



Basin Oil Pty Ltd (ABN 36 000 628 017) (A wholly owned subsidiary of OMV Australia Pty Ltd)

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# PERMIT VIC/L21 OFFSHORE GIPPSLAND BASIN VICTORIA AUSTRALIA

# PATRICIA-2

# WELL COMPLETION REPORT BASIC DATA

**VOLUME 1** 

Prepared by: Ross Tolliday October, 2002

CONFIDENTIAL



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# PATRICIA-2 BASIC DATA REPORT Volume 1A

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FIGURE -



#### WELL SUMMARY CARD – PATRICIA-2

WELL	PATRICIA-2	SPUD	16:00 hrs 20 <sup>th</sup> June 2002
WELL TYPE	Horizontal Development	TD REACHED	01:00 hrs, 28 <sup>th</sup> June, 2002
BLOCK/LICENCE	VIC/L21	RIG RELEASE	00:45 hrs, 9 <sup>th</sup> July, 2002
RIG	Ocean Bounty	COMPLETION	Excluder 2000 sand screen from 896.9 m (-701.0 mTVDSS) to 1384.51 m (-701.0 mTVDSS)
WATER DEPTH	52.5 m (LAT)	STATUS	Suspended Gas Production Well
RT	25.0 m above LAT	TRAP TYPE	Structural Anticline
TD	1385.0 m (-676.2 mTVDSS)	OPERATOR	Basin Oil Pty. Ltd.
SURFACE LATITUDE	38° 01' 39.95" S	SURFACE Y coord	5 790 098.7 mN
SURFACE LONGITUDE	148° 26' 57.78" E	SURFACE X coord	627 207.7 mE
OBJECTIVE (heel) Y co-ord	5 789 889.1 mN	OBJECTIVE (toe) Y co-ord	5 789 566.5 mN
OBJECTIVE (heel)	626 942 6 mE		606 E22 0 mF
X co-ord	020 342.0 ML	X coord	620 555.0 IIIE
X co-ord SEISMIC REFERENCE	Surface: Inline 403, Xline 3688	X coord Spheroid/Datum	ANS/AGD 66

#### REMARKS

Patricia-2 was drilled as a horizontal gas development well located within the Patricia gas field in permit VIC/L21. The main objectives of the well were to drill horizontally through the reservoir and complete a 500 m production interval. The well was tested over the interval 896.9 mMDRT to 1385.0 mMDRT and flowed 28.2 MMscf/d gas.

HOLE SIZE	CASING SIZE	SHOE DEPTH	ТҮРЕ	LOT
mm (inch)	mm (inch)	mMDRT (mTVDSS)		Sg (MWE)
914 (36)	762x508 (30x20)	111.5	X-52	N/A
444.5 (17 ½)	340 (13 3/8)	327.1 (-300.7)	K-55	1.73 (FIT)
311 (12 ¼)	244.5 (9 5/8)	872.4 (-675.9)	L-80	1.4 (FIT)
216 (8 ½)	168 (6 5/8)	1384.51 (-676.1)	Production liner (Excluder 2000 sand Screen)	N/A

MUD DATA			
LWD RUN	1	2	3
TYPE	Seawater/Hi vis	KCI/PHPA/GLYCOL	FLO-PRO
DENSITY (sg)	1.06	1.08	1.12
VISCOSITY(sec/qt)	100.0	54.0	60.0
FLUID LOSS(mptm)		5.6	4.8
PH		8.7	9.5
Rm (ohmm)		0.18 @ 21.0°C	0.10 @ 19.4°C
Rmf (ohmm_		0.12 @ 21.0°C	0.09 @ 19.4°C
Rmc (ohmm)		0.28 @ 21.0°C	0.06 @ 19.4°C
Chlorides (ppm)		35000	72000
KCI (%wt)		5.0	3.0
Glycol (%vol)		3.0	-

**PERFORATIONS:** Excluder 2000 sand Screens from 896.91mMDRT (676.3 mTVDSS) to 1385mMDRT (676.2 mTVDSS)

DRILL STEM TESTS					
DST	Flow rate	Choke mm (in)	GOR		
1	28.2 MMscf/d Dry Gas	No choke, Max flow	N/A		



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#### **NO CORES WERE CUT IN PATRICIA-2**

#### NO WIRELINE LOGS WERE RUN IN PATRICIA-2

LWD LOGS

LOG TYPE	RUN	INTERVAL mMDRT	BHT °C , DATE, TIME	COMMENTS mm (inch)
DGR/EWRP4/DM/DDS	1	111.5 – 334.0	17, 21/6/02, 1432 hrs	444 (17 1⁄2) hole
DGR/EWRP4/DM/DDS	2	334.0 - 884.0	53, 25/6/02, 1842 hrs	311(12 ¼) hole
DGR/EWRP4/SLD/CNP/PM	3	884.0 – 1385.0 (total depth)	47, 28/6/02, 1144 hrs	216 (8 ½) hole

Y:\Geological Operations\Well Files\Patricia-2H\13\_Well Documents\Basic Data Files\Patricia-2\_OMV\_WCR\_Basic\_v1.doc Page iv



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# 1.0 WELL SUMMARY

# 1.1 OPERATIONAL SUMMARY

The semi-submersible Ocean Bounty was towed a short distance from the previous well, Baleen-3/ST1, to the Patricia-2 location. The rig arrived on location and dropped the first anchor (# 6) at 03:40 hrs, 20th June, 2002. After all anchors were run and tensioned, the well was spudded at 16:00 hrs on the 20<sup>th</sup> June, 2002.

The final Thales Geosolutions GPS surface rig position (Appendix 1) for Patricia-2 is

Datum:	AGD 66
Latitude:	38° 01' 39.95" S
Longitude:	148° 26' 57.78" E
Projection:	AMG Zone 55, (CM 147° E)
Easting:	627 207.7 mE
Northing:	5 790 098.7 mN

This position was 1.6 metres on a bearing of  $304^{\circ}$  (T) from the intended location. The final rig heading was  $260^{\circ}$  (T).

The final rig elevations were:

RT – SL:	25.0 m
Water Depth (LAT):	52.5 m (Note: MSL is approximately 0.6 m above LAT)
RT - Sea bed:	77.5 m

Patricia-2 was drilled as a horizontal gas development well and was located within the Patricia gas field in permit VIC/L21, which is approximately 285 Nautical Miles from Geelong and 140 Nautical Miles from Port Welshpool (Figure 1). The Patricia-2 surface location was NW of Patricia-1 and the final bottom hole (toe) location was SW of Patricia-1 (Figure 2).

The main objectives of the well were to drill horizontally through the reservoir and complete a 500.0 m production interval. The plan was to test the well and determine well deliverability, estimate initial reservoir pressures, acquire flowing pressure data and obtain representative gas samples. This was achieved.

After spudding, the 36" (914 mm) hole was drilled from the seabed at 77.5 mMDRT to 111.5 mMDRT where a 30"x20" (762 mm x 508 mm) conductor was run to 111.5 mMDRT and cemented. The 20" (508 mm) shoe track was drilled out and a 17  $\frac{1}{2}$ " (444.5 mm) hole was drilled riser less from 111.5 mMDRT to 334.0 mMDRT. This section was drilled with seawater and hi vis mud sweeps with returns to the sea floor. The 13 3/8" (340 mm) casing was run with the shoe set at 327.0 mMDRT and then cemented. A production xmas tree was run and pressure tested successfully. The BOPs and marine riser were then run.

The 12 ¼" (311 mm) BHA was made up and run in the hole. New formation was drilled from 334.0 mMDRT to 337.0 mMDRT and a Formation Integrity Test (FIT) was performed to an equivalent mud weight of 1.73 sg. The 12 ¼" (311 mm) hole was then drilled and the well deviated from 337.0 mMDRT to 884.0 mMDRT (-676.2 mTVDSS) (section TD). The last survey taken at 884.0 mMDRT (-676.3 mTVDSS) was 85.2° with an azimuth of 229.0°. After a wiper trip and circulating the hole clean, the 9 5/8" (244.5 mm) casing was run and cemented with the casing shoe at 872.0



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mMDRT (-675.9 mTVDSS). Next the 8 ½" (216 mm) drilling assembly was made up and run in the hole. The shoe and 3.0 m of new formation from 884.0 mMDRT to 887.0 mMDRT were then drilled. An FIT was performed up to an equivalent mud weight of 1.4 sg. The well was then drilled horizontally to a total depth of 1385.0 mMDRT (-676.2 mTVDSS), which was reached at 01:00 hrs, 28<sup>th</sup> June, 2002.

A 6 5/8" (168 mm) production liner consisting of Excluder 2000" sand screens and a 5" (127 mm) completion string were run and landed. The well was tested and a maximum flow of 28.2 MMscf/d was recorded. The well was suspended, anchors were pulled and the rig was released at 00:45 hrs, 9<sup>th</sup> July, 2002.

Furthers details are included in the Drilling Operations End of Well Report (Appendix 2).

# 1.2 CASING

Three casing strings and a production liner were run in the Patricia-2 well. The 30"x20" (762x508 mm) casing was set at 111.5 mMDRT on 20<sup>th</sup> June, 2002 after the 36" hole was drilled. The 17  $\frac{1}{2}$ " hole was drilled to 334.0 mMDRT (-307.5 mTVDSS). The 13 3/8" (340 mm) casing was set at 327.0 mMDRT (-300.6 mTVDSS) on 21st June, 2002 and the BOPs run and landed on 22<sup>nd</sup> June. The hole was drilled and deviated in the next 12  $\frac{1}{4}$ " (311 mm) section to a depth of 884.0 mMDRT (-676.3 mTVDSS). The 9 5/8" (244.5 mm) casing was landed at 872.0 mMDRT (-675.9 mTVDSS) on 26<sup>th</sup> June, 2002.

The well was completed at a total depth of 1385.0 mMDRT (-676.2 mTVDSS) with 6 5/8" (168 mm) production liner. The liner shoe was set at 1384.5 mMDRT (-676.2 mTVDSS) on 30<sup>th</sup> June, 2002.

TABLE 1 - CASING SUMMARY					
Hole Size mm (inch)	Casing Size mm (inch)	Shoe Depth mMDRT (mTVDSS)	Туре	LOT Sg(MWE)	
914 (36)	762x508 (30x20)	111.5	X-52	N/A	
444.5 (17 ½)	340 (13 3/8)	327.0 (-300.6)	K-55	1.73 (FIT)	
311 (12 ¼)	244.5 (9 5/8)	872.0 (-676.3)	L-80	1.4 (FIT)	
216 (8 1⁄2)	168 (6 5/8)	1384.5 (-676.2)	Production liner (Excluder 2000 sand screen)	N/A	

A summary of casing run in the well is in Figure 3 and is shown below in Table 1.

# 2.0 SAMPLING

# 2.1 DITCH CUTTINGS

Five sets of cuttings were collected over the intervals 334.0 mMDRT to 1385.0 mMDRT in Patricia-2 (see Table 2). The sample intervals were varied from 5 m to 10 m according to the drilling rate of penetration and section depths.

The cuttings were described and the report is included in Appendix 3.



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TABLE 2 – Cuttings Samples Interval summary					
Depth (mMDRT)	Depth (mMDRT) Interval				
334 - 340	6m				
340 - 350	5m				
350 - 360	10m				
360 - 370	5m				
370 - 400	10m				
400 - 430	5m				
430 - 500	10m				
500 - 620	5m				
620 - 640	10m				
640 - 670	5m				
670 - 850	10m				
850 - 890	5m				
890 - 1380	10m				
1380 - 1385	5m				

The cuttings were packed in boxes and distributed as per Table 3. For more details see the Final Mudlogging Report in Appendix 4.

TABLE 3 - Cuttings Sample Distribution Summary					
Sample type	No. Sets	Quantity per sample (g)	Distributed to:-		
Washed & dried-samplex trays	1	5	OMV		
Washed & dried-A	1	100	OMV		
Washed & dried-B	1	100	AGSO		
Washed & dried-C	1	100	VDNRE		
Washed & dried-D	1	100	TRINITY		
Washed & dried-E	1	100	SANTOS		

# 2.2 SIDEWALL CORES

No sidewall cores were shot during Patricia-2.

# 2.3 CONVENTIONAL CORES

No conventional cores were taken in Patricia-2.

# 2.4 FORMATION FLUIDS

Three 20 Litre surface gas samples were recovered from the separator gas line during testing and were analysed by Core Laboratories in Perth. The compositional analyses report is in Appendix 5.

No wireline formation tests or samples were attempted in Patricia-2.



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# 2.5 WELL TESTING

The Patricia-2 well was production-tested between 3rd - 5th July 2002 in order to clean the well up prior to suspension and to determine key well and reservoir parameters from the bottom hole pressure response. The actual test duration was 58 hours (excluding operational downtime and time waiting on daylight), as compared to the pre-test programme of 52 hours. A short initial flow and pressure build-up was conducted to determine the static reservoir pressure prior to testing.

The well was beaned-up to maximum choke to promote effective clean-up of the entire horizontal production interval. A coiled tubing-conveyed temperature logging pass was conducted to investigate any potential flow anomalies within the horizontal section.

At maximum choke, a maximum flow rate of 28.2 MMscf/d was measured (upstream choke pressure of 632 psia) through the test separator.

See Appendix 6 for DST report by Expro.



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# 3.0 GEOLOGY

# 3.1 GEOLOGICAL SUMMARY

Patricia-2 penetrated a sedimentary sequence which included the following Gippsland Basin stratigraphy as described from cuttings:

Marine argillaceous limestones and limestones with minor lime muds: Marine lime muds, clays and very fine muddy limestones: Marine green clays, lime muds, clays and very fine muddy limestones: Very fine to fine silty sandstones and minor lime muds: Very fine to fine silty and sideritic sandstones and sandstones: Sandstones and argillaceous sandstones:

334.0 - 700.0 mMDRT 700.0 - 770.0 mMDRT 770.0 - 819.0 mMDRT 819.0 - 885.0 mMDRT 885.0 - 1290.0 mMDRT 1290.0 -1385.0 mMDRT

Interval summaries are presented in the Daily Geological Reports in Appendix 7. More detailed descriptions of the Patricia-2 stratigraphy were made from drill cuttings and are included as Appendix 3. Returns above 334.0 mMDRT were to the sea floor.

High gas readings were recorded while drilling through the reservoir with a maximum of 12.5% while drilling at 843.0 mMDRT. No hydrocarbon fluorescence was observed in the well.

A summary of the lithologies penetrated in Patricia-2 appears below.

Seafloor – 334.0 mMDRT	No samples taken – returns to seabed
334.0 to 400.0 mMDRT	Sequence of interbedded ARGILLACEOUS CALCILUTITE and ARGILLACOUS CALCISILTITE
	<b>ARGILLACEOUS CALCILUTITE:</b> (40 - 100%) white to very light grey, light bluish grey, light olive grey, very soft to soft, amorphous, sticky in part, 10 to 15% fossil fragments and forams (coral debris, bryozoa, spicules, shell fragments, forams), 10 to 25% siliceous clay content, 10 to 20% calcisilt, grades to <b>argillaceous calcisiltite</b> in part, trace fine dark green glauconite.
	<b>ARGILLACEOUS CALCISILTITE:</b> (0 - 60%) white to very light grey, light bluish grey, light olive grey, very soft to soft, amorphous, 10 to 15% fossil fragments and forams (coral debris, bryozoa, spicules, shell fragments, forams), 15 to 30% siliceous clay content, 5 to 10% micrite, trace to 5% very fine to fine calcite grains, trace fine dark green glauconite, grades to <b>argillaceous calcilutite</b> in part.
400.0 to 490.0 mMDRT	Interbedded ARGILLACEOUS CALCISILTITE and CALCILUTITE grading to ARGILLACEOUS CALCILUTITE
	<b>ARGILLACEOUS CALCISILTITE:</b> (50-90%) light to light medium grey, light to medium olive grey, trace orange, soft, dispersive in parts, firm in parts amorphous, 5 to 10% fossil fragments (coral debris, bryozoa, spicules, shell fragments, forams), 20 to 35% siliceous clay content, recrystallised calcite



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in parts, 5 to 10% fine, clear to orange calcite grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to **argillaceous calcilutite**.

**CALCILUTITE:** (10-50%) very light to light medium grey, light to medium olive grey, soft, dispersive in parts, amorphous, trace to 5% fossil fragments and forams, 15-20% siliceous clay content, 5 to 10% calcisilt, trace very fine dark green glauconite, grades to **argillaceous calcilutite**.

# 490.0-520.0 mMDRT ARGILLACEOUS CALCISILTITE with interbedded MARL

**ARGILLACEOUS CALCISILTITE:** (60-90%) light to light medium grey, light to medium olive grey, trace dark grey, soft to occasionally firm, dispersive in parts, firm in parts, amorphous, 5% fossil fragments, 20-35% siliceous clay content, 5 to 10% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to **argillaceous calcilutite.** 

**MARL:** (10-40%) very light to light medium grey, light to medium olive grey, very soft, dispersive in parts, amorphous, 5% fossil fragments and forams, 30-40% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, grades to **argillaceous calcilutite**.

# 520.0 to 590.0 mMDRT Predominantly a CALCISILTITE sequence with interbeds of CALCARENITE and MARL

**CALCISILTITE:** (40 - 75%) very light to light medium grey, light to medium olive grey, soft to occasionally firm, amorphous, 5% fossil fragments, 10 to 15% siliceous clay content, 10 to 20% fine clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to **calcarenite**.

**MARL:** (20 - 40%) very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, 5% fossil fragments and forams, 30 to 40% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, grades to **argillaceous calcilutite**.

**CALCARENITE:** (0 - 30%) very light to light medium grey, white in parts, soft to firm, amorphous, silt to very fine clear to very light grey calcite grains, 5% fossil fragments, 10 to 15% siliceous clay content, trace very fine dark green glauconite, trace soft disseminated pyrite.

590.0-700.0 mMDRT

Sequence of ARGILLACEOUS CALCISILTITES interbedded with CALCARENITE and MARL



770.0-819.0 mMDRT

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**ARGILLACEOUS CALCISILTITE:** (45 - 70%) very light to light medium grey, light to medium olive grey, soft to occasionally firm, trace to 5% fossil fragments, 10 to 25% siliceous clay content, 10 to 20% fine grained calcite & recrystallised grains, trace very fine dark green glauconite, trace disseminated pyrite, grades to **calcarenite**.

**CALCARENITE:** (5 - 30%) very light to light medium grey, white in parts, soft to firm, silt to fine clear to very light grey calcite grains, 5% fossil fragments, 5 to 10% siliceous clay content, trace very fine dark green glauconite, trace soft disseminated pyrite.

**MARL:** (10 - 45%) white to very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, trace to 5% fossil fragments and forams, 20 to 30% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, trace disseminated and rare nodular pyrite, commonly grades to **argillaceous calcilutite.** 

# 700.0-770.0 mMDRT MARL with interbedded ARGILLACEOUS CALCISILTITE

**MARL:** (40-90%) light grey, light to medium olive grey, minor dark grey, soft, amorphous to blocky, 5 to 10% fossil fragments and forams, 20 to 40% siliceous clay content, trace to 5% calcisilt, trace to 5% fine to medium dark green glauconite, trace disseminated and nodular pyrite. Grades to **calcareous claystone**.

**ARGILLACEOUS CALCISILTITE:** (10-60%) very light to medium grey, light to medium olive grey, soft to occasionally firm, blocky, trace to 5% fossil fragments, 15 to 25% siliceous clay content, 10 to 15% fine grained calcite & recrystallised grains, trace very fine dark green glauconite, trace disseminated and nodular pyrite, grades to **calcarenite**.

### Interbedded CALCAREOUS CLAYSTONE, MARL and GREENSAND with minor ARGILLACEOUS CALCISILTITE

**CALCAREOUS CLAYSTONE:** (40-70%) light to medium greyish brown, light grey, light brownish yellow in parts, soft, amorphous to blocky, 15 to 25% calcareous content, 0 to 5% calcisilt, 1 to 10% fine to medium dark green glauconite, trace to 5% siderite(?) nodules.

**MARL:** (10 - 60%) light grey, light to medium olive grey, minor dark grey, soft amorphous to blocky, 5% fossil fragments and forams, 20 to 35% siliceous clay content, trace to 5% calcisilt, 1 to 3% fine to medium dark green glauconite, trace disseminated and nodular pyrite. Grades to **calcareous claystone**.



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<b>GLAUCONITIC SANDSTONE</b>	(GREENSAND)	: (	0 - 30%)
------------------------------	-------------	-----	----------

medium to very dark green, firm, soft in parts, very fine to medium glauconite, sub angular to sub rounded. Increasing towards base of interval.

**ARGILLACEOUS CALCISILTITE:** (0 - 10%) very light to medium grey, light to medium olive grey, soft to occasionally firm, blocky, trace to 5% fossil fragments, 15 to25% siliceous clay content, 10 to 15% fine grained calcite & recrystallised grains, trace very fine dark green glauconite, trace disseminated and nodular pyrite, grades to **calcarenite**.

# 819.0-885.0 mMDRT SILTY SANDSTONE with minor CALCAREOUS CLAYSTONE

**SILTY SANDSTONE:** (50 - 95%) light to dark yellowish brown, loose and friable, minor firm, clear to translucent quartz grains, very fine to fine, poorly to moderately sorted, sub angular to sub rounded, 15 to 25% quartz silt, 5 to 15% argillaceous content, 1 to 3% glauconite, trace to 1% mica, trace to 5% siderite nodules, trace multicoloured lithics, fair to good inferred porosity, no fluorescence.

**CALCAREOUS CLAYSTONE:** (5 - 50%) light to medium greyish brown, light grey, light brownish yellow, soft, firm in parts, amorphous to blocky, 10 to 25% calcareous content, 5 to 10% calcisilt, 5 to 15% fine to medium dark green glauconite. Grades to **claystone**.

# 885.0-960.0 mMDRT Massive SILTY SANDSTONE

**SILTY SANDSTONE:** (100%) light to dark yellowish brown, greyish brown, loose and friable to hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, trace medium, poorly to moderately sorted, sub angular to sub rounded, 15 to 30% quartz silt, 5 to 15% argillaceous content, trace to 2% glauconite, trace to 1% mica, trace to 3% siderite nodules, trace multicoloured lithics, nil to trace forams, fair to very good inferred porosity, no fluorescence.

# 960.0-1060.0 mMDRT SILTY SANDSTONE grading to SANDSTONE

**SILTY SANDSTONE:** (100%) light to dark yellowish brown, greyish brown, loose and friable to rare hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, trace medium, poorly to moderately sorted, sub angular to sub rounded, 15 to 25% quartz silt, 5% argillaceous content, trace to 1% glauconite, trace to 1% mica, trace siderite nodules, trace multicoloured lithics, nil to trace forams, fair to good inferred porosity, no fluorescence. Grades to **sandstonl**.

1060.0-1180.0 mMDRT

### Massive ARGILLACEOUS and SILTY SANDSTONE



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**ARGILLACEOUS / SILTY SANDSTONE** (100%): light to dark yellowish brown, medium greyish brown, 5 to 10% friable to hard cemented siderite aggregates, clear to translucent quartz grains, very fine to fine, trace medium, poorly to moderately sorted, angular to sub rounded, 20 to 30% quartz silt, 15 to 25% argillaceous content, trace to 1% glauconite, trace to 1% mica, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair inferred porosity, no fluorescence.

# 1180.0-1290.0 mMDRT SILTY SANDSTONE grading to (Argillaceous) SIDERITIC SANDSTONE

**SILTY SANDSTONE:** (80%) light to dark yellowish brown, medium greyish brown, dominantly loose and friable, trace hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 15 to 25% quartz silt, 10% argillaceous content (suspect clay content being dispersed into mud system), trace to 1% glauconite, trace to 2% mica, trace to 2% siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair to good inferred porosity, no fluorescence.

**SIDERITIC / ARGILLACEOUS SANDSTONE:** (20%) light to commonly dark yellowish brown, dark greyish brown, dominantly loose and friable, common hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, rare medium, poor to moderately sorted, angular to sub rounded, 15 to 20% quartz silt, 15 to 30% argillaceous content (suspect clay content being dispersed into mud system), trace to 1% glauconite, trace to 1% mica, 15 to 25% siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair inferred porosity, no fluorescence.

# Massive SANDSTONE grading to ARGILLACEOUS SANDSTONE

**SANDSTONE:** (70%) light to medium yellowish brown, medium greyish brown, dominantly loose and friable, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 10 to 15% quartz silt, 10% argillaceous content (suspect clay content being dispersed into mud system), trace to 1% glauconite, trace to 2% mica, trace siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, good inferred porosity, no fluorescence. Grades to **argillaceous sandstone**.

**ARGILLACEOUS SANDSTONE:** (30%) light to medium yellowish brown, medium greyish brown, dominantly loose and friable, clear to translucent quartz grains, very fine to fine,

# 1290.0-1385.0 mMDRT



Perth WA 6000 Australia Tel: (61 8) 9223 5000 Fax: (61 8) 9223 5004

moderately sorted, angular to sub rounded, 10 to 15% quartz silt, 15 to 30% argillaceous content (suspect clay content being dispersed into mud system), trace to 1% glauconite, trace to 2% mica, trace to 5% dark yellowish brown siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair to good inferred porosity, no fluorescence.

# 3.2 BIOSTRATIGRAPHY

No palynology or micropaleontology was undertaken in Patricia-2.



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# 4.0 HYDROCARBON SHOWS

# 4.1 OIL FLUORESCENCE SHOWS

No oil fluorescence shows were observed in Patricia-2.

# 4.2 GAS SHOWS

Mud gas was first recorded from 334.0 mMDRT; however, it was not until below 400.0 mMDRT that the gas readings rose above zero. The maximum gas recorded was 12.5% at 843.0 mMDRT. Only methane (C<sub>1</sub>) was recorded throughout the drilling.

The mud gas is plotted on the Formation Evaluation Log (Enclosure 1). No Gas Ratio log was plotted as only  $C_1$  was ever recorded.

A summary of drilled gas is presented in Table 4.

TABLE 4 - Summary of Drilling Gas							
INTERVAL (mMDRT)	Total Gas (%)	C <sub>1</sub> (ppm)	C <sub>2</sub> (ppm)	C <sub>3</sub> (ppm)	iC₄ (ppm)	nC <sub>4</sub> (ppm)	C <sub>5</sub> (ppm)
334 - 400	Nil						
400 - 496	0 – 0.02	0 - 155					
496 – 762	0.01 – 0.16	47 - 1529					
762 – 815	0.06 – 0.26	554 - 2355					
815 - 884	0.29 – 12.47	2309 - 99532					
884 - 1385	0.12 – 7.95	1583 - 60017					



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# 5.0 LOGGING AND SURVEYS

# 5.1 MUD LOGS

Baker Hughes Inteq provided conventional mud logging services integrated with a computerised data logging and processing system.

The BHI unit was operated continuously throughout the well. The following logs were provided and are included as Enclosures: a Formation Evaluation Log (Enclosure 1), a Drilling Data Log (Enclosure 2), a Pressure Evaluation Log (Enclosure 3) and a Pressure Summary Plot (Enclosure 4). No Gas Ratio Log is enclosed as only C1 was recorded.

The BHI Daily reports are included in Appendix 8 and the final BHI Logging report is included in Appendix 3.

# 5.2 WIRELINE LOGS

No Wireline Logs were run in Patricia-2.

# 5.3 WIRELINE FORMATION TESTS

No wireline formation pressure tests were run in Patricia-2.

# 5.4 VELOCITY SURVEY

No Velocity Survey was undertaken in Patricia-2.

# 5.5 LWD

A summary of LWD runs is in Table 5 and the LWD operations report is in Appendix 8. Mud data for log analyses is in Table 6.

TABLE 5 - LWD LOG SUMMARY						
TOOL	LOG TYPE	DATE	RUN	INTERVAL mMDRT	COMMENTS	
8" tools	DGR/EWRP4/ DM/DDS	21/6/02	1	111.5 – 334.0	444mm (17 ½") hole size	
8" tools	DGR/EWRP4/ DM/DDS	23-25/6/02	2	334.0 - 884.0	311mm (12 ¼") hole size	
6 3/4" tools	DGR/EWRP4/ SLD/CNP/PM	25-28/6/02	3	884.0 – 1385.0	216mm (8 1/2").hole size	



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TABLE 6 - MUD DATA						
LWD RUN	1	2	3			
TYPE	Seawater/Hi vis	KCI/PHPA/GLYCOL	FLO-PRO			
DENSITY (sg)	1.06	1.08	1.12			
VISCOSITY(sec/qt)	100.0	54.0	60.0			
FLUID LOSS(mptm)		5.6	4.8			
рН		8.7	9.5			
Rm (ohmm)		0.18/21.00°C	0.10/19.4°C			
Rmf (ohm)		0.12/21.00°C	0.09/19.4°C			
Rmc (ohmm)		0.28/21.00°C	0.06/19.4°C			
Chlorides (ppm)		35000	72000			
KCI (%wt)		5.0	3.0			
Glycol (%vol)		3.0	-			

# 5.6 WELLHEAD LOCATION and TRAJECTORY

The Thales rig positioning report is included in Appendix 1. The Sperry Sun borehole trajectory surveys are in Appendix 9.

# 5.7 SITE SURVEY

A site survey was undertaken by Thales Geosolutions (Australasia) Limited between 15th to 19<sup>th</sup> March, 2002 to investigate the suitability of the Patricia-2 location for the positioning of a semi-submersible drill rig prior to drilling. The resultant report is presented in Appendix 10.



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# 6.0 SAMPLE ANALYSES

# 6.1 OIL ANALYSES

No oil was observed, recovered or analysed from Patricia-2.

# 6.2 GAS ANALYSES

Three 20 Litre surface gas samples from the separator line were submitted to Core Laboratories for analyses and the report is contained in Appendix 5.

A summary of the average gas composition analyses is presented in Table 7.

Table 7 - Summary of Average Gas Composition											
Component	$H_2S$	CO <sub>2</sub>	N <sub>2</sub>	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	iC4	nC₄	iC <sub>5</sub>	nC₅	C <sub>6+</sub>
Mol %	0.00	1.38	0.69	97.59	0.33	0.01	Trace	Trace	0	0	0

Trace = detected but less than 0.005mol%.

# 6.3 WATER ANALYSES

No water was recovered and no analyses were conducted.





Patricia-2 Positioning Report of the Ocean Bounty

> Prepared for OMV Australia Pty Ltd

Report No: 3382A3

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DOCUMENT TITLE	:	PATRICIA-2 POSITIONING REPORT OF THE OCEAN BOUNTY
CLIENT	:	OMV AUSTRALIA PTY LTD
LOCATION	:	GIPPSLAND BASIN, BASS STRAIT
PERMIT	:	VIC/L21
REPORT REF.	:	3382A3
REPORT REV NO.	:	0
REPORT ISSUE DATE	:	26 JUNE 2002
SURVEY DATE	:	13 – 21 JUNE 2002

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# **APPENDICES**

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- G DIFFERENTIAL GPS CHECK
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- I PACIFIC SENTINEL AND PACIFIC CONQUEROR OFFSET DIAGRAMS
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- K DAILY REPORT SHEETS

# LOCATION DIAGRAM



Coastline data is  $\bigcirc$  Commonwealth of Australia, AUSLIG 1998. All rights reserved.

# ABSTRACT

This report details the positioning services provided by Thales GeoSolutions (Australasia) Limited (Thales), prior to and during the positioning of the semi-submersible drilling rig Ocean Bounty at the Patricia-2 location for OMV Australia Pty Ltd (OMV).

Positioning of the Ocean Bounty during the approach to and at the Patricia-2 location was provided by Thales' SkyFix Spot Differential GPS (DGPS) interfaced to Thales' Multifix 3 multiple reference station positioning software and Thales' GNS2 rig move software. The two anchor handling vessels (AHVs), Pacific Sentinel and Pacific Conqueror were positioned using Thales' Tracs/TugNav Vessel Tracking System (VTS). The Ocean Bounty was positioned at the Patricia-2 location at 0420 on 20 June 2002.

# Intended Patricia-2 Location

The co-ordinates of the intended Patricia-2 location were provided by OMV as follows:

# Datum: AGD66

Latitude	:	38° 01' 39.975" South
Longitude	:	148° 26' 57.831" East

# Projection: AMG Zone 55, CM 147° East

Easting Northing	: :	627 209.00m 5 790 097.80m
Rig Positioning Toleran	ce :	± 5m
Intended Rig Heading	:	257.0° (T)

# Final Differential GPS Drillstem Position at the Patricia-2 Location

The final Differential GPS Position of the Ocean Bounty drillstem at the Patricia-2 location was computed from data observed between 0602 and 0702 on 21 June 2002. The final position was as follows:

# Datum: AGD66

Latitude	:	38° 01' 39.946" South
Longitude	:	148° 26' 57.777" East

# Projection: AMG Zone 55, CM 147° East

Easting	:	627 207.69m
Northing	:	5 790 098.71m

The final Differential GPS drillstem position is 1.59m on a bearing of 303.9° (T) from the intended Patricia-2 location.

Final Rig Heading : 260.1° (T)

All times quoted in this report are Eastern Standard Time (UTC + 10.0 hours).

# 1. RESULTS

# 1.1 FINAL DIFFERENTIAL GPS POSITION OF THE OCEAN BOUNTY DRILLSTEM AT THE PATRICIA-2 LOCATION

The Ocean Bounty was positioned at the Patricia-2 location at 0420 on 20 June 2002.

The final Differential GPS position of the Ocean Bounty drillstem at the Patricia-2 location, was determined using Thales' MultiFix 3 positioning software interfaced to a Trimble 4000 DS GPS receiver, with differential corrections being provided by Thales' SkyFix Spot Differential GPS services.

The final fix routine, within Thales' GNS2 rig move software version 2.35, was used to compute the final Differential GPS position of the drillstem at the Patricia-2 location. A total of 720 position fixes were recorded at 5 second intervals between 0602 and 0702 on 21 June 2002.

Refer to Appendix A for the GNS2 final Differential GPS position printouts at the Patricia-2 location. Associated graphs are located in Appendix B.

Differential corrections from the SkyFix reference stations in Melbourne, Sydney and Adelaide were used in the MultiFix 3 software computations to derive the Differential GPS position.

The final surface co-ordinates for the Patricia-2 Ocean Bounty drillstem location, determined from Differential GPS observations were as follows:

Total number of samples used = 720.

The computed antenna position was as follows:

# **GPS Antenna Position**

### Datum: WGS84

Latitude	:	38° 01' 34.600" South	(S.D. 0.26m)
Longitude	:	148° 27' 00.928" East	(S.D. 0.46m)
Ellipsoidal Height	:	42.40m	(S.D. 0.65m)

Transforming the above WGS84 co-ordinates to AGD66 co-ordinates using the parameters in section 6, gives the following antenna co-ordinates:

### **GPS Antenna Position**

### Datum: AGD66

Latitude	:	38° 01' 40.127" South
Longitude	:	148° 26' 56.406" East
Ellipsoidal Height	:	49.32m

By applying a distance of 33.90m on a bearing of 80.6° (T) from the antenna position, the following drillstem co-ordinates were calculated:



# Final Differential GPS Position of the Drillstem at the Patricia-2 Location

# Datum: AGD66

Latitude	:	38° 01' 39.946" South
Longitude	:	148° 26' 57.777" East

### Projection: AMG Zone 55, CM 147° East

Easting	:	627 207.69m
Northing	:	5 790 098.71m

This final Differential GPS position of the drillstem is 1.59m on a bearing of  $303.9^{\circ}$  (T) from the intended Patricia-2 location.

Final Rig Heading : 260.1° (T)



Skyfix Spot Differential GPS Position and Intended Position at the Patricia-2 Location



# 1.2 OCEAN BOUNTY ANCHOR POSITIONS

Deployed anchor positions were derived from the computed anchor function within the GNS2 software. The function takes into account the length of anchor chain out, water depth, anchor tension and the wet weight of anchor chain to compute the deployed anchor positions. The final anchor positions are tabulated below:

Anshan	Intended Anchor Position		Final Anchor Position	
Anchor	Easting (m)	Northing (m)	Easting (m)	Northing (m)
Anchor 1	626 785	5 788 756	627 015	5 789 358
Anchor 2	626 187	5 789 139	626 540	5 789 484
Anchor 3	625 884	5 790 553	626 321	5 790 362
Anchor 4	626 272	5 791 148	626 730	5 790 799
Anchor 5	627 633	5 791 440	627 630	5 790 919
Anchor 6	628 231	5 791 056	628 269	5 791 087
Anchor 7	628 534	5 789 643	628 059	5 789 774
Anchor 8	628 146	5 789 048	627 785	5 789 486

# Datum: AGD66 Projection: AMG Zone 55, CM 147° East

# Difference of final anchor positions from the intended anchor positions.

Anchor	Dropped by	Eastings (m)	Northings (m)
Anchor 1	P.Sentinel	+230.2	+602.3
Anchor 2	P.Conqueror	+353.7	+344.4
Anchor 3	P.Conqueror	+437.6	-190.9
Anchor 4	P.Conqueror	+458.1	-348.6
Anchor 5	P.Conqueror	-3.4	-521.2
Anchor 6	Ocean Bounty	+37.6	+30.5
Anchor 7	P.Sentinel	-475.1	+130.8
Anchor 8	P.Sentinel	-360.8	+437.9

# Horizontal distance and bearing from the Ocean Bounty fairleads to the final anchor positions.

Anchor	Easting (m)	Northing (m)	Bearing (T)	Horizontal Distance (ft)
1	627 015.06	5 789 358.05	194.0°	2377
2	626 540.43	5 789 483.61	228.0°	2862
3	626 321.15	5 790 361.85	283.8°	2931
4	626 729.85	5 790 799.27	324.4°	2649
5	627 629.74	5 790 918.68	27.2°	2898
6	628 268.89	5 791 086.91	47.1°	4642
7	628 059.36	5 789 773.64	108.3°	2881
8	627 785.48	5 789 485.62	135.0°	2635

Ocean Bounty anchor details are located in Appendices C, D and E of this report.



# 2. SAFETY

A pre-rig move meeting was held at Thales' Perth offices on 7 June 2002. Thales personnel N. Mackay, P. Malatzky and S. Bradley were present. During the meeting safety procedures were discussed including correct operation and handling of equipment. It was also confirmed that personnel had been issued with the appropriate safety equipment.

All Thales personnel attended DOGC's daily pre-tour meetings and the weekly safety meeting on 19 June 2002.

A fire and abandon rig drill was held onboard the Ocean Bounty on 16 June 2002, all Thales personnel participated and reported promptly to their stations, remaining there until the all clear was given.

Should an incident occur, Thales' procedures require the incident to be recorded on the appropriate forms and Thales' QA & Safety Manager to be notified immediately. The QA & Safety Manager will initiate a full and thorough investigation with corrective action being introduced to prevent further incidents.

There were no incidents involving Thales personnel during this project. Thales personnel carried out their duties at all times in accordance with Company and Statutory Regulations and Guidelines.

When demobilising the Ocean Bounty, all equipment was packed securely in the designated area where they would not cause obstructions. All heavy or fragile boxes were clearly labelled to avoid accidents during handling.

A project debrief was also held at Thales' Perth offices on 24 June 2002. During the meeting the safety procedures that had been undertaken were discussed and reviewed. It was noted that all personnel had taken due care and as a result there had been no incidents.



# 3. SUMMARY

# 3.1 REQUIREMENTS

Thales GeoSolutions (Australasia) Limited were contracted by OMV Australia Pty Ltd to provide personnel and positioning equipment consisting of Thales' SkyFix Spot Differential GPS for the rig move of the Ocean Bounty to the Patricia-2 location.

The project requirements were as follows:

- (a) Provide real-time positioning of the semi-submersible drilling rig Ocean Bounty and the anchor handling vessels Pacific Sentinel and Pacific Conqueror during the anchor recovery at the Baleen-3 location.
- (b) Provide real-time positioning of the semi-submersible drilling rig Ocean Bounty and the anchor handling vessels Pacific Sentinel and Pacific Conqueror, during transit to the Patricia-2 location.
- (c) Differential GPS Positioning of the Ocean Bounty at the Patricia-2 location.
- (d) Real-time positioning (including GNS2 fixing/logging/streaming) of the Ocean Bounty and the Pacific Sentinel and Pacific Conqueror during anchor deployment operations at the Patricia-2 location.
- (e) Determine the final Differential GPS position of the Ocean Bounty drillstem at the Patricia-2 location using a Multiple Reference Station Differential GPS solution.
- (f) The provision of a comprehensive positioning report containing the final Differential GPS position of the Ocean Bounty drillstem and anchors at the Patricia-2 location.

The positioning requirements were as follows:

(a) Intended Patricia-2 location was supplied by OMV as follows:

### Datum: AGD66

Latitude	:	38° 01' 39.975" South
Longitude	:	148° 26' 57.831" East

### Projection: AMG Zone 55, CM 147° East

	Easting Northing	:	627 209.00m 5 790 097.80m
(b)	Positioning tolerance	:	± 5m
(c)	Intended rig heading	:	257.0° (T)



# 3.2 SUMMARY OF EVENTS

All times quoted are in Eastern Standard Time (UTC + 10.0 hours).

# 13 June 2002

- 0915 Thales personnel Paul Malatzky (PM) and Steve Bradley (SB) depart Perth Domestic Airport for Melbourne.
- 1600 Advised by Thales operations in Perth, transfer to rig delayed until Saturday 15 June 2002.

# 14 June 2002

Stand by for transfer to Ocean Bounty at Baleen-3 location.

# 15 June 2002

- 1205 Depart Essendon airport for the Ocean Bounty at the Baleen-3 location.
- 1315 Arrive onboard the Ocean bounty at the Baleen-3 location.
- 1600 Confirm with client representative Bill Edmonds, intended Patricia-2 location to be AGD66 co-ordinates 38° 01' 39.97" South 148° 26' 57.83" East, AMG Zone 55, 627 209.00m East 5 790 097.80m North.
- 1800 Commence mobilisation of Thales equipment.
- 1930 Thales equipment operational.

# 16 June 2002

- 0720 Commence solar azimuth observations.
- 0730 Conclude solar azimuth observations.
- 0800 Calculate gryocompass C-O value of +0.5 and enter into GNS II.
- 0930 Thales systems including TRACS in fully operational. Flux gate compass on Conqueror faulty.
- 1230 PM and SB attend the pre-rig move meeting onboard the Ocean Bounty. Procedure of the move discussed. Anchor 6 confirmed as run in anchor, distance of 2nm. All advised of location of Patricia-1 well head. Anchor recovery expected to commence 1800hrs
- 1800 Anchor recovery delayed.
- 2230 Thales personnel participate in the fire and abandon rig drill onboard the Ocean Bounty.

### 17 June 2002

Standby for anchor recovery to commence.

### 18 June 2002

Standby for anchor recovery operations to commence. ROV to complete subsea work, weather marginal and affecting operations.



# 19 June 2002

- 0422 Commence anchor recovery operations.
- 0855 # 2 PCC parts from wire.
- 1005 Conqueror collects # 2 chain with "J" hook and chases out.
- 1155 Anchor recovery operations temporarily halted. ROV to return to water.
- 1235 Ocean Bounty manoeuvres near Baleen-3 to assist ROV operations.
- 1300 PM attends the weekly safety meeting onboard the Ocean Bounty.
- 1944 Recommence anchor recovery operations.

# 20 June 2002

- 0030 Ocean Bounty departs the Baleen-3 location.
- 0200 Ocean Bounty commences 2nm run in to Patricia-2 location.
- 0340 Anchor deployment commences.
- 0420 Ocean Bounty over the Patricia-2 location.
- 1115 Anchor deployment completed.
- 1130 Ocean Bounty positioning over the Patricia-2 location.
- 1500 Rig position accepted by client representative Bill Edmonds, spud in commences.
- 2020 Commence final fix at the Patricia-2 location. GNS II Streaming activated.
- 2027 STOP final fix, rig maneuvering to stab back in.

# 21 June 2002

- 0602 Commence final fix at the Patricia-2 location.
- 0702 Conclude final fix at the Patricia-2 location. The datum is 1.59m @ 303.9° T from the intended Patricia-2 location. Position accepted by client representative Bill Edmonds.


## 4. EQUIPMENT ANALYSIS

### 4.1 EQUIPMENT PERFORMANCE

During the positioning of the semi-submersible rig Ocean Bounty from the Baleen-3 location to the Patricia-2 location, no significant problems were encountered with Thales' equipment or software.

An intermittent fault was experienced with the Fluxgate Compass onboard the Pacific Conqueror, this was overcome by the vessel heading being entered manually during anchor recovery and deployment.

Thales personnel were transferred to the Pacific Conqueror and this fault was corrected prior to the completion of the project.



## 5. EQUIPMENT CHECKS AND CALIBRATIONS

## 5.1 DIFFERENTIAL GPS CHECK FIX

A Differential GPS check fix of the drillstem position of the Ocean Bounty at the Baleen-3 location was computed using SkyFix Spot Differential GPS. 120 fixes were taken. Appendix G contains the results of the check fix of the Ocean Bounty drillstem position at the Baleen-3 location.

The published Differential GPS co-ordinates of the Ocean Bounty drillstem position at the Baleen-3 location are as follows:

#### Datum : AGD66

Latitude	:	38° 00' 20.986" South
Longitude	:	148° 26' 34.415" East

#### Projection : AMG Zone 55, CM 147° East

Easting	:	626 675.86m
Northing	:	5 792 541.30m

The computed Differential GPS check fix co-ordinates of the Ocean Bounty drillstem position is as follows:

#### Datum : AGD66

Latitude	:	38° 00' 20.884" South
Longitude	:	148° 26' 34.394" East

#### Projection : AMG Zone 55, CM 147° East

Easting	:	626 675.39m
Northing	:	5 792 544.46m

The Differential GPS check fix of the Ocean Bounty drillstem position is 3.20m on a bearing of 350.7°(T) from the published Ocean Bounty drillstem position at the Baleen-3 location.

The client representative queried the Differential GPS check fix result. Further investigation revealed the rig had heaved in 15ft of chain on winches 3 and 4 which mirrored the indicated position of the Differential GPS check.

The client representative reviewed all geodetic parameters an antenna offsets at which time Thales' equipment was accepted as operating correctly.



## 5.2 GYROCOMPASS CALIBRATION

The S.G. Brown 1000S gyrocompass installed onboard the Ocean Bounty was calibrated on 16 June 2002 using a marine sextant. A series of measurements of the horizontal angle between the centreline of the rig and the sun was observed while accurately recording local time at the instant of each observation. The gyrocompass heading was simultaneously recorded within GNS2 data files.

Thales' Solar Observation software was used to determine the azimuth of the sun for each observation. The observed horizontal angle was applied to the sun's azimuth to determine the true heading of the rig. Each Computed (C) true heading was then compared with the Observed (O) gyrocompass heading to determine the Computed minus Observed (C-O) value for the gyrocompass. The C-O value in GNS2 was set to zero prior to conducting the gyrocompass calibration.

Average Local	Average	Azimuth Sun	Azimuth RO	Calculated (C)	Observed (O)	C-0
Time (HMS)	Horizontal Angle	(DMS)	(DMS)	True Heading	True Heading	(D.D)
	(DMS)			(D.D)	(D.D)	
7:20:05	163° 25' 12"	060° 39' 32"	257° 14' 20"	257.2°	256.7°	0.5°
7:20:35	163° 17' 12"	060° 34' 58"	257° 17' 46"	257.3°	256.8°	0.5°
7:21:00	163° 13' 48"	060° 31' 09"	257° 17' 21"	257.3°	256.8°	0.5°
7:21:45	163° 02' 36"	060° 24' 17"	257° 21' 41"	257.4°	256.8°	0.6°
7:22:25	163° 19' 48"	060° 18' 10"	256° 58' 22"	257.0°	256.7°	0.3°
7:23:05	162° 37' 24"	060° 12' 02"	257° 34' 38"	257.6°	256.2°	1.4°
7:23:35	163° 01' 48"	060° 07' 26"	257° 05' 38"	257.1°	256.8°	0.3°
7:24:00	162° 26' 36"	059° 59' 46"	357° 33' 10"	257.6°	257.0°	0.6°
7:25:10	162° 50' 12"	059° 52' 51"	257° 02' 39"	257.0°	256.7°	0.3°
7:25:52	162° 37' 12"	059° 46' 23"	257° 09' 11"	257.2°	256.8°	0.4°

### **Observation Date : 16 June 2002**

#### Mean C-O = +0.5°

The mean C-O of  $+0.5^{\circ}$  was input into the GNS2 navigation software. See Appendix F for the gyrocompass calibration results.

## 6. GEODETIC PARAMETERS

Co-ordinates listed in this report are referenced to the Australian Geodetic Datum 1966 (AGD66). The Global Positioning System (GPS) is referenced to the World Geodetic System 1984 (WGS84).

#### 6.1 DATUMS

Datum	:	AGD66
Spheroid	:	Australian National Spheroid
Semi-major Axis (a)	:	6 378 160.000m
Semi-minor Axis (b)	:	6 356 774.719m
Eccentricity Squared (e <sup>2</sup> )	:	0.006 694 542
Flattening ( <sup>1</sup> / <sub>f</sub> )	:	298.25
Datum Spheroid	:	ITRF 92 (Epoch 1994.0) WGS84 G730
<b>Datum</b> Spheroid Semi-maior Axis (a)	:	ITRF 92 (Epoch 1994.0) WGS84 G730 WGS84 6 378 137 000m
<b>Datum</b> Spheroid Semi-major Axis (a) Semi-minor Axis (b)		ITRF 92 (Epoch 1994.0) WGS84 G730 WGS84 6 378 137.000m 6 356 752.314m
<b>Datum</b> Spheroid Semi-major Axis (a) Semi-minor Axis (b) Eccentricity Squared (e <sup>2</sup> )	:	ITRF 92 (Epoch 1994.0) WGS84 G730 WGS84 6 378 137.000m 6 356 752.314m 0.006 694 380
<b>Datum</b> Spheroid Semi-major Axis (a) Semi-minor Axis (b) Eccentricity Squared (e <sup>2</sup> ) Flattening ( <sup>1</sup> / <sub>f</sub> )	:	ITRF 92 (Epoch 1994.0) WGS84 G730 WGS84 6 378 137.000m 6 356 752.314m 0.006 694 380 298.257 223 563

#### 6.2 PROJECTION

Projection Name	:	Australian Map Grid 1966 (AMG66)
Projection Type	:	Universal Transverse Mercator
AMG Zone	:	55
Central Meridian (CM)	:	147° East
Scale factor on the CM	:	0.9996
False Easting	:	500 000m
False Northing	:	10 000 000m
Latitude of Origin	:	0° (Equator)
Unit of Measure	:	International Metre

#### 6.3 DATUM TRANSFORMATION

The following 7-parameter datum transformation was used by the GNS2 software to convert WGS84 co-ordinates to AGD66 co-ordinates:

Dx	=	+123.314m
Dy	=	+47.223m
Dz	=	– 136.594m
Rx	=	+0.264"
Ry	=	+0.322"
Rz	=	+0.270"
Scale	=	+1.384 p.p.m.

The sign convention in Thales' GNS survey software used is that used by the US Department of Defense and by Higgins, where a positive rotation about the Z axis is an anti-clockwise movement of the X and Y axes (when viewed from the North Pole looking towards the center of the Earth).

## 7. EQUIPMENT DESCRIPTIONS

### 7.1 GNS2

GNS2 (General Navigation System) is Thales' third generation of On-line Navigation Survey Control software. It has been written by Thales' Software Support Group in C++ for operation under Windows<sup>®</sup> 95 or Windows<sup>®</sup> 98 or Windows<sup>®</sup> NT. GNS2 adheres to the operation and dialogue conventions of the Microsoft Windows<sup>®</sup> environment. Attention has been paid to preserving a consistent operator interface, while at the same time modifying individual dialogue boxes to reflect specific logical circumstances. It has been designed for operation with a pointing device such as a mouse or a tracker ball but control can still be effected in case of the absence or failure of such a device.

The program has the ability to accommodate a large number and variety of mobiles, including surface vessels/ships, anchor handling vessels, tugs, barges, ROVs, towfish, aircraft, vehicles and submersibles etc. The only limiting factors on the number of mobiles that can be tracked in GNS2 are the number of input/output serial communication ports available on the computer and the computer's memory.

For the input/output (I/O) of navigation and sensor data, GNS2 employs intelligent multi-channel serial communications boards to expand a computer's serial input/output facility. Currently GNS2 can support up to 26 communication (Comm) ports, which would consist of the computer's two internal Comm ports and three 8 channel serial communications boards fitted in the computer's internal expansion slots.

If Least Squares Computations (LSCs) are employed for positional calculations, whether twodimensional (2D), three-dimensional (3D) or altitude aided, GNS2 uses standard iteration routines for the minimisation of residuals using 'variation of co-ordinate' algorithms. The number of positioning systems/computations that GNS2 can handle, is only limited by the number of I/O serial communication ports available on the computer and the computer's memory.

All input observables are accepted on interrupt. Screen updates and other internal triggers are paced to once per second but time critical activities occur at discrete moments as required.

The GNS2 application workspace can extend beyond the display area, which is normally restricted to a single monitor connected to the computer. By using one or more multiple VGA cards, an enlarged display area can spread across multiple monitors.

Currently GNS2 can display 14 different types of view windows. Several copies of the same type of view window can be invoked at any one time. This may be required when several mobiles are being tracked and a Plan, Helmsman's or Bullseye display are required for each one or when the data on several Comm ports are to be viewed simultaneously. Each window can be individually sized to optimise use of the available display area.

GNS2 can be operated in 2 modes; GNS2 Master or GNS2 Remote. GNS2 Master has the full functionality of GNS2. GNS2 Remote is run on a separate computer and allows independent configuration of the graphics display and its associated numeric information. GNS2 Remote is operated on Anchor Handling Vessels or anywhere where positional information is required. (eg. Vessel Masters, ROV Pilots, Winch Control Stations). The link between GNS2 Master and GNS2 Remote can be via a telemetry link or hard wired cable.



## 7.2 GLOBAL POSITIONING SYSTEM (GPS)

#### System Description

The NAVSTAR GPS (Navigational Satellite Timing and Ranging Global Positioning System) is a USA Military all-weather, space-based positioning system that transmits signals from a constellation of satellites orbiting the Earth. It is capable of providing suitably equipped users worldwide with accurate three-dimensional positions on, or near, the Earth's surface. The accuracy of these determined positions can vary from a few millimetres to several 10's of metres depending on the GPS receiver and on the method of data acquisition and processing. System design consists of three integrated parts: the Ground Control Segment, the Space Segment and the User Segment.

The operational space segment consists of 24 production satellites and 3 active spares; the term Space Vehicle (SV) is used as a synonym for satellite. The satellites are in high orbits, at approximately 20,200km, having an orbit period of 12 hours. They are arranged in 6 orbital planes, inclined at 55 degrees with near circular orbits. The configuration provides complete 4-satellite (3D) coverage worldwide.

#### **GPS Observations**

There are two important types of GPS observations (observables): Pseudo-range and Carrier Phase. Carrier phase is sometimes also referred to as carrier beat phase. Pseudo-range techniques are generally used for navigation. In high-precision baseline surveying the carrier phase is used. Although the (undifferenced) phase can be used directly, it has become common practice, at least in surveying applications, to process certain linear combinations of the original carrier phase observations (double differences and triple differences).

#### **Pseudo-ranges**

The pseudo-range is a measure of the distance between the satellite and the receiver at the epochs of transmission and reception of the signals. The transit time of the signals is measured by comparing (correlating) identical pseudo-random noise (PRN) codes generated by the satellite and by the receiver. A code-tracking loop within the receiver shifts the internal replica of the PRN code in time until maximum correlation occurs. The codes generated at the receiver are derived from the receiver's own clock, and the codes of the satellite transmissions are generated by the satellite system of clocks. It follows that unavoidable timing errors in both the satellite and the receiver clock will cause the measured quantity (pseudo-range) to differ from the geometric distance.

Where instantaneous positions are required, pseudo-range is the preferred observable. Given the satellite ephemeris (i.e. the position of the satellite at the epoch of transmission), there are seven unknowns: two clock errors, three receiver co-ordinates and the ionospheric and tropospheric delays. The effect of the satellite clock error is negligible for the typical navigation solution, particularly considering that the time errors are indistinguishable from the ionospheric and tropospheric delays. The satellite clocks are constantly monitored and synchronised with GPS time as maintained by the control centre. Actual offsets of the satellite clocks are approximated by polynomials in time and transmitted as part of the navigation message to the user for the correction of the measured pseudo-ranges. The ionospheric and tropospheric delays can be computed on the basis of ionospheric and tropospheric models, thus there are four unknowns left X, Y, Z and receiver clock error. These can be determined from four pseudo-ranges measured simultaneously to four GPS satellites.



## **Carrier Phase**

The phase observable is the difference between the phase of the carrier signal of the satellite, measured at the receiver, and the phase of the local oscillator within the receiver at the epoch of measurement. This can be regarded as a biased range measurement of the satellite-receiver distance with the integer number of carrier waves being unknown. The wavelength of the L1 carrier is about 19cm. Because of the fraction of the carrier phase is measured, the term "interferometry" is often used to describe carrier phase techniques.



## 7.3 SKYFIX/SKYFIX SPOT DIFFERENTIAL GPS (DGPS)

## Differential GPS (DGPS)

GPS is primarily a USA Defence space-based positioning system capable of operating worldwide and in all weather conditions. The USA Military can degrade the accuracy of GPS with the use of Selective Availability (SA) to control the accuracy of Pseudo-range measurements. Essentially, the user is given a false Pseudo-range for each satellite so that the resulting measurement is in error by a controlled amount. On the 1 May 2000 SA was discontinued conditionally and coincided with the successful demonstration of the ability to selectively deny GPS signals on a regional basis. SA has been set to zero and can be reinstated during periods of heightened global tension.

GPS signals are affected by several sources of positional bias, the largest of which was SA. The remaining biases of the ionosphere, the troposphere, time, satellite ephemeris and inherent reciever noise also give rise to substantial bias of position.

Differential GPS is a means by which the civil user can improve the accuracy and quality of GPS to the 1-3 metre level. It requires a receiver be located at a precisely known point from which pseudo-range corrections for each satellite can be determined and monitored. These pseudo-range corrections are then communicated by means of a telecommunications link to users at unknown locations. In the relative mode, most of the important systematic errors common to the known station and at the unknown location cancel out to improve the accuracy of the computed position.

#### SkyFix/SkyFix Spot Differential

#### <u>SkyFix</u>

Thales GeoSolutions (Australasia) Limited introduced its SkyFix Differential GPS System in Australia in February 1991, using the Inmarsat Pacific and Indian Ocean marine communications satellites as the differential data broadcast link. Extensive performance trials and projects undertaken to date have shown SkyFix to meet the best industry expectations in terms of quality of service and accuracy.

Satellite communications systems, particularly at the Inmarsat L-band frequencies of 1.5 GHz are reliable and free of the interference associated with the crowded MF/HF bands. This high data integrity gives users confidence that the corrections will be continuously received without interference.

The SkyFix Australian network comprises of reference stations at Dampier, Broome, Perth, Adelaide, Melbourne, Sydney, Cairns and Darwin.

#### SkyFix Spot

The SkyFix Spot Differential GPS System was launched in Australia in December 1994, using the OPTUS high powered focused communications satellite as the differential data broadcast link. Projects undertaken to date have shown SkyFix Spot to meet the industry expectations in terms of quality of service and accuracy.

The SkyFix Spot system has a link capacity of 1200 bits per second, similar to the SkyFix system but because it is only transmitting corrections from the Australian network an update rate of better than five seconds is achieved.

The OPTUS satellite uses the L-band frequencies of 1.5586 GHz and are very reliable and free of interference avoiding data loss associated with the crowded MF/HF bands.



The SkyFix Spot network comprises of reference stations at Dampier, Broome, Perth, Adelaide, Melbourne, Sydney, Cairns, Darwin, Alice Springs and also Ujung Pandang and Jakarta in Indonesia and Wellington, New Zealand.

The differential corrections generated at each reference station are brought via landline links to the data hub and control centre in Singapore, where the system is monitored for performance and quality. From there, a composite message containing full RTCM 104 version 2 formatted data from all reference stations are sent via dual redundant links to Satellite Earth Stations at Sentosa Island, Singapore, O.T.C. Perth, Western Australia and OPTUS, Perth, Western Australia, for uplink and broadcast over the Inmarsat Pacific and Indian Ocean Region satellites and the OPTUS Satellite.

The SkyFix/SkyFix Spot system includes a 24 hour monitoring facility to ensure the validity of data received at the control centre from the Differential GPS reference stations, and that the same data are received over the SkyFix/SkyFix Spot satellite data link.

## 7.4 TRIMBLE SERIES 4000 GPS RECEIVER

The Trimble Series 4000 GPS receiver is designed for moderate precision static and dynamic positioning applications. The GPS receiver provides time and three-dimensional station co-ordinates at a once-per-second update rate.

The receiver receives the civilian coded signal (C/A) from the GPS NAVSTAR satellites. The receiver automatically acquires and simultaneously tracks GPS satellites and precisely measures code phase and computes position and velocity.

Latitude, longitude and height values are output on the World Geodetic System (WGS84) Earth-centred, Earth-fixed co-ordinate system.

The receiver is designed to measure the following observables:

- Coarse/Acquisition (C/A) code Pseudo-ranges
- Rate of change of Pseudo-range
- Integrated Carrier

C/A code correlation techniques measure the propagation time of the signal from the satellite to the antenna. Latitude, longitude, height and time can be determined from measurements made from at least 4 satellites, by a process similar to triangulation.

To determine speed and heading, the receiver calculates the rate of change of Range (the rangerate) by measuring the Doppler shift of the carrier.

It is capable of receiving and processing differential corrections from other reference sources using the standard format of the Radio Technical Commission for Maritime Services, Special Committee 104 (RTCM SC-104), Version 1.0 or 2.0 protocols.

The Trimble Series 4000 GPS receiver has several options available, including internal data logging memory, event marker logging etc. and therefore may be used alone or as part of a more extensive navigation system.



## 7.5 MULTIFIX 3

#### 7.5.1 System Overview

MultiFix 3 is Thales GeoSolutions third generation *multiple reference station* differential GPS (DGPS) real time position computation and quality control program. It is an integral part of the Thales SkyFix Premier service but can also be used with the standard SkyFix service. MultiFix 3 has more advanced features than its predecessor, MultiFix 2, including being able to use dual frequency receivers and form real time 'lono-Free DGPS position solutions'.

MultiFix 3 is one of a series of programs available under the group name Zero, which includes other tools and utilities with a similar user interface and layout structure, like static and dynamic position comparison programs, a correction monitor program, a terminal program and a replay utility.

MultiFix 3 takes in Almanac, Ephemeris and Raw Code and Carrier measurements from a single or dual frequency GPS receiver (or, for replay, from logged files). It takes in RTCM SC104 Version 2 differential correction messages from one or more RTCM correction delivery systems. It also takes in RTCM Type 15 or Thales Proprietary RTCM Type 55 lonospheric range corrections generated at selected SkyFix Premier reference stations and broadcast via the Thales global network of high (SkyFix Spot-Optus) and low (SkyFix-Inmarsat) power satellite based L-Band beams.

Key features of the program are:

- No limit on the number of RTCM correction delivery systems (data links)
- No limit on the number of RTCM differential reference stations
- No limit on the number of computations (solutions)
- Each computation can employ corrections from any combination of reference stations available
- Computations are weighted least squares with statistical evaluation based upon the UKOOA recommendations
- No limit on the number of outputs
- No limit on the number of view windows
- View windows can be customised
- Extra NMEA outputs can be defined
- TCP/IP communication via sockets for GPS, RTCM and position data transfer between networked computers

MultiFix 3 has been designed in a modular fashion such that data is passed between modules as if over a computer network. The core module MultiFix 3 performs the computation of position. Additional modules are available and more will be made available in the future. While a single computer can be used, the various modules will equally be able to be run on different computers, provided there is a network interconnection.

MultiFix 3 uses the EGM96 geoid/spheroid separation model.

The RTCM corrections that are generated at reference stations are contaminated by a variety of error components, one of which is lonospheric delay. The lonospheric delay is currently more variable because of greater sun spot activity. MultiFix 2 and MultiFix 3's standard computation uses the Klobuchar lonospheric delay model. This model is updated periodically but is not responsive to the current short-term variability. MultiFix 3 has an additional calculation option when working with dual frequency receivers and in receipt of Type 15 or 55 RTCM messages. With dual frequency receivers, estimates can be made of the lonospheric delay by examining the differences between the measurements from the two frequencies. If the same procedure for estimation of lonospheric delay is performed at the reference stations and on the mobile, both the RTCM corrections and the pseudo-ranges can have the lonospheric delay removed, effectively providing an lono-Free DGPS position solution.



## 7.5.2 Hardware Requirements

Optimum requirements for MultiFix 3 are:

- 350 MHz Pentium II computer
- 32 Mb RAM
- Windows 95, 98 or NT operating system
- Graphics resolution of at least 800 x 600 pixels
- Intelligent multi-port serial I/O board

### 7.5.3 Positioning and Quality Control Displays

MultiFix 3 has a large number of features to accomodate the user requirements of highly accurate positions with quality control (QC) information and outputs in different formats. MultiFix 3 runs in a Windows environment, which allows the user to design a preferred screen layout by opening, sizing and placing the numerous displays that are available. Examples of the various displays can be found below.













## 7.6 TRACS TDMA

Tracs TDMA (Time Division Multiple Access) is a high speed, intelligent network radio datalink which can operate in the VHF or UHF bands to provide an addressable network with integrated position reporting from an integrated/internal GPS receiver. The standard Tracs units are fitted with a Trimble SK8 GPS receiver, or a Trimble DSM GPS receiver.

Each unit in the network is assigned a unique address (1 to 255) enabling messages can be specifically addressed to that unit. A broadcast address (0) is provided to allow multiple units to receive a message, for example RTCM corrections. The system manages the data bandwidth by dividing it into timeslots synchronised by means of GPS 1PPS (pulse per second) timing pulse from an internal GPS receiver.

The standard Tracs system has a frequency band of 455.0MHz to 465.0MHz (frequency module 53R). The channel frequencies can be selected in 25kHz steps and the units are equipped with the facility to pre-store 10 selected frequencies within the 10MHz band. Units for use in Australia are fitted with 471MHz radios.

There are four types of messages that can be transmitted in a Tracs network.

- Position Reports automatically generated from the SK8 or DSM GPS receiver as a NMEA type or Raw Pseudo Range information.
- Transparent messages used to send unformatted data across the network eg. RTCM corrections.
- Open messages used to provide a general-purpose data link between units. This format is used by GNS to transfer information.
- Configuration messages used for remote configuration of units using the Destination ID to identify which unit is being configured.

## 7.7 S.G. BROWN 1000S GYROCOMPASS

The S.G. Brown 1000S Gyrocompass is a compact, simple-to-operate master heading reference instrument employing the effect of gravity and the earth's rotation to produce a True North reference. This reference may be read off the compass card or from a digital display and can be interfaced to the GNS2 navigation system.

The normal starting cycle of the instrument is fully automatic and is initiated when the system power supply is switched on. A fail safe control circuit is incorporated which ensures that the compass is not damaged after a power failure when power is restored; the compass will restart automatically and carry out its normal settling program.



## 8. PERSONNEL AND EQUIPMENT

#### 8.1 PERSONNEL

The following personnel were employed on this project:

#### For : Thales GeoSolutions (Australasia) Limited

P. Malatzky	:	Surveyor/Team Leader
S. Bradley	:	Senior Engineer

#### For: OMV Australia Pty Ltd

W. Edmonds : Client Representative



## 8.2 EQUIPMENT

The following equipment was provided for this project:

#### **Ocean Bounty**

- 2 x Compaq Computer, inc monitor, keyboard (for GNS2 / MultiFix 3)
- 1 x Thales SkyFix Mini Rig Portable
- 3 x SkyFix/SkyFix Spot MK II Receivers
- 1 x Compaq Computer, inc. monitor, keyboard (for GNS2 Remote)
- 1 x S.G. Brown 1000S gyrocompass
- 1 x Uninteruptable Power Supply (UPS)
- 2 x Epson LX300 Printers
- 2 x SkyFix Spot Whip Antennae
- 1 x SkyFix Spot Antenna 90962/3/1
- 2 x Trimble 4000DS GPS Receivers
- 2 x SkyFix Spot Antennae
- 2 x Tracs Bricks
- 2 x Tracs Multiplexer
- 2 x UHF Antennae
- 1 x Marine Sextant

#### **Pacific Sentinel and Pacific Conqueror**

- 1 x Tracs Geopod
- 1 x Fluxgate compasses
- 1 x Tracs Box and Interface Box
- 1 x Compaq computer, inc. monitor, keyboard (GNS2 Tug Display)
- 1 x Uninteruptable Power Supply (UPS)

plus all associated software (GNS 2 version 2.32, MultiFix 3 version 1.24) c/w cables, consumables, software dongles etc.



## 9. DISTRIBUTION

Copies of this report have been distributed as follows:

OMV Australia Pty Ltd Attn: Mr Ron King : 3 copies

: 1 electronic copy

Thales GeoSolutions (Australasia) Limited

: 1 copy

Paul Malatzky

Paul Malatzky Surveyor

Anthony Kerr Survey Manager



## **APPENDIX A**

FINAL DIFFERENTIAL GPS DRILLSTEM POSITION AT PATRICIA-2

## THALES Thales GeoSolutions Group Ltd

## **FINAL POSITION FIX – DIFFERENTIAL GPS**

Job Description:	Ocean Bounty to Patricia-2
Job Number:	3382A3
Thales Surveyor:	P.Malatzky
Client:	OMV Australia
Client Representative:	W.Edmonds
Sampling started:	21 Jun 2002 06:02:38
Sampling end:	21 Jun 2002 07:02:35
Ocean Bounty	

Ocean Bounty Intended datum location

Datum:	AGD	1966		
Latit	ude:	38°01'39.975"S	Longitude:	148°26'57.831"E
Projection:	AMG	Zone 55		
East	ting:	627209.00 m	Northing:	5790097.80 m

#### Final Antenna Position (T1 Thales UKOOA):

Sample size: 720 fixes used out of a total of 720.

#### Antenna offset

X:	0.28m	Y:	33.90m Z:	20.00m	า
Range:	33.90m	Rel Brg fror	n datum to antenna:	0.5°	
Datum:	WGS 84				
Latitude:	38°01'34.600"S	Longitude:	148°27'00.928"E	Spheroidal Ht:	42.40m
Datum:	AGD 1966				
Latitude:	38°01'40.127"S	Longitude:	148°26'56.406"E	Spheroidal Ht:	49.32m
Projection:	AMG Zone 55				
Easting:	627174.17	Northing:	5790093.66	Spheroidal Ht:	49.32m

#### **Standard deviations**

Long or E:	0.46m
Lat or N:	0.26m
Height:	0.65m
Position:	0.53m

## **Final Datum Position**

<b>Datum:</b> Latitude:	<b>AGD 1966</b> 38°01'39.946"	S Longitude:	148°26'57.777"E	
Projection: Easting:	<b>AMG Zone 55</b> 627207.69 m	Northing:	5790098.71 m	
Mean corrected SD heading: Intended headi Difference from Gyro C-O: Convergence:	d heading: ng: n intended:	260.1°T 0.1°T 257.0°T 3.1° 0.5° -0.89°		
Final Datum Position is 1.59m on a bearing of 303.9°T (304.8°G) <u>from</u> the intended location.				

Project: Patricia-2 Positioning Report of the Ocean Bounty Client: OMV Australia Pty Ltd



# APPENDIX B

**GNS2 STATIC DIFFERENTIAL GPS FIX GRAPHS** 

### THALES Thales GeoSolutions (Australasia) Limited Project: Patricia-2 Positioning Report of the Ocean Bounty

 Project:
 Patricia-2 Positioning Report of the Ocean Bounty

 Client:
 OMV Australia



Static Fix Graphs - Patricia-2

THALES Thales GeoSolutions (Australasia) Limited Project: Patricia-2 Positioning Report of the Ocean Bounty

 Project:
 Patricia-2 Positioning Report of the Ocean Bounty

 Client:
 OMV Australia



Static Fix Graphs - Patricia-2

# APPENDIX C

RUN LINE GRAPHICS OF ANCHOR HANDLING VESSELS

Project: Patricia-2 Positioning Report of the Ocean Bounty Client: OMV Australia Pty Ltd



Anchor 1 – Pacific Sentinel

Project: Patricia-2 Positioning Report of the Ocean Bounty Client: OMV Australia Pty Ltd



Anchor 2 – Pacific Conqueror

**Project:** Patricia-2 Positioning Report of the Ocean Bounty **Client:** OMV Australia Pty Ltd



Anchor 3 – Pacific Conqueror

Project: Patricia-2 Positioning Report of the Ocean Bounty Client: OMV Australia Pty Ltd



Anchor 4 – Pacific Conqueror

 Project:
 Baleen-3 Positioning Report of the Ocean Bounty

 Client:
 OMV Australia



Anchor 5 – Pacific Conqueror

Project: Baleen-3 Positioning Report of the Ocean Bounty Client: OMV Australia

#### 🍯 👿 📉 💽 🔍 🐼 🖾 💶 💶 🖂 GNS II - C:\Ocean Bounty\Ocean Bounty.gns File Setup Mobile System Control Kbd Comps View Window Help Plan:4 \_ 🗆 × GNS Time: 628620 ◕◕▤⊕╲іё∄ऒ҉ы;€ 20-Jun-02 5791110 GNS Time: 03:39:48 Ocean Bounty Posn Src Name: T1 Thales UKOOA Posn Src: Primary Trk Offset: Fairlead 6 38°01'08.309″S Lat: 148°27'39.329"E Lng: AMG Zone 55 E : 628236.09 N : 5791057.99 THdg: 229.9 °T 0.5 ° Gyro C-O: 1.4 kts Speed: No waypoint assigned Rng(S): 222 222 °T Brg(T): ETA: 222 THdq: 212.8 °T TCMG: 212.8 °T Speed: 1.9 kts No anchor assigned Rng(S):°T Brg(T): DOfL: m Sentinel THda: 225.0 °T TCMG: 221.4 °T 1.4 kts Speed: No anchor assigned Rng(S):222 m Brg(T): 222 °T DOfL: -24.35m E 627660, -N 5790580 Grid size: 200 m-• Ocean Bounty -CAPS NUM SCRL OVR

ONLINE

FIX

LOG

Project: Baleen-3 Positioning Report of the Ocean Bounty Client: OMV Australia



Project: Baleen-3 Positioning Report of the Ocean Bounty Client: OMV Australia



**Anchor 8 - Pacific Sentinel** 

## APPENDIX D

OCEAN BOUNTY ANCHOR PATTERN DETAILS AT PATRICIA-2

**Project:** Patricia-2 Positioning Report of the Ocean Bounty **Client:** OMV Australia Pty Ltd



#### **Anchor Pattern At Patricia-2**

## APPENDIX E

OCEAN BOUNTY ANCHOR CATENARY CALCULATIONS
# THALES Thales GeoSolutions (Australasia) Limited Project: Patricia-2 Positioning Report of the Ocean Bounty Client: OMV Australia Pty Ltd

Control		
Anchors	Cable Components	Anchor
Anchor 1 ON SEABED ▼ Fairlead Cable Out Winch Counter Reading € Manual: 2392 ft	Length Wt (Wt/L) Fairlead F'lead Seg 1 2392.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00	E: 627015.06 627014.86 N: 5789358.05 5789357.30 Depth: 170.83 ft 0.00 ft Horizontal Range From Fairlead Comp: 2376.66 ft Act: 2379.21 ft
Corr to Eairlead Corr to Eairlead Total (corrected): 2392.00 ft On Seabed: 1311.11 ft Suspended: 1080.89 ft	Add Edit Dejete Last	Brg From Fairlead     2.54 R       Brg From Fairlead     Comp:       194,0 *T     Act:       194,0 *T     Market in the second s
Tension            • Manual: 345 kips             • Lensionometer: Not Available             • Current Value: 345 00, kips	Anchor Handling Vessel Lable <u>Weight/Length</u> Out: 0 ft <u>Depth</u> 52.00 m <u>View Section</u>	Touchdown Points Point: 1   Down Total: 1 E: 627117.86 N: 5789744.15 Horiz Rng From F'lead: 1065.56 ft
Current Value: 345.00 Kips	Enable Comp	Unit <u>s</u> Close
Coean Bounty Catenary Control     Anchors     Anchor 2 ON SEABED     ✓     Fairlead Cable     ✓     Out     Winch Counter Reading     ✓     Winch Counter Reading     ✓     Winch Counter Reading     ✓     Out     ✓     Out     ✓     Out     ✓     Out     ✓     Corr to Fairlead     O.00 ft     Total (corrected): 2879.00 ft     On Seabed: 1890.57 ft     Suspended: 988.43 ft     ✓     Tension     ✓     Manual: 290     kips     ✓     Iensionometer: Not Available     ✓     Current Value: 290.00 kips	Cable Components         Length       Wt (Wt/L)         Fairlead       Filead Seg 1       2879.00       91.00         Anchor       0.00       0.00       0.00         AHV to Anc       0.00       0.00         Add       Edit       Dejete Last         Anchor Handling Vessel Cable       Weight/Length       Out: 0         Depth       52.00 m       View Section	Anchor       Computed       Actual         E:       626540.43       626547.70         N:       5789483.61       5789489.95         Depth:       170.65 ft       0.00 ft         Horizontal Range From Fairlead       Comp:       2862.26 ft         Computed Minus Actual:       31.68 ft         Brg From Fairlead       Comp:       228.0 °T         Comp:       228.0 °T       Act:       228.0 °T         I Use Intended (Planning Only)       I       Issel Intended (Planning Only)         Touchdown Points       Down       Total:       1         E:       626974.40       N:       5789862.54         Horiz Rng From Filead:       971.68 ft
# Ocean Bounty Catenary Control Anc <u>h</u> ors	Cable Components	
Anchor 3 ON SEABED	Length Wt (Wt/L) Fairlead F'lead Seg 1 2946.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00	Computed         Actual           E:         626321.15         626313.45           N:         5790361.85         5790363.87           Depth:         170.43 ft         0.00 ft           Horizontal Range From Fairlead         Comp:         2931.36 ft           Computed Minus Actual:         -26.12 ft           Brg From Fairlead         Comp:         283.8 °T           Act:         283.8 °T         Act:         283.8 °T           Image:         Use Intended (Planning Only)         State         State

Anchor Handling Vessel Cable

Weight/Length... Out: 0

Enable Comp

<u>D</u>epth...

Transfer All Comp --> Actual

5790220.99

Close

1111.81 ft

Touchdown Points

Horiz Rng From F'lead:

Unit<u>s</u>...

E:

Point: 1 💌 Down Total: 1

626857.45 N:

ft

52.00 m View Section..

Catenary Calculations - Patricia-2

375

C Tensionometer: Not Available

1819.55 ft

1126.45 ft

kips

375.00 kips

-

On Seabed:

Suspended:

Tension Ma<u>n</u>ual:

Current Value:

# THALES Thales GeoSolutions (Australasia) Limited Project: Patricia-2 Positioning Report of the Ocean Bounty

Client: OMV Australia Pty Ltd

🗱 Ocean Bounty Catenary Control		
Anchors Anchor 4 ON SEABED Fairlead Cable Out Out Manual: 2733 ft Counter: Not Available Corr to Eairlead Corr to Eairlead.	Cable Components         Length       Wt (Wt/L)         Fairlead         Flead Seg 1       2663.00       91.00         Anchor       0.00       0.00         AHV to Anc       0.00       0.00         Add       Edit       Dejete Last	Anchor         Computed         Actual         E         626729.85         626717.77         N:         5790799.27         5790816.73         Depth:         170.48 ft         0.00 ft         Horizontal Range From Fairlead         Comp:         2648.55 ft         Act:         2718.23 ft         Computed Minus Actual:         -69.67 ft         Brg From Fairlead         Comp:         324.4 *T         Act:         324.4 *T         I         I         I         Use Intended (Planning Only)         Transfer All Comp> Actual         I         Transfer All Comp> Actual         I<
On Seabed: 1521.15 ft Suspended: 1141.85 ft Tension ⓒ Manual: 385 kips ⓒ Lensionometer: Not Available ▼ Current Value: 385.00 kips	Anchor Handling Vessel Cable Weight/Length Out: 0 ft Depth 52.00 m View Section Enable Comp Update Catenary	Transfer All Comp> Actual         Touchdown Points         Point:       1 ▼ Down Total:         E:       626993.61 N:       5790418.07         Horiz Rng From F'lead:       1127.40 ft         Units       Close



👯 Ocean Bounty Catenary Control		
Anchors	Cable Components Length Wt (Wt/L)	Anchor Computed Actual
Fairlead Cable         Out         Winch Counter Reading         ♥ Manual:         4658         ft         Counter:         Not Available         Corr to Eairlead         0.00 ft         Total (corrected):         4658.00 ft         On Seabed:         1032.95 ft	Fairlead       F'lead Seg 1     4658.00     91.00       Anchor     0.00       AHV to Anc     0.00     0.00	E: 628268.89 628233.62 N: 5791086.91 5791055.14 Depth: 170.67 ft 0.00 ft Horizontal Range From Fairlead Comp: 4641.82 ft Act: 4486.04 ft Computed Minus Actual: 155.78 ft Brg From Fairlead Comp: 47.1 °T Act: 47.1 °T ☐ Use Intended (Planning Only) Transfer All Comp> Actual
Suspended:       1022.86 ft         Tension       310         Manual:       310         Lensionometer:       Not Available         Current Value:       310.00 kips	Anchor Handling Vessel Cable Weight/Length Out: 0 ft Depth 52.00 m View Section F Enable Comp	Touchdown Points           Point:         1           Down         Total:         1           E:         627445.85         N:         5790345.45           Horiz Rng From F'lead:         1006.68 ft           Units         Close

Catenary Calculations – Patricia-2

# THALES Thales GeoSolutions (Australasia) Limited Project: Patricia-2 Positioning Report of the Ocean Bounty Client: OMV Australia Pty Ltd

👷 Ocean Bounty Catenary Control		
Anc <u>h</u> ors	- Cable Components	Anchor
Anchor 7 ON SEABED	Length Wt (Wt/L)	Computed Actual
- Fairlead Cable	Fairlead	E: 6280003.36 628000.66 N: 5789773.64 5789776.67
Dut	Filead Seg 1 2902.00 91.00	Depth: 170.48 ft 0.00 ft
Winch Lounter Reading	AHV to Anc 0.00 0.00	Horizontal Range From Fairlead
• <u>M</u> anuar: 2902 rt		Comp: 2881.15ft Act: 2850.95 ft
C Counter: Not Available 🚬		Computed Minus Actual: 30.20 ft
Corr to Fairlead		Comp: 108,3 °T Act: 108.3 °T
Total (corrected): 2902.00.ft		Use Intended (Planning Only)
On Seabed: 2107.67.ft	Add Edit Dejete Last	
Suspended: 794.33 ft		Transfer All Comp> Actual
	Anchor Handling Vessel Cable	Touch <u>down P</u> oints
Manual: 190 kips	Weight/Length Out: 0 ft	Point: 1 💌 Down Total: 1
C Tensionometer Not Available		E: 627452.82 N: 5789984.95
Current Valuer 190.00 kins	<u>D</u> epth 52.00 m <u>V</u> iew Section	Horiz Rng From F'lead: 773.47 ft
Current value. 150.00 kips	Enable Comp     Undate Catenary	Units Close
📲 Ocean Bounty Catenary Control		
Anchors	Cable Components	Anchor
Anchor 8 ON SEABED	Length Wt (Wt/L)	E: 627785.48 627804.85
Fairlead Cable	Filead Seg 1 2653.00 91.00	N: 5789485.62 5789465.66
Winch Counter Reading	Anchor 0.00	Depth: 170.43 ft 0.00 ft
• <u>M</u> anual: 2653 ft	AHV to Anc 0.00 0.00	Comp: 2634.95ft Act: 2726.24 ft
C Counter: Not Available		Computed Minus Actual: -91.29 ft
		Brg From Fairlead
Corr to Eairlead 0.00 ft		Comp: 135.0 °T Act: 135.0 °T
Total (corrected): 2653.00 ft	Add Edit Delete Last	Use Intended (Planning Only)
On Seabed: 1737.74 ft		Transfer All Comp> Actual
Suspended: 915.26 ft	-Anchor Handling Vessel Cable	

Weight/Length... Out: 0

Depth...

🔽 Enable Comp

Touch<u>down P</u>oints-

Horiz Rng From F'lead:

Unit<u>s</u>...

E:

Point: 1 🔽 Down Total: 1

627416.69 N:

5789865.66

Close

897.22 ft

ft

52.00 m View Section...

Update Catenary

Tension • Ma<u>n</u>ual:

Current Value:

250

C Lensionometer: Not Available

kips

250.00 kips

4

# APPENDIX F

**GYROCOMPASS CALIBRATION REPORT** 

# THALES

### Thales GeoSolutions (Australasia) Limited ABN 82 000 601 909 Solar Observation for Azimuth (Hour Angle) 2002

Thales Job Number: Job Description: Client: Party Chief: Surveyor: Rig Name: Date:

3382A3 Ocean Bounty Rig Move to Patricia-2 OMV Australia P.Malatzky P.Malatzky Ocean Bounty 16 June 2002

#### **Control Point Co-ordinates**

#### Datum: WGS84 Projection: UTM Zone 55S CM 147° East

Latitude (DMS):	-038	00	16
Longitude (DMS):	148	26	37
UTC Correction (HMS):	10.00		

#### **Total Station Observations:**

	Local Time (HMS)			0	Observed			bserve	ed	Observed (O)
Face				Direc	tion to	R.O.	Direc	ction to	Sun	True Heading
					(DMS)			(DMS)		(D.D)
Left	07	20	05	000	00	00	163	25	12	256.70
Right	07	20	05	180	00	00	343	25	12	
Left	07	20	35	000	00	00	163	17	12	256.80
Right	07	20	35	180	00	00	343	17	12	
Left	07	21	00	000	00	00	163	13	48	256.80
Right	07	21	00	180	00	00	343	13	48	
Left	07	21	45	000	00	00	163	02	36	256.80
Right	07	21	45	180	00	00	343	02	36	
Left	07	22	25	000	00	00	163	19	48	256.70
Right	07	22	25	180	00	00	343	19	48	
Left	07	23	05	000	00	00	162	37	24	256.20
Right	07	23	05	180	00	00	342	37	24	
Left	07	23	35	000	00	00	163	01	48	256.80
Right	07	23	35	180	00	00	343	01	48	
Left	07	24	25	000	00	00	162	26	36	257.00
Right	07	24	25	180	00	00	342	26	36	
Left	07	25	10	000	00	00	162	50	12	256.70
Right	07	25	10	180	00	00	342	50	12	
Left	07	25	52	000	00	00	162	37	12	256.80
Right	07	25	52	180	00	00	342	37	12	
Left										
Right										
Left										
Right										

Signature

SURVEYOR/PARTY CHIEF

#### CLIENT SURVEY REPRESENTATIVE



# **Thales GeoSolutions (Australasia) Limited**

ABN 82 000 601 909

# Solar Observation for Azimuth (Hour Angle) 2002

3382A3
Ocean Bounty Rig Move to Patricia-2
OMV Australia
P.Malatzky
P.Malatzky
Ocean Bounty
16 June 2002

Datum: WGS84 Projection: UTM Zone 55S CM 147° East

Ave Tii	Average Local Time (HMS)			Average Horizontal Angle (DMS)			Azimuth Sun (DMS)			Azimuth RO (DMS)		Calculated (C) True Heading (D.D)	Observed (O) True Heading (D.D)	C-O (D.D)
07	20	05.0	163	25	12	060	39	32	257	14	20	257.24	256.70	0.54
07	20	35.0	163	17	12	060	34	58	257	17	46	257.30	256.80	0.50
07	21	00.0	163	13	48	060	31	09	257	17	21	257.29	256.80	0.49
07	21	45.0	163	02	36	060	24	17	257	21	41	257.36	256.80	0.56
07	22	25.0	163	19	48	060	18	10	256	58	22	256.97	256.70	0.27
07	23	05.0	162	37	24	060	12	02	257	34	38	257.58	256.20	1.38
07	23	35.0	163	01	48	060	07	26	257	05	38	257.09	256.80	0.29
07	24	00.0	162	26	36	059	59	46	257	33	10	257.55	257.00	0.55
07	25	10.0	162	50	12	059	52	51	257	02	39	257.04	256.70	0.34
07	25	52.0	162	37	12	059	46	23	257	09	11	257.15	256.80	0.35

Mean C-O 0.53

Signature

SURVEYOR/PARTY CHIEF

CLIENT SURVEY REPRESENTATIVE

# APPENDIX G

DIFFERENTIAL GPS CHECK

# THALES Thales GeoSolutions Group Ltd

# **CHECK POSITION FIX – DIFFERENTIAL GPS**

Job Desc Job Num Thales S Client: Client Re	cription: ber: urveyor: presenta	itive:	Ocean 3382/ P.Mal OMV W.Ed	n Bounty to P A3 atzky Australia monds	Patricia-2		
Sampling Sampling	g started: g end:	:	16 Ju 16 Ju	n 2002 11:13 n 2002 11:23	:27 :20		
Ocean E Intended Datum: Lat Projection Eas	<b>Bounty</b> datum lo AGD itude: n: AMG i sting:	2cation 1966 38°00'20.98 Zone 55 626675.86	6"S m	Longitude: Northing:	148°26'34.415"E 5792541.30 m		
Final Ant Sai	enna Pos mple size	sition (T1 Th a: 120 fix	ales ( kes us	JKOOA): ed out of a to	tal of 120.		
<b>An</b> X: Rai	<b>tenna off</b> nge:	<b>šet</b> 0.28m 33.90m		Y: Rel Brg from	33.90m Z: datum to antenna:	20.00m 0.5°	
Dat Lat Dat	tum: itude: tum:	WGS 84 38°00'15.654"S AGD 1966		Longitude:	148°26'37.577"E	Spheroidal Ht:	45.40m
Lat Pro Eas	ojection: sting:	AMG Zone 5 626642.61	55	Longitude: Northing:	5792535.81	Spheroidal Ht: Spheroidal Ht:	52.26m 52.26m
<b>Sta</b> Lor Lat Hei Pos	ndard de ng or E: or N: ight: sition:	eviations 0.95m 0.80m 0.39m 1.24m	) ) )				
Final Da Datum: Latitude:	tum Pos AG 38	<b>sition</b> S <b>D 1966</b> S°00'20.884"S	6	Longitude:	148°26'34.394"E		
Projectio Easting:	n: AN 6	<b>IG Zone 55</b> 26675.39 m		Northing:	5792544.46 m		
Mean con SD headin Intended Difference Gyro C-O Converge	rected he ng: heading: e from into t: ence:	ading: ended:	253.9 0.6° 257.6 -3.7° 0.5° -0.89	°T T °T	250 7°T (254 6°C) 5-	om the publicked	location
rinai Dat		UUIIIS 3.20		a bearing of	350.7 T (351.6 G) <u>Tr</u>	<u>om</u> me published	location.

# APPENDIX H

OCEAN BOUNTY OFFSET DIAGRAM

# OCEAN BOUNTY OFFSET DIAGRAM



# **APPENDIX I**

PACIFIC SENTINEL AND PACIFIC CONQUEROR OFFSET DIAGRAMS





# APPENDIX J

**GNS2 CONFIGURATION FILE PRINTOUT** 

JOB DETAILS : 3382A3/ Job Number / Job Description : Ocean Bounty to Patricia-2' : Thales GeoSolutions Group Ltd Company Client : OMV / Time Zone : GMT +10:00 1 WORKING SPHEROID AGD 1966 : 6378160.000 m Semi-major : 0.006694541855 1 e Squared WORKING PROJECTION AMG Zone 55 : 00°00'00.000"N Lat of Origin Long of Origin : 147°00'00.000"E False Easting : 500000.00 False Northing : 10000000.00 500000.00 : 0.999600 Scale Factor : Metres Units GPS TRANSFORMATION From : WGS 84 : 6378137.000 m Semi-major : 0.006694380067 e Squared To : AGD 1966 1 Dx : 123.314 m : 47.223 m Dy : -136.594 m Dz 0.2640 secs Rot x : Rot y : 0.3220 secs 0.2700 secs 1.3840 ppm Rot z : Scale : WAYPOINTS 0.00 m E: 626048.80 N: 5792058.60 Ht: Baleen-1 5.00 m Tol2 E: 626676.40 N: 5792539.70 Ht: E: 626947.80 N: 5789695.40 Ht: 0.00 m Tol1: Baleen-3 0.00 m Tol1: 5.00 m Tol2 Patricia-1 E: 627209.00 N: 5790097.80 Ht: 0.00 m Tol1: 5.00 m Tol2 Patricia-2 E: 621503.10 N: 5771736.08 Ht: E: 632352.85 N: 5794780.59 Ht: 0.00 m West Tuna 0.00 m Run In TRACK GUIDANCE None defined MOBILES Ocean Bounty (semi-sub rig) Shape Definition: Ocean Bounty Line:-X: 14.20 m Y: 37.00 m X: 14.20 m Y: 16.60 m X: 39.30 m Y: 16.60 m N. Ehnd. Verified by: (sign)\_ (print)

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```
X: 39.30 m Y: -16.60 m
   X: 14.20 m Y: -16.60 m
X: 14.20 m Y: -36.20 m
X: -14.20 m Y: -36.20 m
   X: -14.20 m Y: -16.60 m
X: -39.30 m Y: -16.60 m
X: -39.30 m Y: 16.00 m
   X: -14.20 m Y: 16.00 m
X: -14.20 m Y: 37.00 m
   X: 14.20 m Y: 37.00 m
   Line:-
    X: -4.00 m Y: 30.00 m
    X: 4.00 m Y: 30.00 m
         4.00 m Y: 41.00 m
2.00 m Y: 45.00 m
    X:
    X:
   X: -2.00 m Y: 45.00 m
X: -4.00 m Y: 45.00 m
X: -4.00 m Y: 41.00 m
X: -4.00 m Y: 30.00 m
  Tracking Point
                         : Datum/
  Pitch and Roll Centre: Datum
  Selected Sources:-
   Primary Position : T1 Thales UKOOA (Using Antenna Offset : GPS Ae)~
   Backup Position : T2 Thales UKOOA (Using Antenna Offset : GPS Ae)
Primary Heading : E1 SCB 10008
Primary Height : Datum Displacement
   Primary Height
                     : Manual
   Pitch and Roll
   Soundings : Manual
                       : Position Filter
   Speed
   Course Made Good : Posn Filter CMG
  Equipment:-
   T1 Thales UKOOA
    Status: ON Interface: Sock1
Antenna Offset Selected: GPS Ae
X: 0.28 m Y: 33.90 m Z: 20.00 m Rng: 33.90 m Brg: 0.5°
    Apply Pitch Roll: Off Stale Time: 5.0 s Posn SD: 3.0 m Ht SD: 1.0 m
    Update posn only when diff corrected
    Filter: Off Time Constant:60.0 s Sample Dwell: 0.5 s
    Gate: Off Gate Width: 9.0 xSD Minimum Gate: 0.0 m
   T2 Thales UKOOA
    Status: ON Interface: Sock2
    Antenna Offset Selected: GPS Ae
     X: 0.28 m Y: 33.90 m Z: 20.00 m Rng: 33.90 m Brg: 0.5°
    Apply Pitch Roll: Off Stale Time: 5.0 s Posn SD: 3.0 m Ht SD: 1.0 m
    Update posn regardless of whether diff corrected
    Filter: Off Time Constant:60.0 s Sample Dwell: 0.5 s
    Gate: Off Gate Width: 9.0 xSD Minimum Gate: 0.0 m
   S1 SGB 1000S
    Status: ON Interface: COM6
    C-O: 0.5 degs / Stale Time: 5.0 s SD: 0.1 degs
                                                 (print)
Verified by: (sign)
                                                                           Page 2 of 6
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```

Filter: Off Gate: Off Time Constant: 5.0 s Sample Dwell: 0.5 s T3 Tracs TDMA Master Status: ON Interface: COM10 Antenna Offset Selected: GPS Ae 33.90 m Brg: 0.5° X: 0.28 m Y: 33.90 m Z: 20.00 m Rng: Defined Offsets:-Datum 0.00 m Brg: 0.0° 0.00 m Z: 0.00 m Rng: 0.00 m Y: Χ: GPS Ae 20.00 m Rng: 33.90 m Brg: 0.5° X: 0.28 m′Y: 33.90 m Z: Fairlead 1 41.27 m Brg:287.8° 12.60 m Z: -4.11 m Rng: X: -39.30 m Y: Fairlead 2 42.66 m Brg:292.9° 16.60 m Z: -4.11 m Rng: X: -39.30 m Y: Fairlead 3 42.66 m Brg: 67.1° X: 39.30 m Y: 16.60 m Z: -4.11 m Rng: Fairlead 4 41.27 m Brg: 72.2° -4.11 m Rng: X: 39.30 m Y: 12.60 m Z: Fairlead 5 41.27 m Brg:107.8° X: 39.30 m Y: -12.60 m Z: -4.11 m Rng: Fairlead 6 -4.11 m Rng: 42.66 m Brg:112.9° 39.30 m Y: -16.60 m Z: X: Fairlead 7 42.66 m Brg:247.1° -4.11 m Rng: X: -39.30 m Y: -16.60 m Z: Fairlead 8 -4.11 m Rng: 41.27 m Brg:252.2° X: -39.30 m Y: -12.60 m Z: Conqueror (ship) Shape Definition: Pac Conquerer Line:-X: -6.80 m Y: 0.00 m X: -6.80 m Y: 49.40 m 0.00 m Y: 6.80 m Y: 65.00 m X: X: 49.40 m 6.80 m Y: 0.00 m X: X: -6.80 m Y: 0.00 m Line:-X: -1.50 m Y: 35.00 m X: -3.50 m Y: X: -3.50 m Y: 37.00 m 45.00 m X: -6.00 m Y: X: -6.00 m Y: 45.00 m Y: 47.00 m X: -3.50 m Y: 47.00 m X: -3.50 m Y: 49.00 m X: -2.00 m Y: 51.00 m 2.00 m Y: 51.00 m X: X: 3.50 m Y: 49.00 m 3.50 m 47.00 m Y: X: 6.00 m 47.00 m X : Y: X: 6.00 m Y: 45.00 m 3.50 m 45.00 m Х: Y:

Verified by: (sign)\_\_\_\_\_

3.50 m Y: 37.00 m

\_\_\_\_\_ (print)\_

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х:

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GNS II CONFIGURATION FILE C:\Ocean Bounty\Ocean Bounty.gns X: 1.50 m Y: 35.00 m X: -1.50 m Y: 35.00 m Tracking Point : Datum Pitch and Roll Centre: Datum Selected Sources:-Primary Position : T4 Tracs TDMA Remote (Using Antenna Offset : Pod) Primary Heading : T4 Tracs TDMA Remote Primary Height : Datum Displacement : Manual Pitch and Roll Soundings : Manual : T4 Tracs TDMA Remote Speed Course Made Good : Posn Filter CMG Equipment:-T4 Tracs TDMA Remote Status: ON Interface: Not defined Antenna Offset Selected: Pod 0.00 m Rng: 48.04 m Brg: 2.4° 2.00 m Y: 48.00 m Z: X: Defined Offsets:-Datum 0.00 m Brg: 0.0° 0.00 m Z: 0.00 m Rng: X: 0.00 m Y: Pod 2.00 m Y: 0.00 m Rng: 48.04 m Brg: 2.4° 48.00 m Z: Х: Sentinel (ship) Shape Definition: Pac Sentinel Line:-X: -6.80 m Y: 0.00 m X: -6.80 m Y: X: 0.00 m Y: 49.40 m 65.00 m X: 6.80 m Y: 49.40 m X: X: 6.80 m Y: X: -6.80 m Y: 0.00 m 0.00 m Line:-X: -1.50 m Y: X: -3.50 m Y: 35.00 m 37.00 m X: -3.50 m Y: 45.00 m X: -6.00 m Y: X: -6.00 m Y: 45.00 m 47.00 m X: -3.50 m Y: 47.00 m X: -3.50 m 49.00 m Y: -2.00 m 51.00 m X: Y: X: 2.00 m Y: 51.00 m 3.50 m Y: 3.50 m Y: 49.00 m Χ: 47.00 m Х: Χ: 6.00 m Y: 47.00 m 6.00 m Y: 45.00 m Х: 3.50 m Y: 45.00 m X: X: 3.50 m Y: 37.00 m 1.50 m Х: Y: 35.00 m -1.50 m Y: 35.00 m X: (print)\_\_\_\_\_ Verified by: (sign)\_\_\_

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```
Tracking Point
                      : Datum
 Pitch and Roll Centre: Datum
  Selected Sources:-
  Primary Position : T5 Tracs TDMA Remote (Using Antenna Offset : Pod)
  Primary Heading : T5 Tracs TDMA Remote
  Primary Height : Datum Displacement
                  : Manual
  Pitch and Roll
  Soundings
                   : Manual
   Speed
                   : Position Filter
  Course Made Good : Posn Filter CMG
 Equipment:-
   T5 Tracs TDMA Remote
   Status: ON Interface: Not defined
   Antenna Offset Selected: Pod
                                    0.00 m Rng: 50.04 m Brg: 2.2°
    X:
          1.95 m Y:
                     50.00 m Z:
 Defined Offsets:-
  Datum
                                                 0.00 m Brg: 0.0°
                    0.00 m Z:
                                  0.00 m Rng:
         0.00 m Y:
   Χ:
   Pod
         1.95 m Y: 50.00 m Z: 0.00 m Rng: 50.04 m Brg: 2.2*
   Х:
ANCHORS
Ocean Bounty
 Fairleads:-
                                             Z
                                                               Brg
                       х
                                 Y
                                                      Rng
 Name
                                                      41.27 m 287.8
                    -39.30 m
                                12.60 m
                                          -4.11 m
 Fairlead 1
                                                      42.66 m 292.9°
 Fairlead 2
                    -39.30 m
                                16.60 m
                                          -4.11 m
                                                      42.66 m 67.1°
                     39.30 m
                               16.60 m
                                          -4.11 m
 Fairlead 3
                                                      41.27 m 72.2°
                     39.30 m
                                12.60 m
                                          -4.11 m
 Fairlead 4
                                                      41.27 m 107.8°
                                          -4.11 m
 Fairlead 5
                     39.30 m
                               -12.60 m
                                                      42.66 m 112.9°
                     39.30 m
                               -16.60 m
                                          -4.11 m
 Fairlead 6
                                                     42.66 m 247.1°
                    -39.30 m
                               -16.60 m
                                          -4.11 m
 Fairlead 7
                                                     41.27 m 252.2°
 Fairlead 8
                    -39.30 m
                               -12.60 m
                                          -4.11 m
 Main Intended Positions:-
                                                 Depth
                                                           Tolerance
 Name
                          Easting
                                    Northing
                        626784.89 5788755.74
                                                0.00 m
                                                              0.00 m
 Anchor 1
 Anchor 2
                                  5789139.22
                                                 0.00 m
                                                             50.00 m
                        626186.75
                        625883.53 5790552.77
                                                             50.00 m
                                                0.00 m
 Anchor 3
                                                             50.00 m
                                                0.00 m
 Anchor 4
                        626271.76 5791147.83
                        627633.11 5791439.86
                                                0.00 m
                                                             50.00 m
 Anchor 5
                                                             50.00 m
                        628231.25 5791056.38
                                                0.00 m
 Anchor 6
                        628534.47 5789642.82
                                                0.00 m
                                                             50.00 m
 Anchor 7
```

Anchor 8	628146.24	5789047.76	0.00 m	50.00 m	/
Main Actual Posit Name Anchor 1	ions:- Easting 626348.17	Northing 5791775.75	Depth 51.99 m	Tolerance 0.00 m	
Verified by: (sign)		(pr:	int)		

10:43 16-Jun-2002

Page 5 of 6

Anchor 2 Anchor 3 Anchor 4 Anchor 5 Anchor 6 Anchor 7 Anchor 8	625834.55 625685.61 625992.79 626878.74 627620.20 627574.33 627345.21	5791914.60 5792890.32 5793274.98 579328.39 5793415.45 5792207.29 5791787.89	52.00 m 51.99 m 52.07 m 51.95 m 52.01 m 51.99 m 52.00 m	50.00 m 50.00 m 50.00 m 50.00 m 50.00 m 50.00 m
Anchor 8	627345.21	5791787.89	52.00 m	50.00 m

Verified by: (sign)\_\_\_\_\_ (print)\_\_\_\_ 10:43 16-Jun-2002

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Page 6 of 6

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# APPENDIX K

DAILY REPORT SHEETS

Date:13 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up	Equipment	Ор	B/up	Thales Personnel		0600	1200	1800	2400
GPS SkyEix			Echo Sounder			Paul Malatzky (PM) Stovo Bradlov (SB)	Swell				
SkyFix Spot			Pinger			Sleve bradley (SB)	6				
Gyro			Boomer				Sea				
GNS 2			Heave Comp								
MultiFix 3			Velocity Probe				Wind				
Remote			CODA								
Sextant						Client Personnel	Bar				
Tracs TDMA						Bill Edmonds	Temp				
							· sinp				

#### DIARY OF OPERATIONS

#### PAGE 1 OF 12

TIME	Time Zone = UTC + 10.0 <u>Thursday 13 June, 2002</u>
0915	Thales personnel PM and SB depart Perth Domestic Airport for Melbourne.
1430	Thales personnel arrive in Melbourne.
1530	Check in at the Holiday Inn Melbourne.
1600	Advised by Thales operationis in Perth, transfer to rig delayed until Saturday 15 June 2002.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Date:14 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up	Equipment	Ор	B/up	Thales Personnel		0600	1200	1800	2400
GPS			Echo Sounder			Paul Malatzky (PM)	Currell				
SkyFix			Sidescan			Steve Bradley (SB)	Swell				
SkyFix Spot			Pinger								
Gyro			Boomer				Sea				
GNS 2			Heave Comp								
MultiFix 3			Velocity Probe				Wind				
Remote			CODA				_				
Sextant						Client Personnel	Bar				
Tracs TDMA						Bill Edmonds					
							Temp				

#### DIARY OF OPERATIONS

PAGE 2 OF 12

TIME	Time Zone = UTC + 10.0	Friday 14 June, 2002
All Day	Stand by for transfer to Ocea	an Bounty at Baleen-3 location.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Date:15 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

- -

Equipment	Ор	B/up
GPS	✓	
SkyFix	✓	
SkyFix Spot	<ul> <li>Image: A set of the set of the</li></ul>	
Gyro	<ul> <li>Image: A set of the set of the</li></ul>	
GNS 2	<ul> <li>Image: A set of the set of the</li></ul>	
MultiFix 3	<ul> <li>Image: A set of the set of the</li></ul>	
Remote	<ul> <li>Image: A set of the set of the</li></ul>	
Sextant	<ul> <li>Image: A set of the set of the</li></ul>	
Tracs TDMA	<ul> <li>Image: A set of the set of the</li></ul>	

Equipment	Ор	B/up
Echo Sounder		
Sidescan		
Pinger		
Boomer		
Heave Comp		
Velocity Probe		
CODA		

Thales Personnel		0600	1200	1800	2400
Paul Malatzky (PM) Steve Bradley (SB)	Swell				
	Sea				
	Wind				
Client Personnel	Bar				
Bill Edmonds	Temp				

#### DIARY OF OPERATIONS

#### PAGE 3 OF 12

TIME	Time Zone = UTC + 10.0 <u>Saturday 15 June, 2002</u>								
0600	PM and SB check out of the Holiday Inn Melbourne.								
0630	PM and SB check in at Bristow Helicopters Essendon airport.								
0700	Attend Bristow Helicopters pre flight safety briefing.								
0715	Departure to Ocean Bounty delayed to 0930.								
0930	Departure to Ocean Bounty delayed to 1200.								
1205	Depart Essendon airport for the Ocean Bounty at the Baleen-3 location.								
1315	Arrive onboard the Ocean bounty at the Baleen-3 location.								
1400	Locate Thales equipment container, standby for container to be moved in vicinity of pilot house.								
1430	Anchor recovery expected to commence afternoon of 16 June 2002.								
1600	Confirm with client representative Bill Edmonds, intended Patricia-2 location to be AGD66 co-ordinates								
	38° 01' 39.97" South 148° 26' 57.83" East, AMG Zone 55, 627 209.00m East 5 790 097.80m North.								
1800	Commence mobilisation of Thales equipment.								
1930	Thales equipment operational.								
2359	Standby for anchor recovery to commence.								

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Date:16 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up	E
			<b>F</b> a b a
GPS	•		ECUC
SkyFix	✓		Side
SkyFix Spot	✓		Ping
Gyro	✓		Boor
GNS 2	✓		Heav
MultiFix 3	✓		Velo
Remote	✓		COD
Sextant	✓		
Tracs TDMA	<b>~</b>		

Equipment	Ор	B/up
Echo Sounder		
Sidescan		
Pinger		
Boomer		
Heave Comp		
Velocity Probe		
CODA		

Thales Personnel		0600	1200	1800	2400
Paul Malatzky (PM) Steve Bradley (SB)	Swell				
	Sea				
	Wind				
Client Personnel	Bar				
Bill Edmonds	Temp				

#### DIARY OF OPERATIONS

#### PAGE 4 OF 12

TIME	Time Zone = UTC + 10.0 Sunday 16 June, 2002
0720	Commence solar azimuth observations.
0730	Conclude solar azimuth observations.
0800	Calculate gryocompass C-O value of <b>+0.5</b> and enter into GNS II.
0930	Thales systems including TRACS in fully operational. Flux gate compass on Conqueror faulty.
1130	PM and SB attend daily pre-tour meeting.
1230	PM and SB attend the pre-rig move meeting onboard the Ocean Bounty. Procedure of the move discussed.
	Anchor 6 confirmed as run in anchor, distance of 2nm. All advised of location of Patricia-1 well head. Anchor
	recovery expected to commence 1800hrs
1400	Contacted Thales operations manager N.McKay with a project update.
1800	Anchor recovery delayed.
2230	Thales personnel participate in the fire and abandon rig drill onboard the Ocean Bounty.
2359	Standby for anchor recovery to commence.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Date:17 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up	Equipme	ent Op	B/up	Thales Personnel			0600	1200	1800
GPS	✓		Echo Soun	der		Paul Malatzky (PM)		o			
SkyFix	<ul> <li>Image: A start of the start of</li></ul>		Sidescan			Steve Bradley (SB)		Swell			
SkyFix Spot	<ul> <li>Image: A start of the start of</li></ul>		Pinger					-			
Gyro	✓		Boomer					Sea			
GNS 2	✓		Heave Con	np							
MultiFix 3	✓		Velocity Pro	obe			`	Wind			
Remote	✓		CODA					_			
Sextant	✓					Client Personnel		Bar			
Tracs TDMA	✓					Bill Edmonds	ı	Гетр			
										l	1

#### DIARY OF OPERATIONS

#### PAGE 5 OF 12

2400

TIME	Time Zone = UTC + 10.0 <u>Monday 17 June, 2002</u>							
0001	Ocean Bounty has AC generator fail.							
0300	Standby for anchor recovery to commence.							
0600	Standby for anchor recovery to commence.							
0815	AC generator operational							
1130	PM and SB attend daily pre-tour meeting.							
1200	Standby for anchor recovery operations to commence. ROV to complete subsea work, weather marginal and affecting operations.							
1800	Standby for anchor recovery to commence.							
2359	Standby for anchor recovery to commence.							

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

CLIENT REPRESENTATIVE

Date:18 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up	Equipment	Ор	B/up	Thales Personnel					
	-							0600	1200	1800	2400
GPS	✓		Echo Sounder			Paul Malatzky (PM)					
SkyFix	<ul> <li>Image: A set of the set of the</li></ul>		Sidescan			Steve Bradley (SB)	Swell				
SkyFix Spot	<ul> <li>Image: A start of the start of</li></ul>		Pinger				-				
Gyro	<ul> <li>Image: A start of the start of</li></ul>		Boomer				Sea				
GNS 2	<ul> <li>Image: A start of the start of</li></ul>		Heave Comp								
MultiFix 3	<ul> <li>Image: A start of the start of</li></ul>		Velocity Probe				Wind				
Remote	<ul> <li>Image: A start of the start of</li></ul>		CODA				_				
Sextant	<ul> <li>Image: A start of the start of</li></ul>					Client Personnel	Bar				
Tracs TDMA	✓					Bill Edmonds	_				
							Temp				

#### DIARY OF OPERATIONS

#### PAGE 6 OF 12

TIME	Time Zone = UTC + 10.0 <u>Tuesday 18 June, 2002</u>							
0001	Standby for anchor recovery to commence.							
0600	Standby for anchor recovery to commence.							
1130	PM and SB attend daily pre-tour meeting.							
1200	Standby for anchor recovery operations to commence. ROV to complete subsea work, weather marginal and affecting operations.							
1800	Standby for anchor recovery to commence.							
1845	Contacted Thales operations manager N.McKay with a project update.							
2359	Standby for anchor recovery to commence.							

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Date: **19 June 2002** Client: **OMV Australia** Job No.: **3382A3** Vessel: **Ocean Bounty** Location: **Patricia-2** 

Equipment	Ор	B/up		E
GPS	~			Echo
SkyFix	~			Side
SkyFix Spot	>			Ping
Gyro	>			Boor
GNS 2	>			Heav
MultiFix 3	>			Velo
Remote	>			COD
Sextant	~			
Tracs TDMA	<b>~</b>			
			]	

Equipment	Ор	B/up
Echo Sounder		
Sidescan		
Pinger		
Boomer		
Heave Comp		
Velocity Probe		
CODA		

Thales Personnel		0600	1200	1800	2400
Paul Malatzky (PM) Steve Bradley (SB)	Swell				
	Sea				
	Wind				
Client Personnel	Bar				
Bill Edmonds	Temp				

#### DIARY OF OPERATIONS

#### PAGE 7 OF 12

TIME	Time Zone = UTC + 10.0 <u>Wednesday 19 June, 2002</u>				
0001	Standby for anchor recovery operations to commence.				
0422	# 8 PCC passed to the Conqueror.				
0425	Conqueror chases out # 8.				
0426	# 4 PCC passed to the Sentinel.				
0445	ROV Recovering.				
0515	# 8 Off the bottom, commences heaving in.				
0520	# 4 Off the bottom, commences heaving in.				
0630	# 8 PCC returned to the rig.				
0637	# 1 PCC passed to the Conqueror.				
0640	# 4 PCC returned to the rig.				
0645	Conqueror chases out # 1.				
0654	# 5 PCC passed to the Sentinel.				
0703	Sentinel chases out # 5.				
0804	# 1 PCC returned to the rig.				
0815	# 2 PCC passed to the Conqueror.				
0825	# 5 PCC returned to the rig.				
0826	Conqueror chases out # 2.				
0855	# 2 PCC parts from wire.				
0922	Sentinel is connected to the main tow bridle.				
1005	Conqueror collects # 2 chain with "J" hook and chases out.				
1030	Conqueror decks # 2.				

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR

Signature

CLIENT REPRESENTATIVE

Date: **19 June 2002** Client: **OMV Australia** Job No.: **3382A3** Vessel: **Ocean Bounty** Location: **Patricia-2** 

Equipment	Ор	B/up
GPS	<ul> <li>✓</li> </ul>	
SkyFix	✓	
SkyFix Spot	<ul> <li>Image: A set of the set of the</li></ul>	
Gyro	<ul> <li>Image: A set of the set of the</li></ul>	
GNS 2	<ul> <li>Image: A set of the set of the</li></ul>	
MultiFix 3	<ul> <li>Image: A set of the set of the</li></ul>	
Remote	<ul> <li>Image: A set of the set of the</li></ul>	
Sextant	<ul> <li>Image: A set of the set of the</li></ul>	
Tracs TDMA	✓	

Equipment	Ор	в/ир
Echo Sounder		
Sidescan		
Pinger		
Boomer		
Heave Comp		
Velocity Probe		
CODA		

.

Thales Personnel		0600	1200	1800	2400
Paul Malatzky (PM) Steve Bradley (SB)	Swell				
	Sea				
	Wind				
Client Personnel	Bar				
Bill Edmonds	Temp				
1					

#### DIARY OF OPERATIONS

#### PAGE 8 OF 12

TIME	Time Zone = UTC + 10.0 <u>Wednesday 19 June, 2002 Continued</u>						
1035	# 2 off the bottom, commences heaving in.						
1150	# 2 PCC returned to the rig.						
1155	Anchor recovery operations temporarily halted. ROV to return to water.						
1235	Ocean Bounty manoeuvres near Baleen-3 to assist ROV operations .						
1300	PM attends the weekly safety meeting onboard the Ocean Bounty.						
1730	SB attends daily pre-tour meeting.						
1900	SB attends the weekly safety meeting onboard the Ocean Bounty.						
1944	# 3 PCC passed to the Conqueror.						
1950	Conqueror chases out # 3.						
1952	Commence heaving in on # 6 to clear Ocean Bounty of Baleen-3 well head.						
2032	# 2 Off the bottom, commences heaving in.						
2157	#3 PCC returned to rig						
2208	#7 PCC passed to Conqueror						
2245	#7 Commence heave in						
2310	#6 Rig commences heave in						
2323	#7 PCC returned to the rig						
2400	#6 Rig continues heave in last anchor.						

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

Date:20 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up
GPS	<ul> <li>✓</li> </ul>	
SkyFix	✓	
SkyFix Spot	<ul> <li>Image: A set of the set of the</li></ul>	
Gyro	<ul> <li>Image: A set of the set of the</li></ul>	
GNS 2	<ul> <li>Image: A set of the set of the</li></ul>	
MultiFix 3	<ul> <li>Image: A set of the set of the</li></ul>	
Remote	<ul> <li>Image: A set of the set of the</li></ul>	
Sextant	<ul> <li>Image: A set of the set of the</li></ul>	
Tracs TDMA	<b>~</b>	

Equipment	Ор	B/up
Echo Sounder		
Sidescan		
Pinger		
Boomer		
Heave Comp		
Velocity Probe		
CODA		

Thales Personnel		0600	1200	1800	2400
Paul Malatzky (PM)	Swoll				
Steve Bradley (SB)	Sweir				
	Sea				
	Wind				
Client Personnel	Bar				
Bill Edmonds	Temp				

#### **DIARY OF OPERATIONS**

#### **PAGE 9 OF 12**

TIME	Time Zone = UTC + 10.0 <u>Thursday 20 June, 2002</u>
0030	#6 Anchor off the bottom. Rig undertow by Sentinel departs for Patricia-2 run in.
0200	Tow continues, rig at 2 mile Run-in point
0338	Ocean Bounty drops # 6.
0340	# 6 on the bottom, position 628 233mE 5 791 055mN
0420	Ocean Bounty over Patricia-2 location. Over running 500ft to allow deployment of # 2 and # 3.
0425	All stop on # 6, 500ft past Patricia-2 preparing to run # 2.
0442	# 2 PCC passed to the Conqueror.
0503	Conqueror runs out # 2
0510	# 2 on the bottom, position 626 591mE 5 789 565mN
0530	# 2 not holding, Conqueror recovering for re-run.
0610	# 2 off the bottom, commences heaving in.
0640	Conqueror commences to re-run # 2
0647	# 2 on the bottom, position 626 547mE 5 789 490mN
0715	# 2 PCC returned to the rig.
0731	# 3 PCC passed to the Conqueror.
0750	Conqueror runs out # 3
0752	# 3 on the bottom, position 626 313nE 5 790 364mN
0805	Sentinel is disconnected from the main tow bridle.
0815	# 3 PCC returned to the rig.
0825	# 7 PCC passed to the sentinel.
0845	Sentinel runs out # 7
0853	# 5 PCC passed to the Conqueror.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

Date:20 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up
GPS	✓	
SkyFix	<ul> <li>✓</li> </ul>	
SkyFix Spot	✓	
Gyro	✓	
GNS 2	<ul> <li>✓</li> </ul>	
MultiFix 3	✓	
Remote	<ul> <li>✓</li> </ul>	
Sextant	✓	
Tracs TDMA	<ul> <li>✓</li> </ul>	

Equipment	Ор	B/up
Echo Sounder		
Sidescan		
Pinger		
Boomer		
Heave Comp		
Velocity Probe		
CODA		

Thales Personnel		0600	1200	1800	2400
Paul Malatzky (PM) Steve Bradley (SB)	Swell				
	Sea				
	Wind				
Client Personnel	Bar				
Bill Edmonds	Temp				

#### **DIARY OF OPERATIONS**

#### PAGE 10 OF 10

TIME	Time Zone = UTC + 10.0 Thursday 20 June, 2002 Continued
0855	# 7 on the bottom, position 628 051mE 5 789 777mN
0912	Conqueror runs out # 5
0915	# 7 PCC returned to rig.
0924	# 5 on the bottom, position 627 629mE 5 790 917mN
0928	# 1 PCC passed to the Sentinel.
0955	Standby problems with # 4 and # 1 winches.
0957	Sentinel runs out # 1
1007	# 1 on the bottom, position 627 015mE 5 789 357mN
1020	# 1 PCC returned to the rig.
1023	# 4 PCC passed to the Conqueror.
1025	# 8 PCC passed to the Sentinel.
1039	Conqueror runs out # 4
1050	# 4 on the bottom, position
1057	Sentinel runs out # 8
1107	# 8 on the bottom, position
1115	# 4 PCC returned to the rig.
1130	Ocean Bounty positioning over the Patricia-2 location.
1135	# 8 PCC returned to the rig.
1140	Ocean Bounty positioned approximately 0.6m @ 350°T from Patricia-2 location.
1145	Ocean Bounty storm tensioning anchors to 350 kips.
1400	Fine tuning anchors to adjust rig heading around to 257°T.
1500	Rig position accepted by client representative Bill Edmonds, spud in commences.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

Date:20 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up
GPS	✓	
SkyFix	<ul> <li>Image: A second s</li></ul>	
SkyFix Spot	<ul> <li>Image: A second s</li></ul>	
Gyro	<ul> <li>Image: A set of the set of the</li></ul>	
GNS 2	<b>~</b>	
MultiFix 3	<b>~</b>	
Remote	<b>~</b>	
Sextant	<b>~</b>	
Tracs TDMA	<ul> <li>Image: A set of the set of the</li></ul>	

Equipment	Ор	B/up
Echo Sounder		
Sidescan		
Pinger		
Boomer		
Heave Comp		
Velocity Probe		
CODA		

Thales Personnel		0600	1200	1800	2400
Paul Malatzky (PM) Steve Bradley (SB)	Swell				
	Sea				
	Wind				
Client Personnel	Bar				
Bill Edmonds	Temp				

#### **DIARY OF OPERATIONS**

#### PAGE 11 OF 12

TIME	Time Zone = UTC + 10.0 Thursday 20 June, 2002 Continued
1605	Discuss removal faulty Tracs gyro P.S.U with Conqueror for replacement
1635	Tracs P.S.U. received onboard rig. Test unit and confirm spare Fluxgate Gyro is operational.
	Fluxgate onboard Conqueror requires changeout.
1930	Tracs equipment and Computer switched off onboard Sentinel
2000	Client representative Bill Edmonds requests elevation mask be lifted to 15°.
2020	Commence final fix at the Patricia-2 location. GNS II Streaming activated.
2027	STOP final fix, rig manoeuvring to stab back in.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

Date:21 June 2002 Client: OMV Australia Job No.: 3382A3 Vessel: Ocean Bounty Location: Patricia-2

Equipment	Ор	B/up	Equipment	Ор	B/up
GPS	<ul> <li>Image: A set of the set of the</li></ul>		Echo Sounder		
SkyFix	✓		Sidescan		
SkyFix Spot	✓		Pinger		
Gyro	✓		Boomer		
GNS 2	✓		Heave Comp		
MultiFix 3	✓		Velocity Probe		
Remote	✓		CODA		
Sextant	✓				
Tracs TDMA	<b>~</b>				

Thales Personnel		0600	1200	1800	2400
Paul Malatzky (PM) Steve Bradley (SB)	Swell				
	Sea				
	Wind				
Client Personnel	Bar				
Bill Edmonds	Temp				

#### DIARY OF OPERATIONS

PAGE 12 OF 12

TIME	Time Zone = UTC + 10.0 Friday 21 June, 2002				
0602	Commence final fix at the Patricia-2 location.				
0700	Conclude final fix at the Patricia-2 location. The datum is <b>1.59m @ 303.9°T</b> from the intended Patricia-2				
0702	location. Position accepted by client representative Bill Edmonds.				
0730	Client provided with copy of final fix report for Patricia-2 location.				
0800	3 SB transferred to Conqueror to replace faulty fluxgate compass.				
0830	0 All Patricia-2 project data backed up to CD.				
0900	0 SB returned to Ocean Bounty				
0915	5 Commence demobilisation of Thales equipment.				
1030	0 Demobilisation complete.				
1100	0 Attend pre-flight safety briefing.				
1230	30 Depart the Ocean Bounty for Melbourne and connecting flight to Perth.				
2000	00 Depart Melbourne Airport for Perth.				
2330	30 Arrive Perth domestic Airport.				

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.



#### **Drilling Summary**

The last anchor was pulled on Baleen-3 at 00:30 hours on the 20<sup>th</sup> June. The semi-submersible Ocean Bounty was then moved undertow of the Pacific Sentinel to Patricia-2 location in 4 hours.

The first anchor (#6) was dropped on bottom at 03:41 hours on June 20, 2002. Anchor #2 was lying upside down on the seabed and had to be pulled and reset. The last anchor was dropped at 11:50 hours, before the anchors were cross tensioned. In preparation to spud the well, the 30"/36" assembly was made up and racked back in the derrick. Also the 20"/30" casing was made up and landed in the moon pool.

The 36" BHA w/ a 26" bit (DSJC, IADC 111, 1x17, 3x24) and a 36" hole opener was ran in the hole to the mud line at 77.5 m. Patricia-2 was spudded at 16:00 hrs 20 June 2002. The 36" hole was drilled from 77.5 m to 111.5 m and a survey showed a 1/4° inclination. A wiper trip was performed and the hole was displaced prehydrated gel prior to pulling out.

After pulling out of the hole, the permanent guide base was moved to the moon pool. The rig was moved forward starboard with anchor 3 and paid out anchor 8 to stab the casing. The stabbing in of the casing was observed with the ROV. The 30" casing with 20" shoe was run and the last 2 m were washed to bottom. The slope indicator was checked with ROV and found to be 0° with a heading of 259°. The 30" casing was cemented in using 766 sacks of class G, with 94 barrels of sea water and 1% CaCl weight of 1.91 sg cement (160 barrel slurry) and displaced with 11.5 barrels of seawater. Cement was returned to surface and observed by the ROV.

The 17 1/2" assembly was made up with a 9 5/8" Sperry Sun performance motor with a  $1.5^{\circ}$  bend and run in the hole, tagging cement at 102 m. The cement and casing shoe was drilled out and the 17  $\frac{1}{2}$ " hole was then drilled from 111.5 m to 334 m in 5.5 hrs, using seawater and high viscosity sweeps and kicking off from 200 m. At TD 334 m, TVD was 332.5 m with an inclination of approximately 11.6° and an azimuth of 239.9°. Whilst drilling each stand, a gel pill was spotted on bottom then each stand was reamed. At TD, 100 barrels of high viscosity mud was swept and 320 barrels of pre-hydrated mud was spotted in the hole.

The 13 3/8" casing was made up and ran in the hole with 5" DP and 8" drill collars to apply enough weight to set lock down slips of 18  $\frac{3}{4}$ " wellhead (80 klbs). No difficulties were experienced in latching the 18  $\frac{3}{4}$ " wellhead in the 30" housing. Cemented the casing with 95 barrels of 12.5 ppg lead slurry, followed by 100 barrels of 15.9 ppg tail slurry. The bottom plug did not bump. Bled off and checked for backflow and found to be OK. The 18  $\frac{3}{4}$ " wellhead running tool was released without problems.

The Xmas tree was fully function tested on surface, then run without isolation sleeve and latched into the 18  $\frac{3}{4}$ " wellhead. This was confirmed with 50k overpull. The AX gasket was pressure tested to 3,000 psi for 10 minutes against the running tool and casing. The 10  $\frac{3}{4}$ " pipe rams had been placed in the centre position of the drill pipe preventer and the BOP was fully function tested on surface. The BOP was nippled up to the riser, landed and latched into the Xmas tree, confirmed by 50k overpull. The shear rams were closed and the lower connector was tested successfully, to 500/3,000 psi against the casing.

The 12 ¼" BHA (PDM, RLL, MPT, Float, XO, 3 x 5" HWDPs, Jar, 3 x 5" HWDPs) with resistivity and gamma capability was made up and run in with a 1.15 bend in the motor. The cement was tagged at 300 m, some 4.05 m above the float collar. The top plug was found approximately 0.5 m above the float collar. Drilled out the cement plugs and firm cement throughout the shoe track. The shoe was drilled out and again firm cement to 334 m. The well was displaced to KCI/PHPA mud at a density of 1.06 sg before drilling 3 m of new formation to 337 m. Performed a formation integrity test with 1.06 sg mud to a pressure of 321 psi yielding an equivalent mud weight of 1.73 sg. Drilled to TD at 884 m with a maximum inclination at TD of 90°. Bit balling and a decrease in ROP was observed. The casing was run to bottom with no hole problems, and was landed and circulated for one and a half times the casing volume prior to the cement job. The casing was

cemented and the plug bumped at the calculated displacement before the 9 5/8" casing was pressure tested to 3,000 psi for 10 min.

The 8½" drilling assembly was made up and run in hole to 848 m; the shoe track and 3 m of new hole to 887 m were drilled. Then the well was displaced with Flo-Pro mud of 1.07 sg and a formation integrity test yielded an equivalent mud weight of 1.4 sg. The 8 ½" hole was drilled from 887 m to 1385 m (701.2 mTVD). The assembly was pulled back to the shoe and the hole was circulated to 1.08 sg KCl brine.

The sand screens and the 6 5/8" production liner were run including the inner wash string and packer. The tie back sealing assembly and packer were landed at the second attempt successfully and pressure tested to 1500 psi. After rigging up the coiled tubing unit and bringing the well to production, the well was tested with several shut-in and flow periods.

After retrieving the BOP and pulling the anchors, the Ocean Bounty was under tow to Sole-2 at 00:45 on the 9th July 2002.
## **Drilling Fluids Recap**

## OMV

Patricia 2 Vic L21 Bass Strait Development



		DR	11.1.11	NG F		Dril Flu M-I ONE- S DATA	lling ids LL.C. TRAX A MANAGEME	ENT SYSTEM
Operator : OMV Australia Well Name : Patricia 2 Field/Area : VIC / L21 Description : Development Location : Bass Strait Warehouse : Geelong Contractor : Diamond Offshore					alia ent Offshore		Spud Date TD Date Loc Code Dist Engr Sales Engr Sales Engr M-I Well No.	: 20/06/2002 : 1/01/-4713 : 7001 : Dave Bennett : Graeme Garrick : Dave Dixon
Comment	ts : Horiz	contal Fie	ld Devel	opment				
Туре	Size in	Depth m	TVD m	Hole in	MaxMW sp.gr.	Mud 1	Mud 2	Drilling Problem
Casing	30	111	111	36	1.04	Spud Mud		None

Casing

Casing

Open Hole

13.375

9.625

318

700

326

873

17.5

12.25

8.5

 $TVD:\ m$ 

1.04

1.12

Spud Mud

POLY-PLUS

Cost \$

2730.28

8372.09

41400.09

Days

None

\_

1

1

4





## **CONTENTS:**

- **1. DISCUSSION BY INTERVAL**
- 2. DAILY DISCUSSION REPORT
- **3.** COST BY INTERVAL
- 4. DAILY VOLUME SUMMARY SHEET
- 5. TOTAL MATERIAL COST
- 6. HYDRAULICS REPORT
- 7. DRILLING FLUIDS SUMMARY
- 8. **PRODUCT CONSUMPTION**
- 9. DAILY MUD REPORTS





## DISCUSSION BY INTERVAL





## INTRODUCTION

OMV Petroleum was the operator for the horizontal development well Patricia # 2, drilled with the Diamond Offshore semi-submersible, Ocean Bounty spudded on the 20<sup>th</sup> June 2002.

The well was located in the Bass Strait in the permit VIC/L21 approximately 30 kilometres south of the Victorian town of Orbost. The location was latitude 38°01'39.97"S and longitude 148°26'57.83"E with a water depth of 51 meters and height of the rotary table above sea level being 26 meters. The well was vertically drilled for the first 2 intervals and deviated to 90 degrees in the 121/4:" section.

Total depth was reached at 1385m (TVD of 701m) on the 28<sup>th</sup> June 2002. The well was completed and a testing program carried out prior to suspending the well for later attachment to a pipeline.





Interval I Interval II	77.5 - 111.5 111.5 – 334	mete mete	ers ers	36" Hole 17½" Hole		30" Casing set at 111.5m 13³/ <sub>8</sub> " Casing set at 326 m
MUD TYPE		:	SEA	WATER/HI V	'IS S	SWEEPS
HOLE PROB	LEMS	:	Nc	one		
MUD PROPE	RTIES	:				
			Mud Visco	Weight osity	:	1.04 SG 100+sec/qt

## **OPERATIONS:**

Patricia #2 was spudded on the 20<sup>th</sup> June 2002 with seawater/Gel hi-vis sweeps.

A 26" bit and 36" hole opener was used to drill the section. The Seabed was tagged at 77.5 meters and hole drilled to 111.5 meters.

Approximately 480 barrels of mud was recovered from the previous well, this had a specific gravity of 1.2; a yield point of 30; and 6rpm reading of 15. and was used to "drill in" the hole opener. While drilling, seawater was used, 50 bbl of High Viscosity Pre-Hydrated Gel Mud was pumped before each connection. The "old" mud also provided volume for pumping intermittent sweeps while drilling. This aided in maintaining a clean hole and provided adequate cuttings removal.

The hole was good and drag was not observed on connections or while tripping.

At TD of 36" interval, 111.5 m, the hole was displaced to 150 bbl of High Viscosity Pre-Hydrated Gel Mud. A wiper trip was made to the sea bed and when back on bottom 200 bbl of High Viscosity Pre-Hydrated Gel Mud was left in the hole prior to pulling out and running 30 " casing.

The  $17\frac{1}{2}$ " interval was drilled using the same mud system. Additional High Viscosity Pre-Hydrated Gel Mud was mixed and sweeps were pumped following the procedure for the 36" hole. At 334m, TD of the $17\frac{1}{2}$ " interval a 100 barrel sweep of High Viscosity Pre-Hydrated Gel Mud was pumped before making a wiper trip. When back on bottom the hole was circulated clean with seawater and then displaced with 320 bbl of High Viscosity Pre-Hydrated Gel Mud. The drill string was then pulled and the  $13^{3}/_{8}$ " casing was run and cemented as per the program.

Both the 30" and  $13^{3}/_{8}$ " casing were run and cemented without problems.





## MUD

An initial 885 bbls of 40 lb/bbl pre-hydrated Gel (PHG) was prepared and allowed to hydrate. After mixing all agitators and mixing pumps were turned off to enhance hydration. The old mud from the previous well was held in pit # 4 and was used to "drill in" the hole opener and to provide Volume for intermittent sweeps.

In addition to the mud program, 29 sacks of Calcium Chloride were used for mixing a cement water.

## SOLIDS CONTROL:

In the 36" and  $17\frac{1}{2}$ " hole sections, there was no need for solids control as the mud returns were to the sea bed.

## **OBSERVATIONS AND RECOMMENDATIONS:**

Drilling with Seawater and pumping High Viscosity Pre-Hydrated Gel Sweeps has always proved to be a very effective and economical option for drilling the top hole in similar geological formations.





Interval III	335 - 884m TVD = 702 m		12¼" Hole sectio	on	9⁵/ <sub>8</sub> " Casing set at 873m
MUD TYP		:	KCI/PHPA/Glycol		
HOLE PROBL	.EMS	:	None		
MAXIMUM D	EGREE	:	90° at 884 m		
MUD PROPE	RTIES	:	Mud Weight Viscosity Plastic Viscosity Yield Point 6 rpm Filtrate KCL PHPA Glycol Rheology at 49°C		1.06- 1.12 sg 48 – 55 sec/qt 10 – 15cP 18-37 lb/100sqft 9-15 5.4 – 6.8 ml 5.0 – 5.5 % by wt 0.6 – 1.0 ppb 3.0 % by Vol.

## **OPERATIONS:**

The BOP's were installed and tested and the 12<sup>1</sup>/<sub>4</sub>" Drilling assembly was run to tag cement at 301 meters. The float, cement and shoe were drilled out and the shoe track cleaned out by pumping seawater and a Hi Vis sweep. The well was displaced to 1.06 SG KCI/PHPA/Glycol mud at 340 m. After circulating balanced mud a formation integrity test was performed to 1.73 SG EMW.

The 12¼" hole was then directionally drilled to an interval depth of 884 meters and 702 meters TVD. Directional surveys were taken as required. At Interval depth the hole was circulated clean and a wiper trip was made back to the  $13^{3}/_{8}$ " casing shoe. When back on bottom after the wiper trip, the hole was circulated clean and a slug was pumped before pulling out to run the  $9^{5}/_{8}$ " casing

The hole remained in good condition while drilling, during connections, tripping and running casing.

The  $9.5/_8$ " casing was run and cemented at 873 meters without any problems

### MUD:

An initial 450 bbls of mud was premixed double strength, 120 bbls of 18% KCL Brine was received, and diluted to 12% and blended with the premixed polymer mud. An additional 300 bbls of KCI / PHPA / Glycol mud was prepared at 1.06 SG. This was blended into the active system during the displacement. An additional volume of 300 bbls of KCI / PHPA /





Glycol mud was mixed and transferred to the active system during drilling, thereby imparting fresh chemical additions while drilling new formation.

The shale shakers were initially dressed with 84 mesh screens. These however had to be changed to 52 mesh to handle the flow rate until the mud system gained some heat and became fully sheared. The shakers were then sized down to 84 mesh and later to 120 mesh as drilling progressed.

As stated additional unweighted premix was blended slowly to the active to provide firm cuttings over the shakers. As it was and used as dilution, no solids control equipment was used.

Adjustments to the Low end rheology were made with the addition of Duotec added directly to the active system. Additional Glydril was also added directly into the active to maintain the programmed concentration.

## SOLIDS CONTROL:

The shakers were dressed initially with 10/84 mesh and had to be sized up to 10/52 to stop significant losses. These were then changed back to 10/84 and later then to 10/120 mesh on two of the shakers. The Desilter was not required as the unweighted premix was added.

### **OBSERVATIONS AND RECOMMENDATIONS:**

- A PHPA level of 1.0 ppb is probably enough to drill these short shallow formations.
- The hole cleaning regime based on 6 rpm at 8 to 12 was adequate provided the sample was measured at 49°C
- Proposed inhibition at 5-6% by wt of KCL and 3% by vol of Glycol appeared to be sufficient as the MBT was max. 5 ppb of Bentonite equivalent.





Interval III	884 – 1385 TVD = 70	m 02 m	8½" Hole se	ctio	on	6⁵/ <sub>8</sub> " sa set in ∣	nd screens horizontal.
MUD TYPE		: F	Flo-Pro				
HOLE PROBLE	MS	: 1	None				
MAXIMUM DE	GREE	: H	Horizontal section				
MUD PROPER	TIES	:					
		V P Y 6 L L F K D C R	lud Weight iscosity lastic Viscosity ield Point rpm SRV1 SRV2 SRV3 iltrate CL rill Solids chlorides heology at 120 F a	: : : : : : : : : : : : : : : : : : :	1.09 - 60 - 6 11 cP 32 - 34 16 - 1 59187 64086 62687 4.6 - 5 3 % b 0.1 - 6 72000	1.12 sg 9 sec/qt 4 lb/100sqft 7 - 64000 - 69985 - 69485 5.0 ml y wt 5.0 mg/lt Flow Line	

### **OPERATIONS:**

The seal assembly and BOPs were pressure tested prior to making up the  $8\frac{1}{2}$ " drilling assembly. The top of the cement was tagged at 848 m and the old mud was used to drill the cement and shoe. While drilling the shoe the well was displaced to the Flo-Pro system and 3 meters of new formation was drilled. A formation integrity test resulted in an equivalent mud weight of 1.4 SG.

Directional drilling proceeded at 30 to 60 m/hr depending on whether the drill string was sliding or rotating. Drilling continued to the total measured depth of 1385 meters where the horizontal section was displaced to solids free Flo–Pro mud and at the shoe the casing was circulated with a surfactant cleaning pill. The casing was filled with uninhibited brine.

The sand screens and wash pipe were run in the hole and the mud system was displaced to an enzyme system to clean up the polymers remaining in the production zone. The well was completed with filtered inhibitive brine in the well casing.

The packer was unseated to enable a pup joint to be inserted and it appeared that the formation had been broken down as losses to the formation occurred. The losses were approximately 40 bbls /hr and continued until the tubing was reseated in the packer.

The well was production tested as per program. The well was suspended awaiting the link up with the pipe line to be laid at a later date.





### MUD:

The Flo Pro system was made up with sized calcium carbonate to aid in fluid loss control to the production zone. The system worked well without any losses to the sands.

The mud weight was controlled by the addition of salt in addition to the 3% KCl in the system. The section was drilled quickly without any build up of fine solids or increase in clay content.

The main focus for mud treatment was put on keeping LSRV above 60000 cP and a filtration below 5 ml. It was achieved by constant addition of premixed Flovis Plus and Duoalflo polymers.

At TD the following clean up spacers were mixed and pumped:

- □ 25 bbl KCl brine
- 230 bbl Flo-Pro Solids Free displaced with mud (to cover open hole and sand screen volume)
- □ 25 bbl Hi Vis KCl spacer
- □ 50 bbl Surfactant pill
- 25 bbl brine base spacer

Above spacers were displaced with uninhibited KCI brine formulated to 1.08 SG

After running the completion screens, the open hole was displaced to Wellzyme. A pill and the Flo-Pro SF returns were dumped.

After running tubing and before stabbing into PBR, the casing was displaced to 1.08 SG inhibited KCL brine.

### SOLIDS CONTROL EQUIPMENT

Only Four VSM 100 Shale Shakers were used for solids control. They were dressed with 120 mesh screens and handled the flow rate of 600 gpm.

### **OBSERVATIONS AND RECOMMENDATIONS**

The drilling fluid system performed excellently with all the completion and testing requirements achieved in the minimum time.





## DAILY DISCUSSION REPORT

Drilling Fluids	<b>Operator</b> : OMV Au <b>Well Name</b> : Patricia <b>Contractor</b> : Diamone	ustralia 2 d Offshore	Field/Area : VIC / L21 Description : Development Location : Bass Strait	Daily Discussion M-I Well :					
20/06/2002 TD = 111.5 m	Dav	1							
ZO/00/2002       ID =       III.5 m       Day I         Run Anchors and position rig. Run casing an latch to guide base. Secure in moonpool. Seabed tagged at 77.5 m.Spud Well, Drill to interval T.D.       Circulate hole clean and displace to Hi Viscosity mud. Run in & Cement Casing at 111 m.         Drill water received from Pacific Sentinel: pH 7.5       Cl- 200 mg/l. Ca 180 mg/l. Rec'd 480 bbls old mud from Sentinel. Mixed 885 bbls PHG         The interval was drilled with seawater and high viscosity sweeps. The sweeps used old mud and PHG on connection         Spud Well, Run in & Cement Casing.									
21/06/2002 TD = 334 m	Day	2							
The cement was allowed to cure and the 17.1/2" drilling assembly was run in to drill out the cement and shoe. Drilling proceeded at an ROP >60 m/hr with alternate periods of sliding to commence the directional kick off. The mud pits were cleaned thoroughly. The section was drilled with seawater and PHG sweeps after 250 bbls of old mud was used. The interval depth of 344 m was reached and the hole swept with 100 bbls of PHG followed by the spotting of 320 bbls on bottom. The trip out was tight so a wiper trip was made. Displace hole to PHG. Trip out rig and run 13 3/8" casing. The casing was cemented using CaCl2 mix water.									
22/06/2002 TD = 334 m	Dav	3							
Cement 13 3/8" casing. Lay out hand Building new mud in Active pits (1/2 Run B.O.P.s and riser	ing tools. Rig and run subservolume 2xConcentration) v	ea tree. Rig an waiting for K.(	nd run BOPs. C.L. on next supply boat. Plan to mix K.	C.L. and dilute 50/50					
23/06/2002 TD = 401 m	Day	4							
The riser and BOPs were run and tested. Made up liner hanger tool and commenced making up BHA. Repairing BOP control panel. Drill out shoe Displace hole to mud, run leak off test to 1.73 SG. Drill ahead with directional control to raise angle. Received 120 bbls old Brine from boat, Blended this with premixed mud volume and additional water for dilution. Building reserve Premix mud for additional volume. Displace hole to PHPA/KCL mud. Drill out casing shoe, Run leak off test. Drill ahead.									
24/06/2002 TD = 710 m	Day	5							
Changed to finer shaker screeens. Drill 12 1/4" hole with Directional Surveys. Add premixes to active system to maintain system . Treat system with Glydril, Polyplus and Duotec. Drill 12.1/4" interval.									
25/06/2002 TD = 884 m	Day	6							
Directional drilling proceeded to 884 weight raised to 1.12 SG. The max ga Rig up to run 9 5/8" Casing The mud properties were maintained Drilled to interval depth of 884 m	m where the Gurnard forma is was approx 12%. A wiper by the addition of premix an	ation was enco r trip was mad nd KCL. Minc	ountered at an angle of 90 deg. The hole of e to the casing shoe. R.I.H. Circulate hole or losses to the formation occurred.	vas circulated and the mud e clean pump slug POOH					

Drilling Fluids		Operator : ( Well Name : F Contractor : [	DMV Australia Patricia 2 Diamond Offshore	Field/Area : VIC / L21 Description : Development Location : Bass Strait	Daily Discussion M-I Well :			
26/06/2002 TD =	884 m		Day 7					
A string of 9.5/8" casing wa Commence making up FloP	s run and ro mud sy	cemented at 872 m stem	.Test seal assembly a	nd BOPs. Make up Drilling assembly and	R.I.H.			
Set and cemented 9.5/8" cas	ing. Prepa	are for 8.1/2" hole.						
27/06/2002 TD =	1379 m		Day 8					
RIH to tag cement at 848 m. Drill out cement and shoe with the mud from previous section. Displace to new mud while drilling shoe. Drill 3m and take FIT for 1.4 SG EMW. Drill ahead at 60 to 30 m/hr. Mixed Flo-Pro SF clean up pill. Mixed KCL Brine for pills Commence drilling 8.1/2" interval with Flo pro system.								
28/06/2002 TD =	1385 m		Day 9					
The total depth of 1385 m was reached and the well was circulated with clean up pills after a wiper trip. The horizontal section was filled with solids free mud and at the shoe the casing was cleaned out and displaced to 1.08 SG uninhibited brine. POOH and run sand screens. The solids free FloPro was used to fill the horizontal section. High viscosity pills and a surfactant pill were pumped to clean the casing and the casing was filled with 1.08 SG brine. The mud from the hole and pits was dumped and the pits were cleaned.								
	ouonou ui		unea ap. rean sana ser					
29/06/2002       TD =       1385 m       Day 10         The completion program was continued with the running of the sand screens and wash pipe. The screens were set and the well clean up prior to tripping the running string.         400 blls of brine was filtered to approx 35 NTUs for future use as inhibited brine.       The cleanup procedures was mixed,         The cleanup procedure included a high viscosity brine followed by brine to displace the FloPro and then a Wellzyme brine was used to fill the 8,1/2" interval over the sand screens.         Completion program								
30/06/2002 TD =	1385 m		Day 11					
Continued with the well completion program. Filled riser, choke and kill lines with filtered brine. Mixed 100 bbls of brine which was filtered prior to adding the inhition chemicals. The NTUs of the inhibited filtered brine was 22. The old brine was filtered from 450 to 270 NTUs and will be used on next well as KCl base. Continue with well completion.								
1/07/2002 TD =	1385 m		Day 12					
Iter     1585 III     Day 12       Displaced well to filtered inhibited brine.     Continue well completion. Pulled out tubing to insert pup joint. Starte losing brine to formation at up to 40 bbls/hr.       Mixed extra 100 bbls of KCl brine.       continue well completion.								

Drilling Fluids	Operator : OMV Australia Well Name : Patricia 2 Contractor : Diamond Offshore	Field/Area : VIC / L21 Description : Development Location : Bass Strait	Daily Discussion M-I Well :					
2/07/2002 TD = 1385 r	n Day 13							
Continued to run well completion wi Mixed up 1.08 SG KCl brine as requ approx 450 bbls.	th the addition of extra pup joint. Losses of ired to cover the downhole losses of approximately app	continued until the tubing was restabbed in ox 40 bbls/hr. The total losses to the forma	tion over the time was					
Continued well completion.								
3/07/2002 TD = 1385 r	n Day 14							
The well was production tested from	daylight.							
Tested appropiate water flow sample	s to check the amount of brine being prod	luced.						
Continue well completion with the fl	owing of the well.							
4/07/2002 TD = 1385 r	n Day 15							
The well testing program continued.								
Continue testing Patricia # 2								
5/07/2002 TD = 1385 r	n Day 16							
Completed well testing and commen	ced well suspension.	iced.						
6/07/2002 TD = 1385 r	n Day 17							
Continue with well suspension but us Continue well suspension until shut o	Continue with well suspension but unable to continue due to inclement weather. Continue well suspension until shut down by weather.							
7/07/2002 TD = 1385 r	n Day 18							
After the weather abated the BOPs were recovered and the well suspension continued. All brine in pits dumped. Continued with well suspension.								
8/07/2002 TD = 1385 r	n Day 19							
Complete final ROV work with sub	sea tree. Pull anchors in preparation for m	ove to next location.						





## COST BY INTERVAL

## **PRODUCT SUMMARY**

	Operator : Well Name : Contractor :	OMV Australia Patricia 2 Diamond Offshor	e	Field/Area : Description : Location :	VIC / L21 Development Bass Strait	
	SUMMARY O	F PRODUCT USA	GE FOR INTERVAL	20/06/	2002 - 20/06/2002,	111.5 - 111.5
	WATER-BASED	MUD	SIZE	AMOUNT	UNIT COST	PROD COST
					(\$)	(\$)
	1 - Gel Bulk		100 LB BG	320	8.12	2598.40
	2 - Caustic Soda		25 KG DM	6	17.32	103.92
	3 - Soda Ash		25 KG BG	3	9.32	27.96
	SUB TOTAL:					2730.28
	TAX:					0.00
	WATER-BASED	MUD TOTAL COST:				2730.28
	TOTAL MUD CO	ST FOR INTERVAL:				2730.28
-1	L.L.C.		DRILLING FLUIDS DAT	A MANAGEMEN	T SYSTEM	



## **PRODUCT SUMMARY**

Fluids	PRODUCT SUN	IMARY		
Operator : OMV Australia Well Name : Patricia 2 Contractor : Diamond Offshore	Field Descr Lo	<b>J/Area</b> : VIC <b>iption</b> : Dev cation: Bas	: / L21 velopment ss Strait	
SUMMARY OF PRODUCT USAGE F	OR INTERVAL	21/06/200	02 - 21/06/2002,	334 - 334 m
WATER-BASED MUD	SIZE	AMOUNT	UNIT COST	PROD COST
			(\$)	(\$)
1 - Gel Bulk	100 LB BG	634	8.12	5148.08
2 - Calcium Chloride	25 KG BG	29	9.17	265.93
3 - Caustic Soda	25 KG DM	11	17.32	190.52
4 - Soda Ash	25 KG BG	4	9.32	37.28
SUB TOTAL:				5641.81
TAX:				0.00
WATER-BASED MUD TOTAL COST:				5641.81
TOTAL MUD COST FOR INTERVAL:				5641.81



## **PRODUCT SUMMARY**

Operator : Well Name : Contractor :	OMV Australia Patricia 2 Diamond Offshore	F De	Field/Area : escription : Location :	VIC / L21 Development Bass Strait	
SUMMARY OF	F PRODUCT USAGE FO	R INTERVAL	22/06	/2002 - 25/06/2002,	334 - 884 m
WATER-BASED	MUD	SIZE	AMOUNT	UNIT COST	PROD COST
				(\$)	(\$)
1 - Barite Bulk		100 LB BG	50	6.30	315.00
2 - Duotec		25 KG BG	54	192.61	10400.94
3 - Glydril LC		208 KG DM	40	621.94	24877.60
4 - OS-1		25 KG BG	6	31.94	191.64
5 - Polyplus Dry		25 KG BG	24	70.41	1689.84
6 - Polypac UL		25 KG BG	24	92.93	2230.32
7 - KCL-Geel		1 TN BG	6	274.45	1646.70
8 - Sodium Bicarb	onate	25 KG BG	5	9.61	48.05
SUB TOTAL:					41400.09
TAX:					0.00

WATER-BASED MUD TOTAL COST:

TOTAL MUD COST FOR INTERVAL:

41400.09

41400.09

M-I L.L.C.



## **PRODUCT SUMMARY**

 Operator :
 OMV Australia
 Field/Area :
 VIC / L21

 Well Name :
 Patricia 2
 Description :
 Development

 Contractor :
 Diamond Offshore
 Location :
 Bass Strait

 SUMMARY OF PRODUCT USAGE FOR INTERVAL
 26/06/2002 - 27/06/2002,
 884 - 1379 m

 WATER-BASED MUD
 SIZE
 AMOUNT
 UNIT COST
 PROD COST

			(\$)	(\$)
1 - Dual-Flo	50 LB BG	66	94.75	6253.50
2 - Flo-Vis Plus	25 KG BG	56	421.14	23583.84
3 - Glute-25	25 LT DM	5	67.75	338.75
4 - OS-1	25 KG BG	10	31.94	319.40
5 - KCL-Geel	1 TN BG	14	274.45	3842.30
6 - Potassium Hydroxide	25 KG DM	9	28.96	260.64
7 - Omyacarb 1	25 KG BG	28	6.04	169.12
8 - Omyacarb 8	25 KG BG	217	6.04	1310.68
9 - Omyacarb 10	25 KG BG	21	6.04	126.84
10 - SALT (BIG BAG)	1.2 MT BG	11	228.00	2508.00

SUB TOTAL:	38713.07
TAX:	0.00
WATER-BASED MUD TOTAL COST:	38713.07

TOTAL MUD COST FOR INTERVAL:

38713.07



## **PRODUCT SUMMARY**

**Operator : OMV Australia** Field/Area: VIC / L21 Well Name: Patricia 2 **Description :** Development **Contractor :** Diamond Offshore Location : Bass Strait SUMMARY OF PRODUCT USAGE FOR INTERVAL 28/06/2002 - 8/07/2002, 1385 - 1385 m WATER-BASED MUD SIZE AMOUNT UNIT COST PROD COST (\$) (\$) 2 1 - Caustic Soda 25 KG DM 17.32 34.64 2 - Duotec 25 KG BG 8 192.61 1540.88 3 - Defoam A 25 LT DM 5 56.17 280.85 4 - OS-1 25 KG BG 2 31.94 63.88 5 - KCL-Geel 1 TN BG 6 274.45 1646.70 6 - Safe Surf WN 200 KG DM 4 933.30 3733.20 7 - Congor 303A 55 GA DM 3 192.72 578.16 6996.00 8 - Wellzyme A 55 GA DM 1749.00 4 19 9 - SALT (BIG BAG) 1.2 MT BG 228.00 4332.00 10 - BRINE 1 BL BL 400 0.00 0.00 19206.31 SUB TOTAL: TAX: 0.00 WATER-BASED MUD TOTAL COST: 19206.31 TOTAL MUD COST FOR INTERVAL: 19206.31







## DAILY VOLUME SUMMARY SHEET

#### OMV Australia Pty Ltd

#### Patricia 2 Volume Accounting

_	Mud Volume Status (bbl)					Mud Volume Built (bbl)					Mud Volume Lost (bbl)						
Date	Depth	Hole	Surf	Res	Total	Water	Mud	Barite	Daily	Cum	Solids	Surf	Sweep/	Dump	Casing	Daily	Cummul
2002			Active		Vol		Built		Total	Built	Equip		Spots		Plugs	Total	Lost
20-Jun	111.5			661	661	850	515		1365	1365			704			704	704
21-Jun	334				0		1342		1342	2707			1870	133		2003	2707

#### 36" & 17.1/2" Hole - Seawater with High Vis Sweeps

#### 12.1/4" Hole - KCL / PHPA / Glycol

		Mud V	olume Sta	atus (bbl)		Mud Volume Built (bbl)					Mud Volume Lost (bbl)						
Date	Depth	Hole	Surf	Res	Total	Water	Mud	Barite	Daily	Cum	Solids	Surf	Dump	Hole	Casing	Daily	Cummul
2002			Active		Vol		Built		lotal	Built	Equip		or Sweeps		Plugs	lotal	Lost
22-Jun	334			450	450		450		450	450						0	0
23-Jun	401	242	514	710	1466	182	846		1028	1478	12					12	12
24-Jun	710	400	658	394	1452				0	1478	14					14	26
25-Jun	884	513	541	190	1244				0	1478	104		104			208	234
26-Jun	884				0				0	1478			1244			1244	1478

#### 8.1/2" Hole - Flo-Pro Drill-in Fluid Volumes from 27 June include Brine & clean up pills.

		Mud V	olume Sta	atus (bbl)			Mud V	olume Bu	ilt (bbl)				Mud V	olume Lo	st (bbl)		
Date	Depth	Hole	Surf	Res	Total	Water	Mud	Barite	Daily	Cum	Solids	Surf	Dump	Hole	Casing	Daily	Cummul
2002			Active		Vol		Built		Total	Built	Equip				Plugs	Total	Lost
26-Jun	884			1067	1067		1067		1067	1067						0	0
27-Jun	1379	367	443	602	1412	530			530	1597			185			185	185
28-Jun	1385	405		312	717		545		545	2142			474	766		1240	1425
29-Jun	1385	405	402	300	1107	720	429		1149	3291			212	547		759	2184
30-Jun	1385	405	402	300	1107	100			100	3391			100			100	2284
1-Jul	1385	405	218	200	823		110		110	3501				394		394	2678
2-Jul	1385	405		186	591		220		220	3721			40	412		452	3130
3-Jul	1385	405		186	591				0	3721						0	3130
4-Jul	1385	405		186	591				0	3721						0	3130
5-Jul	1385	405		186	591				0	3721						0	3130
6-Jul	1385	405		126	531				0	3721			60			60	3190
7-Jul	1385				0				0	<u>3721</u>			126	405		531	3721
8-Jul	1555				0				0	3721						0	3721





## TOTAL MATERIAL COST

Drilling Fluids	PRODUCT SUMMARY									
Operator : OMV Australia Well Name : Patricia 2 Contractor : Diamond Offshore	Fi Des I	Field/Area : VIC / L21 Description : Development Location : Bass Strait								
SUMMARY OF PRODUCT USAGE	FOR INTERVAL	20/06/20	02 - 8/07/2002,	111.5 - 1385 n						
WATER-BASED MUD	SIZE	AMOUNT	UNIT COST	PROD COST						
			(\$)	(\$)						
1 - Barite Bulk	100 LB BG	50	6.30	315.00						
2 - Gel Bulk	100 LB BG	954	8.12	7746.48						
3 - Calcium Chloride	25 KG BG	29	9.17	265.93						
4 - Caustic Soda	25 KG DM	19	17.32	329.08						
5 - Dual-Flo	50 LB BG	66	94.75	6253.50						
6 - Duotec	25 KG BG	62	192.61	11941.82						
7 - Defoam A	25 LT DM	5	56.17	280.85						
8 - Flo-Vis Plus	25 KG BG	56	421.14	23583.84						
9 - Glute-25	25 LT DM	5	67.75	338.75						
10 - Glydril LC	208 KG DM	40	621.94	24877.60						
11 - OS-1	25 KG BG	18	31.94	574.92						
12 - Polyplus Dry	25 KG BG	24	70.41	1689.84						
13 - Polypac UL	25 KG BG	24	92.93	2230.32						
14 - KCL-Geel	1 TN BG	26	274.45	7135.70						
15 - Potassium Hydroxide	25 KG DM	9	28.96	260.64						
16 - Safe Surf WN	200 KG DM	4	933.30	3733.20						
17 - Soda Ash	25 KG BG	7	9.32	65.24						
18 - Sodium Bicarbonate	25 KG BG	5	9.61	48.05						
19 - Omyacarb 1	25 KG BG	28	6.04	169.12						
20 - Omyacarb 8	25 KG BG	217	6.04	1310.68						
21 - Conqor 303A	55 GA DM	3	192.72	578.16						
22 - Wellzyme A	55 GA DM	4	1749.00	6996.00						
23 - Omyacarb 10	25 KG BG	21	6.04	126.84						
24 - SALT (BIG BAG)	1.2 MT BG	30	228.00	6840.00						
25 - BRINE	1 BL BL	400	0.00	0.00						

SUB TOTAL:

107691.56

M-I L.L.C.

Drilling
Fluids

## **PRODUCT SUMMARY**

Operator : OMV Australia Well Name : Patricia 2 Contractor : Diamond Offshore Field/Area :VIC / L21Description :DevelopmentLocation :Bass Strait

# SUMMARY OF PRODUCT USAGE FOR INTERVAL 20/06/2002 - 8/07/2002, 111.5 - 1385 n TAX: 0.00

WATER-BASED MUD TOTAL COST:

107691.56

TOTAL MUD COST FOR INTERVAL:

107691.56







## HYDRAULICS REPORT



## HYDRAULICS SUMMARY

## **Operator : OMV Australia**

#### Well Name : Patricia 2

## Field/Area : VIC / L21 **Description :** Development

Contractor :	Diamond C	Offshore			Location	<b>ı :</b> Bass St	rait		
Date		20/06/2002	21/06/2002	22/06/2002	23/06/2002	24/06/2002	25/06/2002	26/06/2002	27/06/2002
Depth	m	112	334	334	401	710	884	884	1379
Days Since Spud		1	2	3	4	5	6	7	8
*RHEOLOGICAL PRO	OPERTIES								
Mud Wt	sp.gr.	1.04	1.06	1.03	1.06	1.08	1.12	1.07	1.12
Plastic Visc	cP			22	10	12	14	9	11
Yield Point	1b/100ft <sup>2</sup>			53	20	2.9	30	37	32
3-rpm Rdg	Fann deg			24	7	10	14	17	14
nn Value	1 4111 408			3711	415	3704	3985	2578	3286
Kn Value	$lb \cdot s^n/100ft^2$	•	•	7 9095	2 4054	4 3434	3.91	9.8333	5.91
na Value		•	•	2259	2848	2833	1977	2218	2267
Ka Value	lbes^n/100ft <sup>2</sup>	•	•	17 7142	1 6030	6 722	10.8208	12 6327	10 3204
	10-3 11/10011	•	•	17.7142	4.0737	0.722	10.8208	12.0327	10.5204
TLOW DATA	aa1/min	010	700	0	055	850	850	0	596
Flow Rate	gai/iiiii	910	1250	0	833 1400	2000	2000	0	2000
Pullip Plessure	psi	/10	1230	0	1400	2000	2000	0	2000
Pump	nnp	377	Ť	Ť	698	992	T	T	684
*PRESSURE LOSSES	·								50.1
Drill String	psi		*	*	257	373	*	*	531
Bit	psı		*	*	647	651	*	*	1453
Annulus	psi		*	*	11	28	*	*	190
Total System	psi		*	*	915	1052	*	*	2174
*BIT HYDRAULICS									
Nozzles	1/32"	3x24	3x24		3x15	3x15	3x15	3x14	3x14
Nozzles	1/32"	4x22			24	24	24		
Bit Pressure	%		*	*	46	33	*	*	73
Bit	hhp		*	*	323	323	*	*	497
Bit HSI	(index)	•	*	*	2.74	2.74	*	*	8.76
Jet Velocity	ft/s	32	*	*	87	87	*	*	127
Impact Force	lbf		*	*	1119	1127	*	*	1182
DRILL COLLARS AN	INULUS								
Velocity	ft/min	32	*	*	234	215	*	*	474
Critical Vel	ft/min		*	*	333	400	*	*	476
Revnolds Number			*	*	1416	890	*	*	2641
Crit Re (Lam - Tran)		3470	*	*	2901	2963	*	*	3020
*DRILL PIPE ANNUI	US	5170			2701	2700			2020
Velocity	ft/min		*	*	158	149	*	*	282
Critical Vel	ft/min		*	*	303	366	*	*	439
Paynolds Number	10/11111		*	*	847	551	*	*	1218
Crit Pa (Lam Tran)		3470	*	*	2001	2063	*	*	3020
*HOLE CLEANING		J+/U			2701	2903			5020
Clin Valasita	<u> </u>	1	*	*	10	15	*	*	12
Dising Valuation	ft/min	1	*	*	18	15	*	*	13
Kising velocity	<u>It/min</u>	-1	*	*	140	133	*	*	269
Lifting Capacity	%	*	*	*	88	90	*	*	95
Cutting Conc	<u>%</u>	1.0	*	*	1.06	1.05	*	*	0.0
Penetration Rate	m/h	40	40	0	24	24	24	0	0
CASING SHOE PRES	SURES								
ECD	sp.gr.	0.0	*	*	1.08	1.11	*	*	1.3
ECD+Cuttings	sp.gr.	0.02	*	*	1.09	1.12	*	*	1.3
TOTAL DEPTH PRES	SURES								
ECD	sp.gr.	0.0	*	*	1.08	1.11	*	*	1.31
ECD+Cuttings	sp.gr.	0.02	*	*	1.1	1.13	*	*	1.31
<b>M-I</b> <i>L.L.C.</i>			DRIL	LING FLUI	DS DATA M	ANAGEMEN	NT SYSTEM		



## HYDRAULICS SUMMARY

Operator	: OMV Austr	alia			Field/Area	a:VIC/L2	1							
Well Name	: Patricia 2			Field/Area : VIC / L21         Description : Development         Location : Bass Strait         2002       30/06/2002       1/07/2002       2/07/2002       3/07/2002       4/07/2002       5/07/2002         5       1385       1385       1385       1385       1385       1385       1385         11       12       13       14       15       16         8       1.08       1.08       1.08       1.08       1.08         8       1.08       1.08       1.08       1.08       1.08         6       .3286       .3286       .3286       .3286       .3286         1       5.91       5.91       5.91       5.91       5.91         7       .2267       .2267       .2267       .2267       .2267         .04       10.3204       10.3204       10.3204       10.3204       10.3204         0       0       0       0       0       0       0         10.3204       10.3204       10.3204       10.3204       10.3204       10.3204         10.3204       0       0       0       0       0         10       0       0										
Contractor	: Diamond C	Offshore			Locatior	ı : Bass St	rait							
Date		28/06/2002	29/06/2002	30/06/2002	1/07/2002	2/07/2002	3/07/2002	4/07/2002	5/07/2002					
Depth	m	1385	1385	1385	1385	1385	1385	1385	1385					
Days Since Spud		9	10	11	12	13	14	15	16					
<b>*RHEOLOGICAL PI</b>	ROPERTIES													
Mud Wt	sp.gr.	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08					
Plastic Visc	cP													
Yield Point	lb/100ft <sup>2</sup>													
3-rpm Rdg	Fann deg													
np Value		.3286	.3286	.3286	.3286	.3286	.3286	.3286	.3286					
Kp Value	lb•s^n/100ft <sup>2</sup>	5.91	5.91	5.91	5.91	5.91	5.91	5.91	5.91					
na Value		.2267	.2267	.2267	.2267	.2267	.2267	.2267	.2267					
Ka Value	lb•s^n/100ft <sup>2</sup>	10.3204	10.3204	10.3204	10.3204	10.3204	10.3204	10.3204	10.3204					
*FLOW DATA		-						-						
Flow Rate	gal/min	0	0	0	0	0	0	0	0					
Pump Pressure	psi	0	0	0	0	0	0	0	0					
Pump	hhp	*	*	*	*	*	*	*	*					
*PRESSURE LOSSE	5	¥	y.	y.	*	ų	4	<u>ب</u>	y.					
Drill String	psi	* *	*	*	*	*	*	*	* *					
Bit	psi	* *	*	*	*	*	*	*	* *					
Annulus Total System	psi nai	*	*	*	*	*	*	*	*					
	psi	•	•	•	•	•	•		•					
Nozzles	1/22"													
Nozzles	1/32"													
Rit Pressure	0/0	*	*	*	*	*	*	*	*					
Bit	hhn	*	*	*	*	*	*	*	*					
Bit HSI	(index)	*	*	*	*	*	*	*	*					
Jet Velocity	ft/s	*	*	*	*	*	*	*	*					
Impact Force	lbf	*	*	*	*	*	*	*	*					
DRILL COLLARS A	NNULUS													
Velocity	ft/min	*	*	*	*	*	*	*	*					
Critical Vel	ft/min	*	*	*	*	*	*	*	*					
Reynolds Number		*	*	*	*	*	*	*	*					
Crit Re (Lam - Tran)		*	*	*	*	*	*	*	*					
*DRILL PIPE ANNU	ILUS													
Velocity	ft/min	*	*	*	*	*	*	*	*					
Critical Vel	ft/min	*	*	*	*	*	*	*	*					
Reynolds Number		*	*	*	*	*	*	*	*					
Crit Re (Lam - Tran)		*	*	*	*	*	*	*	*					
*HOLE CLEANING	0./:	¥	y.	y.	*	ų	4	<u>ب</u>	y.					
Slip Velocity	ft/min	*	*	*	*	*	*	*	*					
Lifting Canacity	11/min	*	*	*	*	*	*	*	*					
Cutting Capacity		*	*	*	*	*	*	*	*					
Penetration Rate		0	0	0	0	0	0	0	0					
CASING SHOF PRE	SSURES	U	U	U	0	U	U	0	U					
ECD	sn or	*	*	*	*	*	*	*	*					
ECD+Cuttings	sp.gr.	*	*	*	*	*	*	*	*					
TOTAL DEPTH PRF	SSURES													
ECD	sp.gr.	*	*	*	*	*	*	*	*					
ECD+Cuttings	sp.gr.	*	*	*	*	*	*	*	*					
M-I <i>l.l.c.</i>	101		DRIL	LING FLUID	OS DATA M	ANAGEMEN	NT SYSTEM	l						

Drilling Fluids		HYD	RAULIO	cs sun	IMARY					
	ralia					4				
Operator : ONIV Aust	alla		_	Field/Area						
Well Name : Patricia 2			C	Description						
Contractor : Diamond C	Offshore			Locatio	n : Bass Strait					
Date	6/07/2002									
Depth m	1385									
Days Since Spud	17									
*RHEOLOGICAL PROPERTIES	1.09									
Mud wt sp.gr.	1.08									
Vield Point lb/100ft <sup>2</sup>										
3-rpm Rdg Fann deg										
np Value	.3286									
Kp Value lb•s^n/100ft <sup>2</sup>	5.91									
na Value	.2267									
Ka Value lb•s^n/100ft <sup>2</sup>	10.3204									
*FLOW DATA										
Flow Rate gal/min	0									
Pump Pressure psi	0									
Pump hhp	*									
*PRESSURE LOSSES										
Drill String psi	*									
Bit psi	*									
Annulus psi Total System psi	*									
*PIT HVDP ATH ICS										
Nozzles 1/32"										
Nozzles 1/32"										
Bit Pressure %	*									
Bit hhp	*									
Bit HSI (index)	*									
Jet Velocity ft/s	*									
Impact Force lbf	*									
DRILL COLLARS ANNULUS										
Velocity ft/min	*									
Critical Vel ft/min	*									
Reynolds Number	*									
Crit Ke (Lam - Iran)	Ŷ									
*DRILL PIPE ANNULUS	*									
Critical Vel ft/min	*									
Revnolds Number	*									
Crit Re (Lam - Tran)	*									
*HOLE CLEANING										
Slip Velocity ft/min	*									
Rising Velocity ft/min	*									
Lifting Capacity %	*									
Cutting Conc %	*									
Penetration Rate m/h	0									
CASING SHOE PRESSURES	-									
ECD sp.gr.	*									
TOTAL DEPTH DECEMPTS	Ŷ									
FCD an ar	*									
FCD+Cuttings sp.gr.	*									
Sp.gr.					l					
M-I L.L.C.		DRIL	LING FLUID	DS DATA M	ANAGEME	NT SYSTEM				


DRILLING FLUIDS RECAP PATRICIA 2



# DRILLING FLUIDS SUMMARY



Operator : OMV Australia

Field/Area : VIC / L21

Well Name :	Patricia 2		Description : Development								
Contractor :	Diamond Offsho	ore		Loc	cation: Bass St	rait					
Date		20/06/2002	20/06/2002	21/06/2002	22/06/2002	23/06/2002	24/06/2002				
Depth/TVD	m	111.5/111.5	/	334/326	334/326	401/399	710/643				
Activity		)rilled 36"section	)rilled 36"section	Drill 17.1/2" hole	Run BOPs	Drilling	Drillling				
Mud Type		SW & Hi Vis	SW & Hi Vis	SW & Hi Vis	Mix PHPA/KC	PHPA/KCl/Gl	PHPA/KCl/Gl				
Hole Size	in	36	36	17.5	12.25	12.25	12.25				
Circ Volume	bbl	79	79	323	223	999	1457				
Flow Rate	gal/min	910	910	799	0	855	850				
Circ Pressure	psi	710	710	1250	0	1400	2000				
Avg ROP	m/hr	40	40	40	0	24	24				
Sample From	20		Sentinel	Pit	P1t #4	P1t # 4	Pit # 4				
Flow Line Temp	°C	1.04.0.00	1.00.00	1.0( 0.00	1.02 0.00	23	46				
Mud Weight	sp.gr.	1.04 ( <i>a</i> ) °C	1.2( <u>a)</u> °C	1.06 ( <i>a</i> ) °C	1.03 (a) °C	1.06( <i>a</i> )23 °C	1.08(a)35 °C				
Funnel Viscosity	<u>s/qt</u>	> 100	51	100	>100	55	54				
PV VD	<u>CP</u>		13		52	10	12				
<u>IP</u> D(00/D200/D200	10/10011		50	11	07/75/65	20	<u> </u>				
R000/R300/R200		//	50/45/	//	9///5/05	40/30/24	27/12/10				
$\frac{100/10m/20m}{10}$	1b/100ft2	11	12/18/	11	20/28/24	8/10/10	2//12/10				
A PL Fluid Loss		11	12/10/	11	20/28/30	5.0	5 /				
HTHP Fluid Loss	$cc/30 \min$					5.9	5.4				
Cake A PI/HT	1/32"	1	1	/	/	1/	1/				
Solids	%Vol	/	/	1	/	25	5				
Oil/Water	%Vol	/	/	/	/	0/97.5	3/92				
Sand	%Vol	/	/	/	/	0171.5	tr				
MBT	lb/bbl					1	2.5				
pH	10,001					9.0	8.7				
Alkal Mud (Pm)						0.3	0.1				
Pf/Mf		/	/	/	/	0.2/	0.15/0.6				
Chlorides	mg/l					42000	35000				
Hardness Ca	0					1200	1180				
KCL % by wt	%					5.5	5				
LSRV 1	cP					1	0.8				
LSRV 2	cP					3	3				
LSRV 3	cP					40	20				
Daily Mud Cost	\$	2730.28		5641.81	19856.44	10394.47	10285.28				
Cuml Mud Cost	\$	2730.28		8372.09	28228.53	38623.00	48908.28				
Sales Engineer	· · · ·	Dave Di/Graeme	Dave Di/Graeme	Dave Di/Graeme	Dave Di/Graeme	Dave Di/Graeme	Dave Di/Graeme				
Products Used		MI Gel / 320		Na2Co3 / 4	Duotec / 32	Duotec / 16	Duotec / 6				
		NaOH / 6		MI Gel / 634	GlydLC / 18	GlydLC / 8	GlydLC / 14				
		Na2Co3 / 3		CaCl2 / 29	os1 / 4	os1 / 2	Poly+ / 6				
				NaOH / 11	Poly+ / 12	Poly+ / 6					
					Pac UL / 16	Pac UL / 8					
					NaHCO3 / 4	KCL / 4					
						NaHCO3 / 1					
REMARKS		1	1	1	1	I					
	11 D . O C										

20/06/2002: Spud Well, Run in & Cement Casing.

21/06/2002: Drill 17.1/2" interval. 22/06/2002: Run B.O.P.s and riser 23/06/2002: Drill out casing shoe, Run leak off test. Drill ahead. 24/06/2002: Drill 12.1/4" interval.

M-I L.L.C.



Operator : OMV Australia

Field/Area : VIC / L21

Well Name :	Patricia 2		Description : Development								
Contractor :	Diamond Offsho	ore		Lo	cation: Bass St	rait					
Date		24/06/2002	25/06/2002	25/06/2002	26/06/2002	27/06/2002	27/06/2002				
Depth/TVD	m	530/521	884/702	854/692	884/702	1379/701	1014/700				
Activity		Drillling	Tripping	Tripping	Drill Out	Drilling	Drilling				
Mud Type		PHPA/KCI/Gl	PHPA/KCI/Gl	PHPA/KCI/Gl	Flo-Pro	Flo-Pro	Flo-Pro				
Hole Size	in	12.25	12.25	12.25	8.5	8.5	8.5				
Circ Volume	bbl	1457	1567	1567	1311	1178	1178				
Flow Rate	gal/min	850	850	850	0	586	586				
Circ Pressure	psi	2000	2000	2000	0	2000	2000				
Avg ROP	m/hr	24	24	24	0	0	0				
Sample From		Pit 4	Pit # 4	Pit	Pit # 1	Pit # 4	Pit				
Flow Line Temp	°C	30		49		45	38				
Mud Weight	sp.gr.	1.04@30 °C	1.12 @49 °C	1.10 @49 °C	1.07@, °C	1.12@45 °C	1.09@38 °C				
Funnel Viscosity	s/qt	50	55	57	120	60	69				
PV	cP	9	14	15	9	11	11				
YP	lb/100ft <sup>2</sup>	18	30	37	37	32	34				
R600/R300/R200		36/27/23	58/44/37	67/52/45	55/46/42	54/43/39	56/45/40				
R100/R6/R3		18/9/7	28/16/14	35/15/13	37/19/17	31/16/14	32/17/15				
10s/10m/30m Gel	lb/100ft <sup>2</sup>	7/11/13	13/18/22	14/21/24	17/20/23	15/18/23	18/22/24				
API Fluid Loss	cc/30 min	5.6	6.4	6.8	5.2	4.8	5.2				
HTHP Fluid Loss	cc/30 min										
Cake API/HT	1/32"	1/	1/	1/	1/	1/	1/				
Solids	%Vol	5	7	6	4	8	6				
Oil/Water	%Vol	3/92	3/90	3/91	0/96	/92	/94				
Sand	%Vol	tr	tr	1		0.25	.25				
MBT	lb/bbl	1.25	5	5	1	2	1				
pH		8.7	8.7	8.7	8.9	9.5	9.5				
Alkal Mud (Pm)		0.1	0	0.0	0.8	0.2	0.6				
Pf/Mf		0.1/0.6	0.1/0.7	0.05/0.8	0.2/0.5	0.1/0.6	0.1/0.5				
Chlorides	mg/l	41000	45000	45000	32000	72000	72000				
Hardness Ca	~	1200	1200	1200	350	400	320				
KCL % by wt	%	5.5	5.5	5.5	3	3	3				
LSRV 1	cP	0.8	0.8	0.8	45000	59187	64000				
LSRV 2	cP	3	3	3	54288	64086	69985				
LSRV 3	cP	20	10	10	54788	62687	69485				
Daily Mud Cost	\$		863.90		28639.63	10073.44					
Cuml Mud Cost	\$		49772.18		78411.81	88485.25					
Sales Engineer		Dave Di/Graeme	Dave Di/Graeme	Dave Di/Graeme	Dave Di/Graeme	Dave Di/Graeme	Dave Di/Graeme				
Products Used			BARBK / 50		DualFlo / 53	DualFlo / 13					
			KCL / 2		Flovis+ / 45	Flovis+ / 11					
					Glute25 / 4	Glute25 / 1					
					os1 / 8	os1 / 2					
					KCL / 6	KCL / 8					
					KOH / 7	KOH / 2					
					Om 1 / 28	NaCl / 8					
					OM 8 / 217						
					OM10 / 21						
					NaCl / 3						

REMARKS

25/06/2002: Drilled to interval depth of 884 m.

26/06/2002: Set and cemented 9.5/8" casing. Prepare for 8.1/2" hole. 27/06/2002: Commence drilling 8.1/2" interval with Flo pro system.

M-I L.L.C.



**Operator : OMV Australia** 

Field/Area: VIC / L21

Well Name : Patricia 2 **Description : Development** Contractor: Diamond Offshore Location : Bass Strait 28/06/2002 29/06/2002 30/06/2002 1/07/2002 2/07/2002 3/07/2002 Date Depth/TVD 1385/701 1385/701 1385/701 1385/701 1385/701 1385/701 m ompletion progra Well completion Well Completion Well completion Activity Flowing well Brine Mud Type Brine Brine Brine Brine Brine Hole Size in 8.5 8.5 8.5 8.5 8.5 8.5 Circ Volume bbl 773 1213 1213 1029 810 810 Flow Rate <u>gal/min</u> 0 0 0 0 0 0 Circ Pressure 0 0 0 0 0 0 psi 0 Avg ROP m/hr 0 0 0 0 0 Sample From Pit Flow Line Temp °C 1.08 @ °C Mud Weight 1.08 @ °C sp.gr. Funnel Viscosity s/qt ΡV cP YP  $lb/100ft^2$ R600/R300/R200 11 11 // 11 11 // R100/R6/R3 11 11 10s/10m/30m Gel lb/100ft<sup>2</sup> // // // API Fluid Loss cc/30 min cc/30 min HTHP Fluid Loss Cake API/HT 1/32" Solids %Vol Oil/Water %Vol / Sand %Vol lb/bbl MBT pН Alkal Mud (Pm) Pf/Mf / mg/l Chlorides Hardness Ca KCL % by wt % LSRV 1 cP LSRV 2 cP LSRV 3 cP \$ 6040.15 Daily Mud Cost 10730.44 1225.58 548.90 661.24 0.00 Cuml Mud Cost \$ 94525.40 105255.84 106481.42 07030.32 07691.56 107691.56 Sales Engineer /Graeme /Graeme /Graeme /Graeme /Graeme /Graeme Products Used Duotec / 4 Duotec / 4 NaOH / 2 KCL / DefoamA / 2 KCL / 2 os1 / 2 DefoamA / 3 wellzym / 4 SS WN / 4 NaCI / 13 KCL / 2 NaCl / 6 bRINE / 400 con303 / 3

REMARKS

28/06/2002: Total depth of 1385 m was reached and the hole was cleaned up. Run sand screens.

29/06/2002: Completion program

30/06/2002: Continue with well completion

1/07/2002: continue well completion.

2/07/2002: Continued well completion.

3/07/2002: Continue well completion with the flowing of the well.

M-I L.L.C.



**Operator :** OMV Australia

W	ell	Name	2	Patricia 2	

#### Contractor : Diamond Offshore

## Field/Area : VIC / L21

**Description :** Development

Location : Bass Strait

Contractor .				LU		ian	
Date		4/07/2002	5/07/2002	6/07/2002			
Depth/TVD	m	1385/701	1385/701	1385/701			
Activity		Well Testing	Well suspension	Weather watch			
Mud Type		Brine	Brine	Brine			
Hole Size	in	8.5	8.5	8.5			
Circ Volume	bbl	810	810	810			
Flow Rate	gal/min	0	0	0			
Circ Pressure	nsi	0	ů 0	0			
Avg ROP	m/hr	0	0	0			
Sample From	111/111	V	· · · · · ·	· · · · · · · · · · · · · · · · · · ·			
Flow Line Temp	°C						
Mud Weight	sn gr	1.08 @ °C	1.08 @ °C	1.08 @ °C			
Funnel Viscosity	sp.gr.	1.00 (u) C	1.00 (0) C	1.00 (0) C			
PV	<u> </u>						
VP	1b/100ft2						
P600/P300/P200	10/1001	11	11	11			
P100/P6/P3			11	11			
$\frac{10c/10m/20m}{col}$	1b/100ft2		11	11			
A DI Eluid Loca	$\frac{10/10011}{20/20}$ min	11	11	11			
UTUD Eluid Loss	$\frac{cc/30 \text{ min}}{cc/20 \text{ min}}$						
	1/22	1	1	/			
Cake API/HI	1/32 <sup>1</sup>	/	/	/			
Solids	% V 01	1	1	1			
Oil/water	% V 01	/	/	/			
Sand	%V01						
MBI	Ib/bbl						
pH							
Alkal Mud (Pm)		1					
Pt/Mt		/	/	/			
Chlorides	mg/l						
Hardness Ca							
KCL % by wt	%						
LSRV 1	cP						
LSRV 2	cP						
LSRV 3	cP						
Daily Mud Cost	\$	0.00	0.00	0.00			
Cuml Mud Cost	\$	107691.56	107691.56	107691.56			
Sales Engineer		/Graeme	/Graeme	/Graeme			
Products Used							
			1	1	1	1	1

#### REMARKS

4/07/2002: Continue testing Patricia # 2

5/07/2002: Completed well testing and commenced well suspension

6/07/2002: Continue well suspension until shut down by weather



DRILLING FLUIDS RECAP PATRICIA 2



# **PRODUCT CONSUMPTION**



**Operator :** OMV Australia

Well Name : Patricia 2

Location : Bass Strait

Field/Area: VIC / L21

Contractor:Diamond OffshoreM-I Engineer:Graeme GarrickRig Name:Ocean Bounty

Stock Point: Geelong

	DATES											
Product	Product Jun 20, 2002 Jun 21, 2 Price Oty Cost Oty (			1, 2002	Jun 2	2, 2002	Jun 2	23, 2002	Jun	24, 2002	Page	
Name	Price	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
Barite Bulk	$\frac{6.30}{0.12}$		0.00		0.00		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	0.00
Gel Bulk	$\frac{8.12}{0.17}$	320	2598.40	634	$-\frac{5148.08}{2(5.02)}$		$\frac{0.00}{0.00}$				$\frac{0.00}{0.00}$	//46.48
Caustic Soda	$\frac{9.17}{17.32}$		103.02	29	205.93							
Citric Acid	$\frac{17.32}{26.31}$		0.00		190.32				$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	294.44
Dual-Flo	$\frac{20.51}{94.75}$				$ \frac{0.00}{0.00}$				$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	
Duotec	192.61		0.00		$\overline{0.00}$	$\bar{3}2$	6163.52	16	3081.76	6	1155.66	10400.94
Defoam A	56.17		0.00		$\bar{0}.\bar{0}\bar{0}$						$\bar{0}.\bar{0}\bar{0}$	0.00
Flo-Vis Plus	421.14		0.00		0.00		0.00		0.00		0.00	0.00
Glute-25	67.75		0.00		0.00		0.00		0.00		0.00	0.00
<u>Glydril LC</u>	621.94		0.00		0.00	18	11194.92	8	4975.52	14	8707.16	24877.60
Guar Gum	$ \frac{33.68}{20.10}$		0.00		0.00	+	$ \frac{0.00}{0.00}$		$ \frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	0.00
Kwik Seal Fine	$ \frac{28.19}{28.19}$		0.00		$\frac{0.00}{0.00}$				0.00			0.00
	$ \frac{28.19}{6.64}$											0.00
Mix II Fine	$\frac{0.04}{22.93}$				$ \frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$ \frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	0.00
OS-1	$-\frac{22.99}{31.94}$		0.00		$ \frac{0.00}{0.00}$	4	127.76	2	63.88		$\frac{0.00}{0.00}$	191.64
Pipelax W	326.34		0.00		$\bar{0}.\bar{0}\bar{0}$		0.00					
Polyplus Dry	70.41		0.00		$\bar{0}.\bar{0}\bar{0}$	12	844.92	6	422.46	6	422.46	1689.84
Polypac UL	92.93		0.00		0.00	16	1486.88	8	743.44		0.00	2230.32
KCL-Geel	274.45		0.00		0.00		0.00	4	1097.80		0.00	1097.80
Potassium Hydroxide	28.96		0.00		0.00		0.00		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	0.00
Safe Surf WN	$-\frac{933.30}{22}$		0.00		0.00		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	0.00
Soda Ash	$\frac{9.32}{0.61}$		27.96	4	3/.28		$\frac{0.00}{28.44}$		$\frac{0.00}{0.61}$		$\frac{0.00}{0.00}$	$ \frac{65.24}{48.05}$
Omvacarb 1	9.01		0.00			4	38.44	<sup>1</sup>	9.01			$\frac{48.05}{0.00}$
Omyacarb 8	$ \frac{0.04}{6.04}$		0.00			+						0.00
Zinc Carbonate	32.88		0.00			+	$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	
Flossy Salt	6.50		0.00		0.00		0.00		0.00			
Conqor 303A	192.72		0.00		0.00		0.00		0.00		$\bar{0.00}$	
Omyacarb 40	6.20		0.00		0.00		0.00		0.00		0.00	0.00
Circal 1000	7.25		0.00		0.00		0.00		0.00		0.00	0.00
Circal Y Grade	7.25		0.00		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	0.00
Safe Peel	395.50		0.00		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$\frac{0.00}{5.55}$		$\frac{0.00}{0.00}$	0.00
MIX II Medium	$-\frac{1}{2000}$											0.00
Omyacarb 10	$ \frac{20.00}{6.04}$										$\frac{0.00}{0.00}$	0.00
KCL-Welsh	-287.45		0.00		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$		$\frac{0.00}{0.00}$	0.00
KCL-Eden	323.45		0.00		0.00		0.00		0.00		$\bar{0.00}$	
SALT (BIG BAG)	228.00		0.00		0.00		0.00		0.00		0.00	0.00
BRINE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
											+	
						+						
Cumulative Engineering		I	0.00		0.00		0.00	uI	0.00		0.00	0.00
Daily Product			2730.28		5641.81	1	9856.44		10394.47		10285.28	48908.28
Daily Sales Tax			0		0		0		0		0	0.00
Cumulative Product			2730.28		8372 09	~	08778 52		38623 00		48908 28	48908 28
			2720.20		0312.07 0277 00	4	10110 51	-	28672.00		10000.20	10000.20
Cumulative Cost			2/30.28		03/2.09	4	20228.33		00023.00		48908.28	48908.28



Operator : OMV Australia

Well Name : Patricia 2

Location : Bass Strait Field/Area: VIC / L21

rield/Area: VIC/L21

Contractor:Diamond OffshoreM-I Engineer:Graeme GarrickRig Name:Ocean BountyStock Point:Geelong

	DATES											
Product	Previous	Jun	25, 2002	Jun 2	6, 2002	Jun 2	7, 2002	Jun	28, 2002	Jun 2	29, 2002	Page
Name	Page	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
Barite Bulk	0.00	50	315.00		0.00		0.00		0.00		0.00	315.00
Gel Bulk	7746.48		0.00		0.00		0.00	)	0.00		0.00	7746.48
Calcium Chloride	265.93		0.00		0.00		0.00		0.00		0.00	265.93
Caustic Soda	294.44		0.00		0.00		0.00	)	0.00		0.00	294.44
Citric Acid	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Dual-Flo	0.00		0.00	53	5021.75	13	1231.75		0.00		0.00	6253.50
Duotec	10400.94		0.00		0.00		0.00	4	770.44	4	770.44	11941.82
Defoam A	0.00		0.00		0.00		0.00	3	168.51		0.00	168.51
Flo-Vis Plus	0.00		0.00	45	18951.30	11	4632.54	-	0.00		0.00	23583.84
Glute-25	0.00		0.00	4	271.00	1	67.75		0.00		0.00	338.75
Glydril LC	24877.60		0.00		0.00		0.00	)	0.00		0.00	24877.60
Guar Gum	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Kwik Seal Fine	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Kwik Seal Medium	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Lime	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Mix II Fine	0.00		0.00		0.00		0.00		0.00		0.00	0.00
OS-1	191.64		0.00	8	255.52	2	63.88		0.00		0.00	511.04
Pipelax W	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Polyplus Dry	1689.84		0.00		0.00		0.00		0.00		0.00	1689.84
Polypac UL	2230.32		0.00		0.00		0.00		0.00		0.00	2230.32
KCL-Geel	1097.80	2	548.90	6	1646.70	8	2195.60		0.00		0.00	5489.00
Potassium Hydroxide	0.00		0.00	7	202.72	2	57.92		0.00		0.00	260.64
Safe Surf WN	0.00		0.00		0.00		0.00	4	3733.20		0.00	3733.20
Soda Ash	65.24		0.00		0.00		0.00		0.00		0.00	65.24
Sodium Bicarbonate	48.05		0.00		0.00		0.00	)	0.00		0.00	48.05
Omyacarb 1	0.00		0.00	28	169.12		0.00	)	0.00		0.00	169.12
Omyacarb 8	0.00		0.00	217	1310.68		0.00	)	0.00		0.00	1310.68
Zinc Carbonate	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Flossy Salt	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Conqor 303A	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Omyacarb 40	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Circal 1000	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Circal Y Grade	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Safe Peel	0.00		0.00		0.00		0.00	)	0.00		0.00	0.00
Wellzyme A	0.00		0.00		0.00		0.00		0.00	4	6996.00	6996.00
MIX II Medium	0.00		0.00	21	0.00		0.00		0.00		0.00	0.00
Omyacarb 10	0.00		0.00	21	126.84		0.00	)	0.00		0.00	126.84
KCL-Weish	0.00		0.00		0.00		0.00		0.00		0.00	0.00
KUL-Eden	0.00		0.00	2	0.00	0	1924.00		12(9,00	12	0.00	0.00
SALT (BIG BAG)	0.00		0.00	3	084.00	8	1824.00	0	1308.00	13	2964.00	0840.00
BRINE	0.00		0.00		0.00		0.00	/	0.00	400	0.00	0.00
Cumulativo Engineering			0.00		0.00		0.00	I	0.00		0.00	0.00
			0.00	-	0.00		0.00		0.00		0.00	0.00
Daily Product			863.90	2	8639.63		10073.44		6040.15		10730.44	105255.84
Daily Sales Tax			0		0		0		0		0	0.00
Cumulative Product		2	49772.18	7	8411.81	2	88485.25		94525.40	1	05255.84	105255.84
Cumulative Cost		4	49772.18	7	8411.81	2	88485.25		94525.40	1	05255.84	105255.84
	•			,								



**Operator :** OMV Australia **Well Name :** Patricia 2

**Location :** Bass Strait

Field/Area: VIC / L21

Contractor:Diamond OffshoreM-I Engineer:Graeme GarrickRig Name:Ocean BountyStock Point:Geelong

Product Previous Jun 30, 2002 Jul 1, 2002 Jul 2, 2002 Jul 3, 2002 Jul 4, 2002 Page   Name Page Qty Cost Qty		DATES											
Name Page Qty Cost Q	Product	Previous	Jun	30, 2002	Jul	1,2002	Jul 2	2, 2002	Jul	3, 2002	Jul	4, 2002	Page
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Name	Page	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
Gel Bulk 7746.48 0.00 0.00 0.00 0.00 7746.   Calcium Chloride 265.93 0.00 0.00 0.00 0.00 0.00 265.   Caustic Soda 294.44 2 34.64 0.00 0.00 0.00 0.00 329.   Citric Acid 0.00	Barite Bulk	315.00		0.00		0.00		0.00		0.00		0.00	315.00
Calcium Chloride 265.93 0.00 0.00 0.00 0.00 0.00 265.   Caustic Soda 294.44 2 34.64 0.00 0.00 0.00 329.   Citric Acid 0.00 0.00 0.00 0.00 0.00 0.00 329.   Dual-Flo 6253.50 0.00 0.00 0.00 0.00 0.00 6253.   Duotec 11941.82 0.00 0.00 0.00 0.00 0.00 11941.   Defoam A 168.51 0.00 0.00 0.00 0.00 2112.34 0.00 0.00 280.   Flo-Vis Plus 23583.84 0.00 0.00 0.00 0.00 338.3   Glute-25 338.75 0.00 0.00 0.00 0.00 338.3   Glydril LC 24877.60 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00<	Gel Bulk	7746.48		0.00		0.00		0.00		0.00		0.00	7746.48
Caustic Soda 294.44 2 34.64 0.00 0.00 0.00 329.   Citric Acid 0.00	Calcium Chloride	265.93		0.00		0.00		0.00		0.00		0.00	265.93
Citric Acid 0.00 6253.50 0.00 0.00 0.00 0.00 0.00 6253.50 0.00 0.00 0.00 0.00 0.00 6253.50 0.00 0.00 0.00 0.00 0.00 0.00 0.00 11941.52 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 280.53 0.00 0.00 0.00 0.00 280.53 0.00 0.00 0.00 0.00 0.00 280.53 0.00	Caustic Soda	294.44	2	34.64		0.00		0.00		0.00		0.00	329.08
Dual-Flo 6253.50 0.00 0.00 0.00 0.00 0.00 6253.   Duotec 11941.82 0.00 0.00 0.00 0.00 0.00 11941.   Defoam A 168.51 0.00 0.00 2 112.34 0.00 0.00 280.   Flo-Vis Plus 23583.84 0.00 0.00 0.00 0.00 23583.   Glute-25 338.75 0.00 0.00 0.00 0.00 338.'   Glydril LC 24877.60 0.00 0.00 0.00 0.00 0.00 0.00 0.00   Kwik Seal Fine 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Citric Acid	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Duotec 11941.82 0.00 0.00 0.00 0.00 0.00 11941.   Defoam A 168.51 0.00 0.00 2 112.34 0.00 0.00 280.   Flo-Vis Plus 23583.84 0.00 0.00 0.00 0.00 23583.   Glute-25 338.75 0.00 0.00 0.00 0.00 338.   Glydril LC 24877.60 0.00 0.00 0.00 0.00 0.00 24877.   Guar Gum 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00   Kwik Seal Fine 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Dual-Flo	6253.50		0.00		0.00		0.00		0.00		0.00	6253.50
Defoam A 168.51 0.00 0.00 2 112.34 0.00 0.00 280.   Flo-Vis Plus 23583.84 0.00 0.00 0.00 0.00 0.00 23583.35   Glute-25 338.75 0.00 0.00 0.00 0.00 0.00 338.35   Glydril LC 24877.60 0.00 0.00 0.00 0.00 0.00 24877.00   Guar Gum 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00   Kwik Seal Fine 0.00 0	Duotec	11941.82		0.00		0.00		0.00		0.00		0.00	11941.82
Flo-Vis Plus 23583.84 0.00 0.00 0.00 0.00 0.00 23583.   Glute-25 338.75 0.00 0.00 0.00 0.00 0.00 338.7   Glydril LC 24877.60 0.00 0.00 0.00 0.00 0.00 24877.7   Guar Gum 0.00 0.00 0.00 0.00 0.00 0.00 0.00   Kwik Seal Fine 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Defoam A	168.51		0.00		0.00	2	112.34		0.00		0.00	280.85
Glute-25 338.75 0.00 0.00 0.00 0.00 0.00 338.75   Glydril LC 24877.60 0.00 0.00 0.00 0.00 0.00 24877.75   Guar Gum 0.00 0	Flo-Vis Plus	23583.84		0.00		0.00	-	0.00		0.00		0.00	23583.84
Glydrif LC 24877.60 0.00 0.00 0.00 0.00 0.00 24877.7   Guar Gum 0.00 <td>Glute-25</td> <td>338.75</td> <td></td> <td>0.00</td> <td></td> <td>0.00</td> <td></td> <td>0.00</td> <td></td> <td>0.00</td> <td></td> <td>0.00</td> <td>338./5</td>	Glute-25	338.75		0.00		0.00		0.00		0.00		0.00	338./5
Guar Gum 0.00	Glydfil LC	248//.60		0.00		0.00		0.00		0.00		0.00	248//.60
Kwik Seal Fine 0.00	Guar Gum	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Kurik Saal Madiuma 0.00 0.00 0.00 0.00 0.00 0.00	Kwik Seal Madium	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Kwik Seal Medium 0.00	L ime	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Line 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Mix II Fine	0.00		0.00		0.00		0.00		0.00		0.00	0.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	OS-1	511.04	2	63.88		0.00		0.00		0.00		0.00	574.92
Open Number	Pinelax W	0.00	2	0.00		0.00		0.00		0.00		0.00	0.00
Polyplus Dry 1689 84 0.00 0.00 0.00 0.00 0.00 0.00 1680	Polyplus Dry	1689.84		0.00		0.00		0.00		0.00		0.00	1689.84
Polypas LII 2230 32 0.00 0.00 0.00 0.00 0.00 2230	Polypac UL	2230.32		0.00		0.00		0.00		0.00		0.00	2230.32
KCL-Geel 255.52 0.00 0.00 0.00 0.00 7135   KCL-Geel 5489.00 2.548.90 2.548.90 0.00 0.00 7135	KCL-Geel	5489.00	2	548.90	2	548.90	2	548.90		0.00		0.00	7135.70
Potassium Hydroxide 260.64 0.00 0.00 0.00 0.00 0.00 260	Potassium Hydroxide	260.64	_	0.00	_	0.00	_	0.00		0.00		0.00	260.64
Safe Surf WN 3733 20 0.00 0.00 0.00 0.00 3733	Safe Surf WN	3733.20		0.00		0.00		0.00		0.00		0.00	3733.20
Soda Ash 65.24 0.00 0.00 0.00 0.00 0.00 65.	Soda Ash	65.24		0.00		0.00		0.00		0.00		0.00	65.24
Sodium Bicarbonate 48.05 0.00 0.00 0.00 0.00 0.00 48.05	Sodium Bicarbonate	48.05		0.00		0.00		0.00		0.00		0.00	48.05
Omyacarb 1 169.12 0.00 0.00 0.00 0.00 169.	Omyacarb 1	169.12		0.00		0.00		0.00		0.00		0.00	169.12
Omyacarb 8 1310.68 0.00 0.00 0.00 0.00 1310.4	Omyacarb 8	1310.68		0.00		0.00		0.00		0.00		0.00	1310.68
Zinc Carbonate 0.00	Zinc Carbonate	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Flossy Salt 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Flossy Salt	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Conqor 303A 0.00 3 578.16 0.00 0.00 0.00 578.	Conqor 303A	0.00	3	578.16		0.00		0.00		0.00		0.00	578.16
Omyacarb 40 0.00	Omyacarb 40	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Circal 1000 0.00	Circal 1000	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Circal Y Grade 0.00	Circal Y Grade	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Safe Peel 0.00	Safe Peel	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Wellzyme A 6996.00 0.00 0.00 0.00 0.00 0.00 6996.	Wellzyme A	6996.00		0.00		0.00		0.00		0.00		0.00	6996.00
MIX II Medium 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	MIX II Medium	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Omyacarb 10 126.84 0.00 0.00 0.00 0.00 0.00 126.3   Max Multi 0.00 0.00 0.00 0.00 0.00 126.3	Omyacarb 10	126.84		0.00		0.00		0.00		0.00		0.00	126.84
KCL-weish 0.00	KCL-Welsh	0.00		0.00		0.00		0.00		0.00		0.00	0.00
KUL-Eden 0.00	KUL-Eden	0.00		0.00		0.00		0.00		0.00		0.00	0.00
SAL1 (BIG BAG) 0840.00 <td>SALI (BIG BAG)</td> <td>6840.00</td> <td></td> <td>0.00</td> <td></td> <td>0.00</td> <td></td> <td>0.00</td> <td></td> <td>0.00</td> <td></td> <td>0.00</td> <td>6840.00</td>	SALI (BIG BAG)	6840.00		0.00		0.00		0.00		0.00		0.00	6840.00
BRINE 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	BRINE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
	Cumulativo Engineering			0.00		0.00		0.00		0.00		0.00	0.00
Output 0.00 <				1005.50		549.00		0.00		0.00		0.00	107(01.5(
<b>Daily Product</b> 1225.58 548.90 661.24 0.00 0.00 10/691.3	Daily Product			1225.58		548.90		661.24		0.00		0.00	10/691.56
Daily Sales Tax 0	Daily Sales Tax			0		0		0		0		0	0.00
Cumulative Product 106481.42 107030.32 107691.56 107691.56 107691.56	Cumulative Product		1	06481.42	10	7030.32	1	07691.56	1	07691.56		107691.56	107691.56
Cumulative Cost 106481.42 107030.32 107691.56 107691.56 107691.56 107691.56	Cumulative Cost		1	06481.42	10	7030.32	1	07691.56	1	07691.56		107691.56	107691.56



**Operator :** OMV Australia **Well Name :** Patricia 2

Location : Bass Strait

Field/Area: VIC / L21

Contractor:Diamond OffshoreM-I Engineer:Graeme GarrickRig Name:Ocean BountyStock Point:Geelong

						0	DATES					
Product	Previous	Jul	5, 2002	Jul	6, 2002	Jul '	7, 2002	Jul	8, 2002			Page
Name	Page	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
Barite Bulk	315.00		0.00	)	0.00		0.00		0.00			315.00
Gel Bulk	7746.48		0.00	)	0.00		0.00		0.00			7746.48
Calcium Chloride	265.93		0.00	)	0.00		0.00		0.00			265.93
Caustic Soda	329.08		0.00	2	0.00		0.00		0.00			329.08
Citric Acid	0.00		0.00	)	0.00		0.00		0.00			0.00
Dual-Flo	6253.50		0.00	)	0.00		0.00		0.00			6253.50
Duotec	280.85		0.00	)	0.00		0.00		0.00			11941.82
Elo Vis Plus	280.83		0.00		0.00		0.00		0.00			23583.84
Glute-25	338 75		0.00	)	0.00		0.00		0.00			338 75
Glute 25 Glydril LC	24877.60		0.00	)	0.00		0.00		0.00			24877.60
Guar Gum	0.00		0.00	)	0.00		0.00		0.00			0.00
Kwik Seal Fine	0.00		0.00	)	0.00		0.00		0.00			0.00
Kwik Seal Medium	0.00		0.00	)	0.00		0.00		0.00			0.00
Lime	0.00		0.00	)	0.00	0.00			0.00			0.00
Mix II Fine	0.00		0.00	D	0.00	0.00			0.00			0.00
OS-1	574.92		0.00	)	0.00		0.00		0.00			574.92
Pipelax W	0.00		0.00	)	0.00		0.00		0.00			0.00
Polyplus Dry	1689.84		0.00	2	0.00	0.00			0.00			1689.84
Polypac UL	2230.32		0.00		0.00		0.00		0.00			2230.32
KCL-Geel	/135./0		0.00		0.00		0.00		0.00			/135./0
Polassium Hydroxide	200.04		0.00		0.00		0.00		0.00			200.04
Sale Sull WIN	65.24		0.00	) )	0.00		0.00		0.00			5/55.20
Sodium Bicarbonate	48.05		0.00	2	0.00		0.00		0.00			48.05
Omyacarb 1	169.12		0.00	)	0.00		0.00		0.00			169.12
Omyacarb 8	1310.68		0.00	)	0.00		0.00		0.00			1310.68
Zinc Carbonate	0.00		0.00	Ď	0.00		0.00		0.00			0.00
Flossy Salt	0.00		0.00	)	0.00		0.00		0.00			0.00
Conqor 303A	578.16		0.00	C	0.00		0.00		0.00			578.16
Omyacarb 40	0.00		0.00	C	0.00		0.00		0.00			0.00
Circal 1000	0.00		0.00	)	0.00		0.00		0.00			0.00
Circal Y Grade	0.00		0.00	2	0.00		0.00		0.00			0.00
Safe Peel	0.00		0.00	)	0.00		0.00		0.00			0.00
Wellzyme A	6996.00		0.00	)	0.00		0.00		0.00			6996.00
MIX II Medium	126.84		0.00		0.00		0.00		0.00			126.84
KCL-Welsh	0.00		0.00	)	0.00		0.00		0.00			0.00
KCL-Weish KCL-Eden	0.00		0.00	2	0.00		0.00		0.00			0.00
SALT (BIG BAG)	6840.00		0.00	)	0.00		0.00		0.00			6840.00
BRINE	0.00		0.00	)	0.00		0.00		0.00			0.00
				-								
											1	
											+	
			0.00	1	0.00		0.00		0.00		1	0.00
			0.00		0.00		0.00		0.00			0.00
Daily Product			0.00		0.00		0.00		0.00			10/691.56
Daily Sales Tax			0		0		0		0			0.00
Cumulative Product		1	07691.56	1	07691.56	1	07691.56	1	07691.56			107691.56
Cumulative Cost		1	07691.56	1	07691.56	1	07691.56	1	07691.56			107691.56



DRILLING FLUIDS RECAP PATRICIA 2



# DAILY MUD REPORTS

	💧 Drill	ing				W	AT	ER-B	BASE	ED I	MUD F	REPOF	RT No	. 1	
	Fluid	ds ¯		-	0	Da	ate	20/06/2	002	Dep	th/TVD	11	1.5 m / 11	1.5 m	
					Sp Wate	ud Da er Dep	oth	20/06/2	002	Mu	a iype Activity	Sw a Dril	<u>&amp; HI VIS 3</u> led 36"s	ection	)S
Operator :	OMV Aus	stralia		I			Fie	ld/Area	: VIC	/ L21					
Report For :	G. Howard	d & J. Ke	ndrick				Dese	cription	: Dev	elopm	ent				
Contractor :	Patricia 2 Diamond	Offshore							Bass	s Strait					
Report For :	R.Grahran	n							·						
DRILLING A	SSEMBL	Y	CAS	ING		MU	JD \	VOLUME	E (bbl)		C			Α	
Bit Size 36 in 26"bi	it,36"H/O		Surf	ace				Hole		Pu	ump Make	JATIONAL	. 12P-16 JA	TIONA	L 12P-16
Nozzles 3x24/4x2	<u>2 / 1/32"</u>	.th	<u>30in @111m</u>	(111TV	VD)		78.8(	( <u>Tot)/77.8</u>	<u>S(Bit)</u>		Pump Size	6 X 1	2.1n	<u>6 X</u>	12.1n
5 in	49 r	n l	13 375in @326	$\frac{1}{5}$ (318)	TVD)		F	- 8	lS	Pui	mn stk/mir	$\frac{4.274}{107@9}$	<u>gal/stk</u>	<u>4.274</u> 1060	<u>gai/stk</u>
Drill Pipe Size	Leng	th	Interm	ediate	110)	Т	otal	Circulatir	ng Vol	1 41	linp 500 1111	Flow Rate	9	10 gal	/min
5 in	m							77			Bo	ottoms Up	3.4 mi	n 72	9 stk
Drill Collar Size	Leng	th	Production	or Lin	ner			In Storag	;e		<u>Total (</u>	Circ Time	<u>3.6 mi</u>	<u>n 75</u>	7 stk
9.5 111	551	11	MUD PROPE		s			001			PRO	DUCTS U		T 24 I	IRS
Sample From				Sei	ntinel						Products		Siz	ze	Amt
Flow Line Temp		°C	111 5/111 5			_					Gel Bulk	1.	100 L	B BG	320
Mud Weight		sn gr	1 04		12	_					Soda Ash	da	25 KC	<u>i DM</u> i BG	3
Funnel Viscosity		s/qt	> 100		51						2044 / 1011		25 K		5
Rheology Temp		°Ĉ		-	(142										
R600/R300 R200/R100				50	6/43										
R6/R3															
PV		cP			13										
YP 10s/10m/30m Gel		$\frac{0}{100 \text{ft}^2}$		12	<u>30</u> 2/18/										
API Fluid Loss		/30 min		12	2/10/										
HTHP FL Temp	CC/	/30 min													
Cake API/HTHP Solids		1/32" %Vol													
Oil/Water		%Vol													
Sand		%Vol									SOLIDS	EQUIP	Siz	e	Hr
MBT		lb/bbl				_					Thule VS	<u>M 100 S</u>			0
Alkal Mud (Pm)						_					Thule VS	M 100 S			0
Pf/Mf											Thule VS	M 100 S			0
Chlorides		mg/l									D-Sander				0
Hardness Ca		mg/1				_					D-Silter Degasser				0
KCL % by wt		%									Degusser				
LSRV 1		cP oP													
LSRV 2 LSRV 3		cP													
											N	IUD PRO	PERTY S	PECS	
											Weight Viscosity	.7		$\frac{1.04}{>100}$	
											Filtrate			n/c	
	EWVDK										REMAG	RRS			
Drill water received	from Pacific	c Sentinel:	pH 7.5 Cl- 20	0 mg/l.	Ca 180	Ru	n Ano	chors and r	position	rig. Ru	n casing an	latch to guid	e base. Sec	ure in	
mg/l. Rec'd 480 bbls	s old mud fr	om Sentin	el. Mixed 885 b	bls PHG	G The	mo	onpo	ol. Seabed	tagged	at 77.5	m.Spud We	ell, Drill to in	terval T.D.	Circula	te hole
interval was drilled w	vith seawate	r and high	viscosity sweeps	s. The sv	weeps	clea	an an	d displace	to Hi V	iscosity	mud. Run	in & Cement	Casing at 1	11 m.	
used old mud and PH	IG on conne	ction													
TIME DISTR La	st 24 Hrs	MUD \	OL ACCTG	(bb	I)	SOLI	DS A	ANALYSI	S <u>(</u> %/lb	/bbl)	MU	D RHEOLO	GY & HYE	RAUL	ICS
Rig Up/Service	12	Oil Adde	d I	0		MaCl				/	np/na Va	alues		0.32	9/0.227
Drilling	2	Water Ad	aed	850 191	U K 0 T	.ow Gr	avity		_	/	<u>kp/ka</u> (lt Bit Loss	<u>0•s^n/100ft²)</u> (nsi / %)		<u>5.91(</u> 00	/10.320
Running Casing	5	Dumped		-0	E	Bentoni	te			/	Bit HHP	(hhp / HSI)			18 /
B.O.P. Testing	O.P. Testing Shakers 0			0	Ι	Drill So	lids			/	Bit Jet V	el (ft/s)			32
Condition Hole	3	Evaporati	on e	0		Veight	Mate	erial	N	A/ NA	Ann. Vel	DP (ft/min)		2	2 1 5
Condition Mud		Formation	1	0		<u>nert/Re</u>	act			1	Crit Vel I	<u>DP (ft/min)</u>		3	u.1./
Coring		Left in He	ole	14	5 A	verage	SG				Crit Vel I	DC (ft/min)			
Dev. Survey		Sweeps	DI	559 PHON	9 ( NF	Carb/Bi	Carb	(m mole/I	L)   SE DU/		ECD @ 1	<u>351 (sp.gr.)</u>	CUMU		
Graeme Garrick		9325 4822					vv/		32 PH	UNE	DAIL	0031	CONUL		0031
Dave Dixon								\$ 2,	730.28	\$	2,730.2	28			

	Drilling			V	VATE	ER-BA	SE	DN		EPOR	RT No	. 2	
	Fluids			]	Date 2	1/06/200	2	Dept	h/TVD	3	34 m / 32	26 m	
			w	ater De	pate 2	<u>0/06/200.</u> 53	2	A	ctivity	Sv a Dri	<u>k HI VIS</u> III 17.1/2	Sweep " hole	)5
Operator : Report For : Well Name :	OMV Australia G. Howard & J. J Patricia 2	Kendrick			Field Descr Lo	d/Area : iption : cation :	VIC / Devel Bass S	L21 opmer Strait	nt				
Contractor : Report For :	Diamond Offsho R Grahram	re			VVe	ell No. :							
DRILLING A	SSEMBLY	CASIN	IG	M		DLUME (I	obl)		CI	RCULAT	ION DA	ГА	
Bit Size 17.5 in Sec	XTK	Surfac	e			Hole	-	Pur	np Make J	ATIONAL 6 X 17	. 12P-16 14 2 in	ATIONA 6 X	<u>AL 12P-16</u> 12 in
Drill Pipe Size	Length	Intermed	liate		Ac	tive Pits	-	P	ump Cap	4.274	gal/stk	4.274	gal/stk
5 in Drill Pipe Size	m Length	<u>13.375in @326m</u> Intermed	<u>(318TVD</u> liate	)	Total C	irculating '	Vol	Pum	i <u>p stk/min</u> Flo	70@9 ow Rate	7%	<u> </u>	<u>)97%</u> /min
5 in	m	Droduction	n Linor		Im	Storage			Bott Tatal Ci	oms Up	mi	$\frac{1}{1000}$	tk
8.25 in	m	Production	or Liner		II	storage	-	C	lirculating I	Pressure	1	<u>1 0 s</u> 250 psi	
Coursel Francis			RTIES						PROD	UCTS US	SED LAS	ST 24 H	HRS
Sample From Flow Line Temp	°(	Pit(a)07:00							Products Gel Bulk		100 L	ze B BG	634
Depth/TVD	n	334/326							Calcium Chl	oride	25 K	G BG	29
Mud Weight	sp.gr	1.06							Caustic Soda	L	25 KC	<u>GDM</u>	11
Rheology Temp	<u> </u>								Soda Ash		25 KG	1 BC	4
R600/R300 R200/R100													
R6/R3													
PV VP	cI	2											
10s/10m/30m Gel	lb/100ft	2											
API Fluid Loss	cc/30 mir	1											
<u>HIHPFL Temp</u> Cake API/HTHP	$\frac{cc/30 \text{ mir}}{1/32'}$	1											
Solids	%Vo												
Oil/Water	<u>%Vo</u>										Siz	70	Hr
MBT	lb/bb								Thule VSM	100 S	512	Le	0
pH Alleal Mard (Dee)									Thule VSM	100 S			0
Pf/Mf									Thule VSM	100 S			0
Chlorides	mg/								D-Sander				0
Hardness Ca	mg/								D-Silter Degasser				0
KCL % by wt	%												
LSRV 1 I SRV 2	cl	•											
LSRV 2 LSRV 3	cl												
									ML Weight	JD PROF	PERTY S	PECS	i
									Viscosity			>104	
									Filtrate			n/c	
R The section was drill mud was used. The in with 100 bbls of PHC trip out was tight so a rig and run 13 3/8" ca	REMARKS AND ed with seawater an interval depth of 344 G followed by the sp a wiper trip was mad asing. The casing w	<b>TREATMENT</b> d PHG sweeps after 2 m was reached and th otting of 320 bbls on le. Displace hole to P as cemented using Ca	250 bbls of he hole sw bottom. T HG. Trip o Cl2 mix w	Fold T rept o the p out T vater.	The cemen ut the cen eriods of The mud p	nt was allow nent and sh sliding to c oits were cle	ved to c oe. Dri ommer eaned t	cure an illing p nce the horoug	REMARK d the 17.1/2' roceeded at a directional l hly.	<b>(S</b> ' drilling as an ROP >6 cick off.	ssembly wa 0 m/hr with	is run in h alterna	to drill ite
TIME DISTR I a	st 24 Hrs MUI	VOL ACCTG	(bbl)	so		ALYSIS (	%/lb/h	obl)	MUD	RHEOLO	GY & HYI	DRAUI	ICS
Rig Up/Service	5 Oil Ad	ded	0	NaCl			/	/	np/na Valu	les			
Drilling Trimming	7 Water	Added	1342	KCl	714		/	/	kp/ka (lb•s	$\frac{n}{100ft^2}$			
Running Casing	6 Dumpe	eceived	135	Bento	<u>Jravity</u> nite		/	/	Bit HHP (	151 / <u>%)</u> 1hp / HSD			
B.O.P. Testing	Shaker	s	0	Drill S	Solids		/	/	Bit Jet Vel	(ft/s)			
Condition Hole	2 Evapor	ation	0	Weigl Chem	<u>it Materia</u> ical Conc	al	NA/	/ NA /	Ann. Vel D	$\frac{P(ft/min)}{C(ft/min)}$			
Condition Mud	Format	ion	0	Inert/	React		-	/	Crit Vel DP	(ft/min)			
Coring	Left in	Hole	645	Avera	ge SG	1.005		,	Crit Vel DC	(ft/min)			
Dev. Survey M-I FNGI	R / PHONE		1295 PHONF	Carb/	BICarb (1	n mole/L)	PHO	NE		COST	CUMU		COST
Graeme Garrick	08 9325 4	322											
Dave Dixon	08 9325 4	32.2							\$ 5.64	1 81	\$	8 372 (	09

	Drilling			WATER-BASED MUD REPORT No. 3										
	Fluids			]	Date	22/06/2	002	Dep	th/TVD	3	34 m / 32	26 m		
			Wa	spud L ater De	Date Poth	<u>20/06/20</u> 53	002	Mu A	d Type Activity	MIX F	<u>PA/KC</u> Run BO	<u>l/Glyc</u> Ps	:01	
Operator :	OMV Australia		1		Fie	eld/Area	: VIC /	L21						
Report For :	G. Howard & J. K	endrick			Des	cription	: Devel	opme	ent					
Contractor :	Diamond Offshor	e			v	Vell No.	Dass :	Stran						
Report For :	P.Johns	-						1						
DRILLING A	SSEMBLY	CASIN	IG	N	UD \	VOLUME	E (bbl)	D	C	IRCULAT	ION DA	Α		
Bit Size 12.25 in Nozzles 1/32"		Surfac	e 111TVD)			Hole 223.2		Pu P	<u>mp Make</u> jump Size	ATIONAL 6 X 1'	<u>. 12P-16 JA</u> 2 in	<u>TION/</u> 6 X	<u>AL 12P-16</u> 12 in	
Drill Pipe Size	Length	Intermed	liate		I	Active Pit	ts	F	ump Size ump Cap	0 / 12	gal/stk	gal/stk		
5 in	m	13.375in @326m	(318TVD)			33.8		Pur	np stk/mir		0			
Drill Pipe Size	Length	Intermed	liate		Total	Circulatir	ng Vol		Bo	flow Rate		gal	min	
Drill Collar Size	Length	Production of	or Liner			In Storag	(e		Total C	Circ Time				
8.25 in	m					485	,	(	Circulating	Pressure				
Sample From		<b>MUD PROPER</b>	RIES						PRO			ST 24 HRS		
Flow Line Temp	°C	1 II #4( <i>u</i> ,20.00							Duotec		25 KC	G BG	32	
Depth/TVD	m	334/326							Glydril LC		208 K	<u>GDM</u>	18	
Funnel Viscosity	<u>sp.gr.</u> s/at	>100							<u>OS-1</u> Polyplus D	)rv	25 KC	<u>i BG</u> i BG	4	
Rheology Temp	°Ĉ	49							Polypac U	L	25 KC	G BG	16	
R600/R300 R200/R100		97/75							Sodium Bi	carbonate	25 KC	3 BG	4	
R6/R3		28/24												
PV VD	<u>cP</u>	22												
10s/10m/30m Gel	<u>lb/100ft<sup>2</sup></u>	20/28/30												
API Fluid Loss	cc/30 min													
HTHP FL Temp Cake API/HTHP	<u>cc/30 min</u> 1/32"													
Solids	%Vol													
Oil/Water Sand	<u>%Vol</u>									FOUIP	Siz	0	Hr	
MBT	lb/bbl								Thule VS	M 100 S	84/84/8	. <b>c</b> 34/84	0	
pH									Thule VS	M 100 S	84/84/8	84/84	0	
Alkal Mud (Pm) Pf/Mf									Thule VS Thule VS	M 100 S M 100 S	84/84/8	<u>84/84</u> 84/84	0	
Chlorides	mg/l								D-Sander				0	
Hardness Ca	mg/l								<u>D-Silter</u> Degasser				0	
KCL % by wt	%								Degasser				0	
LSRV 1	<u> </u>													
LSRV 2 LSRV 3	cP cP													
									<u>N</u>	IUD PROF	PERTY S	PECS		
									Viscosity	/		$\frac{1.04}{>100}$		
									Filtrate			n/c		
F	REMARKS AND	REATMENT							RFMAR	RKS				
Building new mud in	Active pits (1/2 volu	ime 2xConcentration	n) waiting fo	or C	ement	13 3/8" ca	sing. Lay	out ha	undling tool	s. Rig and ru	n subsea tro	e. Rig	and run	
K.C.L. on next suppl	y boat. Plan to mix I	K.C.L. and dilute 50	/50	В	OPs.									
			(bbl)	e01			S (0/ /IL/	hl)	NAL 17		CV 8 UVF		109	
Rig Up/Service	Oil Add	ed	0	NaCl			5 ( 78/10/1	/	np/na Va	alues	Granit	INAUL	100	
Drilling	Water A	dded	450	KCl			/	/	kp/ka (lb	•s^n/100ft <sup>2</sup> )				
BOP NU	Mud Re Dumped	l	0	Low C	<u> ravity</u> nite			/	BIT LOSS Bit HHP	<u>(psi / %)</u> (hhp / HSD				
B.O.P. Testing	Shakers		0	Drill S	Solids		,	/	Bit Jet Ve	el (ft/s)				
Condition Hole	Evapora	tion	0	Weigh	t Mate	erial	NA	/ NA/	Ann. Vel	DP (ft/min)				
Condition Mud	Formati	on	0	Inert/F	React		-	1	Crit Vel I	DP (ft/min)				
Coring		Hole	0	Avera	ge SG	(		/	Crit Vel I	OC (ft/min)				
M-I ENG	Dev. Survey Sweeps RIG PH(			Carb/H	W	(m mole/L AREHOU	SE PHO	NE	DAIL	COST	CUMUL	ATIVE	COST	
Graeme Garrick	08 9325 48	22												
Dave Dixon	08 9325 48	22							\$ 19	,856.44	\$	28,228	.53	

	Drilling		WATER-BASED MUD REPORT No. 4									
	Fluids		6	Date	23/06/2	2002	Depth/T		401 m / 39	9 m		
			Wat	ter Depth	53	3	Activ	vity Pi	Drilling	liycor		
Operator :	OMV Australia			F	ield/Area	a: VIC/	L21					
Report For : Well Name :	G. Howard & J. K Patricia 2	Lendrick		Des	scription	1: Devel	lopment Strait					
Contractor :	Diamond Offshor	e			Well No	.:	Stratt					
Report For :	P.Johns									-		
DRILLING A	UT 12 CC Pard	CASIN	G	MUD	VOLUM	IE (bbl)	Dump	CIRCULA	TION DAT		I 12D 16	
Nozzles 3x15/24/	/ 1/32"	30in @111m (1	; 11TVD)		242.4		Pump	o Size 6 X	12.in	6 X 1	$\frac{1}{12P-10}$	
Drill Pipe Size	Length	Intermedi	ate		Active P	its	Pum	o Cap 4.274	gal/stk 4	4.274 g	gal/stk	
5 in Drill Pipe Size	313 m	<u>13.375in @326m</u> Intermedi	( <u>318TVD)</u>	Tota	<u>514.6</u>	ing Vol	Pump s	tk/min 62@9	97%	72@	<u>97%</u>	
5 in	64 m	9.625in @873m (	700TVD)	1014	757	ing voi		Bottoms Up	10.9 mir	1 217	77 stk	
Drill Collar Size	Length	Production of	Liner		In Stora	ge	~:	Fotal Circ Time	37.2 mir	<u>37.2 min 7437 stk</u>		
8.25 in	24 m		TIES		710		Circi	PRODUCTS I	ISED I AS	<u>00 psi</u> T <b>24 H</b>	IRS	
Sample From		Pit # 4@22:30					Pro	ducts	Siz	e	Amt	
Flow Line Temp	°C	23					Duo	tec	25 KG	BG	16	
Mud Weight	sp.gr.	1.06@23°C					OS-	1	208 KG	BG	2	
Funnel Viscosity	s/qt	55					Poly	plus Dry	25 KG	BG	6	
Rheology Temp R600/R300	°C	49					Poly KCI	/pac UL	<u>25 KG</u> 1 TN	BG	<u>          8                          </u>	
R200/R100		24/19					Sod	ium Bicarbonate	25 KG	BG	1	
R6/R3	cP	9/7										
YP	lb/100ft <sup>2</sup>	20										
10s/10m/30m Gel	<u>lb/100ft<sup>2</sup></u>	8/10/10										
HTHP FL Temp	cc/30 min	5.9										
Cake API/HTHP	1/32"	1/										
Solids Oil/Water	<u>%Vol</u> %Vol	2.5										
Sand	%Vol	0,77.0					SO	LIDS EQUIP	Siz	e	Hr	
MBT pH	lb/bbl	1 9.0					Thu Thu	<u>ile VSM 100 S</u> ile VSM 100 S	52/52/5	<u>2/52</u> 2/52	8	
Alkal Mud (Pm)		0.3					Thu	le VSM 100 S	52/52/5	2/52	8	
Pf/Mf Chlorides	mg/l	0.2/					Thu D-S	lle VSM 100 S	84/84/8	4/84	8	
Hardness Ca	mg/l	1200					D-S	Silter			0	
VCL % by wt	0/	5.5					Deg	gasser			0	
LSRV 1	cP	1										
LSRV 2	<u> </u>	3										
LSKV 5	CP	40						MUD PRO	PERTY SI	PECS		
							We	eight	1.	08-1.10	)	
							Fil	trate		<u>+0 - 60</u> <8 ml		
Received 120 bbls of	d Brine from boat. B	lended this with prem	nixed mud	The ris	ser and BO	Ps were ru	n and tested	<b>LIVIARNO</b> d. Made up liner h	anger tool and	d comm	enced	
volume and additiona	al water for dilution.	Building reserve Prer	nix mud for	making	g up BHA.	Repairing	BOP contr	ol panel. Drill out	shoe Displac	e hole to	o mud,	
additional volume. D	Displace hole to PHP/	A/KCL mud.		run lea	k off test t	o 1.73 SG.	Drill ahead	d with directional of	control to rais	e angle		
		VOL ACCTO	(661)								<u></u>	
Rig Up/Service	8 Oil Add	led	(Iuu) 0	SOLIDS NaCl	ANALIS	<b>ו/מו/א״ן בו</b> מ /8.	9.8 np/	na Values		0.415	<u>0.285</u>	
Drilling	10 Water A	Added	846	KCl		1.9/	17.7 kp/	ka (lb•s^n/100ft²	)	2.405	/4.694	
Tripping BOP NU	6 Mud Re	d deceived	120 0	Low Gravit Bentonite	iy	.7/	6.1 Bit	Loss (psi/%) HHP (hhp/HSI	)	<u>647</u> 323	/ 46.2 / 2.7	
B.O.P. Testing	Shakers		12	Drill Solids		.1/	1.3 Bit	Jet Vel (ft/s)	,	8	37	
Condition Hole	Evapora	ation	0	Weight Ma	terial	NA	/ NA An	n. Vel DP (ft/min)		15	<u>8.15</u> 4 3	
Condition Mud	Formati	on	0	Inert/React		1.1	242 Cri	t Vel DP (ft/min)	,	3	03	
Coring Dev Survey	Left in	Hole	0	Average SC	j h (m mala	$\frac{2}{1}$	.6 Cri	t Vel DC (ft/min)		3	<u>33</u> 08	
M-I ENGI	R / PHONE	RIG P	HONE		VAREHO	USE PHO	20. EC NE	DAILY COST	CUMUL		COST	
Graeme Garrick	08 9325 48	22						¢ 10.204.17	<b>*</b>	20 (22	00	
Dave Dixon	08 9325 48	22						\$ 10,394.47	\$	38,623.	00	

				W	ATER-	BASE	ED N		EPOF	RT No	. 5	
	Fluids		<u>en</u>	Da	te 24/06	/2002	Dept	h/TVD	7		l3 m Siveel	
			Wate	er Dep	oth 5	3	A	ctivity	FI	Drilllin	g	
Operator : Report For :	OMV Australia	endrick			Field/Are	a: VIC	/ L21	nt				
Well Name :	Patricia 2	endrick			Locatio	<b>n</b> : Bass	Strait	n				
Contractor :	Diamond Offshore	2			Well N	o.:						
DRILLING A		CASING	1	MU	JD VOLUI	ME (bbl)		CI	RCULA		ГА	
Bit Size 12.25 in M	IHT 13 GC Reed	Surface			Hole	e	Pur	np Make	ATIONAL	12P-16 JA	TIONA	L 12P-16
Nozzles 3x15/24 Drill Pipe Size	/ 1/32" Length	<u>30ın @111m (11</u> Intermedia	te		Active	<u>s</u> Pits		ump Size	<u>6 X 1</u> 4.274	2.1n gal/stk	<u>6 X</u> 4.274	12.1n gal/stk
5 in	622 m	13.375in @326m (3	318TVD)		656.7	7	Pum	p stk/min	70@9	7%	60@	97%
5 in	64 m	9.625in @873m (7	te 00TVD)	10	otal Circula 1057	iting Vol		Bott	oms Up	8 17.9 mi	<u>50 gal</u> / n 35	<u>min</u> 54 stk
Drill Collar Size	Length	Production or	Liner		In Stor	age		Total Ci	rc Time	52.2 mir	<u>103</u>	393 stk
8.25 in	24 m	MUD PROPERT	IES		394			PROD	UCTS U	SED LAS	<u>000 psi</u> 5 <b>T 24 F</b>	HRS
Sample From	°C	Pit # 4@22:30 Pi	t 4@08:00	)			]	Products		Siz	ze	Amt
Depth/TVD	<u>r</u>	710/643	530/521				(	Glydril LC		25 KG	G DM	6 14
Mud Weight Funnel Viscosity	sp.gr.	<u>1.08@35°C 1.</u> 54	<u>04@30°C</u> 50	_			]	Polyplus Dry	1	25 KC	G BG	6
Rheology Temp	°C	49	49									
R200/R100		<u>53/41</u> 35/27	<u>36/27</u> 23/18									
R6/R3	cP.	12/10	9/7									
YP	lb/100ft <sup>2</sup>	29	18									
10s/10m/30m Gel API Fluid Loss	<u>lb/100ft<sup>2</sup></u> cc/30 min	<u>11/14/15</u> 5.4	<u>7/11/13</u> 5.6									
HTHP FL Temp	$\frac{cc}{30} \min_{1/22''}$	1/	1/									
Solids	%Vol	5	5									
Oil/Water Sand	<u>%Vol</u>	3/92 tr	3/92 tr				1		QUIP	Siz	'e	Hr
MBT	lb/bbl	2.5	1.25				r	Thule VSM	100 S	120/120/1	120/120	24
pH Alkal Mud (Pm)		<u>8.7</u> 0.1	<u>8.7</u> 0.1				-	<u>Thule VSM</u> Thule VSM	<u>1 100 S</u> I 100 S	120/120/1 84/84/8	<u>120/120</u> 34/84	24 24
Pf/Mf Chlorides	mg/l	0.15/0.6	0.1/0.6					<u>Thule VSM</u>	[ 100 S	84/84/8	84/84	0
Hardness Ca	ng/l	1180	1200				]	D-Silter				0
KCL % by wt	%	5	5.5					Degasser				0
LSRV 1	cP oP	0.8	0.8									
LSRV 2 LSRV 3	cP cP	20	20									
								ML Weight	JD PRO	PERTY S	<b>PECS</b> 04-1 1	0
								Viscosity			$\frac{40 - 60}{60}$	
								rittate			<u>∼o III</u>	
Add premixes to act	REMARKS AND 1 ive system to maintair	<b>REATMENT</b> system . Treat system	n with	Cha	anged to fine	r shaker sci	reeens.	REMARP Drill 12 1/4"	<b>(S</b> hole with	Directional	Survey	S.
Glydril, Polyplus and	d Duotec.	5			e						5	
	ast 24 Hrs MUD	VOL ACCTG (	bbl)	SOLI	DS ANALY	SIS (%/Ib/	/bbl)	MUD	RHEOLO	GY & HYE	RAUL	
Drilling	24 Water A	dded	0 N 0 K	NaCI KCl		.5/ 1.8/	/ 5.9 / 16.8	<u>np/na Valu</u> kp/ka (lb•s	n/100ft <sup>2</sup> )		4.34	0/0.283 3/6.722
Tripping BOP NU	Mud Ree	ceived	0 I 0 F	Low Gra	avity	1.6	/ 14.9	Bit Loss (p	o <u>si / %)</u> hn / HSD		651	/ 32.6
B.O.P. Testing	Shakers		36 I	Drill Sol	lids	1.	/ 9.5	Bit Jet Vel	(ft/s)		543	87
Cementing Condition Hole	Evapora Centrifu	ge	$\frac{0}{0}$ V	<u>Weight I</u> <u>Che</u> mica	Material	N/	4/ NA / 4.	Ann. Vel D Ann. Vel D	<u>P (ft/min)</u> C (ft/min)		21	<u>8.68</u> 4.64
Condition Mud	Formatio	on Jole	0	nert/Re	act	3.2	3732	Crit Vel DP	(ft/min)			366
Dev. Survey	Sweeps		0 A	average	Carb (m mol	e/L) 3./	2.0 29.9	ECD @ 710	(11/min) (sp.gr.)	1	1	.11
M-I ENG Graeme Garrick	R / PHONE 08 9325 482	RIG PH	IONE		WAREHO	USE PHO	DNE	DAILY	COST	CUMUL	ATIVE	COST
Dave Dixon	08 9325 482	22						\$ 10,2	85.28	\$	48,908	.28

	Drillin Fluids	g			W	ATEF	R-BA		D MU			RT No 84 m / 70	). 6 )2 m	
				S	pud D	ate 20/	06/2002	2	Mud Ty	pe	PH		Glyco	
Operator : Report For : Well Name : Contractor :	OMV Austra G. Howard & Patricia 2 Diamond Of	alia & G.Oth fshore	nen		ter De	Field/A Descrip Loca Well	tion : 1 No. :	VIC / L Develoj Bass St	221 pment trait	ity		<u>ı rippir</u>	ig	
DRILLING A	ASSEMBLY		CAS	ING	м		UME (ł	obl)		CIF			ГА	
Bit Size 12.25 in N	IHT 13 GC Ree	ed	Surf	ace		Н	ole		Pump N	Iake JA	ATIONAL	L 12P-16 JA	ATION/	AL 12P-16
Nozzles 3x15/24	/ 1/32" Length		<u>30in @111m</u>	(111TVD)		51	2.8		Pump Pump	Size	<u>6 X 1</u>	2.in	<u>6 X</u>	12.in
5 in	m		<u>13.375in @326</u>	<u>501110</u> 500 (318TVD)		54	1.2		Pump stl	cap k/min	62@9	7%	4.274 75@	97%
Drill Pipe Size	Length		Intermo	ediate	ſ	Fotal Circ	ulating	Vol	-	<u>Flo</u>	w Rate	8	<u>50 gal</u>	/min
Drill Collar Size	Length		Production	or Liner		54 In St	torage		T	otal Cir	rc Time	 26.7 mi	n <u>0s</u> n 53	22 stk
8.25 in	m			DTIEO		1	90		Circul	lating P	ressure	2	000 psi	
Sample From		P	<b>MUD PROPE</b> Pit # 4@21:00	Pit@07:30	)				Prod	vrobu ucts		SED LAS	7e	Amt
Flow Line Temp		°C	004/500	49					Barite	e Bulk		100 L	B BG	50
Depth/TVD Mud Weight	S	m sp.gr.	<u>884/702</u> 1.12@49°C	854/692 1.10@49°C	С				KCL	-Geel		1 TN	BG	2
Funnel Viscosity		s/qt	55	57										
Rheology Temp R600/R300		°C	<u> </u>	<u>49</u> 67/52										
R200/R100			37/28	45/35										
PV		cP	16/14 14	15/13										
YP	<u>lb/1</u>	00ft <sup>2</sup>	30	37										
API Fluid Loss	10/1 cc/30	$0011^{-1}$	6.4	6.8										
HTHP FL Temp	cc/30	$\frac{1}{22"}$	1/	1/										
Solids	0	Vol	7	6										
Oil/Water	0	6Vol	3/90	3/91					501			Si-		LIF
MBT	1	b/bbl	5	5					Thul	e VSM	100 S	120/120/	120/120	24
pH Alleal Mud (Pm)			8.7	8.7					Thul	e VSM	100 S	120/120/	120/120	24
Pf/Mf			0.1/0.7	0.05/0.8					Thul	e VSM	100 S	84/84/	84/84	0
Chlorides Hardness Ca		mg/1	45000	45000					D-Sa	inder				0
		mg/1	1200	1200					D-51	asser				0
KCL % by wt		cP	5.5	5.5										
LSRV 2		cP	3	3										
LSRV 3		cP	10	10						MU	D PRO	PERTY S	PECS	
									Wei	ight		1	.04-1.1	0
									Vise Filt	cosity rate			<u>40 - 60</u> <8 ml	)
									DE		e			
The mud properties Minor losses to the f	were maintained ormation occur	d by the red.	addition of pren	nix and KCL.	Di en to R.	rectional d countered a 1.12 SG. T I.H. Circul	rilling pr at an ang `he max g ate hole o	oceeded le of 90 gas was clean pu	to 884 m deg. The l approx 12 mp slug Po	where the the the the the the the the the th	ne Gurnar circulated per trip w g up to ru	d formation d and the m ras made to n 9 5/8" Ca	was ud weig the casi sing	ght raised ng shoe.
	ast 24 Hrs	MUD V	OL ACCTG	(bbl)	SOL	IDS ANA		%/Ib/bb	ol)	MUDF	RHEOLO	GY & HY	DRAUL	ICS
Rig Up/Service Drilling	2 O 11 W	<u>11 Added</u> ater Add	ded	0	NaCl KCl			.8/9. 1.9/17	.9 np/n 7.9 kp/k	<u>a Value</u> a <u>(lb•s</u> ⁄	es <u>`n/100ft</u> ²)			
Tripping Demois C	7 M	ud Rece	ived	0	Low G	ravity		3.5/ 32	2.1 Bit	Loss (p	$\frac{1}{100}$			
B.O.P. Testing	5 D Sł	umped nakers		104	Drill So	nte olids		<u>.2/2.</u> <u>2.9/</u> 2	.1 <u>Bit</u> 26. <u>Bit</u>	<u>ннг (h</u> Jet Vel	<u>np / HSI)</u> (ft/s)			
Cementing Condition U-1-		vaporatio	on	0	Weight	Material		NA/ 1	NA Ann	Vel DP	(ft/min)			
Condition Hole	I Co	ormation	5	0	Inert/R	eact		4.629	H. Ann Ol Crit	Vel DP	(ft/min)			
Coring Day Survey	Le	eft in Ho	le	0	Averag	e SG	ole/L)	2.6	Crit	Vel DC	(ft/min)			
M-I ENG	R / PHONE	weeps	RIC	B PHONE	Caru/B	WARE	HOUSE	PHON	E C		OST	CUMUL	ATIVE	COST
Graeme Garrick Dave Dixon	08 93 08 93	25 4822 25 4822								\$ 863.9	00	\$	49,772	2.18

	<b>Drill</b> i	ing				WA	TER-	BAS	<b>SED</b>	MUD R	EPOF	RT No	. 7	
	Fluic	ds		F		Date	e 26/06	/2002	De	pth/TVD	8	84 m / 70	2 m	
				-	<u>Spu</u> Water	Dept	e 20/06	5/2002 53	M	ud Type		Flo-Pro	)  t	
Operator :	OMV Aus	tralia			Water	F	- Field/Are	ea: V	IC / L21	Activity		Dimot		
Report For :	G. Howard	d & G. C	Othen			De	scriptio	on: De	evelopn	nent				
Well Name :	Patricia 2 Diamond	Offshore						on: Βε	ass Strai	it				
Report For :	P.Johns	onshore	•				Wenn	0						
DRILLING A	SSEMBL	Y	CAS	ING		MUE	O VOLU	ME (bb	l)	C	IRCULAT		Α	
Bit Size 8.5 in EHP	41 Reed		Surf				Hol	e 5	P	Pump Make	JATIONAL	<u>. 12P-16</u> JA	TIONA	<u>L 12P-16</u>
Drill Pipe Size	Leng	th	Interm	ediate	(D)		Active	5 Pits		Pump Size Pump Cap	0 A 1	gal/stk	0 Λ	gal/stk
5 in	516	m	13.375in @320	6m (318	TVD)		797.:	5	Pu	ump stk/min		0		0
Drill Pipe Size	Leng	th	Interm	ediate		Tota	al Circula	ating Vo	ol	Fl	low Rate		gal	min
Drill Collar Size	Leng	th	Production	1  or Lin	ier		In Stor	rage		Total C	irc Time			
8.25 in	28 n	n	<u>in @m</u>	(TVD)	_		1067	7		Circulating	Pressure		<b>T</b> 0 4 1	
Sample From			Pit # 1@19:00		5					Products		SED LAS	1 24 1	Amt
Flow Line Temp		°C	110 10017.00							Dual-Flo		50 LE	BG	53
Depth/TVD Mud Weight		m sp.gr	884/702							Flo-Vis Plus	8	25 KC	<u>BBG</u>	45
Funnel Viscosity		sp.gr. s/qt	120							OS-1		25 L1 25 K0	G BG	8
Rheology Temp		°Ĉ	49							KCL-Geel	T	1 TN	BG	6
R200/R300			42/37							Omyacarb 1	iyaroxiae	25 KC	<u>i DM</u> j BG	28
R6/R3			19/17							Omyacarb 8	3	25 KG	B BG	217
PV YP	۱ŀ	$\frac{cP}{100ft^2}$	37							Omyacarb 1 SALT (BIG	<u>0</u> BAG)	25 KC	<u>; BG</u> ' BG	21
10s/10m/30m Gel	lt	0/100ft <sup>2</sup>	17/20/23								,			-
API Fluid Loss HTHP FL Temp		<u>30 min</u> 30 min	5.2											
Cake API/HTHP	007	1/32"	1/											
Solids Oil/Water		%Vol	<u> </u>											
Sand		%Vol	0/ 70							SOLIDS I	EQUIP	Siz	e	Hr
MBT		lb/bbl	1							Thule VSN	<u>A 100 S</u>	120/120/1	20/120	0
Alkal Mud (Pm)			0.8							Thule VSN Thule VSN	A 100 S	84/84/8	34/84	0
Pf/Mf Chlaridag		m a /1	0.2/0.5							Thule VSN	A 100 S	84/84/8	84/84	0
Hardness Ca		mg/l mg/l	32000							D-Sander D-Silter				0
		0/	2							Degasser				0
LSRV 1		cP	45000											
LSRV 2		cP	54288											
LSRV 3		cP	54788							м		PERTY S	PECS	
										Weight		1	04-1.1	0
										Viscosity Filtrate			<u>40 - 60</u> <8 ml	
6			DEATMENT							DEMAD	×0			
Commence making u	p FloPro mi	Id system	REAIMENI			A stri	ng of 9 5/8	8" casing	y was rur	REMAR and cemented	<b>KS</b> 1 at 872 m 1	Fest seal as	embly	and
	P					BOPs	. Make up	Drilling	assemb	ly and R.I.H.				
TIME DIOTO					n .				//h./			<u>ov e mr</u>	D 4 / ···	100
Rig Un/Service	st 24 Hrs	Oil Adde	ed	<b>dd)</b> 0	I)	SULIDS aCl	5 ANALY	515 (%)	(Idd/di 9 8 \8	MUD np/na Val	KHEULO ues	GY&HYD	0.25	105 8/0.222
Drilling		Water A	dded	100	0 K	C1			1.3/ 11.9	kp/ka (lb•	s^n/100ft <sup>2</sup> )		9.833	/12.633
Tripping Direction Work	6	Mud Rec	eived	0		w Grav	ity		.2/ 1.6	Bit Loss (	psi / %) (hhp / HSD			/1
B.O.P. Testing	4	Shakers		0	Dr	ill Solid	S		7/ -6.1	Bit Jet Vel	(ft/s)			/ 1
Running Casing	8	Evaporat	ion	0	W	eight M	aterial		NA/ NA	Ann. Vel E	<u>DP (ft/min)</u>			
Condition Mud	4	Formatic	n se	0	Ine	ert/Reac	t		- 5.4297	Crit Vel D	P (ft/min)		(	645
Coring		Left in H	lole	0	Av	verage S	G	L- /T \	2.6	Crit Vel D	<u>C (ft/min)</u>		(	645
Dev. Survey M-I ENGR	R / PHONE	Sweeps	RIC	0 G PHOI		ILED/BICa	urd (m mol WAREHO	DUSE P	<u>4./ 25.2</u> HONE	DAILY	<u>4 (sp.gr.)</u> COST	CUMUL		.07 COST
Graeme Garrick	08	9325 482	2								-			
Dave Dixon	08	9325 482	2							\$ 28,0	539.63	\$	78,411	.81

	Drilling			WA	TER-B	ASE	D MUD	REPOR	RT No	. 8	
	Fluids			Dat	e 27/06/20	02	Depth/TVD	1	379 m / 7	01 m	
			Wat	pud Dat ter Dept	e 20/06/20 h 53	102		) /	Drillin	<u>כ</u> כו	
Operator :	OMV Australia			<u>                                     </u>	Field/Area :	VIC /	L21			9	
Report For :	G. Howard & G.	Othen		D	escription :	Devel	opment				
Well Name :	Patricia 2				Location :	Bass S	Strait				
Report For :	P Johns	bre			well NO. :						
DRILLING A	SSEMBLY	CAS	NG	MUI		(bbl)		CIRCULA		ΓA	
Bit Size 8.5 in EHP	41 Reed	Surfa	ace		Hole	(221)	Pump Ma	ke JATIONA	L 12P-16 JA	TIONA	L 12P-16
Nozzles 3x14 / 1/3	32"	30in @111m	(111TVD)		367.4		Pump Si	ze 6 X 1	2.in	6 X	12.in
Drill Pipe Size	Length	Interme	ediate		Active Pits	3	Pump C	ap 4.274	gal/stk	4.274	gal/stk
5 in Drill Ding Size	<u>1011 m</u>	13.375in @326	<u>m (318TVD)</u>	Tat	443.6	a Val	Pump stk/r	$\frac{110}{1000}$ $\frac{69(a)9}{1000}$	7% 5	<u>68(a</u>	97%
5 in	341 m	9 625in @873i	n (700 TVD)	100		g voi		Rottoms Un		<u>oo gai/</u> n 29	<u>11111</u> 27 stk
Drill Collar Size	Length	Production	or Liner		In Storage	•	Tota	al Circ Time	58.1 mi	n 79	63 stk
6.75 in	28 m	in @m (	TVD)		602		Circulat	ing Pressure	20	)00 psi	
0 1 5			RTIES					ODUCTS U	SED LAS	T 24 F	IRS
Sample From Flow Line Temp	°(	$r = \frac{Pit \# 4(a)21:30}{45}$	<u>Pit(<i>a</i>)10:00</u> 38	)			Dual-Fl	ts	50 L F	Ze R RG	Amt 13
Depth/TVD	r	n 1379/701	1014/700				Flo-Vis	Plus	25 KC	G BG	11
Mud Weight	sp.g	r. 1.12@45°C	1.09@ <u>38</u> °C	C			Glute-2	5	25 LT	DM	1
Funnel Viscosity	s/c	1t 60	<u> </u>				OS-1	aal	25 KC	BG BC	2
R600/R300	~(	54/43	<u>49</u> 56/45				Potassi	um Hydroxide	25 KC	DM	2
R200/R100		39/31	40/32				SALT (	BIG BAG)	1 MT	BG	8
R6/R3		16/14	17/15								
PV VP	<u> </u>	$\frac{P}{11}$	34								
10s/10m/30m Gel	lb/100f	$t^2 \frac{32}{15/18/23}$	18/22/24								
API Fluid Loss	cc/30 mi	n 4.8	5.2								
Cake API/HTHP	<u> </u>	n " 1/	1/								
Solids	%V0	1 $1$ $8$	6								
Oil/Water	<u>%Vc</u>	01 /92	/94						<b>o</b> :		
Sand	<u>%Vc</u> lb/bb	0.25	.25				SOLIE	USM 100 S	120/120/1	20/120	<u>Hr</u>
pH	10/00	9.5	9.5				Thule	VSM 100 S	120/120/	20/120	24
Alkal Mud (Pm)		0.2	0.6				Thule '	VSM 100 S	84/84/8	34/84	6
Pf/Mf Chloridea		0.1/0.6	0.1/0.5				Thule D Same	<u>VSM 100 S</u>	84/84/8	34/84	0
Hardness Ca	ng	$\frac{1}{1}$ $\frac{72000}{400}$	320				D-Salte	r	20 x	4"	9
	0						Degass	er			0
KCL % by wt	0	$\frac{6}{9}$ 3	<u> </u>								
LSRV 1 LSRV 2	C	P 64086	69985								
LSRV 3	c	P 62687	69485								
							Waiat	MUD PRO	PERTY S	<u>PECS</u>	0
							Visco	n sitv	1	<u>.04-1.1</u> 40 - 60	0
							Filtrat	e		<8 ml	
D		TREATMENT					DEM	VDKG			
Mixed Flo-Pro SF cle	ean up pill. Mixed l	KCL Brine for pills		RIH	to tag cement a	at 848 m.	Drill out cem	ent and shoe wi	th the mud	from pre	evious
		1		sectio	on. Displace to	new mu	d while drillin	g shoe. Drill 3r	n and take F	IT for 1	.4 SG
				EMV	V. Drill ahead a	at 60 to 3	0 m/hr.				
TIME DISTR La	st 24 Hrs MU	D VOL ACCTG	(bbl)	SOLID	S ANALYSIS	6 (%/lb/k	obl) N	UD RHEOLC	GY & HYE	RAUL	ICS
Rig Up/Service	Oil Ac	lded	0	NaCl		2.8/	31.1 np/na	Values		0.329	9/0.227
Drilling Tripping	24 Water Mud F	Added	530	KCI Low Gray	vity	1.2/	11.4 kp/ka 17.6 Bit Lo	$(1b \cdot s^n/100ft^2)$		5.910	/10.320 53 / 1
Direction Work	Dump	ed	1253	Bentonite		.1/	.8 Bit H	<u>IP (hhp / HS</u> I)		49	7/1
B.O.P. Testing	Shake	rs	0	Drill Solid	ds	1.2/	10.8 Bit Jet	Vel (ft/s)		1	127
Running Casing	Evapo	ration	0	Weight M	laterial	NA	/ NA Ann. V	el DP (ft/min)		28	<u>2.37</u>
Condition Mud	Forma	tion	0	Inert/Read	conc	4.80	007 Crit Ve	<u>el DP_(ft/min)</u>		4/	139 <u></u>
Coring	Left ir	n Hole	0	Average S	SG	2.	6 Crit Ve	el DC (ft/min)		4	476
Dev. Survey	Sweep			Carb/BiCa	arb (m mole/L		3.1 ECD @	<u>) 1379 (sp.gr.</u>			.31
Graeme Garrick	08 9325 4	.822			WAREHUUS			LT 0031	CONIUL	AIIVE	0031
Dave Dixon	08 9325 4	822					\$	10,073.44	\$	88,485	.25

	Drill	ing				WA	TER-	BAS	ED I	MUD R	EPOF	RT No	. 9	
	Fluid	ds			Spu	Date	28/06/	2002	Dep	oth/TVD	1:	385 m / 7	01 m	
					<u>Spu</u> Water	Depth	20/06/	3		Activity	Com	pletion p	orogra	m
Operator :	OMV Aus	stralia		I		Fi	eld/Are	a: VIC	/ L21		-			
Report For :	G. Howar	d & G. (	Othen			Des	scriptio	n: Dev	elopm	ent				
Contractor :	Diamond	Offshore	e				Well No	п. Базз D.:	s Stran					
<b>Report For :</b>	P.Johns		-					-						
DRILLING A	SSEMBL	Y.	CASI	NG		MUD	VOLUN	AE (bbl)	_	CI	RCULA	TION DA	ΓΑ	
Bit Size 8.5 in			30in @111m	ce (111TVD	n		Hole 405.3			ump Make A	ATIONAL 6 X 1	<u>_ 12P-16 14</u> 2 in	ATIONA 6 X	<u>L 12P-16</u> 12 in
Drill Pipe Size	Leng	th	Interme	diate	')		Active F	Pits		Pump Cap	0 A 1	gal/stk	υA	gal/stk
5 in	m		13.375in @326i	m (318TV	/D)		-37.3		Pu	mp stk/min	_	e		
Drill Pipe Size	Leng	gth m	Interme	diate $(700TV)$		Tota	l Circulat	tıng Vol	-	Fl	ow Rate		gal/	min
Drill Collar Size	Leng	th	Production	or Liner	<u>.</u>		In Stora	age		Total Ci	irc Time			
6.75 in	28 r	n	in @m (	ΓVD)			312			Circulating 1	Pressure			
Sampla From			MUD PROPE	RTIES						PROD	UCTS U	SED LAS	5T 24 H	IRS A mt
Flow Line Temp		°C	FIL <u>W</u> 15.00							Duotec		25 K	G BG	4
Depth/TVD		m	1385/701							Defoam A		25 LT	DM	3
Mud Weight		sp.gr.	1.08							Safe Surf W	N PAC)	200 K	G DM	4
Rheology Temp		°C								SALT (BIU	BAU)	1 IVI I	BU	0
R600/R300														
R200/R100 R6/R3														
PV		cP												
$\frac{\text{YP}}{10 \pi/10 \text{m}/20 \text{m}} \text{ Cal}$	<u> </u>	$\frac{0}{100 \text{ ft}^2}$												
API Fluid Loss		/30  min												
HTHP FL Temp	CC	/30 min												
Cake API/HTHP Solids		<u>1/32"</u> %Vol												
Oil/Water		%Vol												
Sand		%Vol								SOLIDS E		Siz	<u>.e</u>	Hr
MB1 pH		10/001								Thule VSN Thule VSN	<u>1 100 S                                </u>	120/120/	120/120 120/120	5
Alkal Mud (Pm)										Thule VSN	1 100 S	84/84/	84/84	0
Pt/Mt Chlorides		mg/l								D-Sander	1 100 S	84/84/3	84/84	0
Hardness Ca		mg/l								D-Silter		20 x	4"	0
KCL % by wt		0/2								Degasser				0
LSRV 1		cP												
LSRV 2		cP												
LSKV 3		CP								м	JD PROI	PERTY S	PECS	
										Weight		1	.04-1.1	0
										Filtrate			<u>40 - 60</u> <8 ml	
										DENTE	<i>(</i> )		,	
<b>R</b> The solids free FloPr	EMARKS	<b>5 AND</b> I to fill the	horizontal section	High vis	cosity	The tot	al denth c	of 1385 m	was rea	REMARI ached and the	<b>NS</b> well was c	irculated w	ith clear	un nills
pills and a surfactant	pill were pu	imped to	clean the casing an	d the casi	ing was	after a	wiper trip	. The hori	izontal s	section was fi	lled with so	olids free m	ud and a	at the
filled with 1.08 SG by	rine. The m	ud from tl	he hole and pits wa	as dumped	d and	shoe th	e casing v	was cleane	ed out a	nd displaced t	to 1.08 SG	uninhibited	brine. I	РООН
the pits were cleaned.						and fur	i sand sere	eens.						
TIME DISTR La	st 24 Hrs	MUD	VOL ACCTG	(bbl)		SOLIDS	ANALYS	SIS (%/Ib	/bbl)	MUD	RHEOLO	GY & HY	RAUL	ICS
Kig Up/Service	1	UII Adde Water A	ea dded	0 545	Na K(	<u>.ci</u> 21		7	<u>// -8.8</u> 2/ 11 5	hp/na Valu kp/ka (lb•s	$\frac{1}{100 \text{ ft}^2}$			
Tripping	12	Mud Ree	ceived	0	Lo	w Gravit	у	5.	/ 45.2	Bit Loss (j	psi / %)			
Condition Hole	3	Dumped		474	Be	ntonite		1 0	./. 2/1/1	Bit HHP (	hhp/HSI)			
Running Casing	6	Evapora	tion	0	We	ni Sonus eight Mat	terial	4.8 N	<u>A/ NA</u>	Ann. Vel D	<u>P (ft/m</u> in)			
Cementing		Centrifu	ge	0	Ch	emical C	lonc		/ 6.	Ann. Vel D	<u>C (ft/min)</u>			
Condition Mud		Formatic Left in F	on Jole	0		erage SC	ì		-	Crit Vel DF	<u>' (tt/min)</u> C (ft/min)			
Dev. Survey		Sweeps		70	Ca	rb/BiCar	b (m mole	e/L) .	 /1		- (ivinin)	1		
M-I ENG	R / PHONE	0225 492	RIG	PHONE		N	AREHO	USE PH	ONE	DAILY	COST	CUMUL	ATIVE	COST
Gracine Garrick	08	9323 482	52							\$ 6.04	0.15	\$	94,525	.40
<u> </u>													, -	

	Drilling Fluids		, 	WA7 Date	ER-B	BASE	D MUD		RT NO 385 m / 7	0. 10 01 m	0
			Spuc	Date	20/06/2	002	Mud Type		Brine		
Operator : Report For : Well Name : Contractor : Report For :	OMV Australia G. Howard & G. Otl Patricia 2 Diamond Offshore P Johns	hen	Water	Depth Fi Des L	53 eld/Area cription cocation Well No.	: VIC / : Develo : Bass S	Activity L21 opment Strait	/ W	ell comp	letion	
DRILLING A	SSEMBLY	CASING		MUD	VOLUME	E (bbl)		CIRCULA		ГА	
Bit Size 8.5 in		Surface			Hole		Pump Ma	ke JATIONA	L 12P-16 JA	TIONA	L 12P-16
Nozzles 1/32" Drill Pipe Size	Length	<u>30in @111m (1117</u>	TVD)		405.3	te	Pump Si	$\frac{1}{2}$ 6 X 1	2.in	6 X	<u>12.in</u>
5 in	m	13.375in @326m (31	8TVD)		402.7		Pump stk/r	nin	gai/stk		gai/stk
Drill Pipe Size	Length	Intermediate	,	Total	Circulation	ng Vol		Flow Rate		gal/	min
5 in Drill Collar Size	<u>341 m</u> Length	<u>9.625in @873m (700</u> Production or Li	)TVD)		<u>402.7</u> In Storag	re	Tot	Bottoms Up			
6.75 in	28 m	in @m (TVD)			300	,c	Circulat	ing Pressure			
G 1 E	Π		S				PR	ODUCTS U	SED LAS	5T 24 H	IRS
Sample From Flow Line Temp	°C						Duotec	ts	25 K (	ze GBG	<u>Amt</u>
Depth/TVD	m	1385/701					Wellzyr	me A	55 GA	A DM	4
Mud Weight	sp.gr.	1.08					SALT (	BIG BAG)	1 M7	BG	13
Rheology Temp	°C						DRINL		1 DI	, DL	400
R600/R300											
R6/R3											
PV	<u>cP</u>										
<u>YP</u> 10s/10m/30m Gel	$\frac{16/100ft^2}{1b/100ft^2}$										
API Fluid Loss	cc/30 min										
HTHP FL Temp Cake API/HTHP	<u>cc/30 min</u> 1/32"										
Solids	%Vol										
Oil/Water Sand	%Vol						SOLIE		Siz	20	Hr
MBT	lb/bbl						Thule	VSM 100 S	120/120/	120/120	0
pH Aller Mard (Day)							Thule Thule	VSM 100 S	120/120/	120/120	0
Pf/Mf							Thule	VSM 100 S	84/84/	<u>84/84</u> 84/84	0
Chlorides	mg/l						D-Sano	ler	20	411	0
Hardness Ca	mg/1						D-Sille Degass	er	20 X	4	0
KCL % by wt	%										
LSRV 1 LSRV 2	cP cP										
LSRV 3	сР									<b>DE00</b>	
							Weigh	MUD PRO		04-1 1	0
							Visco	sity		40 - 60	•
							Filtrat	e		<u>&lt;8 ml</u>	
R The brine for the clean The cleanup procedur displace the FloPro ar interval over the sand	EMARKS AND TR nup procedures was mi e included a high visco nd then a Wellzyme bri screens.	REATMENT xed, sity brine followed by ne was used to fill the	y brine to 8,1/2"	The cor wash pi string. 400 blls	mpletion pr ipe. The scr s of brine w	rogram was reens were vas filtered	REM s continued wi set and the wo to approx 35	ARKS th the running ell clean up prio NTUs for futur	of the sand or to trippin e use as inh	screens g the run ibited br	and nning rine.
TIME DISTR Las	st 24 Hrs MUD V	OL ACCTG (bl	bl) S	OLIDS	ANALYSI	S (%/Ib/b	<b>bl) M</b>	UD RHEOLO	GY & HY	RAUL	ICS
Drilling	Water Add	led 7	20 KC	1		/	kp/ka	(lb•s^n/100ft²)			
Tripping Condition Hole	Mud Recei	ived	0 Lov	<u>v Gravity</u> tonite	y	/	Bit Lo	$\frac{\text{ss} (\text{psi} / \%)}{\text{IP} (\text{hbp} / \text{HSD})}$			
B.O.P. Testing	Formation		0 Dril	ll Solids		/	Bit H	<u>Vel (ft/s)</u>			
Running Casing	Left in Ho	le 5.	47 We	ight Mat	erial	NA/	NA Ann. V	<u>(el DP (ft/min)</u>			
Condition Mud	Desilter		0 Che 0 Inei	rt/React	onc		/ Ann. V Crit Ve	el DC (ft/min)			
Coring	Dumped	2	12 Ave	erage SG	ł		Crit Ve	el DC (ft/min)			
Completion	24 Shakers		0 Car	b/BiCart	o (m mole/I	L) /			CUMU		COST
Graeme Garrick	08 9325 4822	NO PHC					s s	10,730.44	\$	105,25	5.84

	Drilling Fluids		V	VATER-	BASE			RT No	. 11 <sup>01 m</sup>	
			Spud	Date 20/06	/2002	Mud Ty	pe	Brine		
Operator : Report For : Well Name : Contractor : Report For :	OMV Australia G. Howard & G. Ot Patricia 2 Diamond Offshore P Johns	hen	Water D	epth 5 Field/Are Descriptic Locatic Well N	a: VIC / on: Devel on: Bass o.:	L21 opment Strait	ity W	<u>ell Comp</u>	<u>letion</u>	
DRILLING A	SSEMBLY	CASING			ME (bbl)		CIRCULA		A	
Bit Size 8.5 in		Surface		Hol	e	Pump M	lake JATIONA	<u>12P-16</u>	TIONAL	L 12P-16
Drill Pipe Size	Length	<u>30in @111m (1111</u> Intermediate	VD)	Active	<u>s</u> Pits	Pump	Size 6 X I Cap	2.1n gal/stk	<u>6 X I</u>	<u>2.1n</u> al/stk
5 in	m	13.375in @326m (31	8TVD)	402.7	7	Pump stk	/min	0		
Drill Pipe Size	Length	Intermediate	TVD)	Total Circula 402 7	iting Vol		Flow Rate Bottoms Un		gal/r	nın
Drill Collar Size	Length	Production or Li	ner	In Stor	age	To	otal Circ Time			
6.75 in	m		:e	300		Circul	ating Pressure		Т 24 Ц	PC
Sample From						Produ	ucts	SED LAS	ze	Amt
Flow Line Temp	<u>°C</u>	1295/701				Caust	ic Soda	25 KC	DM	2
Mud Weight	sp.gr.	1.08				KCL-	Geel	25 KC	BG	2
Funnel Viscosity	s/qt					Conq	or 303A	55 GA	DM	3
R600/R300										
R200/R100										
PV	сР									
YP 10s/10m/30m Gel	$\frac{1b/100ft^2}{1b/100ft^2}$									
API Fluid Loss	cc/30 min									
HTHP FL Temp	$\frac{cc/30 \text{ min}}{1/32"}$									
Solids	%Vol									
Oil/Water Sand	%Vol					SOL		Siz	<u>م</u>	Hr
MBT	lb/bbl					Thul	e VSM 100 S	120/120/1	20/120	0
pH Alkal Mud (Pm)						Thule Thule	<u>e VSM 100 S</u> e VSM 100 S	120/120/1	20/120	0
Pf/Mf						Thul	e VSM 100 S	84/84/8	34/84	0
Chlorides Hardness Ca	mg/l mg/l					D-Sa D-Sil	nder	20 x	<i>4</i> "	0
	iiig/1					Dega	sser	20 X	-	0
KCL % by wt	% cP									
LSRV 2	cP									
LSRV 3	сР						MUD PRO	PERTY S	PECS	
						Wei	ght	1	.04-1.10	)
						Visc Filtr	ate		<u>40 - 60</u> <8 ml	
						DE	WVDKG		-	
Mixed 100 bbls of bri chemicals. The NTUs was filtered from 450 base.	ne which was filtered of the inhibited filtere to 270 NTUs and will	prior to adding the inh d brine was 22. The ol be used on next well a	ition C d brine H Is KCl	Continued with Filled riser,chok	the well con	npletion prog nes with filte	gram. red brine.			
TIME DISTR La	st 24 Hrs MUD V	OL ACCTG (bl	ol) SO	LIDS ANALY	<u>SIS (%</u> /lb/l	obl)	MUD RHEOLO	GY & HYE	RAULI	cs
Rig Up/Service	Oil Addec		0 NaCl			7/ np/na	a Values			
Drilling Tripping	Water Ad Mud Rece	tived 1	DU KCl D Low	Gravity		/ kp/ka / Bit l	a <u>(lb•s^n/100ft²)</u> L <u>oss (psi/</u> %)			
Condition Hole	Centrifug		) Bento	onite		/ Bit I	HHP (hhp / HSI)			
B.O.P. Testing Running Casing	Left in Ho	le 1	Drill 10 Weig	ht Material	NA	/ NA Ann.	Vel DP (ft/min)			
Cementing	Sweeps		Chem	nical Conc		/ Ann.	Vel DC (ft/min)			
Condition Mud	Desilter Dumped		D Inert/ D Avera	nge SG		Crit Crit	<u>Vel DP (ft/min)</u> Vel DC (ft/min)			
Completion	24 Shakers		) Carb/	BiCarb (m mol	e/L)			CLIMAL		COST
Graeme Garrick	08 9325 4822			WAREH			1,225.58	S	<u>106,4</u> 81	.42

	Drilling Fluids			WA Date	TER-E			/UD F		RT No	. 1: 01 m	2
			Spι	ud Date	e 20/06/2	2002	Mu	d Type		Brine		
Operator : 0 Report For : 0 Well Name : 1 Contractor : 1	OMV Australia G. Howard & G. O Patricia 2 Diamond Offshore	then	Water	<u>r Depth</u> F De	h 53 Field/Area escriptior Locatior Well No	a: VIC n: Deve n: Bass	/ L21 lopme Strait	Activity	We	ell Comp	letion	
Report For : 1	P.Johns	CARING		MILE								
Bit Size 8.5 in		Surface		WIOL	Hole		Pu	mp Make	JATIONAI	12P-16 JA	TION/	AL 12P-16
Nozzles 1/32"		30in @111m (11	1TVD)		405.3		Р	ump Size	6 X 1	2.in	6 X	12.in
Drill Pipe Size	Length	Intermedia	te		Active P	its	- F	Pump Cap		gal/stk		gal/stk
Drill Pipe Size	Length	Intermedia	te	Tota	al Circulat	ing Vol	Pul	<u>np stk/mm</u> F	Flow Rate		gal	/min
5 in	m	9.625in @873m (7	00TVD)		218.7	-		Bo	ttoms Up			
Drill Collar Size	Length	Production or	Liner		In Stora	ge	(	<u>Total C</u> Tirculating	Pressure			
0.75 m		MUD PROPERT	IES		200			PRO	DUCTS U	SED LAS	T 24 I	HRS
Sample From	°C							Products		Si	ze	Amt
Depth/TVD	m	1385/701						KCL-Geel		111	BG	2
Mud Weight	sp.gr.	1.08										
Funnel Viscosity Rheology Temp	s/qt °C											
R600/R300												
R200/R100 R6/R3												
PV	cP											
$\frac{\text{YP}}{10 \text{s}/10 \text{m}/20 \text{m}} \text{Cal}$	$\frac{lb/100ft^2}{lb/100ft^2}$											
API Fluid Loss	cc/30 min											
HTHP FL Temp	$\frac{cc/30 \min}{1/32"}$											
Solids	%Vol											
Oil/Water	%Vol								FOUID	<b>c</b> i-		L
MBT	lb/bbl							Thule VS	<u>EQUIP</u> M 100 S	120/120/	.e 120/120	<u> </u>
pH								Thule VS	M 100 S	120/120/	120/120	0 0
Pf/Mf								Thule VS	M 100 S M 100 S	84/84/	<u>54/84</u> 34/84	0
Chlorides	mg/l							D-Sander				0
Hardness Ca	mg/I							D-Silter Degasser		20 x	4"	0
KCL % by wt	%							e				
LSRV 1 LSRV 2	cP cP											
LSRV 3	сР										<b>DE00</b>	
								Weight			<u>PECS</u> .04-1.1	0
								Viscosity	I		<u>40 - 60</u>	)
								Filtrate			<u>&lt;8 ml</u>	
RI	EMARKS AND T	REATMENT				~		REMAR	RKS			
Mixed extra 100 bbls of	of KCl brine.			Displa Conti	aced well to	filtered in mpletion	hibited	l brine. out tubing t	o insert nun	ioint Starte	losing	brine to
				forma	ation at up to	o 40 bbls/h	ır.		• •••• • • • • • • • • • • • • •	J		
TIME DISTR Las	st 24 Hrs MUD	/OL ACCTG (	bbl)	SOLIDS	S ANALYS	6IS (%/Ib/	bbl)	MU	RHEOLO	GY & HY	RAUL	ICS
Rig Up/Service Drilling	Uil Adde Water Ad	d Ided	0 N 110 K	a <u>Ci</u> Cl			.//	np/na Va kp/ka (lb	$(100 \text{ s}^{1})$			
Tripping	Mud Rec	eived	0 Lo	ow Gravi	ity		/	Bit Loss	(psi / %)			
Condition Hole B O P Testing	<u>Centrifug</u>	n le	$\begin{array}{c c} 0 & \mathbf{B} \\ \hline 100 & \mathbf{D} \end{array}$	entonite rill Solid	ls		/	Bit HHP Bit Let Ve	<u>(hhp / HSI)</u> el (ft/s)			
Running Casing	Left in H	ole	300 W	eight Ma	aterial	NA	/NA	Ann. Vel	DP (ft/min)			
Condition Mud	Sweeps Desilter		$\begin{array}{c c} 0 & C \\ \hline 0 & In \end{array}$	hemical (	Conc		- /	Ann. Vel	DC (ft/min) P (ft/min)			
Coring	Dumped		0 A	verage S	G			Crit Vel D	OC (ft/min)			
Completion	24 Shakers			arb/BiCa	arb (m mole		/		( COST	CUMU	ΔΤΙΛΕ	T200
Graeme Garrick	08 9325 482				MAREHU			DAIL	0031	CONIUL		. 5031
								\$ 54	8.90	\$	107,03	30.32

	Drilling		_	W	ATER	-BA	SEI	D MUD	REPOF	RT No	. 1:	3
	Fluids			D	ate 2/07	7/2002		Depth/TVD	1;	385 m / 7	01 m	
			Wat	er Dej	pth	53	<u> </u>	Activity	W	ell comp	etion	
Operator :	OMV Australia				Field/A	rea : Y	VIC / I	L21				
Report For : Well Name :	R.King & G. Othen Patricia 2				Descripti Locati	ion: I	Develo Bass S	opment trait				
Contractor :	Diamond Offshore				Well I	No. :	<b>Du</b> 55 5	uuu				
Report For :	P.Johns	CASING					1.15				- 4	
Bit Size 85 in	SSEMBLT	Surface		IVI	UD VOLU He	ole (D	) (100	Pump Mak	e JATIONAI	12P-16 JA	TIONA	L 12P-16
Nozzles 1/32"		30in @111m (111	TVD)		405	5.3		Pump Siz	$6 \times 1$	2.in	6 X	12.in
Drill Pipe Size	Length	Intermediate	e		Active	e Pits	-	Pump Ca	ip vin	gal/stk		gal/stk
Drill Pipe Size	Length	Intermediate	e	Г	otal Circu	ہ lating ۷	Vol	Fullip Stk/II	Flow Rate		gal/	min
5 in	m	9.625in @873m (70	00TVD)		3			]	Bottoms Up			
Drill Collar Size	Length	in @m (TVD	Jiner		In Sto 18	orage 6	-	<u> </u>	I Circ Time			
0.75 m			ES	I	10			PR	ODUCTS U	SED LAS	T 24 F	IRS
Sample From	ംറ							Product Defoam	S	Si	ze DM	Amt
Depth/TVD		1385/701						KCL-Ge	el	1 TN	BG	2
Mud Weight	sp.gr.	1.08										
Rheology Temp	°C											
R600/R300												
R6/R3												
PV	сР											
YP 10s/10m/30m Gel	lb/100ft <sup>2</sup>											
API Fluid Loss	cc/30 min											
HTHP FL Temp	<u>cc/30 min</u> 1/32"											
Solids	%Vol											
Oil/Water	%Vol							50110		ci-	0	U۲
MBT	lb/bbl							Thule V	<u>S EQUIP</u> /SM 100 S	120/120/	.e 120/120	0 0
pH								Thule V	VSM 100 S	120/120/	20/120	0
Alkal Mud (Pm) Pf/Mf								Thule V Thule V	<u>/SM 100 S</u> /SM 100 S	84/84/8	<u>34/84</u> 34/84	0
Chlorides	mg/l							D-Sand	er	0 11 0 11	/	0
Hardness Ca	mg/l							D-Silter	r >r	20 x	4"	0
KCL % by wt	%							Doguss				v
LSRV 1 LSRV 2	cP cP											
LSRV 2 LSRV 3	cP											
								Weigh		PERTY S	PECS	0
								Viscos	ity	1	40 - 60	0
						_		Filtrate	•		<8 ml	
R	EMARKS AND TH	REATMENT						REMA	ARKS			
Mixed up 1.08 SG Ke	Cl brine as required to	cover the downhole lo	osses of		ntinued to r	un well	comple	etion with the	addition of ext	ra pup joint	Losses	
450 bbls.		initiation over the time	was appro				Jing wa	s restauted in	•			
TIME DISTR La	st 24 Hrs MUD V	OL ACCTG (b	obl)	SOL	IDS ANAL	YSIS (9	%/lb/b	bl) M	UD RHEOLO	GY & HYE	RAUL	ICS
Rig Up/Service	Oil Added		0	NaCl			7	/ <u>np/na</u>	Values			
Tripping	Mud Rece	vied 2	0	<u>ku</u> Low Gi	ravity		/	Bit Los	<u>(10•s~n/100ft²)</u> ss_(psi/%)			
Condition Hole	Centrifuge	e	0	Benton	ite		/	Bit HH	P (hhp / HSI)			
B.O.P. Testing Running Casing	Formation Left in Ho	l de	0	Drill Sc Weight	Material		/ 	NA Ann V	vel (tt/s) el DP (ft/min)			
Cementing	Sweeps		0	Chemic	cal Conc		-	/ Ann. V	el DC (ft/min)			
Condition Mud Coring	Desilter Dumped		0 40	Inert/Re	eact e SG			Crit Ve Crit Ve	<u>I DP (ft/min)</u>			
Completion	24 Shakers		0	Carb/B	iCarb (m m	ole/L)	/			1		
M-I ENG	R / PHONE	RIG PH	ONE		WAREH	IOUSE	PHON	IE DAI	LY COST	CUMUL	ATIVE	COST
Gracine Garrick	00 7525 4822	,						\$	661.24	\$	107,69	1.56

				W	Α	ER-E	BASE	DI	MUD F	REPOF	RT No	). 1 <sup>,</sup>	4
	Fluids			D	ate	3/07/2	002	Dep	th/TVD	1	385 m / 7	01 m	
			Wa	5pud D Iter De	ate ofh	20/06/2	2002	Mu	d Type		Brine Flowing	vell	
Operator :	OMV Australia				Fie	eld/Area	a: VIC/	/ L21	lourity	•	j		
Report For :	R.King & G. Othe	n			Des	cription	Deve	lopm	ent				
Contractor :	Diamond Offshore				1	Vell No.	Bass	Strait					
Report For :	P.Johns												
DRILLING A	ASSEMBLY	CASING		M	IUD '	VOLUM	E (bbl)		(			ГА	
Bit Size 8.5 in		Surface				Hole		Pi I	<u>imp Make</u>	JATIONAL 6 X 1	L 12P-16 1/ 2 in	ATIONA 6 Y	<u>AL 12P-16</u> 12 in
Drill Pipe Size	Length	Intermediat	e			Active Pi	its		Pump Cap	0 1 1	gal/stk	0 Л	gal/stk
5 in	m	13.375in @326m (3	<u>18TVD)</u>			3		Pu	mp stk/mi	1	0		
Drill Pipe Size	Length	Intermediat			l'otal	Circulati	ing Vol		B	How Rate		gal	min
Drill Collar Size	Length	Production or I	Liner			In Stora	ge		Total	Circ Time			
6.75 in	m	in @m (TVD	<u>))</u>			186	-		Circulating	g Pressure			
Sample From		MUD PROPERT	ES						PRO	DUCISU	SED LAS	51 24 I 7e	Amt
Flow Line Temp	°C								Troducts		51	20	7 tint
Depth/TVD Mud Weight	<u> </u>	1385/701											
Funnel Viscosity	<u>sp.gr.</u> s/qt	1.08											
Rheology Temp	°Ĉ												
R600/R300 R200/R100													
R6/R3													
PV VP	<u>cP</u> lb/100ft <sup>2</sup>												
10s/10m/30m Gel	1b/100ft <sup>2</sup>												
API Fluid Loss	$\frac{cc/30 \text{ min}}{cc/30 \text{ min}}$												
Cake API/HTHP	1/32"												
Solids Oil/Water	%Vol												
Sand	%Vol								SOLIDS	EQUIP	Siz	e	Hr
MBT	lb/bbl								Thule VS	M 100 S	120/120/	120/120	0
PH Alkal Mud (Pm)									Thule VS	M 100 S	120/120/ 84/84/	120/120 84/84	0
Pf/Mf									Thule VS	M 100 S	84/84/	84/84	0
Chlorides Hardness Ca	<u> </u>								D-Sander D-Silter		20 x	4"	0
	0								Degasser				0
KCL % by wt	<u> </u>												
LSRV 2	cP												
LSRV 3	cP								N			PECS	
									Weight			1.08	
									Viscosit Filtrate	y			
									Thrate				
F Tested appropriate w	REMARKS AND 1	<b>REATMENT</b>	na haing	т		ll was pro	duction te	stad fr	REMAI	RKS			
produced.	ater now samples to e	neek the amount of on	ne being	11		n was pro	duction tes	sted II	om uayngn	·•			
TIME DISTR La	ast 24 Hrs MUD	VOL ACCTG (I	0 0	SOL NaCl	IDS /	ANALYS	IS (%/Ib/	<u>bbl)</u> 7/	MU np/ng_V	D RHEOLO	GY & HY	RAUL	ICS
Drilling	Water A	dded	0	KCl				.//	kp/ka (ll	nues p•s^n/100ft <sup>2</sup> )			
Tripping Condition II 1	Mud Ree	ceived	0	Low G	iravity	/		/	Bit Loss	(psi / %)			
B.O.P. Testing	Formatio	ye on	0	Drill S	nte olids			/	Bit HHP Bit Jet V	<u>(nnp / HSI)</u> el (ft/s)			
Running Casing	Left in H	Iole	0	Weigh	t Mate	erial	NA	/NA	Ann. Vel	DP (ft/min)			-
Condition Mud	Sweeps Desilter		0	Chemi Inert/R	cal Co leact	onc		- /	Ann. Vel Crit Vel I	<u>DC (tt/min)</u> DP (ft/min)			
Coring	Dumped		0	Averag	ge SG				Crit Vel I	DC (ft/min)			
Completion M-I FNG	24 Shakers	RIG PH	0 ONF	Carb/B	BiCarb	(m mole/	/L)   JSE PHO	/ NF		Y COST	CUMU		COST
Graeme Garrick	08 9325 482	22	SHE					a a la las	DAIL		Jonior		
									\$ 0.	00	\$	107,69	1.56

	👍 Drilling			W	ΆΤ	ER-B	ASE	DI	MUD R	EPOF	RT No	. 1	5
	Fluids			D bud D	ate	4/07/20	002	Dep	oth/TVD	1	385 m / 7 Bring	01 m	
			Wa	ter De	pth	<u>20/06/20</u> 53	002		Activity	•	Well Tes	ing	
Operator :	OMV Australia				Fie	Id/Area	: VIC /	L21					
Well Name :	Patricia 2	n			Desc	ocation	: Devel	lopm Strait	ent				
Contractor :	Diamond Offshore				V	Vell No.	:						
Report For :	P.Johns	CASING	1	м	ע חו ו		(bbl)		C			ГА	
Bit Size 8.5 in		Surface				Hole	- (001)	Ρι	ump Make	JATIONAI	L 12P-16 JA	TIONA	L 12P-16
Nozzles 1/32"		<u>30in @111m (11</u>	1TVD)			405.3		I	Pump Size	6 X 1	2.in	6 X	12.in
Drill Pipe Size	Length	Intermedia	te 318TVD)		A	Active Pit	S	P11	Pump Cap mp stk/min		gal/stk		gal/stk
Drill Pipe Size	Length	Intermedia	te	Г	Fotal (	Circulatir	ng Vol	1 (1)	F	low Rate		gal/	/min
5 in Drill Collar Size	M Length	<u>9.625in @873m (7</u> Production or	<u>00TVD)</u> Liner			3 In Storag	0		Bot Total C	toms Up			
6.75 in	m	in @m (TVI	D)		1	186	,C		Circulating	Pressure			
Somula From		MUD PROPERT	IES						PROD	DUCTS U	SED LAS	T 24 H	IRS
Flow Line Temp	°C								FIODUCIS		51.	20	Allıt
Depth/TVD Mud Weight	m sp.gr.	1385/701											
Funnel Viscosity	sp.gr. s/qt	1.08											
Rheology Temp	°C												
R200/R100													
R6/R3 PV	cP												
YP	lb/100ft <sup>2</sup>												
10s/10m/30m Gel API Fluid Loss	lb/100ft <sup>2</sup> cc/30 min												
HTHP FL Temp	$cc/30 \min$												
Cake API/HTHP Solids	1/32" %Vol												
Oil/Water	%Vol										0.		
Sand MBT	%Vol lb/bbl								Thule VSN	EQUIP M 100 S	120/120/	20/120	<u>Hr</u>
pH									Thule VSN	M 100 S	120/120/	20/120	0
<u>Alkal Mud (Pm)</u> Pf/Mf									Thule VSM Thule VSM	M 100 S M 100 S	84/84/	<u>84/84</u> 84/84	0
Chlorides	mg/l								D-Sander		20	4"	0
Hardness Ca	mg/1								D-Siner Degasser		20 X	4	0
KCL % by wt	% 2P												
LSRV 1 LSRV 2	cP												
LSRV 3	cP								м		PERTY S	PFCS	
									Weight			1.08	
									Viscosity Filtrate				
		DEATMENT							DEMAD	ĸs			
r		REATMENT		Th	ne well	l testing pr	ogram co	ontinue	ed.	NJ			
TIME DISTR La	ast 24 Hrs MUD	VOL ACCTG (	bbl)	SOL	IDS A		S (%/Ib/I	bbl)	MUD	RHEOLO	GY & HY	RAUL	ICS
Rig Up/Service	Oil Adde	dded	0	NaCl				7/	np/na Val	$\frac{ ues }{ ues }$			
Tripping	Mud Rec	ceived	0	Low G	ravity			/	Bit Loss (	(psi / %)			
Condition Hole	Centrifug	ge	0	Benton	ite			/	Bit HHP	( <u>hhp / HSI)</u> 1 (ft/s)			
Running Casing	Left in H	lole	0	Weight	Mate	rial	NA	/ NA	Ann. Vel I	DP (ft/min)			
Condition Mud	Sweeps Desilter		0	Chemic Inert/P	cal Cor eact	nc	-	/	Ann. Vel I Crit Vel D	<u>DC (ft/min)</u> P (ft/min)			
Coring	Dumped		0	Averag	e SG				Crit Vel D	C (ft/min)			
Completion M-I ENG	R / PHONE	RIG PH		Carb/B	iCarb W4	(m mole/L	L) SE PHO	/ NE	DAILY	COST	CUMUI		COST
Graeme Garrick	08 9325 482	2										10	
									\$ 0.0	U	\$	107,69	1.56

	Drilling			WA	TER-	BAS			REPOF	RT No	. 1	6
	Fluids		Cm	Dat	te 5/07/	2002	Dept	th/TVD	13	<u>385 m / 7</u>	01 m	
			Wate	r Dept	th 5	53 53	A	a rype	We	Brine Il suspe	nsion	
Operator :	OMV Australia				Field/Are	a: VIC	/ L21					
Report For : Well Name :	R.King & G. Other Patricia 2	1		D	escriptio	n: Dev	elopme s Strait	nt				
Contractor :	Diamond Offshore				Well N	o. :	Stiult					
Report For :	P.Johns	CASING		RAL I							- •	
Bit Size 85 in	SSEWIBLT	Surface		WU	Hole	<u>vi⊏ (DDI)</u> e	Pu	mn Make	JATIONAI	12P-16 JA	TION/	AL 12P-16
Nozzles 1/32"		30in @111m (111	TVD)		405.3	3	P	ump Size	6 X 12	2.in	6 X	12.in
Drill Pipe Size	Length	Intermediat	e		Active	Pits	Pur	<u>ump Cap</u>		gal/stk		gal/stk
Drill Pipe Size	Length	Intermediat	e	Tot	tal Circula	ting Vol	Full	<u>ip stk/mm</u> F	low Rate		gal	/min
5 in	m	9.625in @873m (70	00TVD)		3			Bo	ttoms Up		-	
Drill Collar Size	Length	Production or I	Liner		In Stor 186	age	- (	<u>Total C</u> Tirculating	Pressure			
0.75 m		MUD PROPERTI	ES		100			PRO	DUCTS US	SED LAS	T 24 I	HRS
Sample From	°C							Products		Siz	ze	Amt
Depth/TVD		1385/701										
Mud Weight	sp.gr.	1.08										
Rheology Temp	<u>s/qt</u> <u>°</u> C											
R600/R300												
R6/R3												
PV	сР											
YP 10s/10m/30m Gel	lb/100ft <sup>2</sup> lb/100ft <sup>2</sup>											
API Fluid Loss	cc/30 min											
HTHP FL Temp Cake API/HTHP	<u>cc/30 min</u> 1/32"											
Solids	%Vol											
Oil/Water Sand	%Vol								FOUIP	Siz	<u>م</u>	Hr
MBT	lb/bbl							Thule VS	M 100 S	120/120/1	20/120	0
pH Alleal Mud (Pm)								Thule VS	<u>M 100 S</u>	120/120/1	20/120	0
Pf/Mf								Thule VS	M 100 S	84/84/8	34/84 34/84	0
Chlorides	mg/l							D-Sander		20	411	0
Hardness Ca	mg/1							D-Sifter Degasser		20 X	4	0
KCL % by wt	<u>%</u>							-				
LSRV 1 LSRV 2	cP cP											
LSRV 3	cP							M			DECO	
								Weight		-ERITS	1.08	
								Viscosity	7			
								Filtrate				
F	REMARKS AND T	REATMENT		The	11 44			REMAR	RKS	· · · · · · · · · · · · · · · · · · ·		
				The	wen testing	, program v	was com	pieted and	the wen susp	bension was	comm	enceu.
								-				
TIME DISTR La	Ast 24 Hrs MUD	VOLACCTG (k		SOLID aCl	S ANALY	SIS (%/Ib	/bbl) - 7/		RHEOLO	GY & HYE	RAUL	ICS
Drilling	Water A	ided	0 K	Cl			/	kp/ka (lb	•s^n/100ft <sup>2</sup> )			
Tripping Condition U-1-	Mud Rec	eived	$\begin{array}{c c} 0 & L \\ \hline 0 & D \end{array}$	ow Grav	vity		/	Bit Loss	(psi / %)			
B.O.P. Testing	Formatic	n	0 D	rill Soli	ds		/	Bit Jet Ve	<u>(ft/s) (ft/s)</u>			
Running Casing	Left in H	ole	$\frac{0}{0}$	eight N	Anterial	N	A/NA	Ann. Vel	DP (ft/min)			
Condition Mud	Sweeps Desilter		0 C	<u>iert/Rea</u>	ct		- /	Ann. Vel D	<u>DC (ft/min)</u> <u>P (ft/min)</u>			
Coring	Dumped		0 A	verage S	SG	( <b>*</b> )	,	Crit Vel D	C (ft/min)			
Completion M-I FNG	R / PHONE	RIG PH	<u>0   C</u> ONE	arb/BiC	arb (m mol	e/L)	/ ONE		COST	CUMU		COST
Graeme Garrick	08 9325 482	2							5001			
								\$ 0.0	0	\$	107,69	1.56

	Drilling			WA	TER-I	BASE	ED N	NUD F	REPOF	RT No	. 1	7
	Fluids		Sn	Dat	e 6/07/2	2002	Dept	th/TVD	13	385 m / 7 Brino	01 m	
			Wate	er Dept	h 5	3	A	Activity	W	eather w	atch	
Operator :	OMV Australia			l	Field/Are	a: VIC	/ L21					
Well Name :	Patricia 2	n		D	Locatio	n: Deve n: Bass	Strait	nı				
Contractor :	Diamond Offshore	;			Well No	<b>.</b> :						
Report For :	P.Johns	CASING		МШ							۵	
Bit Size 8.5 in		Surface			Hole		Pu	mp Make	JATIONAI	_ 12P-16 JA	TION	AL 12P-16
Nozzles 1/32"	T d	<u>30in @111m (111</u>	TVD)		405.3		P	ump Size	6 X 12	2.in	6 X	12.in
Drill Pipe Size	Length	Intermediat	e 18TVD)		Active P	its	Pun	<u>'ump Cap</u> 1p stk/mii	n	gal/stk		gal/stk
Drill Pipe Size	Length	Intermediat	e	Tot	tal Circulat	ting Vol		]	Flow Rate		gal	/min
5 in Drill Collar Size	M Length	<u>9.625in @873m (70</u> Production or I	00TVD)		3 In Stora	ide		Bo Total	ottoms Up			
6.75 in	m	in @m (TVD	)		126	ige	0	Circulating	g Pressure			
Some la From		MUD PROPERTI	ES					PRO Dro duoto	DUCTS U	SED LAS	T 24	HRS
Flow Line Temp	°C							Products		51	le	Am
Depth/TVD Mud Weight	m	1385/701										
Funnel Viscosity	sp.gr. s/qt	1.00										
Rheology Temp	°C											
R200/R100												
<u>R6/R3</u> PV	cP											
YP	lb/100ft <sup>2</sup>											
<u>10s/10m/30m Gel</u> API Fluid Loss	<u>lb/100ft<sup>2</sup></u> cc/30 min											
HTHP FL Temp	cc/30 min											
Solids	1/32* %Vol											
Oil/Water	%Vol								FOUID	<b>Si-</b>	~	L۳
MBT	lb/bbl							Thule VS	SM 100 S	120/120/1	e 20/120	<b>n</b> r ) 0
pH Alleal Mud (Pm)								Thule VS	SM 100 S	120/120/1	20/120	0 0
Pf/Mf								Thule VS	SM 100 S	84/84/8	34/84 34/84	0
Chlorides Hardness Ca	<u>mg/l</u>							D-Sander	ſ	20 x	1"	0
	iiig/1							Degasser		20 X	-	0
KCL % by wt	<u>%</u> cP											
LSRV 2	cP											
LSRV 3	сР							Ν		PERTY S	PECS	;
								Weight			1.08	
								Filtrate	y			
F	EMARKS AND T	REATMENT						REMA	2KG			
•				Cont	inue with w	ell suspens	sion but	unable to	continue due	to inclement	nt weatl	her.
TIME DISTR La	ast 24 Hrs MUD	VOL ACCTG (k	obl)	SOLID	S ANALYS	6IS (%/Ib/	/bbl)	MU	D RHEOLO	GY & HYD	RAUL	ICS
Rig Up/Service Drilling	Oil Adde Water A	d ded	$\begin{array}{c c} 0 \\ \hline 0 \\ \hline 0 \\ \hline \end{array}$	<u>NaCl</u> KCl			·.7//	np/na V kp/ka (ll	alues p•s^p/100ft <sup>2</sup> )			
Tripping	Mud Rec	ceived	0 1	Low Grav	vity		/	Bit Loss	(psi / %)			
B.O.P. Testing	Formatic	ge	0 1	Bentonite Drill Solid	ds		/	Bit HHP Bit Jet V	<u>(hhp / HSI)</u> el (ft/s)			
Running Casing	Left in H	lole	0	Weight M	faterial	NA	4/ NA	Ann. Vel	DP (ft/min)			
Condition Mud	Desilter		0 1	Inert/Read	ct		- /	Crit Vel I	<u>DC (II/min)</u> DP (ft/min)			
Completion	Dumped		60	Average S	SG		/	Crit Vel I	DC (ft/min)			
M-I ENG	R / PHONE	RIG PH	ONE		WAREHO	USE PHC	) DNE	DAIL	Y COST	CUMUL	ATIVE	COST
Graeme Garrick	08 9325 482	2						\$ 0.	00	\$	107,69	91.56

	Drilling		_	WA	TER-E	BASE	ED M	IUD F	REPOF	RT No	. 18	8
	Fluids		Court	Date		002	Depti	h/TVD	1:	385 m / 7	01 m	
			Water	Depth	e 20/06/2 h 53	<u>2002</u> }	A	ctivity	We	ell Suspe	nsion	
Operator :	OMV Australia			F	ield/Area	a: VIC/	/ L21					
Report For : Well Name :	R.King & G. Othe Patricia 2	'n		De	escription	1: Deve 1: Bass	lopmen Strait	it				
Contractor :	Diamond Offshore	2			Well No.		Stratt					
Report For :	P.Johns											
DRILLING A	SSEMBLY	CASING		MUE		E (bbl)	D	<u> </u>				L 10D 16
Bit Size 8.5 in Nozzles 1/32"		30in @111m (111	TVD)		405 3		Pun Pu	np Make Imp Size	6 X 1	<u>_ 12P-16 \A</u> 2 in	6 X	<u>L 12P-16</u> 12 in
Drill Pipe Size	Length	Intermediat	e e		Active Pi	its	Pu	imp Cap	0111	gal/stk		gal/stk
5 in	m	13.375in @326m (3	18TVD)	-	3		Pum	p stk/mir				
Drill Pipe Size	Length	Intermediat		Tota	al Circulati	ing Vol			flow Rate		gal/	mın
Drill Collar Size	Length	Production or I	Liner		In Stora	ge		Total (	Circ Time			
6.75 in	m	in @m (TVD					Ci	irculating	Pressure		TOAL	
Sample From		MUD PROPERTI	E9				F	PRO Products	DUCISU	SED LAS	7e	Amt
Flow Line Temp	°C											
Depth/TVD Mud Waight	<u> </u>	1385/701										
Funnel Viscositv	<u>sp.gr.</u> s/at	INO <sup>-</sup> C										
Rheology Temp	°C	Brine										
R600/R300												
R6/R3												
PV	<u>cP</u>											
YP 10s/10m/30m Gel	<u>1b/100ft</u> <sup>2</sup> 1b/100ft <sup>2</sup>											
API Fluid Loss	cc/30 min											
HTHP FL Temp	<u>cc/30 min</u>											
Solids	%Vol											
Oil/Water	%Vol											
Sand	<u>%Vol</u>						1	SOLIDS	EQUIP M 100 S	120/120/	20/120	Hr
pH	10/001						1	Thule VS	M 100 S	120/120/	120/120	0
Alkal Mud (Pm)							]	Thule VS	<u>M 100 S</u>	84/84/8	84/84	0
Pf/Mf Chlorides	mg/l						I	<u>D-Sander</u>	M 100 S	84/84/8	34/84	0
Hardness Ca	mg/l						Ī	D-Silter		20 x	4"	0
KCL % by wt	0/						I	Degasser				0
LSRV 1	cP											
LSRV 2	cP											
LSRV 3	сР							N		PERTY S	PFCS	
								Weight			1.08	
								Viscosity Filtrata	/			
								rnuale				
R	EMARKS AND	REATMENT		4.0	a a	1 4 14	DOD	REMA	RKS	11		
All brine in pits dump	bed.			contin	the weather nued.	abated the	e BOPs	were reco	vered and the	e well suspe	ension	
TIME DISTR Las	st 24 Hrs MUD	VOL ACCTG (t	obl) S		S ANALYS	IS <u>(</u> %/Ib/	'bbl)	MUI	RHEOLO	GY & HYE	RAUL	CS
Rig Up/Service	Oil Add	ed	0 Nat	<u>Cl</u>			.7/	np/na Va	ilues			
Tripping	Mud Re	ceived	0 KC	w Gravi	ity		/	<u>кр/ка (It</u> <u>Bit</u> Loss	<u>(psi</u> /%)			
Condition Hole	Centrifu	ge	0 Ber	ntonite			/	Bit HHP	(hhp / HSI)			
B.O.P. Testing	Formati	on Jole	$\begin{array}{c c} 0 & \text{Dri} \\ 0 & W_{2} \end{array}$	Il Solid	ls aterial	NT A	/ \/ N/A	Bit Jet Vol	$\frac{\text{el } (\text{ft/s})}{\text{DP} (\text{ft/min})}$			
Cementing	Sweeps		0 <u>C</u> h	emical	Conc		- /	Ann. Vel	<u>DC (ft/min)</u>			
Condition Mud	Desilter		0 Ine	rt/Reac	t			Crit Vel I	<u>DP (ft/min)</u>			
Completion	Dumper Shakers		126 Av	erage <u>S</u> rh/RiCa	iG arb (m mole/	(L)	/	Crit Vel I	<u> (ft/min)</u>			
M-I ENGR	R / PHONE	RIG PH	ONE		WAREHOU	JSE PHO	DNE	DAIL	COST	CUMUL	ATIVE	COST
Graeme Garrick	08 9325 482	22						<b>.</b>	0		107 55	1.50
								\$ 0.0	10	\$	107,69	1.56

	<b>D</b> rilling			W	ΆΤ	ER-B	ASE	DN	IUD I	REPOF	RT No	. 1	9
	Fluids			D	ate	8/07/200	02	Dep	th/TVD	13	385 m / 7	01 m	
			Wat	pud D ter Dei	ate pth	<u>20/06/20</u> 53	02	Mu A	d lype Activity	Pr	epare to	tow.	
Operator :	OMV Australia				Fie	ld/Area :	VIC /	L21					
Report For :	R.King & G. Other	n			Des	cription :	Devel	opme	nt				
Contractor :	Diamond Offshore				V	Vell No. :	Dass 2	Stran					
Report For :	P.Johns												
DRILLING A	ASSEMBLY	CASING	3	M	UD۱	VOLUME	(bbl)		26.1	CIRCULAT	ION DAT	Α	
Bit Size 8.5 in Nozzles 1/32"		Surface 30in @111m (11	1TVD)			Hole 405 3		Pu P	<u>mp Make</u> ump Size	6 X 1'	2 12P-16 1A 2 in	<u>6 X</u>	<u>AL 12P-16</u> 12 in
Drill Pipe Size	Length	Intermedia	ate		I	Active Pits		P	ump Car		gal/stk	011	gal/stk
5 in	m	<u>13.375in @326m (</u>	318TVD)		1	3	X7 1	Pun	np stk/mi	n Fl D (	-	1	
5 in	Length	9 625in @873m (	ate 700TVD)	1	otal	- 3	g voi		B	ottoms Un		gai	min
Drill Collar Size	Length	Production or	Liner			In Storage	;		Total	Circ Time			
6.75 in	m	in @m (TV	D)					(	Circulatin	g Pressure		T 24 I	
Sample From		MUDPROPER	IIEƏ						Products		SED LAS	1 24 I	Amt
Flow Line Temp	°C												
Depth/TVD Mud Weight	m sp.gr	1385/701											
Funnel Viscosity	s/qt												
Rheology Temp	°Ĉ			_									
R200/R100													
<u>R6/R3</u>	. D												
YP	<u>cP</u> lb/100ft <sup>2</sup>												
10s/10m/30m Gel	lb/100ft <sup>2</sup>												
API Fluid Loss HTHP FL Temp	$\frac{cc/30 \text{ min}}{cc/30 \text{ min}}$												
Cake API/HTHP	1/32"												
Solids Oil/Water	%Vol												
Sand	%Vol								SOLIDS		Siz	е	Hr
MBT	lb/bbl								Thule VS	<u>SM 100 S</u> SM 100 S	120/120/1	20/120	0
Alkal Mud (Pm)									Thule V	SM 100 S	84/84/8	20/120 34/84	0
Pf/Mf Chlorides	mg/1								Thule VS	SM 100 S	84/84/8	84/84	0
Hardness Ca	mg/l								D-Silter	1	20 x	4"	0
KCL % by wt	0/_								Degasse	r			0
LSRV 1	cP												
LSRV 2	cP • P												
LSKV 3	CP										PERTY S	PECS	
									Weight			1.08	
									<u>Filtrate</u>	L <b>y</b>			
F		DEATMENT											
г 	CEIMARNS AND I	REATIVIENT		Co	mplet	te final ROV	V work w	vith su	b sea tree.	Pull anchors	in preparati	on for 1	nove to
				ne	xt loc	ation.					1 1		
			(bbl)	901	<u>، ەما</u>		(0/./Ih/L	bl)	M		СЛ 8 ПЛ-	DVII	
Rig Up/Service	Oil Adde	ed	0	NaCl	1037	ANAL 1 313		7/	np/na V	alues	GT&HIL	KAUL	103
Drilling	Water Ad	dded	0	KCI	•.		/	, <u> </u>	kp/ka (l	$b \cdot s^n/100ft^2$			
Condition Hole	Shakers	cerved	0	Low G	ite	<u></u> _		r	Bit Loss	<u>(psi / %)</u> (hhp / HSI)			
B.O.P. Testing	Evaporat	ion	0	Drill So	olids		/		Bit Jet V	/el (ft/s)			
Kunning Casing Cementing	Centrifug Formatio	ge	0	Weight Chemic	: Mate cal Co	erial	NA/	/ NA /	Ann. Vel Ann. Vel	<u>I DP (ft/min)</u> I DC (ft/min)			
Condition Mud	Left in H	lole	0	Inert/R	eact			-	Crit Vel	DP (ft/min)			
Completion	Sweeps		0	Averag	e SG iCarb	(m mole/L)		,	Crit Vel	DC (ft/min)			
M-I ENG	R / PHONE	RIG P	HONE	Curo/D	W	AREHOUS	E PHO	NE	DAIL	Y COST	CUMUL	ATIVE	COST
Graeme Garrick	08 9325 482	2							\$ 0	.00	\$	107,69	1.56

### **BIT RECAP**

#### Patricia-2

From : 20-Jun-02

To : 28-Jun-02

	DATE	BIT#	SIZE	SER#	MF	IADC	TYPE	JETS	OUT	FTGE	HRS	SPP	FLW	WOB	RPM	VEL	HHP	ROP	1	01	D	L	В	G	02	R
											o/b	psi	gpm	lbs		fps		f/hr								
ſ	20-Jun-02	1	26.00	KW0659	Smith	111	DSJC	1x17, 3x24	112	34	.6	1034	910	6.0	60	57.4	0.000	56.7	1	1	WT	А	1	IN	NO	TD
	21-Jun-02	2RR	17.50	740844	SE	115	XT1C	3x24	334	223	3.6	1410	803	10.0	40	59.1	0.068	61.8	2	2	WT	А	Е	IN	BU	TD
	23-Jun-02	3	12.50	NL5007	Reed	137M	MHT 13GC	3x15, 1x24		70	3.9	1420	859	10.0	200	87.3	0.313	17.9								
	24-Jun-02	3	12.50	NL5007	Reed	135M	MHT 13GC	3x15, 1x24		304	18.4	1730	852	10.0	200	86.6	2.643	16.5								
	25-Jun-02	3	12.50	NL5007	Reed	135M	MHT 13GC	3x15, 1x24	884	176	10.6	2160	847	14.0	200	86.1	2.693	16.6	2	2	WT	А	В	1/16	NO	TD
	26-Jun-02	4	8.50	M-25484	Reed		EPH-41-ALKDH	x								.0	0.000									
	27-Jun-02	4	8.50	M-25484	Reed	417	EPH-41-ALKDH	1x14, 1x14,		481	12.8	2090	573	8.0	130	123.9	8.161	37.6								
			0.50					1x14	4 005			1750		1 10 0	100	105 1	0.404						_	Ι.		
	28-Jun-02	4	8.50	M-25484	Reed	417	EPH-41-ALKDH	1x14, 1x14, 1x14	1,385	20	1.0	1750	580	10.0	130	125.4	8.161	20.0	1	2	wo	G	E		WI	סון
L								1714																		1

## Time Analysis Overview

Well :	Patricia-2
Drilling Co :	DIAMOND OFFSHORE
Rig :	OCEAN BOUNTY
Spud date :	20-Jun-02
TD Depth :	1,385.0
Final Depth :	1,385.0
Total Time (hrs) - Spud/Relea	ase : 400.00
Total Time (hrs) - Rig Move :	0.00
Total NPT (hrs) :	49.75
Total Time (hrs) - Pre Spud	: 2.50

#### Time-Breakdown : Times by Class and Operation

Class	Hrs	Operation	Hrs
PROGRAMMED EVENT	350.3		66.3
TROUBLE - DURING PROGRAM	49.8	TOT. CSG/CMT	58.8
		TOT, TRIPPING	31.0
		WELLBORE CLEAN-UP	30.0
		XMAS TREE WORK	29.0
		FLOW WELL/CLEAN UP	26.3
		COILED TUBING OPERATIONS	25.5
		RUN TUBING	25.3
		PULL COMPLETION	14.5
		PRESSURE TEST	14.3
		RISER - RUN	11.5
		WIPER TRIP	11.5
		CIRCULATE & CONDITION MUD	10.3
		HANDLE BHA	10.0
		BOP : NIPPLE U/D AND TEST	10.0
		SLICKLINE	8.8
		HANDLE TOOLS	6.5
		RUN & SET PACKERS	3.5
		WELL-HEAD	3.5
		LEAK-OFF TEST	1.5
		RIG UP (THE RIG)	1.0
		RIG SERVICE	1.0
		EXERCISE/DRILL	.3

Operations of < than 2 hrs



### TIME BREAKDOWN DATABASE - single well overview

# WELL: Patricia-2 Pacesetter : none selected Time Breakdown by Operational Code



### TIME BREAKDOWN DATABASE - single well overview



## TIME BREAKDOWN DATABASE - single well overview

### WELL : Patricia-2




#### Patricia 2 Final Well Completion.

				Elevation.
				0m Rotary Table
			LAT	25m MDRT
			·	
4.795	17.760	Part No	Contraction Contraction Contraction	77.5m MDRT
4.892	5.500		X/O pup joint 1.5m x 5-1/2" 17ppf 13cr L-80. New vam pin x NK-3SB pin	
4.892	6.050		30" x 20" Casing shoe X/O pup joint 1.5m x 5-1/2" 17ppf 13pr 1-80. NK-3SB box x New Vam pin	111.5m MDRT
4.892	6.075		flow coupling 2.0m x 5-1/2" 17ppf 13cr L-80. New Vam box x pin	
4.562	8.375 6.075	H824834511	flow coupling, 1.5m x 5-1/2" 17ppf 13cr L-80. New Vam box x pir	149.36m MDR I
12.415	13.375		X/O pup joint 1.5m x 5-1/2" 17ppf 13cr L-80. New Vam box x NK-3SB pin	
4.892	6.050		5-1/2" 17opf NK-3SB 13 Cr I -80 Tubing	
				227m MDBT 220m TVD
				52/11 MDR1. 52011 14D
8.681	9.625		9-5/8" x 47 ppf Casing	
4.892	6.05	H45761	X/O pup joint 1.5m x 5-1/2" 17ppf 13cr L-80. NK-3SB box x New Vam pin	
4.892	6.75	H45750	Tiow coupling, 2.0m x 5-1/2 <sup>-1</sup> /ppr 13cr L-80. New Vam box x pi	
			20 ft Upper Polished bore receptical	842.76m MDRT, 701m TVD. Top of Liner
7,750	4.895	H297-50-1514	Seal assembly W/3 sets of seals 5-1/2" 17oof 13cr I -80. New Vam bo:	845.54m. Bottom Seal unit
8.315	7.750	1000 05 0000		
8.315	0.184	H290-30-0008	7 x 9-5/8 Liner hanger wi integra packe	850.410m. Centre of Liner Element
		H441-69-7500	Indexing mule shoe	851.41m. Centre of Liner slips
			7" x 29ppf Casing 13Cr L-80 Vam Top HT box x pin thread	
			9-5/8" Casing shoe.	872m MDRT @ 90 Deg.676mTVD
			X/O, Pup Joint x 2.9m.7" 29ppf 13Cr L-80 Vam Top HT box x 7" 29ppf New Vam pin	
			X/O, 7" 29ppf 13Cr New Vam box x 6-5/8" Fox K pin(Top Sand Screen)	896.91m MDRT. 702m TVD. Top of SS
			6.625" OD. 24 ppf. 13Cr 110 Micron weave.Excluder Sand screens. Fox K box x pin	
			6.625" OD. 24 ppf. 13Cr 110 Micron weave.Excluder Sand screens. Fox K box x pin	
			8-1/2" Open hole	
5.920	7.450	H486-90-6F27	6.625" OD. 24 ppf. Excluder Sand screens. Fox K box x pin	
2.992	6.625	H494-01-6142	Pup Joint 6-5/8" 24ppt Fox K box x pir 	1
2.992	3.500	H485-35-3566	O-ring seal sub for Slick stinger. 3-1/2" 9.2ppf, 13Cr SLHT box x pir	
2 002	3 500	H404_07 7497	Pun Joint 3-1/2" 9 2nnf 130 c SI LIT hav y ain	
2.002	0.500	1407 00		
2.500	3.500	H487-36-3511	GPV set shoe.3-1/2" 9.2pp1 SLH1 box	1364.51M MDRT @90 Deg.701m TVD 1385m MDRT @90 Deg.701 m TVD
	•		www.walanaanaanaanaanaanaanaanaanaanaanaanaan	
			NOTE. All Depuis nom rotary lable	

# DATE Jun 20, 2002

### FROM : G. Howard / J. Kenrick

TO: C. Allport / S. Crocker

Well D COUNTI FIELD DRILL C RIG RT ABO WATER	ata RY O. VE SL DEPTH	IPPSLA DIAMO O (m) H (m) L	AU ND SU ND OF OCEAN	STRALIA IB-BASIN FSHORE BOUNTY 25.0 52.5	DEPT TVD ( PROC DAYS DAYS CURF PLAN	TH (mbr mbrt) Gress Con We Con We Con We Con We Con Con Rent Of	(m) LL RVE P @ 0600 D P. D	111.5         CUR. HOLE SIZE (")         36.00         AFE COST \$         11,852,851           111.5         CASING OD (")         30 "         AFE BASIS :         C&S           34.0         SHOE TVD (mBRT)         112         DAILY COST :         \$1,331,820.00           1.00         FIT (sg)         0.00         CUM COST :         \$1,331,820.00           Drill 17.1/2" hole section.         Drill to section TD. Pull out of hole & run 13.3/8" casing.         Drill casing.							
RT TO S	EABE	D (m)		77.5											
Summa Moved at 16:00 Ran & 0	rig to I Dhrs of Cemen	period Patricia n 20th ted 30 <b>DR PE</b>	I 0000 a-2 loc June 2 " casir <b>RIOD</b>	to 2400 ation. Se 2002. Dri 1g. 0000 F	hrs ancho lled 26"	rs & po /36" hol <b>) 2400</b>	sitioned riç e to sectio HRS ON	ig. Spudded Patricia-2 on TD at 111.50m.							
PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION							
RM	Р		AH	00:00	00:30	.50	0	Refer Report No 29, Baleen-3.							
RM	Ρ		RM	00:30	04:30	4.00	0	Rig under tow to Patricia-2 location. Pacific Sentinel on main tow bridle, Pacific Conqueror anchor handling vessel. Anchor 6 on bottom at 03:41hrs 20th June 2002. Move rig in to intended surface location.	e						
RM	Ρ		АН	04:30	12:00	7.50	0	Anchor 2 pennant passed to Conqueror at 04:43hrs. Anchor 2 on bottom at 05:22hrs. Reset anchor 2. Pennant passed to rig at 07:30hrs. Anchor 3 pennant passed to Conqueror at 08:00hrs, anchor set at 08:15hrs, pennant to rig at 08:25hrs. Released Sentinel from main tow bridle. Anchor 7 pennant passed to Sentinel at 08:53hrs, anchor set at 08:54hrs, pennant to rig at 09:15hrs. Anchor 5 pennant passed to Conqueror at 08:53hrs, anchor set at 09:27hrs, pennant passed to rig at 10:10hrs. Anchor 1 pennant passed to sentinel at 09:47 hrs, anchor set at 10:23hrs, pennant passed to rig at 10:25hrs. Anchor 4 pennant passed to Conqueror at 10:25hrs, anchor set at 10:41hrs, pennant passed to rig at 10:49hrs. Anchor 8 pennant passed to Sentinel at 10:41hrs, anchor set at 11:08, pennant to rig at 11:50hrs. Cross tensioned anchors.							
PS	Р		RRC	12:00	14:30	2.50	0	Made up 20"/30" casing & PGB. Hung off in moonpool.							
СН	Р		−BH∕	14:30	16:00	1.50	0	Ran in hole with 26"/36" spud assembly. Tagged seabed at 77.5m LAT.							
СН	Р		DA	16:00	16:30	.50	112	Spudded Patricia-2 at 16:00hrs 20th June 2002. Drilled 36" hole from 77.5m to 111.50m TD.							
СН	Р		WΤ	16:30	17:00	.50	112	Displaced hole to prehydrated bentonite. Pulled out of hole to 80m	١.						
СН	Р		CMD	17:00	17:30	.50	112	Ran in hole from 80m to 111.50m. No fill. Displaced hole to prehydrated gel & dropped totco.							
СН	Р		то	17:30	18:30	1.00	112	Pulled out of hole & racked back spud assembly. Recovered totco 1/4 degree.							
CON	Р		CRN	18:30	20:00	1.50	112	Picked up & made up 5" cement stinger & running tool. Made running tool up to wellhead & ran to sea level. Filled with seawater & closed valves.							
CON	TP	CSG	CRN	20:00	20:30	.50	112	Moved rig foreward starboard with anchor 3 & paid out anchor 8 to stab casing.	,						
CON	Р		CRN	20:30	21:30	1.00	112	Ran & landed casing. Checked slope indicator with ROV - 0 degrees. PGB heading 259 degrees.							
CON	P		RUC	21:30	22:00	.50	112	Rigged up cement hose & held pre-job safety meeting.							
CON	Ρ		CMC	22:00	23:00	1.00	112	Pumped 10bbls seawater & pressure tested cement lines to 2000psi. Pumped 10bbls seawater with flurocene. Mixed & pumped 160bbls 15.9ppg cement slurry. Displace with 11.50bbls seawater. Bled off & checked backflow. Cement in place at 22:45hrs. Full returns observed throughout job & cement returns to surface.	D						

### DAILY DRILLING REPORT # 1

# Patricia-2

VIC/L21

PHSE	CLS	RC	OP	FROM	то	HRS	DEP	ΤН			A	СТІVІ	ITY D	ESCR		ON		
CON	P		CMC	23:00	24:00	1.00	11:	2	Rigged do hole with tool.	own ce 5" cer	ement l nent st	hose a inger.	& relea	ased ru down p	inning ump	g tool. Pu in sub &	illed ou 30" rui	it of nning
	TY F	)R PF		) 0000 H		0600	HRS	ON	Jun 21.	2002								
PHSE	CLS	RC	OP	FROM	то	HRS	DEP	TH	<u> </u>		AC	TIVI	TY DE	ESCRI	PTIC	ON		
SH	Р		TI	00:00	02:30	2.50	11	2	Picked up	17.1	/2" BH/	A. Initi	ialised	MWD	& rar	n in hole	to top	of
SH	Р		DES	02:30	03·30	1 00	11	2	cement a	t 102r ment	n. Weig & shoe	ght tes from	sted ce 102m	ement t to 111	to 10l 50m	Κ.		
SH	P		DA	03:30	06:00	2.50	22	0	Drilled 17	.1/2"	nole fro	om 11	1.50m	to 220	m.	-		
		Phas	e Analy	rsis		Pha	se hrs	Ś	Start On	Fin	ish On	Cu	m Hrs	Cum D	ays	Min Dept	h Ma	x Depth
RIG MO	VE						12.0	Jur	n 20, 2002	Jun 2	20, 2002	2	12.0	(	0.50		0.0	0.0
CONDU	CTOR I	HOLE					2.5 4.0	Jur Jur	n 20, 2002 n 20, 2002	Jun 2	20, 2002 20, 2002	2	14.5 18.5	(	).60 ).77		0.0	0.0 112.0
CONDU	CTORS	;					5.5	Jur	n 20, 2002	Jun 2	20, 2002	2	24.0	1	1.00	11:	2.0	112.0
WBM I	Data	С	OST TO	) DAY : \$	5,056	CUM.	WB M	UD (	COST: \$5,0	56		CUI	M. WBI	M+OBM	I COS	T: \$5,056		
Type : rehydr FROM : TIME : WEIGHT TEMP (C	rated ( (sg) : () :	Bento	<b>Pit</b> 20 1.04	VISCOCI PV (cps) YP (lb10 GEL10s/ <sup>-</sup> (lb100sq. Fann 3/6/	TY (sec/o : 0sq.ft): 10m/100r ft) : 100 :	n 12 18	100 / / ((               ((	API F cm3/ -IL I E 32nd 1THF cm3/ 1THF 32nd	EUID LOSS 30min) : -R CAKE s inch) : PFL 30min) : P CAKE Is inch) :		CI K+ HA ME PM PF	: ·C*100 ARD/Ca 3T (ppl // : 	i0 : a : b) :			SOLIDS ( H2O (%vo OIL (%vol SAND : PH : PHPA (pp	%vol) : l) : ) : b) :	
Bit Da SIZE (") MANUF TYPE : SERIAL DEPTH DEPTH	ta for : ACTUR # : IN (m R OUT (n	Bit # ER : T) : n RT) :	1 IAD 26 Sn DS KW06	00 #     1       .00	1 1 E WOB ( E RPM : OW (gpm MP PRE: I (hp/sqi)	k-lbs) : ) : SS. (psi) :	: 1 0	6 60 910 ,034 0.000	Wear NOZZLE 1 x17 3 x24 x x x x	I S D ME ON IAI TC RC	rilled ov TERAG BOTTO DC DRIL DTAL RE DP (m/hr	1 ver the GE (m) OM HF LL. HR EVS : r):	D WT last 24 : RS : S : 2	L A 34 6 ( 1.0 2,160 34.0	B Calc CUM.N CUM. CUM.I CUM.I CUM.I ROP (	G IN METERAC ON BOT. ADC DRII TOT. REV m/hr):	O2 NO Er the b E (m) HRS : L HRS S :	R TD it run 34 .6 : 1.0 2,160 34.0
BHA # WT BLW BHA WT	<b>1</b> / JAR(k ſ(k-lbs) SCRIP <sup>-</sup> T	<b>Len</b> :-lbs): : TION : OOL D	<b>gth (f</b> 40 26" Bit, ESCRII	t) :62.4 STRIN PICK U SLK OF 36" Hole	G WT(k-I JP WT(k- FF WT(k- Opener,	bs) : lbs) : lbs) : Bit Sub, HRS	40 40 40 3 x 9.1	TI   TI   T /2" D ERIA	RQE MAX (f RQE ON (ft- RQE OFF (f prill Collars, (	t-lbs): lbs): t-lbs): Crossc	1, 1, 1, over, 3 x	500 500 500 8.1/4"	D.C. D.C H.W D.P. Drill C	. (1) AN . (2) AN /.D.P. Al . ANN V ollars, C	N. VE N VEI NN VE 'ELOC Crosso	LOCITY ( LOCITY ( ELOCITY CITY (mpr over.	mpm): npm): (mpm): າ) :	0 0 0
						1												
Survey Last To Magne Survey	ool Typ tic De meth	be : clinati od :	on : Min	Curvatu	0.00	MD mBRT)	TVD (mBR	)     T)   [	NCL AZ DEG (deg)	COR AZ (deg	:R. '\ : SE g) (1	/' I ECT m)	DOGLE (deg/ 30m)	EG N	N/S (m)	E/W (m)	ТОО	L TYPE
-								Pu	mp Data									
									Pu	mp Da	ta - las	t 24 hr	's	0	0	Slow Pu	mp Da	ta
								#	TYPE	LNR (")	SPM	EFF (%)	Flow (gpm)	SPP (psi)	SPM	SPP     (psi)   (	DEPTH mBRT)	MW (ppg)
								1 2 3	National 1 National 1 National 1	6.00 6.00 6.00	31 31 31	97 97 97	133 133 133	1034 1034 1034				

#

Bulk Stocks On Rig									
STOCK TYPE	START USE	D REC'D	STOCK						
BariteSXBentoniteSXG-neatSXG+35% SiFlSXG+BFS+12.25% SiFlSXPot WaterM3Drill WaterM3Heli-fuelItrBase OilM3Rig FuelM3BrineM3	436 1662 35 1449 89 98 2 436 28 1845 370 1	88 95 95 25 98 393 0	436 1304 554 0 0 98 541 1845 0 361 0						
Casing									
DIAM. CSG OD S (p	HOE MD lan/Actual)	SH (pla	IOE TVD an/Actual)	LO (pl/A	T F .ct) (pl/	IT Act)		COMMENT	
30 " 30.000	111.5		111.5						
Personnel : on Site =	:95								
ЈОВ Т	TLE			NAM	E			CO. NAME	#
Drilling Supervisor (snr) Drilling Supervisor Sub Sea Engineer Drilling Engineer Geologist Geologist			G. Howard J. Kenrick W. Bates P. Zehepleitne R. Tolliday P. Boothby	er			OMV Service Diamo Caterir	e Company nd Offshore ng	
Safety, Inspections a	and Drills		Sumr	nary					
days since last Medi	cal Treatment C	Case							
days since last First	Aid Case								
days since last Envir	onmental Issue								
days since last Walk	about								
days since last Rig li	nspection								
days since last Pre-	Iob Meetings								
days since last Trip/I									
days since last Fire I	Jrill								
days since last Aban									
days since last Heav									
days since last BOP	lest								
Shakers, Volumes at           SHAKER 1         4 x 100           SHAKER 2         4 x 100           SHAKER 3         4 x 100           SHAKER 4         4 x 100           SHAKER 5         5	ND LOSSES I VOLUME AV ACTIVE HOLE RESERVE	Data AILABLE 79 661	<b>(bbl) =</b> MIXING SLUG HEAVY	740	LOSSES (bbl) DOWNHOLE SURF. + EQU DUMPED	) = IP	<b>0</b> 0.00	ENGINEER G. Garrick/R. Grad COMMENTS Swept hole with prehydrated ge sweeps.	hram el

### DAILY DRILLING REPORT # 1 Patricia-2

### VIC/L21

Anchors	A 1 A 6	350 300			A 2 A7	305 175		A 3 A8	3	380 235	A 4	4 38	5	A 5	285
Workboats	L	ocation	Fuel (M3)	Barite (sx)	D/wtr (M3)	P/wtr (M3)	Cmt (sx)	Bent Bi (sx) (N	rine //3)		Weather VISIBILITY(nm)	12		Rig / Sea Data RIS.TENS (klbs)	a 0
Pacific Conqueron Pacific Sentinel	r s T	Standb <u>:</u> Fransit	379 105	0 1190	640 0	142 55	1188 0	838 39. 0 87.	.75 .44		WIND SP. (kts) WIND DIR (deg) PRES.(mbars) AIR TEMP (C)	30.0 230 1014 13.0		VDL (mt) WAVES (m) SWELL (m)	2,050 1.8 1.5



RIG UP FOR CEMENTING OPS

CIRCULATE & CONDITION MUD

DRILLING AHEAD

0

.5

1

2.5

2

1.5

Total time in hrs







### DEPTH @ 24:00 = 111.5m after 1.00 days since spud

### DATE Jun 21, 2002

#### FROM : G. Howard / J. Kenrick TO : C. Allport / S. Crocker

DAILY DRILLING REPORT # 2 Patricia-2

### VIC/L21

Well D COUNT FIELD DRILL C RIG RT ABO	ata RY G CO.	IPPSL/ DIAMC ( (m)	AU AND SL DND OF DCEAN	STRALIA JB-BASIN FSHORE BOUNTY 25.0	DEPT TVD ( PROC DAYS DAYS	TH (mBR mBRT) GRESS GON WE G +/- CUF	RT) (m) RVE 2 @ 0600 R	334.0 332.5 222.5 2.00 -1.98	CUR. HOLE SIZE CASING OD (") SHOE TVD (mBR FIT (sg) LOT (sg)	(") 17.50 13.3/8 " T) 326 0.00 0.00	AFE COST \$ 11,852,857 AFE BASIS : C&S DAILY COST : \$715,215.00 CUM COST : \$2,047,035.00	1 5 0
WATER RT TO S	DEPTI SEABE	H (m) L D (m)	_AT	52.5 77.5	PLAN	INED O	P. R	Run & lan	d Xmas Tree. Run I	BOP & marine ı	iser.	
Summa Ran in 111.50 casing.	ary of hole w m to se	period /ith 17. ection	1/2" B TD at	to 2400 HA. Drille 334m. P	hrs ed out s ulled ou	hoetrac t of hole	k. Drilled ´ e. Ran & co	17.1/2" I emented	nole from d 13.3/8"			
				0000 F		2400	HRS ON	Jun 2	1, 2002			
PHSE	CLS	RC	OP	FROM	10	HRS	DEPTH	<u> </u>	AC	TIVITY DES		
SH	Р		11	00:00	02:30	2.50	112	cemen	up 17.1/2" BHA. t at 102m. Weigh	t tested ceme	vD & ran in hole to top of ent to 10K.	
SH	P		DFS	02:30	03:30	1.00	112	Drilled	cement & shoe fr	rom 102m to	111.50m.	
SH	P		DA	03:30	09:00	5.50	334	Drilled TVD)	17.1/2" hole from	111.50m to	334m section TD. (332.49m	
SH	Р		CMD	09:00	10:00	1.00	334	Swept prehyd	hole with 100bbl rated gel.	hi vis pill. Pur	nped & spotted 320bbls	
SH	Р		WΤ	10:00	11:30	1.50	334	Pulled 230m)	out of hole from 3	334m to 111n	n. (Backreamed from 325m to	)
SH	Р		WΤ	11:30	12:30	1.00	334	Ran in	hole from 111m t	to 334m. (No	fill)	
SH	Р		CMD	12:30	13:00	.50	334	Circula prehyd	ited theoretical ho rated gel.	ole volume wi	th seawater. Displaced hole to	0
SH	Р		то	13:00	15:00	2.00	334	Pulled	out of hole. Laid	down drilling	ar & downloaded MWD.	
sc	Р		RRC	15:00	15:30	.50	334	Riggeo	l up to run 13.3/8	" casing. Held	I pre-job safety meeting.	
sc	Р		CRN	15:30	18:30	3.00	334	Made ι	up shoe track & c	hecked floats	. Ran 13.3/8" casing.	
SC	Р		CRN	18:30	21:00	2.50	334	Picked loaded	up & made up w wiper plugs. Mac	ellhead joint. de up running	Released running tool & tool.	
SC	Р		CRN	21:00	21:30	.50	334	Ran in	hole with casing	on 8" Drill Co	llars & 5" Drill Pipe.	
SC	Р		CRN	21:30	22:00	.50	334	Latche overpu	d 18.3/4" wellhea II. Rigged up cerr	nd in 30" hous nenting hose.	ing. Confirmed with 50K	
SC	Р		CIC	22:00	22:30	.50	334	Circula	ited 150% casing	capacity.		
SC	Ρ		СМС	22:30	24:00	1.50	334	Pumpe 3000ps plug sh 95bbls slurry. sheare 109bbl Bled of	ed 10bbls seawate si. Dropped ball & neared with 290ps of 12.5ppg lead s Dropped dart & d d with 2400psi af s seawater - 50% ff & checked for b	er ahead. Pre pumped 10b si after pumpi slurry followe lisplaced casi fter pumping 4 shoetrack vo packflow. Cen	ssure tested cement lines to bbls seawater behind. Bottom ng 1.5bbls. Mixed & pumped d by 100bbls of 15.9ppg tail ng with seawater. Top plug bbls. Displaced casing with blume. Plug did not bump. hent in place at 23:49hrs.	

### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jun 22, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
SC	Р		CMC	00:00	01:30	1.50	334	Released setting tool. Pulled out & laid down setting tool.
SC	Р		CMC	01:30	02:00	.50	334	Laid down cement head.
SH	Ρ		ХТ	02:00	05:30	3.50	334	Rigged up to run subsea tree. Moved rig 10m off location. Made up running tool to tree & installed umbilical. Attached guide wires & lowered tree through moonpool.
SH	Р		XT	05:30	06:00	.50	334	Ran tree through splash zone. Positioned rig over location.

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0

Phase Analysis	Phase	hre St	tart On	Finish	On C	um Hre		Min Depth	Max Denth		
CONDUCTORS	1 11030	5.5 Jun	20 2002	Jun 20	2002	24 0	1 00	112 (	112 0		
SURFACE HOLE	1	5.0 Jun	21, 2002	Jun 21, 2	2002	39.0	1.63	112.0	334.0		
SURFACE CASING		9.0 Jun	21, 2002	Jun 21, 2	2002	48.0	2.00	334.0	334.0		
00:00 TO 24:00 HRS ON : Jur	21. 20	02				•	•				
Comments	,	Recon	nmendati	ions			Rig Requ	uirements			
Final Rig Position: Latitude 38											
Degrees 01 Minutes 39.95											
Seconds South. Longitude 148											
Seconds East Final position is											
1.60m on a bearing of 304											
Degrees True from the intended											
surface location. Final Rig Heading											
260 Degrees True.											
WBM Data COST TODAY : \$10,448	CUM. W	B MUD C	OST: \$15,5	504	C	UM. WBN	M+OBM COS	ST: \$15,504			
Type : VISCOCITY (sec/qt	): 10	0 API FL			CI :			SOLIDS (%	vol) :		
			CAKE		K+C*10	)00 : Col:		H2O (%vol)	:		
FROM . ΡΙΙ ΥΡ (ID100sq.π): TIME · 07:00 GEI 10s/10m/100m		(32nds HTHP	inch) : FL		MBT (n	ob).		SAND :			
WEIGHT (sg) : 1.06 (lb100sq.ft) : 1	12 18 (cm3/30min) : HTHP CAKE PM : PM :										
TEMP (C) : Fann 3/6/100 :		(32nds	inch):		PF :			PHPA (ppb)	:		
COMMENT: Cleaned mud pits in prepartion for n	ext hole s	ection.									
			_								
Bit Data for Bit # 2RR IADC # 1 1	5		Wear	2	01	D WT	L B A E	G C	02 R U TD		
SIZE (") : 17.50			NOZZLE	S Drille	d over th	e last 24	hrs Cal	culated over	the hit run		
MANUFACTURER : SE AVE WOB (k-	lbs) :	10	3 x24	METE	RAGE (n	1) :	223 CUM.	METERAGE	(m) 223		
TYPE: XT1C AVE RPM:		40	X	ON BC	оттом н	IRS :	3.6 CUM	ON BOT. H	RS : 3.6		
SERIAL # : 740844 FLOW (gpIII)	S (nsi) <sup>.</sup>	003 1 410		IADC I	DRILL. H	RS :	5.5 CUM	IADC DRILL	HRS: 5.5		
DEPTH OUT (m RT) · 334 HSI (hp/sqi) :	0. (poi).	0.068	x		_ REVS : m/br):	8	40.5 POP	.IOI. REVS	: 8,640		
							40.3   ROP	(11/11).	40.5		
BHA #2 Length (ft) :219.2						D.C.	(1) ANN. VI	ELOCITY (m	om): 25		
WT BLW JAR(k-lbs): 30 STRING WT(k-lbs)	s): 2	10 TR	QE MAX (f	t-lbs):	2,000	D.C.	(2) ANN VE	ELOCITY (mp	om): 28		
BHA WT(k-lbs) : PICK UP WT(k-lb SI K OFF WT(k-lb	): 2 ): 2	10   TR 10   TR	QE ON (ft-l	lbs): t-lbs):	1,500	H.W	D.P. ANN V	/ELOCITY (n CITY (mpm)	1pm): 21 · 21		
	2" Cross			Floot Cul	1,000			rilling los 0.	. <u>-</u>		
Collars, Crossover, 15 x He	vi Wate D	vrill Pipe.		, Fillat Sui	U, 3 X 0. I	74 DHII (		nining Jar, 29	0.1/4 DIII		
TOOL DESCRIPTION	HRS	SERIAL	#			CO	MMENT				
9.5/8" PDM   8" RLL	7.5 9 7.5 [	963212 2M1515H	GV								
8" MPT	7.5 I	≺ DM01535ŀ	KF8								
8.25" Drilling Jar	7.5 [	DAH01965	5								
Survey	MD		ICL AZ	CORR.	'V'	DOGLF	G N/S	E/W	TOOL TYPE		
Last Tool Type : Projection	iBRT)   (n	nBRT) D	EG (deg)	AZ	SECT	(deg/	(m)	(m)			
Magnetic Declination : 0.00	254	254 0	226 040		(m)	JUM)	00 0	0 20			
Survey method : Min Curvature	251 280	251 6 280 10	0.30 248. 0.56 243	248.3 243.2	1.8 5.9	3.	90 0. 36 -0.	9 -3.0 9 -6.9	MWD		
	315	314 11	1.75 244.	244.1	12.5	1.	04 -3.	.9 -12.9	MWD		
	334	332 11	1.75 244.	244.1	16.3	0.	00 -5.	.6 -16.4	Projection		

#### DAILY DRILLING REPORT # 2

							-1-									
Bulk Stocks On Rig					╢╴	ע ump	ata Pur	nn Da	nta - las	st 24	hrs		1	Slow F	Pump Dat	a
STOCK TYPE	START	USED	REC'D	<b>STOCK</b>	╗╢Ӷ≉	tYPE			SPM	EFF	Flow	SPP	SPM	SPP	DEPTH	MW
Barite SX	436			436	<u>⊣</u> ⊪	4 Nation		(")	63	(%)	(gpm)	(psi)		(psı)	(mBRI)	(ppg)
Bentonite SX	1304	596	838	1546		2 Nationa	al 1 al 1	6.00 6.00	63	97 97	269	1410				
G+35% SiFl SX	004	'		(	S∥Ľ	3 Nationa	al 1	6.00	63	97	269	1410				
G+BFS+12.25% SiFI SX												-	-	-		
Pot Water M3	98 541	25 265	456	98	3											
Heli-fuel Itr	1845	1202		643	3											
Base Oil M3	361		150		2											
Brine M3	301	'''	150	000												
				I												
Casing																
DIAM. CSG OD S	HOE MD	) л	SH				DT		FIT	1)			COM	MENT		
(µi	ah/Actua	1)	(pia	n/Actuar)	) 225 6	(pm	ACI)	_	(pi/Ac	<u>v</u>	Mixed 8	20000		10 10 5		hurry (
13.3/0 13.3/3		327.1			320.0						followed	by 100	)bbls 1	5.9ppg 1	ail slurry.	siurry
											Displace	ed with	seawat	er to 50	)% shoetra	ack
			<u> </u>								volume.			ump.		]
TYPE				этн С	SG (			GRI		TI	HREAD					
Compron 19 3/4" Wollbood	(m)								e		סדר					
Cameron 10.3/4 vvenneau Crossover	ameron 18.3/4" Wellhead Joint 12.00 rossover 12.27								5		BTC					
16 x Intermediate Joints			190	).79   1	12.41	5 68.	0	K55	5		BTC					
Intermediate Joint			11	.73 1	12.41	2.415 68.0 K55 BTC 2.415 68.0 K55 BTC										
Shoe Joint			12.	.61 1	12.41	5 68.	0	K55	5		BTC					
Personnel : on Site =	97															
JOB TI						NAM	IF					00	NAME	:		#
Drilling Supervisor (snr)				G. Howa	ard					0	MV	~~		-		6
Drilling Supervisor				J. Kenric	ck					Se	ervice Co	mpany	,			30
Sub Sea Engineer				W. Bates P Zehet	s Heitne	٥r					amond ( atering	Offshore	9			53 8
Geologist				R. Tollid	ay						licinig					Ĭ
Geologist				P. Booth	nby											
Safety, Inspections a	nd Dril	ls		s	umi	mary										
Shakara Valumaa ar						-										
SHAKER 1 4 x 100	10 2058	Ses Da	lla								EI	NGINEI	ER G.	Garrick	/R. Grahra	am
SHAKER 2 4 x 100	VOLUN	IE AVAI	LABLE	(bbl) =		0	LOS	SES (	(bbl) =		0 0	OMMEN	NTS			
SHAKER 3 4 x 100	ACTIVE	-		MIXING			DOV			0						
SHAKER 5	RESER	ΚVE		HEAVY			DUN	г. + с IPED	QUIP	0	.00					
						1					I					
Anchore A 1 330			A 2 3	285		Δ3	3	65			۵ 4	385			4 5 27	5
A 6 300	1	,	A7	185		A8	2	245			~ -	505		,	10 21	0
Workboats								l v	Voath	or			Ric	1/502	a Data	
Locatio	n Fuel	Barite	D/wtr	P/wtr C	Cmt	Bent Br	ine		/ISIBIL	GI ITY(nr	m) 1	5	RIS	TENS	(klbs)	0
	(M3)	(sx)	(M3)	(M3) (	(sx)	(sx) (N	13)	v	VIND S	P. (kts	s) 30.	0	VDI	_ (mt)	(100)	1,764
Pacific Conqueror Standl Pacific Sentinel Transi	יכ 220 t 105	0 1190	184 0	137 55	0 0	0 39. 0 87.	75 14	V		)IR (de	eg) 28	0	WA	VES (m	1)	1.8
								F	PRES.(I	mbars	) 101	2	SW	ELL (m	)	1.8
								A	IR TE	MP (C	) 13.	0				



# Productive Time by Op.











# DEPTH @ 24:00 = 334.0m after 2.00 days since spud

### DATE Jun 22, 2002

#### FROM : G. Howard / J. Kenrick TO : C. Allport / S. Crocker

### DAILY DRILLING REPORT # 3

# Patricia-2

Well Data	l	DEPTH (mBRT)	334.0	CUR. HOLE SIZE (")	17.50	AFE COST \$	11,852,851
COUNTRY	AUSTRALI	A   TVD (mBRT)	332.5	CASING OD (")	13.3/8 "	AFE BASIS :	C&S
FIELD	GIPPSLAND SUB-BASI	N PROGRESS (m)		SHOE TVD (mBRT)	326	DAILY COST :	\$357,491.00
DRILL CO. RIG	DIAMOND OFFSHOR OCEAN BOUNT	E DAYS ON WELL Y DAYS +/- CURVE	3.00 -2.20	FIT (sg) LOT (sg)	0.00 0.00	CUM COST :	\$2,404,526.00
RT ABOVE WATER DE RT TO SEA	SL (m) 25. PTH (m) LAT 52. BED (m) 77.	0 CURRENT OP @ 060 5 PLANNED OP. 5	0 Running v Run in hol	vear bushing. le & drill shoetrack. Perf	orm FIT. D	rill build up sectior	n to section TD.

#### Summary of period 0000 to 2400 hrs

Ran & landed subsea Xmas Tree. Pressure tested to 3000psi. Ran BOP, LMRP & marine riser. Landed BOP & confirmed latched with 50K overpull.

#### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jun 22, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
SC	Р		СМС	00:00	01:30	1.50	334	Released setting tool. Pulled out & laid down setting tool.
SC	Р		СМС	01:30	02:00	.50	334	Laid down cement head.
SC	Ρ		ХТ	02:00	05:30	3.50	334	Rigged up to run subsea tree. Moved rig 10m off location. Made up running tool to tree & installed umbilical. Attached guide wires & lowered tree through moonpool.
SC	Р		ХT	05:30	07:00	1.50	334	Ran tree through splash zone. Positioned rig over location.
SC	Р		ХТ	07:00	08:00	1.00	334	Lowered tree over 18.3/4" wellhead. Latched tree & confirmed with 50K overpull.
SC	Р		ХТ	08:00	08:30	.50	334	Pressure tested AX gasket to 3000psi for 10 minutes against running tool & casing.
SC	Р		ХТ	08:30	11:00	2.50	334	Released running tool. Pulled out running tool & control line umbilical.
SC	Р		RR1	11:00	12:00	1.00	334	Rigged up to run marine riser.
SC	Р		RR1	12:00	14:00	2.00	334	Picked up & racked back riser.
SC	Р		BOP	14:00	15:30	1.50	334	Positioned BOP & LMRP over moonpool. Nippled up to riser & moved rig 15m off location.
SC	Р		BOP	15:30	17:00	1.50	334	Function tested BOP & related equipment.
SC	Р		RR1	17:00	17:30	.50	334	Ran BOP to splash zone.
SC	Р		PT	17:30	18:00	.50	334	Pressure tested choke & kill lines to 200psi/5000psi for 10 minutes.
SC	Р		RR1	18:00	20:30	2.50	334	Picked up slip & landing joints. Installed goosenecks.
SC	Р		PT	20:30	21:00	.50	334	Pressure tested goosenecks on choke & kill lines to 200psi/5000psi for 10 minutes.
SC	Р		RR1	21:00	23:30	2.50	334	Hooked up riser tensioner lines to slip joint.
SC	Ρ		BOP	23:30	24:00	.50	334	Landed & latched BOP. Confirmed with 50K overpull.

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jun 23, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
SC	Ρ		BOP	00:00	00:30	.50	334	Pressure tested connector to 500psi/3000psi for 10 minutes against shear rams & casing.
SC	Р		RR1	00:30	02:00	1.50	334	Nippled down & laid down landing joint.
SC	Р		RR1	02:00	02:30	.50	334	Installed & latched diverter insert. Confirmed with 20K overpull.
SC	Р		RR1	02:30	03:30	1.00	334	Rigged down riser handling equipment.
SC	Р		ΗT	03:30	04:00	.50	334	Made up plug dropping cement head & racked back.
SC	Р		ΗT	04:00	05:00	1.00	334	Made up 9.5/8" running tool & wiper plug crossover.
SC	Р		ΗT	05:00	06:00	1.00	334	Ran & set wear bushing.

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0

Phase Ana	lvsis		I	Phase hrs	St	art (	)n	Finis	h On	С	um Hrs	Cum	Davs	Min Depth	Ma	Denth
SURFACE CASING	.,			33.0	Jun	21, 2	2002	Jun 22	, 2002		72.0		3.00	334	.0	334.0
WRM Data COST T		\$36 77 <sup>.</sup>	1 C			OST	· \$52.2	75		CI	IM WRI	M+OBI		T: \$52 275	-	
Type :         KCL/PHPA           FROM :         Pit           TIME :         20:00           WEIGHT (sg) :         1.03           TEMP (C) :         COMMENT:	VISCC PV (c YP (lb GEL10 (lb1009 Fann 3 rength b	DCITY (s ps): 100sq.ft 0s/10m/1 sq.ft) : 3/6/100 : ase muc	ec/qt) : :): 00m 20 24 I in activ	100 22 53 28 28 53 re pits. KC	API FL (cm3/3 FIL I EF (32nds HTHPI (cm3/3 HTHP (32nds C will b	UID 0mir CAK inch EL 0min CAK inch	LOSS 1) : KE ) : E 1) : Ided wr	nen vess	CI : K+C HAI MB PM PF sel arriv	C*10 RD/( T (pj : : ves.	000 : Ca : pb) :			SOLIDS (% H2O (%vol OIL (%vol) SAND : PH : PHPA (ppt	%vol) : ) : : )) :	
								<b>—</b>			- 10	. 1	-			
Bit Data for Bit # . IAE SIZE (") : MANUFACTURER : TYPE : SERIAL # : DEPTH IN (m RT) : DEPTH OUT (m RT) :	DC #	AVE WC AVE RPI FLOW (c PUMP P HSI (hp/s	0B (k-lbs M : gpm) : RESS. ( sqi) :	;) : (psi):	0.000	NC	Vear SZLES X X X X X X	Dril MET ON E IADC TOT, ROP	led ove ERAGI BOTTC C DRILI AL RE <sup>V</sup>	er the E (m DM H L. HI VS :	D e last 24 n) : IRS : RS :	L hrs .0 .0 0	E CUM.N CUM. CUM.I CUM.T ROP (1	G METERAG ON BOT. H ADC DRIL TOT. REV m/hr):	02 r the bir E (m) HRS : L HRS: S :	R 1 run 0 .0 .0 0
BHA #. Length ( WT BLW JAR(k-lbs): BHA WT(k-lbs) : BHA DESCRIPTION :	( <b>ft) :</b>   STR   PIC   SLK	RING WT K UP W COFF W	(k-lbs) : Τ(k-lbs) Γ(k-lbs) :	:	TR   TR   TR	QE I QE ( QE (	MAX (ft ON (ft-II OFF (ft-	-lbs): os): ·lbs):			D.C D.C H.W D.P	. (1) AI . (2) AI /.D.P. / . ANN	NN. VE NN VEL ANN VE VELOC	LOCITY (r _OCITY (m ELOCITY ( CITY (mpm	npm): pm): mpm): ) :	0 0 0
TOOL DESCR	IPTION		F	IRS S	ERIAL	#					CO	MMEN	NT .			
Survey Last Tool Type : Magnetic Declination : Survey method : Mir	Proj n Curva	iection 0.00 ature	MD (mBR	251 22 280 22 315 3334 3	D IN RT) D 251 6 280 10 314 11 332 11	ICL EG 0.36 0.56 1.75 1.75	AZ (deg) 248. 243. 244. 244. 244.	CORR AZ (deg) 248.3 243.2 244.7 244.7	. 'V SEC (n 3 2 1 1 1 1	CT 1) 1.8 5.9 2.5 6.3	DOGLE (deg/ 30m) 3. 4. 1. 0.	EG 90 36 04 00	N/S (m) -0.9 -3.9 -5.6	E/W (m) -3.0 -6.9 -12.9 -16.4	TOOL MWD MWD MWD Projec	. TYPE
					Dun	n F	Jata									
BUIK STOCKS ON RIG						- 4-	Pun	np Data	ı - laşt	24 ľ	ırs			Slow Pur	np Dat	a
STOCK TYPE Barite SX Bentonite SX G-neat SX C+25% CEL	START 436 1546 1685	USED 836	REC'D	STOCK 436 1546 849	# 1 N 2 N 3 N	TYF latior latior latior	PE I nal 1 nal 1 nal 1	NR 5 (") 6.00 6.00 6.00	SPM E	97 97 97	Flow (gpm)	SPP (psi)	SPM	SPP D (psi) (r	EPTH nBRT)	MW (ppg)
G+35% SiFISXG+BFS+12.25% SiFISXPot WaterM3Drill WaterM3Heli-fuelItrBase OilM3Rig FuelM3BrineM3	98 732 643 500	27 148 11	27	0 98 584 643 0 489 0				<u> </u>			<u> </u>		<u> </u>			

Casing												
DIAM.	CSG OD	SHOE MD (plan/Actual)	SH (pla	HOE TVD an/Actual)		LOT (pl/Act)	F (pl/	IT Act)			COMMENT	
13.3/8 "	13.375	32	7.1	3	25.6				Mixe follow Displ volur	d & pumpe ved by 100 aced with ne. Plug di	ed 95bbls 12.5ppg lead bbls 15.9ppg tail slurr seawater to 50% shoe id not bump.	d slurry y. track
		TYPE	LN (	GTH CS m)	SG OD (")	WT lbs/ft	GRD		THRE/	AD		
Cameror Crossove 16 x Inter Float Join Intermed Shoe Joi	n 18.3/4" W er rmediate Jo nt liate Joint int	ellhead Joint Dints	12 12 19 12 12 12 12	2.00         18           2.27         12           0.79         12           2.42         12           1.73         12           2.61         12	8.000 2.415 2.415 2.415 2.415 2.415 2.415 2.415	205.0 68.0 68.0 68.0 68.0 68.0 68.0	X-56 K55 K55 K55 K55 K55		BTC BTC BTC BTC BTC BTC			
Person	nel : on	Site =97										
		JOB TITLE			1	NAME				CO	. NAME	#
Drilling S Drilling S Sub Sea Drilling E Geologis Geologis	Supervisor ( Supervisor Engineer Engineer St	snr)		G. Howar J. Kenricl W. Bates P. Zehetl R. Tollida P. Bootht	rd k eitner ay oy				OMV Service Diamor Caterin	Company Id Offshore g	2	6 30 53 8
Safety,	Inspect	ons and Drills	1	Sı	ummary	/						
Shaker SHAKER SHAKER SHAKER SHAKER SHAKER	<b>rs, Volun</b> 1 4 x 8 2 4 x 8 3 4 x 8 4 4 x 8 5	hes and Losse 4 4 <b>Volume</b> 4 ACTIVE 4 HOLE RESERVI	<b>s Data</b> AVAILABLE E 485	<b>(bbl) =</b> MIXING SLUG HEAVY	48	5 LOS DOW SUR DUM	<b>SES (bbl)</b> 'NHOLE <sup>-</sup> . + EQUI PED	) <b>=</b> IP	<b>0</b> 0.00	ENGINEI COMMEN Mixed po	ER G. Garrick / D. Dix NTS olymers for next hole so	con ection.
Ancho	rs A A	1 350 6 205	A 2 A7	275 210		A 3 1 A8 2	90 05		A 4	390	A 5	150
Workb Pacific C Pacific S	oats Conqueror Centinel	arite D/wtr sx) (M3) 0 184 190 0	P/wtr C (M3) (s 132 55	mt Bent sx) (sx) 0 0 0 0	Brine (M3) 39.75 87.44	Wea VISIE WIND WIND PRES AIR T	ther BILITY( D SP. (I D DIR ( S.(mba FEMP (	(nm) kts) (deg) irs) (C)	12 30.0 260 1018 13.0	Rig / Sea Data RIS.TENS (klbs) VDL (mt) WAVES (m) SWELL (m)	0 1,975 2.4 1.8	















# DEPTH @ 24:00 = 334.0m after 3.00 days since spud

# DATE Jun 23, 2002

#### FROM : G. Howard / J. Kenrick TO : C. Allport / S. Crocker

DAILY DRILLING REPORT # 4

# Patricia-2

### VIC/L21

Well D COUNTI FIELD DRILL C RIG RT ABO WATER RT TO S Summa Pressu Made u 1.73SG	ata RY G: CO. VE SL DEPTI SEABE ATY OF re test p 12.1 3. Drille	IPPSLA DIAMC (m) H (m) L D (m) <b>perioc</b> ed BO //4" BH ed 12.7	AU AND SL DND OF DCEAN .AT <b>1 0000</b> P conr IA. Ra I/4" bu	STRALIA IB-BASIN FSHORE BOUNTY 25.0 52.5 77.5 <b>to 2400</b> nector. La n in hole ild sectio	DEPT TVD ( PROC DAYS DAYS CURF PLAN hrs aid down & driller on.	H (mBR mBRT) GRESS ON WE CON WE E +/- CUF RENT OF NED OF NED OF	(m) LL VE P @ 0600 D P. D g joint & ri loetrack. F	404.0       CUR. HOLE SIZE (")       12.50       AFE COST \$       11,852,851         400.7       CASING OD (")       13.3/8 "       AFE BASIS :       C&S         70.0       SHOE TVD (mBRT)       326       DAILY COST :       \$380,252.00         4.00       FIT (sg)       0.00       CUM COST :       \$2,784,778.00         -2.60       LOT (sg)       0.00       CUM COST :       \$2,784,778.00         brilling 12.1/4" build section.       brill to top of Gurnard. Pull out of hole to run casing         brill to top of Gurnard. Pull out of hole to run casing									
PHSE	CLS	RC				HRS	DEPTH										
SC	P	1.0	BOP	00:00	00:30	.50	334	ACTIVITY DESCRIPTION           34         Pressure tested connector to 500psi/3000psi for 10 minutes									
								against shear rams & casing.									
SC	Р		RR1	00:30	02:00	1.50	334	Nippled down & laid down landing joint.									
SC	Р		RR1	02:00	02:30	.50	334	Installed & latched diverter insert. Confirmed with 20K overpull.									
SC	Р		RR1	02:30	03:30	1.00	334	Rigged down riser handling equipment.									
SC	P		HT	03:30	04:00	.50	334	Made up plug dropping cement head & racked back.									
SC	P		HT	04:00	05:00	1.00	334	Made up 9.5/8" running tool & wiper plug crossover.									
SC	P		HT	05:00	05:30	.50	334	Made up wear bushing running tool & wear bushing.									
SC	Р		HT	05:30	06:30	1.00	334	Ran in hole & set wear bushing.									
SC	P		HI	06:30	07:00	.50	334	Pulled out of hole & laid down setting tool.									
SC	P		HBHA	07:00	08:00	1.00	334	Laid down 17.1/2" BHA.									
IH1	Р		−BH∕	08:00	10:00	2.00	334	Picked up & made up 8" Mud Motor & MWD. Made up 12.1/4" bit. Confidence tested MWD & racked back assembly.									
IH1	Р		RS	10:00	10:30	.50	334	Serviced TDS & related equipment.									
IH1	Р		TI	10:30	11:00	.50	334	Held safety meeting prior to drilling ahead.									
IH1	Р		TI	11:00	12:00	1.00	334	Ran in hole with BHA.									
IH1	Р		BOP	12:00	12:30	.50	334	Closed diverter. Flushed diverter lines & checked diverter system.									
IH1	Р		TI	12:30	13:30	1.00	334	Ran in hole to 200m.									
IH1	Ρ		BOP	13:30	14:00	.50	334	Closed upper annular preventer. Pressure tested LMRP connector to 2500psi for 10 minutes.									
IH1	Р		TI	14:00	14:30	.50	334	Ran in hole to top of cement at 300m.									
IH1	Ρ		DC	14:30	16:30	2.00	334	4 Drilled cement plugs & shoetrack. Cleaned out pocket cement to 334m.									
IH1	Ρ		CMD	16:30	17:30	1.00	337	Drilled 12.1/4" hole from 334m to 337m. Displaced well hole to 1.06 SG KCL/PHPA mud. Pulled back to shoe & circulated to balanced mud.									
IH1	Р		LOT	17:30	18:30	1.00	337	Performed FIT to an EMW of 1.73SG.									
IH1	Ρ		DA	18:30	24:00	5.50	404	Drilled 12.1/4" hole from 337m to 404m. (400.73m TVD)									

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jun 24, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH			ACT	IVITY D	ESC	RIPT	ION				
IH1	Р		DA	00:00	06:00	6.00	497	Drilled 12	.1/4" ho	ole from	n 404m to	497n	n. ( <mark>49</mark>	0.15n	n T\	VD)		
							.						_		_		 _	

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0

Phase Analysi	s	Phas	e hrs	Start	On	Finish	On (	Cum Hrs	Cum D	ays	Min Depth	Max	Depth
SURFACE CASING			41.0	Jun 21	, 2002	Jun 23,	2002	80.0	;	3.33	334.	0	334.0
INTERMEDIATE HOLE (1)			16.0	Jun 23	, 2002	Jun 23,	2002	96.0	4	4.00	334.	0	404.0
WBM Data COST TOD	AY: \$19,249	CUM.	WB MU	JD COS	ST: \$71,5	24	C	UM. WBI	M+OBN	1 COS	T: \$71,524		
Type : V	ISCOCITY (sec/	qt):	55 A	PI FLUI	D LOSS		CI :		42,0	00 5	SOLIDS (%	vol) :	2.5
KCL/PHPA P	V (cps):	.,	10 (C	:m3/30m	nin): :AK⊢	6	K+C*1	000 :	280	00   1	12O (%vol)	:	97.5
FROM : Pit Y	P (lb100sq.ft):		20 (3	2nds in	ch):	1	HARD	/Ca :	1,2	00 0	DIL (%vol)		0
TIME: 22:30 G WEIGHT (sg): 1.06 (II	EL10s/10m/100r 0100sg ft)	m 8 10	3 (C	m3/30m	iin) :		MBI (	opb) :	1	1.0 3 3 F	SAND: DH·		90
TEMP (C) : 23 Fa	ann 3/6/100 :	7 9	19 (3	THP CA	KÉ		PF:			.3 1 .2 F	PHPA (ppb	):	1.0
COMMENT: Diluted premix &	displaced hole to	mud. Bui	ilt reser	rve for d	lilution if	needed.				1			
	<b>P</b>												
Bit Data for Bit # 3 IADC	#137	М			Wear	I	01	D	L	В	G (	02	R
SIZE (") : 12.5	0				OZZLE	S Drille	d over th	ne last 24	hrs	Calo		tho hit	rup
MANUFACTURER : Ree	d AVE WOB (	k-lbs) :		10	3 <b>x</b> 15	METE	RAGE (I	m) :	70 0		IFTERAGE	(m)	70
TYPE : MHT 13G	C AVE RPM :		1	200	1 <b>x</b> 24	ON BO	оттом	, HRS :	3.9	CUM. (	ON BOT. H	RS :	3.9
SERIAL # : NL500	7 FLOW (gpm	1): CC (mail):	1	859	X	IADC	DRILL. H	HRS :	6.5	CUM.IA	ADC DRILL	. HRS:	6.5
DEPTH IN (m RT): 33	4 PUMP PRE	55. (psi).	1,4	313	x	TOTA	L REVS	: 46	6,800	CUM.1	TOT. REVS	: 4	46,800
			0.		^	ROP (	m/nr):		10.8	ROP (r	n/hr):		10.8
BHA #3 Length (ft) WT BLW JAR(k-lbs): 15	:88.1 STRING WT(k-I	bs):	190	TRQE	E MAX (fi	t-lbs):	2,000	D.C D.C	. (1) AN . (2) AN	N. VEI N VEL	LOCITY (m .OCITY (m	pm): om):	0 0
BHA WT(k-lbs) : 89	PICK UP WT(k	-lbs) :	190	TRQE	ON (ft-I	bs):	3,000	H.W	/.D.P. A	NN VE	LOCITY (r	npm):	0
I	SLK OFF WI(K-	ibs) :	190	TRQE	E OFF (ft	-lbs):	1,500	D.P	. ANN V	ELOC	ITY (mpm)	:	0
BHA DESCRIPTION : 12.1/4" B Pipe.	it, 8" Motor, 8 " F	RLL, 8" MF	PT, Floa	at Sub,	Crossov	er, 3 x 5"	Hevi Wa	ate Drill Pi	pe, Drill	ling Ja	r, 3 x Hevi	Wate D	rill
TOOL DESCRIPT	ION	HRS	SE	RIAL #				CO	MMEN	Т			
8" Mud Motor		6.5	80005	52									
8" MPT		6.5	DM15	1535KF8	3								
6.1/2" Drilling Jar		6.5	MHA	00211									
Survov	Г		3.0			0000	n <i>a</i>	DOOL			=	TOOL	T) (DE
Last Tool Type :		mBRT)	(mBRT	T) DEG	G (deg)	AZ	SECT	(deg/		v/S (m)	E/VV (m)	TOOL	IYPE
Magnetic Declination ·						(deg)	(m)	30m)	)				
Survey method · Min C		382 412	38 40	0 13.4	4 229. 5 228	229.9 228 7	26.6 33.7	6 1. 7 1	99 08	-11.6	-24.8 -30.1	MWD MWD	
		436	43	2 15.7	5 229.	229.4	40.1	I 1.	59	-20.4	-35.0	MWD	
		464	45	8 16.4	5 229.	229.9	47.7	7 0.	79	-25.3	-40.8	MWD	
Bulk Stocks On Rig				Pump	Data	mn Data	leat 24	hre			Slow Due	n Data	
				# T	/PE	LNR SF	PM EFF	Flow	SPP	SPM	SPP D	EPTH	MW
Barite SX	436		436			(")	(%)	(gpm)	(psi)		(psi) (m	BRT)	(ppg)
Bentonite SX 1	546	1	546	1 Nati	onal 1	6.00	67 97	7 286	1420	30	75	337	8.7
G-neat SX	849 1	800 2	649	3 Nati	onal 1	6.00	67 97	7 286	1420	40 50	175	337	8.7 8.7
G+35% SIFI SX G+BFS+12.25% SIFI SX				•		I		- <b>I</b>					
Pot Water M3	98 26	26	98										
Drill Water M3	584 8		576										
Base Oil M3	043 105 3	3000	0										
Rig Fuel M3	489 11		478										
Brine M3		64	64										

Casing																				
DIAM. CS	SG OD	S⊢ (pla	OE ME n/Actua	) I)	SH (pla	HOE T\ an/Actu	/D al)		LOT (pl/Ac	Г ct)		FIT (pl/Act)	)			(	COMME	NT		
13.3/8 " 13	3.375			327.1			325.0	6						Mixe follov Displ volur	d & pum ved by 1 laced wi ne. Plug	iped 00bl th se i did	95bbls 1 ols 15.9p awater t not bum	2.5ppg l ppg tail s o 50% s p.	lead lurry hoel	slurry /. track
	Т	YPE			LN (	GTH m)	CSG (")	OD	WT lbs/ft	:	GRD		TI	HRE	٩D					
Cameron 18. Crossover 16 x Intermet Float Joint Intermediate Shoe Joint	.3/4" We diate Jo Joint	Ilhead J	oint		12 12 19 12 12 12	2.00 2.27 0.79 2.42 1.73 2.61	18.00 12.41 12.41 12.41 12.41 12.41 12.41	)0 15 15 15 15 15	205.0 68.0 68.0 68.0 68.0 68.0	)	X-56 K55 K55 K55 K55 K55	)		BTC BTC BTC BTC BTC BTC						
Personnel	: on S	Site =8	9																	
	,	IOB TIT	LE					١	JAME	Ξ					C	:0. N	IAME			#
Drilling Supe Drilling Supe Drilling Engir Geologist Geologist	ervisor (s ervisor neer	nr)			G. Ho J. Ker P. Zel R. Tol P. Bo	ward hrick hetleith lliday othby	er					ON Se Dia Ca	MV ervice amor aterin	e Compa nd Offsho g	ore				5 23 53 8	
Safety, Ins	spectio	ons ar	d Dri	lls			Sum	mary	/											
Shakers, N SHAKER 1 SHAKER 2 SHAKER 3 SHAKER 4 SHAKER 5	Volum 4 x 84 4 x 84 4 x 84 4 x 84	es and	Ses Da ME AVA E 5 <sup>-</sup> 24 RVE 7 <sup>-</sup>	<b>ILABLE</b> 15 42 10	E <b>(bbl)</b> = MIXIN SLUG HEAV	= IG i Y	146	7     [ [ [	L <b>OSS</b> Down Surf Dumf	S <b>ES (</b> I NHOI :. + E PED	bbi) = LE QUIP	12	<b>12</b> .00	ENGIN COMM	IEER ENT	R G. Gai	rrick / D.	Dix	on	
Anchors	A 1 A 6	330 215			A 2 A7	250 205			A 3 A8	17 20	0 00			A 4	345			A 5	1	55
Workboat	Norkboats Location Fuel Barite (M3) (sx) Pacific Conqueror Transit 205 0 Pacific Sentinel Standby 364 1190					P/wtr (M3) 127 174	Cmt (sx) 0 0	Bent (sx) 0 300	Brin (M3 (	ie 3) 0 0	W V W W Pl	<b>eathe</b> ISIBILI <sup>-</sup> 'IND SF /IND DI RES.(m IR TEM	<b>er</b> TY(nr P. (kts IR (de nbars 1P (C)	n) \$) 9g) )	12 20.0 270 1019 13.0		Rig / S RIS.TE VDL (m WAVES SWELL	<b>Sea Da</b> NS (klbs ht) S (m) . (m)	ata s)	232 2,093 0.9 1.8





**Productive time by Operation** 









# DEPTH @ 24:00 = 404.0m after 4.00 days since spud

### DATE Jun 24, 2002

#### FROM : G. Howard / J. Kenrick TO : C. Allport / S. Crocker

### DAILY DRILLING REPORT # 5 Patricia-2

			-	•								VIC/L21
Well Data COUNTRY FIELD GIPPS DRILL CO. DIAM RIG RT ABOVE SL (m) WATER DEPTH (m) RT TO SEABED (m)	AL LAND SU IOND OF OCEAN	ISTRALIA JB-BASIN FSHORE BOUNTY 25.0 52.5 77.5	DEPT TVD ( PROG DAYS DAYS CURF PLAN	H (mBF mBRT) SRESS ON WE ON WE +/- CUF RENT OF	RT) (m) ELL RVE P @ 0600 P.	708.0 C 646.6 C 304.0 S 5.00 F -2.10 L Drilling 12.1/ Drill to top of	CUR. HOLE CASING OE CHOE TVD FIT (sg) COT (sg) 4" build se Gurnard. I	E SIZE D (") (mBR <sup>-</sup> ction. Pull ou	(") 12. 13.3/8 T) 3; 1. 0.6	50 AFE C 3" AFE B 26 DAILY 73 CUM 50 run casing.	:OST \$ ASIS : / COST : \$: COST : \$3,	11,852,851 C&S 398,290.00 183,068.00
Summary of period Drilled 12.1/4" buil	o <b>d 0000</b> d sectio	to 2400 on from 4	<b>hrs</b> 04m to 7	708m.								
ACTIVITY FOR F	PERIO	0000 H	IRS TO	2400	HRS OF	V Jun 24,	2002					
PHSE CLS RC	; OP	FROM	то	HRS	DEPTH	1		AC	TIVITY D	ESCRIPT	ION	
IH1 P	DA	00:00	24:00	24.00	708	Drilled 12	2.1/4" hole	e from	404m to	708m. (646	6.60m TVD)	
ACTIVITY FOR F	PERIO	) 0000 F		0600		V Jun 25,	2002					
PHSE CLS RC	OP	FROM	то	HRS	DEPTH	4		ACT		ESCRIPTI	ION	
IH1 P	DA	00:00	06:00	6.00	827	Drilled 12	2.1/4" hole	e from	708m to	827m. (696	ôm TVD)	
Pha	ase Analy	/sis		Pha	se hrs	Start On	Finish	On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE					12.0 J	un 20, 2002	Jun 20,	2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD					2.5 J	un 20, 2002	Jun 20,	2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	1				4.0 J	un 20, 2002	Jun 20,	2002	18.5	0.77	0.0	112.0
					5.5 J	un 20, 2002	Jun 20,	2002	24.0	1.00	112.0	112.0
SURFACE CASING					41.0 J	un 21, 2002	Jun 23.	2002	39.0 80.0	3.33	334.0	334.0
INTERMEDIATE HO	LE (1)				40.0 J	un 23, 2002	Jun 24,	2002	120.0	5.00	334.0	708.0
WBM Data	COST TO	DDAY: \$	19,065	CUM	. WB MUC	COST: \$90	,589		CUM. WBI	M+OBM CO	ST: \$90,589	
Type : KCL/ FROM : TIME : WEIGHT (sg) : TEMP (C) : COMMENT: Added	PHPA Pit 22:30 1.08 46	VISCOCI PV (cps) YP (lb10 GEL10s/ (lb100sq. Fann 3/6/ o active s	TY (sec/o : 0sq.ft): 10m/100r ft) : '100 : ystem to	qt): n 11 14 10 12 maintair	54 API 12 (CM) 29 (32m) 3 HTH 3 (CM) 27 (32m) 1 volume. 1	FLUID LOS 3/30min) : ER CAKE ds inch) : IPFL 3/30min) : IP CAKE ids inch) : reated syter	S 5 1	CI : K+C' HAR MBT PM : PF :	*1000 : D/Ca : (ppb) : yplus & Du	35,000 28000 1,180 2.5 .1 .2 otec.	SOLIDS (%vi H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :	ol): 5 92.0 3 0.2 8.7 : .8
Bit Data for Bit	# 3 IAC	<b>)C #</b> 1	3 5	М		Wear	·	01	D	L B	G O2	2 R
SIZE ("):12.50NOZZLESMANUFACTURER:ReedAVE WOB (k-lbs):10TYPE:MHT 13GCAVE RPM:200SERIAL #:NL5007FLOW (gpm):852DEPTH IN (m RT):334PUMP PRESS. (psi):1,730DEPTH OUT (m RT):HSI (hp/sqi):2.643X												
BHA #3 Le WT BLW JAR(k-lbs): BHA WT(k-lbs) :	n <b>gth (1</b> 15 89	<b>t) :88.1</b> STRIN PICK U SLK 01	G WT(k-l JP WT(k- F WT(k-	bs) : Ibs) : Ibs) :	225 230 220	TRQE MAX TRQE ON (fi TRQE OFF (	(ft-lbs): i-lbs): ift-lbs):	2,00 3,00 1,50	D.C 00 D.C 00 H.W 00 D.P	. (1) ANN. V . (2) ANN VE '.D.P. ANN \ . ANN VELC	ELOCITY (mp ELOCITY (mpr /ELOCITY (mp )CITY (mpm) :	m): 70 n): 70 om): 49 49

- - 49

BHA DESCRIPTION : 12.1/4" Bit, 8" Motor, 8 " RLL, 8" MPT, Float Sub, Crossover, 3 x 5" Hevi Wate Drill Pipe, Drilling Jar, 3 x Hevi Wate Drill Pipe.

TOOL DESCRIPTION	HRS	SERIAL #	COMMENT
8" Mud Motor 8" RLL 8" MPT 6.1/2" Drilling Jar	28.7 28.7 28.7 28.7 28.7	800052 DM151HGVR DM01535KF8 MHA00211	

#### DAILY DRILLING REPORT # 5

								,			r			<u> </u>				<u> </u>		
Survey					MI (mPI	2,		), C		AZ		DRR.	'V' ۹۳	, т	DOGLE	G	N/S	E/W	TOOL	TYPE
Last Too	ol Type :			MWD		×1)	(IIIDR		DEG	(ueg)	(d	⊶∠ leg)	SEC (m	יכ ו)	(deg/ 30m)		(m)	(11)		
Magneti	c Declin	ation :		0.00		691	6	37	56.22	230.	2	230.6	17	9.7	1.	68	-109.6	-142.	4 MWD	
Survey	method :	Μ	in Curv	ature		721	6	53	59.58	230.	2	230.7	20	4.5	3.	44	-125.4	-161.	5 MWD	
						750	6	67	64.19	230.		230.2	23 25	0.1	4.	78 78	-141.7	-181.		
						110	0	13	00.00	230.	-	.50.1	25	0.5	۷.	70	-130.5	-201.		
							1	ь.		) at a										
Bulk St	ocks Or	ı Rig							ump L		mn I	Data -	last	24 h	irs		<u> </u>	Slow Pr	ımn Data	•
ST	OCK TYP		START	USED	REC'D	ST	оск	#	TYF	Έ	LNF	R SP	PM E	FF	Flow	SPP	SPM	SPP	DEPTH	MW
Barite		SX	436		-	-	436				(")	_	(	%)	(gpm)	(psi)		(psi)	(mBRT)	(ppg)
Bentonite	9	SX	1546			·	1546	1	Nation	nal 1 nal 1	6.0 6.0		65 65	97 97	278 278	1730	30 40	110 150	652 652	9.0 9.0
G-neat		SX	2649				2649	3	Nation	nal 1	6.0		65	97	278	1730	50	200	652	9.0
G+35% C	12.25% Sil	FI SX					o	<u> </u>												
Pot Wate	er	М3	98	27	27		98													
Drill Wate	er	M3 Itr	576 3538	720			576 2818													
Base Oil		M3		120			0													
Rig Fuel		M3	478	464																
Brine		M3	64	64																
Casing																				
Casing DIAM. CSG OD SHOE MD SHOE TVD LOT FIT COMMENT																				
	000 00	(pl	an/Actua	I)	(pla	n/Ac	tual)		(p	/Act)		(pl/	/Act)				00111			
13.3/8 "	13.375			327.1			32	25.6					1.	73	Mixed &	pumpe	ed 95bb	ls 12.5p	og lead s	lurry
															followed Displace	by 100 d with	)bbls 15 seawat	5.9ppg ta	il slurry. 6 shoetra	ack
														, 	volume.	Plug d	id not b	ump.	o onoone	
		TYPE				зтн	CS	GO	v la	νт	G	חפ		TH						
					(n	n )		(")	lb	s/ft	0	ND								
Cameron	18.3/4" W	ellhead	Joint		12	.00	18	.000	) 20	5.0	X	-56			BTC					
Crossove	er mediate k	vinte			12	.27	12	.415	5 6	8.0   8.0	K K	55			BTC					
Float Joir	nteulate st	51115			12	.42	12	.415	5 6	B.0	K	55			BTC					
Intermed	iate Joint				11	.73	12	.415	5 68	B.0	K	55			BTC					
3100 301	n				12	.01	12	.41.		5.0	I.	.55			ыс					
Person	nel : on	Site =	88																	
		JOB TI	TLE						NA	ME						CO	. NAME	-		#
Drilling S	upervisor (	snr)			T	G. H	loward	d l						ON	/IV				T	6
Drilling S	upervisor					J. Ke	enrick	itno	r					Se	rvice Co	mpany	, 			21
Geologis	olliday	/	I					Ca	tering	IISHOR	5			8						
Geologis	oothby	y							J											
Geologis	t	eech																		
Safety,	Inspecti	ons a	Su	mn	nary															
Shaker	s, Volun	nes ar	nd Loss	ses Da	ita										EN	IGINE	ER G.	Garrick /	D. Dixor	1
SHAKER	1 4 x 1	20				(hhi	\ =		1451	1.00		S (hh'	) =		36 1 00	омме	NTS			
SHAKER	2 4 x 1 3 4 x 8	20 4			TADLE	(ומט) יצוא	, - INC		1401			a ( <b>Iau</b> ) e IOI E	, -			hander	to fine	r shaker	screens	
SHAKER	SHAKER 3 4 x 84 HOLE 400 SLUG									SUF	RF. +	- EQU	IIP	36.	.00 D	rilled, s	teered	& survey	ed 12.1/4	4"
SHAKER	5		RESER	VE 39	4	HEA	VY			DUN	/PE	D			bu	uild up	section	•		
										-					•					

#### DAILY DRILLING REPORT # 5 Patricia-2

### VIC/L21

Anchors	A 1 A 6	325 215			A 2 A7	240 175			A 3 A8	170 205	A	4	350	A 5 1	55
Workboats	L	ocation	Fuel (M3)	Barite (sx)	D/wtr (M3)	P/wtr (M3)	Cmt (sx)	Bent (sx)	Brine (M3)		Weather VISIBILITY(nm)	1	15	Rig / Sea Data RIS.TENS (klbs)	232
Pacific Conquero Pacific Sentinel	r T	Fransit Standb <u>'</u>	205 359	0 1190	184 530	127 173	0 0	0 300	0 0		WIND SP. (kts) WIND DIR (deg) PRES.(mbars) AIR TEMP (C)	12. 30 101 13	.0 )0 14 .0	VDL (mt) WAVES (m) SWELL (m)	2,036 0.6 0.9



# Productive Time by Op.










## DEPTH @ 24:00 = 708.0m after 5.00 days since spud

## DATE Jun 25, 2002

#### FROM : G. Howard / G. Othen TO : C. Allport / S. Crocker

# DAILY DRILLING REPORT # 6

# Patricia-2

## VIC/L21

Well Data COUNTRY FIELD DRILL CO. RIG	AUSTRALIA GIPPSLAND SUB-BASIN DIAMOND OFFSHORE OCEAN BOUNTY	DEPTH (mBRT) TVD (mBRT) PROGRESS (m) DAYS ON WELL DAYS +/- CURVE	884.0 701.2 176.0 6.00 -2.20	CUR. HOLE SIZE (") CASING OD (") SHOE TVD (mBRT) FIT (sg) LOT (sg)	12.50 13.3/8 " 326 1.73 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	11,852,851 C&S \$365,964.00 \$3,549,032.00
RT ABOVE S WATER DEF RT TO SEAR	SL (m) 25.0 PTH (m) LAT 52.5 BED (m) 77.5	CURRENT OP @ 0600 PLANNED OP.	Cementing Test BOP	g 9 5/8" Casing. / Drill 8 1/2" Hole section	n		

E

#### Summary of period 0000 to 2400 hrs

Drilled 12.1/4" build up section from 708m to 884m. Wiper trip, POOH. Rigged up and ran 13 3/8" Casing.

#### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jun 25, 2002

PHSE	CLS	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		DA	00:00	08:45	8.75	884	Drilled 12.1/4" hole from 708m to 884m. (701.17m TVD)
IH1	Р		CMD	08:45	10:00	1.25	884	Circulated and increased mud weight to 1.12 SG.
IH1	Ρ		WΤ	10:00	12:30	2.50	884	Precautionary pumped out F/- 884m to 655m. Continued POOH to shoe, 326m
IH1	Р		WT	12:30	14:00	1.50	884	RIH to bottom @ 884m (No fill hole good)
IH1	Р		CMD	14:00	15:30	1.50	884	Circulated bottoms up, max gas 12%
IH1	Р		то	15:30	18:30	3.00	884	Flow checked, POOH Hole good no drag.
IH1	Р		−BH∕	18:30	19:00	.50	884	Down loaded MWD data.
IH1	Ρ		WH	19:00	20:30	1.50	884	Made up wear bushing running tool and RIH. Jetted well head and recovered wear bushing.
IC1	Р		CRN	20:30	24:00	3.50	884	Held JSA. Rigged up to run Casing. Picked up 9 5/8" Casing shoe track checked floats and ran Casing.

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jun 26, 2002

		-	_					
PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
IC1	Р		CRN	00:00	02:30	2.50	884	Continued to run 9 5/8" Casing.
IC1	Ρ		CRN	02:30	03:30	1.00	884	Made up hanger, rigged down flush mounted slips and laid out Tam packer. Continued running casing on landing string.
IC1	Р		CRN	03:30	04:00	.50	884	Rigged up cement hose and landed Casing.
IC1	Р		CIC	04:00	04:30	.50	884	Circulated casing 1.5 times casing volume.
IC1	Ρ		СМС	04:30	06:00	1.50	884	Held JSA. Cement unit pumped 10 bbls of Sea water and pressure tested lines to 3,000 psi. Pumped 60 bbls of Super Flush followed by 10 bbls of Drill water. Dropped launching ball, sheared plug with 1200 psi.

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERMEDIATE CASING (1)	3.5	Jun 25, 2002	Jun 25, 2002	144.0	6.00	884.0	884.0

WBM Data	COST T	ODAY: \$1,600	CUM.	WB	MUD COST: \$92,189		CUM. WBM+OBM COST: \$92,189						
Type : FROM : TIME : WEIGHT (sg) TEMP (C) :	KCL/PHPA Pit 22:30 : 1.12 49	VISCOCITY (sec/qt) PV (cps): YP (lb100sq.ft): GEL10s/10m/100m (lb100sq.ft) : 13 Fann 3/6/100 : 14	: 18 16	55 14 30 3 28	API FLUID LOSS (cm3/30min) : FIL I ER CAKE (32nds inch) : HTHPFL (cm3/30min) : HTHP CAKE (32nds inch) :	6 1	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :	45,000 28000 1,200 5.0 .0 .1	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :	7 90.0 3 .1 8.7 .8			
COMMENT:	Added premix	to active system to ma	intain	volu	me. Treated sytem with	Glyd	Iril, Polyplus & Du	otec.					

Bit Data for Bit # 3	IADC # 1	3	5 M		\	Near		01		D	L	B	G	02 NO	R
SIZE ("):         MANUFACTURER :         TYPE :       MH"         SERIAL # :       M         DEPTH IN (m RT) :         DEPTH OUT (m RT) :	12.50 Reed 13GC 15007 334 884	AVE WO AVE RPM FLOW (g PUMP PI HSI (hp/s	B (k-lbs) : M : Ipm) : RESS. (psi sqi) :	1 20 84 ): 2,16 2.69	4 00 77 60 93	DZZLES 3 x15 1 x24 X X X X	Drii MET ON I IADO TOT ROF	led ove ERAGE BOTTO C DRILI AL REV	er the E (m PM H L. HI VS :	e last 24 i) : IRS : RS : 127	hrs 176 10.6 7.7 7,200 22.9	Calcu CUM.M CUM. ( CUM.I/ CUM.T ROP (n	ulated o IETERA DN BOT ADC DR OT. RE n/hr):	ver the bi GE (m) : HRS : ILL HRS: VS : 3	t run 550 32.9 38.2 94,800 14.4
BHA #3 Lengt WT BLW JAR(k-lbs): BHA WT(k-lbs) : BHA DESCRIPTION : 12. Pip TOOL DES 8" Mud Motor 8" RLL 8" MPT 6.1/2" Drilling Jar	n (ft) :88 15   ST 89   Pi0 SL 1/4" Bit, 8' e. CRIPTION	3.1 RING WT CK UP WT K OFF WT ' Motor, 8	(k-lbs) : F(k-lbs) : (k-lbs) : RLL, 8" M HRS 28. 28. 28. 28. 28. 28. 28.	225 230 220 IPT, Float SERI 7 800052 7 DM151 7 DM015 7 MHA00	TRQE TRQE Sub, C AL # HGVR 35KF8 211	MAX (ft ON (ft-II OFF (ft- Crossove	-lbs): os): ·lbs): er, 3 x 5	2,0 3,0 1,5 " Hevi '	00 00 00 Wate	D.C. D.C. H.W D.P. e Drill Pi CO	(1) AN (2) AN .D.P. A ANN V pe, Dril	IN. VEL IN VEL NN VE VELOC Illing Jai	OCITY OCITY LOCITY ITY (mp	(mpm): (mpm): / (mpm): m) : evi Wate I	69 69 48 48 Drill
Survey Last Tool Type : Magnetic Declination Survey method : N	: ⁄lin Curv	MWD 0.00 vature	MD (mBRT) 778 807 837 863	TVD (mBRT) 679 689 696 700	INCL DEG 66.86 71.93 78.14 85.19	AZ (deg) 230. 230. 230. 229.	CORR AZ (deg) 230. 230. 230. 229.	. 'V' SEC (m 1 25 28 0 31 8 33	CT 1) 6.3 3.4 2.0 7.9	DOGLE (deg/ 30m) 2. 5. 6. 8.	EG 78 34 31 05	N/S (m) -158.5 -174.6 -192.9 -209.6	E/W (m) -202 -223 -245 -265	.7 MWD .2 MWD .2 MWD .1 MWD	- TYPE
Bulk Steeke On Dia				Р	ump	Data									
Buik Slocks Off Rig						Pun	np Data	ı - laşt	24 h	irs			Slow P	ump Dat	a
STOCK TYPE	START	USED	REC'D ST	оск #	TYI	PE l	NR S	SPM E	FF	Flow	SPP	SPM	SPP	DEPTH	MW
BariteS2BentoniteS2G-neatS2G+35% SiFIS2G+BFS+12.25% SiFIS2Pot WaterMDrill WaterMHeli-fuelIttBase OilMRig FuelMBrineM	<ul> <li>436</li> <li>4546</li> <li>2649</li> <li>2649</li> <li>3</li> <li>98</li> <li>3</li> <li>576</li> <li>2818</li> <li>3</li> <li>464</li> <li>64</li> </ul>	100 25 36 349 16	25	336 1546 2649 0 98 540 2469 0 448 64	Natio Natio Natio	nal 1 nal 1 nal 1	(") 6.00 6.00 6.00	65 65 65	%) 97 97 97	(gpm) 282 282 282 282	(psi) 2160 2160 2160	30 40 50	(psi) 110 150 200	(MBR1) 652 652 652	(ppg) 9.0 9.0 9.0
Casing															
DIAM. CSG OD (	SHOE MI plan/Actua	) al)	SHOE (plan/Ac	TVD ctual)	l (p	LOT bl/Act)	(	FIT pl/Act)				COM	MENT		
13.3/8   13.375		327.1		325.6				1.	73	Mixed & followed Displace volume.	pumpe by 100 d with Plug di	ed 95bb )bbls 15 seawat id not b	ls 12.5p 5.9ppg t er to 50 ump.	opg lead s ail slurry. % shoetra	slurry ack
TYPE	d loint		LNGTH (m)	CSG (")		NT ps/ft	GRD		Tŀ	HREAD					
Crossover 16 x Intermediate Joints Float Joint Intermediate Joint Shoe Joint	u Joint		12.00 12.27 190.79 12.42 11.73 12.61	12.41 12.41 12.41 12.41 12.41 12.41	20       5     6       5     6       5     6       5     6       5     6       5     6       5     6	8.0 8.0 8.0 8.0 8.0 8.0 8.0	A-96 K55 K55 K55 K55 K55			BTC BTC BTC BTC BTC BTC					

Personnel : on Site =89			
JOB TITLE	NAME	CO. NAME	#
Drilling Supervisor (snr) Drilling Supervisor (Nigh Drilling Engineer Geologist Geologist Geologist	G. Howard G. Othen P. Zehetleitner R. Tolliday P. Boothby R. Leech	OMV Service Company Diamond Offshore Catering	6 22 53 8
Safety, Inspections and Drills	Summary		
Shakers, Volumes and Losses DataSHAKER 14 x 120SHAKER 24 x 120SHAKER 34 x 84SHAKER 44 x 84SHAKER 5ACTIVE 541HOLE513RESERVE190	LE (bbl) =1244LOSSES (bbl) =MIXINGDOWNHOLESLUGSURF. + EQUIPHEAVYDUMPED	ENGINEER G. Garrick / D. Dix 216 COMMENTS Raised mud weight to 1.12 SG 112.00 104.00	on
Anchors         A 1         360         A 2           A 6         200         A7	300         A 3         200           155         A8         180	A 4 405 A 5	136
WorkboatsLocationFuelBarite (M3)D/wt (M3)Pacific Sentinel Pacific ConquerorRig On Rou3551190530 184	P/wtr       Cmt       Bent       Brine       Weather         (M3)       (sx)       (sx)       (M3)         168       300       WIND SP.         127       WIND DIR       PRES.(mthered)         AIR TEMP       AIR TEMP	Rig / Sea Data           Y(nm)         12           (kts)         45.0           VDL (mt)           (deg)         260           wars)         1012           P(C)         16.0	232 2,078 3.7 2.1





### Productive time by Operation









## DEPTH @ 24:00 = 884.0m after 6.00 days since spud

## DATE Jun 26, 2002

#### FROM : G. Howard / G.Othen TO : C. Allport / S.Crocker /

DAILY DRILLING REPORT # 7 Patricia-2

## VIC/L21

Well D COUNT FIELD DRILL C RIG RT ABC WATER RT TO S	Wein Data         DEPTH (mBRT)         884.0         CUR. HOLE SIZE (")         12.50         AFE COST \$         11,852,8           COUNTRY         AUSTRALIA         TVD (mBRT)         701.2         CASING OD (")         9.5/8 "         AFE BASIS :         C2           FIELD         GIPPSLAND SUB-BASIN         PROGRESS (m)         0.0         SHOE TVD (mBRT)         700         DAILY COST :         \$690,558.           DRILL CO.         DIAMOND OFFSHORE         DAYS ON WELL         7.00         FIT (sg)         1.40         CUM COST :         \$4,239,590.           DAYS +/- CURVE         -2.30         LOT (sg)         0.00         CUM COST :         \$4,239,590.           WATER DEPTH (m) LAT         52.5         CURRENT OP @ 0600 Drilling 8 1/2" Hole section.         PLANNED OP.         Drill 8 1/2" hole section to TD.         VIII S         VIIII S         VII													
Summa	ary of	period	d 0000 k	to 2400	hrs									
Ran & 1/2" BH	cemer IA. Dri	Ited 9 Iled sh	5/8"ca: loe tra	sing, Tes ck.	sted BO	P, Laid	out 12 1/4	" BHA Picked up 8						
ACTIV	TY F	OR PE		0000 H	IRS TO	2400	HRS ON	Jun 26, 2002						
PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION						
IC1	Ρ		CRN	00:00	02:30	2.50	884	Continued to run 9 5/8" Casing.						
IC1	Р		CRN	02:30	03:30	1.00	884	Made up hanger, rigged down flush mounted slips and laid out Tam packer. Continued running casing on landing string.						
IC1	Р		CRN	03:30	04:00	.50	884	Rigged up cement hose and landed Casing.						
IC1	Р		CIC	04:00	04:30	.50	884	Circulated casing 1.5 times casing volume.						
IC1	Ρ		CMC	04:30	07:00	2.50	884	Held JSA. Cement unit pumped 10 bbls of Sea water and pressure tested lines to 3,000 psi. Pumped 60 bbls of Super Flush followed by 10 bbls of Drill water. Dropped launching ball, sheared plug with 1200 psi. Mixed and pumped 378sx of 'G' grade cement, 78 bbls of cement slurry at 1.89 sg. Dropped top dart and sheared plug with 1800 psi. Displaced with 10 bbls of drill water, and displaced cement with mud. Bumped plug and pressure tested casing to 3000 psi. Floats held.						
IC1	Р		CRN	07:00	08:00	1.00	884	Released and recovered running tool.						
IC1	Р		WH	08:00	10:00	2.00	884	M/up and Ran seal assembly. Tested 200 / 5000 psi 5 / 10 min						
IC1	Р		BOP	10:00	10:30	.50	884	Presure tested BOP. ( LPR & VPR ) Tested 200 / 5000 psi 5/10 min. Valve test on Yelow pod. Function test on blue pod.						
IC1	Р		то	10:30	12:00	1.50	884	POOH with seal assembly running tool.						
IC1	Р		−BHA	12:00	12:30	.50	884	Laid out 12 1/4" BHA						
IC1	Р		BOP	12:30	13:30	1.00	884	Made up and RIH with BOP test tool.						
IC1	Р		BOP	13:30	16:30	3.00	884	Presure tested BOP. (Annulars 200 / 2500 psi - Rams 200 /5000 psi)						
IC1	Р		BOP	16:30	17:00	.50	884	POOH with test tool. (Tested shear rams 3000 psi)						
IC1	Р		HT	17:00	17:30	.50	884	Service broke and laid out cement head.						
IC1	Р		−BH∕	17:30	20:30	3.00	884	Made up 8 1/2" bit, motor and replaced battery in MWD tool. Function tested tool, loaded radioactive source.						
IC1	Р		ΤI	20:30	22:00	1.50	884	84 RIH with 8 1/2" Drilling assembly to 750m (Broke circulation)						
IC1	Р		RS	22:00	22:30	.50	884	Serviced TDS @ 750m						
IC1	Р		TI	22:30	23:30	1.00	884	Continued RIH F /- 750m to 848m (Tagged @ 848m)						
IC1	Р		DFS	23:30	24:00	.50	884	Drilled shoe track (Drilled firm cement through-out)						

## ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jun 27, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
IC1	Р		DFS	00:00	02:15	2.25	884	Continued drilling shoe track and rat hole to 884m
PH	Р		DA	02:15	02:45	.50	887	Drilled F /- 884m to 887m (Displaced well to Flo-Pro mud)
PH	Р		CMD	02:45	03:00	.25	887	Circulated until shakers clean.
PH	Р		LOT	03:00	03:30	.50	887	Pulled into shoe, preformed FIT (Pressured up to 330 psi Mud
РН	Ρ		DA	03:30	06:00	2.50	928	weight 1.07 sg EMW= 1.4 sg) Took SCRs & Choke line friction loss, Run back to bottom. Drilled F /- 887m to 928m. (TVD 701.2m)

### Patricia-2 VIC/L21

Phase Analysis         Phase hrs         Start On         Finish On         Cum Hrs         Cum Bays         Min Depth         Max Depth           RIG MOVE         12.0         Jun 20, 2002         Jun 20, 2002         12.0         0.50         0.0         0.0           RIG-UP/PRESPUD         2.5         Jun 20, 2002         Jun 20, 2002         14.5         0.60         0.0         0.0           CONDUCTOR HOLE         4.0         Jun 20, 2002         Jun 20, 2002         18.5         0.77         0.0         112.0           CONDUCTORS         5.5         Jun 21, 2002         Jun 23, 2002         39.0         1.63         112.0         334.0           SURFACE CASING         41.0         Jun 23, 2002         Jun 25, 2002         140.5         5.85         334.0         884.0           INTERMEDIATE HOLE (1)         60.5         Jun 25, 2002         Jun 26, 2002         140.5         5.85         334.0         884.0           INTERMEDIATE CASING (1)         27.5         Jun 26, 2002         140.5         5.56         334.0         884.0           WBM Data         COST TODAY : \$53.046         CUM. WB MUD COST: \$145.235         CUM. WBMCC a: 32,000         SOLIDS (%vol) : 4         H20 (%vol) : 96.0         H3.70 (%vol) : 96.0         H3.70 (
RIG MOVE       12.0       Jun 20, 2002       Jun 20, 2002       14.5       0.60       0.0       0.0         RIG-UP/PRESPUD       2.5       Jun 20, 2002       Jun 20, 2002       14.5       0.60       0.0       0.0         CONDUCTOR HOLE       4.0       Jun 20, 2002       Jun 20, 2002       14.5       0.60       0.0       0.0         CONDUCTORS       5.5       Jun 20, 2002       Jun 20, 2002       24.0       1.00       112.0       112.0         SURFACE HOLE       15.0       Jun 21, 2002       Jun 23, 2002       80.0       3.33       334.0       334.0         SURFACE CASING (1)       27.5       Jun 25, 2002       Jun 26, 2002       146.0       7.00       884.0       884.0         WBM Data       COST TODAY : \$53,046       CUM. WB MUD COST: \$145,235       CUM. WBM+OBM COST: \$145,235       CUM. WBM+OBM COST: \$145,235         Type :       Filo-Prov       YP (tpilosq,ft):       120       API FLUID LOSS       5       Cl:       32,000       SOLIDS (%vol) :       4         FROM :       Pit       (filo10sq,ft):       17       19       37       (filo1sh(filo1):       11       HARD/Ca ::       350       OLIC (%vol) :       0         FEMP (C):       Fan 3/6/100 :
RIG-UP/PRESPUD       2.5       Jun 20, 2002       Jun 20, 2002       14.5       0.60       0.0       0.0         CONDUCTOR       4.0       Jun 20, 2002       Jun 20, 2002       18.5       0.77       0.0       112.0         SURFACE HOLE       15.0       Jun 20, 2002       Jun 21, 2002       Jun 21, 2002       39.0       1.63       112.0       334.0         SURFACE CASING       41.0       Jun 21, 2002       Jun 22, 2002       140.5       5.85       334.0       334.0         INTERMEDIATE HOLE (1)       60.5       Jun 23, 2002       Jun 26, 2002       140.5       5.85       334.0       884.0         INTERMEDIATE CASING (1)       27.5       Jun 25, 2002       Jun 26, 2002       168.0       7.00       884.0       884.0         VBM Data       COST TODAY : \$\$3,046       CUM. WB MUD COST: \$145,235       CUM. WBM-OBM COST: \$145,235       CUM. WBM-OBM COST: \$145,235         Type :       Flo-Pro       Vi (cps):       9       Fli< Let CAKE
CONDUCTOR       4.0       Jun 20, 2002       Jun 20, 200
SURFACE HOLE       3.3       3.4       3.4       3.4       1.00       112.0       334.0       3
SURFACE CASING       41.0       Jun 21, 2002       Jun 23, 2002       80.0       3.33       334.0       384.0         INTERMEDIATE HOLE (1)       60.5       Jun 23, 2002       Jun 23, 2002       Jun 25, 2002       140.5       5.85       334.0       884.0         INTERMEDIATE CASING (1)       27.5       Jun 25, 2002       Jun 26, 2002       168.0       7.00       884.0       884.0         WBM Data       COST TODAY : \$53,046       CUM. WB MUD COST: \$145,235       CUM. WBM+OBM COST: \$145,235       SOLIDS (%vol) : 4         FROM :       Pit       YP (pb100sq.ft):       37       API FLUID LOSS (m3/30min) :       F1       HARD/Ca ::       350       OLL (%vol) :       4         VEIGHT (sg) :       1.07       (b100sq.ft):       17       19       37       (32nds inch) :       1       HARD/Ca ::       350       OLL (%vol) :       0         VEIGHT (sg) :       1.07       (b100sq.ft):       17       19       37       (32nds inch) :       1       HARD/Ca ::       350       OLL (%vol) :       0       SAND :       0       0       NDL :       NDL :       NDL :       NDL :       NDL :
INTERMEDIATE HOLE (1) INTERMEDIATE CASING (1)       60.5 27.5       Jun 23, 2002 Jun 25, 2002       Jun 26, 2002       140.5 168.0       5.85 7.00       334.0 884.0       884.0         WBM Data       COST TODAY: \$53,046       CUM. WB MUD COST: \$145,235       CUM. WBM+OBM COST: \$145,235         Type : PIO-Pro PV (cps):       VISCOCITY (sec/qt):       120 PV (cps):       API FLUID LOSS (cm3/30min):       CI:       32,000       SOLIDS (%vol):       4 H2O (%vol):       96.0         FROM :       Pit PV (ps):       97       (b100sq.ft):       37       7       120       HTHPFL (32nds inch):       1 HTHPFL       1 HTHPFL       1 HTHPC CAKE       32,000       SOLIDS (%vol):       4 H2O (%vol):       96.0         OBL GET (sg):       1.07       GEL 10s/10m/100m (b100sq.ft):       17       20       FRAM:       1       1       1       NOZ       SAND :       0       0       0       0       0       PH :       8.9       PHPA (ppb):       0       SAND :       0       PH :       8.9       PHPA (ppb):       0
INTERMEDIATE CASING (1)         27.5         Jun 25, 2002         Jun 26, 2002         168.0         7.00         884.0         884.0           WBM Data         COST TODAY : \$53,046         CUM. WB MUD COST: \$145,235         CUM. WBM+OBM COST: \$145,235           Type :         VISCOCITY (sec/qt) :         120         API FLUID LOSS (cm/3/30min) :         CI :         32,000         SOLIDS (%vol) :         4           FROM :         Pit         YP (b100sq.ft) :         37         Classion in (1)         HTHPFL CAKE (32d sinch) :         PH :         8.9
WBM Data         COST TODAY : \$53,046         CUM. WB MUD COST: \$145,235         CUM. WBM+0BM COST: \$145,235           Type :         Flo-Pro         VISCOCITY (sec/qt) :         120         API FLUID LOSS         CI :         32,000         SOLIDS (%vol) :         4           FROM :         Pit         PV (cps):         9         (cm3/30min) :         1         HARD/Ca :         350         OIL (%vol) :         96.0           TIME :         22:30         E10s/100/100m         (b100sq.ft) :         17         70         Grads inch) :         1         HTHPFL         MBT (ppb) :         1.0         0IL (%vol) :         96.0           TEMP (C) :         1.07         Fann 3/6/100 :         17         19         37         Grads inch) :         1         HTHPFL         8.9         PH :         8.9           COMMENT:         Added premix to active system to maintain volume. Treated sytem with Glydril, Polyplus & Duotec.         PH PA (ppb) :         Calculated over the bit run           MANUFACTURER :         Reed         AVE WOB (k-lbs) :         X         X         METERAGE (m) :         Calculated over the bit run           TYPE :         EPH-41-ALKDH         AVE RPM :         FLOW (gpm) :         PUM PRESS. (psi):         X         X         DC DRILL HRS :         OLM. ADC DRILL HR
Type :       VISCOCITY (sec/qt) :       120 PV (cps):       API FLUID LOSS (cm3/30min) :       CI :       32,000       SOLIDS (%vol) :       4 H2O (%vol) :       9 PI (b100sq.ft) :       37 OIL (%vol) :       50 PI (b100sq.ft) :       51 PI (b100sq.ft) :       CI :       32,000       SOLIDS (%vol) :       4 H2O (%vol) :       9 PI (b100sq.ft) :       9 PI (b100sq.ft) :       11 PI (b100sq.ft) :       11 PI (b100sq.ft) :       Not if (%vol) :       4 PI (b100sq.ft) :       9 PI (b100sq.ft) :       9 PI (b100sq.ft) :       SOLIDS (%vol) :       4 H2O (%vol) :       9 PI (b100sq.ft) :       9 PI (b100sq.ft) :       9 PI (b100sq.ft) :       11 PI PI CAKE (32nds inch) :       10 PI :       9 PI :       8 PI :       9 PI :       8 PI :       9 PI :       9 PI :       9 PI :       9 PI :       9 PI PI A (ppb) :        COMMENT:      Added premix to active system to maintain volume.      Treated sytem with Glydril, Polyplus & Duotec.      Dial over the last 24 hrs NZE (") :      Calculated over the bit run CUM.METERAGE (m) :      Calculated over the bit run CUM.METERAGE (m) :      CuM.METERAGE (m) :      CuM.METERAGE (m) :      CuM.ADC DRILL HRS :      O CUM.ON BOT.HRS :      O CUM.ON BOT.HRS :      O CUM.OD DRIL HRS :      O CUM.IOC DRI
Fio-Pro       Fio-Pro       Fio-Pro       Fio-Pro       Fio-Pro       Find (300min):       5         FROM :       Pri       (b) (000, ft):       37       (a) (30min):       5       HARD/Ca :       350       OIL (%vol):       90         TIME :       22:30       (b) (100sq, ft):       17       20       (b) (100sq, ft):       17       10       HARD/Ca :       350       OIL (%vol):       0         MEIGHT (sg) :       1.07       (b) (100sq, ft):       17       19       37       (32nds inch):       1       HARD/Ca :       350       OIL (%vol):       0         TEMP (C) :       Fann 3/6/100 :       17       19       37       (32nds inch):       1       HARD/Ca :       350       PH :       8.9         COMMENT:       Added premix to active system to maintain volume.       Treated sytem with Glydril, Polyplus & Duotec.       PHPA (ppb):       10       PH A (ppb):         SIZE (") :       8.50         MANUFACTURER :       Reed       AVE WOB (k-lbs):       X       X       METERAGE (m):       Culuated over the bit run         SIZE (") :       8.50       AVE RPM :       FLOW (gpm) :       0.000       X       X       Calculated over the bit run         SERIAL #:       M-25484
FROM :       Pit L TRE CAKE       1       HARD/Ca :       350         YP (b100sq.ft):       37       (32nds inch) :       1       HARD/Ca :       350         WEIGHT (sg) :       1.07       GEL10s/10m/100m       (b100sq.ft) :       17 20       MBT (ppb) :       1.0         TEMP (C) :       Fann 3/6/100 :       17 19 37       (32nds inch) :       PF :       .2       PH :       8.9         COMMENT:       Added premix to active system to maintain volume.       Treated sytem with Glydril, Polyplus & Duotec.       PH :       8.9         Bit Data for Bit # 4 IADC #       AVE WOB (k-lbs) :       Calculated over the last 24 hrs       Calculated over the bit run         SERIAL # :       M-25484       AVE RPM :       FLOW (gpm) :       NOZZLES       Drilled over the last 24 hrs       Calculated over the bit run         DEPTH IN (m RT) :       884       AVE RPM :       FLOW (gpm) :       X       X       OD D C MILL HRS :       OUM.ANDET CARE :       OUM.ANDET CARE :       Calculated over the bit run         DEPTH OUT (m RT) :       101 (m/sqi) :       0.000       X       OD O
TIME:       22:30 WEIGHT (sg):       1.07 (b100sq.ft):       17 20 (b100sq.ft):       THPFL (m330min):       MBT (ppb):       1.0 PM:       SAND:       0 PH:       8.9 PH:       8.9 PH:       9 PH:       8.9 PH:       9 PHPA (ppb):         COMMENT:       Added premix to active system to maintain volume.       Treated sytem with Glydril, Polyplus & Duotec.       PH:       8.9 PHPA (ppb):         Bit Data for Bit # 4 IADC #       AVE WOB (k-lbs):       Calculated over the bit run ON BOTTOM HRS:       Calculated over the bit run ON BOTTOM HRS:       CuM.METERAGE (m):       CUM.METERAGE (m) 0 CUM.ON BOT.HRS:       CuM.IADC DRILL HRS:       0 CUM.IADC DRILL HRS:       0 CUM.IADC DRILL HRS:       0 CUM.TOT. REVS:       0 ROP (m/hr):         BHA #4       Length (ft) :1,266.8       D.C. (1) ANN. VELOCITY (mpm):       0<
WEIGHT (sg):       1.07       (lb100sq.ft):       17       20       (cm3/30min):       PM:       .8       PH:       8.9         TEMP (C):       Fann 3/6/100:       17       19       37       (gm3/30min):       PF:       .2       PH:       8.9         COMMENT:       Added premix to active system to maintain volume.       Treated sytem with Glydril, Polyplus & Duotec.       PH:       8.9         Bit Data for Bit # 4 IADC #       Size ("):       8.50       NozzLes       Drilled over the last 24 hrs       Calculated over the bit run         MANUFACTURER:       Reed       AVE WOB (k-lbs):       AVE RPM:       X       METERAGE (m):       Calculated over the bit run         SERIAL #:       M-25484       AVE RPM:       FLOW (gpm):       PUMP PRESS. (psi):       X       X       Calculated over the bit run       CUM. NO BOT. HRS :       0         DEPTH OUT (m RT):       884       FLOW (gpm):       0.000       X       ROP (m/hr):       0       CUM. IADC DRILL HRS:       0         BHA #4       Length (ft) :1,266.8       D.C. (1) ANN. VELOCITY (mpm):       0       0       0       0       0       0
TEMP (C):       Fann 3/6/100 :       17       19       37       (32nds inch):       PF :       .2       PHPA (ppb) :         COMMENT:       Added premix to active system to maintain volume. Treated sytem with Glydril, Polyplus & Duotec.       Image: Comment of the system to maintain volume. Treated sytem with Glydril, Polyplus & Duotec.       Image: Comment of the system to maintain volume. Treated sytem with Glydril, Polyplus & Duotec.         Bit Data for Bit # 4 IADC #       Wear       Image: Comment of the system to maintain volume. Treated sytem with Glydril, Polyplus & Duotec.       Calculated over the bit run         MANUFACTURER :       Reed       AVE WOB (k-lbs) :       X       NOZZLES       Drilled over the last 24 hrs       Calculated over the bit run         SERIAL # :       M-25484       AVE RPM :       FLOW (gpm) :       NOZZLES       Drilled over the last 24 hrs       Calculated over the bit run         DEPTH IN (m RT) :       884       FLOW (gpm) :       FLOW (gpm) :       NAUP PRESS. (psi):       X       X       NAUC DRILL, HRS :       O         HSI (hp/sqi) :       0.000       X       NOOD       X       NOP (m/hr):       NOP (m/hr):       CUM.IADC DRILL HRS: :       O         BHA #4       Length (ft) :1,266.8       D.C. (1) ANN. VELOCITY (mpm):       O       O       D.C. (1) ANN. VELOCITY (mpm):       O
COMMENT: Added premix to active system to maintain volume. Treated sytem with Glydril, Polyplus & Duotec.         Bit Data for Bit # 4 IADC #         Wear       I       O1       D       L       B       G       O2       R         SIZE (") :       8.50         MANUFACTURER :       Reed       AVE WOB (k-lbs) :       AVE WOB (k-lbs) :       NOZZLES       Drilled over the last 24 hrs       Calculated over the bit run         TYPE :       EPH-41-ALKDH       AVE RPM :       AVE RPM :       X       METERAGE (m) :       OUM.METERAGE (m) 0         SERIAL # :       M-25484       FLOW (gpm) :       FLOW (gpm) :       X       NOZZLES       ON BOTTOM HRS :       CUM. ON BOT. HRS :       OUM.IADC DRILL HRS :       OUM.IADC OR (m/hr):       OUM.IADC OR (m/hr):<
Wear       I       O1       D       B       G       O2       R         SIZE ("):       8.50         MANUFACTURER :       Reed       AVE WOB (k-lbs) :       NOZZLES       Drilled over the last 24 hrs       Calculated over the bit run         TYPE :       EPH-41-ALKDH       AVE RPM :       X       Drilled over the last 24 hrs       Calculated over the bit run         SERIAL # :       M-25484       FLOW (gpm) :       X       Diffed over the last 24 hrs       Calculated over the bit run         DEPTH IN (m RT) :       884       FLOW (gpm) :       X       NOZZLES       Drilled over the last 24 hrs       Calculated over the bit run         DEPTH OUT (m RT) :       B84       PUMP PRESS. (psi):       X       NOZZLES       DIME TOTAL REVS :       0         BHA #4       Length (ft) :1,266.8       D.C. (1) ANN. VELOCITY (mpm):       0         DIT DI MULTER       D.C. (1) ANN. VELOCITY (mpm):       0
Bit Data for Bit # 4 IADC #         Wear       I       O1       D       L       B       G       O2       R         SIZE ("):       8.50         MANUFACTURER :       Reed       AVE WOB (k-lbs) :       AVE WOB (k-lbs) :       X       Dirilled over the last 24 hrs       Calculated over the bit run         SERIAL # :       M-25484       AVE RPM :       AVE RPM :       X       METERAGE (m) :       CUM.METERAGE (m) 0         SERIAL # :       M-25484       FLOW (gpm) :       PUMP PRESS. (psi):       X       NOZZLES       DRILL. HRS :       CUM.ON BOT. HRS :       0         DEPTH IN (m RT) :       884       PUMP PRESS. (psi):       X       X       TOTAL REVS :       0       CUM.TOT. REVS :       0         DEPTH OUT (m RT) :       HSI (hp/sqi) :       0.000       X       ROP (m/hr):       ROP (m/hr):       ROP (m/hr):         BHA #4       Length (ft) :1,266.8       D.C. (1) ANN. VELOCITY (mpm):       0         NUT DI UN IN UP INCOMPANE AND
SiZE ("):       8.50         MANUFACTURER :       Reed         TYPE :       EPH-41-ALKDH         SERIAL # :       M-25484         DEPTH IN (m RT) :       884         DEPTH OUT (m RT) :       HSI (hp/sqi) :         BHA #4       Length (ft) :1,266.8
SIZE ( ):8.50NOZZLESDrilled over the last 24 hrsCalculated over the bit runMANUFACTURER :ReedAVE WOB (k-lbs) :XMETERAGE (m) :CUM.METERAGE (m) 0TYPE :EPH-41-ALKDHAVE RPM :XON BOTTOM HRS :CUM.ON BOT. HRS :0SERIAL # :M-25484FLOW (gpm) :XIADC DRILL. HRS :CUM.IADC DRILL HRS :0DEPTH IN (m RT) :884PUMP PRESS. (psi):XTOTAL REVS :0CUM.TOT. REVS :0DEPTH OUT (m RT) :HSI (hp/sqi) :0.000XROP (m/hr):ROP (m/hr):ROP (m/hr):0BHA #4Length (ft) :1,266.8D.C. (1) ANN. VELOCITY (mpm):000000
MANOFACTORER:       AVE WOB (K-IbS):       X       METERAGE (m):       CUM.METERAGE (m) 0         TYPE:       EPH-41-ALKDH       AVE RPM:       X       ON BOTTOM HRS:       CUM. ON BOT. HRS:       0         SERIAL #:       M-25484       FLOW (gpm):       X       IADC DRILL. HRS:       CUM.IADC DRILL HRS:       0         DEPTH IN (m RT):       884       PUMP PRESS. (psi):       X       TOTAL REVS:       0       CUM.TOT. REVS:       0         DEPTH OUT (m RT):       HSI (hp/sqi):       0.000       X       ROP (m/hr):       ROP (m/hr):       ROP (m/hr):       0
MVE RFM.       X       ON BOTTOM HRS :       CUM. ON BOT. HRS :       0         SERIAL # :       M-25484       FLOW (gpm) :       X       IADC DRILL. HRS :       CUM. IADC DRILL HRS :       0         DEPTH IN (m RT) :       884       PUMP PRESS. (psi):       X       TOTAL REVS :       0       CUM.TOT. REVS :       0         DEPTH OUT (m RT) :       HSI (hp/sqi) :       0.000       X       ROP (m/hr):       ROP (m/hr):       ROP (m/hr):
SERIAL # :       M-25484       PLOW (gpin) :       X       IADC DRILL. HRS :       CUM.IADC DRILL HRS: .       0         DEPTH IN (m RT) :       884       PUMP PRESS. (psi):       X       TOTAL REVS :       0       CUM.TOT. REVS :       0         DEPTH OUT (m RT) :       HSI (hp/sqi) :       0.000       X       ROP (m/hr):       ROP (m/hr):       0         BHA #4       Length (ft) :1,266.8       D.C. (1) ANN. VELOCITY (mpm):       0
DEPTH IN (m RT):       884       POMP PRESS. (bs).       X       TOTAL REVS :       0       CUM.TOT. REVS :       0         DEPTH OUT (m RT):       HSI (hp/sqi):       0.000       X       TOTAL REVS :       0       ROP (m/hr):       0       ROP (m/hr):       0         BHA #4       Length (ft) :1,266.8       D.C. (1) ANN. VELOCITY (mpm):       0       0       0       0       0       0       0
BEPTH OUT (m RT):         HSI (hp/sql)         0.000         X         ROP (m/hr):         ROP (m/hr):           BHA #4         Length (ft) :1,266.8         D.C. (1) ANN. VELOCITY (mpm):         0
BHA #4 Length (ft) :1,266.8 D.C. (1) ANN. VELOCITY (mpm): 0
WT BLW JAR(k-lbs):       STRING WT(k-lbs):       IRQE MAX (tt-lbs):       D.C. (2) ANN VELOCITY (mpm):       0         BHA WT(k-lbs):       PICK UP WT(k-lbs):       TRQE ON (tt-lbs):       H.W.D.P. ANN VELOCITY (mpm):       0         SLK 0FF WT(k-lbs):       TRQE OFF (tt-lbs):       D.P. ANN VELOCITY (mpm):       0         BHA DESCRIPTION:       81/2" bit motor MPT MWD pulser float sub 3xHWDP iar 3xHWDP 93, Joints 5" Drill pipe 30xHWDP
Motor
MPT Tool 0.0 DM-01540 M3
RLL Tool 0.0 DM-1537
HNRL Pulser 0.0 DM-01528 K6
Jars 0.0 DAH-2122
Jars 0.0 DAH-2122
Jars     0.0     DAH-2122       Survey     MD     TVD     INCL     AZ     CORR.     'V'     DOGLEG     N/S     E/W     TOOL TYPE
Jars     0.0     DAH-2122       Survey     MD     TVD     INCL     AZ     CORR.     'V'     DOGLEG     N/S     E/W     TOOL TYPE       Last Tool Type :     MWD     (mBRT)     (mBRT)     DEG     (deg)     AZ     SECT     (deg/     (m)     (m)
Jars     0.0     DAH-2122       Survey     MD     TVD     INCL     AZ     CORR.     'V'     DOGLEG     N/S     E/W     TOOL TYPE       Last Tool Type :     MWD     (mBRT)     (mBRT)     DEG     (deg)     AZ     SECT     (deg/     (m)     (m)     (m)
Jars         0.0         DAH-2122           Survey         MD         TVD         INCL         AZ         CORR.         'V'         DOGLEG         N/S         E/W         TOOL TYPE           Last Tool Type :         MWD         MWD         TVD         INCL         AZ         CORR.         'V'         DOGLEG         N/S         E/W         TOOL TYPE           Magnetic Declination :         0.00         778         679         66.86         230.         230.1         256.3         2.78         -158.5         -202.7         MWD           Survey method :         Min Curvature         807         689         71.93         230         230.5         283.4         53.4         -174.6         -223.3         MWD
Jars         0.0         DAH-2122           Survey         MD         TVD         INCL         AZ         CORR.         'V'         DOGLEG         N/S         E/W         TOOL TYPE           Last Tool Type :         MWD         (mBRT)         0.0         DEG         (deg)         AZ         SECT         (deg/         (m)         (m)         TOOL TYPE           Magnetic Declination :         0.00         778         679         66.86         230.         230.1         256.3         2.78         -158.5         -202.7         MWD           Survey method :         Min Curvature         807         689         71.93         230.         230.5         283.4         5.34         -174.6         -223.2         MWD           837         696         78.14         230.         230.0         312.0         6.31         -192.9         -245.2         MWD
Jars         0.0         DAH-2122           Survey         MD         TVD         INCL         AZ         CORR.         'V'         DOGLEG         N/S         E/W         TOOL TYPE           Last Tool Type :         MWD         (mBRT)         0.0         DEG         (deg)         AZ         SECT         (deg/30m)         (m)         (m)         TOOL TYPE           Magnetic Declination :         0.00         778         679         66.86         230.         230.1         256.3         2.78         -158.5         -202.7         MWD           Survey method :         Min Curvature         807         689         71.93         230.         230.5         283.4         5.34         -174.6         -223.2         MWD           837         696         78.14         230.         230.0         312.0         6.31         -192.9         -245.2         MWD           863         700         85.19         229.         229.8         337.9         8.05         -209.6         -265.1         MWD
Jars         0.0         DAH-2122           Survey         MD         TVD         INCL         AZ         CORR.         'V'         DOGLEG         N/S         E/W         TOOL TYPE           Last Tool Type :         MWD         (mBRT)         (mBRT)         DEG         (deg)         AZ         SECT         (deg/         (m)         (m)         TOOL TYPE           Magnetic Declination :         0.00         778         679         66.86         230.         230.1         256.3         2.78         -158.5         -202.7         MWD           807         689         71.93         230.         230.5         283.4         5.34         -174.6         -223.2         MWD           837         696         78.14         230.         230.0         312.0         6.31         -192.9         -245.2         MWD           863         700         85.19         229.         229.8         337.9         8.05         -209.6         -265.1         MWD
Jars         0.0         DAH-2122           Survey         MD         TVD         INCL         AZ         CORR.         'V'         DOGLEG         N/S         E/W         TOOL TYPE           Last Tool Type :         MWD         (mBRT)         TVD         INCL         AZ         SECT         (deg/         (m)         (m)         (m)         TOOL TYPE           Magnetic Declination :         0.00         778         679         66.86         230.         230.1         256.3         2.78         -158.5         -202.7         MWD           807         689         71.93         230.         230.5         283.4         5.34         -174.6         -223.2         MWD           837         696         78.14         230.         230.0         312.0         6.31         -192.9         -245.2         MWD           863         700         85.19         229.         229.8         337.9         8.05         -209.6         -265.1         MWD
Jars       0.0       DAH-2122         Survey       Last Tool Type :       MWD       TVD       INCL       AZ       CORR.       'V'       DOGLEG       N/S       E/W       TOOL TYPE         Magnetic Declination :       0.00       0.00       TVD       INCL       AZ       SECT       0.00       0.00       (mest)       (mest)       TOOL TYPE         Magnetic Declination :       0.00       0.00       778       679       66.86       230.       230.1       256.3       2.78       -158.5       -202.7       MWD         Survey method :       Min Curvature       807       689       71.93       230.       230.5       283.4       5.34       -174.6       -223.2       MWD         837       696       78.14       230.       230.0       312.0       6.31       -192.9       -245.2       MWD         863       700       85.19       229.       229.8       337.9       8.05       -209.6       -265.1       MWD         Pump Data - last 24 hrs       Slow Pump Data
Jars         0.0         DAH-2122           Survey         MWD         TVD         INCL         AZ         CORR.         'V'         DOGLEG         N/S         E/W         TOOL TYPE           Magnetic Declination :         0.00         TVD         INCL         DEG         (deg)         ZECT         Output         (m)         COL TYPE           Survey method :         Min Curvature         778         679         66.86         230.         230.1         256.3         2.78         -158.5         -202.7         MWD           807         689         71.93         230.         230.0         312.0         6.31         -192.9         -245.2         MWD           837         696         78.14         230.         230.0         312.0         6.31         -192.9         -245.2         MWD           863         700         85.19         229.         229.8         337.9         8.05         -209.6         -265.1         MWD
Jars         0.0         DAH-2122           Survey Last Tool Type :         MWD (mBRT)         TVD (mBRT)         INCL DEG         AZ (deg)         CORR. AZ (deg)         V' (deg/ (m)         DOGLEG (deg/ (m)         N/S (m)         E/W (m)         TOOL TYPE           Magnetic Declination :         0.00         778         679         66.86         230.         230.1         256.3         2.78         -158.5         -202.7         MWD           Survey method :         Min Curvature         807         689         71.93         230.         230.5         283.4         5.34         -174.6         -223.2         MWD           803         696         78.14         230.         230.0         312.0         6.31         -192.9         -245.2         MWD           863         700         85.19         229.         229.8         337.9         8.05         -209.6         -265.1         MWD
Jars         0.0         DAH-2122           Survey Last Tool Type :         MWD (mBRT)         TVD (mBRT)         INCL DEG         AZ (deg)         CORR. AZ (deg)         'V' SECT (deg/ (deg)         DOGLEG (deg/ (m)         N/S (m)         E/W (m)         TOOL TYPE           Magnetic Declination :         0.00         778         679         66.86         230.         230.1         256.3         2.78         -158.5         -202.7         MWD           807         689         71.93         230.         230.5         283.4         5.34         -174.6         -223.2         MWD           837         696         78.14         230.         230.0         312.0         6.31         -192.9         -245.2         MWD           863         700         85.19         229.         229.8         337.9         8.05         -209.6         -265.1         MWD           Fump Data           #         TYPE         LNR         SPM         EFF         Flow         SPP         DEPTH         MW           1         National 1         6.00         64         97         282         1350         30         110         652         9.0

Bulk Stocks On F	Rig				
STOCK TYPE		START	USED	REC'D	STOCK
Barite	SX	336			336
Bentonite	SX	1546			1546
G-neat	SX	2649	483		2166
G+35% SiFI	SX				0
G+BFS+12.25% SiFI	SX				0
Pot Water	М3	98	23	23	98
Drill Water	М3	540	233	280	587
Heli-fuel	ltr	2469	587		1882
Base Oil	М3				0
Rig Fuel	М3	448	10		439
Brine	M3	64			64

Casing										
DIAM.	CSG OD	SHOE MD (plan/Actual)	SHOE T\ (plan/Actu	/D Jal)	LOT (pl/Act)		FI (pl/ <i>F</i>	T Act)		COMMENT
9.5/8 "	9.625	872.4		700.0			1.40	1.40	Mixed and pur bbls of slurry ( bumped plug p psi.	nped 378 sx og G cement, 78 @ 1.89 sg. Displaced and pressue tested casing to 3000
		TYPE	LNGTH (m)	CSG OD (")	0 WT Ibs/ft	(	GRD	T	HREAD	
Well head X/over (I Pup Joint Pup Joint 9 5/8" Ca	d NK3SB Pin t t asing	x New Vam Box)	2.35 3.17 3.07 3.07 746.58	8.575 8.575 8.575 8.575 8.575 8.575	47.0 47.0 47.0 47.0 47.0		80 80 80 80 80 80	N Va	lew Vam am x NK3 NK3SB NK3SB NK3SB NK3SB	

Personnel : on Site =93	
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Float Joint

Intermeniate Joint Shoe Joint

JOB TITLE	NAME	CO. NAME	#
Drilling Supervisor (snr)	G. Howard	OMV	7
Drilling Supervisor (Nigh	G. Othen	Service Company	25
Drilling Engineer	P. Zehetleitner	Diamond Offshore	53
Geologist	R. Tolliday	Catering	8
Geologist	P. Boothby		
Geologist	R. Leech		

47.0 47.0 47.0 47.0

L-80 L-80 L-80 NK3SB NK3SB NK3SB

#### Safety, Inspections and Drills

Summary

8.575 8.575 8.575 8.575

13.17 12.04 12.54

Shakers, V	/olun	ne	s an	d Los	ses D	ata									ENGINE	ER D. Dix	on / G Ga	arrick	
SHAKER 1 SHAKER 2 SHAKER 3 SHAKER 4 SHAKER 5	ER 1       120 x 4         ER 2       120 x 4         ER 3       84 x 4         ACTIVE       797         ER 4       84 x 4         HOLE       256         ER 5       RESERVE					G Y	2120 LOSSES (bbl) = DOWNHOLE SURF. + EQUIP DUMPED					<b>190</b> 0.00 190.00	COMME Prepare	NTS d new mud	system.				
Anchors	A A	1 6	315 220			A 2 A7	250 190		A	. 3 \8	17 21	5 0		A 4	350		A 5	15	D
Workboats	S	Lc	ocatio	n Fuel (M3)	Barite (sx)	D/wtr (M3)	P/wtr (M3)	Cmt (sx)	Bent I (sx)	Brir (M:	ne 3)	Wea VISIE	ithei BILIT	• Y(nm)	12	Rig /	Sea Da	<b>ta</b>	232
Pacific Sentin Pacific Conqu	iel Jeror	T A	o Gee t Rig	e 349 446	1190	250 640	165 205		300			WINL WINE PRES AIR 1	D SP. D DIF S.(mt TEMF	(Kts) R (deg) bars) P (C)	45.0 260 1017 15.0	VDL (n WAVE: SWELI	nt) S (m) _ (m)		2,114 3.7 1.8





Productive time by Operation









# DEPTH @ 24:00 = 884.0m after 7.00 days since spud

## DATE Jun 27, 2002

#### FROM : G. Howard / G.Othen TO: C. Allport / S.Crocker /

Patricia-2

DAILY DRILLING REPORT # 8

						0:	C. Allpor	1/ 5.0	JIOCKEI	1					VIC/L21
Well D COUNT FIELD DRILL C RIG	ata RY G	IPPSLA DIAMC C	AU AND SU ND OF DCEAN	ISTRALIA JB-BASIN FSHORE BOUNTY	DEPT TVD ( PROC DAYS DAYS	H (mBR mBRT) GRESS ON WE G +/- CUF	RT) (m) LL RVE	1,36 70 48 8 -2	65.0 C 01.3 C 01.0 S 0.00 F 0.70 L	CUR. HOLE CASING OI GHOE TVD FIT (sg) LOT (sg)	E SIZE D (") (mBR	(") 8.4 9.5/8 T) 7( 1.4 0.1	50 AFE C 3 "   AFE B 00 DAILY 40 CUM 00	OST \$ ASIS : 2 COST : \$3 COST : \$4,6	11,852,851 C&S 387,030.00 526,620.00
RT ABC WATER RT TO S	DEPTI SEABE	(m) H (m) L D (m)	AT.	25.0 52.5 77.5	CURF PLAN	RENT OF	9 @ 0600 P.	Displ Displ	lacing well	ell to Flo-p I to brine a	ro SF bove s	mud back to shoe, POOF	o shoe. I, run compl	etion.	
Summa Drilled	<b>ary of</b> shoe t	<b>perioc</b> rack, p	l 0000 erform	to 2400 ned FIT.	<b>hrs</b> Drilled 8	1/2" He	ole sectio	on.							
ACTIV	TY FO	OR PE	RIO	0000 H	IRS TO	2400	HRS O	N Ju	un 27,	2002					
PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	н			AC	TIVITY D	ESCRIPT	ION	
IC1	Р		DFS	00:00	02:15	2.25	884	Co	ontinue	d drilling	shoe t	track and	rat hole to	884m	
PH	Р		DA	02:15	02:45	.50	887	Dr mi	rilled 8 <sup>·</sup> ud)	1/2" Hole	F /- 8	84m to 88	87m (Displa	iced well to F	lo-Pro
PH	Р		CMD	02:45	03:00	.25	887	Ci	rculate	d until sh	akers	clean.			
PH	Р		LOT	03:00	03:30	.50	887	Pu we	ulled int	to shoe, p 07 sg EN	oreforr /IW= 1	ned FIT( 1.4 sg)	Pressured	up to 330 ps	i Mud
PH	Р		DA	03:30	24:00	20.50	1,365	To F /	ook SCI /- 887m	Rs & Cho n to 1365	ke lin m (TV	e friction le D 701.32r	oss, Run ba n)	ack to botton	n. Drilled
ΑCTIV		OR PE		0000 I		0600	0 HRS ON Jun 28, 2002								
PHSE	CLS	RC	OP	FROM	то	HRS	DEPT	H			ACT		ESCRIPTI	ON	
PH	Р	_	DA	00:00	01:00	1.00	1.385	Continued drilling 8 1/2" Hole F /- 1365m to 1385m (TVD 701.1							701.15m)
PH	P		CMD	01:00	01:30	.50	1,385	i Ci	irculate	d bottom	s up. (	Shakers of	clean)		
PH	Ρ		WT	01:30	06:00	4.50	1,385	Flow checked, Wiper trip back to shoe @ 872m (Hole good no extra drag) Tagged bottom @ 1385m, no fill on botttom. (Hole in good condition)							
		Phas	e Analy	/sis		Pha	se hrs	Star	rt On	Finish	On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MO	VE						12.0 J	Jun 20	), 2002	Jun 20,	2002	12.0	0.50	0.0	0.0
RIG-UP	PRESE						2.5 J	Jun 20	), 2002	Jun 20,	2002	14.5	0.60	0.0	0.0
CONDU	CTOR	HOLE					4.0 J	Jun 20 Jun 20	), 2002 ), 2002	Jun 20,	2002	18.5 24.0	0.77	0.0 112 0	112.0 112.0
SURFA	CE HOL	.E					15.0 J	Jun 21	1, 2002	Jun 21,	2002	39.0	1.63	112.0	334.0
SURFA	CE CAS	SING					41.0 J	Jun 21	1, 2002	Jun 23,	2002	80.0	3.33	334.0	334.0
	IEDIA I IEDIAT	E HOLE E CASI	= (1) NG (1)				60.5 J	Jun 23 Jun 25	3, 2002 5, 2002	Jun 25,	2002	140.5 170 3	5.85 7.09	334.0 884.0	884.0 884.0
PRODU	CTION	HOLE	(1)				21.8 J	Jun 27	7, 2002	Jun 27,	2002	192.0	8.00	887.0	1,365.0
WBM	Data	С	OST TO	DDAY: \$	18,655	CUM	WB MU		ST: \$163	3,890		CUM. WB	M+OBM CO	ST: \$163,890	
Type : FROM : TIME : WEIGHT TEMP (0	- (sg) : ;) :	Flo	- <b>Pro</b> Pit 22:30 1.12	VISCOC PV (cps) YP (lb10 GEL10s/ (lb100sq. Fann 3/6/	TY (sec/ : 0sq.ft): 10m/100i ft) : '100 :	qt): n 15 17 14 16	60 AP 11 (cm FIL 32 (32) HT (cm 411 31 (32)	I FLUID LOSS         Cl :           n3/30min) :         5           I ER CAKE         HARD/Ca :           nds inch) :         1           HPFL         MBT (ppb) :           n3/30min) :         PM :           Prods inch) :         PF :					72,000 400 2.0 .2 .1	SOLIDS (%vd H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :	bl): 8 92.0 0 .25 9.5
COMME	ENT: A	dded p	remix t	o active s	ystem to	maintain	volume.	Treate	ed syten	n with Glyc	ı Iril, Po	lyplus & Du	otec.		
Bit Da	ta for	Bit #	4 IAC	<b>C #</b> 4	17				Wear	.	01	D	L B	G O2	2 R
SIZE ("):         8.50           MANUFACTURER :         Reed           TYPE :         EPH-41-ALKDH           AVE RPM :         13           SERIAL # :         M-25484           FLOW (gpm) :         57           DEPTH IN (m RT) :         884           PUMP PRESS. (psi):         2,09           DEPTH OUT (m RT) :         HSI (hp/sqi) :         8.16						8 30 73 90 61	NOZZLE 1 x14 1 x14 1 x14 X x X	ES Drille METE ON BO IADC TOTA ROP	ed over RAGE OTTOM DRILL L REV (m/hr):	: the last 24 : (m) : M HRS : . HRS : S : 99	hrs Ca 481 CUM 12.8 CUM 21.0 CUM 9,840 CUM 22.9 ROP	Iculated over the Iculated ove	ne bit run m) 481 S : 12.8 IRS: 21.0 99,840 22.9		

### Patricia-2 VIC/L21

BHA #4 Length (fr WT BLW JAR(k-lbs): BHA WT(k-lbs) : BHA DESCRIPTION : 81/2" bi	t) :1,266.8 STRING WT PICK UP WT SLK 0FF WT t,motor,MPT.MV	(k-lbs) : Γ(k-lbs) : Γ(k-lbs) : WD,pulser.	72 87 57 float sub.3	TRQE   TRQE   TRQE   xHWDF	MAX (i ON (ft- OFF (f P,jar.3:	ft-lbs): ·lbs): ft-lbs): xHWDI	P,93 J	8,000 6,000 6,000 loints 5	D.C. D.C. H.W D.P.	. (1) AN . (2) AN . D.P. A . ANN \ . ann \ . ann \	IN. VEL IN VEL INN VE VELOCI	OCITY ( OCITY ( LOCITY ITY (mpr	(mpm): mpm): (mpm): n) :	143 0 91 91
TOOL DESCRIF	PTION	HRS	SERI	AL #	,,,.,,.		,		CO	MMEN	T			
Motor MPT Tool RLL Tool Pulser Jars		0. 0. 0. 0.	0 675188 0 DM-015 0 DM-153 HNRL 0 DM-015 0 DAH-21	540 M3 57 528 K6 22							-			
Survey					47	COP		'\ <i>/</i> '		ic l	NI/S		ТООІ	
Last Tool Type : Magnetic Declination : Survey method : Min	MWD 0.00 Curvature	(mBRT) 1,281 1,310	(mBRT) 701 701	90.98 89.67	(deg) 232. 232.	AZ (deg 232 232	2.7 2.7	SECT (m) 756.1 785.0	(deg/ 30m) 1.	49	(m) -469.3 -486.8	-592. -615.	8 MWD 8 MWD	
		1,368	701	89.82 90.46	233. 234.	23	5.4 4.0	843.0	0. 0.	93	-504.2 -521.5	-639. -662.	4 MWD	
			<u> </u>											
Bulk Stocks On Rig				ump [	Jata Pu	<u>mp</u> Da	<u>ita -</u> la	<u>ıst 2</u> 4 l	<u>nrs</u>		<u> </u>	Slow Pu	ump Data	1
STOCK TYPE     START     USED     REC'D     STOCK     #     TYPE     LNR     SPM     EFF     Flow     SPP     SPP     DEPTH     MW       Barite     SX     336     336     1     National 1     6.00     64     07     296     2000     30     240     4490     0.3														
Barite       SX       336         Bentonite       SX       1546         G-neat       SX       2166         G+35% SiFI       SX         G+BFS+12.25% SiFI       SX														
G+35% SiFI       SX       0 <td< td=""></td<>														
DIAM. CSG OD SHC (plan,	DE MD /Actual)	SHOE (plan/Ac	TVD ctual)	L (p	_OT I/Act)		FIT (pl/Ac	ct)			COM	MENT		
9.5/8 " 9.625	872.4		700.0				1.40	1.40	Mixed ar bbls of s bumped psi.	nd pum lurry @ plug pi	iped 378 ) 1.89 s ressue f	8 sx og ( g. Displa tested ca	G cement aced and asing to 3	., 78 000
TYPE		LNGTH	CSG C		VT	GRI	D	TI	HREAD					
Well head         2.35         8.575         47.0         L-80         New Vam           X/over (NK3SB Pin x New Vam Box)         3.17         8.575         47.0         L-80         Vam x NK3           Pup Joint         3.07         8.575         47.0         L-80         NK3SB           9 Joint         13.17         8.575         47.0         L-80         NK3SB           Intermeniate Joint         12.04         8.575         47.0         L-80         NK3SB           Shoe Joint         12.54         8.575         47.0         L-80         NK3SB														
Personnel : on Site =91														
JOB TITLE NAME CO. NAME #														
Drilling Supervisor (snr) Drilling Supervisor (Nigh Drilling Engineer Geologist Geologist Geologist		G. I G. ( P. 2 R. 1 P. E R. I	Howard Othen Zehetleitne Folliday Boothby Leech	r				OI Se Dia Ca	MV ervice Co amond C atering	mpany Offshore	2			7 26 50 8
Copyright IDS Pty Ltd, OMVofb	May 24th, 200	2	Sumn	nary								Page	Number	: 2

#### VIC/L21

### Safety, Inspections and Drills

Shakers, V SHAKER 1 SHAKER 2 SHAKER 3 SHAKER 4 SHAKER 5	<b>/olur</b> 120 120 84 x 84 x	<b>ne</b> x 4 x4 4 4	s an	d Los Volun Activi Hole Resef	SeS D ME AVA E 4 3 RVE 6	<b>ata</b> IILABLI 43 67 02	<b>E (bbi) =</b> Mixin Slug Heav	G Y	1412		<b>.OSS</b> DOWN SURF DUMP	<b>es (bbi) =</b> Ihole . + equip Ed	<b>1253</b> 0.00 1,253.00	ENGINE COMMEN Prepared	ER D. Dixon / G Garric <b>NTS</b> d clean up pills.	k
Anchors	A A	1 6	320 205			A 2 A7	260 170		A A	. 3 \8	18 20	5 0	A	4 365	A 5 1	55
Workboat	S	Lo	catio	n Fuel (M3)	Barite (sx)	D/wtr (M3)	P/wtr (M3)	Cmt (sx)	Bent I (sx)	Brine (M3	e )	Weath VISIBIL	<b>1er</b> ₋ITY(nm)	12	Rig / Sea Data RIS.TENS (klbs)	232
Pacific Sentir Pacific Conqu	nel Jeror	T A	o Gee t Rig	349 441	1190	250 640	165 200		300		-	WIND S WIND I PRES.I AIR TE	DIR (deg) (mbars) MP (C)	40.0 330 1004 15.0	WAVES (m) SWELL (m)	1,990 1.9 1.8





CASING - CIRCULATE

RIG UP FOR CEMENTING OPS 5. RIG-UP TO RUN CSG 5.

1

0.5

10

20

30

Total time in hrs

40

50

70

60







## DEPTH @ 24:00 = 1,365.0m after 8.00 days since spud

# DATE Jun 28, 2002

### FROM : G. Howard / Zehetleitner

TO: C. Allport / R. King

DAILY DRILLING REPORT # 9 Patricia-2

### VIC/L21

Well Data COUNTRY FIELD DRILL CO. RIG	AUSTRA GIPPSLAND SUB-BA DIAMOND OFFSHC OCEAN BOUN	LIA SIN )RE NTY	DEPTH (mBRT) TVD (mBRT) PROGRESS (m) DAYS ON WELL DAYS +/- CURVE	1,385.0 701.2 20.0 9.00 -2.70	CUR. HOLE SIZE (") CASING OD (") SHOE TVD (mBRT) FIT (sg) LOT (sg)	8.50 9.5/8 " 700 1.40 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	11,852,851 C&S \$1,597,187.00 \$6,223,807.00
RT ABOVE S WATER DEF RT TO SEAR	SL (m) 2 PTH (m) LAT 5 BED (m) 7	25.0 52.5 77.5	CURRENT OP @ 0600 PLANNED OP.	Running p Set liner h completio	production liner on drill pi anger. Release running n.	pe to TD. tool & was	hpipe and pull out	of hole. Run

E

#### Summary of period 0000 to 2400 hrs

Drilled 8 1/2" Hole to TD at 1385m MD. Circulated clean & flow checked. Wiper Trip to 9 5/8" casing shoe. Ran 6 5/8" production liner (sand screens) w/ linerhanger & inner washpipe on

Ran 6 5/8" production liner (sand screens) w/ linerhanger & inner washpipe on drill pipe to 790m.

#### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jun 28, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
PH	Р		DA	00:00	01:00	1.00	1,385	Continued drilling 8 1/2" Hole F /- 1365m to 1385m (TVD 701.15m)
PH	Р		CMD	01:00	01:30	.50	1,385	Circulated bottoms up. (Shakers clean). Flow checked.
PH	Ρ		WT	01:30	06:00	4.50	1,385	Wiper trip back to shoe. Flowcheck at 9 5/8" shoe. RIH to bottom. Broke circulation @ 1370m. Tagged bottom. No fill. Hole in good shape. TQ&Drag@ TD: TQ:7k(10 rpm), 7k(20), 7k(30) - Drag: PU WT 220k SO WT 200k.
PH	Р		CMD	06:00	06:30	.50	1,385	Circulated & spotted Flo Pro SF from 1385 to 720m
PH	Р		то	06:30	09:00	2.50	1,385	Flow checked. Pulled out of hole from 1385 to 760m. Flow check @ 9 5/8" shoe.
PH	Р		CMD	09:00	10:00	1.00	1,385	Pumped pre-wash pill & circulated hole to 1.08 SG KCL Brine.
PH	Р		то	10:00	13:00	3.00	1,385	Continued to pull out of hole. Flow check prior to BOPs, LD jars, removed radioactive source and downloaded FEWD data. LD PDM.
PH	Р		RRC	13:00	14:00	1.00	1,385	Rigged up to run 6.625" production liner (sand screens). Held JSA.
PH	Р		CRN	14:00	19:00	5.00	1,385	RU & ran 6.625" production liner (Excluder 2000 sand screens).
PH	Р		RRC	19:00	20:30	1.50	1,385	PU XOs & 3 jts blank 7" liner. Rigged up to run 2.875" inner wash string. Held JSA. Repaired power tong.
PH	Р		CRN	20:30	24:00	3.50	1,385	Ran 2.875" inner wash string to 490m.

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jun 29, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
PH	Ρ		CRN	00:00	03:30	3.50	1,385	Ran 2.875" inner wash string & landed on no go. Spaced out with required pup joints.
PH	Ρ		CRN	03:30	04:15	.75	1,385	Held JSA. Picked up liner hanger/packer assembly with running tool installed and made up tail pipe to the 2 7/8" inner wash string.
PH	Р		CRN	04:15	04:30	.25	1,385	Ran in hole with liner on 5" drill pipe to 545m.
PH	Р		CMD	04:30	05:00	.50	1,385	Circulated liner volume with un-inhibited clean brine. Checked for leaks.
PH	Р		CRN	05:00	06:00	1.00	1,385	Continued to run in hole liner on drill pipe to 790m.

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERMEDIATE CASING (1)	29.8	Jun 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0
PRODUCTION HOLE (1)	45.8	Jun 27, 2002	Jun 28, 2002	216.0	9.00	887.0	1,385.0

#### DATE Jun 28, 2002

DAILY DRILLING REPORT # 9

#### Patricia-2 VIC/L21

WBM Data COST T	ODAY : \$6,040	CUN	1. WB N	IUD C	OST: \$	169,93	9,930 CUM. WBM+OBM COST: \$169,930							
Type :         Flo Pro           FROM :         Pit           TIME :         15:00           WEIGHT (sg) :         1.08           TEMP (C) :         100	VISCOCITY (: PV (cps): YP (lb100sq.i GEL10s/10m/ (lb100sq.ft) : Fann 3/6/100	sec/qt) : t): 100m		API FL (cm3/3 FIL I EI 32nds HTHP cm3/3 HTHP (32nds	UID LC Omin) : R CAKE inch) : FL Omin) : CAKE inch) :	oss =	CI: K+C*1000: HARD/Ca: MBT (ppb): PM: PF:					SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :		
Bit Data for Bit # 4 IA	DC # 4 1	7			We	ar		01	D	L	В	G	02 MT	R
SIZE ("): MANUFACTURER : F TYPE : EPH-41-ALI SERIAL # : M-25 DEPTH IN (m RT) : DEPTH OUT (m RT) : 7	8.50         AVE W0           KDH         AVE RF           5484         FLOW (           884         PUMP F           1385         HSI (hp)	DB (k-lbs) : PM : gpm) : PRESS. (ps /sqi) :	i): 1 8	10 130 580 1,750 3.161	NOZZ 1 x 1 x 1 x x x	ZLES (14 (14 (14 (14 (14 () () () () () () () () () () () () ()	Drille METE ON BO IADC TOTA ROP (	IL 2 IL RAGE (m OTTOM H DRILL. H L REVS : (m/hr):	e last 24 1) : IRS : RS :	hrs 20 1.0 1.0 7,800 20.0	Calc CUM.M CUM. ( CUM.I CUM.1 ROP (r	LL ulated ove IETERAG ON BOT. I NOT. REV: n/hr):	r the bit E (m) HRS : L HRS: S : 10	run 501 13.8 22.0 07,640 22.8
BHA # 4Length (WT BLW JAR(k-lbs):BHA WT(k-lbs) :16BHA DESCRIPTION :81/2"	(ft) :1,266.8 STRING W PICK UP W SLK 0FF W bit,motor,MPT,N	T(k-lbs) : 'T(k-lbs) : T(k-lbs) : 'WD,pulser	220 220 200 float su	TR TR TR	QE MA QE ON QE OF WDP,ja	X (ft-II I (ft-Ibs F (ft-Ib ar,3xH'	bs): s): ps): WDP,9	7,000 6,000 6,000 3 Joints 5	D.C D.C H.W D.P	. (1) AN . (2) AN /.D.P. A . ANN \ be,30xH	IN. VEI IN VEL IN VE VELOC HWDP	LOCITY (r .OCITY (m ELOCITY ( ITY (mpm	npm): ipm): mpm): ) :	143 0 91 91
TOOL DESCR	BHA DESCRIPTION : 81/2" bit,motor,MPT,MWD,pulser,float sub,3xHWDP,jar,3xHWDP,93 Joints 5" Drill pipe,30xHWDP													
TOOL DESCRIPTIONHRSSERIAL #COMMENTMotor MPT Tool RLL Tool27.0675188 DM-01540 M3 27.0DM-01540 M3 DM-1537 HNRLPulser Jars27.0DM-01528 K6 0.0DM-01528 K6 DM-01528 K6														
Survey		MD	TVE	) IN		AZ (	CORR.	'V'	DOGLE	G	N/S	E/W	TOOL	TYPE
Last Tool Type :	MWD	(mBRT)	(mBR	RT) D	EG (d	leg)	AZ (deg)	SECT	(deg/ 30m)	r	(m)	(m)		
Magnetic Declination : Survey method : Mir	Last Tool Type :MWD(IIIBRT)Magnetic Declination :0.00Survey method :Min Curvature1,3101,3391,368							756.1 785.0 814.0 843.0	1. 1. 0. 0.	49 36 71 93	-469.3 -486.8 -504.2 -521.5	-592.8 -615.8 -639.0 -662.4	MWD MWD MWD MWD	
Bulk Stocks On Ria				Pun	וף Da	ta								
					Pum	Data	- last 24	nrs	600	SDM	Slow Pu	np Data		
STOCK TYPE	START USED	REC'D S		#	ITPE	(	VIK   SH ")	-ivi EFF (%)	(gpm)	(psi)	SPIN	(psi) (r	nBRT)	(ppg)
DanceSXBentoniteSXG-neatSXPot WaterM3Drill WaterM3Heli-fuelItrBase OilM3Rig FuelM3	1546 2166 98 26 587 55 1882 1115 439 8	163	1546 2166 235 532 767 0 431	1 N 2 N 3 N	lational lational lational	1 6 1 6 1 6	5.00 5.00 5.00	64 97 54 97 0 97	286 287 0	2090 2090 2090	30 40 50	240 310 385	1180 1180 1180	9.3 9.3 9.3
Brine M3	64		64											

#### Patricia-2 VIC/L21

Casing	casing															
DIAM.	CSG OD	SH( (plan	DE ME	) II)	SH (pla	HOE T∖ an/Actu	/D al)		LOT (pl/Act)		F (pl/	IT Act)			COMMENT	
9.5/8 "	9.625			872.4			700.0	D			1.40	1.40	) Mixe bbls bum psi.	ed and pun of slurry @ nped plug p	nped 378 sx og G cen 1.89 sg. Displaced a ressue tested casing	nent, 78 and to 3000
		TYPE			LN (	GTH m)	CSG ( (")	DD	WT Ibs/ft	0	GRD		THRE	AD		
Well hea X/over (( Pup Join Pup Join 9 5/8" Ca Float Join Intermed Shoe Joi	d NK3SB Pii t t asing nt nt liate Joint nt	n x New Va	am Bo	<)	2 3 3 74 1 1 1 1 1	.35 .17 .07 .07 6.58 3.17 2.04 2.54	8.57 8.57 8.57 8.57 8.57 8.57 8.57 8.57	5 5 5 5 5 5 5 5 5 5 5 5 5	47.0 47.0 47.0 47.0 47.0 47.0 47.0 47.0		80 80 80 80 80 80 80 80	V	New \ /am x NK3 NK3 NK3 NK3 NK3 NK3	/am NK3 SB SB SB SB SB SB		
Person	Personnel : on Site =92															
	JOB TITLE     NAME     CO. NAME     #													#		
Drilling S Drilling S Drilling E Geologis Geologis Geologis	JOB TITLE Drilling Supervisor (snr) Drilling Supervisor (Nigh Drilling Engineer Geologist Geologist Geologist						G. Howard G. Othen P. Zehetleitner R. Tolliday P. Boothby R. Leech						OMV Servic Diamo Cateri	e Company and Offshor ng	/ e	8 28 48 8
Safety,	Inspect	ions an	d Dri	lls			Sum	mary	/							
Anchors         A 1         320         A 2         260         A 3         185           A 6         205         A7         170         A8         200									)		A 4	365	A 5	155		
Workb	Workboats Location Fuel Barite D/w (M3) (sx) (M3)							Bent (sx)	Brine (M3)		Weather VISIBILIT		eather SIBILITY(nm) 8		Rig / Sea Data RIS.TENS (klbs)	a 232 1 990
Pacific Sentinel To Rig 349 1190 250 Pacific Conqueror At Rig 434 640					250 640	0 165 0 194		300		WIND D WIND D PRES.(I AIR TEM		(kts)         40.0           (deg)         200           hars)         1019           P (C)         13.0		WAVES (m) SWELL (m)	2.4 4.3	





## Productive time by Operation









## DEPTH @ 24:00 = 1,385.0m after 9.00 days since spud

## DATE Jun 29, 2002

#### FROM : G. Howard / Zehetleitner

TO: C. Allport / R. King

DAILY DRILLING REPORT # 10 Patricia-2

### VIC/L21

Well Data COUNTRY FIELD DRILL CO. RIG	AUSTRALI. GIPPSLAND SUB-BASII DIAMOND OFFSHOR OCEAN BOUNT	DEPTH (mBRT) TVD (mBRT) PROGRESS (m) DAYS ON WELL DAYS +/- CURVE	1,385.0 701.2 0.0 10.00 -2.25	CUR. HOLE SIZE (") CASING OD (") SHOE TVD (mBRT) FIT (sg) LOT (sg)	8.50 9.5/8 " 700 1.40 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	11,852,851 C&S \$435,428.00 \$6,659,235.00
RT ABOVE SL (m)25WATER DEPTH (m) LAT52RT TO SEABED (m)77		CURRENT OP @ 0600 PLANNED OP.	) Run comp Land com	letion & space out. pletion and prepare to te	st.		

r

#### Summary of period 0000 to 2400 hrs

Ran production liner (sand screens) w/ packer & hanger on drill pipe to 1380m. Cleaned up open hole. Tried to set packer & hanger without success. Released running tool and POOH. Ran back again w/ tieback-sealing assembly and set packer & hanger mechanically.

#### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jun 29, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
PC	Р		CRN	00:00	03:30	3.50	1,385	Ran 2.875" inner wash string & landed on no go. Spaced out with required pup joints.
PC	Ρ		CRN	03:30	04:15	.75	1,385	Held JSA. Picked up liner hanger/packer assembly with running tool installed and made up tail pipe to the 2 7/8" inner wash string.
PC	Р		CRN	04:15	04:30	.25	1,385	Ran in hole with liner on 5" drill pipe to 545m.
PC	Ρ		CMD	04:30	05:00	.50	1,385	Circulated liner volume with un-inhibited clean brine. Checked for leaks.
PC	Ρ		CRN	05:00	07:30	2.50	1,385	Continued to run in hole. PU stand w/ side entry sub & tagged bottom at 1383.5m. 1.5m fill.
PC	Ρ		CIC	07:30	12:00	4.50	1,385	Pulled back 10m, RU cement hose and circulated in 25 bbls HI-VIS pill, 324 bbl 1.08 SG un-inhibited brine. Pumped & spotted 160 bbls wellzyme across open hole. Pressure tested cement line w/ 5000 psi for 5 min. Dropped ball.
PC	TP	PKR	RPK	12:00	15:00	3.00	1,385	Displaced ball with clear un-inhibited brine. Ball landed with 850 psi after 22.6 bbl. Applied shear pressure of 2500 psi to set SLZXP packer & hanger and held pressure for 10 min. No indication on pick up weight that packer & hanger has been set. Bled off pressure. Tried to pressure test annulus w/ 1500 psi without success. Applied 2600 psi on dp and checked PU weight. No indication for setting. Applied 3800 psi to initiate second shear to pump out ball seat and checked PU weight. No indication. Decided to run to bottom to put string into compression and released running tool by applying 6,000 ft*lbs torque on left-hand turn.
PC	TP	PRF	то	15:30	17:15	1.75	1,385	POOH and laid down running tool. Indications that string was put into compression while applying first shear pressure of 2500 psi due to big heaves accidentaly, which released running tool before packer & hanger could be set.
PC	Р		то	17:15	20:30	3.25	1,385	POOH and laid down 54 jts of 2.875" wash pipe.
PC	TP	PKR	−BHA	20:30	22:00	1.50	1,385	MU tie-back/sealing assembly - XN shoulder plus sealing elements on drill pipe w/ 300m of 5" HWDP's and 2 stands of 8" DC's- to set packer & hanger mechanically.
PC	TP	PKR	TI	22:00	24:00	2.00	1,385	Ran in hole with tie-back/seal assembly to 800m.

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jun 30, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
PC	TP	PKR	TI	00:00	01:00	1.00	1,385	Continued to run in hole to top of PBR.
PC PC	TP TP	PKR	RPK TO	01:00	01:30 03:30	.50 2.00	1,385	Landed out tieback-sealing assembly on PBR, applied 60klbs pushdown weight, rotated 1 turn right and set packer & hanger mechanically. Clear weight indication. Pressure tested annulus w/ 1500 psi. for 10 min. ok. POOH & SI M running string on the way out
СТВ	P		TI	03:30	06:00	2.50	1,385	MU jet & wear bushing retrieving tool. RIH, retrieved wear bushing and jetted out Xmas Tree tubing hanger profile and BOP. POOH and laid down wear bushing.

Dhara Ana				Dia a a la		Oteratio	2		h 0 h			0				Denth
Phase Ana	Phase h	rs	Start	<u>Un</u>	Finis	sh On	Ci	um Hrs	Cum L	Days	Min Dept	n Ma	x Depth			
RIG MOVE									), 2002	2	12.0		0.50	(	0.0	0.0
			2	.5	Jun 20,	2002	Jun 20	), 2002	<u>{</u>	14.5		0.60	(	0.0	0.0	
CONDUCTORS		4 5	5	Jun 20,	2002	Jun 20	), 2002 ) 2002	<u>-</u>	10.5 24 0		1 00	113		112.0		
SURFACE HOLE				15	0	Jun 21	2002	$Jun 2^{\circ}$	, 2002 1 2002	5	39.0		1 63	112		334.0
SURFACE CASING				41	.0	Jun 21.	2002	Jun 2	3. 2002	2	80.0	:	3.33	334	.0	334.0
INTERMEDIATE HOLE (1)				60	.5	Jun 23,	2002	Jun 2	5, 2002	2	140.5	:	5.85	334	.0	884.0
INTERMEDIATE CASING (	1)			29	.8	Jun 25,	2002	Jun 27	7, 2002	2	170.3		7.09	884	.0	884.0
PRODUCTION HOLE (1)				34	.8	Jun 27,	2002	Jun 28	3, 2002	2	205.0		8.54	887	.0	1,385.0
PRODUCTION CSG/LNR(1	)			34	.5	Jun 28,	2002	Jun 29	9, 2002	2	239.5	9	9.98	1,385	5.0	1,385.0
WBM Data COST	TODAY :	\$19,87	1 C	CUM. WE	в МІ	JD COST	: \$189	9,801		CL	JM. WBI	M+OBN	1 COS	T: \$189,80	)1	
Type :	VISCO		ec/at) ·		Δ		0.055								(wol) ·	
51	PV (c	ns) <sup>.</sup>			(c	m3/30mi	n):	,	K+	C*10	00 ·			H2O (%vc	I):	
FROM :		100sa fi	·)·			ILIER CA	AKE		НА	RD/C	Ca:			OIL ( <sup>`</sup> vol	):	
TIME :	GEL 10	)s/10m/1	100m		ΗH	THPFL	·) ·		MB	BT (pr	ob):			SAND :		
WEIGHT (sg) :	(lb100	sq.ft) :			) (C	m3/30mi	ו): רב		PM	1:	,			PH :		
TEMP (C) :	Fann 3	3/6/100 :			(3	32nds incl	N⊑ 1):		PF	:				PHPA (pp	b):	
BHA #4 Length	(ft) :										D.C	. (1) AN	IN. VE		mpm):	0
WT BLW JAR(k-lbs):	STR	RING WT	(k-lbs)	:	TRQE MAX (ft-lbs): D.C. (2) ANN VELOCITY (mpi							npm):	0			
BHA WT(k-lbs) :	PIC	K UP W	T(k-lbs)	:	: TRQE ON (ft-lbs): H.W.D.P. ANN VELOCITY (mpm								(mpm):	0		
	SLK	OFF W	T(k-lbs)	:	IRQE OFF (ft-lbs):   D.P. ANN VELOCITY (mpm) :									ı) :	0	
BHA DESCRIPTION :																
TOOL DESCR	RIPTION		H	IRS SERIAL # COMMENT												
Survey			M	л т	VD	INCL	AZ	CORF	. "V	/'	DOGLE	G	N/S	E/W	TOOL	. TYPE
Last Tool Type :		MWD	(mBF	BRT)   (mE		T) DEG	(deg)	AZ	SE	СТ	(deg/	1	(m)	(m)		
Magnetic Declination		0.00				_		(deg)	(r	n)	30m)	)				
	•	. 0.00	1,	281	70	1 90.98	232	232.	7 7	56.1	1.	49	-469.3	-592.8	MWD	
Survey method : Mi	n Curva	ature	1,	310	70	1 89.67	232	232.		85.0	1.	36	-486.8	-615.8		
			1,	368	70	1 90 46	233	233.	4 0 0 84	43.0	0.	93	-504.2	-6624		
			,		10	1 00.10	201	2011	• •	10.0	0.	00	02110	002.	1	
Bulk Stocks On Big					T	Pump	Data									
Buik Slocks Off Rig			Pu	mp Dat	a - last	: <b>2</b> 4 h	rs			Slow Pu	mp Dat	a				
STOCK TYPE	START	USED	REC'D	STOCK	¶ך	# TY	PE	LNR	SPM	EFF	Flow	SPP	SPM	SPP [	DEPTH	MW
Barite SX	336			336	₅Ш		$\rightarrow$	(")		(%)	(gpm)	(psi)		(psi)   (	mBRT)	(ppg)
Pot Water M3	98	27	27	98	з 🎚	1 Natio	nal 1	6.00	0	97	0	0	30	240	1180	9.3
Drill Water M3	424	111		313	3 📗	∠ Natio	nal 1	6.00	47	97	93	080 0	40 50	310	1180	9.3
Heli-fuel Itr	482	888	2750	2344	ŧ∥Ľ			0.00	<u> </u>	31	0	0	0	1 303	1100	5.5
Rig Fuel M3	418	7		41												
DITTE M3			7													

### DAILY DRILLING REPORT # 10 Patricia-2 VIC/L21

Casing													
DIAM.	CSG OD	SHOE MD (plan/Actual)	S⊦ (pla	IOE TV an/Actua	D al)	L (pl	OT /Act)	F (pl	FIT /Act)		COMMENT		
9.5/8 "	9.625	872.4		700.0				1.40	0 1.40	Mixed and pum bbls of slurry @ bumped plug p psi.	nped 378 sx og G cement, 78 2 1.89 sg. Displaced and pressue tested casing to 3000		
		TYPE	LN (r	GTH n)	CSG O (")	D W	) WT ( lbs/ft			THREAD			
Well hea X/over (I Pup Join Pup Join 9 5/8" Ca Float Join Intermed Shoe Joi	d NK3SB Pin t t assing nt liate Joint int	2 3 3 74 13 12 12	2.35         8.57           3.17         8.57           3.07         8.57           3.07         8.57           746.58         8.57           13.17         8.57           12.04         8.57           12.54         8.57		47 47 47 47 47 47 47 47 47	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	L-80 L-80 L-80 L-80 L-80 L-80 L-80 L-80		New Vam (am x NK3 NK3SB NK3SB NK3SB NK3SB NK3SB NK3SB				
Person	Personnel : on Site =95												
Drilling S Drilling S Drilling E Geologis Geologis Geologis	Gupervisor ( Gupervisor ( Engineer St St St		G. Hov G. Oth P. Zeh R. Toll P. Boo R. Lee	ward nen netleitne liday othby ech	NAI r	ME			CO DMV Service Company Diamond Offshore Catering	. NAME	# 5 34 48 8		
Safety,	Inspecti	ons and Drills			Sumn	nary							
Shaker SHAKER SHAKER SHAKER SHAKER	<b>rs, Volun</b> 1 4x12 2 4x12 3 4x84 4 4x84 5	nes and Losses D 0 Volume AVA ACTIVE 4 HOLE 4 RESERVE 3	<b>ata</b> 03 05 00	( <b>bbl) =</b> MIXIN SLUG HEAV	G Y	1108	LOS: DOW SURF DUM	SES (bbl NHOLE <sup>-</sup> . + EQU PED	I) = IIP 21	ENGINE 212 COMMEI 400 bbls 35 NTU's 2.00 brine.	ER Graeme Garrick NTS of brine was filtered to s for future use as inhit	appx. bited	
Ancho	ARSA	1 320 6 205	A 2 A7	260 170		A AB	3 18 3 2	35 00		A 4 365	A 5 1	155	
Workb Pacific S Pacific C	oats entinel conqueror	D/wtr (M3) 240 640	P/wtr (M3) 545 190	Cmt (sx)	Bent B (sx) (I 300	rine M3)	Wea VISI WINI WIN PRE AIR	a <b>ther</b> BILITY(I D SP. (k D DIR (0 S.(mbai TEMP (1	nm) 10 tts) 35.0 deg) 240 rs) 1023 C) 12.0	Rig / Sea Data RIS.TENS (klbs) VDL (mt) WAVES (m) SWELL (m)	232 1,883 2.4 4.6		















## DEPTH @ 24:00 = 1,385.0m after 10.00 days since spud
### DAILY DRILLING REPORT # 11 Patricia-2

### DATE Jun 30, 2002

#### FROM : G. Howard / Othen TO : C. Allport / R. King

VIC/L21

Well Data COUNTRY FIELD DRILL CO. RIG	AUSTRALIA GIPPSLAND SUB-BASII DIAMOND OFFSHORI OCEAN BOUNT	DEPTH (mBRT) TVD (mBRT) PROGRESS (m) DAYS ON WELL DAYS +/- CURVE	1,385.0 701.2 0.0 11.00 -2.60	CUR. HOLE SIZE (") CASING OD (") SHOE TVD (mBRT) FIT (sg) LOT (sg)	8.50 9.5/8 " 700 1.40 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	11,852,851 C&S \$395,008.00 \$7,054,243.00				
RT ABOVE SL (m)         25.0           WATER DEPTH (m) LAT         52.5           RT TO SEABED (m)         77.5		CURRENT OP @ 0600 PLANNED OP.	CURRENT OP @ 0600 Attempting to land tubing hanger. PLANNED OP. Land tubing hanger and proceed with wire line work. Run coiled tubing and induce well.								

r

#### Summary of period 0000 to 2400 hrs

Ran tie back seal assy on DP, landed out on PBR and mechanically set liner hanger and packer. Ran 5 1/2" NK3SB Tubing and made up tubing hanger. Rigged up Coiled Tubing lifting frame. Made up SSTT on 7" landing joint and landed tie back assy in liner hanger PBR. Prepared to land tubing hanger.

#### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jun 30, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
PC	TP	PKR	ΤI	00:00	01:00	1.00	1,385	Continued to run in hole to top of PBR.
PC	TP	PKR	RPK	01:00	01:30	.50	1,385	Landed out tieback-sealing assembly on PBR, applied 60klbs pushdown weight, rotated 1 turn right and set packer & hanger mechanically. Clear weight indication. Pressure tested annulus w/ 1500 psi. for 10 min. ok.
PC	TP	PKR	то	01:30	03:30	2.00	1,385	POOH & SLM running string on the way out.
СТВ	Ρ		ΗT	03:30	06:00	2.50	1,385	MU jet & wear bushing retrieving tool. RIH, retrieved wear bushing and jetted out Xmas Tree tubing hanger profile and BOP. POOH and laid down wear bushing.
СТВ	Ρ		RTB	06:00	06:30	.50	1,385	Held JSA. PU 7 1/2" seal assembly w/ No-Go & XO to 5 1/2" NK3SB tubing.
СТВ	Р		RTB	06:30	10:30	4.00	1,385	RIH w 5 1/2" NK3SB tubing to 683m.
СТВ	Р		ED	10:30	10:45	.25	1,385	Fire and Abandon Rig Safety Drill.
СТВ	Ρ		RTB	10:45	11:30	.75	1,385	PU & MU TRSCS-safety valve assembly. Installed & pressure tested control line & swage lock to 5,000 psi for 10 min.
СТВ	Ρ		RTB	11:30	12:30	1.00	1,385	Continued to RIH w/ 5 1/2" tubing, making up across coupling control line protectors every connection and mid joint protectors every mid joint.
СТВ	Ρ		RTB	12:30	13:15	.75	1,385	Spaced out tubing w/ pupjoints and stabbed tubing w/ seal assembly 3.5m into upper PBR. (842.9 mRT).
СТВ	Ρ		RTB	13:15	16:30	3.25	1,385	PU & MU tubing hanger. Installed 1/2"x1/4" swage lock fitting to the control line and the tubing hanger. Pressure tested the control line and the swage lock fittings to 5,000 psi for 10 min. ok. MU tubing hanger running tool to the tubing hanger and sub sea test tree. Connected umbilical to the SSTT and the tubing hanger running tool. Pressure tested the umbilical and the control line to the TRSSV with 5,000 psi for 10min. ok.
СТВ	Ρ		RTB	16:30	19:00	2.50	1,385	Made up SSTT on 7" Landing joint, picked up SSLV made up to landing joint. RIH with 4 space out pup joints and 7" landing joint, make up circulating sub and landed tie back assembly in liner hanger PBR with pumps ticking over. Space out tubing hanger. POOH and laid out landing joint.
СТВ	Р		сто	19:00	20:30	1.50	1,385	Held JSA, Rigged up Coil Tubing lift frame
СТВ	Ρ		СТО	20:30	23:00	2.50	1,385	Picked up and made up Flow head, installed coflex hose and cement hose.
СТВ	Р		СТО	23:00	24:00	1.00	1,385	RIH to 3m above land out. Rigged up and prepared flow head to land out.

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 01, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
СТВ	Р		СТО	00:00	01:00	1.00	1,385	Continued to prepare flow head.

#### Patricia-2 VIC/L21

PHSE	CLS	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
СТВ	Ρ		PT	01:00	03:00	2.00	1,385	Pressure tested Lubricator valve 3500 psi, 10 min. Pressure tested flow head and flow line against choke manifold and Sub sea lubricator valve 3500 psi.
СТВ	Р		RU	03:00	04:00	1.00	1,385	Rigged up BOP Lubricator, and installed on flow head.
CTB	Р		CMD	04:00	05:00	1.00	1,385	Circulated 270 bbls of clean filtered inhibited completion brine.
СТВ	Р		PT	05:00	06:00	1.00	1,385	Attempting to land tubing hanger.

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERMEDIATE CASING (1)	29.8	Jun 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0
PRODUCTION HOLE (1)	34.8	Jun 27, 2002	Jun 28, 2002	205.0	8.54	887.0	1,385.0
PRODUCTION CSG/LNR(1)	38.0	Jun 28, 2002	Jun 30, 2002	243.0	10.13	1,385.0	1,385.0
COMPLETION/TIE-BACK	20.5	Jun 30, 2002	Jun 30, 2002	263.5	10.98	1,385.0	1,385.0

WBM Data COST	roday : \$19,871 CUM. WB	MUD COST: \$194,947	CUM. WBM+OBM CC	OST: \$194,947
Type : KCL Brine FROM : TIME : WEIGHT (sg) : 1.08 TEMP (C) :	VISCOCITY (sec/qt) : PV (cps): YP (lb100sq.ft): GEL10s/10m/100m (lb100sq.ft) : Fann 3/6/100 :	API FLUID LOSS (cm3/30min) : HL I ER CAKE (32nds inch) : HTHPFL (cm3/30min) : HTHP CAKE (32nds inch) :	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :
WBM Data COST	TODAY : \$2,269 CUM. WB	MUD COST: \$197,216	CUM. WBM+OBM CC	DST: \$197,216
Type : KCL Brine FROM : TIME : WEIGHT (sg) : 1.08 TEMP (C) :	VISCOCITY (sec/qt) : PV (cps): YP (lb100sq.ft): GEL10s/10m/100m (lb100sq.ft) : Fann 3/6/100 :	API FLUID LOSS (cm3/30min) : HL I ER CAKE (32nds inch) : HTHPFL (cm3/30min) : HTHP CAKE (32nds inch) :	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :

Survey		MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last Tool Type :	MWD	(mBRT)	(mBRT)	DEG	(deg)	AZ (deg)	SECT (m)	(deg/ 30m)	(m)	(m)	
Magnetic Declination :	0.00	1,281	701	90.98	232.	232.7	756.1	1.49	-469.3	-592.8	MWD
Survey method : Min	Curvature	1,310	701	89.67	232.	232.7	785.0	1.36	-486.8	-615.8	MWD
-		1,339	701	89.82	233.	233.4	814.0	0.71	-504.2	-639.0	MWD
		1,368	701	90.46	234.	234.0	843.0	0.93	-521.5	-662.4	MWD

Bulk Stocks On Rig														
					P	ump Da	ta - la	st 24 h	rs		Slow Pump Data			
STAR	T USED	REC'D	STOCK	#	TYPE	LNR	SPM	EFF	Flow	SPP (psi)	SPM	SPP (psi)		MW (ppg)
X 33	6		336			()		(70)	(gpiii)	(psi)		(psi)	(INDRT)	(PPy)
X 154	6		1546	1	National 1	6.00	0	97	0	0	30	240	1180	9.3
X 216	6		2166	2	National 1	6.00	47	97	93	680	40	310	1180	9.3
x			0	3	National 1	6.00	0	97	0	0	50	385	1180	9.3
x			0											
3 9	8 26	26	98											
3 31	3 41	295	567											
234	4		2344											
3			0											
3 41	1 10		401											
3	0		0											
	STAR STAR SX 334 SX 1544 SX 2164 SX 2164 SX 314 SX 314	START         USED           X         336           X         1546           X         2166           X         13           M3         98           M3         313           M3         411           M3         0	START     USED     REC'D       XX     336	START         USED         REC'D         STOCK           XX         336         336           XX         1546         1546           XX         2166         2166           XX         0         0           X3         98         26         26           X3         313         41         295         567           X3         411         10         401         0           X3         0         0         0         0	START     USED     REC'D     STOCK       IX     336     336       IX     1546     1546       IX     2166     2166       IX     0       IX     98       IX     98       IX     98       IX     0       IX     0       IX     0	START     USED     REC'D     STOCK       X     336     336       X     1546     1546       X     2166     2166       X     0       X     98     26       13     98     26       13     313     41       2344     2344       13     0	START         USED         REC'D         STOCK           X         336         336         #         TYPE         LNR           X         1546         1546         14         6.00         2           X         2166         2166         0         3         1         Ational 1         6.00           X         0         0         0         3         National 1         6.00           X         0         0         0         0         3         National 1         6.00           X         0	START     USED     REC'D     STOCK       IX     336     336       IX     1546     1546       IX     2166     2166       IX     0     0       IX     98     26       IX     313     41       IX     3411     10	START     USED     REC'D     STOCK       X     336     336       X     1546     1546       X     2166     2166       X     0     0       333     313     41       334     295       334     0	Pump Data         START       USED       REC'D       STOCK         X       336       336         X       1546       1546         X       2166       2166         X       0       0         X       98       26       26         X33       13       41       295       567         X       2344       0       0         X3       0       0       0	START         USED         REC'D         STOCK         #         TYPE         LNR         SPM         EFF         Flow         SPP           XX         336         336         1546         1546         1546         1         1         National 1         6.00         0         97         0         0           XX         2166         2166         0         2         National 1         6.00         47         97         93         680           XX         0         0         0         0         97         0         0           X         2344         2344         0         0         97         0         0           X3         411         10         401         0         0         97         0         0	START         USED         REC'D         STOCK           X         336         336           X         1546         1546           X         2166         2166           X         0           333         13           313         41           295         567           x         2344           0         0	START         USED         REC'D         STOCK           X         336         336           X         1546         1546           X         2166         2166           X         0           333         41           333         411           33         0	START         USED         REC'D         STOCK           X         336         336           X         1546         1546           X         2166         2166           X         0           333         41           334         2344           333         411           334         10

#### DAILY DRILLING REPORT # 11 Patricia-2 VIC/L21

Casing												
DIAM.	CSG OD	SHOE MD (plan/Actual)	SH (pla	IOE TVD an/Actual)		LOT (pl/Act)	FI (pl/A	T Act)		COMMENT		
9.5/8 "	9.625	872.4		7	700.0		1.40	1.40	Mixed and pum bbls of slurry @ bumped plug pi psi.	ped 378 sx og G ceme 2 1.89 sg. Displaced ar ressue tested casing to	ent, 78 id 9 3000	
		TYPE	LN (I	GTH C	SG OD (")	WT lbs/ft	GRD	-	THREAD			
Well hea X/over (I Pup Join Pup Join 9 5/8" Ca Float Join Intermed Shoe Joi	id NK3SB Pir it asing nt liate Joint int	x New Vam Box)	2 3 3 3 74 13 12 12	2.35         8.575           3.17         8.575           3.07         8.575           3.07         8.575           746.58         8.575           13.17         8.575           12.04         8.575           12.54         8.575		47.0 47.0 47.0 47.0 47.0 47.0 47.0 47.0	L-80 L-80 L-80 L-80 L-80 L-80 L-80 L-80	۱ ۷	New Vam 'am x NK3 NK3SB NK3SB NK3SB NK3SB NK3SB NK3SB			
Person	nel : on	Site =95										
Drilling S Drilling S Drilling E Geologis Geologis Geologis	Supervisor ( Supervisor ( Engineer st st st	JOB TITLE snr) Nigh		G. Howard G. Othen P. Zehetleitner R. Tolliday P. Boothby R. Leech					# 5 34 48 8			
Safety,	Inspect	ions and Drills		S	umma	ry						
Shaker SHAKER SHAKER SHAKER SHAKER	Shakers, Volumes and Losses Data       ENGINEER Graeme Garrick         SHAKER 1       4x120       VOLUME AVAILABLE (bbi) =       1108       LOSSES (bbi) =       0       COMMENTS         SHAKER 2       4x120       VOLUME AVAILABLE (bbi) =       1108       LOSSES (bbi) =       0       COMMENTS         SHAKER 3       4x84       ACTIVE       403       MIXING       DOWNHOLE       SURF. + EQUIP       0.00         SHAKER 4       4x84       HOLE       405       SLUG       SURF. + EQUIP       0.00         SHAKER 5       RESERVE       300       HEAVY       DUMPED       0.00       Image: colored state sta											
Ancho	o <b>rs</b> A A	1 275 6 215	A 2 A7	250 180		A 3 A8	160 215		A 4 325	A 5	50	
Workb Pacific S Pacific C	entinel Conqueror	Location Fuel Barite (M3) (sx) at Rig 307 1190 at Rig 419	D/wtr (M3) 235 345	P/wtr C (M3) (s 545 185	emt Be sx) (s) 30	nt Brine <) (M3) 0	Weat VISIB WIND WIND PRES AIR T	i <b>her</b> ILITY(r SP. (k DIR (c 6.(mbar EMP (c	nm) 12 tts) 25.0 deg) 230 rs) 1021 C) 15.0	Rig / Sea Data RIS.TENS (klbs) VDL (mt) WAVES (m) SWELL (m)	232 1,804 1.5 3.0	





### Productive time by Operation









# DEPTH @ 24:00 = 1,385.0m after 11.00 days since spud

### DATE Jul 01, 2002

#### FROM : G. Howard / Othen TO : C. Allport / R. King

DAILY DRILLING REPORT # 12

# Patricia-2

VIC/L21

Well D COUNT FIELD DRILL C RIG RT ABO WATER RT TO S	ata RY CO. VE SL DEPT SEABE	IPPSL/ DIAMC (m) H (m) I D (m)	AU AND SL DND OF DCEAN	ISTRALIA JB-BASIN FSHORE BOUNTY 25.0 52.5 77.5	DEPTH (mBRT) TVD (mBRT) PROGRESS (m) DAYS ON WELL DAYS +/- CURVE CURRENT OP @ 0600 F PLANNED OP. F			1,385.0       CUR. HOLE SIZE (")       8.50       AFE COST \$ 11,852,851         701.2       CASING OD (")       9.5/8 "       AFE BASIS :       C&S         0.0       SHOE TVD (mBRT)       700       DAILY COST : \$386,814.00       CUM COST : \$7,441,057.00         12.00       FIT (sg)       1.40       CUM COST : \$7,441,057.00       Structure         1.60       LOT (sg)       0.00       CUM COST : \$7,441,057.00         Running Completion landing string       Redress hanger add 2 mts on completion tubing space out. Re land ompletion and continue with wire line.					
Summa Rigged comple	ary of up flo tion st	<b>perio</b> w hea ring. P	d 0000 d, BOF Pull bac	to 2400 and lub k to han	hrs ricator. ger and	Landed Redres	hanger ar	nd attempted to test					
						<u>ире</u>							
		RU			01:00			Continued to propage flow boad					
СТВ	P		PT	01:00	03:00	2.00	1,385	Pressure tested Lubricator valve 3500 psi, 10 min. Pressure tested flow head and flow line against choke manifold and Sub sea lubricator valve 3500 psi.					
СТВ	Р		RU	03:00	04:00	1.00	1,385	Rigged up BOP Lubricator, and installed on flow head.					
СТВ	Р		CMD	04:00	05:00	1.00	1,385	Circulated 270 bbls of clean filtered inhibited completion brine.					
СТВ	Ρ		RTB	05:00	05:30	.50	1,385	Landed and set hanger, good indication of helix alignment. Vented control lines					
СТВ	Ρ		PT	05:30	06:30	1.00	1,385	Closed middle rams, pressured up on annulas 3500 psi. Locked tubing hanger, good indication with lock monitor on control panel. Pressured up on annulas above tubing hanger to 3500 psi, good seal, bleed down pressure.					
СТВ	ΤP	TUB	RTB	06:30	13:00	6.50	1,385	Attempted to over pull, unsuccessful. Trouble shoot THRT Lock. Pulled landing string back 4 mts and functioned Sub surface safety valve.					
СТВ	Ρ		PT	13:00	15:30	2.50	1,385	Landed completion, launched ROV and opened Sub sea isolation safety valve and cavity seal monitor valve on SST. Closed annular and pressured up to 3500 psi, bled off pressure and locked tubing hanger. Confirmed with 20 kips overpull.					
СТВ	TP	TUB	PT	15:30	19:30	4.00	1,385	Whilst rigging up wire line, tested PBR found to be leaking, prepared to rig down. Unlocked tubing hanger.					
СТВ	TP	TUB	PCO	19:30	23:30	4.00	1,385	Rigged down flow head, laid out coil tubing lift frame. Continued pulling out of hole, hanger at surface. (Losses down hole 40 bbls / Hr)					
СТВ	TP	TUB	PCO	23:30	24:00	.50	1,385	Broke out hanger from tubing, unlatch SSTT assembly from tubing hanger. Laid out SSTT assembly and broke out tubing hanger. Commenced redress tubing hanger.					

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 02, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
СТВ	TP	TUB	PCO	00:00	01:00	1.00	1,385	Laid out test assembly.
СТВ	TP	TUB	PCO	01:00	02:30	1.50	1,385	Changed out seals on hanger.
СТВ	TP	TUB	PT	02:30	03:00	.50	1,385	Made up pup joints to completion string. (2.2mts)
СТВ	TP	TUB	PT	03:00	04:00	1.00	1,385	Picked up & made up lower test assembly. Re-test assembly.
СТВ	TP	TUB	RTB	04:00	06:00	2.00	1,385	RIH with landing string.( Losses continued @ 40 bbls / Hr)

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERMEDIATE CASING (1)	29.8	Jun 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0

DAILY DRILLING REPORT # 12

				-		-			I	1			
Phase Analys	is	Pha	se hrs	St	art On	Finish	On (	Cum Hrs	Cum Days	Min Depth	Max	Depth	
PRODUCTION HOLE (1)			34.8	Jun	27, 2002	Jun 28,	2002	205.0	8.54	887	0 1	,385.0	
PRODUCTION CSG/LNR(1)			38.0	Jun	28, 2002	Jun 30,	2002	243.0	10.13	3 1,385	0 1	,385.0	
COMPLETION/TIE-BACK			44.5	Jun	30, 2002	JUI 01,	2002	287.5	11.98	1,385	0 1	,385.0	
WBM Data COST TO	DAY: \$1,014	CUM.	WB N	VB MUD COST: \$198,230 CUM. WBM+OBM COST: \$198,230						C			
Type :	/ISCOCITY (s	ec/qt):		API FL	UID LOSS		CI: SOLIDS (%vol):				vol):		
KCL Brine	PV (cps):			(cm3/3)	Omin):		K+C*1	000 :		H2O (%vol	H2O (%vol) :		
FROM :	P (lb100sq.ft	):		32nds	inch) :		HARD	/Ca :		OIL (%vol)	:		
TIME :	GEL10s/10m/1	00m		HTHPF			MBT (	opb) :		SAND :			
WEIGHT (sg) : 1.08 (	lb100sq.ft) :			(CIIIS/SU HTHP (	CAKE		PM :			PH :			
TEMP (C) :	ann 3/6/100 :		(	(32nds	inch):		PF :			PHPA (ppb	):		
Bit Data for Bit # 4 IADC #   Wear   O1 D L B G O2 R													
SIZE (") :	1												
MANUFACTURER : Ree	ed AVE WO	)B (k-lbs) ·				Drille	ed over tl	ne last 24	hrs C	alculated ove	the bit r	run	
TYPE :	AVF RPI	M :				METE	RAGE (	m) :		I.METERAG	E (m)	501	
SERIAL #1	FLOW (c	num).				ON B	OTTOM	HRS :	.0 CUI	M. ON BOT. H	IRS :	13.8	
	PUMP P	RESS. (psi)	:		x	IADC	DRILL. H	HRS :				22.0	
	HSI (hp/	sai).	. (	000	x		L REVS	:		VI. TOT. REV:	5	0	
		94.) .				INOP	(11/111).		RUI	<sup>2</sup> (m/nr):		22.8	
BHA #4 Length (ft) : D.C. (1) ANN. VELOCITY (mpm): 0													
WT BLW JAR(k-lbs):	STRING WT	(k-lbs) :		TR	QE MAX (f	lbs):		D.C	. (2) ANN V	/ELOCITY (m	pm):	0	
BHA WT(k-lbs) :	PICK UP W	T(k-lbs):		TR	QE ON (ft-	bs):		H.W	I.D.P. ANN	VELOCITY (I	npm):	0	
	SLK 0FF W	Γ(k-lbs) :		TR	QE OFF (f	-lbs):		D.P	. ANN VEL	OCITY (mpm)	):	0	
BHA DESCRIPTION :													
TOOL DESCRIP	TION	HRS	S	ERIAL	#			CC	MMENT				
Survey			Т\/Г			COPP	'\/'	DOGLE		E/M/		TVDE	
		(mBRT)	(mBR	2   IN	EG (deg)	AZ	SECT	(deg/	(m)	(m)	TOOL		
Last Tool Type :				ή		(deg)	(m)	30m)	)				
Magnetic Declination :	0.00	1,281	7	01 90	.98 232.	232.7	756.1	1 1.	49 -46	9.3 -592.8	MWD		
Survey method : Min (	Curvature	1,310	7	01 89	.67 232.	232.7	785.0	) 1.	36 -48	6.8 -615.8	MWD		
		1,339	7	01 89	.82 233.	233.4	814.0	0.	71 -50	4.2 -639.0	MWD		
		1,368	7	01 90	.46 234.	234.0	843.0	0 0.	.93 -52	1.5 -662.4	MWD		
Bulk Stocks On Rig				Pum	p Data								
l					<u>Pui</u>	np Data	- last 24	hrs		Slow Pur	np Data	NAVA/	
STOCK TYPE ST	ART USED	REC'D ST	оск	#	ITPE	link   Si (")	-MI EFF (%)	(gpm)	(DSI)	'W  SPP   D (psi)   (n	BRT)	(ppa)	
Barite SX	336		336		ational 1	6.00	0 0	7 0		30 240	1180	93	
Bentonite SX	1546		1546	2 N	ational 1	6.00	47 9	7 93	680	40 310	1180	9.3	
G+35% SiFl SX	2100		001≤  ∩	3 N	ational 1	6.00	0 9	7 0	0	50 385	1180	9.3	
G+BFS+12.25% SiFI SX			ő										
Pot Water M3	98 23	23	98										
Drill Water M3	567 17		550										
Heli-fuel Itr	6814 500		6314										
Base Oil M3			0										
Rig Fuel M3	401 12		389										
	۲ ۱		v										

#### DAILY DRILLING REPORT # 12 Patricia-2 VIC/L21

Casing	l												
DIAM.	CSG OD	SHOE MD (plan/Actual)	SI (pl	HOE T∖ an/Actu	/D ial)	L (pl	OT /Act)	F (pl/	IT Act)		COMMENT		
9.5/8 "	9.625	872.	4		700.0			1.40	1.40	Mixed and pum bbls of slurry @ bumped plug pr psi.	ped 378 sx og G cem 1.89 sg. Displaced a ressue tested casing t	ent, 78 nd o 3000	
		TYPE	LN (	IGTH m)	CSG C (")	DD W	/T s/ft	GRD		THREAD			
Well hea X/over (I Pup Join Pup Join 9 5/8" Ca Float Join Intermed Shoe Joi	nd NK3SB Pin ht asing nt diate Joint int	x New Vam Box)	2 3 3 74 1 1 1	2.35         8.575           3.17         8.575           3.07         8.575           3.07         8.575           746.58         8.575           13.17         8.575           12.04         8.575           12.54         8.575			7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	L-80 L-80 L-80 L-80 L-80 L-80 L-80 L-80		New Vam am x NK3 NK3SB NK3SB NK3SB NK3SB NK3SB NK3SB			
Person	nel : on	Site =92		1									
		JOB TITLE			NAME					CO. NAME			
Drilling S Drilling S Drilling E	Supervisor ( Supervisor ( Engineer		G. Howard G. Othen P. Zehetleitner						DMV Service Company Diamond Offshore Catering	3	7 31 46 8		
Safety,	Inspecti	ons and Drills			Sumn	nary							
Shaker SHAKER SHAKER SHAKER SHAKER	rs, Volun 1 4x12 2 4x12 3 4x84 4 4x84 5	nes and Losses	<b>Data</b> 218 405 200	<b>E (bbl)</b> = MIXIN SLUG HEAV	= IG 3 YY	823	LOS DOW SUR DUM	<b>SES (bbi</b> /NHOLE F. + EQU IPED	) <b>=</b> IP	ENGINER 0 COMMEN Mixing Kr 0.00 Hr.	ER Graeme Garrick <b>ITS</b> CL Brine. Losses at 4	0 bbis /	
Ancho	ors A	1 280 5 210	A 2 A7	260 175		A AB	3 1 3 2	65 2100		A 4 315	A 5	140	
Workb Pacific S Pacific C	Conqueror	Location Fuel Bari (M3) (sx at Rig 302 119 at Rig 414	te D/wtr ) (M3) 0 230 345	P/wtr (M3) 545 180	Cmt (sx)	Bent B (sx) (I 300	rine VI3)	Wea VISIE WINE WINE PRES	ther BILITY(I D SP. (k D DIR (d S.(mbai FEMP (f	nm) 12 ts) 30.0 deg) 280 rs) 1021 C) 15.0	Rig / Sea Data RIS.TENS (klbs) VDL (mt) WAVES (m) SWELL (m)	232 1,721 1.5 1.2	





### Productive time by Operation









# DEPTH @ 24:00 = 1,385.0m after 12.00 days since spud

### DATE Jul 02, 2002

CTB

СТВ

CTB

CTB

CTB

CTB

TP

Ρ

Ρ

Ρ

Р

Ρ

PT

SLK

SLK

сто

СТО

СТО

09:30

10:00

13:30

14:30

20:30

23:30

#### FROM: R. King / Othen

TO: C. Allport / S. Crocker

Well Data CUR. HOLE SIZE (") 1,385.0 8.50 AFE COST \$ 11,852,851 DEPTH (mBRT) COUNTRY AUSTRALIA 701.2 CASING OD (") 9.5/8 " AFE BASIS : TVD (mBRT) C&S FIELD **GIPPSLAND SUB-BASIN** PROGRESS (m) SHOE TVD (mBRT) 700 DAILY COST : \$491.060.00 0.0 DRILL CO. DIAMOND OFFSHORE CUM COST : DAYS ON WELL 13.00 FIT (sq) 1.40 \$7,932,117.00 RIG OCEAN BOUNTY DAYS +/- CURVE -1 20 LOT (sg) 0.00 RT ABOVE SL (m) 250CURRENT OP @ 0600 Preparing to flow well at daylight. WATER DEPTH (m) LAT 52.5 PLANNED OP. Run Coiled tubing and inject nitrogen to bring well on. RT TO SEABED (m) 77.5 Summary of period 0000 to 2400 hrs Replaced seals on Tubing Hanger, ran & tested O.K. Rigged up flow head, recovered Isolation sleeve and ran 4.5 Gauge ring. Rigged up coiled tubing injector head ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jul 02, 2002 DEPTH PHSE CLS RC OP FROM ΤO HRS ACTIVITY DESCRIPTION СТВ TΡ TUB PCO 00:00 01:00 1.00 1.385 Laid out test assembly. CTB TP TUB PCO 01:00 02:30 1.50 1,385 Changed out seals on hanger. CTB TP TUB PCO 02:30 03:00 .50 1,385 Made up pup joints to completion string. (Total length 2.2m) TΡ СТВ TUB PT 03:00 04:00 1.00 1.385 Picked up & made up lower test assembly. Re-tested assembly. CTB TUB 04:00 07:00 3.00 RIH with landing string. (Losses continued @ 40 bbls / Hr) Picked TP RTB 1,385 up SSLV and repaired damage to SSLV umbilical line. СТВ TΡ RTB 07:00 07:00 .00 1,385 Rigged up lift frame and flow head, made up coflexip hoses and cement hose. TΡ 07:00 2.50 CTB RTB 09:30 1,385 Landed and locked tubing hanger, confirmed with 50 kips over pull. (Total fluid lost to formation 410 bbls)

isolation sleeve.

and rigged down.

secured.

tubing.

Presure tested Production Annulus to 1500 psi.

BJ Rigged up Coil tubing injector head.

Rigged up wire line and pressure tested lubricator. RIH & retrieved

Made up 4.5" Gauge ring and RIH to 250m. Laid out wire line tools

Held JSA. Rigged up Coil tubing into frame above flow head and

Closed Master valve. Held JSA for presure testing and running coil

### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 03, 2002

10:00

13:30

14:30

20:30

23:30

24:00

.50

3.50

1.00

6.00

3.00

.50

1.385

1.385

1,385

1.385

1.385

1,385

PHSE	CLS	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
СТВ	Ρ		СТО	00:00	01:00	1.00	1,385	Presure tested lines for pumping Nitrogen 300 / 3000 psi 5-10
СТВ	Ρ		сто	01:00	02:00	1.00	1,385	min. Opened Master valve. RIH with Coil tubing to 221m (SRO Problem)
СТВ	TP	MSC	СТО	02:00	02:30	.50	1,385	Troubleshoot SRO Gauge. (Gauge OK. Problem at surface)
CTB	Р		СТО	02:30	03:30	1.00	1,385	Continued Running Coiled tubing to 600m.
СТВ	Ρ		FLO	03:30	05:00	1.50	1,385	Pumped nitrogen and continued running in hole to 892m. (Fluid returned 110 bbls)
СТВ	Ρ		FLO	05:00	06:00	1.00	1,385	Shut well in for initial build up.

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERMEDIATE CASING (1)	29.8	Jun 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0
PRODUCTION HOLE (1)	34.8	Jun 27, 2002	Jun 28, 2002	205.0	8.54	887.0	1,385.0

# VIC/L21

DAILY DRILLING REPORT # 13 Patricia-2

### VIC/L21

Phase Ana	lysis	Phase hr	s Start	On	On Finish On Cum Hrs Cum Days Min Depth M		Cum Hrs	Min Depth	Мах	Depth		
PRODUCTION CSG/LNR(1)		38.	0 Jun 28,	2002	Jun 30,	2002	243.0	10	.13	1,385.	0	1,385.0
COMPLETION/TIE-BACK		00.3	5 Jun 30,	2002	JUI 02, 2	2002	311.5	12.	.90	1,365.	٥Į	1,365.0
WBM Data COST T	ODAY : \$1,224	CUM. WB	MUD COS	T: \$199	9,454	C	UM. WBI	M+OBM	COST	r: \$199,454	1	
Type :	VISCOCITY (sec/q PV (cps): YP (lb100sq.ft): GEL10s/10m/100m (lb100sq.ft) : Fann 3/6/100 :	i) :	API FLUIE (cm3/30m FILTER C (32nds inc HTHPFL (cm3/30mi HTHP CA (32nds inc	D LOSS in) : AKE h) : n) : KE h) :	3	CI : K+C*1 HARD/ MBT (p PM : PF :	000 : Ca : opb) :		S F F F	SOLIDS (% 120 (%vol) DIL (%vol) SAND : PH : PHPA (ppb	ovol) : ) : : ) :	
BHA #4 Length ( WT BLW JAR(k-lbs): BHA WT(k-lbs) : BHA DESCRIPTION :	ft): STRING WT(k-lb PICK UP WT(k-l SLK 0FF WT(k-ll	s) : os) : os) :	TRQE TRQE TRQE	MAX († ON (ft- OFF (f	ft-lbs): ·lbs): ˈt-lbs):		D.C D.C H.W D.P.	. (1) ANN . (2) ANN /.D.P. AN . ANN VE	N. VEL N VEL NN VE ELOCI	OCITY (n OCITY (m LOCITY (i ITY (mpm)	ipm): pm): npm): i	0 0 0 0
TOOL DESCR	IPTION	HRS	SERIAL #				CO	MMENT	-			
Survey Last Tool Type :	MWD (r	MD T∖ ıBRT) (mB	/D INCL RT) DEG	AZ (deg)	CORR. AZ (deg)	'V' SECT (m)	DOGLE (deg/ 30m)	EG N (r	I/S m)	E/W (m)	TOOL	TYPE
Magnetic Declination : Survey method : Mir	0.00 Curvature	1,281 1,310 1,339 1,368	701         90.98           701         89.67           701         89.82           701         90.46	232. 232. 233. 234.	232.7 232.7 233.4 234.0	756.1 785.0 814.0 843.0	1. 1. 0. 0.	49 -4 36 -4 71 -{ 93 -{	469.3 486.8 504.2 521.5	-592.8 -615.8 -639.0 -662.4	MWD MWD MWD MWD	
Pump Data												
				Pu	mp Data -	- last 24	hrs	0.0.0		Slow Pur	np Data	a
STOCK TYPE Barite SX Bentonite SX G-neat SX	START USED REC 336 1546 2166	CD STOCK 336 1546 2166	1 Natio	PE onal 1 onal 1 onal 1	LNR SF (") 6.00 6.00 6.00	PM EFF (%) 0 97 47 97 0 97	Flow (gpm) 7 0 7 93 7 0	SPP ( (psi) 0 680 0	SPM 30 40 50	SPP D (psi) (n 240 310 385	EPTH 1BRT) 1180 1180 1180	MW (ppg) 9.3 9.3 9.3
G+BFS+12.25% SiFI SX Pot Water M3 Drill Water M3 Heli-fuel Itr Base Oil M3 Rig Fuel M3 Brine M3	98 24 550 6314 471 389 10 0	24 98 550 5843 0 380 0										
Casing			<b>_</b>									
DIAM. CSG OD SH	IOE MD n/Actual) (	SHOE TVD plan/Actual)	()	LOT pl/Act)	F (pl	=IT /Act)			COM	MENT		
9.5/8 " 9.625	872.4	7	700.0		1.40	0 1.40	Mixed ar bbls of s bumped psi.	nd pump lurry @ <sup>-</sup> plug pre	ed 378 1.89 s essue f	8 sx og G g. Displac tested cas	cement ed and ing to 3	, 78 000
TYPE	1	NGTH C: (m)	SG OD (")	WT bs/ft	GRD	г	HREAD					
Well head X/over (NK3SB Pin x New V Pup Joint Pup Joint 9 5/8" Casing Float Joint Intermediate Joint Shoe Joint	2.35     8       3.17     8       3.07     8       3.07     8       746.58     8       13.17     8       12.04     8       12.54     8	3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4         3.575       4	17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	L-80 L-80 L-80 L-80 L-80 L-80 L-80 L-80	N Va	lew Vam am x NK3 NK3SB NK3SB NK3SB NK3SB NK3SB NK3SB	3					

Personnel : on Site =95													
JOB TITLE	NAME	CO. NAME	#										
Drilling Supervisor (snr) Drilling Supervisor (Nigh Drilling Engineer	R.King G. Othen P. Zehetleitner	OMV Service Company Diamond Offshore Catering	7 34 46 8										
Safety, Inspections and Drills Summary													
Shakers, Volumes and Losses DataSHAKER 14x120SHAKER 24x120SHAKER 34x84SHAKER 44x84SHAKER 5HOLE405SHAKER 5	E (bbl) =591LOSSES (bbl) =MIXINGDOWNHOLESLUGSURF. + EQUIPHEAVYDUMPED	ENGINEER Graeme Garrick 0 COMMENTS Total losses aprox 450 bbls. 0.00											
Anchors         A 1         270         A 2           A 6         210         A7	250 A 3 175 175 A8 200	A 4 345 A 5 1	40										
WorkboatsLocationFuelBarite (M3)D/wtr (M3)Pacific Sentinel Pacific Conquerorat Rig at Rig3011190225 345	P/wtrCmtBentBrine (M3)Weather VISIBILIT545300WIND DIR PRES.(mt AIR TEME	Rig / Sea Data           Y(nm)         12           (kts)         20.0           (kts)         20.0           X (deg)         310           wars)         1008           P (C)         15.0	232 1,741 0.9 1.8										





### Productive time by Operation









# DEPTH @ 24:00 = 1,385.0m after 13.00 days since spud

### DATE Jul 03, 2002

### FROM : R. King /G. Othen

TO: C. Allport / S. Crocker

Well Data			DEPTH (mBRT)	1,385.0	CUR. HOLE SIZE (")	8.50	AFE COST \$	11,852,851	
COUNTRY	AUSTR	RALIA	TVD (mBRT)	701.2	CASING OD (")	9.5/8 "	AFE BASIS :	C&S	
FIELD	GIPPSLAND SUB-B	BASIN	PROGRESS (m)	0.0	SHOE TVD (mBRT)	700	DAILY COST :	\$388,015.00	
DRILL CO.	DIAMOND OFFSH	HORE	DAYS ON WELL	14.00	FIT (sg)	1.40	CUM COST :	\$8,320,132.00	
RIG OCEAN BOUNTY		UNIY	DAYS +/- CURVE	-1.10	LOT (sg)	0.00			
RT ABOVE	SL (m)	25.0	CURRENT OP @ 060	0 Flowing w	ell for initial clean up flov	v period.			
RT TO SEABED (m) 7		52.5 77.5	PLANNED OP. Complete clean up period. Shut in well for second build up period. Ope for main flow period.						

r

#### Summary of period 0000 to 2400 hrs

RIH with coiled tubing to 600m and pumped nitrogen, continued running in hole to 892m. Shut well in for initial shut-in period. Conducted JSA. Opened choke and flowed well for clean up flow period.

#### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jul 03, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
СТВ	Ρ		сто	00:00	01:00	1.00	1,385	Pressure tested lines for pumping Nitrogen 300 / 3000 psi 5-10 min.
PT	Ρ		сто	01:00	02:00	1.00	1,385	Opened Master valve. RIH with coiled tubing to 221m (SRO Problem)
PT	TP	MSC	СТО	02:00	02:30	.50	1,385	Troubleshoot SRO Gauge. (Gauge OK. Problem at surface)
PT	Р		сто	02:30	03:30	1.00	1,385	Continued Running Coiled tubing to 600m.
PT	Р		сто	03:30	05:00	1.50	1,385	Pumped nitrogen and continued running in hole to 892m. (Fluid returned 110 bbls)
PT	Р		WCU	05:00	07:00	2.00	1,385	Shut well in for initial build up.
PT	Р		WCU	07:00	07:15	.25	1,385	Function tested ESD system. Held JSA on drill floor.
PT	Ρ		WCU	07:15	24:00	16.75	1,385	Opened choke & flowed well for clean up flow period. (Choke opened at 07:14hrs)

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 04, 2002

PHSE	CLS	RC	OP	FROM	TO	HRS	DEF	νтн		ACTIVITY DESCRIPTION								
PT	Р		WCU	00:00	06:00	6.00	0 1,385 Flowed well for clean up flow period.											
										i								
Phase Analysis							se hrs	S	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth				
RIG MOVE							12.0	Jun	20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0				
RIG-UP/PRESPUD						2.5	Jun	20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0					
CONDU	CTOR	HOLE					4.0	Jun	20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0				
CONDUCTORS			5.5	Jun	20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0								
SURFACE HOLE				15.0 Ju		21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0							
SUPEACE CASING						110	lun	21 2002	Jun 23 2002	90 N	2 2 2 2	334 0	334 0					

SOLUTIOE HOLE	10.0	0011 E 1, E00E	001121, 2002	00.0	1.00	112.0	001.01
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERMEDIATE CASING (1)	29.8	Jun 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0
PRODUCTION HOLE (1)	34.8	Jun 27, 2002	Jun 28, 2002	205.0	8.54	887.0	1,385.0
PRODUCTION CSG/LNR(1)	38.0	Jun 28, 2002	Jun 30, 2002	243.0	10.13	1,385.0	1,385.0
COMPLETION/TIE-BACK	69.5	Jun 30, 2002	Jul 03, 2002	312.5	13.02	1,385.0	1,385.0
PRODUCTION TEST	23.0	Jul 03, 2002	Jul 03, 2002	335.5	13.98	1,385.0	1,385.0

WBM Data COST 1	ODAY : \$0 CUM. WB	MUD COST: \$199,454	CUM. WBM+OBM COST: \$199,454				
Type : KCL Brine FROM : TIME : WEIGHT (sg) : 1.08 TEMP (C) :	VISCOCITY (sec/qt) : PV (cps): YP (lb100sq.ft): GEL10s/10m/100m (lb100sq.ft) : Fann 3/6/100 :	API FLUID LOSS (cm3/30min) : FIL 1EK CAKE (32nds inch) : HTHPFL (cm3/30min) : HTHP CAKE (32nds inch) :	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :			

### DAILY DRILLING REPORT # 14

# Patricia-2

#### Patricia-2 VIC/L21

BHA #4Length (ft) :WT BLW JAR(k-lbs):STRING VBHA WT(k-lbs) :PICK UP VOULCOFFOULCOFF	/T(k-lbs) : VT(k-lbs) :	TRQE	MAX (ft-lbs): DN (ft-lbs):	D.C. (1) ANN. VELOCITY (mpm): D.C. (2) ANN VELOCITY (mpm): H.W.D.P. ANN VELOCITY (mpm): D.P. ANN VELOCITY (mpm):				0 0 0			
	V I (K-IDS) :	IRQE (	JFF (ft-Ids):		D.P. ANN	IVELOCI	IIY (mpm)	):	0		
TOOL DESCRIPTION	HRS	SERIAL #			COMME	NT					
Survey Last Tool Type : MWI	D MD T (mBRT) (ml	TVD INCL BRT) DEG	AZ COR (deg) AZ (deg	R. 'V' SECT	DOGLEG (deg/ 30m)	N/S (m)	E/W (m)	TOOL	TYPE		
Magnetic Declination : 0.0	0 1,281	701 90.98	232. 232	2.7 756.1	1.49	-469.3	-592.8	MWD			
Survey method : Min Curvature	1,310 1,339 1,368	701 89.67 701 89.82 701 90.46	232.       232         233.       233         234.       234	2.7     785.0       3.4     814.0       4.0     843.0	1.36 0.71 0.93	-486.8 -504.2 -521.5	-615.8 -639.0 -662.4	MWD MWD MWD			
Bulk Stocks On Rig											
				ta - last 24	hrs		Slow Pun	np Data	N/1\A/		
STOCK TYPE START USED	REC'D STOCH	6 # TT	"E LINK (")	3FM EFF (%)	(gpm) (psi)		(psi) (m	nBRT)	(ppg)		
Bentonite SX 1546 G-neat SX 2166 G+35% SiFI SX	1546	6 1 Nation 6 2 Nation 0 3 Nation	nal 1 6.00 nal 1 6.00 nal 1 6.00	0 97 47 97 0 97	7 0 93 68 0	0 30 0 40 0 50	240 310 385	1180 1180 1180	9.3 9.3 9.3		
G+BFS+12.25% SiFISXPot WaterM39824Drill WaterM355021Heli-fuelItr5843Base OilM3880Rig FuelM3380BrineM30	6 26 94 7 52: 584: 0 380	0 8 3 3 0 0 0									
Casing											
DIAM. CSG OD SHOE MD (plan/Actual)	SHOE TVD (plan/Actual	) L l) (pl	.OT /Act)	FIT (pl/Act)		COM	MENT				
9.5/8 " 9.625 872.4		700.0	1	1.40 1.40	Mixed and pu bbls of slurry bumped plug psi.	mped 378 @ 1.89 s pressue f	8 sx og G g. Displac tested cas	cement, ed and ing to 30	78 000		
ТҮРЕ	LNGTH C (m)	CSG OD W	VT GRD s/ft	) Т	HREAD	]					
Well head X/over (NK3SB Pin x New Vam Box) Pup Joint Pup Joint 9 5/8" Casing Float Joint Intermediate Joint Shoe Joint	2.35 3.17 3.07 746.58 13.17 12.04 12.54	8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47           8.575         47	7.0         L-80           7.0         L-80	) N Va ) Va 	ew Vam am x NK3 NK3SB NK3SB NK3SB NK3SB NK3SB NK3SB						
Personnel : on Site =96											
JOB TITLE Drilling Supervisor (snr) Drilling Supervisor (Nigh Testing Supervisor Completion Supervisor Reservoir Engineer Sub Sea Engineer Drilling Engineer	R.King G.Other M.Mullir L.Taylor A.Ion W.Bates P.Zehet	NA ner r s tleitner	ME	O Se Di Ci	C MV ervice Compar iamond Offshc atering	O. NAME	: 		# 7 34 47 8		
Safety, Inspections and Drills	S	Summary									

Shakers, V SHAKER 1 SHAKER 2 SHAKER 3 SHAKER 4 SHAKER 5	<b>Volumes ai</b> 4x120 4x120 4x84 4x84	NOLUME AVAILAB ACTIVE HOLE 405 RESERVE 186	<b>.E (bbl) =</b> MIXING SLUG HEAVY	591	LOSSES (bbl) = 0 DOWNHOLE SURF. + EQUIP 0.00 DUMPED	ENGINEER G COMMENTS Total losses a	Graeme Garrick prox 450 bbls.	
Anchors	A 1 270 A 6 210	) A 2 ) A7	250 175	A 3 A8	3 175 A 4 200	345	A 5 140	)
Workboats	<b>S</b> Locatio	on Fuel Barite D/wt (M3) (sx) (M3)	r P/wtr Cmt (M3) (sx)	Bent B (sx) (N	rine VISIBILITY(nm)	10 RI	ig / Sea Data IS.TENS (klbs)	232
Pacific Sentin Pacific Conqu	iel at Rig ieror Geelo	296 1190 220 n <sub>!</sub> 410 345	545 177	300	WIND SP. (kts) WIND DIR (deg) PRES.(mbars) AIR TEMP (C)	30.0         VI           270         W           1003         SV           12.0         SV	/AVES (m) WELL (m)	1,903 1.5 1.2





Productive time by Operation









# DEPTH @ 24:00 = 1,385.0m after 14.00 days since spud

### DATE Jul 04, 2002

#### FROM : R. King /G. Othen TO : C. Allport / S. Crocker

# DAILY DRILLING REPORT # 15

# Patricia-2

### VIC/L21

Well DataCOUNTRYAUSTRALFIELDGIPPSLAND SUB-BASDRILL CO.DIAMOND OFFSHOFRIGOCEAN BOUNT	DEPTH (mBRT) IA TVD (mBRT) IN PROGRESS (m) RE DAYS ON WELL TY DAYS +/- CURVE	1,385.0 701.2 0.0 15.00 -1.50	CUR. HOLE SIZE (") CASING OD (") SHOE TVD (mBRT) FIT (sg) LOT (sg)	8.50 9.5/8 " 700 1.40 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	11,852,851 C&S \$262,158.00 \$8,582,290.00
RT ABOVE SL (m)25WATER DEPTH (m) LAT52RT TO SEABED (m)72	5.0 CURRENT OP @ 060 2.5 PLANNED OP. 7.5	0 Flowing V Continue	/ell. to flow well. Shut well in	for build u	o. Suspend well.	

# Summary of period 0000 to 2400 hrs Well Testing.

#### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jul 04, 2002

PHSE	CLS	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PT	Р		WCU	00:00	11:00	11.00	1,385	Flowed well for clean up flow period. (Shut well in @ 10:57 hrs)
PT	Р		FLO	11:00	15:30	4.50	1,385	Well shut in and build up monitored.
PT	Р		FLO	15:30	24:00	8.50	1,385	Opened well continued flow.

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 05, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
PT	Р		FLO	00:00	06:00	6.00	1,385	Continued to flow well.

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERMEDIATE CASING (1)	29.8	Jun 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0
PRODUCTION HOLE (1)	34.8	Jun 27, 2002	Jun 28, 2002	205.0	8.54	887.0	1,385.0
PRODUCTION CSG/LNR(1)	38.0	Jun 28, 2002	Jun 30, 2002	243.0	10.13	1,385.0	1,385.0
COMPLETION/TIE-BACK	69.5	Jun 30, 2002	Jul 03, 2002	312.5	13.02	1,385.0	1,385.0
PRODUCTION TEST	47.0	Jul 03, 2002	Jul 04, 2002	359.5	14.98	1,385.0	1,385.0

WBM Data	COST T	ODAY : \$0 CUM. WI	3 MUD COST: \$199,454	CUM. WBM+OBM COST: \$199,454				
Type : KC	L Brine	VISCOCITY (sec/qt) : PV (cps):	API FLUID LOSS (cm3/30min) :	CI : K+C*1000 :	SOLIDS (%vol) : H2O (%vol) :			
FROM : TIME : WEIGHT (sg) : TEMP (C) :	1.08	YP (lb100sq.ft): GEL10s/10m/100m (lb100sq.ft) : Fann 3/6/100 :	(32nds inch) : HTHPFL (cm3/30min) : HTHP CAKE (32nds inch) :	HARD/Ca : MBT (ppb) : PM : PF :	OIL (%vol) : SAND : PH : PHPA (ppb) :			

#### BHA#4 Length (ft) : D.C. (1) ANN. VELOCITY (mpm): 0 WT BLW JAR(k-lbs): D.C. (2) ANN VELOCITY (mpm): 0 STRING WT(k-lbs) : TRQE MAX (ft-lbs): TRQE ON (ft-lbs): H.W.D.P. ANN VELOCITY (mpm): 0 BHA WT(k-lbs): PICK UP WT(k-lbs): TRQE OFF (ft-lbs): D.P. ANN VELOCITY (mpm) : SLK 0FF WT(k-lbs) : 0 BHA DESCRIPTION : TOOL DESCRIPTION HRS SERIAL # COMMENT

Survey		MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last Tool Type :	MWD	(mBRT)	(mBRT)	DEG	(deg)	AZ (deq)	SECT (m)	(deg/ 30m)	(m)	(m)	
Magnetic Declination :	0.00	1.281	701	90.98	232.	232.7	756.1	, 1,49	-469.3	-592.8	MWD
Survey method : Min	Curvature	1,310	701	89.67	232.	232.7	785.0	1.36	-486.8	-615.8	MWD
		1,339	701	89.82	233.	233.4	814.0	0.71	-504.2	-639.0	MWD
		1,368	701	90.46	234.	234.0	843.0	0.93	-521.5	-662.4	MWD

#### Patricia-2 VIC/L21

Bulk Stocks On Rig					Ρι	ump Data									
						Pu	amp	Data - la	st 24 I	nrs			Slow F	ump Data	a
STOCK TYPE	START	USED	REC'D	STOCK	#	TYPE	LNF (")	R SPM	EFF (%)	Flow (gpm)	SPP (psi)	SPM	SPP (psi)	DEPTH (mBRT)	MW (ppg)
Bentonite SX G-neat SX G+35% SiFI SX	1546 2166			1546 2166	1 2 3	National 1 National 1 National 1	6.0 6.0 6.0	00 0 00 47 00 0	97 97 97	0 93 0	0 680 0	30 40 50	240 310 385	1180 1180 1180	9.3 9.3 9.3
G+BFS+12.25% SiFISXPot WaterM3Drill WaterM3Heli-fuelItrBase OilM3Rig FuelM3BrineM3	98 523 5843 380 0	25 36 403 10	25	0 98 487 5440 0 370 0											
Casing															ĺ
DIAM. CSG OD SHOE MD SHOE TVD (plan/Actual) (plan/Actual)						LOT (pl/Act)		FIT (pl/Ad	ct)			COM	50       385       1180       9.3         COMMENT		
9.5/8 " 9.625	9.5/8 " 9.625 872.4 7							1.40	1.40	Mixed a bbls of s bumped psi.	nd pum lurry @ plug pi	ped 37 ) 1.89 s ressue	8 sx og g. Disp tested o	G cement laced and casing to 3	t, 78 8000
TYPE	SG 0 (")	D WT	G	RD	T	HREAD									
(m)           Well head         2.35           X/over (NK3SB Pin x New Vam Box)         3.17           Pup Joint         3.07           Pup Joint         3.07           9 5/8" Casing         746.58           Float Joint         13.17           Intermediate Joint         13.204						47.0 47.0 47.0 47.0 47.0 47.0 47.0 47.0		-80 -80 -80 -80 -80 -80 -80 -80	Ni Va 1 1 1	ew Vam m x NK3 NK3SB NK3SB NK3SB NK3SB	3				
Shoe Joint			12	.54 8	3.575	47.0	Ĺ	-80	1	NK3SB					
Personnel : on Site =	95														
JOB T	ITLE					NAME					CO	. NAME			#
Drilling Supervisor (snr) Drilling Supervisor (Nigh Testing Supervisor Completion Supervisor Reservoir Engineer Sub Sea Engineer Drilling Engineer				R.King G.Othen M.Mullin L.Taylor A.Ion W.Bates P.Zehetl	er eitner				Of Se Di Ca	MV ervice Co amond C atering	ompany Offshore	2			7 33 47 8
Safety, Inspections a	and Drill	s		S	umn	nary									
Shakers, Volumes a SHAKER 1 4x120 SHAKER 2 4x120 SHAKER 3 4x84 SHAKER 4 4x84 SHAKER 5		591 LO DC SU DU	SSE WN⊦ RF. ⊣ MPE	<b>S (bbi) =</b> HOLE ⊢ EQUIP D	0	EI 0 CC Tr 0.00	NGINEE DMMEN	ER Gra NTS ses apr	aeme G ox 450	arrick bbls.					
Anchors A 1 305 A 6 185	5	ļ	A 2 2 A7	297 165		A 3 A8	192 200			A 4	345		ŀ	A 5 130	0
Workboats Location Pacific Sentinel at Rig Pacific Conqueror On Ro	emt sx)	Bent Brine (sx) (M3) 300		Weath VISIBIL WIND S WIND I PRES.( AIR TE	ITY(nr ITY(nr SP. (kts DIR (de mbars MP (C	m) 1 s) 35. eg) 29 ) 100 ) 15.	0 0 00 02 .0	Rig RIS VDI WA SW	<b>J / Sea</b> .TENS _ (mt) VES (m ELL (m	<b>Data</b> (klbs)	232 1,778 1.8 2.4				





Productive time by Operation









# DEPTH @ 24:00 = 1,385.0m after 15.00 days since spud

### DATE Jul 05, 2002

### FROM: R. King /G. Othen

TO: C. Allport / S. Crocker

DAILY DRILLING REPORT # 16

# Patricia-2

VIC/L21

Well D COUNTI FIELD DRILL C RIG RT ABO WATER RT TO S	ata RY G O. VE SL DEPTI BEABEI	IPPSLA DIAMO C (m) H (m) L D (m)	AU AND SU ND OF DCEAN	STRALIA IB-BASIN FSHORE BOUNTY 25.0 52.5 77.5	DEPT TVD ( PROC DAYS DAYS CURF PLAN	H (mBR mBRT) GRESS ( CON WE CON WE CO	(m) LL RVE 2 @ 0600 R P. R	1,385.0 701.2 0.0 16.00 -3.00 Running In Run Tree	CUR. HOLE SIZ CASING OD (") SHOE TVD (mB FIT (sg) LOT (sg) nternal Tree Cap. cap with SSR Plug	E (") 8.50 9.5/8 " RT) 700 1.40 0.00 g installed. Pull B	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	11,852,851 C&S \$384,597.00 \$8,966,887.00		
Summary of period 0000 to 2400 hrs Continued Well Testing / Installed SSR Plug in Hanger & Tested. Rigged down and prepared to pull landing string.														
PHSE	CLS	RC	OP	FROM	то	HRS	DEPTH		, 2002 A(	CTIVITY DES	CRIPTION			
PT	Р		FLO	00:00	10:00	10.00	1,385	Contin	ued to flow well.					
PT	Р		FLO	10:00	13:15	3.25	1,385	Well st	nut in, monitor b	uild up. (End of	f test @ 13:15 h	rs)		
PT	Р		сто	13:15	14:30	1.25	1,385	РООН	with Coil tubing					
PT	Р		PT	14:30	15:15	.75	1,385	Closed	I SCSSV and pr	eformed an infl	ow test. OK.			
PT	Ρ		сто	15:15	19:00	3.75	1,385	Held J up slic	SA. Rigged dow k line lubricator	n Coil tubing in and pressure te	ijector head and ested 3500 psi.	I BOP. Rigged		
SUS	Ρ		SLK	19:00	20:15	1.25	1,385	5 RIH with 5.25 brush and cleaned pulg landing profile. Pulled tool surface no brush, ran back and fished brush.						
SUS	Ρ		SLK	20:15	23:15	3.00	1,385	Ran 5.25 SSR plug landed in Subsea tree tubing hanger, pressure tested 3000 psi. Bled down and preformed an inflow test OK. Rigged down slick line.						
sus	Ρ		CMD	23:15	24:00	.75	1,385	Unlatched SST and reverse circulated landing string content.						

#### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 06, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
SUS	Р		PCO	00:00	02:00	2.00	1,385	Laid out Flow head and Lifting frame.
SUS	Р		PCO	02:00	03:30	1.50	1,385	POOH with 7" Landing string.
SUS	Р		XT	03:30	04:30	1.00	1,385	Made up Jetting tool, RIH and jetted ITC profile.
SUS	Р		XT	04:30	06:00	1.50	1,385	Made up & RIH with Internal Tree Cap on 7" Landing string.

Phase Anal	ysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth		
RIG MOVE		12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0		
RIG-UP/PRESPUD		2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0		
CONDUCTOR HOLE		4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0		
CONDUCTORS		5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0		
SURFACE HOLE		15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0		
SURFACE CASING		41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0		
INTERMEDIATE HOLE (1)		60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0		
INTERMEDIATE CASING (1)		29.8	Jun 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0		
PRODUCTION HOLE (1)		34.8	Jun 27, 2002	Jun 28, 2002	205.0	8.54	887.0	1,385.0		
PRODUCTION CSG/LNR(1)		38.0	Jun 28, 2002	Jun 30, 2002	243.0	10.13	1,385.0	1,385.0		
COMPLETION/TIE-BACK		69.5	Jun 30, 2002	Jul 03, 2002	312.5	13.02	1,385.0	1,385.0		
PRODUCTION TEST		66.0	Jul 03, 2002	Jul 05, 2002 37		15.77	1,385.0	1,385.0		
SUSPENSION		5.0	Jul 05, 2002	Jul 05, 2002	383.5	15.98	1,385.0	1,385.0		
WBM Data COST T	ODAY: \$0	CUM. WB M	1UD COST: \$199	,454	CUM. WB	M+OBM CO	ST: \$199,454			
Type : KCL Brine	VISCOCITY (sec/qt) PV (cps):	:	API FLUID LOSS (cm3/30min) :				SOLIDS (%vol) : H2O (%vol) :			
FROM :	YP (lb100sq.ft):	(	32nds inch) :	HAI	RD/Ca :		OIL (%vol) :			
TIME :	IME : GEL10s/10m/100m			MB	Г (ррb) :		SAND :			
WEIGHT (sg) : 1.08		HTHP CAKE	PM	:		PH :				
TEMP (C) :	Fann 3/6/100 :	(	(32nds inch) :	PF			PHPA (ppb) :			
## Patricia-2 VIC/L21

BHA # WT BLW BHA WT	4 Le	engtl	<b>1 (ft) :</b>   STF   PIC   SLF	¯(k-lbs) T(k-lbs T(k-lbs	): ):			rrqe i rrqe ( trqe (	MAX († ON (ft- OFF (f	ft-lbs) lbs): t-lbs)	:		D.C D.C H.W D.P	. (1) AN . (2) AN /.D.P. A . ANN <sup>\</sup>	NN. VEI NN VEL ANN VE VELOC	LOCITY OCITY ELOCIT ITY (mp	(mpm): (mpm): Ƴ (mpm): Ƴm) :	0 0 0 0	
	TOOL	DESC	CRIPTION			HRS	S	ERI/	4L #					CC	MMEN	IT			
L																			
Survey	ol Type :			MWD	M (mE	ID BRT)	TVE (mBR	D RT)	INCL DEG	AZ (deg)	CO A	RR. Z	'V' SECT	DOGLI (deg	EG (	N/S (m)	E/W (m)	ТОО	_ TYPE
Magnet	ic Declina	ation		0.00				$ \rightarrow$			(de	eg)	(m)	30m	)				
Currie	mathad .		· Alm Cumu	0.00		,281	281 701		90.98	232.	2	32.7	756.1	1	.49	-469.3	-592		
Survey	Survey method : Min Curvature								89.87 89.82 90.46	232. 233. 234.	2:	33.4 34.0	785.0 814.0 843.0	0	.36 .71 .93	-400.0 -504.2 -521.5	-639 -662	9.0 MWD 2.4 MWD	
Bulk St	tocks On	Ria						Ρι	ımp [	Data									
									1	Pu	mp D	ata - I	ast 24	hrs			Slow P	ump Dat	a
S1 Barite	TOCK TYPI	E SX	START	USED	REC'I	D ST	ОСК 336	#	TYF	ΡE	LNR (")	SPN	И EFF (%)	Flow (gpm)	SPP (psi)	SPM	SPP (psi)	DEPTH (mBRT)	MW (ppg)
Bentonite G-neat	e	S> S>	( 1546 ( 2166				1546 2166	123	Nation Nation	nal 1 nal 1	6.00 6.00		0 97 7 97	0 93	0 680	30 40	240 310	1180 1180 1180	9.3 9.3
G+35% \$	SiFl	S>	< l				0	<u></u>	INALIO		0.00	J	0 97	0	0	50	365	1160	9.3
G+BFS+	·12.25% SiF >r	-I SΣ Μ΄	(  3  08	26	2		0 98												
Drill Wate	er	M	3 487	11	2		476												
Heli-fuel		ltr	5440				5440												
Base Oil		M: M	3 370	11			0 350												
Brine		M	3 0	''			0												
Casing			•																
Casing										OT			- 1			0014			
DIAM.	CSG OD	()	olan/Actua	) I)	(pl	HOE an/Ac	tual)		(p	I/Act)		r⊤ (pl/A	Act)			COM	MENI		
9.5/8 "	9.625			872.4			70	0.0				1.40	1.40	Mixed a bbls of s bumped psi.	nd pum slurry @ plug p	iped 37 ) 1.89 s ressue	'8 sx og sg. Displ tested o	G cemer laced and casing to	it, 78 3000
		TYPE			LN	IGTH	CS	G O		VT	GF	RD	Т	HREAD					
Woll boo	d				(	m) 25	0	( ) 575		s/π 7.0	1.9	20	N	ow Vam					
X/over (I	u NK3SB Pin	x Nev	v Vam Box	<)			8.	575	4	7.0	L-6	30	Va	im x NK3	3				
Pup Join	t •					3.07	8.	575	4	7.0	L-8	30	1	NK3SB					
9 5/8" Ca	t asina					6.58	8.	575 575	4	7.0 7.0	L-8	30	1	NK3SB					
Float Joi	nt				1	3.17	8.	575	4	7.0	L-8	30	1	NK3SB					
Shoe Joi	nt				1	2.04 2.54	8. 8.	575 575	4	7.0 7.0	L-8	30 30	ו ז	NK3SB NK3SB					
Person	Personnel : on Site =91																		
		JOB 1	TITLE						NA	ME					CO	. NAME	Ξ		#
Drilling S	Supervisor (	snr)				R.K	ing						0	MV					7
Drilling S	Supervisor (l	Nigh				G.O	then						Se	ervice Co	ompany	/ 			28
Completi	on Supervisor	sor				L.Ta	avlor							amona ( aterina	JIISHOR	3			40 8
Reservoi	r Engineer					A.lo	n												-
Sub Sea	Engineer					W.B	ates ehetlei	tner											
Safati	Safety Inspections and Drills							m	1251										]
Salety,	mspecti	0/15	anu Drii			Su	11111	ary											

Shakers, V	ihakers, Volumes and Losses Data     ENGINEER Graeme Garrick       SHAKER 1 4x120     4x120														
SHAKER 1 SHAKER 2 SHAKER 3 SHAKER 4 SHAKER 5	4x120 4x120 4x84 4x84		VOLUN ACTIVI HOLE RESEF	<b>//E AVA</b> E 4 RVE 1	05 86	E (bbl) = MIXIN SLUG HEAV	G Y	591	1	LOSS DOWI SURF DUMF	<b>es (bbi) =</b> Nhole . + equip Ped	<b>0</b> 0.00	COMMENT	5	
Anchors	A 1 A 6	320 180			A 2 A7	320 175			A 3 A8	21 17	0 5	A 4	336	A 5	135
Workboats	<b>s</b>	₋ocatio	n Fuel (M3)	Barite (sx)	D/wtr (M3)	P/wtr (M3)	Cmt (sx)	Bent (sx)	Brir (M:	ne 3)		(nm)	10	Rig / Sea Data RIS.TENS (klbs)	a 232
Pacific Sentine Pacific Conqu	el ieror	at Rig On Ro	285 410	1190	215 345	545 177		300			WIND SP. WIND DIR PRES.(mb AIR TEMP	(kts) (deg) ars) (C)	290 1001 15.0	WAVES (m) SWELL (m)	1,910 1.8 8.0









# DEPTH @ 24:00 = 1,385.0m after 16.00 days since spud

# **OMV** Australia

# DATE Jul 06, 2002

#### FROM : R. King /G. Othen TO : C. Allport / S. Crocker

## DAILY DRILLING REPORT # 17

## Patricia-2 VIC/L21

Well DataCOUNTRYAUSTRALIAFIELDGIPPSLAND SUB-BASINDRILL CO.DIAMOND OFFSHORERIGOCEAN BOUNTY	DEPTH (mBRT) TVD (mBRT) PROGRESS (m) DAYS ON WELL DAYS +/- CURVE	1,385.0 701.2 0.0 17.00 -3.00	CUR. HOLE SIZE (") CASING OD (") SHOE TVD (mBRT) FIT (sg) LOT (sg)	8.50 9.5/8 " 700 1.40 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	11,852,851 C&S \$338,167.00 \$9,305,054.00
RT ABOVE SL (m)25.0WATER DEPTH (m) LAT52.5RT TO SEABED (m)77.5	CURRENT OP @ 060 PLANNED OP.	00 Waiting o Wait for w	n weather. reather to improve to pul	BOP.		
Summary of period 0000 to 2400 I Laid out Flow head & 7" Landing str Internal Tree Cap. Prepared to pull	I and tested					

### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jul 06, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
SUS	Р		PCO	00:00	02:00	2.00	1,385	Laid out Flow head & Lifting frame.
SUS	Р		PCO	02:00	03:30	1.50	1,385	POOH with 7" Landing string.
SUS	Р		XT	03:30	04:30	1.00	1,385	Made up Jetting tool, RIH and jetted ITC profile.
SUS	Ρ		ХТ	04:30	06:00	1.50	1,385	Made up & RIH with Internal Tree Cap on 7" Landing string, pressure tested SSR Plug from above 5000 psi / 10 min.
SUS	Р		XT	06:00	07:00	1.00	1,385	Continued RIH landed Internal Tree Cap.
SUS	TP	WHD	ХТ	07:00	08:30	1.50	1,385	Opened AAX and X/Overs, trapped pressure inside lines pressure evacuated riser fluid. Flow checked and circulated riser volume.
SUS	Р		PT	08:30	09:00	.50	1,385	Picked up ITC above BOP. Pressure tested 5.25" TGB Hanger SSR Plug against Shear rams 3000 psi / 10 min.
SUS	Р		PT	09:00	10:00	1.00	1,385	Run and landed Internal tree Cap, closed Annular & pressure tested 3500 psi. Confirmed with 50 kips Over pull.
SUS	Ρ		PCO	10:00	13:30	3.50	1,385	Unlatched Internal tree cap, POOH laid out 7" landing string. (ROV pulled control umbilical free plate. Removed plate & recovered deployment frame to surface. Attempted to close TCT needle valve, unable to close due to insufficient torque on ROV)
RMO	Р		BOP	13:30	14:30	1.00	1,385	Make up jetting tool for BOP & Rigged up to pull BOP.
RMO	TP	WEA	NOM	14:30	24:00	9.50	1,385	Unable to unlatch BOP. Inclement weather.

## ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 07, 2002

PHSE	CLS	RC	OP	FROM	ΤO	HRS	DEP	тн		ACT		ESCRIPTI	ON	
RMO	ΤP	WEA	NOM	00:00	06:00	6.00	1,3	85	Continue	to wait on wea	ather.			
		Dhar	- A I.			Dia				Finish On	0	0	Min Danith	Mary Daryth
		Phas	e Analy	/SIS		Pha	se nrs	5	start On	Finish On	Cum Hrs	Cum Days	win Depth	Max Depth
RIG MO	VE						12.0	Jun	n 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/	PRES	PUD					2.5	Jun	n 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDU	CTOR	HOLE					4.0	Jun	n 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDU	CTOR	S					5.5	Jun	n 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFAC	CE HOI	LE					15.0	Jun	n 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0
SURFAC	CE CAS	SING					41.0	Jun	n 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERM	IEDIAT	E HOLI	Ξ(1)				60.5	Jun	n 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERM	IEDIAT	E CASI	NG (1)				29.8	Jun	n 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0
PRODU	CTION	HOLE	(1)				34.8	Jun	n 27, 2002	Jun 28, 2002	205.0	8.54	887.0	1,385.0
PRODU	CTION	CSG/L	NR(1)				38.0	Jun	n 28, 2002	Jun 30, 2002	243.0	10.13	1,385.0	1,385.0
COMPL	ETION	/TIE-BA	CK				69.5	Jun	n 30, 2002	Jul 03, 2002	312.5	13.02	1,385.0	1,385.0
PRODU	CTION	TEST					66.0	Jul	03, 2002	Jul 05, 2002	378.5	15.77	1,385.0	1,385.0
SUSPEN	SION						18.5	Jul	05, 2002	Jul 06, 2002	397.0	16.54	1,385.0	1,385.0
RIG-DO	WN/MC	OVE OL	JT				10.5	Jul	06, 2002	Jul 06, 2002	407.5	16.98	1,385.0	1,385.0

DAILY DRILLING REPORT # 17 Patricia-2

# VIC/L21

WBM Data COST T	ODAY: \$0	CUM. W	VB MUD COST	: \$199,454	CUM. WBM+OBM COST: \$199,454				
Type : KCL Brine FROM : TIME : WEIGHT (sg) : 1.08 TEMP (C) :	VISCOCITY (se PV (cps): YP (lb100sq.ft) GEL10s/10m/10 (lb100sq.ft) : Fann 3/6/100 :	(sec/qt) : API FLUID LOSS (cm3/30min) : FIL FR CAKE (32nds inch) : /100m HTHPFL (cm3/30min) : HTHP CAKE : (32nds inch) :				00 : Ca : Db) :	SOLIDS H2O (%v OIL (%vc SAND : PH : PHPA (p	(%vol) : ol) : l) : pb) :	
Due #4 Longth (	<b>£4</b> \.								
BHA # 4 Length ( WT BLW JAR(k-lbs): BHA WT(k-lbs) : BHA DESCRIPTION :	T): STRING WT( PICK UP WT SLK 0FF WT	k-lbs) : (k-lbs) : (k-lbs) :	TRQE TRQE TRQE	MAX (ft-lbs): ON (ft-lbs): OFF (ft-lbs):		D.C. (1) AN D.C. (2) AN H.W.D.P. A D.P. ANN V	N. VELOCITY NN VELOCITY ( ANN VELOCITY VELOCITY (mp	(mpm): mpm): ′ (mpm): m) :	0 0 0 0
TOOL DESCR	IPTION	HRS	SERIAL #			COMMEN	IT		
Cum ou		r i	İ	i i					=
Last Tool Type :	MWD	MD (mBRT) (r	TVD INCL mBRT) DEG	AZ CORR. (deg) AZ (deg)	'V' SECT (m)	DOGLEG (deg/ 30m)	N/S E/W (m) (m)	TOOL TYP	Æ
Survey method : Mir	0.00 n Curvature	1,281 1,310 1,339 1,368	70190.9870189.6770189.8270190.46	232.232.7232.232.7233.233.4234.234.0	756.1 785.0 814.0 843.0	1.49 1.36 0.71 0.93	-469.3 -592 -486.8 -615 -504.2 -639 -521.5 -662	8 MWD 8 MWD 0 MWD 4 MWD	
			Dump	Dete					_
Bulk Stocks On Rig			Pumpi	Pump Data	- last 24 h	rs	Slow P	ump Data	
STOCK TYPE	START USED F	REC'D STOC	СК # ТҮН	PE LNR SF	PM EFF	Flow SPP	SPM SPP	DEPTH MW	N N
BariteSXBentoniteSXG-neatSXG+35% SiFISX	336 1546 2166	3: 15- 21:	36 46 66 0 0 1 Natio 3 Natio	nal 1 6.00 nal 1 6.00 nal 1 6.00 nal 1 6.00	0 97 47 97 0 97	(gpiii) (psi) 0 0 93 680 0 0	30 240 40 310 50 385	1180 9 1180 9 1180 9 1180 9	9) 9.3 9.3 9.3
G+BFS+12.25% SiFISXPot WaterM3Drill WaterM3Heli-fuelItrBase OilM3Rig FuelM3BrineM3	98 25 476 18 5440 235 359 8 0	25 4 52 3	0 98 58 05 0 51 0						
Casing									
DIAM. CSG OD SH (pla	IOE MD n/Actual)	SHOE TV (plan/Actua	D l al) (p	_OT F I/Act) (pl	FIT //Act)		COMMENT		
9.5/8 " 9.625	872.4		700.0	1.40	0 1.40 M t f	Mixed and pum obls of slurry @ oumped plug pr osi.	ped 378 sx og ) 1.89 sg. Displa ressue tested c	G cement, 78 aced and asing to 3000	
ТҮРЕ		LNGTH (m)	CSG OD V (") lb	VT GRD ps/ft	ТН	IREAD			
Well head X/over (NK3SB Pin x New V Pup Joint Pup Joint 9 5/8" Casing Float Joint Intermediate Joint Shoe Joint	'am Box)	2.35 3.17 3.07 3.07 746.58 13.17 12.04 12.54	8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4           8.575         4	7.0         L-80           7.0         L-80	Ne Var N N N N N	w Vam n x NK3 K3SB K3SB K3SB K3SB K3SB K3SB K3SB			

Personnel : on Site =92			
JOB TITLE	NAME	CO. NAME	#
Drilling Supervisor (snr) Drilling Supervisor (Nigh Testing Supervisor Completion Supervisor Sub Sea Engineer Drilling Engineer	R.King G.Othen M.Mulliner L.Taylor W.Bates P.Zehetleitner	OMV Service Company Diamond Offshore Catering	7 28 49 8
Safety, Inspections and Drills	Summary		
Shakers, Volumes and Losses DateSHAKER 14x120SHAKER 24x120SHAKER 34x84SHAKER 34x84SHAKER 44x84SHAKER 5RESERVE 1	ata ILABLE (bbl) = 591 LOSSES MIXING DOWNH 05 SLUG SURF. + 86 HEAVY DUMPE	ENGINEER Graeme Garric S (bbl) = 0 COMMENTS IOLE · EQUIP 0.00 D	k
Anchors A 1 320 A 6 180	A 2 320 A 3 210 A7 175 A8 175	A 4 336 A 5	135
Workboats         Location         Fuel         Barite (M3)         (sx)           Pacific Sentinel Pacific Conqueror         Geelon:         272         1190	D/wtr P/wtr Cmt Bent Brine (M3) (M3) (sx) (sx) (M3) 545 210 300 610 190	Weather         Rig / Sea Da           VISIBILITY(nm)         10           WIND SP. (kts)         60.0           WIND DIR (deg)         270           PRES.(mbars)         1011           AIR TEMP (C)         15.0	1,683 1,683 1.8 4.3





## Productive time by Operation









# DEPTH @ 24:00 = 1,385.0m after 17.00 days since spud

# **OMV** Australia

# DATE Jul 07, 2002

### FROM : R. King /G. Othen TO : C. Allport / S. Crocker

# DAILY DRILLING REPORT # 18

## Patricia-2 VIC/L21

Well Data		DEPTH (mBRT)	1,385.0	CUR. HOLE SIZE (")	8.50	AFE COST \$	11,852,851
COUNTRY	AUSTRALIA	TVD (mBRT)	701.2	CASING OD (")	9.5/8 "	AFE BASIS :	C&S
FIELD	GIPPSLAND SUB-BASIN	PROGRESS (m)	0.0	SHOE TVD (mBRT)	700	DAILY COST :	\$327,852.00
DRILL CO.	DIAMOND OFFSHORE	DAYS ON WELL	18.00	FIT (sg)	1.40	CUM COST :	\$9,632,906.00
RIG	OCEAN BOUNTY	DAYS +/- CURVE	-2.50	LOT (sg)	0.00		
RT ABOVE : WATER DEI RT TO SEAI	SL (m)25.0PTH (m) LAT52.5BED (m)77.5	CURRENT OP @ 0600 PLANNED OP.	) ROV Rep ROV work	airing Clump weight syst c on Sub sea tree / Instal	em. I corosion	cap / Pull posts ar	nd start Anchors.

F

### Summary of period 0000 to 2400 hrs

Waited on weather. Pulled BOP. Commenced ROV work on sub sea tree.

ACTIV	TY F	OR PE	RIO	0000 H	IRS TO	2400	HRS ON	Jul 07, 2002
PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
RMO	U		NOM	00:00	11:00	11.00	1,385	Continue to wait on weather. (Jumped ROV closed TCT needle valve & fitted protector cap)
RMO	P		BOP	11:00	12:00	1.00	1,385	Rigged down diverter in preparation to unlatch.
RMO	Р		BOP	12:00	13:45	1.75	1,385	Held JSA. Laid out diverter picked up landing joint.
RMO	Р		BOP	13:45	17:30	3.75	1,385	Unlatched and pulled BOP. (Moved Rig 45ft) Removed Ruckers & choke / kill lines. Laid out landing joint.
RMO	P		BOP	17:30	19:15	1.75	1,385	BOP on beams, split move and secured.
RMO	Р		BOP	19:15	20:30	1.25	1,385	Laid out joints of riser & rigged down BOP equipment.
SUS	Р		ХТ	20:30	21:30	1.00	1,385	Rigged up and ran umbilical with deployment frame. Made up Tree cap to drill pipe. (ROV removed PCA protector, positioned ROV and waited for deployment frame)
SUS	P		ХТ	21:30	24:00	2.50	1,385	Ran Tree cap to 65m stand by for ROV. (Landed Deployment frame, removed umbilical from frame & stabbed into hydraulic free plate. Picked up electrical lead and untangle cable from hydraulic line)

### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 08, 2002

PHSE	CLS	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
SUS	TP	MSC	ХТ	00:00	04:00	4.00	1,385	ROV clump weight cable parted. Recovered ROV to surface for additional weight. ROV dived to recover clump weight @ 02:15 hrs. Whilst recovering clump weight the ROV became entangled in the electrical cable attempted to work free unsuccessful. (P. Congueror & P. Sentinel decks clear @ 03:00 Hrs)
SUS	TP		ХТ	04:00	04:30	.50	1,385	Pulled Tree cap to surface. ROV observed electrical cable to be severed.
SUS	TP		ХТ	04:30	06:00	1.50	1,385	Attempted to recover ROV to surface to repair clump weight system. ROV entangled in deployment frame, put ROV back on bottom and attempted to release hydraulic stab.

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG MOVE	12.0	Jun 20, 2002	Jun 20, 2002	12.0	0.50	0.0	0.0
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	14.5	0.60	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	18.5	0.77	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	24.0	1.00	112.0	112.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	39.0	1.63	112.0	334.0
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	80.0	3.33	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	140.5	5.85	334.0	884.0
INTERMEDIATE CASING (1)	29.8	Jun 25, 2002	Jun 27, 2002	170.3	7.09	884.0	884.0
PRODUCTION HOLE (1)	34.8	Jun 27, 2002	Jun 28, 2002	205.0	8.54	887.0	1,385.0
PRODUCTION CSG/LNR(1)	38.0	Jun 28, 2002	Jun 30, 2002	243.0	10.13	1,385.0	1,385.0
COMPLETION/TIE-BACK	69.5	Jun 30, 2002	Jul 03, 2002	312.5	13.02	1,385.0	1,385.0
PRODUCTION TEST	66.0	Jul 03, 2002	Jul 05, 2002	378.5	15.77	1,385.0	1,385.0
SUSPENSION	22.0	Jul 05, 2002	Jul 07, 2002	400.5	16.69	1,385.0	1,385.0
RIG-DOWN/MOVE OUT	31.0	Jul 06, 2002	Jul 07, 2002	431.5	17.98	1,385.0	1,385.0

DAILY DRILLING REPORT # 18 Patricia-2

# VIC/L21

WBM Data COST T	ODAY: \$0	CUM. WB	MUD COST	: \$199,454	CUM. WBM+OBM COST: \$199,454				
Type : KCL Brine FROM : TIME : WEIGHT (sg) : 1.08 TEMP (C) :	VISCOCITY (see PV (cps): YP (lb100sq.ft): GEL10s/10m/10 (lb100sq.ft) : Fann 3/6/100 :	c/qt) : : :00m	API FLUID (cm3/30mir FIL I ER CA (32nds inch HTHPFL (cm3/30min HTHP CAK (32nds inch	LOSS 1): KE ): ): E 1):	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :		SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :		
	<b>64</b> ) -								
BHA # 4 Length ( WT BLW JAR(k-lbs): BHA WT(k-lbs) :	STRING WT(I PICK UP WT( SLK 0FF WT(	k-lbs) : (k-lbs) : (k-lbs) :	TRQE TRQE TRQE	MAX (ft-lbs): DN (ft-lbs): DFF (ft-lbs):	1 1         	D.C. (1) ANN. VE D.C. (2) ANN VEL H.W.D.P. ANN VE D.P. ANN VELOC	LOCITY (mpm): OCITY (mpm): ELOCITY (mpm): CITY (mpm) :	0 0 0 0	
BHA DESCRIPTION :		i							
TOOL DESCR	IPTION	HRS S	SERIAL #			COMMENT			
Survey	]			17 0000				T) (DE	
Last Tool Type ·	MWD	MD   TV (mBRT) (mBl	/D   INCL RT) DEG	AZ CORR. (deg) AZ	V' DO	GLEG N/S deg/ (m)	E/W TOOL (m)	TYPE	
Magnetic Declination :	0.00	4 004	704 00 00	(deg)	(m) 3	0m)	500.0 1.00/0		
Survey method : Mir	n Curvature	1,281 1,310	701 90.98 701 89.67	232. 232.7 232. 232.7	756.1 785.0	1.49 -469.3 1.36 -486.8	-592.8 MWD -615.8 MWD		
,		1,339	701 89.82	233. 233.4 234 234 0	814.0 843.0	0.71 -504.2	-639.0 MWD		
	l	1,000	701 00.40	204. 204.0	040.0	0.00 -021.0	-002.4 11170		
Bulk Stocks On Rig			Pump D	Data					
				Pump Data	- last 24 hrs		Slow Pump Data	a 	
STOCK TYPE	START USED F	REC'D STOCK	#  IY⊦ •	$^{\prime}E$   LNR   SF	2M EFF FIG (%) (gp	m) (psi)	(psi) (mBRT)	(ppg)	
Bentonite SX	1546	1546	1 Nation	nal 1 6.00	0 97	0 0 30	240 1180	9.3	
G-neat SX G+35% SiFl SX	2166	2166	3 Nation	nal 1 6.00	0 97	0 0 50 40	385 1180	9.3 9.3	
G+BFS+12.25% SiFI SX	00 26								
Drill Water M3	458 20	20 90 458							
Heli-fuel Itr Base Oil M3	5205 463	4742							
Rig Fuel M3	351 15	336							
Brine M3	0	0	J						
Casing									
DIAM. CSG OD SH	IOE MD	SHOE TVD	L	.OT F	FIT (Act)	COM	MENT		
9.5/8 " 9.625	872.4	7	00.0	1.40	0 1.40 Mixe	d and pumped 37	78 sx og G cement	., 78	
					bbls bum psi.	of slurry @ 1.89 s ped plug pressue	sg. Displaced and tested casing to 3	000	
ТҮРЕ		LNGTH CS	SG OD V	VT GRD	THRE	AD			
Well head X/over (NK3SB Pin x New V Pup Joint Pup Joint 9 5/8" Casing Float Joint Intermediate Joint	'am Box)	(III) 2.35 8 3.17 8 3.07 8 3.07 8 746.58 8 13.17 8 12.04 8	()         10           3.575         47           3.575         47           3.575         47           3.575         47           3.575         47           3.575         47           3.575         47           3.575         47           3.575         47           3.575         47           3.575         47           3.575         47	S/IL         L-80           7.0         L-80	New V Vam x I NK3S NK3S NK3S NK3S NK3S	am NK3 BB BB BB BB BB BB BB			
Shoe Joint		12.54 8	8.575 4	7.0 L-80	NK3S	SB			

Personnel : on S	Site =	80												
	JOB TI	TLE					NA	ME				CO.	NAME	#
Drilling Supervisor (s Drilling Supervisor (I Testing Supervisor Completion Supervis Sub Sea Engineer Drilling Engineer	snr) Nigh sor				R.King G.Oth W.Bat P.Zeh	g en es etleitne	er				OMV Service Diamo Caterir	e Company nd Offshore g		5 18 49 8
Safety, Inspecti	ons a	nd Dri	lls			Sum	mary							
Shakers, Volum SHAKER 1 4x120 SHAKER 2 4x120 SHAKER 3 4x84 SHAKER 4 4x84 SHAKER 5	) ) )	NOLUN ACTIVI HOLE RESEF	Ses D 1E AVA E 4 XVE 1	ata AILABLE 05 86	<b>E (bbi) =</b> Mixin Slug Heav	G Y	591	LC DC SL DL	D <b>SSE</b> DWNI JRF. JMPE	<b>S (bbi) =</b> Hole + Equip Ed	<b>0</b> 0.00	ENGINEE COMMEN	R Graeme Garrick	
Anchors A 1 A 6	335 205			A 2 A7	245 175		A A	3 .8	185 175		A 4	300	A 5	115
Workboats Pacific Sentinel Pacific Conqueror	Locatio Rig Rig	n Fuel (M3) 379 359	Barite (sx) 1190	D/wtr (M3) 525 570	P/wtr (M3) 235 185	Cmt (sx)	Bent (sx) 300	Brine (M3)		Weather VISIBILITY WIND SP. WIND DIR PRES.(mb AIR TEMP	Y(nm) (kts) (deg) (deg) (c)	10 50.0 270 1020 15.0	<b>Rig / Sea Data</b> RIS.TENS (klbs) VDL (mt) WAVES (m) SWELL (m)	0 1,735 1.8 4.3













# DEPTH @ 24:00 = 1,385.0m after 18.00 days since spud

# **OMV** Australia

## DATE Jul 08, 2002

#### FROM : R. King /G. Othen TO : C. Allport / S. Crocker

## DAILY DRILLING REPORT # 19

# Patricia-2

## VIC/L21

Well Data COUNTRY FIELD DRILL CO. RIG	AUSTRALIA GIPPSLAND SUB-BASIN DIAMOND OFFSHORE OCEAN BOUNTY	DEPTH (mBRT) TVD (mBRT) PROGRESS (m) DAYS ON WELL DAYS +/- CURVE	1,385.0 701.2 0.0 19.00 -2.90	CUR. HOLE SIZE (") CASING OD (") SHOE TVD (mBRT) FIT (sg) LOT (sg)	8.50 9.5/8 " 700 1.40 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	11,852,851 C&S \$365,007.00 \$9,997,913.00		
RT ABOVE SL (m)         25.0           WATER DEPTH (m) LAT         52.5           RT TO SEABED (m)         77.5		CURRENT OP @ 0600       En Route to Sole-2.         PLANNED OP.       Anchor up on Sole-2							

E

## Summary of period 0000 to 2400 hrs

ROV work on sub sea tree, Installed Corosion cap & recovered posts. Retrieve anchors.

### ACTIVITY FOR PERIOD 0000 HRS TO 2400 HRS ON Jul 08, 2002

PHSE	CLS	RC	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
SUS	TP	MSC	ХТ	00:00	04:00	4.00	1,385	ROV clump weight cable parted. Recovered ROV to surface for additional weight. ROV dived to recover clump weight @ 02:15 hrs. Whilst recovering clump weight the ROV became entangled in the electrical cable attempted to work free unsuccessful. (P.Conqueror & P. Sentinel decks clear @ 03:00 Hrs)
SUS	ΤP		XT	04:00	04:30	.50	1,385	Pulled Tree cap to surface. ROV observed electrical cable to be severed from ROV.
SUS	TP		ХТ	04:30	07:30	3.00	1,385	Attempted to recover ROV to surface to repair clump weight system. ROV entangled in deployment frame. Put ROV back on bottom and attempted to engage and release hydraulic stab. Successful.
SUS	TP		ХТ	07:30	10:30	3.00	1,385	Recovered ROV & repaired Clump weight system. Pulled deployment frame.
SUS	Ρ		ХТ	10:30	11:30	1.00	1,385	Ran & Installed Corrosion cap. Pulled sub sea tree posts. (ROV set electronic SCM caps)
RM	Ρ		AH	11:30	24:00	12.50	1,385	Anchor Handling. Start # 4@ 11:39hrs / Start # 8@ 11:45hrs. Finished # 8@ 13:16hrs / Finished # 4@ 13:38hrs / Start # 1@ 13:26hrs / Start # 5@ 13:51hrs. Finished # 1@14:50hrs / Finished # 5@15:34hrs. Start# 7@15:45hrs Finished # 7@ 17:50hrs. (Sentinel connected to tow bridle @ 16:34hrs) Start # 2@ 18:10hrs Finished # 2@ 20:12hrs / Start # 3@ 20:33hrs. Rig commenced heaving in on # 6@ 21:04hrs. Finished # 3@ 22:32hrs. (Conqueror connected to tow bridle @ 23:52hrs) Senintel reports broken wire to scotsman Repaired wire.

### ACTIVITY FOR PERIOD 0000 HRS TO 0600 HRS ON Jul 09, 2002

PHSE	CLS	RC	OP	FROM	ΤO	HRS	DEPTH	ACTIVITY DESCRIPTION
RM	Ρ		AH	00:00	00:45	.75	1,385	Sentinel takes up static tow @ 00:20hrs. Rig continued heaving #6 Finished @ 00:45hrs (Rig on tow @ 00:45hrs)

Phase Analysis	Phase hrs	Start On	Finish On	Cum Hrs	Cum Days	Min Depth	Max Depth
RIG-UP/PRESPUD	2.5	Jun 20, 2002	Jun 20, 2002	2.5	0.10	0.0	0.0
CONDUCTOR HOLE	4.0	Jun 20, 2002	Jun 20, 2002	6.5	0.27	0.0	112.0
CONDUCTORS	5.5	Jun 20, 2002	Jun 20, 2002	12.0	0.50	112.0	112.0
RIG MOVE	24.5	Jun 20, 2002	Jul 08, 2002	36.5	1.52	0.0	1,385.0
SURFACE HOLE	15.0	Jun 21, 2002	Jun 21, 2002	51.5	2.15	112.0	334.0
SURFACE CASING	41.0	Jun 21, 2002	Jun 23, 2002	92.5	3.85	334.0	334.0
INTERMEDIATE HOLE (1)	60.5	Jun 23, 2002	Jun 25, 2002	153.0	6.38	334.0	884.0
INTERMEDIATE CASING (1)	29.8	Jun 25, 2002	Jun 27, 2002	182.8	7.61	884.0	884.0
PRODUCTION HOLE (1)	34.8	Jun 27, 2002	Jun 28, 2002	217.5	9.06	887.0	1,385.0
PRODUCTION CSG/LNR(1)	38.0	Jun 28, 2002	Jun 30, 2002	255.5	10.65	1,385.0	1,385.0
COMPLETION/TIE-BACK	69.5	Jun 30, 2002	Jul 03, 2002	325.0	13.54	1,385.0	1,385.0
PRODUCTION TEST	66.0	Jul 03, 2002	Jul 05, 2002	391.0	16.29	1,385.0	1,385.0
SUSPENSION	33.5	Jul 05, 2002	Jul 08, 2002	424.5	17.69	1,385.0	1,385.0
RIG-DOWN/MOVE OUT	31.0	Jul 06, 2002	Jul 07, 2002	455.5	18.98	1,385.0	1,385.0

DAILY DRILLING REPORT # 19 Patricia-2

## VIC/L21

WBM Data	BM Data COST TODAY : \$0 CUM						B MUD COST: \$199,454				CUM. WBM+OBM COST: \$199,454							
Type : KCL FROM : TIME : WEIGHT (sg) : TEMP (C) :	Type :         VISCOCITY (sec/qt) :           KCL Brine         PV (cps):           FROM :         YP (lb100sq.ft):           TIME :         GEL 10s/10m/100m           NEIGHT (sg) :         1.08           TEMP (C) :         Fann 3/6/100 :					AP (cm FIL (32i HT (cm HTI (32	API FLUID LOSS (cm3/30min) : FILTER CAKE (32nds inch) : HTHPFL (cm3/30min) : HTHP CAKE (32nds inch) :				C K H P P	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :			S H C S F F	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :		
Bit Data for Bit	# 4 <sup> </sup> /	ADC #						We	ear			O1	D	L	В	G	O2	R
SIZE ("): MANUFACTURER : TYPE : SERIAL # : DEPTH IN (m RT) : DEPTH OUT (m RT)	):	Reed	AVE WO AVE RP FLOW († PUMP F HSI (hp/	DB (k-lbs M : gpm) : PRESS. /sqi) :	s) : (psi):	0.00	00	NOZZLESDrilled over the last 24 hrsXMETERAGE (m) :0XON BOTTOM HRS :.0XIADC DRILL. HRS :.0XTOTAL REVS :0XROP (m/hr):			hrs 0 .0 .0 0	Calculated over the bit run CUM.METERAGE (m) 501 CUM. ON BOT. HRS : 13.8 CUM.IADC DRILL HRS: 22.0 CUM.TOT. REVS : 0 ROP (m/hr): 22.8			trun 501 13.8 22.0 0 22.8			
BHA #4 Le WT BLW JAR(k-lbs) BHA WT(k-lbs) : BHA DESCRIPTION	BHA #4Length (ft) :WT BLW JAR(k-lbs):STRING WT(k-lbs) :BHA WT(k-lbs) :PICK UP WT(k-lbs) :SLK 0FF WT(k-lbs) :SLK 0FF WT(k-lbs) :						TRC TRC TRC	QE M/ QE Of QE Of	AX (ft-l N (ft-lbs FF (ft-ll	bs): s): bs):			D.C D.C H.W D.P	. (1) AN . (2) AN D.P. A . ANN \	IN. VEL IN VEL INN VE /ELOC	-OCITY OCITY LOCITY ITY (mp	(mpm): (mpm): ( (mpm): om) :	0 0 0 0
TOOL	DESCI	RIPTION		ŀ	IRS	SER	IAL #	¥					СО	MMEN	Т			
Survey Last Tool Type :			MWD	ME (mBF	) RT) (n	TVD nBRT)	INC DE	CL G ((	AZ ( deg)	CORF AZ (deg)	א. S	'V' ECT (m)	DOGLE (deg/ 30m)	G	N/S (m)	E/W (m)	TOOL	. TYPE
Survey method :	ation : Mi	in Curv	0.00 ature	1, 1, 1, 1,	281 310 339 368	701 701 701 701	90.9 89.0 89.0 90.4	98 67 82 46	232. 232. 233. 234.	232 232 233 234	.7 .7 .4 .0	756.1 785.0 814.0 843.0	1. 1. 0. 0.	49 36 71 93	-469.3 -486.8 -504.2 -521.5	-592 -615 -639 -662	<ul><li>.8 MWD</li><li>.8 MWD</li><li>.0 MWD</li><li>.4 MWD</li></ul>	
Bulk Stocks On	Rig						um	p Da	ata	- D-4		-4 0 4 4			r —	01.000	Det	_
STOCK TYPE	Ξ	START	USED	REC'D	STOC	ж #	¢ 7	TYPE		NR ")	<u>а - Ia</u> SPM	<u>st 24 r</u> EFF (%)	Flow	SPP (psi)	SPM	SPP (psi)	DEPTH	a MW (ppg)
Barite Bentonite G-neat G+35% SiFl	SX SX SX SX	336 1546 2166			3: 154 210	36 46 66	1 Na 2 Na 3 Na	ationa ationa ationa	al 1 6 al 1 6 al 1 6	5.00 5.00 5.00	0 47 0	97 97 97 97	(gpiii) 0 93 0	0 680 0	30 40 50	240 310 385	1180 1180 1180 1180	9.3 9.3 9.3 9.3
G+BFS+12.25% SiF Pot Water Drill Water Heli-fuel Base Oil Rig Fuel Brine	FI SX M3 M3 Itr M3 M3 M3 M3	98 458 4742 336 0	14 636 11		44 410 32	0 98 44 06 0 25 0												

## DAILY DRILLING REPORT # 19 Patricia-2 VIC/L21

Casing										
DIAM.	CSG OD	SHOE MD (plan/Actual)	SHOE (plan/A	TVD (ctual)	LOT (pl/Act)	F (pl/	IT Act)		COMMENT	
9.5/8 "	9.625	872.4		700.0		1.40	1.40	Mixed and pun bbls of slurry @ bumped plug p psi.	nped 378 sx og G cem 1.89 sg. Displaced a ressue tested casing t	ent, 78 nd o 3000
		TYPE	LNGTI (m)	H CSG OE (")	) WT Ibs/ft	GRD	٦	HREAD		
Well hea X/over (I Pup Join 9 5/8" Ca Float Joir Intermed Shoe Joi	d NK3SB Pin t t asing nt liate Joint nt	x New Vam Box)	2.35 3.17 3.07 3.07 746.5{ 13.17 12.04 12.54	8.575 8.575 8.575 8.575 8.575 8.575 8.575 8.575 8.575	47.0 47.0 47.0 47.0 47.0 47.0 47.0 47.0	L-80 L-80 L-80 L-80 L-80 L-80 L-80 L-80	۱ ۷	lew Vam am x NK3 NK3SB NK3SB NK3SB NK3SB NK3SB NK3SB NK3SB		
Person	nel : on	Site =83	-							
		JOB TITLE			NAME	CO	. NAME	#		
Drilling S Drilling S Testing S Completi Drilling E	Supervisor ( Supervisor ( Supervisor ion Supervi Engineer	snr) Nigh sor	R. G. P.	R.King OMV G.Othen Service Company Diamond Offshore Catering P.Zehetleitner						3 20 52 8
Safety,	Inspect	ons and Drills		Summ	ary					
Shaker SHAKER SHAKER SHAKER SHAKER SHAKER	<b>rs, Volun</b> 1 4x12 2 4x12 3 4x84 4 4x84 5	nes and Losses Da	<b>LABLE (bl</b> MI 5 SL 6 HE	<b>bi) =</b> XING UG EAVY	591 LO DO SUI DU	<b>SSES (bbi)</b> WNHOLE RF. + EQUI MPED	) <b>=</b> IP	ENGINE 0   COMME 0.00	ER Graeme Garrick	
Ancho	rs A A	1 0 A 6 0 A	A 2 0 A 7 0		A 3 A8	0 0		A4 0	A 5	0
Workb Pacific S Pacific C	oats entinel conqueror	Location Fuel Barite (M3) (sx) Rig 364 1190 Rig 339	D/wtr P/\ (M3) (M 525 23 570 18	wtr Cmt E 3) (sx) ( 0 3 0	Bent Brine sx) (M3) 600	Wea VISIE WIND WIND PRES AIR T	ther BILITY(r D SP. (k D DIR (c S.(mbar TEMP (C	im) 12 ts) 35.0 leg) 300 s) 1013 C) 15.0	Rig / Sea Data RIS.TENS (klbs) VDL (mt) WAVES (m) SWELL (m)	0 1,845 1.5 2.1











# DEPTH @ 24:00 = 1,385.0m after 19.00 days since spud

## **Formation Integrity Test** 13-3/8" Casing



Volume- Pumped (bbls)





### Casing, Running and Cementing Report

Patricia - 2 9 5/8" Casing

OMV Australia Reps OMV Australia Witness Date 25 / 26 June	Guy Howard & Gavin Othen 26-Ju	Drilling Contracto Cement Compan	or & Rig y & Service Rep.	Ocean Bounty Halliburton
Basic Data	Mud Data		Hole & Prev Casing Data	
Casing Size 9 5/8"	Type	KCL / PHPA / Glycol	Casing Size	13 3/8" in
Hole Size 12 1/4"	Weight 9.3	ppg 1.12 SG	Hole OD	17 1/2" in
Hole Calipered no	Frenusn	Elucia 100	M. Depth	334 m
Eat PHT degree C	Noight 05	uper Flush 102	Casing ID Shoo Donth	12.415 IN 227.1 m
Est BHT degree.c	weight 9.5	ppg 1.14 sg	Silve Deptil	327.1 111
Cement Volumes	Displacement		Pumping Pressures	
Annular Vol 55 bbl	Calc. Disp	189 bbl	Max Pumping Press	780 nsi
<b>% Excess</b> L:0% T: 20%	Cmt Unit Disp	180 bbl	Sheared Plug with	1800 psi
Shoe Track 6 bbl	Rig Displacement	0 bbl	Bumped Plug with	530 psi
Bat Hole 5.7 bbl	Actual Strokes	0 str	Tested Casing with	3000 psi
Total Volume 77.6 bbl	l iner size / bbl/stroke	6.5" / 0.1193	rested ousing with	0000 poi
		0.0 / 0.1100		
Comont Data				
			Displacement Data	
		0	Displacement Data	1.40 have
Cement Type		G 70 hbl	MIX Rate Lead / Tall	1.40 bpm
Siurry volume DDI		78 DDI	Disals sourcest Data	40.00 have
wix water DDI		Seawater 41.5 bbi	Displacement Rate	10.00 bpm
Lig. Additive	Lig. Additive	-		
Econ	NF-1	0,25gal/10bbl	Plug Bumped (Y/N)	У
NF-5	Halad-413	20gal/10bbl		0.00.111
Dry Additive	Dry Additive CaCl <sub>2</sub>	1% BWOW	Disp. Over Calc.	0.00 bbl
Plan Wt	Plan Wt (ppg) 15.8	ppg 1.90 SG		
Actual Wt	Actual Wt (ppg) 15.8	ppg 1.90 SG	Final Circ Press	530 psi
Yield	Yield	1.16 cuft/sk		
Total # sx cement used	Total # sx cement used	378 sx	Disp. by Rig/Cmt Unit	Cmt Unit
Spacers	Centralizers		Scratchers	1
Ahead	Make	- Weatherford	Make -	
Type/Volume Seawater 20.00 bbl	Type	- Non Weld	Type -	
	Number	- 14	Number -	
Behind	Spacing	2 per shoe track .It	Spacing -	
Type/Volume Seawater displ bbl	Comments	<ul> <li>c/w stop collars</li> </ul>	Comments None I	Run
Casing Data				
Total Depth - From RT (metres)	884.00 m		Water Depth (m)	77.50 m
Off Bottom (Rat Hole)	12.00 m		RT-Sea Level	25.00 m
Casing Shoe depth (mRT)	872.00 m	Wellhead	Stick-up above Mudline	2.35 m
			RT to Wellhead Datum	75.15 m
Casing String Components				
1x 9 5/8" casing hanger pup joint, 47	# L-80, New Vam pin down	2.35 m		
1x 9 5/8" XO NK3SB pin x New Vam	box	3.17 m		
1x 9 5/8" Pup Joint NK3SB		3.07 m		
1x 9 5/8" Pup Joint NK3SB		3.07 m		
58x 9 5/8" 47#, L-80 jts, NK3SB		746.58 m		
1x 9 5/8" Float Jt. (Baker locked), NK	3SB Box	13.17 m		
1x 9 5/8" Inter Jt (Baker locked), New	/ Vam	12.04 m		
1x 9 5/8" Shoe jt.w/ float shoe (Baker	locked), New Vam	12.54 m		

#### **Casing Notes**

Total string length Landing String:

Casing and Cementing Timetable

795.99 m 76.37 m

Operation	Start Time	End Time	Initial Press	Final Press	Vol (bbl)	Comments
Rig up and run casing	20:30hrs 25/6/02	04:00hrs 26/6/02				
Circulation	4:00	4:30			300	
RU and pump seawater	4:47				10	
Test Cement lines	4:52			3000		
Pre-Flush	4:56	5:30			60	
Spacer	5:30	5:32			10	
Drop Bottom Plug launching ball.	5:32	5:37		1200	1.5	Sheared w/ 1200 psi after pumping 1.5 bbls.
Mix and Pump Slurry	5:45	5:58	470	610	78	pumped 15.8 ppg slurry w/ 5.5 bpm.
Drop Top Plug launching dart	6:02			1800	7	Sheared w/ 1800 psi after pumping 7 bbls.
Displacement	6:12	6:33	532	530	180	w/ rate from 10 to 5 bpm
Bump Plug / Test Casing	6:33	6:41	530	3000		bumped plug w/ 500 psi over last displacement pressure. Held pressure for 5min. Pressured up to 3000 psi for casing test. Held pressure for 5min.
Bleed Pres/Check Float Equip.	6:41	1	1			OK.

#### **Detailed Casing and Cementing Report**

Started to run casing at 20:30hrs on the 25/06/02. Landed string at 03:30hrs on the 26/6/02. Circulated 300 bbls (appx. 1.5 times the casing volume) at 10bpm. RU Halliburton, pumped 10 bbls of seawater ahead and pressure tested lines to 3000 psi. Pumped 60 bbls of Super Flush 102 followed by 10 bbls of seawater. Dropped bottom piug launching ball and sheared plug with 1,200 psi. Mixed and pumped 70bbls of 15.8 ppg cement slurry at 5.5 bpm, released the top plug launching dart and displaced with seawater at 10bpm.. Top plug sheared with 1800psi after pumping 7 bbls. Displaced casing with 180 bbls Displaced casing with 180 bbls seawater. Bumped the plugs at 5bpm and pressure du to 500 psi over the final displacement pressure (530 psi). Held pressure for 5 min and continued to pressure up to 3,000 psi and held pressure for 5 min to test casings. Bled off and checked the floats. Ok. Released the running top land recovered the landing stripn

Released the running tool and recovered the landing string.







### **OMV AUSTRALIA**

## **Cuttings Descriptions Report**

Well Name :	PATR	RICIA - 2	Print Date	Fri 28/	/06/200	2
Wellsite Geolo	ogist(s)	Peter Boothby Ross Tolliday				
Interval (mRT)	%	Lithology / Show Descriptions			Ca (%)	Mg (%)
334 to 340	100	<b>ARGILLACEOUS CALCILUTITE:</b> white grey, very soft to soft, amorphous, sticky in par forams (coral debris, bryozoa, spicules, s siliceous clay content, trace to 5% calcisi	to very light grey, light bl rt, 10-15% fossil fragment shell fragments, forams), { iltite, trace fine dark green	uish s and 5-10%		
340 to 345	100	ARGILLACEOUS CALCILUTITE: as ab	oove			
345 to 350	70	<b>ARGILLACEOUS CALCILUTITE:</b> white grey, light olive grey, very soft to soft, amorphot fragments and forams (coral debris, bryo forams), 5-10% siliceous clay content, 10%	to very light grey, light blo bus, sticky in part, 10-15% zoa, spicules, shell fragm 0 to 15% calcisiltite, grade	uish o fossil ents, es to	64	0
	30	<b>ARGILLACEOUS CALCISILTITE:</b> white grey, light olive grey, very soft to soft, am fragments and forams (coral debris, bryo forams), 15-25% siliceous clay content, 5 fine to fine calcite grains, grades to Argill fine dark green glauconite.	e to very light grey, light bl horphous, 10-15% fossil zoa, spicules, shell fragm 5 to 10% micrite, trace to s aceous Calcilutite in part,	uish ents, 5% very trace		
350 to 360	50	ARGILLACEOUS CALCILUTITE: as ab	oove.		60	0
	50	ARGILLACEOUS CALCISILTITE: domi	inantly as above.			
360 to 365	60	ARGILLACEOUS CALCILUTITE: as ab	oove			
	40	ARGILLACEOUS CALCISILTITE: as al	oove			
365 to 370	60	ARGILLACEOUS CALCILUTITE: as ab	oove		66	0
	40	ARGILLACEOUS CALCISILTITE: as at	pove			
370 to 380	60	<b>ARGILLACEOUS CALCISILTITE:</b> white grey, light olive grey, very soft to soft, am and forams (coral debris, bryozoa, spicul 15-25% siliceous clay content, 5 to 15% fine calcite grains, grades to Argillaceous green glauconite.	e to very light grey, light bl horphous, 5-10% fossil fra es, shell fragments, foran micrite, trace to 5% very f s Calcilutite in part, trace f	luish gments ns), ine to ine dark	70	0
	40	ARGILLACEOUS CALCILUTITE: as ab	oove			
380 to 390	50	<b>ARGILLACEOUS CALCILUTITE:</b> white grey, light olive grey, very soft to soft, amorphot fragments and forams (coral debris, bryo forams), 15-25% siliceous clay content, 1	to very light grey, light blo bus, sticky in part, 10-15% zoa, spicules, shell fragm 10 to 15% calcisilt, grades	uish o fossil ents, o to	55	0
	50	<b>ARGILLACEOUS CALCISILTITE:</b> white grey, light olive grey, very soft to soft, am and forams (coral debris, bryozoa, spicul 15-30% siliceous clay content, 5 to 15% fine calcite grains, grades to Argillaceous green glauconite.	e to very light grey, light bl norphous, 5-10% fossil fra es, shell fragments, foran micrite, trace to 5% very f s Calcilutite in part, trace f	luish gments ns), ine to ine dark		
390 to 400	70	<b>ARGILLACEOUS CALCILUTITE</b> : as ab to Calcilutite.	oove, 5-15% siliceous clay	, grades	84	0
	30	ARGILLACEOUS CALCISILTITE: as al	oove			



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Wellsite Geolo	gist(s)	Peter Boothby Ross Tolliday				
Interval (mRT)	%	Lithology / Show Descriptions			Ca (%)	Mg (%)
400 to 405	50 50	<b>CALCILUTITE :</b> white to very light grey, amorphous, sticky in part, 10-15% fossil debris, bryozoa, spicules, shell fragments content, 10 to 15% calcisilt, grades to Arg fine dark green glauconite. <b>ARGILLACEOUS CALCISILTITE:</b> white grey, light olive grey, very soft to soft, am and forams (coral debris, bryozoa, spicul 15-30% siliceous clay content, 5 to 15% fine calcite grains, grades to Argillaceous green glauconite.	light olive grey, very s fragments and forams ( s, forams), 5-10% silice gillaceous Calcisiltite in torphous, 5-10% fossil f es, shell fragments, for micrite, trace to 5% ver calcilutite in part, trace	oft to soft, coral ous clay part, trace bluish ragments ams), y fine to e fine dark	84	0
405 to 410	70	ARGILLACEOUS CALCISILTITE: as at	oove		68	0
	30	CALCILUTITE : as above, hard in parts	i.			
410 to 415	60	ARGILLACEOUS CALCISILTITE: very grey, light olive grey, range grey, soft to firm, a fragments and forams (coral debris, bryo forams), 15-30% siliceous clay content, 5 to fine clear to orange calcite grains, trac	light to light grey, light morphous, 5-15% fossi zoa, spicules, shell frag 5 to 15% micrite, 5-10% e fine dark green glauc	bluish I ments, 5 very fine onite,	70	0
	40	<b>CALCILUTITE :</b> white to very light grey, amorphous, 5-10% fossil fragments and spicules, shell fragments, forams), 5-15% 15% calcisilt, trace fine dark green glauce Calcisiltite in part.	light olive grey, soft to forams (coral debris, br siliceous clay content, onite, grades to Argillac	firm, yozoa, 10 to eous		
415 to 420	60	ARGILLACEOUS CALCISILTITE: as at	oove, increasing fossil o	ontent	70	0
	40	CALCILUTITE : as above, recrystallised	d and hard in parts			
420 to 425	60	<b>ARGILLACEOUS CALCISILTITE:</b> very orange grey, soft to firm, amorphous, 5-1 (coral debris, bryozoa, spicules, shell frag siliceous clay content, 5 to 15% micrite, orange calcite grains, trace fine dark gree Argillaceous Calcilutite in part.	light to light grey, light 5% fossil fragments an gments, forams), 20-30 5-10% very fine to fine en glauconite, grades to	olive grey, d forams % clear to	70	0
	40	<b>CALCILUTITE :</b> white to very light grey, in parts, amorphous, 5-10% fossil fragme bryozoa, spicules, shell fragments, foram 10 to 15% calcisilt, 5-10% recrystallised, glauconite, grades to Argillaceous Calcis	light olive grey, soft to ents and forams (coral c is), 10-15% siliceous cla trace very fine dark gre iltite in part.	firm, hard lebris, ay content, en		
425 to 430	80	ARGILLACEOUS CALCISILTITE: as at recrystallised	oove, softer, only trace		62	0
	20	CALCILUTITE : as above				
430 to 440	70	ARGILLACEOUS CALCISILTITE: as at	oove		78	0
	30	CALCILUTITE : as above				
440 to 450	50	<b>ARGILLACEOUS CALCISILTITE:</b> very orange grey, soft to firm, amorphous, 5-1 bryozoa, spicules, shell fragments, foram 5 to 15% micrite, 5-10% very fine to fine trace fine dark green glauconite, trace so Calcilutite in part.	light to light grey, light 5% fossil fragments (cc is), 20-30% siliceous cla clear to orange calcite ft pyrite, grades to Argi	olive grey, oral debris, ay content, grains, laceous	89	0



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Wellsite Geologist(s): Peter Boothby Ross Tolliday								
Interval (mRT)	%	Lithology / Show Descriptions			Ca (%)	Mg (%)		
	50	<b>CALCILUTITE :</b> very light to light medium grey, light to medium olive grey, soft, dispersive in parts, amorphous, 5% fossil fragments (coral debris, bryozoa, spicules, shell fragments, forams), 15-20% siliceous clay content, 5 to 10% calcisilt, trace very fine dark green glauconite, grades to Argillaceous Calcilutite.						
450 to 460	80	ARGILLACEOUS CALCISILTITE: as above			67	0		
	20	CALCILUTITE : as above						
460 to 470	90	ARGILLACEOUS CALCISILTITE: light medium olive grey, trace orange soft, dis amorphous, 5% fossil fragments (coral de fragments, forams), 20-35% siliceous cla orange calcite grains, trace very fine dark disseminated pyrite, grades to Argillaceo	to light medium grey, ligh persive in parts, firm in p ebris, bryozoa, spicules, y content, 5 to 10% fine, < green glauconite, trace us Calcilutite.	nt to arts shell clear to soft	59	0		
	10	<b>CALCILUTITE :</b> very light to light mediu grey, soft, dispersive in parts, amorphous forams, 15-20% siliceous clay content, 5 dark green glauconite, grades to Argillac	Im grey, light to medium s, 5% fossil fragments ar i to 10% calcisilt, trace ve eous Calcilutite.	olive d ery fine				
470 to 480	90	ARGILLACEOUS CALCISILTITE: as at content, 30-40%, Grades to Marl.	oove, Increasing argillace	eous	56	0		
	10	CALCILUTITE : as above						
480 to 490	90	ARGILLACEOUS CALCISILTITE: as at	oove		58	0		
	10	CALCILUTITE : as above						
490 to 500	95	ARGILLACEOUS CALCISILTITE: as at	oove		50	0		
	5	CALCILUTITE : as above						
500 to 505	60 40	ARGILLACEOUS CALCISILTITE: light medium olive grey, trace orange, soft to amorphous, 5% fossil fragments, 20-35% fine clear to orange calcite & recrystallise green glauconite, trace soft disseminated Calcilutite MARL: very light to light medium grey, soft, dispersive in parts, amorphous, 5% 30-40% siliceous clay content, trace to 5	to light medium grey, ligh rarely firm, dispersive in % siliceous clay content, ed grains, trace very fine d pyrite, grades to Argilla light to medium olive gre fossil fragments and fora % calcisilt, trace very fine	nt to parts, 5 to 10% dark ceous ry, very ums, e dark	49	0		
		green glauconite, grades to Argillaceous	Calcilutite.					
505 to 510	80	ARGILLACEOUS CALCISILTITE: as at	oove, trace dark grey		60	0		
	20	MARL : as above						
510 to 515	90	<b>ARGILLACEOUS CALCISILTITE:</b> light medium olive grey, soft to rarely firm, dis fossil fragments, 25-35% siliceous clay c orange calcite & recrystallised grains, tra glauconite, trace soft disseminated pyrite Calcilutite.	to light medium grey, ligh persive in parts, amorph ontent, 5 to 10% fine, cle ce very fine dark green e, grades to Argillaceous	nt to ous, 5% ear to	66	0		
	10	MARL: as above						
515 to 520	90	ARGILLACEOUS CALCISILTITE: very medium olive grey, soft to rarely firm, dis fossil fragments, 25-35% siliceous clay c orange calcite & recrystallised grains, tra	light to light medium gre persive in parts, amorph ontent, 10 to 20% fine, c ce very fine dark green	y, light to ous, 5% lear to	60	0		



Wellsite Geologist(s) :       Peter Boothby       Ross Tolliday         Interval (mRT)       %       Lithology / Show Descriptions       Ca (%)         glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.       10       glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.       10         520 to       525       70       CALCISILTITE : very light to light medium grey, light to medium olive grey, soft to rarely firm, amorphous, 5% fossil fragments, 15-25% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.       56         30       MARL : very light to light grey, light to medium olive grey, very soft,       57	Mg
Interval (mRT)%Lithology / Show DescriptionsCa (%)glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.(%)10MARL : as aboveMARL : as above520 to 52570CALCISILTITE : very light to light medium grey, light to medium olive grey, soft to rarely firm, amorphous, 5% fossil fragments, 15-25% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.5630MARL : very light to light grey, light to medium olive grey, very soft,56	Mg
glauconite, trace soft disseminated pyrite, grades to Argillaceous         Calcarenite.         10       MARL : as above         520 to 525       70         CALCISILTITE : very light to light medium grey, light to medium olive grey, soft to rarely firm, amorphous, 5% fossil fragments, 15-25% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.       50         30       MARL : very light to light grey, light to medium olive grey, very soft,       56	(%)
520 to       525       70       CALCISILTITE : very light to light medium grey, light to medium olive grey, soft to rarely firm, amorphous, 5% fossil fragments, 15-25% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.       56         30       MARL : very light to light grey, light to medium olive grey, very soft,       56	
520 to52570CALCISILTITE : very light to light medium grey, light to medium olive grey, soft to rarely firm, amorphous, 5% fossil fragments, 15-25% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcarenite.5630MARL : very light to light grey, light to medium olive grey, very soft,56	
30 MARL: very light to light grey, light to medium olive grey, very soft,	0
dispersive in parts, amorphous, 5% fossil fragments and forams, 30-40% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, grades to Argillaceous Calcilutite.	
525 to         530         60         CALCISILTITE : as above         53	0
40 MARL: as above	
530 to         535         70         CALCISILTITE : as above         56	0
30 MARL : as above	
535 to54060CALCISILTITE : very light to light medium grey, light to medium olive grey, soft to rarely firm, amorphous, 5% fossil fragments, 10-15% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Calcarenite.66	0
20 <b>CALCARENITE :</b> very light to light medium grey, white in parts, soft to firm, amorphous, silt to very fine clear to very light grey calcite grains, 5% fossil fragments, 10-15% siliceous clay content, trace very fine dark green glauconite, trace soft disseminated pyrite.	
20 MARL: very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, 5% fossil fragments and forams, 30-40% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, grades to Argillaceous Calcilutite.	
540 to         545         40         MARL : as above         78	0
40 CALCISILTITE : as above	
20 CALCARENITE : as above	
545 to55040CALCISILTITE : very light to light medium grey, light to medium olive grey, soft to rarely firm, amorphous, 5% fossil fragments, 10-15% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Calcarenite.68	0
40 <b>MARL</b> : very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, 5% fossil fragments and forams, 30-40% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, grades to Argillaceous Calcilutite	
20 <b>CALCARENITE</b> : very light to light medium grey, soft to firm, amorphous, silt to very fine, clear to very light grey calcite grains, 5% fossil fragments, 10-15% siliceous clay content, trace very fine dark green glauconite, trace soft disseminated pyrite.	
550 to         555         60         CALCISILTITE : as above         60	0
20 CALCARENITE : as above	


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Wellsite Geolo	ogist(s)	Peter Boothby Ross Tolliday				
Interval (mRT)	%	Lithology / Show Descriptions			Ca (%)	Mg (%)
	20	MARL: as above				
555 to 560	50	ARGILLACEOUS CALCISILTITE: very medium olive grey, soft to rarely firm, 5% siliceous clay content, 10 to 20% fine, cle recrystallised grains, trace very fine dark disseminated pyrite, grades to Calcaren	light to light medium grey fossil fragments, 10-25% ear to orange calcite & green glauconite, trace s te.	, light to	68	0
	30	<b>CALCARENITE</b> : very light to light med firm, silt to fine, clear to very light grey ca 10-15% siliceous clay content, trace very soft disseminated pyrite.	ium grey, white in parts, lcite grains, 5% fossil frag fine dark green glauconi	soft to gments, te, trace		
	20	MARL: as above				
560 to 565	60	ARGILLACEOUS CALCISILTITE: as at	oove		64	0
	30	MARL: as above				
	10	CALCARENITE : as above				
565 to 570	50	ARGILLACEOUS CALCISILTITE: as at	ARGILLACEOUS CALCISILTITE: as above		60	0
	30	MARL: as above				
	20	CALCARENITE : as above				
570 to 575	70	ARGILLACEOUS CALCISILTITE: very medium olive grey, soft to occasionally fi siliceous clay content, 10 to 20% fine, cle recrystallised grains, trace very fine dark disseminated pyrite, grades to Calcaren	light to light medium grey rm, 5% fossil fragments, 7 ear to orange calcite & green glauconite, trace te.	r, light to 10-25%	78	0
	20	MARL: as above				
	10	CALCARENITE : as above				
575 to 580	75	ARGILLACEOUS CALCISILTITE: as al	oove		82	0
	20	MARL: as above				
	5	CALCARENITE : as above				
580 to 585	60	ARGILLACEOUS CALCISILTITE: as al	oove		56	0
	35	<b>MARL</b> : very light to light grey, light to n dispersive in parts, amorphous, 5% fossi siliceous clay content, trace to 5% calcisi glauconite, grades to Argillaceous Calcilu	nedium olive grey, very so I fragments and forams, 3 It, trace very fine dark gre utite	oft, 80-40% een		
	5	CALCARENITE : as above				
585 to 590	70	ARGILLACEOUS CALCISILTITE: as at	oove		72	4
	25	MARL: as above				
	5	CALCARENITE : as above				
590 to 595	50	ARGILLACEOUS CALCISILTITE: as al	oove		50	2
	40	MARL: as above				
	10	CALCARENITE : as above				



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Wellsite Geolo	gist(s)	Peter Boothby Ross Tolliday				
Interval (mRT)	%	Lithology / Show Descriptions			Ca (%)	Mg (%)
595 to 600	55	ARGILLACEOUS CALCISILTITE: as ab	oove		56	0
	40	MARL: as above, commonly grades to	Argillaceous Calcilutite.			
	5	CALCARENITE : as above				
600 to 605	60	ARGILLACEOUS CALCISILTITE: as ab	pove		46	4
	35	MARL: as above				
	5	CALCARENITE : as above				
605 to 610	50	ARGILLACEOUS CALCISILTITE: as ab	oove		56	0
	45	<b>MARL :</b> white to very light to light grey, n very soft, dispersive in parts, amorphous, 30-40% siliceous clay content, 10-15% ca glauconite, grades to Argillaceous Calcilu	rarely light to medium ol , 5% fossil fragments an- alcisilt, trace very fine da itite	ive grey, d forams, irk green		
	5	CALCARENITE : as above				
610 to 615	60	ARGILLACEOUS CALCISILTITE: as ab	oove		60	0
	30	<b>CALCARENITE :</b> very light to light medi firm, silt to fine, clear to very light grey ca 5-10% siliceous clay content, trace very f soft disseminated pyrite.	ium grey, white in parts, lcite grains, 5% fossil fra ine dark green glauconit	soft to igments, ie, trace		
	10	MARL: as above				
615 to 620	45	MARL: as above.			58	0
	45	ARGILLACEOUS CALCISILTITE: very medium olive grey, soft to rarely firm, trac siliceous clay content, 10 to 20% fine gra grains, trace very fine dark green glaucor grades to Calcarenite.	light to light medium gre ce to 5% fossil fragments ined calcite & recrystallis nite, trace disseminated	y, light to s, 10-25% sed pyrite,		
	10	CALCARENITE : as above				
620 to 630	70	ARGILLACEOUS CALCISILTITE: as ab	oove		56	0
	20	MARL: as above				
	10	CALCARENITE : as above				
630 to 640	70	ARGILLACEOUS CALCISILTITE: as ab	oove		54	0
	25	MARL: as above				
	5	CALCARENITE : as above				
640 to 645	50	ARGILLACEOUS CALCISILTITE: very medium olive grey, soft to rarely firm, trac siliceous clay content, 10 to 15% fine gra grains, trace very fine dark green glaucor nodular pyrite, grades to Calcarenite.	light to medium grey, lig ce to 5% fossil fragments ined calcite & recrystallis nite, trace disseminated	ht to s, 15-25% sed and	48	4
	45		amod dologista francista	motru (D)		
	5	CALUARENITE: as above, 2 to 5% inte	erred dolomite from calc	metry (?).		
645 to 650	60	ARGILLACEOUS CALCISILTITE: as ab	oove		60	0



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Wellsite Geolo	ogist(s)	Peter Boothby Ross Tolliday		
Interval (mRT)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
	35	MARL: as above		
	5	CALCARENITE : as above		
650 to 655	55	ARGILLACEOUS CALCISILTITE: as above	74	0
	40	<b>MARL :</b> white to very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, trace to 5% fossil fragments and forams, 20-30% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, trace disseminated and rare nodular pyrite, commonly grades to Argillaceous Calcilutite		
	5	CALCARENITE : as above		
655 to 660	50	ARGILLACEOUS CALCISILTITE: as above	66	0
	45	MARL: as above		
	5	CALCARENITE : as above		
660 to 665	50	ARGILLACEOUS CALCISILTITE: as above	64	0
	35	MARL: as above		
	15	<b>CALCARENITE :</b> light to medium grey, white in parts, soft to firm, silt to fine grained calcite,5% fossil fragments, 5-10% siliceous clay content, trace very fine dark green glauconite, trace disseminated and nodular pyrite.		
665 to 670	50	ARGILLACEOUS CALCISILTITE: as above	60	0
	25	MARL : as above		
	25	CALCARENITE : as above		
670 to 680	50	ARGILLACEOUS CALCISILTITE: very light to medium grey, light to medium olive grey, soft to rarely firm, blocky, trace to 5% fossil fragments, 15-25% siliceous clay content, 10 to 15% fine grained calcite & recrystallised grains, trace very fine dark green glauconite, trace disseminated and nodular pyrite, grades to Calcarenite.	50	0
	40	<b>MARL :</b> white to very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, trace to 5% fossil fragments and forams, 25-35% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, trace disseminated and rare nodular pyrite, commonly grades to Argillaceous Calcilutite		
	10	<b>CALCARENITE :</b> light to medium grey, white in parts, soft to firm, sub blocky to blocky, silt to fine grained calcite,5% fossil fragments, 5-10% siliceous clay content, trace very fine dark green glauconite, trace disseminated and nodular pyrite.		
680 to 690	55	ARGILLACEOUS CALCISILTITE: as above	47	0
	40	MARL: as above		
	5	CALCARENITE : as above		
690 to 700	50	ARGILLACEOUS CALCISILTITE: as above	71	0
	30	MARL: as above		
	20	CALCARENITE : as above		
700 to 710	70	MARL: white to very light to light grey, light to medium olive grey, minor	44	0



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Wellsite Geolo	ogist(s)	Peter Boothby R	Ross Tolliday				
Interval (mRT)	%	Lithology / Show Des	scriptions			Ca (%)	Mg (%)
	30	fossil fragments and foran calcisilt, trace very fine da nodular pyrite. Grades to ( <b>ARGILLACEOUS CALCI</b> medium olive grey, soft to 15-25% siliceous clay con recrystallised grains, trace	ns, 20-35% silic ark green glauco Calcareous Clay ISILTITE: very I o rarely firm, bloo ntent, 10 to 15% e very fine dark	eous clay content, trace nite, trace disseminated /stone. ght to medium grey, ligl ky, trace to 5% fossil fra fine grained calcite & green glauconite, trace	to 5% I and rare ht to agments,		
710 to 720	80	disseminated and nodular <b>MARL</b> : medium grey, lig rarely dispersive, amorpho forams, 20-35% siliceous dark green glauconite, trac Calcareous Claystone.	r pyrite, grades t ght to medium o ous to blocky, tr clay content, tra ice disseminated	o Calcarenite. ive grey, minor dark gre ace to 5% fossil fragmen ce to 5% calcisilt, trace I and nodular pyrite. Gra	ey, soft, nts and very fine ades to	46	0
	20	ARGILLACEOUS CALCI	ISILTITE: as ab	ove			
720 to 730	80	MARL: as above, trace	to 1% fine to me	edium green glauconite		46	0
	20	ARGILLACEOUS CALCI	ISILTITE: as ab	ove			
730 to 740	90	MARL : white to very ligh dark grey, soft, amorphou 20-35% siliceous clay con dark green glauconite, trac Calcareous Claystone. ARGILLACEOUS CALCI	ht to light grey, I us to blocky, 5% ntent, trace to 5% nce disseminated ISILTITE: as ab	ght to medium olive gre b fossil fragments and fo calcisilt, 2-5% fine to r l and nodular pyrite. Gra ove	y, minor orams, nedium ades to	44	0
740 to 750	70					52	0
740 10 750	30	ARGILLACEOUS CALCI	ISILTITE: as ab	ove		52	0
750 to 760	50 50	MARL : as above, 1% gl	lauconite ISILTITE: as ab	ove, increase in forams	to 5%,	61	0
760 to 770	60	ARGILLACEOUS CALCI parts MARL : as above	ISILTITE: as ab	ove, grades to Calcarer	ite in	64	0
770 to 780	50	CALCAREOUS CLAYST amorphous to blocky, 15-2 fine glauconite, sideritic(?)	ONE: light to m 25% calcareous	edium brownish yellow, content, trace calcisilt,	soft , 1-3%	35	0
	40	MARL: light grey, light to amorphous to blocky, 5% clay content, trace to 5% of glauconite, trace dissemin Claystone.	to medium olive 6 fossil fragment calcisilt, 1-3% fin nated and nodul	grey, minor dark grey, s s and forams, 20-35% s ee to medium dark gree ar pyrite. Grades to Calo	oft, iliceous n careous		
	10	ARGILLACEOUS CALCI medium olive grey, soft to 15-25% siliceous clay con recrystallised grains, trace disseminated and nodular	SILTITE: very I o rarely firm, bloc ntent, 10 to 15% e very fine dark r pyrite, grades t	ght to medium grey, lig ky, trace to 5% fossil fra fine grained calcite & green glauconite, trace o Calcarenite.	ht to agments,		
780 to 790	60	MARL : light grey, light to amorphous to blocky, 5% clay content, trace to 5% of glauconite, trace dissemin Claystone.	to medium olive 6 fossil fragment calcisilt, 10-15% nated and nodul	grey, minor dark grey, s s and forams, 20-35% s fine to medium dark gr ar pyrite. Grades to Calo	oft, iliceous een careous	33	0



Well Name :	PATR	ICIA - 2	Print Date	Fri 28/	/06/200	2
Wellsite Geolo	ogist(s)	Peter Boothby Ross Tolliday				
Interval (mRT)	%	Lithology / Show Descriptions			Ca (%)	Mg (%)
	40	<b>CALCAREOUS CLAYSTONE:</b> light to me greyish brown, light grey, soft , amorphous content, trace calcisilt, 10-15% fine to mee	dium brownish yellow, to blocky, 15-25% cal lium dark green glauc	light careous onite.		
790 to 800	70 30	CALCAREOUS CLAYSTONE: light greyis brownish yellow, soft , amorphous to block trace calcisilt, 10-15% fine to medium dark MARL: as above	sh brown, light grey, lig y, 15-25% calcareous green glauconite.	iht content,	28	0
800 to 810	70	CALCAREOUS CLAYSTONE: as above			28	0
	30	MARL: as above				
810 to 820	60	<b>CALCAREOUS CLAYSTONE:</b> light greyis brownish yellow, soft , amorphous to block 5-10% calcisilt, 10-15% fine to medium dar	sh brown, light grey, lig y, 15-25% calcareous k green glauconite.	iht content,	28	0
	30	GLAUCONITIC SANDSTONE: medium to parts, very fine to medium glauconite ( "Gro rounded.	o very dark green, firm, eensand"), sub angula	soft in r to sub		
	10	MARL: as above				
820 to 830	50 50	SILTY SANDSTONE: light to dark yellowis minor firm, clear to translucent quartz grain moderately sorted, sub angular to sub rour argillaceous content, 1-3% glauconite, trac nodules, trace multicoloured lithics, fair to g fluorescence. CALCAREOUS CLAYSTONE: light to me light brownish yellow, soft, firm in parts, am calcareous content, 5-10% calcisilt, 10-15	sh brown, loose and fri ns, very fine to fine , po ided, 15-25% quartz s e -1% mica, trace to 5 good inferred porosity, edium greyish brown, li norphous to blocky, 15 % fine to medium dark	able, porly to llt, 5-15% % siderite no ght grey, -25% green	8	0
830 to 840	80	SILLY SANDSTONE: as above			2	0
	20					
840 to 850	90	SILTY SANDSTONE: as above			6	0
	10	CALCAREOUS CLAISIONE. as above				
850 to 860	95	SILTY SANDSTONE: as above' 1-3% mic	a		6	0
	5	CALCAREOUS CLAYSTONE: as above				
860 to 865	90	SILTY SANDSTONE: as above				
	10	CALCAREOUS CLAYSTONE: as above				
865 to 870	85	SILTY SANDSTONE: light to dark yellowis minor firm, clear to translucent quartz grain moderately sorted, sub angular to sub rour argillaceous content, 1-3% glauconite, trac nodules, trace multicoloured lithics, fair to g fluorescence.	sh brown, loose and fri ns, very fine to fine , po ided, 15-25% quartz si e -1% mica, trace to 5 good inferred porosity,	able, borly to ilt, 5-15% % siderite no	3	0
	15	UALUAREUUS ULAISIUNE: as above				
870 to 875	80	SILTY SANDSTONE: as above				



Well Name :	PATE	RICIA - 2 Print Date Fri	28/06/200	)2
Wellsite Geolo	ogist(s)	Peter Boothby Ross Tolliday		
Interval (mRT)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
	20	CALCAREOUS CLAYSTONE: as above		
875 to 880	90	<b>SILTY SANDSTONE:</b> light to dark yellowish brown, loose and friable, minor firm, clear to translucent quartz grains, very fine to fine, poorly to moderately sorted, sub angular to sub rounded, 15-25% quartz silt, 5-15% argillaceous content, 1-3% glauconite, trace -1% mica, trace to 5% siderit nodules, trace multicoloured lithics, fair to good inferred porosity, no fluorescence.	4 6 e	0
	10	<b>CALCAREOUS CLAYSTONE:</b> light to medium greyish brown, light grey. light brownish yellow, soft, firm in parts, amorphous to blocky, 15-25% calcareous content, 5-10% calcisilt, 10-15% fine to medium dark green glauconite		
880 to 885	90	SILTY SANDSTONE: light to dark yellowish brown, loose and friable, minor firm, clear to translucent quartz grains, very fine to fine, poorly to moderately sorted, sub angular to sub rounded, 15-25% quartz silt, 5-15% argillaceous content, 1-3% glauconite, trace -1% mica, trace to 5% siderit nodules, trace multicoloured lithics, fair to good inferred porosity, no fluorescence.	2 6 e	0
	10	<b>CALCAREOUS CLAYSTONE:</b> light to medium greyish brown, light grey. light brownish yellow, soft, firm in parts, amorphous to blocky, 15-25% calcareous content, 5-10% calcisilt, 10-15% fine to medium dark green glauconite		
885 to 890	100	<b>SILTY SANDSTONE:</b> light to dark yellowish brown, greyish brown, loose and friable, minor firm aggregates, clear to translucent quartz grains, ver fine to fine, trace medium, poorly to moderately sorted, sub angular to sub rounded, 15-25% quartz silt, 5-15% argillaceous content, 2-5% glauconite trace -1% mica, trace to 5% siderite nodules, trace multicoloured lithics, trace forams, fair to good inferred porosity, no fluorescence. Grades to Argillaceous Sandstone.	y ) ,	
890 to 900	100	SILTY SANDSTONE: as above, 1-3% Glauconite, trace mica	2	0
900 to 910	100	SILTY SANDSTONE: light to dark yellowish brown, greyish brown, loose and friable, minor hard cemented aggregates, clear to translucent quartz grains, very fine to fine, trace medium, poorly to moderately sorted, sub angular to sub rounded, 20-30% quartz silt, 5-15% argillaceous content, 1-2% glauconite, trace -1% mica, trace to 3% siderite nodules, trace multicoloured lithics, nil to trace forams, fair to good inferred porosity, no fluorescence.	2	0
910 to 920	100	SILTY SANDSTONE: as above, tr-1% mica (muscovite and biotite)	2	0
920 to 930	100	SILTY SANDSTONE: as above	2	0
930 to 940	100	SILTY SANDSTONE: as above	1	0
940 to 950	100	SILTY SANDSTONE: light to dark yellowish brown, greyish brown, loose and friable to hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, trace medium, poorly to moderately sorted sub angular to sub rounded, 20-30% quartz silt, 5-15% argillaceous content, 1-2% glauconite, trace -1% mica, trace to 3% siderite nodules, trace multicoloured lithics, nil to trace forams, fair to good inferred porosity, no fluorescence.	, 1	0
950 to 960	100	SILTY SANDSTONE: as above	1	0
960 to 970	100	SILTY SANDSTONE: light to dark yellowish brown, greyish brown, loose	1	0



Well Name :	PATE	RICIA - 2	Print Date	Fri 28	/06/200	)2
Wellsite Geolo	ogist(s)	Peter Boothby Ross Tolliday				
Interval (mRT)	%	Lithology / Show Descriptions			Ca (%)	Mg (%)
		quartz grains, very fine to fine, trace mec sub angular to sub rounded, 15-25% qua content, tr-1% glauconite, trace -1% mica trace multicoloured lithics, nil to trace for porosity, no fluorescence.	lium, poorly to modera artz silt, 5-10% argillac a, trace to 2% siderite ams, fair to good infer	tely sorted, eous nodules, red		
970 to 980	100	SILTY SANDSTONE: as above			1	0
980 to 990	100	SILTY SANDSTONE: light to dark yellow and friable to rare hard cemented (sideri translucent quartz grains, very fine to fin moderately sorted, sub angular to sub ro argillaceous content, tr-1% glauconite, tranodules, trace multicoloured lithics, nil to inferred porosity, no fluorescence. Gradu	SILTY SANDSTONE: light to dark yellowish brown, greyish brown, loose and friable to rare hard cemented (siderite?) aggregates, clear to ranslucent quartz grains, very fine to fine, trace medium, poorly to noderately sorted, sub angular to sub rounded, 15-25% quartz silt, 5% argillaceous content, tr-1% glauconite, trace -1% mica, trace siderite nodules, trace multicoloured lithics, nil to trace forams, fair to good nferred porosity, no fluorescence. Grades to Sandstone.		2	0
990 to 1000	100	SILTY SANDSTONE: as above. Grades	to Sandstone.		2	0
1000 to 1010	100	SILTY SANDSTONE: as above. Grades	to Sandstone.		2	0
1010 to 1020	100	SILTY SANDSTONE: light to dark yellow and friable to hard cemented (siderite?) quartz grains, very fine to fine, trace med sub angular to sub rounded, 20-30% qua content, trace-1% glauconite, trace -1% f multicoloured lithics, nil to trace forams, fluorescence.	wish brown, greyish br aggregates, clear to tr lium, poorly to modera artz silt, 5-10% argillac mica, trace to 3% side fair to good inferred po	own, loose anslucent tely sorted, eous rite, trace prosity, no	2	0
1020 to 1030	100	SILTY SANDSTONE: as above			2	0
1030 to 1040	100	SILTY SANDSTONE: as above, with 5% yellowish brown, firm to hard siderite noc Silty Sandstone Siderite cemented aggre	6 dark brownish grey to lules and firm to mode egates.	o dark rately hard		
1040 to 1050	100	ARGILLACEOUS / SILTY SANDSTONE medium greyish brown, loose and friable aggregates, clear to translucent quartz of medium, poorly to moderately sorted, an quartz silt, 15-25% argillaceous content, mica, trace to 5% siderite, trace multicolo nil to trace forams, fair inferred porosity,	Light to dark yellowis to hard cemented (sig grains, very fine to fine gular to sub rounded, t trace-1% glauconite, t bured lithics, trace nod no fluorescence.	sh brown, derite?) , trace 20-30% race -1% ular pyrite,	0	0
1050 to 1060	100	SILTY SANDSTONE: as above. 5-10% and Siderite nodules. Fair to good inferre	siderite cemented age ed porosity.	gregates		
1060 to 1070	100	SILTY / SIDERITIC SANDSTONE: as a cemented aggregates and siderite nodule	bove with 15-20% side es.	erite	0	0
1070 to 1080	100	SIDERITIC / SILTY SANDSTONE: light greyish brown, 15-25% firm to moderate aggregates, loose to friable clear to trans fine, trace medium, moderately sorted, a quartz silt, 15% argillaceous content, trac trace multicoloured lithics, trace nodular good inferred porosity, no fluorescence.	to dark yellowish brow ly hard cemented side slucent quartz grains, ngular to sub rounded ce-1% glauconite, trace pyrite, nil to trace forar	n, medium rite very fine to , 20-25% e -1% mica, ns, fair to		
1080 to 1090	100	<b>SILTY SANDSTONE:</b> light to dark yellow and friable to hard cemented (siderite?) quartz grains, very fine to fine, trace meet to sub rounded, 20-30% quartz silt, 5-10	wish brown, greyish br aggregates, clear to tr lium, moderately sorte % argillaceous content	own, loose anslucent d, angular t (suspect		



Well Name :	PATF	RICIA - 2 Print Date	Fri 28/	/06/200	)2
Wellsite Geolo	gist(s)	Peter Boothby Ross Tolliday			
Interval (mRT)	%	Lithology / Show Descriptions		Ca (%)	Mg (%)
		clay content being dispersed into mud system), trace-1% -1% mica, trace to 5% siderite, trace multicoloured lithics, pyrite, nil to trace forams, fair to good inferred porosity, n	glauconite, trace trace nodular o fluorescence.		
1090 to 1100	100	SILTY / ARGILLACEOUS SANDSTONE: light to dark ye greyish brown, loose and friable to rare hard cemented (a aggregates, clear to translucent quartz grains, very fine t moderately sorted, angular to sub rounded, 15-20% quart argillaceous content (suspect clay content being disperse system), trace-1% glauconite, trace -1% mica, trace to 5% multicoloured lithics, trace nodular pyrite, nil to trace for ar porosity, no fluorescence.	Ilowish brown, siderite?) o fine, iz silt, 15-30% d into mud siderite, trace ms, fair inferred		
1100 to 1110	100	SILTY SANDSTONE: as above. with 10-15% argillaceou good inferred porosity.	is content, fair to		
1110 to 1120	100	SILTY SANDSTONE: as above			
1120 to 1130	100	SILTY / ARGILLACEOUS SANDSTONE: as above, sus dispersed and washed out of samples.	pect clays being	0	0
1130 to 1140	100	SILTY / ARGILLACEOUS SANDSTONE: light to dark ye greyish brown, dominantly loose and friable to very rare l (siderite?) aggregates, clear to translucent quartz grains, rare medium, moderately sorted, angular to sub rounded, silt, 15-30% argillaceous content (suspect clay content be into mud system), trace-1% glauconite, trace -1% mica, tr siderite, trace multicoloured lithics, trace nodular pyrite, n fair inferred porosity, no fluorescence.	Allowish brown, hard cemented very fine to fine, 15-20% quartz ang dispersed race to 5% il to trace forams,		
1140 to 1150	100	SILTY / ARGILLACEOUS SANDSTONE: as above			
1150 to 1160	100	SILTY / ARGILLACEOUS SANDSTONE: as above			
1160 to 1170	100	SILTY / ARGILLACEOUS SANDSTONE: light to dark ye greyish brown, dominantly loose and friable, very rare han (siderite?) aggregates, clear to translucent quartz grains, rare medium, poor to moderately sorted, angular to sub ro quartz silt, 15-30% argillaceous content (suspect clay con dispersed into mud system), trace-1% glauconite, trace - 5% siderite, trace multicoloured lithics, trace nodular pyrit forams, fair to good inferred porosity, no fluorescence.	Allowish brown, rd cemented very fine to fine, bunded, 15-20% otent being 1% mica, trace to se, nil to trace	0	0
1170 to 1180	100	SILTY / ARGILLACEOUS SANDSTONE: as above, 15-2 cemented aggregates and siderite nodules, grades in par Sandstone.	20% siderite t to Sideritic		
1180 to 1190	100	SILTY / ARGILLACEOUS SANDSTONE: light to dark ye greyish brown, dominantly loose and friable, rare hard cere (siderite?) aggregates, clear to translucent quartz grains, rare medium, poor to moderately sorted, angular to sub ro quartz silt, 15-30% argillaceous content (suspect clay condispersed into mud system), trace-1% glauconite, trace - 5% siderite, trace multicoloured lithics, trace nodular pyrit forams, fair to good inferred porosity, no fluorescence.	ellowish brown, mented very fine to fine, bunded, 15-20% ntent being 1% mica, trace to te, nil to trace		
1190 to 1200	100	SIDERITIC / ARGILLACEOUS SANDSTONE: light to co yellowish brown, dark greyish brown, dominantly loose ar common hard cemented (siderite?) aggregates, clear to to quartz grains, very fine to fine, rare medium, poor to mode angular to sub rounded, 15-20% quartz silt, 15-30% argill (suspect clay content being dispersed into mud system).	ommonly dark nd friable, ranslucent erately sorted, aceous content trace-1%		



Well Name :	PATE	RICIA - 2 Print Date Fri 28	8/06/200	)2
Wellsite Geolo	ogist(s)	Peter Boothby Ross Tolliday		
Interval (mRT)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		glauconite, trace -1% mica, 15-20% siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair inferred porosity, no fluorescence.		
1200 to 1210	100	SIDERITIC / ARGILLACEOUS SANDSTONE: as above	1	0
1210 to 1220	100	<b>SILTY SANDSTONE:</b> light to dark yellowish brown, medium greyish brown, dominantly loose and friable, rare hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, rare medium, moderately sorted, angular to sub rounded, 15-20% quartz silt, 15-20% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -2% mica, 5% siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair to good inferred porosity, no fluorescence.		
1220 to 1230	100	SILTY SANDSTONE: as above		
1230 to 1240	100	SILTY SANDSTONE: as above		
1240 to 1250	100	SILTY SANDSTONE: as above	0	0
1250 to 1260	100	SILTY SANDSTONE: light to dark yellowish brown, medium greyish brown, dominantly loose and friable, trace hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 15-20% quartz silt, 10% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -2% mica, trace to 2% siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair to good inferred porosity, no fluorescence.		
1260 to 1270	100	SILTY SANDSTONE: as above		
1270 to 1280	100	<b>SILTY SANDSTONE:</b> as above. trace siderite nodules. good inferred porosity. No fluorescence.		
1280 to 1290	100	<b>SANDSTONE</b> : light to dark yellowish brown, medium greyish brown, dominantly loose and friable, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 10-15% quartz silt, 10% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -2% mica, trace siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, good inferred porosity, no fluorescence.		
1290 to 1300	100	SANDSTONE : as above	2	0
1300 to 1310	100	SANDSTONE : as above		
1310 to 1320	100	<b>SANDSTONE</b> : light to medium yellowish brown, medium greyish brown, dominantly loose and friable, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 10-15% quartz silt, 10% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -2% mica, trace siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, good inferred porosity, no fluorescence.		
1320 to 1330	100	<b>ARGILLACEOUS SANDSTONE:</b> light to medium yellowish brown, medium greyish brown, dominantly loose and friable, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 10-15% quartz silt, 15-30% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -2% mica,	1	0



Well Name :	PATF	RICIA - 2	Print Date	Fri 28/	/06/200	)2
Wellsite Geo	logist(s)	Peter Boothby Ross	Tolliday			
Interval (mRT)	%	Lithology / Show Descri	ptions		Ca (%)	Mg (%)
		trace siderite nodules, trace m to trace forams, good inferred	ulticoloured lithics, trace nodular l porosity, no fluorescence.	<sup>·</sup> pyrite, nil		
1330 to 134	0 100	ARGILLACEOUS SANDSTO medium greyish brown, domin quartz grains, very fine to fine, 10-15% quartz silt, 15-30% ary being dispersed into mud syst trace to 3% dark yellowish bro lithics, trace nodular pyrite, nil porosity, no fluorescence.	NE: light to medium yellowish b antly loose and friable, clear to tr moderately sorted, angular to s gillaceous content (suspect clay em), trace-1% glauconite, trace- wn siderite nodules, trace multic to trace forams, fair to good infe	rown, ranslucent ub rounded, content -2% mica, oloured erred		
1340 to 135	0 100	ARGILLACEOUS SANDSTO	NE: as above			
1350 to 136	0 100	ARGILLACEOUS SANDSTO	NE: as above			
1360 to 137	0 100	ARGILLACEOUS SANDSTO aggregates.	NE: as above, trace firm cemen	ted		
1370 to 138	0 100	ARGILLACEOUS SANDSTO medium greyish brown, domin quartz grains, very fine to fine, 10-15% quartz silt, 15-30% ar being dispersed into mud syst trace to 3% dark yellowish bro lithics, trace nodular pyrite, nil porosity, no fluorescence.	NE: light to medium yellowish b antly loose and friable, clear to tr moderately sorted, angular to si gillaceous content (suspect clay em), trace-1% glauconite, trace - wn siderite nodules, trace multic to trace forams, fair to good infe	rown, ranslucent ub rounded, content -2% mica, oloured erred		
1380 to 138	5 100	ARGILLACEOUS SANDSTO	NE: as above		1	0





# **INTEQ**

# **END OF WELL REPORT**

**OMV** Australia

PATRICIA-2

20 – 28 June 2002

by

# **BAKER HUGHES INTEQ**

The information, interpretations, recommendations, or opinions contained herein are advisory only and may be rejected. Consultant does not warrant their accuracy or correctness. Nothing contained herein shall be deemed to be inconsistent with, nor expand, modify or alter consultant's obligation of performance as provided for in a written agreement between the parties, or, if none, in consultant's most recent price list.

### Patricia-2

# **Final Well Report**

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WELL SUMMARY

# 1 Well Data Summary

1

MODU Ocean Bounty
Semi-submersible
Diamond Offshore General Company
Lowest Astronomical Tide (LAT)
Rotary Table
25.0m
52.5m MSL 53.1m LAT
038° 01' 39.95" S Lat 148° 26' 57.78" E Long
VIC/L21
Field Development
20 June 2002
1385m
28 June 2002
Completed & Tested
Rommel Tadiar Jeff Wilson Romeo Tena
Elaine Spence Malcolm Dixon Trent Liang

#### 1.1 Well Summary

The well Patricia-2 is located in VIC/L21, approximately 140NM from Port Welshpool and 285 NM from Geelong. The objectives of the well were to confirm reservoir structure, to provide wellbore access to the Patricia gas reservoir with minimal formation damage, to obtain complete open hole log information throughout the reservoir interval, estimate reservoir pressures, determine deliverability / inflow performance and to obtain representative reservoir gas samples. All depths in this report unless otherwise stated refer to depths in metres below the rotary table – RT.

Patricia-2 was spudded at 16:00hrs on 20 June 2002, using a 26" bit with a 36" hole opening assembly. The 36" hole was drilled from the seabed to 111.5m using seawater and pre-hydrated gel mud. A 30" x 20" casing was run and set at 111.5mRT.

The 17.5" section was drilled using a Security DBS type XTIC bit in tandem with a mud motor and LWD tool assembly. The cement and shoe track were cleaned out and 222.5m of new hole drilled, reaching the casing point without problems. At the section TD of 334m, the hole was displaced to gel mud and the bit was pulled out. Tight hole was observed during the wiper trip to the 30" shoe. The bit was backreamed out between 325m and 230m, after running back to bottom no drag was noted on the trip out to run casing. After a successful casing run, the Sub-Sea Tree assembly was run and landed on the wellhead. The SST was pressure tested on the AX gasket connector to 3000psi. The BOPs were then run, landed and pressure-tested successfully.

Drilling of the 12.25" hole section commenced from 334m using a Reed MHT13GC rock bit on a steerable assembly including LWD tools to 884m. After drilling out the shoe track and casing shoe at 327.1mRT, three metres of new formation was drilled to 337m. The hole was then displaced to a KCI/PHPA/Glycol mud system initially weighted to 1.06sg. A Formation Integrity Test (FIT) was performed, with an EMW of 1.73sg exerted on formations below the casing shoe. The 12.25" directional hole was drilled at an average penetration rate of about 19m/hr, sliding and rotating as directed by the directional driller from 334m to 884mRT. A maximum gas peak of 12.5% was recorded at the top of the reservoir section at 843mRT. Once the planned 9.625" casing depth was reached, returns were circulated to surface and the mud weight increased to 1.12sg. Circulation continued until background gas levels fell below 0.7%. The well was checked for flow before wiping the hole back to 655m, pumping out as required. A short trip gas peak of 9.5% was recorded after running the bit back to bottom. The hole was circulated until background gas levels had fallen below 0.5%.

The 8.5" hole section was drilled using a Reed EHP41ALKDH rock bit on a steerable assembly including LWD tools. The mud system used was FLO-PRO with weights ranging from 1.07sg to 1.12sg. After cleaning out the shoe track, the casing shoe at 872.3mRT and drilling three metres of new formation to 887m, a formation integrity test (FIT) was successfully conducted. Using mud weighted to 1.07sg, the formation was subjected to a 1.40sg EMW without pressure leak-off. Drilling then recommenced, rotating and sliding to maintain a horizontal profile as per program at an average penetration rate of about 37m/hr. The well's Total Measured Depth of 1385mRT (True Vertical Depth of 701.2mRT) was reached at 01:00hrs on 28 June 2002. The hole was circulated clean and spotted with fresh Flo-Pro mud before a wiper trip to the 9.625" casing shoe was made. Once back on bottom, the hole was circulated clean using uninhibited brine solution. The bit was then pulled out to surface for the completion and production well test programme.

After running the sand screens and other well completion equipment, Patricia-2 was flow-tested before being secured for future gas production. The Ocean Bounty MODU was towed off location on 09 July 2002.

# **DRILLING & ENGINEERING**

BHA No. 1 63.25 m

2.1 Bit Pun Summarios				
2.1 Bit Run Summanes				
36" Hole Section 20 June 2002				
Bit Run No. 1 Summary Bit Number Bit Size Bit Type S/N Jets Depth In (m) Depth Out (m) Metres Drilled Drilling Hours TBR (krevs) Circulating Hours Average ROP (m/hr) API Condition	RR1 26" w/ 36" Hc Smith DS KW0659 1 x 17, 3 77.5 111.5 34 0.6 2.6 0.9 56.7 Not Grad	ole Opener SJC x 24 ed		
Drilling Parameters WOB (klbs) RPM Torque (kft-lbs) Pump Pressure (psi) Flow In (gpm) Mud System	2.8 - 60 - 38 - 208 -	11.7 4 1034 1180		
Seawater & hi-viscosity G Sweeps	el	1.03sg		
Lithology Returns to seabed Drilling Summary				
A 26" bit with a 36" hole opener was made up on a rotary BHA. The bit tagged seabed at 77.5mRT.				

rotary BHA. The bit tagged seabed at 77.5mRT. Patricia-2 was spudded at 16:00hrs on 20 June 2002. The 36" hole was drilled to 111.5mRT with seawater and PHG sweeps. A wiper trip was conducted to just below the sea floor. No fill was recorded. The hole was then displaced with 210bbls PHG mud. A TOTCO survey was dropped and the bit was pulled to surface to run the 30" conductor casing and wellhead. The survey tool was recovered at surface indicating a hole angle of 0.25 degrees.



2.1

#### 17.5" Hole Section 21 June 2002 Bit Run No. 2 Summary Bit Number NB 2 Bit Size 17.5 Bit Type Security DBS XTIC S/N 740844 Jets 3 x 24 Depth In (m) 111.5 Depth Out (m) 334 Metres Drilled 222.5 **Drilling Hours** 3.6 TBR (krevs) 29.8 Circulating Hours 7.5 Average ROP (m/hr) 61.8 Not Graded **API** Condition **Drilling Parameters** WOB (klbs) 1 14 169 RPM 96 Torque (kft-lbs) \_ \_ \_ Pump Pressure (psi) 997 \_ 1410 Flow In (gpm) 739 803 Mud System Seawater & hi-viscosity Gel 1.03sg Sweeps Lithology Returns to seabed **Drilling Summary** NB2, a 17.5" bit was made up on a mud motor and LWD tool and RIH. Cement was tagged and drilled out from 102m. After cleaning out the shoe track, NB2 drilled new formation from 111.5m using seawater and high viscosity gel sweeps. The section was drilled smoothly while building angle to an inclination of 11.75 degrees. At the section TD of 334m, a 100-bbl high viscosity mud pill was pumped. While working pipe, a further 320bbls of gel was spotted in hole. A wiper trip to the 30" casing shoe was performed. The hole was tight and as a result the bit was backreamed out between 325m and 230m. The bit was run back to bottom, no hole fill was recorded. The hole was swept with seawater prior to displacing to gel. The bit was then pulled out of hole to run casing. The hole was slick all the way out and after the LWD data was transferred, preparations were made to

2.1



run the 13.375" casing.

Drilling & Engineering

	BHA No. 3
NB 3 12.25 Reed MHT13GC NL5007 3 x 15, 1 x 24	HWDP

Bit Type S/N Jets Depth In (m) Depth Out (m) Metres Drilled Drilling Hours TBR (krevs)	Reed MHT13GC NL5007 3 x 15, 1 x 24 334 884 550 29.0 429657 40 2
TBR (krevs)	429657
Circulating Hours	40.2
Average ROP (m/hr)	19
API Condition	2-2-WT-A-E-1-NO-TD

#### **Drilling Parameters**

12.25" Hole Section

Bit Run No. 3 Summary

23 - 25 June 2002

Bit Number

Bit Size

0.7	-	34.9
177	-	287
0	-	7.1
1002	-	2162
691	-	872
	0.7 177 0 1002 691	0.7 - 177 - 0 - 1002 - 691 -

#### Mud System

KCI / PHPA / Glycol	1.06-1.10sg
---------------------	-------------

#### Lithology

2.1

Calcarenite, Calcisiltite, Marl, Calcareous Claystone & Silty Sandstone

#### **Drilling Summary**

A 12.25" rock bit was made up with a mud motor and LWD tool and run in hole, tagging cement at 300mRT. After cleaning out the shoe track, three metres of new formation was drilled to 337m. The hole was then displaced to a KCI/PHPA/Glycol mud system initially weighted to 1.06sg. The hole was circulated clean and a Formation Integrity Test (FIT) performed, with 314psi surface pressure yielding a downhole EMW of 1.73sg. The 12.25" directional hole was drilled at an average penetration rate of about 19m/hr, sliding and rotating as directed by the directional driller from 334m to 884mRT. A maximum gas peak of 12.5% was recorded at the top of the reservoir section at 843mRT. Once the planned 9.625" casing depth was reached, returns were circulated to surface and the mud weight increased to Circulation continued until background 1.12sa. gas levels fell below 0.7%. The well was checked for flow before wiping the hole back to 655m, pumping out as required. Running the back to bottom, no fill was encountered. A short trip gas peak of 9.5% was recorded. The hole was circulated until background gas levels had fallen below 0.5%. The bit was then pulled to surface without any problems.



program.

2.1

8.5" Hole Section 27 - 28 June 2002

Bit Run No. 4 Summary

NB 4

M25484

3 x 14

884

501

13.4

22.3

37.4

0.7

87

0

1275

515

NB4 was made up with a mud motor and LWD tool and run in hole. After drilling cement, shoe track and three meters of new formation, a FIT using 1.07sg successfully reached the target 1.40sg EMW without breaking the formation. Drilling continued, rotating and sliding horizontally to the well's Total Depth of 1385mRT, 701mTVD. The hole section was drilled smoothly at an average of 37 m/hr. At TD, bottoms-up sample was circulated out and the open hole was spotted with fresh Flo-Pro mud system. After a flowcheck, the bit was pulled inside the 9.625" casing shoe. A 25bbl brine spacer was pumped, followed by 50bbls of wash pill and chased with another 25bbl brine spacer. The well was circulated clean using uninhibited brine solution. The bit was then pulled to surface to run sand screens in preparation for the completion and production well-testing

166.5

1385

**REED EHP41ALKDH** 

1-2-NO-G-E-I-WT-TD

- 48.9 203

10.1

2089

1.07-1.12sq

-

-

-

\_ 596

8.5

Bit Number

Depth In (m)

Depth Out (m)

Metres Drilled

**Drilling Hours** 

TBR (krevs)

**API** Condition

WOB (klbs)

Torque (kft-lbs)

Flow In (gpm)

Mud Svstem Flo – Pro

**Drilling Summary** 

Lithology

RPM

Circulating Hours

Average ROP (m/hr)

**Drilling Parameters** 

Pump Pressure (psi)

Silty Sandstone and Sandstone

Bit Size

Bit Type

S/N

Jets

BHA No. 4 91.44m	
HWDP 9.38m	
HWDP 8.95m	
HWDP 9.18m	
6.5" Jars 9.64m	
3 x 5" HWDP 26.43m	
Float Sub 0.70m	
6" PM/DGR/Pulser 19.41m	
6" Mud Motor 7.49m	
8.5" Bit Reed EHP41ALKDH jets 3x14, 0.26m	

# Patricia-2

# 2.2 Casing / Cementing Summary

### 30" Conductor

#### 20 June 2002

Hole Size	36"
Depth	111.5mRT
Casing	1 30" x 20" Shoe joint 1 30" Intermediate Joint 1 x 30" Well Head
ID	28" (18.75" on 20" casing)
Weight	310 lb/ft (WH joint 456 lb/ft)
Grade	X-52 x 30", K55 x 20"
Shoe Depth	111.5mRT

#### **Cement Details:**

Sacks	766
Туре	Class "G"
Mix water	92 bbls
Additives	17 sxs CaCl
	2.5 gal NF-5
Weight	15.9 ppg
Volume	159 bbls

#### Summary

Two joints of conductor casing, the swedged 30"/20" shoe joint and PGB were made up and landed on the seabed. The PGB slope indicator showed no deviation (bull's eye). The top of the 30" wellhead was set at 76mRT, 1.5m above seabed. The cement lines were pressure-tested to 2000psi and 10bbls seawater with dye pumped. The casing was cemented with 159bbls slurry at 1.9sg (15.8 ppg) and displaced with 11.5bbls seawater. After pressure was bled off, it was found that the float had held and the running tool was disengaged and pulled to surface.



## 13.375" Casing

#### 21 June 2002

Hole Size	17.5"
Depth	334mRT

#### Casing

	1 x Intermediate Joint 1 x Float collar joint 16 x 13.375" Casing K-55, 68ppf 1 x 13.375" No Cross Coupling 1 x 18.75" Hsg/20"
ID Weight Grade	12.452" 68 lb/ft, BTC K-55
Shoe Depth	327.1mRT

1 x Shoe Joint

#### Ce

Cement Deta	ils:
Lead Slurry	
Sacks	240
Туре	Class "G"
Mix water	seawater
Additives	159 gal Econolite
Weight	12.5 ppg (1.5 sg)
Yield	2.23 cuft/sx
Volume	95 bbls
Tail Slurry	
Sacks	484
Туре	Class "G"
Mix water	seawater
Additives	0.25 gal/sx NF-5 (2.5 gal)
	1% BWOC CaCl (12sxs)
Weight	15.9 ppg (1.9 sg)
Yield	1.17 cuft/sx
Volume	100 bbls
Summon	

#### Summary

The 13.375" casing string was made up, landed and latched on the Cameron 18.75" Wellhead in the 30" housing, tested with 50klbs overpull. The casing was circulated with 180bbls seawater at 90 strokes per minute. The cement lines were rigged up and 10bbls seawater pumped before pressuretesting to 3000psi. The ball was dropped, the bottom plug sheared out and a further 10bbls of dye spacer pumped. The lead slurry of 95bbls cement and 102bbls tail slurry was mixed and pumped. The dart was released and the top plug sheared out. The cement was then displaced with 109bbls seawater at a rate of 9bbls/min. The plug did not bump after the calculated displacement volume was pumped. Pressure was bled off and after confirming that the floats had held, the running tool was disengaged and pulled to surface.



# 9.625" Casing

#### 26 June 2002

12.25" 884m
1 x Shoe Joint 1 x Intermediate Joint 1 x Float collar joint 58 x 9.625" Casing L-80, 47ppf 2 x 9.625" pup joint 1 x 9.625" X/O pup joint 1 x 9.625" casing hanger
8.575" 47lb/ft L80 NK3DB/New Vam 872.36mRT

#### **Cement Details:**

#### Slurry

Sacks	378
Type	Class "G"
Mixwater	44bbls (drill water)
Additives	Halad 413 20gal/10bbls
Weight	15.8ppg (1.9sg)
Yield	1.16 cuft/sx
Volume	78bbls

#### Summary

The 9.625" casing was run and landed successfully encountering no hole problems. Using mud, the casing was then circulated to 1.5 times its theoretical capacity, about 320bbls. Ten barrels of drill water was pumped into the string. After the cement lines were pressure-tested to 3,000psi, 60bbls of Superflush 102 spacer was pumped. A further 10bbls drill water was pumped before launching the bottom plug, which sheared out at 1250psi. The cement slurry was then mixed and pumped at 5.5bpm, amounting to 78bbls of 'G' Grade cement with a density of 1.89sg. The dart was then released to launch the top plug. The top plug sheared out at 2750psi. The cement unit displaced the slurry with 10bbls of drill water, followed by 180bbls mud. The plug bumped after the correct volume pumped with 1250psi pressure indicated. The casing was then pressure-tested to 3,000psi for 10 minutes. After bleeding off pressure and confirming that the floats had held, the running tool was disengaged and pulled to surface.



SURVEYS

Patricia-2 Surveys									
Measured Depth m	Inclination deg	Azimuth deg	Tool Type	Dogleg dptm	Vertical Depth	Vertical Section	Position North	Position East	
75.98	0.00	0.00	TIE-IN	0.00	75.98	0.00	0.00	0.00	
137.95	0.98	9.90	MWD	0.47	137.95	-0.40	0.52	0.09	
165.42	1.05	16.31	MWD	0.15	165.41	-0.78	0.99	0.20	
192.59	1.25	321.00	MWD	1.19	192.58	-0.98	1.46	0.09	
221.64	2.72	262.28	MWD	2.40	221.61	-0.38	1.62	-0.79	
250.74	6.36	248.26	MWD	3.90	250.62	1.75	0.93	-2.98	
280.05	10.56	243.19	MWD	4.36	279.60	5.94	-0.89	-6.88	
314.81	11.75	244.06	MWD	1.04	313.71	12.51	-3.87	-12.91	
337.81	11.63	239.93	MWD	1.10	336.23	17.09	-6.06	-17.09	
355.14	12.11	235.45	MWD	1.80	353.19	20.64	-7.96	-20.03	
382.28	13.44	229.93	MWD	1.99	379.66	26.63	-11.61	-24.78	
411.60	14.45	228.68	MWD	1.08	408.11	33.69	-16.22	-30.14	
436.36	15.75	229.40	MWD	1.59	432.02	40.13	-20.44	-35.01	
463.50	16.45	229.88	MWD	0.79	458.09	47.65	-25.32	-40.75	
490.85	20.25	230.66	MWD	4.18	484.05	56.75	-29.92	-48.71	
520.47	25.07	231.57	MWD	4.89	511.37	68.16	-37.08	-57.59	
545.72	30.22	231.75	MWD	6.12	533.73	79.87	-44.34	-66.78	
574.70	36.08	230.71	MWD	6.09	557.98	95.71	-54.27	-79.12	
601.82	41.61	229.84	MWD	6.15	579.10	112.71	-65.14	-92.20	
632.62	46.70	229.27	MWD	4.97	601.19	134.15	-79.06	-108.52	
661.71	51.65	229.87	MWD	5.13	620.20	156.14	-93.33	-125.27	
691.25	56.22	230.56	MWD	4.68	637.59	180.01	-108.60	-143.62	
720.54	59.58	230.67	MWD	3.44	653.15	204.81	-124.34	-162.79	
749.62	64.19	230.16	MWD	4.78	666.85	230.45	-140.68	-182.55	
778.45	68.86	230.06	MWD	2.78	678.79	256.68	-157.51	-202.68	
807.00	71.93	230.46	MWD	5.34	688.84	283.38	-174.59	-223.23	
836.59	78.14	230.03	MWD	6.31	696.48	311.94	-192.86	-245.19	
862.88	85.19	229.80	MWD	8.05	700.29	337.93	-209.60	-265.08	
890.03	90.24	230.02	MWD	5.59	701.37	365.04	-227.06	-285.82	
918.39	91.01	230.36	MWD	0.89	701.06	393.39	-245.22	-307.61	
946 77	90.86	230 25	MWD	0.20	700 60	421 76	-263 34	-329 44	
975.03	89.50	229.75	MWD	1.53	700.51	450.01	-281.51	-351.09	
1002.56	90.63	230.40	MWD	1.42	700.48	477.53	-299.18	-372.20	
1030.12	88.91	232.09	MWD	2.62	700.59	505.08	-316.43	-393.69	
1056.95	87.97	231.93	MWD	1.07	701.32	531.90	-332.93	-414.83	
1086.87	90.00	231.90	MWD	2.04	701.85	561.81	-351.38	-438.37	
1112 97	90.60	232.56	MWD	1.03	701 71	587.91	-367.37	-459.01	
1140.50	89.68	233.10	MWD	1 17	701.65	615 44	-384 00	-480.94	
1170.64	89.99	233 29	MWD	0.36	701.00	645.56	-402.06	-505.08	
1198.27	90.70	233.79	MWD	0.94	701.57	673.18	-418.48	-527.30	
1224 64	89 59	231 69	MWD	2 70	701 50	699 54	-434 44	-548 28	
1252 22	89.90	231.00	MWD	0.34	701.00	727 12	-451 53	-569.20	
1281 21	90.00 90 98	232.67	MWD	1 49	701 40	756 10	-469.30	-592 84	
1310 13	80.00	232.72	MWD	1 35	701 24	785.02	-486 82	-615.84	
1339.08	89.82	233.39	MWD	0.72	701.37	813.96	-504.22	-638.97	
1368.17	90.46	234.02	MWD	0.92	701.30	843.03	-521.44	-662.42	

All data is in metres unless otherwise stated. Directions and coordinates are relative to Grid North. Vertical depths are relative to Well. Northings and Eastings are relative to Structure. The Dogleg Severity is in Degrees per 30 metres.

Vertical Section is from Structure and calculated along an azimuth of 231.557° (Grid)

Coordinate system is UTM Zone 55S on Australian Geodetic Datum 1966, Meters.

Grid convergence at Surface is -0.893°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 1385.00m.

The Bottom Hole Displacement is 859.86m, in the Direction of 231.834° (Grid).

3

**GEOLOGY & SHOWS** 

## 4.1 GEOLOGY AND SHOWS

#### Patricia-2

Geological logging for Patricia-2 commenced below the 13.375" casing shoe set at 327.1mRT from 334m to the total depth of 1385mRT.

During the course of the well, all gas equipment was checked and calibrated regularly, and spot samples were taken at drilling breaks and other changes in drilling parameters to better assess lithological changes. Samples were analysed for calcimetry as required by the OMV Wellsite Geologist.

The lithology of Patricia-2 is described below. For more detailed descriptions, see Appendix 1: Formation Evaluation Log.

334 – 340	6m
340 – 350	5m
350 – 360	10m
360 – 370	5m
370 – 400	10m
400 – 430	5m
430 – 500	10m
500 – 620	5m
620 – 640	10m
640 - 670	5m
670 – 850	10m
850 - 890	5m
890 – 1380	10m
1380 – 1385	5m

#### SAMPLE INTERVALS

#### **36" HOLE SECTION**

Seabed - 111.5mRT: Returns to Seabed

17.5" HOLE SECTION

111.5 - 334mRT: Returns to Seabed

12.25" HOLE SECTION 334 - 884mRT

#### FORMATION DESCRIPTIONS:

#### 334 - 496m ARGILLACEOUS CALCILUTITE and ARGILLACEOUS CALCISILTITE

**ARGILLACEOUS CALCILUTITE:** Medium light grey to medium dark grey, occasionally very light grey. Dispersive to soft, occasionally firm, amorphous to subblocky, with abundant argillaceous material, trace to common fossil fragments, trace to rare Foraminifera, rare glauconite pellets and trace pyrite.

**ARGILLACEOUS CALCISILTITE:** Light grey to medium light grey, occasionally very light grey. Soft to firm, subblocky to blocky and occasionally amorphous with common to abundant argillaceous material, minor to trace fossil fragments, rare to trace Foraminifera, trace glauconite pellets and trace disseminated pyrite.

No oil shows were observed in this interval.

The section from 334 to 496m was drilled with an average ROP of 19.5m/hr and ranged from 4.7m/hr to 112.5m/hr. The calcimetry values for this interval ranged from 50-89% calcite with an average of 67% calcite. No dolomite was recorded.

Total Gas	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	iC <sub>4</sub>	nC <sub>4</sub>	iC <sub>5</sub>	nC <sub>5</sub>
%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
0.00-0.02	0-155	-	-	-	-	-	-

#### 496 - 762m: MARL, ARGILLACEOUS CALCISILTITE and minor CALCARENITE

**MARL:** Very light grey to medium grey, predominantly light grey to medium light grey. Soft, amorphous to subblocky and sticky in places, with trace glauconite, trace pyrite, trace fossil fragments and trace Foraminifera. Grades to CALCAREOUS CLAYSTONE in places.

**ARGILLACEOUS CALCISILTITE:** Light grey to medium grey, occasionally medium dark grey. Soft to firm, occasionally dispersive, subblocky, occasionally amorphous containing abundant argillaceous material, rare to trace glauconite, trace fossil fragments, trace Foraminifera and occasional trace pyrite.

**CALCARENITE:** Light grey, medium grey to medium dark grey. Friable to moderately hard, occasionally hard to very hard, very fine to fine, moderately well sorted with recrystallised calcite grains and rare calcite cement, trace glauconite, trace pyrite and trace fossil fragments.

No oil shows were observed in this interval.

The section from 496 to 762m was drilled with an average ROP of 16.6m/hr and ranged from 2.2m/hr to 80.4m/hr. The calcimetry values for this interval ranged from 44-82% calcite with an average of 59% calcite. No dolomite was recorded.

Total Gas	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	iC <sub>4</sub>	nC <sub>4</sub>	iC <sub>5</sub>	nC₅
%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
0.01-0.16	47-1529	-	-	-	-	-	-

#### 762 - 815m MARL and CALCAREOUS CLAYSTONE

**MARL:** Light grey to medium dark grey, predominantly medium light grey. Soft, amorphous to blocky and sticky in places containing rare glauconite pellets, trace fossil fragments and trace Foraminifera. Grades to CALCAREOUS CLAYSTONE in places.

**CALCAREOUS CLAYSTONE**: Dusky yellow, light grey to medium grey, light olive grey. Soft to firm, predominantly soft, amorphous to subblocky, with trace glauconite, trace fossil fragments and trace Foraminifera.

No oil shows were observed in this interval.

The section from 762m to 815m was drilled with an average ROP of 27.9m/hr and ranged from 10.4m/hr to 77.7m/hr. The calcimetry values for this interval ranged from 28-64% calcite with an average of 36% calcite. No dolomite was recorded.

Total Gas	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	iC <sub>4</sub>	nC <sub>4</sub>	iC <sub>5</sub>	nC <sub>5</sub>
%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
0.06-0.26	554-2355	-	-	-	-	-	-

4.1

#### 815 - 884m SILTY SANDSTONE, CALCAREOUS CLAYSTONE and minor GLAUCONITIC SANDSTONE

**SILTY SANDSTONE**: Moderate yellowish brown to dark yellowish brown, clear to translucent quartz grains. Very fine to fine, moderately hard with occasionally hard aggregates, subangular to subspherical grains, moderately well-sorted, containing rare glauconite pellets, rare mica flakes, rare to trace Foraminifera, trace fossil fragments and trace siderite. Grades to SILTSTONE in places. Good to fair inferred porosity.

**GLAUCONITIC SANDSTONE:** Medium green to dark green. Fine to medium grained glauconite, subrounded to subangular.

**CALCAREOUS CLAYSTONE:** Dusky yellow, light grey to medium grey, light olive grey. Soft to firm, predominantly soft, amorphous to subblocky with trace glauconite, trace fossil fragments and trace Foraminifera.

No oil shows were observed in this interval.

The section from 815m to 884m was drilled with an average ROP of 26.5m/hr and ranged from 10.6m/hr to 117.4/hr. The calcimetry values for this interval ranged from 2-28% calcite with an average of 7%. No dolomite was recorded.

Total Gas	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	iC <sub>4</sub>	nC <sub>4</sub>	iC <sub>5</sub>	nC₅
%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
0.29-12.47	2309-99532	-	-	-	-	-	-

#### 8.5" HOLE SECTION 884 - 1385mRT

#### FORMATION DESCRIPTIONS:

#### 884 - 1385m SILTY SANDSTONE and SANDSTONE

**SILTY SANDSTONE:** Moderate yellowish brown to dark yellowish brown, brownish black-olive black clear to translucent quartz grains. Very fine to fine, predominantly very fine, moderately hard with occasionally hard aggregates, subangular to subrounded, subspherical, moderately well sorted, containing rare mica flakes, trace glauconite, trace pyrite, rare to trace Foraminifera, trace fossil fragments and trace siderite. Grades to SILTSTONE in places. Good to fair inferred porosity.

**SANDSTONE:** Dusky brown to dusky yellowish brown, olive grey, clear to translucent quartz grains. Very fine to fine, predominantly very fine, loose, friable, rare hard aggregates. Subangular to subrounded, subspherical, moderately well sorted. Grading from 15 down to 5% silt and from 5 to 20% argillaceous material with rare mica flakes, trace glauconite, trace lithic fragments. Grades to ARGILLACEOUS SANDSTONE in places. Fair to good inferred porosity.

No hydrocarbon shows were observed in this interval.

The section from 884 to 1385m was drilled with an average ROP of 56.6/hr and ranged from 3.2m/hr to 120m/hr. The calcimetry values for this interval ranged from 0-2% calcite with an average of 1%. No dolomite was recorded.

Total Gas	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	IC <sub>4</sub>	NC <sub>4</sub>	iC <sub>5</sub>	nC₅
%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
0.12-7.95	1583-60017	-	-	-	-	-	-



# 4.2 Sampling Summary

INTEQ

### OMV: Patricia-2

From:

BHI Unit 503 Location: **Ocean Bounty** Telephone: 08 9221 6200

Shipped in Container No: OPC205

SAMPLE TYPE	No.	C	OMPOSITIO	N	PACKING DETAILS
	Of	Sample	Depth In	terval (m)	
	Sets	Box No.	From	То	
Sets A,B,C,D,E:	5	1	334	470	Small boxes 1 - 8 packed in
		2	470	580	one Large Box for each set.
		3	580	710	
Washed & Air Dried Samples		4	710	875	5 Large Boxes (total)
(100 g)		5	875	1050	
		6	1050	1240	
		7	1240	1385	
Set F: Samplex Trays	1	1	334	1385	1 Box
Set G:	1	1	334	1385	1 Large box
Mud Samples (5 samples),					
Drillwater (3 samples),					
Filtrate (2 samples)					
Set H: Misc paper work, logs and	1	1	-	-	1 Large box
charts					
Mud additives	2	-	-	-	Given to OMV WSG

DISTRIBUTION	Destination & Address	Attention of:
Weehed & Dried (100g)	ON// Australia Dtultal Caraala Chara	
Set A	ONV AUSTRINA PLY LLO Sample Store	Atth: Barry Lloyd
	39 McDowell Street	
	Welshool WA 6106	
	Tel: 08-9350 3170	
	Fax: 08-9350 3179	
Washed & Dried (100g)	AGSO Data Repositories	Attn: Eddie Resiak
Set B: AGSO	Cnr Jerrabomberra Avenue and Hindmarsh	
	Drive	
	Symonston ACT 2609	
	Tel: 02-6249 9222	
	Fax: 02-6269 9903	
Washed & Dried (100g)	VDNRE	Attn:
Set C: VDNRE	Core and Cuttings Store	
	South Rd	
	Werribee, Vic 3030	
	03 9412 5055	
Washed & Dried (100g)	I rinity Gas Resources Pty Ltd	Attn: Tomoyuki Watanabe
Set D: IRINITY	Level 9 Chancery House	
	37 St Georges I ce	
Washed & Dried (100g)	101.00 9225 5070	Atta: Andy Distoch
Set E: Santos	SANTUS	Attn. Andy Fletsch
	91 King William St	
	Adelaide SA 5000	
	08 82247128	
Samplex Travs.	OMV Australia Ptv Ltd Sample Store	Attn: Barry Llovd
Set F	c/o Kestrel Information Management Ptv Ltd	
	39 McDowell Street	
	Welshpool WA 6106	
	Tel: 08-9350 3170	
	Fax: 08-9350 3179	
Set G:	ACS Laboratories Pty Ltd	Attn: lan Mangelsdorf
Mud Samples,	8 Cox Road	
Drillwater sample, Mud	Windsor	
Sample	Brisbane QLD 4030	
Jampie	Tel: 07-3357 1133	
Set H: OMV	OMV Australia Pty Ltd Sample Store	Attn: Barry Lloyd
wisc paper work, logs	c/o Kestrel Information Management Pty Ltd	
and charts	39 McDowell Street	
	Weishpool WA 6106	
	1 el: 08-9350 3170	
	Fax: 08-9350 3179	

# PRESSURE EVALUATION

#### 5.1 Pore Pressure Evaluation

An average sea water density of 1.03 sg was assumed as the normal saline pressure gradient for all calculations for Patricia-2. Using real time data, such as the hydrocarbon gas trend, lithology, flowline temperature, corrected Drilling Exponent (Dxc) data for conventional roller bits, constant drilling fluid parameters and MWD resistivity and gamma real-time data when available, pore pressure estimates were made during the drilling of Patricia-2. For more details, please refer to Appendix 3, "Pressure Summary Plot". All depths unless otherwise stated refer to the rotary table - RT.

#### 36" Hole Section

The 36" hole was drilled from 77.5mRT to 111.5mRT. The section was short, characterised by largely unconsolidated sediments with returns dumped at the seabed. With an average penetration rate of about 57m/hr and low weight-on-bit, the plotted Dxc data curve contained widely scattered points, with no general trend discernible. However, it is unlikely that pore pressure would have increased over this shallow interval. The pore pressure was estimated to have remained normal at 1.03 sg EMD down to 111.5mRT.

#### 17.5" Hole Section

The 17.5" hole was also drilled riserless from 111.5mRT to 334mRT. The rate of penetration was very fast in the upper section from 111.5 to 220mRT averaging 98m/hr through poorly consolidated sediments. The Dxc data points varied widely, but a general rightward trend could be observed. Between 220m and 280mRT, penetration rates marginally slowed to 67m/hr. The Dxc trend shifted to a near-vertical trend, possibly due to a minor change in lithology. More compact, indurated sediments below about 280m, with penetration rate slowing to about 55m/hr, displayed a normal trend of Dxc points. However, at this shallow depth it is unlikely that pore pressure would have increased and was estimated to have remained normal at 1.03 sg EMD down to 334mRT.

#### 12.25" Hole Section

The 12.25" directional hole section was drilled alternating between sliding and rotating from 334m to 884mRT with a tricone bit, allowing useful Dxc values to be recorded when drilling conventionally. A KCI/PHPA/Glycol mud system was used. Starting with an initial weight of 1.06sg, the mud weight was allowed to increase to 1.08sg by 710m. A normal rightward Dxc trend, based on periods of conventional rotary drilling, was observed down to 760m, with average background gas levels remaining very low at about 0.04%. There was a slight leftward Dxc shift from 760 – 820m. This was due to a lithology change from mainly carbonates to more clayey formations. Background gas levels increased to about 0.28%, but there were no signs of increased pore pressure in this interval. No cavings were seen and real-time MWD resistivity data indicated normal pore pressure conditions. A further marked leftward shift in the Dxc curve occurred from 820m to the 9.625" casing point at 884m. Once again this was due to a marked lithology change from calcareous claystones to silty sandstones. Background gas levels rose steadily as the gas reservoir section was penetrated. A maximum gas peak of 12.5% at 843m was recorded, with gas levels remaining at about 4% down to section TD. There were no connection gases recorded in this hole section. Flowline temperatures showed a normal increasing gradient with depth. With no indications at all of any increased pore pressure, the pore pressure in this hole section was estimated to have remained normal at 1.03sg EMW. The mud weight was increased to 1.12 sg after section TD to reduce gas levels in the well.

#### 8.5" Hole Section

The 8.5" hole section was drilled horizontally from 884m to well TD of 1385mRT at an angle from 89 – 91 degrees. The hole was maintained on a specific heading to laterally intersect target horizons in the subsurface structure. Consequently, only one metre of vertical distance was traversed, rendering Dxc analysis unusable. Drilling exponent analysis is based on predicted 'drillability' behaviours of sedimentary units over succeeding stratified layers. Recorded variations in gas levels and Dxc scatter points measured in this section could be directly quantified with the drilling rate and changes in the drilling parameters used. There were no abnormal pressure indicators observed in this section. Therefore, pore pressure was estimated to have remained normal at 1.03sg EMW. The mud weight was increased to 1.12sg to reduce overall gas levels in the well prior to pulling out of hole.

### **5.2 Fracture Pressure Evaluation**

#### 12.25" hole section

After drilling out the 13.375" casing shoe at 327.1m, rathole to 334m and three metres of 12.25" hole to 337mRT, a Formation Integrity Test (FIT) was performed. An applied force of 314psi at surface using mud weighted at 1.06sg yielded an equivalent mud weight (EMW) of 1.73sg without causing formation breakdown. This section was drilled with a KCI/PHPA/Glycol mud system weighted from 1.06 to 1.10sg. While drilling, an ECD range of 1.08 to 1.13sg was recorded. At no time did ECD values approach the FIT result. No significant downhole mud losses were seen in this section.

#### 8.5" hole section

The 8.5" hole formation integrity test (FIT) at 872.36mRT using 1.07sg mud yielded a formation strength of 1.40sg Equivalent Mud Weight. The mud weight was increased from 1.07 - 1.10sg while drilling to the total measured depth of 1385mRT (701.1mTVD). There were no downhole mud losses seen while drilling this section although a maximum ECD of 1.29sg was exerted against the formation. The formation competency of 1.40sg EMW measured at the casing shoe was more than enough to prevent losses to the formation.

The following is a summary of the Formation Integrity Tests conducted in this well:

Hole Section	Hole MD/TVD	Casing	Shoe MD/TVD	Pressure	Mud Weight	EMW
12.25"	334 / 332.5m	13.375"	327.1 / 325.7m	314 psi	1.06 sg	1.73 sg
8.50"	887 / 701.1m	9.625"	872.36 / 700.7m	408 psi	1.07 sg	1.40 sg

TABLES
Т	ab	les

BA	KER UGHES							В	it F	Rui	n S	Sun	nma	iry													
Operato	/ Australia					Well N	lame	Ра	trici	a-2			Location	_21		Drilling Diar	Contr <b>NO</b>	actor d Of	fsh	ore				Rig O	cea	an	Bounty
	Bit				1	1		On Btm					Drilling	paramet	ter rang	je						G	radin	g			
Bit No.	Make, Type Serial No. / IADC Code	Bit Size in	<b>Jets</b> x 1/32"	TFA in/2	Depth In m	Depth Out m	Metres Drilled Metres	Hours Drilled Hours	ROP Avg m/hr	<b>TBR</b> x1000	WOB klbs	SPP psi	RPM	Flow gpm	Jet Vel m/sec	DC/OH Vel m/min	MD sg	Bit Power hhp	Bit Loss %	ı o	D	L	в	G C		R	Remarks
36" Hole Section																											
RR1	Smith DSJC	26	1 x 17, 3 x 24	2.6607	77.5	111.5	34.0	0.6	56.7	2.6	3 - 12	710	60	910	33	6	1.03	49	29.1			No	t Grad	ed			36" Hole Section T.D.
	w/ 36" Hole Opener		36" HO, 4 x 22	ets																							
DD2	17.5" Hole Section	175	2 × 24	1 2254	444 5	224	222.5	2.0	C1 0	20.0	4 44	1000	00 400	704	50	20	1.00	400	44.0	1		No		a al			Mud Motor MM/D
KK2	740844	17.5	3 X 24	1.3234	111.5	334	222.5	3.0	01.0	29.8	1 - 14	1220	90 - 109	761	59	28	1.03	130	44.0			INC	Grad	ea			
	12.25" Hole Section	I	1			1											1										
NB3	Reed MHT 13GC	12.25	3 x 15, 1 x 24	0.9595	334	884	550	29.0	19.0	428.6	1 - 35	1774	177 - 287	847	86.0	73.50	1.06-	318.6	645.0	2 2	WT	A	Е	1 N	D I	TD	Mud Motor, MWD
	NL 5007																1.10										
8.5" Hole Section																											
NB4	Reed EHP41ALKDH	8.50	3 x 14	0.4510	884	1385	501	13.4	37.4	166.5	1 - 49	1763	51 - 189	573	124.2	189.50	1.08	463.1	68.1	1 2	NO	G	E	I W	ΤĪ	TD	Mud Motor, MWD
	M25484																1.12										8.5" Hole Section T.D.

B# Integ	<b>VAR</b> Ker Hjghes Q				В	it H	yd	Irau	ulic	s S	Sun	nma	ry							
Operator					Well Name					Location	ı	Drilling Con	tractor				Rig			
оми	Austral	lia			Patricia-2					VIC/L	.21	Diamon	d Offs	hore			Ocea	in Bou	inty	
Drillstrin	g Abbrevi	ations			S	Camco S	RD Too	ol	Hydraul	ics Mode	ls									
י א	Normal MIMWD	P A	Positive Displacemer Adjustable Gauge St	nt Motor tabilizer	T Halliburton TRACS Tool     Power Law Model used for drilling with Mud       C Core     Bingham Model used for coring and drilling with sea water															
																		Annular Velocities		
Bit	Depth	Hole	Jets	Drill	Mud	Mud		ΥP	Flow	Jet	Impact	Hydraulic	Power/	Bit	Bit	Pipe	ECD	DP	DC	DC
No.		Size		String	Туре	Density	PV	lbs/100	Rate	Vel	Force	Power	Area	Loss	Loss	Loss		он	он	Critical
	(m)	in	x 1/32"	Туре		sg	cР	ft sq	gpm	m/sec	lbf	hhp	hp/sq in	Psi	%	Psi	sg	m/min	m/min	m/min
	36" Hole	Section																		
RR1	111.5	36"	1 x 17, 3 x 24	Ν	SW/hi-vis sweeps	1.03	1	1	910	33.4	443.7	49.0	0.1	92	29.1	191	1.03	-	5.6	25.2
	17.5" Ho	le Sectior	ו																	
RR2	334	17.50	3 x 24	Ν	SW/hi-vis sweeps	1.03	1	1	803	59.2	693.6	135.7	0.6	290	44.0	465	1.03	21.4	28.1	25.5
	12.25" H	ole Sectio	on																	
NB3	884	12.25"	3 x 15, 1 x 24	Ν	KCL/PHPA/Glycol	1.10	15	27	872	88.9	1206.7	354.0	3.0	697	35.3	1230	1.14	50.3	75.7	176.3
	8.5" Hole	e Section																		
NB4	1385	8.50	3 x 14	Ν	FLO-PRO	1.07-1.12	11	32	573	124.2	1128.6	463.1	8.3	1386	68.1	473	1.29	164.9	160.4	189.5



## APPENDICES

# FORMATION EVALUATION LOG 1:500

## **DRILLING DATA PLOT**

1:1000 & 1:2500

## PRESSURE EVALUATION PLOT 1:2500

PRESSURE SUMMARY PLOT 1:5000



Compositional Analysis of Surface Gas Samples from Baleen-3 & Patricia-2 Victoria

> Prepared for OMV Australia Pty Ltd

> > August 2002

File: AFL 2002-022 / AFL 2002-027

Reservoir Fluid Laboratory Core Laboratories Perth Australia 7 August, 2002

OMV Australia Pty Ltd Level 29, St Martin's Tower 44 St Georges Terrace Perth 6000 WESTERN AUSTRALIA

Attention: Mr Andy Ion

Subject:	Compositional Analysis
Well:	Baleen-3 and Patricia-2
Location:	Victoria
File:	AFL 2002-022 & AFL 2002-027

Dear Andy,

Six 20 litre surface gas samples, three collected from each of the Baleen-3 and Patricia-2 wells, were received at our Perth laboratory for compositional analysis. Presented in the following report are the results of the analyses requested.

Core Laboratories appreciates this opportunity to be of service to OMV Australia Pty Ltd. Should you have any questions regarding this report, or if we may be of any further assistance, please feel free to contact me at your convenience.

Yours Faithfully, For **CORE LABORATORIES** 

Kevin Daken Laboratory Supervisor

## OMV Australia Pty Ltd Baleen-3 & Patricia-2

Baleen-3 & Patricia-2 AFL 2002-022 & AFL 2002-027

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Baleen-3	
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Compositional Analysis of Surface Gas Samples	 2-4
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Sample Validity Check	 5
Compositional Analysis of Surface Gas Samples	 6-8

## **OMV Australia Pty Ltd**

Baleen-3 & Patricia-2

AFL 2002-022 & AFL 2002-027

## LABORATORY PROCEDURES

#### Samples

Three 20-litre gas samples were collected from the separator gas line from each of the Baleen-3 and Patricia-2 wells and forwarded to our Perth Laboratory. As an initial quality check, the opening pressure for each sample was determined and compared to sampling conditions. These results, summarised on page 1 (Baleen-3) and 5 (Patricia-2), indicated the samples were suitable for compositional analysis.

#### **Compositional Analysis**

The hydrocarbon composition of each of the separator gas samples was analysed according to the GPA 2286 method. The resultant compositions are reported on pages 2 though 4 (Baleen-3) and 6 through 8 (Patricia-2).

## **Baleen-3**

File: AFL 2002-022

Reservoir Fluid Laboratory Core Laboratories Perth Australia

### OMV Australia Pty Ltd Baleen-3 AFL 2002-022

## PRELIMINARY CHECKS OF SAMPLE QUALITY AND SUMMARY OF SAMPLES RECEIVED

Surface Gas Samples											
Cylinder Number	Sampling	Conditions	Laboratory Opening Conditions								
	psig	°F	psig	°F	Air Content (mol %)						
1278-C1-F	259.6	54.5	258	66	0.32						
2750-C1-F	303.8	38.0	303	66	0.15						
1851-C1-F	303.8	38.1	298	66	2.35						

All samples were subjected to compositional analysis.

#### **OMV Australia Pty Ltd** Baleen-3

AFL 2002-022

## **COMPOSITION OF PRIMARY STAGE SEPARATOR GAS - 1278-C1-F**

(by Programmed-Temperature, Capillary Chromatography)

Component	Mol %	Plant Products (GPM)	Liquid Density (gm/cc)	MW
Hydrogen Sulfide Carbon Dioxide Nitrogen Methane Ethane Propane iso-Butane n-Butane iso-Pentane n-Pentane Hexanes Heptanes Octanes Nonanes Decanes	* 0.00 0.16 1.67 98.08 0.09 Trace 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	(GPM) 0.024 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	(gm/cc) 0.8172 0.8086 0.2997 0.3562 0.5070 0.5629 0.5840 0.6244 0.6311 0.6850 0.7220 0.7450 0.7640 0.7780 0.7890	44.010 28.013 16.043 30.070 44.097 58.123 58.123 72.150 72.150 84.0 96.0 107 121 134 147
Dodecanes	0.00	0.000	0.8000	161
Totals	100.00	0.024		

#### **Properties of Plus Fractions**

Component	Mol %	Liquid Density (gm/cc)	Liquid API Gravity	MW

Note: \* For H2S, 0.00 means less than 0.10 mol percent (cross-checked by other methods) For all other components:

trace means detected but less than 0.005 mol percent.
0.00 means less than or equal to 0.001 mol percent.

Note: Component properties assigned from literature. \* ref: Gas Producers & Suppliers Association (GPSA) Engineering Data Book

### SAMPLING CONDITIONS

259.6 psia 54.5 °F

Gas Cylinder 1278-C1-F

#### **Average Sample Properties**

Critical Pressure, psia	664.1
Critical Temperature, °R	341.6
Average Molecular Weight	16.30
Calculated Gas Gravity ( air = 1.000 )	0.563

#### at 14.696 psia and 60 °F

Heating Value, Btu/scf dry gas\* Gross .....

992

#### **OMV Australia Pty Ltd** Baleen-3

AFL 2002-022

## **COMPOSITION OF PRIMARY STAGE SEPARATOR GAS - 2750-C1-F**

(by Programmed-Temperature, Capillary Chromatography)

Component	Mol %	Plant Products (GPM)	Liquid Density (gm/cc)	MW
Hydrogen Sulfide Carbon Dioxide Nitrogen Methane Ethane Propane iso-Butane n-Butane iso-Pentane n-Pentane Hexanes Heptanes Octanes Nonanes	* 0.00 0.17 1.82 97.93 0.08 Trace 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	(GPM) 0.021 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	(gm/cc) 0.8172 0.8086 0.2997 0.3562 0.5070 0.5629 0.5840 0.6244 0.6311 0.6850 0.7220 0.7450 0.7640	44.010 28.013 16.043 30.070 44.097 58.123 58.123 72.150 72.150 72.150 84.0 96.0 107 121
Decanes Undecanes Dodecanes	0.00 0.00 0.00	0.000 0.000 0.000	0.7780 0.7890 0.8000	134 147 161
Totals	100.00	0.021		

#### **Properties of Plus Fractions**

Component	Mol %	Liquid Density (gm/cc)	Liquid API Gravity	MW

Note: \* For H2S, 0.00 means less than 0.10 mol percent (cross-checked by other methods) For all other components:

trace means detected but less than 0.005 mol percent.
0.00 means less than or equal to 0.001 mol percent.

Note: Component properties assigned from literature.

\* ref: Gas Producers & Suppliers Association (GPSA) Engineering Data Book

### SAMPLING CONDITIONS

303.8 psia 38.0 °F

Gas Cylinder 2750-C1-F

#### **Average Sample Properties**

Critical Pressure, psia	664.0
Critical Temperature, °R	341.4
Average Molecular Weight	16.32
Calculated Gas Gravity ( air = 1.000 )	0.563

#### at 14.696 psia and 60 °F

Heating Value, Btu/scf dry gas\* Gross .....

991

#### **OMV Australia Pty Ltd** Baleen-3

AFL 2002-022

## **COMPOSITION OF PRIMARY STAGE SEPARATOR GAS - 1851-C1-F**

(by Programmed-Temperature, Capillary Chromatography)

Component	Mol %	Plant Products (GPM)	Liquid Density (gm/cc)	MW
Hydrogen Sulfide Carbon Dioxide Nitrogen Methane Ethane Propane iso-Butane n-Butane iso-Pentane n-Pentane Hexanes Heptanes Octanes Nonanes Decanes	* 0.00 0.17 1.79 97.96 0.08 Trace 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	(GPM) 0.021 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.8172 0.8086 0.2997 0.3562 0.5070 0.5629 0.5840 0.6244 0.6311 0.6850 0.7220 0.7450 0.7640 0.7780 0.7780	44.010 28.013 16.043 30.070 44.097 58.123 58.123 72.150 72.150 84.0 96.0 107 121 134
Dodecanes	0.00	0.000	0.7890	161
Totals	100.00	0.021		

#### **Properties of Plus Fractions**

Component	Mol %	Liquid Density (gm/cc)	Liquid API Gravity	MW

Note: \* For H2S, 0.00 means less than 0.10 mol percent (cross-checked by other methods) For all other components:

trace means detected but less than 0.005 mol percent.
0.00 means less than or equal to 0.001 mol percent.

Note: Component properties assigned from literature.

\* ref: Gas Producers & Suppliers Association (GPSA) Engineering Data Book

### SAMPLING CONDITIONS

303.8 psia 38.1 °F

Gas Cylinder 1851-C!-F

#### **Average Sample Properties**

Critical Pressure, psia	664.0
Critical Temperature, °R	341.4
Average Molecular Weight	16.32
Calculated Gas Gravity ( air = 1.000 )	0.563

#### at 14.696 psia and 60 °F

Heating Value, Btu/scf dry gas\* Gross .....

991

## Patricia-2

File: AFL 2002-027

Reservoir Fluid Laboratory Core Laboratories Perth Australia

#### OMV Australia Pty Ltd Patricia-2 AFL 2002-027

## PRELIMINARY CHECKS OF SAMPLE QUALITY AND SUMMARY OF SAMPLES RECEIVED

Surface Gas Samples						
	Sampling Conditions		Laboratory Opening Conditions			
Cylinder Number					Air	
	psig	°F	psig	°F	Content	
					(mol %)	
2357-C1-F	365	37	375	66	0.11	
3416-C1-F	364	37	340	66	0.14	
0687-C1-F	296	48	315	66	0.10	

All samples were subjected to compositional analysis.

## **OMV Australia Pty Ltd**

Patricia-2 AFL 2002-027

## **COMPOSITION OF PRIMARY STAGE SEPARATOR GAS - 2357-C1-F**

(by Programmed-Temperature, Capillary Chromatography)

Component	Mol %	Plant Products (GPM)	Liquid Density (gm/cc)	MW
Hydrogen Sulfide Carbon Dioxide Nitrogen Methane Ethane Propane iso-Butane n-Butane iso-Pentane n-Pentane Hexanes Heptanes Octanes Nonanes Decanes Undecanes Dodecanes	* 0.00 1.38 0.69 97.58 0.34 0.01 Trace Trace 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	0.091 0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.8172 0.8086 0.2997 0.3562 0.5070 0.5629 0.5840 0.6244 0.6311 0.6850 0.7220 0.7450 0.7450 0.7640 0.7780 0.7890 0.8000	44.010 28.013 16.043 30.070 44.097 58.123 58.123 72.150 72.150 84.0 96.0 107 121 134 147 161
Totals	100.00	0.094		

#### **Properties of Plus Fractions**

Component	Mol %	Liquid Density (gm/cc)	Liquid API Gravity	MW

For H2S, 0.00 means less than 0.10 mol percent (cross-checked by other methods) Note: \* For all other components:

- trace means detected but less than 0.005 mol percent.
 - 0.00 means less than or equal to 0.001 mol percent.

Note: Component properties assigned from literature.

\* ref: Gas Producers & Suppliers Association (GPSA) Engineering Data Book

### **SAMPLING CONDITIONS**

364 psia 37 °F

Gas Cylinder 2357-C1-F

#### **Average Sample Properties**

Critical Pressure, psia	670.9
Critical Temperature, °R	345.8
Average Molecular Weight	16.56

#### at 14.696 psia and 60 °F

Heating	Value, Btu/scf dry gas*	
Gross		992

#### **OMV** Australia Ltd. Patricia-2

AFL 2002-027

## **COMPOSITION OF PRIMARY STAGE SEPARATOR GAS - 3416-C1-F**

(by Programmed-Temperature, Capillary Chromatography)

Component	Mol %	Plant Products (GPM)	Liquid Density (gm/cc)	MW
Hydrogen Sulfide Carbon Dioxide Nitrogen Methane Ethane Propane iso-Butane n-Butane iso-Pentane n-Pentane Hexanes Heptanes Octanes Nonanes Decanes Undecanes Dodecanes	* 0.00 1.38 0.69 97.59 0.33 0.01 Trace Trace 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	0.088 0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.8172 0.8086 0.2997 0.3562 0.5070 0.5629 0.5840 0.6244 0.6311 0.6850 0.7220 0.7450 0.7450 0.7640 0.7780 0.7890 0.8000	44.010 28.013 16.043 30.070 44.097 58.123 58.123 72.150 72.150 84.0 96.0 107 121 134 147 161
Totals	100.00	0.091		

#### **Properties of Plus Fractions**

Component	Mol %	Liquid Density (gm/cc)	Liquid API Gravity	MW

For H2S, 0.00 means less than 0.10 mol percent (cross-checked by other methods) Note: \* For all other components:

- trace means detected but less than 0.005 mol percent.
 - 0.00 means less than or equal to 0.001 mol percent.

Note: Component properties assigned from literature.

\* ref: Gas Producers & Suppliers Association (GPSA) Engineering Data Book

### **SAMPLING CONDITIONS**

364 psia 37 °F

Gas Cylinder 3416-C1-F

#### **Average Sample Properties**

Critical Pressure, psia	670.9
Critical Temperature, °R	345.7
Average Molecular Weight	16.56
Calculated Gas Gravity (air = 1.000)	0.572

#### at 14.696 psia and 60 °F

Heating	Value, Btu/scf dry gas*	
Gross		992

#### **OMV** Australia Ltd. Patricia-2

AFL 2002-027

## COMPOSITION OF PRIMARY STAGE SEPARATOR GAS - 0678-C1-F

(by Programmed-Temperature, Capillary Chromatography)

Component	Mol %	Plant Products (GPM)	Liquid Density (gm/cc)	MW
Hydrogen Sulfide Carbon Dioxide Nitrogen Methane Ethane Propane iso-Butane n-Butane iso-Pentane n-Pentane Hexanes Heptanes Octanes Nonanes Decanes Undecanes Dodecanes	* 0.00 1.37 0.70 97.59 0.33 0.01 Trace Trace 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	0.033 0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.8172 0.8086 0.2997 0.3562 0.5070 0.5629 0.5840 0.6244 0.6311 0.6850 0.7220 0.7450 0.7450 0.7640 0.7780 0.7890 0.8000	44.010 28.013 16.043 30.070 44.097 58.123 58.123 72.150 72.150 84.0 96.0 107 121 134 147 161
Totals	100.00	0.036		

#### **Properties of Plus Fractions**

Component	Mol %	Liquid Density (gm/cc)	Liquid API Gravity	MW

For H2S, 0.00 means less than 0.10 mol percent (cross-checked by other methods) Note: \* For all other components:

- trace means detected but less than 0.005 mol percent.
 - 0.00 means less than or equal to 0.001 mol percent.

Note: Component properties assigned from literature.

\* ref: Gas Producers & Suppliers Association (GPSA) Engineering Data Book

### **SAMPLING CONDITIONS**

295 psia 48 °F

Gas Cylinder 0678-C1-F

#### **Average Sample Properties**

Critical Pressure, psia	670.9
Critical Temperature, °R	345.7
Average Molecular Weight	16.56

#### at 14.696 psia and 60 °F

Heating	Value, Btu/scf dry gas*	
Gross		992



## EXPRO GROUP AUSTRALIA PTY LTD EDGE - SURFACE DATA ACQUISITION



Company	OMV Australia Pty Ltd.
Exal Job Number	J02-188
Well	Patricia-2
Dates	30/6 - 06/07/2002
Rig/platform	Ocean Bounty

Exal Engineers	M. Donald / N. Dowdell
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## WELL TEST REPORT E.D.G.E. DATA

Client	:	OMV Australia Pty Ltd.
Well	:	Patricia-2
Date	:	30/6 - 06/07/2002
Country	:	Australia
Rig/Platform	:	Ocean Bounty
Field	:	VIC/L21
Test	:	Completion
Exal Job Number	:	J02-188
Formation	:	Gurnard
Perforation Interval	:	n/a
Client Engineer	:	A. Ion
Exal Engineer	:	M. Donald / N. Dowdell





## INDEX

st Periods





## **INTRODUCTION**

Expro Group CHS(E) Division provided the EDGE Data Acquisition system on Expro Welltest equipment on Well No. Patricia-2 from 30th June - 6th July 2002 for a Completion Test.

The test objectives were:

- i) To determine the initial static reservoir pressure.
- ii) To clean up the well to remove residual mud/filtrate and promote flow contribution from total length while minimising skin damage and plugging of the sand screens.
- iii) To determine rate dependant well bore skin factor.
- iv) To determine well deliverability.
- v) To estimate average formation permeability.
- vi) To obtain representative fluid samples.
- vii) To secure the well for future operations.

viii) To conduct operations in accordance with OMV Australia, Diamond Offshore and Expro Group safety procedures.

The testing phase consisted of:

- (a) Displacing the well bore to Nitrogen.
- (b) Pressure Build Up # 1.
- (c) Initial Clean Up flow.
- (d) Pressure Build Up # 2.
- (e) Step-Rate Test (Low, Medium & High Rates).
- (f) Pressure Build Up # 3.





## Sequence of Events

Client	OMV Australia Pty Ltd
Well No.	Patricia-2
Test No.	Completion
Location	Ocean Bounty
Start Date	30/06 - 01/07/2002
Country	Australia
Field	VIC/L21
Job Number	J02/188
Formation	Gurnard
Exal Engineer	M. Donald / N. Dowdell
Client Engineer	A. Ion
Perforations	n/a

Client	OMV Australia Pty Ltd	Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2	Location	Ocean Bounty
Test No.	Completion	Start Date	30/06 - 01/07/2002

#### 29/06/02

14:00:00 Commenced pressure testing complete surface equipment.

- 14:00:00 Flushed surface lines to Fwd and Aft booms until clean.
- 15:05:00 Test #1 Aft oil and gas lines to boom burners to 500psi.
- 15:17:00 Test #2 Full equipment body test to oil and gas diverter manifolds to 500psi.
- 15:22:00 Test #3 Full equipment body test to oil and gas diverter manifolds to 1,000psi.
- 15:33:00 Test #4 Separator body test and gas, oil and water outlet valves to 500psi.
- 15:38:00 Test #5 Separator body test and gas, oil and water outlet valves to 1,000psi.
- 15:52:00 Test #6 Separator inlet and bypass valves to 500psi.
- 15:57:00 Test #7 Separator inlet and bypass valves to 1,000psi.
- 16:10:00 Test #8 Oil diverter manifold to 500psi.
- 16:15:00 Test #9 Oil diverter manifold to 1,000psi.
- 16:26:00 Test #10 Heater coil and bypass valves to 500psi.
- 16:31:00 Test #11 Heater coil and bypass valves to 1,000psi.
- 16:46:00 Test #12 Heater inlet and bypass valve to 500psi.
- 16:51:00 Test #13 Heater inlet and bypass valve to 1,000psi.
- 17:05:00 Test #14 Downstream choke manifold valves to 500psi.
- 17:10:00 Test #15 Downstream choke manifold valves to 1,000psi.
- 17:23:00 Test #16 Upstream choke manifold valves to 500psi.
- 17:28:00 Test #17 Upstream choke manifold valves to 3,500psi.
- 17:45:00 Test #18 Sandtrap valve to 500psi.
- 17:50:00 Test #19 Sandtrap valve to 3,500psi.
- 18:03:00 Test #20 ESD valve to 500psi.
- 18:08:00 Test #21 ESD valve to 3,500psi.
- 18:20:00 All pressure tests successfully completed.

#### 30/06/02

- 01:00:00 Set SLZXP hanger/packer. Commenced 1,500psi annular pressure test to confirm packer set.
- 01:30:00 Good test. Commenced operations to shear off and release HR running tool.
- 01:50:00 Commenced pulling out of hole with drill pipe and HR running tool.
- 06:30:00 Commenced running in hole with 5-1/2" 17ppf NK3SB tubing
- 10:48:00 Commenced making up TRSCSSV.
- 11:31:00 Completed making up TRSCSSV. Pressure tested hydraulic line to 5,000psi.
- 11:45:00 Good test. Continued running in hole with tubing.
- 14:00:00 Commenced making up Lower Landing String Assembly (LLSA).
- 14:30:00 Picked up and made up TH to THRT to SSTT. Attached umbilical. Flushed and checked lines.
- 15:21:00 Function tested THRT latch, un-latch, softland, vent/test and TH lock.
- 15:35:00 Latched TH in THRT
- 15:37:00 Pressure tested umbilical to 5,000psi.
- 15:42:00 Good test. Pressure tested control line to TRSCSSV to 5,000psi.
- 15:46:00 Good test. Unlocked TH. Opened lower and upper ball valves in SSTT.
- 16:15:00 Commenced running in hole with 7" landing string.
- 18:00:00 Commenced rigging up circulating head.
- 18:50:00 Tagged Polished Bore receptacle. Pulled up and broke out landing joint.
- 19:00:00 Prepared to rig up coil tubing lifting frame.
- 19:30:00 Conducted JSA on drill floor for Coil Tubing Lift Frame (CTLF) and Expro flowhead.
- 19:45:00 Commenced rigging up CTLF.
- 20:45:00 Completed rigging up CTLF. Picked up and made up flowhead.
- 21:15:00 Commenced rigging up Coflexip hose to flow wing. Rigged up casing elevator and bails.
- 22:20:00 Made up 7" casing landing joint to landing string.
- 23:00:00 Rigged up hydraulic control lines and cement pump line to kill wing on flowhead. Rigged up coil tubing lines from rig manifold.
- 16:30:00 Brine returns at surge tank 67.7bbls (calculated rate 125b/d).

Client	OMV Australia Pty Ltd	Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2	Location	Ocean Bounty
Test No.	Completion	Start Date	30/06 - 01/07/2002

Time Comment	Time	Comment
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#### 01/07/02

01:10:00 Opened production wing valve on flowhead.

- 01:10:00 Open choke manifold to surge tank and lo-torque valve.
- 01:23:00 Commenced flushing from cement unit across flowhead to choke manifold and down landing string.
- 01:29:00 Closed SSLV. Continued pumping through to Expro choke manifold.
- 01:37:00 Good returns at choke manifold. Stopped pumping and closed in at choke manifold.
- 01:42:00 Commenced pressure test on SSLV against Expro choke manifold to 3,500psi.
- 01:47:00 Commenced logging on EdgeX surface data acquisition system.
- 01:52:00 Good test bled off pressure. Opened SSLV.
- 02:02:00 Closed SSTT upper ball valve.
- 02:06:00 Commenced pressure test on SSTT against Expro choke manifold to 3,500psi.
- 02:11:00 Bled off pressure due to leak at lo-torque valve. Fuctioned lo-torque valve.
- 02:13:00 Commenced pressure test on SSTT against Expro choke manifold to 3,500psi.
- 02:15:00 Bled off pressure due to leak at lo-torque valve.
- 02:16:00 Replaced lo-torque valve.
- 02:23:00 Commenced pressure test on SSTT against Expro choke manifold to 3,500psi.
- 02:27:00 Bled off pressure due to leak at lo-torque valve. Replaced lo-torque valve.
- 02:32:00 Commenced pressure test on SSTT against Expro choke manifold to 3,500psi.
- 02:44:00 Good test bled off pressure.
- 02:53:00 Opened SSTT upper ball prior to circulating filtered brine.
- 03:10:00 Commenced rigging up Expro wireline BOP's and lubricator.
- 04:00:00 Commenced conventional circulation of inhibited brine.
- 04:48:00 Completed conventional circulation.
- 05:03:00 Landed out completion in Subsea Tree (SST). Good indication of helix alignment.
- 05:13:00 Vented TRSCSSV control line at Expro panel. Vented soft-land on THRT.
- 05:26:00 Closed middle pipe rams.
- 05:54:00 Pressured up on annulus beneath middle pipe rams to 3,500psi. Good test.
- 06:06:00 Locked tubing hanger. Good indication on lock monitor on control panel.
- 06:10:00 Pressured up on annulus above tubing hanger to to 3,500psi to confirm seal. Good test.
- 06:36:00 Bled down tubing hanger lock pressure.
- 06:44:00 Commenced overpull test.
- 06:45:00 Overpull test failed.
- 06:46:00 Pressured up on THRT unlock line to 3,000psi. THRT not locked.
- 07:00:00 Closed middle pipe rams.
- 07:09:00 Pressured up on THRT lock line to 4,500psi. THRT failed to lock.
- 07:11:00 Pressured up on THRT lock line to 3,000psi. THRT failed to lock.
- 07:16:00 Bled off pressure on THRT lock line and re-pressured to 4,000psi. THRT failed to lock.
- 07:26:00 Bled off pressure on THRT lock line and re-pressured to 3,000psi. THRT failed to lock.
- 07:27:00 Bled off pressure on THRT lock monitor.
- 07:30:00 Functioned SST choke with ROV.
- 10:00:00 Pressured up below middle pipe rams and above tubing hanger to assist in engaging lock.
- 11:35:00 Opened middle pipe rams. Closed lower annular bag. Pressured up annulus to 3,500psi.
- 11:40:00 Attempted to set tubing hanger. Failed.
- 12:45:00 Pulled back on landing string 4 meters. Pressured up THRT unlock line to 2,000psi.
- 12:50:00 Pressured up on THRT soft land to 3,000psi.
- 12:55:00 Opened TRSCSSV.
- 13:05:00 Closed TRSCSSV.
- 13:10:00 Landed out completion in SST.
- 13:15:00 Launched ROV to open TRSCSSV isolation valve and cavity seal monitor valve on SST.
- 14:26:00 ROV opened TRSCSSV isolation valve on SST.
- 14:42:00 ROV opened cavity seal monitor valve on SST.
- 14:46:00 Bled off THRT soft land line.
- 14:49:00 Closed lower annular bag. Pressured up beneath annular bag to 3,500psi.

Client	OMV Australia Pty Ltd	Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2	Location	Ocean Bounty
Test No.	Completion	Start Date	30/06 - 01/07/2002

#### 01/07/02

- 14:55:00 Bled off pressure below bag.
- 14:57:00 Pressured up on THRT lock line to 3,000psi. Opened lower annular bag.
- 15:00:00 Bled off pressure on THRT lock line. Conducted 20,000lbs overpull test.
- 15:05:00 Good test. Released overpull.
- 15:08:00 Closed middle pipe rams.
- 15:10:00 Commenced pressure testing tubing hanger and packer seal.
- 15:30:00 Held wireline JSA.
- 15:35:00 Commenced rigging up Expro wireline.
- 16:20:00 Observed polished bore receptacle (PBR) leaking.
- 17:30:00 Commenced rigging down Expro wireline.
- 17:30:00 Prepared to rig down CTLF and flow head.
- 18:50:00 Pressured up tubing hanger unlock. Applied 30,000lbs over pull.
- 19:01:00 Applied neutral weight on tubing hanger, increased unlock to 40,000psi, applied 50,000lbs over pull.
- 19:07:00 Bled off tubing hanger unlock, pressured up tubing hanger lock to 2000psi.
- 19:07:00 Bled off tubing hanger lock, bled off THRT latch.
- 19:10:00 Pressured up tubing hanger unlock to 4,000psi, pressured up THRT latch to 3,000psi.
- 19:15:00 Applied 65,000lbs over pull.
- 19:25:00 Reduced over pull to 40,000lbs above string WT total 270,000lbs.
- 19:28:00 Tubing hanger released.
- 19:35:00 Commenced rigging down flowhead.
- 22:16:00 Laid down CTLF, continue pulling out of hole with landing string and tubing hanger.
- 22:42:00 Bled off SSLV open line.
- 23:20:00 Tubing hanger at surface. Commenced breaking out tubing hanger from tubing.

#### 02/07/02

- 00:10:00 Unlatched SSTT assembly from tubing hanger.
- 00:20:00 Layed out SSTT assembly on catwalk.
- 00:35:00 Broke out tubing hanger. Commenced redress of tubing hanger.
- 03:15:00 Completed re-assembly of tubing hanger with added pup joints.
- 03:35:00 Made up TRSCSSV to tubing hanger and landed out in rotary table.
- 03:52:00 Picked up and made up LLSA and SSTT.
- 04:20:00 Completed function testing LLSA.
- 04:20:00 Commenced pressure testing TRSCSSV control line to 5,000psi. Good test.
- 04:25:00 Commenced running in hole with LLSA.
- 05:02:00 Picked up and made up SSLV assembly. Repaired damage to SSLV umbilical line.
- 06:20:00 Continued running in hole with landing string.
- 06:24:00 Stopped Edge logging system for maintenance.
- 06:28:00 Re-started Edge logging system.
- 06:55:00 Rigged down 7" elevators. Rigged up 5" drill pipe elevators.
- 07:15:00 Picked up CTLF unit to derrick.
- 07:40:00 Completed making up Expro flowhead. Made up coflexip to production wing. Made up line from cement unit to kill wing.
- 08:55:00 Landed out completion in Subsea Tree (SST).
- 09:21:00 Locked tubing hanger. Good indication at control panel.
- 09:25:00 Commenced 50,000lbs overpull test. Good test, released overpull.
- 09:33:00 Commenced pressure annulus below tubing hanger to 1,500psi.
- 09:45:00 Good test. Bled off pressure.
- 09:51:00 Commenced pressure annulus below tubing hanger to 3,500psi.
- 10:03:00 Good test. Bled off pressure.
- 10:15:00 Commenced rigging up Expro wireline to pull isolation sleeve and drift completion.
- 11:30:00 Completed rigging up Expro wireline.
- 11:55:00 Commenced pressure testing against flow head master valve and SSTT upper ball to 2,000psi.

Client	OMV Australia Pty Ltd	Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2	Location	Ocean Bounty
Test No.	Completion	Start Date	30/06 - 01/07/2002

#### 02/07/02

- 12:03:00 Good test. Commenced pressure testing Expro wireline lubricator to 3,500psi.
- 12:13:00 Good test. Bled off pressure.
- 12:15:00 Closed flowhead kill wing valve. Pressure tested from cement unit to kill wing valve to 3,500psi.
- 12:20:00 Repaired leaks to lo-torque valve.
- 12:45:00 Good test. Opened kill wing valve. Opened production wing valve.
- 12:47:00 Commenced pressure testing SSTT upper ball to choke manifold to 3,500psi.
- 12:57:00 Good test. Bled off pressure. Opened SSTT upper ball.
- 13:00:00 Expro wireline commenced running in hole with GS pulling tool to retrieve isolation sleeve.
- 13:07:00 Expro wireline at surface. Closed Swab valve on flowhead.
- 13:10:00 Closed SSLV. Bled off lubricator pressure.
- 13:20:00 Broke out lubricator and laid out GS pulling tool and isolation sleeve.
- 13:25:00 Installed 4.5" gauge ring onto wireline toolstring. Stabbed lubricator and pressure tested to 3,500psi.
- 13:38:00 Good test. Bled off pressure.
- 13:40:00 Opened SSLV. Opened swab valve on flowhead. Commenced running in hole with gauge ring.
- 13:55:00 Expro wireline at surface. Closed SSLV. Closed swab valve on flowhead.
- 14:00:00 Commenced rigging down Expro wireline.
- 14:20:00 Completed rigging down Expro wireline.
- 14:30:00 BJ Coiled tubing commenced rigging up injector head.
- 23:00:00 Completed rigging up coiled tubing.
- 23:23:00 Closed procuction wing valve for pressure test.
- 23:30:00 Held JSA prior to coiled tubing operations.
- 23:50:00 Commenced flushing coiled tubing lines prior to pressure test.

#### <u>03/07/02</u>

- 00:26:00 Commenced pressure testing coil to 300psi.
- 00:29:00 Good test. Increased pressure to 3,000psi.
- 00:40:00 Good test.
- 00:43:00 Commenced slowly bleeding off line pressure.
- 00:50:00 Completed bleed down.
- 01:08:00 Opened kill wing valve on flowhead.
- 01:15:00 Opened flowhead master valve and locked open.
- 01:16:00 Opened SSLV.
- 01:21:00 Coil tubing commenced running in hole at 10m per minute. Open at Expro choke manifold on 64/64th adjustable choke to surge tank.
- 01:38:00 Coil tubing at depth 66mRT. Continued running in hole at 5m per minute.
- 01:56:00 Coil tubing at depth 200mRT. Continued running in hole at 6m per minute.
- 02:00:00 Coil tubing stopped at 221mRT due to problem with SRO pressure gauge.
- 02:28:00 Rectified SRO pressure gauge fault. Coiled tubing continued running in hole.
- 03:09:00 Coiled tubing stopped at 600mRT to allow nitrogen unit to cool down.
- 03:22:00 Coiled tubing commenced pumping nitrogen at 400 scf/m.
- 03:37:00 Coiled tubing at 786mRT. Increased adjustable choke to 72/64".
- 03:42:00 Expro observed brine returns at surge tank.
- 03:44:00 Total brine returns at surge tank 1.3bbls (calculated rate 1877b/d).
- 03:45:00 Total brine returns at surge tank 2.3bbls (calculated rate 1440b/d).
- 03:45:00 Coiled tubing stopped at 892mRT. Continued pumping nitrogen at 400scf/m.
- 03:47:00 Coiled tubing notified of leak in the injector.
- 03:50:00 Coil tubing pulled back up hole 20m due to suspected nitrogen loss in screens.
- 03:50:00 Total brine returns at surge tank 28.3bbls (calculated rate 8640b/d).
- 03:53:00 Coil tubing at depth 872m. Continued pumping.
- 03:53:00 Decreased adjustable choke to 64/64".
- 03:56:00 Total brine returns at surge tank 32.7bbls (calculated rate 6048b/d).
- 03:58:00 Coil tubing commenced pulling out of hole to 792mRT. Continued to pump at 400scf/m.

Client	OMV Australia Pty Ltd	Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2	Location	Ocean Bounty
Test No.	Completion	Start Date	30/06 - 01/07/2002

#### 03/07/02

04:00:00 Decreased adjustable choke to 58/64".

- 04:00:00 Total brine returns at surge tank 43bbls (calculated rate 2880b/d).
- 04:03:00 Expro observed nitrogen at surface with brine.
- 04:05:00 Total brine returns at surge tank 57.7bbls (calculated rate 4320b/d).
- 04:10:00 Increased adjustable choke to 64/64".
- 04:10:00 Total brine returns at surge tank 71bbls (calculated rate 3600b/d).
- 04:13:00 Coil tubing at depth 792mRT.
- 04:15:00 Decreased adjustable choke to 58/64".
- 04:15:00 Total brine returns at surge tank 77bbls (calculated rate 3456b/d).
- 04:17:00 Decreased adjustable choke to 52/64".
- 04:19:00 Total brine returns at surge tank 90.5bbls (calculated rate 3312b/d).
- 04:20:00 Coil tubing reduced nitrogen pump rate to 300scf/m.
- 04:24:00 Increased adjustable choke to 56/64".
- 04:25:00 Increased adjustable choke to 58/64".
- 04:25:00 Total brine returns at surge tank 91.7bbls (calculated rate 720b/d).
- 04:29:00 Decreased adjustable choke to 50/64".
- 04:30:00 Coil tubing commenced running in hole to 892mRT continued flowing at 300scf/m.
- 04:30:00 Total brine returns at surge tank 96.1bbls (calculated rate 1728b/d).
- 04:32:00 Increased adjustable choke to 52/64".
- 04:35:00 Increased adjustable choke to 56/64".
- 04:35:00 Total brine returns at surge tank 97.4bbls (calculated rate 1872b/d).
- 04:36:00 Increased adjustable choke to 58/64".
- 04:37:00 Increased adjustable choke to 64/64".
- 04:40:00 Coiled tubing at depth 892mRT.
- 04:40:00 Total brine returns at surge tank 99.8bbls (calculated rate 864b/d).
- 04:45:00 Total brine returns at surge tank 106.6bbls (calculated rate 1728b/d).
- 04:50:00 Total brine returns at surge tank 109.4bbls (calculated rate 2592b/d).
- 04:54:00 Coil tubing stopped pumping nitrogen and Expro choke shut in.
- 04:57:00 Total brine returns at surge tank 119.4bbls (calculated rate 1152b/d).
- 07:00:00 Function tested ESD system in presence of OMV company men.
- 07:05:00 Held JSA on drill floor prior to opening well.
- 07:14:00 Opened well to aft flare boom via 20/64" adjustable choke.
- 07:15:00 Gradually increased adjustable choke to 24/64".
- 07:17:00 Gradually increased adjustable choke to 46/64".
- 07:18:00 Gradually increased adjustable choke to 64/64". Hydrocarbon gas to surface.
- 07:20:00 Brine to surface.
- 07:23:00 Well slugging brine and gas.
- 07:29:00 Well flowing predominantly nitrogen.
- 07:37:00 Hydrocarbon gas to surface. Commenced gradually increasing adjustable choke to 72/64".
- 07:40:00 Gradually increased adjustable choke to 76/64".
- 07:42:00 Gradually increased adjustable choke to 80/64".
- 07:51:00 Manipulated adjustable choke to prevent plugging.
- 07:52:00 Gradually increased adjustable choke to 100/64".
- 07:54:00 Gradually increased adjustable choke to 112/64". Well slugging hydrocarbon gas and brine.
- 08:00:00 Gradually increased adjustable choke to 128/64".
- 08:00:00 BS&W = 100% brine, trace sediment, pH = 6 and Chloride contents from refractometer 117,000ppm.
- 08:00:00 Draeger showed 1.2 % CO2 by volume & 0 ppm H2S. S.G. of produced water 1.095 @ 57F.
- 08:30:00 Well flowing predominantly brine, trace sediment.
- 09:00:00 BS&W = 100% brine, trace sediment, pH = 6 and Chloride contents from refractometer 120,000ppm.
- 09:00:00 Draeger showed 1.5 % CO2 by volume & 0 ppm H2S. S.G. of produced water 1.096 @ 52F.
- 09:24:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.
- 09:39:00 Diverted flow via test separator.

Well No.         Patricia-2         Location         Ocean Bounty           Test No.         Completion         Start Date         30/06 - 01/07/2002           Time         Comment           095000         Installed 3.750° orifice plate into gas meter run.           095100         Disaled of 500° orifice plate into gas meter run.           00000         Disaled 3.50° orifice plate into gas meter run.           00000         Disager showed 1.4 % CO2 by volume & 0 ppm H2S, S.G. of produced gas - 0.571. S.G. of produced water - 1096 @ 52F.           011000         Diraceger showed 1.4 % CO2 by volume & 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.           110000         Brine returns at surge tank + 10.5bbbis (calculated rate - 494b/d).           111500         Brine returns at surge tank + 27.7bbis (calculated rate - 394b/d).           111500         Brine returns at surge tank + 27.7bbis (calculated rate - 336b/d).           1120000         Diraceger showed 1.4 % CO2 by volume & 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.           1120000         Brine returns at surge tank - 33.9bbis (calculated rate - 32b/d).           113000         Brine returns at surge tank - 33.9bbis (calculated rate - 32b/d).           1120000         Brine returns at surge tank - 33.9bbis (calculated rate - 22b/d).           1130000         Brine returns at surge tank - 33.9bbis (calcu	Client	OMV Australia Pty Ltd	Exal Engineer	M. Donald / N. Dowdell
Test No.         Completion         Start Date         30/06 - 01/07/2002           Time         Comment           0957000         Installed 3 50° orifice plate into gas meter run.           095110         Raised orifice plate.           0950100         BSAW = 100% brine pH = 6 and Chloride contents from refractometer 120,000ppm.           10100100         Dragger showed 1 4 % CO2 by volume & 0 ppm H2S. SG. of produced gas - 0.571. S.G. of produced water - 1.096 @ 52F.           10100100         Dragger showed 1 4 % CO2 by volume & 0 ppm H2S. SG. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.           10100100         Dragger showed 1 4 % CO2 by volume & 0 ppm H2S. SG. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.           10100100         Dragger showed 1 4 % CO2 by volume & 0 ppm H2S. SG. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.           10100100         Drane returms at surge tank - 10.3bbis (calculated rate - 302brd).           1113000         Drine returms at surge tank - 30.3bbis (calculated rate - 302brd).           11130000         Dragger showed 1.4 % CO2 by volume & 0 ppm H2S. SG. of produced gas - 0.576. S.G. of produced water - 1.096 @ 53F.           1120000         Drane returms at surge tank - 33.9bbis (calculated rate - 225b/d).           1120000         Drane returms at surge tank - 30.3bbis (calculated rate - 225b/d).           1200000         Drane returms at surge tank - 30.3bbis (calculated rate - 225b/d)	Well No	Patricia-2	Location	Ocean Bounty
<ul> <li>Comment</li> <li>Op:50:00</li> <li>Installed 3.750° orifice plate into gas meter run.</li> <li>Op:51:00</li> <li>Risialed 3.500° orifice plate into gas meter run.</li> <li>Op:51:00</li> <li>Risialed 3.500° orifice plate into gas meter run.</li> <li>Op:51:00</li> <li>Risialed 3.500° orifice plate into gas meter run.</li> <li>Op:51:00</li> <li>Risialed 3.500° orifice plate into gas meter run.</li> <li>Op:51:00</li> <li>Rise origination of the state /li></ul>	Test No	. Completion	Start Date	30/06 - 01/07/2002
<ul> <li>09:50:00 Installed 3.750° orifice plate into gas meter run.</li> <li>09:51:00 Raised orifice plate.</li> <li>09:53:00 Installed 3.500° orifice plate into gas meter run.</li> <li>10:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 120,000ppm.</li> <li>10:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.571. S.G. of produced water - 1.096 @ 52F.</li> <li>10:15:00 Brine returns at surge tank - 15.7bbls (calculated rate - 404b/d).</li> <li>11:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 120,000ppm.</li> <li>11:00:00 Brine returns at surge tank - 19.8bbls (calculated rate - 404b/d).</li> <li>11:00:00 Brine returns at surge tank - 19.8bbls (calculated rate - 42bb/d).</li> <li>11:00:00 Brine returns at surge tank - 24.2bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 24.2bbls (calculated rate - 394b/d).</li> <li>11:30:00 Brine returns at surge tank - 24.2bbls (calculated rate - 394b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 394b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 304b/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbls (calculated rate - 304b/d).</li> <li>12:00:00 Brave ger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 53F.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 228b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 228b/d).</li> <li>12:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 228b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 228b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank</li></ul>	Time	Comment		
<ul> <li>1955000 Installed 3750° orifice plate into gas meter run.</li> <li>1955100 Raised orifice plate.</li> <li>1000:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.571. S.G. of produced water - 1.096 @ 52F.</li> <li>1010:000 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.571. S.G. of produced water - 1.096 @ 52F.</li> <li>101:000 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>101:000 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 54F.</li> <li>11:50:00 Brine returns at surge tank - 24.2bits (calculated rate - 336b/d).</li> <li>11:50:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 545F.</li> <li>12:00:00 DSkW = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 545F.</li> <li>12:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 545F.</li> <li>12:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 545F.</li> <li>12:00:00 Draeger showed 1.5 % CC2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.094 @ 545F.</li> <li>13:00:</li></ul>	03/07/02			
<ul> <li>109:51:00 Raised orifice plate</li> <li>109:53:00 Installed 3:500° orifice plate into gas meter run.</li> <li>100:00 BS&amp;W = 100% brine pl4 = 6 and Chloride contents from refractometer 120,000ppm.</li> <li>10:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.571. S.G. of produced water - 1.096 @ 52F.</li> <li>10:15:00 Brine returns at surge tank - 15.5bbis (calculated rate - 504b/d).</li> <li>10:30:00 Brine returns at surge tank - 10.5bbis (calculated rate - 499b/d).</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Brine returns at surge tank - 19.8bbis (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 27.7bbis (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 27.7bbis (calculated rate - 32bb/d).</li> <li>11:15:00 Brine returns at surge tank - 27.7bbis (calculated rate - 32bb/d).</li> <li>11:15:00 Brine returns at surge tank - 30.9bbis (calculated rate - 32bb/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbis (calculated rate - 32bb/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbis (calculated rate - 32bb/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbis (calculated rate - 22bb/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbis (calculated rate - 22bb/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbis (calculated rate - 22bb/d).</li> <li>12:00:00 Brine returns at surge tank - 34.9bbis (calculated rate - 22bb/d).</li> <li>12:00:00 Brine returns at surge tank - 43.9bbis (calculated rate - 22bb/d).</li> <li>13:00:00 Brine returns at surge tank - 43.9bbis (calculated rate - 22bb/d).</li> <li>13:00:00 Brine returns at surge tank - 43.9bbis (calculated rate - 22bb/d).</li> <li>13:00:00 Brine returns at surge tank - 43.9bbis (calculated rate - 22bb/d).</li> <li>13:00:00 Brine returns at surge tank - 51.7bbis (calculated rate - 22bb/d).</li> <li>13:00:00 Brine returns at surge ta</li></ul>	09:50:00	Installed 3,750" orifice plate into gas meter ru	Jn.	
<ul> <li>09:53:00 Installed 3.50° orifice plate into gas meter run.</li> <li>10:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 120,000ppm.</li> <li>10:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.571. S.G. of produced water - 1.096 @ 52F.</li> <li>10:50:00 Brine returns at surge tank - 10.5bbls (calculated rate - 504b/d).</li> <li>10:50:00 Brine returns at surge tank - 10.5bbls (calculated rate - 499b/d).</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Brine returns at surge tank - 19.8bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 24.2bbs (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 24.2bbls (calculated rate - 336b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 332b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 332b/d).</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 228b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 221b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 221b/d).</li> <li>12:00:00 Brine returns at surge tank - 43.8 bbls (calculated rate - 221b/d).</li> <li>12:00:00 Brine returns at surge tank - 43.8 bbls (calculated rate - 221b/d).</li> <li>12:00:00 Brine returns at surge tank - 43.8 bbls (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4 bbls (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.8 bbls (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.8 bbls (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.8 bbls (calculate</li></ul>	09:51:00	Raised orifice plate.		
<ul> <li>10:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 120,000ppm.</li> <li>10:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.571. S.G. of produced water - 1.096 @ 52F.</li> <li>10:15:00 Brine returns at surge tank - 5.25bbls (calculated rate - 504b/d).</li> <li>10:30:00 Brine returns at surge tank - 10.5bbs (calculated rate - 499b/d).</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 120,000ppm.</li> <li>11:00:00 Brine returns at surge tank - 19.8bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 27.7bbls (calculated rate - 342b/d).</li> <li>11:30:00 Brine returns at surge tank - 27.7bbls (calculated rate - 336b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 336b/d).</li> <li>12:00:00 Brine returns at surge tank - 30.9bbls (calculated rate - 302b/d).</li> <li>12:00:00 Brine returns at surge tank - 30.9bbls (calculated rate - 21b/d).</li> <li>12:00:00 Brine returns at surge tank - 30.9bbls (calculated rate - 21b/d).</li> <li>12:00:00 Brine returns at surge tank - 30.9bbls (calculated rate - 21b/d).</li> <li>12:00:00 Brine returns at surge tank - 40.8bbls (calculated rate - 22b/d).</li> <li>12:00:00 Brine returns at surge tank - 40.8bbls (calculated rate - 22b/d).</li> <li>12:00:00 Brine returns at surge tank - 40.8bbls (calculated rate - 22b/d).</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.8bbls (calculated rate - 22b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.8bbls (calculated rate - 22b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.8bbls (calculated rate - 22b/d).</li> <li>13:00:00 Brine returns at surge tank - 50.0bbls (calculated rate - 22b/d).</li> <li>13:00:00</li></ul>	09:53:00	Installed 3.500" orifice plate into gas meter ru	Jn.	
<ul> <li>10:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.571. S.G. of produced water - 1.096 @ 52F.</li> <li>10:15:00 Brine returns at surge tank - 5.25bbls (calculated rate - 504b/d).</li> <li>10:30:00 Brine returns at surge tank - 10.5bbls (calculated rate - 499b/d).</li> <li>10:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Brine returns at surge tank - 24.2bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 27.7bbls (calculated rate - 336b/d).</li> <li>11:16:00 Brine returns at surge tank - 27.7bbls (calculated rate - 332b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 332b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 332b/d).</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225.000ppm.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>12:00:00 Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.8bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.8bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.8bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 50.0bbls (calculated rate - 220b/d).</li> <li>13:15:00</li></ul>	10:00:00	BS&W = 100% brine pH = 6 and Chloride co	ntents from refractor	neter 120,000ppm.
<ul> <li>water - 1.096 @ 52F.</li> <li>10:15:00 Brine returns at surge tank - 5.25bbls (calculated rate - 504b/d).</li> <li>10:30:00 Brine returns at surge tank - 15.7bbls (calculated rate - 498b/d).</li> <li>11:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 120,000ppm.</li> <li>11:00:00 Brine returns at surge tank - 19.8bbls (calculated rate - 394b/d).</li> <li>11:00:00 Brine returns at surge tank - 19.8bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 24.2bbls (calculated rate - 336b/d).</li> <li>11:15:00 Brine returns at surge tank - 24.2bbls (calculated rate - 336b/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbls (calculated rate - 336b/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbls (calculated rate - 332b/d).</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 36.1bbls (calculated rate - 221b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>12:30:00 Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>12:45:00 Brine returns at surge tank - 43.4bbls (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:15:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:15:00 Brine returns at surge tank - 55.5bbls (calculated rate - 220b/d).</li> <li>13:15:00 Brine returns at surge tank - 55.5bbls (calculated rate - 220b/d).</li> <li>13:15:00 Brine returns at</li></ul>	10:00:00	Draeger showed 1.4 % CO2 by volume & 0 p	pm H2S. S.G. of pro	oduced gas - 0.571. S.G. of produced
<ul> <li>10:15:00 Brine returns at surge tank - 5.25bbls (calculated rate - 504b/d).</li> <li>10:30:00 Brine returns at surge tank - 10 5bbls (calculated rate - 504b/d).</li> <li>11:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 120,000ppm.</li> <li>11:00:00 Brine returns at surge tank - 19 8bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 22 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Brine returns at surge tank - 24.2bbls (calculated rate - 422b/d).</li> <li>11:30:00 Brine returns at surge tank - 27.7bbls (calculated rate - 422b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 422b/d).</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Brine returns at surge tank - 30.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 21b/d).</li> <li>12:00:00 Brine returns at surge tank - 36.1bbls (calculated rate - 221b/d).</li> <li>12:00:00 Brine returns at surge tank - 36.4bbls (calculated rate - 230b/d).</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 220b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 250b/d).</li> <li>13:15:00 Brine returns at surge tank - 50.0bbl (calculated rate - 250b/d).</li> <li>13:15:00 Brine returns at surge tank - 51.7bbls (calculated rate - 168b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 11</li></ul>		water - 1.096 @ 52F.		
<ul> <li>10:30:00 Brine returns at surge tank - 10.5bbls (calculated rate - 504b/d).</li> <li>10:45:00 Brine returns at surge tank - 15 7bbls (calculated rate - 499b/d).</li> <li>11:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 120,000ppm.</li> <li>11:00:00 Brine returns at surge tank - 19.8bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 19.8bbls (calculated rate - 342b/d).</li> <li>11:30:00 Brine returns at surge tank - 27.7bbls (calculated rate - 336b/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbls (calculated rate - 336b/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbls (calculated rate - 336b/d).</li> <li>11:45:00 Brine returns at surge tank - 33.9bbls (calculated rate - 325b/d).</li> <li>12:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 53F.</li> <li>12:00:00 Drine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 30.9bbls (calculated rate - 211b/d).</li> <li>12:00:00 Brine returns at surge tank - 40.8bbls (calculated rate - 221b/d).</li> <li>12:45:00 Brine returns at surge tank - 40.8bbls (calculated rate - 221b/d).</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:30:00 Brine returns at surge tank - 43.8bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.8bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 53.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 53.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S</li></ul>	10:15:00	Brine returns at surge tank - 5.25bbls (calcula	ated rate - 504b/d).	
<ul> <li>10:45:00 Brine returns at surge tank. 15.7bbls (calculated rate - 499b/d).</li> <li>11:00:00 S&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 120,000ppm.</li> <li>11:00:00 Brine returns at surge tank. 24.2bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank. 27.7bbls (calculated rate - 336b/d).</li> <li>11:45:00 Brine returns at surge tank. 27.7bbls (calculated rate - 302b/d).</li> <li>11:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Braeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 53F.</li> <li>12:00:00 Brine returns at surge tank 33.9bbls (calculated rate - 288b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Refrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank 36.4bbls (calculated rate - 211b/d).</li> <li>12:30:00 Brine returns at surge tank 38.4bbls (calculated rate - 221b/d).</li> <li>12:30:00 Brine returns at surge tank 40.8bbls (calculated rate - 250b/d).</li> <li>13:00:00 Brine returns at surge tank 43.4bbls (calculated rate - 250b/d).</li> <li>13:00:00 Brine returns at surge tank 43.4bbls (calculated rate - 250b/d).</li> <li>13:00:00 Brine returns at surge tank 43.4bbls (calculated rate - 250b/d).</li> <li>13:30:00 Brine returns at surge tank 43.4bbls (calculated rate - 250b/d).</li> <li>13:30:00 Brine returns at surge tank 43.4bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank 43.4bbls (calculated rate - 250b/d).</li> <li>13:45:00 Brine returns at surge tank 45.5bbls (calculated rate - 250b/d).</li> <li>13:45:00 Brine returns at surge tank 51.75bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank 51.75bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank 51.75bbls (calculated rate - 16</li></ul>	10:30:00	Brine returns at surge tank - 10.5bbls (calcula	ated rate - 504b/d).	
<ul> <li>11:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 120,000ppm.</li> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Brine returns at surge tank - 24.2bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 27.7bbls (calculated rate - 422b/d).</li> <li>11:30:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Brine returns at surge tank - 30.9bbls (calculated rate - 302b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank - 36.4bbls (calculated rate - 211b/d).</li> <li>12:30:00 Brine returns at surge tank - 36.4bbls (calculated rate - 212b/d).</li> <li>12:45:00 Brine returns at surge tank - 40.8bbls (calculated rate - 212b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 22bb/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 22bb/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 22bb/d).</li> <li>13:45:00 Brine returns at surge tank - 45.5bbls (calculated rate - 21b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.5bbls (calculated rate - 21b/d).</li> <li>13:45:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:35:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:35:00 Brine returns at surge tank - 55.2bbls (calculated</li></ul>	10:45:00	Brine returns at surge tank - 15.7bbls (calcula	ated rate - 499b/d).	
<ul> <li>11:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.096 @ 52F.</li> <li>11:00:00 Brine returns at surge tank - 24.2bbls (calculated rate - 34b/d).</li> <li>11:15:00 Brine returns at surge tank - 27.7bbls (calculated rate - 32b/d).</li> <li>11:45:00 Brine returns at surge tank - 27.7bbls (calculated rate - 332b/d).</li> <li>11:45:00 Brine returns at surge tank - 27.7bbls (calculated rate - 332b/d).</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 53F.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank - 38.4bbls (calculated rate - 211b/d).</li> <li>12:45:00 Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>12:45:00 Brine returns at surge tank - 40.8bbls (calculated rate - 220b/d).</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 250b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 51.75bbls (calculated rate - 211b/d).</li> <li>14:45:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:35:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:35:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:35:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:35:00 Brine returns at surge tank - 53.2bbls (calculated rate - 168b/d).</li> <li>14</li></ul>	11:00:00	BS&W = 100% brine pH = 7 and Chloride col	ntents from refractor	neter 120,000ppm.
<ul> <li>Water 1.1050 (@ 527.</li> <li>11:15:00 Brine returns at surge tank - 19.8bbls (calculated rate - 394b/d).</li> <li>11:15:00 Brine returns at surge tank - 27.7bbls (calculated rate - 422b/d).</li> <li>11:30:00 Brine returns at surge tank - 30.9bbls (calculated rate - 302b/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbls (calculated rate - 302b/d).</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 228b/d).</li> <li>12:00:00 Brine returns at surge tank - 36.1bbls (calculated rate - 221b/d).</li> <li>12:30:00 Brine returns at surge tank - 36.4bbls (calculated rate - 221b/d).</li> <li>12:30:00 Brine returns at surge tank - 36.4bbls (calculated rate - 221b/d).</li> <li>12:30:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:30:00 Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 5.0bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at sur</li></ul>	11:00:00	Draeger snowed 1.4 % CO2 by volume & 0 p	ppm H2S. S.G. of $prc$	bauced gas - 0.576. S.G. of produced
<ul> <li>11:05:00 Brine returns at surge tank - 33:0b/s (calculated rate - 33:0b/d).</li> <li>11:15:00 Brine returns at surge tank - 24:2b/s (calculated rate - 33:0b/d).</li> <li>11:35:00 Brine returns at surge tank - 30:9b/s (calculated rate - 30:2b/d).</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Brine returns at surge tank - 33:9b/s (calculated rate - 30:2b/d).</li> <li>12:00:00 Brine returns at surge tank - 33:9b/s (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33:9b/s (calculated rate - 218b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank - 36:4b/s (calculated rate - 211b/d).</li> <li>12:30:00 Brine returns at surge tank - 36:4b/s (calculated rate - 21b/d).</li> <li>12:45:00 Brine returns at surge tank - 40.8b/s (calculated rate - 221b/d).</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43:4b/s (calculated rate - 250b/d).</li> <li>13:15:00 Brine returns at surge tank - 43:4b/s (calculated rate - 220b/d).</li> <li>13:30:00 Brine returns at surge tank - 43:4b/s (calculated rate - 220b/d).</li> <li>13:30:00 Brine returns at surge tank - 43:4b/s (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 43:4b/s (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50:0b/s (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Brine returns at surge tank - 51:75b/s (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 51:75b/s (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 52:0b/s (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 52:0b/s (calculated rate - 168b/d).</li> <li>14:30:00 Brine return</li></ul>	11.00.00	Brine returns at surge tank 10 8bbls (calcul	ated rate 30/h/d)	
<ul> <li>11:30:00 Brine returns at surge tank - 27.7bbis (calculated rate - 336b/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbis (calculated rate - 336b/d).</li> <li>11:45:00 Brine returns at surge tank - 30.9bbis (calculated rate - 336b/d).</li> <li>12:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 53F.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbis (calculated rate - 288b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank - 38.4bbis (calculated rate - 221b/d).</li> <li>12:30:00 Brine returns at surge tank - 38.4bbis (calculated rate - 221b/d).</li> <li>12:45:00 Brine returns at surge tank - 40.8bbis (calculated rate - 221b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbis (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbis (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbis (calculated rate - 221b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbis (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.5bbis (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 55.5bbis (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbis (calculated rate - 221b/d).</li> <li>14:45:00 Brine returns at surge tank - 51.7bbbs (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbis (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbis (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbis (calculated rate - 182b/d).</li> <li>15:00:00 Brine returns at surge tank - 54.2bbis (calculated rate - 182b/d).</li> <li>15:00:00 Brine returns at surge tank - 55.2bbis (calculated rate - 182b/d).</li> <li>15:00:00 Brine ret</li></ul>	11.00.00	Brine returns at surge tank - 24 2bbls (calcul	ated rate $- 3940/0$ .	
<ul> <li>1145:00 Brine returns at surge tank - 30.9bbls (calculated rate - 302b/d).</li> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank - 36.1bbls (calculated rate - 211b/d).</li> <li>12:35:00 Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>12:45:00 Brine returns at surge tank - 40.8bbls (calculated rate - 221b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 220b/d).</li> <li>13:30:00 Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 47.8bbls (calculated rate - 211b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 Bs&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:30:00 Brine returns at surge tank - 51.7bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 51.7bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 51.7bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 52.5bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 51.7bbls (calculated rate - 168b/d).</li> <li>15:00:00 Bs&amp;W = 100% brine pH = 7 and Chloride</li></ul>	11:30:00	Brine returns at surge tank - 27 7bbls (calcula	ated rate - $336b/d$ ).	
<ul> <li>12:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 225,000ppm.</li> <li>12:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 53F.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:05:00 Brine returns at surge tank - 36.1bbls (calculated rate - 221b/d).</li> <li>12:05:00 Brine returns at surge tank - 40.8bbls (calculated rate - 221b/d).</li> <li>12:05:00 Brine returns at surge tank - 40.8bbls (calculated rate - 221b/d).</li> <li>12:05:00 Brine returns at surge tank - 40.8bbls (calculated rate - 220b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 200b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 200b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 202b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.5bbls (calculated rate - 202b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 202b/d).</li> <li>13:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 211b/d).</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 56.4bbls (calculated rate - 168b/d).</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G.</li></ul>	11:45:00	Brine returns at surge tank - 30.9bbls (calcula	ated rate - $302b/d$ ).	
<ul> <li>12:00:00 Draeger showed 1.4 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.576. S.G. of produced water - 1.095 @ 537.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:05:00 Brine returns at surge tank - 36.1bbls (calculated rate - 211b/d).</li> <li>12:30:00 Brine returns at surge tank - 36.4bbls (calculated rate - 211b/d).</li> <li>12:45:00 Brine returns at surge tank - 36.4bbls (calculated rate - 230b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Brine returns at surge tank - 40.8bbls (calculated rate - 230b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 250b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 250b/d).</li> <li>13:30:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 58.2bbls (calculated rate - 168b/d).</li> <li>15:00:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>16:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 63.4bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 63.4bbls (calculated rate - 173b/d).</li> <li>15:00:00 B</li></ul>	12:00:00	BS&W = 100% brine pH = 7 and Chloride co	ntents from refractor	neter 225,000ppm.
<ul> <li>water - 1.095 @ 53F.</li> <li>12:00:00 Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank - 38.4bbls (calculated rate - 211b/d).</li> <li>12:30:00 Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>12:45:00 Brine returns at surge tank - 40.8bbls (calculated rate - 2230b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 250b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:30:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:35:00 Brine returns at surge tank - 55.2bbls (calculated rate - 163b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 163b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 173b/d).</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 60.4bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculate</li></ul>	12:00:00	Draeger showed 1.4 % CO2 by volume & 0 p	pm H2S. S.G. of pro	oduced gas - 0.576. S.G. of produced
<ul> <li>Brine returns at surge tank - 33.9bbls (calculated rate - 288b/d).</li> <li>Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>Brine returns at surge tank - 36.4bbls (calculated rate - 211b/d).</li> <li>Brine returns at surge tank - 40.8bbls (calculated rate - 221b/d).</li> <li>Brine returns at surge tank - 40.8bbls (calculated rate - 220b/d).</li> <li>BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>Brine returns at surge tank - 43.4bbls (calculated rate - 202b/d).</li> <li>Brine returns at surge tank - 47.8bbls (calculated rate - 202b/d).</li> <li>Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>H:00:00 Braeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>H:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>H:4:5:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>Bine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>Bine returns at surge tank - 57.1bbls (calculated rate - 182b/d).</li> <li>B:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>D:00:00 Brine returns at surge tank - 63.9bbls (calculated rate - 173b/d).</li> <li>D:00:00 Brine returns at surge tank - 61.4bbls (calculated rate - 144b/d</li></ul>		water - 1.095 @ 53F.		
<ul> <li>12:05:00 Inspected sand catcher for debris. Retrieved traces of rust fragments.</li> <li>12:15:00 Brine returns at surge tank - 36. bbls (calculated rate - 211b/d).</li> <li>12:30:00 Brine returns at surge tank - 40.8bbls (calculated rate - 230b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 250b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.6bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.0bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Sample No. 1-1 (0.5 Itr water) and 1-2 (5 Itr water) taken from separator water line.</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 Itr water) and 1-2</li></ul>	12:00:00	Brine returns at surge tank - 33.9bbls (calcula	ated rate - 288b/d).	
<ul> <li>Brine returns at surge tank - 36.1bbls (calculated rate - 21b/d).</li> <li>12:30:00 Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>12:45:00 Brine returns at surge tank - 40.8bbls (calculated rate - 230b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 250b/d).</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 220b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 60.4bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:00:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:00:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00</li></ul>	12:05:00	Inspected sand catcher for debris. Retrieved	traces of rust fragme	ents.
<ul> <li>Brine returns at surge tank - 38.4bbls (calculated rate - 221b/d).</li> <li>Brine returns at surge tank - 40.8bbls (calculated rate - 230b/d).</li> <li>BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>Brine returns at surge tank - 45.5bbls (calculated rate - 202b/d).</li> <li>Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>Water - 1.093 @ 52F.</li> <li>Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 58.9bbls (calculated rate - 163b/d).</li> <li>Brino: Dowed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>Sio0:00 Brine returns at surge tank - 60.4bbls (calculated rate - 173b/d).</li> <li>Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at s</li></ul>	12:15:00	Brine returns at surge tank - 36.1bbls (calcula	ated rate - 211b/d).	
<ul> <li>12:45:00 Brine returns at surge tank - 40.8bbis (calculated rate - 230b/d).</li> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 202b/d).</li> <li>13:15:00 Brine returns at surge tank - 45.5bbls (calculated rate - 202b/d).</li> <li>13:45:00 Brine returns at surge tank - 45.5bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns a</li></ul>	12:30:00	Brine returns at surge tank - 38.4bbls (calcula	ated rate - 221b/d).	
<ul> <li>13:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from terractometer 110,000ppm.</li> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 202b/d).</li> <li>13:15:00 Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Braeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b</li></ul>	12:45:00	Brine returns at surge tank - 40.8bbls (calcula	ated rate - 230b/d).	
<ul> <li>13:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 53F.</li> <li>13:00:00 Brine returns at surge tank - 43.4bbls (calculated rate - 220b/d).</li> <li>13:15:00 Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 211b/d).</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 60.4bbls (calculated rate - 174b/d).</li> <li>15:00:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.5</li></ul>	13:00:00	BS&W = 100% brine pH = 7 and Chloride col	ntents from refractor	neter 110,000ppm.
<ul> <li>Brine returns at surge tank - 43.4bbls (calculated rate - 250b/d).</li> <li>13:00:00 Brine returns at surge tank - 45.5bbls (calculated rate - 202b/d).</li> <li>13:30:00 Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 163b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 163b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 173b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Bs&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Bs&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:</li></ul>	13.00.00	braeger showed 1.5 % CO2 by volume & 0 $\mu$ water = 1.093 @ 53E	рпп п23. 3.G. 01 рг	Judeu gas - 0.578. S.G. of produced
<ul> <li>Brine returns at surge tank - 45.5bbls (calculated rate - 202b/d).</li> <li>Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>0000 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>H:15:00 Brine returns at surge tank - 52.2bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>Brine returns at surge tank - 57.1bbls (calculated rate - 182b/d).</li> <li>Brine returns at surge tank - 57.1bbls (calculated rate - 182b/d).</li> <li>Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>Sample No. 1-1 (0.5 Itr water) and 1-2 (5 Itr water) taken from separator water line.</li> <li>Si30:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>Brine returns at surge tank - 60.4bb</li></ul>	13.00.00	Brine returns at surge tank - 43 4bbls (calcul	ated rate - 250b/d)	
<ul> <li>13:30:00 Brine returns at surge tank - 47.8bbls (calculated rate - 221b/d).</li> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 Itr water) and 1-2 (5 Itr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	13:15:00	Brine returns at surge tank - 45.5bbls (calculated)	ated rate $-202b/d$ ).	
<ul> <li>13:45:00 Brine returns at surge tank - 50.0bbls (calculated rate - 211b/d).</li> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 168b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	13:30:00	Brine returns at surge tank - 47.8bbls (calcula	ated rate - $221b/d$ ).	
<ul> <li>14:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 110,000ppm.</li> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbls (calculated rate - 163b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 163b/d).</li> <li>14:45:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	13:45:00	Brine returns at surge tank - 50.0bbls (calcula	ated rate - 211b/d).	
<ul> <li>14:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.578. S.G. of produced water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbls (calculated rate - 163b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 163b/d).</li> <li>14:45:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 Itr water) and 1-2 (5 Itr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	14:00:00	BS&W = 100% brine pH = 6 and Chloride co	ntents from refractor	neter 110,000ppm.
<ul> <li>water - 1.093 @ 52F.</li> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbls (calculated rate - 163b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 182b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	14:00:00	Draeger showed 1.5 % CO2 by volume & 0 p	opm H2S. S.G. of pro	oduced gas - 0.578. S.G. of produced
<ul> <li>14:00:00 Brine returns at surge tank - 51.75bbls (calculated rate - 168b/d).</li> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbls (calculated rate - 163b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 182b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>		water - 1.093 @ 52F.		
<ul> <li>14:15:00 Brine returns at surge tank - 53.5bbls (calculated rate - 168b/d).</li> <li>14:30:00 Brine returns at surge tank - 55.2bbls (calculated rate - 163b/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 182b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	14:00:00	Brine returns at surge tank - 51.75bbls (calcu	lated rate - 168b/d).	
<ul> <li>14:30:00 Brine returns at surge tank - 53.2bbis (calculated rate - 1630/d).</li> <li>14:45:00 Brine returns at surge tank - 57.1bbls (calculated rate - 182b/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	14:15:00	Brine returns at surge tank - 53.500is (calcula	ated rate - 1680/d).	
<ul> <li>14:45:00 Brine returns at surge tank - 57:1001s (calculated rate - 1020/d).</li> <li>15:00:00 BS&amp;W = 100% brine pH = 7 and Chloride contents from refractometer 115,000ppm.</li> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	14.30.00	Brine returns at surge tank - 55.2001S (Calcula Brine returns at surge tank - 57.1bbls (calcula	aled fale - $1030/0$ ).	
<ul> <li>15:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.582. S.G. of produced water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	14.45.00	BS&W = 100% brine $pH = 7$ and Chloride co	ntents from refractor	meter 115 000ppm
<ul> <li>water - 1.094 @ 48F.</li> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	15:00:00	Draeger showed 1.5 % CO2 by volume & 0 n	opm H2S_S_G_of pro	oduced gas - 0.582 S.G. of produced
<ul> <li>15:00:00 Brine returns at surge tank - 58.9bbls (calculated rate - 173b/d).</li> <li>15:00:00 Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	10.00.00	water - 1.094 @ 48F.	pm11201 0.01 01 pro	
<ul> <li>15:00:00 Sample No. 1-1 (0.5 Itr water) and 1-2 (5 Itr water) taken from separator water line.</li> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	15:00:00	Brine returns at surge tank - 58.9bbls (calcula	ated rate - 173b/d).	
<ul> <li>15:15:00 Brine returns at surge tank - 60.4bbls (calculated rate - 144b/d).</li> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	15:00:00	Sample No. 1-1 (0.5 ltr water) and 1-2 (5 ltr w	vater) taken from ser	parator water line.
<ul> <li>15:30:00 Brine returns at surge tank - 61.9bbls (calculated rate - 144b/d).</li> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	15:15:00	Brine returns at surge tank - 60.4bbls (calcula	ated rate - 144b/d).	
<ul> <li>15:45:00 Brine returns at surge tank - 63.4bbls (calculated rate - 144b/d).</li> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	15:30:00	Brine returns at surge tank - 61.9bbls (calcula	ated rate - 144b/d).	
<ul> <li>16:00:00 BS&amp;W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm.</li> <li>16:00:00 Draeger showed 1.5 % CO2 by volume &amp; 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.</li> </ul>	15:45:00	Brine returns at surge tank - 63.4bbls (calcula	ated rate - 144b/d).	
16:00:00 Draeger showed 1.5 % CO2 by volume & 0 ppm H2S. S.G. of produced gas - 0.580. S.G. of produced water - 1.094 @ 48F.	16:00:00	BS&W = 100% brine pH = 6 and Chloride co	ntents from refractor	neter 115,000ppm.
Water - 1.094 (0) 48F.	16:00:00	Draeger showed 1.5 % CO2 by volume & 0 p	opm H2S. S.G. of pro	bduced gas - 0.580. S.G. of produced
16:00:00 Prine returns at surres tank 64 Obble (calculated rate 144b/d)	16.00.00	Water - 1.094 (2) 48F.	atad rata 1116/d)	
16:15:00 Brine returns at surge tank - 66 4bbls (calculated rate - 144b/d).	16.00.00	Brine returns at surge tank - 66 Abble (calcul	ated rate - $1440/0$ .	
16:30:00 Brine returns at surge tank - 67.7bbls (calculated rate - 125b/d).	16:30:00	Brine returns at surge tank - 67.7bbls (calcula	ated rate - $125b/d$ ).	

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#### 03/07/02

16:45:00 Brine returns at surge tank - 69.1bbls (calculated rate - 134b/d). 17:00:00 BS&W = 100% brine pH = 6 and Chloride contents from refractometer 115,000ppm. 17:00:00 Brine returns at surge tank - 70.3bbls (calculated rate - 115b/d). 17:00:00 Sample No. 1-3 (0.5 ltr water) and 1-4 (5 ltr water) taken from separator water line. 17:15:00 Brine returns at surge tank - 71.5bbls (calculated rate - 115b/d). 17:30:00 Brine returns at surge tank - 72.7bbls (calculated rate - 115b/d). 17:34:00 Raised orifice plate. Diverted flow via choke manifold bypass 3" line. 17:35:00 Installed 3.500" orifice plate into gas meter run. 17:45:00 Brine returns at surge tank - 73.8bbls (calculated rate - 106b/d). 18:00:00 S.G. of produced gas - 0.580. 18:00:00 Brine returns at surge tank - 75bbls (calculated rate - 115b/d). 18:15:00 Brine returns at surge tank - 76.4bbls (calculated rate - 134b/d). 18:30:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 18:30:00 Brine returns at surge tank - 77.5bbls (calculated rate - 106b/d). 18:45:00 Brine returns at surge tank - 78.6bbls (calculated rate - 106b/d). 19:00:00 Brine returns at surge tank - 79.7bbls (calculated rate - 106b/d). 19:00:00 Sample No. 1-5 (0.5 ltr water) and 1-6 (5 ltr water) taken from separator water line. 19:15:00 Brine returns at surge tank - 80.7bbls (calculated rate - 95.9b/d). 19:30:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 19:30:00 Brine returns at surge tank - 81.7bbls (calculated rate - 95.9b/d). 19:45:00 Brine returns at surge tank - 82.9bbls (calculated rate - 115b/d). 20:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 20:00:00 Draeger showed 1.5 % CO2 by volume & 0 ppm H2S. 20:00:00 S.G. of produced water - 1.087 @ 60°F. S.G. of produced gas - 0.584. 20:00:00 Brine returns at surge tank - 84.1bbls (calculated rate - 115b/d). 20:15:00 Brine returns at surge tank - 85.1bbls (calculated rate - 96b/d). 20:30:00 Brine returns at surge tank - 86.1bbls (calculated rate - 96b/d). 20:45:00 Brine returns at surge tank - 87.1bbls (calculated rate - 96b/d). 21:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 21:00:00 Brine returns at surge tank - 88.1bbls (calculated rate - 96b/d). 21:00:00 Sample No. 1-7 (0.5 ltr water) and 1-8 (5 ltr water) taken from separator water line. 21:15:00 Brine returns at surge tank - 88.9bbls (calculated rate - 77b/d). 21:30:00 Brine returns at surge tank - 89.4bbls (calculated rate - 48b/d). 21:45:00 Brine returns at surge tank - 90.7bbls (calculated rate - 125b/d). 22:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 22:00:00 S.G. of produced gas - 0.586. S.G. of produced water - 1.088 @ 59°F. 22:00:00 Brine returns at surge tank - 91.4bbls (calculated rate - 67b/d). 22:15:00 Brine returns at surge tank - 92.2bbls (calculated rate - 77b/d). 22:30:00 Brine returns at surge tank - 93.1bbls (calculated rate - 86b/d). 22:45:00 Brine returns at surge tank - 93.9bbls (calculated rate - 77b/d). 23:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 23:00:00 Brine returns at surge tank - 94.5bbls (calculated rate - 58b/d). 23:00:00 Sample No. 1-9 (0.5 ltr water) and 1-10 (4 ltr water) taken from separator water line. 23:15:00 Brine returns at surge tank - 95.3bbls (calculated rate - 77b/d). 23:30:00 Brine returns at surge tank - 95.9bbls (calculated rate - 58b/d). 23:45:00 Brine returns at surge tank - 96.5bbls (calculated rate - 67b/d).

#### 04/07/02

00:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.
00:00:00 Draeger showed 1.5 % CO2 by volume & 0 ppm H2S.
00:00:00 S.G. of produced gas - 0.584. S.G. of produced water - 1.087 @ 59°F.
00:00:00 Brine returns at surge tank - 97.3bbls (calculated rate - 77b/d).
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Well No.	Patricia-2	Location	Ocean Bounty
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#### 04/07/02

00:15:00 Brine returns at surge tank - 98.3bbls (calculated rate - 96b/d). 00:30:00 Brine returns at surge tank - 98.9bbls (calculated rate - 58b/d). 00:45:00 Brine returns at surge tank - 99.5bbls (calculated rate - 58b/d). 01:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 01:00:00 Brine returns at surge tank - 100.4bbls (calculated rate - 86b/d). 01:00:00 Sample No. 1-11 (0.5 ltr water) and 1-12 (4 ltr water) taken from separator water line. 01:15:00 Brine returns at surge tank - 100.9bbls (calculated rate - 48b/d). 01:27:00 Bled down scrubber pots on differential cell due to pots being full of water. 01:30:00 Brine returns at surge tank - 101.6bbls (calculated rate - 67b/d). 01:45:00 Brine returns at surge tank - 102.6bbls (calculated rate - 96b/d). 02:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 02:00:00 S.G. of produced gas - 0.586. S.G. of produced water - 1.088 @ 58°F. 02:00:00 Brine returns at surge tank - 103bbls (calculated rate - 38b/d). 02:15:00 Brine returns at surge tank - 103.9bbls (calculated rate - 86b/d). 02:30:00 Brine returns at surge tank - 104.3bbls (calculated rate - 38b/d). 02:45:00 Brine returns at surge tank - 105.2bbls (calculated rate - 86b/d). 03:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 109,000ppm. 03:00:00 Brine returns at surge tank - 105.8bbls (calculated rate - 58b/d). 03:00:00 Sample No. 1-13 (0.5 ltr water) and 1-14 (4 ltr water) taken from separator water line. 03:15:00 Brine returns at surge tank - 106.4bbls (calculated rate - 58b/d). 03:30:00 Brine returns at surge tank - 107.4bbls (calculated rate - 96b/d). 03:42:00 Raised orifice plate to check Barton differential cell - drained excess water from scrubbers. 03:45:00 Brine returns at surge tank - 107.7bbls (calculated rate - 29b/d). 03:47:00 Installed 3.500" orifice plate into meter run. 04:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 04:00:00 Draeger showed 1.5 % CO2 by volume & 0 ppm H2S. 04:00:00 S.G. of produced gas - 0.586. S.G. of produced water - 1.088 @ 58°F. 04:00:00 Brine returns at surge tank - 108.3bbls (calculated rate - 58b/d). 04:15:00 Brine returns at surge tank - 109.2bbls (calculated rate - 86b/d). 04:30:00 Brine returns at surge tank - 109.8bbls (calculated rate - 58b/d). 04:45:00 Brine returns at surge tank - 110bbls (calculated rate - 19b/d). 05:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 05:00:00 Sample No. 1-15 (0.5 ltr water) and 1-16 (4 ltr water) taken from separator water line. 05:00:00 Brine returns at surge tank - 110.7bbls (calculated rate - 67b/d). 05:15:00 Brine returns at surge tank - 111.2bbls (calculated rate - 48b/d). 05:30:00 Brine returns at surge tank - 111.9bbls (calculated rate - 67b/d). 05:45:00 Brine returns at surge tank - 112.5bbls (calculated rate - 58b/d). 06:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 06:00:00 Brine returns at surge tank - 112.8bbls (calculated rate - 29b/d). 06:15:00 Brine returns at surge tank - 113.5bbls (calculated rate - 67b/d). 06:28:00 BJ coiled tubing conducted pick up weight test. Brief pressure increase observed at choke manifold. 06:30:00 Brine returns at surge tank - 114bbls (calculated rate - 48b/d). 06:45:00 Brine returns at surge tank - 114.6bbls (calculated rate - 58b/d). 07:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 07:00:00 Brine returns at surge tank - 115bbls (calculated rate - 38b/d). 07:00:00 Sample No. 1-17 (0.5 ltr water) and 1-18 (4 ltr water) taken from separator water line. 07:15:00 Brine returns at surge tank - 115.5bbls (calculated rate - 48b/d). 07:30:00 BJ coiled tubing commenced running in hole to 1365mRT for pressure/temperature log #1. 07:30:00 Brine returns at surge tank - 116.1bbls (calculated rate - 58b/d). 07:45:00 Brine returns at surge tank - 116.6bbls (calculated rate - 48b/d). 08:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 08:00:00 Draeger showed 1.5 % CO2 by volume & 0 ppm H2S.

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### 04/07/02

08:00:00 S.G. of produced gas - 0.582. S.G. of produced water - 1.085 @ 59°F. 08:00:00 Brine returns at surge tank - 117.1bbls (calculated rate - 48b/d). 08:15:00 Brine returns at surge tank - 117.7bbls (calculated rate - 58b/d). 08:19:00 BJ coiled tubing on depth at 1365mRT. 08:30:00 Brine returns at surge tank - 118bbls (calculated rate - 29b/d). 08:33:00 BJ coiled tubing commenced pulling out of hole to 892mRT. 08:45:00 Brine returns at surge tank - 118.4bbls (calculated rate - 38b/d). 09:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 09:00:00 Brine returns at surge tank - 119bbls (calculated rate - 58b/d). 09:15:00 Brine returns at surge tank - 119.8bbls (calculated rate - 77b/d). 09:20:00 BJ coiled tubing on depth at 892mRT. 09:30:00 Brine returns at surge tank - 120.4bbls (calculated rate - 58b/d). 09:45:00 Brine returns at surge tank - 120.9bbls (calculated rate - 48b/d). 10:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 10:00:00 S.G. of produced gas - 0.582. S.G. of produced water - 1.085 @ 59°F. 10:00:00 Brine returns at surge tank - 121.5bbls (calculated rate - 58b/d). 10:15:00 Brine returns at surge tank - 121.9bbls (calculated rate - 38b/d). 10:30:00 Brine returns at surge tank - 122.5bbls (calculated rate - 58b/d). 10:45:00 Brine returns at surge tank - 122.9bbls (calculated rate - 38b/d). 10:55:00 Lifted orifice plate. Closed in well at choke manifold. 11:00:00 Inspected junk catcher. Observed small amounts of rock gravel. Samples supplied to OMV representative. 11:00:00 Total Brine returns at surge tank - 123.4bbls. 15:30:00 Well opened to Aft flare boom via 16/64" adjustable choke. 15:31:00 Increased adjustable choke to 20/64". 15:32:00 Increased adjustable choke to 24/64". 15:34:00 Increased adjustable choke to 28/64". 15:35:00 Increased adjustable choke to 32/64". 15:36:00 Diverted flow via 32/64" fixed choke. Diverted flow via test separator. 16:00:00 Diverted flow via 36/64" adjustable choke. 16:01:00 Increased adjustable choke to 40/64". Ceased methanol injection upstream of choke manifold. 16:03:00 Increased adjustable choke to 44/64". 16:07:00 Diverted flow via 40/64" fixed choke. 17:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm. 17:00:00 S.G. of produced gas - 0.582. S.G. of produced water - 1.085 @ 59°F. 17:30:00 Exal commenced taking 1st PVT sample No. 1-19 (gas - bottle No. 2357-C1-F). 17:45:00 Completed taking 1st PVT sample. 17:45:00 Exal commenced taking 2nd PVT sample No. 1-20 (gas - bottle No. 3416-C1-F). 18:00:00 Completed taking 2nd PVT sample. 18:00:00 BS&W showed dry gas. 18:00:00 S.G. of produced gas - 0.584. 19:00:00 BS&W showed dry gas. 20:00:00 Raised orifice plate. 20:00:00 Diverted flow through 44/64" adjustable choke. 20:01:00 Increased adjustable choke to 48/64". 20:03:00 Increased adjustable choke to 50/64". 20:05:00 Increased adjustable choke to 56/64". 20:07:00 Increased adjustable choke to 60/64". 20:11:00 Increased adjustable choke to 62/64". 20:12:00 Increased adjustable choke to 66/64". 20:15:00 Brine returns at surge tank - 124.2bbls (calculated rate - 77b/d). 20:18:00 Diverted flow via 64/64" fixed choke. 20:23:00 Installed 3.000" orifice plate into meter run.

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### 04/07/02

20:25:00 Raised orifice plate. 20:28:00 Installed 3.25" orifice plate into meter run. 20:30:00 Brine returns at surge tank - 125bbls (calc

- 20:30:00 Brine returns at surge tank 125bbls (calculated rate 77b/d).
- 21:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm.
- 21:00:00 S.G. of produced gas 0.586.
- 21:30:00 Brine returns at surge tank 125.4bbls (calculated rate 38b/d).
- 21:45:00 Brine returns at surge tank 126.2bbls (calculated rate 77b/d).
- 22:00:00 Brine returns at surge tank 126.7bbls (calculated rate 48b/d).
- 23:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm.
- 23:00:00 Draeger showed 1.5 % CO2 by volume & 0 ppm H2S.
- 23:00:00 Exal commenced taking 3rd PVT sample No. 1-21 (gas bottle No. 0687-C1-F).
- 23:00:00 Sample No. 1-22 (0.5 ltr water) and 1-23 (4 ltr water) taken from separator water line.
- 23:00:00 Brine returns at surge tank 127.2bbls (calculated rate 48b/d).
- 23:15:00 Completed taking 3rd PVT sample.
- 23:15:00 Brine returns at surge tank 127.4bbls (calculated rate 19b/d).
- 23:30:00 Brine returns at surge tank 127.5bbls (calculated rate 10b/d).

### 05/07/02

00:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm. 00:00:00 S.G. of produced gas - 0.586. 00:00:00 S.G. of produced water - 1.083 @ 52°F. 00:00:00 Brine returns at surge tank - 128bbls (calculated rate - 48b/d). 00:15:00 Brine returns at surge tank - 128.2bbls (calculated rate - 19b/d). 00:30:00 Brine returns at surge tank - 128.7bbls (calculated rate - 48b/d). 00:45:00 Brine returns at surge tank - 129.1bbls (calculated rate - 38b/d). 01:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 92,000ppm. 01:00:00 S.G. of produced gas - 0.586. 01:00:00 S.G. of produced water - 1.080 @ 54°F. 01:00:00 Brine returns at surge tank - 129.3bbls (calculated rate - 19b/d). 01:15:00 Brine returns at surge tank - 129.4bbls (calculated rate - 10b/d). 01:30:00 Brine returns at surge tank - 129.8bbls (calculated rate - 38b/d). 01:45:00 Brine returns at surge tank - 130.2bbls (calculated rate - 38b/d). 01:59:00 Raised orifice plate. 02:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 96,000ppm. 02:00:00 Diverted flow through 66/64" adjustable choke. 02:01:00 Increased adjustable choke to 70/64". 02:02:00 Increased adjustable choke to 74/64". 02:03:00 Increased adjustable choke to 78/64". 02:04:00 Increased adjustable choke to 82/64". 02:05:00 Increased adjustable choke to 86/64". 02:07:00 Increased adjustable choke to 90/64". 02:08:00 Increased adjustable choke to 94/64". 02:09:00 Increased adjustable choke to 98/64". 02:10:00 Increased adjustable choke to 102/64" 02:11:00 Increased adjustable choke to 106/64". 02:13:00 Increased adjustable choke to 110/64". 02:17:00 Increased adjustable choke to 128/64". 02:19:00 Opened bypass valve on choke manifold. 02:20:00 Diverted flow via choke manifold bypass 3" line. 02:24:00 Installed 3.750" orifice plate into meter run. 02:30:00 Brine returns at surge tank - 131.5bbls (calculated rate - 125b/d). 02:45:00 Brine returns at surge tank - 132.1bbls (calculated rate - 58b/d).

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#### 05/07/02

03:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm. 03:00:00 S.G. of produced gas - 0.586. S.G. of produced water - 1.082 @ 58°F. 03:00:00 Draeger showed 1.3 % CO2 by volume & 0 ppm H2S. 03:00:00 Brine returns at surge tank - 132.9bbls (calculated rate - 77b/d). 03:15:00 Brine returns at surge tank - 133.5bbls (calculated rate - 58b/d). 03:30:00 Brine returns at surge tank - 134.3bbls (calculated rate - 77b/d). 03:45:00 Brine returns at surge tank - 134.5bbls (calculated rate - 19b/d). 04:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm. 04:00:00 S.G. of produced gas - 0.586. S.G. of produced water - 1.078 @ 61°F. 04:00:00 Brine returns at surge tank - 134.8bbls (calculated rate - 29b/d). 04:15:00 Brine returns at surge tank - 135.1bbls (calculated rate - 29b/d). 04:30:00 Brine returns at surge tank - 135.4bbls (calculated rate - 29b/d). 04:45:00 Brine returns at surge tank - 135.9bbls (calculated rate - 48b/d). 05:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm. 05:00:00 Brine returns at surge tank - 136.3bbls (calculated rate - 38b/d). 05:15:00 Brine returns at surge tank - 136.9bbls (calculated rate - 58b/d). 05:30:00 Brine returns at surge tank - 137.3bbls (calculated rate - 38b/d). 05:45:00 Brine returns at surge tank - 137.8bbls (calculated rate - 48b/d). 06:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 99,000ppm. 06:00:00 Brine returns at surge tank - 138.3bbls (calculated rate - 38b/d). 06:15:00 Brine returns at surge tank - 138.8bbls (calculated rate - 48b/d). 06:30:00 Brine returns at surge tank - 139.1bbls (calculated rate - 29b/d). 06:45:00 Brine returns at surge tank - 139.5bbls (calculated rate - 38b/d). 07:00:00 BS&W = 100% brine pH = 6 and Chloride contents from refractometer 100,000ppm. 07:00:00 S.G. of produced gas - 0.586. S.G. of produced water - 1.082 @ 63°F. 07:00:00 Brine returns at surge tank - 139.8bbls (calculated rate - 29b/d). 07:15:00 Brine returns at surge tank - 140bbls (calculated rate - 19b/d). 07:30:00 Brine returns at surge tank - 142bbls (calculated rate - 19b/d). 07:45:00 Brine returns at surge tank - 142.4bbls (calculated rate - 38b/d). 08:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm. 08:00:00 Brine returns at surge tank - 142.8bbls (calculated rate - 38b/d). 08:15:00 Brine returns at surge tank - 143.2bbls (calculated rate - 38b/d). 08:30:00 Brine returns at surge tank - 143.5bbls (calculated rate - 29b/d). 08:45:00 Brine returns at surge tank - 144.1bbls (calculated rate - 58b/d). 09:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm. 09:00:00 S.G. of produced gas - 0.582. S.G. of produced water - 1.082 @ 63°F. 09:00:00 Brine returns at surge tank - 144.6bbls (calculated rate - 48b/d). 09:15:00 Brine returns at surge tank - 144.8bbls (calculated rate - 19b/d). 09:30:00 Brine returns at surge tank - 145.2bbls (calculated rate - 38b/d). 09:45:00 Brine returns at surge tank - 145.7bbls (calculated rate - 19b/d). 09:55:00 Sample No. 1-24 (0.5 ltr water) taken from separator water line. 10:00:00 BS&W = 100% brine pH = 7 and Chloride contents from refractometer 100,000ppm. 10:00:00 Well shut in at choke manifold. 13:24:00 BJ coiled tubing commenced pulling out of hole. 14:39:00 BJ coiled tubing at surface. 14:45:00 Closed TRSCSSV. Slowly bled off well head pressure to 775psi. 14:47:00 Wellhead pressure at 775psi. Commenced inflow test of TRSCSSV. 15:10:00 Closed SSLV. 15:10:00 Bled off pressure above SSLV via choke manifold to aft flare boom. 15:20:00 Completed bleeding off pressure. 15:22:00 Closed swab valve and master valve on Expro flowhead. 15:30:00 BJ coiled tubing commenced rigging down.

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### 05/07/02

- 17:30:00 BJ coiled tubing completed rigging down. Expro wireline commenced rigging up.
- 18:22:00 Opened swab valve and master valve on Expro flowhead.
- 18:27:00 Opened lo-torque valve on kill line.
- 18:30:00 Locked open master valve on flowhead.
- 18:43:00 Commenced pressure testing Expro wireline lubricator against SSLV to 3,000psi.
- 18:56:00 Good test. Bled off pressure to 980psi via choke manifold. Opened SSLV.
- 18:57:00 Expro wireline commenced running in hole with brush.
- 19:07:00 Expro wireline at surface.
- 19:10:00 Closed SSLV and master valve on flowhead.
- 19:17:00 Bled off pressure via choke manifold. Broke out lubricator. Inspected toolstring brush not present.
- 19:30:00 Made up fishing tool to Expro wireline toolstring. Stabbed lubricator.
- 19:52:00 Commenced pressuring up above flowhead master valve to 980psi.
- 20:00:00 Opened SSLV and master valve on flowhead.
- 20:06:00 Expro wireline commenced running in hole to fish brush.
- 20:10:00 Expro wireline at surface.
- 20:16:00 Closed SSLV and master valve on flowhead.
- 20:20:00 Bled off pressure vai choke manifold. Broke out lubricator. Removed brush and fishing tool.
- 20:45:00 Installed SSR plug onto wireline toolstring. Stabbed lubricator.
- 21:00:00 Pressured up above master valve on flowhead to 980psi. Opened SSLV and master valve.
- 21:05:00 Expro wireline commenced running in hole to set SSR plug in tubing hanger.
- 21:08:00 Expro wireline on depth with SSR plug. Commenced gradually pressuring up above SSR plug to 3,000psi to set.
- 21:25:00 Wellhead pressure at 3,000psi.
- 21:35:00 Expro wireline commenced hand jarring on plug to set.
- 21:41:00 Expro wireline sheared off plug. Commenced pulling out of hole.
- 21:45:00 Expro wireline at surface.
- 21:47:00 Commenced slowly bleeding down pressure above SSR plug via choke manifold.
- 21:58:00 Closed in choke manifold. Wellhead pressure at 200psi. Commenced in-flow testing plug.
- 22:17:00 Good test. Bled off pressure above SSR plug to zero via choke manifold.
- 22:27:00 Expro wireline commenced rigging down.
- 22:30:00 End of Completion Test.





This document and th		A
e informa		
PROPANE RACK HEAT EXCHANGER TEST SEPARATOR SURFACE SAFETY VALVE JUNK TRAP 3" CHOKE MANIFOLD 3" OIL MANIFOLD TRANSFER PUMP SURGE TANK STOCK TANK PRESSURISED LAB WELL TEST CONTAINER AIR RECEIVER AIR RECEIVER MIRELINE CONTAINER AIR PUMP SUBSEA CONTAINER	DESCRIPTION RIG OVE	
1.07 6.10 7.40 0.82 2.44 2.50 1.80 3.10 3.10 3.10 3.10 5.05 3.05 3.05 5.06 6.04 0.80 5.05 1.50 0.80 7.40 1.80 5.05 5.05 5.05 7.40 7.40 7.40 7.40 7.40 7.40 7.40 7.40		
1.07 2.44 2.44 0.77 1.52 2.00 1.50 1.80 1.80 1.80 1.80 1.80 1.80 1.80 2.43 2.43 2.43 2.43 2.43 2.43 2.43 2.44 2.44		C
1.90 2.44 1.65 1.65 1.22 0.80 0.40 1.80 1.80 2.60 2.60 2.62 1.96 0.40 2.62 1.96 0.40 2.62 1.96 0.40 2.62 1.96 0.40 0.2.62 1.96 1.96 1.65 1.96 1.65 1.65 1.65 1.65 1.65 1.65 1.65 1.6	HEIGHT	
1.00           0.00           9.00           1.00           3.00           3.00           9.00	TOTNS	
well test equipment Rigged up as per u'r out piagram checked Diate       as per u'	Frond of the sector of the sec	





### **GLOSSARY OF TERMS**

Client :	OMV Australia Pty Ltd.		Well No. :	Patricia-2
Test :	Completion		Date :	30/6 - 06/07/2002
A	Average	MM/d	Millions of sto	l cubic feet per day
a(v)	Average	MMcf	Millions of sta	undard cubic feet
AMON	SST Annulus Monitor	MODU	Mobile Offsho	ore Drilling Unit
AMV	SST Annulus Master Valve	mRT	Meters - Rotar	ry Table
API	American Petroleum Institute	MWD	Measurement	While Drilling
ASV	SST Annulus Swab Valve	0	Oil	
AWV	SST Annulus Wing Valve	PLT	Production Lo	gging Tool
Bbls	Barrel(s)	PMV	SST Productio	on Master Valve
BHA	Bottom Hole Assembly	РООН	Pull Out Of H	ole
BHFP	Bottom Hole Flowing Pressure	ppm	Parts per milli	on
BHFT	Bottom Hole Flowing Temperature	psia	Pounds per sq	uare inch (absolute pressure)
BHP	Bottom Hole Pressure	psig	Pounds per sq	uare inch (gauge pressure)
BHT	Bottom Hole Temperature	PSR	Production Se	al Rams
BOP	Blow Out Preventer	PSV	SST Production	on Swab Valve
BPV	Back Pressure Valve	PWV	Production Wi	ing Valve
BRT	Below Rotary Table	Q	Flow rate	
BS&W	Basic Sediment and Water	RIH	Run In Hole	
CBL	Cement Bond Log	RT	Rotary Table	
CCL	Casing Collar Locator	Sand	Sand	
CITHP	Closed In Tubing Head Pressure	scf	Standard cubic	c feet
CO2	Carbon Dioxide	sep	Separator	
Cum	Cumulative	sepb	Separator barr	els
d	Day	sepd	Separator barr	els per day
degF	Degrees F	SG	Specific Gravi	ity
FTHP	Flowing Tubing Head Pressure	SIR	Sand impact ra	ate
gas	Gas	SSSV	Sub Surface S	afety Valve
GLV	Gas Lift Valve	SST	Sub Sea Tree	
GOR	Gas oil ratio	stk	Stock tank	
GR	Gamma Ray	stkb	Stock tank bar	rels
H2S	Hydrogen Sulphide	stkd	Stock tank bar	rels per day
i	Instantaneous	TD	Total Depth	
JSA	Job Safety Analysis	THRT	Tubing Hange	r Running Tool
KCl	Potassium Chloride	TRT	Tree Running	Tool
MD	Measured Depth	TVD	True Vertical	Depth
MDBRT	Measured Depth Below Rotary Table	Usfm	Ultrasonic flow	w meter
MF	Meter Factor	WHFP	Well Head Flo	owing Pressure
MM/b	Millions of std cubic feet per barrel	WHFT	Well Head Flo	owing Temperature





# TRANSDUCER INFORMATION

Client :	OMV Australia Pty Ltd.		Well No. :	Patricia-2
Test :	Completion		Date :	30/6 - 06/07/2002
Probe No.	Location	Span	Serial No.	Tag
1	Upstream Choke - Test Area	0-5,000 PSIG	7535407	UCP
2	Upstream Choke - Test Area	0-300 deg F	812518	UCT
3	Downstream Choke - Test Area	0-5,000 PSIG	1043225	DCP
4	Downstream Choke - Test Area	0-300 deg F	812519	DCT
5	Annulus	0-10,000 PSIG	7535403	AnnP
6	Separator Gas Line	0-1,500 PSIG	1033769	GasP
7	Separator Gas Line	0-300 deg F	812517	GasT
8	Separator Gas Line	0-400 INWG	7535420	GasD
9	Separator Oil Line	0-300 deg F	812521	OilT
10	Heater	0-5,000 PSIG	7535409	HeatP
11	Heater	0-300 deg F	812516	HeatT
12	Separator Oil Line	0-2,000 BBL/D	FLO-111	Oil1
13	Separator Oil Line	0-8,000 BBL/D	FLO-112	Oil2
14	Separator Oil Line	0-8,000 BBL/D	FLO-113	Oil3
15	Separator Water Line	0-2,000 BBL/D	FLO-114	Water





## EXAL RESERVOIR SERVICES

## **OIL FLOW RATE CALCULATION**

Vsep =	Vm * m * (1-BSW)	
--------	------------------	--

where

Vsep	=	Corrected meter liquid volume.
Vm	=	Meter volume.
m	=	Meter factor determined during test flow periods. Applied to all volumes recorded by EDGE.
BSW	=	Basic Sediment & Water value as measured at test separator.
Vstk	=	Vsep * (1-Shr) * Vcf * Cf
where		
Vstk	=	Volume of oil produced at standard conditions (14.73 psia @ 60°F)
Shr	=	Shrinkage, accounts for changes in oil volumes due to liberations of free gas between separator and atmospheric pressure. Method of shrinkage, ie. Shrinkage Tester, Katz correlations, etc as determined by operating company.
Vcf	=	Volume Correction Factor. Often applied as part of the shrinkage factor. Corrects the volume at the shrinkage temperature to the volume at the standard temperature (60°F). re: API/NDS Standard petroleum measurement tables 1979.
Cf	=	Conversion factor = 1. (Variable factor used for units output ie. Bbls/day, M3/day, etc)





### EXAL RESERVOIR SERVICES

## **GAS FLOW RATE CALCULATION**

Gas rate	=	Cf *	С	*	Sart	(hw	* <i>Pf</i> )
Ous ruic		$\mathbf{v}_{\mathbf{j}}$	$\mathbf{v}$		Syri	(	- J/

Orifice constant C = Fb \* Fpb \* Ftb \* Fg \* Ftf \* Fr \* Y \* Fpv

### where

Fb	=	Basic orifice constant.
Fpb	=	Pressure base factor. Unity as pressure base used is 14.73 psia.
Ftb	=	Temperature base factor. Unity as temperature base used is 520°R (60°F).
Fg	=	Specific gravity factor. Unity if specified gravity of gas is 1.0.
Ftf	=	Flowing temperature factor. Unity if flowing temperature is 520°R (60°F).
Fr	=	Reynold number.
Y	=	Expansion factor.
Fpv	=	Supercompressibility factor. Z is calculated using the Dranchuk correlation, correcting for mol % of CO2, N2, and H2S for a surface gas.
hw	=	Differential across orifice plate (inches of water).
Pf	=	Flowing pressure upstream of orifice plate (psia).
Cf	=	Coversion factor = $24e-6$ .
<u>Note:</u> i ii		Flange tap measurements across Daniel Orifice Box. Fpv quoted as 1/2 in Gas Factor Listing





# Wellhead - Data Listing

Client	OMV Australia Pty Ltd
Well No.	Patricia-2
Test No.	Completion
Location	Ocean Bounty
Start Date	30/06 - 01/07/2002
Country	Australia
Field	VIC/L21
Job Number	J02/188
Formation	Gurnard
Exal Engineer	M. Donald / N. Dowdell
Client Engineer	A. Ion
Perforations	n/a



Choke - Custom (64th)

Client	OMV Austr	alia Pty	Ltd		Exal Engine	er M.	Donald	/ N. Do	wdell	
Well No.	Patricia-2				Location	O	cean Bou	unty		
Test No.	Completion				Start Date	30	/06 - 01/	/07/200	2	
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG					
29/06/02 14:00:00 14:00:00 15:05:00 15:17:00 15:22:00 15:33:00 15:52:00 15:57:00 16:10:00 16:15:00 16:46:00 16:46:00 16:51:00 17:05:00 17:05:00 17:23:00 17:28:00 17:45:00 17:50:00 18:03:00 18:08:00 18:20:00	Commenced pre Flushed surface Test #1 - Aft oil a Test #2 - Full eq Test #3 - Full eq Test #4 - Separa Test #5 - Separa Test #6 - Separa Test #7 - Separa Test #7 - Separa Test #8 - Oil div Test #9 - Oil div Test #10 - Heate Test #11 - Heate Test #12 - Heate Test #12 - Heate Test #13 - Heate Test #14 - Dowr Test #15 - Dowr Test #16 - Upstr Test #16 - Upstr Test #17 - Upstr Test #18 - Sand Test #19 - Sand Test #20 - ESD Test #21 - ESD All pressure test	essure tes lines to F and gas li juipment li ator body ator body ator of body ator inlet a erter man erter man erter man er coil and er coil and er coil and er coil and er nilet an estream cl eam chok trap valve trap valve valve to 5 valve to 3 s success	sting comp Fwd and Af nes to boo body test to body test to test and gi test and gi and bypass ifold to 500 ifold to 1,0 d bypass vi d bypa	lete surfa t booms om burne o oil and o oil and as, oil and as, oil and s valves to s valves to popsi. 100psi.	ace equipment. until clean. rs to 500psi. gas diverter mar gas diverter mar id water outlet va to 500psi. to 1,000psi. 500psi. 1,000psi. es to 500psi. es to 500psi. es to 1,000psi. to 500psi. to 500psi. to 500psi. to 3,500psi.	nifolds t nifolds t alves to alves to	o 500psi. o 1,000psi 500psi. 1,000psi.	i.		
30/06/02 01:00:00 01:30:00 01:50:00 06:30:00 07:00:01 10:48:00 11:31:00 11:45:00 14:30:00 15:35:00 15:35:00 15:35:00 15:46:00 15:46:00 15:46:00 15:46:00 15:46:00 15:40:00 18:50:00 19:00:00 19:30:00 19:45:00	Set SLZXP packer set. Good test. Com Commenced pu Commenced rur 7.7 Commenced mak Good test. Cont Commenced mak Good test. Cont Commenced mak Picked up ar checked lines. Function tested Latched TH in T Pressure tested Good test. Press Good test. Unlow Commenced rur Commenced rig Tagged Polisher Prepared to rig to Conducted JSA Commenced rig	hanger/pa menced o lling out o nning in h 53.0 aking up T ing up TR inued run aking up T nd made THRT late HRT umbilical sure teste cked TH. nning in h ging up ci d Bore red up coil tub on drill flo ging up C	acker. C operations f hole with ole with 5- 0.0 RSCSSV. P ning in hole ower Lance ower L	ommenc to shear drill pipe 1/2" 17pp 54.0 Pressure e with tul ding Strin l to T h, softlar si. ine to TR wer and landing lead. Pulled up frame. Tubing I	ed 1,500psi off and release H e and HR running of NK3SB tubing 10.1 tested hydraulic bing. Ig Assembly (LLS HRT to SSTT ad, vent/test and SCSSV to 5,000 upper ball valves string. and broke out la Lift Frame (CTLF	annulai HR runn g tool. line to 5 SA). T. Atta TH lock Dpsi. s in SST anding jo =) and E	r pressu ing tool. 5,000psi. ched un  TT. Dint. Expro flowh	nbilical.	to co	and
20:45:00 21:15:00	Completed riggin Commenced ribails.	ng up CTI igging u	LF. Picked p Coflexi	up and i p hose	made up flowhea to flow wing	ad. g. Rig	ged up	casing	elevator	and

Client	OMV Austr	alia Pty I	₋td		Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2				Location	Ocean Bounty
Test No.	Completion	l			Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
<u>30/06/02</u> 22:20:00 23:00:00	Made up 7" casi Rigged up hy Rigged up coil ti	ng landing /draulic ubing lines	i joint to lan control line from rig ma	ding str es and anifold.	ring. d cement pump	line to kill wing on flowhead.
01/07/02 01:10:00 01:10:00 01:23:00 01:29:00 01:37:00 01:42:00 01:47:00	Opened product Open choke ma Commenced fl landing string. Closed SSLV. C Good returns at Commenced pre Commenced log	ion wing v nifold to su ushing fr continued p choke ma essure test gging on E	alve on flow urge tank ar om cemer pumping thr nifold. Stop t on SSLV a dgeX surfac	/head. nd lo-to nt unit ough to ped pui igainst ce data	rque valve. across flowhead Expro choke manif mping and closed in Expro choke manifo acquisition system.	to choke manifold and down old. at choke manifold. Id to 3,500psi.
01:47:31 01:52:00 02:00:00 02:02:00	3497.9 Good test bled o 16.7 Closed SSTT up	54.0 off pressur 53.0 oper ball va	6.2 e. Opened \$ 6.2 alve.	53.0 SSLV. 53.0	9.7 9.2	
02:06:00 02:11:00 02:13:00 02:15:00 02:15:00	Commenced pre Bled off pressur Commenced pre Bled off pressur	e due to le e due to le essure test e due to le	t on SSTT a ak at lo-toro t on SSTT a ak at lo-toro	igainst que val igainst que val 53 0	Expro choke manifo ve. Fuctioned lo-toro Expro choke manifo ve.	ld to 3,500psi. jue valve. ld to 3,500psi.
02:15:00 02:16:00 02:23:00 02:27:00 02:30:00	Replaced lo-toro Commenced pre Bled off pressur 16.3	que valve. essure test e due to le 52.0	t on SSTT a ak at lo-toro 5.5	igainst que val 52.0	Expro choke manifo ve. Replaced lo-torq 10.1	ld to 3,500psi. ue valve.
02:32:00 02:44:00 02:45:00 02:53:00	Commenced pre Good test bled o 17.9 Opened SSTT u	essure test off pressur 52.0 pper ball r	t on SSTT a e. 5.6 prior to circu	gainst 52.0 Ilating f	Expro choke manifo 8.8 iltered brine.	ld to 3,500psi.
03:00:00 03:10:00 03:15:00	17.1 Commenced rig 16.9	52.0 ging up Ex 51.0	5.3 pro wireline 5.3	52.0 BOP's 52.0	9.7 and lubricator. 9.2	
03:30:00 03:45:00 04:00:00	16.9 16.7 Commenced co	51.0 50.0 nventional	5.2 4.8 circulation	52.0 52.0 of inhib	9.2 9.7 ited brine.	
04:00:00 04:15:00 04:30:00 04:45:00	16.3 31.6 29.0 63.3	50.0 50.0 50.0 49.0	5.2 4.9 5.2 4.8	51.0 51.0 51.0 51.0	9.2 9.2 10.1 10.9	
04:48:00 05:00:00 05:03:00 05:13:00 05:15:00	Completed conv 16.9 Landed out com Vented TRSCS	49.0 pletion in S SV control	Subsea Tre Ine at Expr	51.0 e (SST o pane	10.5 ). Good indication of I. Vented soft-land c	f helix alignment. n THRT.
05:26:00 05:30:00 05:45:00	Closed middle p 15.3 15.9 Pressured up or	ipe rams. 49.0 49.0	4.5 4.5 2000	51.0 51.0 51.0	9.7 10.1 e rams to 3 500pci	Good test
06:00:00 06:06:00 06:10:00	15.3 Locked tubing h Pressured up	49.0 anger. Go on annu	4.5 od indication Ilus above	50.0 50.0 n on loo tubin	36.2 sk monitor on contro g hanger to to	l panel. 3,500psi to confirm seal. Good

Client	OMV Au	stralia Pty	Ltd		Exal Er	ngineei	rМ.	Donalo	d / N.	. Dow	dell	
Well No	Patricia-	2			Locatio	on	Oc	ean Bo	ounty	,		
Test No	. Complet	ion			Start D	ate	30/	<mark>06 - 0</mark> 1	1/07/2	2002		
Time hh:mm:ss	UcP S PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG							
<u>01/07/02</u>	test											
06:15:00	15.5	49.0	4.4	50.0	3444.1							
06:30:00	15.5	49.0	4.5	51.0	3445.7							
06:36:00	Bled down tu	ibing hanger	lock pre	ssure.								
06:44:00	Commenced	overpull tes	t									
06:45:00	Overpull test	failed.										
06:45:00	15.7	50.0	3.1	51.0	8.4							
06:46:00	Pressured up	o on THRT u	nlock line	e to 3,000p	si. THRT I	not locke	ed.					
07:00:00	Closed midd	le pipe rams		- / -								
07:00:00	15.3	50.0	2.8	51.0	9.2							
07:09:00	Pressured up		ock line to	0 4,500psi.	THRI fail	ed to loc	K.					
07:11:00	Pressured up			5 3,000psi.		led to loc	к.					
07.15.00	Ried off pres	SUID ON THE	2. <del>4</del> DT lock lir	ond rein	910.1 recoured	to 1 000r	nei TH	DT faile	d to k	ock		
07:26:00	Bled off pres	sure on THE	2T lock lir	he and re-p	ressured	to 3 000r	nsi TH	IRT faile	d to l	ock		
07:27:00	Bled off pres	sure on THF	RT lock m	ionitor	lessureu	10 0,000				ook.		
07:30:00	Functioned S	SST choke w	ith ROV.									
07:30:00	16.1	50.0	2.0	51.0	1890.0							
07:45:00	15.7	50.0	1.8	51.0	12.5							
08:00:00	15.3	50.0	1.3	51.0	11.7							
08:15:00	15.9	51.0	1.8	51.0	12.1							
08:30:00	15.9	51.0	1.4	52.0	12.1							
08:45:00	15.5	51.0	1.4	52.0	11.7							
09:00:00	16.1	52.0	1.4	52.0	11.7							
09:15:00	15.9	52.0 52.0	1.4	53.U 53.0	11.3							
09.30.00	15.9	52.0 53.0	1. <del>4</del> 2.4	54 0	12.1							
10:00:00	Pressured i	in below i	middle r	pipe rams	and ab	ove tub	ina h	anger	to a	ssist i	n enga	aina
	lock.		ria ano r			0.00 100						99
10:00:00	16.3	53.0	2.5	54.0	6.0							
10:15:00	16.5	53.0	2.1	54.0	3410.6							
10:30:00	16.7	54.0	1.7	54.0	3920.8							
10:45:00	17.5	54.0	1.4	54.0	13.8							
11:00:00	17.5	55.0	2.1	55.0	12.9							
11:15:00	16.9	55.0	1.8	55.0	7.6							
11:30:00	ID.I	U.CC	1.4 romo	0.CC	8.U	nnular	haa	Drooo	urad		onnuluo	to
11.55.00	3 500 nei	idule pipe	Tams.	Closed	iowei a	annular	bay.	FIESS	ureu	up	annuius	10
11.40.00	Attempted to	set tubina h	anger F	ailed								
11:45:00	16.7	55.0	2.2	56.0	4899.7							
12:00:00	16.3	55.0	2.0	56.0	4786.8							
12:15:00	16.3	56.0	1.9	56.0	16.2							
12:30:00	16.3	56.0	2.0	56.0	16.6							
12:45:00	Pulled back	on landing st	ring 4 me	eters. Press	sured up 7	[HRT un	lock lir	ne to 2,0	00psi	i.		
12:45:00	15.7	56.0	1.8	56.0	16.2							
12:50:00	Pressured up	on THRT s	oft land t	o 3,000psi.								
12:55:00	Opened TRS	SCSSV.										
13:00:00	33.2	57.0	1.6	56.0	7.6							
13:05:00	Londod aut	JSSV.	COT									
13.10:00			IJJI. Nen TD		solation v	valve o	nd or	avity of	م اده	nonitor	valve	on
10.10.00	SST.				Sation			avity 30		normol	Valve	011

Client	OMV Aust	ralia Pty L	td		Exal Er	ngineer	M. Dona	ald /	N. Dowdel	I
Well No.	Patricia-2				Locatio	on	Ocean B	Bour	nty	
Test No.	Completion	า			Start D	ate	30/06 -	01/0	7/2002	
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG					
01/07/02	16.0	57.0	2.2	57.0	7.0					
13.15.00	16.9	57.0 57.0	2.2	57.0 57.0	7.6					
13:45:00	17.1	57.0	2.1	57.0	7.6					
14:00:00	16.1	56.0	2.4	57.0	8.0					
14:15:00	15.9	56.0	1.8	57.0	7.6					
14:26:00	ROV opened T	RSCSSV is	olation	valve on S	ST.					
14:30:00	16.1	56.0	1.8	57.0	8.0					
14:42:00	ROV opened ca	avity seal m	ionitor V	aive on SS	51. 76					
14.45.00	Bled off THRT	soft land lin	о 1. <del>4</del> С	57.0	7.0					
14:49:00	Closed lower a	nnular bag.	Pressu	red up ben	eath annu	ılar baq to	3.500psi.			
14:55:00	Bled off pressu	re below ba	ıg.			<b>J</b>	-,			
14:57:00	Pressured up o	n THRT loc	k line to	3,000psi.	Opened le	ower annu	lar bag.			
15:00:00	Bled off pressu	re on THRI	lock lin	e. Conduc	ted 20,00	0lbs overp	ull test.			
15:00:00	15.9 Cood toot, Dola	57.0	1.4	57.0	11.3					
15:05:00	Good lest. Rele	aseu overp	oull.							
15:10:00	Commenced pr	essure test	ina tubir	ng hanger	and packe	er seal.				
15:15:00	16.7	57.0	1.9	58.0	5.6					
15:30:00	Held wireline J	SA.								
15:30:00	18.1	58.0	3.2	58.0	197.7					
15:35:00	Commenced rig	ging up Ex	pro wire	eline.	~~~ ~ ~					
15:45:00	18.1	58.0	2.8	58.0	3374.2					
16:00:00	10.5 18.1	58.0 58.0	1.9	58.0 58.0	0.4 6.8					
16:20:00	Observed polis	hed bore re	ceptacle	e (PBR) lei	aking.					
16:30:00	18.1	58.0	2.8	58.0	6.4					
16:45:00	18.9	57.0	2.5	57.0	7.6					
17:00:00	21.0	57.0	2.2	57.0	11.7					
17:15:00	20.4	57.0	_ 1.9		8.4					
17:30:00	Commenced rig	ging down	Expro v	vireline.						
17.30.00		57 0		57 0	76					
17:45:00	20.4	56.0	1.5	57.0	12.5					
18:00:00	20.6	56.0	1.9	57.0	12.1					
18:15:00	21.0	56.0	1.9	57.0	13.3					
18:30:00	20.8	56.0	1.5	57.0	13.3					
18:45:00	20.4	56.0	1.6	57.0	12.9					
18:50:00	Pressured up to	Jbing hange		k. Applied	30,000lbs	over pull.				
19.00.00	20.0 Applied neut	0.0C D.UC		57.0 tubina k	13.3 Nanger	increased	unlock	to	40.000nei	annlied
13.01.00	50 000lbs over	null	. 011	tubing i	langer,	increased	UNIOCK	10	40,000p3i,	applied
19:07:00	Bled off tubing	hanger unlo	ock, pres	ssured up	tubing har	nger lock to	o 2000psi.			
19:07:00	Bled off tubing	hanger lock	, bled o	ff THRT İa	tch.	0	•			
19:10:00	Pressured up to	ubing hange	er unlocl	k to 4,000p	osi, pressu	ired up TH	IRT latch to	o 3,00	00psi.	
19:15:00	Applied 65,000	lbs over pu	II.		10.0					
19:15:00	20.6 Reduced ever	56.U	1.9	57.0	13.3	270 000	NC			
19.25.00 10.28.00	Reduced Over	released	ab saior	ove string	vvi - total	∠ <i>1</i> 0,00010	5.			
19:20:00	20.6	56 0	15	57.0	13.3					
19:35:00	Commenced rid	gging down	flowhea	ad.	10.0					
19:45:00	32.4	56.0	1.6	57.0	13.3					

Client	OMV Austr	alia Pty L	td		Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2				Location	Ocean Bounty
Test No.	Completion	1			Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
01/07/02 20:00:00	31.4	56.0	19	57 0	13 3	
20:15:00	32.6	56.0	2.1	57.0	13.3	
20:30:00	32.4	56.0	1.9	57.0	12.9	
20:45:00	32.8	56.0	1.8	57.0	13.3	
21:00:00	31.0	56.0	1.6	57.0	13.3	
21:15:00	15.7	56.0	2.1	57.0	12.9	
21:30:00	15.9	56.0	2.0	56.0	13.3	
21:45:00	16.1	56.0	1.4	56.0	13.3	
22:00:00	17.1	56.0	1.9	56.0	14.2	
22:15:00	16.9	_ 56.0	2.1	56.0	13.3	
22:16:00		-, continue	pulling out	of hole	with landing string	and tubing hanger.
22:30:00	10.5 Diad off SSLV a	55.U	2.0	56.0	13.3	
22.42.00			15	56.0	11 0	
22.45.00	10.1	55.0	1.0	50.0	14.2	
23.00.00	16.1	55.0	1.9	56.0	13.8	
23:20:00	Tubing hanger a	at surface (	Commence	d break	ing out tubing han	aer from tubing
23:30:00	15.9	55.0	1.6	56.0	14.2	gor nom tabing.
23:45:00	16.1	54.0	1.7	56.0	14.2	
<u>02/07/02</u>						
00:00:00	16.1	54.0	1.8	56.0	13.3	
00:10:00	Unlatched SST1	F assembly	from tubing	g hange	er.	
00:15:00	16.1	54.0	2.1	55.0	13.3	
00:20:00	Layed out SSTT	assembly	on catwalk	<	10.0	
00:30:00	16.1	54.0	1.6	55.0	13.8	
00:35:00	Broke out tubing	hanger. C	ommenced	redres	s of tubing hanger	
00:45:00	15.7	53.0	1.0	55.U	13.8	
01:15:00	10.1	53.0	1.0	55.U	13.8	
01.15.00	10.9	53.0	1.0	55.0	13.3	
01:45:00	16.1	52.0	1.0	54.0	14.2	
01.40.00	15.0	52.0	1.5	54 0	13.3	
02:15:00	16.0	52.0	1.0	54 0	13.8	
02:30:00	15.7	52.0	1.6	54.0	13.3	
02:45:00	15.9	52.0	1.6	54.0	13.3	
03:00:00	15.5	51.0	1.6	54.0	13.3	
03:15:00	Completed re-as	ssembly of	tubing han	ger with	added pup joints.	
03:15:00	15.7	51.0	1.3	53.0	12.9	
03:30:00	15.5	51.0	1.6	53.0	14.2	
03:35:00	Made up TRSC	SSV to tubi	ng hanger	and land	ded out in rotary ta	able.
03:45:00	16.1	51.0	1.4	53.0	13.3	
03:52:00	Picked up and n	nade up LL	SA and SS	TT.		
04:00:00	15.9	51.0	1.5	53.0	13.3	
04:15:00	16.1	51.0	1.6	53.0	13.3	
04:20:00	Completed func	tion testing	LLSA.	o) (		
04:20:00	Commenced pre	essure testi	ng IRSCS	SV cont	trol line to 5,000ps	I. Good test.
04:25:00		ning in hol		A.	10.0	
04:30:00	10.5	51.0	1.5	53.U	13.3	
04.45:00	10.1	51.U 50.0	1.0	53.U 53.0	13.0 12.0	
00.00.00	10.1 Dicked up and n	0.UC nade un SS		00.U hlv Doo	IZ.Ə Dairəd damaqa ta G	SSI V umbilical line
00.02.00	i ickeu up allu ll	naue up 33	-v asseiiii	ory. Rep	aneu uamaye io s	

Client	OMV Aust	ralia Pty	Ltd		Exal En	gineer	M. Do	nald /	N. D	)owde	ell	
Well No.	Patricia-2				Locatio	n	Ocear	n Boui	nty			
Test No.	Completio	n			Start Da	ite	30/06	- 01/0	)7/20	02		
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG							
02/07/02	40 5	50.0	4 5	50.0	40.0							
05:15:00	16.5	50.0	1.5	53.0	13.3							
05:30:00	16.1	50.0	1.6	53.0	13.3							
05:45:00	15.9	50.0	1.0	53.0	13.3							
06:00:00	15.9	50.0	1.3	52.0	12.9							
06:15:00	10.3 Continued runn	0.UC ing in hale	1.0	UC DC	13.3							
06:20:00	Continued run	ling in noie	with lane	ung string								
06:24:00		logging sys		naintenan	ce.							
06:28:00		e logging s		52.0	12.0							
06.30.00	15.9	50.0	1.9	52.0 52.0	12.9							
06.45.00	Diagod down 7	50.0 " alayatara	I.0 Diggod	U.SC	IJ.J	oro						
00.55.00		Elevators				015.						
07.00.00	Dicked up CTL	50.0 E upit to de	1.0	52.0	13.0							
07:15:00	16.2		1 2	52.0	12.0							
07.15.00	10.5	50.0	1.5	52.0	12.9							
07.30.00	Completed m	aking up	T.0 Evoro	JZ.U	Made u	n coflevi	in to r	producti	ion v	vina	Mada	un
07.40.00	ling from como	aking up ntunit to ki		nowneau.	made up	J COILEX	ih in h	Jouuci	VIII V	ving.	Maue	up
07:45:00	23 <i>4</i>	50 0	1 wing.	52.0	13 3							
08:00:00	20.4	50.0	1.3	52.0	12.0							
08:15:00	29.2	50.0	1.3	52.0	12.9							
08:30:00	20.4	50.0	1.3	52.0	12.0							
08:45:00	26.9	50.0	1.0	52.0	13.3							
08:55:00	Landed out cor	moletion in	Subsea	Tree (SST	) )							
09.00.00	23.0	50.0	0.9	52.0	,							
09:15:00	22.6	50.0	0.5	52.0	84							
09:21:00	Locked tubina	hanger. Go	od indica	ation at co	ntrol panel.							
09:25:00	Commenced 5	0.000lbs ov	verpull te	st. Good te	est. release	d overpu	ıll.					
09:30:00	22.8	51.0	1.2	53.0	8.0							
09:33:00	Commenced p	ressure an	nulus bel	ow tubina	hanger to 2	1.500psi.						
09:45:00	Good test. Bled	d off pressu	ire.	<b>J</b>	- <b>0</b>	,						
09:45:00	22.4	51.0	2.6	54.0	1480.7							
09:51:00	Commenced p	ressure an	nulus bel	ow tubing	hanger to 3	3,500psi.						
10:00:00	23.2	51.0	1.9	54.0	3368.1							
10:03:00	Good test. Blee	d off pressu	ire.									
10:15:00	Commenced ri	gging up E	xpro wire	line to pul	l isolation s	leeve and	d drift co	mpletic	on.			
10:15:00	19.6	51.0	2.2	54.0	8.8							
10:30:00	20.6	51.0	1.9	54.0	9.2							
10:45:00	20.6	52.0	0.8	54.0	8.8							
11:00:00	20.8	53.0	0.9	54.0	8.0							
11:15:00	21.2	55.0	0.3	55.0	8.0							
11:30:00	Completed rigg	ging up Exp	oro wirelir	ne.								
11:30:00	21.0	56.0	2.6	56.0	8.8							
11:45:00	21.0	57.0	3.2	56.0	. 8.0							
11:55:00	Commenced 2,000psi.	pressure	testing	against fi	low head	master	valve	and S	5511	uppe	r ball	to
12:00:00	21.0	58.0	2.0	. 56.0	. 8.8							
12:03:00	Good test. Con	nmenced p	ressure f	esting Exp	pro wireline	Iubricato	or to 3,50	00psi.				
12:13:00	Good test. Bled	d off pressu	ire.	_								
12:15:00	Closed flowhe 3,500psi.	ead kill w	ing valv	e. Pressu	ure tested	trom c	ement	unit to	) kill	wing	valve	to
12:15:00	177.6	58.0	1.7	56.0	8.4							
12:20:00	Repaired leaks	s to lo-torqu	e valve.									

Client	OMV Austr	alia Pty Lt	d		Exal Enginee	r M. Donald / N. Dowdell
Well No.	Patricia-2				Location	Ocean Bounty
Test No.	Completior	I			Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F F	DcP PSIG	DcT °F	AnnP PSIG	
02/07/02 12:30:00	147.9	59.0	1.3	56.0	9.2	
12:45:00	Good test. Oper	ned kill wing	valve. Op	pened p	production wing va	alve.
12:45:00	147.9	59.0	1.2	56.0	8.8	
12:47:00	Commenced pro	essure testir	ng SSTT i	upper b	all to choke manif	old to 3,500psi.
12:57:00	Good test. Bled	off pressure	e. Openeo		upper ball.	Northing tool to retrieve indiction
13:00:00	sleeve.	commenc	ea runn	ing in	nole with Ge	5 pulling tool to retrieve isolation
13:00:00	37.5	59.0	U.J	56.0	9.2 an flowbood	
13.07:00		IL SUITACE. C	iuseu SW		e on nownead.	
13.10.00			2 1	57 0	8 8	
13.15.00	20.4 Broke out lubric	ou.u ator and laid	Z.I Lout CS r	07.0 Julling t	0.0 And isolation s	
13.20.00	Installed 4.5"	aluranu alu naune r	ina onto	wire	line toolstring	Stabled lubricator and pressure
10.20.00	tested to 3 500r	i gauge i	ing one	, who	inte toolstring.	
13.30.00	24 5	60.0	20	57.0	84	
13:38:00	Good test Bled	off pressure	2.0	07.0	0.4	
13:40:00	Opened SSL	/ Onened	swah	valve	on flowhead	Commenced running in hole with
10.10.00	dauge ring.	. opened	onab	varvo	on nownoud.	
13:45:00	22.0	59.0	2.7	58.0	8.8	
13:55:00	Expro wireline a	t surface. C	losed SSI	_V. Clo	sed swab valve or	n flowhead.
14:00:00	Commenced rig	aina down E	Expro wire	eline.		
14:00:00	20.2	60.0	2.0	59.0	9.2	
14:15:00	21.2	60.0	2.7	60.0	8.8	
14:20:00	Completed riggi	ng down Ex	pro wireliı	ne.		
14:30:00	BJ Coiled tubing	g commence	d rigging	up inje	ctor head.	
14:30:00	22.4	61.0	3.0	61.0	8.8	
14:45:00	22.0	61.0	2.9	61.0	9.7	
15:00:00	22.0	62.0	3.0	62.0	9.2	
15:15:00	22.0	62.0	2.6	62.0	9.7	
15:30:00	22.0	62.0	4.0	62.0	9.7	
15:45:00	21.6	62.0	2.9	62.0	9.7	
16:00:00	20.6	62.0	1.6	62.0	10.5	
16:15:00	20.0	61.0	2.1	62.0	9.2	
16:45:00	20.0	61.0	2.9	61.0	9.2 10.1	
10.45.00	20.2	60.0	2.1	61.0	0.7	
17:15:00	20.2	59.0	17	60.0	9.7	
17:30:00	20.2	59.0	2.1	60.0	9.7	
17:45:00	20.0	57.0	2.1	58.0	97	
18:00:00	19.3	55.0	12	57.0	92	
18:15:00	19.6	54.0	1.1	56.0	9.2	
18:30:00	19.8	53.0	0.8	56.0	9.7	
18:45:00	19.1	53.0	1.2	56.0	9.2	
19:00:00	19.3	53.0	1.1	55.0	9.7	
19:15:00	20.0	53.0	1.3	55.0	9.7	
19:30:00	20.2	53.0	1.5	55.0	9.7	
19:45:00	19.6	53.0	1.5	55.0	9.2	
20:00:00	20.2	53.0	1.9	55.0	9.7	
20:15:00	19.1	53.0	1.6	55.0	9.2	
20:30:00	19.3	53.0	1.9	55.0	9.2	
20:45:00	19.6	53.0	1.9	55.0	9.2	
21:00:00	19.8	53.0	1.6	55.0	9.2	

Client	OMV Austr	alia Pty Li	td		Exal E	inginee	r M. Don	ald / N	. Do	wdell	
Well No.	Patricia-2				Locati	ion	Ocean	Bounty	'		
Test No.	Completior	ו			Start I	Date	30/06 -	01/07/	200	2	
Time hh:mm:ss	UcP PSIG	UcT °F I	DcP PSIG	DcT °F	AnnF PSIC	) ;					
02/07/02	10.2	52.0	1.6	<b>FF</b> 0	0.0	5					
21.15.00	19.3	53.U 52.0	1.0	55.0	0.0						
21:45:00	19.1	53.0	1.2	55.0 55.0	0.0	)					
22.00.00	19.0	53.0	1.0	55.0	9.2	-					
22:15:00	19.8	53.0	1.5	55.0	9.2	-					
22:30:00	19.8	53.0	1.0	54 0	9.2	-					
22:45:00	19.3	53.0	1.4	54 0	8.8	- 3					
23:00:00	Completed riggi	na un coilea	1 tubina	04.0	0.0	,					
23:00:00	19 6	53.0	1.5	54 0	97	7					
23:15:00	19.6	53.0	1.5	54.0	9.2	>					
23:23:00	Closed procucti	on wing valv	ve for pres	sure tes	st.	-					
23:30:00	Held JSA prior t	o coiled tub	ing operat	ions.							
23:30:00	22.0	53.0	1.5	54.0	8.8	3					
23:45:00	22.2	53.0	1.5	54.0	9.2	2					
23:50:00	Commenced flu	shing coiled	I tubing lin	es prior	to press	sure test.					
		-	-								
03/07/02											
00:00:00	31.6	53.0	1.6	54.0	9.2	2					
00:15:00	31.0	53.0	1.6	54.0	9.7	7					
00:26:00	Commenced pro	essure testii	ng coil to 3	800psi.							
00:29:00	Good test. Incre	eased press	ure to $3,00$	Opsi.	0.0						
00:30:00	299.4 Openditest	54.0	1.3	54.0	9.4	2					
00:40:00	Good test.	منامه ما م	a off line a								
00:43:00				ressure		<b>`</b>					
00.45.00	2705.0 Completed blog	04.0	1.9	54.0	9.2	<u> </u>					
00.50.00		54 0	6.2	55 O	8 9	2					
01:08:00	Opened kill wind	u valve on fl	owhead	55.0	0.0	)					
01:15:00	Opened flowher	ad master v	owneau. alve and Ic	ocked o	nen						
01:15:00	7 5	54 0	6.0	55.0	8.8	3					
01.16.00	Opened SSI V	01.0	0.0	00.0	0.0	•					
01:21:00	Coil tubina c	ommenced	runnina	in ho	ole at	10m pe	r minute.	Open	at	Expro	choke
	manifold on 64/	64th adiusta	ble choke	to sura	e tank.			-			
01:30:00	7.5	54.0	6.2	54.0 <sup>°</sup>	9.7	7					
01:38:00	Coil tubing at de	epth 66mRT	. Continue	d runni	ng in hol	e at 5m p	er minute.				
01:45:00	7.5	54.0	6.3	54.0	8.8	3					
01:56:00	Coil tubing at de	epth 200mR	T. Continu	ed runr	ning in ho	ole at 6m	per minute.				
02:00:00	Coil tubing stop	ped at 221n	nRT due to	o proble	m with S	RO press	sure gauge.				
02:00:00	9.5	54.0	6.5	54.0	10.1						
02:15:00	7.5	54.0	5.9	54.0	9.2	2					
02:28:00	Rectified SRO p	pressure gau	uge fault. (	Coiled to	ubing co	ntinued ru	inning in ho	le.			
02:30:00	7.5	54.0	5.9	54.0	9.7	7					
02:45:00	7.3	54.0	5.6	54.0	8.8	3					
03:00:00	7.5	54.0	5.9	54.0	9.7	, 					
03:09:00	Coiled tubing st	opped at 60	0mRT to a	allow nit	rogen ur	hit to cool	down.				
03:15:00	7.3	54.0	5.9	54.0	9.7	( 					
03:22:00	Colled tubing co	pmmenced p	pumping ni	trogen	at 400 s	ct/m.					
03:30:00	7.3 Optional ( 151 - 1	54.U	5.6	54.0	8.8	5 					
03:37:00	Colled tubing at	786mRT. Ir	icreased a	ajustat	Die choke	e to 72/64	•				
03:42:00	Expro observed	Drine return	topk 1 2	e lank.	louiotod	rate 107	77h/d)				
03:44:00	Total brine retur	ns at surge	tonk - 1.3	DDIS (Ca		rate - 18/	10b/d).				
03.45:00	rotal prine retur	ns at surge	1d11K - 2.3	onis (ca	iculated	iale - 144	+00/0).				

Client	OMV Austr	alia Pty I	_td		Exal Enginee	r M. Donald / N. Dov	wdell
Well No.	Patricia-2				Location	Ocean Bounty	
Test No.	Completior	ı			Start Date	30/06 - 01/07/2002	2
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG		
03/07/02 03:45:00 03:45:00 03:50:00 03:50:00 03:53:00 03:53:00 03:56:00 03:58:00 03:58:00 04:00:00 04:00:00	Coiled tubing st 14.8 Coiled tubing no Coil tubing pulle Total brine retur Coil tubing at de Decreased adju Total brine retur Coil tubing 400scf/m. Decreased adju Total brine retur 177.8	opped at 8 55.0 otified of le ed back up rns at surge epth 872m. stable cho rns at surge commence stable cho rns at surge 70.0	92mRT. ( 9.8 ak in the i hole 20m e tank - 2 Continue ke to 64/6 e tank - 3 d pullin ke to 58/6 e tank - 4 64.1	Continuec 55.0 injector. a due to si 8.3bbls (c ed pumpir 64". 2.7bbls (c ag out 64". 3bbls (cal 69.0	l pumping nitroge 8.8 uspected nitroger alculated rate - 8 ng. alculated rate - 6 of hole to culated rate - 288 8.8	en at 400scf/m. n loss in screens. 640b/d). 048b/d). 792mRT. Continued t 30b/d).	o pump at
04:03:00 04:05:00 04:10:00 04:10:00 04:13:00 04:15:00 04:15:00 04:15:00	Expro observed Total brine retur Increased adjus Total brine retur Coil tubing at de Decreased adju Total brine retur 589.7	nitrogen a ns at surge table chok ns at surge pth 792ml stable cho ns at surge 74.0	t surface e tank - 5 e to 64/64 e tank - 7 RT. ke to 58/6 e tank - 7 77.8 ko to 52/6	with brine 7.7bbls (c 4". 1bbls (cal 54". 7bbls (cal 74.0	e. alculated rate - 4 culated rate - 360 culated rate - 348 8.8	320b/d). 00b/d). 56b/d).	
04.17.00 04:19:00 04:20:00 04:25:00 04:25:00 04:25:00 04:29:00 04:30:00 04:30:00	Total brine retur Coil tubing redu Increased adjus Increased adjus Total brine retur Decreased adju Coil tubing com Total brine retur 576.2	ced nitroge table chok table chok table chok rns at surge stable cho menced ru rns at surge 64.0	te to $52/6$ e tank - 9 en pump i e to $56/6$ e to $58/6$ e tank - 9 ke to $50/6$ nning in h e tank - 9 37.9	0.5bbls (c rate to 30 4". 4". 1.7bbls (c 64". nole to 89 6.1bbls (c 59.0	alculated rate - 3 0scf/m. alculated rate - 7 2mRT continued alculated rate - 1 9.2	312b/d). 20b/d). flowing at 300scf/m. 728b/d).	
04:32:00 04:35:00 04:35:00 04:36:00 04:36:00 04:40:00 04:40:00 04:45:00 04:45:00 04:50:00	Increased adjus Increased adjus Total brine retur Increased adjus Increased adjus Coiled tubing at Total brine retur Total brine retur 567.6 Total brine retur	table chok table chok ns at surge table chok table chok depth 892 ns at surge ns at surge 64.0	e to 52/64 e to 56/64 e tank - 9 e to 58/64 e to 64/64 mRT. e tank - 9 e tank - 1 34.1 e tank - 1	4". 4". 7.4bbls (c 4". 9.8bbls (c 06.6bbls ( 56.0 09.4bbls (	alculated rate - 1 alculated rate - 8 (calculated rate - 8 9.7 (calculated rate -	872b/d). 64b/d). 1728b/d). 2592b/d).	
04:54:00 04:57:00 05:00:00 05:15:00 05:30:00 05:45:00 06:00:00 06:15:00 06:30:00 06:45:00 07:00:00	Coil tubing stop Total brine retur 716.9 768.0 760.6 759.6 759.0 759.0 759.6 759.3 Function tested	ped pumpi ns at surge 70.0 66.0 62.0 60.0 59.0 57.0 56.0 54.0 ESD syste	ng nitroge e tank - 1 0.0 0.0 0.0 0.2 0.2 0.2 0.2 0.0 0.0 em in pres	en and Ex 19.4bbls 68.0 66.0 64.0 62.0 61.0 60.0 59.0 58.0 sence of C	(calculated rate - 9.7 8.8 9.2 8.8 9.2 8.8 9.2 8.8 9.2 8.8 9.2 8.8 9.2 8.8	n. 1152b/d).	

Client	OMV Austra	alia Pty I	Ltd		Exal Enginee	r M. Donald / N. Dowdell
Well No.	Patricia-2				Location	Ocean Bounty
Test No.	. Completion				Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
03/07/02 07:00:00 07:05:00 07:14:00 07:15:00 07:15:00 07:15:00 07:17:00 07:18:00 07:20:00	757.3 Held JSA on dril Opened well to a Gradually increa 746.1 Gradually increa Gradually increa Brine to surface.	53.0 I floor prio aft flare bo ised adjus 53.0 ised adjus ised adjus	0.0 or to opening oom via 20/6 table choke 11.2 table choke table choke	57.0 y well. 64" adju to 24/6 55.0 to 46/6 to 64/6	9.2 Istable choke. 64". 8.8 64". 64". Hydrocarbon	gas to surface.
07:23:00 07:29:00 07:30:00 07:37:00 07:40:00 07:42:00	Well slugging br Well flowing pre 771.7 Hydrocarbon 72/64". Gradually increa Gradually increa	ine and ga dominantl 68.0 gas to sed adjus sed adjus	as. y nitrogen. 189.0 surface. table choke table choke	55.0 Comme to 76/6 to 80/6	9.2 enced gradually 64". 64".	v increasing adjustable choke to
07:45:00 07:51:00 07:52:00 07:54:00 08:00:00	674.3 Manipulated adj Gradually increa Gradually increa brine. Gradually increa	69.0 ustable ch ised adjus eased ad ised adjus	362.6 loke to prev ltable choke djustable c ltable choke	63.0 ent plug to 100 choke to 128	9.7 gging. /64". to 112/64". W /64".	ell slugging hydrocarbon gas and
08:00:00 08:00:00	BS&W = 10 refractometer 11 Draeger showe	0% brir 7,000ppn d 1.2 %	ne, trace n. CO2 by	sedir volume	nent, pH = e & 0 ppm H2	6 and Chloride contents from S. S.G. of produced water - 1.095
08:00:00 08:15:00	@ 57F. 635.5 592.4	77.0 78.0	530.5 509.2	74.0 75.0	9.7 9.7	
08:30:00 08:30:00 08:45:00 09:00:00	607.9 627.7 BS&W = 10	dominanti 77.0 78.0 00% brir	y brine, trac 498.0 508.9 ne, trace	e sedin 76.0 75.0 sedir	nent. 9.7 9.7 nent, pH =	6 and Chloride contents from
09:00:00	refractometer 12 Draeger showe @ 52F.	20,000ppm d 1.5 %	n. CO2 by	volume	e & 0 ppm H2	S. S.G. of produced water - 1.096
09:00:00 09:15:00 09:24:00 09:30:00	648.4 662.3 Inspected sand 653.3	78.0 77.0 catcher fo 76.0	559.0 557.9 r debris. Re 558.6	75.0 75.0 trieved 74.0	9.2 9.7 traces of rust frag 9.2	gments.
09:39:00 09:45:00 09:50:00 09:51:00	Diverted flow via 628.3 Installed 3.750" Raised orifice pl	i test sepa 76.0 orifice pla ate.	arator. 526.4 te into gas r	72.0 neter ru	9.2 In.	
10:00:00 10:00:00	BS&W = 100% b Draeger showe S.G. of produced	orine pH = ed 1.4 % d water - 1	6 and Chlo CO2 by 0.096 @ 52F	volum	ntents from refrac e & 0 ppm H2	tometer 120,000ppm. 2S. S.G. of produced gas - 0.571.
10:00:00 10:15:00 10:30:00 10:30:00 10:45:00	020.5 Brine returns at 632.2 Brine returns at 633.9 Brine returns at	surge tanl 75.0 surge tanl 75.0 75.0 surge tanl	<ul> <li>520.9</li> <li>5.25bbls</li> <li>532.5</li> <li>10.5bbls</li> <li>534.2</li> <li>15.7bbls</li> </ul>	(calcula 72.0 (calcula 71.0 (calcula	9.2 ated rate - 504b/d 8.8 ated rate - 504b/d 9.7 ated rate - 499b/d	I). I). I).

Client	OMV Austr	alia Pty	Ltd		Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2				Location	Ocean Bounty
Test No.	Completion	1			Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
03/07/02		- / 0				
10:45:00	631.4	74.0	533.5	/1.0	9.7	
11:00:00	BS&W = 100%	brine pH =	· / and Chio	ride co	ntents from refractor	meter 120,000ppm.
11:00:00	Draeger showe	90 1.4 % d.u.atar (	5 CO2 by	volum	e & 0 ppm H2S	. S.G. of produced gas - 0.576.
11.00.00	S.G. of produce	a water -	1.096 @ 52F	·. (ooloul	atad rata 204b/d)	
11:00:00			525 6		aleu Tale - 3940/0). 10 1	
11:15:00	Dipo roturno at	74.0 curao tan	000.0 k 04.0 bblc	70.0 (coloul	IU.I	
11.15.00	632 6		536 3		10 1	
11.13.00	Brine returns at	surge tan	200.0 k - 27 7hble	70.0 (calcul:	oted rate - 336b/d)	
11:30:00	632 2	74 N	537 6		9 7	
11:45:00	Brine returns at	surge tan	k - 30 9bbls	ro.o (calcul:	ated rate - 302b/d)	
11:45:00	633 3	74 0	538 7	70 0	10.5	
12.00.00	BS&W = 100%	brine pH =	7 and Chlo	ride co	ntents from refractor	meter 225 000ppm
12:00:00	Draeger showe	ed 1.4 %	CO2 bv	volum	e & 0 ppm H2S	S.G. of produced gas - 0.576.
	S.G. of produce	d water - 1	1.095 @ 53F			erer er produced gab ererer
12:00:00	Brine returns at	surge tan	k - 33.9bbls	(calcula	ated rate - 288b/d).	
12:00:00	632.2	74.0	538.3	`70.0	9.2	
12:05:00	Inspected sand	catcher fo	r debris. Ret	trieved	traces of rust fragm	ents.
12:15:00	Brine returns at	surge tan	k - 36.1bbls	(calcula	ated rate - 211b/d).	
12:15:00	633.5	74.0	539.7	70.0	9.7	
12:30:00	Brine returns at	surge tan	k - 38.4bbls	(calcula	ated rate - 221b/d).	
12:30:00	635.1	74.0	541.0	70.0	9.7	
12:45:00	Brine returns at	surge tan	k - 40.8bbls	(calcula	ated rate - 230b/d).	
12:45:00	634.9	74.0	541.6	70.0	9.7	
13:00:00	BS&W = 100%	brine pH =	7 and Chlo	ride co	ntents from refractor	meter 110,000ppm.
13:00:00	Draeger showe	90 1.5 %	5 CO2 by	volum	e & 0 ppm H2S	. S.G. of produced gas - 0.578.
12.00.00	S.G. of produce	a water -	1.093 @ 53F	·. (ooloul	atad rata 250b/d)	
13.00.00	635.3	75 0	542 2		aleu fale - 2500/0). 10 1	
13.00.00	Brine returns at	runa tan	542.2	7 I.U (calcul:	iu.i ated rate - 202h/d)	
13:15:00	634 Q	75 0	542 4	71 0	10 5	
13:30:00	Brine returns at	surge tan	k - 47 8bbls	(calcul:	ated rate - 221b/d)	
13:30:00	635.3	75.0	542.9	71.0	10.5	
13:45:00	Brine returns at	surge tan	k - 50.0bbls	(calcula	ated rate - 211b/d).	
13:45:00	635.5	75.0	543.2	`71.0	10.1 <sup>′</sup>	
14:00:00	BS&W = 100%	brine pH =	6 and Chlo	ride co	ntents from refractor	meter 110,000ppm.
14:00:00	Draeger showe	ed 1.5 %	CO2 by	volum	e & 0 ppm H2S	. S.G. of produced gas - 0.578.
	S.G. of produce	d water - '	1.093 @ 52F			
14:00:00	Brine returns at	surge tan	k - 51.75bbls	s (calcu	ilated rate - 168b/d).	
14:00:00	635.5	75.0	544.1	71.0	9.7	
14:15:00	Brine returns at	surge tan	k - 53.5bbls	(calcula	ated rate - 168b/d).	
14:15:00	636.1	75.0	544.4	71.0	10.1	
14:30:00	Brine returns at	surge tan	K - 55.2001s	(calcula	ated rate - $163b/d$ ).	
14:30:00	636.7	/5.0	545.7	/1.0	10.1 10.1 (10.0 k / 1)	
14:45:00	Brine returns at	surge tan	K - 57.100IS	(calcula	aleo rate - 1820/d).	
14:45:00	031.1 DC814 - 1000/ 1	/ 0.0 hrino n∐ -	040.0	/ I.U	IU.T ntonto from rofracto:	motor 115 000ppm
15.00.00	Dragger about					SC of produced acc 0.592
13.00.00	S G of produce	dwater ?				. 3.3. 01 produced yas - 0.362.
15.00.00	Brine returns at	a walci - surne teni	1.007 W 401 k - 58 Qhhle	(calcul	ated rate - 173h/d)	
15:00:00	Sample No 1-1	(0.5 ltr wa	ater) and 1-2	(5 ltr w	/ater) taken from se	parator water line
15:00:00	638.0	75.0	546.6	71.0	10.5	

Client	OMV Austr	alia Pty	Ltd		Exal Eng	gineer	M. Donald / N. Dowdell
Well No.	Patricia-2				Locatior	ו	Ocean Bounty
Test No.	Completion				Start Da	te	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG		
03/07/02	Dring raturns at	ourse ten	60 4bbla	(aalaul	atad rata 1	144b/d)	
15.15.00 15:15:00	637 7	75 0	546 5	(Calcul) 71.0	aleu fale - 1 9 7	1440/0).	
15:30:00	Brine returns at	surge tan	k - 61.9bbls	(calcul	ated rate - 1	144b/d).	
15:30:00	638.2	75.0	546.7	71.0	10.5		
15:45:00	Brine returns at	surge tan	k - 63.4bbls	(calcul	ated rate - 1	l44b/d).	
15:45:00	638.0	75.0	546.5	71.0	10.5	- · ·	
16:00:00	BS&W = 100% I	brine pH =	6 and Chlo	ride co	ntents from	refractor	neter 115,000ppm.
16:00:00	Draeger showe	ed 1.5 %	001 @ 19	volum	е & 0 рр	M H2S.	S.G. of produced gas - 0.580.
16.00.00	S.G. 01 produce Brine returns at	u walei - surge tan	1.094 @ 40r k - 64 9hhls	 (calcul:	ated rate - 1	144h/d)	
16:00:00	638.2	75.0	547.4	71.0	10.5	1440/u).	
16:15:00	Brine returns at	surge tan	k - 66.4bbls	(calcul	ated rate - 1	l44b/d).	
16:15:00	638.4	75.0	547.9	`71.0	9.7	,	
16:30:00	Brine returns at	surge tan	k - 67.7bbls	(calcul	ated rate - 1	l25b/d).	
16:30:00	638.0	75.0	547.8	71.0	10.1		
16:45:00	Brine returns at	surge tan	K - 69.1001S	(calcul	ated rate - 1	134b/d).	
17.00.00	030.0 RS&W = 100% I	75.0 hrine nH =	540.2 6 and Chlo	ride co	ntents from	refractor	neter 115 000ppm
17:00:00	Brine returns at	surge tan	k - 70.3bbls	(calcul	ated rate - 1	15b/d).	
17:00:00	Sample No. 1-3	(0.5 ltr wa	ter) and 1-4	(5 ltr v	vater) taken	from se	parator water line.
17:00:00	638.2	75.0	547.9	<b>7</b> 1.0	´9.7		
17:15:00	Brine returns at	surge tan	k - 71.5bbls	(calcul	ated rate - 1	l15b/d).	
17:15:00	639.6	75.0	548.5	71.0	10.5		
17:30:00	Brine returns at	surge tan	K - 72.700IS	(calcul		1150/0).	
17:30:00	030.0 Raised orifice nl	ate Diver	ted flow via	71.0 choke	no.5 manifold by	nass 3" li	ine
17:35:00	Installed 3.500"	orifice pla	te into gas r	neter ru	ina mora by in.		
17:45:00	Brine returns at	surge tan	k - 73.8bbls	(calcul	ated rate - 1	106b/d).	
17:45:00	618.9	75.0	562.1	72.0	10.5		
18:00:00	S.G. of produce	d gas - 0.	580.				
18:00:00	Brine returns at	surge tan	k - 75bbls (c	alculat	ed rate - 11	5b/d).	
18.00.00	020.2 Brine returns at	70.0 surge tan	203.3 2 - 76 1 hble	72.0 (calcul	IU.I 1 _ ted rate	134h/d)	
18:15:00	621.0	75.0	564.0	73.0	9.7	10 <del>4</del> 0/0).	
18:30:00	BS&W = 100% I	brine pH =	7 and Chlo	ride co	ntents from	refractor	neter 110,000ppm.
18:30:00	Brine returns at	surge tan	k - 77.5bbls	(calcul	ated rate - 1	106b/d).	
18:30:00	620.2	75.0	563.9	73.0	10.5		
18:45:00	Brine returns at	surge tan	k - 78.6bbls	(calculation)	ated rate - 1	106b/d).	
18:45:00	620.4 Princ roturno ot	75.0	504.1	73.0 (optout	10.1 stod roto 1		
19.00.00	Sample No. 1-5	(0 5 ltr wa	ter) and 1_6	(Calcul	aleu Tale - T vater) taken	from sei	parator water line
19:00:00	620.6	75.0	564.3	73.0	10.5	1011 30	
19:15:00	Brine returns at	surge tan	k - 80.7bbls	(calcul	ated rate - 9	95.9b/d).	
19:15:00	620.6	75.0	564.4	72.0	10.1	,	
19:30:00	BS&W = 100% I	brine pH =	7 and Chlo	ride co	ntents from	refractor	neter 110,000ppm.
19:30:00	Brine returns at	surge tan	k - 81.7bbls	(calculation)	ated rate - 9	95.9b/d).	
19:30:00	020.8 Brine returns at	10.U surge tool	004.0	72.0 (calcul	10.5 Ated rate	1155/21	
19:45:00	620 A	75 0	564 6	72 0	10 5 10 10 10 10 10 10 10 10 10 10 10 10 10	150/0).	
20:00:00	BS&W = 100% I	brine pH =	7 and Chlo	ride co	ntents from	refractor	neter 110.000ppm.
20:00:00	Draeger showed	1.5 % C	D2 by volum	ie & 0 p	pm H2S.		
20:00:00	S.G. of produce	d water - '	1.087 @ 60°	F. S.G	. of produce	ed gas - C	).584.

Well No.         Patricia-2         Location         Ocean Bounty           Test No.         Completion         Start Date         30/06 - 01/07/2002           Time hh:mm:ss         UCP PSIG         UC *F         DCP PSIG         PSIG         Y           0300702 2000000         Brine returns at surge tank - 84. tbbls (calculated rate - 96b/d).         621.0         75.0         565.2         72.0         10.5           023000         621.2         75.0         565.2         72.0         10.5           023000         621.2         75.0         564.9         72.0         10.5           023000         621.2         75.0         564.9         72.0         10.5           024500         Brine returns at surge tank - 85. tbbls (calculated rate - 96b/d).         622.4         75.0         565.2           024500         BSRW = 100% brine p1 = 7 and Chloride contents from refractometer 110,000ppm.         210000         621.6         74.0         565.7         72.0         10.1           1211500         621.6         74.0         565.7         72.0         10.1           211500         621.6         74.0         565.7         72.0         10.1           211500         621.6         74.0         565.7         72.0 </th <th>Client</th> <th>OMV Austr</th> <th>alia Pty I</th> <th>Ltd</th> <th></th> <th>Exal Engineer</th> <th>M. Donald / N. Dowdell</th>	Client	OMV Austr	alia Pty I	Ltd		Exal Engineer	M. Donald / N. Dowdell
Test No.         Completion         Start Date         30/06 - 01/07/2002           Time httmm:s         USP PSIG         UCT PF         DCP PSIG         PCT PSIG         AnnP PSIG           200700 200500         Brine returns at surge tank - 84.1bbls (calculated rate - 115b/d).         621.8         75.0         565.2         72.0         10.5           201500         Brine returns at surge tank - 84.1bbls (calculated rate - 95b/d).         621.1         75.0         565.2         72.0         10.1           203000         621.2         75.0         564.9         72.0         10.5           203000         621.4         75.0         566.3         72.0         10.5           204500         Brine returns at surge tank - 80.7bbls (calculated rate - 96b/d).         622.4         75.0         566.3           210000         S8W = 100% brine pH = 7 and Chloride contents from refractometer 110.000ppm.         210000         621.6         74.0         565.7         72.0         10.1           213000         622.4         74.0         565.7         72.0         10.1           214500         Brine returns at surge tank - 80.4bbls (calculated rate - 48b/d).         622.0         74.0         566.7           213000         622.4         74.0         566.7         72.0<	Well No	Patricia-2				Location	Ocean Bounty
Time httmm:ss         UCP PSIG         UCT *F         DCP PSIG         DCT *F         AnnP PSIG           0300702 200000         Brine returms at surge tank - 84.1bbis (calculated rate - 115b/d).         621.8         75.0         565.2         72.0         10.5           0300700         621.8         75.0         565.2         72.0         10.5           030000         621.1         75.0         565.2         72.0         10.1           030000         621.2         75.0         566.3         72.0         10.5           030000         621.4         75.0         566.3         72.0         10.5           0204500         Brine returms at surge tank - 88.1bbis (calculated rate - 95b/d).         621.6         74.0         565.8         72.0         10.1           110000         Brine returms at surge tank - 88.1bbis (calculated rate - 77b/d).         621.6         74.0         565.7         72.0         9.7           115000         621.6         74.0         565.7         72.0         9.7         7           115000         621.6         74.0         565.7         72.0         10.1         1           115000         621.6         74.0         565.7         72.0         9.7	Test No	Completion	1			Start Date	30/06 - 01/07/2002
93/07/02         Brine returns at surge tank - 84.1bbls (calculated rate - 115b/d).           20.0000         621.8         75.0         565.2         72.0         10.5           20.15100         621.0         75.0         565.2         72.0         10.1           20.3000         621.0         75.0         565.2         72.0         10.1           20.3000         621.0         75.0         564.9         72.0         10.5           20.3000         621.2         75.0         564.9         72.0         10.5           20.4500         622.4         75.0         566.3         72.0         10.5           21.0000         B38W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.         211.000           21.16         74.0         565.7         72.0         10.1           21.1500         Brine returns at surge tank - 88.9bbls (calculated rate - 71b/d).         21.3100           21.16         74.0         565.7         72.0         10.1           21.4500         622.4         74.0         566.4         71.0         9.7           21.3000         82.2         74.0         566.4         71.0         9.7           22.0000         52.4         74.0	Time hh:mm:se	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
04/07/0200:00:00BS&W = 100% brine pH = 7 and Chloride contents from refractometer 110,000ppm.00:00:00Draeger showed 1.5 % CO2 by volume & 0 ppm H2S.00:00:00S.G. of produced gas - 0.584. S.G. of produced water - 1.087 @ 59°F.00:00:00Brine returns at surge tank - 97.3bbls (calculated rate - 77b/d).00:00:00625.373.0568.770.010.500:15:00Brine returns at surge tank - 98.3bbls (calculated rate - 96b/d).00:30:00624.173.0567.970.010.100:30:00623.273.0567.470.010.100:45:00Brine returns at surge tank - 99.5bbls (calculated rate - 58b/d).00:45:00623.873.0567.870.010.1	03/07/02           20:00:00           20:00:00           20:00:00           20:15:00           20:30:00           20:30:00           20:30:00           20:45:00           21:00:00           21:00:00           21:00:00           21:00:00           21:00:00           21:00:00           21:00:00           21:00:00           22:00:00           23:00:00           23:00:00           23:00:00           23:00:00           23:00:00 <t< td=""><td>Brine returns at 621.8 Brine returns at 621.0 Brine returns at 622.4 BS&amp;W = 100% Brine returns at Sample No. 1-7 621.6 Brine returns at 622.0 Brine returns at 622.0 Brine returns at 622.4 BS&amp;W = 100% S.G. of produce Brine returns at 622.4 Brine returns at 622.4 Brine returns at 622.2 Brine returns at 622.2 Brine returns at 622.2 Brine returns at 622.2 Brine returns at 622.4 Brine returns at 622.4 Brine returns at 622.2 Brine returns at 622.4 Brine returns at 622.8 BS&amp;W = 100% Brine returns at 622.4 Brine returns at 622.3 Brine returns at 622.4 Brine returns at 624.9 Brine returns at 625.3 Brine returns at 624.1</td><td>surge tanl 75.0 surge tanl 75.0 surge tanl 75.0 brine pH = surge tanl (0.5 ltr wa 74.0 surge tanl 74.0 surge tanl 74.0 brine pH = d gas - 0.8 surge tanl 74.0 surge tanl 73.0 surge tanl 73.0 surge tanl 73.0 surge tanl 73.0</td><td><ul> <li>&lt; 84.1bbls</li> <li>565.2</li> <li>&lt; 85.1bbls</li> <li>565.2</li> <li>&lt; 86.1bbls</li> <li>564.9</li> <li>&lt; 87.1bbls</li> <li>566.3</li> <li>&lt; 7 and Chlos</li> <li>&lt; 88.1bbls</li> <li>565.7</li> <li>&lt; 89.4bbls</li> <li>565.7</li> <li>&lt; 90.7bbls</li> <li>566.4</li> <li>&lt; 7 and Chlos</li> <li>&lt; 566.2</li> <li>&lt; 93.1bbls</li> <li>566.4</li> <li>&lt; 93.9bbls</li> <li>566.5</li> <li>&lt; 94.5bbls</li> <li>566.6</li> <li>&lt; 95.9bbls</li> <li>566.6</li> <li>&lt; 95.9bbls</li> <li>569.2</li> <li>&lt; 96.5bbls</li> <li>568.6</li> </ul></td><td>(calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0</td><td>ated rate - 115b/d). 10.5 ated rate - 96b/d). 10.1 ated rate - 96b/d). 10.5 ated rate - 96b/d). 10.5 ated rate - 96b/d). 10.5 ated rate - 96b/d). vater) taken from set 10.1 ated rate - 77b/d). 9.7 ated rate - 48b/d). 10.1 ated rate - 125b/d). 9.7 ated rate - 1088 @ ated rate - 67b/d). 9.7 ated rate - 77b/d). 9.7 ated rate - 77b/d). 9.7 ated rate - 77b/d). 9.7 ated rate - 77b/d). 9.7 ated rate - 58b/d). water) taken from set 10.1 ated rate - 58b/d). 9.7 ated rate - 67b/d). 9.7</td><td>meter 110,000ppm. eparator water line. meter 110,000ppm. s 59°F.</td></t<>	Brine returns at 621.8 Brine returns at 621.0 Brine returns at 622.4 BS&W = 100% Brine returns at Sample No. 1-7 621.6 Brine returns at 622.0 Brine returns at 622.0 Brine returns at 622.4 BS&W = 100% S.G. of produce Brine returns at 622.4 Brine returns at 622.4 Brine returns at 622.2 Brine returns at 622.2 Brine returns at 622.2 Brine returns at 622.2 Brine returns at 622.4 Brine returns at 622.4 Brine returns at 622.2 Brine returns at 622.4 Brine returns at 622.8 BS&W = 100% Brine returns at 622.4 Brine returns at 622.3 Brine returns at 622.4 Brine returns at 624.9 Brine returns at 625.3 Brine returns at 624.1	surge tanl 75.0 surge tanl 75.0 surge tanl 75.0 brine pH = surge tanl (0.5 ltr wa 74.0 surge tanl 74.0 surge tanl 74.0 brine pH = d gas - 0.8 surge tanl 74.0 surge tanl 73.0 surge tanl 73.0 surge tanl 73.0 surge tanl 73.0	<ul> <li>&lt; 84.1bbls</li> <li>565.2</li> <li>&lt; 85.1bbls</li> <li>565.2</li> <li>&lt; 86.1bbls</li> <li>564.9</li> <li>&lt; 87.1bbls</li> <li>566.3</li> <li>&lt; 7 and Chlos</li> <li>&lt; 88.1bbls</li> <li>565.7</li> <li>&lt; 89.4bbls</li> <li>565.7</li> <li>&lt; 90.7bbls</li> <li>566.4</li> <li>&lt; 7 and Chlos</li> <li>&lt; 566.2</li> <li>&lt; 93.1bbls</li> <li>566.4</li> <li>&lt; 93.9bbls</li> <li>566.5</li> <li>&lt; 94.5bbls</li> <li>566.6</li> <li>&lt; 95.9bbls</li> <li>566.6</li> <li>&lt; 95.9bbls</li> <li>569.2</li> <li>&lt; 96.5bbls</li> <li>568.6</li> </ul>	(calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 72.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0 (calcula 71.0	ated rate - 115b/d). 10.5 ated rate - 96b/d). 10.1 ated rate - 96b/d). 10.5 ated rate - 96b/d). 10.5 ated rate - 96b/d). 10.5 ated rate - 96b/d). vater) taken from set 10.1 ated rate - 77b/d). 9.7 ated rate - 48b/d). 10.1 ated rate - 125b/d). 9.7 ated rate - 1088 @ ated rate - 67b/d). 9.7 ated rate - 77b/d). 9.7 ated rate - 77b/d). 9.7 ated rate - 77b/d). 9.7 ated rate - 77b/d). 9.7 ated rate - 58b/d). water) taken from set 10.1 ated rate - 58b/d). 9.7 ated rate - 67b/d). 9.7	meter 110,000ppm. eparator water line. meter 110,000ppm. s 59°F.
00:15:00       Brine returns at surge tank - 98.3bbls (calculated rate - 96b/d).         00:15:00       624.1       73.0       567.9       70.0       10.1         00:30:00       Brine returns at surge tank - 98.9bbls (calculated rate - 58b/d).       00:30:00       623.2       73.0       567.4       70.0       10.1         00:45:00       Brine returns at surge tank - 99.5bbls (calculated rate - 58b/d).       00:45:00       10.1         00:45:00       623.8       73.0       567.8       70.0       10.1	04/07/02 00:00:00 00:00:00 00:00:00 00:00:00 00:00:	BS&W = 100% Draeger showed S.G. of produce Brine returns at 625.3	brine pH = 1 1.5 % C0 d gas - 0.5 surge tanl 73 0	7 and Chlo 22 by volum 584. S.G. of < - 97.3bbls 568 7	ride con le & 0 p produc (calcula 70 0	ntents from refracto opm H2S. ed water - 1.087 @ ated rate - 77b/d). 10 5	meter 110,000ppm. 959°F.
	00:15:00 00:15:00 00:30:00 00:30:00 00:45:00 00:45:00	Brine returns at 624.1 Brine returns at 623.2 Brine returns at 623.8	surge tanl 73.0 surge tanl 73.0 surge tanl 73.0	<- 98.3bbls 567.9 <- 98.9bbls 567.4 <- 99.5bbls 567.8	(calcula 70.0 (calcula 70.0 (calcula 70.0	ated rate - 96b/d). 10.1 ated rate - 58b/d). 10.1 ated rate - 58b/d). 10.1	

Client	OMV Austr	alia Pty I	Ltd		Exal Enginee	er M. Donald /	N. Dowdell	
Well No.	Patricia-2				Location	Ocean Bou	nty	
Test No.	Completion				Start Date	30/06 - 01/0	)7/2002	
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG			
04/07/02 01:00:00 01:00:00 01:00:00 01:15:00 01:15:00 01:15:00 01:27:00 01:30:00 01:45:00 01:45:00 02:00:00 02:00:00 02:00:00 02:00:00 02:15:00 02:15:00 02:30:00 02:30:00 02:45:00 03:00:00 03:00:00 03:00:00 03:00:00 03:15:00	Brine returns at Sample No. 1-1 623.6 Brine returns at 623.6 Bled down scrut Brine returns at 623.4 Brine returns at 624.7 BS&W = 100% I S.G. of produce Brine returns at 623.8 Brine returns at 623.6 Brine returns at 625.5 Brine returns at 625.1 BS&W = 100% I Brine returns at 625.1 Brine returns at 625.1 Brine returns at 625.1 Brine returns at 625.1 Brine returns at 625.1 Brine returns at 624.5 Brine returns at	surge tanl 1 (0.5 ltr w 72.0 surge tanl 72.0 ber pots of surge tanl 72.0 brine pH = d gas - 0.5 surge tanl 73.0 surge tanl 72.0 surge tanl	<ul> <li>&lt; - 100.4bb</li> <li>/ater) and 1</li> <li>568.0</li> <li>&lt; - 100.9bb</li> <li>568.0</li> <li>on different</li> <li>&lt; - 101.6bb</li> <li>567.8</li> <li>&lt; - 102.6bb</li> <li>568.6</li> <li>&lt; 7 and Chle</li> <li>568.5</li> <li>&lt; - 103.9bb</li> <li>568.7</li> <li>&lt; &lt; - 105.2bb</li> <li>568.7</li> <li>&lt; &lt; 7 and Chle</li> <li>&lt; &lt; 105.2bb</li> <li>568.7</li> <li>&lt; &lt; &lt; 105.8bb</li> <li>/ater) and 1</li> <li>&lt; &lt; &lt; 568.7</li> <li>&lt; &lt; /li></ul>	Is (calcu 70.0 Is (calcu 70.0 ial cell d Is (calcu 70.0 Is (calcu 70.0 oride col (calcula 70.0 Is (calcu 70.0 Is (calcu 70.0 Is (calcu 70.0 Is (calcu 70.0 Is (calcu 70.0 Is (calcu 70.0 Is (calcu 70.0 Is (calcu 70.0 Is (calcu 70.0 Is (calcu 70.0	lated rate - 86b/c r water) taken fro 10.5 lated rate - 48b/c 10.5 ue to pots being lated rate - 67b/c 9.7 lated rate - 96b/c 9.7 ntents from refrac ed water - 1.088 ted rate - 38b/d). 10.1 lated rate - 38b/d). 9.7 lated rate - 86b/c 9.7 lated rate - 86b/c 9.7 ntents from refrac 9.7 ntents from refrac 9.7 ntents from refrac 9.7 lated rate - 58b/c 9.7 lated rate - 58b/c	<ul> <li>i).</li> <li>im separator wate</li> <li>i).</li> <li>full of water.</li> <li>i).</li> &lt;</ul>	ppm. opm.	
03:15:00 03:30:00 03:30:00 03:42:00	624.7 Brine returns at 625.1 Raised orifice scrubbers.	73.0 surge tanl 73.0 plate to	568.6 k - 107.4bb 569.1 o check	70.0 Is (calcu 70.0 Barto	9.7 Ilated rate - 96b/c 10.1 In differential	l). cell - drained	excess wate	er from
03:45:00 03:45:00 03:47:00 04:00:00 04:00:00 04:00:00 04:00:00 04:00:00 04:00:00 04:00:00 04:15:00 04:15:00 04:45:00 04:45:00 05:00:00 05:00:00 05:00:00 05:00:00 05:15:00 05:30:00 05:30:00	Brine returns at 622.6 Installed 3.500" BS&W = 100% I Draeger showed S.G. of produce Brine returns at 625.1 Brine returns at 625.3 BS&W = 100% I Sample No. 1-1 Brine returns at 625.1 Brine returns at 625.1 Brine returns at 625.7 Brine returns at 625.7	surge tanl 73.0 orifice pla brine pH = 1.5 % CC d gas - 0.5 surge tanl 73.0 surge tanl 73.0 surge tanl 73.0 surge tanl 73.0 brine pH = 5 (0.5 ltr w surge tanl 73.0 surge tanl 73.0 surge tanl 73.0 surge tanl 73.0	<ul> <li>&lt; - 107.7bb</li> <li>566.5</li> <li>te into metrest</li> <li>&lt; 7 and Chlest</li> <li>&lt; 2 by volure</li> <li>&lt; 569.2</li> <li>&lt; - 109.2bb</li> <li>&lt; 569.4</li> <li>&lt; - 109.8bb</li> <li>&lt; 569.4</li> <li>&lt; &lt; 110.8bb</li> <li>&lt; 569.4</li> <li>&lt; &lt; 7 and Chlest</li> <li>&lt; 569.4</li> <li>&lt; &lt; 110.7bb</li> <li>&lt; 569.4</li> <li>&lt; &lt; 111.2bb</li> <li>&lt; &lt; 569.9</li> <li>&lt; &lt; 111.9bb</li> <li>&lt; &lt; 569.9</li> <li>&lt; &lt; 111.9bb</li> <li>&lt; &lt; 569.9</li> <li>&lt; &lt; 111.9bb</li> <li>&lt; &lt; &lt; 111.9bb</li> <li>&lt; &lt; /li></ul>	Is (calcu 70.0 er run. oride con me & 0 p f produc Is (calcu 70.0 Is (calcu 71.0 (calcula 71.0 (calcula 71.0 oride con I-16 (4 lt Is (calcu 71.0 Is (calcu 71.0 Is (calcu 71.0 Is (calcu 71.0	lated rate - 29b/c 9.7 htents from refractor pm H2S. ed water - 1.088 lated rate - 58b/c 9.2 lated rate - 58b/c 10.1 lated rate - 86b/c 10.1 ted rate - 19b/d). 9.2 htents from refractor r water) taken from lated rate - 67b/c 9.2 lated rate - 48b/c 9.2 lated rate - 67b/c 9.2	1). ctometer 110,000p @ 58°F. 1). 1). 1). ctometer 110,000p m separator wate 1). 1).	opm. opm. rr line.	

Client	OMV Austr	alia Pty	Ltd		Exal Enginee	r M. Donald / N. Dowdell
Well No.	Patricia-2				Location	Ocean Bounty
Test No.	Completion				Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
04/07/02 05:45:00 05:45:00 06:00:00 06:00:00 06:00:00 06:15:00 06:15:00 06:28:00	Brine returns at 626.5 BS&W = 100% I Brine returns at 625.5 Brine returns at 626.1 BJ coiled tub choke manifold.	surge tanl 74.0 brine pH = surge tanl 73.0 surge tanl 73.0 ing cond	k - 112.5bb 570.7 7 and Chlo k - 112.8bb 570.3 k - 113.5bb 570.3 Jucted pic	ls (calcı 71.0 oride co ls (calcı 71.0 ls (calcı 71.0 k up	Ilated rate - 58b/d 10.5 ntents from refrac Ilated rate - 29b/d 9.7 Ilated rate - 67b/d 9.7 weight test. Br	). tometer 110,000ppm. ). ). ief pressure increase observed at
06:30:00 06:30:00 06:45:00 06:45:00 07:00:00 07:00:00 07:00:00 07:00:00 07:15:00 07:15:00 07:30:00	Brine returns at 646.9 Brine returns at 627.1 BS&W = 100% I Brine returns at Sample No. 1-1 627.1 Brine returns at 627.7 BJ coiled tut log #1	surge tanl 74.0 surge tanl 74.0 brine pH = surge tanl 7 (0.5 ltr w 73.0 surge tanl 73.0 bing con	<ul> <li>&lt; - 114bbls</li> <li>591.6</li> <li>&lt; - 114.6bb</li> <li>571.7</li> <li>&lt; 7 and Chlock</li> <li>&lt; - 115bbls</li> <li>vater) and 1</li> <li>572.2</li> <li>&lt; - 115.5bb</li> <li>572.4</li> <li>menced</li> </ul>	(calcula 71.0 ls (calcu 71.0 oride co (calcula -18 (4 li 70.0 ls (calcu 70.0 running	ated rate - 48b/d). 10.1 Ilated rate - 58b/d 10.5 Intents from refrac ated rate - 38b/d). It water) taken from 10.5 Ilated rate - 48b/d 10.5 in hole to	). tometer 110,000ppm. m separator water line. ). 1365mRT for pressure/temperature
07:30:00 07:30:00 07:45:00 08:00:00 08:00:00 08:00:00 08:00:00 08:00:00 08:00:00 08:15:00 08:15:00 08:15:00 08:19:00 08:30:00	log #1. Brine returns at 627.9 Brine returns at 627.5 BS&W = 100% I Draeger showed S.G. of produce Brine returns at 626.1 Brine returns at 627.5 BJ coiled tubing Brine returns at	surge tanl 73.0 surge tanl 73.0 brine pH = 1.5 % C0 d gas - 0.5 surge tanl 73.0 surge tanl 73.0 on depth surge tanl	<ul> <li>4 - 116.1bb</li> <li>572.7</li> <li>4 - 116.6bb</li> <li>572.8</li> <li>572.8</li> <li>7 and Chlored Content of the second sec</li></ul>	Is (calcu 70.0 Is (calcu 70.0 oride co ne & 0 p f produc Is (calcu 70.0 Is (calcu 70.0 T. (calcula	ulated rate - 58b/d 10.5 ulated rate - 48b/d 9.2 ntents from refrac opm H2S. ed water - 1.085 d ulated rate - 48b/d 9.2 ulated rate - 58b/d 10.5	). tometer 110,000ppm. @ 59°F. ). ).
08:30:00 08:33:00 08:45:00 09:00:00 09:00:00 09:00:00 09:00:00 09:15:00 09:15:00 09:20:00 09:30:00 09:30:00 09:45:00 10:00:00 10:00:00 10:00:00	630.4 BJ coiled tubing Brine returns at 622.0 BS&W = 100% I Brine returns at 616.1 Brine returns at 624.9 BJ coiled tubing Brine returns at 629.0 Brine returns at 629.6 BS&W = 100% I S.G. of produce Brine returns at 629.8	73.0 commend surge tanl 74.0 brine pH = surge tanl 73.0 on depth surge tanl 73.0 surge tanl 73.0 brine pH = d gas - 0.5 surge tanl 73.0	575.4 575.4 567.5 7 and Chlo 567.5 7 and Chlo 560.5 - 119.8bb 569.1 at 892mRT - 120.4bb 573.8 - 120.9bb 574.5 7 and Chlo 52. S.G. of - 121.5bb 574.4	70.0 out of he ls (calcula 71.0 oride co (calcula 71.0 ls (calcu 70.0 c ls (calcu 70.0 ls (calcu 70.0 oride co f produc ls (calcu 70.0	10.1 10.1 10.1 10.1 10.1 10.1 10.1 10.5 10.5 10.5 10.1 10.1 10.1 10.1 10.1 10.5 1	). tometer 110,000ppm. ). ). tometer 110,000ppm. @ 59°F. ).

Client	OMV Austra	alia Pty	Ltd		Exal Eng	jineer	М.	Donald	/ N. Dow	dell	
Well No.	Patricia-2				Location		Oc	ean Bo	unty		
Test No.	Completion				Start Dat	e	30	/06 - 01	/07/2002		
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG						
04/07/02 10:15:00 10:15:00 10:30:00 10:30:00 10:45:00 10:45:00 10:55:00 11:00:00 11:00:00 11:00:00 11:15:00	Brine returns at 630.0 Brine returns at 629.8 Brine returns at 630.0 Lifted orifice plat Inspected junk OMV representa Total Brine retur 958.9 963.8	surge tanl 73.0 surge tanl 73.0 surge tanl 73.0 ce. Closed catcher tive. ns at surg 79.0 66.0	k - 121.9t 574.9 k - 122.5t 575.1 k - 122.9t 575.5 l in well a . Obser ge tank - 7 2.1 1.0	obls (calcu 70.0 obls (calcu 70.0 obls (calcu 70.0 t choke ma ved smal 123.4bbls. 64.0 65.0	lated rate - 3 10.9 lated rate - 3 11.3 lated rate - 3 10.5 anifold. I amounts 11.7 10.5	38b/d). 58b/d). 38b/d).	rock	gravel.	Samples	suppli	ed to
11:30:00 11:45:00 12:00:00 12:15:00 12:30:00 12:45:00 13:00:00 13:15:00 13:30:00 13:45:00 14:00:00 14:15:00 14:30:00 14:45:00 15:00:00 15:15:00	965.7 967.1 968.1 969.7 970.4 970.8 971.4 972.2 972.6 973.0 973.4 973.2 973.2 974.2 975.1 974.9	61.0 59.0 57.0 57.0 56.0 56.0 56.0 57.0 57.0 57.0 57.0 57.0 57.0 57.0 57	$1.8 \\ 1.4 \\ 1.0 \\ 1.4 \\ 1.4 \\ 1.4 \\ 1.4 \\ 1.4 \\ 1.5 \\ 1.4 \\ 1.5 \\ 1.4 \\ 1.5 \\ 1.9 \\ 1.6 \\ 1.6 \\ 1.6 \\ 1.6 \\ 1.8 \\ 1.9 \\ 1.6 \\ 1.0 $	63.0 62.0 61.0 59.0 58.0 58.0							
15:30:00 15:30:00 15:31:00 15:32:00 15:34:00 15:35:00 15:36:00 15:45:00 16:00:00 16:00:00 16:01:00	Well opened to A 975.5 Increased adjust Increased adjust Increased adjust Increased adjust Diverted flow via 960.1 Diverted flow via 958.7 Increased adju	Aft flare be 55.0 able chol able chol able chol able chol 32/64" fi 60.0 36/64" a 61.0 stable c	com via 1 0.6 (ce to 20/6 (ce to 24/6 (ce to 28/6 (ce to 32/6 (ce to 32/6) (ce to 32/6 (ce to 32/6) (ce to 3	6/64" adju 57.0 4". 4". 64". e. Diverted 23.0 choke. 25.0 0 40/64".	stable chok 6.4 flow via tes 6.8 6.4 Ceased	e. st sepa metha	rator. nol	injection	upstream	of	choke
16:03:00 16:07:00 16:15:00 16:30:00 16:45:00 17:00:00 17:00:00 17:00:00 17:15:00 17:30:00 17:30:00 17:45:00	Increased adjust Diverted flow via 943.8 943.2 942.6 BS&W = 100% k S.G. of produced 942.3 942.3 Exal commence 942.3 Completed takin	able chok 40/64" fix 64.0 65.0 66.0 orine pH = d gas - 0.5 66.0 67.0 d taking 1 66.0 g 1st PVT	te to 44/6 xed choke 379.3 384.9 384.4 7 and C 582. S.G. 383.4 383.5 st PVT se 385.2 sample.	4". e. 32.0 35.0 hloride cor of produce 35.0 36.0 ample No. 36.0	7.2 7.2 8.0 ntents from r ed water - 1 8.8 9.2 1-19 (gas - 10.1	refracto .085 @ · bottle	omete ) 59°f No. 2	er 110,000 <sup>=</sup> . 2357-C1-I	0ppm. =).		

Client	OMV Austra	alia Pty I	Ltd		Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2				Location	Ocean Bounty
Test No.	Completion	l			Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
04/07/02	Eval commence	d takina 2	nd P\/T sam	nla No	1-20 (das - bottle	No. 3416-01-E)
17:45:00		66 0	384 5	36.0	10 5	NO. 54 10-01-1 ).
18:00:00	Completed takin	a 2nd PV	T sample	50.0	10.0	
18:00:00	BS&W showed of	drv das.	r oumpio.			
18:00:00	S.G. of produce	d gas - 0.5	584.			
18:00:00	941.7	66.0	383.5	36.0	10.9	
18:15:00	941.3	67.0	384.8	36.0	11.7	
18:30:00	941.3	66.0	383.2	36.0	12.5	
18:45:00	940.9	66.0	382.4	35.0	12.9	
19:00:00	BS&W showed of	dry gas.				
19:00:00	940.7	67.0	384.1	36.0	12.5	
19:15:00	938.9	67.0	384.5	37.0	12.9	
19:30:00	938.5	67.0	383.8	37.0	12.5	
19:45:00	938.9	67.0	383.9	37.0	13.3	
20:00:00	Raised orifice pi	ate.		ام مام ما	•	
20:00:00		ougn 44/0	270.2		e.	
20.00.00	930.3 Increased adjuct	07.0 tablo chok	3/0.3 10/6/	30.0	13.0	
20.01.00	Increased adjus	table chok	e to 50/64"			
20:05:00	Increased adjus	table chok	e to 56/64"			
20.03.00	Increased adjus	table chok	e to 50/64.			
20:07:00	Increased adjust	table chok	re to 62/64"			
20:12:00	Increased adjus	table chok	e to 66/64"			
20:15:00	Brine returns at	surge tanl	< - 124.2bbls	s (calcu	lated rate - 77b/d).	
20:15:00	778.4	69.0	415.6	49.0	13.8	
20:18:00	Diverted flow via	a 64/64" fix	ked choke.			
20:23:00	Installed 3.000"	orifice pla	te into meter	r run.		
20:25:00	Raised orifice pl	ate.				
20:28:00	Installed 3.25" o	rifice plate	e into meter i	run.		
20:30:00	Brine returns at	surge tanl	< - 125bbls (	calcula	ted rate - 77b/d).	
20:30:00	799.9	71.0	432.7	52.0	15.0	
20:45:00	798.6	72.0	424.3	52.0	15.4	
21:00:00	BS&W = 100% I	prine pH =	7 and Chlo	ride cor	ntents from refracto	meter 100,000ppm.
21:00:00	S.G. of produce	d gas - 0.5	586.			
21:00:00	798.8	73.0	425.0	53.0	14.6	
21:15:00	/99./	73.0	426.0	54.0	14.6 <sup>°</sup>	
21:30:00	Brine returns at	surge tani			liated rate - 380/0).	
21:30:00	001.7 Dring raturns at	74.0	420.1	54.0 (aalau	14.2 lated rate 77h/d)	
21:45:00		surge tani			14 6	
21.45.00	000.3 Prino roturno at	74.0 curao tanl	420.2 / 126 7hble	04.0 (oplou	14.0 lated rate (18b/d)	
22.00.00		5019E tarii 7/ 0	120.70018 126.4	55 0	$1/1 \circ 2$	
22:15:00	801.1	75.0	425 5	55.0	13.8	
22:30:00	801.7	75.0	426.2	55.0	13.8	
22:45:00	801.1	75.0	425.8	56.0	13.8	
23:00:00	BS&W = 100% H	orine nH =	7 and Chlo	ride coi	ntents from refracto	meter 100.000ppm.
23:00:00	Draeger showed	1.5 % C	D2 by volum	e & 0 n	pm H2S.	
23:00:00	Exal commence	d taking 3	rd PVT sam	ple No	. 1-21 (gas - bottle	No. 0687-C1-F).
23:00:00	Sample No. 1-22	2 (0.5 ltr w	ater) and 1-	23 (4 lt	r water) taken from	separator water line.
23:00:00	Brine returns at	surge tan	< - 127.2bbls	s (calcu	lated rate - 48b/d).	
23:00:00	801.1	75.0	425.0	56.0	13.3	
23:15:00	Completed takin	ig 3rd PV1	sample.			

Client	OMV Austra	alia Pty L	.td		Exal Engi	ineer	M. Donald / N. Dowdell
Well No.	Patricia-2				Location		Ocean Bounty
Test No.	. Completion				Start Date	e	30/06 - 01/07/2002
Time hh:mm:ss	UcP s PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG		
04/07/02 23:15:00 23:15:00 23:30:00 23:30:00 23:45:00	Brine returns at 801.9 Brine returns at 800.7 799.7	surge tank 76.0 surge tank 76.0 76.0	- 127.4bbls 424.9 - 127.5bbls 424.9 424.1	(calcu 56.0 (calcu 56.0 56.0	llated rate - 1 12.9 Ilated rate - 1 12.9 12.9	9b/d). 0b/d).	
05/07/02 00:00:00 00:00:00 00:00:00 00:00:00 00:15:00 00:15:00 00:30:00 00:45:00 00:45:00 01:00:00 01:00:00 01:00:00 01:00:00 01:15:00 01:15:00 01:15:00	BS&W = 100% k S.G. of produced S.G. of produced Brine returns at $\frac{1}{2}$ 800.1 Brine returns at $\frac{1}{798.4}$ Brine returns at $\frac{1}{797.0}$ BS&W = 100% k S.G. of produced S.G. of produced Brine returns at $\frac{1}{796.6}$ Brine returns at $\frac{1}{797.2}$ Brine returns at $\frac{1}{797.2}$	prine pH = d gas - 0.5 d water - 1. surge tank 76.0 surge tank 76.0 surge tank 76.0 orine pH = d gas - 0.5 d water - 1. surge tank 76.0 surge tank 76.0 surge tank 76.0 surge tank	7 and Chlor 86. .083 @ 52°l - 128bbls (i 424.4 - 128.2bbls 423.5 - 128.7bbls 421.6 - 129.1bbls 422.2 7 and Chlor 86. .080 @ 54°l - 129.3bbls 423.3 - 129.4bbls 422.5 - 129.8bbls	ride col F. calcula 56.0 (calcu 57.0 (calcu 57.0 (calcu 57.0 (calcu 57.0 (calcu 57.0 (calcu 57.0 (calcu 57.0 (calcu	ntents from r ted rate - 48 13.3 lated rate - 1 13.3 lated rate - 4 12.1 lated rate - 3 11.7 ntents from r lated rate - 1 12.1 lated rate - 3 12.5 lated rate - 3	efractor b/d). 9b/d). 8b/d). 8b/d). efractor 9b/d). 0b/d). 88b/d).	neter 100,000ppm. neter 92,000ppm.
01:30:00 01:45:00 01:45:00 01:59:00 02:00:00	797.0 Brine returns at 5 795.8 Raised orifice pla BS&W = 100% b	76.0 surge tank 76.0 ate. prine pH =	422.0 - 130.2bbls 421.5 7 and Chlor	57.0 (calcu 57.0	12.1 Ilated rate - 3 12.1	88b/d). efractor	neter 96 000ppm
02:00:00 02:01:00 02:02:00 02:03:00 02:04:00 02:05:00 02:07:00 02:09:00 02:10:00 02:11:00 02:13:00 02:15:00 02:15:00 02:17:00 02:19:00 02:20:00 02:24:00 02:30:00	Diverted flow thr 795.8 Increased adjust Increased adjust Increased adjust Increased adjust Increased adjust Increased adjust Increased adjust Increased adjust Increased adjust G37.3 Increased adjust Opened bypass Diverted flow via Installed 3.750" Brine returns at 620.2	ough 66/6 76.0 table choke table choke 74.0	4" adjustabl 417.8 e to 70/64". e to 74/64". e to 78/64". e to 82/64". e to 86/64". e to 90/64". e to 90/64". e to 98/64". e to 102/64" e to 106/64" e to 110/64" 537.8 e to 128/64" hoke manifo inifold bypas e into meter - 131.5bbls 564.4	e chok 57.0 69.0 old. ss 3" lii run. c (calcu 72.0	e. 12.1 11.3 ne. Ilated rate - 1 11.3	25b/d).	
02:30:00 02:45:00	620.2 Brine returns at	74.0 surge tank	564.4 - 132.1bbls	72.0 (calcu	11.3 Ilated rate - 5	58b/d).	

Client	OMV Austra	alia Pty	Ltd		Exal Engineer	M. Donald / N. Dowdell
Well No.	Patricia-2				Location	Ocean Bounty
Test No.	Completion				Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
05/07/02	624 9	74.0	560 3	72 0	11 3	
02:40:00	BS&W = 100% H	nrine nH =	7 and Chlo	ride co	ntents from refracto	meter 100 000ppm
03:00:00	S G of produce	– ۱۱۹ عادار ۱۹۰۰ - ۱۹۹۵ م		nroduc	red water - 1 082 @	58°F
03:00:00	Draeger showed	1 1 3 % C(	72 by volum	0 2 0 r	nm H2S	001.
03:00:00	Brine returns at	surge tan	k - 132 9bbl	s (calci	lated rate - 77b/d)	
03:00:00	625.7	75.0	570.2	72.0	10.1	
03:15:00	Brine returns at	surge tan	k - 133.5bbl	s (calcı	ulated rate - 58b/d).	
03:15:00	625.7	75.0	570.5	72.0	10.1	
03:30:00	Brine returns at	surge tan	k - 134.3bbl	s (calcı	ulated rate - 77b/d).	
03:30:00	627.3	75.0	571.6	<b>7</b> 2.0	10.5 <sup>′</sup>	
03:45:00	Brine returns at	surge tan	k - 134.5bbl	s (calcı	ulated rate - 19b/d).	
03:45:00	627.7	75.0	572.4	72.0	10.1	
04:00:00	BS&W = 100% k	orine pH =	7 and Chlo	ride co	ntents from refractor	meter 100,000ppm.
04:00:00	S.G. of produce	d gas - 0.8	586. S.G. of	produc	ed water - 1.078 @	61°F.
04:00:00	Brine returns at	surge tan	k - 134.8bbl	s (calcı	ulated rate - 29b/d).	
04:00:00	629.8	75.0	574.7	73.0	10.5	
04:15:00	Brine returns at	surge tan	k - 135.1bbl	s (calcı	ulated rate - 29b/d).	
04:15:00	630.0	75.0	574.6	73.0	10.9	
04:30:00	Brine returns at	surge tan	k - 135.4bbl	s (calci	lated rate - 29b/d).	
04:30:00	630.2 Deira anaturna at	75.0	5/5.1	72.0	10.5	
04:45:00	Brine returns at	surge tan	K - 135.900	s (caici		
04.45.00	030.0 DS8/W - 100% K	75.0 arino n∐ -	070.0 7 and Chio	73.0 rida co	IU.I ntonto from rofractor	motor 100 000ppm
05:00:00	Brine returns at	surae tan	2 - 136 3bbl	e (calci	ilated rate - 38b/d)	
05:00:00	631 2	75 0	576.3	73.0	10.9	
05:15:00	Brine returns at	surge tan	k - 136.9bbl	s (calcı	ulated rate - 58b/d).	
05:15:00	631.2	75.0	576.2	73.0	10.5	
05:30:00	Brine returns at	surge tan	k - 137.3bbl	s (calcı	ulated rate - 38b/d).	
05:30:00	631.4	75.0	576.5	73.0	10.5	
05:45:00	Brine returns at	surge tan	k - 137.8bbl	s (calcı	ulated rate - 48b/d).	
05:45:00	631.8	75.0	577.0	73.0	10.5	
06:00:00	BS&W = 100% k	prine pH =	7 and Chlo	ride co	ntents from refractor	meter 99,000ppm.
06:00:00	Brine returns at	surge tan	k - 138.300	s (calcu	lated rate - 38b/d).	
06:00:00	032.0 Prino roturno at	70.0 curao tani	0//.U 20 9660	73.0 c (color	U.CO	
00.15.00	632 0	76 0	577 0	5 (Calci 73 0	10 1	
06:30:00	Brine returns at	surge tan	k - 139 1bbl	s (calci	ilated rate - 29b/d)	
06:30:00	632.2	76.0	577.3	73.0	10.5	
06:45:00	Brine returns at	surge tan	k - 139.5bbl	s (calcı	ulated rate - 38b/d).	
06:45:00	631.4	76.0	577.0	73.0	10.1	
07:00:00	BS&W = 100% k	orine pH =	6 and Chlo	ride co	ntents from refractor	meter 100,000ppm.
07:00:00	S.G. of produce	. d gas - 0	586. S.G. of	produc	ed water - 1.082 @	63°F.
07:00:00	Brine returns at	surge tan	k - 139.8bbl	s (calcı	ulated rate - 29b/d).	
07:00:00	631.6	76.0	577.1	73.0	10.1	
07:15:00	Brine returns at	surge tan	k - 140bbls (	(calcula	ated rate - 19b/d).	
07:15:00	631.8	76.0	577.0	73.0	12.5	
07:30:00	Brine returns at	surge tan	<pre>&lt; - 142bbls (</pre>		ated rate - $19b/d$ ).	
07:30:00	632.6 Drine	/b.U	5//.8	/3.0	12.9	
07:45:00	Brine returns at	surge tan	<pre>&lt; 142.400!</pre>	s (caici	uateo rate - 38b/d).	
07.45.00	032.0 RS&W = 100% F	ru.u hrine nH =	7 and Chlo	ride co	ں.ی ntents from refractor	meter 100 000nnm
08:00:00	Brine returns at	surge tan	k - 142 8hhl	s (calci	lated rate - 38h/d)	
	i etaline at		0			

Client	OMV Austra	alia Pty I	Ltd		Exal Engineer	M. Donald / N. Dowdell
Well No	Patricia-2				Location	Ocean Bounty
Test No	. Completion				Start Date	30/06 - 01/07/2002
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG	
05/07/02	633.0	76.0	577 0	73.0	12.0	
08.00.00	Brine returns at	ru.u surae tanl	011.9 ( - 1/3 2hbl	r J.U. s (calci	ilated rate - 38h/d)	
08.15.00	632.8	76 0	577.8	73 0	12 1 12 12 12 12 12 12 12 12 12 12 12 12	
08:30:00	Brine returns at	surge tanl	4 - 143 5hbl	r 0.0 s (calci	ilated rate - 20h/d)	
08:30:00	632 2	76 0	577 5	73.0	12 1	
08:45:00	Brine returns at	surge tanl	< - 144 1bbl	s (calci	ilated rate - 58b/d)	
08:45:00	631 4	76 0	577 2	73.0	12.1	
09.00.00	BS&W = 100% I	rine nH =	7 and Chlo	ride co	ntents from refractor	meter 100 000ppm
09.00.00	S G of produce	- 1 iq 2 i i i c 1 i q 2 e n h	582 S G of	nroduc	red water - 1 082 @	63°F
09.00.00	Brine returns at	surge tanl	< - 144 6hbl	s (calci	ilated rate - 48b/d)	
00.00.00	632.8	76 0	577 8	73 0	12.5	
09.00.00	Brine returns at	surge tanl	$c_{-}$ 1// 8hbl	r J.J. s (calci	ilated rate - 10h/d)	
09.15.00	632 G	76 0	577 6	73 N	11 7	
00.30.00	Brine returns at	surge tanl	$c_{-}$ 1/5 2bbl	r 0.0 s (calci	ilated rate - 38h/d)	
00.30.00	632 6	76 0	577 6	7/ 0	11.3	
09.30.00	Brine returns at	ru.u surao tanl	711.0 115 7hbl	r T.U S (calci	ulated rate 10b/d)	
09.45.00	633 D	76 0	577.8	73 0	11 7	
09.45.00	Sample No. 1-2/	1 (0 5 ltr w	orr.o (ater) taken	from se	narator water line	
10.00.00	BS8W = 100%	rine nH =	7 and Chlo	ride co	ntents from refractor	meter 100 000ppm
10:00:00	Well shut in at c	hoke man	ifold			
10:00:00	6/1 /	75 0	580.0	74 0	15.8	
10:00:00	960 5	73.0	0.5	60 0	12.0	
10:30:00	963.4	67.0	0.0	66 0	11 7	
10:45:00	964.4	63.0	0.2	64 0	11.7	
11.00.00	964 N	61.0	0.2	63.0	11.3	
11.15.00	967.5	60.0	0.0	62 0	10.9	
11:30:00	967.7	59.0	0.4	61.0	10.5	
11:45:00	967.1	59 N	0.4	60.0	10.0	
12.00.00	969.3	60.0	0.1	59 0	10.0	
12:00:00	970.2	60.0	0.0	59.0	10.0	
12:30:00	969.7	60.0	0.0	59.0	10.5	
12:45:00	969.5	61.0	0.0	59.0	10.0	
13.00.00	969.9	61.0	0.0	59.0	10.9	
13.15.00	971.4	61.0	0.0	59.0	10.0	
13:24:00	BJ coiled tubing	commenc	ed pulling c	out of h	ole	
13:30:00	972.2	61.0	0.9	60.0	10.1	
13:45:00	971.6	61.0	1.0	60.0	10.1	
14:00:00	972.0	61.0	0.3	61.0	10.9	
14:15:00	971.0	61.0	0.0	61.0	10.9	
14:30:00	972.8	61.0	0.5	61.0	10.9	
14:39:00	BJ coiled tubing	at surface	3			
14:45:00	Closed TRSCSS	SV. Slowly	bled off we	ll head	pressure to 775psi.	
14:45:00	974.9	61.0	1.9	61.0	10.9	
14:47:00	Wellhead press	ure at 775	psi. Comme	nced in	flow test of TRSCS	SV.
15:00:00	813.4	60.0	0.6	52.0	10.1	
15:10:00	Closed SSI V					
15:10:00	Bled off pressure	e above S	SLV via cho	ke ma	nifold to aft flare boo	ım.
15:15:00	15.5	51.0	10.5	46.0	11.3	
15:20:00	Completed blee	dina off nr	essure			
15:22:00	Closed swab val	lve and m	aster valve	on Exp	ro flowhead.	
15:30:00	BJ coiled tubing	commenc	ced rigaina a	down.		
15:30:00	3.4	56.0	1.2	54.0	10.5	

Client	OMV Austr	alia Pty I	_td		Exal Engi	neer	M. Donald / I	N. Dowdell	
Well No.	Patricia-2				Location		Ocean Boun	ty	
Test No.	Completion	l			Start Date	9	30/06 - 01/07	7/2002	
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG				
05/07/02	0.0	50.0	0.0		40.5				
15:45:00	3.8	58.0	0.6	55.0	10.5				
16:00:00	2.8	58.U 59.0	0.5	50.0	10.9				
16:30:00	3.0 2.4	50.0 58.0	0.2	57.0	10.5				
16:45:00	2.4	57.0	0.3	58.0	10.9				
17:00:00	2.2	57.0	1.0	57.0	10.1				
17:15:00	16	55.0	0.3	56.0	10.1				
17:30:00	B.I coiled tubing	complete	d riaain	a down Ex	pro wireline co	ommer	nced rigging up		
17:30:00	1.8	54.0	0.3	56.0	10.1		ieeu ngging up.		
17:45:00	2.4	54.0	0.3	55.0	10.9				
18:00:00	2.0	54.0	0.0	55.0	10.1				
18:15:00	1.8	54.0	0.0	55.0	10.1				
18:22:00	Opened swab va	alve and n	naster v	alve on Exp	pro flowhead.				
18:27:00	Opened lo-torqu	ie valve or	n kill line	Э.					
18:30:00	Locked open ma	aster valve	on flov	vhead.					
18:30:00	2.6	54.0	0.0	55.0	10.5				
18:43:00	Commenced pre	essure tes	ting Exp	pro wireline	lubricator aga	ainst S	SLV to 3,000psi.		
18:45:00	2220.5	56.0	0.6	56.0	10.5	~			
18:56:00	Good test. Bled	off pressu	re to 98	30psi via ch	oke manifold.	Opene	ed SSLV.		
18:57:00	Expro wireline c	ommence	d runnir	ng in hole w	/ith brush.				
19:00:00	946.8	55.0	0.6	57.0	9.7				
19.07.00	Closed SSLV or	t sunace.		n flowbood					
19.10.00				57 0	0.7				
19.15.00	Blad off press	ure via	choke	manifold	9.7 Broke out	lubrics	ator Inspected	tooletring	bruch
19.17.00	not present	Suic via	CHOKE	marmolu.	DIOKE OUL	lubrica	ator. Inspected	tooisting	brush
19:30:00	Made up fishing	tool to Ex	oro wire	eline toolstr	ing, Stabbed I	ubricat	tor.		
19:30:00	2.2	54.0	0.6	56.0	9.7				
19:45:00	2.0	54.0	0.0	56.0	10.1				
19:52:00	Commenced pre	essuring u	p above	flowhead	master valve t	o 980p	osi.		
20:00:00	Opened SSLV a	ind master	· valve o	on flowhead	d.	•			
20:00:00	. 961.4	56.0	0.0	56.0	10.1				
20:06:00	Expro wireline c	ommence	d runnir	ng in hole to	o fish brush.				
20:10:00	Expro wireline a	t surface.							
20:15:00	988.3	55.0	0.0	56.0	9.2				
20:16:00	Closed SSLV ar	nd master	valve o	n flowhead.					
20:20:00	Bled off press	sure vai	choke	manifold.	Broke out	lubrica	ator. Removed	brush and	fishing
~~ ~~ ~~	tool.								
20:30:00	2.2 In stalls d OOD al	54.0	0.3	56.0	9.2 table ad lubrian				
20:45:00	Installed SSR pl	ug onto w	Ireline t	ooistring. S		ator.			
20:45:00	Z.Z	55.U	U.Z	0.00	IU.I flowbood t	- 00(	Deal Opened		mostor
21.00.00	valve	above	naster	valve on	nownead t	0 900	opsi. Opened	SSLV and	master
21.00.00	070 8	56.0	0.0	56.0	10.5				
21.00.00	Expro wireline o	ommence	d runnir	na in hole tr	set SSR nlu	n in tuk	ning hanger		
21.03.00	Expro wireline	on der	oth wit		nlug Comm	enced	aradually pre	essurina un	above
-1.00.00	SSR plug to 3.0	00psi to se	et.		plag. Comm	Shocu	gradually pre	up	00000
21:15:00	1222.0	55.0	0.1	56 0	9.7				
21:25:00	Wellhead press	ure at 3.00	0psi.	00.0	0.7				
21:30:00	2972.4	55.0	0.1	56.0	9.7				
21:35:00	Expro wireline c	ommence	d hand	jarring on p	lug to set.				
21:41:00	Expro wireline s	heared off	plug. C	Commenced	d pulling out of	f hole.			

Client	OMV A	ustralia I	Pty Ltd		Exal Eng	gine	er M. I	Donald / N. E	Dowdell	
Well No.	Patricia	-2			Locatio	n	Oce	ean Bounty		
Test No.	Comple	tion			Start Da	te	30/0	06 - 01/07/20	02	
Time hh:mm:ss	UcP PSIG	UcT °F	DcP PSIG	DcT °F	AnnP PSIG					
05/07/02 21:45:00 21:45:00	Expro wireli	ne at surf	ace.	56.0	97					
21:47:00	Commence	d slowly b	leeding dov	vn pressure	above SSF	R plua	i via chok	e manifold.		
21:58:00	Closed in plug.	choke	manifold.	Wellhead	pressure	at	200psi.	Commenced	in-flow	testing
22:00:00 22:15:00	233.6 241.8	48.0 52.0	0.2 0.2	36.0 41.0	9.7 9.7					
22:17:00 22:27:00	Good test. I Expro wireli	Bled off pr	essure abo <sup>r</sup> enced riggir	ve SSR plu 1g down.	g to zero via	a chok	ke manifo	old.		

22:30:00 End of Completion Test.





# **Separator Data Listing**

Client	OMV Australia Pty Ltd
Well No.	Patricia-2
Test No.	Completion
Location	Ocean Bounty
Start Date	30/06 - 01/07/2002
Country	Australia
Field	VIC/L21
Job Number	J02/188
Formation	Gurnard
Exal Engineer	M. Donald / N. Dowdell
Client Engineer	A. Ion
Perforations	n/a

Page 1




WGR - Custom (b/MM)



GasT - Temperature (°F)



WtrRate - Custom (bpd)

WGR - Custom (b/MM)

Client	OMV Au	istralia P	ty Ltd				Exa	al Enginee	er M. D	onald / N	I. Dowde	ell		
Well No.	Patricia-	2					Lo	cation	Ocea	an Bount	у			
Test No.	Complet	tion					Sta	art Date	30/06	6 - 01/07	/2002			
Time	Choke	Orifice	UcP	GasP	GasT °⊏	GasD	CondR	CondCum	WtrRate	WtrCum	QGas1av	Gas1Cum	WGR	
	0401	1115	1010	1010	•		opu	0013	bpu	0015		WINC	C/ WIW	
<u>03/07/02</u>														
06:00:00	0	0.000	759.2	2.0	54.4	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
06:10:00	0	0.000	759.0	2.3	54.5	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
06:20:00	0	0.000	759.0	2.2	54.5	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
06:30:00	0	0.000	759.6	2.3	54.5	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
06:40:00	0	0.000	758.4	2.7	54.5	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
06:50:00	0	0.000	/5/.5	2.3	54.6	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
07:00:00	0	0.000	757.3	2.2	54.6	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
07:10:00	0	0.000	151.3	2.3	54.5	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
07:20:00	64	0.000	463.4	2.6	54.6	0.1	0.0	0.0	0.0	0.0	0.00	0.000		
07:30:00	64 70	0.000	769.8	2.3	54.5 54.7	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
07:40:00	70	0.000	7 38.0	2.5	54.1 54.7	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
07:50:00	00 129	0.000	04U.J 622 0	2.0	54./ 54.0	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
08:00:00	120	0.000	642.2	2.3	54.0 55.0	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
00.10.00	120	0.000	643.3 650 A	2.3	55.U 55.1	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
08.20.00	120	0.000	637.8	2.3	55.2	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
00.30.00	120	0.000	652 1	2.3	55.2	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
00.40.00	120	0.000	658.2	2.3	55.2	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
09.00.00	120	0.000	641 8	2.0	55.3	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
09.10.00	128	0.000	635.3	2.3	55.3	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
09:20:00	128	0.000	632.2	2.3	55.4	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
09:30:00	128	0.000	651.9	2.3	55.5	0.0	0.0	0.0	0.0	0.0	0.00	0.000		
09:40:00	128	0.000	630.8	336.5	68.6	15.5	0.0	0.0	0.0	0.0	0.00	0.000		
09:50:00	128	3.750	636.5	332.8	63.7	134.6	0.0	0.0	0.0	0.0	4.43	0.020		
10:00:00	128	3.500	627.7	338.6	63.2	199.8	0.0	0.0	0.0	0.0	22.87	0.130	0.0	
10:10:00	128	3.500	630.4	339.9	63.2	203.3	0.0	0.0	0.0	0.0	23.30	0.290	0.0	
10:20:00	128	3.500	628.3	344.0	63.0	209.0	0.0	0.0	504.0	5.3	23.50	0.450	21.6	
10:30:00	128	3.500	634.3	347.8	62.9	211.4	0.0	0.0	504.0	10.5	23.78	0.610	21.5	
10:40:00	128	3.500	632.6	346.8	62.2	212.2	0.0	0.0	504.0	10.5	24.01	0.780	21.0	
10:50:00	128	3.500	633.7	350.0	61.9	228.6	0.0	0.0	499.2	15.7	24.56	0.950	20.7	
11:00:00	128	3.500	632.2	352.1	61.7	231.1	0.0	0.0	394.0	19.8	25.35	1.130	15.6	
							Page 2							

Client	OMV Au	ustralia P	ty Ltd		Exal Engineer M. Donald / N. Dowdell										
Well No.	Patricia-	-2					Loc	cation	Ocea	an Bount	у				
Test No.	Complet	tion					Sta	rt Date	30/06	6 - 01/07	/2002				
Time hh:mm:ss	Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM		
03/07/02 11:10:00 11:20:00 11:30:00 11:40:00 11:50:00 12:00:00 12:10:00 12:20:00 12:20:00 12:30:00 12:40:00 13:00:00 13:10:00 13:20:00 13:20:00 13:40:00 13:50:00 14:00:00 14:20:00	128 128 128 128 128 128 128 128 128 128	3.500 3.500	630.2 632.6 632.2 632.6 633.9 632.6 633.9 634.5 634.3 634.1 635.5 634.3 635.5 635.5 635.3 635.7 635.7 635.7 635.7 635.7 635.7	352.9 354.5 357.2 357.3 358.8 359.7 360.5 361.9 362.8 363.4 363.4 363.3 363.8 364.8 366.5 367.0 366.9 368.6 368.6 368.6 368.6 368.6	61.7 61.4 61.0 61.0 61.2 61.1 61.2 61.1 61.3 61.3 61.4 61.5 61.5 61.4 61.4 61.4 61.4 61.4 61.4 61.4 61.4	232.6 233.4 234.4 235.5 237.3 237.5 238.8 239.1 239.8 240.0 240.5 241.3 241.5 241.4 241.7 242.3 243.2 243.1 242.3 243.6	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	394.0 422.0 336.0 336.0 288.0 211.0 221.0 221.0 230.0 230.0 230.0 230.0 230.0 230.0 211.0 211.0 168.0 168.0 168.0	19.8 24.2 27.7 27.7 30.9 33.9 36.1 38.4 38.4 40.8 43.4 45.5 47.8 47.8 50.0 51.8 51.8 53.5	25.37 25.49 25.65 25.71 25.79 25.86 25.91 26.05 26.14 26.22 26.24 26.27 26.32 26.37 26.39 26.46 26.49 26.51 26.55	1.300 1.480 1.660 1.830 2.010 2.190 2.370 2.550 2.730 2.920 3.100 3.280 3.460 3.460 3.650 3.830 4.010 4.190 4.380 4.560 4.750	15.6 16.6 13.2 13.1 11.7 11.1 11.1 8.5 8.5 8.8 8.8 8.8 8.8 8.8 8.8 8.8 8.8		
14:20:00 14:30:00 14:40:00 14:50:00 15:00:00 15:10:00 15:20:00 15:30:00 15:40:00 15:50:00 16:00:00 16:10:00	128 128 128 128 128 128 128 128 128 128	3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500	637.3 636.9 637.8 638.2 638.0 638.0 638.0 638.0 638.0 638.2 638.8	369.7 370.7 371.2 370.8 372.0 372.2 372.4 373.0 373.3 374.0 374.3 374.1	61.4 61.5 61.7 61.7 61.6 61.6 61.6 61.6 61.6	243.6 244.3 245.0 244.9 245.1 245.5 245.3 246.0 246.3 247.0 246.8 247.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	168.0 163.0 182.0 173.0 144.0 144.0 144.0 144.0 144.0 144.0 144.0	53.5 55.2 55.2 57.1 58.9 60.4 61.9 61.9 63.4 64.9 64.9	26.55 26.61 26.66 26.67 26.69 26.64 26.68 26.72 26.74 26.78 26.81 26.81	$\begin{array}{c} 4.750 \\ 4.930 \\ 5.120 \\ 5.300 \\ 5.490 \\ 5.670 \\ 5.860 \\ 6.040 \\ 6.230 \\ 6.420 \\ 6.600 \\ 6.790 \end{array}$	6.3 6.1 6.8 6.5 6.5 5.4 5.4 5.4 5.4 5.4 5.4		

OMV Au	V Australia Pty Ltd Exal Engineer M. Donald / N. Dowdell															
Patricia-	2					Lo	cation	Ocea	an Bount	у						
Comple	tion					Sta	rt Date	30/0	6 - 01/07	/2002						
Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM				
128 128 128 128 128 128 128 128 192 192 192 192 192 192 192 192 192 192	3.500 3.500	638.8 638.2 638.6 638.8 638.8 639.0 638.8 620.0 618.7 620.6 619.5 620.2 620.0 620.6 621.0 620.4 620.4 620.4 620.4 620.8 621.8	374.7 374.7 375.8 375.7 376.7 376.4 377.5 386.8 386.7 387.4 387.4 387.4 389.1 389.2 389.2 389.2 389.9 389.9 389.9 389.5 389.6 389.8	61.7 61.6 61.7 61.8 61.9 62.0 62.0 62.8 62.9 62.9 62.9 62.9 62.9 63.0 63.1 63.1 63.1 63.1 63.1 63.1 63.2 9 62.9 62.9 62.9 62.9 62.9 62.9 62.9	247.6 247.7 246.7 247.6 247.7 247.5 249.0 249.3 240.6 241.5 242.6 243.1 243.0 243.7 243.3 243.9 244.1 245.1 245.1 244.1 245.3 244.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	144.0 125.0 125.0 134.0 115.0 115.0 115.0 115.0 115.0 115.0 115.0 115.0 115.0 115.0 106.0 106.0 106.0 106.0 106.0 95.9 95.9 95.9	66.4 67.7 69.1 70.3 70.3 71.5 72.7 72.7 73.8 75.0 75.0 75.0 76.4 77.5 78.6 79.7 79.7 80.7 81.7	26.90 26.92 26.91 26.94 26.98 26.99 27.01 27.06 26.93 26.91 27.04 27.08 27.11 27.16 27.17 27.19 27.17 27.26 27.26 27.27 27.28	6.970 7.160 7.350 7.540 7.720 7.910 8.100 8.290 8.440 8.630 8.820 9.010 9.190 9.190 9.380 9.570 9.760 9.950 10.140 10.330 10.520 10.710	5.4 4.6 5.0 4.3 4.3 4.3 4.3 6.1 3.9 4.3 5.0 3.9 3.9 3.9 3.9 3.9 3.9 3.5 3.5 3.5				
192 192 192 192 192 192 192 192 192 192	3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500	621.4 621.8 621.8 621.2 621.8 621.2 621.8 622.2 621.8 621.8 621.8	390.1 390.1 391.6 391.3 391.4 391.5 391.4 392.2 391.6 391.9	62.9 62.9 62.8 62.8 62.7 62.6 62.5 62.2 62.1 62.2	245.3 244.7 246.2 245.8 246.4 246.3 246.4 246.8 246.8 248.2 248.7	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	115.0 115.0 96.0 96.0 96.0 96.0 96.0 96.0 96.0 77.0	82.9 84.1 84.1 85.1 86.1 86.1 87.1 88.1 88.1 88.1 88.9	27.28 27.30 27.30 27.32 27.35 27.33 27.36 27.43 27.42 27.44	10.900 11.090 11.270 11.460 11.650 11.840 12.030 12.220 12.410 12.610	4.2 4.2 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 2.8				
	OMV Au Patricia- Complet Choke 64th 128 128 128 128 128 128 128 128 128 128	OMV Australia P           Patricia-2           Completion           Choke         Orifice           64th         ins           128         3.500           128         3.500           128         3.500           128         3.500           128         3.500           128         3.500           128         3.500           128         3.500           128         3.500           128         3.500           128         3.500           128         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500           192         3.500      <	OMV Australia Pty Ltd           Patricia-2           Completion           Choke         Orifice         UcP           64th         ins         PSIG           128         3.500         638.8           128         3.500         638.8           128         3.500         638.8           128         3.500         638.8           128         3.500         638.8           128         3.500         638.8           128         3.500         638.8           128         3.500         638.8           128         3.500         638.8           128         3.500         620.0           192         3.500         620.0           192         3.500         620.2           192         3.500         620.2           192         3.500         620.4           192         3.500         620.4           192         3.500         620.4           192         3.500         620.4           192         3.500         620.8           192         3.500         621.8           192         3.500 <td>OMV Australia Pty Ltd           Patricia-2           Completion           Choke         Orifice         UcP         GasP           64th         ins         PSIG         PSIG           128         3.500         638.8         374.7           128         3.500         638.2         374.7           128         3.500         638.8         375.8           128         3.500         638.8         375.7           128         3.500         638.8         375.7           128         3.500         638.8         375.7           128         3.500         638.8         375.7           128         3.500         638.8         377.5           192         3.500         620.0         386.8           192         3.500         620.6         387.4           192         3.500         620.6         387.4           192         3.500         620.6         387.4           192         3.500         620.6         389.1           192         3.500         620.6         389.2           192         3.500         620.4         389.9      &lt;</td> <td>OMV Australia Pty Ltd           Patricia-2           Completion           Choke         Orifice         UcP         GasP         PSIG         °F           128         3.500         638.8         374.7         61.7           128         3.500         638.2         374.7         61.7           128         3.500         638.6         374.7         61.6           128         3.500         638.8         375.7         61.8           128         3.500         638.8         375.7         61.8           128         3.500         638.8         375.7         61.8           128         3.500         638.8         375.7         61.8           128         3.500         638.8         375.7         61.8           128         3.500         620.0         386.8         62.8           192         3.500         620.0         386.8         62.9           192         3.500         620.0         389.1         63.1           192         3.500         620.0         389.1         63.1           192         3.500         620.4         389.9         62.9</td> <td>OMV Australia Pty Ltd           Patricia-2           Completion           Choke Orifice UCP GasP PSIG GasT CasD PSIG           64th         0         0         0           128         3.500         638.8         374.7         61.7         247.6           128         3.500         638.2         374.7         61.6         247.7           128         3.500         638.8         375.8         61.7         247.6           128         3.500         638.8         375.7         61.8         247.7           128         3.500         638.8         375.7         61.9         247.5           128         3.500         638.8         375.7         61.9         247.5           128         3.500         638.8         375.7         61.9         247.5           128         3.500         620.0         386.8         62.8         240.6           192         3.500         620.0         386.8         62.9         241.5           192         3.500         620.6         387.4         62.9         242.6           192         3.500         620.0         389.1         63.1</td> <td>OMV Australia Pty Ltd         Example           Patricia-2         Loc           Completion         Sta           Choke orifice tins         Ucp PSIG         GasP PSIG         GasT To PSIG         CondR bpd           128         3.500         638.8         374.7         61.7         247.6         0.0           128         3.500         638.8         374.7         61.6         247.7         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0           128         3.500         638.8         375.7         61.9         247.5         0.0           128         3.500         638.8         376.7         61.9         247.5         0.0           192         3.500         620.0         386.7         62.9         241.5         0.0           192         3.500         620.6         387.4         62.9         243.1         0.0           192         3.500         620.6         &lt;</td> <td>OMV Australia Pty Ltd         Exal Engine           Patricia-2         Location           Completion         Start Date           Choke orifice UCP GasP PSIG         GasT GasD CondR CondCum bpd           64th         Orifice CondCum bpd         On 0         On 0           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         0.0           128         3.500         62.8         241.5         0.0         0.0      <tr< td=""><td>Exal Engineer M. D           Patricia-2         Location         Ocea           Completion         Start Date         30/00           Choke orifice lucp psice         GasP refine         GasD condR condCum bpd         WtrRate bpd           64th         Orifice distance         Vertice         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         <td <="" colspan="2" td=""><td>CMV Australia Pty Ltd         Exal Engineer M. Donald / N           Patricia-2         Location         Ocean Bount           Completion         Start Date         30/06 - 01/07           Choke online         Orifice UsP PSIG         GasP F         GasD CondR CondCum byd WtrRate         WtrCum byd bbls           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         144.0         66.4           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         125.0         67.7           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         70.3           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         71.5           128         3.500         638.8         376.7         62.9         241.5         0.0         0.0         115.0         72.7           192         3.500         620.6         387.4         62.9         241.5         0.0         0.0<td>Exal Engineer M. Donald / N. Dowder           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Choke         Orflice         UPP SIG         Gast PSIG         CondR CondCum bpd         WtrRate bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd           128         3.500         G38.8         377.7         G46.7         0.0         0.0         144.0         66.4         26.99           128         3.500         63.8         377.5         61.9         247.6         0.0         0.0         15.0         66.7         2.691           128         3.500         63.8         377.5         61.2         244.5         0.0         <td col<="" td=""><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           128         3.500         638.8         374.7         61.6         247.7         0.0         0.0         128.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         2</td><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Completion         Start Date         30/06 - 01/07/2002           Completion         WtrRate         WtrCum         Gast Cond Cum           Location         Out 125.0         Gr.77         Cond Cum         WtrCum         Gast Cond Cum           Location         Cond</td></td></td></td></td></td></tr<></td>	OMV Australia Pty Ltd           Patricia-2           Completion           Choke         Orifice         UcP         GasP           64th         ins         PSIG         PSIG           128         3.500         638.8         374.7           128         3.500         638.2         374.7           128         3.500         638.8         375.8           128         3.500         638.8         375.7           128         3.500         638.8         375.7           128         3.500         638.8         375.7           128         3.500         638.8         375.7           128         3.500         638.8         377.5           192         3.500         620.0         386.8           192         3.500         620.6         387.4           192         3.500         620.6         387.4           192         3.500         620.6         387.4           192         3.500         620.6         389.1           192         3.500         620.6         389.2           192         3.500         620.4         389.9      <	OMV Australia Pty Ltd           Patricia-2           Completion           Choke         Orifice         UcP         GasP         PSIG         °F           128         3.500         638.8         374.7         61.7           128         3.500         638.2         374.7         61.7           128         3.500         638.6         374.7         61.6           128         3.500         638.8         375.7         61.8           128         3.500         638.8         375.7         61.8           128         3.500         638.8         375.7         61.8           128         3.500         638.8         375.7         61.8           128         3.500         638.8         375.7         61.8           128         3.500         620.0         386.8         62.8           192         3.500         620.0         386.8         62.9           192         3.500         620.0         389.1         63.1           192         3.500         620.0         389.1         63.1           192         3.500         620.4         389.9         62.9	OMV Australia Pty Ltd           Patricia-2           Completion           Choke Orifice UCP GasP PSIG GasT CasD PSIG           64th         0         0         0           128         3.500         638.8         374.7         61.7         247.6           128         3.500         638.2         374.7         61.6         247.7           128         3.500         638.8         375.8         61.7         247.6           128         3.500         638.8         375.7         61.8         247.7           128         3.500         638.8         375.7         61.9         247.5           128         3.500         638.8         375.7         61.9         247.5           128         3.500         638.8         375.7         61.9         247.5           128         3.500         620.0         386.8         62.8         240.6           192         3.500         620.0         386.8         62.9         241.5           192         3.500         620.6         387.4         62.9         242.6           192         3.500         620.0         389.1         63.1	OMV Australia Pty Ltd         Example           Patricia-2         Loc           Completion         Sta           Choke orifice tins         Ucp PSIG         GasP PSIG         GasT To PSIG         CondR bpd           128         3.500         638.8         374.7         61.7         247.6         0.0           128         3.500         638.8         374.7         61.6         247.7         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0           128         3.500         638.8         375.7         61.9         247.5         0.0           128         3.500         638.8         376.7         61.9         247.5         0.0           192         3.500         620.0         386.7         62.9         241.5         0.0           192         3.500         620.6         387.4         62.9         243.1         0.0           192         3.500         620.6         <	OMV Australia Pty Ltd         Exal Engine           Patricia-2         Location           Completion         Start Date           Choke orifice UCP GasP PSIG         GasT GasD CondR CondCum bpd           64th         Orifice CondCum bpd         On 0         On 0           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         0.0           128         3.500         62.8         241.5         0.0         0.0 <tr< td=""><td>Exal Engineer M. D           Patricia-2         Location         Ocea           Completion         Start Date         30/00           Choke orifice lucp psice         GasP refine         GasD condR condCum bpd         WtrRate bpd           64th         Orifice distance         Vertice         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         <td <="" colspan="2" td=""><td>CMV Australia Pty Ltd         Exal Engineer M. Donald / N           Patricia-2         Location         Ocean Bount           Completion         Start Date         30/06 - 01/07           Choke online         Orifice UsP PSIG         GasP F         GasD CondR CondCum byd WtrRate         WtrCum byd bbls           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         144.0         66.4           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         125.0         67.7           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         70.3           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         71.5           128         3.500         638.8         376.7         62.9         241.5         0.0         0.0         115.0         72.7           192         3.500         620.6         387.4         62.9         241.5         0.0         0.0<td>Exal Engineer M. Donald / N. Dowder           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Choke         Orflice         UPP SIG         Gast PSIG         CondR CondCum bpd         WtrRate bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd           128         3.500         G38.8         377.7         G46.7         0.0         0.0         144.0         66.4         26.99           128         3.500         63.8         377.5         61.9         247.6         0.0         0.0         15.0         66.7         2.691           128         3.500         63.8         377.5         61.2         244.5         0.0         <td col<="" td=""><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           128         3.500         638.8         374.7         61.6         247.7         0.0         0.0         128.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         2</td><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Completion         Start Date         30/06 - 01/07/2002           Completion         WtrRate         WtrCum         Gast Cond Cum           Location         Out 125.0         Gr.77         Cond Cum         WtrCum         Gast Cond Cum           Location         Cond</td></td></td></td></td></td></tr<>	Exal Engineer M. D           Patricia-2         Location         Ocea           Completion         Start Date         30/00           Choke orifice lucp psice         GasP refine         GasD condR condCum bpd         WtrRate bpd           64th         Orifice distance         Vertice         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd         WtrRate bpd           128 3.500         GasP refine         CondR condCum bpd <td <="" colspan="2" td=""><td>CMV Australia Pty Ltd         Exal Engineer M. Donald / N           Patricia-2         Location         Ocean Bount           Completion         Start Date         30/06 - 01/07           Choke online         Orifice UsP PSIG         GasP F         GasD CondR CondCum byd WtrRate         WtrCum byd bbls           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         144.0         66.4           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         125.0         67.7           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         70.3           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         71.5           128         3.500         638.8         376.7         62.9         241.5         0.0         0.0         115.0         72.7           192         3.500         620.6         387.4         62.9         241.5         0.0         0.0<td>Exal Engineer M. Donald / N. Dowder           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Choke         Orflice         UPP SIG         Gast PSIG         CondR CondCum bpd         WtrRate bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd           128         3.500         G38.8         377.7         G46.7         0.0         0.0         144.0         66.4         26.99           128         3.500         63.8         377.5         61.9         247.6         0.0         0.0         15.0         66.7         2.691           128         3.500         63.8         377.5         61.2         244.5         0.0         <td col<="" td=""><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           128         3.500         638.8         374.7         61.6         247.7         0.0         0.0         128.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         2</td><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Completion         Start Date         30/06 - 01/07/2002           Completion         WtrRate         WtrCum         Gast Cond Cum           Location         Out 125.0         Gr.77         Cond Cum         WtrCum         Gast Cond Cum           Location         Cond</td></td></td></td></td>	<td>CMV Australia Pty Ltd         Exal Engineer M. Donald / N           Patricia-2         Location         Ocean Bount           Completion         Start Date         30/06 - 01/07           Choke online         Orifice UsP PSIG         GasP F         GasD CondR CondCum byd WtrRate         WtrCum byd bbls           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         144.0         66.4           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         125.0         67.7           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         70.3           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         71.5           128         3.500         638.8         376.7         62.9         241.5         0.0         0.0         115.0         72.7           192         3.500         620.6         387.4         62.9         241.5         0.0         0.0<td>Exal Engineer M. Donald / N. Dowder           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Choke         Orflice         UPP SIG         Gast PSIG         CondR CondCum bpd         WtrRate bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd           128         3.500         G38.8         377.7         G46.7         0.0         0.0         144.0         66.4         26.99           128         3.500         63.8         377.5         61.9         247.6         0.0         0.0         15.0         66.7         2.691           128         3.500         63.8         377.5         61.2         244.5         0.0         <td col<="" td=""><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           128         3.500         638.8         374.7         61.6         247.7         0.0         0.0         128.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         2</td><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Completion         Start Date         30/06 - 01/07/2002           Completion         WtrRate         WtrCum         Gast Cond Cum           Location         Out 125.0         Gr.77         Cond Cum         WtrCum         Gast Cond Cum           Location         Cond</td></td></td></td>		CMV Australia Pty Ltd         Exal Engineer M. Donald / N           Patricia-2         Location         Ocean Bount           Completion         Start Date         30/06 - 01/07           Choke online         Orifice UsP PSIG         GasP F         GasD CondR CondCum byd WtrRate         WtrCum byd bbls           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         144.0         66.4           128         3.500         638.8         374.7         61.7         247.6         0.0         0.0         125.0         67.7           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         70.3           128         3.500         638.8         375.7         61.8         247.7         0.0         0.0         115.0         71.5           128         3.500         638.8         376.7         62.9         241.5         0.0         0.0         115.0         72.7           192         3.500         620.6         387.4         62.9         241.5         0.0         0.0 <td>Exal Engineer M. Donald / N. Dowder           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Choke         Orflice         UPP SIG         Gast PSIG         CondR CondCum bpd         WtrRate bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd           128         3.500         G38.8         377.7         G46.7         0.0         0.0         144.0         66.4         26.99           128         3.500         63.8         377.5         61.9         247.6         0.0         0.0         15.0         66.7         2.691           128         3.500         63.8         377.5         61.2         244.5         0.0         <td col<="" td=""><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           128         3.500         638.8         374.7         61.6         247.7         0.0         0.0         128.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         2</td><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Completion         Start Date         30/06 - 01/07/2002           Completion         WtrRate         WtrCum         Gast Cond Cum           Location         Out 125.0         Gr.77         Cond Cum         WtrCum         Gast Cond Cum           Location         Cond</td></td></td>	Exal Engineer M. Donald / N. Dowder           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Choke         Orflice         UPP SIG         Gast PSIG         CondR CondCum bpd         WtrRate bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd         WtrCum bpd         Gastav bpd           128         3.500         G38.8         377.7         G46.7         0.0         0.0         144.0         66.4         26.99           128         3.500         63.8         377.5         61.9         247.6         0.0         0.0         15.0         66.7         2.691           128         3.500         63.8         377.5         61.2         244.5         0.0 <td col<="" td=""><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           128         3.500         638.8         374.7         61.6         247.7         0.0         0.0         128.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         2</td><td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Completion         Start Date         30/06 - 01/07/2002           Completion         WtrRate         WtrCum         Gast Cond Cum           Location         Out 125.0         Gr.77         Cond Cum         WtrCum         Gast Cond Cum           Location         Cond</td></td>	<td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           128         3.500         638.8         374.7         61.6         247.7         0.0         0.0         128.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         2</td> <td>Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Completion         Start Date         30/06 - 01/07/2002           Completion         WtrRate         WtrCum         Gast Cond Cum           Location         Out 125.0         Gr.77         Cond Cum         WtrCum         Gast Cond Cum           Location         Cond</td>	Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           128         3.500         638.8         374.7         61.6         247.7         0.0         0.0         128.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         247.7         0.0         0.0         118.3.500         638.8         375.7         61.8         2	Exal Engineer M. Donald / N. Dowdell           Patricia-2         Location         Ocean Bounty           Completion         Start Date         30/06 - 01/07/2002           Completion         Start Date         30/06 - 01/07/2002           Completion         WtrRate         WtrCum         Gast Cond Cum           Location         Out 125.0         Gr.77         Cond Cum         WtrCum         Gast Cond Cum           Location         Cond

Client	OMV Au	ustralia P	ty Ltd				Exa	al Engine	er M. D	onald / N	I. Dowde	ell		
Well No.	Patricia-	-2					Lo	cation	Ocea	an Bount	у			
Test No.	Complet	tion					Sta	rt Date	30/06	6 - 01/07	/2002			
Time hh:mm:ss	Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM	
03/07/02 21:30:00 21:40:00 21:50:00 22:00:00 22:10:00 22:20:00 22:30:00 22:30:00 22:50:00 23:00:00 23:10:00 23:20:00 23:30:00 23:30:00 23:40:00 23:50:00	192 192 192 192 192 192 192 192 192 192	3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500	621.8 621.6 622.2 622.6 622.0 622.2 622.6 623.0 624.7 623.0 623.2 625.1 623.2 625.1 623.2 623.4	391.5 391.6 391.7 392.2 393.0 393.0 393.0 393.5 393.1 393.5 393.2 394.3 393.9 393.6 394.3 394.3	62.0 61.8 61.7 61.5 61.4 61.3 61.2 61.3 61.1 61.1 61.0 60.9 60.9 60.6	247.1 248.8 249.0 249.8 248.0 250.0 250.4 250.0 250.4 250.6 250.4 250.6 250.4 250.6 250.4 250.6	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	48.0 48.0 125.0 67.0 67.0 77.0 86.0 86.0 77.0 58.0 58.0 58.0 58.0 58.0 58.0 67.0	89.4 89.4 90.7 91.4 92.2 93.1 93.1 93.9 94.5 94.5 95.3 95.9 95.9 95.9 96.5	27.45 27.46 27.50 27.51 27.55 27.57 27.59 27.60 27.64 27.67 27.65 27.66 27.72 27.71	12.800 12.990 13.180 13.370 13.560 13.750 13.940 14.130 14.330 14.520 14.710 14.900 15.090 15.290 15.480	1.8 1.8 4.5 2.4 2.4 2.8 3.1 3.1 2.8 2.1 2.1 2.1 2.1 2.1 2.4	
04/07/02 00:00:00 00:10:00 00:20:00 00:30:00 00:40:00 00:50:00 01:00:00 01:10:00 01:20:00 01:30:00 01:40:00 01:50:00 02:00:00 02:10:00	192 192 192 192 192 192 192 192 192 192	3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500 3.500	625.5 623.4 624.3 623.0 623.2 624.5 623.9 623.6 623.4 623.9 624.5 624.3 623.9 624.5 624.3	394.6 394.9 394.6 394.1 394.3 395.2 395.1 394.5 394.5 394.9 394.2 394.9 395.4 395.4 395.4	60.6 60.4 60.4 60.3 60.3 60.2 60.1 60.1 60.0 59.9 60.0 60.0 60.0 59.8	250.5 251.9 254.4 254.2 252.4 253.1 254.2 253.2 252.9 225.7 221.0 221.6 220.2 221.6	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	77.0 77.0 96.0 58.0 58.0 86.0 86.0 48.0 67.0 67.0 96.0 38.0 38.0	97.3 97.3 98.3 98.9 99.5 100.4 100.4 100.4 100.9 101.6 101.6 102.6 103.0	27.80 27.89 27.88 27.89 27.91 27.93 27.90 27.95 27.55 26.23 26.09 26.07 26.10	15.670 15.870 16.060 16.250 16.450 16.640 16.830 17.030 17.220 17.380 17.560 17.740 17.920 18.100	2.8 2.8 3.4 2.1 2.1 2.1 3.1 3.1 1.7 2.4 2.5 3.7 1.4 1.5	

Client	OMV Au	istralia P	ty Ltd				Exa	al Engine	er M. D	onald / N	I. Dowde	ell		
Well No.	Patricia-	2					Lo	cation	Ocea	an Bount	у			
Test No.	Complet	tion					Sta	rt Date	30/0	6 - 01/07	/2002			
Time hh:mm:ss	Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM	
04/07/02														
02:20:00	192	3.500	623.6	395.0	59.9	220.6	0.0	0.0	86.0	103.9	26.08	18.280	3.3	
02:30:00	192	3.500	624.7	394.0	59.9	222.5	0.0	0.0	38.0	104.3	26.10	18.460	1.5	
02:40:00	192	3.500	624.5	395.3	60.0	220.9	0.0	0.0	38.0	104.3	26.10	18.650	1.5	
02:50:00	192	3.500	624.7	395.3	60.0	221.2	0.0	0.0	86.0	105.2	26.12	18.830	3.3	
03:00:00	192	3.500	624.7	395.6	60.0	221.3	0.0	0.0	58.0	105.8	26.12	19.010	2.2	
03:10:00	192	3.500	624.9	395.4	60.1	220.8	0.0	0.0	58.0	105.8	26.09	19.190	2.2	
03:20:00	192	3.500	624.9	395.3	60.2	221.6	0.0	0.0	58.0	106.4	26.12	19.370	2.2	
03:30:00	192	3.500	626.7	395.3	60.2	222.3	0.0	0.0	96.0	107.4	26.16	19.550	3.7	
03:40:00	192	3.500	625.1	395.7	60.2	220.7	0.0	0.0	96.0	107.4	26.13	19.730	3.7	
03:50:00	192	3.500	624.9	396.0	60.2	238.7	0.0	0.0	29.0	107.7	21.67	19.830	5.6	
04:00:00	192	3.500	624.9	395.7	60.3	237.0	0.0	0.0	58.0	108.3	27.01	20.010	2.1	
04:10:00	192	3.500	625.9	396.4	60.5	238.0	0.0	0.0	58.0	108.3	27.07	20.200	2.1	
04:20:00	192	3.500	625.3	396.4	60.5	238.4	0.0	0.0	86.0	109.2	27.07	20.390	3.2	
04:30:00	192	3.500	624.9	396.0	60.7	238.7	0.0	0.0	58.0	109.8	27.08	20.580	2.1	
04:40:00	192	3.500	625.9	396.4	60.8	237.5	0.0	0.0	58.0	109.8	27.06	20.770	2.1	
04:50:00	192	3.500	625.7	396.5	60.7	238.4	0.0	0.0	19.0	110.0	27.11	20.950	0.7	
05:00:00	192	3.500	625.1	396.4	60.8	238.6	0.0	0.0	67.0	110.7	27.07	21.140	2.5	
05:10:00	192	3.500	626.7	396.2	60.9	236.6	0.0	0.0	67.0	110.7	27.00	21.330	2.5	
05:20:00	192	3.500	625.7	397.0	60.9	239.1	0.0	0.0	48.0	111.2	27.08	21.520	1.8	
05:30:00	192	3.500	625.7	397.2	61.0	238.7	0.0	0.0	67.0	111.9	27.09	21.710	2.5	
05:40:00	192	3.500	626.9	398.1	61.2	240.1	0.0	0.0	67.0	111.9	27.17	21.900	2.5	
05:50:00	192	3.500	625.5	397.3	61.1	239.6	0.0	0.0	58.0	112.5	27.17	22.080	2.1	
06:00:00	192	3.500	625.5	397.3	60.9	239.0	0.0	0.0	29.0	112.8	27.15	22.270	1.1	
06:10:00	192	3.500	626.1	397.0	61.0	238.9	0.0	0.0	29.0	112.8	27.17	22.460	1.1	
06:20:00	192	3.500	627.7	397.0	60.9	240.3	0.0	0.0	67.0	113.5	27.20	22.650	2.5	
06:30:00	192	3.500	647.0	415.9	61.2	245.2	0.0	0.0	48.0	114.0	27.51	22.840	1.8	
06:40:00	192	3.500	624.9	393.2	61.1	239.4	0.0	0.0	48.0	114.0	27.22	23.030	1.7	
06:50:00	192	3.500	627.1	399.0	61.0	240.7	0.0	0.0	58.0	114.6	27.26	23.220	2.1	
07:00:00	192	3.500	627.3	400.4	60.5	240.7	0.0	0.0	38.0	115.0	27.39	23.410	1.4	
07:10:00	192	3.500	627.3	399.7	60.4	240.6	0.0	0.0	38.0	115.0	27.33	23.600	1.4	
07:20:00	192	3.500	627.3	398.7	60.6	241.1	0.0	0.0	48.0	115.5	27.36	23.790	1.8	
							Page 6							

Client	OMV Au	ustralia P	ty Ltd				Exa	al Engine	er M. D	onald / N	I. Dowde	ell		
Well No.	Patricia-	2					Loc	cation	Ocea	an Bount	у			
Test No.	Complet	tion					Sta	rt Date	30/06	6 - 01/07	/2002			
Time hh:mm:ss	Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM	
04/07/02 07:30:00 07:40:00 07:50:00 08:00:00 08:10:00 08:20:00 08:30:00 08:30:00 08:40:00 08:50:00 09:00:00 09:10:00 09:20:00 09:30:00 09:40:00 09:50:00 10:00:00 10:20:00 10:30:00	192 192 192 192 192 192 192 192 192 192	3.500 3.500	627.9 633.0 626.7 626.1 626.7 627.1 630.2 630.2 617.1 616.1 618.9 623.4 629.4 630.8 630.0 629.6 629.8 630.8 629.8 630.8 629.8 631.2	399.3 408.0 398.7 399.4 400.3 399.3 401.3 404.8 390.2 386.2 391.9 395.7 399.3 401.0 402.0 401.4 401.7 402.0 402.3 402.6	60.6 60.3 60.3 60.5 60.4 60.5 60.9 61.0 61.0 60.7 60.7 60.6 60.6 60.5 60.7 60.6 60.5 60.4 60.4 60.6	243.0 247.2 241.3 241.9 243.3 240.8 243.5 237.3 236.8 229.4 235.9 236.0 238.1 242.1 241.1 242.3 242.1 241.6 243.4	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	$egin{array}{c} 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0$	58.0 58.0 48.0 48.0 29.0 29.0 29.0 38.0 58.0 58.0 58.0 58.0 58.0 58.0 58.0 5	116.1 116.6 117.1 117.1 117.7 118.0 118.0 118.0 118.4 119.0 119.8 120.4 120.4 120.4 120.4 120.5 121.5 121.5 121.5 122.5	27.42 28.05 27.39 27.38 27.51 27.48 27.54 27.63 26.34 26.34 26.77 27.05 27.23 27.56 27.53 27.59 27.53 27.59 27.53 27.62 27.60 27.61	23.980 24.170 24.370 24.560 24.750 24.940 25.130 25.320 25.510 25.690 25.690 25.880 26.070 26.250 26.440 26.640 26.830 27.020 27.210 27.210 27.400 27.590	2.1 2.1 1.7 1.8 2.1 1.1 1.1 1.4 2.2 2.9 2.1 2.1 2.1 2.1 1.4 2.1 2.1	
10:50:00 11:00:00 11:10:00 11:20:00 11:30:00 11:40:00 11:50:00 12:00:00 12:10:00 12:20:00 12:30:00	192 0 0 0 0 0 0 0 0 0 0 0	3.500 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	631.0 959.1 962.4 964.6 965.9 966.7 967.9 968.3 968.7 969.3 969.5	403.0 3.7 2.7 3.2 3.2 3.2 2.9 2.7 3.1 3.4 3.1	60.5 33.0 45.7 50.7 52.8 53.9 54.6 55.1 55.6 55.9 56.0	243.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	38.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	122.9 123.4 123.4 123.4 123.4 123.4 123.4 123.4 123.4 123.4 123.4	27.62 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	27.790 27.860 27.860 27.860 27.860 27.860 27.860 27.860 27.860 27.860 27.860	1.4 0.0	

Client	OMV Au	istralia P	ty Ltd				Exa	I. Dowde	:11					
Well No.	Patricia-	2					Lo	cation	Ocea	an Bount	у			
Test No.	Complet	ion					Sta	rt Date	30/06	6 - 01/07	/2002			
Time hh:mm:ss	Choke 64th	Orifice	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM	
04/07/00														
<u>04/07/02</u>	٥	0 000	070 4	2 0	56 A	0.0	0.0	0.0	0.0	122 1	0.00	27 960		
12.40.00	0	0.000	970.4 071 0	2.9	56.4 56.6	0.0	0.0	0.0	0.0	123.4	0.00	27.000		
12.30.00	0	0.000	971.0	2.5	56.6	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
13.10.00	0	0.000	970.8	2.5	56.9	0.0	0.0	0.0	0.0	123.4	0.00	27 860		
13:20:00	õ	0.000	972.0	3.1	57.3	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
13:30:00	0	0.000	972.4	3.4	57.4	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
13:40:00	Ō	0.000	972.6	3.3	57.3	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
13:50:00	0	0.000	972.6	2.9	57.2	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
14:00:00	0	0.000	973.0	2.9	57.2	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
14:10:00	0	0.000	973.2	3.0	57.2	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
14:20:00	0	0.000	973.6	3.0	57.2	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
14:30:00	0	0.000	973.4	3.0	57.3	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
14:40:00	0	0.000	973.6	3.3	57.5	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
14:50:00	0	0.000	974.0	3.8	57.5	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
15:00:00	0	0.000	975.1	3.7	57.4	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
15:10:00	0	0.000	974.5	3.2	57.0	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
15:20:00	0	0.000	975.5	3.7	56.6	0.0	0.0	0.0	0.0	123.4	0.00	27.860		
15:30:00	16	0.000	977.9	8.1	56.9	0.5	0.0	0.0	0.0	123.4	0.00	27.860		
15:40:00	32	0.000	962.4	210.3	43.1	12.1	0.0	0.0	0.0	123.4	0.00	27.860		
15:50:00	32	0.000	959.5	368.2	36.9	11.3	0.0	0.0	0.0	123.4	0.00	27.860		
16:00:00	36	0.000	959.1	253.4	31.3	15.0	0.0	0.0	0.0	123.4	0.00	27.860		
16:10:00	40	0.000	948.3	359.0	35.0	12.3	0.0	0.0	0.0	123.4	0.00	27.860		
16:20:00	40	2.250	943.6	365.1	35.1	192.9	0.0	0.0	0.0	123.4	6.08	27.880		
16:30:00	40	2.250	943.4	365.4	35.8	207.2	0.0	0.0	0.0	123.4	9.50	27.950	0.0	
16:40:00	40	2.250	942.5	365.6	36.3	200.0	0.0	0.0	0.0	123.4	9.57	28.010	0.0	
16:50:00	40	2.250	942.5	364.1	36.6	203.3	0.0	0.0	0.0	123.4	9.48	28.080	0.0	
17:00:00	40	2.250	942.4	363.5	36.9	200.6	0.0	0.0	0.0	123.4	9.44	28.150	0.0	
17:10:00	40	2.250	942.8	364.3	37.1	206.2	0.0	0.0	0.0	123.4	9.56	28.210	0.0	
17:20:00	40	2.250	942.5	366.1	37.3	195.8	0.0	0.0	0.0	123.4	9.53	28.280	0.0	
17:30:00	40	2.250	942.5	365.1	37.3	207.3	0.0	0.0	0.0	123.4	9.52	28.350	0.0	
17:40:00	40	2.250	941.7	364.3	37.2	186.3	<b>U.0</b> Page 8	0.0	0.0	123.4	9.43	28.410	0.0	

Client	OMV Au	ustralia P	ty Ltd				Exa	al Engine	er M. D	onald / N	I. Dowde	ell		
Well No.	Patricia-	2					Lo	cation	Ocea	an Bount	у			
Test No.	Complet	tion					Sta	rt Date	30/0	6 - 01/07	/2002			
Time hh:mm:ss	Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM	
04/07/02														
17:50:00	40	2.250	942.4	364.9	37.2	191.6	0.0	0.0	0.0	123.4	9.46	28.480	0.0	
18:00:00	40	2.250	941.9	363.7	37.1	206.2	0.0	0.0	0.0	123.4	9.46	28.540	0.0	
18:10:00	40	2.250	941.5	363.2	36.9	197.7	0.0	0.0	0.0	123.4	9.48	28.610	0.0	
18:20:00	40	2.250	940.7	363.1	36.9	209.1	0.0	0.0	0.0	123.4	9.52	28.670	0.0	
18:30:00	40	2.250	941.1	362.9	37.1	204.4	0.0	0.0	0.0	123.4	9.57	28.740	0.0	
18:40:00	40	2.250	941.1	363.8	36.9	207.2	0.0	0.0	0.0	123.4	9.50	28.810	0.0	
18:50:00	40	2.250	940.7	362.3	36.9	200.9	0.0	0.0	0.0	123.4	9.46	28.870	0.0	
19:00:00	40	2.250	940.7	363.4	37.3	208.9	0.0	0.0	0.0	123.4	9.46	28.940	0.0	
19:10:00	40	2.250	938.9	362.9	37.7	187.7	0.0	0.0	0.0	123.4	9.44	29.000	0.0	
19:20:00	40	2.250	938.7	364.3	37.9	196.8	0.0	0.0	0.0	123.4	9.41	29.070	0.0	
19:30:00	40	2.250	938.7	363.8	38.0	198.2	0.0	0.0	0.0	123.4	9.34	29.130	0.0	
19:40:00	40	2.250	938.5	363.0	38.1	194.9	0.0	0.0	0.0	123.4	9.49	29.200	0.0	
19:50:00	40	2.250	938.9	365.0	37.8	200.1	0.0	0.0	0.0	123.4	9.46	29.270	0.0	
20:00:00	40	0.000	938.7	359.9	37.6	12.1	0.0	0.0	0.0	123.4	7.56	29.320	0.0	
20:10:00	60	0.000	821.7	232.7	39.0	14.0	0.0	0.0	0.0	123.4	0.00	29.320		
20:20:00	64	0.000	794.3	293.1	43.3	12.2	0.0	0.0	77.0	124.2	0.00	29.320		
20:30:00	64	3.250	800.1	304.8	44.4	238.6	0.0	0.0	77.0	125.0	12.26	29.380	16.3	
20:40:00	64	3.250	799.5	293.4	44.6	251.2	0.0	0.0	77.0	125.0	20.58	29.530	3.7	
20:50:00	64	3.250	798.6	293.4	45.2	250.7	0.0	0.0	77.0	125.0	20.55	29.670	3.7	
21:00:00	64	3.250	799.0	295.1	45.5	250.6	0.0	0.0	77.0	125.0	20.56	29.810	3.8	
21:10:00	64	3.250	799.7	295.8	45.8	250.8	0.0	0.0	77.0	125.0	20.54	29.950	3.8	
21:20:00	64	3.250	800.7	295.1	46.1	250.7	0.0	0.0	77.0	125.0	20.55	30.100	3.8	
21:30:00	64	3.250	801.7	296.7	46.5	250.7	0.0	0.0	38.0	125.4	20.56	30.240	1.9	
21:40:00	64	3.250	800.7	296.7	46.7	250.8	0.0	0.0	38.0	125.4	20.53	30.380	1.9	
21:50:00	64	3.250	800.9	296.4	46.9	250.2	0.0	0.0	77.0	126.2	20.49	30.530	3.8	
22:00:00	64	3.250	800.9	296.1	47.1	249.0	0.0	0.0	48.0	126.7	20.52	30.670	2.3	
22:10:00	64	3.250	801.3	296.6	47.3	249.6	0.0	0.0	48.0	126.7	20.51	30.810	2.3	
22:20:00	64	3.250	801.7	296.3	47.5	249.7	0.0	0.0	48.0	126.7	20.50	30.950	2.3	
22:30:00	64	3.250	801.7	296.6	47.6	251.3	0.0	0.0	48.0	126.7	20.50	31.090	2.3	
22:40:00	64	3.250	801.9	296.7	47.7	250.2	0.0	0.0	48.0	126.7	20.51	31.240	2.3	
22:50:00	64	3.250	801.9	295.6	48.0	252.5	0.0	0.0	48.0	126.7	20.50	31.380	2.3	
							Page 9							

Client	OMV Au	istralia P	ty Ltd		Exal Engineer M. Donald / N. Dowdell									
Well No.	Patricia-	2					Lo	cation	Ocea	an Bount	у			
Test No.	Complet	tion					Sta	rt Date	30/06	6 - 01/07	/2002			
Time hh:mm:ss	Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM	
04/07/02														
23.00.00	64	3 250	801.3	295 1	48 0	251 7	0.0	0.0	48 0	127 2	20 49	31 520	23	
23:10:00	64	3.250	802.5	295.8	48.1	250.4	0.0	0.0	48.0	127.2	20.49	31.660	2.4	
23:20:00	64	3.250	801.1	295.8	48.3	249.3	0.0	0.0	19.0	127.4	20.47	31.810	0.9	
23:30:00	64	3.250	800.5	295.6	48.5	250.7	0.0	0.0	10.0	127.5	20.45	31.950	0.5	
23:40:00	64	3.250	799.9	295.2	48.6	250.5	0.0	0.0	10.0	127.5	20.43	32.090	0.5	
23:50:00	64	3.250	800.7	295.0	48.5	249.5	0.0	0.0	10.0	127.5	20.43	32.230	0.5	
05/07/02														
00:00:00	64	3.250	799.9	294.7	48.7	248.9	0.0	0.0	48.0	128.0	20.39	32.370	2.4	
00:10:00	64	3.250	799.0	295.0	48.8	249.9	0.0	0.0	48.0	128.0	20.40	32.520	2.4	
00:20:00	64	3.250	798.8	295.1	48.9	248.0	0.0	0.0	19.0	128.2	20.35	32.660	0.9	
00:30:00	64	3.250	797.2	291.8	48.9	250.9	0.0	0.0	48.0	128.7	20.34	32.800	2.4	
00:40:00	64	3.250	796.8	292.0	49.0	250.5	0.0	0.0	48.0	128.7	20.32	32.940	2.4	
00:50:00	64	3.250	796.8	294.5	49.2	246.9	0.0	0.0	38.0	129.1	20.30	33.080	1.9	
01:00:00	64	3.250	796.4	294.0	49.2	249.1	0.0	0.0	19.0	129.3	20.27	33.220	0.9	
01:10:00	64	3.250	796.2	294.7	49.3	246.8	0.0	0.0	19.0	129.3	20.27	33.360	0.9	
01:20:00	64	3.250	796.2	294.7	49.4	246.2	0.0	0.0	10.0	129.4	20.28	33.500	0.5	
01:30:00	64	3.250	796.8	293.7	49.4	249.4	0.0	0.0	38.0	129.8	20.26	33.640	1.9	
01:40:00	64	3.250	796.6	293.5	49.3	248.3	0.0	0.0	38.0	129.8	20.31	33.780	1.9	
01:50:00	64	3.250	795.6	292.4	49.5	249.1	0.0	0.0	38.0	130.2	20.25	33.930	1.9	
02:00:00	66	0.000	795.8	286.9	49.5	14.3	0.0	0.0	38.0	130.2	12.14	34.040	1.9	
02:10:00	102	0.000	663.5	374.9	56.4	13.8	0.0	0.0	38.0	130.2	0.00	34.040		
02:20:00	192	0.000	617.1	381.7	59.2	13.0	0.0	0.0	38.0	130.2	0.00	34.040		
02:30:00	192	3.750	619.8	388.9	60.5	177.8	0.0	0.0	125.0	131.5	27.25	34.160	14.8	
02:40:00	192	3.750	623.4	392.4	61.1	175.3	0.0	0.0	125.0	131.5	27.28	34.350	4.6	
02:50:00	192	3.750	625.3	393.2	61.5	178.1	0.0	0.0	58.0	132.1	27.42	34.540	2.1	
03:00:00	192	3.750	626.3	394.3	61.8	175.8	0.0	0.0	77.0	132.9	27.45	34.730	2.8	
03:10:00	192	3.750	625.7	394.9	62.1	177.0	0.0	0.0	77.0	132.9	27.45	34.920	2.8	
03:20:00	192	3.750	626.7	396.0	62.2	178.6	0.0	0.0	58.0	133.5	27.55	35.110	2.1	
03:30:00	192	3.750	627.3	396.0	62.3	180.0	0.0	0.0	77.0	134.3	27.61	35.300	2.8	
03:40:00	192	3.750	627.5	396.6	62.5	178.9	<b>0.0</b> Page 10	0.0	77.0	134.3	27.63	35.500	2.8	

Client	OMV Au	istralia P	ty Ltd	td Exal Engineer M. Donald / N. Dowdell										
Well No.	Patricia-	2					Lo	cation	Ocea	an Bount	у			
Test No.	Complet	tion					Sta	rt Date	30/06	6 - 01/07	/2002			
Time hh:mm:ss	Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM	
05/07/02 03:50:00 04:00:00 04:10:00 04:20:00 04:30:00 04:40:00 04:50:00 05:00:00 05:10:00 05:20:00 05:30:00 05:30:00 05:50:00 06:00:00	192 192 192 192 192 192 192 192 192 192	3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750 3.750	629.0 630.0 630.2 630.4 630.2 631.2 631.4 631.4 631.4 631.4 631.4 631.4 631.4 631.4 631.4	397.3 398.9 399.0 399.3 399.3 399.7 400.3 400.3 400.9 401.0 400.2 400.4 400.6 400.6	62.5 62.7 62.9 62.8 62.7 62.6 62.9 63.0 62.9 62.9 62.9 62.9 63.1 63.3 63.3	180.3 181.1 179.1 181.9 178.9 181.0 181.8 181.1 179.6 181.5 180.9 182.7 181.1 181.3	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	19.0 29.0 29.0 29.0 29.0 48.0 38.0 38.0 38.0 38.0 38.0 38.0 48.0 48.0	134.5 134.8 135.1 135.4 135.4 135.9 136.3 136.3 136.3 136.3 136.3 137.3 137.3 137.8 138.3	27.67 27.78 27.82 27.83 27.84 27.90 27.95 27.88 27.87 27.92 27.95 27.96 27.92 27.90	35.690 35.880 36.070 36.270 36.460 36.660 36.850 37.040 37.240 37.240 37.430 37.620 37.820 38.010 38.210	0.7 1.0 1.0 1.0 1.0 1.0 1.7 1.4 1.4 2.1 1.4 1.4 1.4 1.7 1.7	
06:00:00 06:10:00 06:20:00 06:30:00 06:40:00 06:50:00 07:00:00 07:10:00 07:20:00 07:20:00 07:30:00 07:40:00 07:50:00 08:00:00 08:10:00 08:20:00 08:30:00 08:40:00 08:50:00	192 192 192 192 192 192 192 192 192 192	3.750 3.750	631.8 632.0 632.2 631.8 633.5 631.8 632.6 632.6 632.6 632.6 632.2 633.0 632.6 632.0 632.0 632.4 632.4 634.5 632.6	400.6 401.6 401.4 400.6 400.6 400.6 401.9 401.7 401.4 401.6 401.6 401.6 401.3 401.5 401.7 402.7 402.7 401.3	63.3 63.4 63.5 63.4 63.5 63.4 63.4 63.4 63.5 63.5 63.5 63.5 63.5 63.4 63.5 63.4 63.5 63.4 63.5 63.4 63.5 63.5	181.3 180.0 180.8 180.7 181.1 184.0 181.6 181.6 181.6 181.6 183.2 182.3 182.7 181.4 180.8 184.2 182.3 182.3	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	48.0 48.0 29.0 29.0 38.0 29.0 19.0 19.0 19.0 38.0 38.0 38.0 38.0 29.0 29.0 58.0	138.3 138.3 138.8 139.1 139.5 139.8 139.8 140.0 142.0 142.0 142.0 142.4 142.8 142.8 142.8 143.2 143.5 143.5 144.1	27.90 27.94 27.96 27.92 27.96 27.95 27.99 28.03 27.96 28.04 28.02 28.06 27.89 28.00 28.05 28.02 28.02 27.94	38.210 38.400 38.590 38.790 38.980 39.180 39.370 39.570 39.760 39.950 40.150 40.340 40.540 40.730 40.930 41.120 41.320 41.510	1.7 1.7 1.7 1.0 1.0 1.4 1.0 1.0 0.7 0.7 0.7 1.4 1.4 1.4 1.4 1.0 1.0 2.1	

Client	OMV Au	ustralia P	ty Ltd				Exa	al Engine	onald / N	I. Dowde	ell			
Well No.	Patricia-	2					Lo	cation	Ocea	an Bount	у			
Test No.	Complet	tion					Sta	rt Date	30/00	6 - 01/07	/2002			
Time hh:mm:ss	Choke 64th	Orifice ins	UcP PSIG	GasP PSIG	GasT °F	GasD INWG	CondR bpd	CondCum bbls	WtrRate bpd	WtrCum bbls	QGas1av MM/d	Gas1Cum MMcf	WGR b/MM	
05/07/02														
09:00:00	192	3.750	632.8	401.4	63.6	181.3	0.0	0.0	48.0	144.6	28.06	41.710	1.7	
09:10:00	192	3.750	631.6	400.9	63.7	182.8	0.0	0.0	48.0	144.6	28.07	41.900	1.7	
09:20:00	192	3.750	632.4	401.3	63.5	183.4	0.0	0.0	19.0	144.8	28.09	42.100	0.7	
09:30:00	192	3.750	632.6	401.6	63.9	180.3	0.0	0.0	38.0	145.2	28.07	42.290	1.4	
09:40:00	192	3.750	634.1	402.9	63.7	183.0	0.0	0.0	38.0	145.2	28.14	42.490	1.4	
09:50:00	192	3.750	633.3	402.5	63.7	181.9	0.0	0.0	19.0	145.7	28.12	42.680	0.7	
10:00:00	0	0.000	641.4	400.8	64.6	181.7	0.0	0.0	0.0	145.7	22.55	42.860	0.0	





# Gas Calcs Data Listing

Client	OMV Australia Pty Ltd
Well No.	Patricia-2
Test No.	Completion
Location	Ocean Bounty
Start Date	30/06 - 01/07/2002
Country	Australia
Field	VIC/L21
Job Number	J02/188
Formation	Gurnard
Exal Engineer	M. Donald / N. Dowdell
Client Engineer	A. Ion
Perforations	n/a

Client	OM	V Austr	alia Pt	y Ltd					E	xal En	gineer	M. Do	onald /	N. Dov	wdell				
Well No.	Patr	icia-2							L	ocatio	n	Ocea	n Bou	nty					
Test No.	t No. Completion								S	tart Da	ate	30/06	6 - 01/0	7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>03/07/02</u>																			
07:00:00	0.000	2.2	54.6	0.0	0.0	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	16.9	0.00	0.000
07:10:00	0.000	2.3	54.5	0.0	0.0	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
07:20:00	0.000	2.6	54.6	0.1	0.0	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.3	0.00	0.000
07:30:00	0.000	2.3	54.5	0.0	0.0	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
07:40:00	0.000	2.5	54.7	0.0	0.0	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.3	0.00	0.000
07:50:00	0.000	2.0	54.7	0.0	0.0	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	16.7	0.00	0.000
08:00:00	0.000	2.3	54.8	0.0	1.2	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
08:10:00	0.000	2.3	55.0	0.0	1.2	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
08:20:00	0.000	2.3	55.1	0.0	1.2	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
08:30:00	0.000	2.3	55.2	0.0	1.2	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
08:40:00	0.000	2.3	55.3	0.0	1.2	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
08:50:00	0.000	2.3	55.2	0.0	1.2	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
09:00:00	0.000	2.4	55.3	0.0	1.5	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.2	0.00	0.000
09:10:00	0.000	2.3	55.3	0.0	1.5	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
09:20:00	0.000	2.3	55.4	0.0	1.5	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
09:30:00	0.000	2.3	55.5	0.0	1.5	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.0	0.00	0.000
09:40:00	0.000	336.5	68.6	15.5	1.5	0.0	0.571	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	351.2	0.00	0.000
09:50:00	3.750	332.8	63.7	134.6	1.5	0.0	0.571	3172.2	1.0	0.995	1.0	1.0	0.996	1.323	1.026	4269.4	347.5	4.43	0.015
10:00:00	3.500	338.6	63.2	199.8	1.4	0.0	0.571	2695.1	1.0	0.993	1.0	1.0	0.997	1.323	1.026	3623.2	353.3	22.87	0.126
10:10:00	3.500	339.9	63.2	203.3	1.4	0.0	0.571	2695.1	1.0	0.993	1.0	1.0	0.997	1.323	1.026	3623.4	354.6	23.30	0.287
10:20:00	3.500	344.0	63.0	209.0	1.4	0.0	0.571	2695.1	1.0	0.993	1.0	1.0	0.997	1.323	1.027	3624.9	358.8	23.50	0.450
10:30:00	3.500	347.8	62.9	211.4	1.4	0.0	0.571	2695.1	1.0	0.993	1.0	1.0	0.997	1.323	1.027	3626.3	362.5	23.78	0.614
10:40:00	3.500	346.8	62.2	212.2	1.4	0.0	0.571	2695.1	1.0	0.993	1.0	1.0	0.998	1.323	1.027	3628.5	361.5	24.01	0.780
10:50:00	3.500	350.0	61.9	228.6	1.4	0.0	0.571	2695.1	1.0	0.992	1.0	1.0	0.998	1.323	1.027	3629.0	364.7	24.55	0.949
11:00:00	3.500	352.1	61.7	231.1	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.998	1.318	1.028	3616.0	366.9	25.35	1.125
11:10:00	3.500	352.9	61.7	232.6	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.998	1.318	1.028	3616.0	367.6	25.37	1.301
11:20:00	3.500	354.5	61.4	233.4	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1.318	1.028	3617.7	369.2	25.49	1.478
11:30:00	3.500	357.2	61.0	234.4	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1.318	1.028	3620.1	371.9	25.65	1.656
11:40:00	3.500	357.3	61.0	235.5	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1.318	1.028	3619.9	372.0	25.71	1.834
11:50:00	3.500	358.8	60.9	237.3	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1.318	1.029	3620.9	373.5	25.79	2.013
12:00:00	3.500	359.7	61.0	237.5	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1.318	1.029	3620.7	374.5	25.86	2.192
									Page	2									

Client	OM	V Austr	alia Pt	y Ltd					E	xal En	gineer	M. D	onald /	N. Dov	vdell				
Well No.	Patr	icia-2							L	ocatio	n	Ocea	an Boui	nty					
Test No.	Con	npletior	1						S	tart Da	ate	30/06	6 - 01/0	7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>03/07/02</u>								/											
12:10:00	3.500	360.5	61.2	238.8	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1.318	1.029	3620.0	375.2	25.91	2.372
12:20:00	3.500	361.9	61.1	239.1	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1.318	1.029	3620.9	370.0	26.05	2.553
12:30:00	3 500	363.4	61.3	239.0	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1 318	1.029	3620.6	378.1	26.14	2.734
12:50:00	3 500	363.3	61.3	240.5	1.4	0.0	0.576	2695.1	1.0	0.992	1.0	1.0	0.999	1.318	1.023	3620.0	378.0	26.14	3 098
13:00:00	3.500	363.8	61.4	241.3	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3614.0	378.5	26.24	3.280
13:10:00	3.500	364.8	61.5	241.5	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3614.2	379.5	26.27	3.462
13:20:00	3.500	366.5	61.5	241.4	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3614.8	381.3	26.32	3.645
13:30:00	3.500	367.0	61.4	241.7	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3615.3	381.7	26.37	3.828
13:40:00	3.500	366.9	61.4	242.3	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3615.1	381.6	26.39	4.011
13:50:00	3.500	368.6	61.4	243.2	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3615.7	383.3	26.46	4.195
14:00:00	3.500	368.6	61.4	243.1	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3615.7	383.4	26.50	4.379
14:10:00	3.500	368.6	61.4	242.3	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3615.6	383.4	26.51	4.563
14:20:00	3.500	369.7	61.4	243.6	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.029	3615.8	384.5	26.55	4.747
14:30:00	3.500	370.7	61.5	244.3	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.999	1.315	1.030	3615.6	385.4	26.61	4.932
14:40:00	3.500	371.2	61.6	245.0	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.998	1.315	1.030	3615.4	385.9	26.66	5.117
14:50:00	3.500	370.8	61.7	244.9	1.5	0.0	0.578	2695.1	1.0	0.992	1.0	1.0	0.998	1.315	1.030	3614.8	385.6	26.67	5.302
15:00:00	3.500	372.0	61.7	245.1	1.5	0.0	0.582	2695.1	1.0	0.992	1.0	1.0	0.998	1.311	1.030	3604.2	386.7	26.69	5.488
15:10:00	3.500	372.2	61.7	245.5	1.5	0.0	0.582	2695.1	1.0	0.992	1.0	1.0	0.998	1.311	1.030	3604.2	387.0	26.64	5.673
15:20:00	3.500	372.4	61.6	245.3	1.5	0.0	0.582	2695.1	1.0	0.992	1.0	1.0	0.998	1.311	1.030	3604.5	387.1	26.68	5.858
15:30:00	3.500	373.0	61.6	246.0	1.5	0.0	0.582	2695.1	1.0	0.992	1.0	1.0	0.998	1.311	1.030	3604.8	387.7	26.72	6.043
15:40:00	3.500	373.3	61.7	246.3	1.5	0.0	0.582	2695.1	1.0	0.992	1.0	1.0	0.998	1.311	1.030	3604.6	388.0	26.74	6.229
15:50:00	3.500	374.0	61.6	247.0	1.5	0.0	0.582	2695.1	1.0	0.992	1.0	1.0	0.998	1.311	1.030	3604.9	388.8	26.78	6.415
16:00:00	3.500	374.3	61.6	246.8	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3610.7	389.1	26.80	6.601
16:10:00	3.500	374.1	61.6	247.2	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3610.7	388.8	26.84	6.788
16:20:00	3.500	374.7	61.7	247.6	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3610.5	389.4	26.90	6.974
16:30:00	3.500	374.7	61.6	247.7	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3610.6	389.4	26.92	7.161
16:40:00	3.500	374.7	61.7	246.7	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3610.5	389.4	26.91	7.348
16:50:00	3.500	375.8	61.7	247.6	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3610.7	390.5	26.94	7.535
17:00:00	3.500	375.7	61.8	247.7	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3610.5	390.5	26.98	7.722
17:10:00	3.500	376.7	61.9	247.5	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3610.3	391.4	26.98	7.910

Client	OM	V Austr	alia Pt	y Ltd					E	xal En	gineer	M. D	onald /	N. Dov	vdell				
Well No.	Patr	icia-2							L	ocatio	n	Ocea	an Boui	nty					
Test No.	Con	npletior	1						S	tart Da	ate	30/06	6 - 01/0	7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>03/07/02</u> 17:20:00	3 500	376 4	62.0	249 0	15	0.0	0 580	2695 1	10	0 992	10	10	0 998	1 313	1 030	3609 6	391 1	27 01	8 097
17:30:00	3.500	377.5	62.0	249.3	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.998	1.313	1.030	3609.7	392.3	27.06	8.285
17:40:00	3.500	386.8	62.8	240.6	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3610.7	401.6	26.93	8.444
17:50:00	3.500	386.7	62.9	241.5	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3610.1	401.4	26.91	8.631
18:00:00	3.500	387.4	62.9	242.6	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3610.2	402.2	27.04	8.818
18:10:00	3.500	387.8	62.9	243.1	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3610.3	402.6	27.08	9.006
18:20:00	3.500	388.4	63.0	243.0	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3610.2	403.2	27.11	9.194
18:30:00	3.500	389.1	63.1	243.7	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3609.8	403.8	27.16	9.383
18:40:00	3.500	389.2	63.1	243.3	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3609.9	403.9	27.17	9.572
18:50:00	3.500	389.2	63.1	243.9	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3609.9	403.9	27.19	9.760
19:00:00	3.500	388.9	63.1	244.1	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3609.9	403.7	27.17	9.949
19:10:00	3.500	389.9	62.9	245.1	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3611.0	404.6	27.26	10.138
19:20:00	3.500	389.5	62.9	244.1	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3610.7	404.2	27.26	10.327
19:30:00	3.500	389.6	62.8	245.3	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3611.2	404.3	27.27	10.517
19:40:00	3.500	389.8	62.8	244.0	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3611.6	404.5	27.28	10.706
19:50:00	3.500	390.1	62.9	245.3	1.5	0.0	0.580	2695.1	1.0	0.992	1.0	1.0	0.997	1.313	1.031	3611.0	404.9	27.29	10.896
20:00:00	3.500	390.1	62.9	244.7	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.997	1.309	1.031	3600.3	404.9	27.30	11.085
20:10:00	3.500	391.6	62.8	246.2	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.997	1.309	1.032	3600.7	406.3	27.30	11.275
20:20:00	3.500	391.3	62.8	245.8	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.997	1.309	1.032	3601.0	406.0	27.32	11.464
20:30:00	3.500	391.4	62.7	246.4	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.997	1.309	1.032	3601.2	406.1	27.35	11.654
20:40:00	3.500	391.5	62.6	246.3	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.998	1.309	1.032	3601.8	406.2	27.33	11.844
20:50:00	3.500	391.4	62.5	246.4	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.998	1.309	1.032	3602.1	406.2	27.36	12.034
21:00:00	3.500	392.2	62.2	246.8	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.998	1.309	1.032	3603.6	406.9	27.43	12.225
21:10:00	3.500	391.6	62.1	248.2	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.998	1.309	1.032	3603.4	406.3	27.42	12.415
21:20:00	3.500	391.9	62.2	248.7	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.998	1.309	1.032	3603.3	406.7	27.44	12.605
21:30:00	3.500	391.5	62.0	247.1	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.998	1.309	1.032	3604.1	406.2	27.45	12.796
21:40:00	3.500	391.6	61.8	248.8	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.998	1.309	1.032	3604.7	406.3	27.46	12.987
21:50:00	3.500	391.7	61.7	249.0	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.998	1.309	1.032	3605.2	406.4	27.49	13.178
22:00:00	3.500	392.2	61.7	249.8	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.998	1.306	1.032	3599.9	407.0	27.50	13.369
22:10:00	3.500	393.0	61.5	248.0	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3601.1	407.7	27.51	13.560
22:20:00	3.500	393.0	61.4	248.9	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3601.5	407.7	27.55	13.751

Client	OM	OMV Australia Pty Ltd Exa									gineer	M. D	onald /	N. Dov	vdell				
Well No.	Patr	ricia-2							L	ocatio	'n	Ocea	an Boui	nty					
Test No.	Con	npletior	า						S	tart Da	ate	30/06	6 - 01/0	7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>03/07/02</u>																			
22:30:00	3.500	392.5	61.3	250.0	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3601.7	407.3	27.57	13.942
22:40:00	3.500	393.1	61.2	250.4	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3602.1	407.8	27.59	14.134
22:50:00	3.500	393.5	61.3	249.8	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3602.0	408.2	27.60	14.326
23:00:00	3.500	393.2	61.1	250.0	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3602.7	407.9	27.64	14.518
23:10:00	3.500	394.3	61.1	250.4	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3603.1	409.0	27.67	14./10
23:20:00	3.500	393.9	60.0	250.0	1.5	0.0	0.500	2095.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3603.3	400.0	27.00	14.902
23:40:00	3.500	393.0	60.9	250.4	1.5	0.0	0.586	2695.1	1.0	0.332	1.0	1.0	0.333	1.300	1.032	3603.6	400.4	27.00	15 287
23:50:00	3.500	394.3	60.6	251.7	1.5	0.0	0.586	2695.1	1.0	0.992	1.0	1.0	0.999	1.306	1.032	3605.0	409.0	27.71	15.479
<u>04/07/02</u>																			
00:00:00	3.500	394.6	60.6	250.5	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	0.999	1.309	1.032	3610.9	409.4	27.80	15.672
00:10:00	3.500	394.9	60.4	251.9	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	1.000	1.309	1.032	3611.6	409.7	27.89	15.866
00:20:00	3.500	394.6	60.4	254.4	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	1.000	1.309	1.032	3611.0	409.4	27.88	16.059
00:30:00	3.500	394.1	60.3	254.2	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	1.000	1.309	1.032	3611.3	408.9	27.89	16.253
00:40:00	3.500	394.3	60.3	252.4	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	1.000	1.309	1.032	3611.8	409.0	27.85	16.446
00:50:00	3.500	395.2	60.2	253.1	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	1.000	1.309	1.032	3612.4	409.9	27.91	16.640
01:00:00	3.500	395.1	60.1	254.2	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	1.000	1.309	1.032	3612.6	409.9	27.93	16.834
01:10:00	3.500	394.5	60.1	253.2	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	1.000	1.309	1.032	3612.3	409.2	27.90	17.028
01:20:00	3.500	394.9	60.0	252.9	1.5	0.0	0.584	2695.1	1.0	0.992	1.0	1.0	1.000	1.309	1.032	3613.1	409.6	27.95	17.222
01:30:00	3.500	394.2	59.9	225.7	1.5	0.0	0.584	2695.1	1.0	0.993	1.0	1.0	1.000	1.309	1.032	3616.5	408.9	27.55	17.376
01:40:00	3.500	394.9	60.0	221.0	1.5	0.0	0.584	2695.1	1.0	0.993	1.0	1.0	1.000	1.309	1.032	3616.9	409.7	26.23	17.558
01:50:00	3.500	395.4	60.0	221.6	1.5	0.0	0.584	2695.1	1.0	0.993	1.0	1.0	1.000	1.309	1.032	3617.0	410.1	26.09	17.740
02:00:00	3.500	395.4	60.0	220.2	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3611.4	410.1	26.07	17.921
02:10:00	3.500	394.3	59.8	221.6	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3611.7	409.1	26.10	18.102
02:20:00	3.500	395.0	59.9	220.6	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3611.8	409.7	26.08	18.283
02:30:00	3.500	394.0	59.9	222.5	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3611.3	408.8	26.10	18.464
02:40:00	3.500	395.3	60.0	220.9	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3611.5	410.0	26.10	18.645
02:50:00	3.500	395.3	60.0	221.2	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3611.6	410.0	26.12	18.827
03:00:00	3.500	395.6	60.0	221.3	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3611.3	410.3	26.12	19.008
03:10:00	3.500	395.4	60.1	220.8	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3611.2	410.1	26.09	19.189

Client	OM	DMV Australia Pty Ltd Exal Eng									gineer	M. D	onald /	N. Dov	vdell				
Well No.	Patr	icia-2							L	ocatio	n	Ocea	an Boui	nty					
Test No.	Con	npletior	1						S	tart Da	ate	30/06	6 - 01/0	7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>04/07/02</u> 03:20:00	3.500	395.3	60.2	221.6	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3610.5	410.0	26.12	19.371
03:30:00	3.500	395.3	60.2	222.3	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3610.3	410.0	26.16	19.552
03:40:00	3.500	395.7	60.2	220.7	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3610.6	410.4	26.13	19.734
03:50:00	3.500	396.0	60.2	238.7	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3608.7	410.8	21.67	19.827
04:00:00	3.500	395.7	60.3	237.0	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3608.4	410.5	27.01	20.015
04:10:00	3.500	396.4	60.5	238.0	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3607.6	411.1	27.07	20.203
04:20:00	3.500	396.4	60.5	238.4	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3607.7	411.1	27.07	20.391
04:30:00	3.500	396.0	60.7	238.7	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.7	410.7	27.08	20.579
04:40:00	3.500	396.4	60.8	237.5	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.4	411.1	27.06	20.767
04:50:00	3.500	396.5	60.7	238.4	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.7	411.2	27.11	20.955
05:00:00	3.500	396.4	60.8	238.6	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.4	411.1	27.07	21.143
05:10:00	3.500	396.2	60.9	236.6	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.2	410.9	27.00	21.331
05:20:00	3.500	397.0	60.9	239.1	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.2	411.7	27.08	21.519
05:30:00	3.500	397.2	61.0	238.7	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3605.9	411.9	27.09	21.707
05:40:00	3.500	398.1	61.2	240.1	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3604.9	412.8	27.17	21.896
05:50:00	3.500	397.3	61.1	239.6	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3605.4	412.1	27.17	22.084
06:00:00	3.500	397.3	60.9	239.0	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.1	412.0	27.16	22.273
06:10:00	3.500	397.0	61.0	238.9	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3605.9	411.7	27.17	22.462
06:20:00	3.500	397.0	60.9	240.3	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.0	411.8	27.20	22.650
06:30:00	3.500	415.9	61.2	245.2	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.034	3610.6	430.6	27.51	22.840
06:40:00	3.500	393.2	61.1	239.4	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.032	3603.7	407.9	27.22	23.032
06:50:00	3.500	399.0	61.0	240.7	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3606.0	413.7	27.27	23.221
07:00:00	3.500	400.4	60.5	240.7	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3608.8	415.1	27.39	23.411
07:10:00	3.500	399.7	60.4	240.6	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3609.0	414.4	27.33	23.601
07:20:00	3.500	398.7	60.6	241.1	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3607.9	413.4	27.36	23.791
07:30:00	3.500	399.3	60.6	243.0	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.033	3607.7	414.0	27.42	23.981
07:40:00	3.500	408.0	60.6	247.2	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	0.999	1.306	1.034	3610.5	422.7	28.05	24.174
07:50:00	3.500	398.7	60.3	241.3	1.5	0.0	0.586	2695.1	1.0	0.993	1.0	1.0	1.000	1.306	1.033	3608.8	413.4	27.39	24.365
08:00:00	3.500	399.4	60.3	241.9	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	1.000	1.311	1.032	3619.9	414.1	27.38	24.555
08:10:00	3.500	400.3	60.5	243.3	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	1.000	1.311	1.033	3619.6	415.1	27.51	24.746
08:20:00	3.500	399.3	60.4	240.8	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	1.000	1.311	1.032	3619.8	414.0	27.48	24.937

Client	OM	DMV Australia Pty Ltd								xal En	gineer	M. D	onald /	N. Do	wdell				
Well No.	Pat	ricia-2							L	ocatio	n	Ocea	an Boui	nty					
Test No.	Cor	npletior	1						S	tart Da	ate	30/06	6 - 01/0	)7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>04/07/02</u> 08:30:00	3 500	401 3	60 5	243 5	15	0.0	0 582	2695 1	10	0 993	10	10	0 999	1 311	1 033	3619 5	416.0	27 54	25 128
08:40:00	3 500	404.8	60.9	243.3	1.5	0.0	0.502	2695.1	1.0	0.000	1.0	1.0	0.333	1 311	1.000	3619.9	419.5	27.63	25 320
08:50:00	3.500	390.2	61.0	236.8	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.032	3614.5	404.9	26.98	25.509
09:00:00	3.500	386.2	61.0	229.4	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.031	3614.1	401.0	26.34	25.692
09:10:00	3.500	391.9	60.7	235.9	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.032	3616.3	406.6	26.77	25.878
09:20:00	3.500	395.7	60.7	236.0	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.032	3617.6	410.4	27.05	26.065
09:30:00	3.500	399.3	60.6	238.1	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.032	3619.0	414.0	27.23	26.254
09:40:00	3.500	401.0	60.6	242.1	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.033	3619.5	415.7	27.55	26.445
09:50:00	3.500	402.0	60.5	241.1	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.033	3620.1	416.7	27.53	26.636
10:00:00	3.500	401.4	60.7	242.3	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.033	3619.2	416.1	27.59	26.827
10:10:00	3.500	401.7	60.6	242.1	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.033	3619.7	416.4	27.53	27.018
10:20:00	3.500	402.0	60.5	241.6	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.033	3620.1	416.7	27.61	27.210
10:30:00	3.500	402.3	60.4	241.6	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	1.000	1.311	1.033	3620.5	417.0	27.60	27.402
10:40:00	3.500	402.6	60.6	243.4	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	0.999	1.311	1.033	3619.9	417.3	27.61	27.593
10:50:00	3.500	403.0	60.5	243.2	1.5	0.0	0.582	2695.1	1.0	0.993	1.0	1.0	1.000	1.311	1.033	3620.4	417.8	27.62	27.785
11:00:00	0.000	3.7	33.0	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.4	0.00	27.862
11:10:00	0.000	2.7	45.7	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.4	0.00	27.862
11:20:00	0.000	3.2	50.7	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.0	0.00	27.862
11:30:00	0.000	3.2	52.8	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.0	0.00	27.862
11:40:00	0.000	3.2	53.9	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.0	0.00	27.862
11:50:00	0.000	2.9	54.6	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.6	0.00	27.862
12:00:00	0.000	2.7	55.1	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.4	0.00	27.862
12:10:00	0.000	3.1	55.6	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.8	0.00	27.862
12:20:00	0.000	3.4	55.9	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.1	0.00	27.862
12:30:00	0.000	3.1	56.0	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.8	0.00	27.862
12:40:00	0.000	2.9	56.4	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.6	0.00	27.862
12:50:00	0.000	2.9	56.6	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.6	0.00	27.862
13:00:00	0.000	2.9	56.6	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.6	0.00	27.862
13:10:00	0.000	2.7	56.9	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.4	0.00	27.862
13:20:00	0.000	3.1	57.3	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.8	0.00	27.862
13:30:00	0.000	3.4	57.4	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.1	0.00	27.862

Client	OM	V Austr	alia Pt	y Ltd					E	xal En	gineer	M. D	onald /	N. Do	wdell				
Well No.	Pati	ricia-2							L	ocatio	n	Ocea	an Bou	nty					
Test No.	Con	npletior	า						S	tart Da	ate	30/06	6 - 01/0	7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>04/07/02</u>																			
13:40:00	0.000	3.3	57.3	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.0	0.00	27.862
13:50:00	0.000	2.9	57.2	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.6	0.00	27.862
14:00:00	0.000	2.9	57.2	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.6	0.00	27.862
14:10:00	0.000	3.0	57.2	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.7	0.00	27.862
14:20:00	0.000	3.0	57.2	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.7	0.00	27.862
14:30:00	0.000	3.0	57.3	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	17.7	0.00	27.862
14:40:00	0.000	3.3	57.5	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.0	0.00	27.862
14:50:00	0.000	3.8	57.5	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.5	0.00	27.862
15:00:00	0.000	3.7	57.4	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.4	0.00	27.862
15:10:00	0.000	3.2	57.0	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.0	0.00	27.862
15:20:00	0.000	3.7	56.6	0.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	18.4	0.00	27.862
15:30:00	0.000	8.1	56.9	0.5	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	22.8	0.00	27.862
15:40:00	0.000	210.3	43.1	12.1	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	225.1	0.00	27.862
15:50:00	0.000	368.2	36.9	11.3	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	382.9	0.00	27.862
16:00:00	0.000	253.4	31.3	15.0	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	268.1	0.00	27.862
16:10:00	0.000	359.0	35.0	12.3	1.5	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	373.7	0.00	27.862
16:20:00	2.250	365.1	35.1	192.9	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.025	1.311	1.036	1437.6	379.8	6.08	27.883
16:30:00	2.250	365.4	35.8	207.2	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.024	1.311	1.035	1435.7	380.1	9.50	27.949
16:40:00	2.250	365.6	36.3	200.0	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.024	1.311	1.035	1435.2	380.3	9.57	28.015
16:50:00	2.250	364.1	36.6	203.3	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.023	1.311	1.035	1434.3	378.9	9.48	28.081
17:00:00	2.250	363.5	36.9	200.6	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.023	1.311	1.035	1433.9	378.2	9.44	28.147
17:10:00	2.250	364.3	37.1	206.2	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.023	1.311	1.035	1433.3	379.0	9.56	28.213
17:20:00	2.250	366.1	37.3	195.8	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.023	1.311	1.035	1433.8	380.8	9.53	28.279
17:30:00	2.250	365.1	37.3	207.3	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.023	1.311	1.035	1433.1	379.8	9.52	28.346
17:40:00	2.250	364.3	37.2	186.3	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.023	1.311	1.035	1434.1	379.0	9.43	28.411
17:50:00	2.250	364.9	37.2	191.6	1.5	0.0	0.582	1039.5	1.0	0.994	1.0	1.0	1.023	1.311	1.035	1433.9	379.6	9.46	28.477
18:00:00	2.250	363.7	37.1	206.2	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.023	1.309	1.035	1431.1	378.4	9.46	28.543
18:10:00	2.250	363.2	36.9	197.7	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.023	1.309	1.035	1431.8	378.0	9.48	28.609
18:20:00	2.250	363.1	36.9	209.1	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.023	1.309	1.035	1431.2	377.8	9.52	28.675
18:30:00	2.250	362.9	37.1	204.4	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.023	1.309	1.035	1431.1	377.6	9.57	28.741
18:40:00	2.250	363.8	36.9	207.2	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.023	1.309	1.035	1431.5	378.6	9.50	28.806

Client	OM	MV Australia Pty Ltd Exal Exal Exal Exal Exal Exal Exal Exal								xal En	gineer	M. D	onald /	N. Do	wdell				
Well No.	Patr	ricia-2							L	ocatio	'n	Ocea	in Bou	nty					
Test No.	Con	npletior	ı						S	tart Da	ate	30/06	6 - 01/0	)7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>04/07/02</u>																			
18:50:00	2.250	362.3	36.9	200.9	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.023	1.309	1.035	1431.5	377.0	9.46	28.872
19:00:00	2.250	363.4	37.3	208.9	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.023	1.309	1.035	1430.5	378.1	9.46	28.938
19:10:00	2.250	362.9	37.7	187.7	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.022	1.309	1.035	1430.8	377.6	9.44	29.003
19:20:00	2.250	364.3	37.9	196.8	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.022	1.309	1.035	1430.2	379.0	9.41	29.069
19:30:00	2.250	363.8	38.0	198.2	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.022	1.309	1.035	1429.9	378.5	9.34	29.134
19:40:00	2.250	363.0	38.1	194.9	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.022	1.309	1.035	1429.7	377.7	9.49	29.200
19:50:00	2.250	365.0	37.8	200.1	1.5	0.0	0.584	1039.5	1.0	0.994	1.0	1.0	1.022	1.309	1.035	1430.3	379.7	9.46	29.266
20:00:00	0.000	359.9	37.6	12.1	1.5	0.0	0.584	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	374.6	7.56	29.325
20:10:00	0.000	232.7	39.0	14.0	1.5	0.0	0.584	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	247.4	0.00	29.325
20:20:00	0.000	293.1	43.3	12.2	1.5	0.0	0.584	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	307.8	0.00	29.325
20:30:00	3.250	304.8	44.4	238.6	1.5	0.0	0.584	2276.6	1.0	0.991	1.0	1.0	1.015	1.309	1.028	3080.9	319.6	12.26	29.384
20:40:00	3.250	293.4	44.6	251.2	1.5	0.0	0.584	2276.6	1.0	0.990	1.0	1.0	1.015	1.309	1.027	3074.3	308.1	20.58	29.527
20:50:00	3.250	293.4	45.2	250.7	1.5	0.0	0.584	2276.6	1.0	0.990	1.0	1.0	1.015	1.309	1.027	3072.5	308.2	20.55	29.669
21:00:00	3.250	295.1	45.5	250.6	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.014	1.306	1.027	3067.4	309.8	20.56	29.812
21:10:00	3.250	295.8	45.8	250.8	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.014	1.306	1.027	3066.4	310.5	20.54	29.955
21:20:00	3.250	295.1	46.1	250.7	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.014	1.306	1.027	3065.0	309.9	20.55	30.097
21:30:00	3.250	296.7	46.5	250.7	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.013	1.306	1.027	3064.4	311.4	20.56	30.240
21:40:00	3.250	296.7	46.7	250.8	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.013	1.306	1.027	3063.5	311.4	20.53	30.383
21:50:00	3.250	296.4	46.9	250.2	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.013	1.306	1.027	3062.8	311.1	20.50	30.525
22:00:00	3.250	296.1	47.1	249.0	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.013	1.306	1.027	3062.1	310.8	20.52	30.668
22:10:00	3.250	296.6	47.3	249.6	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.012	1.306	1.027	3061.3	311.4	20.51	30.810
22:20:00	3.250	296.3	47.5	249.7	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.012	1.306	1.027	3060.5	311.1	20.50	30.953
22:30:00	3.250	296.6	47.6	251.3	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.012	1.306	1.027	3060.2	311.4	20.50	31.095
22:40:00	3.250	296.7	47.7	250.2	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.012	1.306	1.027	3059.9	311.4	20.51	31.238
22:50:00	3.250	295.6	48.0	252.5	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.012	1.306	1.027	3058.4	310.4	20.50	31.380
23:00:00	3.250	295.1	48.0	251.7	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.012	1.306	1.027	3058.2	309.9	20.49	31.522
23:10:00	3.250	295.8	48.1	250.4	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.012	1.306	1.027	3058.2	310.5	20.49	31.664
23:20:00	3.250	295.8	48.3	249.3	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.012	1.306	1.027	3057.8	310.6	20.47	31.807
23:30:00	3.250	295.6	48.5	250.7	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.027	3056.8	310.4	20.45	31.949
23:40:00	3.250	295.2	48.6	250.5	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3056.3	309.9	20.43	32.091
23:50:00	3.250	295.0	48.5	249.5	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3056.6	309.8	20.43	32.233

Client	OM	V Austr	alia Pt	y Ltd					E	xal En	gineer	M. D	onald /	N. Dov	vdell				
Well No.	Patr	ricia-2							L	ocatio	n	Ocea	ın Boui	nty					
Test No.	Con	npletior	ו						S	tart Da	ate	30/06	6 - 01/0	7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>05/07/02</u>																			
00:00:00	3.250	294.7	48.7	248.9	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3055.9	309.4	20.39	32.374
00:10:00	3.250	295.0	48.8	249.9	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3055.5	309.8	20.40	32.516
00:20:00	3.250	295.1	48.9	248.0	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3055.4	309.9	20.36	32.657
00:30:00	3.250	291.8	48.9	250.9	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3054.0	306.5	20.34	32.798
00:40:00	3.250	292.0	49.0	250.5	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3053.7	306.7	20.32	32.939
00:50:00	3.250	294.5	49.2	246.9	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3054.4	309.2	20.30	33.080
01:00:00	3.250	294.0	49.2	249.1	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3053.7	308.7	20.27	33.221
01:10:00	3.250	294.7	49.3	246.8	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.011	1.306	1.026	3054.2	309.4	20.27	33.362
01:20:00	3.250	294.7	49.4	246.2	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.010	1.306	1.026	3053.8	309.4	20.28	33.503
01:30:00	3.250	293.7	49.4	249.4	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.010	1.306	1.026	3052.9	308.4	20.26	33.643
01:40:00	3.250	293.5	49.3	248.3	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.010	1.306	1.026	3053.4	308.2	20.31	33.784
01:50:00	3.250	292.4	49.5	249.1	1.5	0.0	0.586	2276.6	1.0	0.990	1.0	1.0	1.010	1.306	1.026	3052.1	307.1	20.25	33.925
02:00:00	0.000	286.9	49.5	14.3	1.5	0.0	0.586	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	301.7	12.14	34.038
02:10:00	0.000	374.9	56.4	13.8	1.5	0.0	0.586	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	389.6	0.00	34.038
02:20:00	0.000	381.7	59.2	13.0	1.5	0.0	0.586	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	396.4	0.00	34.038
02:30:00	3.750	388.9	60.5	177.8	1.5	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	1.000	1.306	1.032	4250.6	403.7	27.25	34.161
02:40:00	3.750	392.4	61.1	175.3	1.5	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.999	1.306	1.032	4249.2	407.1	27.27	34.350
02:50:00	3.750	393.2	61.5	178.1	1.5	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.999	1.306	1.032	4247.2	407.9	27.42	34.541
03:00:00	3.750	394.3	61.8	175.8	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.998	1.306	1.032	4247.4	409.0	27.45	34.731
03:10:00	3.750	394.9	62.1	177.0	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.998	1.306	1.032	4246.0	409.6	27.45	34.922
03:20:00	3.750	396.0	62.2	178.6	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.998	1.306	1.032	4245.5	410.7	27.55	35.113
03:30:00	3.750	396.0	62.3	180.0	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.998	1.306	1.032	4244.8	410.7	27.61	35.305
03:40:00	3.750	396.6	62.5	178.9	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.998	1.306	1.032	4244.1	411.3	27.63	35.497
03:50:00	3.750	397.3	62.5	180.3	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.998	1.306	1.032	4244.6	412.1	27.67	35.689
04:00:00	3.750	398.9	62.7	181.1	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4243.9	413.6	27.78	35.882
04:10:00	3.750	399.0	62.9	179.1	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4243.3	413.8	27.82	36.075
04:20:00	3.750	399.3	62.8	181.9	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4243.6	414.0	27.83	36.268
04:30:00	3.750	399.3	62.7	178.9	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4244.2	414.0	27.84	36.461
04:40:00	3.750	399.7	62.6	181.0	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4244.5	414.4	27.90	36.655
04:50:00	3.750	399.7	62.9	181.8	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4243.3	414.4	27.95	36.849
05:00:00	3.750	400.3	63.0	181.1	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4243.2	415.0	27.88	37.042

Client	OM	V Austr	alia Pt	y Ltd					E	xal En	gineer	M. D	onald /	N. Dov	wdell				
Well No.	Patr	icia-2							L	ocatio	n	Ocea	an Boui	nty					
Test No.	Con	npletior	ו						S	tart Da	ate	30/06	6 - 01/0	7/2002	2				
Time hh:mm:ss	Orifice ins	GasP PSIG	GasT °F	GasD INWG	Co2 mol%	H2S ppm	GasSG fact	GasFb fact	GasFr fact	GasY fact	GasFpb fact	GasFtb fact	GasFtf fact	GasFgr fact	GasFpv fact	GasC fact	GasPf PSIA	QGas1av MM/d	Gas1Cum MMcf
<u>05/07/02</u>																			
05:10:00	3.750	400.9	62.9	179.6	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4243.9	415.7	27.87	37.236
05:20:00	3.750	401.0	62.9	181.5	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4243.7	415.7	27.92	37.430
05:30:00	3.750	400.2	62.9	180.9	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4243.3	414.9	27.95	37.624
05:40:00	3.750	400.4	63.1	182.7	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4242.3	415.1	27.96	37.818
05:50:00	3.750	400.6	63.3	181.1	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.7	415.4	27.92	38.012
06:00:00	3.750	400.6	63.3	181.3	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.6	415.4	27.90	38.206
06:10:00	3.750	401.6	63.3	180.0	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4242.0	416.4	27.94	38.400
06:20:00	3.750	401.4	63.4	180.8	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.4	416.1	27.96	38.594
06:30:00	3.750	401.2	63.5	180.7	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.1	415.9	27.92	38.788
06:40:00	3.750	400.6	63.4	181.1	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.1	415.4	27.96	38.982
06:50:00	3.750	400.6	63.5	184.0	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4240.4	415.4	27.98	39.177
07:00:00	3.750	400.6	63.4	181.6	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.0	415.3	27.95	39.371
07:10:00	3.750	401.9	63.4	181.6	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.7	416.7	27.99	39.565
07:20:00	3.750	401.7	63.3	181.1	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.8	416.4	28.03	39.760
07:30:00	3.750	401.4	63.5	181.6	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.0	416.1	27.96	39.954
07:40:00	3.750	401.6	63.5	183.2	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4240.5	416.3	28.04	40.149
07:50:00	3.750	401.6	63.5	182.3	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4240.7	416.4	28.02	40.344
08:00:00	3.750	401.6	63.5	182.7	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.0	416.4	28.06	40.538
08:10:00	3.750	401.3	63.4	181.4	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.2	416.0	27.89	40.732
08:20:00	3.750	401.5	63.5	180.8	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4240.9	416.2	28.00	40.927
08:30:00	3.750	401.7	63.4	184.2	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4240.9	416.4	28.05	41.121
08:40:00	3.750	402.7	63.5	182.3	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4241.4	417.4	28.02	41.316
08:50:00	3.750	401.3	63.5	182.8	1.3	0.0	0.586	3172.2	1.0	0.994	1.0	1.0	0.997	1.306	1.033	4240.5	416.0	27.94	41.510
09:00:00	3.750	401.4	63.6	181.3	1.3	0.0	0.582	3172.2	1.0	0.994	1.0	1.0	0.997	1.311	1.032	4253.3	416.1	28.06	41.705
09:10:00	3.750	400.9	63.7	182.8	1.3	0.0	0.582	3172.2	1.0	0.994	1.0	1.0	0.996	1.311	1.032	4252.5	415.7	28.07	41.900
09:20:00	3.750	401.3	63.5	183.4	1.3	0.0	0.582	3172.2	1.0	0.994	1.0	1.0	0.997	1.311	1.032	4253.3	416.0	28.09	42.095
09:30:00	3.750	401.6	63.9	180.3	1.3	0.0	0.582	3172.2	1.0	0.994	1.0	1.0	0.996	1.311	1.032	4252.1	416.3	28.07	42.290
09:40:00	3.750	402.9	63.7	183.0	1.3	0.0	0.582	3172.2	1.0	0.994	1.0	1.0	0.996	1.311	1.032	4253.2	417.6	28.14	42.486
09:50:00	3.750	402.5	63.7	181.9	1.3	0.0	0.582	3172.2	1.0	0.994	1.0	1.0	0.996	1.311	1.032	4253.1	417.3	28.13	42.681
10:00:00	0.000	400.8	64.6	181.7	1.3	0.0	0.582	0.0	0.0	0.000	0.0	0.0	0.000	0.000	0.000	0.0	415.6	22.55	42.857

### SAMPLE LISTING



QAD 065 Rev. 4 Issued Oct 1994

Client:	OMV Austr	alia		Well No:	Patricia-2		Field:	Vic/L21
Test:	Completion	า		Rig:	Ocean Bounty		Job No:	J02/188
Sample No.	Test No.	Time	Date	Nature	Sampling Points	Container Description/ Sample Volume	Cylinder No.	Comments
1-1	Completion	15:00	03/07/2002	Water	Water Line	500ml Pyrex	1-1	
1-2	Completion	15:00	03/07/2002	Water	Water Line	5lt Steel Drum	1-2	
1-3	Completion	17:00	03/07/2002	Water	Water Line	500ml Pyrex	1-3	
1-4	Completion	17:00	03/07/2002	Water	Water Line	5lt Steel Drum	1-4	
1-5	Completion	19:00	03/07/2002	Water	Water Line	500ml Pyrex	1-5	
1-6	Completion	19:00	03/07/2002	Water	Water Line	5lt Steel Drum	1-6	
1-7	Completion	21:00	03/07/2002	Water	Water Line	500ml Pyrex	1-7	
1-8	Completion	21:00	03/07/2002	Water	Water Line	5lt Steel Drum	1-8	
1-9	Completion	23:00	03/07/2002	Water	Water Line	500ml Pyrex	1-9	
1-10	Completior	23:00	03/07/2002	Water	Water Line	4lt Steel Drum	1-10	
1-11	Completion	01:00	04/07/2002	Water	Water Line	500ml Pyrex	1-11	
1-12	Completion	01:00	04/07/2002	Water	Water Line	4lt Steel Drum	1-12	
1-13	Completion	03:00	04/07/2002	Water	Water Line	500ml Pyrex	1-13	
1-14	Completion	03:00	04/07/2002	Water	Water Line	4lt Steel Drum	1-14	
1-15	Completion	05:00	04/07/2002	Water	Water Line	500ml Pyrex	1-15	
1-16	Completion	05:00	04/07/2002	Water	Water Line	4lt Steel Drum	1-16	
1-17	Completion	07:00	04/07/2002	Water	Water Line	500ml Pyrex	1-17	
1-18	Completion	07:00	04/07/2002	Water	Water Line	4lt Steel Drum	1-18	
1-19	Completion	17:30	04/07/2002	Sep Gas	Sep Gas Line	20 Litre Luxfer	2357-CI-F	

### SAMPLE LISTING



QAD 065 Rev. 4 Issued Oct 1994

Client:	OMV Australia Completion			Well No:	Patricia-2		Field:	Vic/L21
Test:	Completion	า		Rig:	Ocean Bounty		Job No:	J02/188
Sample No.	Test No.	Time	Date	Nature	Sampling Points	Container Description/ Sample Volume	Cylinder No.	Comments
1-20	Completior	17:45	04/07/2002	Sep Gas	Sep Gas Line	20 Litre Luxfer	3416-CI-F	
1-21	Completior	23:00	04/07/2002	Sep Gas	Sep Gas Line	20 Litre Luxfer	0687-CI-F	
1-22	Completior	23:00	04/07/2002	Water	Water Line	500ml Pyrex	1-22	
1-23	Completior	23:00	04/07/2002	Water	Water Line	5lt Steel Drum	1-23	
1-24	Completior	09:55	05/07/2002	Water	Water Line	500ml Pyrex	1-24	



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-1	Cylinder No:	1-1
IDENTIFICATION	<u>N</u>	FINAL TRANSPORTATION CONDITION	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	: 03/07/2002	Sample Volume	: 500mls
Time Start/Finish	: 15:00 - 15:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flov	vrates (averaged) entered manually	<u>Sample Taken By:</u> from 3rd Party systems.	EXAL
Production Con	ditions supplied by Well Test Company	EXPRO	



Client: OMV Test: Com Field: Vic/L: Sample No: 1-2	V Australia		
Test:CompField:Vic/L.Sample No:1-2IDENTIFICATION Sample Nature Date of Sampling Time Start/Finish Sampling PointImage: Comment Sector Secto	v / tuoti ullu	Well No:	Patricia-2
Field:       Vic/L         Sample No:       1-2         IDENTIFICATION       Sample Nature         Date of Sampling       Image: Sampling Point         Time Start/Finish       Sampling Point	npletion	Rig:	Ocean Bounty
Sample No: 1-2 IDENTIFICATION Sample Nature Date of Sampling Time Start/Finish Sampling Point COMMENTS	L21	Perforations:	
IDENTIFICATION Sample Nature Date of Sampling Time Start/Finish Sampling Point		Cylinder No:	1-2
Sample Nature Date of Sampling Time Start/Finish Sampling Point <u>COMMENTS</u>		FINAL TRANSPORTATION CONDITIONS	
Date of Sampling Time Start/Finish Sampling Point COMMENTS	: Water	Sample Container Type / Volume	: 5lt Steel Drum
Time Start/Finish Sampling Point COMMENTS	: 03/07/2002	Sample Volume	: 5 Litres
Sampling Point <u> COMMENTS</u>	: 15:00 - 15:15	H2S Concentration	:
COMMENTS	: Water Line	Liquid Gravity	:
Data and Flowrates	s (averaged) entered manually fron	<u>Sample Taken By:</u> n 3rd Party systems.	EXAL
Production Conditions	s supplied by Well Test Company	EXPRO	



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-3	Cylinder No:	1-3
IDENTIFICATION	<u>N</u>	FINAL TRANSPORTATION CONDITI	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	: 03/07/2002	Sample Volume	: 500mls
Time Start/Finish	: 17:00 - 17:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flov	vrates (averaged) entered manual	<u>Sample Taken By:</u> Ily from 3rd Party systems.	EXAL
		EVEDO	
Production Con	ditions supplied by Well Test Company	EXPRO	

## THE GROUP

PRO

QAD 070

## ATMOSPHERIC SAMPLE

AIMOSPHERIC SAMPLE		Rev. 6	Issued Jul 2000	
Client:	OMV Australia	Well No:	Patricia-2	
Test:	Completion	Rig:	Ocean Bounty	
Field:	Vic/L21	Perforations:		
Sample No:	1-4	Cylinder No:	1-4	

### IDENTIFICATION

Sample Nature	:	Water
Date of Sampling	:	03/07/2002
Time Start/Finish	:	17:00 - 17:15
Sampling Point	•	Water Line

### FINAL TRANSPORTATION CONDITIONS

Sample Container Type / Volume	: 5lt Steel Drum
Sample Volume	: 5 Litres
H2S Concentration	:
Liquid Gravity	:

### COMMENTS

Sample Taken By:

EXAL

Data and Flowrates (averaged) entered manually from 3rd Party systems.

Production Conditions supplied by Well Test Company

**EXPRO** 



### **QAD 070** ATMOSPHERIC SAMPLE Rev. 6 Issued Jul 2000 **OMV** Australia Well No: Patricia-2 **Client:** Test: Completion Rig: Ocean Bounty Field: Vic/L21 **Perforations:** Sample No: 1-5 **Cylinder No:** 1-5 IDENTIFICATION FINAL TRANSPORTATION CONDITIONS 500ml Pyrex Sample Nature : Water Sample Container Type / Volume : Date of Sampling 03/07/2002 500mls Sample Volume : : Time Start/Finish : 19:00 - 19:15 H2S Concentration : Sampling Point ÷ Water Line Liquid Gravity · COMMENTS EXAL Sample Taken By: Data and Flowrates (averaged) entered manually from 3rd Party systems. Production Conditions supplied by Well Test Company **EXPRO**

# SERVICES

### THE EXPRO GROUP

### **QAD 070** ATMOSPHERIC SAMPLE Rev. 6 Issued Jul 2000 **OMV** Australia Well No: Patricia-2 **Client:** Test: Completion Rig: Ocean Bounty Field: Vic/L21 **Perforations:** Sample No: 1-6 **Cylinder No:** 1-6 IDENTIFICATION FINAL TRANSPORTATION CONDITIONS 5lt Steel Drum Sample Nature : Water Sample Container Type / Volume : Date of Sampling 03/07/2002 Sample Volume : 5 Litres : Time Start/Finish : 19:00 - 19:15 H2S Concentration : Sampling Point Water Line Liquid Gravity • ٠ COMMENTS EXAL Sample Taken By: Data and Flowrates (averaged) entered manually from 3rd Party systems. Production Conditions supplied by Well Test Company **EXPRO**

## EXPRO GROUP

Rev. 6

QAD 070

Issued Jul 2000

## ATMOSPHERIC SAMPLE

Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-7	Cylinder No:	1-7
IDENTIFICATIO	N	FINAL TRANSPORTATION CONDITI	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	3 : 03/07/2002	Sample Volume	: 500mls
Time Start/Finish	: 21:00 - 21:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	<u> </u>
COMMENTS		Sample Taken By:	ΕΥΛΙ
Data and Flov	wrates (averaged) entered man	ually from 3rd Darty systems	
Data and Fior	viales (averaged) entered man	any noni sia Party systems.	
4			

Production Conditions supplied by Well Test Company

EXPRO



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-8	Cylinder No:	1-8
IDENTIFICATION		FINAL TRANSPORTATION CONDITION	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 5lt Steel Drum
Date of Sampling	: 03/07/2002	Sample Volume	: 5 Litres
Time Start/Finish	: 21:00 - 21:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flov	vrates (averaged) entered manually	<u>Sample Taken By:</u> from 3rd Party systems.	EXAL
Production Con	ditions supplied by Well Test Company	EXPRO	
### THE EXPRO GROUP

Rev. 6

QAD 070

Issued Jul 2000

# ATMOSPHERIC SAMPLE

Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-9	Cylinder No:	1-9
IDENTIFICATIO	N	FINAL TRANSPORTATION CONDITI	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	: 03/07/2002	Sample Volume	: 500mls
Time Start/Finish	: 23:00 - 23:15	H2S Concentration	
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS		Sample Taken By:	EXAL
Data and Flow	wrates (averaged) entered man	ually from 3rd Party systems.	

Production Conditions supplied by Well Test Company

EXPRO



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-10	Cylinder No:	1-10
IDENTIFICATION		FINAL TRANSPORTATION CONDITION	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 4lt Steel Drum
Date of Sampling	: 03/07/2002	Sample Volume	: 4 Litres
Time Start/Finish	: 23:00 - 23:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flow	rrates (averaged) entered manual	<u>Sample Taken By:</u> lly from 3rd Party systems.	EXAL
Production Cond	litions supplied by Well Test Company	EXPRO	



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-11	Cylinder No:	1-11
IDENTIFICATION	<u>N</u>	FINAL TRANSPORTATION CONDITION	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	: 04/07/2002	Sample Volume	: 500
Time Start/Finish	: 01:00 - 01:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flov	vrates (averaged) entered manually f	<u>Sample Taken By:</u> from 3rd Party systems.	EXAL
Production Con	ditions supplied by Well Test Company	EXPRO	



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-12	Cylinder No:	1-12
IDENTIFICATIO	N	FINAL TRANSPORTATION CONDITION	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 4lt Steel Drum
Date of Sampling	g : 04/07/2002	Sample Volume	: 4 Litres
Time Start/Finish	i 01:00 - 01:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flow	wrates (averaged) entered manually	<u>Sample Taken By:</u> from 3rd Party systems.	EXAL



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-13	Cylinder No:	1-13
IDENTIFICATIO	<u>v</u>	FINAL TRANSPORTATION CONDITI	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	: 04/07/2002	Sample Volume	: 500mls
Time Start/Finish	: 03:00 - 03:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flov	vrates (averaged) entered manual	<u>Sample Taken By:</u> lly from 3rd Party systems.	EXAL
Production Con	ditions supplied by Well Test Company	EXPRO	



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-14	Cylinder No:	1-14
IDENTIFICATION	1	FINAL TRANSPORTATION CONDITION	DNS
Sample Nature	: Water	Sample Container Type / Volume	: 4lt Steel Drum
Date of Sampling	: 04/07/2002	Sample Volume	: 4 Litres
Time Start/Finish	: 03:00 - 03:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flov	rates (averaged) entered manually	<u>Sample Taken By:</u> from 3rd Party systems.	EXAL
Production Con	litions supplied by Well Test Company	EXPRO	

: 05:00 - 05:15

Water Line

### THE EXPRO GROUP

Rev. 6

QAD 070

Issued Jul 2000

# ATMOSPHERIC SAMPLE

1

Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-15	Cylinder No:	1-15
IDENTIFICATIO	N	FINAL TRANSPORTATION CONDITI	IONS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	: 04/07/2002	Sample Volume	: 500mls

H2S Concentration

Liquid Gravity

COMMENTS

Time Start/Finish

Sampling Point

Sample Taken By:

EXAL

:

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Data and Flowrates (averaged) entered manually from 3rd Party systems.

Production Conditions supplied by Well Test Company

EXPRO



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-16	Cylinder No:	1-16
IDENTIFICATIO	<u>N</u>	FINAL TRANSPORTATION CONDITION	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 4lt Steel Drum
Date of Sampling	: 04/07/2002	Sample Volume	: 4 Litres
Time Start/Finish	: 05:00 - 05:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flov	vrates (averaged) entered manually	<u>Sample Taken By:</u> from 3rd Party systems.	EXAL
Production Con	ditions supplied by Well Test Company	EXPRO	



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-17	Cylinder No:	1-17
IDENTIFICATION	<u>i</u>	FINAL TRANSPORTATION CONDITI	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	: 04/07/2002	Sample Volume	: 500mls
Time Start/Finish	: 07:00 - 07:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flow	vrates (averaged) entered manua	<u>Sample Taken By:</u> lly from 3rd Party systems.	EXAL
Production Con	ditions supplied by Well Test Company	e EXPRO	



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-18	Cylinder No:	1-18
IDENTIFICATION	N	FINAL TRANSPORTATION CONDITION	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 4lt Steel Drum
Date of Sampling	: 04/07/2002	Sample Volume	: 4 Litres
Time Start/Finish	: 07:00 - 07:15	H2S Concentration	:
Sampling Point	: Water Line	Liquid Gravity	:
COMMENTS Data and Flov	wrates (averaged) entered manually fr	<u>Sample Taken By:</u> om 3rd Party systems.	EXAL
Production Con	ditions supplied by Well Test Company	EXPRO	

# SURFACE SAMPLE

**QAD 066** 

Rev. 6 Issued Feb 2000 **Client: OMV** Australia Well No: Patricia-2 Test: Completion Rig: Ocean Bounty Field: Vic/L21 **Perforations:** Sample No: 1-19 **Cylinder No:** 2357-CI-F IDENTIFICATION FINAL TRANSPORTATION CONDITIONS Sep Gas : 20 Litre Luxfer Sample Nature Sample Cylinder Type 04/07/2002 Date of Sampling Volume of Cylinder 20 Litres · · Time Start/Finish 17:30 - 17:45 20 Litres : Sample Volume : Sampling Point • Sep Gas Line Volume H2O removed for Gas Cap • n/a Volume H20 left in Cylinder n/a Final Pressure : 364psig Final Temperature 37 · SAMPLING CONDITIONS **COUPLED WITH SAMPLES** in Cylinder No. 3416-CI-F Sampling Pressure : 364psig Sample No. 1-20 Sampling Temperature : 37degF Sampling Method : Evacuated Cylinder Sampling Duration 15min(s) PRODUCTION CONDITIONS DURING SAMPLING Bottom Hole Pressure : 9.51MM/scf Gas prodn. rate st std. conditions · Bottom Hole Temperature Gas gravity (Air = 1) : 0.582 : at Depth : Gas line pressure • 365psig Date/Time : Gas line temperature 37DegF 1.035 Fpv (supercompressibility factor) : Wellhead Pressure : 942psig Fb (basic orifice factor) · 1039.5 Wellhead Temperature : 66DegF Stock tank oil prodn. rate at std. conditions · n/a Corrected by (shrinkage tester or tank) n/a Separator Pressure 365psig Shrinkage factor used n/a · Separator Temperature : 37DegF Separator oil production rate n/a Meter factor used : n/a : 2mol% Carbon Dioxide (CO2) Oil gravity at 60 degF · n/a Hydrogen Sulphide (H2S) : Oppm Oil line temperature n/a Base Sediment Water production rate at separator conds. 0 · & Water (BS&W) : 0 Separator gas oil ratio (GOR) : n/a Separator condensate gas ratio (CGR) : n/a STANDARD CONDITIONS Stock tank gas oil ratio (GOR) : n/a Pressure : 14.73 psiA Stock tank condensate gas ratio (CGR) : n/a Temperature : 60 degF Well producing through choke size 40/64" : Time elapsed since stabilisation : 1 hour EXPRO Well Testing Company

#### COMMENTS

Sample taken by:

EXAL

# SURFACE SAMPLE

**QAD 066** 

Rev. 6 Issued Feb 2000 **Client: OMV** Australia Well No: Patricia-2 Test: Completion Rig: Ocean Bounty Field: Vic/L21 **Perforations:** Sample No: 1-20 **Cylinder No:** 3416-CI-F IDENTIFICATION FINAL TRANSPORTATION CONDITIONS Sep Gas : 20 Litre Luxfer Sample Nature Sample Cylinder Type 04/07/2002 Date of Sampling Volume of Cylinder 20 Litres · · Time Start/Finish 17:45 - 18:00 20 Litres : Sample Volume : Sampling Point • Sep Gas Line Volume H2O removed for Gas Cap • n/a Volume H20 left in Cylinder n/a Final Pressure 364psig Final Temperature 37DegF SAMPLING CONDITIONS **COUPLED WITH SAMPLES** in Cylinder No. 2357-CI-F Sampling Pressure : 364psig Sample No. 1-19 Sampling Temperature : 37DegF Sampling Method : Evacuated Cylinder Sampling Duration 15min(s) PRODUCTION CONDITIONS DURING SAMPLING Bottom Hole Pressure : 9.46MM/scf Gas prodn. rate st std. conditions · Bottom Hole Temperature Gas gravity (Air = 1) 0.584 : : at Depth : Gas line pressure • 364psig Date/Time : Gas line temperature 37DegF 1.035 Fpv (supercompressibility factor) : Wellhead Pressure : 941psig Fb (basic orifice factor) · 1039.5 Wellhead Temperature : 66DegF Stock tank oil prodn. rate at std. conditions · n/a Corrected by (shrinkage tester or tank) n/a Separator Pressure 364psig Shrinkage factor used n/a · Separator Temperature : 37DegF Separator oil production rate n/a Meter factor used : n/a : 2mol% Carbon Dioxide (CO2) Oil gravity at 60 degF · n/a Hydrogen Sulphide (H2S) : Oppm Oil line temperature n/a Base Sediment Water production rate at separator conds. 0 · & Water (BS&W) : 0 Separator gas oil ratio (GOR) : n/a Separator condensate gas ratio (CGR) : n/a STANDARD CONDITIONS Stock tank gas oil ratio (GOR) : n/a Pressure : 14.73 psiA Stock tank condensate gas ratio (CGR) : n/a Temperature : 60 degF Well producing through choke size 40 : Time elapsed since stabilisation : 1.25 hours Well Testing Company EXPRO ·

#### COMMENTS

Sample taken by:

EXAL

# SURFACE SAMPLE

**QAD 066** 

Rev. 6 Issued Feb 2000 **Client: OMV** Australia Well No: Patricia-2 Test: Completion Rig: Ocean Bounty Field: Vic/L21 **Perforations:** Sample No: 1-21 **Cylinder No:** 0687-CI-F IDENTIFICATION FINAL TRANSPORTATION CONDITIONS Sep Gas : 20 Litre Luxfer Sample Nature Sample Cylinder Type 04/07/2002 Date of Sampling Volume of Cylinder 20 Litres · · Time Start/Finish 23:00 - 23:15 20 Litres : Sample Volume : Sampling Point • Sep Gas Line Volume H2O removed for Gas Cap • n/a Volume H20 left in Cylinder n/a Final Pressure 296psig 48DegF Final Temperature SAMPLING CONDITIONS **COUPLED WITH SAMPLES** Sampling Pressure : 295psig Sample No. in Cylinder No. Sampling Temperature : 48DegF Sampling Method : Evacuated Cylinder Sampling Duration 15min(s) PRODUCTION CONDITIONS DURING SAMPLING Bottom Hole Pressure : 20.5MM/scf Gas prodn. rate st std. conditions · Bottom Hole Temperature Gas gravity (Air = 1) 0.586 : : at Depth : Gas line pressure • 296psig Date/Time : Gas line temperature 48DegF 1.027 Fpv (supercompressibility factor) : Wellhead Pressure : 802psig Fb (basic orifice factor) : 2276.6 Wellhead Temperature : 76DegF Stock tank oil prodn. rate at std. conditions · n/a Corrected by (shrinkage tester or tank) n/a Separator Pressure : 296psig Shrinkage factor used n/a · Separator Temperature : 48DegF Separator oil production rate n/a : Meter factor used : n/a : 1.5%vol Carbon Dioxide (CO2) Oil gravity at 60 degF • n/a Hydrogen Sulphide (H2S) : Oppm Oil line temperature n/a Base Sediment Water production rate at separator conds. 19b/d · & Water (BS&W) : 0 Separator gas oil ratio (GOR) : n/a Separator condensate gas ratio (CGR) : n/a STANDARD CONDITIONS Stock tank gas oil ratio (GOR) : n/a Pressure : 14.73 psiA Stock tank condensate gas ratio (CGR) : n/a Temperature : 60 degF Well producing through choke size 64 : Time elapsed since stabilisation : 5.75 Hours Well Testing Company EXPRO

#### COMMENTS

Sample taken by:

EXAL



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-22	Cylinder No:	1-22
IDENTIFICATION	N	FINAL TRANSPORTATION CONDITIO	NS
Sample Nature	: Water	Sample Container Type / Volume	: 500ml Pyrex
Date of Sampling	: 04/07/2002	Sample Volume	: 500mls
Time Start/Finish	: 23:00 - 23:15	H2S Concentration	: 0
Sampling Point	: Water Line	Liquid Gravity	: 1.083
<u>COMMENTS</u>		Sample Taken By:	EXAL
Production Con	ditions supplied by Well Test Company	EXPRO	



ATMOS	PHERIC SAMPLE		QAD 070 Rev. 6 Issued Jul 2000
Client:	OMV Australia	Well No:	Patricia-2
Test:	Completion	Rig:	Ocean Bounty
Field:	Vic/L21	Perforations:	
Sample No:	1-23	Cylinder No:	1-23
IDENTIFICATIO	N	FINAL TRANSPORTATION CONDITION	ONS
Sample Nature	: Water	Sample Container Type / Volume	: 5lt Steel Drum
Date of Sampling	g : 04/07/2002	Sample Volume	: 5 Litres
Time Start/Finish	: 23:00 - 23:15	H2S Concentration	: 0
Sampling Point	: Water Line	Liquid Gravity	: 1.083
<u>COMMENTS</u>		<u>Sample Taken By:</u>	EXAL
Production Con	ditions supplied by Well Test Company	EXPRO	



ATMOS	PHEF	RIC SAMPLE			Rev. 6	QAD 070 Issued Jul 2000
Client:	OMV A	ustralia	Well No:	Pati	ricia-2	
Test:	Comple	tion	Rig:	Oce	an Bounty	
Field:	Vic/L21		Perforations:			
Sample No:	1-24		Cylinder No:	1-24	1	
IDENTIFICATION	N		FINAL TRANSPORTATION CONDITIO	<u>DNS</u>		
Sample Nature	:	Water	Sample Container Type / Volume	:	5lt Steel D	)rum
Date of Sampling	; ,	05/07/2002	Sample Volume	:	500mls	
Time Start/Finish	:	09:55	H2S Concentration	:	0	
Sampling Point	:	Water Line	Liquid Gravity	:	1.083	
<u>COMMENTS</u>			Sample Taken By:	EXA	L	
Production Con	ditions su	oplied by Well Test Company	EXPRO			





### **DISK INFORMATION**

Client :	OMV Australia Pty Ltd.	Well No. :	Patricia-2
Test :	Completion	Date :	30/6 - 06/07/2002

#### PATRICIA2\_EVENTS.TXT

A diary of events. In particular all information on events which affect the readings of the transducers is recorded, eg opening of valves, power shut-downs, bleeding of lines, etc.

#### WELLHEAD.TAB

Contains the raw data readings taken from sensors on the choke manifold and annulus throughout the complete test period

Column 1	:	Date	dd/mm/yy
Column 2	:	Time	hh:mm:ss
Column 3	:	Up Choke Pressure	psia
Column 4	:	Up Choke Temperature	degF
Column 5	:	Down Choke Pressure	psig
Column 6	:	Down Choke Temperature	degF
Column 7	:	Annulus Pressure	psig

#### FINALRAWDATA.TAB

Contains the raw data readings taken from sensors on the choke manifold, annulus and separator throughout the complete test period.

:	Date	dd/mm/yy
:	Time	hr:min:sec
:	Choke size	/64th
:	Orifice	inches
:	Gas SG	fact
:	Oil SG	fact
:	Up Choke Pressure	psia
:	Up Choke Temperature	degF
:	Down Choke Pressure	psig
:	Down Choke Temperature	degF
:	Annulus Pressure	psig
:	Gas Pressure	psig
:	Gas Temperature	degF
:	Gas Differential	inHg
:	Oil Temperature	degF
:	Heater Pressure	psig
:	Heater Temperature	degF
:	Condensate Rate	bbl/d
:	Condensate Cummulative	Bbls
:	Water Rate	bbl/d
:	Water Cummulative	Bbls
:	Average Gas Rate	Mmscf/d
:	Gas Cummulative	Mmscf
:	Condensate Gas Ratio (CGR)	Bbls/MMscf
:	Water Gas Ratio (WGR)	Bbls/MMscf
:	Sand Impact Rate	I/sec
:	Sand Rate	gms/hr
		<ul> <li>Date</li> <li>Time</li> <li>Choke size</li> <li>Orifice</li> <li>Gas SG</li> <li>Oil SG</li> <li>Up Choke Pressure</li> <li>Up Choke Pressure</li> <li>Down Choke Pressure</li> <li>Down Choke Temperature</li> <li>Down Choke Temperature</li> <li>Gas Pressure</li> <li>Gas Pressure</li> <li>Gas Differential</li> <li>Oil Temperature</li> <li>Heater Pressure</li> <li>Heater Temperature</li> <li>Condensate Rate</li> <li>Condensate Cummulative</li> <li>Water Rate</li> <li>Water Cummulative</li> <li>Average Gas Rate</li> <li>Gas Cummulative</li> <li>Condensate Gas Ratio (CGR)</li> <li>Water Gas Ratio (WGR)</li> <li>Sand Impact Rate</li> </ul>





# **DISK INFORMATION**

Client :	OMV Australia Pty Ltd.	Well No. :	Patricia-2
Test :	Completion	Date :	30/6 - 06/07/2002

### GASCAL.TAB

Contains the oil calculation factors and manual inputs for main flow period.

Column 1	:	Date	dd/mm/yy
Column 2	:	Time	hr:min:sec
Column 3	:	Orifice	inches
Column 4	:	Gas Pressure	psig
Column 5	:	Gas Temperature	degF
Column 6	:	Gas Differential	inHg
Column 7	:	CO2	%
Column 8	:	H2S	%
Column 9	:	Gas SG	fact
Column 10	:	Gas Fb	fact
Column 11	:	Gas Fr	fact
Column 12	:	Gas Y	fact
Column 13	:	Gas Fpb	fact
Column 14	:	Gas Ftb	fact
Column 15	:	Gas Ftf	fact
Column 16	:	Gas Fg	fact
Column 17	:	Gas Fpv	fact
Column 18	:	GasC	fact
Column 19	:	Gas Pf	fact
Column 20	:	Average Gas Rate	MMcf/d
Column 21	:	Gas Cummulative	MMcf





# **DISK INFORMATION**

Client :	OMV Austr	alia Pty Ltd.	Well No. :	Patricia-2
Test :	Completion		Date :	30/6 - 06/07/2002
File Name	Start Date/time	End Date/time	Description	Compression Type
PATRICIA2_EVENTS.TXT		Sequence of events	0	
WELLHEAD.TAB			All upstream / downstream choke data and annulus	1
FINALRAWDATA.TAB			All choke, annulus and separator data	1
GASCALCS.TAB			Gas calculation factors	1

Compres	sion	Type	1

0 = None

- 1 =Self Extracting
- 2 = Zip (PKUNZIP program supplied. YES/NO)

Self Extracting Tip         Type @ DOS prompt A:\ARCHIVE C: -d         where         A:\ARCHIVE is name of .EXE file on floppy in A: drive         C: is destination drive         -d         restores all sub-directories automatically.		ZIP Tip Type @ DOS prompt where C: Type @ DOS prompt where	C: is destination drive CD\
		CD\ Type @ DOS prompt	moves system to root directory A:\PKUNZIP -d A:\ARCHIVE
		where A:\PKUNZIP -d A:\ARCHIVE	is name of .EXE file on floppy in A: drive restores all sub-directories automatically is name of .ZIP file on floppy in A: drive.





### **OMV** Australia

# CONFIDENTIAL

Date:	20 June 2002	Rig:	Ocean Bounty
Report Number:	1	Bit Diameter:	17 ½"
Report Period:	00:00 - 24:00 Hours	Last Casing:	30" x 20" @ 111.0 m MDRT
Spud Date:	20/Jun/2002 16:00 Hours	FIT:	-
Days From Spud:	0.3	Mud Weight:	1.04 SG
Depth @ 2400 Hrs:	111.5 m MDRT	ECD:	1.04SG
	111.5 m TVDRT	Mud Type:	Seawater/Gel Sweeps
Lag Depth:	Returns to Seafloor	Mud Chlorides:	
Last Depth:	0 m MDRT	Est. Pore Pressure:	
Progress:	112.0 m	DXC:	
Water Depth:	52.5 m	Last Survey:	111.5 m MDRT (Totco)
RT:	25.0 m	Deviation:	Inc. 0.25 °

## **OPERATIONS SUMMARY**

24 HOUR SUMMARY:	Moved rig to Patricia-2 location. Set anchors and positioned rig. Spudded well at
	1600hrs, 20/6/02. Drilled 26"/36" hole from 77.5 to 111.5m. Ran and cemented
	30" casing.

**NEXT 24 HOURS:** Drill 17 1/2" section. Run and cement 13 3/8" casing.

CURRENT OPERATION @ 07:00 HRS (21/06/2002) : Drilling 17 1/2" hole at 255m MDRT.

# **GEOLOGICAL SUMMARY**

#### LITHOLOGY

INTERVAL:	77.5 to 111.5 m MDRT
ROP (Range):	10 to 170 m/hr
Av. ROP:	55 m/hr

Returns to Seafloor

**GAS SUMMARY** No Gas Data

#### **MUDLOGGING EQUIPMENT / PERSONNEL**

All Gas equipment working and calibrated. Waiting on new torque sensor. All personnel on board.

WELLSITE GEOLOGISTS Peter Boothby Ross Tolliday

Az. 244.06 °



# **CONFIDENTIAL**

Date:	21 June 2002	Rig:	Ocean Bounty
Report Number:	2	Bit Diameter:	17 1/2
Report Period:	00:00 - 24:00 Hours	Last Casing:	13 3/8" @ 326.0 m MDRT
Spud Date:	20/Jun/2002 16:00 Hours	FIT:	
Days From Spud:	1.3	Mud Weight:	1.04 SG
Depth @ 2400 Hrs:	334.0 m MDRT	ECD:	1.04 SG
-	332.4 m TVDRT	Mud Type:	Seawater/Gel Sweeps
Lag Depth:	Returns to Seafloor	Mud Chlorides:	
Last Depth:	111.5 m MDRT	Est. Pore Pressure:	
Progress:	222.0 m	DXC:	
Water Depth:	52.5 m	Last Survey:	314.8 m MDRT
RT:	25.0 m	Deviation:	Inc. 11.75 °

### **OPERATIONS SUMMARY**

24 HOUR SUMMARY: Made up and ran in hole with 17 1/2 BHA. Drilled cement and shoe. Drilled from 111.5m to 334m (section TD). Pulled out of hole. Performed wiper trip. Ran and cemented 13 3/8' casing.

**NEXT 24 HOURS:** Run and land Xmas tree. Run BOP and marine riser.

CURRENT OPERATION @ 07:00 HRS (22/06/2002) : Running Xmas tree.

# **GEOLOGICAL SUMMARY**

#### LITHOLOGY

INTERVAL:	111.5 to 190 m MDRT
ROP (Range):	12 to 260 m/hr
Av. ROP:	85 m/hr

Returns to Seafloor

INTERVAL:	190 to 334 m MDRT
ROP (Range):	20 to 120 m/hr
Av. ROP:	55 m/hr

Returns to Seafloor

#### **GAS SUMMARY** No Gas Data

#### **MUDLOGGING EQUIPMENT / PERSONNEL**

All Gas equipment working and calibrated.

WELLSITE GEOLOGISTS Peter Boothby / Ross Tolliday

Az. 244.06 °



# CONFIDENTIAL

Date:	22 June 2002	Rig:	Ocean Bounty
Report Number:	3	Bit Diameter:	12 ¼"
Report Period:	00:00 - 24:00 Hours	Last Casing:	13 3/8" @ 326.0 m MDRT
Spud Date:	20/Jun/2002 16:00 Hours	FIT:	
Days From Spud:	2.3	Mud Weight:	1.04 SG
Depth @ 2400 Hrs:	334.0 m MDRT	ECD:	
	332.4 m TVDRT	Mud Type:	Seawater/Gel Sweeps
Lag Depth:	Returns to seafloor	Mud Chlorides:	
Last Depth:	334.0 m MDRT	Est. Pore Pressure:	
Progress:	0 m	DXC:	
Water Depth:	52.5 m	Last Survey:	314.8 m MDRT
RT:	25.0 m	Deviation:	Inc. 11.75 °

### **OPERATIONS SUMMARY**

**24 HOUR SUMMARY:** Rigged up and ran subsea Xmas tree. Rigged up and ran riser and BOPs.

**NEXT 24 HOURS:** Complete running of BOPs. RIH with 12 1/4" BHA. Drill cement and shoetrack. Drill 3m and perform FIT. Drill ahead.

CURRENT OPERATION @ 07:00 HRS (23/06/2002) : Making up 12 1/4 BHA

# **GEOLOGICAL SUMMARY**

No Drilling

**MUDLOGGING EQUIPMENT / PERSONNEL** All Gas equipment working and calibrated.

#### WELLSITE GEOLOGISTS

Peter Boothby Ross Tolliday

Az. 229.93 °



# CONFIDENTIAL

Date:	23 June 2002	Rig:	Ocean Bounty
Report Number:	4	Bit Diameter:	12.25 "
Report Period:	00:00 - 24:00 Hours	Last Casing:	13 3/8" @ 326.0 m MDRT
Spud Date:	20/Jun/2002 16:00 Hours	FIT:	1.73 SG EMW @ 334.0m MDRT
Days From Spud:	3.3	Mud Weight:	1.06 SG
Depth @ 2400 Hrs:	404.0 m MDRT	ECD:	1.07 SG
	400.8 m TVDRT	Mud Type:	PHPA/KCI/Glycol
Lag Depth:	400.0 m MDRT	Mud Chlorides:	42000 mg/l
Last Depth:	334.0 m MDRT	Est. Pore Pressure:	1.03 SG
Progress:	70.0 m	DXC:	Normal
Water Depth:	52.5 m	Last Survey:	383.7 m MDRT
RT:	25.0 m	Deviation:	Inc. 13.44 °

### **OPERATIONS SUMMARY**

24 HOUR SUMMARY:Completed running BOPs and riser. Commenced making up 12 1/4" BHA. RIH<br/>and drilled out cement and shoe track. Drilled 3m new formation to 337m.<br/>Performed leak off test to EMW of 1.73 SG. Drilled with sliding to 404m.NEXT 24 HOURS:Drill with sliding to section TD. Commence running 9 5/8" casing.

CURRENT OPERATION @ 07:00 HRS (24/06/2002) : Drilling and sliding ahead at 507 mMDRT (499.7mTVDRT).

## **GEOLOGICAL SUMMARY**

#### LITHOLOGY

INTERVAL:	334 to 400 m MDRT
ROP (Range):	5 to 80 m/hr
Av. ROP:	15 m/hr

Sequence of interbedded ARGILLACEOUS CALCILUTITE and ARGILLACOUS CALCISILTITE

ARGILLACEOUS CALCILUTITE: (40 - 100%) white to very light grey, light bluish grey, light olive grey, very soft to soft, amorphous, sticky in part, 10-15% fossil fragments and forams (coral debris, bryozoa, spicules, shell fragments, forams), 10-25% siliceous clay content, 10 to 20% calcisilt, grades to Argillaceous Calcisiltite in part, trace fine dark green glauconite.

ARGILLACEOUS CALCISILTITE: (0 - 60%) white to very light grey, light bluish grey, light olive grey, very soft to soft, amorphous, 10-15% fossil fragments and forams (coral debris, bryozoa, spicules, shell fragments, forams), 15-30% siliceous clay content, 5 to 10% micrite, trace to 5% very fine to fine calcite grains, grades to Argillaceous Calcilutite in part, trace fine dark green glauconite.

#### GAS SUMMARY

Background	Gas						
INTERVAL	Total Gas	C1	C2	C3	iC4	nC4	C5
mMDRT	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
334 - 400	0	0	0	0	0	0	0

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### CALCIMETRY

Interval	Calcite	Dolomite
(m MDRT)	Range	Range
	(%)	(%)
334 - 400	55 - 84 %	0
Calcimetry being	conducted at	5 to 10m intervals

#### FORMATION PRESSURE ESTIMATION

Gas is very low and cuttings are normally shaped. These and all other indications suggest the formation is normally pressured.

#### SAMPLE QUALITY

Sampling conducted at 5 to 10m intervals depending on ROP.

#### MUDLOGGING EQUIPMENT / PERSONNEL

All Gas equipment working and calibrated.

#### MWD

Sensor distances behind bit

Resistivity(EWR)	11.83m
Gamma Ray(DGR)	14.75m
Survey(DM)	18.33m

WELLSITE GEOLOGISTS

Peter Boothby Ross Tolliday





# CONFIDENTIAL

Date:	24 June 2002	R
Report Number:	5	В
Report Period:	00:00 - 24:00 Hours	La
Spud Date:	20/Jun/2002 16:00 Hours	FI
Days From Spud:	4.3	Μ
Depth @ 2400 Hrs:	708.0 m MDRT	E
	646.6 m TVDRT	Μ
Lag Depth:	700.0 m MDRT	Μ
Last Depth:	404.0 m MDRT	E
Progress:	304.0 m	D
Water Depth:	52.5 m	La
RT:	25.0 m	D

Rig: Bit Diameter: Last Casing: FIT: Mud Weight: ECD: Mud Type: Mud Chlorides: Est. Pore Pressure: DXC: Last Survey: Deviation: Ocean Bounty 12 ¼" 13 3/8" @ 326.0 m MDRT 1.73 SG EMW @ 334.0m MDRT 1.08 SG 1.11 SG PHPA/KCI/Glycol 35000 mg/l 1.03 SG Normal 691.3 m MDRT Inc. 56.22 ° Az. 230.56 °

## **OPERATIONS SUMMARY**

**24 HOUR SUMMARY:** Drilled (sliding and rotating) from 404 to 708m MDRT.

**NEXT 24 HOURS:** Drill to section TD. Run and cement 9 5/8" casing.

CURRENT OPERATION @ 07:00 HRS (25/06/2002) : Drill ahead at 850m.

## **GEOLOGICAL SUMMARY**

#### LITHOLOGY

INTERVAL:	400 to 490 m MDRT
ROP (Range):	6 to 12 m/hr
Av. ROP:	19 m/hr

Interbedded ARGILLACEOUS CALCISILTITE and CALCILUTITE grading to ARGILLACEOUS CALCILUTITE

ARGILLACEOUS CALCISILTITE (50-90%) : light to light medium grey, light to medium olive grey, trace orange, soft, dispersive in parts, firm in parts amorphous, 5-10% fossil fragments (coral debris, bryozoa, spicules, shell fragments, forams), 20-35% siliceous clay content, recrystallised calcite in parts, 5 to 10% fine, clear to orange calcite grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcilutite.

CALCILUTITE (10-50%) : very light to light medium grey, light to medium olive grey, soft, dispersive in parts, amorphous, trace to 5% fossil fragments and forams, 15-20% siliceous clay content, 5 to 10% calcisilt, trace very fine dark green glauconite, grades to Argillaceous Calcilutite.

INTERVAL:	490 to 520 m MDRT
ROP (Range):	9 to 65 m/hr
Av. ROP:	16 m/hr

ARGILLACEOUS CALCISILTITE with interbedded MARL

ARGILLACEOUS CALCISILTITE (60-90%) : light to light medium grey, light to medium olive grey, trace dark grey, soft to occasionally firm, dispersive in parts, firm in parts amorphous, 5% fossil fragments, 20-35% siliceous clay content, 5 to 10% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Argillaceous Calcilutite.

MARL (10-40%) : very light to light medium grey, light to medium olive grey, very soft, dispersive in parts, amorphous, 5% fossil fragments and forams, 30-40% siliceous clay content, trace to 5% calcisilt, trace very



fine dark green glauconite, grades to Argillaceous Calcilutite.

INTERVAL:	520 to 555 m MDRT
ROP (Range):	5 to 34 m/hr
Av. ROP:	14 m/hr

Predominantly a CALCISILTITE sequence with interbeds of CALCARENITE and MARL

CALCISILTITE: (40 - 70%) very light to light medium grey, light to medium olive grey, soft to occasionally firm, amorphous, 5% fossil fragments, 10-15% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Calcarenite.

MARL: (20 - 40%) very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, 5% fossil fragments and forams, 30-40% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, grades to Argillaceous Calcilutite.

CALCARENITE: (0 - 20%) very light to light medium grey, white in parts, soft to firm, amorphous, silt to very fine clear to very light grey calcite grains, 5% fossil fragments, 10-15% siliceous clay content, trace very fine dark green glauconite, trace soft disseminated pyrite.

INTERVAL:	555 to 590 m MDRT
ROP (Range):	4 to 28 m/hr
Av. ROP:	11 m/hr

An ARGILLACEOUS CALCISILTITE sequence with interbedded MARL and minor CALCARENITE.

ARGILLACEOUS CALCISILTITE: (50 - 75%) very light to light medium grey, light to medium olive grey, soft to occasionally firm, 5% fossil fragments, 10-25% siliceous clay content, 10 to 20% fine, clear to orange calcite & recrystallised grains, trace very fine dark green glauconite, trace soft disseminated pyrite, grades to Calcarenite.

MARL: (20 - 35%) very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, 5% fossil fragments and forams, 30-40% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, grades to Argillaceous Calcilutite

CALCARENITE: (5 - 30%) very light to light medium grey, white in parts, soft to firm, silt to fine clear to very light grey calcite grains, 5% fossil fragments, 10-15% siliceous clay content, trace very fine dark green glauconite, trace soft disseminated pyrite.

INTERVAL:	590 to 700 m MDRT
ROP (Range):	2 to 80 m/hr
Av. ROP:	30 m/hr

Sequence of ARGILLACEOUS CALCISILTITES interbedded with CALCARENITE and MARL.

ARGILLACEOUS CALCISILTITE: (45 - 70%) very light to light medium grey, light to medium olive grey, soft to occasionally firm, trace to 5% fossil fragments, 10-25% siliceous clay content, 10 to 20% fine grained calcite & recrystallised grains, trace very fine dark green glauconite, trace disseminated pyrite, grades to Calcarenite.

CALCARENITE: (5 - 30%) very light to light medium grey, white in parts, soft to firm, silt to fine clear to very light grey calcite grains, 5% fossil fragments, 5-10% siliceous clay content, trace very fine dark green glauconite, trace soft disseminated pyrite.

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# **OMV** Australia

MARL: (10 - 45%) white to very light to light grey, light to medium olive grey, very soft, dispersive in parts, amorphous, trace to 5% fossil fragments and forams, 20-30% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, trace disseminated and rare nodular pyrite, commonly grades to Argillaceous Calcilutite

#### **GAS SUMMARY**

Background	d Gas						
INTERVAL	Total Gas	C1	C2	C3	iC4	nC4	C5
	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
400 - 490	0.01	67	0	0	0	0	0
490 - 520	0.01	112	0	0	0	0	0
520 - 555	0.02	172	0	0	0	0	0
555 - 590	0.03	277	0	0	0	0	0
590 - 700	0.08	650	0	0	0	0	0

#### CALCIMETRY

Interval (m MDRT)	Calcite Range	Dolomite Range
	(70)	(70)
400 - 490	56 - 89 %	0%
490 - 520	49 - 66 %	0%
520 - 555	53 - 78 %	0%
555 - 590	56 - 82 %	0 - 4 %
590 - 700	46 - 74 %	0 - 4 %

#### FORMATION PRESSURE ESTIMATION

Backgound gas is relatively low. There is no connection gas. Cuttings are normally shaped. There is a slight deviation in the Dxc between 710 to 725m. A change in lithology also occurred at this interval and this Dxc change may be attributed to the formation change. It is interpreted that the formation is normally pressured.

#### SAMPLE QUALITY

Sampling conducted at 5m samples where ROP permits.

#### **MUDLOGGING EQUIPMENT / PERSONNEL**

All Gas equipment working and calibrated.

#### MWD

Sensor distances behind bit

Resistivity(EWR)	11.83m
Gamma Ray(DGR)	14.75m
Survey(DM)	18.33m

#### WELLSITE GEOLOGISTS

Peter Boothby Ross Tolliday



# CONFIDENTIAL

Date:	25 June 2002	Rig:
Report Number:	6	Bit Diameter:
Report Period:	00:00 - 24:00 Hours	Last Casing:
Spud Date:	20/Jun/2002 16:00 Hours	FIT:
Days From Spud:	5.3	Mud Weight:
Depth @ 2400 Hrs:	884.0 m MDRT	ECD:
	701.3 m TVDRT	Mud Type:
Lag Depth:	884.0 m MDRT	Mud Chlorides:
Last Depth:	708.0 m MDRT	Est. Pore Pressure:
Progress:	176.0 m	DXC:
Water Depth:	52.5 m	Last Survey:
RT:	25.0 m	Deviation:

Ocean Bounty 12 ¼" 13 3/8" @ 327.1 m MDRT 1.73 SG EMW @ 334.0m MDRT 1.10 SG 1.14 SG PHPA/KCI/Glycol 45000 mg/l 1.03 SG Normal 862.9 m MDRT Inc. 85.19 ° Az. 229.80 °

## **OPERATIONS SUMMARY**

24 HOUR SUMMARY:	Continued to drill (sliding and rotating) 12 ¼" hole from 708 to 884m. POOH. Conducted wiper trip. Circulated hole clean. POOH and rig up to run 9 5/8" casing.
NEXT 24 HOURS:	Run and cement 9 5/8" casing. Perform pressure tests. Make up 8 1/2" BHA. RIH and drill to Total Depth.

CURRENT OPERATION @ 07:00 HRS (26/06/2002) : Cemented casing. Preparing to run seal assembly.

## **GEOLOGICAL SUMMARY**

#### LITHOLOGY

INTERVAL:	700 to 721 m MDRT
ROP (Range):	11 to 43 m/hr
Av. ROP:	29 m/hr

MARL and minor interbedded ARGILLACEOUS CALCISILTITE

MARL: (80%) medium grey, light to medium olive grey, minor dark grey, soft, rarely dispersive, amorphous to blocky, trace to 5% fossil fragments and forams, 20-35% siliceous clay content, trace to 5% calcisilt, trace very fine dark green glauconite, trace disseminated and nodular pyrite. Grades to Calcareous Claystone.

ARGILLACEOUS CALCISILTITE: (20%) very light to medium grey, light to medium olive grey, soft to occasionally firm, blocky, trace to 5% fossil fragments, 15-25% siliceous clay content, 10 to 15% fine grained calcite & recrystallised grains, trace very fine dark green glauconite, trace disseminated and nodular pyrite, grades to Calcarenite.

INTERVAL:	721 to 770 m MDRT
ROP (Range):	12 to 57 m/hr
Av. ROP:	31 m/hr

MARL with interbedded ARGILLACEOUS CALCISILTITE

MARL: (40-90%) light grey, light to medium olive grey, minor dark grey, soft, amorphous to blocky, 5-10% fossil fragments and forams, 20-40% siliceous clay content, trace to 5% calcisilt, 1-5% fine to medium dark green glauconite, trace disseminated and nodular pyrite. Grades to Calcareous Claystone.



#### PATRICIA - 2



ARGILLACEOUS CALCISILTITE: (10-60%) very light to medium grey, light to medium olive grey, soft to occasionally firm, blocky, trace to 5% fossil fragments, 15-25% siliceous clay content, 10 to 15% fine grained calcite & recrystallised grains, trace very fine dark green glauconite, trace disseminated and nodular pyrite, grades to Calcarenite.

INTERVAL:	770 to 819 m MDRT
ROP (Range):	10 to 103 m/hr
Av. ROP:	40 m/hr

Interbedded CALCAREOUS CLAYSTONE, MARL and GREENSAND with minor ARGILLACEOUS CALCISILTITE

CALCAREOUS CLAYSTONE (40-70%) : light to medium greyish brown, light grey, light brownish yellow in parts, soft , amorphous to blocky, 15-25% calcareous content, 0-5% calcisilt, 1-10% fine to medium dark green glauconite, trace to 5% siderite(?) nodules.

MARL (10 - 60%): light grey, light to medium olive grey, minor dark grey, soft, amorphous to blocky, 5% fossil fragments and forams, 20-35% siliceous clay content, trace to 5% calcisilt, 1-3% fine to medium dark green glauconite, trace disseminated and nodular pyrite. Grades to Calcareous Claystone.

GLAUCONITIC SANDSTONE(GREENSAND): (0 - 30%) medium to very dark green, firm, soft in parts, very fine to medium glauconite, sub angular to sub rounded. Increasing towards base of interval.

ARGILLACEOUS CALCISILTITE: (0 - 10%) very light to medium grey, light to medium olive grey, soft to occasionally firm, blocky, trace to 5% fossil fragments, 15-25% siliceous clay content, 10 to 15% fine grained calcite & recrystallised grains, trace very fine dark green glauconite, trace disseminated and nodular pyrite, grades to Calcarenite

INTERVAL:	819 to 885 m MDRT
ROP (Range):	11 to 120 m/hr
Av. ROP:	40 m/hr

SILTY SANDSTONE with minor CALCAREOUS CLAYSTONE

SILTY SANDSTONE: (50 - 95%) light to dark yellowish brown, loose and friable, minor firm, clear to translucent quartz grains, very fine to fine, poorly to moderately sorted, sub angular to sub rounded, 15-25% quartz silt, 5-15% argillaceous content, 1-3% glauconite, trace -1% mica, trace to 5% siderite nodules, trace multicoloured lithics, fair to good inferred porosity, no fluorescence.

CALCAREOUS CLAYSTONE: (5 - 50%) light to medium greyish brown, light grey, light brownish yellow, soft, firm in parts, amorphous to blocky, 10-25% calcareous content, 5-10% calcisilt, 5-15% fine to medium dark green glauconite. Grades to Claystone.

HYDROCARBON FLUORESCENCE No Fluorescence

GAS SUMMARY

<u>ouv</u>	PA	TRICIA - 2				Daily Geolo	ogical Report
OMV Au	ustralia						
Background	d Gas						
INTERVAL	Total Gas	C1	C2	C3	iC4	nC4	C5
	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
700 - 721	0.12	1084	0	0	0	0	0
721 - 770	0.12	1068	0	0	0	0	0
770 - 819	0.19	1640	0	0	0	0	0
819 - 884	4.1	38267	0	0	0	0	0
Gas Peak							
INTERVAL	Total Gas	C1	C2	C3	iC4	nC4	C5
	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
842 - 842	12.5	99471	0	0	0	0	0
858 - 858	5.13	48253	0	0	0	0	0
871 - 871	10.65	92381	0	0	0	0	0

### CALCIMETRY

Interval (m MDRT)	Calcite Range (%)	Dolomite Range (%)	
700 - 721	44 - 46 %	0%	
721 - 770	44 - 64 %	0%	
770 - 819	28 - 35 %	0%	
819 - 884	2 - 8 %	0%	

#### FORMATION PRESSURE ESTIMATION

There are no indications of overpressure.

### SAMPLE QUALITY

Sampling conducted at 5m samples where ROP permits.

### MUDLOGGING EQUIPMENT / PERSONNEL

All Gas equipment working and calibrated.

#### MWD

Sensor distances behind bit

Resistivity(EWR) 11.83m Gamma Ray(DGR) 14.75m Survey(DM) 18.33m

#### WELLSITE GEOLOGISTS

Peter Boothby Ross Tolliday



# CONFIDENTIAL

Date:	26 June 2002	Rig:
Report Number:	7	Bit Diameter:
Report Period:	00:00 - 24:00 Hours	Last Casing:
Spud Date:	20/Jun/2002 16:00 Hours	FIT:
Days From Spud:	6.3	Mud Weight:
Depth @ 2400 Hrs:	884.0 m MDRT	ECD:
	701.3 m TVDRT	Mud Type:
Lag Depth:	884.0 m MDRT	Mud Chlorides:
Last Depth:	884.0 m MDRT	Est. Pore Pressure:
Progress:	0 m	DXC:
Water Depth:	52.5 m	Last Survey:
RT:	25.0 m	Deviation:

Ocean Bounty 8 ½" 9-5/8" @ 872.4 m MDRT 1.4 SG EMW @ 872.4 m MDRT 1.07 SG

FLO-PRO/KCI 32000 mg/l 1.03 SG Normal 862.9 m MDRT Inc. 85.19 ° Az. 229.80 °

## **OPERATIONS SUMMARY**

**24 HOUR SUMMARY:** Ran and cemented 9 5/8" casing. Tested seal assembly and BOPs. Made up 8 1/2" BHA and RIH. Tagged TOC at 848m. Commenced drilling shoe track.

**NEXT 24 HOURS:** Drill and slide to Total Depth.

CURRENT OPERATION @ 07:00 HRS (27/06/2002) : Drilling and sliding at 945m MDRT.

# **GEOLOGICAL SUMMARY**

#### LITHOLOGY No new drilling

#### **MUDLOGGING EQUIPMENT / PERSONNEL**

All Gas equipment working and calibrated.

#### MWD

Sensor distances behind bit

Survey (DM)9.07mGamma Ray(DGR)11.69mDensity (SLD)14.89mResistivity(EWR)17.69mPorosity (CNP)20.65m

#### WELLSITE GEOLOGISTS

Peter Boothby Ross Tolliday

Az. 234.02 °





# CONFIDENTIAL

Date:	27 June 2002	Rig:	Ocean Bounty
Report Number:	8	Bit Diameter:	8 <sup>1</sup> / <sub>2</sub> "
Report Period:	00:00 - 24:00 Hours	Last Casing:	9-5/8" @ 872.4 m MDRT
Spud Date:	20/Jun/2002 16:00 Hours	FIT:	1.4 SG EMW @ 872.0m MDRT
Days From Spud:	7.3	Mud Weight:	1.12 SG
Depth @ 2400 Hrs:	1365.0 m MDRT	ECD:	1.28 SG
	701.5 m TVDRT	Mud Type:	FLO-PRO/KCI-POLYMER
Lag Depth:	1385.0 m MDRT	Mud Chlorides:	72000 mg/l
Last Depth:	884.0 m MDRT	Est. Pore Pressure:	1.03 SG
Progress:	481.0 m	DXC:	Normal
Water Depth:	52.5 m	Last Survey:	1368.2 m MDRT
RT:	25.0 m	Deviation:	Inc. 90.46 °

### **OPERATIONS SUMMARY**

24 HOUR SUMMARY:	Continued to drill shoe track. Drilled 3m of new formation from 884 to 887m. Performed FIT to an EMW of 1.4 SG. Drilled (rotating and sliding) from 887 to 1365m (midnight depth).
NEXT 24 HOURS:	Drilled from 1365 to total depth of 1385m MDRT (701m TVDRT). Reached TD at

0100hrs, 28/06/02. Circulate. Perform wiper trip. Circulate hole clean. Flow check. Pump clean out pills. POOH and run sand screens.

CURRENT OPERATION @ 07:00 HRS (28/06/2002) : POOH to shoe

# **GEOLOGICAL SUMMARY**

#### LITHOLOGY

INTERVAL:	885 to 960 m MDRT
ROP (Range):	3 to 80 m/hr
Av. ROP:	25 m/hr

Massive SILTY SANDSTONE

SILTY SANDSTONE: (100%) light to dark yellowish brown, greyish brown, loose and friable to hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, trace medium, poorly to moderately sorted, sub angular to sub rounded, 15-30% quartz silt, 5-15% argillaceous content, trace -2% glauconite, trace -1% mica, trace to 3% siderite nodules, trace multicoloured lithics, nil to trace forams, fair to very good inferred porosity, no fluorescence.

INTERVAL:	960 to 1060 m MDRT
ROP (Range):	3 to 100 m/hr
Av. ROP:	40 m/hr

SILTY SANDSTONE grading to SANDSTONE

SILTY SANDSTONE: (100%) light to dark yellowish brown, greyish brown, loose and friable to rare hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, trace medium, poorly to moderately sorted, sub angular to sub rounded, 15-25% quartz silt, 5% argillaceous content, tr-1% glauconite, trace -1% mica, trace siderite nodules, trace multicoloured lithics, nil to trace forams, fair to good inferred porosity, no fluorescence. Grades to SANDSTONE

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INTERVAL:	1060 to 1180 m MDRT
ROP (Range):	8 to 100 m/hr
Av. ROP:	50 m/hr

Massive ARGILLACEOUS and SILTY SANDSTONE

ARGILLACEOUS / SILTY SANDSTONE (100%): light to dark yellowish brown, medium greyish brown, 5-10% friable to hard cemented siderite aggregates, clear to translucent quartz grains, very fine to fine, trace medium, poorly to moderately sorted, angular to sub rounded, 20-30% quartz silt, 15-25% argillaceous content, trace - 1% glauconite, trace - 1% mica, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair inferred porosity, no fluorescence.

INTERVAL:	1180 to 1290 m MDRT
ROP (Range):	5 to 120 m/hr
Av. ROP:	45 m/hr

SILTY SANDSTONE grading to SIDERITIC SANDSTONE (Silty) with proximity to the entry and exit to the Sub Grid Unit 4.

SILTY SANDSTONE: (80%) light to dark yellowish brown, medium greyish brown, dominantly loose and friable, trace hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 15-20% quartz silt, 10% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -2% mica, trace to 2% siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair to good inferred porosity, no fluorescence.

SIDERITIC / ARGILLACEOUS SANDSTONE: (20%) light to commonly dark yellowish brown, dark greyish brown, dominantly loose and friable, common hard cemented (siderite?) aggregates, clear to translucent quartz grains, very fine to fine, rare medium, poor to moderately sorted, angular to sub rounded, 15-20% quartz silt, 15-30% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -1% mica, 15-20% siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair inferred porosity, no fluorescence.

INTERVAL:	1290 to 1385 m MDRT
ROP (Range):	4 to 75 m/hr
Av. ROP:	25 m/hr

Massive SANDSTONE grading to ARGILLACEOUS SANDSTONE

SANDSTONE: (70%) light to medium yellowish brown, medium greyish brown, dominantly loose and friable, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 10-15% quartz silt, 10% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -2% mica, trace siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, good inferred porosity, no fluorescence. Grades to Argillaceous Sandstone

ARGILLACEOUS SANDSTONE: (30%) light to medium yellowish brown, medium greyish brown, dominantly loose and friable, clear to translucent quartz grains, very fine to fine, moderately sorted, angular to sub rounded, 10-15% quartz silt, 15-30% argillaceous content (suspect clay content being dispersed into mud system), trace-1% glauconite, trace -2% mica, trace to 5% dark yellowish brown siderite nodules, trace multicoloured lithics, trace nodular pyrite, nil to trace forams, fair to good inferred porosity, no fluorescence.

### HYDROCARBON FLUORESCENCE

No Fluorescence

<b>O</b> <sup>m</sup> V	PATRICIA - 2			Daily Geological Report			
OMV Au	ustralia						
GAS SUMMA	RY						
Background	d Gas						
INTERVAL	Total Gas	C1	C2	C3	iC4	nC4	C5
	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
885 - 960	2.25	17620	0	0	0	0	0
960 - 1060	3.68	26925	0	0	0	0	0
1060 - 1180	3.28	22200	0	0	0	0	0
1290 - 1385	2.6	19000	0	0	0	0	0
Gas Peak							
INTERVAL	Total Gas	C1	C2	C3	iC4	nC4	C5
	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
950	4.16	31930	0	0	0	0	0
980	5.7	41970	0	0	0	0	0
1000	7.17	53680	0	0	0	0	0
1032	5.19	40350	0	0	0	0	0
1108	5.97	44450	0	0	0	0	0
1158	4.6	33950	0	0	0	0	0
1193	4.24	31980	0	0	0	0	0
1206	4.63	34800	0	0	0	0	0
1256	7.95	60000	0	0	0	0	0
1285	7.1	52000					
1374	4.65	30200					
Trip Gas							
INTERVAL	Total Gas	C1	C2	C3	iC4	nC4	C5
	(%)	(mqq)	(mqq)	(ppm)	(ppm)	(mqq)	(ppm)

#### CALCIMETRY

884

Interval	Calcite	Dolomite Range	
(m MDRT)	Range		
	(%)	(%)	
885 - 1385	0 - 2 %	0	

0.86

Calcimetry discontinued due to the addition of CaCO3 to the FloPro mud system (used to reduce water loss).

#### FORMATION PRESSURE ESTIMATION

All indications suggest the formation is normally pressured.

#### SAMPLE QUALITY

Sampling conducted at 5 to 10m intervals dependant on ROP.

#### **MUDLOGGING EQUIPMENT / PERSONNEL**

All Gas equipment working and calibrated.

#### MWD

Sensor distances behind bit

Survey (DM)	9.07m
Gamma Ray(DGR)	11.69m
Density (SLD)	14.89m
Resistivity(EWR)	17.69m
Porosity (CNP)	20.65m

#### WELLSITE GEOLOGISTS

Peter Boothby Ross Tolliday




	End of Well Report for OMV
Rig:	Ocean Bounty
Well:	Patricia-2
Field:	Patricia
Country:	Australia
Job No:	AU-FE-02022
Date:	20-Jun-02
API No:	

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- 4. Bitrun Summary
- 5. Directional Survey Data

### **General Information**

Company:	OMV		
Rig:	Ocean Bounty	/	
Well:	Patricia-2		
Field:	Patricia		
Country:	Australia		
API Number:			
Sperry-Sun Job Number:	AU-FE-02022		
Job start date:	20-Jun-02		
Job end date:	28-Jun-02		
North reference:	Grid		
Declination:	13.120	deg	
Dip angle:	-68.561	deg	
Total magnetic field:	59948.832	nT	
Date of magnetic data:	21-Jun-02		
Wellhead coordinates N:	38 deg. 1 min	39.95 sec So	uth
Wellhead coordinates E:	148 deg. 26 m	nin 57.78 sec l	East
Vertical section direction:	231.56	deg	
MWD Engineers:	P. O'Shea		P. Allen
	M. Pope		

Company Representatives: G. Howard

Company Geologist:	P. Boothby	R. Tolliday
Lease Name:	VIC/L21	
Unit Number:	LT 1087	
State:	Victoria	
County:		

### Operational Overview

Sperry Sun Drilling Services was contracted by OMV to provide Logging While Drilling (LWD) services on the drilling of their well, Patricia-2. The well was drilled in permit VIC/L21 by Diamond Offshore General Company's rig the Ocean Bounty.

### 445mm Hole Section:

A basic suite of 8" LWD tools were run to log this hole section. The toolstring consisted of Dual Gamma Ray (DGR) and four phase Electromagnetic Wave Resistivity (EWRP4) that were used for formation evaluation. A Directional Module (DM) was run for deviation control, also providing Surveys on the Fly (SOTF). A Dynamic Drillstring Sensor (DDS) was also run for vibration analysis. This section was completed in one bit ru to 334.0 mMDRT. All tools performed well and all recorded data was obtained.

### 311 mm Hole Section:

A basic suite of 8" LWD tools (as run in the 445mm hole section) were run to log this hole section. This section was completed in one bit run from 334.0 to 884.0 mMDRT. All tools performed well and all recorded data was obtained.

### 216mm Hole Section:

A Triple Combo suite of 6 <sup>3</sup>/<sub>4</sub>" LWD tools were run in this hole section. The toolstring consisted of Dual Gamma Ray (DGR), four phase Electromagnetic Wave Resistivity (EWR-P4), Stabilised Litho Density (SLD), Compensated Neutron Porosity (CNP) tools that were used for formation evaluation. A Dynamic Drillstring Sensor was run for vibration analysis. A Position Monitor (PM) was run for deviation control. This section was completed in one bit run from 884.0 to 1385.0 mMDRT. All tools per and all recorded data was obtained.

SPENNY-SUN

### Summary of MWD runs

Run No.	Bit No.	Ho Siz (mm	le MWD ce Sensors )	Start Depth (m)	End Depth (m)	Drill/W Distan (m)	iβαen Start do∌ate Time	Run End Date Time	BRT Hrs.	Oper. Hrs.	Circ Hrs	Max. .Temp. (degC)	Serv Int.	. Trip for MWD	Failure Type
0100	2	445.00	DIR-FE	111.56	334.00	222.44	21-Jun-02 00:42	21-Jun-02 14:32	13.85	13.8	6.59	17.00	No	No	
0200	3	311.00	DIR-FE	334.00	884.00	550.00	23-Jun-02 10:45	25-Jun-02 18:42	55.96	55.90	44.05	53.00	No	No	
0300	4	216.00	DIR-FE-NUKE	884.00	1385.00	501.00	26-Jun-02 19:47	28-Jun-02 11:44	39.95	39.9	22.98	47.00	No	No	
				TOTALS	====>	1273.44			109.75	109.76	73.62	>	0	0	

### Bitrun Son mary

R	un Time Data	Drilli	ng Data	M	lud Data	
MWD Run :	0100	Start Depth :	111.56 m	Mud Type : Sea V	Vater	
Rig Bit No:	2	End Depth :	334.00 m	Weight / Visc 1.06	sg / 100.00	spqt
Hole Size :	445.00 mm	Footage :	222.44 m	Chlorides: 0.00	ppm	
Run Start :	21-Jun-02 00:42	Avg. Flow Rate :	780.00 gpm	PV/YP: 0.00	cp / 0.00	lhf2
Run End :	21-Jun-02 14:32	Avg. RPM :	102.00 rpm	Solids/Sand : N/A	% / N/A	%
BRT Hrs :	13.85	Avg. WOB :	7.50 klb	%Oil / O:W: N/A	% / N/A	
Circ. Hrs :	6.59	Avg. ROP :	55.50 m/hr	pH/Fluid Loss0.00	pH / 0.00	mptm
Oper. Hrs :	13.85	Avg. SPP :	1220.00 psig	Max. Temp. : 17.00	degC	
MW	D Schematics			BHA Schematic	CS	
(8)		(14)	Component		Length O.D. (m) (mm)	I.D. (mm)
(7)	8.Pulse SN: 59420	(13) (12)				
(6)	7.Cross Over <b>S</b> u SN: 175215	(11)			140 5 127 000	76 200
	6.DM	(10)	14. 11WDF	ver Sub	1 08 203 000	49 000
	SN: 29034				1.00 200.000	40.000
(5)	19.69 m Distance from B	<del>(</del> 9)	12. Drill colla	ar	9.22 203.200	49.000
	5.Cross Over Sou		11. Drill colla	ar	9.26 203.200	49.000
(4)	SN: 43488	(8)	10. Drilling	lars	9.69 203.000	49.000
	4.HCM	(7)	09. Drill colla	ar	9.53 203.200	49.000
(2)	SN: 100206	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	08. Drill colla	ar	9.39 203.200	50.800
(3)		(6)		ər	0 50 203 200	71 370
	3.DGR-D <b>D</b>	(5)			3.32 203.200	05.400
	SN: 102971	+	06. Float Su	b	0.70 50.800	25.400
(2)		(4)	05. 8" MPT v	w/Dir	6.27 203.000	49.000
	SN: 121428		04. 8" RLL v	v/DGR + EWR	6.99 203.000	49.000
	13.19 m Distance from B	t(3)	03. Cross O	ver Sub	1.22 203.000	49.000
	1.Cross Over Sou	(2)		orryDrill	0 50 244 470	76.000
(1)	SN: DA8001		02. 9-5/6 5		9.39 244.470	10.000
		(1)	01. Security		0.42 445.000	49.000
	Co	mments		MW	D Performanc	e
Drilled from	111.5 to section TD at 334.0	mMDRT. All reco	rded data recov	e <b>Fed</b> la0D / Type:20	03.00 mm/ LW	D
Sunace.				MWD Real-time%25	5.00 % / 95.0	00 %
				MWD Recorded%1:0	0.00 % / 100	.00 %
				Min. Inc. : 0.	98 deg/ 137	.95 m
				Max. Inc.: 11	1.89 deg/ 308	.71 m
				Final Az.: 24	14.06 deg	
				Max Op. Press. : 88	30.00 psig	

### Bitrun Son mary

Ru	un Time Data		Drillin	g Data	1	N	lud Dat	a	
MWD Run :	0200	Start D	Depth :	334.00	m	Mud Type : KCI/F	РНРА		
Rig Bit No:	3	End De	epth :	884.00	m	Weight / Visc 1.08	sg /	54.00	spqt
Hole Size :	311.00 mm	Footag	ge:	550.00	m	Chlorides : 3500	0 ppm		
Run Start :	23-Jun-02 10:45	Avg. F	low Rate :	847.00	gpm	PV/YP: 9.00	cp /	18.00	lhf2
Run End :	25-Jun-02 18:42	Avg. R	PM:	67.00	rpm	Solids/Sand : 5	% /	tr	%
BRT Hrs :	55.96	Avg. W	VOB :	14.80	klb	%Oil / O:W: 3	% /	3/92	
Circ. Hrs :	44.05	Avg. R	OP:	19.10	m/hr	pH/Fluid Loss8.70	рН /	5.60	mptm
Oper. Hrs :	55.96	Avg. S	PP:	2162.0	0 psig	Max. Temp. : 53.00	degC		
MW	D Schematics					BHA Schematio	cs		
(8)		(11)	П	Comp	onent		Length (m)	O.D. (mm)	I.D. (mm)
(7)	8.Pulse SN: 59420	(10)					()	()	()
(6)	7.Cross Over <b>S</b> u SN: 175215	(9)							
(5)	6.DM SN: 29034 18.33 m Distance from B	(8) t	П						
(4)	5.Cross Over Sou	(7)		11. 3	0 x HW	DP	277. <b>4</b> 2	127.000	76.200
(-)	011. 40400		н	10. 3	0 x Dril	l Pipe	289. <b>8</b>	127.0 <b>0</b>	108.610
	4.HCM	(6)		09. 3	x HWD	P	27.51	127.000	76.200
(2)	SN: 100206	(5)		08. D	rilling J	ars	9.22	203.000	49.000
(3)		(4)		07 3	x HWI	P	26 AB	127 000	76 200
	3.DGR-D <b>B</b>			07. 0			20.0		10.200
	SN: 102971 14 To m Distance from B	<b>t</b> (a)		06. C	ross O	ver Sub	1.08	203.000	49.000
(2)	2 FWR-P4	(3)		05. F	loat Su	b	0.70	50.800	25.400
	SN: 121428			04. 8	' MPT \	w/Dir	6.27	203.000	49.000
	11.88 m Distance from B	<b>t</b> (2)		03.8	"RLL w	//DGR + EWR	6.99	203.000	49.000
	1.Cross Over Sou			02 8	' Sporn	/Drill	0.53	203 200	19 000
(1)	SN: DA8001	(1)		02. 0			0.30	311 000	76 200
	<u> </u>	('') mmor		01. 1		M1300	U.gr	<u> </u>	70.200
		mmer							
Drilled from a surface.	334.0 to section ID at 884.0	) mMDF	RI. All reco	rded dat	a recov	elnocod SutD / Type : 20	03.00 m	m/ FE\	
						MWD Real-time%	0.00 %	/ 95.0	
							∿ ∪0.∪0 ⊶ہ دی	/ IUU 	.00 % 2.91 ∽
							.uo ue :10 da	:y/ 337	.01 111
						Final Az ·	, ng ng ng ng ng ng ng ng ng ng ng ng ng	;y/ 00∠ \a	
						Max On Proce +13	200 00 pc	'9 Sig	
						Imax Op. Pless. 11	00.00 ps	лy	

### Bitrun Son mary

Rı	ın Time Data	Drillin	g Data	М	ud Data	
MWD Run :	0300	Start Depth :	884.00 m	Mud Type : Flo-P	ro	
Rig Bit No:	4	End Depth :	1385.00 m	Weight / Visc .1.12	sg / 60.00	spqt
Hole Size :	216.00 mm	Footage :	501.00 m	Chlorides : 72000	) ppm	
Run Start :	26-Jun-02 19:47	Avg. Flow Rate :	574.00 gpm	PV/YP: 11.00	cp / 32.00	lhf2
Run End :	28-Jun-02 11:44	Avg. RPM :	66.00 rpm	Solids/Sand : 8	% / 0.25	%
BRT Hrs :	39.95	Avg. WOB :	11.10 klb	%Oil / O:W: N/A	% / N/A/92	
Circ. Hrs :	22.98	Avg. ROP :	34.80 m/hr	pH/Fluid Loss9.50	pH / 4.80	mptm
Oper. Hrs :	39.95	Avg. SPP :	2089.00 psig	Max. Temp. : 47.00	degC	
MWI	D Schematics			BHA Schematic	S	
(9)	9.Cross Over Stu SN: 170531	(9)	Component		Length O.D. (m) (mm)	I.D. (mm)
(8)	8.HCM SN: 110409	(8)				
(7)	7.CNP SN: 117334 20.65 m Distance from B	(7)				
	6.EWR-14 SN: 81799 17.69 m Distance from B	<b>1</b> (6)				
(5)	5.Cross Over Sou SN: 21692	(5)				
	4.SLD	(4)	09. 3 x HWD	P	27.5 127.000	76.200
(3)	14.89 m Distance from B	t	08. Drilling J	lars )P	9.64 165.000 26.48 127.000	70.000 76.200
	3.DGR	(3)			0.70 405 000	72.000
	11 69 m Distance from B	(5)	06. Float Su	d	0.0 165.000	73.000
	2 Cross Over Su	,	05. 6-3/4 MF	PT	3.47 171.450	46.740
(2)	SN: 170533	(2)	04. 6-3/4 RL	L w/DGR+EWR+SL	<b>100+€3N2</b> 171.450	48.510
(1)		(2)	03. 6-3/4 Dir		2.73 171.450	49.000
	1.PM		02 6-3/4" 5	perryDrill	7 40 171 450	70 000
	SN: 106311		02. 0-3/4 3	JerryDhin	7.40 171.430	10.000
	9.07 m Distance from B		01. Reed EH	IP41ALKDH	0.26 216.000	76.200
	Co	mments		MW	D Performanc	е
Drilled from 8	384.0 to section Td at 1385.0 surface	0 mMDRT, well TD	. All recorded c	afteol OD / Type:17	2.00 mm/ Tripl	e Combo
				MWD Real-time%1:0	0.00 % / 100.	00 %
				MWD Recorded%1:0	0.00 % / 100.	00 %
				Min. Inc. : 87	.97 deg/ 1056	5.95 m
				Max. Inc.: 91	.01 deg/ 918.	39 m
				Final Az.: 23	4.02 deg	
				Max Op. Press. : 25	60.00 psig	

### Directional Survey Data

Measured Depth	Inclination	Direction	Vertical Depth	Latitude	Departure	Vertical Section	Dogleg
(metres)	(degrees)	(degrees)	(metres)	(metres)	(metres)	(metres)	(deg/30m)
75.9	0.00	0.00	75.9	0.00N	0.00E	0.00	TIE-IN
137.95	0.98	9.90	137.95	0.52N	0.09E	-0.40	0.47
165.42	1.05	16.3	165.41	0.99N	0.20E	-0.78	0.15
192.59	1.25	321.00	192.58	1.46N	0.09E	-0.98	1.19
221.64	2.72	262.28	221.61	1.62N	0.79W	-0.38	2.40
250.74	6.36	248.26	250.62	0.93N	2.98W	1.75	3.90
280.05	10.5	243.19	279.60	0.89S	6.88W	5.94	4.36
314.81	11.7	244.06	313.71	3.87S	12.9 W	12.5	1.04
337.81	11.6:	239.93	336.23	6.06S	17.0: W	17.0	1.10
355.14	12.1	235.45	353.19	7.96S	20.0: W	20.6	1.80
382.28	13.4	229.93	379.66	11.6 S	24.7: W	26.6	1.99
411.60	14.4	228.68	408.11	16.2; S	30.1 <sup>,</sup> W	33.6	1.08
436.36	15.7	229.40	432.02	20.4 S	35.0 W	40.1	1.59
463.50	16.4	229.88	458.09	25.3: S	40.7: W	47.6	0.79
490.85	20.2	230.66	484.05	30.8 S	47.3 W	56.2	4.18
520.47	25.0 <sup>°</sup>	231.57	511.37	37.9 <sup>°</sup> S	56.2I W	67.6	4.89
545.72	30.2	231.75	533.73	45.2; S	65.4 W	79.3	6.12
574.70	36.0	230.71	557.99	55.11 S	77.7! W	95.2	6.10
601.82	41.6	229.84	579.10	66.0; S	90.8I W	112.22	6.14
632.62	46.7	229.27	601.19	79.9¦ S	107.18W	133.65	4.97
661.71	51.6	229.87	620.20	94.2; S	123.94W	155.65	5.13
691.25	56.2	230.56	637.59	109.49S	142.28W	179.51	4.67
720.54	59.5	230.67	653.15	125.23S	161.46W	204.32	3.44
749.62	64.1	230.16	666.85	141.57S	181.22W	229.96	4.78
778.45	66.8	230.06	678.79	158.40S	201.35W	256.18	2.78
807.00	71.9	230.46	688.84	175.47S	221.89W	282.89	5.34
836.59	78.1 <sup>,</sup>	230.03	696.48	193.75S	243.86W	311.46	6.31
862.88	85.1	229.80	700.29	210.49S	263.75W	337.44	8.05
890.03	90.2	230.02	701.37	227.95S	284.49W	364.55	5.59
918.39	91.0	230.36	701.06	246.11S	306.28W	392.90	0.89
946.77	90.8	230.25	700.60	264.23S	328.11W	421.27	0.19
975.03	89.5	229.75	700.51	282.40S	349.76W	449.52	1.53
1002.56	90.6	230.40	700.48	300.07S	370.87W	477.04	1.42
1030.12	88.9	232.09	700.59	317.32S	392.36W	504.59	2.62
1056.95	87.9	231.93	701.32	333.82S	413.50W	531.41	1.07
1086.87	90.0	231.90	701.85	352.27S	437.04W	561.33	2.04
1112.97	90.6	232.56	701.71	368.26S	457.68W	587.42	1.03
1140.50	89.6	233.10	701.65	384.89S	479.61W	614.95	1.17
1170.64	89.9	233.29	701.74	402.95S	503.75W	645.07	0.36
1198.27	90.7	233.79	701.57	419.37S	525.97W	672.69	0.94

r								
	Measured	Inclination	Direction	Vertical	Latitude	Departure	Vertical	Dogleg
	Depth			Depth		·	Section	00
		(deeree)	(		(matrea)			( 1 / 2
	(metres)	(degrees)	(degrees)	(metres)	(metres)	(metres)	(metres)	(deg/30m
ſ	1224.64	89.5	231.69	701.50	435.33S	546.95W	699.05	2.70
	1252.22	89.9	231.72	701.62	452.42S	568.60W	726.63	0.34
	1281.21	90.9	232.67	701.40	470.19S	591.51W	755.62	1.49
	1310.13	89.6	232.72	701.24	487.71S	614.51W	784.53	1.35
	1339.08	89.8	233.39	701.37	505.11S	637.64W	813.47	0.72
	1368.17	90.4	234.02	701.30	522.33S	661.09W	842.54	0.92
	1385.00	90.4	234.02	701.16	532.22S	674.71W	859.35	0.01

### Directional Survey Data



### **Directional Survey Data**

CALCULATION BASED ON MINIMUM CURVATURE METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 231.56 DEGREES (GRID) A TOTAL CORRECTION OF 14.01 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

> HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD. HORIZONTAL DISPLACEMENT(CLOSURE) AT 1385.00 METRES IS 859.36 METRES ALONG 231.73 DEGREES (GRID)

> > Surveys have been SAG corrected. Final survey extrapolated to TD.

### Sperry-Sun, A Halliburton Company





### OMV AUSTRALIA PTY. LTD.

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### DIRECTIONAL DRILLING END OF WELL REPORT





Franker Carola

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### OMV AUSTRALIA PTY. LTD.

### WELL : PATRICIA #2

### TABLE OF CONTENTS

- SECTION ONE : WELL SUMMARY
- SECTION TWO : SURVEY PLOT & DEFINITIVE SURVEY REPORTS
- SECTION THREE : SURVEY & DRILLING PARAMETERS
- SECTION FOUR : BHA DATA

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- SECTION FIVE : MOTOR PERFORMANCE REPORTS
- SECTION SIX : DAILY DIRECTIONAL DRILLING REPORTS

Client : OMV Australia Pty. Ltd.

Well Name : Patricia #2

### Job Objectives:

To dritt a horizontal producer to optimally drain the Patricia gas reservoir.

### Summary of Results;

### 36" Hole

BHA #1 was run in the 36" hole at 75.98mMD. The bit used was a 26" Smith DSJC tooth bit with a 36" hole opener. The bit was ran with a total flow area of 0.967 in2mm2, with the bit having a total of  $3 \times 18/32$ nds and  $1 \times 17/32$ nd jets. The average flow rate used was 525gpm. The drilling fluid used was a seawater system. The circulating pressure averaged 1000psi. The average WOB was 8 klbs to a maximum of 10 klbs. The ROP averaged 60 m/hr. This assembly was pulled at 111.50 metres. This assembly drilled the 36" inch hole with no difficulty and the bit, which had been run on the Balcen #3 well, came out 1-1-NO-A-E-I-NO-TD.

### Additional Comments

The Toteo survey showed @ 1/4° .

### BHA # 1 Hours

BHI Mudloggers- 0.6 drilling hours and 0.8 total circulating hours. IADC Tour Book- 1.0 drilling hours and 1.5 total circulating hours.

### 171/2" Hole

This section was drilled without incident using a 9-5/8" Sperry-Drill set at 1.5° bent housing. Angle was built to 12° along the proposed 240° Azimuth without problem, the assembly being capable of up to 5°/30m with 800 gpm in 100% oriented mode.

### Additional Comments

Flow rates could have been increased upon reaching TD of this section to 1000 GPM to aid in hole cleaning. It was necessary to keep it low for the build or we would have washed all our angle away.

### BHA # 2 Hours

MWD/LWD loggers- 4.01 drilling hours and 6.59 total circulating hours. IADC Tour Book- 5.5 drilling hours and 8.0 total circulating hours.

### 12¼" Hole

An 8° Performance Sperry Drill 1.5° was used to drill this section. Proposed build rates were 4°/30m, and from experience on Balleen 3 it was decided a 1.5° bent housing would be required. A Reed Milled tooth, type MHT13GC was selected to drill the section, and this performed well, being graded 1-1-NO-E-I-NO-TD.

Average flow rate used for this section was 850 GPM, with only 50 to 100 psi Differential pressure being generated with an average of 30klb oriented and 12-15 klb while rotating. ROP averaged 11m/br in slide mode and 17 m/br in rotary, and the 550m section was drilled in one 39 hr run at an overall ROP of 14m/br.

The motor averaged 5°/30m doglegs with an average set of 10 meters per stand. This assembly was capable of 10°/30m doglegs. On reaching TD in the top Gurnard a wiper trip was made back to the shoe and no fill or tight hole was encountered. The trip out was without incident, and 9-5/8" casing was run to bottom without any problems.

### Additional Comments

Again this assembly was pumped at high rates and working the pipe Highside once TDed, to avoid losing angle in the soft sands of the Gurnard. A wiper trip went very well with no fill or tight spots. As a precaution the first few stands were pumped out.

### BHA # 3 Hours

MWD/LWD loggers- 28.8 drilling hours and 44.05 total circulating hours. IADC Tour Book- 39.25 drilling hours and 44.00 total circulating hours.

### 81⁄2" Hole

A 6-3/4" 6/7 lobe Sperry-Drill was picked up and set to 1.5 degrees. The float shoe and cement were drilled with reduced parameters to minimize vibration, and drilling then proceeded according to the Directional proposal. The well was landed with a 6°/30m dogleg severity at 701m TVD, and the horizontal section was drilled in one run to 1385m MD. TVD ranged through the run from 701.1m to 701.7m. The motor averaged 2.5°/30m doglegs with an average set of 8 meters. It is estimated that in full slide mode the assembly could achieve 9°/30m doglegs. The assembly was pulled at a measured depth of 1385 meters, with an extrapolated inclination of 90.5° at a direction of 234.0°, after reaching TD of the well.

Sliding after the first couple of singles became difficult until HWDP was added and the flow rate was increased from 550 GPM to 580 GPM. It slowed down again for the last 3 stands prior to TD.

Throughout the run a total of 43m was drilled in oriented mode at an average of 8m/hr, and 458m was drilled in rotary mode at an average 24m/hr. This resulted in the 501m section being drilled in 22 hours at an overall ROP of 23m/hr.

### Additional Comments

Sliding after the first couple of singles became difficult until HWDP was added and the flow rate was increased from 550 GPM to 580 GPM. It slowed down again when we got a couple of stands from Final TD.

### BHA # 4 Hours

MWD/LWD loggers- 14.4 drilling hours and 22.98 total circulating hours. IADC Tour Book- 22.00 drilling hours and 27.00 total circulating hours.

### Discussion:

	BHA #	Bit #	Motor Run #	Hole Size (in)	MD In (m)	MD Out (m)	TVD In (m)	TVD Out (m)	inc in (deg)	Inc Out (deg)	Azi In (deg)	Azi Out (deg)	Drig hrs	Circ hrs
	1	1rr1		26.000	/8	111	18	111	0.0	0.6	10	10	1	1
ſ	2	2rr1	1	17.500	111	334	111	332	0.6	11.6	10	241	6	3
Γ	3	3	2	12.250	334	884	332	701	11.6	89.1	241	230	39	5
Γ	4	4	3	8.500	884	1385	701	701	89.1	90.5	230	234	22	5

### Table 1 - BHA Summary

Motor Run #	Manufacturer	Туре	Lobe	OD (in)	Gauge (in)	Bend (deg)	Adj	DLS (Ori) (°/30m)	ROP (Ori) (m/hr)	ROP (Rot) (m/hr)
1	SSDS	SperryDrill	6/7	9.625	17.250	1.50	Y		30	45
2	SSDS	SperryDrill	4/5	8.000	12.125	1.50	Ý		11	17
3	SSDS	SperryDrill	6/7	6.750	8.250	1.50	Ý	1.50	8	24

Table 2 - Motor Run Summary

Bit #	Menufacturer	Style	OD (in)	Gge Len (in)	Nozzles (/32's)	TFA (ln²)	Dull Gradee IODLBGOR	Ftge (m)	Drig hrs	ROP (m/hr)
1rr1	Smith	DSJC	26.000		3x18, 1x17	0.967	0-0-NO-A -E-I-NO-TD	34	1.00	34
2rr1	Security DBS	XT1C	17.500		3x24	1.325	1-1 BU A -E-I-NO-TD	222	5,50	40
3	Reed	MHT13GC	12.250	1.000	3x15, 1x24	0.960	1.1 WIGEINO TO	550	39.25	14
4	Reed	EHP41ALKD	8.500		3x14	0.451	1-2-ER-G -E-I-WT-TD	501	22.00	23
		Н								

Table 3 - Bit Run Summary

### Hours by Operation Summary







### Hours per BHA Breakdown



### Average Rate of Penetration per BHA



### Footage per BHA



Ind Sub Basin AU-DD-02022	BHAID		0 9 6	22 29 29	2	45 39 72				T	- 44 G 384					
Gippsla +	Comments		Drilled to 111.5m. POOH to run 20° conductor.	Orilled to 334m. Wiper bip to shoe, Run to bottom, 2-30H to run 1-3.90. casing							PAU 6 344 - Molov + LWD					
	BHA Stabilizers			17.250 in \$ 1.45 m		12.125 in 2011 18 m					6.250 in \$6 1.02 m 6.480 in \$6 1.02 m	= 0 0				
	Mator			9-5.8" SperyDr.II 6.7 L 1.50° ABH		8* SperyDril 4/5 L 1.50* ABH					6-34 SpanyOrit	1.50° ABH				
Patricia #2 Ocean Bounty	Drilling Parameters		W/OB & Mbs RPM 50 FLO 525 gpm SPP 1000 psi	WOB 8 ktbs RPM 50 FLO 806 gpm SPP : 219 psi		WOB 16 kltes RPM 53 FLO 854 gpm 54P 1770 psi					WOB 13 klbs	ELO 575 gpm SPP 1724 sei				
	Bit Data		DSJC 3x18, 1x17.92's 1.86 ft/min 1.00 hrs	XT1C 3A24.722's 2.21 tbmin 5.50 hrs		MHT13GC 3015, 1x24, 122's 0.77 temin 39.25 ths					EHP41ALKDH	- 25 frmin - 25 frmin - 22.00 hrs				
	Inclination DLS	2 23 45 63 80 105						 				 				
	Formation Name MD/TVD								Lakes Entrance FM 721 / 654	Top Gurnard 819 / 692 SG2 Top Porosity 843 / 698	SG3 Top going down 959/700	SG4 Top going down 1061 / 701	SG4 Top going up 1168 / 702	SG3 Top going up 1291 / 701		
	Q (E)	-02	- 170 -	270-	370-	470-	570-	670-	770-	870-	-076	1070-	-0711	1270-	1370-	1470-



DrillQuest 3.03.02.000



### OMV Australia Pty. Ltd. Patricia Patricia #2 : 8½" MWD Survey

## Sperry-Sun

# **Survey Report**

### 13 August, 2002

Surface Coordinates: 5790098.70 N, 627207.70 E (38° 01' 39.9460" S, 148° 26' 57.775" E) Grid Coordinate System: UTM Zone 55S on Australian Geodetic Datum 1966, Meters

Kelly Bushing: 25.00m above Mean Sea Level

Survey Ref: svy5214

## HALLIBURTON

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NV /	
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# Survey Report for Patricia #2

				ą
Comment				13 3/8" Casin
Vertical Section		0.00 0.00 0.78 0.78 0.78	-0.38 1.75 5.94 12.51	14.83 20.69 20.63 33.68 56.65 56.26 56.26 79.38 56.26 79.38 56.26 112.22 33.65 79.38 56.26 112.22 36.55 112.22
Dogleg Rate (*/30m)		0.00 0.47 0.15	2.90 4.30 90 1.04 1.04	1,10 1,10 1,10 1,10 1,10 1,10 1,10 1,10
ordinates Eastings (m)		627207.70 E 627207.70 E 627207.79 E 627207.90 E 627207.79 E	627206.90 E 627204.72 E 627200.81 E 627194.79 E	627192.68 E 627192.68 E 627192.68 E 627177.55 E 627177.55 E 627177.55 E 627166.95 E 627166.95 E 627160.32 E 627160.32 E 627142.25 E 627140.51 E 627140.51 E 627140.51 E
Global Co Northings (m)		N 07.80098.70 N 5790098.70 N 579009.72 N 700.16 N 579009.76 N	5790100.32 N 5790099.63 N 5790097.81 N 5790094.83 N	5790093.76 N 5790093.76 N 5790092.64 N 5790092.48 N 5790062.48 N 5790067.89 N 5790067.38 N 5790067.3 N 57900633.47 N 5790043.54 N 5790018.75 N 5790018.76 N
dinates Eastings (m)		000000 000000 000000000000000000000000	0.80 W 2.98 W 6.89 W 12.91 W	15.02 W 17.02 W 24.79 W 30.15 W 40.75 W 56.26 W 65.45 W 77.79 W 107.19 W
Local Coo Northings (m)		0.00 N 0.00 N 0.52 N 0.54 N 1.00 N	1.62 N 0.93 N 0.89 S 3.87 S	4.94 6.06 7.96 6.06 7.96 8.08 7.97 8.08 7.95 8.03 8.03 8.03 8.03 8.03 8.03 8.03 8.03
Vertical Depth (m)		0.00 75.98 137.95 165.41	221.61 250.62 279.60 313.70	325.12 336.23 353.19 363.19 379.66 408.11 408.11 408.11 533.73 533.73 533.73 533.73 533.73 533.73 533.73
Sub-Sea Depth (m)	urvey	-25.00 50.98 112.95 140.41	196.61 225.62 254.60 288.70	500.12 300.12 311.23 354.66 354.66 354.66 353.11 407.02 459.05 532.98 532.98 532.98 532.98 554.10 556.19 556.19
Azim.	S DWM "	0.000 0.000 9.900 16.310 321.000	262.280 248.260 244.060 244.060	241.977 239.930 235.450 228.680 228.680 229.660 231.570 231.570 231.570 231.750 232.710 229.840 229.840 229.840 229.840 229.840
lnct.	2:17%	0.000 0.980 1.050	2.720 6.360 10.560 11.750	25.070 11.682 11.682 12.110 13.440 14.450 16.450 26.250 26.250 36.080 37.080 37.000 37.0000000000000000000000000000
Measured Depth (m)	Patricia #:	0.00 75.98 137.95 165.42	221.64 250.74 280.05 314.81	<b>Patricia #</b> 326.47 335.14 335.14 411.60 436.36 490.85 574.70 575.70 575

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13 August, 2002 - 15:53

Pty. Ltd.	Patricia
Australia	
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## HALLIBURTON

# Survey Report for Patricia #2

Comment	Lakes Entrance	Top Gumard SG2 Top Porosity		9 5/8" Casing
Vertical Section	204.32 205.06 229.96 256,19 282.89	294.76 311.46 317.55 337.45		346.90 346.90 364.56 392.91 421.28 477.05 561.34 561.46 587.44 645.09 645.09 645.09 6672.69 692.69 692.69 692.69 692.69 692.69
Dogleg Rate (*/30m)	6, <b>4</b> , 78, 4, 7	6.31 6.31 8.05 8.05		8000 100 1000 1
ordinates Eastings (m)	627046.24 E 627045.66 E 627026.48 E 627006.35 E 626985.80 E	626976.66 E 626963.84 E 626959.17 E 626943.95 E		626936.72 E 626936.72 E 626923.20 E 626879.59 E 626836.83 E 626836.83 E 626836.83 E 626836.83 E 626770.65 E 626770.65 E 626770.65 E 626770.35 E 626680.73 E 626680.75 E
Global Coc Northings (m)	5789973.47 N 57899573.03 N 5789957.13 N 57899240.30 N 5789923.22 N	5789915.65 N 5789904.95 N 5789801.03 N 5789888.21 N		5789682.11 N 5789682.11 N 57896870.74 N 57898852.59 N 5789816.30 N 57897881.38 N 5789781.38 N 5789746.42 N 5789730.44 N 5789730.44 N 578963.75 N 5789683.36 N 5789663.36 N
rdinates Eastings (m)	161.46 W 162.04 W 181.22 W 201.35 W 221.90 W	231.04 W 243.86 W 248.53 W 263.75 W		270.98 W 284.50 W 328.11 W 349.76 W 457.68 W 473.06 W 473.66 W 473.66 W 568.60 W 568.60 W
Local Coo Northings (m)	125.23 S 125.70 S 141.57 S 158.40 S 175.48 S	183.05 S 193.75 S 197.67 S 210.49 S		216.59 S 246.11 S 264.24 S 264.24 S 300.07 S 333.83 S 333.83 S 368.26 S 378.26 S 388.26 S 388.26 S 388.26 S 388.26 S 388.26 S 388.26 S 285.26 S 285
Vertical Depth (m)	653.15 653.58 666.85 678.79 688.84	692.41 696.47 697.66 700.28		700.93 701.06 701.06 700.59 700.58 701.84 701.64 701.64 701.64 701.64 701.64
Sub-Sea Depth (m)	628.15 628.58 641.85 653.79 663.84	667.41 671.47 672.66 675.28	irvey	675.93 675.93 675.95 675.59 675.59 675.50 675.54 675.54 676.64 676.64 676.55 676.56 676.56 676.56 676.56
Azim.	230.670 230.654 230.160 230.060 230.060	230.277 230.030 229.975 229.800	MWD Su	229.877 230.020 230.020 230.360 230.250 230.400 231.900 231.900 233.790 233.790 233.790 233.790 233.790 233.790 233.790
Incl.	59.580 59.716 64.190 66.860 71.930	74.532 78.1 <b>4</b> 0 79.805 85.190	2:8½"	86.950 910.10 910.00 910.00 910.00 900.000 900.000 900.000 900.000 900.00000000
Measured Depth (m)	720.54 721.40 778.45 778.45 807.00	819.40 836.59 842.80 882.88	Patricia #.	872.36 890.03 946.77 946.77 975.03 975.03 11202.56 11202.56 1112.97 1112.97 1112.97 1112.97 1112.97 1112.97 11252.66 11252.22

DrillQuest 3.03.02.000

13 August, 2002 - 15:53

Pty. Ltd.	Patricia
ustralia	
MV A	

## HALLIBURTON

# Survey Report for Patricia #2

Azìr	n. Depth (m)	Depth (m)	Northings (m)	Eastings (m)	Northings (m)	Eastings (m)	Coses Rate (°/30m)	Section	Comment
စ	70 676.39	701.39	470.20 S	591.50 W	5789628.50 N	626616.20 E	1.49	755.62	
۴.	20 676.23	701.23	487.72 S	614.51 W	5789610.98 N	626593.19 E	1.36	784.53	
ကဲ့	90 676.36	701.36	505.12 S	637.64 W	5789593.58 N	626570.06 E	0.71	813.47	
9	20 676.29	701.29	522.34 S	661.09 W	5789576.36 N	626546.61 E	0.93	842.54	
9	20 676.15	701.15	532.23 S	674.71 W	5789566.47 N	626532.99 E	00.00	859.35	þ

All data is in Metres unless otherwise stated. Directions and coordinates are relative to Grid North. Vertical depths are relative to Well. Northings and Eastings are relative to Well. Global Northings and Eastings are relative to UTM Zone 55S on Australian Geodetic Datum 1966, Meters.

The Dogleg Seventty is in Degrees per 30 metres. Vertical Section is from Well and calculated along an Azimuth of 231.457° (Grid). Coordinate System is UTM Zone 55S on Australian Geodetic Datum 1966, Meters. Grid Convergence at Surface is -0.893°. Magnetic Convergence at Surface is -14.003° (01-Jul-02)

Based upon Minimum Curvature type calculations, at a Measured Depth of 1385.00m., The Bottom Hole Displacement is 859.36m., in the Direction of 231.732° (Grid).

Casing depths and formation tops are provisional, and should only be used as a guide.

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# Survey Report for Patricia #2

### **Comments**

Comment	1D
nates Eastings (m)	674.71 W
tion Coordi Northings (m)	532.23 S
Sta TVD (m)	701.15
Measured Depth (m)	1385.00

### Formation Tops

Formation Name	Lakes Entrance Top Gurnard SG2 Top Porosity
Up-Dip Dim.	0.000 0.000 0.000
Dip Angle	0.000
Eastings (m)	162.04 W 231.04 W 248.53 W
Northings (m)	125.70 S 183.05 S 197.67 S
Sub-Sea Depth (m)	628.58 667.41 672.66
Vertical Depth (m)	653.58 692.41 697.66
Measured Depth (m)	721.40 819.40 842.80

### **Casing details**

	Casing Detail	13 3/8" Casing 9 5/8" Casing
	Vertical Depth (m)	325.12 700.93
ř	Measured Depth (m)	326.47 872.36
Шo	Vertical Depth (m)	<surface> <surface></surface></surface>
л Ц	Measured Depth (m)	<surface> <surface></surface></surface>



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		. U	ي س 1 س		<b>()</b>	Weil N	ame:P	'atricia # cean Bo	2 unty					_	ocatior Job ‡	n : Gip # : AU-	psland - DD-020	Sub Bas 122	ui a
Surve	y and	Drill	ing Pa	ramete	S					Nor	th Ref :	Gid	Dec	lination	•		VS Dir :	231.55	(from Wellhead)
			WE	ILLBORE S	URVEY									DRILL	ING PA	RAMET	rers		
Measured	Incl	Azi	Vertical	Vertical	Coordir	lates	DLS	Build	Turn	WOB	RPM	Flow S	Stand	Orienta	tion	Tool	ROP BI	(A Com	ment
Depth	Angle	<u>ה</u>	Depth	Section	S/N	EW		Rate	Rate			Rate	Pipe 1	rom	۴	Face	ž		
Ē	(deg)	(deg)	Ξ	<u>E</u>	Ē	Ē	(m0E/_)	("/30m)	(m0E/.	(klbs)	-	(udB	(isi)	Ê	Ē	(deg) (	m/hr) (#	-	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	00.0	0.00									Tieon	
75.98	0.00	0.00	76.0	0.0	0.0	0.0	0.00	0.00	0.00										
137.95	0.98	06.6	137.9	<b>4</b> •	0.5	0.1	0.47	0 47	0.0	G	8	800	1050				120		
165.42	1.05	16.31	165.4	-0.8	1.0	0.2	0.15	0.08	<b>0</b> 0'0	ۍ ا	8	800	1050				120	<u> </u>	
192.59	1.25	321.00	192.6	-1.0	1.5	0.1	1.19	0.22	-61.07	5		810	1200	192	193 2	32m	8	<u> </u>	
221.64	2.72	262.28	221.6	<b>4</b> 0	1.6	-0.8	2.41	1.52	-60.64	o O		810	1200	193	210-2	32m	8	<u></u>	
														219	222 2	32m	14		
250.74	6.36	248.26	250.6	1.8	0.0	-3.0	3.90	3,75	-14.45	<b>6</b>		810	1250	222	238 2	32m	8		
				1										248	251 2	32m	• • • • • • •		
280.05	10.56	243.19	279.6	0.0	ი. •	0.0 0	4.36	4.30	-5.19 -	₽		810	1350	251	267 2	32m	2		
														277	280 .	년 년	- 1		
314.81	11.75	244.06	313.7	12.5	ი. ო	-12.9	1.04	1.03	0.75	₽	8	810	1450	280	291	10L			
337.81	11.63	239.93	336.2	17.1	φ	-17.0	1.10	-0.16	-5.39	₽	ያ	810	1450				<u>8</u>		
355.14	12.11	235.45	353.2	20.6	0. 9	-20.0	1.80	0.83	-7.76	10	\$	850	1350	340	347	85L	25		
382.28	13.44	229.93	379.7	26.6	-11.6	-24.8	1.99	1 47	-6.10	10	3	850	1350	359	366	80L	35		
411.60	14.45	228.68	408.1	33.7	-16.2	- <u>30.1</u>	1.08	1.03	-1.28	₽	50	850	1350	387	395	25L	202	<u>.</u>	
436.36	15.75	229.40	432.0	40.1	-20.4	-35.0	1.59	1.58	0.87	9	50	850	1550	424	429	20R	50	~	
463.50	16.45	229.88	458.1	47.7	-25.3	40.8	0.79	0.77	0.53	9	3	850	1550				2	~	
490.85	20.25	230.66	484.0	56.3	8.06	474	4.18	4.17	0.86	9	20	850	1650	469	485	SR SR	8	~	
520.47	25.07	231.57	511.4	67.7	-38.0	-56.3	4.89	4.88	0.92	\$	ß	850	1650	496	512	R F	20	~	
545.72	ਸ. 8	231.75	533.7	79.4	45.2	-65.5	6.12	6.12	0.21	5	22	850	1650	523	5	R	2	~	
574.70	36.08	230.71	558.0	95.2	-55.2	-77.8	6.09	6.07	-1.08	<del>1</del>	52	850	1650	551	569	20L	2		
601.82	41.61	229.84	579.1	112.2	-66.0	6.06	6.15	6.12	-0.96	12 1	55	850	1800	581	597	Ę	4	~	
632.62	46.70	229.27	601.2	133.7	-80.0	-107.2	4.97	4.96	-0.56	<u>ы</u>	55	850	1875	607	620	먹	<del>9</del>	~	
661.71:	51.65	229.87	620.2	155.7	-94.2	-123.9	5,13	5.10	0.62	12	55	880	1900	635	645	ß	45	~	
691.25	56.22	230.56	637.6	179.5	-109.5	-142.3	4.68	4.64	0.70	4	55	880	1900	664	676	10R	5 42	~	
720.54	59.58	230.67	653.1	204.3	-125.2	-161.5	3.44	3.44	0.11	ង		850	1900	711	721		8	~	
749.62	64.19	230.16	666.8	230.0	-141.6	-181.2	4.78	4.76	-0.53	25		850	2000	721	724	Ъ	2	~	
														740	750	ដ			

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<u>.</u>	iub Basin 22	(31.55° (from Wellhead)			A Comment		1																										
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ic/L21	ippslai U-DD-	VS D	ETERS		Ş	(m/hr	4		2	8	8		ଚ୍ଚ	99	00	65	-02 	65	<u></u> В	33 	09 	99	80	09	ŝ	8	8	8	8	33			 
ck: <	0 ₹ 		ARAM	,		(deg)	5	5 L	ΗS	ΥS	HS	Ϋ́	£		150	S		160R	170L	ß		2 C			1201	120L		160L					
8	Locati	。 :	TING P		tation	2 Ê	753	775	807	837	840	863			8 <b>2</b> 3	996 996		1023	1045	1084		1128			1225	1225		1305					
		clinatic	DRIL			E (E)	750	769	790	819	837	848	863		920	959		1015	1042	1081		1125			1217	125		1297					
		å			Stand	er (sd	1950		2100	2150	2150		1400	1400	1350	1600	1600	1600	1700	1700	1750	1750	1750	1750	1900	1900	1900	1950	1950	2000			 
		: Grid		ī		aley (Udb)	850		850	850	850		350	<u>9</u> 20	550	580	580	580	580	580	580	580	580	580	580	580	580	580	580	580			
		rth Raf			КЧМ		55		99				80	8	55	8	8	09	8	8	00	8	00	ġ		3	8	8	8	8			
y, Ltd.		Ñ			MOB	(klbs)	12		15	30	8		t0	10	<b>6</b>	₽	9	12	얻	13	₽	2	₽	¢	\$	<b>ç</b>	\$	\$	æ	\$			
ralia Pt	, Afur			,	iurn Data	'30m)	-0.10		0.42	4	-0.26		0.24	0.36	-0.12	-0.53	0.71	1.84	-0.18	-0.03	0.76	0.59	0.19	0.54	2.39	0.03	0.98	0.05	0.69	0.65	0.0		
V Aust	tricia # ean Boi					(30m) (	2.78		5.33	6.30	8.04		5.58	0.81	-0.16	-1.44	1.23	-1.87	1.05	2.04	0.69	9.1	0.31	0.77	-1.26	0.34	1.12	-1.36	0.16	0.66	0.00		
nt: OM	ne:Par ig:Oco				22	 30m)	2.78		5.34	6.31	8.05		5.59	0.89	0.20	1.54	1.42	2.62	1.07	2.04	1.03	1.16	0.36	<b>5</b> 6.0	2.70	0.34	1.49	1.36	0.71	0.93	0.00	 	 
Clier	ell Nar R					<u>3</u> : 2	01.4		21.9	43.9	63.7		84.5	06.3	28.1	49.8	- - - - - - - - - - - - - - - - - - -	92.4	13.5	37.0	57.7	79.6	03.7	26.0 (	47.0	68.6	91.5	14.5	37.6 (	61.1	74.7	 	 
	Š		-		rainate: Eu	] ÷	∳   ∮		ο Γ	8 Å	5 P		ы Ч	Ϋ́	ې ۲. ک	¢، •	۳ 	9 0	00 4	4	4	4	ማ 0	4 ů	ς μ	4 ب	ې ب	9 	1 6	9 9	9 		
ſ	ល	sıs	SURVE			ÊÊ	-158.4		-175.	-193.	-210.		-228.1	-246	-264.	-282.4	-300	-317	-333.1	-352.	-368	-384.1	-403.(	419	-435.	-452,	-470	-487	-505	-522	-532		
ק		amet	LLBORE	111111	Vertical Section	(m)	256.2		282.9	311.5	337.4		364.6	392.9 <sub>:</sub>	421.3	449.5	477.0	504.6	531.4	561.3	587.4	615.0	645.1	672.7	699.1	726.6	755.6	784.5	813.5	842.5	859.4		
5		ng Pai	ME	1	Vertical	ing (j)	678.8		688.8	696.5	700.3		7014	701.1	700.6	700.5	700.5	700.6	701.3	701.8	701.7	701.6	701.7	701.6	701.5	701.6	701.4	701.2	701.4	701.3	701.2		 
Ę	- U	Drillir			R 2	(deg)	230.06		230.46	230.03	229.80		230.02	230.36	230.25	229.75	230.40	232.09	231.93	231.90	232.56	233.10	233.29	233.79	231.69	231.72	232.67	232.72	233.39	234.02	234.02		
Ù		and				alfalle (dec)	66.86		71.93	78.14	85.19	-	90.24	91.01 j	90.86	89.50	90.63	88.91	87.97	90.00	90.60	89.68	89.99	90.70	89.59	89.90	90.98	89.67	89.82	90.46	90.46		
		Survey			Neasured	(E)	778.45		807.00	836.59	862.88		890.03	918.39	946.77	975.03	1002.56	1030.12	1056.95	1086.87	1112.97	1140.50	1170.64	1198.27	1224.64	1252.22	1281.21	1310.13	1339.08	1368.17	1385.00		
L				1	-		[																										 

5	per	۳y	/-5	UΠ	C Well N	lient : Of ame : Pa	viv Aust tricia #2	ralia Pty	. Ltd.			
DR		G SE	ERVI	CES	i B Loca	lock:Vie ition:Gi	¢/L21 ppsland	Sub Ba:	sin			
		^ D	4			Rig : Oc	ean Bo	unty				
	<u> </u>	а кер		425 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	L	ob#:At	J-DD-02	022	mmenia konstrukter Mit		and the second	BHA#1
BHA	t 1 Date l	n ·20/06/200	MD In (n	o): 78	TVD in (m)	: 78	Date Ó	ut 20/06/2	2002 <b>MD O</b>	ut (m): 111	TVD Out	(m): 111
RIT												
Bit #	OD (in)	MFR		Style		Şərial#	000000011155252331137	Nozz)	es (/32's)	TFA (in²)	Dull Cor	dition
1rr1	26.000	Smith		DSJC		KP2374		3x1	8, 1x17	0.967 0	-0-NO-A -E	-I-NO-TD
MÓT	OR DATA	276754267										
Run	# OD (in)	MER	[	Model		Serial	#	Bend	I NZI (	(32'S) AVG DI	( <u>psi)</u> Cu	
ĊŎM	PONENT DAT	A HARRE				5.275 5.50 gr. 7.						
ltem	Description	ananan'i Sossi Sin	nani/2006/23/00/97/2009/24/2		Serial #	OD (in)	ID (in)	Gauge	Weight	Top Con	Length	Bit - Center
1	26" Milled To	oth Bit		KF	₽2374	26.000	(01)	26.000	(inequi)	P 7-5/8" Reg	0.62	
2	36" Hole Ope	ner wir 51 2	Tat P1	46	367	9.500	3.000	36.000	217.48	<sup>:</sup> P 7-5/8" Reg	2.22	
3	9-1/2" Bit Sul 3 x 9-1/2" So	) w/ Float & iral Drill coll:	Totco Rinj ar	9 9/	5	9.500	3.000		217.48	: B 7-5/8" Reg	27.85	
- 5	Cross Over S	lub	ent.	14	4-211	9.500	3.000		217.48	B 6-5/8" Reg	1.17	
6	3 x 8" Spiral I	Drill collar		,.	4 20 4	8.000	2.810		150.00	B 6-5/8" Reg	28,44	
· · ·	Cross Over 5	UD		14	4-204	8.000	2.880		149,10	: 134-1/2 IF	0.97	
											62.24	
		//····/···		( <u> </u>						······································		
Para WOP	meter N k(klbs) :	un Max 8 8	Ave 8	Activit Drillir	y Hrs Ig: 1.00	in Air	eight (Total)	:	>)   Dr	ili String		n) Len (m)
RPM	(rpm) :	50 50	50	Reamin	ng: 0.00	In Mud	(Total)	:				
Flow	(gpm) : 5	25 525	525	Circ-Oth	er: 0.50	in Air	(Bel Jar:	5):	0		1	;
SPP	(psi) : 10	00 1000	1000	Tot	ai: 1.50	L in Mud	(Bei Jar	8.				
PERI		In	Out		Dia	stance (m)	ROP	(m/hr)	Build (°	/30m) Turn (°	/30m) Di	LS (°/30m)
Inclir	nation (deg)	0.02	0.56	Orient	ed :	0.00		0		<u>`</u> `	· <u>···</u>	6.00
Azim	uth (deg)	9.90	9.90	Rotati	ed : tal -	34.00 34.00		34 84	0.30		)	0.47
0.04	NENTE I					J-,VV			U.47	0.04	•	<u> </u>
Drille	d to 111.5m. P	DOH to run	20" condu	ctor.								

1. 20.00

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	Client : OMV Australia Pty. Ltd.	
JUCI I YJJUII	Well Name : Patricia #2	
	Block : Vic/L21	
DRICCING SERVICES	Location : Gippsland Sub Basin	
	Rig : Ocean Bounty	
BHA Report page 2	Job # : AU-DD-02022	BHA# 1

### **OBJECTIVES:**

Spud well and drill 36" hole vertically to 112mMD.

### RESULTS:

RIH 36" hole opener assembly. Tagged seabed at 77.5m and drilled to 111.5m. Circulate clean then dropped a TOTCO survey prior to POOH. Survey showed ¼\* inclination.

S					C Well N B	lient : Ol ame : Pa lock : Vi	MV Aust atricia #2 c/L21	ralia Pty.	Ltd.			
	рц		oort			Rig : O	cean Bo	unty	•••			<b></b>
		<u> </u>			J.	ob#:Al	J-DD-02	2022				BHA# 2
BHA	# 2 : Date Ir	21/06/20	)( MD in (i	m): 111	TVD In (m)	: 111	Date O	ut 21/06/2	00: <b>MD O</b>	ut (m): 334	TVD Out	(m): 332
BITC				94449								
Bit #	OD (in)	MFI		Style VT1C		Serial#		Nozzle	s (/32's)	1 325	Dull Cor	ndition
		Jecuny			2.1.3.3 <i>6</i> 31	140044	74		∧ <u>∠</u>	1.020		
Runt	# OD (in)	MFI	R	Model		Seria	]#	Bend	Nzi (/	(32's) Avg Di	if(psi) Cu	um Circ Hrs
1	9.625	SSD:	5	SperryDr		9632	12	1.50°		3:	2	15.50
COM	PONENT DAT											
ntem #	Description				97121 #	(in)	iD (in)	Gauge (in)	(lbs/ft)		Length (m)	Bit - Center Blade (m)
1	17½" Milled T 9-5/8" Spern/	ooth Bit Drill Lobe (	5/7 50et	740 7 963	844	17.500	6 135	17.500 17.250	795.63	P 7-5/8" Reg	0.42	1.45
3	Non-Mag Cro	ss Over Si	ub.	A-5-	45	9.500	3.000	11.200	217.48	B 6-5/8" Reg	1.22	1.45
4	8" RLL w/DG	₹+EWR		DM	1515HGVR	8.000	1.920		161.44	B 6-5/8" Reg	6.99	
5 6	8" Float Sub			A-3	17	8.000	1.920 3.000		147.22	B 6-5/6 Reg B 6-5/8" Reg	0.70	
7	3 x 8" Drill col	lars				8.000	2.810		150.00	B 6-5/8" Reg	28.44	!
8 9	Drilling Jar 2 x 8" Drill col	lars			101965	8.250	3.000 2.810		158.09	B 6-5/8" Reg B 6-5/8" Reg	9.69 18.48	
10	Cross Over S	ub		144	-200	6.500	2.810		91. <del>9</del> 5	B 4-1/2" IF	1.08	
11	15 x 5"HWDP	•				5.000	3.000		49.30	B 4-1/2" IF	136.39	
											219.27	
								i				
Parar	neter M	in Max	Ave	Activity	Hrs	BHA W	elaht	(lb)		II String	OD(	n) Len (m)
WOB	(klbs) :	5 10	8	Drilling	: 5.50	in Air	(Total)	: 64462		S)-NC50(XH)-	19.50# 5.	000 115
RPM Flow	(rpm) : 5	50 50 NO 810	50 806	Reaming	: 1.00	In Mud	l (Total) (Bel. iarr	: 5602; =) · 2795/	5			
SPP	(psi) : 108	50 1450	1219	Total	: 8.00	in Mud	(Bel Jan	s;: 24297	7			
PERF	ORMANCE											10 4 / WT 10 10 10
Inatio	ation (dea)			Oalanta	Dis	tance (m)	ROP	(m/hr)	Build (*/	'30m) Turn (	°/30m) D	L\$ (°/30m)
Azim	uth (deg)	9.90	240.62	Rotated	،. I: 1	52.50	4	15				
				Totai	1: 2	22.50	4	10	1.49	0.0	0	1.62
COM	MENTS											
Drilled	a to 334m. Wipe	er trip to sh	ioe. Run ta	bottom, PO	UH to run 1	3-3/8" cas	sing					
					AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AANAA AA			n venna vens	0.0050-0251-025-22	a survey and a survey and a survey and a	101110-1474-0311414-1535 (NAMA)	



### **OBJECTIVES:**

Rotary drill from the 20" shoe to 200m MD then kick off, nudging the well at 2.2°/30m to 10° inclination on a 231° azimuth by section TD at 334m.

### **RESULTS:**

The 17½" assembly was made up and RIH, with the motor bend set to 1.5° and surface tested. Tagged top of cement at 102m and drilled out the shoetrack, then continued to drill in rotary to kick-off point at 192m (8m higher than proposal). Set magnetic toolface on 231° and commenced sliding to nudge the well to 10° inclination as per wellplan. With a flow rate of 800 gpm there were no problems achieving build.

The assembly showed a dogleg capability of 6°/30m throughout the run.. It built at +/- 0.2°/30m in rotary, with a right hand walk tendency of 0.4°/30m.

Drilled to section TD at 334m, circulated bottoms up and POOH. Some overpull was seen and the hole was backreamed from 325m to 230m, RIH assembly to bottom then pulled straight to run 13 3/6" casing.

On surface the bit was found to be heavily balled up. All BHA components in good condition.

Total Drlg Hours: 4.0 Total Circ. Hours: 6.6 Total BRT Hours: 14.5

					ient : Ol	MV Aust	ralia Ptv	Ltd.	000 / F94 - B90 -		997 <u>7</u> 93,07,888,6494	2012000104963662666966
5	Deri	-ער	SUN	Well N	ame : Pa	tricia #2						
	· · · · · · · ·			B	lock : Vie	c/L21						
		SER	VICES	Loca	tion:Gi	ppsland	Sub Ba	sin				
		<b>D</b>			Rig : Oa	cean Bo	unty					
	вна	Repor	L	J.	ob#:Al	J-DD-02	022					BHA#3
BHA	# 3 : Date in :2	3/06/200 <b>ME</b>	) In (m) : 334	TVD In (m)	: 332	Date O	ut 25/06/2	2002 MD O	ut (m):	884	TVD Out (	[m): 701
BITD					())********							
Bit #	OD (in)	MFR	Style	<u></u>	Serial#		Nozzl	es (/32's)		(in²)	Dull Con	
o Anni Anni Anni	12.200	Neeu	MIT 130		INESUU7		130	0, 1824	0.8 7		1-VY 1-C3 -C	
MOT			Madal		Caulai	4	Barr		(20°a)		(mai) Cu	
<u> Run 7</u> 2	7 OD (IN) 8 000	SSDS	Sperryf	Drill	5911a 80001	1# 52	1.50°	) IZINI	328) 1	4 <b>vg</b> Dit 1 65	(psi) Cu	79.00
	0.000		openyc			ranseraa S						
COM	PONENT DATA			Serial	<u>OD</u>		Gauce	Waight	Ton	Con	Length	Bit - Center
#	Description			#	(in)	(in)	(in)	(lbs/ft)	401	ΨΨΠ	(m)	Blade (m)
1	12-1/4" Milled To	oth Bit	NL	5007	12.250		12.250	380.68	P 6-5/	8" Reg	0.34	
2	8" SperryDrill Lo	be 4/5 - 5.3 :	stg 80	0052 M64640000	8.000	5.000	12.125	104.39	B 6-5/	8" Reg   9" Po-	9.53 # 00	1.16
3	8" KLL W/DGK + 8" MPT w/Dir	EWR	יים	01535KE8	8.000	1.920	:	161.44	B 6-5/	orrkeg ∣ 8″Rea Í	6.99	
5	8" Float Sub		A-	317	8.000	3.000		147.22	B 6-5/	8" Reg	0.70	
6	Cross Over Sub		14	4 <del>-</del> 200	6.500	2.810		91.95	B 4-1/2	2" IF	1.08	
7	3 x 5"HWDP				5.000	3.000		49.30	B 4-1/2	2" IF	26.43	
8	Drilling Jar		-00	211	6.750	2.750		101.71	B 4-1/2	2" IF	9.22	
10	30x DP (S) - NC	50(XH) - 19.5			5.000	4.276		49.30 22.60	B 4-1/2	2 IF 2" IF	289.88	
11	30x HWDP	50(/iii) 1510			5.000	3.000		49.30	B 4-1/2	2" IF	277.42	
										-		
											655.37	
8									1			
7.												
						:				ł		
<u> </u>												
Paran	neter Min	Max A	ve Activit	y Hrs	BHA W	eight	 (It	) Drl	ili Ştrinc		OD(i	n) Len (m)
WOB	(kibs) : 8	30	16 Drillin	g: 39.25	in Air	(Total)	: 8954	12 DP(	S)-NC5	- 0(XH)-19	9.50# 5.0	000 229
RPM	(rpm) : 50	60	53 Reamin	<b>g:</b> 2.00	in Mud	(Total)	: 7702	26		÷		
Flow	(gpm): 810	880 E	354 Circ-Othe	er: 2.75	in Air	(Bei Jar:	s): 156:	51				!
SPP	(psi) : 1350	2150 17	'70 <b>Tot</b> a	al: 44.00	in Mud	(Bel Jar	<b>s</b> : 1346	3]				
PERF	ORMANCE											
	/ l	<u>In O</u>		Dis	tance (m)	ROP	(m/hr)	Build (*/	(30m)	Turn (°/3	30m) Di	LS (°/30m)
Inclin	ation (deg)	11.65 89 ∡∩.62⊺.220	.12   Oriente	ed: 2	:51.00 :00.00		11 17					
	uur (099) 2	-0.02 229	.er   Rotate	al: 5	.ə.ə i50.00	1	י 14	4.23		-0.58		4.24
			<u> </u>	Wa			-				I	



### **OBJECTIVES:**

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Drill to 88.28° at 701.22 TVD to land 9-5/8" casing, adjusting as per geology departments requests.

E			/_=		C	lient : Ol	MV Aust	ralia Pty.	Ltd.		0-1997) (1997) (1997) 1979) (1997) (1997) 1979) (1977)	<u>74790 (0474952 474596290)00(04747) (04</u>
			/-=	الهاز	Well N	ame : Pa Ioolai - M	tricia #2					
DR		i 5	ERV	ICE	S   B	lock : ∨⊮ ition : Gi	onsland	Sub Bas	in			
		-			2000	Rig : Od	ean Bo	unty				
	BHA	۱Re	port		J	ob # : Al	J-DD-02	022				BHA# 4
BHA#	4 : Date In	:26/06/20	C MD In (	m): 884	FVD In (m)	: 701	Date C	ur: 30/06/2	002 <b>MD C</b> i	u <mark>r (m):</mark> 1385	TVD Cu	r (m): 701
BIT D	ATA	ienie in	jestes 2 Mi	65 Seizen								
Bit #	OD (in)	MF	R	Sty	le	Serial#		Nozzle	s (/32's)	TFA (In <sup>2</sup> )	Dull Co	ndition
4	8.500	Ree	d	EHP41A	ALKDH	M25485		3	x14	0.451	1-2-ER-G -	E-I-WT-TD
мото	DR DATA							<u></u>	htert (//			
Run #	6 750	MF SSD:	<u>к</u> s	Mo Spei	del TyDrill	5enal 6751/	177 238	Bena 1 50°	N21 (/-	SZ'S) AVG D 5	17 (psi) C 0	97 25
									. and			
ltem	Description		3#		Serial	OD	ID	Gauge	Weight	Top Con	Lenath	Bit - Center
#					#	(in)	(in)	<u>(In)</u>	(lbs/ft)		(m)	Blade (m)
1	8 1/2" Tricone	Insert Bit		L	M25485	8.500	4 400 -	8.500	172.25	P 4-1/2" Re(	<b>)</b> 0.26	) 1 0 0
2.	- 6-3/4" Sperryu - 6-3/4" MPT w/l	vnir Lobe⊣ Dir	0/7 - 5.0 S	g	DM01540M6	6 750	4.490 2.810	φ.2 <del>5</del> 0	07.81 100.82	B 4-1/2" IF	2.73	1.02
4	6-3/4" RLL w/E	GR + EV	VR + CNO		DM1537HNRL	6.750	2.810	8.188	100.82	B 4-1/2" IF	13.21	
5	Pulser				DM01528K6	6.500	2.810		91.95	B 4-1/2" IF	3.47	'
6	6 3/4" Float Su	ıb			A-225	6.500	2.810		91.95	B 4-1/2" IF	0.70	)
7	3 x 5"HWDP				DAU2422	5.000	3.000		49.30	B 4-1/2" IF	26.43	5
9	3 x 5"HWDP				DANZIZZ	5.000	3.000		49.30	B 4-1/2" IF	27.51	
10	93x DP (\$) - N	C50(XH)	- 19.50#			5.000	4.276		22.60	B 4-1/2" IF	897.93	3.
11	30x HWDP					5.000	3.000		49.30	B 4-1/2" IF	277.42	2
						ĺ					4000 70	
											1200.75	* ·
						-						
					1							
					1						Ì	
L												
Paran WOP	neter Mir (kibe)	n Max	Ave 12	Act	Vity Hrs	BHA W	eight (Total)	(ib) - 13145	)   Drii 5	i String		in) Len(m)
RPM	(rpm) : 5	5 60	60	Rear	ning: 2.75	in Mud	(Total)	: 11274	6			
Flow	(gpm) : 55	0 580	575	Circ-C	ther: 2.25	in Air	(Bel Jar	s): 1261	9			
SPP	(psi) : 132	5 2000	1724		Fotal : 27.00	in Mud	(Bel Jar	s: 1082	3			
PERF	ORMANCE											
	· · · · · · · · · · · · · · · · · · ·	In	Out		Dis	stance (m)	ROP	(m/hr)	Build (°/:	30m) Turn (	(°/30m) [	)LS (°/30m)
Inclin	ation (deg)	89.12	90.46	Orie	ented :	43.00		8	4.00			1.50
Azimu	ıtı (değ)	229.97	234.02	Ro	tateci: 4 Total: F	+58.00 501.00		24	1.00 n.n.e	0.5		0.26
	 	1		L	<u></u> .		4		0.00	0.2		V.20
P/U6	3/4" Motor + LV	νU										
												li de la companya de la companya de la companya de la companya de la companya de la companya de la companya de

1100<u>4</u>704

	Client : OMV Australia Pty. Ltd.	
Sheri Jahar	Well Name : Patricia #2	
	Biock : Vic/L21	
BRILLING SCRVICES	Location : Gippsland Sub Basin	
	Rig : Ocean Bounty	
BHA Report page 2	Job # : AU-DD-02022	BHA# 4

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### OBJECTIVES:

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Drill 8-1/2" lateral section as per geology and obtain a minimum of 400 metres of pay up to 500 metres.
			NG  02199 0357 0359 0453 0499 0			
	MOTOR		NCE REP	ORT	M-/	4U-DD-02022-2
Motor Serial # : 963212	2	Job #	: AU-DD-0202	22		
Directional Driller(s) : Frank	van Noord, Ian Cobba	in Client	: OMV Austra	ilia Pty. Ltd.		
Location : Gippsi	and Sub Basin - #2	Rig Sit Due #	: Ocean Bour	nty	Maton Dur	. 44 · · · ·
Well Name : Patrici     Depth In/Out : 111	3 TTZ / 334 m	Bit Rufi # Date In/Out	; <u>201</u> 06/2002	000 # 1 2	Hole Si	τ#•. 1 τρ.•17/500 in
Application Details Kickof	r alar m f	Date IniCut	. 2000/2002	) 2000/2002	noie oi	
						A States
MOTOR CONFIGURATION				4		
	From Bit (m)	Component		Туре		Diam In/Out (in)
Upr State	1 1.45	Sleeve Stab/Pad	Yes	Stab: 510°		17.250 17.250
8 <i>V</i>	2 3.68	Bent Housing	Yes	Part 0.250 in Th	3	
And Live Stell on Piel Suith	<b>4</b> 10.01	Stator Elastomer	Nitrile	Stator: Standard		
Pod A	5	Bent Sub / 2nd Bent I	Isg No			
Band (Housing)	6	Lower String Stab	No			
	7	Upper String Stab	Nu			
Skowe Tuel 👹 🕴 👘	Additional Features	:				Arr Re
1234507	Flex Collar : No	Short Brg Pack : No	Rtr Noz / Si	<b>ze</b> : /32's	Pick U	<b>pSub</b> : No No
····· ··· ····························	Brg Cfg (Off/On) :	3/3 Lobe Cfg : 6/7	BHA OD/	ID : 9.500 / 3.000 in	Bit Bo:	<b>Protr</b> : Yes Yea
MOTOR RUN DATA						
Max Dogleg While Rotating	: <b>4</b> .36 <i>"/30m</i>	<b>RPM</b> : 50	Mo	tor Stalled : No	Prev Jo	<b>þ/Well Hrs</b> : 7.5
Max Dogleg Overpulled In	: 4.36 <i>%30m</i>	Force :	ibi P	loat Valve : Yes	D	rilling Hrs : 5.5
Max Dogleg Pushed Through	: 4.36 %30m	Force :	lbf	DP Filter : No		Circ Hrs : 1.5
Hole Azimuth Start / End :	9.90" / 240.62"	Inc Start /	<b>End</b> : 0.66	° / 11.65°	Re	aming Hrs : 1.0
Interval Oriented / Rot.	70 / 153 m	Directional Perf Ori / I	Rot !	/ °/30m	Total Hrs	This Run : 8.0
Diff Broggy (ast) Str Pl	PM Data Taraua /	a waa Desa Ua/Da				De Rotated (m/m)
	na 2500	1000 / 10	)00 8	2 2 2	1 ( <i>11011)</i> 1	45
Max: 50 5	0 3000	2000 / 20	00 10		'o	120
PRE-RUN TESTS			POST-RUN T	ESTS		
Motor Tested Pre-Run : Yes	with : 2 Collars, I	Bit in an	Motor Tested P	ost-Run : No	with :	
Dump Sub Operating : N/A	Brg Play	3.0 mm	Dump Sub Ope	rating : N/A	Brg Play	: 3.0 mm
Flow 1 : 900 gpm	Pressure 1	roo psi	Flow 7	gpm apm	Pressure 7	. psi
Driveshaft Rotation Observed	Yes	P31 535-000	Driveshaft F	Rotation Observed :	Yes	. ,
Bearing Leakage Observed	: Yes		Bearing (	_eakage Observed :	Yeş	
_ , _			Driveshaft Ro	tated to Drain Mud	Yes	
				Fluid Flushed :	No Flu	id Used :
				200.000		
Base Motor Address	<u></u>	La	9	SDD Start		50 oc
Sase water Additives	% Solid*	muciwit:1.⊍ % Sand :	rusg ₽V:	arratartend 1 cp YP:	. 5050714 1.0 <i>ibi/1001*</i>	ыцарана На
DH Temp Avg/Max /	Flow	wRate Avg/Max : 80	16/810 gpm	Chloride	Content	ppm
	Seabed/Gippsland LS	-		Lithology :		
Principle Formation Name(s)		544.000				
Principle Formation Name(s)			AND THE ACCOUNTS OF A DESCRIPTION OF A D		In contrast the sector of the contrast of the	7472-0.000
Principle Formation Name(s) : BIT DATA	Trace Vite		H. 740044		<u></u>	5 0 7 7
Principle Formation Name(s) : BIT DATA Make : Security DBS Pre Existing Hours From Other W	Type: XT1C fells: 6.5	Şerial	<b>#</b> : 740844	Dull Grade 1 2	34	5678
Principle Formation Name(s) : BIT DATA Make : Security DBS Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr	Type: XT1C /ells: 6.5 ev Reaming Hrs : 0.00	Serial No of Runs This B	#: 740844 it: 1	Dull Grade 1 2	3 4 BU A	5 6 7 8 E I NO TO
Principle Formation Name(s)       :         BIT DATA       :         Make       :         Security DBS       :         Pre Existing Hours From Other W         Prev Drilling Hrs       :       0.00       Pr         Jet Sizes       :/?2's)       :       3x24	Type : XT1C /elis: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32	Serial No of Runs This B 5 m² Gage Langt	#: 740844 it: 1 h: <i>in</i>	Dull Grade     1     2       In     1     1       Out     1     1	3 4 BU A BU A	5 6 7 8 E I NO TO E 1 NO TO
Principle Formation Name(s) : BIT DATA Make : Security DBS Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (/32's) : 3x24	Type: XT1C /elis: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32	Şerial No of Runs This B 5 m² Gage Lengt	#: 740844 it: 1 h: <i>in</i>	Dull Grade     1     2       In     1     1       Out     1     1	3 4 BU A BU A	5 6 7 8 E I NO TO E I NO TO
Principle Formation Name(s) : BIT DATA Make : Security DBS Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (/32's) : 3x24 PERFORMANCE COMMENTS Problem Perceived : No	Type : XT1C (ells: 6.5 ev Reaming Brs : 0.00 TFA : 1.32 Problem Date :	Serial No of Runs This B 5 m² Gage Langt	#: 740844 it: 1 h: in Service in	Dull Grade 1 2 In 1 1 Out 1 1 Recrupt : No	3 4 BU A BU A	5 6 7 8 E I NO TO E I NO TO
Principle Formation Name(s)       :         BIT DATA       ####################################	Type : XT1C /ells: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32 Problem Date : Tandem Motor :	Serial No of Runs This B 5 m <sup>2</sup> Gage Lengt	#: 740844 it: 1 h: <i>in</i> Service Int	Dull Grade     1     2       In     1     1     1       Out     1     1     1       Europe     1     1     1       LiH     No     1     1	3 4 BU A BU A Service Interr PP	5 6 7 8 E I NO TO E I NO TO Materia Materia Materia R Ref # :
Principle Formation Name(s)       :         BIT DATA       Make : Security DBS         Pre Existing Hours From Other W         Prev Drilling Hrs : 0.00       Pr         Jet Sizes (7925) : 3x24         PERFORMANCE COMMENTS         Problem Perceived : No         Performance Motor : Yes	Type : XT1C /ells: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32 Problem Date : Tandem Motor ;	Serial No of Runs This B 5 m <sup>2</sup> Gage Lengt	#: 740844 it: 1 h: <i>in</i> Service Int	Dull Grade     1     2       In     1     1       Out     1     1       Eterrupt     : No     2       LIH     : No     3	3 4 BU A BU A Service Interr PP	5 6 7 8 E I NO TO E I NO TO Upt Hrs : R Ref # :
Principle Formation Name(s)       :         BIT DATA         Make       :         Make       :         Security DBS         Pre Existing Hours From Other W         Prev Drilling Hrs       :         Jet Sizes       (/92's)       :         PERFORMANCE COMMENTE         Problem Perceived       :       No         Performance Motor       :       Yes	Type : XT1C /ells: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32 Problem Date : Tandem Motor :	Serial No of Runs This B 5 m <sup>2</sup> Gage Langt	#: 740844 it: 1 h: in Service Int	Dull Grade         1         2           In         1         1         1           Out         1         1         1           Eerrupt         No         2         2           LIH         No         2         3	3 4 BU A BU A Service Interr PP	5 6 7 8 E I NO TO E 1 NO TO Market # upt Hrs : R Ref # :
Principle Formation Name(s)       :         BIT DATA       Make         Make       :         Security DBS       Pre Existing Hours From Other W         Prev Drilling Hrs       :       0.00       Pr         Jet Sizes       (792s)       :       3x24         PERFORMANCE COMMENT       Problem Perceived       :       No         Performance Motor       :       Yes	Type : XT1C (ells: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32 Problem Date : Tandem Motor :	Serial No of Runs This B 5 m <sup>2</sup> Gage Lengt	#: 740844 it: 1 h: <i>in</i> Service Int	Dull Grade     1     2       In     1     1     1       Out     1     1     1       Europt     No     1     1	3 4 BU A BU A Service Interr PP	5 6 7 8 E I NO TO E I NO TO Market And TO Particular Market And TO TO TO TO TO TO TO TO TO TO TO TO TO T
Principle Formation Name(s) : BIT DATA Make : Security DBS Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (925) : 3x24 PERFORMANCE COMMENT Problem Perceived : No Performance Motor : Yes	Type : XT1C /ells: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32 Problem Date : Tandem Motor ;	Serial No of Runs This B 5 m <sup>2</sup> Gage Lengt	#: 740844 it: 1 h: <i>in</i> Service Int	Dull Grade     1     2       In     1     1       Out     1     1       Errupt     No     1       LIH     No     1	3 4 BU A BU A Service Interr PP	5 6 7 8 E I NO TO E I NO TO Upt Hrs : R Ref # :
Principle Formation Name(s)       :         BIT DATA       Make : Security DBS         Pre Existing Hours From Other W         Prev Drilling Hrs : 0.00       Pr         Jet Sizes (792s) : 3x24         PERFORMANCE COMMENTS         Problem Perceived : No         Performance Motor : Yes	Type : XT1C /ells: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32 Problem Date : Tandem Motor :	Serial No of Runs This B 5 m <sup>2</sup> Gage Lengt	#: 740844 it: 1 h: <i>in</i> Service Inf	Dull Grade     1     2       In     1     1     1       Out     1     1     1       Eerrupt     :     No     1	3 4 BU A BU A	5 6 7 8 E I NO TO E I NO TO Upt Hrs : R Ref # :
Principle Formation Name(s) : BIT DATA Make : Security DBS Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (792's) : 3x24 PERFORMANCE COMMENT Problem Perceived : No Performance Motor : Yes	Type : XT1C /ells: 6.5 ev Reaming Brs : 0.00 TFA : 1.32 Problem Date : Tandem Motor :	Serial No of Runs This B 5 m <sup>2</sup> Gage Lengt	#: 740844 it: 1 h: <i>in</i> Service Int	Dull Grade     1     2       In     1     1     1       Out     1     1     1       Eterrupt     :     No     2       LIH     :     No     2	3 4 BU A BU A Service Interr PP	5 6 7 8 E I NO TO E I NO TO Market And TO Particular Part And TO TO TO TO TO TO TO TO TO TO TO TO TO T
Principle Formation Name(s) : BIT DATA Make : Security DBS Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (325) : 3x24 PERFORMANCE COMMENT Problem Perceived : No Performance Motor : Yes Customer Representative's Signa	Type : XT1C /ells: 6.5 ev Reaming Hrs : 0.00 TFA : 1.32 Problem Date : Tandem Motor :	Serial No of Runs This B 5 m <sup>2</sup> Gage Lengt	#: 740844 it: 1 h: <i>in</i> Service int	Dull Grade 1 2 In 1 1 Out 1 1 terrupt : No LIH : No	3 4 BU A BU A Service Interr PP	5 6 7 8 E I NO TO E I NO TO Upt Hrs : R Ref # :

	MOTOR	PERFORMANCI			M-/	AU-DD-02022-3
Motor Serial # : 80005	2	Job # : Al	J-DD-02022			
Directional Driller(s) : Frank	van Noord, Ian Cobbai	B Client : Of	MV Australia Pty	y. Ltd.		
Location : Gippsl	and Sub Basin	Rig : Oc	cean Bounty			
Well Name : Patrici	a #2	Bit Run # : 3	BHA #	‡:3 I	Motor Run	1#:2
Depth In/Out : 334	/884 m	Date In/Out : 23	3/06/2002 / 2	5/06/2002	Hole Si	ze: 12.250 in
Application Details : Mediu	m Radius					
Contraction Contraction (Sec. 1972)						
MOTOR CONFIGURATION						en en en en en en en en en en en en en e
6	From Bit (m)	Component	Type			Diam In/Out (in)
Uersaas 🖉	1 1.16	Sleeve Stab/Pad	Yes Stab:	410"		12.125 12.125
	2 3.13	Bent Housing	Yes Adjus	table: 1,50° bend		
Lwr Stabon Parl Subo	3 3.15	Housing Tool Used	Yes Pad	0.250 in Th		
Makes Top	4 9.87	Stator Elastomer	Nitrile Stato	r: Standard		
	5	Bent Sub / 2nd Bent Hsg	No			
Bend (Housing)	6	Lower String Stab	No			
	7	Upper String Stab	No			
	Additional Costurar		···· / ···			Arr Bai
		- Short Bra Back - Ma	bir Noz / Sinn	/90%	Diele U	
1234567		Short Brg Mack : No M	ar Noz / Size :	/32'3	Pick U	poub : res res
	Brg Ctg (Off/On) : 3	9/3 LODE Cfg : 4/5	BHA OD/ID : 8	.00071.920 /n	Bit Bo)	krrottr : Yes Yes
MOTOR RUN DATA						
Max Dogleg While Rotating	: 805 %30m	RPM · 50	Motor Sta	lled : Yes	Prev lo	b/Well Brs 35.0
Max Dogleo Overputed in	1 8.05 W30m	Force : 230000 /br	Float V	alve : Yes		rijing Hrs : 39.2
Max Dogleg Pushed Through	: 8.05 */30m	Force : 180000 ///		ilter No	-	Circ Hrs. 2.7
Hole Aslgruth Start / End	0.05 730m	Inc Start / End		1.02	Pa	aming Here : 2.0
Interval Oriented / Bot	240.02 (2,2,9,9) 251/200 m	Directional Part Orl / Pot	· 105768.	12 \$/20m	rte Total Her	aming Hrs. 2.0
Jarring Occurred No.	2017237 4)	Directional Fell Off / Rot		730407	Now Cum	ilativa Hrs. : 79.0
	DM Both Torque //	unci Drag Un/Dn //60		POP Orlanted	(m/hc) E	OP Potstad (m/lin)
Awa 85 5	3 3357		18	11	(mm) F	
Max 1 100 4	o i 4600	30000 / 20000	30	20		70
				30		
PRE-RUN TESTS		POS	T-RUN TESTS			
Motor Tested Pre-Pure	with : 0 College P	it Mate	Tested Post_P	n · No	with ·	
Dump Sub Operation 105	Bro Play	20 mm	n Sub Onerating	· N/A	Bra Play	: 20 mm
		600 w		. 19265	Droteuro 4	
Elow 1 : 400 com	Pressure 1		940 ·	1	110000101	- por
Flow 1 : 400 gpm	Pressure 1	ing Elow	<b>9</b> ·	-	Pressure 2	
Flow 1 : 400 gpm Flow 2 : gpm	Pressure 1 : Pressure 2 :	psi pri Flow	2 : gp/ gp/	n Observadi i	Pressure 2	: psi
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed	Pressure 1 : Pressure 2 ; : Yes	psi Flow	2 : gpn Priveshaft Rotatio	n Observed :	Pressure 2 Yes Ves	: psi
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed	Pressure 1 : Pressure 2 : : Yes : Yes	psi res Flow	2 : gpm Priveshaft Rotatio Bearing Leakag	n Observed : le Observed :	Pressure 2 Yes Yes Ves	: psi
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed	Pressure 1 : Pressure 2 : Yes Yes	psi Flow C	2 : gpo Priveshaft Rotatio Bearing Leakag veshaft Rotated to	n Observed : e Observed : o Drain Mud : uid Elusbed :	Pressure 2 Yes Yes Yes	it Πεοσί:
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed	Pressure 1 : Pressure 2 ; ; Yes : Yes	psi Flow C	2 : gpo priveshaft Rotatio Bearing Leakag reshaft Rotated to Fi	7 n Observed : e Observed : o Drain Mud : uid Flushed :	Pressure 2 Yes Yes No Flu	: psi id Used :
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed	Pressure 1 : Pressure 2 ; ; Yes : Yes	psi Flow C Driv	2 : gpo priveshaft Rotatio Bearing Leakag reshaft Rotated to Fi	7 In Observed : In Observed : Do Drain Mud : uid Flushed :	Pressure 2 Yes Yes No Flu	id Used :
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Rase : Water Addition	Pressure 1 : Pressure 2 : : Yes : Yes	psi Flow Driv	2 : gpo priveshaft Rotatio Bearing Leakag veshaft Rotated to Fi	7 In Observed : In Observed :	Pressure 2 Yes Yes No Flu	:: ря/ id Used : 50 реі
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90	Pressure 1 : Pressure 2 : : Yes : Yes	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10	2 : gpo priveshaft Rotatio Bearing Leakag veshaft Rotated to Fi	n Observed : e Observed : o Drain Mud : uid Flushed : SPP Start/End : YP - 80 0	Pressure 2           Yes           Yes           No         Flue           1450 / 218           165 / 1000	: : ряі id Used : 50 ряі рН : 8.7
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max	Pressure 1 : Pressure 2 : : Yes : Yes : % Solids : 7.00	psi Flow Driv Mud Wt : 1.12 sg % Sand ; 0.10 Rate Ave/Max : 854 (88	2 : gpm priveshaft Rotation Bearing Leakag veshaft Rotated to Fi PV : 14 cp 0 gpm	7 In Observed : In Observed :	Pressure 2           Yes           Yes           No         Flue           1450 / 211           1667 (00%)           Content	: : psi id Used : 50 psi pH : 8.7 45000.com
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(et)	Pressure 1 : Pressure 2 : : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gingland ( S. La	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Enfrance EM. Top Gurger	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to Fi PV : 14 cp 0 gpm ct SG2 T Little	7 In Observed : In Observed :	Pressure 2           Yes           Yes           No         Flue           1450 / 21!           1657 / 00%           content	: : psi id Used : 50 psi pH : 8.7 45000 ррт
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 69.90 DH Temp Avg/Max : / Principle Formation Name(s) :	Pressure 1 : Pressure 2 ; ; Yes : Yes : Yes : <b>% Solids</b> : 7.00 Flow Seabed/Gippsland LS, La	hei pei Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Entrance FM, Top Guman	2 : gpm Priveshaft Rotatio Bearing Leakag reshaft Rotated to Fi PV : 14 cp 0 gpm rd, SG2 T Lithe	7 In Observed : In Observed :	Pressure 2           Yes           Yes           No         Flu           1450 / 21!           0         167100%           content         1	: : ряі id Used : 50 ряі рН : 8.7 45000 ррт
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Enfrance FM, Top Guman	2 : gpm priveshaft Rotation Bearing Leakag veshaft Rotated to Fi PV : 14 cp 0 gpm rd, SG2 T Lithe	7 n Observed : o Drain Mud : uid Flushed : SPP Start/End : YP ; 30.0 Chloride C ology : Sand	Pressure 2           Yes           Yes           No         Flux           1450 / 21!           1667100R*           Sontent	: : μsi id Used : 50 psi pH : 8.7 45000 ρρm
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed	Pressure 1 : Pressure 2 ; : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Entrance FM. Top Guman Serial #: NI	2 : gpm priveshaft Rotation Bearing Leakag veshaft Rotated to Fi PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Duil	n Observed : e Observed : o Drain Mud : uid Flushed : SPP Start/End : YP ; 30.0 Chloride C ology : Sand Grade 1 2	Pressure 2           Yes           Yes           No         Flue           1450 / 211           0         1687 (000)           content         1           3         4	: : psi id Used : 50 psi pH : 8.7 45000 ppm 5 6 7 8
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W	Pressure 1 : Pressure 2 ; ; Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells:	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 854 / 88 kes Enfrance FM, Top Guman Serial #: Ni	2 : gpm priveshaft Rotated to Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Litho L5007 Dull	r n Observed : o Drain Mud : uid Flushed : SPP Start/End : YP ; 90.0 Chloride C ology : Sand Grade 1 2	Pressure 2           Yes           Yes           No           1450 / 211           1450 / 211           160/100R*           content           3	id Used : id Used : 50 psi pH : 8.7 45000 ppm <b>5 6 7 8</b>
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 88.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr	Pressure 1 : Pressure 2 : : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC Kells: ev Reaming Hrs : 0.00	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Enfrance FM, Top Guman Serlal #: Ni No of Runs This Bit : 1	2 : gpm priveshaft Rotation Bearing Leakag reshaft Rotated to Fi PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Dull In	n Observed : e Observed : o Drain Mud : uid Flushed : SPP Start/End : YP ; 30.0 Chloride C ology : Sand Grade 1 2	Pressure 2           Yes           Yes           No           1450 / 211           1450 / 211           168/100R*           Sontent           3	: : μsi id Used : 50 psi pH : 8.7 45000 ρpm 5 6 7 8 ΝΕΥ
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pri Jet Sizes (/32's) : 3x15, 1x24	Pressure 1 : Pressure 2 : : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Rearning Hrs : 0.00 TFA : 0.960	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Entrance FM, Top Guman Serial # : Ni No of Runs This Bit : 1 ) in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Litho L5007 Dull In 000 in Out	r n Observed : o Drain Mud : uid Flushed : SPP Start/End : YP : 30.0 Chloride C ology : Sand Grade 1 2	Pressure 2           Yes           Yes           No         Flu           1450 / 211           0         168/100 R <sup>o</sup> Sontent         1           3         4           WT         G	id Used : 50 psi pH : 8.7 45000 ppm 5 6 7 8 ΝΕΫ Ε Ι ΝΟ ΤΟ
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pri Jet Sizes (/32/5) : 3x15, 1x24	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Entrance FM, Top Guman Serial # : Ni No of Runs This Bit : 1 + in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Dull In 000 in Out	r n Observed : e Observed : o Drain Mud : uid Flushed : SPP Start/End : YP ; 80.0 Chloride C ology : Sand Grade 1 2 1 1	Pressure 2           Yes           Yes           No         Flu           1450 / 21!           1657 / 00?*           content         :           3         4           WT         G	id Used : 50 psi pH : 8.7 45000 ρpm 5 6 7 8 ΝΕΨ Ε Ι ΝΟ ΤΟ
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 69.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (/32's) : 3x15, 1x24 PERFORMANCE COMMENTS	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC Vells: ev Reaming Hrs : 0.00 TFA : 0.960	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Enfrance FM, Top Guman Serial #: Ni No of Runs This Bit : 1 9 in <sup>2</sup> Gage Length : 1.3	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 cpm rd, SG2 T Lithe L5007 Dull In 000 in Out	r n Observed : b Drain Mud : uid Flushed : SPP Start/End : YP ; 80.0 Chloride C blogy : Sand Grade 1 2 1 1	Pressure 2           Yes           Yes           No         Flu           1450 / 21!           0         166/100R*           content         1           3         4           WT         G	id Used : 50 psi pH : 8.7 45000 ρpm 5 6 7 8 NEV E I NO TD
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oli/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (/32/s) : 3x15, 1x24 PERFORMANCE COMMENTS Problem Percetved : No Performance Motor : Yur	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960 Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 854 / 88 kes Entrance FM. Top Guman Serial # : NI No of Runs This Bit : 1 ) in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotation Bearing Leakag reshaft Rotated to Fi PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Dull In 000 in Out	r n Observed : b Drain Mud : uid Flushed : SPP Start/End : YP ; 80.0 Chloride C blogy : Sand Grade 1 2 i 3	Pressure 2           Yes           Yes           No         Flu           1450 / 211           1450 / 211           0         168/100R*           content         :           3         4           WT         G	: : μsi id Used : 50 psi pH : 8.7 45000 ppm 5 6 7 8 ΝΕΨ Ε Ι ΝΟ ΤΡ Upt Hrs ; Β Paf #
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pm Jet Sizes (/32/s) : 3x15, 1x24 PERFORMANCE COMMENT: Problem Percetved : No Performance Motor : Yes	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960 S Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 854 / 88 kes Enfrance FM, Top Guman Serial # : Ni No of Runs This Bit : 1 e in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotation Bearing Leakag reshaft Rotated to Fi PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Dull In 000 in Out Service Interrupt L1H	r n Observed : o Drain Mud : uid Flushed : SPP Start/End : YP ; 30.0 Chloride C ology : Sand Grade 1 2 i 1 i 1	Pressure 2           Yes           Yes           No         Flu           1450 / 21!           1450 / 21!           0         16//100ft*           content         :           3         4           WT         G           rrvice Interr         :	id Used : 50 psi pH : 8.7 45000 ppm 5 6 7 8 ΝΕΥ Ε Ι ΝΟ ΤΟ upt Hrs : R Ref # :
Flow 1       :       400 gpm         Flow 2       :       gpm         Driveshaft Rotation Observed       Bearing Leakage Observed         MUD DATA       Base :       Water         Base :       Water       :       3.00 / 89.90         DH Temp Avg/Max :       /       Principle Formation Name(s)       :         BIT DATA       Make :       Reed       Pre Existing Hours From Other W         Prev Drilling Hrs       :       0.00       Pridet Sizes         Jet Sizes       :/32's)       :       3x15, 1x24         PERFORMANCE COMMENTS       Problem Percetved :       No         Performance Motor       :       Yes	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960 S Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 854 / 88 kes Enfrance FM, Top Guman Serial # : Ni No of Runs This Bit : 1 9 in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotation Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Dull 000 in Out Service Interrupt L1H	r n Observed : o Drain Mud : uid Flushed : SPP Start/End : YP : 30.0 Chloride C ology : Sand Grade 1 2 i 1 : No Se : No Se	Pressure 2           Yes           Yes           No         Flu           1450 / 21!           1450 / 21!           16//100P           content           3           4           WT           G           srvice Interm           PP	id Used : 50 psi pH : 8.7 45000 ppm 5 6 7 8 ΝΕΥ Ε Η ΝΟ ΤΟ 45000 REY Ε Η ΝΟ ΤΟ 10 PF : R Ref # :
Flow 1       :       400 gpm         Flow 2       :       gpm         Driveshaft Rotation Observed       Bearing Leakage Observed         MUD DATA       Base :       Water         Base :       Water       :       3.00 / 89.90         DH Temp Avg/Max :       /       Principle Formation Name(s)       :         BIT DATA       Make :       Reed       Pre Existing Hours From Other W         Prev Drilling Hrs       :       0.00       Priolet Sizes         Jet Sizes       :/32's)       :       3x15, 1x24         PERFORMANCE COMMENTS       Problem Percetved :       No         Performance Motor       :       Yes	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960 S Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Enfrance FM, Top Guman Serial # : Ni No of Runs This Bit : 1 9 in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotation Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Litho L5007 Dull 000 in Out Service Interrupt Lith	r n Observed : o Drain Mud : uid Flushed : SPP Start/End : YP : 30.0 Chloride C ology : Sand Grade 1 2 i 3 ; No Se : No	Pressure 2 Yes Yes No Flu 1450 / 21: 0 167/100P Sontent : 3 4 WT G WT G	id Used : 50 psi pH : 8.7 45000 ρpm 5 6 7 8 NEV E I NO TD 45000 REV E I NO TD 1000 REV E I NO TD
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pm Jet Sizes (/32's) : 3x15, 1x24 PERFORMANCE COMMENTS Problem Percetved : No Performance Motor : Yes	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960 S Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Entrance FM, Top Guman Serlal # : NI No of Runs This Bit : 1 9 in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Litho L5007 Dull In 000 in Out Service Interrupt Lith	r n Observed : o Drain Mud : uid Flushed : SPP Start/End : YP ; 30.0 Chloride C ology : Sand Grade 1 2 i 1 ; No Se : No	Pressure 2           Yes           Yes           No         Flu           1450 / 211           168/100R*           Sontent           3           4           WT           G           Provice Interm           PP	id Used : 50 psi pH : 8.7 45000 ppm 5 6 7 8 NEV E I NO TD 4500 με με με με με με με με με με με με με
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 69.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pri Jet Sizes (/32/s) : 3x15, 1x24 PERFORMANCE COMMENT: Problem Percetved : No Performance Motor : Yes	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960 S Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Entrance FM, Top Guman Serial # : Ni No of Runs This Bit : 1 ) in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Dull In 000 in Out Service Interrupt Lith	r n Observed : e Observed : o Drain Mud : uid Flushed : SPP Start/End : YP ; 30.0 Chloride C ology : Sand Grade 1 2 i 1 ; No Se : No Se	Pressure 2           Yes           Yes           No         Flu           1450 / 211           0         1697 (100)?**           content         1           3         4           WT         G           ervice Interm         PP	id Used : 50 psi pH : 8.7 45000 ppm 5 6 7 8 ΝΕΥ Ε Ι ΝΟ ΤΟ upt Hrs : R Ref # :
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 69.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (/32's) : 3x15, 1x24 PERFORMANCE COMMENTS Problem Perceived : No Performance Motor : Yes	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960 S Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Entrance FM, Top Guman Serial # : Ni No of Runs This Bit : 1 h in <sup>2</sup> Gage Length : 1.1 No	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Dull In 000 in Out Service Interrupt L1H	r n Observed : b Drain Mud : uid Flushed : SPP Start/End : YP ; 80.0 Chloride C blogy : Sand Grade 1 2 i 1 i 1	Pressure 2           Yes           Yes           No         Flu           1450 / 211           0.167/100R*           content         1           3         4           WT         G           rvice Interm         PP	id Used : 50 psi pH : 8.7 45000 ppm 5 6 7 8 NEV E I NO TD Upt Hrs : R Ref # :
Flow 1       :       400 gpm         Flow 2       :       gpm         Driveshaft Rotation Observed       Bearing Leakage Observed         Base       :       Mub DATA         Base       :       Water       Additives         % Oll/Water       :       3.00 / 69.90       DH Temp Avg/Max :       /         Principle Formation Name(s)       :       :       EIT DATA         Make       :       Reed       Pre Existing Hours From Other W         Prev Drilling Hrs       :       0.00       Pr         Jet Sizes       :       3.15, 1x24       PERFORMANCE COMMENTS         Problem Percetved       :       No         Performance Motor       :       Yes	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes : % Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC Kells: av Reaming Hrs : 0.00 TFA : 0.960 S Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Enfrance FM, Top Gumai Serial # : Ni No of Runs This Bit : 1 h in <sup>2</sup> Gage Length : 1.1 No	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to FI PV : 14 cp 0 gpm rd, SG2 T Lithe L5007 Dull In 000 in Out Service Interrupt Lith	r n Observed : b Drain Mud : uid Flushed : SPP Start/End : YP ; 80.0 Chloride C blogy : Sand Grade 1 2 i 1 1 ; No Se : No	Pressure 2           Yes           Yes           No         Flu           1450 / 21!           1657 (00%)           content         1           3         4           WT         G           rvice Interm         PP	id Used : 50 psi pH : 8.7 45000 ρpm 5 6 7 8 ΝΕΨ Ε Ι ΝΟ ΤΟ 4000 μ μpt Hrs : R Ref # :
Flow 1 : 400 gpm Flow 2 : gpm Driveshaft Rotation Observed Bearing Leakage Observed MUD DATA Base : Water Additives % Oll/Water : 3.00 / 89.90 DH Temp Avg/Max : / Principle Formation Name(s) : BIT DATA Make : Reed Pre Existing Hours From Other W Prev Drilling Hrs : 0.00 Pr Jet Sizes (/32's) : 3x15, 1x24 PERFORMANCE COMMENTS Problem Perceived : No Performance Motor : Yes	Pressure 1 : Pressure 2 ; : Yes : Yes : Yes * Solids : 7.00 Flow Seabed/Gippsland LS, La Type : MHT13GC /ells: ev Reaming Hrs : 0.00 TFA : 0.960 S Problem Date : Tandem Motor : 1	psi Flow Driv Mud Wt : 1.12 sg % Sand : 0.10 Rate Avg/Max : 654 / 88 kes Entrance FM, Top Guman Serial # : Ni No of Runs This Bit : 1 ) in <sup>2</sup> Gage Length : 1.1 ) in <sup>2</sup> Gage Length : 1.1	2 : gpm priveshaft Rotatio Bearing Leakag reshaft Rotated to FI PV : 14 gp 0 gpm rd. SG2 T Lithe L5007 Dull In 000 in Out Service Interrupt Lith	r n Observed : b Drain Mud : uid Flushed : SPP Start/End : YP ; 80.0 Chloride C blogy : Sand Grade 1 2 i 1 i 1	Pressure 2           Yes           Yes           No         Flu           1450 / 21!           1657 / 00?           content         :           3         4           WT         G           rrvice Interrn         PP	id Used : 50 psi pH : 8.7 45000 ρpm 5 6 7 8 NEV E I NO TD upt Hrs : R Ref # :

		RFORMANCI	E REPO	DRT [		AU-DD-02022-4	
Motor Serial # : 675188 Directional Driller(s) : Frank van N	oord, S. Wainwright	Job # : AL Client : Of Bin : Of	J-DD-0202: MV Australi Sean Bount	2 ia Pty. Ltd. w		23.0925 fantanan o serang kada kata dari kata ka	<u>99019-429</u>
Well Name : Patricia #2 Depth In/Out : 884 / 138	5 m	Bit Run # : 4 Date In/Out : 20	6/06/2002	9 H <b>A # : 4</b> / 30/06/2002	Motor Rui Hole S	n.#:3 ize: 8.500 m	
MOTOR CONFIGURATION		a a shekara					
Upr Steb or Pad Sub Lwr Steb or Pad Sub Meter Top Pad Bend (Houshg)	From Bit (m) Comp 1.02 Sleev 2.00 Bent Hous 7.75 Stato Bent Lowe	ponent re Stab/Pad Housing ing Tool Used r Elastomer Sub / 2nd Bent Hsg r String Stab	Yes Yes No	<b>Type</b> Stab: 4 I 0" Adjustable: 1.50" ber	ld	Diam In/Out (in) 8.250 8.250	<u>)</u>
Zeewa Tool 0 - 1 2 3 4 5 6 7 Flex	itional Features ; : Collar : No Short Cfg (Off/On) : 3/3	r String Stab Brg Pack : No F Lobe Cfg : 6/7	No Rtr Noz / Sizo BHA OD/II	• : /32's D :6.750 / 2.810 in	Pick L Bit Bo	Arr Fi IpŞub : Yes Y xProtr : Yes N	<b>tet</b> ′es √o
MOTOR RUN DATA				Stalled an Mar			
Max Dogleg While Rotating : 8 Max Dogleg Overpulled In : Max Dogleg Pushed Through : Hole Azimuth Start / End : 229.9	.00 730m R 730m Fr 730m Fr 37° / 234.02°	PM : 50 orce : 16 orce : 16 inc Start / End	; 89,12	oat Valve : Yes DP Filter : No °/90.46°	Rev Jo	Drilling Hrs : 70 Drilling Hrs : 22 Circ Hrs : 2 Daming Hrs : 2	.25 1.00 1.25 1.75
Interval Oriented / Rot. : 43 Jarring Occured : No	/ 458 m Direct	iional Perf Ori / Rot	: 1.507	1.12 %30m	Total Hr New Cum	s This Run : 27 ulative Hrs : 97	.00 .25
Diff Press (ρs)         Str RPM           Avg ;         50         60	Rotn Torque (fl-(bs) 6376	Drag Up/Dn (lbf) 5000 / 5000	<b>WÓB</b> ( <i>k/b</i> 13	s) ROP Oriente	d (m/hr) 8	ROP Rotated (m/h 24	4)
Max : 50 60	7500	10000 / 10000	50		45	65	
PRE-RUN TESTS         Motor Tested Pre-Run       : Yes         Dump Sub Operating       : N/A         Flow 1       : 350 gpm	with : 0 Collars, Bit, MM Brg Play : 4.0 Pressure 1 : 600	/D Moto nm Dum ps/ Flow	r Tested Po p Sub Opera 1 :	STS st-Run : No ating : N/A gpm	with : Brg Play Pressure :	; 5.0 mm I : ps/	
Flow 2 : gpm Driveshaft Rotation Observed : Bearing Leakage Observed :	Pressure 2 : Yes Yes	psi Flow	2 : Priveshaft Ro Bearing Lo reshaft Rota	gpm otation Observed : eakage Observed : ated to Drain Mud :	Pressure : Yes No Yes	Σ : ρ≌i	
				Fluid Flushed :	Yes Fli	uld Used : Water	
MUDDATA Base : Water Additivés : % Oil/Water : / % So	lids: 6.00 % Sa	Mud Wt : 1.12 sg nd : 0.25	PV : 11	SPP Start/End	; 1400 / 20 2.0 <i>Ibl/100ft</i> *	00 وي <b>ps</b> y <b>pH</b> ; 9.5	
DH Temp Avg/Max ; / Principle Formation Name(s) : SG2 1	FlowRate A "op Porosity, SG3 Top goir	<b>vg/Max</b> : 575 / 58 19 down, SG4 Top goln	0 <i>gpm</i> ig down	Chloride Lithology : Sand	Content :	72000 ppm	
BIT DATA		ti da fa					
Make : Reed Ty Pre Existing Hours From Other Wells:	pe: EMP41ALKOH 0 walna Han : 0.00 Ma	Serial # : M	25485	Dull Grade 1 2	2 3 4	5 6 7	8 ENV
Jet Sizes (/32's) : 3x14	דאמים 1955 (0.00 No TFA (0.451 איי דרא 1956 (0.451 איי	Gage Length ;	in	 Out 1 2	ER G		
PERFORMANCE COMMENTS           Problem Perceived         : No           Performance Motor         : Yes         T	Problem Date : andem Motor : No		Service Inte	prrupt : No LIH : No	Service Inter PF	rupt Hrs : PR Ref # :	
Customer Representative's Signature (c	ptional) :			Date: .			

CURRENT Total Dept Drilled las Hole Size	A Contraction of the second se	Image: Constraint of the second sec	<b>/-</b> 5 <b>ERVI</b> <b>2 Repc</b> <sup>★</sup> 1 06/06/ 78 0 1 06/06/ 78 0 1 05/06/ 78 0 75 75 75 75 75 75 75 75 75 75	LIC CES Ort 2002 Casing D Casing IC Casing IC	epth iameter ) Ispl (m) 0.00	Client Vell Name Block Location Rig Job # (m) : (in) : (in) : Direction N00.00	:: OM : Patr : Vic/i : Gipp : Oce : AU-i	/ Australia Pty. L icia #2 21 osland Sub Basin an Bounty DD-02022 Operator Reps SSDS Reps LAST FORMATIO Formation Name Seabed/Gippsland	td. : : M TOP f LS	MD Top (r 77,50	<u>n) TVD</u> 7	Top (m) 77.50
MUD DATA Type Saltwater TIME BREA From 00:00	KDOWN To 00:00	ight (sg) 1.03 24.00	FV (sec) 26 TMD (m) 77.50	PV (cp) 1	YP : : Tools c	(Ibf/100ft*) 1.0 y on standby	Gels 1.0 / 1.	Fluid Loss	pH S	olids (%) Si	and (%)	<u>Oil (%)</u>
							2019-12-13-13-13-14-14-14-14-14-14-14-14-14-14-14-14-14-					

CURREN Total Dej Drilled la Hole Size LAST SU Depth ( 75.98 BHA SUM	Daily [ Daily ] Daily	Image: G         S           Drilling         Image: G           (m)         Image: G     <	<b>/-5</b> <b>E</b> R V I <b>2</b> Repo	CES ort 2002 Casing D Casing D Casing D Casing D	Clier Well Nam Bloc Locatio Ri Job Depth (m) : Dameter (in) : D (in) : D (in) :	nt : OM\ e : Patri k : Vic/L n : Gipp g : Ocea # : AU-E	/ Australia Pty. Lt cia #2 .21 sland Sub Basin an Bounty DD-02022 Operator Reps SSDS Reps LAST FORMATIO Formation Name Seabed/Gippsland	d. NTOP MD LS	Top (m) 77.50	TVD Top (m) 77.50
MUD DAT Type Saltwater TIME BRE From 00:00	TA We CAKDOWN To 00:00	ight (sg) 1.03 Hours 24.00	FV (sec) 26 TMD (m) 77.50	PV (cp) 1 BHA #	YP (Ibf/100ff <sup>a</sup>	) Gels 1.0 / 1.1	Fluid Loss	pH Solids	(%) Sand (	<u>%) Oil (%)</u>
COMMEN	ATS									

Client: OMV Australia Pty. Ltd.         Well Name: Patricia #2         Block: Vic/L21         Location: Gippsland Sub Basin         Rig: Ocean Bounty         Job #: AU-DD-02022         CURRENT STATUS       Report # 3       08/06/2002         Cotain Depth       (m) :       78       Casing Depth       (m) :         Drilled last 24 hrs       (m) :       0       Casing Diameter       Operator Reps       :         Hole Size       (in) :       Casing ID       (in) :       SDS Reps       :       :         LAST SURVEY       Exercision       TVD (m)       Displ (m)       Direction       Sabed/Gippsland LS       77.50       77.50         BHA SUMMARY       Exercision       Sabed/Gippsland LS       77.50       77.50       77.50											
MUD DATA	NG MG MG										
Type Weight (s Saltwater 1.02	sg) FV (sec) PV (cp)	YP (lbf/100ft²) Gels	Fluid Loss pH	Solids (%) Sand (%) Oil (%)							
	<u> </u>	<u> </u>									
From To Ho	ours TMD (m) BHA #	Activity									
00:00 00:00 24.	.00 77,50	Tools on standby									
COMMENTS											

CURREN Total Dep Drilled la Hole Size LAST SU Depth ( 75.98 BHA SUM	Daily [ Daily [ T STATUS oth st 24 hrs st 24 hrs m) Inclina 0.0	Crilling           Report           (m)           (m)	<b>/-5</b> ERVI <u>2 Repc</u> 78 0 0 <u>78</u> 0	Casing D Casing D Casing D Casing II	Depth Diameter D	Clier /ell Nam Bloc Locatlo Ri Job (m) : (in) : (in) : (in) : Direct N00.(	nt:OMV e:Patri k:Vic/L n:Gipp g:Ocea #:AU-[	/ Australia Pty. cia #2 .21 sland Sub Bas an Bounty DD-02022 Operator Rep SSDS Reps LAST FORMAT Formation Nam Seabed/Gippsla	Ltd. in s : i <u>ION TOP</u> he nd LS	MD Top 77.5	<u>(m)</u> 0 10	<u>/D Top (m)</u> 77.50
		laht (sc)	EV (coc)	PV /cp)		lbf/100f+	) Gole	Eluid Loss		Solide (%)	Sand (%)	
Saltwater	***	1.03	26	г <b>ч</b> (ср)		1.0	1.0 / 1.1		s pr		Sand (76	
TIME BRE	AKDOWN		. Anse. 7. 8		S.2.2							
From	<u>To</u>	Hours	TMD (m)	BHA #	Activity Tools of	/ n Staadh						
		24.00					<b>y</b>					
COMMEN	ITS											

sp	)eľ	רור/	/-5	UN		Clien ell Name	t:OM\ a:Patri	/ Australia Pty. Li icia #2	id.		
DRIL		G S	, Ervi	CES		Block Location	נ: Vic/l ו: Gipp	_21 Island Sub Basin			
	aily F	Drilling	Done	. e-t		Riç	: Oce	an Bounty			
	any L	Junne	<u>i repc</u>		Series Contractor	Job #	f: AU-[	DD-02022			
CURRENT:	STATUS	Report #	5 10/06/	2002	nth	/m) :	er versen so	Operator Reco			
Drilled last	t 24 hrs	(m) :	0	Casing De	ameter	(in) :		SSDS Reps	:		
Hole Size		(in) :		Casing ID		(in) :					
										Ballinan alaysa	. Network and the Alexandree of the Alexandree of the Alexandree of the Alexandree of the Alexandree of the Ale
LAST SUR	VEY	ation Azin	outh TVC	)(m) Dis	(m) la	Directi	on N	LAST FORMATIO	N TOP M	D Top (m)	TVD Top (m)
75.98	0.0	0.0	0 75	.98	0.00	N00.0	DE	Seabed/Gippsland	LS	77.50	77.50
BHA SUMM	JARY									42. CO	
	ر Wai	iabt (sa)	EV (sec)	BV (cp)			Gele	Eluid Lose	bild Ha	e (%) Sand	
Saltwater		1.03	26	1	1	.0	1.0 / 1.0	0			
TIME BREAK	KDÓWN					and the second	Ťare.	a working set			
<b>From</b>	To 00:00	Hours	TMD (m)	BHA #	Activity	n etandhy					
00.00	00.00	24.00	17.50		10013-01	n standby					
j j											
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j j											
	ľ										
				NK (CSC XAS) AND AND AND AND AND AND AND AND AND AND		107000000 part officer on Second Sector			0.04-070 Millioniain watershows		
	S S					¢.ª					
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	Gowardeno ontentra	INVICES AND INVICES AND INVICES									

CURRENT Total Deptil Drilled last Hole Size	LLIN aily E <u>status</u> h t 24 hrs	<b>G S</b> Drilling (m) : (m) : (in) :	/-SI ERVI Repo 6 11/06/ 78 0	CES ort 2002 Casing D Casing D Casing D	Depth Diameter D	Client /ell Name Block Location Rig Job # (m) : (in) : (in) :	:: OM\ : Patri : Vic/L : Gipp : Ocea : AU-I	/ Australia Pty. cia #2 _21 sland Sub Bas an Bounty DD-02022 Operator Rep SSDS Reps	Ltd. in s : :			
LAST SUR Depth (m 75.98 BHA SUMM	VEY	ation Azin 0 0.	. nuth TVD 00   75	(m) E 98	bispl (m) 0.00	Direction N00.00		LAST FORMAT Formation Nan Seabed/Gippsla	ION TOP ne Ind LS	MD Top 77.50	(m) TVI ) .	9 Top (m) 77.50
Туре	:Wei	ight (sg)	FV (sec)	PV (cp)	YP (	(Ibf/100ft²)	Gels	Fluid Los:	s pH	Solids (%)	Sand (%)	Oil (%)
Saltwater		1.03	26	1		1.0	1.0 / 1.	0				Katudia di sua
					A				•2•:4 			
From OO:00	<u>Το</u> 00:00	Hours 24.00	<u>TMD (m)</u> 77.50	BHA #	Activit Tools c	y n standby						
COMMENT	5						88					

	nnv-s	un	Client : OM Well Name : Patr	V Australia Pty. Ltd. icia #2		
DRILLI	NG SERVI		Block : Vic/	L21 Island Sub Basin		
			Rig : Oce	an Bounty		
Daily	Drilling Repo	ort	Job # : AU-	DD-02022	****	
CURRENT STATU	S Report # 7 12/06	/2002	and Children and			
Total Depth	(m): 78	Casing Depth	(m) :	Operator Reps :		
Drilled last 24 hrs	(m): 0	Casing Diamet	er (in) :	SSDS Reps :		
Hole Size	(in) :	Casing ID	(in) :			
LAST SURVEY	T THE SECOND			LAST FORMATION TOP	· The second states of the	
Depth (m) Incli	nation Azimuth TV	D (m) Displ (n	n) Direction	Formation Name	MD Top (m)	TVD Top (m)
1 75.98 U	1.00 U.00 7	5.98 ; 0.00	<u>  NOU.UUE    </u>	Seabed/Gippsland LS	77.50	77.50
BHA SUMMARY						
Type W	eight (sg) FV (sec)	PV (cp) Y	P (lbf/100ft²) Gels	Fluid Loss pH	Solids (%) Sand	(%) Oil (%)
Saltwater	1.03 26	1	1.0 1.0 / 1.	.0		
						<b>.</b>
00:00 i 00:00	Hours TMD (m 24.00 77.50	J BHA # Activ	vity s on standby			
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		i				
	:					
		<b>6</b>		e di sense di seconda di seconda di seconda di seconda di seconda di seconda di seconda di seconda di seconda d		
	aanaa kaanaa kaanaa kaanaa kaana br>Kaana kaana kaa					
1			Saddadin (1997)	an an an an an an an an an an an an an a		

CURREN Total Dej Drilled la Hole Size	Deif LLIN Daily [ T STATUS oth st 24 hrs st 24 hrs st 24 hrs m) Inclin 0.0	Continue           Continue           Report #           (m) :           (m) :           (in) :           ation         Azim           00         0.0	/- Si Repo 8 13/06/ 78 0 uth TVD 0 75	CES ort 2002 Casing De Casing Di Casing ID	epth (i ameter (i spi (m) 0.00	Client II Name Block ocation Rig Job # m) : in) : in) : in) : Direction	Patri Patri Gipp Coces AU-I	/ Australia Pty. cia #2 .21 sland Sub Basi an Bounty DD-02022 Operator Reps SSDS Reps LAST FORMATI Formation Nam Seabed/Gippslar	Ltd. in s : ; ON TOP e nd LS	MD Toj	<u>o (m)</u>	<u>TVD Top (m)</u> 77.50
BHA SUM MUD DA Type	IMARY TA We	ight (sg)	FV (sec)	РV (ср)	YP (lb	±±±±±±±±±±±±±±±±±±±±±±±±±±±±±±±±±±±±±	Gels	Fluid Loss	s pH	Solids (%)	Sand (9	%) Oll (%)
Saltwater		1.03	26	1	1.0	0	1.0 / 1.0	0		A NAME OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER	Second Constant of the	
TIME BRE	AKDOWN		den service									
From	То	Hours	TMD (m)	BHA #	Activity			-				
COMMEN	1TS											

CURRENT STATUS Total Depth Drilled last 24 hrs Hole Size	Pipy-S           C SERVI           Drilling Report           (m)         78           (m)         78           (m)         0           (in)         1           ation         Azimuth         TV           00         0.00         7	Clie Well Nam Bloc Locatio R Ort Job Casing Depth (m) : Casing Diameter (in) : Casing ID (in) : Casing ID (in) : D (m) Displ (m) Direct 5.98 0.00 N00.	nt : OMV Australia Pty, Ltd. ne : Patricia #2 ck : Vic/L21 on : Gippsland Sub Basin ig : Ocean Bounty # : AU-DD-02022 Operator Reps : SSDS Reps : SSDS Reps : LAST FORMATION Tormation Name Seabed/Gippsland LS	TOP         Implementation           MD Top (m)         TVD Top (m)           S         77.50
MUD DATA Type We Saltwater TIME BREAKDOWN	ight (sg) FV (sec) 1.03 26	PV (cp) YP (lbf/100ft 1 1.0	2) Gels Fluid Loss 1.0 / 1.0	pH Solids (%) Sand (%) Oil (%)
From         To           00:00         00:00	Hours TMD (m 24.00 77.50	) BHA # Activity Tools on standb	у	
COMMENTS				

Spendy/         DRILLING       SEF         Daily Drilling R         CURRENT STATUS       Report # 10         Total Depth       (m)         Drilled last 24 hrs       (m)         Hole Size       (in)         LAST SURVEY       Depth (m)         Depth (m)       Inclination         Azimuth       75.98         0.00       0.00		Client : ON Well Name : Pa Block : Vic Location : Gij Rig : Oc Job # : AL >th (m) : meter (in) : (in) : pl (m) Direction 0.00 N00.00E	/V Australia Pty. Ltd. tricia #2 :/L21 opsland Sub Basin :ean Bounty )-DD-02022 Operator Reps : SSDS Reps : LAST FORMATION T Formation Name Seabed/Gippsland LS	OP MD Top (m) 77.50	<b>TVD Top (m)</b> 77.50
MUD DATA Type Weight (sg) FY	V (sec) PV (cp)	YP (lbf/100ft²) Ge	ls Fluid Loss p	H Solids (%) Sand	(%) Oll (%)
Saltwater 1.03	26 1	1.0 i 1.0 /	1.0		
From To Hours Th	MD (m) BHA # /	Activity			
	77.50 T	Fools on standby			
COMMENTS					

<u></u>						Client : OM	/ Australia Pty. Lt	d.	
▏ <b>─</b> ト	JEI	7	/->		VVĢII	Name Paul Block : Vic/l	_21		
DRI		G S	ERVI	CES	Loc	ation : Gipp	sland Sub Basin		
			_			Rig : Oce	an Bounty		
<u> </u>	<u>Daily [</u>	Drilling	g Repo	ort		Job # : AU-I	DD-02022		
CURREN	IT STATUS	Report #	¥ 11 16/06	2002	1 <del></del>				
Total De	pth	(тт) :	78	Casing De	pth (m)	:	Operator Reps		***************************************
Drilled la	st 24 hrs	(m) :	o	Casing Dia	ameter (in)	:	SSDS Reps	:	
Hole Size	Ð	(in) :		Casing ID	(in)	:			
								2002.7010027-0101010101000011-0012607-0 <sup>2</sup> 8	-
LAST SU	RVEY			£	X		LAST FORMATIO		
Depth (	m) Inclin	ation Azi	muth TVI	D(m) Dis	spi (m) [		Formation Name		op (m) TVD Top (m)
75.98	1 0.0		.00 73	5.96 	0.00	NUU.UUE []	Seaped/Gippsiand		.50 / 77.50
BHASU	MMARY								
	COMPOSED ON STOCK AND DESCRIPTION			2502000717121107120200019109499	17.7.2.114.2.100.2121/101212121-11	NATORO MILA DI CRIMINA DI DUDI DI	er John Verstein and Berlin and Be	ning 1000000000000000000000000000000000000	20-16-24/1014-2010/00/00/00/00/00/00/00/00/00/00/00/00/
MUD DA	TA								
Туре	We	ight (sg)	FV (59C)	PV (cp)	YP (lbf/	100ft²) Gels	Fluid Loss	pH Solids (%	6) Sand (%) Oil (%)
Saltwater		т.DЗ	26	1	1.0	1.0 / 1.	U		
	To To	Houre	TMD (m)	вна #	Activity				
00:00	00:00	24.00	77.50	DNA #	Tools on st	andby			
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	NTS								
	- — p82062588	**************************************	nen sinter onder som sinter at the source of the source of the source of the source of the source of the source		2402/5/2017 2019/00/00/00/00/00/00/00/00/00/00/00/00/00			anna an an Albert State State State State State State State State State State State State State State State Sta	A.YARAFATTANA ANY AMIN'NY 227767334766000000
			·				de la la balk dan se de la bin den de sa la politike de la b		

SPEC DRILLIN Daily D CURRENT STATUS Total Depth Drilled last 24 hrs Hole Size LAST SURVEY Depth (m) Inclina 75.98 0.0	G       S       R       VI         Orilling       Report       # 12       17/06         (m)       :       78         (m)       :       0         (in)       :       0         ation       Azimuth       TV         0       0.00       7	Casing Depth Casing Diameter Casing ID	Client : OM Well Name : Patr Block : Vic/ Location : Gipp Rig : Oce Job # : AU- (m) : (m) : (in) : ) Direction N00.00E	V Australia Pty. Ltd. icia #2 L21 osland Sub Basin an Bounty DD-02022 Operator Reps : SSDS Reps : LAST FORMATION Formation Name Seabed/Gippsland Lt	Guy Howard, John Ke Frank van Noord (1), I TOP MD Top (m) S 77.50	nrick an Cobban (1) TVD Top (m) 77.50
MUD DATA         Type       Wei         Saltwater	ight (sg)         FV (sec)           1.03         26           Hours         TMD (m           24.00         77.50	PV (cp) YF 1 BHA # Activ Tools	2 (Ibf/100ft²) Gels 1.0 1.0 / 1. ity on standby, SSDS	Fluid Loss 0 personnel leave Perth	pH Solids (%) Sand	(%) Oil (%)
COMMENTS						

	<u>Abovalov i zdrevoldi i domi</u>	<u>Alth Indonesia (1987) Attinudiae</u>	50000005000000000000000000000000000000	Woladowania	<u>, Madapanenabén</u> e 	Clien	t: OM	V Australia Pty. L	<u></u>	<u> Arangan na mangangan kara</u> g	<u>Activities and a second</u>	<u></u>
I Sr	jeľ	רור	<b></b> _		4   v	- Nell Namr	a : Patr	icia #2				,
			7 -		<u>.</u>	Block	<∵ Vic//	L21				,
			ERVI			Location Riv	i : Gipp ∼ : Ocr	osland Sub Basin				,
É [	Daily /	Drillin/	a Repr	ort		Job #	/: ∪ #: AŲ-	an bounty .DD-02022				'
	CONTRACTOR		2 								Antiging	
CURREN Total Der	T STATUS 	/m)	# 13 10/00/ 78	2002	<u>All Allen</u> Noorth	(m) ·		Coerator Reps	G	W Howard, J	<u>Alexano</u> aba Kenri	And And And And And And And And And And
Drilled la	un unt 24 hrs	(m) ;	,	Casing [	/epui Dismeter	(11) ; /in) ;		SSDS Reps	: CC,	iy ⊓owaro, ≜nk van Noor	/00//sam. rd (2), lar	ر ۲ Cobban (2)
Hole Size	эг <u>а</u> ч А	(in) :	- 1	Casing I	D	(in) :		Over top-	• • • -	DR. TANK		000000
		·			-	• •			1000 M			+
LAST SU	RVEY						<u>ABBE T</u>	LAST FORMATIO	N TOP			
Depth (r	m) Inclin	iation Azir	muth TVI	<u>) (m)</u> D	Jispl (m)	Directiv	on M	Formation Name		MD Top	<u>) (m)</u> T	TVD Top (m)
(0.90		<u>.)0  </u> U.	.00 /	<u>).98</u>	0.00	NUU.U.	JE JE	Seabed/Gippsiand	i LS	(1.~	-0 	77.50
BHASUM	IMARY B				<u>ASTERNO</u>							<u> ANN AN SOME</u>
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MUD DAT	íA A											
Type	We	sight (sg)	FV (sec)	PV (cp) ₁	<u> </u>	(lbf/100ft²)	Gels	Fluid Loss	рН	Solids (%)	Sand (%	/a) Oil (%)
Saltwaren		1.03	20	1 1		1.0	1.0 / 1.	.0				
TIME BRE		Hours		N RHA #	Activi						Million	
00:00	06:30	6.50	77.50	Ditra.	WOW	(y /.Tools on s'	tandby,	SSDS personnel de	epart for	r Ocean Bour	nty	
06:30	00:00	17.50	77.50		WOW	.Fly to rig ar	nd chec	k equipment	r.			,
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<b>s</b> r	<b>)</b> pi	ריין ר'	/_5		Cli Well Na	ent: OM me: Patr	/ Australia Pty. icia #2	Ltd.		700987600000007	(Norlo-Calandor)non-contested
					Bl	ock:Vic/l	_21				
		6 5	ERVI		Locat	ion : Gip;	sland Sub Bas	in			
	Dailv [	Drilling	a Repo	ort	oL	kag. 00e b#:AU-i	DD-02022				
	Τ ΩΤΛΤΙΙΩ	Roport 1	+ 14 10/06/	2002							
	t status h	(m) :	78	Casing Der	oth (m):		Operator Rep	s : Guv	/ Howard, Jo	hn Kenrick	00000000000000000000000000000000000000
Drilled la	st 24 hrs	(m) :	0	Casing Dia	meter (in) :		SSDS Reps	: Fra	nk van Noor	d (3), Ian Co	obban (3)
Hole Size	•	(in) :		Casing ID	(in) :						
LAST SU	RVEY			₩ Sector Control (Control (Control (Contro) (Contro) (Contro) (Contro) (Co			LAST FORMAT	ION TOP	-		
Depth (	m) Inclin	ation Azir	nuth TVC	)(m) Dis	pl(m) Dire	ection	Formation Nan	10	MD Top	<u>(m)</u> TVI	D Top (m)
/5.98		00   0. Kalendar	00 75	.98	0.00 N0	<u></u>	Seabed/Gippsia	na LS	(7.5		77.50
BHA SUN	IMARY										C. T. S.
2											
Type	IA We	ight (sg)	FV (sec)	PV (cp)	YP (lbf/100	ft²) Gels	Fluid Los	s pH	Solids (%)	Sand (%)	Oil (%)
Saltwater		1.03	26	1	1.0	1.0 / 1.	0				
	AKDOWN	heiniguste									
From 00:00		Hours 4.50	TMD (m) 77.50	BHA #	Activity ROV / Camero	n operation	15				
04:30	12:00	7.50	77.50		Anchor handlin	ng operation	15				
12:00	19:30	7.50	77.50		ROV / Camero	on operation	15				
19:30	00:00	4.50	77.50		Anchor nandki	ig operation	15				
2											
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<b>Matrix Matrix</b>		Sa ka se se se se se se se se se se se se se	an an an an an an an an an an an an an a				a an an an an an an an an an an an an an				

SPERILLING SET Daily Drilling F CURRENT STATUS Report # 15 Total Depth (m) : Drilled last 24 hrs (m) : Hole Size (in) : 26.	Clier Well Nam Bloc Locatio Report 20/06/2002 111 Casing Depth (m) : 34 Casing Diameter (in) : 34 Casing ID (in) :	nt : OMV Australia Pty. Ltd. ne : Patricia #2 k : Vic/L21 m : Gippsland Sub Basin ig : Ocean Bounty # : AU-DD-02022 111.50 30.000 Operator Reps : Guy Howard, John Kenrick SSDS Reps : Frank van Noord (4), Ian Cobban (4) LAST FORMATION TOP
Depth (m)         Inclination         Azimuth           75.98         0.00         0.00           BHA SUMMARY         3         3           BHA 1:         62.24 m;         Bit #1rr1 (1. hrs), 0           MUD DATA         3	n TVD (m) Displ (m) Direct 75.98 0.00 N00.0 Other, Sub, 3 x DC, Sub, 3 x DC, Sub	Formation Name         MD Top (m)         TVD Top (m)           JOE         Seabed/Gippsland LS         77.50
Type         Weight (sg)         FV           Saltwater         1.03         From         To         Hours         TI           00:00         00:30         0.50         0.50         00:30         0.50           00:00         00:30         0.50         0.50         00:30         0.345         3.25           03:45         12:00         8.25         12:00         14:45         2.75         14:45         15:00         0.25           15:00         16:00         1.00         1         17:00         1.00         1           17:00         17:30         0.50         1         17:30         16:00         1.00         1           17:30         18:30         1.00         1         16:30         20:00         1.50         1           20:00         20:30         0.50         1         20:30         2:00         1           22:30         00:00         1.50         1         1         1	V (sec)         PV (cp)         YP (lbf/100ft <sup>2</sup> )           26         1         1.0           MD (m)         BHA #         Activity           77.50         Continue anchor           77.50         Anchor handling           77.50         M/U 30" x 20" Ca           77.50         Trip In and tag se           11.50         Drilling 26" hole v           111.50         Circulate hole 1-1           11.50         Trip Out (at Surfa           111.50         M/U 30" R/T sting           111.50         M/U 30" R/T sting           111.50         Continue RIH with           11.50         Release R/T, PO	Cels       Fluid Loss       pH       Solids (%)       Sand (%)       Oil (%)         1.0 / 1.0
COMMENTS		

CURRENT Total Dept Drilled las Hole Size LAST SUR Depth (m 314.81 BHA 2: 21	A constraints of the second se	G       S         Orilling         Report         (m)       :         (m)       :         (in)       :         ation       Azim         75       244         Sit #2rr1 (6.5	/- S ERVI Repo 16 21/06/ 334 222 17.500 100 17.500	CES 2002 Casing D Casing D Casing ID 2002 (m) D 3.70   41 (15.5 hr	We L epth ( ameter ( ( <u>spl (m)</u> 13.48	Client El Name Block Ocation Rig Job # m) : 3 in) : 1 in) : 1 in) : 1 Direction S73.31	: OMV : Patri : Vic/L : Gipp : Oce : AU-I 26.47 3.375 2.415 2.415 0n 1 W 2 0, Sub,	/ Australia Pty. L cia #2 _21 Island Sub Basin an Bounty DD-02022 Operator Reps SSDS Reps LAST FORMATIO Formation Name Seabed/Gippsland 3 x DC, Jar, 2 x DO	td. : Guy Howard, John : Frank van Noord ( NTOP MD Top ( 1LS 77.50 C, Sub, HWDP	n Kenrick (5), Ian Cobban (5) ( <b>m) TVD Top (m)</b> ; 77.50
MUD DATA Type Saltwater	Vei	ght (sg) 1.03	FV (sec) 26	PV (cp) 1	YP (It 1.	of/100ft²) 0	Gels 1.0 / 1.0	Fluid Loss	pH Solids (%) S	iand (%) Oil (%)
TIME BREA           From           00:00           00:30           02:30           03:30           09:00           10:00           11:30           12:30           13:00           15:00           18:30	KDOWN           To           00:30           02:30           03:30           09:00           10:00           11:30           12:30           13:00           15:00           18:30           00:00	Hours 0.50 2.00 1.00 5.50 1.00 1.50 1.00 0.50 2.00 3.50 5.50	TMD (m) 111.50 111.50 334.00 334.00 334.00 334.00 334.00 334.00 334.00 334.00	BHA #	Activity Make up Rih BHA Reaming Drill 17½ Circulate Wiper trij RIH from Circulate Trip Out Hold JSA P/U well!	17½" BH , pick up j / Washin " hole from work pipe p to shoe 1 20" shoe 2 20"	A, uplos ars, RO g m 111.5 e. Swee (Backree s, no fill ole w/se xe) to run and run plugs &	ad LWD V observe stab in m to 334m p 100 bbls hi-vis, s am 325m - 230m) eawater & displace n casing, download 13-3/8" casing run wellhead + 50	pot 30 bbls PHG w/PHG, increase flow LWD, no drag. k overpull, test & cem	to 1000 gpm ent as per prog
COMMENT	S					1				jî.

Speny-sun       Well Name : Patricia #2         Block : Vic/L21         LING SERVICES         Biock : Ocean Bounty	1/1/1/11/1////////////////////////////
Block : Vic/L21 DRILLING SERVICES Block : Vic/L21 Location : Gippsland Sub Basin Big : Ocean Bounty	
DRILLING SERVICES Location : Gippsland Sub Basin Rig : Ocean Bounty	
Rig · Ocean Bounty	
Daily Drilling Report Job # : AU-DD-02022	
CUPPENT STATUS Percet # 17, 77/06/2002	
Total Depth (m) : 334 Casing Depth (m) : 326 47 Operator Rans : Guy Howard	John Kenrick
Deilled leet 24 brs (m) : 0 Casing Deprin (m) : 13 375 SSDS Rens : Frank van No	oord (6) Jan Cobban (6)
Hole Size (in) : Cacing D (in) : 12.415	
Depth (m) Inclination Azimuth TVD (m) Displ (m) Direction Formation Name MD	Гор (m) TVD Top (m)
314.81 11.75 244.06 313.70 13.48 S73.31W Seabed/Glppsland LS 7	7.50 77.50
BHA SUMMARY	COLL 1976
MUD DATA	
Type Weight (sg) FV (sec) PV (cp) YP (lbf/100ft²) Gels Fluid Loss pH Solids (*	%) Sand (%) Oil (%)
Saltwater 1.03 26 1 1.0 1.0 / 1.0	
TIME BREAKDOWN	
From To Hours TMD (m) BHA # Activity	
01:30 02:00 0.50 334.00 Release 16-3/4 running tool. Pooli, ay out same	
02:00 05:30 3.50 334.00 Rig up to run SST	
05:30 08:30 3.00 334.00 Rih SST & umbilical control line.Land,latch,pressure test same	e,ok
08:30 11:00 2.50 334.00 Pooh SST running tool & umbilical control line.	
11:00 12:00 1.00 334.00 Rig up riser handling equipment to run BOP	
12:00 14:00 2.00 334.00 Hold JSA, P/U 2x50'+1x10' Riser & stand in derrick	ention
15:30 17:00 1.50 334.00 Nove BOP's to Beams, highline and the set ROP's on Beams	
17:00 17:30 0.50 334.00 Run BQP's Into splash zone	
17:30 18:00 0.50 334.00 Pressure test choke & kill lines	
18:00 20:30 2.50 334.00 Pick up slip joint & landing joint & install goosenecks	
20:30 21:00 0.50 334.00 Pressure test goosenecks	
21:00 23:30 2.50 334.00 Hook up riser tensioners to slip joint	
23:30 00:00 0.50 534.00 Eand out BOP's, perform 50 k overpointest	
	li li li li li li li li li li li li li l
COMMENTS	

<b>c</b> r	٦œľ		/		a   v	Clie Voli Nat	≱nt:OM ™≏:Pat	V Austr ricia #Σ	ralia Pty. L′ ₂	.td.			
	الكال	-1 - V -	/,		-	Blo	ne i i uu vck : Vic/	/L21	-				1
DRI		JG S	ERVI	CES	1	Locati	on : Gip	psland	i Sub Basin	1			1
Г	Daily !			~ <b></b> +		F	<b>≀ig</b> : Oce	∋an Boi	unty				1
	<u>Jany</u> 1	<u>Dhine</u>		ITL management		Jor	<b>)#:</b> AU-	DD-02	:022	CALEN AND A	NOADQLICENSK, WALL (SCHOOL)	animal estimation of	l mitmeensitesmitteseessest
CURREN	T STATUS	3 Report #	# 18 23/06/	2002									
Total Dep	Jth	(m) :	404	Casing F	Jepth	<b>(m)</b> :	326.47	Oper	rator Reps	: Gu	ıy Howard, J	ohn Kenri	ck /
Drilled la	st 24 hrs	(m) :	70	Casing F	Jameter	(ln) :	13.375	SSD	/S Reps	: Fra	ank van Noo	rd (7), Ian	. Cobban <b>(7)</b> /
Hole Size	;	(in) :	12.250	Casing If	D	(in) :	12.415						ľ
													aa aa ay
Depth (i	m) Inclin	nation Azir	muth TVE	<u>ממשלא אלא (</u> ס(m) ב	Displ (m)	Dire	ction	Form	ation Name	<u>///iii</u> 2	MD To	ר (m) פע	TVD Top (m)
382.28	13.	.44 225	<del>3</del> .93 379	9.66	27.37	S64	.91W	Seabr	ed/Gippsland	dLS	77.	.50	77.50
BHA SUM							A Started						
BHA 3: 6	55.37 m; 1	Bit #3 (8.5 h	irs), PDM #2	(43.5 hrs),	, MWD, N	/WD, Şu'	b, Şub, 3 '	x HWDI	P, Jar, 3 x H	iWDP, 3	30x DP (\$), 3	30x HWDF	{ د
													1
	-A 1200												
Туре	<u>∧</u> W€	eight (sg)	FV (sec)	PV (cp)	) YP	(lbf/100f	//////////////////////////////////////	<u>#2000000000000000000000000000000000000</u>	Fiuld Loss	pH	Solids (%)	) Sand (%	/•) Oil (%)
KCI/Polyn	ner	1.06	55	10		20.0	8.0 / 1	0.0	6	9.0	2.50		0.00
TIME BRE	AKDOWN		Faire and					A CONTRACTOR					
From	To	Hours	TMD (m)	BHA #	Activit	y		<u></u>					
00:00	00:30	0.50	334.00		Pressu	ire test w	vith connect	ctor					ŗ
00.50	0≥:00 ⊡ 02:30	0.50	334.00		Nippis Pick ur	up iano ≜ diverter	ng joan ≜ Iand & Ia	∍tch					F
02:30	03:15	0.75	334.00		Rig do	wn riser l	handling e	acuipme	ent				F
03:15	04:00	0.75	334.00		Make (	up cemer	nt head ar	nd stand	d In derrick				ŀ
04:00	05:15	1.25	334.00		Make u	up 9-5/8"	casing ha	anger ru	unning tool &	SS plu	igs, lay out s	ame	F
05:15	05:45	0.50	334.00		Make u Oriuliar	up wear o	pushing ru	inning to	ool on HWUr	Р			1
05.40	07:00	0.00	334.00 334,00		POOH	.d set wo. ' wear bu	ar Dusining Shina rufir	) nina toc	si and lav ou'	.+ same			1
07:00	08:00	1.00	334.00		Lay ou	it 17-1/2"	bit and 9-	-5/8" mc	otor	, <b>3</b>			ļ
08:00	10:00	2.00	334.00		Make u	up BHA #	# 3, 12-1/4	4" bit, 8"	' motor w/ber	nd @1./	5° & downloa	ad LWD	!
10:00	10:30	0.50	334.00		Service	a Rig and	1 top drive	<i>.</i>					ļ
10:30	12:00 12:30	1.50	334.00	3	Trip in Close (	with Bro-	4#3 `~~ #ush	and chr	د. مار				1
12:00	13:30	1.00	334.00	3	Trip In	RHA #3	above cer	anu u ment	3CK				P
13:30	14:00	0.50	334.00	3	Close 1	upper An	nular and	test LM	IRP connect	tor			!
14:00	14:30	0.50	334.00	3	Trip In	and tag t	top of cen	nent @ (	300 m				ļ
14:30	16:30 ≜7:20	2.00	334.00	3	Drill ou <sup>s</sup>	t cement	ι plugs, ce	ement ar	nd 13-3/8" cr	asing sr	noe		1
10:30 17:30	17:39 18:30	1.00	337.00		Driwng Perforr	12-1/4 ⊪ m Leak (	hole from . Mf Test	334 ເບ ເ	337m				
18:30	00:00	5.50	404.00	3	Drilling	12-1/4"	hole from	337 to /	404m				
		· ·											
												an an an an an an an an an an an an an a	State Antipation
COMMEN	TS												

Daily Drilling Report         Job #: AU-DO-02022           CURRENT STATUS         Report # 10         2406/2020         3         3         0 <t< th=""><th>Speri Drilling</th><th>TY-SUIT SERVICES</th><th>Client : OM Well Name : Patri Block : Vic/I Location : Gipp Rig : Oce</th><th>V Australia Pty. Ltd. icia #2 L21 psland Sub Basin ean Bounty</th><th></th></t<>	Speri Drilling	TY-SUIT SERVICES	Client : OM Well Name : Patri Block : Vic/I Location : Gipp Rig : Oce	V Australia Pty. Ltd. icia #2 L21 psland Sub Basin ean Bounty	
Gunter # 19         2400-2022           Total Depth         (m)         ?         700         Casing Depth         (m)         326.47         Operator Reps         :         Guy Howard, John Kerrick,           Dilled Isal 24 hrs         (m)         :         12.250         Casing Diameter (m)         :         325.47         Operator Reps         :         Guy Howard, John Kerrick,           LAST SURVEY         Total Colspan="2">Casing Diameter (m)         :         325.47         SSDS Reps         :         Frank van Noord (8), Ian Cobban (8)           691.25         66.22         230.56         637.50         176.45         392.42W         Seabed/Gippsland LS         77.50 <th>Daily וויזט</th> <th><u>lling Repoπ</u></th> <th></th> <th>DD-02022</th> <th>nentus s suntountonisti tekinteksimminen medammenye periteration</th>	Daily וויזט	<u>lling Repoπ</u>		DD-02022	nentus s suntountonisti tekinteksimminen medammenye periteration
Total Depth         (m)         708         Casing Depth         (m)         304         Casing Diameter (in)         13.37         SDS Reps         : Frank van Noord (8) fan Cobban (8)           Hole Size         (n)         :         12.250         Casing Diameter (in)         :         12.415         LAST SURVEY         Seabed/Gippsind LS         T75.0         T75.0         T75.0         T75.0 <td< th=""><th>CURRENT STATUS Ref</th><th>port # 19 24/06/2002</th><th></th><th>· · · ·</th><th>and the set of a standard state</th></td<>	CURRENT STATUS Ref	port # 19 24/06/2002		· · · ·	and the set of a standard state
Drilled last 24 hrs         (m)         :         304         Casing D         Gasing ID         (m)         :         13.07         SSUS reps         :         rmm van wood (p), rain Column (p)           LAST SURVEY         State         State <th>Total Depth (m)</th> <th>) : 708 Casing /</th> <th>Depth (m) : 326.47</th> <th>Operator Reps : Guy How</th> <th>ard, John Kenrick</th>	Total Depth (m)	) : 708 Casing /	Depth (m) : 326.47	Operator Reps : Guy How	ard, John Kenrick
Hole Size         (in)         12.20         Lasting it         (in)         12.413           LAST SURVEY         Image: Constraint of the state of t	Drilled last 24 hrs (m)	) : 304   Casing ) · 13.250   Casing	Diameter (in) : 13.375	SSDS Reps : Frank var	n Noord (8), Ian Cobban (8)
LAST SURVEY         Last FORMATION TOP         Pormation Name         MD Top (m)         TVD Top (m)           691.25         69.22         230.56         637.59         179.54         S52.42W         Seebed/Gippeland L3         77.50	Hole Size (יייי)	/ : 12.200 vasmy ·	ID (III) . 12.413		
Depth (m)         Inclination         Azimuth         TVD (m)         Displ (m)         Direction         If         Formation Name         MD Top (m)         TVD Top (m)           601.25         60.22         230.56         637.50         179.54         S52.42W         Seabed/Gippsiand LS         77.50         77.50           BHA SUMMARY         B         BHA SUMMARY         B         BHA SUMMARY         Seabed/Gippsiand LS         77.50         77.50           BHA SUMMARY         B         BHA SUMMARY         B         B         Seabed/Gippsiand LS         77.50         77.50           BHA SUMMARY         B         B         Seabed/Gippsiand LS         77.50         77.50         77.50           BHA SUMMARY         B         From to the start of the	LAST SURVEY				
691.25         56.22         290.05         657.09         178.04         SOLARY BUILDED THE SOLARY BUILDED THE SOLAR PLANT	Depth (m) Inclination	Azimuth TVD (m)	Displ (m) Direction	Formation Name M	4D Top (m) TVD Top (m)
BHA 30: 655.37 m; Bit #3 (32.5 hrs), PDM #2 (67.5 hrs), MWD, MWD, Sub, Sub, 3 x HWDP, Jar, 3 x HWDP, 30x DP (S), 30x HWDP           MUD DATA         Type         Weight (sg)         FV (sec)         PV (cp)         YP (lbf/100ft)         Gets         Fluid Loss         pH         Solids (%)         Sand (%)         Oil (%)           KC/POymer         1.04         50         9         18.0         7.0/11.0         6         8.7         5.00         0.10         3.00           TME BREAKDOWN         To         Hours         TMD (m)         BHA #         Activity	691.20 JU.22	230.55   537.38   	1/9.54 352.4211 pg	Seabed/Gippsiano Lo	77.50 11.50
MUD DATA         Type         Weight (sg)         FV (sec)         PV (cp)         YP (lb/100/ft)         Gets         Fluid Loss         pH         Solids (%)         Sand (%)         Oil (%)           KC/Polymer         1.04         50         9         18.0         7.0/11.0         6         8.7         5.00         0.10         3.00           TWE BREAKDOWN         From         To         Hours         TMD (m)         BHA#         Activity         00.00         12.00         12.00         12.00         708.00         3         Drill 1214" hole from 404 - 558m         0         1         12.00         00.00         12.00         708.00         3         Drilling 12-114" hole from 558 to 708m         1 <td< th=""><th>BHA 3: 655.37 m; Bit #3</th><th>3 (32.5 hrs), PDM #2 (67.5 hr</th><th>rs), MWD, MWD, Sub, Sub, 3</th><th>3 x HWDP, Jar, 3 x HWDP, 30x D</th><th>P (S), 30x HWDP</th></td<>	BHA 3: 655.37 m; Bit #3	3 (32.5 hrs), PDM #2 (67.5 hr	rs), MWD, MWD, Sub, Sub, 3	3 x HWDP, Jar, 3 x HWDP, 30x D	P (S), 30x HWDP
MUD DATA         Type         Weight (sg)         FV (sec)         PV (op)         YP (b/1001*)         Gets         Fluid Loss         pH         Solids (%)         Sand (%)         Oil (%)         3.00           TME BREAKDOWN         TO         Hours         TMD (m)         BHA #         Activity         0.00         3.00           00:00         12:00         00:00         12:00         708.00         3         Drill 12½* hole from 404 - 558m         12:00         12:00         708.00         3         Drilling 12*1/4* hole from 558 to 708m				· ·	
MOD DATA         Weight (sp)         FV (sec)         PV (p)         YP (lbf/100ff)         Geta         Fluid Loss         pH         Solids (%)         Sand (%)         Oil (%)           KCIPolymer         1.04         50         9         18.0         7.0/11.0         6         8.7         5.00         0.10         3.00           TIME BREAKDOWN         Hours         TMD (m)         BHA #         Activity         0         0         0         0         10         3.00           12:00         12:00         12:00         708.00         3         Drill 12%" hole from 404 - 558m         12:00         12:00         708.00         3         Drilling 12-1/4" hole from 558 to 708m           12:00         00:00         12:00         708.00         3         Drilling 12-1/4" hole from 558 to 708m         14         <	MID DATA				
KC/Polymer         1.04         50         9         18.0         7.0/11.0         6         8.7         5.00         0.10         3.00           TIME BREAKDOWN         From         To         Hours         TMD (m)         BHA #         Activity	Type Weight (	(sg) FV (sec) PV (cp	o) YP (lbf/100 <u>ft²) Gels</u>	Fluid Loss <u>pH Solic</u>	ts (%) Sand (%) Oil (%)
From         To         Hours         TMD (m)         BHA #         Activity           00:00         12:00         12:00         558.00         3         Drill 12%" hole from 404 - 558m           12:00         00:00         12:00         708.00         3         Drill 12%" hole from 558 to 708m	KCI/Polymer 1.0	<u>)4                                    </u>	18.0 7.0 / 1*	1.0 6 8.7 5.	.00 0.10 3.00
From         To         Hours         TMU (m)         BHA #         Activity           00:00         12:00         12:00         558.00         3         Drill 12%* hole from 404 - 558m           12:00         00:00         12:00         708.00         3         Drilling 12-1/4* hole from 558 to 708m				esting, three	<u>.</u>
Outcol         Lator         Society         I         Diffiling 12-11/4" hole from 558 to 708m           12:00         00:00         12.00         708.00         3         Driffing 12-11/4" hole from 558 to 708m	From 10 ms 00:00 12:00 12	ours TMD (m) BHA# 2.00 558.00 3	Activity Drill 121/2" hole from 404 -	 - 558m	
	12:00 00:00 12	2.00 708.00 3	Drilling 12-1/4" hole from	558 to 708m	
COMMENTS					
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		<u>NWWANGRADANU UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU</u>	<u>/////////////////////////////////////</u>		

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		G S	- ERVI	CES		B	IOCK : VIC/I tion : Gior	_Z1 velanz	1 Sub Racin				
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E D	) Daily [	Drilling	a Repo	ort		J	ob # : AU-I	DD-02	2022				
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CURREN1	SIATUS	Report #	20 25/06/	2002	aath		973 36		antes Bans	·	Web State	nda Othaa	
Dellad (oo	in 494 bro	(m) :	470	Casing D	epin iomotor	(m) : (in) :	012.30	eer	Prator Reps	: Gu	iy Howard, G	avin Othen a (0) Jan C	
United tas	a 24 ors	(m) . (:) .	40.050	Casing D	iameter	un).	9.025	331	Ja Reps	. 112	ank van Noui	u (a), ian C	onnau (a)
Hole Size		(in) :	12.200	Casing IL	,	(IN) :	0.001						
		an gun taut											
Depth (n	n) Inclina	ation Azir	nuth TVI	)(m) D	isol (m)	Dir	rection	Form	nation Name		MD To	o(m) TV	D Top (m)
862.88	85.	19 229	9.80 70	0.28	337.45	St	51.41W	SG2	Top Porosity		842.	80	697.66
BHASUM	MARY								Sec. State				fat-
BHA 3: 65	55.37 m; E	3it #3 (41.2	5 hrs), PDM	#2 (79. hrs)	), MWD	MWD,	Sub, Sub, 3	x HW	'DP, Jar, 3 x H	IWDP,	30x DP (S),	30x HWDP	
1 1				in the second					с.				
	A WA	iaht (ea)	EV (coc)	PV (co)		(Ibf/10	0ff <sup>2</sup> ) Cole		Fluid Lose	nH	Solide (%)	Sand (%)	Dil (%)
KCI/Polym	er	1.12	55	14		30.0	13.0 / 18	3.0	6 :	8.7	7.00	0.10	3.00
				Series and		-							
From	То	Hours	TMD (m)	BHA #	Activit	<u>тананка</u> У		<u> </u>					
00:00	08:45	8.75	884.00	3	Drilling	12-1/4	4" hole from	708 to	884m, 12-1/4	t TD			
08:45	10:00	1.25	884.00	3	Circula	te and	increase mu	id wei	ght to 1.12 S(	3.			
10:00	12:00	2.00	884.00 884.00	3	Continu	trip fro	m 884 to 65: er trip to 13-1	2/8" co	ax overpull 35 asing shoe	) K.			
12:00	14:00	0.50 1.50	884.00	3	- Finish	wiper t	rio runnina ir	1 to 88	33mg snoa 34m. no fill				
14:00	15:30	1.50	884.00	3	Circula	te bott	oms up, gas	peak	ed at 12.47%,	contin	ue circ until g	gas 0.5%	
15:30	18:30	3.00	884.00	3	Trip Ou	it BHA	. #3 (at Surfa	ice)					
18:30	19:00	0.50	884.00	3	Downic	oad LW	/D tools and	rack i	n derrick with	motor			
20:30	20:30	1.50 3.50	884.00	i 	Hold JS	ip wea SA ria	r ousning ret	neva) tasing	tooi, retneve '	wearou	isning and ia	y oown san	le
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	1979), NR 1979, M				a ana ara ara ara	50/450/4653		0.000000000000		1. M. 292			A STATE

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	JEI	י וי_	/->		We	II Nam	e∶Patri ⊾ ∧ va=0	icia #2				
DRI		ig s	- ERVI	CES		BIOC	κ∶νic/i n:Gior	LZ1 Seland Sub Raeir	,			
					-	Ri-	a: Oce	an Bountv	1			
1 E	Daily I	Drilling	g Repo	ort		Job	#: AU-I	DD-02022				
CURREN	T STATUS	Report #	21 26/06/	2002								
Total Dec		(m) :	884	Casing D	epth (	m) :	872.36	Operator Reps	: Gu	iv Howard, G	avin Ott	nen
Drilled la	st 24 hrs	(m) ;	0	Casing D	)iameter (i	in) :	9.625	SSDS Reps	: Fra	ank van Noo	rd (10), :	S. Wainwright
		,		<b>-</b>	•				(1)			, i
Hole Size	,	(in) :	8.500	Casing II	<b>) (</b> i	in) :	8.681					
								l Arrestander verste Arten ander sonder so				al a chair a tha
LAST SU	RVEY	ation Azin	nuth TVD	)/m) []	lisol (m)	Direct		LAST FORMATIC	ON TOP	MD To	<u>n (m)</u>	TVD Top (m)
862.88	85.	19 229	9.80 700	).28	337.45	\$51.4	1W	SG2 Top Porosity	,	842	.80	697.66
	MARY											
BHA 4: 1	266.79 m;	Bit #4 (0.5	hrs), PDM #3	3 (70.75 hr	s), MWD, N	NWD, M	WD, Sub	), 3 x HWDP, Jar, 3	3 x HW[	) P, 93x DP	<b>S)</b> , 30x I	HWDP
									11. C. C. C. C. C. C. C. C. C. C. C. C. C.		1.16 <b>-18</b> -5-161-1	
	A										<u>.</u>	
Type KCl/Polym	We	1 12	FV (sec)	PV (cp) 14	YP (lb 30	of/100ft*	) Gels 13.0 / 1/	Fluid Loss	<u>рн</u> 87	Solids (%)	Sand (	(%) Oil(%) 3.00
											44	
From	To	Hours	TMD (m)	BHA #	Activity							
00:00	03:30	3.50	884.00		Make up	casing l	hanger a	nd run on drill pipe				
03:30	04:00	0.50	884.00		Rig up ce	ement h	ose and l	and casing				
04:00	04:30	0.50	884.00	:	Circulate	: 1-1/2 tii	mes casi	ng volume				
04:30	07:00	2.50	884.00 884.00		Hold JSA Release	and ce	ment. over casi	na runnina tool				
01:00	10:00	2.00	884.00		Make up	and run	seal ass	embly				
10:00	10:30	0.50	884.00		Test BOF	Р		-				
10:30	12:00	1.50	884.00		POOH w	ith seal :	assembly	y running tool				
12:00 12:30	12:30	0.50	884.00 884.00		Lay dowr Make un	n 12-1/4' & ⊡⊟ v	"BHA#; with ROP	3 test tool				
13:30	16:30	3.00	884.00		Pressure	test BC	)P					
16:30	17:00	0.50	884.00		POOH w	ith BOP	test tool					
17:00	17:30	0.50	884.00		Service b	preak an	d lay out	cement head				
17:30 20:30	20:30	3.00	884.00	4	RIH with	8-1/2"   8-1/2" a	BHA #4, ccombly	motor bend @ 1.5 to 750m	', servic	e LWD & loa	id radioa	ictive source
20:00 22:00 i	22:30	0.50	884.00	4	Service to	op drive	ssennory	10 7 0011				
22:30	23:30	1.00	884.00	4	Continue	RIH to a	848m, toj	p of cement				
23:30	00:00	0.50	884.00	4	Drill ceme	ent and	casing fle	oat plugs.				
		!!!		i l								
					an cha						<u>12</u>	
COMMEN	IS										9068 45 <b>7</b> 46	<u> </u>
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s s	Jer	רור\	/-5	UN	W	ell Narr	ie : Patr	icia #2			
			<b>,</b> 681/1			Bloc	sk ∶ Vic/l an i Cinr	_21 valend Sub Resir			
		-				Locatic Ri	ia : Oce	an Bounty	•		
🖁 E	Daily I	Drilling	g Repo	ort		Job	#: AU-	DD-02022			
	T STATUS	Report #	22 27/06	/2002							
Total Dec	oth	(m) ;	1365	Casing D	)epth	(m) :	872.36	Operator Reps	: Guy Howard,	Gavin Othen	1999-1990-1990-1999-1990 1
Drilled la	st 24 hrs	(m) :	481	Casing E	)iameter	(in) :	9.625	SSDS Reps	; Frank van No	ord (11), S. \	Nainwright
				<b>.</b>	-				(2)		
Hole Size	•	(in) :	8.500	Casing II	D	(IN) :	8.681				
		e e e									-
Depth (	m) Inclin	ation Azir	nuth TVI	) (m) D	ispl (m)	Direc	tion	Formation Name	MD T	op (m) TV	/D Top (m)
1339.08	89.	82 233	3.39 70	1.36	813.47	S51.6	51W 👘	SG3 Top going up	p129	0.80	701.27
BHA SUN	MARY										
BHA 4: 1	266.79 m;	Bit #4 (23.)	75 hrs), PDN	/ #3 (94.25	hrş), MW	'D, MWD	, MWD, S	Sub, 3 x HWDP, Ja	r, 3 x HWDP, 93x I	DP (S), 30x F	IWDP
								471.8-0"DT407070			
	ГА							18 - <del></del>	<b>* 1</b> 20 20 2		
Туре	We	light (sg)	FV (sec)	PV (cp)	YP (	1bf/100ft	²) Gels	Fluid Loss	pH Solids (%	6) Sand (%)	Oil (%)
L KCI/Polyn	ner	1.09	69	רר	د	4.0	18.0 / Z.	2.0 3	9.5 6.00	0.25	104 <u>2</u>
TIME BRE		Hours	TMD (m)	BHA #	Activity	24-11-12-17-17-17-17-17-17-17-17-17-17-17-17-17-				100 A 100 A 100 A	1999 - Star (1997)
00:00	02:15	2.25	884.00	4	Continu	r ie drilling	plugs, fic	at, cement and 9-	5/8" casing shoe		
02:15	02:45	0.50	887.00	4	Drilling	8-1/2" ho	ble from 8	84 to 887m	u aud dealaca ab	aka 8 kill lina	
02:45	03:00	0.25	887.00	4	Perform	te and co 1 F.I.T., v	vith 1.07s	ud, displace to nev a mud to 330 psi, l	w mud, displace ch Equivalent mud we	оке & кш ште lght = 1.40sc	35
03:30	12:00	8.50	1064.00	4	Drilling	8-1/2" ho	ole from 8	87 to 1064m		<b>.</b>	
12:00	00:00	12.00	1365.00	4	Drilling	8-1/2" ho	ble from 1	064 to 1365m			
2,2250											
		:									
2											
	888.85										
COMMEN	its 🎆					1. 19 <b>4</b> -1975					<b></b> )
						100 A 12 10 10	N 17.06-0.5		144 (1770)		

		Clien	it : OMV Australia Pty. I a : Patricia #2	en nomen en
	-y-su	Block	<b>k</b> : Vic/L21	
DRILLING	SERVICI	ES Location	n:Gippsland Sub Basin n:Ocean Bounty	n
Daily Dri	lling Report	Job	#: AU-DD-02022	
CURRENT STATUS Re	port # 23 28/06/2002			State of the state
Total Depth (m)	): 1385 <b>Ca</b>	ing Depth (m) :	872.36 Operator Reps	Guy Howard, Gavin Othen
Drilled last 24 hrs (m)	): 20 Ca:	ing Diameter (in) :	9.625 <b>SSDS Reps</b>	(1)
Hole Size (in)	): 8.500 Ca:	ing ID (in) :	8.681	
LAST SURVEY				ON TOP
Depth (m) Inclination	Azimuth TVD (m)	Displ (m) Direct	ion Formation Name 3W 5G3 Top going u	e MD Top (m) TVD Top (m) ID 1290.80 701.27
BHA 4: 1266.79 m; Bit #	#4 (24.75 hrs), PDM #3 (	97.25 hrs), MWD, MWD,	MWD, Sub, 3 x HWDP, Ja	er, 3 x HWDP, 93x DP (S), 30x HWDP
MUD DATA				
Type Weight	(sg) FV (sec) P'	/ (cp) YP (lbf/100ft <sup>2</sup>	) Gels Fluid Loss	pH Solids (%) Sand (%) Oll (%)
KCI/Polymer 1.1	12 60	11   32.0	15.0 / 18.0 5	9.5 8.00 0.25
From To H	lours TMD (m) B	A # Activity		
00:00 01:00 1	1.00 1385.00	4 Drilling 8-1/2" hol	le from 1365 to 1385m, Fin	al TD of Patricia 2.
01:00 01:30 0 01:30 06:00 4	0.50 1385.00 1.50 1385.00	4 Circulate bottom: 4 Wiper trip to 9-5/	s up 8" casing shoe, retturn to b	pottom no fill
06:00 06:30 0	0.50 1385.00	4 Circulate	<u> </u>	
06:30 09:00 2 09:00 10:00 1	2.50 1385.00	4 Trip Out to 9-5/8' 4 Circulate to Inhib	' casing shoe ited brine	
10:00 12:00 2	2.00 1385.00	4 Trip Out (at Surfa	açe) Remove LWD source	and download.
12:00 13:00 1 13:00 00:00 11	1.00 1385.00	4 : Lay down BHA # 4 Bin out and wait	<ol> <li>wash and drain motor.</li> <li>on location for screen liner</li> </ol>	to get to bottom as per companyman
	1000.00	r rug our und wait		
	;			
COMMENTS				2

		_ Clie	nt: OMV	' Australia Pty. Ltd		ikaina ap <u>ysa</u> ng app <u>a</u> n
Sperr\	J-Sur	Well Na	<b>ne</b> : Patrie	cia #2		
		Elo Blo	<b>ck</b> ∶Vic/L	.21		
	ERVILE	- Locati	on:Gipp	sland Sub Basin		
Daily Drillin	a Report	i al	kig: Ocea ⊾# - All ⊏	an Bounty		
	<u>g report</u>		J#. AU-L	/0-02022		
CURRENT STATUS Report	# 24 29/06/2002					
Total Depth (m) :	1385 Casing	g Depth (m):	872.36	Operator Reps	Guy Howard, Gavin O	then
Drilled last 24 hrs (m) :	0 Casing	g Diameter (in) :	9.625	SSDS Reps	: Frank van Noord (13), (2)	S.Wainwright
Hole Size (in) :	8.500 Casing	ID (in):	8.681			
LAST SURVEY				LAST FORMATION	ТОР	
Depth (m) Inclination Azi	muth TVD (m)	Displ (m) Dire	ction	Formation Name	MD Top (m)	TVD Top (m)
		<u> </u>		COS TOP going up	1250.00	, (1.2) MA
BHA 4: 1266.79 m; Bit #4 (24	.75 hrs), PDM #3 (97,	25 hrs), MWD, MWI	D. MWD. SI	ub. 3 x HWDP. Jar. 3	3 x HWDP, 93x DP (S), 3	0x HWDP
		,	-,,			
MUD DATA						
Type Weight (sg) KCI/Polymer 1.12	FV (sec) PV (c	p) YP (lbf/100f	t*) Gels	Fluid Loss	pH Solids (%) Sand	<u>(%)</u> Oil(%)
		<u> </u>	19.0716	.0 5	9.0 0.00 0.2	
TIME BREAKDOWN	TMD (m) BHA	# Activity				
00:00 00:00 24.00	1385.00 4	Wait on rig for	chopper to l	Melbourne		
		:				ĺ
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			133			
COMMENTS		an an an an an an an an an an an an an a			5 A	E.
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Er						Clie	ant: OM	V Austi icio #2	alia Pty. Lte	<u>anonosing</u> a 7	an an an an an an an an an an an an an a	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
▏ <mark>゚</mark> ┣┟			/		"	ven Nar Blo	ne Pau ck:Vic/	icia #2 L21					
		G S	ERVI	CES		Locati	on : Gip	osland	Sub Basin				
	Dailv [	Drilling	a Repo	ort		F Jol	<b>tig</b> :Oce 5#:AU-	an Bou DD-020	unty 022				
	/	Report 1	25 30/06/	2002									<u>,</u>
Total Dep	oth	(m) :	1385	Casing E	)epth	(m) :	872.36	Óper	ator Reps	: Guy	Howard, Gi	avin Othen	000000000000000000
Drilled la	st 24 hrs	(m) :	0	Casing E	Diameter	(in) :	9.625	SSD	S Reps	: Frai	nk van Noor	d (14), S.W	ainwright
Hole Size	,	(in) :	8.500	Casing i	D	(in):	8.681			(3)			
									EORMATIO				
Depth (	m) Inclin	ation Azir	muth TVE	) (m) [	Displ (m)	Dire	ction	Forma	tion Name	TOP	MD Top	(m) TV	D Top (m)
1385.00	) 90.	46 234	4.02 70	1.15	859.36	\$51	.73W	SG3 T	op going up		1290.	80	701,27
BHA SUN	MARY												
BHA 4: 1	266.79 m;	Bit #4 (24.)	75 hrs), PDN	1 #3 (97.25	hrs), MV	VD, MWI	D, MWD, S	Sub, 3 x	HWDP, Jar,	3 x HW	/DP, 93x DP	' (S), 30x H	WDP
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Patricia-2 Site Survey Report

Prepared for OMV Australia Pty. Ltd.

Report No: 3346C1

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### THALES

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# LOCATION DIAGRAM



Coastline data is  $\bigcirc$  Commonwealth of Australia, AUSLIG 1998. All rights reserved.
# 1. INTRODUCTION

Positioning, bathymetric and geophysical services were provided by Thales GeoSolutions (Australasia) Limited (Thales) to OMV Australia Pty Limited (OMV), for a survey of the proposed Patricia-2 location, in the Gippsland Basin, Bass Strait. All survey requirements and operating procedures were undertaken in accordance with the agreement between Thales and OMV. The survey was undertaken to investigate the suitability of the area for the positioning of a semi-submersible rig.

The survey vessel, Bluefin, was used to conduct the survey. All necessary survey positioning, geophysical and geotechnical equipment were installed and calibrated prior to the commencement of the survey. A Trimble 4000 Series Global Positioning System (GPS) was used in conjunction with Thales' SkyFix/SkyFix Spot Differential GPS and associated equipment to provide on-line positioning. An Atlas Deso 15 single beam echo sounder, a GeoAcoustics side scan sonar towfish with CODA data logging, an EG & G surface tow boomer sub-bottom profiling system with CODA data logging and a Geometrics G-880 magnetometer were used for geophysical data acquisition.

The survey site is a rectangle 3.0km x 2.0km with a total area of 6.0km<sup>2</sup>.

OMV supplied the proposed Patricia-2 location:

# Datum: AGD66

Latitude	:	38° 01' 39.97" South
Longitude	:	148° 26' 57.83" East

#### Projection: AMG Zone 55, CM 147° East

Easting	:	627 209.0m
Northing	:	5 790 097.8m

The survey area consisted of 21 primary lines 3.0km long, on an orientation of 051°/231° with a line spacing of 100m. The cross lines consisted of 3 lines 2.0km long, on an orientation of 141°/321° with a line spacing of 500m. Geophysical equipment consisting of echo sounder, side scan sonar and boomer profiler was run simultaneously on these lines. Two additional 1.0km lines were run: the first on an orientation of 359° and the second on an orientation of 089°, to correlate the position of the Patricia-1 wellhead. The full suite of geophysical equipment consisting of echo sounder, side scan sonar, boomer profiler and magnetometer was run simultaneously on these lines.

Seabed sampling was successfully undertaken across the site survey area, and the results have been used to ground truth the geophysical data.

The survey was carried out on 18 and 19 March 2002. All times are quoted in Eastern Daylight Time (UTC+11 hours).



# 2. SUMMARY OF SURVEY RESULTS

# Bathymetry

All soundings have been reduced to the Lowest Astronomical Tide (LAT) based on tidal predictions obtained from WNI (38° 01' 00" South, 148° 26' 57" East). LAT is approximately 0.7m below Mean Sea Level (MSL) or the Australian Height Datum (AHD).

The nearest observable water depth to the proposed Patricia-2 location is 52.5m LAT. The minimum water depth observed within the site survey area was 51.6m LAT, 800m southeast of the proposed Patricia-2 location. The maximum water depth observed was 53.7m LAT, 900m northeast of the proposed Patricia-2 location.

Overall, the seabed is essentially flat, across the site with only a 2.1m variation in seabed height. The seabed within the site survey area shows no overall geographic trend but undulates with a very gentle gradient  $<1^{\circ}$  (<1:57).

# Seabed features

A low reflectivity seabed interpreted as loose/soft clayey SAND with some shell fragments occupies approximately 35% of the Patricia-2 site survey area. The occurrence of this seabed type is elongate and indicates a probable current direction trending east to west. The proposed Patricia-2 location lies within this seabed type. One gravity corer sample was recovered within this seabed type.

The remaining 65% of the seabed within the site survey area is a moderate reflectivity seabed interpreted as fine to coarse SAND with some shell and ROCK fragments. The moderately reflective character of this seabed type may be indicative of a slightly coarser average grain size compared to the other seabed type. One grab sample was recovered within this seabed type.

One sonar contact was identified, approximately 5.4m across and 1.7m in height interpreted as the Patricia-1 wellhead, which was drilled in 1987 and has not been removed. The Patricia-1 wellhead is surrounded by a small area of disturbed seabed believed to be associated with former drilling activities and also possibly indicative of drilling muds.

# Shallow geology

The shallow stratigraphy in the survey area has been defined as follows:

Stratigraphy	Description
Unit A	Loose to medium dense shelly SANDS and soft to stiff CLAYS.
Unit B	Medium dense to dense shelly SANDS and stiff CLAYS.
Unit C	Variably cemented SANDS.
Unit D	Cemented sediments.



The shallow stratigraphy at the proposed Patricia-2 location has been defined as follows:

Top of Unit	Depth Below Seabed (m)	Unit Thickness (m)	Predicted Lithology
A	0	2.0	Loose to medium dense shelly SANDS and soft to stiff CLAYS.
В	2.0	1.0	Medium dense to dense shelly SANDS and stiff CLAYS.
С	3.0	1.0	Variably cemented SANDS.
D	4.0	>8.0 to beyond the approximate limit of seismic penetration	Cemented sediments.

# Shallow Gas Risk Assessment

Using the method of shallow gas risk assessment outlined in section 3.5 of this report, the risk of shallow gas is defined as slight (gas unlikely) at the proposed Patricia-2 location and within the limit of useful boomer penetration.

#### Seabed Sampling

One gravity corer sample and one grab sample of the seabed were collected near the proposed Patricia-2 location the results of which have been used to ground truth the geophysical data.



# 3. SURVEY RESULTS

# 3.1 BATHYMETRY

Analogue and digital soundings of the seafloor were obtained using an Atlas Deso 15 Single Beam echo sounder. The data was corrected for heave using a TSS DMS 2-05 motion sensor. The transducers were mounted onto the starboard side of the vessel and a bar check was carried out prior to commencement of the survey. A draft setting of 1.54m was obtained for the 33kHz and 210kHz transducers on 16 March 2002. These were entered into the echo sounder (refer Appendix F).

All soundings have been reduced to LAT based on the tidal predictions obtained from WNI for the survey area (38° 01' 00" South, 148° 26' 57" East refer Drawing No. 3346C1-02). LAT is approximately 0.7m below Mean Sea Level (MSL) or the Australian Height Datum (AHD) (refer Appendix L).

Bathymetric data quality was generally good with minimal miss-ties. Maximum miss-ties observed were up to 0.4m.

The velocity of sound in seawater was determined prior to the commencement of the survey by the deployment of an Applied Microsystems Model SVPlus Velocity Profiler Probe. A mean velocity of sound of 1515.7m/s was determined and entered into the echo sounder on 18 March 2002 (refer Appendix I).

The bathymetric soundings are representative of the seafloor topography and are plotted on Drawing No. 3346C1-02 (Scale 1:5000) and contoured at 1m intervals.

The nearest observable water depth to the proposed Patricia-2 location is 52.5m LAT. The minimum water depth observed within the site survey area was 51.6m LAT, 800m southeast of the proposed Patricia-2 location. The maximum water depth observed was 53.7m LAT, 900m northeast of the proposed Patricia-2 location.

Overall, the seabed is essentially flat, across the site with only a 2.1m variation in seabed height. The seabed within the site survey area shows no overall geographic trend but undulates with a very gentle gradient  $<1^{\circ}$  (<1:57).

The seabed within a 100.0m radius of the proposed Patricia-2 location appears clear of any topographical features which may be considered hazardous to drilling operations.

A single beam echo sounder data example at the proposed location is shown as Figure 1.





Figure 1 : 33kHz and 210kHz Atlas Deso 15 single beam echo sounder data example. Illustrates the seabed bathymetry at the proposed Patricia-2 location. Line PX2. Heading 321°



# 3.2 SEABED FEATURES

The textural characteristics and reflective strengths of the seafloor around the survey area were investigated by the deployment of a GeoAcoustics side scan sonar system. The system consists of the GeoAcoustics side scan sonar towfish & transceiver operated at 100kHz, a CODA DA200 Digital Recorder and an Alden 9315 CTP printer. The data was digitally recorded using the CODA Acquisition System to allow further processing or replay. The side scan sonar was set with a slant range of 125m, with interval scale lines of 10m, providing over 100% data overlap on a 100m primary line spacing.

One gravity corer sample and one grab sample were recovered within the site survey area. These samples were used to ground truth the geophysical data. Correlation between seabed sample data and sonar acoustic reflectivity across the survey area enables textural characteristics to be interpreted in terms of sediment lithology and plotted on the seabed features drawing (refer Drawing No. 3346C1-03).

The quality of the side scan sonar data was good. Insonification of the seabed was generally achieved to the limit of the selected slant range, and adequate to produce the required coverage.

Seabed sediments within the survey area have been interpreted and classified into the following acoustic and lithological seabed categories:

#### Low reflectivity seabed interpreted as loose/soft clayey SAND with some shell fragments.

This seabed type occupies 35% of the Patricia-2 site survey area and consists of loose/soft clayey SAND with some shell fragments. It is characterised by a flat, low reflectivity seabed with well defined sediment textural boundaries. The textural boundaries are elongate indicating a probable current direction trending west to east.

One gravity core sample recovered in this seabed type consists of loose shelly SAND at the seabed, overlaying firm to stiff CLAY. The proposed Patricia-2 location lies within this seabed type (see Figure 2).

# Moderate reflectivity seabed interpreted as fine to coarse SAND with some shell and ROCK fragments.

This seabed type occupies 65% of the Patricia-2 site survey area and consists of fine to coarse SAND with some shell and ROCK fragments. It is characterised by a flat, moderate reflectivity seabed with well defined sediment textural boundaries (see Figure 4).

The moderately reflective character of this seabed type may be indicative of a slightly coarser average grain size compared to the other seabed type.

One grab sample recovered in this seabed type consists of loose, coarse SAND with some shell fragments.

# Moderate reflectivity seabed interpreted as disturbed loose/soft clayey SAND with some shell fragments.

This seabed type occupies <1% of the Patricia-2 site survey area and occurs exclusively around the Patricia-1 wellhead position. It is believed to consist of loose/soft clayey SAND with some shell fragments. It is characterised by a moderate reflectivity seabed with a well define sediment textural boundary.



It is believed to be disturbed seabed associated with former drilling activities and may also be indicative of drilling muds around the former wellhead (see Figure 3).

# **Sonar Contacts**

One sonar contact was identified with approximately 5.4m across and with a height of approximately 1.7m. It is interpreted as the Patricia-1 wellhead, which was drilled in 1987 and has not been removed (see Figure 3). The as-found (side scan sonar) position of the contact can be found below and correlates closely to the as-supplied position of the Patricia-1 wellhead.

# Datum: AGD66 Projection: AMG Zone 55, CM 147° East

Description	Easting (m)	Northing (m)
Patricia-1 Wellhead (as supplied)	626 945.0	5 789 700.3
Patricia-1 Wellhead (as found sss)	626 948	5 789 695

# **Positional Considerations**

The accuracy of derived dimensions is dependent on the quality of the side scan sonar data. Adverse operating conditions can produce effects such as tow fish heave and yaw, which reduce interpretation accuracy.

The accuracy with which a sonar contact or seabed feature can be positioned is dependent on a number of factors. Survey considerations are of primary importance, as position accuracy ultimately depends on the accuracy with which both the vessel and tow fish can be positioned. Running adjacent survey lines in opposite directions reduces the effects of tow fish position inaccuracy, as miss-ties between lines can then be averaged to produce a best-fit position.

The position accuracy of features derived from an interpretation of side scan sonar data, is subject to additional considerations that are independent of the data quality issues discussed above. Such potential errors include those associated with scaling, plotting and subsequent digitising of features. Additionally, certain features require a subjective interpretation.

In the survey area, the accuracy of positioning is estimated at  $\pm$  15m and the accuracy of height measured above and below ambient seabed is estimated at  $\pm$  0.5m.





Figure 2 : 100kHz slide scan sonar data example. Illustrates low reflectivity seabed interpreted as loose/soft clayey SAND with some shell fragments at the proposed Patricia-2 location. Line PX2. Heading 321°





Figure 3 : 100kHz slide scan sonar data example. Illustrates Patricia-1 wellhead location and the surrounding seabed. Line P1NS+50. Heading 051°







Figure 4 : 100kHz slide scan sonar data example. Illustrates the boundary between low reflectivity seabed interpreted as loose/soft clayey SAND with some shell fragments and moderate reflectivity seabed interpreted as fine to coarse SAND with some shell and ROCK fragments. Line PP7. Heading 051°



# 3.3 WELL HEAD MAGNETOMETER SURVEY

Analogue and digital magnetometer data were obtained using a Geometrics G-880 caesium marine deep tow magnetometer. The G-880 tow fish was towed from the stern of the vessel. The aim of the magnetometer survey was to confirm the location of the Patricia-1 wellhead.

Confirmation of the wellhead location was reported separately to OMV.



# 3.4 SHALLOW GEOLOGY

The shallow geology of the survey area was interpreted from data acquired by the deployment of an EG&G 230 surface tow boomer. Analogue seismic data was recorded on a CODA DA200 Digital Recorder and an Alden 9315 CTP printer. The data was digitally recorded using the CODA Acquisition System to allow further processing or replay. The boomer data was recorded with a sweep of 135ms of which 85ms was displayed on a hard copy printout using an Alden 9315 CTP printer. The firing interval was 410ms and a power level of 300 Joules was supplied by an Applied Acoustics, high voltage energy source. The printed sub-bottom data was TVG amplified to compensate for signal loss and a band-pass filter (400Hz to 4.0kHz) was applied.

Sub-bottom profiler data quality was good considering the poor weather conditions. The limit of penetration reached with the sub-bottom profiler (or limit of useful acoustic penetration) was up to 16.0m below seabed. Boomer data could not be interpreted below this depth.

Sediment thickness was calculated using an assumed acoustic velocity of 1600m/s for the time to depth conversion. The stratigraphy in the survey area has been categorised as follows:

Stratigraphy	Description
Unit A	Loose to medium dense shelly SANDS and soft to stiff CLAYS.
Unit B	Medium dense to dense shelly SANDS and stiff CLAYS.
Unit C	Variably cemented SANDS.
Unit D	Cemented sediments.

The shallow geology is relatively homogenous across the site survey area. Unit A and Unit B are generally flat lying and continuous across the entire site survey area. Unit C is continuous across the entire site survey area but the thickness of Unit C is much more variable, becoming much thicker in the north and west of the site survey area. Unit D underlies the first three Units across the entire site survey area and in the north and west occurs at greater depth below the seabed.

# Unit A : Loose to medium dense shelly SANDS and soft to stiff CLAYS

The seabed and reflector R1 bound the uppermost unit, designated Unit A. By correlation with seabed sampling, Unit A comprises loose to medium dense shelly SANDS and soft to stiff CLAYS. Unit A is present over the entire site survey area. Its thickness varies from 2.0m to 4.0m thick. Unit A is flat lying and its thickness is relatively homogenous across the survey area.

Reflector R1 has a relatively low reflection amplitude and is continuous to gradational across the entire survey area.

The thickness of Unit A (seabed to reflector R1) has been mapped across the survey area and presented as an isopach drawing at one metre contour interval (refer Drawing No. 3346C1-04).



# Unit B : Medium dense to dense shelly SANDS and stiff CLAYS.

The top of Unit B is defined by reflector R1, and its base by reflector R2, which are both laterally continuous to gradational across the entire survey area and of relatively low reflection amplitude. The acoustic properties of Unit B are similar to Unit A. No seabed sampling was obtained within Unit B. Unit B is interpreted as consisting medium dense to dense shelly SANDS and stiff CLAYS. Unit B is also flat lying and its thickness is relatively homogenous across the entire survey area varying from 0.5m to 1.5m.

# Unit C : Variably cemented SANDS

The top of Unit C is defined by the reflector R2 and the base by reflector R3. No seabed sampling was obtained within Unit C. Unit C is interpreted as consisting variably cemented SANDS. The thickness of Unit C is relatively homogenous across most of the site survey area, varying from 0.5m to 1.5m thick. In the north and west of the site survey area however the depth of the base of Unit C below the seabed is more variable and generally deeper. In the north and west of the site survey area the thickness of Unit C varies from approximately 1.5m to 8.0m (see Figure 6).

# Unit D : Cemented sediments

The top of Unit D is defined by the reflector R3 and continues to below the limit of useful acoustic penetration. No seabed sampling was obtained within Unit D. Unit D is interpreted as consisting cemented sediments to beyond the limit of useful acoustic penetration.

The reflector R3 has a relatively high reflection amplitude and although continuous to gradational across the site survey area is not always clearly defined. This would indicate a relatively large, although variable change in density, between Unit C and Unit D. This has been interpreted as the result of the change to the cemented sediments of Unit D. There is also an angular unconformity between Unit C and Unit D and the top of Unit D may comprise a weathered surface probably related to a Pleistocene era sea level regression. The depth of reflector R3 is relatively constant across some of the site survey area except in the north and west of the site survey area where it becomes more variable and generally deeper.

Numerous internal reflectors have been identified within Unit D (refer Drawing No. 3346C1-05). These have been interpreted as possibly representing bedding planes within Unit D, dipping southerly. These internal reflectors could also be indicative of lithological changes within Unit C. (see Figures 5 and 6).

Top of Unit	Depth Below Seabed (m)	Unit Thickness (m)	Predicted Lithology
А	0	2.0	Loose to medium dense shelly SANDS and soft to stiff CLAYS.
В	2.0	1.0	Medium dense to dense shelly SANDS and stiff CLAYS.
С	3.0	1.0	Variably cemented SANDS.
D	4.0	>8.0 to beyond the approx. limit of seismic penetration	Cemented sediments.

The predicted lithology at the proposed Patricia-2 location can be seen below:

A boomer data example at the proposed Patricia-2 location is presented as Figure 5.





Figure 5 : Boomer sub-bottom data examples. proposed Patricia-2 location. Line PP11. Heading 051°

Illustrates the shallow geology at the





# Figure 6 : Boomer sub-bottom data examples. Illustrates a zone of high amplitude reflection exhibited by reflector R3 and change in depth of top of Unit D. Line PP9. Heading 051°



# 3.5 SHALLOW GAS RISK ASSESSMENT

The limit of penetration reached with the subbottom profiler (or limit of useful acoustic penetration) was up to 16.0m below the seabed. Boomer data could not be interpreted below this depth due to the strongly cemented and relative hard nature of the shallow geology encountered.

In places reflector R3 exhibits anomalously high amplitude reflection. This has been interpreted as indicating a higher degree of cementation in Unit D than in Unit C. This could also be an indication of the presence of shallow gas accumulation in the upper part of Unit D. No other criterion suggesting the presence of shallow gas were observed from the bathymetry, side scan sonar, boomer or seabed sampling data.

Using the method of shallow gas risk assessment outlined in section 3.6 of this report, the risk of shallow gas is defined as slight (gas unlikely) at the proposed Patricia-2 location.



# 3.6 STANDARD METHOD OF SHALLOW GAS RISK ASSESSMENT

The shallow gas hazard assessment consisted of the following:

- Analysis of side scan sonar / echo sounder data attributes, which included the following:
  - Disturbed seabed and / or numerous pockmarks.
  - Areas of high reflectivity seabed.
  - Evidence of gas within the water column.
- Lithological / structural evidence e.g. faults.
- Analysis of seismic data attributes which included the following:
  - Anomalously high amplitude reflectors: high acoustic impedance contrast.
  - Acoustic blanking: high signal attenuation.
  - Velocity pull down of underlying reflectors: velocity reduction.
  - Phase reversal: negative reflection coefficient.
  - Edge effects: diffraction hyperbolae.

The risk assessment criteria in this report is summarised in the following table and is dependant on the type and number of attributes observed and the magnitude or severity of these attributes.

Level of Risk	Probability of Gas	Typical Seismic Characteristics		
High	Gas most probable	High amplitude with 3 or 4 other well defined features (closure, phase reversal etc.).		
Moderate	Gas likely	High amplitude with 2 other subsidiary gas-like features.		
Low	Gas possible	Moderate amplitude with 1 or 2 other features or very high reflector amplitude alone.		
Slight	Gas unlikely	Usually 1 or more features, but unremarkable reflector amplitude.		

#### **Shallow Gas Risk Assessment Criteria**

# 3.7 SEABED SAMPLING

Two gravity corer sample attempts were made returning one sample and one grab sample attempt was made which returned a sample within the Patricia-2 site survey area. The recovered samples were photographed and logged upon recovery and sealed in plastic bags and returned to Thales (Perth) for storage.

The sample descriptions are summarised in the table below and sample logs are presented in Appendix K.

Sample Location		tion	Briof Description
Number	Easting (m)	Northing (m)	
GC1	627 204	5 790 101	No Recovery
GC1a	627 198	5 790 098	Layered firm to stiff CLAY and loose shelly SAND
GS1	626 096	5 790 282	Loose coarse SAND, with some shell fragments (up to 40mm)

Datum : AGD66	Projection:	AMG Zone	55 South,	CM 147°	East
	-				



# 4. CONCLUSIONS

The nearest observable water depth to the proposed Patricia-2 location is 52.5m LAT. The seabed within a 100.0m radius of the proposed Patricia-2 location appears clear of any topographical features, debris or other obstruction which may be considered hazardous to drilling operations.

One sonar contact was identified, approximately 445m southwest of the proposed Patricia-2 location, with dimensions approximately 5.4m across and 1.7m in height interpreted as the Patricia-1 wellhead, which was drilled in 1987 and has not been removed. The Patricia-1 wellhead is surrounded by a small area of disturbed seabed believed to be associated with former drilling activities and also possibly indicative of drilling muds.

Top of Unit	Depth Below Seabed (m)	Unit Thickness (m)	Predicted Lithology
А	0	2.0	Loose to medium dense shelly SANDS and soft to stiff CLAYS.
В	2.0	1.0	Medium dense to dense shelly SANDS and stiff CLAYS.
С	3.0	1.0	Variably cemented SANDS.
D	4.0	>8.0 to beyond the approximate limit of seismic penetration	Cemented sediments.

The predicted lithology at the proposed Patricia-2 location can be seen below:

Anchoring conditions across the survey area will be dictated by the geotechnical properties of Units A, B and C which have a combined thickness of 4m to 8m across most of the site survey area. The sediments of Units A and B are believed to consist of loose to dense SANDS and firm to stiff CLAYS overlaying variably cemented SANDS of Unit C. Cementation in the lower part of Unit C and Unit D is expected to be significant. Although it is not possible to predict geotechnical properties, it is reasonable to assume that these sediments will become more dense with increasing depth below the seabed.

Within the limit of useful boomer penetration, there is no evidence of shallow faults or any other characteristics of shallow gas in the vicinity of the proposed Patricia-2 location that could be considered hazardous to drilling operations. Using the method of shallow gas risk assessment outlined in section 3.5 of this report, the risk of shallow gas is defined as slight (gas unlikely) at the proposed Patricia-2 location.



# 5. SAFETY

# Objective

The prevention of accidents and injury is the primary objective on this and all Thales projects, and great importance is placed on ensuring and maintaining the health and safety of employees. Furthermore, Thales wishes to protect all persons with whom employees may have association during work activities. It is therefore the policy of Thales; to observe and comply with all statutory provisions and to take additional measures that it sees fit in the pursuance of safety. Thales maintains a safe working environment by employing the following measures:

- a) Observe and comply with all statutory provisions.
- b) Ensure that all work places are suitably equipped and free from recognised hazards that are liable to cause death, injury or illness.
- c) Encourage employees to improve health and safety awareness in their own sphere of activity, to prevent injury to themselves and to other people and to report accidents and hazards to their superiors.
- d) Hold all supervisory personnel responsible for developing and maintaining safety equipment where appropriate.
- e) Provide employees with suitable safety equipment where appropriate.
- f) Seek ways of improving health and safety in the work environment.
- g) Encouraging the use of the 'Stand Back, 5 by 5' work safety ethic.

To facilitate the implementation of these measures Thales produces the following documents; Survey Safety Manual, Project Manual (includes Safety Management Plan), and Emergency Response Plan.

# **Project Induction and Safety Meeting**

A general Project Induction and Safety Meeting was held at 0800 on 15 March 2002 onboard the Bluefin, prior to the start of mobilisation. A further safety meeting and fire & abandonment drill was held at 1730 on 16 March 2002. The subsequent safety meeting was held to go into further detail of the safety requirements expected from the Client, Thales and Australian Maritime College (AMC). The Client Representative, Thales and AMC personnel attended the Project Induction and Safety Meeting.

#### The Thales Party Chief discussed the Following topics:

- 1. Thales personnel introductions.
- 2. Project briefing of the survey campaign.
- 3. Introduction of Thales Operations Policies including Thales Health and Safety Policy, Environmental Policy, Drugs and Alcohol Policy, Injury Management Policy and Procedures, and Quality Policy.
- 4. The effective implementation of Thales Policies under the Thales Safety Management Systems (SMS).
- 5. Legislation and Regulations applicable to Thales Operations, particularly offshore operations.
- Hazard Identification and Assessment (the introduction of Thales U-See, U-Act Safety System and the Stepback 5x5 process), Risk Assessment and Job Safety Analysis (JSA) with particular discussion directed toward equipment deployment / recovery and geotechnical coring operations.



- 7. Thales Emergency Response Plan and the process for accident / incident reporting and investigations.
- 8. Safety documentation supporting Thales SMS including Thales Manuals, Legislation and Acts, Safety Work Instructions, Safety Notes, Safety Forms, Codes of Practice and Guidance Notes.
- The appropriate use of Personal Protective Equipment (PPE) including coveralls, safety footwear, safety helmets, safety glasses, hearing protection devices, safety gloves and the mandatory use of life vests during operations near the vessels stern.
- 10. Thales' Underwater Engineers to control all back deck operations involving equipment deployment / recovery and geotechnical coring.

# The AMC Vessel Master discussed the Following topics:

- 1. AMC personnel introductions.
- 2. Vessel safety onboard the Bluefin.
- 3. Emergency procedures, muster points and alarms.
- 4. General reinforcement of Thales Safety Management System (SMS).

#### Vessel Inductions

AMC held vessel inductions onboard the Bluefin on 15 March 2002. All Thales personnel and the Client Representative were required to undertake the vessel induction.

# Job Safety Analysis (JSA) Meetings

Job Safety Analysis meetings were undertaken prior to all facets of the survey. A JSA was held for the following operations; vessel mobilisation, equipment installation, vessel operations, deployment / recovery of equipment, velocity profile dip and coring operations. Particular emphasis was directed towards safety near the stern of the vessel, with all non-essential personnel required to remain clear of equipment deployment and geotechnical coring operations. The use of PPE was re-iterated. The process of communication between the back deck and bridge was outlined during each JSA to ensure personnel wee informed during each phase of the operation.

JSA worksheets are detailed in the Thales Safety Management Plan.

#### Incidents

There were no safety incidents reported for the project.



# 6. GEODETIC PARAMETERS

Co-ordinates shown in this report are referred to the Australian Geodetic Datum 1966 (AGD66). The Global Positioning System (GPS) is referenced to the World Geodetic System 1984 (WGS84).

# 6.1 DATUMS

<b>Datum</b> Spheroid Semi-major Axis (a) Semi-minor Axis (b) Eccentricity Squared (e <sup>2</sup> ) Flattening ( <sup>1</sup> / <sub>f</sub> )	<ul> <li>ITRF92 (Epoch 1994.0) WGS84 G730</li> <li>WGS84</li> <li>6 378 137.000m</li> <li>6 356 752.314m</li> <li>0.006 694 380</li> <li>298.257 223 563</li> </ul>
$\begin{array}{llllllllllllllllllllllllllllllllllll$	<ul> <li>Australian Geodetic Datum AGD66</li> <li>Australian National Spheroid</li> <li>6 378 160.000m</li> <li>6 356 774.719m</li> <li>0.006 694 542</li> <li>298.25</li> </ul>
6.2 PROJECTION	
Projection Name Projection Type :	: Australian Map Grid 1966 (AMG66) Universal Transverse Mercator (UTM)

AMG Zone Central Meridian (CM) Scale factor on the CM False Easting False Northing Latitude of Origin Unit of Measure

- . 55 147° East : : 0.9996 : 500 000m : 10 000 000m :
- 0° (Equator) :
  - International Metre



# 6.3 DATUM TRANSFORMATION

The following 7-parameter datum transformation was used to convert WGS84 co-ordinates to AGD66 co-ordinates:

Dx	=	+123.314m
Dy	=	+47.223m
Dz	=	-136.594m
Rx	=	+0.264"
Ry	=	+0.322"
Rz	=	+0.270"
Scale (K)	=	+1.384 p.p.m.

The sign convention applied by Thales in GNS2 software is that used by the US Department of Defence, where a positive sign about the z axis is an anti-clockwise movement of the x and y-axes (when viewed from the North Pole looking towards the centre of the Earth).



# 7. EQUIPMENT DESCRIPTIONS

# 7.1 GNS2

GNS2 (General Navigation System) is Thales' third generation of On-line Navigation Survey Control software. Thales' Software Support Group in C++ has written it for operation under Windows<sup>®</sup> 95 or Windows<sup>®</sup> 98 or Windows<sup>®</sup> NT. GNS2 adheres to the operation and dialogue conventions of the Microsoft Windows<sup>®</sup> environment. Attention has been paid to preserving a consistent operator interface, while at the same time modifying individual dialogue boxes to reflect specific logical circumstances. It has been designed for operation with a pointing device such as a mouse or a tracker ball but control can still be effected in case of the absence or failure of such a device.

The program has the ability to accommodate a large number and variety of mobiles, including surface vessels/ships, anchor-handling vessels, tugs, barges, ROVs, towfish, aircraft, vehicles and submersibles etc. The only limiting factors on the number of mobiles that can be tracked in GNS2 are the number of input/output serial communication ports available on the computer and the computer's memory.

For the input/output (I/O) of navigation and sensor data, GNS2 employs intelligent multi-channel serial communications boards to expand a computer's serial input/output facility. Currently GNS2 can support up to 26 communication (Comm) ports, which would consist of the computer's two internal Comm ports and three 8 channel serial communications boards fitted in the computer's internal expansion slots.

If Least Squares Computations (LSCs) are employed for positional calculations, whether twodimensional (2D), three-dimensional (3D) or altitude aided, GNS2 uses standard iteration routines for the minimisation of residuals using 'variation of co-ordinate' algorithms. The number of I/O serial communication ports available on the computer and the computer's memory, limits the number of positioning systems/computations that GNS2 can handle.

All input observables are accepted on interrupt. Screen updates and other internal triggers are paced to once per second but time critical activities occur at discrete moments as required.

The GNS2 application workspace can extend beyond the display area, which is normally restricted to a single monitor connected to the computer. By using one or more multiple VGA cards, an enlarged display area can spread across multiple monitors.

Currently GNS2 can display 14 different types of view windows. Several copies of the same type of view window can be invoked at any one time. This may be required when several mobiles are being tracked and a Plan, Helmsman's or Bullseye display are required for each one or when the data on several Comm ports are to be viewed simultaneously. Each window can be individually sized to optimise use of the available display area.

GNS2 can be operated in 2 modes: GNS2 Master or GNS2 Remote. GNS2 Master has the full functionality of GNS2. GNS2 Remote is run on a separate computer and allows independent configuration of the graphics display and its associated numeric information. GNS2 Remote is operated on Anchor Handling Vessels or anywhere where positional information is required (e.g. Vessel Masters, ROV Pilots, Winch Control Stations). The link between GNS2 Master and GNS2 Remote can be via a telemetry link or hard-wired cable.

# 7.2 GLOBAL POSITIONING SYSTEM (GPS)

#### System Description

The NAVSTAR GPS (Navigational Satellite Timing and Ranging Global Positioning System) is a USA Military all-weather, space-based positioning system that transmits signals from a constellation of satellites orbiting the Earth. It is capable of providing suitably equipped users worldwide with accurate three-dimensional positions on, or near, the Earth's surface. The accuracy of these determined positions can vary from a few millimetres to several 10's of metres depending on the GPS receiver and on the method of data acquisition and processing. System design consists of three integrated parts: the Ground Control Segment, the Space Segment and the User Segment.

The operational space segment consists of 24 production satellites and 3 active spares; the term Space Vehicle (SV) is used as a synonym for satellite. The satellites are in high orbits, at approximately 20,200km, having an orbit period of 12 hours. They are arranged in 6 orbital planes, inclined at 55 degrees with near circular orbits. The configuration provides complete 4-satellite (3D) coverage worldwide.

#### **GPS Observations**

There are two important types of GPS observations (observables): Pseudo-range and Carrier Phase. Carrier phase is sometimes also referred to as carrier beat phase. Pseudo-range techniques are generally used for navigation. In high-precision baseline surveying the carrier phase is used. Although the (undifferenced) phase can be used directly, it has become common practice, at least in surveying applications, to process certain linear combinations of the original carrier phase observations (double differences and triple differences).

#### **Pseudo-ranges**

The pseudo-range is a measure of the distance between the satellite and the receiver at the epochs of transmission and reception of the signals. The transit time of the signals is measured by comparing (correlating) identical pseudo-random noise (PRN) codes generated by the satellite and by the receiver. A code-tracking loop within the receiver shifts the internal replica of the PRN code in time until maximum correlation occurs. The codes generated at the receiver are derived from the receiver's own clock, and the codes of the satellite transmissions are generated by the satellite system of clocks. It follows that unavoidable timing errors in both the satellite and the receiver clock will cause the measured quantity (pseudo-range) to differ from the geometric distance.

Where instantaneous positions are required, pseudo-range is the preferred observable. Given the satellite ephemeris (i.e. the position of the satellite at the epoch of transmission), there are seven unknowns: two clock errors, three receiver co-ordinates and the ionospheric and tropospheric delays. The effect of the satellite clock error is negligible for the typical navigation solution, particularly considering that the time errors are indistinguishable from the ionospheric and tropospheric delays. The satellite clocks are constantly monitored and synchronised with GPS time as maintained by the control centre. Actual offsets of the satellite clocks are approximated by polynomials in time and transmitted as part of the navigation message to the user for the correction of the measured pseudo-ranges. The ionospheric and tropospheric delays can be computed on the basis of ionospheric and tropospheric models, thus there are four unknowns left X, Y, Z and receiver clock error. These can be determined from four pseudo-ranges measured simultaneously to four GPS satellites.



# **Carrier Phase**

The phase observable is the difference between the phase of the carrier signal of the satellite, measured at the receiver, and the phase of the local oscillator within the receiver at the epoch of measurement. This can be regarded as a biased range measurement of the satellite-receiver distance with the integer number of carrier waves being unknown. The wavelength of the L1 carrier is about 19cm. Because of the fraction of the carrier phase is measured, the term "interferometry" is often used to describe carrier phase techniques.



# 7.3 SKYFIX/SKYFIX SPOT DIFFERENTIAL GPS (DGPS)

# Differential GPS (DGPS)

GPS is primarily a USA Defence space-based positioning system capable of operating worldwide and in all weather conditions. The USA Military can degrade the accuracy of GPS with the use of Selective Availability (SA) to control the accuracy of Pseudo-range measurements. Essentially, the user is given a false Pseudo-range for each satellite so that the resulting measurement is in error by a controlled amount. On the 1 May 2000 SA was discontinued conditionally and coincided with the successful demonstration of the ability to selectively deny GPS signals on a regional basis. SA has been set to zero and can be reinstated during periods of heightened global tension.

GPS signals are affected by several sources of positional bias, the largest of which was SA. The remaining biases of the ionosphere, the troposphere, time, satellite ephemeris and inherent receiver noise also give rise to substantial bias of position.

Differential GPS is a means by which the civil user can improve the accuracy and quality of GPS to the 1-3m level. It requires a receiver be located at a precisely known point from which pseudo-range corrections for each satellite can be determined and monitored. These pseudo-range corrections are then communicated by means of a telecommunications link to users at unknown locations. In the relative mode, most of the important systematic errors common to the known station and at the unknown location cancel out to improve the accuracy of the computed position.

#### SkyFix/SkyFix Spot Differential

#### <u>SkyFix</u>

Thales GeoSolutions (Australasia) Limited introduced its SkyFix Differential GPS System in Australia in February 1991, using the Inmarsat Pacific and Indian Ocean marine communications satellites as the differential data broadcast link. Extensive performance trials and projects undertaken to date have shown SkyFix to meet the best industry expectations in terms of quality of service and accuracy.

Satellite communications systems, particularly at the Inmarsat L-band frequencies of 1.5 GHz are reliable and free of the interference associated with the crowded MF/HF bands. This high data integrity gives users confidence that the corrections will be continuously received without interference.

The SkyFix Australian network comprises of reference stations at Dampier, Broome, Perth, Adelaide, Melbourne, Sydney, Cairns and Darwin.

#### SkyFix Spot

The SkyFix Spot Differential GPS System was launched in Australia in December 1994, using the OPTUS high powered focused communications satellite as the differential data broadcast link. Projects undertaken to date have shown SkyFix Spot to meet the industry expectations in terms of quality of service and accuracy.

The SkyFix Spot system has a link capacity of 1200 bits per second, similar to the SkyFix system but because it is only transmitting corrections from the Australian network an update rate of better than five seconds is achieved.

The OPTUS satellites uses the L-band frequencies of 1.5586 GHz and are very reliable and free of interference avoiding data loss associated with the crowded MF/HF bands.



The SkyFix Spot network comprises of reference stations at Dampier, Broome, Perth, Adelaide, Melbourne, Sydney, Cairns, Darwin, Alice Springs and also Ujung Pandang and Jakarta in Indonesia and Wellington, New Zealand.

The differential corrections generated at each reference station are brought via landline links to the data hub and control centre in Singapore, where the system is monitored for performance and quality. From there, a composite message containing full RTCM 104 version 2 formatted data from all reference stations are sent via dual redundant links to Satellite Earth Stations at Sentosa Island, Singapore, O.T.C. Perth, Western Australia and OPTUS, Perth, Western Australia, for uplink and broadcast over the Inmarsat Pacific and Indian Ocean Region satellites and the OPTUS Satellite.

The SkyFix/SkyFix Spot system includes a 24 hour monitoring facility to ensure the validity of data received at the control centre from the Differential GPS reference stations, and that the same data are received over the SkyFix/SkyFix Spot satellite data link.



# 7.4 TRIMBLE SERIES 4000 GPS RECEIVER

The Trimble Series 4000 GPS receiver is designed for moderate precision static and dynamic positioning applications. The GPS receiver provides time and three-dimensional station co-ordinates at a once-per-second update rate.

The receiver receives the civilian coded signal (C/A) from the GPS NAVSTAR satellites. The receiver automatically acquires and simultaneously tracks GPS satellites and precisely measures code phase and computes position and velocity.

Latitude, longitude and height values are output on the World Geodetic System (WGS 84) Earthcentred, Earth-fixed co-ordinate system.

The receiver is designed to measure the following observables:

- Coarse/Acquisition (C/A) code Pseudo-ranges
- Rate of change of Pseudo-range
- Integrated Carrier

C/A code correlation techniques measure the propagation time of the signal from the satellite to the antenna. Latitude, longitude, height and time can be determined from measurements made from at least 4 satellites, by a process similar to triangulation.

To determine speed and heading, the receiver calculates the rate of change of Range (the rangerate) by measuring the Doppler shift of the carrier.

It is capable of receiving and processing differential corrections from other reference sources using the standard format of the Radio Technical Commission for Maritime Services, Special Committee 104 (RTCM SC-104), Version 1.0 or 2.0 protocols.

The Trimble Series 4000 GPS receiver has several options available, including internal data logging memory, event marker logging etc. and therefore may be used alone or as part of a more extensive navigation system.



# 7.5 MULTIFIX 3

# 7.5.1 System Overview

MultiFix 3 is Thales GeoSolutions third generation *multiple reference station* differential GPS (DGPS) real time position computation and quality control program. It is an integral part of the Thales SkyFix Premier service but can also be used with the standard SkyFix service. MultiFix 3 has more advanced features than its predecBSOCr, MultiFix 2, including being able to use dual frequency receivers and form real time 'lono-Free DGPS position solutions'.

MultiFix 3 is one of a series of programs available under the group name Zero, which includes other tools and utilities with a similar user interface and layout structure, like static and dynamic position comparison programs, a correction monitor program, a terminal program and a replay utility.

MultiFix 3 takes in Almanac, Ephemeris and Raw Code and Carrier measurements from a single or dual frequency GPS receiver (or, for replay, from logged files). It takes in RTCM SC104 Version 2 differential correction messages from one or more RTCM correction delivery systems. It also takes in RTCM Type 15 or Thales Proprietary RTCM Type 55 lonospheric range corrections generated at selected SkyFix Premier reference stations and broadcast via the Thales global network of high (SkyFix Spot-Optus) and low (SkyFix-Inmarsat) power satellite based L-Band beams.

Key features of the program are:

- No limit on the number of RTCM correction delivery systems (data links)
- No limit on the number of RTCM differential reference stations
- No limit on the number of computations (solutions)
- Each computation can employ corrections from any combination of reference stations available
- Computations are weighted least squares with statistical evaluation based upon the UKOOA recommendations
- No limit on the number of outputs
- No limit on the number of view windows
- View windows can be customised
- Extra NMEA outputs can be defined
- TCP/IP communication via sockets for GPS, RTCM and position data transfer between networked computers

MultiFix 3 has been designed in a modular fashion such that data is passed between modules as if over a computer network. The core module MultiFix 3 performs the computation of position. Additional modules are available and more will be made available in the future. While a single computer can be used, the various modules will equally be able to be run on different computers, provided there is a network interconnection.

MultiFix 3 uses the EGM96 geoid/spheroid separation model.

The RTCM corrections that are generated at reference stations are contaminated by a variety of error components, one of which is lonospheric delay. The lonospheric delay is currently more variable because of greater sun spot activity. MultiFix 2 and MultiFix 3's standard computation uses the Klobuchar lonospheric delay model. This model is updated periodically but is not responsive to the current short-term variability. MultiFix 3 has an additional calculation option when working with dual frequency receivers and in receipt of Type 15 or 55 RTCM messages. With dual frequency receivers, estimates can be made of the lonospheric delay by examining the differences between the measurements from the two frequencies. If the same procedure for estimation of lonospheric delay is performed at the reference stations and on the mobile, both the RTCM corrections and the pseudo-ranges can have the lonospheric delay removed, effectively providing an lono-Free DGPS position solution.



# 7.5.2 Hardware Requirements

Optimum requirements for MultiFix 3 are:

- 350 MHz Pentium II computer
- 32 Mb RAM
- Windows 95, 98 or NT operating system
- Graphics resolution of at least 800 x 600 pixels
- Intelligent multi-port serial I/O board

#### 7.5.3 Positioning and Quality Control Displays

MultiFix 3 has a large number of features to accomodate the user requirements of highly accurate positions with quality control (QC) information and outputs in different formats. MultiFix 3 runs in a Windows environment, which allows the user to design a preferred screen layout by opening, sizing and placing the numerous displays that are available. Examples of the various displays can be found below.







MultiFix 3 Computer

Typical MultiFix 3 Interconnection With Trimble 4000 GPS Receiver



# 7.6 ATLAS DESO 15 ECHO SOUNDER

The Atlas Deso 15 echo sounder is a dual frequency system operating at 33kHz and 210kHz. Digital technology is employed so that the equipment comprises one unit incorporating an analogue/digital thermal recorder, transceiver electronics and digitiser. The transducers may be hull or over-the-side mounted.

To measure water depth the Atlas Deso 15 echo sounder uses ultrasonic sound waves. A short burst of ultrasound is transmitted vertically downwards into the water by a transducer, which converts electrical energy into mechanical energy. A proportion of the sound energy is reflected by the bottom or by other solid media such as fish, and returns as an echo to the transducer. The time which elapses between the transmission of the signal and the return of its echo is proportional to the depth. The accuracy of the depth measurement depends on such factors such as the print speed and index errors, although the primary influence on depth accuracy is the measurement (and concomitant accuracy) of the velocity of sound through the water column, which is set by the operator in the echo sounder. Bar checks are also carried out to calibrate the system for index errors. Print speed checks are carried out as part of the mobilisation procedures. The echo sounder controls the generation, timing and length of outgoing pulses that are transmitted from the transducer.

High frequency transmissions will tend to be reflected by the seafloor whilst lower frequency signals penetrate soft mud and sediment to produce shaded echoes of the various layers on the analogue recorder. The echo sounder contains two digitisers, one for each transmitted frequency. Returns from several transmissions are stored, weighted and summed so that faint returns from the seabed will be recognised from the background noise. Digital information is indicated in the display window of the echo sounder and is also available for external use. The digitiser can be set to track either or both of the two frequencies.

#### System specifications are as follows:

Operational Voltage:	18 - 32 V DC or 240 V AC
Power Consumption:	Approx. 100 VA
Transducer Frequencies:	33kHz 210kHz
Beam Widths:	33kHz - 16° 210kHz - 9°
Depth Capability:	0.5 - 650 metres
Power Output:	300W, 600W & 1,000W
Measuring Accuracy:	33kHz - better than 10cm 210kHz - better than 1cm
Water Sound Velocity:	1400 m/s to 1600 m/s in 1 m/s steps



# 7.7 TSS DMS 2-05 MOTION SENSOR

The TSS DMS 2-05 Motion Sensor is used to provide heave, pitch and roll data to the single beam echo sounder system. The TSS DMS 2-05 is a small portable system for measuring the vertical displacement and altitude of a vessel when no stationary reference is available.

#### Sensor Package

The standard sensor package contains the solid state sensing elements that resolve the magnitude and direction of forces acting upon the sensor so that it can supply motion measurements. High speed circuitry converts the signals from the sensing elements into actual measurements of attitude and motion. These are then communicated via RS232 or RS422 to a receiving PC, or terminal, or to the appropriate receiving equipment (echo sounder, datalogger etc.).

Installation of the DMS System is simple, and the compact design allows it to be mounted close to the point for which measurements are required.

#### Software

Software resident within the sensor electronics package allows a PC or terminal to control the DMS System so that its configuration can be optimised for any particular installation. The software can be utilised to check the analogue output values, and to measure the roll and pitch mount angles.

#### **Auxiliary Input**

The DMS System can accept signals from auxiliary equipment such as a Global Positioning System (GPS) or a gyrocompass. The sensor uses these 'aiding' inputs to maintain the accuracy and stability of measurements throughout vessel turns.

#### Principle of Operation

The DMS includes an array of solid-state sensing elements that measures the instantaneous linear accelerations and angular rates affecting the sensor at any time. These measurements allow the system to derive the attitude of the platform on which the sensor is mounted with respect to the true vertical.

Additionally, velocity and heading information supplied by external GPS and gyrocompass systems can be used by the DMS system to maintain the measurement accuracy of the sensor throughout vessel turns.

The digital output from the sensor is updated and supplied as a digital data string transmitted to external equipment using either RS232 or RS422.

To support the requirement of applications that require an analogue input (i.e. the Elac Multibeam System), the sensor provides scalable analogue outputs for roll, pitch and heave.



System specifications are as follows:

#### Heave

Range	:	± 10 meters
Resolution	÷	
	:	0.05 10 > 10 HZ The greatest of fem or $5\%$
Accuracy Massurament Datum	:	All measurements are with respect to the centre of the
	·	bottom surface of vertically mounted Sensor.
Acceleration Range (vertical)	:	2g
Noise (at cut-off frequency 0.05 Hz)	:	<1cm RMS
Roll, Pitch		
Range	:	±30°
Resolution	:	Digital 0.01°
Bandwidth	:	0 to >10 Hz
Accuracy		
(Dynamic) DMS 2-05	:	±0.05°
(Static) DMS 2-05	:	±0.05°
Angular rate change	:	100°/second
Noise	:	<0.05° RMS
Cross axis coupling	:	<1%
Electrical		
Power Requirement	:	12V to 36V DC 12W at 24V
Digital Interface	:	RS232C, RS422 user selectable
Digital Output Data Rate	:	Dependent upon output format and baud rate. The
		Sensor will supply data packets at the highest possible
		transfer rate. Using the default settings (format TSS1 at
		9600 baud), the digital output rate will be 32 packets/second
Environmental		
Temperature Range		
(Operating)	:	0 to +40°C {32°F to 104°F}
(Storage)	:	-20 to +70°C {-4°F to 158°F}
Shock (Survival)	:	30g peak
		40ms half-sine
Vibration (Operating)	:	Meet Lloyd's Register ENV2 (1996) specification
		for vibration
		Meet ABS Table 4/11.1 (1996) No. 12 IEC
		Publication 68-2-6 (1995) Test F.
Transverse Acceleration	:	500mg peak
		0.1s sine
Enclosure Ingress Protection	:	3000m {9840ft} depth rated
	:	±30° any plane
Operating Transit/Storage	:	No limit
Yaw Immunity	:	10° per second with 30° roll and pitch



# 7.8 GEOACOUSTICS DUAL FREQUENCY SIDE SCAN SONAR SYSTEMS

The GeoAcoustics Dual Frequency Side Scan Sonar system provides mapping of the seabed and consists of a GeoAcoustics combined towfish (159D), a pair of dual frequency sonar transducers (196D) and a Sonar Transceiver (SS941).

The GeoAcoustics combined towfish contains side scan sonar transducers which transmit short pulses of high frequency acoustic energy in fan shaped beams at right angles to the fish's track. The beams are narrow in the horizontal plane and wide in the vertical plane. In the nose of the towfish are the transmitting and receiving circuitry and on receipt of a trigger pulse from the ship-borne recorder the transducers are energized. The receiving circuitry amplifies the returned echoes and sends them via the tow cable to the recorder for display.

The transceiver unit allows the operator a simple means of controlling various Side Scan operating parameters. The unit includes standard controls such as: Gain, Time Varying Gain (TVG), Automatic Gain Control (AGC), with duplicated controls for port and starboard transducers. The operating frequency can also be switched from 100kHz to 500kHz directly from the transceiver. The choices of frequencies means that long range scanning and short range high resolution investigations are possible. The output of the transceiver can be recorded digitally if interfaced to a digital recording system.

System specifications are as follows:

#### **GeoAcoustics 196D Dual Frequency Transducers**

Source level	223 ± 3 dB re 1µPa @ 1 m		
Beamwidth	50° by 1°/40° by 0.5°		
Sensitivity	190 dB re 1 V/µPa		
Depression	Angle 10° ±1° down.		
Transmitter			
Frequency	100/500 kHz ±1%.		
Power output	1.2 kW/1 kW pulse ±20%.		
Pulse length	167 µsec/88 µsec ±1%		
Pulse repetition rate	50 pulses per second maximum.		
Protection Open and short circuit protected.			

Efficiency Greater than 80%.


#### Receiver

Port channel	100/500kHz, heterodyned to 135kHz.		
Starboard channel	100/500kHz, heterodyned to 65kHz.		
Bandwidth	20kHz. TVG Transmission loss curve compensated at both frequencies. Approximately + 40dB at 100m range.		
Keyburst Frequency	455kHz ± 2%.		
Pulse length	300µsec for 110 kHz operation. 600µsec for 410kHz operation.		
Power	150V DC at 100mA.		
Size	Diameter Length Weight	10.2cm 34.5cm 3.2kg in air, 0.45kg in water.	



#### 7.9 BOOMER SUB-BOTTOM PROFILING SYSTEM – CSP1000

A Boomer sub-bottom profiling system consisting of an Applied Acoustics CSP1000 power source, EG&G Model 230 Boomer seismic source, and an EG&G Model 265 Type hydrophone is used to determine the nature of the sub-seafloor geology. The boomer catamaran and the 10-element hydrophone are towed astern of the vessel.

The raw analogue signal is firstly filtered using a Krohn-Hite 3700 filter before it is digitally displayed and recorded.

The system is operated and fired by an Applied Acoustics CSP1000 Triggered Capacitor Bank and Power Source. The data can be processed and recorded by a digital recording system, which includes a band pass filter.

The Boomer Sub-bottom Profiling system comprises the following components:

#### **Applied Acoustics CSP1000 Power Source**

The Applied Acoustics CSP1000 Power Source provides a high-voltage direct current for charging the capacitor banks used in sub-bottom profiling systems. The Applied Acoustics CSP1000 Power Source will charge at 1100 Joules per second. This allows the operator to select sound-pulse repetition rates as fast as six pulses per second at an energy level of 1000 Joules:

System specifications are as follows:

Size:	19" rack mounted 7U high 550mm deep
Weight:	55 kg
Operating Temperature:	0-37°C at maximum output
Mains input:	207-206 VAC 45-65Hz @ 2.5kVA 3 pin connector
Voltage Output:	3550 or 3800 volts DC 4 pin interlocked connector
Output Energy:	100 to 1000J in 100J increments
Charging Rate:	1100J per second
Capacitance:	144 $\mu$ F. 1 x 10 <sup>8</sup> shot life
Trigger:	+ive key opto isolated or closure set by front panel switch. BNC connector on front panel and remote.
Repetition Rate:	То 6ррѕ
Earth:	M8 stainless steel stud on front panel



#### EG&G Model 230 Boomer Seismic Source

The EG&G Model 230 Boomer (or Uniboom) is an electromechanical source fixed to a surface towed catamaran. The boomer source consists of an induction coil against which an aluminium plate is applied by a system of springs. With each discharge, from the ship-borne capacitor banks, the eddy currents induced in the conductive plate cause it to move violently away from the coil. The initial movement of the plate triggers the acoustic pulse, the duration of the boomer signal is limited to about 0.2ms.

#### EG&G Model 265 Type Hydrophone

The EG&G Model 265 Type Hydrophone uses 10 elements connected in series and incorporates a current summing amplifier. The hydrophone elements and preamplifier are enclosed in a one-inch, oil filled tube designed to minimise turbulent noise from towing, this part of the hydrophone is called the active section. In addition to the active section, the hydrophone includes a tail for stabilisation, a tow cable that incorporates the conductors for transmitting the electric signals and a battery box attached to the shipboard end of the cable which supplies the DC voltage for operating the pre-amplifier.

System specifications are as follows:

Input Power:	9v DC Battery
Sensitivity:	-61 dB/volt/microbar
Bandwidth:	400Hz - 5kHz
Hydrophone Element: Sensitivity Gain (Preamplifier) Output	-103 dB/volt/microbar (single element) 42 dB (including gain of 10 elements in series) 2 kohms



#### 7.10 GEOMETRICS G-880 MAGNETOMETER

The Geometrics G-880 magnetometer is a high resolution marine Cesium magnetometer system, which features very high sensitivity measurements of total field and gradient combined with rapid sampling. A Larmor counter provides direct connection to a host CPU for integrated side scan sonar applications. The G-880 is completely digital, unaffected by shipboard noise, easily deployed and simple to operate.

A key element in the high performance of the system is the conditioning and the counting of the Larmor signal. Using a proprietary design mounted into the electronics pressure vessel, sensitivity, measurement rates and data format are selected by operator commands. Counters from multiple sensors may be concatenated together to provide a sequential stream of RS232 data for transmittal through the tow cable. A basic software package for data logging and system control is provided with each model G-880.

Magnetic field variations are measured using the Geometrics G-880 magnetometer, towed from the stern of the vessel. Data are processed and recorded as ASCII files (containing numerical values for latitude, longitude, magnetic field, magnetometer altitude, time, and date) using Sandia Research Associates MagSea logging program software, on the magnetometer control notebook computer. Data are also displayed on a hardcopy using a printer.

Additional Plot software allows any portion of the data recorded on disk to be called up for display or printing; and CsAz for determining optimum sensor orientation.

Deviations from the ambient magnetic field (caused by metallic objects such as pipelines) produce anomaly spikes on the hardcopy printout that can be correlated with GPS navigation information to derive an anomaly location.

#### **Magnetometer Electronics**

Operating Principle:		Self-oscillating split-beam Cesium Vapor (non-radioactive Cs133) with automatic hemisphere switching.
Operating Range:		17,000nT to 100,000nT
Heading Error:		+/- 0.5nT
Sensitivity:		90% of all readings will fall within the following Peak-to-Peak envelopes:
	1. 2. 3.	0.05nT at 0.1 second cycle rate 0.03nT at 0.2 second cycle rate 0.01nT at 1.0 second cycle rate
Operating Zones:		For highest signal-to-noise ratio, the sensor long axis should be oriented at $45^{\circ}$ , +/- $30^{\circ}$ to the earth's field angle, but operation will continue through $45^{\circ}$ , +/- $35^{\circ}$ .
Gradient Tolerance	e:	> 500nT / inch; >20,000nT / meter
Data Output:		Three wire RS232, magnetics, up to 6 A/D channels for other sensors if present



Larmor Counter:

- Integrated into sensor electronics in 'fish' 4.
- 5. Ref Osc: Nominal 22MHz
- 6. Output data concatenated with other counters or data sources if present
- A/D converters: 3 single and 3 differential, 12 bit resolution.
  Control functions: Keyboard commands from surface



#### 7.11 CODA DA200 DIGITAL RECORDING/PROCESSING SYSTEM

The CODA-DA200 Sonar Data Acquisition and Playback System is used to convert the analogue signal from the GeoAcoustics Transceivers to digital format, and to record the digital data on magneto-optical disk. The CODA is a Unix-based hardware and software system developed for recording and processing of analogue or digital signals from a dual channel side scan sonar.

In real time the data can be recorded to the hard disk, to removable disk drives, or to magnetooptical disk. Processing parameters such as slant range correction, TVG enhancement, image enhancement, zoom facilities, real-time cursor navigation position and on-screen management, scrolling speed adjustment, multi-resolution data display and single/dual channel waterfall display, can be applied while on-line or during playback. Only the raw data will be recorded to magnetooptical disk.

#### CODA-DA200

#### Physical

Flight-cased industrial 19" rackmount chassis - 21" x 22" x 13" Monitor flight casing - 20.75" x 19.75" x 19.5"

#### Hardware

Dedicated acquisition board Dual Independent input/output triggers High-spec Pentium PC High Resolution 17" monitor Mouse or Trackball

#### Data Storage/Retrieval

Shock mounted high speed DDS DAT (4mm) SCSI tape (Exabyte tape, Optical Disk optional) Shock mounted 1GB SCSI HDD

#### Data Format

CODA, SEG-Y, SDEF, Q-MIPS<sup>™</sup> compatible

#### Hard Copy

Continuous real-time output to various thermal recorders: Ultra Wideline 200, Ultra Wideline 195 Ultra 3710, EPC1086, Alden 9315 Screen dump to disk or printer in EPS or TIFF format SCSI, GPIB, Parallel interface

#### **DATA INTERFACES**

#### Analogue Input

200 kHz throughput Fully independent triggers Input signal range  $\pm$  1.25 to  $\pm$ 10V 12-bit resolution, dynamic range 72dB (16-bit optional) Up to 10,240 samples per channel



#### Triggering

2 fully independent triggers Master Trigger Output Trigger period 33ms to 65s TTL (user-specifiable duty cycle) Slave Trigger Input Trigger period minimum 33ms TTL (min. pulse width 40ns) Negative/Positive Edge Triggered

#### **Digital Input/Output**

TCP/IP Ethernet link, or customer-specified (e.g. SCSI, GPIB), RS-232, DMA compatible parallel External event input by TTL

#### **Navigational Interface**

RS-232 serial interface Data rate up to 9600 baud, user-configurable User-configurable RS-232 data format Corrected navigation input from floppy disk

#### SOFTWARE

#### **General On-line Processing**

Simultaneous, real-time, dual sensor display windows Real-time, on-line corrective processing including independent channel TVG Automatic seabed detection and display Full colour image enhancement

#### Side scan On-line Processing

Slant range correction Across-track smoothing

#### **Shallow Seismic On-line Processing**

High, low, and band-pass filtering Trace mixing and anti-mixing User selectable sound velocity for measurements Swell filtering

#### **High-Resolution Display**

Multi-channel window displays including horizontal and vertical waterfall display and 3D mesh plot (optional) Multi-resolution, independent channel display 3-mode zoom Freeze-frame with auto-release during acquisition A-scan oscilloscope display Geo-referenced screen and cursor On-screen measurement and event marking User configurable scale lines



#### High Speed Tape Operating System

Random data access with intuitive controls including GoTo, Stop, Play, Fast Forward, Rewind, Cue and review

Tape copying facility including data format and tape conversion Continuous recording with dual type system CODA, SEG-Y, SDEF, Q-MIPS<sup>™</sup> compatible data formats

#### Acquisition

Navigation input and survey parameter QC Software-configurable acquisition setup Time-synchronised navigation input User-programmable nav. string input

#### General

X windows/Motif user interface (version X11R6)

UNIX SVR4 operating system

Additional software modules available for pipeline inspection (PI100), site survey interpretation and reporting (GeoKit), survey overview (Trackplot and Trackplot Plus), on-line mosaicing (Coda Mosaic), swathe bathymetry acquisition and processing (Coda Swathe module)



#### 7.12 S.G. BROWN 1000S GYROCOMPASS

The S.G. Brown 1000S Gyrocompass is a compact, simple-to-operate master heading reference instrument employing the effect of gravity and the earth's rotation to produce a True North reference. This reference may be read off the compass card or from a digital display and can be interfaced to the GNS2 navigation system.

The normal starting cycle of the instrument is fully automatic and is initiated when the system power supply is switched on. A fail safe control circuit is incorporated which ensures that the compass is not damaged after a power failure when power is restored; the compass will restart automatically and carry out its normal settling program.



#### 7.13 APPLIED MICROSYSTEMS MODEL SVPLUS SOUND VELOCITY PROFILER

The SVPlus is a multi-parameter, self-contained, intelligent instrument designed for the measurement of sound velocity, temperature and pressure. The SVPlus features microprocessor based CMOS circuitry, two A/D converters (1 part in 40,000, 1 part in 16,000) and 128 Kbytes of battery backed-up random access memory (RAM) for data storage. The SVPlus has the options of logging data continuously, by depth increments, by time increments, by sound velocity increments, or logging individual scans.

Prior to deployment the SVPlus is connected to an IBM compatible computer via a 3-conductor cable, the instruments output is standard ASCII RS-232. When connected to a computer the SVPlus is programmed using Applied Microsystems Ltd's Total System Software. The SVPlus is configured for logging, choosing sample time units, sampling interval, depth logging increment, sound velocity increment and log file name. Logging begins when the SVPlus is immersed in water and when the instrument receives a valid sound velocity value it begins recording the data. Logging stops when the instrument cannot detect a sound velocity signal and it will assume it is out of the water.

Deployment of the SVPlus is either by hand or winch. As the instrument is lowered to and raised from the seabed, data is stored in memory.

When recovered the SVPlus is re-connected to a computer to view, edit and graph the data logged by the instrument. When a file (or cast) has been completely loaded an analysis of the data automatically begins. The purpose of this analysis is to compute the engineering values of the data and to determine the maximum and minimum values for graphing.

The SVPlus records the temperature, pressure and sound velocity at user specified logging increments. The sound velocity is measured by injecting an acoustic pulse into the water and measuring the time taken for that pulse to travel across a fixed distance.

The SVPlus's sensors must be calibrated occasionally. These should remain within published specifications for periods of 1 - 2 years, depending on the amount of use, and depth of deployment. Sensors are calibrated by recording the instruments raw data at known reference points. This data is applied to a curve fitting algorithm to produce calibration coefficients which are permanently stored in the instruments memory.

System specifications are as follows:

Pressure:	Type: Keller stainless steel pressure transducer Range: Assorted pressure ranges up to 5000 dBars Accuracy: 0.15% of Full scale Resolution: 0.005% of Full scale Response Time: 10 ms
Temperature:	Type: Pressure protected precision aged thermistor Range: -02°c to 32°C Accuracy: ±0.005°C Resolution: 0.001°C Response Time: 100 ms
Sound Velocity:	Type: 1 Megahertz piezoelectric transducer. INVAR stabilised path length (±5.5nm/°C) Range: 1400 - 1550 m/s Accuracy: <0.06 m/s (r.m.s) Resolution: 0.015 m/s
Sample Rate:	When recording internally without sending data, the scan rate is selectable



from 10 scans/second to one every 24 hours.

Memory: 128 Kb battery backed-up RAM, expandable to 40 Mbytes. The standard RAM can record 6400 scans of date, time, pressure, sound velocity and battery.



#### 8. EQUIPMENT CALIBRATIONS AND CHECKS

#### 8.1 GYROCOMPASS CALIBRATION

The S.G.Brown survey gyrocompass was calibrated at 1130 on 16 March 2002. Calibration of the survey gyrocompass was performed using total station observations, while the Bluefin was alongside the Australian Maritime College (AMC) Wharf, Beauty Point, Tasmania.

Survey Mark AMC5 on the AMC Wharf was occupied by total station. The observed reference object was Survey Mark AMC2 on the AMC Wharf. A series of horizontal angles and distances were measured to reflective prisms located along the centreline of the vessel, at the bow and stern. Simultaneous survey gyrocompass observations were recorded within the Thales GNS2 software. The gyrocompass Calculated minus Observed (C-O) was reset to zero before commencing logging data to file.

The vessels Calculated (C) heading was compared to the Observed (O) survey gyrocompass heading to determine the gyrocompass C-O. The gyrocompass C-O was entered into GNS2 and used throughout the site survey campaign. The results of the calibrations are tabulated below.

#### **Control Point Co-ordinates**

#### Datum: AGD66 Projection: AMG Zone 55, CM 147° East

Control Mark	Easting (m)	Northing (m)
AMC5	485 188.128	5 443 443.762
AMC2	485 232.088	5 443 475.890

#### **Observations**

Date:	16 March 2	2002
-------	------------	------

Instrument Station:	AMC5
Backsight Station:	AMC2

Time (hh:mm:ss)	Observation Point	Observed Bearing	Observed Distance (m)	Observed (O) True Heading
11:34:40	Bow	343° 21' 35"	70.910	338.80°
11:35:20	Stern	001° 12' 00"	61.880	339.20°
11:35:50	Bow	343° 30' 25"	70.840	339.00°
11:36:20	Stern	001° 03' 05"	61.935	339.00°
11:36:50	Bow	343° 20' 05"	70.830	338.80°
11:37:20	Stern	001° 03' 40"	61.930	338.50°
11:37:50	Bow	343° 23' 55"	70.730	338.20°
11:38:20	Stern	001° 10' 45"	61.890	337.80°
11:40:10	Bow	343° 19' 05"	70.720	338.80°
11:40:40	Stern	001° 10' 55"	61.980	338.20°
11:41:00	Bow	343° 20' 25"	70.750	337.70°
11:41:40	Stern	001° 16' 25"	61.835	338.70°
11:42:20	Bow	343° 17' 40"	70.935	339.00°
11:43:00	Stern	001° 06' 30"	61.970	339.30°
11:43:30	Bow	343° 23' 40"	70.910	339.00°
11:44:00	Stern	001° 06' 30"	62.000	338.30°
11:44:30	Bow	343° 22' 40"	70.685	338.20°
11:45:00	Stern	001° 12' 45"	61.815	339.00°

Time	Observation	Observed Bearing	Observed	Observed (O)
(hh:mm:ss)	Point		Distance (m)	True Heading
11:45:40	Bow	343° 19' 45"	70.500	338.80°
11:46:10	Stern	001° 21' 05"	62.020	338.70°

#### Results

Calculated (C)	Observed (O)	C-0
vessel heading (The)	Survey Gyrocompass (True)	
339.66°	339.00°	+0.66°
339.73°	339.00°	+0.73°
339.42°	338.65°	+0.77°
339.32°	338.00°	+1.32°
338.94°	338.50°	+0.44°
339.34°	338.20°	+1.14°
339.44°	339.15°	+0.29°
339.48°	338.65°	+0.83°
339.25°	338.60°	+0.65°
339.54°	338.75°	+0.79°
	Mean	+0.76°

The mean gyrocompass C-O =  $+0.76^{\circ}$  was entered into the GNS2 configuration parameters.

The printouts for the pre-survey gyrocompass calibration are located in Appendix D.



#### 8.2 STATIC DIFFERENTIAL GPS CHECK

A static check of the SkyFix/SkyFix Spot Differential GPS was carried out at 1150 on 16 March 2002 while the Bluefin was alongside the AMC Wharf.

Survey Mark AMC5 on the AMC Wharf was occupied by total station. The observed reference object was Survey Mark AMC2. A series of horizontal angles and distances were measured to the vessel datum (echo sounder transducer pole) installed onboard the Bluefin. Simultaneous Differential GPS position fixes were recorded within Thales GNS2 software.

The calculated datum position was then compared to the observed datum position to provide verification of the Differential GPS positioning system. The results of the static Differential GPS check are tabulated below.

#### Control Point Co-ordinates

#### Datum: AGD66 Projection: AMG Zone 55, CM 147° East

Control Mark	Easting (m)	Northing (m)
AMC5	485 188.128	5 443 443.762
AMC2	485 232.088	5 443 475.890

#### Results

Date:	16 March 2002
Instrument Station:	AMC5
Backsight Station:	AMC2

Time	Calculated	Co-ordinates	Obse	erved	Linear
(hhimmise)	Valoalatoa		DGPS Co	-ordinates	Misclose
(111.1111.55)	Easting (m)	Northing (m)	Easting (m)	Northing (m)	(m)
11:49:50	485 234.330	5 443 500.347	485 235.440	5 443 500.200	1.12
11:50:15	485 234.300	5 443 500.436	485 235.460	5 443 500.320	1.17
11:50:35	485 234.452	5 443 500.466	485 235.350	5 443 500.040	0.99
11:50:55	485 234.447	5 443 500.490	485 235.300	5 443 499.640	1.20
11:51:15	485 234.450	5 443 500.494	485 235.120	5 443 499.300	1.37
11:51:30	485 234.397	5 443 500.460	485 234.930	5 443 498.870	1.68
11:51:45	485 234.310	5 443 500.415	485 234.910	5 443 498.780	1.74
11:52:05	485 234.401	5 443 500.327	485 234.790	5 443 498.780	1.60
11:52:20	485 234.346	5 443 500.243	485 234.700	5 443 498.870	1.42
11:52:35	485 234.375	5 443 500.181	485 234.740	5 443 499.020	1.22
				Mean	1.35

#### Mean Linear Misclosure = 1.35m

Printouts of the static Differential GPS checks are located in Appendix E of this report.



#### 8.3 VELOCITY OF SOUND IN SEAWATER PROFILES

A velocity of sound in seawater profile was carried out at the Patricia-2 survey site on 17 March 2002, using a SV Plus Sound Velocity Probe.

A mean velocity of sound of 1515.7m/s was determined and entered into the echo sounder.

The water column velocity profile is detailed in Appendix I of this report.



#### 8.4 ECHO SOUNDER TRANSDUCER DRAFT MEASUREMENT AND MOTION SENSOR TEST

#### 8.4.1 Echo Sounder Transducer Draft Measurements

The Atlas Deso 15 echo sounder transducer draft settings were established by undertaking a bar check. A bar check was performed after vessel mobilisation on 16 March 2002, while Bluefin was alongside the AMC Wharf. The draft was measured as 1.54m for the 33kHz and 210kHz transducers.

Copies of the bar check are included in Appendix F of this report.

#### 8.4.2 Motion Sensor Test

A motion sensor test was carried out prior to departure from the AMC Wharf on 16 March 2002. This involved physically lifting the DMS-05 Motion Sensor up and down whilst watching the echo sounder screen for the correct movement in the raw heave trace.



#### 8.5 SIDE SCAN SONAR RUB TESTS & WET TESTS

Side scan sonar rub tests and wet tests were performed on the primary and back-up towfish alongside the AMC Wharf on 16 March 2002. The purpose of these tests was to ensure that the fish mounted transducers were operating within specification and connected to the correct recorder channels. The Client Representative accepted the results.

The results of these tests are presented as Appendix G of this report.



#### 8.6 BOOMER WET TESTS

A boomer wet-test was performed while the Bluefin was alongside the AMC Wharf on 16 March 2002. The purpose of the test was to check the overall operation and performance of the seismic equipment. The Client Representative was present during the test and accepted the results.

The results of this test are presented as Appendix H of this report.



#### 9. SUMMARY OF EVENTS

The Bluefin commenced mobilisation at the AMC Wharf on 15 March 2002 to conduct a series of site surveys for OMV, in Gippsland Basin in the Bass Strait.

A vessel induction, pre-mobilisation safety meeting including a JSA for the mobilisation was conducted for Thales and Bluefin personnel on arrival at the vessel. The induction and safety meeting commenced at 0800 on 15 March 2002.

Thales survey equipment was loaded onto the Bluefin at 0830 and all crane, welders and labour work were completed by 1545. The Gyrocompasses were powered up at 1300. At 1600 a power failure was encountered but power returned by 1630. At 2000 Thales personnel departed the vessel for the night.

At 0700 on 16 March 2002 mobilisation recommenced. Boomer wet test and side scan sonar rub tests and wet tests were completed by 1000. An echo sounder bar check, gyrocompass calibration and DPGS health check were completed by 1345. Another power failure was encountered from 1515 to 1530. By 1600 the magnetometer was operational. An emergency muster including a fire and abandonment drill was held at 1730.

At 1800 on 16 March 2002 the vessel departed the AMC wharf. The vessel arrived at the Patricia-2 site survey location at 1845 on 17 March 2002. From 1845 17 March 2002 until 0400 on 18 March 2002 the vessel went on weather standby. Equipment was tuned from 0400 until 1030.

Data acquisition on the Patricia-2 site survey was conducted from 1043 until 2119 on 18 March 2002. Data acquisition on the Baleen-3 site survey was conducted from 2148 on 18 March 2002 until 1233 on 19 March 2002. Magnetometer and seabed sampling were carried out to complete both site survey areas until 2053.

From 2200 on 19 March 2002 until 0828 on 20 March 2002 data acquisition was carried out on the Patricia-Baleen pipe route survey. At 0900 on 20 March 2002 the vessel commenced transit to the Sole-2 site survey location but poor conditions forced the vessel to divert to shelter. At 1700 the vessel dropped anchor for weather down time in the lee of Gabo Island. The anchor was recovered at 2359 on 21 March 2002 and the vessel transited to the Sole-2 site, arriving at 0800 on 22 March 2002. All survey operations were completed on Sole-2 at 2000 on 23 March 2002.

At 2041 on 23 March 2002 data acquisition commenced on the scouting line from Sole-2 to meet with the Patricia-Baleen survey line. This was completed at 0330 on 24 March 2002 and transit commenced to Port Welshpool at 0400.



#### 10. PERSONNEL AND EQUIPMENT

#### **10.1 PERSONNEL**

The following personnel were employed on this project:

#### For: Thales GeoSolutions (Australasia) Limited

Chris Shuttleworth	-	Team Leader/Senior Surveyor
Marc Dybala	-	Surveyor
Laurie Etheridge	-	Senior Underwater Engineer
Jeremy Antao	-	Underwater Engineer
Patrick Fournier	-	Offshore Geophysicist
Luis McArthur	-	Interpretation Geophysicist

#### For: OMV Australia Pty Limited

Rick Glanville - Client Representative



#### **10.2 EQUIPMENT**

#### NAVIGATION

- 2 x Trimble 4000 Series GPS Receivers
- 3 x SkyFix/LandStar Demodulators
- 2 x LandStar Whip Antennae
- 1 x Skyfix Minidome plus controller
- 2 x Compaq Pentium Desktop GNS2 Computers
- 1 x Compaq 486/66 MHz Desktop MultiFix3 Computer
- 2 x Epson LX300 Printers
- 2 x SG Brown 1000S Gyro Compass
- 2 x Helmsman's GNS2 Remote Display
- 1 x 3KVA Un-interruptible Power Supply

#### GEOPHYSICAL

ECHO SOUNDER

- 2 x Atlas Deso 15 Single Beam Echo Sounder
- 2 x Overboard Transducer (Dual Frequency)
- 1 x Model XR-666 230vac to 24vdc Power Converter
- 2 x SV-Plus Velocity Probe
- 1 x E/S Bar Check
- 1 x TSS DMS 2-05 Motion Sensor
- 1 x TSS 335 Motion Sensor

SIDE SCAN SONAR 2 x GeoAcoustics Transceiver Units 2 x Dual Frequency (100 and 500 kHz) Towfish Assemblies 2 x Side Scan Sonar Deck Cables 2 x CODA DA200 Acoustic Recorder 2 x Alden 9315 CTP printer 1 x Seamac Winch 1 x Electric/Hydraulic Winch

BOOMER SYSTEM 2 x EG&G Surface Tow Source 2 x CSP 1000 Cap/Disch Power supplies 1 EG&G Power Supply Model 232-A 1 EG&G Triggered Capacitor Bank Model 231 2 x EG&G Type Hydrophones 2 x TSS 307 TVG amplifiers Auto transformer 2x Krohne-Hite Filters

MAGNETOMETER 2 x Geometrics G-800 marine caesium magnetometers 2 x Magnetometer Deck Leads 2 x Geometrics MagSea Computer System



#### 11. DISTRIBUTION

Copies of this report have been distributed as follows:

OMV Australia Pty Ltd Attn: Mr Ron King : 4 copies

Thales GeoSolutions (Australasia) Limited

: 1 copy

CAALAST

Luis McArthur Interpretation Geophysicist

John Graindorge Senior Geophysicist

Anthony Kerr Survey Manager



## APPENDIX A

SAFETY REPORTS

THALES

#### **VESSEL INDUCTION/PRE-MOBILISATION MEETING**

#### **MINUTES**

Date :	15 March 2002	Job No. :	3346C1 Patricia-2 Site Survey
Time :	0800	Location :	AMC, Beauty Point
Present :	TGA Personnel and Bluefin Marine	Crew	

The Party Chief opened the meeting & made the following points.

- 1) Everything to be proven & tested prior to departure.
- 2) A detailed discussion on where all the equipment to be positioned & what required welding & testing.
- 3) An explanation of the site, including size, water depth & procedures.
- 4) Talk of the safety requirements during mobilisation, including hot work certificates, PPE, cranage, etc.
- 5) Explanation of survey crew shift pattern & responsibilities.
- 6) Safety environment & hierarchy, need to keep hazard free as possible.

The First Officer.

- 1) No smoking within the vessel. Restrictions on smoking on deck.
- 2) Restriction on personnel in working areas on back deck.
- 3) Safety chains on stern when applicable.
- 4) No work boots in accommodation, keep clean environment.

The Party Chief then thanked all attendees, the survey crew were then taken on the vessel induction tour by the First Officer.

## **APPENDIX B**

**OFFSET DIAGRAM - BLUEFIN** 



## APPENDIX C

**GNS SYSTEM DATA PRINTOUT** 

GNS II CONFIGURATION FILE C:\3346C1\_Site Surveys\Bass Strait.gns JOB DETAILS Job Number : 3346C1 Job Description : Site Surveys Company : Thales GeoSolutions Group Ltd Client : OMV Time Zone : GMT +11:00 WORKING SPHEROID AGD 1966 Semi-major : 6378160.000 m e Squared : 0.0066945418 : 0.006694541855 WORKING PROJECTION AMG Zone 55 Lat of Origin : 00°00'00.000"N Long of Origin : 147°00'00.000"E False Easting : 500000.00 False Northing : 10000000.00 Scale Factor : 0.999600 Units : Metres GPS TRANSFORMATION From : WGS 84 Semi-major : 6378137.000 m e Squared : 0.006694380067 To : AGD 1966 Dx : 123.314 m Dy : 47.223 m Dz : -136.594 m Rot x : 0.2640 secs Rot y : 0.3220 secs Rot z : 0.2700 secs Scale: 1.3840 ppm MOBILES Blue Fin (ship) Shape Definition: Bluefin Line:-X: -10.30 m Y: -7,00 m X: -10.30 m Y: 13.00 m X: -5.30 m Y: 23.00 m X: -0.30 m Y: 13.00 m X: -0.30 m Y: -7.00 m X: -10.30 m Y: -7.00 m Tracking Point : Datum Pitch and Roll Centre: HPR Selected Sources:-Primary Position : T1 Thales UKOOA (Using Antenna Offset : GPS) Backup Position : T3 Thales UKOOA (Using Antenna Offset : GPS) Primary Heading : S1 SGB 1000S Primary Height : Datum Displacement Verified by: (sign) \_\_\_\_\_ (print) \_\_\_\_\_ 12:19 17-Mar-2002 Page 1 of 3 GNS II CONFIGURATION FILE C:\3346C1\_Site Surveys\Bass Strait.gns Pitch and Roll : T2 TSS DMS-05 Heave Sensor : T2 TSS DMS-05 : A1 Atlas Deso 15 Ch1 Course Made Good : Posn Filter CMG Equipment:-T1 Thales UKOOA Status: ON Interface: COM3 Antenna Offset Selected: GPS -2.10 m Y: 15.49 m Z: 0.00 m Rng: 15.63 m Brg:352.3° X: Apply Pitch Roll: Instantaneous Stale Time: 5.0 s Posn SD: 3.0 m Ht S Update posn regardless of whether diff corrected Filter: Off Time Constant:60.0 s Sample Dwell: 0.5 s Gate: Off Gate Width: 9.0 xSD Minimum Gate: 0.0 m T3 Thales UKOOA Status: ON Interface: COM4 Antenna Offset Selected: GPS X: -2.10 m Y: 15.49 m Z: 0.00 m Rng: 15.63 m Brg:352.3° Apply Pitch Roll: Instantaneous Stale Time: 5.0 s Posn SD: 3.0 m Ht S Update posn regardless of whether diff corrected Filter: Off Time Constant:60.0 s Sample Dwell: 0.5 s Gate: Off Gate Width: 9.0 xSD Minimum Gate: 0.0 m 51 SGB 1000S Status: ON Interface: COM5 C-O: 0.8 degs Stale Time: 5.0 s SD: 0.1 degs Filter: Off Gate: Off Time Constant: 5.0 s Sample Dwell: 0.5 s T2 TSS DMS-05 Status: ON Interface: COM7 Pitch C-O: 0.0 degs Roll C-O: 0.0 degs Stale Time: 0.2 s C1 CODA DA200 Status: ON Interface: COM8 Antenna Offset Selected: Datum X: 0.00 m Y: 0.00 m Z: 0.00 m Rng: 0.00 m Brg: 0.0° Al Atlas Deso 15 Status: ON Interface: COM6 Tdr 1:Datum X: 0.00 m Y: 0.00 m Z: 0.00 m Rng: 0.00 m Brg: 0.0° Tdr 2:Datum X: 0.00 m Y: 0.00 m Z: 0.00 m Rng: 0.00 m Brg: 0.0° Stale Time: 5.0 s Corrections Applied:-Is Heave Compensated: Yes Tdr Draught entered in E/S: 0.00 m Apply Corrections:-Heave Compensate: No Correct for Draught: No Correct for Pitch and Sounding Selection:-Mode: All Gate: No Gate Window: 25.00 Annotation: Yes Every: 1 fixes

Verified by: (sign)\_\_\_\_\_ (print)\_\_\_\_\_

12:19 17-Mar-2002

Page 2 of 3

GNS II CONFIGURATION FILE C:\3346C1\_Site Surveys\Bass Strait.gns

Defined Offsets:-Datum 0.00 m Y: 0.00 m Z: 0.00 m Rng: 0.00 m Brg: 0.0° X: GPS -2.10 m Y: 15.49 m Z: 0.00 m Rng: 15.63 m Brg:352.3° X: Stern -5.30 m Y: -7.17 m Z: 8.92 m Brg:216.5" X: 0.00 m Rng: 555 0.00 m Rng: 9.16 m Brg:218.5° -5.70 m Y: -7.17 m Z: X: HPR X: -0.70 m Y: 0.93 m Z: 0.00 m Rng: 1.16 m Brg:323.0°

Verified by: (sign) \_\_\_\_\_ (print) \_\_\_\_\_

12:19 17-Mar-2002

Page 3 of 3

## APPENDIX D

**GYROCOMPASS CALIBRATIONS PRINTOUTS** 

# THALES

## Thales GeoSolutions (Australasia) Limited

ABN 82 000 601 909

### **Gyrocompass Calibration**

3346C1
Bass Strait Site Surveys
OMV
C.Shuttleworth
M.Dybala
Beauty Point
Blue Fin
16 March 2002

#### **Control Point Co-ordinates**

#### Datum: AGD66 Projection: AMG Zone 55 CM 147° East

Instrument Station:	AMC5			Easting (m): Northing (m): AHD Height (m):	485 188.128 5 443 443.762 0.000
Backsight Station:	AMC2			Easting (m): Northing (m): AHD Height (m):	485 232.088 5 443 475.890 0.000
Calculated Grid Bearing (DMS): Calculated Grid Convergence (DMS):	053 000	50 06	20 58	Negative-Grid North	East of True North

#### **Gyrocompass Observations**

Backsight Observation (DMS): 000 00 00

Time	Observation	0	Observed		Observed	Observed (O)
(hh:mm:ss)	Point	Dire	Direction (DMS)		Distance (m)	True Heading (D.D)
11:34:40	Bow	343	21	35	70.910	338.80
11:35:20	Stern	001	12	00	61.880	339.20
11:35:50	Bow	343	30	25	70.840	339.00
11:36:20	Stern	001	03	05	61.935	339.00
11:36:50	Bow	343	20	05	70.830	338.80
11:37:20	Stern	001	03	40	61.930	338.50
11:37:50	Bow	343	23	55	70.730	338.20
11:38:20	Stern	001	10	45	61.890	337.80
11:40:10	Bow	343	19	05	70.720	338.80
11:40:40	Stern	001	10	55	61.980	338.20
11:41:00	Bow	343	20	25	70.750	337.70
11:41:40	Stern	001	16	25	61.835	338.70
11:42:20	Bow	343	17	40	70.935	339.00
11:43:00	Stern	001	6	30	61.970	339.30
11:43:30	Bow	343	23	40	70.910	339.00
11:44:00	Stern	001	6	30	62.000	338.30
11:44:30	Bow	343	22	40	70.685	338.20
11:45:00	Stern	001	12	45	61.815	339.00
11:45:40	Bow	343	19	45	70.500	338.80
11:46:10	Stern	001	21	5	62.020	338.70

Signature

SURVEYOR/PARTY CHIEF

#### CLIENT SURVEY REPRESENTATIVE

## THALES Thales GeoSolutions (Australasia) Limited ABN 82 000 601 909

#### **Gyrocompass Calibration**

Thales Job Number:	3346C1
Job Description:	Bass Strait Site Surveys
Client:	OMV
Party Chief:	C.Shuttleworth
Surveyor:	M.Dybala
Wharf:	Beauty Point
Vessel:	Blue Fin
Date:	16 March 2002

#### Datum: AGD66 Projection: AMG Zone 55 CM 147° East

Time	Observation	0	oserv	ed	Observed	Plan	Plane Bearing		Plane	Calculated Co-ordinates		Calc (C) True	Obs (O) True	C-0
(hh:mm:ss)	Point	Direc	tion (	DMS)	Distance (m)		(DMS) I		Distance (m)	Easting (m)	Northing (m)	Heading (D.D)	Heading (D.D)	(D.D)
11:34:40	Bow	343	21	35	70.910	037	11	55	70.882	485 230.982	5 443 500.222	339.66	339.00	0.66
11:35:20	Stern	001	12	00	61.880	055	02	20	61.855	485 238.821	5 443 479.206			
11:35:50	Bow	343	30	25	70.840	037	20	45	70.812	485 231.084	5 443 500.056	339.73	339.00	0.73
11:36:20	Stern	001	03	05	61.935	054	53	25	61.910	485 238.774	5 443 479.369			
11:36:50	Bow	343	20	05	70.830	037	10	25	70.802	485 230.909	5 443 500.177	339.42	338.65	0.77
11:37:20	Stern	001	03	40	61.930	054	54	00	61.905	485 238.776	5 443 479.358			
11:37:50	Bow	343	23	55	70.730	037	14	15	70.702	485 230.911	5 443 500.050	339.32	338.00	1.32
11:38:20	Stern	001	10	45	61.890	055	01	05	61.865	485 238.816	5 443 479.230			
11:40:10	Bow	343	19	05	70.720	037	09	25	70.692	485 230.826	5 443 500.102	338.94	338.50	0.44
11:40:40	Stern	001	10	55	61.980	055	01	15	61.955	485 238.892	5 443 479.280			
11:41:00	Bow	343	20	25	70.750	037	10	45	70.722	485 230.866	5 443 500.110	339.34	338.20	1.14
11:41:40	Stern	001	16	25	61.835	055	06	45	61.810	485 238.830	5 443 479.115			
11:42:20	Bow	343	17	40	70.935	037	08	00	70.907	485 230.932	5 443 500.291	339.44	339.15	0.29
11:43:00	Stern	001	06	30	61.970	054	56	50	61.945	485 238.838	5 443 479.339			
11:43:30	Bow	343	23	40	70.910	037	14	00	70.882	485 231.016	5 443 500.196	339.48	338.65	0.83
11:44:00	Stern	001	06	30	62.000	054	56	50	61.975	485 238.862	5 443 479.356			
11:44:30	Bow	343	22	40	70.685	037	13	00	70.657	485 230.863	5 443 500.030	339.25	338.60	0.65
11:45:00	Stern	001	12	45	61.815	055	03	05	61.790	485 238.775	5 443 479.158			
11:45:40	Bow	343	19	45	70.500	037	10	05	70.472	485 230.704	5 443 499.919	339.54	338.75	0.79
11:46:10	Stern	001	21	05	62.020	055	11	25	61.995	485 239.029	5 443 479.152			

Mean C-O 0.76

Signature

SURVEYOR/PARTY CHIEF

## APPENDIX E

STATIC DIFFERENTIAL GPS CHECK PRINTOUTS



### **Thales GeoSolutions (Australasia) Limited**

ABN 82 000 601 909

### **Static Differential GPS Check**

Thales Job Number:	3346C1
Job Description:	Bass Strait Site Surveys
Client:	OMV
Party Chief:	C.Shuttleworth
Surveyor:	M.Dybala
Wharf:	Beauty Point
Vessel:	Blue Fin
Date:	16 March 2002

#### **Control Point Co-ordinates**

#### Datum: AGD66 Projection: AMG Zone 55 CM 147° East

Instrument Station:	AMC5			Easting (m): Northing (m): AHD Height (m):	485 188.128 5 443 443.762 0.000
Backsight Station:	AMC2			Easting (m): Northing (m): AHD Height (m):	485 232.088 5 443 475.890 0.000
Calculated Grid Bearing (DMS): Calculated Grid Convergence (DMS):	053 000	50 06	20 58	Negative-Grid North E	ast of True North

**Observations To:** 

**Vessel Datum** 

Backsight Observation (DMS):

000 00 00

Time	Observed	O	Observed		Positioni DGPS Co	ng System -ordinates
(111.1111.55)	Distance (III)	Dife		51913)	Easting (m)	Northing (m)
11:49:50	73.080	345	23	35	485 235.440	5 443 500.200
11:50:15	73.130	345	19	50	485 235.460	5 443 500.320
11:50:35	73.250	345	24	30	485 235.350	5 443 500.040
11:50:55	73.265	345	23	35	485 235.300	5 443 499.640
11:51:15	73.270	345	23	35	485 235.120	5 443 499.300
11:51:30	73.210	345	22	40	485 234.930	5 443 498.870
11:51:45	73.120	345	20	50	485 234.910	5 443 498.780
11:52:05	73.110	345	26	45	485 234.790	5 443 498.780
11:52:20	73.010	345	27	15	485 234.700	5 443 498.870
11:52:35	72.980	345	30	10	485 234.740	5 443 499.020

Signature

SURVEYOR/PARTY CHIEF

CLIENT SURVEY REPRESENTATIVE

# THALES

### **Thales GeoSolutions (Australasia) Limited**

ABN 82 000 601 909

### **Static Differential GPS Check**

3346C1
Bass Strait Site Surveys
OMV
C.Shuttleworth
M.Dybala
Beauty Point
Blue Fin
16 March 2002

#### Datum: AGD66 Projection: AMG Zone 55 CM 147° East

**Observations To:** 

Vessel Datum

Time	Observed			Observed		ed	Observed	Plane Bearing		Plane	Calculated	Co-ordinates	Positioni DGPS Co	ng System o-ordinates	Linear
(nn:min:ss) Direction (Dr		DIVI3)	Distance (m)			)	Distance (m)	Easting (m)	Northing (m)	Easting (m)	Northing (m)	wisciose (m)			
11:49:50	345	23	35	73.080	039	13	55	73.051	485 234.330	5 443 500.347	485 235.440	5 443 500.200	1.12		
11:50:15	345	19	50	73.130	039	10	10	73.101	485 234.300	5 443 500.436	485 235.460	5 443 500.320	1.17		
11:50:35	345	24	30	73.250	039	14	50	73.221	485 234.452	5 443 500.466	485 235.350	5 443 500.040	0.99		
11:50:55	345	23	35	73.265	039	13	55	73.236	485 234.447	5 443 500.490	485 235.300	5 443 499.640	1.20		
11:51:15	345	23	35	73.270	039	13	55	73.241	485 234.450	5 443 500.494	485 235.120	5 443 499.300	1.37		
11:51:30	345	22	40	73.210	039	13	00	73.181	485 234.397	5 443 500.460	485 234.930	5 443 498.870	1.68		
11:51:45	345	20	50	73.120	039	11	10	73.091	485 234.310	5 443 500.415	485 234.910	5 443 498.780	1.74		
11:52:05	345	26	45	73.110	039	17	05	73.081	485 234.401	5 443 500.327	485 234.790	5 443 498.780	1.60		
11:52:20	345	27	15	73.010	039	17	35	72.981	485 234.346	5 443 500.243	485 234.700	5 443 498.870	1.42		
11:52:35	345	30	10	72.980	039	20	30	72.951	485 234.375	5 443 500.181	485 234.740	5 443 499.020	1.22		

Mean Linear Misclose (m)

1.35

Surveyor

#### SURVEYOR/PARTY CHIEF
### APPENDIX F

**BAR CHECK & MOTION SENSOR CHECK** 

		~~
D	igitised 210kHz return	Job No : 3346C1 Date : 16 March 2002
		Loudon'r Amo Boudy'r onig rusi
Di	gitised 33kHz return	
		33kHz and 210kHz Return from bar
		÷
Bar	yuunanaan uraanaan aasaa aasaa aasaa aasaa aasaa aasaa aasaa aasaa aasaa aasaa aasaa aasaa aasaa aasaa aasaa aa	
Bar 33ki 210i Spe	Set : 6.00m Hz Draft set : 1.54m (Hz Draft set : 1.54m ed of Sound : 1530 m/s	1
Bar 33ki 210i Spe	Set : 6.00m Hz Draft set : 1.54m (Hz Draft set : 1.54m ed of Sound : 1530 m/s	1
Bar 33ki 210i Spe	Set : 6.00m Hz Draft set : 1.54m kHz Draft set : 1.54m ed of Sound : 1530 m/s	1
Bar 33ki 210i Spe	Set : 6.00m Hz Draft set : 1.54m Hz Draft set : 1.54m ed of Sound : 1530 m/s	
Bar 33ki 210i Spe	Set : 6.00m Hz Draft set : 1.54m Hz Draft set : 1.54m ed of Sound : 1530 m/s	

Primary Atlas Deso 15 Echo Sounder Bar Check



**TSS DMS-05 Motion Sensor Test** 

### APPENDIX G

SIDE SCAN SONAR WET TEST & RUB TEST



Primary Side Scan Sonar Towfish Nav Test and Rub Test



Primary Side Scan Sonar Towfish Wet Test

### **APPENDIX H**

BOOMER WET TEST AND PULSE TEST



Primary Boomer Sub-Bottom Profiler System Wet Test

### **APPENDIX I**

VELOCITY OF SOUND IN SEAWATER PROFILE

Sound Velocity Profile											
Date : 17 March 2002											
Location : Bass Strait Patricia-2 Site Survey											
Job No. : 3346C1											
Model	: Applied Micro	systems SV P	lus								
Pressure	Temperature	Sndvel	Battery								
1.7	19.246	1520.56	12.16								
3.2	19.233	1520.15	12.16								
4.6	19.232	1520.17	12.16								
6.1	19.196	1519.84	12.16								
7.2	19.152	1519.89	12.16								
8.3	19.137	1519.86	12.16								
9.9	18.98	1518.91	12.16								
10.8	18.802	1518.68	12.16								
11.2	18.739	1518.71	12.16								
13.5	18.703	1518.54	12.16								
15.2	18.638	1518.36	12.16								
16.4	18.547	1517.96	12.16								
17.3	18.45	1517.67	12.16								
18.1	18.319	1517.40	12.16								
20.1	18.18	1517.09	12.16								
21.9	18.126	1516.98	12.16								
23	18.077	1516.86	12.16								
23.5	18.028	1516.66	12.16								
24.9	17.951	1516.47	12.16								
27.1	17.873	1516.20	12.16								
28.5	17.795	1516.09	12.17								
30.7	17.614	1514.57	12.17								
32.1	17.219	1512.69	12.17								
34	16.624	1512.41	12.17								
35.1	16.547	1512.36	12.17								
36.2	16.485	1512.33	12.17								
37.8	16.479	1512.36	12.17								
39.7	16.476	1512.41	12.17								
41.1	16.477	1512.45	12.17								
42.2	16.473	1512.45	12.17								
43.7	16.471	1512.44	12.17								
45.1	16.472	1512.49	12.17								
47.3	16.471	1512.52	12.17								
48.8	16.472	1512.55	12.17								
51.2	16.47	1512.58	12.17								
52.5	16.47	1512.60	12.17								
51.4	16.47	1512.60	12.17								
49.6	16.47	1512.54	12.17								
48.4	16.469	1512.55	12.17								
46.7	16.469	1512.50	12.17								
45.5	16.468	1512.52	12.18								
44.1	16.467	1512.47	12.17								
42.5	16.467	1512.45	12.17								
41.4	16.468	1512.42	12.17								
40.1	16.469	1512.39	12.17								
38	16.467	1512.37	12.17								
36.8	16.466	1512.34	12.17								
35.3	16.466	1512.34	12.17								
33.5	16.468	1512.33	12.17								

	Average	1515.69	
2.5	19.191	1520.04	12.17
3.8	19.179	1520.02	12.17
4.9	19.146	1519.97	12.17
6.7	19.063	1519.92	12.18
8.1	18.796	1519.47	12.17
9.4	18.663	1518.59	12.17
10.8	18.635	1518.58	12.17
12.2	18.564	1518.48	12.17
13.5	18.468	1518.25	12.17
14.6	18.339	1517.98	12.17
15.7	18.239	1517.56	12.17
17.5	18.167	1517.27	12.17
18.6	18.061	1517.03	12.17
20.6	18.019	1516.88	12.17
21.3	17.951	1516.75	12.17
21.7	17.916	1516.66	12.18
23.4	17.848	1516.44	12.17
24.6	17.757	1516.22	12.17
26.2	17.708	1516.08	12.17
28	17.582	1515.89	12.17
28.4	17.501	1515.70	12.17
28.6	16.83	1514.63	12.17
29.2	16.611	1513.56	12.17
30.3	16.513	1512.53	12.18
32.4	16.472	1512.31	12.17

### Sound Velocity Profile Date : 17 March 2002 Location : Bass Strait Patricia-2 Site Survey Job No. : 3346C1



## APPENDIX J

SURVEY LINE LOGS



SIDE SCAN SONAR AND	D SUB BOTTOM PROFILE	R ANALOGUE LOG SHEET	Page No 1 of 1
JOB NO: 3346C1	SITE: Patricia-2	OPERATORS: LE - JA	

Date	Line No.	Fix	es	Tin	nes	SS	S	S	BP	ES	Cable Out	Comments
		SOL	EOL	SOL	EOL	Disc	Roll	Disc	Roll	Roll	@SOL	
18/03/02	PP1NS+50	2	16	06:39	06:46	1A	1	1A	1	1	150	HRB @20M, HYDRPHONE 20M
18/03/02	PPEW+50	17	30	07:08	07:15	1A	1	1A	1	1	150	
18/03/02	PP1	31	63	10:43	10:59	1A	1	1A	1	1	115	
18/03/02	PP4	64	95	11:12	11:28	1A	1	1A	1	1	120	
18/03/02	PP7	96	127	11:37	11:53	1A	1	1A	1	1	130	
18/03/02	PP10	128	160	12:07	12:23	1A	1	1A	1	1	121	#151-#152 PORT CHNL PAT-1 WELLHEAD
18/03/02	PP13	161	193	12:37	12:53	1A	1	1A	1	1	117	
18/03/02	P16	194	225	13:03	13:18	1A	1	1A	1	1	136	
18/03/02	PP19	226	261	13:29	13:46	1A	1	1A	1	1	111	
18/03/02	PP14	262	296	13:58	14:15	1A	1	1A	1	1	130	
18/03/02	PP11	297	329	14:27	14:43	1A	2	1A	2	2	137	
18/03/02	PP8	330	372	14:52	15:13	1A	2	1A	2	2	130	#368 POSS BASIN IN SBP
18/03/02	PP5	373	406	15:28	15:45	1A	2	1A	2	2	117	
18/03/02	PP2	407	440	15:53	16:09	1A	2	1A	2	2	103	
18/03/02	PP3	441	474	16:19	16:36	1B	2	1B	2	2	110	
18/03/02	PP6	475	508	16:44	17:10	1B	2	1B	2	2	100	
18/03/02	PP9	509	542	17:10	17:26	1B	2	1B	2	2	105	#520-#521 STBD CHNL PAT-1 WELLHEAD
18/03/02	PP12	543	576	17:35	17:51	1B	2	1B	2	2	100	
18/03/02	PP15	577	610	18:02	18:16	1B	2	1B	2	2	109	
18/03/02	PP18	611	644	18:28	18:44	1B	2	1B	2	2	100	
18/03/02	PP21	645	678	18:56	19:21	1B	2	1B	2	2	109	
18/03/02	PP20	679	711	19:21	19:37	1B	2	1B	2	2	105	
18/03/02	PP17	712	745	19:44	20:01	1B	2	1B	2	2	105	
18/03/02	PX03	746	777	20:15	20:30	1B	2	1B	2	2	105	
18/03/02	PX02	778	811	20:38	20:56	1B	2	1B	2	2	105	
18/03/02	PX01	812	845	21:03	21:19	1B	2	1B	2	2	105	

	SIDE SCAN SONAR CABLE OUT LOG					
Job No: 3346c1	Site Name: Patricia-2	Operators:				

### NB - ONLY FILL OUT LOG IF THERE ARE ANY ADDITIONAL CABLE CHANGES OTHER THAN THAT AT START OF LINE

Line Number	Fix Number	Cable Out	Line Number	Fix Number	Cable Out		Line Number	Fix Number	Cable Out	Line Number	Fix Number	Cable Out
PP1	36-63	150	PP17	712-745	107	Ī						
PP4	64-95	120	PX3	746-777	111							
PP7	96-127	130	PX2	778-811	100	Ī						
PP10	128-160	130	PX1	812-845	107	Ī						
PP13	161-193	117										
PP16	194-225	136										
PP19	226-261	111										
PP14	262-296	130										
PP11	297-329	137										
PP8	330-372	130										
PP5	373-406	117										
PP2	407-440	103										
PP3	441-474	110										
PP6	475-508	100										
PP9	509-542	115										
PP12	543-576	100										
PP15	577-610	109				Ī						
PP18	611-641	100				Ī						
PP21	645-678	110										
PP20	679-711	105										



	NAVIGATION AND ECHO SO INFORMATION (	LOG	Page 1 of 1	
Client	OMV			
Project	Site Surveys			
Job No	3346C1 – 3349C1, 3375C1	Vessel	FTV Bluefin	
Area	Bass Strait	Patricia-2, Baleen-3 and Sole-2		
Date(s)	18 – 23 March 2002	Operators	ECS/MD	

Equipment	Make/Model	Serial No (Bar Code)	Software Version
Positioning System	Multifix 3	ARR000867	1.28
Navigation System	GNS II	ARR000866	2.35
Echo Sounder	Atlas Deso 15	ARR000607	
Motion Sensor	TSS DMS-05		

Datum	E/S Pole
GPS Ant Offset from Datum	X=-2.10, Y=+15.49
Stern Offset from Datum	X=-5.30, Y=-7.17

Echo Sounder Settings											
From Fix	To Fix	210Khz Draft	33Khz Draft	SOS	Comments						
1	2988	1.54 m	1.54 m	1516 m/s	Heave applied in GNS II, not in echo sounder.						
2989	5940	1.54 m	1.54 m	1518 m/s	Heave applied in GNS II, not in echo sounder.						

### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3346C1

Operators: ECS/MD

Dete		Fiz	xes	Tim	nes		Heading	Commente
Dale	LINE NO	SOL	EOL	SOL	EOL		пеаціпу	Comments
18/03/02	P1NS+50	2	16	0639	0646	1	359	Dynamic SSS Check. No heave in E/S; applied in GNS.
	P1EW+50	17	30	0708	0715	1	89	Dynamic SSS Check. No heave in E/S; applied in GNS.
	PP1	31	63	1043	1059	1	51	Start Patricia-2 site survey.
	PP4	64	95	1112	1128	1	231	
	PP7	96	127	1137	1153	1	51	
	PP10	128	160	1207	1223	1	231	
	PP13	161	193	1237	1253	1	51	
	PP16	194	225	1303	1318	1	231	
	PP19	226	261	1329	1346	1	51	
	PP14	262	296	1358	1415	1	231	
	PP11	297	329	1427	1444	1	51	
	PP8	330	372	1452	1513	2	231	
	PP5	373	406	1528	1545	2	51	
	PP2	407	440	1553	1609	2	231	
	PP3	441	474	1619	1636	2	51	
	PP6	475	508	1644	1701	2	231	
	PP9	509	542	1709	1726	2	51	
	PP12	543	576	1735	1751	2	231	
	PP15	577	610	1801	1818	2	51	
	PP18	611	644	1828	1845	2	231	
	PP21	645	678	1856	1912	2	51	
	PP20	679	711	1921	1937	2	231	

Page 1 of 9



#### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3346C1

Operators: ECS/MD

Fixes Times ES Roll Heading Date Line No Comments SOL EOL SOL EOL No heave in E/S; applied in GNS. 18/03/02 PP17 712 745 1944 2001 2 51 PX3 746 777 2015 2030 2 141 PX2 778 811 2039 2056 2 321 PX1 812 845 2103 2119 2 141 Patricia-2 site complete.

Page 2 of 9

#### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3347C1

Operators: ECS/MD

Fixes Times ES Roll Heading Comments Date Line No SOL EOL SOL EOL BP1 No heave in E/S; applied in GNS. Start of Baleen-3 site. 18/03/02 BP4 BP7 Long run-in to cover Baleen-2 wellhead. 19/03/02 **BP10** BP13 BP16 **BP19 BP20 BP17** BP14 **BP11** BP8 BP5 BP2 BP3 BP6 Long run-out to cover Baleen-2 wellhead. BP6S SSS only over Baleen-2 wellhead. -BP9 **BP12** BP15 **BP18** BP21 

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#### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3347C1

Operators: ECS/MD

Fixes Times ES Roll Heading Comments Date Line No SOL EOL SOL EOL No heave in E/S; applied in GNS. Mast blocking Spot 19/03/02 BX5 antenna, switch Skyfix mini-dome to primary. BX4 BX3 BX2 Bx1 End of Baleen-3 site. P1NS Magnetometer only at Patricia-1 wellhead. P1EW Magnetometer only at Baleen-2 wellhead. B2EW B2Ewa B2NS B2NSa B1NS B1NSa B1EW B1Ewa 

Page 4 of 9

#### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3348C1

Operators: ECS/MD

Fixes Times Line No ES Roll Heading Comments Date SOL EOL SOL EOL Start of ridge survey. No heave in E/S; applied in GNS. 19/03/02 R1 No ES paper record R4 R7 R2 R5 R6 R3 R4A Ridge survey complete. 20/03/02 Centre-seg1 Start pipe route Centre-seg2 Centre-WL-75-seg2 Centre-WL-75-seg1 Centre-WL75-seg1 Centre-WL75-seg2 Centre-XL5 Pipe route complete. EXT1 Scout line from ridge to 15m contour. 

Page 5 of 9

#### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3349C1

Operators: ECS/MD

Fixes Times ES Roll Heading Comments Date Line No SOL EOL SOL EOL SP29 No heave in E/S; applied in GNS. Start of Sole-2 site survey. 22/3/02 SP26 SP23 SP20 SP17 SP14 **SP11** 100m missed @ SOL SP8 SP5 250m of ES paper record missed at SOL SP2 Early SOL to cover Sole-1 wellhead SP1 Shooting head to wind only due boomer interference SP3 Return to 2 way shooting SP6 SP9 SP12 SP15 **SP18** SP21 SP24 SP27 SP28 23/3/02 SP25 

Page 6 of 9

### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3349C1

Operators: ECS/MD

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Data		Fix	es	Tin	nes		Hooding	Commonto
Dale	LINE NO	SOL	EOL	SOL	EOL		Tleauling	Comments
23/3/02	SP22	4223	4275	0202	0228	8	89	
	SP19	4276	4330	0244	0311	8	269	
	SP16	4331	4383	0332	0358	8	89	
	SP13	4384	4440	0415	0443	8	269	
	SP10	4441	4495	0501	0528	8	89	
	SP7	4496	4552	0549	0617	8	269	
	SP4	4553	4615	0635	0706	8	89	Long run-out to pass Sole-1 wellhead
	SX6	4616	4663	0737	0801	8	359	
	SX5	4664	4709	0821	0844	8	179	
	SX4	4710	4756	0906	0929	8	359	
	SX3	4757	4803	0948	1011	8	179	
	SX2	4804	4851	1035	1059	8	359	
	SX1	4852	4895	1118	1140	8	179	Sole-2 site survey complete.
	S1EW	4896	4907	1259	1305		89	Magnetometer on Sole-1 wellhead, 100m cable out.
	S1NS	4908	4919	1343	1348		179	
	S15	4920	4936	1402	1410		359	
	S12	4937	4949	1417	1423		179	
	S3	4950	4967	1428	1437		359	
	S14	4968	4981	1443	1450		179	
	S5	4982	5000	1458	1507		359	
	S2	5001	5015	1513	1521		179	

### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3349C1

Operators: ECS/MD

Page 8 of 9

Data		Fixes Times ES Boll Hea		Hooding	Commonte			
Dale	LINE NO	SOL	EOL	SOL	EOL		Tleauing	Comments
23/03/02	S13	5016	5033	1528	1536		359	
	S4	5034	5047	1544	1550		179	
	S!	5048	5065	1612	1620		359	150-200m of Cable out
	S1a	5066	5081	1630	1638		179	
	S1b	5082	5098	1650	1658		359	
	S1Ewa	5099	5115	1709	1717		269	
	S1Ewb	5116	5130	1730	1737		089	



### NAVIGATION AND ECHO SOUNDER ANALOGUE LOG SHEET

Job No: 3375C1

Operators: ECS/MD

Fixes Times ES Roll Heading Date Line No Comments SOL EOL SOL EOL 23/03/02 SS 5134 5940 2041 0323 9 297.5 Scout line from Sole-2 site to intersect with Patricia/Baleen pipe route.

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### APPENDIX K

FIELD SEABED SAMPLE DESCRIPTIONS

Gravi	ty Co	re / Gı	rab Sam	ple Descr	iption		TH		ES
						THALES GEOS		USTRALAS	SIA) LTD
CLIENT: PROJEC JOB No. VESSEL LOGGEE POSITIO POSITIO RECOVE	OMV T: Patric : 33460 : Bluefi D BY Pat N EAST N NORT :RY (m):	ia-2 21 Fournier 627 2 H: 5 790	03.79 101.17 <b>CL</b>	ITTER CONDITI	ION ON RECO	SAMI WATE DATE: TIME: TYPE BARR CORE	PLE No.: G R DEPTH (ml 19-Mar-02 19:02 OF CORER G EL LENGTH ( R WEIGHT: 5	GC1 AT): 52 Gravity core (m): 2.0m 00kg	.5 r
EPTH (m)	АЭОТОН.	ILE NUMBER		VISUAL DESCRIPTION					ETROMETER (Kn/m <sup>2</sup> )
DE	ГI	SAMP						TC ()	PENE (
Sample h unconfine taken as	as been ed compre half the u	described essive stre nconfinec	by visual ide ength and she I compressive	entification. A po ear strength resp e strength.	ocket penetrome pectively, of the	eter and a Torvane soil. The undrain	e have been us ed shear strer	sed to define ngth of the so	the tis
Note: fie Very soft Soft Firm Stiff Very stiff Hard	ld identif Exu Easi Can Can Can Can	ication fo des betwe ly moulde be mould not be mould be inden be inden	or strength o een fingers w ed in the finge led in the fing bulded in the ted by thumb ted with diffic	f cohesive soil hen squeezed in ers jers by strong pr fingers, can be i nailVery tough ulty by thumb na	s (AS 1726 - 19 n fist ressure ndented by thur ail	993) mb	Undrained kN/m <sup>2</sup> < 12 12 to 25 25 to 50 50 to 100 100 to 200 >200	shear strer kgf/c < 0. 0.12 to 0.25 to 0.50 to 1.00 to >2	<b>igth</b> m <sup>2</sup> 12 0.25 0.50 1.00 2.00 2.00
	CLAY silty CI	AY	× × × × × ×	SILT		SAND clayev SAND	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	sandy GRAV	'EL iRAVEL
	sandy (	CLAY	$\frac{\times - \times'}{\times \times \times}$	sandy SILT	 	silty SAND		Sundy Sitty G	
× × × ×	silty sa	ndy CLAY			$\times \times \times$	clayey silty SAND		ROCK	

Gravit	y Co	re / Gı	rab Sam	ple Descri	iption		TH		ES
						THALES GEOS	OLUTIONS (A	USTRALAS	SIA) LTD
CLIENT: ( PROJECT JOB No.: VESSEL: LOGGED POSITION POSITION RECOVER	OMV Patrici 33460 Bluefii BY Pat EAST: NORT	ia-2 C1 Fournier 627 1 H: 5 790	97.97 097.56			SAM WATE DATE TIME: TYPE BARR CORE	PLE No.: G R DEPTH (mL : 19-Mar-02 19:20 OF CORER G EL LENGTH (i R WEIGHT: 50	C1 .AT): 52 ravity corei m): 2.0m D0kg	.5 r
	(11).								Ш
DEPTH (m)	ЛТНОГОСУ	SAMPLE NUMB		VI	SUAL DESCR	IPTION		TORVANE (Kn/m <sup>2</sup> )	PENETROMETI (Kn/m <sup>2</sup> )
0		GC1a	Layered firm	n to stiff clays and	l loose shelly S	AND		85	45
0.4		doooribod					ricia-2 46C1 /3/02 Cla		
unconfined taken as h	d compre alf the u	essive stre	ength and sh	ear strength resp e strength.	ectively, of the	soil. The undrair	ned shear stren	gth of the so	pil is
Note: field Very soft Soft Firm Stiff Very stiff Hard	d identif Exuc Easi Can Can Can Can Can	des betwee ly moulde be mould not be mould be inden be inden	een fingers w ed in the finge led in the fing bulded in the ted by thumb ted with diffic	of cohesive soils hen squeezed in ers gers by strong pre fingers, can be in nailVery tough culty by thumb nai	fist fist essure idented by thur	<b>93)</b> nb	Undrained kN/m <sup>2</sup> < 12 12 to 25 25 to 50 50 to 100 100 to 200 >200	shear strer kgf/c < 0.7 0.12 to 0.25 to 0.50 to 1.00 to >2	ngth m <sup>2</sup> 12 0.25 0.50 1.00 2.00 2.00
	CLAY		× × × × ×	SILT		SAND		sandy GRAV	′EL
×> >	silty CL	AY	$\begin{array}{c} \times - \times \\ - \times - \times \\ \times - \times \end{array}$	clayey SILT		clayey SAND	ו••	sandy silty G	RAVEL
· · · · · · · · · · · · · · · · · · ·	sandy ( silty sar	CLAY	$ \begin{array}{c} & & & \\ & & & \\ \times & \times & \times \end{array} $	sandy SILT		silty SAND clayey silty SAND		ROCK	

Gravi	ty Co	re / Gı	ab Sam	ple Descrip	otion		тн		ES
						THALES GEOS		JSTRALAS	SIA) LTD
CLIENT: PROJEC JOB No.: VESSEL: LOGGED POSITIOI POSITIOI RECOVE	OMV T: Patric 33460 Bluefii BY Pat N EAST N NORT RY (m)	ia-2 C1 Fournier : 626 0 H: 5 790	95.53 281.87 full <b>Cl</b>			SAN WATI DATE TIME TYPE BARI CORI	IPLE No.: GS ER DEPTH (mL/ E: 19-Mar-02 : 19:40 : OF CORER Va REL LENGTH (m ER WEIGHT:	51 AT): 52 In Veen n):	.5
DEPTH (m)	ГІТНОГОСУ	SAMPLE NUMBER		VIS	GUAL DESCR	IPTION		TORVANE (Kn/m <sup>2</sup> )	PENETROMETER (Kn/m <sup>2</sup> )
		GS1	Loose red/o biologics. Average she	range coarse SAN ell size 4cm x 4cm	ID, with abun	dant shell fragme	nts and		
Sample h unconfine taken as l Note: fiel	as been ed compre half the u	described essive stre nconfined	by visual ide ength and sh compressiv	entification. A pocl ear strength respe e strength. of cohesive soils	ket penetrom ectively, of the (AS 1726 - 19	eter and a Torvar soil. The undrai	ne have been us ned shear streng Undrained s	ed to define oth of the so	e the bil is
Very soft Soft Firm Stiff Very stiff Hard	Exu Easi Can Can Can Can Can	des betwe ily moulde be mould not be mo be inden be inden	the fingers were fingers were fingers were fingers were drawn of the finger led in the finger builded in the final builded in the field by thumber the dwith diffice $\frac{\times \times \times}{\times \times}$	then squeezed in f ers gers by strong pres fingers, can be ind nailVery tough culty by thumb nail SILT	ist ssure dented by thu	mb	kN/m <sup>2</sup> < 12 12 to 25 25 to 50 50 to 100 100 to 200 >200	kgf/c < 0.2 0.12 to 0.25 to 0.50 to 1.00 to >2 sandy GRAV	m <sup>2</sup> 12 0.25 0.50 1.00 2.00 2.00
	silty CL sandy ( silty sau	AY CLAY ndy CLAY	$\begin{array}{c} \\ \times \\ \times \\ \times \\ \times \\ \times \\ \times \\ \times \\ \times \\ \times \\ $	clayey SILT sandy SILT		clayey SAND silty SAND clayev silty SANI		sandy silty G ROCK	RAVEL

Gravi	ity Co	re / Gı	ab Sample	e Descrip	tion			тн	<b>AL</b>	ES
						THALES	GEOSOLU	TIONS (AU	ISTRALAS	SIA) LTD
CLIENT: PROJEC JOB No. VESSEL LOGGEL POSITIO POSITIO RECOVE	OMV T: Balee : 3347( : Bluefi D BY Pat N EAST N NORT ERY (m):	n C1 Fournier : 627 4 H: 5 792	51.21 364.59 CUTTE	ER CONDITION	I ON RECO	VERY:	SAMPLE WATER DE DATE: 19-I TIME: 20: TYPE OF C BARREL L CORER W	ENO.: GS EPTH (mLA Mar-02 36 CORER Va ENGTH (m EIGHT:	1 <b>xT):</b> 52 n Veen ():	.5
		BER								ER
DEPTH (m)	ГІТНОГОСУ	SAMPLE NUME		VISU	JAL DESCF	RIPTION			TORVANE (Kn/m <sup>2</sup> )	PENETROMET (Kn/m <sup>2</sup> )
		GS1	Green/grey medi fragments and o	ium to coarse S	SAND with a	abundant ro	ck and shell		-	
				rook frogmont F	Som v Aom				-	
			Average size of I	TOCK Trayment of	CIII X 4CIII.					
			Rocks show evic fragments cemer	lence of early s nted together.	tages of ce	mentation v	vith shell		-	
Sample b	as been	described	by visual identifi				Ballee n3 3347C1 19/3/02 CS 1			the
Sample r	ed compre	described	by visual identific	strength respec	et penetrom tively, of the	eter and a e soil. The	undrained s	e been use hear streng	to define th of the so	e the bil is
taken as Note: fie	half the u Id identif	nconfined	compressive street r strength of co	ength. hesive soils (/	AS 1726 - 1	993)	<b>U</b> kl	<b>ndrained s</b> N/m <sup>2</sup>	<b>hear strer</b> kgf/c	n <b>gth</b> m²
Very soft Soft	Exu Easi	des betwe ily moulde	en fingers when d in the fingers	squeezed in fis	t		، 12	< 12 to 25	< 0.1 0.12 to	12 0.25
Firm Stiff	Can	be mould	ed in the fingers	by strong press	Sure	umb	25	to 50	0.25 to	0.50
Very stiff	Can	be indent	ed by thumb nail	Very tough	incu by thu	IIID	100	to 200	1.00 to	2.00
Hard	Can 1	be indent	ed with difficulty $\times \times$	by thumb nail	1		E	>200	>2	2.00
	CLAY silty CL	AY		LT ayey SILT		SAND clayey SA		s S S S S S S S S	andy GRAV andy silty G	EL RAVEL
	sandy (	CLAY	$\begin{array}{c} & - \\ \hline \times & \times & \times \\ \hline \cdot & \times & \cdot \end{array}$ satisfies	ndy SILT		silty SANE	)	<u> </u>		
— — — — — > — — — > — — > — >	silty sa	ndy CLAY	<u> </u>		$\times \times \times$	clayey silt	y SAND		ROCK	

Gravi	ty Co	re / Gi	rab Sam	ple Descri	ption		тн	ALI	ES
						THALES GEOS	SOLUTIONS (AU	JSTRALAS	SIA) LTD
CLIENT: PROJEC JOB No.: VESSEL: LOGGED POSITIOI POSITIOI RECOVE	OMV T: Balee 3347( Bluefi D BY Pat N EAST N NORT RY (m):	n C1 Fournier : 626 6 H: 5 792	81.98 553.88 Сц	JTTER CONDITIO	ON ON RECO	SAM WATI DATE TIME TYPE BARF CORE VERY:	IPLE No.: GS ER DEPTH (mL/ :: 19-Mar-02 : 20:53 : OF CORER Va REL LENGTH (n ER WEIGHT:	62 AT): In Veen n):	
DEPTH (m)	ГІТНОГОСУ	SAMPLE NUMBER		VI	SUAL DESCR	RIPTION		TORVANE (Kn/m <sup>2</sup> )	PENETROMETER (Kn/m <sup>2</sup> )
		GS2	Green/grey and minor ro Average size Average she	Fine to coarse silf ock fragments. e of rock fragmen ell size 5cm x 2cm	ty SAND with t 5cm x 4cm. 1	abundant shell fra	agments baleen-3 347C1 7/3/02 252.		
Sample h unconfine taken as h Note: fiel	as been ed compre half the u <b>d identif</b>	described essive stro nconfined fication fo	by visual ide ength and sh compressive or strength o	entification. A poo ear strength respo e strength. of cohesive soils	cket penetrom ectively, of the (AS 1726 - 19	eter and a Torvan e soil. The undrai 993)	ned shear streng Undrained s	ed to define of the so shear stren	e the bil is hgth
Very soft Soft Firm Stiff Very stiff Hard	Exu Easi Can Can Can	des betwe ily moulde be mould not be mo be inden	een fingers w ed in the finge led in the fing bulded in the ted by thumb ted with diffic	hen squeezed in ers gers by strong pre fingers, can be in nailVery tough	fist essure dented by thu	mb	kN/m <sup>2</sup> < 12 12 to 25 25 to 50 50 to 100 100 to 200 >200	kgf/ct < 0.1 0.12 to 0.25 to 0.50 to 1.00 to	m <sup>2</sup> 12 0.25 0.50 1.00 2.00
	CLAY silty CL	AY		SILT clayey SILT		SAND clayey SAND		sandy GRAV	EL RAVEL
	sandy ( silty sai	CLAY ndy CLAY	$\times \cdot \times \cdot$ $\cdot \times \cdot \times$ $\times \cdot \times \cdot$	sandy SILT	$\times \times$	silty SAND clayey silty SANE		ROCK	

## APPENDIX L

**TIDAL PREDICTIONS** 

TIDE I	HE	IGH.	ΓPF	REDI	CT	IONS					
LOCAT	IOI	1:1	Bal	leen	-3,	/Pat	ri	cia	a-2		
LATIT	UDI	: 2	38	31	(	) S					
LONGI	TUI	)E	: 14	18 2	65	57 E					
CLIEN	Т	: TH	IALE	IS							
TIME	ZOI	ΝE	: -1	000	(1	EST)					
DATUM	:	LAT	Г (~	-0.7	0M	< M	SL	/AF	HD)		
PERIO	D	: 1	L8/	3/2	002	2 –	20	/3/	200	2	
INTER	VAI	: :	30	) MI	NU	res					
HHMM:	SS	DD	MM	YYY	Y	TID	Е	HEI	IGHT	(M)	
0:	0	18	3	200	2		1.	15			
30:	0	18	3	200	2		1.	10			
100:	0	18	3	200	2		1.	02			
130:	0	18	3	200	2		0.	93			
200:	0	18	3	200	2		0.	82			
230:	0	18	3	200	2		0.	71			
300:	0	18	3	200	2		0.	60			
330:	0	18	3	200	2		0.	51			
400:	0	18	3	200	2		0.	42			
430:	0	18	3	200	2		0.	35			
500:	0	18	3	200	2		0.	31			
530:	0	18	3	200	2		0.	29			
600:	0	18	3	200	2		0.	30			
630:	0	18	3	200	2		0.	33			
700:	0	18	3	200	2		0.	38			
730:	0	18	3	200	2		0.	44			
800:	0	18	3	200	2		0.	52			
830:	0	18	3	200	2		0.	61			
900:	0	18	3	200	2		0.	70			
930:	0	18	3	200	2		0.	78			
1000:	0	18	3	200	2		0.	86			
1100:	0	18	3	200	2		0.	91 91			
11200	0	10	3	200	2		0.	95			
12000	0	10	3	200	⊿ ົ		0.	97			
12200.	0	10 10	2	200	⊿ ົ		0. ∩	90 Q/			
1300.	0	18	2	200	2 2		0. n	29			
1330:	0	18	2	200	2		0. n	83			
1400:	0	18	2	200	2		0.	75			
1430:	0	18	3	200	2		0.	67			
1500:	0	18	3	200	2		0.	59			
1530:	0	18	3	200	2		0.	51			
1600:	0	18	3	200	2		0.	45			
1630:	0	18	3	200	2		0.	40			
1700:	0	18	3	200	2		0.	37			
1730:	0	18	3	200	2		0.	36			
1800:	0	18	3	200	2		0.	37			
1830:	0	18	3	200	2		0.	41			
1900:	0	18	3	200	2		0.	47			
1930:	0	18	3	200	2		0.	55			
2000:	0	18	3	200	2		0.	64			
2030:	0	18	3	200	2		0.	74			
2100:	0	18	3	200	2		0.	84			
2130:	0	18	3	200	2		0.	94			
2200:	0	18	3	200	2		1.	03			
2230:	0	18	3	200	2		1.	10			
2300:	0	18	3	200	2		⊥.	16			
2330:	0	18	3	200	2		⊥.	19			
:0	0	19 10	3	200	∠ ว		⊥. ₁	∠U 10			
30:	0	19 10	3 r	200	⊿ ົ		⊥. 1	⊥8 1 ⁄			
TOO:	U	тЭ	3	200	2		⊥.	⊥4			

130: 200:	0 1	L9 3 L9 3	3	200 200	2 2	1.0	)7 99
230:	0 1	L9 3	5	200	2 2	0.9	90 79
330: 400:	0 1	L9 3 L9 3	5	200	2	0.0	58
430: 500:	0 1	L9 3 L9 3	5	200	2	0.4	±9 41
530: 600:	0 1	L9 3	5	200	2	0.1	30
630: 700:	0 1	19 3 19 3	8	200 200	2 2	0.2	29 29
730: 800:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.1	32 36
830: 900:	0 1 0 1	L9 3 L9 3	8	200 200	2 2	0.4	42 50
930: 1000:	0 1 0 1	L9 3 L9 3	3	200 200	2 2	0.9	57 55
1030: 1100:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.5	73 79
1130: 1200:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.8 0.8	34 37
1230: 1300:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.8 0.8	39 38
1330: 1400:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.8	36 32
1430: 1500:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.7	77 71
1530: 1600:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.0	55 58
1630: 1700:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.5	53 18
1730: 1800:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.4 0.4	45 43
1830: 1900:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.4 0.4	13 16
1930: 2000:	0 1 0 1	L9 3 L9 3	3	200 200	2 2	0.5	50 56
2030: 2100:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.0	54 72
2130: 2200:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.8	31 91
2230: 2300:	0 1 0 1	L9 3 L9 3	5	200 200	2 2	0.9 1.0	99 )7
2330: 0:	0 1 0 2	L9 3 20 3	5	200 200	2 2	1.1	L3 L8
30: 100:	0 2	203 203	5	200 200	2 2	1.2 1.2	20 20
130: 200:	0 2	20 3 20 3	5	200 200	2 2	1.1	L7 L3
230: 300:	02	20 3 20 3	5 5	200 200	2 2	1.0 0.9	)6 97
330: 400:	02	20 3 20 3	5 5	200 200	2 2	0.8	38 78
430: 500:	02	20 3 20 3	5	200 200	2 2	0.0	57 57
530: 600:	0 2 0 2	20 3 20 3	3	200 200	2 2	0.4 0.4	18 10
630: 700:	0 2 0 2	20 3 20 3	5	200 200	2 2	0.3	34 30
730:	0 2	20 3	3	200	2	0.2	27

0	20	3	2002	0.28
0	20	3	2002	0.30
0	20	3	2002	0.33
0	20	3	2002	0.39
0	20	3	2002	0.45
0	20	3	2002	0.52
0	20	3	2002	0.59
0	20	3	2002	0.66
0	20	3	2002	0.72
0	20	3	2002	0.77
0	20	3	2002	0.81
0	20	3	2002	0.83
0	20	3	2002	0.83
0	20	3	2002	0.82
0	20	3	2002	0.79
0	20	3	2002	0.75
0	20	3	2002	0.71
0	20	3	2002	0.66
0	20	3	2002	0.61
0	20	3	2002	0.56
0	20	3	2002	0.53
0	20	3	2002	0.50
0	20	3	2002	0.49
0	20	3	2002	0.50
0	20	3	2002	0.53
0	20	3	2002	0.57
0	20	3	2002	0.63
0	20	3	2002	0.70
0	20	3	2002	0.78
0	20	3	2002	0.86
0	20	3	2002	0.95
0	20	3	2002	1.03
	000000000000000000000000000000000000000	$\begin{array}{cccc} 0 & 20 \\ 0 $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

### APPENDIX M

DAILY FIELD PROGRESS REPORT SHEETS


Date:15 March 2002

Client: OMV Job No.: 3346C1 Vessel: Blue Fin

Location: Bass Strait

PAGE 1 OF 10

Equipment	Ор	
SkyFix	Mob	
SkyFix Spot	Mob	
Gyro	Mob	
GNS 2	Mob	
MultiFix 3	Mob	
GRREP	Mob	

Equipment	Ор	
Echo Sounder	Mob	
Sidescan	Mob	
Boomer	Mob	
Heave Comp	Mob	
Velocity Probe	Mob	
ENSIN/CODA	Mob	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

WX	Sea State	Swell	Wind Dir.
0000			
0600			
1200			
1800			

### DIARY OF OPERATIONS

TIME	Time Zone=UTC+11
0800	Thales personnel at vessel. Project Briefing & vessel induction
0830	Truck, crane, welders & labour commence work.
1115	All equipment loaded to vessel
1300	Gyros powered up.
1545	Crane, welders & labour complete work
1600	Power failure.
1630	Power return
2000	Thales personnel depart vessel for night.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

 Signature
 WHITE
 Accounts Department
 Signature

 SURVEYOR/ENGINEER
 BLUE
 :Operations Department
 CLIENT REPRESENTATIVE

 YELLOW
 : Clients Representative
 CLIENT REPRESENTATIVE



Date:16 March 2002

Client: OMV Job No.: 3346C1 Vessel: Blue Fin

Location: Bass Strait

PAGE 2 OF 10

Equipment	Ор	
SkyFix	Y	
SkyFix Spot	Y	
Gyro	Y	
GNS 2	Y	
MultiFix 3	Y	
GRREP	Y	

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

WX	Sea State	Swell	Wind Dir.
0000			
0600			
1200			
1800			

### DIARY OF OPERATIONS

TIME	Time Zone=UTC+11
0700	Thales personnel at vessel.
0800	Boomer in water
1000	SSS rub & wet test
1100	ES deployed. Deso 15 problem.
1200	DGPS Health check & gyro calibration complete.
1300	ES operational
1345	ES bar check complete.
1430	Spare magnetometer arrive.
1515	Power failure.
1530	Power back. Reboot equipment
1600	Magnetometer operational
1730	Fire & Abandonment drill
1800	Depart Beauty Point.
2400	Transit to Patricia

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR/ENGINEER

 WHITE
 : Accounts Department
 S

 BLUE
 :Operations Department
 S

 YELLOW
 : Clients Representative

Signature



Date:17 March 2002

Client: OMV Job No.: 3346C1 Vessel: Blue Fin

Location: Bass Strait

PAGE 3 OF 10

Equipment	Ор	
SkyFix	Y	
SkyFix Spot	Y	
Gyro	Y	
GNS 2	Y	
MultiFix 3	Y	
GRREP	Y	

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

WX	Sea State	Swell	Wind Dir.
0000	6	2m	NW
0600	6	2m	SW
1200	6	2m	SW
1800	3/4	2m	SW

### DIARY OF OPERATIONS

TIME	Time Zone=UTC+11		
0000	Transit to Patricia		
1100	DMS2-05 reset itself to 1200 baud rate. Reset GNS2 & Deso 15 to same.		
1845	Drop anchor at Patricia site. Wx standby. Wind dec., seas 2m+		
2100	SVP check during wx dt. 1515.7 m/s		
2400	Standby for wx on Patricia 2 site		

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

 Signature
 WHITE
 Accounts Department
 Signature

 SURVEYOR/ENGINEER
 BLUE
 :Operations Department
 CLIENT REPRESENTATIVE

 YELLOW
 : Clients Representative
 CLIENT REPRESENTATIVE



Date:18 March 2002

Client: OMV Job No.: 3346C1 Vessel: Blue Fin

Location: Bass Strait

PAGE 4 OF 10

Equipment	Ор	
SkyFix	Y	
SkyFix Spot	Y	
Gyro	Y	
GNS 2	Y	
MultiFix 3	Y	
GRREP	Y	

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

WX	Sea State	Swell	Wind Dir.
0000	3/4	2m	SW
0600	3/4	1m	NW
1200	3	<1m	NE
1800	3	<1m	NE

### DIARY OF OPERATIONS

TIME	Time Zone=UTC+ 11
0000	Standby for wx on Patricia 2 site
0400	Deploy and tune E/S. No heave into E/S as causes loss of soundings. Heave applied in GNS.
0520	Recover anchor.
0530	Deploy SSS. Tuning SSS.
0639	Start SSS dynamic check Patricia 2.
0715	End of dynamic check.
0730	Deploy hydrophone. Tuning boomer.
1030	Commence run-in to line PP1.
1043	Commenced SSS, ES & Boomer on Patricia 2 site.
2119	Analogue acquisition completed at Patricia 2.
2148	Commence analogue acquisition at Baleen 3 site.
2400	Continue on Baleen 3 site.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR/ENGINEER

 WHITE
 : Accounts Department

 BLUE
 :Operations Department

 YELLOW
 : Clients Representative

Signature



Date:19 March 2002

Client: OMV Job No.: 3347C1 Vessel: Blue Fin

Location: Bass Strait

PAGE 5 OF 10

Equipment	Ор	
SkyFix	Y	
SkyFix Spot	Y	
Gyro	Y	
GNS 2	Y	
MultiFix 3	Y	
GRREP	Y	

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

WX	Sea State	Swell	Wind Dir.
0000	4	1-2m	SW
0600	3	1-2m	SW
1200	3	1-2m	SW
1800			

### DIARY OF OPERATIONS

TIME	Time Zone=UTC+ 11
0000	Continue on Baleen 3 site.
1233	Analogue acquisition complete on Baleen 3. Recover SSS & Boomer, deploy magnetometer.
1315	Magnetometer deployed.
1353	Commence magnetometer checks on wellheads.
1800	Magnetometer recovered. Rig for coring.
1845	JSA/Toolbox for coring.
1902	Gravity core attempt on Patricia 2. Fail.
1920	Gravity core attempt on Patricia 2. Sample.
1940	Grab Sample 1 (Patricia site.)
2007	Grab Sample 2 (Patricia site.)
2036	Grab Sample 3 (Baleen site.)
2053	Grab Sample on Baleen 3 site. Derig corer, hd for pipe route ridge.
2200	SSS deployed. Commence ridge examination

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR/ENGINEER

 WHITE
 : Accounts Department

 BLUE
 :Operations Department

 YELLOW
 : Clients Representative

Signature



Date:20 March 2002

Client: OMV Job No.: 3347C1 Vessel: Blue Fin

Location: Bass Strait

PAGE 6 OF 10

Equipment	Ор	
SkyFix	Y	
SkyFix Spot	Y	
Gyro	Y	
GNS 2	Y	
MultiFix 3	Y	
GRREP	Y	

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

WX	Sea State	Swell	Wind Dir.
0000	3	1	NW
0600	3	1	NW
1200	5/6	2m+	SW
1800			

### DIARY OF OPERATIONS

TIME	Time Zone=UTC+ 11
0000	Continue on ridge survey.
0014	Complete ridge survey. Deploy Boomer for route development
0115	Commenced pipe route development.
0617	Pipe route completed.
0654	Commence scout line to 15m contour.
0828	Scout line complete. Start recovering spread.
0900	Commence transit to Sole-2 site.
1100	Divert to shelter off Gabo Island. Wind SW'ly, force 6, seas 2m+. F'cast W/SW 30 – 40 kn.
1700	Drop anchor in lee of Gabo Island.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR/ENGINEER

 WHITE
 : Accounts Department

 BLUE
 :Operations Department

 YELLOW
 : Clients Representative

Signature



Date:21 March 2002

Client: OMV Job No.: 3349C1 Vessel: Blue Fin

Location: Bass Strait

Equipment	Ор	
SkyFix	Y	
SkyFix Spot	Y	
Gyro	Y	
GNS 2	Y	
MultiFix 3	Y	
GRREP	Y	

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

PAGE 7	OF	10
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WX	Sea State	Swell	Wind Dir.
0000			
0600			
1200			
1800			

## DIARY OF OPERATIONS

TIME	Time Zone=UTC+ 11
0000	At anchor in lee of Gabo Island.
1300	Deployed Sub-tow boomer for testing. Deployed ES pole to check HeCo.
1700	Recovered all equipment.
2400	Commence recover anchor.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR/ENGINEER

 WHITE
 : Accounts Department

 BLUE
 :Operations Department

 YELLOW
 : Clients Representative

Signature



Date:22 March 2002

Client: OMV Job No.: 3349C1 Vessel: Blue Fin

Location: Bass Strait

Equipment	Ор	
SkyFix	Y	
SkyFix Spot	Y	
Gyro	Y	
GNS 2	Y	
MultiFix 3	Y	
GRREP	Y	

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

PAGE 8	OF	10
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WX	Sea State	Swell	Wind Dir.
0000		na	
0600	4	2m	SW
1200	3	1m	E
1800	5	1-2m	E

## DIARY OF OPERATIONS

TIME	Time Zone=UTC+ 11
0000	Enroute to Sole-2 site
0800	Arrive Sole-2 site. Deploy E/S pole.
0815	Deploy SVP probe. SV = 1517.8m/s.
0840	Deploy boomer and SSS.
0900	Deploy hydrophone. Start tuning gear.
0930	Heading for SOL
0956	Commenced analogue acquisition on Sole 2 site.
1700	Shooting from west to east, into prevailing seas, due to excess noise on boomer data.
1800	Return to shooting both directions.
2400	Continue on Sole 2 site survey.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR/ENGINEER

 WHITE
 : Accounts Department

 BLUE
 :Operations Department

 YELLOW
 : Clients Representative

Signature



Date:23 March 2002

Client: OMV Job No.: 3349C1 Vessel: Blue Fin

Location: Bass Strait

EquipmentOpSkyFixYSkyFix SpotYGyroYGNS 2YMultiFix 3YGRREPY

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
<b>Client Personnel</b>
R Glanville

PAGE	9	OF	10

WX	Sea State	Swell	Wind Dir.
0000	5	1-2m	E
0600	4	1-2m	NE
1200	3	1m	NE
1800	4	1-2m	NE

#### DIARY OF OPERATIONS

TIME	Time Zone=UTC+ 11
0000	Continue analogue acquisition on Sole 2 site.
1140	Complete analogue on Sole 2 site. Recover gear, deploy magnetometer.
1240	Magnetometer deployed, hdg wellhd.
1800	Magnetometer recovered. Preparing corer.
1910	Core S1 on Sole 2 site
1934	Core S2 On Sole 2 site
2000	Corer de-rigged. Analogue gear deployed. Hdg for line.
2041	Commenced scout line from Sole to meet scout line running north from Patricia Baleen,

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR/ENGINEER

 WHITE
 : Accounts Department

 BLUE
 :Operations Department

 YELLOW
 : Clients Representative

Signature



Date:24 March 2002

Client: OMV Job No.: 3349C1 Vessel: Blue Fin

Location: Bass Strait

EquipmentOpSkyFixYSkyFix SpotYGyroYGNS 2YMultiFix 3YGRREPY

Equipment	Ор	
Echo Sounder	Y	
Sidescan	Y	
Boomer	Y	
Heave Comp	Y	
Velocity Probe	Y	
ENSIN/CODA	Y	

Racal Personnel
EC Shuttleworth
M.Dybala
J Antao
L.Ethridge
P Fournier
Client Personnel
R Glanville

PAGE	10	OF	10

WX	Sea State	Swell	Wind Dir.
0000	5	1-2m	E
0600	4	1-2m	NE
1200	3	1m	NE
1800	4	1-2m	NE

### DIARY OF OPERATIONS

TIME	Time Zone=UTC+ 11
0000	Continue analogue acquisition on scout line from Sole-2 to Patricia/Baleen pipe route.
0330	Finish scout line. Recover survey spread.
0400	Commence transit to Port Welshpool.

Forms are to be completed daily in duplicate on all vessels. Each form should be countersigned by the Clients Representative, the original being retained on board until the next crew change or at the end of job, whichever is the earlier, when they should be returned to the PERTH office.

Signature

SURVEYOR/ENGINEER

 WHITE
 : Accounts Department

 BLUE
 :Operations Department

 YELLOW
 : Clients Representative

Signature

# DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	Blue Fin	PROJECT No.:	3346C1	REPORT No.:	1	DATE:	15 March 2002
To:	TGA Perth	Attn:	Operations - N	N. Mackay			Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	<b>TGGL Compass House</b>	Attn:	Audrey Maysh	ו		Via:	TGA Perth

#### AA. LOCATION AT 2359 hrs:

Beauty Point, Tasmania

# BB. WEATHER:

Na

## CC. OPERATIONAL DATA:

C2. PERSONNEL

02. 7 20000						Total		
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date		
No. of Persons	4	0	1	0	5	5		
Man-Hours	96	0	24	0	120	120		
No. On Today	4	0	1	4	9	9		
No. Off Today	0	0	0	0	0	0		

#### C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	60
Patricia 2	0
Baleen 3	0
Pipe route	0
Sole 2	0
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

	Today (hours)				Total (hours)			
	Working	Transit	Downtim	Weather	Working	Transit	Downtim	Weather
			е				е	
Patricia 2 Baleen 3 Pipe route Sole 2	0	0	0	0	0	0	0	0

	Today	To Date
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:	Vessel Induction and P	re-MOB Safety Meeting

From	То	Activity	Code	Hours
0000	0800	Wait on equipment	MOB/DEMO	8
0800	2000	Mobilisation	MOB/DEMO	12
2000	2400	Standby	MOB/DEMO	4

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	0	0
Disputed Time	DT	0	0
Transit	TR	0	0
Downtime	TD	0	0
Working	OP	0	0
Mobilisation / Demobilisation	MOB/DEMO	24	24
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	24

GG. EXPECTED WEATHER FOR NEXT 24 HOURS: Na

#### HH. TECHNICAL & PARTY CHIEF'S COMMENTS: Mob progressing satisfactorily.

#### II. CLIENT REPRESENTATIVE'S COMMENTS: Nil

#### JJ. PROGRAMME FOR NEXT 24 HOURS: Continue Mobilisation and Equipment testing. Expect to depart 1800 hrs.

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)

# DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	Blue Fin	PROJECT No.:	3346C1	REPORT No.:	2	DATE:	16 March 2002
To:	TGA Perth	Attn:	Operations - N	I. Mackay			Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	<b>TGGL Compass House</b>	Attn:	Audrey Maysh	1		Via:	TGA Perth

#### AA. LOCATION AT 2359 hrs:

40° 58" S, 146° 46" E

#### BB. WEATHER:

NW 30 kn, 2m seas

#### CC. OPERATIONAL DATA:

#### C2. PERSONNEL

02. 7 210011	//				Total		
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date	
No. of Persons	5	0	1	5	11	16	
Man-Hours	120	0	24	120	262	382	
No. On Today	1	0	0	1	2	11	
No. Off Today	0	0	0	0	0	0	

## C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	100
Patricia 2	0
Baleen 3	0
Pipe route	0
Sole 2	0
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

	Today (hours)			Total (hours)				
	Working	Transit	Downtim	Weather	Working	Transit	Downtim	Weather
	-		е		-		е	
Patricia 2	0	6	0	0	0	6	0	0
Baleen 3								
Pipe route								
Sole 2								

	Today	To Date
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:	Fire & Abandon Boat Drill	

То	Activity	Code	Hours			
0700	Standby	MOB/DEMO	7			
1800	Mobilisation	MOB/DEMO	11			
2400	Transit. Depart Beauty Point	TR	6			
	<b>To</b> 0700 1800 2400	ToActivity0700Standby1800Mobilisation2400Transit. Depart Beauty Point	ToActivityCode0700StandbyMOB/DEMO1800MobilisationMOB/DEMO2400Transit. Depart Beauty PointTR			

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	0	0
Disputed Time	DT	0	0
Transit	TR	6	6
Downtime	TD	0	0
Working	OP	0	0
Mobilisation / Demobilisation	MOB/DEMO	18	42
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	48

#### GG. EXPECTED WEATHER FOR NEXT 24 HOURS: NW 20-30 kn, back SW 20-30 kn, then moderating

#### HH. TECHNICAL & PARTY CHIEF'S COMMENTS: Mob completed.

#### II. CLIENT REPRESENTATIVE'S COMMENTS: Nil

#### JJ. PROGRAMME FOR NEXT 24 HOURS: Transit to Patricia. ETA 1400 hrs 17/03/02. Commence proof of wellheads. Acquisition.

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)

# DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	VESSEL: Blue Fin PROJECT No.: 3346C1 REPORT I		REPORT No.:	3	DATE:	17 March 2002	
To: TGA Perth		Attn:	Operations - N. Mackay				Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	<b>TGGL Compass House</b>	Attn:	Audrey Maysh	1		Via:	TGA Perth

AA. LOCATION AT 2359 hrs:

At anchor on Patricia 2 site

#### BB. WEATHER:

SW 15 kn, 2m seas

#### CC. OPERATIONAL DATA:

C2. PERSONNEL

02. 7 210011	//					Total
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date
No. of Persons	5	0	1	5	11	27
Man-Hours	120	0	24	120	262	644
No. On Today	0	0	0	0	0	11
No. Off Today	0	0	0	0	0	0

#### C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	100
Patricia 2	0
Baleen 3	0
Pipe route	0
Sole 2	0
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

	Today (hours)			Total (hours)				
	Working	Transit	Downtim	Weather	Working	Transit	Downtim	Weather
			е				е	
Patricia 2 Baleen 3 Pipe route Sole 2	0	18.75	0	5.25	0	24.75	0	5.25

	Today	To Date
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:		0

From	То	Activity	Code	Hours
0000	1845	Transit	TR	18.75
1845	2400	Standby at anchor, Patricia 2 site	STBY	5.25

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	5.25	5.25
Disputed Time	DT	0	0
Transit	TR	18.75	24.75
Downtime	TD	0	0
Working	OP	0	0
Mobilisation / Demobilisation	MOB/DEMO	18	42
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	72

## GG. EXPECTED WEATHER FOR NEXT 24 HOURS:

SW back NW inc 20-30 kn. Seas dec to 1m then inc again.

#### HH. TECHNICAL & PARTY CHIEF'S COMMENTS:

Expect seas to remain low when wind is NW from off the land. Geko Beta 30m south of sites.

#### II. CLIENT REPRESENTATIVE'S COMMENTS: Nil

#### JJ. PROGRAMME FOR NEXT 24 HOURS:

SSS dynamic position on Patricia 1 wellhead. Commence acquisition Patricia 2.

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)

# DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	Blue Fin	PROJECT No.:	3346C1 3347C1	REPORT No.:	4	DATE:	18 March 2002
To:	TGA Perth	Attn:	Operations - N	I. Mackay			Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	<b>TGGL Compass House</b>	Attn:	Audrey Maysh	1		Via:	TGA Perth

#### LOCATION AT 2359 hrs: AA.

On Baleen 3 site

#### BB. WEATHER:

SW 15 kn, 1m seas

## OPERATIONAL DATA: CC.

PERSONNEL C2.

					Total		
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date	
No. of Persons	5	0	1	5	11	38	
Man-Hours	120	0	24	120	262	906	
No. On Today	0	0	0	0	0	0	
No. Off Today	0	0	0	0	0	0	

#### C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	100
Patricia 2	90
Baleen 3	10
Pipe route	0
Sole 2	0
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

	Today (hours)				Total (hours)			
	Working	Transit	Downtim	Weather	Working	Transit	Downtim	Weather
Patricia 2 Baleen 3 Pipe route Sole 2	18.5	Ο	0	5.5	18.5	24.75	0	10.75

	Today	To Date
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:		0

From	То	Activity	Code	Hours
0000	0530	Standby at anchor on Patricia site.	STBY	5.5
0530	2130	Analogue acquisition on Patricia 2 site	OP	16
2130	2400	Analogue acquisition on Baleen 3 site	OP	2.5

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	5.5	10.75
Disputed Time	DT	0	0
Transit	TR	0	24.75
Downtime	TD	0	0
Working	OP	18.5	18.5
Mobilisation / Demobilisation	MOB/DEMO	0	42
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	96

#### GG. EXPECTED WEATHER FOR NEXT 24 HOURS:

W/SW 20-30 kn, seas 2-4m, dec 10-20 kn, seas 1-2m

#### HH. TECHNICAL & PARTY CHIEF'S COMMENTS:

Patricia 2 site completed excepting coring. No heave on Deso 15 ES, but applied in GNS.

#### II. CLIENT REPRESENTATIVE'S COMMENTS: Nil

#### JJ. PROGRAMME FOR NEXT 24 HOURS:

Continue Baleen 3 analogue acquisition, then magnetometer over wellheads, then coring.

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)

# DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	Blue Fin	PROJECT No.:	3347C1	REPORT No.:	5	DATE:	19 March 2002
To:	TGA Perth	Attn:	Operations - N	I. Mackay			Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	<b>TGGL Compass House</b>	Attn:	Audrey Maysh	1		Via:	TGA Perth

AA. LOCATION AT 2359 hrs:

On pipe route, 37 56 S 148 26 E

#### BB. WEATHER:

SW 15 kn, 1m seas

#### CC. OPERATIONAL DATA:

#### C2. PERSONNEL

02. 7 210011						Total
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date
No. of Persons	5	0	1	5	11	49
Man-Hours	120	0	24	120	262	1168
No. On Today	0	0	0	0	0	0
No. Off Today	0	0	0	0	0	0

#### C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	100
Patricia 2	100
Baleen 3	100
Pipe route	10
Sole 2	0
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

	Today (hours)				Total (hours)			
	Working	Transit	Downtime	Weather	Working	Transit	Downtime	Weather
Patricia 2	24	0	0	0	42.5	24.75	0	10.75
Baleen 3								
Pipe route								
Sole 2								

	Today	To Date
	loudy	10 Duto
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:		0

From	То	Activity	Code	Hours
0000	1230	Analogue acquisition on Baleen 3	OP	12.5
1230	1800	Magnetometer check on wellheads		5.5
1800	2130	Core & grab samples, Patricia & Baleen		3.5
2130	2400	Pipe route development		2.5

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	0	10.75
Disputed Time	DT	0	0
Transit	TR	0	24.75
Downtime	TD	0	0
Working	OP	24	42.5
Mobilisation / Demobilisation	MOB/DEMO	0	42
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	120

#### GG. EXPECTED WEATHER FOR NEXT 24 HOURS: NW inc 25-35 kn, back W/SW inc 30-40 kn.

- HH. TECHNICAL & PARTY CHIEF'S COMMENTS: Patricia 2 & Baleen 3 sites complete.
- II. CLIENT REPRESENTATIVE'S COMMENTS: Nil

#### JJ. PROGRAMME FOR NEXT 24 HOURS: Complete pipe route development, transit & commence on Sole, weather permitting.

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)

# DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	Blue Fin	PROJECT No.:	3348C1	REPORT No.:	6	DATE:	20 March 2002
			3349C1				
To:	TGA Perth	Attn:	Operations - N	I. Mackay			Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	TGGL Compass House	Attn:	Audrey Maysh	1		Via:	TGA Perth

#### AA. LOCATION AT 2359 hrs:

At anchor, lee of Gabo Isl., 37 33, S. 149 55, E

#### BB. WEATHER:

SW 35 kn.

#### CC. OPERATIONAL DATA:

C2. PERSONNEL

						Total		
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date		
No. of Persons	5	0	1	5	11	60		
Man-Hours	120	0	24	120	262	1430		
No. On Today	0	0	0	0	0	0		
No. Off Today	0	0	0	0	0	0		

#### C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	100
Patricia 2	100
Baleen 3	100
Pipe route	100
Sole 2	0
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

	Today (hours)			Total (hours)				
	Working	Transit	Downtime	Weather	Working	Transit	Downtime	Weather
Patricia 2	9	2	0	13	51.5	26.75	0	23.75
Baleen 3								
Pipe route								
Sole 2								

	Today	To Date
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:		0

From	То	Activity	Code	Hours
0000	0900	Pipe route development	OP	9
0900	1100	Transit to Sole	TR	2
1100	1700	Divert to Gabo Isl	STBY	6
1700	2400	At anchor in lee of Gabo Island	STBY	7

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	13	23.75
Disputed Time	DT	0	0
Transit	TR	2	26.75
Downtime	TD	0	0
Working	OP	9	51.5
Mobilisation / Demobilisation	MOB/DEMO	0	42
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	120

#### GG. EXPECTED WEATHER FOR NEXT 24 HOURS: Continue SW 30 kn

#### HH. TECHNICAL & PARTY CHIEF'S COMMENTS: Pipe route development completed.

#### II. CLIENT REPRESENTATIVE'S COMMENTS: Nil

#### JJ. PROGRAMME FOR NEXT 24 HOURS: Commence on Sole, weather permitting.

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)

## DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	Blue Fin	PROJECT No.:	3349C1	REPORT No.:	7	DATE:	21 March 2002
To:	TGA Perth	Attn:	Operations - N	I. Mackay			Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	<b>TGGL Compass House</b>	Attn:	Audrey Maysh	1		Via:	TGA Perth

#### AA. LOCATION AT 2359 hrs:

At anchor, lee of Gabo Isl., 37 33, S. 149 55, E

#### BB. WEATHER:

In lee.

#### CC. OPERATIONAL DATA:

C2. PERSONNEL

						Total		
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date		
No. of Persons	5	0	1	5	11	71		
Man-Hours	120	0	24	120	262	1692		
No. On Today	0	0	0	0	0	0		
No. Off Today	0	0	0	0	0	0		

#### C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	100
Patricia 2	100
Baleen 3	100
Pipe route	100
Sole 2	0
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

	Today (hours)			Total (hours)				
	Working	Transit	Downtime	Weather	Working	Transit	Downtime	Weather
Patricia 2	0	0	0	24	51.5	26.75	0	47.75
Baleen 3								
Pipe route								
Sole 2								

	Today	To Date
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:		0

From	То	Activity
1700	2400	At anchor in lee of Gabo Island

CodeHoursSTBY24

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	24	47.75
Disputed Time	DT	0	0
Transit	TR	0	26.75
Downtime	TD	0	0
Working	OP	0	51.5
Mobilisation / Demobilisation	MOB/DEMO	0	42
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	144

#### GG. EXPECTED WEATHER FOR NEXT 24 HOURS: SW 15-25 kn., dec 10-15kn, swell dec 3-4 to <2m

#### HH. TECHNICAL & PARTY CHIEF'S COMMENTS: Anchor recover at midnight. ETA on location 0700hrs 220302.

#### II. CLIENT REPRESENTATIVE'S COMMENTS: Nil

#### JJ. PROGRAMME FOR NEXT 24 HOURS: Commence on Sole with analogue acquisition

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)

# DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	Blue Fin	PROJECT No.:	3349C1	REPORT No.:	8	DATE:	22 March 2002
To:	TGA Perth	Attn:	Operations - N	I. Mackay			Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	<b>TGGL Compass House</b>	Attn:	Audrey Maysh	1		Via:	TGA Perth

#### AA. LOCATION AT 2359 hrs:

Sole 2 location

#### BB. WEATHER:

NE 20 kn, 1-2m seas

#### CC. OPERATIONAL DATA:

C2. PERSONNEL

02. 7 210011						Total
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date
No. of Persons	5	0	1	5	11	82
Man-Hours	120	0	24	120	262	1954
No. On Today	0	0	0	0	0	0
No. Off Today	0	0	0	0	0	0

#### C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	100
Patricia 2	100
Baleen 3	100
Pipe route	100
Sole 2	50
Scout pipe route	0
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

	Today (hours)			Total (hours)				
	Working	Transit	Downtime	Weather	Working	Transit	Downtime	Weather
Patricia 2	16	0	0	8	67.5	26.75	0	55.75
Baleen 3								
Pipe route								
Sole 2								

	Today	To Date
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:	(	0

From	То	Activity	Code	Hours
0000	0800	En route Gabo Isl. To Sole 2 site	STBY	8
0800	1000	Deploy & tune equipment	OP	2
1000	2400	Analogue acquisition on Sole 2 site	OP	14

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	8	55.75
Disputed Time	DT	0	0
Transit	TR	0	26.75
Downtime	TD	0	0
Working	OP	16	67.5
Mobilisation / Demobilisation	MOB/DEMO	0	42
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	168

#### GG. **EXPECTED WEATHER FOR NEXT 24 HOURS:** Cont. E/NE 10-15 kn

#### HH. TECHNICAL & PARTY CHIEF'S COMMENTS: Scout line pipe route from Sole 2 location to meet line Patricia Ballen-15m contour added to programme

#### II. **CLIENT REPRESENTATIVE'S COMMENTS:** Nil

#### **PROGRAMME FOR NEXT 24 HOURS:** JJ.

Continue on Sole with analogue acquisition, magnetometer search, coring & scout line, head Welshpool.

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)

## DAILY PROJECT REPORT

#### ALL TIMES ARE WST

VESSEL:	Blue Fin	PROJECT No.:	3349C1	REPORT No.:	9	DATE:	23 March 2002
			3375C1				
To:	TGA Perth	Attn:	Operations - N	N. Mackay			Fax 08 9344 8783
То	OMV Australia Pty Ltd	Attn:	Ron King			Via:	TGA Perth
Copy:	<b>TGGL Compass House</b>	Attn:	Audrey Maysh	۱		Via:	TGA Perth

#### AA. LOCATION AT 2359 hrs:

On scout line 38 03 S, 148 53 E

#### BB. WEATHER:

NE 20 kn, 1-2m seas

#### CC. OPERATIONAL DATA:

C2. PERSONNEL

			Total			
	Racal	Sub-Cont	Client	Vessel	Today	Project To Date
No. of Persons	5	0	1	5	11	93
Man-Hours	120	0	24	120	262	2216
No. On Today	0	0	0	0	0	0
No. Off Today	0	0	0	0	0	0

#### C3. SURVEY PROGRESS

Area of Activity	Percent Complete (at end of today)
Mobilisation	100
Patricia 2	100
Baleen 3	100
Pipe route	100
Sole 2	100
Scout pipe route	50
Demobilisation	0

#### C4. RE RUNS TODAY

#### C5. SUMMARY OF CHARGEABLE TIME

		Total (hours)						
	Working	Transit	Downtime	Weather	Working	Transit	Downtime	Weather
Patricia 2 Baleen 3 Pipe route Sole 2	24	0	0	0	91.5	26.75	0	55.75

	Today	To Date
TOTAL HAZARDS/INCIDENTS REPORTED:	0	0
TOTAL MINOR INJURIES:	0	0
TOTAL LTI:	0	0
DETAILS OF INCIDENTS AND DRILLS TODAY:		0

From	То	Activity	Code	Hours
0000	1200	Analogue acquisition on Sole 2 site	OP	12
1200	1800	Magnetometer search for Sole 1 wellhead	OP	6
1800	2000	Coring	OP	2
2000	2400	Scout line, Sole to line north of Patricia Baleen	OP	4

#### FF. TIME SUMMARY:

Rate	Code	Hours	Acc. Hours
Standby and/or Weather	STBY	0	55.75
Disputed Time	DT	0	0
Transit	TR	0	26.75
Downtime	TD	0	0
Working	OP	24	91.5
Mobilisation / Demobilisation	MOB/DEMO	0	42
Breakdown (Vessel)	VD/STBY	0	0
Other Nil Revenue Time	СТ	0	0
	TOTAL	24	216

#### GG. EXPECTED WEATHER FOR NEXT 24 HOURS:

Cont. E/NE 10-15 kn

#### HH. TECHNICAL & PARTY CHIEF'S COMMENTS: ETA Port Welshpool now delayed to approx 1600 hrs 24/03/02

#### II. CLIENT REPRESENTATIVE'S COMMENTS:

Sole 1 magnetometer runs proved location of seabed disturbance as observed on sidescan to be wellhead position.

#### JJ. PROGRAMME FOR NEXT 24 HOURS:

Complete scout line, head Port Welshpool for data drop & discharge magnetometers

Signed for Thales GeoSolutions

Signed for OMV Australia Pty Ltd

Chris Shuttleworth (Party Chief)



BAKI		INTEQ LOG SUITE Formation Evaluation Drilling Data Plot Pressure Summary Plot	Permanent Datum - LAT Sealevel 25mRT
INTEQ		ABBREVIATIONS       NB     New Bit     MD     Measured Depth       RR     Rerun Bit     GPM     Gallons per Min       CB     Core Bit     PP     Pump Pressure       WOR     Waight on Bit     MW     Mud Waight on	<b>52.5m (LAT)</b> _ Seabed @ 77.5m Drilling Fluid: Seawater / Hi-vis sweeps 36" hole to 111.5m
Company Well Permit Region	OMV Australia Pty Ltd Patricia-2 VIC/L21 Gippsland Sub Basin	WOB       Weight on Bit       MW       Mud Weight sg         RPM       Revs per Minute       FV       Funnel Viscosity         FLC       Flow Check       F       Filtrate - API         CR       Circulate Returns       FC       Filter Cake         PR       Poor Returns       PV       Plastic Viscosity         NR       No Returns       YP       Yield Point         BG       Background Gas       Sol       Solids %         WTG       Wiper Trip Gas       Sd       Sand %         TG       Trip Gas       CI       Chlorides         POG       Pumps Off Gas       RM       Mud Resistivity         CC       Connection Gas       RME       Eiltrate Resistivity	30" x 20" csg set @ 111.5m Drilling Fluid: Seawater / Hi-vis sweeps 17.5" hole to 334m 13.375" csg set @ 327.1m Drilling Fluid: KCI / PHPA / Glycol 12.25" hole to 884m 0.655" csg set @ 972.2m
Designation Coordinates Ref Elevation	Field Development 038° 01' 39.95" S Lat 148° 26' 57.78" E Long RT 25 m	LITHOLOGY SYMBOLS     G	9.625° csg set @ 872.3m Drilling Fluid: FLO - PRO 8.5" hole to 1385m TD
Total Depth Contractor Rig Type	1385 mRT Diamond Offshore General Co. MODU Ocean Bounty Semi-Submersible	Calcarenite Ca       Calcisitite Cs       Calcilutite Glauc       Glauconite Glauc         Image: Calcisitite Ca       Cs       Cl       Glauc         Image: Calcisitite Ca       Cs       Cl       Glauc         Image: Calcisitite Ca       Image: Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Glauc       Image: Calcisitite Glauc       Image: Calcisitite Glauc         Image: Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Calcisite Calcisite Glauc       Image: Calcisite Glauc       Image: Calcisite Glauc       Image: Calcisite Glauc         Image: Calcisite Calcis Calcisite Calcisite Calcisite Calcisite Calcisite Calcisite Calc	eat Wireline nger Log rerval →Formation
LOG INTERVAL Depth Date Scale Data Engineers Loggers	77.5 mRT to 1385 mRT 20 – 28 June 2002 1:500 R. Tadiar, J. Wilson, R. Tena E. Spence, M. Dixon, T. Liang	Image: Stress of the stress	ered Sidewall Core No Recovery cal Core M Recovery hile drilling





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			+		Dev 13.44deg Azi 229.93deg TVD 379.66m
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					W 1.06sg V55 Pv/Yp 10/20 Gels 8/10 F 5.9 FC 1.0 Sol 2.5 Sd 0 pH 9.0 Cl 42k Ca 1200 KCl 5.5%
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					ARGILLACEOUS CALCISILTITE: It gy-m It gy,occ v It gy,sft-frm,sbblky- blky,occ amor,com arg mat,mnr foss frags,r Foram,tr glauc pel,tr dissem pyr
					Survey @ 411.6m Dev 14.45deg Azi 228.68deg TVD 408.11m
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					Survey @ 436.36m Dev 15.75deg Azi 229.40deg TVD 432 02m
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					Survey @ 463.5m Dev 16.45deg Azi 229.88deg TVD 458.09m
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					ARGILLACEOUS CALCILUTITE: It gy-m gy,sft-disp,amor-sbblky,abdt arg mat,tr foss frags,tr Foram
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		}			Survey @ 490.85m Dev 20.25deg

-   WOB 4.0-15.3 klbs -   RPM 221-285			= <b>- (</b>		Azi 230.66deg TVD 484.04m
- GPM 844- <b>86</b> 7 - SPP 1501- <del>1666 pst</del>		Ε		· ·	MARL: It gy-m gy.sft.amor-stky.tr.pyr.
					tr glauc,tr foss frags,tr Foram
	500				W 1.04sg V50 Pv/Yp 9/18 Gels 7/11 F 5.6 FC 1.0 Sol 5.0 Sd tr pH 8.7
- FLC @ 506 (Static)			$\{ \{ \} \}$		
					gy-m gy,sft,disp,amor,abdt arg mat,tr glauc,tr pyr,tr foss frags,tr Foram
					Survey @ 520.47m Dev 25.07deg Azi 231.57deg TVD 511.37m
					CALCARENITE: It gy,vf-f,fri-mod hd, rexld calc cmt,calcilutite mtx,r foss frags,tr Foram,tr glauc,tr pyr
					Survey @ 545.72m
- WOB 6:9-18.1 klbs - RPM:220-282 - GPM 839-856 - SPP 1585-1781 psi - \\	5				Dev 30.24deg Azi 231.75deg TVD 533.73m
	50				ARGILLACEOUS CALCISILTITE: It gy-m gy,sft-frm,amor-sbblky,abdt arg mat,r glauc,tr pyr,tr foss frags,tr Foram
			<u>}</u>		MARL: It gy-m gy,sft,amor-stky,tr glauc,tr foss frags,tr Foram
					500 @ 574 70m
					Dev 36.08deg Azi 230.71deg TVD 557.98m
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	CALCARENITE: It gy-m It gy,fri,hd-v hd,vf-f,mod srt,tr calc cmt,tr pyr,tr glauc,tr foss frags,tr Foram
	ARGILLACEOUS CALCISILTITE: m gy-m dk gy,frm-hd,amor-sbblky,tr glauc
	Survey @ 601.82m Dev 41.61deg Azi 229.84deg TVD 579.10m
	MARL: m lt gy-m gy,sft,amor-sbblky,tr glauc,tr pyr
	Survey @ 632.62m Dev 46.70deg Azi 229.27deg TVD 601.19m
	ARGILLACEOUS CALCISILTITE: m It gy-m gy,occ m dk gy,sft-frm,amor- sbblky,tr glauc,tr pyr,tr Foram,tr foss frags
	MARL: v It gy-m It gy,sft,amor-sbblky, tr glauc,tr foss frags
	Survey @ 661.71m Dev 51.65deg Azi 229.87deg TVD 620 2m
	CALCARENITE: v lt gy-lt gy,fri,hd-v hd,vf-f,mod-wl srt,r calc cmt,tr calc mtx,tr glauc,tr foss frags
E	Survey @ 683.17m Dev 55.94deg Azi 230.13deg



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				Ì						CALCISILTITE: m lt gy-m dk gy,sft, frm-hd,amor-sbblky,tr glauc,tr foss frags
				( \						MARL: It gy-m dk gy,sft,amor,tr glauc, tr foss frags
										Survey @ 691.25m Dev 56.22deg Azi 230.56deg TVD 637.58m
				$\langle$			/			CALCISILTITE: m lt gy-m dk gy,sft, frm-hd,amor-sbblky,tr glauc,tr foss frags
			ſ	S			$\left( \right)$			T W 1.08sg V54 Pv/Yp 12/29 Gels 11/14 F 5.4 FC 1.0 Sol 5.0 Sd tr pH 8.7 L CI 35k Ca 1180 KCI 5.0%
										1 Survey @ 720.54m Dev 59.58deg Azi 230.67deg
								 		1 _ TVD 652.95m 1 1 1
				l				4		<ul> <li>MARL: It gy-m dk gy,pred m It gy,sft,</li> <li>amor-blky,stky i/p,r glauc pel,tr foss</li> <li>frags,tr Foram,g/t CALCAREOUS</li> <li>CLAYSTONE</li> </ul>
		-	ς	2			$\left\{ \right.$			
				5						Survey @ 749.69m Dev 64.19deg Azi 230.16deg TVD 666.65m
$\begin{array}{c} \mathbf{r} & $					4					CALCISILTITE: m lt gy-m dk gy,sft- frm,amor-sbblky,tr glauc,tr foss frags, tr Foram
				L	d 1 4		Į			CALCAREOUS CLAYSTONE: dsky yel,m lt gy-m gy,sft,amor-sbblky,tr glauc,tr Foram,tr foss frags



























$\begin{array}{c c} & 50 & 0 \\ \hline & 40 \\ \hline & 40 \\ \hline & 40 \\ \hline & 30 \\ \hline & 100 \\ \hline & 20 \\ \hline & 100 \\ \hline & 100 \\ \hline & 100 \\ \hline & 200 \\ \hline \end{array}$			0.01	TOTAL GAS	CHROMA Meti Eth Prop Iso-B Iso-B Normal Iso-Pe 	TOGRAPH nane ane pane utane Butane entane ntane (ppm)	CALC Calcite - 75 Dolo+ 25 Dolo+ 25 Dolo+ 25	REMARKS



ВАК		INTEQ LOG SUITE Formation Evaluation Drilling Data Plot Pressure Summary Plot	Permanent Datum - LAT Sealevel 25mRT
INTEQ		ABBREVIATIONS       NB     New Bit     MD     Measured Depth       RR     Rerun Bit     GPM     Gallons per Min       CB     Core Bit     PP     Pump Pressure       WOR     Waight on Bit     MW     Mud Waight on	<b>52.5m (LAT)</b> _ Seabed @ 77.5m Drilling Fluid: Seawater / Hi-vis sweeps 36" hole to 111.5m
Company Well Permit Region	OMV Australia Pty Ltd Patricia-2 VIC/L21 Gippsland Sub Basin	WOB       Weight on Bit       MW       Mud Weight sg         RPM       Revs per Minute       FV       Funnel Viscosity         FLC       Flow Check       F       Filtrate - API         CR       Circulate Returns       FC       Filter Cake         PR       Poor Returns       PV       Plastic Viscosity         NR       No Returns       YP       Yield Point         BG       Background Gas       Sol       Solids %         WTG       Wiper Trip Gas       Sd       Sand %         TG       Trip Gas       CI       Chlorides         POG       Pumps Off Gas       RM       Mud Resistivity         CC       Connection Gas       RME       Eiltrate Resistivity	30" x 20" csg set @ 111.5m Drilling Fluid: Seawater / Hi-vis sweeps 17.5" hole to 334m 13.375" csg set @ 327.1m Drilling Fluid: KCI / PHPA / Glycol 12.25" hole to 884m 0.655" csg set @ 972.2m
Designation Coordinates Ref Elevation	Field Development 038° 01' 39.95" S Lat 148° 26' 57.78" E Long RT 25 m	LITHOLOGY SYMBOLS     G	9.625° csg set @ 872.3m Drilling Fluid: FLO - PRO 8.5" hole to 1385m TD
Total Depth Contractor Rig Type	1385 mRT Diamond Offshore General Co. MODU Ocean Bounty Semi-Submersible	Calcarenite Ca       Calcisitite Cs       Calcilutite Glauc       Glauconite Glauc         Image: Calcisitite Ca       Cs       Cl       Glauc         Image: Calcisitite Ca       Cs       Cl       Glauc         Image: Calcisitite Ca       Image: Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Glauc       Image: Calcisitite Glauc       Image: Calcisitite Glauc         Image: Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Calcisite Calcisite Glauc       Image: Calcisite Glauc       Image: Calcisite Glauc       Image: Calcisite Glauc         Image: Calcisite Calcis Calcisite Calcisite Calcisite Calcisite Calcisite Calcisite Calc	eat Wireline nger Log rerval →Formation
LOG INTERVAL Depth Date Scale Data Engineers Loggers	77.5 mRT to 1385 mRT 20 – 28 June 2002 1:500 R. Tadiar, J. Wilson, R. Tena E. Spence, M. Dixon, T. Liang	Image: Stripped constraints       Image: Stripped constraints	ered Sidewall Core No Recovery cal Core M Recovery hile drilling





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ВАК		INTEQ LOG SUITE Formation Evaluation Drilling Data Plot Pressure Summary Plot	Permanent Datum - LAT Sealevel 25mRT
INTEQ		ABBREVIATIONS       NB     New Bit     MD     Measured Depth       RR     Rerun Bit     GPM     Gallons per Min       CB     Core Bit     PP     Pump Pressure       WOR     Waight on Bit     MW     Mud Waight on	<b>52.5m (LAT)</b> _ Seabed @ 77.5m Drilling Fluid: Seawater / Hi-vis sweeps 36" hole to 111.5m
Company Well Permit Region	OMV Australia Pty Ltd Patricia-2 VIC/L21 Gippsland Sub Basin	WOB       Weight on Bit       MW       Mud Weight sg         RPM       Revs per Minute       FV       Funnel Viscosity         FLC       Flow Check       F       Filtrate - API         CR       Circulate Returns       FC       Filter Cake         PR       Poor Returns       PV       Plastic Viscosity         NR       No Returns       YP       Yield Point         BG       Background Gas       Sol       Solids %         WTG       Wiper Trip Gas       Sd       Sand %         TG       Trip Gas       CI       Chlorides         POG       Pumps Off Gas       RM       Mud Resistivity         CC       Connection Gas       RME       Eiltrate Resistivity	30" x 20" csg set @ 111.5m Drilling Fluid: Seawater / Hi-vis sweeps 17.5" hole to 334m 13.375" csg set @ 327.1m Drilling Fluid: KCI / PHPA / Glycol 12.25" hole to 884m 0.655" csg set @ 972.2m
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Total Depth Contractor Rig Type	1385 mRT Diamond Offshore General Co. MODU Ocean Bounty Semi-Submersible	Calcarenite Ca       Calcisitite Cs       Calcilutite Glauc       Glauconite Glauc         Image: Calcisitite Ca       Cs       Cl       Glauc         Image: Calcisitite Ca       Cs       Cl       Glauc         Image: Calcisitite Ca       Image: Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Glauc       Image: Calcisitite Glauc       Image: Calcisitite Glauc         Image: Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Calcisite Calcisite Glauc       Image: Calcisite Glauc       Image: Calcisite Glauc       Image: Calcisite Glauc         Image: Calcisite Calcis Calcisite Calcisite Calcisite Calcisite Calcisite Calcisite Calc	eat Wireline nger Log rerval →Formation
LOG INTERVAL Depth Date Scale Data Engineers Loggers	77.5 mRT to 1385 mRT 20 – 28 June 2002 1:500 R. Tadiar, J. Wilson, R. Tena E. Spence, M. Dixon, T. Liang	Image: Stripped constraints       Image: Stripped constraints	ered Sidewall Core No Recovery cal Core M Recovery hile drilling





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ROP (m/hr) පු ROP (Backup)	
100   50	0



ВАК		INTEQ LOG SUITE Formation Evaluation Drilling Data Plot Pressure Summary Plot	Permanent Datum - LAT Sealevel 25mRT
INTEQ		ABBREVIATIONS       NB     New Bit     MD     Measured Depth       RR     Rerun Bit     GPM     Gallons per Min       CB     Core Bit     PP     Pump Pressure       WOR     Waight on Bit     MW     Mud Waight on	<b>52.5m (LAT)</b> _ Seabed @ 77.5m Drilling Fluid: Seawater / Hi-vis sweeps 36" hole to 111.5m
Company Well Permit Region	OMV Australia Pty Ltd Patricia-2 VIC/L21 Gippsland Sub Basin	WOB       Weight on Bit       MW       Mud Weight sg         RPM       Revs per Minute       FV       Funnel Viscosity         FLC       Flow Check       F       Filtrate - API         CR       Circulate Returns       FC       Filter Cake         PR       Poor Returns       PV       Plastic Viscosity         NR       No Returns       YP       Yield Point         BG       Background Gas       Sol       Solids %         WTG       Wiper Trip Gas       Sd       Sand %         TG       Trip Gas       CI       Chlorides         POG       Pumps Off Gas       RM       Mud Resistivity         CC       Connection Gas       RME       Eiltrate Resistivity	30" x 20" csg set @ 111.5m Drilling Fluid: Seawater / Hi-vis sweeps 17.5" hole to 334m 13.375" csg set @ 327.1m Drilling Fluid: KCI / PHPA / Glycol 12.25" hole to 884m 0.655" csg set @ 972.2m
Designation Coordinates Ref Elevation	Field Development 038° 01' 39.95" S Lat 148° 26' 57.78" E Long RT 25 m	LITHOLOGY SYMBOLS     G	9.625° csg set @ 872.3m Drilling Fluid: FLO - PRO 8.5" hole to 1385m TD
Total Depth Contractor Rig Type	1385 mRT Diamond Offshore General Co. MODU Ocean Bounty Semi-Submersible	Calcarenite Ca       Calcisitite Cs       Calcilutite Glauc       Glauconite Glauc         Image: Calcisitite Ca       Cs       Cl       Glauc         Image: Calcisitite Ca       Cs       Cl       Glauc         Image: Calcisitite Ca       Image: Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Glauc       Image: Calcisitite Glauc       Image: Calcisitite Glauc         Image: Calcisitite Calcisitite Calcisitite Calcisitite Calcisitite Calcisite Calcisite Glauc       Image: Calcisite Glauc       Image: Calcisite Glauc       Image: Calcisite Glauc         Image: Calcisite Calcis Calcisite Calcisite Calcisite Calcisite Calcisite Calcisite Calc	eat Wireline nger Log rerval →Formation
LOG INTERVAL Depth Date Scale Data Engineers Loggers	77.5 mRT to 1385 mRT 20 – 28 June 2002 1:500 R. Tadiar, J. Wilson, R. Tena E. Spence, M. Dixon, T. Liang	Image: Stripped constraints       Image: Stripped constraints	ered Sidewall Core No Recovery cal Core M Recovery hile drilling







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ВАК		INTEQ LOG SUITE Formation Evaluation Drilling Data Plot Pressure Summary Plot	Permanent Datum - LAT Sealevel 25mRT											
INTEQ		ABBREVIATIONS       NB     New Bit     MD     Measured Depth       RR     Rerun Bit     GPM     Gallons per Min       CB     Core Bit     PP     Pump Pressure       WOR     Waight on Bit     MW     Mud Waight on	<b>52.5m (LAT)</b> _ Seabed @ 77.5m Drilling Fluid: Seawater / Hi-vis sweeps 36" hole to 111.5m											
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