SANTOS – STRIKE OIL

COMPILED FOR

SANTOS LIMITED (A.B.N. 80 007 550 923)

CASINO-1

BASIC DATA REPORT

PREPARED BY: R. Subramanian (Consultant) October 2002

CASINO-1

BASIC DATA REPORT

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LOCATION MAP



SECTION 1:- WELL HISTORY

1.1 INTRODUCTION

Casino-1 was drilled as an Otway Basin gas exploration well in the Victoria Offshore VIC/P44 licence. The Surface Location is Latitude: 38° 47' 18.502" S Longitude: 142° 42' 00.287" E (GDA94), Northing: 5705323.87m Easting: 647654.91m (MGA-94). The Seismic Reference is Inline 6066, CDP 2726. The location lies approximately 29 km south west of the town of Port Campbell, 24 km WSW of the Minerva gas field and 22 km North of the LaBella gas field (see Location Map). The Casino prospect is situated towards the western limit of the productive Waarre Sandstone play fairway of the Port Campbell Embayment. The water depth at the well location was 70.5m.

The Casino prospect is a tilted fault block closure defined by the 2001 Casino 3D seismic dataset and the proposed location will crestally test the structure. The primary objective in the well is the Late Cretaceous Waarre Sandstone, with a prognosed mean average pay of 45m across the structure. The critical risk on the prospect is related to the nature of updip cross fault seal. The prospect exhibits a significant full stack amplitude anomaly at the Waarre Sandstone with significant increase in amplitude with offset over the prospect. The prospect is currently interpreted as containing 2 separate Waarre sands, the older of which will be tested in the updip location by this wildcat well. The aims of this well are:

- Intersect the Waarre sand high on the structure, within the high amplitude zone, and at a location of minimum geologic complexity, to confirm the presence of hydrocarbons and calibrate the remaining seismic data set (including the younger Waarre sand not intersected in the wellbore).
- To obtain pressure data to confirm column height and gas samples to determine composition.
- To drill high enough on structure to maximise the intersection of possible gas charged Waarre sandstone section.

Casino-1 was drilled by the semi-submersible drilling rig "Diamond Offshore Ocean Bounty".

1.2 GENERAL DATA

XX7 11 XT

Well Name:	CASINO-1	
Well Classification:	Offshore Gas Exploration	
Interest Holders:	Santos Ltd Strike Oil NL	50% 50%
Participating Interests:	Santos Ltd Strike Oil NL	50% 50%
Operator:	Santos Ltd.	
Location:	Offshore Victoria – Otway Basin VIC/P44	
Surveyed Location (GDA94)	Latitude: 38° 47' 18.502" South Longitude: 142° 42' 00.287" East Northing: 5705323.87m Easting: 647654.91m	
Seismic Location: Seismic Survey:	Inline 6066, CDP 2726 2001 Casino 3D	

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Elevations:	Water Depth -70.5m AHD (Australian Height Datum) Rotary Table +25.0m LAT
Total Depth:	Driller: 2118m RT Logger: 2098.5m RT (fill in hole)
Status:	Plugged and Abandoned
License:	VIC/P44 Offshore Victoria
Date Drilling Commenced:	18:30 hours on 25 th August 2002.
Date Drilling Completed:	11:00 hours on 14 th September 2002.
Date Rig Released:	12:00 hours on 23 rd September 2002.
Total Well Time:	28 days
Contractor:	Diamond Offshore
Rig:	Ocean Bounty (semi-submersible)

1.3 DRILLING SUMMARY

(a) <u>Drilling Summary</u> (All Depths Driller's RT)

Casino-1 was spudded at 18:30 hrs on 25th August 2002 utilising the semi-submersible drilling facility "Ocean Bounty".

Bit 1, a 660mm (26") Smith DSJC, run in conjunction with a 914mm (36") hole opener, drilled the 914mm (36") phase from seafloor at 95.5m to section total depth at 130m. Returns were to the seafloor. A string of 762mm (30") (461 kg/m X56) casing was run and set at 128m. The casing running tool and 914mm (36") BHA were laid out.

Bit 2, a Smith MGSSH-C was run in hole to tag the cement top at 124.5m and was used to drill the entire 445mm (17.5") hole section from 130m to 752m. The hole was circulated clean and displaced with gel. A string of 340mm (13.375") (101 kg/m L80) casing was run and set at 743m and pressure tested to 20600kPa (3000psi). The casing running tool was released and laid out along with the cement head. The blowout preventers were installed on the marine riser and function tested. The 445 mm (17.5") BHA was laid out.

Thereafter, the 311 mm (12.25") BHA with Bit 3, Reed DSX195 was run in hole to tag top of cement at 718m. The cement plugs, cement, casing shoe, rathole and 3m of new hole from 752m to 755 m were drilled. The hole was displaced to 1.04 SG (8.7ppg) and circulated clean. A Leak-off Test was performed to 2.07 SG EMW. The 311mm (12.25") hole was then drilled from 755m to 1053m with partial losses which varied between 8.0 to 11.1 m3/hr (50 to 70 bbls/hr). The mud loss situation was remedied with LCM to ensure complete returns. Drilling continued to 1057m where poor penetration rates required a bit change. Bit #4, Reed HP51 HFKPRDH was run in hole. However, the bit had to be pulled at 1059m after drilling only 2m due to plugged nozzles. A new tricone Bit #5, a Smith 10GF was run in hole and drilling continued from 1059m to 1400m. The bit was tripped out of hole and Bit #6, a PDC Smith MA74BPX was run in hole and drilled from 1400m to 1797m where poor penetration rates

required a bit change. The 311mm (12 ¹/₄") section from 752m to 1797m was logged while drilling with Anadrill Schlumberger MWD/LWD CDR/Isonic tools to record Gamma Ray, Resistivity, Sonic and Deviation Survey data.

A tricone insert Bit #7, a Hughes MXR09D was run in hole, and the hole was circulated clean. However due to adverse weather conditions, the drillstring was pulled back into the casing shoe and further operations were suspended while waiting on weather. After the weather conditions worsened, the drillstring was hung-off inside the wellhead the riser was disconnected from the Lower Marine Riser Package. As the weather abated, the Lower Marine Riser Package was reconnected and further operations resumed.

The bit nozzles were found to be plugged which required a bit trip to change the plugged bit. MWD/LWD tools were laid out at this sage for a clean-out trip due to the well being idle. After reaming to bottom, it was decided to drill ahead from 1797m to total depth of 2118m. This section was drilled without the MWD/LWD tools. Total depth was reached at 11:00hrs on 14/09/02.

At Total Depth, the hole was circulated clean and the drillstring was pulled out of hole to run wireline logs. Baker Atlas was rigged up and wireline logs were run as summarised in Table 1. After rigging down Baker Atlas, a cement stinger was run in the hole to set cement abandonment plugs as per program, Plug 1: 1840m-1690m, Plug 2: 1620m-1470m, Plug 3: 780m-630m and Plug 4: 183m-133m. Weather conditions worsened and further abandonment/rig release operations were temporarily suspended.

The rig was released at 12:00 hours on September 23, 2002.

(b) <u>Mudlogging Services</u>

Mudlogging services were provided by Baker Hughes Inteq Unit 503 with the following parameters monitored:

- 1. Total Gas
- 2. Chromatographic Gas Breakdown
- 3. Hydrogen Sulphide Levels
- 4. Depth/Rate of Penetration.
- 5. Pipe Speed/Block Position
- 6. Top drive RPM
- 7. Top drive Torque
- 8. Hook Load/Weight On Bit
- 9. Standpipe Pressure
- 10. Casing Shut-in Pressure
- 11. Mud Pump Rate (3 pumps)
- 12. Mud Flow Out
- 13. Mud Pit Levels (6 pits)
- 14. Mud Weight In and Out
- 15. Mud Temperature In and Out
- 16. Carbon Dioxide Detectors

Ditch cuttings were collected at 3m intervals over most of the 311mm (12-1/4") phase from 752m to total depth of 2118m. However very fast drilling rates required the sampling interval to be increased to 6m when necessary. In the zones of interest, sampling was done at 3m intervals. In addition to microscopic examination of all drilled cuttings, samples were subjected to fluoroscope examination. Since no significant carbonate section was intersected in the 311mm (12-1/4") phase, calcimetry was not performed on a regular basis, but as required.

A catalogue of all wellsite samples is found in Section 4.3.

(c) <u>MWD Data</u>

Measurement while drilling (MWD) was acquired by Anadrill-Schlumberger in Casino-1. The CDR / Powerpulse was used in the 311mm (12.25") section from 752m to 1797m, where operations were temporarily suspended while waiting-on-weather. Gamma Ray, Resistivity and Deviation Surveys data were acquired in this phase in 4 runs. Anadrill Schlumberger's detailed report is attached in Section 3.5: MWD/LWD END OF WELL REPORT

(d) <u>Testing</u>

No production tests were conducted at the Casino-1 location.

(e) <u>Coring</u>

No full hole cores were cut at the Casino-1 location.

(f) <u>Biostratigraphy</u>

Micro-palaeontology studies were not conducted in Casino-1.

(g) <u>Electric Logging</u>

Electric Logging Services were provided by Schlumberger Wireline Services. One suite of electric logs were attempted at Casino-1 as follows:

LOG	SUITE/	INTERVAL	BHT/TIME	OTHER
	RUN			
PEX-DSI	1 / 1	(** Note: PEX Hi-Res	80°C / 10.33 hrs	
		to 1650m. Standard		
		Res above 1650m)		
GR		TD to 95		
Spectral GR		TD to 1650		
Resistivity		TD to 742		
SP		TD to 742		
HCAL		TD to 742		
Sonic (Upper Dipole)		TD to 1650		
Dt (Full waveforms)		TD to 500		
Neutron-Density		TD to 742		
MDT-GR	1 / 2	1524 to 2016		
(TOTAL : 29,				
8 Good, 10 Valid but tight,				
5 Lost Seals, 2 bad data,				
5 curtailed, 3 samples				
collected)				
	1.12			
CST-GR	1/3	1520 to 2030		
(30 of 30 shots recovered)				
				1

TABLE 1

(h) <u>MDT Pressure Data</u>

An MDT pressure survey was conducted at the Casino-1 location. A total of 29 pre-tests were attempted of which 8 were good tests, 10 were valid but tight, 5 were lost seals, 2 were bad data, 5 were curtailed. In addition 3 samples were collected. Two sample chambers were sent for PVT analysis while one chamber was opened at the rigsite. The MDT Pressure Survey data are presented in Section 3.4: MDT PRESSURE SURVEY RESULTS

(i) <u>Hole Deviation</u>

Casino-1 was drilled as a vertical hole. Deviation Surveys were recorded using MWD/LWD tools in most of the 311mm (12.25") section while drilling, with the last survey being recorded at 1775.86m. Below 1797m, MWD/LWD tools were not included in the drillstring. Hence reliable survey data are not available below that depth. However, an estimate of inclination (without direction) was obtained with the magnetometer in the wireline PEX toolstring and are included for completeness, in the data presented in Section 18: Deviation Surveys.

At Total Depth, the estimated displacement was 74m towards 191.5°T direction. At total depth it is estimated that the TVD would be 2113m.

(j) <u>Velocity Surveys</u>

A planned Velocity Survey was not cancelled. No velocity survey was conducted at the Casino-1 location.

(k) <u>Casing & Cementing Summary</u>

The following Table-3 summarises casing sizes, depths and cementing details for Casino-1. Casing and Cementing Reports for each casing run are detailed in Section 11: CASING & CEMENTING SUMMARY.

HOLE SIZE	DEPTH	CASING SIZE	CASING DEPTH	JOINTS	CASING TYPE	CEMENT
914mm (36")	130m	762mm (30")	128.23m	3	461 kg/m X56 HD90	823 sacks class "G" cement of total volume 174 bbl, 1% CaCl2 BWOC, mixed to a slurry weight of 1.9sg.
445mm (17.5")	752m	340 mm (13.375")	743.15m	55	101kg/m L80 BTC	Lead: 1032 sacks class "G" cement of total volume 65.19m3, mixed to a slurry weight of 1.497-1.509sg. Tail: 686 sacks class "G" cement of total volume 22.74m3, mixed to a slurry weight of 1.893-1.917sg.

TABLE 3

SECTION 2:- LITHOLOGICAL DESCRIPTIONS

SECTION 2.1: CUTTINGS DESCRIPTIONS

2.1 <u>CASINO-1 - LITHOLOGICAL DESCRIPTIONS</u>

<u>From (m)</u>	<u>To (m)</u>	<u>%</u>	Description
752	755	100	CALCAREOUS CLAYSTONE : Light brown, medium brown grey, common fossil fragments (10%), firm to moderately hard, subblocky to blocky. (Sample cement contaminated)
755	758	100	CALCAREOUS CLAYSTONE : Light brown, medium brown grey, common fossil fragments (10%), firm to moderately hard, grading to marl, subblocky to blocky. (Sample cement contaminated)
758	761	100	CALCAREOUS CLAYSTONE : Light brown, medium brown grey, common fossil fragments (echinoid spines, bryozoa fragments, trace forams?), firm to moderately hard, grading to marl, trace pyrite, trace quartz grains, subblocky to blocky. (Sample cement contaminated)
761	764	100	CALCAREOUS CLAYSTONE : Light to predominantly medium brown, medium brown grey, common fossil fragments (echinoid spines, bryozoa fragments), firm to moderately hard, grading to marl, trace pyrite, trace quartz grains, subblocky to blocky.
764	767	70	CALCAREOUS CLAYSTONE : Medium brown, medium brown grey, common fossil fragments (echinoid spines, bryozoa fragments), firm to moderately hard, grading to marl, trace pyrite, trace quartz grains, subblocky to blocky.
		30	MARL: Light grey, occasionally light green grey, argillaceous in part, very calcareous, grading to calcareous claystone, soft to firm, subblocky
767	770	60	CALCAREOUS CLAYSTONE : Medium brown, medium brown grey, common fossil fragments (echinoid spines, bryozoa fragments), firm to moderately hard, grading to marl, trace pyrite, trace glauconite, trace quartz grains, subblocky to blocky.
		30	MARL: Light grey, occasionally light green grey, argillaceous in part, very calcareous, grading to calcareous claystone, soft to
		10	CALCARENITE: Off white, pale brown, fine grained, weak to moderately strong cement, trace lithic fragments, trace glauconite, firm to moderate hard, occasionally hard.
770	773	80	CALCAREOUS CLAYSTONE : Medium brown, medium brown grey, common fossil fragments, moderately hard, grading to marl, trace pyrite, trace glauconite, trace quartz grains, subblocky to blocky.

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		20	MARL: Light grey, occasionally light green grey, argillaceous in part, very calcareous, grading to calcareous claystone, soft to firm, subblocky
773	776	60	SANDSTONE: Clear to translucent, pale yellow to pale brown, medium to coarse, moderately well sorted, subrounded to rounded, subangular to angular, common yellow brown staining on grains, weak siliceous and calcareous cement, trace glauconite, friable to moderate hard, common loose, poor visual porosity, no hydrocarbon fluorescence.
		40	CALCAREOUS CLAYSTONE : Medium brown, medium brown grey, common fossil fragments, moderately hard, grading to marl, trace pyrite, trace glauconite, trace quartz grains, subblocky to blocky.
776	779	80	SANDSTONE: Pale yellow to pale brown, pale red brown, minor clear to translucent, medium to coarse, occasionally fine, moderately well sorted, subrounded to rounded, subangular to angular, common yellow brown to red brown Fe-staining on grains, weak siliceous and calcareous cement, trace pyrite, trace glauconite, friable to moderate hard, common loose, poor visual porosity, no hydrocarbon fluorescence.
		20	CALCAREOUS CLAYSTONE : Medium brown, medium brown grey, common fossil fragments, moderately hard, grading to marl, trace pyrite, trace glauconite, trace quartz grains, subblocky to blocky.
779	782	100	SANDSTONE: Medium brown, medium yellow brown, medium to very coarse grained, moderately poorly sorted, subrounded, occasionally rounded, minor subangular, weak siliceous cement, common Fe-staining, trace glauconite, trace pyrite, friable in part, loose in part, moderately hard in part, fair inferred porosity, no hydrocarbon fluorescence.
782	785	100	SANDSTONE: Medium brown, medium yellow brown, medium to very coarse grained, moderately poorly sorted, subrounded to minor subangular, weak siliceous cement, common Fe-staining, trace glauconite, trace pyrite, friable in part, loose in part, moderately hard in part, fair inferred porosity, no hydrocarbon fluorescence.
785	788	100	SANDSTONE: Medium brown, occasionally dark brown, medium yellow brown, coarse to very coarse grained, minor medium grained, moderately well sorted, subrounded, occasionally rounded, minor subangular, weak siliceous cement, common Fe-staining, trace glauconite, trace pyrite, friable in part, loose in part, moderately hard in part, fair inferred porosity, no hydrocarbon fluorescence.

788 791 80 SANDSTONE: Medium brown, occasionally dark brown,

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			medium yellow brown, coarse to very coarse grained, minor medium grained, moderately well sorted, subrounded, occasionally rounded, minor subangular, weak siliceous cement, common Fe-staining, trace glauconite, trace pyrite, friable in part, loose in part, moderately hard in part, fair inferred porosity, no hydrocarbon fluorescence.
		20	CALCAREOUS CLAYSTONE: Medium to dark grey to minor grey brown, moderately hard, grading to marl, trace pyrite, trace glauconite, trace quartz grains, subblocky to blocky, minor amorphous.
791	794	100	SANDSTONE: Medium brown, occasionally dark brown, medium yellow brown, predominantly medium grained, minor coarse to very coarse grained, well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
794	797	100	SANDSTONE: Medium brown, occasionally dark brown, medium yellow brown, medium to coarse grained, minor very coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
797	800	100	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, medium to coarse grained, minor very coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
800	803	50	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, medium to coarse grained, minor very coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
		50	MARL: Light grey, occasionally light green grey, argillaceous in part, very calcareous, grading to calcareous claystone, soft to firm, dispersive, minor subblocky to predominantly amorphous.
803	806	90	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, predominantly medium to coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, trace pyrite, friable in part, loose in part, moderately hard in part,
		10	poor to fair inferred porosity, no hydrocarbon fluorescence.MARL: Light grey, occasionally light green grey, argillaceous in part, very calcareous, grading to calcareous claystone, soft to

Santos			Well Completion Report Volume 1 Basic
			firm, dispersive, minor subblocky to predominantly amorphous.
806	809	90	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, predominantly medium to coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
		10	MARL: Light grey, occasionally light green grey, argillaceous in part, very calcareous, grading to calcareous claystone, soft to firm, dispersive, minor subblocky to predominantly amorphous.
809	812	100	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, predominantly medium to coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, trace very dark brown to black brown rounded lithic fragments, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
812	815	100	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, predominantly medium to coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, trace very dark brown to black brown rounded lithic fragments, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
815	818	100	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, predominantly medium to coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, common (10%) very dark brown to black brown rounded lithic fragments, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
818	821	100	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, predominantly medium to coarse grained, moderately well sorted, subrounded to subangular, weak siliceous cement, common Fe-staining, common (10%) very dark brown to black brown rounded lithic fragments, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
821	824	100	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, medium to coarse grained, occasionally very coarse, moderately well sorted, subrounded to subangular, weak to occasionally moderately strong siliceous cement, common Fe-staining, common (10%) very dark brown to black brown rounded lithic fragments, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred

Santos			Well Completion Report Volume 1 Basic
			porosity, no hydrocarbon fluorescence.
824	827	100	SANDSTONE: Medium brown, occasionally dark brown, medium to dark yellow brown, medium to coarse grained, occasionally very coarse, moderately well sorted, subrounded to subangular, weak to occasionally moderately strong siliceous cement, common Fe-staining, common (10%) very dark brown to black brown rounded lithic fragments, trace pyrite, friable in part, loose in part, moderately hard in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
827	836	100	SANDSTONE: Medium brown, red brown, pale pink, medium to occasionally coarse grained, moderately well sorted, subrounded, subangular in part, common to abundant light brown to pale red brown moderate strong calcareous matrix (10 to 30%), moderately hard to hard, poor visual porosity, no hydrocarbon fluorescence, trace mineral fluorescence.
836	839	100	SANDSTONE: Medium brown, red brown, pale pink, 1 occasionally coarse grained, moderately well sorted, subrounded, in part, common to abundant light brown to pale red brown mode calcareous matrix (10 to 30%), moderately hard to hard, 1 porosity, no hydrocarbon fluorescence, trace mineral fluorescence
839	842	100	SANDSTONE: Medium brown, red brown, pale pink, 1 occasionally coarse grained, moderately well sorted, subrounded, in part, common to abundant light brown to pale red brown mod calcareous matrix (10 to 30%), moderately hard to hard, 1 porosity, no hydrocarbon fluorescence, trace mineral fluorescence
842	845	100	SANDSTONE: Clear, translucent, pale yellow, frosted, occasional Fe-staining, predominantly medium to coarse grained, occasionally very coarse, moderately well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
845	848	100	SANDSTONE: Clear, translucent, pale yellow, frosted, occasional Fe-staining, predominantly medium to coarse grained, occasionally very coarse, moderately well sorted, rounded to subrounded, generally loose and clean, good visual porosity, no hydrocarbon fluorescence.
848	851	100	SANDSTONE: Clear, translucent, pale yellow, frosted, occasional Fe-staining, predominantly medium to coarse grained, occasionally very coarse, moderately well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
851	854	100	SANDSTONE: Clear, translucent, very pale yellow to pale yellow brown, frosted, occasional Fe-staining, predominantly coarse to very coarse grained, medium grained in part, moderately well sorted, rounded to subrounded, generally loose and clean, good l porosity, no hydrocarbon fluorescence.

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854	857	100	SANDSTONE: Clear, translucent, very pale yellow to pale yellow brown, frosted, occasional Fe-staining, predominantly coarse to very coarse grained, medium grained in part, moderately well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
857	860	100	SANDSTONE: Predominantly clear to translucent, minor very pale yellow to yellow brown, frosted, occasional Fe-staining, predominantly coarse to very coarse grained, well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
860	863	100	SANDSTONE: Predominantly clear to translucent, minor very pale yellow to yellow brown, frosted, occasional Fe-staining, predominantly coarse to very coarse grained, well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
863	866	100	SANDSTONE: Predominantly clear to translucent, minor very pale yellow to yellow brown, frosted, occasional Fe-staining, predominantly coarse to very coarse grained, well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
866	869	100	SANDSTONE: Predominantly clear to translucent, minor very pale yellow to yellow brown, frosted, occasional Fe-staining, predominantly coarse to very coarse grained, well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
869	872	100	SANDSTONE: Clear to translucent, minor very pale yellow to yellow brown, frosted, waxy in part, vitreous in part, medium to predominantly coarse, minor very coarse grained, well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
872	875	100	SANDSTONE: Clear to translucent, minor very pale yellow to yellow brown, frosted, waxy in part, vitreous in part, medium to predominantly coarse, minor very coarse grained, well sorted, rounded to subrounded, generally loose and clean, good porosity, no hydrocarbon fluorescence.
875	878	100	SANDSTONE: Clear to translucent, pale grey, occasionally very pale brown, medium to coarse grained, occasionally very coarse, moderately sorted, subrounded, subangular in part, trace disseminated pyrite, generally clean, loose, good porosity, no hydrocarbon fluorescence.
878	881	100	SANDSTONE: Clear to translucent, pale grey, occasionally very pale brown, medium to coarse grained, occasionally very coarse, moderately sorted, subrounded, subangular in part, trace disseminated pyrite, generally clean, loose, good porosity, no hydrocarbon fluorescence.

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881	884	100	SANDSTONE: Clear to translucent, pale grey, occasionally very pale brown, coarse grained to very coarse, moderately well sorted, subrounded, subangular in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
884	887	100	SANDSTONE: Clear to translucent, pale grey, occasionally very pale brown, coarse grained to very coarse, moderately well sorted, subrounded, subangular in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
887	890	100	SANDSTONE: Clear to translucent, pale grey, occasionally very pale brown, coarse grained to very coarse, moderately well sorted, subrounded, subangular in part, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
890	893	100	SANDSTONE: Clear to translucent, pale grey, occasionally very pale brown, coarse grained to very coarse, moderately well sorted, subrounded, subangular in part, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
893	896	100	SANDSTONE: Clear to translucent, pale grey, medium to coarse grained, minor very coarse, moderately well sorted, subrounded, subangular in part, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
896	899	100	SANDSTONE: Clear to translucent, pale grey, medium to coarse grained, minor very coarse, moderately well sorted, subrounded, subangular in part, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
899	902	100	SANDSTONE: Clear to translucent, pale grey, rare pale green grey, coarse to very coarse, moderately well sorted, predominantly subrounded, minor subangular, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
902	905	100	SANDSTONE: Clear to translucent, pale grey, rare pale green grey, coarse to very coarse, moderately well sorted, predominantly subrounded, minor subangular, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
905	908	90	SANDSTONE: Clear to translucent, pale grey, rare pale green grey, coarse to very coarse, moderately well sorted, predominantly subrounded, minor subangular, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.

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		10	CLAYSTONE: Medium grey, medium to light brown grey, slightly arenaceous, firm to moderate hard, partly soft and dispersive, subblocky.
908	911	90	SANDSTONE: Clear to translucent, pale grey, rare pale green grey, coarse to very coarse, moderately well sorted, predominantly subrounded, minor subangular, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to light brown grey, slightly arenaceous, firm to moderate hard, partly soft and dispersive, subblocky.
911	914	90	SANDSTONE: Clear to translucent, pale grey, rare pale green grey, coarse to very coarse, moderately well sorted, predominantly subrounded, minor subangular, rounded in part, trace very weak siliceous cement, trace pyrite, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to light brown grey, slightly arenaceous, firm to moderate hard, partly soft and dispersive, subblocky.
914	917	90	SANDSTONE: Clear to translucent, pale grey, rare pale green grey, coarse to very coarse, moderately well sorted, predominantly subrounded, minor subangular, rounded in part, trace very weak siliceous cement, trace pyrite, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to light brown grey, slightly arenaceous, firm to moderate hard, partly soft and dispersive, subblocky.
917	920	100	SANDSTONE: Clear to predominantly translucent, pale grey, fine to coarse grained, poorly sorted, subangular to predominantly subrounded, trace weak siliceous cement, trace medium grey argillaceous matrix, rarely moderate hard, generally loose, fair to good inferred porosity, no hydrocarbon fluorescence.
920	923	100	SANDSTONE: Clear to predominantly translucent, pale grey, fine to coarse grained, poorly sorted, subangular to predominantly subrounded, trace weak siliceous cement, trace medium grey argillaceous matrix, rarely moderate hard, generally loose, fair to good inferred porosity, no hydrocarbon fluorescence
923	926	70	SANDSTONE: Clear to predominantly translucent, pale yellow, medium to coarse grained, minor fine grained, moderately poorly sorted, subangular to predominantly subrounded, trace weak siliceous cement, trace pyrite, minor moderate hard, generally loose, fair inferred porosity, no hydrocarbon fluorescence
		30	CLAYSTONE: Medium to occasionally dark grey to brown

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			grey, slightly arenaceous, soft to firm, partly dispersive, amorphous.
926	929	70	SANDSTONE: Clear to predominantly translucent, pale yellow, medium to coarse grained, minor fine grained, moderately poorly sorted, subangular to predominantly subrounded, trace weak siliceous cement, trace pyrite, minor moderate hard, generally loose, fair inferred porosity, no hydrocarbon fluorescence.
		30	CLAYSTONE: Medium to occasionally dark grey to brown grey, slightly arenaceous, soft to firm, partly dispersive, amorphous.
929	932	90	SANDSTONE: Clear to predominantly translucent, medium grey, medium to coarse grained, moderately well sorted, subangular to predominantly subrounded, locally common pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, slightly arenaceous, soft to firm, partly dispersive, amorphous.
932	935	90	SANDSTONE: Clear to predominantly translucent, medium grey, medium to coarse grained, moderately well sorted, predominantly subrounded, locally common pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, slightly arenaceous, soft to firm, partly dispersive, amorphous.
935	938	90	SANDSTONE: Clear to translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded, common pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, slightly arenaceous, soft to firm, partly dispersive, amorphous.
938	941	90	SANDSTONE: Clear to translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded, common pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no hydrocarbon fluorescence. CLAYSTONE: Medium to dark grey to brown grey slightly
		10	arenaceous, soft to firm, partly dispersive, amorphous.
941	944	90	SANDSTONE: Clear to translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded, trace pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no

Santos			Well Completion Report Volume 1 Basic
			hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally hard, partly dispersive, amorphous.
944	947	90	SANDSTONE: Clear to translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded, trace pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally hard, partly dispersive, amorphous.
947	950	90	SANDSTONE: Translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally hard, partly dispersive, amorphous.
950	953	90	SANDSTONE: Translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally hard, partly dispersive, amorphous.
953	956	90	SANDSTONE: Translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally hard, partly dispersive, amorphous.
956	959	90	SANDSTONE: Translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite cement, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally hard, partly dispersive, amorphous.

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959	962	90	SANDSTONE: Translucent, pale to medium grey, minor pale yellow, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite cement, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
962	965	90	SANDSTONE: Translucent, pale to medium grey, minor pale yellow, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite cement, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
965	968	90	SANDSTONE: Translucent, pale to medium grey, minor pale yellow, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite cement, trace lithic fragments, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
968	971	90	SANDSTONE: Translucent, pale to medium grey, minor pale yellow, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite cement, trace lithic fragments, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
971	974	90	SANDSTONE: Translucent, pale to medium grey, minor pale yellow, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, subangular in part, trace pyrite cement, trace lithic fragments, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
974	977	90	SANDSTONE: Translucent, pale to medium grey, minor pale yellow, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, subangular in part, trace pyrite cement, trace lithic fragments, common loose, fair

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			inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
977	980	90	SANDSTONE: Translucent, pale to medium green grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, polished surface in part, subangular in part, trace pyrite cement, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
980	983	90	SANDSTONE: Translucent, pale to medium green grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, polished surface in part, subangular in part, trace pyrite cement, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
983	986	90	SANDSTONE: Translucent, pale to medium green grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, polished surface in part, subangular in part, trace pyrite cement, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium brown, medium to dark brown grey, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
986	989	90	SANDSTONE: Translucent, pale to medium green grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, polished surface in part, subangular in part, trace pyrite cement, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium brown, medium to dark brown grey, soft to firm, occasionally moderately hard, partly dispersive, amorphous.
989	992	80	SANDSTONE: Translucent, pale to medium grey, pale yellow in part, medium to coarse grained, very coarse in part, moderately poorly sorted, predominantly subrounded to rounded, polished surface in part, subangular in part, trace pyrite cement, trace Fe-staining, trace grey lithic fragments, common loose, fair inferred porosity, no hydrocarbon fluorescence.

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		20	CLAYSTONE: Light to medium grey, soft to firm, very finely arenaceous, calcareous, slightly dispersive, subblocky.
992	995	80	SANDSTONE: Translucent, pale to medium grey, pale yellow in part, medium to coarse grained, very coarse in part, moderately poorly sorted, predominantly subrounded to rounded, polished surface in part, subangular in part, trace pyrite cement, trace Fe-staining, trace grey lithic fragments, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		20	CLAYSTONE: Light to medium grey, soft to firm, very finely arenaceous, calcareous, slightly dispersive, subblocky.
995	998	90	SANDSTONE: Translucent, pale grey, pale yellow in part, coarse to very coarse grained, moderately sorted, predominantly subrounded to commonly rounded, trace pyrite cement, trace Fe-staining, trace grey rounded lithic fragments, common loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, soft to firm, very finely arenaceous, slightly dispersive, subblocky to amorphous.
998	1001	90	SANDSTONE: Translucent, pale grey, pale yellow in part, coarse to very coarse grained, moderately sorted, predominantly subrounded to commonly rounded, trace pyrite cement, trace Fe-staining, trace grey rounded lithic fragments, common loose, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, soft to firm, very finely arenaceous, slightly dispersive, subblocky to amorphous.
1001	1004	90	SANDSTONE: Translucent, pale grey, minor pale yellow, medium to very coarse grained, poorly sorted, predominantly subrounded to commonly rounded, common pyrite cement, trace pyrite nodules, trace grey rounded lithic fragments, commonly loose, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, soft to firm, very finely arenaceous, slightly dispersive, subblocky to amorphous.
1004	1007	90	SANDSTONE: Translucent, pale grey, minor pale yellow, medium to very coarse grained, poorly sorted, predominantly subrounded to commonly rounded, common pyrite cement, trace pyrite nodules, trace grey rounded lithic fragments, commonly loose, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, soft to firm, very finely arenaceous, slightly dispersive, subblocky to amorphous.

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1007	1010	100	SANDSTONE: Translucent, pale grey, coarse to very coarse grained, occasionally medium grained, moderately poorly sorted, subrounded to commonly rounded, common pyrite cement, trace pyrite nodules, generally loose and clean, good inferred porosity, no hydrocarbon fluorescence.
1010	1013	100	SANDSTONE: Translucent, pale grey, coarse to very coarse grained, occasionally medium grained, moderately poorly sorted, subrounded to commonly rounded, common pyrite cement, trace pyrite nodules, generally loose and clean, good inferred porosity, no hydrocarbon fluorescence.
1013	1016	90	SANDSTONE: Translucent, pale grey, coarse to very coarse grained, occasionally medium grained, minor fine grained, poorly sorted, rounded to subrounded, trace pyrite cement, trace pyrite nodules, generally loose and clean, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, soft to firm, very finely arenaceous, slightly dispersive, subblocky to amorphous.
1016	1019	90	SANDSTONE: Translucent, pale grey, coarse to very coarse grained, occasionally medium grained, minor fine grained, poorly sorted, rounded to subrounded, trace pyrite cement, trace pyrite nodules, generally loose and clean, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, soft to firm, very finely arenaceous, slightly dispersive, subblocky to amorphous.
1019	1022	80	SANDSTONE: Translucent, pale grey, medium to very coarse grained, moderately poorly sorted, rounded to subrounded, trace pyrite cement, trace pyrite nodules, generally loose and clean, poorly consolidated, good inferred porosity, no hydrocarbon fluorescence.
		20	CLAYSTONE: Medium to dark brown, soft to firm, very finely arenaceous, slightly dispersive, subblocky to amorphous.
1022	1025	80	SANDSTONE: Translucent, pale grey, medium to very coarse grained, moderately poorly sorted, rounded to subrounded, trace pyrite cement, trace pyrite nodules, generally loose and clean, poorly consolidated, good inferred porosity, no hydrocarbon fluorescence.
		20	CLAYSTONE: Medium to dark brown, soft to firm, very finely arenaceous, slightly dispersive, subblocky to amorphous.
1025	1028	90	SANDSTONE: Translucent, pale grey, medium to very coarse grained, moderately poorly sorted, rounded to subrounded, trace pyrite cement, trace pyrite nodules, generally loose and clean, good inferred porosity, no hydrocarbon fluorescence.

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		10	CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive, subblocky to amorphous.
1028	1031	90	SANDSTONE: Translucent, pale grey, medium to very coarse grained, moderately poorly sorted, rounded to subrounded, trace pyrite cement, trace pyrite nodules, generally loose and clean, good inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive, subblocky to amorphous.
1031	1034	90	SANDSTONE: Translucent, pale grey, medium to very coarse grained, moderately poorly sorted, rounded to subrounded, trace moderately strong siliceous cement, trace pyrite cement, trace light grey argillaceous matrix, moderately hard aggregates, common loose and clean, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive, subblocky to amorphous.
1034	1037	90	SANDSTONE: Translucent, pale grey, medium to very coarse grained, moderately poorly sorted, rounded to subrounded, trace moderately strong siliceous cement, trace pyrite cement, trace light grey argillaceous matrix, moderately hard aggregates, common loose and clean, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive, subblocky to amorphous.
1037	1040	90	SANDSTONE: Translucent, pale grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong siliceous cement, trace pyrite cement, trace light grey argillaceous matrix, moderately hard aggregates, common loose and clean, poor visual porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive, subblocky to amorphous.
1040	1043	90	SANDSTONE: Translucent, pale grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong siliceous cement, trace pyrite cement, trace light grey argillaceous matrix, moderately hard to hard aggregates, common loose and clean, poor visual porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive,

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			subblocky to amorphous.
1043	1046	90	SANDSTONE: Translucent, pale grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong siliceous cement, rare light grey argillaceous matrix, moderately hard to hard aggregates, loose and clean in part, poor visual porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive, subblocky to amorphous.
1046	1049	90	SANDSTONE: Translucent, pale grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong siliceous cement, rare light grey argillaceous matrix, moderately hard to hard aggregates, loose and clean in part, poor visual porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive, subblocky to amorphous.
1049	1052	100	SANDSTONE: Translucent, pale grey, minor green grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong to strong siliceous cement, rare light grey argillaceous matrix, moderately hard to hard aggregates, loose and clean in part, poor visual porosity, no hydrocarbon fluorescence.
1052	1055	100	SANDSTONE: Translucent, pale grey, minor green grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong to strong siliceous cement, minor calcareous cement, rare light grey argillaceous matrix, moderately hard to hard aggregates, loose and clean in part, poor visual porosity, no hydrocarbon fluorescence.
1055	1061	100	SANDSTONE: Translucent, pale grey, minor pale brown, predominantly medium to very coarse grained, minor fine grained, poorly sorted, subangular, minor subrounded, trace moderately strong to strong siliceous cement, minor calcareous cement, rare pyrite cement, trace medium to dark brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
1061	1064	100	SANDSTONE: Translucent, pale grey, minor pale brown, predominantly medium to very coarse grained, minor fine grained, poorly sorted, subangular, minor subrounded, trace moderately strong to strong siliceous cement, minor calcareous cement, rare pyrite cement, trace medium to dark brown silty

Santos			Well Completion Report Volume 1 Basic
			matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		Trace	CLAYSTONE: Dark brown, carbonaceous, silty, moderate hard, subblocky.
1064	1067	100	SANDSTONE: Translucent, pale grey, minor pale brown, predominantly medium to coarse grained, very coarse grained in part, moderately poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, minor calcareous cement, trace pyrite, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		Trace	CLAYSTONE: Dark brown, calcareous, carbonaceous, silty, moderate hard, subblocky
1067	1070	100	SANDSTONE: Translucent, pale grey, minor pale brown, predominantly medium to coarse grained, very coarse grained in part, moderately poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, minor calcareous cement, trace pyrite, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		Trace	CLAYSTONE: Dark brown, carbonaceous, calcareous, silty, moderate hard, subblocky
1070	1073	90	SANDSTONE: Pale brown, translucent, dominantly medium to coarse grained, very coarse grained and fine in part, poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, calcareous, silty, moderate hard, subblocky
1073	1076	90	SANDSTONE: Pale brown, translucent, dominantly medium to coarse grained, very coarse grained and fine in part, poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, calcareous, silty, moderate hard, subblocky
1076	1079	80	SANDSTONE: Pale brown, translucent, dominantly medium to coarse grained, very coarse grained and fine in part, poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, trace medium brown silty

Santos			Well Completion Report Volume 1 Basic
			matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		20	CLAYSTONE: Medium to dark brown, calcareous, silty, firm to moderate hard, subblocky
1079	1082	80	SANDSTONE: Pale brown, translucent, dominantly medium to coarse grained, very coarse grained and fine in part, poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		20	CLAYSTONE: Medium to dark brown, calcareous, silty, firm to moderate hard, subblocky
1082	1085	70	SANDSTONE: Pale brown, translucent, medium to coarse grained, very coarse grained and fine in part, poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		30	CLAYSTONE: Medium to dark brown, slightly calcareous, silty, soft to firm, minor moderately hard, dispersive, amorphous to subblocky
1085	1088	60	SANDSTONE: Pale brown, translucent, medium to coarse grained, very coarse grained and fine in part, poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		40	CLAYSTONE: Medium to dark brown, slightly calcareous, silty, soft to firm, minor moderately hard, dispersive, amorphous to subblocky
1088	1091	40	SANDSTONE: Pale brown, translucent, minor clear, fine to predominantly medium grained, coarse to very coarse grained in part, moderately poorly sorted, subrounded to subangular, trace moderately strong to strong siliceous cement, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		60	CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft to firm, minor moderately hard, dispersive, amorphous to subblocky.
1091	1094	60	CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft to firm, minor moderately hard, dispersive, amorphous to subblocky.
		40	SANDSTONE: Pale brown, translucent, minor clear, fine to

Santos			Well Completion Report Volume 1 Basic
			predominantly medium grained, coarse to very coarse grained in part, moderately poorly sorted, subrounded to subangular, trace moderately strong to strong siliceous cement, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
1094	1097	90	CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft, minor firm, dispersive, amorphous to subblocky.
		10	SANDSTONE: Pale brown, translucent, predominantly coarse grained, well sorted, subrounded, trace moderately strong to strong siliceous cement, trace silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
1097	1100	90	CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft, minor firm, dispersive, amorphous to subblocky.
		10	SANDSTONE: Pale brown, translucent, predominantly coarse grained, well sorted, subrounded, trace moderately strong to strong siliceous cement, trace silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
1100	1103	30	CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft, minor firm, dispersive, amorphous to subblocky.
		70	SANDSTONE: Pale brown, translucent, predominantly coarse grained, well sorted, subrounded, trace moderately strong to strong siliceous cement, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
1103	1106	30	CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft, minor firm, dispersive, amorphous to subblocky
		70	SANDSTONE: Pale brown, translucent, predominantly coarse grained, well sorted, subrounded, trace moderately strong to strong siliceous cement, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence.
1106	1109	80	SANDSTONE: Light grey, trace pale brown, translucent, trace green grey, predominantly medium grained, minor coarse and occasionally fine grained, moderately well sorted, subrounded, trace weak siliceous cement, trace glauconite ?, rare friable to moderately hard aggregates, loose, fair inferred porosity, no hydrocarbon fluorescence.

20 CLAYSTONE: Medium to dark brown, slightly arenaceous,

Santos			Well Completion Report Volume 1 Basic
			silty, predominantly soft, minor firm, dispersive, amorphous to subblocky.
1109	1112	80	SANDSTONE: Light grey, trace pale brown, translucent, trace green grey, predominantly medium grained, minor coarse and occasionally fine grained, moderately well sorted, subrounded, trace weak siliceous cement, trace glauconite ?, rare friable to moderately hard aggregates, loose, fair inferred porosity, no hydrocarbon fluorescence.
		20	CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft, minor firm, dispersive, amorphous to subblocky
1112	1115	90	SANDSTONE: Pale brown, clear to translucent, predominantly medium grained, minor coarse and occasionally fine grained, moderately well sorted, subrounded, trace weak siliceous cement, trace pyrite, rare friable to moderately hard aggregates, generally loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft, minor firm, dispersive, amorphous to subblocky
1115	1118	90	SANDSTONE: Pale brown, clear to translucent, predominantly medium grained, minor coarse and occasionally fine grained, moderately well sorted, subrounded, trace weak siliceous cement, trace pyrite, rare friable to moderately hard aggregates, generally loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium to dark brown, medium grey, slightly arenaceous, silty, predominantly soft, minor firm, dispersive, amorphous to subblocky.
1118	1121	90	SANDSTONE: Pale grey, clear to translucent, predominantly medium grained, minor coarse grained, moderately well sorted, subangular to minor subrounded, trace weak siliceous cement, rare friable to moderately hard aggregates, generally loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky.
1121	1124	90	SANDSTONE: Pale grey, clear to translucent, predominantly medium grained, minor coarse grained, moderately well sorted, subangular to minor subrounded, trace weak siliceous cement, rare friable to moderately hard aggregates, generally loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm,

Santos			Well Completion Report Volume 1 Basic
			occasionally very hard, dispersive, amorphous to subblocky.
1124	1127	90	SANDSTONE: Pale grey, clear to translucent, predominantly medium grained, minor coarse grained, moderately well sorted, subangular to subangular, occasionally subrounded, trace weak siliceous cement, rare friable to moderately hard aggregates, generally loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky.
1127	1130	90	SANDSTONE: Pale grey, clear to translucent, predominantly medium grained, minor coarse grained, moderately well sorted, subangular to minor angular, occasionally subrounded, trace weak to moderately hard siliceous cement, minor friable to moderately hard aggregates, generally loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky
1130	1133	90	SANDSTONE: Pale grey, clear to translucent, medium grained to coarse grained, moderately well sorted, subangular to minor angular, minor Fe-staining, occasionally subrounded, trace pyrite, moderately hard siliceous cement, minor friable to moderately hard aggregates, partly loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky.
1133	1136	90	SANDSTONE: Pale grey, clear to translucent, medium grained to coarse grained, moderately well sorted, subangular to minor angular, minor Fe-staining, occasionally subrounded, moderately hard siliceous cement, minor friable to moderately hard aggregates, trace pyrite, partly loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky
1136	1139	90	SANDSTONE: Pale grey, clear to translucent, medium grained to coarse grained, moderately well sorted, subangular to minor angular, occasionally subrounded, moderately hard siliceous cement, minor friable to moderately hard aggregates, trace pyrite, partly loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to dark brown, slightly

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			arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky.
1139	1142	90	SANDSTONE: Pale grey, clear to translucent, medium grained to coarse grained, moderately well sorted, subangular to minor angular, occasionally subrounded, moderately hard siliceous cement, minor friable to moderately hard aggregates, trace pyrite, partly loose, fair inferred porosity, no hydrocarbon fluorescence.
		10	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky.
1142	1145	60	SANDSTONE: Pale grey, clear to translucent, off white, minor medium grey, medium grained to very coarse grained, occasional very coarse polished bit-fractured quartz fragments, moderately poorly sorted, subangular to minor angular, occasionally subrounded, moderately hard siliceous cement, occasional medium grey silty matrix, minor friable to moderately hard aggregates, occasionally very hard, partly loose, poor visual porosity, no hydrocarbon fluorescence.
		40	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky.
1145	1148	60	SANDSTONE: Pale grey, clear to translucent, off white, minor medium grey, medium grained to very coarse grained, occasional very coarse polished bit-fractured quartz fragments, moderately poorly sorted, subangular to minor angular, occasionally subrounded, moderately hard siliceous cement, occasional medium grey silty matrix, minor friable to moderately hard aggregates, occasionally very hard, partly loose, poor visual porosity, no hydrocarbon fluorescence.
		40	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky.
1148	1151	80	SANDSTONE: Pale grey, clear to translucent, off white, minor medium grey, medium grained to very coarse grained, occasional very coarse polished bit-fractured quartz fragments, moderately poorly sorted, subangular to minor angular, occasionally subrounded, moderately hard siliceous cement, occasional medium grey silty matrix, minor friable to moderately hard aggregates, occasionally very hard, partly loose, poor visual porosity, no hydrocarbon fluorescence.
		20	CLAYSTONE: Medium grey, medium to dark brown, slightly arenaceous, siliceous in part, minor silty, soft to firm, occasionally very hard, dispersive, amorphous to subblocky

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1151	1154	80	SANDSTONE: Pale grey, clear to translucent, off white, medium grey, medium grained to very coarse grained, occasional very coarse polished bit-fractured quartz fragments, moderately poorly sorted, subangular to minor angular, occasionally subrounded, moderately hard siliceous cement, occasional medium grey silty matrix, com disseminated pyrite, moderate hard to hard aggregates, occasionally very hard, partly loose, poor visual porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Medium grey, medium to dark brown, arenaceous, grades to sandstone, siliceous in part, soft to firm, occasionally very hard, minor dispersive, amorphous to subblocky
1154	1157	60	SANDSTONE: Pale to medium grey, clear to translucent, off white, fine to medium grained, partly coarse grained, occasional very coarse polished bit-fractured quartz fragments, poorly sorted, subangular to minor angular, occasionally subrounded, common moderate strong siliceous and slightly calcareous cement, locally common white argillaceous matrix, occasional medium grey silty matrix, common disseminated pyrite, rare glauconite(?), moderate hard to hard aggregates, occasionally very hard, no hydrocarbon fluorescence.
		40	SILTSTONE: Medium grey, medium to dark brown, arenaceous, grades to sandstone, carbonaceous in part, rare white argillaceous laminations, common disseminated pyrite, moderately hard occasionally very hard, subblocky.
1157	1160	60	SANDSTONE: Pale to medium grey, clear to translucent, off white, fine to medium grained, partly coarse grained, occasional very coarse polished bit-fractured quartz fragments, poorly sorted, subangular to minor angular, occasionally subrounded, common moderate strong siliceous and slightly calcareous cement, locally common white argillaceous matrix, occasional medium grey silty matrix, common disseminated pyrite, rare glauconite ?, moderate hard to hard aggregates, occasionally very hard, no hydrocarbon fluorescence.
		40	SILTSTONE: Medium grey, medium to dark brown, arenaceous, grades to sandstone, carbonaceous in part, rare white argillaceous laminations, common disseminated pyrite, moderately hard occasionally very hard, subblocky.
1160	1163	70	SANDSTONE: Pale to medium grey, clear to translucent, off white, medium to coarse grained, occasional very coarse subrounded polished bit-fractured quartz fragments, moderately poorly sorted, subangular to minor angular, common moderate strong calcareous and dolomitic cement, minor white argillaceous matrix, occasional medium grey silty matrix, common disseminated pyrite, hard to occasionally very hard aggregates, party loose, no hydrocarbon fluorescence.

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		30	SILTSTONE: Light to medium grey, medium brown, arenaceous, grades to sandstone in part, trace carbonaceous specks, minor disseminated pyrite, moderately hard, subblocky.
1163	1166	70	SANDSTONE: Pale to medium grey, clear to translucent, off white, medium to coarse grained, occasional very coarse subrounded polished bit-fractured quartz fragments, moderately poorly sorted, subangular to minor angular, common moderate strong calcareous and dolomitic cement, minor white argillaceous matrix, occasional medium grey silty matrix, common disseminated pyrite, hard to occasionally very hard aggregates, loose in part, no hydrocarbon fluorescence.
		30	SILTSTONE: Light to medium grey, medium brown, arenaceous, grades to sandstone in part, trace carbonaceous specks, minor disseminated pyrite, moderately hard, subblocky.
1166	1169	60	SANDSTONE: Pale grey, clear to translucent, off white, medium to very coarse grained, poorly sorted, subangular to subrounded, common moderately strong calcareous and dolomitic cement, minor white argillaceous matrix, occasional medium grey silty matrix, common disseminated pyrite, hard to occasionally very hard aggregates, loose in part, no hydrocarbon fluorescence.
		40	SILTSTONE: Light to medium grey, medium brown, arenaceous, grades to sandstone in part, trace carbonaceous specks, minor disseminated pyrite, moderately hard, subblocky.
1169	1172	60	SANDSTONE: Pale grey, clear to translucent, off white, medium to very coarse grained, poorly sorted, subangular to subrounded, common moderately strong calcareous and dolomitic cement, minor white argillaceous matrix, occasional medium grey silty matrix, common disseminated pyrite, hard to occasionally very hard aggregates, loose in part, no hydrocarbon fluorescence.
		40	SILTSTONE: Light to medium grey, medium brown, arenaceous, grades to sandstone in part, trace carbonaceous specks, minor disseminated pyrite, moderately hard, subblocky.
1172	1175	60	SANDSTONE: Pale grey, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular to subrounded, rounded in part, common strong calcareous and dolomitic cement, minor to locally common white argillaceous matrix, common disseminated and nodular pyrite, hard to occasionally very hard aggregates, minor loose, no hydrocarbon fluorescence.
		40	SILTSTONE: Light to medium grey, medium brown, arenaceous, grades to sandstone in part, calcareous in part, trace carbonaceous specks, minor disseminated pyrite, moderately hard, subblocky.

Trace DOLOMITE: Dark brown, hard, subblocky.
1175	1178	60	SANDSTONE: Pale grey, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular to subrounded, rounded in part, common strong calcareous and dolomitic cement, minor to locally common white argillaceous
			matrix, common disseminated and nodular pyrite, hard to occasionally very hard aggregates, minor loose, no hydrocarbon fluorescence.

- 40 SILTSTONE: Light to medium grey, medium brown, arenaceous, grades to sandstone in part, calcareous in part, trace carbonaceous specks, minor disseminated pyrite, moderately hard, subblocky.
- Trace DOLOMITE: Dark brown, hard, subblocky.
- 1178 1184 60 SANDSTONE: Pale grey, grey, green grey in part, clear to translucent, medium grained, coarse and fine grained in part, moderately sorted, subangular to angular, common glauconite, common strong calcareous and dolomitic cement, minor to locally common white argillaceous matrix, common nodular pyrite, hard to occasionally very hard aggregates, minor loose, no hydrocarbon fluorescence.
 - 40 SILTSTONE: Light to medium brown to brown grey, arenaceous, grades to sandstone in part, calcareous in part, minor disseminated pyrite, firm to moderately hard, subblocky.
- 1184 1190 50 SANDSTONE: Pale grey, grey, clear to translucent, medium grained, coarse and fine grained in part, moderately sorted, subangular to angular, common strong calcareous and dolomitic cement, minor to locally common white argillaceous matrix, common nodular pyrite, hard to occasionally very hard aggregates, minor loose, no hydrocarbon fluorescence.
 - 50 SILTSTONE: Light to medium brown to brown grey, arenaceous, grades to sandstone in part, calcareous in part, minor disseminated pyrite, firm to moderately hard, subblocky
- 1190 1196 90 SANDSTONE: Pale grey, grey, clear to translucent, medium to coarse grained, moderately sorted, subangular, common strong calcareous and dolomitic cement, minor to locally common white argillaceous matrix, common nodular pyrite, hard to occasionally very hard aggregates, minor loose, no hydrocarbon fluorescence.
 - 10 SILTSTONE: Light to medium brown to brown grey, arenaceous, grades to sandstone in part, calcareous in part, minor disseminated pyrite, firm to moderately hard, subblocky.
- 1196 1202 80 SANDSTONE: Pale grey, grey, clear to translucent, predominantly medium, minor coarse grained, moderately well sorted, subrounded, subangular in part, weak siliceous cement, trace lithic fragments, friable to occasionally moderately hard

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			aggregates, loose, no hydrocarbon fluorescence.
		20	SILTSTONE: Light to medium brown to brown grey, arenaceous, slightly calcareous, minor disseminated pyrite, firm to moderately hard, subblocky.
1202	1208	70	SANDSTONE: Pale grey, grey, clear to translucent, predominantly medium, minor coarse grained, moderately well sorted, subrounded, subangular in part, weak siliceous cement, trace lithic fragments, friable to occasionally moderately hard aggregates, loose, no hydrocarbon fluorescence.
		30	SILTSTONE: Light to medium brown to brown grey, arenaceous, slightly calcareous, minor disseminated pyrite, firm to moderately hard, subblocky.
1208	1214	80	SANDSTONE: Pale grey, grey, clear to translucent, pale green grey, predominantly medium to coarse grained, moderately well sorted, subangular, moderately strong siliceous cement, trace glauconite, locally common white argillaceous matrix, trace lithic fragments, moderately hard to hard aggregates, no hydrocarbon fluorescence.
		20	SILTSTONE: Light to medium brown to brown grey, arenaceous, slightly calcareous, minor disseminated pyrite, firm to moderately hard, subblocky.
1214	1220	90	SANDSTONE: Pale grey, grey, clear to translucent, rare pale green grey, predominantly medium to coarse grained, moderately well sorted, subangular to subangular, moderately strong siliceous cement, trace dolomitic cement, trace glauconite, trace pyrite, locally common white argillaceous matrix, trace lithic fragments, moderately hard to hard aggregates, no hydrocarbon fluorescence.
		10	arenaceous, slightly calcareous, minor disseminated pyrite, firm to moderately hard, subblocky.
1220	1226	50	SANDSTONE: Pale grey, grey, clear to translucent, rare pale green grey, predominantly medium to coarse grained, fine to medium in part, poorly sorted, subangular to subangular, moderately strong siliceous cement, trace calcareous cement, locally common white argillaceous matrix, trace glauconite, trace pyrite, trace lithic fragments, moderately hard to hard aggregates, no hydrocarbon fluorescence.
		50	SILTSTONE: Light brown to brown grey, arenaceous, slightly calcareous, trace carbonaceous specks, minor disseminated pyrite, firm to moderately hard, subblocky.
1226	1232	80	SANDSTONE: Pale grey, grey, clear to translucent, pale to medium green, green grey, predominantly fine to very coarse grained, fine to medium in part, poorly sorted, subangular to subangular, moderately strong siliceous cement, trace

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			calcareous cement, locally common white argillaceous matrix, common glauconite, trace pyrite, trace lithic fragments, moderately hard to hard aggregates, no hydrocarbon fluorescence.
		20	SILTSTONE: Light brown to brown grey, arenaceous, slightly calcareous, trace carbonaceous specks, minor disseminated pyrite, firm to moderately hard, subblocky.
1232	1238	80	SANDSTONE: Pale grey, grey, clear to translucent, pale to medium green, green grey, predominantly fine to very coarse grained, fine to medium in part, poorly sorted, subangular to subangular, moderately strong siliceous cement, trace calcareous cement, locally common white argillaceous matrix, common glauconite, trace pyrite, trace lithic fragments, moderately hard to hard aggregates, no hydrocarbon fluorescence.
		20	SILTSTONE: Light brown to brown grey, arenaceous, slightly calcareous, trace carbonaceous specks, minor disseminated pyrite, firm to moderately hard, subblocky.
1238	1244	80	SANDSTONE: Pale grey, clear to translucent, predominantly medium to coarse, moderately poorly sorted, subangular, weak to moderately strong siliceous cement, trace lithic fragments, friable to moderately hard aggregates, no hydrocarbon fluorescence.
		20	SILTSTONE: Light brown to brown grey, arenaceous, slightly calcareous, trace carbonaceous specks, minor disseminated pyrite, firm to moderately hard, subblocky.
1244	1250	70	SANDSTONE: Pale grey, minor green grey, clear to translucent, fine to predominantly medium, moderately well sorted, subrounded to subangular, weak to moderately strong siliceous cement, trace lithic fragments, common pyrite, friable to moderately hard aggregates, no hydrocarbon fluorescence.
		30	SILTSTONE: Light brown to brown grey, light grey, arenaceous, slightly calcareous, trace lithic fragments, minor disseminated pyrite, firm to moderately hard, subblocky.
1250	1256	80	SANDSTONE: Pale grey, minor green grey, clear to translucent, fine to predominantly medium, moderately well sorted, subrounded to subangular, weak to moderately strong siliceous cement, trace lithic fragments, common pyrite, friable to moderately hard aggregates, no hydrocarbon fluorescence.
		20	SILTSTONE: Light brown to brown grey, light grey, arenaceous, slightly calcareous, trace lithic fragments, minor disseminated pyrite, firm to moderately hard, subblocky.
1256	1262	30	SANDSTONE: Pale grey, minor green grey, clear to

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			translucent, fine to predominantly medium, moderately well sorted, subrounded to subangular, weak to moderately strong siliceous cement, trace lithic fragments, common pyrite, friable to moderately hard aggregates, no hydrocarbon fluorescence.
		70	SILTSTONE: Light brown to brown grey, light grey, arenaceous, slightly calcareous, trace lithic fragments, common nodular and disseminated pyrite, firm to moderately hard, subblocky
1262	1268	20	SANDSTONE: Pale grey, minor green grey, clear to translucent, fine to predominantly medium, moderately well sorted, subrounded to subangular, weak to moderately strong siliceous cement, trace lithic fragments, common pyrite, friable to moderately hard aggregates, no hydrocarbon fluorescence.
		80	SILTSTONE: Medium to dark brown to brown grey, minor light grey, arenaceous, slightly calcareous, trace lithic fragments, common pyrite, soft to firm, amorphous to subblocky
1268	1274	10	SANDSTONE: Pale grey, minor green grey, clear to translucent, fine to predominantly medium, moderately well sorted, subrounded to subangular, weak to moderately strong siliceous cement, trace lithic fragments, common pyrite, friable to moderately hard aggregates, no hydrocarbon fluorescence.
		90	SILTSTONE: Medium to dark brown to brown grey, minor light grey, arenaceous, slightly calcareous, trace lithic fragments, common pyrite, soft to firm, amorphous to subblocky.
1274	1280	10	SANDSTONE: Pale grey, minor green grey, clear to translucent, fine to predominantly medium, moderately well sorted, subrounded to subangular, weak to moderately strong siliceous cement, trace lithic fragments, common pyrite, friable to moderately hard aggregates, no hydrocarbon fluorescence.
		90	SILTSTONE: Medium to dark brown to brown grey, minor light grey, arenaceous, slightly calcareous, trace lithic fragments, common pyrite, soft to firm, amorphous to subblocky.
1280	1286	100	SILTSTONE: Medium to dark brown to brown grey, minor light grey, arenaceous, slightly calcareous, trace lithic fragments, common pyrite, soft to firm, amorphous to subblocky.
1286	1292	100	SILTSTONE: Medium to dark brown to brown grey, minor light grey, arenaceous, slightly calcareous, trace lithic fragments, common pyrite, soft to firm, amorphous to subblocky.
1292	1298	100	SILTSTONE: Medium to dark brown to brown grey, minor

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			light grey, arenaceous, slightly calcareous, trace lithic fragments, common pyrite, soft to firm, amorphous to subblocky.
1298	1304	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1304	1310	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1310	1313	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1313	1316	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1316	1319	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1319	1322	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1322	1325	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1325	1328	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1328	1331	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1331	1334	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky.
1334	1337	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, rare fossil fragments, soft to firm, amorphous to subblocky.
1337	1340	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1340	1343	100	SILTSTONE: Medium to dark brown to brown grey,

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			arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1343	1346	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1346	1349	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1349	1352	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1352	1355	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1355	1358	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1358	1361	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1361	1364	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common
1364	1367	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1367	1370	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1370	1373	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1373	1376	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1376	1379	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1379	1382	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.

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1382	1385	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1385	1391	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1391	1394	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1394	1397	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1397	1400	100	SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky.
1400	1406	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace lithic fragments, trace pyrite, common glauconite, soft to firm, amorphous to subblocky.
1406	1412	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace lithic fragments, trace pyrite, common glauconite, soft to firm, amorphous to subblocky.
1412	1418	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace lithic fragments, trace pyrite, common glauconite, soft to firm, amorphous to subblocky.
1418	1424	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace lithic fragments, trace pyrite, common glauconite, soft to firm, amorphous to subblocky.
1424	1430	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace loose coarse subrounded quartz grains, trace to common glauconite, calcareous, soft to firm, amorphous to subblocky.
1430	1436	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace loose coarse subrounded quartz grains, trace to common glauconite, calcareous, soft to firm, amorphous to subblocky.
1436	1442	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace loose coarse subrounded quartz grains, trace pyrite, trace to common glauconite, calcareous, soft to firm, amorphous to subblocky.
1442	1448	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace loose coarse subrounded quartz

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			grains, trace pyrite, trace to common glauconite, calcareous, soft to firm, amorphous to subblocky.
1448	1454	100	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace loose coarse subrounded quartz grains, trace pyrite, trace to common glauconite, calcareous, soft to firm, amorphous to subblocky.
1454	1460	50	SANDSTONE: Clear to translucent, locally pale to medium green, fine to medium, occasionally coarse, moderate well sorted, subangular to subrounded, trace Fe-staining, weak siliceous cement, trace white argillaceous matrix, common glauconite, friable, loose in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace loose coarse subrounded quartz grains, trace pyrite, trace to common glauconite, calcareous, soft to firm, amorphous to subblocky (** Sample may be contaminated due to cleaning of header box).
1460	1466	90	SILTSTONE: Medium to dark brown to grey brown, minor green grey, arenaceous, trace loose subrounded quartz grains, trace pyrite, trace to common glauconite, calcareous, soft to firm, amorphous to subblocky.
		10	SANDSTONE: Clear to translucent, locally pale to medium green, fine to medium, occasionally coarse, moderate well sorted, subangular to subrounded, trace Fe-staining, weak siliceous cement, trace white argillaceous matrix, common glauconite, friable, loose in part, poor to fair inferred porosity, no hydrocarbon fluorescence.
1466	1472	100	SILTSTONE: Medium to dark brown to grey brown, arenaceous, trace loose quartz grains, trace fossil fragments, trace glauconite, calcareous, soft to firm, amorphous to subblocky.
1472	1478	100	SILTSTONE: Medium to dark brown to grey brown, arenaceous, trace loose quartz grains, trace fossil fragments, trace glauconite, calcareous, soft to firm, amorphous to subblocky.
1478	1484	100	SILTSTONE: Medium to dark brown to grey brown, arenaceous, trace loose quartz grains, trace fossil fragments, trace glauconite, calcareous, soft to firm, amorphous to subblocky.
1484	1490	100	SILTSTONE: Medium to dark brown to grey brown, arenaceous, trace loose quartz grains, trace fossil fragments, trace (increasing) glauconite, calcareous, soft to firm, amorphous to subblocky.
1490	1496	100	SILTSTONE: Medium to dark brown to grey brown,

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			arenaceous, trace loose quartz grains, trace fossil fragments, common glauconite, trace calcite, soft to firm, amorphous to subblocky.
1496	1502	40	SANDSTONE: Light to medium brown, mottled green brown, light brown, fine to medium grained, occasionally coarse, moderate poorly sorted, subangular, common weak to moderate strong calcareous cement, common glauconite, moderate hard to friable, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Medium to dark brown to grey brown, arenaceous, trace loose quartz grains, trace fossil fragments, common glauconite, trace calcite, soft to firm, amorphous to subblocky.
1502	1508	10	SANDSTONE: Light to medium brown, mottled green brown, light brown, fine to medium grained, occasionally coarse, moderate poorly sorted, subangular, common weak to moderate strong calcareous cement, common glauconite, moderate hard to friable, poor visual porosity, no hydrocarbon fluorescence.
		90	SILTSTONE: Medium to dark brown to grey brown, arenaceous, trace loose quartz grains, trace fossil fragments, common glauconite, trace calcite, soft to firm, amorphous to subblocky.
1508	1514	100	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, trace fossil fragments, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1514	1517	100	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, trace fossil fragments, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1517	1520	10	SANDSTONE: Clear to translucent, light green, light grey, green, fine to medium, moderately sorted, subangular, weak calcareous cement, common glauconite, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		90	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, trace fossil fragments, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1520	1523	10	SANDSTONE: Clear to translucent, light green, light grey, green, fine to medium, moderately sorted, subangular, moderately strong siliceous cement in part, weak calcareous cement, common glauconite, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.

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		90	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1523	1526	70	SANDSTONE: Clear to translucent, light green, light grey, green, fine to medium, moderately sorted, subangular, moderately strong siliceous cement in part, weak calcareous cement, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1526	1529	90	SANDSTONE: Clear to translucent, light green, light grey, green, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1529	1532	50	SANDSTONE: Clear to translucent, light green, light grey, light brown to brown grey, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1535	1535	50	SANDSTONE: Clear to translucent, light green, light grey, light brown to brown grey, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Medium to dark brown, medium to dark grey

brown, slightly arenaceous, trace loose quartz grains, common

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			dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1532	1538	10	SANDSTONE: Clear to translucent, light green, light grey, light brown to brown grey, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		90	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1538	1544	10	SANDSTONE: Clear to translucent, light green, light grey, light brown to brown grey, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		90	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1544	1550	20	SANDSTONE: Clear to translucent, light green, light grey, light brown to brown grey, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		80	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1550	1556	30	SANDSTONE: Clear to translucent, light green, light grey, light brown to brown grey, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, moderately strong calcareous cement, moderately strong siliceous cement in part, trace glauconite, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		70	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to

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			subblocky.
1556	1562	20	SANDSTONE: Clear to translucent, light grey, light brown grey, fine to medium, moderately sorted, subangular to subrounded in part, moderately strong calcareous cement, moderately strong siliceous cement in part, trace glauconite, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
		80	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
1562	1568	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, soft to firm, dispersive, amorphous to subblocky.
1568	1574	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, soft to firm, dispersive, amorphous to subblocky.
1574	1580	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, soft to firm, dispersive, amorphous to subblocky.
1580	1586	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, soft to firm, dispersive, amorphous to subblocky.
1586	1592	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, soft to firm, dispersive, amorphous to subblocky.
1592	1598	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, soft to firm, dispersive, amorphous to subblocky.
1598	1604	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, minor soft and dispersive, amorphous to subblocky.
1604	1610	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, minor soft and dispersive, subblocky.
1610	1616	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, subblocky.
1616	1622	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately

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			hard, occasionally hard, subblocky.
1622	1628	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, occasionally hard, subblocky.
1628	1634	10	SANDSTONE: Clear to translucent, pale grey, fine to medium, occasionally coarse, moderately well sorted, weak siliceous cement, locally common argillaceous matrix, trace glauconite, moderate hard to friable, poor visual porosity, no hydrocarbon fluorescence.
		90	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, occasionally hard, subblocky.
1634	1640	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, occasionally hard, subblocky.
1640	1646	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, occasionally hard, subblocky.
1646	1652	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, occasionally hard, subblocky.
1652	1658	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, occasionally hard, subblocky.
1658	1664	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, firm to moderately hard, occasionally hard, subblocky.
1664	1670	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, firm to moderately hard, occasionally hard, subblocky.
1670	1676	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, firm to moderately hard, occasionally hard, subblocky.
1676	1682	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, firm to moderately hard, occasionally hard, subblocky.
1682	1688	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
1688	1694	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.

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1694	1700	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
1700	1706	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
1706	1712	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
1712	1718	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, trace loose quartz, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
1718	1724	100	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, trace loose quartz, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
1724	1730	100	SILTSTONE: Dark to medium brown to grey brown, minor glauconite, trace calcite, trace loose quartz, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
1730	1736	100	SILTSTONE: Medium to dark brown to grey brown, minor glauconite, trace calcite, trace loose quartz, calcareous, trace pyrite, moderately hard to hard, blocky to subblocky.
1736	1742	100	SILTSTONE: Medium to dark brown to grey brown, minor glauconite, trace calcite, trace loose quartz, calcareous, trace pyrite, moderately hard to hard, blocky to subblocky.
1742	1748	60	SANDSTONE: Light grey, light brown grey, clear to translucent quartz sand, fine to medium, moderately well sorted, subangular to subrounded, weak siliceous and calcareous cement, trace glauconite, common to abundant argillaceous matrix, (common rock flour), silty, friable to moderately hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, occasionally moderately hard, blocky to subblocky.
1748	1751	70	SANDSTONE: Light grey, light brown grey, clear to translucent quartz sand, fine to medium, moderately well sorted, subangular to subrounded, weak siliceous and calcareous cement, trace glauconite, common to abundant argillaceous matrix, (common rock flour), silty, friable to moderately hard, poor visual porosity, no hydrocarbon fluorescence.

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		30	SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, occasionally moderately hard, blocky to subblocky.
1751	1754	70	SANDSTONE: Light grey, light brown grey, clear to translucent, fine to medium, occasional coarse loose grains, moderately sorted, subangular to subrounded, moderately strong siliceous cement, trace calcareous cement, com white to light grey argillaceous matrix, silty, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, occasionally moderately hard, blocky to subblocky.
1754	1757	60	SANDSTONE: Light grey, light brown grey, clear to translucent, fine to medium, occasional coarse loose grains, moderately sorted, subangular to subrounded, moderately strong siliceous cement, trace calcareous cement, com white to light grey argillaceous matrix, silty, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, occasionally moderately hard, blocky to subblocky.
1757	1760	90	SANDSTONE: Light brown grey, light grey, fine to medium grained, minor coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to occasionally moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, occasionally moderately hard, blocky to subblocky.
1760	1763	70	SANDSTONE: Light brown grey, light grey, fine to medium grained, minor coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to occasionally moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, trace carbonaceous specks, occasionally moderately hard, blocky to subblocky.
1763	1766	60	SANDSTONE: Light brown grey, light grey, fine to medium grained, minor coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to occasionally moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.

		40	SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, trace carbonaceous specks, occasionally moderately hard, blocky to subblocky.
1766	1769	40	SANDSTONE: Light brown grey, light grey, fine to medium grained, minor coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to occasionally moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, trace carbonaceous specks, occasionally moderately hard, blocky to subblocky.
1769	1772	80	SANDSTONE: Light brown grey, light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Light to medium grey brown, minor green brown, trace to common glauconite, soft to firm, trace carbonaceous specks, occasionally moderately hard, blocky to subblocky.
1772	1775	80	SANDSTONE: Light brown grey, light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, becoming cleaner, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Light to medium grey brown, minor green brown, trace to common glauconite, trace carbonaceous specks, soft to firm, occasionally moderately hard, blocky to subblocky.
1775	1778	90	SANDSTONE: Light brown grey, light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, trace white to light grey argillaceous matrix, becoming cleaner, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey brown, minor green brown, trace to common glauconite, soft to firm, trace carbonaceous specks, occasionally moderately hard, blocky to subblocky.

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1778	1781	90	SANDSTONE: Light brown grey, light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, trace to locally common white to light grey argillaceous matrix, becoming cleaner, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey brown, minor green brown, trace to common glauconite, trace carbonaceous specks, soft to firm, occasionally moderately hard, blocky to subblocky.
1781	1784	70	SANDSTONE: Light brown grey, light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, trace to locally common white to light grey argillaceous matrix, becoming cleaner, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light to medium grey brown, minor green brown, trace to common glauconite, trace carbonaceous specks, soft to firm, occasionally moderately hard, blocky to subblocky.
1784	1787	90	SANDSTONE: Light brown grey, light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, trace to locally common white to light grey argillaceous matrix, becoming cleaner, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey brown, minor green brown, trace to common glauconite, trace carbonaceous specks, soft to firm, occasionally moderately hard, blocky to subblocky.
1787	1790	70	SANDSTONE: Light brown grey, light grey, medium to very coarse grained, poorly sorted, subangular, weak siliceous cement, common white to light grey argillaceous matrix, trace lithic fragments, rare pyrite, friable to predominantly moderately hard, loose in part, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light to medium grey brown, minor green brown, trace to common glauconite, calcareous, trace carbonaceous specks, soft to firm, occasionally moderately hard, blocky to subblocky.
1790	1793	60	SANDSTONE: Light grey, medium to very coarse grained, poorly sorted, subangular to angular, weak siliceous cement, common white to light grey calcareous and argillaceous matrix, trace Fe-staining, trace lithic fragments, predominantly

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			moderately hard, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Medium to dark grey, minor grey brown, rare disseminated pyrite, moderate hard to hard, calcareous, trace carbonaceous specks, blocky to subblocky.
1793	1797	60	SANDSTONE: Light grey, fine to coarse, predominantly medium grained, moderate poorly sorted, subangular to subrounded, weak siliceous cement, common white to light grey calcareous and argillaceous matrix, trace Fe-staining, trace lithic fragments, trace glauconite, predominantly moderately hard, loose in part, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Medium to dark grey, minor grey brown, rare disseminated pyrite, moderate hard to hard, calcareous, trace carbonaceous specks, blocky to subblocky.
1797	1799	60	SILTSTONE: Medium to dark grey, minor grey brown, rare disseminated pyrite, moderate hard to hard, slightly arenaceous, trace carbonaceous specks, blocky to subblocky.
		40	SANDSTONE: Pale grey, white to off-white, very pale green grey, very fine to very coarse grained, poorly sorted, subangular, moderately strong calcareous cement, locally common white argillaceous matrix, minor quartzose appearance, trace lithic fragments, trace carbonaceous occasionally grades to coal, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
1799	1802	60	SANDSTONE: Pale grey, white to off-white, very pale green grey, minor Fe-staining, rare pale yellow, predominantly very fine, grading to arenaceous siltstone, medium to coarse grained in part, moderately well sorted, subangular to subrounded, moderately strong calcareous cement, locally common white argillaceous matrix, well cemented, generally quartzose appearance, trace lithic fragments, trace carbonaceous, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Medium to dark grey, minor grey brown, rare disseminated pyrite, moderate hard to hard, slightly arenaceous, trace carbonaceous specks, blocky to subblocky.
1802	1805	80	SANDSTONE: Pale grey, white to off-white, very pale green grey, minor Fe-staining, rare pale yellow, clear to translucent in part, predominantly very fine, grading to arenaceous siltstone, medium grained in part, moderately well sorted, subangular to subrounded, moderately strong calcareous cement, locally common white argillaceous matrix, well cemented, common quartzose appearance in fine grained aggregates, trace green (glauconite?) and black lithic fragments, trace carbonaceous, trace pyrite (pyritised fossils?), hard to very hard, poor visual porosity, no hydrocarbon fluorescence.

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		20	SILTSTONE: Medium to dark brown grey, minor disseminated and occasionally nodular pyrite, moderate hard to hard, subblocky.
1805	1808	80	SANDSTONE: Pale grey, white to off-white, very pale green grey, occasionally red to pink red, minor Fe-staining, rare pale yellow, clear to translucent in part, predominantly very fine, grading to arenaceous siltstone, medium to very coarse grained in part, moderately sorted, subangular to subrounded, occasionally angular coarse bit fractured quartz, moderately strong calcareous cement, locally common white argillaceous matrix, well cemented, common quartzose appearance in fine grained aggregates, trace green and black lithic fragments, trace carbonaceous, trace pyrite, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Medium to dark brown grey, minor disseminated and occasionally nodular pyrite, moderate hard to hard, subblocky.
1808	1811	80	SANDSTONE: Pale grey, white to off-white, very pale green grey, occasionally red to pink red, minor Fe-staining, rare pale yellow, clear to translucent in part, predominantly very fine, grading to arenaceous siltstone, medium to very coarse grained in part, moderately sorted, subangular to subrounded, occasionally angular coarse bit fractured quartz, moderately strong calcareous cement, locally common white argillaceous matrix, well cemented, common quartzose appearance in fine grained aggregates, trace green and black lithic fragments, trace carbonaceous, trace pyrite, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Medium to dark brown grey, minor disseminated and occasional nodular pyrite, moderate hard to hard, subblocky.
1811	1814	80	SANDSTONE: Pale grey, white to off-white, very pale green grey, common pale pink to pink red, minor Fe-staining, rare pale yellow, clear to translucent in part, commonly very fine, grading to arenaceous siltstone, medium to very coarse grained in part, moderately poorly sorted, subangular to subrounded, occasionally angular coarse bit fractured quartz, moderately strong calcareous cement, locally common white argillaceous matrix, well cemented, common quartzose appearance in fine grained aggregates, trace black lithic fragments, trace carbonaceous, trace pyrite, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Medium to dark brown grey, minor disseminated and occasional nodular pyrite, moderate hard to hard, subblocky.

occasionally pale pink, minor Fe-staining, rare pale yellow brown, clear to translucent in part, very fine grained in part, grading to arenaceous siltstone, medium to very coarse grained in part, moderately poorly sorted, subangular to subrounded, occasionally angular coarse bit fractured quartz, moderately strong calcareous cement, locally common white argillaceous matrix, well cemented, common quartzose appearance in fine grained aggregates, trace black lithic fragments, trace carbonaceous, trace pyrite, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.

- 30 SILTSTONE: Medium to dark brown grey, minor disseminated and occasional nodular pyrite, moderate hard to hard, subblocky.
- 1817 1820 80 SANDSTONE: Pale grey, white to off-white, pale green grey, occasionally pale pink, minor Fe-staining, rare pale yellow brown, clear to translucent in part, very fine grained in part, grading to arenaceous siltstone, medium to very coarse grained in part, moderately poorly sorted, subangular to subrounded, occasionally angular coarse bit fractured quartz, moderately strong calcareous cement, locally common white argillaceous matrix, well cemented, common quartzose appearance in fine grained aggregates, trace black, green lithic fragments, trace carbonaceous, trace pyrite, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
 - 20 SILTSTONE: Medium to dark brown grey, light grey in part, argillaceous, trace pyrite, trace carbonaceous specks and occasional micro-lamination, moderate hard to hard, subblocky.
- 1820 1823 90 SANDSTONE: Pale grey, white to off-white, pale green grey, occasionally pale pink, minor Fe-staining, rare pale yellow brown, clear to translucent in part, very fine grained in part, grading to arenaceous siltstone, medium to very coarse grained in part, moderately poorly sorted, subangular to subrounded, occasionally angular coarse bit fractured quartz, moderately strong calcareous cement, locally common white argillaceous matrix, well cemented, common quartzose appearance in fine grained aggregates, trace lithic fragments, trace carbonaceous, trace glauconite, trace pyrite, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
 - 10 SILTSTONE: Medium to dark brown grey, light grey in part, argillaceous, trace pyrite, trace carbonaceous specks and occasional micro-lamination, moderate hard to hard, subblocky.
- 1823 1826 90 SANDSTONE: Pale grey, off-white, pale green grey, rare pink, clear to translucent in part, fine grained in part, medium grained in part, moderately sorted, subangular to subrounded, moderately strong calcareous cement, locally common white argillaceous matrix, quartzose appearance in fine grained aggregates, trace lithic fragments, trace carbonaceous, trace pyrite cemented glauconite aggregates, trace pyrite, hard to

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			very hard, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Medium to dark brown grey, light grey in part, argillaceous, trace pyrite, trace carbonaceous specks and occasional micro-lamination, moderate hard to hard, subblocky.
1826	1829	80	SANDSTONE: Light grey, light green grey, medium to very coarse grained, moderately sorted, occasionally loose coarse bit fractured clear quartz, subangular, common moderately strong calcareous cement, common white argillaceous matrix, trace multi-coloured lithic fragments, grades to lithic sandstone, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Light to medium grey, occasionally dark grey, arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile.
1829	1832	80	SANDSTONE: Light grey, light green grey, rare yellow, trace Fe-staining, fine to medium grained, moderately sorted, subangular, common moderately strong calcareous cement, common white argillaceous matrix, trace multi-coloured lithic fragments, grades to lithic sandstone, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Light to medium grey, occasionally dark grey, arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile.
1832	1835	80	SANDSTONE: Light grey, light green grey, trace pink, medium to coarse grained, moderately sorted, subangular, common moderately strong calcareous cement, common white argillaceous matrix, trace multi-coloured lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		20	SILTSTONE: Light to medium grey, occasionally dark grey, arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile.
1835	1838	70	SANDSTONE: Light grey, light green grey, trace pink, medium to coarse grained, moderately sorted, subangular, common moderately strong calcareous cement, common white argillaceous matrix, trace multi-coloured lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light to medium grey, occasionally dark grey, arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile.
		Trace	COAL: Black, subvitreous, brittle, moderate hard, subfissile.
1838	1841	90	SANDSTONE: Light grey, light green grey, medium to coarse grained, predominantly medium, moderately sorted, subangular, common moderately strong calcareous cement, common white argillaceous matrix, trace multi-coloured lithic

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			fragments, common glauconite (?), moderately hard to hard, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, slightly arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile.
1841	1844	90	SANDSTONE: Light grey, light to minor medium green to green grey, medium to coarse grained, predominantly medium, moderately sorted, subangular, common moderately strong calcareous cement, common white argillaceous matrix, trace lithic fragments, trace glauconite, moderately hard to hard, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, slightly arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile.
1844	1847	100	SANDSTONE: Light green, light green grey, light grey, off white, translucent, rare pink, medium, moderate well sorted, subangular, common calcite cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
1847	1850	90	SANDSTONE: Light green, light green grey, light grey, off white, translucent, rare pink, medium, moderately well sorted, subangular, common calcite cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, slightly arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile.
1850	1853	90	SANDSTONE: Light green, light green grey, light grey, off white, translucent, rare pink to red, medium to coarse, moderately well sorted, subangular, common calcite cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, slightly arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile.
1853	1856	100	SANDSTONE: Light green, light green grey, light grey, off white, translucent, rare pink to red, medium to coarse, moderately well sorted, subangular, common calcite cement,

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			common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
1856	1862	90	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, common calcite cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, trace carbonaceous specks, hard, subblocky to occasionally subfissile.
1862	1868	90	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, common calcite cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, trace carbonaceous specks, hard, subblocky to occasionally subfissile.
1868	1874	90	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, weak siliceous cement, trace calcareous cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, trace carbonaceous specks, hard, subblocky to occasionally subfissile.
1874	1880	90	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, weak siliceous cement, trace calcareous cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		10	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, trace carbonaceous specks, hard, subblocky to occasionally subfissile.
1880	1886	70	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, weak siliceous cement, trace calcareous cement, common argillaceous matrix,

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			common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Medium to dark grey brown, light grey, very finely arenaceous, trace carbonaceous specks, trace glauconite, firm to moderate hard, soft and dispersive, subblocky.
1886	1892	60	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, weak siliceous cement, trace calcareous cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Medium to dark grey brown, increasing light grey, very finely arenaceous, trace carbonaceous specks, trace glauconite, firm to moderate hard, soft and dispersive, subblocky.
1892	1898	60	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, weak siliceous cement, trace calcareous cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Medium to dark grey brown, increasing light grey, very finely arenaceous, trace carbonaceous specks, trace glauconite, firm to moderate hard, soft and dispersive, subblocky.
1898	1904	60	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink, medium to coarse, moderately well sorted, subangular to subrounded, weak siliceous cement, trace calcareous cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Medium to dark grey brown, increasing light grey, very finely arenaceous, trace carbonaceous specks, trace glauconite, firm to moderate hard, occasionally very hard, soft and dispersive, subblocky.
1904	1907	70	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink, medium to coarse, moderately well sorted, subangular to subrounded, weak siliceous cement, trace calcareous cement, minor light green to light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.

30	SILTSTONE: Medium to dark grey brown, commonly light
	grey, trace carbonaceous specks, trace glauconite, firm to
	moderate hard, occasionally very hard, soft and dispersive,
	subblocky.

1907 1910 80 SANDSTONE: Light grey, light green grey, off white, translucent, medium to coarse, moderately well sorted, subangular to occasionally subrounded, weak siliceous cement, trace calcareous cement, minor light green argillaceous matrix, common lithic fragments, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.

- 20 SILTSTONE: Medium to dark grey brown, commonly light grey, trace carbonaceous specks, trace glauconite, firm to moderate hard, commonly soft and dispersive, subblocky.
- 1910 1916 70 SANDSTONE: Light grey, light green grey, pale pink, off white, translucent, fine to coarse, poorly sorted, subangular to subrounded, weak siliceous cement, common calcareous cement, minor to locally common light green grey argillaceous matrix, common lithic fragments, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
 - 30 SILTSTONE: Medium to dark grey brown, commonly light grey, trace carbonaceous specks, trace glauconite, firm to moderate hard, commonly soft and dispersive, subblocky.
- 1916 1919 70 SANDSTONE: Light grey, light to medium green grey, pale pink, off white, translucent, fine to coarse, poorly sorted, subangular to subrounded, weak siliceous cement, common calcareous cement, minor to locally common light green grey argillaceous matrix, common lithic fragments, hard to very hard, poor visual porosity, no hydrocarbon fluorescence.
 - 30 SILTSTONE: Medium to dark grey brown, commonly light grey, trace carbonaceous specks, trace glauconite, firm to moderate hard, commonly soft and dispersive, subblocky.
- 1919 1922 80 SANDSTONE: Light grey, light to medium green grey, off white, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
 - 20 SILTSTONE: Medium to dark grey brown, commonly light grey, trace carbonaceous specks, trace glauconite, firm to moderate hard, commonly soft and dispersive, subblocky
- 1922 1925 50 SANDSTONE: Light grey, light to medium green grey, off

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			white, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Light grey, light to medium brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
1925	1928	40	SANDSTONE: Light grey, light to medium green grey, off white, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light to medium brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
1928	1931	30	SANDSTONE: Light grey, light to medium green grey, off white, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular to subrounded, moderate strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		70	SILTSTONE: Light grey, light to medium brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
1931	1934	30	SANDSTONE: Light grey, light to medium green grey, off white, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		70	SILTSTONE: Light grey, light to occasionally medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
1934	1940	50	SANDSTONE: Light grey, minor light green grey, off white, clear to translucent, medium to coarse grained, occasionally fine grained, moderately poorly sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no

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			hydrocarbon fluorescence.
		50	SILTSTONE: Light grey, light to occasionally medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
1940	1946	70	SANDSTONE: Light grey, minor light green grey, off white, clear to translucent, medium to coarse grained, occasionally fine grained, moderately poorly sorted, subangular, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light grey, light to occasionally medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
1946	1952	50	SANDSTONE: Light grey, minor light green grey, off white, clear to translucent, medium to coarse grained, occasionally fine grained, moderately poorly sorted, subangular, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Light grey, light to occasionally medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
1952	1958	60	SANDSTONE: Light grey, minor light green grey, off white to minor pale brown, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light grey, light to occasionally medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
1958	1961	70	SANDSTONE: Light grey to minor light green grey, off white to minor pale brown, clear to translucent, medium to coarse grained, moderately sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, trace glauconite, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light grey, light to occasionally medium grey brown, argillaceous, trace carbonaceous specks, trace lithic

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			fragments, firm to moderate hard, soft in part, subblocky.
1961	1967	70	SANDSTONE: Light grey to minor light green grey, off white to minor pale brown, clear to translucent, medium to coarse grained, moderately sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, trace glauconite, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light grey, light to occasionally medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft in part, subblocky.
1967	1973	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, clear to translucent, medium to coarse grained, moderately sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light green grey argillaceous matrix, common lithic fragments, trace glauconite, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft in part, subblocky.
1973	1979	50	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, clear to translucent, medium to coarse grained, moderately sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light green grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace glauconite, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace carbonaceous detritus, trace lithic fragments, firm to moderate hard, soft in part, subblocky.
1979	1985	50	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, clear to translucent, medium to coarse grained, moderately sorted, subangular to subrounded, strong siliceous cement, trace calcareous cement, minor to locally common light green grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace glauconite, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace carbonaceous detritus, trace lithic fragments, firm to moderate hard, soft in part, subblocky.
1985	1991	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, clear to translucent, medium to coarse grained, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, minor to locally common light

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			grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace carbonaceous detritus, trace lithic fragments, firm to moderate hard, soft in part, subblocky.
1991	1997	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, clear to translucent, medium to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace carbonaceous detritus, trace lithic fragments, firm to moderate hard, soft in part, subblocky.
1997	2003	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, clear to translucent, medium to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace carbonaceous detritus, trace lithic fragments, firm to moderate hard, soft in part, subblocky.
2003	2009	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, clear to translucent, medium to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace carbonaceous detritus, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2009	2015	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, translucent, medium to coarse grained, predominantly medium, minor fine grained, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.

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		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace carbonaceous detritus, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2015	2021	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, minor red brown, translucent, medium to coarse grained, predominantly medium, partly fine grained, moderately sorted, subangular to subrounded, strong siliceous cement, trace calcite, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace carbonaceous detritus, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2021	2027	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, minor red brown, translucent, medium to coarse grained, predominantly coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, trace quartz overgrowths, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2027	2030	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, minor red brown, translucent, medium to coarse grained, predominantly coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, trace quartz overgrowths, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2030	2033	40	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, minor red brown, translucent, medium to coarse grained, predominantly coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, trace quartz overgrowths, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.

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		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2033	2036	60	SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, minor red brown, translucent, medium to coarse grained, predominantly coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, trace quartz overgrowths, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2036	2039	60	SANDSTONE: Light grey, light brown grey, light green grey, trace pink, minor red brown, translucent, fine to coarse grained, predominantly fine to medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2039	2042	70	SANDSTONE: Light grey, light brown grey, light green grey, trace pink, minor red brown, translucent, fine to coarse grained, predominantly fine to medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2042	2045	60	SANDSTONE: Light grey, light brown grey, light green grey, common pink to red brown, translucent, fine to coarse grained, predominantly fine to medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace glauconite?, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2045	2048	40	SANDSTONE: Light grey, light brown grey, light green grey,

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			common pink to red brown, translucent, fine to coarse grained, predominantly fine to medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace glauconite?, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard soft in part subblocky.
2048	2054	60	SANDSTONE: Light grey, light brown grey, light green grey, rare pink to red brown, translucent, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace glauconite?, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2054	2060	50	SANDSTONE: Light grey, light brown grey, light green grey, light green, rare pink to red brown, translucent, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2060	2066	70	SANDSTONE: Light grey, predominantly off white, translucent, light green grey, trace pink red, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		30	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2066	2072	60	SANDSTONE: Light grey, predominantly off white, translucent, light green grey, trace pink red, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.

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		40	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.
2072	2078	60	SANDSTONE: Light grey, predominantly off white, translucent, light green grey, trace pink red, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft in part, subblocky.
2078	2081	60	SANDSTONE: Light grey, predominantly off white, translucent, light green grey, trace pink red, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		40	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2081	2084	50	SANDSTONE: Light grey, predominantly off white, translucent, light green grey, trace pink red, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2084	2090	40	SANDSTONE: Light grey, predominantly off white, translucent, light green grey, trace brown red, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2090	2093	40	SANDSTONE: Light grey, predominantly off white, translucent, light green grey, trace brown red, fine to coarse

Santos			Well Completion Report Volume 1 Basic
			grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2093	2096	40	SANDSTONE: Light to medium grey, translucent, occasionally light green grey, fine to predominantly medium, coarse in part, moderately sorted, subangular to subrounded, moderately strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2096	2102	40	SANDSTONE: Light to medium grey, translucent, occasionally light green grey, fine to predominantly medium, minor coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, common light grey argillaceous matrix, trace lithic fragments, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, siliceous in part, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2102	2105	50	SANDSTONE: Light to medium grey, translucent, occasionally light green grey, fine to predominantly medium, minor coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, common light grey argillaceous matrix, trace lithic fragments, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		50	SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, siliceous in part, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2105	2108	40	SANDSTONE: Light to increasing medium grey, translucent, occasionally light green grey, occasionally orange red, fine to predominantly medium, minor coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, common light grey argillaceous matrix, trace lithic fragments, grades to lithic sandstone, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light to medium grey brown,

Santos			Well Completion Report Volume 1 Basic
			argillaceous, trace carbonaceous specks, trace lithic fragments, siliceous in part, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2108	2111	40	SANDSTONE: Light to medium grey, translucent, occasionally light green grey, occasionally orange red, fine to predominantly medium, minor coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, common light grey argillaceous matrix, trace lithic fragments, grades to lithic sandstone, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		60	SILTSTONE: Light grey, light to medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, siliceous in part, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2111	2114	30	SANDSTONE: Light to medium grey, translucent, occasionally light green grey, occasionally orange red, fine to predominantly medium, minor coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, common light grey argillaceous matrix, trace glauconite, trace lithic fragments, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		70	SILTSTONE: Light to medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, siliceous in part, firm to moderate hard, soft in part, slightly dispersive, subblocky.
2114	2118	20	SANDSTONE: Light to medium grey, translucent, occasionally light green grey, occasionally orange red, fine to predominantly medium, minor coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, common light grey argillaceous matrix, trace glauconite, trace lithic fragments, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.
		80	SILTSTONE: Predominantly light grey, off white, light to medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, siliceous in part, firm to moderate hard, soft in part, slightly dispersive, subblocky.

TOTAL DEPTH DRILLER : 2118m TOTAL DEPTH LOGGER : 2098.5m (Fill in hole)

SECTION 2.2:- SIDEWALL CORES DESCRIPTIONS
SANTOS LIMITED

SIDEWALL CORE DESCRIPTIONS

WELL:	CASINO-1	DATE	16-09-02	PAGES	8
GUN NO.:	1	SHOTS FIRED	30	SHOTS PURCHASED	30
		GEOLOGIST:	M. D'Cruz		

CORE	DEPTH	REC.	PALYN.	LITH.	COLOUR	GRAI	HYDR.	SUPPLEMENTARY INFORMATION
NO.	(m)	(cm)	EVAL.			Ν	INDIC.	
			REJECT			SIZE	(Y/N)	
1	2030	2.25		SLTST	Light grey	Arg	Ν	SILTSTONE: Light grey, argillaceous, trace
								carbonaceous specks, trace lithic fragments,
								trace glauconite, soft to firm, subblocky.
2	1990	2.5		SLTST	Light grey	Arg	Ν	SILTSTONE: Light grey, argillaceous, trace
								carbonaceous specks, trace lithic fragments,
								trace glauconite, soft to firm, subblocky.
3	1960	2.0		SST 40%	Light grey	Fine	Ν	SANDSTONE: Light grey to minor light green
				SLTST				grey, off white to minor pale brown, clear to
				60%				translucent, fine grained, well sorted,
								subangular to subrounded, weak siliceous
								cement, trace calcareous cement, minor to
								locally common light grey argillaceous matrix,
								common lithic fragments, trace glauconite,
								friable, poor visual porosity, no hydrocarbon
								Illuorescence.
								SILISIONE: Light grey, arginaceous, trace
								firm to moderate hard, soft in part, subblook
4	1027	2.25		OL TOT	T :-1.4	A	N	IIIII to moderate nard, soft in part, subblocky.
4	1957	2.23		SL151	Light grey	Arg	IN	SILISIONE: Light grey, argillaceous, trace
								firm to moderate hard, soft and diagarative in
								infinito moderate nard, soft and dispersive in
								part, subblocky.

5	1921	1.0	SST	White to light grey	Fine	Ν	SANDSTONE: White to light grey, fine grained, well sorted, subangular to subrounded, weak calcareous cement, common white to light grey argillaceous matrix, trace glauconite and lithics, trace carbonaceous fragments, friable aggregates, poor visual porosity, no hydrocarbon fluorescence.
6	1885	3.0	SST 80% SLTST 20%	Light grey to green grey	Mediu m to coarse	Ν	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, weak siliceous cement, trace calcareous cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Light grey to light green, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.
7	1833	4.0	SLTST	Light grey to medium grey brown	Arg	N	SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, argillaceous, trace carbonaceous specks, common plant remnants, firm, subblocky to occasionally subfissile.
8	1823	2.5	CLYST	Off white to light grey	Arg	N	CLAYSTONE: Off white to light grey, rare carbonaceous micro-specks, firm to moderately hard, blocky to subblocky.

9	1804	2.5	SST 80%	Off white	Fine	Ν	SANDSTONE: Pale grey, white to off-white,
			SLTST	to light			minor Fe-staining, rare pale yellow, clear to
			20%	grey			translucent in part, predominantly very fine,
							grading to arenaceous siltstone, well sorted,
							subangular to subrounded, moderately strong
							calcareous cement, locally common white
							argillaceous matrix, well cemented, common
							quartzose appearance in fine grained
							aggregates, trace green (glauconite?) and black
							lithic fragments, trace carbonaceous, friable to
							hard, poor visual porosity, no hydrocarbon
							fluorescence.
							SILTSTONE: Medium to dark brown grey, com
							carbonaceous fragments and plant remnants,
		• •	~~~				firm, subblocky.
10	1800	2.0	SST	Off white	Fine	Ν	SANDSTONE: Pale grey, white to off-white,
				to light			minor Fe-staining, rare pale yellow, clear to
				grey			translucent in part, predominantly very fine,
							grading to arenaceous silfstone, well sorted,
							subangular to subrounded, moderately strong
							calcareous cement, locally common white
							arginaceous matrix, well cemented, common
							qualizose appearance in line grained
							aggregates, trace black funct fragments, trace
							carbonaceous, naru to very nard, poor visuar
							porosity, no nydrocarbon fluorescence.

11	1792.5	2.0	SLTST 80% SST 20	Medium to dark grey	Arg	Ν	SILTSTONE: Medium to dark grey, minor grey brown, rare disseminated pyrite, moderate hard to hard, calcareous, trace carbonaceous specks, blocky to subblocky SANDSTONE: Light grey, medium to very coarse grained, poorly sorted, subangular to angular, weak siliceous cement, common white to light grey calcareous and argillaceous matrix, trace Fe-staining, trace lithic fragments, predominantly moderately hard, loose in part, poor visual porosity, no hydrocarbon fluorescence.
12	1783	3.25	SST	Light grey to green grey	Mediu m to coarse	Ν	SANDSTONE: Light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
13	1779	3.75	SST	Light grey to green grey	Mediu m to coarse	N	SANDSTONE: Light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
14	1773	4.0	SST	Light grey to brown grey	Mediu m to coarse	N	SANDSTONE: Light brown grey, light grey, medium to coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, becoming cleaner, trace glauconite, trace lithic fragments, friable to predominantly moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.

15	1769	3.0	SST	Light grey to brown grey	Fine to medium to coarse	Ν	SANDSTONE: Light brown grey, light grey, fine to medium grained, minor coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to occasionally moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence.
16	1758	2.25	SST 90% SLTST 10%	 Light grey to light brown grey 	Fine to medium	Ν	SANDSTONE: Light brown grey, light grey, fine to medium grained, minor coarse grained, moderate well sorted, weak siliceous cement, common white to light grey argillaceous matrix, trace glauconite, trace lithic fragments, friable to occasionally moderately hard, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence. SILTSTONE: Medium to dark grey brown, argillaceous, soft to firm, trace carbonaceous specks, blocky to subblocky
17	1753	3.5	SST	Light grey to light brown grey	Fine to coarse	N	SANDSTONE: Light grey, light brown grey, clear to translucent, fine to coarse grains, moderately sorted, subangular to subrounded, moderately strong siliceous cement, trace calcareous cement, com white to light grey argillaceous matrix, silty, poor visual porosity, no hydrocarbon fluorescence.
18	1751	3.0	SST	Light grey to light brown grey	Fine to coarse	Ν	SANDSTONE: Light grey, light brown grey, clear to translucent, fine to medium, occasional coarse loose grains, moderately sorted, subangular to subrounded, moderately strong siliceous cement, trace calcareous cement, com white to light grey argillaceous matrix, silty, poor visual porosity, no hydrocarbon fluorescence.

19	1742	2.0	SLTST	Medium to dark brown	Arg	N	SILTSTONE: Medium to dark brown to grey brown, minor glauconite, trace calcite, trace loose quartz, calcareous, trace pyrite, moderately hard, blocky to subblocky.
20	1736	3.75	SLTST	Medium to dark brown	Arg	Ν	SILTSTONE: Medium to dark brown to grey brown, common large glauconite fragments and nodules, trace calcite, trace loose quartz, calcareous, trace pyrite, moderately hard, blocky to subblocky.
21	1723	2.0 (Crushed)	SLTST	Medium to dark brown	Arg	N	SILTSTONE: Medium to dark brown to grey brown, common glauconite, trace calcite, trace loose quartz, calcareous, trace pyrite, moderately hard, blocky to subblocky.
22	1715	4.0	SLTST	Medium to dark brown	Arg	N	SILTSTONE: Medium to dark brown to grey brown, common glauconite, trace calcite, trace loose quartz, calcareous, trace pyrite, moderately hard, blocky to subblocky.
23	1707	2.75	SLTST	Light to medium brown	Arg	Ν	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
24	1685	3.75	SLTST	Light to medium brown	Arg	Ν	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, trace pyrite, firm to moderately hard, occasionally hard, subblocky.
25	1665	3.25	SLTST	Light to medium brown	Arg	Ν	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, calcareous, firm to moderately hard, occasionally hard, subblocky.
26	1600	2.25	SLTST	Light to medium brown	Arg	Ν	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, minor soft and dispersive, subblocky.

27	1570	3.0	5	SLTST	Light to medium brown	Arg	N	SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, soft to firm, dispersive, amorphous to subblocky.
28	1534	1.75	5	SLTST	Medium to dark brown	Arg	N	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.
29	1527	2.5	S	SLTST 90% ST 10%	Medium to dark brown	Arg to aren	Ν	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky. SANDSTONE: Clear to translucent, light green, light grey, green, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.
30	1520	2.0	5	SLTST	Medium to dark brown	Arg	Ν	SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky.

COMMENTS:

30 sidewall cores were attempted. 30 were recovered.3 correlation passes were performed.

SECTION 2.3:- CATALOGUE OF WELLSITE SAMPLES

INTEQ

Santos: Casino-1



Shipping Manifest

From: BHI Unit 503 Location: **Ocean Bounty** Telephone: 08 8218 5740

Shipped in Container No: OPC200

SAMPLE TYPE	No.	CO	MPOSI	ΓΙΟΝ	PACKING DETAILS
	Of	Sample	Depth	Interval (m)	
	Sets	Box No.	From	То	
Sets A,B,C: Washed & Air	3	1	752	818	Small boxes 1 – 8 packed in
Dried Samples (100 g)		2	818	875	large box 1 of 3
		3	875	956	
		4	956	1037	
		5	1037	1124	
		6	1124	1211	
		7	1211	1298	
		8	1298	1379	
		9	1379	1451	Small boxes 9 – 12 packed
		10	1451	1541	in large box 2 of 3
		11	1541	1625	
		12	1625	1700	
		13	1700	1781	Small boxes 13-17 packed
		14	1781	1862	in large box 3 of 3
		15	1862	1955	
		16	1955	2036	
		17	2036	2118	
Sets D,E: Washed & Air	2	1	752	806	Small boxes $1 - 8$ packed in
Dried Samples (200 g)		2	806	875	large box 1 of 5
		3	875	929	
		4	929	986	
		5	986	1040	
		6	1040	1094	
		7	1094	1154	
		8	1154	1226	
		9	1226	1298	Small boxes 9-12 packed in
		10	1298	1355	large box 2 of 5
			1355	1412	
		12	1412	148/	
		13	148/	1556	Small boxes 13 – 16 packed
		14	1556	1625	in large box 3 of 5
		15	1625	1685	
		16	1685	1/45	
		1/	1/45	1808	Small boxes 1/-20 packed
		18	1808	1865	in large box 4 of 5
		19	1865	1931	
		20	1931	1985	Small haves 21 22 med 1
		21	1985	2042	Small boxes 21-23 packed
		22	2042	2090	in large box 5 of 5
		23	2090	2118	

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		-			
Set F: Samplex Trays	1	1	752	1052	5 Small boxes packed into 1
		2	1052	1352	Large box.
		3	1352	1652	
		4	1652	1817	
		5	1817	2118	
Set G: Samplex Trays	1	1	752	2012	Box 1 Couriered to Strike
		2	2012	2118	oil on 14/09/02
					Box 2: 1 small box
Set H: Mud Samples and	1	1	755		Packed in 1 Large Box.
Mud Filtrate sample.			1408		Also included a Mud
MDT fluid sample			1529		Filtrate Sample (glass jar).
-			1748		Mud Sample and MDT
			1757		sample in plastic 500ml
			1799		bottles
			1870		
			2118		
Set I: Misc paper work, logs	1	1	-	-	1 Large box
and charts					

Samplex trays (Set G) from 752 to 2012m have been forwarded to Strike Oil on 14/09/02

DISTRIBUTION	Destination & Address	Attention of:
Set A and B: Santos	C/- Santos Core Library	Attn: Troy Prosser
Washed & Dried	Ascot Transport	(Santos Core Librarian)
(100g)	Francis Street	
	Gillman SA 5013	
Set C: Strike Oil	C/- Santos Core Library	Attn: Troy Prosser
Washed & Dried	Ascot Transport	(Santos Core Librarian)
(100g)	Francis Street	
	Gillman SA 5013	
Set D: Vic DRNE	C/- Santos Core Library	Attn: Troy Prosser
Washed & Dried	Ascot Transport	(Santos Core Librarian)
(200g)	Francis Street	
	Gillman SA 5013	
	Fwd to Vic DNRE	
Set E: Geoscience	C/- Santos Core Library	Attn: Troy Prosser
Australia	Ascot Transport	(Santos Core Librarian)
Washed & Dried	Francis Street	
(200g)	Gillman SA 5013	
	Fwd to AGSO	
Set F, G: Santos and	C/- Santos Core Library	Attn: Santos Core
Strike Oil	Ascot Transport	Library, Gillman
Samplex Trays	Francis Street	
	Gillman SA 5013	
	Fwd to AGSO	
Set H:	C/- Santos Core Library	Attn: Troy Prosser
Mud Samples	Ascot Transport	(Santos Core Librarian)
	Francis Street	
	Gillman SA 5013	
	Fwd to AGSO	
Set I: Misc paper	C/- Santos Core Library	Attn: Attn: Troy Prosser
work, logs and	Ascot Transport	(Santos Core Librarian)
charts	Francis Street	
	Gillman SA 5013	
	Fwd to AGSO	

SECTION 3: WIRELINE LOGGING REPORTS

SECTION 3.1:- SUITE 1 - LOGGING ORDER FORM

Santos A.C.N. 007 550 923

LOGGING ORDER

COMPANY:	SANTOS – STRIKE OIL			
WELL:	CASINO-1	FIELD:	EXPLORAT	ION
RIG:	OCEAN BOUNTY	STATE:	VICTORIA	
LOCATION:	OTWAY BASIN	BLOCK:	VIC/P44	
LATITUDE:	38° 47' 18.502" S	LONGITUDE:	142° 42' 0.28	87" E
ELEVATIONS:	Water Depth: 70.5m RT-Seabed : 95.5m	RT:	25.0m LAT	DF : <u>25.0m</u>
914mm HOLE:	130m	762mm CSG:	128m	310 ppf X-52
445mm HOLE:	752m	340mm CSG:	743m	68 ppf L-80
311mm HOLE:	2118m	244mm CSG:		_
MUD SYSTEM:	KCl / PHPA / GLYCOL	CIRCULATION 14/09/02	N STOPPED: 1	12:40 hrs on
WT: V ** See attached M	TSC: PV/YP: ud report for mud properties	PH: FLUI	ID LOSS:	CHL:
GEOLOGIST:	R. Subramanian / M. D'Cruz			
INFORMATION (GIVEN ABOVE IS TO BE USEI	O ON LOG HEADI	NG SHEETS.	

HOLE CONDITIONS: (TIGHT SPOTS, DEVIATION, COALS, BARITE IN MUD, ETC) Good hole conditions expected. Barite in mud = ____ ppb

DRILL STEM TESTS/CORED INTERVALS:

No DSTs were conducted. No open hole cores were cut.

COMMENTS: (TO BE INCLUDED IN REMARKS SECTION ON HEADER SHEET)

LOGS:

PROGRAM CONFIRMED WITH OPERATIONS GEOLOGIST AT 18:00 hrs ON 14-09-02

PROGRAM VARIES FROM PRE-SPUD NOTES:

YES:

NO: X

LOG	INTERVAL	REPEAT SECTION /
		Comments
<u>RUN 1</u> : PEX-DSI		
Resistivity-Caliper-SP	TD to casing shoe	No repeat section required, check
Sonic (P&S WFT)	TD to 500m (expected top cement)	repeatability with down log.
Sonic (Dipole shear)	TD to 1650m	
Neutron Density	TD to casing shoe	
Spectral Gamma	TD to 1650m	
GR	TD to Seafloor	
<u>RUN 2</u> : MDT-GR	20 points (TBA) Sampling. PVT module with resistivity monitoring required.	
<u>RUN 3</u> : VSP	Zero offset. TD to 500m. (expected top cement) 20m levels.	
<u>RUN 4</u> : SWC	30 cores. Points to be advised	Extra gun contingent

<u>REMARKS</u>: (ALL OPERATIONS AS PER CURRENT SANTOS OPERATING PROCEDURES)

- 1. TENSION CURVE TO BE DISPLAYED ON LOG FROM T.D. TO CASING SHOE.
- 2. ALL CALIBRATIONS IN CASING MUST BE VERSUS DEPTH.
- 3. ALL THERMOMETER READINGS TO BE RECORDED ON LOG
- 4. ALL SCALES AND PRESENTATIONS TO CONFIRM TO STANDARDS UNLESS OTHERWISE ADVISED.
- 5. THE FIELD/EDIT TAPE MUST BE A MERGED COPY OF ALL LOGS RUN. SEPARATE TAPES ARE ONLY ACCEPTABLE AS AN INTERIM MEASURE.
- 6. ANY CHANGE FROM STANDARD PROCEDURES/SCALES TO BE NOTED IN REMARKS SECTION.
- 7. RM, RMF, RMC AND BHT MUST BE ANNOTATED ON FAXED LOGS. FAXED LOGS SHOULD ALSO INDICATE IF ON DEPTH OR NOT.
- 8. LOG DATA IS TO BE TRANSMITTED AS SOON AS POSSIBLE AFTER ACQUISITION. IF ANY DELAYS ARE LIKELY OR IF DATA TRANSMISSION WILL ADVERSELY EFFECT THE OPERATION THEN THE WELLSITE GEOLOGIST MUST BE IMMEDIATELY INFORMED.
- 9. THE WELLSITE GEOLOGIST MUST BE INFORMED IMMEDIATELY OF ANY TOOL OR HOLE PROBLEMS, LOST TIME OR ANY OTHER EVENT WHICH MAY AFFECT THE LOGGING OPERATIONS.

SECTION 3.2:- SUITE 1 - ELECTRIC LOGGING TIME SUMMARY

Geology Operations



ELECTRIC LOGGING TIME SUMMARY

LOGGING UNIT:	OSU-25	LEFT BASE:	13-09-2002
START DATE:	14-09-2002	ARRIVED AT THE WELLSITE:	14-09-2002
END DATE:	16-09-2002	INITIAL RIG UP:	14-09-2002
DEPTH DRILLER:	2118	FINAL RIG DOWN:	16-09-2002
DEPTH LOGGER:	2098.5 (fill)	RETURN TO BASE:	17-09-2002

DATE / TIME	RIG UP / DOWN	TOOL	RIH / POOH	LOGGING	DATA TX	LOST TIME SLB	I. O.	WIPER	LOST TIME OTHERS	OTHERS	COMMENT	S / REMARKS
0:00												
.30												
1:00												
.20												
.50												
2:00												
.20												
.30												
3:00												
.20												
.50												
4:00												
.20												
.30												
5:00												
.20												
:30												
6:00												
:30												
7:00												
:30												
8:00												
:30												
9:00												
:30												
10:00												
:30												
11:00												
:30												
											WSG (SIGN)	ENGINEER(SIGN)
					тот	ALS						
											TOOLS RUN:	
	l	1									10020 KUK.	
											TOOLS RUN:	



SECTION 3.3:- SUITE 1 – FIELD ELECTRIC LOGGING REPORT

SANTOS LIMITED

FIELD ELECTRIC LOG REPORT

WELL: LOGGING Engr:	Casino-1 Meshary / Ismail	GEOLOGI	R. Subramanian and M D'Cruz			
RUN NO:	Suite 1 / Run 1 to 3	DATE LOG	14-09-02 to 16-09-02			
DRILLERS DEPTH:	2118m	LOGGERS	DEPTH:	2098.5m (Fill in hole)		
ARRIVED ON SITE:	14-09-02					
ACTUAL LOG TIME:	16 hrs 15 mins	LOST TIM	2 hrs 30 mins			
TOTAL TIME:	30 hrs 15 mins	LOST TIM	E OTHER:	-		
TYPE OF LOG	PEX-DSI	MDT	MDT-GR	CST-GR		
	(Run 1)	(Run 2A-Tool Failed)	(Run 2B-Re-run)	(Run 3)		
TIME CIRC. STOPPED	12:40 14/09/02	12:40 14/09/02	12:40 14/09/02	12:40 14/09/02		
TIME TOOL RIG UP	19:45 14/09/02	03:00 15/09/02	13:30 15/09/02	20:45 15/09/02		

TIME TOOL RIH	21:00 14/09/02	04:30 15/09/02	13:30 15/09/02	21:45 15/09/02
TIME TOOL RIG DOWN	03:00 15/09/02	13:30 15/09/02	20:45 15/09/02	02:00 16/09/02
TOTAL TIME	7 hrs 15 mins	10 hrs 30 mins	7 hrs 15 mins	5 hrs 15 mins
-				

TYPE OF LOG	FROM	ТО	REPEAT	TIME	BHT
	(m)	(m)	SECTION	SINCE	
				LAST CIRC	
PEX-DSI	(** Note: PEX Hi-	Res to 1650m. Stand	lard Res above 1650	m)	
GR	TD	95	Down log	10.33 hrs	80°C
Spectral GR	TD	1650			
Resistivity	TD	742			
SP	TD	742			
HCAL	TD	742			
Sonic (Upper Dipole)	TD	1650			
Dt (Full waveforms)	TD	500			
Neutron-Density	TD	742			
MDT-GR	1524	2016		-	-
(TOTAL : 29,					
8 Good, 10 Valid but tight,					
5 Lost Seals, 2 bad data,					
5 curtailed, 3 samples					
conected)					
CST CP	1520	2030			
(30 of 30 shots recovered)	1520	2030		-	-
(50 of 50 shots recovered)					

MUD SYSTEM: KCl – PHPA – GLYCOL

WEIGHT: 1.22 SG

HOLE CONDITIONS: Good

WELLSITE LOG QUALITY CONTROL CHECKS

LOG ORDER	OK	MUD SAMPLE	OK	TOOL NO. / CODE	OK
FORM		RESISTIVITY		CHECK	
OFFSET WELL	OK	CABLE DATA CARD	OK	LOG SEQUENCE	OK
DATA				CONFIRM.	

LOG TYPE	Run 1	Run 2	Run 3	REMARKS
	PEX-	MDT	CST-GR	
	HALS			
CASING CHECK	Y			
SCALE CHECK	Y			
DEPTH Casing	Y			L=742m D=743'
CALIBRATIONS OK	Y		Y	
REPEATABILITY	Y			
LOGGING SPEED	1700/300			
	0			
OFFSET WELL	Y			Compares with MWD/LWD
REPEATABILITY				
NOISY/MISSING DATA	Y			
CURVES/LOGS Depth	Y	Y		
Matched				
Rm MEASUREMENT	Y			
LLS/LLD/CHECK	Y			
PERF/RHOB CHECK	Y			
LOG HEADER/TAIL	Y			OK
PRINT/FILM QUALITY				To be sent from town
CORRELATION		Y	Y	OK
PASSES				

COMMENTS:

Run 1 PEX-HALS failed to reach bottom due to fill. Logger TD: 2098.5m vs Drillers TD 2118m

Run 2 MDT tool failed and had to be replaced .

2 x PVT samples collected for forwarding to town.

1 x 1-gal chamber opened at the site.

Run 3 CST. 100% recovery.

ENGINEERS COMMENTS (If this report has not been discussed with the Engineer state reason)

SECTION 3.4: MDT PRESSURE SURVEY RESULTS

	Santos	S					PRE	SSUR	E SUF	RVEY					
	WELL: Casino 1 WITNESS: <u>R Subramanian / M. D'Cruz</u>				Time since	RT: last circ :	25.0	metres hrs		G Probe/Pa	auge Type : acker Type :	Quartz Standard	_	Page : Date :	1 OF 2 15/09/2002
	FORMATION	DEPTH	DEPTH	EXPECT	EXPECT	FILE		TEST R	ESULTS			INT	ERPRETATI	ON	COMMENTS
		RT	SUBSEA	FORM	TEMP	NO	HYDRO	FORM	HYDRO	TEMP	D/D	TYPE	TYPE	DEPL	FLUID TYPE
		MD		PRESS			BEFORE	PRESS	AFTER		MOB	D/D	BUILD	S/C	
		m	m	PSIA	deg C		PSIA	PSIA	PSIA	deg C	MD/CP		UP		
															CORRELATION
1	Nullawarre	1524.0	1499.0		66	69	2715.96	2192.00	2715.60	70.80	50.50	N	Rapid		GOOD
2	Nullawarre	1526.0	1501.0		66	71	2719.22	2192.25	2718.75	71.35	179.80	N	Rapid		GOOD
3	Nullawarre	1527.5	1502.5		66	72	2721.72	2192.64	2721.56	71.45	256.70	N	Rapid		GOOD
4	Nullawarre	1529.5	1504.5		66	73	2725.44	2199.80	2725.16	71.55	29.70	N	Slow		CURTAILED
5	Belfast	1552.5	1527.5		67	74	2766.16	2230.34	2766.71	71.77	284.00	N	Rapid		GOOD
6	Belfast	1557.5	1532.5		68	75	2774.61	811.37	2774.81	71.88	19.70	N	Very Slow		TIGHT
															CORRELATION
7	Warre 'C'	1739.5	1714.5		75	77	3097.13	-		76.01	-				LOST SEAL
8	Warre 'C'	1739.0	1714.0		75	78	3095.92	-	3095.14	76.19	-				LOST SEAL
9	Warre 'C'	1741.0	1716.0		75	79	3099.40	-		76.43	-				LOST SEAL
10	Warre 'C'	1746.0	1721.0		75	80	3108.45	2825.33	3108.87	76.47	8.00	N	Slow		BAD (Unstable)
11	Warre 'C'	1751.0	1726.0	2770	75	81	3117.41	2817.60	3116.64	76.50	7.70	N	Very Slow		CURTAILED
12	Warre 'C'	1759.0	1734.0		76	82	3131.50	-	-	76.58	-				LOST SEAL
13	Warre 'C'	1761.5	1736.5		76	83	3135.72	-	-	76.96	-				BAD (Plugging)
14	Warre 'C'	1761.0	1736.0		76	84	3135.13	2850.36	3134.71	76.72	2.40	N	Very Slow		CURTAILED
15	Warre 'C'	1763.0	1738.0		76	85	3138.37	2835.95	3137.93	77.20	0.80	N	Very Slow		CURTAILED
									то	OL PROBLI	EM, PULL O	UT OF HO	LE & CHANG	GE TOOL,	CORRELATION
16	Paarate	1454.0	1429.0		63	90	2594.52	-	2594.02	68.89		N	Slow		TIGHT
17	Paarate	1456.0	1431.0		63	91	2597.74	2121.73	2597.50	69.17	0.20	N	Slow		CURTAILED
															CORRELATION
18	Warre 'C'	1769.0	1744.0		76	93	3150.72	2812.13	3150.44	77.14	47.80	N	Rapid		GOOD
19	Warre 'C'	1773.0	1748.0		76	94	3158.04	-	3157.78	77.27	0.20	Ν	Slow		TIGHT
20	Warre 'C'	1773.0	1748.0		76	95	3158.20	-	3157.75	77.20	0.20	Ν	Slow		TIGHT (Reset)
	Expected Temp Gradient: 0.04 Normal Drawdown : Pressure does not drop to zero Expected Water Gradient: 0.43 Limited Drawdown : Pressure drops to zero Mud Weight : 1.22 sg Build Up types: Immediate, Rapid, Good, Slow.														

	Santos <u>PRESSURE SURVEY</u>														
	WELL: Casino 1					RT:	25.0	metres		G	auge Type :	Quartz		Page :	2 OF 2
	WITNESS: R Subra	amanian/ M.	D'Cruz		Time since	last circ :	17.0	hrs		Probe/Pa	acker Type :	Standard		Date :	15/09/2002
													-		
	FORMATION	DEPTH	DEPTH	EXPECT	EXPECT	FILE		TEST R	ESULTS			INT	ERPRETATI	ON	COMMENTS
		RT	SUBSEA	FORM	TEMP	NO	HYDRO	FORM	HYDRO	TEMP	D/D	TYPE	TYPE	DEPL	FLUID TYPE
		MD		PRESS			BEFORE	PRESS	AFTER		мов	D/D	BUILD	S/C	
		m	m	PSIA	deg C		PSIA	PSIA	PSIA	deg C	MD/CP		UP		
21	Warre 'C'	1779.0	1754.0		76	96	3168.50	2813.85	3168.20	77.70	141.40	Ν	Rapid		GOOD
22	Warre 'C'	1782.5	1757.5		77	97	3174.73	2814.82	3174.72	77.80	9.40	Ν	Rapid		GOOD (2 PVT+1 gal)
23	Warre 'C'	1785.0	1760.0		77	98	3179.50	2817.83	3179.22	78.12	1.20	Ν	Very Slow		TIGHT
24	Warre 'C'	1787.5	1762.5		77	99	3184.08	2822.22	3183.60	78.20	14.40	Ν	Slow		TIGHT
25	Warre 'A'	1806.0	1781.0		77	100	3217.13	-	-		-	Ν	-		LOST SEAL
26	Warre 'A'	1806.0	1781.0	1	77	100	3217.13	-	3216.40	78.50	-	Ν	Very Slow		TIGHT (reset)
27	Warre 'A'	1813.0	1788.0		78	101	3229.50	-	3228.30	79.10	-	Ν	Very Slow		TIGHT
28	Warre 'A'	1870.0	1845.0		80	102	3332.60	-	3329.60	79.40	-	Ν	Very Slow		TIGHT
															CORRELATION
29	Eumeralla ?	2016.0	1991.0		86	104	3586.80	-	3585.30	80.90	-	Ν	Very Slow		TIGHT
															CORRELATION
30	Warre 'C'	1776.5	1751.5		76	105	3163.40	2815.93	3163.30	80.60	10.50	Ν	Good		GOOD
	TOTAL : 30	PRE-TE	STS: 8	-Good,	10-Valio	d Test	s but T	ight, 5 L	.ost Sea	als, 2-Ba	ad Tests	, 5 curt	ailed		
* Note	Expected Temp Gra	noted real-t adient:	ime. Softw 0.04	vare picks o	could vary s	lightly.	Refer final	log presen	tation.	Normal Dra	awdown : Pre	ssure does	not drop to z	zero	
	Expected water Gr	auient:	0.43	-						Limited Dra	iwuown : Pre	ssure arops			
	Mud Weight : 1.22 sg Build Up types: Immediate, Rapid, Good, Slow.														

SECTION 3.5:- MWD – LWD END OF WELL REPORT (Anadrill Schlumberger)



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Santos

Casino - 1

MWD – LWD End of Well Report





End of Well Report for Casino - 1

Contents

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Logging Overview General Information Geomagnetic and Survey Reference Criteria Survey Report Bit Run Summary





Logging Overview



Schlumberger



Logging Overview Casino - 1

Schlumberger Drilling and Measurements provided LWD and MWD services in the 12 $\frac{1}{4}$ in. section of the Casino– 1 well.

In the 12 ¹/₄ in. section, the following formation evaluation measurements were delivered in real time and memory modes:

- Phase Shift Resistivity (CDR)
- Attenuation Resistivity (CDR)
- Formation Gamma Ray (CDR)
- Compressional Delta-T (ISONIC)

Furthermore survey data were transmitted in real time by the PowerPulse tool for both hole sizes. This information is not recorded in the tool memory.

Run	Hole Size (in.)	Service	Start Depth (m)	Stop Depth (m)
1	12 1⁄4	PowerPulse / CDR / ISONIC	752	1056
2	12 1⁄4	PowerPulse / CDR / ISONIC	1056	1400
3	12 1⁄4	PowerPulse / CDR / ISONIC	1400	1797
4	12 1⁄4	PowerPulse / CDR / ISONIC	1797	1797

<u>12 ¼ in. Section (Runs 1 to 4, 752 to 1797 mMD):</u>

The CDR / PowerPulse / ISONIC combination was used for correlation purposes and to evaluate a seismic data. The MWD tool was programmed to transmit real time information at 6.4 bits per second and this allowed obtaining a good quality log in real time.

The ISONIC had been programmed to pick compressional Delta-T. Top interval of the ISONIC log, from 752 m to 950 m MD, was spiky due to high level of shocks in this section and due to high rate of penetration. Client was informed of high shock but no action was taken.

After run 3 the ISONIC recorded data for all the runs was reprocessed without receiver 4. Receiver 4 of the ISONIC was found to get a very weak signal back. The reprocessed memory logs without receiver 4 showed a much higher Delta-T coherence and were therefore presented on the final logs.

While running in the hole with next BHA gale force wind and high swells forced rig to hang off BHA in BOP's and disconnect the riser. That led to well being suspended for a week. When riser was reconnected drillstring was pulled out of the hole and one without Schlumberger LWD/MWD tools was run in to assess hole condition. Hole was found to be in good condition and decision was made to drill ahead without trip to pick up Schlumberger tools.

Hole TD, at 2118 m, was reached and wireline logging commenced.



General Information







General Information

Well Name:	Casino - 1	
Rig:	DOGC Ocean Bount	У
Field:	VIC – P – 44	
Location:	Otway Basin	
Country:	Australia	
Cell Members:	Willem Bertheux Chu Mihn Tue Ozren Radicevic	LWD Engineer LWD Engineer LWD Engineer
Town Contacts:	Raymond Nanan Go Ching Lian Hrvoje Spoljaric	Location Manager Engineer In Charge – WA District Technical and SQR manager
Company Representatives:	Henry Flink Steve Hodgetts R. Subramanian	



Geomagnetic and Survey Reference Criteria







Geomagnetic and Survey Reference Criteria

Geomagnetic Data

Magnetic Model:	BGGM version 2002
Magnetic Date:	29 September 2002
Magnetic Field Strength:	1220.31 HCNT
Magnetic Declination:	10.87 degrees
Magnetic Dip:	-70.06 degrees

Survey Reference Criteria

Reference G:	1000.08 mgal
Reference H:	1220.31 HCNT
Reference Dip:	-70.06 degrees
G value Tolerance:	2.50 mgal
H value Tolerance:	6.00 HCNT
Dip Tolerance:	0.45 degrees

Survey Corrections Applied

Reference North:	Grid North
Magnetic Declination:	10.87 degrees
Grid Convergence:	-1.07 degrees
Total Azimuth Correction:	11.94 degrees
Vertical Section Azimuth:	0.00 degrees



Survey Report



Schlumberger



Seq	Measured	Incl	Azimuth	Course	TVD	Vertical	Displ	Displ	Total	At	DLS	Srvy	Tool	
#	depth	angle	angle	length	depth	section	+N/S-	+E/W-	displ	Azim	(deg/	tool	qual	
-	(m)	(deg)	(deg)	(m)	(m)	(m)	(m)	(m)	(m)	(deg)	10m)	type	type	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	-	
2	766.75	0.60	342.17	766.75	766.74	3.82	3.82	-1.23	4.01	342.17	0.01	MWD	6-axis	
3	855.00	0.26	216.64	88.25	854.98	4.10	4.10	-1.49	4.36	340.03	0.09	MWD	6-axis	
4	912.40	0.54	155.43	57.40	912.38	3.75	3.75	-1.46	4.02	338.79	0.08	MWD	6-axis	
5	969.94	0.83	135.97	57.54	969.92	3.20	3.20	-1.05	3.37	341.81	0.06	MWD	6-axis	
6	1041.08	1.20	191.94	71.14	1041.05	2.11	2.11	-0.85	2.27	338.03	0.14	MWD	6-axis	
7	1084.57	1.29	209.06	43.49	1084.53	1.23	1.23	-1.18	1.71	316.20	0.09	MWD	6-axis	
8	1170.44	0.93	192.51	85.87	1170.38	-0.29	-0.29	-1.80	1.83	260.74	0.06	MWD	6-axis	
9	1256.72	1.44	181.17	86.28	1256.64	-2.06	-2.06	-1.98	2.85	223.78	0.06	MWD	6-axis	
10	1382.12	1.87	182.17	125.40	1381.99	-5.68	-5.68	-2.08	6.05	200.15	0.03	MWD	6-axis	
11	1458.48	2.13	183.87	76.36	1458.31	-8.34	-8.34	-2.23	8.63	194.95	0.03	MWD	6-axis	
12	1546.07	2.74	185.63	87.59	1545.82	-12.05	-12.05	-2.54	12.31	191.92	0.07	MWD	6-axis	
13	1605.53	3.09	184.83	59.46	1605.20	-15.06	-15.06	-2.82	15.32	190.60	0.06	MWD	6-axis	
14	1690.72	3.44	188.91	85.19	1690.25	-19.87	-19.87	-3.41	20.16	189.73	0.05	MWD	6-axis	
15	1775.86	4.38	192.34	85.14	1775.19	-25.57	-25.57	-4.50	25.97	189.97	0.11	MWD	6-axis	



Bit Run Summary



Schumberger DRILLING & MEASUREMENTS - RUN SUMMARY																											
	Job Numbe	r		Cor	mpany Re).	Date In Date Out					D&M Run Number					Rig Run Number										
	AWA-02-1	5	He	nry Fl	ink, S.Ho	odgetts	30-A	2	:	31-Aug	-02		1				3										
	Company SA Rig Name Oc	Ty SANTOS Ltd Grid Corr					Brief Run Summary 7 Good Run					Bit Run Number Ce					Cell Manager										
	Well Name Cas	sino-1	ounty	/	Tot	Corr	Hole Depth						D&M Crew														
	Location Otv	vay B	asin			11.94	From	752	m	То	105	6 m	W.Bertheux, C.Tue, C.Borbas														
	Mapfile		Ma	g Dec	PP S	lot ID	Inclination (Drift)				Pumpin			ng Hours Belo				ow Rotary Tbl Hrs									
	222			1	0.86		From	deg	To 1.2 deg			Datawal	2	21.9 h	rs.	Dette	33 NrS.										
NO	6 /	Freque	ency	N C	noa Type		Azimuin From 13	5 07	nah	То	3/12 1	7 dea	7 deg		Hours Rot				204 m								
IATI	Pump Type	Pump	Outpu	t P	Pump Strk	Len.	True Vertica	l Dept	h		542.1	, acg	Slide Ho	lours				Slide Distance									
ORN	12-P-160	603		1	2		From	752	m	То	105	6 m			0 h	rs.			0	m							
INF	Pump Liner ID	Min D	LS	Ν	Aax DLS		Hole Size	V	Vater [Depth	Air Ga	р	Drilling		Drill	Drilling Distance											
RUN	6 Bent Sub Angle	0.01 Bont k		0).14)onth Max	DIS	12.25 IN	c	/0.5	Flov	2 Mod G	5 m	Peamin	a Hoi	14.8 h	rs.	Pop	ning Dis	304 tanc	m							
	deq	Denti	de	eq L	ершиал	m	0 m		Ji Ouriu	m		2 in	Keannin	griot	0 h	rs.	Rea	ining Dis	0	m							
	Pulse Ht Thresh	Min P	ulse W	/dt N	/lax Pulse	Wdt	Digit Time T/F			Arc T/F An		gle	On Botte	om H	ours		Serv	ice									
										in		0 deg			14.8 h	rs.	lso	nic-Res	-GR	-IWW							
	Conn Phase Ang	Rise C	Const	F	all Const		H2S In Well	0	amp P	ress	Signal	Streng.	Last Cas	sing	275 1	n	Don	h	742								
	Directional Driller(s	3)					Turbine RPN	1 @ Mi	in Flow	Rate	90		Turbine	T3. RPN	375 I 1@Ma	x Flo	ow Rate	11	743	m							
	and the straight the						RPM		2700	2700 FR 60		6 gpm	RPM			270	DO FR	FR 900									
	Run Objective																										
	Equipment	Pump	Hrs	SW	Tool	Equip	ment	Pump	Hrs	SW	Tool	Sensors	6		Real T	ime	.	Recor	ded	Time							
	Code MDC-DC-231	Start 0	21.9	6.1C00	s 312e	Code		Start	Cum	Vers	3120	Code MDC-D(-231		Hrs 21.9	Fail	Drilled 3	Hrs 4	Fail	Drilled							
	RGS9-AA-9556	0	21.9	5.0B0	5 9.50						-	RGS9-A	A-9556		21.9		30	4 40		304							
A	SWD8-BA-857	0	21.9	6.0B 1	2 8.25							SWD8-E	A-857		21.9		30	4 40		304							
DAT																											
ENT																											
IPMI																											
EQU																											
	Surface Sys	IDEA	L/SPN	<u>Л</u>																							
	Version	11	J7_UC_	.02	Stage Lo	nath		m	Dit	to Rond	Dict		m	Roo	ring C	an Ir											
OR	Type				Rubber	ngun	m			BIT to Bend Dist.			Bearing Gap 0			ut	t										
NOT	Size				Sleeve P	osition	in		RS	SS Type			R		Radial Bearing Play												
DΗ	Serial Number				Sleeve S	ize			RS	S Size				Thrust Bearing Play													
	Lobe Config.				Motor Fa	il			RS	S SN																	
	Max Circ Temp	4	5.00 (С	Avg ROP		30.00	m/h	r Mir	n Actl Flo	wRt	800.00 gpm		Max	k Shocl	k Du	r			sec.							
OND	Min Circ Temp	2	1.00 (C .	Max ROP		120.00 m/hr		r Avç	g PmpPre	s	2500.00	Tota	al DH S	hoc	ks (k)			k								
NG C	End Mud Wt	2	8.80 I	b/gai	Avg Surf	RPM	100.00			pPres Or	f Bot	2600.00	psi	Tur	0		CHECK	Andordrift									
ATI	End Plastic Vis	4(7.00 C	PS	Max RPN	1		125	00 Av	Surf W) BOI	BOI 2300.00		Den	oth		_	AIIUE	rufi	m.							
DER	End Yield Point	1!	5.00 C	PS	Avg Flow	Rate	825.00	gpn	n Avç	Avg Surf Tora		3.00	3.00 ft-lbs		ination					deg							
0	End Mud Resist			0.132	Max Act	FlowRt	900.00 gpm		n Ma	Max Shock L		Lev		3 Azimuth				deg		deg							
	Company	IDFS			PH		10.00			cent Sar	nd	2.00	Add	litives													
UD	Brand	KCI/F	PHPA	/Glyco	Chloride	\$	29000			cent Sol	ids	1.63	Clean]								
M	Туре	KCU			Other				Per	cent Oil		0.00															
	LCM Туре	Sand	lseal	swee	р				LCN	/I Size		fine		LCN	1 Conc	enta	tion			50							
	ВНА Туре	Rota	ry		Tur Roto	Prt #	_		Tur	bine Con	fig		Surface Screen				n										
BHA	Int TF Offset				Stator Pr	t# w Oil		bre	Pul	ser Confi	g		DFS Used														
	DD Objectives Achi	eved			If not, wi	ny?		in S.	314	2 opdein	9		ronnation					_									
	Bit Type	PDC			Other																						
	Manufacturer	Model		IADC Co	IADC Code		No. of Jets		Size of Jets		Bit TFA		Total Revs				Stick/Slip										
BIT	Hycalog	DSX195CUW				5		_	12		0.5522																
	niner Kow 8	outer	KOM 8		Dull Char RO		Location		Brr	Brng/Seals X		Gauge (1/16") 1		Other Char WT				Reason Pulled 15									
ш	Trans Fail				Jammino			1	Clie	ent Incon	V.	Г		Surface Noise				_									
LUR	Pres Incr @ Fail				Jamming	Time	hrs.			Lost Time			hrs. Down Hole No			ise	e 🗌										
FA	Trip Due to D&M				Sync Ho	ırs	hrs.			face Vib				Sur	Surface Sys Failure												
ARΥ	Good run, rop	dropp	bed be	elow	1 m/hr. F	ulled fo	or bit																				
N,																											
(THE DRILLING & MEASUREMENTS - BHA DATA												
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- 56	hlumberger					D	RILLI	NG &	MFA	SUR	FMFN	JTS	- BHA	(DA)	ΓA				Run Numbe	r		1					
													2						BHA Numb	er							
				Se	erial	Fishing Ne	ck	Stab			Bot Connec	tion	Top Conne	ction					TIME/DEPTH	DETAILS							
Item	Description	Vendor	Material	N	umber	OD	Length	OD	OD	ID	Size	Туре	Size	Туре	Len	Cum Len		1	2		3	4		5			
		UNITS				in	m	in	in	in	in		in		m	m	Date/Time	8/31/2002									
1	12 1/4" PDC Bit						0.1		12 1/4				6 5/8	Reg	0.32	0.32	Field Engineer	Chu/Willem									
2	12 1/4" NB R/R			C1	IU2151		0.59	12 1/4	8	3	6 5/8	Reg	6 5/8	Reg	2.44	2.76	Depth	1055									
3	CDR				9556	5	4.01		9 7/16		6 5/8	Reg	7 5/8	H90	7.54	10.3	Average ROP	1.94									
4	PowerPulse				231	1	7.92		8 3/8		7 5/8	H90	6 5/8	FH	8.38	18.68	Avg. Std. Pres.	2900									
5	ILS			31	3272-2		0.88	12 1/4	8 1/2		6 5/8	FH	6 5/8	FH	1.71	20.39	Desurger 1	1800									
6	Isonic				857	7	1.65		8 3/8		6 5/8	FH	6 5/8	Reg	7.2	27.59	Desurger 2	1800									
7	12 1/4" Stabiliser R/R			C1	1U2143		0.95	12 1/4	8	2 15/16	6 5/8	Reg	6 5/8	Reg	2.44	30.03	Tur. RPM @ FR	2773									
8	8" DC			14	4-22		0.56		8	2 3/4	6 5/8	Reg	6 5/8	Reg	9.24	39.27	FR @ Tur. RPM	666									
9	12 1/4" Stabiliser R/R			C1	1U2144		0.96	12 1/4	8	2 15/16	6 5/8	Reg	6 5/8	Reg	2.44	41.71	Avg. RPM	82									
10	9 x 8" DC				144	ı	0.5		8	2 15/16	6 5/8	Reg	6 5/8	Reg	83.29	125	Max RPM	100									
11	Jar			48	907C		0.61		8	3	6 5/8	Reg	6 5/8	Reg	9.71	134.71	Total Shocks	832.448									
12	2 x 8" DC				144	l I	0.59		8	2 3/4	6 5/8	Reg	6 5/8	Reg	18.75	153.46	Max Shock	60									
13	х/О			14	4-025		0.66		8 1/4	2 7/8	6 5/8	Reg	4 1/2	IF	1.17	154.63	Avg. Surf. WOB	20									
14	HWDP										4 1/2	IF	4 1/2	IF	110.72	265.35	Max Surf. WOB	30									
15																	Avg. DH WOB										
16																	Max DH WOB										
17																	Avg. Surf. Torq.	2.5									
18																	Max Surf. Torq.	e									
19																	Avg. DH Torq.										
20																	Max DH Torq.										
21																	Formation Type	Coarse SSt									
22																	Friction										
23																	Drag Up										
24																	Drag Down										
								Hookload			lbs	Wt. B	elow Jars	60000	lb	S	Mud Weight	8.8									
								Pickup Wt			lbs	Wt. A	bove Jars		lb	S	Funnel Vis.	40									
								Slack Wt.			lbs	Total	Air Wt.		lb	s	Plastic Vis.	7									
РКЕ	ENDENCY																Circ. Temp	45									
																	Signal Strength	40									
																	Bit Deviation	0.83									
																	Differential Pres.										
		Mid Pt	To	BLADE			GAUGE		Bit To Read	l Out Port			Bit To Measu	rement Po	rt		BATTERY	Unloaded	V) Loade	d (V)	Run Hr	s	Cum Hrs				
Stabiliz	er Description	Bit	Туре	Length	Width	Length	In	Out	PPL		12.16 m		D&I PPL		14.55 m		Tool	Before	After Befo	e After	BOT	AMP	BOT	AMP			
	UNITS	m		in	in	in	in	in	CDR		6.34 m		GR PPL		13.94 m												
									ISONIC		_{25.34} m		GR LWD		_{8.65} m												
											m		RES LWD		5.17 m												
											m		SON LWD		_{25.73} m												
											m				m												
											m				m												

DRILLING & MEASUREMENTS - TIME/DEPTH COMMENTS

PAGE 1

Job Number: AWA-02-15

			Run Number: 1
	-		
Date	rime	Depth	uperating Details
29-Aug-02	22.05		CDR Tool Initialised
277109 02	22:36		Isonic Tool Initialised
30-Aug-02	1:50		Make up BHA
	5:00		Tools below Rotary table
	9:20	698.00	Set bit depth during top drive service
	10:08	717.71	Tag cement
	15:00	754.52	Leak off test
	18:00	775.00	SHOCKS the PP is reading Shocki= 15 cps; shkpk avg = 100 g's ; shkpk max = 300 g's ; cdrshkl =3 ; sonshk =3
	22:00	950.00	Shocks present at same levels as before but subsided at around 950 m to zero
31-Aug-02	1:40	1044.00	Rmf=0.125 ohm @ 22.4 deg C, Rm=0.132 ohm @ 21.8 deg C, Rmc=0.182 ohm @ 21.4 deg C
	2:00	1051.00	ROP slowed down significantly from about an average of 40 m/hr to around and below 1 m/hr
	11:00	1056.00	Start to pull bit due to slow ROP
	14:00		Tools above rotary table - downloaded CDR and ISONIC

0	Schlumber	ger	ı			DR	ILLING a	& M	EAS	UREN	MEN	rs - Rl	JN SU	IMI	MAF	RY				
	Job Numbe	er		Со	mpany Rep).	Date In			Date Ou	ut		D&M Ru	ın Nu	umber		Rig	Run Nu	mber	
	AWA-02-1	15 NTOG	Не	nry F	link, S.Ho	dgetts	31-A	ug-02			2-Sep-	-02	-	2	2				4	
	Company SA Rig Name Oc	ean B	ounty	/	Grid	-1.07	Good Run	immary	1				BIT RUN	Num	ber 2		Cei Wi	i Manaq Ilem B	er erth	eux
	Well Name Ca	sino-1			Tot (Corr	Hole Depth						D&M Cr	ew	-					
	Location Ot	way B	asin			11.94	From 1	056 r	n	То	1400.0	00 m	W.Ber	theu	их, С.Т	ue,	C.Bo	rbas		
	Mapfile		Ma	g Dec	PP S	lot ID	Inclination (Drift)	hor	То	1 0	7 dog	Pumping	д Ноц 1 с	urs D 50 h	rc	Bel	ow Rota	ry Tł	ol Hrs
	BPS	Freau	encv	1	Mod Type		Azimuth	1.2 (Jey	10	1.0	n ueg	Rotary H	lours	3.30 11	13.	Rot	ary Dist	ance	1113.
NOI.	6.4	16	,		QPSK		From 19	1.94 (deg	То	209.0)6 deg	,	15	5.70 h	rs.		3	44.00) m
MAT	Pump Type	Pump	Outpu	t I	Pump Strk	en.	True Vertica	l Depth	ı				Slide Ho	ours			Slic	e Dista	nce	
FORI	12-P-160	603	10		12		From 1	056 r	n /=+== 5	To	1400.0	0 m	Daillia a l		0 h	rs.	Dell	line Die	() m
N I N	Pump Liner ID 6	IVIIN D	LS	0.03	Wax DLS	0 14	12.25 in	V	70 5	m	Air Ga	ր 15 m	Drilling	Hour 15	s 5 70 h	rs	Dri	iing Dis 3	anco 44 00) m
RU	Bent Sub Angle	Bent I	HSG Ar	ng l	Depth Max	DLS	RKB Height	G	round	Elev.	Mod G	Sap	Reamin	g Hou	urs		Rea	iming D	stan	се
	0.00 deg		de	eg	1041.08	m	0 m			m	0.1	2 in			0 h	rs.			() m
	Pulse Ht Thresh	Min P	ulse W	/dt I	Max Pulse	Wdt	Digit Time	T.	/F Arc	la.	T/F An	igle Ordora	On Botto	om H	ours		Ser	vice	- C	
	Conn Phase Ang	Rise (Const		Fall Const		H2S In Well	D	amp P	ress	Signal	Streng.	Last Cas	ina Sina	5.70 N	15.	ISC	nic-re	5-6	K-1VV VV
	deg			1						psi	95	5	Size	13.	375 i	n	Dep	th	74	3 m
	Directional Driller(s)					Turbine RPN	1 @ Mi	n Flow	Rate			Turbine	RPM	1 @ Ma	x Flo	ow Rat	е		
							RPM	27	/00.00	FR	845.0	0 gpm	RPM		29	50.0	00 FR	8	30.00) gpm
	Run Objective	Duran	Une	CIA	/ Tool	E audia		Duran	Line	CIM	Teel	6			DealT			Dee		Time
	Equipment Code	Pump Start	Cum	Ver	rs Size	Code	ment	Pump Start	Cum	Vers	Size	Code	5		Real I Hrs	rme Fail	Drille	Hrs	Fai	I Drilled
	MDC-DC-231	21.9	40.4	6.1C0	0 8.25							MDC-D0	C-231		18.5		3	44	C]
	RGS9-AA-9556	21.9	40.4	5.0B0	9.50							RGS9-A	A-9556		18.5		3	44 3	6	344
ΤA	SWD8-BA-857	21.9	40.4	6.0B	12 8.25							SWD8-E	3A-857		18.5		3	44 3	6 L	344
T D∕					_													_	╞	
JEN.																		+	F	
UIPN]
EO]
	Curfe e a Cure			4			-							1				r –		
	Version	IDEA	D7_0C_	.02	-		-+													
	Manufacturer				Stage Le	ngth		m	Bit	to Bend	Dist.		m	Bea	iring Ga	ap Ir	ı		_	
TOR	Туре				Rubber				RSS	S Mfr				Bea	iring Ga	ap O	ut			
.0M	Size				Sleeve P	osition			RSS	6 Туре				Rad	ial Bea	iring	Play			
ΡH	Serial Number				Sleeve S	ize	_	in	RSS	S Size				Thru	ust Bea	aring	j Play			
	Lobe Config.	-		_	Motor Fa	II			RSS	SSN								_	_	
D.	Max Circ Temp	5	8.00		Avg ROP		20.00	m/hi	r Mir	Actl Flo	wRt	845.00) gpm	Max Toto	K Shocl	k Du	r kc (k)			Sec.
CON	End Mud Wt	4	8.80 I	b/aa	Avg Surf	RPM	33.00	95.0	00 Pm	pPres Or	n Bot	3390.00	, psi psi	1012			CHEC	< <u>SHOT</u>		N
ING	End Funnel Vis	4	B.00 C	PS PS	Min RPN			80.0	00 Pm	pPres Of	f Bot	3300.00	psi	Тур	е			And	erd	rift
RAT	End Plastic Vis	1	1.00 C	PS	Max RPN	1		100.0)0 Avg	Surf W	OB	25.00) Ibs	Dep	oth					m
OPE	End Yield Point	2	3.00 C	PS	Avg Flow	Rate	860.00	gpm	Avç	g Surf To	rq	2.90	ft-lbs	Incl	ination					deg
	End Mud Resist	_		0.123	3 Max Act	FlowRt	880.00	gpm	Ma	x Shock	Lev		3	Azin	muth					deg
	Company	IDFS		10.	PH			10.0	00 Per	cent Sar	nd	0.50) %	Add	litives	_		_		_
JUD	Brand	KCI/F	тнра	ыус	Cuntoride:	5		2900	JU Per	cent Sol	Ids	2.01	% %	Clea	an	_				
~	гуре I СМ Туре	Sand	ادمك	SMPC	omer				Per	A Size		0.0L	70	LCM	1 Conce	ente	tion			50
		Data	iseai .	30000	Tur Data	Det #			Tur	hina Can	fia	line		Curf	food Cr		n	-	-	- 30
Δ	Int TF Offset	Rola	i y		Stator Pr	t#			Pul	ser Confi	ia			DES	Used	ree		-	L 	
BH/	Low Oil Flag				Hrs @ Lo	w Oil		hrs.	Sta	b Spacin	ig		in	DFS Used Formation						
	DD Objectives Ach	ieved			If not, wh	ıy?														
	Bit Type				Other															
L	Manufacturer	Mode	I		IADC Cod	le	No. of Jet	s	Size	e of Jets		Bit TFA		Tota	al Revs			Stick/S	lip	
В	Smith	MJ3163 Outer Row Dull Char					3 Location		Rrn	16 a/Sealc		Gauge (1/	16")	Othe	er Char			Reaso	1 Pul	led
	1	outel	1		V	VT	A		ып	E		1/ ⁻	16	Jun	E Cridi	R		neasu	ui 15	5
ų	Trans Fail				Jammino		Г	٦	Clie	ent Incon	IV.	Г	٦	Surf	face N	oise				1
ILUR	Pres Incr @ Fail				Jamming	Time		hrs.	Los	t Time			hrs.	Dow	vn Hole	No	ise		<u>_</u>]
FA	Trip Due to D&M	&M Sync Hours			irs		hrs.	Sur	face Vib		[Surf	face Sy	/s Fa	ilure		Ε		
ARY	Good run Poo	h for F	ROP's																	
Z																				

		DRILLING & MEASUREMENTS - BHA DATA																Job Number		1	WA-02-1	15	
SC	hlumberger					D	RILLI	NG &	' MEA	SUR	emen	ITS	- BHA	DAT	ΓA				Run Number			2	
																			BHA Number				
				Se	erial	Fishing Ne	ck	Stab			Bot Connec	tion	Top Conne	ction					IME/DEPTH D	ETAILS			
Item	Description	Vendor	Material	Nu	umber	OD	Length	OD	OD	ID	Size	Туре	Size	Туре	Len	Cum Len		1	2	3		4	5
		UNITS				in	m	in	in	in	in		in		m	m	Date/Time	9/1/2002	9/1/2002	!			
1	12 1/4" PDC Bit						0.1		12 1/4				6 5/8	Reg	0.32	0.32	Field Engineer	Chu	C.Borbas				
2	12 1/4" NB R/R			C1	1U2151		0.59	12 1/4	8	3	6 5/8	Rea	6 5/8	Rea	2.44	2.76	Depth	1125	1340)			
3	CDR				9556		4 01		9 7/16		6 5/8	Rea	7 5/8	HOU	7 54	10.3	Average ROP	16	20				
4	PowerPulse				231		7.92		8.3/8		7 5/8	H90	6 5/8	FH	8.38	18.68	Ava. Std. Pres.	2861	3200)			
5	ILS			31	3272-2		0.88	12 1/4	8 1/2		6 5/8 F	FH	6 5/8	FH	1.71	20.39	Desurger 1	1800	1800)			
6	Isonic				857	,	1.65		8 3/8		6 5/8 F	FH	6 5/8	Reg	7.2	27.59	Desurger 2	1800	1800)			
7	12 1/4" Stabiliser R/R			C1	1U2143		0.95	12 1/4	8	2 15/16	6 5/8 F	Reg	6 5/8	Reg	2.44	30.03	Tur. RPM @ FR	2812	2929	,			
8	8" DC			14	4-22		0.56		8	2 3/4	6 5/8 F	Reg	6 5/8	Reg	9.24	39.27	FR @ Tur. RPM	846	860	1			
9	12 1/4" Stabiliser R/R			C1	1U2144		0.96	12 1/4	8	2 15/16	6 5/8 F	Reg	6 5/8	Reg	2.44	41.71	Avg. RPM	95	90	1			
10	9 x 8" DC				144	l I	0.5		8	2 15/16	6 5/8 F	Reg	6 5/8	Reg	83.29	125	Max RPM	110	110	,			
11	Jar			48	907C		0.61		8	3	6 5/8 F	Reg	6 5/8	Reg	9.71	134.71	Total Shocks	0	0				
12	2 x 8" DC				144	l I	0.59		8	2 3/4	6 5/8 F	Reg	6 5/8	Reg	18.75	153.46	Max Shock	0	0	,			
13	X/O			14	4-025		0.66		8 1/4	2 7/8	6 5/8 F	Reg	4 1/2	IF	1.17	154.63	Avg. Surf. WOB	15	32	!			
14	HWDP										4 1/2 I	IF	4 1/2	IF	110.72	265.35	Max Surf. WOB	32	45	i			
15																	Avg. DH WOB						
16																	Max DH WOB						
17																	Avg. Surf. Torq.	2.8	3	i			
18																	Max Surf. Torq.	5.1	5.5	, 			
19																	Avg. DH Torq.						
20																	Max DH Torq.						
21																	Formation Type						
22																	Friction						
23																	Drag Up						
24																	Drag Down						
								Hookload			lbs	Wt. B	elow Jars	70000	lb	S	Mud Weight	8.8	8.8	6			
								Pickup Wt			lbs	Wt. A	bove Jars		lb	S	Funnel Vis.	48	48	ś			
DDC								Slack Wt.			lbs	Total	Air Wt.		lb	S	Plastic Vis.	12	12				
T	ENDENCY																Circ. Temp	44	55	i			
																	Signal Strength	37	25	;			
																	Bit Deviation	1.29	1.29	,			
																	Differential Pres.						
		Mid Pt To		BLADE			GAUGE		Bit To Read	d Out Port			Bit To Measu	rement Po	rt		BATTERY	Unloaded (/) Loaded	(V) F	≀un Hrs	Cur	n Hrs
Stabilize	er Description	Bit	Туре	Length	Width	Length	In	Out	PPL		12.03 m		D&I PPL		14.42 m		Tool	Before	After Before	After	BOT A	VP B	OT AMP
	UNITS	m	Т	in	in	in	in	in	CDR		6.21 M		GR PPL		13.81 m								
									ISONIC		25.21 m		GR LWD		_{8.52} m								
											m		RES LWD		5.04 m		_						
											m		SON LWD		_{25.6} m								
											m				m								
								m				m											

DRILLING & MEASUREMENTS - TIME/DEPTH COMMENTS

PAGE 1

Job Number: AWA-02-15

			Run Number: 2
Date	Time	Depth	Operating Details
31-Aug-02	14:38		Isonic Tool Initialised
0	15:09		CDR Tool Initialised
	15:30	0.00	Tools below Rotary table
	18:05	39.00	SHT (good)
	21:00	1059.00	High pressure with low pump stroke, blockage suspected, POOH
01-Sep-02	0:10		Bit out of hole with two blocked nozzles, changed bit, RIH
	2:25	150.00	SHT (good)
	3:40	756.00	Run to shoe, test realtime data from MWD (good).
	4:30	1059.00	Lag bottom.
02 500 02	10:45	1400.00	Start Circulating, POOH for bit change
02-Sep-02	4.20 5·/0		CDR ABT, dumped on the drill floor and initialized for next run
	J.40		
			Rm = 0.135ohmm @ 21.deaC. Rmf = 0.127ohmm @ 20.deaC. Rmc = 0.19.ohmm @ 21.deaC.
	_		

	Schlumber	ger	1			DR	ILLING a	& M	EAS	UREN	/IEN ⁻	rs - Rl	JN SU	IMI	MAF	RY				
		r 5	LL-	Co	mpany Rep	daotte	Date In	00.02		Date Ou	it 2 Sor	02	D&M Ru	ın Nu	umber 2		Rig R	un Num	iber	
	AWA-02-1 Company SA	5 NTOS	He	nry F	Grid (agetts Corr	2-S€ Brief Run Su	p-02	v		3-Sep	-02	Bit Run I	Num	3 ber		Cell I	Manage	5 r	
	Rig Name Oc	ean B	ounty	/		-1.07	Good Run		,					:	3		Will	em Be	rthe	eux
	Well Name Cas	sino-1	<u>.</u>		Tot C	orr	Hole Depth	400		L	4707.4		D&M Cr	ew	0.7	-				
	Location Otv Manfile	vay B	asin Ma	a Dec	DD SI	11.94	From 1	400 I	m	То	1/9/.(00 m	W.Bert	theu	JX, C. I	ue,	C.Bor	Das N Rotar	v Thi	Hrc
	wapine		IVIA	y Dec 1	0.86		From	1.87 (deq	То	4.3	38 deg	Fumping	26	6.20 hi	rs.	Belo	4().30	hrs.
7	BPS	Frequ	ency	N	Aod Type		Azimuth		Ū				Rotary H	lours	6		Rota	y Dista	nce	
TION	6.4	16		(2PSK		From 18	2.17 (deg	То	192.3	34 deg		16	6.18 hi	rs.		39	7.00	m
MA	Pump Type	Pump	Outpu	t F	Pump Strk L	en.	True Vertica	I Depti	h	I	170/ 1)7 m	Slide Ho	ours	0.00 h		Slide	Distand	ce	
JFOF	12-P-100 Pump Liner ID	003 Min D	IS	N	Aax DLS		Hole Size	400 I	Vater F	lopth	Air Ga	0	Drilling H	Hour	J.00 III	15.	Drilli	na Dista	J.00	111
JI N	6			0.03		0.11	12.25 in		70.5	m	2	25 m	5	16	6.18 hi	rs.		39	7.00	m
RL	Bent Sub Angle	Bent H	ISG Ar	ng E	Depth Max I	DLS	RKB Height	G	Ground	Elev.	Mod 0	Sap	Reaming	g Hou	urs		Rean	ning Dis	tanc	e
	deg		de	g	1775.86	m	0 m			m	0.1	l2 in		(0.00 hi	rs.		(0.00	m
	Pulse Ht Thresh	Min P	ulse W	/dt M	Max Pulse V	Vdt	Digit Lime	1	/F Arc	in	I/F Ar	den	On Botto	om H 1 <i>4</i>	ours 6.18 hi	rs	Ison	ce ic-Res	-GR	2-1\//\//
	Conn Phase Ang	Rise C	onst	F	all Const		H2S In Well	D)amp P	ress	Signal	Streng.	Last Cas	sing	5.10 11	13.	1301			
	deg									psi			Size	13	3.38 ii	n	Dept	n 743	3.00	m
	Directional Driller(s	5)					Turbine RPN	1@ Mi	in Flow	Rate			Turbine	RPM	1@ Ma	x Flo	ow Rate			
	Pup Objective						RPM	20	600.00	FR	800.0	JU gpm	RPM		27	00.0	JU FR	830	J.00	gpm
	Fauinment	Pump	Hrs	SIA	Tool	Equips	nent	Pump	Hrs	SW	Tool	Sancor			Real	imo		Recor	ded	Time
	Code	Start	Cum	Ver	s Size	Code	nem	Start	Cum	Vers	Size	Code	>		Hrs	Fail	Drilled	Hrs	Fail	Drilled
	MDC-DC-231	40.4	66.6	6.1C0	0 8.25							MDC-DO	2-231		26.2		39	7		
	RGS9-AA-9556	40.4	66.6	5.0B0	5 9.50							RGS9-A	A-9556		26.2		39	7 40.3		397
٩TA	SWD8-BA-857	40.4	66.6	6.0B 1	2 8.25						-	SWD8-E	SA-857		26.2		39	/ 40.3		397
T D/											-									
VIEN																				
IUIPI																				
EC																				
	Surface Svs																			
	Version																+			
	Manufacturer				Stage Ler	gth		m	Bit	to Bend	Dist.		m	Bea	iring Ga	ap Ir	1			
TOR	Туре				Rubber				RSS	6 Mfr				Bea	iring Ga	ap O	ut			
I MO	Size				Sleeve Po	sition			RSS	6 Туре				Rad	ial Bea	ring	Play			
DF	Serial Number				Sleeve Siz	e.		in	RSS	S Size				Thru	ust Bea	aring	Play	_		
	Lobe Coning.	E	0.00	<u>_</u>			2E 00		r Mie		Dł	000.00	anm		Charl	. D.	_		0.00	
ID.	Max Circ Temp Min Circ Temp	55	7.00 (r r	AVG ROP		25.00	m/n	r Avo	1 ACTI FIO	wrt	3200.00	gpm	Max Tota	A Shock	k Du	r ks.(k)	().00).00	sec. k
CON	End Mud Wt	(7.90 I	b/ga	Avg Surf F	RPM	10.00	140.0	00 Pm	pPres On	Bot	3400.00	psi				CHECK	SHOT		R
DNI.	End Funnel Vis	54	4.00 C	PS	Min RPM			110.	00 Pm	pPres Of	f Bot	3100.00	psi	Тур	е					
ERAT	End Plastic Vis	18	3.00 C	PS	Max RPM			170.	00 Avg	g Surf WO)B	14.00	lbs	Dep	oth					m
OPI	End Yield Point	32	2.00 C	PS	Avg Flow	Rate	810.00	gpm	n Avg	Surf To	rq	7.00	ft-lbs	Incl	ination					deg
	ena Mua Resist	IDEC		U. 165	Wax Actl	riowRt	830.00	gpm	1 Ma	x Shock	Lev	C 01	0	Azin	nuth		-	_		aeg
0	Company Brand		нрл	Glyc	PH		-	9. 200	OU Per	cent Sar	id ids	0.00	%	Add	an		_	-		1
MUL	Туре	KCI		Siye	Other			270	Per	cent Oil		0.00	%	0.00		_		-		
	LCM Type								LCN	/ Size		5.00		LCN	1 Conce	enta	tion			
	ВНА Туре	Rota	ry		Tur Rotor	Prt #			Tur	bine Con	fig			Surf	face So	cree	n		Г	1
A	Int TF Offset				Stator Prt	#			Pul	ser Confi	g			DFS	Used			-]
BF	Low Oil Flag				Hrs @ Lov	v Oil		hrs.	Sta	b Spacin	g			Forr	mation					
	DD Objectives Achi	eved			If not, wh	/?														
	Bit Type	N4 ·			Other		N		6			DH TC -		T		_		NI . 1. 1911		
L	smith	Smith MJ3163						s	Size	e or Jets 16		BIT IFA		Tota	al Revs			stick/Sli	р	
61	Inner Row	er Row Outer Row Dull Char					Location		Brn	g/Seals		Gauge (1/	16")	Othe	er Char		1	Reason	Pulle	ed
	1	1 8 LT					S			Х		Gauge	(1/16")		С	Т			15	
IRE	Trans Fail				Jamming				Clie	ent Incon	V.			Surf	face No	oise				
AILU	Pres Incr @ Fail	Incr @ Fail Jamming Tir			Time		hrs.	Los	t Time	_		hrs.	Dow	vn Hole	No	ise	_			
ΥĘ	Good rup Bull	d bit	for P	ገD'ሳ	Sync Hou	is 1 a bar	d formatio	nrs.	Sur	iace Vib	ONIC	after the		Surf	race Sy	is Fa	ssible	West		aiver 4
1 MAR	Reprocessed	ut rece	eiver 4.	Laj	, 54 01				. un Del	Juus		. pu	551016	uki						

																			Job Number		AWA	4-02-15	
- 26	hlumberger	1				D	RILLI	NG &	' MEA	ASUR	emen	ITS	- BHA	(DA1	ΓA				Run Number			3	
																			BHA Number	•			
				Se	rial	Fishing Ne	ck	Stab			Bot Connec	tion	Top Conne	ction					TIME/DEPTH D	ETAILS			
Item	Description	Vendor	Material	Nu	mber	OD	Length	OD	OD	ID	Size	Гуре	Size	Туре	Len	Cum Len		1	2	3	4		5
		UNITS				in	m	in	in	in	in		in		m	m	Date/Time	9/2/2002	9/2/2002	2 3-Se	р		
1	12 1/4" PDC Bit						0.1		12 1/4				6 5/8	Reg	0.37	0.37	Field Engineer	Chu\WB	C.Borbas	Chu			
2	12 1/4" NB R/R			C1	U2151		0.59	12 1/4	8	3	6 5/8	Rea	6 5/8	Rea	2.44	2.81	Depth	1408	170	7 177	0		
3	CDR				9556		4.01		9 7/16		6 5/8	Reg	7 5/8	H90	7 54	10.35	Average ROP	13	2(2	6		
4	PowerPulse				231		7.92		8 3/8		7 5/8	H90	6 5/8	FH	8.38	18.73	Ava. Std. Pres.	2997	3400	326	1		
5	ILS			313	3272-2		0.88	12 1/4	8 1/2		6 5/8	FΗ	6 5/8	FH	1.71	20.44	Desurger 1	1800	1800	220	0		
6	Isonic				857		1.65		8 3/8		6 5/8	Η	6 5/8	Reg	7.2	27.64	Desurger 2	1800	1800) 220	0		
7	12 1/4" Stabiliser R/R			C1	U2143		0.95	12 1/4	8	2 15/16	6 5/8	Reg	6 5/8	Reg	2.44	30.08	Tur. RPM @ FR	2812	269	5 269	5		
8	8" DC			144	1-22		0.56		8	2 3/4	6 5/8	Reg	6 5/8	Reg	9.24	39.32	FR @ Tur. RPM		808	8 82	8		
9	12 1/4" Stabiliser R/R			C1	U2144		0.96	12 1/4	8	2 15/16	6 5/8	Reg	6 5/8	Reg	2.44	41.76	Avg. RPM	154	13	5 15	5		
10	9 x 8" DC				144		0.5		8	2 15/16	6 5/8	Reg	6 5/8	Reg	83.29	125.05	Max RPM	160	150) 17	7		
11	Jar			489	907C		0.61		8	3	6 5/8	Reg	6 5/8	Reg	9.71	134.76	Total Shocks	0	()	0		
12	2 x 8" DC				144		0.59		8	2 3/4	6 5/8	Reg	6 5/8	Reg	18.75	153.51	Max Shock	0	()	0		
13	х/о			144	1-025		0.66		8 1/4	2 7/8	6 5/8	Reg	4 1/2	IF	1.17	154.68	Avg. Surf. WOB	7	2	12.	8		
14	HWDP										4 1/2	F	4 1/2	IF	110.72	265.4	Max Surf. WOB	8.1	20	5 18	3		
15																						_	
16																	Max DH WOR						
10													-						12.1)	4		
10																	Max Surf Torg	7 10	12.4	1 11	7		
10																	Ava DH Tora	7.17	1.		/	_	
20																	May DH Torg						
20																	Formation Type						
22																	Friction						
22																	Drag Up						
24																	Drag Down						
								Hookload				Wt B	elow lars				Mud Weight		90	0 0	9		
								Dickup W/t				\A/+ A	hovo lars	70000			Funnal Vis		5	1 5	4		
								Slack Wt	•			Total	Air W/t				Plastic Vis		J. 11	2 1	9		
PRE	DICTED BHA							SIGCK WL.			_	Total	All WL				Circ Temp		50	5	0		
1	ENDENCY																Signal Strength		21	,	2		
																	Pit Doviation		2.	2			
																	Differential Pres			-			
				DIADE			0.41105		D'' T. D.			1	D'I T. M.				Differential Fles.			A.A			
		Mid Pt T		BLADE			GAUGE		BIT TO Read	J OUT Port	11.2 m		BIL TO Measu	ement Por	12 47 m		BATTERY	Unioaded (v) Loaded	(v) Run	HIS	Cum Hrs	S
Stabiliz	er Description	Bit	Туре	Length	width	Length	in ia	Out	CDD		4.04 m		DAI PPL		12.0/ 00		1001	Before	Arter Before	After B	JI AMP	BOT	AMP
	UNITS	m		in	III	(f1	in	in			0.00 11		GR PPL		13.80 11							+	
			+						ISONIC		25.26 11		GRLWD		8.2 11							—	
											m		RES LWD		4.72 m								
											m		SON LWD	_	25.28 m							—	
											m				m							4	
											m				m								

DRILLING & MEASUREMENTS - TIME/DEPTH COMMENTS

PAGE 1

Job Number: AWA-02-15

			Run Number: 3
Dete	T:	Dauth	
Date	Time	Depth	operating Details
02-Sep-02	4:20		Initialized Isonic
	5:15		Initialized CDR
	5:40		Tool BRT
	7:10	154.68	SHT (good)
03-Sep-02	0:26	1760	5% gas detected in return mud, stop drilling to circulating gas up.
	2:40	1794.00	
	4:15	1/89.00	Rmf=0.145 ohm @ 20.9 deg C, Rm =0.165 ohm @ 20.08 deg C, Rmc =0.207 ohm @ 20.07 deg C
	13:00	1707.00	Gas (28%) comes up while pooling out of hole, run back to bottom and circulating.
	9.00 22.00	1797.00	Tiols above retary table
	22.00		
04-Sep-02	2:00		Dump Isonic
0100002	2.00		
I			
		1	
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L			
L	<u> </u>		
•	1		

	Schlumber	ger	1			DR	ILLING a	& M	EAS	UREN	/IEN]	TS - RI	JN SU	IM	MAF	RY				
	Job Numbe	r		Cor	mpany Rep		Date In			Date Ou	ıt		D&M Ru	ın Nu	umber		Rig	Run N	umber	
	AWA-02-1	5	He	nry Fl	link, S.Ho	dgetts	3-Se	ep-02		ſ	12-Sep	-02			4				6	
	Company SA Rig Name Oc	NTOS	Ltd		Grid (0rr	Brief Run Su Bad weath	immar <u>:</u> Dor (s		mmonte	-)		Bit Run	Num	ber 1		Cel	Mana Ilom F	jer ortha	VIIC
	Well Name Cas	sino-1	ounty		Tot C	orr	Hole Depth			minerita	5)		D&M Cr	ew .	-				CILIE	Sux
	Location Otv	vay B	asin			11.94	From 1	797	m	То	179	97 m	W.Ber	theu	их, С.Т	Tue				
	Mapfile		Ma	g Dec	PP SI	ot ID	Inclination (Drift)		I			Pumpino	д Ноц	urs		Bel	ow Rot	ary Tb	l Hrs
	DDC	From	anav	1	0.86		From	4.38	deg	10	4.3	38 deg	Potony L	Jourg	6.2 h	rs.	Pot	any Die	92.50	hrs.
NO	6 4	rrequi	ency	C			From		dea	То		dea	Rotary F	10013	, 0 h	rs	KUL	ary Dis	ance 0	m
1 ATI	Ритр Туре	Pump	Outpu	t P	Pump Strk L	en.	True Vertica	l Dept	h			9	Slide Ho	ours	0 11		Slic	e Dista	nce	
ORN	12-P-160	603		1	12		From 179	6.27	m	То		m			0 h	rs.			0) m
INF	Pump Liner ID	Min D	LS	Ν	Max DLS		Hole Size	V	Vater D	epth	Air Ga	ip NF	Drilling	Hour	s		Dril	ling Di	tance	2
RUN	0 Bent Sub Angle	Bent F	ISG AI	na f	enth Max	פומ	IZ.25 IN RKB Height	C	70.5 Ground	m Flev	Z Mod G	25 M Gan	Reaming	n Hoi	U N	rs.	Rea	mina [U	m re
	deg	Donti	de	eg s	optin max i	m	0 m		Jiounu	m	0.1	12 in	nounni	9.100	0 h	rs.			0) m
	Pulse Ht Thresh	Min P	ulse W	/dt N	/lax Pulse \	Vdt	Digit Time	Т	/F Arc		T/F An	igle	On Botto	om H	ours		Ser	vice		
										in		deg			0 h	rs.	lso	nic-R	∋s-GF	R-IWW
	Conn Phase Ang	Rise C	Const	F	all Const		H2S In Well	C	Damp P	ress	Signal	Streng.	Last Cas	sing 1'	2 20 1	n	Dor	th	742	m
	Directional Driller(s	5)					Turbine RPN	1 @ Mi	in Flow	Rate	<u> </u>		Turbine	RPN	1.30 I 1@Ma	ix Flo	ow Rat	e	743	
							RPM			FR		gpm	RPM				FR			gpm
	Run Objective	TD																		
	Equipment Code	Pump	Hrs	SW	Tool	Equip	ment	Pump	Hrs	SW	Tool	Sensor	3		Real T	ime	Della	Rec	orded	Time
	MDC-DC-231	5tart 66.6	72.8	6.1C00	0 8.25	code		Start	Cum	vers	5120	MDC-DO	2-231		ні s 6.2		Drilled	0		Drilled
	RGS9-AA-9556	66.6	72.8	5.0B0	5 9.50							RGS9-A	A-9556		6.2			0	0	0
A	SWD8-BA-829	0	6.2	5.0B10	0 8.25							SWD8-E	A-829		6.2			0	0	0
DAT																				
ENT																				
PMB																		_		
IUD																	_		1	
											-									
]	
	Surface Sys	IDEA	L/SPN	Л																
	Version	10	D7_0C_	.02															_	
R	Manufacturer 				Stage Ler	gth		m	Bit	to Bend	Dist.		m	Bea	iring G	ap Ir	ו 			
IOTC	Type Size				Sleeve Po	sition			RSS					Bea Rad	iring G	ap U aring	ı Plav	_		
ΝH	Serial Number				Sleeve Siz	ze		in	RSS	Size				Thru	ust Bea	aring	Play	-		
	Lobe Config.				Motor Fai	1]	RSS	S SN										
	Max Circ Temp	43	3.00 (С	Avg ROP			m/h	r Mir	Actl Flo	wRt		gpm	Max	k Shocl	k Du	r			sec.
ND.	Min Circ Temp	3	7.00 (С	Max ROP			m/h	r Avg	PmpPre	S		psi	Tota	al DH S	hoc	ks (k)			k
G CC	End Mud Wt	1(0.30 I	b/gal	Avg Surf F	₹PM			Pmj	pPres On	Bot		psi				CHEC	K SHO1		
ΤIΝ	End Funnel Vis	64	4.00 C	PS	Min RPM		_		Pm	oPres Of	f Bot		psi	Тур	e					_
PER₽	End Plastic Vis	23	3.00 C	PS	Max RPM	Joto	(00.00	ann	Avg	Surf W)B		lbs ft lbc	Dep	oth			_		m
Ю	End Mud Resist	3.	2.00 C	,5	Max Act	FlowRt	650.00	gpn	i Avg n Mar	Sull Tol	Lev		n-ius 0	Azir	nuth					den
	Company	IDES			PH		000.00	0 1146	50 Por	Cent Sar	d	1.00	%	Δdd	litives					y
D	Brand	1013			Chlorides			300	00 Per	cent Soli	ids	7.28	%	Clea	an				Г	1
MU	Туре	KCI			Other				Per	cent Oil			%							-
	LCM Туре				·				LCN	/ Size				LCN	1 Conc	enta	tion			
	ВНА Туре	Rota	ry		Tur Rotor	Prt #			Tur	bine Con	fig			Sur	face So	cree	n		Ľ	
HΑ	Int TF Offset			_	Stator Prt	#			Pul	ser Confi	g			DFS	Used					
В	Low Oil Flag			_	Hrs @ Lov	v Oil		hrs.	Sta	b Spacin	g			Form	mation	_				
	טט Objectives Achi	eved			If not, wh]?													_	
	ыт туре Manufacturer	Anufacturer Model IADC Code					No. of Let	s	Size	e of Jets		Bit TFA		Tota	al Revs			Stick/	Slin	
BIT	Smith MJ3163						3		5.20	16				5.0	.515					
	Inner Row	Outer	Row		Dull Char		Location		Brn	g/Seals		Gauge (1/	16")	Oth	er Chai	r		Reaso	n Pulle	ed
	1	1 8 L					S			Х		Gauge	(1/16")		C	CT			15	
JRE	Trans Fail				Jamming				Clie	nt Incon	V.]	Sur	face N	oise]
FAILU	Pres Incr @ Fail	es Incr @ Fail Jamming Til			Time		hrs.	Los	t Time			hrs.	Dov	vn Hole	e No	ise	_		1	
ΥF	Gale force wir	rip Due to D&M Sync Ho					stop runnin	n in h	ole ar	id hand	off RI	L ∣A in R∩	_ Pand di	isco	nnect	ys ra t fr∩	m ris	er. Af	∟ ter w	J eather
MAR	get better, PO	OH du	ie to b	blocka	age of the	bit.		91	5.0 ui		5.1 DI					0		AI	٧٧	240101

	h la ser la ser ser ser s				_								_					J do L	Number			AWA-0	2-15	
- 26	aumberger				D	RILLI	NG &	ı MEA	ASUR	EME	VTS	- BHA	NDA D	ΓA				Run I	Number			4		
			-		-							-						BHA	Number					
				Serial	Fishing N	eck	Stab			Bot Connee	ction	Top Conne	ction					TIME/I	DEPTH D	ETAILS	п		п.	
Item	Description	Vendor	Material	Number	OD	Length	OD in	OD in	ID in	Size	Туре	Size	Туре	Len	Cum Len		1		2	3		4		3
		UNITS	1			III										Date/Time		_						
1	12 1/4" PDC Bit					0.1		12 1/4				6 5/8	Reg	0.34	0.34	Field Engineer							_	
2	12 1/4" NB R/R			C1U2151	_	0.59	12 1/4	8	3	6 5/8	Reg	6 5/8	Reg	2.44	2.78	Depth								
3	CDR			95	56	4.01		9 7/16	,	6 5/8	Reg	7 5/8	H90	7.54	10.32	Average ROP								
4	PowerPulse			2	31	7.92	2	8 3/8	6	7 5/8	H90	6 5/8	FH	8.38	8 18.7	Avg. Std. Pres.								
5	ILS			313272-2		0.88	8 12 1/4	8 1/2	2	6 5/8	FH	6 5/8	FH	1.71	20.41	Desurger 1								
6	Isonic			8	57	1.65	i	8 3/8		6 5/8	FH	6 5/8	Reg	7.28	27.69	Desurger 2								
7	12 1/4" Stabiliser R/R			C1U2143		0.95	5 12 1/4	8	2 15/16	6 5/8	Reg	6 5/8	Reg	2.44	30.13	Tur. RPM @ FR								
8	8" DC			144-22		0.56	j	8	2 3/4	6 5/8	Reg	6 5/8	Reg	9.24	39.37	FR @ Tur. RPM								
9	12 1/4" Stabiliser R/R			C1U2144		0.96	12 1/4	8	2 15/16	6 5/8	Reg	6 5/8	Reg	2.44	41.81	Avg. RPM								
10	9 x 8" DC			1	44	0.5	j	8	2 15/16	6 5/8	Reg	6 5/8	Reg	83.29	125.1	Max RPM								
11	Jar			48907C		0.61		8	3	6 5/8	Reg	6 5/8	Reg	9.71	134.81	Total Shocks								
12	2 x 8" DC			1	44	0.59)	8	2 3/4	6 5/8	Reg	6 5/8	Reg	18.75	153.56	Max Shock								
13	X/0			144-025		0.66	ò	8 1/4	2 7/8	6 5/8	Reg	4 1/2	IF	1.17	154.73	Avg. Surf. WOB								
14	HWDP									4 1/2	IF	4 1/2	IF	110.72	265.45	Max Surf. WOB								
15																Avg. DH WOB								
16																Max DH WOB								
17																Avg. Surf. Torg.								
18																Max Surf. Torq.								
19																Ava. DH Tora.								
20																Max DH Torg.								
21																Formation Type								
22																Friction								
23																Drag Up								
24																Drag Down								
	·	1					Hookload				Wt B	elow Jars	70000			Mud Weight								
							Pickup Wt				W/t Δ	hove lars				Funnel Vis								
							Slack Wt.				Total	Air Wt.				Plastic Vis.								
PRE	DICTED BHA															Circ Temp								
· ·	ENDENCY															Signal Strength								
																Bit Doviation		_						
																Differential Pres								
						CALLOF		Dit To Doo	d Out Dort			Dit To Monou	romont Do	rt.			Uploado	4 0 0	Loodod	0.0	Dup Uro	(um Hro	
Ctobiliz	or Decoription	Mid Pt To	Turno	Longth Width	Longth	GAUGE	Out	DDI		12 05 M			rement Po	14 44 M		DATIERT	Defere	After	Defere	(V)				
StabiliZ	LINITS	bil m	Type	in in	in	in	in			6.23 m				13.83 m		1001	Delote	Arter	Delote	Arter	BUI	AIVIP	501	AIVIP
	0.110									25 19 m				8 54 m										
			+			+		IJUNIC		m				5.04 m										_
				┨───┤───		+				m				25 E0 M										_
				┨───┤───						m				20.00 m										
				<u>├──</u>						m				m										
			1			1	1																	

DRILLING & MEASUREMENTS - TIME/DEPTH COMMENTS

PAGE 1

Job Number: AWA-02-15

			Run Number: 4
Date	Time	Depth	Operating Details
04-Sep-02	1:30		Tools BRT
			Gale force wind and high swell forced rig crew stop RIH, hang off drill string in the BOP and disconnect
			riser.
11-Sep-04		744.00	Rig stand by on weather until 11-Sep-02, weather get better, start circulating with high pressure and low flow
10.0	0.00		rate, blockage suspected, POOH.
12-Sep-04	2:00		Tools ABT. (Unsure hole condition, drilling company decide to drill ahead without MWD/LWD, final
			TD at 2118 m, run Schlumberger wireilne logging)

SECTION 4:- PRODUCTION TEST REPORTS

No production tests were conducted at the Casino-1 location.

SECTION 5:- DAILY GEOLOGICAL REPORTS

				A.C.N. 007 5	550 923			
			WELL	PROGRE	CSS REPO	ORT		
				CASIN	01			
				DATE: 27/	08/02			
				REPORT N	NO: 1			
DEPTH : 220 As at 2400 hours	m EST, 26/08/02)	P	ROGRESS:	: 90 m		I	DAYS FR	OM SPUD: 1.25
OPERATION 0600 hours EST,	: DRII 27/08/02)	LLING	445mm (17	.5") HOLE @	415m @ AV	ERAGE 4	40m/hr.	
AFE COST			CUMU	LATIVE CO	ST			
CASING DEP PROGRAMM	PTH: 128m (762 IED TD: 2276n	2mm- 3 1	0") ROTA	RY TABLE:	25m LAT	R R W	IG: OCI T – SEAF ⁄ATER D	EAN BOUNTY TLOOR: 95.5m EPTH: 70.5m
MUD DATA (2400 Hours)	Type: Gel Sweeps		Wt: V 1.06 1	/is: FL: 30	РН: КС 12.0	Cl : 150	PV/ 0 18/5	YP: Rmf: 4 -
BIT DATA (2400 Hours)	PRESENT LAST	No. 2 1	Make SMITH SMITH	Type MGSSH-C DSJC	Size (mm) 445 660	Hours 1.3 1.0	Drilled 90 35	Condition IN HOLE 1-1-NO-A-1-I-NO-TE
SURVEYS:	<u>MD</u> (m) 95 135		<u>INC</u> 0.5 2.0	<u>A</u> . - -	<u>ZIM (T)</u>			

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

WAIT ON CEMENT. LAYOUT CASING RUNNING TOOL AND CEMENT STINGER. LAYOUT 914mm (36") BOTTOM HOLE ASSEMBLY. MAKE UP 445mm (17.5") BOTTOM HOLE ASSEMBLY, DRIFTING ALL TOOLS. RUN IN HOLE TO 120m. CONTINUE TO PICK UP 5" DRILLPIPE WHILE WAITING ON SUPPLY VESSEL FOR CASING. RUN IN HOLE, TAG CEMENT @ 124.5m. DRILL SHOE TRACK & RATHOLE TO 130m. DRILL 445mm (17.5") HOLE TO 140m. SECTION. WAIT ON SUPPLY VESSEL FOR CASING. DRILL 445mm (17.5") HOLE FROM 140m TO 220m AT 24:00 HRS.

00:00 - 06:00 HOURS 27/08/02:

DRILL AHEAD 445mm (17.5") HOLE FROM 220m TO 415m WITH RETURNS TO SEAFLOOR. PUMP 8 m3 (50BBLS) HI-VISCOSITY SWEEPS EACH SINGLE.

ANTICIPATED OPERATIONS:

DRILL AHEAD TO APPROX. 800m. PULL OUT OF HOLE. RIG TO AND RUN 340mm (13 3/8") CASING.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 27/08/02

REPORT NO: 1

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	02:00	2.00	Made up 30" housing to Permanent Guide Base (PGB). Ran 30" conductor to sealevel,
			filled casing with seawater. Attempted to stab into hole, re-positioned string. Stabbed
			into hole and RIH to setting depth, no drag.
02:00	03:00	1.00	PGB slope indicator 1.25deg. Repositioned rig on anchors to correct angle to 0.75deg
			port/forward.
03:00	03:30	0.50	Circulated hole with 21 m3 (130bbls) seawater. Observed good returns.
03:30	04:30	1.00	Rigged up cement lines and pumped 0.8m3 (5 bbls) of seawater with Fluroscene dye
			ahead. Closed line at drill floor and tested lines to 6.9kPa (1000 psi), held OK. Pumped
			remaining 0.8m3 (5 bbls) of seawater with Fluroscene dye. Mixed and pumped 27.7 m3
			(174bbls) 1.9sg tail slurry at 954 lpm (6bpm), 832sxs class 'G' cement in 16.5 m3
			(104bbls) mix water with 1% CaCl2. Displaced with 4.6 m3 (28.7bbls) seawater at 800
			lpm (5bpm), final pressure 1380kPa (200psi). Bled off pressure, float held. Good
			returns throughout job.
04:30	09:00	4.50	WOC, slope indicator remained on .75 deg port/forward. Picked up DP and racked in
			derrick.
09:00	10:00	1.00	Released R/T, POOH and laid out R/T and cement stinger.
10:00	11:30	1.50	Picked up 476mm (18.75") R/T and made up single, x/o, pup. Laid out assembly.
			Drifted to 66.7mm (2.625").
11:30	14:00	2.50	Make up 445mm (17.5") BHA, gauge and drift all tools. RIH to 120m.
14:00	19:00	5.00	Wait on supply vessel with casing. P/U DP and racked back in derrick.
19:00	20:30	1.50	RIH and tagged top of cement at 124.5m. Drilled shoetrack and cleaned rathole to
			130m.
20:30	21:00	0.50	Drilled 445mm (17.5") to 140m.
21:00	22:30	1.50	Wait on supply vessel with casing.
22:30	24:00	1.50	Drilled 445mm (17.5") to 220m. Swept hole with 8 m3 (50bbls) hi-vis each single.
			Hole good.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 27/08/02

FORMATION TOPS:	MD RT	TVD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A	
						_

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u>	<u>LITHOLOGY</u>	GAS
	Nil	

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u>	LITHOLOGY	<u>GAS</u>
96 – 415m	RETURNS TO SEAFLOOR	

Santos
A.C.N. 007 550 923
WELL PROGRESS REPORT
CASINO 1

DATE: 28/08/02

REPORT NO: 2

DEPTH : 713 m (As at 2400 hours EST, 27/08/02) PROGRESS: 493 m

DAYS FROM SPUD: 2.25

OPERATION : PULLING OUT OF HOLE TO RUN 340mm (13 3/8") CASING. TOTAL DEPTH 752m. (0600 hours EST, 28/08/02)

AFE COST			CUMU	CUMULATIVE COST					
CASING DEP PROGRAMM	TH: 128m (762 IED TD: 2276m	0") ROTA) ROTARY TABLE: 25m LAT				RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m WATER DEPTH: 70.5m		
MUD DATA (2400 Hours)	Type: Gel Sweeps		Wt: 1.06	Vis: FL: 90	РН: КС 12.0	Cl : 170	PV/ 0 12/6	YP: Rmf: 51 -	
BIT DATA (2400 Hours)	PRESENT LAST	No. 2 1	Make SMITH SMITH	Type MGSSH-C DSJC	Size (mm) 445 660	Hours 23.1 1.0	Drilled 583 35	Condition IN HOLE 1-1-NO-A-1-I-NO-TD	
SURVEYS:	<u>MD</u> (m) 538 568 597 655 687 750		INC 0.5° 1° 0.5° 0.5° 0° 0°	<u>A</u> - - - - -	<u>ZIM (T)</u>				

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

DRILL 445mm (17.5") HOLE FROM 220m TO 713m AT 24:00 HRS; PUMP 8 m3 (50BBLS) HI-VISCOSITY SWEEPS EACH SINGLE.

00:00 - 06:00 HOURS 28/08/02:

DRILL AHEAD 445mm (17.5") HOLE FROM 713m TO 752m WITH RETURNS TO SEAFLOOR; PUMP 8 m3 (50BBLS) HI-VISCOSITY SWEEPS EACH SINGLE. TOTAL DEPTH FOR 445mm (17.5") SECTION REACHED AT 02:00 HRS ON 28/02/02. SWEEP HOLE WITH 24m3 (150BBLS) HI-VISCOSITY GEL MUD. DISPLACE HOLE WITH 111m3 (700BBLS) HI-VISCOSITY GEL MUD. PULL OUT OF HOLE TO RUN 340mm (13 3/8") CASING. WIPE TIGHT SPOTS BETWEEN 629m AND 396m (9-18T, 20-40KIPS OVERPULL).

ANTICIPATED OPERATIONS:

RIG TO AND RUN 340mm (13 3/8") CASING (54 JOINTS). CEMENT SAME. RIG UP TO RUN BLOWOUT PREVENTERS.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 28/08/02

REPORT NO: 2

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	06:00	6.00	Drilled 445mm (17.5") 220m to 415m. Swept hole with 8 m3 (50bbls) hi-vis each
			single. Hole good.
06:00	12:00	6.00	Drilled 445mm (17.5") to 515m. Swept hole with 8 m3 (50bbls) hi-vis each single.
			Hole good. Last survey 1 deg.
12:00	18:00	6.00	Drilled 445mm (17.5") to 626m. Swept hole with 8 m3 (50bbls) hi-vis each single.
			Hole good. Last survey 0.5 deg.
18:00	24:00	6.00	Drilled 445mm (17.5") to 713m. Swept hole with 8 m3 (50bbls) hi-vis each single.
			Hole good. Last survey 0 deg.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 28/08/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u>	<u>LITHOLOGY</u>	GAS
	Nil	

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u>	LITHOLOGY	GAS
415 – 752m	RETURNS TO SEAFLOOR	

				San A.C.N. 007 5	tos 550 923			
			WELL	PROGRE	ESS RE	PORT		
				CASIN	01			
				DATE: 29/ REPORT N	708/02 NO: 3			
DEPTH: 752 As at 2400 hours	m EST, 28/08/02)	P]	ROGRESS	: 39 m]	DAYS FR	OM SPUD: 3.25
OPERATION 0600 hours EST,	: RUI 29/08/02)	NNING	BLOWOUT	Γ PREVENTE	RS STACI	X		
AFE COST			CUMU	JLATIVE CO	ST			
CASING DEP	TH: 743m (34	0mm- 1.	3 3/8")			R	IG: OCI T – SEAF	EAN BOUNTY
PROGRAMM	ED TD: 2276	m	ROTA	RY TABLE:	25m LAT	W	ATER D	EPTH: 70.5m
MUD DATA (2400 Hours)	Type: (in P KCL/PHPA	its)	Wt: 1.04	Vis: FL: 38	PH: 10.0	KCl Cl: 37800 280	PV / 7 00 7 / 2	YP: Rmf:
	DDECENT	No.	Make	Туре	Size (m	m) Hours	Drilled	Condition
DII DAIA (2400 Hours)	LAST	2 1	SMITH SMITH	MGSSH-C DSJC	445 660	23.4 1.0	1205 35	1-1-NO-A-E-0-NO-TD 1-1-NO-A-1-I-NO-TD
SURVEYS:	<u>MD</u> (m)		INC	<u>A</u>	ZIM (T)			

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

DRILL 445mm (17.5") HOLE FROM 713m TO 752m. TOTAL DEPTH FOR 445mm (17.5") SECTION REACHED AT 02:00 HRS ON 28/02/02. SWEEP HOLE WITH 24m3 (150BBLS) HI-VISCOSITY GEL MUD. DISPLACE HOLE WITH 111m3 (700BBLS) HI-VISCOSITY GEL MUD. PULL OUT OF HOLE TO RUN 340mm (13 3/8") CASING. WIPE TIGHT SPOTS 629m TO 425m. RIG TO AND RUN 54 JOINTS OF 340mm (13 3/8") CASING. MAKE UP WELLHEAD ASSEMBLY, RUN IN HOLE WITH 340mm (13 3/8") CASING ON 5" DRILLPIPE. LAND WELLHEAD WITH CASING SHOE AT 743m. CONFIRM LATCHING WITH 20.4T (45 KIPS) OVERPULL. CIRCULATE CASING & HOLE CLEAN. DISPLACE CASING TO 89 m3 (560BBLS) GEL MUD. CEMENT CASING AS PER PROGRAM WITH 59.6 m3 (375BBLS) OF 1.51 SG (12.6PPG) LEAD SLURRY AND 21.4 m3 (135BBLS) OF 1.9 SG (15.8PPG) TAIL SLURRY. DISPLACE CASING WITH SEAWATER. BUMP PLUG TO 8.3 MPa (1200 PSI). PRESSURE TEST CASING TO 20.6 MPa (3000 PSI) FOR 10 MINS – OKAY. LAYOUT CEMENT HEAD AND WELLHEAD RUNNING TOOL. PREPARE TO RUN BOP STACK.

00:00 - 06:00 HOURS 29/08/02:

MAKE UP MARINE RISER. MOVE BLOWOUT PREVENTERS TO MOONPOOL, LATCH AND TEST LOWER MARINE RISER PACKAGE.

ANTICIPATED OPERATIONS:

COMPLETE RUNNING BLOWOUT PREVENTERS STACK. FUNCTION TEST SAME. LAYOUT 445mm (17.5") BOTTOM HOLE ASSEMBLY. PICKUP 311mm (12.25") BIT & BOTTOM HOLE ASSEMBLY.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 29/08/02

REPORT NO: 3

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	02:00	2.00	Drilled 445mm (17.5") to 752m. Swept hole with 8 m3 (50bbls) hi-vis each single. Hole
			good. Last survey 0 deg at 744m.
02:00	03:00	1.00	Swept hole with 24 m3 (150bbls) hi vis. Displaced hole with 111 m3 (700bbls) hivis gel
			mud.
03:00	06:00	3.00	POOH to run casing from 752 to 628m, no drag. Wiped tight spots between 629m and
			425m, 9-18 tonne (20-40kips) OP. No drag from 425m. Break off bit.
06:00	07:00	1.00	Held JSA. Rigged up to run 340mm (13.375") casing.
07:00	14:00	7.00	RIH with 54 joints of 340mm (13.375") 101 kg/m (68ppf), L-80 BTC casing and made
			up 476mm (18-3/4") wellhead assembly OK.
14:00	14:30	0.50	Release 476mm (18-3/4") wellhead running tool and attempt to load Weatherford plugs,
			difficulty running in plug assembly (plugs holding up/binding in 340mm casing).
14:30	16:00	1.50	RIH with 476mm (18-3/4") wellhead and 340mm (13.375") casing on 127mm (5") DP
			(pick up wt. 295k). Made up cement head assembly (darts loaded). Landed wellhead
			with casing shoe at 743m. Took 20.4 tonne (45kip) overpull and confirmed engagement.
			Checked PGB bullseye at 3/4deg port/forward.
16:00	17:00	1.00	Circulated casing and hole clean, displaced casing to 89 m3 (560bbls) gel mud.
			Pressured pods and prepared to cement.
17:00	17:30	0.50	Pumped ahead .8 m3 (10 bbls) seawater (with dye). Attempted to pressure test surface
			lines, no-go. Changed out leaking Low-torq valve on cement head.
17:30	19:30	2.00	Re-tested surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed
			and pumped 59.6 m3 (375 bbls) of 1.51sg (12.6 ppg) lead slurry and 21.4 m3 (135 bbls)
			of 1.9sg (15.8 ppg) tail slurry.
19:30	20:30	1.00	Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped
			plug to 8.3 MPa (1200 psi).
20:30	21:00	0.50	Pressure tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back .8 m3
			(5bbls), floats held OK.
21:00	22:30	1.50	Broke and laid out cement head. POOH with wellhead running tool and laid out.
22:30	24:00	1.50	Prepared drillfloor to run BOP.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 29/08/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u>	<u>LITHOLOGY</u>	GAS
	Nil	

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u>	LITHOLOGY	GAS

				San A.C.N. 007 5	tos 50 923				
			WELL]	PROGRE	SS RI	EPOR	Г		
				CASIN	01				
				DATE: 30/	08/02				
				REPORT N	IO: 4				
DEPTH : 752 (As at 2400 hours OPERATION (0600 hours EST,	m EST, 29/08/02) : MA 30/08/02)	PI KING U	ROGRESS: JP 311mm (0 m 12.25") BOTT	ТОМ НО	LE ASSI	D. Embly	AYS FR	ROM SPUD: 4.25
AFE COST			CUMU	LATIVE CO	ST				
CASING DEP PROGRAMM	TH: 743m (34 IED TD: 2276	40mm- 1 m	3 3/8") ROTA	RY TABLE:	25m LA	T	RIO RT WA	G: OCI – SEAI ATER D	EAN BOUNTY FLOOR: 95.5m DEPTH: 70.5m
MUD DATA (2400 Hours)	Type: (in F KCL/PHPA	Pits)	Wt: V 1.04 4	/is: FL: 0	PH: 10.0	KC1 37800	Cl : 23000	PV /) 7 / 7	YP: Rmf:
BIT DATA (2400 Hours)	PRESENT LAST	No. 3 2 1	Make REED SMITH SMITH	Type DSX195 MGSSH-C DSJC	Size (311 445 660	(mm) H - 23 1.	ours 3.4 0	Drilled - 1205 35	Condition - 1-1-NO-A-E-0-NO-TD 1-1-NO-A-1-I-NO-TD

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

INC

MD (m)

MAKE UP MARINE RISER. MOVE BLOWOUT PREVENTERS TO MOONPOOL, LATCH AND TEST LOWER MARINE RISER PACKAGE. COMPLETE RUNNING BOP STACK & MARINE RISER. PRESSURE TEST CHOKE & KILL LINES. INSTALL SLIP JOINT & LANDING JOINT. LAND AND TEST BOP STACK & SURFACE EQUIPMENT

AZIM (T)

00:00 - 06:00 HOURS 30/08/02:

SURVEYS:

MAKE UP 311mm (12.25") PDC BIT & BOTTOM HOLE ASSEMBLY ALONG WITH MWD TOOLS. SHALLOW TEST MWD TOOLS - OKAY. CONTINUE TO MAKE UP 311mm (12.25") BOTTOM HOLE ASSEMBLY

ANTICIPATED OPERATIONS:

COMPLETE RUNNING IN HOLE WITH 311mm (12.25") BOTTOM HOLE ASSEMBLY. DRILL SHOE TRACK AND 3m FORMATION. DISPLACE HOLE TO MUD. CONDUCT LEAK-OFF TEST. DRILL 311mm (12.25") HOLE.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 30/08/02

REPORT NO: 4

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	07:50	7.50	Made up double marine riser. Moved BOP to moonpool and made up LMRP to BOP.
			Made up double and rigged up pod lines. Ran BOP on marine riser. Pressure tested
			choke and kill lines 1.4/34.5 MPa (200/5000psi) for 5/15 mins.
07:50	10:00	2.50	Ran riser slip jt and landing jt. Nippled up Choke and kill hoses. Pressure tested choke
			and kill lines/hoses to 1.4/34.5 MPa (200/5000psi) for 5/15 mins, OK.
10:00	14:00	4.00	Nippled up MRT lines and pod hose saddles. Re-positioned rig over PGB. Ballasted rig
			to 21.3m (70') and landed BOP. Set down 13.6 tonne (30kip), confirmed latched with
			ROV and took 22.6 tonne (50kip) O/P. LMRP and BOP between 1-0.5deg (rolling).
14:00	15:30	1.50	Installed diverter and rigged down drill floor.
15:30	22:30	7.00	Ran wearbushing. Made up test tool and RIH. Pressure tested BOP connector to
			34.5MPa (5000psi) and LMRP connector to 20.7MPa (3000psi), OK. Function tested
			BOP on both pods and performed accumulator test. POOH with test tool and function
			tested diverter system.
22:30	24:00	1.50	Broke out and laid out cement head, 241mm (9.5") DC and 445mm (17.5") BHA.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 30/08/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u>	<u>LITHOLOGY</u>	<u>GAS</u>
	Nil	

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u>	LITHOLOGY	GAS

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 31/08/02

REPORT NO: 5

DEPTH : 1016 m (As at 2400 hours EST, 30/08/02) PROGRESS: 264 m

DAYS FROM SPUD: 5.25

OPERATION: DRILLING 311mm (12.25") HOLE @ 1053m (0600 hours EST, 31/08/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm- 13 3/8")

PROGRAMMED TD: 2276m

ROTARY TABLE: 25m LAT

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m WATER DEPTH: 70.5m

MUD DATA (2400 Hours)	Type: KCL/PHPA		Wt: 1.06	Vis: FL: 40 7.0	PH: 10.0	KCl 37800	Cl : 29000	PV / 7 7 / 15	YP: Rmf: 0.125 @ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 3 2 1	Make REED SMITH SMITH	Type DSX195 MGSSH-C DSJC	Size (311 445 660	mm) H 4 21 1	ours 1 5 1 3.4 0 1	Drilled 264 1205 35	Condition - 1-1-NO-A-E-0-NO-TD 1-1-NO-A-1-I-NO-TD
SURVEYS:	<u>MD</u> (m) 766 855 912 970		<u>INC</u> 0.6° 0.26° 0.54° 0.83°		<u>AZIM (T)</u> 342° 216° 155° 136°				

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

COMPLETE MAKING UP 311mm (12.25") BOTTOM HOLE ASSEMBLY AND RUN IN HOLE TO 690m. TAG TOP OF CEMENT AT 717.6m. DRILL CEMENT, PLUGS & SHOE TRACK (SHOE AT 743m). CLEAN OUT RATHOLE, DRILL 3m FORMATION TO 755m, DISPLACING HOLE TO 1.04 SG (8,7PPG) KCL/PHPA MUD. CIRCULATE HOLE CLEAN. CONDUCT LEAK-OFF TEST (EQUIVALENT MUD WEIGHT= 2.07SG (17.3PPG). DRILL 311mm (12.25") HOLE FROM 755m TO 1016m. OBSERVE INTERMITTENT PARTIAL MUD LOSSES 50-70 BBLS/HOUR FROM 784m

00:00 - 06:00 HOURS 31/08/02:

DRILL 311mm (12.25") HOLE FROM 1016m TO 1053m. (SLOW PENETRATION RATE FROM 1051m TO 1053m) TREATED MUD WITH LCM TO STOP LOSSES.

ANTICIPATED OPERATIONS:

DRILL AHEAD 311mm (12.25") HOLE.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 31/08/02

REPORT NO: 5

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	01:30	1.50	Continued laying out 445mm (17.5") BHA.
01:30	05:00	3.50	Held JSA and made up 311mm (12.25") BHA. Shallow tested MWD/FEWD tools, OK,
			156 spm = 9.3 MPa (1350psi).
05:00	09:00	4.00	Continued making up 311mm (12.25") BHA and RIH to 690m.
09:00	09:30	0.50	Serviced TDS and repaired loggers RPM sensor.
09:30	14:30	5.00	Continued RIH. Tagged TOC at 717.6m. Drilled cement and plugs at 718m. Drilled
			float and shoetrack. Cleaned out rathole to 752m and displaced hole to 1.04sg (8.7ppg)
			KCl/PHPA mud.
14:30	15:00	0.50	Drilled 3 m to 755m.
15:00	16:30	1.50	Circulated 1.5 times bottoms up and performed LOT. EMW = 2.07sg (17.3ppg).
16:30	24:00	7.50	Drilled ahead 311mm (12.25") hole from 755 to 1016m.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 31/08/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
Nirranda Group: Mepunga Fm	774	749	8m High	128m Low
Wangerrip Group	843	818	12m High	68m Low

	HYDROCARBON SHOW SUMMARY	
INTERVAL	LITHOLOGY	GAS
	Nil	

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>
752 – 774 ROP: 20-130 Ave: 60	CALCAREOUS CLAYSTONE INTERGRADING WITH MARL CALCAREOUS CLAYSTONE : Medium brown, medium brown grey, common fossil fragments (echinoid spines, bryozoa fragments), firm to moderately hard, grading to marl, trace pyrite, trace quartz grains, subblocky to blocky. MARL: Light grey, occasionally light green grey, argillaceous in part, very calcareous, grading to calcareous claystone, soft to firm, subblocky	< 1 unit 100% C1
774 – 843 ROP: 21-150 Ave: 70	MEPUNGA FORMATION SANDSTONE INTERBEDDED WITH MINOR CALCAREOUS CLAYSTONE SANDSTONE: Medium brown, occasionally dark brown, medium yellow brown, coarse to very coarse grained, minor medium grained, moderately well sorted, subrounded, occasionally rounded, minor subangular, weak siliceous cement, common Fe-staining, trace glauconite, trace pyrite, friable in part, loose in part, moderately hard in part, fair inferred porosity, no hydrocarbon fluorescence. CALCAREOUS CLAYSTONE: Medium to dark grey to minor grey brown, moderately hard, grading to marl, trace pyrite, trace glauconite, trace quartz grains, subblocky to blocky, minor amorphous.	< 1 unit 100% C1

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 31/08/02

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> ROP (m/hr)	<u>LITHOLOGY</u>	<u>GAS</u>
843 – 878 ROP: 12-160 Ave: 70	WANGERRIP GROUP MASSIVE SANDSTONE SANDSTONE: Clear, translucent, very pale yellow to pale yellow brown, frosted, occasional Fe-staining, predominantly coarse to very coarse grained, medium grained in part, moderately well sorted, rounded to subrounded, generally loose and clean, good visual porosity, no hydrocarbon fluorescence.	< 1 unit 100% C1
878 – 902 ROP: 20-200 Ave: 70	MASSIVE SANDSTONE SANDSTONE: Clear to translucent, pale grey, medium to coarse grained, minor very coarse, moderately well sorted, subrounded, subangular in part, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence.	< 1 unit 100% C1
902 – 958 ROP: 12-155 Ave: 75	SANDSTONE THIN MINOR CLAYSTONE INTERBEDS SANDSTONE: Clear to translucent, pale grey, rare pale green grey, coarse to very coarse, moderately well sorted, predominantly subrounded, minor subangular, rounded in part, trace very weak siliceous cement, generally clean, loose, good inferred porosity, no hydrocarbon fluorescence. CLAYSTONE: Medium grey, medium to light brown grey, slightly arenaceous, firm to moderate hard, partly soft and dispersive, subblocky.	< 1 unit 100% C1
958 – 979 ROP: 50 – 175 Ave: 100	SANDSTONE WITH THIN CLAYSTONE INTERBEDS SANDSTONE: Translucent, pale grey, medium to coarse grained, moderately well sorted, predominantly subrounded to rounded, trace pyrite cement, hard in pyritised aggregates, common loose, poor visual porosity, fair inferred porosity, no hydrocarbon fluorescence. CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally hard, partly dispersive, amorphous.	< 1 unit 100% C1
979 – 1008 ROP: 25-170 Ave: 70	SANDSTONE WITH THIN CLAYSTONE INTERBEDS SANDSTONE: Translucent, pale grey, minor pale yellow, medium to very coarse grained, poorly sorted, predominantly subrounded to commonly rounded, common pyrite cement, trace pyrite nodules, trace grey rounded lithic fragments, commonly loose, good inferred porosity, no hydrocarbon fluorescence. CLAYSTONE: Medium to dark grey to brown grey, dark brown, soft to firm, occasionally moderately hard, partly dispersive, amorphous.	< 1 unit 100% C1

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 31/08/02

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>
1008 – 1051 ROP: <1 – 110 Ave: 25	MASSIVE SANDSTONE: SANDSTONE: Translucent, pale grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong siliceous cement, rare light grey argillaceous matrix, moderately hard to hard aggregates, loose and clean in part, poor visual porosity, no hydrocarbon fluorescence. CLAYSTONE: Medium to predominantly dark brown, occasionally very dark brown, soft to firm, slightly dispersive, subblocky to amorphous.	< 1 unit 100% C1
1051-1053 ROP: <1	SANDSTONE: Translucent, pale grey, minor green grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong to strong siliceous cement, rare light grey argillaceous matrix, moderately hard to hard aggregates, loose and clean in part, poor visual porosity, no hydrocarbon fluorescence.	< 1 unit 100% C1

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 01/09/02

REPORT NO: 6

DEPTH : 1059 m (As at 2400 hours EST, 31/08/02) PROGRESS: 43 m

DAYS FROM SPUD: 6.25

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m

WATER DEPTH: 70.5m

OPERATION : DRILLING 311mm (12.25") HOLE @ 1076m IN THE BASAL DILWYN/PEBBLE POINT (WANGERRIP GROUP)

AFE COST

CUMULATIVE COST

ROTARY TABLE: 25m LAT

CASING DEPTH: 743m (340mm- 13 3/8")

PROGRAMMED TD: 2276m

MUD DATA (2400 Hours)	Type: KCL/PHPA		Wt: 1.06	Vis: FL 48 6.0	: Pl) 8.	H: KC 0 378	Cl Cl: 800 280	PV/ 00 12/2	YP: Rmf: 21 0.125 @ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 5 4 3	Make SMITH REED REED	Type 10GF EHP51 DSX195	S 3 3 3	ize (mm) 11 11 11	Hours - 0.2 14.8	Drilled - 2 305	Condition - 0-2-CT-G-F3-I-PN-PP 8-8-RO-S-X-1-WT-PR
SURVEYS:	<u>MD</u> (m) 1041		<u>INC</u> 1.2°		<u>AZIM</u> 192°	<u>(T)</u>			

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

DRILL 311mm (12.25") HOLE FROM 1016m TO 1057m. POOR PENETRATION RATE FROM 1051m TO 1057m. POOH, DOWNLOAD MWD DATA, CHANGE TO TRICONE INSERT BIT, RUN IN HOLE TO 1016m. WASH TO BOTTOM. OBSERVE ABNORMALLY HIGH CIRCULATING PRESSURE. ATTEMPT TO CLEAR BLOCKAGE. DRILL 311mm (12.25") HOLE FROM 1057m TO 1059m WITH REDUCED FLOW RATE. PULL OUT OF HOLE TO CHECK BIT.

00:00 - 06:00 HOURS 01/09/02:

BREAK OUT DAMAGED PLUGGED BIT, CHANGE TO NEW TRICONE INSERT BIT. RUN IN HOLE AFTER SHALLOW TESTING MWD TOOLS. RUN IN HOLE to 1012m. WASH TO BOTTOM. DRILL 311mm (12.25") HOLE FROM 1059m TO 1076m.

ANTICIPATED OPERATIONS:

DRILL AHEAD 311mm (12.25") HOLE.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 01/09/02

REPORT NO: 6

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	06:00	6.00	Continued drilling 311mm (12.25") hole from 1016m to 1053m. Treated losses with
			LCM, gained full returns.
06:00	10:30	4.50	Continued drilling 311mm (12.25") hole from 1053m to 1057m, ROP poor.
10:30	14:00	3.50	Flow checked, hole static. POOH to change bit, no drag. Flow checked at shoe, static.
14:00	14:30	0.50	Commenced downloading MWD data.
14:30	18:00	3.50	Broke and changed bit while continuing to download MWD data. RIH to shoe picking
			up additional stand of DC. Broke circulation at shoe and shallow tested MWD, OK.
			156spm = 11.7MPa (1700psi).
18:00	18:30	0.50	Serviced TDS and travelling blocks.
18:30	19:00	0.50	Continued RIH to 1016m, no drag.
19:00	20:30	1.50	Broke circulation at 1016m, abnormally high circulating pressure, 82spm = 18.6 MPa
			(2700psi). Attempted to clear blockage, no success. Washed to bottom, hole good.
20:30	21:00	0.50	Drilled ahead 311mm (12.25") hole to 1059m at reduced mud flow rate (90spm = 20.7
			MPa (3000psi).
21:00	24:00	3.00	Flow checked on bottom and at shoe, hole static. POOH to check bit, no drag. At shoe
			80spm = 18.9 MPa (2750psi). Continued POOH.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 01/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
Nirranda Group: Mepunga Fm	774	749	8m High	128m Low
Wangerrip Group	843	818	12m High	68m Low

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u>	LITHOLOGY	GAS
	Nil	

	GEOLOGICAL SUMMARY							
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>						
1053-1061 ROP: <1	SANDSTONE: Translucent, pale grey, minor green grey, coarse to very coarse grained, minor medium grained, moderately poorly sorted, rounded to subrounded, trace moderately strong to strong siliceous cement, minor calcareous cement, rare light grey argillaceous matrix, moderately hard to hard aggregates, loose and clean in part, poor visual porosity, no hydrocarbon fluorescence.	< 1 unit 100% C1						

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 02/09/02

REPORT NO: 7

DEPTH : 1400 m **PROGRESS:** 341 m (As at 2400 hours EST, 01/09/02)

DAYS FROM SPUD: 7.25

OPERATION:RUNNING IN HOLE WITH NEW PDC BIT TO DRILL AHEAD 311mm HOLE IN THE(0600 hours EST, 02/09/02)SKULL CREEK MUDSTONE (?)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm- 13 3/8")

PROGRAMMED TD: 2276m

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m WATER DEPTH: 70.5m

MUD DATA (2400 Hours)	Type: KCL/PHPA		Wt: 1.06	Vis: 48	FL: 6.0	РН 9.5	:: KC 324	C1 0 400 2	C1 : 29000	PV / Y 11 / 2	YP: Rmf: 3 0.125 @ 22.4℃
BIT DATA (2400 Hours)	PRESENT LAST	No. 5 4 3	Make SMITH REED REED	Type 10Gl EHP DSX	e F '51 (195	Si 31 31 31	ze (mm) 1 1 1	Hou 14.7 0.2 14.8	rs D 3 2 3	rilled 41 05	Condition - 0-2-CT-G-F3-I-PN-PP 8-8-RO-S-X-1-WT-PR

ROTARY TABLE: 25m LAT

SURVEYS:	<u>MD</u> (m)	INC	<u>AZIM (T)</u>
	1084.57	1.29°	209.06°
	1170.44	0.93°	192.51°
	1256.72	1.44°	181.17°
	1382.1	1.87°	182.17°

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

BREAK OUT DAMAGED PLUGGED BIT, CHANGE TO NEW TRICONE INSERT BIT (No 5). RUN IN HOLE AFTER SHALLOW TESTING MWD TOOLS. RUN IN HOLE to 1012m. WASH TO BOTTOM. DRILL 311mm (12.25") HOLE FROM 1059m TO 1400m. CIRCULATE PRIOR TO PULLING OUT OF HOLE FOR BIT CHANGE.

00:00-06:00 HOURS 02/09/02:

PULL OUT OF HOLE, WORK INTERMITTENT TIGHT HOLE TO 1180m. COMPLETE PULLING OUT OF HOLE. CHANGE BIT WHILE DOWNLOADING MWD DATA. COMMENCE RUNNING IN HOLE.

ANTICIPATED OPERATIONS:

RUN IN HOLE. DRILL AHEAD 311mm (12.25") HOLE FROM 1400m.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 02/09/02

REPORT NO: 7

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	04:30	4.50	Broke out plugged bit (chipped teeth and suspect bearing cone #3) and changed to new TCI bit. RIH shallow testing MWD at first stand of HWDP, OK. RIH. Broke
			(770gpm = 1750psi), OK. Continued RIH to 1044m.
04:30	04:45	0.25	Washed and reamed to bottom, precautionary. Logged with MWD.
04:45	06:00	1.25	Drilled ahead to 1076m.
06:00	12:00	6.00	Drilled ahead to 1218m.
12:00	18:00	6.00	Drilled ahead to 1332m.
18:00	22:30	4.50	Drilled ahead 311mm (12.25") hole to 1400m. No drag on connections.
22:30	24:00	1.50	Circulated bottoms up prior to POOH for bit change. Boosted riser to clear cuttings.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 02/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
Nirranda Group: Mepunga Fm	774	749	8m High	128m Low
Wangerrip Group: Dilwyn Fm	843	818	12m High	68m Low
Pebble Point Fm	1102	1077	-	-
Massacre Shale	1154	1129	-	-
Sherbrook Group: Curdies Fm	1177	1152	12m High	52m Low
Sherbrook Group: Timboon Sst	1190	1165	-	-
Skull Creek Mudstone	1259	1234	-	-

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u>	LITHOLOGY	GAS
	Nil	

GEOLOGICAL SUMMARY			
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>	
1061-1102 ROP: 7-140 Ave: 40	SANDSTONE WITH MINOR SILTSTONE INTERBEDS SANDSTONE: Pale brown, translucent, dominantly medium to coarse grained, very coarse grained and fine in part, poorly sorted, predominantly subrounded, partly subangular, trace weak to strong siliceous cement, trace medium brown silty matrix, moderately hard to hard aggregates, loose in part, poor visual porosity, no hydrocarbon fluorescence. CLAYSTONE: Medium to dark brown, calcareous, silty, firm to moderate hard, subblocky	3 – 7 units 100% C1 Ave CO ² : 150	
1102-1154 ROP: 8-190 Ave: 60	PEBBLE POINT FORMATION SANDSTONE WITH MINOR SILTSTONE INTERBEDS SANDSTONE: Light grey, trace pale brown, translucent, trace green grey, predominantly medium grained, minor coarse and occasionally fine grained, moderately well sorted, subrounded, trace weak siliceous cement, trace glauconite, rare friable to moderately hard aggregates, loose, fair inferred porosity, no hydrocarbon fluorescence. CLAYSTONE: Medium to dark brown, slightly arenaceous, silty, predominantly soft, minor firm, dispersive, amorphous to subblocky	3 – 6 units 100% C1 Ave CO ² : 150ppm	
A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 02/09/02

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>
1154-1177 ROP: 8-85 Ave: 50	MASSACRE SHALE (?) SILTSTONE INTERBEDDED WITH SANDSTONE SILTSTONE: Medium grey, medium to dark brown, arenaceous, grades to sandstone, carbonaceous in part, rare white argillaceous laminations, common disseminated pyrite, moderately hard occasionally very hard, subblocky SANDSTONE: Pale to medium grey, clear to translucent, off white, fine to medium grained, partly coarse grained, occasional very coarse polished bit- fractured quartz fragments, poorly sorted, subangular to minor angular, occasionally subrounded, common moderate strong siliceous and slightly calcareous cement, locally common white argillaceous matrix, occasional medium grey silty matrix, common disseminated pyrite, rare glauconite ?, moderate hard to hard aggregates, occasionally very hard, no hydrocarbon fluorescence.	3 – 5 units 100% C1 Ave CO ² : 150ppm
1177-1190 ROP: 9-100 Ave: 80	SHERBROOK GROUP: CURDIES FORMATION INTERBEDDED SANDSTONE AND SILTSTONE SANDSTONE: Pale grey, grey, green grey in part, clear to translucent, medium grained, coarse and fine grained in part, moderately sorted, subangular to angular, common glauconite, common strong calcareous and dolomitic cement, minor to locally common white argillaceous matrix, common nodular pyrite, hard to occasionally very hard aggregates, minor loose, no hydrocarbon fluorescence. SILTSTONE: Light to medium brown to brown grey, arenaceous, grades to sandstone in part, calcareous in part, minor disseminated pyrite, firm to moderately hard, subblocky	3 – 5 units 100% C1 Ave CO ² : 160ppm
1190-1224 ROP: 7-180 Ave: 40	SHERBROOK GROUP: TIMBOON SANDSTONE SANDSTONE INTERBEDDED WITH MINOR SILTSTONE SANDSTONE: Pale grey, grey, clear to translucent, rare pale green grey, predominantly medium to coarse grained, moderately well sorted, subangular to subangular, moderately strong siliceous cement, trace dolomitic cement, trace glauconite, trace pyrite, locally common white argillaceous matrix, trace lithic fragments, moderately hard to hard aggregates, no hydrocarbon fluorescence. SILTSTONE: Light to medium brown to brown grey, arenaceous, slightly calcareous, minor disseminated pyrite, firm to moderately hard, subblocky	3 – 5 units 100% C1 Ave CO ² : 150ppm

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 02/09/02

	GEOLOGICAL SUMMARY	1
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	<u>GAS</u>
1224-1259 ROP: 9-104 Ave: 50	SANDSTONE INTERBEDDED WITH MINOR SILTSTONE SANDSTONE: Pale grey, grey, clear to translucent, pale to medium green, green grey, predominantly fine to very coarse grained, fine to medium in part, poorly sorted, subangular to subangular, moderately strong siliceous cement, trace calcareous cement, locally common white argillaceous matrix, common glauconite, trace pyrite, trace lithic fragments, moderately hard to hard aggregates, no hydrocarbon fluorescence. SILTSTONE: Light brown to brown grey, arenaceous, slightly calcareous, trace carbonaceous specks, minor disseminated pyrite, firm to moderately hard, subblocky	2 – 7 units 100% C1 Ave CO ² : 140ppm
1259-1287 ROP: 7-40 Ave: 10	SHERBROOK GROUP: SKULL CREEK MUDSTONE (?) MASSIVE SILTSTONE WITH MINOR SANDSTONE SILTSTONE: Medium to dark brown to brown grey, minor light grey, arenaceous, slightly calcareous, trace lithic fragments, common pyrite, soft to firm, amorphous to subblocky SANDSTONE: Pale grey, minor green grey, clear to translucent, fine to predominantly medium, moderately well sorted, subrounded to subangular, weak to moderately strong siliceous cement, trace lithic fragments, common pyrite, friable to moderately hard aggregates, no hydrocarbon fluorescence.	2 – 4 units 100% C1 Ave CO ² : 150ppm
1287-1340 ROP: 8-60 Ave: 15	MASSIVE SILTSTONE SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, trace glauconite, soft to firm, amorphous to subblocky	2 – 3 units 100% C1 Ave CO ² : 140ppm
1340-1400 ROP: 9-30 Ave: 11	MASSIVE SILTSTONE SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky	2 – 4 units 100% C1 Ave CO ² : 130ppm

DACE 1

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				San A.C.N. 007	tos 550 923				
		,	WELL	PROGRI	ESS R	EPOR	Т		
				CASIN	01				
				DATE: 03/	09/02				
				DEDODT	NO- 8				
				KEFUKI	10:0				
DEPTH : 17501 (As at 2400 hou	m rs EST, 02/09/02)	Pl	ROGRES	5: 350 m			DA	YS FROM	SPUD: 8.25
OPERATION : (0600 hours EST 03/09/02)	DRIL r,	LING A	AHEAD31	1mm (12 ¼") H	OLE IN T	THE WAA	RRE FOI	RMATION	I AT 1792 M.
AFE COST			CUM	ULATIVE COS	Т				
CASING DEPI	T H: 743m(340mm	n-133/3	8')				RIG:	OCEAN	BOUNTY
PROGRAMMI	E D TD: 2276m		ROT	ARY TABLE: 2	5m LAT		RT – WAT	SEAFLO TER DEPI	OR: 95.5 m H: 70.5 m
MUD DATA (2400 Hours)	Type: KCL/PHPA		Wt: 1.18	Vis: FL: 54 4.5	PH: 9.5	KCl 32400	Cl : 29000	PV / YP: 18 / 32	Rmf: 0.125 @ 22.4°C
		No.	Make	Туре	Size ((mm) He	ours D	rilled C	ondition
BIT DATA	PRESENT	6	SMIT	MA74BPX	311	10	.2 3	- 50	
(2400 Hours)	LAST	5	SMIT H	10GF	311	14	.7 34	41	
SURVEYS:	<u>MD</u> (m) 1605 1691		<u>INC</u> 3.09 3.44	<u>A</u> 13 13	<u>ZIM (T)</u> 35 39				

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

FLOW CHECK WELL, HOLE STATIC. PULL OUT OF HOLE WORKING TIGHT SPOTS, FLOW CHECK AT SHOE, HOLE STATIC. CONTINUE PULLING OUT OF HOLE. DOWNLOAD MWD DATA. CHANGE OUT BIT. RUN IN HOLE WITH NEW BIT. DRILL AHEAD 311MM (12.25") HOLE TO 1750M. FLOW CHECK DRILLING BREAK AT 1750M.

00:00 - 06:00 HOURS 03/09/02:

DRILL AHEAD 311MM (12.25") HOLE TO 1764M, CIRCULATEOUT GAS (MAX 22.4%), DRILL AHEAD TO 1792M.

ANTICIPATED OPERATIONS:

DRILL AHEAD 311MM (12.25") HOLE.

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A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 03/09/02

REPORT NO: 8

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	05:30	5.50	Flow checked, hole static. POOH, worked tight spots, 13.6-22.7 tonne (30-50 kip) O/P. No drag
			after 1180m. Flow checked at shoe, hole static. Continued POOH. Commenced downloading
			MWD data.
05:30	08:00	2.50	Changed bit while downloading MWD data. Commenced RIH. Shallow tested MWD, OK.
08:00	08:30	0.50	Serviced rig, TDS and travelling blocks.
08:30	10:30	2.00	Continued RIH to 1400m. Washed from 1382m to bottom.
10:30	12:00	1.50	Drilled 311mm (1225") hole from 1400m to 1440m. No drag.
12:00	18:00	6.00	Drilled ahead 311mm (12.25") hole to 1605m. No drag.
18:00	24:00	6.00	Drilled ahead 311mm (12.25") hole to 1750m. No drag. Flow checked drilling break at 1750m.

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Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 03/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
NULLAWARRE GREENSAND	1522	1497	-	-
BELFAST MUDSTONE	1561	1536	27m High	37m High
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
INTERVAL ROP (m/hr)	LITHOLOGY	GAS
1522-1531 Ave: 70	NULLAWARRE GREENSAND GLAUCONITIC SANDSTONE INTERBEDDED WITH SILTSTONE SANDSTONE: Clear to translucent, light green, light grey, green, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence.	153 / 20 units 96/2/1/1 %
1743-1790 ROP: 9-95 Ave: 40	WAARRE FORMATION SANDSTONE INTERBEDDED WITH SILTSTONE SANDSTONE: Light grey, light brown grey, clear to translucent quartz s and, fine to medium, becoming coarser with depth, moderately well sorted, subangular to subrounded, weak siliceous and calcareous cement, trace glauconite, common to abundant argillaceous matrix, (common rock flour), silty, friable to moderately hard, poor visual porosity, no hydrocarbon fluorescence.	1120 / 15 units 93/3/2/1/1 % Max CO ² : 400 ppm

	GEOLOGICAL SUMMARY	
INTERVAL ROP (m/hr)	LITHOLOGY	GAS
1400-1522 ROP: 9-90 Ave: 40	MASSIVE SILTSTONE WITH MINOR SANDSTONE SILTSTONE: Medium to dark brown to brown grey, arenaceous, trace lithic fragments, common pyrite, common glauconite, soft to firm, amorphous to subblocky SANDSTONE: Clear to translucent, locally pale to medium green, fine to medium, occasionally coarse, moderate well sorted, subangular to subrounded, trace Fe- staining, weak siliceous cement, trace white argillaceous matrix, common glauconite, friable, loose in part, poor to fair inferred porosity, no hydrocarbon fluorescence.	4 – 24 units 100/tr % Ave CO ² : 130ppm

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Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 03/09/02

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	<u>GAS</u>
1522-1561 ROP: 8-80 Ave: 70	NULLAWARRE GREENSAND GLAUCONITIC SANDSTONE INTERBEDDED WITH SILTSTONE SANDSTONE: Clear to translucent, light green, light grey, green, fine to medium, occasionally coarse, moderately poorly sorted, subangular to subrounded in part, weak calcareous cement, moderately strong siliceous cement in part, common glauconite, grades to glauconitic sandstone, locally common white argillaceous matrix, moderate hard, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Medium to dark brown, medium to dark grey brown, slightly arenaceous, trace loose quartz grains, common dispersed glauconite, trace calcite, soft to firm, amorphous to subblocky	8 – 153 units 96/2/1/1 % Ave CO ² : 30ppm
1561-1630 ROP:10-90 Ave: 40	BELFAST MUDSTONE MASSIVE SILTSTONE WITH TRACE SANDSTONE SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, soft to firm, dispersive, amorphous to subblocky SANDSTONE: Clear to translucent, pale grey, fine to medium, occasionally coarse, moderately well sorted, weak siliceous cement, locally common argillaceous matrix, trace glauconite, moderate hard to friable, poor visual porosity, no hydrocarbon fluorescence.	7 – 30 units 100/trace % Ave CO ² : 30 ppm
1630-1743 ROP: 10-87 Ave: 50	MASSIVE SILTSTONE WITH TRACE SANDSTONE SILTSTONE: Light to medium brown to grey brown, minor glauconite, trace calcite, minor arenaceous, firm to moderately hard, occasionally hard, subblocky SANDSTONE: Clear to translucent, pale grey, fine to medium, occasionally coarse, moderately well sorted, weak siliceous cement, locally common argillaceous matrix, trace glauconite, moderate hard to friable, poor visual porosity, no hydrocarbon fluorescence.	15 – 30 units 96/3/2 % Ave CO ² : 35 ppm
1743-1760 ROP: 9-95 Ave: 40	WAARRE FORMATION SANDSTONE INTERBEDDED WITH SILTSTONE SANDSTONE: Light grey, light brown grey, clear to translucent quartz sand, fine to medium, moderately well sorted, subangular to subrounded, weak siliceous and calcareous cement, trace glauconite, common to abundant argillaceous matrix, (common rock flour), silty, friable to moderately hard, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Light to medium grey brown, minor green brown, locally common glauconite, soft to firm, occasionally moderately hard, blocky to subblocky	30 – 1120 units 93/3/2/1/1 % Max CO ² : 400 ppm

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 03/09/02

	GEOLOGICAL SUMMARY							
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	GAS						
1760-1790 ROP: 9-85 Ave: 45	SANDSTONE INTERBEDDED WITH SILTSTONE SANDSTONE: Light brown grey, light grey, medium to very coarse grained, poorly sorted, subangular, weak siliceous cement, common white to light grey argillaceous matrix, trace lithic fragments, rare pyrite, friable to predominantly moderately hard, loose in part, poor visual porosity, poor to fair inferred porosity, no hydrocarbon fluorescence. SILTSTONE: Light to medium grey brown, minor green brown, trace common glauconite, soft to firm, trace carbonaceous specks, occasionally moderately hard, blocky to subblocky	90 – 1120 units 93/3/2/1/1 % Max CO ² : 400 ppm						

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 04/09/02

REPORT NO: 9

DEPTH : 1797 m (As at 2400 hours EST, 03/09/02) PROGRESS: 47 m

DAYS FROM SPUD: 9.25

OPERATION: RUNNING IN HOLE WITH NEW TRICONE BIT TO DRILL AHEAD 311mm HOLE (0600 hours EST, 04/09/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm- 13 3/8")

PROGRAMMED TD: 2276m

ROTARY TABLE: 25m LAT

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m WATER DEPTH: 70.5m

MUD DATA (2400 Hours)	Type: KCL/PHPA		Wt: 1.18	Vis: Fl 54 4.	L: PH 5 9.5	I: KC 5 324	Cl Cl: 400 290	PV/ 000 18/3	YP: Rmf: 32 0.125 (@ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 7 6 5	Make HTC SMITH SMITH	Type MXR09 I MA74B I 10GF	S D 3 PX 3 3	ize (mm) 11 11 11	Hours - 16.2 14.7	Drilled - 397 341	Condition - 1-6-LT-S-X 1-1-WT-A-F	-I-CT-PR E-I-ER-PR
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>AZIM</u> 192.34	<u>(T)</u>				

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

DRILL AHEAD 311mm (12.25") HOLE TO 1766m, CIRCULATE OUT GAS (MAX 1120 UNITS), DRILL AHEAD TO 1790m. CIRCULATE & INCREASE MUD WEIGHT TO 1.2 SG (10.0 PPG). DRILL AHEAD TO 1797m. FLOW CHECK – WELL STATIC. PULL OUT OF HOLE TO 1610m, PUMP OUT TO 1498m, OBSERVE 27T (60 KIPS) OVERPULL & HIGH TORQUE. RUN BACK TO BOTTOM (9m FILL). CIRCULATE OUT GAS (MAX 1405 UNITS). BOOST RISER, OBSERVE LARGE VOLUME OF CAVINGS AT SHAKERS. RAISE MUD WEIGHT TO 1.24 SG (10.3 PPG) PRIOR TO BIT TRIP. PUMP OUT OF HOLE TO CHANGE BIT. DOWNLOAD MWD DATA.

00:00 - 06:00 HOURS 04/09/02:

CHANGE TO TRICONE BIT. CHANGE CDR MODULE ON ANADRILL MWD TOOLS, RUN IN HOLE TO CASING SHOE AFTER SHALLOW TESTING MWD TOOLS. SERVICE TOP DRIVE SYSTEM.

ANTICIPATED OPERATIONS:

RUN IN HOLE TO BOTTOM. CIRCULATE GAS OUT. DRILL AHEAD 311mm (12.25") HOLE AFTER OFFLOADING BARITE FROM SUPPLY BOAT (WEATHER PERMITTING); ELSE PULL BACK INTO CASING SHOE AND WAIT ON WEATHER.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 04/09/02

REPORT NO: 9

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	00:30	0.50	Drilled 311mm (12.25") hole to 1766m.
00:30	01:30	1.00	Circulated out gas, flow checked, well static.
01:30	03:00	1.50	Drilled ahead to 1790m.
03:00	04:00	1.00	Circulated and increased mud weight to 1.2sg (10ppg).
04:00	08:30	4.50	Drilled ahead to 1797m.
08:30	12:30	4.00	Flow checked, hole static and POOH to 1610m, pumped out to 1498m, 27.2 tonne (60kins) overpull and high torque. Ban back to bottom no drag 9m fill
12.30	16:00	3 50	Circulated out gas Boosted riser observed cavings at shakers Raised mud weight to
12.50	10.00	5.50	1.24sg (10.3ppg).
16:00	24:00	8.00	Pumped out of hole to 1074m, 23 tonne (50kips) overpull reduced to 0-7 tonne (0-
			15kips). Flow check static, pumped slug and POOH, no drag. B/O bit and download
			MWD data.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 04/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
NULLAWARRE GREENSAND	1522	1497	-	-
BELFAST MUDSTONE	1561	1536	27m High	37m High
WAARRE FORMATION	1743	1718	6m High	19m High
			-	-

	HYDROCARBON SHOW SUMMARY							
INTERVAL ROP (m/hr)	LITHOLOGY	GAS						

	GEOLOGICAL SUMMARY									
INTERVAL ROP (m/hr)	LITHOLOGY	GAS								
1790-1797 ROP: <1-9 Ave: 4	SANDSTONE INTERBEDDED WITH SILTSTONE SANDSTONE: Light grey, fine to coarse, predominantly medium grained, moderate poorly sorted, subangular to subrounded, weak siliceous cement, common white to light grey calcareous and argillaceous matrix, trace Fe- staining, trace lithic fragments, trace glauconite, predominantly moderately hard, loose in part, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Medium to dark grey, minor grey brown, rare disseminated pyrite, moderate hard to hard, calcareous, trace carbonaceous specks, blocky to subblocky	5 – 1000 units 93/3/2/1/1 % Ave CO ² : 40 ppm								

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 05/09/02

REPORT NO: 10

DEPTH : 1797 m (As at 2400 hours EST, 04/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 10.25

OPERATION: WAITING ON WEATHER – OPERATIONS SUSPENDED. (0600 hours EST, 05/09/02)

AFE COST			CUI	MULAT	TIVE CO	OST					
CASING DEP	TH: 743m (34	0mm- 13	3 3/8")					RI RT	G: OCI	EAN BOUNTY	
PROGRAMMED TD: 2276m			ROTARY TABLE: 25m LAT					WA	WATER DEPTH: 70.5m		
MUD DATA (2400 Hours)	Type: KCL/PHPA		Wt: 1.24	Vis: 64	FL: 5.0	РН: 9.5	KCl 32400	C1 : 30000	PV/ 0 18/3	YP: Rmf: 2 0.125 @ 22.4°C	
BIT DATA (2400 Hours)	PRESENT LAST	No. 7 6 5	Mako HTC SMIT SMIT	e Tyj MX TH MA TH 100	pe KR09D A74BPX GF	Size (r 311 311 311	nm) H - 1 1	Hours 6.2 4.7	Drilled - 397 341	Condition - 1-6-LT-S-X-I-CT-PR 1-1-WT-A-E-I-ER-PR	
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>A</u>	<u>ZIM (T)</u> 92.34°					

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

CHANGE TO TRICONE BIT. CHANGE ISONIC MODULE ON ANADRILL MWD TOOLS, RUN IN HOLE TO CASING SHOE AFTER SHALLOW TESTING MWD TOOLS. SERVICE TOP DRIVE SYSTEM. CONTINUE TO RUN IN HOLE, TAG FILL @ 1750m. CIRCULATE HOLE CLEAN, PULL OUT OF HOLE TO CASING SHOE. SUSPEND OPERATIONS DUE TO DETERIORATING WEATHER CONDITIONS. PICK UP HANG-OFF TOOL, RACK IN DERRICK. PICK UP ADDITIONAL DRILLPIPE, RACK IN DERRICK. MAKE UP HANG-OFF TOOL, RUN IN HOLE, LAND OUT IN WELLHEAD. BACK OUT LANDING STRING. PULL OUT OF HOLE.

00:00-06:00 HOURS 05/09/02:

PREPARE DRILL FLOOR TO PULL DIVERTER IF REQUIRED. WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. (HEAVE: 4-5m, ROLL: 1°, COMBINED WAVE HEIGHT: 7.6m)

ANTICIPATED OPERATIONS:

CONTINUE TO WAIT ON WEATHER. DRILL AHEAD 311mm (12.25") HOLE OR POSSIBLY RUN WIRELINE LOGS.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 05/09/02

REPORT NO: 10

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	04:30	4.50	Changed bit and ISONIC module on MWD. RIH shallow testing MWD at HWDP.
			Flowchecked at shoe.
04:30	05:00	0.50	Serviced Top Drive System.
05:00	07:30	2.50	Continued RIH tagged fill at 1750m.
07:30	09:00	1.50	Circulated bottoms up through chokeline to degasser.
09:00	12:30	3.50	Washed and reamed to bottom at 1797m. Boosted riser.
12:30	16:00	2.50	Circulated bottoms up, continued until shakers clean. Made flowcheck, static.
16:00	19:00	3.00	Suspended operations due to degrading weather conditions. Heave 7m, Roll 1.5 deg,
			Pitch 1.8 deg, Combined wave height 8.5m. POOH to shoe, made flowcheck, static.
			De-ballasted rig to storm draft 19.81m (65ft) at 17:45hrs.
19:00	21:00	3.00	Picked up hangoff tool and racked in derrick. Picked up additional DP to TD well and
			racked in derrick.
21:00	24:00	3.00	Made up hangoff tool, RIH and landed out in wellhead. Backed out landing string,
			POOH. Heave 8m, Roll 1.2 deg, Pitch 2.5 deg, Combined wave height 8.5m.

A.C.N. 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 05/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
NULLAWARRE GREENSAND	1522	1497	-	-
BELFAST MUDSTONE	1561	1536	27m High	37m High
WAARRE FORMATION	1743	1718	6m High	19m High
	1715	1,10	ommengin	1) III IIIgii

	HYDROCARBON SHOW SUMMARY	
INTERVAL ROP (m/hr)	<u>LITHOLOGY</u>	GAS

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 06/09/02

REPORT NO: 11

DEPTH : 1797 m (As at 2400 hours EST, 05/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 11.25

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m WATER DEPTH: 70.5m

OPERATION: WAITING ON WEATHER – OPERATIONS SUSPENDED. (0600 hours EST, 06/09/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

MUD DATA (2400 Hours)	Type: KCL/PHPA		Wt: 1.24	Vis: FL: 71 5.0	PH: 8.5	KCl 32400	Cl : 31000	PV / 20 / 2	YP: Rmf: 9 0.125 @ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 7 6 5	Make HTC SMITH SMITH	Type MXR09D MA74BP 10GF	Size 311 X 311 311	(mm) H - 16 14	ours 1 6.2 2 4.7 2	Drilled - 397 341	Condition - 1-6-LT-S-X-I-CT-PR 1-1-WT-A-E-I-ER-PR
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>AZIM (T)</u> 192.34°				

ROTARY TABLE: 25m LAT

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

PREPARE DRILL FLOOR TO PULL DIVERTER IF REQUIRED. WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. OFFLOAD BARITE FROM SUPPLY BOAT.

00:00 - 06:00 HOURS 06/09/02:

WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. (06:00HRS - HEAVE: 4m, ROLL: 1°, COMBINED WAVE HEIGHT: 5.5m)

ANTICIPATED OPERATIONS:

CONTINUE TO WAIT ON WEATHER. OFFLOAD SUPPLY BOATS WHEN POSSIBLE.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 06/09/02

REPORT NO: 11

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	00:30	0.50	Rigged drill floor to pull diverter.
00:30	06:00	5.50	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 6m, combined wave height 7.5m.
06:00	12:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 5m, combined wave height 7.5m.
12:00	18:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1.2 deg, roll 0.8 deg, heave 4m, combined wave height 6m.
18:00	24:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1.8 deg, roll 1.2 deg, heave 3m, combined wave height 6.5m.

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 06/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	GAS

	GEOLOGICAL SUMMARY	
INTERVAL ROP (m/hr)	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 07/09/02

REPORT NO: 12

DEPTH : 1797 m (As at 2400 hours EST, 06/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 12.25

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m

WATER DEPTH: 70.5m

OPERATION: WAITING ON WEATHER – OPERATIONS SUSPENDED. (0600 hours EST, 07/09/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

MUD DATA (2400 Hours)	Type: KCL/PHPA		Wt: 1.24	Vis: FI 71 5.0	L: PH: 0 8.5	KCl 324	Cl : 00 310	PV/ 00 20/2	YP: Rmf: 29 0.125 @ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 7 6 5	Make HTC SMITH SMITH	Type MXR09I MA74BI 10GF	Siz D 311 PX 311 311	e (mm)	Hours - 16.2 14.7	Drilled - 397 341	Condition - 1-6-LT-S-X-I-CT-PR 1-1-WT-A-E-I-ER-PR
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>AZIM (1</u> 192.34°	[)			

ROTARY TABLE: 25m LAT

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. PERFORM GENERAL MAINTENANCE. OFFLOAD SUPPLY BOAT.

00:00 - 06:00 HOURS 07/09/02:

WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. (06:00HRS - HEAVE: 7-7.5m, ROLL: 2.5°, COMBINED WAVE HEIGHT: 9.75-10.5m)

ANTICIPATED OPERATIONS:

CONTINUE TO WAIT ON WEATHER.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 07/09/02

REPORT NO: 12

FROM	ТО	HRS	ACTIVITY DESCRIPTION
		1	
00:00	06:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 4.5m, combined wave height 6.5m.
06:00	12:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 4.5m, combined wave height 6.5m.
12:00	18:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1.8 deg, roll 1.2 deg, heave 4.8m, combined wave height 7.3m.
18:00	24:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2.2 deg, roll 1.8 deg, heave 5.8m, combined wave height 9.7m.
'	I	1	

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 07/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	GAS

	GEOLOGICAL SUMMARY	
INTERVAL ROP (m/hr)	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 08/09/02

REPORT NO: 13

DEPTH : 1797 m (As at 2400 hours EST, 07/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 13.25

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m

WATER DEPTH: 70.5m

OPERATION: WAITING ON WEATHER – OPERATIONS SUSPENDED. (0600 hours EST, 08/09/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

	T		W/4.	Via EL	DII.	KC1	CL		D. D. fr
(2400 Hours)	Type: KCL/PHPA		wt: 1.24	VIS: FL: 70 4.0	8.5	32400	30000	19 / 29	0.125 @ 22.4°C
BIT DATA	PRESENT	No. 7	Make HTC	Type MXR09D	Size (311	mm) Ho -	urs D -	rilled	Condition
(2400 Hours)	LAST	6 5	SMITH SMITH	MA74BPΣ 10GF	X 311 311	16. 14.	2 39 7 34	∂7 41	1-6-LT-S-X-I-CT-PR 1-1-WT-A-E-I-ER-PR
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>AZIM (T)</u> 192.34°				

ROTARY TABLE: 25m LAT

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. PERFORM GENERAL MAINTENANCE. OFFLOAD SUPPLY BOAT.

00:00 - 06:00 HOURS 08/09/02:

WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. (06:00HRS - HEAVE: 6m, ROLL: 1°, COMBINED WAVE HEIGHT: 6.7m)

ANTICIPATED OPERATIONS:

CONTINUE TO WAIT ON WEATHER TO ABATE TO PULL HANGOFF TOOL.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 08/09/02

REPORT NO: 13

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	06:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2.5 deg, heave 7-7.5m, combined wave height 9.75-10.5m.
06:00	12:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2 deg, heave 7m, combined wave height 12m.
12:00	18:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2 deg, heave 6.1m, combined wave height 10.8m.
18:00	24:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 4.9m, combined wave height 8.5m.

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 08/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	GAS

	GEOLOGICAL SUMMARY	
INTERVAL ROP (m/hr)	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 09/09/02

REPORT NO: 14

DEPTH : 1797 m (As at 2400 hours EST, 08/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 14.25

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m

WATER DEPTH: 70.5m

OPERATION: WAITING ON WEATHER – OPERATIONS SUSPENDED. (0600 hours EST, 09/09/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

MUD DATA (2400 Hours)	Type: (Pits) KCL/PHPA		Wt: 1.22	Vis: FL 59 4.0	.: PH:) 9.0	KC1 3240	C1 : 00 310	PV / 00 14 / 2	YP: Rmf: 25 0.125 @ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 7 6 5	Make HTC SMITH SMITH	Type MXR09E MA74BP 10GF	Size 311 2X 311 311	e (mm)	Hours - 16.2 14.7	Drilled - 397 341	Condition - 1-6-LT-S-X-I-CT-PR 1-1-WT-A-E-I-ER-PF
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>AZIM (1</u> 192.34°	<u> </u>			

ROTARY TABLE: 25m LAT

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. PERFORM GENERAL MAINTENANCE.

00:00 - 06:00 HOURS 09/09/02:

WAIT ON WEATHER, CONTINUE TO MONITOR CONDITIONS. (06:00HRS - HEAVE: 6m, ROLL: 2.5°, PITCH: 3°, COMBINED WAVE HEIGHT: 8.5m)

ANTICIPATED OPERATIONS:

CONTINUE TO WAIT ON WEATHER TO ABATE TO PULL HANGOFF TOOL.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 09/09/02

REPORT NO: 14

FROM	TO	HRS	ACTIVITY DESCRIPTION
00:00	06:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 6m, wind 20/25 knots, combined wave height 6.7m.
06:00	12:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 5 m, wind 20/25 knots, combined wave height 5.8 m.
12:00	18:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2 deg, heave 5 m, wind 35/45 knots, combined wave height 9.4 m.
18:00	24:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2.2 deg, roll 2 deg, heave 6 m, wind 25/40 knots, combined wave height 8.5 m.

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 09/09/02

FORMATION TOPS:	MD RT Subsea		H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	<u>GAS</u>

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 10/09/02

REPORT NO: 15

DEPTH: 1797 m (As at 2400 hours EST, 09/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 15.25

WAITING ON WEATHER, HAVING DETACHED LOWER MARINE RISER PACKAGE. **OPERATION** : (0600 hours EST, 10/09/02)

AFE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

MUD DATA Type: (Pits) Wt: Vis: FL: PH: KCl C1 : PV / YP: Rmf: (2400 Hours) KCL/PHPA 1.22 59 4.0 9.0 32400 31000 14 / 25 0.125 @ 22.4°C No. Make Type Size (mm) Hours Drilled Condition **BIT DATA** PRESENT 7 HTC MXR09D 311 (2400 Hours) SMITH MA74BPX 311 1-6-LT-S-X-I-CT-PR LAST 6 16.2 397 5 SMITH 311 1-1-WT-A-E-I-ER-PR 10GF 14.7 341 SURVEYS: $\underline{MD}(m)$ INC AZIM (T) 1775.86 4.38° 192.34°

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

WAIT ON WEATHER. CONTINUE TO MONITOR CONDITIONS. PERFORM GENERAL MAINTENANCE. UNLATCH LOWER MARINE RISER PACKAGE DUE TO DETERIORATING WEATHER CONDITIONS. CONTINUE TO WAIT ON WEATHER.

00:00 - 06:00 HOURS 10/09/02: WAIT ON WEATHER.

(06:00HRS - HEAVE: 6.1m, ROLL: 1°, PITCH: 1.5°, WIND 30-35 KNOTS, COMBINED WAVE HEIGHT: 6.1m)

ANTICIPATED OPERATIONS:

CONTINUE TO WAIT ON WEATHER TO ABATE TO PULL HANGOFF TOOL.

CUMULATIVE COST

RIG: OCEAN BOUNTY RT - SEAFLOOR: 95.5m WATER DEPTH: 70.5m

ROTARY TABLE: 25m LAT

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 10/09/02

REPORT NO: 15

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	06:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 3 deg, roll 2.5 deg, heave 6 m, wind 30/45 knots, combined wave height 8.5 m.
06:00	12:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 3 deg, roll 2.5 deg, heave 5.5 m, wind 40/45 knots, combined wave height 8.2 m.
12:00	13:30	1.50	 Waiting on weather. Weather conditions deteriorated rapidly. 12:55:- Pitch 4 deg, heave 10m, roll 2 deg, heave 10 m, wind 30/45 knts, combined wave height 12.1 m. Situation:- Blue pod hose off saddle, tangled in slip jt; #4 Rucker, some strands parted at sheave; slip jt extreme lateral movement, violent heave of 8-10m; #8 Rucker, line chafed on sheave mounting support. Attempted to re-position Rig, - #2 anchor not holding, #3 anchor reported max 289kN (650 Kips). 12:53: OIM informed Santos Rep of decision to unlatch. 12:54: Disconnected at LMRP, commenced de-ballasting Rig. 13:05: Slacked leeward chains #: 5,6,7 & 8 and guidelines. 13:20: Completed slacking chains, propulsion ready for use. 13:23: Rig at 60 feet draft.
13:30	14:00	0.50	Waiting on weather. Weather conditions continued to deteriorate. Pitch 4 deg, roll 1.8 deg, heave 10m, wind 30/45 knots, combined wave height 13.4 m.
14:00	18:00	4.00	Waiting on weather, continue to monitor conditions. Pitch 3.5 deg, roll 1.8 deg, heave 9.1m, wind 30/40 knots, combined wave height 11.3 m.
18:00	24:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1.8 deg, heave 6.1m, wind 30/35 knots, combined wave height 8.8 m.

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 10/09/02

FORMATION TOPS:	MD RT Subsea		H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 11/09/02

REPORT NO: 16

DEPTH : 1797 m (As at 2400 hours EST, 10/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 15.25

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

WAIT ON WEATHER. PERFORM GENERAL MAINTENANCE. TENSION UP ANCHOR #2. PRESSURE TEST SURFACE EQUIPMENT. CONTINUE TO WAIT ON WEATHER.

00:00 - 06:00 HOURS 11/09/02:

WAIT ON WEATHER TO RECONNECT LOWER MARINE RISER PACKAGE (06:00HRS - HEAVE: 1.8m, ROLL: 0.8°, PITCH: 1°, WIND 15-20 KNOTS, COMBINED WAVE HEIGHT: 3.4m)

ANTICIPATED OPERATIONS:

CONTINUE TO WAIT ON WEATHER. AT FIRST OPPORTUNITY, RECONNECT LOWER MARINE RISER PACKAGE AND RESUME OPERATIONS.

OPERATION : WAITING ON WEATHER TO RECONNECT LOWER MARINE RISER PACKAGE.								
AFE COST			CUMU	LATIVE C	OST			
CASING DEPTH: 743m (340mm-13 3/8") RIG: OCEAN BOUNTY PROGRAMMED TD: 2276m ROTARY TABLE: 25m LAT RIG: OCEAN BOUNTY WATER DEPTH: 70.5m WATER DEPTH: 70.5m						OUNTY 8: 95.5m 9: 70.5m		
MUD DATA (2400 Hours)	Type: (Pits) KCL/PHPA)	Wt: 1.23	Vis: FL: 57 5.0	PH: 9.0	KCl C 32400 30	l: PV/ 0500 15/2	YP: Rmf: 4 0.125 @ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 7 6 5	Make HTC SMITH SMITH	Type MXR09D MA74BP2 10GF	Size (1 311 X 311 311	mm) Hours - 16.2 14.7	5 Drilled - 397 341	Condition - 1-6-LT-S-X-I-CT-PR 1-1-WT-A-E-I-ER-PR
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>AZIM (T)</u> 192.34°			

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 11/09/02

REPORT NO: 16

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	06:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 6.1 m, wind 20/30 knots, combined wave height 6.1 m.
06:00	12:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 6.1 m, wind 25/28 knots, combined wave height 6.4 m.
12:00	18:00	6.00	Waiting on weather, continue to monitor conditions. Pitch .8 deg, roll .6 deg, heave 2.4 m, wind 15/25 knots, combined wave height 4.3 m.
18:00	24:00	6.00	Waiting on weather, continue to monitor conditions. Pitch 1 deg, roll .8 deg, heave 2.4 m, wind 15/20 knots, combined wave height 3.7 m. Completed pressure testing surface equipment.

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WELL PROGRESS REPORT

CASINO 1

DATE: 11/09/02

FORMATION TOPS:	MD RT Subsea		H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 12/09/02

REPORT NO: 17

DEPTH : 1797 m (As at 2400 hours EST, 11/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 17.25

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m

WATER DEPTH: 70.5m

OPERATION: RUNNING IN HOLE TO CASING SHOE, PRIOR TO PRESSURE TESTING BOP STACK. (0600 hours EST, 12/09/02)

CUMULATIVE COST

ROTARY TABLE: 25m LAT

AFE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

MUD DATA (2400 Hours)	Type: (Pits) KCL/PHPA		Wt: 1.23	Vis: FL: 54 4.0	PH: 9.0	KCl 32400	C1 : 30000	PV / YP 14 / 23	: Rmf: 0.125 @ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 7 6 5	Make HTC SMITH SMITH	Type MXR09D MA74BPX 10GF	Size (311 311 311 311	(mm) Ho - 16. 14.	ours Dr - .2 39 .7 34	rilled C - 97 1 41 1	Condition -6-LT-S-X-I-CT-PR -1-WT-A-E-I-ER-PR
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>AZIM (T)</u> 192.34°				

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

WAIT ON WEATHER. PERFORM GENERAL MAINTENANCE. TENSION UP ANCHOR #2. LAND LOWER MARINE RISER PACKAGE ON NEW GASKET, CONFIRM LATCH WITH 22.6T (50KIPS) OVERPULL. RUN IN HOLE TO SHEAR RAMS. DISPLACE RISER TO 1.24SG (10.3PPG) MUD. STAB INTO HANG-OFF TOOL. ATTEMPT TO CIRCULATE – PRESSURED UP TO 27 MPa (3900 PSI). PULL OUT OF HOLE TO CLEAR STRING BLOCKAGE.

00:00 - 06:00 HOURS 12/09/02:

PULL OUT OF HOLE. LAYOUT MWD/LWD TOOLS. SERVICE BIT, BOTTOM HOLE ASSEMBLY & RUN IN HOLE TO CASING SHOE.

ANTICIPATED OPERATIONS:

MAKE UP & RUN IN HOLE WITH BOP TEST TOOL. PRESSURE TEST BOP STACK. PULL OUT BOP TEST TOOL. RUN IN HOLE TO BOTTOM FOR CLEAN-OUT TRIP, CONDITION HOLE. DISPLACE TO FRESH MUD. POOH TO PICK UP MWD/LWD TOOLS. RUN IN HOLE. DRILL AHEAD 311mm (12 ¼") HOLE.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 12/09/02

REPORT NO: 17

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	07:30	7.50	Waiting on weather, continue to monitor conditions. Pitch 1 deg, roll 0.8 deg, heave 1.8 m, wind 15/20 knots, combined wave height 3.4 m.
07:30	08:30	1.00	Laid out diverter, picked up landing joint. Released VX gasket from LMRP, ROV confirmed release.
08:30	13:30	5.00	Repositioned rig to land LMRP. ROV installed new VX gasket on BOP. Ballasted rig to 19.8m (65') draft, moved rig to free # 4 guideline
13:30	16:30	3.00	Waited on weather in position to land LMRP, heave over 2 m. Attempted landing, unsuccessful due to heave too large. Ballasted rig to drilling draft and ROV installed temporary (threaded hook) #2 guideline.
16:30	17:30	1.00	Landed and latched LMRP with 13.6 tonne (30kip), took overpull 22.6 tonne (50kip) O/P to confirm latched. Pressure tested Choke & Kill lines to 1.7/34.5 MPa (250/5000 psi) for 5/15 mins.
17:30	19:30	2.00	Laid out riser landing joint and rigged up diverter, took 9 tonne (20(kip) O/P. Rigged down riser handling equipment.
19:30	20:15	0.75	RIH with landing string to above blind/shear rams and circulated riser to 1.24 sg (10.3 ppg) mud. Checked pressure between rams.
20:15	22:00	1.75	Opened B/S rams and made up recovery string. Opened Lower Pipe Ram and lost 4 m3 (25bbls) to hole, before hole static. Attempted to circulate without success, pressured up to 27 MPa (3900 psi). Drill string blocked.
22:00	24:00	2.00	POOH from 616m with Emergency Hang-off Tool, racked in derrick. Depressured and laid out Inside Gray and TIW valves.

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 12/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 13/09/02

REPORT NO: 18

DEPTH : 1804 m (As at 2400 hours EST, 12/09/02) PROGRESS: 7 m

DAYS FROM SPUD: 18.25

OPERATION : DRILLING 311mm (12 ¹/₄") HOLE IN THE WAARRE FORMATION @ 6 m/hr. (0600 hours EST, 13/09/02)

CUMULATIVE COST

AFE COST

CASING DEPTH: 743m (340mm- 13 3/8")

PROGRAMMED TD: 2276m

ROTARY TABLE: 25m LAT W

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m WATER DEPTH: 70.5m

MUD DATA (2400 Hours)	Type: (Pits) KCL/PHPA		Wt: 1.24	Vis: FI 61 5.	L: 1 0 9	PH: 9.5	KCl 3240	C1 : 0 300	PV / 00 19 /	YP: 28	Rmf: 0.125 @ 22.4°C
BIT DATA (2400 Hours)	PRESENT LAST	No. 7 6 5	Make HTC SMITH SMITH	Type MXR091 MA74BI 10GF	D PX	Size (311 311 311	mm)	Hours 1.5 16.2 14.7	Drilled 7 397 341	Con - 1-6- 1-1-	ndition -LT-S-X-I-CT-PF -WT-A-E-I-ER-P
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>AZIN</u> 192.3	<u>M (T)</u> 34°					

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

PULL OUT OF HOLE WITH PLUGGED BIT. LAYOUT MWD/LWD TOOLS. SERVICE BIT, BOTTOM HOLE ASSEMBLY & RUN IN HOLE TO 663m. MAKE UP & RUN IN HOLE WITH BOP TEST TOOL. CIRCULATE HOLE CLEAN. PRESSURE TEST BOP STACK. LAYOUT BOP TEST TOOL. PRESSURE TEST SURFACE EQUIPMENT AND UPPER/LOWER INSIDE BLOWOUT PREVENTERS IN THE TOP DRIVE SYSTEM. RUN IN HOLE TO 950m. CIRCULATE HOLE CLEAN. RUN IN HOLE TO 1717m. WASH & REAM FROM 1717m TO 1770m (TAG FILL). REAM TO BOTTOM (27m FILL). DRILL AHEAD 311mm (12 ¼") HOLE FROM 1797m TO 1804m AT 24:00HRS.

00:00-06:00 HOURS 13/09/02:

DRILL AHEAD 311mm (12 1/4") HOLE FROM 1804m TO 1838m

ANTICIPATED OPERATIONS:

DRILL AHEAD 311mm (12 ¹/₄") HOLE.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 13/09/02

REPORT NO: 18

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	02:30	2.50	Attempted to circulate, unsuccessfully. POOH for plugged bit. Broke and cleaned bit.
02:30	06:00	3.50	Laid out MWD/LWD tools. Made up serviced bit, BHA and RIH. Broke circulation at HWDP (268 mts / 880ft)
06:00	07:30	1.50	Continued RIH on drill pipe, made up BOP test tool and RIH to 663m (2175 ft)
07:30	08:30	1.00	Circulated bottoms up via choke @ 80spm 5175 kpa (750 psi).
08:30	09:30	1.00	Circulated bottoms up 100spm 5865 kpa (850 psi.)
09:30	14:00	4.50	Pressure tested BOPs 1380kpa / 20700kpa (200 / 3000 psi). Annulars 1380 kpa / 34500 kpa (200 / 5000 psi) for 5 / 10 min Bams & failsafes
14:00	14:30	0.50	POOH and laid out BOP test tool.
14:30	16:00	1.50	Pressure tested mud hose, upper and lower IBOP valves 1380 / 34500 kpa (200 / 5000 psi) Function tested Diverter.
16:00	17:00	1.00	Continued RIH to 743m (2437 ft) Broke circulation at (340mm) 13-3/8 Casing shoe.
17:00	18:00	1.00	RIH to 950m (3117 ft) Circulated bottoms up via choke line.
18:00	20:00	2.00	Continued RIH to 1717m (5633 ft)
20:00	22:00	2.00	Took weight @ 1717m (5633ft) Washed and reamed down from 1717m to 1770 m. Intermittently taking 10 kips with erratic torque up to 15,000 ft/lbs. Tagged firm fill @ 1770m and reamed down to 1797m (5807ft to 5896ft) 10-15 kips required to ream.
22:00	24:00	2.00	Drilled 12-1/4" hole from 1797m to 1804m. (5896ft to 5919ft)
A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 13/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY			
<u>INTERVAL</u> <u>ROP (m/hr)</u>	INTERVAL ROP (m/hr)			
	No shows			

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>
1797-1832 ROP: 5-10 Ave: 5.5	SANDSTONE WITH INTERBEDDED SILTSTONE SANDSTONE: Pale grey, white to off-white, very pale green grey, occasional pale pink to pink red, minor Fe-staining, rare pale yellow, clear to translucent in part, commonly very fine, grading to arenaceous siltstone in part, medium to	3 – 11 units 100 / tr / tr %
	very coarse grained in part, moderately poorly sorted, subangular to subrounded, occasional angular coarse bit fractured quartz, moderately strong calcareous cement, locally common white argillaceous matrix, generally well cemented, commonly quartzose appearance in the fine grained aggregates, coarser aggregates occasionally contain multi-coloured lithic fragments, trace carbonaceous specks, trace pyrite, hard to very hard, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Medium to dark brown grey, minor disseminated and occasional nodular pyrite, trace carbonaceous specks, moderately hard to hard, subblocky.	CO2: 30-40 ppm

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 14/09/02

REPORT NO: 19

DEPTH : 2043 m (As at 2400 hours EST, 12/09/02) PROGRESS: 239 m

DAYS FROM SPUD: 19.25

1-1-WT-A-E-I-ER-PR

OPERATION : DRILLING 311mm (12 ¹/₄") HOLE @ 2093m (ROP : 8 m/hr). (0600 hours EST, 14/09/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

ROTARY TABLE: 25m LAT

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m WATER DEPTH: 70.5m

341

MUD DATA (2400 Hours)	Type: (Pits) KCL/PHPA		Wt: 1.24	Vis: FL: 56 4.4	PH: K 9.5 3'	Cl Cl: 7800 3140	PV / 7 00 22 / 2	YP: Rmf: 6
RIT DATA	PRESENT	No. 7	Make HTC	Type MXR09D	Size (mm 311) Hours 22.9	Drilled 246	Condition
(2400 Hours)	LAST	6	SMITH	MA74BPX	311	16.2	397	1-6-LT-S-X-I-CT-PR

 5
 SMITH
 10GF
 311
 14.7

 SURVEYS:
 MD (m)
 INC
 AZIM (T)

 1775.86
 4.38°
 192.34°

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

DRILL AHEAD 311mm (12 1/4") HOLE FROM 1804m TO 2043m AT 24:00HRS.

00:00 – 06:00 HOURS 14/09/02: DRILL AHEAD 311mm (12 ¹/₄") HOLE FROM 2043m TO 2093m

ANTICIPATED OPERATIONS: DRILL AHEAD 311mm (12 ¹/₄") HOLE TO TOTAL DEPTH.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 14/09/02

REPORT NO: 19

SUMMARY OF OPERATIONS (0000 hours - 2400 hours):

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	24:00	24.0	Continued drilling 311mm (12-1/4") hole from 1804m to 2043m (5919ft to 6703ft)

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 14/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>
1862-1872 Ave: 45	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, common calcite cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.	82 units / 10 bg 98.5 / 1 / 0.5 / tr %

	GEOLOGICAL SUMMARY						
INTERVAL ROP (m/hr)	LITHOLOGY	GAS					
1832-1862 ROP: 7-11 Ave: 9	SANDSTONE INTERBEDDED WITH SILTSTONE, TRACES OF COAL SANDSTONE: Light grey, light green grey, trace pink, medium to coarse grained, moderately sorted, subangular, common moderately strong calcareous cement, common white argillaceous matrix, trace multi-coloured lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Light to medium grey, occasionally dark grey, arenaceous, trace carbonaceous specks, trace finely disseminated pyrite, hard, subblocky to occasionally subfissile. COAL: (Traces) Black, subvitreous, brittle, moderate hard, subfissile.	4 – 20 units 100/tr/tr % CO2: 30-50 ppm					
1862-1872 ROP: 40-55 Ave: 45	SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, common calcite cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro-micaceous specks, poor visual porosity, no hydrocarbon fluorescence.	82 units 98.5 / 1 / 0.5 / tr % CO2: <30 ppm					

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 14/09/02

	GEOLOGICAL SUMMARY						
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>					
1872-1905 ROP: 9-45 Ave: 20	INTERBEDDED SANDSTONE AND SILTSTONE SANDSTONE: Light grey, light green grey, off white, translucent, occasionally pink to red, medium to coarse, moderately well sorted, subangular, weak siliceous cement, trace calcareous cement, common argillaceous matrix, common lithic fragments, grades to lithic sandstone in part, trace micro- micaceous specks, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Light to medium grey, occasionally dark grey, medium brown grey, siliceous, trace carbonaceous specks, hard, subblocky to occasionally subfissile.	11 – 30 units 100 / tr / tr % CO2: 40-50 ppm					
1905-1940 ROP: 8-20 Ave: 10	INTERBEDDED SANDSTONE AND SILTSTONE SANDSTONE: Light grey, light green grey, pale pink, off white, translucent, fine to coarse, poorly sorted, subangular to subrounded, weak siliceous cement, common calcareous cement, minor to locally common light green grey argillaceous matrix, common lithic fragments, hard to very hard, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Medium to dark grey brown, commonly light grey, trace carbonaceous specks, trace glauconite, firm to moderate hard, commonly soft and dispersive, subblocky.	7 – 15 units 100 / tr /tr % to 97 / 3 % CO2: <40 ppm					
1940-1982 ROP: 8 – 22 Ave: 9.5	INTERBEDDED SANDSTONE AND SILTSTONE SANDSTONE: Light grey, minor light green grey, off white to minor pale brown, clear to translucent, medium to coarse grained, moderately poorly sorted, subangular, strong siliceous cement, trace calcareous cement, minor to locally common light grey argillaceous matrix, common lithic fragments, hard, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Light grey, light to occasionally medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, firm to moderate hard, soft and dispersive in part, subblocky.	6 - 15 units 100 / tr / tr % CO2: <40 ppm					
1982-2042 ROP: 5-20 Ave: 9	SANDSTONE INTERBEDDED WITH SILTSTONE SANDSTONE: Light grey, light green grey, mottled green grey, trace pink, minor red brown, translucent, medium to coarse grained, predominantly coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, trace quartz overgrowths, minor to locally common light grey argillaceous matrix, common lithic fragments, grades to lithic sandstone, trace mica, trace pyrite, hard, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace plant fragments, trace lithic fragments, trace glauconite, firm to moderate hard, soft in part, subblocky.	7 – 14 units 100 / tr % CO2: 40-50 ppm					

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WELL PROGRESS REPORT

CASINO 1

DATE: 14/09/02

	GEOLOGICAL SUMMARY	
INTERVAL ROP (m/hr)	<u>LITHOLOGY</u>	<u>GAS</u>
2042-2088 ROP: 5-20 Ave: 8	SANDSTONE INTERBEDDED WITH SILTSTONE SANDSTONE: Light grey, predominantly off white, translucent, light green grey, trace pink red, fine to coarse grained, predominantly medium, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, locally common light grey argillaceous matrix, trace lithic fragments, trace mica, hard, poor visual porosity, no hydrocarbon fluorescence. SILTSTONE: Light grey, light grey brown, argillaceous, trace carbonaceous specks, trace plant fragments, trace lithic fragments, rare glauconite, firm to moderate hard, soft in part, subblocky.	4 – 12 units 100 / tr % CO2: 30–40 ppm

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 15/09/02

REPORT NO: 20

DEPTH : 2118 m (As at 2400 hours EST, 14/09/02) PROGRESS: 75 m

DAYS FROM SPUD: 20.25

RIG: OCEAN BOUNTY RT – SEAFLOOR: 95.5m

WATER DEPTH: 70.5m

OPERATION : RUNNING WIRELINE LOGS (RUN 2: MDT-GR) (0600 hours EST, 15/09/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

MUD DATA Type: (Pits) Wt: Vis: FL: PH: KCl C1 : PV / YP: Rmf: (2400 Hours) KCL/PHPA 1.22 54 5.2 9.0 43200 31400 21 / 26 0.1137 @ 24°C No. Make Type Size (mm) Hours Drilled Condition 2-2-BT-A-E-I-CT-TD **BIT DATA** LAST 7 HTC MXR09D 311 33.9 321 (2400 Hours) 6 SMITH MA74BPX 311 397 1-6-LT-S-X-I-CT-PR 16.2 SURVEYS: $\underline{MD}(m)$ INC AZIM (T) 1775.86 4.38° 192.34°

ROTARY TABLE: 25m LAT

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

DRILL AHEAD 311mm (12 ¼") HOLE FROM 2043m TO 2118m. LOGGING DEPTH REACHED AT 11:00 HRS ON 14-09-02. CIRCULATE HOLE CLEAN. STRAP OUT OF HOLE TO RUN WIRELINE LOGS (WORKED TIGHT HOLE AT 1805m & 1760m). RIG UP SCHLUMBERGER AND RECORD RUN 1: PEX-DSI.

00:00 - 06:00 HOURS 15/09/02:

COMPLETE RUN 1: PEX-DSI. RIG UP & RUN IN HOLE WITH RUN 2: MDT-GR

ANTICIPATED OPERATIONS:

COMPLETE MDT PRESSURE SURVEY (TOTAL 39 TESTS). RUN 3: SIDEWALL CORES.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 15/09/02

REPORT NO: 20

SUMMARY OF OPERATIONS (0000 hours - 2400 hours):

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	11:00	11.00	Continued drilling 311mm (12-1/4") Hole from 2043m to 2118m
11:00	13:00	2.00	Circulated bottoms up @ 2118m. Shakers clean, flow checked.
13:00	19:30	6.50	POOH F /- 2118m (60 kips O-Pull @ 1805m & 1760m Worked clean)
19:30	20:00	0.50	Held JSA and rigged up Schlumberger wire line.
20:00	24:00	4.00	Made up and RIH with Log # 1 (PEX / DSI / HALS)

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 15/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
WAARRE FORMATION	1743	1718	6m High	19m High

	HYDROCARBON SHOW SUMMARY	
INTERVAL ROP (m/hr)	LITHOLOGY	GAS

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	<u>LITHOLOGY</u>	<u>GAS</u>
2088-2118 ROP: 7-9 Ave: 8	SILTSTONE INTERBEDDED WITH SANDSTONE SILTSTONE: Light grey, light to medium grey brown, argillaceous, trace carbonaceous specks, trace lithic fragments, siliceous in part, firm to moderate hard, soft in part, slightly dispersive, subblocky. SANDSTONE: Light to medium grey, translucent, occasionally light green grey, occasionally orange red, fine to predominantly medium, minor coarse, moderately well sorted, subangular to subrounded, strong siliceous cement, trace calcite, common light grey argillaceous matrix, trace lithic fragments, grades to lithic sandstone, hard aggregates, poor visual porosity, no hydrocarbon fluorescence.	3-6 units 100% C1 CO2: 40 ppm

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 16/09/02

REPORT NO: 21

DEPTH : 2118 m (As at 2400 hours EST, 15/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 21.25

OPERATION : RUNNING IN HOLE WITH CEMENT STINGER TO SET ABANDONMENT PLUGS.

CUMULATIVE COST

AFE COST

CASING DEPTH: 743m (340mm- 13 3/8")

PROGRAMMED TD: 2276m

ROTARY TABLE: 25m LAT WA

	RIG: OCEAN BOUNTY
	RT – SEAFLOOR: 95.5m
Т	WATER DEPTH: 70.5m

MUD DATA (2400 Hours)	Type: (Pits) KCL/PHPA		Wt: 1.24	Vis: 57	FL: 5.0	PH: 9.0	KCl 4050	Cl : 0 3300	PV/ 20 21/2	YP: Rmf: 25 0.1137 @ 24°C	2
BIT DATA (2400 Hours)	LAST	No. 7	Make HTC	Type MXR0)9D	Size (1 311	mm)	Hours 33.9	Drilled 321	Condition 2-2-BT-A-E-I-CT-T	D
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>A</u> 19	<u>ZIM (T)</u> 92.34°					

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

RECORD WIRELINE LOGGING RUN 1: PEX-DSI. RIG UP & RUN IN HOLE WITH RUN 2: MDT-GR. RECORD 15 PRE-TESTS. PULL OUT OF HOLE TO SWAP FAILED MDT TOOL. RUN IN HOLE WITH REPLACEMENT MDT TOOL. COMPLETE PRESSURE SURVEY (TOTAL 30 PRE-TESTS, 18 VALID TESTS, 5 LOST SEALS, 5 CURTAILED, 2 INVALID TESTS). RIG UP & RUN IN HOLE WITH SIDEWALL CORE GUN. SHOOT 30 SIDEWALL CORES.

00:00 - 06:00 HOURS 15/09/02:

UNLOAD SIDEWALL CORES – RECOVER 30 OF 30 SHOTS. RIG DOWN SCHLUMBERGER. MAKE UP CEMENT STINGER WITH 89mm (3 ½") TUBING. RUN IN HOLE TO 560m AT 06:00 HRS

ANTICIPATED OPERATIONS:

SET ABANDONMENT PLUGS AS PER PROGRAM.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 16/09/02

REPORT NO: 21

SUMMARY OF OPERATIONS (0000 hours - 2400 hours):

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	02:30	2.50	Continue Logging Run # 1 (Depth tools reached 2098.5 mts)
02:30	11:30	9.00	Tools on surface Made up Log # 2 (MDT) RIH @ 04:30hrs.
11:30	14:00	2.50	Tools on surface, changed out hydraulic unit due to failure of tool. Re - run Log # 2
			(MDT)
14:00	20:00	6.00	Continued Log # 2 (MDT)
20:00	21:30	1.50	Laid out MDT tools, and made up Log tools # 3 (CST)
21:30	24:00	2.50	RIH Log # 2 (CST)

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 16/09/02

FORMATION TOPS:	MD RT	Subsea	H/L to Prognosis	H/L to Pecten 1A
1				

	HYDROCARBON SHOW SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	GAS

	GEOLOGICAL SUMMARY	
<u>INTERVAL</u> <u>ROP (m/hr)</u>	LITHOLOGY	GAS

A.C.N. 80 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 17/09/02

REPORT NO: 22

DEPTH : 2118 m (As at 2400 hours EST, 15/09/02) PROGRESS: 0 m

DAYS FROM SPUD: 22.25

RIG: OCEAN BOUNTY

OPERATION : RUNNING IN HOLE TO TAG CEMENT PLUG #3. (0600 hours EST, 17/09/02)

AFE COST

CUMULATIVE COST

CASING DEPTH: 743m (340mm-13 3/8")

PROGRAMMED TD: 2276m

RT – SEAFLOOR: 95.5m ROTARY TABLE: 25m LAT WATER DEPTH: 70.5m

MUD DATA (2400 Hours)	Type: (Pits) KCL/PHPA)	Wt: 1.24	Vis: 57	FL: 5.0	PH: 9.0	KCl 4050	C1 : 00 330	PV / 00 21 / 1	YP: 25	Rmf: 0.1137 @ 24°C
BIT DATA (2400 Hours)	LAST	No. 7	Make HTC	Type MXR0	9D	Size (311	(mm)	Hours 33.9	Drilled 321	Coi 2-2	ndition -BT-A-E-I-CT-TD
SURVEYS:	<u>MD</u> (m) 1775.86		<u>INC</u> 4.38°		<u>A</u>	<u>ZIM (T)</u> 92.34°					

PREVIOUS 24 HOURS OPERATIONS SUMMARY:

UNLOAD SIDEWALL CORES (30 SHOTS - 100% RECOVERY). RIG DOWN SCHLUMBERGER. MAKE UP CEMENT STINGER WITH 89mm (3 ½") TUBING, RUN IN HOLE TO BOTTOM, CIRCULATE BOTTOMS UP. SET CEMENT PLUG #1: 1840-1690m. PULL BACK TO 1500m. CIRCULATE BOTTOMS UP. RUN IN HOLE TO 1620m. SET CEMENT PLUG #2: 1620-1470m. PULL BACK TO 1300m. CIRCULATE BOTTOMS UP. PULL BACK TO 599m. RECOVER WEAR BUSHING. RUN IN HOLE, TAG CEMENT PLUG @ 1361m. PULL BACK TO 850m. SPOT 6.3 m3 (40BBLS) HI-VIS PILL. PULL BACK TO 780m.

00:00-06:00 HOURS 15/09/02:

CIRCULATE BOTTOMS UP @ 780m. SET CEMENT PLUG #3: 780-630m. PULL BACK TO 550m. CIRCULATE BOTTOMS UP, DISPLACE TO INHIBITED MUD. PULL OUT OF HOLE, LAYOUT TUBING WHILST WAITING ON CEMENT. RUN IN HOLE TO TAG CEMENT PLUG #3.

ANTICIPATED OPERATIONS:

TAG CEMENT PLUG #3. RUN BRIDGE PLUG. SET CEMENT PLUG #4: 183-133m. POOH. PULL BOP STACK.

A.C.N. 08 007 550 923

WELL PROGRESS REPORT

CASINO 1

DATE: 17/09/02

REPORT NO: 22

SUMMARY OF OPERATIONS (0000 hours - 2400 hours):

FROM	ТО	HRS	ACTIVITY DESCRIPTION
00:00	01:30	1.50	Continued Log # 3 (CST) Laid out tools. (30 Shots 100% Recovery)
01:30	02:00	0.50	Rigged down wire line.
02:00	02:30	0.50	Made up cement side entry sub and TIW valve, racked stand in derrick.
02:30	06:30	4.00	Picked up 20 joints of 88.9mm tubing. RIH to 743m (Shoe)
06:30	07:00	0.50	Serviced TDS & Blocks.
07:00	10:00	3.00	Continued RIH. Washed to bottom tagged @ 2094m.
10:00	11:30	1.50	Circulated bottoms up @ 2094m.
11:30	12:00	0.50	Pulled back to 1920m
12:00	13:00	1.00	Spotted 6.3 M3 (40 bbls) Hi-vis @ 1920m. Pulled back to 1840m.
13:00	14:30	1.50	Set cement plug # 1 F /- 1840m to 1690m. Rigged up & pumped 1.5 M3 (10 bbls) of
			drill water, tested cement line 7000 Kpa (1000 psi) Pumped 1.5 M3 (10 bbls) of drill
			water. Mixed and pumped 18.2 M3 (115 bbls) 557sx of tail slurry @ 1.89sg with 10.8
			M3 (68 bbls) of mix water. Displaced cement with 14.4 M3 (91 bbls) of mud.
14:30	16:00	1.50	Pulled back F /- 1840m to 1500m and circulated bottoms up.
16:00	16:30	0.50	RIH to 1620m.
16:30	17:00	0.50	Set cement plug # 2 F /- 1620m to 1470m. Rigged up and pumped 1.5 M3 (10 bbls) of
			drill water tested lines to 7000 Kpa (1000 psi) Pumped 1.5 M3 (10 bbls) of drill water.
			Mixed and pumped 18.2 M3 (115 bbls) of 1.89sg cement (557sx) with 10.8 M3 (68.3
			bbls) of mix water. Displaced with 12.4 M3 (78 bbls) of mud.
17:00	19:00	2.00	Pulled back F /- 1620m to 1300m and circulated bottoms up.
19:00	20:00	1.00	Pulled back to 599m.
20:00	21:30	1.50	Installed wear bushing running tool, RIH and recovered wear bushing.
21:30	23:00	1.50	RIH and tagged cement @ 1361m.
23:00	23:30	0.50	Pulled back to 850m.
23:30	24:00	0.50	Spotted 6.3 M3 (40 bbls) of Hi-vis pill, POOH to 780m.

SECTION 6:- DAILY DRILLING REPORTS

Santos Ltd. DATE : Aug 21, 2002

FROM : H. Flink / S. Hodgetts **TO** : O. Moller

DAILY DRILLING REPORT # 1

FORMATION

Well Data M.DEPTH (m BRT) 0.0 CUR.HOLE SIZE (mm) AFE COST \$ 12,129,000 0 COUNTRY Australia AFE BASIS : P&A TVD (m BRT) 0.0 CASING OD (mm) 0 FIELD Casino DAILY COST : \$517,531 PROGRESS (m) 0.0 SHOE TVD (m BRT) 0 DRILL CO. **Diamond Offshore** -3.75 FIT (sg) DAYS FROM SPUD 0.00 CUM COST : \$517,531 RIG Ocean Bounty DAYS +/- CURVE LOT (sg) 0.00 RT ABOVE SL (m) 25.0 CURRENT OP @ 0400 Undertow by P. Conqueror & P. Sentinel to Casino location. WATER DEPTH (m) LAT 70.5 PLANNED OP. Continue tow. RT TO SEABED (m) 95.5

Summary of period 00:00 to 24:00 hrs

Rig released to Santos at last anchor racked. Underway to Casino-1 location.

ΑCTIV	CTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 21, 2002												
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION					
PS	Р		MOV	22:30	24:00	1.50	0	Released rig from OMV's Sole-2 @ 22:30 hrs last anchor racked. Commenced tow to Casino-1 location with Pacific Sentinel & Pacific Conqueror on tow bridles. Current position Lat 38deg 11'S, Long 148deg 54.4'E, course 226deg, av speed 4.53kts, dist travelled 6.8nm, DTG 325nm, ETA 23:45 24/8/02.					

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 22, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS PS	P P		MOV	00:00 06:00	06:00 12:00	6.00 6.00	0	Continued tow. Current position Lat 38deg 32.6'S, Long 148deg 25.9'E, course 228deg, av speed 5.0kts, dist travelled 37.6nm, DTG 294.2nm, ETA 14:20 24/8/02. Continued tow. Current position Lat 38deg 48.5'S, Long 147deg 47.5'E, course 251deg, av speed 5.3kts, dist travelled 72nm, DTG 259.9nm, ETA 13:00 24/8/02.

Survey	(Method : Min Curvature)	MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last Tool	Туре :	(mBRT)	(mBRT)	DEG	(deg)	AZ (dea)	SECT (m)	(deg/ 30m)	(m)	(m)	
Magnetic I	Declination : 0.00					(***3)	()	,			

Bulk	STOCK	STOCK TYPE & UNITS			USED	REC'D	STOCK	STOCK TYPE & UNITS		START	USED	REC'D	STOCK
Stocks	Fuel Oil	- Rig	М3	0.0	0.1	395.5	395.4	Drill Water - Rig	MT	0.0		435.0	435.0
On Rig	Pot Wat	Pot Water - Rig MT				98.0	98.0	Cement 'G' - Rig	SXS	0.0		782.0	782.0
	Cement	Cement HTB - Rig sxs					0.0	Bentonite - Rig	SXS	0.0		626.0	626.0
	Barite -	Barite - Rig sz			2	2115.0	2115.0	Brine - Rig	MT	0.0			0.0
	Helifuel	Helifuel - Rig			ŧ	5055.0	5055.0	Fuel Oil - Conqueror	М3	0.0	1.7	250.1	248.4
	Drill Wat	Drill Water - Conqueror N				520.0	520.0	Pot Water - Conqueror	MT	0.0		135.0	135.0
	Cement	Cement 'G' - Conqueror				0.0	0.0	Cement HTB - Conquer	C SXS	0.0		0.0	0.0
	Bentonit	Bentonite - Conqueror sxs				635.0	635.0	Barite - Conqueror	SXS	0.0		1146.0	1146.0
	Brine - C	Conqueror	MT	0.0		0.0	0.0	Fuel Oil - Sentinel	М3	0.0	10.5	366.7	356.2
	Drill Wa	ter - Sentinel	MT	0.0		585.0	585.0	Pot Water - Sentinel	MT	0.0		230.0	230.0
	Cement	'G' - Sentinel	SXS	0.0		1736.0	1736.0	Cement HTB - Sentinel	SXS	0.0		0.0	0.0
	Bentoni	te - Sentinel	SXS	0.0		740.0	740.0	Barite - Sentinel	SXS	0.0		1000.0	1000.0
	Brine - S	MT	0.0		0.0	0.0							
Casing													
DIAM.	CSG OD (mm)	CSG OD SHOE MD (mm) (plan/Actual		SH (pl	HOE TVI an/Actua	D al)	LOT (pl/Ac	t) FIT (pl/Act)		C	OMMEN	IT	

Personnel : on Site =7	72		
2 Santos	36 DOGC	1 DOGC extra	22 TMT (marine)
3 TMT (ROV)	2 BHI	1 Halliburton	1 ECL QA surveyor
2 Thales	1 Marconi	1 OMV	
Safety, Inspections ar	nd Drills	Summary	

TOP(m BRT)

CASINO #1

2 days since last Fire and Abandon Ship Drill		
days since last Lost Workday Case		
days since last Medical Treatment Case		
days since last First Aid Case		
days since last Environmental Issue		
Anchors Anc 1 : 0 Anc 2 : 0 Anc 3 : 0 Anc 4 : 0 Anc 6 : 0 Anc 7 : 0 Anc 8 : 0 Anc 9 : 0	Anc 5 : 0 Anc 10: 0	RIS. TENS. (MT) : 0 RISER ANGLE (deg):
Workboats Arrived @ Rig (Date)(Time) Depart from Rig (Date)(Time) EstimatedArrival (Port) (Date)(Time)	Weather VISIBILITY(nm): 12	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :
Pacific Sentinel21/8/0222:30Pacific Conqueror21/8/0222:30	WIND SP. (kts) : 10.0 WIND DIR (deg) : 020 PRES.(mbars): 1020 AIR TEMP (C) : 11.0	MAX HEAVE (m) : AVE PITCH (deg) : 0.3 MAX PITCH (deg) : AVE ROLL (deg) : 0.2
COMMENTS : Pax on / off : Flt #1, 8 / 8; Flt #2, 6 / 7	•	MAX ROLL (deg) :

Santos Ltd. DATE : Aug 22, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

Well Data M.DEPTH (m BRT) 0.0 CUR HOLES

Well Data		M DEPTH (m BRT)	مما		٥	AFE COST \$	12,129,000
COUNTRY	Australia	TVD (m BRT)	0.0	CASING OD (mm)	0	AFE BASIS :	P&A
FIELD	Casino	PROGRESS (m)	0.0	SHOE TVD (m BRT)	0 0	DAILY COST :	\$241,349
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	-2.75	FIT (sg)	0.00	CUM COST :	\$758,880
RIG	Ocean Bounty	DAYS +/- CURVE		LOT (sg)	0.00		
RT ABOVE SL (m) WATER DEPTH (m) LAT RT TO SEABED (m)		CURRENT OP @ 0400 PLANNED OP.	Undertow Continue	by P. Conqueror & P. Ser tow.	ntinel to C	Casino location.	

Summary of period 00:00 to 24:00 hrs Underway to Casino-1 location.

FORMATION

TOP(m BRT)

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 22, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS	Р		MOV	00:00	06:00	6.00	0	Continued tow. Current position Lat 38deg 32.6'S, Long 148deg 25.9'E, course 228deg, av speed 5.0kts, dist travelled 37.6nm, DTG 294.2nm, ETA 14:20 24/8/02.
PS	Р		MOV	06:00	12:00	6.00	0	Continued tow. Current position Lat 38deg 48.5'S, Long 147deg 47.5'E, course 251deg, av speed 5.3kts, dist travelled 72nm, DTG 259.9nm, ETA 13:00 24/8/02.
PS	Р		MOV	12:00	18:00	6.00	0	Continued tow. Current position Lat 38deg 54.6'S, Long 147deg 21.3'E, course 251deg, av speed 4.8kts, dist travelled 93.9nm, DTG 238nm, ETA 18:00 24/8/02.
PS	Р		MOV	18:00	24:00	6.00	0	Continued tow. Current position Lat 39deg 2.2'S, Long 146deg 55.2'E, course 240deg, av speed 4.5kts, dist travelled 115.8nm, DTG 216.1nm, ETA 23:30 24/8/02.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 23, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS	Ρ		MOV	00:00	06:00	6.00	0	Continued tow. Current position Lat 39deg 8.2'S, Long 146deg
							_	34.9'E, course 251deg, av speed 4.2kts, dist travelled 132.7nm, DTG 199.2nm, ETA 05:00 25/8/02.
PS	Р		моу	06:00	12:00	6.00	0	Continued tow. Current position Lat 39deg 12.2'S, Long 146deg 5'E, course 268deg, av speed 4.17kts, dist travelled 156.5nm, DTG 175.4nm, ETA 06:00 25/8/02.

Survey	(Method : Min Curvat	ture)	MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last Tool	Туре :		(mBRT)	(mBRT)	DEG	(deg)	AZ (deg)	SECT	(deg/ 30m)	(m)	(m)	
Magnetic I	Declination :	0.00					(ucg)	(11)	00111)			

Bulk	STOCK TYPE & UNITS		START	USED	REC'D	STOCK	STOCK TYPE & UNITS		START	USED	REC'D	STOCK
Stocks	Fuel Oil - Rig	М3	395.4	6.0		389.4	Drill Water - Rig	МΤ	435.0	39.0		395.0
On Rig	Pot Water - Rig	МΤ	98.0	22.0	22.0	98.0	Cement 'G' - Rig	SXS	782.0			782.0
	Cement HTB - Rig	SXS	0.0			0.0	Bentonite - Rig	SXS	626.0			626.0
	Barite - Rig	SXS	2115.0			2115.0	Brine - Rig	MT	0.0			0.0
	Helifuel - Rig	ltr	5055.0			5055.0	Fuel Oil - Conqueror	М3	248.4	22.2		226.2
	Drill Water - Conqueror	МΤ	520.0			520.0	Pot Water - Conqueror	MT	135.0	5.0		130.0
	Cement 'G' - Conqueror	SXS	0.0			0.0	Cement HTB - Conquerc	SXS	0.0			0.0
	Bentonite - Conqueror	SXS	635.0			635.0	Barite - Conqueror	SXS	1146.0			1146.0
	Brine - Conqueror	ΜТ	0.0			0.0	Fuel Oil - Sentinel	M3	356.2	16.3		339.9
	Drill Water - Sentinel	МΤ	585.0			585.0	Pot Water - Sentinel	МΤ	230.0	5.0		225.0
	Cement 'G' - Sentinel	SXS	1736.0			1736.0	Cement HTB - Sentinel	SXS	0.0			0.0
	Bentonite - Sentinel	SXS	740.0			740.0	Barite - Sentinel	SXS	1000.0			1000.0
	Brine - Sentinel	МТ	0.0			0.0						

DAILY DRILLING REPORT # 2

DAILY DRILLING REPORT # 2

Casing									
DIAM.	CSG OD (mm)	SHOE MD (plan/Actual)	SH (pla	OE TVD in/Actual)	LOT (pl/Act)	FIT (pl/Act)		COMMENT	
Person	nel : on	Site =72							
2 Sa	antos	3	6 DOGC		1 DOGO	Cextra	22	2 TMT (marine)	
3 TM	MT (ROV)		2 BHI		1 Hallib	urton	1	ECL QA surveyor	
2 Th	nales		1 Marconi		1 OMV				
Safety,	Inspect	ions and Drills		Sumn	nary				
3 day	/s since last	Fire and Abandon	Ship Drill						
day	/s since last	Lost Workday Case)						
day	/s since last	Medical Treatmen	t Case						
day	/s since last	First Aid Case							
day	ys since last	Environmental Iss	ue						
Anchor	'S Anc Anc	1:0 An 6:0 An	c 2 : 0 c 7 : 0	Anc 3 : 0 Anc 8 : 0	Anc 4 : 0 Anc 9 : 0	Anc 5 : 0 Anc 10:0		RIS. TENS. (MT) : RISER ANGLE (deg):	0
Workb	oats	Arrived @ Rig (Date)(Time)	Depart fro (Date)(Ti	m Rig Est me)	imatedArrival (Port) (Date)(Time)	Weather VISIBILITY(nm) :	11	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	
Pacific Se Pacific Ce	entinel onqueror	21/8/02 22:30 21/8/02 22:30				WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars):	35.0 250 1020	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) :	8.0
COMMEN	ITS : Pax	c on / off : no flt.				AIR TEMP (C) :	10.0	AVE ROLL (deg) : MAX ROLL (deg) :	0.5

Santos Ltd. DATE : Aug 23, 2002

FROM : H. Flink / S. Hodgetts то : O. Moller

DAILY DRILLING REPORT # 3

CASINO #1

Well Data COUNTRY FIELD DRILL CO. Dia RIG	Australia Casino amond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	0.0 0.0 0.0 -1.75	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	0 0 0.00 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$368,852 \$1,127,732
RT ABOVE SL (m) WATER DEPTH (m) LA RT TO SEABED (m)	25.0 AT 70.5 95.5	CURRENT OP @ 0400 PLANNED OP.	Undertow Continue	by P. Conqueror & P. Ser tow.	ntinel to C	asino location.	

Summary of period 00:00 to 24:00 hrs Underway to Casino-1 location.

FORMATION

TOP(m BRT)

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 23, 2002

PHS	S CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS	Ρ		MOV	00:00	06:00	6.00	0	Continued tow. Current position Lat 39deg 8.2'S, Long 146deg 34.9'E, course 251deg, av speed 4.2kts, dist travelled 132.7nm, DTG 199.2nm, ETA 05:00 25/8/02.
PS	P		MOV	06:00	12:00	6.00	0	Continued tow. Current position Lat 39deg 12.2'S, Long 146deg 5'E, course 268deg, av speed 4.17kts, dist travelled 156.5nm, DTG 175.4nm, ETA 06:00 25/8/02.
PS	Ρ		MOV	12:00	18:00	6.00	0	Continued tow. Current position Lat 39deg 12.7'S, Long 145deg 32.3'E, course 268deg, av speed 4.2kts, dist travelled 182.5nm, DTG 149.4nm, ETA 05:00 25/8/02.
PS	P		MOV	18:00	24:00	6.00	0	Continued tow. Current position Lat 39deg 12.8'S, Long 144deg 57.8'E, course 268deg, av speed 4.2kts, dist travelled 207.9nm, DTG 123nm, ETA 05:00 25/8/02.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 24, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS	Ρ		MOV	00:00	06:00	6.00	0	Continued tow. Current position Lat 39deg 13.6'S, Long 144deg
PS	Ρ		MOV	06:00	12:00	6.00	0	92.5nm, ETA 03:00 25/8/02. Continued tow. Current position Lat 39deg 13.4'S, Long 143deg 45.4'E, course 269deg, av speed 4.3kts, dist travelled 265.2nm, DTG 66.7nm, ETA 03:10 25/8/02.

Survey	(Method : Min Curvat	ture)	MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last Tool	Туре :		(mBRT)	(mBRT)	DEG	(deg)	AZ (deg)	SECT	(deg/ 30m)	(m)	(m)	
Magnetic I	Declination :	0.00					(ucg)	(11)	00111)			

Bulk	STOCK TYPE & UNITS		START	USED	REC'D	STOCK	STOCK TYPE & UNITS		START	USED	REC'D	STOCK
Stocks	Fuel Oil - Rig	М3	389.4	4.8		384.6	Drill Water - Rig	МΤ	395.0	20.0		375.0
On Rig	Pot Water - Rig	МΤ	98.0	22.0	22.0	98.0	Cement 'G' - Rig	SXS	782.0			782.0
	Cement HTB - Rig	SXS	0.0			0.0	Bentonite - Rig	SXS	626.0			626.0
	Barite - Rig	SXS	2115.0			2115.0	Brine - Rig	MT	0.0			0.0
	Helifuel - Rig	ltr	5055.0	675.0		4380.0	Fuel Oil - Conqueror	М3	226.2	26.6		199.6
	Drill Water - Conqueror	МΤ	520.0			520.0	Pot Water - Conqueror	MT	130.0	5.0		125.0
	Cement 'G' - Conqueror	SXS	0.0			0.0	Cement HTB - Conquerc	SXS	0.0			0.0
	Bentonite - Conqueror	SXS	635.0			635.0	Barite - Conqueror	SXS	1146.0			1146.0
	Brine - Conqueror	МΤ	0.0			0.0	Fuel Oil - Sentinel	М3	339.9	27.0		312.9
	Drill Water - Sentinel	МΤ	585.0			585.0	Pot Water - Sentinel	МΤ	225.0	5.0		220.0
	Cement 'G' - Sentinel	SXS	1736.0			1736.0	Cement HTB - Sentinel	SXS	0.0			0.0
	Bentonite - Sentinel	SXS	740.0			740.0	Barite - Sentinel	SXS	1000.0			1000.0
	Brine - Sentinel	МТ	0.0			0.0						

DAILY DRILLING REPORT #3

Casing												
DIAM.	CSG OD (mm)	SHOE MD (plan/Actual)	SHOE TVD (plan/Actual)	LOT (pl/Act)	FIT (pl/Act)		COMMENT					
		0:1. 77	I	Ч								
Person	inei : on	Site = $//$										
2 Santos 37 DOGC 1 DOGC extra 22 TMT (marine)												
3 TI	MT (ROV)	2	BHI	1 Hallib	ourton	1	ECL QA surveyor					
2 Tł	nales	1	Marconi	2 DOG	C Conoco/Veritas	2	2 IDFS					
1 Di	rilQuip											
Safety,	Inspecti	ons and Drills	Sum	mary								
4 day	ys since last	Fire and Abandon S	hip Drill									
1788 day	ys since last	Lost Workday Case										
day	ys since last	Medical Treatment C	ase									
day	ys since last	First Aid Case										
day	ys since last	Environmental Issue										
Anchor	'S Anc	1:0 Anc 2	2:0 Anc 3:0) Anc 4 : 0	Anc 5 : 0		RIS. TENS. (MT) :	0				
	Anc	6:0 Anc 7	': 0 Anc 8 : 0) Anc 9 : 0	Anc 10:0		RISER ANGLE (deg):					
Workb	oats	Arrived @ Rig (Date)(Time)	Depart from Rig E (Date)(Time)	stimatedArrival (Port) (Date)(Time)	Weather VISIBILITY(nm) :	12	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	1,663.4				
Pacific S	entinel	21/8/02 22:30			WIND SP. (Kts) :	35.0	MAX HEAVE (m) :					
Pacific C	unqueror	21/0/02 22:30			PRES.(mbars).	1029	AVE PITCH (deg) :	0.6				
					AIR TEMP (C) :	10.0	AVE ROLL (deg) :	0.8				
		on / off · Elt #1 7 / 9· E	lt #2 0 / 2		(-).		MAX ROLL (deg) :	0.5				
CONNEN	no. Pax	. 011 / 011 . FIL #1, 7 / 0, F	π <i>πμ</i> , <i>3</i> / <i>3</i>									

Santos Ltd. DATE : Aug 24, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

DAILY DRILLING REPORT # 4 CASINO #1

TOP(m BRT)

FORMATION

Well Data			مما		0	AFE COST \$	12 129 000		
COUNTRY	Australia	TVD (m BRT)	0.0	COR.HOLE SIZE (IIIII) CASING OD (mm)	0	AFE BASIS :	P&A		
FIELD	Casino	PROGRESS (m)	0.0	SHOE TVD (m BRT)	0	DAILY COST :	\$317,902		
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	-0.75	FIT (sg)	0.00	CUM COST :	\$1,445,634		
RIG	Ocean Bounty	DAYS +/- CURVE	-1.00	LOT (sg)	0.00				
RT ABOVE SL (m) WATER DEPTH (n	25.0 n) LAT 70.5	CURRENT OP @ 0400 Running anchors on Casino-1 location. Rig passing #7 pennant to P. Conqueror.							
RT TO SEABED (m	1) 95.5	PLANNED OP.	Continue	anchoring, spud well and	drill 36"h	ole.			

Summary of period 00:00 to 24:00 hrs

Underway to Casino-1 location. Making final approach.

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 24, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS	Ρ		MOV	00:00	06:00	6.00	0	Continued tow. Current position Lat 39deg 13.6'S, Long 144deg 18.6'E, course 268deg, av speed 4.3kts, dist travelled 238.4nm, DTG 92.5nm, ETA 03:00 25/8/02.
PS	Ρ		MOV	06:00	12:00	6.00	0	Continued tow. Current position Lat 39deg 13.4'S, Long 143deg 45.4'E, course 269deg, av speed 4.3kts, dist travelled 265.2nm, DTG 66.7nm, ETA 03:10 25/8/02.
PS	Ρ		MOV	12:00	18:00	6.00	0	Continued tow. Current position Lat 39deg 10'S, Long 143deg 10.4'E, course 325deg, av speed 4.36kts, dist travelled 294.4nm, DTG 37.5nm, ETA 02:00 25/8/02.
PS	Р		MOV	18:00	24:00	6.00	0	Continued tow. Current position Lat 38deg 46.1'S, Long 142deg 49'E, course 325deg, av speed 4.4kts, dist travelled 323.2nm, DTG 8.4nm, ETA 01:30 25/8/02.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 25, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS	Ρ		MOV	00:00	01:30	1.50	0	Continued tow, lowered #6 during approach to location.
PS	Ρ		ANC	01:30	10:30	9.00	0	Rig positioned #6 on bottom @ 01:30 during approach to location. P. Conqueror returned Port tow wire to rig, P. Sentinel remained on static tow. Anchor #2, on bottom @ 04:05 (P.C.), # 3 on bottom @ 5:25 (P.C.), # 7 on bottom @ 6:30 (P.C.). P. Sentinel disconnected from Stbd tow wire. Anchor #8 on bottom @7:46 (P.C.), #4 on bottom @8:25 (P.S.). Re-ran #1 as flukes upside down, #5 on bottom @ 9:30 (P.S.), #1 on bottom @9:45 (P.C.).
				0.4/0	/2222			

<u>00:00 TO 24:00 HRS ON :</u>	24/08/2002	
Comments	Recommendations	Rig Requirements
Conducted Fire and Abandon rig Drill. Made 2 Pre-drill presentation to crews. First Aid Case - Derrickman cut middle finger left hand.		250,000 ltr fuel for P Sentinel on first trip to Portland.

Survey	(Method : Min Curvature) MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last Tool	Туре :	(mBRT)	(mBRT)	DEG	(deg)	AZ (deg)	SECT	(deg/ 30m)	(m)	(m)	
Magnetic I	Declination : 0.0	0				(ucg)	(11)	00111)			

Bulk	STOCK	TYPE & UNITS		START	USED R	EC'D	D STOCK STOCK TYPE & UNITS START USED REC'D						
Stocks	Fuel Oil	- Rig	М3	384.6	6.0		378.6 Drill	Vater - Rig	MT	375.0			375.0
On Rig	Pot Wat	er - Rig	MT	98.0	32.0	22.0	88.0 Cem	ent 'G' - Rig	SXS	782.0			782.0
	Cement	HTB - Rig	SXS	0.0			0.0 Bent	onite - Rig	SXS	626.0			626.0
	Barite -	Rig	SXS	2115.0			2115.0 Brine	- Rig	MT	0.0			0.0
	Helifuel	- Rig	ltr	4380.0			4380.0 Fuel	Oil - Conqueror	М3	199.6	24.3		175.3
	Drill Wa	ter - Conqueror	MT	520.0			520.0 Pot V	Vater - Conquero	r MT	125.0	5.0		120.0
	Cement	'G' - Conqueror	SXS	0.0			0.0 Cem	ent HTB - Conqu	erc sxs	0.0			0.0
	Bentoni	te - Conqueror	SXS	635.0			635.0 Barit	e - Conqueror	SXS	1146.0			1146.0
	Brine - (Conqueror	MT	0.0			0.0 Fuel	Oil - Sentinel	M3	312.9	28.4		284.5
	Drill Water - Sentinel			585.0			585.0 Pot V	MT	220.0	5.0		215.0	
	Cement	'G' - Sentinel	SXS	1736.0			1736.0 Cem	ent HTB - Sentin	el sxs	0.0			0.0
	Bentoni	te - Sentinel	SXS	740.0		740.0 Barite - Sentinel sxs 1000.0							
	Brine - S	Sentinel	MT	0.0			0.0						
Casing													
DIAM.	CSG OD	SHOE ME)	SH	HOE TVD		LOT	FIT		C	OMMENT	-	
	(mm) (plan/Actual) (plan/Actual)						(pl/Act)	(pl/Act)					
Person	Personnel : on Site =83												
3 Sa	antos		38	DOGC			4 DOG	C extra		22 TN	/IT (marin	e)	
6 TM	/T (ROV)		2	BHI			1 Halli	burton		1 EC	CL QA sur	vevor	
2 Th	ales		- 1	Marconi			2 IDES			1 Dr	ilQuip	-) -	
Cofoty	Increati	ene and Dril											
Safety,			l is Idon S	hin Drill	3	umn	hary						
1700 day													
1789 day	/s since last	Lost workday (Jase										
day	/s since last	Medical Treatr	ment	Jase									
0 day	s since last	First Aid Case											
day	/s since last	Environmental	Issue	1									
Anchor	S Anc	1: 0	Anc 2	2:0	Anc	3:0	Anc 4 :) Anc 5	: 0	R	IS. TENS. ((MT) :	0
	Anc	6: 0	Anc	7:0	Anc	8:0	Anc 9 :	O Anc 1	0:0	R	ISER ANGI	LE (deg):	
Workb	oats	Arrived @ Rig		Depart fro	m Rig	Est	imatedArrival (Port	Weather		ST ST	TACK ANG	LE(deg):	4 000 0
		(Date)(Time)		(Date)(T	ime)		(Date)(Time)	VISIBILITY(nm):	12	υ.l. (ΜΤ) : /f hfa\/f	(m) ·	1,680.3
Pacific So	antinel	21/9/02 22:20						WIND SP. (kts):	15.0 M		(m) ·	
Pacific Co	onqueror	21/8/02 22:30 21/8/02 22:30	l I					WIND DIR (de	g):	190 A		(dea) :	8.0
								PRES.(mbars):		1030 M	AX PITCH	(deg) :	2.0
								AIR TEMP (C)	:	11.0 A	VE ROLL (d	deg) :	0.6
	TS · Pav	on / off · Flt #1 4	3/-					1		— м	AX ROLL (deg):	1.0

Santos Ltd. DATE : Aug 25, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	130.0 130.0 34.0 0.25 -1.00	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	914 0 0 0.00 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$500,816 \$1,946,450
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25.0 n) LAT 70.5) 95.5	CURRENT OP @ 0400 PLANNED OP.	WOC. Make up	17.5" BHA, RIH and drill to	section	TD approximately	785m.

Summary of period 00:00 to 24:00 hrs

Ran anchors only #1 had to be rolled as flukes inverted. Positioned rig on location 3.22m @ 20.6 degT from intended location. Made up 36" BHA, RIH and tagged seabed at 70.5 m water depth. Spudded well @ 18:30 hrs 25/8/02. Drilled 26"/36" hole to 130m with seawater and hi-vis sweeps. Displaced hole to hi-vis mud, POOH. Hole good. Rigged to run 30" conductor. Made up RT and stinger.

FORMATION TOP(m BRT) Undescribed 96

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 25, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS	Ρ		MOV	00:00	01:30	1.50	0	Continued tow, lowered #6 during approach to location.
PS	Ρ		ANC	01:30	10:30	9.00	0	Rig positioned #6 on bottom @ 01:30 during approach to location. P. Conqueror returned Port tow wire to rig, P. Sentinel remained on static tow. Anchor #2, on bottom @ 04:05 (P.C.), # 3 on bottom @ 5:25 (P.C.), # 7 on bottom @ 6:30 (P.C.). P. Sentinel disconnected from Stbd tow wire. Anchor #8 on bottom @7:46 (P.C.), #4 on bottom @8:25 (P.S.). Re-ran #1 as flukes upside down, #5 on bottom @ 9:30 (P.S.), #1 on bottom @9:45 (P.C.).
PS	Ρ		ANC	10:30	16:30	6.00	0	Commenced cross tensioning anchors, ballasted rig to drilling draft. Tensioned anchors to 186 tonne (410kips).
PS	Ρ		ΤI	16:30	18:30	2.00	96	Made up 36" BHA & RIH. Tagged seabed at 95.5m. Water Depth 70.5m.
СН	Ρ		D	18:30	20:00	1.50	130	Spudded Casino-1 at 18:30 hrs, 25/8/02. Drilled 36" hole from 95.5m to 130m with seawater and 4.8 m3 (30 bbls) hi-vis sweeps every 1/2 single. Final Position Lat 38deg 47' 18.502"S, long 142deg 42' 0.287"E, Easting 647 654.91 m, Northing 5 705 323.87 m. Location 3.22m at 20.6deg T from intended location.
СН	Ρ		CIR	20:00	20:30	0.50	130	Swept hole with 8 m3 (50 bbls) hi-vis mud, took survey with Anderdrift (2deg). Displaced hole with 35 m3 (220 bbls) hi-vis mud.
СН	Ρ		то	20:30	21:30	1.00	130	POOH and racked back BHA. Hole good.
CON	Ρ		RC	21:30	23:00	1.50	130	Rigged up and ran 20" / 30" conductor.
CON	Р		RC	23:00	24:00	1.00	130	Made up cement stinger / running tool. Installed 30" in PGB.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 26, 2002

WBM	Dat	a	cos	T TODAY	/: \$11,2	43 (CUM. WB M	conductor. WOC. NUD COST: \$11,243 CUM. WBM+OBM COST: \$11,243
CON	Ρ		CAT	00:00	06:00	6.00	130	Ran 30" conductor / PGB to seabed. Attempted to enter hole, repositioned string. RIH with 30" conductor. Re-aligned rig over hole Circulated hole, pumped dye, tested cement lines. Cemented 30"
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION

Туре :	Spud	VISCOCITY (sec/ltr) PV (Pa.s) :	: 10	API FLUID LOSS (cm3/30min) :		CI : K+C*1000 :	1,600	SOLIDS (%vol) : H2O (%vol) :	2.6 97.4
FROM :	pit	YP (Pa.s) :	1	6 (mm) :	0	HARD/Ca :	80	OIL (%vol) :	
TIME : WEIGHT (sg):	20:30 1.04	GEL10s/10m/100m (Pa.s) : 1	1 12	(cm3/30min) :		МВТ (ррб): РМ:	30.0	PH :	10.0
TEMP (C) :		Fann 3/6/100 : 22	2 23 3	⁸ (mm) :	0	PF :	.3	PHPA (ppb) :	
COMMENT N	Mixed spud mu	bi							

DAILY DRILLING REPORT # 5

DAILY DRILLING REPORT # 5

Bit Data																
		" I	a						mean		1	1	NO	A 1		NO TD
MANUFA		26.0 SI				у.		3 N		S	Drille	ed over t	he last 24 h	rs Ca	alculated ov	er the bit run
TYPE :	or on Entre	DSJ		VER	PM :).	6	55	3 x 18 4 x 22		/ETE	RAGE (I	m):	35 CUN	1.METERAG	E (m) 35
SERIAL #	:	KP237	4 Fl	LOW	(lpm) :		3,27	74	X (DN B(∆DC		HRS:		A. ON BOT.	HRS: 1.0
DEPTH IN	l (mRT):	9	6 PI	UMP	PRESS	(Kpa):	6,70	09 X 0 TOTAL REVS : 3,900 CUM.TOT. REVS : 3,900								
DEPTH O	UT (mRT):	13	0 H	SI (kV	V/cm2) :		0.01	13	х		ROP ((m/hr) :	3	4.5 ROF	9 (m/hr) :	34.5
														•		
BHA # 1	Le	ngth (m)	: 83.2	2									D.C. (1) A	NN. VEL	OCITY (mpr	n): 6
WT BLW .	JAR (MT):	0	STRI	NG V	VT (MT)	:	91 T	RQE	MAX (I	Nm):		4	D.C. (2) A	ANN VEL	OCITY (mpm	n): 6
BHA WT	(MT) :	0	PICK		NT (MT)	:				m): Jm):		3			LOCITY (mp TV (mpm) :	m): 6
		- 26" hit 2			WI (IVI I): Andordr				NIII).	" רי				i i (inpin) .	0
BHA DESU			0 П/О	, bit s				9.5 L	$\frac{1}{2}$	5 X 6		x/0, 6 x	5 HWDP	0014		
	TOOL DES	CRIPTION			ENGI					. #	HR	5		COM	MENI	
36" hole opener 203A7 4 x 22 nozzles 9.5" Anderdrift tool ADB905 Survey flask ASF 8171TOTC																
													-,		-	
Survey	(Metho	d: Min Cu	urvatu	re)	MD	TV	D IN	CL	AZ	COF	RR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last Tool	Type :				(mBR	Г) (mBf	ם (דא	EG	(deg)	A	z	SECT	(deg/	(m)	(m)	
Magnetic	Declinati	on :	C	0.00		0			0.0	(ue	9) 00	(11)	3011)			datum
					95	.0 9	5.0 C).50	0.0		0.0	0.4	0.2	0.	4 0.0	Anderdrift 2 s
					130	.0 13	0.0 2	2.00	0.0		0.0	1.2	1.3	1.	2 0.0	
Stocks	Fuel Oil	- Ria	15	M3	378.6	9.5	RECD	51	369.1 r		/ater	- Ria	<u>пз</u> мт	375.0	470.0 585	5.0 490.0
On Rig	Pot Wate	er - Ria		MT	88.0	25.0	25.0		88.0	Ceme	nt 'G'	' - Ria	SXS	782.0	1736	6.0 2518.0
	Cement	ement HTB - Rig sxs			0.0				0.0 E	Bento	nite -	- Rig	SXS	626.0	581.0 635	5.0 680.0
	Barite - F	Rig		SXS	2115.0			2	115.0 E	Brine	- Rig		МТ	0.0		0.0
	Helifuel	- Rig		ltr	4380.0			4	380.0 F	Fuel C	Dil - C	Conquer	or M3	175.3	12.1	163.2
	Drill Wat	er - Conque	eror I	MT	520.0				520.0 F	Pot W	ater	- Conque	eror MT	120.0	5.0	115.0
	Cement	'G' - Conqu	eror	SXS	635.0				0.0	Jeme Barita	nt H I	IB - Con	querc sxs	1146.0		1146.0
	Brine - C	e - Conque Conqueror	101	MT	0.0				0.0 E	Fuel C	- 00 Dil - S	Sentinel	M3	284.5	16.2	268.3
	Drill Wat	er - Sentin	el l	МΤ	585.0				0.0 F	Pot W	ater	- Sentine	el MT	215.0	5.0	210.0
	Cement	'G' - Sentin	el	SXS	1736.0				0.0	Ceme	nt H1	TB - Sen	tinel sxs	0.0		0.0
	Bentonit	e - Sentine	l .	SXS	740.0				740.0 E	Barite	- Se	ntinel	SXS	1000.0		1000.0
	Brine - S	Sentinel		MT	0.0				0.0							
Pump D	Data															
		F	Pump [Data	- last 24	hrs					-		SI	ow Pump	Data]
#	TYPE	LNR(I	nm)	SPI	M E	FF (%)	Flow	(lpm)	SPP	(kPa)	SPM	SPP (kPa	a) DI	EPTH (m)	MW (sg)
1 Nat'l	12-P-160	· ·	152		80	97		1293		8963				0		
2 Nat'l 3 Nat'l	12-P-160 12-P-160		152		80 80	97 97		1293		8963 8963						
	12-1-100		102		00	51		1235		0303				5		
Casing																
DIAM.	CSG OD	SHO	E MD		S	HOE TV	D		LOT			FIT		C	OMMENT	
(mm) (plan/Actual) (plan/Actual)								(pl/Act)		(p	pl/Act)					
ļ													•			
Person	nel : on s	Site =83														
3 Sai	ntos			38	DOGC				4	DOGO	C extr	ra		22 TM	T (marine)	
6 TM	T (ROV)			2	BHI				1	Hallib	ourtor	n		1 EC	L QA survey	or
2 Tha	ales			1	Marcon			_	2	IDFS		_		1 Dri	IQuip	
Safetv.	Inspecti	ons and	Drills	s			Sumn	narv	,							
1 days	s since last	Fire and	Abando	on Sł	nip Drill			,								
1790 dave	s since last	Lost Work	day Co	ise												
L'i So uays		LOSI WORK	uay Ud	100												

CASINO #1

days since last	Medical Treatment Case	
1 days since last	First Aid Case	
days since last	Environmental Issue	
Shakers, Volume	es and Losses Data ENGINEE	R M. Docherty / J. Singh
SHAKER 1 SHAKER 2 SHAKER 3 SHAKER 4 SHAKER 5	VOLUME AVAILABLE (m3) = 310 LOSSES (m3) = 50 COMMENT ACTIVE 180.6 MIXING 0.0 DOWNHOLE 50.39 HOLE 22.4 SLUG 0.0 SURF.+EQUIP 0.00 RESERVE 106.8 HEAVY 0.0 DUMPED 0.00 HOURD 10.00 HOLE 10.00 HOLE <th>NTS</th>	NTS
Anchors Anc 1 Anc 6	: 143 Anc 2 : 159 Anc 3 : 159 Anc 4 : 150 Anc 5 : 145 : 138 Anc 7 : 136 Anc 8 : 211 Anc 9 : 0 Anc 10: 0	RIS. TENS. (MT) : 0 RISER ANGLE (deg):
Workboats	Arrived @ Rig Depart from Rig EstimatedArrival (Port) (Date)(Time) (Date)(Time) (Date)(Time) (Date)(Time) (VISIBILITY(nm) : 12	STACK ANGLE(deg): V.D.L. (MT) : 2,020.1 AVE HEAVE (m) :
Pacific Sentinel Pacific Conqueror 2	26/8/02 2:05 26/8/02 7:00 WIND SP. (kts) : 10.0 1/8/02 22:30 WIND DIR (deg) : 080 PRES.(mbars): 1030 AIR TEMP (C) : 10.0	MAX HEAVE (m) :AVE PITCH (deg) :0.4MAX PITCH (deg) :0.8AVE ROLL (deg) :0.2
COMMENTS : Pax	on / off : no flt.	MAX ROLL (deg) : 0.6

Santos DATE : Aug 26, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

Well Data		M.DEPTH (m BRT)	220.0		445	AFE COST \$	12.129.000		
COUNTRY	Australia	TVD (m BRT)	220.0	CASING OD (mm)	762	AFE BASIS :	P&A		
FIELD	Casino	PROGRESS (m)	90.0	SHOE TVD (m BRT)	128	DAILY COST :	\$346,062		
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	1.25	FIT (sg)	0.00	CUM COST :	\$2,292,512		
RIG	Ocean Bounty	DAYS +/- CURVE	-1.00	LOT (sg)	0.00				
RT ABOVE SL (n	n) 25.0	CURRENT OP @ 0400) Drilling a	head 445mm (17.5") hole	at 415m.				
WATER DEPTH (m) LAT 70.5		PLANNED OP.	PLANNED OP Drill about 445 mm (17.5") to See TD POOH and run 340 mm (13.3/8")						
RT TO SEABED (m) 95.5									

casing.

Summary of period 00:00 to 24:00 hrs

Made up running tool to housing and ran 762mm (30") conductor and PGB. Cemented conductor and waited on cement. Laid out 914mm (36") BHA and running tools. Picked up DP. Made up 445mm (17.5") BHA and RIH. Waited on supply vessel. Drilled shoetrack and cleaned rathole to 130m. Drilled hole to 140m. Waited on supply vessel. Drilled agead to 220m.

FORMATION TOP(m BRT) Undescribed 96

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 26, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
CON	Ρ		CAT	00:00	02:00	2.00	130	Made up 30" hsg to PGB. Ran 30" conductor to sealevel, filled casing with seawater. Attempted to stab into hole, re-positioned string. Stabbed into hole and RIH to setting depth, no drag.
CON	Ρ		CAT	02:00	03:00	1.00	130	PGB slope indicator 1.25deg. Repositioned rig on anchors to correct angle to 0.75deg port/forward.
CON	Ρ		CIC	03:00	03:30	0.50	130	Circulated hole with 21 m3 (130bbls) seawater. Observed good returns.
CON	Ρ		СМС	03:30	04:30	1.00	130	Rigged up cement lines and pumped 0.8m3 (5 bbls) of seawater with Fluroscene dye ahead. Closed line at drill floor and tested lines to 6.9kPa (1000 psi), held OK. Pumped remaining 0.8m3 (5 bbls) of seawater with Fluroscene dye. Mixed and pumped 27.7 m3 (174bbls) 1.9sg tail slurry at 954 lpm (6bpm), 832sxs class 'G' cement in 16.5 m3 (104bbls) mix water with 1% CaCl2. Displaced with 4.6 m3 (28.7bbls) seawater at 800 lpm (5bpm), final pressure 1380kPa (200psi). Bled off pressure, float held. Good returns throughout job.
CON	Ρ		WOC	04:30	09:00	4.50	130	WOC, slope indicator remained on .75 deg port/forward. Picked up DP and racked in derrick.
CON	Ρ		то	09:00	10:00	1.00	130	Released R/T, POOH and laid out R/T and cement stinger.
SH	Ρ		LDP	10:00	11:30	1.50	130	Picked up 476mm (18.75") R/T and made up single, x/o, pup. Laid out assembly. Drifted to 66.7mm (2.625").
SH	Ρ		ТΙ	11:30	14:00	2.50	130	Make up 445mm (17.5") BHA, gauge and drift all tools. RIH to 120m.
SH	U		WO	14:00	19:00	5.00	130	Wait on supply vessel with casing. P/U DP and racked back in derrick.
SH	Ρ		DFS	19:00	20:30	1.50	130	RIH and tagged top of cement at 124.5m. Drilled shoetrack and cleaned rathole to 130m.
SH	Ρ		D	20:30	21:00	0.50	140	Drilled 445mm (17.5") to 140m.
SH	U		WO	21:00	22:30	1.50	140	Wait on supply vessel with casing.
SH	Ρ		D	22:30	24:00	1.50	220	Drilled 445mm (17.5") to 220m. Swept hole with 8 m3 (50bbls) hi-vis each single. Hole good.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 27, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
SH	Р			00:00	06:00	6.00	415	Drilled 445mm (17.5") 220m to 415m. Swept hole with 8 m3 (50bbls) hi-vis each single. Hole good.

DAILY DRILLING REPORT

CASINO #1 Casino #1

6

																CASINO #
WB	M Dat	t a cos	ST TODAY :	\$4,754	CL	JM. WB	MUD C	OST: \$15,	997		СІ	JM. WBM+	овм соз	ST: \$15,	997	
FRO TIME WEIC TEM Bit SIZE MAN TYP SEF DEP DEP	e: HT (sg) C(C): Data 1 ("): IUFACT E: IAL #: TH IN (1 TH OUT	Gel Swee 23): 1 for Bit # 2 for Bit # 2 fURER : M fURER : M fURER : f	VISCO PV (Pa pit YP (Pa 30 GEL10 (Pa.s) : Fann 3 IADC # 1 17.50 SM GSSH-C MM0005 130	CITY (se a.s.) : a.s.) : /6/100 : //6/100 : ///////////////////////////////////	ec/ltr) : 100m 19 35 5 DB (MT) : M : Ipm) : RESS.(K /cm2) :	130 0 26 20 0 40 55	API FL (cm3/3 FIL1EF (mm): HTHP (cm3/3 HTHP (mm): 4 86 3,554 10,411 0.016	UID LOSS 30min) : CAKE 30min) : CAKE Wear NOZZLE 3 x 20 1 x 18 x 0 x 0 x 0 x 0	• 1 • 000 •	CI: K+C HAH PM PM PF OI ERAG SOTTC C DRILL C DRILL C DRILL C DRILL C DRILL C DRILL C DRILL C DRILL	: C*10 RD/C I: : : : : : : : : : : : : : : : : : :	000 : Ca : pb) : D L e last 24 hi i) : IRS : CS : 6,7 6,7	1,500 60 25.0 .6 .6 .6 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	SOLIDS H2O (% OIL (% SAND : PH : PHPA (G G Culated METER . ON BO IADC DI .TOT. R (m/hr) :	S (%\ 6vol) : (ppb) Over AGE DT. HI R. HF EVS	vol): 3.4 : 96.6 12.0 : 22 R the bit run (m): 90 RS: 1.3 RS: 2.0 : 6,708 69.2
BH/ WT BH/ BHA	A # 2 BLW JA WT (M DESCF	Lengt AR (MT): IT) : RIPTION : 17 5"	th (m): 21 0 STF 0 PIC SLF 7.5" bit, NB s HWDP	5.2 RING W K UP W K OFF W stab, 9.5	T (MT): 'T (MT): /T (MT): " Anderd	1 rift, 17.5	02 TR 0 TR 0 TF " stab,	2QE MAX (f 2QE ON (Nr 2QE OFF (N 1 x 9.5" DC	Nm): n): √m): :, 17.5" s	tab, 2 >	3 2 1 x 9.5	D.C. (1) A D.C. (2) A H.W.D.P. D.P. ANN " DC, x/o, (NN. VELC NN VELO ANN VEL VELOCIT S x 8" DC,	OCITY (n CITY (m OCITY (Ƴ (mpm 8" Jar, 4	npm): npm): mpm n) : 4 x 8'	: 32 35): 27 27 " DC, x/o, 8 x
	т	OOL DESCRI	PTION	LE	ENGTH	OD	ID	SERIAL	.# Н	RS			COMM	IENT		
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Survey (Method : Min Curvature) Last Tool Type : Magnetic Declination : 0.00																
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Sur Last Mag Bul Sto On	vey Tool 1 netic [k k ks Rig	(Method : Type : Declination : Declination : Fuel Oil - Rig Pot Water - F Cement HTE Barite - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - C Brine - Cong Drill Water - Cement 'G' -	Min Curvat E & UNITS G Rig B - Rig Conqueror Conqueror Conqueror Conqueror Sentinel Sentinel	UIRE) 0.00	MD (mBRT) 0.0 95.0 130.0 START (369.1 88.0 0.0 1115.0 1380.0 2 520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0	INC 0 0.1 0 2.1 EC'D 23.0 3335.0 374.0	L AZ G (deg) 00 0.0 50 0.0 00 0.0 STOCK S 358.3 [88.0 0 0.0 E 2115.0 E 4107.0 F 0.0 F 0.0 F 3355.0 F 874.0 0	CORR. AZ (deg) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	YPE & (m 0 1 YPE & er - Rig 3' - Rig 3' - Rig 3' - Rig 9 Conque 1TB - Con 1TB - Con 1TB - Sen 1TB - Sen	0.4 1.2 UNI uero aquer Conq ror nel titinel Senti	DOGLEG (deg/ 30m) 0.2 1.3 TS TS TS SXS SXS MT r MT r M3 ror MT uuer(SXS SXS SXS M3 MT inel SXS	N/S (m) 0.4 1.2 START 490.0 2 2518.0 9 680.0 2 680.0 2 680.0 2 680.0 2 115.0 0.0 163.2 115.0 0.0 1146.0 268.3 210.0 0.0	E/W (m) 0 0 238.0 238.0 328.0 328.0 328.0 328.0 3328.00 3328.00 3	/ 1).0 /).0 / REC 5520.(740.(260.(35.(TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0.0 156.7 110.0 0.0 1146.0 0 498.0 0 240.0 0.0
Sur Last Mag Bul Sto On	vey Tool 1 netic [k k ks Rig	(Method : Type : Declination : Declination : Fuel Oil - Rig Pot Water - F Cement HTE Barite - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - Cong Drill Water - Cement 'G' - Bentonite - S	Min Curvat E & UNITS g Rig 3 - Rig Conqueror Conqueror Conqueror Jueror Sentinel Sentinel	UIRE) 0.00	MD (mBRT) 0.0 95.0 130.0 START (369.1 88.0 0.0 1115.0 380.0 2 520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 740.0	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0	F) INC 0 0.1 0 2.1 EC'D 23.0 335.0 374.0	L AZ G (deg) 00 0.0 50 0.0 00 0.0 50 0.0 00 0.0 50 0.0 0.0 50 0.0 0.0 50 0.0 0.0 50 0.0 0.0 50 0.0 0.0 50 0.0 0.0 0.0 50 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	CORR. AZ (deg) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	YPE & (m C T YPE & F - Rig G' - Rig G' - Rig G' - Rig g Conque r - Con 1TB - C conque Sentir r - Sen 1TB - S sentire	UNI UNI UNI UNI Conq uero nel nel tinel Senti l	DOGLEG (deg/ 30m) 0.2 1.3 TS MT sxs sxs MT r M3 ror MT uuerc sxs sxs M3 MT inel sxs sxs	N/S (m) 0.4 1.2 START 490.0 2 2518.0 9 680.0 2 680.0 2 680.0 2 680.0 2 0.0 163.2 115.0 0.0 1146.0 268.3 210.0 0.0 1000.0	E/W (m) 0 0 238.0 238.0 328.0 328.0 328.0 328.0 338.0 338.0 338.0 338.0 338.0 30.3 5.0	/ 1).0 / 520.0 740.0 260.0 35.0	TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0.0 156.7 110.0 0.0 1146.0 0 498.0 0 240.0 0.0 1000.0
Sur Last Mag Bul Stor On	vey Tool 1 netic [k cks Rig	(Method : Type : Declination : STOCK TYPI Fuel Oil - Rig Pot Water - F Cement HTE Barite - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - Conq Drill Water - Cement 'G' - Bentonite - Sent	Min Curvat	UIRE) 0.00	MD (mBRT) 0.0 95.0 130.0 START (369.1 88.0 0.0 1115.0 388.0 2520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 740.0 0.0	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0	F) INC 0 0.4 0 2.4 EC'D 23.0 3335.0 874.0	L AZ G (deg) 00 0.0 50 0.0 00 0.0 STOCK S 358.3 [88.0 0 0.0 E 2115.0 E 4107.0 F 0.0 F 0.0 0 874.0 0 0.0 E 0.0 E 0.	CORR. AZ (deg) 0.0 0.0 0.0 0.0 0.0 0 0.0 0 0.0 0 0 0	YPE & (m 0 1 YPE & er - Rig G' - Rig G' - Rig G' - Rig g Conque r - Con 1TB - C Sentir r - Sen 1TB - S sentine	UNI UNI UNI Duero aquer Conq ror nel tinel Senti	DOGLEG (deg/ 30m) 0.2 1.3 TS MT sxs sxs MT rom MT uerc sxs sxs M3 MT inel sxs sxs sxs	N/S (m) 0.4 1.2 START 490.0 2 2518.0 9 680.0 2 680.0 2 680.0 2 680.0 2 0.0 163.2 115.0 0.0 1146.0 268.3 210.0 0.0 1000.0	E/W (m) 0 0 0 238.0 238.0 238.0 328.0 328.0 328.0 338.0 338.0 338.0 328.0 338.0 30.3 5.0	/ 1).0 / 0.0 / 740.0 260.0 35.0	TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0.0 156.7 110.0 0.0 1146.0 0 498.0 0 240.0 0.0 1000.0
Sur Last Mag Bul Sto On	vey Tool 1 netic [k cks Rig	(Method : Type : Declination : Declination : STOCK TYPI Fuel Oil - Rig Pot Water - F Cement HTE Barite - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - Cong Drill Water - Cement 'G' - Bentonite - Senti	Min Curvat	UIRE) 0.00	MD (mBRT) 0.0 95.0 130.0 START (369.1 88.0 0.0 (115.0 380.0 2520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 740.0 0.0	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0	F) INC 0 0.4 0 2.6 EC'D 23.0 335.0 374.0	L AZ (deg) 00 0.0 00 0.0 00 0.0 00 0.0 00 0.0 00 0.0 00 0.0 00 0.0 550	CORR. AZ (deg) 0.0 0.0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	YPE & (m 1 YPE & G' - Rig G' - Rig G' - Rig g Conque r - Con 1TB - C Sonque Sentir r - Sen 1TB - Sentir	UNI UNI UNI Conquer Conquer Conquer Senti	DOGLEG (deg/ 30m) 0.2 1.3 TS MT sxs sxs MT r r M3 ror MT uerc sxs sxs M3 MT inel sxs sxs sxs	N/S (m) 0.4 1.2 START 490.0 2 2518.0 9 680.0 2 680.0 2 680.0 2 680.0 2 0.0 163.2 115.0 0 0.0 1146.0 268.3 210.0 0 0.0 1000.0	E/W (m) 0 0 0 238.0 238.0 238.0 328.0 328.0 328.0 3328.0 3328.0 3328.0 3328.0 3328.0 328.0	/ 1).0 / 520.0 740.0 260.0 35.0	TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0 0.0 156.7 110.0 0.0 1146.0 0 498.0 0 240.0 0 0.0 1000.0
Sur Last Mag Bul Sto On	vey Tool 1 netic [k k ks Rig np Da	(Method : Type : Declination : Declination : Fuel Oil - Rig Pot Water - Rig Helifuel - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - C Brine - Cong Drill Water - Cement 'G' - Bentonite - Senti	Min Curvat E & UNITS G Rig B - Rig Conqueror Conqueror Conqueror Conqueror Sentinel Sentinel Sentinel inel Pumr	UIRE) 0.00	MD (mBRT) 0.0 95.0 130.0 START (369.1 88.0 0.0 115.0 380.0 2 520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 740.0 0.0 0.0	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0	INC 0 0.1 0 0.2 EC'D 23.0	L AZ G (deg) 00 0.0 50 0.0 00 0.0 STOCK \$ 358.3 [88.0 0 0.0 E 2115.0 E 4107.0 F 0.0 0 0.0 0 0.0 0 5335.0 F 874.0 0 0.0 0 0	CORR. AZ (deg) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	YPE & (m 0 1 YPE & er - Rig 3' - Rig 9 Conque 5 - Rig 9 Conque 1TB - Con 1TB - Con 1TB - Sen 1TB - Sen 1TB - Sen	UNI UNI UNI UNI UNI UNI UNI UNI UNI UNI	DOGLEG (deg/ 30m) 0.2 1.3 TS MT sxs sxs MT r M3 ror MT ruer sxs sxs M3 MT inel sxs sxs	N/S (m) 0.4 1.2 START 490.0 2 2518.0 2 680.0 2 680.0 2 680.0 2 680.0 2 0.0 163.2 115.0 0 0.0 163.2 115.0 0 0.0 1146.0 2 68.3 210.0 0 0.0 1000.0	E/W (m) 0 0 238.0 328.0 328.0 328.0 330.3 5.0 30.3 5.0	/ 1).0 / 0.0 / REC 5520.0 740.0 2260.0 35.0	TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0.0 156.7 110.0 0.0 1146.0 0 498.0 0 240.0 0.0 1000.0
Sur Last Mag Bul Sto On	vey Tool 1 netic [k ks Rig np Da	(Method : Type : Declination : Declination : Fuel Oil - Rig Pot Water - F Cement HTE Barite - Rig Helifuel - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - C Brine - Conq Drill Water - Cement 'G' - Bentonite - Senti Brine - Senti	Min Curvat E & UNITS G Rig B - Rig Conqueror Conqueror Conqueror Conqueror Sentinel Sentinel Sentinel Sentinel Min Curvat Sentinel Min Curvat Min Curvat Conqueror LNR(mm)	UIRE) 0.00	MD (mBRT) 0.0 95.0 130.0 369.1 88.0 0.0 2115.0 380.0 2520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0 273.0	F) INC 0 0.0 0 2.0 EC'D 23.0 335.0 374.0 ELOW (11)	L AZ G (deg) 00 0.0 50 0.0 00 0.0 STOCK S 358.3 [88.0 0 0.0 E 2115.0 E 4107.0 F 0.0 F 335.0 F 874.0 0 0.0 E 0.0 E 0.	CORR. AZ (deg) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	YPE & (m CONCO	UNI UNI UNI UNI Conquer Conquer Conquer Itinel Senti	DOGLEG (deg/ 30m) 0.2 1.3 TS MT sxs sxs MT r M3 ror MT uerc sxs sxs M3 MT inel sxs sxs sxs Sxs Sxs Syse Spe (kP=	N/S (m) 0.4 1.2 START 490.0 2 2518.0 9 680.0 2 680.0 2 680.0 2 680.0 2 0.0 163.2 115.0 0.0 163.2 115.0 0.0 163.2 210.0 0.0 1146.0 268.3 210.0 0.0 1000.0	E/W (m) 0 0 238.0 238.0 328.0 328.0 328.0 328.0 328.0 338.0 30.3 5.0 30.3 5.0 30.3 5.0 2 0 7 8 0 0 2 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	/ 1).0 / 520.0 740.0 260.0 35.0	TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0.0 156.7 110.0 0.0 156.7 110.0 0.0 1146.0 0 240.0 0 240.0 0 0.0 1000.0
Sur Last Mag Bul Sto On	vey Tool 1 netic I k cks Rig	(Method : Type : Declination : Fuel Oil - Rig Pot Water - F Cement HTE Barite - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - Conq Drill Water - Cement 'G' - Bentonite - Senti Brine - Senti	Min Curvat E & UNITS g Rig 3 - Rig Conqueror Conqueror Conqueror Sentinel Sentinel Sentinel inel Pump LNR(mm)	UIRE) 0.00	MD (mBRT) 0.0 95.0 130.0 START U 369.1 88.0 0.0 1115.0 380.0 2 520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0 273.0	Flow (I	L AZ G (deg) 00 0.0 50 0.0 00 0.0 STOCK S 358.3 [88.0 0 0.0 E 2115.0 E 4107.0 F 0.0 F 0.0 0 0.0 E 0.0 0 0.0	CORR. AZ (deg) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	YPE & (m 1 YPE & r - Rig G' - Rig G' - Rig G' - Rig g Conque r - Con 1TB - C Sentir r - Sen 1TB - S Sentire SPM	UNI UNI UNI UNI UNI UNI UNI UNI UNI UNI	DOGLEG (deg/ 30m) 0.2 1.3 TS MT sxs sxs MT r M3 ror MT uerc sxs sxs M3 MT inel sxs sxs SXS SPP (kPa	N/S (m) 0.4 1.2 START 490.0 2 2518.0 9 680.0 2 680.0 2 680.0 2 680.0 2 0.0 163.2 115.0 0.0 163.2 115.0 0.0 163.2 115.0 0.0 1146.0 268.3 210.0 0.0 1000.0 0 0.0 1000.0 0 0 0 0 0 0 0 0	E/W (m) 0 0 238.0 238.0 238.0 328.0 328.0 328.0 328.0 328.0 330.3 5.0 30.3 5.0 30.3 5.0 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 9 7 8 9 9 9 9	/ 1).0 / 520.0 740.0 260.0 35.0	TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0.0 156.7 110.0 0.0 1146.0 0 498.0 0 240.0 0.0 1000.0
Sur Last Mag Bul Sto On	vey Tool 1 netic I k cks Rig	(Method : Type : Declination : Fuel Oil - Rig Pot Water - F Cement HTE Barite - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - Conq Drill Water - Cement 'G' - Bentonite - Senti Brine - Senti Brine - Senti ta	Min Curvat	UIRE) 0.00	MD (mBRT) 0.0 95.0 130.0 START (369.1 88.0 0.0 1115.0 3880.0 2520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 740.0 0.0 740.0 0.0 8185 24 h EFF	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0 273.0 273.0 273.0	Flow (I)	L AZ G (deg) 00 0.0 50 0.0 00 0.0 STOCK S 358.3 [88.0 0 0.0 E 2115.0 E 4107.0 F 0.0 0 0.0 F 0.0 0 0.0 E 0.0 0 0.0 E 0.0 0 0.0 E 0.0 0 0.0 E 0.0 0 0.0 E 0.0 0 0.0 E 0.0 0 0.0 0	CORR. AZ (deg) 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	YPE & (m 0 1 YPE & er - Rig G' - Rig G' - Rig G' - Rig g Conque tr - Con 1TB - C Sentir T - Sen 1TB - S sentire	UNI UNI UNI UNI UNI UNI UNI Senti Senti	DOGLEG (deg/ 30m) 0.2 1.3 TS MT sxs sxs MT r M3 ror MT uerc sxs sxs M3 MT inel sxs sxs SPP (kPa	N/S (m) 0.4 1.2 START 490.0 2 2518.0 9 680.0 2 680.0 2 680.0 2 680.0 2 680.0 2 0.0 163.2 115.0 0.0 163.2 115.0 0.0 1146.0 268.3 210.0 0.0 1000.0 0 0.0 1000.0 0 0 0 0 0 0 0 0	E/W (m) 0 0 0 238.0 238.0 238.0 328.0 328.0 328.0 328.0 338.0 328.0 338.0 338.0 328.0 338.0 328.0 30.3 5.0 30.3 5.0 30.3 5.0 30.3 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	/ 1).0 / 520.0 740.0 260.0 35.0	TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0.0 156.7 110.0 0.0 1146.0 0 498.0 0 240.0 0.0 1000.0 1000.0
Sur Last Mag Bul Sto On	vey Tool 1 netic [k cks Rig np Da	(Method : Type : Declination : Declination : Fuel Oil - Rig Pot Water - F Cement HTE Barite - Rig Helifuel - Rig Drill Water - Cement 'G' - Bentonite - Comp Drill Water - Cement 'G' - Bentonite - Senti Bentonite - Senti Barita TYPE 2-P-160 2-P-160 2-P-160	Min Curvat	Ure) 0.00	MD (mBRT) 0.0 95.0 130.0 START (369.1 88.0 0.0 (115.0 380.0 2520.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	TVD (mBR1 0. 95. 130. JSED R 10.8 23.0 273.0 273.0 273.0 273.0 5 7 8 7 7 97 97 97 97 97	Flow (II	L AZ G (deg) 00 0.0 50 0.0 00 0.0 STOCK S 358.3 [88.0 (0.0] 2115.0] 4107.0] 4107.0] 0.0 [0.0] 0.0] 50.0] 2115.0] 4107.0] 0.0] 0.0] 0.0] 2115.0] 4107.0] 0.0] 0.0] 0.0] 0.0] 2115.0] 0.0] 0.0] 2115.0] 0.0] 0.0] 2115.0] 0.0] 0.0] 0.0] 2115.0] 0.0] 0.0] 2115.0] 0.0] 0.0] 0.0] 2115.0] 0.0] 0.0] 0.0] 0.0] 2115.0] 0.0	CORR. AZ (deg) 0.0 0.0 0.0 0.0 0.0 0 0 0 0 0 0 0 0 0	YPE & (m 1 YPE & er - Rig G' - Rig G' - Rig g Conque r - Con 1TB - C conque Sentir r - Sen 1TB - S conque Sentir r - Sen 1TB - S	UNI UNI UNI Conquer Conquer Conquer Senti I	DOGLEG (deg/ 30m) 0.2 1.3 TS MT sxs sxs MT r M3 ror MT uerc Sxs sxs M3 MT inel sxs sxs SXS SYP (kPa	N/S (m) 0.4 1.2 START 490.0 2 2518.0 9 680.0 2 680.0 2 680.0 2 680.0 2 0.0 163.2 115.0 0.0 163.2 115.0 0.0 1146.0 268.3 210.0 0.0 1000.0 00 1000.0 0 0 0 0 0 0 0 0 0 0	E/W (m) 00 00 238.0 5 238.0 5 238.0 5 328.0 5 6.5 5.0 30.3 5 5.0 30.3 5 5.0 Data PTH (m)	/ 1).0 / 520.0 740.0 260.0 35.0	TOOL TYPE datum Anderdrift 2 s 'D STOCK 0 772.0 1540.0 0 1092.0 0 1092.0 0 0.0 156.7 110.0 0 0.0 1146.0 0 498.0 0 240.0 0 0.0 1000.0

DAILY DRILLING REPORT #6

CASINO #1

Casing									
DIAM.	CSG OD (mm)	SHOE MD (plan/Actual)	SHOE TVD (plan/Actual)	LOT (pl/Act	:)	FIT (pl/Act)		COMMENT	
30.0	762	128.0 128.0	128.0 128	.0					
	-	ГҮРЕ	LENGTH (m)	CSG ID (mr	m) W	/T (kg/m)	GRADE	THREAD	
30" Well 30" 30" /20"	head + extr shoe		11.92 11.57 11.17	0 0 0		.0 .0 .0			
Person	nel : on	Site =82							
4 Sa 6 TN 2 ID	antos MT (ROV) FS	38 DC 2 BH 1 Dr	DGC II ilQuip	2 1 3	DOGC e Halliburt Weather	xtra ton ford	22 1	: TMT (marine) Marconi	
Safety,	Inspecti	ons and Drills	Sum	mary					
2 day	/s since last	Fire and Abandon Ship	Drill						
1791 day	/s since last	Lost Workday Case							
day	/s since last	Medical Treatment Cas	е						
2 day	/s since last	First Aid Case							
day	/s since last	Environmental Issue							
Shaker	s, Volum	es and Losses Dat	а				ENGINEE	R M. Docherty / J. Si	ngh
SHAKER SHAKER	R 1 R 2	VOLUME AVAIL	.ABLE (m3) =	426 L	OSSES (I	m3) = 5		NTS	
SHAKER SHAKER SHAKER	R 3 2 4 2 5	ACTIVE 19 HOLE 10 RESERVE 2	91.7 MIXING 6.7 SLUG 17.8 HEAVY	0.0 D 0.0 S 0.0 D	OWNHOI URF.+EC UMPED	LE 50.55 QUIP 0.00 0.00	5		
Anchor	S Anc Anc	1 : 129 Anc 2 : 6 : 132 Anc 7 :	125 Anc 3 : 1 107 Anc 8 : 1	43 And 70 And	c 4 : 154 c 9 : 0	Anc 5 : Anc 10:	150 0	RIS. TENS. (MT) : RISER ANGLE (deg):	0
Workboats Arrived @ Rig (Date)(Time) Depart from Rig (Date)(Time) Pacific Sentinel 26/8/02 23:00				stimatedArrival (Date)(Time)	(Port)	Weather VISIBILITY(nm) : WIND SP. (kts) :	12 15.0	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) : MAX HEAVE (m) :	2,027.2
Pacific Conqueror 21/8/02 22:30						WIND DIR (deg): 020 AVE PITCH (deg):		0.3	
						AIR TEMP (C) :	10.0	AVE ROLL (deg) :	0.4
COMMEN	ITS : Pax	on / off : Flt #1, 8/9			1			MAX ROLL (deg) :	0.2

Santos DATE : Aug 27, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

Well Data		1		713 0		115	AFE COST \$	12 129 000	
COUNTRY	Aust	tralia	TVD (m BRT)	712.9	CASING OD (mm)	762	AFE BASIS :	P&A	
FIELD	Ca	asino	PROGRESS (m)	493.0	SHOE TVD (m BRT)	128	DAILY COST :	\$392,001	
DRILL CO.	Diamond Offsl	hore	DAYS FROM SPUD	2.25	FIT (sg)	0.00	CUM COST :	\$2,684,513	
RIG	Ocean Bo	ounty	DAYS +/- CURVE	-1.00	LOT (sg)	0.00			
RT ABOVE SL (m)		25.0	CURRENT OP @ 0400	POOH for	casing.				
RT TO SEABED (m)	95.5	PLANNED OP. Continue drilling ahead 445mm (17.5") to csg TD (752m). Displace h hivis gel mud. POOH and run 340mm (13.3/8") casing. Cement same up to run BOP.						

Summary of period 00:00 to 24:00 hrs

Drilled ahead 445mm (17.5") hole from 220 to 713m. Hole good. Swept hole each single. Good returns to seabed.

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 27, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
SH	Р		D	00:00	06:00	6.00	415	Drilled 445mm (17.5") 220m to 415m. Swept hole with 8 m3 (50bbls) hi-vis each single. Hole good.
SH	Ρ		D	06:00	12:00	6.00	515	Drilled 445mm (17.5") to 515m. Swept hole with 8 m3 (50bbls) hi-vis each single. Hole good. Last survey 1 deg.
SH	Ρ		D	12:00	18:00	6.00	626	Drilled 445mm (17.5") to 626m. Swept hole with 8 m3 (50bbls) hi-vis each single. Hole good. Last survey 0.5 deg.
SH	Ρ		D	18:00	24:00	6.00	713	Drilled 445mm (17.5") to 713m. Swept hole with 8 m3 (50bbls) hi-vis each single. Hole good. Last survey 0 deg.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 28, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
SH	Ρ		D	00:00	02:00	2.00	752	Drilled 445mm (17.5") to 752m. Swept hole with 8 m3 (50bbls) hi-vis
								each single. Hole good. Last survey 0 deg at 744m.
SH	Р		CIR	02:00	03:00	1.00	752	Swept hole with 24 m3 (150bbls) hi vis. Displaced hole wih 111 m3
								(700bbls) hivis gel mud.
SH	Р		то	03:00	06:00	3.00	752	POOH to run casing. Wiped tight spots between 629m and 396 m, 9-
								18 tonne (20-40kips) OP.

00:00 TO 24:00 HRS O	<u>1 : 27/08/2002</u>	
Comments	Recommendations	Rig Requirements
Held Safety meetings. First Aid Case - Floorman pinched middle finger right hand.		

WBM Data COST	UDAY: \$11,388 CU		MUD COST: \$27,385	COW: MRW+OR	M CO	51: \$27,385	
Type : Gel Sweeps	VISCOCITY (sec/ltr) :	90	API FLUID LOSS (cm3/30min) :	CI: 1 K+C*1000 ·	,700	SOLIDS (%vol) : H2O (%vol) :	3.4 96.6
FROM : pit TIME : 22:30 WEIGHT (sg): 1.06 TEMP (C) : 1.06	YP (Pa.s): GEL10s/10m/100m (Pa.s): 7 Fann 3/6/100: 18	29 8 0 30 60	FILTER CAKÉ (mm) : 0 HTHPFL 0 (cm3/30min) : HTHP CAKE (mm) : 0	HARD/Ca : MBT (ppb) : PM : PF :	60 25.0 .6	OIL (%vol) : SAND : PH : PHPA (ppb) :	12.0

Bit Data for Bit #	# 2 IADC #	1 1 5		Wear	I 01	D		В	G	02	R
SIZE ("):	17.50 SM			NOZZLES	Drilled over t	he last	24 hrs	Calc	ulated c	over the	bit run
TYPE :	MGSSH-C	AVE WOB (MT) : AVE RPM :	9 100	3 <u>x</u> 20 1 x 18	METERAGE (m) :	493	CUM.N		GE (m)	583
SERIAL # :	MM0005	FLOW (Ipm) :	3,826	X 0	IADC DRILL. H	HRS :	21.0	CUM.	ADC DR	. HRS :	23.1
DEPTH IN (mRT): DEPTH OUT (mRT):	130	HSI (kW/cm2) :	0.020	x 0 x 0	TOTAL REVS ROP (m/hr) :	: '	130,800 22.6	CUM.1 ROP (r	OT. RE n/hr) :	EVS :	138,600 25.2

Casino #1

7

FORMATION	TOP(m BRT)
Undescribed	96

DAILY DRILLING REPORT #

5" HWDP																		
Т	OOL DES	CRIPTION		LEN	NGTH	OD	ID		SERIA	_ #	HRS			CON	IMENT			
9.5" Ander	drift tool							AD	DB905		32.3	Surve	ey flask As	SF 8171T	отс			
8" Jar								DA	AH 3434	4	27.5	5						
0								_							-	_		
Survey	(Method	d:Min Cu	urvature	.)	MD	TVE) IN	ICL	AZ	COR	R.	'V'	DOGLEC	N/S	E/V	V	τοοι	_ TYPE
Last Tool 7	Гуре :		Anderdı	ift ^{(r}	nBRT)	(mBR	T) D	EG	(deg)	AZ		SECT	(deg/	(m)	(m) (m)			
Magnetic [Declinatio	on :	0.0	00 	520.0	507			0.0	(ueų		(11)	3011)				مامم	
U					538.0	537	.9 U 7.9 1	0.50 1.00	0.0		0.0	7.7 8.1	0.5	8	.7	0.0	Ande	rarift rdrift
					597.0	596	6.9 C	0.50	0.0		0.0	8.4	0.5	8	.4	0.0	Ande	rdrift
					626.0	625	5.9 0	0.50	0.0		0.0	8.7	0.0	8	.7	0.0	Ande	rdrift
					655.0	654		0.50	0.0		0.0	9.0	0.0	9	0.0	0.0	Ande	rdrift
					720.0	719	9.9 C	0.00	0.0		0.0	9.1	0.0	g	0.1	0.0	Ande	rdrift
					750.0	749	9.9 0	0.00	0.0		0.0	9.1	0.0	g	0.1	0.0	Ande	rdrift
				_			•	-		•				•		•		
Bulk	STOCK T	YPE & UN	ITS	S	TART I	JSED I	REC'D	ST	оск	STOCK		E & UN	TS	START	USED	RE	C'D S	зтоск
Stocks	Fuel Oil	- Rig	M	3 3	58.3	18.0			340.3	Drill W	ater - I	Rig	MT	772.0	89.0			683.0
On Rig	Pot Wate	r - Rig	M		88.0	26.0	26.0		88.0	Cemer	it 'G' -	Rig	SXS	1540.0	204.0	874	.0	2414.0
	Cement I	HIB - Rig	S	(S) (C) 21	15.0			2	0.0	Bentor		lg	SXS	1092.0	284.0			0.808
	Helifuel -	Ria	3/	tr 41	07.0			4	1107.0	Fuel O	il - Co	nquerc	or M3	156.7	7 1			149.6
	Drill Wate	er - Conau	eror M	T	0.0				0.0	Pot Wa	ater - C	Conque	ror MT	110.0	5.0			105.0
	Cement '	G' - Conqu	ieror s	s	0.0				0.0	Cemer	t HTB	- Cond	querc sxs	0.0				0.0
	Bentonite	e - Conque	eror s	s	0.0				0.0	Barite	- Conc	queror	SXS	1146.0				1146.0
	Brine - C	onqueror	M	Т	0.0			0.0 Fuel			il - Se	ntinel	М3	498.0	6.1			491.9
	Drill Wate	er - Sentin	el M	Т 3	35.0				335.0	Pot Wa	ater - S	Sentine	I MT	240.0	5.0			235.0
	Cement '	G' - Sentir	nel s	(s 8	74.0				0.0	Cemer	t HTB	- Sent	inel sxs	0.0				0.0
	Bentonite	e - Sentine	el SX	(S T	0.0				0.0	Barite	- Sent	inel	SXS	1000.0				1000.0
	Dillie - S	entinei	IVI	I	0.0				0.0									
Pump Da	ata																	
		I	Pump Da	ıta - la	st 24 h	rs							S	low Pum	p Data			
#	TYPE	LNR(mm) s	SPM	EFF	(%)	Flow	(lpm)) SPF	P (kPa)	s	РМ	SPP (kF	Pa) [DEPTH (n	ר)	MV	V (sg)
1 Nat'l 1	2-P-160		152	79)	97		1277	, .	14824				0				
2 Nat'l 1	2-P-160		152	79		97		1278	, ·	14824				0				
3 Nat'l 1	2-P-160		152	79)	97		1278	; ·	14824				0				
Casing																		<u>. </u>
		0.10	- 110					1	1.07			· -	1			.		
DIAM. C	(mm)	SHO (plan/	E MD Actual)		SH (pla	OE IVL n/Actua	ر (اه		LOI (nl/Act		۲ /nl	II Act)		C	OMMEN	I		
30.0 7	62	120.0	120	20	128	0	128.0		(p#7101	, 	(P"	, (01)	+					
30.0	02	120.0	120	5.0	120.	0	120.0	′										
	Т	YPE			LEN	IGTH (r	n)	CSG	6 ID (mr	n)	WT (k	g/m)	GRAD	DE	THRE	AD		
30" Wellhe	ad + extn	jt			1	1.92		7′	11		461.	3	X-52	2	HD	90		
30" int jt	!!				1	1.57		7'	11		461.	3	X-52	2	HD	90		
30" /20" sn	ioe jt				1	1.17		48 (83 N		197.	9	X-52	2	HD	90		
Personne	el : on S	Site =82																
4 Sant	os		:	39 DO	GC				2	DOGC	extra			21 TI	MT (marii	ne)		
6 TMT	(ROV)			2 BH	I				1	Hallibu	urton			1 M	arconi			
2 IDFS	;			1 Dril	lQuip				3	Weath	erford							
Safety Ir	Ispectiv	ons and	Drille				Sumn	narv										
3 dave	since last	Fire and	Abandor	Shin	Drill	•	- 41111	i ai j	,									
Juays	3 days since last Fire and Abandon Ship Drill																	

113 TRQE MAX (Nm):

116 TRQE ON (Nm):

112 | TRQE OFF (Nm):

BHA DESCRIPTION : 17.5" bit, NB stab, 9.5" Anderdrift, 17.5" stab, 1 x 9.5" DC, 17.5" stab, 2 x 9.5" DC, x/o, 6 x 8" DC, 8" Jar, 4 x 8" DC, x/o, 8 x

BHA # 2

WT BLW JAR (MT):

BHA WT (MT) :

Length (m): 215.2

23

32

STRING WT (MT):

PICK UP WT (MT):

SLK OFF WT (MT):

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D.C. (1) ANN. VELOCITY (mpm):

D.C. (2) ANN VELOCITY (mpm):

H.W.D.P. ANN VELOCITY (mpm):

1 D.P. ANN VELOCITY (mpm) :

7

4

CASINO #1

31

35

27

27

CASINO #1

1792 days since last	Lost W	'orkday Ca	se								
days since last	Medica	al Treatme	ent Case								
0 days since last	First A	id Case									
days since last	Enviro	nmental Is	ssue								
Shakers, Volume	es and	d Losse	s Data						ENGINEE	R M. Docherty / J. S	ingh
SHAKER 1 SHAKER 2 SHAKER 3 SHAKER 4 SHAKER 5		ACTIVE HOLE RESERV	E AVAILABLI 224.1 88.2 /E 178.8	E (m3) = MIXING SLUG HEAVY	49 0. 0. 0.	1 LOSSE 0 DOWNH 0 SURF.+ 0 DUMPE	s (m3) = Hole Equip D	289 289.48 0.00 0.00	COMME	NTS	
Anchors Anc 1 Anc 6	: 12 5: 13	7 A 6 A	nc 2 : 125 nc 7 : 109	Anc 3 Anc 8	: 141 : 177	Anc 4 : 1 Anc 9 : 0	54	Anc 5 : 14 Anc 10: 0	17	RIS. TENS. (MT) : RISER ANGLE (deg):	0
Workboats	Arrived (Date)	@ Rig (Time)	Depart fr (Date)(om Rig Time)	Estimated (Date)	Arrival (Port) (Time)	Weat VISIBI	: her LITY(nm) :	12	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	2,216.3 2.0
Pacific Sentinel 2 Pacific Conqueror 2	26/8/02 21/8/02	23:00 22:30	27/8/02	22:00	28/8/02	7:00	WIND WIND PRES. AIR TE	SP. (kts) : DIR (deg) : (mbars): :MP (C) :	25.0 030 1024 10.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	0.4 0.4 0.3
COMMENTS : Pax	on / off	: no flt								MAX ROLL (deg) :	0.3

Santos DATE : Aug 28, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

Well Data COUNTRY FIELD DRILL CO.	Australia Casino Diamond Offshore	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m)	752.0 751.9 39.0	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT)	445 340 743	AFE COST \$ AFE BASIS : DAILY COST :	12,129,000 P&A \$795,946
RIG	Ocean Bounty	DAYS FROM SPUD DAYS +/- CURVE	-0.50	LOT (sg)	0.00	COM COST .	\$3,480,459
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25.0) LAT 70.5) 95.5	CURRENT OP @ 0400 PLANNED OP.	Running E Continue (12.25") b	BOP stack. running BOP and test. L/O it & BHA. RIH.	445mm	ı (17.5") BHA and P	/U 311mm

Summary of period 00:00 to 24:00 hrs

Drilled ahead 445mm (17.5") hole to section TD 752m. Hole good. Swept hole each single. Good returns to seabed. Rigged up and ran 340mm (13.375") casing. Landed wellhead and cemented casing with shoe at 743m. Rigged to run BOP.

FORMATION TOP(m BRT) Undescribed 96

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 28, 2002

SHPID00:0002:002.00752Drilled 445mm (17.5") to 752m. Swept hole with 8 m3 (50bbls) hivis each single. Hole good. Last survey 0 deg at 744m.SHPICR02:0003:001.00752Swept hole with 24 m3 (150bbls) hi vis. Displaced hole with 111 m3 (700bbls) hivis gel mud.SHPTO03:0006:003.00752Swept hole with 24 m3 (150bbls) hi vis. Displaced hole with 111 m3 (700bbls) hivis gel mud.SHPRC06:0007:001.00752Held JSA. Rigged up to run 340mm (13.375") casing.SHPRC06:0007:001.00752Held JSA. Rigged up to run 340mm (13.375") to 14 kg/m (68ppl). L-80 BTC casing and made up 476mm (18-3/4") wellhead atsembly OK.SCTPCMTCAT14:0014:300.50752Release 476mm (16-3/4") wellhead and 340mm (13.375") casing on up/binding in 340mm casing).SCTPCMTCAT14:300.50752RIH with 476mm (16-3/4") wellhead and 340mm (13.375") casing on up/binding in 340mm casing).SCPCAT14:301.50752RIH with 476mm (16-3/4") wellhead and 340mm (13.375") casing on up/binding in 940mm casing Jone at 744m.SCFPCMC17:0017:001.50752RIH with 476mm (16-3/4") wellhead and 340mm (13.375") casing on up/binding up/binding in 940mm casing Jone at 744m.SCFPCMC17:0017:001.50752RIH with 476mm (16-3/4") wellhead and 340mm (13.375") casing on up/binding up/binding up	PHS	CL	RC	OP	FROM	TO	HRS	DEPTH ACTIVITY DESCRIPTION				
SHPCRO2:00O3:001.00752Swept hole with 24 m3 (150bbls) hi vis. Displaced hole with 111 m3 (700bbls) hivis gel mud.SHPTOO3:00O6:003.00752POCH to run casing from 752 to 628m, no drag. Wiped tight spots between 629m and 425m, 9-18 tonne (20-40kips) OP. No drag from 425m. Break off bit.IH1PRC06:0007:001.00752Held JSA. Rigged up to run 340mm (13.375") to asing.SCPRC07:0014:007.00752Release 476mm (18-3/4") wellhead assembly OK.SCTPCMTCAT14:0014:007.00752Release 476mm (18-3/4") wellhead running tool and attempt to load Weatherford plugs, difficulty running in plug assembly (plugs holding up/binding in 340mm casing).SCPCAT14:3016:001.50752Release 476mm (18-3/4") wellhead and 340mm (13.375") casing on 127mm (5") DP (pick up tr. 295k). Made up cement head assembly (dars toaded). Landed wellhead with casing shoe at 743m. Took 20.4 tonne (45kip) overpul and confirmed engagement. Checked PGB bullseye at 3/4deg port/forward.SCPCMT17:001.00752Pumped ahead .8 m3 (10 bbls) seawater (with dye). Attempted to pressure test surface lines, no-go. Changed out leaking Low-torq valve oncement head.SCPCMT19:3020:301.00752Pumped ahead .8 m3 (10 bbls) seawater (with dye). Attempted to pressure test surface lines, no-go. Changed out leaking Low-torq valve on cement head.SCPCMT19:3020:301.00752Pumped ahead .8 m3 (10 bbls) seawat	SH	Ρ		D	00:00	02:00	2.00	752	Drilled 445mm (17.5") to 752m. Swept hole with 8 m3 (50bbls) hi-vis each single. Hole good. Last survey 0 deg at 744m.			
SHPITO03:0006:003.00752POOH to run casing from 752 to 628m, no drag. Wiped tight spots between 629m and 425m, 9-18 tonne (20-40kips) OP. No drag from 425m. Break off bit.IH1PRC06:0007:001.00752Held JSA. Rigged up to run 340mm (13.375") casing.SCPRC07:0014:007.00752RIH with 54 joints of 340mm (13.375") 101 kg/m (68ppf), L-80 BTC casing and made up 476mm (18-3/4") wellhead assembly OK.SCTPCMTCAT14:0014:300.50752Release 476mm (18-3/4") wellhead running tool and attempt to load Weatherford plugs, difficulty running in plug assembly (plugs holding up/binding in 340mm casing).SCPCAT14:3016:001.50752RIH with 476mm (18-3/4") wellhead and 340mm (13.375") casing on 127mm (5") DP (pick up wt. 295k). Made up cement head assembly (darts loaded). Landed wellhead with casing shoe at 743m. Took 20.4 tonne (45kip) overpull and confirmed engagement. Checked PGB bullseye at 3/4deg port/forward.SCTPPTFCMC17:0017:300.50752Pumped ahead. 8m 3(10 bbls) seawater (with dye). Attempted to pressure test surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed and pumped 59.6 m3 (375 bbls) of 1.51sg (12.6 prg) lead slurry and 21.4 m3 (135 bbls) of 1.51sg (12.6 prg) lead slurry and 21.4 m3 (135 bbls) of 1.51sg (20 psi).SCPCMT19:3020:301.00752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).SCPC	SH	Ρ		CIR	02:00	03:00	1.00	752	Swept hole with 24 m3 (150bbls) hi vis. Displaced hole wih 111 m3 (700bbls) hivis gel mud.			
IHIPRC06:0007:001.00752Held JSA. Rigged up to run 340mm (13.375") casing.SCPRC07:0014:007.00752RIH with 54 joints of 340mm (13.375") 101 kg/m (68ppf), L-80 BTC casing and made up 476mm (18-3/4") wellhead assembly OK.SCTPCMTCAT14:0014:300.50752Release 476mm (18-3/4") wellhead running tool and attempt to load Weatherford plugs, difficulty running in plug assembly (plugs holding up/binding in 340mm casing).SCPCAT14:3016:001.50752RIH with 476mm (18-3/4") wellhead and 340mm (13.375") casing on 127mm (5") DP (pick up wt. 295k). Made up cement head assembly (darts loaded). Landed wellhead with casing shoe at 743m. Took 20.4 tonne (45kip) overpull and confirmed engagement. Checked PGB bullseye at 3/4deg port/forward.SCPCIC16:0017:001.00752Circulated casing and hole clean, displaced casing to 89 m3 (560bbls) gel mud. Pressured pods and prepared to cement.SCPCMC17:300.50752Re-tested surface lines, no-go. Changed out leaking Low-torq valve on cement head.SCPCMT19:302.00752Re-tested surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed and pumped 59.6 m3 (375 bbls) of 1.51sg (12.6 pp) lead slurry and 21.4 m3 (135 bbls) of 1.9sg (15.8 pp) tail slurry.SCPCMT19:302.100752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).SCPCMT19:302.00752Dropped top dart and dis	SH	Ρ		то	03:00	06:00	3.00	752	POOH to run casing from 752 to 628m, no drag. Wiped tight spots between 629m and 425m, 9-18 tonne (20-40kips) OP. No drag from 425m. Break off bit.			
SCPRC07:0014:007.00752RIH with 54 joints of 340mm (13.375") 101 kg/m (68ppf), L-80 BTC casing and made up 476mm (18-3/4") wellhead assembly OK.SCTPCMTCAT14:0014:300.50752Release 476mm (18-3/4") wellhead running tool and attempt to load Weatherford plugs, difficulty running in plug assembly (plugs holding up/binding in 340mm casing).SCPCAT14:3016:001.50752RIH with 476mm (18-3/4") wellhead and 340mm (13.375") casing on 127mm (5") DP (pick up wt. 295k). Made up cement head assembly (darts loaded). Landed wellhead with casing shoe at 743m. Took 20.4 tonne (45kip) overpull and confirmed engagement. Checked PGB bullsey at 3/4deg port/forward.SCPCIC16:0017:001.00752Circulated casing and hole clean, displaced casing to 89 m3 (560bbls) gel mud. Pressured pods and prepared to cement.SCTPPTFCMC17:300.50752Pumped ahead. 8 m3 (10 bbls) seawater (with dye). Attempted to pressure test surface lines, no-go. Changed out leaking Low-torq valve on cement head.SCPCMT19:302.00752Re-tested surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed and pumped 59.6 m3 (375 bbls) of 1.51 sg (12.6 ppg) lead slurry and 21.4 m3 (135 bbls) of 1.9 sg (15.8 ppg) tail slurry.SCPCMT19:302.00752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).SCPCMT19:302.031.00752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped p	IH1	Ρ		RC	06:00	07:00	1.00	752	Held JSA. Rigged up to run 340mm (13.375") casing.			
SCTPCMTCAT14:0014:300.50752Release 476mm (18-3/4") wellhead running tool and attempt to load Weatherford plugs, difficulty running in plug assembly (plugs holding up/binding in 340mm casing).SCPCAT14:3016:001.50752RIH with 476mm (18-3/4") wellhead and 340mm (13.375") casing on 127mm (5") DP (pick up wt. 295k). Made up cement head assembly (darts loaded). Landed wellhead with casing shoe at 743m. Took 20.4 tonne (45kip) overpull and confirmed engagement. Checked PGB bullsey at 3/4deg port/forward.SCPCIC16:0017:001.00752Circulated casing and hole clean, displaced casing to 89 m3 	SC	Ρ		RC	07:00	14:00	7.00	752	RIH with 54 joints of 340mm (13.375") 101 kg/m (68ppf), L-80 BTC casing and made up 476mm (18-3/4") wellhead assembly OK.			
SCPCAT14:3016:001.50752RIH with 476mm (18-3/4") wellhead and 340mm (13.375") casing on 127mm (5") DP (pick up wt. 295k). Made up cement head assembly (darts loaded). Landed wellhead with casing shoe at 743m. Took 20.4 tonne (45kip) overpull and confirmed engagement. Checked PGB bullseye at 3/4deg port/forward.SCPCIC16:0017:001.00752Circulated casing and hole clean, displaced casing to 89 m3 (560bbls) gel mud. Pressured pods and prepared to cement.SCTPPTFCMC17:0017:300.50752Pumped ahead. 8 m3 (10 bbls) seawater (with dye). Attempted to pressure test surface lines, no-go. Changed out leaking Low-torq valve on cement head.SCPCMC17:3019:302.00752Re-tested surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed and pumped 59.6 m3 (375 bbls) of 1.51sg (12.6 ppg) lead slurry and 21.4 m3 (135 bbls) of 1.9sg (15.8 ppg) tail slurry.SCPCMT19:3020:301.00752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).SCPTO21:000.50752Pressure tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back. 8 m3 (5bbls), floats held OK.SCPTO21:0022:301.50752Presare tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back. 8 m3 (5bbls), floats held OK.SCPTO21:0022:301.50752Prepared drillfloor tor run BOP.	SC	ΤP	СМТ	CAT	14:00	14:30	0.50	752	Release 476mm (18-3/4") wellhead running tool and attempt to load Weatherford plugs, difficulty running in plug assembly (plugs holding up/binding in 340mm casing).			
SCPCIC16:0017:001.00752Circulated casing and hole clean, displaced casing to 89 m3 (560bbls) gel mud. Pressured pods and prepared to cement.SCTPPTFCMC17:0017:300.50752Pumped ahead .8 m3 (10 bbls) seawater (with dye). Attempted to pressure test surface lines, no-go. Changed out leaking Low-torq valve on cement head.SCPCMC17:3019:302.00752Re-tested surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed and pumped 59.6 m3 (375 bbls) of 1.51sg (12.6 ppg) lead slurry and 21.4 m3 (135 bbls) of 1.9sg (15.8 ppg) tail slurry.SCPCMT19:3020:301.00752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).SCPCMT20:3021:000.50752Pressure tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back .8 m3 (5bbls), floats held OK.SCPTO21:0022:301.50752Broke and laid out cement head. POOH with wellhead running tool and laid out.SCPBOP22:3024:001.50752Prepared drillfloor to run BOP.	SC	Ρ		CAT	14:30	16:00	1.50	752	RIH with 476mm (18-3/4") wellhead and 340mm (13.375") casing on 127mm (5") DP (pick up wt. 295k). Made up cement head assembly (darts loaded). Landed wellhead with casing shoe at 743m. Took 20.4 tonne (45kip) overpull and confirmed engagement. Checked PGB bullseye at 3/4deg port/forward.			
SCTPPTFCMC17:0017:300.50752Pumped ahead .8 m3 (10 bbls) seawater (with dye). Attempted to pressure test surface lines, no-go. Changed out leaking Low-torq valve on cement head.SCPCMC17:3019:302.00752Re-tested surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed and pumped 59.6 m3 (375 bbls) of 1.51sg (12.6 ppg) lead slurry and 21.4 m3 (135 bbls) of 1.9sg (15.8 ppg) tail slurry.SCPCMT19:3020:301.00752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).SCPCMT20:3021:000.50752Pressure tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back .8 m3 (5bbls), floats held OK.SCPTO21:0022:301.50752Prepared drillfloor to run BOP.SCPBOP22:3024:001.50752Prepared drillfloor to run BOP.	SC	Ρ		CIC	16:00	17:00	1.00	752	Circulated casing and hole clean, displaced casing to 89 m3 (560bbls) gel mud. Pressured pods and prepared to cement.			
SCPCMC17:3019:302.00752Re-tested surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed and pumped 59.6 m3 (375 bbls) of 1.51sg (12.6 ppg) lead slurry and 21.4 m3 (135 bbls) of 1.9sg (15.8 ppg) tail slurry.SCPCMT19:3020:301.00752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).SCPCMT20:3021:000.50752Pressure tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back .8 m3 (5bbls), floats held OK.SCPTO21:0022:301.50752Broke and laid out cement head. POOH with wellhead running tool and laid out.SCPBOP22:3024:001.50752Prepared drillfloor to run BOP.	SC	ΤP	PTF	СМС	17:00	17:30	0.50	752	Pumped ahead .8 m3 (10 bbls) seawater (with dye). Attempted to pressure test surface lines, no-go. Changed out leaking Low-torq valve on cement head.			
SCPCMT19:3020:301.00752Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).SCPCMT20:3021:000.50752Pressure tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back .8 m3 (5bbls), floats held OK.SCPTO21:0022:301.50752Broke and laid out cement head. POOH with wellhead running tool and laid out.SCPBOP22:3024:001.50752Prepared drillfloor to run BOP.	SC	Ρ		СМС	17:30	19:30	2.00	752	Re-tested surface lines to 20.6 MPa (3000 psi), held OK. Dropped bottom dart, mixed and pumped 59.6 m3 (375 bbls) of 1.51sg (12.6 ppg) lead slurry and 21.4 m3 (135 bbls) of 1.9sg (15.8 ppg) tail slurry.			
SCPCMT20:3021:000.50752Pressure tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back .8 m3 (5bbls), floats held OK.SCPTO21:0022:301.50752Broke and laid out cement head. POOH with wellhead running tool and laid out.SCPBOP22:3024:001.50752Prepared drillfloor to run BOP.	SC	Ρ		СМТ	19:30	20:30	1.00	752	Dropped top dart and displaced casing with 48.3 m3 (304 bbls) of seawater. Bumped plug to 8.3 MPa (1200 psi).			
SCPTO21:0022:301.50752Broke and laid out cement head. POOH with wellhead running tool and laid out.SCPBOP22:3024:001.50752Prepared drillfloor to run BOP.	SC	Ρ		СМТ	20:30	21:00	0.50	752	Pressure tested casing to 20.6 MPa (3000 psi) for 10 mins - solid. Bled back .8 m3 (5bbls), floats held OK.			
SC P BOP 22:30 24:00 1.50 752 Prepared drillfloor to run BOP.	SC	Ρ		то	21:00	22:30	1.50	752	Broke and laid out cement head. POOH with wellhead running tool and laid out.			
	SC	Ρ		BOP	22:30	24:00	1.50	752	Prepared drillfloor to run BOP.			

ACTI\	ΊΤΥ	FOR	PER	IOD 000	<u>0 HRS</u>	TO 04:	:00 HRS	ON Aug 29, 2002
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
SC	Р		BOP	00:00	06:00	6.00	752	Made up double marine riser. Moved BOP to moonpool and latched and tested LMRP. Made up double and rigged up pod lines.

DAILY DRILLING REPORT # 8 CASINO #1

															CASINO #1
WB	M Dat	a cos	ST TODAY :	\$26,947	CU	M. WB	MUD CO	OST: \$54	4,331		С	UM. WBM+	OBM COS	T: \$54,331	
Typ FROI TIME WEIG TEMI	e: M: GHT (sg) P (C):	KCI PH	PA pit YP (Pa 2:00 GEL10 .04 (Pa.s) : Fann 3	CITY (sed a.s) : a.s) : s/10m/10 /6/100 :	c/ltr) :)0m 0 1	38 0 1 0 1 1 4	API FL (cm3/3 FIL I EF (mm) : HTHPF (cm3/3 HTHP ((mm) :	UID LOSS 30min) : 3 CAKE 1 1 0min) : CAKE		0	CI : K+C*1(HARD/(MBT (p PM : PF :	000 : Ca : pb) :	28,000 37800 720 .2	SOLIDS (% H2O (%vol OIL (%vol) SAND : PH : PHPA (ppt	6vol) : .55) : 99.5 : 10.0 o) : .7
Bit	Data	for Bit # 2	IADC # 1	1 5	5			Wea	ar 🖂		01		- B	G	O2 R
SIZE	: (")		17.50					NOZZI	FS _						
MAN	UFACT	URER :	SM ,	AVE WOE	3 (MT) :		10	3 x 2		rilled	over th	ie last 24 h	rs Cal	culated ove	er the bit run
TYP	E :	М	IGSSH-C	AVE RPM	1:		100	1 x			AGE (n	n): 109 ·	39 CUM.		E(m): 622
SER	IAL # :	I	ммооо5 Г	-LOW (lp	m) :		3,815	x				RS ·			IRS: 23.4
DEP	TH IN (mRT):	130 F	PUMP PF	RESS.(Kp	oa):	16,906	x	0 тс	DTAL	REVS	: 10,8		TOT. REV	S: 140,400
DEP	TH OU	Г (mRT):	752 H	HSI (kW/c	:m2) :		0.167	x	0 RC	DP (m	/hr) :	2	1.7 ROP	(m/hr) :	26.6
BH	A # 2	Lengi	in (m): 21		(1.47).	٨	10		(1)		-	D.C. (1) A	NN. VELO	CITY (mpm	i): 31
WT		к (MT):	23 516		(MT):	1	ופי IR 20 דף		(INM): Nm)·		5 ⊿	D.C. (2)		CITY (mpm): 35 m): 27
вна	VVI (IV	11):	32 FIC		(MT).	1	18 TR		(Nm):		3	D.P. ANN		Y (mpm) :	27
вна	DESCF	RIPTION : 17	7.5" bit, NB s	tab, 9.5"	Anderdri	ft, 17.5	" stab, 1	x 9.5" D	C, 17.5"	stab,	2 x 9.5	5" DC, x/o,	6 x 8" DC,	8" Jar, 4 x	8" DC, x/o, 8 x
	т		PTION	LEI	NGTH	OD	ID	SERIA	L#	HRS			СОММ	ENT	
9.5"	Ander	drift tool						ADB905		35.3	3 Surve	ev flask ASI	= 8171TOT	-C	
8" J	ar							DAH 343	34	30.5			0171101	0	
							I				•				
Sur	vey	(Method :	Min Curvat	ure)	MD	TVD	INCI	AZ	COR	२.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last	Tool T	ype :	Ande	erdrift ^{(I}	mBRT)	(mBR1	T) DEC	G (deg)	AZ	、 s	SECT	(deg/	(m)	(m)	
Mag	netic [Declination		0.00					(deg)	(m)	30m)			A 1 1 16
			-		538.0	537.	9 0.5 9 1 0			.0	7.7 8.1	0.5	/./ 81	0.0	Anderdrift
					597.0	596.	.9 0.5	50 0.		.0	8.4	0.5	8.4	0.0	Anderdrift
					626.0	625.	.9 0.5	50 0.	0 0	.0	8.7	0.0	8.7	0.0	Anderdrift
					655.0	654.	.9 0.5	50 0.		.0	9.0	0.0	9.0	0.0	Anderdrift
					720.0	686. 719.	.9 0.0			.0	9.1 9.1	0.5	9.1	0.0	Anderdrift
					750.0	749.	.9 0.0	0 0.	0 0	.0	9.1	0.0	9.1	0.0	Anderdrift
Dull	x													· · · · · · · · · · · · · · · · · · ·	
Stor	n :ks	STOCK TYP		<u>S</u>	TART U	<u>SED R</u>	EC'D	STOCK			- & UNI	TS MT	SIARI	USED RE	C'D STOCK
On	Riq	Pot Water - I	9 Ria	MT 3	88.0	24.0	24.0	329.5 88.0	Cemen	t 'G' -	Ria	SXS	2414.0 19	14.0	500.0
-	5	Cement HTE	B - Rig	SXS	0.0			0.0	Benton	ite - R	Rig	SXS	808.0 1	38.0	670.0
		Barite - Rig		sxs 21	15.0			2115.0	Brine -	Rig		MT	0.0		0.0
		Helifuel - Rig	g	ltr 41	07.0 6	83.0		3424.0	Fuel Oi	I - Co	nquero	r M3	149.6	19.5 320	.0 450.1
		Drill Water -	Conqueror	MT	0.0	:	360.0	360.0	Pot Wa	ter - C	Conque	ror MT	105.0	5.0 110	.0 210.0
		Cement 'G' -		SXS	0.0			0.0	Cemen		- Cond	querc sxs	0.0		0.0
		Brine - Conc		MT	0.0			0.0	Fuel Oi		ntinel	SXS M3	491 9	4.7	487 2
		Drill Water -	Sentinel	MT 3	35.0			335.0	Pot Wa	ter - S	Sentine	I MT	235.0	5.0	230.0
		Cement 'G' -	Sentinel	sxs	0.0			0.0	Cemen	t HTB	- Sent	inel sxs	0.0		0.0
		Bentonite - S	Sentinel	SXS	0.0			0.0	Barite -	Sent	inel	SXS	1000.0		1000.0
		Brine - Sent	inel	MT	0.0			0.0							
Pur	np Da	ta													
			Pump	Data - la	ast 24 hr	s						Slo	ow Pump I	Data	
#		TYPE	LNR(mm)	SPM	EFF	(%)	Flow (Ip	om) SP	P (kPa)	s	PM	SPP (kPa	a) DEI	PTH (m)	MW (sg)
1	Nat'l 1	2-P-160	152	80)	97	12	93	16547			()		
2	Nat'l 1	2-P-160	152	80		97	12	93	16547			(
3	Nat'l 1	2-P-160	152	80		97	12	93	16547			()		

DAILY DRILLING REPORT #8

CASINO #1

Casing															
DIAM.	CSG OD (mm)	SHOE (plan/Ac	MD ctual)	SHOE 1 (plan/Ac	TVD tual)	LC (pl/	OT Act)	FIT (pl/Act)			COMMENT				
13.375	340	785.0	743.0	785.0	742.9										
	-	ГҮРЕ		LENGTH	H (m)	CSG ID	(mm)	WT (kg/m)) G	RADE	THREAD				
340mm ((13.375") sł	noe jt 107 kg/	m, cent mi	d 12.52		316		107.1		L-80	BTC				
340mm	(13.375") in	t jt 107 kg/m	, cent mid j	t 12.13		316		107.1		L-80	BTC				
340mm ((13.375") in	t jt 107 kg/m	, cent mid j m	t 12.64	,	316		107.1		L-80	BIC				
340mm (////// (13.375 (13.375") No	-cross it 101	li ka/m	590.73	`	310		101.2		L-00	BTC				
476mm	(13.375) NO (18.75") WA	llhead + exte	nsion it	10.71		316		101.2		L-80	BTC				
RT to W	ellhead top	inicau + exte	nsion ji	92.58		0		.0		L-00	БТО				
Person	nel : on	Site =88													
4 Sa	4 Santos 39 DOGC 2 DOGC extra 21 TMT (marine)														
6 TN	6 TMT (ROV) 6 BHI 1 Halliburton 2 IDFS														
1 Dr	1 DrilQuip 3 Weatherford 3 Anadrill														
Safety,	Inspecti	ons and D	Drills		Summ	nary									
4 day	/s since last	Fire and At	bandon Shi	p Drill											
1793 day	/s since last	Lost Workda	ay Case												
day	/s since last	Medical Tre	eatment Ca	se											
1 day	/s since last	First Aid Ca	se												
day	/s since last	Environmer	ntal Issue												
Shaker	s, Volum	es and Lo	sses Da	ta						ENGINEE	R M. Docherty / J. Si	ngh			
SHAKER	R 1	VOL		LABLE (m3)	=	175	LOSSE	S (m3) =	491	СОММЕ	NTS				
SHAKER	2	AC		50.9 MIX		0.0			430.65						
SHAKER	4	но) 0 SLI	IG	0.0	SURF +	-FOUIP	0.00						
SHAKER	5	RE	SERVE 1	24.3 HE	AVY	0.0	DUMPE	D	60.41						
Anchor	'S Anc	1: 111	Anc 2 :	132 A	Anc 3 : 14	7	Anc 4 : 1	54 A	Anc 5 : 14	5	RIS. TENS. (MT) :	0			
	Anc	6: 132	Anc 7 :	109 A	Anc 8 : 16	3	Anc 9 : 0) A	Anc 10: 0		RISER ANGLE (deg):				
Workb	oats	Arrived @ Ri	g De	epart from Rig	g Esti	imatedArr	ival (Port)	Weath	er		STACK ANGLE(deg): V.D.L. (MT) :	1,769.3			
		(Date)(Time	ə) (Date)(Time)				VISIBILIT	Y(nm) :	8	AVE HEAVE (m) :	2.0			
Pacific Se	entinel	26/8/02 23	3:00					WIND SF	P. (kts) :	40.0	MAX HEAVE (m) :				
Pacific Co	onqueror	29/8/02 0):55					WIND DI	R (deg) :	030	AVE PITCH (deg) :	0.4			
								PRES.(m	bars):	1020	MAX PITCH (deg) :	0.4			
								AIR TEM	P (C) :	10.0	AVE ROLL (deg) :	0.3			
COMMEN	ITS : Pax	on / off : Flt #	1, 8 / 7; Flt	#2,5/0							MAX ROLL (deg) :	0.3			

Santos DATE : Aug 29, 2002

то : O. Moller

	DAILY DRILLING REPORT #
FROM: H. Flink / S. Hodgetts	CASIN
TO O M "	UACIN

Well DataCOUNTRYAustraliaFIELDCasinoDRILL CO.Diamond OffshoreRIGOcean Bounty					asino shore ounty	M.DEPTH TVD (m E PROGRE DAYS FR DAYS +/-	H (m BRT) BRT) SS (m) OM SPUD CURVE	752.0 CUR.HOLE SIZE (mm) 311 AFE COST \$ 12,129,000 751.9 CASING OD (mm) 340 AFE BASIS : P&A 0.0 SHOE TVD (m BRT) 743 DAILY COST : \$445,673 4.25 FIT (sg) 0.00 CUM COST : \$3,926,132 -0.50 LOT (sg) 0.00 CUM COST : \$3,926,132							
RT ABOVE SL (m)25.0CURRENT OP @ 0400Making up and running 311mm (12.25") BHA in hole to tag cement.WATER DEPTH (m) LAT RT TO SEABED (m)70.5PLANNED OP.Continue RIH. Drill shoetrack, clean rathole and displace hole to new mu Conduct LOT. Drill 311mm (12.25") hole to TD.															
Summary of period 00:00 to 24:00 hrs FORMATION TOP(m BRT) Continued running BOP. Tested BOP and surface equipment. Laid out 445mm Undescribed 96 (17.5") BHA and made up 311mm (12.25") BHA. RIH. 96															
	ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 29, 2002														
SC	P	ĸĊ	BOP	00:00	07:30	7.50	752	Made up double marine riser. Moved BOP to moonpool and made u LMRP to BOP. Made up double and rigged up pod lines. Ran BOP on marine riser. Pressure tested choke and kill lines 1.4/34.5 MPa (200/5000psi) for 5/15 mins.							
SC	Ρ		BOP	07:30	10:00	2.50	752	Ran riser slip jt and landing jt. Nippled up Choke and kill hoses. Pressure tested choke and kill lines/hoses to 1.4/34.5 MPa (200/5000psi) for 5/15 mins, OK.							
SC	Ρ		BOP	10:00	14:00	4.00	752	Nippled up MRT lines and pod hose saddles. Re-positioned rig over PGB. Ballasted rig to 21.3m (70') and landed BOP. Set down 13.6 tonne (30kip), confirmed latched with ROV and took 22.6 tonne (50kip) O/P. LMRP and BOP between 1-0.5deg (rolling).							
SC	Ρ		BOP	14:00	15:30	1.50	752	Installed divertor and rigged down drill floor.							
SC	Ρ		BOP	15:30	22:30	7.00	752	Ran wearbushing. Made up test tool and RIH. Pressure tested BOP connector to 34.5MPa (5000psi) and LMRP connector to 20.7MPa (3000psi), OK. Function tested BOP on both pods and performed accumulator test. POOH with test tool and function tested divertor							

system. SC Ρ TO 22:30 24:00 1.50 752 Broke out and laid out cement head, 241mm (9.5") DC and 445mm (17.5") BHA.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 30, 2002																
PHS	CL	RC	OP F	ROM	то	HRS	DEPT	Н	ACTIVITY DESCRIPTION							
IH1	Ρ		TI (00:00	06:00	6.00	752		Held JSA and made up 311mm (12.25") BHA. Checked MWI surface and RIH.							
WBM Data COST TODAY : \$17,508 CUM. WB MUD COST: \$71,839 CUM. WBM+OBM COST: \$71,839																
Type FROM : TIME : WEIGHT TEMP (: Γ (sg) C) :	K	CI PHP/ pi 23:00 1.04	VISC PV t YP GEL (Pa.s Fanr	COCITY ((Pa.s) : (Pa.s) : 10s/10m s) : n 3/6/100	sec/ltr) : /100m 1 : 1	40 0 3 1 - 2) /) 3 (1 7 (API FLUID LOSS (cm3/30min) : FILTER CAKE mm) : HTHPFL (cm3/30min) : HTHP CAKE (mm) :	0	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :	23,000 37800 440 .2	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :	.88 99.1 10.0 .7		

													_
Bit Data for Bit #	3 IADC #			Wear	I	01	D	L	В	G	02	R	
SIZE ("):	12.25			NOZZLES	Drille	d over t	he last 2	24 hrs	, Calc	Calculated over the bit run			
MANUFACTURER :	RE DSX 195	AVE WOB (MT) :	0	5 x 12	МЕТЕ	RAGE (m) :		CUM.METERAGE (m) :				0
SERIAL # :	2011100	FLOW (lpm) :	0	x 0			HRS:		CUM.	ON BOT	HRS :		0
DEPTH IN (mRT):	752	PUMP PRESS.(Kpa):	0	x 0	TOTA	L REVS	:	0	CUM.1	OT. RE	VS :		0
DEPTH OUT (mRT):		HSI (kW/cm2) :	0.000	X 0	ROP (m/hr) :			ROP (r	n/hr) :			

9
BHA #	3 Le	ngth (m):										D.C. (1) A	NN. VELO	CITY (mpm	n):	0
WT BLW	JAR (MT):	0 STI	RING V	NT (MT):		0 т	RQE	MAX (N	Nm):		0	D.C. (2) A	NN VELO	CITY (mpm):	0
BHA WT	(MT) ·		KUP	WT (MT):		0 Т	RQE	ON (Nr	n):		0	H.W.D.P.	ANN VELC	OCITY (mp	m):	0
5	().) SI	< OFF	WT (MT)		οΙт	RQE	OFF (N	lm):		0	D.P. ANN		Y (mpm) :	,	0
		• 12.25" hit NB	etab.	8 25" M/M/		-	" D D	1 v 8"	DC 12	25" P		2" DC 8"	lar 2 v 8" [10^{-12}	v 5" Ц\//	סח
		. 12.25 bit, ND	siab, i	0.23 101001		7, 12.25		, 1 . 0	100, 12	.25 1	1			JC, X/0, 12	× 5 11001	
	TOOL DES	CRIPTION		LENGTH	OD	ID	5	SERIAL	#	HRS			COMM	ENT		
NB RR							GU	2151								
CDR							955	56								
Pulser							231									
ILS							313	3272-2								
ISONIC							857	04.40								
								2143								
Jare							180	2144								
5413								010								
Survey	(Matha		ture)					. –				2001 20				
Survey	(ivietno	a : Min Curva	MD (mppt)				AZ	CORF	^{2.}	'V'	DOGLEG	N/S	E/W	TOOL T	YPE	
Last Too	ol Type :	(MBRI)	(mBF			(aeg)	AZ (dog)			(deg/ 20m)	(m)	(m)				
Magneti	c Declinat	ion :	0.00						(uey	-	(111)	30111)				
				538.0	53	/.9 0	.50	0.0	0.	۷I	1.7	0.5		0.0	Anderdri	ITT
				568.0	56	1.9 1	.00	0.0			8.1 ჹ₄	0.5	8.1	0.0	Anderdri	IIT
				626.0	62	5.9 0	50	0.0	0. 0	ŏ	0.4 8 7	0.5	0.4 8.7	0.0	Anderdri	ift
				655.0	654	4.9 0	.50	0.0	0.	ŏ	9.0	0.0	9.0	0.0	Anderdri	ift
				687.0	68	6.9 0	.00	0.0	0.	0	9.1	0.5	9.1	0.0	Anderdri	ift
				720.0	71	9.9 0	.00	0.0	0.	0	9.1	0.0	9.1	0.0	Anderdri	ift
		750.0	749	9.9 0	.00	0.0	0.	0	9.1	0.0	9.1	0.0	Anderdri	ift		
BUIK STOCK TYPE & UNITS START USED REC'D STOCK STOCK TYPE & UNITS START USED REC'D STOCK																
Stocks	Fuel Oil	- Rig	М3	329.5	9.5		3	320.0 C	Drill Wa	ter - R	Rig	MT	541.0 1	44.0 270	.0 60	67.0
On Rig	Pot Wat	er - Rig	MT	88.0	23.0	23.0		88.0 C	Cement	'G' - F	Rig	SXS	500.0		50	00.0
	Cement HTB - Rig sxs 0.0 0.0 Bentonite - Rig sxs 670.0 670								70.0							
	Barite - Rig sxs 2115.0 2115.0 Brine - Rig MT 0.0								0.0							
	Helifuel - Rig Itr 3						33	322.0 F	uel Oil	- Cor	nquero	or M3	450.1	4.0	44	46.1
	Drill Wat	ter - Conqueror	MT	360.0	270.0			90.0 F	ot Wat	er - C	onque	ror MT	210.0	5.0	20	05.0
	Cement	'G' - Conqueror	SXS	0.0	0.0 0.0 Cement HTB - Conquerc sxs 0.0								0.0			
	Bentonit	e - Conqueror	SXS	0.0	0.0 0.0 Barite - Conqueror sxs 1146.0							114	46.0			
	Brine - C	Conqueror	MT	0.0	.0 0.0 Fuel Oil - Sentinel M3						487.2	7.3	4	79.9		
	Drill Wa	ter - Sentinel	MT	335.0			3	335.0 F	ot Wat	er - S	entine	I MT	230.0	5.0	22	25.0
	Cement	'G' - Sentinel	SXS	0.0				0.0	Cement	нтв	- Sent	tinel sxs	0.0			0.0
	Bentoni	te - Sentinel	SXS	0.0			0.0 Bar			Senti	nel	SXS	1000.0		100	00.0
	Brine - S	Sentinel	MT	0.0				0.0								
-																
Pump	Data															
		Pump	Data	- last 24 l	nrs							Slo	ow Pump D	ata		
#	TYPE	LNR(mm)	SP	M EFF	- (%)	Flow (lpm)	SPP	(kPa)	SF	РМ 🛛	SPP (kPa	a) DEF	PTH (m)	MW (s	sg)
1 Nat	'I 12-P-160	152			97		0		0			(
2 Nat	'l 12-P-160	152			97		0		0			(
3 Nat	'l 12-P-160	152			97		0		0			(
Casing																
			<u>ר</u>	ец						C1.	т		0			
	(mm)	(plan/Actua	J al)	(pla	n/Actu	al)		(pl/Act)		(pl/A	Act)		001			
12 275	240	705.0	740.0	795	0	742.0		(p.,, tot)		(P.,,	,					
13.375	340	/85.0	143.0	/ 85.	U	142.9										
	ТҮРЕ					m) (CSG	ID (mm	i) V	VT (kg	g∕m)	GRADE	Ξ	THREAD		
340mm (340mm (13.375") shoe it 107 kg/m, cent mid 12.52						31	6		107.1		L-80		BTC		
340mm	(13.375") in	t jt 107 kg/m, ce	ent mic	dijt ∣ 1	2.13		31	6		107.1	I	L-80		BTC		
340mm	(13.375") in	t jt 107 kg/m, ce	ent mic	dijt ∣ 1	2.64		31	6		107.1	I	L-80		BTC		
50 x 340)mm (13.37	5") jt 101 kg/m		59	90.73		31	6		101.2	2	L-80		BTC		
340mm (13.375") No-cross jt 101 kg/m					11.84			316		101.2	<u> </u>	L-80		BTC		
476mm (18.75") wellhead + extension jt RT to Wellhead top					10.71		31 ^	316		101.2 L-80		BIC				
	enneau iop			9	2.00		U			.0						

Length (m):

CASINO #1

Aug 29, 2002		DAILY DRILLING REPORT # 9
		CASINO #1
Personnel : on Sit	ite =90	
5 Santos	39 DOGC 2 DOGC	Cextra 21 TMT (marine)
6 TMT (ROV)	6 BHI 2 Hallib	urton 2 IDFS
1 DrilQuip	3 Weatherford 3 Anadr	ill
Safety, Inspection	ns and Drills Summary	
5 days since last F	Fire and Abandon Ship Drill	
1794 days since last L	Lost Workday Case	
days since last M	Medical Treatment Case	
2 days since last F	First Aid Case	
days since last E	Environmental Issue	
Shakers, Volumes	s and Losses Data	ENGINEER M. Docherty / J. Singh
SHAKER 1 4 x 84	VOLUME AVAILABLE (m3) = 311 LOSSES	
SHAKER 2 4 x 84		IOLE 0.00 Completed mixing new mud
SHAKER 4 4 x 84	HOLE 70.9 SLUG 0.0 SURF.+	EQUIP 0.00
SHAKER 5	RESERVE 19.1 HEAVY 0.0 DUMPE	D 0.00
Anchors Anc 1 :		47 Anc 5 : 129 RIS. TENS. (MT) : 101
Anc 6 :	: 125 Anc 7 : 91 Anc 8 : 118 Anc 9 : 0	Anc 10: 0 RISER ANGLE (deg): 0.0
Marlah a ata Ar	rrived @ Pig Depart from Pig Estimated Arrival (Port)	STACK ANGLE(deg): 0.0
WORKDOATS	(Date)(Time) (Date)(Time) (Date)(Time)	V.D.L. (MT) : 1,898.6
		VISIBILITY (nm): 5 AVE HEAVE (m): 1.2 WIND SP (kts): 40.0 MULTINE (m): 1.2
Pacific Sentinel 26/	5/8/02 23:00	WIND DIR (deg): 320 AVE DITOUT(1) 1.2
	10/02 0.33 29/0/02 19.43 30/0/02 7.00	PRES (mbars): 1011 MAX PITCH (deg) : 1.0
		AIR TEMP (C) · 9.0 AVE ROLL (deg) · 0.8
		MAX ROLL (deg) : 0.8
COMMENTS : Pax on	n / off : Flt #1, 3 / 1	

Santos DATE : Aug 30, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

DA

Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,016.0 1,015.9 264.0 5.25 -0.50	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 0.00	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$308,601 \$4,234,733
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m)	25.0) LAT 70.5 95.5	CURRENT OP @ 0400 PLANNED OP.	Drilling at Continue	nead 311mm (12.25") hole a drilling 311mm (12.25") hol	at 1053 e to TD	m. (2276m).	

Summary of period 00:00 to 24:00 hrs

Made up 311mm (12.25") BHA, RIH. Drilled cement and shoetrack, cleaned rathole and displaced hole to new mud. Drilled 3m to 758m and performed LOT to 2.07sg (17.3ppg). Drilled ahead to 1016m.

E		
	FORMATION	TOP(m BRT)
	Undescribed	96
	Merpunga	774
	Wangerrip Grp	850

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 30, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
SC	Ρ		LDP	00:00	01:30	1.50	752	Continued laying out 445mm (17.5") BHA.
IH1	Ρ		ΤI	01:30	05:00	3.50	752	Held JSA and made up 311mm (12.25") BHA. Shallow tested MWD/FEWD tools, OK, 156 spm = 9.3 MPa (1350psi).
IH1	Ρ		ТΙ	05:00	09:00	4.00	752	Continued making up 311mm (12.25") BHA and RIH to 690m.
IH1	Ρ		RS	09:00	09:30	0.50	752	Serviced TDS and repaired loggers RPM sensor.
IH1	Ρ		DFS	09:30	14:30	5.00	752	Continued RIH. Tagged TOC at 717.6m. Drilled cement and plugs at 718m. Drilled float eqt and shoetrack. Cleaned out rathole to 752m and displaced hole to 1.04sg (8.7ppg) KCI/PHPA mud.
IH1	Ρ		D	14:30	15:00	0.50	755	Drilled 3 m to 755m.
IH1	Ρ		LOT	15:00	16:30	1.50	755	Circulated 1.5 times bottoms up and performed LOT to 7.5 MPa (1090psi). EMW = 2.07sg (17.3ppg).
IH1	Ρ		D	16:30	24:00	7.50	1,016	Drilled ahead 311mm (12.25") hole from 755 to 1016m. Partial losses commenced at 784m, losses varied from 11.1- 8 m3ph (70- 50bph).

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Aug 31, 2002

PHS	CL	RC	OP	FROM	10	HRS	DEPIH	ACTIVITY DESCRIPTION
IH1	Ρ		D	00:00	06:00	6.00	1,053	Continued drilling 311mm (12.25") hole from 1016m to 1053m. Treated losses with LCM, regained full returns.

<u>00:0</u>	0 TO 24:00	0 HRS ON :	<u>30/08</u>	/200	2							
	Comments				F	Recommendations				Rig Red	quirements	
Mud losses from 784m.												
WBM Data	COST T	ODAY : \$26,90	7 C	UM. \	WВ	MUD COST: \$98,746			CUM. WB	м+овм со	ST: \$98,746	
Type : FROM : TIME : WEIGHT (sg): TEMP (C) :	KCI PHPA pit 22:00 1.06	VISCOCITY (se PV (Pa.s) : YP (Pa.s) : GEL10s/10m/1 (Pa.s) : Fann 3/6/100 :	ec/ltr) : 00m 2 3	2	40 0 7 1 12	API FLUID LOSS (cm3/30min) : FILTER CAKE (mm) : HTHPFL (cm3/30min) : HTHP CAKE (mm) :	7 1 0	CI : K+C HAR MBT PM : PF :	*1000 : D/Ca : ` (ppb) :	29,000 37800 640 2.5	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :	1.6 98.4 2 10.0 1.1
COMMENT:	COMMENT: Making additions of LCM material to manage losses.											

DAILY DRILLING REPORT # 10

Casino #1

CASINO #1

Bit	Data	for Bit # 3	IADC #					Wea	r F		01	D	L	В	G	02	R	
SIZE MAN TYP SER DEP DEP	E (") : IUFACT E : IAL # : TH IN (I TH OUT	ŪRER : mRT): Γ (mRT):	3 104 2,721 17,409 0.067	NOZZLE 5 X 12 X (X (X (X (2 N 2 N 0 C 0 I/ 0 T 0 T 0 R	Drilled METER ON BOT ADC DI OTAL COP (m	over th AGE (r TTOM I RILL. H REVS I/hr) :	LI n) : HRS : IRS : : 2	4 hrs 264 4.5 8.0 28,080 58.7	Cal CUM. CUM. CUM. CUM. ROP	Culated c METERA ON BOT IADC DR .TOT. RE (m/hr) :	GE (m GE (m . HRS . HRS: . WS :	bit run): 26 : 4 8 28,08 58.	4 .5 .0 30				
BHA BHA BHA NB I CDF Puls	A # 3 BLW JA WT (M DESCF TC RR Seer	Leng AR (MT): IT) : RIPTION : 1: DOL DESCR	th (m): 26 36 ST 36 PIC 31 2.25" bit, NB	5.4 RING CK UP K OFF stab,	WT (MT): WT (MT): WT (MT) 8.25" MW LENGTH	D/FEWD	127 TR(0 TR(0 TR(12.25" 	QE MAX (I QE ON (Ni QE OFF (I RR, 1 x 8" SERIAL GU 2151 9556 231	Nm): m): Nm): DC, 1	I2.25" HRS 11.0 11.0 11.0	13 7 3 RR, 9 3	D.C. (' D.C. () H.W.C D.P. A < 8" DC,	1) ANN 2) ANN 0.P. AN 0.N VE 8" Jar,	I. VELO I VELO IN VELC ELOCIT 2 x 8" COMM	CITY (mp CITY (mp DCITY (n Y (mpm) DC, x/o, ENT	om): om): ipm): : 12 x 5"	7 7 5 5 HWDP	3 7 11 11
ISO Str F Str F Jars	NIC RR RR							857 GU 2143 GU2144 48907C		11.0 11.0 11.0 11.0								
Sur Last	vey Tool T	(Method : ype :	Min Curva	ture)	MD (mBRT	TVD (mBR) INCL T) DEG	AZ (deg)	COF AZ (de	RR. Z S	'V' SECT (m)	DOGLE (deg, 30m	EG /)	N/S (m)	E/W (m)	тос)L TYPE]
Mag	netic L	Jeclination	:	0.00	655. 687. 720. 750. 766. 855. 912. 969.	0 654 0 686 0 719 0 749 8 766 0 854 0 911 9 969	9 0.5 9 0.0 9 0.0 9 0.0 9 0.0 9 0.0 9 0.0 9 0.0 9 0.2 9 0.5 9 0.5 9 0.8	0 0.0 0 0.0 0 0.0 0 0.0 0 342.2 6 216.0 4 155.4 3 136.0	34. 21 15 13	0.0 0.0 0.0 2.2 6.0 5.4 6.0	9.0 9.1 9.1 9.2 9.5 9.1 8.6	0. 0. 0. 1. 0. 0. 0.	.0 .5 .0 .0 .1 .3 .2 .2	9.0 9.1 9.1 9.2 9.5 9.1 8.6	0. 0. 0. -0. -0. -0. 0.	0 And 0 And 0 And 0 And 0 MW 3 MW 3 MW 2	erdrift erdrift erdrift erdrift D D D	
Bull	<u> </u>	STOCK TVP			STADT		פרים	STOCK	STOC		= & I INI		e1	ADT			STOCK	Ŧ
Sto	:ks	Fuel Oil - Ri	ia	M3	320.0	10.9		309 11	Drill W	/ater -	Ria	<u>тэ</u> м	T 6	67.0	33.0		634 0	1
On	Ria	Pot Water -	Ria	MT	88.0	23.0	23.0	88.0	Ceme	nt 'G' -	Ria	s	. c	00.0	00.0		500.0	
	5	Cement HTI	B - Ria	SXS	0.0			0.0	Bento	nite - F	Ria	S	ks 6	70.0			670.0)
		Barite - Rig	Ŭ	SXS	2115.0			2115.0	Brine ·	- Rig	-	M	Т	0.0			0.0	j
		Helifuel - Ri	g	ltr	3322.0	326.0		2996.0 I	-uel C	Dil - Co	nquerc	or M	3 4	46.1			446.1	ĺ
		Drill Water -	Conqueror	MT	90.0			90.0	Pot W	ater - C	Conque	eror M	T 2	05.0			205.0)
		Cement 'G'	- Conqueror	SXS	0.0			0.0	Ceme	nt HTB	- Con	querc s	ĸs	0.0			0.0	2
		Bentonite -	Conqueror	SXS	0.0			0.0	Barite	- Cond	queror	S	ks 11	46.0			1146.0)
		Brine - Cond	queror	MT	0.0			0.0	Fuel C	Dil - Se	entinel	М	3 4	79.9	7.4		472.5	j
		Drill Water -	Sentinel	MT	335.0			335.0	Pot W	ater - S	Sentine	el Mi	T 2	25.0	5.0		220.0	4
		Cement 'G'	- Sentinel	SXS	0.0			0.0	Ceme	nt HTB	3 - Sent	tinel s	KS	0.0			0.0	1
		Bentonite -	Sentinel	SXS	0.0			0.0	Barite	- Sent	tinel	S	ks 10	00.0			1000.0	4
		Brine - Sent		MT	0.0			0.0										
Pur	np Da	ita																
			Pum	p Data	- last 24	hrs							Slow	Pump I	Data]
#	-	TYPE LNR(mm) SPM EFF (%) Flow (Ip					Flow (lp	m) SPP	(kPa)) S	PM	SPP (kPa)	DE	PTH (m)	M	W (sg)	Į
1	Nat'l 1 Nat'l 1	2-P-160 2-P-160	152 152		66 66	97 97	10 10	66 1 66 1	8271 8271				0 0					
3	inat'i 1	2-P-160	152		66	97	10	00 1	8271				0					l

Casing											
DIAM. CSG (mm	DD S 1) (pl	HOE MD an/Actual)	SHOE TVD (plan/Actual)	L (pl	OT /Act)	FIT (pl/Act)		COMMENT			
13.375 340	78	35.0 743.0	785.0 7	42.9							
	TYPE		LENGTH (m)	CSG ID	(mm)	WT (kg/m)	GRADE	THREAD			
340mm (13.375 340mm (13.375 340mm (13.375 50 x 340mm (13. 340mm (13.375 476mm (18.75" RT to Wellhead	") shoe jt 10 ") int jt 107 ") int jt 107 3.375") jt 10 ") No-cross j) wellhead + top	07 kg/m, cent m kg/m, cent mid kg/m, cent mid 1 kg/m t 101 kg/m - extension jt	id 12.52 jt 12.13 jt 12.64 590.73 11.84 10.71 92.58	316 316 316 316 316 316 316 0		107.1 107.1 107.1 101.2 101.2 101.2 .0	L-80 L-80 L-80 L-80 L-80 L-80	BTC BTC BTC BTC BTC BTC			
Personnel :											
5 Santos 3 TMT (RO 1 DrilQuip	V)	39 6 3 \	DOGC BHI Weatherford		4 DOGC extra21 TMT (marine)2 Halliburton2 IDFS3 Anadrill						
Safety, Inspe	Safety, Inspections and Drills Summary										
1795 days since	last Lost V	Vorkdav Case	•								
days since	last Medic	al Treatment C	ase								
3 days since	last First A	vid Case									
days since	last Enviro	onmental Issue									
Shakers, Vo	umes an	d Losses Da	ata				ENGINEI	ER M. Docherty / J. Si	ngh		
SHAKER 1 4 x SHAKER 2 4 x SHAKER 3 4 x SHAKER 4 4 x SHAKER 5	84 84 84	ACTIVE HOLE RESERVE	ILABLE (m3) = 68.7 MIXING 83.9 SLUG 47.7 HEAVY	200 0.0 0.0 0.0	LOSSES DOWNH SURF.+ DUMPE	S (m3) = HOLE 9 EQUIP 2 ED 7	187 COMME 11.57 24.00 11.54	INTS			
Anchors	Anc 1 : 15 Anc 6 : 11	50 Anc 2 13 Anc 7	: 127 Anc 3 : 107 Anc 8	: 154 : 145	Anc 4 : 1 Anc 9 : 0	13 Anc Anc	5 : 118 10:0	RIS. TENS. (MT) : RISER ANGLE (deg):	101 0.0		
Workboats	Workboats Arrived @ Rig (Date)(Time) Depart from Rig (Date)(Time) EstimatedArrival (Port) (Date)(Time) Weather STACK ANGLE(deg): V.D.L. (MT) : 1, AVE HEAVE (m) :					0.0 1,787.6 0.6					
Pacific Sentinel Pacific Conquero	26/8/02 29/8/02	3/8/02 23:00 MAX HEAVE (m) 3/8/02 0:55 29/8/02 19:45 30/8/02 7:00 WIND DIR (deg) : 320 AVE PITCH (deg) PRES.(mbars): 1014 MAX PITCH (deg) AVE ROLL (deg)		AVE PITCH (deg) : AVE ROLL (deg) :	0.4 1.0 0.3						
COMMENTS :	Pax on / off	: Flt #1, 7 / 7; Fl	t #2, 3 / 4			1		MAX ROLL (deg) :	8.0		

Santos DATE : Aug 31, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,059.0 1,058.9 43.0 6.25 0.50	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 2.07	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$494,648 \$4,729,381
RT ABOVE SL (m) WATER DEPTH (m) RT TO SEABED (m)	25.0) LAT 70.5 95.5	CURRENT OP @ 0400 PLANNED OP.	Drilling al Continue	nead 311mm (12.25") hole a drilling 311mm (12.25") hol	at 1076i e to TD	n. (2276m).	

Summary of period 00:00 to 24:00 hrs

Drilled ahead 311mm (12.25") hole from 1016m to 1057m. Flow checked, hole static and POOH due to low ROP. Changed bits while downloading MWD data. RIH to shoe and broke circulation shallow testing MWD, OK. 156spm = 11.7MPa (1700psi). Serviced TDS. Continued RIH to 1016m, no drag. Broke circulation, abnormally high circulating pressure, 82spm = 18.6 MPa (2700psi). Attempted to clear blockage, no sucess. Washed to bottom hole good. Drilled to 1059m at reduced folw rate. Flow checked and POOH to check bit.

FORMATION	TOP(m BRT)
Undescribed	96
Merpunga	774
Wangerrip Grp	843

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Aug 31, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Р		D	00:00	06:00	6.00	1,053	Continued drilling 311mm (12.25") hole from 1016m to 1053m. Treated losses with LCM, gained full returns.
IH1	Р		D	06:00	10:30	4.50	1,057	Continued drilling 311mm (12.25") hole from 1053m to 1057m, ROP poor.
IH1	Р		то	10:30	14:00	3.50	1,057	Flow checked, hole static. POOH to change bit, no drag. Flow checked at shoe, static.
IH1	Ρ		то	14:00	14:30	0.50	1,057	Commenced downloading MWD data.
IH1	Р		ΤI	14:30	18:00	3.50	1,057	Broke and changed bit while continuing to download MWD data. RIH to shoe picking up additional stand of DC. Broke circulation at shoe and shallow tested MWD, OK. 156spm = 11.7MPa (1700psi).
IH1	Ρ		RS	18:00	18:30	0.50	1,057	Serviced TDS and travelling blocks.
IH1	Ρ		ТΙ	18:30	19:00	0.50	1,057	Continued RIH to 1016m, no drag.
IH1	ΤР	BIT	CIR	19:00	20:30	1.50	1,057	Broke circulation at 1016m, abnormally high circulating pressure, 82spm = 18.6 MPa (2700psi). Attempted to clear blockage, no sucess. Washed to bottom, hole good.
IH1	Р		D	20:30	21:00	0.50	1,059	Drilled ahead 311mm (12.25") hole to 1059m at reduced mud flow rate (90spm = 20.7 MPa (3000psi).
IH1	Р		то	21:00	24:00	3.00	1,059	Flow checked on bottom and at shoe, hole static. POOH to check bit, no drag. At shoe 80spm = 18.9 MPa (2750psi). Continued POOH.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 01, 2002

	PHS CL RC OP FROM TO HRS DEPT						HRS	DEPTH	ACTIVITY DESCRIPTION
	IH1 IH1	P		TI	00:00 04:30	04:30 05:00	4.50 0.50	1,059	Broke out plugged bit (chipped teeth and suspect bearing cone #3) and changed to new TCI bit. RIH shallow testing MWD at first stand of HWDP, OK. RIH. Broke circulation at shoe, tested MWD OK. Pump pressures normal. Continued RIH to 1044m. Washed and reamed to bottom, precautionary.
ļ	IH1	Ρ		D	05:00	06:00	1.00	1,076	Drilled ahead to 1076m.
Γ	WRM	Dat	а	COS	T TODAY	<pre>': \$16.0</pre>	06 0	CUM. WB M	UD COST: \$114.752 CUM. WBM+OBM COST: \$114.752

	00011	ODAT . \$10,000		B 100 COS1. \$114,7	52	CON. WI		51. 9114,752	
Type :		VISCOCITY (sec/ltr)	: 4	8 API FLUID LOSS		CI :	28,000	SOLIDS (%vol) :	1.7
	KCI PHPA	PV (Pa.s) :		0 (cm3/30min) :	6	K+C*1000 :	37800	H2O (%vol) :	98.3
FROM :	pit	YP (Pa.s) :	1	0 (mm) :	1	HARD/Ca :	360	OIL (%vol) :	
TIME :	21:00	GEL10s/10m/100m		HTHPFL (arr 0/00 min)	00	MBT (ppb) :	2.5	SAND :	.5
WEIGHT (sg):	1.06	(Pa.s) :	34		22	PM:		PH :	8.0
TEMP (C) :		Fann 3/6/100 :	6 8 2	0 (mm) :	2	PF :	.1	PHPA (ppb) :	.9

CASINO #1

DAILY DRILLING REPORT # 11

Casino #1

CASINO #1

Bit Dial Dial <thdial< thr=""> Dial Dial</thdial<>	Bit Data for Bit # 3 IADC #			Wear		01	D	L B	G	02 R
Bit Data for Bit # 4 IADC # Size (r): 12.25 MANUPACTURER : RE AVE WOB (MT): 3 Calculated over the bit number of the bast 24 hrs	SIZE ("): 12.25 MANUFACTURER: RE AVE TYPE: DSX 195 AVE SERIAL #: 103894 FLOW DEPTH IN (mRT): 752 PUMI DEPTH OUT (mRT): 1057 HSI (b)	WOB (MT) : RPM : V (lpm) : P PRESS.(Kpa): kW/cm2) :	3 114 2,400 17,892 0.046	NOZZLES 5 x 12 x 0 x 0 x 0 x 0 x 0	Drilled METER ON BO IADC D TOTAL ROP (m	8 JU AGE (n TTOM F RILL. H REVS	re last 24 h n) : HRS : 1 RS : 1 : 70,4	S Calc 41 CUM.I 0.3 CUM.I 0.5 CUM.I 452 CUM.I 4.0 ROP (Ulated ov METERAG ON BOT. ADC DR. I TOT. REV m/hr) :	WI PR er the bit run 8 E (m) : 305 HRS : 14.8 HRS: 18.5 S : 101,232 20.6
SIZE (1): 12.25 AVE WOB (MT): 3 14 Calculated over the bit run METERAGE (m): Calculated over	Bit Data for Bit # 4 IADC #			Wear	 0	01 2	D CT (L B G F3	G	O2 R PN PP
BHA # 3 Length (m): 265.4 D.C. (1) ANN. VELOCITY (mpm): 7 WT BLW JAR (MT): 23 STRING WT (MT): 127 TRQE MAX (Nm): 8 D.C. (1) ANN. VELOCITY (mpm): 7 BHA # 3 VERO P WT (MT): 0 TRQE ON (Nm): 4 HW.D.P. ANN VELOCITY (mpm): 7 BHA # 3 StK OFF WT (MT): 0 TRQE OF (Nn): 2 D.P. ANN VELOCITY (mpm): 7 BHA # 3 LENGTH OD ID SERIAL # HRS COMMENT TOOL DESCRIPTION LENGTH OD ID SERIAL # HRS COMMENT BHA # 3 Length (m): 2231 21.5 STRR 231 21.5 BHA # 4 Length (m): 293.0 Str RR Str RR C.2 (2) ANN VELOCITY (mpm): 7 BHA WT (MT): 31 STRING WT (MT): 132 TRQE MAX (Nm): 2 D.C. (1) ANN. VELOCITY (mpm): 7 BHA WT (MT): 32 STRING WT (MT): 122 TRQE ON (Nm): 2 D.C. (1) ANN. VELOCITY (mpm): 7	SIZE ("): 12.25 MANUFACTURER: RE TYPE: HP51HFKPRDH SERIAL #: KA4914 FLOV DEPTH IN (mRT): 1057 DEPTH OUT (mRT): 1059 COMMENT: Chipped cutters and seal fail	WOB (MT) : RPM : V (lpm) : P PRESS.(Kpa): kW/cm2) : ilure cone #3.	3 86 1,453 20,643 0.009	NOZZLES 3 x 16 x 0 x 0 x 0 x 0 x 0	Drilled METER ON BO IADC D TOTAL ROP (m	I over th AGE (n TTOM H RILL. H REVS :	ne last 24 h ח) : HRS : RS : : 1,1 1	rs Calc 2 CUM.1 .2 CUM. .5 CUM.1 032 CUM.1 0.0 ROP (culated ov METERAG ON BOT. ADC DR. I TOT. REV m/hr) :	er the bit run E (m) : 2 HRS : .2 HRS: .5 S : 1,032 10.0
BHA DESCRIPTION : 12.25" NI, NB stab, 8.25" MWD/FEWD, 12.25" RR, 1 x 8" DC, 12.25" RR, 9 x 8" DC, 8" Jar, 2 x 8" DC, x/o, 12 x 5" HWDP TOOL DESCRIPTION LENGTH OD ID SERIAL # HRS COMMENT NB RR CDR Pulser I GU 2151 21.5	BHA # 3Length (m): 265.4WT BLW JAR (MT):23STRINGBHA WT (MT):36PICK UPSLK OFF	WT (MT): 9 WT (MT): = WT (MT):	127 TR 0 TR 0 TR	QE MAX (Ni QE ON (Nm) QE OFF (Nr	n): : 1):	8 4 2	D.C. (1) / D.C. (2) / H.W.D.P. D.P. ANN	ANN. VELO ANN VELO ANN VELO ANN VELO	CITY (mpn CITY (mpn OCITY (mp Y (mpm) :	n): 73 n): 77 m): 51 51
TOOL DESCRIPTION LENGTH OD ID SERIAL # HRS COMMENT NB RR CDR Pulser ILS ISONIC B I GU 2151 231 21.5 231 COMMENT COMMENT BHA # 4 Length (m): 293.0 Image: Comment of the	BHA DESCRIPTION : 12.25" bit, NB stab,	, 8.25" MWD/FEW	/D, 12.25"	RR, 1 x 8" D	C, 12.25"	RR, 9 x	8" DC, 8"	Jar, 2 x 8" [DC, x/o, 12	2 x 5" HWDP
BHA # 4 Length (m): 293.0 D.C. (1) ANN. VELOCITY (mpm): 77 WT BLW JAR (MT): 32 STRING WT (MT): 132 TRQE MAX (Nm): 2 D.C. (2) ANN VELOCITY (mpm): 77 BHA WT (MT): 41 PICK UP WT (MT): 0 TRQE ON (Nm): 2 D.C. (2) ANN VELOCITY (mpm): 77 BHA WT (MT): 41 PICK UP WT (MT): 0 TRQE OFF (Nm): 1 D.C. (2) ANN VELOCITY (mpm): 5 BHA DESCRIPTION : 12.25" bit, NB stab, 8.25" MWD/FEWD, 12.25" RR, 12 x 8" DC, 12.25" RR, 12 x 8" DC, 8" Jar, 2 x 8" DC, x/o, 12 x 5" HWDF 0 D.P. ANN VELOCITY (mpm): 5 MB RR COR GU 2151 23.5 23.	TOOL DESCRIPTION NB RR CDR Pulser ILS ISONIC Str RR Str RR Jars	LENGTH OD	ID	SERIAL # GU 2151 9556 231 313272-2 857 GU 2143 GU2144 48907C	HRS 21.5 21.5 21.5 21.5 21.5 21.5 21.5 21.5	5 5 5 5 5 5 5 5 5 5		COMMI	ENT	
WT BLW JAR (MT): 32 STRING WT (MT): 132 TRQE MAX (Nm): 2 D.C. (1) ANN VELOCITY (mpm): 7 BHA WT (MT): 41 PICK UP WT (MT): 0 TRQE ON (Nm): 2 D.C. (2) ANN VELOCITY (mpm): 7 BHA WT (MT): 41 PICK UP WT (MT): 0 TRQE OFF (Nm): 1 D.C. (2) ANN VELOCITY (mpm): 7 BHA DESCRIPTION : 12.25" kK, 1x 8' DC, 12.25" kR, 12 x 8' DC, 8' Jar, 2 x 8' DC, x/o, 12 x 5" HWDF Magnetic Description LENGTH OD ID SERIAL # HRS COMMENT NB RR GD ID SERIAL # HRS COMMENT Velocity (mpm): 23.5 User ILS 313272-2 23.5 313272-2 23.5 313272-2 23.5 Str RR Str RR MD TVD INCL AZ CORR. V' DOGLEG N/S E/W TOOL TYPE Magnetic Declination : 0.00 687.0 686.9 0.00 0.0 9.1 0.5 9.1 0.0 Anderdrift Magnetic Declination : 0.00 687.0 686.9 0.00	BHA # 4 Length (m): 293.0								CITV (mpn	
BHA DESCRIPTION : 12.25" bit, NB stab, 8.25" MWD/FEWD, 12.25" RR, 1 x 8" DC, 12.25" RR, 12 x 8" DC, 8" Jar, 2 x 8" DC, v/o, 12 x 5" HWDF TOOL DESCRIPTION LENGTH OD ID SERIAL # HRS COMMENT NB RR CDR Pulser ILS ISONIC Str RR Jars LENGTH OD ID SERIAL # HRS COMMENT Str RR Jars MB C GU 2151 23.5 <	WT BLW JAR (MT): 32 STRING BHA WT (MT): 41 PICK UP SLK OFF	WT (MT): 9 WT (MT): 5 WT (MT):	132 TR 0 TR 0 TR	QE MAX (Ni QE ON (Nm) QE OFF (Nr	n): : n):	2 2 1	D.C. (1) / D.C. (2) / H.W.D.P. D.P. ANN	ANN VELOO ANN VELOO ANN VELOO VELOCIT	CITY (mpn CITY (mpn CITY (mp Y (mpm) :	n): 73 n): 77 m): 51 51
TOOL DESCRIPTION LENGTH OD ID SERIAL # HRS COMMENT NB RR CDR Pulser ILS ISONIC Str RR Jars I I ID SERIAL # HRS COMMENT Str RR Jars ISONIC Str RR Jars ID ID SERIAL # HRS COMMENT Survey (Method : Min Curvature) Last Tool Type : MWD TVD INCL (mBRT) INCL DEG AZ (deg) CORR. AZ (deg) V DOGLEG N/S E/W (m) TOOL TYPE Magnetic Declination : 0.00 687.0 686.9 0.00 0.0 0.0 9.1 0.5 9.1 0.0 Anderdrift Anderdrift 750.0 749.9 0.00 0.0 0.0 9.1 0.0 9.1 0.0 Anderdrift Anderdrift 855.0 854.9 0.26 216.0 216.0 9.5 0.3 9.5 -0.3 MWD	BHA DESCRIPTION : 12.25" bit, NB stab,	8.25" MWD/FEW	/D, 12.25"	RR, 1 x 8" D	C, 12.25"	RR, 12	x 8" DC, 8	" Jar, 2 x 8"	DC, x/o, 1	2 x 5" HWDP
Survey (Method : Min Curvature) 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) (m) MOD TOOL TYPE Magnetic Declination : 0.00 686.9 0.00 0.00 0.00 9.1 0.5 9.1 0.0 Anderdrift 720.0 719.9 0.00 0.00 0.0 9.1 0.00 9.1 0.0 Anderdrift 750.0 749.9 0.00 0.00 0.0 9.1 0.0 Anderdrift 766.8 766.7 0.60 342.2 342.2 9.2 1.1 9.2 -0.0 MWD 855.0 854.9 0.26 216.0 216.0 9.5 0.3 9.5 -0.3 MWD 912.0 911.9 0.54 155.4 9.1 0.2 9.1 <t< td=""><td>NB RR CDR Pulser ILS ISONIC Str RR Str RR Jars</td><td>LENGTH OD</td><td>IJ</td><td>SERIAL # GU 2151 9556 231 313272-2 857 GU 2143 GU2144 48907C</td><td>HRS 23.(23.(23.(23.(23.(23.(23.(23.(</td><td>5 5 5 5 5 5 5 5 5 5</td><td></td><td>СОММІ</td><td>= N I</td><td></td></t<>	NB RR CDR Pulser ILS ISONIC Str RR Str RR Jars	LENGTH OD	IJ	SERIAL # GU 2151 9556 231 313272-2 857 GU 2143 GU2144 48907C	HRS 23.(23.(23.(23.(23.(23.(23.(23.(5 5 5 5 5 5 5 5 5 5		СОММІ	= N I	
Last Tool Type : MWD (mBRT) (mBRT) DEG (deg) AZ SECT (deg/ 30m) (m) (m) (m) Magnetic Declination : 0.00 687.0 686.9 0.00 0.0 0.0 9.1 0.5 9.1 0.0 Anderdrift 720.0 719.9 0.00 0.0 0.0 9.1 0.0 9.1 0.0 Anderdrift 750.0 749.9 0.00 0.0 0.0 9.1 0.0 9.1 0.0 Anderdrift 766.8 766.7 0.60 342.2 342.2 9.2 1.1 9.2 -0.0 MWD 911.2 911.9 0.54 155.4 91 0.2 91 -0.3 MWD	Survey (Method : Min Curvature)	MD TV	/D INCI	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
969.9 969.9 0.83 136.0 136.0 8.6 0.2 8.6 0.2 MWD 1041.1 1041.0 1.20 191.9 191.9 7.5 0.4 7.5 0.4 MWD	Last Tool Type : MWD Magnetic Declination : 0.00	(mBRT) (mB 687.0 68 720.0 7' 750.0 7' 766.8 76 855.0 85 912.0 9' 969.9 96 1041.1 102	BRT) DEC 86.9 0.0 19.9 0.0 49.9 0.0 66.7 0.6 54.9 0.2 11.9 0.5 69.9 0.8 41.0 1.2	 (deg) 0 0.0 0.0 0.0 0.0 0.0 342.2 6 216.0 14 155.4 136.0 191.9 	AZ (deg) 0.0 0.0 0.0 342.2 216.0 155.4 136.0 191.9	SECT (m) 9.1 9.1 9.2 9.5 9.1 8.6 7.5	(deg/ 30m) 0.5 0.0 0.0 1.1 0.3 0.2 0.2 0.4	(m) 9.1 9.1 9.2 9.5 9.1 8.6 7.5	(m) 0.0 0.0 -0.0 -0.3 -0.3 0.2 0.4	Anderdrift Anderdrift MWD MWD MWD MWD MWD

Aug 31, 2002

DAILY DRILLING REPORT # 11

Bul	k	STOCK Т	YPE &	UNITS		START	USED	REC'D	STO	CK S	госк	TYPE & UN	IITS		START	USED	REC'D	STOCK
Sto	cks	Fuel Oil	- Rig		М3	309.1	17.8	158.0	44	9.3 D	rill Wa	ter - Rig		МТ	634.0	68.0		566.0
On	Rig	Pot Wate	er - Rig		MT	88.0	25.0	25.0	8	8.0 C	ement	'G' - Rig		SXS	500.0		930.0	1430.0
	-	Cement I	HTB - R	Rig	SXS	0.0				0.0 B	entoni	te - Rig		SXS	670.0			670.0
		Barite - F	Rig		SXS	2115.0	174.0		194	1.0 B	rine - I	Rig		MT	0.0			0.0
		Helifuel -	· Rig		ltr	2996.0			299	6.0 F	uel Oil	- Conquer	or	М3	446.1	12.1		276.0
		Drill Wate	er - Cor	nqueror	MT	90.0			ç	0.0 P	ot Wat	er - Conque	eror	MT	205.0	10.0		195.0
		Cement '	G' - Co	nqueror	SXS	0.0		930.0		0.0 C	ement	HTB - Con	querc	SXS	0.0			0.0
		Bentonite	e - Con	queror	SXS	0.0				0.0 B	arite -	Conqueror		SXS	1146.0			1146.0
		Brine - C	onquer	or	MT	0.0				0.0 F	uel Oil	I - Sentinel		M3	472.5	11.0		461.5
		Drill Wate	er - Ser	ntinel	MI	335.0			33	5.0 P	ot Wat	ter - Sentin		MI	220.0	5.0		215.0
		Cement	G - Se	ntinei	SXS	0.0					ement	Continel	itinei	SXS	0.0			1000.0
		Bentonite Brino - S	e - Sen	unei	SXS	0.0				0.0 8	ante -	Sentinei		SXS	1000.0			1000.0
		Dinie - 3	entinei			0.0				0.0								
Pu	mp Da	nta																
				Pump	Data	- last 24	hrs							Slo	w Pump	o Data		
#		TYPE	LN	IR(mm)	SPI	ИЕ	FF (%)	Flow (lpm)	SPP	(kPa)	SPM	SPI	P (kPa) D	EPTH (n	n) I	MW (sg)
	Not'l 1	2-P-160		152		00	07		1452	20	684							
2	Nat'l 1	2-P-160		152		30	97	'	0	20	004			C	, ,			
3	Nat'l 1	2-P-160		152			97		0		0			C				
															•			
Cas	sing																	
DI	DIAM. CSG OD SHOE					S	HOE TV	'D	L	от	T F				С	OMMEN	Т	
	(mm) (plan/Act				I)	(p	lan/Actu	al)	(pl/Act		ct) (pl/Act)							
13.	375 34	40	78	5.0	743.0 785.0			742.9	8 2.	2.07								
		Т	YPE		LENGTH			(m)	CSG IE) (mm)	V	VT (kg/m)	6	RADE TH		THRE	AD	7
340)mm (13	8.375") sh	oe jt 10	07 kg/m,	cent m	id	12.52		316			107.1	L-80			BT	C	
340)mm (13	3.375") int	jt 107	kg/m, ce	nt mid	jt	12.13		316			107.1	L-80			BT	С	
340	0mm (13	3.375") int m (13.375	: jt 107 .") it 107	kg/m, ce 1 ka/m	nt mid	Jt	12.64		316 316			107.1		L-80		BI	C	
340	mm (13	.375") No	-cross ji	t 101 kg/iii	m		11.84		316 316			101.2				BT	C	
476	5mm (18	8.75") wel	lhead +	extensio	on jt		10.71		316			101.2		L-80		BT	C	
RT	to Well	head top					92.58		0			.0						
Per	sonne	el : on S	Site =9	9 1														
	5 Sant	05			30	DOGC				2 D	OGC	extra			21 TM	/T (marii	ne)	
	3 TMT	(ROV)			6	BHI				2 H	allihu	rton			2 1	FS	,	
	1 DrilC	(ito i)			3	Weather	ford			2 A	nadril	1			4 Sc	hlum		
0-6	-							0				·						
Sat	ety, Ir 7 davs 4	since last		nd Aban	IS don St			Summ	iary									
179	6 days	since last	Lost W	/orkdav C	ase													
1796 days since last Lost Workday Case				nent C	ase													
	4 days	since last	First A	id Case														
			-															
	days since last Environmental Issue																	
Sha	Shakers, Volumes and Losses Da				ata								ENGI	NEER	M. Doche	erty / J.	Singh	
SHA	AKER 1	4 x 84		VOLUM			E (m3) =		238	LOS	SES	(m3) =	23		IMENTS			
SH4	AKER 3	4 x 84		ACTIV	F	87.4	MIXIN	NG	0.0		WNHC) F	15.42	D/H	losses <	5 bph.		
SHA	KER 4	4 x 84		HOLE	_	86.5	SLUC		0.0	SUI	RF.+E		7.79			· - P		
SHA	KER 5			RESER	RVE	63.6	HEA	/Y	0.0	DU	MPED		0.00					

Anchors	Anc 1 : Anc 6 :	145 113	Anc 2 : 127 Anc 7 : 109	Anc 3 : 152 Anc 8 : 145	Anc 4:11 Anc 9:0	3 Anc 5 : 116 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	101 0.0
Workboats	Arri (D	ved @ Rig ate)(Time)	Depart fror (Date)(Tir	n Rig Estimat me) (Da	edArrival (Port) te)(Time)	Weather VISIBILITY(nm) :	12	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.0 1,849.7 0.3
Pacific Sentinel Pacific Conquer	26/8 or 31/8	/02 23:0 /02 5:0	0 5			WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	20.0 300 1017 10.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	0.6 0.3 0.4 0.2
COMMENTS :	Pax on /	off : Flt #1	4 / 2					MAX ROLL (deg) :	0.3

Santos DATE : Sep 01, 2002

FROM: H. Flink / S. Hodgetts TO: O. Moller

Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,400.0 1,399.9 341.0 7.25 -2.50	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 2.07	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$366,968 \$4,601,701
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25.0) LAT 70.5) 95.5	CURRENT OP @ 0400 PLANNED OP.	RIH with r Continue	new bit. drilling 311mm (12.25") hc	ble to TD	(2276m).	

Summary of period 00:00 to 24:00 hrs

Broke out bit (2 blocked jets), made up new bit. RIH to 1044m and shallow tested MWD at surface and shoe, (770gpm = 1750psi), OK. Logged with MWD while washing to bottom. Drilled ahead 311mm (12.25") hole from 1059m to 1400m. Circulated bottoms up, boosted riser.

- 1		
	FORMATION	TOP(m BRT)
	Wangerrip Grp	843
	Pebble Point	1,102
	Sherbrook Group	1,177
	Skull Creek (?)	1,259

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 01, 2002

PHS	CL	RC	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Р		ΤI	00:00	04:30	4.50	1,059	Broke out plugged bit (chipped teeth and suspect bearing cone #3) and changed to new TCI bit. RIH shallow testing MWD at first stand of HWDP, OK. RIH. Broke circulation at shoe, tested MWD OK. Pump pressures normal, 2.9 m3pm = 12.1 MPa (770gpm = 1750psi), OK. Continued RIH to 1044m.
IH1	Ρ		ТΙ	04:30	04:45	0.25	1,059	Washed and reamed to bottom, precautionary. Logged with MWD.
IH1	Ρ		D	04:45	06:00	1.25	1,076	Drilled ahead to 1076m.
IH1	Ρ		D	06:00	12:00	6.00	1,218	Drilled ahead to 1218m.
IH1	Ρ		D	12:00	18:00	6.00	1,332	Drilled ahead to 1332m.
IH1	Ρ		D	18:00	22:30	4.50	1,400	Drilled ahead 311mm (12.25") hole to 1400m. No drag on connections.
IH1	Ρ		CIR	22:30	24:00	1.50	1,400	Circulated bottoms up prior to POOH for bit change. Boosted riser to clear cuttings.

4	ACTIV	ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 02, 2002												
	PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION					
	IH1	Ρ		то	00:00	05:30	5.50	1,400	POOH, worked tight spots, 13.6-22.7 tonne (30-50 kip) O/P. No drag after 1180m. Continued POOH. Commenced downloading MWD data.					
	IH1	Ρ		ΤI	05:30	06:00	0.50	1,400	Changed bit while downloading MWD data. Commenced RIH.					

<u>00:0</u>	0 TO 24:00	HRS ON :	<u>1/09/</u>	2002							
	Comments				Recommendatio	ons			Rig Rec	quirements	
Conducted drills.	fire & aband	onment									
WBM Data	COST T	ODAY: \$16,80	5 (CUM. WB	MUD COST: \$131	,558	(CUM. WBM	1+ОВМ СО	ST: \$131,558	
Туре :	КСІ РНРА	VISCOCITY (se PV (Pa.s) :	ec/ltr) :	48 0	API FLUID LOSS (cm3/30min) :	6	CI : K+C*	1000 :	29,000 32400	SOLIDS (%vol) : H2O (%vol) :	2.0 98.0
FROM :	pit	YP (Pa.s) :		11	(mm) :	1	HARD	0/Ca :	280	OIL (%vol) :	
TIME : WEIGHT (sg):	20:00 1.06	GEL10s/10m/1 (Pa.s) :	00m 4	6 1	HTHPFL (cm3/30min) : HTHP CAKE	20	MBT PM :	(ppb) :	7.0	SAND : PH :	tr 9.5
TEMP (C) :	120	Fann 3/6/100 :	6	9 21	(mm) :	2	PF :		.2	PHPA (ppb) :	1.2

DAILY DRILLING REPORT # 12

DAILY DRILLING REPORT # 12

CASINO #1

Bit	Data	for Bit # 5	IADC # 4	3 7	7 X			w	lear			01	D	L	В	G	02	R
SIZE MAN TYPI SER DEP ⁻ DEP ⁻	SIZE ("): 12.25 MANUFACTURER: SM AVE WOB (MT): TYPE: 10GF SERIAL #: MJ3163 DEPTH IN (mRT): 1059 PUMP PRESS.(Kpa): 2 DEPTH OUT (mRT): 1400								ZZLES x 16 x 0 x 0 x 0 x 0 x 0 x 0	i C ME Of IAI TC RC	Drilled ETER/ N BOT DC DF DTAL I DP (m/	over th AGE (r TOM I RILL. H REVS /hr) :	ne last 2 n) : HRS : RS : :	24 hrs 341 14.7 18.0 87,318 23.2	Calc CUM.N CUM. CUM.I CUM.I ROP (ulated ov /IETERAC ON BOT. ADC DR. TOT. RE ^V m/hr) :	HRS : HRS : HRS: /S :	2011 run 341 14.7 18.0 87,318 23.2
BHA WT B BHA BHA NB F CDR Puls ILS ISOT Str F	A # 4 BLW JA WT (M DESCF TC RR R R R R R R	Leng AR (MT): IT) : RIPTION : 12 DOL DESCR	th (m): 29 32 STI 41 PIC SLH 2.25" bit, NB	3.0 RING WT K UP WT OFF WT stab, 8.2 LEI	(MT): (MT): (MT): 5" MWE NGTH)/FEWD	141 TR 0 TR 0 TR 12.25" ID	QE M QE OI QE OI RR, 1 SE GU 2 ⁻ 9556 231 31327 857 GU 2 ⁻	AX (Nr N (Nm) FF (Nr x 8" E RIAL # 151 72-2 143	m):): n): DC, 12 #	2.25" F HRS 43.0 43.0 43.0 43.0 43.0 43.0 43.0 43.0	9 5 1 RR, 12	D.C. (D.C. H.W.I D.P x 8" D0	(1) ANN (2) ANN D.P. AN ANN VE C, 8" Ja	I. VELO I VELO IN VELC ELOCIT ^V r, 2 x 8" COMMI	CITY (mp CITY (mpi)CITY (mj ((mpm) : DC, x/o, ENT	n): n): om): 12 x 5"	76 80 52 52 HWDP
Str F Jars	R							GU21 4890	144 7C		43.0 43.0							
Surv Last Mag	Survey (Method : Min Curvature) Last Tool Type : MWD Magnetic Declination : 0.00				MD mBRT)	TVD (mBR	T) INCI	A G (d	AZ leg)	CORI AZ (deg	R. J)	'V' SECT (m)	DOGL (deg 30m	EG)/ 1)	N/S (m)	E/W (m)	ТООІ	- TYPE
					912.0 969.9 1041.1 1084.6 1170.4 1256.7 1382.1	911 969 1041 1084 1170 1256 1381	.9 0.2 .9 0.5 0.9 0.8 .0 1.2 0.3 0.9 0.6 1.4 .9 1.8	54 1 33 1 20 1 29 1 93 1 14 1 37 1	55.4 36.0 91.9 91.9 92.5 81.2 82.2	155 136 191 191 192 181 182	.0 .4 .0 .9 .9 .5 .2 .2	9.1 9.1 8.6 7.5 6.5 4.9 3.1 -0.5).2).2).4).1).1).2).2	9.0 9.1 8.6 7.5 6.5 4.9 3.1 -0.5	-0.3 -0.3 0.2 0.4 0.2 -0.2 -0.4 -0.5	MWD MWD MWD MWD MWD MWD MWD	
Bulk	‹	STOCK TYP	F & LINITS	S	TART I			STOC	K SI	OCK		8. I IN	TS	ST	ART I	ISED R		TOCK
Stoc	:ks			M3 /	/0 3	1/1 3		3100	5 0 Dr			Ria	13 M		6 0	74 0		192 0
On I	Ria	Det Weter	y Dia	MT 4	08.0	26.0	26.0	43				Dia	10	ve 1/1	30.0	74.0		492.0
	Ng	Pot water -			90.0	20.0	20.0	9		emen	<u> </u>	Rig	2	x5 14	70.0			070.0
			3 - Rig	SXS	0.0				0.0 Be	enton	Ite - R	lg	5		70.0			670.0
		Barite - Rig		SXS 19	41.0	70.0		187	1.0 Br	ine -	Rig		IV .		0.0			0.0
		Helifuel - Ri	g	Itr 29	96.0			299	6.0 Fi	iel Oi	I - Coi	nquerc	or N	13 2	76.0	1.2		274.8
		Drill Water -	Conqueror	MI	90.0			9	0.0 Pc	ot Wa	ter - C	conque	ror IV	1 1	95.0	5.0		190.0
		Cement 'G'	- Conqueror	SXS	0.0				0.0 Ce	emen	t HTB	- Cond	querc s	XS	0.0			0.0
		Bentonite -	Conqueror	SXS	0.0				0.0 Ba	arite -	Conq	ueror	S	xs 11	46.0			1146.0
		Brine - Cond	queror	MT	0.0				0.0 Fi	iel Oi	il - Sei	ntinel	N	13 4	61.5	4.5		457.0
		Drill Water -	Sentinel	MT 3	35.0			33	5.0 Pc	ot Wa	iter - S	Sentine	I N	IT 2	15.0	5.0		210.0
	Cement 'G' - Sentinel sxs 0.0					0.0 Ce	emen	t HTB	- Sent	tinel s	XS	0.0			0.0			
	Bentonite - Sentinel sxs 0.0				0.0 Ba	arite -	 Senti 	inel	s	xs 10	0.00			1000.0				
	Brine - Sentinel MT 0.0					0.0												
D		4																
Pun	np Da	ta									1			<u>.</u>				
			Pump	Data - la	ast 24 h	rs								Slow	Pump D	ata		
# 1	Nat'l 1	2-P-160	LNR(mm) 152	SPM 68	EFF 3	(%) 97	Flow (lp	om) 00	SPP (22	kPa) 753	SI	РМ 30	SPP	(kPa) 862	DEF	2TH (m) 1215.0	MV	/ (sg) 1.07
	Nat'l 1	2-P-160	0 0 152	6		07	11	0	^	0 0 752		40 50 30		1379 1724 862				
_	ndlil	2-2-100	152	30		91	11	0	22	133 0		30 40		1379				
0 0 3 Nat'l 12-P-160 152 68		97	11	0	22	0 753		-0 50		1724 0								
			102	1 30							1			5				

Casing											
DIAM.	CSG OD (mm)	SHOE MD (plan/Actual)	SHOE TVD (plan/Actual)	LOT (pl/Act)	FIT (pl/Act)		COMMENT				
13.375	340	785.0 743.0	785.0 74	2.9 1.68 2.	07						
		ТҮРЕ	LENGTH (m)	CSG ID (mm)	WT (kg/m)	GRADE	THREAD				
340mm (13.375") shoe jt 107 kg/m, cent mid 12.52 316 107.1 L-80 BTC 340mm (13.375") int jt 107 kg/m, cent mid jt 12.13 316 107.1 L-80 BTC 340mm (13.375") int jt 107 kg/m, cent mid jt 12.13 316 107.1 L-80 BTC 340mm (13.375") int jt 107 kg/m, cent mid it 12.64 316 107.1 L-80 BTC											
340mm 50 x 340 340mm ((13.375") ir)mm (13.37 (13.375") N	it jt 107 kg/m, cent mid 5") jt 101 kg/m p-cross it 101 kg/m	jt 12.64 590.73 11.84	316 316 316	107.1 101.2 101.2	L-80 L-80 L-80	BTC BTC BTC				
476mm RT to W	(18.75") we ellhead top	Ilhead + extension jt	10.71 92.58	316 0	101.2 .0	L-80	BTC				
Person	nel : on	Site =96									
7 Sa 3 TN	antos MT (ROV)	35 I 6 I	DOGC BHI	6 E 2 F	OGC other Ialliburton	2*	1 TMT (marine) 2 IDFS				
1 Dr	rilQuip	3 \	Veatherford	3 A	nadrill	-	7 Schlum				
Safety,	Inspect	ons and Drills	Sur	nmary							
0 day	/s since last	Fire and Abandon Sh	ip Drill								
1797 day	/s since last	Lost Workday Case									
day	/s since last	Medical Treatment Ca	ase								
5 day	/s since last	First Aid Case									
day	/s since last	Environmental Issue									
Shaker	s, Volum	es and Losses Da	nta			ENGINEE	R M. Docherty / J. Si	ngh			
SHAKER SHAKER	R1 4x115 R2 4x115	VOLUME AVA	ILABLE (m3) =	228 LO	SSES (m3) =	46 COMME	NTS				
SHAKER SHAKER SHAKER	8 3 4 x 115 8 4 4 x 84 8 5	ACTIVE HOLE RESERVE	91.4 MIXING 112.4 SLUG 23.8 HEAVY	0.0 DO 0.0 SU 0.0 DU	WNHOLE 1 RF.+EQUIP 3 MPED	3.35 32.27 0.00					
Anchor	' S Anc	1 : 150 Anc 2	: 118 Anc 3 :	145 Anc -	4:111 Anc	5 : 113	RIS. TENS. (MT) :	101			
	Anc	6: 116 Anc 7	: 109 Anc 8 :	147 Anc	9:0 And	10:0	RISER ANGLE (deg):	0.0			
Workb	oats	Arrived @ Rig D (Date)(Time)	epart from Rig (Date)(Time)	EstimatedArrival((Date)(Time)	Port) Weather VISIBILITY(r	nm): 12	V.D.L. (MT) : AVE HEAVE (m) :	0.0 1,780.5 0.3			
Pacific Se Pacific Co	entinel onqueror	26/8/02 23:00 1/ 31/8/02 5:05	9/02 16:50	1/9/02 21:0	WIND SP. (H WIND DIR (r PRES.(mbar AIR TEMP (r	xts): 20.0 deg): 360 s): 1019 C): 11.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	0.3 0.3 0.3 0.2			
COMMEN	AIR TEMP (C): 11.0 AVE ROLL (deg): 0.2 MENTS: Pax on / off: Flt #1, 5 / - MAX ROLL (deg): 0.2										

Santos DATE : Sep 02, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

DAILY DRILLING REPORT

EPORT # 13 CASINO #1

Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,750.0 1,649.8 350.0 8.25 -3.00	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg)	311 340 743 0.00 2.07	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$508,889 \$5,677,238
RT ABOVE SL (m) WATER DEPTH (n RT TO SEABED (m	25.0 n) LAT 70.5 n) 95.5	CURRENT OP @ 0400 PLANNED OP.	Drilling al Continue	nead 311mm (12.25") hole drilling 311mm (12.25") ho	at1792r le to TD	n. (2276m).	

Summary of period 00:00 to 24:00 hrs

Made flow check at 1400m. POOH, made flow check at shoe. Downloaded MWD data and made up new PDC bit. Serviced rig and continued RIH. Drilled 311mm (12.25") hole to 1750m.

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,561
Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 02, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Р		то	00:00	05:30	5.50	1,400	Flow checked, hole static. POOH, worked tight spots, 13.6-22.7 tonne (30-50 kip) O/P. No drag after 1180m. Flow checked at shoe, hole static. Continued POOH. Commenced downloading MWD data.
IH1	Р		ΤI	05:30	08:00	2.50	1,400	Changed bit while downloading MWD data. Commenced RIH. Shallow tested MWD, OK.
IH1	Ρ		RS	08:00	08:30	0.50	1,400	Serviced rig, TDS and travelling blocks.
IH1	Ρ		ТΙ	8:30	10:30	2.00	1,440	Continued RIH to 1400m. Washed from 1382m to bottom.
IH1	Ρ		D	10:30	12:00	1.50	1,440	Drilled 311mm (12.25") hole from 1400m to 1440m. No drag.
IH1	Р		D	12:00	18:00	6.00	1,605	Drilled ahead 311mm (12.25") hole to 1605m. No drag.
IH1	Р		D	18:00	24:00	6.00	1,750	Drilled ahead 311mm (12.25") hole to 1750m. No drag. Flow checked drilling break at 1750m.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 03, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Р		D	00:00	06:00	6.00	1,792	Drilled to 1764m, gas increased. Circulated out gas, lag depth 1746m. Drilled ahead.

WBM Data	COST T	ODAY: \$30,289	CUM.	WB	MUD COST: \$161,847		CUM. WB	м+овм со	ST: \$161,847	
Туре :	КСІ РНРА	VISCOCITY (sec/ltr) PV (Pa.s) :	:	54 0	API FLUID LOSS (cm3/30min) :	5	CI : K+C*1000 :	29,000 32400	SOLIDS (%vol) : H2O (%vol) :	5.6 94.3
FROM :	pit	YP (Pa.s) :		15	(mm) :	1	HARD/Ca :	320	OIL (%vol) :	
TIME :	20:00	GEL10s/10m/100m			HTHPFL (arra 2/20 min)	47	MBT (ppb) :	11.0	SAND :	tr
WEIGHT (sg):	1.18	(Pa.s) : 5	57	1	(CM3/30MIN) :	17	PM:		PH :	9.5
TEMP (C) :	54	Fann 3/6/100 : 9	12	32	(mm) :	2	PF :	.2	PHPA (ppb) :	1.8

Bit Data for Bit #	5 IADC #	4 3 7 X		Wear	I O1 D L 1 1 WT A	B G O2 E 1 ER	R PR
SIZE (") :	12.25			NOZZLES	Drilled over the last 24 hrs	Calculated over the t	
MANUFACTURER :	SM	AVE WOB (MT) :	15	3 x 16			244
TYPE :	10GF	AVE RPM :	99	x 0		O CUM ON BOT HPS	341
SERIAL # :	MJ3163	FLOW (lpm) :	3,244	X 0			14.7
DEPTH IN (mRT):	1059	PUMP PRESS.(Kpa):	21,167	x 0	TOTAL REVS	0 CUM.TOT. REVS :	87.318
DEPTH OUT (mRT):	1400	HSI (kW/cm2) :	0.099	x 0	ROP (m/hr) :	ROP (m/hr) :	23.2

Casino #1

CASINO #1

Bit	Data	for Bit # e	S IADC #					Wear			01		L	В	G	02	R
SIZE	("):		12.25											L][
MAN	IUFACT	URER :	SM	AVF W	OB (MT)		6	6 V 12	3 D	orilled ov	ver th	ne last 24	4 hrs	l Calo	culated ov	ver the b	oit run
ТҮР	F ·	N	1A74BPX	AVE RE	од (). РМ ·		155		ME	ETERAC	GE (r	n) :	350	СОМ.	METERA	GE (m) :	350
SED	<u>н</u> .		196343	FLOW	(lpm) ·		3 134		ON	N BOTT	OM I	HRS :	10.2	CUM.	ON BOT.	HRS :	10.2
SER	.IAL # :		1400		(ipiii) . DDESS (k	(00).	21 060		IAI	DC DRII	LL. H	IRS :	13.5	CUM.	IADC DR.	HRS:	13.5
DEP		mri):	1400		PRE33.(r	(pa).	21,900		ТС	DTAL RI	EVS	: 9	4,860	CUM.	TOT. RE	/S :	94,860
DEP	THOU	Г (mRT):	l		v/cm2) :		0.071		RC	DP (m/h	r) :		34.3	ROP	(m/hr) :		34.3
БЦ	N # 6	Long	th (m): 20	13 1								/					
			00 01		/T /NAT).				lm).		16	D.C. (1	I) ANN	. VELO	CITY (mp	m):	76
VVI	BLW JA	ar (mit):	32 51		(1) (1) (1)				4111). •) :		10	D.C. (2	2) ANN	VELO		n):	80
BHA	WT (M	IT) :	41 PI	SK UP W	VI (IVII):				1):		9	H.W.D	.P. AN			om):	52
			I SL	K OFF V	NT (MT):		01180	JE OFF (N	m):		4	I D.P. A	INN VE	LOCH	Y (mpm) :		52
BHA	DESCF	RIPTION: 1	2.25" bit, NE	8 stab, 8	.25" MWE)/FEWD	, 12.25" F	RR, 1 x 8"	DC, 12	2.25" RF	R, 12	x 8" DC	, 8" Jai	r, 2 x 8"	DC, x/o,	12 x 5"	HWDP
	тс	OOL DESCR	IPTION	L	ENGTH	OD	ID	SERIAL	#	HRS				СОММ	ENT		
NB I	RR							GU 2151		57.5							
CDF	2						9	9556		57.5							
Puls	ser						2	231		57.5							
ILS							3	313272-2		57.5							
ISO	NIC						8	357		57.5							
Str F	R							GU 2143		57.5							
Stri	K							JU2144		57.5							
Jais	1						6	+0907C		57.5							
Sur	VOV	(Mathaal :	Min Currie			1										1	
Sui	vey	(Method :	Min Curva	iture)	MD			AZ	CORF	₹. '\	/'	DOGLE	G	N/S	E/W	ΤΟΟΙ	_ TYPE
Last	Tool T	ype :		MWD	(mbri)	(mbk	I) DEG	(deg)	AZ (dam		:C1	(deg/		(m)	(m)		
Mag	netic F	Declination		0.00					(deg) (1	m)	3011)	<u> </u>				
			•		1084.6	1084	.5 1.29	9 191.9	191.	.9	6.5	0.	1	6.5	0.2	MWD	
					11/0.4	11/0	0.3 0.9	3 192.5	192.	.5	4.9		1	4.9	-0.2		
					1200.7	1200	0 1.44	4 181.2	101.	.2	3.1 0.E		4	3.1	-0.4		
					1382.1	1381	.9 1.8	/ 182.2	182.	.2	-0.5		1	-0.5	-0.5		
					1400.0	1400	2 2 2 2 2 2 2 2	1 185 6	103.	.9 .	-3.1 -6 9		2	-3.1	-0.0		
					1605.5	1605	1 3.09	9 184.8	184	.8	-9.9	0.	$\frac{2}{2}$	-9.9	-1.2	MWD	
					1690.7	1690	.2 3.44	4 188.9	188.	.9 -1	14.7	0.	1	-14.7	-1.8	MWD	
				L													
Bull	k	STOCK TYP	E & UNITS		START	USED F	REC'D S	зтоск s	тоск	TYPE &	& UN	ITS	ST	ART	USED R	EC'D S	тоск
Stoc	cks	Fuel Oil - R	ig	М3	435.0	14.5		420.5 D	orill Wa	ater - Ri	g	M	T 49	92.0	96.0		396.0
On	Rig	Pot Water -	Rig	MT	98.0	25.0	25.0	98.0 C	ement	t 'G' - R	ig	SX	s 143	30.0			1430.0
		Cement HT	B - Rig	SXS	0.0			0.0 B	entoni	ite - Rig	3	SX	(s 67	70.0			670.0
		Barite - Rig		sxs ²	1871.0	988.0		883.0 B	rine -	Rig	-	M	Г	0.0			0.0
		Helifuel - Ri	g	ltr 2	2996.0			2996.0 F	uel Oi	I - Conc	querc	or M3	3 27	74.8	7.7		267.1
		Drill Water -	Conqueror	MT	90.0			90.0 P	ot Wat	ter - Co	nque	ror M	T 19	90.0	5.0		185.0
		Cement 'G'	- Conqueror	sxs	0.0			0.0 C	ement	t HTB -	Cond	querc sx	s	0.0			0.0
		Bentonite -	Conqueror	SXS	0.0			0.0 B	arite -	Conqu	eror	SX	(s 114	46.0			1146.0
		Brine - Con	queror	MT	0.0			0.0 F	uel Oi	I - Sent	tinel	M	3 45	57.0	8.4		448.6
		Drill Water -	Sentinel	MT	335.0		149.0	484.0 P	ot Wa	ter - Se	entine	el Mi	T 2'	0.0	5.0 1	9.0	224.0
		Cement 'G'	- Sentinel	SXS	0.0			0.0 C	ement	t HTB -	Sent	tinel sx	s	0.0			0.0
		Bentonite -	Sentinel	SXS	0.0			0.0 B	arite -	Sentin	el	sx	s 100	0.0			1000.0
		Brine - Sent	tinel	MT	0.0			0.0									
<u> </u>																	
Pur	np Da	ita															
	-		Pum	p Data -	last 24 h	irs)	4 E 3			67-	Slow	Pump [Data		
#	-	IYPE	LNR(mm)	SPN		· (%)	Flow (lpr	n) SPP	(кРа)	SPI	IVI	SPP (I	кна)	DEI	- I H (m)		v (sg)
											00	- A -	~ – ~				4 4 0 1
1	Nat'l 1	2-P-160	152		63	97	100	09 22	2063		30	1.	379		1707.0		1.18
1	Nat'l 1	2-P-160	152 0		63	97	100	0 22	2063 0		30 40	1	379 896		1707.0		1.18
1	Nat'l 1	2-P-160	152 0 0		63	97	100	09 22 0 0	2063 0 0		30 40 50	1	379 896 241		1707.0		1.18
1	Nat'l 1	2-P-160 2-P-160	152 0 0 152		63 63	97 97	100	09 22 0 0 09 22	2063 0 0 2063		30 40 50 30	1	379 896 241 551		1707.0		1.18
1	Nat'l 1: Nat'l 1:	2-P-160 2-P-160	152 0 152 0		63 63	97 97	100 100	09 22 0 0 09 22 09 22	2063 0 0 2063 0		30 40 50 30 40 50	1 2 1 1 1	379 896 241 551 896 413		1707.0		1.18
1	Nat'l 1: Nat'l 1: Nat'l 1:	2-P-160 2-P-160 2-P-160	152 0 152 0 0 152		63 63 63	97 97 97	100 100	09 2: 0 0 09 2: 09 2: 09 2: 09 2: 09 2: 09 2: 09 2: 09 2:	2063 0 2063 0 0 2063		30 40 50 30 40 50	1: 2: 1: 1: 1: 2:	379 896 241 551 896 413 0		1707.0		1.18

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CASINO #1

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Casing									
DIAM.	CSG OD (mm)	SHOE MD (plan/Actual)	SHOE TVD (plan/Actual)	LOT (pl/Ac	ct)	FIT (pl/Act)		COMMENT	
13.375	340	785.0 743.0	785.0 74	1.68	2.07				
	-	ГҮРЕ	LENGTH (m)	CSG ID (m	ım)	WT (kg/m)	GRADE	THREAD]
340mm 340mm 340mm 50 x 340 340mm 476mm RT to W	(13.375") sł (13.375") in (13.375") in Omm (13.375 (13.375") No (18.75") we 'ellhead top	noe jt 107 kg/m, cent m t jt 107 kg/m, cent mid t jt 107 kg/m, cent mid 5") jt 101 kg/m >-cross jt 101 kg/m Ilhead + extension jt	iid 12.52 jt 12.13 jt 12.64 590.73 11.84 10.71 92.58	316 316 316 316 316 316 316 0		107.1 107.1 107.1 101.2 101.2 101.2 .0	L-80 L-80 L-80 L-80 L-80 L-80 L-80	BTC BTC BTC BTC BTC BTC BTC	
Person	nnel : on :	Site =95							
7 Sa 3 TI 1 Di	antos MT (ROV) rilQuip	35 6 3	DOGC BHI Weatherford		3 DOGC 1 Hallib 3 Anadr	C other urton 'ill	2	1 TMT (marine) 2 IDFS 7 Schlum	
Safety, 1 day	, Inspecti ys since last	ons and Drills Fire and Abandon St	Su nip Drill	mmary					
1798 day	ys since last	Lost Workday Case							
day	ys since last	Medical Treatment C	ase						
6 day	ys since last	First Aid Case							
day	ys since last	Environmental Issue							
Shaker Shaker Shaker Shaker Shaker Shaker	r s, Volum R 1 4 x 115 R 2 4 x 115 R 3 4 x 115 R 4 4 x 84 R 5	es and Losses Dates and Losses Dates and Losses Dates	ata AILABLE (m3) = 79.5 MIXING 139.6 SLUG 54.0 HEAVY	273 L 0.0 L 0.0 S 0.0 L	-OSSES DOWNH SURF.+I	5 (m3) = IOLE 1 EQUIP 1 D	ENGINE 29 COMME 2.56 6.53 0.00	ER M. Docherty / J. Si	ngh
Anchor	'S Anc	1: 147 Anc 2	: 125 Anc 3 :	147 Ar	10 4 : 1 ²	16 Anc	5 : 116	RIS. TENS. (MT) :	101
Workb Pacific S Pacific C	entinel onqueror	Arrived @ Rig C (Date) (Time) 2/9/02 20:45 31/8/02 5:05	Depart from Rig (Date)(Time)	EstimatedArriva (Date)(Time	al (Port)	VISIBILITY(n VISIBILITY(n WIND SP. (k WIND DIR (c PRES.(mbars AIR TEMP (C	m): 5 ts): 45.0 leg): 1.5 s): 997 t): 10.0	 STACK ANGLE (deg): V.D.L. (MT) : AVE HEAVE (m) : MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) : 	0.0 1,923.5 0.6 0.6 0.4 0.4 0.3 0.2
COMMEN	ITS : Pax	on / off : Flt #1, 4 / 5							0.0

Santos DATE : Sep 03, 2002

FROM : H. Flink / S. Hodgetts TO :

O. Moller

Well Data			M.DEPTH (m BRT)	1.797.0	CUR HOLE SIZE (mm)	311	AFE COST \$	12,129,000
COUNTRY FIELD DRILL CO. RIG	Au Diamond Of Ocean I	ustralia Casino ffshore Bounty	TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,796.5 47.0 9.25 -4.00	CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	340 743 0.00 2.07	AFE BASIS : DAILY COST : CUM COST :	P&A \$431,343 \$6,108,581
RT ABOVE SL (m) WATER DEPTH (r RT TO SEABED (n	n) LAT 1)	25.0 70.5 95.5	CURRENT OP @ 0400 PLANNED OP.	Running i Continue	n hole with new bit. drilling 311mm (12.25") ho	le to TD	(2276m).	

Summary of period 00:00 to 24:00 hrs

Drilled 311mm (12.25") hole from 1750m to 1797m. Circulated out gas at 1766m, flow checked well static. Increased mud weight to 1.2sg (10ppg) at 1790m. Flow checked, hole static and POOH to 1610m, pumped out to 1498m, 27.2 tonne (60kips) overpull and high torque. Ran back to bottom, no drag, 9m fill and circulated out gas. Boosted riser observed cavings at shakers. Raised mud weight to 1.24sg (10.3ppg). Pumped out of hole to 1074m, 23 tonne (50kips) overpull reduced to 0-7 tonne (0-15kips). Flow check static, pumped slug and POOH, no drag. B/O bit and D/L data.

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,561
Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 03, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Р		D	00:00	00:30	0.50	1,766	Drilled 311mm (12.25") hole to 1766m.
IH1	Р		CIR	00:30	01:30	1.00	1,766	Circulated out gas, flow checked, well static.
IH1	Р		D	01:30	03:00	1.50	1,790	Drilled ahead to 1790m.
IH1	Р		CIR	03:00	04:00	1.00	1,790	Circulated and increased mud weight to 1.2sg (10ppg).
IH1	Р		D	04:00	08:30	4.50	1,797	Drilled ahead to 1797m.
PS	Ρ		WT	08:30	12:30	4.00	1,797	Flow checked, hole static and POOH to 1610m, pumped out to 1498m, 27.2 tonne (60kips) overpull and high torque. Ran back to bottom, no drag, 9m fill.
PS	Ρ		CIR	12:30	16:00	3.50	1,797	Circulated out gas. Boosted riser observed cavings at shakers. Raised mud weight to 1.24sg (10.3ppg).
PS	Р		то	16:00	24:00	8.00	1,797	Pumped out of hole to 1074m, 23 tonne (50kips) overpull reduced to 0-7 tonne (0-15kips). Flow check static, pumped slug and POOH, no drag. B/O bit and download MWD data.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 04, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
PS	Ρ		ΤI	00:00	06:00	6.00	1,797	Changed bit and CDR module on MWD. RIH shallow testting MWD at HWDP. Flowchecked at shoe and serviced TDS.

<u>00:0</u>	0 TO 24:0	<u>0 HRS ON :</u>	<u>3/09/</u>	<u>2002</u>						
	Comments				Recommendations			Rig Rec	quirements	
Conducted crews.	ings for all					P. Conq call at p	ueror requ ort.	iires 250m3 fuel	next	
WBM Data	COST T	ODAY : \$18,19	5 C	UM. WB	MUD COST: \$180,042	2	CUM. WB	м+овм со	ST: \$180,042	
Type : FROM : TIME : WEIGHT (sg): TEMP (C) :	KCI PHPA pit 20:00 1.24 43	VISCOCITY (se PV (Pa.s) : YP (Pa.s) : GEL10s/10m/1 (Pa.s) : Fann 3/6/100 :	ec/ltr) : 00m 6 10	64 0 16 8 1 12 43	API FLUID LOSS (cm3/30min) : FILTER CAKE (mm) : HTHPFL (cm3/30min) : HTHP CAKE (mm) :	4 1 16 2	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :	31,200 32400 300 12.0 .2	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :	7.4 92.6 1 9.5 1.8

Casino #1

CASINO #1

CASINO #1

Bit	Data	for Bit # 6	S IADC #					We	ear	 1)1	D	L	B	G	02 CT	R
SIZE	("):		12.25					NOZZ	1 FS		<u>`</u>							
MAN	IUFACT	URER :	SM	AVE WO	3 (MT) :		5	6	(12	Dri	lled ov	ver th	ne last 2	24 hrs		culated ov	er the	bit run
TYP	E :	Ν	1A74BPX	AVE RPM	1:		147		(0	MET	ERA(GE (r	n):	47	CUM.I	METERA	3E (m)	397
SER	IAI #•		JS6343	FLOW (lp	m) :		3,047		(0		BOTT		HRS :	6.0		ON BOT.	HRS :	16.2
		mRT).	1400		RESS (K	(na).	22 222		č	IADO		LL. H	RS :	6.5		IADC DR.	HRS:	20.0
		ППСТ). Г (mPT):	1707	HSI (kW/c	:m2) ·	pu).	0.646 X 0 DOD (11)						/S:	142,884				
DEP		i (iiiki).	1/9/		···· <i>z</i>).		0.040	'	• •	I ROF	- (m/h	r) :		7.8	ROP	(m/nr) :		24.5
BHA	\ # 6	Leng	th (m): 29	3.1									D.C.	(1) ANI	N. VELO	CITY (mp	m):	70
WTI	BLW JA	NR (MT):	32 STF	RING WT	(MT):	1	149 TR	QE MA	X (Nn	ר):		15	D.C.	(2) AN	N VELO	CITY (mp	m):	73
BHA	WT (M	IT) :	41 PIC	K UP WT	(MT):		0 TR	QE ON	(Nm):			7	H.W.	D.P. Al	NN VELO	OCITY (m	om):	48
			SLK	OFF W1	(MT):		₀ tr	QE OFI	= (Nm	ı):		1	D.P.	ANN V	ELOCIT	Y (mpm)		48
BHA	DESCF	RIPTION: 1	2.25" bit, NB	stab, 8.2	5" MWE)/FEWD	, 12.25"	RR, 1 x	8" D	C, 12.2	25" RF	R, 12	x 8" D0	C, 8" Ja	ar, 2 x 8"	DC, x/o,	12 x 5"	HWDP
	т	OL DESCR		LE	NGTH	00		SER	IAI #	Н	RS				сомм	FNT		
								CU 21		<u> </u>	71.0							
	λ Γ							GU 218 9556)		71.0							
Puls	er							231			71.0							
ILS								313272	2-2		71.0							
ISOI	NIC							857			71.0							
Str F	RR							GU 214	13		71.0							
Str F	RR							GU214	4		71.0							
Jars								489070	<i>,</i>		71.0							
e				, r				1	1		1		1	-		1	1	
Sur	vey	(Method :	Min Curvat	ure)	MD			_ AZ		CORR.	\\ 	/'	DOGL	EG	N/S	E/W	100	LTYPE
Last	Tool T	ype :	1	MWD (mBRI)	(mBR		de (de	g)	AZ (dog)	SE	CI m)	(de	9/	(m)	(m)		
Mag	netic [Declination	:	0.00		<u> </u>				(deg)	- (i	(11)	3011	<u>)</u>				
g					1170.4	1170	0.3 0.9	3 192	2.5	192.5		4.9		0.1	4.9	-0.2	MWE	2
					1256.7	1256	0.6 1.4	4 18	1.2	181.2		3.1).2 _1	-0.5	-0.4		, I
					1458 5	1458	2 21	3 18:	3.9	183.9		-3.1) 1	-0.5	-0.0	MWF	, l
					1546.1	1545	5.7 2.7	4 18	5.6	185.6	; .	-6.9		0.2	-6.9	-0.9	MWE	, ,
					1605.5	1605	5.1 3.0	9 184	4.8	184.8	; .	-9.9	().2	-9.9	-1.2	MWE)
					1690.7	1690	0.2 3.4	4 188	3.9	188.9	-1	4.7		0.1	-14.7	-1.8	MWE)
					1775.9	1775	5.1 4.3	8 192	2.3	192.3	-2	20.4	().3	-20.4	-2.9	MWE)
Dull	,				T.D.T			07001	07	0.014 7								TOOK
Stoc	N Nac	STOCK TYP		<u> </u>		JSED F	KEC.D	STOCK			TPE 8	s un		5		USED R	EC.D	SIOCK
Onl	ns Dia	Fuel Oil - R	ig	M3 4	20.5	15.6	04.0	404.	9 Dri	II wate	er - Ri	g	N	11 3	96.0	95.0		301.0
	NIY	Pot Water -	Rig		98.0	24.0	24.0	98.		ment	G' - R	ıg		SXS 14	30.0			670.0
		Cement HII	B - Rig	SXS	0.0	440.0		0.	0 Bei	ntonite	e - Rig)		5XS C	0.0			070.0
		Darite - Kig	a	SXS 8	03.0 4	+43.0		2000						11 10 0	0.0	10.0		0.0
		Drill Motor	Conquerer	MT 29	90.0			2996.				Juero	n N	//J 2 //T 4	85 0	5.0		201.1
		Coment 'C'			0.0			90. 0		n vvdle		Con		11 2Ve	0.0	5.0		0.0
		Bentonito	Conqueror	373	0.0			0.		rite - C		eror		270 11	46.0			1146 0
		Brine - Con	queror	MT	0.0			0.			- Sont	inol	N	/3 /	48.6	8.5		440 1
		Drill Water	Sentinel	MT 4	84 0			484		t Wata		ntine		1T 2	24 0	5.0		219.0
		Cement 'G'	- Sentinel	SXS	0.0			0	0 Ce	ment l	HTR -	Sent	tinel s	325	0.0	0.0		0.0
		Bentonite -	Sentinel	SXS	0.0			0.	0 Ba	rite - S	Sentin	el	(1110) (9	sxs 10	00.0			1000.0
		Brine - Sent	tinel	MT	0.0			0.	0			0.						
		L			-				_									
Pun	np Da	ita								<u>.</u>								
			Pump	Data - la	ast 24 h	rs								Slow	Pump [Data		
#	-	TYPE	LNR(mm)	SPM	EFF	(%)	Flow (Ip	m) S	PP (k	(Pa)	SPI	М	SPP	(kPa)	DEF	PTH (m)	M\	V (sg)
1	Nat'l 1	2-P-160	152	63	3	97	10	09	224	108		30		1379	1	1707.0		1.18
'			0				.0	0		0		40		1896				
			0					0		0		50		2241				
2	Nat'l 1	2-P-160	152	63	3	97	10	09	224	804		30		1551				
			0					0		0		40		1896				
	Not'l 4	2 D 160	0			_{دە}	10	0	22.4			50		2413				
3	mat 11	2-1-100	152	63	2	97	10	09	224	100				U				

Casing							
DIAM. CSG OD (mm)	SHOE MD (plan/Actual)	SHOE TVD (plan/Actual)	LOT (pl/Act)	FIT (pl/Act)		COMMENT	
13.375 340	785.0 743.0	785.0 742	9 1.68 2.07				
	ТҮРЕ	LENGTH (m)	CSG ID (mm)	WT (kg/m)	GRADE	THREAD	
340mm (13.375") s 340mm (13.375") ii 340mm (13.375") ii 50 x 340mm (13.37 340mm (13.375") N 476mm (18.75") we RT to Wellhead top	hoe jt 107 kg/m, cent mid nt jt 107 kg/m, cent mid j nt jt 107 kg/m, cent mid j 5") jt 101 kg/m o-cross jt 101 kg/m ellhead + extension jt	1 12.52 1 12.13 1 12.64 590.73 11.84 10.71 92.58	316 316 316 316 316 316 316 0	107.1 107.1 107.1 101.2 101.2 101.2 .0	L-80 L-80 L-80 L-80 L-80 L-80	BTC BTC BTC BTC BTC BTC	
Personnel : on	Site =93						
5 Santos 3 TMT (ROV) 1 DrilQuip	35 D 6 B 3 W	OGC HI /eatherford	6 DO0 1 Hall 3 Ana	GC other liburton Idrill	21 2 7	I TMT (marine) 2 IDFS 7 Schlum	
Safety, Inspect	ions and Drills	Sum	imary				
2 days since las	Fire and Abandon Shi	p Drill					
1799 days since las	t Lost Workday Case						
days since las	t Medical Treatment Ca	se					
7 days since las	t First Aid Case						
days since las	t Environmental Issue						
Shakers, Volun SHAKER 1 4 x 111 SHAKER 2 4 x 111	nes and Losses Da	ta LABLE (m3) =	286 LOSS	ES (m3) =	ENGINEE	R M. Docherty / J. Si	ngh
SHAKER 3 4 x 11 SHAKER 4 4 x 84 SHAKER 5	5 ACTIVE 8 HOLE 1 RESERVE 6	2.7MIXING42.4SLUG0.4HEAVY	0.0 DOWN 0.0 SURF 0.0 DUMF	NHOLE 9 .+EQUIP 10 PED (9.22 0.17 0.00		
Anchors Anc Anc	1 : 140 Anc 2 : 6 : 118 Anc 7 :	113 Anc 3 : 1 102 Anc 8 : 1	59 Anc 4 : 31 Anc 9 :	143Anc0Anc	5:116 10:0	RIS. TENS. (MT) : RISER ANGLE (deg):	101 0.0
Workboats Pacific Sentinel Pacific Conqueror	Arrived @ Rig (Date) (Time) (2/9/02 20:45 31/8/02 5:05	epart from Rig E Date)(Time)	stimatedArrival (Por (Date)(Time)	t) Weather VISIBILITY(ni WIND SP. (kt WIND DIR (d PRES.(mbars AIR TEMP (C	m): 6 ts): 50.0 eg): 310 :): 1002): 10.0	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) : MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	0.0 1,921.0 3.0 1.5 1.5 1.0
COMMENTS : Pa:	x on / off : Flt #1, - / 2					IN STROLL (dog) .	1.0

Santos DATE : Sep 04, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

DAILY DRILLING REPORT

CASINO #1

Well Data			1 707 0		044		12 129 000
COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (MBRT) TVD (mBRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,797.0 1,796.5 0.0 10.25 4.00	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg)	311 340 743 0.00 2.07	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	P&A \$376,338 \$6,484,919
RT ABOVE SL (m) WATER DEPTH (r RT TO SEABED (n	25.0 n) LAT 70.5 n) 95.5	CURRENT OP @ 0400 PLANNED OP.	WOW. H	eave 4-5m, Roll 1 deg, Pit WOW. RIH and drill ahead	2.07 ch 2 deg 311mm	I, Combined wave H (12.25") hole to TD	neight 7.6m. 9 (2276m).

Summary of period 00:00 to 24:00 hrs

Changed out MWD. RIH to 1750m, circulated bottoms up. Washed and reamed to TD. Circulated hole clean. WOW - POOH to shoe and hung off.

L		
	FORMATION	TOP(m BRT)
	Skull Creek (?)	1,259
	Nullawarre	1,522
	Belfast	1,561
	Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 04, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION			
IH1	Ρ		ΤI	00:00	04:30	4.50	1,797	Changed bit and ISONIC module on MWD. RIH shallow testing MWD at HWDP. Flowchecked at shoe.			
IH1	Ρ		RS	04:30	05:00	0.50	1,797	Serviced TDS.			
IH1	Ρ		ΤI	05:00	07:30	2.50	1,797	Continued RIH tagged fill at 1750m.			
IH1	ΤР	WCN	CIR	07:30	09:00	1.50	1,797	Circulated bottoms up through chokeline to degasser.			
IH1	Ρ		RW	09:00	12:30	3.50	1,797	Washed and reamed to bottom at 1797m. Boosted riser.			
IH1	Ρ		CIR	12:30	15:00	2.50	1,797	Circulated bottoms up, continued until shakers clean. Made flowcheck, static.			
IH1	ΤP	WEA	то	15:00	18:00	3.00	1,797	Suspended operations due to degrading weather conditions. Heave 7m, Roll 1.5 deg, Pitch 1.8 deg, Combined wave height 8.5m. POOH to shoe, made flowcheck, static. De-ballasted rig to storm draft 19.81m (65ft) at 17:45hrs.			
IH1	ΤР	WEA	то	18:00	21:00	3.00	1,797	Picked up hangoff tool and racked in derrick. Picked up additional DP to TD well and racked in derrick.			
IH1	ΤP	WEA	0	21:00	24:00	3.00	1,797	Made up hangoff tool, RIH and landed out in wellhead. Backed out landing string, displaced riser to seawater. POOH. Heave 8m, Roll 1.2 deg, Pitch 2.5 deg, Combined wave height 8.5m. Well secured at 22:30hrs			

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 05, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION			
IH1	ΤР	WEA	BOP	00:00	00:30	0.50	1,797 Rigged drill floor to pull divertor.				
IH1	ΤP	WEA	WO	00:30	06:00	5.50	1,797 Waiting on weather, continue to monitor conditions.				

<u>00:0</u>	0 TO 24:00	<u>) HRS ON :</u>	<u>4/09/2</u>	2002						
	Comments				Recommendation	ons		Rig Re	quirements	
De-ballaste 19.81m (65	ed rig to sto it) at 17:45h	orm draft rs.								
WBM Data	COST T	ODAY : \$9,276	С	UM. W	B MUD COST: \$189	,318	(CUM. WBM+OBM C	OST: \$189,318	
Туре :	КСІ РНРА	VISCOCITY (se PV (Pa.s) :	ec/ltr) :	6	4 API FLUID LOSS 0 (cm3/30min) :	5	CI : K+C*1	300,000 1000 : 32400	SOLIDS (%vol) : H2O (%vol) :	7.3 91.7
FROM :	pit	YP (Pa.s) :		1	5 (mm) :	1	HARD	0/Ca: 280	OIL (%vol) :	4
TIME : WEIGHT (sg): TEMP (C) :	20:00 1.24 38	GEL10s/10m/1 (Pa.s) : Fann 3/6/100 :	00m 5 10	7 12 3	1 (cm3/30min) : HTHP CAKE	16 2	MBT (PM : PF :	(ppb): 13.0	PH : PHPA (ppb) ·	9.5

Casino #1

15

CASINO #1

Bit	Data f	for Bit # 7	• IADC # 5	1	7			Wear		0	01	D	L	В	G	02	R
SIZE	("):		12.25]	
MAN	UFACT	URER :	HU	AVE WO	B (MT) :		5	3 x 16	3 D	rilled ov	ver th	ne last 2	4 hrs	Calc	ulated ov	er the l	oit run
TYP	E :		MXR09D	AVE RPI	И:		147				GE (n	n):	0			jE (m)	. 0
SER	IAL # :		L11DK	LOW (I	om) :		3,047	x o		יו וטש וי וופח כר	омг п н	RS :	.0			HRS:	0.
DEP	ΓΗ IN (r	mRT):	1797 l	PUMP P	RESS.(K	(pa):	22,222	x 0		TAL RE	EU. II EVS		.0	CUM.	TOT. RE	/S :	.0
DEP	гн оит	Г (mRT):	I	HSI (kW/	cm2) :		0.817	x 0	RC)P (m/hi	r):		Ū	ROP (m/hr) :		
			1					1	•					1			
BHA	4 # 7	Leng	th (m): 293	3.1								D.C. (1) ANN	I. VELO	CITY (mp	m):	34
WT E	BLW JA	R (MT):	32 STF	RING WT	(MT):	1	49 TR	QE MAX (N	lm):		0	D.C. (2) ANN	VELO	CITY (mpi	n):	36
BHA	WT (M	IT) :	41 PIC	K UP W	T (MT):		0 TR(QE ON (Nr	n):		0	H.W.C	D.P. AN	IN VELC	OCITY (m	om):	24
			l slk	OFF W	T (MT):			QE OFF (N	lm):		0	D.P. /	ANN VI	ELOCITY	Y (mpm) :		24
BHA	DESCR	RIPTION : 12	2.25" bit, NB	stab, 8.2	25" MWE)/FEWD	, 12.25"	RR, 1 x 8"	DC, 12	2.25" RF	R, 12	x 8" DC	C, 8" Ja	r, 2 x 8"	DC, x/o,	12 x 5"	HWDP
	тс	OOL DESCR	IPTION	LE	NGTH	OD	ID	SERIAL	#	HRS				СОММ	ENT		
NB F	R							GU 2151		77.0							
CDR								9556		77.0							
Puls	er							231		77.0							
								313272-2 829		6.0							
Str F	R							GU 2143		77.0							
Str F	RR							GU2144		77.0							
Jars								48907C		77.0							
Sur		/ M = the state	Min Original			I										1	
Sur	vey	(ivietnod :	win Curvat	ure)				AZ	CORF	R. 'V	/'	DOGL	EG	N/S	E/W		TYPE
Last	Tool T	ype :	ſ	NWD				(ueg)	(deg) (r	m)	30m		(11)			
Mag	netic E	Declination	:	0.00	1170.4	1170	.3 0.9	3 192.5	192.	.5	, 4.9	0	.1	4.9	-0.2	MWD	
					1256.7	1256	.6 1.4	4 181.2	181.	2	3.1	0	.2	3.1	-0.4	MWD	
					1382.1	1381	.9 1.8	7 182.2	182.	.2 -	-0.5	0	.1	-0.5	-0.5	MWD	
					1458.5	1458	.2 2.1	3 183.9	183.	.9 -	-3.1	0	.1	-3.1	-0.6	MWD	
					4 - 4 - 4	4 5 4 5	7 07	4 405 0	405	~ I	C O	<u>م</u>	<u> </u>	~ ~			
					1546.1 1605.5	1545	.7 2.7 .1 3.0	4 185.6 9 184.8	185. 184.	.6 - .8 -	-6.9 -9.9	0	.2	-6.9 -9.9	-0.9		
					1546.1 1605.5 1690.7	1545 1605 1690	.7 2.7 .1 3.0 .2 3.4	4 185.6 9 184.8 4 188.9	185. 184. 188.	.6 - .8 - .9 -1	-6.9 -9.9 14.7	0 0 0	.2 .2 .1	-6.9 -9.9 -14.7	-0.9 -1.2 -1.8	MWD MWD MWD	
					1546.1 1605.5 1690.7 1775.9	1545 1605 1690 1775	.7 2.7 .1 3.0 .2 3.4 .1 4.3	4 185.6 9 184.8 4 188.9 8 192.3	185. 184. 188. 192.	.6 - .8 - .9 -1 .3 -2	-6.9 -9.9 14.7 20.4	0 0 0 0	.2 .2 .1 .3	-6.9 -9.9 -14.7 -20.4	-0.9 -1.2 -1.8 -2.9	MWD MWD MWD MWD	
Bulk	<u> </u>	STOCK TVB			1546.1 1605.5 1690.7 1775.9	1545 1605 1690 1775	.7 2.7 .1 3.0 .2 3.4 .1 4.3	4 185.6 9 184.8 4 188.9 8 192.3	185. 184. 188. 192.	.6 - .8 - .9 -1 .3 -2	-6.9 -9.9 14.7 20.4	0 0 0	.2 .2 .1 .3	-6.9 -9.9 -14.7 -20.4	-0.9 -1.2 -1.8 -2.9	MWD MWD MWD MWD	TOCK
Bulk	(ks	STOCK TYP	E & UNITS		1546.1 1605.5 1690.7 1775.9 TART 1 404 9	1545 1605 1690 1775 USED F	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S	185. 184. 188. 192. TOCK	.6 - .8 - .9 -1 .3 -2 TYPE 8	-6.9 -9.9 14.7 20.4 & UNI	0 0 0 0 TS	.2 .2 .1 .3 SI	-6.9 -9.9 -14.7 -20.4 	-0.9 -1.2 -1.8 -2.9 JSED R	MWD MWD MWD MWD	238 0
Bulk Stoc	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water -	E & UNITS	M3 4	1546.1 1605.5 1690.7 1775.9 5TART 404.9 98.0	1545 1605 1690 1775 USED F 18.0 25.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0]	185. 184. 188. 192. TOCK Drill Wa	.6 - .8 - .9 -1 .3 -2 TYPE 8 .ter - Rig	-6.9 -9.9 14.7 20.4 & UNI g	0 0 0 TS M	.2 .2 .1 .3 T 3 xs 14	-6.9 -9.9 -14.7 -20.4 ART U 01.0 30.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0	MWD MWD MWD MWD	5TOCK 238.0 1430.0
Bulk Stoc On I	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTF	E & UNITS g Rig 3 - Rig	M3 MT SXS	1546.1 1605.5 1690.7 1775.9 5TART 404.9 98.0 0.0	1545 1605 1690 1775 USED F 18.0 25.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D 25.0	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 0 0.0 E	185. 184. 188. 192. STOCK Drill Wa Cement Bentoni	.6 - .8 - .9 -1 .3 -2 TYPE 8 .ter - Rig : 'G' - Rig te - Rig	-6.9 -9.9 14.7 20.4 g ig	0 0 0 1 TS M s s	.2 .2 .1 .3 T 3 xs 14 xs 6	-6.9 -9.9 -14.7 -20.4 ART U 01.0 30.0 70.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0	MWD MWD MWD MWD	5TOCK 238.0 1430.0 670.0
Bulk Stoc On I	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig	E & UNITS g Rig 3 - Rig	M3 · MT SXS SXS ·	1546.1 1605.5 1690.7 1775.9 5TART 1 404.9 98.0 0.0 440.0	1545 1605 1690 1775 JSED F 18.0 25.0 240.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E	185. 184. 188. 192. STOCK Drill Wa Cement Bentoni Brine - I	6 - 8 - 9 -1 3 -2 TYPE 8 tter - Rig tte - Rig Rig	-6.9 -9.9 14.7 20.4 & UNI g ig	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.2 .2 .1 .3 T 3 xs 14 xs 6 T	-6.9 -9.9 -14.7 -20.4 XART U 01.0 30.0 70.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0	MWD MWD MWD EC'D S	5 TOCK 238.0 1430.0 670.0 0.0
Bulk Stoc On I	k sks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri	E & UNITS g Rig 3 - Rig g	M3 M MT sxs sxs sxs d ltr 2	1546.1 1605.5 1690.7 1775.9 START (404.9 98.0 0.0 440.0	1545 1605 1690 1775 JSED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK \$ 386.9 [98.0 0 0.0 E 200.0 E 2577.0 F	185. 184. 188. 192. TOCK TOCK Drill Wa Cement Bentoni Brine - I Guel Oil	6 - 8 - 9 -1 3 -2 TYPE 8 tter - Rig (G' - Rig Rig I - Conq	-6.9 -9.9 14.7 20.4 & UNI g ig g	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.2 .2 .1 .3 T 3 xs 14 xs 6 T I3 2	-6.9 -9.9 -14.7 -20.4 ART U 01.0 30.0 70.0 0.0 57.1	-0.9 -1.2 -1.8 -2.9 JSED R 63.0	MWD MWD MWD EC'D S	STOCK 238.0 1430.0 670.0 0.0 246.4
Bull Stoc On I	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water -	E & UNITS g Rig 3 - Rig g Conqueror	M3 - MT - SXS - Itr 2: MT -	1546.1 1605.5 1690.7 1775.9 START 404.9 98.0 0.0 440.0 996.0 990.0	1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 0 0.0 E 200.0 E 2577.0 F 90.0 F	185. 184. 188. 192. Drill Wa Cement Bentoni Brine - I Fuel Oil Pot Wat	6	-6.9 -9.9 14.7 20.4 & UNI g ig g quero	TS M S S M or M ror M M	.2 .2 .1 .3 T 3 xs 14 xs 6 T T I3 2 T 1	-6.9 -9.9 -14.7 -20.4 ART U 01.0 30.0 70.0 0.0 57.1 80.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0	MWD MWD MWD MWD	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0
Bulk Stoc On I	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G'	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror	M3 MT sxs sxs ltr 2 MT sxs	1546.1 1605.5 1690.7 1775.9 5TART 404.9 98.0 0.0 440.0 996.0 90.0 0.0	1545 1605 1690 1775 JSED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 C 98.0 C 0.0 E 200.0 E 2577.0 F 90.0 F	185. 184. 188. 192. TOCK Orill Wa Cement Bentoni Brine - I Guel Oil Pot Wat	6	-6.9 -9.9 14.7 20.4 & UNI g ig g ig g quero nque	O O O O O TS M S S S S M M or M O T O M Querc	.2 .2 .1 .3 T 3 xs 14 xs 6 T I3 2 T 1 xs	-6.9 -9.9 -14.7 -20.4 ART U 01.0 30.0 70.0 0.0 57.1 80.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0	MWD MWD MWD EC'D S	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0
Bulk Stoc On I	k sks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTF Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite -	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror Conqueror	M3 M MT SXS SXS M Itr 22 MT SXS SXS SXS MT	1546.1 1605.5 1690.7 1775.9 START 1 404.9 98.0 0.0 440.0 996.0 90.0 0.0 0.0 0.0	1545 1605 1690 1775 JSED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK 9 386.9 [98.0 C 0.0 E 200.0 E 200.0 F 90.0 F 0.0 C 0.0 E	185. 184. 188. 192. TOCK Orill Wa Cement Bentoni Brine - I Guel Oil Pot Wat Cement Barite -	6	-6.9 -9.9 14.7 20.4 & UNI g ig g ig g quero nque conc eror	ITS M S S M or M ror M querc s	1.2 1.2 1.1 1.3 T 3 XS 14 XS 6 T I3 2 T 1 XS XS 11 XS XS 11 I3 4	-6.9 -9.9 -14.7 -20.4 CART U 01.0 01.0 0.0 57.1 80.0 0.0 46.0 40.1	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0	MWD MWD MWD EC'D S	5TOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6
Bulk Stoc On I	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTF Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - U Brine - Conc Drill Water -	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror Conqueror queror Sentinel	M3 - MT - SXS - Itr 2: MT - SXS - SXS - SXS - MT - MT -	1546.1 1605.5 1690.7 1775.9 START (404.9 98.0 0.0 440.0 996.0 990.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 JSED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK 9 386.9 [98.0 0 0.0 E 200.0 E 200.0 E 2577.0 F 90.0 F 0.0 0 0.0 E 0.0 F 0.0 0 F 0.0 0 F	185. 184. 188. 192. FTOCK Frill Wa Cement Bentoni Pot Wat Cement Cement Barite - Cuel Oil Cot Wat	6	-6.9 -9.9 14.7 20.4 9 ig g quero nque Conc eror tinel	ITS M S S M or M querc s S M Querc s S M	1.2 1.2 1.3 T 3 XS 14 XS 6 T 13 2 T 1 XS XS 11 XS XS 11 13 4 T 2	-6.9 -9.9 -14.7 -20.4 01.0 030.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0	MWD MWD MWD MWD	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0
Bull Stoc On I	k :ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTB Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Conc Drill Water - Cement 'G'	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror Conqueror queror Sentinel - Sentinel	M3 MT SXS SXS Itr 2 MT SXS SXS MT MT MT	1546.1 1605.5 1690.7 1775.9 START 1 404.9 98.0 0.0 440.0 996.0 990.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 JSED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 0 200.0 E 2577.0 F 90.0 F 0.0 0 0.0 F 484.0 F 0.0 0	185. 184. 188. 192. FTOCK Orill Wa Cement Gentoni Pot Wat Cement Garite - Guel Oil Pot Wat Cement Carite -	6	-6.9 -9.9 14.7 20.4 9 quero rig quero conc eror tinel sent	M TS M S S M M ror M querc s S M M L M M S S M M M S S M M S S S M M M M S S S S M M S S S S S S S S S S S S S	.2 .1 .3 T 3 xs 14 xs 6 T T 1 xs 11 xs 11 xs 11 3 4 T 2 xs	-6.9 -9.9 -14.7 -20.4 CART U 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0	MWD MWD MWD EC'D S	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0
Bulk Stoc On I	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTF Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Cement 'G' Bentonite -	E & UNITS g Rig 3 - Rig G Conqueror - Conqueror Conqueror queror Sentinel - Sentinel Sentinel	M3 - MT - SXS - Itr 2: MT - SXS - SXS - MT - MT - SXS - SXS -	1546.1 1605.5 1690.7 1775.9 START 1 404.9 98.0 0.0 440.0 2996.0 99.0 0.0 0.0 0.0 0.0 0.0 0.0 484.0 0.0 0.0	1545 1605 1690 1775 JSED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 [200.0 [200.0 [2577.0] 90.0 [0.0 [0.0 [0.0] 484.0] 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][185. 184. 188. 192. STOCK Orill Wa Cement Gentoni Gentoni Gentoni Gentoni Cement Cement Cement Cement Cement Cement Cot Wat Cement Cot Wat Cot W	6	-6.9 -9.9 14.7 20.4 9 ig guero nque conor eror tinel nntine Sent	ITS M S S M F C M M C C M M M M C C M M M C C M M C C M M C C M M C C C O O O O	.2 .2 .1 .3 T 3 xs 14 xs 6 T T 1 xs 11 13 4 T 2 xs xs 10 xs 10	-6.9 -9.9 -14.7 -20.4 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0	MWD MWD MWD EC'D S	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0
Bulk Stoc On I	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTF Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Cement 'G' Bentonite - Cement 'G' Bentonite - Bentonite - Sentonite -	E & UNITS g Rig 3 - Rig Conqueror Conqueror Conqueror Conqueror Sentinel - Sentinel Sentinel inel	M3 MT SXS SXS Itr 2 MT SXS SXS MT MT SXS SXS SXS SXS MT	1546.1 1605.5 1690.7 1775.9 START (404.9 98.0 0.0 440.0 996.0 90.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E 200.0 E 200.0 E 200.0 F 0.0 C 0.0 E 0.0 C 0.0 C 0	185. 184. 188. 192. FTOCK FORM Comment	6	-6.9 -9.9 14.7 20.4 g g quero nque conc eror tinel sent el	ITS M S S M Or M querc s S M Querc s S S M I I M S S S S S S S S S S S S S S	.2 .2 .1 .3 T 3 T 3 XS 14 XS 13 2 XS 13 4 T 2 XS	-6.9 -9.9 -14.7 -20.4 TART U 01.0 30.0 70.0 0.0 57.1 80.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0	MWD MWD MWD EC'D S	5TOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0
Bulk Stoc On I	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Cement 'G' Bentonite - Bentonite - Sentonite -	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror Conqueror Queror Sentinel - Sentinel Sentinel inel	M3 MT SXS SXS Itr 2 MT SXS SXS MT MT SXS SXS SXS SXS MT	1546.1 1605.5 1690.7 1775.9 98.0 0.0 440.0 996.0 996.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 484.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E 200.0 E 2577.0 F 90.0 C 0.0 C 0.0 E 0.0 C 0.0 E 0.0 C 0.0 E 0.0 C	185. 184. 188. 192. FTOCK Frill Wa Cement Cement Cement Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Comment Cot Wat Cot Wat Comment Cot Wat Comment Cot Wat Comment Cot Wat Comment Cot Wat Cot W	6	-6.9 -9.9 14.7 20.4 g g g quero Conc eror tinel Sent el	O O O O TS M S S M M ror M querc S S M M I U M S S S S S S S S S S S S S S S S S S	.2 .1 .3 T 3 xs 14 xs 6 T T 1 xs 14 xs 6 T T 1 xs 14 xs 14 x	-6.9 -9.9 -14.7 -20.4 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0	EC'D S	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0
Bull Stoc On I	ks Rig np Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Cement 'G' Bentonite - Brine - Sent	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror Queror Sentinel - Sentinel Sentinel inel	M3 M MT SXS SXS M Itr 2 MT SXS SXS M MT MT M SXS SXS M MT MT M	1546.1 1605.5 1690.7 1775.9 98.0 0.0 440.0 996.0 996.0 990.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E 2577.0 F 90.0 F 0.0 C 0.0 E 0.0 F 484.0 F 0.0 C 0.0 E	185. 184. 188. 192. STOCK Drill Wa Cement Sentoni Brine - I Guel Oil Pot Wat Cement Sarite - Guel Oil Pot Wat Cement Sarite -	6	-6.9 -9.9 14.7 20.4 g ig g querc Conc eror tinel nntine Sent el	O O O O O O TS M S S M O T M M O T M M O T M M O T M M O T M M O T S S M O T S S S M M O O O O O O O O O O O O O O O	.2 .2 .1 .3 T 3 T 3 T 13 2 XS 13 4 T 2 XS 13 4 T 2 XS XS XS XS 10	-6.9 -9.9 -14.7 -20.4 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0	MWD MWD MWD EC'D S	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0
Bulk Stoc On I	ks Rig np Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Brine - Conc Drill Water - Cement 'G' Bentonite - Bentonite - Brine - Sent tta	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Queror Sentinel - Sentinel Sentinel inel Pump	M3 MT sxs sxs Itr 2 MT sxs sxs MT MT sxs sxs sxs MT MT - sxs sxs sxs MT	1546.1 1605.5 1690.7 1775.9 98.0 0.0 404.9 98.0 0.0 440.0 996.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D 25.0	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E 200.0 E 200.0 E 200.0 F 0.0 C 0.0 C 0.0 E 0.0 E 0.0 C 0.0 E 0.0 E 0.0 C 0.0 E 0.0 E 0	185. 184. 188. 192. STOCK Orill Wa Coment Bentoni Brine - I Guel Oil Cot Wat Coment Cot Wat Cot Wat Coment Barite - Cuel Oil Cot Wat Coment Cot Wat Coment Cot Wat Coment Cot Wat Coment Cot Wat Cot Wat Coment Cot Wat Cot Wat Coment Cot Wat Cot Wat	6	-6.9 -9.9 14.7 20.4 9 ig 9 quero Conc eror tinel nntine Sent el	O O O O O TS M S S S S S S S S S S S S S S S S S	.2 .2 .2 .2 .2 .2 .2 .2 .1 .3 T 3 XS 13 13 2 XS 11 13 4 T 2 XS XS <t< th=""><th>-6.9 -9.9 -14.7 -20.4 70.0 0.0 57.1 80.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0 0.0 0.0</th><th>-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0 8.5 5.0</th><th></th><th>5TOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0</th></t<>	-6.9 -9.9 -14.7 -20.4 70.0 0.0 57.1 80.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0 0.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0 8.5 5.0		5TOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0
Bulk Stoc On I	ks Rig np Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Brine - Cond Drill Water - Cement 'G' Bentonite - Bentonite - Bentonite - Sentonite - Sentonite - Sentonite - Bentonite - Sentonite - Bentonite - Sentonite - Bentonite - Sentonite - Bentonite - Sentonite - S	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror Conqueror Queror Sentinel - Sentinel inel Pump LNR(mm)	M3 MT SXS SXS Itr 2 MT SXS SXS MT MT SXS SXS MT MT SXS SXS SXS MT	1546.1 1605.5 1690.7 1775.9 START 1 404.9 98.0 0.0 440.0 996.0 90.0 0.0 0.0 0.0 0.0 0.0 0.0	I 1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 REC'D	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E 200.0 E 2577.0 F 90.0 C 0.0 C 0.0 E 0.0 C 0.0 E 0.0 C 0.0 E 0.0 C 0.0 E 0.0 C 0.0 E 0.0 C 0.0 E	185. 184. 188. 192. FTOCK Frock	6	-6.9 -9.9 14.7 20.4 g g g g querco conc eror tinel sent el M	O O O O TS M S S M O T M M O T M M O T M M O T M M O T M M O T M M O T S S S S S S S S S S S S S S S S S S	.2 1 1 3 T 3 xs 14 xs 6 T T 1 xs 14 xs 14	-6.9 -9.9 -14.7 -20.4 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0 8.5 5.0 Data	MWD MWD MWD EC'D S	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0 V (sg)
Bulk Stoc On I	ks Rig np Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTF Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Brine - Conc Drill Water - Cement 'G' Bentonite - Brine - Sent ta	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror Conqueror Queror Sentinel - Sentinel inel Pump LNR(mm) 152 0	M3 - MT - SXS - Itr 2: MT - SXS - MT - SYM -	1546.1 1605.5 1690.7 1775.9 98.0 0.0 440.0 99.0 0.0 0.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0 419.0	.7 2.7 .1 3.0 .2 3.4 .1 4.3 25.0 25.0 Flow (lp 15	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E 200.0 E 2577.0 F 90.0 C 0.0 C	185. 184. 188. 192. STOCK Drill Wa Cement Sentoni Pot Wat Cement Sarite - Guel Oil Pot Wat Cement Sarite - (kPa) 7239 0	6	-6.9 -9.9 14.7 20.4 g ig g querco conc eror tinel mtine Sent el	O O O O O O O TS M S S M O C M M O C C M M O C C M O C C C C C	.2 .2 .1 .3 T 3 xs 14 xs 6 T T 1 xs 14 xs 11 xs 14 xs 10 xs 11 xs 14 xs 10 xs	-6.9 -9.9 -14.7 -20.4 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0 8.5 5.0 Pata PTH (m) 1707.0		STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0 V (sg) 1.18
Bulk Stoc On F	ks Rig np Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTF Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Brine - Conc Drill Water - Cement 'G' Bentonite - Brine - Sent ta	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Sentinel Sentinel Sentinel Sentinel Nemp LNR(mm) 152 0 0	M3 - MT sxs Sxs - Itr 2: MT - sxs - MT - SPM -	1546.1 1605.5 1690.7 1775.9 98.0 0.0 440.0 998.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	I 1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0 419.0 5 5 (%) 97	.7 2.7 .1 3.0 .2 3.4 .1 4.3 25.0 25.0 Flow (lp 15	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E 2577.0 F 90.0 F 0.0 C 0.0 E 0.0 C 0.0 C 0	185. 184. 188. 192. STOCK Drill Wa Cement Sentoni Brine - I Guel Oil Pot Wat Cement Sarite - Guel Oil Pot Wat Cement Sarite - (kPa) 7239 0 0	6	-6.9 -9.9 14.7 20.4 9 ig 9 querco nque Conc eror tinel mtine Sent el M 30 40 50	O O O O O O O O O O O O O O O O O O O	.2 .2 .1 .3 T 3 xs 14 xs 6 T T 1 xs 14 xs 6 T T 1 xs 11 3 4 T 2 xs 11 3 4 T 2 xs 10 Slow (kPa) 1379 896 2241	-6.9 -9.9 -14.7 -20.4 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 00.0 00.0 Pump D DEF	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0 8.5 5.0 Pata PTH (m) 1707.0		STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0 V (sg) 1.18
Bulk Stoc On I Pun # 1	np Da Nat'l 12	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Brine - Cond Drill Water - Cement 'G' Bentonite - Brine - Sent tta	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Queror Sentinel Sentinel Sentinel inel Pump LNR(mm) 152 0 0 152	M3 MT sxs sxs Sxs MT MT sxs sxs Sxs MT MT Sxs Sxs Sxs MT MT Syp M 9 9	1546.1 1605.5 1690.7 1775.9 START 404.9 98.0 0.0 440.0 2996.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	I 1545 1605 1690 1775 JSED F 18.0 25.0 240.0 419.0 419.0 5 (%) 97 97 97	.7 2.7 .1 3.0 .2 3.4 .1 4.3 25.0 25.0 Flow (lp	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 [98.0 [98.0 [200.0 [2577.0] 90.0 [2577.0] 90.0 [0.0 [0.0] 484.0] 0.0 [0.0] 0.0 [0.0] 0.0] 0	185. 184. 188. 192. STOCK Orill Wa Cement Gentoni Brine - I Gentoni Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Cot Wat C	6 - 8 - 9 -1 3 -2 TYPE 8 ter - Rig 1 - Conque 1 - Conque 1 - Conque 1 - Sent ter	-6.9 -9.9 14.7 20.4 9 ig 9 querco nque Conc eror tinel mtine Sent el M 30 40 50 30	O O O O O O O O O O O O O O O O O O O	.2 .2 .1 .3 T 3 xs 14 xs 6 T T 1 xs 14 xs 6 T T 1 xs 14 xs 1	-6.9 -9.9 -14.7 -20.4 ART U 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 46.0 40.1 19.0 0.0 0.0 Pump D DEF	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0 8.5 5.0 Pata PTH (m) 1707.0		STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0 V (sg) 1.18
Bulk Stoc On I	np Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Bentonite - Cement 'G' Bentonite - Brine - Sent ta TYPE 2-P-160	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Queror Sentinel - Sentinel Sentinel inel Pump LNR(mm) 152 0 0 152 0 0	M3 MT SXS MT Itr 2 MT SXS SXS MT MT SXS SXS MT MT SXS SXS SXS MT SXS SXS SXS MT SXS SXS SXS MT SYS SYS SYS	1546.1 1605.5 1690.7 1775.9 START 404.9 98.0 0.0 440.0 2996.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 USED F 18.0 25.0 240.0 419.0 419.0 5 (%) 97 97 97	.7 2.7 .1 3.0 .2 3.4 .1 4.3 25.0 25.0 Flow (lp	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 [98.0 [98.0 [200.0 [2577.0 [90.0 [2577.0 [90.0 [0.0	185. 184. 188. 192. STOCK Orill Wa Cement Sentoni Brine - I Guel Oil Pot Wat Cement Cement Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Cement Cot Wat Cot Wat C	6 - 8 - 9 -1 3 -2 TYPE 8 ter - Rig 1 - Conque 1 - Conque 1 - Conque 1 - Sent ter - Sent ter - Sent ter - Sent ter - Sent ter - Sent Sentine	-6.9 -9.9 14.7 20.4 9 ig querc Conc eror tinel mtine Sent el M 30 40 50 30 40	O O O O O O O O O O O O O O O O O O O	.2 .2 .1 .3 T 3 xs 14 xs 6 T 13 2 T 1 xs 14 xs 6 T 13 2 T 1 xs 11 13 4 T 2 xs xs 11 13 4 T 2 xs xs 11 13 4 T 2 xs xs 10 (kPa) 1379 1896 2241 1551 1896	-6.9 -9.9 -14.7 -20.4 ART U 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0 Pump D	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0 8.5 5.0 Data PTH (m) 1707.0		STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0 1000.0
Bulk Stoc On I	np Da Nat'l 12	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Bentonite - Cement 'G' Bentonite - Brine - Conc Drill Water - Cement 'G' Bentonite - Brine - Sent ta	E & UNITS g Rig 3 - Rig g Conqueror - Conqueror Conqueror Queror Sentinel - Sentinel - Sentinel inel Pump LNR(mm) 152 0 0 152 0 0 152 0 0 152	M3	1546.1 1605.5 1690.7 1775.9 START 1 404.9 98.0 0.0 440.0 996.0 90.0 0.0 0.0 0.0 0.0 0.0 0.0	1545 1605 1690 1775 JSED F 18.0 25.0 240.0 419.0 419.0 5 (%) 97 97 97 97	.7 2.7 .1 3.0 .2 3.4 .1 4.3 25.0 25.0 Flow (lp 15	4 185.6 9 184.8 4 188.9 8 192.3 STOCK S 386.9 [98.0 C 0.0 E 200.0 E 200.0 E 2577.0 F 90.0 C 0.0 C 0.0 E 0.0 C 0.0 C 0.0 E 0.0 C 0.0 C 0.0 E 0.0 C 0.0 E 0.0 C 0.0 C	185. 184. 188. 192. Drill Wa Cement Com Com Com Com Com Com Com Com	6	-6.9 -9.9 14.7 20.4 g g g querco a conc eror tinel M 30 40 50 30 40 50	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.2 .2 .1 .1 .3 T 3 xs 14 xs 6 T T 1 xs 14 xs 10 xs 14 xs 10 xs 14 xs 10 xs 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x	-6.9 -9.9 -14.7 -20.4 01.0 30.0 70.0 0.0 57.1 80.0 0.0 46.0 40.1 19.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-0.9 -1.2 -1.8 -2.9 JSED R 63.0 10.7 5.0 8.5 5.0 8.5 5.0 Pata PTH (m) 1707.0	MWD MWD MWD EC'D S	STOCK 238.0 1430.0 670.0 0.0 246.4 175.0 0.0 1146.0 431.6 214.0 0.0 1000.0 V (sg) 1.18

Casing											
DIAM. CSG ((mm	D SHOE MD (plan/Actual)	SHOE TVD (plan/Actual)	LOT (pl/Act)	FIT (pl/Act)		COMMENT					
13.375 340	785.0 743.	785.0 742	2.9 1.68 2.07	7							
	TYPE	LENGTH (m)	CSG ID (mm)	WT (kg/m)	GRADE	THREAD					
340mm (13.375 340mm (13.375 340mm (13.375 50 x 340mm (13) shoe jt 107 kg/m, cent) int jt 107 kg/m, cent mi) int jt 107 kg/m, cent mi 375") it 101 kg/m	nid 12.52 d jt 12.13 d jt 12.64	316 316 316 316	107.1 107.1 107.1 101.2	L-80 L-80 L-80	BTC BTC BTC BTC	•				
340mm (13.375" 476mm (18.75") RT to Wellhead	No-cross jt 101 kg/m wellhead + extension jt top	11.84 10.71 92.58	316 316 0	101.2 101.2 .0	L-80 L-80	BTC BTC					
Personnel : o	n Site =93										
4 Santos 3 TMT (RO\ 1 DrilQuip	35 ') 6 3	DOGC BHI Weatherford	7 DO 1 Ha 3 Ani	GC other/extra Iliburton adrill	21 2 7	1 TMT (marine) 2 IDFS 7 Schlum					
Safety, Inspe	ctions and Drills	Sun	nmary								
1900 dava since	3 days since last Fire and Abandon Ship Drill										
dava since	ast Lost Workday Case	2000									
		Jase									
8 days since	ast First Aid Case										
days since	ast Environmental Issue										
Shakers, Vol	umes and Losses [Data			ENGINEE	R M. Docherty / J. Si	ngh				
SHAKER 2 4 x SHAKER 2 4 x SHAKER 3 4 x SHAKER 4 4 x SHAKER 5	115 VOLUME AV 115 ACTIVE 134 HOLE RESERVE	AILABLE (m3) = 82.7 MIXING 142.4 SLUG 63.6 HEAVY	289 LOSS 0.0 DOW 0.0 SURF 0.0 DUM	SES (m3) = NHOLE 14 F.+EQUIP 15 PED (29 COMME 4.78 3.83 0.00	NTS					
Anchors	nc 1 : 137 Anc nc 6 : 104 Anc	2:75 Anc 3: 7:68 Anc 8:	145 Anc 4 : 91 Anc 9 :	118 Anc 8 0 Anc 9	5 : 109 10:0	RIS. TENS. (MT) : RISER ANGLE (deg):	109 0.0				
Workboats Pacific Sentinel Pacific Conqueror	Arrived @ Rig (Date) (Time) 2/9/02 20:45 31/8/02 5:05	Depart from Rig (Date)(Time)	EstimatedArrival (Po (Date)(Time) 5/9/02	rt) Weather VISIBILITY(nr WIND SP. (kt WIND DIR (dr	n): 5 s): 45.0 eg): 310	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) : MAX HEAVE (m) :	0.0 1,921.0 5.5 6.1				
				AIR TEMP (C)): 1015): 12.0	MAX PITCH (deg) : AVE ROLL (deg) : MAX ROLL (deg) :	2.0 3.0 1.2 1.8				
COMMENTS :	Pax on / off : Flt #1, 7 / 4; F	lt #2, 3/6.					1.0				

Santos DATE : Sep 05, 2002

WATER DEPTH (m) LAT

RT TO SEABED (m)

FROM : H. Flink / S. Hodgetts TO : O. Moller

							Casino #
Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,797.0 1,796.5 0.0 11.25 5.00	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 2.07	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$338,543 \$6,823,462
RT ABOVE SL (m)	25.0	CURRENT OP @ 0400) WOW.				

opportunity prevail.

Summary of period 00:00 to 24:00 hrs

Continued waiting on weather. General maintenance. Transferred bulk from P. Sentinel.

PLANNED OP.

70.5

95.5

TOP(m BRT)
1,259
1,522
1,561
1,743

Continue waiting on weather to abate. Offload supply vessels as windows of

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 05, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	BOP	00:00	00:30	0.50	1,797	Rigged drill floor to pull divertor.
IH1	ΤP	WEA	WO	00:30	06:00	5.50	1,797	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 6m, combined wave height 7.5m.
IH1	ΤP	WEA	WO	06:00	12:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 5m, combined wave height 7.5m.
IH1	ΤP	WEA	WO	12:00	18:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.2 deg, roll 0.8 deg, heave 4m, combined wave height 6m.
IH1	ΤP	WEA	WO	18:00	24:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.8 deg, roll 1.2 deg, heave 3m, combined wave height 6.5m.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 06, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤР	WEA	WO	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.8 deg, roll 1 deg, heave 4m, combined wave height 5.5m.

00:00 TO 24:00 HRS ON :	5/09/2002	
Comments	Recommendations	Rig Requirements
Whilst offloading drillwater a squawl approached OB postponing offtake. The P. Sentinel was disconnected and let go. When clear of the rig PS experienced a total electrical power failure (notified at 21:15). PS regained partial power (1 generator). Has no spares to repair and requires dockside work on return of the P. Conqueror.		
WPM Data COST TODAY : \$1 950		

WBM Data	COST T	ODAY: \$1,950	CUM.	WB	MUD COST: \$191,268		CUM. WBM+OBM COST: \$191,268								
Type :	КСІ РНРА	VISCOCITY (sec/ltr) PV (Pa.s) :	:	71 0	API FLUID LOSS (cm3/30min) :	5	CI: K+C*1000:	31,000 32400	SOLIDS (%vol) : H2O (%vol) :	11. 88.4					
FROM :	pit	YP (Pa.s) :		14	(mm) :	1	HARD/Ca :	360	OIL (%vol) :						
TIME :	21:00	GEL10s/10m/100m			HTHPFL (om2/20min) :	10	MBT (ppb) :	11.0	SAND :	1					
WEIGHT (sg):	1.24	(Pa.s) : 5	57	1		19	PM :		PH :	8.5					
TEMP (C) :		Fann 3/6/100 : 9	11	30	(mm) :	2	PF :	.1	PHPA (ppb) :	1.8					

DAILY DRILLING REPORT # 16

CASINO #1 Casino #1

Bit	Bit Data for Bit # 7 IADC # 5 1 7 Wear I 01 D L B G 02 R																						
SIZE ("): 12.25 NOZZLES Drilled over the last 24 brs Colouidad over the bit run.																							
SIZE MAN TYP SEF DEP DEP	E (") : NUFAC [*] PE : RIAL # : PTH IN (PTH OU	TURER : (mRT): T (mRT):	Ν	12.25 HU MXR09D L11DK 1797	AVE W AVE R FLOW PUMP HSI (kV	VOB (MT) : :PM : (Ipm) : PRESS.(Kpa): W/cm2) : 0.00					NOZZLE 3 x 16 x 0 x 0 x 0 x 0 x 0	5 M 0 C 0 I, 0 T 0 F	Drille METE ON BO ADC TOTA ROP (ed over th ERAGE (r OTTOM I DRILL. H AL REVS (m/hr) :	he last 24 hrs Ca m) : 0 CUM HRS : .0 CUM IRS : .0 CUM : 0 CUM ROP			Calc CUM.I CUM. CUM.I CUM.I ROP (alculated over the bit M.METERAGE (m) : M. ON BOT. HRS : M.IADC DR. HRS: M.TOT. REVS : P (m/hr) :			it run 0 .(.(
Sur Last	vey Tool	(Metho Type :	d:ľ	Min Curva	ture) MWD	(m	MD BRT)	TVI (mBF	TVD INCL (mBRT) DEG		AZ (deg)	COI A: (de	RR. Z ≆g)	'V' SECT (m)	DOGL (deg 30m	.EG g/ 1)	N/S (m)			E/W (m)	то	OL	TYPE
Мас	inetic I	Declinati	on :		0.00	1 1 1	1170.41170.31256.71256.61382.11381.9			0.93 1.44 1.87	192.5 181.2 182.2	19 18 18	2.5 1.2 2.2	4.9 3.1 -0.5	().1).2).1		4.9 3.1 -0.5		-0.2 -0.4 -0.5	2 MW 4 MW 5 MW	/D /D /D	
	1458.5 1458.2 2.13 183.9 183.9 -3.1 0.1 -3.1 -0.6 MWD 1546.1 1545.7 2.74 185.6 185.6 -6.9 0.2 -6.9 -0.9 MWD 1605.5 1605.1 3.09 184.8 184.8 -9.9 0.2 -9.9 -1.2 MWD 1690.7 1690.2 3.44 188.9 188.9 -14.7 0.1 -14.7 -1.8 MWD 1775.9 1775.1 4.38 192.3 -20.4 0.3 -20.4 -2.9 MWD																						
1030.7 1030.2 3.44 106.9 106.9 114.7 0.1 -14.7 -1.0 MWD 1775.9 1775.1 4.38 192.3 192.3 -20.4 0.3 -20.4 -2.9 MWD																							
Bui	1,																						
Sto	K cks	STOCK		E & UNITS	Mo	ST.	ART U	ISED	REC'D	S		STOC	KTY	PE & UN	TS	4 T	ST.	ART U			EC'D	S	
On	Ria	Pot Wate	- RIQ ar - F	g Ria	MT	38 9	6.9 8.0	8.4 24.0	24.0)	378.5 L 98.0 (Ceme	vater ent 'G	' - Rig ' - Ria	IV	11 SXS	23 143	38.0	48.0) 2(0.0	1	390.0 430.0
		Cement	HTB	- Rig	sxs		0.0	21.0	21.0	,	0.0 E	Bento	nite ·	- Rig	5	sxs	67	70.0					670.0
		Barite - F	Rig		SXS	20	0.0		1000.0) '	1200.0 E	Brine	- Rig		Ν	1T		0.0					0.0
		Helifuel	- Rig)	ltr	257	7.0			2	2577.0 F	uel C	Dil - C	Conquerc	or N	13	24	46.4					246.4
		Drill Wat	er - (Conqueror	MT	9	0.0				90.0 Pot Water - Conqueror MT 175.0										175.0		
		Cement	'G' -	Conqueror	SXS		0.0				0.0 Cement HTB - Conq					SXS		0.0					0.0
		Bentonit	e - C		SXS		0.0				0.0	Barite	- Co	nqueror	5	M3 431.6				7		1	146.0
		Drill Wat	onq	Sentinel	MT	48	0.0 4 0				284.0	Pot W	JII - 3 later	- Sentinei		/13 1T	43 21	31.0 14.0	7.	י ר			209 0
		Cement	'G' -	Sentinel	SXS	10	0.0				0.0	Ceme	ent H	TB - Sent	tinel s	sxs		0.0	0.	<u> </u>			0.0
		Bentonit	e - S	Sentinel	SXS		0.0				0.0 E	Barite	- Se	entinel	ę	SXS	100	0.0					0.0
		Brine - S	Senti	nel	MT		0.0				0.0												
Pu	nn Da	ata																					
				Pum	p Data	- las	t 24 h	rs								Slo	w F	Pump [Data				
#		TYPE		LNR(mm)	SPI	И	EFF	(%)	Flow	(lpm) SPP	(kPa	l)	SPM	SPP	(kPa)	DEF	РТН	(m)	Ν	١W	(sg)
1	Nat'l 1	2-P-160		152				97		(<u> </u>	0		30		1379			1	707.(,		1.18
				0				•		(0		40		1896	;						
	Not!! 4			0				07		(0		50		2241							
2	matri	2-P-100		152				97		(0		30 40		1551 1896							
				0						(0		50		2413	:						
3	Nat'l 1	2-P-160		152				97		()	0				0							
Cas	sing														1								
DIAM. CSG OD SHOE MD SHOE TVD LOT (mm) (plan/Actual) (plan/Actual) (pl/Act)												(FIT pl/Act)				CO	MMI	ENT				
13.375 340 785.0 743.0 785.0 742.9 1.68 2.07																							
	TYPE LENGTH (m) CSG ID (mm) WT (kg/m) GRADE THREAD																						
340	mm (1:	3.375") sh	ioe ji	t 107 kg/m,	cent m	nid	12	2.52		3	16		10)7.1	L	-80				BTC			
340	mm (1:	3.375") in 3.375") in	tjt1 +i+1	07 kg/m, ce	ent mid	jt it	12	2.13 2.64		3	16 16		10)7.1)7.1		-80 -80				BTC			
50 3	x 340m	m (13.375	5") jt	101 kg/m	ont mu	۲.	59	0.73		3	16		10)1.2		-80				BTC			
340	mm (13	3.375") No	o-cros	ss jt 101 kg	/m		11	.84		3	16		10)1.2	L	-80				BTC			
476mm (18.75") wellhead + extension jt 10.71 316 101.2 L-80 BTC I RT to Wellhead top 92.58 0 .0 <t< th=""><th></th></t<>																							
	.5	iloud top					32				~												

Personnel : on S	Site =81							
4 Santos	35	DOGC		7 DOGC	other/extra	21	TMT (marine)	
3 TMT (ROV)	4	BHI		2 Hallibu	urton	2	IDFS	
1 DrilQuip	2	Anadrill						
Safety, Inspection	ons and Drills	Su	ummary					
4 days since last	Fire and Abandon S	Ship Drill						
1801 days since last	Lost Workday Case							
days since last	Medical Treatment	Case						
0 days since last	First Aid Case							
days since last	Environmental Issue	;						
Shakers, Volum	es and Losses D	Data				ENGINEEF	R M. Docherty / J. Si	ngh
SHAKER 2 4 x 115	VOLUME AV	AILABLE (m3) =	301	LOSSES	5 (m3) = 11	COMMEN	ITS	
SHAKER 3 4 x 115	ACTIVE	79.5 MIXING	0.0	DOWNH	OLE 0.00			
SHAKER 4 4 x 84	HOLE	142.4 SLUG	0.0	SURF.+E	EQUIP 0.00			
SHAKER 5		79.5 HEAVY	0.0		5 11.13			
Anchors Anc 1	: 95 Anc	2:68 Anc 3	: 145	Anc 4 : 98	3 Anc 5 : 88	3	RIS. TENS. (MT) :	109
Anc 6	6: 88 Anc	7:70 Anc 8	: 107	Anc 9 : 0	Anc 10:0		RISER ANGLE (deg):	0.0
Workboats	Arrived @ Rig (Date)(Time)	Depart from Rig (Date)(Time)	EstimatedAr (Date)(T	rival (Port) ime)	Weather VISIBILITY(nm) :	8	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.C 2,019.C 3.C
Pacific Sentinel 2 Pacific Conqueror	2/9/02 20:45		5/9/02		WIND SP. (kts) : WIND DIR (deg) :	40.0 315	MAX HEAVE (m) : AVE PITCH (deg) :	6.1 1.8
					PRES.(mbars):	1012	MAX PITCH (deg) :	2.5
					AIR TEMP (C) :	13.0	AVE ROLL (deg) :	1.2
					•		MAX ROLL (deg)	15
COMMENTS : Pax	on / off : Flt #1, 0 / 8; F	It #2, 3/7.					(003)	1.0

Santos DATE : Sep 06, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

DAILY DRILLING REPORT

Well Data 1,797.0 AFE COST \$ 12,129,000 M.DEPTH (m BRT) CUR.HOLE SIZE (mm) 311 COUNTRY Australia TVD (m BRT) AFE BASIS : P&A 1,796.5 CASING OD (mm) 340 FIELD Casino DAILY COST : \$329,759 PROGRESS (m) 0.0 SHOE TVD (m BRT) 743 DRILL CO. **Diamond Offshore** DAYS FROM SPUD 12.25 0.00 CUM COST : \$7,153,221 FIT (sg) RIG Ocean Bounty 6.50 DAYS +/- CURVE LOT (sg) 2.07 RT ABOVE SL (m) 25.0 CURRENT OP @ 0400 WOW. WATER DEPTH (m) LAT 70.5 PLANNED OP. Continue waiting on weather to abate to pull hangoff tool. RT TO SEABED (m) 95.5

Summary of period 00:00 to 24:00 hrs

Continued waiting on weather. General maintenance. Offloaded P. Conqueror.

	-	
	FORMATION	TOP(m BRT)
	Skull Creek (?)	1,259
-	Nullawarre	1,522
	Belfast	1,561
	Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 06, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	wow	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 4.5m, combined wave height 6.5m.
IH1	ΤР	WEA	WOW	06:00	12:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 4.5m, combined wave height 6.5m.
IH1	ΤР	WEA	wow	12:00	18:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.8 deg, roll 1.2 deg, heave 4.8m, combined wave height 7.3m.
IH1	ΤР	WEA	wow	18:00	24:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2.2 deg, roll 1.8 deg, heave 5.8m, combined wave height 9.7m.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 07, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤР	WEA	WOW	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2.5 deg, heave 7-7.5m, combined wave height 9.75-10.5m.

WBM Data	COST T	ODAY : \$672	CUM.	WB	MUD COST: \$191,940		CUM. WBM+OBM COST: \$191,940								
Туре :	КСІ РНРА	VISCOCITY (sec/ltr) PV (Pa.s) :	:	72 0	API FLUID LOSS (cm3/30min) :	5	CI : K+C*1000 :	29,800 32400	SOLIDS (%vol) : H2O (%vol) :	11. 88.8					
FROM :	pit	YP (Pa.s) :		14	(mm) :	1	HARD/Ca :	300	OIL (%vol) :						
TIME : WEIGHT (sg): TEMP (C) :	20:00 1.24	GEL10s/10m/100m (Pa.s) : Fann 3/6/100 : 8	4 6 3 10	1 29	(cm3/30min) : HTHP CAKE (mm) :	20 2	MBT (ppb) : PM : PF :	12.0 .1	SAND : PH : PHPA (ppb) :	1 8.5 1.8					

Survey (Method : Min Cu	urvature)	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)	
						(deg)	(m)	30m)			
Magnetic Declination :	0.00	1170.4	1170.3	0.93	192.5	192.5	4.9	0.1	4.9	-0.2	MWD
		1256.7	1256.6	1.44	181.2	181.2	3.1	0.2	3.1	-0.4	MWD
		1382.1	1381.9	1.87	182.2	182.2	-0.5	0.1	-0.5	-0.5	MWD
		1458.5	1458.2	2.13	183.9	183.9	-3.1	0.1	-3.1	-0.6	MWD
		1546.1	1545.7	2.74	185.6	185.6	-6.9	0.2	-6.9	-0.9	MWD
		1605.5	1605.1	3.09	184.8	184.8	-9.9	0.2	-9.9	-1.2	MWD
		1690.7	1690.2	3.44	188.9	188.9	-14.7	0.1	-14.7	-1.8	MWD
		1775.9	1775.1	4.38	192.3	192.3	-20.4	0.3	-20.4	-2.9	MWD

Casino #1

<u>3 REPORT # 17</u> CASINO #1

—																		
Bulk	K	STOCK	TYPE &	UNITS		STAR	T USED	REC'D	STO	CK S	STOCK	TYPE & UN	ITS		START	USED	REC'D	STOCK
Stoc	ks	Fuel Oil	- Rig		М3	378.	5 7.2		3	71.3	Drill Wa	ter - Rig	Ν	ΛT	390.0	11.0		379.0
On F	Rig	Pot Wate	er - Ria		MT	98.	0 21.0	21.0		98.0	Cement	'G' - Ria	;	sxs	1430.0			1430.0
	•	Cement	HTB - F	Ria	SXS	0.	0			0.0	Bentoni	te - Ria		sxs	670.0			670.0
		Barite - F			272	1200	ົ		12		Brine - I	Ria	Ν	ЛТ	0.0			0.0
		Holifuol	- Pig		ltr	2577	<u>ว</u> า		25	77 0 1			n N	13	246.4	2.3	285.8	520.0
			- Kiy		NAT	2011.	0	400.0	20					/13 / T	240.4	2.3	205.0	029.9
			er - Col	nqueror	IVI I	90.	0	480.0	5	70.0		ter - Conque	TOT N	/11	175.0	5.0	75.0	245.0
		Cement	'G' - Co	onqueror	SXS	0.	0			0.0	Cement	HIB - Cond	querc	SXS	0.0			0.0
		Bentonit	e - Con	queror	SXS	0.	0		0.0		Barite -	Conqueror		SXS	1146.0			1146.0
		Brine - C	conquer	ror	MT	0.	0	0		0.0	Fuel Oi	I - Sentinel	Ν	ЛЗ	423.9	6.3		417.6
		Drill Wat	er - Sei	ntinel	MT	284.	C		2	84.0	Pot Wat	ter - Sentine	el N	ΛT	209.0	3.0		206.0
		Cement	'G' - Se	entinel	SXS	0.	0			0.0	Cement	t HTB - Sent	tinel	sxs	0.0			0.0
		Bentonit	e - Sen	ntinel	SXS	0.	0			0.0	Barite -	Sentinel		sxs	0.0			0.0
		Brine - S	Sentinel	1	MT	0	 N			0.0								
						0.				0.0								
Pun	nn Da	nta																
		11.0		Bumn	Data	lact) 4 hro					1		Sie		Data		
				Fump	Data		24 11/5							310	ow Pump	Dala		
#		TYPE		NR(mm)	SPI	М	EFF (%)	Flow (lpm)	SPP	' (kPa)	SPM	SPP	(kPa	i) D	EPTH (n	ן (ר	MW (sg)
1	Nat'l 1	2-P-160		152			97		0		0	30		1379	3	170	7.0	1.18
				0			0.		0		0	40		1896				
									0		0	50		2241				
2	2 Nat'l 12-P-160 15						97		0		0	30		1551				
									0		0	40		1896	3			
									0		0	50		2413	3			
3	3 Nat'l 12-P-160 152						97		0		0			0)			
Cas	ing																	
					<u> </u>													
		/SG 0D	0 (n)) .1\		SHUE IV					FII (pl/A ot)			U	OWINEN	I	
		(mm)	(pi	ian/Actua	u)		pian/Actu	tual) (pl/			, 							
13.3	375 34	40	78	35.0	743.0	7	85.0	742.9	742.9 1.68									
													1		1			
		T	YPE				LENGTH (m) () CSG ID (m			m) WT (kg/m)		RADE		THRE	AD	
340r	mm (13	3 375") sh	oe it 10	07 ka/m	cent m	hid	12 52	316			107.1		· ·	-80		BT	с.	
340	mm (13	3.375") in	t it 107	ka/m.ce	nt mid	it	12.13		316	, ;		107.1	1 1	-80		BT	с О	
340	mm (13	3.375") in	t it 107	ka/m. ce	nt mid	it	12.64		316	5		107.1	1	-80		BT	Ċ	
50 x	340mr	n (13.375	5") jt 10	1 kg/m		,	590.73		316	5		101.2	L-80			BT	C	
340r	nm (13	.375") No	-cross j	jt 101 kg/	m		11.84		316	5		101.2	ι	-80		BT	С	
476r	mm (18	3.75") wel	Ihead +	+ extensio	on jt		10.71		316	5		101.2	L	-80		BT	С	
RT t	o Well	head top					92.58		0			.0						
						-												
Pers	sonne	el : on S	Site =	80														
	4 Sant	05			36	DOGC				6	DOGC	other/extra			21 TM	IT (marii	ne)	
	2 TMT				4					- -	Hallibu	rton					,	
	3 1 1 1 1	(KOV)			4	БПІ				2	пашри	non			2 101	-3		
	2 Anac	drill																
Cat		onesti		اند م	le.			C										
Sale	ery, n	ispecti	ons a		15			Summ	iar y									
5	5 days s	since last	Fire a	and Aban	don Sł	nip Dri	11											
1000		ninga lagt	L oot V	Norkdov C	`~~~													
1002	2 days s	since last	LOSI	vorkuay C	ase													
35	5 days s	since last	Medic	cal Treatn	nent C	ase												
1	1 days s	since last	First A	Aid Case														
	davs	since last	Envir	onmental														
	uays			onnentai	15500													
Sha	kers,	Volum	es an	d Loss	es D	ata							E	ENGI	NEER I	M. Doche	erty / J.	Singh
SHA	KER 1	4 x 115					F (m 2)					(<u>,</u>					
SHA	KER 2	4 x 115		VOLUM		AILABI	_⊏ (m3) =		30'		199F2	(113) =	U	CON	IMENTS			
SHA	KER 3	4 x 115		ACTIV	VE 79.5 MIXING			١G	0.0) D D	OWNHC	DLE	0.00					
SHA	KER 4	4 x 84		HOLE		142.4	SLUG	;	0.0) SL	JRF.+E	QUIP	0.00					
SHA	KER 5			RESEF	RVE	79.5	HEAV	/Y	0.0	ם סו	JMPED		0.00					

Anchors	Anc Anc	1: 6:	86 91	Anc 2 : Anc 7 :	68 68	Anc 3 : Anc 8 :	154 98	Anc 4:11 Anc 9:0	3 Anc 5 : 104 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	109 0.0
Workboats		Arrive (Dat	ed @ Rig e)(Time)	De ([part from R Date)(Time)	ig	Estimated (Date	Arrival (Port))(Time)	Weather VISIBILITY(nm) :	8	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.0 2,058.6 3.0
Pacific Sentinel Pacific Conquer	or	6/9/02	15:50	6/9/	/02 15:5	60	6/9/02	23:00	WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	45.0 315 1009 13.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	6.1 1.8 2.5 1.2
COMMENTS :	Pax	c on / o	ff:Flt#1,2	2/3.							MAX ROLL (deg) :	1.5

Santos DATE : Sep 07, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

DAILY DRILLING REPORT

EPORT # 18 CASINO #1

Well Data M.DEPTH (m BRT) 1,797.0 AFE COST \$ 12,129,000 CUR.HOLE SIZE (mm) 311 COUNTRY Australia TVD (m BRT) AFE BASIS : P&A 1,796.5 CASING OD (mm) 340 FIELD Casino DAILY COST : \$320,452 PROGRESS (m) 0.0 SHOE TVD (m BRT) 743 DRILL CO. **Diamond Offshore** DAYS FROM SPUD 13.25 0.00 CUM COST : \$7,473,673 FIT (sg) RIG Ocean Bounty 7.00 DAYS +/- CURVE LOT (sg) 2.07 RT ABOVE SL (m) 25.0 CURRENT OP @ 0400 WOW. WATER DEPTH (m) LAT 70.5 PLANNED OP. Continue waiting on weather to abate to pull hangoff tool. RT TO SEABED (m) 95.5

Summary of period 00:00 to 24:00 hrs Continued waiting on weather. General maintenance.

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,561
Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 07, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	TP	WEA	wow	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2.5 deg, heave 7-7.5m, combined wave height 9.75-10.5m.
IH1	ТР	WEA	WOW	06:00	12:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2 deg, heave 7m, combined wave height 12m.
IH1	TP	WEA	wow	12:00	18:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2 deg, heave 6.1m, combined wave height 10.8m.
IH1	TP	WEA	wow	18:00	24:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 4.9m, combined wave height 8.5m.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 08, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	WOW	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 4m, wind 20/25kts, combined wave height 6.7m.

WBM Data	COST T	ODAY :	CUM	. WB	MUD COST: \$191,940	CUM. WBM+OBM COST: \$191,940				
Туре :	КСІ РНРА	VISCOCITY (sec/ltr) PV (Pa.s) :	:	70 0	API FLUID LOSS (cm3/30min) :	CI : K+C*1000 :	30,000 32400	SOLIDS (%vol) : H2O (%vol) :	11. 88.8	
FROM :	pit	YP (Pa.s) :		14	(mm) : 1	HARD/Ca :	300	OIL (%vol) :		
TIME :	20:00	GEL10s/10m/100m			HTHPFL	MBT (ppb) :	12.5	SAND :	.5	
WEIGHT (sg):	1.24	(Pa.s) :	4 6	5 1	CAKE	PM :		PH :	8.5	
TEMP (C) :		Fann 3/6/100 :	7 9	30	(mm) : 2	PF:	.1	PHPA (ppb) :	1.8	

Bit Data for Bit #	7 IADC #	4 3 7		Wear		BGO2R
SIZE (") :	12.25			NOZZLES	Drilled over the last 24 br	rs Coloulated over the bit rup
MANUFACTURER :	HU	AVE WOB (MT) :	0	3 x 16		
TYPE :	MXR09D	AVE RPM :		X 0		
SERIAL # :	L11DK	FLOW (Ipm) :	0	X 0		
DEPTH IN (mRT):	1797	PUMP PRESS.(Kpa):	0	X 0	TOTAL REVS	0 CUM.TOT. REVS : 0
DEPTH OUT (mRT):		HSI (kW/cm2) :	0.000	x 0	ROP (m/hr) :	ROP (m/hr) :

Casino #1

DAILY DRILLING	REPORT # 18
	CASINO #1

BHA	# 7	Leng	th (m): 29	3.1								D.C. (1) A	NN. VELO	CITY (mpn	n):	0
WT E	BLW JA	AR (MT):	32 STF	RING V	VT (MT):	1	149 TF	RQE	MAX (I	Nm):	0	D.C. (2)	NN VELO	CITY (mpm):	0
вна	WT (N	1T) ·	41 PIC	K UP \	WT (MT):		0 TF	RQE	ON (Nr	n):	0	H.W.D.P.	ANN VELO	OCITY (mp	, m):	0
	•••• (••			(OFF	WT (MT):		0 ті	RQE	OFF (N	lm):	C	D.P. ANN	I VELOCIT	Y (mpm) :	,.	0
BHA	DESCF	RIPTION : 3	11mm bit, NE	3 RR (:	solid float)	, 210mr	n MWD	/FEV	VD, 31 [.]	1mm RR	(totco rin	g), 1 x 203m	1 m DC, 31	Imm RR, 1	2 x 203	mm
		D	C, 203mm Ja	ar, 2 x	203mm D	C, x/o, 1	2 x 127	7mm	HWDP		`					
	т	OOL DESCR	IPTION	ι	LENGTH	OD	ID	s	SERIAL	.# Н	IRS		COMM	ENT		
NB F	R							GU	2151		77.0					
CDR								955	56		77.0					
Puls	er							231			77.0					
ILS								313	3272-2		//.0					
								829	,		6.0 77 0					
Str E									2143		77.0					
Jars	.1X							489	2144 07C		77.0					
СОМ	MENT	: Huna-c	off at wellhea	d. rise	r displaced	d to sea	L water a	nd la	ndina s	string rad	cked.]
		(1 , 1)				1	1					1		1		
Jour	/ey	(Method :	Min Curvat	ure)	MD	TVD			AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL	TYPE
Last	Tool T	Гуре :	I	MWD	(mBRT)	(mBR	1) DE	G	(deg)	AZ	SECT	(deg/	(m)	(m)		
Mag	netic F	Declination		0.00						(aeg)	(m)	30m)				
magi		Decimation	•	0.00	1170.4	1170	.3 0.	.93	192.5	192.5	4.9	0.1	4.9	-0.2	MWD	
					1256.7	1256	.6 1.	44	181.2	181.2	2 3.1	0.2	3.1	-0.4	MWD	
					1382.1	1381	.9 1.	.87	182.2	182.2	-0.5	0.1	-0.5	-0.5		
					1458.5	1458	.2 2.	74	183.9	183.9		0.1	-3.1	-0.6		
					1546.1	1545	./ 2.	.74	185.6		-6.9	0.2	-6.9	-0.9		
				1005.5	1 1000	.ij 3.	091	104.0	1 104.0	-9.9	0.2	-9.9	-1.Z			
1					1600 7	1600	2 2	44	100 0	100 0	147		117	1 1 0		
					1690.7	1690	.2 3.	44	188.9	188.9	-14.7	0.1	-14.7	-1.8	MWD	
					1690.7 1775.9	1690 1775	.2 3. 5.1 4.	.44 .38	188.9 192.3	188.9 192.3	-14.7 -20.4	0.1 0.3	-14.7 -20.4	-1.8 -2.9	MWD MWD	
Bulk		STOCK TYP	E & UNITS		1690.7 1775.9 START	1690 1775 USED F	0.2 3. 0.1 4. REC'D	.44 .38 STC	188.9 192.3 ОСК 5	188.9 192.3	-14.7 -20.4	0.1 0.3	-14.7 -20.4 START	-1.8 -2.9 USED RE	MWD MWD	госк
Bulk	ks	STOCK TYP Fuel Oil - Ri	E & UNITS g	M3	1690.7 1775.9 START 371.3	1690 1775 USED F 7.2	2 3. 5.1 4. REC'D	.44 .38 STC	188.9 192.3 ОСК 5 364.1 [188.9 192.3 STOCK T	-14.7 -20.4 TYPE & UN er - Rig	0.1 0.3 IITS MT	-14.7 -20.4 START 379.0	-1.8 -2.9 USED RE 21.0	MWD MWD	оск 357.0
Bulk Stoc	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water -	E & UNITS g Rig	M3 MT	1690.7 1775.9 START 371.3 98.0	1690 1775 USED F 7.2 25.0	2 3. 1 4. REC'D	.44 .38 STC .3	188.9 192.3 DCK 5 364.1 [98.0 (188.9 192.3 STOCK T Drill Wate Cement '	-14.7 -20.4 TYPE & UN er - Rig G' - Rig	0.1 0.3 IITS MT sxs	-14.7 -20.4 START 379.0 1430.0	-1.8 -2.9 USED RE 21.0	MWD MWD C'D ST	оск 357.0 430.0
Bulk Stoc On F	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE	E & UNITS g Rig 3 - Rig	M3 MT sxs	1690.7 1775.9 START 371.3 98.0 0.0	1690 1775 USED F 7.2 25.0	2 3. 1 4. REC'D 25.0	.44 .38 STC .3	188.9 192.3 DCK 5 364.1 [98.0 (0.0 [188.9 192.3 STOCK T Drill Wate Cement ' Bentonite	-14.7 -20.4 TYPE & UN er - Rig G' - Rig e - Rig	0.1 0.3 IITS MT sxs sxs sxs	-14.7 -20.4 START 379.0 1430.0 670.0	-1.8 -2.9 USED RE 21.0	MWD MWD	о ск 357.0 430.0 670.0
Bulk Stoc On F	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig	E & UNITS g Rig 3 - Rig	M3 MT sxs sxs	1690.7 1775.9 START 371.3 98.0 0.0 1200.0	1690 1775 USED F 7.2 25.0	2 3. 1 4. REC'D	44 38 STC 3	188.9 192.3 DCK 364.1 98.0 0.0 E 200.0 E	188.9 192.3 STOCK T Drill Wate Cement ' Bentonite Brine - R	-14.7 -20.4 TYPE & UN er - Rig G' - Rig e - Rig ig	0.1 0.3 MT SXS SXS MT	-14.7 -20.4 START 379.0 1430.0 670.0 0.0	-1.8 -2.9 USED RE 21.0	MWD MWD C'D ST	OCK 357.0 430.0 670.0 0.0
Bulk Stoc On F	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri	E & UNITS g Rig 3 - Rig g	M3 MT sxs sxs ltr	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0	1690 1775 USED F 7.2 25.0	2.2 3. 3.1 4. REC'D 25.0	.44 .38 STC .33 .12 .25	188.9 192.3 DCK \$ 364.1 [98.0 (0.0 [200.0 [577.0]	188.9 192.3 STOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil -	-14.7 -20.4 TYPE & UN er - Rig G' - Rig e - Rig ig - Conquer	0.1 0.3 IITS MT sxs sxs MT or M3	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9	-1.8 -2.9 USED RE 21.0	MWD MWD C'D ST	OCK 357.0 430.0 670.0 0.0 521.8
Bulk Stoc On F	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water -	E & UNITS g Rig 3 - Rig g Conqueror	M3 MT sxs sxs ltr MT	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0	1690 1775 USED F 7.2 25.0	25.0	.44 .38 STC .33 .12 .25 .5	188.9 192.3 DCK \$ 364.1 [98.0 [0.0] 200.0] 577.0] 570.0]	188.9 192.3 STOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate	-14.7 -20.4 -20	0.1 0.3 IITS MT sxs sxs Sxs MT or M3 eror MT	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD	OCK 357.0 430.0 670.0 0.0 521.8 240.0
Bulk Stoc On F	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G'	E & UNITS g Rig 3 - Rig g Conqueror · Conqueror	M3 MT sxs sxs ltr MT sxs	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0	1690 1775 USED F 7.2 25.0	25.0	44 38 STC 3 12 25	188.9 192.3 DCK \$ 364.1 [98.0 [0.0 [200.0 [577.0] 570.0 [0.0 [0.0]	188.9 192.3 STOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I	-14.7 -20.4 -20	0.1 0.3 IITS MT sxs sxs MT or M3 eror MT querc sxs	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D ST	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0
Bulk Stoc On F	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite -	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror	M3 MT sxs sxs ltr MT sxs sxs	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0	1690 1775 USED F 7.2 25.0	25.0	44 38 STC 3 12 25 5	188.9 192.3 DCK \$ 364.1 [98.0 (0.0] 200.0] 577.0] 570.0] 0.0 (0.0] 0.0]	188.9 192.3 TOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement H Barite - C	-14.7 -20.4	0.1 0.3 IITS MT sxs sxs MT or M3 eror MT querc sxs sxs	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D ST	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0
Bulk Stoc On F	ks ≀ig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite - Conc	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror queror	M3 MT sxs sxs ltr MT sxs sxs MT	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 0.0	1690 1775 USED F 7.2 25.0	25.0	44 38 STC 33 12 25 5	188.9 192.3 DCK \$ 364.1 [98.0 (0.0] 577.0] 570.0] 0.0 (0.0] 0.0 [0.0] 0.0] 0.0]	188.9 192.3 TOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Communication Co	-14.7 -20.4	0.1 0.3 IITS MT sxs sxs MT or M3 eror MT querc sxs sxs M3	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 200.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D ST	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 200.0
Bulk Stoc On F	ks {ig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite - Conc Drill Water -	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Queror Sentinel	M3 MT sxs sxs ltr MT sxs sxs MT MT	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 0.0 284.0	1690 1775 USED F 7.2 25.0	25.0	44 38 STC 3 12 25 5	188.9 192.3 364.1 [98.0 (0.0 E 200.0 E 577.0 F 0.0 (0.0 E 0.0 E 284.0 F 284.0 F	188.9 192.3 FTOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate	-14.7 -20.4 FYPE & UN er - Rig G' - Rig e - Rig ig - Conquer er - Conquer er - Conqueror - Sentinel er - Sentinel	0.1 0.3 IITS MT sxs sxs MT or M3 eror MT querc sxs sxs M3 el MT	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D ST 1	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0
Bulk Stoc On F	ks ₹ig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Conc Drill Water - Cement 'G'	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Queror Sentinel - Sentinel	M3 MT sxs sxs ltr MT sxs sxs MT MT Sxs	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 0.0 284.0 0.0	1690 1775 USED F 7.2 25.0	25.0	44 38 STC 3 12 25 5 2	188.9 192.3 364.1 [98.0 (0.0] 200.0] 577.0] 570.0] 0.0 (0.0] 284.0] 284.0] 0.0]	188.9 192.3 FOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I	-14.7 -20.4 FYPE & UN er - Rig G' - Rig ig - Conquer er - Conquer er - Conquer or - Conquer - Sentinel er - Sentinel HTB - Ser	0.1 0.3 IITS MT sxs sxs MT or M3 eror MT querc sxs sxs M3 el MT ttinel sxs	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D ST 1	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0
Bulk Stoc On F	ks ≀ig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - 0 Drill Water - Cement 'G' Bentonite -	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Queror Sentinel - Sentinel Sentinel	M3 MT sxs sxs ltr MT sxs sxs MT MT Sxs sxs	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 284.0 0.0 0.0	1690 1775 USED F 7.2 25.0	25.0	44 38 STC 3 12 25 5	188.9 192.3 364.1 [98.0 (0.0 [200.0 [577.0] 570.0 [0.0 (0.0 [284.0] 284.0 [0.0 (0.0 [284.0]	188.9 192.3 FOCK T Orill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S	-14.7 -20.4 FYPE & UN er - Rig G' - Rig ig - Conquer er - Conquer er - Conquer or - Conquer or - Sentinel er - Sentinel HTB - Ser Sentinel	0.1 0.3 ITS MT SXS SXS MT or M3 eror MT querc SXS SXS M3 el MT tinel SXS SXS	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D ST	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 0.0
Bulk Stoc On F	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Cement 'G' Bentonite - Bentonite - Bentonite -	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror queror Sentinel - Sentinel Sentinel inel	M3 MT sxs sxs ltr MT sxs sxs MT MT sxs sxs MT	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 284.0 0.0 0.0 0.0 0.0 0.0 0.0	1690 1775 USED F 7.2 25.0	25.0	44 38 STC 3 12 25 5 2	188.9 192.3 364.1 [98.0 (0.0 E 200.0 E 577.0 F 570.0 F 0.0 (0.0 E 0.0 F 284.0 F 0.0 (0.0 E 0.0 E 0.0 (0.0 E	188.9 192.3 STOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S	-14.7 -20.4	ITS MT SXS SXS MT or M3 eror MT querc SXS SXS M3 el MT tinel SXS SXS	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D S1 1	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 0.0
Bulk Stoc On F	ks ₹ig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Conc Drill Water - Cement 'G' Bentonite - Bentonite - Sent	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Queror Sentinel - Sentinel Sentinel inel	M3 MT sxs sxs ltr MT sxs sxs MT MT sxs sxs MT	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 284.0 0.0 0.0 0.0 0.0 0.0	1690 1775 USED F 7.2 25.0	25.0	44 38 33 12 25 5 2 2	188.9 192.3 364.1 [98.0 (0.0 [200.0 [577.0] 570.0 [0.0 (0.0 [284.0] 284.0 [0.0 (0.0] 284.0] 0.0 (0.0]	188.9 192.3 FTOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S	-14.7 -20.4 FYPE & UN er - Rig G' - Rig ig - Conquer er - Conquer er - Conquer or - Conquer er - Conquer er - Sentinel er - Sentinel	0.1 0.3 ITS MT sxs sxs MT or M3 eror MT querc sxs sxs M3 el MT tinel sxs sxs	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D ST 1	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 0.0
Bulk Stoc On F	ks ₹ig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite - Cement 'G' - Bentonite - Bentonite - Bentonite - Sentonite -	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Sentinel Sentinel Sentinel inel Pump	M3 MT sxs sxs ltr MT sxs sxs MT MT sxs sxs MT	1690.7 1775.9 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 284.0 0.0 0.0 0.0 0.0 - last 24 h	1690 1775 USED F 7.2 25.0	25.0	44 38 STC 3 12 25 5 5	188.9 192.3 364.1 [98.0 (0.0 [200.0 [577.0] 570.0 [0.0 (0.0 [0.0] 284.0 [0.0] 284.0 [0.0]	188.9 192.3 FTOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S	-14.7 -20.4 FYPE & UN er - Rig G' - Rig ig - Conquer er - Conquer er - Conquer er - Conquer or - Sentinel er - Sentinel HTB - Ser Sentinel	0.1 0.3 ITS MT SXS SXS MT or M3 eror MT querc SXS SXS M3 el MT tinel SXS SXS	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0	MWD MWD C'D ST 1	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 0.0
Bulk Stoc On F	ks Rig	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' Bentonite - Cement 'G' Bentonite - Brine - Sent	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Sentinel - Sentinel sentinel inel Pump LNR(mm)	M3 MT sxs sxs ltr MT sxs sxs MT MT sxs sxs MT Data	1690.7 1775.9 START 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1690 1775 7.2 25.0	5.1 3. REC'D 25.0 Flow (I	44 38 5TC 3 12 25 5 5 2 2 2 2 2	188.9 192.3 364.1 [98.0 (0.0 E 577.0 F 570.0 F 0.0 (0.0 E 0.0 F 284.0 F 0.0 (0.0 E 0.0 E 0.0 E	188.9 192.3 STOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S (kPa)	 -14.7 -20.4 <	0.1 0.3 ITS MT sxs sxs MT or M3 eror MT querc sxs sxs M3 el MT tinel sxs sxs sxs	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0 Data PTH (m)	MWD MWD C'D S1 1 1	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 0.0 (sg)
Bulk Stoc On F	ks kig np Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite - Drill Water - Cement 'G' - Bentonite - Bentonite - Bentonite - Sentonite - Bentonite - Sentonite - Bentonite - Sentonite - Bentonite - Sentonite - Bentonite - Sentonite - Bentonite - Sentonite	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Queror Sentinel Sentinel inel Pump LNR(mm) 152	M3 MT sxs sxs Itr MT sxs sxs MT MT sxs sxs MT Data	1690.7 1775.9 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0	1690 1775 7.2 25.0 	1.2 3. 3.1 4. REC'D 25.0 Flow (I	44 38 STC 33 12 25 5 2 3<	188.9 192.3 364.1 [98.0 (0.0 [200.0 [577.0] 570.0 [0.0 (0.0 [0.0] 284.0 [0.0] 284.0 [0.0] 284.0 [0.0]	188.9 192.3 FTOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S (kPa) 0	 -14.7 -20.4 Prype & UN er - Rig G' - Rig e - Rig ig - Conquer er - Conquer er - Conquer or - Conqueror - Sentinel er - Sentinel SPM 30 	0.1 0.3 IITS MT SXS SXS MT or M3 eror MT querc SXS SXS M3 el MT tinel SXS SXS SI SPP (kPa	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0 0.0 DE	-1.8 -2.9 USED RE 21.0 8.1 5.0 8.1 5.0 Data PTH (m) 1707.0	MWD MWD C'D ST 1 1	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 0.0 0.0 0.0
Bulk Stoc On F	ks kig np Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite - Conc Drill Water - Cement 'G' - Bentonite - Sent Sta TYPE 2-P-160	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Sentinel Sentinel inel Pump LNR(mm) 152 0 0	M3 MT sxs sxs Itr MT sxs sxs MT MT sxs sxs MT	1690.7 1775.9 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0	1690 1775 7.2 25.0 	5.1 4. REC'D 25.0 Flow (I	44 38 STC 33 12 25 5 2 2 2 2 33 12 25 5 2 2 33 33 33 33 33 33 33 33 34 35 36 37 37 38 39 39 310 310 32 32 33 34 35 36 37 38 39 310 310 32 33 34 35 36 37 <t< td=""><td>188.9 192.3 364.1 [98.0 (0.0 [200.0 [577.0] 570.0 [0.0 (0.0 [0.0] 284.0 [0.0] 284.0 [0.0] 284.0 [0.0]</td><td>188.9 192.3 FTOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S (kPa) 0 0</td><td> -14.7 -20.4 Prype & UN er - Rig G' - Rig e - Rig ig - Conquer er - Conquer er - Conqueror - Sentinel er - Sentinel SPM 300 40 </td><td>0.1 0.3 IITS MT SXS SXS MT Or M3 eror MT quer(SXS SXS M3 el MT tinel SXS SXS SI SPP (kPa 137 189 024</td><td>-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0 0.0 DE DE DE</td><td>-1.8 -2.9 USED RE 21.0 8.1 5.0 Data PTH (m) 1707.0</td><td>MWD MWD C'D ST 1 1</td><td>OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 (sg) 1.18</td></t<>	188.9 192.3 364.1 [98.0 (0.0 [200.0 [577.0] 570.0 [0.0 (0.0 [0.0] 284.0 [0.0] 284.0 [0.0] 284.0 [0.0]	188.9 192.3 FTOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S (kPa) 0 0	 -14.7 -20.4 Prype & UN er - Rig G' - Rig e - Rig ig - Conquer er - Conquer er - Conqueror - Sentinel er - Sentinel SPM 300 40 	0.1 0.3 IITS MT SXS SXS MT Or M3 eror MT quer(SXS SXS M3 el MT tinel SXS SXS SI SPP (kPa 137 189 024	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0 0.0 DE DE DE	-1.8 -2.9 USED RE 21.0 8.1 5.0 Data PTH (m) 1707.0	MWD MWD C'D ST 1 1	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 (sg) 1.18
Pun #	h p Da	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite - Conc Drill Water - Cement 'G' - Bentonite - 2 Brine - Sent Sta TYPE 2-P-160	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Sentinel Sentinel inel Pump LNR(mm) 152 0 0 152	M3 MT sxs sxs Itr MT sxs sxs MT MT sxs sxs MT	1690.7 1775.9 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1690 1775 7.2 25.0 	1.2 3. 3.1 4. REC'D 25.0 Flow (I	44 38 STC 33 12 25 5 22 5 22 5 22 5 0 0 0 0 0 0	188.9 192.3 364.1 [98.0 (0.0 E 200.0 E 577.0 F 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E	188.9 192.3 FTOCK T Drill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S (kPa) 0 0 0	 -14.7 -20.4 Prype & UN er - Rig G' - Rig e - Rig ig - Conquer er - Conquer er - Conquer or - Conqueror - Sentinel er - Sentinel SPM 300 40 500 200 	0.1 0.3 IITS MT sxs sxs MT or M3 eror MT quer(sxs sxs M3 el MT tinel sxs sxs SPP (kPa 137 189 224	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0 0.0 DE DE 5 1 1	-1.8 -2.9 USED RE 21.0 8.1 5.0 Data PTH (m) 1707.0	MWD MWD C'D ST 1 1 1 1 MW	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 (sg) 1.18
Pun # 2	ks kg np Da Nat'l 1	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite - 0 Brine - Conc Drill Water - Cement 'G' - Bentonite - 2 Brine - Sent TYPE 2-P-160	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Sentinel Sentinel inel Pump LNR(mm) 152 0 152 0	M3 MT sxs sxs Itr MT sxs sxs MT MT sxs sxs MT	1690.7 1775.9 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 0.0 284.0 0.0 0.0 0.0 0.0 284.0 0.0 0.0 0.0 0.0 - last 24 h M EFF	1690 1775 7.2 25.0 	25.0	44 38 STC 33 12 25 5 22 5 22 5 22 5 0 0 0 0 0 0 0 0 0	188.9 192.3 364.1 [98.0 (0.0 E 200.0 E 577.0 F 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E	188.9 192.3 FTOCK T Orill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S (kPa) 0 0 0 0 0 0 0 0 0 0 0 0 0	-14.7 -20.4	0.1 0.3 IITS MT sxs sxs MT or M3 eror MT quer(sxs sxs M3 el MT tinel sxs sxs SPP (kPa SPP (kPa 137) 189) 224 137)	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0 Data PTH (m) 1707.0	MWD MWD C'D ST 1 1 1 1 MW	OCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 (sg) 1.18
Pun # 1	ks kig np Da Nat'l 1	STOCK TYP Fuel Oil - Ri Pot Water - Cement HTE Barite - Rig Helifuel - Ri Drill Water - Cement 'G' - Bentonite - Conc Drill Water - Cement 'G' - Bentonite - 2 Brine - Sent tta	E & UNITS g Rig 3 - Rig g Conqueror Conqueror Conqueror Queror Sentinel - Sentinel inel Pump LNR(mm) 152 0 0 152 0 0 0 0	M3 MT sxs sxs Itr MT sxs sxs MT MT sxs sxs MT	1690.7 1775.9 371.3 98.0 0.0 1200.0 2577.0 570.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1690 1775 7.2 25.0 irs 5 (%) 97 97	1.2 3. 3.1 4. REC'D 25.0 Flow (I	44 38 STC 3 12 25 5 22 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	188.9 192.3 364.1 [98.0 (0.0 E 200.0 E 577.0 F 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E 0.0 (0.0 E	188.9 192.3 STOCK T Orill Wate Cement ' Bentonite Brine - R Fuel Oil - Pot Wate Cement I Barite - C Fuel Oil - Pot Wate Cement I Barite - S (kPa) 0 0 0 0 0 0 0 0 0 0 0 0 0	-14.7 -20.4	0.1 0.3 IITS MT sxs sxs MT or M3 eror MT quer(sxs sxs M3 el MT tinel sxs sxs SPP (kPa SPP (kPa 137) 189) 224 155 189)	-14.7 -20.4 START 379.0 1430.0 670.0 0.0 529.9 245.0 0.0 1146.0 417.6 206.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-1.8 -2.9 USED RE 21.0 8.1 5.0 Data PTH (m) 1707.0	MWD MWD 1 1	TOCK 357.0 430.0 670.0 0.0 521.8 240.0 0.0 146.0 417.6 206.0 0.0 0.0 (sg) 1.18

Casing												
DIAM. C	SG OD (mm)	Sł (pla	HOE MD in/Actual)	SI (pl	HOE TVD an/Actual)		LOT pl/Act)	(p	FIT I/Act)		COMMENT	
13.375 34	10	78	5.0 743.0	785	5.0 74	2.9 1	68 2.07	7				
	٦	YPE		LE	NGTH (m)	CSG	ID (mm)	WT (kg/m) (GRADE	THREAD	
340mm (13	.375") sh	ioe jt 10	7 kg/m, cent m	id	12.52	31	6	107	.1	L-80	BTC	
340mm (13	.375") in	t jt 107 k	g/m, cent mid	jt	12.13	31	316		.1	L-80	BTC	
340mm (13	.375") in	t jt 107 k	(g/m, cent mid	jt –	12.64	31	о́	107	.1	L-80	BIC	
340mm (13	375") No	-cross it	101 kg/m		11 84	31	6	101	2	L-80	BTC	
476mm (18	.75") we	lhead +	extension it		10.71	31	6	101	.2	L-80	BTC	
RT to Wellh	nead top			9	92.58	0		.0)			
Personne	el : on s	Site =8	0									
4 Santo	DS		36 I	DOGC			6 DO	GC othe	r/extra	21	1 TMT (marine)	
3 TMT	(ROV)		4 1	зні			2 Hal	liburton		2	2 IDFS	
2 Anad	rill											
Safety, In	specti	ons ar	d Drills		Su	nmary						
6 days s	ince last	Fire ar	nd Abandon Sh	ip Drill								
1803 days s	ince last	Lost W	orkday Case									
36 days s	ince last	Medica	al Treatment C	ase								
2 days s	ince last	First Ai	d Case									
days s	ince last	Enviro	nmental Issue									
Shakers,	Volum	es and	l Losses Da	ata						ENGINEE	R M. Docherty / J. Si	ngh
SHAKER 1	4 x 115		VOLUME AVA	ILABLE	(m3) =	30	1 LOSS	ES (m3)) = 0	сомме	NTS	
SHAKER 3	4 x 115		ACTIVE	79.5	MIXING	0			0.00			
SHAKER 4	4 x 84		HOLE	142.4	SLUG	0	0 SURF	.+EQUI	> 0.00			
SHAKER 5			RESERVE	79.5	HEAVY	0	0 DUMF	PED	0.00			
Anchors	Anc	1: 10	0 Anc 2	: 70	Anc 3 :	132	Anc 4 :	86	Anc 5 : 8	4	RIS. TENS. (MT) :	104
	Anc	6: 98	Anc 7	: 77	Anc 8 :	104	Anc 9 :	0	Anc 10:0)	RISER ANGLE (deg):	0.0
Workboa	ts	Arrived	@ Rig D	epart fro	om Rig	Estimated	Arrival (Por	^{rt)} We	ather		STACK ANGLE(deg): V.D.L. (MT)	0.0 2.058 f
		(Date)	(Time)	(Date)(T	ime)	(Date	(iime)	VIS	IBILITY(nm):	5	AVE HEAVE (m) :	6.1
Pacific Sentir	nel		6	/9/02	15:50	6/9/02	23:00	- wir	ID SP. (kts) :	50.0	MAX HEAVE (m) :	7.5
Pacific Conq	ueror	6/9/02	15:50	-				WIN	ID DIR (deg) :	270	AVE PITCH (deg) :	2.0
								PRE	S.(mbars):	1016	MAX PITCH (deg) :	2.5
								AIR	TEMP (C) :	11.0	AVE ROLL (deg) :	1.0
COMMENTS	COMMENTS : Pax on / off : no fit MAX ROLL (deg) : 1.5											

Santos DATE : Sep 08, 2002

FROM : H. Flink / S. Hodgetts то : O. Moller

DAILY DRILLING REPORT

19 CASINO #1

Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,797.0 1,796.5 0.0 14.25 8.00	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 2.07	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$324,346 \$7,798,019		
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25.0 n) LAT 70.5 n) 95.5	CURRENT OP @ 0400 PLANNED OP.	WOW. Continue	waiting on weather to aba	ate to pul	hangoff tool.			
Summary of peri	Summary of period 00:00 to 24:00 hrs								

Continued waiting on weather. General maintenance.

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,561
Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 08, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	WOW	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 6m, wind 20/25knts, combined wave height 6.7m.
IH1	ΤР	WEA	wow	06:00	12:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1 deg, heave 5 m, wind 20/25 knts, combined wave height 5.8 m.
IH1	ΤР	WEA	wow	12:00	18:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2.5 deg, roll 2 deg, heave 5 m, wind 35/45 knts, combined wave height 9.4 m.
IH1	ΤР	WEA	wow	18:00	24:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2.2 deg, roll 2 deg, heave 6 m, wind 25/40 knts, combined wave height 8.5 m.

ACTIVITY FOR PERIOD 0000 HRS TO 04:00 HRS ON Sep 09, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	wow	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 3 deg, roll

WBM Data	COST T	ODAY : \$3,789	CUM	. WB	MUD COST: \$195,729		CUM. WBM+OBM COST: \$195,729						
Туре :	КСІ РНРА	VISCOCITY (sec/ltr) PV (Pa.s) :	:	59 0	API FLUID LOSS (cm3/30min) :	4	CI : K+C*1000 :	31,000 32400	SOLIDS (%vol) : H2O (%vol) :	11. 89.2			
FROM :	pit	YP (Pa.s) :		12	(mm) :	1	HARD/Ca :	320	OIL (%vol) :				
TIME :	19:00	GEL10s/10m/100m			HTHPFL	04	MBT (ppb) :	11.0	SAND :	.5			
WEIGHT (sg):	1.22	(Pa.s) :	35	51	(CM3/30min):	21	PM :		PH :	9.0			
TEMP (C) :		Fann 3/6/100 : 6	6 8	3 25	(mm) :	2	PF :	.1	PHPA (ppb) :	1.8			

Survey (Method : N	/lin Curvature)	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)	
						(deg)	(m)	30m)			
Magnetic Declination :	0.00	1170.4	1170.3	0.93	192.5	192.5	4.9	0.1	4.9	-0.2	MWD
		1256.7	1256.6	1.44	181.2	181.2	3.1	0.2	3.1	-0.4	MWD
		1382.1	1381.9	1.87	182.2	182.2	-0.5	0.1	-0.5	-0.5	MWD
		1458.5	1458.2	2.13	183.9	183.9	-3.1	0.1	-3.1	-0.6	MWD
		1546.1	1545.7	2.74	185.6	185.6	-6.9	0.2	-6.9	-0.9	MWD
		1605.5	1605.1	3.09	184.8	184.8	-9.9	0.2	-9.9	-1.2	MWD
		1690.7	1690.2	3.44	188.9	188.9	-14.7	0.1	-14.7	-1.8	MWD
		1775.9	1775.1	4.38	192.3	192.3	-20.4	0.3	-20.4	-2.9	MWD

Bul	k	STOCK	TYPE &			STAR	T USED	REC'D	STO	CK S	TOCK	TYPE & UN	ITS		START	USED	REC'D	STOCK
Sto	cks	Fuel Oil	- Ria		M3	364	84	KLO D	3	55 7 F	orill Wa	ter - Ria	<u></u>	ит	357.0	46.0	NLO D	311.0
On	Ria	Pot Wate	er - Ria		MT	98.0) 24.0	24.0	0	98.0 C	Cement	'G' - Rig		sxs	1430.0	10.0		1430.0
•		Cement	HTB - F	Ria	sxs	0.0)	21.0		0.0 F	Sentoni	te - Rig		sxs	670.0			670.0
		Barite - F	Ria	ug	SXS	1200.0)		12	00.0 F	Brine -	Ria	1	ИТ	0.0			0.0
		Helifuel	- Ria		ltr	2577.0)		25	77.0 F	uel Oi	l - Conquera	or l	M3	521.8	9.8		512.0
		Drill Wat	er - Cor	naueror	MT	570.0)		5	70.0 F	ot Wat	ter - Conque	eror l	МΤ	240.0	5.0		235.0
		Cement	'G' - Co	naueror	SXS	0.0)		-	0.0 0	Cement	HTB - Con	auerc	SXS	0.0			0.0
		Bentonit	e - Con	queror	SXS	0.0)			0.0 E	Barite -	Conqueror		SXS	1146.0			1146.0
		Brine - C	onauer	or	MT	0.0)			0.0 F	uel Oi	I - Sentinel		M3	417.6			417.6
		Drill Wat	er - Ser	ntinel	MT	284.0)		2	84.0 F	ot Wa	ter - Sentine	el l	МΤ	206.0			206.0
		Cement	'G' - Se	ntinel	SXS	0.0)			0.0 0	ement	t HTB - Sen	tinel	SXS	0.0			0.0
		Bentonit	e - Sen	tinel	SXS	0.0)			0.0 E	Barite -	Sentinel		SXS	0.0			0.0
		Brine - S	entinel		ΜТ	0.0)			0.0								
Pur	np Da	ita																
				Pump	Data	- last 2	4 hrs							Slo	w Pump	Data		
#		TYPE	LN	NR(mm)	SPI	N I	EFF (%)	Flow (lpm)	SPP	(kPa)	SPM	SPP) (kPa	i) D	EPTH (m) N	/W (sg)
1	Nat'l 1	2-P-160		152			97		0		0	30		1379	9	1707	7.0	1.18
				0					0		0	40		1896	5			
2	Not'l 1	2 D 160		152			07		0		0	50		2241				
2	inati i	2-1-100		0			51		0		0	40		1896				
				0					0		0	50		2413	3			
3	Nat'l 1	2-P-160		152			97		0		0			C)			
Cas	sing																	
DI	AM. C	SG OD	S	HOE MD)		SHOE TV	DE TVD LO				FIT	COMMENT				Г	
		(mm)	(pl	an/Actua	al)	(plan/Actu	al)	pl/Act)		(pl/Act)							
13.	375 34	40	78	85.0	743.0	7	85.0	742.9	68 2	.07								
		T	YPE			l	ENGTH (m) (CSG I	D (mm) \	VT (kg/m)	G	RADE	<u> </u>	THRE	AD	7
340	mm (13	375") sh	oe it 10)7 ka/m	cent m	hid	12 52		316			107 1		1 -80		BT	<u></u>	-
340	mm (13	3.375") int	t it 107	ka/m. ce	nt mid	it	12.13		316	, }		107.1		L-80		BT		
340	mm (13	.375") int	t jt 107	kg/m, ce	nt mid	jt	12.64		316	6		107.1		L-80		BT	С	
50 >	340mr	m (13.375	5") jt 10	1 kg/m			590.73		316	6		101.2		L-80		BT	C	
340	mm (13	.375") No	-cross j	t 101 kg/	m		11.84		316	5		101.2		L-80		BT		
4/6	mm (18 to Welli	5.75") Wel	inead +	- extensio	on jt		10.71		316	Ď		101.2		L-80		BI	U	
		leau top					32.30		0			.0						
Per	sonne	el : on S	Site =	80														
	4 Sante	os			36	DOGC				6 [DOGC	other/extra			21 TN	IT (marin	e)	
	3 TMT	(ROV)			4	BHI				21	Hallibu	rton			2 IDF	-s		
	2 Anac	drill			•					-					-			
	2 / 11/40																	
Saf	ety, Ir	nspection	ons a	nd Dril	ls			Summ	ary									
	0 days s	since last	Fire a	nd Aban	don Sł	nip Dril	I											
180	4 days s	since last	Lost V	Vorkday C	Case													
3	37 days since last Medical Treatment Case																	
	3 days since last First Aid Case																	
	days since last Environmental Issue																	
Sha	KER 1		es an	a Loss	es Da	ata								ENGI	NEER I	M. Doche	rty / J. S	Bingh
SH4	SHAKER 1 4 x 115 SHAKER 2 4 x 115 VOLUME AVAILABLE (m3) =							327	7 LO	SSES	(m3) =	0	CON	MENTS				
SHA	KER 3	4 x 115		ACTIV	E	79.5	MIXIM	١G	0.0		WNHC	DLE	0.00	Prep	ared pre	emix.		
SHA	KER 4	4 x 84		HOLE		139.1	SLUC	3	0.0	o su	RF.+E	QUIP	0.00		-			
SHA	KER 5			RESER	RVE	108.1	HEA\	/Y	0.0	0 DL	IMPED	ED 0.00						

Anchors	Anc 1 Anc 6	: 100 : 86)	Anc 2 : 91 Anc 7 : 68	Anc 3 Anc 8	: 156 : 95	Anc 4:12 Anc 9:0	27 Anc 5 : 82 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	18 0.0
Workboats	A	rrived ((Date) (@ Rig Time)	Depart (Date	from Rig)(Time)	Estim (D	atedArrival (Port) pate)(Time)	Weather VISIBILITY(nm) :	5	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.0 2,095.7 6.0
Pacific Sentinel Pacific Conquere	or 6/	9/02	15:50	6/9/02	15:50	6/9/0	2 23:00	WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	40.0 250 1016 13.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	6.0 2.2 2.5 2.0
COMMENTS :	Pax o	n / off :	no flt							MAX ROLL (deg) :	2.2

Santos DATE : Sep 09, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

DAILY DRILLING REPORT # 20 CASINO #1

Well Data			1 707 0		211		12 129 000
COUNTRY	Australia	TVD (m BRT)	1,796.5	COR.HOLE SIZE (IIIII) CASING OD (mm)	340	AFE BASIS :	P&A
FIELD	Casino	PROGRESS (m)	0.0	SHOE TVD (m BRT)	743	DAILY COST :	\$297,045
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	15.25	FIT (sg)	0.00	CUM COST :	\$8,095,064
RIG	Ocean Bounty	DAYS +/- CURVE	10.00	LOT (sg)	2.07		
RT ABOVE SL (m WATER DEPTH () 25.0 m) LAT 70.5	CURRENT OP @ 0400) WOW.				
RT TO SEABED (m) 95.5	PLANNED OP.	Continue	waiting on weather to aba	te to reco	onnect LMRP.	

Summary of period 00:00 to 24:00 hrs

Continued waiting on weather. General maintenance. Unlatched LMRP @12:54 due to deteriorating weather contitions.

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,561
Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 09, 2002

PHS	CL	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	wow	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 3 deg, roll 2.5 deg, heave 6 m, wind 30/45 knts, combined wave height 8.5 m.
IH1	ΤР	WEA	WOW	06:00	12:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 3 deg, roll 2.5 deg, heave 5.5 m, wind 40/45 knts, combined wave height 8.2 m.
IH1	TP	WEA	wow	12:00	13:30	1.50	1,797	Waiting on weather. Weather conditions deteriorated rapidly. 12:55:- Pitch 4 deg, roll 2 deg, heave 10 m, wind 30/45 knts, combined wave height 12.1 m. Situation:- Blue pod hose off saddle, tangled in slip jt; #4 Rucker, some strands parted at sheave; slip jt extreme lateral movement, violent heave of 8-10m; #8 Rucker, line chafed on sheave mounting support. Attempted to re-position Rig, - #2 anchor not holding, #3 anchor reported max 289kN (650 Kips). 12:53: OIM informed Santos Rep of decision to unlatch. 12:54: Disconnected at LMRP, commenced de-ballasting Rig. 13:05: Slacked leeward chains #: 5,6,7 & 8 and guidelines. 13:20: Completed slacking chains, propulsion ready for use. 13:23: Rig at 60 feet draft.
IH1	ΤP	WEA	wow	13:30	14:00	0.50	1,797	Waiting on weather. Weather conditions continued to deteriorate. Pitch 4 deg, roll 1.8 deg, heave 10 m, wind 30/45 knts, combined wave height 13.4 m.
IH1	ΤР	WEA	wow	14:00	18:00	4.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 3.5 deg, roll 1.8 deg, heave 9.1 m, wind 30/40 knts, combined wave height 11.3 m.
IH1	ΤP	WEA	WOW	18:00	24:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 2 deg, roll 1.8 deg, heave 6.1 m, wind 30/35 knts, combined wave height 8.8 m.

ACTIV	ΊΤΥ	FOR	PERI	OD 000	0 HRS	TO 06:	00 HRS (DN Sep 10, 2002
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	WOW	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 6.1 m, wind 20/30 knts, combined wave height 6.1 m.

WBM Data	COST T	ODAY :	CUN	. WE	3 MUD COST: \$195,729		CUM. WBM+OBM COST: \$195,729							
Туре :	KCI PHPA	VISCOCITY (sec/ltr) PV (Pa.s) :	:	58 (API FLUID LOSS (cm3/30min) : FILTER CAKE	1	CI : K+C*1000 :	30,500 32400	SOLIDS (%vol) : H2O (%vol) :	10. 89.5				
FROM :	pit	YP (Pa.s) :		12	(mm) :	1	HARD/Ca :	300	OIL (%vol) :					
TIME :	19:00	GEL10s/10m/100m			HTHPFL		MBT (ppb) :	12.0	SAND :	.5				
WEIGHT (sg):	1.22	(Pa.s) :	35	5 1	(cm3/30min) :	22	PM:		PH :	9.0				
TEMP (C) :		Fann 3/6/100 : 6	6 8	3 26	HTHP CAKE	2	PF :	.1	PHPA (ppb) :	1.8				

Survev	(Method ·	Min Curvat	ure)	МП				۸7	COPP	'\/'		NI/S	E/\//	TOOL	TVDE
				(mBRT)	(mBR1	-) D	EG	(dea)	AZ	SECT	(dea/	(m)	(m)	TOOL	
Last 1001	rype.	I		、	Ì	´		(***))	(deg)	(m)	30m)		()		
Magnetic I	Declination	:	0.00	1170.4	1170.	3 0).93	192.5	192.5	6 4.9	0.1	4.9	9 -0.2	MWD	
				1256.7	1256.	6 1	1.44	181.2	181.2	2 3.1	0.2	3.1	1 -0.4	MWD	
				1382.1	1381.	9 1	.87	182.2	182.2	-0.5	0.1	-0.8	5 -0.5	MWD	
				1458.5	1458.	2 2	2.13	183.9	183.9		0.1	-3.	1 -0.6	MWD	
				1546.1	1545.	1 2	2.74	185.0	185.6	-6.9	0.2	-6.9	-0.9		
				1690.7	1690.	2 3	3.44	188.9	188.9	-14.7	0.2	-14.7	7 -1.8	MWD	
				1775.9	1775.	1 4	1.38	192.3	192.3	-20.4	0.3	-20.4	4 -2.9	MWD	
Bulk	STOCK TYP	PE & UNITS		START U	JSED R	EC'D	ST	оск :	STOCK 1	YPE & UN	ITS	START	USED RE	C'D S	тоск
Stocks	Fuel Oil - R	lig	М3	355.7	10.8			345.0	Drill Wat	er - Rig	МТ	311.0	15.0		296.0
On Rig	Pot Water -	Rig	MT	98.0	24.0	24.0		98.0	Cement	G' - Rig	SXS	1430.0		1	430.0
	Cement HT	B - Rig	SXS	0.0				0.0	Bentonit	e - Rig	SXS	670.0			670.0
	Barite - Rig		SXS	1200.0			1	200.0	Brine - R	ig	МТ	0.0			0.0
	Helifuel - R	ig	ltr	2577.0 3	385.0		2	192.0	Fuel Oil	- Conquero	or M3	512.0	7.2		504.8
	Drill Water	- Conqueror	MT	570.0				570.0	Pot Wate	er - Conque	ror MT	235.0	5.0		230.0
	Cement 'G'	- Conqueror	SXS	0.0				0.0	Cement	HTB - Con	querc sxs	0.0			0.0
	Bentonite -	Conqueror	SXS	0.0				0.0	Barite - 0	Conqueror	SXS	1146.0		1	146.0
	Brine - Con	queror	MT	0.0				0.0	Fuel Oil	- Sentinel	М3	417.6			417.6
	Drill Water	- Sentinel	MT	284.0				284.0	Pot Wate	er - Sentine	I MT	206.0			206.0
	Cement 'G'	- Sentinel	SXS	0.0				0.0	Cement	HTB - Sen	tinel sxs	0.0			0.0
	Bentonite -	Sentinel	SXS	0.0				0.0	Barite - S	Sentinel	SXS	0.0			0.0
	Brine - Sen	tinel	MT	0.0				0.0							
Pump Da	ata														
		Pumn	Data	last 24 h	rs						SI	ow Pump	Data		
#	TVDE				(%)	Flow	(Inm)	SDE		SDM			DULU	N/1\A/	
π					(70)	1000	(ipiii)		(Ki a)				-1 111 (111)		(39)
1 Nat'l 1	2-P-160	152			97		0		0	30	137	9	1707.0		1.18
		0					0		0	40 50	189	6 1			
2 Nat'l 1	2-P-160	152			97		0		o	30	155	1			
		0					0		0	40	189	6			
		0					0		0	50	241	3			
3 Nat'l 1	2-P-160	152			97		0		0			0			
Casing															
Casing											_				
DIAM. C	CSG OD	SHOE MD)	SHO	DE TVD			LOT		FIT		CC	OMMENT		
	(mm)	(plan/Actua	il)	(plai	n/Actual)		(pl/Act)	(pl/Act)					
13.375 3	40	785.0	743.0	785.0	0	742.9) 1	.68 2	2.07						
							<u></u>			T (ka/m)		- 1			
		L			GIII (III	<u> </u>	030			i (kg/iii)	GRAD		THINEAD		
340mm (13	3.375") shoe	jt 107 kg/m,	cent m	id 12	2.52		31	6		107.1	L-80		BTC		
340mm (13	3.375") int jt	nt mid	jt 12	2.13		31	6		107.1	L-80		BTC			
50 x 340m	5.375) IIII JI m (13.375")	ni ma	JL 12	2.04 0.73		21	6		107.1	L-00		BTC			
340mm (13	375") No-cr	m	11	1.84		31	16		101.2	L-80		BTC			
476mm (18	3.75") wellhe	on jt	10	0.71		31	6		101.2	L-80		BTC			
RT to Well	head top	92	2.58		0)		.0							
Personn															
4 Sant	OS		36	DOGC				6	DOGC o	ther/extra		21 TM	T (marine)		
3 TMT	(ROV)		4	BHI				2	Hallibur	on		2 IDF	S		

Sep 09, 2002

DAILY DRILLING REPORT # 20

CASINO #1

Safety, Inspection	s and Drills	Summary					
1 days since last Fi	ire and Abandon Ship Drill						
1805 days since last Lo	ost Workday Case						
38 days since last M	ledical Treatment Case						
4 days since last Fi	irst Aid Case						
days since last E	nvironmental Issue						
Shakers, Volumes	and Losses Data			E	ENGINEER	R M. Docherty / J. Si	ngh
SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5	VOLUME AVAILABLEACTIVE79.5HOLE139.1RESERVE108.1	(m3) = 327 MIXING 0.0 SLUG 0.0 HEAVY 0.0	LOSSES (m3 DOWNHOLE SURF.+EQU DUMPED	n3) = 0 E 0.00 JIP 0.00 0.00	COMMEN Periodical header bo	TS Ily truning over mud v x and SCE.	via
Anchors Anc 1 : Anc 6 :	82 Anc 2 : 50 43 Anc 7 : 43	Anc 3 : 95 Anc 8 : 63	Anc 4 : 86 Anc 9 : 0	Anc 5 : 43 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	18 0.C
Workboats Arr (D	rived @ Rig Depart fro Date)(Time) (Date)(T	om Rig EstimatedA ime) (Date)(T	rival (Port) We	leather ISIBILITY(nm) :	5	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.0 2,114.1
Pacific Sentinel Pacific Conqueror 6/9/	6/9/02 /02 15:50	15:50 6/9/02	23:00 WI PR Alf	/IND SP. (kts) : /IND DIR (deg) : RES.(mbars): IR TEMP (C) :	45.0 235 1008 9.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	10.1 2.5 3.8 1.8
COMMENTS : Pax on	/ off : Flt #1, 7/7.					WAA KULL (aeg) :	2.2
Santos DATE : Sep 10, 2002

FROM : H. Flink / S. Hodgetts TO : O. Moller

dgetts DAILY DRILLING REPORT # 21 CASINO #1

Well DataCOUNTRYAustraliaFIELDCasinoDRILL CO.Diamond OffshoreRIGOcean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	1,797.0 1,796.5 0.0 16.25 10.00	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 2.07	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$296,929 \$8,391,993
RT ABOVE SL (m)25.0WATER DEPTH (m) LAT70.5RT TO SEABED (m)95.5	CURRENT OP @ 0400 PLANNED OP.) WOW. Continue	waiting on weather to aba	te to reco	onnect LMRP.	

Summary of period 00:00 to 24:00 hrs

Continued waiting on weather. General maintenance. Repaired APV bottle #7 and installed #3 & #7 rucker wires to riser tension ring. Slipped & cut riser tension wires as needed.

	FORMATION	TOP(m BRT)
	Skull Creek (?)	1,259
	Nullawarre	1,522
	Belfast	1,561
1	Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 10, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	wow	00:00	06:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 6.1 m, wind 20/30 knts, combined wave height 6.1 m.
IH1	ΤР	WEA	WOW	06:00	12:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1.5 deg, roll 1 deg, heave 6.1 m, wind 25/28 knts, combined wave height 6.4 m.
IH1	ΤР	WEA	wow	12:00	18:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch .8 deg, roll . 6 deg, heave 2.4 m, wind 15/25 knts, combined wave height 4.3 m.
IH1	ΤP	WEA	wow	18:00	24:00	6.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1 deg, roll . 8 deg, heave 2.4 m, wind 15/20 knts, combined wave height 3.7 m. Completed pressure testing surface equipment.

ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 11, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	WOW	00:00	00:00	0.00	1,797	Waiting on weather, continue to monitor conditions. Pitch 1 deg, roll . 8 deg, heave 1.8 m, wind 15/20 knts, combined wave height 3.4 m.

00:00 TO 24:00 HRS ON :	10/09/2002	
Comments	Recommendations	Rig Requirements
ROV prepared to run new AX gasket. Pulled in on #2 anchor, holding at 163 tonne (360kips), after 29.9m (98').		

WBM Data	COST T	ODAY : \$5,418	CUN	/I. WE	3 MUD COST: \$201,147		CUM. WE	M+OBM CO	ST: \$201,147	
Туре :	КСІ РНРА	VISCOCITY (sec/ltr) PV (Pa.s) :	:	57	, API FLUID LOSS (cm3/30min) : FILTER CAKE	5	CI : K+C*1000 :	30,500 32400	SOLIDS (%vol) : H2O (%vol) :	10. 89.4
FROM :	pit	YP (Pa.s) :		11	(mm) :	1	HARD/Ca :	280	OIL (%vol) :	
TIME :	19:00	GEL10s/10m/100m			HTHPFL	~~	MBT (ppb) :	12.0	SAND :	.5
WEIGHT (sg):	1.23	(Pa.s) :	3	5	(cm3/30min) :	22	PM :		PH :	9.0
TEMP (C) :		Fann 3/6/100 : 6	6	8 23	HTHP CAKE (mm) :	2	PF :	.2	PHPA (ppb) :	1.8

													CAS	INO #1
Survey	(Method :	Min Curvat	ure)	MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL	TYPE
Last Tool	Tvpe :	Ν	/wd	(mBRT)	(mBRT)	DEG	(deg)	AZ	SECT	(deg/	(m)	(m)		
Magnetic I	Declination		0.00					(deg)	(m)	30m)				
Magnetie	Decimation		0.00	1170.4	1170.3	0.93	192.5	192.5	4.9	0.1	4.9	-0.2	MWD	
				1382.1	1381.9	1.87	182.2	182.2	-0.5	0.2	-0.5	-0.4	MWD	
				1458.5	1458.2	2.13	183.9	183.9	-3.1	0.1	-3.1	-0.6	MWD	
				1546.1	1545.7	2.74	185.6	185.6	-6.9	0.2	-6.9	-0.9	MWD	
				1605.5	1605.1	3.09	184.8	184.8	-9.9	0.2	-9.9	-1.2	MWD	
				1690.7	1690.2	3.44	188.9	188.9	-14.7	0.1	-14.7	-1.8		
			l	1115.5	1775.1	4.00	132.5	192.0	-20.4	0.5	-20.4	-2.5		
Bulk	STOCK TYP	E & UNITS		START L	JSED RE	C'D ST	оск s	TOCK	YPE & UNI	тѕ	START	USED RE	C'D ST	оск
Stocks	Fuel Oil - R	ig	М3	345.0	7.2		337.8 C	rill Wate	r - Rig	МТ	296.0	39.0 482	.0	739.0
On Rig	Pot Water -	Rig	MT	98.0	18.0 1	8.0	98.0 C	ement 'C	9' - Rig	SXS	1430.0		14	430.0
	Cement HT	3 - Rig	SXS	0.0			0.0 B	entonite	- Rig	SXS	670.0		6	670.0
	Barite - Rig		SXS	1200.0 3	339.0 90	0.0 1	761.0 B	rine - Ri	g	MT	0.0			0.0
	Helifuel - Ri	g	ltr	2192.0		2	192.0 F	uel Oil -	Conquero	or M3	504.8	8.2	4	496.6
	Drill Water -	Conqueror	MT	570.0 4	182.0		88.0 P	ot Water	- Conque	ror MT	230.0		2	230.0
	Cement G	- Conqueror	SXS	0.0				ement H	IIB - Cond	querc sxs	0.0			0.0
	Brine - Con		MT	0.0					Sentinel		1140.0			240.0 117 6
	Drill Water -	Sentinel	MT	284.0			284.0 P	ot Water	- Sentine	I MT	206.0			206.0
	Cement 'G'	- Sentinel	SXS	0.0			0.0 C	ement H	ITB - Sent	inel sxs	0.0			0.0
	Bentonite -	Sentinel	SXS	0.0			0.0 B	arite - S	entinel	SXS	0.0			0.0
	Brine - Sent	inel	MT	0.0			0.0							
Dumm D														
Fump Da	ala	Bump	Data	lact 24 h						51/2	Nu Dump I	Data		
#	TVDE		SDA		(%) EI		SDD	(kBa)	SPM			DTH (m)	NAVA/	(60)
#			JF N		(70) 11	ow (ipiii)	J	(кга)	3F IVI	OFF (KF8		r III (III)		(39)
1 Nat'l 1	2-P-160	152			97	0		0	30	1379		1707.0	· ·	1.18
									401					
		0				0		0	50	2241				
2 Nat'l 1	2-P-160	0 0 152			97	0		0	50 30	2241 1551				
2 Nat'l 1	2-P-160	0 0 152 0			97	0		0 0 0 0	50 30 40	1896 2241 1551 1896	1 1 3			
2 Nat'l 1	2-P-160	0 0 152 0 0			97	0 0 0 0		0 0 0 0	50 30 40 50	2241 1551 1896 2413	1 1 3 3			
2 Nat'l 1 3 Nat'l 1	2-P-160 2-P-160	0 0 152 0 0 152			97 97	0 0 0 0		0 0 0 0 0	50 30 40 50	2241 1551 1896 2413 (1 5 3)			
2 Nat'l 1 3 Nat'l 1 Casing	2-P-160 2-P-160	0 0 152 0 0 152			97 97	0 0 0 0 0		0 0 0 0 0	50 30 40 50	2241 1551 1896 2413	1 5 3 0			
2 Nat'l 1 3 Nat'l 1 Casing	2-P-160	0 0 152 0 0 152		SH(97 97				50 30 40 50	1896 2241 1551 1896 2413 (0		MMENT		
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2 Nat'l 1 3 Nat'l 1 Casing DIAM. (13.375 3	2-P-160 2-P-160 CSG OD (mm) 40	0 0 152 0 0 152 SHOE MD (plan/Actua 785.0	I) 743.0	SH0 (plai 785.0	97 97 DE TVD n/Actual) 0 7	42.9 1	LOT (pl/Act) .68 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 30 40 50 FIT (pl/Act)	2241 1551 1896 2413 (0	CO	MMENT		
2 Nat'l 1 3 Nat'l 1 Casing DIAM. (13.375 3	2-P-160 2-P-160 CSG OD (mm) 40 TYP	0 0 152 0 0 152 SHOE MD (plan/Actua 785.0	I) 743.0	SH0 (plan 785.0 LEN	97 97 DE TVD n/Actual) 0 7 GTH (m)	42.9 1 CSG	LOT (pl/Act) .68 2 ID (mm	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 30 40 50 FIT (pl/Act)	2241 1551 1890 2413 (0)		MMENT		
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Sep 10, 2002

CASINO #1

Safety, Inspection	s and Drills	Summary					
2 days since last Fi	ire and Abandon Ship Drill						
1806 days since last Lo	ost Workday Case						
39 days since last M	ledical Treatment Case						
5 days since last Fi	irst Aid Case						
days since last E	nvironmental Issue						
Shakers, Volumes	and Losses Data				ENGINEEF	R M. Docherty / J. Si	ngh
SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5	VOLUME AVAILABLEACTIVE79.5HOLE139.1RESERVE108.1	(m3) = 327 MIXING 0.0 SLUG 0.0 HEAVY 0.0	LOSSES DOWNHO SURF.+E DUMPED	(m3) = 3 DLE 0.00 CQUIP 0.00 0 3.18	COMMEN Periodica header bo MW pit #	TS Ily turning over mud v x and surface eqt. R 3 to 1.24g.	via aised
Anchors Anc 1 : Anc 6 :	5 Anc 2 : 107 77 Anc 7 : 73	Anc 3 : 109 Anc 8 : 127	Anc 4 : 75 Anc 9 : 0	Anc 5 : 68 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	18 0.0
Workboats Arr (D	rived @ Rig Depart fro Date)(Time) (Date)(T	om Rig EstimatedAi ime) (Date)(T	rival (Port) ime)	Weather VISIBILITY(nm) :	8	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.0 2,087.8 1.8
Pacific Sentinel 10/5 Pacific Conqueror 6/9/	3/02 23:25 02 15:50			WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	25.0 240 1026 11.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	6.7 1.2 2.2 0.8
COMMENTS : Pax on	/ off : no flt					WAX ROLL (deg) :	1.5

Santos DATE : Sep 11, 2002

FROM : H. Flink / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 22 CASINO #1

Well Data		M DEPTH (m BRT)	1 797 0		311	AFE COST \$	12 129 000
COUNTRY	Australia	TVD (m BRT)	1,796.5	CASING OD (mm)	340	AFE BASIS :	P&A
FIELD	Casino	PROGRESS (m)	0.0	SHOE TVD (m BRT)	743	DAILY COST :	\$321,791
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	17.25	FIT (sg)	0.00	CUM COST :	\$8,713,784
RIG	Ocean Bounty	DAYS +/- CURVE	11.00	LOT (sg)	1.88		
RT ABOVE SL (m) WATER DEPTH (I	25.0 m) LAT 70.5	CURRENT OP @ 0400) Continue	RIH with drill pipe			
RT TO SEABED (r	n) 95.5	PLANNED OP.	Make up/ mud. Dis	run test tool and test BOPs place hole to new mud. RI	s. Pull tes H and dr	it tool, RIH and con ill ahead to 12.25"	idition hole and TD.

Summary of period 00:00 to 24:00 hrs

Continued waiting on weather. General maintenance. Rigged up and landed LMRP on new AX Gasket. RIH to BSR and circulated riser to mud. Stabbed into and MU to EHOT. Attempted to cirulate without success. POOH with plugged bit.

L		
I	FORMATION	TOP(m BRT)
l	Skull Creek (?)	1,259
I	Nullawarre	1,522
I	Belfast	1,561
I	Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 11, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	wow	00:00	07:30	7.50	1,797	Waiting on weather, continue to monitor conditions. Pitch 1 deg, roll 0.8 deg, heave 1.8 m, wind 15/20 knts, combined wave height 3.4 m.
IH1	ΤР	WEA	BOP	07:30	08:30	1.00	1,797	Laid out divertor, picked up landing jt. Released VX gasket from LMRP, ROV confirmed release.
IH1	ΤP	WEA	BOP	08:30	13:30	5.00	1,797	Repositioned rig to land LMRP. ROV installed new VX gasket on BOP. Ballasted rig to 19.8m (65') draft, moved rig to free # 4 guideline
IH1	ΤP	WEA	wow	13:30	16:30	3.00	1,797	Waited on weather in position to land LMRP, heave over 2 m. Attempted landing, unsuccessful due to heave too large. Ballasted rig to drilling draft and ROV installed temporary (threaded hook) #2 guideline.
IH1	ΤP	WEA	BOP	16:30	17:30	1.00	1,797	Landed and latched LMRP with 13.6 tonne (30kip), took overpull 22.6 tonne (50kip) O/P to confirm latched. Pressure tested Choke & Kill lines to 1.7/34.5 MPa (250/5000 psi) for 5/15 mins.
IH1	ΤР	WEA	BOP	17:30	19:30	2.00	1,797	Laid out riser landing joint and rigged up divertor, took 9 tonne (20(kip) O/P. Rigged down riser handling equipment.
IH1	ΤP	WEA	ΤI	19:30	20:15	0.75	1,797	RIH with landing string to above blind/shear rams and circulated riser to 1.24 sg (10.3 ppg) mud. Checked pressure between rams.
IH1	TU	MSC	CIR	20:15	22:00	1.75	1,797	Opened B/S rams and made up recovery string. Opened LPR and lost 4 m3 (25bbls) to hole, before hole static. Attempted to circulate without success, pressured up to 27 MPa (3900 psi). Drillstring blocked.
IH1	ΤU	MSC	то	22:00	24:00	2.00	1,797	POOH from 616m with Emergancy Hang-off Tool, racked in derrick. Depressured and layed out Inside Gray and TIW valves.

ACTIV	ΊΤΥ	FOR	PERI	OD 000	0 HRS	TO 06:	<u>00 HRS (</u>	DN Sep 12, 2002
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤU	MSC	то	00:00	02:30	2.50	1,797	Attempted to circulate, unsuccessfully. POOH for plugged bit. Broke off bit.
IH1	ΤU	MSC	ΤI	02:30	06:00	3.50	1,797	Laid out MWD/LWD tools. Made up serviced bit, BHA and RIH. Broke circulation at HWDP.

													CAS	SINO #1
WBM Dat	a COST TO	ODAY : \$548	3 CI	JM. WB I	MUD CO	ST: \$20	1,695		С	UM. WBM+	овм соз	T: \$201,6	95	
Type : FROM : TIME : WEIGHT (sg) TEMP (C) :	KCI PHPA pit 19:00 : 1.23	VISCOCITY PV (Pa.s) : YP (Pa.s) : GEL10s/10i (Pa.s) : Fann 3/6/10	(sec/ltr) : n/100m 3 0 : 6	54 0 11 4 1 7 22	API FLU (cm3/30 FILTER (mm) : HTHPFL (cm3/30 HTHP C	ID LOSS min) : CAKE min) : AKE	2	4 C K 1 H 2 P 2 P	I : +C*1(ARD/(IBT (p M : F :	000 : Ca : pb) :	30,000 32400 320 11.0 .2	SOLIDS (H2O (%vo OIL (%vol SAND : PH : PHPA (pp	%vol) : l) :) : b) :	11 89.2 .5 9.0 1.8
Bit Data	for Bit # 7 IAI	DC # 4 3	7			Wea	r 🗆		01	DL	В	G	02	R
SIZE ("): MANUFACT TYPE: SERIAL #: DEPTH IN (1 DEPTH OUT	1: "URER : Δ1 mRT): 1 Γ (mRT):	2.25 HU AVE 09D AVE 1DK FLOV 797 PUMI HSI (1	WOB (MT) : RPM : V (lpm) : P RESS.(k W/cm2) :	(ра):	0 0 0 0.000	NOZZLI 3 X 1 X X X X X	ES Dr 6 ME 0 ON 0 IAD 0 TO 0 RO	Illed of TERA BOT ⁻ C DR TAL F P (m/F	DVER th GE (r TOM H ILL. H REVS nr) :	I ne last 24 h n) : HRS : RS : :	rs Cal 0 CUM. .0 CUM. .0 CUM. 0 CUM. 0 CUM. ROP	JLJL culated ov METERAG . ON BOT. IADC DR. I .TOT. REV (m/hr) :	er the bi E (m) HRS : HRS: 'S :	t run 0 .0 .0 0
BHA # 7 WT BLW JA BHA WT (M BHA DESCF	Length (i NR (MT): 32 IT): 41 RIPTION: 311mr DC, 20 24	m): 293.1 2 STRING PICK UP SLK OFF n bit, NB RR 03mm Jar, 2	WT (MT): WT (MT): WT (MT): (solid float) × 203mm D	1. , 210mm C, x/o, 12	49 TRG 0 TRG 0 TRG MWD/F 2 x 127m	RE MAX (RE ON (N RE OFF (EWD, 31 m HWDF	[Nm): m): Nm): 1mm RF	R (toto	0 0 0 co ring	D.C. (1) A D.C. (2) A H.W.D.P. D.P. ANN), 1 x 203m	NN. VELC ANN VELO ANN VEL I VELOCIT IM DC, 31	CITY (mpn CITY (mpn OCITY (mp Ƴ (mpm) : 1mm RR, 1	n): ı): m): 2 x 203	0 0 0 0 mm
Т	OOL DESCRIPTIO	ON	LENGTH	OD	ID	SERIA	∟# ⊦	IRS			COMM	IENT		
NB RR CDR Pulser ILS ISONIC Str RR Str RR Jars COMMENT	: Hung-off at	wellhead, ris	er displaceo	d to seaw	(2 3 8 (4 2 3 8 (4 4 2 3 8 (4 4 4 2 3 8 (4 4 4 10 10 10 10 10 10 10 10 10 10 10 10 10	GU 2151 556 31 13272-2 29 GU 2143 GU 2144 8907C landing	string ra	77.0 77.0 77.0 77.0 77.0 77.0 77.0 77.0						
Survey	(Method · Min	Curvature)	МР		INCL	Δ7	CORR		V'		N/S	E/M	τοοι	TYPE
Last Tool T	ype :	MWE	(mBRT)	(mBRT) DEG	(deg)	AZ (deg)	SI	v ECT (m)	(deg/ 30m)	(m)	(m)		
Magnetic [Declination :	0.00) 1170.4 1256.7 1382.1 1458.5 1546.1 1605.5 1690.7 1775.9	1170. 1256. 1381. 1458. 1545. 1605. 1690. 1775.	3 0.93 6 1.44 9 1.87 2 2.13 7 2.74 1 3.09 2 3.44 1 4.38	3 192.5 4 181.2 7 182.2 3 183.9 4 185.6 9 184.8 4 188.9 3 192.3	192.8 181.2 183.9 183.9 183.9 183.9 183.9 183.9 183.9 184.8 184.8 188.9 188.9 192.3	5 2 2 9 3 3 9 - 3 -	4.9 3.1 -0.5 -3.1 -6.9 -9.9 14.7 20.4	0.1 0.2 0.1 0.1 0.2 0.2 0.2 0.1 0.3	4.9 3.1 -0.5 -3.1 -6.9 -9.9 -14.7 -20.4	-0.2 -0.4 -0.5 -0.6 -0.9 -1.2 -1.8 -2.9	MWD MWD MWD MWD MWD MWD MWD MWD	
Bulk	STOCK TYPE &	JNITS	START	JSED R	EC'D S	тоск	STOCK	TYPE	& UN	тѕ	START	USED RE	C'D S	оск
Stocks	Fuel Oil - Rig	M3	337.8	8.7 1	50.0	479.1	Drill Wat	er - R	ig	МТ	739.0	61.0 88	3.0	765.0
On Ríg	Pot Water - Rig	MT	98.0	22.0	22.0	98.0	Cement	'G' - F	Rig	SXS	1430.0		1	430.0
	Barite - Rig	iy sxs	0.0	5	246.0	0.0	Brine - R	e - Ri lia	g	SXS MT	670.0 0.0			0.0
	Helifuel - Rig	ltr	2192.0	308.0		1884.0	Fuel Oil	- Con	querc	or M3	496.6	6.1		340.5
	Drill Water - Con	queror MT	88.0	88.0		0.0	Pot Wate	er - Co	onque	ror MT	230.0			230.0
	Cement 'G' - Cor	queror sxs	0.0			0.0	Cement		- Cond	querc sxs	0.0			0.0
	Brine - Conquerc	ueror sxs or M⊤	0.0			0.0	Barite - (Fuel Oil	Jonqu - Sen	ueror	SXS M3	246.0	21.8		246.0 395 8
	Drill Water - Sen	tinel MT	284.0	3	305.0	589.0	Pot Wate	er - Se	entine	I MT	206.0	5.0 3	1.0	232.0
	Cement 'G' - Ser	ntinel sxs	0.0			0.0	Cement	нтв	- Sent	inel sxs	0.0			0.0
	Bentonite - Sent	inel sxs	0.0			0.0	Barite -	Sentir	nel	SXS	0.0	1453	3.0 1	453.0
	Brine - Sentinel	MI	0.0			0.0								

Sep 11, 2002

DAILY DRILLING REPORT # 22

Pu	mp Data													
		Pump	Data - la	st 24 hrs	1						Slow Pump Data			
#	TYPE	LNR(mm)	SPM	EFF (%)	Flow (Ip	om)	SPP (kP	a)	SPM	SPP	(kPa)	DEPTH (m)	MW (sg)	
1	Nat'l 12-P-160	152		97		0		0	30		1379	1707.0	1.18	
		0				0		0	40		1896			
2	Not'l 12 D 160	0		07		0		0	50		1551			
2	Nati 12-F-100	0		97		0		0	40		1896			
		0				0		0	50		2413			
3	Nat'l 12-P-160	152		97		0		0			0			
Cas	sing													
DI	AM. CSG OD	SHOE MD)	SHOE TV	'D	I	LOT		FIT			COMMENT		
	(mm)	(plan/Actua	ıl)	(plan/Actu	al)	(p	ol/Act)		(pl/Act)					
13.	375 340	785.0	743.0	785.0	742.9	1.6	58 1.88							
	TY	ΈE		LENGTH ((m) C	SG IE	D (mm)	V	NT (kg/m)	GI	RADE	THREAD		
340	mm (13.375") sho	e jt 107 kg/m,	cent mid	12.52		316			107.1	L	-80	BTC		
340	00000 (13.375°) INT J 0000 (13.375°) int i	тил ку/m, се t 107 ka/m се	nt mid jt	12.13		316			107.1	L		BTC		
50 :	x 340mm (13.375")) jt 101 kg/m	in ind je	590.73		316			101.2	i	-80	BTC		
340	mm (13.375") No-c	ross jt 101 kg/	m	11.84		316			101.2	ι	-80	BTC		
476	5mm (18.75") wellh	iead + extensi	on jt	10.71		316			101.2	[-80	BTC		
				92.50		0			.0					
Per	sonnel : on Si	ite =80												
	4 Santos		36 DO	GC			5 DOO	GC (other/extra		21	TMT (marine)		
	3 TMT (ROV)		4 BH	l			2 Hall	ibuı	rton		2	2 IDFS		
	2 Anadrill		1 Dril	Quip										
Saf	ety, Inspectio	ns and Dril	ls	Daill	Summa	ary								
	3 days since last	Fire and Aban	don Ship	Drill										
180	/ days since last	Lost Workday C	ase											
4	0 days since last	Medical Treatr	nent Case	9										
	6 days since last	First Aid Case												
	days since last	Environmental	Issue											
Sha	akers, Volume	s and Loss	es Data	1						I	ENGINEE	R M. Docherty /	J. Singh	
SH/	AKER 1 4 x 115 AKER 2 4 x 115	VOLUN		ABLE (m3) =		318		ES ((m3) =	9	СОММЕ	NTS		
SH/	AKER 3 4 x 115	ACTIV	E 71	.1 MIXIN	١G	0.0		NHC	DLE	3.97	Over dis	placed riser by 30	bbls to	
SHA	AKER 4 4 x 84	HOLE	13	9.1 SLUG	3	0.0	SURF.	.+E(QUIP	0.00	remove	contamination.		
SHA	KER 5	RESE	RVE 10	8.1 HEA\	/Y	0.0	DUMP	ED	1	4.77				
And	chors Anc 1	: 132	Anc 2 : 1	43 An	c 3 : 118		Anc 4 :	116	6 Anc	5:11	1	RIS. TENS. (MT)	102	
	Anc 6	: 122	Anc 7 : 1	13 An	c 8 : 129		Anc 9 :	0	Anc	10:0		RISER ANGLE (de	eg): 0.C	
Wa	vrkhoate ^A	rrived @ Ria	Den	art from Rig	Estim	atedA	Arrival (Port	t) I	Weather			STACK ANGLE(de	eg): 0.0	
vvC		(Date) (Time)	(Da	ate)(Time)	(D	Date)(Time)	1		(m) ·	e	V.D.L. (MT) :	2,101.8	
		, , ,		,				-	WIND SP. (k		ە 20.0		1.2	
Pac Pac	ific Sentinel 10	//9/02 23:25	11/9/	/02 18:30	11/9/	/02	23:30		WIND DIR (deg):	250		2.4 : 0.4	
									PRES.(mbar	s):	1029	MAX PITCH (dea)	: 1.2	
									AIR TEMP (C	C):	13.0	AVE ROLL (deg) :	0.3	
<u> </u>		n / off · El+ #1 0	/0					1				MAX ROLL (deg) :	8.0	
CON	AIVIEINIS. Pax 0		13.											

Santos DATE : Sep 12, 2002

FROM : H. Flink / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 23

CASINO #1

Well Data			1 804 0		211	AFE COST \$	12 129 000
COUNTRY	Australia	TVD (m BRT)	1,804.0	CASING OD (mm)	340	AFE BASIS :	UNKNOWN
FIELD	Casin	PROGRESS (m)	7.0	SHOE TVD (m BRT)	743	DAILY COST :	\$316,960
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	18.25	FIT (sg)	0.00	CUM COST :	\$9,030,744
RIG	Ocean Bount	DAYS +/- CURVE	11.50	LOT (sg)	1.88		
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25.0 1) LAT 70.3) 95.3	CURRENT OP @ 0400	Drilling 12 Continue	2-1/4" Hole. (06:00hr Dept to drill 12-1/4" Hole section	h 1838m n to TD.	o / 6030 ft)	

Summary of period 00:00 to 24:00 hrs

POOH with plugged bit / RIH and tested BOP / Continued RIH washed and reamed to TD 1797m (5896ft) Drilled 12-1/4" Hole

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,561
Warre	1,743
	FORMATION Skull Creek (?) Nullawarre Belfast Warre

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 12, 2002

PHS	CL	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤU	MSC	то	00:00	02:30	2.50	1,797	Attempted to circulate, unsuccessfully. POOH for plugged bit. Broke and cleaned bit.
IH1	ΤU	MSC	ΤI	02:30	06:00	3.50	1,797	Laid out MWD/LWD tools. Made up serviced bit, BHA and RIH. Broke circulation at HWDP (268 mts / 880ft)
IH1	ΤU	MSC	ΤI	06:00	07:30	1.50	1,797	Continued RIH on drill pipe, made up BOP test tool and RIH to 663m (2175 ft)
IH1	ΤU	MSC	CIC	07:30	08:30	1.00	1,797	Circulated bottoms up via choke @ 80spm 5175 kpa (750 psi).
IH1	ΤU	MSC	CIC	08:30	09:30	1.00	1,797	Circulated bottoms up 100spm 5865 kpa (850 psi.)
IH1	ΤU	MSC	BOP	09:30	14:00	4.50	1,797	Pressure tested BOPs 1380kpa / 20700kpa (200 / 3000 psi). Annulars 1380 kpa / 34500 kpa (200 / 5000 psi) for 5 / 10 min. Rams & failsafes.
IH1	ΤU	MSC	BOP	14:00	14:30	0.50	1,797	POOH and laid out BOP test tool.
IH1	ΤU	MSC	BOP	14:30	16:00	1.50	1,797	Pressure tested mud hose, upper and lower IBOP valves 1380 / 34500 kpa (200 / 5000 psi) Function tested Diverter.
IH1	ΤU	MSC	ΤI	16:00	17:00	1.00	1,797	Continued RIH to 743m (2437 ft) Broke circulation at (340mm) 13-3/8 Casing shoe.
IH1	ΤU	MSC	CIR	17:00	18:00	1.00	1,797	RIH to 950m (3117 ft) Circulated bottoms up via choke line.
IH1	ΤU	MSC	ТΙ	18:00	20:00	2.00	1,797	Continued RIH to 1717m (5633 ft)
IH1	ΤU	MSC	TIT	20:00	22:00	2.00	1,797	Took weight @ 1717m (5633ft) Washed and reamed down from 1717m to 1770 m. Intermittently taking 4.5 mt (10 kips) with erratic torque up to 15,000 ft/lbs. Tagged firm fill @ 1770m and reamed down to 1797m (5807ft to 5896ft) 4.5 - 6.8 mt (10-15 kips) Required to ream.
IH1	Р		D	22:00	24:00	2.00	1,804	Drilled 12-1/4" hole from 1797m to 1804m. (5896ft to 5919ft)
			DEDI					

ACTIV	ΊΤΥ	FOR	PERI	OD 000	0 HRS	TO 06:	<u>00 HRS (</u>	ON Sep 13, 2002
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		D	00:00	06:00	6.00	1,838	Continued drilling 311mm (12-1/4") hole from 1804m to 1838m (6030 ft)

WBM Dat	a cost t	ODAY : \$12	2,848 C	UM. WB	MUD CO	ST: \$21	4,543	С	UM. WBM+	-OBM COS	ST: \$214,54	43	
Type :	KCI PHPA	VISCOCIT PV (Pa.s)	Y (sec/ltr) :	61 0	API FLU (cm3/30 FILTER	IID LOSS min) : CAKE	5	CI : K+C*10	000 : Ca :	30,000 32400 280	SOLIDS (% H2O (%vo	%vol) : l) :	11 89.0
TIME :	22:00	GEL10s/10)m/100m	15	(mm) : HTHPFI	L.	·	MBT (p	opb) :	11.0	SAND :		.5
WEIGHT (sg)	: 1.24	(Pa.s) :	4	61	(cm3/30	min) :	20	PM :	• /		PH :		9.5
TEMP (C) :	22	Fann 3/6/1	00: 8	10 29	HTHP C	AKE	2	PF :		.2	PHPA (pp	c):	1.6
Bit Data	for Bit # 7	DC#4 3	3 7			Wea	r 🗌	01	DI	L B	G	02	R
SIZE (") :	1	2.25				NOZZLE		ad over ti	Last 24 h				
MANUFACT	URER :	HU AVE	WOB (MT)	:	11	3 x 10		RAGE (r	n) ·				7
TYPE :	MXF	09D AVE	RPM :		100	x	0 ON B		HRS :	1.5 CUM	. ON BOT.	HRS :	, 1.5
SERIAL # :	L1	1DK FLO	W (lpm) :		3,043	X		DRILL. H	IRS :	2.0 CUM	IADC DR. I	HRS:	2.0
DEPTH IN (mRT):		IP PRESS.(кра):	26,083	X	0 ТОТА	L REVS	: 9,0	000 CUM	I.TOT. REV	S :	9,000
DEPTH OU	Г (mRT):		(KVV/Cm2) :		0.814	X	^U ROP ((m/hr) :		4.7 ROP	(m/hr) :		4.7
BHA # 8 WT BLW JA BHA WT (N	Length (AR (MT): 29 IT) : 34	m): 268.2 5 STRING 4 PICK U SLK OF	6 WT (MT): P WT (MT): F WT (MT):		77 TRO 82 TRO 77 TRO	QE MAX (QE ON (N QE OFF (I	Nm): m): Nm):	8,135 5,423 5,423	D.C. (1) A D.C. (2) A H.W.D.P. D.P. ANN	ANN. VELC ANN VELC . ANN VEL N VELOCIT	OCITY (mpn OCITY (mpn OCITY (mp TY (mpm) :	n): n): m):	70 73 48 48
BHA DESCR	RIPTION : Bit, N	3 RR (solid f	loat), 3 x 8"	DC, RR,	1 x 8" D0	C, RR, 92	X 8"dc, Jar	, 2 x 8" D	C, x/o, 12 x	5" HWDP			
Т	OOL DESCRIPTIO	NC	LENGTH	OD	ID	SERIAL	_ # HR	s		COMM	IENT		
NB RR					(GU 2151	84	4.0					
Str RR					0	GU 2143	84	1.0					
Str RR						3U2144	84	1.0					
						100010	0	^{+.0}					
Survey	(Method : Min	Curvature) MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL T	YPE
Last Tool 7	vpe:	MW) (mBR1) DEG	(deg)	AZ	SECT	(deg/	(m)	(m)		
Magnetic [Declination :	0.0	0	_	_		(deg)	(m)	30m)				
			1170.	4 1170. 7 1256	3 0.93 6 1.4	3 192.5	192.5	4.9 3.1		4.9	-0.2		
			1382.	1 1381.	9 1.8	7 182.2	182.2	-0.5	0.2	-0.5	-0.5	MWD	
			1458.	5 1458.	2 2.1	3 183.9	183.9	-3.1	0.1	-3.1	-0.6	MWD	
			1546.	1 1545.	7 2.7	4 185.6		-6.9	0.2	-6.9	-0.9	MWD	
			1605.	7 1605.	1 3.03 2 3.4	9 184.8 4 188.9	184.8	-9.9 -14.7	0.2	-9.9	-1.2	MWD	
			1775.	9 1775.	1 4.3	8 192.3	192.3	-20.4	0.3	-20.4	-2.9	MWD	
Bulk			07485							OTAST			
Stocks	STOCK TYPE &	UNITS	START 170.1	10.7 Y	EC'D S	583 /	Drill Water	PE & UN	IIS MT	765.0	<u>USED RE</u>		
On Rig	Pot Water - Rig	M	98.0	10.7	115.0	98.0	Cement 'G	- Rig	SXS	1430.0	40.0 220	14:	30.0
•	Cement HTB - R	ia sx	s 0.0			0.0	Bentonite ·	- Ria	SXS	670.0		6	70.0
	Barite - Rig	SX	s 2007.0	272.0 14	453.0	3188.0	Brine - Rig		МТ	0.0			0.0
	Helifuel - Rig	lt	r 1884.0	15	539.0	3423.0	Fuel Oil - (Conquero	or M3	340.5		34	40.5
	Drill Water - Con	queror M1	0.0			0.0	Pot Water	- Conque	ror MT	230.0		23	30.0
	Cement 'G' - Cor	nqueror sx	s 0.0			0.0	Cement H	TB - Con	querc sxs	0.0			0.0
	Bentonite - Cond	queror sx	s 0.0			0.0	Barite - Co	nqueror	SXS	246.0		24	46.0
	Brine - Conquere	or M1	0.0	220.0		0.0	Fuel Oil - S	Sentinel	M3	395.8	118.0	2	11.8
	Comont IC	tinel MI	589.0	220.0		309.0	Pot Water	- Sentine		232.0	5.0	22	21.0
	Bentonite - Ser	inel sx	s 0.0			0.0	Barite - So	ntinel		1453 0 1	453.0		0.0
1	Demonite - Sent	IIICI SX	3 0.0			0.0	Danie - 36		5X5	1400.0 1	-00.0		0.0
	Brine - Sentinel	МП	. 00			0.0							

Pur	np Data									
		Pump	Data - las	st 24 hrs				Slow I	Pump Data	
#	TYPE	LNR(mm)	SPM	EFF (%)	Flow (lpm)	SPP (kPa)) SPM	SPP (kPa)	DEPTH (m)	MW (sg)
1	Nat'l 12-P-160	152 0 0	71	97	1013 0 0	8694 0 0	30 40 50	1379 2068 2758	1804.0 1804.0 1804.0	1.23 1.23 1.23
2	Nat'l 12-P-160	152 0 0	62	97	1013 0 0	8694 0 0	30 40 50	1551 2068 2758	1804.0 1804.0 1804.0	1.23 1.23 1.23
3	Nat'l 12-P-160	152	59	97	1013	8694		0		
Cas	sing									
DI	AM. CSG OD (mm)	SHOE MD (plan/Actua) II)	SHOE TV (plan/Actu	'D al) (LOT pl/Act)	FIT (pl/Act)		COMMENT	
13.	375 340	785.0	743.0	785.0	742.9 1.	68 1.88				
	TYF	РЕ		LENGTH (m) CSG	ID (mm)	WT (kg/m)	GRADE	THREAD	
340 340 340 50 5 340 476 RT	mm (13.375") shoe mm (13.375") int jt mm (13.375") int jt < 340mm (13.375") j mm (13.375") No-cr mm (18.75") wellhe to Wellhead top	jt 107 kg/m, 107 kg/m, ce 107 kg/m, ce jt 101 kg/m oss jt 101 kg/i ad + extensio	cent mid nt mid jt nt mid jt m on jt	12.52 12.13 12.64 590.73 11.84 10.71 92.58	311 310 310 310 310 310 310 0	5 5 5 5 5	107.1 107.1 107.1 101.2 101.2 101.2 .0	L-80 L-80 L-80 L-80 L-80 L-80	BTC BTC BTC BTC BTC BTC	
Per	sonnel : on Sit 4 Santos 3 TMT (ROV) 2 Anadrill	e =79	36 DOC 4 BHI 1 Dril(GC Quip		4 DOGC 2 Hallib	C other/extra urton	2	1 TMT (marine) 2 IDFS	
Saf	ety, Inspection	s and Dril	ls		Summary					
	4 days since last F	ire and Aban	don Ship [Drill						
180	8 days since last L	ost Workday C	Case							
4	1 days since last N	ledical Treatn	nent Case							
	7 days since last F	irst Aid Case								
	days since last E	nvironmental	Issue							
Sha	akers, Volumes	and Loss	es Data					ENGINE	ER M. Docherty /	J. Singh
SHA SHA	KER 1 4 x 115 KER 2 4 x 115	VOLUM	IE AVAILA	BLE (m3) =	31	5 LOSSES	S (m3) =		ENTS	
SHA SHA SHA	AKER 3 4 x 115 AKER 4 4 x 84 AKER 5	ACTIV HOLE RESEF	E 71. 140 RVE 103	5 MIXIN 0.2 SLUG 3.3 HEAV	NG 0. 6 0. /Y 0.	0 DOWNH 0 SURF.+ 0 DUMPE	IOLE EQUIP D	2.23 Dumped 3.18 due to b 19.08	d 120 bbls of bottor being dehydrated.	ns up mud,
Anc	hors Anc 1 : Anc 6 :	129 125	Anc 2 : 14 Anc 7 : 1	41 And 18 And	c 3 : 118 c 8 : 134	Anc 4: 1 Anc 9:0	18 And And	5 : 113 : 10:0	RIS. TENS. (MT) RISER ANGLE (d	: 102 eg): 0.0
Wo	rkboats Arr (E	ived @ Rig Date)(Time)	Depa (Da	art from Rig ite)(Time)	Estimated (Date)	Arrival (Port) (Time)		nm): 15	V.D.L. (MT) : AVE HEAVE (m) :	eg): 0.0 2,143.0 0.3
Paci Paci	ific Sentinel 10/9 fic Conqueror	9/02 23:25	11/9/0	02 18:30	11/9/02	23:30	WIND SP. (WIND DIR (PRES.(mbai AIR TEMP (kis): 18.0 deg): 45 rs): 1023 C): 15.0	MAX HEAVE (m) : AVE PITCH (deg) MAX PITCH (deg) AVE ROLL (deg) :	1.2 : 0.3 : 0.4 0.2
CON	IMENTS : Pax on	/ off : Flt #1, 4	/5.						MAX ROLL (deg) :	0.3

Santos DATE : Sep 13, 2002

FROM : H. Flink / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 24

Well COUN FIELD DRILL RIG RT AE WATE RT TC Summ Drille	Data TRY CO. BOVE R DE D SEA Mary d 31	SL (m PTH (BED (of pe 1mm (Diar) (m) LAT m) riod 0 (12-1/-	Aus Ca mond Offs Ocean Bo r 0:00 to 2 4") Hole	tralia asino shore 25.0 70.5 95.5 24:00 h	M.DEPTH TVD (m B PROGRE DAYS FR DAYS +/- CURREN PLANNEI	I (m BRT RT) SS (m) OM SPUI CURVE T OP @ (O OP.	-) 2 2 D 0400 D C	2,043.0 2,043.0 239.0 19.25 11.00 rilling 3 ⁷ ontinue	CUR CAS SHC FIT (LOT 11mm to dril	HOLE ING OE DE TVD (sg) (12-1/4 I 311mn	SIZE (n) (mm) (m BRT ") Hole n (12-1)	nm) ⁻) ⁽² 209 ^(4") Hol <u>Skull C</u>	311 340 743 0.00 1.88 3m e sectio FORM	AFE C AFE B DAILY CUM C	OST \$ ASIS : COST : COST :	12 \$9 TOP(129,000 P&A 317,616 348,360 m BRT) 1,259
Αςτιν	//TV	FOR	DEDI	OD 00·(STO 24	·00 HR		Sor	13	2002		Nullaw Belfast Warre	arre				1,522 1,561 1,743
PHS		PC		FROM					000	, 13,	2002	ACTI		ESCRI				
1113		RC.			04:00	24.00	0.040								frame 4	004mm		
	Г		D	00:00	24:00	24.00	2,043	Cor	ntinued	ariiii	ng 311	mm (12-1/4	") noie	from 1	804m to	2043	m
		FOR	PERI	OD 000	0 HRS	TO 06:	00 HRS	<u>ON</u>	Sep	14, 2	2002							
PHS	CL	RC	OP	FROM	ТО	HRS	DEPTH	-				ACTI	/ITY D	ESCRI	PTION			
IH1	Ρ		D	00:00	06:00	6.00	2,093	Cor	ntinued	l drilli	ng 311	l mm (1	2-1/4	") Hole	from 2	2043m t	o 2093	m
				T TOD 4.1	¢ 40.0	<u> </u>			00T (*	000.00	0.4					- ¢000	004	
- WRW	Dat	а	COS		: \$18,3	51 (UM. WB			232,8	94		COM. V	NRW+OF		51: \$232,	894	
FROM TIME : WEIGH TEMP (• T (sg) (C) :	KC	22: 1.	VISC PA PV (pit YP (00 GEL 24 (Pa.s 54 Fann	:OCITY ([Pa.s) : [Pa.s) : 10s/10m 5) : 13/6/100	sec/ltr) : /100m 3 : 7	56 0 12 6 1 9 28	(cm3/3 FILTEI (mm) HTHP (cm3/3 HTHP (mm)	30min) : R CAKE FL 30min) : CAKE		4 1 18 2	CI : K+C*1 HARD MBT (PM : PF :	1000 : /Ca : ppb) :	31	,400 7800 240 11.0 .2	SOLIDS H2O (%) OIL (%) SAND : PH : PHPA (p	(%vol) vol) : ol) : pb) :	: 12 88.0 .5 9.5 1.8
Bit D	ata f	or Bi	it # 7	IADC #	4 3	7			We	ar		01	D] [L	В	G	02	R
SIZE (·····	•• =•		10.05	1													
MANU): FACT	URER	:	12.25 HU	AVEW			14		ZLES	Drille	d over	the last	24 hrs	l Cal	culated o	ver the	bit run
TYPE	:	-	Ν	AXR09D	AVER	PM :	•	100	, ,) ,	(10 (0		RAGE	(m) :	239	CUM.	METERA	GE (m)	: 246
SERIA	L#:			L11DK	FLOW	(lpm) :		3,043	3 ,	K 0	IADCI	DRILL.	HRS :	21.4		IADC DR	. HRS : . HRS:	22.9 26.0
DEPTH	H IN (r	nRT):		1797	PUMP	PRESS.(Kpa):	26,379))	K 0	ΤΟΤΑ	LREVS	S :	128,400	CUM	.TOT. RE	VS :	137,400
DEPTH	I OUT	(mRT	·):			W/cm2) :		0.814	• >	κ Ο	ROP (m/hr) :		11.2	ROP	(m/hr) :		10.7
BHA	# 8	L	enat	h (m): 2	68.2									(1) ANI).	
WT BL	_W JA	R (MT):	25 S	TRING V	VT (MT):		84 TF		X (Nm):	8,135	5 D.C.	. (2) ANI	N VELO	CITY (mp	om):	70
BHA V	VT (M	T) :		34 P	ICK UP \	NT (MT):		86 TF		(Nm):		5,423	B H.W	.D.P. Al		OCITY (m	npm):	48
DUL -	F00-		NI. D''		LK OFF	WT (MT):		86 TF		⊢ (Nm)):	5,423	SID.P	. ANN V		Y (mpm)	:	48
BHA D	ESCR				SOIID FIOR	αι), 3 X 8"				9 X 8"	uc, Jar,	∠ x 8" 	JU, X/O	, 12 X 5"				
			ESCKI	TION				טו	SER	IAL #					COMM			
Str RR	ς {								GU 214	43	108	.0						
Str RR	R								GU214	4	108	.0						
Jars									489070	3	108	.0						

Survey (Method : Min Curvature) MD TVD INCL AZ CORR. 'V' DOGLEG N/S E/W TOO Last Tool Type : MWD (mBRT) (mBRT) DEG (deg) AZ SECT (deg/ (m) (m) <th>TYPE</th>	TYPE
Last Tool Type : MWD (mBRT) (mBRT) DEG (deg) AZ SECT (deg/ (deg) (m) (m) (m) (m) Magnetic Declination : 0.00 1170.4 1170.3 0.93 192.5 192.5 4.9 0.01 4.9 -0.2 MWD 1256.7 1256.6 1.44 181.2 181.2 3.1 0.22 3.1 -0.4 MWD 1382.1 1381.9 1.87 182.2 182.2 -0.5 0.1 -0.5 MWD 1458.5 1458.2 2.13 183.9 183.9 -3.1 0.1 -3.1 -0.6 MWD	
Magnetic Declination : 0.00 1170.4 1170.3 0.93 192.5 192.5 4.9 0.1 4.9 -0.2 MWE 1256.7 1256.6 1.44 181.2 181.2 3.1 0.2 3.1 -0.4 MWE 1382.1 1381.9 1.87 182.2 182.2 -0.5 0.1 -0.5 -0.5 MWE 1458.5 1458.2 2.13 183.9 183.9 -3.1 0.1 -3.1 -0.6 MWE	
Magnetic Declination : 0.00 1170.4 1170.3 0.93 192.5 192.5 4.9 0.1 4.9 -0.2 MWI 1256.7 1256.6 1.44 181.2 181.2 3.1 0.2 3.1 -0.4 MWI 1382.1 1381.9 1.87 182.2 182.2 -0.5 0.1 -0.5 -0.5 MWI 1458.5 1458.2 2.13 183.9 183.9 -3.1 0.1 -3.1 -0.6 MWI	
1256.7 1256.6 1.44 181.2 181.2 3.1 0.2 3.1 -0.4 MWI 1382.1 1381.9 1.87 182.2 182.2 -0.5 0.1 -0.5 -0.5 MWI 1458.5 1458.2 2.13 183.9 183.9 -3.1 0.1 -3.1 -0.6 MWI	
1382.1 1381.9 1.87 182.2 182.2 -0.5 0.1 -0.5 -0.5 MWL 1458.5 1458.2 2.13 183.9 183.9 -3.1 0.1 -3.1 -0.6 MWF	
1458.5 1458.2 2.13 183.9 183.9 -3.1 0.1 -3.1 -0.6 MWF	
1546.1 1545.7 2.74 185.6 185.6 -6.9 0.2 -6.9 -0.9 MWE	
1605.5 1605.1 3.09 184.8 184.8 -9.9 0.2 -9.9 -1.2 MWE	
1690.7 1690.2 3.44 188.9 188.9 -14.7 0.1 -14.7 -1.8 MWE	
1775.9 1775.1 4.38 192.3 192.3 -20.4 0.3 -20.4 -2.9 MWE	
Bulk STOCK TYPE & UNITS START USED REC'D STOCK STOCK TYPE & UNITS START USED REC'D	<u> тоск</u>
Stocks Fuel Oil - Rig M3 583.4 23.0 560.4 Drill Water - Rig MT 939.0 120.0	819.0
On Rig Pot Water - Rig MT 98.0 98.0 Cement 'G' - Rig sxs 1430.0	1430.0
Cement HTR - Pig SYS 0.0 0.0 Bentonite - Pig SYS 670.0	670.0
Borrite Dia ore 2199.0.261.0. 2927.0 Drine Dia MT 0.0	0.0
Dame - Ng SAS 3100.0 S01.0 Z027.0 Diffee - Ng W1 U.0 Halfual Dia Itr 2402.0 154.0 2260.0 Eval Oil Consustors M2 240.5	240 5
Telliter Rig III 3423.0 154.0 3205.0 Fuel Or Conqueror M3 340.5	340.5
Compart ICL Conqueror MI 0.0 0.0 Pot Water - Conqueror MI 230.0	230.0
Cement G - Conqueror sxs 0.0 0.0 Cement HIB - Conquerc sxs 0.0	0.0
Bentonite - Conqueror sxs 0.0 0.0 Barite - Conqueror sxs 246.0	246.0
Brine - Conqueror MT 0.0 0.0 Fuel Oil - Sentinel M3 277.8 4.0	273.8
Drill Water - Sentinel MT 369.0 369.0 Pot Water - Sentinel MT 227.0 5.0	222.0
Cement 'G' - Sentinel sxs 0.0 0.0 Cement HTB - Sentinel sxs 0.0	0.0
Bentonite - Sentinel sxs 0.0 0.0 Barite - Sentinel sxs 0.0	0.0
Brine - Sentinel MT 0.0 0.0	
Pump Data	
Pump Data - last 24 hrs Slow Pump Data	
# TYPE LNR(mm) SPM EFF (%) Flow (lpm) SPP (kPa) SPP (kPa) DEPTH (m) MU	V (sg)
1 Nat'l 12-P-160 152 71 97 1013 8791 30 1551 2001.0	1.23
0 0 0 40 1896 2001.0	1.23
0 0 0 50 2586 2001.0	1.23
2 Nat'l 12-P-160 152 62 97 1013 8791 30 1379 2001.0	1.23
0 0 0 40 2068 2001.0	1.23
	1.23
3 Nat'l 12-P-160 152 59 97 1013 8791 0	
Casing	
DIAM. CSG OD SHOE MD SHOE TVD LOT FIT COMMENT	
(mm) (plan/Actual) (plan/Actual) (pl/Act)	
13.375 340 785.0 743.0 785.0 742.9 1.68 1.88	
TYPE LENGTH (m) CSG ID (mm) WT (kg/m) GRADE THREAD	
340mm (13.375") shoe jt 107 kg/m, cent mid 12.52 316 107.1 L-80 BTC	
340mm (13.375") int it 107 kg/m, cent mid it 12.13 316 107 1 I-80 BTC	
340mm (13.375") int jt 107 kg/m, cent mid jt 12.64 316 107.1 L-80 BTC	
340mm (13.375") int jt 107 kg/m, cent mid jt 12.64 316 107.1 L-80 BTC 50 x 340mm (13.375") jt 101 kg/m 590.73 316 101.2 L-80 BTC	
340mm (13.375") int jt 107 kg/m, cent mid jt 12.64 316 107.1 L-80 BTC 50 x 340mm (13.375") jt 101 kg/m 590.73 316 101.2 L-80 BTC 340mm (13.375") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC	
340mm (13.375") int jt 107 kg/m, cent mid jt 12.64 316 107.1 L-80 BTC 50 x 340mm (13.375") jt 101 kg/m 590.73 316 101.2 L-80 BTC 340mm (13.375") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC 340mm (13.375") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC 476mm (18.75") wellhead + extension jt 10.71 316 101.2 L-80 BTC	
340mm (13.375") int jt 107 kg/m, cent mid jt 12.64 316 107.1 L-80 BTC 50 x 340mm (13.375") jt 101 kg/m 590.73 316 101.2 L-80 BTC 340mm (13.375") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC 340mm (13.75") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC 476mm (18.75") wellhead + extension jt 10.71 316 101.2 L-80 BTC RT to Wellhead top 92.58 0 .0 .0	
340mm (13.375") int jt 107 kg/m, cent mid jt 12.64 316 107.1 L-80 BTC 50 x 340mm (13.375") int jt 101 kg/m 590.73 316 101.2 L-80 BTC 340mm (13.375") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC 340mm (13.375") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC 476mm (18.75") wellhead + extension jt 10.71 316 101.2 L-80 BTC RT to Wellhead top 92.58 0 .0 0 0 0	
340mm (13.375") int jt 107 kg/m, cent mid jt 12.64 316 107.1 L-80 BTC 50 x 340mm (13.375") int jt 101 kg/m 590.73 316 101.2 L-80 BTC 340mm (13.375") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC 476mm (18.75") wellhead + extension jt 10.71 316 101.2 L-80 BTC RT to Wellhead top 92.58 0 .0 0 0 0 0 Personnel : on Site =79 4 Santos 36 DOGC 5 DOGC other/extra 21 TMT (marine)	
340mm (13.375") int jt 107 kg/m, cent mid jt 12.64 316 107.1 L-80 BTC 50 x 340mm (13.375") jt 101 kg/m 590.73 316 101.2 L-80 BTC 340mm (13.375") No-cross jt 101 kg/m 11.84 316 101.2 L-80 BTC 476mm (18.75") wellhead + extension jt 10.71 316 101.2 L-80 BTC RT to Wellhead top 92.58 0 .0 0 0 0 0 Personnel : on Site =79 4 Santos 36 DOGC 5 DOGC other/extra 21 TMT (marine) 3 TMT (ROV) 4 BHI 1 Halliburton 2 IDFS	

Sep 13, 2002

DAILY DRILLING REPORT # 24

CASINO #1

Safety, Inspection	ons and Drills	Summary										
5 days since last	Fire and Abandon Ship Drill											
1809 days since last	Lost Workday Case											
42 days since last	Medical Treatment Case											
8 days since last	First Aid Case											
2 days since last	Pre-Job Meetings											
1 days since last	Trip/Pit Drill											
days since last	Fire Drill											
days since last	Heavy Lift Meeting											
SHAKER 1 4 × 115 ENGINEER M. Docherty / J. Singh												
SHAKER 1 4 x 115 SHAKER 2 4 x 115	VOLUME AVAILABLE (m3) =	325 LOSSES	(m3) = 54 COMME	NTS								
SHAKER 3 4 x 115	ACTIVE 79.5 MIXII	NG 0.0 DOWNH	OLE 12.88									
SHAKER 4 4 x 84	HOLE 157.7 SLUC	G 0.0 SURF.+E	EQUIP 41.33									
SHAKER 5	RESERVE 87.4 HEA	VY 0.0 DUMPE	0.00									
Anchors Anc 1	1: 116 Anc 2: 143 An	c 3 : 102 Anc 4 : 10	07 Anc 5 : 118	RIS. TENS. (MT) : 105								
Anc 6	6: 88 Anc 7: 122 An	c 8 : 145 Anc 9 : 0	Anc 10:0	RISER ANGLE (deg): 0.0								
	Arrived @ Pig Depart from Pig	EstimatedArrival (Port)	Weether	STACK ANGLE(deg): 0.0								
workboats	(Date)(Time) (Date)(Time)	(Date)(Time)		V.D.L. (MT) : 2,155.C								
			WIND SP (kts) : 25.0	AVE HEAVE (m): 0.9								
Pacific Sentinel	10/9/02 23:25 11/9/02 18:30	11/9/02 23:30	WIND DIR (deg) · 25.0									
	11,0,02 10.00		PRES.(mbars): 1020									
			AIR TEMP (C) 18.0	AVE ROLL (deg) : 0.2								
			10.0	MAX ROLL (deg) : 0.2								
COMMENTS : Pax	on / off : Flt #1, 7/7. Flt #2, 5/5.			- (

Santos DATE : Sep 14, 2002

FROM : H. Flink / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 25

CASINO #1

Well Data			2 118 0		211	AFE COST \$	12 129 000
COUNTRY	Austra	alia TVD (m BRT)	2,118.0	CASING OD (mm)	340	AFE BASIS :	UNKNOWN
FIELD	Casi	ino PROGRESS (m)	75.0	SHOE TVD (m BRT)	743	DAILY COST :	\$326,139
DRILL CO.	Diamond Offsho	DAYS FROM SPUD	20.25	FIT (sg)	0.00	CUM COST :	\$9,674,499
RIG	Ocean Bour	nty DAYS +/- CURVE	11.00	LOT (sg)	1.88		
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25 i) LAT 7() 95	5.0 CURRENT OP @ 04 0.5 PLANNED OP.	100 Logging F Continue	Run # 2 (MDT) Logging program.			

Summary of period 00:00 to 24:00 hrs

Drilled 311mm (12-1/4") Hole to 2118m. POOH. Rigged up and ran Wire line logs.

	FORMATION	TOP(m BRT)
	Skull Creek (?) Nullawarre	1,259 1,522
וו	Belfast	1,561
	Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 14, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		D	00:00	11:00	11.00	2,118	Continued drilling 311mm (12-1/4") Hole from 2043m to 2118m
IH1	Ρ		CIR	11:00	13:00	2.00	2,118	Circulated bottoms up @ 2118m. Shakers clean, flow checked.
IH1	Ρ		то	13:00	19:30	6.50	2,118	POOH F /- 2118m (60 kips O-Pull @ 1805m & 1760m Worked clean)
IH1	Ρ		WL	19:30	20:00	0.50	2,118	Held JSA and rigged up Schlumberger wire line.
IH1	Р		WL	20:00	24:00	4.00	2,118	Made up and RIH with Log # 1 (PEX / DSI / HALS)

ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 15, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		WL	00:00	02:30	2.50	2,118	Continue Logging Run # 1 (Depth tools reached 2098.5 mts)
IH1	Р		WL	02:30	06:00	3.50	2,118	Tools on surface Made up Log # 2 (MDT) RIH @ 04:30hrs

WBM Data	COST T	ODAY : \$5,652	CUM. WB MUD COST: \$238,546				CUM. WBM+OBM COST: \$238,546					
Туре :	КСІ РНРА	VISCOCITY (sec/ltr) PV (Pa.s) :	:	54 (API FLUID LOSS (cm3/30min) :	5	CI : K+C*1000 :	32,500 40500	SOLIDS (%vol) : H2O (%vol) :	10 89.6		
FROM :	pit	YP (Pa.s) :		13	3 (mm) :	1	HARD/Ca :	400	OIL (%vol) :			
TIME :	22:00	GEL10s/10m/100m			HTHPFL	4.0	MBT (ppb) :	10.0	SAND :	.5		
WEIGHT (sg):	1.22	(Pa.s) :	3	5	(cm3/30min) :	18	PM :		PH :	9.0		
TEMP (C) :	54	Fann 3/6/100 : 6	6	8 27	HTHP CAKE	2	PF :	.1	PHPA (ppb) :	1.9		

Bit Data for Bit #	7 IADC #	4 3 7		Wear	I O1 2 2	D BT	L	B E	G I	O2 CT	R TD
SIZE (") :	12.25			NOZZLES	Drilled over th	ha last	21 hrs	Colo	ulated c	wor the	hit run
MANUFACTURER :	HU	AVE WOB (MT) :	16	3 x 16			75				
TYPE :	MXR09D	AVE RPM :	100	x 0		n):	10.0				321
SERIAL # :	L11DK	FLOW (lpm) :	3,043	X 0		HRS:	10.3			. HRS :	33.2
DEPTH IN (mRT):	1797	PUMP PRESS.(Kpa):	26,821	x 0			0.1 1.0			. пкз.	37.0
DEPTH OUT (mRT):	2118	HSI (kW/cm2) :	0.814	x 0	ROP (m/hr) :	:	7.3	ROP (m/hr) :		9.7

Laot												(deg	3)	(m)	30m	i)				
Mag	netic [Declinati	ion	:	0.00	117	0.4	1170.3	0.9	93	192.5	192	.5	4.9	C).1	4.9	-0.2	MWD	
						125	6.7	1256.6	1.4	4	181.2	181	.2	3.1	C).2	3.1	-0.4	MWD	
						138	2.1	1381.9	1.8	37	182.2	182	.2	-0.5	C).1	-0.5	-0.5	MWD	
						145	8.5	1458.2	2.1	3	183.9	183	.9	-3.1	C).1	-3.1	-0.6	MWD	
						154	6.1	1545.7	2.7	74	185.6	185	.6	-6.9	C).2	-6.9	-0.9	MWD	
						160	5.5	1605.1	3.0	9	184.8	184	.8	-9.9	C).2	-9.9	-1.2	MWD	
						169	0.7	1690.2	3.4	4	188.9	188	.9	-14.7	C).1	-14.7	' -1.8	MWD	
						177	5.9	1775.1	4.3	88	192.3	192	.3	-20.4	C).3	-20.4	-2.9	MWD	
D																				
Bui	K	STOCK	TYP	E & UNITS		STAR	T US	ED RE	C'D	STO	DCK	STOCK	TY	PE & UNI	TS		START	USED RE	C'D S	тоск
5100	CKS	Fuel Oil	- Ri	g	M3	560.4	1	6.0		5	44.4	Drill Wa	ater	- Rig	M	IT	819.0	85.0		734.0
On	Rig	Pot Wate	er - I	Rig	MT	98.0)				98.0	Cemen	t 'G'	' - Rig	S	XS	1430.0			1430.0
		Cement	HTE	3 - Rig	SXS	0.0)				0.0	Benton	ite -	- Rig	S	xs	670.0			670.0
		Barite -	Rig		SXS	2827.0) 7	6.0		27	51.0	Brine -	Rig		M	IT	0.0			0.0
		Helifuel	- Ri	g	ltr	3269.0	46	2.0		28	07.0	Fuel O	il - C	Conquero	r N	13	340.5			340.5
		Drill Wat	ter -	Conqueror	MT	0.0)				0.0	Pot Wa	ter -	- Conque	ror M	Т	230.0			230.0
		Cement	'G' -	Conqueror	SXS	0.0)				0.0	Cemen	t HT	TB - Cond	querc s	xs	0.0			0.0
		Bentonit	e - (Conqueror	SXS	0.0)				0.0	Barite ·	· Co	nqueror	s	XS	246.0			246.0
		Brine - C	Conc	queror	МТ	0.0)				0.0	Fuel O	il - S	Sentinel	Ν	13	273.8	2.6		271.2
		Drill Wat	ter -	Sentinel	MT	369.0)			3	69.0	Pot Wa	ter ·	- Sentine	I M	IT	222.0	5.0		217.0
		Cement	'G' ·	- Sentinel	SXS	0.0)				0.0	Cemen	t HT	TB - Sent	inel s	XS	0.0			0.0
		Bentonit	te - :	Sentinel	SXS	0.0)				0.0	Barite	- Se	entinel	s	XS	0.0			0.0
		Brine - S	Sent	inel	MT	0.0)				0.0						-			
Pun	Pump Data																			
				Pump	Data	- last 2	4 hrs									Slo	w Pump	Data		
#		TYPE		LNR(mm)	SPI	И	EFF (%	%) FI	ow (Ip	om)	SPP (kP			SPM	SPP	(kPa)) DE	PTH (m)	MW	/ (sg)
1	Nat'l 1	2-P-160		152		71		97	10	13		8936		30		1551		2116.0		1.23
				0						0		0		40		1896		2116.0		1.23
		0.0.101		0						0	(50	2	2758		2116.0		1.23
2	Nat'l 1	2-P-160		152		62		97	10	13	8936			30		1551		2116.0		1.23
										0	0			40 50		∠∪68 2759		2116.0		1.23
2	Nat'l 1	2-P-160		152		59		97	10	12		8936 0						2110.0		1.23
	Mutri	21 100		102				<u> </u>	10	10		5550								
Cas	sing																			
DIA	λМ. С	CSG OD		SHOE MD)		SHOE	TVD	T		LOT	Τ		FIT			CC	MMENT		
		(mm)		(plan/Actua	l)	(plan//	Actual)		(pl/Act)	(r	pl/Act)						
13.3	375 3	40		785.0	743.0	7	85.0	74	42.9	1.0	68	1.88								
		1	ΓYΡ	E		L	ENG	TH (m)	C	SG I	D (mn	n)	WТ	(kg/m)	GR	ADE		THREAD		
340	.340mm (13.375") shoe it 107 kg/m, cent mi							52		316	3		10)7.1	l 1	-80		BTC		
340	340mm (13.375") int jt 107 kg/m, cent mid						12.1	13		316	5		10)7.1	ī	-80		BTC		
340	mm (13	3.375") in	t jt 1	107 kg/m, ce	nt mid	jt	12.6	64		316	6		10)7.1	_L	-80		BTC		
50 x	340mi	m (13.37	5") jt	t 101 kg/m			590.	73		316	6		10	1.2	L	-80		BTC		
340	mm (13	8.375") No	o-crc	oss jt 101 kg/	m		11.84			316	6		10	1.2	L	-80		BTC		
476	mm (18	3.75") we	llhea	ad + extensio	on jt		10.71			316	6		10	1.2	L	-80		BTC		
RT t	to Well	head top					92.5	58		0			-	.0						
L																				
Indonor	ndent Data	Services : S	Santo	s I td. (offshore me	etric repo	rt sept 20	02)												l	Page # 2 of

86 TRQE MAX (Nm):

86 TRQE OFF (Nm):

86

ID

INCL

DEG

BHA DESCRIPTION : Bit, NB RR (solid float), 3 x 8" DC, RR, 1 x 8" DC, RR, 9 X 8"dc, Jar, 2 x 8" DC, x/o, 12 x 5" HWDP.

OD

TVD

(mBRT)

TRQE ON (Nm):

GU 2151

GU 2143

GU2144

48907C

ΑZ

(deg)

SERIAL #

BHA # 8

NB RR

Str RR

Str RR

Survey

Last Tool Type :

Jars

WT BLW JAR (MT):

BHA WT (MT) :

Length (m): 268.2

25

34

(Method : Min Curvature)

TOOL DESCRIPTION

STRING WT (MT):

PICK UP WT (MT):

SLK OFF WT (MT):

MWD

LENGTH

MD

(mBRT)

Independent Data Services : Santos Ltd. (offshore metric report, sept.2002)

DAILY DRILLING REPORT # 25

D.C. (1) ANN. VELOCITY (mpm):

D.C. (2) ANN VELOCITY (mpm):

COMMENT

N/S

(m)

E/W

(m)

5,423 H.W.D.P. ANN VELOCITY (mpm):

5,423 D.P. ANN VELOCITY (mpm) :

8,135

HRS

120.5

120.5

120.5

120.5

'V'

SECT

DOGLEG

(deg/

CORR.

ΑZ

CASINO #1

TOOL TYPE

70

73

48

48

Personnel : on S	Site =85	
4 Santos	35 DOGC	4 DOGC other/extra 22 TMT (marine)
3 TMT (ROV)	4 BHI	1 Halliburton 2 IDFS
9 Schlumberger	1 DrilQuip	
Safety, Inspection	ons and Drills Summary	
6 days since last	Fire and Abandon Ship Drill	
1810 days since last	Lost Workday Case	
43 days since last	Medical Treatment Case	
9 days since last	First Aid Case	
4 days since last	Weekly Safety Meeting	
0 days since last	Trip/Pit Drill	
3 days since last	BOP Test	
Shakers, Volum	es and Losses Data	ENGINEER M. Docherty / J. Singh
SHAKER 1 4 x 115	VOLUME AVAILABLE (m3) = 313	LOSSES (m3) = 43 COMMENTS
SHAKER 3 4 x 115	ACTIVE 92.2 MIXING 0.0	DOWNHOLE 3.66
SHAKER 4 4 x 84	HOLE 163.1 SLUG 0.0	SURF.+EQUIP 24.96
SHAKER 5	RESERVE 58.0 HEAVY 0.0	DUMPED 14.31
Anchors Anc	RESERVE 58.0 HEAVY 0.0 I : 113 Anc 2 : 127 Anc 3 : 111	DUMPED 14.31 Anc 4 : 100 Anc 5 : 120 RIS. TENS. (MT) : 105
Anchors Anc	RESERVE 58.0 HEAVY 0.0 1: 113 Anc 2: 127 Anc 3: 111 5: 88 Anc 7: 118 Anc 8: 118	DUMPED 14.31 Anc 4 : 100 Anc 5 : 120 RIS. TENS. (MT) : 105 Anc 9 : 0 Anc 10: 0
Anchors Anc	RESERVE 58.0 HEAVY 0.0 I: 113 Anc 2: 127 Anc 3: 111 3: 88 Anc 7: 118 Anc 8: 118 Arrived @ Rig Depart from Rig EstimatedArr	DUMPED 14.31 Anc 4 : 100 Anc 5 : 120 Anc 9 : 0 Anc 10: 0 RIS. TENS. (MT) : 105 RISER ANGLE (deg): 0.0 stack (Angle (deg)): 0.0
Anchors Anc Anc Anc B	RESERVE 58.0 HEAVY 0.0 I: 113 Anc 2: 127 Anc 3: 111 5: 88 Anc 7: 118 Anc 8: 118 Arrived @ Rig Depart from Rig EstimatedArr (Date)(Time) (Date)(Time) (Date)(Time)	DUMPED 14.31 Anc 4 : 100 Anc 5 : 120 Anc 9 : 0 Anc 10: 0 ival (Port) me) Weather VISIBILITY(nm) : 16
Anchors Anc	RESERVE 58.0 HEAVY 0.0 1: 113 Anc 2: 127 Anc 3: 111 5: 88 Anc 7: 118 Anc 8: 118 Arrived @ Rig (Date) (Time) Depart from Rig (Date)(Time) EstimatedArr (Date)(Time)	DUMPED 14.31 Anc 4 : 100 Anc 5 : 120 Anc 9 : 0 Anc 10: 0 ival (Port) me) Weather VISIBILITY(nm) : 16 WIND SP. (kts) : 32.0
Anchors Anc Anc Workboats Pacific Sentinel Pacific Conqueror	RESERVE 58.0 HEAVY 0.0 1 : 113 Anc 2 : 127 Anc 3 : 111 5 : 88 Anc 7 : 118 Anc 8 : 118 Arrived @ Rig (Date)(Time) Depart from Rig (Date)(Time) EstimatedArr (Date)(Time) EstimatedArr (Date)(Time) 10/9/02 23:25 11/9/02 18:30 11/9/02	DUMPED 14.31 Anc 4 : 100 Anc 5 : 120 Anc 9 : 0 Anc 10: 0 ival (Port) me) Weather VISIBILITY(nm) : 16 WIND SP. (kts) : 32.0 WIND DIR (deg) : 20
Anchors Anc	RESERVE 58.0 HEAVY 0.0 1 : 113 Anc 2 : 127 Anc 3 : 111 5 : 88 Anc 7 : 118 Anc 8 : 118 Arrived @ Rig (Date)(Time) Depart from Rig (Date)(Time) EstimatedArn (Date)(Time) EstimatedArn (Date)(Time) 10/9/02 23:25 11/9/02 18:30 11/9/02	DUMPED 14.31 Anc 4 : 100 Anc 5 : 120 Anc 9 : 0 Anc 10: 0 ival (Port) me) Weather VISIBILITY(nm) : 16 WIND SP. (kts) : 32.0 WIND DIR (deg) : 20 PRES.(mbars): 1015
Anchors Anc	RESERVE 58.0 HEAVY 0.0 1 : 113 Anc 2 : 127 Anc 3 : 111 5 : 88 Anc 7 : 118 Anc 8 : 118 Arrived @ Rig (Date)(Time) Depart from Rig (Date)(Time) EstimatedAri (Date)(Time) EstimatedAri (Date)(Time) 10/9/02 23:25 11/9/02 18:30 11/9/02	DUMPED 14.31 Anc 4 : 100 Anc 5 : 120 Anc 9 : 0 Anc 10: 0 ival (Port) me) Weather VISIBILITY(nm) : 16 WIND SP. (kts) : 32.0 WIND DIR (deg) : 20 PRES.(mbars): 1015 AIR TEMP (C) : 19.0

Santos DATE : Sep 15, 2002

FROM : H. Flink / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 26

CASINO #1

Well Data			2 1 1 8 0		211	AFE COST \$	12 129 000
COUNTRY	Australia	TVD (m BRT)	2,118.0	CASING OD (mm)	340	AFE BASIS :	P&A
FIELD	Casino	PROGRESS (m)	75.0	SHOE TVD (m BRT)	743	DAILY COST :	\$807,796
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	21.25	FIT (sg)	0.00	CUM COST :	\$10,482,295
RIG	Ocean Bounty	DAYS +/- CURVE	11.00	LOT (sg)	1.88		
RT ABOVE SL (m) WATER DEPTH (n RT TO SEABED (m	25.0 n) LAT 70.5 n) 95.5	CURRENT OP @ 0400 PLANNED OP.	RIH with t Complete	ubing for Cement pulg # 1 Loging program / RIH & C	(06:00 D Commenc	epth 560 mts) e Abandonment p	rogram.

Summary of period 00:00 to 24:00 hrs Continued with Logging program.

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,561
Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 15, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		WL	00:00	02:30	2.50	2,118	Continue Logging Run # 1 (Depth tools reached 2098.5 mts)
IH1	Ρ		WL	02:30	11:30	9.00	2,118	Tools on surface Made up Log # 2 (MDT) RIH @ 04:30hrs.
IH1	U		WL	11:30	14:00	2.50	2,118	Tools on surface, changed out hydraulic unit due to failure of tool. Re - run Log # 2 (MDT)
IH1	Ρ		WL	14:00	20:00	6.00	2,118	Continued Log # 2 (MDT)
IH1	Ρ		WL	20:00	21:30	1.50	2,118	Laid out MDT tools, and made up Log tools # 3 (CST)
IH1	Ρ		WL	21:30	24:00	2.50	2,118	RIH Log # 2 (CST)

ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 16, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		WL	00:00	01:30	1.50	2,118	Continued Log # 3 (CST) Laid out tools.
IH1	Р		WL	01:30	02:00	0.50	2,118	Rigged down wire line.
IH1	Р		ΤI	02:00	02:30	0.50	2,118	Made up cement side entry sub and TIW valve, racked stand in
								derrrick.
IH1	Р		ΤI	02:30	06:00	3.50	2,118	Picked up 20 joints of 88.9mm tubing. RIH in preperation for cmt plug.
								(06:00 hr Depth 560 mts)

WBM Data	COST T	ODAY :	CUM. WB MUD COST: \$238,546					CUM. WBM+OBM COST: \$238,546					
Туре :	КСІ РНРА	VISCOCITY (sec/ltr) : PV (Pa.s) :		: 57 0		API FLUID LOSS (cm3/30min) : FILTER CAKE	5	CI : K+C*1000 :	33,000 40500	SOLIDS (%vol) : H2O (%vol) :	11 89.6		
FROM :	pit	YP (Pa.s) :		1	12	(mm) :	1	HARD/Ca :	300	OIL (%vol) :			
TIME :	22:00	GEL10s/10m/100m				HTHPFL	4.0	MBT (ppb) :	11.0	SAND :	.5		
WEIGHT (sg):	1.24	(Pa.s) :	3	5	1	(cm3/30min) :	18	PM:		PH :	9.0		
TEMP (C) :	57	Fann 3/6/100 : 6	6	8 2	27	HTHP CAKE (mm) :	2	PF :	.1	PHPA (ppb) :	1.9		

													_
Bit Data for Bit #	7 IADC #	4 3 7		Wear	1	01	D BT	L	B	G	O2 CT	R TD	
SIZE ("):	12.25		10	NOZZLES	Drille	d over t	he last 2	 24 hrs		ulated o	ver the	bit run	-
TYPE ·		AVE WOB (MT) :	16 100	3 x 16	METE	RAGE (m) :	0	CUM.N	IETERA	GE (m)	321	I
SERIAL # :	L11DK	FLOW (lpm) :	3,043	x 0			HRS:	0. 0	CUM.	ON BOT	HRS :	33.2	2 0
DEPTH IN (mRT):	1797	PUMP PRESS.(Kpa):	26,821	x 0	TOTA	L REVS	:	.0	CUM.1	TOT. RE	VS :	199,200	0
DEPTH OUT (mRT):	2118	HSI (kW/cm2) :	0.814	X 0	ROP (m/hr) :			ROP (r	m/hr) :		9.7	7

				~ ~ ~						(3)	()	,				
Magn	etic De	eclinatio	on :	0.00	1170.4	1170.	3 0.	.93	192.5	192.5	4.9	0.1	4	.9 -0.2	MWC)
					1256.7	1256.	6 1.	44	181.2	181.2	3.1	0.2	3	.1 -0.4	MWC)
					1382.1	1381.	9 1.	.87	182.2	182.2	-0.5	0.1	-0	.5 -0.5	MWC)
					1458.5	1458.	2 2.	13	183.9	183.9	-3.1	0.1	-3	.1 -0.6	MWC)
					1546.1	1545.	7 2.	74	185.6	185.6	-6.9	0.2	-6	.9 -0.9	MWE)
					1605.5	1605.	1 3.	.09	184.8	184.8	-9.9	0.2	-9	.9 -1.2	MWE)
					1690.7	1690.	2 3.	.44	188.9	188.9	-14.7	0.1	-14	.7 -1.8	MWE)
					1775.9	1775.	1 4.	.38	192.3	192.3	-20.4	0.3	-20	.4 -2.9	MWD)
Bulk	S	STOCK T	YPE & UNITS		START L	JSED R	EC'D	STO	CK S	стоск т	YPE & UN	TS	START	USED RE	C'D	STOCK
Stock	KS F	uel Oil -	Rig	М3	544.4	9.5		5	34.9	Drill Wate	ər - Rig	MT	734.0	22.0		712.0
On R	ig _F	ot Water	- Rig	MT	98.0				98.0	Cement '	G' - Rig	SXS	1430.0			1430.0
	C	Cement H	ITB - Rig	SXS	0.0				0.0 E	Bentonite	ə - Rig	SXS	670.0			670.0
	E	Barite - R	ig	SXS	2751.0			27	51.0 E	Brine - R	ig	MT	0.0			0.0
	F	lelifuel -	Rig	ltr	2807.0			28	07.0 F	uel Oil	- Conquero	r M3	340.5			340.5
		Drill Wate	r - Conqueror	MT	0.0				0.0 F	Pot Wate	r - Conque	ror MT	230.0			230.0
	c	Cement 'C	G' - Conqueror	SXS	0.0				0.0	Cement	HTB - Cond	uerc sxs	0.0			0.0
	F	Bentonite	- Conqueror	SXS	0.0				0.0 F	Barite - (Conqueror	SXS	246.0			246.0
	F	Brine - Co	nqueror	MT	0.0				0 0 F	Fuel Oil	- Sentinel	M3	271.2	5.5		265.7
)rill Wate	or - Sentinel	MT	369.0			3	69 0 F	Pot Wate	er - Sentine	і мт	217.0	5.0		212.0
		`ement '(3' - Sentinel	eve	0.0			0		°omont	HTR - Sont	inal eve	0.0	0.0		0.0
		Rontonito	- Sentinel	573 676	0.0				0.0	Barito - 9	Sontinol		0.0			0.0
				572 MT	0.0				0.0	Janie - C	Sentinei	3/3	0.0			0.0
	Ľ	sinie - Se			0.0				0.0							
Pum	p Dat	а														
	P = 41	-	Pumr	Data	- last 24 h	rs								Data		
#	 	VDE				(0/)		nm)	epp	(kBa)	SDW	SDD (k			M	
#	1	IFE		SFI		(70)	FIOW (I	pin)	SFF	(KFa)	SEIVI	SFF (K	-a) D			w (sy)
1 N	Vat'l 12-	-P-160	152		71	97	1	013		8936	30	15	51	2116.0		1.23
			0					0		0	40	18	96	2116.0		1.23
			0					0		0	50	27	58	2116.0		1.23
2 1	vat'i 12-	-P-160	152		62	97	1	013		8936	30	15	51	2116.0		1.23
			0					0			40 50	20	08 58	2116.0		1.23
3 1	Jat'l 12.	P-160	152		59	97	1	013		8036	50	21	0	2110.0		1.25
	Vati 12	1-100	152		55	31		015		0350			0			
Casi	na															
DIA			01105.15	<u></u>	0.11				LOT							
DIAN	л. CS	G OD	SHOE ML)	SH			1.			FII (ml/A at)		C	OMMENI		
	(mm)	(plan/Actua	ai <i>)</i>	(piai	1/Actual)	()	pi/Act)	'	(pi/Act)	_				
13.37	75 340)	785.0	743.0	785.)	742.9	1.6	68 1	.88						
		Τ	YPE		LEN	GTH (m) (CSG I	D (mm	n) W	T (kg/m)	GRA	DE	THREAD		
340m	m (13)	875") sha	o it 107 kg/m	cont m	ud 11	0.50		316		· .	107.1	1_8	0	BTC		
340m	m (13.3 m (13.3	375") int	it 107 kg/m,	oent mid	it 12	2.52		316	, ,		107.1	L-8		BIC		
340m	m (13.)	375") int	it 107 kg/m, ce	ent mid	it 12	2.64		316	, }		107.1	1-8	õ	BTC		
50 x 3	340mm	(13.375"	') jt 101 ka/m		59	0.73		316	5	.	101.2	L-8	0	BTC		
340m	m (13.3	875") No-	cross jt 101 kg/	'n	1	.84		316	6	· ·	101.2	L-8	o	BTC		
476m	m (18.7	75") well	head + extensi	on jt	10).71		316	6	· ·	101.2	L-8	o	BTC		
RT to	Wellhe	ead top			92	2.58		0			.0					

86 TRQE MAX (Nm):

86 TRQE OFF (Nm):

86

ID

INCL

DEG

BHA DESCRIPTION : Bit, NB RR (solid float), 3 x 8" DC, RR, 1 x 8" DC, RR, 9 X 8"dc, Jar, 2 x 8" DC, x/o, 12 x 5" HWDP.

OD

TVD

(mBRT)

TRQE ON (Nm):

GU 2151

GU 2143

GU2144

48907C

ΑZ

(deg)

SERIAL #

WT BLW JAR (MT):

BHA WT (MT) :

BHA # 8

NB RR

Str RR

Str RR

Survey

Last Tool Type :

Jars

Length (m): 268.2

25

34

(Method : Min Curvature)

TOOL DESCRIPTION

STRING WT (MT):

PICK UP WT (MT):

SLK OFF WT (MT):

LENGTH

MD

(mBRT)

MWD

DAILY DRILLING REPORT # 26

D.C. (1) ANN. VELOCITY (mpm):

D.C. (2) ANN VELOCITY (mpm):

COMMENT

N/S

(m)

E/W

(m)

5,423 H.W.D.P. ANN VELOCITY (mpm):

5,423 D.P. ANN VELOCITY (mpm) :

DOGLEG

(deg/

30m)

8,135

HRS

120.5

120.5

120.5

120.5

'V'

SECT

(m)

CORR.

ΑZ

(deg)

TOOL TYPE

70

73

48

48

Independent Data Services : Santos Ltd. (offshore metric report, sept.2002)

Personnel : on S	ite =85			
4 Santos	35 DOGC	4 DO	GC other/extra	22 TMT (marine)
3 TMT (ROV)	4 BHI	1 Hal	liburton	2 IDFS
9 Schlumberger	1 DrilQuip			
Safety, Inspection	ons and Drills S	ummary		
7 days since last	Fire and Abandon Ship Drill			
1811 days since last	Lost Workday Case			
44 days since last	Medical Treatment Case			
10 days since last	First Aid Case			
5 days since last	Weekly Safety Meeting			
1 days since last	Trip/Pit Drill			
4 days since last	BOP Test			
Shakers, Volume	es and Losses Data			ENGINEER M. Docherty / J. Singh
Shakers, Volume SHAKER 1 4 x 115	es and Losses Data	312 LOSS	ES (m3) = 2	ENGINEER M. Docherty / J. Singh
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115	es and Losses Data VOLUME AVAILABLE (m3) = ACTIVE 90.6 MIXING	312 LOSS	ES (m3) = 2 NHOLE 1.59	ENGINEER M. Docherty / J. Singh
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84	es and Losses Data VOLUME AVAILABLE (m3) = ACTIVE 90.6 MIXING HOLE 163.1 SLUG	312 LOSS 0.0 DOWI 0.0 SURF	ES (m3) = 2 NHOLE 1.59 :.+EQUIP 0.00	ENGINEER M. Docherty / J. Singh
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5	es and Losses Data VOLUME AVAILABLE (m3) = ACTIVE 90.6 MIXING HOLE 163.1 SLUG RESERVE 58.0 HEAVY	312 LOSS 0.0 DOWI 0.0 SURF 0.0 DUMF	ES (m3) = 2 NHOLE 1.59 :+EQUIP 0.00 PED 0.00	ENGINEER M. Docherty / J. Singh
Shakers, VolumeSHAKER 14 x 115SHAKER 24 x 115SHAKER 34 x 115SHAKER 44 x 84SHAKER 54 x 84	ACTIVE 90.6 MIXING HOLE 163.1 SLUG RESERVE 58.0 HEAVY	312 LOSS 0.0 DOWI 0.0 SURF 0.0 DUMF 3: 113 Anc 4 :	ES (m3) = 2 NHOLE 1.59 :+EQUIP 0.00 PED 0.00 104 Anc 5 : 12	COMMENTS 7 RIS. TENS. (MT) : 105
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5 Anchors Anc 1 Anc 6	VOLUME AVAILABLE (m3) = ACTIVE 90.6 MIXING HOLE 163.1 SLUG RESERVE 58.0 HEAVY : 102 Anc 2 : 118 Anc 3 : 102 Anc 7 : 113 Anc 8	312 LOSS 0.0 DOWI 0.0 SURF 0.0 DUMF 3: 113 Anc 4 : 3: 113 Anc 9 :	ES (m3) = 2 NHOLE 1.59 :+EQUIP 0.00 PED 0.00 104 Anc 5 : 12 0 Anc 10: 0	COMMENTS 7 RIS. TENS. (MT) : 105 RISER ANGLE (deg): 0.0
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5 Anchors Anc 1 Anc 6	es and Losses Data VOLUME AVAILABLE (m3) = ACTIVE 90.6 MIXING HOLE 163.1 SLUG RESERVE 58.0 HEAVY 102 Anc 2 : 118 Anc 7 : 113 Anc 8 Arrived @ Rig Depart from Rig	312 LOSS 0.0 DOWI 0.0 SURF 0.0 DUMI 3: 113 Anc 4 : 3: 113 Anc 9 : EstimatedArrival (Por	ES (m3) = 2 NHOLE 1.59 C+EQUIP 0.00 PED 0.00 104 Anc 5 : 12 0 Anc 10: 0 rt) Weather	COMMENTS 7 RIS. TENS. (MT): 105 RISER ANGLE (deg): 0.C STACK ANGLE(deg): 0.C
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5 Anchors Anc 1 Anc 6 Workboats	es and Losses Data VOLUME AVAILABLE (m3) = ACTIVE 90.6 HOLE 163.1 SUG RESERVE 58.0 HEAVY 102 Anc 2 : 118 Anc 7 : 113 Anc 8 Arrived @ Rig Depart from Rig (Date)(Time) (Date)(Time)	312 LOSS 0.0 DOWI 0.0 DUMI 0.0 DUMF 0.1 DUMF 3: 113 Anc 4 : 3: 113 Anc 9 : EstimatedArrival (Por (Date)(Time)	ES (m3) = 2 NHOLE 1.59 :+EQUIP 0.00 PED 0.00 104 Anc 5 : 12 0 Anc 10: 0 rth Weather VISIBILITY(opm) :	ENGINEER M. Docherty / J. Singh COMMENTS 7 RIS. TENS. (MT) : 105 RISER ANGLE (deg): 0.C STACK ANGLE(deg): 0.C V.D.L. (MT) : 1,971.C 12
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5 Anchors And 1 And 6 Workboats	es and Losses Data VOLUME AVAILABLE (m3) = ACTIVE 90.6 HOLE 163.1 SUBRET 58.0 HEAVY 102 Anc 2 : 118 Anc 7 : 113 Anc 8 Arrived @ Rig Depart from Rig (Date)(Time) (Date)(Time)	312 LOSS 0.0 DOWI 0.0 DUMF 0.0 DUMF 3: 113 Anc 4 : 3: 113 Anc 9 : EstimatedArrival (Por (Date)(Time)	ES (m3) = 2 NHOLE 1.59 t+EQUIP 0.00 PED 0.00 104 Anc 5 : 12 0 Anc 10: 0 rt) Weather VISIBILITY(nm) : WIND SP. (kts) :	ENGINEER M. Docherty / J. Singh COMMENTS .7 RIS. TENS. (MT) : 105 RISER ANGLE (deg): 0.C STACK ANGLE(deg): 0.C V.D.L. (MT) : 1,971.C AVE HEAVE (m) : 2.4 50.0
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5 Anchors And 1 And 6 Workboats	es and Losses Data VOLUME AVAILABLE (m3) = ACTIVE 90.6 HOLE 163.1 SESERVE 58.0 HEAVY : 102 Anc 2 : 118 Anc 7 : 113 Arrived @ Rig Depart from Rig (Date)(Time) (Date)(Time) 0/9/02 23:25 11/9/02 18:30	312 LOSS 0.0 DOWI 0.0 DUMF 0.0 DUMF 3: 113 Anc 4 : 3: 113 Anc 9 : EstimatedArrival (Por (Date)(Time) 11/9/02 23:30	ES (m3) = 2 NHOLE 1.59 :+EQUIP 0.00 PED 0.00 104 Anc 5 : 12 0 Anc 10: 0 rt) Weather VISIBILITY(nm) : WIND SP. (kts) : WIND DIR (deg) : WIND DIR (deg) :	ENGINEER M. Docherty / J. Singh COMMENTS
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5 Anchors And 1 And 6 Workboats	es and Losses Data VOLUME AVAILABLE (m3) = ACTIVE 90.6 HOLE 163.1 SEERVE 58.0 HEAVY 102 Anc 2 : 118 Anc 7 : 113 Anc 8 Arrived @ Rig Depart from Rig (Date)(Time) (Date)(Time) 0/9/02 23:25 11/9/02 18:30	312 LOSS 0.0 DOWI 0.0 DUMR 0.0 DUMR 3: 113 Anc 4 : 3: 113 Anc 9 : EstimatedArrival (Por (Date)(Time) 11/9/02 23:30	ES (m3) = 2 NHOLE 1.59 :+EQUIP 0.00 DED 0.00 104 Anc 5 : 12 0 Anc 10: 0 rt) Weather VISIBILITY(nm) : WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars):	ENGINEER M. Docherty / J. Singh COMMENTS
Shakers, Volume SHAKER 1 4 x 115 SHAKER 2 4 x 115 SHAKER 3 4 x 115 SHAKER 4 4 x 84 SHAKER 5 Anchors And 1 And 6 Workboats	VOLUME AVAILABLE (m3) = ACTIVE 90.6 MIXING HOLE 163.1 SLUG RESERVE 58.0 HEAVY 102 Anc 2 : 118 Anc 3 102 Anc 7 : 113 Anc 8 Arrived @ Rig (Date) (Time) Depart from Rig (Date)(Time) 0/9/02 0/9/02 23:25 11/9/02 18:30	312 LOSS 0.0 DOWI 0.0 DUMI 0.0 DUMI 3: 113 Anc 4 : 3: 113 Anc 9 : EstimatedArrival (Por (Date)(Time) 11/9/02 23:30	ES (m3) = 2 NHOLE 1.59 :+EQUIP 0.00 PED 0.00 104 Anc 5 : 12 0 Anc 10: 0 rt) Weather VISIBILITY(nm) : WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	ENGINEER M. Docherty / J. Singh COMMENTS 17 RIS. TENS. (MT) : 105 RISER ANGLE (deg): 0.C STACK ANGLE(deg): 0.C V.D.L. (MT) : 1,971.C 12 50.0 MAX HEAVE (m) : 2.4 50.0 101 AVE PITCH (deg) : 0.6 1014 AVE ROLL (deg) : 0.4

Santos DATE : Sep 16, 2002

FROM : H. Flink / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 27

CASINO #1

Well Data			2 1 1 8 0		211	AFE COST \$	12 129 000
COUNTRY	Australia	TVD (m BRT)	2,118.0	CASING OD (mm)	340	AFE BASIS :	P&A
FIELD	Casino	PROGRESS (m)	75.0	SHOE TVD (m BRT)	743	DAILY COST :	\$334,987
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	22.25	FIT (sg)	0.00	CUM COST :	\$10,817,282
RIG	Ocean Bounty	DAYS +/- CURVE	11.00	LOT (sg)	1.88		
RT ABOVE SL (m) WATER DEPTH (m	25.0 n) LAT 70.5	CURRENT OP @ 0400 PLANNED OP.) RIH to tag Run 13 3/	g # 3 Cement plug. /8" EZSV & cement plug #	4. POOF	I prepare to pull B	OP.
RT TO SEABED (m	1) 95.5					· · ·	

Summary of period 00:00 to 24:00 hrs

Complete logging / Picked up tubing RIH & set two abandonment plugs.

	FORMATION	TOP(m BRT)
	Skull Creek (?)	1,259
1	Nullawarre	1,522
	Belfast	1,561
	Warre	1,743

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 16, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		WL	00:00	01:30	1.50	2,118	Continued Log # 3 (CST) Laid out tools. (30 Shots 100% Recovery)
IH1	Ρ		WL	01:30	02:00	0.50	2,118	Rigged down wire line.
IH1	Ρ		ΤI	02:00	02:30	0.50	2,118	Made up cement side entry sub and TIW valve, racked stand in derrrick.
IH1	Р		ТΙ	02:30	06:30	4.00	2,118	Picked up 20 joints of 88.9mm tubing. RIH to 743m (Shoe)
IH1	Ρ		RS	06:30	07:00	0.50	2,118	Serviced TDS & Blocks.
IH1	Ρ		ТΙ	07:00	10:00	3.00	2,118	Continued RIH. Washed to bottom tagged @ 2094m.
IH1	Ρ		CIR	10:00	11:30	1.50	2,118	Circulated bottoms up @ 2094m.
IH1	Ρ		то	11:30	12:00	0.50	2,118	Pulled back to 1920m
IH1	Ρ		CIR	12:00	13:00	1.00	2,118	Spotted 6.3 M3 (40 bbls) Hi-vis @ 1920m. Pulled back to 1840m.
IH1	Ρ		СМР	13:00	14:30	1.50	2,118	Set cement plug # 1 F /- 1840m to 1690m. Rigged up & pumped 1.5 M3 (10 bbls) of drill water, tested cement line 7000 Kpa (1000 psi) Pumped 1.5 M3 (10 bbls) of drill water. Mixed and pumped 18.2 M3 (115 bbls) 557sx of tail slurry @ 1.89sg with 10.8 M3 (68 bbls) of mix water. Displaced cement with 14.4 M3 (91 bbls) of mud.
IH1	Р		то	14:30	16:00	1.50	2,118	Pulled back F /- 1840m to 1500m and circulated bottoms up.
IH1	Ρ		ТΙ	16:00	16:30	0.50	2,118	RIH to 1620m.
IH1	Ρ		СМР	16:30	17:00	0.50	2,118	Set cement plug # 2 F /- 1620m to 1470m. Rigged up and pumped 1.5 M3 (10 bbls) of drill water tested lines to 7000 Kpa (1000 psi) Pumped 1.5 M3 (10 bbls) of drill water. Mixed and pumped 18.2 M3 (115 bbls) of 1.89sg cement (557sx) with 10.8 M3 (68.3 bbls) of mix water. Displaced with 12.4 M3 (78 bbls) of mud.
IH1	Ρ		то	17:00	19:00	2.00	2,118	Pulled back F /- 1620m to 1300m and circulated bottoms up.
IH1	Ρ		то	19:00	20:00	1.00	2,118	Pulled back to 599m.
IH1	Ρ		WH	20:00	21:30	1.50	2,118	Installed wear bushing running tool, RIH and recovered wear bushing.
IH1	Р		ТΙ	21:30	23:00	1.50	2,118	RIH and tagged cement @ 1361m.
IH1	Ρ		то	23:00	23:30	0.50	2,118	Pulled back to 850m.
IH1	Ρ		CIR	23:30	24:00	0.50	2,118	Spotted 6.3 M3 (40 bbls) of Hi-vis pill, POOH to 780m.
ACTIV	ΊΤΥ	FOR	PERI	OD 000	0 HRS	TO 06:	00 HRS (ON Sep 17, 2002

ACIN		FUR	PERI		υπκο			JN Sep 17, 2002
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		CIR	00:00	00:30	0.50	2,118	Circulated bottoms up @ 780m.

																		CAS	SINO #1
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	4					ACTIV	ITY DE	SCR	IPTION			
IH1	Ρ		СМР	00:30	01:30	1.00	2,118	Se pu (10 15	t cen mpeo 000 p .5 M3	nent p d 1.5 M osi) Pu 3 (98 b ter Dis	lug /I3 (mp obls spla	# 3 F 10 bl ed 1.) of 1 aced	⁻ /- 780 bls) of c 5 M3 (1 .89sg c with 4 7	n to 63 frill wa 0 bbls ement 7 M3 (3	30m. ter te) of d t (475	Rigged ested cer rill wate isx) with Is) of mu	up ceme ment line r. Mixed 9.2 M3 (ud	nt line to 700 and pu 58 bbl	,)0 Kpa Imped s) of
IH1	Р		то	01:30	02:00	0.50	2,118	Pu	lled I	back F	= /- 7	780m	n to 550	m.					
IH1	Р		CIR	02:00	02:30	0.50	2,118	Ci	rcula	ted bo	ottor	ns up	o & disp	laced	well t	to corros	sion inhit	oited m	ud @
IH1	Р		то	02:30	05:00	2.50	2.118	55 PC	UM. DOH	F /- 55	50m	. laid	out tub	ina wh	nilst w	vaiting o	n cement	t.	
IH1	Р		ТΙ	05:00	06:00	1.00	2,118	RI	H to t	ag cei	mer	nt plu	g # 3	0					
WRM	Dat	<u> </u>	0.05	Γ ΤΟΠΑΥ	· \$1.64	16 CI	IM WB		COST	· \$240	191	1			BM+O	BM COS	T· \$240 10	Q1	
Type		a	003			(000/ltr) :		API F		LOSS	,131			0101. 00	2				10
Type	•	KC	I PHF	PA PV (Pa.s) :	(sec/itr) :	62 0	(cm3/	/30min):		6	K+C*1	: 000	3	40500	H2O (%vo	%voi): l):	89.6
FROM				pit YP (Pa.s) :		13	(mm)	:			1	HARD/	Ca:		560	OIL (%vol)):	F
WEIGH	T (sg):	:	22: 1.	00 GEL [.] 22 (Pa.s	10s/10m ;) :	n/100m 3	71	(cm3	/30mir	n) :		22	МВТ (р РМ :) : (aqo		11.0	PH :		.5 10.5
TEMP (C) :			0 Fann	3/6/100	0: 6	8 29	HTHF (mm)	P CAKI	E		2	PF :			.3	PHPA (pp	b):	1.8
								. ,											
Bit D	ata f	or Bi	t # 7	IADC #	4 3	7				Wear		I	01	D	L	В	G	02	R
SIZE ('):		• · ·	12.25	I					0771 5		2	2	BT	A	E		СТ	TD
MANU TYPE SERIA DEPTH DEPTH	FACT : L # : I IN (r I OUT	URER nRT): `(mRT	: ₩):	HU IXR09D L11DK 1797 2118	AVE V AVE F FLOW PUMP HSI (k	VOB (MT) : RPM : ' (Ipm) : PRESS.(K W/cm2) :	(pa):	1 10 3,04 26,82 0.81	6 0 3 1 4	³ x ¹⁶ x ⁰ x ⁰ x ⁰		Drille METE ON BO IADC TOTA ROP (ed over ti RAGE (i OTTOM DRILL. H L REVS (m/hr) :	ne last : m) : HRS : IRS : :	24 hrs	Calc 0 CUM.I 0 CUM. 0 CUM. 0 CUM. ROP (culated ove METERAG ON BOT. IADC DR. I TOT. REV (m/hr) :	er the b E (m) HRS : HRS: S :	it run 321 33.2 37.0 199,200 9.7
BHA WT BL BHA V	# 8 .W JA VT (M	L R (MT) T) :	engtl	n (m): 2 25 S 34 P S	68.2 TRING V ICK UP LK OFF	WT (MT): WT (MT): WT (MT): 21) 3 x 8" [86 T 86 T 86 T	RQE RQE RQE	MAX (N ON (Nn OFF (N	Im): n): Im):	e lar	8,135 5,423 5,423	D.C. D.C. H.W. D.P.	(1) AN (2) AN D.P. A ANN \ 12 × 5	IN. VELO IN VELO IN VELO VELOCIT	CITY (mpn CITY (mpn DCITY (mp Y (mpm) :	n): 1): m):	70 73 48 48
	TC		ESCRIF			LENGTH	OD	ID	l s	ERIAL	#		s	, , ,,0,	12 × 3	COMM	ENT		
NB RF	2			-		_	-		GU	2151		120).5						
Str RF	1								GU	2143 2144		120).5) 5						
Jars									489	07C		120	0.5						
Surve	эy	(Meth	nod : N	/lin Curv	ature)	MD	TVD	IN	CL	AZ	со	RR.	'V'	DOGL	EG	N/S	E/W	TOOL	TYPE
Last T	ool T	ype :			MWD	(mBRT)	(mBR1		G	(deg)	A (d	Z	SECT	(deg	g/	(m)	(m)		
Magne	etic D	eclina	ation :		0.00	1170.4 1256.7 1382.1 1458.5 1546.1 1605.5 1690.7 1775.9	1170. 1256. 1381. 1458. 1545. 1605. 1690. 1775.	3 0 6 1 9 1 2 2 7 2 1 3 2 3 1 4	.93 .44 .87 .13 .74 .09 .44 .38	192.5 181.2 182.2 183.9 185.6 184.8 188.9 192.3	19 18 18 18 18 18 18 18	32.5 31.2 32.2 33.9 35.6 34.8 38.9 32.3	4.9 3.1 -0.5 -3.1 -6.9 -9.9 -14.7 -20.4),),1),2),1),1),2),2),2),2),1),3	4.9 3.1 -0.5 -3.1 -6.9 -9.9 -14.7 -20.4	-0.2 -0.4 -0.5 -0.6 -0.9 -1.2 -1.8 -2.9	MWD MWD MWD MWD MWD MWD MWD	

CASINO #1

Bull	k	STOCK 1	TYPE &	UNITS		START	USED	REC'D	STO	ск ѕт	оск	TYPE & UN	TS	ST	TART	USED REC	D S	тоск
Sto	cks	Fuel Oil	- Rig		M3	534.9	10.8		5	24.1 Dr	ill Wa	iter - Rig	ľ	ИТ 7	′12.0 [·]	120.0		592.0
On	Rig	Pot Wate	er - Ria		MT	98.0				98.0 Ce	men	'G' - Ria		sxs 14	30.0 1 ⁻	145.0 1300.	0	1585.0
	U	Cement	HTB - F	Ria	SXS	0.0				0.0 Be	nton	ite - Ria		sxs 6	670.0			670.0
		Barite - F	Rin	g	SYS (2751.0			27	51 0 Br	ine -	Ria	N	<u>лт</u>	0.0			0.0
		Holifuol	Pig		ltr 1	207.0	307.0		25				r I	13 1		3.0		496.0
			or Co	nguoror		660.0	307.0		23				ror N	AT 2	199.0 DDE 0	5.0		220.0
		Comont				250.0	1050.0		0		i vva				225.0	5.0		220.0
		Cement	G - Co	nqueror	SXS	350.0	1350.0			0.0 0.0	men		querc	sxs	0.0			0.0
		Bentonit	e - Con	queror	SXS	0.0				0.0 Ba	rite -	Conqueror		SXS 2	246.0	7.0		246.0
		Brine - C	onquer	ror	MI	0.0				0.0 Fu	el Oi	I - Sentinel		VI3 2	265.7	7.2		258.5
		Drill Wat	er - Se	ntinel	MI	369.0			3	69.0 Pc	t Wa	ter - Sentine		AT 2	212.0	3.0		209.0
		Cement	'G' - Se	entinel	SXS	0.0				0.0 Ce	men	t HTB - Sent	tinel	SXS	0.0			0.0
		Bentonit	e - Sen	ntinel	SXS	0.0				0.0 Ba	rite -	Sentinel		SXS	0.0			0.0
		Brine - S	entinel		MT	0.0				0.0								
_																		
Pur	np Da	ata																
				Pump	Data -	last 24	hrs							Slow	Pump	Data		
#		TYPE	LI	NR(mm)	SPN	E	FF (%)	Flow	(lpm)	SPP (kPa)	SPM	SPP	(kPa)	DE	PTH (m)	MW	/ (sg)
1	Not'l 1	2 D 160		150		71	07		1012	0	126	20		1551		2116.0		1 22
	Matri	2-F-100		152		/ '	97		1013	0	000	40		1896		2110.0		1.23
				0					0		0	50		2758		2116.0		1.23
2	Nat'l 1	2-P-160		152		62	97		1013	8	936	30		1551		2116.0		1.23
				0					0		0	40		2068		2116.0		1.23
				0					0		0	50		2758		2116.0		1.23
3	Nat'l 1	2-P-160		152		59	97		1013	8	936			0				
Cas	sing																	
	AM C	CSG OD	S					/D		LOT		FIT			0.0	MMENT		
		(mm)	(pl	lan/Actua	n l	(n	lan/Actu	ial)	6	ol/Act)		(pl/Act)	COMMENT					
12	275 2	40	70	05.0	740.0	70	E 0	740		20 1 0		([)						
13.	375 3	40	78	35.0	743.0	70	5.0	742.	9 1.0	00 1.0								
		Т	YPE			L	ENGTH	(m)	CSG I	D (mm)		NT (ka/m)	G	GRADE		= THREAD		
		-				_		,		- ()		(GRADE					
340	mm (13	3.375") sh	oe jt 10	07 kg/m,	cent mi	d	12.52		316		107.1 107.1		L-80		BTC			
340	mm (13	3.375") ini	t jt 107	kg/m, ce	nt mid	t	12.13		316		107.1			L-80 L-80		BIC		
340	mm (13	3.375") ini m (12.275	t jt 107	kg/m, ce	nt mid	t	12.64		316		107.1			-80		BIC		
340	mm (13	11 (13.373 8 375") No	-cross i	it 101 ka/	m		11 84		316		101.2		L-80			BTC		
476	mm (18	3.75") wel	lhead +	⊦ extensio	on it		10.71		316			101.2	L-80 L-80			BTC		
RT	to Well	head top			,		92.58		0			.0						
													•					
Per	sonne	el : on S	Site =	84														
	4 Sant	os			35 E	OGC				4 D(OGC	other/extra		:	22 TMT	(marine)		
	3 TMT	(ROV)			4 F	н				1 H	allihu	rton		-	2 IDE9	s ,		
	C Cabl	(1.0.0)			4 -					0.0		Teele			2 101 0	5		
	6 Schi	umberger			1 L	mQuip)			2 31	mun	10015						
Saf	etv. Ir	nspectio	ons a	nd Dril	ls			Sumi	marv									
	0 dovo		Fire e		dan Sh			••••••										
	o uays s	SILLE ISS	гне а		uuri 5N	וווים קי												
181	2 days :	since last	Lost V	Vorkday C	ase													
	5 dava	eineo loct	Madia	al Treat-	ont O-	20												
4	Judys		weut	arrieath		30												
1	1 days :	since last	First A	Aid Case														
	6 dava	eineo loct	Moole	ly Sofati	Mootin	0												
	o uays s	since last	vveek	iy Salety	weetin	9												
	2 days :	since last	Trip/F	Pit Drill														
	Edavia	ologe l=		Toot														
	o uays s	since last	BOP	rest														
	-																	
Sha	akers,	Volum	es an	d Loss	es Da	ta								ENGINE	EER M	. Docherty /	J. Sin	igh
SHA	KER 1	4 x 115					= (m2)		201	0 1 1 00	SES	(m3) -	20	COM				
SHA	KER 2	4 x 115		VOLUM	i⊑ AVA _		- (113) =		292		363	(113) =	20	COMM				
SHA	KER 3	4 x 115		ACTIV	E	71.5	MIXI	NG	0.0) DOV	VNHC	DLE	0.95					
SHA	KER 4	4 x 84		HOLE		167.7	SLUC	3	0.0		F.+E	QUIP	0.00					
SHA	KER 5			RESEF	RVE 4	52.5	HEA	/Y	0.0	DUN	1PED	1	9.08					

Independent Data Services : Santos Ltd. (offshore metric report, sept.2002)

Anchors	Anc 1 : Anc 6 :	116 86	A	Anc 2 : 127 Anc 7 : 109	Anc 3 Anc 8	: 127 : 116	Anc 4 : 10 Anc 9 : 0	07 Anc 5 : 113 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	105 0.0
Workboats	Arri (Da	ved @ I ate)(Tir	Rig me)	Depart fr (Date)(⁻	om Rig Fime)	Estima (Da	tedArrival (Port) ate)(Time)	Weather VISIBILITY(nm) :	8	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.0 1,977.C 3.7
Pacific Sentinel Pacific Conquer	or 16/9,	/02	12:25	16/9/02	17:48	16/9/0	2 23:55	WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	50.0 340 1016 19.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	3.7 1.8 1.8 1.0
COMMENTS :	Pax on / point on	off:Flt boat.	#1, 7/8	8. Pacific Con	queror report	ed lost 5	50 sx Cement due	e to problem with discha	rge	MAX ROLL (deg) :	1.0

Santos DATE : Sep 17, 2002

FROM : H. Flink / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 28

CASINO #1

Well Data			2 118 0		211	AFE COST \$	12 129 000
COUNTRY	Austral	ia TVD (m BRT)	2,118.0	CASING OD (mm)	340	AFE BASIS :	UNKNOWN
FIELD	Casir	PROGRESS (m)	,	SHOE TVD (m BRT)	743	DAILY COST :	\$315,487
DRILL CO.	Diamond Offsho	DAYS FROM SPUD	23.25	FIT (sg)	0.00	CUM COST :	\$11,132,769
RIG	Ocean Boun	^{ty} DAYS +/- CURVE	11.00	LOT (sg)	1.88		
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25) LAT 70) 95	.0 .5 .5 PLANNED OP.	Waiting of Wait on W	n Weather. /eather / Pull BOP			

Summary of period 00:00 to 24:00 hrs

Set Abandonment plugs & Mechanical surface plug / Prepared to pull BOP / Wait on Weather.

	FORMATION	TOP(m BRT)
	Skull Creek (?)	1,259
	Nullawarre	1,522
'	Belfast	1,531
	Warre	1,739
1		

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 17, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION		
IH1	Ρ		CIR	00:00	00:30	0.50	2,118	Circulated bottoms up @ 780m.		
IH1	Ρ		СМР	00:30	01:30	1.00	2,118	Set cement plug # 3 F /- 780m to 630m. Rigged up cement line, pumped 1.5 M3 (10 bbls) of drill water tested cement line to 7000 Kpa (1000 psi) Pumped 1.5 M3 (10 bbls) of drill water. Mixed and pumped 15.5 M3 (98 bbls) of 1.89sg cement (475sx) with 9.2 M3 (58 bbls) of mix water. Displaced with 4.7 M3 (30 bbls) of mud.		
IH1	Ρ		то	01:30	02:00	0.50	2,118	Pulled back F /- 780m to 550m.		
IH1	Ρ		CIR	02:00	02:30	0.50	2,118	Circulated bottoms up & displaced well to corrosion inhibited mud @ 550m.		
IH1	Ρ		то	02:30	05:00	2.50	2,118	POOH F /- 550m, laid out tubing whilst waiting on cement.		
IH1	Ρ		ТΙ	05:00	08:30	3.50	2,118	RIH to tag cement plug # 3 @ 642m, POOH.		
IH1	Ρ		ΤI	08:30	10:30	2.00	2,118	Made up EZSV packer and RIH to 185m. Set packer and pressure tested packer to 6800 Kpa (1000 psi)		
IH1	Ρ		CMP	10:30	11:30	1.00	2,118	Displaced hole to sea water and flushed choke & kill lines. Rigged up & tested cement line to 6800 Kpa (1000 psi) Set # 4 Cement plug F /- 183m to 133m. Pumped 1M3 (5 bbls) of sea water, Mixed and pumped 4M3 (25 bbls) of 1.89sg (120sx) of cement and displaced with 1.1M3 (6 bbls) of sea water.		
IH1	Ρ		то	11:30	12:00	0.50	2,118	Pulled back F /- 183m to 120m.		
IH1	Ρ		CIR	12:00	12:30	0.50	2,118	Reverse circulated @ 120m		
IH1	Ρ		то	12:30	13:00	0.50	2,118	POOH F /- 120m, laid out EZSV running tool.		
IH1	Ρ		BOP	13:00	15:30	2.50	2,118	Rigged up to pull BOP. Removed diverter and installed handling joint.		
IH1	U		BOP	15:30	24:00	8.50	2,118	W.O.W. Unable to colapse and secure slip joint prior to unlatch BOP due to inclement weather. Conditions @ Midnight Heave 4.3m / Roll 2deg / Wind 45-50 knots / Swell 5.5m		

ACTIV	CTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 18, 2002													
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION						
IH1	U		BOP	00:00	06:00	6.00	2,118	Waiting on weather conditions to subside enough to recover BOP. Conditions @ 06:00hrs Heave 6.5m / Roll 3.2deg / Wind 55-60 knots / Swell 6.7m						

CASINO #1

WBM Data	COST T	ODAY : \$279	CUM.	WB	MUD COST: \$240,470		CUM. WBM+OBM COST: \$240,470						
Type :	КСІ РНРА	VISCOCITY (sec/ltr) PV (Pa.s) :	:	66 0	API FLUID LOSS (cm3/30min) : FILTER CAKE	7	CI : K+C*1000 :	33,000 40500	SOLIDS (%vol) : H2O (%vol) :	10 89.6			
FROM :	pit	YP (Pa.s) :		13	(mm) :	1	HARD/Ca :	640	OIL (%vol) :				
TIME :	22:00	GEL10s/10m/100m			HTHPFL	~ .	MBT (ppb) :	12.0	SAND :	.5			
WEIGHT (sg):	1.22	(Pa.s) : 4	47	1	(cm3/30min) :	24	PM:	2.6	PH :	11.5			
TEMP (C) :	0	Fann 3/6/100 : 7	' 9	31	HTHP CAKE	2	PF :	.7	PHPA (ppb) :	1.8			

Survey (Method : M	in Curvature)	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)	
	0.00					(deg)	(m)	30m)			
Magnetic Declination :	0.00	1170.4	1170.3	0.93	192.5	192.5	4.9	0.1	4.9	-0.2	MWD
		1256.7	1256.6	1.44	181.2	181.2	3.1	0.2	3.1	-0.4	MWD
		1382.1	1381.9	1.87	182.2	182.2	-0.5	0.1	-0.5	-0.5	MWD
		1458.5	1458.2	2.13	183.9	183.9	-3.1	0.1	-3.1	-0.6	MWD
		1546.1	1545.7	2.74	185.6	185.6	-6.9	0.2	-6.9	-0.9	MWD
		1605.5	1605.1	3.09	184.8	184.8	-9.9	0.2	-9.9	-1.2	MWD
		1690.7	1690.2	3.44	188.9	188.9	-14.7	0.1	-14.7	-1.8	MWD
		1775.9	1775.1	4.38	192.3	192.3	-20.4	0.3	-20.4	-2.9	MWD

Bulk	STOCK TYPE & UNITS		START	USED REC'D	STOCK	STOCK TYPE & UNITS		START	USED	REC'D	STOCK
Stocks	Fuel Oil - Rig	М3	524.1	8.4	515.7	Drill Water - Rig	MT	592.0	71.0		521.0
On Rig	Pot Water - Rig	MT	98.0		98.0	Cement 'G' - Rig	SXS	1585.0	684.0		901.0
	Cement HTB - Rig	SXS	0.0		0.0	Bentonite - Rig	SXS	670.0			670.0
	Barite - Rig	SXS	2751.0		2751.0	Brine - Rig	MT	0.0			0.0
	Helifuel - Rig	ltr	2500.0		2500.0	Fuel Oil - Conqueror	М3	496.0	7.8		488.2
	Drill Water - Conqueror	MT	660.0		660.0	Pot Water - Conqueror	MT	220.0	5.0		215.0
	Cement 'G' - Conqueror	SXS	0.0		0.0	Cement HTB - Conquerc	SXS	0.0			0.0
	Bentonite - Conqueror	SXS	0.0		0.0	Barite - Conqueror	SXS	246.0			246.0
	Brine - Conqueror	MT	0.0		0.0	Fuel Oil - Sentinel	М3	258.5			258.5
	Drill Water - Sentinel	MT	369.0		369.0	Pot Water - Sentinel	MT	209.0			209.0
	Cement 'G' - Sentinel	SXS	0.0		0.0	Cement HTB - Sentinel	SXS	0.0			0.0
	Bentonite - Sentinel	SXS	0.0		0.0	Barite - Sentinel	SXS	0.0			0.0
	Brine - Sentinel	МТ	0.0		0.0						

Pump Data

		Pump	Data - las	Slow Pump Data						
#	TYPE	LNR(mm)	SPM	EFF (%)	Flow (lpm)	SPP (kPa)	SPM	SPP (kPa)	DEPTH (m)	MW (sg)
1	Nat'l 12-P-160	152		97	0	0	30	0		
		0			0	0	40	0		
		0			0	0	50	0		
2	Nat'l 12-P-160	152		97	0	0	30	0		
		0			0	0	40	0		
		0			0	0	50	0		
3	Nat'l 12-P-160	152		97	0	0		0		

Casing

DIAM.	CSG OD (mm)	SHOE MD (plan/Actual)	SHOE TVD (plan/Actual)	LOT (pl/Act)	FIT (pl/Act)	COMMENT			
13.375	340	785.0 743.0	785.0 742	2.9 1.68 1.88					
	-	ГҮРЕ	LENGTH (m)	CSG ID (mm)	WT (kg/m)	GRADE	THREAD]	
340mm 340mm	(13.375") sł (13.375") in	noe jt 107 kg/m, cent m t jt 107 kg/m, cent mid	id 12.52 jt 12.13	316 316	107.1 107.1	L-80 L-80	BTC BTC		
340mm 50 x 340	(13.375") in)mm (13.37	t jt 107 kg/m, cent mid 5") jt 101 kg/m	jt 12.64 590.73	316 316	107.1 101.2	L-80 L-80	BTC BTC		
340mm (476mm	(13.375") No (18.75") we	o-cross jt 101 kg/m Ilhead + extension jt	11.84 10.71	316 316	101.2 101.2	L-80 L-80	BTC BTC		
RT to W	ellhead top		92.58	0	.0]	

								(CASINO #1
Personnel : on S	Site =78								
2 Santos	3	B DOGC			4 DOGC	other/extra	22	TMT (marine)	
3 TMT (ROV)	:	2 BHI			1 Hallibu	urton	1	IDFS	
4 Schlumberger		I DrilQuip			2 Smith	Tools			
Safety, Inspection	ons and Drills		Summ	ary					
1 days since last	Fire and Abandon	Ship Drill							
1813 days since last	Lost Workday Case								
46 days since last	Medical Treatment	Case							
12 days since last	First Aid Case								
7 days since last	Weekly Safety Mee	ting							
3 days since last	Trip/Pit Drill								
6 days since last	BOP Test								
Shakers, Volum	es and Losses	Data					ENGINEE	R M. Docherty	
SHAKER 1 4 x 115			-21 -	175		(m ²) - 160		, NTC	
SHAKER 2 4 x 115				0.0				115	
SHAKER 4 4 x 84	HOLE	174.7	SLUG	0.0	SURF.+E	EQUIP 0.00			
SHAKER 5	RESERVE	0.0 H	HEAVY	0.0	DUMPE	D 169.46			
Anchors Anc 1	I: 113 And	2:88	Anc 3 : 125	5	Anc 4 : 12	20 Anc 5 : 1	09	RIS. TENS. (MT) :	105
Anc 6	6: 91 And	7:82	Anc 8 : 88		Anc 9 : 0	Anc 10: 0	1	RISER ANGLE (deg): 0.0
Workboats	Arrived @ Rig (Date)(Time)	Depart from (Date)(Time	Rig Estin e)	matedAri (Date)(Ti	rival (Port) ime)	Weather VISIBILITY(nm) :	8	STACK ANGLE(deg) V.D.L. (MT) : AVE HEAVE (m) :	: 0.0 1,751.0 3.7
Pacific Sentinel		16/9/02 17	7:48 16/	9/02	23:55	WIND SP. (kts) :	35.0	MAX HEAVE (m) :	3.7
Pacific Conqueror	16/9/02 12:25					WIND DIR (deg) :	270	AVE PITCH (deg) :	2.2
						PRES.(mbars):	1010	MAX PITCH (deg) :	2.2
						AIR TEMP (C) :	14.0	AVE ROLL (deg) :	2.0
COMMENTS : Pax	on / off : Flt #1, 2/8.							WAX KULL (aeg) :	2.0

Santos DATE : Sep 18, 2002

FROM : H. Flink / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 29

CASINO #1

Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	2,118.0 2,118.0 24.25	CUR.HOLE SIZE (CASING OD (mm) SHOE TVD (m BR FIT (sg) LOT (sg)	mm) 311 340 T) 743 0.00 1.88	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$305,369 \$11,438,138
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m)) LAT 70.5) 95.5	CURRENT OP @ 0400 PLANNED OP.	Waiting o Wait on W	n Weather. /eather.			
Summary of period	od 00:00 to 24:00 / Disconnected Lf	hrs MRP @ 07:00hrs.			FOR Skull Creek (? Nullawarre Belfast Warre	MATION)	TOP(m BRT) 1,259 1,522 1,531 1,739
					vvarre		1,739

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 18, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ТР	WEA	BOP	00:00	24:00	24.00	2,118	W.O.W Conditions @ 06:00hrs Heave 6.5m / Roll 3.2deg / Wind 55- 60 knots / Swell 6.7m. De-ballast rig to 65ft draft. Disconnected LMRP @ 07:05 De-ballast rig to 60ft draft. Weather conditions @ 12:00hrs Heave 6m / Roll 3.0deg / Wind 55-60 knots / Swell 6.7m. Weather conditions @ Midnight Heave 6.7m / Roll 3.0deg / Wind 35-45 knots / Swell 8.5m.

ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 19, 2002

PHS	CL	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	BOP	00:00	06:00	6.00	2,118	W.O.W. Conditions @ 06:00hrs. Heave 6m / Roll 3deg / Wind 35-45 / Swell 7.5m

WBM Data	BM Data COST TODAY : \$0				MUD COST: \$240,470		CUM. WBM+OBM COST: \$240,470			
Туре :	Sea Water	VISCOCITY (sec/ltr) PV (Pa.s) :	:	0	API FLUID LOSS (cm3/30min) : FILTER CAKE		CI : K+C*1000 :	SOLIDS (%vol) : H2O (%vol) :		
FROM : TIME : WEIGHT (sg): TEMP (C) :	pit	YP (Pa.s) : GEL10s/10m/100m (Pa.s) : (Fann 3/6/100 :	0 (0	(mm) : HTHPFL (cm3/30min) : HTHP CAKE (mm) :	0	HARD/Ca: MBT (ppb): PM: PF:	OIL (%vol) : SAND : PH : PHPA (ppb) :		

Survey (Method : M Last Tool Type :	1in Curvature) MWD	MD (mBRT)	TVD (mBRT)	INCL DEG	AZ (deg)	CORR. AZ (deg)	'V' SECT (m)	DOGLEG (deg/ 30m)	N/S (m)	E/W (m)	TOOL TYPE
Magnetic Declination :	0.00	1170.4 1256.7 1382.1 1458.5 1546.1 1605.5 1690.7 1775.9	1170.3 1256.6 1381.9 1458.2 1545.7 1605.1 1690.2 1775.1	0.93 1.44 1.87 2.13 2.74 3.09 3.44 4.38	192.5 181.2 182.2 183.9 185.6 184.8 188.9 192.3	192.5 181.2 182.2 183.9 185.6 184.8 188.9 192.3	4.9 3.1 -0.5 -3.1 -6.9 -9.9 -14.7 -20.4	0.1 0.2 0.1 0.1 0.2 0.2 0.2 0.1 0.3	4.9 3.1 -0.5 -3.1 -6.9 -9.9 -14.7 -20.4	-0.2 -0.4 -0.5 -0.6 -0.9 -1.2 -1.8 -2.9	MWD MWD MWD MWD MWD MWD MWD MWD

D	k					07457				01/ /	TOOK		T O					07001
Dui Sto	K	STOCK TY	YPE & UI	NITS		START	USED	REC'D	STO		STOCK	TYPE & UN	TS .		START	USED	REC'I	STOCK
510		Fuel Oil -	Rig		M3	515.7	7.0		5	08.7	Drill Wa	iter - Rig	ſ	AT .	521.0	19.0		502.0
On	RIG	Pot Water	- Rig		MI	98.0				98.0	Cement	'G' - Rig		SXS 1	585.0	684.0		901.0
		Cement H	ITB - Rig)	SXS	0.0				0.0	Bentoni	te - Rig		sxs	670.0			670.0
		Barite - Ri	ig		SXS	2751.0			27	51.0 E	Brine -	Rig	r	AT .	0.0			0.0
		Helifuel -	Rig		ltr	2500.0	308.0		21	92.0 F	-uel Oi	I - Conquerc	or I	M3	488.2	8.0		480.2
		Drill Wate	r - Conqu	ueror	MI	660.0			6	60.0 H	Pot Wat	ter - Conque	ror l	ЛТ	215.0	5.0		210.0
		Cement	- Conq	queror	SXS	0.0				0.0		HIB - Cond	querc	SXS	0.0			0.0
		Bentonite	- Conqu	leror	SXS	0.0				0.0	sarite -	Conqueror		SXS	246.0			246.0
		Brine - Co	onqueror			0.0				10.0	-uel Oi	I - Sentinel		VI 3	496.0			496.0
		Drill Wate	r - Senti	nei		610.0			0			ter - Sentine	el l' Statest	VI I	245.0			245.0
		Cement C	- Sent		SXS	1338.0			13	38.0	Jemen	O antinal	inei	SXS	0.0			0.0
		Bentonite	- Sentin	iei	SXS	873.0			8	73.0	sante -	Sentinei		SXS	0.0			0.0
		Billie - Se	entinei			0.0				0.0								
Pu	mp Da	ata																
				Pump	Data	last 24	hrs							Slov	v Pump	Data		
#		TYPF	INR	(mm)	SP	ΛF	FF (%)	Flow	(lpm)	SPP	(kPa)	SPM	SPP	(kPa)		EPTH (m	1)	MW (sg)
<u> </u>				,			. (/0)		(.p)		(u)	0		(u)		(.,	(09)
1	Nat'l 1	2-P-160		152			97		0		0	30		0				
				0					0		0	40 50		0				
2	Nat'l 1	2-P-160		152			97		0		0	30		0				
				0			•		0		0	40		0				
				0					0		0	50		0				
3	Nat'l 1	2-P-160		152			97		0		0			0				
Cas	sing																	
DI	AM. C	CSG OD	SHO	OE MD		S	HOE TV	D		LOT		FIT			С	OMMEN	Т	
		(mm)	(plan	n/Actua	I)	(p	lan/Actu	al)	(pl/Act)		(pl/Act)						
13	375 3	40	785.	.0	743.0	78	5.0	742.9	1.0	58 1	.88							
								742.9 1.68			1.00		GRADE					
		T١	YPE			LE	ENGTH (m)	CSG I	D (mm	n) V	WT (kg/m)		GRADE		THRE	AD	
340)mm (13	3.375") sho	be jt 107	kg/m, d	cent m	id	12.52		316	;		107.1	1			BT	С	
340)mm (1:	3.375") int	jt 107 kg	g/m, cei	nt mid	jt	12.13		316	5		107.1	1	80		BT	С	
340)mm (1:	3.375") int	jt 107 kg	g/m, ce	nt mid	jt	12.64		316	5	107.1		1	80		BT	С	
50	x 340m	m (13.375")) jt 101 k	kg/m			590.73		316	5	101.2			80		BT	C	
476	mm (13 mm (18	3.375) INO-0 8.75") wellt	cross jt i nead + e	iui kg/r avtensio	n nit		11.84		310) ;		101.2		-80 -80		BI	C C	
RT	to Well	head top	ieau + e	ALGHISIC	, i ji		92.58		0	,		.0	'	00		ы	0	
		•																
Per	sonn	el : on S	ite =78	3														
	2 Sant	os			35 I	DOGC				22	TMT (n	narine)			4 DC	OGC (othe	ər)	
	1 Anad	drill			4	Schlum	berger			2	BHI				1 Dri	ilQuip		
	1 Halli	burton			1	DFS	•			2	Smith ⁻	Tools			3 TM	IT (ROV))	
																,		
Saf	ety, lı	nspectio	ns and	d Drill	IS			Sumn	nary									
	2 days	since last	Fire and	d Abano	don Sh	ip Drill												
181	4 davs	since last	Lost Wo	rkdav C	ase													
	7 dava		Madiaal	Treater														
4	7 uays	Since last	Medical	Treatri		ase												
1	3 days	since last	First Aid	Case														
	8 days	since last	Weekly	Safety	Meetir	ng												
	4 days	since last	Trip/Pit	Drill														
	7 days	since last	BOP Tes	st														
<u></u>	akera	Velue		Less														
Sna	akers,	volume	s and	LOSS	es Da	ata								ENGIN	IEER	M. Doche	erty	
SH		4 x 115	\	VOLUM	E AVA	ILABLE	E (m3) =		17	5 LC	SSES	(m3) =	o	СОМІ	MENTS			
SH		4 x 115 4 x 115		ACTIV	F	0.0	MIYI	IG	0.0		WNHC) F	0.00					
SH	KER 4	4 x 84		HOLE	_	174.7	SLUG	3	0.0		JRF.+E	QUIP	0.00					
SHA	KER 5			RESER	RVE	0.0	HEA	/Y	0.0		JMPED		0.00					

Anchors	Anc 1 : Anc 6 :	84 48	A	Anc 2 : 79 Anc 7 : 50	Anc 3 Anc 8	145 54	Anc 4 : 79 Anc 9 : 0	Anc 5 : 77 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	0 0.0
Workboats	Arı (E	ived @ Date)(Ti	Rig me)	Depart fr (Date)(1	om Rig Time)	Estima (Da	tedArrival (Port) ate)(Time)	Weather VISIBILITY(nm) :	3	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.0 1,751.0 6.7
Pacific Sentinel Pacific Conquere	or 16/9	9/02	12:25	16/9/02	17:48	16/9/0	2 23:55	WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	50.0 300 1007 13.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	6.7 4.0 4.0 3.0
COMMENTS :	Pax on	/ off:Flt	t #1, 6/	6.						MAX ROLL (deg) :	4.0

Santos DATE : Sep 19, 2002

FROM : R.King / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 30

CASINO #1

Well Data			2 1 1 8 0		211	AFE COST &	12 120 000
COUNTRY	Australia	TVD (m BRT)	2,118.0	CASING OD (mm)	340	AFE BASIS :	P&A
FIELD	Casino	PROGRESS (m)		SHOE TVD (m BRT)	743	DAILY COST :	\$336,353
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	25.25	FIT (sg)	0.00	CUM COST :	\$11,774,491
NO	Ocean Bounty	DAYS +/- CURVE		LOT (sg)	1.88		
RT ABOVE SL (m)	25.0	CURRENT OP @ 0400	Waiting o	n Weather.			
WATER DEPTH (n RT TO SEABED (m	n) LAT 70.5 1) 95.5	PLANNED OP.	Wait on W	Veather. Position Rig and I	Deballast	in preparation to	latch BOP.
] [

Summary of period 00:00 to 24:00 hrs Wait on Weather, Rig at storm draft.

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,531
Warre	1,739

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 19, 2002

PHS	CL	RC	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	BOP	00:00	24:00	24.00	2,118	W.O.W. Conditions @ 06:00hrs. Heave 6m / Roll 3deg / Wind 35-45 / Swell 7.5m. Conditions @ 12:00hrs Heave 3.6m / Roll 2deg / Wind 25-35 / Swell 6m Conditions @ Midnight Heave 3.3 / Roll 1.8deg / Wind 10-20 / Swell 4.2m

ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 20, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	ΤP	WEA	BOP	00:00	06:00	6.00	2,118	W.O.W. Conditions @ 06:00hrs. Heave 2.5m / Roll 1deg / Pitch 1.5deg /Wind 12 / Swell 4.2m /

WBM Data COST	ODAY: \$0 CUI	M. WB	MUD COST: \$240,470	CUM. WBM+OBM CC	OST: \$240,470
Type : Sea Water FROM : pit TIME : WEIGHT (sg): TEMP (C) : TEMP (C) :	VISCOCITY (sec/ltr) : PV (Pa.s) : YP (Pa.s) : GEL10s/10m/100m (Pa.s) : 0 Fann 3/6/100 :	0 0 0 0	API FLUID LOSS (cm3/30min) : FILTER CAKE (mm) : 0 HTHPFL (cm3/30min) : HTHP CAKE (mm) : 0	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :

Survey (Method : Mi Last Tool Type :	n Curvature) MWD	MD (mBRT)	TVD (mBRT)	INCL DEG	AZ (deg)	CORR. AZ	'V' SECT (m)	DOGLEG (deg/ 30m)	N/S (m)	E/W (m)	TOOL TYPE
Magnetic Declination :	0.00	1170.4 1256.7 1382.1	1170.3 1256.6 1381.9	0.93 1.44 1.87	192.5 181.2 182.2	(deg) 192.5 181.2 182.2	4.9 3.1 -0.5	0.1 0.2 0.1	4.9 3.1 -0.5	-0.2 -0.4 -0.5	MWD MWD MWD
		1458.5 1546.1 1605.5 1690.7 1775.9	1458.2 1545.7 1605.1 1690.2 1775.1	2.13 2.74 3.09 3.44 4.38	183.9 185.6 184.8 188.9 192.3	183.9 185.6 184.8 188.9 192.3	-3.1 -6.9 -9.9 -14.7 -20.4	0.1 0.2 0.2 0.1 0.3	-3.1 -6.9 -9.9 -14.7 -20.4	-0.6 -0.9 -1.2 -1.8 -2.9	MWD MWD MWD MWD

D		[
Bui	K	STOCK	TYPE 8			STARI	USED	REC'D	STO	CK	STOCK	TYPE & UN	ITS	5	STARI	USED	REC'D	STOCK
510	Dia	Fuel Oil	- Rig		M3	508.7	6.0		5	02.7	Drill Wa	iter - Rig	ſ		502.0	12.0		490.0
On	Rig	Pot Wate	er - Rig		MI	98.0				98.0	Cement	'G' - Rig		SXS S	901.0			901.0
		Cement	HIB -	RIG	SXS	0.0			07	0.0	Bentoni	te - Rig		SXS U	070.0			070.0
		Barite -	Rig - Pia		SXS	2102.0	154.0		21	38 0	Brine - I	Rig La Conquerc	r vr l	VI3 .	480.2	7.0		473.2
		Drill Wat	er - Co	nqueror	MT	660.0	134.0		20	60.0	Pot Wat	er - Conque	eror M	<u>ит</u>	210.2	5.0		205.0
		Cement	'G' - Co	onqueror	SXS	0.0			0	0.0	Cement	HTB - Con	auerc	sxs	0.0	5.0		0.0
		Bentonit	e - Cor	naueror	SXS	0.0				0.0	Barite -	Conqueror	quore	sxs 2	246.0			246.0
		Brine - C	Conque	ror	MT	0.0				0.0	Fuel Oi	I - Sentinel		M3 4	490.6	1.0		489.6
		Drill Wa	ter - Se	entinel	MT	610.0			6	10.0	Pot Wat	ter - Sentine	el M	ИТ З	245.0			245.0
		Cement	'G' - Se	entinel	SXS	1338.0			13	38.0	Cement	t HTB - Sen	tinel	SXS	0.0			0.0
		Bentonit	e - Ser	ntinel	SXS	873.0			8	73.0	Barite -	Sentinel		SXS	0.0			0.0
		Brine - S	Sentine	el	MT	0.0				0.0								
Pur	np Da	ita																
				Pump	Data -	last 24	hrs							Slow	v Pump	Data		
#		TYPE	L	.NR(mm)	SPN	/ E	FF (%)	Flow ((lpm)	SPI	P (kPa)	SPM	SPP	(kPa)	D	EPTH (m) N	/W (sg)
1	Nat'l 1	2-P-160		152			97		0		0	30		0				
				0					0		0	40		0				
_				0					0		0	50		0				
2	Nat'l 1	2-P-160		152			97		0		0	30		0				
				0					0		0	40 50		0				
3	Nat'l 1	2-P-160		152			97		Ő		0			0				
Cas	sing																	
	AM. C	SG OD	6	SHOE MD)	s	HOE TV	D		LOT		FIT			C	OMMENT	г	
		(mm)	(p	lan/Actua	l)	(p	lan/Actu	al)	(ol/Act	t)	(pl/Act)						
13.	375 3	40	7	85.0	743.0	78	5.0	742.9	1.6	58	1.88							
													1					
		٦	ГҮРЕ			LE	ENGTH (m) (CSG II	D (mi	m) V	VT (kg/m)	G	RADE		THRE	AD	
340	mm (13	3.375") sł	noe jt 1	07 kg/m, 0	cent m	id	12.52		316	;		107.1	1	80		BT	С	
340	mm (13	3.375") in	t jt 107	′ kg/m, ce	nt mid	jt	12.13		316			107.1	1	80		BT	C	
340	mm (13	3.375") in	t jt 107	′ kg/m, ce	nt mid	jt	12.64		316			107.1	1	80		BT	С	
50)	< 340mi	m (13.37	5") jt 10	01 kg/m			590.73		316			101.2		80		BT		
476	mm (13 mm (18	375) NO 375") We	llhead ·	+ extension	m n it		11.84		310			101.2		-80 -80		BT		
RT	to Well	head top	mouu	· oxtonoit	Shi ji		92.58		0			.0	·	_ 00		DIV	0	
													1		-			
Per	sonne	el : on a	Site =	-73														
	2 Sant	os			35 [DOGC				22	TMT (n	narine)			3 DO	GC (othe	er)	
	1 Anac	drill			2 E	ЗНІ				1	DrilQui	р			1 Ha	lliburton		
	1 IDFS				2 3	Smith T	ools			3	TMT (R	ROV)						
Sat	ety, Ir	Ispecti	ons a	and Dril	IS			Summ	hary									
	3 days :	since last	Fire a	and Aban	don Sh	ip Drill												
181	5 days :	since last	Lost \	Workday C	Case													
	۔ میں مام ا		Madi	-														
4	ouays	since last	Medi	cal freath	nem Ca	ase												
1	4 days :	since last	First /	Aid Case														
	1 davs :	since last	Weel	klv Safetv	Meetir	na												
						5												
	5 days :	since last	Trip/I	Pit Drill														
	8 days :	since last	BOP	Test														
Sha	akers,	Volum	es an	nd Loss	es Da	ata								ENGIN	EER N	M. Doche	rty	
SHA	KER 1	4 x 115			-		(m: 0)		4		00050	(~ 1					
SHA	KER 2	4 x 115		VOLUM		ILABLE	: (m3) =		175	2 L	USSES	(m3) =	0	COWN	VENTS			
SHA	KER 3	4 x 115		ACTIV	E	0.0	MIXIN	١G	0.0) D	OWNHC	DLE	0.00					
SHA	KER 4	4 x 84		HOLE		174.7	SLUG	j N	0.0	ן א ג	URF.+E	QUIP	0.00					
SHA	KER 5			RESEF	κνΕ	0.0	HEA\	/ Y	0.0	סןנ	UMPED		0.00					

Anchors	Anc 1 : Anc 6 :	79 48	Ano Ano	c 2 : 75 c 7 : 61	Anc 3 Anc 8	: 118 : 63	Anc 4 : Anc 9 :	75 0	Anc 5 : 77 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	0 0.0
Workboats	Arri (D	ved @ R ate)(Tim	tig ne)	Depart fro (Date)(T	om Rig ïme)	Estima (Da	atedArrival (Por ate)(Time)	rt)	Weather VISIBILITY(nm) :	6	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.0 1,664.0 4.7
Pacific Sentinel Pacific Conquere	19/0 or	9/02 2	20:00	19/09/02	20:10	20/09,	/02 8:00		WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	45.0 250 1018 12.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	6.0 3.0 3.5 2.5
COMMENTS :	Pax on /	off:Flt	#1, 3/8.								MAX ROLL (deg) :	3.0

Santos DATE : Sep 20, 2002

FROM : R.King / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 31

CASINO #1

Well Data		M.DEPTH (m BRT)	2,118.0	CUR.HOLE SIZE (mm)	311	AFE COST \$	12,129,000
COUNTRY	Australia	TVD (m BRT)	2,118.0	CASING OD (mm)	340	AFE BASIS :	P&A
FIELD	Casino	PROGRESS (m)		SHOE TVD (m BRT)	743	DAILY COST :	\$324,317
DRILL CO.	Diamond Offshore	DAYS FROM SPUD	26.25	FIT (sg)	0.00	CUM COST :	\$12,098,808
RIG	Ocean Bounty	DAYS +/- CURVE		LOT (sg)	1.88		
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25.0 n) LAT 70.5) 95.5	CURRENT OP @ 0400 PLANNED OP.	Waiting o Wait on V	n Weather. (Reconnected	d @08:00 LMRP &) oull BOP.	

Summary of period 00:00 to 24:00 hrs

W.O.W. Rig lowered to 65 ft draft in preparation to latch LMRP.

	FORMATION	TOP(m BRT)
	Skull Creek (?)	1,259
1	Nullawarre	1,522
	Belfast	1,531
	Warre	1,739

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 20, 2002

PHS	CL	RC	OP	FROM	TO	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	U		wow	00:00	24:00	24.00	2,118	W.O.W. (Rig at 65ft Draft) Conditions @ 06:00hrs. Heave 2.5m / Roll 1deg / Pitch 1.5deg /Wind 12 / Swell 4.2m / Conditions @ 12:00hrs Heave 4.2m / Roll 1.5deg / Pitch 2deg / Wind 20 / Swell 4.8m Conditions @ Midnight. Heave 3m / Roll .4deg / Pitch .4deg / Wind 20 / Swell 1m.

ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 21, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	U		WOW	00:00	00:00	0.00	2,118	W.O.W Conditions @ 06:00hrs Heave 2.4m / Roll .5deg / Pitch .75deg / Wind 25 / Swell 3m (Jumped ROV and inspected LMRP Swell movment)

WBM Data	COST T	ODAY: \$0	CUN	. WB	MUD COST: \$240,470	CUM. WBM+OBM COST: \$240,470			
Туре :	Sea Water	VISCOCITY (sec/ltr) PV (Pa.s) :	:	0	API FLUID LOSS (cm3/30min) : FILTER CAKE	CI : K+C*1000 :	SOLIDS (%vol) : H2O (%vol) :		
FROM : TIME : WEIGHT (sg): TEMP (C) :	pit	YP (Pa.s) : GEL10s/10m/100m (Pa.s) : (Fann 3/6/100 :	0 (0	(mm): 0 HTHPFL (cm3/30min): HTHP CAKE (mm): 0	HARD/Ca : MBT (ppb) : PM : PF :	OIL (%vol) : SAND : PH : PHPA (ppb) :		

Survey (Method : Mi Last Tool Type :	n Curvature) MWD	MD (mBRT)	TVD (mBRT)	INCL DEG	AZ (deg)	CORR. AZ (deg)	'V' SECT (m)	DOGLEG (deg/ 30m)	N/S (m)	E/W (m)	TOOL TYPE
Magnetic Declination :	0.00	1170.4 1256.7 1382.1 1458.5 1546.1 1605.5 1690.7 1775.9	1170.3 1256.6 1381.9 1458.2 1545.7 1605.1 1690.2 1775.1	0.93 1.44 1.87 2.13 2.74 3.09 3.44 4.38	192.5 181.2 182.2 183.9 185.6 184.8 188.9 192.3	192.5 181.2 182.2 183.9 185.6 184.8 188.9 192.3	4.9 3.1 -0.5 -3.1 -6.9 -9.9 -14.7 -20.4	0.1 0.2 0.1 0.1 0.2 0.2 0.2 0.1 0.3	4.9 3.1 -0.5 -3.1 -6.9 -9.9 -14.7 -20.4	-0.2 -0.4 -0.5 -0.6 -0.9 -1.2 -1.8 -2.9	MWD MWD MWD MWD MWD MWD MWD MWD

Dur																		
Bui	K	STOCK	TYPE &			START	USED	REC'D	STO	CKS	госк	TYPE & UN	ITS	S	TART	USED	REC'D	STOCK
Sto	CKS	Fuel Oil	- Rig		М3	502.7	6.0		4	96.7 D	rill Wa	ter - Rig	Ν	/T 4	490.0	7.0		483.0
On	Rig	Pot Wate	er - Rig		MT	98.0				98.0 C	ement	'G' - Rig	:	sxs g	901.0			901.0
		Cement	HTB - F	Rig	SXS	0.0				0.0 B	entoni	te - Rig	:	sxs 6	570.0			670.0
		Barite -	Rig		SXS	2751.0			27	51.0 B	rine -	Rig	Ν	ΛT	0.0			0.0
		Helifuel	- Rig		ltr	2038.0	461.0		15	77.0 F	uel Oi	I - Conquerc	or N	ИЗ 4	473.2			473.2
		Drill Wat	er - Co	nqueror	MT	660.0			6	60.0 P	ot Wa	ter - Conque	ror N	/T 2	205.0			205.0
		Cement	'G' - Co	onqueror	SXS	0.0				0.0 C	ement	HTB - Con	querc	SXS	0.0			0.0
		Bentonit	e - Con	nqueror	SXS	0.0				0.0 B	arite -	Conqueror	:	sxs 2	246.0			246.0
		Brine - C	Conque	ror	MT	0.0				0.0 F	uel Oi	I - Sentinel	N	ИЗ 4	489.6	9.0		480.6
		Drill Wat	ter - Se	ntinel	MT	610.0			6	10.0 P	ot Wa	ter - Sentine	el N	/T 2	245.0	5.0		240.0
		Cement	'G' - Se	entinel	SXS	1338.0			13	38.0 C	emen	t HTB - Sent	tinel	SXS	0.0			0.0
		Bentonit	e - Ser	ntinel	SXS	873.0			8	73.0 B	arite -	Sentinel		SXS	0.0			0.0
		Brine - S	Sentine	1	MT	0.0				0.0								
				•		0.0				0.0								
Pur	np Da	ata																
	•			Pump	Data -	last 24	hrs							Slow	Pump	Data		
#		TVPF		NR(mm)	SPA		EF (%)	Flow ((Inm)	SDD	(kPa)	SPM	SDD	(kPa)		EPTH (m	N	MW (sa)
							1 (70)	11000 ((ipiii)	011	(κι α)		011	(Ki a)			·)	WW (39)
1	Nat'l 1	2-P-160		152			97		0		0	30		0				
				0					0		0	40		0				
		0 0 400		0			07		0		0	50		0				
2	Natin	2-P-160		152			97		0		0	30		0				
				0					0		0	40 50		0				
3	Nat'l 1	2-P-160		152			97		ő		0 0			0				
	3 Nati 12-F-100								÷		-							
Cas	Casing																	
DIA	DIAM. CSG OD SHOE MI			S	HOE TV	D	LOT		FIT			C	OMMENT	Г				
	(mm) (plan/Actu			lan/Actua	1)	(p	lan/Actu	al)	(1	ol/Act)		(pl/Act)						
13.	13.375 340 785.0 743.0 785.0 742.9 1.68 1.88																	
										_ /			1					
			FYPE				ENGTH (m) '	CSG II	D (mm)		VT (kg/m)	GF	RADE		THRE	AD	
340	mm (13	3.375") sł	noe jt 10	07 kg/m,	cent m	id	12.52	316				107.1	L	-80		BT	С	
340	mm (13	3.375") in	t jt 107	kg/m, ce	nt mid	jt	12.13	31				107.1	L	-80		BT	С	
340	mm (13	3.375") in	t jt 107	kg/m, ce	nt mid	jt	12.64	31				107.1	L	-80		BT	С	
50 >	< 340mi	m (13.37	5") jt 10)1 kg/m			590.73	316		3		101.2		L-80		BT	С	
340	mm (13	8.375") No	o-cross	jt 101 kg/	m		11.84		316			101.2		-80		BTO	C	
476	mm (18	3.75") We	linead -	+ extension	on jt		10.71		316)		101.2	'	-80		BI	C	
	to wen	neau top					92.56		0			.0						
Per	sonne	el : on S	Site =	76														
											NAT /-					00 (
	2 Sant	os			33 1	JUGC				22 1	IVII (n	narine)			4 DO	GC (othe	er)	
	1 Anac	drill			2 E	ЗНІ				1 C	rilQui	р			1 Ha	lliburton		
	1 IDFS	;			2 3	Smith T	ools			3 T	MT (F	ROV)			4 Exp	oro		
0.4								C										
Sar	ety, Ir	ISPECTI	ons a		IS			Summ	hary									
	4 days :	since last	Fire a	and Aban	don Sh	ip Drill												
181	6 dave	sinco last	L ost V	Norkday (` 260													
101	0 uays :		LUSI		ase													
4	9 days :	since last	Medio	cal Treatn	nent Ca	ase												
1	5 days	sinco last	Firet /															
	Juays		111517															
	2 days s	since last	Week	dy Safety	Meetir	ng												
	6 days	cinco loct	Trip/E															
	o uays :	Since last	пр/г															
	9 days :	since last	BOP	Test														
Sha	akers.	Volum	es an	d Loss	es Da	ata							F		EER M	M. Doche	ertv	
SHA	KER 1	4 x 115															•••	
SHA	KER 2	4 x 115		VOLUM	IE AVA	ILABLE	E (m3) =		175	5 LO	SSES	(m3) =	0	COMM	IENTS			
SHA	KER 3	4 x 115		ACTIV	E 0.0 MIXING			١G	0.0) do	WNHC	DLE	0.00					
SHA	KER 4	4 x 84		HOLE		174.7	SLUG	6	0.0	b su	RF.+E	QUIP	0.00					
SHA	KER 5		RESEF	RVE	0.0	HEA∖	/Y	0.0) DU C	MPED		0.00						

Anchors	Anc 1 : Anc 6 :	109 91	Anc 2:45 Anc 7:61	Anc 3 Anc 8	: 120 : 79	Anc 4:66 Anc 9:0	Anc 5 : 77 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	0 0.0
Workboats	Arri Da	ved @ Rig ate)(Time	Depart fro) (Date)(T	om Rig ïime)	Estimate (Dat	edArrival (Port) e)(Time)	Weather VISIBILITY(nm) :	12	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.C 1,689.C 3.C
Pacific Sentinel Pacific Conquer	19/09 or	9/02 20:	00 19/09/02	20:10	20/09/0	02 8:00	WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	20.0 250 1012 14.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	4.2 1.5 2.0 1.2
COMMENTS :	Pax on /	off:Flt#1	, 8/8. Flt #2, 7/4	1					MAX ROLL (deg) :	1.5

Santos DATE : Sep 21, 2002

FROM : R.King / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 32

CASINO #1

Summary of period	00:00 to 24:00	hrs			FOR	MATION	TOP(m BRT)
RT ABOVE SL (m) WATER DEPTH (m) LA RT TO SEABED (m)	25.0 AT 70.5 95.5	CURRENT OP @ 0400 PLANNED OP.	POOH wit Cut 762m	th PGB, & Casing m (30") Casing & recover ,	/ Pull seco	ondary anchors.	
Well Data COUNTRY FIELD DRILL CO. Dia RIG	Australia Casino amond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	2,118.0 2,118.0 27.25	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 1.88	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$295,897 \$12,394,705

Latch LMRP & Pull BOP / Cut & Recover Casing.

	FORMATION	TOP(m BRT)
	Skull Creek (?)	1,259
-	Nullawarre	1,522
	Belfast	1,531
	Warre	1,739

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 21, 2002

PHS	CL	RC	OP	FROM	ТО	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	U		wow	00:00	06:30	6.50	2,118	W.O.W Conditions @ 06:00hrs Heave 2.4m / Roll .5deg / Pitch .75deg / Wind 25 / Swell 3m (Jumped ROV and inspected LMRP Swell movment)
IH1	U		0	06:30	07:30	1.00	2,118	ROV untangled Guide line # 1 from BOP.
IH1	U		BOP	07:30	08:00	0.50	2,118	Rigged up to latch LMRP.
IH1	U		BOP	08:00	08:30	0.50	2,118	Latched LMRP and confirmed with 50 kips O-Pull.
IH1	Ρ		BOP	08:30	10:00	1.50	2,118	Closed slip joint & unlatched BOP. Deballasted rig to 60ft.
IH1	Ρ		BOP	10:00	12:00	2.00	2,118	Rigged down Ckoke & kill lines, Riser tensioners and storm loops.
IH1	Ρ		BOP	12:00	15:30	3.50	2,118	Pulled BOP & Rigged down handling equipment.
IH1	Ρ		BOP	15:30	17:30	2.00	2,118	Jetted BOP, split and secured.
IH1	Ρ		ΤI	17:30	19:00	1.50	2,118	Made up Casing cutting assembly & RIH
IH1	Ρ		WH	19:00	21:30	2.50	2,118	Cut 508mm x 762mm (20" x 30" Casing) Observed 476mm (18-3/4") housing rotating. Well head housing free. POOH & laid out 476mm (18-3/4") well head housing.
IH1	Ρ		WH	21:30	23:30	2.00	2,118	Changed cutting assembly to 762mm (30") & RIH.
IH1	Ρ		WH	23:30	24:00	0.50	2,118	Cut 762mm (30") casing.

ACTIV	ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 22, 2002												
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION					
IH1	P		WH	00:00	04:30	4.50	2,118	Continued cutting 762mm (30") casing. (Continual torque range whilst cutting 6-8,000ft/lbs)					
IH1	Р		10	04:30	06:00	1.50	2,118	POOH with PGB, & 762mm (30") Casing. Released cutting tool. (O- Pull 100kips to free casing)					

WBM Data Co	COST TODAY : \$0				MUD COST: \$240,470	CUM. WBM+OBM COST: \$240,470			
Type : Sea W FROM : TIME : WEIGHT (sg): TEMP (C) :	Vater _{pit}	VISCOCITY (sec/ltr) PV (Pa.s) : YP (Pa.s) : GEL10s/10m/100m (Pa.s) : 0 Fann 3/6/100 :	:) 0	0 0 0	API FLUID LOSS (cm3/30min) : FILTER CAKE (mm) : C HTHPFL (cm3/30min) : HTHP CAKE	CI : K+C*1000 : HARD/Ca : MBT (ppb) : PM : PF :	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :		

Survey (Mathad - Min Curvatura)				МР			A 7		11/1		N/C			TYPE
	-	wiin Curvat		(mBRT)	IVD (mBRT)						(m)	(m)		
Last I ool I ype : MWD					(IIIBI(I)		(ucg)	(deg)	(m)	(dog) 30m)	(11)			
Magnetic Declination : 0.00			1170.4	1170 3	0.92	192	5 192	5 49	0.1	4 0	-0.2			
				1256.7	1256.6	1.44	181.	2 181.2	2 3.1	0.2	3.1	-0.4	MWD	
				1382.1	1381.9	1.87	182.	2 182.:	2 -0.5	0.1	-0.5	5 -0.5	MWD	
				1458.5	1458.2	2.13	183.	9 183.9	9 -3.1	0.1	-3.1	1 -0.6	MWD	
				1546.1	1545.7	2.74	185.	6 185.0	6.9	0.2	-6.9	9 -0.9	MWD	
				1605.5	1605.1	3.09	184.	8 184.	3 -9.9	0.2	-9.9	-1.2	MWD	
				1690.7	1690.2	3.44	188.	9 188.9	-14.7	0.1	-14.7	-1.8		
			L	1775.9	1775.1	4.38	192.	3 192.	3 -20.4	0.3	-20.4	4 -2.9		
Bulk	STOCK TV			STADT II										
Stocks			M0	400 7		50 3	402.4			<u>мт</u>	402.0			470.0
On Dia		ng D'		496.7	4.3		492.4				483.0	7.0		476.0
On Kig	Pot water -			90.0			96.0	Cement		5X5	901.0			901.0
Dement HTB - Kig SXS			SXS	0.0			0.0	Bentonit	e - Rig	SXS	070.0			070.0
Barite - Rig SXS			2751.0			2751.0	Brine - F	Consulation	IVI I	0.0			0.0	
Drill Weter Conquerer MT			000.0			1577.0	Fuel OII			473.2			473.2	
	Comont ICI		0.000	560.0 660.0 Pot Water - Conqueror MT 205.0									205.0	
Bentonite - Conqueror sxs			0.0	0.0 U.U Cement HIB - Conquercists 0.0									246.0	
Bring Conqueror MT			0.0			0.0	Eucl Oil	Sontinol	5X5 M2	240.0	6.0		474.6	
Drill Water Septing MT		MT	610.0			610.0	Puer Oil	- Sentinei		240.0	7.0		222.0	
Drill Water - Sentinel MT			1338.0			1338.0	Comont			240.0	7.0		233.0	
Cement G - Sentinel SXS			572	972.0			072.0	Derite	RIB - Sen		0.0			0.0
Bentonite - Sentinel SXS			SXS MT	0/3.0			0/3.0	Danie -	Sentinei	585	0.0			0.0
	Billie - Sei	lillei		0.0			0.0							
Pump Da	ata													
		s					Slo	w Pump	Data					
#	# TYPE INR(mm) SPM			1 EFF	EFE (%) Flow			P (kPa)	SPM	SPP (kPa) DE	PTH (m)	ММ	V (sa)
										- (-	,	()		(-3/
1 Nat'l 1	2-P-160	152			97		0	0	30		2			
						0	40 50							
2 Nat'l 1	2 Nat'l 12-P-160 152				97 0		0	0	30	0				
		0					0	0	40	C				
	0					0	0	50	C)				
3 Nat'l 12-P-160 152			97		0	0		()					
DIAM. CSG OD SHOE MD			SHC	SHOE TVD				FIT		COMMENT				
	(mm) (plan/A		l)	(plan	(plan/Actual)		(pl/Act)		(pl/Act)					
13.375 3	40	785.0	743.0	785.0	74	12.9	1.68	1.88						
I							1							
		LENG	GTH (m)	CS	CSG ID (mm)		/T (kg/m)	GRADE		THREAD				
340mm (13.375") shoe jt 107 kg/m, cent m				id 12	12.52		316		107.1	L-80		BTC		
340mm (13.375") int jt 107 kg/m, cent mid j			jt 12	12.13		316		107.1	L-80		BTC			
340mm (13.375") int jt 107 kg/m, cent mid jt				jt 12	12.64		316		107.1	L-80		BTC		
1340mm (13.375") Jt 101 kg/m			590	590.73		316		101.2	L-80		BTC			
40mm (13.375") No-Cross jt 101 kg/m			10	11.84		316		101.2 101.2	L-80		BIC			
RT to Wellhead top				92	92.58		0		.0			510		
	···· ••F				-		-		-	I	1			
Personn	el : on Sit	te =76												
2 Santos 33 DOGC								22 TMT (marine)				GC (other)		
1 Anadrill 2 BH			зні			DrilQuir	uin			1 Halliburton				
					I	Surgent								
	2		20	mith Tool	c		2	TMT /P	$\Omega(V)$		1 Evn	ro		

Sep 21, 2002

DAILY DRILLING REPORT # 32
DAILY DRILLING REPORT # 32

CASINO #1

Safety, Inspections and Drills Summary										
5 days since last Fire and Abandon Ship Drill										
1817 days since last Lost Workday Case										
50 days since last Medical Treatment Case										
16 days since last First Aid Case										
3 days since last Weekly Safety Meeting										
7 days since last Trip/Pit Drill										
10 days since last BOP Test										
Shakers, Volumes and Losses Data	ENGINEER M. Docherty									
SHAKER 1 4 x 115 VOLUME AVAILABLE (m3) = 175 LOSSE SHAKER 2 4 x 115 ACTIVE 0.0 MIXING 0.0 DOWN SHAKER 3 4 x 115 ACTIVE 0.0 MIXING 0.0 DOWN SHAKER 4 4 x 84 HOLE 174.7 SLUG 0.0 SURF SHAKER 5 RESERVE 0.0 HEAVY 0.0 DUMPR	ES (m3) = 0 COMMENTS IHOLE 0.00									
Anchors Anc 1: 118 Anc 2: 61 Anc 3: 118 Anc 4: 6 Anc 6: 88 Anc 7: 73 Anc 8: 93 Anc 9: 6	66 Anc 5 : 79 RIS. TENS. (MT) : 0 0 Anc 10: 0 RISER ANGLE (deg): 0.0									
Workboats Arrived @ Rig (Date)(Time) Depart from Rig (Date)(Time) EstimatedArrival (Port) (Date)(Time)	Weather STACK ANGLE(deg): 0.C VISIBILITY(nm): 12 AVE HEAVE (m): 1,785.C									
Pacific Sentinel 19/09/02 20:00 Pacific Conqueror 19/09/02 20:10 20/09/02 8:00	WIND SP. (kts): 20.0 MAX HEAVE (m): 3.0 WIND DIR (deg): 320 AVE PITCH (deg): 0.8 PRES.(mbars): 1015 MAX PITCH (deg): 0.8 AIR TEMP (C): 14.0 AVE ROLL (deg): 0.5									
COMMENTS : No Helicopters.										

Santos DATE : Sep 22, 2002

FROM : R.King / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 33

CASINO #1

Summary of period 00:00 to 24:00 hrs								
RT ABOVE SL (m) WATER DEPTH (m RT TO SEABED (m	25.0) LAT 70.5) 95.5	CURRENT OP @ 0400 PLANNED OP.	Anchor H Discharge # 2, Run A	andling. e cargo from P.Conqueror (Anchors.	& pull prir	nary anchors. Rig	move to Casino	
Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	2,118.0 2,118.0 28.25	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 1.88	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$330,406 \$12,725,111	

Cut & Recover Casing / Commenced Anchor handling.

FORMATION	TOP(m BRT)
Skull Creek (?)	1,259
Nullawarre	1,522
Belfast	1,531
Warre	1,739

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 22, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		WH	00:00	04:30	4.50	2,118	Continued cutting 762mm (30") casing. (Continual torque range whilst cutting 6-8,000ft/lbs)
IH1	Ρ		то	04:30	06:30	2.00	2,118	POOH with PGB, & 762mm (30") Casing. Released cutting tool, laid out cutting assembly. (O-Pull 100kips to free casing)
IH1	Ρ		ΗT	06:30	07:30	1.00	0	Made up 762mm (30") Runnning tool and laid out.
IH1	Ρ		HBH	07:30	09:30	2.00	0	Made up 660mm & 914mm (26" & 36") BHA and racked in derrick. (ROV conducted sea bed survey) Loaded darts in cement head.
IH1	Ρ		ANC	09:30	19:00	9.50	0	Anchor Handling. (Pacific Sentinel) Start # 4 @09:40hrs finished @ 11:45hrs / Start # 8 @12:35hrs finished @ 14:45hrs / Start # 1 @14:58hrs finished @ 16:55hrs / Start # 5 @17:06hrs finished @ 19:00hrs
IH1	Ρ		0	19:00	23:30	4.50	0	Pressure tested Choke manifold, mud manifold & surface equipment 1,724 / 34,475Kpa (250 / 5,000 psi) Serviced TDS & Blocks, Broke out 762mm (30") Cutting assembly & Made up 476mm (18-3/4") Casing cutting assembly in preparation for Casino#2. Prepared PGB and guide lines.
IH1	Ρ		0	23:30	24:00	0.50	0	Pacific Conqueror arrived on location @ 22:30hrs. Discharged cargo & straped 340mm (13-3/8") Casing.

ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON Sep 23, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Р		0	00:00	03:30	3.50	0	Continued to discharge cargo from Pacific Conqueror.
IH1	Р		ANC	03:30	04:00	0.50	0	Pacific Conqueror completed discharge of cargo. Rigged up deck for
								Anchor handling operations.
IH1	Р		ANC	04:00	06:00	2.00	0	Tow bridle passed to P.Sentinel @ 04:10hrs. 'Anchor handling'
								(Pacific Conqueror) Start #3 @ 04:15hrs.

WBM Data	COST TO	ODAY: \$0	CUM. WE	8 MUD COST: \$240,470	CUM. WBM+OBM COST: \$240,470			
Type : FROM : TIME : WEIGHT (sg): TEMP (C) :	Sea Water _{pit}	VISCOCITY (sec/ltr) : PV (Pa.s) : YP (Pa.s) : GEL10s/10m/100m (Pa.s) : Fann 3/6/100 :	: 0 0 0 0 0	API FLUID LOSS (cm3/30min) : FILTER CAKE (mm) : HTHPFL (cm3/30min) : HTHP CAKE (mm) :	CI: K+C*1000: HARD/Ca: MBT (ppb): PM: PF:	SOLIDS (%vol) : H2O (%vol) : OIL (%vol) : SAND : PH : PHPA (ppb) :		

SURVOV	/Mathaal						.								
Survey	(ivietnoa		ure)	MD				AZ	CORR.		DOGLEG	N/S	E/W		TYPE
Last Tool	Type :	I	MWD	(MBRT)	(твкт)			ueg)	(deg)		(deg/ 30m)	(m)	(m)		
Magnetic I	Declinatio	n :	0.00	4470.4	4470.0			00.5	(009)		00111)				
0				1170.4	1170.3		93 1 44 1	192.5	192.5	4.9	0.1	4.9	9 -0.2 1 -0.4		
				1382.1	1381.9		87 1	182.2	182.2	-0.5	0.2	-0.5	5 -0.5	MWD	
					1458.2	2	13 1	83.9	183.9	-3.1	0.1	-3.1	1 -0.6	MWD	
					1545.7	2.	74 1	85.6	185.6	-6.9	0.2	-6.9	9 -0.9	MWD	
					1605.1	3.0	09 1	84.8	184.8	-9.9	0.2	-9.9	9 -1.2	MWD	
				1690.7	1690.2	3.4	44 1	188.9	188.9	-14.7	0.1	-14.7	7 -1.8	MWD	
				1775.9	1775.1	4.3	38 1	92.3	192.3	-20.4	0.3	-20.4	4 -2.9	MWD	
Bulk	STOCK T	PE & UNITS		START U	SED RE	C'D	STO	CK S	тоск 1	YPE & UN	TS	START	USED RE	C'D S	тоск
Stocks	Fuel Oil -	Rig	М3	492.4	6.0		48	36.4 C	Drill Wate	er - Rig	MT	476.0	7.0		469.0
On Rig	Pot Water	- Rig	MT	98.0			g	98.0 C	Cement '	G' - Rig	SXS	901.0			901.0
	Cement H	TB - Rig	SXS	0.0				0.0 B	Bentonite	e - Rig	SXS	670.0			670.0
	Barite - Ri	g	SXS	2751.0 3	64.0		238	37.0 B	Brine - R	ig	MT	0.0			0.0
	Helifuel -	Rig	ltr	1577.0			157	7.0 F	uel Oil	Conquerc	or M3	460.5			460.5
	Drill Wate	r - Conqueror	MT	640.0			64	10.0 P	ot Wate	r - Conque	ror MT	215.0			215.0
	Cement 'G	S' - Conqueror	SXS	0.0				0.0 C	Cement	HTB - Cond	querc sxs	0.0			0.0
	Bentonite	- Conqueror	SXS	0.0				0.0 B	Barite - C	Conqueror	SXS	246.0			246.0
	Brine - Co	naueror	MT	0.0				0.0 F	uel Oil	- Sentinel	M3	474.6	15.2		459.4
	Drill Wate	r - Sentinel	МТ	610.0			61	0.0 P	Pot Wate	r - Sentine	I MT	233.0	5.0		228.0
	Cement 'C	S' - Sentinel	SXS	1338.0			133	38.0 C	Cement	HTB - Sent	tinel sxs	0.0			0.0
	Bentonite	- Sentinel	eve	873.0			87	73 0 B	Porito - 9		eve	364.0			364.0
	Brine - Se	ntinel	MT	0.0			07	0.0		Jentinei	3/3	304.0			304.0
	Billio 00			0.0				0.0							
Pump Da	ata														
		Pump	Data	- last 24 hi	's						Slo	w Pump	Data		
#	TYPE	LNR(mm)	SPI	M EFF	(%) FI	ow (l	w (Ipm) SPP (kF		(kPa)	SPM	SPP (kPa) DE	EPTH (m)	MV	/ (sg)
1 Nat'l 1	2-P-160	152			97		0		0	30	C)			
		0					0		0	40	C)			
		0					0			50	C)			
2 Nat'l 1	2-P-160	152			97		0		0	30	(2			
		0							0	40 50		<u>, </u>			
3 Nat'l 1	2-P-160	152			97		0			50	(
- o Hatti	21 100	102			01		Ů		Ű			<u> </u>			
Casing															
DIAM.	CSG OD	SHOE ME)	SHO	DE TVD		L	_ОТ		FIT		CC	OMMENT		
	(mm)	(plan/Actua	al)	(plar	n/Actual)		(p	l/Act)		(pl/Act)					
13.375 3	40	785.0	743.0	785.0) 7	42.9	1.6	8 1	.88						
	 TY	′ΡΕ		LEN	GTH (m)		SG ID	D (mm) W	T (kg/m)	GRADE		THREAD		
340mm (13	3.375") sho	e jt 107 ka/m.	cent m	nid 12	.52		316			07.1	L-80		BTC		
340mm (1	3.375") int i	t 107 kg/m, ce	nt mid	jt 12	.13		316		· · ·	107.1	L-80		BTC		
340mm (1	340mm (13.375") int jt 107 kg/m, cent mid jt 12						316		· ·	107.1	L-80		BTC		
50 x 340mm (13.375") jt 101 kg/m 590.73							316		· · ·	01.2	L-80		BTC		
340mm (13.375") No-cross jt 101 kg/m 11.84						316			· ·	01.2	L-80		BTC		
476mm (18	8.75") wellh	iead + extensi	on jt	10	.71		316		· ·	101.2	L-80		BTC		
KI to Well	nead top			92	.58		0			.0					
Personn	el : on S	ite =76													
2 Sant	tos		33	DOGC				22 1	TMT (m	arine)		4 DO	GC (other)		
1 Ana	drill		2	BHI				1 [DrilQuip			1 Hal	liburton		
			2	Smith Too	ls			3 1) V		4 Evo	no		
			~							- • /		- - - /			

Sep 22, 2002

DAILY DRILLING REPORT # 33

CASINO #1

DAILY DRILLING REPORT # 33

CASINO #1

Safety, Inspections and Drills Summary										
0 days since last Fire and Abandon Ship Drill										
1818 days since last Lost Workday Case										
51 days since last Medical Treatment Case										
17 days since last First Aid Case										
4 days since last Weekly Safety Meeting										
8 days since last Trip/Pit Drill										
11 days since last BOP Test										
Anchors Anc 1 : 0 Anc 2 : 48 Anc 3 : 70 Anc 4 : 0 Anc 6 : 23 Anc 7 : 63 Anc 8 : 0 Anc 9 : 0	Anc 5 : 0 Anc 10: 0	RIS. TENS. (MT) : RISER ANGLE (deg):	0 0.0							
Workboats Arrived @ Rig (Date)(Time) Depart from Rig (Date)(Time) EstimatedArrival (Port) (Date)(Time) Pacific Sentinel 19/09/02 20:00 20:00 20:00	WeatherVISIBILITY(nm) :14WIND SP. (kts) :20.0	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) : MAX HEAVE (m) :	0.C 1,817.C 0.C 0.C							
Pacific Conqueror 22/09/02 22:30	WIND DIR (deg) : 320 PRES.(mbars): 1016 AIR TEMP (C) : 14.0	AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	0.7 0.8 0.5							
COMMENTS : No Helicopters.		MAX ROLL (deg) :	0.6							

Santos DATE : Sep 23, 2002

FROM : R.King / G. Othen TO : O. Moller

DAILY DRILLING REPORT # 34

CASINO #1

Well Data COUNTRY FIELD DRILL CO. RIG	Australia Casino Diamond Offshore Ocean Bounty	M.DEPTH (m BRT) TVD (m BRT) PROGRESS (m) DAYS FROM SPUD DAYS +/- CURVE	2,118.0 2,118.0 29.25	CUR.HOLE SIZE (mm) CASING OD (mm) SHOE TVD (m BRT) FIT (sg) LOT (sg)	311 340 743 0.00 1.88	AFE COST \$ AFE BASIS : DAILY COST : CUM COST :	12,129,000 P&A \$116,261 \$12,841,372
RT ABOVE SL (m) WATER DEPTH (n RT TO SEABED (m	25.0 n) LAT 70.5 n) 95.5	CURRENT OP @ 0400 PLANNED OP.	Rig move	to Casino #2			
Summary of per	iod 00:00 to 24:00	hrs			FOR	MATION	TOP(m BRT)

Anchor handling. Rig nReleased 12:00 hrs.

		-i
	FORMATION	TOP(m BRT)
	Skull Creek (?)	1,259
-	Nullawarre	1,522
	Belfast	1,531
	Warre	1,739

ACTIVITY FOR PERIOD 00:00 HRS TO 24:00 HRS ON Sep 23, 2002

PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION
IH1	Ρ		0	00:00	03:30	3.50	0	Continued to discharge cargo from Pacific Conqueror.
IH1	Ρ		ANC	03:30	04:00	0.50	0	Pacific Conqueror completed discharge of cargo. Rigged up deck for Anchor handling operations.
IH1	Ρ		ANC	04:00	12:00	8.00	0	Tow bridle passed to P.Sentinel @ 04:10hrs. 'Anchor handling' (Pacific Conqueror) Start #3 @ 04:15hrs finished @ 06:15hrs / Start #7 @ 06:24hrs finished @ 08:10hrs / Start #2 @ 08:16hrs finished @ 09:53hrs / Start hauling # 6 @ 10:00hrs Anchor racked @12:00. Tow to Casino #2

ACTIVITY FOR PERIOD 0000 HRS TO 06:00 HRS ON

AVIII												
PHS	CL	RC	OP	FROM	то	HRS	DEPTH	ACTIVITY DESCRIPTION				

WBM Data	COST T	ODAY: \$0	CUM. V	/B	MUD COST: \$240,470	CUM. WBM+OBM CC	ST: \$240,470
Туре :	Sea Water	VISCOCITY (sec/ltr) : PV (Pa.s) :		0	API FLUID LOSS (cm3/30min) : FILTER CAKE	CI : K+C*1000 :	SOLIDS (%vol) : H2O (%vol) :
FROM : TIME : WEIGHT (sg): TEMP (C) :	pit	YP (Pa.s) : GEL10s/10m/100m (Pa.s) : 0 Fann 3/6/100 :	0	0	(mm) : 0 HTHPFL (cm3/30min) : HTHP CAKE (mm) : 0	HARD/Ca : MBT (ppb) : PM : PF :	OIL (%vol) : SAND : PH : PHPA (ppb) :

Survey (Method : Min Cu	rvature)	MD	TVD	INCL	AZ	CORR.	'V'	DOGLEG	N/S	E/W	TOOL TYPE
Last Tool Type :	MWD	(mBRT)	(mBRT)	DEG	(deg)	AZ (dog)	SECT	(deg/	(m)	(m)	
	0.00					(deg)	(m)	30m)			
Magnetic Declination :	0.00	1170.4	1170.3	0.93	192.5	192.5	4.9	0.1	4.9	-0.2	MWD
		1256.7	1256.6	1.44	181.2	181.2	3.1	0.2	3.1	-0.4	MWD
		1382.1	1381.9	1.87	182.2	182.2	-0.5	0.1	-0.5	-0.5	MWD
		1458.5	1458.2	2.13	183.9	183.9	-3.1	0.1	-3.1	-0.6	MWD
		1546.1	1545.7	2.74	185.6	185.6	-6.9	0.2	-6.9	-0.9	MWD
		1605.5	1605.1	3.09	184.8	184.8	-9.9	0.2	-9.9	-1.2	MWD
		1690.7	1690.2	3.44	188.9	188.9	-14.7	0.1	-14.7	-1.8	MWD
		1775.9	1775.1	4.38	192.3	192.3	-20.4	0.3	-20.4	-2.9	MWD

DAILY DRILLING REPORT # 34

CASINO #1

Bull	k					OTAD			070	01/ 0	TOOK			OTADT			OTOOK
Duil	n alka	STOCK	IYPI			STAR	I USED	RECD	SIC	CKS	TOCK	ITTPE & UNI	15	START	USED	REC.D	STOCK
5100		Fuel Oil	- Ri	g	M3	486.4	3.0		4	83.4 D	rill Wa	ater - Rig	MT	469.0			469.0
On	Rig	Pot Wate	er - F	Rig	MT	98.0				98.0 C	emen	t 'G' - Rig	SXS	901.0			901.0
		Cement	HTE	3 - Rig	SXS	0.0				0.0 B	enton	ite - Rig	SXS	670.0			670.0
		Barite - F	Rig		SXS	2387.0			23	87.0 B	rine -	Rig	MT	0.0			0.0
		Helifuel ·	- Ri	9	ltr	1577.0	231.0		13	46.0 F	uel O	il - Conquero	r M3	460.5	3.8		456.7
		Drill Wat	er -	Conqueror	ΜT	640.0			6	40.0 P	ot Wa	iter - Conquei	ror MT	215.0	2.0		213.0
		Cement	'G' -	Conqueror	SXS	0.0				0.0 C	emen	t HTB - Conq	uerc sxs	0.0			0.0
		Bentonit	e - (Conqueror	SXS	0.0				0.0 B	arite -	Conqueror	SXS	246.0	246.0		0.0
		Brine - C	onq	ueror	MT	0.0				0.0 F	uel O	il - Sentinel	M3	459.4	5.4		454.0
		Drill Wat	er -	Sentinel	MT	610.0	10.0		6	00.0 P	ot Wa	ter - Sentinel	MT	228.0	5.0		223.0
		Cement	'G' -	Sentinel	SXS	1338.0			13	38.0 C	emen	t HTB - Sent	inel sxs	0.0			0.0
		Bentonit	e - S	Sentinel	SXS	873.0			8	73.0 B	arite ·	- Sentinel	SXS	364.0			364.0
		Brine - S	Senti	inel	MT	0.0				0.0							
D		-1-															
Pur	np D	ata		D	Dete	lact 0	1 hrc					1		ow D	Data		
				Pump	Data	- iast 2	4 nrs			0			51				
#		TYPE		LNR(mm)	SP	ME	EFF (%)	Flow (lpm)	SPP	(kPa)	SPM	SPP (kPa	a) D	EPTH (m)) N	/W (sg)
1	Nat'l	12-P-160		152			97		0		0	30		0			
				0					0		0	40		0			
				0					0		0	50		0			
2	Nat'l	12-P-160		152			97		0		0	30		0			
				0					0		0	40					
3	Nat'l	12-P-160		0 152			97		0		0	50					
Ľ	Hatt	121 100		102										<u> </u>			
Cas	ing																
DIA	۱M.	CSG OD		SHOE MD)		SHOE TV	D		LOT		FIT		С	OMMENT	-	
		(mm)		(plan/Actua	l)	(plan/Actu	al)	(pl/Act)		(pl/Act)					
13.3	375 3	340		785.0	743.0	78	35.0	742.9	1.0	58 1.	88						
	-	Т	ΥP	 E			ENGTH (m) (CSG I	D (mm)		WT (ka/m)	GRAD	F	THRE	AD	7
							- (,		. ,	_	(3),	0.0.0			_	-
340	mm (1	3.375") sh	ioe j	t 107 kg/m,	cent n	nid	12.52		316	5		107.1	L-80		BTC	2	
340	mm (1	3.375") IN	tjti	07 kg/m, ce		1 JT	12.13		316)		107.1	L-80		BIC	- -	
50 x	///// (1 / 340m	3.375) III 1m (13 375	נןני 5") it	101 kg/m, ce	nt mic	, ji	12.04 590.73		316) ;		107.1	L-00		BTC		
340	mm (1	3.375") No	-cro	ss it 101 kg/m	m		11.84		316	, ;		101.2	L-80		BTC	5	
476	mm (1	8.75") wel	lhea	ad + extensio	on jt		10.71		316	5		101.2	L-80		BTC	2	
RT 1	to Wel	llhead top					92.58		0			.0					
Per	sonn	el : on S	Site	e =76													
	2 San	itos			22	DOGC				22 T	MT (r	marine))GC (othe	r)	
	1 Ana	drill			200	выі				<u>2</u> 2.	nil∩u	in		4 Ha	lliburton	.,	
					2		F = = 1 =			16	niiQu	ih DOM					
		5			2	Smith	10015			31	IVI I (F	(0)		4 EX	pio		
Safe	ety, I	nspectio	ons	and Dril	IS			Summ	nary								
	1 days	since last	Fir	re and Aban	don S	hip Drill											
1819	9 days	since last	Lo	st Workday C	ase												
52	2 days	since last	Me	edical Treatn	nent C	ase											
18	8 days	since last	Fir	st Aid Case													
	5 days	since last	W	eekly Safety	Meeti	ng											
	9 days	since last	Tr	ip/Pit Drill													
12	2 days	since last	BC	DP Test													

DAILY DRILLING REPORT # 34

CASINO #1

Anchors	Anc 1 : Anc 6 :	0 0		Anc 2:0 Anc 7:0	Anc 3 : Anc 8 :	: 0 : 0	Anc 4 : 0 Anc 9 : 0	Anc 5 : 0 Anc 10: 0		RIS. TENS. (MT) : RISER ANGLE (deg):	0 0.0
Workboats	A (rrived @ Date)(1	Ø Rig Time)	Depart (Date	from Rig)(Time)	Esti	imatedArrival (Port) (Date)(Time)	Weather VISIBILITY(nm) :	0	STACK ANGLE(deg): V.D.L. (MT) : AVE HEAVE (m) :	0.C 0.C 0.C
Pacific Sentinel Pacific Conquer	19 or 22	/09/02 /09/02	20:00 22:30					WIND SP. (kts) : WIND DIR (deg) : PRES.(mbars): AIR TEMP (C) :	0. 0 0.0	MAX HEAVE (m) : AVE PITCH (deg) : MAX PITCH (deg) : AVE ROLL (deg) :	0.0 0.7 0.8 0.5
COMMENTS :	Pax or	n/off 8/8	8					1		MAX ROLL (deg) :	0.6

SECTION 7:- TIME / DEPTH CURVE





SECTION 8:- BHA SUMMARY

Bŀ	IA SUN	IMAR)	(W	ELL:		С	ASIN	NO #1
#	LENGTH	BHA	WT.	STRNG	P/UP	S/0FF	TRQE	TRQE	TRQE	HRS	BHA DESCRIPTION
		WT.	BELOW	WT.	WT.	WT.	MAX	ON BOT	OFF		
			JAR						BOT		
1	83.24			200			3	2			660mm bit, 914mm holeopener, bit sub (solid float), 241mm Anderdrift, 3 x 241mm DC, x/o, 5 x 203mm DC x/o, 6 x 127mm HWDP
2	215.20			225			2	1	1		445mm bit, 445mm NB stab (solid float), 241mm Anderdrift, 445mm stab, 1 x 241mm DC, 445mm stab, 2 x
											241mm DC, x/o, 6 x 203mm DC, 203mm Jar, 4 x 203mm DC, x/o, 8 x 127mm HWDP
2	215.20	70	50	250	255	247	5	3	1		445mm bit, 445mm NB stab (solid float), 241mm Anderdrift, 445mm stab, 1 x 241mm DC, 445mm stab, 2 x
											241mm DC, x/o, 6 x 203mm DC, 203mm Jar, 4 x 203mm DC, x/o, 8 x 127mm HWDP
2	215.20	70	50	262	264	260	4	3	2		445mm bit, 445mm NB stab (solid float), 241mm Anderdrift, 445mm stab, 1 x 241mm DC, 445mm stab, 2 x
											241mm DC, x/o, 6 x 203mm DC, 203mm Jar, 4 x 203mm DC, x/o, 8 x 127mm HWDP
3	265.35	80	50	280			9	5	2		311mm bit, NB RR (ported float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 9 x
											203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
3	265.35	80	50	280			6	3	1		311mm bit, NB RR (ported float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 9 x
											203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
4	293.03	90	70	290			2	1	1		311mm bit, NB RR (ported float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 12
											x 203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
5	293.03	90	70	310			7	4	1		311mm bit, NB RR (solid float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 12 x
											203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
6	293.08	90	70	328			12	6	3		311mm bit, NB RR (solid float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 12 x
											203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
6	293.08	90	70	328			11	6	0		311mm bit, NB RR (solid float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 12 x
											203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
7	293.08	90	70	328							311mm bit, NB RR (solid float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 12 x
											203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
7	293.08	90	70	328							311mm bit, NB RR (solid float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 12 x
											203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
7	293.08	90	70	328							311mm bit, NB RR (solid float), 210mm MWD/FEWD, 311mm RR (totco ring), 1 x 203mm DC, 311mm RR, 12 x
											203mm DC, 203mm Jar, 2 x 203mm DC, x/o, 12 x 127mm HWDP
8	268.22	75	55	170	180	170	6,000	4,000	4,000		Bit, NB RR (solid float), 3 x 8" DC, RR, 1 x 8" DC, RR, 9 X 8"dc, Jar, 2 x 8" DC, x/o, 12 x 5" HWDP.
8	268.22	75	55	185	190	190	6,000	4,000	4,000		Bit, NB RR (solid float), 3 x 8" DC, RR, 1 x 8" DC, RR, 9 X 8"dc, Jar, 2 x 8" DC, x/o, 12 x 5" HWDP.
									-		
8	268.22	75	55	190	190	190	6,000	4,000	4,000		Bit, NB RR (solid float), 3 x 8" DC, RR, 1 x 8" DC, RR, 9 X 8"dc, Jar, 2 x 8" DC, x/o, 12 x 5" HWDP.
									-		
8	268.22	75	55	190	190	190	6,000	4,000	4,000		Bit, NB RR (solid float), 3 x 8" DC, RR, 1 x 8" DC, RR, 9 X 8"dc, Jar, 2 x 8" DC, x/o, 12 x 5" HWDP.
			-				,	,	,		
8	268.22	75	55	190	190	190	6,000	4,000	4,000		Bit, NB RR (solid float), 3 x 8" DC, RR, 1 x 8" DC, RR, 9 X 8"dc, Jar, 2 x 8" DC, x/o, 12 x 5" HWDP.

SECTION 9:- BIT RECORD & PERFORMANCE SUMMARY

CAS	SINO) #1								I	Drillin	g Co.	.: Dia	monc	i Offst	ore			Ri	g:(Dcea	n B	our	ity			
RT a GL a	bove (bove N	GL : MSL :	25 mtrs 70 mtrs	3 ;	Lat : 38 de Long : 142	eg 47 min deg 42 m	18.5 in 0.2	0 sec 4 sec		3	Spud Spud ⁻	Date: Time:	25/08/ 18:30	2002 :00					Re Re	leas leas	e Da e Tir	te:: ne:	23/0 12:	09/2 00:0	2002 20		<u></u>
BIT	REC	ORD	•																								
BIT#	IADC	SIZE	SER	MFR	ТҮРЕ	JETS	D.IN mtrs	D.OUT mtrs	MTRG	HRS o/b	SPP psi	FLW gpm	WOB k-lbs	RPM	MW kgm3	TFA sq.in	VEL mps	HHP /sq*	ROP m/hr	10	1 D	L	В	G	02	R	
1	111	26.00	KP2374	SMITH	DSJC	3x18,4x22	96	130	35	1.0	973	865	6.4	65	1.04	2.231	38	0.11	34.5	1 1	NC	A	1	1	NO	TD	
3	115	17.50	103894	REED	DSX 195	5x12	752	1.057	305	24.9 14.8	2452 2595	719	18.1 7.3	98 105	1.06	0.552	84 112	1.45 0.40	25.0 20.6	1 1 B B	RC	S	X	1	NO WT	PR	İ
4 5	437X	12.25 12.25	KA4914 MJ3163	SMITH	EHP51HFKPRDH 10GF	3x16 3x16	1.057 1,059	1.059 1, 4 00	2 341	0.2 14.7	2994 3070	384 857	6.2 32.1	86 99	1.06 1.06	0.589 0.589	64 142	0.08 0.86	10.0 23.2	0 2 1 1		G	F3 E	 1	PN ER	PP PR	
6 7	437	12.25 12.25	J\$6343 L11DK	SMITH HUGHES	MA74BPX MXR09D	6x12 3x16	1,400 1,797	1,797 2,118	397 321	16.2 33.2	3223 3890	828 804	12.5 31.1	154 100	1.19 1.24	0.663 0.589	118 133	5.59 7.04	24.5 9.7	1 B 2 2	LT BT	S A	X E	1	CT CT	PR TD	

CASINO #1

Drill. Co : Diamond Offshore

Rig: Ocean Bounty

 RT ABOVE MSL (m)
 25.0
 Lat
 : 38 deg
 47 min
 18.50 sec
 Spuc

 WATER DEPTH (m)
 70.5
 Long : 142 deg
 42 min
 0.24 sec
 Spuc

Spud Date: 25/08/2002 Spud Time: 18:30 Release Date: 23/09/2002 Release Time: 12:00

BHA SUMMARY

#	Length (m)	Weight (MT)	Weight blw/Jars (MT)	String Weight (MT)	Pick-Up Weight (MT)	Slack-Off Weight (MT)	Torque Max (kNm)	Torque on botlom (kNm)	Torque off bottom (kNm)	BHA DESCRIPTION
1	83.2	0.0	0.0	90.7	0.0	0.0	4.20	2.58	.00	26" bit, 36" H/O, bit sub. 9.5" Anderdrift. 3 x 9.5" DC, x/o, 5 x 8" DC x/o, 6 x 5" HWDP
2	215.2	31.8	22.7	118.8	119.7	117.9	5.42	4.34	2.71	17.5" bit, NB stab, 9.5" Anderdrift, 17.5" stab, 1 x 9.5" DC, 17.5" stab, 2 x 9.5" DC, x/o, 6 x 8" DC, 8" Jar, 4 x 8" DC, x/o, 8 x 5" HWDP
3	265.4	36.3	22.7	127.0	0.0	0.0	7.59	3.80	1.63	12.25" bit. NB stab, 8.25" MWD/FEWD, 12.25" RR, 1 x 8" DC, 12.25" RR, 9 x 8" DC, 8" Jar, 2 x 8" DC, x/o, 12 x 5" HWDP
4	293.0	40.8	31.8	140.6	0.0	0.0	9.22	5.29	1.49	12.25" bit, NB stab, 8.25" MWD/FEWD, 12.25" RR, 1 x 8" DC, 12.25" RR, 12 x 8" DC, 8" Jar, 2 x 8" DC, x/o, 12 x 5" HWDP
6	293.1	40.8	31.8	148.8	0.0	0.0	15.32	7.46	.54	12.25" bit, NB stab, 8.25" MWD/FEWD, 12.25" RR, 1 x 8" DC, 12.25" RR, 12 x 8" DC, 8" Jar, 2 x 8" DC, x/o, 12 x 5" HWDP
7	293.1	40.8	31.8	148.8	0.0	0.0	.00	.00	.00	12.25" bit, NB stab, 8.25" MWD/FEWD, 12.25" RR, 1 x 8" DC, 12.25" RR, 12 x 8" DC, 8" Jar, 2 x 8" DC, x/o, 12 x 5" HWDP
8	268.2	34.0	24.9	86.2	86.2	86.2	8.13	5.42	5.42	12.25" Bit, NB RR (solid float), 3 x 8" DC, RR, 1 x 8" DC, RR, 9 X 8"dc, Jar, 2 x 8" DC, x/o, 12 x 5" HWDP.

BIT RECAP

WELL :

From: 25/08/2002 To: 16/09/2002

DATE	BIT#	SIZE	SER#	MF	IADC	TYPE	JETS	OUT	MTRG	HRS	HRS	SPP	FLW	WOB	RPM	VEL	HHP	ROP	Ι	01	D	L	В	G	02	R
										o/b	IADC						sq"									
												psi	gpm	k-lbs		mps		m/hr								
25/08/2002	1	26.00	KP2374	SM	111	DSJC	3x18, 4x22	130	35	1.0	1.5	973	865	6.4	65	37.8	0.114	34.5	1	1	WT	А	Е	Т	NO	TD
26/08/2002	2	17.50	MM0005	SM	115	MGSSH-C	3x20, 1x18		90	1.3	2.0	1510	939	9.4	86	78.4	0.140	69.2								
27/08/2002	2	17.50	MM0005	SM	115	MGSSH-C	3x20, 1x18		493	20.3	24.0	2123	1011	19.4	100	84.4	0.175	24.3								
28/08/2002	2	17.50	MM0005	SM	115	MGSSH-C	3x20, 1x18	752	39	1.8	2.0	2452	1008	22.0	100	84.1	1.449	21.7	1	1	NO	А	Е	0	NO	TD
29/08/2002	3	12.25	103894	SM		DSX 195	5x12									.0	0.000									
30/08/2002	3	12.25	103894	RE		DSX 195	5x12		264	4.5	8.0	2525	719	7.4	104	127.0	0.576	58.7								
31/08/2002	3	12.25	103894	RE		DSX 195	5x12	1,057	41	10.3	10.5	2595	634	6.5	114	112.0	0.395	4.0	8	8	RO	s	Х	1	WТ	PR
31/08/2002	4	12.25	KA4914	RE		EHP51HFKPRDH	3x16	1,059	2	.2	.5	2994	384	6.2	86	63.6	0.077	10.0	0	2	СТ	G	F3	Т	PN	PP
1/09/2002	5	12.25	MJ3163	SM	437X	10GF	3x16	1,400	341	14.7	18.0	3070	857	32.0	99	141.9	7.293	23.2								PR
2/09/2002	5	12.25	MJ3163	SM	437X	10GF	3x16	1,400	0	.0	.0	3070	857	32.0	99	141.9	0.858		1	1	WT	А	Е	1	ER	PR
2/09/2002	6	12.25	JS6343	SM		MA74BPX	6x12		350	10.2	13.5	3185	828	12.8	155	121.9	0.611	34.3								
3/09/2002	6	12.25	JS6343	SM		MA74BPX	6x12	1,797	47	6.0	6.5	3223	805	10.6	147	118.5	5.587	7.8	1	8	LT	s	х	Т	СТ	PR
4/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16		0	.0	.0	3223	805	10.6	147	133.3	7.070									
5/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16		0	.0	.0					.0	0.000									
7/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16		0	.0	.0					.0	0.000									
11/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16		0	.0	.0					.0	0.000									
12/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16		7	1.5	2.0	3783	804	25.0	100	133.1	7.044	4.7								
13/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16		239	21.4	24.0	3826	804	30.0	100	133.1	7.044	11.2								
14/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16	2,118	75	10.3	11.0	3890	804	35.0	100	133.1	7.044	7.3	2	2	BT	А	Е	Т	СТ	TD
15/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16	2,118	0	.0	.0	3890	804	35.0	100	133.1	7.044		2	2	BT	А	Е	Ι	СТ	TD
16/09/2002	7	12.25	L11DK	ΗU	437	MXR09D	3x16	2,118	0	.0	.0	3890	804	35.0	100	133.1	7.044		2	2	BT	А	Е	Т	СТ	TD

CASINO #1

SECTION 10:- DRILLING FLUIDS REPORT

MUD RECAP

WELL :

CASINO - 1

R#	DATE	TYPE	DEPTH	ТМР	MW	VIS	ΡV	YP	GEL	GEL	F.L.	CAKE	SOL	H2O	Oil	SND	МВТ	PH	РМ	PF	CI	HARD	РНРА	KCI%	K+	COST
				С	ppg	cps	cps		10s	10M	API		%	%	%	%	ppb					/CA	ppb			
-	05/00/0000	Oracial	400		1.0	400	40	0.4	00	00			0.0	07.4			00.0	10.0		_	4 000					44.040
ິ ຄ	25/08/2002	Shun Col Swoops	200		10	120	18	.14	2.3	/n 42			21 21	974			30.0	10.0		1	1 600	80 60				11 74.3
7	20/08/2002	Gel Sweeps	200		1.1	00	10	04 61	40	42			3.4	90.0			25.0	12.0		1	1.500	60				4.704
0 0	28/08/2002		752		1.1	30	7	2	10	1			5.4	90.0 00.5			25.0	12.0			28,000	720	7	7	37 800	26.047
0	20/08/2002		752		1.0	10	7	7	2	2			.55	99.5 00.1				10.0		0	20.000	120	./	7	37.000	20.947
10	29/00/2002		047		1.0	40	7	15	4	4	65	10	1.6	08.1		2	25	10.0		0	20.000	640	./	7	37 800	26.007
11	31/08/2002		1 050		1.1	40	12	21	6	4	6.2	1.0	1.0	08.3		5	2.5	8.0		0	29.000	360	0	7	37.800	16.006
12	1/00/2002		1 360	120	1.1	48	11	23	8	12	6.2	1.0	2.0	98.0		tr	7.0	9.5		0	20.000	280	12	6	32 400	16.805
13	2/09/2002	KCI PHPA	1.500	130	12	54	18	32	11	15	4.5	1.0	5.6	94.3		tr	11.0	9.5		0	29,000	320	1.2	6	32,400	30 289
14	3/09/2002	KCI PHPA	1 797	110	12	64	21	33	12	16	4.3	1.0	74	92.6		1	12.0	9.5		0	31 200	300	1.8	6	32 400	18 195
15	4/09/2002	KCI PHPA	1 797	38	12	64	23	32	11	15	4.6	1.0	73	91 7		1	13.0	9.5		0	30,000	280	1.8	6	32 400	9 276
16	5/09/2002	KCI PHPA	1 797	00	12	71	20	29	10	15	4.8	1.0	11	88.4		1	11.0	8.5		0	31 000	360	1.8	6	32 400	1 950
17	6/09/2002	KCI PHPA	1 797		12	72	19	29	9	13	47	1.0	11	88.8		1	12.0	8.5		0	29 800	300	1.8	6	32 400	672
18	7/09/2002	KCI PHPA	1 797		12	70	19	29	8	12	44	1.0	11	88.8		5	12.5	8.5		0	30,000	300	1.8	6	32 400	0/2
19	8/09/2002	KCI PHPA	1.797		1.2	59	15	25	7	11	4.4	1.0	11.	89.2		.5	11.0	9.0		0	31.000	320	1.8	6	32,400	3.789
20	9/09/2002	KCI PHPA	1.797		1.2	58	17	25	7	10	1.4	1.0	10.	89.5		.5	12.0	9.0		0	30,500	300	1.8	6	32,400	
21	10/09/2002	KCI PHPA	1.797		1.2	57	15	24	7	10	4.6	1.0	10.	89.4		.5	12.0	9.0		0	30.500	280	1.8	6	32.400	5.418
22	11/09/2002	KCI PHPA	1.797		1.2	54	14	23	6	9	4.4	1.0	11	89.2		.5	11.0	9.0		0	30.000	320	1.8	6	32.400	548
23	12/09/2002	KCI PHPA	1.797	22	1.2	61	19	28	8	12	4.6	1.0	11	89.0		.5	11.0	9.5		0	30.000	280	1.6	6	32.400	12.848
24	13/09/2002	KCI PHPA	2.043	54	1.2	56	22	26	7	12	4.4	1.0	12	88.0		.5	11.0	9.5		0	31.400	240	1.8	7	37.800	18.351
25	14/09/2002	KCI PHPA	2.118	54	1.2	54	20	28	7	11	5.2	1.0	10	89.6		.5	10.0	9.0		0	32.500	400	1.9	8	40.500	5.652
26	15/09/2002	KCI PHPA	2.118	57	1.2	57	21	25	7	11	4.6	1.0	11	89.6		.5	11.0	9.0		0	33.000	300	1.9	8	40.500	
27	16/09/2002	KCI PHPA	2.118	0	1.2	62	22	28	7	14	6.0	1.0	10	89.6		.5	11.0	10.5	1	0	32,500	560	1.8	8	40.500	1.646

DRILLING FLUID SUMMARY

FOR: SANTOS Ltd

WELL: CASINO 1

Otway Basin

Offshore Victoria

Engineered by: Jasdeep Singh and Mike Docherty Prepared by: Jasdeep Singh, Mike Docherty and Mark Scheide Spud Date: 25th August 2002

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1. Summary of Operation	S
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- 2. Observations, Recommendations and Well Analysis
- 3. Interval Costs
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- 5. Fluid Properties Summary
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Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

1. SUMMARY OF OPERATIONS

Casino 1 was an Offshore Victoria exploration well in Otway basin, drilled to evaluate the gas bearing Waare formation as a primary target. It lies 24 km WSW of the Minerva gas field and 22 km North of LaBella gas field. The Casino prospect is situated towards the western limit of the productive Waare Sandstone.

HOLE SIZE	:	36"
MUD TYPE	:	Seawater Gel Sweeps
INTERVAL	:	95.5metres (Seabed) to 130metres
CASING	:	20" and 30"

The Ocean Bounty was towed on to location and anchors run on 25th August 2002. Field analysis of the initial Drill Water supply showed the following results:

pH:	8.0	Chlorides:	900 mg/l
Pf:	0.1	Total Hardness:	240 mg/l
Mf:	0.15		_

After the primary anchors were run, the tanks were filled with water and mud preparation commenced. 230 barrels of 1.9 ppb Guar Gum and 970 barrels of 25 ppb prehydrated bentonite (Trugel 13A) were initially mixed. This was flocculated with lime prior to use. A further 330 barrels of 33 ppb prehydrated bentonite were mixed for the mud to be spotted in the hole.

The well was spudded at 1830 hours on the 25^{th} August 2002 and a total of 6 x 50 barrels of sweep mud was used to clean the hole to a TD of 130 metres. The unflocculated mud was then spotted in the hole and the string pulled out.

After running the 20" x 30" casing, the cement stinger was made up and installed in the PGB. The string was run in the hole to bottom without problems. The rig was then moved to be central over the hole. During this time, the mud pits were filled to full capacity with 25 ppb prehydrated bentonite.

After circulating 130 barrels of seawater with good returns, the cement job was then conducted displacing the slurry with seawater. After waiting on cement, the 30" running tool was released and laid out. This was laid down along with the cement stinger and 36" bottom hole assembly.

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

HOLE SIZE	: 17 ½"
MUD TYPE	: Seawater Gel / Guar Gum Sweeps
INTERVAL	: 130 - 752 metres
CASING	: 13 3/8" @ 743 metres

The 17 $\frac{1}{2}$ " drill bit and bottom hole assembly were made up and run in to 112 metres. The cement was drilled out using seawater with two 30 barrel Guar Gum sweeps and a 50 barrel gel sweep to aid hole cleaning.

While drilling 17 $\frac{1}{2}$ " hole with seawater, sweeps were pumped, three 50 barrel lots each stand drilled. Two Guar Gum sweeps at 2 ppb were pumped at 10 metres and 20 metres, while the flocculated gel sweep was spotted around the collars for the connection.

The Guar Gum sweep mud typically had a funnel viscosity of 65 seconds/quart and a yield point of 25 $lb/100ft^2$, while the flocculated prehydrated bentonite sweeps had a funnel viscosity in excess of 100 seconds/quart, and a yield point of 55 $lb/100ft^2$.

The bentonite mud preparation was 0.2 ppb Caustic Soda, 25 ppg Bentonite and then flocculated with 0.5 ppb Lime. Mud to be left in the casing was mixed at 35 ppb Bentonite and not flocculated.

At casing point of 752 metres the hole was swept with 150 barrels of flocculated bentonite mud and then the hole was put back on seawater. The hole was then displaced with 750 barrels of unflocculated bentonite mud, filling the string with water. The string was pulled out of the hole, working through tight hole between 628 - 425 metres.

The floor was rigged up, and 13 3/8" casing run in the hole, filling each joint with prehydrated bentonite. The casing was run without problems and displaced with 460 barrels of prehydrated bentonite.

The cement job was conducted and the slurry displaced with seawater. The casing was pressure tested to 3000 psi and the float checked. The cement head and wellhead running tool were laid out, and the floor prepared to run BOPs.

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

HOLE SIZE	: 12.25"
MUD TYPE	: KCl Polymer Glycol
INTERVAL	: 752 metres to 2118 metres
CASING	: P & A

During the running of casing and running of the BOPs, the new mud was mixed up and sheared. A total of 1392 barrels was mixed with 0.1ppb Soda Ash, 0.3ppb Xanthan Gum, 0.8ppb PAC LV, 0.7ppb JK261, 20ppb KCl, and 3% Glycol in four active pits.

All four shakers were dressed with s84 mesh screens for initial drilling.

After shearing new mud for 8 hours, 120 barrels of it was transferred to two settling pits on the shaker deck. The sandtrap was left empty. 120 barrels of 1.5ppb Xanthan Gum mud was also mixed for a high viscosity sweep prior to conducting the LOT.

At 740 metres while drilling the cement and float using sea water, 20 barrel of this high viscosity sweep was pumped to clean hole. At 752 metres, just before drilling the shoe, 50 barrels of the same high viscosity sweep was pumped, followed by the new mud to displace the hole.

The system was closed in after dumping 30 barrels of contaminated returns. Then further 3 metres of formation were drilled with new mud with returns through sandtrap and settling pits. The hole was circulated one and half times the bottoms up volume before conducting LOT. A value of 17.3 ppg Mud Weight equivalent was obtained for the leak off test.

Drilling resumed after the LOT and during first two hours a total of 140 barrels was lost. It was initially suspected that dump valves on surface lines are leaking but by stepping through various possibilities, isolating tanks one by one, no cause was found.

It was concluded that these losses were in the lose sands from 760 to 900 metres. The volume was maintained by bleeding in premix. A 12 ppb Sandseal mix of 60 bbl was prepared and pumped downhole on the run to combat losses. No appreciable results were obtained from this Sandseal sweep on this occasion.

On speaking to the Santos Drilling Supervisor, it was evident that due to MWD tools in the string, any LCM sweeps have to be carefully regulated. 4 ppb of Sandseal was mixed in the premix and this was bled across into active system over 1.5 hours at 1030 metres.

As the drilling rate was slow at 1050 metres, the losses healed to less than 10 barrels per hour before pulling the bit at 1057 metres. On an average while drilling from casing shoe to 1000 metres the downhole losses were 60 barrels per hour.

After the bit trip drilling resumed, however due to plugged nozzles only 2 metres was drilled, before pulling out of the hole at 1059 metres.

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

Drilling resumed with the new bit. The desander and desilter were run however due to excessive underflow volume from the desander, this was shut down. The desilter was discharging about 12 barrels per hour. No centrifuge was made available for this well.

As drilling progressed at approximately 20 metres per hour, more silt was encountered and as a result PHPA concentration was bumped up with direct addition of 0.2 ppb JK-261. Direct Glycol addition was also made at 0.15%.

Premix was added to maintain properties and volume at this stage and was made up of 1.2ppb Xanthan Gum, 6 –9% KCl, 3% Glycol, 1.5ppb PHPA. At this stage all screens was dressed with s115 mesh screens, with cuttings removal being fairly wet.

At 1400 metres, bottoms up was circulated one and a half times and the pipe slugged. The string was pulled out the hole to run a PDC bit. The hole was found to be in good condition.

On resuming drilling, the mud weight was increased from 8.9 ppg to 9.6 ppg with 54 ppb barite while drilling from 1450 metres to 1550 metres. The system was treated with PHPA and Glycol while waiting for mud to get homogenised with barite. The mud weight was further increased to 9.8 ppg with 13 ppb barite at 1650 m as per the program.

Due to excessive gas levels while drilling the top of the Waare Formation, it was necessary to circulate out the peaks. After two large peaks and gas levels remaining above 20% while drilling, the mud weight was raised with 8ppb barite to 10 ppg at 1790 metres, while the mud was treated with a premix containing 1.5ppb PAC-L, 6% KCl and 1.7 ppb JK-261.

Drilling was halted at 1797 metres due to the poor rate of penetration. While pulling out for bit change at 1797 metres, tight hole was encountered at 1610 metres to 1498 metres and it was necessary to back ream. It appeared that the hole was swabbing as gas levels recorded were up to 20%. It was decided to run back in and condition the well.

Once on bottom, the hole was circulated clean but due to gas levels reported, the mud weight was increased from 10 ppg to 10.3 ppg with 40 ppb barite as per the Santos Drilling Supervisors instruction over 2 hours.

The string was pumped out from 1797 metres to 1420 metres with no drag and from 1420 metres to 1074 metres with 20 - 50K overpull. It was established that the wellbore was stable and a heavy weight Baryte slug was pumped. The string was pulled out the hole, a new bit made up and run in to the shoe.

At this stage, 440 sacks of barite were left on board, which were not enough to raise system mud weight by 1 ppg. Due to rough weather conditions, the supply boat could not deliver barite to the rig and so drilling ahead was put on hold.

On running in the hole, at 1750 metres fill was encountered. The hole was circulated via the choke and degasser and at this time downhole losses were noticed to be 60 barrels per hour receding to 5 barrels per hour as mud weight was reduced from 10.5 to 10.3 ppg and pump rate reduced. 8 ppb Sandseal was introduced to the premix being added at this time.

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

With no significant gas reported, the hole was circulated back up through the riser and the mud weight reduced with the addition of premix as the fill was reamed out.

The desilter was run to increase solids removal, as there was a high level of solids entrainment due to the repeated wiping of the hole. Bottoms up was circulated and a flow check made. A heavy weight slug was pumped and the string pulled out the hole with only 10 - 15Klbs overpull recorded.

The string was hung off in the casing and the blind rams closed. The riser was displaced to seawater and operations put on hold, waiting on weather and preparing to hang off, with swells up to 12 metres.

During this time a 150 barrel premix with 12.5% KCl and 1.3 ppb PAC-LV was prepared and the sandtrap cleaned out. The desander and desilter were serviced with the limited parts available. The mud in the settling tanks was turned over periodically and the surface mud circulated. 0.1 ppb Caustic Soda and 0.2 ppb Idcide were added while circulating.

A 180 barrel premix was mixed with 1 ppb Xanthan Gum, 1.5 ppb PAC-L and 4% KCl, to have additional volume to treat the dehydrating mud in the hole. When the boat was able to unload barite, the premix was weighted up.

After eight days of waiting on weather, the LMPR was latched and the riser was displaced to mud, dumping 30 barrels of seawater contaminated mud. When opening the shear rams, 25 barrels of mud was required to fill the hole.

The hole was observed to be static and the drill string reconnected via the EHOT. Attempts to circulate were thwarted due to the string being plugged. The string was pulled out of the hole and the MWD tool laid out. The bit was full of cuttings.

On running in the hole the BOP test tool was picked up. At 663 metres the hole was circulated via the choke line, as weighted premix was bled in to build surface volume. The hole was flow checked and the circulation reverted to the riser. After performing the BOP tests and the necessary surface line tests, the BOP test tool was laid out and the drill string run in the hole to 950 metres.

The mud was circulated via the choke line and was found to be in reasonable shape. The drill string was then run in to 1717 metres where the hole was reamed with 10 - 20K drag. 27 metres of fill were encountered. The gel breaks were done regularly while running in.

The bottoms up mud from 1700 metres was assessed and an on the spot and decision was made to dump as the Funnel Viscosity was 80 seconds per quart. A total of 120 barrels were dumped and volume built up by weighted premix. 2% gas was also recorded from this sample of mud.

The mud was further conditioned with the addition of weighted premixes typically, 1.3 ppb Xanthan Gum, 1.3 ppb PAC-L, 6% KCl, 1.5 ppb JK261 and weighted with barite. The desilter was run intermittently, since the output was only 11.3 ppg at 15 gpm.

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

The primary property that had deteriorated during this extended stagnant time on bottom was the fluid loss and this was soon improved with the addition of premix. The level of PHPA was increased by 0.3 ppb to 1.8 ppb with direct JK261 addition and also via concentrated premixes.

The rate of penetration in the Waare Sandstone varied between 8 and 50 metres per hour Downhole losses were negligible. The degasser was run continuously from 1900 to 2000 metres to minimise aeration, when the desilter was not in use. The mud weight was maintained between 10.2 to 10.3 ppg as requested by the operator. The shakers were upgraded to 145 mesh at 1850 metres as fine sands were drilled.

At 2000 meters, the mud weight increased to 10.4 ppg, as fine solids became entrained in the mud. To control the increasing mud weight, the desilter was kicked in and unweighted premix was bled in. The desilter underflow was 12.3 ppg with discharge of 15 barrels per hour. The desander was also briefly run, but the discharge was only 0.3 ppg heavier than the mud, so it was turned off. The sand trap was dumped of settled solids and un-weighted premix continued to be added, at between 20 and 40 barrels per hour. The dilution successfully achieved a mud weight of 10.2 ppg.

Premix with 1.3 ppb PAC-L and 6% KCl was then added to kerb rising rheology. This was added at 25 barrels per hour over two complete circulations, to establish the yield point at 25 $- 30 \text{ lb}/100 \text{ft}^2$.

At 11:00 am on the 14th September 2002, a TD of 2118 metres was reached and bottoms up circulated.

On pulling out the hole, 60K overpull was experienced at 1805 metres and at 1760 metres. Otherwise the hole was in good shape.

POST TD.

The first logging run reached 2096 metres, indicating 22 metres of fill. The subsequent two runs were completed without hole problems. Deviation at TD was recorded as 13°.

The cement stinger was run in the hole and a plug and abandon program followed. High viscosity pills were spotted below the cement plugs. The mud to be left in the casing was treated with 0.5 ppb Caustic Soda, and 0.4 ppb Idcide.

After displacing the riser to sea water, all the tanks were dumped and cleaned. The unlatching of the BOPs was delayed by rough weather.

2. OBSERVATIONS, RECOMMENDATIONS AND WELL ANALYSIS

Casino 1 was drilled to 2118 metres for a total cost of \$238,546. A further \$1,925 was spent on post TD operations.

A total of \$43,764 was spent on weighting up the mud, on Barite.

HOLE SIZE	INTERVAL	METERAGE	COST	COST/M
36"	95 - 130 metres	35 metres	\$ 4,330	127
17 ½ "	130 – 752 metres	622 metres	\$ 29,693	48
12 ¼ "	743 – 2118 metres	1375 metres	\$ 204,523	149
Г	COTAL DRILLING CO	\$ 238,546	118	
POST TD COSTS (logging / completion)			\$ 1,925	
TOTAL WELL COST			\$240,471	

36" Conductor Hole

There were no problems associated with this section, which was drilled for a mud cost of \$4,330 or \$127/metre. Seawater was not as effective as a flocculant and as a result, 0.5 ppb lime was used to good effect to attain Funnel Viscosity of 100 sec/quart.

17 ¹/₂" Surface Hole

The 17 $\frac{1}{2}$ " section was drilled for a mud cost of \$29,693 or \$48/metre. There were no hole problems encountered when drilling the hole, however some tight hole was experienced while pulling out of the hole after reaching casing point. Casing was run without problems.

12 ¹/₄" Production Hole

This hole interval was drilled for a mud cost of \$ 204,523, or 149 \$/metre.

The initial drilling out of the shoe was plagued with downhole losses, which did gradually reduce. It would seem likely that the leak off test may have fractured the formation from discussions with the Santos Drilling Supervisor.

Poor hole conditions prevailed when tripping out of the hole from 1797 metres through the top of the Belfast Formation. It was necessary to pump out and back ream through this section. On repeated trips past this section, the hole conditions did gradually improve, however fill was encountered each time.

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

Extended periods of static conditions due to poor weather and high swells resulted in the mud in the hole being untreated for eight days. Despite this, the mud was in relatively good shape. The first circulation of mud in the casing required weighting up due to barite sag. The mud at the bottom of the hole was showing signs of dehydration and degradation and 120 barrels was dumped when bottoms up was circulated. The mud was easily and quickly brought back in to shape, primarily improving the fluid loss.

Some tight hole was experienced at 1805 and 1760 metres through sands of the Waare Formation when pulling the drill string out of the hole for logging. Perhaps a short wiper trip through this section of new hole would have rectified this and resulted in less fill on bottom for logging.

Solids Control and Mixing Equipment

The rig had a Desander with 3 cones and a Desilter with 20 cones installed on the mud system.

The desander was only used briefly in 12.25" hole, as the underflow discharge rate was excessive at 18 barrels per hour. During the shut down period the one cone was rebuilt. The performance of this unit was still very poor.

The desilter was run selectively through the 12.25" hole section, with discharge rates prior to weighting up in the order of 12 barrels per hour, with 12.2 ppg mud. The cones were replaced as the availability of spare parts dictated. Its performance on weighted mud fluctuated between 12 and 15 ppg, but was always extravagant on mud losses.

The shale shakers were gradually dressed up from s84 mesh screens to s115 mesh to 120 mesh. They were changed to 145 mesh at 1850 m. These s145 screens lasted for 24 hours before they had to be replaced.

The s115 screens that were used were made by Varco and were of poor quality. There was a considerable reduction in open area, and the wear happened quickly. They were shorter than the Thule screens and as a result some cuttings returned to the mud. They appear to have been left on the rig by a previous operator and as such, do not appear in the screen inventory.

There was no Centrifuge on the rig.

The shear hopper was satisfactory at shearing up the PHPA, however care had to be made not to overshear the Xanthan Gum and thus reduce its hole cleaning ability.

Mud Weight

The Gel sweeps pumped during surface hole drilling and spotted in the hole prior to pull out for casings, were not weighted with Barite and the hole stability was not compromised at any stage.

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

The mud weight was raised ahead of the Belfast Formation as per the program, to 9.8 ppg over three circulations. Subsequent gas level in the mud while drilling the Waare Formation resulted in the mud weight being further raised with barite to 10 ppg and then 10.3 ppg.

After waiting on weather, the section drilled to TD required a dump and dilute regime to keep the mud weight in the range 10.2 - 10.3 ppg.

The solids control equipment on this rig were in need of an overhaul and as a result higher dilution rates than programmed were required to maintain the desired mud weight.

Mud Losses

During surface hole drilling with the returns dumped on bottom, no loss circulation material was used in sweeps as good returns were seen as monitored with ROV. However, contingency stock of Quickseal was kept on the rig.

In the 12¹/₄ inch section of hole, massive downhole losses were encountered below casing shoe to 1050 metres of the order of 70 barrels per hour over a 7 hour drilling period. A 50 barrel Sandseal sweep loaded with 12 ppb was pumped and then 4 ppb was mixed in the premix and bled into system in an effort to combat these losses.

It was observed that there were no static losses and dynamic losses were exacerbated at a pump discharge of 600 gpm and to a lesser extent below this. Mud weight was kept low at 8.7-8.8 ppg to minimise effective ECD and thus downhole losses during this interval.

Downhole losses recurred briefly when circulating out gas via the choke, when the mud weight was 10.5 ppg and pump rate was 600 gpm. Sandseal was bled in at 8 ppb, and as the mud weight was reduced to 10.4 ppg and the strokes reduced, the losses abated.

Mud Properties

Mud properties were kept closely in line with the programmed parameters.

At 1760 metres the PHPA concentration was raised to over 1.5 ppb as requested by the operator, due to receding levels of Glycol and the sticky nature of the cuttings. However, rheology levels at that time indicated that PHPA levels were in excess.

Fluid loss properties were able to be kept in close control primarily with PAC-LV, but assisted with the presence of Glycol in the circulating system. Concentration levels of these products can be seen in the key polymer concentration section of this recap.

Initial rheology had to be built with Xanthan Gum, thereafter with higher solids content of the mud as a result of barite, drill solids incorporation and with PHPA concentrations up over 1.5 ppb, there was minimal requirement for further additions of Xanthan Gum.

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

Hole Gauge

The calliper log indicated a 31% by volume overgauge hole. This averaged out to 14". Factors affecting hole enlargement are strongly related to the formations being drilled, however the hydraulics and related rheology also must be considered in future planning if improved hole gauge is required.

Program Analysis

The programmed quantities of mud chemicals were predicted lean for the 36" and $17 \frac{1}{2}$ " hole sections with the levels of surface volume required underestimated.

The 12 ¹/₄" hole was also predicted very lean as well, with the dilution volumes required to maintain the desired weight underestimated. The ability of the solids control equipment to efficiently remove drill solids was not of the highest standard and as such the cost of maintaining the desired properties were elevated.

There is a need to have a good yield point right from the outset of this interval and not rely on sweeps to build rheology during production hole drilling. This will be factored into future programs in this region.

The loss of 600 - 700 barrels early in this interval, the amount of time waiting on weather and continual dilution required to maintain the desired mud weight with the less than efficient solids control equipment, created a shortfall in product, namely Glycol, also giving rise to extra cost.

Due to the nature of the location of this well and not having a continued drilling program exit Portland, stock was ordered based upon the program plus a minimum of 20% excess for this well. Due to the above added consumption requirements; the contingent level of Glycol available within Australia was not able to be met.

The non usage of Glycol in the sand bearing reservoir formations was not at the detriment to the hole with the levels of Glycol maintained throughout the whole of the Belfast formation at the programmed spec.

CASINO 1	COI	NDUCTOR	SUR	RFACE HOLE	PF	MAIN ODUCTION HOLE	CHE F	CEMENT EMICALS & POST TD	TOTAL WELL
PROGRAMMED	\$	3,705.00	\$	22,047.00	\$	114,771.00			\$ 140,524.00
ACTUAL	\$	4,330.00	\$	29,693.00	\$	204,523.00	\$	1,925.00	\$ 240,471.00
%VARIANCE		16.9%		34.7%		78.2%			71.1%

Operator	:	SANTOS
Well	:	Casino 1
Rig	:	Ocean Bounty
Spud	:	25 th August 2002

Safety & Environment

A thorough and serious approach to safety exists on the Ocean Bounty. This is strongly backed up with the proactive "Stop Card" regime. IDFS mud engineers actively participated in improving safety on the rig through Stop Card system.

As the rig crew was new to IDFS products, they were told about the safe handling of various products at every stage. MSDS were made available and Safe Handling of chemical reference charts was displayed.

All toxic laboratory reagents were collected in a separate container after each testing and transported to shore to dispose in an appropriate manner as per company's corporate environment policy.

Features of the IDFS chemical packaging were highlighted in so much that there was no metal strapping, which is a regular cause of hand injuries. The cardboard and shrink-wrap packaging enabled the sack room to stay clean and tidy, minimise damaged stock and chemical spills.

3. Interval Costs

Casino 1

			3	6" Conducto	r Hole	1	7 1/2" Surface	e Hole	12 1	/4" Main Produc	tion Hole		Post TD		Т	otal Well Consu	mption
		Interval :	S	Seabed - 130	metres		130 - 752 me	tres		752 - 2118 met	res					2118 metres	
Product	Cost	Unit Size	Used	Cost	%Cost	Used	Cost	%Cost	Used	Cost	%Cost	Used	Cost	%Cost	Used	Cost	%Cost
Barite Bulk	\$ 14.7	7 100 lb							2963	\$43,763.51	21.40%				2963	\$43,763.51	18.2%
Caustic Soda	\$ 36.6	0 55 lb	3	\$109.80	2.5%	11	\$402.60	1.4%	24	\$878.40	0.43%	2	\$73.20	3.8%	40	\$1,464.00	0.6%
Citric Acid	\$ 51.0	6 55 lb							2	\$102.12	0.05%				2	\$102.12	0.0%
Defoamer-A	\$ 245.3	3 55 lb							4	\$981.32	0.48%				4	\$981.32	0.4%
Glychem MC	\$ 590.0	0 440 lb							80	\$47,200.00	23.08%				80	\$47,200.00	19.6%
Guar Gum	\$ 125.0	0 55 lb	8	\$1,000.00	23.1%	72	\$9,000.00	30.3%							80	\$10,000.00	4.2%
Idcide-20	\$ 103.0	0 55 lb							53	\$5,459.00	2.67%	2	\$206.00	10.7%	55	\$5,665.00	2.4%
JK-261	\$ 109.7	0 55 lb							137	\$15,028.90	7.35%				137	\$15,028.90	6.2%
KCl BB Fine	\$ 650.0	0 2240 lb							50	\$32,500.00	15.89%				50	\$32,500.00	13.5%
Lime	\$ 7.8	0 44 lb	9	\$70.20	1.6%	19	\$148.20	0.5%							28	\$218.40	0.1%
PAC-L	\$ 168.0	0 55 lb							111	\$18,648.00	9.12%				111	\$18,648.00	7.8%
Sandseal Fine	\$ 98.0	0 55 lb							58	\$5,684.00	2.78%				58	\$5,684.00	2.4%
Soda Ash	\$ 13.5	6 55 lb							2	\$27.12	0.01%				2	\$27.12	0.0%
Sodium Sulphite	\$ 25.0	2 55 lb							37	\$925.74	0.45%				37	\$925.74	0.4%
Trugel-13A Bulk	\$ 17.5	0 100 lb	180	\$3,150.00	72.7%	1151	\$20,142.50	67.8%							1331	\$23,292.50	9.7%
Xanthan Gum P	\$ 411.4	2 55 lb							81	\$33,325.02	16.29%	4	\$1,645.68	85.5%	85	\$34,970.70	14.5%
Totals		Totals :		\$4,330.00	100.0%		\$29,693.30	100.0%		\$204,523.13	100.0%		\$1,924.88	100.0%		\$240,471.31	100.0%
Costings	Co	st per metre :		\$127.35			\$47.74			\$148.74						\$118.40	

4. MUD MATERIALS RECONCILIATION

Previous Well :

Well : Casino 1

Transferred to : Casino 2

PRODUCT	SIZE / Ib	UNIT	TRANSFER FROM PREVIOUS WELL	RETURNED STORES	STORES ISSUE	STORES ISSUE VALUE	TRANSFERRED	TOTAL ISSUED	TOTAL ISSUED VALUE	DAMAGED	DAMAGED VALUE	TOTAL USED	TOTAL USED VALUE	TRANSFER QUANTITY	UNIT	[PRICE	Т	RANSFER VALUE
IDFS STOCK																		
Barite	55	Sack													s	8.25	\$	-
Barite Bulk	100	Bulk	2115		1000	\$14,770.00		5714	\$84,395.78			2963	\$43,763.51	2751	s	14.77	\$	40,632.27
Bicarb Soda	55	Sack			48	\$686.88		48	\$686.88					48	\$	14.31	\$	686.88
Caustic Soda	55	Drum			65			65				40	\$1,464.00	25	\$	36.60	\$	915.00
Citric Acid	55	Sack			40	\$2,042.40		40	\$2,042.40			2	\$102.12	38	s	51.06	\$	1,940.28
Cronox 2100	440	Drum													\$	795.00		
Defoamer-A	55	Drum			32	\$7,850.56		32	\$7,850.56			4	\$981.32	28	\$	245.33	\$	6,869.24
Enerseal C	55	Sack															\$	-
Enerseal F	55	Sack															\$	-
Frac Seal	25	Sack													s	52.38	\$	-
Glychem MC	440	Drum			96	\$56,640.00		96	\$56,640.00			80	\$47,200.00	16	\$	590.00	\$	9,440.00
Guar Gum	55	Sack			80			80	\$10,000.00			80	\$10,000.00		\$	125.00	\$	-
Idcide-20	55	Drum			64	\$6,592.00		64	\$6,592.00			55	\$5,665.00	9	s	103.00	\$	927.00
JK-261	55	Sack			180	\$19,746.00		180	\$19,746.00			137	\$15,028.90	43	s	109.70	\$	4,717.10
KCI BB Fine	2240	Bulk			60	\$39,000.00		60	\$39,000.00			50	\$32,500.00	10	s	650.00	\$	6,500.00
KCI Fine	55	Sack													\$	16.00	\$	-
Lime	44	Sack			108	\$842.40		108	\$842.40			28	\$218.40	80	\$	7.80	\$	624.00
Mag Oxide	55	Sack						50	\$1,475.00					50	s	29.50	\$	1,475.00
PAC-L	55	Sack			160	\$26,880.00		160	\$26,880.00			111	\$18,648.00	49	s	168.00	\$	8,232.00
PAC-R	55	Sack			40	\$6,720.00		40	\$6,720.00					40	s	168.00	\$	6,720.00
PipeFree (W)	440	Drum			4	\$3,980.00		4	\$3,980.00					4	s	995.00	\$	3,980.00
Quik Seal	55	Sack			223	\$10,481.00		223	\$10,481.00					223	s	47.00	\$	10,481.00
Salt	55	Sack															\$	-
Sandseal Fine	55	Sack			120	\$11,760.00		120	\$11,760.00			58	\$5,684.00	62	s	98.00	\$	6,076.00
SAPP	55	Sack													s	53.18	\$	-
Small Torque	200	Sack															\$	-
Soda Ash	55	Sack			48	\$650.88		48	\$650.88			2	\$27.12	46	s	13.56	\$	623.76
Sodium Sulphite	55	Sack			80	\$2,001.60		80	\$2,001.60			37	\$925.74	43	s	25.02	\$	1,075.86
Sulscav-50	450	Drum						4	\$5,792.00					4	\$	1,448.00	\$	5,792.00
Trugel-13A	55	Sack													s	10.89	\$	-
Trugel-13A Bulk	100	Bulk	626		1375	\$24,062.50		2001	\$35,017.50			1331	\$23,292.50	670	\$	17.50	\$	11,725.00
Xanthan Gum P	55	Sack			140	\$57,598.80		140	\$57,598.80			85	\$34,970.70	55	s	411.42	\$	22,628.10
															T			
		1			1										1			
								1		1					1			
		1		1	1					1					1			
TOTAL VALUES						\$ 292,305.02			\$ 390,152.80		\$-		\$ 240,471.31				\$	152,060.49

5. Fluid Properties Summary

Casino 1

										Gels			Fil	ltrate			Solid	5											
Date	Day	Mud Type	Daily Cost	Temp.	Depth	Weight	Vis	PV	/P 10	sec 10 r	nin Al	PI	Cake	HPHT	@Temp	Solids	Water Oi	Sand	MBT	pН	Pm	Pf	Mf	Cl-	Ca++	$SO_3^{=}$	K ⁺	KCl	PHPA
25-Aug-02	1	Gel Sweeps	\$11,243		93	8.6	100	15	70 1	5 20	0 -	-	-	-	-	1.8	98.2	Nil	25	12		0.35	0.45	2400	60	-			
		Guar Gum			93	8.55	65	13	30 4	4 7	'					0.0	100.0	Nil		8		0.1	0.3	24200	3200				1
		Gel Sweeps			130	8.8	100	18	34 2	3 2	8 -	-	-	-	-	3.4	96.6	Nil	30	10		0.26	0.47	1600	80	-			1
26-Aug-02	2	Gel Sweeps	\$4,754		130	8.8	135	17	57 4	2 4:	5					3.4	96.6	Nil	25	11.5		0.6	0.8	1600	40				l l
		Guar Gum			130	8.55	60	15	23	3 3						0.3	99.7	Nil		7.5		0.15	0.35	21000	3600				l l
		Gel Sweeps			200	8.8	130	18	54 4	0 44	4					3.4	96.6	Nil	25	11.5		0.6	0.8	1500	60				l I
27-Aug-02	3	Gel Sweeps	\$11,388		356	8.8	110	16	53 3	7 40	0					3.4	96.6	Nil	25	12		0.65	0.8	1600	40				l I
		Guar Gum			556	8.55	67	15	35 7	7 5	;					0.1	99.9	Nil		8		0.15	0.3	24000	3400				l I
		Gel Sweeps			675	8.8	90	12	51 1	5 19	9					3.4	96.6	Nil	25	12		0.6	0.9	1700	60				l l
28-Aug-02	4	Gel Sweeps	\$26,947		752	8.8	120	13	32 2	2 20	6					3.4	96.6	Nil	33	10		0.4	0.65	1600	60				l I
		Gel Sweeps			752	8.8	85	10	41 1	0 12	2					3.4	96.6	Nil	22.5	12		0.58	1.58	2300	60				l l
		KCl/PHPA/Glycol			752	8.65	38	7	2	l 1						0.6	99.4	Nil		10		0.24	0.88	28000	720		37800	7	0.7
29-Aug-02	5	KCl/PHPA/Glycol	\$17,508		752	8.65	40	7	7 2	2 2	2					0.9	99.1	Nil		9.5		0.14	0.8	23000	460		37800	7	0.65
		KCl/PHPA/Glycol			752	8.65	39	7	8 2	2 2	2					0.9	99.1	Nil		9.5		0.15	0.8	23000	480		40500	7.5	0.65
		KCl/PHPA/Glycol			752	8.65	40	7	7 2	2 2	2					0.9	99.1	Nil		9.5		0.15	0.8	23000	440		37800	7	0.65
30-Aug-02	6	KCl/PHPA/Glycol	\$26,907		752	8.65	39	6	8 2	2 2						0.8	99.2	Nil		9.5		0.15	0.75	23500	360		40500	7.5	0.65
		KCl/PHPA/Glycol			755	8.7	36	6	5	l 1						1.0	99.0	Nil		9.5		0.2	0.8	27000	800		40500	7.5	0.65
		KCl/PHPA/Glycol			947	8.8	40	7	15 4	4 4	6.	.5	1			1.6	98.4	2	2.5	10		0.1	0.4	29000	640		37800	7	1.06
31-Aug-02	7	KCl/PHPA/Glycol	\$16,006		1052	8.8	39	8	15	3 4	6	5	1			1.7	98.3	1.75	2.5	9.5		0.15	0.4	28500	400		37800	7	1.16
		KCl/PHPA/Glycol			1054	8.7	41	9	16	3 4	5.	.5	1	22	250	1.0	99.0	1.5	2.5	9.5		0.1	0.4	27500	440		37800	7	0.96
		KCl/PHPA/Glycol			1059	8.8	48	12	21 (5 10	0 6.	.2	1:2	22	250	1.7	98.3	0.5	2.5	8.5		0.05	0.32	28000	360	100	37800	7	0.89
1-Sep-02	8	KCl/PHPA/Glycol	\$16,805		1129	8.8	44	10	19 :	5 9	6.	.4	1			1.7	98.3	0.75	5	9		0.1	0.55	28000	360	80	37800	7	1.05
		KCl/PHPA/Glycol		115	1260	8.8	47	10	20 8	3 12	2 6.	.4	1:2	22	250	1.7	98.3	0.5	4	9.5		0.15	0.65	28000	400	80	37800	7	1.15
		KCl/PHPA/Glycol		120	1360	8.85	48	11	23	3 14	4 6.	.2	1:2	20	250	2.0	98.0	TR	7	9.5		0.18	0.68	29000	280	80	32400	6	1.19
2-Sep-02	9	KCl/PHPA/Glycol	\$30,289	120	1400	8.9	48	11	25		5 6	5	1:2	21	250	2.4	97.6	TR	6	9.5		0.15	0.7	29500	320	80	35100	6.5	1.2
		KCI/PHPA/Glycol		120	1450	9.3	52	16	28 1		/ 6.	.2	1:2	22	250	5.5	94.5	IR	7	9.5		0.12	0.52	28500	400	80	32400	6	1.3
2.0.02	10	KCl/PHPA/Glycol	610.105	130	1672	9.85	54	18	32 1	1 19	9 4.	.5	1:2	17	250	7.0	93.0	TR	11	9.5		0.15	0.7	29000	320	100	32400	6	1.77
3-Sep-02	10	KCI/PHPA/Glycol	\$18,195	130	1791	10.05	58	17	33 1			-	1:2	17	250	8.0	92.0	2	12	9		0.1	0.65	30000	300	80	32400	6	1.7
		KCI/PHPA/Glycol		130	1/9/	10	55	18	29 9			2	1:2	16	250	8.0	92.0	1.5	12	9		0.1	0.65	29000	320	80	27000	5	1.78
4.8 02	11	KCI/PHPA/Glycol	¢0.276	110	1750	10.3	64	21	53 1	2 13	8 4.	.3	1:2	16	250	9.0	91.0	1	12	9.5		0.15	0.7	31200	300	80	32400	6	1./8
4-Sep-02	11	KCI/PHPA/Glycol	\$9,270	110	1791	10.5	08 59	19	22 1	2 20	0 2	5	1:2	10	250	10.0	89.0	1.5	12.5	9		0.1	0.8	20000	320	60	35100	0.5 6.5	1.8
		KCI/PHPA/Glycol		100	1707	10.5	50	22	122 1	1 19	0 J	6	1.2	16	250	10.0	90.0	1	12.5	9		0.12	0.8	30000	280	40	33100	6.5	1.0
5 San 02	12	KCI/PHPA/Glycol	\$1.050	100	1797	10.3	68	23	21 92	2 1'	7 4	8	1.5	10	250	10.0	90.0	1	12.5	9.5		0.12	0.75	20500	200	20	32400	6	1.0
5-50p-02	12	KCI/DHDA/Ghyaol	\$1,750		1707	10.5	70	20) 19	, .	6	1.2	19	250	11.6	88.4	1	12.5	8 5		0.15	0.75	21000	320	20	32400	6	1.0
		KCI/PHPA/Glycol			1707	10.35	71	20	0 1	0 19	8 1	8	1.3	10	250	11.0	88.4	1	11	8.5		0.06	0.6	31000	360		32400	6	1.0
6-Sep-02	13	KCI/PHPA/Glycol	\$672		1797	10.35	73	20	29 2	2 10	6 4	6	1.3	19	250	11.0	89.0	1	12	8.5		0.00	0.75	30000	280		32400	6	1.0
0 0 0 p 02	15	KCl/PHPA/Glycol	00/2		1797	10.35	72	20	9 0		5 4	8	1.3	20	250	11.2	88.8	1	12	8.5		0.05	0.7	30000	300		32400	6	1.8
		KCl/PHPA/Glycol			1797	10.35	72	19	29) 1	5 4	7	1.3	20	250	11.2	88.8	1	12	8.5		0.05	0.7	29800	300		32400	6	1.8
7-Sep-02	14	KCl/PHPA/Glycol			1797	10.35	73	20	29	3 1	5 4	.8	1:3	21	250	11.0	89.0	1	12.5	8.5		0.1	0.85	30500	280		32400	6	1.8
1		KCl/PHPA/Glycol			1797	10.35	70	20	28 8	3 10	6 4.	.6	1:3	21	250	11.2	88.8	1	13	8.5		0.1	0.85	30000	300		32400	6	1.8
		KCl/PHPA/Glycol			1797	10.35	70	19	29 8	3 1:	5 4.	.4	1:3	21	250	11.2	88.8	0.5	12.5	8.5		0.1	0.85	30000	300		32400	6	1.8
8-Sep-02	15	KCl/PHPA/Glycol	\$3,789		1797	10.35	67	18	28 7	7 14	4 4.	.4	1:3	20	250	11.0	89.0	0.75	12.5	8.5		0.1	0.9	29500	280		32400	6	1.8
		KCl/PHPA/Glycol			1797	10.25	64	18	27 7	7 14	4 4.	.4	1:3	21	250	10.5	89.5	0.5	12.5	9		0.15	0.95	30000	280		32400	6	1.8
		KCl/PHPA/Glycol			1797	10.2	59	15	25 7	7 13	3 4.	.4	1:3	21	250	10.8	89.2	0.5	11	9		0.1	0.7	31000	320		32400	6	1.8
9-Sep-02	16	KCl/PHPA/Glycol			1797	10.3	60	17	25 7	7 13	3 4.	.4	1:3	21	250	11.0	89.0	0.5	12	9		0.1	0.7	30500	300		32400	6	1.8
		KCl/PHPA/Glycol			1797	10.25	59	15	26 7	7 13	3 4.	.4	1:3	22	250	10.5	89.5	0.5	12	9		0.1	0.85	30000	280		32400	6	1.8
		KCl/PHPA/Glycol			1797	10.2	58	17	25 7	7 1.	3 4.	.2	1:3	22	250	10.5	89.5	0.5	12	9		0.1	0.8	30500	300		32400	6	1.8
10-Sep-02	17	KCl/PHPA/Glycol	\$5,418		1797	10.25	59	15	26	7 1.	3 4.	.4	1:3	22	250	10.5	89.5	0.5	12	9		0.1	0.85	30000	280		32400	6	1.8
		KCl/PHPA/Glycol			1797	10.25	59	15	25	7 13	3 4.	.6	1:3	22	250	10.5	89.5	0.5	12	9		0.1	0.85	30500	280		32400	6	1.8
		KCl/PHPA/Glycol		1	1797	10.25	57	15	24	7 13	3 4.	.6	1:3	22	250	10.6	89.4	0.5	12	9		0.2	0.9	30500	280		32400	6	1.8
11-Sep-02	18	KCl/PHPA/Glycol	\$549	1	1797	10.25	58	15	24 (5 13	3 4.	.6	1:3	22	250	10.5	89.5	0.5	12	9		0.2	1	29000	260		32400	6	1.8
		KCl/PHPA/Glycol		1	1797	10.25	55	14	24 (5 12	2 4.	.4	1:3	22	250	11.0	89.0	0.5	11	9		0.2	1	30000	280		32400	6	1.8
		KCl/PHPA/Glycol			1797	10.25	54	14	23 (5 12	2 4.	.4	1:3	22	250	10.8	89.2	0.5	11	9		0.2	1	30000	320		32400	6	1.8
12-Sep-02	19	KCl/PHPA/Glycol	\$12,848	70	1797	10	54	16	23 (5 12	2 7.	.2	1:3	28	250	9.5	90.5	0.5	12	9		0.2	1	30000	280		29700	5.5	1.8
		KCI/PHPA/Glycol		70	1797	10.1	52	16	26		3 4.	.8	1:3	24	250	10.0	90.0	0.5	11	9.5		0.25	1.2	28000	240		27000	5	1.8
12.0 02	20	KCI/PHPA/Glycol	610.251	110	1797	10.3	61	19	28		5 4.	.0	1:3	20	250	11.0	89.0	0.5	11	9.5		0.22	1	30000	280	(0)	32400	6	1.6
13-Sep-02	20	KCI/PHPA/Glycol	\$18,351	118	1811	10.25	60	17	28		5 4.	.δ	1:3	22	250	10.5	89.5	1	12	9.5		0.15	0.9	29000	320	60	32400	6	1.7

	1	KCl/PHPA/Glycol		118	1837	10.2	55	19	26	8	13	4.8	1:3	20	250	10.0	90.0	1	1.25	12	9.5		0.1	0.9	31000	320	60	35100	6.5	1.74
		KCl/PHPA/Glycol		130	2001	10.3	56	22	26	7	15	4.4	1:3	18	250	12.0	88.0		0.5	11	9.5		0.18	1	31400	240	100	37800	7	1.83
14-Sep-02	21	KCl/PHPA/Glycol	\$5,652	135	2065	10.4	59	19	29	7	14	4.6	1:3	18	250	12.0	88.0		0.5	12.5	9		0.1	0.85	31000	280	100	37800	7	1.9
		KCl/PHPA/Glycol		140	2118	10.2	54	17	26	7	12	4.8	1:3	18	250	10.5	89.5		0.5	12	9		0.1	0.9	31500	380	80	37800	7	1.8
		KCl/PHPA/Glycol			2118	10.2	54	20	28	7	13	5.2	1:3	18	250	10.4	89.6		0.5	10	9		0.13	0.85	32500	400	80	40500	7.5	1.86
15-Sep-02	22	KCl/PHPA/Glycol			2118	10.3	59	21	29	7	14	4.6	1:3	18	250	11.0	89.0		0.5	12	9		0.1	0.85	33000	400	80	40500	7.5	1.86
		KCl/PHPA/Glycol			2118	10.3	57	20	27	8	14	4.6	1:3	18	250	10.8	89.2		0.5	11	9		0.15	0.9	33000	300	80	40500	7.5	1.86
		KCl/PHPA/Glycol			2118	10.3	57	21	25	7	14	4.6	1:3	18	250	11.0	89.0		0.5	11	9		0.13	0.9	33000	300	80	40500	7.5	1.86
16-Sep-02	23	KCl/PHPA/Glycol	\$1,646		2118	10.3	58	22	24	7	13	4.8	1:3	20	250	11.0	89.0		0.5	12	9		0.1	0.9	32500	360		40500	7.5	1.8
		KCl/PHPA/Glycol		120	2118	10.25	57	20	27	7	14	4.6	1:3	20	250	10.8	89.2		0.5	11	8.5	0	0.02	0.6	33000	560		40500	7.5	1.8
		KCl/PHPA/Glycol			2118	10.2	62	22	28	7	16	6	1:3	22	250	10.4	89.6		0.5	11	10.5	1.4	0.3	1	32500	560		40500	7.5	1.8
17-Sep-02	24	KCl/PHPA/Glycol	\$279		2118	10.2	63	22	29	8	17	6	1:3	22	250	10.4	89.6		0.5	12	11	2	0.4	1.1	33000	640		40500	7.5	1.8
		KCl/PHPA/Glycol																												
		KCl/PHPA/Glycol			2118	10.2	66	24	28	9	18	6.6	1:3	24	250	10.5	89.5		0.5	12	11.5	2.6	0.7	1.4	33000	640		40500	7.5	1.8

6.1 Mud Volume Analysis

Casino 1

36" Conductor Hole

		Interval	Mtrs			Fluid B	uilt & Rec	ceived				Fluid D	isposed				Sumr	nary	
	Hole				Fresh	Sump	Direct			De-	De-	Centrif	Down-						
Date	Size	From	То	Mud Type	Premix	Premix	Recirc	Water	Other	sander	silter	uge	hole	Dumped	Other	Initial	Received	Disposed	Final
25-Aug-02	36.00	93	130	Gel Sweeps	2265								316				2265	316	1949
				Gel Sweeps															
				Gel Sweeps															
Sub Total				Gel Sweeps	2265								316				2265	316	

]	Dilution Factors	
	Interval Length	Dilution Vol	Dilution Factor
36" Conductor Hole	34 metres		

6.2 Mud Volume Analysis

Casino 1

17 1/2" Surface Hole

		Interval	Mtrs			Fluid B	uilt & Rec	eived				Fluid D	isposed				Sumi	nary	
	Hole				Fresh	Sump	Direct			De-	De-	Centrif	Down-						
Date	Size	From	То	Mud Type	Premix	Premix	Recirc	Water	Other	sander	silter	uge	hole	Dumped	Other	Initial	Received	Disposed	Final
26-Aug-02	17.50	130	220	Gel Sweeps	1050								318			1949	1050	318	2681
				Gel Sweeps															
				Gel Sweeps															
27-Aug-02	17.50	220	713	Gel Sweeps	2230								1821			2681	2230	1821	3090
				Gel Sweeps															
				Gel Sweeps															
28-Aug-02	12.25	713	752	Gel Sweeps				320					2710	380		3090	1102	3090	1102
				Gel Sweeps															
Sub Total				Gel Sweeps	3280			320					4849	380			4382	5229	

]	Dilution Factors	
	Interval Length	Dilution Vol	Dilution Factor
17 1/2" Surface Hole	622 metres	3332 bbls	5.36 bbls/metre
Santos Ltd.

6.3 Mud Volume Analysis

Casino 1

12 1/4" Main Production Hole

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		Interval	Mtrs			Fluid B	uilt & Re	ceived		D. D.		Fluid Dispose		Disposed			Sun	mary	
	Hole				Fresh	Sump	Direct			De-	De-	Centrif	Down-						
Date	Size	From	То	Mud Type	Premix	Premix	Recirc	Water	Other	sander	silter	uge	hole	Dumped	Other	Initial	Received	Disposed	Final
				KCl/PHPA/Glycol	782														
29-Aug-02	12.25	752	752	KCl/PHPA/Glycol	755			100					0			1102	855	0	1958
				KCl/PHPA/Glycol															
				KCI/PHPA/Glycol							-						100		
30-Aug-02	12.25	752	1016	KCI/PHPA/Glycol	480					14	7		582	450	130	1958	480	1183	1255
				KCl/PHPA/Glycol															
				KCI/PHPA/Glycol															
31-Aug-02	12.25	1016	1059	KCI/PHPA/Glycol	380						29		98		20	1255	380	147	1488
				KCI/PHPA/Glycol															
1.6 02	12.25	1050	1400	KCI/PHPA/Glycol	225					21	1.42		01		40	1400	225	204	1410
1-Sep-02	12.25	1039	1400	KCI/PHPA/Glycol	223					21	145		91		40	1488	225	294	1419
				KCI/PHPA/Glycol															
2 San 02	12.25	1400	1760	KCI/PHPA/Glycol	470						64		96		40	1410	470	100	1609
2-3ep-02	12.23	1400	1700	KCI/PHPA/Glycol	470						04		80		40	1419	470	190	1098
				KCI/PHPA/Glycol															
3-Sep-02	12.25	1760	1707	KCI/PHPA/Glycol	200						14		50		50	1608	200	123	1775
5-5ep-02	12.25	1700	1177	KCI/PHPA/Glycol	200						14		57		50	1070	200	125	1775
				KCI/PHPA/Glycol															
4-Sep-02	12.25	1797	1797	KCI/PHPA/Glycol	200						57		93		30	1775	200	180	1795
1 560 52	12.20			KCI/PHPA/Glycol	200						57		,,,		50		200	100	
				KCI/PHPA/Glycol															
5-Sep-02	12.25	1797	1797	KCI/PHPA/Glycol	150									70		1795	150	70	1875
p				KCI/PHPA/Glycol															
				KCl/PHPA/Glycol															
6-Sep-02	12.25	1797	1797	KCl/PHPA/Glycol												1875			1875
				KCl/PHPA/Glycol															
				KCl/PHPA/Glycol															
7-Sep-02	12.25	1797	1797	KCl/PHPA/Glycol												1875			1875
				KCl/PHPA/Glycol															
				KCl/PHPA/Glycol															
8-Sep-02	12.25	1797	1797	KCl/PHPA/Glycol	180											1875	180		2055
				KCl/PHPA/Glycol															
				KCl/PHPA/Glycol															
9-Sep-02	12.25	1797	1797	KCl/PHPA/Glycol												2055			2055
				KCl/PHPA/Glycol															
				KCl/PHPA/Glycol															
10-Sep-02	12.25	1797	1797	KCl/PHPA/Glycol				20							20	2055	20	20	2055
				KCl/PHPA/Glycol															
				KCI/PHPA/Glycol															
11-Sep-02	12.25	1797	1797	KCI/PHPA/Glycol									25	30		2055		55	2000
				KCI/PHPA/Glycol															
12 6 02	12.25	1707	1904	KCI/PHPA/Glycol	200						()		14	120	20	2000	200	210	1082
12-Sep-02	12.25	1/9/	1804	KCI/PHPA/GI/COI	200						04	1	14	120	20	2000	200	218	1982
1				KCI/PHPA/Glycol															
13-Sep-02	12.25	1804	2043	KCI/PHPA/Glycol	400						200	1	81		60	1982	400	341	2042
15-5cp=02	12.23	1004	2043	KCI/PHPA/Glycol	400						200	1	01		00	1762	400		2042
				KC1/PHPA/Glycol															
14-Sep-07	12.25	2043	2118	KCI/PHPA/Glycol	200					17	110		24	90	30	2042	200	271	1971
11 500 02	12.20	2015	2110	KCI/PHPA/Glycol	200					• *			2.	10	50	2012	200	2/1	
				KCl/PHPA/Glycol															
15-Sep-02	12.25	2118	2118	KCI/PHPA/Glycol									10			1971		10	1961
				KCl/PHPA/Glycol												.,,,,			
1	1			KCl/PHPA/Glycol								1	1		1				
16-Sep-02	12.25	2118	2118	KCl/PHPA/Glycol								1	6	120	1	1961		126	1835
				KCl/PHPA/Glycol								1			1	1			
1	1			KCl/PHPA/Glycol								1	1		1				
17-Sep-02	12.25	2118	2118	KCl/PHPA/Glycol					330			1	0	1066	1	1835	330	1066	1099
				KCl/PHPA/Glycol															
1	1			KCl/PHPA/Glycol								1	1		1				
Sub Total				KCI/PHPA/Glycol	4622			120	330	52	689	-	1166	1946	440	36074	4290	4293	36071

	1	Dilution Factors	
	Interval Length	Dilution Vol	Dilution Factor
12 1/4" Main Production Hole	1375 ft	2778 bbls	2.02 bbls/metre

7.1 Graphs



7.2 Graphs

Santos Ltd.

Casino 1



7.3 Graphs

Santos Ltd.

Casino #1















8. Bit Record

Oper	erator : Santos Ltd. Well : Casino 1					Contractor : DOGC				Supervise	ors :	Henr	y Fliı	1k &	Steve	Hodg	etts	Gavin Othen											
Spuc	l Date :	25-Aug-02		TD	Da	te :		14	l-Se	p-02	Surface	Csg :	30"& @1	& 20'' 30m	Intermed	iate Cs	g :	13 3 @7	3/8" 43m				Product	ion Csg					
																					A	nnular F	low Pro	perties					
Bit	Size									Reason	Depth	Depth		Cumm			Mud			Drill	O CRIT		Drill	O CRIT				HHP/	Impact
#	(in)	Make	Туре		J	lets	(1/32	2)		Pulled	Out	Drilled	Hours	Hours	Gauge	GPM	Wt	n	θ300	Pipe	dp	Flow	Collars	dc	Flow	Jet Vel	HHP	in ²	Force
1	26.00	Varel	DSJC	18	18	18				TD	130	35	1	1	In	863	8.45			5		Furbulen	9.5		Turbulent	370	525	1.0	1400
2	17.50	Smith	MGSSHC	20	20	20	18			TD	752	622	23.4	24.4	In	1005	8.45			5		Furbulen	9.5		Turbulent	275	337	1.4	1211
3	12.25	Hycalog	DSX195C,UW	12	12	12	12	12		PR	1057	305	14.8	39.2	1	603	8.8	0.4	22	5	859.4	Laminar	8.25	654	Laminar	349	340	2.9	961
4	12.25	Reed	EHP51HFKPRI	16	16	16				PP	1059	2	0.2	39.4	In	385	8.8	0.45	33	5	1039	Laminar	8.25	810	Laminar	209	78	0.7	367
5	12.25	Smith	10 GF	16	16	16				PR	1400	341	14.7	54.1	1	872	8.8	0.4	34	5	1128	Laminar	8.25	858	Turbulent	474	903	7.6	1883
6	12.25	Smith	MA74BPX	16	16	16	16	16	16	PR	1797	397	16.2	70.3	In	812	10	0.47	50	5	1222	Laminar	8.25	962	Laminar	221	207	1.8	928
7	12.25	Hughes	MXRO9D	16	16	16				TD	2118	321	33.2	103.5	In	804	10.2	0.54	48	5	1072	Laminar	8.25	876	Laminar	437	821	6.9	1856

HYDRAULICS

		Drilling Parameters							Fluid Properties						An	nular Pı (If La	ressure I minar)	LOSS	А	nnular Pı (If Tur	ressure Lo ·bulent)	DSS	Ann. Pressu	are losses				
																				psi				psi			psi	ppg
Date	Bbl/Stk @ 100%	%Eff	Total Stks	GPM	Hole Size	Casing ID	D/C size	D/P size	Depth m	TVD m	Casing Depth m	Length D/C m	Mw ppg	rpm 600	rpm 300	n	k	k (dynes)	LPr. Loss (dh-dc)	LPr loss (dcas-dc)	LPr loss (dh-dp)	LPr loss (dcas-dp)	Tu Pr loss (dh-dc)	Tu Pr loss (dcas-dc)	Tu pr loss (dh-dp)	Tu pr loss (dcas-dp)	Total Pressure loss	ECD
25-Aug-02	0.1049	97	202	863	36.00		9.5	5	130	130		50	8.5	2	1	0.999	0.010	0.01					0.00		0.00		0.00	8.45
26-Aug-02	0.1049	97	220	940	17.50	25.6	9.5	5	220	220	130.0	142	8.5	2	1	0.999	0.010	0.01					0.17	0.01		0.01	0.18	8.50
27-Aug-02	0.1049	97	236	1009	17.50	25.6	9.5	5	715	715	130.0	142	8.5	2	1	0.999	0.010	0.01					0.30		0.33	0.01	0.64	8.51
28-Aug-02	0.1049	97	236	1009	17.50	25.6	9.5	5	752	752	130.0	142	8.5	2	1	0.999	0.010	0.01					0.30		0.36	0.01	0.67	8.51
30-Aug-02	0.1049	97	141	603	12.25	12.42	8.25	5	1016	1016	743.0	155	8.8	29	22	0.398	9.378	9.38	6.30		1.77	10.62					18.69	8.91
31-Aug-02	0.1049	97	90	385	12.25	12.515	8	5	1059	1059	743.0	182	8.8	44	33	0.415	12.693	12.69	8.06		2.39	12.32					22.76	8.93
1-Sep-02	0.1049	97	200	855	12.25	12.515	8	5	1400	1400	743.0	182	8.9	45	34	0.404	13.975	13.97	11.75		12.45	18.14					42.34	9.03
2-Sep-02	0.1049	97	200	855	12.25	12.515	8	5	1760	1760	743.0	182	9.9	68	50	0.443	16.095	16.09	16.30		29.31	24.21					69.83	10.08
3-Sep-02	0.1049	97	198	846	12.25	12.515	8	5	1797	1797	743.0	182	10.3	75	54	0.474	14.389	14.39	16.74		30.59	24.13					71.46	10.53
4-Sep-02	0.1049	97	178	761	12.25	12.515	8	5	1797	1797	743.0	182	10.3	78	55	0.504	12.148	12.15	15.43		27.44	21.59					64.46	10.46
12-Sep-02	0.104915	97	190	812	12.25	12.515	8	5	1804	1804	743.0	182	10.3	66	47	0.490	11.344	11.34	13.94		25.30	19.77					59.02	10.49
13-Sep-02	0.104915	97	191	816	12.25	12.515	8	5	2043	2041	743.0	182	10.3	70	48	0.544	8.248	8.25	13.10		28.78	17.60					59.47	10.47
14-Sep-02	0.104915	97	191	816	12.25	12.515	8	5	2118	2116	743.0	182	10.3	68	48	0.502	10.704	10.70	13.99		34.08	19.60					67.67	10.49

9. Solids Control Equipment

Casino 1

Date	Depth	Shaker 1 Shaker 4 Desander Screeps Hours Screeps Hours OF pag UF pag								Des	ilter			Centrifuge 1				Degasser					
	Mtrs	Screens	Hours	Screens	Hours	Cone Size	Cone Nos	Hours	OF ppg	UF ppg	GPM	Cone Size	Cone Nos	Hours	OF ppg	UF ppg	GPM	Туре	Hours	UF ppg	OF ppg	Туре	Hours
25-Aug-02	130						3					2	20										
26-Aug-02	220						3					2	20										
27-Aug-02	713	4 x 84		4 x 84			3					2	20										
28-Aug-02	752	4 x 84		4 x 84			3					2	20										
29-Aug-02	752	4 x 84		4 x 84			3					2	20										
30-Aug-02	1016	4 x 84	8	4 x 84	8		3	5	8.6	10.9	2	2	20	5	8.6	14.2	1						
31-Aug-02	1059	4 x 84	10	4 x 84			3					2	20	10	8.7	10.5	2						
1-Sep-02	1400	4 x 115	20	4 x 84	20	6	3	8	8.7	10.6	1.8	2	20	20	8.7	12.2	5						
2-Sep-02	1760	4 x 115	20	4 x 84	16	6	3					2	20	15	9.5	10.3	3						8
3-Sep-02	1797	4 x 115	12	4 x 84	2	6	3					2	20	2	10	13.4	5						12
4-Sep-02	1797	4 x 115	3	4 x 84		6	3					2	20	4	10.3	13.2	10						
5-Sep-02	1797	4 x 115		4 x 84		6	3					2	20										
6-Sep-02	1797	4 x 115		4 x 84		6	3					2	20										
7-Sep-02	1797	4 x 115		4 x 84		6	3					2	20										
8-Sep-02	1797	4 x 115		4 x 84		6	3					2	20										
9-Sep-02	1797	4 x 115		4 x 84		6	3					2	20										
10-Sep-02	1797	4 x 115		4 x 84		6	3					2	20										
11-Sep-02	1797	4 x 115		4 x 84		6	3					2	20										
12-Sep-02	1804	4 x 115	6	4 x 84		6	3					2	20	3	10.1	11.3	15						
13-Sep-02	2043	4 x 145	24	4 x 84		6	3					2	20	14	10.1	14.1	10						17
14-Sep-02	2118	4 x 145	14	4 x 84		6	3	3	10.3	10.7	4	2	20	7	10.2	12.9	11						3
15-Sep-02	2118	4 x 145	14	4 x 84		6	3					2	20										
16-Sep-02	2118	4 x 145	18	4 x 84		6	3					2	20										
17-Sep-02	2118	4 x 145	4	4 x 84		6	3					2	20										

Santos Ltd.

10. Hole Gauge

Casino 1

Hole Gauge by Formation Interpreted from Caliper Log Data.

Drilled Depth
Logging Depth
Bit Size
CSG Size
CSG ID
CSG Shoe (loggers)
OH Logged

2118 m
2102.2 m
12.25 ins.
13 3/8
12.515 ins.
734.1 m
1368.1 m

Calc OH Vol Actual OH Vol Volume Excess OH Excess % Average Hole Diam CSG Volume Total Volume

654 bbls
857 bbl
203 bbl
31.0%
14.02 ins.
366 bbls
1223 bbls

FORMATION	FROM	ТО	INTERVAL	BHVol	MAX OH DIAM	AVG DIAM
	Mtrs	Mtrs	Feet	Cu Ft	inches	inches
Nirranda Group	734.1	774	131	207.49		17.05
Mepunga	774	843	226	321.12		16.13
Wagerrip	843	1093	820	815.14		13.50
Pember Mudstone	1093	1125	105	91.748		12.66
Pebble Point	1125	1177	171	137.62		12.16
Sherbrook Group	1177	1522	1132	1132.7		13.55
Nullawarre	1522	1531	30	59.989		19.30
Belfast Formation	1531	1739	682	913.95		15.67
Waarre Formation	1739	1920	594	564.6		13.20
Eumeralla Formation	1920	2102.2	598	568.13		13.20
TD	2102.2					

11. KEY POLYMER CONCENTRATIONS

Santos Ltd.

Casino 1

						Usage				C	oncentratio	n ppb	
Date	Depth metres	Initial Vol bbls	Vol Addition bbls	PHPA(55 lb Sx)	PAC L (55 lb Sx)	Glychem (200 Lit Drums)	KCI (BB) 1 Tons	Xanthan Gum (55 Ib Sx)	PHPA	PAC L	Glychem %	KCI %	Xanthan Gum
28-Aug-02	752	0	1355	16	21	32	13		0.65	0.85	2.97%	6.03%	0.00
29-Aug-02	752	1355	62				1	8	0.62	0.82	2.84%	6.21%	0.31
30-Aug-02	1016	1415	460	20	15	11	7	19	1.06	1.06	2.88%	7.03%	0.79
31-Aug-02	1059	1260	350	2	6	1	1	20	0.89	1.03	2.33%	5.89%	1.30
1-Sep-02	1260	1494	225	13		16	3	5	1.19	0.90	3.20%	6.22%	1.29
2-Sep-02	1533	1432	470	30	18	8	4	4	1.77	1.19	2.94%	6.01%	1.09
3-Sep-02	1797	1718	200	6	6	12	2		1.75	1.24	3.42%	6.03%	0.98
4-Sep-02	1797	1796	200	8	6		2		1.80	1.28	3.08%	6.06%	0.88
5-Sep-02	1797	1816	150				3		1.66	1.19	2.84%	6.56%	0.81
6-Sep-02	1797	1896			4				1.66	1.30	2.84%	6.56%	0.81
7-Sep-02	1797	1896							1.66	1.30	2.84%	6.56%	0.81
8-Sep-02	1797	1875	180		6		1	4	1.52	1.35	2.59%	6.29%	0.85
9-Sep-02	1797	2055							1.52	1.35	2.59%	6.29%	0.85
10-Sep-02	1797	2035	20					1	1.50	1.33	2.57%	6.23%	0.87
11-Sep-02	1797	2055		4					1.61	1.33	2.57%	6.23%	0.87
12-Sep-02	1804	2000	200	5	6		4	11	1.59	1.36	2.33%	6.80%	1.06
13-Sep-02	1920	1982	400	22	17		6	6	1.83	1.53	1.94%	7.24%	1.02
14-Sep-02	2118	2042	200	8	6		2		1.86	1.54	1.77%	7.16%	0.93

12. FIELD ENGINEERING LOG

Santos Ltd.

Previous Well:	Beardie 1 with Esso
Rig Release date of:	
Mud Engineer(s) on Rig Move:	1st Engineer: Mike Docherty
	2nd Engineer: Jasdeep Singh
Dates of Rig Move:	23 Aug 02 , 24 Aug 02
Engineering Days on Rig Move:	4

Day #	Date	Engineer(s) Name
Day 1	25-Aug-02	Mike Docherty / Jasdeep Singh
Day 2	26-Aug-02	Mike Docherty / Jasdeep Singh
Day 3	27-Aug-02	Mike Docherty / Jasdeep Singh
Day 4	28-Aug-02	Mike Docherty / Jasdeep Singh
Day 5	29-Aug-02	Mike Docherty / Jasdeep Singh
Day 6	30-Aug-02	Mike Docherty / Jasdeep Singh
Day 7	31-Aug-02	Mike Docherty / Jasdeep Singh
Day 8	1-Sep-02	Mike Docherty / Jasdeep Singh
Day 9	2-Sep-02	Mike Docherty / Jasdeep Singh
Day 10	3-Sep-02	Mike Docherty / Jasdeep Singh
Day 11	4-Sep-02	Mike Docherty / Jasdeep Singh
Day 12	5-Sep-02	Mike Docherty / Jasdeep Singh
Day 13	6-Sep-02	Mike Docherty / Jasdeep Singh
Day 14	7-Sep-02	Mike Docherty / Jasdeep Singh
Day 15	8-Sep-02	Mike Docherty / Jasdeep Singh
Day 16	9-Sep-02	Mike Docherty / Jasdeep Singh
Day 17	10-Sep-02	Mike Docherty / Jasdeep Singh
Day 18	11-Sep-02	Mike Docherty / Jasdeep Singh
Day 19	12-Sep-02	Mike Docherty / Jasdeep Singh
Day 20	13-Sep-02	Mike Docherty / Jasdeep Singh
Day 21	14-Sep-02	Mike Docherty / Jasdeep Singh
Day 22	15-Sep-02	Mike Docherty / Jasdeep Singh
Day 23	16-Sep-02	Mike Docherty / Jasdeep Singh
Day 24	17-Sep-02	Mike Docherty / Jasdeep Singh
Day 25	18-Sep-02	Mike Docherty
Day 26	19-Sep-02	Mike Docherty
Day 27		
Day 28		
Day 29	Rig Release -	
	TOTAL:	

			IN	DEP	END	EN.	ТD	RILLI	NG	FLL	лD s	SER	VIC	ES	Re	eport #	1	Date			25-Aug-	02
	FS)				A Divisi	on of	Bheo	chem Pt	u l trl						R	ig # Bou	nty	Spuc	l Date		25-Aug-	02
	- E								y Liu N	A(CN 070	415	593		То	tal MD		9	3	to	1	30
	-			D	rillii	ngl	FΙ	ng F	(ep	ort					То	tal VD				to	1	30
OPERATO	DR			Sar	ntos Ltd	Ι.					CONT	RACT	OR		DO	GC						
REPORT	FOR			Her	nry Flin	k & St	eve H	lodgetts			REPO	RT FC	R		Ped	lro John	s & R	Ronni	e Saf	ar		
WELL NA	ME A	ND N	0								FIELD)			LOC	ATION			STAT	ΓE		
				Cas	sino 1							VIC -	P - 44		Otw	ay Basi	<u>1</u>		Victo	oria		
BHA BIT SIZE	BIT T Var	YPE el	18	JET SI2	ZE			ASING	ft	М		JME (B	BL) PITS		PUMP		CULAI	TION D	ATA CIRCULA	TION		
36	DS.	JC	22	22 22			SET @		m	1	41	1'	136	6	x	12 Inch	es		PRE	SS	923	psi
DRILL PIPE	s		Length	13	30 Mtrs		SURFACE SET @	1	ft m	TOTAL CI	RCULATING	VOL. 77		PUI Nation	MP MOD	EL P-160	97 8	ENCY	BOTT	roms P		7 min
DRILL PIPE	TYPE		Length				PROD. or		ft		IN STORAGE			E	BBL/STK		STK / N	1IN	SURF	ACE	0	4
SIZE 5 DRILL COLLAR SI	H\ IZE (")	N	Lenath	1	Mtrs	MUD TYPE	LNR Set (2	m		67	72		0).1018 BBL/MIN	3	202 GAL / N		TO I TOTAL	BIT CIRC.		min
8 1/4	91	/2			Mtrs		-		Gel Sw	eeps					20.56		863	6	TIM	ИE		5 _{min}
					м	JD PRO	PERTIE	ES			1		1			MU	D PRC	OPERT	Y SPEC	IFICA	TIONS	
SAMPL	E FR	DM							Р	it	Pi	t	P	it	Mud	Wt 1.03-	I.0 Gly	col			API	
TIME S	AMPL	E TA	KEN						17:	00	17:	00	20:	30	Vis	100	Yiel	d Point	t		рН	
FLOWL	INE T	EMP	ERA	TURE				⁰ F/ ⁰ C							KCI		PHF	PA exce	ess		Sulphites	;
TOTAL	MEAS	SURE	DD	ЕРТН (Т	MD)			Fee	t 9	3	93	3	13	30				OBSEF	RVATIO	NS		
WEIGH	Т						I	opg / SG	8.60	1.03	8.55	1.03	8.80	1.06	Drill \	Nater Analy	sis: Ha	rdness	240 pp	m; CI 9	000 ppm	
FUNNE	L VIS	cosi	TY(s	ec/qt) A	PI @		°C	°F	10	00	65	5	10	00	Pf/Mf	0.1/0.15, p	H 7.7					
RHEOL	.OGY	600 :	300	RPM		16	°C	60 ⁰ F	100	85	56	43	70	52	Sea	Water analy	sis: Ha	rdness:	3200 p	pm; C	24200 pp	m
RHEOL	.OGY	200 :	100	RPM		16	°C	60 ⁰ F	75	65	34	24	45	38	Pf/Mf	0.1/0.3, pH	8					
RHEOL	.OGY	6:3	RPI	И		16	°C	60 ⁰ F	35	25	10	8	23	22	Prepa	are 230 bbls	Guar	Gum at	2 ppb.			
PLASTI	IC VIS	cos	ITY	cP @		16	°C	60 ⁰ F	1	5	13	3	18	8	Prepa	are 1735 ba	rrels of	25 ppb	PHG a	and flo	c with lim	e.
YIELD F	ΡΟΙΝΤ	lb	/100	FT ²)		16	°C	60 ⁰ F	7	0	30)	34	4	Prep	are 300 barı	els of 3	33 ppb l	PHG to	fill hol	e at TD.	
GEL ST	RENO	STH	(lb/	100ft ²)	10 sec/10	0 min/3	0 min		15/1	8/20	4/6	/7	23/2	6/28								
API FIL	TRAT	Έ (cm ³ /	'30 min.))				-				-									
HPHT F	ILTR/	ATE (cm ³ /	'30 min.)		######	°C	- ⁰ F	-	•			-									
API : HI	PHT (Cake	32n	d in.)					-	•			-				OPE	RATIO	NS SUI	MMAR	Y	
PH									12	.0	8.0	0	10	.0	Run	anchors.						
ALKAL	INITY	MUD	(Pm)											Make	e up bit and	BHA.					
ALKAL	INITY	FILT	RAT	E (Pf/	Mf)				0.35	0.45	0.10	0.30	0.26	0.47	RIH.	Spud well a	t 1830	hrs.				
CHLOR	RIDE	(mg/	L)						24	00	242	00	16	00	Drill 3	36" hole to 3	4m sw	eeping	hole wi	th 6 x	50 bbl swe	eps.
TOTAL	HAR	DNES	S	(mg/L)					6	0	320	00	8	0	Spot	160 barrels	of unfle	occ gel	mud in	hole.		
SULPH	ITE	(mg/l	_)						-				-		POO	н						
PHPA	(Calo	: ppb)																			
GLYCO	L CO	NTEN	IT (%	6 V/V)											1							
K+ (m	ng/L)														1							
KCL ((% by	Wt.)																				
BARYT	ES (C	alc p	pb)													MUI	D ACC	OUNTI	NG (BB	BLS)		
METHY	LENE	BLU	E C/	APACITY	Y (ppb ed	quivale	nt)		25	.0			30	.0		FLUID BUIL	г	FLUI	D DISPC	DSED	SUM	MARY
SOLIDS	S CON	TEN	Г (%	by volu	me) Reto	ort			1.8	85	0.0	4	3.4	40	Prem	nix - Water	###	S.C.E			INITIAL	
LIQUID	CON	TENT	(%)	by volun	ne) Calc				98.	15	99.9	96	96.	60	Prem	nix - Recyc		Dump	ed		+ Rcd	2,265
CUTTIN	IGS O	IL RA		(% oil)											Drill	Water		Down	hole	316	- Lost	316
SAND (CONT	ENT (% b	y volum	e)				N	il	Ni	I	N	il	Othe	r		Other			Surface	1,808
					PR	ODUCT	USAG	E	•						REC	EIVED	###	LOST		316	FINAL	1,949
Product	T	Pric	e	Start	Received	Damage	llse	d d	Close		Cost				<u> </u>	SOLIDS	ONTR		UIPME	NT	_	
Cauctio Dad		\$ 3	6.60	33			236 8		25	\$		292 80	SHALE S	HAKERS	Hrs	002.000	#	Size	Hrs			Hrs
Cuer Cuer		\$ 12	5.00	40			0 8		32	\$	1 (000 00	# 1			Desander	2			Centri	uge	
Guar Gum		¢ 12	7 80	108			8		100	¢	1,0	62.40	# 1			Desilter	20	2		Centri	uge	
		۲ ۲	7.50	626	635		0 56	5	696	s	0.0	387 50	#2		$\left - \right $	Mud C	leaner	<u> </u>		Degas	-9°	
Trugel-13A B	ulk	φı	7.50	020	033		50	5	090	ş	9,0	567.50	# 3			Mud C	loonor	. ว		Degas		
													# 4		Ove	erflow (ppg		derflow	(pag)	0	utput (Ga	/Min.)
													Desande	er		1.1.2		0		-		,
													Desilter				-	0				
													Cleaner	1			_	0				
													Cleaner	2			_					
													Centrifu	- ae1			_	v				
													Contrif	901			_					
											Senunu	962	<u> </u>			_	1					
													CUF	KENCY	r	DAIL	Y COS	í	<u> </u>	CUMU		UST
											A N					\$11 ,	242.7	0	L	\$1	1,242.7	U
I.D.F.S. Engin	.F.S. Engineer: M.Docherty & J. Singh Office:													Telepho	one:	07 3	806-01	160	Fax:		07 3806-0	165

			IN	DEP	END	EN.	ТD	RILLI	NG	FLL	лD s	SER	VIC	ES	Re	eport #	1	Date			25-Aug-	02
	FS)				A Divisi	on of	Bheo	chem Pt	u l trl						R	ig # Bou	nty	Spuc	l Date		25-Aug-	02
	- ê								y Liu N	A(CN 070	415	593		То	tal MD		9	3	to	1	30
	-			D	rillii	ngl	FΙ	ng F	(ep	ort					То	tal VD				to	1	30
OPERATO	DR			Sar	ntos Ltd	Ι.					CONT	RACT	OR		DO	GC						
REPORT	FOR			Her	nry Flin	k & St	eve H	lodgetts			REPO	RT FC	R		Ped	lro John	s & R	Ronni	e Saf	ar		
WELL NA	ME A	ND N	0								FIELD)			LOC	ATION			STAT	ΓE		
				Cas	sino 1							VIC -	P - 44		Otw	ay Basi	<u>1</u>		Victo	oria		
BHA BIT SIZE	BIT T Var	YPE el	18	JET SI2	ZE			ASING	ft	М		JME (B	BL) PITS		PUMP		CULAI	TION D	ATA CIRCULA	TION		
36	DS.	JC	22	22 22			SET @		m	1	41	1'	136	6	x	12 Inch	es		PRE	SS	923	psi
DRILL PIPE	s		Length	13	30 Mtrs		SURFACE SET @	1	ft m	TOTAL CI	RCULATING	VOL. 77		PUI Nation	MP MOD	EL P-160	97 8	ENCY	BOTT	roms P		7 min
DRILL PIPE	TYPE		Length				PROD. or		ft		IN STORAGE			E	BBL/STK		STK / N	1IN	SURF	ACE	0	4
SIZE 5 DRILL COLLAR SI	H\	N	Lenath	1	Mtrs	MUD TYPE	LNR Set (2	m		67	72		0).1018 BBL/MIN	3	202 GAL / N		TO I TOTAL	BIT CIRC.		min
8 1/4	91	/2			Mtrs		-		Gel Sw	eeps					20.56		863	6	TIM	ИE		5 _{min}
					м	JD PRO	PERTIE	ES			1		1			MU	D PRC	OPERT	Y SPEC	IFICA	TIONS	
SAMPL	E FR	DM							Р	it	Pi	t	P	it	Mud	Wt 1.03-	I.0 Gly	col			API	
TIME S	AMPL	E TA	KEN						17:	00	17:	00	20:	30	Vis	100	Yiel	d Point	t		рН	
FLOWL	INE T	EMP	ERA	TURE				⁰ F/ ⁰ C							KCI		PHF	PA exce	ess		Sulphites	;
TOTAL	MEAS	SURE	DD	ЕРТН (Т	MD)			Fee	t 9	3	93	3	13	30				OBSEF	RVATIO	NS		
WEIGH	Т						I	opg / SG	8.60	1.03	8.55	1.03	8.80	1.06	Drill \	Nater Analy	sis: Ha	rdness	240 pp	m; CI 9	000 ppm	
FUNNE	L VIS	cosi	TY(s	ec/qt) A	PI @		°C	°F	10	00	65	5	10	00	Pf/Mf	0.1/0.15, p	H 7.7					
RHEOL	.OGY	600 :	300	RPM		16	°C	60 ⁰ F	100	85	56	43	70	52	Sea	Water analy	sis: Ha	rdness:	3200 p	pm; C	24200 pp	m
RHEOL	.OGY	200 :	100	RPM		16	°C	60 ⁰ F	75	65	34	24	45	38	Pf/Mf	0.1/0.3, pH	8					
RHEOL	.OGY	6:3	RPI	И		16	°C	60 ⁰ F	35	25	10	8	23	22	Prepa	are 230 bbls	Guar	Gum at	2 ppb.			
PLASTI	IC VIS	cos	ITY	cP @		16	°C	60 ⁰ F	1	5	13	3	18	8	Prepa	are 1735 ba	rrels of	25 ppb	PHG a	and flo	c with lim	e.
YIELD F	ΡΟΙΝΤ	lb	/100	FT ²)		16	°C	60 ⁰ F	7	0	30)	34	4	Prep	are 300 barı	els of 3	33 ppb l	PHG to	fill hol	e at TD.	
GEL ST	RENO	STH	(lb/	100ft ²)	10 sec/10	0 min/3	0 min		15/1	8/20	4/6	/7	23/2	6/28								
API FIL	TRAT	Έ (cm ³ /	'30 min.))				-				-									
HPHT F	ILTR/	ATE (cm ³ /	'30 min.)		######	°C	- ⁰ F	-	•			-	•								
API : HI	PHT (Cake	32n	d in.)					-	•			-				OPE	RATIO	NS SUI	MMAR	Y	
PH									12	.0	8.0	0	10	.0	Run	anchors.						
ALKAL	INITY	MUD	(Pm)											Make	e up bit and	BHA.					
ALKAL	INITY	FILT	RAT	E (Pf/	Mf)				0.35	0.45	0.10	0.30	0.26	0.47	RIH.	Spud well a	t 1830	hrs.				
CHLOR	RIDE	(mg/	L)						24	00	242	00	16	00	Drill 3	36" hole to 3	4m sw	eeping	hole wi	th 6 x	50 bbl swe	eps.
TOTAL	HAR	DNES	S	(mg/L)					6	0	320	00	8	0	Spot	160 barrels	of unfle	occ gel	mud in	hole.		
SULPH	ITE	(mg/l	_)						-				-		POO	н						
PHPA	(Calo	: ppb)																			
GLYCO	L CO	NTEN	IT (%	6 V/V)											1							
K+ (m	ng/L)														1							
KCL ((% by	Wt.)													1							
BARYT	ES (C	alc p	pb)													MUI	D ACC	OUNTI	NG (BB	BLS)		
METHY	LENE	BLU	E C/	APACITY	Y (ppb ed	quivale	nt)		25	.0			30	.0		FLUID BUIL	г	FLUI	D DISPC	DSED	SUM	MARY
SOLIDS	S CON	TEN	Г (%	by volu	me) Reto	ort			1.8	85	0.0	4	3.4	40	Prem	nix - Water	###	S.C.E			INITIAL	
LIQUID	CON	TENT	(%)	by volun	ne) Calc				98.	15	99.9	96	96.	60	Prem	nix - Recyc		Dump	ed		+ Rcd	2,265
CUTTIN	IGS O	IL RA		(% oil)											Drill	Water		Down	hole	316	- Lost	316
SAND (CONT	ENT (% b	y volum	e)				N	il	Ni	I	N	il	Othe	r		Other			Surface	1,808
					PR	ODUCT	USAG	E	•						REC	EIVED	###	LOST		316	FINAL	1,949
Product		Pric	e	Start	Received	Damage	llse	d d	Close		Cost					SOLIDS	ONTR		UIPME	NT	_	
Cauctio Dad		\$ 3	6.60	33			236 8		25	\$		292 80	SHALE S	HAKERS	Hrs	002.000	#	Size	Hrs			Hrs
Cuer Cuer		\$ 12	5.00	40			0 8		32	\$	1 (000 00	# 1			Desander	2			Centri	uge	
Guar Gum		¢ 12	7 80	108			8		100	¢	1,0	62.40	# 1			Desilter	20	2		Centri	uge	
		۲ ۲	7.50	626	635		0 56	5	696	s	0.0	387 50	#2		$\left - \right $	Mud C	leaner	<u> </u>		Degas	-9°	
Trugel-13A B	ulk	φı	7.50	020	033		50	5	090	ş	9,0	567.50	# 3			Mud C	loonor	. ว		Degas		
													# 4		Ove	erflow (ppg		derflow	(pag)	0	utput (Ga	/Min.)
													Desande	er		1.1.2		0		-		,
													Desilter				-	0				
													Cleaner	1			_	0				
													Cleaner	2			_					
													Centrifu	- ae1			_	v				
													Contrif	901			_					
											Senunu	962	<u> </u>			_	1					
													CUF	KENCY	r	DAIL	Y COS	í	<u> </u>	CUMU		UST
											A N					\$11 ,	242.7	0	L	\$1	1,242.7	U
I.D.F.S. Engin	.F.S. Engineer: M.Docherty & J. Singh Office:													Telepho	one:	07 3	806-01	160	Fax:		07 3806-0	165

	4	I	NE	DEP	END	DEN.	ТС	RILLI	NG	FLU	ND S	SER	VIC	ES	Re	eport #		2	Date			26-Aug	-02
ID	S)	-				ion of	 Rhai	chem Pt							R	ig #	Bounty		Spud	Date		25-Aug	-02
					- DIVIS	ION OI	nne.	· · ·	y Liu •	A	CN 070	415	593		То	tal MD)		13	30	to	:	220
	, .			D	rilli	ng	Εli	лд Н	{ep	ort					То	tal VD			13	30	to	:	220
OPERATO	R			San	tos Lt	d.					CONT	RACT	OR		DO	GC							
REPORT F	FOR			Her	nry Flir	k & St	eve l	lodgetts			REPO	RT FC	R		Ped	lro Jo	hns a	& R(onnie	e Safa	ar		
WELL NA	ME AN	D No		_							FIELD)			LOC	ATION	1			STAT	Ē		
DUA		05		Cas	sino 1	1						VIC -	P - 44		Otw	vay Ba	asin			Victo	oria		
BHA BIT SIZE	SMIT	РЕ Н 1	8 2	JET SI2	E	20" &	CONDUC	TOR 427	7 ft	н		JME (B	BL) ITS		PUMPS	SIZE	CIRCU	LAII		CIRCULA	TION		
17 1/2	MGSS	HC 2	0			30"	SET @	130) m	1	05	1:	206	6	X	12	Inches % Fi	FEICIEN	ICY	PRE	SS	1860) psi
SIZE 5	s	20.	.g	3	2 Mtrs		SURFAC	E	ft m	IUTAL CI	13 RCULATING	11		Nation	al 12-	-P-160	<i>/</i> 0 _ 1	97		U	P		4 min
	TYPE	Lei	ngth				PROD. o	r	ft		IN STORAGE	-		E	BBL/STK	1	S		N	SURF	ACE		0.2
SIZE 5 DRILL COLLAR SI	HW ZE(")	Lei	ngth	11	1 Mtrs	MUD TYPE	ENR Set	e e	m		13	70		0 E).1018 BBL/MIN	3	G	220 AL / MII	N	TO E TOTAL	BIT . CIRC.		min
8 1/4	9 1/2	2	103	3	9 Mtrs				Gel Sw	eeps				:	22.40			941		TIN	ME		120 min
					N	UD PRO	PERTI	ES									MUD	PROI	PERTY	SPEC	IFICA	TIONS	
SAMPL	E FRO	M							P	it	Pi	t	P	it	Mud	Wt 1.	.03-1.0	Glyc	ol			API	
TIME SA		TAK	EN					0 0	08:	:00	18:	00	23:	30	Vis	10	0	Yield	Point			рН	
FLOWL	INE TE	MPE	RAT	URE				⁰ F/ ⁰ C							KCI			PHP/	A exce	SS		Sulphite	S
TOTAL	MEAS	URED	DE	PTH (T	MD)			Fee	t 13	30	13	0	20	00				C	BSER	VATIO	NS		
WEIGH	ľ 	00/-		1			°c	ppy/3G	8.80	1.06	8.55	1.03	8.80	1.06	Build	surface	mud v	olum	e to ma	ax with	25 pp	g PHG.	
FUNNE		USIT	Y (Se	ec/qt) A	ы@		0 0 0	°F	13	55	60)	13	50	_							~	
RHEOL	OGY 6	500:3	00	RPM		16	°C	60 °F	91	74	53	38	90	72	Pump	ped two	sweep	s of 3	0 bbl e	each of	Guar	Gum whi	le
RHEOL	OGY 2	200:1	00	RPM		16	00	60 ⁰ F	65	57	31	22	62	55	drillin	ig shoe t	rack. F	inally	hole s	sweepe	ed with	50 bbl G	el.
RHEOL	OGY 6	6:3 F	RPM			16	°C	60 °F	41	38	5	3	40	35									
PLASTI	c viso	COSIT	Y	<u>cP @</u>		16	00	60 °F	1	7	15	5	1	8	Pump	ping 2 x	50 bbls	s 2pp	b Guar	Gum	sweep	s and	
YIELD F	POINT	(lb/1	100F	•T ²)		16	°C	60 ⁰ F	5	7	23	3	5	4	50 bb	ols of 25	ppb flo	occula	ated PH	IG per	stand		
GEL ST	RENG	TH (<u>lb/1</u>	00ft ²) 1	10 sec/1	0 min/3	0 mir		42/4	4/45	3/3	/3	40/4	2/44									
API FIL	TRATE	(C	m²/3	60 min.)			00								Reple	enish su	rface v	olum	e.				
HPHT F	ILTRA	TE (CI	m³/3	0 min.)			C	۴															
API : HF	РНТ (С	ake/3	2nd	in.)							_	_					(OPER	RATION	NS SUI	MMAR	Y	
РН			(5	<u>,</u>					11	.5	7.	5	11	.5	Rig u	ip and ru	in 20" :	x 30"	casing	. Fill wi	ith sea	water	
ALKALI			(P)	m)											at se	a level.	Stab in	to 36	" hole a	and RIP	H to se	ttling dep	oth.
ALKALI			AIE	(Pf /	Mt)				0.60	0.80	0.15	0.35	0.60	0.80	Move	e rig to c	orrect a	angle	. Circul	late 13	U DDIS	seawate	r.
CHLOR		mg/L)						16	00	210	00	15	00	Good	1 returns	. Cond	uct c	ement	JOD WIT	n good	returns.	WOC.
IOTAL	HARD	NESS	(mg/L)					4	0	360	00	6	0	Relea	ase 30"	RT and	1 L/O.	L/Oc	ement	stinge	r and 36	BHA.
SULPHI	IE (I	mg/L)													M/U ·	17.5" BF	IA and	RIH	to 112r	n. Pick	up sta	ands whil	e
РНРА	(Calc	ppp)													waitir	ng on ca	sing. L	orill ou	ut ceme	ent, and	d Drill	17.5" hoi	e with
GLYCO		IENI	(%	V/V)											seaw	ater usir	ng gel a	and G	Suar Gu	um swe	eeps.		
K+ (m	g/L)																						
KCL (% by V	Vt.)																					
BARYI	ES (Ca		o)																UNTIN	IG (BB	SLS)		
METHY		BLUE			(ppb e	quivale	nt)		25	5.0 40			25	.0	_	FLUID E	BUILT		FLUID	DISPC	DSED	SUI	
SOLIDS	CONI		(% K	by volui	me) Ret	ort			3.4	40	0.2	.5	3.4	41	Prem	11x - Wa	ter	###	S.C.E				1949
LIQUID	CONT		% b	y volun	ne) Calc				96.	.60	99.	75	96.	59	Prem	nix - Rec	сус		Dump	ed		+ Rcd	1,050
	GS OI		10 (% OII)	- \										Drill	Water			Downi	nole	318	- Lost	318
SAND	ONTE	NT (%	ь ру	volume	e)			_	N	11	N	1	N	11	Othe	r			Other			Surface	2,576
					PI		USAG								REC	EIVED		###	LOST		318	FINAL	2,681
Product		Price		Start	Received	Damage	Us	ed C	Close		Cost				Lire	SOLIE				JIPME	NT		Hre
Caustic Soda	\$	36.0	50 2	25			2	2	23	\$		73.20	SHALE S	HARERS	піз			# 	Size	піз			піз
Guar Gum	\$	125.0	00 3	32			1	2	20	\$	1,	500.00	# 1			Desande	r	3			Centri	uge	
Lime	\$	7.8	30 1	00			4	۱	96	\$		31.20	# 2			Desilter		20	2		Centri	uge	
Trugel-13A Bu	ulk ^{\$}	17.9	50 6	96	740		18	30 1	1256	\$	3,'	150.00	# 3			Mu	ud Clea	aner	1		Degas	ser	
													# 4			Mu	ud Clea	aner	2		Poorb	ру	
ļ													<u>.</u>		Uve	ernow (ppg)	und	ertiow	(ppg)	0	utput (G	aı/Min.)
ļ													Desande	er					0				
ļ													Desilter	4					0				
													Cleaner	1	<u> </u>				U				
													Cleaner	2	<u> </u>				0				
													Centrifu	ge1	<u> </u>								
										Centrifu	ge2	L											
													CUF	RRENCY	(D	AILYC	COST		(сими	LATIVE	COST
														AUD		\$	4,754	4.40			\$1	5,997.′	10
I.D.F.S. Engin	F.S. Engineer: M.Docherty & J. Singh Office:													Telepho	one:	-	07 380	6-01	50	Fax:		07 3806	-0165

			IN	DEP	ΈN	D	ENT	ΓD	RIL	ING	FL		SEF	NIC	ES	R	eport #		3 [Date			27-Aug	j-02	
	ES)					ieio	n of F	2600	chem	Phu L Ed			_			R	ig # Bo	unty	S	Spud	Date	•	25-Aug	J-02	
	- 6			-		- -	, 10 II					ACN 070) 415	593		Тс	otal MD			22	20	to		713	
	-			D	rill	IN	ig i	-10	DIL	кер	or	t i				Тс	otal VD			22	20	to		713	
OPERATO	DR			Sar	ntos I	.td.						CONT	RACT	OR		DO	GC								
REPORT	FOR			Her	nry F	ink	& Ste	eve H	lodget	s		REPO	RT FC)R		Peo	dro Johr	ıs &	Ro	nnie	e Saf	ar			
WELL NA	ME AI	ND N	D	_								FIELD)			LOC	CATION				STAT	ΓE			
				Cas	sino '						-		VIC -	P - 44		Otv	vay Bas	in			Vict	oria			
BHA BIT SIZE	BIT T SMI	YPE TH	18	JET SI 20 20	ZE		20" & 0		TOR A	27 ft		HOLE	UME (B	BL) PITS		PUMP		RCUL	ATIC	ON DA		ATION			
17 1/2	MGS	внс	20				30" \$	SET @		30 m		555	1	410	6	x	12 Inc	hes		NV.	PRE	ESS	245)	psi
DRILL PIPE	s		_engtn	4	61 M	rs	5	SURFACI	E	ft m	TOTAL	CIRCULATING	VOL. 165		PU Natior	MP MOD 1al 12	-P-160	% EFF	97	, T	BOT	roms IP		22	min
DRILL PIPE	TYPE		.ength				F	PROD. or		ft		IN STORAG	E			BBL/ST	<	STK	C/MIN		SURF	ACE		14	
SIZE 5	HV	v	_enath	1 [,]	<u>11 </u> ™	rs M		.NR Set (S	0	m		11	25		(0.1018 BBL/MIN	B	2 GAL	235 L/MIN		TO TOTAL	BIT CIRC.			min
8 1/4	91	/2	10	3 3	9 M	rs		-		Gel Sw	veeps					23.92		1	005		ті	ME		129	min
						MU	D PROF	PERTI	ES					1			м	UD P	ROP	ERTY	SPEC	CIFICA	TIONS		
SAMPL	E FRO	DM								F	Pit	Pi	it	P	it	Mud	Wt 1.03	-1.0 G	Blyco				API		
TIME S	AMPL	E TA	KEN							04	:00	13:	00	22	:30	Vis	100	Y	'ield	Point			рН		
FLOWL	INE T	EMPI	ERA	TURE					⁰ F/	°C						KCI		Ρ	РНРА	exce	ss		Sulphit	es	
TOTAL	MEAS	SURE	D D	ЕРТН (Т	MD)				F	eet 3	56	55	6	67	75				0	BSER	VATIC	ONS			
WEIGH	Т								ppg / SG	8.80	1.06	8.55	1.03	8.80	1.06	Built	2 ppb Gua	Gum	n pre	mixes	to use	e for sv	veeps.		
FUNNE	LVIS	COSI	TY(s	ec/qt) A	PI @		(°C	⁰ F	1	10	67	7	9	0	Cons	sumed all G	iuar G	Gum	on bo	ard at 2	22:00	nrs.		
RHEOL	.OGY	600 :	300	RPM			16	°C	60 ⁰ F	85	69	65	50	85	73	Pum	ping 50 bbl	Gel s	swee	ps on	conne	ctions	to spot		
RHEOL	.OGY	200 :	100	RPM			16 [°]	°C	60 ⁰ F	56	50	43	33	68	60	arou	nd BHA. Re	epleni	ish vo	olume	with 2	5 ppb	PHG		
RHEOL	.OGY	6:3	RPI	И			16 (°C	60 ⁰ F	38	34	10	8	30	18	flocc	ulated with	Lime							
PLAST	IC VIS	cos	ΤY	cP @			16 [°]	°C	60 ⁰ F	1	16	1	5	1	2	Prep	are 700 ba	rrels o	of un	loccu	lated F	PHGm	ud to		
YIELD I	POINT	(lb	/100	FT ²)			16 (°C	60 ⁰ F	5	53	3	5	6	1	use t	to displace	the ho	ole a	casir	ng poir	nt.			
GEL ST	RENC	STH	(lb/	100ft ²)	10 seo	:/10	min/30) min		37/3	39/40	7/7	/5	15/1	7/19										
API FIL	TRAT	E (cm³/	'30 min.))																				
HPHT F	ILTR/	ATE (cm³/	30 min.))		(°C	⁰ F																
API : HI	PHT (0	Cake/	32no	d in.)														0	PER	ATION	NS SU	MMAF	Y		
PH										1:	2.0	8.	0	12	2.0	Drill	17.5" hole v	vith s	eawa	ater ar	nd pum	nping 2	ppb Gu	ar Gu	m
ALKAL	INITY	MUD	(F	Pm)												and	25 ppb Gel	swee	eps e	very 1	0 m.				
ALKAL	INITY	FILTI	RAT	E (Pf/	Mf)					0.65	0.80	0.15	0.30	0.60	0.90										
CHLOR	RIDE	(mg/	L)							16	600	240	00	17	00										
TOTAL	HAR	NES	s	(mg/L)						4	40	34	00	6	0										
SULPH	ITE	(mg/L	.)													1									
PHPA	(Calc	; ppb)													1									
GLYCO	L CO	NTEN	T (%	6 V/V)																					
K+ (m	ng/L)																								
KCL ((% by	Wt.)																							
BARYT	ES (C	alc p	ob)														М	ID AC	ccol	JNTIN	NG (BE	BLS)			
METHY	LENE	BLU	E C/	APACITY	r (ppt	equ	uivaler	nt)		2	5.0			25	5.0		FLUID BUI	т		FLUI	D DISPO	DSED	SU	MMAF	RΥ
SOLIDS	S CON	TEN	%) آ	by volu	me) R	etor	t			3.	.40	0.0)5	3.	39	Pren	nix - Water	#	### S	S.C.E			INITIAL		2681
LIQUID	CON	ENT	(% I	by volur	ne) Ca	lc				96	6.60	99.	95	96	.61	Pren	nix - Recyc	:	0	Dump	ed		+ Rcd		2,230
CUTTIN	IGS O	IL RA		(% oil)												Drill	Water		0	Downl	hole	1821	- Lost		1,821
SAND (CONT	ENT (% b	y volum	e)					N	Nil	N	il	N	lil	Othe	ər		Ċ	Other			Surface		2,535
				-	·	PRO	DUCT	JSAG	E							REC	EIVED	#	### L	OST		1821	FINAL		3.090
Product		Pric	e	Start	Receiv	ed	Damage	(lse	ed	Close		Cost				L	SOLIDS	CON	TRO		UIPME	NT	ļ		
Countin Conto		\$ 30	- 	23				4		19	¢		146 40	SHALE S	HAKERS	Hrs	002.20	#		Size	Hrs	T			Hrs
Caustic Soda	1	\$ 12!	5 00	20	40			-	<u> </u>	15	¢	7	500.00	#1	4 y 84		Desander		3			Centri	fune		
Guar Gum		¢ 12.	7 80	96	40			11	2	83	¢	,	101 /0	#2	4 × 84		Desilter	-	20	2		Centri	fuge		
		÷ /	.50	###		+		20	8	1048	¢	2	640.00	#2	4 2 24	-	Mud	- Clear		4		Decar	ser		
Trugel-13A B	rugel-13A Bulk \$ 17.50 ### 208											5,	040.00	#3	4 × 84		Mud	Cloar	nor 2			Poorb	301 0V		
														# 4	4 X 04	Ov	erflow (pp	a) L	Jnde	rflow	(ppq)	C	utput (G	al/Mi	n.)
						+								Desand	er	-	4. F.			0		-		-	
														Desilter	-			_		0					
														Cleaner	1			_		0					
			_			+								Cleaner	2	-		-		0		<u> </u>			
			_			+								Centrifu	ae1	-		-		-		<u> </u>			
														Centrif	ide2	-		-				<u> </u>			
																		VO	0.07					000	.
														CU		ı	DAI	20-	051		'	CUMU		008	1
LDES Engineer: M Desharty & L Singh Offic											PPIO				Tolant	0.54	j \$11	,387 2000	.80	n	Ferri	\$2	1,384.	90	
I.D.F.S. Engin	D.F.S. Engineer: M.Docherty & J. Singh Office											DANE			reieph	une:	U7	3006	-016	J	гах:		01 3806	-0165	,

	4		IN	DEP	END	EN.	ГD	RILLI	NG	FLU	лD s	SEF	NIC	ES	Re	eport #	Acean	4	Date			28-Au	g-02	
	S)				A Divisi	on of I	Rheor	hem Pti	htti						R	ig# i	Bounty		Spud	l Date		25-Au	g-02	
				-						A(CN 070	415	593		Тс	otal MD			7	13	to		752	
	-			D	rillii	ng I	Flu		lep	ort					Тс	otal VD			7	13	to		752	
OPERATO)R			Sar	ntos Ltd	Ι.					CONT	RACT	OR		DO	GC								
REPORT I	FOR			Her	nry Flin	k & Ste	eve H	odgetts			REPO	RT FC)R		Pec	iro Jo	hns	& Ro	onni	e Saf	ar			
WELL NA	ME AN	ND No	C								FIELD)			LOC	ATION	I			STAT	ΓE			
				Cas	sino 1							VIC -	P - 44	r	Otv	vay Ba	Isin			Victo	oria			
BHA BIT SIZE	BITT	YPE	1	JET SI	ZE	20" &	CONDUCT	ASING DR 427	ft	М		JME (B	BL) PITS		PUMP	SIZE	CIRCU	JLATI	ON DA		TION			
12 1/4			a meth			30"	SET @	130	m	3	20			6	x	12 1	nches		<u>ov</u>	PRE	SS		F	osi
DRILL PIPE		ľ	.engtn	7!	52 Mtrs	13 3/8	SURFACE SET @	2438 743	ft m	TOTAL CI	RCULATING	VOL. 20		PU Natior	мр мор 1аі 12-	-P-160	% E	97	GY	BOTT	OMS P			nin
DRILL PIPE	TYPE	L	.ength				PROD. or		ft		IN STORAGE			1	BBL/STK	(s	TK / MIN		SURF	ACE			
SIZE 5	HV	V L	.enath		Mtrs	MUD TYPE	LNR Set @ S		m		78	32		(0.1018 BBL/MIN	3	G	AL / MIN	1	TO TOTAL	BIT CIRC.		r	nin
8 1/4	91	/2			Mtrs		-		Gel Swe	eeps										TI	ИE		r	nin
					м	UD PROI	PERTIE	S									MUD	PROF	PERTY	Y SPEC	IFICA	TIONS		
SAMPL	E FRC	M							Pi	it	Pi	t	Р	lit	Mud	Wt 1.	03-1.0	Glyco	bl			API		
TIME SA	AMPL	E TA	KEN						04:	:00	14:	00	22	:00	Vis	10	D	Yield	Point	1		рН		
FLOWL	INE T	EMPE	ERA [®]	TURE				⁰ F/ ⁰ C							KCI			PHPA	A exce	ess		Sulphit	es	
TOTAL	MEAS	SURE	D D	ЕРТН (Т	MD)			Feet	75	52	75	2	7	52				0	BSER	RVATIO	NS			
WEIGH	Т						р	pg / SG	8.80	1.06	8.80	1.06	8.65	1.04	Prep	are 850	bbls of	f 35 pp	b PH	G mud	utilisir	g the Pł	łG	
FUNNE	L VISO	cosr	ΓY(s	ec/qt) A	PI @		°C	⁰ F	12	20	85	5	3	8	mud	from res	erve p	its.						
RHEOL	OGY	600:	300	RPM		16	°C	60 ⁰ F	58	45	61	51	16	9										
RHEOL	OGY	200 :	100	RPM		16	°C	60 ⁰ F	33	27	47	41	7	4										
RHEOL	OGY	6:3	RP	M		16	°C	60 ⁰ F	22	21	27	11	1	1										
PLASTI	C VIS	cosi	ΤY	cP @		16	°C	60 ⁰ F	1	3	10)	7	7	Gel u	usage to	correc	t inve	ntory a	as per l	Ballast	Control		
YIELD F	POINT	(lb	/100	FT ²)		16	°C	60 ⁰ F	3	2	41	1	:	2										
GEL ST	RENG	тн	(lb/	100ft ²)	10 sec/10	0 min/3	0 min.		22/2	5/26	10/10)/12	1/*	1/1	Start	preparir	ng mua	d for n	ext se	ction, v	vith 0.1	5 ppb S	oda A	sh,
API FIL	TRAT	E (cm ³ /	, 30 min.))										0.8 p	pb PAC-	-LV, 20)ppb k	(CI, 0.	6 ppb F	PHPA,	and 3%		
HPHT F	ILTRA		cm ³ /	30 min.))		°C	⁰ F							Glycl	hem								
API : H	PHT (C	Cake/	32nd	d in.)	,													OPER	ATIO	NS SU	MMAR	Y		
РН									10	.0	12.	.0	10).0	Drill [·]	17.5" hol	e to 7	52m. (Circula	ate 150	barrel	sweep.		
ALKAL	INITY	MUD	(F	Pm)											Circu	late with	seaw	ater. S	Spot 7	50 bbls	unflo	culated	PHG	
ALKAL	INITY	FILTE	RATI	, E (Pf/	Mf)				0.40	0.65	0.58	1.58	0.24	0.88	mud	in the ho	ole. PC	OH. () - 40ŀ	< drag f	rom 6	28 - 425	m.	
CHLOR	IDE	(ma/	L)		,				16	00	230	00	280	000	Ria u	ip and ru	ın 13 3	3/8" ca	sina f	illina ea	ach ioir	nt with P	HG.	
TOTAL	HARD		ś	(ma/L)					6	0	60)	7:	20	M/U	wellhead	l assei	mblv.	Land v	wellhea	, id. 50k	(overpu	I.	
SULPH		(ma/L		(9. –)						-					Displ	ace casi	na wit	h 560	bbls F	PHG. C	onduc	cement	iob.	
PHPA	(Calc	nnh	. <u>,</u>)										0	7	Displ	ace with	seaw	ater F	22.с УЛ сая	sina 30	00 nsi	and che	ck floa	at
GLYCO			, Τ (%	. V/V)									3	0	holdi	na B/O		ement	head	POOF	l wellt	ead and	R/T	
K+ (m			1 (7	• • • • • • • •									375	800	and I	/0 Pre	Dare fl	oor an	d ria t				IVI,	
	% by	W+)											7	0		_/0.110	bare in		ungi	o run E	01 0.			
		alc n	ab)															NCC0			1 5)			
METHV			50,		V (nnh or	nuivalo	at)		22	0	22	5						1000	FILM			91	MMAR	v
			- /0/		no) Pote	Juivalei	iii)		33	40	22.	5	0	55	Bron	iv Wat	tor	70.2	PLUI	DISPC	J3ED			2000
			(/0			Л			0.4	40 60	3.3	55 65	0.	35 AE	Dren	ix - wa		102	5.0.E	- d	200			1 102
			(% L		ne) calc				90.	.00	90.0	00	99	.45	Pren	Wotor	ус	220	Down	hala	300			3 000
			% h		۵)				NI	il	NI:	1	NI NI	111	046-	valei		520	Other	ivie	2/10			782
SAND		_141 (/0 03	y volum	e) DC	ODUCT					IN I											Surraco	-	102
		-	-	<u></u>	PR	00001	USAGE								REC			###	-081		3090	FINAL		1,102
Product		Price	e	Start	Received	Damage	Used	i C	lose		Cost		SHALE	HAKEDO	Hre	SOLID	os co	NTRO #	L EQ		NŤ			Hre
Glychem MC		\$	0.00	32			20		12	\$	11,8	300.00						- -	0120	1				
JK-261		\$ 109	0.70	108			10		98	\$	1,0	97.00	#1	4 x 84		Desande	r	3			Centri	fuge		
KCI BB Fine		\$ 650	0.00	19			8		11	\$	5,2	200.00	# 2	4 x 84		Desilter		20	2	ļ	Centri	fuge		
Lime		\$7	.80	83			3		80	\$		23.40	#3	4 x 84		Mu	ıd Cle	aner 1		ļ	Degas	ser		
PAC-L	:	\$ 168	8.00	40			13		27	\$	2,1	184.00	#4	4 x 84		Mu	Id Cle	aner 2	2	·	Poorb	oy 		•)
Soda Ash	:	\$ 13	5.56	48			2		46	\$		27.12			00	ernow (p	opg)	Unde	TIOW	(ppg)		utput (C	ai/Míi	1.)
Trugel-13A Bu	ulk	\$ 17	.50	###			378		670	\$	6,6	615.00	Desand	er					0					
L													Desilter						0					
													Cleaner	1					0					
													Cleaner	2					0					
													Centrifu	ıge1										
													Centrifu	ıge2										
													CU	RRENC	Y	D	AILY	COST			сими	LATIVE	cos	r _
														AUD		\$2	26,94	6.52			\$5	4,331.	42	
I.D.F.S. Engin	D.F.S. Engineer: M.Docherty & J. Singh Offic										ANE			Teleph	one:	(07 380	6-016	0	Fax:		07 3800	6-0165	

		I	IN	DEP	EN	DEN	ТС	DRIL	LI	NG	FLU	лD s	SER	VIC	ES	R	eport #	ocean	5	Date			29-Au	g-02	
IDFS					A Divi	sion of	Rhe	ochen	. Pty	Ltd		CN 070		500		R	lig # E	Bounty		Spud	l Date		25-Au	g-02	
	È								D	~ ~	Al Art	CN 070	415	593		Т	otal MD			7	52	to		752	
						ng		uia	п	ep	on	1				Т	otal VD			7	52	to		752	
OPERATOR	2			Sar	ntos Li	d.						CONT	RACT	OR		DO	GC								
				Her	nry Fli	1k & Si	teve	Hodge	etts			REPO	RT FC	DR		Peo	dro Jo	hns a	& R(onni	e Saf	ar			
			,	Cas	sino 1							FIELD	VIC -	P - 44		Otv	vav Ba	isin			Victo	oria			
BHA E	ΒΙΤ ΤΥ	'PE		JET SI	ZE			CASING	;		N		JME (B	BL)			(CIRCU	LATI	ON DA	ATA				
BIT SIZE 12 1/4		-	1			20" & 30"	CONDU SET @	CTOR	427 130	ft m	H	IOLE	P 1:	итs 392	6	PUMP X	SIZE 12 I	nches			CIRCULA	ATION ESS			psi
DRILL PIPE		L	ength			13 3/8	SURFA	CE	2438	ft	TOTAL C	RCULATING	VOL.		PU	MP MOI	DEL	% EI	FFICIEN	ICY	BOTT	roms			•
DRILL PIPE	TYPE	L	ength	/:	52 Mtrs		PROD. 0	or	743	m ft		IN STORAGE	38		Nation	BBL/ST	-P-160 K	S	97 TK / MI	N	SURF	ACE			min
SIZE 5	HW	1	enath	1	Mtrs		LNR Set	t @		m		12	20		(0.101	8	G	AL / MI	N	TO TOTAL	BIT			min
8 1/4					Mtrs				к	CI/PHPA	/Glycol					_					TI	ME			min
					I	IUD PRC	PERT	IES						-				MUD	PRO	PERT	Y SPEC	CIFICA	TIONS		
SAMPLE	FRO	М								Р	it	Pi	t	Р	it	Mud	Wt 1	1.1-1.3	Glyc	ol		3 - 5%	API		6.0
TIME SA			(EN					0	0	14:	00	17::	30	23	:00	Vis	45-5	55	Yield	l Point	t	15	рН		9-10
FLOWLIN								0	F/ºC			75	•			KCI	6-8	5	PHP/	A exce	ess	1-1.5	Sulphit	es	>100
	IEAS	UREI		:PIH (I	MD)			ppg / S	Feet	/5	1 04	75	2	/: 0.05	52 4 0 4	<u> </u>		daa of	0	BSER			- 4202	hla	
ELINNEL	VIEC		Vie	oc/at) A			°C	0	-	0.00	1.04	0.00	1.04	0.00	1.04	Dron	ipiete mix	ang or	new	mud a	na bien		al 1392 i	bois.	
		0311 00 ·	300		FI @	16	0°C	60 0		21	14	22	, 15	21	14	Yant		baneis	s nign	VISCO	Sily Swe	eep, w	uni.5 pp	U	
RHEOLO	GY 3	200 . 200 ·	100	RPM		16	, °C	60 ⁰	г 5	10	7	10	7	10	7	Aan	Inan Gun	1.							
RHEOLO		6 · 3	RPN	1 1		16	о ^о С	60 ⁰	F	2	1	2	1	2	1										
PLASTIC	VISC	COSI	ТҮ	 cP @		16	°C	60 ⁰	F	- 7	,	- 7	•	-	7										
YIELD PC	DINT	(lb/	100	FT ²)		16	°C	60 ⁰	F	7	,	8		-	7	1									
GEL STR	ENG	TH	(lb/1	100ft ²)	10 sec/	10 min/:	30 mii	n.		2/2	2/2	2/2	/2	2/2	2/2	1									
API FILT	RATE	E (0	;m ³ /;	30 min.))											1									
HPHT FIL	TRA	TE (c	;m³/	30 min.))		°C	0	F							1									
API : HPH	HT (C	ake/3	32nd	l in.)														(OPER	RATIO	NS SU	MMAF	Y		
PH										9.	5	9.5	5	9	.5	M/U	riser and	l move	BOP	's in to	run po	sition,	M/U LM	PR	
ALKALIN	ITY I	NUD	(P	'm)												to B	OPs. Fun	iction t	est. F	Run BC)Ps and	d marii	ne riser.		
ALKALIN	ITY F	FILTR	RATE	E (Pf/	Mf)					0.14	0.80	0.15	0.80	0.15	0.80	Pres	sure test	Choke	e and	kill lin	es. Cer	ntralise	e rig.		
CHLORID	DE ((mg/L	_)							230	000	230	00	230	000	Latc	h BOPs.	Install	dive	rter an	d run w	/ear bi	ishing.		
TOTAL H	ARD	NES	5	(mg/L)						46	60	48	0	44	40	Pres	sure and	functi	on tes	st BOF	°S.				
SULPHIT	Ε (mg/L)													B/O.	L/O cem	ent he	ead as	ssemb	ly and [·]	17.5" E	BHA.		
PHPA (Calc	ppb)							0.	7	0.7	7	0	.7										
GLYCOL	CON	ITEN	Т (%	V/V)						3.	0	3.0	0	3	.0										
K+ (mg	/L)									378	300	405	00	378	300										
KCL (%	by V	Vt.)								7.	0	7.	5	7	.0										
BARYIE		nc pp	(00)		/ (1000		NG (BE	SLS)			
					r (ppb (equivale	ent)				00	0.0	0	0	00	Dron	FLUID B		755	FLUI	D DISPC	JSED	SU	мман	4402
			(%)		ne) Cel					0.0	12	0.0	12	0.	00 12	Pren	nix - wai	ler	/ 55	3.U.E	od			-	855
			(// L TIO		ne) Cai					33.	12	33.	12	33	. 12	Drill	Wator	.yc	100	Down	holo	0	- Lost		000
SAND CC			// bv		e)					N	il	Ni		N	il	Othe	r		100	Other	noie		Surface		1.512
0/110 00			/• ~ J	vorain	<u>с,</u> Р	RODUCT	USAC	GE					<u> </u>			REC			855			0	FINAI		1 958
Product		Prico		Start	Receive	Damage		end .	Cl	050	1	Cost					SOLID	is col				NT			1,000
Glucham MC	e	590	.00	12	48	Jamaye	1	12		18	\$	7 (080 00	SHALE S	HAKERS	Hrs			#	Size	Hrs				Hrs
	5	109	.70	98				6	- c	12	\$,,c F	58.20	#1	4 x 84		Desander	r	3			Centri	fuae		
KCI BB Fino	s	650	.00	11	21			6	2	26	\$	3.9	900.00	#2	4 x 84		Desilter		20	2		Centri	fuge		
	\$	168	.00	27	80			8	9	99	\$	1.3	344.00	# 3	4 x 84		Mu	Id Clea	aner	1		Degas	ser		
Xanthan Gum P	, ş	411.	.42		80		1	11	e	59	\$	4,5	525.62	#4	4 x 84		Mu	Id Clea	aner	2		Poorb	оу		
Xanthan Guin I												,				Ov	erflow (p	opg)	Und	erflow	(ppg)	0	utput (C	ial/Mi	n.)
														Desand	er					0					
							1							Desilter						0					
														Cleaner	1					0					
														Cleaner	2					0					
												Centrifu	ige1												
										Centrifu	ige2														
														CU	RRENC	Y	D	AILY	COST		(сими	LATIVE	cos	т
															AUD		\$1	7,50	7.82	2		\$7	1,839.	24	
I.D.F.S. Enginee	D.F.S. Engineer: M.Docherty & J. Singh Office:											ANE			Teleph	one:	(07 380	6-01	60	Fax:		07 380	-016	5

	4		N	DEP	END	EN.	T DRI		NG	FLU	лD S	SEP	NIC	ES	Re	eport #		6	Date			30-Aug	J-02
	5	-				ion of	· · ·								R	ig #	Bounty		Spud	l Date		25-Aug	-02
	U.S						meocne			A	CN 070	415	593		Тс	otal MD)		7	52	to	1	016
	7			D	rillii	ng	Fluid	1 R	ep	ort					Тс	otal VD			7	52	to	1	016
OPERATO	DR			San	ntos Ltd	1.					CONT	RACT	OR		DO	GC							
REPORT F	FOR			Her	nry Flin	k & St	eve Hod	getts			REPO	RT FC	DR		Pec	lro Jo	hns	& R(onnie	e Saf	ar		
WELL NA	ME AI	ND No)	_							FIELD				LOC	CATION	1			STAT	ΓE		
				Cas	sino 1	1						VIC -	P - 44		Otv	vay Ba	asin			Victo	oria		
BHA BIT SIZE	BII I Hyca	YPE alog	12	JET SIZ	2E	20" &		NG 427	ft	м н		JME (B	IBL) PITS		PUMP	SIZE	CIRCU	ILAII	ON DA		TION		
12 1/4	DSX1	95C	12	12 12		30"	SET @	130	m	5	523	4	432	6	x	12	Inches			PRE	SS	2650) psi
DRILL PIPE	s	Le	engtn	75	50 Mtrs	13 3/8	SURFACE SET @	2438 743	ft m	TOTAL CI	RCULATING \ 95	/OL. 5		PUI Nation	MP MOD al 12	-P-160	% E	97	ICY.	BOTT	roms IP		33 min
DRILL PIPE	TYPE	Le	ength				PROD. or		ft		IN STORAGE			E	BBL/STK	(s	TK / MI	N	SURF	ACE		3.5
SIZE 5 DRILL COLLAR SI	HV ZE(")	N Le	ength	11	1 Mtrs	MUD TYPE	LNR Set @		m		30	0		0).1018 BBL/MIN	3	G	141 AL / MI	N	TO TOTAL	BIT CIRC.		min
8			155	5	Mtrs			K	CI/PHPA	/Glycol					14.35			603		ти	ME		87 _{min}
					M	UD PRO	PERTIES				1		1				MUD	PRO	PERTY	SPEC	CIFICA	TIONS	
SAMPL	E FRO	ОМ							Pi	it	Pit	t	Р	it	Mud	Wt	1.1-1.3	Glyc	ol	:	3 - 5%	API	6.0
TIME S	AMPL	E TAK	(EN						04:	00	15:4	45	22:	00	Vis	45-	55	Yield	Point		15	рН	9-10
FLOWL	INE T	EMPE	RAT	URE				⁰ F/ ⁰ C							KCI	6-8	3	PHP/	A exce	ss	1-1.5	Sulphite	es >100
TOTAL	MEAS	SURE) DE	EPTH (T	MD)			Feet	75	52	75	5	94	7				C	BSER	VATIC	ONS		
WEIGH	Т						ppg /	SG	8.65	1.04	8.70	1.04	8.80	1.06	Swee	eped hol	e with	20 bb	ol 1.8 p	pb Xar	n Gum	HiVis at	740m
FUNNE	L VIS	COSIT	Y(se	ec/qt) A	PI @		°C	⁰ F	3	9	36	i	4	0	and §	50 bbl at	752m	. Cha	nged o	over to	new m	ud.	
RHEOL	OGY	600:3	300	RPM		21	°C 70	⁰ F	20	14	17	11	29	22	Obse	erved los	ses of	60 bł	ol/hr in	sands	Chec	ked on si	urface.
RHEOL	OGY	200 : 1	100	RPM		21	°C 70	⁰ F	10	7	8	6	16	12	Pum	ped 50 b	obl of 1	2 ppb	Sand	seal sw	veep. N	lo good e	effect.
RHEOL	OGY	6:3	R₽N	1		21	^o C 70	⁰ F	2	1	1	1	4	3	Build	up PHF	A con	centra	ation w	ith dire	ct add	itions	
PLASTI	C VIS	COSI	ΓY	cP @		21	^o C 70	⁰ F	6	5	6		7	,	to su	ction pit.							
YIELD F	POINT	- (lb/	100	FT ²)		21	^o C 70	⁰ F	8	3	5		1	5	Кеер	oing up v	olume	with	fresh p	remixe	s, with	5 - 10 p	pb LCM.
GEL ST	RENO	GTH	(lb/1	100ft ²) 1	10 sec/10	0 min/3	0 min.		2/2	2/2	1/1/	/1	4/4	I/4									
API FIL	TRAT	E (c	:m³/3	30 min.)									6.	5									
HPHT F	ILTR/	ATE (c	:m³/3	30 min.)			°C	⁰ F															
API : HF	PHT (Cake/3	32nd	l in.)									1				(OPER	RATIO	NS SU	MMAR	Y	
PH									9.	5	9.5	5	10	.0	M/U	12.25" b	it and	BHA.	RIH. F	unctio	n test I	MWD.	
ALKAL	INITY	MUD	(P	'm)											RIH.	Service	Top D	rive. F	RIH. Ta	ag cem	ient plu	ug at 717	.6 m.
ALKALI	INITY	FILTR	ATE	E (Pf/	Mf)				0.15	0.75	0.20	0.80	0.10	0.40	Drill J	plugs,flo	at, cen	nent a	and sho	oe. Dis	placed	to new r	nud
CHLOR	IDE	(mg/L	.)					235	500	270	00	290	000	at 75	2m. Circ	ulate '	1.5x E	8/U.					
TOTAL	HAR	DNESS	, S ((mg/L)				36	60	800	0	64	10	cond	uct LOT	to 15.	0 ppg	. Drill a	ahead.				
SULPH	ITE	(mg/L))																				
PHPA	(Calc	(dqq ;)						0.	7	0.7	7	1.	1									
GLYCO			, T (%	V/V)					3.	0	3.0)	3.	0									
K+ (m	a/L)		(/-	,					405	500	405	00	378	300									
KCI (% bv	Wt)							7.	5	7.5	5	7.	0									
BARYT	FS (C	alc nn	h)							-		-		-				0000		NG (BE	RIS)		
METHY			- CΔ	PACITY	((nnh er	nuivale	nt)						2	5		FI UID F			FLUI		OSED	SU	MMARY
		TENT	- UA /%		me) Rete	ort			0.8	25	1.0	0	1		Pron	nix - Wa	tor	480	SCE		21	ΙΝΙΤΙΔΙ	1958
			(% h						0.0	15	99.0	<u> </u>	0.0	37	Dron	nx - ma		400	Dump	od	450	+ Pcd	480
CUTTIN				/% oil)	le) Calc				33.	15	33.0		30.	51	Drill	Wator	.yc		Down	bolo	582	- Loet	1 183
SAND			// bv		a)				N	il	Ni	1	21	n n	Otho	r			Othor	noie	130	Surfaco	732
SAND			/0 D y	Volum	<i>-)</i>	ODUCT							2.	50	DEO			400			130		/ 52
			-				USAGE			1	-		1		REC	EIVED		400	LUSI		1183	FINAL	1,255
Product		Price		Start	Received	Damage	Used	CI	lose	-	Cost		SHALE S	HAKERS	Hrs	SOLIE	is co	N FRC			NÎ		Hrs
Citric Acid		\$ 51.	.06	40			2		38	\$	1	02.12						_			_	. 1	
Glychem MC		\$ 590.	.00	48			11	1	37	\$	6,4	90.00	#1	4 x 84	8	Desande	r	3		5	Centri	fuge	
JK-261	JK-261 \$ 109.70 92 20										2,1	94.00	# 2	4 x 84	8	Desilter		20	2	5	Centri	ruge	
KCI BB Fine	KCI BB Fine \$ 650.00 26 7										4,5	50.00	#3	4 x 84	8	Mu	id Cle	aner	1		Degas	ser	
PAC-L	PAC-L \$ 168.00 99 15										2,5	20.00	#4	4 x 84	8	Mu	ud Cle	aner	2	(Poorb	oy	
Sandseal Fine	Sandseal Fine \$ 98.00 80 33 Xanthan Gum P \$ 411.42 69 19										3,2	34.00	Deserve		00		rhð)	Und		(644)		aiput (G	ai/iviiii.)
Xanthan Gum	Kanthan Gum P \$ 411.42 69 19										7,8	16.98	Desilter	er		0.0			10.9			2.0	0
													Desilter			8.6			14.2			1.0	U
L													Cleaner	1	L				0		<u> </u>		
										ļ			Cleaner	2					0				
										ļ			Centrifu	ge1									
										<u> </u>			Centrifu	ge2									
										<u> </u>			CUR	RRENCI	(D	AILY (COST		(сими	LATIVE	соѕт
														AUD		\$2	26,90	7.10)		\$9	8,746.3	34
I.D.F.S. Engin	D.F.S. Engineer: M.Docherty & J. Singh Offic									BRISB				Teleph	one:		07 380	6-016	50	Fax:		07 3806	-0165

	L	IN	IDEP	ENE	DEN	ТΟ	RILLI	NG I	FLU	лD S	SER	VIC	ES	R	eport #	-cau	7 0	Date			31-Aug-	02
IDFS					ion of	 Bheor	hem Pt							R	ig # Bo	ounty	S	Spud	l Date		25-Aug-	02
	È		_					, Liu	A(CN 070	415	593		Тс	otal MD			10	16	to	1)59
			D	rilli	ng	Flu		lep	ort					Тс	otal VD			10	16	to	1)59
OPERATOR			Sar	ntos Lte	d.					CONT	RACT	OR		DO	GC							
REPORT FO	R		Hei	nry Flir	k & St	eve H	odgetts			REPO	RT FC	R		Peo	dro Joh	ns &	k Ro	nnie	e Saf	ar		
WELL NAME	AND	No	_							FIELD				LOC	CATION				STAT	ΓE		
	IT T)(D	-	Cas	sino 1	1							P - 44	1	Otv	vay Bas	sin	A TI C		Victo	oria		
BHA B BIT SIZE	REED	E 16	JET SI. 16 16		20" &	CONDUCT	ASING DR 427	' ft	н		JME (B	BL) ITS		PUMP	SIZE	RCUL				TION		
12 1/4	EHP51	l engti			30"	SET @	130	m	5	538	5	50	6	X	12 In	ches % FFF	FICIENC	Y	PRE	SS	3000	psi
SIZE 5	s	3-	7	66 Mtrs	13 3/0	SURFACE SET @	2430	m π	TOTAL CI	10	88		Nation	nal 12	-P-160		97		U	P	4	53 min
DRILL PIPE 1	TYPE	Lengti	1			PROD. or		ft		IN STORAGE				BBL/STP	<	ST	K / MIN		SURF	ACE	Ę	.7
SIZE 5 DRILL COLLAR SIZE (<u>HW</u>	Lengti	<u>1</u> י	11 Mtrs	MUD TYPE	ENK Set @ ES		m		40	00			D.1018 BBL/MIN	N B	GA	90 L / MIN		TOTAL	. CIRC.		min
8		1	82	Mtrs			ĸ	CI/PHPA	/Glycol					9.16		3	385		TI	NE		oz min
				N	UD PRO	PERTIE	S						_		Ν		ROP	ERTY	(SPEC	IFICA	TIONS	
SAMPLE	FROM		-					Pi	it	Pit	t	P	it	Mud	Wt 1.	1-1.3 G	Glyco			3 - 5%	API	6.0
		IAKE	N				0 0	03:	00	08:3	30	21:	:00	Vis	45-55	5 Y	rield	Point		15	рН	9-10
FLOWLIN	ETEN	IPERA	TURE				⁰ F/ ⁰ C							KCI	6-8	P	PHPA	exce	SS	1-1.5	Sulphite	s >100
TOTAL M	EASU	RED D	ОЕРТН (Т	MD)			Feet	10	52	105	64	10	59				OE	BSER	RVATIC	NS		
WEIGHT						р 0-	pg / SG	8.80	1.06	8.70	1.04	8.80	1.06	Repl	enish volu	me los	st dov	vnhol	e with p	oremix	containin	9
FUNNEL	lscc	SITY(sec/qt) A	NPI @		°C	۴F	39	9	41		4	8	1.5 p	opb Xantha	an Gur	m, 1.5	5 ppb	PAC-L	, 3% C	Slycol,	
RHEOLOG	GY 60	0:30	0 RPM		21	- <u>C</u>	70 °F	31	23	34	25	45	33	6% ł	<cl, 1="" ppb<="" td=""><td>JK261</td><td>1, with</td><td>п 5 pp</td><td>ob Sano</td><td>dseal a</td><td>added.</td><td></td></cl,>	JK261	1, with	п 5 pp	ob Sano	dseal a	added.	
RHEOLOG	GY 20	0:10	0 RPM		21	00	70 °F	17	12	18	13	27	20	Prep	are a furth	ner 230	0 barr	els in	case o	of furth	er losses,	
RHEOLOG	GY 6	3 RP	M		21	- <u>C</u>	70 °F	4	3	4	3	8	6	and	150 bbls o	f high	visco	sity s	weep (1.5 pp	b XG).	
PLASTIC	visco	DSITY	cP @		21	°C	70 °F	8	-	9		1	2	Dow	nhole loss	es rec	eded	to les	ss than	5 bbl/	hr at 1052	m.
YIELD PO	INT	(lb/10	0FT [*])		21	-C	70 °F	1	5	16	5	2	1	Trea	ted active	syster	m with	ן 0.4 ו	ppb Xa	nthan	Gum, to b	oost
GEL STRE	ENGT	H (lb	/100ft ²)	10 sec/1	0 min/3	0 min.		3/4	/4	3/4/	4	6/8	/10	yield	point.							
	ATE	(cm)	2/30 min.))		00		6.	0	5.5	5	6.	.2									_
HPHT FIL	TRAT	E (cm [°]	2/30 min.))	121	C	250 ° F			22.	0	22	2.0	Barit	e usage fo	or slug	& co	rrect i	invento	ry as p	ber Ballast	Control.
API : HPH	T (Ca	ke/32n	id in.)					1	_	1	_	1:	-			0	PER/	ATIO	NS SU	MMAF	ι γ	
PH								9.	5	9.5	5	8.	.5	Drill	12.25" hol	e with	receo	ding d	lownho	le loss	es	
) UL	(Pm)											Pull	bit at 1057	m due	e to po	oor R	OP.			
			E (Pf/	Mt)				0.15	0.40	0.10	0.40	0.05	0.32	P00	H and R/I	with n	new b	it.				
			(285	000	2/5	00	280	000	Drille		m. Oc	oserve	ea nig	gner cir	culatin	g pressur	2.
	ARDN	ESS	(mg/L)					40	0	44	0	36	50	POC	H with Sus	specte		скеа	nozzie	5.		
SULPHITE	= (m	g/L)							<u></u>			10	0	-								
		(aq	V VAA					1.	2	1.0	, ,	0.	.9	-								
GLYCOL		ENI (% V/V)					2.	0	2.3	, ,	2.	.5	-								
	L)							3/8	00	3/8	<u>00</u>	3/0	0	-								
KCL (%) 						7.	U	7.0	,	1.	.0				0001					
BARTIES		; ppp)				43			-		-		-		M		000			SLS)		
METHYLE				r (ppb e	quivale	nt)		2.	5	2.8	> -	2.	.5	Duran	FLUID BU			FLUI	DISPC	OSED	SUN	
		INT (70		me) Cele	ort			1.0	24	0.9	/ \2	1.	20	Pren		er a	300 3).U.E		29		1255
				ne) Calc				98.	34	99.0]3	98.	.30	Pren	nix - Recy	'C		ump	ea	00	+ RCa	380
) (% 011)	<u></u>				4 7	76	4 5	0	0	E0	Drill	vvater			Jown	noie	98	- LOST	147
SAND CO	NIEN	I (% L	by volum	e)				1.7	5	1.5	0	0.	50	Othe	er (ne			Juner		20	Surrace	950
				PI		USAGE	. 1		1					REC	EIVED	1	360 L	UST		147	FINAL	1,488
Product		rice	Start	Received	Damage	Use		lose		Cost		SHALE S	HAKERS	Hrs	SOLIDS	S CON	RO	L EQI		NT		Hrs
Barite Bulk	\$	14.77	###			174	1	941	\$	2,5	69.98										. T	
Caustic Soda	\$	36.60	19			1		18	\$		36.60	#1	4 x 84	10	Desander		3	-		Centri	ruge	
Defoamer-A	\$	245.33	32			2		30	\$	4	90.66	# 2	4 x 115	10	Desilter	1	20	2	10	Centri	fuge	
Glychem MC	\$	590.00	37			1		36	\$	5	90.00	#3	4 x 84	10	Mud	i Cleai	ner 1			Degas	ser	
Idcide-20	\$	103.00	32			11		21	\$	1,1	33.00	#4	4 x 84	01	Mud		ner 2	rflow	(nng)	Poorb	oy utput (Ca	l/Mip.)
JK-261	\$	109.70	72			2		70	\$	2	19.40	Decend	or	00	ernow (bb	-9) l	unde	w	(644)		աւթու (Ան	
KCI BB Fine	\$	650.00	19			1		18	\$	6	50.00	Desiltor			87			10 5			2 00	
PAC-L	\$	168.00	84			6		/8	\$	1,0	00.800	Cleanor	1	<u> </u>	0.1			0.0			2.00	
Sandseal Fine	\$	98.00	47			10		37	\$	9	00.08	Cleaner	2					0				
Sodium Sulphite	\$	25.02	40			4		36	\$	1	00.08	Contrif	4					U				
Xanthan Gum P	\$	411.42	50			20		30	\$	8,2	28.40	Contrifu	1961									
												Centriffu		<u> </u>								
	-											CUI	RENC	Ý	DA		OST			CUMU		OST
LDES Engineer: M.Docharty & L.Singh Offi									DDIGG						\$16	b,006	b.12	•		\$1 <i>°</i>	4,752.4	
U.F.S. Engineer	.F.S. Engineer: M.Docherty & J. Singh Office												i eleph	one:	07	r 3806	o-0160	U	Fax:		u/ 3806-	165

	4	I	NDE	PE	ND	EN	Γ DRI		NGI	FLU	лD s	SER	NIC	ES	Re	eport #	Jucan	8 0)ate			1-Sep-0	2
(IDF	S)			۸D	iviei	on of l	Sheoche	m Ptu	L Fd						R	ig# E	Bounty	S	pud	Date		25-Aug-	02
	- È			<u>, .</u> ,						A(CN 070	415	593		То	tal MD			10	59	to	14	100
			L	Jril		ng I	-luic	зн	ер	ort					То	tal VD			10	59	to	14	100
OPERATO	R		S	antos	s Ltd						CONT	RACT	OR		DO	GC							
REPORT F	FOR		н	enry	Flin	k & Ste	eve Hod	getts			REPO	RT FC)R		Ped	lro Jol	hns a	& Ro	nnie	e Saf	ar		
WELL NA	ME AN	ID No									FIELD				LOC	ATION				STAT	ΓE		
			C	asino	<u>1</u>							VIC -	P - 44	<u> </u>	Otw	vay Ba	sin			Victo	oria		
BHA BIT SIZE	SMIT	H Y	JEI 16 16 1	SIZE 6		20" &	CASI	NG 427	ft	М		JME (B	BL) PITS		PUMP	SIZE	IRCU	LATIC	N DA		TION		
12 1/4	10G	F	nath			30"	SET @	130	m	6	694	5	575	6	x	12 1	nches % F	FEICIENC	v	PRE	SS	3250	psi
SIZE 5	s			1107	Mtrs	13 3/8	SURFACE SET @	2438 743	ft m	TOTAL CI	12 RCULATING	69		Nation	al 12.	-P-160	70 L	97	•	U	P	:	80 min
DRILL PIPE	TYPE	Le	ngth			1	PROD. or		ft		IN STORAGE			E	BBL/STK		S	TK / MIN		SURF	ACE	3	.5
SIZE 5 DRILL COLLAR SI	HW ZE(")	Le	ngth	111	Mtrs	MUD TYPE	S		m		18	50		C E).1018 BBL/MIN	3	G	204 AL / MIN		TO TOTAL	BIT . CIRC.		min
8			182		Mtrs			K	CI/PHPA	/Glycol					20.77			872		TI	ME		min
					MU	JD PROF	PERTIES		1		1		1				MUD	PROP	ERTY	SPEC	CIFICA	TIONS	
SAMPL	E FRO	М							Pi	it	Pi	t	P	it	Mud	Wt 1	.1-1.3	Glyco			3 - 5%	API	6.0
TIME SA	AMPLE	E TAK	EN						08:	00	13:4	45	20:	:00	Vis	45-5	5	Yield	Point		15	рН	9-10
FLOWL	INE TE	IMPE	RATURE					⁰ F/ ⁰ C			115	46	120	49	KCI	6-8		PHPA	exce	SS	1-1.5	Sulphite	s >100
TOTAL	MEAS	UREL	DEPTH	(TMD))		/	Feet	112	29	126	50	13	60				OE	BSER	VATIC	NS		
WEIGH	T				_		ppg /	30	8.80	1.06	8.80	1.06	8.85	1.06	Treat	ted syste	m with	1 0.2 p	b PH	HPA wh	nile dri	ling throug	gh
FUNNE		OSIT	Y(sec/qt)	API @	Ŋ	43	⁻ C 110	°F	44	4	47		4	8	muds	stones. C	utting	s discr	ete.				
RHEOL	OGY	600::	300 RPM			49	°C 120	⁰ F	39	29	40	30	45	34	Adde	ed Glycol	to kee	эр 3 %	conc	-			
RHEOL	OGY :	200 : ′	100 RPM			49	² C 120	°F	24	18	25	20	28	21	Main	tain prop	erties	and vo	lume	with p	remix	addition	
RHEOL	OGY	6:3 I	RPM			49	°C 120	⁰ F	7	5	8	7	9	6	conta	aining,1.2	2 ppb >	Kantha	n Gu	m, 9%	KCI, 3	% Glycol,	
PLASTI	C VIS	COSIT	<u>Y cP@</u>	2		49	°C 120	°F	10	0	10)	1	1	1.5 p	pb PHPA	A. Upg	rade s	creen	is to s1	15s m	esh.	
YIELD F	POINT	(lb/	100FT ²)			49	°C 120	۴F	19	9	20)	2	3									
GEL ST	RENG	TH	(lb/100ft ²)) 10 s	ec/10) min/3) min.		5/7	/9	8/10	/12	8/12	2/14									
API FIL	TRATE	E (C	m³/30 mi	1.)					6.	4	6.4	4	6.	.2									
HPHT F	ILTRA	TE (c	m³/30 mii	า.)		121	-C 250	۴			22.	0	20	0.0									
API : HF	РНТ (С	ake/3	2nd in.)						1		1::	2	1:	:2			(OPER/		NS SU	MMAF	Υ Υ	
PH			(=)						9.	0	9.	5	9.	.5	RIH \	with new	bit.						
ALKALI			(Pm)												Drill '	12.25" hc	ble to 1	1400 m					
ALKALI				f / Mf)					0.10	0.55	0.15	0.65	0.18	0.68	Circu	ilated hol	le clea	ın. Pun	nped	slug.			
CHLOR	IDE	(mg/L)						280	000	280	00	290	000	P00	H for bit	chang	e.					
	HARD	NESS	(mg/L)					36	50	40	0	28	30									
SULPHI		mg/L)							8	0	80)	8	0									
		(aqq							1.	1	1.2	2	1.	.2									
GLYCO		IIENI	(% V/V)						3.	0	3.0) 	3.	.0									
K+ (m	g/L)								3/8	00	378	00	324	100									
KCL (% by \ =0.40	Vt.)							7.	U	7.0	J	6.	.0		_							
BARYII		iic pp	b)				0											1000		NG (BE	SLS)		
METHY		BLUE		1 Y (pp	pb eq	luivalei	1t)		5.	0	4.0	0	7.	.0	_	FLUID B	UILT		FLUI	DISPO	DSED	SUM	MARY
SOLIDS	CON		(% by vo	lume)	Reto	ort			1./		1./	0	2.0	01	Prem	ix - Wat	er	225 S	.C.E	-	163		1488
LIQUID	CONI	ENI (% by vol	ume) (Calc				98.	30	98.	30	97.	.99	Prem	nix - Rec	ус		ump	ed 		+ Rcd	225
	GS OI)								•	-		Drill	water			own	hole	91	- Lost	294
SAND	ONTE	NI (%	by volu	me)					0.7	(5	0.5	0	1	ĸ	Othe	r		C	other		40	Surface	725
				_	PR	UDUCT	USAGE	1		1					REC	EIVED		225 L	OST		294	FINAL	1,419
Product	-+	Price	Start	Rece	eived	Damage	Used	CI	ose		Cost		SHALES		Here 1	SOLID	S CO	NTROI			NT		Line .
Barite Bulk	\$	i 14.	77 ###	_			70	18	871	\$	1,0	033.90	JUNE S		nrs			*	5128	nrs			ΠſS
Caustic Soda	\$	36.	60 18	+			5	ļ '	13	\$	1	83.00	#1	4 x 115	20	Desander		3	6	8	Centri	fuge	_
Glychem MC	\$	590.	00 36	+			16		20	\$	9,4	40.00	# 2	4 x 115	20	Desilter		20	2	20	Centri	fuge	
Idcide-20		16	\$	{	515.00	#3	4 x 115	20	Mu	d Clea	aner 1			Degas	ser								
JK-261	ļ !	57	\$	1,4	\$26.10	#4	4 x 84	20	Mu	d Clea	aner 2	ef le constant	(Poorb	oy	I/M: \							
KCI BB Fine	· · ·	15	\$	1,9	950.00	Dear	~ ~	00	ernow (p	opg)	unde	now	(ppg)	0		ı/win.)							
Sodium Sulph	nite \$	25.	02 36	_			8		28	\$	2	200.16	Desilter	er		ö./			10.6			1.80	
Xanthan Gum	Р \$	i 411.	42 30	_			5	²	25	\$	2,0	057.10	Cleaner	1		0./			12.2			ə.uu	
													Cleaner	י ס	<u> </u>				0				
	\rightarrow			+									Contrif	4	<u> </u>				U				
	\rightarrow			+									Centrifu	ige'i	<u> </u>								
				_				<u> </u>		ļ			centrifu	igez	L_								
	-+		_	+									CUI	RRENC	(DA	AILY C	COST			CUMU		OST
LDES Engineers M.Desherty & L.Singh Offi														AUD		\$1	6,80	5.26			\$13	31,557.7	/2
I.D.F.S. Engin	.F.S. Engineer: M.Docherty & J. Singh Offic										ANE			Teleph	one:	C	07 380	6-0160)	Fax:		07 3806-0	165

		1	N	DEP	END	EN	T DRI	LLII	NG I	FLU	ND S	ER	VIC	ES	Re	eport #	cean	9 [Date			2-Sep-0	2
(IDF	S)				A Divisi	ion of	Bheoche	m Ptv	Ltd						R	ig# Bo	ounty	5	Spud	Date		25-Aug-	02
	-8				:		 1:.)A 	CN 070	415	593		То	tal MD			14	00	to	17	60
					riiii	ng	FIUIC	ын	ep	ort					То	tal VD			14	00	to	17	60
OPERATO	R			San	tos Lto	1.					CONT	RACT	OR		DO	GC							
REPORT F	OR			Her	ry Flin	k & St	eve Hodo	getts			REPO	RT FC	R		Ped	Iro Joh	ns 8	& Ro	nnie	e Saf	ar		
WELL NAM		ND NO		Cas	ino 1						FIELD		D _ 11		LOC	ATION	sin			Victo	E		
BHA	BITT	YPE		JET SIZ	E		CASI	IG		М	UD VOLL	JME (B	BL)		011	C	IRCUI	LATIC	ON DA	ATA	Jila		
BIT SIZE	SMIT MA74		16 1 16 1	16 16 16 16		20" &	CONDUCTOR SET @	427	ft m	HI R	0LE 58	P 5	ITS	6	PUMP S	SIZE 12 In	ches				TION	3000	nei
DRILL PIPE		Le	ength			13 3/8	SURFACE	2438	ft	TOTAL CI	RCULATING	/OL.		PUI	MP MOD	EL	% EF	FICIEN	CY	BOTT	OMS		18
SIZE 5 DRILL PIPE	S	Le	ength	14	67 Mtrs		SET @	743	m ft		13	58		Nation	al 12.	-P-160	ST	97 K/MIN		U	P		min
SIZE 5	ни	v	-	11	1 Mtrs		LNR Set @		m		34	0		c	0.1018	3	:	200		то	BIT	4	.6 min
DRILL COLLAR SIZ	2E(")	Le	ngth 182		Mtrs	MUD TYPE	S	ĸ	CI/PHPA	/Glycol				E	38L/MIN 20.36		GA	al / Min 855		TOTAL TI	. CIRC. ME	1	33 _{min}
					М	UD PRO	PERTIES									Ν	/UD F	PROP	ERTY	SPEC	IFICA	TIONS	
SAMPLE	E FRC	М							Pi	t	Pi	t	F	L	Mud	Wt 1.	1-1.3 (Glyco	l I	;	3 - 5%	API	6.0
TIME SA	MPL	E TAK	EN						04:	30	12:3	30	20:	:00	Vis	45-55	5	Yield	Point		15	рН	9-10
FLOWLI	NE TI	EMPE	RAT	URE				⁰ F/ ⁰ C			120	49	130	54	KCI	6-8	F	PHPA	exce	ss	1-1.5	Sulphite	s >100
TOTAL I	MEAS	URE	D DE	PTH (T	MD)			Feet	140	00	145	0	16	72				0	BSER	VATIC	NS		
WEIGHT							ppg /	SG	8.90	1.07	9.30	1.12	9.85	1.18	Prepa	are 220 bl	bl prer	mix w	ith 0.5	5 ppb X	antha	n Gum,	
FUNNEL		COSIT	Y(se	ec/qt) A	PI @	49	°C 120	°F	48	3	52	1	5	4	2 ppt	D PAC-L, 6	6% KC	CI, 2p	ob JK	261.			
RHEOLO	DGY	600:3	300	RPM		49	°C 120	°F	47	36	60	44	68	50	Raise	e mud wei	ight fro	om 8.	9 to 9	.9 ppg	with 5	3 ppb Bari	te
RHEOLO	DGY	200 :	100	RPM		49	°C 120	°F	31	23	36	27	43	32	as pe	er program	1 befo	re ent	tering	into Be	elfast F	m.	
RHEOLO	DGY	6:3	RPM	.		49	°C 120	°F	10	8	11	9	12	9	Incre	ased PHF	'A cor	nc abo	ove 1.	5 ppb \	via Pre	mixes	
PLASTIC		COSI	Y	сР @		49	°C 120	°F	1'	-	16		1	8	and o	direct addi	tions.	As a	result	, increa	ase in	rheology.	
YIELD P		(lb/	100F	•T*)		49	C 120	°F	2) // F	28	147	3	2									
		51H 5 (a	(ID/1)	00π) 1	U Sec/1	u min/3	u min.		9/13	/15 0	6.2))	11/1	5									
			m ³ /3	0 min)		121	^o C 250	⁰ F	21	0	22	0	17										
API : HP		Cake/3	32nd	in.)					1:	2	1:2	2	1:	:2			0	PER		NS SU	MMAR	Y	
PH			-	,					9.	5	9.6	5	9.	.5	Conti	inue to PC	DOH. I	Down	load N	/WD d	ata. C	hange out	bit.
ALKALI	NITY	MUD	(P	m)											RIH.	Break circ	culatio	on at s	hoe. I	RIH.			
ALKALI	NITY	FILTR	ATE	(Pf /	Mf)				0.15	0.70	0.12	0.52	0.15	0.70	Drill '	12.25" hol	е						
CHLORI	DE	(mg/L	.)						295	00	285	00	290	000									
TOTAL I	HARD	NESS	6 (mg/L)					32	0	40	0	32	20									
SULPHI	TE ((mg/L))						80)	80)	10	00									
PHPA	(Calc	ppb))						1.:	2	1.3	3	1.	.8									
GLYCOL		NTEN	Г (%	V/V)					3.	5	3.0)	3.	.0									
K+ (m	g/L)								351	00 -	324	00	324	100									
KCL (%	% by \	Wt.)	L.)						6.	5	6.0)	6.	.0				000					
BARYIE					/ (nnh a)					•			64	.1		M		0000			SLS)	0.11	
			(%, h		(ppb ed	quivale	nu)		0. 23	6	5.4	, a	7	.0	Brom	vix - Wato	n L I	470 9		DISPC	64		1/10
	CONT	ENT ((% h	v volun	ne) Calc				97	64	94 /	5 51	93	00	Prem	nix - Wate		470 C).umn	ed	04	+ Rcd	470
CUTTIN	GS O		TIO (/% oil)	10) 0410				•	••	•				Drill	Water			Down	hole	86	- Lost	190
SAND C	ONTE	ENT (%	∕₀ by	volume	e)				TF	र	TR	2	Т	R	Othe	r			Other		40	Surface	840
			,		PR	ODUCT	USAGE								REC	EIVED	F.	470 L	.ost		190	FINAL	1,698
Product		Price		Start	Received	Damage	Used	С	lose		Cost				-	SOLIDS		ITRO	L EQI	UIPME	NT		
Barite Bulk	5	\$ 14.	77 #	##			988	8	883	\$	14,5	92.76	SHALE S	HAKERS	Hrs		#	¥	Size	Hrs			Hrs
Caustic Soda	5	\$ 36.	.60 f	13			3		10	\$	1	09.80	#1	4 x 115	20	Desander		3	6		Centri	fuge	
Glychem MC	5	\$ 590.	00 2	20			8		12	\$	4,7	20.00	# 2	4 x 115	20	Desilter		20	2	15	Centri	fuge	
Idcide-20	5	\$ 103.	00 1	16			2		14	\$	2	206.00	# 3	4 x 115	12	Mud	l Clea	ner 1			Degas	ser	8
JK-261	:	\$ 109.	70 \$	57	36		30		63	\$	3,2	91.00	# 4	4 x 84	16	Mud	l Clea	ner 2			Poorb	ру	
KCI BB Fine	5	\$ 650.	00 1	15			4		11	\$	2,6	00.00			Ove	erflow (pp	og)	Unde	rflow	(ppg)	0	utput (Ga	l/Min.)
PAC-L	5	\$ 168.	00 7	78	40		18	1	00	\$	3,0	24.00	Desand	er					0				
Sodium Sulph	ite s	\$25.	02 2	28			4	:	24	\$	1	00.08	Desilter	_		9.5			10.3			3.00	
Xanthan Gum	P	\$ 411.	42 2	25	60		4	1	81	\$	1,6	45.68	Cleaner	1					0				
													Cleaner	2					0				
													Centrifu	ige1									
													Centrifu	ige2	L								
													CUI	RENC	ſ	DA		OST			CUMU		OST
LDES Engineer: M Docherty & J Singh Offic										BDIED				Tolonk	000	\$30	J,289	9.32	0	Farri	\$16	07 2000	14
	. 134		IV		ιy Οι	J. Jingr		onice:		PLIOR				reiebu	one:	0/	3000	0-010	•	гах:		JI JOUD-	000

	L L	IN	IDEP	END	EN.	T DRI	LLII	NG	FLU	лD S	SER	VIC	ES	Re	eport #	ocean	10	Date			3-Sep-	02
LDF	S)			A Divisi	on of	Rheoche	m Pty	Ltd				500		R	ig# I	Bounty		Spud	Date		25-Aug	-02
									AI Art	CN 070	415	593		Тс	tal MD			17	60	to	1	797
				r	ng			ep	on					Тс	otal VD			17	60	to	1	795
OPERATO	R		Sar	ntos Lto	l.					CONT	RACT	OR		DO	GC							
		No	Her	nry Flin	k & St	eve Hodg	jetts			REPO	RT FC	DR		Pec	Iro Jo	hns -	& Rc	onnie	e Saf	ar		
		NO	Cas	sino 1						FIELD	VIC -	P - 44		Otv	vav Ba	isin			Victo	oria		
BHA	BIT TYP	E	JET SI	ZE		CASIN	G		М	UD VOLI	JME (B	BL)			(CIRCU	JLATIO	on da	ATA			
BIT SIZE 12 1/4	SMITH MA74BP	16	16 16		20" & 30"	CONDUCTOR SET @	427 130	ft m	н 8	OLE 875	Р 5	чтs 520	6	PUMP : X	size 12 I	nches			CIRCULA	ATION ESS	3250	psi
		Lengt			13 3/8	SURFACE	2438	ft	TOTAL CI	RCULATING	VOL.		PU		EL	% E	FFICIEN	CY	BOTT	TOMS		40
SIZE 5 DRILL PIPE	S TYPE	Lengtl	<u>15</u>	04 Mtrs		PROD. or	743	m ft		IN STORAGE	95		Nation	BBL/STK	-P-160	s	97 TK / MIN		USURF	ACE		min
SIZE 5	HW	Longt	<u>1'</u>	11 Mtrs		LNR Set @		m		38	30		().1018	3		190		TO	BIT		4.9 min
8	Ε()	Lengti 1	82	Mtrs	MODITE	.5	ĸ	CI/PHPA	/Glycol					19.34		G	812			ME		92 _{min}
				M	UD PRO	PERTIES		1				r				MUD	PROP	ERTY	SPEC	CIFICA	TIONS	
SAMPLE	FROM							Pi	it	Pi	t	P	it	Mud	Wt	10.3	Glyco	bl	;	3 - 5%	API	6.0
TIME SA	MPLE	TAKE	N					04:	45	13:0	00	20:	:00	Vis	45-5	55	Yield	Point		>15	pН	9-10
FLOWLI	NE TEN	IPER/	TURE				⁰ F/ ⁰ C	130	54	130	54	110	43	KCI	6-8	3	PHPA	exce	SS	>1.5	Sulphite	s >100
TOTAL N	MEASU	RED D	DEPTH (T	MD)			Feet	179	91	179	97	17	97				0	BSER	VATIC	ONS		
WEIGHT						ppy / s	°.	10.05	1.21	10.00	1.20	10.30	1.24	Incre	ased mu	ıd weię	ght fur	ther to	o 10 pp	g at 17	'90m, an	d then
FUNNEL		SITY(sec/qt) A	PI @	38	°C 100	°F	5	8	55		6	4	to 10	.3 ppg w	ith bai	rite aft	er trip.	, due to	high	gas level:	6.
RHEOLO	DGY 60	0:30			49	°C 120	°F	67	50	65	47	75	54	Add	premix c	ontain	ing 1.5	5 ppb 	PAC-L	, 6% K	Cl, 1.7 pp	b
RHEOLO	DGY 20	0:10	0 RPM		49	°C 120	°F	43	32	40	29	46	34	JK26	1 to mai	ntain p	proper	ties.	_			
RHEOLO	DGY 6:	3 RP	M R O		49	°C 120	°F	12	10	11	8	12	10	Desil	ter could	l not b	e run v	while l	Jegass	ser in c	peration.	
PLASTIC		SITY	CP @		49	°C 120	°F	1	7	18	3	2	1	Adde	ed Glyche	em an	d KCI	into sy	/stem t	before	POOH.	
YIELD P	OINT	(lb/10			49	C 120	°F	3	3	29) // C	3	3	-								
GEL ST		dl) H	/100ft ⁻)	10 sec/10	0 min/3	0 min.		11/10	6/17 0	9/14/	/16	12/1	6/18 2	-								
		(cm	/30 min.)		121	°C 250	⁰ E	J. 17	0	16	<u>,</u>	4.	.5 : 0	Barit	a Potenti	ial· 10	65 nn	a 200	umina	1700 1	ble	
		= (CM (0/32m	/30 min.)		121	0 230	Г	1/	.0 2	10.	2	10	·2	Dant	e rotent	iai. 10.		y, ass Δτιοι		MMAR	v	
	iii (Ca	(C/JZI	iu iii.)					۱.	<u>-</u> 0	9.0	2 N	9	5	Drill	12 25" hi	ole in V	Naare	Em c	irculati		nas nea	(5
			(Pm)					0.	•	0.0				Run	degasse	r. Drill	12.25	" hole	to 179	7 metr	es. POO	-
ALKALI		TRA	, E (Pf/	Mf)				0.10	0.65	0.10	0.65	0.15	0.70	due t	o low R	DP. Pu	o	ut at tio	aht sec	tion at	top of Be	elfast
CHLORI	DE (m	a/L)		,				300	00	290	00	312	200	Form	nation 16	610m t	to 149	8m. R	J IH to b	ottom.	' 9m fill.	
TOTAL H		ESS	(mg/L)					30	0	32	0	30	00	Circu	late out	gas ar	nd wei	ght up	to 10.	3 ppg.	Flow che	ck,
SULPHI	ΓE (m	q/L)	() /					8	0	80)	8	0	Pum	p out of I	- hole fro	om 17	97 - 14	420m r	no drag	, from 14	-20 -
PHPA	(Calc p	ob)						1.	7	1.8	3	1.	.8	1074	m 20-50	K drag	g. Flow	chec	k, stati	c. Pun	ip slug. P	ООН
GLYCOL		ENT (% V/V)					3.	0	3.(0	3.	.0	to sh	oe. Flow	check	k, stati	c. PO	OH.			
K+ (mg	g/L)		,					324	00	270	00	324	400									
KCL (%	6 by Wt	.)						6.	0	5.0	D	6.	.0									
BARYTE	S (Calc	ppb)						71	.7	66.	2	84	l.8			MUD A	ACCO	UNTIN	NG (BE	BLS)		
METHYL	ENE B	UE C	APACITY	r (ppb ed	quivale	nt)		12	.0	12.	0	12	2.0		FLUID B	UILT		FLUI	D DISPO	DSED	SUI	IMARY
SOLIDS	CONTE	NT (%	by volu	me) Reto	ort			8.0	00	8.0	0	9.	00	Pren	nix - Wat	ter	200	S.C.E		14	INITIAL	1698
LIQUID	CONTE	NT (%	by volur	ne) Calc				92.	00	92.0	00	91.	.00	Pren	nix - Rec	сус	[Dump	ed		+ Rcd	200
CUTTING	GS OIL	RATIC) (% oil)											Drill	Water		1	Down	hole	59	- Lost	123
SAND C	ONTEN	T (% k	y volum	e)				2.0	00	1.5	0	1.0	00	Othe	r			Other		50	Surface	900
				PR	ODUCT	USAGE								REC	EIVED		200 I	OST		123	FINAL	1,775
Product	1	Price	Start	Received	Damage	Used	CI	lose		Cost					SOLID	os co	NTRO	L EQI	UIPME	NT		
Barite Bulk	\$	14.77	883			443	4	40	\$	6,5	543.11	SHALE S	HAKERS	Hrs			#	Size	Hrs			Hrs
Caustic Soda	\$	36.60	10			1		9	\$		36.60	# 1	4 x 115	12	Desande	r	3	6		Centri	uge	
Glychem MC	\$	590.00	12			12			\$	7,0	080.00	# 2	4 x 115	12	Desilter		20	2	2	Centri	uge	
ldcide-20	\$	103.00	14			5		9	\$	ŧ	515.00	# 3	4 x 115	12	Mu	ıd Cle	aner 1			Degas	ser	12
JK-261	\$	109.70	63			9		54	\$	9	987.30	# 4	4 x 84	2	Mu	ıd Cle	aner 2	2		Poorb	ру	
KCI BB Fine	\$	650.00	11			3		8	\$	1,9	950.00			Ov	erflow (p	opg)	Unde	rflow	(ppg)	0	utput (G	al/Min.)
PAC-L	\$	168.00	100			6	9	94	\$	1,0	008.00	Desand	er					0				
Sodium Sulphi	ite \$	25.02	24			3	:	21	\$		75.06	Desilter			10.0			13.4			5.00)
									ļ			Cleaner	1					0				
									<u> </u>			Cleaner	2					0				
									ļ			Centrifu	ige1							<u> </u>		
												Centrifu	ige2	L								
												CUR	RRENC	ſ	D		COST		-	CUMU	LATIVE	COST
LDES Engineer: M Decharty & LSingh Offic													AUD		\$1	18,19	5.07			\$18	80,042.	11
I.D.F.S. Engine	er:		M.Doche	rty &	Office:		BRISB	ANE			Teleph	one:	(07 380	6-016	0	Fax:		07 3806	0165		

	4	I	NDE	PEND) EN	T DRI	LLII	NG	FLU	ND S	SEP	۱VIC	ES	Re	eport #	Juean	11 [Date			4-Sep-)2
	S)			A Divis	ion of	Bheoche	m Ptv	Ltd						R	ig# E	Bounty		Spud	Date		25-Aug	02
	ų.		Г			_];,	,		A۱ احساب	CN 070	415	593		Тс	otal MD			17	97	to	1	797
			L	riiii	ng	FIUIC	אנ	ep	on					Тс	otal VD			17	95	to	1	795
OPERATO	DR		Sa	ntos Lt	d.					CONT	RACT	OR		DO	GC							
REPORT I	FOR		He	enry Flir	ık & St	eve Hod	getts			REPO	RT FC	DR		Pec	dro Jo	hns	& Ro	onnie	e Saf	ar		
WELL NA	MEAN	ID NO	Ca	isino 1						FIELD		P - 44		LOC Ofv	JATION	ein			Victo	E		
BHA	BIT T	PE	JET S			CASI	١G		м	UD VOLI	JME (B	BL)	1	011	(CIRCU	ILATIO	DN DA	ATA	Jila		
BIT SIZE	Hugh	es <u>'</u>	16 16 16		20" &	CONDUCTOR SET @	427	ft	н	OLE	F	PITS	6	PUMP	SIZE	nchoe				TION	3300	nci
DRILL PIPE	interio	Le	ngth	1	13 3/8	SURFACE	2438	ft	TOTAL CI	RCULATING	VOL.	20	PU	MP MOD	DEL	% E	FFICIEN	CY	BOTT	OMS	3300	43
SIZE 5 DRILL PIPE	S TYPE	Le	ngth 1	504 Mtrs		SET @	743	m ft		13 IN STORAGE	95		Natior	al 12	-P-160	s	97 TK / MIN		U	P		min
SIZE 5	нм	,	-	111 Mtrs		LNR Set @		m		40	00		(0.1018	В		178		то	BIT		5.3 min
DRILL COLLAR SI 8	ZE (")	Le	ngth 182	Mtrs	MUD TYPE	S	ĸ	CI/PHPA	/Glycol				1	BBL/MIN 18.12	2	G	5AL / MIN 761		TOTAL TI	. CIRC. ME		99 _{min}
			•	N	UD PRO	PERTIES										MUD	PROP	ERT	SPEC	CIFICA	TIONS	
SAMPL	E FRO	М						P	it	Pi	t	Р	it	Mud	Wt	10.3	Glyco	bl		3 - 5%	API	6.0
TIME S	AMPLE	ΞΤΑΚ	EN					08:	00	11:0	00	20:	:00	Vis	45-5	5	Yield	Point		>15	рН	9-10
FLOWL	INE TE	MPE	RATURE				⁰ F/ ⁰ C	110	43	110	43	100	38	ксі	6-8	}	PHPA	exce	ss	>1.5	Sulphite	s >100
TOTAL	MEAS	URED) DEPTH (TMD)			Feet	17	50	178	31	17	97				0	BSER	VATIC	NS		
WEIGH	Т					ppg /	SG	10.50	1.26	10.30	1.24	10.30	1.24	Blee	d in prem	nix to c	cut wei	ght ba	ack to 1	10.25 p	pg	
FUNNE		OSIT	Y(sec/qt)	API @	41	^O C 105	٥F	6	8	58	3	6	4	Trea	t active n	nud wi	ith Sar	Idseal	l after h	ole ta	king mud	at
RHEOL	OGY	600:3	300 RPM		49	°C 120	٥F	86	62	69	51	78	55	MW	of 10.5 p	pg and	d 600 g	gpm, i	initially	at 60	oph.	
RHEOL	OGY :	200 : 1	100 RPM		49	^O C 120	° F	53	40	41	31	45	33	At re	duced st	rokes	and 10).4 pp	g losse	es rece	ded.	
RHEOL	OGY	6:3 I	RPM		49	°C 120	°F	14	12	12	10	12	10	Trea	ted syste	em with	n Idcid	e.				
PLASTI	C VIS	COSIT	Y cP@		49	°C 120	۴F	24	4	18	3	2	3									
YIELD F	POINT	(lb/	100FT ²)		49	120	۴F	3	8	33	3	3	2									
GEL ST	RENG	TH ((Ib/100ft ⁻)	10 sec/1	0 min/3	0 min.		12/1	//20	10/13	s/18	11/1	5/18	-								
		= (C	m/30 mm $m^{3}/20 min$.) \	121	⁰ C 250	⁰ E	5. 16	0	16	0	4.	.0 : 0	Barit	e Potenti	al· 10	45 nn	n 966 n	umina	1700 1	hle	
		ake/3	2nd in)	.)	121	230	Г	1.	2	10	2	1:	:3	Dant	e i otenti	ai. 10.	OPER	ass ATIOI		MMAR	Y	
PH	(•		,					9.	0	9.0	0	9	.5	M/U	bit. RIH t	o 175	0m. Ci	rculat	e via cl	hoke a	fter 5000	strokes
ALKAL		NUD	(Pm)											Minir	mal gas t	o surfa	ace. Si	art re	aming	47 m f	II.	
ALKAL		ILTR	ATE (Pf	/ Mf)				0.10	0.80	0.10	0.80	0.12	0.70	Circu	ulated ho	le clea	an and	pump	bed slug	g.		
CHLOR	IDE	(mg/L)					300	00	300	00	300	000	POO	H to sho	e.						
TOTAL	HARD	NESS	(mg/L)					32	20	30	0	28	B O	Waiti	ing on we	eather						
SULPH	ITE (mg/L)						6	0	60)	4	0	Hang	ged string	g in we	ellhead	l. Disp	laced	riser m	ud volum	е.
PHPA	(Calc	ppb)						1.	8	1.8	8	1.	.8									
GLYCO	LCON	ITENT	" (% V/V)					2.	5	2.	5	2	.5									
K+ (m	ig/L)							351	00	351	00	324	400	-								
KCL (% by \	Vt.)						6.	5	6.	5	6.	.0									
BARYI	ES (Ca		b)			0		78	.0	70.	.4	70).4				ACCO		NG (BE	SLS)		
				Y (ppb e	quivale	nt)		15	.0	12.	.5	13	<u>s.u</u>	Dron	FLUID B		200	FLUI	DISPC	ISED	SUN	1775
				unie) Kei	on .			00 00	00	10.0	00	00	.00	Pren	nix - wai	er	200 3	5.U.E	ad	57		200
				ine) Cal	•			09.	00	90.0	00	90.	.00	Drill	Wator	.yc		Down	holo	93	- Lost	180
SAND		NT (%	by volur	ne)				1.5	50	1.0	0	1.0	00	Othe	r			Other		30	Surface	920
		()	·	PI	RODUCT	USAGE					-			REC	EIVED		200 1	OST		180	FINAL	1.795
Product		Price	Start	Received	Damage	Used	с	lose		Cost				<u> </u>	SOLID	s co	NTRO	LEQ		NT		,
Barite Bulk	5	14.	77 440			240	2	200	\$	3.6	544.80	SHALE S	HAKERS	Hrs			#	Size	Hrs			Hrs
Caustic Soda	\$	36.	60 9	1	1	2		7	\$	-) -	73.20	#1	4 x 115	3	Desander	,	3	6		Centri	uge	
Idcide-20	\$	103.	00 9			9			\$	ç	927.00	# 2	4 x 115	3	Desilter		20	2	4	Centri	uge	
JK-261	\$	109.	70 54			8		46	\$	8	377.60	# 3	4 x 115	3	Mu	d Cle	aner 1			Degas	ser	
KCI BB Fine	\$	650.	00 8	1		2		6	\$	1,3	300.00	# 4	4 x 84		Mu	d Cle	aner 2			Poorb	ру	
PAC-L	\$	168.	94		L	6	1	88	\$	1,0	008.00			Ov	erflow (p	opg)	Unde	rflow	(ppg)	0	utput (Ga	l/Min.)
Sandseal Fine	e \$	98.	00 37			15	:	22	\$	1,4	470.00	Desand	er					0				
Sodium Sulph	nite \$	25.	02 21			3		18	\$		75.06	Desilter			10.3			13.2			10.0)
												Cleaner	· 1					0				
												Cleaner	2					0				
												Centrifu	ige1									
					ļ				ļ			Centrifu	ıge2		1				1			
				<u> </u>	<u> </u>				ļ			CUI	RRENC	ſ	D	AILY	COST		<u> </u>	CUMU		OST
LDES Engineer: M Docherty & J Singh Offic													AUD		\$	9,27	5.66		Ļ	\$18	9,317.	77
I.U.F.S. Engin	eer:		M.Doch	erty &	J. Singl	1	Office:		BRISB	ANE			i eleph	one:	(J7 380	010-016	U	Fax:		U/ 3806-	U165

	L		INE	DEP	END	EN.	ГD	RILL	ING	FLL	лD s	SER	VIC	ES	R	eport #	Jucan	12 [Date			5-Sep	-02	
	FS)			4	Divisi	on of I	Sheo	chem P	tu I tel						R	ig#	Bounty	\$	Spud	l Date		25-Au	g-02	
	- E						—ı.	.:	D	A	CN 070	0 415	593		Тс	otal MD			17	'97	to		1797	
	-				rillii	ng I	-π	пан	кер	on					Тс	otal VD			17	'95	to		1795	
OPERATO	OR			San	tos Ltd	Ι.					CONT	RACT	OR		DO	GC								
REPORT	FOR			Hen	ry Flin	k & Ste	eve H	lodgetts	5		REPO	RT FC	R		Peo	dro Jo	hns	& Ro	nni	e Saf	ar			
WELL NA		ND No	D								FIELD)	_		LOC	CATION				STAT	ΓE			
				Cas	ino 1					.		VIC -	P - 44	r –	Otv	vay Ba	sin			Vict	oria			
BHA BIT SIZE	BII I Hugi	YPE hes	16 1	JET SIZ	E	20" &		TOR 42	27 ft	N ⊢		UME (B	BL) hts		PUMP	SIZE	JIRCU		DN DA		ATION			
12 1/4	MXR	09D	ength			30"	SET @	1:	30 m	8	375	5	00	6	x	12 1	nches % F	FEICIEN	~~	PRE	ESS		ps	.i
SIZE 5	s	;	-ongin	150)4 Mtrs	13 3/8	SURFACE SET @	= 24. 74	13 m	TOTALC	RCULATING	VOL. 875		Natior	nal 12	-P-160	<i>7</i> 0 –	97		U	IP		mi	in
DRILL PIPE	TYPE	: L	ength				PROD. or	2	ft		IN STORAG	E			BBL/STH	<	S	TK / MIN		SURF	ACE			
SIZE 5 DRILL COLLAR S	HV SIZE (")	N L	ength	11	1 Mtrs	MUD TYPE	S	μ	m		5	00			D.1018 BBL/MIN	8 4	G	AL / MIN		TO TOTAL	BIT CIRC.		mi	n
8			182		Mtrs				KCI/PHPA	A/Glycol										TII	ME		mi	.n
					M	UD PROF	PERTIE	ES			1				-		MUD	PROP	ERT	Y SPEC	CIFICA	TIONS		
SAMPL	_E FRO	DM							Р	Pit	Pi	it	P	lit	Mud	Wt	10.3	Glyco		:	3 - 5%	API		6.0
TIME S	SAMPL	E TAI	KEN						02	:00	13:	00	21:	:00	Vis	45-5	55	Yield	Point	t	>15	рН		9-10
FLOWL	LINE T	EMPE	ERAT	URE				⁰ F/ ⁰	2						KCI	6-8	3	PHPA	exce	ess	>1.5	Sulphit	es >	>100
TOTAL	. MEAS	SURE	D DE	PTH (TI	MD)			Fe	et 17	'97	179	97	17	97				0	BSER	RVATIC	DNS			
WEIGH	IT						-	opg / SG	10.30	1.24	10.35	1.24	10.35	1.24	Corr	ect solids	s analy	sis so	that t	he reto	ort solid	ds is not		
FUNNE	EL VIS	COSI	TY(se	c/qt) AF	יו @	27	°C	80 °F	6	68	70	0	7	1	corre	ected for	salt.							
RHEOL	OGY	600:	300	RPM		49	°C	120 ⁰ F	75	53	70	50	69	49	Volu	me analy	sis as	sumes	riser	is full o	of mud	and not	in pit.	
RHEOL	OGY	200 :	100	RPM		49	°C	120 °F	45	32	42	31	41	30										
RHEOL	OGY	6:3	RPM			49	°C	120 °F	11	9	11	9	11	9	Prep	ared 150) ppl ol	f 12.5%	6 KCI	brine.				
PLAST	IC VIS	COSI	TY	cP @		49	- <u>C</u>	120 °F	2	2	20	0	2	0	Clea	ned out S	Sandtr	ap.						
YIELD	POINT	lb	/100F	T ²)		49	C	120 °F	3	51	30	0	2	9	Drill	water tak	en tes	sted as	:					
GEL ST	TRENC	GTH	(lb/1	00ft ²) 1	0 sec/1	0 min/3) min	•	8/12	2/17	9/14	/18	10/1	5/18	pH: 8	3.3, Hard	ness:	180 m	g/I, Pi	f/Mf 0.0	02/0.32	2, CI 620	mg/l	
API FIL	TRAT	Е (cm ³ /3	0 min.)			2		4	.8	4.	6	4.	.8										
HPHT F	FILTR/	ATE (cm ³ /3	0 min.)		121	°C	250 ⁰ F	17	7.0	18	.0	19	9.0	Barit	e Potenti	ial: 11.	4 ppg	assu	iming 1	700 bl	ols.		
API : H	PHT (Cake/	32nd	in.)					1	:2	1:	3	1:	:3			(OPER	ATIO	NS SU	MMAF	RY		
PH									9	.0	8.	5	8	.5	Wait	on weat	her.							
ALKAL	.INITY	MUD	(Pi	m)						1				1										
ALKAL	.INITY	FILTE	RATE	(Pf / I	Mf)				0.15	0.75	0.10	0.70	0.06	0.66										
CHLOR	RIDE	(mg/l	L)						29	500	310	00	310	000										
TOTAL	. HARD	DNES	S (I	mg/L)					30	00	32	0	36	60										
SULPH	IITE	(mg/L	.)						2	20														
PHPA	(Calo	c ppb)						1	.8	1.	8	1.	.8										
GLYCC	DL CO	NTEN	T (%	V/V)					2	.2	2.	2	2.	.2										
K+ (m	ng/L)								324	400	324	00	324	400										
KCL	(% by	Wt.)							6	.0	6.	0	6	.0										
BARYT	res (C	alc p	pb)						63	3.2	52	.9	52	2.9		I	MUD A		JNTI	NG (BE	BLS)	-		
METHY	LENE	BLU	E CA	PACITY	(ppb ed	quivaleı	nt)		12	2.5	12	.0	11	.0		FLUID B	UILT		FLUI	D DISPO	DSED	SL	MMARY	
SOLIDS	S CON	TENT	「 (% b	y volun	ne) Reto	ort			10	.50	11.	60	11.	.60	Pren	nix - Wat	ter	150 \$	6.C.E			INITIAL	. 1	795
LIQUID	CON	TENT	(% b	y volum	e) Calc				89	.50	88.	40	88	.40	Pren	nix - Rec	ус	0	Dump	ed	70	+ Rcd	-	150
CUTTIN	NGS O	IL RA	TIO (% oil)											Drill	Water			Down	hole		- Lost		70
SAND	CONT	ENT (% by	volume	e)				1.	00	1.0	00	1.	00	Othe	ər		C	Other			Surface	• 1	,000
					PR	ODUCT	USAG	E							REC	EIVED		150 I	.ost		70	FINAL	1,	,875
Product		Price	e	Start	Received	Damage	Use	ed	Close		Cost					SOLID	s co	NTRO	L EQ	UIPME	NT			
KCI BB Fine		\$ 650	0.00	6			3		3	\$	1,	950.00	SHALE S	HAKERS	Hrs			#	Size	Hrs			1	Hrs
													# 1	4 x 115	5	Desander	r	3	6		Centri	fuge		
													# 2	4 x 115	5	Desilter		20	2		Centri	fuge		
						# 3	4 x 115	5	Mu	Id Cle	aner 1			Degas	ser									
						# 4	4 x 84		Mu	Id Cle	aner 2			Poorb	оу									
							•	Ov	erflow (p	opg)	Unde	rflow	(ppg)	C	utput (C	al/Min.))							
						Desand	er					0												
	\rightarrow									1			Desilter		1				0					
	\rightarrow									1			Cleaner	1	1				0					
													Cleaner	2					0					
	-+		\uparrow										Centrifu	ige1	1									
	-+												Centrifu	ige2							<u> </u>			
													CUI	RRENC	Y	D	AILY (COST			сими	LATIVE	соѕт	
														AUD		\$	1.95	0.00			\$19	91.267	.77	
I.D.F.S. Engir	D.F.S. Engineer: M.Docherty & J. Singh Offic										ANE			Teleph	one:		07 380	6-016	0	Fax:	, - ,	07 3800	6-0165	

	4		INC)EP	END	EN	Γ DRIL	LI	NG	FLL	ND S	SER	NIC	ES	Re	eport #	CCEAN	13	Date			6-Sep-02	
IDF	S)				A Divisi	on of F	Bheochem	Ptu	Ltd						R	ig #	Bounty	'	Spud	Date		25-Aug-0	2
	ųÈ.				.:	I				A۱ احساب	CN 070	0 415	593		То	otal MC)		17	97	to	179	97
					r	ngi		н	ep	ort					То	tal VD)		17	95	to	179	95
OPERATO)R			San	tos Ltd	l.					CONT	RACT	OR		DO	GC							
REPORT F	OR			Hen	ry Flin	k & Ste	eve Hodge	tts			REPC	RT FC	DR		Ped	Iro Jo	hns	& R	lonnie	e Saf	ar		
WELL NAI		ID No)	Cas	ino 1						FIELD) VIC -	D - 11		LOC Ofta	ATION	N acin			Victo	E		
BHA	BIT T	YPE		JET SIZ	Έ		CASING			м	UD VOL	UME (B	BL)		010		CIRCL	JLAT		ATA	Jila		
BIT SIZE	Hugh	ies	16 1	6 16		20" &	CONDUCTOR SET @	427	ft	н		P	PITS	6	PUMP S	SIZE	Inches				TION		nal
DRILL PIPE	WIARC	,50 Li	ength			30 13 3/8	SURFACE	2438	ft	C TOTAL CI	RCULATING	VOL.	000	PUN	A NP MOD	EL	% E	FFICIE	NCY	BOTT	OMS		psi
SIZE 5	S	L	enath	150)4 Mtrs		SET @	743	m		13 IN STORAG	875 E		Nation	al 12.	P-160	s	97	IN	U	P		min
SIZE 5	ни	/		11	1 Mtrs	-	LNR Set @		m		5	00		0	0.1018		-	-		то	BIT		min
DRILL COLLAR SI	ZE (")	L	ength 182		Mtrs	MUD TYPE:	S	ĸ	CI/PHPA	/Glvcol				В	BBL/MIN		G	GAL / M	IIN	TOTAL TIM	. CIRC. ME		min
					MU	JD PROF	PERTIES										MUD	PRO	PERTY	SPEC	IFICA	TIONS	
SAMPL	E FRO	M							P	it	Р	it	Р	it	Mud	Wt	10.3	Glyd	col	:	3 - 5%	API	6.0
TIME SA	AMPLI	E TAP	KEN						03:	30	13:	00	20:	00	Vis	45-	55	Yiel	d Point		>15	pН	9-10
FLOWL	INE TE	EMPE	RATI	URE			0	=/ ⁰ C							ксі	6-	8	PHP	PA exce	ss	>1.5	Sulphites	>100
TOTAL	MEAS	URE	D DEI	PTH (TI	MD)			Feet	17	97	17	97	17	97				(OBSER	VATIO	NS		
WEIGH	Г						ppg / So	3	10.35	1.24	10.35	1.24	10.35	1.24	Servi	ce desil	ter and	d des	ander				
FUNNE		COSIT	TY(se	c/qt) Al	PI @	21 (^D C 70 ⁰	=	73	3	7:	2	7	2									
RHEOL	OGY	600:	300	RPM		49 (^D C 120 ⁰	=	69	49	69	49	67	48	Adde	d 1.45 p	opb PA	AC L I	to KCI b	orine in	prepa	ration	
RHEOL	OGY	200 :	100	RPM		49 (^D C 120 ⁰	-	41	29	40	29	40	29	for ci	rculatior	า.						
RHEOL	OGY	6:3	RPM			49 9	C 120 º	=	10	8	10	8	10	8									
PLASTI	C VIS	COSI	TY (с Р @		49	^o C 120 ^o	=	2	0	2	0	1	9									
YIELD F	POINT	(lb/	/100F	T ²)		49 `	°C 120 °	-	2	9	2	9	2	9									
GEL ST	RENG	TH	(lb/10	00ft ²) 1	0 sec/10	0 min/30) min.		8/12	2/16	9/12	2/15	9/13	s/15 -									
API FIL	TRATI	E (c	cm ³ /3	0 min.)					4.	6	4.	8	4.	7	,						4704		
		IE (C	22md	0 min.) in \		121	C 250°	-	19	.0 2	20	.0 2	20	.0 2	Barite	e Poten	(al: 11	.4	ppg, as	ssumin			
	- TT (C	ake/s	5211u	m. <i>)</i>					· · ·	5 5	0	3 5	· · ·	5	W/oit		thor	UPE	KATIOI	13 30		.1	
		мпр	(Pr	n)					0.	5	0.	5	0.	5	vvalt	UII wea	uiei.						
ALKALI		FILTR		, (Pf /	Mf)				0.01	0.75	0.05	0.70	0.05	0.70									
CHLOR	IDE	(ma/L	_)	(,				300	00	300	00	298	800									
TOTAL	HARD	NES	, S (r	na/L)					28	80	30	0	30	0									
SULPHI	TE (mg/L	.)	3,					-	-		-		-									
PHPA	(Calc	ppb)						1.	8	1.	8	1.	8									
GLYCO	LCON		, T (% '	V/V)					2.	2	2.	2	2.	2									
K+ (m	g/L)								324	00	324	00	324	00									
KCL (% by \	Wt.)							6.	0	6.	0	6.	0	1								
BARYTI	ES (Ca	alc pp	ob)						61	.5	58	.6	58	.6			MUD	ACCO	OUNTIN	NG (BB	BLS)		
METHY	LENE	BLUE	E CAF	PACITY	' (ppb ec	quivaler	nt)		12	.0	12	.0	12	.0		FLUID B	BUILT		FLUI	D DISPC	OSED	SUMM	ARY
SOLIDS	CON	TENT	' (% b	y volur	ne) Reto	ort			11.	00	11.	20	11.	20	Prem	nix - Wa	iter		S.C.E			INITIAL	1875
LIQUID	CONT	ENT	(% by	/ volum	ne) Calc				89.	00	88.	80	88.	80	Prem	nix - Re	сус		Dump	ed		+ Rcd	
CUTTIN	GS OI	LRA	TIO (% oil)											Drill	Water			Down	hole		- Lost	
SAND C	ONTE	ENT (%	% by	volume	9)				1.0	00	1.0	00	1.0	00	Othe	r			Other			Surface	1,000
					PR	ODUCT	USAGE			1					REC	EIVED			LOST			FINAL	1,875
Product		Price	•	Start	Received	Damage	Used	С	lose		Cost		SHALE S	HAKERS	Hrs	SOLI	os co	NTR	OL EQI		NT		Hrs
PAC-L	1	5 168.	.00 8	8			4		84	\$		672.00		4 4 4 5				<i>"</i>	0.20			. [
													#1	4 x 115		Desande	er	3	0		Centri	ruge	-
													#2	4 x 115		M	ud Cle	aner	· 1		Degas	ser	
													#4	4 x 84		M	ud Cle	aner	2		Poorbe	ov.	
															Ove	erflow (ppg)	Unc	derflow	(ppg)	0	utput (Gal/	Min.)
													Desande	ər					0				
													Desilter						0				
													Cleaner	1					0				
													Cleaner	2					0				
												Centrifu	ge1										
										İ –			Centrifu	ge2									
		ł			İ			CUF	RRENCY	r	D	AILY	cos	т	(сими	LATIVE CC	OST					
				1				AUD			\$672	2.00			\$19	91,939.77	7						
I.D.F.S. Engin	D.F.S. Engineer: M.Docherty & J. Singh Office:												-	Telepho	one:		07 380	06-01	60	Fax:		07 3806-01	65

Page

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	4	1	IND	EP	END	EN	T DRI	LLI	NG I	FLU	ND S	SER	VIC	ES	Re	eport #	14	4 Date			7-Sep-02	
	FS)	-			A Nivisi	on of I	Bheoche	m Ptu	u l td						R	ig # Bount	y	Spud	Date		25-Aug-02	2
	- 6			_ م		. 10 110				A(CN 070) 415	593		То	tal MD		17	97	to	179	7
	-			D	rillii	ng I	Fluid	1 H	lepo	ort					То	tal VD		17	95	to	179	5
OPERATO	DR			San	tos Ltd	Ι.					CONT	RACT	OR		DO	GC						
REPORT	FOR			Hen	ry Flin	k & Ste	eve Hodg	getts			REPO	RT FC	R		Ped	lro Johns	& F	Ronnie	e Saf	ar		
WELL NA	ME AI	ND No)								FIELD)	_		LOC	ATION			STAT	ΓE		
DUA				Cas	ino 1		0.4.01					VIC -	P - 44		Otw	ay Basin			Victo	oria		
BHA BIT SIZE	BII I Hugi	YPE hes	16 16	16	E	20" &		427	ft	H H		JME (B	ITS		PUMPS		ULA	TION DA		TION		
12 1/4	MXR	D9D	enath			30"	SET @	130	m	8	75	5	00	6	x	12 Inches	S FFFICI	ENCY	PRE	SS		psi
SIZE 5	s		engti	150)4 Mtrs	13 3/8	SURFACE SET @	2438	ft m	TOTAL CI	RCULATING	75		Nation	al 12-	EL ″	97	,	U BOLL	P		min
DRILL PIPE	TYPE	: L	ength				PROD. or		ft		IN STORAGE			B	BL/STK		STK / I	MIN	SURF	ACE		
SIZE 5 DRILL COLLAR SI	HV	V L	ength	11	1 Mtrs	MUD TYPE	LNR Set @ S		m		5	00		0 E	.1018 BBL/MIN		GAL / I	MIN	TO I TOTAL	BIT CIRC.		min
8			182		Mtrs			ĸ	CI/PHPA	/Glycol									TIN	ME		min
					MU	JD PROI	PERTIES		1							MUE) PR(OPERTY	SPEC	CIFICA	TIONS	
SAMPL	E FRO	ОМ							Pi	t	Pi	t	P	it	Mud	Wt 10.2	Gly	col	:	3 - 5%	API	6.0
TIME S	AMPL	ETAP	KEN						02:	00	14:	00	20:	00	Vis	45-55	Yie	ld Point		>15	рН	9-10
FLOWL	INE T	EMPE	RATU	RE				⁰ F/ ⁰ C							ксі	6-8	PHI	PA exce	SS	>1.5	Sulphites	>100
TOTAL	MEAS	SURE	D DEP	ТН (ТІ	MD)			Feet	179	97	179	97	17	97				OBSER	VATIO	NS		
WEIGH	Т						ppg /	SG	10.35	1.24	10.35	1.24	10.35	1.24								
FUNNE	LVIS	COSIT	TY(sec	/qt) Al	PI @	21	°C 70	٥F	73	3	7()	7	0	Mud	properties qu	ite sta	able.				
RHEOL	.OGY	600:	300 R	PM		49	°C 120	٥F	69	49	68	48	67	48								
RHEOL	.OGY	200 :	100 R	PM		49	°C 120	٥F	40	29	40	30	40	30								
RHEOL	.OGY	6:3	RPM			49	^o C 120	٥F	10	7	9	7	9	7								
PLASTI	IC VIS	cosi	TY c	Р@		49	°C 120	٥F	20	D	20)	1	9								
YIELD F	POINT	(lb/	100FT	⁻²)		49	^o C 120	⁰ F	29	Э	28	3	2	9								
GEL ST	RENC	ЭTН	(lb/10	0ft ²) 1	0 sec/10	0 min/3	0 min.		8/12	/15	8/13	/16	8/12	2/15								
API FIL	TRAT	E (c	cm ³ /30	min.)					4.	8	4.	6	4.	4								
HPHT F	ILTR/	ATE (c	:m ³ /30	min.)		121	^o C 250	⁰ F	21	.0	21	.0	21	.0	Barite	e Potential: 1	1.4	ppg, as	ssumin	g 170) bbls.	
API : HI	PHT ((Cake/3	32nd iı	ı.)					1:	3	1:	3	1:	3			OPE	RATION	VS SUI	MMAF	۲Y	
PH									8.	5	8.	5	8.	5	Wait	on weather.						
ALKAL	INITY	MUD	(Pm)																		
ALKAL	INITY	FILTR	RATE	(Pf /	Mf)				0.10	0.85	0.10	0.85	0.10	0.85								
CHLOR	IDE	(mg/L	_)						305	00	300	00	300	000								
TOTAL	HAR	DNESS	S (m	ig/L)					28	0	30	0	30	00								
SULPH	ITE	(mg/L)																			
PHPA	(Calc	ppb)						1.3	8	1.	8	1.	8								
GLYCO	L CO	NTEN	T (% V	/V)					2.	2	2.	2	2.	2								
K+ (m	ng/L)		-						324	00	324	00	324	100								
KCL ((% by	Wt.)							6.	0	6.	0	6.	0								
BARYT	ES (C	alc pp	ob)						61	.5	58	.6	58	.6		MUD	ACC		IG (BB	BLS)		
METHY	LENE	BLUE	E CAP	ACITY	(ppb ec	quivale	nt)		12	.5	13	.0	12	.5		FLUID BUILT		FLUI	DISPO	OSED	SUMM	ARY
SOLIDS	S CON	TENT	(% by	volur	ne) Reto	ort	,		11.	00	11.:	20	11.	20	Prem	nix - Water	T	S.C.E			INITIAL	1875
LIQUID	CON	ΓΕΝΤ	(% by	volum	ne) Calc				89.	00	88.	80	88.	80	Prem	nix - Recyc		Dump	ed		+ Rcd	
CUTTIN	IGS O	IL RA		oil)	-,										Drill	Water		Downl	hole		- Lost	
SAND C	CONT	ENT (% by v	olume	e)				1.0	0	1.0	0	0.	50	Othe	r		Other			Surface	1,000
	-				PR	ODUCT	USAGE				-	-			REC	FIVED		LOST			FINAI	1 875
Product		Price		Start	Received	Damaga	llead	C	loso		Cost								IIDME	NT		.,
rioduct		FILCE		Juit	Received	Damage	Useu	Ū	1036		0031		SHALE S	HAKERS	Hrs	SOLIDS CC	#	Size	Hrs			Hrs
			_										# 1	4 x 115		Decender	2	6		Contri	fugo	
			_										#1	4 x 115		Desilter	3	0		Centri	fuge	
													#2	4 x 115		Mud Cl	20	- 1		Centri	luge	
													#3	4 x 115		Mud Cl	eane	r 1 		Degas	ser	
			-										#4	4 X 84	0.44	wida Clo erflow (nna)	earie Un	i ∠ derflow	(png)	Poorb O	utput (Gal/	Min.)
													Desand	or	011	(ppg)	0	0	(PP9)	-	utput (Our	,
													Desilter	51				0				
													Cleaner	1			_					
													Cloanor	2				0				
													Contrif	- 100			-	U				
													Contrife	901			-					
													Centrinu	yez	Ļ.,							
													CUI	RENCY	'	DAILY	cos	61	(CUMU	LATIVE CO	ST
										<u> </u>				AUD						\$19	91,939.77	7
I.D.F.S. Engin	neer:		M.I	Docher	ty &	J. Singh		Office		BRISB	ANE			Telepho	one:	07 38	06-0	160	Fax:		07 3806-01	65

Page

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	4		IN	DEP	ENE) EN	T DF	NLLI	NG	FLU	лD s	SER	VIC	ES	Re	eport #	Ocean	15	Date			8-Sep	-02
	S)				A Divis	ion of	Rheocl	nem Ptu	Ltd						R	ig #	Bounty		Spud	l Date		25-Aug	-02
	ųÈ.						[];				CN 070	415	593		Тс	otal MD)		17	797	to	1	797
					riiii	ng	FIU		ep	ort					Тс	otal VD			17	795	to	1	795
OPERATO	R			Sar	ntos Lt	d.					CONT	RACT	OR		DO	GC							
REPORT F	OR			Her	nry Flir	k & St	eve Ho	dgetts			REPO	RT FC	DR		Pec	dro Jo	hns	& R	onni	e Saf	ar		
WELL NA			0	Cas	sino 1						FIELD	VIC -	P - 44		Ofv	Vav Ba	N acin			Victo	lE ∩ria		
BHA	BIT T	(PE		JET SI	ZE		CA	SING		М	UD VOLI	JME (B	BL)	1	011	vay De	CIRCL	JLATI		ATA	ona		
BIT SIZE	Hugh	es IgD	16	16 16		20" &	CONDUCTOR SET @	427	ft m	н s	OLE	P	NTS SOO	6	PUMP	SIZE	Inches				ATION ESS		nei
DRILL PIPE	mixite	L	ength.			13 3/8	SURFACE	2438	ft	TOTAL CI	RCULATING	VOL.		PU	MP MOD	DEL	% E	FFICIEN	ICY	вот	TOMS		psi
SIZE 5 DRILL PIPE	S TYPE	L	.ength	15	04 Mtrs		SET @	743	m ft		13 IN STORAGE	75		Natior	nal 12 BBL/STR	-P-160	s	97 TK / MII	N	U	IP FACE		min
SIZE 5	ни	1	-	1'	11 Mtrs		LNR Set @		m		68	30		(0.1018	3				то	BIT		min
DRILL COLLAR SIZ	ZE (")	L	ength. 18	2	Mtrs	MUD TYPE	S	к	CI/PHPA	/Glycol					BBL/MIN	1	G	GAL / MI	N	TOTAL TII	L CIRC. ME		min
					N	UD PRO	PERTIES										MUD	PRO	PERT	Y SPEC	CIFICA	TIONS	
SAMPL	E FRO	M							Р	it	Pi	t	Р	'it	Mud	Wt	10.2	Glyc	ol	:	3 - 5%	API	6.0
TIME SA	AMPLI	E TAP	KEN						02:	00	08:	00	19	:00	Vis	45-5	55	Yield	Point	t	>15	рН	9-10
FLOWL	INE TI	EMPE	RA	TURE				⁰ F/ ⁰ C							ксі	6-8	В	PHP	A exce	ess	>1.5	Sulphit	es >100
TOTAL	MEAS	URE	D DE	EPTH (T	MD)			Feet	17	97	179	97	17	97				C	BSER	RVATIC	ONS		
WEIGHT	r						pp)/SG	10.35	1.24	10.25	1.23	10.20	1.22	Turn	over mu	ıd in se	ettling	and s	and tra	p.		
FUNNEL			TY(s	ec/qt) A	PI @	18	6 3°	5 °F	6	7	64	•	5	9	Run	desilter,	desan	der b	riefly to	o stir up	o Settli	ng tanks	
RHEOL	OGY	600 :	300	RPM		49	°C 12	20 °F	64	46	63	45	55	40	And	0.1 ppb (Causti	c Sod	a and	0.2 ppl	b Idcid	е	
RHEOL	OGY :	200 :	100	RPM		49	°C 12	20 °F	38	28	37	27	33	25	to su	Irface mu						-	
RHEOL	OGY	6:3		// -D@		49	0 0 0 0 0	20 °F	10	7	10	7	8	6	Prep	are 200	barrel	prem	x with	1 ррб.	Xantha	an Gum,	
		-031	11	CP @		49	⁰ C 12		1	o o	10	,	1	5	1.5 p		-L, 4%		and wa		ante to	tatia pari	ıp. od
		(01) 	/100 (Ib/	ГІ) 100ft ²)	10 000/1	49 0 min/2	0 min	.0 F	7/11	0	7/11	/14	7/1*	5 1/13	of m	ud in the				d assor	nueu s	high solid	le
			(ID/ cm ³ /	30 min	IU Sec/	0 1111/3	v mm.		4	4	4.4	4	4	.4	conte	ent.			(pecies	u 23300	biatou	ingii sono	15
HPHT F		- (\ .TE (@	cm ³ /	30 min.)		121	⁰ C 2	50 ⁰ F	20	.0	21.	0	21	.0	Barit	e Potent	ial: 11	.3 ppc	ı, assu	ıming 1	700 bl	ols.	
API : HF	PHT (C	ake/	32nc	d in.)					1:	3	1:	3	1	:3				OPEF	RATIO	NS SU	MMAF	Y	
PH				,					8.	5	9.0	D	9	.0	Wait	on weat	her.						
ALKALI	NITY	MUD	(F	°m)											1								
ALKALI	NITY	FILTF	RATE	E (Pf/	Mf)				0.10	0.90	0.15	0.95	0.10	0.70									
CHLOR	IDE	(mg/l	_)						295	500	300	00	310	000									
TOTAL	HARD	NES	s	(mg/L)					28	30	28	0	32	20									
SULPHI	TE (mg/L	.)																				
PHPA	(Calc	ppb)						1.	8	1.8	8	1	.8									
GLYCO		ITEN	Т (%	5 V/V)					2.	2	2.2	2	2	.2									
K+ (m	g/L)								324	100	324	00	324	400									
KCL (% by \	Nt.)	- 1-)						ь. С1	.0 	6.0	-	6	.0									
BARTIN			(ac		/ (mmh. a				61	.5	57.	./ F	4/	.9		51.000.0		ACCC			SLS)		
					r (ppp e mo) Pot	quivale	nt)		12	.5	12.	5	10	0.0	Dron	FLUID E	tor	100	FLUI	DDISPO	JSED	SU	1075
		ENT	(%) (%)		no) Calo				89	00	89	50	89	20	Pron	niv - Roc		100	Dumn	bod		+ Rcd	180
CUTTIN	GS OI			(% oil)	ne) oait	,					00.		00	.20	Drill	Water	.yc		Down	hole		- Lost	
SAND C	ONTE	NT (% b\	volum	e)				0.7	75	0.5	0	0.	50	Othe	er			Other			Surface	1,180
				<u>.</u>	P	RODUCT	USAGE						<u> </u>		REC	EIVED		180	LOST			FINAL	2,055
Product		Price		Start	Received	Damage	Used	c	lose		Cost					SOLIE	os co	NTRO	DL EQ	UIPME	NT	<u> </u>	
Caustic Soda	\$	36	.60	39		-	2		37	\$		73.20	SHALE S	HAKERS	Hrs			#	Size	Hrs			Hrs
Idcide-20	\$	5 103	.00	32			4		28	\$	4	12.00	#1	4 x 115	5	Desande	r	3	6		Centri	fuge	
KCI BB Fine	\$	650	.00	23			1		22	\$	(650.00	# 2	4 x 115	5	Desilter		20	2		Centri	fuge	
PAC-L	\$	5 168	.00	84			6		78	\$	1,0	008.00	# 3	4 x 115	5	Mu	ud Cle	aner	1		Degas	ser	
Xanthan Gum	P \$	6 411	.42	81			4		77	\$	1,6	645.68	#4	4 x 84		Mu	ud Cle	aner	2		Poorb	оу	
															Ov	erflow (ppg)	Und	erflow	' (ppg)	C	utput (G	al/Min.)
													Desand	er					0				
													Desilter						0				
								_					Cleaner	1					0				
													Cleaner	2					0				
								_					Centrifu	ige1									
													centrifu	ige2	<u> </u>					T			
							CU	KRENC	Ý	D.				- '	CUMU		COST						
D.F.S. Engineer: M.Docherty & J. Singh Office										BDIED				Telenh	one	\$	3,18	0.08	50	Eav.	\$19	07 3900	.0165
						J. Jingi	•	Since						reichu	J.16.		J. JOL			1 01.		J. 3000	0.00

	14		INC	РЭ	END	EN.	ТD	RILLI	NG I	FLU	лD S	SER	VIC	ES	Re	port #	16	Date			9-Sep-	02
(III)	FS J			4	A Divisi	on of	Rheo	chem Pt	y Ltd				500		Ri	g # Bount	ty	Spuc	l Date		25-Aug	-02
							— 1.	.:)	A۱ احد د	CN 070	415	593		То	tal MD		17	797	to	1	797
				υ	rIIII	ng	FIL	ла н	epo	οπ					То	tal VD		17	795	to	1	795
OPERATO	OR			San	tos Lto	Ι.					CONT	RACT	OR		DOO	GC						
REPORT	FOR			Hen	ry Flin	k & St	eve H	lodgetts			REPO	RT FC	DR		Ped	ro Johns	& R	lonni	e Saf	ar		
WELL NA	AME A	ND No	D	C	ine d						FIELD		D 44		LOC				STAT	ΓE 		
BHA	BIT T	YPE			E					м		JME (B	P - 44 BL)		Otw	CIRC				oria		
BIT SIZE	Hug	hes	16 1	6 16		20" &	CONDUC	TOR 42	7 ft	н	OLE	P	PITS		PUMP S	SIZE	ULAI	1011 2/	CIRCULA	TION		
12 1/4 DRILL PIPE	MXR	09D	.ength			30" 13 3/8	SURFACI	130 = 2438) m 3 ft	8 TOTAL CI	RCULATING	5 VOL.	500	6 PU	X MP MOD	12 Inches	S	NCY	PRE BOTT	ESS FOMS		psi
SIZE 5	s	;		150)4 Mtrs		SET @	74	3 m		13	75		Nation	nal 12-	P-160	97		U	P		min
DRILL PIPE	TYPE	N	.ength	11	1 Mtrs		PROD. or LNR Set (Q	ft		IN STORAGE	20			38L/STK		STK / M	IN	SURF	ACE		min
DRILL COLLAR S	SIZE (")	L L	ength			MUD TYPE	s	-						1	BBL/MIN		GAL / M	IIN	TOTAL	CIRC.		
8			182		Mtrs		DEDTI	ł 2	(CI/PHPA	/Glycol						MUT					TIONS	min
SAMDI		- M			IN I	OD PRO		_5	Di	•	Di	•	р		Mud	W+ 10.2	Ghu		I SPEC	2 5%		6.0
									01.	00	07:0	ι 10	10-	-00	Wic	45 55	Vial	d Point	•	5 - 5%		0.0
				IDE				0 = 40 0	01.	00	07.0	00	19.	.00	VIS	45-55	TIEF			>15	рп Сильніка	9-10
FLOWL								- F/-C	4 170	7	470	7	47	07	NCI	0-0	PHP			>1.5	Sulphite	s >100
TOTAL		SURE	D DEF	'IH (II	VID)			Fee	t 1/3	97	1/9	1 00	1/	97	Derite	- U U A		UBSEF	(VATIO	INS		
WEIGH	11	000	F V(- /		40	00	05 0-	10.30	1.24	10.25	1.23	10.20	1.22	Perio	dically turn o	ver mi	ud via r	neader I	box, a	nd desilte	r
FUNNE		COSI	I Y (Sec	C/QT) AI	-1@	18	0 0 0	65 °F	50) / ^	55	,	5	8	and d	lesander.						
RHEOL	LOGY	600 :	300 F			49	0 0 0	120 °F	59	42	56	41	59	42	-							
RHEOL	LOGY	200 :	100 H	RPM		49	°C	120 °F	35	26	34	24	35	26	-							
RHEOL	LOGY	6:3				49	0 0 0	120 °F	9	7	9	7	8	6	-							
PLAST	IC VIS	COSI	TY C	:P@		49	°0	120 °F	17	7	15	5	1	7								
YIELD	POINT	[] (Ib	/100F	Γ <u>΄)</u>		49	C	120 °F	29	5	26	5	2	5								
GEL ST	TREN	GTH	(lb/10	00ft ²) 1	0 sec/1	0 min/3	0 min	•	7/10	/13	7/10/	/13	7/10	0/13								
API FIL		E (cm [°] /30) min.)			°c		4.	4	4.4	4	4.	.2	-							
HPHT F	FILTR	ATE (cm ³ /30) min.)		121	U	250 ° F	21.	.0	22.	0	22	2.0								
	ірні (Саке/	32nd I	n.)					1:	3	1:	3	1:	:3			OPE	RATIO	NS SUI	мман	Υ Υ	
PH									9.	0	9.0	J	9.	.0	wait	on wild weat	ner.					
ALKAL		MUD	(Pn	n)											Disco	onnect LMPR	at 13	30 houi	rs due t	o incre	eased swe	ell.
ALKAL		FILTE	RAIE	(Pf /	Mf)				0.10	0.70	0.10	0.85	0.10	0.80	-							
CHLOR		(mg/	L)						305	00	300	00	305	500								
			<u>s</u> (n	ng/L)					30	0	28	0	30	00	-							
SULPH	111E	(mg/L	.)												-							
РНРА	(Cale	c ppb)						1.	8	1.8	3	1.	.8								
GLYCC		NTEN	T (% \	//V)					2.3	2	2.2	2	2.	.2								
K+ (n	ng/L)								324	00	324	00	324	400								
KCL	(% by	Wt.)							6.	0	6.0)	6.	.0								
BARYT	TES (C	alc p	ob)						56	.0	57.	7	52	2.2		MUD	ACC		NG (BB	BLS)	1	
METHY	YLENE	BLU	E CAP	PACITY	(ppb ed	quivale	nt)		12	.0	12.	0	12	2.0		FLUID BUILT		FLUI	D DISPC	DSED	SUI	IMARY
SOLID	S CON	ITENT	(% b	y volur	ne) Reto	ort			11.	00	10.	50	10.	.50	Prem	iix - Water		S.C.E			INITIAL	2055
LIQUID	CON	TENT	(% by	volum	ie) Calc				89.	00	89.	50	89.	.50	Prem	iix - Recyc		Dump	ed		+ Rcd	
CUTTIN	NGS C	IL RA	TIO (%	% oil)											Drill	Water		Down	hole		- Lost	
SAND	CONT	ENT (% by \	volume	e)				0.5	50	0.5	0	0.	50	Othe	r		Other			Surface	1,180
					PR	ODUCT	USAG	E							RECI	EIVED		LOST			FINAL	2,055
Product	t	Price	e	Start	Received	Damage	Use	ed (Close		Cost					SOLIDS CO	ONTR	OL EQ	UIPME	NT		
													SHALE S	HAKERS	Hrs		#	Size	Hrs			Hrs
													# 1	4 x 115		Desander	3	6		Centri	fuge	
													# 2	4 x 115		Desilter	20	2		Centri	fuge	
													# 3	4 x 115		Mud Cl	eaner	1	L	Degas	ser	
													# 4	4 x 84		Mud Cl	eaner	2		Poorb	оу	
													Ĺ		Ove	erflow (ppg)	Und	derflow	(ppg)	0	utput (G	al/Min.)
													Desand	er				0				
													Desilter					0				
													Cleaner	1				0				
													Cleaner	2				0				
													Centrifu	ige1								
													Centrifu	ige2								
													CUI	RRENC	ſ	DAILY	COS	т		сими	LATIVE	COST
														AUD					Ī	\$19	95,728.	65
I.D.F.S. Engir	neer:		M	.Docher	ty &	J. Singh	1	Office):	BRISB	ANE			Teleph	one:	07 38	806-01	60	Fax:		07 3806	0165

	4		INI	DEP	END	EN.	T DI	RILLI	NG I	FLU	лD s	SER	VIC	ES	Re	eport #	Juean	17	Date			10-Sej	b-02	
	18			,	A Divis	ion of	Rheoc	hem Pt	v Ltd						R	ig# 🗉	Bounty		Spud	l Date		25-Au	g-02	
	÷						 1	:		A۱ احساب	CN 070	0 415	593		Тс	otal MD			17	'97	to		1797	
					riiii	ng	FIU	Ia F	ep	ort					Тс	otal VD			17	95	to		1795	
OPERATO	DR			San	ntos Lto	.					CONT	RACT	OR		DO	GC								
REPORT	FOR			Her	nry Flin	k & St	eve Ho	odgetts			REPO	RT FC	DR		Pec	Iro Jol	hns	& Ro	onnie	e Saf	ar			
WELL NA		ND NO)	Cas	sino 1						FIELD		D - 11		LOC	ATION	ein			Victo	l E oria			
BHA	BIT T	YPE		JET SIZ	ZE		CA	SING		м	UD VOLI	JME (B	BL)		011	(U) (CIRCU	ILATI	ON DA	ATA	ona			
BIT SIZE	Hugh	Ies	16	16 16		20" &	CONDUCTO SET @	R 427	ft m	н	OLE	P	ITS	6	PUMP	SIZE	nchoe				TION			nci
DRILL PIPE	mark	L	ength			13 3/8	SURFACE	2438	ft	TOTAL CI	RCULATING	VOL.		PU	MP MOD	EL	% E	FFICIEN	CY	вотт	roms			51
SIZE 5 DRILL PIPE	S TYPE	L	ength	15	04 Mtrs		SET @	743	6 m #		13 IN STORAGE	75		Nation	al 12.	-P-160	s	97 TK / MIN		U	ACE			min
SIZE 5	н	v	•	11	11 Mtrs		LNR Set @		m		68	B0		(0.1018	3				то	BIT			min
DRILL COLLAR SI	IZE (")	L	ength 182	2	Mtrs	MUD TYPE	S	к	CI/PHPA	/Glycol					BBL/MIN	1	G	SAL / MIN		TOTAL TIM	. CIRC. ME			min
					М	UD PRO	PERTIES	6									MUD	PROF	ERT	Y SPEC	CIFICA	TIONS		
SAMPL	.E FRC	М							Pi	it	Pi	t	Р	'it	Mud	Wt	10.2	Glyco	bl	:	3 - 5%	ΑΡΙ		6.0
TIME S.	AMPL	E TAI	KEN						02:	00	08:	00	19:	:00	Vis	45-5	5	Yield	Point	t	>15	рН		9-10
FLOWL	INE T	EMPE	RAT	TURE				⁰ F/ ⁰ C							ксі	6-8	}	PHPA	exce	ess	>1.5	Sulphit	es	>100
TOTAL	MEAS	URE	d de	EPTH (T	MD)			Feet	t 179	97	179	97	17	97				0	BSER	RVATIO	NS			
WEIGH	Т						pp	og / SG	10.25	1.23	10.25	1.23	10.25	1.23	Peric	dically tu	urn ove	er mud	l via h	neader l	box, a	nd desilt	er	
FUNNE	L VISO	COSI	ſY(se	ec/qt) A	PI @	16	0 C (60 °F	59	9	59	•	5	7	and o	desander	r.							
RHEOL	.OGY	600 :	300	RPM		49	°C 1	20 °F	56	41	55	40	54	39	Raise	ed mud v	vt of P	it 3 pr	emix t	o 10.3	ppb w	ith Barite) .	
RHEOL	.OGY	200 :	100	RPM		49	°C 1	20 °F	34	25	33	25	32	23	-									
RHEOL	.OGY	6:3		1		49	⁻ C 1	20 °F	8	7	8	7	8	6		~			_		. .			
PLAST		051	1 Y	CP @		49	0 1	20°F	1	5	1:	> -	1	5	Barit	e figures	adjus	ted as	per B	sallast C	Jontro	l.		
		(II)	1001	FI ⁻)	10 /4	49	0 min	20 ° F	7/10	0	7/10	/12	7/10	4	-									
			(ID/1) $cm^3/2$	100π) 1	TU SEC/1	u min/3	u min.		4	//13 4	4	6	4	6	-									
			-m ³ /3	30 min)		121	°C	250 ⁰ F	22	.0	22	.0	22	2.0	Barit	e Potenti	al: 11	9 ppa	assu	ımina 1	700 bl	ols.		
API : H	PHT (Cake/	32nd	l in.)					1:	3	1:	3	1:	:3	Built	010000	(OPER		NS SUI	MMAR	Y		
PH				,					9.	0	9.	0	9.	.0	Wait	on weath	her							
ALKAL	INITY	MUD	(P	m)											Run	ROV.								
ALKAL	INITY	FILTF	RATE	E (Pf/	Mf)				0.10	0.85	0.10	0.85	0.20	0.90										
CHLOR	RIDE	(mg/l	_)						300	00	305	00	305	500										
TOTAL	HARD	NES	S ((mg/L)					28	80	28	0	28	30										
SULPH	ITE (mg/L)																					
PHPA	(Calc	ppb)						1.	8	1.8	8	1.	.8										
GLYCO	L COI	NTEN	Т (%	V/V)					2.	2	2.:	2	2.	.2	_									
K+ (m	ng/L)								324	00	324	00	324	400	-									
KCL ((% by	Wt.)							6.	0	6.	0	6.	.0										
BARYT	ES (C	alc pp	b)				0		57	.7	57.	.7	56	5.3				ACCO	UNTIN	NG (BB	BLS)			
METHY					r (ppb e	quivale	nt)		12	.0	12	.0	12	2.0	Duran	FLUID B	UILT		FLUI	D DISPC	DSED	SU	MMAR	Y
			(%) /0/ h		me) Ket	ort			10.	50	10.	50	10	40	Pren		er		5.C.E	ad				2055
CUTTIN			(// IJ TIO	/% oil)	lie) Calc				09.	50	09.	50	09.	.40	Drill	Water	.yc	20	Down	hole		- Lost		20
SAND			% bv		e)				0.5	50	0.5	50	0.	50	Othe	r			Other		20	Surface	•	1.180
			,		-, PF	ODUCT	USAGE		1						REC	EIVED		20	OST		20	FINAL		2.055
Product	T	Price	,	Start	Received	Damage	Used	6	lose		Cost					SOLID	s co	NTRO	LEO	UIPMF	NT			,- 30
Barito Bulk		\$ 14	.77 ‡	###	900	-9-	339	1	761	\$	5.0	007.03	SHALE S	HAKERS	Hrs			#	Size	Hrs				Hrs
Xanthan Gum	IP	\$ 411	.42	77			1		76	\$	-,-	411.42	#1	4 x 115		Desander	r	3	6		Centri	fuge		
						# 2	4 x 115	;	Desilter		20	2		Centri	fuge									
						# 3	4 x 115		Mu	d Cle	aner 1			Degas	ser									
													# 4	4 x 84		Mu	d Cle	aner 2	2		Poorb	оу		
															Ov	erflow (p	opg)	Unde	rflow	(ppg)	0	utput (C	Gal/Mi	n.)
													Desand	er					0					
													Desilter						0					
										<u> </u>			Cleaner	1					0					
										ļ			Cleaner	2					0		<u> </u>			
										<u> </u>			Centrifu	ige1										
													Centrifu	ige2	<u> </u>					1				
													CUI	RRENC	r	D/		COST			CUMU		COST	Г
LDES Engineer: M Docherty & J Singh Offic										BBIED				Telest	one	\$	5,41	8.45	0	Farri	\$2(J1,147	.10	
engin בייר					iy Ci	J. Jingr	•	Unice	•	PLISE				reiebu	one:	L L	,, 30U	0-010		гах:		01 3000	-0105	,

	L		INI	DEP	END	EN.	T DF	RILLI	NG I	FLU	лD s	SER	NIC	ES	Re	eport #	Jucan	18 C)ate			11-Se	o-02	
	FS				A Divisi	on of	Bheoc	hem Ptu	ht I u						R	ig# B	Bounty	S	pud	l Date		25-Au	g-02	
							— 1			A۱ است	CN 070	415	593		Тс	otal MD			17	'97	to		1797	
					riiii	ng	-IU	Ia H	ep	ort					Тс	otal VD			17	'95	to		1795	
OPERATO	OR			San	tos Lto	l.					CONT	RACT	OR		DO	GC								
REPORT	FOR			Her	nry Flin	k & St	eve Ho	dgetts			REPO	RT FC	DR		Pec	Iro Joh	hns	& Ro	nni	e Saf	ar			
WELL NA)	Cas	ino 1						FIELD	VIC -	P - 44		Ofv	ATION	ein			Victo	l E oria			
BHA	BIT T	YPE		JET SIZ	ZE		CA	SING		М	UD VOLI	JME (B	BL)		011		CIRCU	ILATIC	N D	ATA	ona			
BIT SIZE	Hugh	nes D9D	16	16 16		20" &	CONDUCTO SET @	R 427	ft m	H	OLE	F	PITS	6	PUMP	SIZE	nchoe				TION			nci
DRILL PIPE	MARK		ength			30 13 3/8	SURFACE	2438	ft	TOTAL CI	RCULATING	VOL.	40	PU	MP MOD	IZ II	% E	FFICIENC	Y	вот	roms			psi
SIZE 5 DRILL PIPE	S	L	ength	15	04 Mtrs		SET @	743	6 m #		13 IN STORAGE	20		Nation	al 12.	-P-160	s	97 TK / MIN		U	ACE			min
SIZE 5	н	v		11	1 Mtrs		LNR Set @		m		68	30		(0.1018	3				то	віт			min
DRILL COLLAR S 8	SIZE (")	Ľ	ength 182	2	Mtrs	MUD TYPE	S	к	CI/PHPA	/Glycol					BBL/MIN		G	GAL / MIN		TOTAL	. CIRC. ME			min
					М	UD PRO	PERTIES										MUD	PROP	ERT	Y SPEC	CIFICA	TIONS		
SAMPL	E FRO	M							Pi	it	Pi	t	Р	it	Mud	Wt	10.2	Glyco	I	:	3 - 5%	API		6.0
TIME S	AMPL	E TAŀ	KEN						02:	00	13:	00	19	:00	Vis	45-5	5	Yield	Point	t	>15	рН		9-10
FLOWL	INE T	EMPE	RAT	URE				⁰ F/ ⁰ C							KCI	6-8	;	PHPA	exce	ess	>1.5	Sulphit	es	>100
TOTAL	. MEAS	SURE	d de	EPTH (T	MD)			Feet	t 179	97	179	97	17	97				OE	BSER	RVATIC	ONS			
WEIGH	IT						pp	g/SG	10.25	1.23	10.25	1.23	10.25	1.23	Displ	aced sea	a wate	er in rise	er wit	h mud	at 20:0	00 Hrs.		
FUNNE	L VIS		Y(se	ec/qt) A	PI @	16	°C 6	60 °F	58	8	55	5	5	4	Over	displaced	d by 3	0 bbl to	o elim	inate a	iny cor	ntaminat	on.	
RHEOL	LOGY	600 :	300	RPM		49	⁻ C 1	20 ⁰ F	54	39	52	38	51	37	-									
RHEOL	LOGY	200 :	100	RPM		49	$\frac{1}{0}$	20 °F	32	23	31	22	31	22	-									
		6:3		۱ ۵۵ ه		49	°C 1	20 °F	8	6	1	6	1	6										
PLAST VIELD			11			49	⁰ C 1	20 °F	1	5 4	14	•	1	4 2	Ohor	anyod loor	o of 24	5 bbl to	holo	00 00	nina r	2000		
		(01) • T LI T	(1001	ΓΙ)	0 000/1	49 0 min/2	0 min	20 F	6/10	4	6/10	112	6/9	J 112	Obse		5 01 23	טויוטט נט	noie	on ope	ining i	ams.		
	TRAT		$\frac{10}{10}$	30 min)	IU SEC/ II	0 1111/3	•		4	6	4	1	0/J 4	4										
нрнт в			-m ³ /3	30 min)		121	°C	250 ⁰ F	22	.0	22	0	22	2.0	Barit	e Potenti	al: 12	.1 ppg.	assu	ımina 1	700 bl	ols.		
API : H	PHT (Cake/	32nd	l in.)					1:	3	1:	3	1	:3	Built	o r otorita	(OPER/		NS SU	MMAR	Y		
PH				,					9.	0	9.0	- D	9	.0	Repo	sition rig	over	well he	ad.					
ALKAL	.INITY	MUD	(P	m)											Land	and latc	h LMF	RP and	test.					
ALKAL	.INITY	FILTF	RATE	E (Pf/	Mf)				0.20	1.00	0.20	1.00	0.20	1.00	Conr	nected Sl	ip Joir	nt and I	Diver	ter.				
CHLOR	RIDE	(mg/l	_)						290	000	300	00	300	000	RIH 1	to top of I	BSRs,	, displa	ce ris	ser to n	nud.			
TOTAL	HARD	NES	S ((mg/L)					26	60	28	0	32	20	Oper	n LPR an	d top	up hole	e with	mud.	Well st	atic.		
SULPH	IITE ((mg/L)												Atter	npt to cire	culate	. String	ı plug	iged.				
PHPA	(Calc	ppb)						1.	8	1.8	8	1	.8	POC	DH.								
GLYCC		NTEN	Т (%	V/V)					2.	2	2.2	2	2	.2										
K+ (n	ng/L)								324	100	324	00	324	400										
KCL	(% by	Wt.)							6.	0	6.0	D	6	.0										
BARYT	TES (C	alc pp	ob)						57	.7	50.	5	53	8.4		Ν	MUD A	ACCOL	INTI	NG (BE	BLS)	1		
METHY	LENE	BLUE	ECA	PACITY	(ppb ed	quivale	nt)		12	.0	11.	0	11	.0		FLUID B	UILT		FLUI	D DISPO	DSED	SL	MMAR	Y
SOLIDS	S CON	TENT	(%)	by volu	me) Reto	ort			10.	50	11.0	00	10	.80	Pren	nix - Wat	er	S	.C.E			INITIAL		2055
LIQUID			(% b	y volun	ne) Calc				89.	50	89.0	00	89	.20	Pren	nix - Rec	ус		ump	ed 	30	+ Rcd		
CUTTIN				(% 011)	-)					-0	0.5	0	•	50	Drill	Water			own	nole	25	- Lost		55
SAND	CONTI		⁄₀ Dy	volume	e)	ODUCT			0.5	50	0.5	U	υ.	50	Othe	er			ntner			Surface)	1,125
				a i (USAGE			1	<u> </u>				REC	EIVED			051		55	FINAL		2,000
Product		Price	60	Start 27	Received	Damage	Used	C	24	e	Cost	100 00	SHALE S	HAKERS	Hrs	SOLID	3 CO	#	Size	Hrs				Hrs
Caustic Soda	3	\$ 30 \$ 100	.60	37 82			3		34 79	ې د	1	109.80	# 1	4 ~ 115		Decender		2	6		Contri	fugo	_	
JK-261		φ 105		02					10	Ψ		+30.00	#1	4 x 115		Desilter		20	2		Centri	fuge		
													#2	4 x 115		Mu	d Cle	aner 1	2		Degas	ser		
													# 4	4 x 84		Mu	d Cle	aner 2			Poorb	ov.		
														Ov	erflow (p	opg)	Unde	rflow	(ppg)	0	utput (C	Gal/Mi	n.)	
										1			Desand	er					0					
												Desilter						0						
													Cleaner	1					0					
										1			Cleaner	2					0					
										l			Centrifu	ige1										
													Centrifu	ige2										
													CU	RRENC	1	DA	AILY	COST			сими	LATIVE	cos	г
														AUD		\$	\$548	.60			\$20)1,695	.70	
I.D.F.S. Engir	D.F.S. Engineer: M.Docherty & J. Singh Office										ANE			Teleph	one:	0	07 380	6-016)	Fax:		07 3806	6-0165	;

	L	IN	DEP	END	EN.	T DRII		NG	FLU	ND S	SER	NIC	ES	Re	eport #	Ocean	19	Date			12-Sep-)2
IDFS				A Divisi	ion of l	Bheochei	n Ptu	htl						R	ig #	Bounty		Spud	Date		25-Aug-	02
	j)								A(CN 070	415	593		Тс	otal MD)		17	97	to	18	04
		i	D	rillii	ng I	Fluid	IR	ep	ort					Тс	otal VD			17	95	to	18	02
OPERATOR			Sar	ntos Lto	1.					CONT	RACT	OR		DO	GC							
REPORT FC	R		Her	nry Flin	k & Ga	vin Othe	n			REPO	RT FC)R		Pec	dro Jo	hns a	& Ro	onnie	e Saf	ar		
WELL NAM	E AND N	lo	_							FIELD)			LOC	CATION	1			STAT	ΓE		
		1	Cas	sino 1	1						VIC -	P - 44	r —	Otv	vay Ba	asin			Victo	oria		
BHA B BIT SIZE	Hughes	16	JET SI2		20" &	CASIN	427	ft	H H		JME (B	BL) PITS		PUMP	SIZE	CIRCU	ILAII			TION		
12 1/4	MXRO9D	Length			30"	SET @	130	m	8	82	4	50	6	x	12	Inches	FEICIEN		PRE	SS	3550	psi
SIZE 5	S	Length	15	36 Mtrs	13 3/8	SURFACE SET @	2438 743	ft m	TOTAL CI	RCULATING	VOL. 32		Nation	мр мов 1 al 12 -	-P-160	70 E	97		воп	P	4	1 min
DRILL PIPE	TYPE	Length				PROD. or		ft		IN STORAGE			E	BBL/STK	(S	TK / MIN	4	SURF	ACE	5	.0
SIZE 5 DRILL COLLAR SIZE	HW (")	Length	11	11 Mtrs	MUD TYPE	LNR Set @ S		m		6	50		C).1018 BBL/MIN	B 1	G	190	N	TO TOTAL	BIT CIRC.		min
8		15	57	Mtrs			K	CI/PHPA	/Glycol					19.34			812		TI	ME	1	02 min
				M	UD PROI	PERTIES		1				1				MUD	PRO	PERTY	SPEC	CIFICA	TIONS	
SAMPLE	FROM							P	it	Fl	-	P	lit	Mud	Wt	10.2	Glyc	ol	:	3 - 5%	API	6.0
TIME SAM	IPLE TA	KEN	l					08:	30	17:	40	22	:00	Vis	45-5	55	Yield	Point		>15	pН	9-10
FLOWLIN	E TEMP	ERA	TURE				[°] F/ [°] C	70	21	70	21	72	22	KCI	6-8	B	PHP	A exce	SS	>1.5	Sulphites	>100
TOTAL M	EASURI	ED D	EPTH (T	MD)			Feet	179	97	179	97	17	97				0	BSER	VATIO	NS		
WEIGHT						ppg / S	SG	10.00	1.20	10.10	1.21	10.30	1.24	Build	l 240 bbl	s of ne	ew mu	d with	0.4 pp	b Cau	stic Soda,	
FUNNEL	VISCOS	ITY(s	sec/qt) A	PI @	18	⁰ C 65	۶F	54	4	52	2	6	51	1.3 p	pb Xantl	han Gu	um,1.3	3 PAC-	L, 6%	KCI ar	nd weight	
RHEOLO	GY 600	: 300	RPM		49	°C 120 '	۶	55	39	58	42	66	47	up to	0 10.2 pp	g.						
RHEOLO	GY 200	: 100	RPM		49	°C 120 '	۶F	33	24	35	25	39	29	Som	e mud lo	osses o	on sur	face dı	ue to w	et trip.		
RHEOLO	GY 6:3	RP	М		49	°C 120 '	۶	8	6	8	6	10	8	Botto	oms Up r	mud at	950 r	n was	in satis	factor	conditior	
PLASTIC	viscos	SITY	cP @		49	°C 120 '	۶F	1	6	16	6	1	9	Botto	oms Up r	mud at	1650	m was	s show	ing sig	ns of	
YIELD PO	INT (I	b/100	OFT ²)		49	°C 120 '	۶F	2	3	26	6	2	8	degra	adation a	and 12	0 bbl	was dı	imped.			
GEL STR	ENGTH	(lb/	/100ft ²)	10 sec/1	0 min/3	0 min.		6/8/	/12	7/10	/13	8/12	2/13	Treat	ting syst	em wit	h wei	ghted p	oremix	es to r	e-establish	
API FILTE	RATE	(cm ³	/30 min.)					7.	2	4.3	В	4	.6	mud	propertie	es.						
HPHT FIL	TRATE	(cm ³	/30 min.)		121	°C 250 '	۶	28	.0	24.	.0	20).0	Barit	e Potent	ial: 13.	8 ppg	l, assu	ming g	auge h	ole.	
API : HPH	T (Cake	/32n	d in.)					1:	3	1:	3	1	:3			(OPER	ATIO	NS SU	MMAR	Y	
PH								9.	0	9.	5	9	.5	P00	H wet. F	Rack Bl	HA.B/	O bit. I	Plugge	d with	cuttings.	
ALKALIN	TY MUE) (Pm)											L/O I	MWD. M	/U BHA	A. RIH	H. M/U	BOP to	est too	Ι.	
ALKALIN	TY FILT	RAT	E (Pf/	Mf)				0.20	1.00	0.25	1.20	0.22	1.00	RIH 1	to 663m.	. Circul	late B	/U thro	ugh ch	noke. F	low check	static.
CHLORID	E (mg	/L)						300	00	280	00	30	000	Circu	ulate B/U	l via ris	er. Fl	ow Ch	eck. Pr	ressure	e test BOP	s and
TOTAL H	ARDNE	SS	(mg/L)					28	80	24	0	28	B O	surfa	ice lines.	. Funct	ion te	st dive	rter. R	IH. Cir	culate B/U	
SULPHIT	E (mg/	Ľ)												throu	igh chok	e at 95	50 m.	RIH to	1717n	n. Was	h and rea	n
PHPA (0	Calc ppb))						1.	8	1.8	8	1	.6	with	10 -20K	drag. 2	27m o	f fill on	bottor	n.		
GLYCOL	CONTE	NT (%	6 V/V)					2.	0	1.	5	1	.5	Drill [·]	12.25" h	ole. Pu	ımp 3	0 bbl h	igh vis	cosity	sweep.	
K+ (mg/	L)							297	'00	270	00	324	400									
KCL (%	by Wt.)							5.	5	5.	0	6	.0	Barit	e figures	as pe	r Balla	ast Cor	ntrol.			
BARYTES	6 (Calc p	opb)						44	.5	48.	.3	56	6.0			MUD A	ACCO	UNTIN	IG (BE	BLS)		
METHYLE		JE C	APACITY	r (ppb ed	quivale	nt)		12	.0	11.	.0	11	.0		FLUID B	BUILT		FLUI	DISPO	DSED	SUM	MARY
SOLIDS C	ONTEN	T (%	by volu	me) Reto	ort	•		9.6	50	10.	00	11	.00	Pren	nix - Wa	ter	200	S.C.E		64	INITIAL	2000
LIQUID C	ONTEN	Г (%	by volun	ne) Calc				90.	50	90.	00	89	.00	Pren	nix - Rec	сус		Dump	ed	120	+ Rcd	200
CUTTING	S OIL R) (% oil)	,										Drill	Water	-		Downl	nole	14	- Lost	218
SAND CO	NTENT	(% b	v volum	e)				0.5	50	0.5	0	0.	50	Othe	er			Other		20	Surface	1,100
			<u>,</u>	, PR	ODUCT	USAGE		I						REC	EIVED		200	LOST		218	FINAL	1.982
Broduct	Pri	CO	Start	Received	Damage	lleod	C	060		Cost					SOLIE				IIDME	NT		-,
	e 1	4 77	###	###	Damage	272	2	1030	¢	4.1	17 44	SHALE S	HAKERS	Hrs	JOLIL	3 00	#	Size	Hrs			Hrs
Barite Bulk	¢ .	26.60	24	***		212	3	22	ф с	4,0	72 20	# 1	4 ~ 115	6	Decando	-	2	6		Contri	iugo	
Caustic Soda	÷ 10	0.00	79			2		32 70	φ ¢		73.20	#1	4 × 115	0	Desilter		3	0		Centri	uge	
JK-261	\$ 10	9.70	70			5		13	۵ ۵		548.50	#2	4 x 115	6	Desilier		20	2	3	Centri	uge	
KCI BB Fine	\$ 00	50.00	22			4		18	۵ ۵	2,0	500.00	# 3	4 x 115	6	IVIC		aner			Degas	ser	
PAC-L	\$ 16	58.00	78			6		72	\$	1,0	00.800	#4	4 X 84	0	MIL orflow (r	la Clea	aner 2	2 arflow	(nna)	Poorb	oy utput (Ga	/Min)
Sodium Sulphite	3 5 2	25.02	58			3		55	\$		75.06	Docand	or	01		PP9)	Uniu	0	(PP9)		atput (Oa	
Xanthan Gum P	\$ 41	1.42	76			11		65	\$	4,	525.62	Desiltor			10.1			11.3			15.00	
												Cloanor	. 1		10.1			0			15.00	
									<u> </u>			Cleaner	· ·					0				
												Centrif	- 1001	<u> </u>				J				
									<u> </u>			Contrit	190 J									
									<u> </u>			Sentrift	.9ez		-							
			<u> </u>			CU	KRENC	r	D.		COST		(CUMU		UST						
	0.07						AUD		\$1	12,84	7.82	2	_	\$21	4,543.5	2						
I.D.F.S. Enginee	r:		M.Doche	rty &	J. Singh	1	Uffice:		BRISB	ANE			I eleph	one:		U7 380	6-016	0	Fax:		U7 3806-0	165
	4	I	NDEF	PEND	EN.	T DRI	LLII	NG	FLU	лD s	SEF	۱VIC	ES	Re	eport #	Jucan	20 D	ate			13-Sep	-02
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	5			A Divisi	ion of	Bheache	m Ptu	htl						R	ig# E	Bounty	S	pud	Date		25-Aug	J-02
	- R		-	A DIVIS					A(CN 070	415	593		То	tal MD			18	04	to	2	2043
			Ľ	rilli	ng	Fluid	зн	ep	ort					То	tal VD			18	02	to	2	2041
OPERATO)R		Sa	ntos Lto	1 .					CONT	RACT	OR		DO	GC							
REPORT I	FOR		He	nry Flin	k & Ga	vin Othe	en			REPO	RT FC	DR		Ric	ky Gra	ham	1 & Ro	onn	ie Sa	afar		
WELL NA	ME AN	ID No								FIELD				LOC	ATION				STAT	ΓE		
			Ca	sino 1	r						VIC -	P - 44	r	Otw	vay Ba	sin			Victo	oria		
BHA BIT SIZE	BIT TY Hugh	/PE es 1	JET S 6 16 16		20" &	CASI	NG 427	ft	М	UD VOLU	JME (B	BBL) PITS		PUMP	SIZE	CIRCU	LATIO	N DA		TION		
12 1/4	MXRO	9D			30"	SET @	130	m	9	92	5	500	6	x	12 I	nches		,	PRE	SS	390) psi
DRILL PIPE	s	Lei	1gtn 1	775 Mtrs	13 3/8	SURFACE SET @	2438 743	ft m	TOTAL CI	RCULATING	VOL. 92		PU	MP MOD	EL .P-160	% EI	97	ſ	BOTT	roms IP		46 min
DRILL PIPE	TYPE	Lei	ngth	110		PROD. or	140	ft		IN STORAGE			Itation	BBL/STK		S	TK / MIN		SURF	ACE		5.8
SIZE 5		/	1 nath	11 Mtrs		LNR Set @		m		55	50		().1018	3	G	188		TO TOTAL	BIT		min
8	. ,		157	Mtrs	-	-	K	CI/PHPA	/Glycol					19.14			804		TI	ME		107 _{min}
				М	UD PRO	PERTIES										MUD	PROPE	RTY	SPEC	CIFICA	TIONS	
SAMPL	E FRO	M						Pi	it	Pi	t	Р	lit	Mud	Wt	10.2	Glycol		:	3 - 5%	API	6.
TIME SA	AMPLE	Ε ΤΑΚ	EN					01:	30	09:	00	19	:30	Vis	45-5	5	Yield P	oint		>15	рН	9-10
FLOWL	INE TE	EMPE	RATURE				⁰ F/ ⁰ C	118	48	118	48	130	54	ксі	6-8		PHPA (exce	ss	>1.5	Sulphit	es >10
TOTAL	MEAS	URED	DEPTH (TMD)			Feet	18	11	183	37	20	01				OB	SER	VATIO	NS		
WEIGH	Т					ppg /	SG	10.25	1.23	10.20	1.22	10.30	1.24	Bleed	d in prem	ix with	n 1 ppb	Xant	than G	um, 1.	3 ppb PA	ιC-L,
FUNNE	L VISC	COSIT	Y(sec/qt) /	API @	49	^o C 120	٥F	6	0	55	5	5	6	6% K	CI 1,6pp	b JK2	61, 0.6	ppb	Idcide	weigh	ted with t	oarite.
RHEOL	OGY	600 : 3	00 RPM		49	^o C 120	⁰ F	62	45	64	45	70	48	Selec	ctively us	e desi	ilter, up	grad	e shak	er scre	ens to 1	45 mesh.
RHEOL	OGY :	200 : 1	00 RPM		49	^o C 120	⁰ F	37	28	38	28	39	28									
RHEOL	OGY	6:3 F	RPM		49	^o C 120	⁰ F	9	7	9	7	9	7									
PLASTI	C VIS	COSIT	Y cP@		49	^o C 120	⁰ F	1	7	19)	2	2	Adde	d dry PH	IPA (0	.3 ppb)					
YIELD F	POINT	(lb/	100FT ²)		49	^o C 120	⁰ F	2	8	26	5	2	6	Barite	e figures	as pe	r Ballas	t Co	ntrol.			
GEL ST	RENG	TH (1b/100ft ²)	10 sec/1	0 min/3	0 min.		7/11	/13	8/11	/13	7/12	2/15	Obse	erved inci	rease	in Mud	Wt to	o 10.4	ppg. S	tarted De	esilter
API FIL	TRATE	E (c	m ³ /30 min	.)				4.	8	4.8	8	4	.4	at 20	:30 Hrs a	and ble	eeding u	unwe	eighted	premi	X.	
HPHT F	HPHT FILTRATE (cm³/30 min.) 121 °C 250						⁰ F	22	.0	20.	0	18	3.0	Barite	e Potenti	al: 13.	18 ppg.	ass	umina	aauae	hole.	
API : H	HPHT FILTRATE (cm³/30 min.) 121 °C 250 API · HPHT (Cake/32nd in) 121 °C 250						-	1:	3	1:	3	1	:3				OPERA	TIO		MMAR	Y	
PH								9	5	9	5	9	.5	Drill '	12 25" hc	ole to 2	2043 m					
		мир	(Pm)					•••		•	-											
				/ Mf)				0.15	0.90	0.10	0.90	0.18	1.00									
CHLOR		(ma/l		,,				290	0.00	310	0.00	314	400									
TOTAL	HARD	NESS	(ma/L)					200	200	32	00	2/	100									
			(iiig/L)					52	. <u>.</u> 0	52	<u>,</u>		+0 nn									
		nng/L)						1	7	4 .	, ,	1	0									
			· /0/ \/\/\					1.	0	1.	5	1	5									
GLICO			(/0 ¥/¥)					224	0	254	00	270										
	19/L)	A/4 \						524	000	351	5	370	0									
	% by \ FR (Ca	/vt.)	-)					0. 57	7	50.	5 A		.0									
BARTI				X (5/	./	59.	4	41	.0							SLS)		
METHY		BLUE			quivale	nt)		12	.0	12.	0	11	0.0		FLUID B				DISPC	DSED	SU	
SOLIDS				ume) Reto	ort			10.	50	10.0	00	12	.00	Prem	ix - wat	er	400 S.	C.E		200		1982
LIQUID	CONT	ENI (% by volu	me) Calc				89.	50	90.0	00	88	.00	Prem	11X - Rec	ус		ump	ed 		+ Rca	400
			10 (% 01)	\						4.0	-	•		Driii	water		Do	own	noie	81	- Lost	341
SAND	ONTE	:NT (%	by volun	ne)				1.0	00	1.2	5	0.	50	Othe	r		01	ther		60	Surface	1,050
				PR	TODUCT	USAGE	1		1					REC	EIVED		400 LC	DST		341	FINAL	2,042
Product		Price	Start	Received	Damage	Used	CI	lose		Cost				· · · ·	SOLID	s co	NTROL	EQI	UIPME	NT		1
Barite Bulk	Barite Bulk \$ 14.77 ### 361					28	827	\$	5,3	331.97	SHALE S	HAKERS	Hrs			# \$	oize	Hrs			Hrs	
Caustic Soda	\$	6 36.0	30 32			2	;	30	\$		73.20	# 1	4 x 145	24	Desander		3	6		Centri	fuge	
ldcide-20	\$	5 103.0	00 28			11		17	\$	1,1	33.00	# 2	4 x 145	24	Desilter		20	2	14	Centri	fuge	
JK-261 \$ 109.70 73 22						51	\$	2,4	413.40	# 3	4 x 145	24	Mu	d Clea	aner 1			Degas	ser	17		
KCI BB Fine	\$	650.0	00 18			6	· ·	12	\$	3,9	900.00	# 4	4 x 84		Mu	d Clea	aner 2			Poorb	оу	
PAC-L	\$	5 168.0	00 72			17		55	\$	2,8	356.00			Ove	erflow (p	opg)	Under	flow	(ppg)	0	utput (G	al/Min.)
Sodium Sulph	nite \$	5 25.0	02 55			7		48	\$	1	175.14	Desand	er					0				
Xanthan Gum	P \$	6 411.4	42 65			6		59	\$	2,4	468.52	Desilter			10.1			14.1			10.0	00
												Cleaner	1					0				
							L		L			Cleaner	2				_	0		L		
							L		L			Centrifu	ige1				_			L		
	\neg						ſ		ſ	-		Centrifu	ige2				_			L		
										CU	RRENC	(DA	AILY C	COST			сими	LATIVE	соѕт		
													AUD		\$1	8,35	1.23			\$23	32,894	.75
I.D.F.S. Engin	D.F.S. Engineer: M.Docherty & J. Singh Offi					Office:		BRISB	ANE			Teleph	one:	C	07 380	6-0160		Fax:		07 3806	-0165	

Any opinion and/or recommendation, expressed orally or written herin, has been prepared carefully and may be used if the user so elects, however, no representation or wan is made by ourselves or our agents as to its correctness or completeness, and no liability is assumed for any damages resulting from the use of same.

	INDEPENDENT DR								FLU	JID S	EP	NIC	ES	Re	eport #	OCEAN	21	Date			14-Sep	-02
IDFS				A Divisi	on of	Bheoche	m Ptu	htle						R	ig #	Bounty		Spud	Date		25-Aug	-02
	È			:					A(CN 070	415	593		Тс	otal MD)		20	43	to	2	118
•			D	riiii	ng		ын	epo	σπ					Тс	otal VD			20	41	to	2	116
OPERATOR			Sar	ntos Lto	Ι.					CONT	RACT	OR		DO	GC							
REPORT FO	R		Her	nry Flin	k & Ga	vin Othe	n			REPO	RT FC)R		Ric	ky Gra	aham	1 & F	Ronn	ie Sa	afar		
WELL NAME	AND	No	Cae	sino 1						FIELD		D _ 11				l Jein			STAT	E		
BHA B	T TYP	E	JET SIZ	ZE		CASIN	IG		м	UD VOLU	IME (B	BL)		01		CIRCU	LATI		TA	Jila		
BIT SIZE	Hughes	16	16 16		20" &	CONDUCTOR SET @	427	ft	H	OLE	P	PITS	c	PUMP	SIZE	Inches			CIRCULA	TION	200	
12 1/4 M	IARU9L	Lengti	1		30 ⁻¹ 13 3/8	SURFACE	2438	ft	TOTAL CI	NCULATING V	0L.	080	0 PUI	A MP MOD	1Z DEL	Inches % El	FFICIEN	ICY	BOTT	OMS	390) psi
SIZE 5	S	Longti	18	50 Mtrs		SET @	743	m			06		Nation	al 12	-P-160	e.	97	4	U	P		4/ min
SIZE 5	HW	Lengu	' 11	11 Mtrs		PROD. or LNR Set @		ft m		36	5).1018	3	3	190	•	TO	BIT		5.9 min
DRILL COLLAR SIZE (")	Lengti	1 67		MUD TYPE	S	K		Chung				E	BBL/MIN	I	G		N	TOTAL	. CIRC.		102 _{min}
0			57	Mitrs	UD PROI	PERTIES	N	CI/PHPA	Giycol				I	19.34	·	MUD	PRO	PERTY	SPEC		TIONS	
SAMPLE		1						Pi	t	Pit	ł	Р	it	Mud	Wt	10.2	Glyc	ol	0. 20	3 - 5%	API	6.0
TIME SAM	PLE	TAKE	N					01:	00	11:0	00	19:	:00	Vis	45-5	55	Yield	Point		>15	Ηα	9-10
FLOWLIN	E TEN	IPER/					⁰ F/ ⁰ C	135	57	140	60			ксі	6-8	3	PHP	A exce	ss	>1.5	Sulphit	es >100
TOTAL MI	EASU	RED D	DEPTH (T	MD)			Feet	200	65	211	8	21	18				0	BSER	VATIO	NS		
WEIGHT				,		ppg /	SG	10.40	1.25	10.20	1.22	10.20	1.22	Run	desande	er and o	desilte	er and	bleed i	n unw	eighted p	remix
FUNNEL \	/ISCC	SITY(sec/qt) A	PI @	43	°C 110	٥F	59)	54		5	4	to lov	wer mud	weight	t from	10.4 -	10.2p	pg. Du	mp sand	trap.
RHEOLOG	SY 60	0:30	0 RPM	0	49	^o C 120	⁰ F	67	48	60	43	68	48	Add	premix w	vith 1.3	ppb	PAC-L	and 6	% KCI	to kerb	·
RHEOLOG	Y 20	0:10	0 RPM		49	^o C 120	⁰ F	38	28	35	23	38	27	rising	g rheolog	jy.						
RHEOLOG	Y 6	3 RP	M		49	^o C 120	⁰ F	8	6	8	6	8	6	Repl	ace worr	ר 10 x s	s145	shaker	screer	ns afte	r 24 hou	s use.
PLASTIC	visco	DSITY	cP @		49	^o C 120	⁰ F	19		17		2	0	Hole	taking le	ess tha	n half	f a barr	el/hou	r while	logging.	
YIELD PO	INT	(lb/10	0FT ²)		49	^o C 120	⁰ F	29		26		2	8									
GEL STRE	NGT	` H (lb	/100ft ²)	10 sec/1	0 min/3	0 min.		7/11	/14	7/10/	12	7/11	I/13									
API FILTR	ATE	(cm ³	3/30 min.)					4.	6	4.8	3	5.	2									
HPHT FIL	TRAT	E (cm ³	/30 min.)		121	^o C 250	⁰ F	18	.0	18.	0	18	.0	Barit	e Potent	ial:12.8	34 pp	og, ass	uming	gauge	hole.	
API : HPH	T (Ca	ke/32n	id in.)					1:	3	1:3	3	1:	:3			(OPER	NOITAS	NS SUI	MMAF	Y	
PH								9.	0	9.0)	9.	.0	Drill	12.25" h	ole to	2118	m.				
ALKALINI	TY M	JD ((Pm)											Circu	ulate bott	toms u	p. Bo	ost rise	er till cle	ean.		
ALKALINI	TY FI	LTRA	E (Pf/	Mf)				0.10	0.85	0.10	0.90	0.13	0.85	Flow	check. F	РООН	from	2118m	n, 60K d	overpu	II at 180	ōm
CHLORID	E (n	ng/L)						310	00	315	00	325	500	and a	at 1760m	n. Flow	chec	k at sh	noe. PC	DOH. E	3/O bit.	
TOTAL HA	RDN	ESS	(mg/L)					28	0	38	ט	40	00	RIH	with log	1 PEX	-DSI-	HALS.	Monito	or well	on trip ta	ank.
SULPHITE	E (m	g/L)						10	0	80		8	0									
PHPA (C	alc p	pb)						1.9	9	1.8	3	1.	.9									
GLYCOL	CONT	ENT ('	% V/V)					1.	5	1.5	5	1.	.5									
K+ (mg/	L)							378	00	378	00	405	500									
KCL (%	by Wi	:.)						7.	0	7.0)	7.	.5									
BARYTES	(Calo	; ppb)						52	.6	52.	2	53	3.7		ļ	MUD A	ACCO	UNTIN	IG (BB	BLS)		
METHYLE	NE B	LUE C	APACITY	r (ppb ed) (quivale	nt)		12	.5	12.	0	10	.0		FLUID B	BUILT		FLUI	DISPC	SED	SU	MMARY
SOLIDS C	ONTE	ENT (%	by volu	me) Reto	ort			12.	00	10.5	50	10.	.40	Pren	nix - Wa	ter	200	S.C.E		127	INITIAL	2042
	ONTE	NT (%	by volun	ne) Calc				88.	00	89.5	50	89.	.60	Pren	nix - Rec	сус		Dump	ed	90	+ Rcd	200
CUTTING	S OIL	RATIC) (% oil)											Drill	Water			Downl	hole	24	- Lost	271
SAND CO	NTEN	T (% k	y volum	e)				0.5	50	0.5	0	0.	50	Othe	er			Other		30	Surface	945
				PR	ODUCT	USAGE						•		REC	EIVED		200	LOST		271	FINAL	1,971
Product	1	Price	Start	Received	Damage	Used	CI	lose		Cost					SOLIE	os col	NTRC	DL EQI	JIPME	NT		
Barite Bulk	\$	14.77	###			76	2	751	\$	1,1	22.52	SHALE S	HAKERS	Hrs			#	Size	Hrs			Hrs
Caustic Soda	\$	36.60	30			3	:	27	\$	1	09.80	# 1	4 x 145	14	Desande	r	3	6	3	Centri	fuge	
Defoamer-A	\$	245.33	30			2	:	28	\$	4	90.66	# 2	4 x 145	14	Desilter		20	2	7	Centri	fuge	
ldcide-20	\$	103.00	17			6		11	\$	6	18.00	# 3	4 x 145	14	Mu	ud Clea	aner '	1		Degas	ser	3
JK-261	\$	109.70	51			8		43	\$	8	77.60	#4	4 x 84		Mu	ud Clea	aner	2		Poorb	oy	
KCI BB Fine	\$	650.00	12			2		10	\$	1,3	00.00	.		00	ertiow (ppg)	Und	erflow	(ppg)	0	utput (G	al/Min.)
PAC-L	\$	168.00	55			6		49	\$	1,0	08.00	Desand	er		10.3			10.7			4.0	u n
Sodium Sulphite	\$	25.02	48			5		43	\$	1	25.10	Desilter	4		10.2			12.9			11.0	U
											Cleaner	1					0					
										Cleaner	2					U						
										Centrifu	ige1											
										centrifu	igez	L										
											CUR	RENC	r	D.		COST		(CUMU		COST	
													AUD		\$	5,651	1.68			\$23	38,546	43
I.D.F.S. Engineer	:		.F.S. Engineer: M.Docherty & J. Singh O						BRISB	ANE			I eleph	one:		u7 380	6-016	50	Fax:		07 3806	-0165

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	INDEPENDENT DRILL									FL		SEF	NIC	ES	Re	eport #	ocean	22	Date			15-Sej	b-02
	FS				Divisi	ion of	Rheo	chem F	'tv Ltd						R	ig #	Bounty	,	Spuc	l Date	1	25-Au	g-02
								i a I			NCN 070	0 415	593		То	otal MD)		21	18	to		2118
	. –				r	ng	ГЦ		Rep	or	L				То	otal VD			21	16	to		2116
OPERATO	OR			San	tos Lto	1.					CONT	RACT	OR		DO	GC							
	FOR			Hen	ry Flin	k & Ga	avin (Othen			REPO	RT FC	DR		Ric	ky Gra	ahan	n & F	Ronr		afar		
WELL NA)	Cas	ino 1						FIELL	, VIC -	P - 44		Otw	vav Ba	asin			Victo	oria		
BHA	BIT T	YPE		JET SIZ	E		C	ASING				UME (B	BL)				CIRCL	JLATI	ON D/	ATA			
BIT SIZE 12 1/4	Hugi MXR0	hes D9D	16 10	6 16		20" & 30"	CONDUC SET @	tor 4	27 ft 30 m		HOLE 1026	F 5	ытs 570	6	PUMP S	SIZE	Inches			CIRCULA	ATION ESS		psi
DRILL PIPE		L	ength			13 3/8	SURFACI	= 24	38 ft	TOTAL	CIRCULATING	VOL.		PUI	MP MOD	EL	% E	FFICIEN	CY	BOTT	TOMS		
SIZE 5 DRILL PIPE	TYPE		.ength	185	0 Mtrs		PROD. or	7	43 m ft		15 IN STORAG	96 E		Nation	BBL/STK	-P-160	s	97 STK / MIN	I	SURF	FACE		min
SIZE 5	HV	v .		11	1 Mtrs		LNR Set (0	m		3	65		<u> </u>	0.1018	3			1	то	BIT		min
8			157		Mtrs	MODITIFE	.5		KCI/PHP	A/Glyco	bl									TI	ME		min
					M	UD PRO	PERTI	ES	-		1		1				MUD	PROF	PERT	Y SPEC	CIFICA	TIONS	
SAMPL	LE FRO	DM								Pit	P	it	P	it	Mud	Wt	10.2	Glyco	bl	:	3 - 5%	API	6.0
TIME S	SAMPL	E TAI	KEN						04	4:00	13:	00	20	:00	Vis	45-	55	Yield	Point	t	>15	рН	9-10
FLOWL	LINE T	EMPE	RATU	JRE				⁰ F/ ⁰	С		-				KCI	6-8	3	PHP	Aexce	ess	>1.5	Sulphit	es >100
TOTAL	MEAS	SURE	D DEF	РТН (ТІ	MD)			Fe	et 2	118	21	18	21	18				0	BSEF	RVATIO	ONS		
WEIGH							°0	opy / SG	10.3	0 1.24	10.30	1.24	10.30	1.24									
FUNNE		COSI	Y(sec	c/qt) Al	יי @	32	°C	90 °F	74	59	5	/	5	10	Oper	1 Hole 3	1% ov	ergau	ge as	per Cal	liper da	ata.	
RHEOL		600 : 200 :	300 F			49	°C	120 °F	/1	50	67	4/	6/ 20	46									
		200:		RPIN		49	0°C	120 °F	41	29	38	21	30	21									
		0.3		-P @		43	°C	120 F	9	21	0	n N	0	1									
		· //h	/100FT	<u>σε ω</u> τ²ι		49	°C	120 F	_	29	2	7	2	5	Hole	taking a	bout 0) 4 bbl	an ho	our durii	na loa	nina	
GEL ST		ці) атн	(16/10	<u>')</u>)0ft ²) 1	0 600/11	0 min/3	- 0 min	120 1	7/1	1/14	8/12	/14	7/1	1/14	11010	taiting a	bout		unno		ing log:	ging.	
	TRAT	E ($cm^{3}/30$	0 min.)	0 300/10	0 1111/0	•			4.6	4.	6	4	.6									
НРНТ Р	HPHT FILTRATE (cm³/30 min.) 121 °C 250						250 ⁰ F	1	8.0	18	.0	18	3.0	Barite	e Potent	ial:12.	94 pp	g, ass	suming	gauge	hole.		
API : H	HPHT FILTRATE (cm ³ /30 min.) 121 C 250 API : HPHT (Cake/32nd in.) 121 C 250									1:3	1:	3	1	:3				OPER	ATIO	NS SU	MMAF	RY	
PH									9	9.0	9.	0	9	.0	Logg	ing tools	reach	ned 20	98m.				
ALKAL	INITY	MUD	(Pn	n)											Cond	lucted F	ollowir	ng run	s:				
ALKAL	INITY	FILTE	RATE	(Pf / I	Mf)				0.10	0.85	0.15	0.90	0.13	0.90	# 1: F	PEX-DS	I						
CHLOF	RIDE	(mg/l	L)						33	3000	330	00	33	000	# 2: N	MDT-GR	2						
TOTAL	HAR	DNES	S (n	ng/L)					4	100	30	0	3	00	# 3: 0	CSD-GR	1						
SULPH	IITE	(mg/L	.)							80	8	D	8	0									
PHPA	(Calc	: ppb)							1.9	1.	9	1	.9									
GLYCC		NTEN	T (% \	V/V)						1.5	1.	5	1	.5									
K+ (n	ng/L)								40)500	405	00	40	500									
KCL	(% by	Wt.)								7.5	7.	5	7	.5									
BARYT	res (C	alc p	ob)						5	6.1	59	.0	56	6.1			MUD /	ACCO	UNTI	NG (BE	BLS)	1	
METHY	LENE	BLU		PACITY	(ppb ed	quivale	nt)		1	2.0	11	.0	11	.0	_	FLUID E	BUILT	_	FLUI	D DISPO	DSED	SL	MMARY
SOLID	S CON	IENI	(% by	y volur	ne) Reto	ort			1	1.00	10.	80	11	.00	Prem	nix - Wa	ter		S.C.E				1971
			(% by	volum	ie) Calc				8	9.00	89.	20	89	.00	Prem	nix - Red	сус	-	Dump	bela	40	+ Rcd	
SAND			110 (%						-	50		:0	0	50	Drill	water		-	Down	noie	10	- LOST	10
SAND	SONT	LINI (/0 DY \	volume	7) 80	ODUCT		F	1 0		0.8	,0	U.	00				\vdash			40	Surrac	, 900
Pue du et		Dela		Ctort	Providence		USAG	-	01		0		1		REC							FINAL	1,901
Product Price Start Received Damage Used						a	Close		Cost		SHALE S	HAKERS	Hrs	SOLIL	500	#	Size	Hrs			Hrs		
											# 1	4 y 145	14	Desando	r	2	6		Centri	fune			
											# 1	4 x 145	14	Desilter	•	20	2		Centri	fuae			
			+										#2	4 x 145	14	Mi	ud Cle	aner '	-		Decas	ser	
			+										#4	4 x 84		Mu	ud Cle	aner 2	2		Poorb	оу	
													<u> </u>	-	Ove	erflow (ppg)	Unde	erflow	(ppg)	C	utput (C	al/Min.)
			+										Desand	er				1	0		1		
													Desilter						0				
													Cleaner	1					0				
													Cleaner	2					0				
													Centrifu	ige1									
													Centrifu	ıge2									
												CU	RRENC	(D	AILY	cost			сими	LATIVE	COST	
														AUD							\$2	38,546	.43
I.D.F.S. Engir	neer:		М.	.Docher	ty&	J. Singh	_ ۱	Offi	ce:	BRIS	BANE			Teleph	one:		07 380	06-01	0	Fax:		07 380	-0165

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	4		IN	DEP	END	EN.	T DR	ILLI	NG I	FLU	лD S	SEP	NIC	ES	Re	eport #		23	Date			16-Sep-	02
l D	FS				A Divisi	ion of	Bheach								R	ig #	Bounty	,	Spud	Date		25-Aug-	02
	÷ É				- 014151				, Liu	A(CN 070	415	593		Тс	tal MD			21	18	to	2 [.]	118
				D	rilli	ng	Flui	d H	lepo	ort					Тс	tal VD			21	16	to	2 [.]	116
OPERATO	OR			San	tos Lto	1.					CONT	RACT	OR		DO	GC							
REPORT	FOR			Her	nry Flin	k & Ga	vin Oth	en			REPO	RT FC	R		Ric	ky Gra	ahan	n & I	Ronn	nie Sa	afar		
WELL NA	ME A		0	_							FIELD				LOC	ATION	l			STAT	ΓE		
				Cas	sino 1	1						VIC -	P - 44		Otv	vay Ba	isin			Victo	oria		
BHA BIT SIZE	BII	IYPE	52	JET SI2	2E	20" &	CAS	NG 427	ft	M H		JME (B	BL) PITS		PUMP	SIZE	CIRCU	JLAII	ON DA		ATION		
12 1/4			th			30"	SET @	130	m	10	055	4	50	6	х	12	nches			PRE	ESS	1000	psi
DRILL PIPE		s	Length	19	28 Mtrs	13 3/8	SURFACE SET @	2438 743	ft m	TOTAL CI	RCULATING 15	VOL. 05		PUI Nation	MP MOD nal 12-	EL -P-160	% E	97	ICY	BOTT	roms IP		49 min
DRILL PIPE	TYP	E I	Length				PROD. or		ft		IN STORAGE			E	BBL/STK		S	STK / MI	4	SURF	ACE	e	5.1
SIZE 3 1/2 DRILL COLLAR S	H	W	Length	19	0 Mtrs	MUD TYPE	LNR Set @		m		33	30		(0.1018 BBL/MIN	3	G	190 GAL / MII	N	TO TOTAL	BIT CIRC.		min
					Mtrs			к	CI/PHPA	/Glycol					19.34			812		ти	ME		95 _{min}
					м	UD PRO	PERTIES		1		1		1				MUD	PRO	PERT	SPEC	CIFICA	TIONS	
SAMPL	E FR	ОМ							Pi	t	Pi	t	P	it	Mud	Wt	10.2	Glyc	ol	:	3 - 5%	API	6.0
TIME S	AMPI	LE TA	KEN						04:	00	14:0	00	19:	:00	Vis	45-8	55	Yield	Point		>15	рН	9-10
FLOWL	INE 1	TEMPI	ERA	TURE				⁰ F/ ⁰ C			120	49			KCI	6-8	3	PHP/	A exce	ss	>1.5	Sulphite	s >100
TOTAL	MEA	SURE	D DI	EPTH (T	MD)			Feet	21	18	211	8	21	18				C	BSER	VATIC	ONS		
WEIGH	Т						ppg	/ SG	10.30	1.24	10.25	1.23	10.20	1.22	Prep	are 120	bbls h	igh vis	scosity	pill wit	h1.6 p	pb Xantha	an Gum
FUNNE	L VIS	scosi	TY(s	ec/qt) A	PI @	38	^o C 100	٥F	58	B	57	,	6	2									
RHEOL	.OGY	600 :	300	RPM		49	°C 120	٥F	68	46	67	47	72	50	Dum	ped 120	bbl of	conta	minate	ed mud	l at 18	30 Hrs wh	nile
RHEOL	.OGY	200 :	100	RPM		49	°C 120	٥F	37	26	38	27	41	29	circu	lating as	indica	ated b	y high	pH.			
RHEOL	.OGY	6:3	RP	N		49	^o C 120	٥F	8	6	8	6	8	6									
PLAST		scos	ITΥ	cP @		49	^o C 120	٥F	22	2	20)	2	2									
YIELD	POIN	T (lb	/100	FT ²)		49	^o C 120	٥F	24	4	27	,	2	8									
GEL ST	FREN	GTH	(lb/	100ft ²) 1	10 sec/1	0 min/3	0 min.		7/10	/13	7/12	/14	7/14	4/16									
API FIL	TRA	ΓE (cm ³ /	30 min.)					4.	8	4.6	6	6.	.0									
НРНТ Р	HPHT FILTRATE (cm ³ /30 min.) 121 °C 250 °						0 ⁰ F	20	.0	20.	0	22	2.0	Barit	e Potent	ial:13	ppg,	assum	ing gau	uge ho	le.		
API : H	API : HPHT (Cake/32nd in.)							1:	3	1::	3	1:	:3				OPER		NS SU	MMAF	Y		
PH									9.	0	8.	5	10).5	RIH	with cem	ent sti	inger.					
ALKAL	INITY	MUD	(F	Pm)							0		1.	.4	Circu	lated ho	le clea	an.					
ALKAL	.INITY	FILT	RATI	, E (Pf/	Mf)				0.10	0.90	0.02	0.60	0.30	1.00	Place	ed ceme	nt plug	is as i	ber P 8	& A pro	gram.		
CHLOR	RIDE	(ma/	L)		,				325	00	330	00	325	500							•		
TOTAL	HAR		s	(ma/L)					36	0	56	0	56	50									
SULPH	ITE	(ma/L	_)	(3)						-		-											
PHPA	(Cal	c ppb)						1.	8	1.8	8	1.	.8									
GLYCC			, IT (%	5 V/V)					1.	5	1.(5	1	.5									
K+ (m	na/L)			,					405	00	405	-	405	500									
	(% hv	Wt)							7.	5	7.5	5	7	.5	-								
BARYT	FS (Calc n	nh)						56	1	53	4	53	17				1000		NG (BE	8LS)		
METHY			F C/		(nnh e	ماديرنيي	nt)		12	0	11	0	11	0		FLUID B		1000	FLU		DSED	SUM	
	S COL		с 07 г (%		(ppb et	ort			11	.0	10.5	80	10	40	Pron	iv - Wa			SCE				1961
			· (//		ne) Calc				80	00	80.4	20	80	. 	Dron				Dumn	od	120	+ Pcd	1501
CUTTIN									03.	00	03.2	20	- 03.	.00	Drill	Wator	-yc		Down	bolo	6	- Loet	126
SAND			% h		2)				0.5	50	0.5	0	0.4	50	Otho	r			Othor	noie		Surfaco	780
5AND (50141	-AT (70 D]	y voluille	-/				0.5	,0	0.5	5	0.		DEC						400	CINA	100
							USAGE	1 -		1	_				REC	EIVED			LUSI		126	FINAL	1,835
Product		Pric	e	Start	Received	Damage	Used	c	lose		Cost		SHALE S	HAKERS	Hrs	SOLIE	is co	N FRC			IN F		Hrs
Xanthan Gum P \$ 411.42 59 4						-	55	\$	1,6	645.68									_	. T			
						-					#1	4 x 145	18	Desande	r	3	6		Centri	tuge			
										# 2	4 x 145	18	Desilter		20	2		Centri	fuge				
													#3	4 x 145	18	Μι	ld Cle	aner	1		Degas	ser	
													#4	4 x 84		Mu	Id Cle	aner	2	(m	Poorb	oy	1/BA: \
													.		00	ernow ()	nbâ)	und	erriow	(ppg)		utput (Ga	u/WIIN.)
L								_					Desand	er					0				
L								_					Desilter						0				
L													Cleaner	1					0				
													Cleaner	2					0				
													Centrifu	ige1									
													Centrifu	ige2									
												CUI	RRENC	1	D	AILY	COST			сими		COST	
													AUD		\$	1,64	5.68			\$24	10,19 <u>2.</u> ′	11	
I.D.F.S. Engir	D.F.S. Engineer: M.Docherty & J. Singh Off						Office	:	BRISB	ANE			Teleph	one:	(07 380	06-016	50	Fax:		07 3806-	0165	

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	INDEPENDENT DRI									FLU	JID SE	R	VIC	ËS	Re	eport #	ocean	24	Date			17-Se	p-02	
	FS			,	A Divisi	on of	Bheoch	em Ptu	Ltd			_			R	ig# i	Bounty	'	Spud	l Date		25-Au	g-02	
	٠.				rilli					AI Tra	CN 070 41	5 !	593		Тс	otal MD			21	18	to		2118	3
						ig i	Flui		ehd	JI					Тс	otal VD			21	16	to		2116	5
OPERATO	DR			Sar	itos Ltd						CONTRA	СТС	OR		DO	GC								
REPORT	FOR			Her	nry Flin	k & Ga	vin Oth	en			REPORT	FO	R		Ric	ky Gra	ahan	n & I	Ronr	nie Sa	afar			
WELL NA			5	Cas	sino 1							2 - 1	P - 44		Otv	anon vav Ba	ı İsin			Victo	oria			
BHA	BIT	TYPE		JET SIZ	ZE		CASI	NG		м		(BE	3L)		011	(CIRCL	JLATI	ON DA	ATA	ona			
BIT SIZE		-	52	52 52		20" &	CONDUCTOR SET @	427	ft m	н 1	OLE 099	Pľ	TS	6	PUMP	SIZE 12 I	nches				TION SS			nei
DRILL PIPE		L	ength			13 3/8	SURFACE	2438	ft	TOTAL CI	RCULATING VOL.			PUI		EL	% E	FFICIE	ICY	вотт	roms			hai
SIZE DRILL PIPE	түр	FL	.ength	21	18 Mtrs		SET @	743	m		1099 IN STORAGE			Nation	al 12	-P-160	s	97 STK / MI	1	U				min
SIZE	н	w			Mtrs		LNR Set @		n m					0	.1018	3	-			то	BIT			min
DRILL COLLAR S	IZE (")	L	.ength		Mtrs	MUD TYPE	S	ĸ	CI/PHPA	Glycol				E	BL/MIN	l	G	GAL / MI	N	TOTAL TI	. CIRC. ME			min
	L	I			MU	JD PRO	PERTIES		00111170	Ciyooi							MUD	PRO	PERT	Y SPEC	CIFICA	TIONS		
SAMPL	E FR	ом							Pi	t			Р	it	Mud	Wt	10.2	Glyc	ol	:	3 - 5%	API		6.0
TIME S	AMPI	E TA	KEN						02:	00			08:	:00	Vis	45-5	55	Yield	Point	t	>15	рН		9-10
FLOWL	INE 1	EMPE	RAT	TURE				⁰ F/ ⁰ C							KCI	6-8	3	PHP	A exce	ess	>1.5	Sulphi	tes	>100
TOTAL	MEA	SURE	D DE	EPTH (T	MD)			Feet	211	8			21	18				C	BSER	VATIO	NS			
WEIGH	т						ppg /	SG	10.20	1.22			10.20	1.22	Spot	40 bbl H	ligh vi	s pills	below	cemer	nt plug	s.		
FUNNE	LVIS	COSI	TY(se	ec/qt) A	PI @	29	^o C 85	⁰ F	63	3			6	6	Treat	t mud to	be lef	t in ca	sing w	ith 0.5	ppb C	austic S	oda a	and
RHEOL	.OGY	600:	300	RPM		49	^o C 120	⁰ F	73	51			76	52	0.4 p	pb Idcide	e.							
RHEOL	.OGY	200:	100	RPM		49	^o C 120	⁰ F	41	29			43	31										
RHEOL	.OGY	6:3	RPN	Λ		49	^o C 120	⁰ F	8	6			9	7	Dum	p and cle	ean tai	nks at	ter dis	placing	riser f	o seawa	ater.	
PLAST		scosi	ΤY	cP @		49	^o C 120	⁰ F	22	2			2	4										
YIELD I	POIN	T (lb	/100	FT ²)		49	^o C 120	⁰ F	29)			2	8										
GEL ST	REN	GTH	(lb/1	100ft ²) ′	10 sec/10) min/3	0 min.		8/15	/17	11		9/15	5/18										
API FIL	TRA	ΓE («	cm³/:	30 min.)					6.	D			6.	.6										
HPHT F	HPHT FILTRATE (cm ³ /30 min.) 121 °C 250 °C) ⁰ F	22.	.0			24	l.0	Mud	received	l is cer	ment	slurries	3.					
API : HI	PHT (Cake/	32nd	l in.)					1:	3			1:	:3				OPEF	RATIO	NS SU	ММАБ	Y		
PH									11.	.0			11	.5	Follo	wP&A	progra	am						
ALKAL	INITY	MUD	(P	' m)					2.0	0			2.	.6	Wait	on weat	her							
ALKAL	INITY	FILTE	RATE	E (Pf/	Mf)				0.40	1.10			0.70	1.40										
CHLOR	RIDE	(mg/l	L)						330	00			330	000										
TOTAL	HAR	DNES	S	(mg/L)					64	0			64	40										
SULPH	ITE	(mg/L	.)																					
PHPA	(Cal	c ppb)						1.8	В			1.	.8										
GLYCO	DL CO	NTEN	Т (%	v/v)					1.	5			1.	.5										
K+ (m	ng/L)								405	00			405	500										
KCL ((% by	Wt.)							7.	5			7.	.5										
BARYT	'ES (C	alc p	ob)						53.	.7			52	2.2			MUD	ACCC	UNTI	NG (BE	BLS)	1		
METHY	LENE	BLU	ECA	PACITY	(ppb ec	quivale	nt)		12.	.0			12	2.0		FLUID B	UILT	1	FLUI	D DISPO	DSED	SI	JMMA	RY
SOLIDS	S COI	NTENT	(%	by volu	me) Reto	ort			10.4	40			10.	.50	Pren	nix - Wat	ter		S.C.E			INITIAI	-	1835
LIQUID	CON	TENT	(% b	oy volun	ne) Calc				89.	60			89.	.50	Pren	nix - Rec	сус		Dump	ed	1066	+ Rcd		330
CUTTIN	IGS C	DIL RA	TIO	(% oil)											Drill	Water			Down	hole	0	- Lost		1,066
SAND	CONT	ENT (% by	/ volum	e)				0.5	60			0.	50	Othe	r		330	Other			Surfac	e	
					PR	ODUCT	USAGE	1							REC	EIVED		330	LOST		1066	FINAL		1,099
Product Price Start Received Damage Used						С	lose		Cost	_	01141 E 0			SOLID	os co	NTRO	DL EQ	UIPME	NT					
Caustic Soda \$ 36.60 27 2						-	25	\$	73.2	20	SHALES	MAKERS	HIS			#	SIZE	Hrs				Hrs		
ldcide-20 \$ 103.00 11 2						<u> </u>	9	\$	206.	00	#1	4 x 145	4	Desande	r	3	6		Centri	fuge				
					<u> </u>					# 2	4 x 145	4	Desilter		20	2		Centri	fuge					
													#3	4 x 145	4	Mu	Id Cle	aner	1		Degas	ser		
								 					# 4	4 x 84	0	Mu	Id Cle	aner	2	(nn-)	Poorb	oy	201/85	lin)
			-+										Decert	or	00	ernow (hð)	und	erriow ^	(pbĝ)		uiput (Jai/M)
								1				4	Desand	CI					0					
												_	Cleanor	1				<u> </u>	0		<u> </u>			
												_	Cleanor	2				<u> </u>	0		<u> </u>			
			-+									_	Centrifu	- Ige1					U					
			-+					+				_	Centrifu	.ae,										
											-f		DDENO	, 1	-	A II V -						000	. т	
												\rightarrow	CUI			D	AILY (<u> </u>	CUMU COMU		24	51
	0007		<u> </u>	M Docho	rtu 9	Sinah		Office		BDIED				Tolonk	2001		₽ ∠/9 07.201	0.2U	:0	Eave	φ Ζ4	+U,4/1	.31	5
p.v.r.s. engin	P.F.S. Engineer: M.Docherty & J. Singh O						Onice:	•	DKISB				reiebuo	one:		01 301	0-01		LqX:		01 300	0-010	5	

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LEARNINGS FROM CASINO 1

Some of the learning's related to the drilling fluid system run on Casino 1 in the Otway Basin September 2002 for Santos Ltd.

Seawater Gel / Guar Gum Sweeps

- 2ppb Guar Gum sweeps were prepared and utilized for added hole cleaning and viscosity. Properties of this fluid had typically a funnel viscosity of 65 seconds / quart and a yield point of 25lb/100ft2.
- The 80 sacks of Guar Gum provided to location for this well, will be increased to 120 sacks for any subsequent wells in this area.
- Flocculated prehydrated bentonite (Trugel 13A) was prepared using 0.2ppb Caustic Soda, 25ppb Bentonite and then flocculated with 0.5ppb Lime after hydration in the rigs drill water. Properties of this fluid typically had a funnel viscosity of above 100 seconds / quart and a yield point of 55lb/100ft2.
- Once casing point had been reached the hole was displaced with 33ppb prehydrated bentonite (un-flocculated).
- Guar Gum sweeps were used to good effect in hole cleaning to save on drill water levels. Guar Gum sweeps could also have Potassium Chloride additions to provide inhibition during the drilling of reactive clays.
- Some tight hole was experienced whilst pulling out after reaching the 17 ¹/₂" casing point however the casing was run in without any obstruction.
- The spotting of high viscosity flocculated bentonite sweeps around the collars for connections is also recommended on any future wells.
- LCM's such as Quickseal or Enerseal were not required during either interval as good returns were seen as monitored with the ROV. The levels of bentonite we deemed sufficient to bridge of pore throats to reduce the amount of fluid lost to the surrounding wellbore.
- The programmed fluid requirements for these two intervals were underestimated due to the increased usage of sweeps and greater level of surface volume required to run the system. Adjustments will be made on future programs in this area with this drill rig.

KCI / PHPA / Glycol System

- A shearing unit was made available to good effect in this interval, especially whilst building the levels of PHPA in the active system.
- The requirement of a shearing unit is however reduced once Pac and Xanthan Gum has been added to the premixes or if added viscosity is required from the PHPA.

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- Initial hole cleaning properties of the circulating fluid were low and adjustments on the run are not recommended on future wells. The properties of the circulating fluid from the initial stages of the production interval will be increased to ensure adequate hole cleaning and inhibition at all times.
- The levels of Xanthan Gum in the initial premix will be increased to provide the desired yield point of greater than 20lb/100ft2 from the onset of the production interval through until section TD.
- A large quantity of downhole losses were experienced below the casing shoe. Losses were not observed when static, however were exacerbated at a pump discharge rate of 600 gpm.
- The usage of Glycol in future wells in the initial stages of this interval (Below 1050 meters) is discouraged due to the non requirement of this added inhibition and increased cost of replacement fluid, especially if large downhole losses are possible as with this well. The drilling fluid program for any subsequent wells in this area will not commence Glycol addition until after 1050 meters.
- The mud weight should be kept to a minimum to reduce equivalent circulating densities and thus downhole losses, especially through the initial stages of the production interval prior to the Belfast formation.
- Usage of LCM's to treat downhole losses must be discussed with the Santos Company Man before usage.
- The usage of Quickseal and / or Enerseal is preferred in non-producing formations over LCM's such as Sandseal and Fracseal due to their courser particle size and reduced cost.
- Optimal inhibition levels in the circulating fluid were seen as 1.8ppb PHPA, 3% Glycol and 6-8% KCl through the Belfast formation with a mud weight in the order of 9.6 – 10.3ppg to aid wellbore stability and reduce background gas levels.
- Yield points are recommended to be above 20lb/100ft2 from the commencement of this interval through until TD and increased depending upon the mud weight requirements of the well. The primary source of hole cleaning should be from the addition of Xanthan Gum.
- The levels of bentonite incorporated in the system whilst drilling (MBC) were higher than predicted and close attention to the dilution rates should be made to keep this property as low as possible without sufficient solids control equipment on the rig site to treat out.
- If tight hole is experienced whilst pulling out or running in, inhibition levels within the circulating system will be depleted rapidly from the fresh formation exposed. Close attention to depletion rates will need to be undertaken to ensure that adequate inhibition levels is maintained.
- Recording of the results of high viscosity sweeps returning to the system is paramount for accurate assessment of the benefits of such sweeps is to be analysed.
- Idcide was used to good effect to prevent any biological contamination to the circulating system even after extended delays in drilling due to the weather conditions.

• Overgauged hole can be expected in future wells and downhole volumes and calculations of treatment requirements should take this into consideration. LCM usage to seal thief zones and aid wellbore stability in unconsolidated formations may help in reducing hole gauge.

Solids Control Equipment

- No centrifuge on location and as such, higher reliance on the primary and other secondary solids control equipment was required.
- Desilter (20 cones) and Desander (3 cones) worked well, however high underflow discharge of fluid meant that the equipment was used selectively to reduce replacement fluid costs and requirements.
- The finest screen size available to handle the flow during the production interval was seen as 145 mesh.

Stock Levels

- Whilst drilling programs in this area are not regular and the maintenance of a regular warehouse in Portland is not an option at this stage, adequate stock levels and contingent plans should be agreed upon with the Operator prior to the commencement of drilling.
- Logistical arrangements of Bulk material from Adelaide to Portland worked well and all supply vessels were met with the required product on time.

Safety and the Environment

- IDFS mud engineers actively participated in improving safety on the rig through the stop card system.
- As the rig crews were new to the IDFS products, they were told about the safe handling of various products at every stage. MSDS were made available and Safe Handling posters for chemical reference were prominently displayed.
- All toxic laboratory reagents were collected in a separate container after each testing and transported to shore to dispose of in an appropriate manner.
- IDFS chemical packaging was highlighted in so much as there was no metal strapping, which is a regular cause of hand related injuries. The cardboard and shrink wrap packaging enabled the sack room to stay clean and tidy minimizing damaged stock and chemical spills.

Daily Reporting

• Additional daily reporting, in graph format, of the properties both required and tested, was seen as a good monitoring tool and will be incorporated on a daily basis in future wells.

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• The ability to receive electronic copies of the daily drilling fluid reports was seen as a huge advantage in communication with the field based engineers.

• IDFS to receive a daily copy of the 10 day forecast to help plan movements of products and personnel as required.

SECTION 11:- CASING & CEMENTING SUMMARY

s	Santos OAI	BU		CASIN	G AND CEI	MENTING R	REPORT			
WELL: ELEVATIONS: CASING BOW STRING TYPE	Casino 1 L SIZE: 13.375" (13-3	R' 8/8") Surface Ca	T to seabed (m) RT to MSL (m) SERIES sing	: 95.5 : 25 : Dril Quip SS-10)	DATE: T.D (m): PBTD (m): REPORT BY:	28/08/2002 752 Chris Wise	2		
			CASING AND	EQUIPMENT RECO	RD AS RUN FRO	м воттом то т	OP			
SIZE	WEIGHT	[No. of		LENGTH	FROM	то			
OD. (mm)	(kg/m)	GRADE	JOINTS	IIIIILAD	(m)	(m)	(m)	RE	EMARKS	
762 (top) to 340	267	X-60	1	BTC	10.71	92.58	103 29	476 x 34	0 mm Wellhead Ass	embly
340	101.18	1-80	1 x No-cross	BTC	11.84	103.29	115 13			
340	101.10	L-80	50	BTC	590.73	115.13	705.86			
340	101.18	L-80	Float	BTC	12.64	705.86	718 50			
340	101.18	1-80	Intermediate	BTC	12.04	718 50	730.63			
340	101.10	1-80	Shoe	BTC	12.13	730.63	743.15			
040	101.10	2.00	Choc	510	12.02	100.00	140.10			
				TALLY TOTAL	650.57					
					CASI	I NG I ANDED AT ·.	743 -	15 m		
							92.6	58 m		
					OF OF CONDUC		52.0	50 m		
CENTRALIZER P		Bow spring	centralisers, place	a in the middle of th	e snoe, intermed	liate and float joir	its (three total).			
PREFLUSH:	Seawater	Volume (m3	3): 3.33	3	Density (SG):	1.018				
Additive	: Fluroscene Dy	/e	Amount Used:	10 kg	Additive:		%	Amount Used		
CEMENT:										
LEAD SLURRY						Additive		litre/sx	Amount Used (litr	е)
Brand: Adelaide	Brighton Cement	Clas	s: G (1032 sacks)	MT:		Ecconolite		0.231	7407	
Mixwater litr/sk:	45.44	Vield litr/s	k. 63.15	Density sa:	1 497 - 1 509					
	-0.11			Denoty og.	1.407 1.000					
Volume pumped	65.19	m3 Exces	s: 100	%						
TAIL SLURRY (m	ixed with seawate	er)				Additive		litre/sx	Amount Used (litr	е)
Brand: Adelaide	Brighton Cement	Clas	s: G (686 sacks)	MT:						
Mixwater litr/sk:	18.77	Yield litr/sl	k: 33.13	Density sg:	1.893 - 1.917					
Volume pumped	22.74	m3 Exces	s: 50	%						
						I				
DIDI LACEMENT										
Fluid:	Seawater	Calc. Displa	cement (m3):	48.326	Plug Bump:	5722	kPa F	Pressure Tested to	2070	00 kPa
Density sg:	1.03	Actual Displ	acement (m3):	49.6	at Rate:	1.271	m3/min	Bleed Back:	0.79	94 m3
ACTIVITY		Time								
Start Running Ca	sing	28/8/02 6:30	R	leturns to Surface:	Poor			bbls cement	0	
Finish Running C	Casing	28/8/02 13:00	Reciproca	ate/Rotate Casing:	No					
Start Circulating	-	28/8/02 16:00	During;	Circulating		Top Up Job run:	No	sacks of Class	N/A	
Start Surface Eq	ot. Pressure Test	28/8/02 17:10)	Cementing						
Pump Preflush		28/8/02 18:00)	Displacing						
Start Mixing/Pum	ping Cement	28/8/02 18:04	ł	Wiper Plugs:	Weatherford	Туре	SSR			
Finish Mixing/Pu	mping Cement	28/8/02 19:38	3	Bottom						
Start Displaceme	ent	28/8/02 19:40)	Тор						
Stop Displaceme	nt/Bump Plug	28/8/02 20:40) Cem	enting Contractor:	Halliburton					
Top Up Job		NA								
CEMENT JOB DE	TAIL/REMARKS									
The engine and h			liburton there are	ad 1 50 m2 (40 bb) -	oowotor /	with duo) and attem	antad to preserve	toot ourface lines 7	The comort hand	
The casing and ho	he were circulated	ciean over 1 nr, Ha			eawater spacer (\	with uye) and atten	ipieu io pressure	LESI SURIACE IINES. I	ne cement nead	
Lo-torq valve had	to be replaced before	ore a successful te	st was obtained (0.5	nrs). Bottom dart wa	is displaced and s	neared out the bot	tom plug with 733	ь кна (1064psi), a fi	urtner ./94 m3	

(5 bbls) of water was pumped to chase the plug prior to mixing cement. The lead slurry was pumped at a constant rate of 1.017 m3/m (6.4 bpm) with a SG of 1.497 to 1.509 (12.5 - 12.6 ppg) followed by the tail slurry pumped at .794 to .890 m3/m (15.8 - 16 ppg) with a SG of 1.893 to 1.917 (15.8 to 16 ppg). The top dart was displaced and the top plug sheared at 13100 - 14479 kPa (indicated). The cement was then displaced with 49.6 m3 (312 bbls) and the plug bumped at 5722 kPa (830 psi) pump pressure, increasing to 8274 kPa (1200 psi). A further .445 m3 (2.8 bbls)

were pumped to increase pressure to 20700 kPa and test the casing. Held pressure for 10 minutes - solid. Bled back .794 m3 (5 bbls) to zero, floats held OK.

s	lantos OAB	U		CASING	AND CE	MENTING R	EPORT	-		
WELL: ELEVATIONS:	Casino 1	RT to RT	o seabed (m) to MSL (m)	: 95.5 : 25		DATE: T.D (m): PBTD (m):	26/08/ 129	2002		
CASING BOW	L SIZE: : Conductor Cas	ing	SERIES: Dril	Quip SS-10		REPORT BY:	Steve	Hodgetts		
							OR			
SIZE	WEIGHT		No. of	THREAD	LENGTH	FROM	ор то			
OD. (mm)	(kg/m)	GRADE	JOINTS		(m)	(m)	(m)	F	EMARKS	
762	461	X52	1	HD90	11.92	93.50	105.4	12 30" Coi	nductor Housing	
762	461	X52	1	HD90	11.57	105.42	116.9	99 30" Int	ermediate Joint	
508	140	X52	1	HD90	11.24	116.99	128.2	23 30" x	20" Shoe Joint	
								Davi	s Lynch shoe	
						#\/ALLIEI				
						#VALUE!				
						#VALUE!				
				TALLY TOTAL	34.73		-			
					CASI	NG LANDED AT :-		128.23 m		
				RT TO TO	P OF CONDUC	TOR HOUSING :-		93.50 m		
CENTRALIZER P	LACEMENI	NII.								
PREFI USH	Seawater	Volume (m3):	0 795		Density (SG)	1.03				
Additive	: Fluroscene Dye	%	Amount Used:		Additive	:	%	Amount Used		
CEMENT: NO LEAD SLURB	Y					Additive		litre/sx	Amount Used (litre)	
Brand: Adelaide	Briahton Cement	Class:		MT:		, luuliiro		in order	420	
Mixwater litr/sk:	•	Yield litr/sk:		Density sg:					136	
Volume pumped		m3 Excess:		%					16	
TAIL SLURRY (m	ixed with seawate	r)				Additive		litre/sx	Amount Used (litre)	
Brand: Adelaide	Brighton Cement	Class: (G (832 Sacks)	MT:		1% BWOC CaCl2				
Mixwater litr/sk:		Yield litr/sk:	200	Density sg:						
DISPLACEMENT		IIIS LACESS.	200	78						
Fluid:	Seawater	Calc. Displaceme	ent (m3):		Plug Bump: @ 0.5 m3/min	2	kPa	Pressure Tested to	N/A	kPa
Density sg:	1.03	Actual Displacen	nent (m3):	4.6	at Rate:	0.795	m3/min	Bleed Back:		m3
ACTIVITY		Time								
Start Running Ca	sing	25/8/02 21:30	R	eturns to Surface:	Yes			bbls cement	146	
Finish Running C	asing	26/8/02 0:00	Reciproca	ate/Rotate Casing: N	0	Tau Un Jah mus	Nie			
Start Circulating	nt Prossuro Tost	26/8/02 3:15	During;	Cementing		Top Up Job run:	INO	Sacks of Class		
Pump Preflush		26/8/02 3:32		Displacing						
Start Mixing/Pum	ping Cement	26/8/02 3:45		Wiper Plugs:	Make	Type				
Finish Mixing/Pu	mping Cement	26/8/02 3:26		Bottom	N/A					
Start Displaceme	nt	26/8/02 4:26		Тор						
Stop Displaceme	nt/Bump Plug	26/8/02 4:33	Cem	enting Contractor: H	alliburton					
Top Up Job		NA								
CEMENT JOB DE	TAIL/REMARKS	660mm (26") hol- TD	Circulated coor	ulua ta appurator (4500		and up comont line	a and pur	od 0.9m2 (5 bblo) of	otor with Eluropoor	o obood
Closed line at drill	floor and tested line	to 6 9kPa (1000 pci)	beld OK Pump	ed remaining 0.8m3 (F	5 bbls) of seawa	geu up cement line	s anu pump dva Miver	eu u.omo (5 DDIS) UT SEAW	74.bbls) 1.9sq tail slurgy a	e aneau. at
954 lpm (6bpm). 8	332sxs class 'G' cer	ment in 16.5 m3 (104bbl	s) mix water with	n 1% CaCl2. Displace	d with 4.6 m3 (2	28.7bbls) seawater	at 800 lpm (5bpm), final pressure 138	0kPa (200psi).	
Bled off pressure,	float held.		,							

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WELL: Casino 1 ELEVATIONS:		RT t R	o seabed (m T to MSL (m SERIE	n): 95.5): 25 S: Dril Quip SS-10		DATE: T.D (m): PBTD (m): REPORT B	Y:	16/09/2002 2118 Gavin Othen	1		
Cmt Plug # 1 F /- 1840m to 1690m											
PREFLUSH: Drillwater Additive:		Volume (m3):	1 Amount Used	.5	Density (SG): Additive:		1 %		Amount Used	1	
<u>CEMENT:</u> TAIL SLURRY Mixwater litr/sk:		Class: Yield litr/sk:	G (557 sacks)) MT: Density sa:	1.89	Additive HR 6-L Dair 3000L			litre/sx	Amount Used (litro 265 7.5	e)
Volume pumped 18.2	m3	Excess:	10	% Oped hole		Dan 00002					
TAIL SLURRY (mixed with seawater Brand: Adelaide Brighton Cement Mixwater litr/sk: Volume pumped) m3	Class: Yield litr/sk: Excess:		MT: Density sg: %		Additive			litre/sx	Amount Used (litre	ə)
<u>DISPLACEMENT</u> Fluid: Mud		Calc. Displace	ment (m3):	14.4			kPa	6000	Pressure Tes	ted to	kPa
Density sg: 1.22		Actual Displac	ement (m3):	14.4	at Rate:	1.4	m3/m	in	Bleed Back:		m3
<u>ACTIVITY</u> Pump Drill water spacer Test Lines Pump Drill water spacer Mix & Pump Tail Slurry		Time 16/9/02 12:55 16/9/02 13:00 16/9/02 13:08 16/9/02 13:26	Recipro During;	Returns to Surface: cate/Rotate Casing: Circulating Cementing	Yes	Top Up Job rur	n:	No	bbls cement sacks of Clas	0 s N/A	
Pump Drill water Displace Slurry		16/9/02 13:53 16/9/02 13:54	Cer	Displacing Wiper Plugs: Bottom Top menting Contractor:	Halliburton	Тур	De				
CEMENT JOB DETAIL/REMARKS Pumped 1.5 M3 (10bbls) of Drill water Mixed & pumped 18.2 M3 (115bbls) 58	, teste	l lines to 7000 K of tail slurry @ 1.8	pa (1000psi) Pu }9sg with 10.8M	umped 1.5 M3 (10bbls) 13 (68bbls) of mix water	of Drill water.						
Displaced with 14.4M3 (91bbls) of muc	d.										

	Santos ()	ABU			ABAI	NDONMEN	NT CEMEN	T # 2					
WELL: ELEVATIONS	Casino 1 S:		RT t R	o seabed (m T to MSL (m) SERIES): 95.5): 25 3: Dril Quip SS-10	1	DATE: T.D (m): PBTD (m): REPORT BY:	16 21 : Ga	/09/2002 18 avin Othen	I			
Cmt Plug # 2 F	/- 1620m to 1470	Dm											
<u>PREFLUSH:</u> Additiv	Drillwa /e:	iter	Volume (m3):	1. Amount Used:	5	Density (SG): Additive:	1	%		Amount Used			
<u>CEMENT:</u> TAIL SLURRY			Class:	G (557 sacks	s) MT:		Additive			litre/sx	Amount	Used (litre)
Mixwater litr/sk Volume pumpe	: d 18.2	m3	Yield litr/sk: Excess:	1.16 10	Density sg: % Oped hole	1.89							
TAIL SLURRY (Brand: Adelaid Mixwater litr/sk Volume pumpe	mixed with seaw e Brighton Ceme : d	vater) ent m3	Class: Yield litr/sk: Excess:		MT: Density sg: %		Additive			litre/sx	Amount	Used (litre	*)
DISPLACEMEN Fluid: Density sa:	II Mud 1.22		Calc. Displace	ment (m3): ement (m3):	12.4	at Rate:	12	kPa m3/min	5500	Pressure Test	ted to		kPa m3
ACTIVITY Pump Drill wate Test Lines Pump Drill wate Mix & Pump Ta Pump Drill wate Displace Slurry	er spacer er spacer il Slurry er		Time 16/9/02 16:10 16/9/02 16:12 16/9/02 16:16 16/9/02 16:25 16/9/02 16:50 16/9/02 16:51	Reciprod During; Cen	Returns to Surface: cate/Rotate Casing: Circulating Cementing Displacing Wiper Plugs: Bottom Top nenting Contractor:	Yes	Top Up Job run: Type	No		bbls cement		0 N/A	
CEMENT JOB I Pumped 1.5 M3 Mixed & pumped Displaced with 1	DETAIL/REMARK (10bbls) of Drill w d 18.2 M3 (115bbl 2.4M3 (78bbls) of	(S vater, teste (s) 557sx (f mud.	ed lines to 7000 K of tail slurry @ 1.8	pa (1000psi) Pu 99sg with 10.8M	mped 1.5 M3 (10bbls) 3 (68bbls) of mix water	of Drill water.							

Note: after setting plug, picked up to 1300m and circulated clean, picked up to 599m, pulled wear bushing then RIH and tagged up at 1361m.

8	Santos OAB	U			ABAN	NDONMEN		NT #	3				
WELL: ELEVATIONS:	Casino 1		RT t RT	o seabed (m Γ to MSL (m) SERIES): 95.5): 25 3: Dril Quip SS-10	I	DATE: T.D (m): PBTD (m): REPORT B	Y:	17/09/2002 2118 Gavin Othen	1			
Cmt Plug # 3 F/-	780m to 642m.												
<u>PREFLUSH:</u> Additive:	Drillwater		Volume (m3):	1. Amount Used:	5	Density (SG): Additive:		1 %		Amount Used			
<u>CEMENT:</u> TAIL SLURRY			Class:	G (475 sacks	s) MT:		Additive			litre/sx	Amou	nt Used (litre)
Mixwater litr/sk: Volume pumped	15.5	m3	Yield litr/sk: Excess:	1.16 10	Density sg: % Oped hole	1.89							
TAIL SLURRY (mi	ixed with seawater)		-			Additive			litre/sx	Amou	nt Used (litre)
Brand: Adelaide E	Brighton Cement		Class:		MT:								
Mixwater litr/sk:	-		Yield litr/sk:		Density sg:								
Volume pumped		m3	Excess:		%								
DISPLACEMENT													
Fluid:	Mud		Calc. Displacer	ment (m3):	4.7			kPa	5500	Pressure Test	ted to		kPa
Density sg:	1.22		Actual Displace	ement (m3):	4.7	at Rate:	7	m3/m	iin	Bleed Back:			m3
ACTIVITY			Time										
Pump Drill water	spacer		17/9/02 0:45	I	Returns to Surface:	Yes				bbls cement		0	
Test Lines Pump Drill water : Mix & Pump Tail S Pump Drill water	spacer Slurry		17/9/02 0:48 17/9/02 0:51 17/9/02 1:00	Recipro During;	cate/Rotate Casing: Circulating Cementing Displacing		Top Up Job rui	n:	No	sacks of Clas		N/A	
Displace Slurry			17/9/02 1:18		Wiper Plugs: Bottom Top		Тур)e					
				Cen	nenting Contractor:	Halliburton							
CEMENT JOB DE	TAIL/REMARKS												
Pumped 1.5 M3 (1	Obbls) of Drill water,	teste	d lines to 7000 K	pa (1000psi) Pu	imped 1.5 M3 (10bbls)	of Drill water.							
Mixed & pumped 1	5.5M3 (98bbls) 475	sx of	tail slurry @ 1.89	sg with 9.2M3 (58bbls) of mix water.								
Displaced with 4.7	M3 (30bbls) of mud.												
Note: after setting	plug, picked up to 5	50m, (circulated clean a	ind displaced to	inhibited mud. RIH an	d tagged up at 6	42m.						

Santos OABU			ABA	ANDONME	NT CEME	ENT # 4			
WELL: Casino 1 ELEVATIONS:	RT t R1	ο seabed (n Γ to MSL (m SERIE	n): 95.5 i): 25 S: Dril Quip SS-10	1	DATE: T.D (m): PBTD (m): REPORT BY	17/0 2118 : Gavi	9/2002 3 in Othen		
Set EZSV at 185m, cement Plug # 4 set F	7- 183m to 133m								
PREFLUSH: Sea Water Additive:	Volume (m3):	Amount Used	1	Density (SG): Additive:	1	%		Amount Used	
<u>CEMENT:</u> TAIL SLURRY	Class:	G (120 sack	(s) MT :		Additive			litre/sx	Amount Used (litre)
Mixwater litr/sk: Volume pumped 4 m3	Yield litr/sk: Excess:	1.16 10	Density sg: % Oped hole	1.89					
TAIL SLURRY (mixed with seawater) Brand: Adelaide Brighton Cement Mixwater litr/sk: Volume pumped m3	Class: Yield litr/sk: Excess:		MT: Density sg: %		Additive			litre/sx	Amount Used (litre)
DISPLACEMENT Fluid: Sea Water	Calc. Displacer	nent (m3):	1.1		I	kPa 5	5500	Pressure Tested	to kPa
Density sg: 1	Actual Displace	ement (m3):	1.1	at Rate:	7	m3/min		Bleed Back	: m3
<u>ACTIVITY</u> Pump Sea water spacer Test Lines Pump Drill water spacer Mix & Pump Tail Slurry	Time 17/9/02 11:18 17/9/02 11:20 17/9/02 11:22 17/9/02 11:28	Recipro During;	Returns to Surface: pcate/Rotate Casing: Circulating Cementing	Yes	Top Up Job run	: No		bbls cement sacks of Class	0 N/A
Displace Slurry	17/9/02 11:32	Ce	Displacing Wiper Plugs: Bottom Top menting Contractor:	Halliburton	Тур	9			
CEMENT JOB DETAIL/REMARKS Tested lines to 7000 Kpa (1000psi) Pumped	Set EZSV Packe 11M3 (5bbls) of Se	er @ 185 mts ea water.							
Mixed & pumped 4M3 (25bbls) 120sx of tail Displaced with 1.1M3 (6bbls) of mud.	slurry @ 1.89sg								
Note: after pumping cement to place top of t	he plug at 133m, i	the string was	picked up to 120m and	the casing/string	reverse circulate	ed clean.			

SECTION 12:- MUDLOGGING WELL REPORT (Including Mudlog 1:500 & D-Exponent Log)



END OF WELL REPORT

SANTOS

Casino-1

25 August - 14 September 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.

Casino-1

Final Well Report

Section 1	Well Su	Immary	
Section 2	Drilling 2.1 2.2	and Engineering Bit Run Summaries Casing and Cementing Summar	ies
Section 3	Survey		
Section 4	Geolog 4.1 4.2	y and Shows Geology Summary and Shows Sampling Summary and Record	of Distribution
Section 5	Pressur 5.1 5.2	re Evaluation Pore Pressure Evaluation Fracture Pressure Evaluation	
Tables	Bit Tabl Bit Hydi Time D	le raulics Table epth Curve	
Appendices			
	Formati Drilling Pressur Pressur Gas Ra	ion Evaluation Log Data Plot re Evaluation Plot re Summary Plot tio Plot	1 : 500 1 : 2000 1 : 2000 1 : 500

SECTION 1

WELL SUMMARY

1 Well Data Summary

1.1

Well Name	Casino-1
Rig Name:	MODU Ocean Bounty
Rig Type:	Semi-submersible
Drilling Contractor:	Diamond Offshore General Company
Drilling Datum:	Rotary Table
Drill Floor Elevation:	25.0m
Water Depth:	70.5m
Surface Coordinates:	038° 47' 18.502" S Lat 142° 42' 00.287" E Long
Block:	VIC/P44
Well Type:	Exploration
Spud Date:	25 August 2002
Total Depth:	2118m
TD Date:	14 September 2002
Well Status:	Plugged & Abandoned
Baker Hughes INTEQ Crew:	
Data Engineers:	Romeo Tena Rommel Tadiar Jamie McLeod Jeff Wilson
Logging Geologists:	Elaine Spence Tomasz Zelski Malcolm Dixon Trent Liang

1.1 Well Summary

The well Casino-1 was located in VIC/P44, approximately 29km southwest of Port Campbell, 24km west southwest of the Minerva gas field and 22km north of the LaBella gas field. The main objective of the well was to evaluate the hydrocarbon potential of the Waare Formation in a tilted fault block closure within the Casino Prospect Area. All depths in this report unless otherwise stated refer to depths in metres below the rotary table – RT.

Casino-1 was spudded at 1830hrs on 25 August 2002, using a 26" bit with a 36" hole opening assembly. The 36" hole was drilled from the seabed at 95.5m to 130.0m using seawater and pre-hydrated gel mud. A 30" x 20" casing was run and set at 128.0mRT.

The 17.5" section was drilled using a Smith MGSSHC type bit. The cement tagged at 124.5m was drilled and the shoe track was cleaned out. New hole was drilled averaging 27m/hr during 23 hours of drilling time, reaching the casing point at 752m without problems. At section TD, the hole was circulated clean and displaced to 700bbls of gel mud. During the trip out, tight intervals were recorded from 628m to 425m. The subsequent 13.375" casing run however was conducted smoothly and the BOPs were run, landed and pressure-tested successfully.

Drilling the 12.25" hole section commenced from 752m using a Reed PDC bit. The cement tagged at 717.6m and the shoe track were drilled and cleaned out. The hole was then displaced to a KCI/PHPA/Glycol mud system initially weighted to 8.7ppg and three metres of new formation was drilled to 755m. A Leak Off Test (LOT) was performed yielding a formation strength of 17.3ppg EMW below the casing shoe. Drilling resumed with penetration rates averaged at 60m/hr with surveys taken as required. Hard stringers slowed the bit down at 1051m until it was pulled out at 1057m. NB4, an insert bit was run in but when circulation was attempted prior to drilling, unusual high pressures were observed. Two metres of new formation were drilled to 1059m before the bit was pulled out for inspection. On surface, two bit jets were completely sealed with cuttings and a bearing seal have failed. NB5, a new insert bit was then made up with the previous BHA and run in hole. NB5 drilled from 1059m to 1400m at an average of 23m hour.

NB6, a Smith PDC bit was then run in to drill to the programmed hole TD. In anticipation of abnormal pore pressure within the Belfast formation, the mud weight was incremented to 9.8ppg by 1650m. Gas bearing sands below 1740m recorded a maximum gas peak of 23.1%. The gas was circulated out before drilling ahead. At 1790m, the mud weight was further increased to 10.0ppg. Slow penetration rates ensued from 1791 to 1797m dropping to less than 4.5m/hr from an average of 41m/hr. The bit was then tripped out with the hole noted tight at 1610m requiring a force of up to 60klbs overpull. The bit was backreamed from 1610m to 1498m and tripped back to bottom to condition the hole. 28% of total gas lagged from about 1761m was recorded. The mud weight was raised to 10.3ppg and the bit was pulled to surface smoothly.

NB7 was made up with the same assembly and RIH. Before reaching bottom, the onset of inclement weather prevented the commencement of normal drilling operations and the bit was pulled inside the casing shoe. The string was then spaced out and hung at the well head. Due to worsening weather conditions the riser was unlatched from the BOP's. After waiting weather for 6 days the rig re-attached to the BOP"S and NB7 was pulled out of the hole. After a full BOP test the same bit was run back in the hole on the same BHA minus the MWD tools. The bit was washed down from 1717m and 24m of fill was recorded. Drilling resumed from 1797m to a total depth of 2118m. After circulating the hole clean the bit was pulled out to run a suite of wireline logs.

After the wireline logging was complete the decision was made to plug and abandon Casino-1. The MODU Ocean Bounty was towed off location on 23 September 2002.

SECTION 2

DRILLING & ENGINEERING

Drilling & Engineering

2.1		Drilling &
2.1 Bit Run Summa	aries	BHA No. 1 83.24 m
<u>Casino-1</u>		
36" 914mm Hole So 25 August 2002	ection	
Bit Run No. 1 Summar Bit Number Bit Size	y NB 1 26" 660mm w/ Hole Opener	5" HWDP
Bit Type S/N Jets Depth In (m) Depth Out (m) Metres Drilled Drilling Hours	36" 914mm, 4 x 22 jets Smith DSJC KP2374 3 x 18 95.5 130.0 34.5 1 0	X/O 1.17m
TBR (krevs) Circulating Hours Average ROP (m/hr) API Condition	3.8 1.6 34.4 Not Graded	5 x 8.25" DC 45.88m
Drilling Parameters WOB (klbs) RPM Torque (kft-lbs) Pump Pressure (psi) Flow In (gpm)	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	X/O 1.14m
Mud System Seawater & hi-viscosity Sweeps	Gel 8.60ppg	3 x 9.5" DC 27.80m
Lithology Returns to seabed		
Drilling Summary		
A 26" bit with a 36" hole rotary BHA. The bit ta Casino-1 was spudded 2002. The 36" hole was seawater and PHG si metres. The hole was gel mud before pulling t was found to be in good racked in the detrick	opener was made up on a gged seabed at 95.5mRT. at 1830hrs on 25 August is drilled to 130.0mRT with weeps pumped every 15 displaced with 220bbls of he bit to surface. The hole d condition. The BHA was	Anderdrift Survey Tool 3.27m Bit Sub 0.98m
TACKEU III LITE UETTICK I	Service running the SU/20	36" Hole Opener

x 8.25" DC 45.88m X/O 1.14m 3 x 9.5" DC 27.80m Survey Tool 3.27m Bit Sub 0.98m 36" Hole Opener 4 x 22 jets 2.38m 26" Bit Smith DSJC 3 x 18 jets 0.62m

762mm /508mm conductor casing.

17.5" Hole Section 26 - 28 August 2002 Bit Run No. 2 Summary Bit Number NB 2 Bit Size 17.5 Smith MGSSHC Bit Type S/N MM0005 Jets 3 x 20, 1 x 18 Depth In (m) 130 Depth Out (m) 752 Metres Drilled 622 **Drilling Hours** 23.4 TBR (krevs) 143.1 Circulating Hours 28.7 Average ROP (m/hr) 26.6 **API** Condition 1-1-NO-A-E-I-NO-TD **Drilling Parameters** WOB (klbs) 3.4 33.5 RPM 60 108 _ Torque (kft-lbs) 0.6 5.1 _ Pump Pressure (psi) 1002 2543 -Flow In (gpm) 798 1122 Mud System Seawater & hi-viscosity Gel 8.60ppg Sweeps Lithology Returns to seabed **Drilling Summary** NB2, a 17.5" milled tooth tricone bit was made up on a rotary BHA and run in hole. Hard cement was tagged at 124.5m. The shoe track was cleaned out and the 20" casing shoe was drilled out at 128m. New formation was drilled from 130m using

2.1

seawater. High-viscosity guar gum sweeps of 50bbls volume were pumped every 9 metres drilled, with 50bbls pre-hydrated gel (PHG) sweeps pumped prior to every connection. Returns at seabed were monitored by the ROV. Inclination surveys were taken with the in-string Anderdrift tool at each connection. At section TD of 752m, the hole was circulated clean and displaced to 700bbls PHG mud before pulling out of hole. The bit was tripped out with tight intervals encountered from 628 to 425m. The subsequent 13.375" casing run, however, proceeded without any hole problems.



Santos

12.25" Hole Section 30 - 31 August 2002 Bit Run No. 3 Summary **Bit Number** NB 3 Bit Size 12.25 Bit Type Reed DSX195GUW S/N 103894 Jets 5 x 12 Depth In (m) 752 Depth Out (m) 1057 Metres Drilled 305 **Drilling Hours** 14.8 TBR (krevs) 100.6 **Circulating Hours** 21.9 Average ROP (m/hr) 20.6 **API** Condition 8-8-RO-S-X-I-WT-PR **Drilling Parameters** WOB (klbs) 1.3 17.8 RPM 78 _ 131 9.32 Torque (kft-lbs) 0.62 -Pump Pressure (psi) 1684 -2982 Flow In (gpm) 499 -1214 Mud Svstem KCI / PHPA / Glycol 8.7-8.8 ppg Lithology Claystone & Sandstone **Drilling Summary** A 12.25" fixed cutter bit was made up to a packed drilling assembly with FEWD/MWD tools and run in hole, tagging cement at 717.6m. The float plugs, cement and shoe track were drilled out before the hole was displaced to a KCI/PHPA/ Glycol mud system, initially weighted at 8.7ppg. Three metres

nole, tagging cement at 717.6m. The float plugs, cement and shoe track were drilled out before the hole was displaced to a KCI/PHPA/ Glycol mud system, initially weighted at 8.7ppg. Three metres of new formation were drilled. The bit was pulled back into the shoe at 743m and a Leak-Off Test (LOT) was subsequently conducted, with an applied surface force of 1090 psi on 8.7ppg mud yielding a formation strength of 17.3 ppg EMW. Drilling resumed at a fast penetration rate of about 60m/hr, with surveys taken as required. The penetration rate at 1051m slowed significantly to below 1m/hr as hard pyrite-cemented coarse sandstone stringers were encountered. At 1057m, the decision was made to change the bit due to the low penetration rate.



2.1

31 August 2002

Bit Run No. 4 Summary	
Bit Number	NB 4
Bit Size	12.25
Bit Type	Reed
	EHP51HFKPRDH
S/N	KA4914
Jets	3 x 16
Depth In (m)	1057
Depth Out (m)	1059
Metres Drilled	2
Drilling Hours	0.2
TBR (krevs)	2.5
Circulating Hours	1.6
Average ROP (m/hr)	10
API Condition	0-2-CT-G-F-I-PN-PP

Drilling Parameters

WOB (klbs)	5		16
RPM	86	-	87
Torque (kft-lbs)	1.08	-	1.49
Pump Pressure (psi)	2983	-	3006
Flow In (gpm)	384	-	385

Mud System

KCI / PHPA / Glycol	

Lithology

Claystone & Sandstone

Drilling Summary

A 12.25" insert bit and three additional 8" drill collars were made up with the previous drilling assembly and run in hole. While circulating before drilling commenced, high pressures at low pump rates were noted. Two metres of new formation were drilled at these low flow rates before it was decided to pull the bit to surface for inspection. At surface it was found that the bit had two jets completely blocked with cuttings. The bearing seal on one of the roller cones had also failed.

8.8 ppg



Drilling Parameters

Average ROP (m/hr)

API Condition

WOB (klbs)	1	-	48
RPM	53	-	125
Torque (kft-lbs)	0.74	-	6.81
Pump Pressure (psi)	2860	-	3445
Flow In (gpm)	701	-	874

23.2

1-1-WT-A-E-I-ER-PR

Mud System

KCI / PHPA / Glycol	8.8 ppg

Lithology Claystone, Siltstone & Sandstone

Drilling Summary

A new 12.25" insert bit was made up to the previous drilling assembly and run in hole. The open hole was lightly reamed from 1044 – 1059m to allow for the collection of MWD data. Once on bottom, drilling rates averaged about 23m/hr, with penetration rates slowing at several hard sandstone stringers. At 1400m, the bit was pulled to surface, once it was likely that no more hard stringers would be encountered while drilling to the target zone. The hole was found to be in good condition on the trip out.



02 – 03 September 2002				
Bit Run No. 6 Summary				
Bit Number	NB 6			
Bit Size	12.25			
Bit Type	Smith M	ЛА7	'4BPX	
S/N	JS6343	3		
Jets	6 x 12			
Depth In (m)	1400			
Depth Out (m)	1797			
Metres Drilled	397			
Drilling Hours	16.2			
TBR (krevs)	140.2			
Circulating Hours	26.2			
Average ROP (m/hr)	24.5			
API Condition	1-8-LT-S-X-I-CT-PR			
Drilling Parameters				
WOB (klbs)	2.5	-	23.1	
RPM	114	-	177	
Torque (kft-lbs)	0.4	-	11.7	
Pump Pressure (psi)	2785	-	3445	
Flow In (gpm)	788	-	864	
Mud Svstem				
KCI / PHPA / Glycol	8.8	-	10.3 ppg	
Lithology Siltstone & Sandstone				

Drilling Summary

A 12.25" fixed cutter bit was made up with the previous drilling assembly and run in hole. Penetration rates were relatively high from 1400 to 1750m, averaging about 41m/hr. The mud weight was increased to 9.8ppg by 1650m. Gas-bearing formations were encountered below 1740m, with a maximum gas peak of 23.1% Total Gas recorded at 1766m. The well was circulated until gas levels had dropped to background levels before At 1790m, the mud weight was drilling ahead. increased further to 10.0ppg. Drilling rates dropped markedly from 1791 to 1797m, averaging less than 4.5m/hr, probably due to the reappearance of hard sandstone stringers. The decision was made to pull the bit due to the poor penetration rate. On the trip out, the hole was found to be tight above 1610m with up to 60klbs overpull recorded. The bit was backreamed out of the hole from 1610 – 1498m. The bit was then run back to bottom to condition the hole. While circulating from 1797m, a gas peak of 28% Total Gas was recorded, lagged back to 1761m, indicating that some gas had been swabbed into the well on the trip out. The well was circulated until gas levels had fallen to 0.06%. Blocky and trace splintery cavings were seen at the shakers. Flow checks indicated that the fluid levels in the well were static. The bit was pumped and backreamed out of the hole from 1797-1420m, with 20-50klbs drag recorded from 1420-1160m. The mud weight was further increased to 10.3ppg. The bit was pulled to surface with no further problems from 1160m.



Drilling & Engineering

04 - 12 September 2002

Bit Run No. 7 Summary Bit Number NB 7

Bit Size	12.25
Bit Type	Hughes MXR09D
S/N	L11DK
Jets	3 x 16
Depth In (m)	1797
Depth Out (m)	1797
Metres Drilled	-
Drilling Hours	-
TBR (krevs)	-
Circulating Hours	-
Average ROP (m/hr)	-
API Condition	-
Drilling Deremeters	

Drilling ParametersWOB (klbs)--RPM--Torque (kft-lbs)--Pump Pressure (psi)--Flow In (gpm)--

Mud System

KCI / PHPA / Glycol	10.3	-	10.3 ppg

Lithology Claystone, Siltstone & Sandstone

Drilling Summary

An insert bit was made up to the previous drilling assembly and run in hole to 1750m. The hole was circulated out with minimal gas vented out of the drilling fluid. Due to inclement weather a decision to pull back inside the shoe was made. The hole was circulated clean and a slug was pumped before pulling inside the shoe. The weather however worsened and the lower drill string was hung off below the well head and the riser was unlatched. After 7 days waiting on weather, the LMRP was landed back on, and the drill string reattached. The hole was circulated from inside the casing shoe, a static flow check was made and the bit was pulled to surface to conduct a full stack test.



2.1

Drilling & Engineering

12 - 14 September 2002

Bit Run No. 8 Summary	
Bit Number	RR 7.1
Bit Size	12.25
Bit Type	Hughes MXR09D
S/N	L11DK
Jets	3 x 16
Depth In (m)	1797
Depth Out (m)	2118
Metres Drilled	321
Drilling Hours	33.2
TBR (krevs)	203.1
Circulating Hours	39
Average ROP (m/hr)	9.67
API Condition	2-2-BT-A-E-I-CT-TD

Drilling Parameters

WOB (klbs)	8.3	-	42.2
RPM	67	-	115
Torque (kft-lbs)	1.5	-	6.4
Pump Pressure (psi)	3400	-	3988
Flow In (gpm)	756	-	825
Mud System			
KCI / PHPA / Glycol	10.2	-	10.3 ppg

Lithology

Claystone, Siltstone, Sandstone & minor Coal

Drilling Summary

After a full BOP test the MWD tools were removed from the BHA and bit #7 was re-run in the hole to 1717m. The bit was washed and reamed from 1717m to bottom with 27m of fill recorded. A maximum trip gas of 125 units (2.5%) was recorded. New 12.25" hole was drilled from 1797m to a Total Depth of 2118m. The hole was circulated clean and the bit pulled out of the hole to run wireline logs. Two tights spots at 1805m and 1760m recorded 60klbs overpull on the trip out. Stactic flowchecks were recorded prior to pulling out, at the shoe and at the BOP's.



2.2 Casing / Cementing Summary

30" Conductor

25 August 2002

Hole Size	36" 130.0mPT
Depin	130.000
Casing	1 30" x 20" Shoe joint 1 30" Intermediate Joint 1 x 30" Well Head
ID Weight Grade Shoe Depth	28" (18.75" on 20" casing) 310 lb/ft X-52 x 30", K55 x 20" 128.0mRT

Cement Details:

Sacks	832 Class "G"
Mix water	104 bbls
Additives	CaCl2

Weight	15.8 ppg
Volume	174 bbls

Summary

Two joints of conductor casing, the swedged 30"/20" shoe joint and PGB were made up and landed on the seabed. The hole was circulated using 130bbls of seawater with good returns observed. Cement operation was then conducted as per Santos program. Good cement returns were noted throughout the procedure. After pressure was bled off, it was found that the float had held and the running tool was disengaged and pulled to surface.



Casing & Cementing

13.375" Casing

28 August 2002

Hole Size	17.5"						
Depth	752mRT						
Casing	1 x Shoe Joint 1 x Intermediate Joint 1 x Float collar joint 50 x 13.375" Casing 1 x 18.75" WH"						
ID	12.44"						
Weight	68 / 72 lb/ft, BTC						
Grade	L80						
Shoe Depth	743mRT						
Cement Details:							

.caa olaliy	
Sacks	944
Туре	Class "G"
Mix water	seawater
Additives	20 gal/10 bbl Econolite
	C
Weight	12.5 ppg (1.5 sg)
•	110 (0,

2.23 cuft/sx

Yield Volume

Tail Slurry

Sacks Type Mix water Additives Weight Yield Volume 375 bbls 646 Class "G" seawater Neat 15.8 ppg (1.9 sg) 1.17 cuft/sx 135 bbls

Summary

The 13.375" casing string was made up, landed and latched onto the wellhead in the 30" housing, and tested with 45klbs overpull. The casing was circulated clean and displaced with 560bbls of gel mud. After a leak was fixed, the surface lines were re-tested ok to 3000psi. Cement operation was then performed. The casing was pressure tested to 3000psi for 10 minutes and was bled out with the float held in place. The running tool was then released and pulled to surface.



SECTION 3

SURVEY

SANT	ſOS
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SURVEY DATA

Casino-1

Seq	Measured	Incl	Azimuth	Course	TVD	Vertical	Displ	Displ	Total	At	DLS	Srvy Tool
No.	depth	angle	angle	length	depth	section	+N/S-	+E/W-	displ	Azim	(deg/	tool qual
	(m)	(deg)	(deg)	(m)	(m)	(m)	(m)	(m)	(m)	(deg)	10m)	type type
1	0	0	0	0	0	0	0	0	0	0	0	TIP -
2	766.75	0.6	342.17	766.75	766.74	3.82	3.82	-1.23	4.01	342.17	0.01	MWD 6-axis
3	855	0.26	216.64	88.25	854.98	4.1	4.1	-1.49	4.36	340.03	0.09	MWD 6-axis
4	912.4	0.54	155.43	57.4	912.38	3.75	3.75	-1.46	4.02	338.79	0.08	MWD 6-axis
5	969.94	0.83	135.97	57.54	969.92	3.2	3.2	-1.05	3.37	341.81	0.06	MWD 6-axis
6	1041.08	1.2	191.94	71.14	1041.05	2.11	2.11	-0.85	2.27	338.03	0.14	MWD 6-axis
7	1084.57	1.29	209.06	43.49	1084.53	1.23	1.23	-1.18	1.71	316.2	0.09	MWD 6-axis
8	1170.44	0.93	192.51	85.87	1170.38	-0.29	-0.29	-1.8	1.83	260.74	0.06	MWD 6-axis
9	1256.72	1.44	181.17	86.28	1256.64	-2.06	-2.06	-1.98	2.85	223.78	0.06	MWD 6-axis
10	1382.12	1.87	182.17	125.4	1381.99	-5.68	-5.68	-2.08	6.05	200.15	0.03	MWD 6-axis
11	1458.48	2.13	183.87	76.36	1458.31	-8.34	-8.34	-2.23	8.63	194.95	0.03	MWD 6-axis
12	1546.07	2.74	185.63	87.59	1545.82	-12.05	-12.05	-2.54	12.31	191.92	0.07	MWD -
13	1605.53	3.09	184.83	59.46	1605.2	-15.06	-15.06	-2.82	15.32	190.6	0.06	MWD 6-axis
14	1690.72	3.44	188.91	85.19	1690.25	-19.87	-19.87	-3.41	20.16	189.73	0.05	MWD 6-axis
15	1775.86	4.38	192.34	85.14	1775.19	-25.57	-25.57	-4.5	25.97	189.97	0.11	MWD -
16	1797	4.38	192.34	21.14	1796.27	-27.15	-27.15	-4.84	27.58	190.11	0	MWD Projection To
												טו

SECTION 4

GEOLOGY & SHOWS
4.1 GEOLOGY AND SHOWS

Formation Evaluation for Casino - 1 commenced from below the 339.72mm (13.375") casing shoe at 743mRT to the well's Total Depth of 2118mRT.

During the course of the well, all gas equipment was checked and calibrated before drilling. Carbide was run at 1100mRT and 1447mRT to ensure lag times were correct.

The lithological units observed during the drilling of Casino– 1 are described below. For more detailed descriptions, see Appendix-1, Formation Evaluation Log.

SAMPLING INTERVALS

Depth	Sampling Interval
752-2114m	3m
2114-2118m	4m

914mm (36") HOLE SECTION

Seabed to 130m: Returns to Seabed

445mm (17.5") HOLE SECTION

130m to 752m: Returns to Seabed

311mm (12.25") HOLE SECTION

752m to 776m: CALCAREOUS CLAYSTONE and MARL

CALCAREOUS CLAYSTONE: Medium light grey to medium dark grey, occasionally very light grey to light grey. Soft, occasionally firm, dispersive in parts, subblocky, rarely blocky with rare fossils, rare Echinoid spines, rare Foraminifera, trace disseminated pyrite and trace very fine carbonaceous specks.

MARL: Medium light grey to medium dark grey, occasionally dark grey, mottled in parts. Soft, occasionally firm, dispersive in parts with rare fossils, rare Echinoid spines, rare Foraminifera, trace disseminated pyrite and trace very fine carbonaceous specks.

There were no oil shows in this interval.

776m to 845m: SANDSTONE with minor interbedded CALCAREOUS CLAYSTONE, MARL and CALCILUTITE

SANDSTONE: Moderate brown to medium yellowish brown, translucent to opaque quartz grains, common Fe (iron) staining. Medium to coarse grained, occasionally very coarse, moderately to poorly sorted, subrounded, occasionally rounded, minor subangular, poorly consolidated, occasional moderately hard aggregates with trace weak siliceous cement, trace glauconite, trace pyrite, trace lithic fragments. Poor visible porosity, fair inferred porosity.

CALCAREOUS CLAYSTONE: Medium light grey to medium dark grey, occasionally very light grey to light grey. Soft, occasionally firm, dispersive in parts, subblocky, rarely blocky containing rare fossils, rare Echinoid spines, rare Foraminifera, trace disseminated pyrite and trace very fine carbonaceous specks.

MARL: Medium light grey to medium dark grey, occasionally dark grey, mottled in parts. Soft, occasionally firm, dispersive in parts with rare fossils, rare Echinoid spines, rare Foraminifera, trace disseminated pyrite and trace very fine carbonaceous specks.

CALCILUTITE: White to very light grey, firm to moderately hard, occasionally dispersive, subblocky to blocky. Grades to CALCARENITE in parts.

There were no oil shows in this interval.

845m to 1405m: SANDSTONE with minor interbedded CLAYSTONE

SANDSTONE: Moderate brown to medium yellowish brown, white to very light grey, translucent to opaque, rare milky quartz grains. Medium to coarse, occasionally very coarse, moderately to poorly sorted, subrounded occasionally rounded, minor subangular. Poorly consolidated with minor to common moderately hard calcite, common iron staining, trace glauconite, trace pyrite and trace lithic fragments. Poor visible porosity, fair inferred porosity.

CLAYSTONE: Brownish grey to olive grey, medium grey to medium dark grey, soft, dispersive in parts, subblocky. Trace disseminated pyrite, trace very fine carbonaceous specks, grades to CALCAREOUS CLAYSTONE in parts.

There were no oil shows in this interval.

1405m to 1555m: SANDSTONE with interbedded COAL, SILTSTONE and minor CARBONACEOUS SILTSTONE

SANDSTONE: Clear to translucent and occasionally grey and orange stained quartz grains, fine to coarse grained, predominantly medium to coarse, rare pebbles, loose, angular to subrounded, occasionally rounded, subelongate to subspherical, rare to trace fractured grains, moderately well sorted containing trace white argillaceous matrix, rare to trace pyrite cement and trace glauconite. Poor to good inferred porosity.

COAL: Greyish black to black, brownish black to olive black. Firm to moderately hard, vitreous, blocky, sub-conchoidal to conchoidal fracture. Grading to a CARBONACEOUS SILTSTONE in places.

SILTSTONE: Moderate yellowish brown to light pale brown, greyish orange pink, pale yellowish orange, greyish brown, mottled texture in parts. Soft to firm, occasionally moderately hard, subblocky to subfissile with carbonaceous microlaminations, common carbonaceous material, trace nodular and disseminated pyrite, trace mica. Grading to a CARBONACEOUS SILTSTONE.

CARBONACEOUS SILTSTONE: Brownish grey to dark yellowish brown, moderate yellowish brown. Soft, subfissile, subblocky to blocky, with carbonaceous microlaminations and trace disseminated pyrite. Grading to SILTSTONE in parts.

There were no oil shows in this interval.

1555m to 1625m: SANDSTONE and CONGLOMERATIC SANDSTONE with Interbedded COAL and SILTSTONE

SANDSTONE: Clear to translucent quartz grains, fine to very coarse grained, subrounded to subangular, common to abundant fractured grains, subspherical, poorly sorted, loose, common very hard aggregates with common hard dolomite cement, trace pyrite and trace glauconite. Poor visual porosity. Dolomite fluorescence: light yellowish green.

CONGLOMERATIC SANDSTONE: Clear to translucent quartz grains, loose, fine to very coarse with occasional granules, predominantly medium to coarse, subangular occasionally subrounded, common fractured grains, subelongate to subspherical, poorly sorted. Contains common hard, dolomite cement, which is medium grey to dark grey, greyish orange in colour, trace pyrite cement, trace nodular pyrite and trace glauconite pellets. Poor visual porosity. Dolomite fluorescence: Bright greenish yellow.

COAL: Greyish black to black, brownish black to olive black. Firm to moderately hard, vitreous, blocky, sub-conchoidal to conchoidal fracture. Grading to a CARBONACEOUS SILTSTONE in parts.

SILTSTONE: Moderate yellowish brown to light pale brown, greyish orange pink, pale yellowish orange, greyish brown, mottled texture in parts. Soft to firm, occasionally moderately hard, subblocky to sub-fissile with carbonaceous microlaminations, common carbonaceous material, trace nodular and disseminated pyrite and trace mica. Grading to a CARBONACEOUS SILTSTONE.

There were no oil shows in this interval.

845m to 1147m: SANDSTONE with minor interbedded CLAYSTONE

SANDSTONE: Moderate brown to moderate yellowish brown, dark yellowish orange, white to very light grey, translucent to opaque, common iron staining, rare milky quartz grains. Medium to coarse grained, occasionally fine to very coarse, moderately to poorly sorted, subrounded occasionally rounded, minor subangular, poorly consolidated with common pyrite cement, rare siliceous cement, minor to common moderately hard calcite cement, common argillaceous matrix. Trace glauconite, trace pyrite, trace mica and trace lithic fragments. Poor visible porosity, fair inferred porosity.

CLAYSTONE: Brownish grey to olive grey, medium grey to medium dark grey, dusky yellowish brown to brownish black. Soft to firm, dispersive in parts, subblocky, amorphous with trace disseminated pyrite and trace very fine carbonaceous specks. Grades to CALCAREOUS CLAYSTONE in parts.

There were no oil shows in this interval.

1147m to 1270m: SANDSTONE interbedded with SILTSTONE

SANDSTONE: Dark yellowish brown, light brownish grey, brownish black, clear to translucent, occasionally milky quartz grains, occasional orange iron staining. Fine to coarse, predominantly medium grained, occasionally very fine, moderately well sorted, angular to subrounded, predominantly subangular, rare friable aggregates, predominantly poorly consolidated, common pyrite cement, rare siliceous cement, trace dolomite cement and common glauconite matrix with rare glauconite pellets, trace disseminated pyrite and trace mica flakes. Poor visible porosity, poor inferred porosity.

SILTSTONE: Dusky yellowish brown, brownish black to olive black, light brownish grey, medium light grey to medium grey. Soft to firm, occasionally very soft, subblocky to blocky, occasionally amorphous with trace carbonaceous specks, trace disseminated pyrite and trace glauconite. Grades to very fine SANDSTONE in parts.

There were no oil shows in this interval.

1270m to 1454m: SILTSTONE

SILTSTONE: Brownish black to olive black, dusky brown to dusky yellowish brown, light brownish grey to brownish grey, light olive grey, dark grey. Dispersive, very soft to firm, amorphous to subblocky with occasional very fine to coarse quartz grains, rare to trace glauconite nodules and trace pyrite nodules.

There were no oil shows in this interval.

1454m to 1562m: SILTSTONE with minor interbedded SANDSTONE

SILTSTONE: Brownish black to olive black, brownish grey to olive grey, dusky yellowish brown. Dispersive, very soft to firm, occasionally moderately hard, amorphous to subblocky, with trace predominantly very fine to medium quartz grains, occasionally very coarse, minor to trace glauconite pellets and rare pyrite nodules.

SANDSTONE: Clear to translucent, trace opaque quartz grains, occasionally orange to yellowish stained. Very fine to medium grained, occasionally very coarse, subangular to subrounded, occasionally rounded, poorly to well sorted. Loose, poorly consolidated, friable with trace weak silica cement, common to trace glauconite pellets and rare pyrite nodules. Poor visual porosity, fair inferred porosity.

There were no oil shows in this interval.

1562m to 1743m: SILTSTONE with rare interbedded SANDSTONE

SILTSTONE: Dusky yellowish brown, brownish black to olive black, brownish grey to olive grey. Predominantly very soft to firm, occasionally moderately hard, dispersive in parts, amorphous to subblocky. Rare to trace glauconite nodules, rare to trace pyrite nodules, trace disseminated pyrite, trace very fine to fine quartz grains and trace calcite.

SANDSTONE: Clear to translucent quartz grains, occasionally yellowish to orange iron staining. Predominantly fine to medium, occasionally very coarse, moderately sorted, subangular to subrounded, loose, rare glauconite and trace pyrite. Fair inferred porosity.

There were no oil shows in this interval.

1743m to 1860m: SANDSTONE with interbedded SILTSTONE and trace COAL

SANDSTONE: Medium light grey to light olive grey, light brown grey to very light grey with clear to translucent quartz grains, occasionally pink to reddish brown. Very fine to medium grained, occasionally very coarse, poor to well sorted, subangular to subrounded, friable to hard aggregates, quartzose in parts and occasionally poorly consolidated with abundant white to very light grey argillaceous matrix, weak silica cement, trace to common hard calcareous cement, rare to minor pyrite cement. Contains trace lithic fragments, trace glauconite and glauconite pellets, trace pyrite nodules and trace carbonaceous material. Poor to fair inferred porosity, poor visual porosity.

SILTSTONE: Brownish grey to medium dark grey, medium light grey to olive grey. Soft to firm, occasionally very soft, sticky in parts, amorphous to subblocky. Trace lithics, trace pyrite, trace glauconite.

COAL: (Trace): Greyish back to brownish black, sub vitreous to earthy, silty in parts, subblocky to angular fracture.

There were no oil shows in this interval.

1860m to 2118m: SILTSTONE with interbedded SANDSTONE

SILTSTONE: Medium light grey to medium dark grey, light brownish grey to brownish grey, light olive grey to olive grey, occasionally white to very light grey. Very soft to soft, dispersive, amorphous with trace carbonaceous specks, trace pyrite and trace glauconite.

SANDSTONE: White to light grey, medium light grey to greenish grey with clear, translucent and opaque quartz grains, occasionally pink, reddish brown, trace orange, trace iron staining and trace milky. Very fine to coarse grained, predominantly fine to medium, moderately to moderately well sorted, subrounded to angular, subelongate to subspherical. Moderately hard to hard aggregates, quartzose in parts, occasionally loose with minor to abundant white to light grey argillaceous matrix, trace to common hard calcareous cement, rare silica cement, trace pyrite cement. Contains trace to common glauconite, rare mica flakes, rare siderite, trace pyrite nodules, trace lithic fragments and trace carbonaceous specks. Poor visual porosity, poor inferred porosity.

There were no oil shows in this interval.

Drilling Rate Summary for All Lithology Intervals on Casino-1											
Depth Interval (m)	RATE	OF PENETRATION (m/hr)								
	Minimum	Maximum	Average								
752 - 776	14.2	125.1	62.9								
776 - 845	22.4	149.0	77.7								
845 - 1147	0.5	226.1	72.5								
1147 - 1270	4.9	192.8	63.1								
1270 - 1454	8.8	95.4	25.5								
1454 - 1562	7.6	88.5	43.0								
1562 - 1743	16.2	79.6	41.4								
1743 - 1860	0.7	93.1	21.5								
1860 – 2118	4.4 36.1 14.6										

	<u>Sı</u>	ımmar	y of G	as Readin	gs Reco	rded	for All	Litholo	gy Inter	vals o	n Casin	<u>0–1</u>	
Interva	al (m)		Tota	Gas (units)				Ch	romatogr	aph Ana	alysis (ppr	n)	
		Ra	nge	Max Gas	Av. Tota								
From	То	From	То	at (m)	Gas		C1	C2	C3	iC4	NC4	IC5	nC5
0	752		Retur	ns to Seabed		Min	-	-	-	-	-	-	-
						Max							
752	776	0.0	0.3	757-776	0.3	Min	40	-	-	-	-	-	-
						Max	71	-	-	-	-	-	-
776	845	0.2	0.3	776-845	0.3	Min	37	-	-	-	-	-	-
						Max	87	-	-				
845	1147	0.3	6.8	1055-1056	1.5	Min	41	-	-	-	-	-	-
						Max	752	-	-	-	-	-	-
1147	1270	1.9	7.3	1256	3.7	Min	97	-	-	-	-	-	-
						Max	1020	-	-	-	-	-	-
1270	1454	2.3	12.9	1453	4.7	Min	83	-	-	-	-	-	-
						Max	1894	-	19	-	-	-	-
1454	1562	7.8	153.0	1528	23.5	Min	612	-	-	-	-	-	-
						Max	28601	216	134	24	22	6	
1562	1743	3.2	52.5	1741	19.0	Min	459	-	-	-	-	-	-
						Max	5350	118	48	-	6	-	-
1743	1860	3.0	1150	1761	333.0	Min	322	0	0	0	0	0	0
						Max	134997	2448	1329	232	235	73	75
1860	2118	4.0	88.0	1870	12.1	Min	485	0	0	0	0	0	0
						Max	14892	140	64	13	13	8	29



4.2 Sampling Summary

INTEQ

Santos: Casino-1

From:

BHI Unit 503 Location: **Ocean Bounty** Telephone: 08 8218 5740

Shipped in Container No: OPC200

SAMPLE TYPE	No.	C	OMPOSITIO	N	PACKING DETAILS
	Of	Sample	Depth In	terval (m)	
	Sets	Box No.	From	То	
Sets A,B,C: Washed & Air Dried	3	1	752	818	Small boxes 1 – 8 packed in
Samples (100 g)		2	818	875	large box 1 of 3
_		3	875	956	-
		4	956	1037	
		5	1037	1124	
		6	1124	1211	
		7	1211	1298	
		8	1298	1379	
		9	1379	1451	Small boxes 9 – 12 packed
		10	1451	1541	in large box 2 of 3
		11	1541	1625	
		12	1625	1700	
		13	1700	1781	Small boxes 13-17 packed
		14	1781	1862	in large box 3 of 3
		15	1862	1955	
		16	1955	2036	
		17	2036	2118	
Sets D,E: Washed & Air Dried	2	1	752	806	Small boxes 1 – 8 packed in
Samples (200 g)		2	806	875	large box 1 of 5
		3	875	929	
		4	929	986	
		5	986	1040	
		6	1040	1094	
		1	1094	1154	
		8	1154	1226	
		9	1226	1298	Small boxes 9-12 packed in
		10	1298	1355	large box 2 of 5
		11	1355	1412	
		12	1412	1407	Small boyon 12 16 packed
		13	1487	1000	in large box 2 of 5
		14	1000	1025	In large box 5 or 5
		10	1685	1745	
		17	1745	1808	Small boxes 17-20 packed
		18	1808	1865	in large box 4 of 5
		10	1865	1000	in large box 4 or 5
		20	1931	1985	
		21	1985	2042	Small boxes 21-23 packed
		22	2042	2090	in large box 5 of 5
		23	2090	2118	
Set F: Samplex Travs	1	1	752	1052	5 Small boxes packed into 1
		2	1052	1352	Large box.
		3	1352	1652	
		4	1652	1817	
		5	1817	2118	

Set G: Samplex Trays	1	1	752	2012	Box 1 Couriered to Strike oil
		2	2012	2118	on 14/09/02
					Box 2: 1 small box
Set H: Mud Samples and Mud	1	1	755		Packed in 1 Large Box.
Filtrate sample.			1408		Also included a Mud Filtrate
MDT fluid sample			1529		Sample (glass jar).
			1748		Mud Sample and MDT
			1757		sample in plastic 500ml
			1799		bottles
			1870		
			2118		
Set I: Misc paper work, logs and charts	1	1	-	-	1 Large box
				1	1

Samplex trays (Set G) from 752 to 2012m have been forwarded to Strike Oil on 14/09/02

DISTRIBUTION	Destination & Address	Attention of:				
Set A and B: Santos	C/- Santos Core Library	Attn: Troy Prosser (Santos				
Washed & Dried (100g)	Ascot Transport	Core Librarian)				
	Francis Street					
	Gillman SA 5013					
Set C: Strike Oil	C/- Santos Core Library	Attn: Troy Prosser (Santos				
Washed & Dried (100g)	Ascot Transport	Core Librarian)				
	Francis Street					
	Gillman SA 5013					
Set D: Vic DRNE	C/- Santos Core Library	Attn: Troy Prosser (Santos				
Washed & Dried (200g)	Ascot Transport	Core Librarian)				
	Francis Street	,				
	Gillman SA 5013					
	Fwd to Vic DNRE					
Set E: Geoscience	C/- Santos Core Library	Attn: Trov Prosser (Santos				
Australia	Ascot Transport	Core Librarian)				
Washed & Dried (200g)	Francis Street					
	Gillman SA 5013					
	Fwd to AGSO					
Set F, G: Santos and	C/- Santos Core Library	Attn: Santos Core Library,				
Strike	Ascot Transport	Gillman				
Samplex Trays	Francis Street					
	Gillman SA 5013					
	Fwd to AGSO					
Set H:	C/- Santos Core Library	Attn: Troy Prosser (Santos				
Mud Samples	Ascot Transport	Core Librarian)				
-	Francis Street					
	Gillman SA 5013					
	Fwd to AGSO					
Set I: Misc paper work,	C/- Santos Core Library	Attn: Attn: Troy Prosser				
logs and charts	Ascot Transport	(Santos Core Librarian)				
_	Francis Street	,				
	Gillman SA 5013					
	Fwd to AGSO					

SECTION 5

PRESSURE EVALUATION

5.1 Pore Pressure Evaluation

An average sea water density of 8.6 ppg was assumed as the normal saline pressure gradient for all calculations for Casino-1. 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, pore pressure estimates were made during the drilling of Casino-1. For more details, please refer to Appendix 3, "Pressure Summary Plot".

36" Hole Section

The 36" hole was drilled from 95.5mRT to 130.0mRT. The section was short, characterised largely by unconsolidated sediments with returns dumped at the seabed. With an average penetration rate of about 30m/hr and low weight-on-bit, the plotted Dxc data curve projected a leftward general trend consistent with bit jet washing action on soft, unconsolidated sediments. However, it is unlikely that pore pressure would have increased over this shallow interval. The pore pressure was estimated to have remained normal at 8.6 ppg EMW down to 130.0mRT.

17.5" Hole Section

The 17.5" hole was drilled riserless from 130.0mRT to 752.0mRT with returns dumped at the seabed. As in the 36" section, pore pressure estimates were based on the DxC curve, penetration rate and the behaviour of available drilling parameters. The Dxc scatter from below the casing shoe to 400m was indicative of a probably more than gradual sediment consolidation as recorded by Dxc points ranging from 0.21 to 1.31 averaging a slope of 0.71 for the interval. Below 400m to the section total depth of 752m, the trend was closer to vertical inferring a more consistent sediment consolidation with depth. The whole section however was estimated to have remained normal at 8.6ppg EMD down to 752mRT.

12.25" Hole Section

The 12.25" hole section was drilled using a KCI/PHPA/Glycol mud system initially weighted at 8.7ppg. After a successful leak off test (17.3ppg EMW) drilling progressed smoothly averaging 29.2m per hour from 752m to 1797m and 9.7m per hour from 1797m to 2118m TD. In anticipation of higher than normal formation pressure, the mud weight was incremented to 9.8ppg at about 1650m. Drilling continued until gas sands were penetrated below 1740m. High gas with a peak of 23% was circulated our before drilling was resumed. Due to the appearance of trace splintery cavings at the shakers, the mud density was incremented to 10.0ppg at 1790m. The drilling rate then slowed down to less than 4.5m/hr from 1791m to 1797m. It was then decided to pull the bit due to poor rate of penetration. The hole was tight above 1610m requiring a force of up to 60klbs overpull. The section was backreamed from 1610m to 1480m before the bit was run back in to condition the hole. The wiper trip gas recorded rose to 28%. The mud weight was further incremented to 10.3ppg and the bit was pumped and backreamed out of the hole from bottom to 1420m. 20 to 50klbs drag were recorded from 1420m to 1160m before the bit was finally pulled to surface without problems.

An insert bit was made up with the previous assembly and RIH but before tagging bottom, a decision to pull back inside the casing shoe was made due to inclement weather. The string was then spaced out and the BHA and some drill pipe joints were hung up below the seabed. The weather worsened further and the riser was unlatched from the wellhead to prevent damage. Six days were spent waiting on weather.

Aside from a few pieces of splintery cavings noted from 1680m, there was no other indication of abnormal pore pressure while drilling to 1797m. The background gas slowly rose from trace to 2 units with the mud weight maintained at 8.9ppg. Gas background further increased to about 10 units from 1450m to 1740m while the mud weight was measured at 9.9ppg. The temperature curve maintained its gradual increments , however it did shift slightly lower when the reservoir sandstones were drilled from about 1740m as did the DxC trend, increased and stayed high from this point too averaging 676 units (13.5%) between 1740 and 1797m. Whilst the gas peak of 1150 units (23%) below 1740m was considered to have come from a permeable sandstone formation while and the wiper trip gas of 28% was thought to have been swabbed by the bit it is likely that a pore pressure increase had occurred at around 1740m. Offset data from other wells suggested a pore pressure of around 9.2ppg to be present here, but with the high wiper trip gas with 9.9ppg MW, the pore pressure on Casino-1 is likely to be around 9.7ppg EMW. The mud weight was increased to 10.3ppg before the well was shutdown due to inclement weather, the EMW resisting the formation was reduced from 10.3ppg to 10.2ppg. When the well was re-entered, circulation was broken at 950m before continuing to run in the hole to 1717m. From this point the bit was washed and reamed into the hole to

1797m, encountering 27m of fill on bottom, and a maximum trip gas of 125 units (2.5%). This trip gas is relatively low compared to the wiper trip gas prior to waiting on weather. This would indicate that the increase in MW from 9.9 to 10.3ppg stabilised the well and that the pore pressure was fairly close to balance at around 9.7ppg before the MW increase. New 12.25" hole was then drilled from 1797m to 2118m, with a mud weight of 10.3 ppg, which fell to 10.2 ppg by TD at 2118m. The background gas for this section ranged from 4-14 units (0.08-0.28%), with the only significant peak at 1870m of 88 units (1.76%). On pulling out of hole tight spots were encountered at 1805m and 1760m with 60 klbs of overpull.

As discussed above, the maximum trip gas circulated out after 6 days of waiting on weather with an EMW of 10.2ppg was 2.5%. The Dxc trended lower from 1830m to 1860m before maintaining a normal inclination towards TD at 2118m. The temperature gradient increased at a higher than normal rate from 1797m to 1850m before returning to a normal trend higher from 1850m to TD. There were, however, no further pressure cavings observed from 1797m to 2118m. These factors, in conjunction with the increasing background gas as this section was drilled, indicates that the maximum pore pressure may have been around 9.7ppg EMW. Once the Mud Weight was increased to 10.3ppg gas levels were significantly reduced. The Trip gas produced after waiting on weather for 6 days was much lower than the wiper trip gas produced with when the mud weight was 9.9%. This suggests a pore pressure of around 9.7ppg EMW. No further evidence of increasing pore pressure was seen whilst drilling to TD. So the maximum pore pressure at TD was around 9.7ppg.

5.2 Fracture Pressure Evaluation

12.25" hole section

After drilling out the 13.375" casing shoe at 743m, rathole to 752m and three metres of 12.25" hole to 755mRT, a Leak Off Test (LOT) was performed. An applied force of 1090psi at the surface using mud weighted at 8.7ppg recorded an equivalent mud weight (EMW) of 17.29ppg formation strength at the casing shoe. This section was drilled with a KCI/PHPA/Glycol mud system weighted from 8.7 to 10.3ppg. While drilling, an ECD range of 8.9 to 10.5ppg was recorded. At no time did ECD values approach the LOT result. No downhole mud losses were seen in this section.

The following is a summary of the Leak Off Test conducted in this well:

Hole Section	Hole MD	Casing	Shoe MD	Pressure	Mud Weight	EMW
12.25"	755 m	13.375"	743m	1090 psi	8.7 sg	17.29ppg

TABLES

Table 1: Bit Run Summary

BA								В	it F	Rui	n S	un	nma	ry		_											Santos
Operate	or SA	NT	os			Well N	lame	Ca	isinc)-1			Location	C/P4	4	Drilling	Contracto Dia	or mon	d Of	ffsł	nor	е			Rig	(Ocean Bounty
																		_		-	-	-					
	Bit				_	_		On Btm					Drilling	paramet	ter rang	je						G	radin	ng			
Bit No.	Make, Type Serial No. / IADC Code	Bit Size in	Jets x 1/32"	TFA in*	Depth In m	Depth Out m	Metres Drilled Metres	Hours Drilled Hours	ROP Avg m/hr	TBR x1000	WOB klbs	SPP psi	RPM	Flow apm	Jet Vel m/sec	DC/OH Vel m/min	MD ppg	Hyd Power hhp	Bit Loss %	۱o	D	L	в	G	ο	R	Remarks
	36" Hole Section													01													
NB1	Smith DSJC	26	3 x 18	2.2304	95.5	130	34.5	1.0	34.5	4.1	2-10	1332	65	870	38	5	8.6	61	38.0			Not	t Grad	ded			36" Hole Section T.D.
	w/ 36" Hole Opener		36" HO, 4 x 22 j	ets																							
	17.5" Hole Section			-	-									-	_			-									
NB2	Smith MGSSHC	17.5	3 x 20, 1 x 18	1.1689	130	752	622	23.4	26.6	143.1	3.4-33.5	2057	60-108	1000	85	35	8.6	349	43.6	1 1	NO	Α	Е	1	NO	TD	17.5" Hole Section TD
	12.25" Hole Section																										
NB3	Reed DSX195GUW	12.25	5 x12	0.5522	752	1057	305	4.7	64.9	100.6	1.3-17.8	2533	78-131	499-1214	112.3	37	8.8	394.7	62.2	88	RO	S	Х	1	WT	PR	MWD,FEWD
NB4	Reed EHP51HFKPRDH	12.25	3 x 16	0.5890	1057	1059	2	0.2	10.0	2.5	5.3-7.1	2994	86	384	3.0	35.60	8.8	77.7	52.5	0 2	CT	G	F	Ι	PN	PP	MWD,FEWD
NB5	Smith 10GF	12.25	3 x 16	0.5890	1059	1400	341	14.7	23.2	86.2	1-48	3070	53-125	857	141.0	78.90	8.8	843.0	55.3	1 1	WT	A	E		ER	PR	MWD,FEWD
NB6	Smith MA74BPX	12.25	6 x 12	0.6627	1400	1797	397	16.2	24.5	140.2	2.5-23.1	3189	114-117	825	118.9	74.50	10.0	637.0	43.6	18	LT	S	Х	1	CT	۲R	MWD,FEWD
NB7	Hughes MXR09D	12.25	3 x 16	0.5890	1797	1797	0	0.0	-	-	-	-	-	-	-	-	-	-	-		DT				OT	-	RIH, WOW, POOH
KR7.1	Hugnes MXR09D	12.25	3 x 16	0.5890	1797	2118.0	321	33.2	9.7	203.1	8-42	3840	67-115	802	134.2	70.80	10.2-10.3	1.2	52.4	2 2	BI	A	E	1	UI I	ID	

SANTOS: Casino-1

BAKER

Santos

Bit Hydraulics Summary

INTEQ)						, ~				мп		.									
Operator					Well Name					Location	1	Drilling Con	tractor				Rig					
		SAI	NTOS			Casino	o-1			VIC	/P44	0	Diamon	d Offsl	hore			Ocean Bounty				
Drillstrin	g Abbrevi	ations			•				Hydraul	ics Mode	els	-										
N	Normal MWD	P A	Positive Displacemen Adjustable Gauge St	nt Motor abilizer	T C	Halliburton Core	TRAC	S Tool		Power L Bingham	aw Model n Model us	used for dri sed for corin	ling with N g and drilli	/lud ng with s	ea wate	r						
																		Ann	ular Velo	ocities		
Bit	Depth	Hole	Jets	Drill	Mud	Mud		YP	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		ppg	cР	ft sq	gpm	m/sec	lbf	hhp	hp/sq in	Psi	%	Psi	ppg	m/min	m/min	m/min		
	36" Hole	Section																				
NB1	130	36"	3 x 18, 4 x 22	Ν	SW/hi-vis sweeps	8.60	1	1	870	38.1	485.0	61.1	0.1	120	38.0	167	8.60	-	5.4	25.2		
	17.5" Ho	le Sectio	n																			
NB2	752	17.50	3 x 20, 1 x18	Ν	SW/hi-vis sweeps	8.60	1	1	1011	84.6	1249.8	349.1	1.5	592	43.6	725	8.60	26.9	35.0	25.5		
	12.25" H	ole Section	on																			
NB3	1057	12.25"	5 x 12	М	KCL/PHPA/Glycol	8.80	7	15	707	125.0	1323.0	547.0	4.7	1328	64.7	684	8.90	42.0	65.4	103.9		
NB4	1059	12.25"	3 x 16	М	KCL/PHPA/Glycol	8.80	7	15	385	63.9	368.0	78.0	0.7	346	52.5	297	8.89	22.0	35.6	105.6		
NB5	1400	12.25"	3 x 16	М	KCL/PHPA/Glycol	8.80	12	21	852	141.0	1804.0	843.0	7.3	1697	55.3	1319	8.93	51.1	78.9	131.0		
NB6	1797	12.25"	6 x 12	М	KCL/PHPA/Glycol	10.00	18	32	805	118.9	1625.0	637.0	5.5	1359	43.6	1651	10.20	48.3	74.5	158.1		
RR7.1	2118.0	12.25"	3 x 16	M	KCL/PHPA/Glycol	10.2 - 10.3	20	28	808	134.2	1879.0	832.4	7.2	1767	52.4	1504	10.40	48.5	70.8	142.1		



APPENDICES

FORMATION EVALUATION LOG 1:500



FORMATION EVALUATION LOG Casino-1

INTEQ

Santos

SCALE: 1:500

								1						<u></u>		
RATE OF PENETRATION	모	C	z		RESIS	STIVITY	(101	AL GAS	IN UNITS	5	CAL	CIMI	EIRY	REMARKS
	뜅	L T	Ξ													
	크	Ţ	R							_	100					
10 10	ŝ	G	ਸ਼ੋ	.				1	1	0	100	1K				
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NB1 660mm (26")							=									Spud Casino-1 @ 18:30hrs on 25/08/02
3 x 18 iets				-			=						-			
914mm (36") H.O w/ 4 x 22 jets	<u></u>			- :				- :					- :			
In 95. 5 m	ŏ			- !				-					-		-	
34.4m/1.0hrs				-			-						-		-	
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26/08/07				-			- 1	-					-		-	
NP2 445 mm (17.5")				-			=	-					-			Drill 014mm/660mm (26"/26") hole to
Smith MGSSHC				-				-					-		-	130m. Set 762mm (30") csg shoe @ 128
E x 20, 1 x 18 jets				-			=									0m. Drill ahead 445mm (17.5") hole
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₩22m/23.4hrs							-									



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			Dev:0.54deg Azi:155.43deg TVD:912.38m
		X	SANDSTONE:wh-v It gry,trnsl qtz grs,rr opq,med-crs,occ f & v crs,mod-pr srt,sbrnd, occ rnd,mnr sbang,tr wk sil cmt,tr pyr cmt, tr Fe stn,tr nods & dissem pyr,tr glauc,pr cons,fr inf por,no show
			CLAYSTONE:brnsh gry-olv gry,med gry- med dk gry,tr dissem pyr,tr vf carb spks,sft, disp,sbblky,grd to CALCAREOUS CLAYSTONE i/p
WOB 1.8-10.4 klb RPM 92-128 SPP 1684-2736 psi MFI 499-678 gpm			MW 8.8ppg V 40 PV/YP 7/15 Gels 4/4 F 6.5 FC 1 Sol 1.6 Sd 2.0% pH 10 Cl 29k KCl 7.0%
			SANDSTONE:wh-v It gry,trnsl qtz grs,rr opq,med-crs,occ f & v crs,mod-pr srt,sbrnd, occ rnd,mnr sbang,pr cons,tr pyr cmt,tr Fe
			no show
			Dev:0.83deg Azi:135.97deg TVD:969.92m
WOB 1.9-10.6 klb RB M 87-117 SPP 1890-2703psi MFI 555-671gpm			CLAYSTONE:brnsh gry-olv gry,med gry- med dk gry,tr dissem pyr,tr vf carb spks,sft, disp,sbblky,grd to CALCAREOUS CLAYSTONE i/p

			SANDSTONE:trnsl-opq,v lt gry-lt gry,orng stn qtz grs,f-crs,pred med,mod srt,sbang- rnd,tr pyr cmt,tr sid cmt,tr pyr nods,tr foss frags,tr liths frags,pr cons,fr inf por,no show
			SANDSTONE:brnsh gry,dk yelsh orng,clr- trnsl qtz grs,occ gry & orng stn,f-crs,occ v crs,rr gran,pr-mod srt,sbang-sbrnd,rr rnd, com pyr cmt,tr sil cmt,rr arg mtx,tr glauc,v hd aggs,pr cons,pr vis por,fr inf por,no show
GRPM 89-125 GRPM 89-125 MFI 552-547 gpm			Survey @ 1041.08m Dev:1.20deg Azi:191.94deg
NB4 311mm (12.25")			[TVD:1041.05m
01/09/02 NB5 311mm (12.25") Smith_10GF 3 x 16 jets p=1050m 41m/12 7brs	∃		MW 8.8ppg V 48 PV/YP 12/21 Gels 6/8 F 6.2 FC 1 Sol 1.7 Sd 0.5% pH 8 Cl 28k KCl 7.0%
			SANDSTONE:dk yelsh brn-dk yelsh orng, clr-trnsl, occ mlky qtz grs,occ orng stn,f-v crs,pred m-crs,pr srt,sbang-rnd,pred sbrnd, com pyr cmt,rr sil cmt,com arg mtx,tr glauc, tr dissem pyr,rr fri aggs,pred pr cons,pr vis por,pr inf por,no show
WOB 0.5-151 klb C RPM 153-126			Survey @ 1084.57m Dev:1.29deg

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l l l			- SILTSTONE:med It gry-med dk gry,brnsh gry,occ wh-v It gry,sft,disp,amor,tr carb spks,tr pyr
			- SANDSTONE:clr-opq qtz gr,med lt gry- grnsh gry,wh-lt gry,tr pnk,tr orng,vf-crs,
			 pred vf-f,wl srt,sbrnd-sbang,sbspher,com wh-v It gry arg mtx,tr pyr cmt & nods,min glauc,tr carb spks,mod hd-hd,pr vis por,no fluor
WOB 27.2- 27 .9 klb RPM 98-11 5 SPP 3690-39 56 psi MEL 788-81 1 com			
		ζζ Į	Gels 7/12 F 4.4 FC 1 Sol 12.0 Sd 0.5 pH 9.5 Cl 31.4k KCl 7.0%
	2000		SANDSTONE:clr-opq qtz grs,med lt gry- grnsh gry,lt brnsh gry,wh-lt gry,vf-crs,pred
			It gry arg mtx,tr pyr cmt,rr sil cmt,tr calc cmt,rr mic flks,rr glauc pel,tr carb spks, mod hd-hd,pr inf por,pr vis por,no fluor
			SILTSTONE: It gry-med gry, It brnsh gry- brnsh gry, It olv gry, occ wh-v It gry, v sft-sft,
WOB 30.1- 34.8 klb			

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MFI 794-811 gpm				
		· 사망· 사망· 사망· 사망·		
5				mlky,f-med,wl srt,sbrnd-sbang,sbspher, com wh-v lt gry slt mtx,tr pyr cmt,rr sil cmt,
	050			tr calc cmt,com glauc,rr sid,tr carb spks, mod hd-hd aggs,pr inf por,pr vis por,no fluor
$\{ \ \rangle$				
			100%C1	SILTSTONE: It gry-med gry, It olv gry-olv
		- 000000000000000000000000000000000000		- glauc
		- 2002/2002/2002 - 		
			E S S E	
WOB 31.0-38.044b RPM 96-104 C				 SANDSTONE:clr-opq qtz gr,tr Fe stn,tr mlky,f-med,wl srt,sbrnd-sbang,sbspher, com wh-v lt gry slt mtx,tr pyr cmt,rr sil cmt,
MFI 771-8081gpm				tr calc cmt,com glauc,rr sid,tr carb spks, - mod hd-hd aggs,pr inf por,pr vis por,no fluor
, i i i i i i i i i i i i i i i i i i i				
	2100			SILTSTONE: It gry-med gry, It olv gry-olv
, f				pyr,tr glauc
,				- MW 10.2ppg V 54 PV/YP 17/26 Gels 7/10 F 4.8 FC 1 Sol 10.5
			Ē	
η, γ				- - Reached 2118m TD @ - 11:00brs 14 Sep 2002
				- Run wireline logs
				- RUN#1 PEX-DSI - RUN#2 MDT-GR (30 points) - Run#3 CST-GR

RATE OF PENETRATION GAMMA (API) 1 0 0 00 0 4.5 9 13.5 18 WOB (MT) 0 4.5 9 13.5 18 WOB (klb) 0 10 20 30 40 ROP (m/hr) 	DEPTH (m)	CUTTINGS LITHOLOGY	INTERPRETED LITHOLOGY	TOTAL GAS IN UNITS 1 10 100 1k Ethane (ppm) Ethane (ppm) Ethane (ppm) Iso Butane (ppm)	CALCIMETRY	REMARKS

DRILLING DATA PLOT 1:2000



BAKER HUGHES

INTEQ

Santos















		ROP (m/hr)		DEPTH (m)	FLOW 1 - 400 FLOW - 400 FLOW - 1.5k STANL - 1.400 - 1.5k STANL - 1.400 - 1.5k STANL - 1.400 - 1.5k STANL	N (gal/min) 1.6k - 6k IN - 1.2k (l/min) - 6k IN - 4.5kE (psi) - 2.8k IN - 2.1k (basi) - 2.8k	2k 7.5k 3.5k		- 100 W- 16	<u>RPM</u> 150)В (klb) 24 28 (МТ)	- 200 - 32	250 40	0 9	Torq 5 Torq .7 Torq	ue Max 10 1 ue Max 1.4 2 jue Avg	((kft-lb 15 2 ((kg/m 2.1 2 ((kft-lb 15 2) 20 25) 2.8 3.5) 20 25		Drilling Expone	nt	Interpreted Lithology
200	150	100	50	0		9.6k	19.2k	24k	0 3.6	7.2	10.8	- 14.4	18	0 0	Torq .7	lue Avg 1.4 2	<u> (kg/m</u> 2.1 2	2.8 3.5	0.2	1	3	~

PRESSURE EVALUATION PLOT 1:2000













Rate Of Penetration					Dep	Drilling Exponent	Gas Data in Units		Temper	Inter			
	·····	GAMMA (API)		oth (n					Temperat	ure In (degC)	rprete
0	50	100	150	200	nRT		1	Connection Gas		40 20	50	70 60	dLith
		ROP (m/	hr)		MSL				₹.	Temperatu	ire Out	(degC)	nolog
200	150	100	50	0	<u>-</u>)	0	ω		1 k	20 30 40 20	50	60 60	~

PRESSURE SUMMARY PLOT



GAS RATIO PLOT 1:500

BAKER HUGHES INTEQ		G	AS RAT	FIO AN Casii SCALE	JALY no-1 : 1:500	SIS PLC	TC	S	Sant	0	S
TOTAL GAS	D	CHROM	IATOGRAPH A	NALYSIS		OCQ	RATIOS		C1/(C2+C3-	+C4)	
	EPTH (Butane iC4 (ppm) Butane iC4 (ppm)						C1/C4_	INTE LITI	
	mR		Propane_C3 (ppm)				GWR		C1/C3		RPR
			Ethane C2 (ppm)						01/00		ETE DGY
Ditch Gas (unit)	<u>IS</u>				<u> </u>	 4 2 0					0
0 00		0 00	*	0k	00k		0 00	~	0 00	~	
NB3 311mm (12.25") Reed DSX195GUW	0 800										



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TOTAL GAS	CHRC	DMATOGRAPH AN Pentane C5 (ppm) Butane nC4 (ppm)	IALYSIS		OCQ		RA	TIOS	-	C1/(C2	2+C3+C	4) _
(mRT		Butane IC4 (ppm) Propane C3 (ppm) Ethane C2 (ppm)				-	G	WR		С	1/C3	_
Ditch Gas (unit)		Methane C1 (ppm)					L	HR		С	1/C2	
- 10	- 100 10	- 1k	- 10k	100k	⊃ N	- 4	- 10	- 100	1 , -	- 10	- 100	¥

SECTION 13:- RIG POSITIONING REPORT



Casino-1 Positioning Report of the Ocean Bounty

> Prepared for Santos Offshore Pty Ltd

> > Report No: 3429A3

Thales GeoSolutions (Australasia) Limited ABN 82 000 601 909 Hydrographic House 4 Ledgar Road BALCATTA WA 6021 Tel: +61 (0) 8 9344 7166 Fax: +61 (0) 8 9344 8783



Thales GeoSolutions (Australasia) Limited ABN 82 000 601 909

Hydrographic House 4 Ledgar Road Balcatta WA 6021 Tel: + 61 (0) 8 9344 7166 Fax: + 61 (0) 8 9344 8783



SANTOS OFFSHORE PTY LTD

DOCUMENT TITLE	:	CASINO-1 POSITIONING REPORT OF THE OCEAN BOUNTY
CLIENT	:	SANTOS OFFSHORE PTY LTD
LOCATION	:	OTWAY BASIN, BASS STRAIT
PERMIT	:	VIC-P-44
REPORT REF.	:	3429A3
REPORT REV NO.	:	0
REPORT ISSUE DATE	:	2 SEPTEMBER 2002
SURVEY DATE	:	19 – 26 AUGUST 2002

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- B GNS2 STATIC DIFFERENTIAL GPS FIX GRAPHS
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- K DAILY REPORT SHEETS





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 Casino-1 location for Santos Offshore Pty Ltd (Santos).

Positioning of the Ocean Bounty during the approach to and at the Casino-1 location was provided by Thales' SkyFix/SkyFix Spot Differential GPS (Differential GPS) 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/Tug Display Vessel Tracking System (VTS). The Ocean Bounty was positioned at the Casino-1 location at 0145 on 25 August 2002.

Intended Casino-1 Location

The co-ordinates of the intended Casino-1 location were provided by Santos as follows:

Datum: GDA94

Latitude	:	38° 47' 18.600" South
Longitude	:	142° 42' 00.240" East

Projection: MGA Zone 54, CM 141° East

Easting Northing	:	647 653.72m 5 705 320.87m
Rig Positioning Toleran	ce :	± 20m
Intended Rig Heading	:	240.0° (T)

Final Differential GPS Drillstem Position at the Casino-1 Location

The final Differential GPS Position of the Ocean Bounty drillstem at the Casino-1 location was computed from data observed between 2111 and 2211 on 25 August 2002. The final position is as follows:

Datum: GDA94

Latitude	:	38° 47' 18.502" South
Longitude	:	142° 42' 00.287" East

Projection: MGA Zone 54, CM 141° East

Easting	:	647 654.91m
Northing	:	5 705 323.87m

The final Differential GPS drillstem position is 3.22m on a bearing of 20.6° (T) from the intended Casino-1 location.

Final Rig Heading : 237.7° (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 CASINO-1 LOCATION

The Ocean Bounty was positioned at the Casino-1 location at 0145 on 25 August 2002.

The final Differential GPS position of the Ocean Bounty drillstem at the Casino-1 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 Casino-1 location. A total of 720 position fixes were recorded at 5 second intervals between 2111 and 2211 on 25 August 2002.

Refer to Appendix A for the GNS2 final Differential GPS position printouts at the Casino-1 location. Associated graphs are located in Appendix B.

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

The final surface co-ordinates for the Casino-1 Ocean Bounty drillstem location, determined from Differential GPS observations are as follows:

Total number of samples used = 694.

The computed antenna position is as follows:

GPS Antenna Position

Datum: WGS84

Latitude	:	38° 47' 19.081" South	(S.D. 0.28m)
Longitude	:	142° 41' 59.093" East	(S.D. 0.41m)
Ellipsoidal Height	:	32.83m	(S.D. 0.62m)

Transforming the above WGS84 co-ordinates to GDA94 co-ordinates using the parameters in section 6, gives the following antenna co-ordinates:

GPS Antenna Position

Datum: GDA94

Latitude	:	38° 47' 19.081" South
Longitude	:	142° 41' 59.083" East
Ellipsoidal Height	:	32.83m

By applying a distance of 33.90m on a bearing of 58.2° (T) from the antenna position, the following drillstem co-ordinates are calculated:



Datum: GDA94

Latitude	:	38° 47' 18.502" South
Longitude	:	142° 42' 00.287" East

Projection: MGA Zone 54, CM 141° East

Easting	:	647 654.91m
Northing	:	5 705 323.87m

This final Differential GPS position of the drillstem is 3.22m on a bearing of 20.6° (T) from the intended Casino-1 location.

Final Rig Heading : 237.7° (T)



Skyfix Spot Differential GPS Position and Intended Position at the Casino-1 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:

A	Intended Ar	nchor Position	Final Anchor Position	
Anchor	Easting (m)	Northing (m)	Easting (m)	Northing (m)
Anchor 1	647 662.44	5 704 070.47	647 676.46	5 704 152.47
Anchor 2	647 053.97	5 704 230.57	647 141.56	5 704 380.81
Anchor 3	646 409.67	5 705 346.53	646 400.89	5 705 342.76
Anchor 4	646 575.25	5 705 953.53	646 615.82	5 705 948.43
Anchor 5	647 644.96	5 706 571.13	647 669.46	5 706 469.04
Anchor 6	648 253.43	5 706 411.03	648 285.18	5 706 469.88
Anchor 7	648 897.73	5 705 295.07	648 767.16	5 705 306.09
Anchor 8	648 732.15	5 704 688.07	648 752.37	5 704 695.11

Datum: AGD66 Projection: MGA Zone 54, CM 141° East

Difference of final anchor positions from the intended anchor positions.

Anchor	Dropped by	Eastings (m)	Northings (m)
Anchor 1	P.Conqueror	-14.02	-82.00
Anchor 2	P.Conqueror	-87.59	-150.24
Anchor 3	P.Conqueror	+8.78	+3.77
Anchor 4	P.Sentinel	-40.57	+5.10
Anchor 5	P.Sentinel	-24.50	+102.09
Anchor 6	Ocean Bounty	-31.75	-58.85
Anchor 7	P.Conqueror	+130.57	-11.02
Anchor 8	P.Conqueror	-20.22	-7.04

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

Anchor	Bearing (T)	Horizontal Distance (ft)
Anchor 1	178.3°	3712
Anchor 2	208.9°	3412
Anchor 3	268.6°	4001
Anchor 4	299.6°	3855
Anchor 5	0.2°	3627
Anchor 6	28.9°	4181
Anchor 7	88.6°	3536
Anchor 8	118.4°	4017

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 16 August 2002. Thales personnel B. O'Brien, S. Bradley and L. Kercheval 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.

On arrival at the Ocean Bounty L. Kercheval attended a rig induction incorporating:

- Rig Safety
- Emergency Response
- General Management
- Rig Tour

All Thales personnel attended DOGC's daily pre-tour meetings. A weekly fire/abandon rig drill was held on 24 August 2002, in which Thales personnel participated

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 it 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 27 August 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 Santos Offshore Pty Ltd (Santos) to provide personnel and positioning equipment consisting of Thales' SkyFix/SkyFix Spot Differential GPS for the rig move of the Ocean Bounty to the Casino-1 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 Sole-2 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 Casino-1 location.
- (c) Differential GPS Positioning of the Ocean Bounty at the Casino-1 location.
- (d) Real-time positioning (including GNS2 fixing/logging/streaming) of the Ocean Bounty, Pacific Sentinel and Pacific Conqueror during anchor deployment operations at the Casino-1 location.
- (e) Determine the final Differential GPS position of the Ocean Bounty drillstem at the Casino-1 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 Casino-1 location.

The positioning requirements were as follows:

(a) Intended Casino-1 location:

Datum: GDA94

Latitude	:	38° 47' 18.600" South
Longitude	:	142° 42' 00.240" East

Projection: MGA Zone 54, CM 141° East

	Easting Northing	:	647 653.72m 5 705 320.87m
(b)	Positioning tolerance	:	± 20m
(c)	Intended rig heading	:	240.0° (T)



3.2 SUMMARY OF EVENTS

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

19 August 2002

0950 Thales personal arrive Perth Domestic Airport (UTC +8).

- 1130 Thales personnel depart Perth for Melbourne (UTC +8).
- 1630 Thales personnel arrive Melbourne.
- 1730 Thales personnel checkin Holiday Inn Spencer St. Standby

20 August 2002

0610 Thales personnel check out Holiday Inn Spencer St.

- 0630 Arrive Bristow Helicopters, Essendon Airport.
- 0730 Depart Essendon Airport for Ocean Bounty.
- 0900 Arrive Ocean Bounty.
- 0915 L. Kercheval begins Rig Induction. S. Bradley begins Equipment Mobilisation.
- 1115 L. Kercheval finished Rig Induction and Assists with Equipment Mobilisation.
- 1345 Meeting held for Rig Move Procedures.
- 0700 GDA94 configuration file running and check fixes at Sole-2 for MGA Zones 54, 55 complete. AGD66 co-ordinates checked and no significant errors detected.
- 1845 Survey Equipment tested and running for anchor recovery (standing by).

21 August 2002

0001 Standby for anchor recovery.

- 0830 Commence anchor recovery. Deballasting completed.
- 0829 #1 PCC passed to Conqueror.
- 0838 #5 PCC passed to Sentinel.
- 1007 #1 PCC returned to rig.
- 1020 #8 PCC passed to Conqueror.
- 1039 #5 PCC returned to rig.
- 1055 #4 PCC to Sentinel.
- 1101 #4 Chase out.
- 1217 #8 PCC Returned to Rig.
- 1246 #4 PCC returned to rig, Sentinel preparing deck for towing.
- 1257 #6 PCC passed to Conqueror.
- 1402 Sentinel connected to Tow Bridle.
- 1510 Adjust rig position to keep Fairlead 6 clear of the wellhead.
- 1558 #6 PCC returned to rig.
- 1617 #3 PCC passed to Conqueror.
- 1826 #3 PCC returned to rig.
- 1835 Tracs frozen on Sentinel.



21 August 2002 (continued)

- 1901 Sentinel updating.
- 1905 #2 PCC passed to Conqueror.
- 1915 #2 Chase out.
- 2000 #7 recover by rig during winch in #2.
- 2108 #2 PCC returned to rig.
- 2152 Conqueror connected to port Tow Bridle.
- 2158 #7 Recovery continues by rig.
- 2210 #7 Off the bottom.
- 2230 #7 Racked.
- 2230 Tow commences to Casino-1 location.

22 August 2002

- 0001 Continue on tow to Casino-1 location.
- 1130 Tracs operational on vessels, computer hang ups cleared, Running on GDA94 Configuration File.
- 1530 ETA to Casino-1 26 August 0700.
- 2400 Tow continues 215 miles to go, speed down to 2.6kts due weather.

23 August 2002

0001 Continue on tow to Casino-1 location.

- 1015 Approx 3.5km West of waypoint Citadel, current ETA Casino-1: 0700 25/08/02.
- 2200 Approx 163km East of waypoint Otway, current ETA Casino-1: 1800 24/08/02.

24 August 2002

0001 Continue on tow to Casino-1 location.

1030 Crew attends Fire/Abandon rig drill.

1130 Crew attends Pre-Tow safety meeting followed by Clients Pre-Spud meeting.

1600 Continue on tow to Casino-1. Speed 5 knots 45 nautical miles to location.

1715 Complete Anchor assign test to vessels, Sentinel fluxgate input ok.

25 August 2002

0001 Continue on tow to Casino-1 location.

0041 Begin final run in.

0046 5km to intended Anchor 6.

0130 Anchor 6 lowered 100m from intended E:648271 N:5706445.

0145 Finish chain payout on Anchor 6, rig at location.

0233 Conqueror disconnected from tow bridle.

0312 #2 PCC passed to Conqueror.

0352 #2 Run out.

0400 #2 Lowered to bottom E: 647091 N: 5704293.



25 August 2002 (continued)

0428 #2 PCC passed back to Bounty. 0445 #3 PCC passed to Conqueror. 0510 #3 Run out. 0517 #3 Lowered to bottom E:646427 N:5705343. 0544 #3 PCC passed back to Bounty. 0600 #7 PCC passed to Conqueror. 0620 #7 Run out. 0626 #7 Lowered to bottom E:648842 N:5705307. 0658 #7 PCC passed to Bounty. 0708 #8 PCC passed to Conqueror. 0724 Sentinel disconnected from tow bridle. 0732 #8 Run out. 0739 #8 Lowered to bottom E:648749 N:5704697. 0800 #4 PCC passed to Sentinel. 0811 #8 passed back to Bounty. 0812 #4 Run out. 0821 #4 Lowered to bottom E:646626 N:5705943. 0828 #1 PCC passed to Conqueror. 0842 #4 PCC returned to Bounty. 0847 #1 Run out halted, anchor turned, winch back to rig. 0854 #5 PCC passed to Sentinel. 0920 #5 Run out. 0928 #5 Lowered to bottom E:647670 N:5706470. 0932 #1 Run out. 0938 #1 Lowered to bottom E:647677 N:704074. 0952 #5 PCC returned to Bounty. 1003 #1 PCC returned to Bounty. 1010 Begin pre-tensioning. 1115 Stop pre-tensioning and continue ballast rig. 1500 Ballast operations complete, anchor tensioning continues. 1601 Rig at 70' draft.

- 1621 Maneuvering onto location.
- 1724 Pre-tensioning complete, rig in location.
- 1800 Begin spud-in.
- 2111 Commence Final Position fix.
- 2211 Complete Final Fix.
- 2300 Demob equipment for storage onboard rig.



26 August 2002

- 0100 Complete De-mobilisation and storage of equipment.
- 0845 Thales personnel Depart Ocean Bounty for Essendon airport on Bristow helicopter.
- 1000 Arrive Essendon airport, transit to Melbourne domestic airport.
- 1030 Arrive Melbourne domestic airport, check in.
- 1150 Depart Melbourne domestic airport for Perth.
- 1400 Arrive Perth domestic airport. (UTC +8.00).



4. EQUIPMENT ANALYSIS

4.1 EQUIPMENT PERFORMANCE

During the positioning of the semi-submersible drilling rig Ocean Bounty from the Sole-2 location to the Casino-1 location, no significant problems were encountered with Thales' equipment or software.



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 Sole-2 location was computed using SkyFix Spot Differential GPS. 100 fixes were taken. Appendix G contains the results of the check fix of the Ocean Bounty drillstem position at the Sole-2 location.

The published Differential GPS co-ordinates of the Ocean Bounty drillstem position at the Sole-2 location are as follows:

Datum : GDA94

Latitude	:	38° 06' 12.987" South
Longitude	:	149° 00' 33.451" East

Projection : MGA Zone 54, CM 141° East

Easting	:	1 202 750.10m
Northing	:	5 752 267.46m

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

Datum : GDA94

Latitude	:	38° 06' 13.083" South
Longitude	:	149° 00' 33.511" East

Projection : MGA Zone 54, CM 141° East

Easting	:	1 202 751.30m
Northing	:	5 752 264.37m

The Differential GPS check fix of the Ocean Bounty drillstem position is 3.32m on a bearing of $153.8^{\circ}(T)$ from the published Sole-2 location.

The client representative reviewed all geodetic parameters and 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 24 August 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 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)
07:13:00	163° 03' 42"	073° 51' 19"	270° 47' 37"	270.79°	270.30°	0.49°
07:15:00	164° 11' 18"	073° 32' 08"	269° 20' 50"	269.35°	268.30°	1.05°
07:16:00	165° 49' 30"	073° 22' 32"	267° 33' 02"	267.55°	266.30°	1.25°
07:17:00	166° 09' 00"	073° 12' 55"	267° 03' 55"	267.07°	266.20°	0.87°
07:18:00	165° 58' 24"	073° 03' 17"	267° 04' 53"	267.08°	265.80°	1.28°
07:20:00	166° 21' 24"	072° 43' 59"	266° 22' 35"	266.38°	264.70°	1.68°

Observation Date : 24 August 2002

Mean C-O = +1.1°

The mean C-O of +1.1° 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 Geocentric Datum of Australia 1994 (GDA94). The Global Positioning System (GPS) is referenced to the World Geodetic System 1984 (WGS84).

6.1 DATUMS

Datum	:	GDA94
Spheroid	:	Geodetic Reference System 1980 (GRS80)
Semi-major Axis (a)	:	6 378 137.000m
Semi-minor Axis (b)	:	6 356 752.314m
Eccentricity Squared (e ²)	:	0.006 694 380
Flattening (1/f)	:	298.257 222 101
Datum	:	ITRF92 (Epoch 1994.0) WGS84 G730
Datum Spheroid	:	ITRF92 (Epoch 1994.0) WGS84 G730 WGS84
Datum Spheroid Semi-major Axis (a)	:	ITRF92 (Epoch 1994.0) WGS84 G730 WGS84 6 378 137.000m
Datum Spheroid Semi-major Axis (a) Semi-minor Axis (b)	:	ITRF92 (Epoch 1994.0) WGS84 G730 WGS84 6 378 137.000m 6 356 752.314m
Datum Spheroid Semi-major Axis (a) Semi-minor Axis (b) Eccentricity Squared (e ²)	:	ITRF92 (Epoch 1994.0) WGS84 G730 WGS84 6 378 137.000m 6 356 752.314m 0.006 694 380
Datum Spheroid Semi-major Axis (a) Semi-minor Axis (b) Eccentricity Squared (e ²) Flattening (¹ / _f)	:	ITRF92 (Epoch 1994.0) WGS84 G730 WGS84 6 378 137.000m 6 356 752.314m 0.006 694 380 298.257 223 563

The GRS80 and WGS84 ellipsoids have a very small difference in the inverse flattening. On a UTM projection this difference is at the centimetre level. WGS84 and GDA94 can be considered the same for most practical applications.

6.2 PROJECTION

Projection Name	:	Map Grid of Australia 1994 (MGA94)
Projection Type	:	Universal Transverse Mercator (UTM)
MGA Zone	:	Zone 54
Central Meridian (CM)	:	141° 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 TRANSFORMATIONS

The following 7-parameter datum transformation was used by the GNS2 software to convert WGS84 co-ordinates to GDA94 co-ordinates:

=	0m
=	0m
=	0m
=	0"
=	0"
=	0"
=	0.0 p.p.m
	= = = = =

The sign convention in Thales' GNS2 survey software used is that used by the US Department of Defense 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[®] 95 or Windows[®] 98 or Windows[®] NT. GNS2 adheres to the operation and dialogue conventions of the Microsoft Windows[®] 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 Ionospheric 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

L. Kercheval : Surveyor/Team Leader S. Bradley : Senior Engineer

For : Santos Offshore Pty Ltd

K. O'Halloran : 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 (Each)

- 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 2.35, MultiFix 3 version 1.24) c/w cables, consumables, software dongles etc.


Copies of this report have been distributed as follows:

Santos Offshore Pty Ltd Attn: Mr Ole Moller : 3 copies

Thales GeoSolutions (Australasia) Limited

: 1 copy

Lee Kercheval

Lee Kercheva Surveyor

Anthony Kerr Survey Manager



APPENDIX A

FINAL DIFFERENTIAL GPS DRILLSTEM POSITION AT CASINO-1

THALES Thales GeoSolutions Group Ltd

FINAL POSITION FIX – DIFFERENTIAL GPS

Job Description:Ocean Bounty to Casino-1Job Number:3429A3Thales Surveyor:L.KerchevalClient:SantosClient Representative:									
Sampling started: Sampling end:	25 Au 25 Au	ıg 2002 21:11 ıg 2002 22:11	:35 :30						
Ocean Bounty Intended datum Ic Datum: GDA9 Latitude:	ocation 4 38°47'18.600"S	Longitude:	142°42'00.240"E						
Projection: MGA9 Easting:	04 Zone 54 647653.72 m	Northing:	5705320.87 m						
Final Antenna Pos Sample size	sition (T1 Thales l e: 694 fixes us	JKOOA): ed out of a to	tal of 720.						
Antenna off X: Range:	set 0.28m 33.90m	Y: Rel Brg from	33.90m Z: datum to antenna:	0.00m 0.5°					
Datum: Latitude: Datum:	WGS 84 38°47'19.081"S GDA94	Longitude:	142°41'59.093"E	Spheroidal Ht:	32.83m				
Latitude: Projection: Easting:	38°47'19.081"S MGA94 Zone 54 647625.77	Longitude: Northing:	142°41'59.093"E 5705306.55	Spheroidal Ht: Spheroidal Ht:	32.83m 32.83m				
Standard de Long or E: Lat or N: Height: Position:	eviations 0.41m 0.28m 0.62m 0.49m								
Final Datum PosDatum:GDLatitude:38	<u>sition</u>) A94 1°47'18.502"S	Longitude:	142°42'00.287"E						
Projection:MGEasting:6	6A94 Zone 54 647654.91 m	Northing:	5705323.87 m						
Mean corrected he SD heading: Intended heading: Difference from inte Gyro C-O: Convergence:	ading: 237.7 0.1° 240.0 ended: -2.3° 1.1° -1.07	°T T °T							
Final Datum Posit	tion is 3.22m on a	a bearing of	20.6°T (21.7°G) <u>fron</u>	<u>n</u> the intended lo	ocation.				

APPENDIX B

GNS2 STATIC DIFFERENTIAL GPS FIX GRAPHS

THALES Thales GeoSolutions (Australasia) LimitedProject:Casino-1 Positioning Report of the Ocean BountyClient:Santos Australia



Project:Casino-1 Positioning Report of the Ocean BountyClient:Santos Australia





THALES Thales GeoSolutions (Australasia) LimitedProject:Casino-1 Positioning Report of the Ocean BountyClient:Santos Australia

R	taw Static Fix Analysis - T1 Thales UKOOA 🛛 🔀									
		Latitude	Longitude	Ht	Resid	Constel				
		38°47'19.070''S	142°41'59.092''E	33.50	0.35	50 🔺				
		38°47'19.079''S	142°41'59.076''E	32.70	0.41	50				
		38°47'19.077''S	142°41'59.069''E	34.20	0.59	50				
		38°47'19.075''S	142°41'59.092''E	32.70	0.20	50		Friday International Action		
		38°47'19.070''S	142°41'59.072''E	34.00	0.61	50				
		38°47'19.073''S	142°41'59.089''E	33.70	0.27	50				
		38°47'19.065''S	142°41'59.094''E	33.60	0.50	50				
		38°47'19.074''S	142°41'59.086''E	33.50	0.28	50				
		38°47'19.074''S	142°41'59.089''E	33.40	0.24	50	Grid Inte	erval: 0.25m		
		38°47'19.073''S	142°41'59.083''E	33.70	0.35	50	<u> </u>			
		38°47'19.077''S	142°41'59.081''E	33.10	0.32	50	Lount:	694		
		38°47'19.068''S	142*41'59.079''E	34.00	0.53	50	Mean Lat:	38°47'19.081''S		
		38°47'19.070''S	142°41'59.085''E	33.40	0.40	50	Mean Lng:	142°41'59.093''E		
		38°47'19.076''S	142*41'59.082''E	34.50	0.31	50	SD:	0.49		
		38°47'19.075''S	142*41'59.092''E	33.80	0.20	50 💌	•			
	[Eind Max Resid	<u><u>G</u>ate</u>	<u>R</u> e:	store	<u>C</u> onstell	<u>S</u> tart	Close		

APPENDIX C

RUN LINE GRAPHICS OF ANCHOR HANDLING VESSELS

Project: Casino-1 Positioning Report of the Ocean Bounty Client: Santos Australia

Anchor 1 – Pacific Conqueror







 Project:
 Casino-1 Positioning Report of the Ocean Bounty

 Client:
 Santos Australia

Anchor 3 – Pacific Conquerer



Anchor 4 – Pacific Sentinel



 Project:
 Casino-1 Positioning Report of the Ocean Bounty

 Client:
 Santos Australia

Anchor 5 – Pacific Sentinel



Anchor 6 – Ocean Bounty



Project: Casino-1 Positioning Report of the Ocean Bounty Client: Santos Australia

Anchor 7 – Pacific Conquerer



Anchor 8 – Pacific Conqueror



APPENDIX D

OCEAN BOUNTY ANCHOR PATTERN DETAILS AT CASINO-1

THALES

OCEAN BOUNTY ANCHOR POSITIONS

30 Aug 2002 10:34

Main Anchors

Name	Intended E	Intended N	Dropped E	Dropped N
Anchor 1	647662.44	5704070.47	647676.46	5704152.47
Anchor 2	647053.97	5704230.57	647141.56	5704380.81
Anchor 3	646409.67	5705346.53	646400.89	5705342.76
Anchor 4	646575.25	5705953.53	646615.82	5705948.43
Anchor 5	647644.96	5706571.13	647669.46	5706469.04
Anchor 6	648253.43	5706411.03	648285.18	5706469.88
Anchor 7	648897.73	5705295.07	648767.16	5705306.09
Anchor 8	648732.15	5704688.07	648752.37	5704695.11

Project:Casino-1 Positioning Report of the Ocean BountyClient:Santos Australia

Ocean Bounty Anchor Pattern at Casino-1



APPENDIX E

OCEAN BOUNTY ANCHOR CATENARY CALCULATIONS

THALES Thales GeoSolutions (Australasia) LimitedProject:Casino-1 Positioning Report of the Ocean BountyClient:Santos Australia

4027.00 ft

2725.01 ft

1301.99 ft

kips

356.00 kips

356

C Tensionometer Not Available

Total (corrected):

On Seabed: Suspended:

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

Current Value:

📲 ob Catenary Control		_ 🗆 🗵
Anchors	Cable Components	Anchor
Anchor 1 DEPLOYED	Length Wt (Wt/L) Fairlead Filead Seg 1 3739.00 91.00 Anchor 0.00 AHV to Anc 0.00 AHV to Anc 0.00 0.00 AHV to Anc 0.00 AHV to Anc 0.00 0.00 AHV to Anc 0.00 AHV to Anc 0.00 0.00 AHV to Anc 0.00 AHV to Anc 0.00 0.00 AHV to Anc 0.00	Computed Actual E: 647676.46 647677.29 N: 5704152.47 5704073.73 Depth(MSL): 223.02 ft 0.00 ft Horizontal Range From Fairlead 0.00 ft Comp: 3712.18 ft Act: 3970.56 ft Comp: 3712.18 ft Act: 3970.56 ft Comp: 1712.18 ft Act: 3970.56 ft Comp: 172.18 ft Act: 3970.56 ft Comp: 172.18 ft Act: 3970.56 ft Comp: 172.18 ft Act: 3970.56 ft Comp: 178.3 *T Act: 178.3 *T If: Issue Intended (Planning Only) T
Stob Catopany Control		
a ob Latenary Control		
Anchor 2 DEPLOYED Fairlead Cable Out Winch Counter Reading Manual: 3439 ft Counter: Not Available Corr to Fairlead 0,00 ft Total (corrected): 3439,00 ft On Seabed: 2188,06 ft Suspended: 1250,94 ft Tension Magual: 329 kips Fensionometer: Not Available Current Value: 329,00 kips	Length Wt (Wt/L) Fairlead 13439.00 Flead Seg 1 3439.00 91.00 0.00 Anchor 0.00 Add Edit Dejete Last Anchor Handling Vessel Cable Weight/Length Dut: 0 tt Depth(MSL) 223.00 ft Yiew Section Enable Comp Update Catenary	Computed Actual E: 647141.56 647090.72 N: 5704380.81 5704292.66 Depth[MSL]: 223.31 ft 0.00 ft Horizontal Range From Fairlead
Anchors Anchor 3 DEPLOYED Fairlead Cable Out Winch Counter Reading Manual: 4027 ft Counter: Not Available Corr to Fairlead 0.00 ft	Cable Components Length Wt (Wt/L) Fairlead F'lead Seg 1 4027.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00	Anchor Computed Actual E: 646400.89 646427.05 N: 5705342.76 5705342.89 Depth[MSL]: 223.01 ft 0.00 ft Horizontal Range From Fairlead Comp: 4001.38 ft Act: 3915.54 ft Computed Minus Actual: 85.85 ft Brg From Fairlead Comp: 268.6 *T Act: 268.6 *T

<u>A</u>dd...

Anchor Handling Vessel Cable

Weight/Length... <u>0</u>ut: 0

Depth(MSL)... 223.00 ft View Section...

Enable Comp

ft

- Horiz	ontal	Bange From	n Eairlear	4						
Comp:	:	4001.38 ft	Act:	3915.54	4 ft					
Comp	uted I	Minus Actu	al:	85.85	5 ft					
-Bro E	rom E	airlead —								
Comp:	:	268.6 °T	Act	268.6	۴T					
	se Ini	tended (Pla	nning On	ly)						
Transfer Comp> Actual										
- Touch	douur	Pointe								
rouch	UOWI.	r F Oirits								

- Touchdown Point	ts
Point: 1 💌 Do	wn Total: 1
E: 647231.35	5 N: 5705346.91
Horiz Rng From F	'lead: 1276.37 ft
Unit <u>s</u>	Close

 Project:
 Casino-1 Positioning Report of the Ocean Bounty

 Client:
 Santos Australia

🗱 ob Catenary Control		
Anchors	Cable Components	Anchor
Anchor 4 DEPLOYED	Length Wt (Wt/L)	Computed Actual
- Fairlead Cable	Fairlead	N: 5705948.43 5705942.69
Winch Counter Reading	Anchor 0.00	Depth(MSL): 222.82 ft 0.00 ft
• <u>M</u> anual: 3871 ft	AHV to Anc 0.00 0.00	Horizontal Hange From Fairlead Comp: 3844 75 ft Act: 3807 82 ft
C Counter: Not Available		Computed Minus Actual: 36.94 ft
		Brg From Fairlead
Corr to Eairlead 0.00 ft		Comp: 299.6 *T Act: 299.6 *T
Total (corrected): 3871.00 ft	Add Edit Dejete Last	Use Intended (Planning Unly)
On Seabed: 2601.94 ft		Transfer Comp> Actual
Suspended: 1269.06 ft	Anchor Handling Vessel Cable	Tauah daum Dainte
Tension	Weight/Length Out 0 ft	Point: 1 Topan Total: 1
• Ma <u>n</u> uai: 339 kips		E: 647297.94 N: 5705544.07
O Iensionometer: Not Available	Depth(MSL) 223.00 ft View Section	Horiz Rng From F'lead: 1242.81 ft
Current Value: 339.00 kips		
	Enable Comp <u>Update Catenary</u>	Unit <u>s</u> Close





THALES Thales GeoSolutions (Australasia) LimitedProject:Casino-1 Positioning Report of the Ocean BountyClient:Santos Australia

📲 ob Catenary Control		
Anchors	Cable Components	Anchor
Anchor 7 DEPLOYED	Length Wt (Wt/L)	Computed Actual E: 648767.16 648841.63
Fairlead Cable	Filead Sec 1 3565.00 91.00	N: 5705306.09 5705306.59
Winch Counter Reading	Anchor 0.00	Depth(MSL): 223.29 ft 0.00 ft
Manual: 3565 ft	AHV to Anc U.UU U.UU	Comp: 3536.27 ft Act: 3780.63 ft
O Counter: Not Available		Computed Minus Actual: -244.36 ft
Corr to Eairlead	J	Comp: 88.6 °T Act: 88.6 °T
Total (corrected): 3565.00 ft	Add Edit Delete Last	Use Intended (Planning Only)
On Seabed: 2399.41 ft		Transfer Comp> Actual
Suspended: 1165.59 ft	- Anchor Handling Vessel Cable	
Tension	Weight/Length	Touchdown Points
• Ma <u>n</u> ual: 287 kips		
O Iensionometer: Not Available	Depth/MSL1 223.00 ft View Section	E: 648035.93 N: 5705301.19 Horiz Bng From Flead: 1136.86.ft
Current Value: 287.00 kips		
	Enable Comp <u>Update Catenary</u>	Unit <u>s</u> Close
	111 (2000)	
a ob Catenary Control		
Anchors	Cable Components	
Anchors Anchor 8 DEPLOYED	Cable Components Length Wt (Wt/L)	Anchor Computed Actual F: 548752 37 548748.89
Anchors Anchor 8 DEPLOYED Fairlead Cable	Cable Components Length Wt (Wt/L) Fairlead Elead Sec 1 4040.00 91.00	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07
Anchors Anchor 8 DEPLOYED Fairlead Cable Ut Uvinch Counter Reading	Cable Components Length Wt (Wt/L) Filead Seg 1 4040.00 91.00 Anchor 0.00	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft
Anchors Anchor 8 DEPLOYED Fairlead Cable Out Winch Counter Reading Manual: 4040 ft	Cable Components Length Wt (Wt/L) Filead Seg 1 4040.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comm. 4012 47 ft Act 4.004 35 ft
Anchors Anchors Anchor 8 DEPLOYED Fairlead Cable Out Winch Counter Reading Manual: 4040 ft Congregative Net Available	Cable Components Length Wt (Wt/L) Fairlead Flead Seg 1 4040.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft
Anchors Anchors Anchor 8 DEPLOYED Fairlead Cable Out Winch Counter Reading Manual: 4040 ft Counter: Not Available	Cable Components Length Wt (Wt/L) Fairlead Flead Seg 1 4040.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Fairlead
Anchors Anchor 8 DEPLOYED Fairlead Cable Uut Winch Counter Reading Manual: 4040 ft Corr to Eairlead 0.00 ft	Cable Components Length Wt (Wt/L) Fairlead F'lead Seg 1 4040.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Fairlead Comp: 118.4 °T Act: 118.4 °T
Anchors Anchors Anchor 8 DEPLOYED Fairlead Cable Uut Winch Counter Reading Manual: 4040 ft Corn to Eairlead 0.00 ft Total (corrected): 4040.00 ft	Cable Components Length Wt (Wt/L) Fairlead F'lead Seg 1 4040.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00 Add Edit Delete Last	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Fairlead Comp: 118.4 °T Act: 118.4 °T Use Intended (Planning Only)
Anchors Anchor 8 DEPLOYED Fairlead Cable Uut Winch Counter Reading Manual: 4040 ft Counter: Not Available Corr to Eairlead 0.00 ft Total (corrected): 4040.00 ft On Seabed: 2559.65 ft	Cable Components Length Wt (Wt/L) Fairlead Filead Seg 1 Filead Seg 1 4040.00 91.00 Anchor 0.00 AHV to Anc 0.00 Add Edit Dejete Last	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Fairlead Comp: 118.4 °T Act: 118.4 °T Use Intended (Planning Only) Transfer Comp> Actual
Anchors Anchors Anchor 8 DEPLOYED Fairlead Cable Uut Winch Counter Reading Manual: 4040 ft Counter: Not Available Corr to Eairlead 0.00 ft Total (corrected): 4040.00 ft Un Seabed: 2559.65 ft Suspended: 1480.35 ft	Cable Components Length Wt (Wt/L) Fairlead Flead Seg 1 4040.00 91.00 Anchor 0.00 0.00 AHV to Anc 0.00 AHV to Anc 0.00 0.00 Dejete Last Add Edit Dejete Last	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Fairlead Comp: 118.4 *T Act: 118.4 *T Use Intended (Planning Only) Transfer Comp> Actual Tauch dama Baints
Anchor 8 DEPLOYED Fairlead Cable Out Manual: 4040 ft Courter: Not Available Corr to Fairlead Corr to Fairlead Corr to Fairlead Corr to Fairlead Total (corrected): 4040.0 ft Suspended: 1480.35 ft Suspended: 1480.35 ft Tension Manual: 457 Kine	Cable Components Length Wt (Wt/L) Fairlead Filead Seg 1 4040.00 91.00 Anchor 0.00 AHV to Anc 0.00 0.00 A	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Fairlead Comp: 118.4 *T Act: 118.4 *T Use Intended (Planning Only) Transfer Comp -> Actual Touchdown Points Point: 1 ▼ Down Total: 1
Anchor 8 DEPLOYED Fairlead Cable Out Vinch Counter Reading Vinch Counter Reading Out Counter: Not Available Corr to Eairlead 0.00 ft Total (corrected): 4040.00 ft On Seabed: 2559.65 ft Suspended: 1480.35 ft Tension • Magual: 457 kips	Cable Components Length Wt (Wt/L) Fairlead Filead Seg 1 Filead Seg 1 4040.00 91.00 Anchor 0.00 0.00 AHV to Anc 0.00 0.00 Add Edit Dejete Last Anchor Handling Vessel Cable Weight/Length Qut: 0	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Fairlead Comp: 118.4 *T Act: 118.4 *T Use Intended (Planning Only) Transfer Comp> Actual Touchdown Points Point: 1 ▼ Down Total: 1 E: 648072.99 N: 5705078.46
Anchor 8 DEPLOYED Fairlead Cable Out Vinch Counter Reading Manual: 4040 ft Counter: Not Available Corr to Fairlead 0.00 ft Total (corrected): 4040.00 ft On Seabed: 2559.65 ft Suspended: 1480.35 ft Tension Magual: 457 kips Fersionmeter: Not Available	Cable Components Length Wt (Wt/L) Fairlead Filead Seg 1 Filead Seg 1 4040.00 91.00 Anchor 0.00 AHV to Anc 0.00 Add Edit Dejete Last Anchor Handling Vessel Cable Weight/Length Out: 0 Depth(MSL) 223.00 ft View Section	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 kt 0.00 ft Horizontal Range From Fairlead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Fairlead Comp: 118.4 *T Act: 118.4 *T Use Intended (Planning Only) Ifansfer Comp> Actual Touchdown Points Point: 1 ▼ Down Total: 1 E: 648072.99 N: 5705078.46 Horiz Rng From Flead: 1457.83 ft
Anchor 8 DEPLOYED Anchor 8 DEPLOYED Fairlead Cable Out Winch Counter Reading Winch Counter Reading Out Corr to Fairlead 0.00 ft Total (corrected): 4040.00 ft On Seabed: 2559.65 ft Suspended: 1480.35 ft Tension Magual: 457 kips Iensionometer: Not Available Current Value: 457.00 kips	Cable Components Length Wt (Wt/L) Filead Seg 1 4040.00 91.00 Anchor 0.00 0.00 AHV to Anc 0.00 0.00 Add Edit Dejete Last Anchor Handling Vessel Cable Weight/Length Qut: 0 Methylic Longth Qut: 0 ft Depth(MSL) 223.00 ft View Section ✓ Enable Comp Update Catenary	Anchor Computed Actual E: 648752.37 648748.89 N: 5704695.11 5704697.07 Depth(MSL): 223.14 ft 0.00 ft Horizontal Range From Faillead Comp: 4017.47 ft Act: 4004.36 ft Computed Minus Actual: 13.11 ft Brg From Faillead Comp: 118.4 *T Act: 118.4 *T Use Intended (Planning Only) T_fansfer Comp> Actual Touchdown Points Boint: 1 ▼ Down Total: 1 E: 648072.99 N: 5705078.46 Horiz Rng From Flead: 1457.83 ft Units Close

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:

3429A3 Ocean Bounty Rig Move to Casino-1 Santos L.Kercheval L.Kercheval Ocean Bounty 24August 2002

Control Point Co-ordinates

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

Latitude (DMS):	-039	13	33
Longitude (DMS):	144	09	19
UTC Correction (HMS):	10.00		

Total Station Observations:

				Observed			0	bserve	ed	Observed (O)
Face	LC				ction to	R.O.	Direc	ction to	o Sun	True Heading
				(DMS)				(DMS)		(D.D)
Left	07	13	00	000	00	00	163	03	42	270.30
Right	07	13	00	180	00	00	343	03	42	
Left	07	15	00	000	00	00	164	11	18	268.30
Right	07	15	00	180	00	00	344	11	18	
Left	07	16	00	000	00	00	165	49	30	266.30
Right	07	16	00	180	00	00	345	49	30	
Left	07	17	00	000	00	00	166	09	00	266.20
Right	07	17	00	180	00	00	346	09	00	
Left	07	18	00	000	00	00	165	58	24	265.80
Right	07	18	00	180	00	00	345	58	24	
Left	07	20	00	000	00	00	166	21	24	264.70
Right	07	20	00	180	00	00	346	21	24	
Left										
Right										
Left										
Right										
Left										
Right										
Left										
Right										
Left										
Right										
Left										
Right										

Signature

SURVEYOR/PARTY CHIEF

CLIENT SURVEY REPRESENTATIVE



ABN 82 000 601 909

Solar Observation for Azimuth (Hour Angle) 2002

Thales Job Number:	3429A3
Job Description:	Ocean Bounty Rig Move to Casino-1
Client:	Santos
Party Chief:	L.Kercheval
Surveyor:	L.Kercheval
Rig Name:	Ocean Bounty
Date:	24August 2002

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

Ave Tii	rage L me (HN	ocal IS)	Avera An	ge Hori gle (DN	izontal MS)	Azi	imuth \$ (DMS)	Sun	Az	imuth (DMS)	RO	Calculated (C) True Heading (D.D)	Observed (O) True Heading (D.D)	C-O (D.D)
07	13	00.0	163	03	42	073	51	19	270	47	37	270.79	270.30	0.49
07	15	00.0	164	11	18	073	32	08	269	20	50	269.35	268.30	1.05
07	16	00.0	165	49	30	073	22	32	267	33	02	267.55	266.30	1.25
07	17	00.0	166	09	00	073	12	55	267	03	55	267.07	266.20	0.87
07	18	00.0	165	58	24	073	03	17	267	04	53	267.08	265.80	1.28
07	20	00.0	166	21	24	072	43	59	266	22	35	266.38	264.70	1.68

Mean C-O 1.10

Signature

SURVEYOR/PARTY CHIEF

CLIENT SURVEY REPRESENTATIVE

APPENDIX G

DIFFERENTIAL GPS CHECK

THALES Thales GeoSolutions Group Ltd

CHECK POSITION FIX – DIFFERENTIAL GPS

Job Decription: Job Number: Thales Surveyor: Client: Client Representative:		Ocean Bounty to Casino-1 3429A3 L.Kercheval Santos								
Sampling started:20Sampling end:20			20 Au 20 Au	20 Aug 2002 14:26:48 20 Aug 2002 14:36:45						
Ocean Bounty <u>Published datum location</u> Datum: GDA94 Latitude: 38°06'12.987"S Projection: MGA94 Zone 54 Easting: 1202750.10 m			7"S) m	Longitude: Northing:	149°00'33.451"E 5752267.46 m					
Final Antenna Position (T1 Thales UKOOA):Sample size:120 fixes used out of a total of 120.										
A X: R	ntenna off : ange:	f fset 0.28m 33.90m		Y: Rel Brg from	33.90m Z: datum to antenna:	0.00m 0.5°	I			
Di La Di La Pi Ei	atum: atitude: atum: atitude: rojection: asting:	38°06'13.204 GDA94 38°06'13.204 MGA94 Zone 1202717.41	4"S 4"S e 54	Longitude: Longitude: Northing:	149°00'32.136"E 149°00'32.136"E 5752263.56	Spheroidal Ht: Spheroidal Ht: Spheroidal Ht:	42.38m 42.38m 42.38m			
Si Lo La Po	tandard de ong or E: at or N: eight: osition:	eviations 0.00m 0.00m 0.52m 0.00m								
Final D Datum: Latitude	eatum Pos GE : 38	sition D A94 3°06'13.083"S	i	Longitude:	149°00'33.511"E					
Projecti Easting:	ion: MC 12	3A94 Zone 5 4 202751.30 m	4	Northing:	5752264.37 m					
Mean corrected heading:263.2°TSD heading:0.2°TIntended heading:260.2°TDifference from intended:3.0°Gyro C-O:0.0°Convergence:-4.96°Final Datum Position is3.32m on a bearing of 153.8°T (158.8°G) from the published locati							l 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 Job Number : 3429A3 Job Description : Ocean Bounty to Casino-1 : Thales GeoSolutions Group Ltd Company : Santog : GMT +\$:00 Client Time Zone WORKING SPHEROID GDA94 : 6378137.000 m Semi-major e Squared : 0.006694380023 WORKING PROJECTION MGA94 Zone 54 Lat of Origin : 00°00'00.000"N Long of Origin : 141°00'00.000"E False Easting : 500000.00 False Northing : 10000000.00 Scale Factor : 0.999600 : Metres Units GPS TRANSFORMATION From : WGS 84 Semi-major : 6378137.000 m e Squared : 0.006694380067 To : GDA94 : 0.000 m Dx : Dy 0.000 m : 0.000 m Dz 0.0000 secs Rot x : 0.0000 secs Rot y : Rot z : 0.0000 secs Scale : 0.0000 ppm WAYPOT NTS Sole-2 MGAZ55 E: 1202750.09 N: 5752267.47 Ht: 0.00 m Tol1: 5.00 m Tol: Casino-1 E: 647653.72 N: 5705320.87 Ht: 0.00 m Tol1: 5.00 m Tol: E: 1202766.15 N: 5752296.79 Ht: Mack 0.00 m Mackeral E: 1149235.02 N: 5708463.45 Ht: 0.00 m E: 1128032.76 N: 5691892.12 Ht: Kings 0.00 m E: 961769.62 N: 5647576.36 Ht: E: 953559.34 N: 5648057.61 Ht: 0.00 m Cleft Citadel 0.00 m E: 693028.90 N: 5655100.51 Ht: 0.00 m Otway Run In E: 651362.33 N: 5711529.73 Ht: 0.00 m TRACK GUIDANCE None defined

MOBILES Ocean Bounty (semi-sub rig)

Shape Definition: Ocean Bounty Line:-

Verified by: (sign) K: O'Hall (print) K. O'HALLORAN

18:33 25-Aug-2002

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X: 14.20 m Y: 37.00 m X: 14.20 m Y: 16.60 m X: 39.30 m Y: 16.60 m 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: -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 X: 4.00 m Y: 41.00 m X: 2.00 m Y: 45.00 m X: -2.00 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 : S1 SGB 1000S Primary Height : Datum Displacement Pitch and Roll : G1 Ocean Bounty Heave Sensor : Gl GNS 11 : Gl Cocean Bounty : G1 GNS II Master Speed : Position Filter Course Made Good : Posn Filter CMG Equipment:-T3 Tracs TDMA Master Status: ON Interface: COM10 Antenna Offset Selected: Datum X: 0.00 m Y: 0.00 m Z: 0.00 m Rng: 0.00 m Brg: 0.0° T1 Thales UKOOA Status: ON Interface: Sock1 Antenna Offset Selected: GPS Ae X: 0.28 m Y: 33.90 m Z: 0.00 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 T2 Thales UKOOA Status: ON Interface: Sock2 Antenna Offset Selected: GPS Ae Verified by: (sign)____ _____ (print)____ 18:33 25-Aug-2002 Page 2 of 6

33.90 m Brg: 0.5° 33.90 m Z: 0.00 m Rng: 0.28 m Y: Χ: 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: \$.0 x5D Minimum Gate: 0.0 m S1 SGB 1000S Status: ON Interface: COM6 C-O: 1.1 degs Stale Time: 5.0 s SD: 0.1 degs Filter: Off Gate: Off Time Constant: 5.0 s Sample Dwell: 0.5 s Defined Offsets:-Datum 0.00 m Y: 0.00 m Z: 0.00 m Rng: 0.00 m Brg: 0.0° X: GPS Ae 0.28 m Y: 33.90 m Z: 0.00 m Rng: 33.90 m Brg: 0.5° X: Fairlead 1 X: -39.30 m Y: 12.60 m Z: -4.11 m Rng: 41.27 m Brg:287.8° Fairlead 2 X: -39.30 m Y: 16.60 m Z: -4.11 m Rng: 42.66 m Brg:292.9° Fairlead 3 39.30 m Y: 16.60 m Z: -4.11 m Rng: 42.66 m Brg: 67.1° X: Fairlead 4 X: 39.30 m Y: 12.60 m Z: -4.11 m Rng: 41.27 m Brg: 72.2° Fairlead 5 X: 39.30 m Y: -12.60 m Z: 41.27 m Brg:107.8° -4.11 m Rng: Fairlead 6 X: 39.30 m Y: -16.60 m Z: -4.11 m Rng: 42.66 m Brg:112.9° Fairlead 7 -4.11 m Rng: 42.66 m Brg:247.1° X: -39.30 m Y: -16.60 m Z: Fairlead 8 X: -39.30 m Y: -12.60 m Z: -4.11 m Rng: 41.27 m Brg:252.2° 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 6.80 m Y: 49.40 m X: 6.80 m Y: X: 0.00 m X: -6.80 m Y: 0.00 m Line:-35.00 m X: -1.50 m Y: X: -3.50 m Y: 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 Y: 49.00 m X: -2.00 m Y: 51.00 m X: 2.00 m Y: 51.00 m X: 3.50 m Y: 49.00 m 3.50 m Y: 47.00 m X:

Verified by: (sign) K. OHullo (print) KOHALLORAN

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GNS II CONFIGURATION FILE C:\OceanBountyGDA94\OceanBountyGDA94.gns Х: 6.00 m Y: 47.00 m 6.00 m Y: 45.00 m X: X: 3.50 m Y: 45.00 m X: 3.50 m Y: 37.00 m 1.50 m Y: 35.00 m -1.50 m Y: 35.00 m X: 35.00 m X: : Datum Tracking Point Pitch and Roll Centre: Datum Selected Sources:-Primary Position : T4 Tracs TDMA Remote (Using Antenna Offset : Pod) Primary Heading : T4 Tracs TDMA Remote : Datum Displacement : Manual Primary Height Pitch and Roll Soundings : Manual Speed : Position Filter Course Made Good : Posn Filter CMG Equipment:-T4 Tracs TDMA Remote Status: ON Interface: Not defined Antenna Offset Selected: Pod X: 1.95 m Y: 50.00 m Z: 0.00 m Rng: 50.04 m Brg: 2.2° Defined Offsets:-Datum X: 0.00 m Y: 0.00 m Z: 0.00 m Rng: 0.00 m Brg: 0.0° delete 2.00 m Y: 2.00 m Z: 0.00 m Rng: 2.83 m Brg: 45.0° X: Pod 50.04 m Brg: 2.2° 1.95 m Y: 50.00 m Z: 0.00 m Rng: X: Conqueror (ship) Shape Definition: Pac Conquerer Line:-X: -6.80 m Y: X: -6.80 m Y: 0.00 m 49.40 m X: 0.00 m Y: 65.00 m X: 6.80 m Y: 49.40 m X: 6.80 m Y: X: -6.80 m Y: 0.00 m 0.00 m Line:-X: -1.50 m Y: 35.00 m X: -3.50 m Y: 37.00 m X: -3.50 m Y: X: -6.00 m Y: X: -6.00 m Y: 45.00 m 45.00 m 47.00 m X: -3.50 m Y: 47.00 m X: -3.50 m Y: 49.00 m X: -2.00 m Y: X: 2.00 m Y: X: 3.50 m Y: 51.00 m 51.00 m 49.00 m 3.50 m Y: 47.00 m X: Verified by: (sign)___ _____ (print)____ Page 4 of 6 18:33 25-Aug-2002

GNS II CONFIGURATION FILE C:\OceanBountyGDA94\OceanBountyGDA94.gns 6.00 m Y: 47.00 m 6.00 m Y: 45.00 m X: X: 3.50 m Y: 45.00 m X: 3.50 m Y: 37.00 m 1.50 m Y: 35.00 m -1.50 m Y: 35.00 m X: X: X: 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 Pitch and Roll : Manual 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 2.00 m Y: 48.00 m Z: 0.00 m Rng: 48.04 m Brg: 2.4° X: Defined Offsets:-Datum 0.00 m Brg: 0.0° X: 0.00 m Y: 0.00 m Z: 0.00 m Rng: Pod 2.00 m Y: 48.00 m Z: 0.00 m Rng: 48.04 m Brg: 2.4° Х: ANCHORS Ocean Bounty Fairleads:-Z Rng Name Х Y Brq 41.27 m 287.8° -39.30 m 12.60 m -4.11 m Fairlead 1 16.60 m -39.30 m -4.11 m 42.66 m 292.9° Fairlead 2 42.66 m 67.1° Fairlead 3 39.30 m 16.60 m -4.11 m 41.27 m 72.2° Fairlead 4 39.30 m 12.60 m -4.11 m -12.60 m -4.11 m 41.27 m 107.8° Fairlead 5 39.30 m 42.66 m 112.9° Fairlead 6 39.30 m -16.60 m -4.11 m -39.30 m -16.60 m 42.66 m 247.1° -4.11 m Fairlead 7 41.27 m 252.2° Fairlead 8 -39.30 m -12.60 m -4.11 m Main Intended Positions :-Easting Depth Tolerance Name Northing 647662.44 5704070.47 20.00 m 68.00 m Anchor 1 Anchor 2 647053.97 5704230.57 68.00 m 20.00 m 20.00 m Anchor 3 646409.67 5705346.53 68.00 m 68.00 m 20.00 m 646575.25 5705953.53 Anchor 4 647644.96 5706571.13 68.00 m 20.00 m Anchor 5 648253.43 5706411.03 68.00 m 20.00 m Anchor 6 Verified by: (sign) Ki O'Hall (print) KO'HALLORA Page 5 of 6 18:33 25-Aug-2002

Anchor 7	648897.73	5705295.07	68.00 m	20.00 m
Anchor 8	648732.15	5704688.07	68.00 m	20.00 m
Main Actual	Positions:-			
Name	Easting	Northing	Depth	Tolerance
Anchor 1	647677.29	5704073.73	0.00 m	20.00 m
Anchor 2	647090.72	5704292.66	0.00 m	20.00 m
Anchor 3	646427.05	5705342.89	0.00 m	20.00 m
Anchor 4	646625.50	5705942.69	0.00 m	20.00 m
Anchor 5	647669.47	5706469.45	0.00 m	20.00 m
Anchor 6	648270.78	5706444.90	0.00 m	20.00 m
Anchor 7	648841.63	5705306.59	0.00 m	20.00 m
Anchor 8	648748.89	5704697.07	0.00 m	20.00 m

Verified by: (sign) / Ci O'Halla (print) KOHALORAN

18:33 25-Aug-2002

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APPENDIX K

DAILY REPORT SHEETS



Date: 19-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Bass Strait/Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel
L. Kercheval
S. Bradley (SB)
Client Personnel
K.O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600			
1200			
1800			

DIARY OF OPERATIONS

PAGE 1 OF 10

TIME	Time Zone=UTC+10.00 Monday, 19 August 2002		
950	Thales personal arrive Perth Domestic Airport (UTC +8)		
1130	Thales personnel depart Perth for Melbourne (UTC +8)		
1630	Thales personnel arrive Melbourne		
1730	Thales personnel checkin Holiday Inn Spencer St		
	Standby		

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-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Bass Strait/Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel L. Kercheval S. Bradley Client Personnel K.O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 2 OF 10

TIME	Time Zone=UTC+10.00 Tuesday, 20 August 2002
0610	Thales personnel check out Holiday Inn Spencer St
0630	Arrive Bristow Helicopters, Essendon Airport
0730	Depart Essendon Airport for Ocean Bounty
0900	Arrive Ocean Bounty
0915	L.Kercheval begins Rig Induction. S.Bradley begins Equipment Mobilisation
1115	L.Kercheval finished Rig Induction and Assists with Equipment Mobilisation
1345	Meeting held for Rig Move Procedures
0700	GDA94 configuration file running and check fixes at Sole-2 for MGA Zones 54,55 complete. AGD66 co-
	ordinates checked and no significant errors detected.
1845	Survey Equipment tested and running for anchor recovery (standing by)

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-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Bass Strait/Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel L. Kercheval S. Bradley Client Personnel K.O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 3 OF 10

TIME	Time Zone=UTC+10.00 Wednesday, 21 August 2002
0001	Standby for anchor recovery
0830	Commence anchor recovery. deballasting completed
0829	#1 PCC passed to Conqueror
0838	#5 PCC passed to Sentinel
1007	#1 PCC returned to rig
1020	#8 PCC passed to Conqueror
1039	#5 PCC returned to rig
1055	#4 PCC to Sentinel
1101	#4 Chase out
1217	#8 PCC Returned to Rig
1246	#4 PCC returned to rig, Sentinel preparing deck for towing
1257	#6 PCC passed to Conqueror
1402	Sentinel connected to Tow Bridle
1510	Adjust rig position to keep Fairlead 6 clear of the wellhead
1558	#6 PCC returned to rig
1617	#3 PCC passed to Conqueror
1826	#3 PCC returned to rig
1835	Tracs frozen on Sentinel
1901	Sentinel updating
1905	#2 PCC passed to Conqueror
1915	#2 Chase out
2000	#7 recover by rig during winch in #2
2108	#2 PCC returned to rig

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 DepartmentBLUE:Operations DepartmentYELLOW: Clients Representative

Signature



Date: 21-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Bass Strait/Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel
L. Kercheval
S. Bradley
Client Personnel
K. O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 4 OF 10

TIME	Time Zone=UTC+10.00	Wednesday, 21 August 2002(Continued)
2152	Conqueror connected to port Tov	v Bridle
2158	#7 Recovery continues by rig	
2210	#7 Off the bottom	
2230	#7 Racked	
2230	Tow commences to Casino-1 loc	ation

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-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Bass Strait/Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel
L. Kercheval
S. Bradley
Client Personnel
K.O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 5 OF 10

TIME	Time Zone=UTC+10.00 Thursday, 22 August 2002
0001	Continue on tow to Casino-1 location
1130	Tracs operational on vessels, computer hang ups cleared, Running on GDA94 Configuration File.
1530	ETA to Casino-1 26 August 0700
2400	Tow continues 215 miles to go, speed down to 2.6kts due weather

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-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Bass Strait/Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel
L. Kercheval
S. Bradley
Client Personnel
K. O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 6 OF 10

TIME	Time Zone=UTC+10.00	Friday, 23 August 2002
0001	Continue on tow to Casino-1 loca	ation
1015	Approx 3.5 km West of waypoint	Citadel, current ETA Casino-1: 0700 25/08/02
2200	Approx 163 km East of waypoint	Otway, current ETA Casino-1: 1800 24/08/02

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Signature

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 :Operations Department

 YELLOW
 : Clients Representative

Signature



Date: 24-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Bass Strait/Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel L. Kercheval S. Bradley Client Personnel K. O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 7 OF 10

TIME	Time Zone=UTC+10.00 Saturday, 24 August 2002
0001	Continue on tow to Casino-1 location
1030	Crew attends Fire/Abandon rig drill
1130	Crew attends Pre-Tow safety meeting followed by Clients Pre-Spud meeting
1600	Continue on tow to Casino-1. Speed 5 knots 45 nautical miles to location
1715	Complete Anchor assign test to vessels, Sentinel fluxgate input ok

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

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 BLUE
 :Operations Department

 YELLOW
 : Clients Representative

Signature



Date: 25-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Bass Strait/Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel L. Kercheval S. Bradley Client Personnel K. O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 8 OF 10

TIME	Time Zone=UTC+10.00 Saturday, 25 August 2002
0001	Continue on tow to Casino-1 location
0041	Begin final run in
0046	5km to intended Anchor 6
0130	Anchor 6 lowered 100m from intended E:648271 N:5706445
0145	Finish chain payout on Anchor 6, rig at location
0233	Conqueror disconnected from tow bridle
0312	#2 PCC passed to Conqueror
0352	#2 Run out
0400	#2 Lowered to bottom E: 647091 N: 5704293
0428	#2 PCC passed back to Bounty
0445	#3 PCC passed to Conqueror
0510	#3 Run out
0517	#3 Lowered to bottom E:646427 N:5705343
0544	#3 PCC passed back to Bounty
0600	#7 PCC passed to Conqueror
0620	#7 Run out
0626	#7 Lowered to bottom E:648842 N:5705307
0658	#7 PCC passed to Bounty
0708	#8 PCC passed to Conqueror
0724	Sentinel disconnected from tow bridle
0732	#8 Run out
0739	#8 Lowered to bottom E:648749 N:5704697
0800	#4 PCC passed to Sentinel

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: 25-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel
L. Kercheval
S. Bradley
Client Personnel
K. O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 9 OF 10

TIME	Time Zone=UTC+10.00 Saturday, 25 August 2002(Continued)
0811	#8 passed back to Bounty
0812	#4 Run out
0821	#4 Lowered to bottom E:646626 N:5705943
0828	#1 PCC passed to Conqueror
0842	#4 PCC returned to Bounty
0847	#1 Run out halted, anchor turned, winch back to rig
0854	#5 PCC passed to Sentinel
0920	#5 Run out
0928	#5 Lowered to bottom E:647670 N:5706470
0932	#1 Run out
0938	#1 Lowered to bottom E:647677 N:704074
0952	#5 PCC returned to Bounty
1003	#1 PCC returned to Bounty
1010	Begin pre-tensioning
1115	Stop pre-tensioning and continue ballast rig
1500	Ballast operations complete, anchor tensioning continues
1601	Rig at 70' draft
1621	Manoeuvring onto location
1724	Pre-tensioning complete, rig in location
1800	Begin spud-in
2111	Commence Final Position fix
2211	Complete Final Fix.
2300	Demob equipment for storage onboard rig.

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: 26-Aug-2002 Client: Santos Job No.: 3429A3 Vessel: Ocean Bounty Location: Otway Basin

Equipment	Ор	
Ocean Bounty		
SkyFix	1	
SkyFix Spot	2	
Gyro	1	
GNS 2	1	1
MultiFix 3	1	1
Remote Disp	1	1
Tracs	1	1

Equipment	Ор	
AHV's		
Tug Display	2	
Tracs	2	
Fluxgate gyro	2	

Racal Personnel L. Kercheval S. Bradley Client Personnel K.O'Halloran

WX	Sea State	Swell	Wind Dir.
0000			
0600		1	
1200		1	
1800		1	

DIARY OF OPERATIONS

PAGE 10 OF 10

TIME	Time Zone=UTC+10.00 Monday, 26 August 2002							
0100	Complete De-mobilisation and storage of equipment							
0845	Thales personnel Depart Ocean Bounty for Essendon airport on Bristow helicopter							
1000	Arrive Essendon airport, transit to Melbourne domestic airport							
1030	Arrive Melbourne domestic airport, checkin							
1150	Depart Melbourne domestic airport for Perth							
1400	Arrive Perth domestic airport. (UTC +8.00)							

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

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Signature

SECTION 14:- WELL ABANDONMENT AND PLUG REPORT



SECTION 15:- DEVIATION SUMMARY

Surveys and schematics are presented overleaf.

SURVEY CALCULATION METHOD USED : MINIMUM CURVATURE

WELLNAME: Casino-1

ALL BEARINGS CORRECTED TO TRUE NORTH. DEPTHS IN FEET (MDRT)

REFERENCED TO WELLHEAD COORDINATES

No.	MD	INC	AZ	+E/-W	+N/-S	Closure	Direction	TVD	Build/30m	Walk /30m	Dog Leg	V.Sect.
1	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00				0.0
2	766.75	0.60	342.17	-1.23	3.82	4.0	342.17	766.74	0.078	0.000	0.078	-3.8
3	855.00	0.26	216.64	-1.49	4.10	4.4	340.03	854.98	-0.385	-142.244	1.135	-4.1
4	912.40	0.54	155.43	-1.46	3.75	4.0	338.79	912.38	0.488	-106.638	0.890	-3.8
5	969.94	0.83	135.97	-1.05	3.20	3.4	341.81	969.92	0.504	-33.820	0.646	-3.2
6	1041.08	1.20	191.94	-0.85	2.11	2.3	338.03	1041.05	0.520	78.676	1.488	-2.1
7	1084.57	1.29	209.06	-1.18	1.23	1.7	316.20	1084.53	0.207	39.365	0.880	-1.2
8	1170.44	0.93	192.51	-1.80	-0.29	1.8	260.74	1170.38	-0.419	-19.273	0.561	0.3
9	1256.72	1.44	181.17	-1.98	-2.06	2.9	223.78	1256.64	0.591	-13.143	0.651	2.1
10	1382.12	1.87	182.17	-2.08	-5.68	6.1	200.15	1381.99	0.343	0.797	0.344	5.7
11	1458.48	2.13	183.87	-2.23	-8.34	8.6	194.95	1458.31	0.340	2.226	0.349	8.3
12	1546.07	2.74	185.63	-2.54	-12.05	12.3	191.92	1545.82	0.696	2.009	0.702	12.0
13	1605.53	3.09	184.83	-2.82	-15.06	15.3	190.60	1605.20	0.589	-1.345	0.593	15.1
14	1690.72	3.44	188.91	-3.41	-19.87	20.2	189.73	1690.25	0.411	4.789	0.493	19.9
15	1775.86	4.38	192.34	-4.50	-25.57	26.0	189.97	1775.19	1.104	4.029	1.138	25.6
16	1850.00	6.67	192.34	-6.02	-32.55	33.1	190.48	1848.98	3.089	0.000	3.089	32.5
17	1900.00	8.00	192.34	-7.39	-38.78	39.5	190.78	1898.57	2.660	0.000	2.660	38.8
18	1950.00	9.34	192.34	-9.00	-46.14	47.0	191.03	1948.00	2.680	0.000	2.680	46.1
19	2000.00	10.57	192.34	-10.84	-54.59	55.7	191.24	1997.25	2.460	0.000	2.460	54.6
20	2050.00	11.74	192.34	-12.91	-64.04	65.3	191.40	2046.30	2.340	0.000	2.340	64.0
21	2090.00	13.17	192.34	-14.76	-72.47	74.0	191.51	2085.36	3.575	0.000	3.575	72.5
Note: \$	Note: Surveys #16 to #21 are from the PEX tool. Azimuth is assumed.					sumed.						