



A.C.N. 004 247 214

TRIFON No. 1

WELL COMPLETION REPORT

PEP 137 - VICTORIA

by

D.A. SHORT & J.N. MULREADY



LAKES OIL N.L.

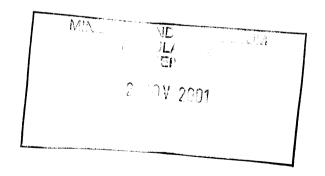
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A.C.N. 004 247 214
Level 11,
500 Collins Street
MELBOURNE 3000

February, 2001

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LIST OF ENCLOSURES (Pocket)

SCALE

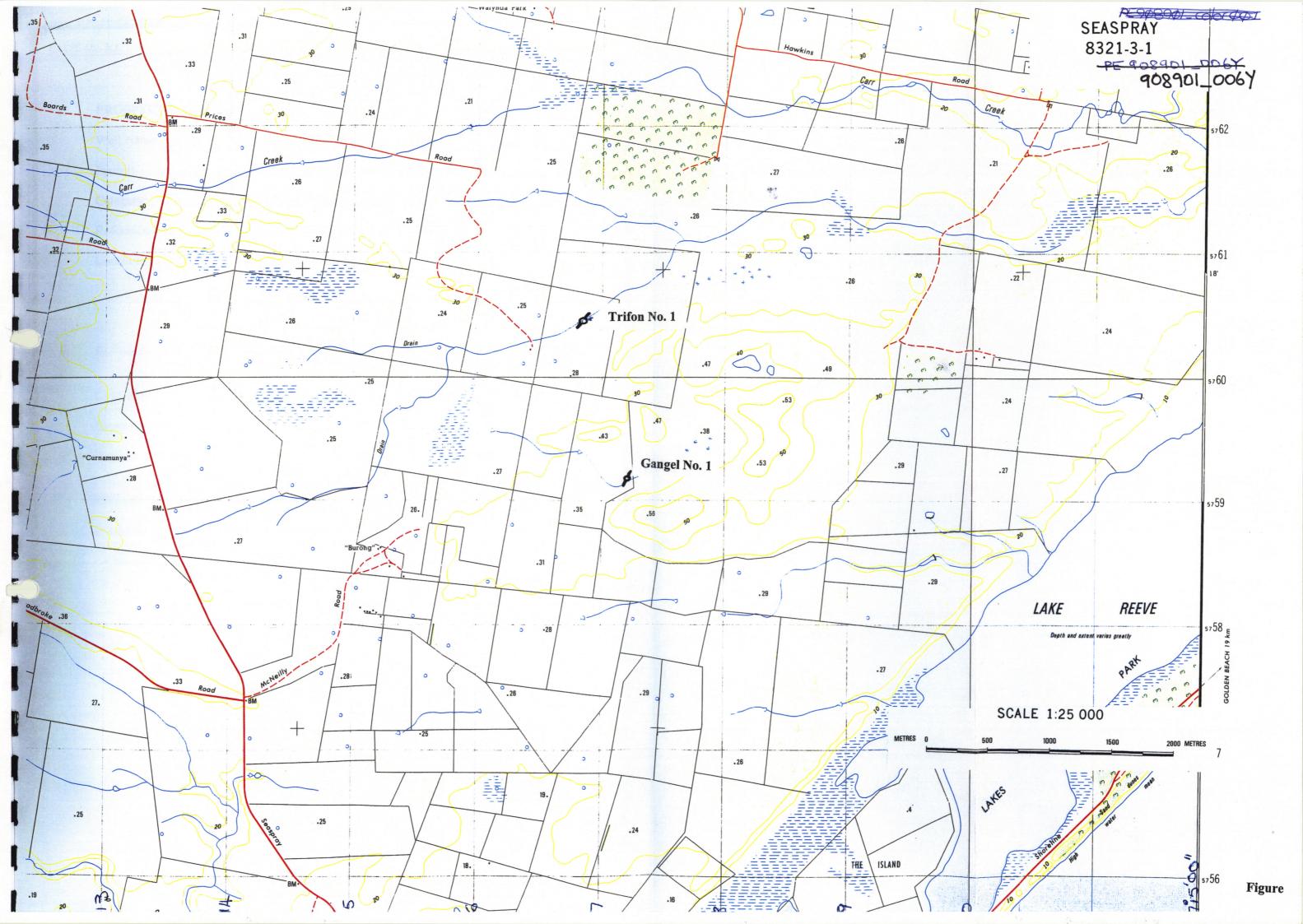
Enclosure 1	Composite Well Log
Enclosure 2	Geoservices Mudlog

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and is enclosed within the document PE908901 at this page.



1.0 SUMMARY

Trifon-1 was located in PEP 157 of the Gippsland Basin, approximately 25 kilometres south south-east of Sale. The closest wells were North Seaspray-1, 2 & 3 approximately 1.5 kilometres to the northeast and Burong-1 approximately 0.9 kilometres to the south southeast.

The well was drilled to evaluate the hydrocarbon potential of a detached alluvial fan identified on seismic within the Strzelecki Formation. The Secondary targets were thin meander belt sands in the upper Strzelecki Formation which were gas productive in North Seaspray-1&3.

Trifon-1 spudded on December 5th, 2000 and surface hole (445 mm./17.5") was drilled to 261m. Surface casing (340 mm./13-375") was set at 260.6m. and 311 mm. (12.25") hole was drilled to 1233m Lost circulation was encountered while drilling the coals in the top Latrobe Group. The coal gave a maximum of 358 units of gas.

After logging, intermediate casing (244mm./ 9.625") was set in the top Strzelecki at 1232.0m. and the well was then drilled (216mm. hole) to a total depth of 2570m. which was reached on 27th December 2000. Schlumberger logs were run at 2152m. and at total depth, 2570m. Four drill stem tests were run in the Strzelecki Formation and the maximum gas flow recorded was 23mcfd from DST#1. DSTs#3&4 were run after reaching total depth and flowed water with gas at a rate too small to measure.

The well was then plugged with plugs (1) across the 244mm. casing shoe and (2) at surface. The rig was released on 30th December 2000.

2.0 WELL HISTORY

2.1 **General Data**

Well Name and Number : TRIFON No.1 2.1.1

38°18'15.54"S Latitude: 2.1.2 Location

Longitude: 147°11'29.80"E

> Easting: 516 753.18

5 760 387.27 Northing: Seismic: VP 1757

GH 85-05

Line:

25.0m. A.S.L. 2.1.3 Elevations G.L. : 29.9m. A.S.L. K.B. :

PEP 157 Petroleum Tenement 2.1.4

LAKES OIL N.L. 2.1.5 Name of Operator

A.C.N. 004 247 214

11th Level,

500 Collins Street, MELBOURNE 3000

Other Participants None 2.1.6

1330 hours 05th December, 2000 2.1.7 Date Drilling Commenced:

0530 hours 27th December, 2000 2.1.8 Date Drilling Completed:

1900 hours 30th December, 2000 Date Rig Released 2.1.9

2.1.10 Drilling Time to T.D. 25.2 days

Driller: 2570.0m. Total Depth 2.1.11 :

> 2570.0m. (Extrapolated) Logger:

Plugged and abandoned. 2.1.12 Status

2.2 Rig Data

2.2.1	Drilling Contractor	:	O.D.&E. Pty. Limited 8 th Level, 9 Bligh Street, SYDNEY NSW 2000
2.2.2	Rig	:	Number 30 Make - Ideco Rated - 3,350m. / 11,000ft.
2.2.3	Draw Works	:	Type - Ideco Hydrair 725D Drive System - 4 Caterpillar 3412-PCTA Transmission - SCR Drill Line - 28mm/1-1/8" (Diesel- electric SCR Brown Boveri 600 volt - 3 phase 60 Htz)
2.2.4	Mast	:	Type - Draco -cantilever Height - 38.7 metres/127 ft Capacity - 227,678 kg/510,000 lbs
2.2.5	Substructure	:	Floor Height - 4.6 metres / 15.1 feet KB Height - 4.9 metres / 16.1 feet
2.2.6	Rotary Table	:	Type - Oilwell A 20.5"
2.2.7	Hook Block	:	Type - Crosby McKissock Capacity - 250 tonnes / 250 tons (2240lb)
2.2.8	Swivel	:	Type - Oilwell PC-300
2.2.9	Mud Pumps (2)	:	Type - Gardner-Denver PZ-8 Power - EMD Output - 800 hp
2.2.10	Mud System	:	Tanks - 800-bbl system
2.2.11	Shale Shaker	:	Type - DFE - SCR01 Linear Motion
2.2.12	Desander	:	Type - None
2.2.13	Desilter	:	Type - Harrisburg 12 cone.

2.2.14 Ram Type BOP Type -**Shaffer LWS** Bore Size -346mm / 13.625" 34,475 kpa/5000 psi Rating -Type -Hydril 2.2.15 Annular Type BOP Bore Size -346mm / 13.625" 21,000 kpa/3000 psi Rating -Wagner 130-160 3 BND 2.2.16 Accumulator Type -: 2.2.17 Choke Manifold Size -1 x 5000psi with McEvoy and 1x3" positive & 1 Swaco 3"superchoke 4.5" (2750 metres) Size -2.2.18 Drill Pipe : 16.6 lb/ft Weight -Grade -G 4.0" IF Connection -4.5" (250 metres) Size -16.6 lb/ft Weight -Grade -E 4.0" IF Connection -2.2.19 HW Drill Pipe 4.5" (15 joints) Size -Weight -45.0 lb/ft Connection -4.0" IF Number/Size - 24 x 6 1/4" 2.2.20 Drill Collars :

Connection -

4.0" IF

2.3 Drilling Data

2.3.1 The following is the daily operations summary for Trifon-1. It has been compiled from the tour sheets and daily drilling reports. Onsite drilling supervision for Lakes Oil N.L. was provided by B. Speechly. Further details are given in the time/depth curve (Fig. 2) and the time analysis chart (Fig. 3).

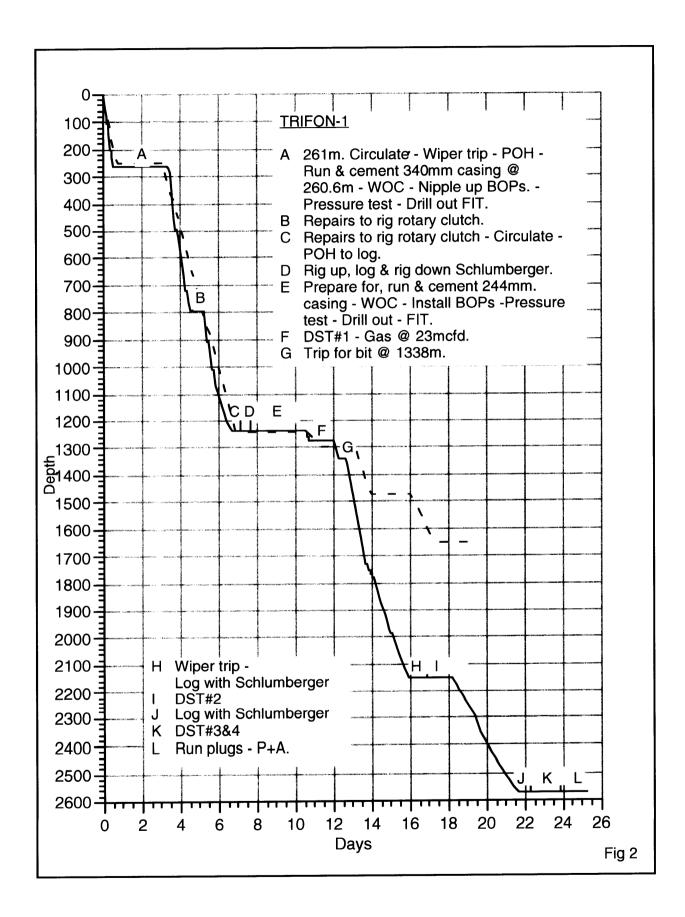
The depths in the following summary are those reached at 2400 hours on each day with the operations given for the previous 24 hour period.

Date Depth Operation

05.12.00 229.0m. Spud - Drill ahead to 50m. - Circulate & survey 3/4 deg. at 38m. - Drill ahead to 79m. - Circulate & survey, misrun at 66.5m. - Drill ahead to 106m. - Circulate & survey 1/4 deg. at 94m. - Drill ahead to 135m. - Circulate & survey 0 deg. at 124m. - Drill ahead to 201m. - Circulate & survey 1/4 deg. at 189m. - Drill ahead to 229m.

Drill ahead from 229m to 261m. - Circulate & 06.12.00 261.0m. condition the well (carbide lag indicated minimum 8% overgauge) - Survey 0.75 deg. at 258m. - Wiper trip to the 8" collars - No fill on bottom - Circulate & condition the well -Circulate Enerseal LCM to the well - POH to run casing - Rig to run casing - Hold pre-run safety meeting - Pick up & run 23 joints of J-55, 54.5lb/ft - BTC 13-3/8" casing - Head up -Circulate & reciprocate casing - Hold pre cementing safety meeting - Mix & pump 26 cubic metres of class A cement - Treat the first 13 cubic metres of cement with Mica (M) -Bump plug at 2204 hours - with 14700 kPa -**WOC**

07.12.00 262.0m. WOC - Slack off - Head down - Cut 20" conductor & landing joint collar - - Lay out - Centralize 13-3/8" with chocks - Install Bradenhead & torque up - Nipple up BOP - Top up annulus with 1 cubic metres of neat class A cement.

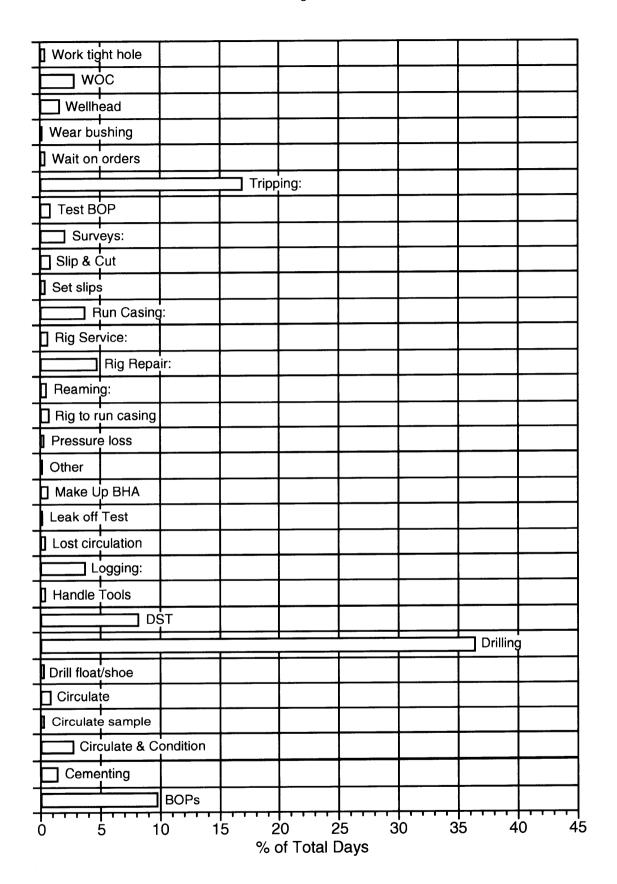


08.12.00 Continue to nipple up BOPs installing the HCR 289.0m. / kill lines & choke manifold - Install the ram blocks - Weld in centralizing chocks to the conductor - Make up flow nipple & flow line dresser sleeve - Pressure test choke manifold, kill & choke line valves to 200psi for 5 minutes & 2000psi for 10 minutes - Prepare new BHA -Make up BHA#2 pendulum assembly & RIH -Tag cement top at 295.5m. - Pressure test pipe rams - Hydril, inside BOP & stand pipe to 200psi & 2000psi - Attempt to rebuild Stab - in valve - Source new valve - Drill out float & shoe track - Drill to 268m. - Circulate & leak off test -18.7ppg - Equivalent - Drill ahead from 268m to 289m.

09.12.00 765.0m. - Drill to 365m. - Circulate & survey @ 353m. - misrun - Drill to 374m. - Circulate & survey @ 362m. - 0 deg - Drill to 496m. - Rig repairs to mud pump #2 valve - Drill to 527m. - Circulate & survey - Drill to 659m. - Rig repairs to mud pump #1 - Drill to 717m. - Circulate sample - Drill to 765m. - Circulate & survey @ 751m. - Misrun

10.12.00 907.0m. Drill ahead from 765m to 774m. - Circulate & survey @ 762m. - 3/4 deg - Drill to 793m. - Rotary clutch failure - POH to shoe - Hole tight 440m to 420m. - Rig service - POOH & lay out bit - Change out high gear clutch - Make up Bit #3 & RIH to shoe - Continue to RIH to 783m. - Work & jar free stuck pipe at 783m. - Ream 762m. - 793m. - Drill ahead to 907m.

11.12.00 1206.0m. - Circulate & survey @ 895m. - 1 deg - Drill to 1009m. - Rig service - Drill to 1065m. - Circulate & survey @ 1053m. - 1 deg - Drill to 1206m.



TRIFON-1 - Time Breakdown Chart

12.12.00 1233.0m. - Drill 12 1/4" hole to 1233m. - Pump barite slug & POH to 750m. - RIH to 1211m. - Wash to 1233m. - Circulate & condition well - Survey @ 1220m. - 0.5 deg - POH - Lay out 12-1/4" stabilizer - Rig up Sclumberger - Run Platform Express - Pick up bit #2RR & RIH for clean out trip.

13.12.00 1233.0m. - RIH to shoe - Slip 33' drill line - RIH to 1211m.

- Lay out top single - Pick up kelly & break circulation - Ream 1211m to 1233m. - Circulate & condition well - Pump slug - Strap out of hole

- Lay out 3 x 8" drill collars - Rig to run casing - Hold safety meeting & review relevant JSA's - Run 9-5/8" casing.

1233.0m. - Run 106 joints of 9-5/8" casing - Head up 14.12.00 casing circulating swedge - Circulate - Lost returns - Lose 160 bbls - mud to the well - Build mud volume.& work drill string - Regain circulation - Circulate & work casing waiting on cement - Head up cement head - Safety meeting - Pressure test Halliburton lines to 3000psi -Circulate & work casing waiting on cement -Load plugs - Pick up & pump 32 cubic metres of class A cement into the casing - Displace with the rig pumps losing & regaining circulation frequently (total losses downhole approx 90 bbl) - Bump plug at 1541 hours with 2200psi - Hold 10 minutes - Rig down cementing equipment -Set slip & seal assembly & set in tension with 120,000lbs - Nipple down & lift BOP - Rough cut the 9-5/8" casing.

15.12.00 772.0m. Cut & dress 9-5/8" casing landing joint Remove spacer spool & DSA - Dress & bevel 95/8" casing stub - Pick up & make up 9-5/8"
WG-22 BP 13 5/8" 3000lbs x 11" 3000lbs
flanged casing spool - The WG PE secondary
seal hung up on the bevel - Remove spool,
remove WG PE seal & inspect for damage - Re
bevel casing stub at a steeper angle - Pick up &
nipple up the 9-5/8" WG-22 casing spool -

Pressure test primary & secondary casing seals to 2200psi for 10 minutes - Nipple up BOP & fit flow line - Pressure test BOP & choke manifold to 300psi for 5 minutes & 3000psi for 10 minutes - Pick up & make up the wear bushing running tool - Install the wear bushing - Make up Bit #4 pendulum assembly & run in hole picking up & servicing the recut collars & heviwate drill pipe - RIH with with bit #4 assembly - Tag cement top at 1212m.

16.12.00 1274.0m.

Pressure test pipe rams, hydril, inner & outer kill valves to 300psi for 5 minutes & 3000psi for 10 minutes - Drill out float & shoe - Drill to 1238m. - Circulate & leak off test - Drill ahead to 1258m. - Circulate sample - Drill ahead to 1274m. - Circulate sample - Strap out of hole for DST #1, conventional off bottom 1200m to 1274m. - Pick up & make up DST #1 string - RIH with DST #1 string - Stabilized flow 23mcfd gas.

1338.0m. - Run DST #1 1206m. - 1274m. - Shut in for final 17.12.00 buildup pressure - Unseat packer & pull free -Drop bar & reverse circulate out 18.5 bbl - gas cut mud - Pump slug - Head down - Pull out of hole with DST #1 assembly flow checking every 10 stands - Break & lay out DST string - Make up bit #4 RR pendulum assembly & run in the hole to 1119m. - Slip 33' drill line - Continue to RIH to 1252m. - Break circulation - Wash to 1274m. - Circulate out gas cut mud - Drill to 1311m. - Rig repair - Work on mud pumps -Drill to 1320m. - Work tight hole at 1311m. -Drill to 1338m. - Penetration rate dropped to zero - Mix & pump slug - POOH to check bit -Rig repair - Draw-works - Continue to POOH.

18.12.00 1625.0m. POOH to inspect the bit - Lay out bit #4RR (locked cone) - Make up bit #5 & RIH - Break circulation & wash 1318m to 1338m. - Drill ahead to 1510m. - Circulate & survey 1498m. - 3/4 deg - Drill to 1625m.

19.12.00 1871.0m. Drill to 1729m. - Rig service - Drill to 1757m. - Circulate & survey 1745m. - misrun - Lay out 9 singles & run 3 work stands (out of drill pipe) - Circulate & survey 1745m. - misrun - Drill to 1767m. - Circulate & survey 1754m. - 2 deg - Drill 1776m. - Work tight hole at 1769m. - Drill to 1871m.

20.12.00 2060.0m. Drill to 1966m. - (tight connections 1881m., 1890m., 1909m., 1947m.) - Work tight hole 1960m. - Drill to 1985m. - Rig repair - Replace broken geolograph line - Drill ahead to 2060m.

21.12.00 2152.0m. Drill to 2109m. - Rig service - Drill to 2152m. Circulate - Survey 2144m. - 4 1/4 deg - Wiper
trip to the shoe - Rig repair - SCR shutdown Continue to POOH to shoe - Slip & cut drill line
- Rig repair - Brake cooling hose - RIH - Wash
20m to bottom - 1m. - fill - Circulate &
condition well - Pump slug - Strap out of hole
flow checking every 10 stands.

22.12.00 2152.0m. Continue to strap out of the hole - 1.8m difference strap to tally - Rig up Schlumberger - Run #1 Platform Express (HALS, BHC & Sonic) - Run #2, Side Wall Cores (CST) - Make up DST #2 string, inflate straddle 1388m to 1415m. - RIH with DST #2 string - Head up - Inflate packers at 1388m. - 1415m. - No seat - Move up 1 metre - Re-inflate packers - DST #2 - 1387m. - 1414m. - Tool open 2043 hours - Flow rate RTSTM - Close tool in for buildup at 2214 hours.

23.12.00 2183.0m. DST #2 - Continue with buildup - Unseat packers - Deflate rubbers - Pull free - Drop bar - Reverse circulate - Pump slug - Head down - POOH - Break & lay out test tools - Clean, caliper & strap new BHA - RIH drifting the pipe (DST reverse circulating knock off lugs missing) - Slip 33' drill line - Continue to RIH drifting the drill string - Break circulation & wash 19m to

bottom - Drill ahead 2152m to 2183m. - Circulate & survey.

24.12.00 2300.0m. Continue to survey 2170m. - 3.5 deg - Drill to 2192m. - Work tight hole at 2192m. - Lose 60 bbl - Work pumps & regain full returns - Drill ahead to 2208m. - Total lost circulation (300 bbl.) - Mix & pump LCM - Drill ahead to 2300m.

25.12.00 2354.0m. Drill ahead to 2354m. - Rig service - Drill ahead to 2450m. - (35 bbl lost downhole at 2427m.).

26.12.00 2550.0m. Drill ahead to 2478m. - Rig service - Drill to 2523m. - Repair cap seal - Drill to 2539m. - Repair SCR faults - Drill to 2550m.

27.12.00 2570.0m. Drill ahead to 2563m. - Rig repair - blown weight indicator hose - Drill ahead to 2570m. - Pressure loss - Check surface equipment - POOH wet to check for a string washout - Break & lay out damaged jar (outer body parted) - Rig up Schlumberger - RIH with DLL, LLL, GR, SP, Cal - Work ledge at 2390m. - POOH - Reconfigure the standoffs.through the ledge - Run to bottom - Log up - Rig down Schlumberger - Process Logs & determine DST point - Pick up DST #3 tools (2188m. - 2218m. - logger)

28.12.00 2570.0m. - Make up DST #3 tools (2188m. - 2218 m) - (rig tongs not biting efficiently) - RIH with BHA picking up new jar - Rig repair - Replace "O" rings in tong sensator - Continue to RIH - Rig repair - Replace blown tong sensator hose - Continue to RIH with DST #3 string - DST #3 - Head up & inflate - Lost packer seat - Move up 1m. - Re-inflate - Seat - Open tool 1014 hours - Flow zone - FTS @ 1100 (1/8" choke 30psi) - Close in for build up 1523 hours - Pull free 1647 hours - Deflate packers - POOH 2 singles for DST #4 2180m. - 2200m. - Move pup joint down 1 stand - DST #4 - Head up & inflate -

Open tool 1810 - Close in for buildup 2021 hours - Pull free 2137 hours - Deflate packers - Drop bar - Reverse circulate out drill string - Pump slug - Head down - POOH with DST string.

29.12.00 2570.0m.

POOH with DST #4 string - Slip 33' drill line -POOH with drill pipe - Lay out HWDP, Jars & Drill collars - Break & lay out DST tools -Recover pressure charts & sealed sample from the sample chamber - Break & lay out remaining Drill collars - Pick up & make up the slotted cementing mule shoe - RIH to 1332m. - Pick up cementing swedge - Rig up lines - Circlate hole clean leaving biocide (40 litres) treated mud -Hold cementing safety meeting - Pressure test lines - Mix & spot 9 tonne class A cement at 1332m. - 1182m displacing with biocide - WOC - POOH to 926m. - WOC - Circulate drill pipe clean - WOC - POOH laying out excess drill pipe - WOC - RIH to 935m. - WOC - Wait on samples to set up.

30.12.00 2570.0m.

RIH slowly - Tag cement top @ 1209m with 10,000lb - POOH laying out drill pipe - Flush ckoke manifold, BOP & pumps - Nipple down splitting the BOP - Cut windows in the 13-3/8" casing - Cut the 9-5/8" casing - Pick up the potato masher & back out the Bradenhead - Lay out the wellhead - Break & lay out the Kelly - Dress off the 13-3/8" stump - Mix & place the surface cement plug in 9-5/8" casing - Weld a cap on the 9-5/8" casing stump - Rig released 19:00 hours on 30th. December 2000.

2.3.2 Hole Sizes and Depths:

17.50" / 445 mm. to 261.0m. 12.25" / 311 mm. to 1233.0m. 8.50" / 216 mm. to 2570.0m. - TD

2.3.3 Casing and Cementing:

Surface

Size - 13.375" / 340 mm. Weight - 54.5lb/ft - 79.8kg/m.

Grade - K-55 Shoe Setting Depth - 260.6m.

Quantity of Cement - 26 cubic metres "A"

Intermediate

Size - 9.625" / 244 mm. Weight - 36.0lb/ft - 52.7kg/m.

Grade - K55 Shoe Setting Depth - 1232.0m.

Quantity of Cement - 32 cubic metres "A"

2.3.4 Deviation Surveys:

Depth (metres)	Deviation (degrees)	Depth (metres)	Deviation (degrees)	Depth (metres)	Deviation (degrees)
38	0.75	362	0.00	1220	0.50
94	0.25	504	0.88	1498	0.75
124	0.00	762	0.75	1754	2.00
189	0.25	895	1.00	2144	4.25
258	0.75	1053	1.00	2183	3.50

2.3.5 Drilling Fluid:

(a) Spud - 261m. Type - Gel Spud Mud
Additives - Ausgel, Caustic, Soda Ash.

(b) 261 – 2570m. Type - KCl - Polymer

Additives - Ausgel, Barite, Biocide, Defoamer,

Enerseal F, KCl, Kwikseal F,

Kwikseal M, Lime, NaOH, Pac -R, PHPA, Soda Ash, Sodium Sulphite,

Xantemp.

2.3.6 Physical Mud Properties:

Date	Wt.	Vis.	WL	FC	pН	K+	KCl	Cl-
05/12	8.90	46	16	2				700
06/12	9.20	47	16	2	8.0			750
07/12								
08/12	8.70	47	10.5		9.5			32250
09/12	9.75	47	10.0	1	8.0	27560	5.1	29000
10/12	9.60	43	11.0	1	8.5	24858	4.6	27000
11/12	9.60	44	9.8	1	8.8	25939	4.8	27000
12/12	9.70	45	9.5	1	8.8	25939	4.8	26500
13/12	9.70	46	9.5	1	8.5	25939	4.8	26500
14/12	9.60	42	13.0	2	8.0	24318	4.5	25000
15/12	8.70							
16/12	8.75	37	8.5	1	9.5	29182	5.4	31000
17/12	8.90	40	8.0	1	9.5	38909	7.2	41000
18/12	8.90	40	8.0	1	9.5	38909	7.2	41000
19/12	9.35	38	8.4	1	8.5	25399	4.7	27000
20/12	9.30	36	8.5	1	8.0	18374	3.4	19500
21/12	9.40	38	8.0	1	8.5	17293	3.2	18500
22/12	9.40							
23/12	9.30	49	6.5	1	8.0	15672	2.9	16500
24/12	9.00	45	5.6	1	8.5	14591	2.7	15000
25/12	9.10	40	7.5	1	8.5	16752	3.1	17500
26/12	9.00	38	6.4	1	8.5	13510	2.5	14000
27/12	9.10	34	7.2	1	8.5	13510	2.5	14000
28/12	9.10	34	7.2	1	8.5	13510	2.5	14000
29/12	9.10	34	7.2	1	8.5	13510	2.5	14000
30/12	9.10	34	7.2	1	8.5	13510	2.5	14000

Chemicals Used:

PRODUCT	UNIT (lb)	USED	WEIGHT (lb)
Ausgel	55	304	16720
Barite	55	1363	74965
Biocide	25	14	350
Caustic	44	2	88
Defoamer	25	13	325
Enerseal F	55	63	3465
KCl	55	1296	71280
Kwikseal F	55	72	3960
Kwikseal M	55	20	1100
Lime	55	5	275
NaOH	55	21	1155
Pac -R	55	63	3465
PHPA	55	110	6050
Sod Sulphite	55	70	3850
Sod. Ash	55	44	2420
Xantemp	55	60	3300

2.3.7 Water Supply:

Water was obtained from a bore on site.

2.3.8 Perforation Record:

None

2.3.9 Plugging and Cementing:

1 1332 - 1182m. 9 tonnes "A" - tag @ 1209m.

2 Surface.

2.4 Logging and Testing

2.4.1 Wellsite Geologist:

D.A. Short

2.4.2 Mudlogging:

Mudlogging services were provided by Geoservices. Cuttings gas was monitored from surface casing shoe to total depth using a hot-wire gas detector and a gas chromatograph.

A mudlog recording lithology, penetration rate, mud gas and other data was prepared and is an enclosure to this report.

2.4.3 Ditch Cutting Samples:

Cuttings were collected at 10m. intervals from surface to 260m. and then at 3m. intervals to 2570.0m. (T.D). The cuttings samples and sets were:

Sample Type	No. Set
Unwashed	1
Washed	2
Samplex Trays	1

2.4.4 Coring:

No cores were cut.

2.4.5 Sidewall Cores:

30 attempted / 29 recovered.

2.4.6 Testing:

DST No.:

1 Bottom Hole (Packer in 244mm. casing.)

Formation:

Strzelecki Formation

Interval:

1206.0 – 1274.0m. (D&L)

Result:

Opened tool for 10 minute initial flow - Lost 10.5 bbl mud past packer before seating - Close in for 30 minutes - Open for 120 minute final flow, GTS after 22 minutes, 52psi on 1/8" choke at end of flow (Q=23mcfd) - Shut in

for 240 minutes.

Recovery:

18.7 bbl. (401m.) mud, including 10.5 bbl lost on opening. Gas cut mud @ 500psi in sample chamber.

DST No.:

2 Open Hole – Inflate Straddle

Formation:

Strzelecki Formation

Interval:

1387.0 – 1414.4m. (D&L)

Result: Recovery: Opened on Very weak blow - No gas to surface.

Reversed out minor gas & 196m. of slightly gas cut

muddy water. Field Rw = 0.35Ω -M @ 72° F. (Sample chamber contained 3.5 litres of slightly

muddy water.)

DST No.:

3 Open Hole – Inflate Straddle

Formation: Interval:

Strzelecki Formation

IIICI vai

2185.0 – 2215.2m. (D&L)

Result:

After 39 minutes gas @ RTSTM and water @ 900 b/d.

Recovery:

See DST#4 - Re-set 15 metres higher for DST#4

DST No.:

4 Open Hole – Inflate Straddle

Formation: Interval:

Strzelecki Formation 2170.0 – 2200.2m. (D&L)

Result:

21/0.0 - 2200.2111. (D&L)

Recovery:

Gas @ RTSTM and Water @ 900 b/d.

Full string of salty water. (Rw = 0.34Ω m @ 25°C.)

2.4.7 Wireline Logs:

Three suites of logs were run by Schlumberger

Suite / Depth

Logs

1 @ 1233m.

DLL / BCS / RHOZ / GR / SP / Cal

2 @ 2152m.

DLL / BCS / RHOZ / TNPH / GR / SP / Cal

3 @ 2570m.

DLL / BCS / GR / SP / Cal

2.4.8 Temperature Surveys:

None

Temperatures recorded from drill stem tests at Trifon-1 &

Gangell-1 give a temperature gradient of 29.5°C / 1000m. The bottom hole temperature at 2570m. calculated as

94°C

2.4.9 Velocity Survey:

None

3.0 GEOLOGY

3.1 Reasons for Drilling

Trifon-1 was drilled to evaluate the hydrocarbon potential of a detached alluvial fan identified on seismic within the Strzelecki Formation. The Secondary targets were thin meander belt sands in the upper Strzelecki Formation which were gas productive in North Seaspray-1&3

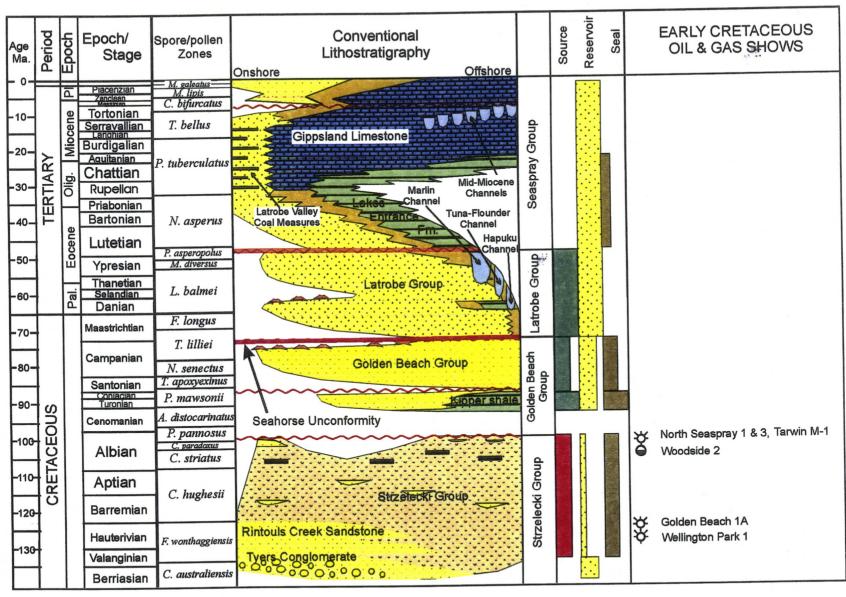
Previious wells in the area included North Seaspray-1, Carrs Creek-1 and Burong-1.

North Seaspray-1 was drilled in 1962 on an anticline closed on the Latrobe Group. A drill stem test within the top Latrobe Group was attempted but the packer did not seat. The lower Latrobe sand unit was not tested. Log interpretation suggests the Latrobe sands are fresh water flushed. Significant attention was paid to the upper Strzelecki Formation between 1104 and 1158m. culminating in the setting of casing and testing through perforations. Open hole DST#3 (1147.6-1156.7m. KB. flowed gas at an estimated 50-100mcfd for a duration of 2 hours. The well was drilled to 1371.6m. KB. and plugged back to 1161.3m. KB. DST#5 attempted over the interval 1144.5-1161.3m. KB. but failed due to plugging with cement. The hole was then cased and perforated and further DSTs were run. Testing did not extend below 1150.3m. KB. and although gas flowed to surface the rate was less than in the original DST#3 in open hole.

Carrs Creek-1 was drilled in 1963 following the encouraging gas flows in North Seaspray-1 some 5.3km. to the west. The well was located down-dip of the North Seaspray structure where it was hoped that the Strzelecki Formation sands would have better porosities and permeabilities. Subsequent mapping has shown that the Carrs Creek feature is separate to the North Seaspray structure. No significant shows were encountered in the well and the gas sand noted in North Seaspray-1 was not encountered. The Latrobe Group sands were fresh water flushed. A sandstone between 1388 – 1402m. KB. also contained fresh water suggesting possible communication with the overlying Latrobe Group. Waters were brackish in the remainder of the Strzelecki Formation sands.

The Burong structure is a northeast-southwest trending asymmetrical anticline, fault controlled to the north west. The fault was probably a down to the basin normal fault which has subsequently been inverted and reversed during the Late Miocene. The Burong-1 well was drilled in 1985 as a crestal test of the anticline. The main target was the Latrobe Group and although the sands had excellent porosities and permeabilities no oil shows were observed and minor methane was recorded from the top 60m. Wireline logs confirmed the sands to be water saturated and the gas shows to have been associated with Latrobe Group coals.







Thickness: 74.6 metres

3.2 Stratigraphic Prognosis

The stratigraphic prognosis was made utilising the results of nearby wells and the available seismic coverage.

A comparison between prognosed and actual formation tops is given below.

FORMATION	PROGNOSED	ACTUAL	DIFFERENCE
	MD (mKB)	MD (mKB)	MD (m)
Haunted Hill Gravels	4.9	4.9	0.0
Jemmy's Point Fm.	95.0	79.5	15.5
Tambo River Fm.	171.0	165.0	6.0
Gippsland Limestone	213.0	233.5	-20.5
Lakes Entrance Fm.	611.0	620.0	-9.0
Latrobe Group (Top Clastics)	660.0	689.0	-29.0
Latrobe Group (Top Coals)	796.0	835.0	-39.0
Strzelecki Group	1208.0	1236.0	-28.0
Total Depth	1650.0	2570.0	

3.3 Stratigraphy

The stratigraphic section encountered in Trifon-1 is graphically illustrated in Figure 4 and discussed below.

HAUNTED HILL GRAVELS

4.9 - 79.5 metres

4.9 - 79.5m SANDSTONE, clear to translucent white, yellow to yellow-brown at top, medium to very coarse, sub-angular to rounded, poor to moderate sorted, trace grey chert grains, rare carbonaceous fragments and greenish mica flakes, predominantly loose, minor yellow ferruginous clay matrix at top, very good porosity.

JEMMY'S POINT FORMATION

79.5 - 165.0 metres

Thickness: 85.5 metres

79.5 - 165.0m Interbedded MARL and LIMESTONE with GLAUCONITE at top.

MARL, pale grey, pale brownish grey, very fossiliferous, silty, occasionally sandy.

LIMESTONE, white, very pale pinkish white, fossil fragments, silty and argillaceous in part, grading to marl in part.

GLAUCONITE, dark green to black silty nodules / concretions and as replacement in some fossil fragments.

TAMBO RIVER FORMATION

165.0 - 233.5 metres

Thickness: 68.5 metres

165.0 - 205.0m. LIMESTONE, white to pale yellowish white, fossil fragments with a weak to moderate calcite cement in part, occasionally silty and argillaceous.

205.0 - 235.0m. MARL, white to pale grey, fossiliferous, argillaceous, silty / sandy, occasionally glauconitic.

GIPPSLAND LIMESTONE

233.5 - 620.0 metres

Thickness: 386.5 metres

233.5 - 261.0m. Interbedded MARL and LIMESTONE.

MARL, white to pale grey, fossiliferous, argillaceous, silty / sandy, occasionally glauconitic.

LIMESTONE, white to pinkish white, fossil fragments in a calcite cement, occasionally argillaceous and silty.

261.0 - 451.0m. MARL, grading to limestone in part, off white to light grey, occasionally pale brown, soft to firm, minor green glauconitic nodules and glauconitic

Thickness: 69.0 metres

Thickness: 547.0 metres

staining, fossiliferous, argillaceous and grades to calcareous claystone in part. Trace moderate to dark brown siltstone, very argillaceous.

- 451.0 480.0m. MARL, grading to limestone in part, off white to light grey, occasionally pale brown, soft to firm, minor green glauconitic nodules and glauconitic staining, fossiliferous, argillaceous and grades to calcareous claystone in part. Trace moderate to dark brown siltstone, very argillaceous.
- 480.0 527.0m. MARL, light grey, some light pinkish brown, soft to firm, argillaceous, also moderate hard to hard, very calcareous and grades to limestone.
- 527.0 546.0m. MARL, white to light grey, light grey-brown, soft to firm, argillaceous and grades to claystone.
- 546.0 620.0m. MARL, white to pale greenish white, light grey, soft, very argillaceous, grades to claystone, greenish glauconitic stain, minor fossils, rare coarse to very coarse loose well rounded quartz grains.

LAKES ENTRANCE FORMATION

620.0 - 689.0 metres

620.0 - 689.0m MARL, pale greenish white to light greenish grey, pale brown to grey-brown, soft, green glauconitic staining, minor fossil fragments, very argillaceous and grades to claystone. Abundant glauconite pellets (5%) below 666m.

LATROBE GROUP

689.0 - 1236.0 metres

689.0 - 704.0m. COAL, very dark brown to black, dull to sub-vitreous lustre, tabular to conchoidal fracture, gas bleeding from some joints / fractures.

- 704.0 713.0m. SANDSTONE, translucent white, medium to coarse, occasionally very coarse, minor dispersive silty, argillaceous and carbonaceous matrix at top, generally loose, very good porosity.
- 713.0 720.0m. COAL as for 689.0 704.0m. & minor SANDSTONE as for 704.0 713.0m.
- 720.0 793.0m. SANDSTONE with trace COAL.

 SANDSTONE, translucent white, medium to coarse, occasionally very coarse, minor dispersive silty, argillaceous and carbonaceous matrix at top, generally loose, very good porosity.

 COAL, very dark brown to black, dull to sub-vitreous lustre, lignitic.
- 793.0 835.0m. SANDSTONE, translucent white, translucent very pale brown, fine to very coarse, sub-angular to rounded, moderate sorted, loose quartz grains, very good porosity.
- 835.0 964.0m. Interbedded SANDSTONE, CLAYSTONE and COAL.

 SANDSTONE, translucent white, translucent very pale brown, coarse to very coarse, granular in part, angular to sub-angular, moderate sorted, loose quartz grains, very good porosity.

 CLAYSTONE, white, light to dark brown, soft, dispersive, carb, silty in part.

 COAL, very dark brown to black, sub-vitreous lustre, tabular to platey

fracture.

964.0 - 1236.0m. SANDSTONE with interbedded CLAYSTONE and minor COAL.

SANDSTONE, translucent white, medium to very coarse, angular to subangular, moderate sorted, loose quartz grains, good porosity.

CLAYSTONE, white to pale brown and grey-brown, soft, dispersive, amorphous, carbonaceous specks, silty in part..

COAL, very dark brown to black, sub-vitreous lustre, tabular to platey fracture.

STRZELECKI FORMATION

1236.0 - 2570.0 metres

Thickness: 1334.0 metres

1233.0 - 1269.0m. Interbedded SANDSTONE and CLAYSTONE.

SANDSTONE, white to moderate grey, very fine to occasionally medium, sub-angular to sub-rounded, moderate sorted, abundant greenish grey to grey-black volcano-lithic grains, feldspathic, moderate to abundant clay matrix, trace pyrite & mica, calcareous, friable, poor to fair porosity.

CLAYSTONE, predominantly pale grey to bluish grey, soft to firm, silty, calcareous in part; minor moderate to dark brown, carbonaceous.

1269.0 - 1298.0m. Interbedded SANDSTONE & CLAYSTONE.

SANDSTONE, light to dark grey, white to greenish grey, very fine to occasionally medium, sub-angular to sub-rounded, moderate sorted quartz and green grey to black volcano-lithic grains, feldspathic, rare pyrite, dispersive clay matrix, grains being matrix supported in part, common calcite and weak calcite cement, friable, poor porosity.

CLAYSTONE, pale grey to pale greenish grey, soft to firm, silty, trace carbonaceous specks.

1298.0 - 1340.0m. SANDSTONE with interbedded CLAYSTONE.

SANDSTONE, white to pale grey, moderate to dark grey-green, fine to medium, sub-rounded, moderate to well sorted quartz, feldspar and multi-coloured volcano-lithic grains with a dispersive argillaceous matrix, weak to moderate calcite cement, friable, poor porosity.

CLAYSTONE, light grey to grey-green, pale brown to grey-brown, soft to firm, blocky, silty in part.

1340.0 - 1418.0m. SANDSTONE with minor CLAYSTONE.

SANDSTONE, white to light grey, grey-green, very fine to medium, sub-angular to sub-rounded, moderate sorted quartz, feldspar and quartzitic

volcano-lithic grains, trace mica, dispersive clay matrix, slightly calcareous, friable, poor to occasional fair porosity.

CLAYSTONE, light grey, grey-green, pale brown, soft, silty in part.

1418.0 - 1491.0m. CLAYSTONE with minor SANDSTONE.

CLAYSTONE, light to moderate grey to grey-green, occasionally grey-brown, soft to firm, occasionally silty, minor plant / coal fragments.

SANDSTONE, white to grey-green, very fine, sub-rounded, moderate to well sorted, lithic, feldspathic, abundant clay matrix, calcite cement, friable, very poor porosity.

1491.0 - 1691.5m. Interbedded SANDSTONE and CLAYSTONE, minor SILTSTONE with trace COAL and TUFF.

SANDSTONE, white to pale grey, pale grey-green, very fine to fine, sub-angular to sub-rounded, moderate to well sorted, lithic, feldspathic, trace mica, dispersive clay matrix, calcareous in part, friable, poor porosity.

CLAYSTONE, light to moderate brown, grey-green, soft, dispersive, silty and carbonaceous in part.

COAL, black, sub-vitreous lustre.

TUFF, pale grey-brown, soft to firm, silty and carbonaceous in part.

1691.5 - 1865.0m. SANDSTONE, with interbedded CLAYSTONE and minor SILTSTONE / TUFF and trace COAL.

SANDSTONE, light to moderate grey to grey-green, very fine to medium, sub-angular to sub-rounded, moderate sorted clear to white quartz, white to pinkish orange feldspar and grey-green to black volcanolithic grains, minor calcite, dispersive clay matrix, friable, poor porosity. CLAYSTONE, light to dark grey and grey-green, light to moderate brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.

SILTSTONE, moderate to dark brown, carbonaceous, also light brown to grey-brown, argillaceous and tuffaceous.

TUFF, translucent pale brownish grey, soft to firm, silty and carbonaceous in part.

COAL, dark brown to black, lignitic.

1865.0 - 1910.0m. CLAYSTONE with minor SANDSTONE.

CLAYSTONE, light to moderate grey to grey-brown, grey-green, soft, occasionally silty.

SANDSTONE, light to moderate grey to grey-green, very fine to fine, some medium, sub-angular to sub-rounded, moderate sorted, lithic, feldspathic, calcareous in part, clay matrix, friable, poor porosity.

1910.0 - 2113.0m. SANDSTONE, with minor interbedded CLAYSTONE.

SANDSTONE, arkosic, light to moderate grey to grey-green, very fine to fine, occasionally medium, predominantly sub-angular, some sub-rounded, moderate sorted clear to white quartz, white to pinkish orange feldspar and grey-green to black volcano-lithic grains, minor calcite, dispersive clay matrix, friable, very poor to poor porosity.

CLAYSTONE, light to moderate grey and grey-green, bluish grey, light to dark brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.

2113.0 - 2193.0m. SANDSTONE with minor CLAYSTONE.

SANDSTONE, white to pale grey, very fine to fine, occasionally silty, sub-angular to sub-rounded, moderate sorted clear to white quartz, white feldspar and grey-green to grey-black volcano-lithic, minor calcite, trace mica flakes and carbonaceous material, minor green chloritic staining, dispersive clay matrix, friable, poor porosity.

CLAYSTONE, pale grey to greenish grey, moderate to dark brown, soft to firm, silty in part.

2193.0 - 2344.0m. Argillaceous SANDSTONE with interbedded CLAYSTONE.

SANDSTONE, light to moderate grey, very fine to fine, grades to siltstone in part, sub-angular to sub-rounded, moderate sorted, lithic, feldspathic, argillaceous, minor mica flakes and calcite, friable to moderately hard, poor porosity.

CLAYSTONE, light to dark grey, greenish grey, moderate to dark brown, sub-fissile to blocky, silty and carbonaceous in part.

2344.0 - 2467.0m. Argillaceous SANDSTONE with interbedded CLAYSTONE.

SANDSTONE, light to moderate grey, grey-green, some white to greybrown, very fine to fine, occasionally medium, grades to siltstone in part, sub-angular to sub-rounded, moderate sorted, volcano-lithic, feldspathic, argillaceous, minor mica flakes, trace to common calcite grains, friable to moderately hard, poor porosity.

CLAYSTONE, light to dark grey, greenish grey, moderate to dark brown, sub-fissile to blocky, dispersive in part, silty and carbonaceous in part.

2467.0 - 2570.0m. Argillaceous SANDSTONE with interbedded CLAYSTONE and trace COAL.

> SANDSTONE, white to pale green, grey-green, very fine to fine, subangular to sub-rounded, moderate sorted, volcano-lithic, feldspathic, abundant argillaceous matrix, green chloritic staining in part, friable, poor porosity.

> CLAYSTONE, moderate grey to grey-green, grey-brown, moderate to dark brown, soft to firm, occasional carbonaceous and silty in part.

> COAL, very dark brown to black, sub-vitreous lustre, grades to shale in part.

TOTAL DEPTH

Driller:

2570.0 metres

Logger:

2570.0 metres (Extrapolated)

3.4 Hydrocarbon Shows

Latrobe Group: The only shows were from the coals at the top of the unit where a maximum of 358 units of gas (100% C1) was recorded. At 717m. temporary lost circulation resulted in erroneously long lag time, initially indicating that the gas came from a coal / sand interval. When the lag was corrected it showed that the coals were the sole source of the gas.

Strzelecki Group: Moderate to very good gas shows (200 to 1000+ units) were recorded down to 2050m. while below 2050m. the gas was generally below 200 units. Gas composition was typically 97/2/1/Tr.

Four drill stem tests were run in the Strezlecki Group.

DST No.1

Bottom Hole (Packer in 244mm. casing.)

Interval:

1206.0 – 1274.0m. (D&L)

Result:

Opened tool for 10 minute initial flow - Lost 10.5 bbl mud past packer before seating - Close in for 30 minutes - Open for 120

minute final flow, GTS after 22 minutes, 52psi on 1/8" choke

at end of flow (Q=23mcfd) - Shut in for 240 minutes.

Recovery: 18.7 bbl. (401m.) mud, including 10.5 bbl lost on opening.

DST No.2

Open Hole – Inflate Straddle 1387.0 – 1414.4m. (D&L)

Interval:

Opened on Very weak blow - No gas to surface.

Result: Recovery:

Reversed out minor gas & 196m. of slightly gas cut muddy

water. Field Rw = 0.35Ω -M @ 72° F. (Sample chamber

contained 3.5 litres of slightly muddy water.)

DST No.3

Open Hole – Inflate Straddle

Interval:

2185.0 – 2215.2m. (D&L)

Result:

After 39 minutes gas @ RTSTM and water @ 900 b/d.

Recovery:

See DST#4 - Re-set 15 metres higher for DST#4

DST No.4

Open Hole – Inflate Straddle

Interval:

2170.0 – 2200.2m. (D&L)

Result:

Gas @ RTSTM and Water @ 900 b/d.

Recovery:

Full string of salty water. (Rw = 0.34Ω m @ 25° C.)

4.0 DISCUSSION AND CONCLUSIONS

Trifon-1 intersected a normal onshore Gippsland Basin sedimentary section and formation tops were generally 10 to 30 metres lower than prognosed.

Trifon-1 achieved its' objective of evaluating the upper Strzelecki Formation but the sands encountered were predominantly fine grained, lithic, very argillaceous and with poor to fair reservoir quality. This appears to be confirmed by wireline logs where although calculated porosities lie in the 12-18% range when tested they show a lack of good permeability as seen in DSTs 1&2 where they flowed gas at rates less than 50mcfd.

Of significance are the water flows of 900 barrels / day recorded from DSTs 3&4. The water accompanied by a small amount of gas appears to be flowing from fractures in the sands at 2191 and 2209 metrers. These fractures can be identified on the sonic log and are seen at several levels in the Strzelecki Formation in Trifon-1.

The sands of the Latrobe Group had very good porosity and permeability but were, as expected, water saturated. The top Latrobe had a maximum gas reading of 358 units but was not tested. The coal was produced in large "chunks" and showed what appeared to be an extensive fracture system which could provide a conduit to the underlying water filled Latrobe sands. If this were the case then any attempts to produce gas from the coal(s) would quite likely be frustrated by very high and probably sustained water production.

5.0 COMPLETION

None – the well was plugged and abandoned.

Table1: TRIFON-1 - STRATIGRAPHIC TABLE

Age	Formation	Depth KB (m)	Elevation (m)	Thickness
		KB (m)		(m)
TERTIARY	Haunted Hills	4.9 m	29.9	74.6
Pleistocene-Pliocene	Gravels			
TERTIARY	Jemmy's Point	79.5	-49.6	85.5
Pliocene	Fm.			
TERTIARY	Tambo River	165	-135.1	68.5
Miocene	Fm.			
TERTIARY	Gippsland	233.5	-203.6	386.5
Oligocene- Miocene	Limestone			
TERTIARY	Lakes Entrance	620	-590.1	69
Oligocene	Fm.			
TERTIARY	Latrobe Gp.	689	-659.1	547
Eocene	(Top Clastics)			
TERTIARY	Latrobe Gp	(835)	(-805.1)	
Eocene	(Top Coal)			
LOWER	Strzelecki Fm	1236	-1206.1	1334+
CRETACEOUS				
	Total Depth	2570	-2540.1	

Ground Level 25.0 m KB 29.9 m

δ	0	8	\mathfrak{g}	0	1	n	3	2
	_	-	$\mathbf{\circ}$	•		v		

PASTEL MANILLA DIVIDERS 5 TAB A4



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APPENDIX 1

CUTTINGS DESCRIPTIONS

Gas (units) (Breakdown %) Lithological Description Depth Percent SANDSTONE, clear to translucent, white to pale yellow-brown, medium 100 20 to very coarse, angular to sub-rounded, poor to moderate sorted quartz grains, trace chert grains, moderate dispersive yellow ferruginous clay matrix, friable to loose, good porosity. SANDSTONE, a.a. - coarse to very coarse, occasionally granular, sub-0.0 30 100 angular to rounded, moderate sorted, good porosity. (0:0:0:0:0) (2.3)SANDSTONE, a.a. - clear to translucent white, trace yellow, coarse to 0.0 40 100 (0:0:0:0:0) very coarse, sub-rounded to rounded, moderate sorted, good porosity. (0.5)SANDSTONE, a.a. - medium to very coarse, loose, sub-angular to 0.0 100 50 (0:0:0:0:0)rounded, moderate sorted, good porosity. (0.4)SANDSTONE, clear to translucent white, medium to very coarse, sub-0.0 100 60 angular to rounded, poor to moderate sorted, trace grey chert grains, (0:0:0:0:0) (0.4)rare carbonaceous fragments and greenish mica flakes, predominantly loose, good porosity. 0.0 100 SANDSTONE, a.a. - fine to very coarse. 70 (0:0:0:0:0)(0.3)SANDSTONE, a.a. - fine to very coarse, trace grey chert grains and 0.0 100 80 (0:0:0:0:0) green mica flakes, loose, good porosity. (0.4)SANDSTONE, clear to translucent white, very pale grey, fine to medium, 100 0.0 90 (0:0:0:0:0) occasionally coarse, sub-angular to sub-rounded, moderate sorted, (0.4)loose quartz grains, minor red-brown, yellow-brown and grey chert grains, trace white and green mica flakes, good porosity. SANDSTONE, a.a. - fine to medium, common greenish white mica 0.0 100 (0:0:0:0:0) (0.7)LIMESTONE, fossil fragments, bryozoa, molluscs, forams. 20 COAL, dull brown-black to black, lignitic. SANDSTONE, translucent white to pale yellow, minor pale grey, coarse 0.0 110 to granular, rounded, polished, moderate to well sorted, loose quartz (0:0:0:0:0)(0.9)grains, very good porosity. LIMESTONE, white to pinkish white fossil fragments, bryozoa, mollusc 50 and forams. GLAUCONITE, dark green to black silty nodules / concretions and as Tr replacement in some fossil fragments. 0.0 SANDSTONE, a.a. 120 30 (0:0:0:0:0) 10 MARL, white to light grey, silty and sandy. (0.4)LIMESTONE, a.a. 60 0.0 40 SANDSTONE, a.a. 130 (0:0:0:0:0) 30 MARL, white to light grey, silty, occasionally sandy. (0.5)30 LIMESTONE, a.a. 0.0 140 SANDSTONE, a.a. 10 MARL, pale grey, pale brownish grey, very fossiliferous, silty, (0:0:0:0:0) 90 (0.4)occasionally sandy. 0.0 150 Tr SANDSTONE, a.a. MARL, a.a. - grades to limestone in part. (0:0:0:0:0) 100 (0.5)SANDSTONE, a.a. 0.0 160 Tr (0:0:0:0:0) (0.5)30 LIMESTONE, white, very pale pinkish white, fossil fragments, silty and 70 argillaceous in part, grading to marl in part. 10 MARL, a.a. 170 (0:0:0:0:0) LIMESTONE, a.a. 90 (0.3)100 LIMESTONE, a.a. 0.0 180 (0:0:0:0:0) (0.6)LIMESTONE, white to pale yellowish white, fossil fragments with a weak 0.0 190 100 (0:0:0:0:0) to moderate calcite cement in part, occasionally silty and argillaceous (0.5)100 LIMESTONE, a.a. 0.0 200 (0:0:0:0:0) (0.6)MARL, white to pale grey, fossiliferous, argillaceous, silty / sandy, 0.0 210 100 (0:0:0:0:0) (0.7)occasionally glauconitic. 0.0 100 MARL, a.a. 220 (0:0:0:0:0)(0.8)MARL, a.a. 0.0 100 230 (0:0:0:0:0) (1.2)80 MARL, a.a. - glauconitic. 0.0 240 (0:0:0:0:0) 20 LIMESTONE, white to pinkish white, fossil fragments in a calcite cement, (1.1)occasionally argillaceous and silty.

Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
250 (0.9)	70 30	MARL, a.a. LIMESTONE, a.a.	0.0 (0:0:0:0:0)
260	40	MARL, a.a.	0.0
(1.2)	60	LIMESTONE, a.a.	(0:0:0:0:0)
264 (1.4)		No Sample – bypassing shakers	0.0 (0:0:0:0:0)
267 (2.5)		No Sample – bypassing shakers	0.0 (0:0:0:0:0)
270		No Sample – bypassing shakers	0.0 (0:0:0:0:0)
(3.4)		No Sample – bypassing shakers	0.0 (0:0:0:0:0)
(1.4) 276		No Sample – bypassing shakers	0.0
(1.2) 279		No Sample – bypassing shakers	(0:0:0:0:0) 0.0
(1.2)			(0:0:0:0:0)
282 (1.5)	100	LIMESTONE, white to very pale greenish grey, pale pinkish white, fossiliferous, slightly argillaceous, minor greenish glauconitic staining.	0.0 (0:0:0:0:0)
285	100	LIMESTONE, a.a.	0.0 (0:0:0:0:0)
(1.3)	100	LIMESTONE, a.a.	0.0.0.0.0)
(1.2)			(0:0:0:0:0)
291 (1.2)	100	LIMESTONE, a.a.	0.0 (0:0:0:0:0)
294 (1.7)	20 80	MARL, light grey, argillaceous, fossiliferous, grades to limestone. LIMESTONE, a.a. – minor fine to medium quartz grains, argillaceous in part.	0.0 (0:0:0:0:0)
297	80	MARL, a.a.	0.0
300	20 50	LIMESTONE, a.a. MARL, a.a.	(0:0:0:0:0)
(1.2)	50	LIMESTONE, a.a.	(0:0:0:0:0)
303 (1.0)	70	MARL, pale grey, fossiliferous, trace glauconite, trace medium to coarse rounded quartz grains, argillaceous.	0.0 (0:0:0:0:0)
(,	30	LIMESTONE, a.a.	
306 (0.8)	80 20	MARL, a.a. LIMESTONE, a.a.	0.0 (0:0:0:0:0)
309	80	MARL, a.a.	0.0
(0.7)	20	LIMESTONE, a.a. MARL, white to pale grey, minor pale greenish grey, minor glauconite,	(0:0:0:0:0) 0.0
312 (0.6)	80	trace medium to very coarse quartz grains, fossiliferous, argillaceous and grades to calcareous claystone in part.	(0:0:0:0:0)
045	20	LIMESTONE, a.a.	0.0
315 (0.7)	80 20	MARL, a.a. LIMESTONE, a.a.	(0:0:0:0:0)
318	80	MARL, a.a.	0.0
(0.9)	20 80	LIMESTONE, a.a. MARL, a.a.	(0:0:0:0:0) 0.0
(0.7)	20	LIMESTONE, a.a.	(0:0:0:0:0)
324	80	MARL, a.a.	0.0
(0.6)	20 80	LIMESTONE, a.a. MARL, a.a.	(0:0:0:0:0) 0.0
(0.8)	20	LIMESTONE, a.a.	(0:0:0:0:0)
330	90 10	MARL, a.a. LIMESTONE, a.a.	0.0 (0:0:0:0:0)
333	90	MARL, a.a.	0.0
(0.7)	10	LIMESTONE, a.a.	(0:0:0:0:0)
336 (1.0)	100	MARL, pale grey to pale greenish grey, white to pale pinkish brown, fossiliferous, minor glauconite and glauconitic staining, argillaceous and grades to calcareous claystone.	0.0 (0:0:0:0:0)
339 (0.7)	100	MARL, a.a.	0.0 (0:0:0:0:0)
342	100	MARL, a.a.	0.0 (0:0:0:0:0)
(0.6)	100	MARL, a.a.	0.0
(0.6)			(0:0:0:0:0)

LAKES OIL N	N.L. TRIFC	<u>DN-1</u>	Gas (units)
Depth	Percent	Lithological Description ,	(Breakdown %)
348 (0.6)	100	MARL, a.a.	0.0 (0:0:0:0:0)
351 (0.9)	100	MARL, a.a.	0.0 (0:0:0:0:0)
354	100	MARL, a.a.	0.0 (0:0:0:0:0)
(0.8)	100	MARL, a.a. – fossiliferous, forams and bryozoa fragments, argillaceous.	0.0 (0:0:0:0:0)
(0.7) 360	100	MARL, a.a.	0.0 (0:0:0:0:0)
(0.8) 363 (0.9)	100	MARL, a.a.	0.0 (0:0:0:0:0)
366 (1.0)	100	MARL, a.a.	0.0 (0:0:0:0:0)
369 (0.8)	100	MARL, pale grey, white to off-white, soft to firm, fossiliferous, grades to calcareous claystone.	0.0 (0:0:0:0:0)
372 (0.7)	100	MARL, a.a.	0.0 (0:0:0:0:0)
375	100	MARL, a.a. – trace glauconite.	0.0 (0:0:0:0:0)
(0.8) 378 (0.8)	100	MARL, a.a.	0.0 (0:0:0:0:0)
381 (0.6)	100	MARL, a.a.	0.0 (0:0:0:0:0)
384 (0.6)	100	MARL, a.a.	0.0 (0:0:0:0:0)
387 (0.6)	100	MARL, a.a.	0.0 (0:0:0:0:0)
390 (0.5)	100	MARL, a.a.	0.0 (0:0:0:0:0)
393 (0.8)	100	MARL, a.a.	0.0 (0:0:0:0)
396 (0.8)	100	MARL, a.a.	0.0 (0:0:0:0:0)
399 (0.9)	100	MARL, a.a.	0.0 (0:0:0:0)
402 (1.0)	100	MARL, a.a.	0.0 (0:0:0:0)
405 (0.8)	100	MARL, a.a.	0.0 (0:0:0:0:0)
408 (0.7)	100	MARL, a.a.	0.0 (0:0:0:0:0)
411 (0.9)	Tr	SILTSTONE, moderate to dark brown, soft, argillaceous, carbonaceous. MARL, a.a.	0.0 (0:0:0:0)
414	100 Tr	SILTSTONE, a.a.	0.0
(1.2) 417	100 Tr	MARL, a.a. SILTSTONE, a.a.	(0:0:0:0:0) 0.0
(1.5) 420	100	MARL, a.a. MARL, off-white to light grey, soft to firm, minor glauconite, fossiliferous,	(0:0:0:0:0)
(1.3) 423	100	argillaceous and grades to calcareous claystone in part. MARL, a.a.	(0:0:0:0) 0.0
(1.6) 426	100	MARL, a.a.	(0:0:0:0:0)
(2.0)		MARL, a.a.	(0:0:0:0:0)
429 (1.3)	100	MARL, a.a.	(0:0:0:0:0)
432 (2.4)			(0:0:0:0:0) 0.0
435 (1.5)	100	MARL, a.a.	(0:0:0:0:0)
438 (2.9)	100	MARL, a.a.	(0:0:0:0:0)
441 (2.0)	100	MARL, light grey, soft to firm, fossiliferous, argillaceous and grades to calcareous claystone in part.	0.0 (0:0:0:0:0)

Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
444	100	MARL, a.a.	0.0 (0:0:0:0:0)
(1.6) 447	100	MARL, a.a.	0.0 (0:0:0:0:0)
(2.1) 450 (1.8)	100	MARL, a.a.	0.0 (0:0:0:0:0)
453 (1.9)	100	MARL, a.a. – becoming more argillaceous and grading to calcareous claystone.	0.0 (0:0:0:0:0)
456 (1.5)	100	MARL, a.a.	0.0 (0:0:0:0:0)
459 (1.4)	100	MARL, a.a.	0.0 (0:0:0:0:0)
462 (1.6)	100	MARL, a.a.	0.0 (0:0:0:0)
465 (0.9)	100	MARL, a.a.	0.0 (0:0:0:0:0)
468 (1.5)	100	MARL, a.a. – fossiliferous.	0.0 (0:0:0:0:0)
471 (1.5)	100	MARL, a.a. – also pale pinkish brown, fossiliferous and grades to hard crystalline limestone.	0.0 (0:0:0:0:0)
474 (1.7)	100	MARL, a.a.	0.0 (0:0:0:0:0)
477 (1.2)	100	MARL, a.a.	0.0 (0:0:0:0:0)
480 (1.7)	100	MARL, a.a.	0.0 (0:0:0:0:0)
483 (2.2)	100	MARL, a.a. – grades to hard crystalline limestone in part.	0.0 (0:0:0:0:0)
486 (2.1)	100	MARL, a.a.	0.0 (0:0:0:0:0)
489 (2.4)	100	MARL, light grey, some light pinkish brown, soft to firm, argillaceous, also moderate hard to hard, very calcareous and grades to limestone.	0.0 (0:0:0:0:0)
492 (4.1)	100	MARL, a.a.	0.0 (0:0:0:0:0)
495 (4.3)	100	MARL, a.a.	0.0 (0:0:0:0:0)
498 (2.8)	100	MARL, a.a.	0.0 (0:0:0:0:0)
501 (2.6)	100	MARL, a.a. – trace glauconite.	0.0 (0:0:0:0:0)
504 (2.8)	100	MARL, a.a.	0.0 (0:0:0:0:0)
507 (1.7)	100	MARL, a.a. – grades to limestone.	0.0 (0:0:0:0:0)
510 (2.3)	100	MARL, a.a.	0.0 (0:0:0:0:0)
513 (1.2)	100	MARL, a.a.	0.0 (0:0:0:0:0)
516 (1.7)	100	MARL, white to light grey, light grey-brown, soft to firm, argillaceous and grades to claystone, also moderate hard to hard, fossiliferous and crystalline and grades to limestone.	0.0 (100:0:0:0:0)
519 (2.5)	100	MARL, a.a.	0.5 (100:0:0:0:0)
522 (1.9)	100	MARL, a.a.	0.3 (100:0:0:0:0)
525 (2.0)	100	MARL, a.a.	0.0 (100:0:0:0:0)
528 (2.3)	100	MARL, a.a. – minor disseminated glauconite.	0.0 (100:0:0:0:0)
531 (1.4)	100	MARL, a.a.	0.0 (100:0:0:0:0)
534 (1.3)	100	MARL, a.a.	0.2 (100:0:0:0:0)
537 (1.4)	100	MARL, a.a.	0.0 (100:0:0:0:0)

Depth	Percent	Lithological Description	Gas (units) (Breakdown %
540	100	MARL, a.a.	0.3
(1.5)	100	MADI	(100:0:0:0:0) 0.0
543 (1.3)	100	MARL, a.a.	(100:0:0:0:0)
546	100	MARL, white to pale greenish white, light grey, soft, very argillaceous,	0.0
(1.3)		grades to claystone, greenish glauconitic stain, minor fossils, rare coarse to very coarse loose well rounded quartz grains.	(100:0:0:0:0)
549	100	MARL, a.a.	0.2 (100:0:0:0:0)
(1.3) 552	100	MARL, a.a. – common fossil fragments.	0.0
(1.3)	100	· · · · · · · · · · · · · · · · · · ·	(91:9:0:0:0)
555 (1.2)	100	MARL, a.a.	0.0 (91:9:0:0:0)
558 (1.3)	100	MARL, a.a.	0.0 (100:0:0:0:0)
561	100	MARL, a.a.	0.5
(1.3)	100	MARIL City to an already averaged areas and to firm grades to	(100:0:0:0:0) 0.2
564 (1.3)	100	MARL, a.a light to moderate greenish grey, soft to firm, grades to claystone in part.	(100:0:0:0:0)
567	100	MARL, a.a.	0.2
(1.3)	100	MARL, a.a. – greenish white to light greenish grey, grades to claystone.	(94:6:0:0:0) 0.2
570 (1.1)	100	MARL, a.a. – greenish white to light greenish grey, grades to claystone.	(100:0:0:0:0)
573	100	MARL, a.a.	0.2 (100:0:0:0:0)
(1.1) 576	100	MARL, a.a.	0.8
(1.6)	100	MADL o o	(100:0:0:0:0) 0.0
579 (1.0)	100	MARL, a.a.	(97:3:0:0:0)
582 (1.3)	100	MARL, a.a.	0.0 (100:0:0:0:0)
585 (1.3)	100	MARL, a.a. – grades to claystone.	0.5 (100:0:0:0:0)
588	100	MARL, a.a. – grades to claystone.	0.0 (100:0:0:0:0)
(1.1) 591	100	MARL, a.a pale greenish white to greenish grey, very argillaceous and	0.5
(1.1) 594	100	grades to claystone. MARL, a.a. – grades to claystone.	(100:0:0:0:0) 1.0
(1.0)	100	Wirth L., d.d. grades to stayeteries	(100:0:0:0:0)
597 (1.1)	100	MARL, a.a.	0.0 (100:0:0:0:0)
600	100	MARL, a.a pale to moderate green to grey-green, soft, very	0.7
(1.0)	100	argillaceous and grades to claystone.	(100:0:0:0:0) 2.2
603 (1.4)	100	MARL, a.a.	(100:0:0:0:0)
606 (1.0)	100	MARL, a.a. – rare pyrite.	0.5 (100:0:0:0:0)
609	100	MARL, a.a.	1.2 (100:0:0:0:0)
(1.0) 612	100	MARL, a.a.	2.2
(1.1)	100	MARL, a.a. – grades to claystone.	(100:0:0:0:0) 1.7
615 (1.2)	100		(100:0:0:0:0)
618 (1.1)	100	MARL, a.a grades to claystone, trace green / black glauconitic pellets.	1.8 (100:0:0:0:0)
621	100	MARL, a.a.	3.0 (100:0:0:0:0)
(1.2) 624	100	MARL, a.a grades to claystone.	2.2
(1.4) 627	100	MARL, a.a.	(100:0:0:0:0) 2.5
(1.5)			(100:0:0:0:0)
630 (1.2)	100	MARL, a.a. – pale greenish white to light greenish grey, pale brown to grey-brown, soft, green glauconitic staining, minor fossil fragments, very argillaceous and grades to claystone.	3.2 (100:0:0:0:0)

AKES OIL N.	L. TRIFC	<u>DN-1</u>	One (write)
Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
633 (1.7)	100	MARL, a.a.	2.8 (100:0:0:0:0)
636 (1.3)	100	MARL, white to pale brown, minor pale green, soft, very argillaceous and grades to claystone.	2.5 (100:0:0:0:0)
639	100	MARL, a.a.	2.3 (100:0:0:0:0)
(1.4) 642	100	MARL, a.a.	1.5
(1.5) 645	100	MARL, a.a.	(100:0:0:0:0) 2.5
(1.4) 648	100	MARL, a.a.	(100:0:0:0:0) 1.5
(1.4) 651	100	MARL, a.a.	(100:0:0:0:0) 1.2
(1.3) 654	100	MARL, a.a. – minor glauconitic nodules	(100:0:0:0:0) 1.8
(1.3)	100	MARL, a.a.	(100:0:0:0:0) 5.0
657 (1.5)			(100:0:0:0:0) 6.3
660 (1.4)	100	MARL, white to pale greenish white, soft to firm, very argillaceous and calcareous, abundant (5%) green to black glauconite nodules / pellets.	(100:0:0:0:0)
663 (1.4)	100	MARL, a.a.	1.3 (100:0:0:0:0)
666 (1.3)	100	MARL, a.a. – white to greenish white, very pale grey-brown, soft, very argillaceous and calcareous, abundant (5%) glauconite nodules.	1.8 (100:0:0:0:0)
669 (1.2)	100	MARL, a.a.	2.2 (100:0:0:0:0)
672 (1.4)	100	MARL, a.a.	1.2 (100:0:0:0:0)
675 (1.1)	100	MARL, a.a.	2.5 (100:0:0:0:0)
678	100	MARL, a.a. – abundant glauconite (5%).	3.0 (100:0:0:0:0)
(1.4) 681	100	MARL, a.a. – abundant glauconite (5-10%).	1.5 (100:0:0:0:0)
(1.6) 684	100	MARL, a.a.	1.8
(4.9) 687	100	MARL, a.a.	(100:0:0:0:0)
(1.3) 690	20	SANDSTONE, light brown, very fine, sub-angular to sub-rounded, well	(100:0:0:0:0) 11.0
(1.2)	80	sorted, calcareous, fair inferred porosity, grades to limestone in part. MARL, light brown, light greenish grey, soft to firm, very argillaceous, calcareous, abundant green glauconite pellets.	(100:0:0:0:0)
693	20	SANDSTONE, a.a.	13.7
(0.7) 696	80 10	MARL, a.a. SANDSTONE, a.a.	(100:0:0:0:0) 7.3
(0.6)	80 10	MARL, a.a. COAL, very dark brown to black, dull to sub-vitreous lustre, tabular to conchoidal fracture, gas bleeding from some joints / fractures.	(100:0:0:0:0)
699	10	SANDSTONE, a.a.	157.7 (100:0:0:0:0)
(0.6)	80 10	MARL, a.a. COAL, a.a. – coal percentage is probably > 50% but is not present in the fine fraction as it is mostly in 2cm. or larger pieces.	(100.0.0.0.0)
702 (0.6)	70	SANDSTONE, translucent pale brown, fine to medium, occasionally coarse, sub-rounded, moderate sorted, loose quartz grains, good	286.5 (100:0:0:0:0)
· · ·	20 10	porosity. MARL, a.a. COAL, a.a.	
705 (0.6)	80 20	SANDSTONE, a.a. MARL, a.a.	184.7 (100:0:0:0:0)
708 (1.1)	80	SANDSTONE, translucent pale brown, fine to medium, occasionally coarse, sub-angular to sub-rounded, moderate sorted, loose, very good porosity.	205.2 (100:0:0:0:0)
711 (0.8)	20 90 10	COAL, a.a. SANDSTONE, a.a. COAL, a.a.	161.7 (100:0:0:0:0)
(0.0)	10	1 00/1L, d.d.	

_AKES OIL N.I	TRIFC	<u>0N-1</u>	Cae (unite)
Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
714 (0.8)	90 10	SANDSTONE, a.a. COAL, a.a.	56.8 (100:0:0:0:0)
717 (0.8)	90	SANDSTONE, a.a. – medium to coarse, occasionally very coarse, minor dispersive silty, argillaceous and carbonaceous matrix, generally loose, very good porosity.	37.7 (100:0:0:0:0)
720 (0.7)	10 90 10	COAL, a.a. SANDSTONE, a.a. COAL, a.a.	12.8 (100:0:0:0:0)
723 (0.6)	100 Tr	SANDSTONE, a.a. – sub-angular to rounded, very good porosity. COAL, a.a.	41.3 (100:0:0:0:0)
726 (0.5)	100 Tr	SANDSTONE, a.a COAL, a.a.	66.0 (100:0:0:0:0)
729 (1.8)	100	SANDSTONE, clear to translucent white, medium to very coarse, subangular to rounded, moderate sorted, loose, very good porosity.	16.5 (100:0:0:0:0)
732 (2.7)	100	SANDSTONE, a.a.	6.2 (100:0:0:0:0)
735 (2.1)	100	SANDSTONE, a.a.	5.2 (100:0:0:0:0)
738 (1.1)	100	SANDSTONE, a.a. – medium to very coarse, angular (fractured) to rounded quartz grains, minor coloured chert grains, trace pyrite encrusted and cemented quartz grains, loose, very good porosity.	5.3 (100:0:0:0:0)
741 (0.9)	100	SANDSTONE, a.a.	8.7 (100:0:0:0:0)
744 (1.7)	100	SANDSTONE, a.a.	6.8 (100:0:0:0:0)
747 (1.5)	100	SANDSTONE, a.a.	7.3 (100:0:0:0:0)
750 (1.9)	100	SANDSTONE, a.a.	5.8 (100:0:0:0:0)
753 (0.9)	100	SANDSTONE, a.a.	3.0 (100:0:0:0:0)
756 (1.3)	100	SANDSTONE, a.a medium to very coarse, very good porosity.	4.0 (100:0:0:0:0)
759 (0.8)	100	SANDSTONE, a.a.	3.2 (100:0:0:0:0)
762 (0.8)	100	SANDSTONE, a.a.	4.0 (100:0:0:0:0)
765 (0.8)	100	SANDSTONE, a.a.	4.8 (100:0:0:0:0)
768 (1.5)	100	SANDSTONE, a.a. – medium to very coarse, sub-angular to rounded, moderate sorted, very good porosity.	1.0 (100:0:0:0:0)
771 (2.3)	100	SANDSTONE, a.a.	1.0 (100:0:0:0:0)
774 (1.9)	100	SANDSTONE, a.a predominantly medium to coarse, very good porosity.	1.3 (100:0:0:0:0)
777 (1.9)	100	SANDSTONE, a.a.	1.7 (100:0:0:0:0) 1.8
780 (1.2)	100	SANDSTONE, a.a. – medium to very coarse.	(100:0:0:0:0)
783 (1.2)	100	SANDSTONE, a.a.	1.3 (100:0:0:0:0)
786 (0.8)	100	SANDSTONE, a.a.	1.3 (100:0:0:0:0)
789 (0.8)	100	SANDSTONE, a.a.	2.0 (100:0:0:0:0)
792 (0.7)	100	SANDSTONE, a.a.	1.0 (100:0:0:0:0)
795 (0.6)	100	SANDSTONE, a.a.	1.7 (100:0:0:0:0)
798 (1.0)	100	SANDSTONE, a.a.	1.0 (100:0:0:0:0)
801 (0.7)	100	SANDSTONE, a.a.	1.0 (100:0:0:0:0)

AKES OIL N	I.L. TRIFC	<u>JN-1</u>	Gas (units)
Depth	Percent	Lithological Description	(Breakdown %)
804 (0.7)	100	SANDSTONE, translucent white, fine to very coarse, predominantly medium to coarse, sub-angular to rounded, moderate sorted, loose	0.5 (100:0:0:0:0)
		quartz grains, very good porosity.	
807 (0.6)	100	SANDSTONE, a.a.	0.0 (100:0:0:0:0)
810	100	SANDSTONE, a.a translucent white, translucent very pale brown.	0.2
(0.7)			(100:0:0:0:0)
813	100	SANDSTONE, a.a.	0.3 (100:0:0:0:0)
(0.6) 816	100	SANDSTONE, a.a.	0.8
(1.0)		DANDOTONE, a.a.	(100:0:0:0:0)
819 (0.9)	100	SANDSTONE, a.a.	0.5 (100:0:0:0:0)
822	100	SANDSTONE, a.a.	0.8
(0.8)			(100:0:0:0:0)
825	100	SANDSTONE, a.a.	0.0 (100:0:0:0:0)
(0.6) 828	100	SANDSTONE, a.a translucent white, fine to very coarse, very good	0.0
(0.8)		porosity.	(100:0:0:0:0)
831	100	SANDSTONE, a.a.	0.0 (100:0:0:0:0)
(0.8) 834	100	SANDSTONE, a.a. – medium to very coarse.	0.0
(1.0)	100	O/HYDOTONE, d.d. Modiante very econoci.	(100:0:0:0:0)
837	100	SANDSTONE, a.a.	0.0
(1.2) 840	100	SANDSTONE, a.a. – granular in part.	(100:0:0:0:0) 0.0
(1.1)	100	SANDSTONE, a.a. — granular in part.	(100:0:0:0:0)
843	100	SANDSTONE, a.a.	0.0
(1.4)	100	SANDSTONE, a.a medium to very coarse, granular in part, loose,	(100:0:0:0:0) 0.7
846 (1.4)	100 Tr	very good porosity. SILTSTONE, medium to dark brown, argillaceous, very carbonaceous.	(100:0:0:0:0)
849	50	SANDSTONE, a.a.	1.0
(7.1)	50	COAL, very dark brown to black, sub-vitreous lustre, tabular to platey fracture.	(100:0:0:0:0)
852	100	SANDSTONE, a.a clear to white, translucent pale brown, medium to	0.1
(2.1)	_	very coarse, loose, very good porosity.	(100:0:0:0:0)
855	100	COAL, a.a. – silty and argillaceous in part. SANDSTONE, a.a.	0.3
(3.5)	Tr	COAL, a.a.	(100:0:0:0:0)
858	100	SANDSTONE, a.a.	1.0
(4.0)	Tr	COAL, a.a. SANDSTONE, a.a. – predominantly coarse to very coarse.	(100:0:0:0:0) 1.0
861 (2.8)	90	COAL, a.a. — predominantly coarse to very coarse.	(100:0:0:0:0)
864	100	SANDSTONE, a.a medium to very coarse, very good porosity.	0.8
(3.1)	Tr	CLAYSTONE, light to moderate brown, soft, dispersive, silty, carbonaceous.	(100:0:0:0:0)
867	100	SANDSTONE, a.a.	1.5
(0.8)	Tr		(100:0:0:0:0) 1.0
870	100 Tr	SANDSTONE, a.a. CLAYSTONE, a.a.	(100:0:0: <u>0:0</u>)
(1.2) 873	100	SANDSTONE, a.a.	1.0
(1.4)	Tr	CLAYSTONE, a.a.	(100:0:0:0:0)
876 (2.8)	100	SANDSTONE, a.a. – coarse to very coarse, granular in part, angular to sub-angular, moderate sorted, loose quartz grains, very good porosity. COAL, a.a.	0.8 (100:0:0:0:0)
	Tr		
879	100	SANDSTONE, a.a.	0.0 (100:0:0:0:0)
(1.7) 882	100	COAL, a.a. SANDSTONE, a.a. – coarse to very coarse, angular to sub-rounded,	0.0
(1.3)		very good porosity.	(100:0:0:0:0)
885	100	SANDSTONE, a.a.	0.0
(1.3)			(100:0:0:0:0)

Depth	Percent	Lithological Description	Gas (units) (Breakdown %
888	80	SANDSTONE, a.a.	0.0
(1.5)	10	CLAYSTONE, white, light to dark brown, soft, dispersive, carbonaceous,	(100:0:0:0:0)
(1.5)	'	silty in part.	,
	10	COAL, a.a.	
901	80	SANDSTONE, a.a.	0.0
891		CLAYSTONE, a.a.	(100:0:0:0:0)
(2.5)	10	·	(100.0.0.0.0)
	10	COAL, a.a.	0.0
894	100	SANDSTONE, a.a coarse to very coarse, sub-angular to rounded.	0.2
(5.3)	Tr	COAL, a.a.	(100:0:0:0:0)
897	90	SANDSTONE, a.a.	0.5
(4.9)	10	CLAYSTONE, a.a.	(100:0:0:0:0)
900	60	SANDSTONE, a.a.	0.2
(2.6)	30	CLAYSTONE, a.a.	(100:0:0:0:0)
` ,	10	COAL, a.a.	
903	60	SANDSTONE, a.a.	0.2
(2.7)	30	CLAYSTONE, a.a.	(100:0:0:0:0)
(2.7)	10	COAL, a.a.	,
906	70	SANDSTONE, a.a.	0.0
	30	CLAYSTONE, a.a.	(100:0:0:0:0)
(2.1)			0.0
909	80	SANDSTONE, a.a.	(100:0:0:0:0)
(1.8)	20	CLAYSTONE, a.a.	
912	50	SANDSTONE, a.a medium to very coarse. Sub-angular to sub-	0.3
(1.4)		rounded, very good porosity.	(100:0:0:0:0)
	50	CLAYSTONE, a.a.	
915	100	SANDSTONE, a.a medium to very coarse, sub-angular to rounded,	0.2
(7.1)		very good porosity.	(100:0:0:0:0)
918	70	SANDSTONE, a.a.	0.7
(1.4)	l 30 l	CLAYSTONE, a.a.	(95:5:0:0:0)
921	70	SANDSTONE, a.a.	1.3
(3.1)	20	CLAYSTONE, light to dark brown, soft to firm, carbonaceous, dispersive,	(95:5:0:0:0)
(0.1)		silty in part.	`
	10	COAL, a.a.	
924	80	SANDSTONE, a.a.	2.0
	10	CLAYSTONE, a.a.	(100:0:0:0:0)
(1.6)	10	COAL, a.a.	(100,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
		SANDSTONE, a.a coarse to very coarse, sub-angular to rounded,	2.8
927	90		(96:4:0:0:0)
(2.0)	1	very good porosity.	(30.4.0.0.0)
·			
\	Tr		
	10	COAL, a.a.	0.0
930	10 90	SANDSTONE, a.a.	2.0
	10 90 Tr	SANDSTONE, a.a. CLAYSTONE, a.a.	2.0 (100:0:0:0:0)
930 (1.8)	10 90 Tr 10	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a.	(100:0:0:0:0)
930 (1.8)	10 90 Tr 10 70	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a.	1.0
930 (1.8)	10 90 Tr 10	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a.	(100:0:0:0:0)
930 (1.8)	10 90 Tr 10 70	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a.	(100:0:0:0:0) 1.0 (100:0:0:0:0)
930 (1.8)	10 90 Tr 10 70 20	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a.	1.0 (100:0:0:0:0)
930 (1.8) 933 (2.1)	10 90 Tr 10 70 20	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a.	(100:0:0:0) 1.0 (100:0:0:0:0)
930 (1.8) 933 (2.1)	10 90 Tr 10 70 20 10	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7)	10 90 Tr 10 70 20 10 60 20 20	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a.	1.0 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7)	10 90 Tr 10 70 20 10 60 20	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7)	10 90 Tr 10 70 20 10 60 20 20 100	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9)	10 90 Tr 10 70 20 10 60 20 20 100 Tr	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9)	10 90 Tr 10 70 20 10 60 20 20 100	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9)	10 90 Tr 10 70 20 10 60 20 20 100 Tr	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945	10 90 Tr 10 70 20 10 60 20 20 100 Tr	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9)	10 90 Tr 10 70 20 10 60 20 20 100 Tr	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a. SANDSTONE, clear to translucent white, translucent very pale brown, predominantly coarse to very coarse, sub-angular to rounded, moderate	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945	10 90 Tr 10 70 20 10 60 20 20 100 Tr	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0) 1.5 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945	10 90 Tr 10 70 20 10 60 20 20 100 Tr	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a. SANDSTONE, clear to translucent white, translucent very pale brown, predominantly coarse to very coarse, sub-angular to rounded, moderate	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0) 1.5 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945 (3.9)	10 90 Tr 10 70 20 10 60 20 20 100 Tr 100	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a. SANDSTONE, clear to translucent white, translucent very pale brown, predominantly coarse to very coarse, sub-angular to rounded, moderate sorted, trace brown lignitic clay matrix, loose, very good porosity.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0) 1.5 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945 (3.9)	10 90 Tr 10 70 20 10 60 20 20 100 Tr 100	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a. SANDSTONE, clear to translucent white, translucent very pale brown, predominantly coarse to very coarse, sub-angular to rounded, moderate sorted, trace brown lignitic clay matrix, loose, very good porosity. SANDSTONE, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0) 1.5 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945 (3.9) 948 (1.5)	10 90 Tr 10 70 20 10 60 20 20 100 Tr 100 100	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. – medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a. SANDSTONE, clear to translucent white, translucent very pale brown, predominantly coarse to very coarse, sub-angular to rounded, moderate sorted, trace brown lignitic clay matrix, loose, very good porosity. SANDSTONE, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0) 0.3 (100:0:0:0:0) 0.8
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945 (3.9)	10 90 Tr 10 70 20 10 60 20 20 100 Tr 100 100 60 100	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. — medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a. SANDSTONE, clear to translucent white, translucent very pale brown, predominantly coarse to very coarse, sub-angular to rounded, moderate sorted, trace brown lignitic clay matrix, loose, very good porosity. SANDSTONE, a.a. SANDSTONE, a.a. CLAYSTONE, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0) 0.3 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945 (3.9) 948 (1.5) 951 (2.8)	10 90 Tr 10 70 20 10 60 20 20 100 Tr 100 100 60 100 30	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. — medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a. SANDSTONE, clear to translucent white, translucent very pale brown, predominantly coarse to very coarse, sub-angular to rounded, moderate sorted, trace brown lignitic clay matrix, loose, very good porosity. SANDSTONE, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0) 0.3 (100:0:0:0:0) 0.8 (100:0:0:0:0)
930 (1.8) 933 (2.1) 936 (1.7) 939 (1.9) 942 (5.2) 945 (3.9) 948 (1.5)	10 90 Tr 10 70 20 10 60 20 20 100 Tr 100 100 60 100	SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. COAL, a.a. SANDSTONE, a.a. CLAYSTONE, a.a. CLAYSTONE, a.a. COAL, a.a. SANDSTONE, a.a. — medium to very coarse, trace brown lignitic clay matrix / stain, loose, very good porosity. COAL, a.a. SANDSTONE, a.a. SANDSTONE, a.a. SANDSTONE, clear to translucent white, translucent very pale brown, predominantly coarse to very coarse, sub-angular to rounded, moderate sorted, trace brown lignitic clay matrix, loose, very good porosity. SANDSTONE, a.a. SANDSTONE, a.a. CLAYSTONE, a.a.	1.0 (100:0:0:0:0) 1.0 (100:0:0:0:0) 1.7 (100:0:0:0:0) 1.5 (100:0:0:0:0) 0.3 (100:0:0:0:0) 0.8

LAKES OIL N.I	L. TRIFC	<u>N-1</u>	Coo (unito)
Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
957	50	SANDSTONE, a.a.	1.8
(1.6)	10	CLAYSTONE, a.a.	(100:0:0:0:0)
	40	COAL, a.a.	1.0
960	40	SANDSTONE, a.a.	1.3 (98:2:0:0:0)
(2.1)	10 50	CLAYSTONE, a.a. COAL, a.a.	(90.2.0.0.0)
963	70	SANDSTONE, a.a.	1.3
(2.2)	30	COAL, a.a.	(98:2:0:0:0)
966	80	SANDSTONE, a.a medium to very coarse, common orange-brown	1.0
(1.5)		chert? grains, loose, very good porosity.	(98:2:0:0:0)
	20	COAL, a.a.	1.7
969 (1.5)	100	SANDSTONE, a.a.	(100:0:0:0:0)
972	100	SANDSTONE, a.a medium to granular.	1.0
(1.3)	100	5/1/25757CL, a.a.	(100:0:0:0:0)
975	100	SANDSTONE, a.a.	1.7
(1.4)			(100:0:0:0:0)
978	100	SANDSTONE, a.a.	1.7
(2.1)			(100:0:0:0:0)
981	100	SANDSTONE, a.a.	1.0
(2.4)		O.M.DOTOME	(100:0:0:0:0) 1.3
984	100	SANDSTONE, a.a.	(97:3:0:0:0)
(1.7)	100	SANDSTONE, a.a.	1.3
987 (2.6)	100	SANDSTONE, a.a.	(97:3:0:0:0)
990	100	SANDSTONE, a.a.	1.0
(3.3)	100	0/11/50 TOTAL, d.d.	(94:6:0:0:0)
993	70	SANDSTONE, a.a.	1.3
(3.7)	10	CLAYSTONE, a.a.	(94:6:0:0:0)
	20	COAL, a.a.	
996	100	SANDSTONE, a.a.	1.0
(4.3)	400	CANIDOTONIE	(94:6:0:0:0) 1.0
999	100	SANDSTONE, a.a. COAL, a.a.	(94:6:0:0:0)
(0.9) 1002	Tr 100	SANDSTONE, a.a. – medium to very coarse.	1.0
(2.4)	Tr	CLAYSTONE, a.a.	(94:6:0:0:0)
1005	100	SANDSTONE, a.a.	1.0
(3.6)	Tr	COAL, a.a.	(94:6:0:0:0)
1008	100	SANDSTONE, a.a.	1.0
(2.2)	Tr	COAL, a.a.	(93:7:0:0:0)
1011	100	SANDSTONE, a.a.	1.0
(1.7)	Tr	COAL, a.a.	(93:7:0:0:0) 1.0
1014	100	SANDSTONE, a.a.	(93:7:0:0:0)
(3.3) 1017	100	SANDSTONE, a.a.	0.8
(2.6)	100	SANDSTONE, a.a.	(93:7:0:0:0)
1020	100	SANDSTONE, a.a.	1.0
(2.6)	,00		(93:7:0:0:0)
1023	100	SANDSTONE, a.a.	1.0
(1.7)			(93:7:0:0:0)
1026	100	SANDSTONE, a.a sub-angular to sub-rounded, moderate sorted, very	1.0
(0.7)		good porosity.	(93:7:0:0:0) 1.0
1029	100	SANDSTONE, a.a.	(93:7:0:0:0)
(0.6)	100	SANDSTONE, a.a. – angular to sub-rounded.	1.0
1032 (0.9)	100	OMNUOTONE, a.a. — angulai to sub-toutided.	(92:8:0:0:0)
1035	100	SANDSTONE, a.a.	1.0
(1.6)	'00		(91:9:0:0:0)
1038	100	SANDSTONE, translucent white, medium to very coarse, angular to sub-	1.0
(0.8)		rounded, moderate sorted, loose quartz grains, very good porosity.	(92:8:0:0:0)
1041	100	SANDSTONE, a.a.	1.0
(2.2)			(91:9:0:0:0)
1044	100	SANDSTONE, a.a.	1.0
(4.1)	Tr	COAL, a.a.	(90:10:0:0:0)

Gas (units) (Breakdown %) Percent Lithological Description Depth SANDSTONE, a.a. 1.0 1047 90 (91:9:0:0:0) (4.0)COAL, a.a. 10 SANDSTONE, a.a. - sub-angular to sub-rounded, trace white clay 1.0 1050 100 (94:6:0:0:0) matrix, very good porosity. (3.9)100 SANDSTONE, a.a. 1.0 1053 (96:4:0:0:0) (1.3)1056 100 SANDSTONE, a.a. 1.0 (97:3:0:0:0) (1.1)0.8 1059 100 SANDSTONE, a.a. (98:2:0:0:0) (1.3)SANDSTONE, a.a. - mostly coarse to very coarse, angular to sub-1.0 100 1062 (100:0:0:0:0) rounded, very good porosity. (2.3)0.2 100 SANDSTONE, a.a. 1065 (100:0:0:0:0) (1.1)SANDSTONE, a.a. - medium to very coarse, angular to sub-rounded. 0.2 1068 100 (100:0:0:0:0) (1.2)0.0 SANDSTONE, a.a. 1071 100 (100:0:0:0:0)(1.5)0.0 SANDSTONE, a.a. - medium to very coarse. 1074 100 (100:0:0:0:0)(1.3)0.3 100 SANDSTONE, a.a. 1077 (100:0:0:0:0) (1.5)0.0 SANDSTONE, a.a. 1080 100 (100:0:0:0:0) (4.1)SANDSTONE, a.a. 0.7 1083 100 (100:0:0:0:0) (1.1)0.5 SANDSTONE, a.a. 1086 90 (100:0:0:0:0) 10 COAL, a.a. (3.5)0.0 1089 90 SANDSTONE, a.a. (100:0:0:0:0) (4.2)10 COAL, a.a. 0.0 SANDSTONE, a.a. - coarse to very coarse. 1092 100 (100:0:0:0:0) (4.5)0.5 SANDSTONE, a.a. 1095 100 (100:0:0:0:0) (1.6)0.7 SANDSTONE, a.a. - coarse to very coarse, sub-angular to rounded, 100 1098 (100:0:0:0:0) poor to moderate sorted quartz grains, very good porosity. (1.7)100 SANDSTONE, a.a. - medium to very coarse, angular to sub-rounded, 1.0 1101 (100:0:0:0:0) (1.0)poor to moderate sorted quartz grains, very good porosity. 0.7 1104 100 SANDSTONE, a.a. (100:0:0:0:0) (1.2)SANDSTONE, a.a. 0.3 100 1107 (100:0:0:0:0) (1.0)1.0 100 SANDSTONE, a.a. 1110 (100:0:0:0:0) (2.8)SANDSTONE, a.a. 0.8 100 1113 (100:0:0:0:0) (2.6)02 100 SANDSTONE, a.a. 1116 (100:0:0:0:0) (2.0)0.7 1119 100 SANDSTONE, a.a. (100:0:0:0:0)(3.1)0.3 1122 100 SANDSTONE, a.a. (100:0:0:0:0) (4.2)0.3 SANDSTONE, a.a. 100 1125 (100:0:0:0:0) (3.8)0.7 SANDSTONE, a.a. - medium to very coarse, sub-angular to rounded, 100 1128 (5.8)(100:0:0:0:0) poor to moderate sorted, loose quartz grains, very good porosity. 0.5 100 SANDSTONE, a.a. 1131 (100:0:0:0:0) (2.2)0.7 SANDSTONE, a.a. 1134 100 (100:0:0:0:0) (1.9)0.8 100 SANDSTONE, a.a. 1137 (100:0:0:0:0) (2.8)SANDSTONE, a.a. - medium to coarse, occasional very coarse, sub-1.0 100 1140 (100:0:0:0:0) angular to sub-rounded, moderate sorted, loose, trace white argillaceous (2.4)matrix.

Depth	<u>LAKES OIL N.L</u>	. TRIFC	<u>N-1</u>	Gas (units)
(2.1) (2.1)	Depth	Percent	Lithological Description	(Breakdown %)
1146		100	SANDSTONE, a.a medium to very coarse.	
1.149	1146	100	SANDSTONE, a.a. – medium to coarse, some very coarse.	0.8
(2.3) (100.00:00:00:0) (100.00:00:00:0) (100.00:00:00:00:00:00:00:00:00:00:00:00:0		100	SANDSTONE a.a. – medium to very coarse	
(5.3) SANDSTONE, a.a. (1000:00:00:00) (2.2) 1198 100 SANDSTONE, a.a. (1000:00:00:00) (3.3) 101 100 SANDSTONE, a.a. (1000:00:00:00) (3.4) 100 SANDSTONE, a.a. (1000:00:00:00) (2.7) 1167 100 SANDSTONE, a.a. (1000:00:00:00) (2.8) perosity. (1000:00:00:00) (3.4) 1170 100 SANDSTONE, a.a. - sub-angular to sub-rounded. (1000:00:00:00) (4.1) 1173 100 SANDSTONE, a.a. (1000:00:00:00) (3.4) 1176 100 SANDSTONE, a.a. (1000:00:00:00) (3.4) 1177 100 SANDSTONE, a.a. (1000:00:00:00) (3.4) 1179 100 SANDSTONE, a.a. (1000:00:00:00) (4.2) 1179 100 SANDSTONE, a.a. (1000:00:00:00) (4.2) 1189 50 SANDSTONE, a.a. (1000:00:00:00) (4.2) 1180 50 SANDSTONE, a.a. (1000:00:00:00) (4.2) 1181 50 SANDSTONE, a.a. (1000:00:00:00) (4.2) 1182 50 SANDSTONE, a.a. (1000:00:00:00:00:00:00:00:00:00:00:00:00		100		(100:0:0:0:0)
1155		100	SANDSTONE, a.a. – medium to coarse.	
1158	1155	100	SANDSTONE, a.a.	0.5
1161		100	SANDSTONE, a.a.	0.3
(32) 1164 100 SANDSTONE, a.a. (100:0:0:0:0) 1167 (2.8) 100 SANDSTONE, a.a medium to very coarse, sub-angular, loose, good (2.2) 1170 1100 SANDSTONE, a.a sub-angular to sub-rounded. (100:0:0:0:0) 1171 1100 SANDSTONE, a.a sub-angular to sub-rounded. (100:0:0:0:0) 1173 100 SANDSTONE, a.a. (100:0:0:0:0) 1176 100 SANDSTONE, a.a. (100:0:0:0:0) 1177 100 SANDSTONE, a.a. (100:0:0:0:0) 1178 100 SANDSTONE, a.a coarse to very coarse, sub-rounded, good porosity. (100:0:0:0:0) 1179 100 SANDSTONE, a.a coarse to very coarse, sub-rounded, good porosity. (100:0:0:0:0) 1182 50 SANDSTONE, a.a. (100:0:0:0:0) 1185 30 SANDSTONE, a.a rare pyrite. (100:0:0:0:0:0) 1186 30 SANDSTONE, a.a rare pyrite. (100:0:0:0:0:0) 1188 80 SANDSTONE, a.a rare pyrite. (100:0:0:0:0:0) 1191 100 SANDSTONE, a.a. (100:0:0:0:0) 1192 103 SANDSTONE, a.a. (100:0:0:0:0) 1193 104 105 SANDSTONE, a.a. (100:0:0:0:0) 1194 105 SANDSTONE, a.a. (100:0:0:0:0) 1195 105 SANDSTONE, a.a. (100:0:0:0:0) 1196 107 SANDSTONE, a.a. (100:0:0:0:0) 1197 108 SANDSTONE, a.a. (100:0:0:0:0) 1198 108 SANDSTONE, a.a. (100:0:0:0:0) 1199 109 SANDSTONE, a.a. (100:0:0:0:0) 1100 100:0:0:0:0 1100 1	(3.0)	100	CANDCTONE	
1164	1	100	SANDSTONE, a.a.	
1167	1164	100	SANDSTONE, a.a.	
1170	1167	100	·	0.2
(4.1) (100:00:00:0) 1173 100 SANDSTONE, a.a. (100:00:00:0) (3.4) 0 (100:00:00:0) (1176) 100 SANDSTONE, a.a. 0.0 (1179) 100 SANDSTONE, a.a coarse to very coarse, sub-rounded, good porosity. (100:00:0:00) (4.2) 1182 50 SANDSTONE, a.a coarse to very coarse, sub-rounded, good porosity. (100:00:0:0) (1185) 30 SANDSTONE, a.a rare pyrite. (100:00:0:0) (7.8) 70 CLAYSTONE, a.a rare pyrite. (100:00:0:0:0) (188) 80 SANDSTONE, a.a (100:00:0:0:0) (19.3) 20 CLAYSTONE, a.a (100:00:0:0:0) (8.1) 1191 100 SANDSTONE, a.a (100:00:0:0:0) (8.1) 80 SANDSTONE, a.a (100:00:0:0:0) (19.6) 20 CLAYSTONE, a.a (100:00:0:0:0) (19.6) 20 CLAYSTONE, a.a (100:00:0:0:0) (19.8) 20 CLAYSTONE, a.a (100:00:0:0:0) (19.8) 20 CLAYSTONE, a.a (100:00:00:0:0) (17.3) 3		100	porosity. SANDSTONE a.a. – sub-angular to sub-rounded.	
1176	(4.1)			(100:0:0:0:0)
1176		100	SANDSTONE, a.a.	
1179	1176	100	SANDSTONE, a.a.	
(4.2) 1182		100	SANDSTONE, a.a. – coarse to very coarse, sub-rounded, good porosity.	
(10.8) 50 CLAYSTONE, white to pale brown and grey-brown, soft, dispersive, amorphous, carbonaceous specks, silty in part. 1185 30 SANDSTONE, a.a. – rare pyrite. (7.8) 70 CLAYSTONE, a.a. (100:0:0:0:0) 1188 80 SANDSTONE, a.a. (100:0:0:0:0) 1191 100 SANDSTONE, a.a. (100:0:0:0:0) 1191 100 SANDSTONE, a.a. (100:0:0:0:0) 1191 80 SANDSTONE, a.a. (100:0:0:0:0) 1197 80 SANDSTONE, a.a. (100:0:0:0:0) 1197 80 SANDSTONE, a.a. (100:0:0:0:0) 1197 80 SANDSTONE, a.a. (98:6) 20 CLAYSTONE, a.a. (93:7:0:0:0) 1197 80 SANDSTONE, a.a. (93:7:0:0:0) 1100 40 SANDSTONE, a.a. (100:0:0:0:0) 1100 50 CLAYSTONE, white to pale brown, soft, dispersive, amorphous, carbonaceous. 1100 40 SANDSTONE, a.a. (93:7:0:0:0) 1100 50 CLAYSTONE, white to pale brown, soft, dispersive, amorphous, carbonaceous. 1100 50 CLAYSTONE, a.a. (10:0:0:0:0:0) 1100 50 SANDSTONE, a.a. (10:0:0:0:0:0) 1100 50 SANDSTONE, a.a. (10:0:0:0:0:0) 1100 50 SANDSTONE, a.a. (10:0:0:0:0:0) 1110 50 SANDSTONE, a.a. (10:0:0:0:0:0) 1111 50 50 SANDSTONE, a.a. (10:0:0:0:0:0) 1111 50 SANDSTONE, a.a. (10:0:0:0:0:0:0) 1111 50 SANDSTONE, a.a. (10:0:0:0:0:0:0)	(4.2)			
1185		l	CLAYSTONE, white to pale brown and grey-brown, soft, dispersive,	
(7.8) 70 CLAYSTONE, a.a. (100:0:0:0:0) 1188 80 SANDSTONE, a.a. (100:0:0:0:0) 1191 100 SANDSTONE, a.a. (100:0:0:0:0) 1191 100 SANDSTONE, a.a. (100:0:0:0:0) 1194 80 SANDSTONE, a.a. (100:0:0:0:0) 1197 80 SANDSTONE, a.a. (100:0:0:0:0) 1197 80 SANDSTONE, a.a. (100:0:0:0:0) 1197 80 SANDSTONE, a.a. (93:7:0:0:0) Tr COAL, a.a. (93:7:0:0:0) Tr COAL, a.a. (93:7:0:0:0) Tr COAL, a.a. (2.2 (93:7:0:0:0) Tr COAL, a.a. (2.2 (93:7:0:0:0) Tr COAL, a.a. (100:0:0:0:0) 1203 70 SANDSTONE, translucent white, medium to very coarse, angular to subangular, moderate sorted, loose quartz grains, good porosity. (93:7:0:0:0) 1206 70 SANDSTONE, a.a. – angular to sub-rounded. (1.5 (100:0:0:0:0) 1209 60 SANDSTONE, a.a. – angular to sub-rounded. (1.5 (100:0:0:0:0) 1212 70 SANDSTONE, a.a. (100:0:0:0:0) 1212 70 SANDSTONE, a.a. (100:0:0:0:0) 1215 70 SANDSTONE, a.a. (100:0:0:0:0) 1216 70 SANDSTONE, a.a. (100:0:0:0:0) 1217 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. (100:0:0:0:0) 1222 80 SANDSTONE, a.a. (100:0:0:0:0) 1223 90 SANDSTONE, a.a. (100:0:0:0:0) 1224 90 SANDSTONE, a.a. (100:0:0:0:0) 1224 90 SANDSTONE, translucent white, medium to very coarse, angular to subrounded, (1.0 (100:0:0:0:0) 1224 90 SANDSTONE, a.a. (100:0:0:0:0) 1225 70 SANDSTONE, a.a. (100:0:0:0:0) 1226 70 SANDSTONE, a.a. (100:0:0:0:0) 1227 80 SANDSTONE, a.a. (100:0:0:0:0) 1228 90 SANDSTONE, a.a. (100:0:0:0:0) 1299 100:0:0:0:0:0	1105	30		0.0
(9.3) 20 CLAYSTONE, a.a. (100:0:0:0:0) 1191		-	CLAYSTONE, a.a.	(100:0:0:0:0)
1191				
1194	1191			0.2
(9.6) 20 CLAYSTONE, a.a. (100:0:0:0:0) 1197 80 SANDSTONE, a.a. 0.5 (9.8) 20 CLAYSTONE, a.a. (93:7:0:0:0) Tr COAL, a.a. (93:7:0:0:0) 1200 40 SANDSTONE, white to pale brown, soft, dispersive, amorphous, carbonaceous. (93:7:0:0:0) (17.3) 60 CLAYSTONE, white to pale brown, soft, dispersive, amorphous, carbonaceous. (93:7:0:0:0) (12.0) 30 CLAYSTONE, translucent white, medium to very coarse, angular to subangular, moderate sorted, loose quartz grains, good porosity. (93:7:0:0:0) (12.0) 30 CLAYSTONE, a.a. 1.5 (12.0) 30 CLAYSTONE, a.a. (100:0:0:0:0) (12.0) 30 CLAYSTONE, a.a. (100:0:0:0:0) (12.0) 30 CLAYSTONE, a.a. (100:0:0:0:0) (12.0) 40 CLAYSTONE, a.a. (100:0:0:0:0) (12.1) 70 SANDSTONE, a.a. (100:0:0:0:0) (12.1) 70 SANDSTONE, a.a. (100:0:0:0:0) (12.1) 30 CLAYSTONE, a.a. <		80	SANDSTONE, a.a.	
(9.8) 20 CLAYSTONE, a.a. (93:7:0:0:0) 1200 40 SANDSTONE, a.a. 2.2 (17.3) 60 CLAYSTONE, white to pale brown, soft, dispersive, amorphous, carbonaceous. 2.2 1203 70 SANDSTONE, translucent white, medium to very coarse, angular to subangular, moderate sorted, loose quartz grains, good porosity. 2.0 (12.0) 30 CLAYSTONE, a.a. 1.5 (5.6) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1206 70 SANDSTONE, a.a. (100:0:0:0:0) (5.6) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1209 60 SANDSTONE, a.a. (100:0:0:0:0) 1212 70 SANDSTONE, a.a. (100:0:0:0:0) 1212 70 SANDSTONE, a.a. (100:0:0:0:0) 1215 70 SANDSTONE, a.a. (100:0:0:0:0) 1215 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. (100:0:0:0:0) 1221	(9.6)	20	CLAYSTONE, a.a.	
1200				
(17.3) 60 CLAYSTONE, white to pale brown, soft, dispersive, amorphous, carbonaceous. Tr COAL, a.a. 1203 70 SANDSTONE, translucent white, medium to very coarse, angular to subangular, moderate sorted, loose quartz grains, good porosity. 1206 70 SANDSTONE, a.a. 1209 60 SANDSTONE, a.a. – angular to sub-rounded. (5.6) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1209 60 SANDSTONE, a.a. (100:0:0:0:0) 1212 70 SANDSTONE, a.a. (100:0:0:0:0) 1212 70 SANDSTONE, a.a. (100:0:0:0:0) 1215 70 SANDSTONE, a.a. (100:0:0:0:0) 1215 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. (100:0:0:0:0) 1224 90 SANDSTONE, translucent white, medium to very coarse, angular to subrounded, poor to moderate sorted, loose quartz grains, minor grey and grey-green chert and fine grained sandstone grains, rare pyrite	(3.6)			
Carbonaceous.			SANDSTONE, a.a.	1
1203	(17.3)	60		(55.7.5.5.5)
(12.0) angular, moderate sorted, loose quartz grains, good porosity. (93:7:0:0:0) 1206 70 SANDSTONE, a.a. – angular to sub-rounded. 1.5 (5.6) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1209 60 SANDSTONE, a.a. (100:0:0:0:0) (7.8) 40 CLAYSTONE, a.a. (100:0:0:0:0) 1212 70 SANDSTONE, a.a. (100:0:0:0:0) 1215 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. 1.0 (12.2) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. 1.0 (7.8) 20 CLAYSTONE, translucent white, medium to very coarse, angular to subrounded, poor to moderate sorted, loose quartz grains, minor grey and grey-green chert and fine grained sandstone grains, rare pyrite 0.5			COAL, a.a.	2.0
30 CLAYSTONE, a.a. 1.5 (100:0:0:0:0) 1.5 (100:0:0:0:0:0) 1.5 (100:0:0:0:0:0) 1.5 (100:0:0:0:0:0) 1.5 (100:0:0:0:0:0) 1.5 (100:0:0:0:0:0) 1.5 (100:0:0:0:0:0) 1.5 (100:0:0:0:0:0) 1.5 (100:0:0:0:0:0) 1.5 (100:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0		70	SANDS I ONE, translucent white, medium to very coarse, angular to sub-	
(5.6) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1209 60 SANDSTONE, a.a. 1.2 (7.8) 40 CLAYSTONE, a.a. (100:0:0:0:0) 1212 70 SANDSTONE, a.a. (100:0:0:0:0) 1215 70 SANDSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) 1221 30 CLAYSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. (100:0:0:0:0) 1224 90 SANDSTONE, translucent white, medium to very coarse, angular to subrounded, poor to moderate sorted, loose quartz grains, minor grey and grey-green chert and fine grained sandstone grains, rare pyrite 0.5	(12.0)	30	CLAYSTONE, a.a.	
1209	1			
(7.8) 40 CLAYSTONE, a.a. (100:0:0:0:0) 1212 70 SANDSTONE, a.a. 1.8 (5.1) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1215 70 SANDSTONE, a.a. (100:0:0:0:0) (7.3) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1218 70 SANDSTONE, a.a. (100:0:0:0:0) (12.2) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. (100:0:0:0:0) 1224 90 SANDSTONE, translucent white, medium to very coarse, angular to subrounded, poor to moderate sorted, loose quartz grains, minor grey and grey-green chert and fine grained sandstone grains, rare pyrite 0.5				
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1218				1
(12.2) 30 CLAYSTONE, a.a. (100:0:0:0:0) 1221 80 SANDSTONE, a.a. (100:0:0:0:0) 1224 90 SANDSTONE, translucent white, medium to very coarse, angular to subrounded, poor to moderate sorted, loose quartz grains, minor grey and grey-green chert and fine grained sandstone grains, rare pyrite (100:0:0:0:0)				
1221 80 SANDSTONE, a.a. 1.0 (100:0:0:0:0) 1224 90 SANDSTONE, translucent white, medium to very coarse, angular to subrounded, poor to moderate sorted, loose quartz grains, minor grey and grey-green chert and fine grained sandstone grains, rare pyrite				
(7.8) 20 CLAYSTONE, a.a. (100:0:0:0) 1224 90 SANDSTONE, translucent white, medium to very coarse, angular to subrounded, poor to moderate sorted, loose quartz grains, minor grey and grey-green chert and fine grained sandstone grains, rare pyrite (100:0:0:0:0)			SANDSTONE, a.a.	1.0
(7.4) rounded, poor to moderate sorted, loose quartz grains, minor grey and grey-green chert and fine grained sandstone grains, rare pyrite (100:0:0:0:0)			CLAYSTONE, a.a.	
grey-green chert and fine grained sandstone grains, rare pyrite	l l	90		
	(7.4)			(100.0.0.0.0)
			cemented aggregates, good porosity.	
10 CLAYSTONE, a.a.		10		

Gas (units)

LAKES OIL N.L. TRIFON-1

(Breakdown %) Lithological Description Depth Percent SANDSTONE, a.a. - coarse to very coarse; minor white to cream very 100 1227 fine to fine grained silica cemented aggregates, trace pyrite cemented (100:0:0:0:0) (10.3)fine grained aggregates. CLAYSTONE, a.a. Tr SANDSTONE, predominantly translucent white, medium to very coarse 2.2 1230 80 loose quartz grains; also some white to cream, fine to coarse silica (96:4:0:0:0) (27.6)cemented aggregates with poor porosity; minor pyrite cemented aggregates. CLAYSTONE, white to pale bluish grey, soft amorphous, silty in part. 20 11.0 SANDSTONE, a.a. 1233 50 (99:1:0:0:0) 50 CLAYSTONE, a.a. (14.9)9.8 Depth Correction 1233 = 1239m. 1236 (99:1:0:0:0) (6.6)11.0 Depth Correction 1233 = 1239m. 1239 (99:1:0:0:0) (19.1)SANDSTONE, translucent white, medium to very coarse quartz grains, 1.2 20 1242 (100:0:0:0:0) sub-angular to sub-rounded, poor to moderate sorted, loose. (3.4)CLAYSTONE, predominantly pale grey to bluish grey, soft to firm, silty, 80 calcareous in part; minor moderate to dark brown, carbonaceous. 4.3 20 SANDSTONE, a.a. 1245 (100:0:0:0:0) 80 CLAYSTONE, a.a. (3.0)12.3 10 SANDSTONE, a.a. 1248 (99:1:0:0:0) 90 CLAYSTONE, a.a. (3.0)SANDSTONE, white to light grey, very fine to fine, sub-rounded, 10.0 1251 60 (99:1:0:0:0) moderate sorted quartz, lithic and feldspar grains, micaceous, abundant (2.4)clay matrix, calcareous with weak to moderate calcite cement, poor porosity. 40 CLAYSTONE, a.a. - silty and sandy in part. 19.2 1254 50 SANDSTONE, a.a. - trace pyrite. (99:1:0:0:0) CLAYSTONE, a.a. (2.9)50 SANDSTONE, light to moderate grey, fine to medium, sub-angular to 756.01257 80 (98:2:0:0:0) sub-rounded, moderate to well sorted, abundant greenish grey to grey-(2.4)black volcano-lithic grains, feldspathic, moderate to abundant clay matrix, calcareous, friable, poor to fair porosity. 20 CLAYSTONE, a.a. 502.8 1260 70 SANDSTONE, a.a. (98:2:0:0:0) CLAYSTONE, a.a. (2.4)30 355.7 SANDSTONE, a.a. 1263 20 (99:1:0:0:0) CLAYSTONE, a.a. 80 (3.2)67.5 20 SANDSTONE, a.a. 1266 (99:1:0:0:0) CLAYSTONE, a.a. 80 (2.6)SANDSTONE, white to pale grey, very fine to fine, sub-angular to sub-91.2 1269 rounded, moderate to well sorted, lithic, feldspathic, micaceous, (99:1:0:0:0) (1.6)abundant argillaceous / clay matrix, trace pyrite, very poor porosity. CLAYSTONE, a.a. 90 SANDSTONE, white to pale bluish grey, very fine to fine, lithic, 360.3 1272 40 (99:1:0:0:0) feldspathic, micaceous, abundant clay matrix, slightly calcareous, very (1.3)poor porosity. CLAYSTONE, light grey, light bluish grey, soft to firm, occasionally silty 60 and carbonaceous. Tr COAL, dark brown, lignitic. 644.7 SANDSTONE, a.a. - very fine to medium. 1275 80 (99:1:0:0:0) CLAYSTONE, a.a. (1.6) 20 586.7 SANDSTONE, light to dark grey, greenish grey, very fine to medium, 1278 (99:1:0:0:0) sub-angular to sub-rounded, moderate sorted quartz and green grey to (3.6)black volcano-lithic grains, feldspathic, rare pyrite, dispersive clay matrix, common calcite and weak calcite cement, friable, poor porosity. CLAYSTONE, pale grey to pale greenish grey, soft to firm, silty, trace 20 carbonaceous specks. SANDSTONE, a.a. - trace pyrite and mica, rare white to greenish white 961.2 1281 80 (98:2:0:0:0) (1.5)tuff. CLAYSTONE, a.a. 20 937.2 1284 80 SANDSTONE, a.a. CLAYSTONE, a.a. (98:2:0:0:0) 20 (1.7)

Depth	Percenț	Lithological Description	(Breakdown %)
1287 (3.9)	80 20	SANDSTONE, a.a. – abundant calcite. CLAYSTONE, a.a.	657.0 (99:1:0:0:0)
1290	90	SANDSTONE, a.a weak to moderately calcareous, dispersive clay	409.2
(3.4)	90	matrix.	(99:1:0:0:0)
(3.4)	10	CLAYSTONE, a.a.	(557775757)
1293	30	SANDSTONE, a.a. – trace pyrite.	191.0
(4.9)	70	CLAYSTONE, a.a.	(99:1:0:0:0)
1296	10	SANDSTONE, a.a. – predominantly fine, trace pyrite.	157.8
(3.7)	90	CLAYSTONE, light to moderate grey to greenish grey, firm, blocky, trace	(99:1:0:0:0)
(0.7)		carbonaceous specks, silty in part.	, ,
1299	20	SANDSTONE, a.a. – trace pyrite.	157.7
(3.0)	80	CLAYSTONE, a.a.	(99:1:0:0:0)
1302	70	SANDSTONE, white to pale greenish grey, very fine to fine, very	221.2
(2.7)		argillaceous with grains being matrix supported in part, moderately	(99:1:0:0:0)
(=,		calcareous, very poor porosity.	
	30	CLAYSTONE, a.a.	
1305	70	SANDSTONE, a.a. – very argillaceous.	206.8
(3.4)	30	CLAYSTONE, a.a.	(99:1:0:0:0)
1308	70	SANDSTONE, a.a very fine to medium, abundant clay matrix, poor	278.2
(1.7)		porosity.	(100:0:0:0:0)
	30	CLAYSTONE, a.a.	
1311	80	SANDSTONE, white to pale grey, green to greenish grey, fine to	609.5
(2.0)		medium, sub-angular to sub-rounded, moderate to well sorted quartz,	(99:1:0:0:0)
		feldspar and volcano-lithic grains, abundant dispersive clay matrix,	
		slightly calcareous, poor porosity.	
	20	CLAYSTONE, a.a.	075.0
1314	30	SANDSTONE, a.a.	275.2
(2.9)	70	CLAYSTONE, a.a.	(99:1:0:0:0) 171.5
1317	60	SANDSTONE, a.a.	
(2.2)	40	CLAYSTONE, a.a.	(99:1:0:0:0) 74.5
1320	30	SANDSTONE, a.a.	(98:2:0:0:0)
(2.1)	70	CLAYSTONE, a.a. SANDSTONE, a.a.	74.2
1323	20 80	CLAYSTONE, a.a.	(99:1:0:0:0)
(2.7) 1326	20	SANDSTONE, a.a.	138.7
(3.8)	80	CLAYSTONE, light grey to grey-green, pale brown to grey-brown, soft to	(99:1:0:0:0)
(5.6)		firm, blocky, silty in part.	,
1329	90	SANDSTONE, white to pale grey, moderate to dark grey-green, fine to	174.3
(3.6)		medium, sub-rounded, moderate to well sorted quartz, feldspar and	(100:0:0:0:0)
(3.2)		multi-coloured volcano-lithic grains with a dispersive argillaceous matrix,	
		weak to moderate calcite cement, friable, poor porosity.	
	10	CLAYSTONE, a.a.	
1332	80	SANDSTONE, a.a.	194.8
(3.7)	20	CLAYSTONE, a.a.	(100:0:0:0:0)
1335	60	SANDSTONE, a.a.	264.3
(3.7)	40	CLAYSTONE, a.a.	(100:0:0:0:0)
1338	80	SANDSTONE, a.a.	159.7 (99:1:0:0:0)
(4.7)	20	CLAYSTONE, a.a.	123.3
1341	50	SANDSTONE, a.a.	(99:1:0:0:0)
(3.6)	50	CLAYSTONE, a.a.	78.5
1344	20	SANDSTONE, a.a.	(98:2:0:0:0)
(2.6)	80	CLAYSTONE, a.a. SANDSTONE, white to pale grey, grey-green to grey-black, fine to	419.2
1347	90	medium, sub-angular to sub-rounded, moderate to well sorted quartz,	(99:1:0:0:0)
(2.5)		feldspar and quartzitic volcano-lithic grains, dispersive clay matrix,	(00.1.0.0.0)
		friable, poor porosity.	
	10	CLAYSTONE, a.a.	
1350	100	SANDSTONE, a.a. – trace mica flakes.	350.3
(3.2)	'00	Contract Circuit and the contract contr	(100:0:0:0:0)
1353	80	SANDSTONE, a.a very argillaceous, very poor porosity.	111.8
(2.4)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
1356	80	SANDSTONE, a.a. – very fine to fine, poor porosity.	191.7
(2.9)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
1359	100	SANDSTONE, a.a very fine to medium, weak to moderate calcite	247.8
(2.2)		cement and calcite grains, poor porosity.	(100:0:0:0:0)

<u>LAKES OIL N.L</u>	TRIFO	<u>N-1</u>	• • • • •
Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
1362 (2.4)	100	SANDSTONE, a.a. – calcareous, poor porosity.	243.2 (99:1:0:0:0)
1365 (2.1)	100	SANDSTONE, a.a. – common calcite grains, dispersive clay matrix, poor porosity.	178.2 (99:1:0:0:0)
1368 (1.3)	50 50	SANDSTONE, a.a. CLAYSTONE, white to light grey, grey-green, pale brown, soft, silty in	221.7 (99:1:0:0:0)
1371	90	part. SANDSTONE, a.a. – very slightly calcareous, poor porosity.	334.5
(3.0) 1374	100	CLAYSTONE, a.a. SANDSTONE, a.a. – non calcareous, dispersive clay matrix, trace mica	(100:0:0:0:0) 318.3 (20:4:0:0:0)
(3.2)	100	flakes, poor porosity. SANDSTONE, a.a.	(99:1:0:0:0) 268.3 (100:0:0:0:0)
(2.5) 1380	100	SANDSTONE, a.a. – very fine to medium, poor porosity.	296.3 (100:0:0:0:0)
(2.1) 1383 (2.2)	100	SANDSTONE, a.a. – slightly calcareous, poor porosity.	240.0 (100:0:0:0:0)
1386 (2.2)	100	SANDSTONE, a.a.	334.3 (100:0:0:0:0)
1389 (2.0)	100	SANDSTONE, a.a.	334.3 (100:0:0:0:0)
1392 (2.2)	100	SANDSTONE, a.a.	372.3 (100:0:0:0:0)
1395 (2.1)	100	SANDSTONE, white to light grey, grey-green, very fine to medium, sub-angular to sub-rounded, moderate sorted quartz, feldspar and quartzitic volcano-lithic grains, trace mica, dispersive clay matrix, slightly calcareous, friable, poor to occasional fair porosity.	313.2 (99:1:0:0:0)
1398 (1.8)		SANDSTONE, a.a. CLAYSTONE, a.a.	276.5 (100:0:0:0:0)
1401 (2.1)	90	SANDSTONE, a.a. CLAYSTONE, a.a.	133.5 (99:1:0:0:0)
1404 (1.6)	90 10	SANDSTONE, a.a. CLAYSTONE, a.a.	317.8 (100:0:0:0:0)
1407 (1.5)	100	SANDSTONE, a.a.	646.2 (99:1:0:0:0)
1410 (1.8)	100	SANDSTONE, a.a.	347.7 (99:1:0:0:0)
1413 (1.8)		SANDSTONE, a.a.	792.8 (98:2:0:0:0)
1416 (1.7)	100	SANDSTONE, a.a.	550.0 (99:1:0:0:0)
1419 (2.9)	100	SANDSTONE, a.a.	243.5 (98:2:0:0:0)
1422 (3.1)	100	SANDSTONE, a.a. – abundant dispersive clay matrix, friable, poor porosity.	171.0 (99:1:0:0:0) 276.7
1425 (3.4)	70 30 Tr	SANDSTONE, a.a. CLAYSTONE, white to pale grey-brown, soft, dispersive, amorphous. COAL, black, brittle, sub-vitreous lustre.	(100:0:0:0:0)
1428 (3.7)	70	SANDSTONE, a.a. CLAYSTONE, a.a.	179.0 (99:1:0:0:0)
1431 (3.1)	70	SANDSTONE, a.a. – predominantly fine, very argillaceous, poor porosity. CLAYSTONE, a.a. – white to pale grey, grey-green, pale brown,	317.7 (99:1:0:0:0)
1434 (3.5)	30	dispersive. SANDSTONE, a.a. CLAYSTONE, a.a. COAL, a.a.	226.7 (99:1:0:0:0)
1437 (3.7)	30 70	SANDSTONE, a.a. CLAYSTONE, grey to grey-brown, grey-green, soft to firm, blocky, trace carbonaceous material.	74.2 (98:2:0:0:0)
1440 (3.5)	100	CLAYSTONE, light to moderate grey to grey-green, occasionally grey-brown, soft to firm, occasionally silty, minor plant / coal fragments.	199.7 (99:1:0:0:0)
1443 (3.5)	100	CLAYSTONE, a.a.	237.7 (99:1:0:0:0)
1446 (2.8)	100	CLAYSTONE, a.a.	286.8 (99:1:0:0:0)

Gas (units) (Breakdown %) Lithological Description Depth Percent CLAYSTONE, a.a. 330.3 1449 100 (99:1:0:0:0) (2.8)CLAYSTONE, a.a. 204.3 1452 100 (99:1:0:0:0) (2.9)SANDSTONE, white to grey-green, very fine, sub-rounded, moderate to 113.8 10 1455 (98:2:0:0:0) well sorted, lithic, feldspathic, abundant clay matrix, calcite cement, (2.6)friable, very poor porosity. CLAYSTONE, a.a. 90 91.3 SANDSTONE, a.a. 10 1458 (98:2:0:0:0) 90 CLAYSTONE, a.a. (3.4)SANDSTONE, pale grey to moderate grey-green, fine to medium, 183.2 50 1461 (99:1:0:0:0) occasionally coarse, sub-angular to sub-rounded, moderate sorted (2.2)quartz, feldspar and quartzitic volcano-lithic grains, trace mica, moderate to abundant dispersive clay matrix, calcareous in part, friable, poor to occasional fair porosity. 50 CLAYSTONE, a.a., 546.7 SANDSTONE, a.a. 1464 90 (99:1:0:0:0) 10 CLAYSTONE, a.a. (2.7)146.5 1467 40 SANDSTONE, a.a. (99:1:0:0:0) CLAYSTONE, a.a. (3.8)60 163.2 SANDSTONE, a.a. 1470 Tr (99:1:0:0:0) CLAYSTONE, white to pale brown, pale grey to moderate grey-green, 100 (2.8)soft to firm, dispersive in part, carbonaceous and silty in part. 214.3 1473 CLAYSTONE, a.a. 100 (99:1:0:0:0) (2.8)177.0 CLAYSTONE, a.a. 1476 100 (99:1:0:0:0) (4.3)CLAYSTONE, a.a. 181.8 100 1479 (99:1:0:0:0) (3.2)447.3 10 SILTSTONE, white to pale brown, soft to firm, very argillaceous, sandy 1482 (99:1:0:0:0) (3.7)in part, carbonaceous specks. CLAYSTONE, a.a. 90 177.2 SILTSTONE, a.a. 1485 20 (99:1:0:0:0) CLAYSTONE, a.a. 80 (2.3)SANDSTONE, light to moderate grey to grey-green, very fine, sub-466.0 70 1488 (99:1:0:0:0) angular to sub-rounded, moderate to well sorted, lithic, feldspathic, (3.1)abundant argillaceous matrix, calcareous in part, very poor porosity. 30 CLAYSTONE, a.a. 329.0 1491 40 SANDSTONE, a.a. (99:1:0:0:0) 60 CLAYSTONE, a.a. (2.5)SANDSTONE, white to grey, grey-green to green, very fine to medium, 572.3 80 1494 (99:1:0:0:0) sub-angular to sub-rounded, moderate sorted quartz, feldspar and (1.8)quartzitic volcano-lithic grains, dispersive clay matrix, calcareous in part, friable, poor porosity. CLAYSTONE, a.a. 20 302.2 40 SANDSTONE, a.a. 1497 (99:1:0:0:0) 60 CLAYSTONE, a.a. (1.7)789.7 CLAYSTONE, a.a. - minor brown, carbonaceous. 1500 100 (98:2:0:0:0) (2.5)713.2 SANDSTONE, a.a. - very fine to fine. 1503 20 (98:2:0:0:0) 80 CLAYSTONE, a.a. (1.9)660.2 SANDSTONE, a.a. 1506 20 (99:1:0:0:0) 80 CLAYSTONE, a.a. (1.7)757.7 SANDSTONE, a.a. 1509 40 (99:1:0:0:0) CLAYSTONE, a.a. 60 (1.5)SANDSTONE, a.a. 598.7 70 1512 CLAYSTONE, a.a. (99:1:0:0:0) 30 (1.8)SANDSTONE, a.a. 215.2 1515 70 <u>(99:1:0</u>:0:0) CLAYSTONE, a.a. 30 (1.6)561.3 SANDSTONE, a.a. 1518 70 (99:1:0:0:0) CLAYSTONE, a.a. (1.8)30 601.2 SANDSTONE, a.a. - predominantly fine, poor porosity. 1521 80 (99:1:0:0:0) 20 CLAYSTONE, a.a. (2.0)289.3 SANDSTONE, a.a. 90 1524 (99:1:0:0:0) (2.0)10 CLAYSTONE, a.a.

Depth	Percent	Lithological Description	Gas (units) (Breakdown %
1527	100	SANDSTONE, a.a.	559.8
(1.7)	Tr	COAL, black, sub-vitreous lustre.	(99:1:0:0:0)
1530	80	SANDSTONE, a.a.	1138.3
(2.0)	20	CLAYSTONE, a.a.	(98:2:0:0:0)
1533	90	SANDSTONE, a.a.	585.8
(3.3)	10	CLAYSTONE, a.a.	(98:2:0:0:0)
, ,	Tr	COAL, a.a.	
1536	50	SANDSTONE, a.a.	521.7
(2.7)	50	CLAYSTONE, a.a.	(98:2:0:0:0)
1539	30	SANDSTONE, a.a green to grey-green, predominantly very fine to	208.5
(2.6)		fine, lithic, feldspathic, trace mica, dispersive clay matrix, calcareous in	(99:1:0:0:0)
, ,		part, friable, poor porosity.	
	70	CLAYSTONE, a.a.	
1542	60	SANDSTONE, a.a.	164.0
(2.5)	40	CLAYSTONE, a.a.	(99:1:0:0:0)
1545	70	SANDSTONE, a.a.	244.2
(2.1)	30	CLAYSTONE, pale brown, light to moderate grey to grey-green, soft to	(99:1:0:0:0)
, ,		firm, occasionally silty and carbonaceous.	
1548	80	SANDSTONE, a.a.	391.2
(2.6)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
1551	80	SANDSTONE, a.a.	298.7
(2.6)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
1554	80	SANDSTONE, a.a.	344.0
(3.5)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
1557	80	SANDSTONE, a.a.	275.0
(2.9)	20	CLAYSTONE, a.a.	(100:0:0:0:0)
1560	80	SANDSTONE, a.a.	239.2
(2.7)	20	CLAYSTONE, a.a.	(100:0:0:0:0)
1563	20	SANDSTONE, a.a.	62.8
(2.5)	10	SILTSTONE, dark grey-brown to black, firm, argillaceous, carbonaceous	(99:1:0:0:0)
(=:-)		specks and laminae.	
	70	CLAYSTONE, a.a.	
1566	20	SANDSTONE, a.a.	175.2
(2.7)	10	SILTSTONE, a.a.	(99:1:0:0:0)
, ,	70	CLAYSTONE, pale grey-brown, light to moderate grey to grey-green,	
		soft to firm, occasionally silty.	-
1569	30	SANDSTONE, a.a.	134.2
(2.3)	10	SILTSTONE, a.a.	(99:1:0:0:0)
, ,	60	CLAYSTONE, a.a.	
1572	30	SANDSTONE, a.a.	58.5
(1.4)	10	SILTSTONE, a.a.	(99:1:0:0:0)
` ,	60	CLAYSTONE, a.a.	
1575	80	SANDSTONE, a.a white to pale grey, greenish grey to green, very	78.5
(1.5)		fine to fine, sub-angular to sub-rounded, moderate sorted, feldspar and	(99:1:0:0:0)
		volcano-lithic grains, abundant dispersive clay matrix, calcareous in part,	
		poor porosity.	
	20	CLAYSTONE, a.a.	
1578	80	SANDSTONE, a.a.	513.0
(3.0)	10	SILTSTONE, a.a.	(99:1:0:0:0)
	10	CLAYSTONE, a.a.	
1581	80	SANDSTONE, a.a.	81.7
(3.1)	10	SILTSTONE, light to dark brown, soft to firm, argillaceous, carbonaceous	(99:1:0:0:0)
. ,		specks.	1
	10	CLAYSTONE, a.a.	
1584	80	SANDSTONE, a.a.	216.8
(2.4)	10	SILTSTONE, a.a.	(99:1:0:0:0)
` '	10	CLAYSTONE, a.a.	
1587	80	SANDSTONE, a.a.	551.3
(2.1)	10	SILTSTONE, a.a.	(98:2:0:0:0)
` '/	10	CLAYSTONE, a.a.	
1590	80	SANDSTONE, a.a.	237.3
(2.3)	10	SILTSTONE, a.a.	(99:1:0:0:0)
(2.0)			

<u>KES OIL N.L. TRIFON-1</u> Gas (units				
Depth	Percent	Lithological Description	(Breakdown %	
1593	80	SANDSTONE, a.a.	317.7	
(2.3)	10	SILTSTONE, a.a.	(100:0:0:0:0)	
	10	CLAYSTONE, a.a.		
1596	90	SANDSTONE, a.a.	348.7	
(2.3)	10	CLAYSTONE, a.a.	(99:1:0:0:0)	
1599	100	SANDSTONE, white to light grey, grey-green, very fine to fine, sub-	205.3	
(2.5)		angular to sub-rounded, moderate sorted quartz, feldspar and volcano-	(99:1:0:0:0)	
(2.0)	1	lithic grains, dispersive argillaceous matrix, calcareous in part, friable,	,	
	1 1	poor porosity.		
	Tr	SILTSTONE, a.a.		
1602	100	SANDSTONE, a.a.	218.3	
(2.4)	100	0/11/D0 0/12, a.a.	(100:0:0:0:0)	
1605	50	SANDSTONE, a.a.	368.2	
(2.5)	50	CLAYSTONE, light to moderate brown, grey-green, soft, dispersive, silty	(100:0:0:0:0)	
(2.5)] 30	and carbonaceous in part.	(10010101010)	
1000	F0	SANDSTONE, a.a.	319.7	
1608	50		(99:1:0:0:0)	
(2.7)	50	CLAYSTONE, a.a.	174.7	
1611	80	SANDSTONE, a.a.	(99:1:0:0:0)	
(2.6)	20	CLAYSTONE, a.a. – silty and carbonaceous in part.		
1614	80	SANDSTONE, a.a.	367.7	
(3.7)	20	CLAYSTONE, a.a.	(99:1:0:0:0)	
1617	80	SANDSTONE, a.a.	280.8	
(2.9)	20	CLAYSTONE, a.a.	(100:0:0:0:0)	
1620	80	SANDSTONE, a.a.	201.0	
(2.2)	20	CLAYSTONE, a.a.	(99:1:0:0:0)	
1623	90	SANDSTONE, a.a.	235.8	
(2.6)	10	CLAYSTONE, a.a.	(99:1:0:0:0)	
1626	100	SANDSTONE, white to pale grey, pale grey-green, very fine to fine, sub-	331.8	
(2.1)		angular to sub-rounded, moderate to well sorted, lithic, feldspathic, trace	(99:1:0:0:0)	
()		mica, dispersive clay matrix, calcareous in part, friable, poor porosity.		
1629	50	SANDSTONE, a.a.	245.8	
(1.9)	50	CLAYSTONE, light brown, light grey-brown, soft, dispersive, silty and	(99:1:0:0:0)	
(1.0)		carbonaceous in part.	,	
1632	30	SANDSTONE, a.a.	294.5	
(2.5)	70	CLAYSTONE, a.a.	(99:1:0:0:0)	
1635	20	SANDSTONE, a.a.	218.5	
(2.6)	80	CLAYSTONE, a.a.	(99:1:0:0:0)	
1638	20		166.2	
(2.9)	80	CLAYSTONE, a.a.	(99:1:0:0:0)	
		CLAYSTONE, a.a.	247.5	
1641	70	TUFF, pale grey-brown, soft to firm, silty and carbonaceous in part.	(99:1:0:0:0)	
(2.7)	30		541.2	
1644	80	CLAYSTONE, a.a.	_	
(3.6)	20	TUFF, a.a.	(99:1:0:0:0)	
1647	20	SANDSTONE, a.a.	458.3	
(2.4)	70	CLAYSTONE, a.a.	(98:2:0:0:0)	
	10	TUFF, a.a.	504.0	
1650	20	SANDSTONE, a.a.	584.2	
(2.8)	70	CLAYSTONE, a.a.	(99:1:0:0:0)	
	10	TUFF, a.a.	1-0-5	
1653	10	SILTSTONE, moderate to dark brown, soft to firm, argillaceous,	153.8	
(2.1)		carbonaceous.	(99:1:0:0:0)	
. ,	90	CLAYSTONE, a.a.		
1656	10	SILTSTONE, a.a.	438.7	
(2.7)	90	CLAYSTONE, a.a.	(99:1:0:0:0)	
1659	50	SANDSTONE, a.a.	483.2	
(2.8)	10	SILTSTONE, a.a.	(99:1:0:0:0)	
(=.0)	40	CLAYSTONE, a.a.	`	
1662	100	SANDSTONE, a.a. – very fine to fine, occasionally medium.	336.7	
	Tr		(99:1:0:0:0)	
(2.0)		SILTSTONE, a.a.	536.7	
1665	90	SANDSTONE, a.a.	(99:1:0:0:0)	
(2.1)	Tr	SILTSTONE, a.a.	(33.1.0.0.0)	
	10	CLAYSTONE, a.a.	207.0	
1668	80	SANDSTONE, a.a.	307.2	
(2.5)	Tr	SILTSTONE, a.a.	(99:1:0:0:0)	
	20	CLAYSTONE, a.a.	ı	

Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
1671	80	SANDSTONE, a.a.	251.7
(2.0)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
1674	80	SANDSTONE, a.a.	311.8
(2.6)	20	CLAYSTONE, a.a.	(100:0:0:0:0)
1677	50	SANDSTONE, a.a.	189.0
(3.8)	50	CLAYSTONE, a.a.	(100:0:0:0:0)
1680	30	SANDSTONE, a.a.	113.0
(3.3)	70	CLAYSTONE, a.a.	(99:1:0:0:0)
1683	20	SANDSTONE, a.a.	206.0
(3.3)	80	CLAYSTONE, a.a.	(99:1:0:0:0)
1686	20	SILTSTONE, light to dark brown, soft to firm, very argillaceous,	224.8
(3.8)	80	carbonaceous, grades to coal in part. CLAYSTONE, grey to grey-green, soft to firm, silty and carbonaceous in	(99:1:0:0:0)
		part.	345.7
1689	20	SANDSTONE, a.a.	(98:2:0:0:0)
(3.2)	20	SILTSTONE, a.a. CLAYSTONE, a.a.	(96.2.0.0.0)
1000	60 30	SANDSTONE, a.a.	213.7
1692 (2.8)	20	SILTSTONE, a.a.	(99:1:0:0:0)
(2.0)	50	CLAYSTONE, a.a.	(00:
1695	20	SANDSTONE, a.a.	213.2
(2.5)	30	SILTSTONE, a.a.	(99:1:0:0:0)
(=)	50	CLAYSTONE, a.a.	
1698	40	SANDSTONE, a.a.	337.8
(2.5)	20	SILTSTONE, a.a.	(100:0:0:0:0)
	40	CLAYSTONE, a.a.	
1701	70	SANDSTONE, a.a.	322.2
(3.3)	10	SILTSTONE, a.a.	(99:1:0:0:0)
	20	CLAYSTONE, a.a.	
1704	Tr 80	TUFF, a.a. SANDSTONE, a.a.	280.5
(3.7)	10	SILTSTONE, a.a.	(99:1:0:0:0)
(5.7)	10	CLAYSTONE, a.a.	(00:::::::,
1707	80	SANDSTONE, a.a.	550.7
(3.3)	10	SILTSTONE, a.a.	(98:2:0:0:0)
,	10	CLAYSTONE, a.a.	
1710	80	SANDSTONE, a.a.	565.2
(2.9)	10		(99:1:0:0:0)
	10	CLAYSTONE, a.a.	544.0
1713	80	SANDSTONE, white to pale grey, grey-green, very fine to fine, sub-	544.3 (99:1:0:0:0)
(3.5)		angular to sub-rounded, moderate to well sorted quartz, lithic and quartzitic volcano-lithic grains, dispersive argillaceous matrix, trace	(99.1.0.0.0)
		mica, slightly calcareous, poor porosity.	
	10	SILTSTONE, a.a.	
	10	CLAYSTONE, a.a.	
1716	80	SANDSTONE, a.a.	394.8
(3.8)	10	SILTSTONE, a.a.	(99:1:0:0:0)
` .	10	CLAYSTONE, a.a.	
1719	100	SANDSTONE, a.a.	437.8
(3.1)		SILTSTONE, a.a.	(99:1:0:0:0)
	Tr	CLAYSTONE, a.a.	200.0
1722	100	SANDSTONE, a.a.	309.8
(3.1)	Tr	SILTSTONE, a.a.	(99:1:0:0:0)
1705	Tr	CLAYSTONE, a.a.	337.8
1725	60	SANDSTONE, a.a. SILTSTONE, a.a. – tuffaceous in part.	(99:1:0:0:0)
(3.9)	20 20	CLAYSTONE, a.a. – tunaceous in part.	(30.1.3.0.0)
1728	30	SANDSTONE, light to moderate grey, grey-green, very fine to fine, sub-	406.7
(3.9)	30	angular to sub-rounded, moderate sorted, lithic, feldspathic, abundant	(99:1:0:0:0)
(3.5)		clay matrix, silty in part, very poor porosity.	_
	20	SILTSTONE, a.a. – tuffaceous.	
	30	CLAYSTONE, a.a.	
	20	TUFF, light to moderate grey-brown, tabular / angular fracture, silty in	
	1	part.	I

Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
1731	80	SANDSTONE, a.a very fine to medium, poor porosity.	212.0
(5.5)	10	CLAYSTONE, a.a.	(99:1:0:0:0)
(0.0)	10	TUFF, a.a.	
1734	80	SANDSTONE, a.a. – very poor porosity.	29.5
(4.2)	10	CLAYSTONE, a.a.	(99:1:0:0:0)
` ′	10	TUFF, a.a.	
1737	80	SANDSTONE, a.a.	43.3
(4.7)	10	CLAYSTONE, a.a.	(99:1:0:0:0)
` ′	10	TUFF, a.a.	
1740	80	SANDSTONE, a.a.	254.0
(4.7)	10	CLAYSTONE, a.a.	(99:1:0:0:0)
	10	TUFF, a.a.	
1743	100	SANDSTONE, a.a.	191.2
(4.1)	Tr	CLAYSTONE, a.a.	(99:1:0:0:0)
	Tr	TUFF, a.a.	
1746	100	SANDSTONE, a.a.	305.8
(3.8)			(99:1:0:0:0)
1749	100	SANDSTONE, light to dark grey to grey-green, very fine to medium, sub-	490.0
(3.9)		angular to sub-rounded, moderate sorted quartz, feldspar and volcano-	(98:2:0:0:0)
		lithic grains, calcareous in part, trace mica, cm, friable, poor porosity.	450.5
1752	40	SANDSTONE, a.a.	153.5
(3.3)	10	SILTSTONE, moderate to dark brown, carbonaceous, also light brown to	(99:1:0:0:0)
		grey-brown, argillaceous and tuffaceous.	
	40	CLAYSTONE, light to moderate grey, grey-green, silty and tuffaceous.	
	10	TUFF, light grey to grey-brown, silty and carbonaceous in part.	214.2
1755	30	SANDSTONE, a.a. – mostly very fine to fine.	(99:1:0:0:0)
(3.1)	20	SILTSTONE, a.a.	(55.1.0.0.0)
1750	50	CLAYSTONE, a.a.	340.3
1758	70 20	SANDSTONE, a.a. SILTSTONE, a.a.	(99:1:0:0:0)
(4.5)	10	CLAYSTONE, a.a.	(0017101010)
1761	100	SANDSTONE, a.a. – very fine to medium, poor porosity.	272.3
(5.2)	100	GANGO PONE, a.a. Vory line to modium, poor porosity.	(99:1:0:0:0)
1764	70	SANDSTONE, a.a.	114.5
(5.0)	30	CLAYSTONE, a.a.	(99:1:0:0:0)
(5.5)	Tr	COAL, a.a.	,
1767	90	SANDSTONE, a.a.	217.2
(4.6)	10	CLAYSTONE, a.a.	(99:1:0:0:0)
` ′	Tr	COAL, dark brown to black, lignitic.	
1770	80	SANDSTONE, a.a.	188.7
(4.1)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
1773	70	SANDSTONE, a.a.	121.7
(3.2)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
	10	TUFF, translucent pale brownish grey, soft to firm, silty and	
		carbonaceous in part.	470.0
1776	70	SANDSTONE, a.a white to grey, grey-green, very fine to medium,	170.8 (99:1:0:0:0)
(4.6)		moderate sorted, lithic, feldspathic, dispersive argillaceous matrix,	(99.1.0.0.0)
1		friable, poor porosity.	
	20	CLAYSTONE, a.a.	
1	10	TUFF, a.a.	122.0
1779	80	SANDSTONE, a.a.	(99:1:0:0:0)
(4.6)	10	CLAYSTONE, a.a.	(33.1.0.0.0)
1700	10	TUFF, a.a.	70.7
1782	70	SANDSTONE, a.a.	(98:2:0:0:0)
(3.1)	20 10	CLAYSTONE, a.a. TUFF, a.a.	(55.2.5.5.5)
1705		SANDSTONE, a.a.	113.8
1785 (2.3)	60 30	CLAYSTONE, a.a.	(99:1:0:0:0)
(2.3)	10	TUFF, a.a.	(33)
1788	80	SANDSTONE, a.a predominantly very fine to fine, occasionally	175.0
(3.7)	"	medium, poor porosity.	(99:1:0:0:0)
(5.7)	10	CLAYSTONE, a.a.	`
1	10	TUFF, a.a.	
1791	70	SANDSTONE, a.a. – mostly very fine to fine, occasionally medium.	93.7
(4.0)	30	CLAYSTONE, a.a.	(99:1:0:0:0)

Gas (units) (Breakdown %)

(4.0) 20 CLAYSTONE, a.a. (9 1797 100 SANDSTONE, white to moderate grey, moderate to dark grey-green, very fine to medium, sub-angular to sub-rounded, moderate sorted quartz, feldspar and volcano-lithic grains, minor calcite, dispersive clay matrix, friable, poor porosity. 1800 80 SANDSTONE, a.a. (9 1803 60 SANDSTONE, a.a. (9 1803 60 SANDSTONE, a.a. (9 1806 80 SANDSTONE, a.a. (9 1806 80 SANDSTONE, a.a. (9 1806 80 SANDSTONE, a.a. (9 1806 0 SANDSTONE, a.a. (9 1807 0 SANDSTONE, a.a. (9 1808 0 SANDSTONE, a.a. (9 1809 0 SAN	18.7 99:1:0:0:0) 59.8 99:1:0:0:0)
1797 100 SANDSTONE, white to moderate grey, moderate to dark grey-green, very fine to medium, sub-angular to sub-rounded, moderate sorted quartz, feldspar and volcano-lithic grains, minor calcite, dispersive clay matrix, friable, poor porosity. 1800 80 SANDSTONE, a.a. (4.0) 20 CLAYSTONE, a.a. (9) 1803 60 SANDSTONE, a.a. (10) 40 CLAYSTONE, a.a. (11) 40 CLAYSTONE, a.a. (12) SANDSTONE, a.a. (13) 40 CLAYSTONE, a.a. (14) 40 CLAYSTONE, a.a. (15) SANDSTONE, a.a. (16) 20 CLAYSTONE, a.a. (17) SANDSTONE, a.a. (18) SA	59.8
(3.9) very fine to medium, sub-angular to sub-rounded, moderate sorted quartz, feldspar and volcano-lithic grains, minor calcite, dispersive clay matrix, friable, poor porosity. 80 SANDSTONE, a.a. (4.0) 20 CLAYSTONE, a.a. (9) 1803 60 SANDSTONE, a.a. (9) 1806 (4.1) 40 CLAYSTONE, a.a. (9) 1806 (4.6) 20 CLAYSTONE, a.a. (9) 1806 (4.6) 20 CLAYSTONE, a.a. (9) 1806 (4.6) 20 CLAYSTONE, light to dark grey and grey-green, light to moderate brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.	
quartz, feldspar and volcano-lithic grains, minor calcite, dispersive clay matrix, friable, poor porosity. 1800 80 SANDSTONE, a.a. (4.0) 20 CLAYSTONE, a.a. (99 SANDSTONE, a.a. (4.1) 40 CLAYSTONE, a.a. (90 SANDSTONE, a.a. (90	99.1.0.0.0)
(4.0) 20 CLAYSTONE, a.a. (9 1803 60 SANDSTONE, a.a. (9 4.1) 40 CLAYSTONE, a.a. (9 1806 80 SANDSTONE, a.a. (9 1806 (4.6) 20 CLAYSTONE, a.a. (9 CLAYSTONE, a.a. 31 CLAYSTONE, light to dark grey and grey-green, light to moderate brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.	
(4.0) 20 CLAYSTONE, a.a. (9 1803 60 SANDSTONE, a.a. 32 (4.1) 40 CLAYSTONE, a.a. (9 1806 80 SANDSTONE, a.a. (9 1806 (4.6) 20 CLAYSTONE, a.a. 31 (4.6) 20 CLAYSTONE, ight to dark grey and grey-green, light to moderate brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.	2.8
1803 60 SANDSTONE, a.a. 34 (4.1) 40 CLAYSTONE, a.a. (9 1806 80 SANDSTONE, a.a. 31 (4.6) 20 CLAYSTONE, light to dark grey and grey-green, light to moderate brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.	99:1:0:0:0)
(4.1) 40 CLAYSTONE, a.a. (9 1806 (4.6) 80 SANDSTONE, a.a. CLAYSTONE, light to dark grey and grey-green, light to moderate brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.	40.5
1806 80 SANDSTONE, a.a. (4.6) 20 CLAYSTONE, light to dark grey and grey-green, light to moderate brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.	98:2:0:0:0)
brown, soft to firm, dispersive, silty, carbonaceous and tuffaceous in part.	16.5
	99:1:0:0:0)
1000 00 0/1/100 0/1/2, 4/4/	02.8
(3.8) 20 CLAYSTONE, a.a. (9	99:1:0:0:0)
1012 1 00 10/112010112	73.0
) (U.L) (U UL) ((U UL) (UL) (UL) (UL) (UL) (UL) (UL) (UL)	99:1:0:0:0)
	24.3
	98:2:0:0:0)
1010 00 OANDOTONE, a.a.	94.7
(1,2)	98:2:0:0:0)
1021 00 0/11/2010/12, 4:4:	1.3
\(\lambda_{1}\)\(\lambda_{1}\)\(\lambda_{2}\)\(\lambda_{1}\)\(\lambda_{2}\)\(\lambda_{1}\)\(\lambda_{2}\)\(\lambda_{1}\)\(\lambda_{2}\)\(\lambda_{1}\)\(\lambda_{2}\)\(\lambda_{2}\)\(\lambda_{1}\)\(\lambda_{2}\)\(\lam	98:2:0:0:0)
1024 00 0/140010142, a.a.	23.3
	98:2:0:0:0)
1027 70 07112010112, 4.4.	13.0
(0.0)	98:2:0:0:0)
10 TUFF, a.a.	
70 07 1720 107 127 127 127 127 127 127 127 127 127 12	97.0
(1.0)	98:2:0:0:0)
10 TUFF, a.a.	50.5
1 1000 00 00 00 00 00 00	58.5
(4.0) abantaan olay manny pro- pro-	99:1:0:0:0)
10 CLAYSTONE, a.a.	03.0
1000 40 0/(100) 0/(12)	98:2:0:0:0)
(112)	12.8
1 1000 00 07 (1750 0.112) (1.12)	99:1:0:0:0)
(1.0)	110.5
	99:1:0:0:0)
to pinkish orange feldspar and grey-green to black volcano-lithic grains,	,
minor calcite, dispersive clay matrix, friable, poor porosity.	
CLAYSTONE, a.a.	
10	4.44
1845 90 SANDSTONE, a.a. 29	99.0
(4.2) 10 CLAYSTONE, a.a. (9	99:1:0:0:0)
1848 80 SANDSTONE, a.a. 25	258.0
(10)	99:1:0:0:0)
1 1001	183.0
(112)	99:1:0:0:0)
1004 00 0/1/2010/12/ 4/40	332.0
(6.6)	99:1:0:0:0)
1007	89.3
	99:1:0:0:0)
1000 100 0,412010112, a.a	294.7
(O.1)	98:2:0:0:0)
1000 100 0,4100 0.110	515.7
	98:2:0:0:0)
1000 100 07112010112, 4.4.	319.0
(99:1:0:0:0)
1 1000 00 07 (120 07 (12) (13)	75.7 98:2:0:0:0)
(6.0) 20 CLAYSTONE, a.a. (9	30.2.0.0.0j

<u>LAKES OIL N.</u>	L. TRIFO	<u>N-1</u>	Coo (verito)
Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
1872	80	SANDSTONE, a.a.	207.8
(5.5)	20	CLAYSTONE, light to moderate grey to grey-green, soft to firm, tuffaceous in part.	(98:2:0:0:0)
1875	30	SANDSTONE, a.a.	299.8
(4.1)	70	CLAYSTONE, a.a.	(98:2:0:0:0)
1878	40	SANDSTONE, a.a.	286.5
(5.6)	60	CLAYSTONE, a.a.	(98:2:0:0:0)
1881	60	SANDSTONE, a.a.	243.0
(5.5)	40	CLAYSTONE, a.a.	(98:2:0:0:0)
1884	30	SANDSTONE, a.a.	550.8
(4.8)	70	CLAYSTONE, a.a.	(99:1:0:0:0)
1887	80	SANDSTONE, a.a.	233.7
(5.9)	20	CLAYSTONE, a.a.	(99:1:0:0:0)
1890	60	SANDSTONE, a.a.	193.3
(5.6)	40	CLAYSTONE, light to moderate grey to grey-green, light to dark brown, soft to firm, silty and carbonaceous in part.	(98:2:0:0:0)
1893	50	SANDSTONE, light to moderate grey to grey-green, very fine to fine,	258.0
(5.1)		some medium, sub-angular to sub-rounded, moderate sorted, lithic,	(98:2:0:0:0)
	50	feldspathic, calcareous in part, clay matrix, friable, poor porosity. CLAYSTONE, a.a.	
1896	10	SANDSTONE, a.a.	65.7
(6.0)	90	CLAYSTONE, a.a.	(98:2:0:0:0)
1899	100	CLAYSTONE, light to moderate grey to grey-brown, grey-green, soft,	55.2
(6.2)		occasionally silty.	(98:2:0:0:0)
1902	100	CLAYSTONE, a.a.	103.5
(4.5)			(98:2:0:0:0)
1905	30	SANDSTONE, a.a.	96.0
(5.6)	70	CLAYSTONE, a.a.	(98:2:0:0:0)
1908	30	SANDSTONE, a.a.	81.3
(5.1)	70	CLAYSTONE, a.a.	(98:2:0:0:0)
1911	40	SANDSTONE, a.a.	146.8
(3.0)	60	CLAYSTONE, a.a.	(98:2:0:0:0)
1914	30	SANDSTONE, a.a.	380.3
(2.4)	70	CLAYSTONE, a.a.	(98:2:0:0:0)
1917	30	SANDSTONE, a.a.	782.8 (98:2:0:0:0)
(3.7)	70	CLAYSTONE, a.a.	766.8
1920	100	SANDSTONE, a.a moderately calcareous, dispersive clay matrix, poor	(98:2:0:0:0)
(4.0)	100	porosity. SANDSTONE, a.a. – mostly very fine to fine.	253.8
1923	100		(98:2:0:0:0)
(3.9)	Tr Tr	COAL, dark brown to black, lignitic, grades to carbonaceous shale.	(50.2.0.0.0)
1926	90		227.5
(4.8)		CLAYSTONE, a.a.	(98:2:0:0:0)
(4.6)	Tr		(001211111)
1929	100		250.3
(4.4)	Tr	CLAYSTONE, a.a.	(99:1:0:0:0)
``''		COAL, a.a.	
1932	100	SANDSTONE, a.a predominantly very fine to fine, some medium, lithic	213.0
(4.4)		/ feldspathic, moderately calcareous, clay matrix, friable, poor porosity.	(98:2:0:0:0)
` ,		CLAYSTONE, a.a.	
	Tr		
1935	100	SANDSTONE, a.a.	343.3
(3.3)	Tr	CLAYSTONE, a.a.	(98:2:0:0:0)
1938	100	SANDSTONE, a.a.	460.2
(3.8)			(98:2:0:0:0)
1941	100	SANDSTONE, a.a.	251.0
(4.6)			(99:1:0:0:0)
1944		SANDSTONE, a.a. – trace mica, poor porosity.	242.7
(3.7)		CLAYSTONE, a.a.	(99:1:0:0:0)
1947		SANDSTONE, a.a.	333.8
(3.5)		CLAYSTONE, a.a.	(99:1:0:0:0)
1950		SANDSTONE, a.a.	436.2
(4.9)		CLAYSTONE, a.a.	(98:2:0:0:0)
1953		SANDSTONE, a.a.	170.7
(4.9)	<u> </u> 10	CLAYSTONE, a.a.	(98:2:0:0:0)

Gas (units)

LAKES OIL N.L. TRIFON-1

(Breakdown %) Depth Percent Lithological Description 301.5 SANDSTONE, a.a. 1956 (98:2:0:0:0) (5.9)390.7 1959 90 SANDSTONE, a.a. (98:2:0:0:0) CLAYSTONE, a.a. (5.2)10 118.2 SANDSTONE, a.a. 1962 60 CLAYSTONE, off-white to pale brown, occasionally dark brown, grev to (98:2:0:0:0) (5.0)40 grey-green, soft, dispersive, silty and carbonaceous in part. 169.5 100 SANDSTONE, a.a. 1965 (98:2:0:0:0) CLAYSTONE, a.a. Tr (4.9)211.2 SANDSTONE, a.a. 1968 100 (98:2:0:0:0) CLAYSTONE, a.a. (5.1)391.0 80 SANDSTONE, a.a. 1971 (99:1:0:0:0) 20 CLAYSTONE, a.a. (6.6)108.2 SANDSTONE, a.a. 1974 70 (98:2:0:0:0) CLAYSTONE, pale grey to grey-green, pale brown, soft to firm, silty in 30 (5.3)part. 178 5 SANDSTONE, a.a. 90 1977 (98:2:0:0:0) CLAYSTONE, a.a. (3.6)10 269.3 SANDSTONE, a.a. 1980 (98:2:0:0:0) 20 CLAYSTONE, a.a. (3.5)370.8 SANDSTONE, a.a. 1983 80 (98:2:0:0:0) CLAYSTONE, a.a. 20 (3.5)227.8 90 SANDSTONE, a.a. - rare pyrite. 1986 <u>(98:2</u>:0:0:0) 10 CLAYSTONE, a.a. (4.4)SANDSTONE, - moderately calcareous. 130.3 1989 100 (98:2:0:0:0) (5.2)203.8 100 SANDSTONE, a.a. - very fine to medium. 1992 (97:3:0:0:0) CLAYSTONE, a.a. (4.4)SANDSTONE, light to moderate grey to grey-green, very fine to medium, 200.8 1995 sub-angular to sub-rounded, moderate sorted quartz, pinkish white (98:2:0:0:0) (4.7)feldspar and grey-green volcano-lithic grains, minor calcite, dispersive clay matrix, friable, poor porosity. CLAYSTONE, light to dark grey, grey-green, soft to firm. COAL, very dark brown to black, lignitic. Tr SANDSTONE, a.a. 202.0 90 1998 (98:2:0:0:0) CLAYSTONE. .a.a 10 (6.2)Tr COAL, a.a. 109.8 2001 100 SANDSTONE, a.a. (98:2:0:0:0) Tr CLAYSTONE, a.a. (4.0)266.2 SANDSTONE, a.a. - very fine to fine, poor porosity. 2004 100 (98:2:0:0:0) CLAYSTONE, a.a. (4.0)Tr 313.7 100 SANDSTONE, a.a. 2007 (98:2:0:0:0) CLAYSTONE, a.a. Tr (4.2)225.7 2010 100 SANDSTONE, a.a. (98:2:0:0:0) CLAYSTONE, a.a. - also moderate to dark grey-brown to black, (5.5)carbonaceous. 235.5 2013 100 SANDSTONE, a.a. (98:2:0:0:0) CLAYSTONE, a.a. (5.1)Tr 247.7 100 SANDSTONE, a.a. 2016 (98:2:0:0:0) Tr CLAYSTONE, a.a. (5.3)174.3 100 SANDSTONE, a.a. 2019 (98:2:0:0:0) CLAYSTONE, a.a. (4.7)Tr 228.3 SANDSTONE, a.a. 2022 90 (98:2:0:0:0) 10 CLAYSTONE, a.a. (5.8)SANDSTONE, a.a. - light to dark grey to grey-green, very fine to fine, 219.7 2025 sub-angular to sub-rounded, moderate sorted, feldspathic, volcano-lithic, (98:2:0:0:0) (5.7)calcareous, dispersive clay matrix, friable, poor porosity. 10 CLAYSTONE, a.a. 244.3 SANDSTONE, a.a. 2028 100 (98:2:0:0:0) CLAYSTONE, a.a. (5.7)Tr SANDSTONE, a.a. 221.7 2031 100 (98:2:0:0:0) CLAYSTONE, a.a. (5.5)Tr 117.5 SANDSTONE, a.a. 2034 100 (98:2:0:0:0) Tr CLAYSTONE, a.a. (5.5)

LAKES OIL N	L. IRIFO		Gas (units)
Depth	Percent	Lithological Description	(Breakdown %)
2037	90	,	90.8
(6.0)		CLAYSTONE, a.a.	(98:2:0:0:0)
2040		SANDSTONE, a.a.	82.2 (98:2:0:0:0)
(6.8)	100	CLAYSTONE, a.a. SANDSTONE, a.a.	100.3
(7.9)	Tr		(98:2:0:0:0)
2046	80		62.2
(7.0)		CLAYSTONE, a.a. – silty in part.	(98:2:0:0:0)
2049	80	SANDSTONE, a.a.	86.8
(5.4)	20	CLAYSTONE, moderate to dark brown, grey to grey-green, soft to firm.	(98:2:0:0:0)
2052	90	-	118.0
(5.5)		CLAYSTONE, a.a.	(98:2:0:0:0) 83.0
2055	90	- ,	(98:2:0:0:0)
(6.1)		CLAYSTONE, a.a. SANDSTONE, a.a.	97.0
2058 (5.2)	80	CLAYSTONE, a.a.	(98:2:0:0:0)
2061	90		110.5
(5.6)	10	CLAYSTONE, a.a.	(98:2:0:0:0)
2064	100	SANDSTONE, grey to grey-green, very fine to fine, occasionally medium,	77.7
(5.4)		sub-angular, moderate sorted, lithic, feldspathic, calcite grains, dispersive	(98:2:0:0:0)
		clay matrix, friable, very poor porosity.	
		CLAYSTONE, a.a.	113.7
2067		SANDSTONE, a.a.	(97:3:0:0:0)
(4.8)		CLAYSTONE, a.a. – tuffaceous in part. SANDSTONE, a.a.	46.3
2070 (5.8)	100 Tr	CLAYSTONE, a.a.	(97:3:0:0:0)
2073	100		55.2
(5.4)	Tr	·	(98:2:0:0:0)
2076	90	SANDSTONE, a.a.	10.0
(4.6)	10	CLAYSTONE, a.a.	(99:1:0:0:0)
2079	100		58.2
(4.4)	Tr		(98:2:0:0:0)
2082	100	SANDSTONE, a.a.	23.5 (98:2:0:0:0)
(4.6)		CLAYSTONE, a.a. SANDSTONE, a.a.	26.8
2085 (7.0)		CLAYSTONE, a.a.	(98:2:0:0:0)
2088	70		26.8
(6.6)	30		(98:2:0:0:0)
L ` ′		part.	
2091	100	SANDSTONE, a.a sub-angular to sub-rounded, poor porosity.	14.5
(4.1)		CLAYSTONE, a.a.	(99:1:0:0:0)
2094	1 1	SANDSTONE, a.a.	21.2 (98:2:0:0:0)
(5.8)		CLAYSTONE, a.a. SANDSTONE, a.a.	24.2
2097 (5.4)		CLAYSTONE, a.a.	(98:2:0:0:0)
2100	100		30.8
(5.8)		CLAYSTONE, a.a.	(98:2:0:0:0)
2103	100	SANDSTONE, a.a.	30.8
(5.1)		CLAYSTONE, a.a.	(97:3:0:0:0)
2106		SANDSTONE, a.a.	37.5
(5.9)		CLAYSTONE, a.a.	(98:2:0:0:0)
2109	100	SANDSTONE, a.a.	18.8 (98:2:0:0:0)
(5.5)		CLAYSTONE, grey-green, dark grey-brown to black, silty and tuffaceous. SANDSTONE, a.a.	9.5
2112		CLAYSTONE, a.a.	(99:1:0:0:0)
(6.3) 2115	100		45.8
(6.2)	Tr		(98:2:0:0:0)
2118		SANDSTONE, a.a.	9.3
(6.9)	Tr	CLAYSTONE, a.a.	(98:2:0:0:0)
2121	70		16.0
(5.2)		CLAYSTONE, a.a.	(98:2:0:0:0)
2124	100	SANDSTONE, a.a. – pale grey, grey-green, grey-black, very fine to fine,	26.2
(5.7)		lithic, feldspathic, calcareous in part, dispersive clay matrix, friable, poor	(97:3:0:0:0)
	Tr	porosity. CLAYSTONE, a.a.	
L	<u> </u>	OLATOTONE, a.a.	L

AKES OIL N	L. TRIFO	<u>N-1</u>	Gas (units)
Depth	Percent	Lithological Description	(Breakdown %)
2127	80	SANDSTONE, a.a.	23.7
(6.7)		CLAYSTONE, a.a.	(97:3:0:0:0)
2130		SANDSTONE, a.a.	33.8
(6.5)		CLAYSTONE, a.a.	(98:2:0:0:0)
2133	1 1	SANDSTONE, a.a.	27.3
(7.6)		CLAYSTONE, a.a.	(98:2:0:0:0)
2136		SANDSTONE, a.a.	10.7
(6.5)		CLAYSTONE, a.a.	(98:2:0:0:0)
2139		SANDSTONE, a.a.	22.8
(6.3)		CLAYSTONE, a.a.	(97:3:0:0:0)
2142		SANDSTONE, a.a.	17.3
(7.6)	Tr		(98:2:0:0:0)
2145		SANDSTONE, a.a.	70.3
(9.4)		CLAYSTONE, a.a.	(96:3:1:0:0)
2148		SANDSTONE, a.a.	61.5
(7.4)		CLAYSTONE, a.a.	(98:2:0:0:0)
2151	100	SANDSTONE, a.a.	123.8
(7.1)	Tr	CLAYSTONE, a.a.	(95:4:1:0:0)
2154	100	SANDSTONE, a.a.	101.8
(5.6)		CLAYSTONE, a.a.	(95:4:1:0:0)
2157	80		30.7
(4.8)		CLAYSTONE, a.a.	(98:2:0:0:0)
2160	80	SANDSTONE, light to dark grey, grey-green, very fine to fine, sub-	89.5
(7.0)	"	angular to sub-rounded, moderate to well sorted quartz, feldspar and	(98:2:0:0:0)
(7.0)		volcano-lithic grains, dispersive clay matrix, friable, poor porosity.	•
	20		
	-~	carbonaceous.	
2163	80	SANDSTONE, a.a.	28.3
(6.7)		CLAYSTONE, a.a.	(98:2:0:0:0)
2166	80		29.7
(8.8)		CLAYSTONE, a.a.	(98:2:0:0:0)
2169		SANDSTONE, a.a.	19.8
(11.1)		CLAYSTONE, a.a.	(96:3:1:0:0)
2172		SANDSTONE, a.a.	14.2
(9.9)		CLAYSTONE, a.a.	(95:4:1:0:0)
2175	80		8.8
	1	CLAYSTONE, a.a.	(96:3:1:0:0)
(10.5) 2178		SANDSTONE, a.a.	5.0
			(97:3:0:0:0)
(7.1)	20		9.5
2181	70	·	(98:2:0:0:0)
(5.2)		CLAYSTONE, a.a.	12.0
2184	80		(97:3:0:0:0)
(5.5)	20	CLAYSTONE, a.a. SANDSTONE, white, light to dark grey, grey-green, very fine to fine,	16.5
2187	80	some medium, sub-angular to sub-rounded, moderate sorted quartz and	(98:2:0:0:0)
(7.9)		volcano-lithic, trace pyrite and carbonaceous material, minor calcite,	(90.2.0.0.0)
		dispersive clay matrix, friable to loose, poor inferred porosity.	
	00		
0400	20		10.2
2190	90	·	(98:2:0:0:0)
(7.5)	10		5.2
2193	90	, · · · · · · · · · · · · · · · · · · ·	
(7.4)		flakes.	(98:2:0:0:0)
	10		0.0
2196	90		8.8
(8.5)		CLAYSTONE, a.a.	(98:2:0:0:0)
2199	90	SANDSTONE, white, pale grey, very fine to fine, occasionally silty, sub-	8.8
(7.4)		angular to sub-rounded, moderate sorted quartz, white feldspar and grey-	(97:3:0:0:0)
		green to grey-black volcano-lithic grains, minor calcite, trace mica and	
		carbonaceous material, dispersive clay matrix, friable, poor inferred	
		porosity.	
	10	CLAYSTONE, pale grey to grey-green, light to dark brown, soft to firm,	
		silty in part.	
			7.3
2202	90	SANDSTONE, a.a.	(97:3:0:0:0)

LAKES OIL N.L.	TRIFO	<u>N-1</u>	DOOT OF
			Gas (units)
Depth	Percent	Lithological Description	(Breakdown %)
2205	80	SANDSTONE, a.a.	8.5
(9.3)	20		(98:2:0:0:0)
2208	90	SANDSTONE, a.a white, pale to dark grey, grey-green, very fine to	14.0
(8.0)		fine, abundant clay matrix, very poor porosity.	(97:3:0:0:0)
` '	10		
2211	80	SANDSTONE, a.a.	95.0
(8.3)	20	CLAYSTONE, moderate to dark brown to grey-brown, soft to firm.	(99:1:0:0:0)
2214	100	SANDSTONE, a.a.	53.2
(7.0)	Tr	CLAYSTONE, a.a.	(96:3:1:0:0)
2217	90	SANDSTONE, a.a.	72.7
(8.1)	10		(98:2:0:0:0)
2220	90	SANDSTONE, a.a.	34.3
(7.1)	10		(98:2:0:0:0)
2223	100		20.8
(8.6)	Tr		(98:2:0:0:0)
2226	100		19.3
(7.7)	Tr	CLAYSTONE, a.a.	(98:2:0:0:0)
2229	100		18.2
(9.3)	Tr		(98:2:0:0:0)
2232	100		28.2
(15.3)	Tr		(96:3:1:0:0)
2235	80		25.3
(25.8)	20		(97:3:0:0:0) 5.2
2238	70	=- ·· · - · · ,	5.2 (96:4:0:0:0)
(10.2)	30	CLAYSTONE, a.a.	3.2
2241	80	SANDSTONE, light to moderate grey, very fine to fine, grades to siltstone in part, sub-angular to sub-rounded, moderate sorted, lithic, feldspathic,	(95:5:0:0:0)
(10.7)		argillaceous, minor mica flakes and calcite, friable to moderately hard,	(90.0.0.0)
		poor porosity.	
	20		
2244	50	SANDSTONE, a.a. – trace pyrite and carbonaceous material.	12.5
(8.5)	50		(98:2:0:0:0)
(0.5)	00	carbonaceous material.	,
2247	80	SANDSTONE, a.a. – light to moderate grey, grey-green, very fine to	14.3
(9.9)	"	medium, abundant clay matrix, poor porosity.	(98:2:0:0:0)
(5.5)	20		
2250	90	SANDSTONE, a.a.	12.0
(8.9)	10		(98:2:0:0:0)
2253	90	SANDSTONE, a.a.	25.8
(11.9)	10	CLAYSTONE, a.a.	(97:3:0:0:0)
2256	50		30.8
(5.8)	50	CLAYSTONE, light to dark grey, greenish grey, moderate to dark brown,	(97:3:0:0:0)
		sub-fissile to blocky, silty and carbonaceous in part.	
2259	50	SANDSTONE, white to moderate grey, grey-green, very fine to fine, sub-	32.8
(5.9)		angular to sub-rounded, poor to moderate sorted, volcano-lithic, feldspar,	(98:2:0:0:0)
		abundant clay matrix, trace calcite, friable to moderately hard, poor	
		porosity.	
—		CLAYSTONE, a.a.	26.2
2262	40		26.2
(5.9)		CLAYSTONE, a.a.	(98:2:0:0:0)
2265	60	SANDSTONE, a.a.	28.8
(5.7)	40		(98:2:0:0:0)
2268	50	SANDSTONE, a.a.	39.2
(4.4)	50		(98:2:0:0:0) 137.7
2271	30	SANDSTONE, a.a. – light to dark grey-green, silty, argillaceous, lithic,	(98:2:0:0:0)
(3.0)		feldspathic, very poor porosity.	(30.2.0.0.0)
	70		
0074		material.	78.7
2274	30	SANDSTONE, a.a. – abundant pinkish orange anhydrite? grains, very poor porosity.	(98:2:0:0:0)
(3.3)	70		(30.2.3.0.0)
	70	OLATOTONE, a.a.	

Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
2277 (3.9)	80	SANDSTONE, white to grey, grey-green, very fine to fine, sub-angular to sub-rounded, poor to moderate sorted, volcano-lithic, common coarse pinkish orange anhydrite? grains, trace mica flakes and carbonaceous material, dispersive clay matrix, friable, poor porosity.	46.2 (98:2:0:0:0)
2280	20 90	CLAYSTONE, a.a. SANDSTONE, a.a.	36.8
(4.0)	10	CLAYSTONE, a.a.	(98:2:0:0:0)
2283 (3.2)	100	SANDSTONE, a.a. – very fine to medium.	48.8 (98:2:0:0:0)
2286	30	· · · · · · · · · · · · · · · · · · ·	73.5 (98:2:0:0:0)
(4.7) 2289		CLAYSTONE, a.a. SANDSTONE, a.a.	67.0
(5.2)		CLAYSTONE, a.a.	(98:2:0:0:0)
2292	30	SANDSTONE, a.a.	55.7
(23.1)	70		(98:2:0:0:0) 23.0
2295 (32.4)	80	SANDSTONE, grey to grey-green, very fine to medium, sub-angular to sub-rounded, poor to moderate sorted quartz, volcano-lithic and feldspar grains, minor coarse pinkish orange anhydrite? grains, dispersive clay matrix, poor porosity. CLAYSTONE, a.a.	(96:3:1:0:0)
2298	50	SANDSTONE, a.a.	28.7
(26.4)		CLAYSTONE, a.a. SANDSTONE, a.a. – very argillaceous, lithic, minor mica flakes, very	(96:3:1:0:0) 150.7
2301 (3.1)	40 60	poor porosity.	(98:2:0:0:0)
2304	60		52.3
(7.3)	40	CLAYSTONE, a.a.	(98:2:0:0:0)
2307	40		95.2 (98:2:0:0:0)
(3.7) 2310		CLAYSTONE, a.a. SANDSTONE, a.a.	71.2
(5.7)		CLAYSTONE, a.a.	(98:2:0:0:0)
2313	70	SANDSTONE, a.a.	106.3
(3.3)	30		(98:2:0:0:0) 71.3
2316 (4.4)	30 70		(98:2:0:0:0)
2319 (4.4)	30 70	SANDSTONE, white to pale grey, grey-green, very fine to fine, sub-angular to sub-rounded, poor to moderate sorted quartz and volcano-lithic grains, feldspathic, trace mica flakes and carbonaceous material, abundant clay matrix, very poor porosity. CLAYSTONE, a.a.	85.2 (97:3:0:0:0)
2322		SANDSTONE, a.a.	91.5
(4.2)		CLAYSTONE, a.a.	(97:3:0:0:0)
2325 (3.1)		SANDSTONE, a.a. CLAYSTONE, a.a.	159.7 (98:2:0:0:0)
2328	40		146.0
(3.3)	60	CLAYSTONE, a.a.	(98:2:0:0:0)
2331	40	·	119.0 (98:2:0:0:0)
(4.8) 2334		CLAYSTONE, a.a. SANDSTONE, a.a.	57.3
(6.7)		CLAYSTONE, a.a.	(97:3:0:0:0)
2337	50	SANDSTONE, a.a.	81.5
(7.5)		CLAYSTONE, a.a. – minor very dark brown, carbonaceous.	(97:3:0:0:0)
2340 (5.7)		SANDSTONE, a.a. CLAYSTONE, a.a.	62.2 (98:2:0:0:0)
2343	50	SANDSTONE, a.a.	130.3
(6.0)		CLAYSTONE, a.a.	(97:3:0:0:0)
2346		SANDSTONE, a.a. CLAYSTONE, a.a.	48.3 (96:3:1:0:0)
(8.3) 2349		SANDSTONE, a.a.	29.8
(7.6)	70	CLAYSTONE, a.a.	(96:3:1:0:0)
2352	50	SANDSTONE, a.a.	25.8

 $\underset{(\text{Breakdown }\%)}{903901067}$

2355 60 SANDSTONE, while to grey, groy-green, very fine to fine, occasionally medium, sub-angular to sub-rounded, poor to moderate sorted volcano-calorie, very argillaceous, finalse, poor proresity. 26.3 (98:2:0:0:0)			And the Company of the Company	Gas (units)
(9.2) medium, sub-engular to sub-rounded, poor to moderate sorted, volcanolillic, feldspathic, trace carbonaceous material and mina flakes, minor calcile, very argillaceous, friable, poor porosity.	Depth	Percent	Lithological Description	(Breakdown %)
(9.2) medium, sub-engular to sub-rounded, poor to moderate sorted, volcanolillic, feldspathic, trace carbonaceous material and mina flakes, minor calcile, very argillaceous, friable, poor porosity.	2255	60	SANDSTONE white to grey grey-green, very fine to fine occasionally	26.3
Itinic, feldspethic, trace carbonaceous material and mica flakes, minor calcite, very argillaceous, friable, poor porosity,			medium sub-angular to sub-rounded, poor to moderate sorted, volcano-	
calcite, very argillaceous, friable, poor porosity.	(5.2)		lithic, feldspathic, trace carbonaceous material and mica flakes, minor	,
40 CLAYSTONE, light to moderate grey, grey-brown, brown, soft to firm, silty and carbonaceous in part.				
and carbonaceous in part. 20.0		40	CLAYSTONE light to moderate grey, grey-brown, brown, soft to firm, silty	
20.0 20.0				
(6.2) 60 CLAYSTONE, a.a. (98.2:0:0.0) (99.2:0:0.0) (99	2358	40		20.0
2361 60 SANDSTONE, a.a. (98:2:0:0:0)		1 1		(98:2:0:0:0)
(6.1) 40 CLAYSTONE, a.a. (98:2:0:00) 2367 60 SANDSTONE, a.a. (98:2:0:00) 2367 60 SANDSTONE, a.a. (98:2:0:00) 2370 90 SANDSTONE, a.a very fine to medium. (7.2) 10 CLAYSTONE, a.a. (98:2:0:00) 2373 90 SANDSTONE, a.a very fine to medium. (7.2) 11 CLAYSTONE, a.a. (98:2:0:00) 2376 40 SANDSTONE, a.a. (98:2:0:00) 2376 40 SANDSTONE, a.a. (98:2:0:00) 2379 40 SANDSTONE, a.a. (98:2:0:00) 2379 40 SANDSTONE, a.a. (98:2:0:00) 2379 40 SANDSTONE, a.a. (98:2:0:00) 2382 40 SANDSTONE, a.a. (98:2:0:00) 2382 40 SANDSTONE, a.a. (98:2:0:00) 2383 40 SANDSTONE, a.a. (98:2:0:00) 2384 50 SANDSTONE, a.a. (98:2:0:00) 2385 50 SANDSTONE, a.a. (98:2:0:00) 2386 10 SANDSTONE, a.a. (98:2:0:00) 2388 20 SANDSTONE, a.a. (98:2:0:00) 2389 30 SANDSTONE, a.a. (98:2:0:00) 2391 30 SANDSTONE, white to pale grey, light to moderate brown, soft to firm, silty, dispersive in part. (98:2:0:00) 2391 30 SANDSTONE, a.a. (98:2:0:00) 2400 30 SANDSTONE, a.a. (98:2:0:00) 2400 30 SANDSTONE, a.a. (98:2:0:00) 2401 30 SANDSTONE, a.a. (98:2:0:00) 2402 30 SANDSTONE, a.a. (98:2:0:00) 2403 30 SANDSTONE, a.a. (98:2:0:00) 2404 30 SANDSTONE, a.a. (98:2:0:00) 2405 30 SANDSTONE, a.a. (98:2:0:00) 2406 70 SANDSTONE, a.a. (98:2:0:00) 2407 30 SANDSTONE, a.a. (98:2:0:00) 2408 30 SANDSTONE, a.a. (98:2:0:00) 2409 30 SANDSTONE, a.a. (98:2:0:				43.2
28.7		l		(98:2:0:0:0)
(2.77) 20 CLAYSTONE, a.a. (98:2:0:0.0) (9				26.7
2367 60 SANDSTONE, a.a. 15.5 (98.2:0:0.0) 2370 90 SANDSTONE, a.a very fine to medium. 8.7 (7.2) 10 CLAYSTONE, a.a. (98.2:0:0.0) 2373 80 SANDSTONE, a.a. (98.2:0:0.0) 2373 80 SANDSTONE, a.a. (98.2:0:0.0) 2376 40 SANDSTONE, a.a. (98.2:0:0.0) 2376 40 SANDSTONE, a.a. (98.2:0:0.0) 2379 40 SANDSTONE, a.a. (98.2:0:0.0) 2379 40 SANDSTONE, a.a. (98.2:0:0.0) 2379 40 SANDSTONE, a.a. (98.2:0:0.0) 2389 40 SANDSTONE, a.a. (98.2:0:0.0) 2382 40 SANDSTONE, a.a. (98.2:0:0.0) 2385 50 SANDSTONE, a.a. (98.2:0:0.0) 2385 50 SANDSTONE, a.a. (10.8) (10				(98:2:0:0:0)
(6.8) 40 CLAYSTONE, a.a. (98:2:0:0:0) 2373 90 SANDSTONE, a.a. (98:2:0:0:0) (7.2) 10 CLAYSTONE, a.a. (98:2:0:0:0) (7.2) 10 CLAYSTONE, a.a. (98:2:0:0:0) (8.7) 40 SANDSTONE, a.a. (98:2:0:0:0) (2376 40 SANDSTONE, a.a. (98:2:0:0:0) (2379 40 SANDSTONE, a.a. (98:2:0:0:0) (2379 40 SANDSTONE, a.a. (98:2:0:0:0) (2379 40 SANDSTONE, a.a. (98:2:0:0:0) (2382 40 SANDSTONE, a.a. (98:2:0:0:0) (2382 40 SANDSTONE, a.a. (98:2:0:0:0) (2385 50 SANDSTONE, a.a. (98:2:0:0:0) (2386 20 SANDSTONE, a.a. (98:2:0:0:0) (2388 20 SANDSTONE, white to pale grey, very fine, very argillaceous, lithic, feldspathic, friable to moderate grey, light to moderate brown, soft to firm, silty, dispersive clay matrix, poor porosity. (7.2) 30 SANDSTONE, a.a. (98:2:0:0:0) (7.2) 30 SANDSTONE, a.a. (98:2:0:0:0) (7.2) 31 SANDSTONE, a.a. (98:2:0:0:0) (7.2) 32 SANDSTONE, a.a. (98:2:0:0:0) (7.3) 32 SANDSTONE, a.a. (98:2:0:0:0) (7.4) 40 CLAYSTONE, a.a moderate to dark grey, dark brown, firm, silty in part. (98:2:0:0:0) (7.4) 40 CLAYSTONE, a.a moderate to dark grey, dark brown, firm, silty in part. (98:2:0:0:0) (7.4) 40 CLAYSTONE, a.a moderate to dark grey, dark brown, firm, silty in part. (98:2:0:0:0) (7.4) 40 CLAYSTONE, a.a moderate to dark grey, dark brown, firm, silty in part. (98:2:0:0:0) (7.4) 40 CLAYSTONE, a.a grey-green. (98:2:0:				15.5
2370 90 SANDSTONE, a.a very fine to medium. 98.2:0:0:0 98				(98:2:0:0:0)
(72) 10 CLAYSTONE, a.a. (98:2:0:0:0) (98:				
2373 80 SANDSTONE, a.a. 7.8 (98:2:00:0)		10	CLAYSTONE, a.a.	
(9.8) 20 CLAYSTONE, a.a. (982:00:00) 2376 40 SANDSTONE, a.a. (12.8 (982:00:00) 2379 40 SANDSTONE, a.a. (982:00:00) 3.0 (982:00		80	SANDSTONE, a.a.	
2376		20	CLAYSTONE, a.a.	
(8.7) 60 CLAYSTONE, a.a. (98:2:0:0:0) 2379 40 SANDSTONE, a.a. (98:2:0:0:0) 60 CLAYSTONE, white to pale grey, very fine, very argillaceous, lithic, feldspathic, friable to moderately hard, poor porosity. (98:2:0:0:0) 60 CLAYSTONE, white to moderate year, light to moderate brown, soft to firm, silty, dispersive in part. (98:2:0:0:0) 61 CLAYSTONE, a.a. (98:2:0:0:0) 62 CLAYSTONE, a.a. (98:2:0:0:0) 63 CLAYSTONE, a.a. (98:2:0:0:0) 63 CLAYSTONE, a.a. (98:2:0:0:0) 63 CLAYSTONE, a.a. (98:2:0:0:0) 64 CLAYSTONE, a.a. (98:2:0:0:0) 64 CLAYSTONE, a.a. (98:2:0:0:0) 64 CLAYSTONE, a.a. (98:2:0:0:0) 65 CLAYSTONE, a.a. (98:2:0:0:0) 66 CLAYSTONE, a.a. (98:2:0:0:0) 68 CLAYSTONE, a.a				
2379		60		
10.8	2379	40	SANDSTONE, a.a.	
2382		60		
17.7 (9.0) 50 SANDSTONE, a.a. (9.0) 50 CLAYSTONE, moderate to dark grey, soft to firm, silty in part. (9.0) (9	2382			
2388	(11.7)	60		
2388 (13.8) 20 SANDSTONE, white to pale grey, very fine, very argillaceous, lithic, feldspathic, friable to moderately hard, poor porosity. (98:2:0:0:0)	2385	50		
(13.8) 80 CLAYSTONE, white to moderately hard, poor porosity. (98:2:0:0:0) 2391 30 SANDSTONE, a. a. (98:2:0:0:0) 2394 90 SANDSTONE, a. a. (98:2:0:0:0) 30 SANDSTONE, a. a. (98:2:0:0:0) 31 SANDSTONE, a. a. (98:2:0:0:0) 3294 90 SANDSTONE, white to grey, grey-green, fine to medium, sub-angular to sub-rounded, moderate sorted quartz, volcano-lithic and feldspar grains, dispersive clay matrix, poor porosity. 3297 90 SANDSTONE, a. a. (98:2:0:0:0) 3298 30 SANDSTONE, a. a. (98:2:0:0:0) 32400 80 SANDSTONE, a. a. (98:2:0:0:0) 32400 80 SANDSTONE, a. a. (98:2:0:0:0) 32400 80 SANDSTONE, a. a. (98:2:0:0:0) 32403 70 SANDSTONE, a. a. (98:2:0:0:0) 32404 70 SANDSTONE, a. a. (98:2:0:0:0) 32406 70 SANDSTONE, a. a. (98:2:0:0:0) 32406 70 SANDSTONE, a. a. (98:2:0:0:0) 32406 70 SANDSTONE, a. a. (98:2:0:0:0) 32407 30 SANDSTONE, a. a. (98:2:0:0:0) 32408 30 SANDSTONE, a. a. (98:2:0:0:0) 32409 30 SANDSTONE, a. a. (98:2:0:0:0) 32412 60 SANDSTONE, a. a yery-green. (98:2:0:0:0) 32412 60 SANDSTONE, a. a yery fine to fine. (44.5 (98:2:0:0:0) 32415 40 SANDSTONE, a. a very fine to fine. (98:2:0:0:0) 32415 40 SANDSTONE, a. a. (98:2:0:0:0) 32416 40 SANDSTONE, a. a. (98:2:0:0:0) 32417 40 CLAYSTONE, a. a. (98:2:0:0:0) 32418 30 SANDSTONE, a. a. (98:2:0:0:0) 32418 30 SANDSTONE, a. a. (98:2:0:0:0) 32427 70 CLAYSTONE, a. a. (98:2:0:0:0) 32427 70 SANDSTONE, a. a. (98:2:0:0:0) 32427 70 SANDSTONE, a. a. (98:2:0:0:0) 32433 70 SANDSTONE, a. a. (98:2:0:0:0) 32433 70 SANDSTONE, a. a. (98:2:0:0:0) 32433 70 CLAYSTONE, a. a. (98:2:0:0:0) 32433 70 SANDSTONE, a. a. (98:2:0:0:0) 32434 70 SANDSTONE, a. a. (98:2:0:0:0) 32433 70 SANDSTONE, a. a. (98:2:0:0:0) 32433 70 SANDSTONE, a. a. (98:2:0:0:0) 32433 70 S	(9.0)	50	CLAYSTONE, moderate to dark grey, soft to firm, silty in part.	
80 CLAYSTONE, white to moderate grey, light to moderate brown, soft to firm, silty, dispersive in part. 9.2 (98:2:0:0:0)	2388	20		
SANDSTONE, a.a. 9.2	(13.8)			(98:2:0:0:0)
2391		80		
(8.1) 70 CLAYSTONE, a.a. (98:2:0:0:0) 2394 90 SANDSTONE, white to grey, grey-green, fine to medium, sub-angular to sub-rounded, moderate sorted quartz, volcano-lithic and feldspar grains, dispersive clay matrix, poor porosity. 10 CLAYSTONE, a.a. 9.7 (7.3) 10 CLAYSTONE, a.a. (98:2:0:0:0) 2400 80 SANDSTONE, a.a. (98:2:0:0:0) 2401 2402 20 CLAYSTONE, a.a. (98:2:0:0:0) 2403 70 SANDSTONE, a.a. (98:2:0:0:0) 2404 70 SANDSTONE, a.a. (98:2:0:0:0) 2405 70 SANDSTONE, a.a. (98:2:0:0:0) 2406 70 SANDSTONE, a.a. (98:2:0:0:0) 2407 2409 30 SANDSTONE, a.a. (98:2:0:0:0) 2409 30 SANDSTONE, a.a. (98:2:0:0:0) 2410 60 SANDSTONE, a.a moderate to dark grey, dark brown, firm, silty in part. (98:2:0:0:0) 2412 60 SANDSTONE, a.a grey-green. (98:2:0:0:0) 2415 40 CLAYSTONE, a.a very fine to fine. (44.5) (4.6) 60 CLAYSTONE, a.a. (98:2:0:0:0) 2415 40 SANDSTONE, a.a. (98:2:0:0:0) 2415 40 SANDSTONE, a.a. (98:2:0:0:0) 2416 30 SANDSTONE, a.a. (98:2:0:0:0) 2417 40 CLAYSTONE, a.a. (98:2:0:0:0) 2418 30 SANDSTONE, a.a. (98:2:0:0:0) 2419 30 SANDSTONE, a.a. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. (98:2:0:0:0) 2421 30 SANDSTONE, a.a grades to siltstone in part. (98:2:0:0:0) 2421 30 SANDSTONE, a.a grades to siltstone in part. (98:2:0:0:0) 2421 30 SANDSTONE, a.a grades to siltstone in part. (98:2:0:0:0) 2421 30 SANDSTONE, a.a grades to siltstone in part. (98:2:0:0:0) 2421 30 SANDSTONE, a.a grades to siltstone in part. (98:2:0:0:0) 2421 30 SANDSTONE, a.a silty in part. (98:2:0:0:0) 2422 30 SANDSTONE, a.a silty in part. (98:2:0:0:0) 2423 70 SANDSTONE, a.a silty in part. (98:2:0:0:0) 2433 70 SANDSTONE, a.a sorty fine to medium, sub-angular to sub-rounded, moderate sorted, lithic, feldspathic, calcareous in part, dispersive clay matrix, friable, poor porosity.				0.0
2394	l .			
Sub-rounded, moderate sorted quartz, volcano-lithic and feldspar grains, dispersive clay matrix, poor porosity. 10 CLAYSTONE, a.a. 9.7 (98:2:0:0:0)			CLAYSIONE, a.a.	
dispersive clay matrix, poor porosity. 10 CLAYSTONE, a.a. 9.7 (7.3) 10 CLAYSTONE, a.a. (98:2:0:0:0) 2400 80 SANDSTONE, a.a. (98:2:0:0:0) 2403 70 SANDSTONE, a.a. (98:2:0:0:0) 2403 70 SANDSTONE, a.a. (98:2:0:0:0) 2406 70 SANDSTONE, a.a. 25.3 (98:2:0:0:0) 2406 70 SANDSTONE, a.a. 13.0 (98:2:0:0:0) 2409 30 CLAYSTONE, a.a. 13.0 (7.6) 30 CLAYSTONE, a.a. 13.0 (98:2:0:0:0) 2409 30 SANDSTONE, a.a. 8.0 (10.0) 70 CLAYSTONE, a.a. 198:2:0:0:0) 2412 60 SANDSTONE, a.a. 198:2:0:0:0) 2415 40 SANDSTONE, a.a. 198:2:0:0:0) 2415 40 SANDSTONE, a.a. 198:2:0:0:0) 2415 40 SANDSTONE, a.a. (98:2:0:0:0) 2418 30 SANDSTONE, a.a. (98:2:0:0:0) 2418 30 SANDSTONE, a.a. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. 194:2 198:2 1		90	SANDSTONE, white to grey, grey-green, fine to medium, sub-arigular to	
10 CLAYSTONE, a.a. 9.7	(7.2)			(90.2.0.0.0)
2397		1 40		
(7.3) 10 CLAYSTONE, a.a. (98:2:0:0:0) 2400 80 SANDSTONE, a.a. (11.5) (7.4) 20 CLAYSTONE, a.a. (25.3) (6.6) 30 CLAYSTONE, a.a. — moderate to dark grey. (98:2:0:0:0) 2406 70 SANDSTONE, a.a. — moderate to dark grey. (98:2:0:0:0) 2409 30 CLAYSTONE, moderate to dark grey, dark brown, firm, silty in part. (98:2:0:0:0) 2409 30 SANDSTONE, a.a. — grey-green. (98:2:0:0:0) 2412 60 SANDSTONE, a.a. — very fine to fine. (98:2:0:0:0) 2412 60 SANDSTONE, a.a. — very fine to fine. (98:2:0:0:0) 2415 40 CLAYSTONE, a.a. — very fine to fine. (98:2:0:0:0) 2416 40 CLAYSTONE, a.a. — (98:2:0:0:0) 2417 40 CLAYSTONE, a.a. — (98:2:0:0:0) 2418 30 SANDSTONE, a.a. — (98:2:0:0:0) 2421 30 SANDSTONE, a.a. — grades to siltstone in part. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. — grades to siltstone in part. (98:2:0:0:0) 2424 20 SANDSTONE, a.a. — grades to siltstone in part. (98:2:0:0:0) 2424 20 SANDSTONE, a.a. — rery fine to medium. (98:2:0:0:0) 2427 70 CLAYSTONE, a.a. — very fine to medium. (98:2:0:0:0) 2427 70 SANDSTONE, a.a. — very fine to medium. (98:2:0:0:0) 2427 70 SANDSTONE, a.a. — very fine to medium. (98:2:0:0:0) 2428 30 SANDSTONE, a.a. — very fine to medium, (98:2:0:0:0) 2430 30 SANDSTONE, a.a. — very fine to medium, sub-angular to sub-rounded, moderate sorted, lithic, feldspathic, calcareous in part, dispersive clay matrix, friable, poor porosity.	2207			9.7
2400				
(7.4) 20 CLAYSTONE, a.a. (98:2:0:0:0) 2403 70 SANDSTONE, a.a. 25.3 (6.6) 30 CLAYSTONE, a.a. – moderate to dark grey. (98:2:0:0:0) 2406 70 SANDSTONE, a.a. 13.0 (7.6) 30 CLAYSTONE, moderate to dark grey, dark brown, firm, silty in part. (98:2:0:0:0) 2409 30 SANDSTONE, a.a. 8.0 (10.0) 70 CLAYSTONE, a.a. (98:2:0:0:0) 2412 60 SANDSTONE, a.a. – very fine to fine. 44.5 (7.4) 40 CLAYSTONE, a.a. (98:2:0:0:0) 2415 40 SANDSTONE, a.a. 46.0 (4.6) 60 CLAYSTONE, a.a. (98:2:0:0:0) 2418 30 SANDSTONE, a.a. 44.7 (8.8) 70 CLAYSTONE, a.a. – silty in part. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. – silty in part. (98:2:0:0:0) 2424 20 SANDSTONE, a.a. (98:2:0:0:0) 2427 70 SANDSTONE, a.a. <t< td=""><td></td><td></td><td></td><td></td></t<>				
2403 70 SANDSTONE, a.a. 25.3 (98:2:0:0:0)		I I		
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2406	•			1
(7.6) 30 CLAYSTONE, moderate to dark grey, dark brown, firm, silty in part. (98:2:0:0:0) 2409 30 SANDSTONE, a.a. (98:2:0:0:0) 2412 60 SANDSTONE, a.a. – very fine to fine. (98:2:0:0:0) 2415 40 SANDSTONE, a.a. (98:2:0:0:0) 2415 40 SANDSTONE, a.a. (98:2:0:0:0) 2418 30 SANDSTONE, a.a. (98:2:0:0:0) 2418 30 SANDSTONE, a.a. (98:2:0:0:0) 2418 30 SANDSTONE, a.a. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. – grades to dark grey, grey-brown, soft to firm. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. – grades to siltstone in part. (98:2:0:0:0) 2421 30 SANDSTONE, a.a. – silty in part. (98:2:0:0:0) 2424 20 SANDSTONE, a.a. – silty in part. (98:2:0:0:0) 2424 20 SANDSTONE, a.a. (98:2:0:0:0) 2427 70 SANDSTONE, a.a. – very fine to medium. (98:2:0:0:0) 2427 70 SANDSTONE, a.a. – very fine to medium. (98:2:0:0:0) 2430 30 SANDSTONE, a.a. (98:2:0:0:0) 2430 30 SANDSTONE, a.a. (98:2:0:0:0) 2433 70 CLAYSTONE, a.a. (98:2:0:0:0) 2433 70 SANDSTONE, ight to moderate grey, very fine to medium, sub-angular to sub-rounded, moderate sorted, lithic, feldspathic, calcareous in part, dispersive clay matrix, friable, poor porosity.				
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(9.1)30CLAYSTONE, a.a.(98:2:0:0:0)243030SANDSTONE, a.a.58.5(9.6)70CLAYSTONE, a.a.(98:2:0:0:0)243370SANDSTONE, light to moderate grey, very fine to medium, sub-angular to sub-rounded, moderate sorted, lithic, feldspathic, calcareous in part, dispersive clay matrix, friable, poor porosity.75.8				
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2433 70 SANDSTONE, light to moderate grey, very fine to medium, sub-angular to sub-rounded, moderate sorted, lithic, feldspathic, calcareous in part, dispersive clay matrix, friable, poor porosity. 75.8 (98:2:0:0:0)		30		
(12.3) sub-rounded, moderate sorted, lithic, feldspathic, calcareous in part, dispersive clay matrix, friable, poor porosity. (98:2:0:0:0)	(9.6)	70	CLAYSTONE, a.a.	
dispersive clay matrix, friable, poor porosity.		70		75.8
	(12.3)			(98:2:0:0:0)
30 CLAYSTONE, a.a.				
		30	CLAYSTONE, a.a.	L

LAKES OIL N	L. TRIFO	<u>)N-1</u>	Can (unita)
Depth	Percent	Lithological Description	Gas (units) (Breakdown %)
2436	70	SANDSTONE, a.a.	72.7
(15.0)	30	CLAYSTONE, a.a.	(97:3:0:0:0)
2439	70	SANDSTONE, a.a.	36.8
(17.2)	30		(98:2:0:0:0)
2442	70	·	46.5
(16.3)		CLAYSTONE, a.a.	(98:2:0:0:0)
2445		SANDSTONE, a.a.	53.0
(14.3)		CLAYSTONE, a.a.	(96:3:1:0:0)
2448		SANDSTONE, a.a.	63.0
(15.2)		CLAYSTONE, a.a.	(96:3:1:0:0) 145.2
2451	70	SANDSTONE, a.a.	(97:3:0:0:0)
(13.4)	30	CLAYSTONE, white to pale grey, soft, dispersive, moderate to dark grey,	(97.3.0.0.0)
		grey-green, moderate to dark brown, soft to firm, silty, carbonaceous in	
0.15.1		part.	85.8
2454	50	· · · · · · · · · · · · · · · · · · ·	(97:3:0:0:0)
(10.9)	50		96.2
2457	50	carbonaceous laminae, silty, very argillaceous, very poor porosity.	(96:3:1:0:0)
(10.3)	50	CLAYSTONE, a.a.	(00.0
2460	50		70.5
(11.4)	50		(98:2:0:0:0)
2463	60		75.7
(11.3)	40	·	(97:3:0:0:0)
2466	60		91.3
(10.1)	40		(96:3:1:0:0)
2469	80		69.5
(12.1)	1	CLAYSTONE, a.a.	(96:3:1:0:0)
2472	20		155.8
(15.5)	80	CLAYSTONE, a.a.	(97:3:0:0:0)
(10.0)	Tr	l de la companya de l	
		and shaley in part.	
2475	20		85.7
(10.7)	70		(96:3:1:0:0)
	10	COAL, a.a.	
2478	20		58.2
(12.0)	80	CLAYSTONE, a.a moderate grey, soft, dispersive.	(96:3:1:0:0)
2481	20	SANDSTONE, white to greenish grey, very fine to fine, occasionally	51.2 (98:2:0:0:0)
(12.8)		medium and rare coarse, sub-angular to sub-rounded, moderate sorted,	(96.2.0.0.0)
		lithic, feldspathic, minor calcite, rare pyrite nodules and cement,	
		abundant clay matrix, friable, very poor porosity.	
0.40.4	80	CLAYSTONE, a.a. SANDSTONE, a.a. – light to moderate grey, very fine to fine.	81.8
2484		CLAYSTONE, a.a.	(98:2:0:0:0)
(10.4) 2487	50		205.3
(12.5)	50		(97:3:0:0:0)
(12.3)	30	soft to firm, sub-fissile to blocky, carbonaceous in part.	
2490	30		216.8
(11.4)	70		(97:3:0:0:0)
2493	50		180.3
(10.9)		CLAYSTONE, a.a.	(97:3:0:0:0)
2496	10	the state of the s	123.8
(11.9)		argillaceous, poor porosity.	(97:3:0:0:0)
	90	CLAYSTONE, dark brown, dark grey to grey-brown, firm, sub-fissile to	
		blocky, carbonaceous in part, rare pyrite.	
2499	50	SANDSTONE, a.a. – also grey-green, chloritic.	95.0
(14.1)	50		(98:2:0:0:0)
2502		SANDSTONE, a.a.	89.3
(11.3)	20	CLAYSTONE, a.a.	(97:3:0:0:0)
2505	70		107.7
(11.6)	30	CLAYSTONE, a.a.	(96:3:1:0:0)
2508	70	SANDSTONE, a.a.	129.3
(11.9)	30	CLAYSTONE, a.a.	(97:3:0:0:0)
2511	70		171.2
(10.4)	30	CLAYSTONE, a.a.	(97:3:0:0:0)

Gas (units) (Breakdown %) Lithological Description Percent Depth 152.7 SANDSTONE, a.a. 2514 40 (97:3:0:0:0) CLAYSTONE, moderate to dark grey, occasionally grey-green and grey-60 (11.5)brown, firm, minor carbonaceous specks, occasionally silty. SANDSTONE, green to grey-green, grey, very fine to fine, sub-angular to 126.7 2517 (97:3:0:0:0) sub-rounded, moderate sorted volcano-lithic and feldspar grains, (12.6)abundant clay matrix, green chloritic staining in part, friable, poor porosity. CLAYSTONE, a.a. 50 137.2 2520 50 SANDSTONE, a.a. CLAYSTONE, a.a. - occasional carbonaceous / coal fragments. (96:3:1:0:0) 50 (11.8)175.7 SANDSTONE, a.a. 40 2523 (97:3:0:0:0) CLAYSTONE, a.a. (11.9)60 SANDSTONE, a.a. 161.8 40 2526 (98:2:0:0:0) CLAYSTONE, a.a. (11.4)60 208.3 2529 SANDSTONE, a.a. (97:3:0:0:0) (13.9)50 CLAYSTONE, a.a. 193.0 SANDSTONE, white to pale green, grey-green, very fine to fine, sub-2532 angular to sub-rounded, moderate sorted, volcano-lithic, feldspathic, (97:3:0:0:0) (13.2)abundant argillaceous matrix, green chloritic staining in part, friable, poor porosity. CLAYSTONE, a.a. 123.5 SANDSTONE, a.a. 40 2535 (97:3:0:0:0) CLAYSTONE, a.a. (14.1)60 107.8 SANDSTONE, a.a. 2538 50 <u>(97:3</u>:0:0:0) CLAYSTONE, a.a. 50 (13.2)77.2 70 SANDSTONE, a.a. 2541 (96:3:1:0:0) CLAYSTONE, a.a. (13.9)30 114.2 SANDSTONE, a.a. 2544 80 CLAYSTONE, moderate grey to grey-green, grey-brown, moderate to (96:3:1:0:0) 20 (10.3)dark brown, soft to firm, occasional carbonaceous and silty in part. 94.2 SANDSTONE, a.a. 50 2547 (96:3:1:0:0) CLAYSTONE, a.a. 50 (11.3)99.5 SANDSTONE, a.a. 40 2550 (96:3:1:0:0) 60 CLAYSTONE, a.a. (13.8)COAL, very dark brown to black, sub-vitreous lustre, grades to shale in Tr SANDSTONE, a.a. 122.7 40 2553 (96:3:1:0:0) CLAYSTONE, a.a. - silty in part. 60 (16.1)106.2 SANDSTONE, a.a. - very calcareous, poor porosity. 60 2556 (96:3:1:0:0) CLAYSTONE, a.a. (18.3)40 117.3 SANDSTONE, a.a. 2559 30 (98:2:0:0:0) 70 CLAYSTONE, a.a. (11.3)COAL, a.a. Tr 91.3 SANDSTONE, a.a. 40 2562 (97:3:0:0:0) 60 CLAYSTONE, a.a. (8.5)Tr COAL, a.a. 69.3 SANDSTONE, a.a. 2565 50 (97:3:0:0:0) CLAYSTONE, a.a. 50 (10.7)COAL, a.a. Tr SANDSTONE, white to pale grey, grey-green, very fine to fine, sub-128.0 2568 60 (96:3:1:0:0) angular to sub-rounded, moderate sorted, lithic and feldspathic, (14.4)calcareous in part, clay matrix, friable, poor porosity. CLAYSTONE, a.a. 40 TD 2570 metres - 05.30 hours 27 December 2000

APPENDIX 2

SIDEWALL CORE DESCRIPTIONS

LAKES OIL N.L. TRIFON-1 SIDE WALL CORE DESCRIPTION

No.	Depth	Rec	Lithology
	metres	mm.	
1	2130.0	40	CLAYSTONE, very dark grey-green, soft to firm.
2	2117.0	30	CLAYSTONE, very dark grey-green, soft to firm.
3	2110.0	30	CLAYSTONE, very dark grey-green, soft to firm, sandy in part.
4	2043.0	25	CLAYSTONE, very dark grey-green, soft to firm.
5	2022.0	10	SANDSTONE, grey to grey-green, very fine to medium, sub-angular, moderate to well
			sorted, volcano-lithic, slightly calcareous, abundant white clay matrix, friable, very poor
			porosity.
6_	1990.0	25	CLAYSTONE, very dark grey-green, soft to firm.
7	1922.0	15	SANDSTONE, grey to grey-green, very fine to fine, sub-angular, moderate to well sorted,
			volcano-lithic, slightly calcareous, abundant white clay matrix, friable, very poor porosity.
8	1870.0	15	CLAYSTONE, very dark grey-green, soft to firm.
9	1840.0	-	NO RECOVERY
10	1820.0	15	CLAYSTONE, very dark grey-green, soft to firm.
11	1800.0	20	CLAYSTONE, very dark grey-green, soft to firm, sandy in part.
12	1778.0	50	CLAYSTONE, very dark grey-green to brown-black, firm.
13	1747.5	40	SILTSTONE / CLAYSTONE, dark grey and dark brown, laminated, carbonaceous in part.
14	1727.5	15	SANDSTONE, pale grey to greenish grey, very fine, abundant clay matrix, very poor porosity.
15	1677.5	20	CLAYSTONE, very dark grey-green, soft to firm.
16	1667.0	20	SANDSTONE, pale grey to greenish grey, very fine, abundant clay matrix, very poor porosity.
17	1644.0	35	CLAYSTONE, very dark grey-green, soft to firm.
18	1608.0	10	CLAYSTONE, very dark grey-green, soft to firm.
19	1592.0	45	SANDSTONE, pale grey to greenish grey, very fine, abundant clay matrix, very poor porosity.
20	1566.0	30	CLAYSTONE, grey to grey-green, silty.
21	1535.0	20	SILTSTONE, white to pale grey, very argillaceous, grades to very fine sandstone in part.
22	1477.0	35	CLAYSTONE, very dark grey-green, soft to firm.
23	1457.0	30	CLAYSTONE, light to moderate grey, soft to firm.
24	1425.0	15	CLAYSTONE, light to moderate grey, soft to firm.
25	1400.0	20	SANDSTONE, light grey to grey-green, very fine, moderate to abundant clay matrix, poor
			porosity.
26	1362.0	20	CLAYSTONE, light to moderate grey, soft to firm.
27	1315.0	35	CLAYSTONE, light to moderate grey to grey-green, soft to firm.
28	1292.0	35	CLAYSTONE, light to moderate grey to grey-green, soft to firm.
29	1255.0	35	SANDSTONE, pale grey to grey-green, very fine to fine, very argillaceous, lithic, feldspathic,
			very poor porosity.
30	1241.0	50	CLAYSTONE, light to moderate grey to grey-green, soft to firm.

APPENDIX 3

WIRELINE LOG ANALYSIS

TRIFON-1

LOG ANALYSIS

D.A. Short February 2001

LAKES OIL N.L. - TRIFON-1 Log Analysis

A basic log analysis has been performed on Trifon-1 over the top Latrobe Group and two selected intervals in the Strzelecki Formation.

Three Schlumberger logging runs were made:

Run / Depth

Logs

1 @ 1233m.

DLL / BCS / RHOZ / GR / SP / Cal

2 @ 2152m.

DLL / BCS / RHOZ / TNPH / GR / SP / Cal

3 @ 2570m.

DLL / BCS / GR / SP / Cal

Four drill stem tests were conducted and the results are summarized in figures 1a & 1b.

Temperatures recorded from drill stem tests at Trifon-1 & Gangell-1 give a temperature gradient of 29.5°C / 1000m. – figure 2.

The bottom hole temperature at 2570m. calculated as 94°C

True formation resistivity (Rt) is calculated from the DLL / MSFL combination or if no MSFL the DLL is assumed to approximate Rt.

Formation water resistivity was taken from:

- 1 Latrobe Group 6.99 Ω m @ 42°C Hingle Plot of sand 810-830m.
- 2 Strzelecki Group $0.29\Omega m$ @ $25^{\circ}C$ Water sample from DST#3.

Filtrate resistivity calculated at $0.10\Omega m$ at $42^{\circ}C$. (Figures 3a & 3b.)

Porosity was calculated from:

a) Latrobe Group

Density log and adjusted for Volay.

b) Upper Strzelecki Group

Neutron-Density log and adjusted for Vclay.

c) Middle Strzelecki Group

Sonic log and adjusted for Vclay.

Clay content (Vclay) was calculated from the Gamma Ray log

Water saturation was then calculated using the Indonesia Equation and the results presented both as a table and graphically at a scale of 1 to 500.

The following tables and graphical plots – figures 4a / 4b & 4c - summarize the calculated Porosity / Volay / Water Saturation for the three zones.

Latrobe Group

Interval (metres)	Porosity	V clay	Water Saturation
704.4 - 713.5	32.5	6.1	100.0
714.5 - 715.1	30.9	35.2	100.0
720.9 - 780.6	31.6	9.9	98.8
781.7 - 802.1	31.7	9.0	98.6
802.7 - 807.6	31.9	5.3	99.4
808.3 - 835.2	30.0	7.5	98.4

Strzelecki Group - Upper

Interval (metres)	Porosity	V clay	Water Saturation
1270.9 - 1271.9	12.0	58.7	98.0
1272.4 - 1276.7	13.6	47.9	91.1
1277.7 - 1284.4	14.1	46.0	87.5
1285.0 - 1289.5	15.4	41.3	79.5
1298.9 - 1310.3	16.1	39.1	83.4
1320.1 - 1321.5	14.1	43.6	77.1
1324.5 - 1329.2	16.1	32.7	79.2
1330.8 - 1332.7	13.6	44.4	86.3
1335.5 - 1340.4	15.8	41.3	82.7
1343.3 - 1348.4	17.5	33.1	70.9
1350.7 - 1360.2	16.5	38.6	81.0
1366.1 - 1423.0	18.2	29.0	68.2
1429.1 - 1430.9	12.3	40.0	85.1

Strzelecki Group - Middle

Interval (metres)	Porosity	V clay	Water Saturation
2100.0 - 2113.0	13.2	25.0	66.0
2141.7 - 2147.5	19.8	24.2	78.2
2155.9 - 2167.0	14.4	28.1	100.0
2179.0 - 2187.1	14.4	31.7	100.0
2191.8 - 2201.0	14.2	26.1	100.0
2205.8 - 2208.4	16.5	23.1	100.0
2209.5 - 2230.1	16.4	18.2	100.0
2238.6 - 2239.8	16.6	37.5	100.0
2240.9 - 2241.7	13.0	25.1	100.0
2242.3 - 2258.6	14.1	26.6	100.0
2271.2 - 2272.3	10.4	63.1	88.9

Conclusions

The sands of the Latrobe Group had very good porosity and permeability but were, as expected, water saturated.

Good gas shows were recorded from the top Latrobe coal but no drill stem tests were attempted. The coal was produced in large "chunks" while drilling and showed what appeared to be an extensive fracture system. While this could be a reservoir for "coal seam gas" it could also provided a conduit to the underlying water filled Latrobe sands. If this were the case then any attempts to produce gas from the coal(s) would quite likely be frustrated by very high and probably sustained water production.

The Strzelecki Formation sands encountered were predominantly fine grained, lithic, very argillaceous and with poor to fair reservoir quality. This appears to be confirmed by wireline logs where although calculated porosities lie in the 12 - 18% range when tested they show a lack of good permeability as seen in DSTs 1&2 where they flowed gas at rates less than 50mcfd.

Of significance are the water flows of 900 barrels / day recorded from DSTs 3&4. The water accompanied by a small amount of gas appears to be flowing from fractures in the sands at approximately 2191 and 2209 metrers. These fractures can be identified on the sonic log and are seen at several levels in the Strzelecki Formation in Trifon-1.

Doug Short February 2001

DATA	(m/psi/°C)	1200	1802	536	563	1320	427	575	1675	1818	51	
EMP	(Inside)	Depth	王	1st Flow 1	1st Flow 2	1st Shut-in	2nd Flow 1	2nd Flow 2	2nd Shut-in	표	Temp (°C)	
Strzelecki Group	1206.0-1274.0	1206.0-1274.0	Bottom hole	16 December 2000	10	30	120	240	1.05/1.00/ -	-/-/-	31000/ - / -	
DST#1	Depth (driller)	Depth (logger)	Type test (open hole)	Date	First flow open	First flow shut-in	Second flow open	Second flow shut-in	SG Mud/Make-up/Rec 🕹	Res. Mf/Make-up/Rec - 25°C	CI- Mf/Make-up/Rec	

DST#1

2000 -

1500

1000

PSI

2500

REMARKS: Result: Opened tool for 10 minute initial flow - Lost 10.5 bbl mud past packer before seating - Close in for 30 minutes - Open for 120 minute final flow, GTS after 22 minutes, 52psi on 1/8" choke at end of flow

(Q=23mcfd) - Shut in for 240 minutes.

Recovery: 18.7 bbl. (401m.) mud, including 10.5 bbl lost on opening.

720

900

480

360

240

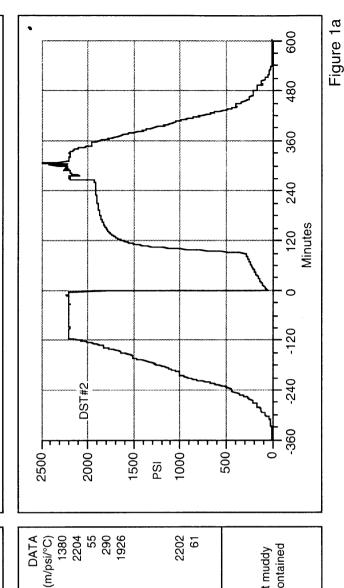
120

-120

-240

500

Minutes



2nd Flow 2 2nd Shut-in FHH

1.13/1.00/ -

Cemp (°C)

18500/ - /11500

Res. Mf/Make-up/Rec - 25°C CI- Mf/Make-up/Rec

SG Mud/Make-up/Rec

First flow shut-in Second flow open Second flow shut-in

1st Flow 2 1st Shut-in

90

Ist Flow 1

23 December 2000

Type test (open hole)

First flow open

Date

Depth (driller) Depth (logger)

(Inside) Depth

1387.0-1414.4 1387.0-1414.4 Inflate straddle

Strzelecki Group

2nd Flow 1

REMARKS: Result: Very weak blow - No gas to surface.

Recovery: Reversed out minor gas & 196m. of slightly gas cut muddy water. Field Rw = 0.35Ω-M @ 72°F. (Sample chamber contained

3.5 litres of slightly muddy water.)

4000 | 3500 |

3000

2500 -

2000

PSI

1st Flow 2	1st Flow 2 1st Shut-in 2nd Flow 1 2nd Flow 2 2nd Shut-in
Ç	1.09/1.00/1.00
First flow shut-in	Second flow open Second flow shut-in SG Mud/Make-up/Rec.

REMARKS: Result: After 39 minnutes Gas @ RTSTM and Water @ 900 b/d.

Recovery: Re-set 15 metres higher for DST#4.

840 960 1080

-360 -240 -120

DST#3-

1500

1000

500

3500 3500 2500 31 2500 31 2500 3000		مممي			840 960 108
60 -240 -120 0			★ -DST#4		80 600 720
60 -240 -120 0		\ <u>\</u>			240 360 4 Minutes
360 -240 -12		<u> </u>			<u> </u>
1000 - 10	4000				0 1 1 1 1 1 1 -360 -240 -12

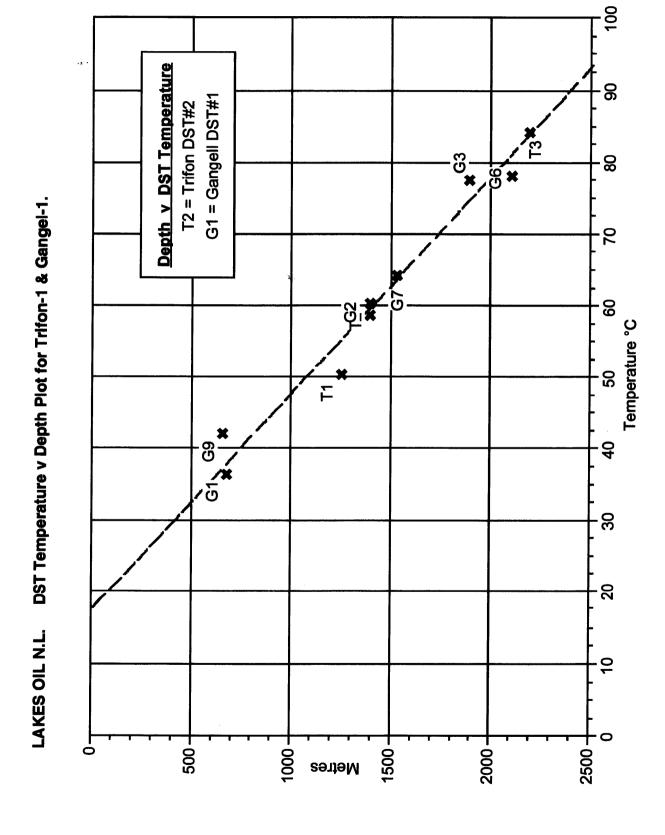
DAT (m/psi/°(216 333 333 310 312 315 33 2nd Shut-in FHH 2nd Flow 1 2nd Flow 2 1st Shut-in 1st Flow 2 Temp (°C) 1st Flow 1 (Inside) Depth -/-/0.34 131 2170.0-2200.0 28 December 2000 2170.0-2200.0 Inflate straddle Strzelecki Group 1.09/1.00/1.00 14000/ - /12873 Res. Mf/Make-up/Rec - 25°C Cl- Mf/Make-up/Rec SG Mud/Make-up/Rec Type test (open hole) Second flow shut-in Second flow open First flow shut-in First flow open Depth (logger) Depth (driller) DST#4 Date

REMARKS: Result: Gas @ RTSTM and Water @ 900 b/d.

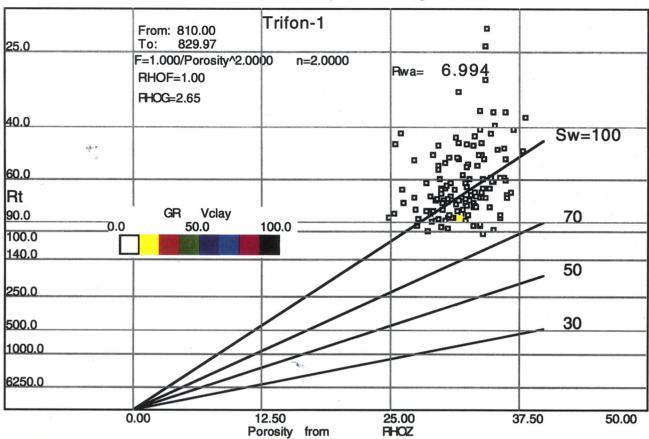
 $\underline{\text{Recovery}}$: Full string of salty water. (Rw = 0.34 Ωm @ 25°C.)

Figure 1b

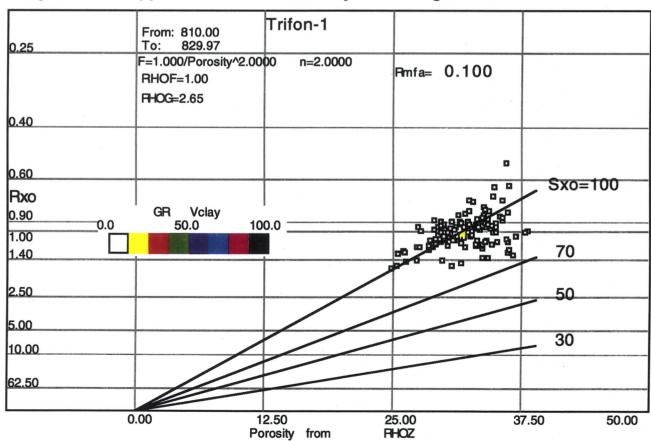
Figure 2



Hingle Plot - Apparent water resistivity figure 3a



Hingle Plot - Apparent filtrate resistivity figure 3b



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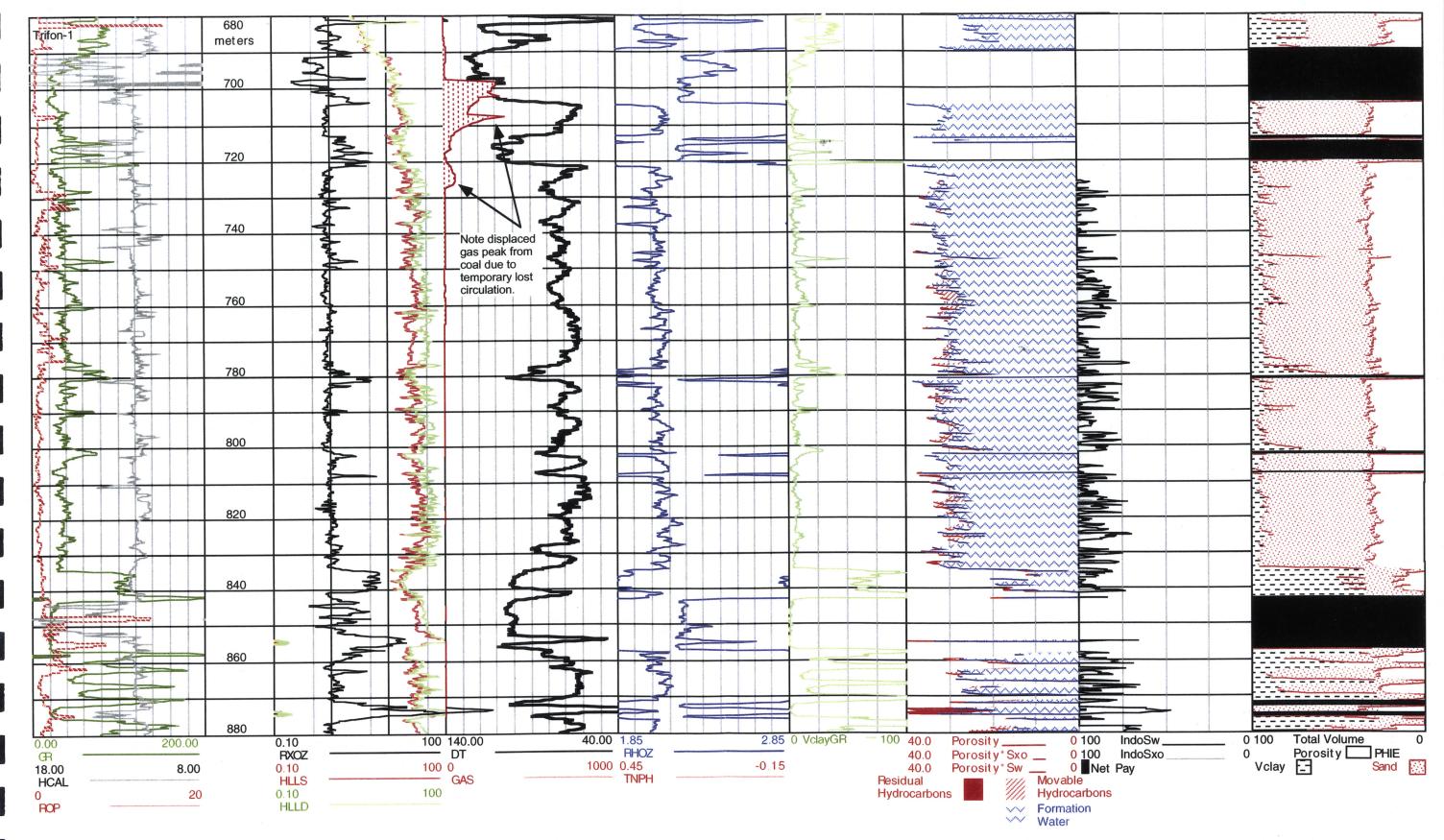
908901_083Y

and is enclosed within the document PE908901 at this page.

LAKES OIL N.L. TRIFON-1

Top LATROBE FORMATION EVALUATION

908901 083Y



Evaluation using Indonesian Water Saturation Model (1/RT)^0.5=[(Vclay^b)/(Rclay^0.5)+(PHIE^(m/2))/(a*Rw)^0.5]*SwInd^(n/2) b=1-(Vclay/2)

Parameters Used.

Surface temperature = 77°F BHT (logs) = 190°F RHOF = 1.00 Measured Rmf = 0.125 at 104.0°F. Bit Size = 12.25 GRclean = 20 GRclay = 120 VclayGR = 0.5*VclayGR/(1.5-VclayGR)Shaly Sand model for lithology. RTclay = 20 Rw = 6.994PHIE cutoff sets Sw & Sxo to 100% below 0.0 % porosity. Coal is detected if RHOZ<1.65 & RHOZ<>0 or if TNPH > 55.0 or if DT > 240.0. Density Porosity Model.

TD logger = 2570 meters. Rt from RT curve. Bit Size = 8.500 from 1232 to 3000 RHOG = 2.65 for Density porosity. Rmf = 0.100a = 1.0 : m = 2.0 : n = 2.0 Sw & Sxo set to 100% above 100% Vclay.

Vclay is Vclay from GR PHIE = (1-Vclay)*PHIT. Sxo is limited to: Sxo>=Sw. This is an enclosure indicator page.

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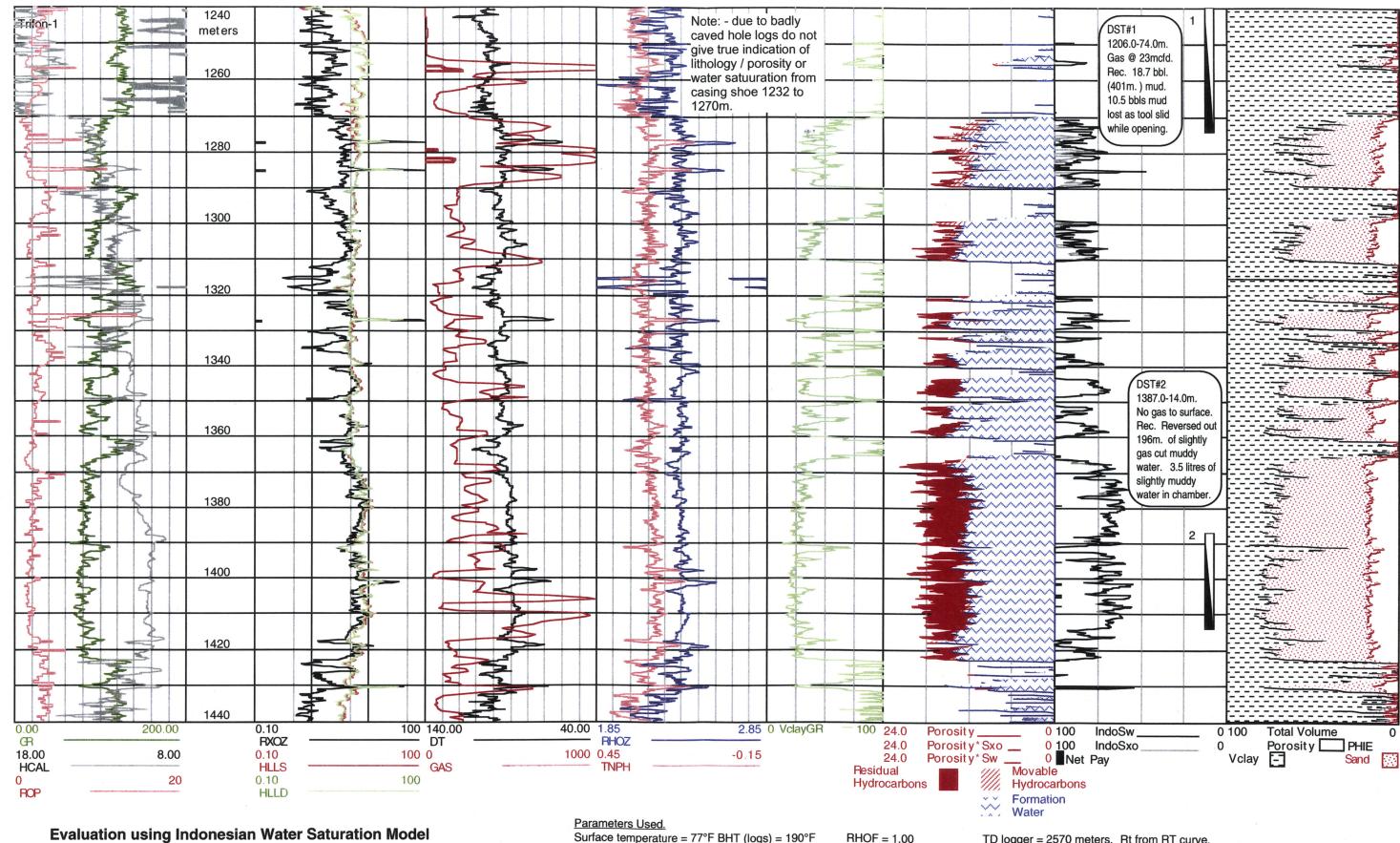
908901_084Y

and is enclosed within the document PE908901 at this page.

LAKES OIL N.L. TRIFON-1

Top STRZELECKI FORMATION EVALUATION

908901 084Y



(1/RT)^0.5=[(Vclay^b)/(Rclay^0.5)+(PHIE^(m/2))/(a*Rw)^0.5]*SwInd^(n/2) b=1-(Vclay/2)

Measured Rmf = 0.125 at 104.0°F. Bit Size = 12.25 GRclean = 40 GRclay = 120 VclayGR = 0.5*VclayGR/(1.5-VclayGR) Shaly Sand model for lithology. RTclay = 20 Rw = 0.15PHIE cutoff sets Sw & Sxo to 100% below 0.0 % porosity.

TD logger = 2570 meters. Rt from RT curve. Bit Size = 8.500 from 1232 to 3000 RHOG = 2.65 for Density porosity. Rmf = 0.100 a = 1.0: m = 2.0: n = 2.0Sw & Sxo set to 100% above 100% Vclay. Coal is detected if RHOZ<1.65 & RHOZ<>0 or if TNPH > 55.0 or if DT > 240.0. Density - Neutron Porosity Model.

Vclay is Vclay from GR PHIE = (1-Vclay)*PHIT. Sxo is limited to: Sxo>=Sw. This is an enclosure indicator page.

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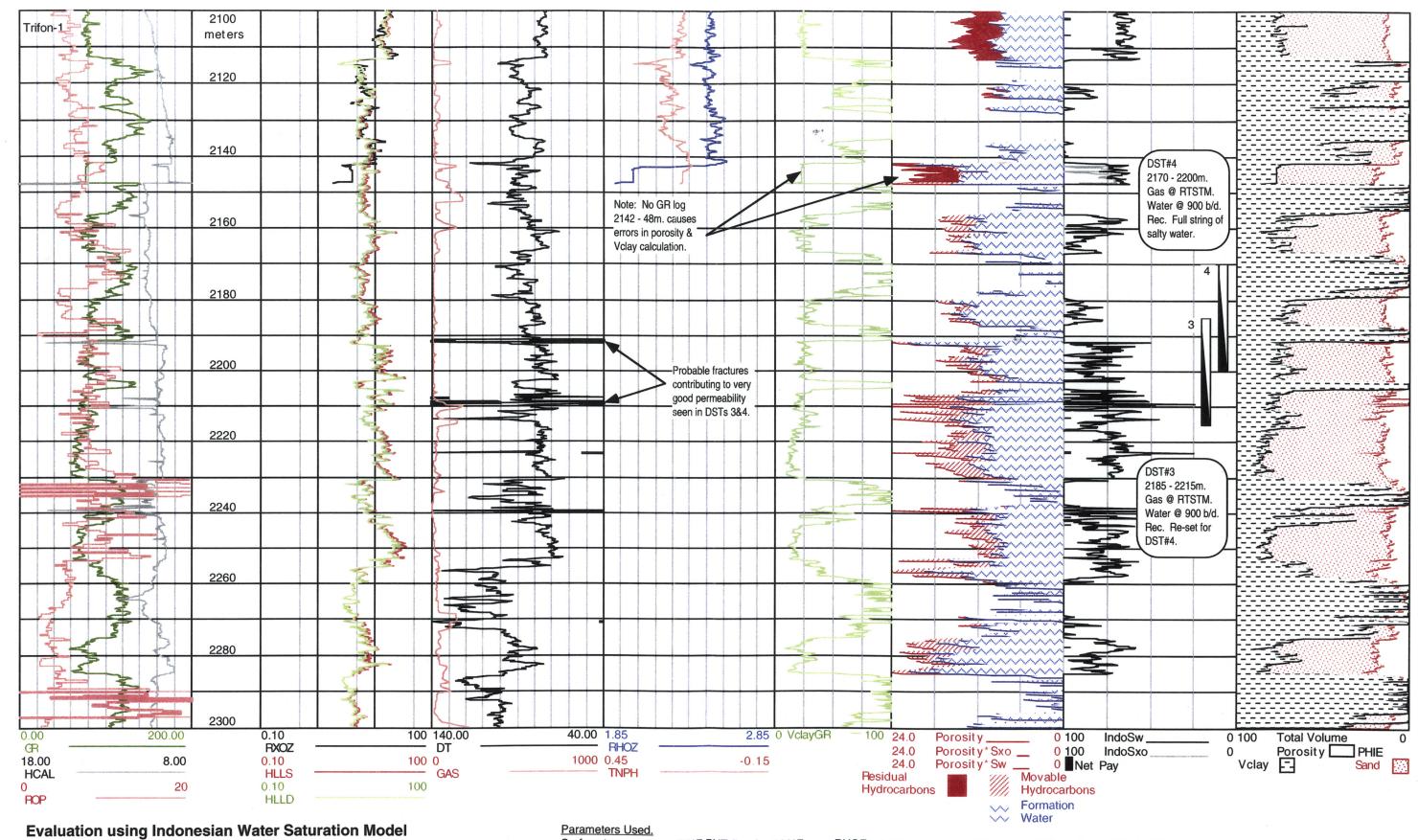
908901_085Y

and is enclosed within the document PE908901 at this page.

LAKES OIL N.L. TRIFON-1

Mid STRZELECKI FORMATION EVALUATION

908901 085Y



(1/RT)^0.5=[(Vclay^b)/(Rclay^0.5)+(PHIE^(m/2))/(a*Rw)^0.5]*SwInd^(n/2) b=1-(Vclay/2)

Surface temperature = 77°F BHT (logs) = 190°F RHOF = 1.00 Measured Rmf = 0.125 at 104.0°F. Bit Size = 12.25 GRclean = 40 GRclay = 120 VclayGR = 0.5*VclayGR/(1.5-VclayGR) Shaly Sand model for lithology. RTclay = 20 Rw = 0.15PHIE cutoff sets Sw & Sxo to 100% below 0.0 % porosity. Coal is detected if RHOZ<1.65 & RHOZ<>0 or if TNPH > 55.0 or if DT > 240.0. Sonic porosity AFF model. $\emptyset = 1-(Tma/T)^{(1/x)}$

TD logger = 2570 meters. Rt from RT curve. Bit Size = 8.500 from 1232 to 3000 RHOG = 2.65 for Density porosity. Rmf = 0.100 a = 1.0 : m = 2.0 : n = 2.0Sw & Sxo set to 100% above 100% Vclay.

Vclay is Vclay from GR PHIE = (1-Vclay)*PHIT. Sxo is limited to: Sxo>=Sw.

x = 1.60 Tma = 55.5 ms/ft

Figure 4c

APPENDIX 4

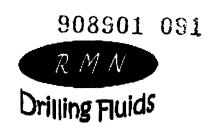
BIT RECORD

TRIFON-1 BIT RECORD

¥	Run	Size	Run Size Make Type		IADC	Serial	IADC Serial Nozzles Motor S/Sub Depth Metres Hours ROP SUM Bit Grading	Motor	gnS/S	Depth	Metres	Hours	ROP	SUM	Bit	srading						WOB	RPM	Pump Press
ġ	No.	(mm)			Code	No.	(32nd)	(Y/N) (S/I	9	Out			(m/h) Hrs	FIS	_	1 0 D L B G O	-	æ	ပြ		œ			(mdb)/(isd)
	-	445	Varel	L114M	1-1-4	134516	134516 18-18-18 N	z		261	261	9.0	29.0 9.0	1	2	SS	<	~	0	0	2 2 SS A 2 0 NO CTD 5-25		70-130	1250/765
٠.	_	311	Varel	L114	1-1-4	142700	142700 18-18-16 N	z		793	532	21.0	25.3 30.0	30.0	7	2 2 SS A E	∢	ш		ER RR	3 5-28		130-175	1300647
	_	311	Varel	L117	1-1-7	148978	148978 18-18-16 N	z		1233	440	34.5	12.8 64.5		4	e ss		O F 8		ER PR	3 5-27		120-170	1300/647
_		216	Varel	L114	4-1-4	105438	105438 12-12-10 N	z	1	1274	14	2.0	20.5	66.5	· ·	SS		A E 0		Ö O N	DST 20	20-25	120- 140 1050342	1050342
_	1RR	1RR 216	Varel	L114	1-1-4	105438	105438 12-12-10 N	z		1338	64	5.0	12.7	71.5 2 2 SS	7	ss s		A E 0		CD	PR 20	20-28	120-140	1100/342
	-	216	Varel	ETD417	4-1-7	92403	92403 12-12-10 N	z		2152	834	72.0	11.6	11.6 143.5 3 3 BT	က	3 BT		О Е	_	ER L	LOG 25	25-28	120-120	1550/342
		216	Varel	ETD14MPS 4-3-7	4-3-7	152664	152664 12-12-10 N	z	1	2570	419	0.92	5.5	219.5 4 6 BT M F 5 SD PP	4	3 BT	Σ	ட	5	Ü E		20-35 8	80-125	1500/342

APPENDIX 5

DRILLING FLUID SUMMARY by RMN DRILLING FLUIDS PTY. LTD.



DRILLING FLUID SUMMARY FOR: LAKES OIL NL

WELL: TRIFON # 1
GIPPSLAND BASIN
PEP 137
VICTORIA

Prepared by : Andre Skujins

Date: January 2001



CONTENTS

- 1. Summary of Operations
- 2. Observations, Recommendations and Well Analysis
- 3. Material Costs and Consumption Analysis
- 4. Mud Materials Reconciliation
- 5. Fluid Properties Summary
- 6. Mud Volume Reconciliation
- 7. Graphs
- 8. Bit & Hydraulics Record
- 9. Hole Gauge Evaluation
- 10. Daily Mud Reports

Lakes Oil NL Trifon # 1

Rig

ODE # 30

Spud

5th December 2000



1. SUMMARY OF OPERATIONS

Trifon # 1 was spudded on the 5th December 2000 utilising ODE # 30 and reached a total depth of 2570 m on the 27th December 2000. The rig was released on the 30th December 2000.

The rig water supply was from a water well drilled on site. The water had the following properties:

Chlorides

700 mg/l

Hardness :

120 mg/l

Pf/Mf

0/0.1

HOLE SIZE

171/2" SURFACE HOLE

MUD TYPE

: GEL SPUD MUD

INTERVAL

0 - 261 m

CASING

13-3/8" @ 261 m

Prior to spudding, all mud tanks were filled with water. Also, due to the relatively low output of the water bore, the near side of the sump was filled partially with water. All mud tanks (approximately 500 bbls) were treated with two sacks of Soda Ash and then had 19 ppb Ausgel (double yielding bentonite) to achieve a yield point in excess of 20 lb/100 ft² (funnel viscosity of around 50 sec/qt). Caustic Soda was added to increase the pH to approximately 9.5. The linear motion shale shakers were dressed with S84 screens.

For the initial stages of spud, while the large diameter collars were drilled past the conductor barrel, the pump rate remained low. It was then increased to approximately 740 gpm. The desilter was used almost from the outset, as the predominant formation type was sand. Despite the amount of sand drilled, blinding of the shakers was not a problem and downhole losses were not serious, totalling just over 200 bbls for the interval. Consequently, lcm was not added while drilling.

While drilling ahead, mud volume was maintained with pre-hydrated Ausgel additions. The yield point was maintained around 20 lb/100 ft² throughout the interval and the mud weight slowly increased to a maximum level of 8.9 ppg.

Drilling continued to a casing point of 261 m where the hole was circulated clean prior to running a wiper trip. When back on bottom, Enerseal fine was

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added prior to pulling out to run casing as a protection against cement losses when cementing. The pipe was then pulled from the hole.

13-3/8" surface casing was then run in the hole. After circulating the hole clean, the casing was cemented and cement was displaced with water. Returns were good for most of the job, but as the cement column rose near the surface, returns tapered off although good cement did return to surface. A top up job was eventually required. All mud tanks were then dumped and cleaned.

HOLE SIZE

121/4" INTERMEDIATE HOLE

MUD TYPE

KCL PHPA POLYMER

INTERVAL

261 m - 1233 m

CASING

9-5/8" @ 1232 m

All tanks were filled with water that was sourced from the sump (approximately 600 bbls.) The pill tank was isolated as it was intended to be used to drill out cement. Into the remainder of the tanks, the following was added:

Xantemp

4 sacks (0.35 ppb)

AMC Pac-R

6 sacks (0.5 ppb)

Praestol PHPA:

4 sacks (0.35 ppb)

KCI (ag grade):

240 sacks (22 ppb or 6%)

Caustic Soda :

1 drum

A higher KCI concentration than the programmed 5% was added to allow for initial dilution after displacing the hole. Sodium Sulphite for corrosion control was added just prior to drilling ahead. The relatively coarse S84 screens were kept on the shale shakers in case problems were experienced with the fresh mud.

After BOPs had been installed and tested, a 12½" bit was run in the hole. The cement, float and shoe were drilled out with water circulated through the pill tank. While drilling on the shoe, the hole was displaced to the premixed KCI PHPA fluid and all cement contaminated water was dumped.

The hole was drilled to 268 m where a leak off test was conducted, indicating a formation break down pressure equivalent to a mud weight of 18.7 ppg. Drilling then continued.

The Drilling Fluid's properties were then improved. Initially, the yield point was built up with Xantemp (Xanthan Gum) and the PHPA concentration was

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increased. Inhibition appeared very good judging by the nature of the cuttings at the shakers.

Once the yield point approached 20 lb/100 ft², barite additions commenced with the view to increasing the mud weight to 9.6 ppg prior to the Latrobe coals. Fortunately, the rig has two separate mud mixing hoppers which allowed barite to be added direct to the suction tank through one, while building fresh premixes in the other. These premixes consisted primarily of Xantemp for the building and maintenance of the yield point (20 - 30 lb/100 ft²) and PHPA and KCI for inhibition. Due to the rapid drilling of the larger 12¼" hole size, considerable amounts of volume had to be built on a continuous basis.

As the Xantemp and PHPA concentration were built up, the 6RPM reading increased to around 10 - 12, a very good level for hole cleaning. The mud weight reached the required level of 9.6 ppg by 650 m.

As the first coal was intersected, a rapid downhole mud loss of approximately 100 bbls occurred. LCM (Enerseal and Kwikseal) were added rapidly, although to a degree, the loss appeared to be self healing. A further LCM pill of 30 bbls was built in the pill tank in anticipation of further losses, especially as the mud cost per barrel was fairly expensive. Some biocide was also added to the mud system to prevent degradation of the Enerseal. The shale shaker screens were upgraded to S110's once the mud weight had increased to 9.6 ppg.

Drilling continued through the numerous coal seams with the mud weight being maintained at 9.6 - 9.7 ppg with barite. At 793 m the bit was tripped, with the hole being tight from 440 - 420 m. Upon running in with the new bit, the string became briefly stuck at 783 m but was worked free. The hole was then reamed from 762 m to bottom.

As drilling continued, the yield point was propped back up to over 20 lb/100 ft², as the coals had somewhat thinned the fluid. This ensured good hole cleaning, as evidenced by the large amounts of large sized coal cavings that came over the shale shakers. The fluid loss of the mud stayed at around 9 - 11 cc's simply with the addition of PHPA.

As drilling approached the casing point of 1233 m, it was ensured that the mud volume was high in the mud tanks due to the prospect of down hole losses while wiper tripping, logging and running of casing. The yield point was around 30 lb/100 ft² by casing point and the 6 RPM reading was at 13.

At casing point, the LCM pill built previously was pumped around as the hole was circulated clean. A wiper trip was made to 743 m and found the hole in

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good shape. The hole was again circulated clean and the pipe pulled for electric logging.

Electric logs were run on their first attempt. A bit was then made up and run back in the hole, reaming and washing from 1211 m to bottom. The hole was circulated clean and the pipe was pulled. The 9-5/8" casing was then run in the hole. When breaking circulation, approximately 160 bbls of mud was lost down hole due to the hole packing off. Once circulation was gained, no further problems occurred.

The casing was then cemented with neat cement, with fairly good returns, but the returns did appear to diminish once the cement top reached the top of the Latrobe coals.

After the cement job, the tanks were dumped and cleaned.

HOLE SIZE

81/2"

MUD TYPE

: KCL PHPA POLYMER

INTERVAL

: 1233 m - 2570 m (TD)

CASING

: P&A

All tanks were filled with water that was again sourced from the sump (approximately 600 bbls.) The sump fluid by this stage had levels of KCI and PHPA in it. The pill tank was also isolated as it was intended to be used to drill out cement. Into the remainder of the tanks, the following was added:

Biocide

1 drum

Soda Ash

6 sacks

AMC Pac-R :

8 sacks (0.5 ppb)

Xantemp : 2 sacks (0.35 ppb)
Praestol PHPA : 2 sacks (0.35 ppb)
KCl (ag grade) : 216 sacks (to bring 216 sacks (to bring concentration to 5%)

The premix was more concentrated than what was expected to be drilled ahead with, as it was expected that it would be diluted back rapidly once displaced to the hole because of the large hole volume.

The S110 screens were kept on the shale shakers and the desilter was cleaned out. (Large coal chunks from the previous section had clogged the inlets.)

An 8½" bit was run in the hole and the cement, float and shoe were drilled out with water via the pill tank. Once into open hole, a leak off test was conducted

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at 1238 m indicating a formation breakdown pressure equivalent to a mud weight of 13.3 ppg. At the same time, the premixed mud was lined up to the hole and as drilling continued, the hole was displaced to mud and the cement contaminated water was dumped.

A new premix was rapidly built while drilling ahead, a it was expected that a DST would be conducted fairly soon after drilling out. Mud properties were fairly simple at this stage, with the yield point at around 10 lb/100 ft² and the fluid loss at approximately 8.5 cc's. The KCl concentration was just over 5% and the PHPA concentration was 0.15 ppb. The sulphite concentration was increased and maintained at around 120 mg/l for corrosion control.

As expected, DST # 1 was called at 1268 m and the hole was circulated clean. A heavy weight pill was mixed with KCI. (Unfortunately, the KCI did not dissolve rapidly and the mud did not suspend the KCI well, so a lot more KCI than expected was mixed. This subsequently led to a marked increase in the KCI concentration in the mud system, but this was not wasted as it was slowly diluted back in the following days.)

After pumping the pill, the pipe was pulled and test tools were made up. These were run in the hole and DST # 1 was conducted, with the packer being set inside the casing.

After the string had been pulled free, the string was reverse circulated and the test tools were then pulled from the hole and laid out.

A bit was run back in the hole and washed and reamed 16 m to bottom. Drilling then continued to 1338 m, where a bit change was made. In this interval, tight hole was worked at 1311 m (40 k over pull) with the mud weight at 8.9 ppg.

On running back in the hole, 20 m of hole was washed to bottom. Drilling continued with a tight connection at 1422 m (mud weight 9.2 ppg). It was quite noticeable that the mud weight was rapidly increasing while drilling ahead. The MBT did not show a huge increase so the increase in mud weight was due mainly to relatively inert formations dispersing into the mud. (The extent of this dispersion was not realised until electric logs were run later in this section.) Since the mud weight was increasing rapidly, the shaker screens were upgraded to S175 and the PHPA concentration was increased somewhat. With the increased PHPA usage, AMC Pac-R usage was curtailed as the fluid loss had dropped to around 7 cc's.

The mud weight increased to a maximum of 9.45 ppg while tight connections continued at 1741 m, 1769 m, 1881 m, 1909 m, 1947 m and 1960 m. The mud weight was controlled back to 9.2 - 9.3 ppg with heavy dilution, while

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maintaining a lowish yield point of around 8 - 10 lb/100 ft² (lowered yield points help facilitate solids control) and keeping the fluid loss below 10 cc's. The KCl concentration, by 2000 m, had dropped to 3.5% with the dilution that occurred. However, it seemed obvious that this was more than adequate because little depletion of K+ was occurring.

Drilling continued to 2152 m where the hole was circulated clean and a wiper trip conducted. After circulating bottoms up again, the pipe was pulled and electric logs were run. The calliper log showed the hole to be severely washed out, even in the areas where tight hole had earlier occurred. Moreover, the last 20 - 40 metres of hole became progressively more in gauge, indicating that the dispersion was time dependent.

It was consequently decided that to counter the dispersion and at the same time counter the resultant increase in solids which were responsible for the high mud weight, that the PHPA concentration would be increased to at least 1.5 ppb.

After logs, DST # 2 was conducted. Once completed, the string was reverse circulated and the test tools pulled from the hole and laid down.

A bit was then run in the hole, washing 19 m to bottom, and drilling continued. Mud was dumped and diluted back, while increasing the PHPA concentration to over 1.5 ppb.

At 2160 m, tight hole was worked and a rapid downhole loss of 60 bbls occurred. Drilling continued but at 2208 m, total losses were encountered and approximately 240 bbls were lost down hole. A concentrated slug of LCM was pumped (Kwikseal fine and medium) and soon after it passed the bit, circulation was regained. Drilling continued but considerable amounts of fresh volume had to be built, leading to substantially increased mud costs.

While drilling ahead, minor seepage losses were still evident but not serious enough to warrant more LCM additions. Further KCl additions were also made to bring the KCl concentration back to approximately 3%, while the PHPA concentration was maintained at 1.5 - 1.8 ppb. The higher PHPA concentration helped keep the fluid loss in the region of 6 - 7 cc's.

The considerable losses downhole led to a rapid dwindling of PHPA stock which could not be replenished due to the lost circulation problem occurring on Christmas Eve. Consequently, the PHPA concentration started to taper off, but was still at 1.4 ppb by the end of the hole. However, as PHPA was not aiding in maintaining the fluid loss any more and was not contributing to the yield point,

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AMC Pac-R and Xantemp additions had to be made once again. Unfortunately, PHPA would have been the cheaper option, so mud costs again started to rise.

Drilling continued to 2570 m, where a pressure drop led to the string being pulled wet from the hole. It was discovered that the jars had parted, so TD was called. The well was logged and inflate test tools were then made up and run in the hole. DST # 3 was conducted, and after resetting the tools, DST # 4 was run. The string was then reverse circulated and pulled from the hole. Drill pipe was then run in open ended and one cement plug was placed across the casing shoe. The rig was subsequently released.

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2. OBSERVATIONS, RECOMMENDATIONS AND WELL ANALYSIS

Trifon # 1 was drilled to a total depth of 2570 m for a mud cost of \$110,785.30 or \$43.11 per metre. No major problems were experienced although hole conditions in the $8\frac{1}{2}$ " hole section were not as good as could be expected and there are areas where cost savings could be implemented.

171/2" Surface Hole

This section of hole was drilled to 261 m for a mud cost of \$4807.00 or \$18.42 per metre. No problems were experienced and possible downhole losses did not occur. LCM (Enerseal fine) was added to the mud just prior to pulling out to run casing. This may have improved cement returns but in light of the next well drilled, where the cement slurry weight was reduced by using prehydrated bentonite mixwater, the need to use LCM should not occur in future. No changes to the programmed mud system are required.

121/4" Intermediate Hole

This section of hole was drilled to 1233 m for a mud cost of \$51,787.80 or \$53.28 per metre. The high cost reflects the fact that this section was expected to be the most difficult to complete problem free. That it was drilled, logged and cased without major problems appears to justify the cost of the system used. However, some changes to the program could be made that would lower costs somewhat without compromising hole conditions.

This section was programmed to be drilled with a inhibitive KCI PHPA system. The inhibition was mainly due to the Lakes Entrance Formation, a formation which is quite sticky but appears to have little in the way of problematic "swelling clays". This was evidenced by the fact that not a lot of base exchange occurred with the Potassium in the mud. i.e. K+ levels did not deplete overly as they would when highly reactive shales are drilled.

The mud weight was also increased to around 9.6 ppg with barite as drilling progressed through to the Latrobe Group at about 660 m, which contains a lot of coal. Due to the rapid drilling of the prior formation and due to the fact that it was a 12½" hole, which requires considerable new volume to be built, the mud weight increase started immediately the mud had enough carrying capacity.

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This carrying capacity was built with Xantemp (Xanthan Gum), but as the mud also contained PHPA, it was thought unwise to build all the pre-requisite properties the mud required for both inhibition (PHPA) and carrying capacity (Xanthan Gum) prior to drilling ahead, because of the worry that the shale shakers could not handle thick, cool, unsheared mud immediately. Consequently, for the first three or so hours after drilling commenced, the main focus was in building up the PHPA and Xanthan Gum concentration, before starting the weighting up process.

As it turned out, the mud weight increase was achieved (just in time) and the mud's carrying capacity was very good throughout. It was fortunate that the rig had two separately operated mud mixing hoppers which allowed the simultaneous addition of barite on the one hand, and polymers on the other.

So overall, the system worked well. However, the following are cost cutting measures that are felt would not compromise the hole's stability.

KCI Level

Given that there was not a lot of base exchange, PHPA with either lowered KCl concentrations (say 1.5 - 2%) or no KCl, but having NaCl (Salt) substituted instead. High chlorides are inhibitive in any case. What would be proposed is that NaCl be used as a major part of the weighting up process, as a 9.6 ppg fluid would be easily achieved with salt. PHPA would still be used, so inhibition would not be compromised.

An operational benefit of using salt instead of barite is that salt does not need a carrying capacity for mud weight to be built. In effect, the mud weight could be increased to say 9.0 -9.2 ppg prior to drilling ahead (it is doubtful whether the ROP would be severely limited in the top section of hole by having a higher mud weight to drill ahead with) and then built up to 9.6 ppg while drilling, negating the "rush and panic" that occurs when adding large amounts of product.

Additionally, the yield point could be built more slowly, ensuring it is at 25 - 30 lb/100 ft² by the time the coals are penetrated but not earlier.

Yield Point and Carrying Capacity

Although a small amount of AMC Pac-R was used at the outset, it was found that the natural fluid loss of the mud was stable without it subsequent use, simply by using PHPA. The viscosity that Regular Pac builds does not improve the mud's carrying capacity as does Xanthan Gum. This is because it builds up

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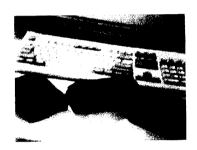
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the Plastic Viscosity, which reduces the 6 RPM reading, an important factor in the relatively low shear rate area of the annulus.

Consequently, only Xantemp was used to build the yield point and improve the mud's carrying capacity. Although this was important early in the section to help suspend barite, the main reason it was used was to help keep the hole clean when the Latrobe Coals were drilled. This it did very well, as evidenced both by the trouble free logging run and the physical size of the sloughing coal chunks that were carried from the hole. Following are examples of the coal chunks seen at the shale shakers, which demonstrate the excellent cleaning properties of the fluid.











81/2" Production Hole

This section of hole was drilled with a KCI PHPA Polymer Drilling Fluid from 1233 m to a total depth of 2570 m for a mud cost of \$54,190.50 or \$40.53 per foot. Problems encountered were tight hole on connections in various sections of hole, the poor hole gauge, and lost circulation to fracture zones.

Although the Drilling Fluid in the previous section of hole had a similar chemical make up, the high solids contents precluded its continued use in this section of hole, where the maintenance of a reasonably low mud weight was important.

The tight hole seen on a number of connections was an interesting phenomenon in the light of the fact that the hole was severely washed out in

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those areas when first logged. It certainly seemed obvious that the hole was deteriorating over time, and that the tight hole was probably a function of the mud weight not being high enough. So in that respect, perhaps some tight hole has to be lived with given that low mud weights are deemed fairly important.

What did not seem to be the case was that the formation was reactive. This was again evidenced by the low depletion rate of potassium. The formation was, though, extremely dispersive in nature. In hindsight, this was seen in the way the mud weight increased quite rapidly in the earlier section of 8½" hole, and especially seen in the way the calliper log improved in the 50 or so metres through to the bottom of the first log interval. i.e. It seemed quite plain that the hole gauge was deteriorating over time, or literally "dissolving" into the mud.

It was consequently decided that the PHPA concentration would be increased from around 0.5 ppb to at least 1.5 ppb. Whether this worked well or not is difficult to say, as the formation may have become less dispersive as the hole got deeper. However, solids control was made easier and hole gauge did improve. The recommendation for the next well, Gangell # 1, was to run a PHPA concentration of at least 1.5 ppb and that well will more accurately show whether the increased PHPA concentration worked.

The other problem to occur was not mud related but had a definite impact on mud costs. Severe lost circulation occurred to fractures and thereafter, down hole losses continued, albeit at a far reduced rate. This led to a run on PHPA stocks, which could not be replenished due to the first lost circulation happening on a Saturday, being Christmas Eve!

Up until that stage, the increased PHPA concentration had meant that little Xantemp or AMC Pac-R was required for yield point or fluid loss control. However, increased concentrations of both were required thereafter and the mud cost increased as a consequence.

The recommendations for a section of hole such as this in future would be based on the following lines:

Use a lowered concentration of KCI, around 2 - 2.5%.

Use Salt for weight increases, not barite, as this will aid in preventing any formation damage that may occur from barite plugging.

Use a high concentration of PHPA, at least 1.5 ppb and even up to 2.5 ppb.

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Subsequent experience on the Gangell # 1 well has shown that a mud weight increase to around 9.0 - 9.1 ppg might be necessary just to control the tight hole conditions that have been the main problematical area of both 8½" hole sections.



3. INTERVAL COSTS

			17	17-1/2" Surface Hole	Hole	12-	12-1/4" Intermediate Hole	te Hole	8-1	8-1/2" Production Hole	Hole L	Tot	Total Well Consumption	ption
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		Interval:		0 - 261 m			III CC71 - III 107		⊢	107 - 111 0071	1000	1000	100	%Cost
Product	Cost	Unit Size	Used	Cost	%Cost	Used	Cost	%Cost	Used	Cost	%COSI	nsed	COSI	15000
100001	9464 00	25 120				မ	\$966.00	1.9%	57	\$9,177.00	16.9%	 8	\$10,143.00	9.5%
Aus Fac-R	00.101	D	,	0	76 007	,						304	\$3,648.00	3.3%
Ausgel	\$12.00	25 Kg	304	\$3,546.00	0.8.0	0	1	700	07	64 970 EO	20 50%	1183	\$11 122 50	10.0%
Durite	\$7.50	25 ka				1300	00.000/68	00.00	3	00.2/0,19	6.076	2 (000000	, 6
ביינים מיינים	9140.00	27.70				•	\$140.00	0.3%	7	\$1,540.00	2.8%	12	\$1,680.00	1.5% %C.T
Blocide	90000	0 2 2	c	00.09	7 30%	· (c	\$192.00	0.4%	13	\$416.00	0.8%	7	\$672.00	%9.0
Caustic Soda	\$32.00	ZU KG	٧	90.1	5.5	, (9760.00	7 7 0/	1	\$275.00	76%	73	\$1,625.00	1.5%
Defoamer	\$125.00	25 kg				٥	00.0074	0/ + 7	۱ -	00.00	100		@2 278 00	300%
	\$52 00	25 kg	20	\$1 040 00	21.6%	9	\$1,872.00	3.6%	_	\$364.00	%).0	3	42,470.00	5 5
Enerseal Time	627.00	9 1	3) 	576	\$10.408.80	19.5%	720	\$12,636,00	23.3%	1296	\$22,744.80	20.5%
KCI Ag	CC. / LA	20 Kg				3 5		4 70%	2	\$2,700,00	2 0%	22	\$3,600,00	3.2%
Kwikseal Fine	\$50.00	18.2 Kg				<u>0</u>	900.00	0/./-	5	64,700.00	9 (. (0000	60
	0000	24 0 07				18	\$900.00	1.7%	7	\$100.00	0.7%	2	\$1,000.00	80.0
Kwikseai Medium	940.00	9. 7. C				٠,	\$24 DO	%00	m	\$36.00	0.7%	വ	\$60.00	0.1%
Lime	\$12.00	ZU KG				4 2	00000	1000	5	\$11.080.00	20.8%	125	\$15 000 00	13.5%
PHPA	\$120.00	25 kg				<u>بر</u>	93,720.00	0/7.	t 1	20.00	2,5,7	2 6	64 070 EO	1 00%
100	¢27.50	25 70	c	855.00	7,2%	9	\$275.00	0.5%	27	\$742.50	1.4%	25	00.270,14	8
Soda Asn	05.720	2 2	1)))	: :	2	\$790.00	1.5%	57	\$2,251.50	4.2%	22	\$3,041.50	2.7%
Sodium Sulphite	0c.85#	50 KG	_			3 9		74 20/	ć	\$10,700,00	19.7%	9	\$32 100.00	29.0%
Xantemp SD	\$535.00	25 Kg				40	\$21,400.00	4 .070	24	00.00	2 1.51		00 101 077	/00 004
		Totals		\$4.807.00	100.0%		\$51,787.80	100.0%		\$54,190.50	100.0%		\$110,765.30	0.00
	1,000	Notro	L	\$18.42			\$53.28			\$40.53			\$43.11	
	1600	cost per metre.		410.1										



4. MATERIALS RECONCILIATION

Previous Well:

Ex Dyers Transport

Well:

Trifon #1

Transferred to:

Gangell #1

		TOTAL	TOTAL	TRANSFER
PRODUCT	UNIT	RECEIVED	USED	BALANCE
AMC Pac-LV	25 kg	40		40
AMC Pac-R	25 kg	160	63	97
Ausgel	25 kg	714	304	410
Barite	25 kg	2880	1483	1397
Biocide	20 kg	18	12	6
Caustic Soda	20 kg	34	21	13
Citric Acid	25 kg	27		27
Defoamer	25 lt	16	13	3
Enerseal Fine	25 kg	157	63	94
KCI	25 kg	1920	1296	624
Kwikseal Fine	18.2 kg	75	72	3
Kwikseal Medium	18.2 kg	60	20	40
Lime	20 kg	55	5	50
PHPA (Praestol)	25 kg	125	125	
Rod Free	200 lt	2		2
Soda Ash	25 kg	40	39	1
Sodium Sulphite	25 kg	120	77	43
Xantemp	25 kg	90	60	30
			-	



5. FLUID PROPERTIES SUMMARY

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}	Gel Spud Mud	İ	261	9.10	47	თ	23	12	20	9	7		94.6		1/2		0.	-		0.10	750	8				
6-Dec-00	Gel Spud Mud		261	9.20	4							6	93.9												,	
8-Dec-00	KCI PHPA Polymer	25	336	8.70	47	<u>რ</u>	24	ø	5	=	~	9.0	99.4		Ë		ල ගු	_			32,250					0.50
	KCI PHPA Polymer	34	999	9.70	6	ñ	28	5	12	-	_	60	5.15		4/4	0.4	8) (3)	_			20,500				ຫ ຕ	
9-Dec-00	KCI PHPA Polymer	88	751	9.75	47	6	9	ø	7	6	-	4.0	91.6		1/4	0.0	80.0				29,000				r.	0.45
10-Dec-00	KCI PHPA Polymer	8	890	9.60	43	4	15	S	00	11.0	-	7.4	92.6		1/2	5.0	8.5				27,000				4.6	0.40
		- 54	1070	9.60	5	5	23	თ	7	11.2	-	7.3	92.7		4/1		8.5	_			29,000				ri L	0.45
11-Dec-00		47	1195	9.60	4	4	ဓ	5	12	8	τ-	7.4	92.6		1/2	5.0	ω ω				27,000				4. 60	0.50
12-Dec-00	KCI PHPA Polymer	47	1233	9.70	5		59	5	12	6.	-	∞ 1	91.9		1/2	5.0	ω ω	_			26,500			25,939	4. Θ	0.50
13-090-00	KCI PHPA Polymer	43	1233	9.70	4		9	7	4	9.5	-	<u>ش</u>	91.9	_	1/2	5.0	80				26,500				4 60) -
14-Dec-00	KCI PHPA Polymer	!	1233	9.6	42	_	5	ß	00	13.0	7	2.5	92.5		1/2		8				25,000				4.5	9.45
15-Dec-00	KCI PHPA Polymer	33	1245	8.75	37		7	-	7	8.6	-	1.1	98.9		ř		ທີ່				31,000				ئ 4	0.20
16-Dec-00	KCI DHPA Polymer	34	1268	8.75	37	_	9	_	8	8.5	_	-	6 86 6		Ë	0.0	S				31,000		_		4.	0.15
		98	1295	8	8		7	_	7	9.5	_	4.	98.6		F		9.5				42,500				- - - - - - -	-0. 1.
17.000.00	KCI DHPA Polymer	¦ 	1338	8	4		5	_	m	8.0	τ-	3	98.5		F	2.5	9.5				41,000			38,909	7.2	0.2
	KCI PHPA Polymer	38	1420	9.20	4	12	4	-	m	7.4	_	က	96.2		ř	5.0	0.6				39,000				69	<u>်</u>
18-Dec-00	KCI PHPA Polymer	4	1625	9.30	89		Ξ	-	7	7.2	-	4.6	95.4		Ë	7.5	80 (3)				37,500		_		6	0
	PHDA	. 24	1740	9.35	ဗ္ဗ		თ	_	7	7.8	-	5.3	94.7		F	8	9.0				32,000				9	0.55
19-090-00		. 54	1865	935	800		7	-	ო	8.4	-	5.6	4.46		Ë	7.0	8.5				27,000				7.7	Š,
		. 7	1960	9.45	89		5	-	7	0.6	-	9.9	93.4		F	7.5	8.5				23,000				4 0	90
20-Dec-00		4	2060	9.3	ဗ္ဗ		00	-	7	8 0	-	5.7	94.3		Ë	6.5	8.0		0	0.65	19,500	380	120	18,374	ω 4	0.50
21-Dec-00		45	2152	9.49	89			-	ო	80	_	6.5	93.5		Ë	0.0	8.5				18,500					o o
22-Dec-00		43	2160	9.6	47			_	8	7.0	_	9.9	93.4		4	0.					17,000				က က	Ö
23-Dec-00		47	2183	6 6	0		_	-	7	6.5	-	ල ල	94.1		Ė	7.0	0.0				16,500			15,672	2, 10	<u> </u>
	KCI PHPA Polymer	43	2240	9.05	47			_	7	0.0	-	4.2	95.8		Ė	5.0	0.6			0.70	4,000	- 54 - 54			25	4.
24-Dec-00		48	2300	8.6	45		_	-	7	5.6	_	တ တ	96.2		Ļ	5.0	80 50			0.65	15,000	320			2.7	
: :		46	2388	8.95	4			_	~	0.0	-	<u>რ</u>	96.7		Ë	5.0	8			0.65	18,000	음 —		-1		Z.
25-Dec-00	Š	47	2450				_	-	7	7.5	_	4	95.6		Ë	4 0	80 50			0.65	17,500	320		6	<u>რ</u>	7.7
	Š	84	2500					-	7	7.2	_	4.	92.6		Ë	4 5	80 30			0.70	17,000	99 -	_	6	რ 0	
26-Dec-00	Š	- 84	2548					_	7	4.0	-	<u>ග</u>	96.1		Ë	4 0	8 5		0.05	0.65	14,00	ဓ္က		13,510	2.5	
27-Dec-00	δ		2570	9.10				-	7	7.2	_	9.	95.4		Ļ	4 0	ω Ω		90.0	0.65	14,000	2 80			 55	<u>-</u>
			_		_	_						_									-					

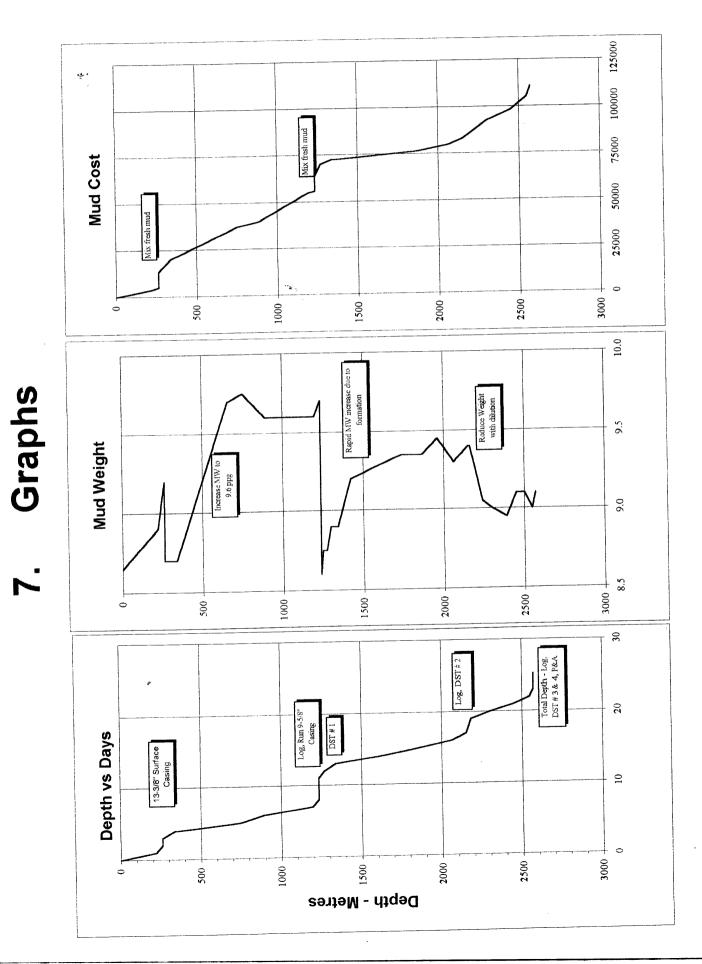


6. Mud Volume Analysis

	nterva	-			Fluid Built & Received	≓ & Kec	elved			=	riuid Disposed	Sed			Summary	y Igi	
Hole				Fresh	Sump	Direct			غ	ቋ	Down-						
Size	From	ဥ	Mud Type	Premix	Premix	Recirc	Water	Other	sander	silter	hole	Dumped	Other	Initial	Received	Disposed	Fina
17-1/2"	E O	229 m	Spud Mud	650			200		0	<u>8</u>	191			0	1150	371	6//
17-1/2"	229 m	261 m		8					0	23	11			779	80	34	825
			1	730	0	0	500	0	0	203	202	0	o		1230	405	
					Ü				c	c				c	009	C	009
12-1/4	m L97	E [0]	7 7 7 7 7 7 7 7 7 7		000		,) () (C			5	} <	, (070
12-1/4"	261 m	289 m	KCI PHPA				4		0	0	o !			200	0± €	o ;	5.0
12-1/4"	289 m	751 m	KCI PHPA		200		170		0	5	149			640	370	191	819
12-1/4"	751 m	907 m	KCI PHPA		500				0	0	8	우		819	500	138	88
12-1/4"	m 206	1206 m	KCI PHPA		350		20		0	0	112	9		880	400	152	1128
12-Dec-00 12-1/4"	1206 m	1233 m	KCI PHPA		9		8		0	0	8	S S		1128	120	148	1101
	1233 m	1233 m	KCI PHPA				8		0	0	8			1101	30	<u>0</u> 6	104
	1233 m	1233 m	KCI PHPA			150	2		0	0	310			1041	220	310	951
				0	1450	150	380	0	0	51	848	130	0		1980	1029	
	1,000	4000 22	Vanaiox		550				C	C	c			0	550	0	550
	1233 H	E 200	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		3 6				o c) C	, e	40		550	260	63	747
	1233 m				200				> 0	;	3 5	? §	7	777) (50	747
17-Dec-00 8-1/2"	1268 m	1338 m			3				> (= \$	*	5 6	2 6	11,1	2 6	3 5	, Q
18-Dec-00 8-1/2"	1338 m	1635 m	KCI PHPA		780				0	£ ;	<u>p</u> ,	⊋ { 	8 6	747	007	/ / -	2 6
19-Dec-00 8-1/2"	1635 m	1871 m	KCI PHPA		400				0	82	m	200	8	င္တ	400	320	200
	1871 m	2060 m	KCI PHPA		400	150			0	62	<u>რ</u>	450	32	930	550	260	920
21-Dec-00 8-1/2"	2060 m	2152 m	KCI PHPA	-	160	20			0	ස	გ,	150 051	8	920	210	230	3 8
22-Dec-00 8-1/2"	2152 m	2152 m	KCI PHPA						0	0	o :		,	006	o ;) 	
23-Dec-00 8-1/2"	2152 m	2183 m	KCI PHPA		5				0	<u>'</u>	4		15	0 0 0 0 0	9 5	و <u>ز</u>	924
24-Dec-00 8-1/2"	2183 m	2300 m	KCI PHPA		6				0	4	88	ا ا	2 6	924	220	460 0.00	200
25-Dec-00 8-1/2"	2300 m	2450 m	KCI PHPA		220				0	72	136	202	9	500L	25	208	
26-Dec-00 8-1/2"	2450 m	2550 m	KCI PHPA	200	5				0	<u></u> ළ	198	4	22	1051	000	667	200
27-Dec-00 8-1/2"	2550 m	2570 m	KCI PHPA	9					0	တ	157	8	- -	1052	6	196	926
28-Dec-00 8-1/2"	2570 m	2570 m	KCI PHPA	8					0	0	165	4	9	926	දිල ්	215	808
	2570 m	2570 m	KCIPHPA						0	0	75		- -	808	0	2)	5
				365	3000	350	۰	۰	٥	354	1239	1135	222		3/13	2984	
									,		0				3000	7410	
_				1095	4450	200	280	_	_	200	2230	C97	733	_	C7E0	777	

		Dilution Factors	
	Interval Length D	Dilution Vol	Dilution Factor
17-1/2" Surface Hole	261 m	slqq 089	2.2 bbls/m
12-1/4" Intermediate Hole	972 m	1380 bbls	1.4 bbls/m
8-1/2" Hole	1337 m	3165 bbls	2.4 bbls/m







9.1 Hole Gauge Evaluation

Hole Gauge by Formation Interpreted from Caliper Log Data 12-1/4" Intermediate Hole

Loggers Depth Bit Size CSG Size CSG ID CSG Shoe OH Depth	1213 m 12.25" 13-3/8" 12.715" 261 m 952 m		Calc OH V Actual OH Volume Ex Excess % Average H CSG Volui Total Volu	Vol cess ole Diam me	455 bbl 459 bbl 4 bbl 1% 12.3" 134.5 bbls 593 bbls
FORMATION	FROM (m)	TO (m)	INTERVAL	CUB m	AVG DIAM inches
Gippsland Limestone	261 m	620	359 m	27 cub m	12.26"
Lakes Entrance	620	681	61 m	4.7 cub m	
Latrobe Gp (Top Clastics)	681	842.5	161.5 m	12 cub m	12.31"
Latrobe Gp (Top Coals)	842.5	1212.5	370 m	29 cub m	12.33"



9.2 Hole Gauge Evaluation Hole Gauge by Formation Interpreted from Caliper Log Data

8-1/2" Hole - Run # 1

Loggers Depth Bit Size	2145 m 8.5"		Calc OH V Actual OH		210 bbl 445 bbl
CSG Size	9-5/8"		Volume Ex	cess	235 bbl
CSG 512e CSG ID	8.921"		Excess %		112%
	1234 m		Average H	ole Diam	12.4"
Start Log Interval	911 m		CSG Volum		313.1 bbls
OH Depth		à	Total Volu		758 bbls
i		•	Total Volu	ille	700 0010
FORMATION	FROM	TO	INTERVAL		AVG DIAM
FORMATION	(m)	(m)	III EKVAL	CUB m	inches
Strzelecki Group	1234 m	1250	16 m	3.0 cub ms	19.2"
0.7201001.11 0.10 0.5	1250	1300	50 m	5.8 cub ms	15.1"
	1300	1350	50 m	3.6 cub ms	11.9"
	1350	1400	50 m	2.8 cub ms	10.5"
	1400	1450	50 m	3.1 cub ms	11.0"
	1450	1500	50 m	3.6 cub ms	11.9"
	1500	1550	50 m	3.2 cub ms	11.3"
	1550	1600	50 m	3.3 cub ms	11.4"
	1600	1650	50 m	3.8 cub ms	12.3"
	1650	1700	50 m	3.9 cub ms	12.4"
	1700	1750	50 m	3.7 cub ms	12.1"
	1750	1800	50 m	3.7 cub ms	12.1"
	1800	1850	50 m	4.6 cub ms	13.4"
	1850	1900	50 m	4.4 cub ms	13.2"
	1900	1950	50 m	4.9 cub ms	13.9"
	1950	2000	50 m	4.0 cub ms	12.6"
	2000	2050	50 m	4.1 cub ms	12.7"
· ve	2050	2100	50 m	3.2 cub ms	11.2"
	2100	2145	45 m	2.2 cub ms	9.8"

9.3 Hole Gauge Evaluation

Hole Gauge by Formation Interpreted from Caliper Log Data 8-1/2" Hole - Run # 2

Loggers Depth Bit Size CSG Size CSG ID Start Log Interval OH Depth	2550 m 8.50" 9-5/8" 8.921" 2145 m 405 m	X.	Calc OH V Actual OH Volume Ex Excess % Average H CSG Volum Total Volument	Vol cess ole Diam ne	93 bbl 150 bbl 56 bbl 61% 10.8" 544.3 bbls 694 bbls
FORMATION	FROM	ТО	INTERVAL	CUB m	AVG DIAM
1	(m)	(m)		COBIII	inches
Strzelecki Group	2145 m	2150	5 m	0.3 cub ms	10.9"
	2150	2200	50 m	2.7 cub ms	10.4"
	2200	2250	50 m	2.6 cub ms	10.1"
	2250	2300	50 m	2.6 cub ms	10.1"
	2300	2350	50 m	2.1 cub ms	9.0"
	2350	2400	50 m	4.2 cub ms	12.8"
	2400	2450	50 m	3.2 cub ms	11.2"
	2450	2500	50 m	3.4 cub ms	11.5"
	2500	2550	50 m	2.9 cub ms	10.7"

R M N illing Fluids

DRILLING FLUID REPORT

 Report #
 1
 Date :
 5-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 to
 229
 Metres

			1 0"					CON	TRACT	OR (ODE							
ERATO			akes Oil						ORT FO		John (Greyda	nus					
PORT			rent Spe	ecniey				FIEL				TION			STATE			
ELL NA	AME AN		n •e "	1				PEP 1		1			Basin		$\mathbf{V}_{\mathbf{i}}$	ictoria		
			rifon #		OFFIC				ME (BBL		PP		IRCUL	ATION	DATA			
LLING AS			r SIZE	CA: SURFACE	SING	ft	MUD		PITS		PUMP SIZI				CIRCULATION		200	
.50 T	YPE Varel	18	18 18	SET @		M	2	204	575	6 PUMP M	X 8	Inch	ASSUMED	EFF	PRESS (PSI) BOTTOMS	1	200	psi
PIPE T	YPE	Length	** *	INT. SET @		n M	TOTAL CIR	CULATIN 779		GD I			9	7.0	UP (min)		10	min
	16.6 # TYPE	Length	40 Mtrs	PROD. or		nt .	Г	N STORA		BBL/S		s	TK / MIN	60	TOTAL CIRC. TIME (min)		44	min
4.5	HW		37 Mtrs	LNR Set @		M	L			0.07 BBL/1			GAL / M		ANN VEL.	DP	64	
COLLAR		Length	30 Mtrs	MUD TYPE	el Spud M	ud				17.				41	(ft/min)	DCs 68	75	
6.25	8	122	30 11111	<u>`</u>	er opau 112		MUD PRO	PERTI	ES		M			Y SPE	CIFICATIO			
CAMPI	E FROM					F	rL	F	'L M	lud Weight	Min		I Filtrate			HPHT Filtrat	e	
	SAMPLE T	TAKEN				17	.30	23	.45 P	lastic Vis			eld Point		> 20	pH Sulphites		
	(ft) - (r				Metres	1	05	2:	20 K	CI		PH	IPA			Sulpinies		
	LINE TEN		JRE	0	C OF			28						RVAT				
WEIGH		H BICIX		p	pg/SG	8.70	1.044	8.90	1.068	All mud tanks we	re filled	with w	ater and	added 1	9 ppb Ausge	l. In ta maintain	volume	
	EL VISCO	SITY (s	ec/qt) API		⁰ C		49	4		As drilling progre	ssed, w	ater and	l fresh ge	additio	ons were mad	ie to mainam	Volume	
	IC VISCO			<u> </u>	°C		9		8 a	nd yield point.						titiona mbila (inilling	
	POINT						22		20 1	Down hole losses	appear	ed mino	or and die	l not wa	irrant icm add	mons wime	numg.	
			00ft²) 10 se	c/10 min		12	18	14	22									
	ATE API						17	1	6.0	Make up water:			0/.1					
	FILTRAT			<u></u>	⁰ F				,				700 mg					
			I : HPHT	(32nd in)		2		2			Hard	ness :	120 m	g/l				
	S CONTE		by Volume				2.5		4.0									
	D CONTE			e) OIL/WATER			97.5		96.0				DED (TO	ONTO	IIMMADV			
	CONTEN					0	.50	0	.50		_		PERATI	UNS S	<u>UMMARY</u>			
				(ppb equiv.)				L		Spud Trifon # 1	at 13.30) hours			ht danth af ?	20 m		
pН							9.0		8.5	Drill 17-1/2" hold	e with r	egular sı	urveys to	mianig	ли аврип от 2	L) III.		
ALKAI	LINITY M		m)				-											
ALKAI	LINITY F	ILTRAT	E (Pf/Mf)		0.10	0.20	0.05	0.15									
	RIDE (n					 _	700		700									
TOTAL	L HARDN	ESS AS C	CALCIUM	(mg/L)			100		160									
SULPI	HITE (m	g/L)																
K+ (r	mg/L)																	
KCI ((% by Wt	.)						 										
PHPA	ppb				VO CENT S			<u></u>				SOLI	DS CON	TROL	EQUIPME	NT		
			NG (BBLS SPOSED) 	MIID	MARY			Туре	Hrs		Comes	Hrs	7	Size	Hir		
'LUID BU	ILT & REC	EIVED	OSED	_	30141					-+			+			11		
			72.77	TAL VOLU	MF		Centrifuse	1 1	1	Desander			Shaker #1	3 x 84				
		100	INIT	IAL VOLU	ме		Centrifuge Degasser	РВ		Desander Desilter	12	10.5	Shaker #1 Shaker #2	3 x 84 3 x 84	1			
ni ir		180			••••••••••••	1150	Centrifuge Degasser	PB	1			10.5			1			
Water	c from sum	180 191	+ FL	UID RECE	••••••••••••	1150		PB				10.5			1			
Water	ectrc Sump Dumped g Diesel) Centrifuge						UID RECE	IVED	1150 371			erflow (p	Desilter	12	10.5	Shaker #2		
Water	irc from sump) Desilter ter 500 Downhole tecirc Sump Dumped g Diesel) Centrifuge						UID RECE	IVED					Desilter	12		Shaker #2	3 x 84	
Water ct Recirc S r (eg Diese	c from sum Sump sel)		500	Desilter Downhole Dumped Centrifuge	191	+ FL' -FLU + FL	UID RECE	IVED ORAGE		Degasser			Desilter	Under	rflow (ppg) 0 13.8	Shaker #2 Outpu	3 x 84 ut (Gal/Min 12.00	
Water et Recirc S et (eg Diese	Sump sel) AL RECEIVE	ED.	500	Desilter Downhole Dumped Centrifuge TOTAL LOST	371	+ FL -FLU + FL	UID RECE IID LOST UID IN STO VOLUME	ORAGE	371	Degasser Desander Desilter	Ove	erflow (pj	Desilter	Under	rflow (ppg) 0 13.8	Shaker #2	3 x 84 ut (Gal/Min 12.00	a.)
Water ct Recirc S r (eg Diese TOTA	Sump sel) AL RECEIVE	ED Price	500 1150 Start	Desilter Downhole Dumped Centrifuge	371 Used	+ FL -FLU + FL	UID RECE IID LOST UID IN STO	ORAGE	779	Degasser Desander Desilter	Ove	erflow (pp	Desilter	Under	rflow (ppg) 0 13.8	Shaker #2 Outpu	3 x 84 at (Gal/Min 12.00 DATA 31	a.)
Water ct Recirc S r (eg Diese TOTA Product gel	Sump sel) AL RECEIVE	Price 12.00	1150 Start 714	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECEI TID LOST UID IN STO , VOLUME Close	ORAGE	779 Cost 3,528.00	Degasser Desander Desilter	Ove	8.8 ALYSIS	Desilter pg)	Under	rflow (ppg) 0 13.8 BIT HY	Shaker #2 Outpu	3 x 84 at (Gal/Min 12.00 DATA 31 105	8 88
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECEIUD LOST UID IN STO , VOLUME Close 420	ORAGE	779 Cost 3,528.00	Degasser Desander Desilter SOLII	Ove	8.8 ALYSIS	Desilter pg)	Under	rflow (ppg) 0 13.8 BIT HY Velocity act force	Shaker #2 Outpu	3 x 84 12.00 DATA 31 103	8 8 88 51
Water ct Recirc S r (eg Diese TOTA Product gel	Sump sel) AL RECEIVE	Price 12.00	1150 Start 714	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desauder Desilter SOLII High Grav solids	Ove	8.8 ALYSIS	Desilter pg)	Under	rflow (ppg) 0 13.8 BIT HY Velocity act force	Shaker #2 Outpu	3 x 84 12.00 DATA 31 100 35	8 8 88 51 5
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desander Desilter SOLII High Grav solids Total LGS	Ove	8.8 ALYSIS	Desilter pg)	Jet V Imp HHI	rflow (ppg) 0 13.8 BIT HY Velocity act force	Shaker #2 Outpu	3 x 84 12.00 DATA 31 103	8 8 88 51 5
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desander Desilter SOLII High Grav solids Total LGS Bentonite	Ove	8.8 ALYSIS	Desilter pg)	Jet V Imp HHI HSI Bit 1	of 13.8 BIT HYVelocity act force	Outpu Outpu	3 x 84 12.00 DATA 31 100 35	8 8 88 51 5
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desander Desitter SOLII High Grav solids Total LGS Bentonite Drilled Solids	Ove	8.8 ALYSIS	Desilter pg)	Jet V Imp HHI HSI Bit 1 CSC	of 13.8 BIT HYVelocity act force	Outpu Outpu OD. PRESS.)	3 x 84 12.00 DATA 31 100 35 1. 81	8 8 8 8 8 1 1 5
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desander Desitter SOLII High Grav solids Total LGS Bentonite Drilled Solids Salt	Ove	8.8 ALYSIS PPB 4.0	Desilter pg)	Jet V Imp HHI HSI Bit 1 CSC Equ ECI	of 13.8 BIT HY Velocity act force P Press Loss G Seat Frac I iv. Mud Wt.	Outpu Outpu OD. PRESS.	3 x 84 12.00 DATA 31 100 35	8 8 88 51 5 11
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desander Desilter SOLII High Grav solids Total LGS Bentonite Drilled Solids Salt n @ 23.45 Hrs	Ove	8.8 ALYSIS PPB 4.0 0.36	Desilter pg)	Jet V Imp HHI HSI Bit 1 CSC Equ ECI	of 13.8 BIT HY Velocity act force P Press Loss G Seat Frac I iv. Mud Wt.	Outpu Outpu OD. PRESS.	3 x 84 12.00 DATA 31 100 35 1. 81	8 8 88 51 5 11
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desander Desilter SOLII High Grav solids Total LGS Bentonite Drilled Solids Salt n @ 23.45 Hrs	Ove	8.8 ALYSIS PPB 4.0 0.36	Desilter pg)	Jet V Imp HHI HSI Bit 1 CSC Equ ECI	of 13.8 BIT HY Velocity act force P Press Loss G Seat Frac I iv. Mud Wt.	Outpu Outpu OD. PRESS.	3 x 84 12.00 DATA 31 100 35 1. 81	8 8 88 51 5 11
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desander Desilter SOLII High Grav solids Total LGS Bentonite Drilled Solids Salt n @ 23.45 Hrs	Ove	8.8 ALYSIS PPB 4.0 0.36	Desilter pg)	Jet V Imp HHI HSI Bit 1 CSC Equ ECI	of 13.8 BIT HY Velocity act force P Press Loss G Seat Frac I iv. Mud Wt.	Outpu Outpu OD. PRESS.	3 x 84 12.00 DATA 31 100 35 1. 81	8 8 88 51 5 11
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Degasser Desander Desilter SOLII High Grav solids Total LGS Bentonite Drilled Solids Salt n @ 23.45 Hrs	Ove	8.8 ALYSIS PPB 4.0 0.36	Desilter pg)	Jet V Imp HHI HSI Bit 1 CSC Equ ECI	rflow (ppg) 0 13.8 BIT HY Velocity act force P Press Loss G Seat Frac I iv. Mud Wt. D x Pressure @	Outpu	3 x 84 at (Gal/Min 12.00 DATA 31 108 3.5 1. 8.1	8 8 8 8 8 1 1 5
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Desander Desilter SOLII High Grav solids Total LGS Bentonite Drilled Solids Salt n @ 23.45 Hrs K @ 23.45 Hrs	Ove	8.8 ALYSIS PPB 4.0 0.36 2.92	Desilter pg)	Jet V Imp HHI HSI Bit 1 CSC Equ ECI	rflow (ppg) 0 13.8 BIT HY Velocity act force P Press Loss G Seat Frac I iv. Mud Wt. D CUM	Output Output OD. PRESS. Press Other:	3 x 84 12.00 DATA 31 108 3.5 1. 8.1	8 8 8 8 8 1 1 5
Water ct Recirc S r (eg Diese TOTA Product gel stic Soda	Sump Sel) AL RECEIVE S S	Price 12.00 32.00	500 1150 Start 714 34	Desilter Downhole Dumped Centrifuge TOTAL LOST	371 Used 294	+ FL -FLU + FL	UID RECE TID LOST UID IN STO , VOLUME Close 420 32	ORAGE	779 Cost 3,528.00 64.00	Desander Desilter SOLII High Grav solids Total LGS Bentonite Drilled Solids Salt n @ 23.45 Hrs K @ 23.45 Hrs	Ove	8.8 ALYSIS PPB 4.0 0.36 2.92	Desilter pg)	Jet V Imp HHI HSI Bit 1 CSC Equ ECI	rflow (ppg) 0 13.8 BIT HY Velocity act force P Press Loss G Seat Frac I iv. Mud Wt. D CUM	Output Output OD. PRESS. Press Shoe:	3 x 84 12.00 DATA 31 108 3.5 1. 8.1	8 8 8 8 8 8 1 1 5 1 1

									-		908	390	01 1	<u>114</u>		
RM	N	LI	۱G	FL	JU	ID	Repoi	·t #	2	Date :		6-De	c-2000			
			T) IF I	POF	2 Т	ı		Rig N	0	30	Spud :	:	5-De	c-2000	
rilling F	quids		r			7 I			Depth		229	to	261	Metro	es	
						CON	TRAC	FOR	ODE				·····			
PERATOR		akes Oil					ORT F			Crev	danus					
EPORT FOI		Brent Spe	echley					<u> </u>	LOC	<u> </u>		19	STATE			
ELL NAME	E AND No					FIEI			1					ictoria		
1	Т	Trifon#	1			PEP			Gipp	sian	d Basin	TION		ictoria		
RILLING ASSEM	BLY JE	T SIZE	CA	SING		D VOLU			PUMP SI	(F	CIRCULA		DATA			
SIZE TYPE	18	18 18	SURFACE		ft I	IOLE 235	PITS 590		YUMPSI X 8		nches	ľ	PRESS (PSI)		200	psi
7.50 Val			SET @		n TOTAL	CIRCULATI		PUMP	MODEL		ASSUMED I		BOTTOMS UP (min)		12	min
E 4.5 16.6 #	<i>*</i>	72 Mtrs	SET @		M	IN STORA			D PZ8 L/STK	+	STK / MIN		TOTAL CIRC.			
LL PIPE TYPE		37 Mtrs	PROD. or LNR Set @		ft M	LUSTOR		0.	0700			60	TIME (min)	DP	47 64	min
L COLLAR SIZE			MUD TYPE						L/MIN		GAL / MII	41	ANN VEL. (ft/min)	DCs 68	75	
6.25 8	122	30 Mtrs	G	el Spud M					7.65	AT ID			CIFICATION			
						ROPERTI		Mud Weight	Mi		API Filtrate	1 51 2		HPHT Filtra	te	
SAMPLE FI	ROM				FL		FL	Plastic Vis			Yield Point		> 20	pН		
TIME SAMI	PLE TAKEN				04.00).00	KCl			PHPA			Sulphites		
DEPTH (Metres	261	 	61	ikei			OBSEI	QVATI	ONS			
FLOWLINE	TEMPERATU	URE		°C PF			J	After cement jo	h add 1	eack F				s in attempt t	o flocculat	te
WEIGHT			p	pg/SG	9.10 1.09			gel and separate		Suck 1	111 11 10 1110			•		
FUNNEL VI		sec/qt) API (<u>@</u>	⁰ C	47		43	All tanks to be		and cle	aned					
PLASTIC V	ISCOSITY c	P @		°C	9			Trip tank to be								
	NT (1b/100ft ²				22	_		Remaining tank				d foob r	nud to be mi	ved comprisi	ng :	
	NGTHS (lb/1		c/10 min		12 20		<u> </u>	t .		шеа м	illi water air	u 11511 1	nuu to oc m	Aud Company		
FILTRATE	API (cc's/30	min)			16	-a.		4 sacks Xant	-							
HPHT FILT	TRATE (cc's/	30 min) @		⁰ F			1	3 sacks AMO								
CAKE THI	CKNESS AP	I: HPHT ((32nd in)		2	+		3 sacks PHP								
SOLIDS CO	ONTENT (%				5.4		93.9	240 sacks K Caustic and So		lahita 1	o be added !	later				
LIQUID CO) OIL/WATER		94.0		93.9	Causic and So	chum su		OPERATIO		JMMARY			
	TENT (% by				0.50			Drill to section	TD of 2	•	OI DIGITAL	<u> </u>				
METHYLE	NE BLUE CAI	PACITY (ppb equiv.)					Circulate hole of		01 111.						
pН					8.0			POH wiper trip		llare						
ALKALINI					0.10		1	RIH. Circulate			mud remain	nino in	hole.			
	TY FILTRATI	E (Pf/Mf))			-		POH.	anu auu	iciii ic	IIIda Tollian	m.e				
CHLORIDI					750			Rig up and run	12.3/9"	cacino						
	RDNESS AS (CALCIUM	(mg/L)		180			Circulate casing				cement	returns.			
SULPHITE								WOC.	g and co	illelli s	anic. Good					
K+ (mg/L						_		WOC.								
KCl (% b						+		4								
PHPA ppt)	107	2 A CCOLUNITIES	NC ODI C				1		SO	IDS CON	TROL	EQUIPME	NT		
	прости пр	MUI	D ACCOUNTII			MMARY		-{	Туре	Hirs		Cones	Hrs	7	Size	E
FLUID BUILT &			 	- OSED	INITIAL VO		779	Centrifuge			Desander			Shaker #1	3 x 84	T
mix (drill water		80	Desander		INTIAL VO			Degasser	PB		Desilter	12	2	Shaker #2	3 x 84	T
ecirc from	n sump)		Desilter	23	+ FLUID REC	מאַעואָר	80		+			 				T
ill v. ater			Downhole	11			34	 		L	L	<u> </u>	L			
ect Recirc Sump			Dumped		-FLUID LOS" + FLUID IN S		34	1	Ov	erflow	(ppg)	Under	flow (ppg)	Outpo	ıt (Gal/Min	L)
er (eg Diesel)			Centrifuge		+ FLUID IN S	, CRAGE		Desander	+-				0	1		
TOTAL RE	CRIVED	80	TOTAL LOST	34	FINAL VOLUM	ИЕ	825	Desilter	+-	9.1			13.2		8.00	_
			-		Close		Cost		IDS AN	ALYS	IS	T	BIT HY	D. PRESS.	DATA	_
Product	Price	Start	Received	Used	410	s	120.00			PPB	%	Jet V	elocity		319	8
gel	\$ 12.00	420	-	10 20	137	S		High Grav solid	s				ct force		112	.5
1 177	\$ 52.00	157	4	4U	1 13/	۱ ۳	-,	1 - 5		1						

				Desilter	23				Degasser	PB		Desilt	ter	12	2	Shaker #2	3 x 84	
ecirc from	m sump)					+ FLUID RECEI	VWD.	80	 	_								T
v. ater				Downhole	11		* ED		 	1								
ct Recirc Sump				Dumped		-FLUID LOST		34	4	0	erflow (nng)	I	nderfi	low (ppg)	Outpu	t (Gal/Min	<u>,</u>
r (eg Diesel)		İ		Centrifuge		+ FLUID IN STO	RAG	E	ļ	0	er riow (PP6/			0	ļ <u>-</u>	<u> </u>	_
									Desander	1						-	8.00	-
TOTAL RE	CEIVE	,	80	TOTAL LOST	34	FINAL VOLUME		825	Desilter	<u></u>	9.1			1.	3.2			_
Product		rice	Start	Received	Used	Close		Cost	SOLID	S AN	ALYS	IS			BIT HY	D. PRESS.I		_
	s	12.00	420		10	410	\$	120.00			PPB	%	J	let Ve	elocity		318	_
jel	s	52.00	157		20	137	s	1,040.00	High Grav solids				I	mpac	t force		112	5
seal Fine	3	52.00	157	 					Total LGS				1	нт			362	,
	 			-					Bentonite				I	HSI			1.5	,
	 			-			 		Drilled Solids		6.1		ī	Bit Pr	ess Loss		838	į
	-					<u> </u>			Salt				- (CSG	Seat Frac Pr	ess		
		1					n @ 20.00 Hrs					Equiv	. Mud Wt.			_		
		-		 			K@ 20.00 Hrs]	ECD				_		
											1	Max I	Pressure @ S	Shoe :		_		
	+																	_
	+			1														_
	+			+														_
	+			+			 		D/A	AILY	COST				CUMU	LATIVE C	OST	
				 			t		S	1,16	0.00				\$4	1,807.00		
			Skujins		CITY	Adelai		<u> </u>	<u> </u>	_,			TELE	PHO	NE	08 83	38 7266	



 Report #
 3
 Date :
 7-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 261
 to
 261
 Metres

	- ·		alres Oil					CONT	RACT	OR (ODE							\dashv
ERAT			akes Oil						RT FO		John (Greyda	nus					_
PORT			3rent Spe	ecniey				FIELI			LOCA	TION		S	TATE			
ELL NA	AME A		a ::				1	EP 1				sland I	Basin		V	ictoria		
			Trifon #						Œ (BBL		1.1	CI	RCULA'	TION I	DATA			
	SSEMBLY	JE	T SIZE	CAS		n	MUD V		PITS	1	PUMP SIZ	E			IRCULATION			
IZE 1	TYPE			13.375" SURFACE SET @	837 255.1	n M	l		600		X 8	Inche	ASSUMED E	ne	PRESS (PSI) BOTTOMS		Р	_
PIPE	ГҮРЕ	Longth		INT.		ft	TOTAL CIRC	CULATING 600	VOL.	PUMP M GD			97.	0	UP (min)			nin
4.5	16.6 #	1	Mtrs	SET @		M ft	IN	STORAG	E	BBL/	STK	ST	K/MIN	Т	OTAL CIRC. TIME (min)			nin
PIPE 4.5	TYPE HW	Length	Mtrs	LNR Set @		M	<u> </u>			0.07 BBL			GAL / MIN		ANN VEL.	DP	T	
COLLAI	R SIZE (")	Longth		MUD TYPE	I Canad Mar	ıd									(ft/min)	DCs		_
6.25	8		Mtrs	Ge	l Spud Mu	u	MUD PRO	PERTIE	s		N			SPEC	CIFICATI	ONS		
							FL	FI	-	1ud Weight	8.5 -		Filtrate		8 - 10	HPHT Filtrate		_
	LE FROM									lastic Vis	Mi		ld Point		15 - 25	pH		- 8.5
		TAKEN			Metres				ŀ	(CI	5%	PH			0.5 - 1.0	Sulphites	80 -	120
	I (ft) -			0	C OF		1						OBSER	VATI	<u>ons</u>			
		MPERAT	URE		g/SG		-			Dumped and clea								
WEIGH			, , , , , , , , , , , , , , , , , , , ,		g / SG					Filled same with			l fresh mu	d.				
			sec/qt) API	<u>a</u>	°C		+		—— ₁	Kept S84 screens	s on sha	akers						
		OSITY			<u> </u>					-								
	POINT	(lb/100ft	<u> </u>															
GEL S	TRENG	THS (lb/1	100ft ²) 10 se	ec/10 min														
FILTR	RATE AP	I (cc's/30	min)		0.5													
HPHT	FILTR/	TE (cc's	/30 min) @		⁰ F		F		-									
			PI : HPHT						$\vdash \vdash \vdash$									
			by Volume)						Rheology: 600:	300: 2	200: 100	: 60: 30:	6: 3:				
	ID CON			e) OIL/WATER					·			OI	PERATIC	NS ST	UMMARY			
SAND	CONTE	NT (% b	y Vol.)							WOC.								
METH	IYLENE	BLUE CA	PACITY	(ppb equiv.)						Slack off and lay	v out co	nductor						
pН										Weld stabilising			tor to casi	ng				
ALKA	LINITY	MUD (Pm)						1	Conduct top up				_				
ALKA	LINITY	FILTRAT	TE (Pf/M	f)					<u> </u>	Pick up rams an		up.						
	ORIDE									TICK oh tuning un	AIMINE	-r.						
TOTA	L HARI	NESS AS	CALCIUM	(mg/L)														
SULP	нте	(mg/L)																
K+	(mg/L)					<u> </u>												
KCl	- (mg/L) Cl (% by Wt.) IPA ppb MUD ACCOUNTING D BUILT & RECEIVED FLUID DISPO drill water) 600 Desander circ from sump) er Downhole circ Sump Dumped					 		 										
PHPA	- (mg/L) Cl (% by Wt.) IPA ppb MUD ACCOUNTING D BUILT & RECEIVED drill water) 600 Desander ecirc from sump) Desitter er Downhole circ Sump Dumped											SOLI	DS CON	rrol	EQUIPM	ENT		
	- (mg/L) Cl (% by Wt.) IPA ppb MUD ACCOUNTING D BUILT & RECEIVED FLUID DISPO drill water) 600 Desander circ from sump) er Downhole circ Sump Dumped)	CTIMA	MARY		1	Туре	Hrs		Cenes	Hirs		Size	Hr
FLUID B	- (mg/L) Cl (% by Wt.) IPA ppb MUD ACCOUNTING D BUILT & RECEIVED drill water) 600 Desander ecirc from sump) Desitter er Downhole circ Sump Dumped					1			1	Centrifuge	+	+	Desander			Shaker #1	3 x 84	
mix (dri	MUD ACCOUNTING D BUILT & RECEIVED FLUID DISPO (drill water) 600 Desander ecirc from sump) Desitter processor Downhole circ Sump Dumped					INI	TIAL VOLU	NIE		Degasser	PB	+-+	Desilter	12		Shaker #2	3 x 84	
n ec	CI (% by Wt.) IPA ppb MUD ACCOUNTING D BUILT & RECEIVED FLUID DISPO (drill water) 600 Desander ecirc from sump) Desilter er Downhole scirc Sump Dumped					-		****	(00	Degasser	+	+		1				
 [] \ter	CI (% by Wt.) IPA ppb MUD ACCOUNTING D BUILT & RECEIVED FLUID DISPO (drill water) 600 Desander ecirc from sump) Desilter er Downhole scirc Sump Dumped						LUID RECE	IAED	600			<u> </u>						
ct Recirc	MUD ACCOUNTING D BUILT & RECEIVED FLUID DISPO (drill water) 600 Desander ecirc from sump) Desilter Downhole scirc Sump Dumped						UID LOST			-	O	verflow (p	pg)	Under	rflow (ppg)	Outpu	ıt (Gal/Min	L)
er (eg Die	(drill water) 600 Desander ecirc from sump) Desitter Downhole ceirc Sump Dumped					+ F	LUID IN STO	URAGE		Desander	+				0			
,	MUD ACCOUNTING D BUILT & RECEIVED FLUID DISPOS (drill water) 600 Desander ecirc from sump) Desitter Downhole ecirc Sump Dumped g Diesel) Centrifuge					FIN.	L VOLUME	:	600	Desilter	+-		-+		0			
TO	TAL RECE	IVED	600	TOTAL LOST		FINA				1	DS AN	ALYSIS	 }	T	BIT H	YD. PRESS.	DATA	
Produ	ct	Price	Start	Received	Used	4-	Close	+	Cost	SOLI	DO AIN	PPB	%	Jet V	elocity			
C Pac-R	5	161.00	120		6	-	114	\$	966.00	High Cross collect		++			act force			
foamer	9	125.00	16		44		12	\$	500.00	 		++		ни				
3	-		5 960		240		720	<u> </u>	4,212.00			+-+		HSI			#DIV	7/0!
PA (Prae			0 25		4		21	S	480.00	 		+			Press Loss			
	3101)	535.0			4		86	S	2,140.00			++			Seat Frac	Press		
htemp										Salt		4		_	iv. Mud W			
			+							n@ Hrs		-		ECI				
-					_					K@ Hrs					Pressure (@ Shoe ·		
		y												Max	r ressure (w Silve .		
			+															
			1			\top												
-			_												~~~	ACCUT A COTACON A	COST	
L												COST		+-		MULATIVE (
	+										\$8,29	08.00				\$13,105.00	338 7266	
ENI EN	GINEE	2 And	re Skujins		CIT	Y	Adela	ide Off	fice				TE	LEPH	IONE	V8 8	330 /200	,
HIN EA	STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,	, Anu	cayus											remente				



 Report #
 4
 Date :
 8-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Don'th
 261
 to
 289
 Metres

นเแบ	g Fl	Mins				_					Depth		261	to	289	Metro	es
PERATO	OR		Lakes Oi	ì				CON	TRACT	OR	ODE						
EPORT			Brent Sp					REP	ORT FO)R	Mick	O'Com	ner				
EFORT		ND No	Diene Sp	ceemey				FIEI	LD		LOCA	TION		5	TATE		
INDL INE	ZIVIL A	IND ING	Trifon #	. 1			- [-	PEP	137		Gipp	sland :	Basin		V	ictoria	
					CINC				ME (BBI	<u>5 T</u>			IRCULAT	ION	DATA		
ILLING AS			JET SIZE	13.375" SURFACE	SING 856	ft	HOL		PITS	" 	PUMP SIZ				IRCULATION		
	YPE Varel L1	16	16 18	SET@	260.9	M		126	514		x 8	Inche	ASSUMED EFF	-	PRESS (PSI) BOTTOMS		900 psi
	YPE	Length	<u> </u>	INT.		ſt	TOTAL CIL	RCULATE 644			MODEL PZ8		97.0		UP (min)		7 <u>m</u> t
	16.6 #	Length	100 · Mtrs	SET @		M R	 	IN STOR			/STK	S	TK / MIN	T	OTAL CIRC.		
L PIPE	TYPE HW	Longin	37 Mtrs	LNR Set @		M					700 /MIN		GAL / MIN	-	TIME (min) ANN VEL.	DP	43 mi 118
L COLLAR) Length		MUD TYPE						1	.94		627		(ft/min)	DCs 138	179
6.25	8	114	31 Mirs	K	CI PHPA			OBERT	ES			IIID PR	OPERTY	SPE	CIFICATION	ONS	· · · · · · · · · · · · · · · · · · ·
							MUD PRO			Mud Weight	8.5 - 9		I Filtrate		8 - 10	HPHT Filtrat	te
SAMPL						1	7L			Plastic Vis	Mir		ld Point		15 - 25	pН	8.0 -
TIME S	AMPL	E TAKEN	<u> </u>						2.00	KCI	5%		PA		0.5 - 1.0	Sulphites	80 - 1
DEPTH					Metres				36				OBSERV	ATI			
FLOWI	LINE T	EMPERA	TURE		C		<u> </u>	25	1044	nitially, building	vield no	sint with	Yantemn to	ensu	re both goo	d hole cleanii	ng and
WEIGH	IT			p	pg / SG			8.70		sufficient carryin							
FUNNE	L VIS	COSITY	(sec/qt) API	<u>@</u>	⁰ C				47	ncreasing mud	g vapavi	ith hanis	e to 0 6 noa	nnio:	to entering	Latrobe coals	š.
PLAST	IC VIS	COSITY	cP @		°C				13	ncreasing mud	weight w	Aur Oarn	e 10 3.0 ppg	inn n	na/l swith soc	lium sulnhite	
		(lb/100								Maintaining sulp							
			/100ft²) 10 se	ec/10 min			.1			KCl levels starte	d high to	allow f	or initial dilu	ition	- ievei will b	e anowed to	шор
		PI (cc's/						1		to around 5%.							
HPHT I	FILTR	ATE (cc	's/30 min) @		⁰ F			· .		Inhibition is goo	d - cuttir	ngs slide	off one's ha	ınds s	howing that	they are wel	1
CAKE	THICK	NESS A	PI : HPHT	(32nd in)			ļ			encapsulated.							
SOLID	s con	TENT (% by Volume	2)					0.6	Hole cleaning is	good as	evidenc	ed by cutting	gs en	nerging fron	the hole.	
LIQUII	D CON	TENT (% by Volum	e) OIL/WATER					99.4								
SAND (CONTI	ENT (%	by Vol.)						Tr			<u>of</u>	PERATION	IS SU	MMARY		
			APACITY	(ppb equiv.)						Nipple up BOPs	1						
pH									9.5	Pressure Test							
ALKAI	LINITY	MUD	(Pm)							Make up bit and	BHA a	nd RIH.	Tag float at	250 ı	n		
			TE (Pf/M	U .				0.10	0.45	Drill to 268 m							
CHLO								32	2,250	Conduct FIT							
			CALCIUM	(mg/L)					520	Drill ahead							
SULPH				(140								
K+ (n		(IIIg) L)				ļ		32	2,964								
	(% by \	Wt)							6.1								
PHPA		,,,,				 			0.50	ı							
TILLA	ppo		MI	D ACCOUNTIN	NG (BBLS))						SOLII	DS CONTR	OL		NT	
FLUID BUI	ILT & R	ECEIVED	1110	FLUID DIS		Ť	SUM	MARY			Туре	Hrs	C	ones	Hrs		Size
			T	Desander		INIT	IAL VOLU	ME	600	Centrifuge			Desander			Shaker #1	3 x 84
mix (drill v				Desilter		1				Degasser	PB		Desilter	12		Shaker #2	3 x 84
	c from su	mp)		Downhole	0	+ FL	UID RECE	IVED	40		1						
1. 4			40	Dumped		-	ID LOST		0								
xt Recirc S				—			UID IN STO	ORAGE			Ove	rflow (pp	g) U	nderf	low (ppg)	Outpu	ıt (Gal/Min.)
er (eg Diese	el)			Centrifuge		1			L	Desander	-				0		
тота	L RECE	VED	40	TOTAL LOST	0	FINAL	VOLUME		640	Desilter	†				0		
	T T					1	Close	Т	Cost	SOLI	DS ANA	LYSIS			BIT HY	D. PRESS.I	DATA
Product		Price	Start	Received	Used			s	360.00		T	PPB		et V	elocity		313
A (Praesto		120.6		100	3	 	118	+	158.00	High Grav solids					t force		885
ium Sulphi					4		116	S		Total LGS		0.6		HP			281
temp	S	535.0	0 86		12	 	74	\$	6,420.00	Bentonite		0.0		ISI			2.4
ite				480		+	960	+		Drilled Solids		0.6			ress Loss		767
			528	192			720					22.0			Seat Frac P	ress	833
ikseal Fine				75		1	75	-		Salt					. Mud Wt.		18.7
C Pac-R			114	40		+	154			n @ 02.00 Hrs		0.43		ECD	** 6.		8.85
						<u> </u>				K@ 02.00 Hrs		2.47			Dwogguno (2)	Shoe :	0.00
		,											I.	viax l	Pressure @	SHOC.	
						<u></u>											
ŀ						1		1		I D	AILY C	COST	- 1		CUM	ULATIVE C	OST
	_									υ υ	AILI C	031					
	_										66,938					20,043.00	338 7266



 Report #
 5
 Date :
 9-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 289
 to
 751
 Metres

PENCY FOR Percent									CON	TOD A CT	FOD		ODE		207	•••				$\neg \neg$
The part The part	PERATO	R												N.Com						
Ref Ref	EPORT F	OR		Brent Sp	eechley	···					<u>UK</u>						CTATE			
The color of the	ELL NA	ME A	ND No						FIE	LD		i i				1				1
Martin				Trifon #	1				PEP	137			Gipps	land	Basin	1	<u>v</u>	ictoria		
The content of the	ILLING ASS	FMRL				SING		MUD	VOLU	јме (вв	L)				IRCUI					
1.50							n	но		1									1 200	nel
The color The	2.25 Va	rel L11				260.9		TOTAL C			-+			Inch		DEFF			1500	
Thirty The part P	' 1		Length	560 · Mrrs				IOIALC				GD I	PZ8						21	min
Color 187			Length	- July 1					IN STOR	AGE				s	TK / MIN	1			55	min
See 15 15 15 16 16 16 17 16 18 18 18 18 18 18 18				37 Mtrs			M	L			-+				GAL/			DP		
SAMPLE FIRON	! (1	31 Mtrs	B	KCI PHPA	Polvme	er			- 1	14.9							179	
Martine File Fil	6.23	•	1 117	<u> </u>					OPERT	IES			М	UD PF	ROPER	TY SPE	CIFICATION			
Micro Micr	CAMDI F	FDO	<u> </u>				J	FL]	FL	Mud W	Veight	8.5 - 9.	6 AP	I Filtrat	e	< 12		ite	
Metron Metron Metron Gol							10	5.00	24	4.00	Plastic \	Vis	Min	Yie	eld Point	:	15 - 25			8.0 - 8.5
FOOTNINE TRANSPERATURE						Metres			7	751	KCI		5%	PH	IPA .		0.5 - 1.0	Sulphites		80 - 120
PRESENTE PRESENTA PRESENTE				TIDE				I	38						OBS	ERVAT	<u>IONS</u>			
PLANTE VISCOSITY Getqi) APT @ 47			MIFERA	UKE				1.164	9.75	1.170	Increas	sed mud we	ight to r	ninimu	m of 9.	6 ppg wit	h barite.			
FLY-NOT-1 Section Section FL C 15 18 18 18 19 19 19 19 19			OCITY	(coc/at) ADI						47	Rheolo	ogy being m	naintaine	d with	Xanten	np. Altho	ugh there wa	s a thinning	effect af	ter
STRENGTIS GATOROPY O section in 10 12 10 10 10 10 10 10				<u> </u>	<u></u>					18	the firs	st coals wer	e drilled	throug	th, it wa	s mainly	the yield poi	nt that dropp	ed and t	the
STRENTING (05100P) 10 sec/10 min 10.52 8.11 10.52 10.04 10.55 10.04 10.55 10.04 10.55 10.04 10.55 10.04 10.55 10.04 10.55 10.05 10										19	plactic	viscosity th	nat incre	ased as	a resul	t. The mo	ore important	t 6 rpm readi	ng was s	still
The properties Properties					a/10 mi=				 											
PHIT FILTRATE (cc '4506 min) @					:C/ 10 IIIIN											coals we	re intersected	d. LCM was	rapidly	
CAKE FITICKNYRS						0 E	<u> </u>		1		added	although th	ie loss a	ppeared	d to be s	self healir	ng. A further	LCM pill wa	as built a	ınd
SOLIDIS CONTENT 76 by Volume) UMATER 947 945 945 84606gy: 60:55, 300:37, 200:37, 300:37,					(22md in)		 		-	1										ı
SACH CONTENT																				
SAPL CONTENT (% by Vol.)					·		 		 								9,30:15, 6:1	0, 3:8		
METHYLEAP LUE CAPACHY (ppb equiv.) 4.0 6.0 Carding Car					e) OIL/WATER		-		-		14.00	.ову . ости	,							
Pi					(b canin)				+		Drill to	to 717 m								
ALKALINITY MUD (Pm) ALKALINITY FILTRATE (Pf'/M) CHILORDE (mg/L) CUPILORDE (mg/L)		LENE	BLUE CA	PACITY	(ppb equiv.)		ļ						in as c	oal inte	resecte	d and dov	vn hole mud	loss occurre	d.	
ALKALINITY FILTRATE (Pf /M)								0.5	-	0.0	1		, up us v	J. 2111						
CHILORIDE			<u> </u>				0.05	0.35	1	0.25	1	anoud.								
TOTAL HARDNESS AS CALCIUM (mg/L) SULPHITE (mg/L) K+ (mg/L) KC (% 6y WL) SULPHITE (mg/L) KC (% 6y WL) SULPHITE (mg/L) MUD ACCOUNTING (BBLS) FLUID DISPOSED SUMMARY MUD ACCOUNTING (BBLS) FLUID DISPOSED SUMMARY SULD SCONTROL EQUIPMENT FLUID DISPOSED SUMMARY SULD SCONTROL EQUIPMENT FUEL DISPOSED SUMMARY SULD SCONTROL EQUIPMENT SUMMARY S				E (PI/MI	.)						1									
SULPHITE 196				a.r.owa.r	(7)		 		+		1									
SULPHITE				CALCIUM	(mg/L)				+		1									
Marter M			mg/L)				-				1									
Primate Prim	 										i									
MUD ACCOUNTING (BBLs)	 		(t.)					3.9		3.1	1									
Fluid Bull Received Fluid Brane Sum Received	PHPA I	ppb				NG (DDI G								SOLI	DS CO	NTROL	EOUIPME	NT		
Note		T 0 DE	OPP/ED	MU)	SIIN	IMARY		1							7	Size	Hrs
Desider Signature Signat			CEIVED	T		SPOSED				640	C	entrifuge			Desande	r		Shaker #1	3 x 84	4 24
Desilier S1	mix (drill wa	ter)		200			INIT	IAL VOLU	JNE	640			PR	-			6	Shaker #2	3 x 8-	4 24
No	miy circ f	rom sur	ap)				┨		III TO TO	270	├ —	Degasser	-	-+		-+				\top
Freedrect Sumply Centrifuge + FLUID IN STORAGE Pluncher (reg Diesel) TOTAL RCST 191 FINAL VOLUME FINAL VOLUME 191 FINAL VOLUME 191 PINAL VOLUME PINAL VOLUME 191 PINAL VOLUME PINAL VO	11			170	-	140		•••••••	TAFD		-		LL				J			
Product	ect Recirc Sur	mp			_		-		ODACE	191	-		Over	flow (pp	g)	Under	flow (ppg)	Outp	ut (Gal/M	(in.)
Product	er (eg Diesel)				Centrifuge		+ FL	UID IN SI	OKAGE		Decan	ıder					0			
Product Price Start Received Used Close Cost SOLIDS ANALYSIS BIT HYD. PRESS.DATA ite \$ 7.50 960 760 200 \$ 5,700.00 PPB % Jet Velocity 313 clde \$ 140.00 18 1 17 \$ 140.00 High Grav solids 58.0 Impact force 992 creal Fine \$ 5.2.00 137 30 107 \$ 1,560.00 Total LGS 13.7 HHP 315 Iseal Fine \$ 5.0.00 75 18 57 \$ 900.00 Bentonite 6.0 HSI 2.7 Ikseal Fine \$ 5.0.00 75 18 57 \$ 900.00 Salt 19.0 CSG Seat Frac Press 833 Ikseal Medium \$ 50.00 60 18 42 \$ 900.00 Salt 19.0 CSG Seat Frac Press 833 Ikseal Fine \$ 39.50 118 8 110 \$ 960.00 ng 24.00 Hrs 0.57 Equiv. Mud Wt. 18.7					TOTAL 1 00T		EINAI	VOLUMI	7	910			 	9.7			12.8		6.00	
Product	TOTAL	RECEIV	/ED	370			 				1203		CANAI				BIT H	D. PRESS.	DATA	
S	Product	_			Received		+'		+		1	SOLID				.Iet V				513
cide \$ 140.00 18 1 17 \$ 1,560.00 Total LGS 13.7 HHP 315 real Fine \$ 52.00 137 192 528 \$ 3,369.60 Bentonite 6.0 HSI 2.7 kseal Fine \$ 50.00 75 18 57 \$ 900.00 Drilled Solids 7.7 Bit Press Loss 859 ikseal Medium \$ 50.00 60 18 42 \$ 900.00 Salt 19.0 CSG Seat Frac Press 833 PA (Praestol) \$ 120.00 118 8 110 \$ 960.00 n	ite			 		 	 					Gray solids							9	992
S 17.55 720 192 528 S 3,369.60 Bentonite 6.0 HSI 2.7	cide	-+-		 		 	 				<u>+</u> -							<u></u>	3	315
S 17.55 720 192 528 S 3,399.60 Benfonte 6.0 Bit Press Loss 859	rseal Fine			+			 				 									
Reseal Fine S 50.00 75 18 57 S 900.00 Drilled Solids 77 Drilled Solids 78 Drilled Solids 77 Drilled Solids 77 Drilled Solids 77 Drilled Solids 78 Drilled So		S	17.55	 			1				—		-+				ress Loss			
Ikseal Medium S 50.00 60 18 42 S 900.00 Salt 17.0 Equiv. Mud Wt. 18.7	ikseal Fine	\$	50.00	75		 			_+			a Solias						Press		
PA (Praestol) \$ 120.00 118 8 110 \$ 960.00	ikseal Mediu	m S	50.00	60							-	24.02 **								
tum Sulphite S 39.50 116 4 112 S 153.00 K@ 24.00 HS 1.03 DEC temp S 5\$5.00 74 6 6 68 S 3,210.00 Max Pressure @ Shoe : DAILY COST CUMULATIVE COST S 16,897.60 S 36,940.60 IN ENGINEER Andre Skujins CITY Adelaide Office TELEPHONE 08 8338 7266	PA (Praestol)	S	120.00	118		8	1				+					_ -				
DAILY COST CUMULATIVE COST	ium Sulphite	s	39.50	116		4	1					24.00 Hrs		1.05				Shoo:		.,,
IN ENGINEER Andre Skujins CITY Adelaide Office TELEPHONE 08 8338 7266	ıtemp	S	535.00	74		6		68	S	3,210.00	-					Max	r ressure @	SHOE:		
IN ENGINEER Andre Skujins CITY Adelaide Office TELEPHONE 08 8338 7266																				
IN ENGINEER Andre Skujins CITY Adelaide Office TELEPHONE 08 8338 7266									4											
IN ENGINEER Andre Skujins CITY Adelaide Office TELEPHONE 08 8338 7266											<u> </u>						OT THE	TIL ATUSTE	COST	
IN ENGINEER Andre Skujins CITY Adelaide Office TELEPHONE 08 8338 7266											-					+				
IN ENGINEER Andre Skujins CTTY Adeiaide Office TEEL TOTAL											<u> </u>	\$1	6,897	.60		EX EXX				<u> </u>
	IN ENGIN	VEER	Andr	e Skujins													JINE	08.8	JJO /40	

R	MN		
rilli	ng Flui	ds	
PERA	TOR		I
EPOR	T FOR		I
٠	NAME AN	D No	_
ELL	IAME AI	D 110	7
ILLING	ASSEMBLY		Œ
SIZE	TYPE	16	
2.25	Varel L117		L
L PIPE	TYPE	Length	
E 4.5	16.6 #		
L PIPE	TYPE	Length	
E 4.5	HW	ļ	
L COLL	AR SIZE (")	Length	
6.25	8	114	_
SAM	PLE FROM		
TDA	CAMPIE	CAKEN	_

IN ENGINEER

Andre Skujins

DRILLING FLUID

6 Date: 10-Dec-2000 Report #

				TD	E)B	\mathbf{T}			Rig	No		30 S	pud	:	5-D	ec-2000	
rilling	Flu	ias		I	נעני		/11				Dep	oth	751	1	to	907	Met	res	
			akes Oil					CONT	RACT	OR	OD	E							
PERATOI			rent Spe					REPO	RT FC	R	Mic	k O'C	onner						
EPORT FO			rent Spe	ectificy				FIEL	D		LO	CATIO	ΟN			STATE			1
ELL NAN	VIE AI		rifon #	1			l _J	PEP 1	37		Gij	ppslan	d Ba	sin		V	ictoria		
	EMBI V		SIZE		ING				Æ (BBI	<i>a</i>)			CIRC	CULAT		DATA			
SIZE TY				13.375" SURFACE	856	ſt	ног	Æ	PITS			SIZE	Tb		ľ	CIRCULATION PRESS (PSI)		1050	psi
2.25 Vai	rei L117			SET @	260.9	M ft	TOTAL CIR	CULATING	470 G VOL.		6 X P MODE		Inches ASS	UMED EF	F	BOTTOMS			
L PIPE TY	PE .6 #	Longth	725 Mtrs	INT. SET @		M		880			D PZ8		STK/	97.0		UP (min) TOTAL CIRC.		25	min
L PIPE TY	PE	Length		PROD. or LNR Set @		ft M	1	N STORAG	Ж		.0700			220	1	TIME (min)		59	min
L COLLAR SI	HW IZE (")	Lougth	37 Mtrs	MUD TYPE							BL/MIN		G.	AL/MIN 627	,	ANN VEL. (ft/min)	DP DCs 138	118 179	
	8	114	31 Mtrs	K	CI PHPA						14.94	MIID	PROP			CIFICATION			
							MUD PRO			Mud Weight	8	5-9.6	API Fil			< 12	HPHT Filti	ate	
SAMPLE						F	L	F1		Plastic Vis		Min	Yield P	oint		15 - 25	рН		8.0 - 8.5
TIME SA					Matriag			89		KCI		5%	PHPA			0.5 - 1.0	Sulphites		80 - 120
DEPTH				0	Metres C F			36	<u> </u>					BSER					
		MPERATU	JRE		g/SG			9.60	1 152	improving rhed	ology v	vith Xan	temp as	s values	have	dropped du	e to dilution	and coal	ls.
WEIGHT		OTTEN /	en/mt) ADT		°C			4.		Maintaining mi	nimun	n mud w	eight o	f 9.6 pp	og.				
			ec/qt) API		TL °C		-	1.											
PLASTIC					- C			1											
LDP))0ft²) 10 se	od/10 min				5	8										1
FILTRAT				-C/10 IIIII				11	.0										
		E (cc's/3			°F		~3												l
			: HPHT	(32nd in)				1											1
			by Volume					4											ļ
LIQUID				e) OIL/WATER					95.1	Rheology: 600	0:43, 3	300:29, 2	200:23,	100:17	, 60:	13, 30:10, 6:	6, 3:5		
		T (% by						0.	50				<u>OPER</u>	RATIO.	NS S	UMMARY			i
		BLUE CAF		(ppb equiv.)				5		Drill to 793 m.					401				l
pН								8		POH to shoe f				ght 440	- 420) m.			
ALKALI										POH to surfac	e to cl	nange bit							
ALKALI	INITY I	ILTRATI	E (Pf/Mi	<u> </u>				0.05		RIH	***	1 6	ماها	OD of	F 5 0 1	I av out sin	ale		
CHLORI										Stuck at 783 n			Aui illa	X OF U	1 JU N	Luy out sin	ere.		
TOTAL	HARDI	VESS AS C	CALCIUM	(mg/L)				 	80 30	Ream 762 m - Drill ahead.	· /93 I	п.							
SULPHI	TE (n	ng/L)							858	Dilli alicau.									
K+ (mg									.6										
	6 by W	i.)							.40										
PHPA p	ppb		MI	D ACCOUNTIN	G (BBLS	`						SO	LIDS	CONT	ROL	EQUIPME	NT		
FLUID BUIL	T & RFC	FIVED	WIC	FLUID DIS		Í	SUM	MARY			Тур	e Hrs	1		Cones	Hrs		Size	Hrs
		- I	200	Desander		INIT	IAL VOLU	ME	819	Centrifuge			Des	ander			Shaker #		
mix (drill wa	from sum	n)		Desilter		-				Degasser	РВ		De	silter	12		Shaker #	2 3 x 1	10 14
ш	II VIII JUIII	P)		Downhole	98	+ FLI	UID RECE	IVED	200										
et Recirc Sur	mp			Dumped	40	-FLU	ID LOST		138		_					G ()	0.5	put (Gal/N	Min)
er (eg Diesel)				Centrifuge		+ FL	UID IN STO	RAGE				Overflow	(ppg)	-	Under	rflow (ppg)		put (Gar)	· · · · · · · · · · · · · · · · · · ·
	***************************************					ļ				Desander				-		0			
TOTAL	RECEIV	ED	200	TOTAL LOST	138	+	VOLUME		880	Desilter	IDS /	NALY	ere				YD. PRES	S.DATA	
Product		Price	Start	Received	Used	↓ '	Close	+	Cost	SOL	IDS A	PPB	1 0	16	Tet V	Velocity			290
stic Soda	s	32.00	32		2		30	S	64.00			46.0				act force			904
1	\$	17.55	528		48	 	480	\$		High Grav soli	as		+		НН				265
PA (Praestol)	s	120.00	110		3	-	107	\$		Total LGS		6.0	+		HSI				2.2
ium Sulphite	, S	39.50	112		4		108	S	158.00	Bentonite		6.7				Press Loss			724
ntemp	S	535.00	68		3	\vdash	65	S	1,605.00	Drilled Solids		18.0	+			Seat Frac	Press		833
						-		+		Salt n @ 23.00 Hr	•	0.5				iv. Mud Wt.			18.7
<u> </u>								+		K@ 23.00 Hr		0.84			ECI				9.70
						+		+		23.00 111					Max	Pressure @	Shoe :		
						+		+		 					-				
						-		+		1									
	-					+		+		1									
				+		+		+		T	DAIL	Y COS	Г			CUM	ULATIVE	COST	
			-			+		+				029.40				9	39,970.0		
	- 1		1											COTA	EDI	ONE	AQ	9339 77	.66

CITY

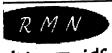
TELEPHONE

08 8338 7266

DRILLING FLUID

Report #	7	Date :		11-Dec-2000
Rig No	30	Spud :		5-Dec-2000
Depth	907	to	1206	Metres

				10	REI	>)D	T	ı		F	Rig No)	3	Spu	d:	5-De	c-2000
rilling F	luic	1 5		r			<i>)</i> 1\				F	epth		907	to	1206	Metr	es
			akes Oil				T	CON	TRACT	OR	(ODE						
PERATOR EPORT FOR)		rent Spe					REP	ORT FO	OR	N	Mick (O'Coı	nner				
ELL NAME			Tent Spe	cency				FIEI	LD	***	I	LOCA	TIOI	V		STATE		
ELL NAME	AND		rifon#	1			J	PEP	137			Gipps	sland	Basi	n	<u> </u>	/ictoria	
WALE ASSESSED.	DI V		SIZE		SING				ME (BBI	L)				CIRCU	LATIO	N DATA		
BIZE TYPE	BLX			13.375" SURFACE	856	ft	HOL	Æ	PITS			UMP SIZI		hes		CIRCULATION PRESS (PSI)		200 psi
2.25 Varei I				SET @	260.9	M ft	TOTAL CIR	548 CULATE	NG VOL.		PUMP M	X 8	1	ASSUM		BOTTOMS		
L PIPE TYPE E 4.5 16.6 #	1	ongth 1	024 Mtrs	INT. SET @		M		112	28		GD P BBL/S			STK / MIN	97.0	UP (min) TOTAL CIRC.		34 min
L PIPE TYPE	1	ongth	37 Mirs	PROD. or LNR Set @		ft M	1	n stor/ 50			0.07	00			220	TIME (min)		76 min
L COLLAR SIZE		ength	3/ WIII	MUD TYPE							BBL/N			GAL	MIN 627	ANN VEL. (ft/min)	DP DC: 138	118
6.25 8		114	31 Mirs	K	CI PHPA		r MUD PRO	DEDTI	FS		14.9		IUD P	ROPEI		ECIFICAT	IONS	
					T		L			Mud We	eight	8.5 - 9		PI Filtra		< 12	HPHT Filtra	te
SAMPLE FR		TARRE					.00			Plastic V	Vis	Min	Y	ield Poin	t	15 - 25	pН	8.0 - 8.5
TIME SAMP					Metres		070			KCl		5%	P	HPA		0.5 - 1.0	Sulphites	80 - 120
FLOWLINE			RE	Ö	C °F	45		47								<u>TIONS</u>		
WEIGHT	TEIVIL	and I C			pg/SG	9.60	1.152	9.60	1.152	Ensure	d that there	was g	ood vo	lume by	casing	point.		
FUNNEL VI	SCOS	ITY (se	ec/qt) API (⁰ C		45		44	Maintai	ined mud v	veight a	ıt 9.6 -	9.7 ppg	with b	inte.	maina manadi	es
PLASTIC V			P @		FL ⁰ C		13		14	Xanten	np was use	d to ma	untain	good ho	ie clean	mg and suspe	nsion properti	free logging
VUELD POL)				23						e as po	JSSIDIC I	ow in a	n anompi io e	nsure trouble	
			00ft²) 10 se	c/10 min			11			and cas	sing operati	ions.						
FILTRATE	API	(cc's/30 ı	min)			1	1.2		9.8									
HPHT FILT					⁰ F				1									
CAKE THIC			: HPHT				1.6		4.8									
SOLIDS CO			by Volume)				95.4			Rheolo	ogv: 600:5	8, 300:	44, 20	0:38, 10	0:30, 60	0:26, 30:21, 6	:13, 3:11	
LIQUID CO) OIL/WATER			0.25		0.50	raison	ъ	.,				SUMMARY		
SAND CON				(ppb equiv.)		-	.20		5.0	Drill al	head.							
pH METHYLE	NE BL	UE CAP	ACITI (ррь един.)			8.5		8.8									
ALKALINI	ry MI	JD (Pr	m)															
ALKALINI)		0.05	0.70	0.10	0.80	1								
CHLORIDE						29	9,000	2'	7,000	1								
TOTAL HA			ALCIUM	(mg/L)			440		340									
SULPHITE	(mg/	L)				<u> </u>	140		120									
K+ (mg/L))						7,560	2	5,939	ł								
KCl (% b	y Wt.)						5.1		4.8	ł								
PHPA ppb					YO (DDI (I)		0.45	<u> </u>	0.50	-			SOL	IDS CO	NTRO	L EQUIPM	ENT	
FLUID BUILT &	DECE	VED	MU	D ACCOUNTII Fluid dis		, 	SUM	MARY		1		Туре	Hrs		Conc			Size Hrs
ļ		T	350	Desander		INIT	IAL VOLU	ME	880	Ce	entrifuge			Desand	er		Shaker #1	3 x 110 24
nix (drill water)			330	Desilter		1	***************************************		<u>L</u>	D	egasser	PB		Desilte	r 1	2	Shaker #2	3 x 110 24
11			50	Downhole	112	+ FL	UID RECEI	IVED	400				l					<u> </u>
et Recirc Sump			J. 1. 10	Dumped	40	-FLU	ID LOST		152						¥7	lowflore (n= a)	Outo	ut (Gal/Min.)
er (eg Diesel)	***************************************			Centrifuge		+ FL	UID IN STO	ORAGE		<u> </u>		Ove	rflow (J	ppg)	Unc	lerflow (ppg)	Outp	m. (Out.11111.)
	***************************************						WO: 17:5-		1.000	Desalte		ļ				0		
TOTAL RE			400	TOTAL LOST	152		VOLUME	T	1,128 Cost	Deside	SOLID	SANA	LYSI	s	$\neg \tau$	BIT H	YD. PRESS.	DATA
Product		rice	Start	Received	Used 400	 '	Close 760	s	3,000.00	t^-	32212	1	РРВ	%	Je	Velocity		290
ite	\$	7.50	200	960		+	26	5		High C	Grav solids		50.0		Im	pact force		904
ustic Soda	S	32.00	30		<u>4</u>	+	10	s	250.00	+			11.9		н			265
pamer	\$	125.00	12 480	960	96	+	1344	s	1,684.80				5.0		н	SI		2.2
	S	17.55	107	700	11	+	96	\$	1,320.00	+	d Solids		6.9		Bi	t Press Loss		724
PA (Praestol)	s	120.00 27.50	38	+	10	+	28	s	275.00				5.3		C	SG Seat Frac	Press	833
da Ash Lium Sulphite	\$	39.50	108	1	8	†	100	s	316.00	n@	23.00 Hrs		0.40			uiv. Mud W	t	18.7
temp	s	535.00	65		15		50	s	8,025.00	K @	23.00 Hrs]	3.67			CD		9.75
		,								1_					M	ax Pressure (a) Shoe :	
										 								
						1				1_								
								-		1-	***	TT 37. 7	TOST			CIT	MULATIVE	COST
	<u> </u>					 				+-		AILY C			\dashv		\$54,968.80	
	<u></u>				L	<u></u>	A .1 -1 -1	ide OS	Tico.		21	14,99	0.00		LELEL	HONE		338 7266
IN ENGINE	ER	Andre	Skujins		CITY	[Adela	ide Of			used if the user so	1 4 1						



Report #	8	Date :		12-Dec-2000
Rig No	30	Spud :		5-Dec-2000
Depth	1206	to	1233	Metres

rilling F	Julas		 `			<i>-</i>	_		I	epth	12	06	to	1233	Meti	·es	
PERATOR	Ī	akes Oil					CON	TRACT		DDE							
EPORT FOR		Brent Spe	echlev				REP	ORT FO			'Conne	r					
ELL NAME		Ji Citt Spe	COMO				FIEI	LD	l.	LOCA'			S	TATE			
ACRES I SERVED		Frifon #	1			I	PEP	137		Gipps	land B				ictoria		
ILLING ASSEM		T SIZE		SING		MUD '	VOLU	ME (BBI				CULAT					
IZE TYPE	16		13.375" SURFACE	856	n	HOL		PITS 460		UMP SIZE	Inches		C	IRCULATION PRESS (PSI)		1200	psi
2.25 Varei l	L117 Length		SET @	260.9	M ft	TOTAL CIR	CULATI		PUMP M	ODEL		SUMED EF		BOTTOMS		35	min
L PIPE TYPE 4.5 16.6 #	i -	1051 Mtrs	SET @		M		110 N STOR		GD F		STK	97.0 / MIIN		UP (min) OTAL CIRC.			
L PIPE TYPE	Length	37 Mtrs	PROD. or LNR Set @		ft M	'	N 510K)		0.07	00		220		TIME (min)		74 118	min
L COLLAR SIZE			MUD TYPE						BBL/!			GAL/MIN 627	,	ANN VEL. (ft/min)	DP DCs 138	179	
6.25 8	114	31 Mtrs	K	CI PHPA I		er MUD PRO	DEDT	TEC T	1 19.3	M	LID PRO			CIFICATI	ONS		
						L			Mud Weight	8.5 - 9.		iltrate		< 12	HPHT Filtr	ate	
SAMPLE FE						ir i			Plastic Vis	Min	Yield	Point		15 - 25	pН		8.0 - 8
TIME SAME				Metres					KC1	5%	PHP			0.5 - 1.0	Sulphites		80 - 1
DEPTH (f		· · · · · · · · · · · · · · · · · · ·	- 0	COF			47	,				OBSER'	VATI	ONS			
	TEMPERAT	URL		pg/SG		-	9.70	1.164									
WEIGHT FUNNEL VI	ISCOSITY 6	sec/qt) API (⁰ C				45									
	ISCOSITY (FL OC				13									
	NT (lb/100ft							29									
STREE	NGTHS (lb/1	00ft ²) 10 se	c/10 min				10	0 12									
	API (cc's/30							9.5									
	TRATE (cc's/			⁰ F													
	CKNESS AP		(32nd in)					1									
SOLIDS CO	ONTENT (%	by Volume)						5.3									
LIQUID CO	ONTENT (%	by Volume) OIL/WATER					94.7			OPE	DATIO	IP PM	JMMARY			
	TENT (% b							0.50	TO 11 to 1222 on		OFF	KATIO	110 00	JIVIIVE IIXI			
METHYLE	NE BLUE CA	PACITY (ppb equiv.)					5.0 8.8	Drill to 1233 m. Pump around len	, nill mi	red count	e of dave	ago a	s a precuati	ionary meast	ıre.	
pН							 	0.0	Pump around ich Circulate bottoms		sou coupi	or days	50 4	Present	,		
ALKALINI'		Pm)					0.10	0.90	POH to 743 m.	up.							
	TY FILTRAT	E (Pf/Mf)			L		6,500	RIH to 1211 m.	Wash to	botom. 1	lo fill.					
CHLORIDI		CALCUME	(ma/L)					360	Circulate hole cle								
	RDNESS AS	CALCIUM	(mg/L)					120	Run Electric Log								
SULPHITE K+ (mg/L									RIH with bit.								
K+ (mg/L	·							4.8									
PHPA ppt								0.50									
TILES PPI		MU.	D ACCOUNTI	NG (BBLS))									EQUIPMI Hrs	ENT	Stz	
FLUID BUILT &	RECEIVED		FLUID DIS			SUM	MARY			Туре	Hrs		Cones	Hrs	Ob -1 #**		
mix (drill water)	100	Desander		INIT	IAL VOLU	ME	1128	Centrifuge			sander			Shaker #1 Shaker #2		
recirc fron			Desilter		1				Degasser	РВ	'	Desilter	12	 	Snaker #.	3 X I	10
ll r	***************************************	20	Downhole	98	+ FL	UID RECEI	IVED	120				اـــــا	L	L			
ect Recirc Sump			Dumped	50		ID LOST		148		Over	flow (ppg)	Т	Under	flow (ppg)	Out	put (Gal/	Min.)
er (eg Diesel)			Centrifuge		+ FL	UID IN STO	ORAGE		Desander	Jve	OPPS			0			
•			TOTAL LOST	4.40	RINA.	_ VOLUME		1,101	Desilter			_		0			
TOTAL RE		120		148	┼—		1	Cost		S ANA	LYSIS		Γ	віт н	YD. PRESS	DATA	
Product	Price	Start	Received	Used	+-	Close 680	s	600.00	30211	1	PPB	%	Jet V	elocity			290
ite	\$ 7.50	760	-	80	 	94	\$	240.00	High Grav solids	-+	50.0		├ ──	ct force			913
PA (Praestol)	S 120.00	96		2		74	-	240.00	Total LGS		12.6		ннр				268
<u> </u>		-	-		+		+		Bentonite		5.0		HSI				2.3
	-	 	+		+-		1		Drilled Solids		7.6		Bit P	ress Loss			731
<u> </u>		 			+		+		Salt		5.2		CSG	Seat Frac	Press		833
	 	 	-		+		+		n@ 10.00 Hrs		0.39		Equi	v. Mud Wt			18.7
	 	-	+		+-		+-		K@ 10.00 Hrs		3.72		ECD)			9.85
<u> </u>	<u> </u>	-			+-		+-						Max	Pressure @	Shoe:		
	¥		+		+		+										
· · · · · · · · · · · · · · · · · · ·	+	 	+	-	+		1										
	+	+	 	 	+-		+										
L	-	 		 	+		+		D.	AILY C	OST				IULATIVE		
	 	 			1		1			\$840.	00				\$55,808.8		
		Cl!i		CITA	7	Adelai	ide Of	fice				TEL	EPH	ONE	08	8338 72	66



 Report #
 9
 Date :
 13-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 1233
 to
 1233
 Metres

					.,						Deptil							
ERATOR		La	ıkes Oil						RACTO		ODE							
PORT FOR								REPO	RT FOI		Mick (er					
		Trifon # 1 Y						FIELD			LOCA	TION		!	STATE			
BLL MANIE	יון עוזען		uifα μ	1				PEP 13			Gipps	land I	Basin		Vi	ictoria		_
					CINC		MID	VOLUM			1.5		RCULA'	ΓΙΟΝ	DATA			
LLING ASSEMI	BLY	JET				ft		OLE	PITS		PUMP SIZE				CIRCULATION			
IZE TYPE .25 Varel I	L117	\dashv	+			M		561	440		x 8	Inche	ASSUMED EF	,	PRESS (PSI) BOTTOMS		600	psi
PIPE TYPE	Lakes Oil R Brent Speechley E AND NO Trifon # 1 ABLY JET SIZE CASING LI17					ft M	TOTAL CI	RCULATING 1041	VOL.	PUMP ! GD	MODEL PZ8	'	97.		UP (min)		35	min
4.5 16.6 # L PIPE TYPE			51 Mtrs			M ft	-	IN STORAGE	Ē.	BBL	/STK	ST	K/MIN	12	TOTAL CIRC.		70	
PIPE TYPE 4.5 HW				LNR Set @		M	<u>l</u>	40			700 /MIN		GAL / MIN		ANN VEL.	DP 1	70 118	min
COLLAR SIZE	(") Lengt				COLDITO : 3	Dal					.94		62'		(ft/min)	DC: 138	179	
6.25 8	11	4 3	1 Mtrs	K	CI PHPA I	_		OPERTIES	. 1	14		UD PR			CIFICATIO			
										ud Weight	8.5 - 9		Filtrate		< 12	HPHT Filtrat	e	
SAMPLE FR							FL	FL		astic Vis	Min		d Point		15 - 25	рH	8.	0 - 8.
TIME SAMP	LE TAKI	EN						08.0	·		5%	PHI			0.5 - 1.0	Sulphites	80) - 120
DEPTH (f								1,23	3 1		5.0		OBSER	VATI				
FLOWLINE	TEMPER	ATU	RE					43		ome mud losses	dors L	ole but a	t this stee	e it ie	not worth hi	ilding new vo	olume.	
WEIGHT				p						ome mua losses	s aown n	iore par s	и ппэ эця	, u 13	alor storm on			
FUNNEL VI	SCOSITY	(se	c/qt) API (46										
					FL ⁰ C			14										
								31										
STREN	IGTHS	(lb/100)ft²) 10 sec	c/10 min				11 1	14									
								9.5	5									
					°F			i.										
				(32nd in)				1										
								5.3	,									
								 	94.7									
) OIL/WATER				0.5				OP	ERATIO	NS SI	UMMARY			
				h on \				5.6		ΙΗ		ندائنمان						
	NE BLUE	CAP	ACITY (ppp equiv.)				8.5		ин eam 1211 m -	hattam							
pН								1 0.3										
ALKALINI							т	1 0 0 T		ire and condition	on noie.							
ALKALINI	TY FILTE	RATE	(Pf / Mf))		ļ		0.05		OH.	0.5/0"	. •						
CHLORIDE	(mg/L)							26,5		ig up and run 9	9-5/8" ca	sıng.						
TOTAL HA	RDNESS	AS CA	ALCIUM	(mg/L)				40										
SULPHITE								10	0									
K+ (mg/L)						L		25,9	39									
KCl (% by								4.	8									
PHPA ppb								0.5	50									
-12.1 ppo			MUI	D ACCOUNTI	NG (BBLS)	,									EQUIPME	NT ¬	Ç!	Hr
LUID BUILT &	RECEIVE	D				I	SUM	IMARY			Туре	Hrs		Cones	Hrs		Size	-
				 		INIT	IAL VOLU	JME	1101	Centrifuge		I)esander			Shaker #1	3 x 110	-
nix (drill water)						1		L		Degasser	PB		Desilter	12		Shaker #2	3 x 110	3
ecirc from	sump)		20	-	- Ou	+ 181	UID RECE	IVED [30		+							
l			30	-	70		ID LOST		90					L				
ct Recirc Sump				-			UID IN ST	ORACE			Over	rflow (ppg	9	Under	flow (ppg)	Outpu	t (Gal/Mir	n.)
er (eg Diesel)				Centrifuge		+ FL	OID IN 21	ORAGE	ı	Desander	+				0			
TOTAL D	CD11/PD		20	TOTALLOST	ο.	FINAT	VOLUMI	e [Desilter	+				0			
TOTAL REC	FILLED		30	IOTAL LOSI		Ļ			2,012		DO ARTA	LVOTO			RIT HV	D. PRESS.I)ATA	
Product	Price		Start	Received	Used	1	Close	Co	ost	SOLII	DS ANA		%	Tet 17	elocity	J. 1 11200.1		
ite		\neg	680	960			1640					PPB						
-		$\neg \uparrow$							1	ligh Grav solids		50.0			ct force			
										Total LGS		12.6		HHP				
						Ī				Bentonite		5.0		HSI				
	1		Nil	Used					l l	Orilled Solids		7.6		Bit P	ress Loss			
	 			T		1				Salt		18.0		CSG	Seat Frac P	ress	83	
	ļ			+		+			- 1	n @ 08.00 Hrs		0.39		Equi	v. Mud Wt.		18.	.7
			·	-		+		-		K @ 08.00 Hrs		3.94		ECD			9.8	35
				-		 		+	 	@ 30.03 1113				-	Pressure @	Shoe:		
				_		 		 						1				
	*	\perp		-		 		+										
				_		 												
						<u> </u>						06=			OT D. O.	TI ATIME O	OST	
									1	D.	AILY C	OST		 		JLATIVE C	U01	
						<u> </u>			1					<u> </u>		55,808.80	20 72	
IN ENGINER	ER A	ndre S	kujins		CITY		Adela	ide Office	e				TEL	EPH	ONE	08 83	38 7266	
Literation										may be used if the user s	a alasta bassa		entetion or West	antri				

R M N rilling Fluids

DRILLING FLUID

 Report #
 10
 Date :
 14-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 1233
 to
 1233
 Metres

	ide		R	E	"(JК				Rig N		30 15	puu .				
rilling F	Inina		•							Depth		1233	to	1233	Metre	s	
PERATOR		Lakes Oi	l					ΓRACT		ODE							
EPORT FOR		Brent Sp						ORT FO	R	Mick				TATE			
ELL NAME						- 1	FIEL			LOCA					ictoria		
		Trifon #	1				PEP 1			Gipp		Basin	TION		ICIUITA		
ILLING ASSEMI	BLY J	ET SIZE		ING				ME (BBI)	PUMP SIZ		CIRCULA		DATA IRCULATION			
IZE TYPE			13.375" SURFACE SET @	856 260.9	ft M	HOLI 9		PITS 390	6	X 8		thes		PRESS (PSI)			psi
LPIPE TYPE	Longth	Ll	INT.	200.7	ñ	TOTAL CIRC	CULATIN	G VOL.	PUMP	MODEL PZ8		ASSUMED E		BOTTOMS UP (min)		_10	min
4.5 16.6 #		1051 Mtrs	SET @		M ft	In the	486 N STORAG		ВВ	L/STK		STK / MIN	Т	OTAL CIRC.		79	min
L PIPE TYPE E 4.5 HW	Length	37 Mtrs	LNR Set @		M					0700 L/MIN		GAL / MIN		ANN VEL.	DP	13	muta.
L COLLAR SIZE	(") Length	44	MUD TYPE	CI PHPA I	Polymer	•			1	5.11		25	57	(ft/min)	DCs		
6.25 8	114	31 Mirs	I K	CILLEAD		MUD PRO	PERTII	ES					Y SPE	CIFICATION			
SAMPLE FR	OM				F	L	F	<u> </u>	Mud Weight	8.5 -		PI Filtrate		< 12	HPHT Filtrat		8.0 - 8.5
TIME SAMP							11.	.00	Plastic Vis	Mi		ield Point		15 - 25	Sulphites		8.0 - 8.: 80 - 120
	t) - (m)			Metres			1,2	233	KCI	5%	• P	HPA	3 X 7 A 1974	0.5 - 1.0	Saihunes		ou - 12
FLOWLINE		TURE	0	C PF							all +== 1	OBSEI					
WEIGHT			pp	og/SG			9.60		After cement jo Fill tanks with v	o, aump	au tank Glad fo	om enmo /	hack se	ction now.)			
FUNNEL VI	SCOSITY	(sec/qt) API	@	°C	<u>-</u>				Fill tanks with v Add the followi			տո ծառթ (Juon 30				
PLASTIC V]	FL ⁰ C					Add the following Biocide: 1	-							
Y LD POI	NT (lb/100	ft²)						8	Soda Ash:								
		/100ft ²) 10 s	ec/10 min					3.0	AMC Pac-R								
FILTRATE				 • F				J.V	Xantemp SI								
HPHT FILT			(32nd in)	Г	ļ		2		PHPA: 2								
SOLIDS CO						-		5.0	KC1: 216	sacks							
LIQUID CO			ie) OIL/WATER					95.0	Sodium Sul	phite :							
SAND CON			,				0	.50			9	PERATIO	ONS ST	JMMARY			
METHYLE			(ppb equiv.)						Run 9-5/8" cas	ing.					h.a.l.a		
pH								8.0	Break circulation				ost 160	bbls down	noie.		
ALKALINI	ry mud	(Pm)				l			Circulate hole		on cem	ent trucks.					
ALKALINI'	TY FILTRA	TE (Pf/M	if)				0		Cement casing		Da)De					
CHLORIDE								440	WOC and star	nippling	g up BC	ors.					
TOTAL HA	RDNESS AS	CALCIUM	(mg/L)					440									
SULPHITE	(mg/L)							80 1,318									
K+ (mg/L)								4.5									
KCl (% b).45									
PHPA ppb	· · · · · · · · · · · · · · · · · · ·	M	JD ACCOUNTIN	G (BBLS)		<u></u>					IDS CON		EQUIPME	ENT	Size	н
FLUID BUILT &	RECEIVED	1410	FLUID DIS		T	SUM	MARY			Туре	Hrs		Cones	Hrs	-		$-\vdash$
mix (drill water)		1	Desander		INIT	IAL VOLUI	ME	1041	Centrifuge			Desander	<u> </u>	<u> </u>	Shaker #1	3 x 11	
mix (urni water)	• • • • • • • • • • • • • • • • • • • •		Desilter]				Degasser	PB		Desilter	12		Shaker #2	3 x 11	10 1
<u> </u>	•	70	Downhole	310	+ FLU	JID RECEI	VED	220			لـــــا		<u></u>	l		L	
ect Recirc Sump		150	Dumped			ID LOST		310	4	_~	erflow (nng)	Under	flow (ppg)	Outpu	ıt (Gal/N	(in.)
er (eg Diesel)			Centrifuge		+ FLU	JID IN STO	DRAGE		Desander		willow (PP6/		0			
					PINAT	VOLUME		951	Desilter					0			
TOTAL RE	CEIVED	220	TOTAL LOST	310	 			Cost		IDS AN	ALYS	IS	T	віт н	YD. PRESS.	DATA	
Product	Price	Start	Received	Used		Close 1580	s	450.00	1 501		PPB	96	Jet V	elocity			
ite	\$ 7.5		960	60		101	\$	312.00	High Grav solic	İs	50.0		Impa	ct force			
erseal Fine	\$ 52.0			2	+	53	s	24.00	 		12.5		нн)			
ne	\$ 12.0	55			+		† <u> </u>		Bentonite		5.0		HSI				
					+-		T^{-}		Drilled Solids		7.5			ress Loss			
					+-		1		Salt		18.0		_	Seat Frac			833
<u> </u>	 	 			1				n @ 11.00 Hrs		0.55			v. Mud Wt	<u>t </u>		18.7
									K@ 11.00 Hr:		0.91		ECL		2 01		9.70
!		 											Max	Pressure @	ay Shoe :		
	9																
										D 4 TT 11	COCT			CUR	MULATIVE (COST	
					1-		-			DAILY			+-		\$56,594.80	_	
L							11.00	No.	<u></u>	\$786	.00	тг	LEPH			338 72	66 .
ON ENCINE	ED And	tre Skuiins		CITY	Y	Adelai	ide Off	ice				1 E					



Report #	11	Date :		15-Dec-2000
Rig No	30	Spud :		5-Dec-2000
Depth	1233	to	1233	Metres

din 12	IM.	-									ODE					
ERATOR		La	ikes Oil						RACT		ODE					
PORT FOR			rent Spee	chley					RT FO		Mick O'		er	STATE		
ELL NAME								FIELI	D	1	LOCAT				ictoria	
			rifon # 1	l				PEP 1			Gippsl				KIULIA	
LLING ASSEME	RLV		SIZE	CAS	ING	T			Æ (BBL	<i>a</i>)	PUMP SIZE	CIF	RCULATIO	N DATA CIRCULATION		
ZE TYPE	1			3 3/8 SURFACE	856	ft	но		PITS 550	N .	Y 8	Inches		PRESS (PSI)		psi
50 Varel L				SET @ 5/8 INT.	260.9 4042	M T	TOTAL CE	274 RCULATING		PUMP	MODEL	A.	SSUMED EFF 97.0	BOTTOMS UP (min)		29 min
PIPE TYPE 4.5 16.6 #	1	Longth 9	6 % ↑ Mtrs	SET @	1232	M		IN STORAC			PZ8 /STK	STK	97.0 C/MIN	TOTAL CIRC.		
PIPE TYPE		Length		PROD. or LNR Set @		ft M		IN STORCE	<i>y</i> E	0.0	700		120	TIME (min) ANN VEL.	DP 1	61 min
4.5 HW		Length	83 Mirs	MUD TYPE							/MOIN	1	GAL/MIN 342	(ft/min)	DCs 253	
6.25	,	182	Mirs	KC	CI PHPA F					_18	.15 MT	ID PRO		ECIFICATI	ONS	
					т			OPERTIE		Mud Weight	8.5 - 9.2		Filtrate	6 - 8	HPHT Filtrate	e
SAMPLE FR	ROM					F	L	F		Plastic Vis	Min		l Point	12 - 18	pH	8.0 - 8
TIME SAMP		AKEN								KCI	5%	PHP		0.5 - 1.0	Sulphites	80 - 12
DEPTH (fi					Metres				· '	KCI			OBSERVA	TIONS		
FLOWLINE			RE	0					\Box	All mud mixed a	nd left ou					
WEIGHT				pp	g/SG			ļ		All muu niixeu a Premix is somev	what conce	ntrated :	and will be d	iluted while dr	illing out ceme	nt.
FUNNEL VI	SCO	SITY (se	ec/qt) API @	0	°C					Will displace ho	e to fresh	mud wh	nile drilling o	n shoe.		
PLASTIC V			P @		⁰ C			ļ		Will then have to	build free	sh volun	ne based on	similar recipe.		
y D POI														•		
c stren	NGTH	S (1b/10	0ft²) 10 sec	/10 min			<u> </u>	 	<u> </u>	Use KCl for hea	ivy weight	pш.				
FILTRATE																
HPHT FILT					⁰ F		,	*								
CAKE THIC	CKNE	SS API	: HPHT (32nd in)			<u> </u>	-	L							
SOLIDS CO							,									
LIQUID CO			by Volume)	OIL/WATER			<u></u>	ļ				OPI	FRATIONS	SUMMARY		
SAND CON								-				<u>OP</u> 1	CICALIONS			
METHYLE				ppb equiv.)						Nipple up BOP	s.					
pH										Pressure Test.		TTA 1	נחמ			
ALKALINI'	TY M	UD (Pr	n)							Make up 8-1/2'	bit and B	HA and	KIFI.			
ALKALINI							<u> </u>			Tag cement.						
CHLORIDI																
TOTAL HA	RDN	ESS AS C	ALCIUM	(mg/L)						1						
SULPHITE										1						
K+ (mg/L										4						
KCl (% b)								1						
PHPA ppt												COLUM	S CONTRA	OL EQUIPM	ENT	
PP.			MUI	D ACCOUNTIN)				4		SOLID Br.	Cor Cor		<u> </u>	Size
FLUID BUILT 8	& REC	EIVED		FLUID DIS				MMARY		_	-700		Desander	+	Shaker #1	3 x 110
mix (drill water	r)		550	Desander		INIT	IAL VOL	UME		Centrifuge				12	Shaker #2	3 x 110
m' ecirc from))		Desilter		1				Degasser	PB		Desilter	-		
				Downhole		+ FLU	UID REC	EIVED	550			i_				<u> </u>
ect Recirc Sump				Dumped			ID LOST			4		flow (no	g) II-	derflow (ppg)	Outp	ut (Gal/Min.)
er (eg Diesel)				Centrifuge		+ FLI	UID IN S	TORAGE		L	Over	flow (pp	D 01	0		
\-B						L		r 70		Desander Desilter				0		
TOTAL RE	ECEIVI	ED O	550	TOTAL LOST		FINAL	, VOLUM		550		IDC ANA	LVCIC		BIT F	IYD. PRESS.	DATA
Product	T	Price	Start	Received	Used		Close		Cost		DS ANA			t Velocity		368
	5	161.00	154		8		146	S	1,288.00			PPB				
[C Pac-R	s	140.00	17	1	1		16	s	140.00	High Grav solid	is			npact force		
cide	\$	17.55	1344	1	216		1128	s	3,790.80					HP		
1	5	120.00	94	1	2		92	s	240.00	Bentonite				SI		
PA (Praestol)	5	27.50	28		6		22	S	165.06	Drilled Solids		$-\!\!\!\!+$		it Press Loss	Droce	
la Ash	5	39.50	100	 	4		96	s	158.00	Salt				SG Seat Frac		
iium Sulphite	8	535.00	50		2	—	48	s	1,070.0	0 n@ Hrs				quiv. Mud W	<u>l. </u>	
rtemp		333.00	- 50	-		1				K@ Hrs			1	CD		
	+-		-	+		+-							<u> </u> N	1ax Pressure	@ Shoe:	
	-	· ·				+-										
	+			-		+-		+-								
	-		 	-		-		_								
	+-			+		+-		-		1	DAILY C	OST			MULATIVE	
	\dashv		-			+-		_			\$6,851	.80			\$63,446.60	
					CITT		Ada	laide Of	fice				TELE	PHONE	08 8	8338 7266
IN ENGINE	EER	Andre	Skujins		CIT	Y	Ade	iaiue VI	100				esentation or warrant	Y		_



Report # 12 Date : 16-Dec-2000

Rig No 30 Spud : 5-Dec-2000

OPERATOR Lakes Oil							Depth	1233	to	1268	Metro	es .	_
				CONT	RACI	OR	ODE						4
REPORT FOR Brent Speechley				REPO	RT FC		Mick O'C						4
FELL NAME AND No				FIELI)	i	LOCATIO		i	STATE			1
Trifon # 1			F	PEP 1.	37		Gippslar	d Basin		Vi	ctoria		_
	SING	N	AUD A	VOLUM		ر)		CIRCUL					4
SIZE TYPE 10 12 12 13 3/8 SURFACE	856	ft M	HOL	E 82	PITS 465	1	PUMP SIZE X 8	Inches		CIRCULATION PRESS (PSI)	1	050 p	ai
3.50 Varel L114 SET @ LPIPE TYPE Leagth 9 5/8 INT.	260.9 4042			CULATING		PUMP I	MODEL	ASSUMEI	i	BOTTOMS		10	
IZE 4.5 16.6 # 1003 Mtrs SET @	1232	M ft	F	747 STORAGE	Ē	GD BBL		STK MIN	97.0	UP (min) TOTAL CIRC.		30 -	nda .
E 4.5 HW 83 Mirs LNR Set @		M M				0.0	700 MIN	GAL / N	120	TIME (min) ANN VEL.	DP	92	-
L COLLAR SIZE (") Length MUD TYPE	CI PHPA !	Dalumer					MIN 15		342		DC: 253	101	- [
6.25 182 Mirs K	CI PHPA		D PRO	PERTIE:	s I					CIFICATIO	NS		
- SAMPLE FROM		FL	1	FL		Mud Weight	8.5 - 9.2	API Filtrate		6 - 8	HPHT Filtrat	e	
TIME SAMPLE TAKEN		05.00		08.0	00 1	Plastic Vis	Min	Yield Point		12 - 18	рН	8.0	- 8.5
DEPTH (ft)-(m)	Metres	1,245		1,26	~	KCI	5%	PHPA		0.5 - 1.0	Sulphites	80 -	120
	C PF	33		34.					ERVAT				
WEIGHT P	pg / SG	8.75 1.	.050	8.75		After displacing l					duittina alea	- d - 1 d11	- 1
FUNNEL VISCOSITY (see/qt) API	°C	37				No problems with				ow, so prior to	driming and	au, WIII	
PLASTIC VISCOSITY CP @	FL °C	9		10	 1.	be changing all Will increase yiel				ahead, althou	zh lowish va	lues will he	
LD POINT (lb/100ft ²)		11		10		Will increase viel keep solids and					-· ···································		.
, STRENGTHS (lb/100ft ²) 10 sec/10 min		1 2		1 2					uown.				ŀ
FILTRATE API (cc's/30 min)	⁰ F	8.6		8.5		Dumped and clean KCl used for hear							
HPHT FILTRATE (cc's/30 min) @ - CAKE THICKNESS API: HPHT (32nd in)	F	1	-+			INCI USEU 101 IICZ	, weight bi	·			n.		
SOLIDS CONTENT (% by Volume)		1.1		1.		-							
E LIQUID CONTENT (% by Volume) OIL/WATER			98.9		98.9								
SAND CONTENT (% by Vol.)		Tr		Tı	r			OPERAT	IONS S	UMMARY			
METHYLENE BLUE CAPACITY (ppb equiv.)				2.0	0	Pressure Test.							
pH		9.5		9.	5	Drill out float an	d shoe.						
ALKALINITY MUD (Pm)						Displace hole to	fresh mud v	vhile drilling	on shoo	e.			
ALKALINITY FILTRATE (Pf/Mf)		0.35	1.10	0.30	1.10	Drill new hole to	1238 m.						ı
CHLORIDE (mg/L)		31,00	0	31,0		Conduct FIT (13							
TOTAL HARDNESS AS CALCIUM (mg/L)		100		10		Drill ahead to 12							١
SULPHITE (mg/L)		100		8		Circulate sample							i
K+ (mg/L)		29,18		29,1		Pump pill and P							
KCl (% by WL)		5.4		5. 0.		Make up test too Conduct DST #							
PHPA ppb MUD ACCOUNTIN	C (DDI C	0.20		0	15	Conduct D31 #		LIDS CO	NTROL	EQUIPMEN	NT.		
FLUID BUILT & RECEIVED FLUID DIS		'i 	SUMN	AARY			Type Hrs	7	Cones	Hrs	1	Size	Hrs
		INITIAL	VOLUN	ИE	550	Centrifuge		Desander	r		Shaker #1	3 x 110	7
mix (drill water) 260 Desander Prer recirc from sump) Desilter						Degasser	РВ	Desilter	12		Shaker #2	3 x 110	7
Drill er Downhole	23	+ FLUID	RECEI	VED	260						<u> </u>		
ect Recirc Sump Dumped	40	-FLUID L	OST		63								
ier (eg Diesel) Centrffuge		+ FLUID	IN STO	RAGE			Overflow	(ppg)	Under	rflow (ppg)	Outpu	nt (Gal/Min.)	
						Desander	-			0	 		
TOTAL RECEIVED 260 TOTAL LOST	63	FINAL VO			747	Desilter	36.43275	916			D. PRESS.	DATA	
Product Price Start Received	Used	Clos			cat on	SOLII	OS ANALY:		lot V	Velocity	D. FRESS.I	368	
-IC Pac-R S 161.00 146	4	142		S	644.00 280.00	High Grav solids		+		act force		571	
Biocide \$ 140.00 16	2	14		 		Total LGS	2.8	+	НН			213	
S 17.55 1128	249	879		S	4,369.95 82.50	Bentonite	2.0		HSI			3.7	
ta Ash S 27.50 22	2	94		S	79.00	Drilled Solids	0.8			Press Loss		1065	;
Sodium Sulphite S 39.50 96	2	46			1,070.00	 	20.0			Seat Frac P	ress	2800)
Y e = 22.00 40		1 70		-	.,	n @ 08.00 Hrs	0.50		Equ	iv. Mud Wt.		13.3	3
\antemp \ \\$ 535.00 \ 48		+				K @ 08.00 Hrs	0.5	2	ECI)		8.90)
Yantemp \$ 535.00 48				 		1			Max	-	~-		•
Yantemp \$ 535.00 48				1		<u>i</u>			IVIA	Pressure @	Shoe :	956	
Yantemp \$ 535.00 48									IVIA)	Pressure (a)	Shoe :	956	
\(\text{\text{Antemp}}\) \(\text{S} \) 535.00 \(\text{48}\)									Ivias	(Pressure (a)	Shoe :	956	
Yantemp \$ 535.00 48]///				
\(\text{\text{antemp}}\) \(\text{\text{\$\sigma}}\) \(\text{\$\sig							AILY COS		Į.vias	CUMI	JLATIVE (COST	
Yantemp \$ 535.00 48	CIT			de Offic			aily cos 86,525.45		ELEPH	CUMU \$6	JLATIVE (5 9,972.0 5	COST	

R M N Prilling Fluids

DRILLING FLUID REPORT '

 Report #
 13
 Date :
 17-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 1268
 to
 1338
 Metres

Albina 1											Deptn	12	.00		1336	Metre		
PERATOR		L	akes Oil					CONT	RACT	OR	ODE							
REPORT FOR			rent Spe			.,		REPO	RT FC		Mick O		r					
ELL NAME				•				FIEL	D		LOCAT	ION		ST	ATE			
			rifon #	1				PEP 1	37		Gippsl	and B	asin		V	ictoria		
RILLING ASSEMI	RLY		SIZE		SING		MUD	VOLUN	1E (BBI			CIF	CULAT					
SIZE TYPE			12 12	13 3/8 SURFACE	856	ft	нон	LE	PITS		PUMP SIZE	inches		1	TULATION RESS (PSI)	1	300	pei
1.50 Varel L	114	Longth		SET @ 9 5/8 INT.	260.9 4042	M ft		297 RCULATING	450 VOL.	PUMP I	X 8 MODEL		SUMED EF	F B	OTTOMS	1		
L PIPE TYPE ZE 4.5 16.6 #		1	973 Mus	9 5/8 INT. SET @	1232	м		747		GD	PZ8	CTL	97.0		UP (min) AL CIRC.		31	
ILL PIPE TYPE		Longth	83 Mtrs	PROD. or LNR Set @		ft M	1	IN STORAG	E.	BBL 0.0	700		120	Т	IME (min)		92	-
L COLLAR SIZE (Length	o) MIN	MUD TYPE						BBL	MIN		GAL / MIN	1	NN VEL.	1	161	
6.25		182	Mitra	k	CI PHPA					8.		D DDC	342 PERTY		(fv=)	DCs 253		
							MUD PRO			Mud Weight	8.5 - 9.2		PERTY	SPECI.	6-8	HPHT Filtrat	e	+
SAMPLE FR							Pit	Pi		Plastic Vis	Min	Yield			12 - 18	рН		8.0 - 8.5
TIME SAMP							3.00	20.0	-	KCI	5%	PHP			0.5 - 1.0	Sulphites		80 - 120
DEPTH (A					Metres		295	1,3.	²⁰ 1				OBSER			. 1		
FLOWLINE		PERAIL	KT	The second second	C F	36 8.90	1.068	8.90	1.068	increase yield po	int and lov				_			1
			-/		pg / SG ⁰ C		38			Cleaned out inlet								
FUNNEL VI				<u>a</u> .	°C		8	10		Upgraded 4 shak						two screens if	flow	
PLASTIC VI			- (<u>a)</u>				11	13		permits.			•					1
YIELD POIN			on²) 10 se	c/10 mir			1 2	1		KCl and then bar	rite used fo	or heavy	weight p	oills.				1
FILTRATE				C/ IV MIII			9.5	8.					J .					
HPHT FILT					°F			, , , , , , , , , , , , , , , , , , ,										İ
CAKE THIC				(32nd in)			ı	1										
2							1.4	1.										Ì
LIQUID CO							98.6		98.5	Rheology: 600:2	27, 300:19	. 200:1:	5.5, 100:1	1, 60:9,	30:6, 6:3	3, 3:2.		
						Tr	Т	r			OPE	RATIO!	NS SUM	<u>IMARY</u>				
	CONTENT (% by Volume) CONTENT (% by Volume) OIL/WATER ONTENT (% by Vol.) LENE BLUE CAPACITY (ppb equiv.)							2.	.5	Conduct DST #	1.							İ
pH							9.5	9.	.5	Drop bar and rev	verse circu	late.						
ALKALINIT	ΥM	UD (Pr	n)							Pump pill and P								
ALKALINI1	Y F	LTRATE	(Pf/Mf)		0.30		0.30		Lay down test to								
CHLORIDE	(m	g/L)					2,500	41,		Make up bit and								- 1
TOTAL HAI	RDN	ESS AS C	ALCIUM	(mg/L)		ļ	140	+	10	Wash & ream 1				1211	40 1	ur OP\		
SULPHITE	(mį	g/L)				-	80	+		Drill ahead to 13			t hole at 1	1311 m -	40 K ma	ix OP)		
K+ (mg/L)							1,070	38,		Pump pill and P	OH bit ch	inge.						
KCl (% by	Wt.)					7.6	+	.2									
PHPA ppb				D A COCK TOTAL	io (PPI c		0.15	0.	4 0			OLID	CONT	ROL FO	DUIPME	ENT		
DI IIID DITT T	DEC.	en/en	MU	D ACCOUNTII FLUID DIS		' —	SIIM	MARY				m]	_	Comes	Hrs	ا آ	Size	Hrs
FLUID BUILT &	RECI	TIVED	100		. OSED	INIT	IAL VOLU		747	Centrifuge	+	D	sander	-+		Shaker #1	3 x 11	0 8
mix (drill water)			100	Desilter	11	1.711	.AL 1010		L.,-,	Degasser	PB		ester	12	5	Shaker #2	3 x 11	
recirc from	sump	·		Desilter Downhole	34	+ 61.	UID RECE	IVED	100		++							
ril, r				Dumped	40	4	ID LOST		100					-				
ect Recirc Sump er (eg Diesel)				Shakers	15		UID IN ST	ORAGE			Overf	ow (ppg)		Underflov	v (ppg)	Outpu	ıt (Gal/M	in.)
er (cg Dreser)		-				1				Desander				0				
TOTAL REC	EIVE	D	100	TOTAL LOST	100	FINAL	VOLUME	!	747	Desilter		B.9		9.9			1.50	
Product		Price	Start	Received	Used		Close	C	ost	SOLII	S ANAL	YSIS			BIT H	YD. PRESS.I		
C Pac-R	s	161.00	142		5	T	137	S	805.00		I	PB	%	Jet Velo	city		3	68
Barite	<u> </u>	7.50	1580		35		1545	s	262.50	High Grav solids				Impact	force			81
:Cl	s	17.55	879		63		816	s	1,105.65	Total LGS).3		ннр				16
PA (Praestol)	s	120.00	92		2		90	S	240.00	Bentonite		2.5		HSI				3.8
Jium Sulphite	s	39.50	94	1	4		90	. S	158.00	Drilled Solids		1.2		Bit Pres				084
										Salt			2.5		at Frac			800
										n @ 20.00 Hrs		.52		<u> </u>	Mud Wt			3.3
										K@ 20.00 Hrs	(.90		ECD		> 61	9	0.15
				• • • • • • • • • • • • • • • • • • • •		1		-						Max Pr	essure (ā	Shoe:		
						-		_		 								
						<u> </u>		 		 								
						_				<u></u>	AHVO	CT		T	CITA	TULATIVE C	TOST	
						 		-			AILY CO			 		72,543.20		
					L	<u>. </u>		14.0=		<u> </u>	52,571.	13	TEI	EPHON			338 726	6
IN ENCINEE	D	Andre	Skuiins		CITY	ř.	Adela	ide Offic	e				166	LITTO	نوا	VO 04		

								31	UOC	<u>, </u>	120								
\mathcal{R}	M	N		DI	RIL	LI	1	3 1	FL	U	İD	Report	#_	14	Date		18-De	ec-2000	
'rillir					F	REI	P(DR	RT		•	Rig No		30	Spud		5-De	c-2000	
, etti	ואַ ד	'lu	u							4.		Depth	133	38	to	1635	Metro	es	
PERA	TOR]	Lakes Oil					CON	FRAC	FOR	ODE							
REPOR	RT FOR	₹]	Brent Spe	echley				REPO	ORT F	OR)'Conno	r					
ELL!	NAME	ANI) No						FIEL	D		LOCA			1	STATE			
			•	Trifon #	1				PEP 1	137		Gipps	land Ba	sin		V	ictoria		
RILLING	ASSEM	BLY	JE	T SIZE -	CA	SING		MUD	VOLU	ME (BB	L)			CULA		DATA			
SIZE	TYPE		10	12 12 1	3 3/8 SURFACE SET @	856 260.9	ft M	но	360	PITS 490		PUMP SIZE	Inches		1	PRESS (PSI)	1	050	psi
L PIPE	Varel 1 TYPE		Length		5/8 INT.	4042	ñ	TOTAL CI	RCULATIN	G VOL.	l l	P MODEL	ASS	UMED F		BOTTOMS UP (min)		39	min
ZE 4.5 ILL PIPE	16.6 # TYPE		Length	1370 Mtrs	SET @	1232	M ft	 	IN STORA			D P Z8 IL/STK	STK/			TOTAL CIRC.			
ZE 4.5	НА	v		83 Mtrs	LNR Set @		М	<u> </u>				.0700 L/MIN		AL / MID		ANN VEL.	DP	104 161	min
	AR SIZE	(")	Length 182	Mars	MUD TYPE	CI PHPA	Polvme	er .				8.15			12	(ft/min)	DC: 253		
6.25	1		102			terrin A	0,,	MUD PR	OPERTI	ES		М	UD PROI	PERT	Y SPE	CIFICATIO	ONS		
SAM	PLE FR	OM]	Pit	P	it	Mud Weight	8.5 - 9	2 API FI	itrate		6 - 8	HPHT Filtra	te 	
	E SAMP		AKEN				10	0.00	23	.00	Plastic Vis	Min	Yield I	oint		12 - 18	pH		- 8
	TH (f					Metres O C	1,	420	<u> </u>		KCI -	5%	PHPA			0.5 - 1.0	Sulphites	80	- 13
FLO	OWLINE TEMPERATURE 0 IGHT PP						38		41		And the second s		_	DBSEI	RVAT	IONS	Villa		
« WEI	GHT				. 1	pg/SG	9.20	1.104	9.30		Maintaining vol Bringing PHPA			-00	4 m	lan diamamian	of drilled so	lide le ale	^
FUN	NEL VI	scos	ITY (sec/qt) API 🗿	<u> </u>	°C		40	 		aiding in mair							uus. Is ais	,
	STIC VI			P @		°C		12		9	Mud weight cre							nore costly	·
- mai	LD POI							14	 	2	dump and dil							•	
				00ft ²) 10 sec	/10 min			7.4	+	.2	dump and du	ute regime	. Ali silake	45 HOV	Vilave	CACIGSIVOIS I	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	TRATE			30 min) @		⁰ F		7.4	· · · · ·										
	E THIC			I:HPHT (32nd in)			ı	1										
· ——	IDS CO			by Volume)	,			3.8	4	.6									
	UID CO				OIL/WATER			96.2		95.4	Rheology: 600	:38, 300:2	6, 200:21,	100:1	7, 60:1	2, 30:8, 6:3,	3:2		
SAN	D CON	TENT	(% b	y Vol.)				Tr	7	r			OPE	RATIO	ONS S	UMMARY			
- MET	THYLE	NE BI	UE CA	PACITY (J	opb equiv.)			5.0	+	'.5	POH Bit chang	ge							
pН								9.0	8	1.5	Make up new b		I.						
	(ALINI			m)			0.45	1 0 00	0.10	0.02	Wash 20 m to			22 1					
				E (Pf/Mf)			0.15		0.10	0.85 ,500	Drill ahead. (Ti	ignt conne	cuon at 14	22 m.)	,				
	ORIDE			DAT CHIRA	(T)			9,000 160		.00									
	PHITE			CALCIUM	(mg/L)			120		40									
	(mg/L)		, L)				 	7,288		,126									
ţ	(% by							6.9	 	5.5	1								
	A ppb							0.30	0	.40									
				MUD	ACCOUNTI	NG (BBLS								CON	Cones	EQUIPME	NT	Stae	Ti
_FLUID I	BUILT &	RECE	IVED		FLUID DI	SPOSED			IMARY			Туре	Hrs		Comes		6h alaa #1		+-
mix (dr	rill water)			280	Desander		INIT	IAL VOLU	JME	747	Centrifuge			ander	12	20	Shaker #1 Shaker #2	3 x 175	+
·III·	ecirc from	sump)			Desilter	43	·				Degasser	PB		siter	12	20	SHAREI #2		+
7 الله 1 الله					Downhole	19		UID RECE	IVED	177	ļ				1	J		1	
ect Recir					Dumped Shakers	80 35	4	UID IN ST	ORAGE	1	1	Over	Now (ppg)	T	Under	flow (ppg)	Outpu	ıt (Gal/Min	.)
er (eg D		•					1				Desander			T		0			
TO	OTAL REC	EIVEL)	280	TOTAL LOST	177	FINAL	VOLUME	Z	850	Desitter		9.3			11.5		1.50	
Predi	uct	F	rice	Start	Received	Used		Close		Cost	SOL	DS ANA					D. PRESS.		
IC Pac-R	R	s	161.00	137		2		135	S	322.00	ļ		PPB '	*	+	elocity		368	
iocide		s	140.00	14		2		12	s	280.00	High Grav solid				<u> </u>	ct force		226	
-foamer		S	125.00	10		2	 	8	S	250.00	Total LGS		11.3		HHE			4.0	
PA (Pra	estol)	S	120.00	90		7	<u> </u>	83	S	840.00	Bentonite		7.5		HSI	Denna 7		113	
ium Sul	n Sulphite S 39.50 90 6					6	ļ	84	S	237.00			3.8	<u> </u>	-	Press Loss	Proce	280	
	suiphite						₩		+		Salt			6.5	+	Seat Frac I v. Mud Wt.	1622	13	
											n@ 23.00 Hrs		0.54		rqu	v. Mud WL		13	<u>-</u>

Adelaide Office

CITY

IN ENGINEER

Andre Skujins

DAILY COST

\$1,929.00

Max Pressure @ Shoe :

TELEPHONE

CUMULATIVE COST

\$74,472.20

08 8338 7266

rilling Fluids

RMN DRILLING FLUID **REPORT**

Report #	15	Date :		19-Dec-2000
Rig No	30	Spud :		5-Dec-2000
Denth	1635	to	1871	Metres

MED ATAD		T	akes Oi				T	CON	TRACT	OR _	ODE							I
PERATOR -							+		ORT FO		Mick (O'Conn	or					
EPORT FOR			Brent Spe	ecmey				FIEL				TION		5	STATE			\neg
ELL NAME	ANI			. 1						1		sland I	Basin			ictoria		1
			rifon #					PEP			~thb;		RCULA	LION				
RILLING ASSEMI	BLY		SIZE		SING		MUD		ME (BBI		PUMP SIZ		ULA		TRCULATION			
SIZE TYPE	,114	10	12 12	13 3/8 SURFACE SET @	856 260.9	ft M	4	110	520	6	х 8	Inches			PRESS (PSI)		1550	psi
L PIPE TYPE		Length		9 5/8 INT.	4042	ft	TOTAL CIR	CULATI	NG VOL.		MODEL P78		ASSUMED EF		BOTTOMS UP (min)		44	min
ZE 4.5 16.6 #		Length	1606 Murs	SET a	1232	M	 	930 N STORA		GD BBL	PZ8 /STK	ST	K MIN	Т	OTAL CIRC.			
ILL PIPE TYPE T 4.5 HW	.		83 Mtrs	LNR Set (g)		M M	<u></u>				700		GAL MIN		TIME (min)	DP	114 161	min
L COLLAR SIZE		Length		MUD TYPE	GI DI S						/MIN .15		GAL MIN	- 1	ANN VEL. (ft/min)	DCs 253	101	
6.25		182	Mirs	l K	CI PHPA I	olyme		DEDT	re I			(IID PP			CIFICATION			
					T		MUD PRO			Mud Weight	8.5 - 9		Filtrate	~	6-8	HPHT Filtra	ite	
SAMPLE FR							Pit		`` I.	Plastic Vis	Mir		d Point		12 - 18	рН	8.0	0 - 8.5
TIME SAMP							7.40		7.50	KCI	5%				0.5 - 1.0	Sulphites		- 120
DEPTH (N					Metres		740		865				OBSER	VATI		<u> </u>		
FLOWLINE			TRE		C %F	42	1 122	42	1122	Attempting to ke	en mud	weight at				r working we	and S17	75
WEIGHT					pg SG	9.35	1.122	9.35		screens being	tilted for	rward co	nsiderably	, weigh	nt continues	to increase.	However.	mud
FUNNEL VI		<u>`</u>	ec/qt) API	<u>@</u> :	°C		36		38	costs are reason								
PLASTIC VI			P @		⁰ С		11		11	Although KCl co						gh dilution ar	nd not due	to
_ LD POL							9			_		wii nas t	oppou. u					
			00π²) 10 se	ec/10 min			1 2		3	depletion of l	N+.							
FILTRATE .							7.8		8.4									
- HPHT FILT					⁰ F													
CAKE THIC	KNE	SS AP	: HPHT	(32nd in)			1		• •									
SOLIDS CO	NTE						5.3		5.6	n	33 300		17 100.12	20.0	20.6 6.2	3.7		
LIQUID CO	NTE	NT (%	by Volume	e) OIL/WATER			94.7			Rheology: 600:	33, 300:					5.2.		
SAND CON							Tr		Tr			<u>OP</u>	<u>eka 110</u>	113 31	MMARY			
- METHYLE	VE BI	LUE CAI	PACITY	(ppb equiv.)			8.0			Drill ahead.			401			760 m /45 1.	may over	null\
pН							9.0		8.5	Work tight conn	ections	at 1741 n	n (40 k ma	ax ove	r pull) and 1	/69 m (45 K	max over	pun)
ALKALINIT	ry M	UD (P	m)														•	
ALKALINI	ry fi	LTRATI	E (Pf/M	Ŋ		0.15	0.90	0.05	<u> </u>									
CHLORIDE	(m	g/L)				3	2,000		7,000									
TOTAL HA	RDNI	ESS AS C	CALCIUM	(mg/L)	,		480	 	380									
SULPHITE	(mg	;/L)					120		120									
K+ (mg/L)						3	0,262	2:	5,399									
KCl (% by	y Wt.))					5.6		4.7									
E PHPA ppb							0.50		0.55					m ==	EOLUE: -	NT.		
			MU	D ACCOUNTI	NG (BBLS)						-			ROL	EQUIPME Hrs	NT T	Size	Hir
-FLUID BUILT &	RECE	IVED		FLUID DIS	SPOSED		SUM	MARY			Туре	Hrs			nn	 	ļ	_
mix (drill water)			400	Desander		INI	IAL VOLU	ME	850	Centrifuge			Desander	ļ		Shaker #1	3 x 175	
rer recirc from	sump))		Desilter	82					Degasser	PB		Desilter	12	24	Shaker #2	3 x 175	24
riller				Downhole	3	+ FL	UID RECEI	IVED	400					L	L		1	
ect Recirc Sump				Dumped	200	-FLU	ID LOST		320									
er (eg Diesel)				Shakers	35	+ FL	UID IN STO	DRAGE			Ove	erflow (pp	g)	Under	llow (ppg)	Outp	ut (Gal/Mir	n.)
										Desander					0		2.40	
TOTAL REC	CEIVE	0	400	TOTAL LOST	320	FINAL	L VOLUME	.,	930	Desilter		9.4		,	12.2			
Product	1	Price	Start	Received	Used		Close		Cost	SOLI	DS ANA	ALYSIS		<u> </u>		D. PRESS.		
cide	s	140.00	12		1		11	s	140.00			PPB	**	Jet V	elocity		36	
austic Soda	s	32.00	26		2	1	24	s	64.00	High Grav solids				Impa	ct force		61	
PA (Praestol)	s	120.00	83		11	1	72	s	1,320.00	Total LGS		19.0		ННР			22	
	s	27.50	19	1	6	1	13	S	165.00	Bentonite		7.0		HSI			4.	
ia Ash	s	39.50	84		5	1	79	S	197.50	Drilled Solids		12.0		Bit P	ress Loss		11.	38
odium Sulphite	- -					1		T		Salt		18.0	5.0	CSG	Seat Frac I	Press	280	00
				1		1				n @ 23.30 Hrs		0.58		Equi	v. Mud Wt.		13	.3
	-			 				1		K @ 23.30 Hrs		0.57		ECD			9.5	55
				+		1		1		1				Max	Pressure @	Shoe:		
					 	 		†										
	-		 	-	<u> </u>	+		1		1								
	-			+		+		+		1								
	+		 			†		1	 	D	AILY O	COST		1	CUM	ULATIVE (COST	
	 		 		 	+		\top			\$1,886	5.50			S	76,358.70)	
AN ENGINE	I FD	Andro	Skujins		CITY	, -	Adela	ide Off	fice				TEL	EPH	ONE	08 8	3338 7266	
VIN ENGINE	Ŀĸ	Andre	экијив	A minim 4						nd may be used if the user	so elects, how	vever, no repre	seniation or war	Tanly				

	\mathcal{R}	M	N)
ોri	llir	ng T	Jui	ds

DRILLING FLUID REPORT

Report #	16	Date :		20-Dec-2000
Rig No	30	Spud:		5-Dec-2000
Depth	1871	to	2060	Metres

willing T	wids		ŀ	(E)	PO	K			μ	Rig N	<u> </u>	30 8	pud :		2-Dec	2-2000
rilling F	Mina]	Depth	1	871	to	2060	Metre	es
OPERATOR	-]	Lakes Oil					CONT			ODE					<u>`</u>	
REPORT FOR		Brent Spe	echley				REPO				O'Conn	or	- 12	TO A TOP		
ELL NAME	AND No						FIELI		i i		ATION		15	STATE	• . 4 • .	
	,	Trifon #	1]1	PEP 1	37		Gipp	sland I				ictoria	
DRILLING ASSEMB	LY JI	ET SIZE		SING			VOLUN			PUMP SE		RCULA		DATA IRCULATION		
SIZE TYPE	10	12 12	13 3/8 SURFACE SET @	856 260.9	ft M	HOL	E 150	PITS 470	4	ими su Х 8				PRESS (PSI)	1	8(10 psi
L PIPE TYPE	Longth		9 5/8 INT.	4042	n TO		CULATING		PUMP N		· ·	ASSUMED EI 97.		BOTTOMS UP (min)		49 min
RILL PIPE TYPE	Length	1795 Murs	SET @	1232	M ft		920 N STORAG	E	GD BBL		ST	K / MIN		OTAL CIRC.		
THE HW	1 -	83 Mtrs	LNR Set @		М				0.07 BBL			GAL MIN		ANN VEL.	DP	113 min 161
L COLLAR SIZE (Mirs	MUD TYPE	CI PHPA	Polymer				8.1			34	- 1	(ft/min)	DCs 253	
6.25	182	MILY	1	CIFILIA		D PRO	PERTIE	s			IUD PR	OPERTY	SPE	CIFICATION	ONS	
SAMPLE FRO	OM				Pit		Pi		Mud Weight	8.5 -	9.2 API	Filtrate		6 - 8	HPHT Filtrat	e
TIME SAMP					13.30		24.6	90	Plastic Vis	Mi	n Yiel	d Point		12 - 18	pH	8.0 - 8.
DEPTH - (ft)				Metres	1,960		2,00	60	KCI	5%	PHF	°A		0.5 - 1.0	Sulphites	80 - 12
FLOWLINE		URE		°C PF	45		47		2 3 7 3 4 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			OBSER				
			ī	pg/SG	9.45 1	134	9.30		Extremely dispers						ght increases.	
FUNNEL VIS	SCOSITY (sec/qt) API	<u>a</u>	°C	38		36	5	Consequently, re-				ing and	d dilution.		
PLASTIC VI	SCOSITY	cP @		°C	11		10		Allowing K+ to d	lrop (d	ie to dilut	ion)			Lilliand at 0.2	0.2 nna
LLD POIN					10		8		Regaining contro						omscu at 9.2	- 7.3 PINE
STREN	GTHS (lb/1	00ft ²) 10 se	c/10 min		1 2		1		AMC Pac-R lo							
FILTRATE A	API (cc's/30	min)			9		8.	5	As a consequence	e of the	dilution,	mud cost	s nave	increased a	corumgiy.	
HPHT FILTE				*F												
CAKE THIC					1		1									
SOLIDS CO		by Volume			6.6	93.4	5.	94.3								
LIQUID CO			OIL/WATER		Tr	93.4	Т				OP	ERATIO	NS SI	MMARY		
SAND CONT			ppb equiv.)		7.5		6.		Drill ahead.		222					
₩ETHYLEN	E BLUE CA	PACITI	ppo equiv.)		8.5		8.		Work tight conne	ections	at 1881 n	n. 1890 m	. 1909	m., 1947 m	(40 k max ov	er pull)
pH ALKALINIT	N' MOTO				0.0				and 1960 m (45							•
ALKALINIT)		0.05	0.70	0	0.65			•					
CHLORIDE		E (III)	<u>/</u>		23,00		19,	500								
TOTAL HAR		CALCIUM	(mg/L)		400		38	30								
SULPHITE		CALCIUM.	(11.6)		100		12	20								
K+ (mg/L)	(8/				21,61	6	18,	374								
KCl (% by	Wt.)				4.0		3.	.4								
PHPA ppb					0.60		0.	50								
		MU	D ACCOUNTI)					Toma	SOLID		ROL Cones	EQUIPME Hr	NT T	Size H
FLUID BUILT &	RECEIVED		FLUID DI	SPOSED	ļ	SUM	MARY			Туре					Shaker #1	3 x 175 2
mix (drill water)		400	Desander		INITIAL	VOLUI	ME	930	Centrifuge	-		Desander	12	24	Shaker #2	3 x 175 2
Yer recirc from	sump)		Desilter	62	-				Degasser	PB		Desilter	12	24	Glianei #2	222
Drift . "er			Downhole	13	+ FLUID		VED	550	<u> </u>	ــــــــــــــــــــــــــــــــــــــ			l	l		<u> </u>
ect Recirc Sump		150	Dumped	450	-FLUID I		ND A CE	560	1	Ov	erflow (ppg	2)	Underf	low (ppg)	Outpu	ıt (Gal/Min.)
er (eg Diesel)			Shakers	35	+ FLUID	INSIC	KAGE	L	Desander	+-				0		
TOTAL REC	FIVED	550	TOTAL LOST	560	FINAL VO	LUME		920	Desilter	+	9.4	_	1	3.4		1.80
Product	Price	Start	Received	Used	Clos	•	C	est	SOLIE	S AN.	ALYSIS			BIT H	D. PRESS.I	DATA
	\$ 161.00	135	 	14	121		S	2,254.00			PPB	*•	Jet V	elocity		368
	\$ 140.00	11		1	10		S	140.00	High Grav solids				Impa	ct force		607
TC I AC-IX		24	1	2	22		s	64.00	Total LGS		18.5		ннр			226
Biocide	\$ 32.00				66		s	720.00	Bentonite		6.5		HSI			4.0
Biocide ristic Soda	S 32.00 S 120.00	72	ŀ	6	1			55.00	Drilled Solids		10.0		Bit P	ress Loss		1132
Biocide rstic Soda PA (Praestol)		 		2	11		S	2.2.100	Di lieu Sonus					1033 17033		
Biocide 'nstic Soda PA (Praestol) Doua Ash	S 120.00	72			+		S	237.00	 		12.0	3.4	4	Seat Frac I	ress	2800
Biocide 'nstic Soda PA (Praestol) Duŭa Ash	\$ 120.00 \$ 27.50	72 13		2	11		+		 		12.0 0.64	3.4	Equi	Seat Frac I v. Mud Wt.	Press	13.3
Biocide 'nstic Soda PA (Praestol) Duita Ash	\$ 120.00 \$ 27.50	72 13		2	11		+		Salt			3.4	Equiv ECD	Seat Frac I v. Mud Wt.		
Biocide 'nstic Soda PA (Praestol) Duita Ash	\$ 120.00 \$ 27.50	72 13		2	11		+		Salt n @ 24.00 Hrs		0.64	3.4	Equiv ECD	Seat Frac I v. Mud Wt.		13.3
Biocide 'nstic Soda PA (Praestol) Duita Ash	\$ 120.00 \$ 27.50	72 13		2	11		+		Salt n @ 24.00 Hrs		0.64	3.4	Equiv ECD	Seat Frac I v. Mud Wt.		13.3
Biocide Tatic Soda PA (Praestol) Doug Ash	\$ 120.00 \$ 27.50	72 13		2	11		+		Salt n @ 24.00 Hrs		0.64	3.4	Equiv ECD	Seat Frac I v. Mud Wt.		13.3
Biocide Tatic Soda PA (Praestol) Doug Ash	\$ 120.00 \$ 27.50	72 13		2	11		+		Salt n @ 24.00 Hrs K @ 24.00 Hrs	ATI	0.64	3.4	Equiv ECD	Seat Frac I v. Mud Wt. Pressure @	Shoe:	13.3 9.50
Biocide rstic Soda PA (Praestol) roua Ash	\$ 120.00 \$ 27.50	72 13		2	11		+		Salt n @ 24.00 Hrs K @ 24.00 Hrs	AILY 63,470	0.64 0.34	3.4	Equiv ECD	Seat Frac I v. Mud Wt. Pressure @		13.3 9.50

rilling Fluids

DRILLING FLUID REPORT

Report #	17	Date :		21-Dec-2000
Rig No	30	Spud :		5-Dec-2000
			24.52	1//

Metres Depth 2060 to 2152 ODE CONTRACTOR Lakes Oil OPERATOR Mick O'Connor REPORT FOR REPORT FOR **Brent Speechley** STATE LOCATION FIELD ELL NAME AND No Gippsland Basin Victoria **PEP 137** Trifon # 1 CIRCULATION DATA MUD VOLUME (BBL) CASING JET SIZE PRILLING ASSEMBLY PLIMP SIZE CIRCULATION 13 3/8 SURFACE 12 SIZE TYPE 10 12 PRESS (PSI) 1800 470 SET @ 260.9 Varel L114 ₹.50 ASSUMED EFF OTAL CIRCULATING VOL. PUMP MODEL INT. 4042 TYPE UP (min) GD PZ8 97.0 900 IN STORAGE 1232 1887 Mus STK MIN TOTAL CIRC PROD. or RILL PIPE TYPE 110 TIME (min) 0.0700 120 LNR Set & м HW GAL DΡ 161 MUD TYPE L COLLAR SIZE (342 8.15 KCI PHPA Polymer 182 6.25 MUD PROPERTY SPECIFICATIONS MUD PROPERTIES HPHT Filtrate Mud Weight 85.92 API Filtrate 6 - 8 Pit Pit SAMPLE FROM Yield Point pН 8.0 - 8.5 Plastic Vis Min 12 - 18 19.30 TIME SAMPLE TAKEN Sulphites 80 - 120 PHPA 5% KCI 0.5 - 1.02.152 Metre **DEPTH** (ft) - (m) OBSERVATIONS 45 ℀ FLOWLINE TEMPERATURE °C Maintained mud weight at 9.3 ppg with dilution. 9.40 1.128 ppg/SG WEIGHT AMC Pac-R added for maintaining fluid loss at 8 cc's or below, and yield point above 12. °C FUNNEL VISCOSITY (sec/qt) API @ 0 C 14 PLASTIC VISCOSITY 12 LD POINT (lb/100ft²) 1 3 STRENGTHS (lb/100ft²) 10 sec/10 min 8.0 FILTRATE API (cc's/30 min) HPHT FILTRATE (cc's/30 min) @ 1 CAKE THICKNESS API : HPHT (32nd in) 6.5 SOLIDS CONTENT (% by Volume) 93.5 LIQUID CONTENT (% by Volume) OIL/WATER OPERATIONS SUMMARY Tr SAND CONTENT (% by Vol.) Drill to 2152 m. 6.0 METHYLENE BLUE CAPACITY (ppb equiv.) 8.5 Circulate bottoms up. pН Wiper trip to shoe. ALKALINITY MUD (Pm) 0.05 0.75 Circulate bottoms up. ALKALINITY FILTRATE (Pf/Mf) 18,500 POH to log. CHLORIDE (mg/L) TOTAL HARDNESS AS CALCIUM (mg/L) 340 100 SULPHITE (mg/L) 17,293 K+ (mg/L) 3.2 KCl (% by Wt.) 0.50 PHPA ppb SOLIDS CONTROL EQUIPMENT MUD ACCOUNTING (BBLS) FLUID DISPOSED SUMMARY FLUID BUILT & RECEIVED 3 x 175 14 Desander Centrifuge INITIAL VOLUME 160 Desander mix (drill water) Shaker #2 3 x 175 14 Desilter 14 РВ 12 30 'ecirc from sump) Desilter + FLUID RECEIVED 210 20 Downhole rill V. ..er -FLUID LOST 230 150 ect Recirc Sump 50 Dumped Underflow (ppg) Output (Gal/Min.) Overflow (ppg) + FLUID IN STORAGE Shakers er (eg Diesel) Desander 12.5 TINAL VOLUME 900 Desilter 9.3 TOTAL LOST TOTAL RECEIVED 230 210 BIT HYD. PRESS.DATA SOLIDS ANALYSIS Used Close Cost Received Product Start PPB Jet Velocity s 1.610.00 10 111 121 161.00 (C Pac-R Impact force 613 1467 S 585.00 High Grav solids 78 1545 Sarite 228 ннр 20.0 140.00 Total LGS 9 S 140.00 10 `'-cide HSI 4.0 64.00 Bentonite 6.0 20 2 32.00 22 ıstic Soda 1144 Bit Press Loss 14.0 125.00 Drilled Solids 1 S 125.00 8 ...oamer 2800 10.0 CSG Seat Frac Press 3.2 480.00 Salt 62 S 120.00 66 S 13.3 0.62 Equiv. Mud Wt. s 110.00 n @ 19.30 Hrs la Ash 11 27.50 9.65 0.54 ECD 68 197.50 K @ 19.30 Hrs 39.50 73 lium Sulphite \$ Max Pressure @ Shoe: CUMULATIVE COST DAILY COST \$83,140.20 \$3,311.50 08 8338 7266 TELEPHONE CITY Adelaide Office AN ENGINEER Andre Skujins

•	R	M	N	
`	rillie	no I	nui	ds

 Report #
 18 Date :
 22-Dec-2000

 Rig No
 30 Spud :
 5-Dec-2000

 Depth
 2152 to
 2152 Metres

										274						\dashv
OPERATOR]	Lakes Oil					CONT	ract	OR	ODE						\dashv
REPORT FOR		Brent Spe	echley				REPO	ORT FO		Mick O'						
ELL NAME							FIEL	D		LOCAT	ON		STATE			
		Trifon #	1				PEP 1	37		Gippsla	nd Basir	1	V	ictoria		
DV I DIC LOCELL		T SIZE		SING		MUD	VOLUN		.)		CIRCU	LATIO!	N DATA			
RILLING ASSEMI	BL1 31		3 3/8 SURFACE	856	ſŧ		OLE	PITS		PUMP SIZE			CIRCULATION PRESS (PSI)			nu!
.50 Varel l	L114		SET @	260.9	M	TOTAL C	470 RCULATING	430		X 8 MODEL	ASSUME	D EFF	BOTTOMS			psi
L PIPE TYPE ZE 4.5 16.6 #	Length	1887 Mtrs	95/8 INT. SET @	4042 1232	ft M	HOTALCI	RCULATING 900		GD	P7.8		97.0	UP (min)			min
ZE 4.5 16.6 # ILL PIPE TYPE		100 / 1411	PROD. or		ſŧ		IN STORAG	3E		/STK	STK - MIN		TOTAL CIRC.			min
4.5 HW		83 Mtrs	LNR Set .@ MUD TYPE		М	<u> </u>				790 MIN	GAL	MIN	ANN VEL.	DP		
L COLLAR SIZE	(") Length 182	Murs		CI PHPA	Polym	er							(ft/min)	DCs	<u> </u>	
6.23	102						OPERTIE	s		MUI) PROPER	RTY SP	ECIFICATI			
SAMPLE FR	OM					Pit	Pi	it N	Mud Weight	8.5 - 9.2	API Filtrat	le	6 - 8	HPHT Filtrate	·	
TIME SAMP								Ŧ	Plastic Vis	Min	Yield Point	t	12 - 18	pH	8.0	- 8.5
DEPTH (N				Metres				ŀ	KCI	5%	PHPA		0.5 - 1.0	Sulphites	80	- 120
FLOWLINE		TRE	7 10 1	°C %					and comments of the second			ERVAT				
WEIGHT	I ENII EKAT	-112		pg SG		_ i		I	in view of poor l					tions, will be in	ncreasing	
FUNNEL VI	SCOSITY (sec/qt) API i		°C					PHPA concent	tration upwa	rds towards	s 1.5 ppt).			
PLASTIC VI		cP a	7'	°C			<u> </u>									
	NT (lb/100ft															
	GTHS (lb/1		/10 min													
	API (cc's/30		/ A U 111111				 									
	RATE (cc's			⁰ F	<u> </u>		†									
	CKNESS AF		32nd in)													
	NTENT (%						†									
			OIL/WATER				†									
	TENT (% b		OILWAILK		 -		 				OPERAT	TIONS S	SUMMARY			
	NE BLUE CA		ppb equiv.)			<u> </u>	 		Run electric logs	š.						
	AL DLUE CA	IACIII (ppo cquir.)				1		Rig down.							
pH ALKALINI	LZ, Value a	Pm)					+		Make up test to	ols and RIH						
	TY FILTRAT						 		Conduct DST #							
		E (FI/MI)				i	+									
CHLORIDE	RDNESS AS	CALCIIM	(mg/I)		 		-									
		CALCIUM	(IIIg/L)				+									
SULPHITE					 		1									
K+ (mg/L)					-		+									
KCl (% by					 		+									
; PHPA ppb	<u></u>	МП	ACCOUNTI	NC (RRI S			ــــــــــــــــــــــــــــــــــــــ			S	OLIDS CO	NTRO	LEQUIPME	ENT		
DI UID BUILT 6	DECEIVED	MUL	FLUID DIS		<u>,</u>	SUM	1MARY			Туре Нг		Cones			Size	Hr
FLUID BUILT &		ı			INIT	TIAL VOL		900	Centrifuge	 	Desande	er	T	Shaker #1	3 x 175	T
mix (drill water)			Desander		1	I IAL VOL			Degasser	РВ	Desiliter			Shaker #2	3 x 175	1
et ecirc from	sump)		Desilter		1	UID RECE	ZIVED.	$\overline{}$	2 0 2 1 1 1	+	- 		 			T
rill \vater			Downhole		-			-		_1i						
ect Recirc Sump			Dumped			UID LOST LUID IN ST	ORACE			Overflo	w (ppg)	Unde	erflow (ppg)	Outpu	t (Gal/Min.	.)
er (eg Diesel)		<u> </u>	Shakers		+ '''	2010 IN 31	JUNGE	L	Desander	+			0			
TOTAL REC	TRIVED		TOTAL LOST		FINA	L VOLUMI	E	900	Desitter				0			
				Used	+	Close		Cost	l	DS ANALY	SIS	\top	віт н	YD. PRESS.I	ATA	
Product	Price	Start	Received	(sea	+	CPUSE	+		SOLI	PP		Jet	Velocity			
		-			+-	,,			High Grav solids		-		act force			
	ļ				+		+		Total LGS		+	нн				
-		1	<u> </u>	L	+-		+				+	HS				
									Bentonite		+		Press Loss			
		Nil	usage today		-				Drilled Solids				G Seat Frac	Press	280	0
		T	·	r	 				Salt						13	
					 				n@ Hrs				uiv. Mud Wt		13	
			•••	i	4		-		K@ Hrs			EC		Chas		
					1							Ma	x Pressure	Snoe:		
			<u> </u>		<u> </u>				ļ							
									ļ							
															007	
									D	AILY CO	ST			TULATIVE C	OST	
									<u></u>			L_		83,140.20	20 52 6	
IN ENGINE	ER Andr	e Skujins		CITY	7	Adela	aide Offic	ce			7	relepi	HONE	08 83	38 7266	
							1 1		A be med if the near	en electe however	no representation o	A MARITHAN				

RMN

DEDODT

23-Dec-2000 19 Date : Report # 30 Spud: Rig No 5-Dec-2000

rilling I	Flui	as		r			JN	L JL			Dept	h	2152	to	2183	Met	res	
OPERATOR			akes Oil					CON	FRACT	OR	ODE							
REPORT FO	R		Brent Spe						ORT FO		John	Grey	danus					
ELL NAMI			orem spe	cency				FIEL			LOC				STATE			
DDL IVANII	i an		rifon #	1				PEP 1			Gipt	slan	d Basin		\mathbf{v}	ictoria		
	451 N		r SIZE		SING		ناــــــــــــــــــــــــــــــــــــ		ME (BB)	()	1		CIRCULAT	TION	DATA			
RILLING ASSEM				13 3/8 SURFACE	856	n	Hoi		PITS	-	PUMP SI	IZE			TRCULATION			
3.50 Varel ETI	D 14MF			SET@i	260.9	M		474 RCULATIN	450		MODEL	B 1	ASSUMED EF	F	PRESS (PSI) BOTTOMS		1580	Psi
L PIPE TYPE TYPE 16.6		Length 1	1874 Mus	9 5/8 INT. SET <u>a</u>	4042 1232	ft M	101AL CI	924	G VOL	1	PZ8		97.0	0	UP (min)		48	mir
ILL PIPE TYPE		Length		PROD. or		ſt		IN STORAG	GE	1	L/STK		STK/MIN 128	i	TIME (min)		106	mb
"E 4.5 H" .L COLLAR SIZE		Length	101 Mus	LNR Set @		М	J				0700 L/MIN		GAL MIN	•	ANN VEL.	DP	172	Т
6.25	٠()	208	Mars		CI PHPA	Polyme	er				3.69		365		(ft/min)	DCs 269		
							MUD PRO	OPERTIE	es			MUD I	PROPERTY	SPE	CIFICATI			
SAMPLE FI	ROM					I	Pit	P		Mud Weight	8.5		API Filtrate		6 - 8	HPHT Film		
TIME SAM	PLE T	AKEN				20	0.30	24.	00	Plastic Vis	M		Yield Point		12 - 18	рН		8.0 - 8
DEPTH (ft) - (m	1)			Metres	2,	160	2,1	83	KCI	3 -	5%	PHPA		=> 1.5 ppb	Sulphites		30 - 1
FLOWEINE	ETEM	PERATU	RE		C J. F	43		47					OBSER					***
WEIGHT				p	pg SG	9.40	1.128	9.30	1.116	Increasing PHP	A conce	ntratio	n to approxin	nately	1.5 ppb as r	apidly as the	system v	-1ii
FUNNEL V	ISCOS	SITY (s	ec/qt) API	a	⁰ C		47	4	9	allow.						. ~		_
PLASTIC V	ISCO	SITY cl	P ∙@		°C		18	1	7	Maintaining pH	at sligh	tly low	er level of 8.0	to les	sen any disp	persion effec	us of high	er
Y-TELD POI	INT (lb/100ft ²)				10	1		pH values.								
)0៧²) 10 sec	:/10 min		1	1 2	1	2									
FILTRATE							7	6	.5									
HPHT FILT	TRATI	E (cc's/3	80 min) @		⁰ F													
CAKE THI	CKNE	SS API	: HPHT (32nd in)		1	1	1										
SOLIDS CO	ONTE	VT (%	by Volume)				6.6	5	.9									
LIQUID CO	ONTE	VT (%	by Volume	OIL/WATER			93.4		94.1									
SAND CON	TENT	(% by	Vol.)			0).25		[r				<u>OPERATIO</u>	NS SU	MMARY			
- METHYLE	NE BI	UE CAP	ACITY (ppb equiv.)			7.0	7	.0	Continue with I	OST # 2	2.						
pН							8.5	8	.0	Pull free, revers	e circul	ate and	POH.					
ALKALINI	TY M	UD (Pi	m)							Lay down test t	ools.							
ALKALINI	ITY FI	LTRATE	(Pf/Mf)			0.05	0.70	0		Pick up new BI		RIH.						
* CHLORID	E (m	g/L)				17	7,000	16,	500	Wash 19 m to b	ottom.							
TOTAL HA	ARDNI	ESS AS C	ALCIUM	(mg/L)			380	4	00									
SULPHITE	E (mg	/L)					120	1	20									
K+ (mg/L	ر.					10	6,212	15,	,672									
KCl (% b	by Wt.)						3.0	2	9									
. PHPA ppl	b					(0.65	1.	.00									
			MUI	ACCOUNTI							T		LIDS CONT	ROL	EQUIPME Hrs	NT T	Size	_
FLUID BUILT &	& RECE	IVED		FLUID DIS	POSED	 	SUM	MARY	,		Туре	Hrs	 	C ones				-
mix (drill water	Γ)			Desander		INIT	IAL VOLU	ME	900	Centrifuge	-	ļ	Desander			Shaker #1		
. :m recirc from	n sump)		190	Desilter	7	1				Degasser	PB	<u> </u>	Desilter	12	4	Shaker #2	3 x 175	+
rill ,r				Downhole	14	ļ	UID RECE	IVED	100			L			1			
ect Recirc Sump				Dumped	40	ł	ID LOST		76				(nna) T	Iled	low (nnc)	0	put (Gal/Mi	in '
er (eg Diesel)				Shakers	15	+ FLI	UID IN STO	ORAGE	<u></u>	Decander	- 0	erflow	(PPg)	under	llow (ppg)	Out	par (GAV/VI	
m				TOTALLOST	*-	FINA	VOLUME		024	Desander Desilter	-	9.3			2.8		1.20	
TOTAL RE	CEIVEL	<u>'</u>	100	TOTAL LOST	76	 			924		DC 43		TC T			D. PRESS		
Product	1	rice	Start	Received	Used	 	Close	+	ost	SOLI	DS AN		18	1.4 **		D. LKE99		02
ite	s	7.50	1467		40	ļ	1427	S	300.00	ļ		PPB	 		elocity			93
HPA (Praestol)	S	120.00	62		13	ļ	49	S	1,560.00	High Grav solids	<u> </u>	 			ct force			90 74
~dium Sulphite	S	39.50	68	ļ	2	ļ	66	S	79.00	Total LGS		21.0		HHP				
	1					1		_		Bentonite		7.0		HSI				.8
								<u> </u>		Drilled Solids		14.0	ļ		ress Loss			288
	1					<u> </u>				Salt		10.0	3.0		Seat Frac I	ress		300
	1					 		-		n@ 24.00 Hrs		0.67		<u> </u>	v. Mud Wt.			3.3
						<u> </u>				K@ 24.00 Hrs		0.46		ECD		Ch -	9.	.50
								1						Max	Pressure @	Shoe :		
						ļ		<u> </u>										
						<u> </u>												
						<u> </u>		1						· · · · ·			OOET	
	1			-							DAILY					ULATIVE		
						<u></u>					\$1,93	9.00		<u> </u>		85,079.2		
IN ENGINE	ER	Andre	Skujins		CITY		Adelai	ide Offic	ce				TEL	EPHO	ONE	08	8338 7266)

rilling Fluids

DRILLING FLUID REPORT

 Report #
 20
 Date :
 24-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 2183
 to
 2300
 Metres

OPERATOR		I	akes Oil					CON	[RAC]	TOR		DE							
REPORT FOI	R		Brent Spe					REPO	RT F	OR	J	ohn G	reydar	nus					
ELL NAME			~ P'					FIEL	D		I	OCAT	ION			STATE			
DDD			rifon#	1				PEP 1	37			Sippsl	and B	Basin		Vi	ctoria		
DRILLING ASSEM	DI V		I SIZE		SING			VOLUN		L)			CII	RCULAT	ION	DATA			
SIZE TYPE	BL 1	19		13 3/8 SURFACE	856	ft	ног	LE	PITS			MP SIZE			C	TRCULATION		1300	
.50 Varel ETI	14MF			SET á	260.9	M		499 RCULATING	510		PUMP MO	X 8	Inches	SSUMED EFF	- 	PRESS (PSI) BOTTOMS		1300	psi
L PIPE TYPE	ŧ	Length	1991 Mus	9 5/8 INT. SET @	4042 1232	ft M	l	1009			GD P	7.8		97.0		UP (min)		50	min
GILL PIPE TYPE		Length		PROD. or		ſı		IN STORAC	E	j	BBL-S' 0.070		ST	K MEN 130		TOTAL CIRC. TIME (min)		114	min
L COLLAR SIZE		Length	101 Mtrs	LNR Set -@ MUD T\PE		M	l				BBL M			GAL MIN			DP	175	
6.25	()	208	Mtrs		СІ РНРА І	Polymo	er				8.8.			371	_	(ft/min)	DCs 274		
0.20							MUD PRO	PERTIE	s			MU			SPE	CIFICATIO			
SAMPLE FI	ROM						Pit	Pi		Mud W		8.5 - 9.2		Filtrate		6 - 8	HPHT Filtra		
TIME SAMI	PLE T	AKEN				1-	1.00	24.	00	Plastic	Vis	Min		l Point		12 - 18	pH		8.0 - 8.5
DEPTH (1					Metres	2.	240	2,3	00	KCI		3 - 5%	PHP.			=> 1.5 ppb	Sulphites		80 - 120
FLOWLINE	TEM	PERATU	RE		°C PF	43		48						OBSERY				41.1	
WEIGHT				P	pg SG	9.05	1.086	9.00	1.080							centration wa			
FUNNEL VI	SCOS	SITY (s	ec/qt) API	<u>ā</u> `	⁰ C		47	4	5							on meaning m	nud could be	built m	ore
PLASTIC V			P a		⁰ С		15	1	5		oidly than if N								
ATEID BOI)				14	1	1	Once	circulation w	as regai	ned, mir	nor seepag	ge loss	ses were still	evident but	even the	se
			00ft²) 10 se	c/10 min			1 2	1			ered off and								
FILTRATE							6	5.	6							k up to 3% +			
HPHT FILT					⁶ F					Kwik	seal favoured	l over E	nerseal a	as LCM be	ecaus	e of its more	diverse size	distribu	tion.
CAKE THIC				(32nd in)			1	1]									
SOLIDS CO			by Volume)				4.2	3	.8										
LIQUID CO) OIL/WATER			95.8		96.2	<u> </u>									
SAND CON							Tr	7	`r				OPI	ERATION	NS SU	UMMARY			
- METHYLE				ppb equiv.)			5.0	5	.0	Drill .	Ahead.								
pH							9.0	8	.5		tight connec								
ALKALINI	TY M	UD (P	m)							Drill .	Ahead and a	t 2208 ei	ncopunt	er total mi	ud los	ses (approxi	mately 240 l	obls at th	ne time.
ALKALINI)		0.10	0.70	0.05	0.65	LCM	I slug was pu	mped ar	d circul	lation was	regai	ned. Drilling	continued.		
* CHLORIDI			<u>```</u>	<u> </u>		1-	4,000	15,	000	1									
TOTAL HA			CALCIUM	(mg/L)			240	3	20	1									
SULPHITE							160	1	20	1									
K+ (mg/L		,,				1.	3,510	14,	591	1									
KCl (% b							2.5	2	.7	1									
PHPA ppt							1.40	1.	.80	1									
TILK ppt	<u>, </u>		MU	D ACCOUNTI	NG (BBLS)	!)							SOLID	S CONTI	ROL	EQUIPME	NT		
FLUID BUILT &	RECE	IVED		FLUID DIS		Г	SUM	MARY		1	[Type l	ir:	C	Cones	Hrs]	Size	Hr
mix (drill water		. 1		Desander		INIT	IAL VOLU	ME	924	(entrifuge		D	esander			Shaker #1	3 x 1	75 24
			400	Desilter	46	1			L		Degasser	PB	ı	Desilter	12	20	Shaker #2	3 x 1	75 24
.m recirc from	i sump			Downhole	384	+ FL	UID RECE	IVED	550	1									
rill .			150	Dumped	15	-FLU	ID LOST		465	1									
ect Recirc Sump			130	Shakers	20	-	UID IN STO	ORAGE		1		Overf	low (ppg)) l	Underl	Now (ppg)	Outp	ut (Gal/N	Ain.)
er (eg Diesel)				Jiaktis		 				Desai	nder	···				0			
TOTAL RE	CEIVE	o	550	TOTAL LOST	465	FINAL	VOLUME		1,009	Desil	ter		9.0		1	11.4		1.60	
Product	1	Price	Start	Received	Used	†	Close	(ost	1	SOLID	SANAL	YSIS			BIT HY	D. PRESS.	DATA	
	 		20		2	1	18	S	64.00			1	PB	**	Jet V	elocity			399
ıstic Soda	S	32.00		+	48	+	768	s	842.40		Grav solids				Impa	ct force			689
CI	S	17.55	816	+	41	1	16	+	2,050.00	1	LGS	1	5.0		ннр	`			278
"ikseal Fine	S	50.00	42	1	2	1-	40	s	100.00	-			5.0		HSI				4.9
ikseal Medium	S				36	+-	13	s	4,320.00	+	ed Solids		0.0		Bit P	ress Loss		1	1286
.:PA (Praestol)	S	120.00	49		5	+-	61	s	197.50	-			9.0			Seat Frac P	ress	2	2800
odium Sulphite	S	39.50	66			+		+	27720		24.00 Hrs		.66		Equi	v. Mud Wt.		1	13.3
	+			+		+		+		+	24.00 Hrs		1.43		ECD			9	9.20
	+					+				+						Pressure (a)	Shoe :		
	+					+		+		+				1	<u> </u>	<u> </u>	-,		
				-		+		+		+-									
						+-		+		+-									
	+-			+		+		+		+-	DA	ILY CO	ST	1		CUMI	ULATIVE	COST	
	-			-		+-		+		+-		7,573.9					92,653.10		
AL DAYOUS	EE	A 1	Classia:		CITY		Adola	ide Om	-P		<u> </u>	, , ,		TELI	EPHO			338 720	66
1N ENGINE	ER	Andre	Skujins		CITY	· 	Adela	ide OM	ce					TELI	EPHO	ONE	08 8	338 720	36

RMN
rilling Fluids

DRILLING FLUID REPORT

 Report #
 21
 Date :
 25-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 2300
 to
 2450
 Metres

OPERATOR		La	kes Oil				T	CON	TRACT	OR	ODE					
REPORT FOI	D D		ent Spe					REPO	ORT FO	OR .	John Gi	eydanu	s			
ELL NAMI			om Spe					FIEL			LOCAT	ION		STATE		
ELL NAMI	ANDIV		ifon#	1],	PEP 1	137		Gippsl	and Ba	sin	V	ictoria	
	DI V				SING				ME (BB)					ON DATA		
RILLING ASSEM		JET :		13 3/8 SURFACE	856	ft	ног		PITS		PUMP SIZE			CIRCULATION		
SIZE TYPE	-	1.	12	SET (ē	260.9	М		531	520		x 8_	Inches	MED EFF	PRESS (PSI) BOTTOMS	1	1400 psi
L PIPE TYPE	Leng			9 5/8 INT. SET @	4042 1232	ft M	TOTAL CIF	RCULATIN 1051		PUMP M GD I		Asse	97.0	UP (min)		57 min
ZE 4.5 16.6 #			41 Mtrs	PROD. or	1232	ft		IN STORA		BBL/	STK	STK !		TOTAL CIRC.		120 .
75 4.5 HV	N'		1 Mtrs	LNR Set @		М	<u> </u>			0.07 BBL1		G/	120	ANN VEL.	DP	129 min
L COLLAR SIZE	,		Murs	MUD TYPE	CI PHPA	Daluma	ar.			8.1			342	(ft/min)	DCs 253	
6.25	2	08	Mili		CITILA		MUD PRO	PERTI	ES			D PROP	ERTY S	PECIFICATION	ONS	
GAMPI E EI	2024						Pit			Mud Weight	8.5 - 9.2	API Fil	trate	6 - 8	HPHT Filtra	te
SAMPLE FI		EN					2.00			Plastic Vis	Min	Yield P	oint	12 - 18	pH	8.0 - 8.
		EN			Metres		388			KCI	3 - 5%	PHPA		=> 1.5 ppb	Sulphites	80 - 12
	(t) - (m)	DATE		0	C OF	46	300	47				o	BSERV	ATIONS		
FLOWLINE	TEMPE	RATUR	CE		pg/SG	8.95	1.074	9.10	1.092	Ongoing seepage	losses the	oughout t	his period	d, with a more r	apid loss at 2	427 m
WEIGHT			(1) A DI (⁰ C				10	necessitating th	ne building	g of anoth	er LCM	pill. Only half of	f this pill was	pumped.
FUNNEL VI			/qt) API	<u>u</u>	°C		41 13		12	Dropping yield po						
PLASTIC V			ą		, C		11		11	maintain it arou						
- PE (D POI			- 2: -				1 2			Re-introducing A						
			ft²) 10 sec	:/10 min			6		2.5							
FILTRATE					⁰ F		o	· /	.2							
HPHT FILT				22 1	· F			1								
CAKE THIC				32nd in)			3.3		1.4							
SOLIDS CO			Volume)						95.6							
LIQUID CO				OIL/WATER			96.7	-				OPER	ATIONS	SUMMARY		
SAND CON							Tr		Γr	~ " · · ·		OLIM	ATTOM	3 OCIVEVESIKI		
- METHYLE	NE BLUE	E CAPA	CITY (ppb equiv.)			5.0			Drill ahead.		e 1.11 - 1.21	127 m \			
pН							8.5		3.5	(Rapid yet partial	1 10SS 01 3	5 DDI at 24	+27 m.)			
* ALKALINI							1000	0.05	10.65							
ALKALINI	TY FILT	RATE	(Pf/Mf)	<u> </u>		0.05		0.05	0.65							
CHLORIDI	(mg/L)					3,000		,500							
TOTAL HA	RDNESS	AS CA	LCIUM	(mg/L)			300		20							
SULPHITE	(mg/L)		<u></u>				120	 -	40							
K+ (mg/L)						7,293	 	,752							
KCl (% b	y Wt.)						3.2		3.1							
PHPA ppt	<u> </u>		.,				1.70		.70			OI IDE	CONTR	OL EQUIPME	NT	
			MUI	ACCOUNTIN		1	GUNE.	MADV				ייין אינוטאַ	Con IR		Ϋ́	Size H
FLUID BUILT &	RECEIVE	D		FLUID DIS	POSED	ļ		MARY	- 		1.57				Shaker #1	3 x 175 2
mix (drill water)			Desander		INIT	IAL VOLU	ME	1009	Centrifuge		Desa			Shaker #2	3 x 175 2
m -ecirc from	ı sump)		250	Desilter	27	1				Degasser	PB	Des	alter	12 24	Silakei #2	377.5
rill				Downhole	136		UID RECEI	IVED	250		11_	l				l
et Recirc Sump				Dumped	20		ID LOST	,	208		-	()	11-	iderflow (ppg)	Outro	ut (Gal/Min.)
er (eg Diesel)				Shakers	25	+ FL	UID IN STO	DRAGE	L	D	Overn	ow (ppg)	-	0		
										Desander		9.1	-	12.4	_	0.80
TOTAL RE	CEIVED		250	TOTAL LOST	208	ļ	VOLUME	,	1,000	Desilter					D. PRESS.	
Product	Price		Start	Received	Used	<u> </u>	Close		Cost	SOLID	S ANAL	YSIS		et Velocity	D. PRESS.	368
cide	S 14	10.00	9	ļ	11	ļ	8	\$	140.00		F	rs /		npact force		594
austic Soda	s .	32.00	18	ļ	1		17	S		High Grav solids				 		221
rseal Fine	s 5	52.00	101		7	<u> </u>	94	S		Total LGS		1.0		HP		3.9
ı	S	17.55	768		96		672	s	1,684.80	Bentonite		1.0		SI		
wikseal Fine	s :	50.00	16		13		3	S	650.00	Drilled Solids		7.0		it Press Loss		1108
'HPA (Praestol)	S 1:	20.00	13		10		3	S	1,200.00					SG Seat Frac I		2800
ium Sulphite	s .	39.50	61		9		52	S	355.50	n@ 24.00 Hrs		.61		quiv. Mud Wt.		13.3
temp	S 5.	35.00	46		2		44	S	1,070.00	K @ 24.00 Hrs	0	.53		CD	-	9.30
	T												N.	fax Pressure @	Shoe :	
	T									<u> </u>						
										1						
	1															
											AILY CO				ULATIVE C	
										S	5,496.3	80			98,149.40	
IN ENGINE	ER A	andre S	kujins		CITY		Adelai	ide Offi	ce				TELEI	PHONE	08 8	338 7266
L. DITGHTE	~ P										 					



DRILLING FLUID

Report #	22 Date :	26-Dec-2000
Rig No	30 Spud:	5-Dec-2000

rilling F	-Ju	as		r			/1 \				Depth	1	2450	to	2550	Metre	es	
PERATOR			akes Oi	<u> </u>				CONT	RACT		ODE							
REPORT FOR	R	E	Brent Spe	eechlev				REPO	RT FO	OR	John	Greyd	anus					
ELL NAME				•				FIELI)		LOCA	ATION	Ĭ		STATE			
	• '		rifon #	1				PEP 1	37		Gipp	sland	Basin		V	ictoria		
OH I DIO LOCKI	DI V		T SIZE		SING			VOLUM		L)		(CIRCUL	ATIO!	DATA			
RILLING ASSEM SIZE TYPE				13 3/8 SURFACE	856	ft	ног		PITS		PUMP SIZ				CIRCULATION		500	
3.50 Varel ETD				SET -∉	260.9	М		552	500	6	X 8	inc	ASSUMED	EFF	PRESS (PSI) BOTTOMS	1	500	psi
L PIPE TYPE		Length	2241 Mtrs	9 5/8 INT. SET ä	4042 1232	ft M	TOTAL CIR	CULATING 1052	· VOL.		PZ8		9	7.0	UP (min)		60	nú
LE 4.5 16.6 #		Length	2241 ,103	PROD. er		ft	1	N STORAG	E		STK		STK MIN		TOTAL CIRC. TIME (min)		129	mir
'S 4.5 HV	N'		101 Mus	LNR Set @		M	<u> </u>				700 MIN		GAL M	120 IN	ANN VEL.	DP	161	Т
L COLLAR SIZE	(")	Length	Mura	MUD TYPE	СГРНРА І	Polym	er			1	.15		2	342	(ft/min)	DCs 253		
6.25		208	Mus	1	CHIBA	Olyin	MUD PRO	PERTIE:	s		N	MUD PI	ROPERT	Y SPI	ECIFICATION	ONS		
CAMPIE E	2014				T		Pit	Pit		Mud Weight	8.5 -	9.2 Al	I Filtrate		6 - 8	HPHT Filtrat	e	
SAMPLE FR		LEEN					2.00	23.3		Plastic Vis	Mi	n Yi	eld Point		12 - 18	рН		8.0 -
					Metres		,500	2,5-		KCI	3 - 5	% PI	IPA .		=> 1.5 ppb	Sulphites		80 - 1
<u> </u>	t) - (n		DF		C	48	1	48					OBSE	RVAT	10NS			
FLOWLINE	IEN	IPEKATU	RE		pg SG	9.10	1.092		1.080	Seepage losses s	till ongo	oing - ad	dition of	lem no	t thought to b	e cost efficier	nt - it is	not
WEIGHT					°C			38		likely that Ene								
FUNNEL VI			ec/qt) API	ā	0 C		41	9		Aditionally, th								
PLASTIC V			P â		- C.		10	10		PHPA stocks are							lities.	
YUF LD POI							10			- A A STOOKS AIR	10					•		
			00ft²) 10 se	c/10 min			1 2	1 2										
FILTRATE					6		7.2	6										
HPHT FILT					°F													
CAKE THIC							1	1										
SOLIDS CO	NTE						4.4	3.										
LIQUID CO	NTE	NT (%	by Volume	e) OIL/WATER			95.6		96.1				DEDATI	ONE	UMMARY			
SAND CON	TEN	Г (% by	Vol.)				Tr	Т				<u>U</u>	PERAII	UNS S	CAUNIANI			
- METHYLE	NE B	LUE CAI	PACITY	(ppb equiv.)			4.5	4.		Drill ahead.								
рН							8.5	8.	5									
" ALKALINI	TY M	UD (P	m)															
ALKALINI'	TY F	ILTRATI	E (Pf/Mi	<u>) </u>		0.05	0.70	0.05	0.65									
CHLORIDE	E (n	ıg/L)				1	7,000	14,0	000									
TOTAL HA	RDN	ESS AS C	ALCIUM	(mg/L)			350	30	00									
SULPHITE	(m	g/L)					80	8	0									
K+ (mg/L))					1	6,212	13,	510									
KCl (% b	y Wt.)					3.0	2.	.5									
PHPA ppb)						1.65	1.5	50									
 			MU	D ACCOUNTI	NG (BBLS))							DS CON		EQUIPME	NT	Size	
FLUID BUILT &	REC	EIVED		FLUID DIS	SPOSED		SUM	MARY			Туре	Hrs		Cones	Hrs			
mix (drill water))		200	Desander		INIT	TIAL VOLU	ME	1051	Centrifuge			Desander			Shaker #1	3 x 1	+
er recirc from)	100	Desilter	38					Degasser	РВ		Desilter	12	22	Shaker #2	3 x 1'	/5
:ii) .r		1		Downhole	196	+ FL	UID RECE	IVED	300			1			<u></u>			
ect Recirc Sump	***************************************			Dumped	40	-FLU	ID LOST		299									
er (eg Diesel)				Shakers	25	+ FL	UID IN STO	ORAGE		1	Ov	erflow (p	pg)	Unde	rflow (ppg)	Outpu	ıt (Gal/N	lin.)
(1				Desander					0			
TOTAL RE	CEIVE	D	300	TOTAL LOST	299	FINAL	L VOLUME		1,052	Desilter		9.0			11.8		1.20	
Product	Т	Price	Start	Received	Used		Close	С	ost	SOLII	DS AN	ALYSIS			BIT H	D. PRESS.		
	S	161.00	111		14	T	97	s	2,254.00			PPB	٠,	Jet '	Velocity			368
C Pac-R	s	32.00	17	-	1	1	16	s	32.00	High Grav solids				Imp	act force		:	587
austic Soda	S	125.00	7	1	1	1	6	S	125.00	Total LGS		18.5		нн	Р			219
oamer	S	120.00	3		3	 		s	360.00	Bentonite		4.0		HSI				3.8
PA (Praestol)	+	27.50	7	+	6	1	1	s	165.00	Drilled Solids		14.5		Bit	Press Loss		1	096
oua Ash	S				8	+	44	s	316.00	 		8.5	2.5	cso	G Seat Frac l	Press	2	800
odium Sulphite	S	39.50	52	+	7	+	37	+	3,745.00	n @ 23.30 Hrs		0.56		Equ	iv. Mud Wt.			13.3
itemp	<u> S</u>	535.00	44		 '	+		+		K@ 23.30 Hrs		0.58		ECI				9.20
	+			+		+		+				I			Pressure a	Shoe:		
	-					+		+		 								
	-			 	ļ	+		+		 								
	-					+		+		 								
	4					+		+			AILY (COST		T	CUM	ULATIVE C	COST	
	1			-				-			\$6,99°			+-		105,146.40		
	<u></u>				L			11.0~		<u> </u>	30,77	/.UU	т	ELEPH			338 720	56
IN ENGINE	ER	Andre	Skujins		CITY		Adela	ide Offic		nd may be used if the user o	so electe has	Wever, no re-						

R M N rilling Fluids

DRILLING FLUID REPORT

 Report #
 23
 Date :
 27-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 2550
 to
 2570
 Metres

RILLING ASSEMBLY IZE TYPE 1.50 Varel ETD 14M L PIPE TYPE 1.6.6 # LL PIPE TYPE LL PIPE TYPE LL COLLAR SIZE (") 6.25	JE 10 Length	Trifon #	eechley 1	SING						John G LOCAT				STATE			
RILLING ASSEMBLY SIZE TYPE 50 Varel ETD 14M L PIPE TYPE 625 16.6 # LL PIPE TYPE L COLLAR SIZE (") 6.25 SAMPLE FROM	JE 10 Length	rifon #	E 1 CAS	ilNG			FIEI	LD	OR .	LOCA				STATE			
RILLING ASSEMBLY SIZE TYPE 50 Varel ETD 14M L PIPE TYPE 625 16.6 # LL PIPE TYPE L COLLAR SIZE (") 6.25 SAMPLE FROM	JE 10 IF Length	T SIZE	CAS	SING						1	ION		1	MAIL			
RILLING ASSEMBLY IZE TYPE 50 Vard ETD 14M L PIPE TYPE 16.6 # LL PIPE TYPE L COLLAR SIZE (") 6.25 SAMPLE FROM	JE 10 IF Length	T SIZE	CAS	SING		1	PFD	127									
IZE	JE 10 IF Length	T SIZE	CAS	SING			111	13/		Gippsl					ctoria		
IZE	10 IF Length		13 3/8 SURFACE					ME (BB	L)		CI	RCULA					
L PIPE	Length			856	ft	ноі		PITS 400		PUMP SIZE X 8	lnche	s		PRESS (PSI)	1	500	psi
LE 4.5 16.6 # ILL PIPE TYPE 1. 4.5 HW L COLLAR SIZE (") 6.25			SET @ 9 5/8 INT.	260.9 4042	M ft	TOTAL CI	556 RCULATE		PUMP	MODEL		ASSUMED EI	j	BOTTOMS			
LCOLLAR SIZE (") 6.25 SAMPLE FROM	Length	2261 Mirs	SET @	1232	M	ļ	950			PZ8	ST	97. K MIN		UP (min) TOTAL CIRC.		60	min
6.25 SAMPLE FROM	1	101 Mus	PROD. or LNR Set ;ā		ft M				0.0	0700		120	0	TIME (min)		117	min
SAMPLE FROM	Length	101	MUD TYPE						li .	LMON		GAL MIN	- 1	ANN VEL. (ft.min)	DP DCs 253	161	
	208	Mtrs	K	CI PHPA I			OBERT	re I	8	3.15 MI	T) PD			CIFICATIO			
				— т		MUD PRO			Mud Weight	8.5 - 9.2		Filtrate		6-8	HPHT Filtrat	e	
]	Pit		10	Plastic Vis	Min		d Point		12 - 18	pH		8.0 - 8
TIME SAMPLE				NA article				•.00	KCI	3 - 5%				=> 1.5 ppb	Sulphites		80 - 12
DEPTH (ft) - (TOP	0	Metres				-/-				OBSER	VATI				
FLOWLINE TEN	MPERATU	KŁ		pg SG		<u> </u>	9.10	1.092	Seepage losses s	still ongoin	g.						
WEIGHT	SCITE :	na/at) A DT		o _C					Lost mud down			also.					
FUNNEL VISCO		ec/qt) API	<u>'a</u>	°C				9									
PLASTIC VISCO		P · â						9									
D POINT			oc/10 min					1 2									
STRENGT			2C/ 10 Min			-	+	7.2									
FILTRATE API				°F			-										
HPHT FILTRAT			(32nd in)	1			 	1									
SOLIDS CONTI								4.6									
LIQUID CONTI							 	95.4									
SAND CONTEN			., OID WAIDA		ļ		1	Tr			OP	ERATIO	NS SU	MMARY			
METHYLENE H			(ppb equiv.)				+	4.0	Drill to 2570 m.	. Pressure	loss so	POH wet					
pH	Del en		(PPs oquit)					8.5	Jars parted.								
ALKALINITY N	ALD (P	m)							Rig up Electric	Loggers a	nd log.						
ALKALINITY I			D.				0.05	0.65	Make up test to								
CHLORIDE (<u></u>				14	4,000									
TOTAL HARDN		CALCIUM	(mg/L)					280	1								
SULPHITE (n							L	100]								
K+ (mg/L)	<i>3 −7</i>						1.	3,510]								
KCl (% by Wi	t.)							2.5									
PHPA ppb	-							1.40									
		MU	D ACCOUNTIN	G (BBLS)				1					EQUIPME Hrs	NT T	Size	, 1
FLUID BUILT & REC	CEIVED		FLUID DIS	POSED		SUM	MARY		ļ	Туре	Hirs		Cones	Hrs.	1		
mix (drill water)		100	Desander		INIT	IAL VOLU	ME	1052	Centrifuge			Desander		<u> </u>	Shaker #1	3 x 1	
m ecirc from sum	p)		Desilter	9]				Degasser	PB		Desilter	12	8	Shaker #2	3 x 1	75
rillr			Downhole	157		UID RECE	IVED	100	ļ		L		l	1		l	
ect Recirc Sump			Dumped	20	4	ID LOST		196	4	[C	low /	g)	Lindor	flow (ppg)	Outro	ıt (Gal/	Min.)
er (eg Diesel)			Shakers	10	+ FL	UID IN ST	ORAGE	L	Desander	Over	low (pp	g)	CHUCK	0	Curp		
			TOTAL 1000		FINA	_ VOLUME	,	056	Desilter	+	9.1			11.3	+	0.80	
TOTAL RECEIV	ED	100	TOTAL LOST	196	-		·	956		DC ANIA					D. PRESS.	DATA	
Product	Price	Start	Received	Used		Close	 	Cost		DS ANAI	PPB PPB	0.0	let V	elocity	D. 1 KE55.		368
ıstic Soda S	32.00	16		3	 	13	S	96.00			FFB			et force			594
efoamer S	125.00	6		3		3	S	375.00	 				HHP				221
T S	17.55	672		48	-	624	S	842.40			21.0		HSI				3.9
1	12.00	53		3		50	S	36.00			4.0			ress Loss			1108
ne S	39.50	44		1		43	S	39.50	 		17.0 8.5	2.5		Seat Frac F	ress		2800
ne S odium Sulphite S	535.00	37		7	-	30	S	3,745.00			0.58	4.0	-	v. Mud Wt.			13.3
**	555.00				1-				n @ 14.00 Hrs		0.58		ECD				9.25
dium Sulphite \$	232.00	 	4 !		+				K@ 14.00 Hrs		U.4 /		+	Pressure (a)	Shoe:		
dium Sulphite \$	555.00						i		1				Lyrax	i ressure a	SHOE .		
dium Sulphite \$	535.00				-				<u> </u>								
dium Sulphite \$	030.00																
dium Sulphite \$	030.00																
dium Sulphite \$	232,000										NCT.		1	CIBA	H ATIVE	COST	
dium Sulphite \$	00000									DAILY CO \$5,133.			Į.		ULATIVE (

1	\mathcal{R}	M	N)
\ !~'	112	T	7.4	٦ç

DRILLING FLUID REPORT

Report #	24	Date :		28-Dec-2000
Rig No	30	Spud :		5-Dec-2000
Depth	2570	to	2570	Metres

'rilling F	Inias		-	~			_			Depth		2570	to	2570	Metre	s	
PERATOR		Lakes Oi]	***************************************			CON	TRACT	OR	ODE							
REPORT FOR		Brent Spe					REPO	ORT FO		John (
ELL NAME		Втеп. ор					FIEL	.D		LOC.	OITA	N		STATE			
DDDIII		Trifon #	1			1	PEP 1	137		Gipp		l Basin			ictoria		
RILLING ASSEME	LY	JET SIZE		SING		MUD	VOLU?	ME (BB)				CIRCUL					
SIZE TYPE			13 3/8 SURFACE	856	ft	HOL	1	PITS	1	PUMP SIZ		ches		PRESS (PSI)			psi
L PIPE TYPE	Length		9 5/8 INT.	260.9 4042	M ft	TOTAL CIR	CULATEN	G VOL	PUMP N			ASSUMED		BOTTOMS			
L PIPE TYPE LE 4.5 16.6 #		2261 Mus	SET â	1232	М	ļ	806 N STORA		GD BBL			STK MIN	7.0	UP (min) TOTAL CIRC.			min
ILL PIPE TYPE	Length	101 Murs	PROD. or LNR Set @		ft M	1 '	NSTORA	GE	0.0	700				TIME (min)			min
L COLLAR SIZE (101	MUD TYPE						BBL	MIN	1	GAL M	EN	ANN VEL. (ft/min)	DP DCs		
6.25	208	Mirs	<u> </u>	CI PHPA I			DEDTI	e I			ALID F	ROPERT	Y SPE	CIFICATIO		<u> </u>	
						MUD PRO			Mud Weight	8.5 -		PI Filtrate	1 01 2	6 - 8	HPHT Filtrate	2	
SAMPLE FR						Pit	г		Plastic Vis	Mi	n Y	ield Point		12 - 18	рН	8.0	- 8.
TIME SAMP				Metres					KCI	3 - 5	% F	PHPA		=> 1.5 ppb	Sulphites	80	- 12
DEPTH (ft		TIDE		C of								OBSE	RVAT	IONS			
FLOWLINE '	LEMPERA	TURE		pg SG					Dumped and clea	ned ou	sand	trap.					
WEIGHT	COSTA!	(englat) ADI		°C					•					1			
FUNNEL VIS		(sec/qt) API	- u	°C													
PLASTIC VI																	
YUELD POIN			oc/10 mir														
		/100n²) 10 se	2C/ 1U IIIII														
FILTRATE A				⁰ F		-											
CAKE THIC			(32nd in)														
SOLIDS CO																	
) e) OIL/WATER														
SAND CONT			e) OID/WATER								(PERATI	ONS S	UMMARY			
- METHYLEN			(nnh equiv.)						Make up test too	ls.							
	E BLCL C	ALACITI	(ррв счигт)						RIH with same.								
pH ALKALINIT	N. MID	(Pm)					,		Conduct DST #	3.							
ALKALINIT			<u> </u>						Reset and condu	ct DST	# 4.						
CHLORIDE		115 (117.741						4	Drop bar and rev								
TOTAL HAI		CALCIUM	(mg/L)		l				Pump pill and Po								
SULPHITE		CABCICIA	(1116) 23														
K+ (mg/L)	(IIIg/D)																
KCl (% by	Wt.)																
PHPA ppb	114)						1										
ти и рро		MU	D ACCOUNTI	NG (BBLS))							IDS CON		EQUIPME	NT r		T
FLUID BUILT &	RECEIVED		FLUID DIS			SUM	MARY			Туре	Hrs		Cones	Hrs		Size	Н
mix (drill water)		65	Desander		INIT	IAL VOLU	ME	956	Centrifuge			Desander			Shaker #1	3 x 175	\perp
m' 'recirc from	sump)	+ 	Desilter		1				Degasser	PB		Desilter	12		Shaker #2	3 x 175	4
rill .			Downhole	165	+ FL	UID RECEI	VED	65]						\perp
et Recirc Sump			Dumped	40	-FLU	ID LOST		215									
er (eg Diesel)			Shakers	10	+ FL	UID IN STO	RAGE			Ove	erflow (ppg)	Under	flow (ppg)	Outpu	t (Gal/Min	.)
(-8					1				Desander					0			
TOTAL REC	EIVED	65	TOTAL LOST	215	FINAL	VOLUME		806	Desilter					0			
Product	Price	Start	Received	Used		Close		Cost	SOLII	S ANA	ALYSI				D. PRESS.E	DATA	
ite	s 7.5	0 1427		30		1397	s	225.00			PPB	**		elocity			
***									High Grav solids				_	ct force			
									Total LGS				НН				
							L		Bentonite				HSI				
									Drilled Solids				Bit I	ress Loss			
					1				Salt				CSG	Seat Frac I	Press	280	
					1				n@ Hrs					v. Mud Wt.		13	3
					1				K@ Hrs				ECI				
		+	<u> </u>				T						Max	Pressure @	Shoe :		
		 			1												
		1															
-		1															
		 			1				D	AILY (COST				ULATIVE C		
										\$225.	.00			\$ 1	10,505.30		
IN ENGINEE	D And	re Skujins		CITY		Adelai	de Offi	ce				TE	LEPH	ONE	08 83	38 7266	

R M N

rilling Fluids

DRILLING FLUID REPORT

 Report #
 25
 Date :
 29-Dec-2000

 Rig No
 30
 Spud :
 5-Dec-2000

 Depth
 2570
 to
 2570
 Metres

							CONT	TD A CIT		ODE							
PERATOR		Lakes Oi						RACT	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	ODE	Crari	lanue					
EPORT FOR		Brent Sp	eechley					RT FC		John LOC				STATE			
ELL NAME	AND No						FIELI								ictoria		
		Trifon #					PEP 1			Gipp		Basin	TION		CIVI IA		
RILLING ASSEMI	BLY J	IET SIZE	CAS	SING			VOLUN			PUMP SE		CIRCULA		DATA			
SIZE TYPE			13 3/8 SURFACE SET @	856 260.9	ft M	нс	556	PITS 175	1	X 8		ches		PRESS (PSI)			psi
L PIPE TYPE	Length	L	9 5/8 INT.	4042	fı	TOTAL CI	RCULATING		L L	MODEL		ASSUMED I	7.0	BOTTOMS UP (min)			nin
E 4.5 16.6 #		2261 Mtrs	SET @	1232	M ft	 	731 IN STORAG	E		PZ8 STK		STK MIN		TOTAL CIRC.			
LL PIPE TYPE TYPE HW	1	101 Mus	LNR Set @		M	<u> </u>				700		GAL MI	N .	TIME (min) ANN VEL.	DP		min
L COLLAR SIZE	(") Length		MUD TYPE						BBL	MIN	1	GAL MI	`	(fumin)	DCs		i
6.25	208	Mirs	l K	CI PHPA	Polym		OPERTIE	s		ľ	AUD P	ROPERT	Y SPE	CIFICATIO	ONS		
a . s en E En				 -1		Pit	Pi		Mud Weight	8.5 -		Pl Filtrate		6 - 8	HPHT Filtrate	e	
SAMPLE FR									Plastic Vis	Mi	n Y	ield Point		12 - 18	рH	8.0	- 8.
DEPTH (f)				Metres				1	KCI	3 - 5	% P	HPA		=> 1.5 ppb	Sulphites	80	- 120
FLOWLINE		TURE	0	C OF								OBSE	RVAT	IONS			
WEIGHT	TEMI EICA	TC KE	pr	g SG													
FUNNEL VI	SCOSITY	(sec/at) API		°С													
PLASTIC VI			<u></u>	⁰ C													
'D POL																	
STREN			ec/10 min														
FILTRATE																	
HPHT FILT				⁰ F													
CAKE THIC			(32nd in)														
SOLIDS CO							<u> </u>										
			e) OIL/WATER														
SAND CON											9	PERATION	ONS S	<u>UMMARY</u>			
- METHYLE			(ppb equiv.)						POH								
pН									Lay down Test	tools							
ALKALINI	TY MUD	(Pm)							RIH open ended	I.							
ALKALINI		TE (Pf/M	Ŋ						Circulate and Pa	&А							
CHLORIDE	(mg/L)																
TOTAL HA		CALCIUM	(mg/L)														
SULPHITE																	
K+ (mg/L))																
KCl (% b)	y Wt.)																
PHPA ppb)				<u> </u>		<u> </u>						mp o I	POLUDATE.	N.T.		
		MU	D ACCOUNTIN)					T	SOI.	IDS CON	Cones	EQUIPME	N1 [Size	Н
FLUID BUILT &	RECEIVED		FLUID DIS	POSED	<u> </u>	SUN	MARY			Туре	nı,		-		Challer #1	3 x 175	+
mix (drill water))		Desander		INI	TIAL VOL	UME	806	Centrifuge			Desander	 		Shaker #1		+-
en ecirc from	sump)		Desilter		1				Degasser	PB		Desilter	12	ļ	Shaker #2	3 x 1 7 5	+
rill Water			Downhole	75	+ FL	UID RECI	EIVED	ļ					.1				
ect Recirc Sump			Dumped			IID LOST		75		0	orflow (nna)	Linder	flow (ppg)	Outpu	t (Gal/Min	.)
er (eg Diesel)			Shakers		+ FI	JUID IN ST	FORAGE			- 00	erflow (ppg)	Ciloci	0			
					L				Desander					0			
TOTAL REG	CEIVED		TOTAL LOST	75	FINA	L VOLUM		731	Desilter	20.437	A I M CI	6			D. PRESS.I	ΣΑΤΑ	
Product	Price	Start	Received	Used	-	Close		ost	SOLI	DS AN	PPB	.5	Int 3	elocity	D. I KESS.I	7.7.1.1	
cide	\$ 140.0	0 8		2	ļ	6	S	280.00			PPB			act force			
					1				High Grav solids				нин				
					 				Total LGS		-		HSI				
								<u></u>	Bentonite					Press Loss			
					-				Drilled Solids				_	Seat Frac I	Press	280	0
					-				Salt			L	_	iv. Mud Wt.		13.	
	ļ				-				n @ Hrs		 		ECI				
					4—				K@ Hrs		L			Pressure @	Shoe		
					-								l.viax	1 ressure W	SHUE .		
					-				 								
					 				 								
					+				 	A FT T7	COST			CIBA	ULATIVE C	OST	
									D	AILY			+-		110,785.30		
					Щ.				<u> </u>	S280	.00	· ·	LEDI			338 7266	
AN ENGINE	ER And	re Skujins		CITY	ř.	Adel	aide Offic	ce				TE	LEPH	UNE	U8 8.	338 /200	

APPENDIX 6

WELL LOCATION SURVEY

2051 446591

908901 140

KLUGE JACKSON CONSULTANTS PTY. LTD. A.C.N. 004 778 947

SURVEYORS, ENGINEERS AND ESTATE PLANNERS

Office: Our Ref:

Sale

01045-02

DIRECTORS: H. Peter Kluge John Jackson

2001

July 28th, 2001

TABLE OF SURVEY RESULTS

	Gangell - 1		Trifon - 1
AHD Level of Top of Plate	35.33		24.12
AMG Co-ordinate of Centre of steel rod.	Easting 517 204. Northing 5 759 221		Easting 516 753.18 Northing 5 760 387.27
Latitude	S 38°18'53.34	38"	S 38°18'15.54536"
Longitude	E 147°11'48.49	16"	E 147°11'29.79691"
Approximate AHD surface Level at Bore	35.0		24.5
Approximate AHD Level of Pad	35.3		24.7

Note: Table amended 28/07/2001 to include approximate pad level and surface level beside bore.

The AMG coordinates shown above are for Zone 55.

Coordinates are in AGD 66.

SALE 45 Macalister Street, SALE, Vic 3850 (P.O. Box 47) Telephone (03) 5144 3877 Facsimile (03) 5144 6591

MAFFRA 119 Johnson Street, MAFFRA Vic 3860

Telephone (03) 5147 2126

TRARALCON Suite 3/29 Breed Street,

TRARALGON Vic 3844 (P.O. Box 412)

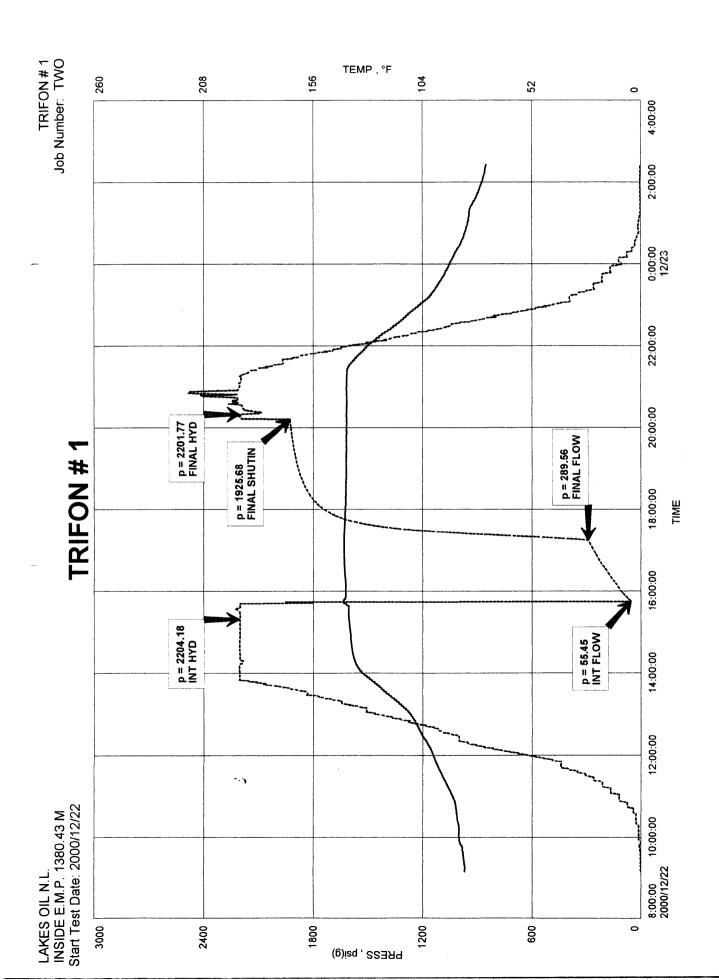
Telephone (03) 5174 4808 Facsimile (03) 5174 6969

APPENDIX 7

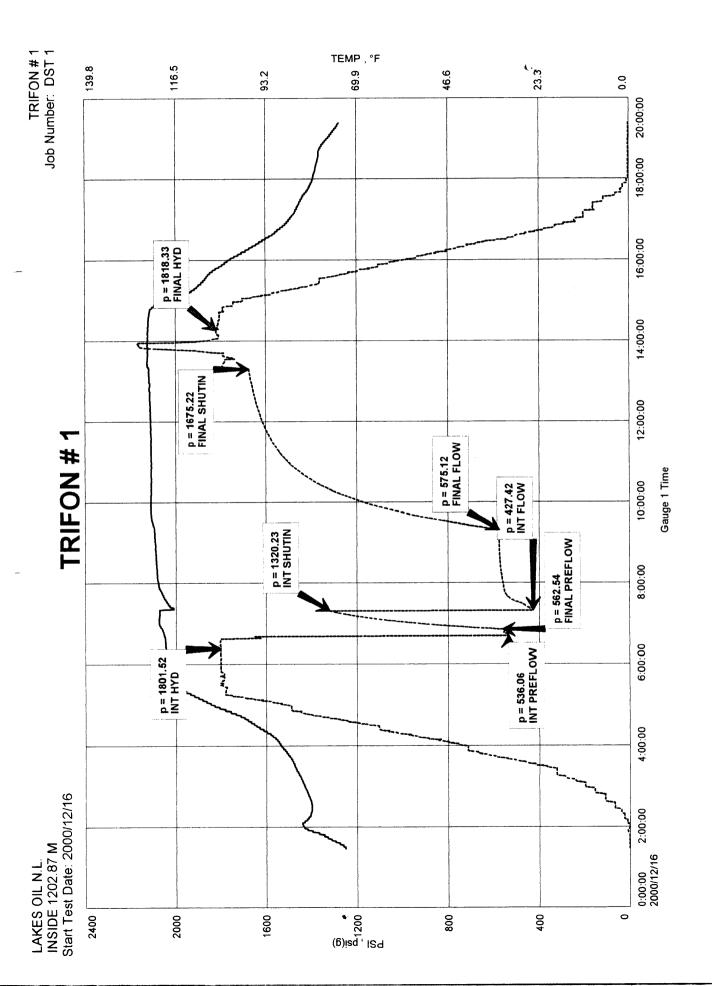
DRILL STEM TEST REPORTS by AUSTRALIAN DST

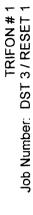


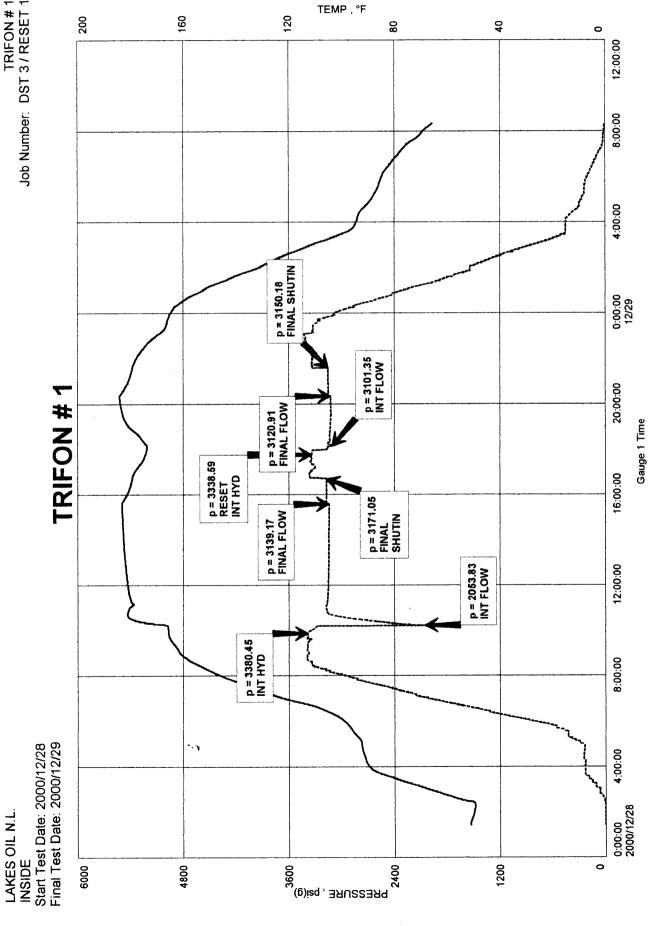
Dec-00 Ver 2.239











LAKES OIL N.L.

DRILL STEM TEST REPORT

Well:	TRIF	ON - 1	 				DS	ST N	o.:_	3		Date	e: <u>28</u>	12/20	00	
Test Int	erval :		2185	<u>:</u>		<u>2215</u> I	Formati	ion :		Strezele	cki					
Water (Cushion :					I	Rw (water cushion):				ohm/m @			°F		
Open Hole: X Cased Hole:				I	Rw (mal	ke-uj	p wat	ter) :		ohi	m/m @	_		۰F		
Type tes	st: Infla	ite straddle	- Austral	ian DS	T											
						REM	<u>IARKS</u>	}								
Time			Remarks/Pr			1	Tim 262		Chart	in 45 al 6		marks/Pre				
0	blow – (st tool for 26 Gas / Mud /	62 minute i Water to su	nitial il rface af	low – Mod fter 39 min	ierate air iutes – At	262		Snut	in tool ic	or 69 mi	nute iinai	snut-in			
	end of fl	ow Gas @ F	RTSTM & v	vater @	900 bbl/da	ay.		_		· · · · · · · ·						
							+	\dashv								
					Surface I	Flory Inf	ormotiv	C.		o PV						
Choke	GTS/F	TS	Flowing		essure		Rate			Rate	Field	d Analysis	;		Oil	,
(ins)	(min)		Time		psig)	G				Water PD)		Gas	1	API /	Pour P	't
	39		(min) 262	+			ofd) STM	\ \ \		@ 900	99	3 / 2 / Tr	+	·····		·········
	1 32		202	_L				· · · ·	V dtOI	(a) >00	1 2	27.27.11				
Da	Circulat	ad Do o	et for DST#	44 on so	me run in		covery				 					
Fluid Cl		eu Ke-s	T	ce-up V			t Mud C	heck	. 1	Flar	e line v	vater				
Density	ileiiiisti y	S.G		ce-up v	Valci	Lasi	1.09	HCCK		1 141	C IIIIC V	vator				
Viscosit	v	sec/q	1				34									
API Filt		cc/30 mir					7.2							********		
рН		strir					8.5									
Pf / Mf				/		0.05	7	0.0	65							
Chloride	es	mg/	1				14000				12000					
Total Ha		mg/l Ca	1				280									
KCl		%	5				2.5									,
Restivit	y	ohmm/n	<u>. </u>	@	۰F		@		٥F		(a)	۰F		a		۰F
		· · · · · · · · · · · · · · · · · · ·			Pn	essure R	ecorde	r Dat	a							
					ottom		attery			iddle		Тор			Elapse	
			Danish		utside) 2188	(in	1 side) 2175		(in	side) 2177		fluid) 2169	m	11	ime (m	ıın)
1	nitial Hs	drostatic l	Depth Pressure		2100		3380			3380			psig			
•	_	w - Initial		•			2054			2053			psig			
		w - Final					3139		3140				psig		262	
	1st Flow	- Shut-in	Pressure				3171	_		3178		3055	psig		325	
	2nd Flov	v - Initial I	Pressure										psig			
2nd Flow - Final Pressure										psig						
2nd Flow - Shut-in Pressure											psig			—		
	_	drostatic !					184						psig °F			
Fina	1 Bottom	-hole Tem	perature				104						· F		······	
			7			Sampl	es Take	en								
Gas:		Oil	:		Cond	ensate :			_ Wa	ater: _	1	Diss	solved l	HC _		
Sent to	:															

APPENDIX 8

GAS & WATER ANALYSIS



Amdel Limited A.C.N. 008 127 802

Petroleum Services PO Box 338 Torrensville Plaza SA 5031

Telephone: (08) 8416 5240 Fax: (08) 8234 2933

8 February 2001

Lakes Oil NL PO Box 300 Collins Street West MELBOURNE VIC 8007

Attention: Jack Mulready

REPORT LO9737

CLIENT REFERENCE:

WELL NAME/RE:

Trifon-1 DST-1

MATERIAL:

Natural gas

WORK REQUIRED:

Gas composition

AUTHOR'S NAME:

Diane Cass

Please direct technical enquiries regarding this work, to the signatory below, under whose supervision the work was carried out. This report relates specifically to the sample or samples submitted for testing.

Brian L Watson

Manager

Petroleum Services

bw.cm

 $\verb|\LISA| PETROLEUM \\ Secretary \\ | petroleum \\ DOCS \\ | 9737.doc$

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903901 150



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PETROLEUM SERVICES GAS ANALYSIS

Method GL-01-01

ASTM D 1945-91 (modified)

Client:

LAKES OIL N.L

Report # LQ9737

Sample:

TRIFON-1

DST-1, Strzelecki Fm, 1206-1274m

500 psi, 15°C

17/12/00, 0600 h, Cyl #477

GAS	MOL %
Nitrogen	0.73
Carbon Dioxide	0.00
Methane	96.56
Ethane	1.87
Propane	0.55
I-Butane	0.08
N-Butane	0.11
I-Pentane	0.02
N-Pentane	0.02
Hexanes	0.03
Heptanes	0.02
Octanes and higher h'cs	0.01
Total	100.00

(0.00 = less than 0.01%)

The above results are calculated on an air and water free basis assuming only the measured constituents are present The following parameters are calculated from the above composition at 15°C and 101.325 kPa (abs)

Average Molecular Weight	16.70
Lower Flammability limit	4.90
Upper Flammability limit	14.98
Ratio of upper to lower	3.06
Wobbe Index	50.78
Compressibility Factor	0.9979
Ideal Gas Density (Rel to air = 1)	0.577
Real gas Density (Rel to air = 1)	0.577
Ideal Nett Calorific Value MJ/m³	34.75
Ideal Gross Calorific Value MJ/m ³	38.56
Real Nett Calorific Value MJ/m ³	34.82
Real Gross Calorific Value MJ/m ³	38.64
Gross calorific value of water-saturated gas MJ/m ³	37.88

This report relates specifically to the sample submitted for analysis.

Approved Signatory

2013

Date:

Accreditation No.

02-01-01



908901 151



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PETROLEUM SERVICES GAS ANALYSIS

Method GL-01-01

ASTM D 1945-91 (modified)

Client:

LAKES OIL N.L

Report # LQ9737

Sample:

GANGELL-1

DST-3

48 psi @ 25°C

19/01/01, 1030h Cyl# 323

GAS	MOL %
Nitrogen	1.40
Carbon Dioxide	0.00
Methane	96.15
Ethane	1.63
Propane	0.51
I-Butane	0.08
N-Butane	0.10
I-Pentane	0.02
N-Pentane	0.02
Hexanes	0.04
Heptanes	0.03
Octanes and higher h'cs	0.02
Total	100.00

(0.00 = less than 0.01%)

The above results are calculated on an air and water free basis assuming only the measured constituents are present. The following parameters are calculated from the above composition at 15°C and 101.325 kPa (abs)

Average Molecular Weight	16.75
Lower Flammability limit	4.94
Upper Flammability limit	15.09
Ratio of upper to lower	3.05
Wobbe Index	50.29
Compressibility Factor	0.9980
Ideal Gas Density (Rel to air = 1)	0.578
Real gas Density (Rel to air = 1)	0.579
Ideal Nett Calorific Value MJ/m ³	34.46
Ideal Gross Calorific Value MJ/m ³	38.24
Real Nett Calorific Value MJ/m ³	34.54
Real Gross Calorific Value MJ/m ³	38.32
Gross calorific value of water-saturated gas MJ/m ³	37.57

This report relates specifically to the sample submitted for analysis.

Approved Signatory

2013

Accreditation No. Date:

07-02-01



Amdel Limited A.C.N. 008 127 802

Petroleum Services PO Box 338 Torrensville Plaza SA 5031

Telephone: (08) 8416 5240 Fax: (08) 8234 2933

31 January 2001

Lakes Oil NL PO Box 300 Collin Street West MELBOURNE VIC 8007

Attention: Jack Mulready

REPORT LO9761

CLIENT REFERENCE:

Request

WELL NAME/RE:

Trifon-1

MATERIAL:

Water sample

WORK REQUIRED:

Water analysis

AUTHOR'S NAME:

Jason Mitchell

Please direct technical enquiries regarding this work, to the signatory below, under whose supervision the work was carried out. This report relates specifically to the sample or samples submitted for testing.

Brian L Watson

Manager

Petroleum Services

Bin WHA

bw.cm

 $\verb|\LISA| PETROLEUM \\ Secretary \\ | petroleum \\ DOCS \\ | 9761.doc$

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22144



TABLE 1 - WATER ANALYSIS

WELL / ID: TRIFON-1, DST-2

SAMPLE TYPE: Water

SAMPLE POINT: Sample Chamber

DATE COLLECTED:

DATE RECEIVED: 05/01/01

JOB NUMBER: LQ9761

d) Theoretical Total dissolved salts =

(From Electrical Conductivity)

FORMATION: Strezlecki Fm

٤.

INTERVAL:

COLLECTED BY: Client

PROPERTIES:

pH (measured) = 6.8

CHEMICAL COMPOSITION

Resistivity (Ohm.M @ 25°C) =

Electrical Conductivity (μ S/cm @ 25°C) = 34600

Specific Gravity (S.G. @ 20°C) = na

Measured Total Dissolved Solids(Evap@180°C) mg/L =

Measured Total Suspended Solids mg/L =

CATIONS		mg/L	meq/L	ANIONS		mg/L	meq/L
Ammonium	as NH ₄	na	na	Bromide	as Br	na	na
Potassium	as K	4140	105.88	Chloride	as Cl	14249	401.38
Sodium	as Na	3594	156.33	Fluoride	as F	na	na
Barium	as Ba	na	na	Hydroxide	as OH	nd	nd
Calcium	as Ca	2612	140.31	Nitrite	as NO2	na	na
Iron	as Fe	na	na	Nitrate	as NO ₃	5	0.08
Magnesium	as Mg	nd	nd	Sulphide	as S	na	na
Strontium	as Sr	na	na	Bicarbonate	as HCO ₃	320	5.25
Boron	as B	na	na	Carbonate	as CO ₃	nd	nd
				Sulphite	as SO ₃	na	na
				Sulphate	as SO ₄	570	11.87
Total Cations		10346	402.52	Total Anions		15144.1	418.58

na

DERIVED PARAMETERS

a) Ion Balance	(Diff*100/Sum)	(%)	=	1.96
u, ton Dunance	(2111 100.000)	(, -)		

262

b) Total Alkalinity (calc as CaCO₃) (mg/L) = c) Total of Cations + Anions =

25490

(calculated dissolved salts)

d) Hardness (calc as $CaCO_3$) (mg/L) =

6522

QUALITY CONTROL COMMENTS

Item	Actual Value	Acceptance Crit	eria Satisfactory? (Yes/No)
Ion Balance (%) =	1.96	5%	Yes
Expected pH range		< 8.3	Yes
% difference between m	neasured total dissolved solids and		
calc total dissolved salts	s (from ionic comp) =	na 5%	na
na = not analysed			If No - what action is
nd = not detected			recommended by Amdel

nd = not detected

is = insufficent sample

Ų.,

1. INTRODUCTION

Three samples were received for water and headspace analysis on 5 January 2001. This is a formal presentation of results forwarded by facsimile, as they became available.

2. PROCEDURE

Water analysis was performed in accordance with APHA 19th edition methods.

Gas concentrations were determined by injection into a Perkin Elmer Autosystem XL gas chromatograph equipped with a packed column. Concentrations were calculated from peak areas measured with a proprietary software package and compared with peak areas taken from standard gas mixtures of known concentration injected into the same chromatograph.

3. RESULTS

Water analysis is presented on the following pages.

Headspace analysis for TRIFON-1 DST-3 is as follows:

Methane	38.4%	equales	le	N	46%	muthane,
Ethane	0.69%	V				
Propane	0.08%					
Butanes	$87\mu L/L$					
Pentanes	8μL/L					



TABLE 1 - WATER ANALYSIS

WELL / ID: TRIFON-1, DST-3

SAMPLE TYPE: Water SAMPLE POINT: DATE COLLECTED:

DATE RECEIVED: 05/01/01

JOB NUMBER: LQ9761

FORMATION: Strezlecki Fm INTERVAL: 2188-2218m

COLLECTED BY: Client

PROPERTIES:

pH (measured) =

Resistivity (Ohm.M @ 25°C) =

Electrical Conductivity (μS/cm @ 25°C) =

29100

Specific Gravity (S.G. @ 20°C) =

Measured Total Dissolved Solids(Evap@180°C) mg/L =

Measured Total Suspended Solids mg/L =

na

CHEMICAL COMPOSITION

CATIONS		mg/L	meq/L	ANIONS		mg/L	meq/L
Ammonium	as NH4	na	na	Bromide	as Br	na	na
Potassium	as K	1140	29.16	Chloride	as Cl	12746	359.04
Sodium	as Na	2956	128.58	Fluoride	as F	na	na
Barium	as Ba	na	na	Hydroxide	as OH	nd	nd
Calcium	as Ca	4444	238.72	Nitrite	as NO ₂	na	na
Iron	as Fe	na	na	Nitrate	as NO ₃	2	0.03
Magnesium	as Mg	nd	nd	Sulphide	as S	na	na
Strontium	as Sr	na	na	Bicarbonate	as HCO3	168	2.75
Boron	as B	na	na	Carbonate	as CO ₃	nd	nd
				Sulphite	as SO ₃	na	na
				Sulphate	as SO ₄	257	5.35
Total Cations		8540	396.46	Total Anions		13173	367.18

DERIVED PARAMETERS

a) Ion Balance	(Diff*100/Sum)	(%) =	3.83
b) Total Alkalir	nity (calc as CaCO3) (mg/L) =	137

d) Theoretical Total dissolved salts = (From Electrical Conductivity)

18624

c) Total of Cations + Anions =

137

21713

11097

(calculated dissolved salts)

d) Hardness (calc as $CaCO_3$) (mg/L) =

QUALITY CONTROL COMMENTS

ltem	Actual Value	Acceptance Criteria	Satisfactory? (Yes/No)
Ion Balance (%) =	3.83	5%	Yes
Expected pH range		< 8.3	Yes
% difference between n calc total dissolved salt	neasured total dissolved solids and s (from ionic comp) =	na 5%	na
na = not analysed			If No - what action is recommended by Amdel
nd = not detected			recommended by Amder
is = insufficent sample			



TABLE 1 - WATER ANALYSIS

WELL / ID: TRIFON-1, DST-3/4

SAMPLE TYPE: Water

SAMPLE POINT: Tool Chamber

DATE COLLECTED:

DATE RECEIVED: 05/01/01

JOB NUMBER: LQ9761

FORMATION: INTERVAL:

COLLECTED BY: Client

ķ٠.

PROPERTIES:

pH (measured) = 6.5

Resistivity (Ohm.M @ 25° C) = 0.34

Electrical Conductivity (μ S/cm @ 25°C) = 29200

Specific Gravity (S.G. @ 20°C) = na

Measured Total Dissolved Solids(Evap@180°C) mg/L =

Measured Total Suspended Solids mg/L = na

CHEMICAL COMPOSITION

CATIONS		mg/L	meq/L	ANIONS		mg/L	meq/L
Ammonium	as NH4	na	na	Bromide	as Br	na	na
Potassium	as K	1160	29.67	Chloride	as Cl	12873	362.62
Sodium	as Na	4820	209.66	Fluoride	as F	na	na
Barium	as Ba	na	na	Hydroxide	as OH	nd	nd
Calcium	as Ca	3082	165.56	Nitrite	as NO2	na	na
Iron	as Fe	na	na	Nitrate	as NO ₃	4	0.06
Magnesium	as Mg	nd	nd	Sulphide	as S	na	na
Strontium	as Sr	na	na	Bicarbonate	as HCO ₃	161	2.64
Boron	as B	na	na	Carbonate	as CO ₃	nd	nd
				Sulphite	as SO ₃	na	na
				Sulphate	as SO ₄	230	4.79
Total Cations		9062	404.88	Total Anions		13268	370.11

na

DERIVED PARAMETERS

a) Ion Balance	(Diff*100/Sum)	(%)	=	4.49
b) Total Alkalin	ity (calc as CaCO3) (mg/L	.) =	132

22220

(From Electrical Conductivity)

d) Theoretical Total dissolved salts =

18688

c) Total of Cations + Anions =

22330

(calculated dissolved salts)

d) Hardness (calc as $CaCO_3$) (mg/L) =

7696

QUALITY CONTROL COMMENTS

Item	Actual Value	Acceptance Criteria	Satisfactory? (Yes/No)
Ion Balance (%) = Expected pH range	4.49	5% < 8.3	Yes Yes
% difference between m calc total dissolved salts	easured total dissolved solids and (from ionic comp) =	na 5%	na

na = not analysed

nd = not detected

is = insufficent sample

If No - what action is recommended by Amdel

APPENDIX 9

PALYNOLOGY REPORT

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BIOSTRATA PTY LTD

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20th February 2001

Our ref: PR21/03

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Page 1 of 1

Trifon-1 — Provisional Report No. 1

This report provides initial palynological results on four SWC samples collected on 6th February and forwarded to Laola Pty Ltd in Perth the next day. The prepared palynological slides where returned on 20th February and analysed to provide the following zone and age determinations:

Sample Type	Depth (m)	Spore-Pollen Zone STAGE/AGE	Comments and Key Species Present
SWC 30	1241	Upper(?) C. paradoxa Mid to Late ALBIAN	Assemblage dominated by spores 54%, with the majority assigned to <i>Cyathidites</i> spp. 28%. Rare specimens of <i>Coptospora paradoxa</i> confirm zone assignment while the tentative identification of <i>Pilosisporites grandis</i> suggests the sample belongs to the Upper subzone.
SWC 22	1477	Early Cretaceous Probably C. paradoxa	Although clearly an assemblage from the Strzelecki Group key zone index species were not recorded during this initial examination.
SWC 12	1778	C. paradoxa Mid to Late ALBIAN	Assemblage dominated by gymnosperm pollen 78%, but containing rare specimens of index species <i>Coptospora paradoxa</i> .
SWC 1	2130	Crybelosporites striatus Early ALBIAN	Assemblage dominated by spores 82%, including <i>Ruffordiaspora australiensis</i> 10%. No older than the <i>Crybelosporites striatus</i> Zone based on rare & poorly preserved specimens of the eponymous species.

Discussion: All samples gave good yields with high concentrations of spore-pollen and rare non-marine algal cysts, and all belong to the upper part of the Early Cretaceous Strzelecki Group. The possibility that the shallowest SWC at 1241m might belong to the "Golden Beach Group" is dismissed as untenable based on the recovery of a diverse Mid to Late Albian spore-pollen assemblage.

Prepared by Alan D. Partridge

Palynological analysis of four sidewall cores from the Strzelecki Group in Trifon-1, onshore Gippsland Basin.

by

Alan D. Partridge

Biostrata Pty Ltd A.C.N. 053 800 945 A.B.N. 39 053 800 945

Biostrata Report 2001/10 26th February 2001

Palynological analysis of four sidewall cores from the Strzelecki Group in Trifon-1, onshore Gippsland Basin.

by Alan D. Partridge

INTERPRETATIVE DATA

Summary.

Four sidewall core samples over an interval of 890 metres were analysed for palynology from the Strzelecki Group in the Trifon–1 well located in the Seaspray Depression onshore Gippsland Basin. The three shallowest samples between 1241 and 1778m are assigned to the *Coptospora paradoxa* spore-pollen Zone, while the deepest sample at 2130m is assigned to the slightly older *Crybelosporites striatus* spore-pollen Zone. The interval sampled is assigned an Albian age.

Introduction.

The samples were collected on Tuesday 6th February 2001 and forwarded to Laola Pty Ltd in Perth for palynological processing. The prepared palynological slides were returned on 20th February and the initial results provided in a provisional palynological report prepared the same day. Final results are provided below in Table 1.

The four samples were selected from a suite of 29 sidewall cores recovered from the Strzelecki Group. They were chosen to provide a relatively even spacing, and also sample the most favourable lithologies for palynology (Table 3). Between 6 and 11 grams of rock was processed, with all samples giving high yields and high concentrations of palynomorphs. Preservation was mainly poor to fair, with the shallowest sample having the best preservation. Recorded species diversity averaged 39+ spore-pollen species and 2+ microplankton species per sample (Table 4). A listing of all species recorded and their relative abundance is provided in Table 5. Author citations for the species names can be sourced from Dettmann (1963, 1986), Helby *et al.* (1987) for spore-pollen, and from the index compiled by Fensome *et al.* (1990) for acritarch and algal species.

Geological Discussion.

All four sidewall core samples contain diverse spore-pollen and limited non-marine microplankton assemblages characteristic of the Strzelecki Group. The possibility that part of the interval may belong to the younger Emperor and Golden Beach Subgroups of the Latrobe Group cannot be supported, as none of the species recorded nor their abundances in the assemblages are considered diagnostic of these younger units.

The thickness and subsurface depth at which the zones are encountered in Trifon-1 are also consistent with available palynological data from the Strzelecki Group in adjacent wells, as provided in the following table:

Table 1. Comparison of Strzelecki Group zones in adjacent wells.

Well Name	Strzelecki Group Top	C. paradoxa Zone Top	C. paradoxa Zone Base	C. striatus Zone Top	C. striatus Zone Base	T.D.
Burong-1	1235m	1256m		NP	NP	1260m
Darriman-1	1291m			? 1364m		1442m
Dutson Downs-1	>1786m			? 1810m	1835m	1862m
East Reeve-1	1440m			? 1508m	1600m	1622m
Gangell-1				2115m	2350m	
Lake Reeve-1	1838m	1858m				2022m
North Seaspray-1	1104m	1113m	1500m†	NP	NP	1524m
Salt Lake-1	1571m	NP	NP	NP	NP	1644m
Seaspray-1	1384m	1460m	1693m†	NP	NP	1693m
Trifon-1		1241m	1778m†	2130m		
Wellington Park-1	1158m	1163m	1387m	Present	Present	3661m
Woodside-1	1200m		1815m†	NP	NP	1831m
Woodside-2	1112m	1254m	1258m	? 1521m	2101m	2701m
Woodside-3			1636m†	? 1745m		1824m
Woodside South-1	985m		1006m	? 1063m		1773m

† Most reliable data on base of zone. NP = Not penetrated.

In the fifteen wells tabulated the top of the Strzelecki Group is penetrated at depths of between 985 and 1835m. In most of the wells the *C. paradoxa* Zone is found immediately below the unconformity. The obvious exceptions are the Darriman–1 and Salt Lake–1 wells, which have very old palynological analyses, and the Dutson Downs–1 and East Reeve–1 wells, which although containing more recent analyses are both characterised by rather poor assemblages. The latter two wells have previously been interpreted to penetrate the older *C. striatus* Zone below

the unconformity, but considering that the critical index species for the *C. paradoxa* Zone are often rare and difficult to find, the assemblages recorded could easily be younger. An example of this problem is the sample recorded herein at 1477m in Trifon–1, which although thoroughly examined lacked the index species for both the *C. paradoxa* and *C. striatus* Zones.

In those wells where the data is most reliable the base of the *C. paradoxa* Zone lies between 1500 and 1815m, with most of the wells reaching T.D. while still within the zone. Considering that the maximum confirmed thickness for *C. paradoxa* Zone is the >540 metres recorded in Trifon-1, and that the cumulative effects of all errors is to make the zone thinner, it quite conceivable that only the five deepest wells listed (i.e. Gangell-1, Lake Reeve-1, Trifon-1, Lake Wellington Park-1 and Woodside-2) penetrated significant thickness of older section.

Finally, no reliable and recent palynological data appears to be available for the Strzelecki Group in the wells Carrs Creek–1 (T.D. 1679m), Darriman–1 (T.D. 1422m), Keystone–1 (T.D. 1960m), McAlister–1 (T.D. 1452m), North Seaspray–2 (T.D. 1633m), and Wonga Binda–1 (T.D. 1394m). Of these wells the most likely to reach older section than the *C. paradoxa* Zone are Carrs Creek–1, Keystone–1 and North Seaspray–2.

Description of Assemblages

Coptospora paradoxa spore-pollen Zone

Interval: 1241 to 1778 metres

Age: Middle to Late Albian

The top and the bottom sidewall cores over the this interval are assigned to the zone on the presence of rare but well preserved specimens of the eponymous species *Coptospora paradoxa* following the zone definition of Dettmann & Playford (1989) and Helby *et al.* (1987). In addition, the occurrence in the shallowest sidewall core, of rare specimens of *Cicatricosisporites pseudotripartitus* and *Perotrilites majus*, and the tentative identification of *Pilosisporites grandis* suggests that this sample belongs to the Upper subzone. The middle sample surprisingly lacks *Coptospora paradoxa*, *Crybelosporites striatus*, and all other associated index species and therefore could easily be mistaken for an assemblage from the older *C. hughesii* Zone. It is assigned to the *C. paradoxa* Zone solely on superposition

The assemblage composition of the three samples differs significantly as is often the case with non-marine spore-pollen assemblages (Table 5). The only linking feature is the common occurrence of *Podocarpidites* which averages 25%. All samples contain fossil algae, of which the most frequently occurring species is small (<20µ) *Sigmopollis carbonis*, which is related to morphologically similar Holocene algae occurring in eutrophic to mesotrophic freshwater environments (Srivastava, 1984).

Crybelosporites striatus spore-pollen Zone

Sample at: 2130 metres

Age: Early Albian

The deepest sidewall cores is assigned to the zone on rare presence of the eponymous species *Crybelosporites striatus* in an assemblage dominated by spores (82% of spore-pollen count). The presence of *Foraminisporis asymmetricus* and absence of *Cyclosporites hughesii* and *Cooksonites variabilis* supports the zone assignment. Non-marine microplankton are represented by rare specimens of *Sigmopollis carbonis*, *S. hispidus* and the colonial algae *Botryococcus braunii*.

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Table 2: Interpretative data from Trifon-1, Gippsland Basin.

Sample Type	Depth metres	Spore-Pollen Zone or (Subzone)	CR*	Comments & Key Species Present
SWC 30	1241	Upper (?) C. paradoxa	В1	LADs of <i>Coptospora paradoxa</i> and other Early Cretaceous species in assemblage dominated by spores 54% confirm top of Strzelecki Group, while the tentative identification of <i>Pilosisporites grandis</i> suggests the sample belongs to the Upper subzone.
SWC 22	1477	C. paradoxa	B5	Relatively low diversity sample lacking key index species that is assigned to <i>C. paradoxa</i> Zone on superposition. Assemblage dominated by spores 71%.
SWC 12	1778	C. paradoxa	В1	FAD of <i>Coptospora paradoxa</i> in assemblage dominated by gymnosperm pollen 78%.
SWC 1	2130	C. striatus	B1	FAD of <i>Crybelosporites striatus</i> in assemblage dominated by spores 82%, including common <i>Ruffordiaspora australiensis</i> at 10%.

Spore & Pollen % = abundance expressed as % of SP count only. FAD & LAD = Last & First Appearance Datums.

*Confidence Ratings used in STRATDAT database and applied to Table 2.

Alpha codes: Linked to sample			neric codes: ted to fossil assemblage	
A	Core	1	Excellent confidence:	High diversity assemblage recorded with key zone species.
В	Sidewall core	2	Good confidence:	Moderately diverse assemblage recorded with key zone species.
С	Coal cuttings	3	Fair confidence:	Low diversity assemblage recorded with key zone species.
D	Ditch cuttings	4	Poor confidence:	Moderate to high diversity assemblage recorded without key zone species.
E	Junk basket	5	Very low confidence:	Low diversity assemblage recorded without key zone species.

BASIC DATA

Table 3: Basic sample data from Trifon-1, onshore Gippsland Basin.

Sample Type	Depth metres	Lithology	Wt (grams)	VOM (cc)	Org. Yield
SWC 30	1241	Claystone very dark green-grey, soft to firm.	11.3	0.4	0.035
SWC 22	1477	Claystone very dark grey- green to black-brown, firm.	10.4	0.4	0.038
SWC 12	1778	Claystone very dark grey- green, soft to firm.	9.4	2.6	0.276
SWC 1	2130	Claystone light to moderate grey to grey- green, soft to firm.	6.5	0.5	0.076

Wt = Weight of sample processed in grams.

VOM = Volume of wet organic residues in cubic centimetres recovered from sample.

Org. Yield = VOM divided by Wt.

Table 4: Basic assemblage data from Trifon-1, onshore Gippsland Basin.

Sample Type	Depth metres	Visual Yield	Palynomorph Concentration	Preservation	No. SP Species	No. MP Species
SWC 30	1241	High	High	Fair-Good	57+	3+
SWC 22	1477	High	High	Poor-Fair	33+	2+
SWC 12	1778	High	High	Poor	27+	2+
SWC 1	2130	High	High	Poor-Fair	39+	2+

Averages:

39+

2+

Table 5. Species distribution list for Trifon-1, onshore Gippsland Basin.

Sample Type:	SWC 30	SWC 22	SWC 12	SWC 1
Depth (metres):	1241	1477	1778	2130
SPORE-POLLEN				
Aequitriradites spinulosus	X	0.8%	X	
Aequitriradites verrucosus	X		X	
Aequitriradites sp.	X	X	X	X
Annulispora folliculosa/microannulata		RW		RW
Antulisporites varigranulatus	RW			
Aratrisporites spp.	RW	RW		X
Araucariacites australis	3.3%	X	21.5%	
Baculatisporites spp.	1.9%	2.4%	4.7%	0.7%
Balmeisporites holodictyus	X		cf.	
Caliallasporites dampieri				X
Ceratosporites equalis	0.5%	1.6%	1.9%	0.7%
Cicatricosisporites pseudotripartitus	X			
Coptospora paradoxa	X		X	
Corollina torosa	1.9%	0.8%		
Crybelosporites striatus	0.5%		X	0.7%
Crybelosporites berberoides	X			
Cupressacites sp.	1.4%		X	
Cyathidites asper	X	Х		
Cyathidites australis	2.8%	1.6%	0.9%	5.9%
Cyathidites minor	25.6%	12.2%	4.7%	39.2%
Cyathidites punctatus	X		X	
Cycadopites nitidus		4.1%		0.7%
Densoisporites velatus	X			
Dictyophyllidites spp.	1.4%	5.7%	X	2.6%
Dictyotosporites complex	X			
Dictyotosporites speciosus		X		X
Dulhuntyispora parvithola	RW			
Falcisporites australis	RW	RW		
Falcisporites grandis	X	X		X
Falcisporites simplis				X
Foraminisporis asymmetricus	X		X	0.7%
Foraminisporis dailyi	X			
Foveosporites cannalis	X	X		X
Foveosporites parvietrus	X	11		
Gleicheniidites circinidites	1.9%		0.9%	2.0%
Horriditriletes ramosus	RW	RW	0.570	2.070
Klukisporites scaberis	X	1000		X
Kraeuselisporites spp.	2 k	RW		
Laevigatosporites ovatus	0.9%	2.77	X	
Leptolepidites verrucatus	0.5%		- *	1.3%
Marattisporites scabratus	J.U/0	X		1.0/0
-	X	7.		X
Matonisporites cooksoniae Microcachryidites antarcticus	7 14.4%	X	20.6%	2.6%
Neoraistrickia truncata	X	X	Z0.070 X	0.7%
Osmundacidites wellmanii	3.3%	10.6%	3.7%	5.9%

Table 5. Species distribution list for Trifon-1, onshore Gippsland Basin.

Sample Type:	SWC 30	SWC 22	SWC 12	SWC 1
Depth (metres):	1241	1477	1778	2130
SPORE-POLLEN				
Perotrilites majus	X			
Pilosisporites grandis	cf			
Pilosisporites notensis		0.8%		
Plicatipollenites spp.	RW			
Podocarpidites spp.	18.6%	24.4%	32.7%	13.7%
Polycingulatisporites clavus	X			X
Protohaploxypinus spp.	RW	RW		RW
Pseudoreticulatispora pseudoreticulata		RW		
Reticulatisporites pudens				X
Retitriletes spp.	8.8%	3.3%	2.8%	2.0%
Retitriletes austroclavatidites	X	X	_,,,,	X
Retitriletes circolumenus	X			X
Retitriletes eminulus	11		X	X
Retitriletes facetus				X
Retitriletes nodosus	X		X	
Retitriletes riodosas Retitriletes semimuris	cf.		11	
Ruffordiaspora australiensis	3.7%	10.6%	0.9%	10.5%
Stereisporites antiquisporites	0.7%	17.1%	1.9%	7.8%
Stereisporites unuquisporites Stereisporites pocockii	0.570	X	1.570	X
Sulcosaccispora alaticonformis		71		cf.
	5.6%		2.8%	0.7%
Trichotomosulcites subgranulatus	1.9%	4.1%	2.070	1.3%
Trilete spores undiff. Triporoletes reticulatus	1.970 X	7.170		1.070
-	X			
Vallizonosporites sp.	X			
Velosporites triquetrus	0.5%			0.7%
Vitreisporites signatus	54%	71%	22%	82%
Total Spores:	54% 46%		22% 78%	18%
Total Gymnosperms:		29%		
Total Spore-Pollen Count:	215	123	107	153
MICROPLANKTON	0.50/	0.007	1 00/	
Microplankton undiff.	0.5%	0.8%	1.8%	
Circulisporites parvus	**	X		
Micrhystridium sp. A.	X			
Shizophacus rugulatus	X	1.60/	0.00/	37
Sigmopollis carbonis	1.4%	1.6%	0.9%	X
Sigmopollis hispidus	_	_	1.8%	X
Total Microplankton Count:	4	3	5	
Microplankton % of total SP & MP:	1.9%	2.4%	4.5%	
Total SP and MP COUNT:	219	126	112	153
OTHER PALYNOMORPHS				
Botryococcus braunii				0.6%
Fungal spores/hyphae		X	2.6%	
Reworked Fossils	0.5%			
TOTAL COUNT:	220	126	115	154

PE605304

This is an enclosure indicator page.

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                    Enclosure 1, Part 1 contained within
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   DATE PROCESSED = 28-FEB-2001
   DATE_RECEIVED = 02-NOV-2001
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           AUTHOR =
       ORIGINATOR = Lakes Oil NL
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(Inserted by DNRE - Vic Govt Mines Dept)

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PE605529

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                    PEP157. Enclosure 2 contained within
                    "Well Completion Report" [PE908901].
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   DATE_PROCESSED =
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           AUTHOR =
       ORIGINATOR = Lakes Oil NL
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     BOTTOM DEPTH = 2570
   ROW_CREATED_BY = DN07_SW
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