

Essential Petroleum Resources Limited

**PEP 152
ONSHORE OTWAY BASIN, VICTORIA**

WELL COMPLETION REPORT

Port Fairy 1

January 2003



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1 SUMMARY

Port Fairy 1 was drilled as an exploration well. The well is located approximately 3.5km north of Port Fairy township as shown on Figure 1. The primary exploration objectives were to test for commercial gas in sandstones of the Waarre and Flaxman Formations. Sandstones in the Nullawarre Greensand and the Pebble Point Formation were secondary objectives.

The Port Fairy structure is a northeast trending anticline with crestal faulting. Closure is mapped at the top of the Waarre Formation and at the top Pebble Point Formation. Other target horizons were also expected to be closed at the drilling location. The location of the well on the structure is shown on Figure 2. A near-crestal location was chosen at VP 345 on seismic line OBE00-01. The location was chosen to coincide with a seismic AVO anomaly. The location was shifted approximately 200m west to avoid boggy surface conditions.

Port Fairy 1 was drilled in January 2002. Mitchell Drilling Rig 50 proved ideal for the project; with capacity for drilling with both air and mud with minimal rig-up time, having low visual and noise impact, and requiring a relatively small drill pad.

The surface basalt was air drilled effectively and a 13³/₈" conductor was cemented at 67.4m. 12 1/4" hole was drilled to 821m and cased with 9⁵/₈" casing. The remainder of the hole to total depth of 1550m was drilled at 8 1/2". High rates of penetration were achieved with a PDC bit. All drilling and casing operations proceeded without significant delays.

Formation tops were intersected approximately as prognosed. Sandstone, and porosity in the target Flaxman/Waarre zone was very poorly developed although good gas shows were recorded. A high gas background continued into the upper Eumeralla Formation. Log interpretations showed potential gas saturation through the Flaxman/Waarre/upper Eumeralla interval, but with low porosities, and also in sands in the Paaratte Formation where gas shows had not been detected while drilling.

A program of straddle testing was undertaken, but repeated plugging of the DST tools prevented flow testing of the target zones. The well was cased with 7" casing, and suspended for further evaluation. The Mitchell Drilling rig was demobilised on 24 January 2002.

The evaluation program was commenced from 18 March 2002 using a mobile crane and an Imperial Snubbing 2⁷/₈" snubbing unit. A velocity survey (held over from the original logging program) was carried out prior to well testing. Two zones were perforated and tested (1406m – 1402m, 1443m – 1452m) in the uppermost Eumeralla Formation and produced 5.4 barrels of water over a 1 hour interval. A zone in the upper Paaratte Formation (862m – 866m) flowed fresh water to surface at a stable rate of 240 BWPD. The rig was released on March 26, 2002.

Testing was recommenced with Schlumberger on 7 August 2002. The completion fluid in the tubing was swabbed down to ~591m. Three short intervals in the Flaxman Formation in the zone 1347m – 1358m were perforated. Perforations at 1356.5 to 1358.0m were monitored for 15 minutes with no increase in wellhead pressure. After sitting overnight the fluid level in the wellbore had risen to 529m, there was an air blow (no gas) at the wellhead. The interval 1352.5m to 1354 was perforated with a 2 psi pressure rise noted at the wellhead. Fluid had risen to 518m. The zone 1347m to 1348m was perforated with a 1 psi pressure increase noted at the wellhead. The fluid level was ~520m. The well was swabbed to catch a sample. A black residue in water was analysed and found to be

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lubricating oil. The well was left suspended on 10 August pending a decision on future testing.

The well was inspected on 16 September 2002 and a pressure of 900 psi was recorded on the wellhead. The well was flared and gas samples were taken. A static pressure gradient survey on 22 September showed approximately 223m of gas, 15m of oil and 1120m of completion brine in the tubing (measured from the base of the perforated interval at 1358m). Swabbing of the well on 23 September produced samples of light 52° API oil. The wellhead pressure returned to 900 psi.

The well has been resuspended pending further engineering, petrophysical and seismic interpretation studies.

2 WELL HISTORY

2.1 GENERAL DATA

General well data are given in Table 1, and the location shown in Figures 1 & 2.

Table 1: General well data

Well name:	Port Fairy 1
Classification:	Exploration
Permit operator:	Oil Company of Australia Limited
Well operator	Essential Petroleum Resources Limited
Basin:	Otway, onshore western Victoria
Lease:	PEP 152
Seismic location:	Line OBE00-01, Shotpoint 345, location offset 200m west.
Coordinates:	Latitude 38° 21' 38.40"S, Longitude 142 12'49.03"E Easting 606, 030.35m, Northing 5,753,470.16m, MGA Zone 54
Datum:	GDA94
Elevation:	Ground Level (GL): 7.67 metres AHD Rotary Table (RT): 12.09 metres AHD (All depths relate to RT unless otherwise stated)
Property owner:	Bill McClaren, Tayfield Station
Nearest town:	The coastal township of Port Fairy, approximately 3.5 km south of the well.
Nearest well:	Government water bore Belfast 4, approximately 4km SSE of the well.
Measured depth	Driller: 1550.0 m
	Logger: 1523.0 m (logger could not reach TD)
Spud date:	07:00 hours January 9, 2002.
TD reached:	18:30 hours January 18, 2002.
Days to Drill:	9.5 days
Date suspended:	04:00 hours, January 24, 2002.
Drill rig released:	12:00 hours January 24, 2002.
Testing commenced:	07:00 March 19, 2002
Testing completed:	18:00 September 24, 2002
Well status:	Suspended oil & gas well.

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Figure 1: Port Fairy Top Waarre Formation Two Way Time

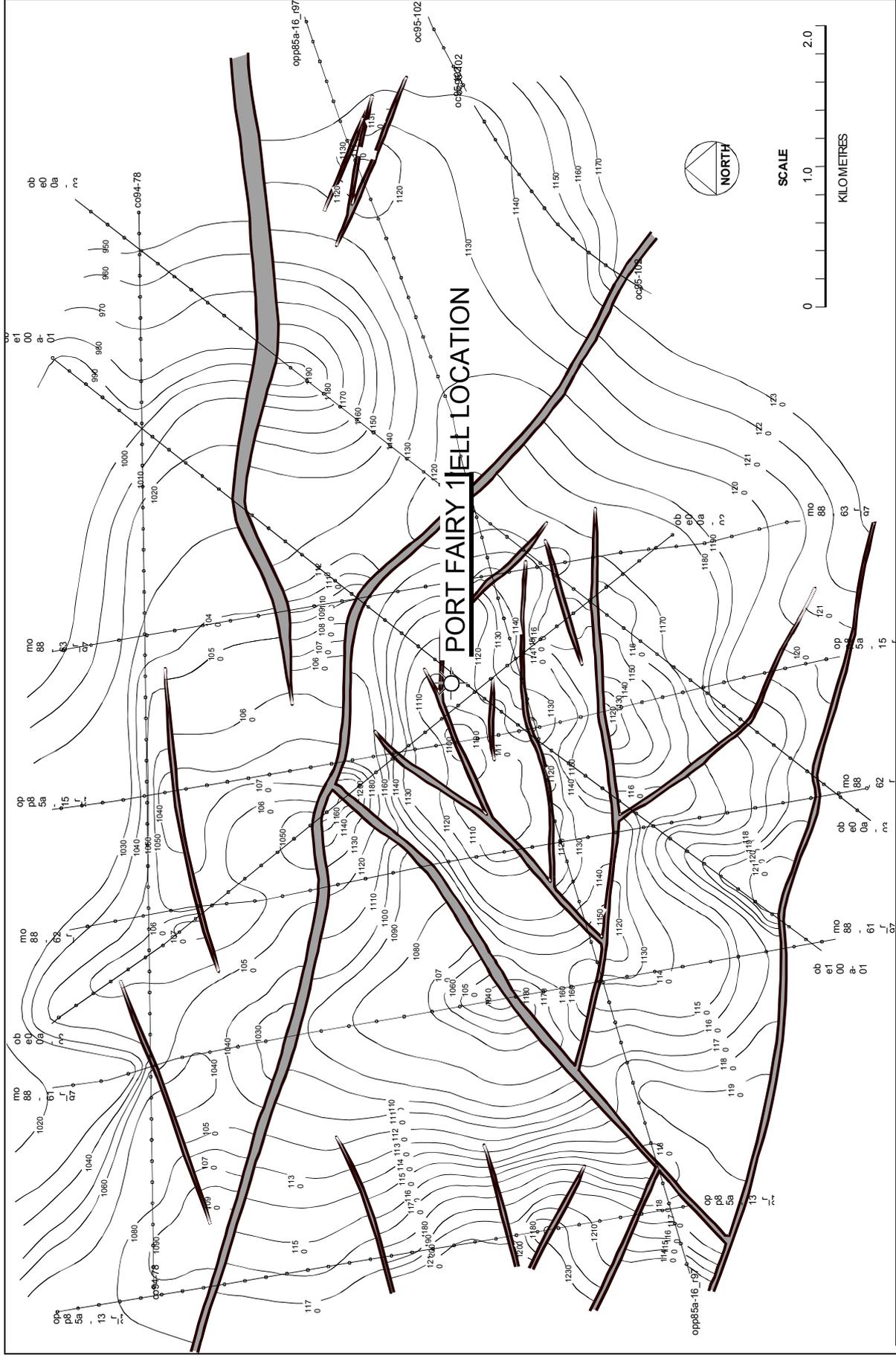
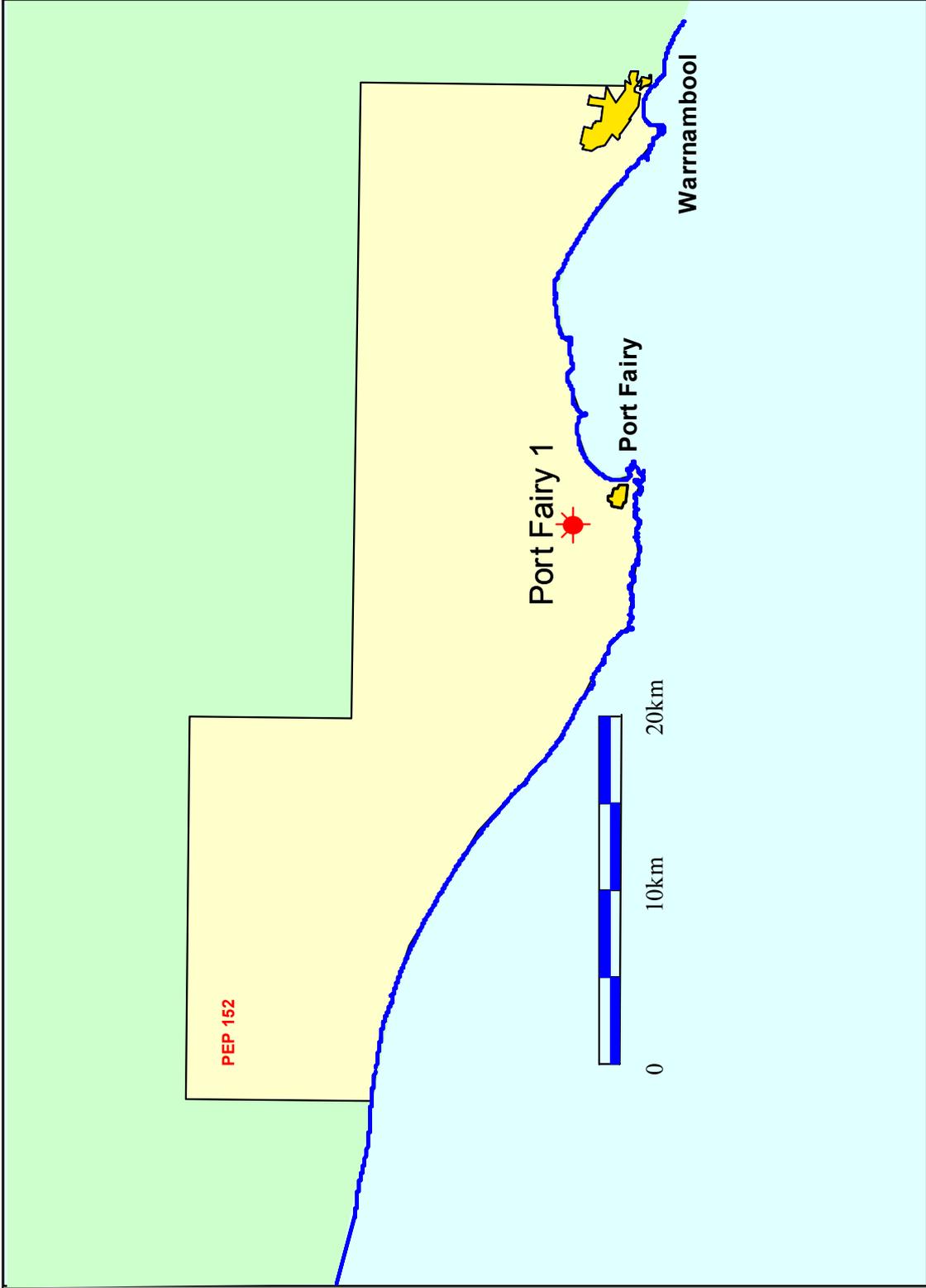


Figure 2: Port Fairy Well Location



2.2 CONTRACTORS

Table 2: List of Contractors

Service	Contractor
Project Managers	Essential Petroleum Resources Limited
Drilling	Mitchell Drilling and Exploration
Location Survey	Paul Crowe, Licensed Surveyor
Site Construction	Walter Mellis
Water Supply	Trucked in by Walter Mellis
Fuel Supply	Supplied by Drilling Contractor
Cementing	Dowell
Mud System - Drilling Fluids - Solids Control	IDFS Via Drilling Contractor
Mud Logging	Geoservices
Electric Logging	Schlumberger
Drilling Tools	Tasman Oil Tools
Casing Services	Drilling Rig
Drill Stem Testing	Australian DST
Casing & Tubing	Itochu
Wellheads And Equipment	Cameron Iron Works
Workover Rig	Imperial Snubbing
Completion Services - Slickline - Completion Components - Perforating - Lubricator	- Expertest - Expertest - Schumberger
Well Testing	Expertest
Environmental - Waste Disposal	Transwest Environmental
Accommodation	Town accommodation. (Port Fairy)
Trucking	Dehne Transport
Crane Services	Timboon Engineering
Communications - Landlines - E Mail/Internet	- Telstra - Via EPRL server

3. ENGINEERING DATA

3.1. WELL STATUS

Figure 3 illustrates the suspended condition of the well as at December 2002.

3.2. OPERATIONAL SUMMARY

3.2.1. Logistics and Planning

Essential Petroleum Resources (EPRL) managed drilling on behalf of the PEP152 Joint Venture. Materials and logistics were managed out of the EPRL offices and from the Port Fairy wellsite.

Mud and cement chemicals were supplied by Independent Drilling Fluid Services, from their Cheltenham facility.

3.2.2. Site Preparation

Site construction for Port Fairy 1 commenced in December 2001. The original selected position (SP 345 on line OBE00a-01) was unsuitable as the land had been subdivided for housing and was also boggy from recent rains. The site was shifted 200m to the west side of Blackwood Road.

Fencing and lockable gates were installed. Pits were dug and the site was sheeted with gravel. Hard rock (basalt) at surface limited the depth of the water storage pits. The size of the location was kept relatively compact, as the rig required a small footprint and no rig camp.

Of particular concern throughout construction was adherence to the environmental management plan for the project, which stressed the minimisation of noise and dust levels.

3.2.3. Mobilisation

Mitchell Rig 50 was mobilised from Queensland on January 3 after completion of necessary modifications to the mud system. Mobilisation was timed to avoid the road congestion of the immediate Christmas-New Year period.

The mobilisation to the rigsite was completed in 4 days.

3.2.4. Pre Spud

The Port Fairy 1 pre-spud meeting was held at the rig site at 19:00 on January 8, 2002.

3.2.5. 17 ½" Hole Section

Port Fairy 1 was spudded at 07:00 hrs on the January 9, 2002. The 17½" hole section was initiated with a 20" drag bit to drill the soil above the basalt. A 12 ¼" pilot hole was then air-hammered to 14.5m. Attempts to ream the pilot hole with the drag bit were unsuccessful. A 20" conductor was set to 6.5m and the diverter rigged up. The pilot hole was reamed at 17 ½" diameter with an air hammer to 14.5m and then drilled ahead to 31.5m. Caving sand below the base of basalt at 28m prevented further air drilling. The air hammer was laid down and 23 sacks neat cement was spotted on bottom. After waiting on cement and rigging up mud tanks 17 ½" hole was drilled ahead with no returns to 55m and partial water returns to 78.2m. The 13 ⅜" conductor was run to 67.4m and cemented with neat class G cement.

3.2.6. 12 1/4" Hole section

Cement was tagged at 57.9m inside the conductor pipe. The 12 1/4" hole section was drilled from 78.2 to 821m with water/gel mud. High instantaneous rates of penetration were achieved. With only one mud pump available, the large cuttings load caused mud rings in the annulus and cutting blockages in the flow line. The flow line was modified to add cleaning jets, and the drill pipe was worked briefly prior to connections to prevent cuttings build-up. The mud was continually diluted to counter viscosity increases due to the native clays and limestone, and treated with SAPP to counter the mud rings. Enerseal lost circulation material (LCM) was used during drilling of the Dilwyn Formation aquifer to ensure minimal contamination of the formation. No losses were experienced.

Further minor time losses were caused by the mud pump losing prime in the section 500 – 687m. LCM in the mud probably contributed to this problem. At 817.5m a wiper trip was carried out. No fill was encountered. The hole was deepened to 821 during the wiper trip to better accommodate the 9 5/8" casing measurement.

Hole deviation in the upper part of the 12 1/4" section was stable at 1°. A survey at 821m was a misrun.

3.2.7. 9 5/8" Intermediate String

A string of 9 5/8" L80 47 ppf BTC casing was run to a shoe depth of 812m. The string was cemented to surface with 200% annular volume of class G cement and displaced with 195 BBL mud. Good cement returns to surface were noted. Plugs were bumped with 1300psi.

3.2.8. 8 1/2" Hole Section

The BOPs were nipped up and tested successfully at 250 and 2500psi without incident. The float and shoe were drilled out and formation drilled to 824m. A leak-off test was performed. Leak-off was recorded at 620 psi, equivalent to mud weight of 13.5ppg. The hole was displaced to PHPA mud. A survey of 3 1/2° was recorded at 824m. 8 1/2" hole was drilled ahead to 1327m with a PDC bit. Flow check and sample circulation was carried out to evaluate a drilling break at 865m. A survey of 3 1/2° was recorded at 1044m. The mud weight was increased to 9.5ppg. Rate of penetration decreased below 1236m and the bit was pulled at 1327m. The PDC bit was in good condition. The low ROP was attributed to poor face cleaning.

A new tricone bit was reamed to bottom and drilled 8 1/2" hole to 1550m TD. Samples were circulated at 1343 and 1351m. The hole was logged successfully. Straddle drillstem tests were attempted unsuccessfully. As the zones could not be properly evaluated in open hole by DST the hole was completed for testing through casing.

3.2.9. 7" Production String

A string of 7" J55 BTC casing was run to a shoe depth of 1536m. The string was cemented, to a theoretical depth of 660m RT plus 40% excess, with class G cement and displaced with 199 BBL mud. Plugs were bumped with 3000psi.

During rigging down of the cementing gear the well started to flow. The annular BOP was closed. A stable shut in pressure of 13psi was observed. The pressure bled off and the well was observed to be stable.

3.3 DAILY OPERATIONS

3.3.1 Daily Drilling Reports

The details of the daily activities during rig up and drilling operations for the Port Fairy 1 well are presented in the Daily Drilling reports in Appendix 2.

3.3.2 Time Performance

The time – depth curve for Port Fairy 1 is presented in Figure 3 and a time breakdown presented in Table 2 and Figure 4. Problems due to DST failures at the end of the hole were the most significant cause of delays. Drilling, logging and casing operations were carried out without significant problems. Some delays were incurred dealing with mud rings and poor cuttings clearance, and pump suction problems from LCM in the 12 ¼” section. An unscheduled bit change in the 8 ½” section was due to the PCD bit balling up.

Table 3: Time Breakdown – drilling phase

OPERATION	Days	%
Drill actual	3.17	21%
Reaming	0.71	5%
Rig Repairs & maintenance	0.38	2%
Rig up or modify surface equipment	0.30	2%
Logging	0.48	3%
Circulate to condition mud	0.38	2%
Circulate to evaluate well	0.36	2%
Casing and cementing operations	2.84	19%
Tripping for bit or BHA change, for casing and at TD	1.75	12%
Tripping to condition hole	0.63	4%
Tripping to evaluate well	1.51	10%
Hole problems	0.41	3%
Well surveys	0.15	1%
Drill stem testing operations	1.31	9%
Installing & testing BOPS, Leak-off tests	0.79	5%
Routine HSE operations: site cleanups, safety meetings	0.05	0.3%
HSE time related to incidents	0.00	0%
Total Days	15.21	100%

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Figure 3: Port Fairy Time -Depth Curve

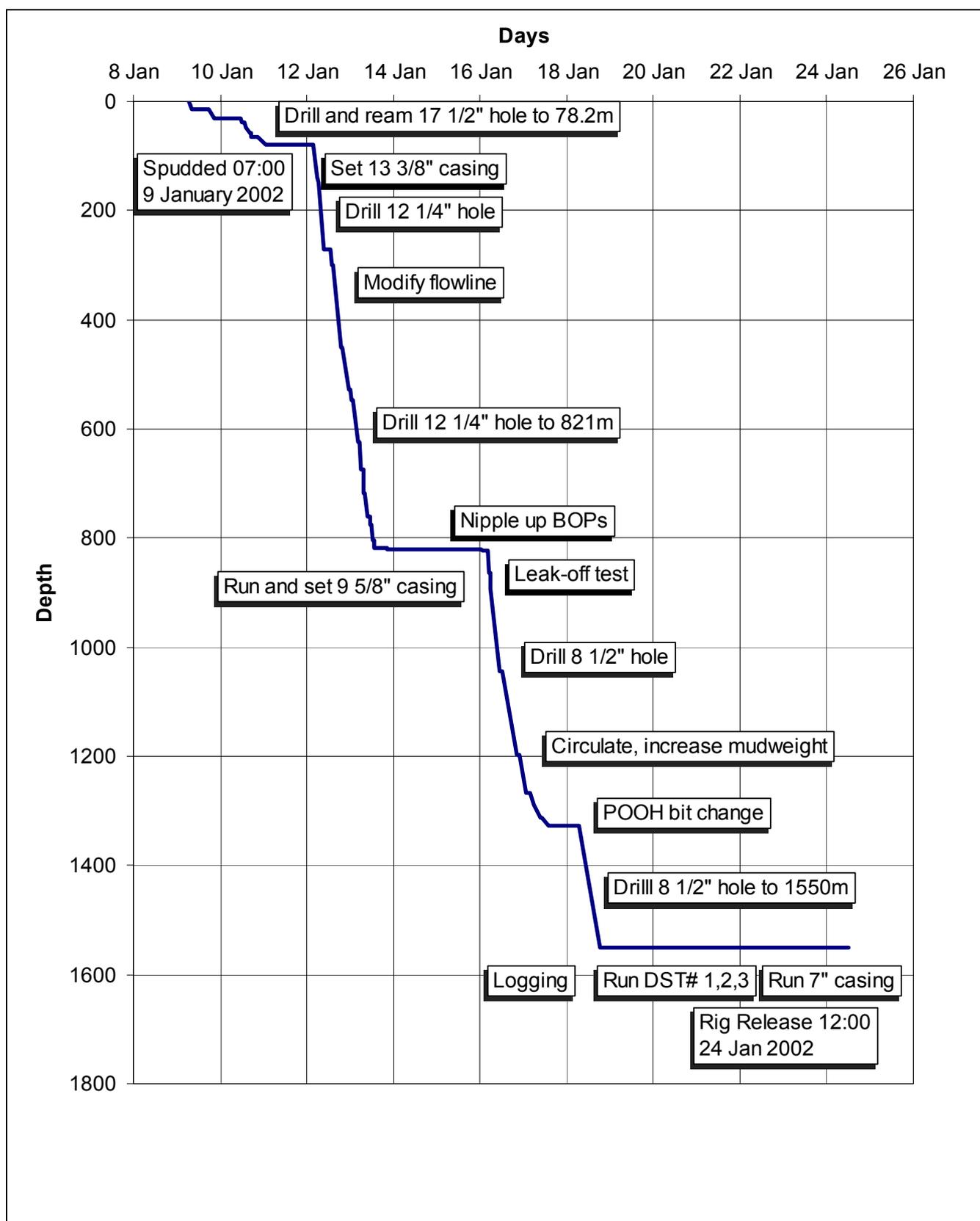
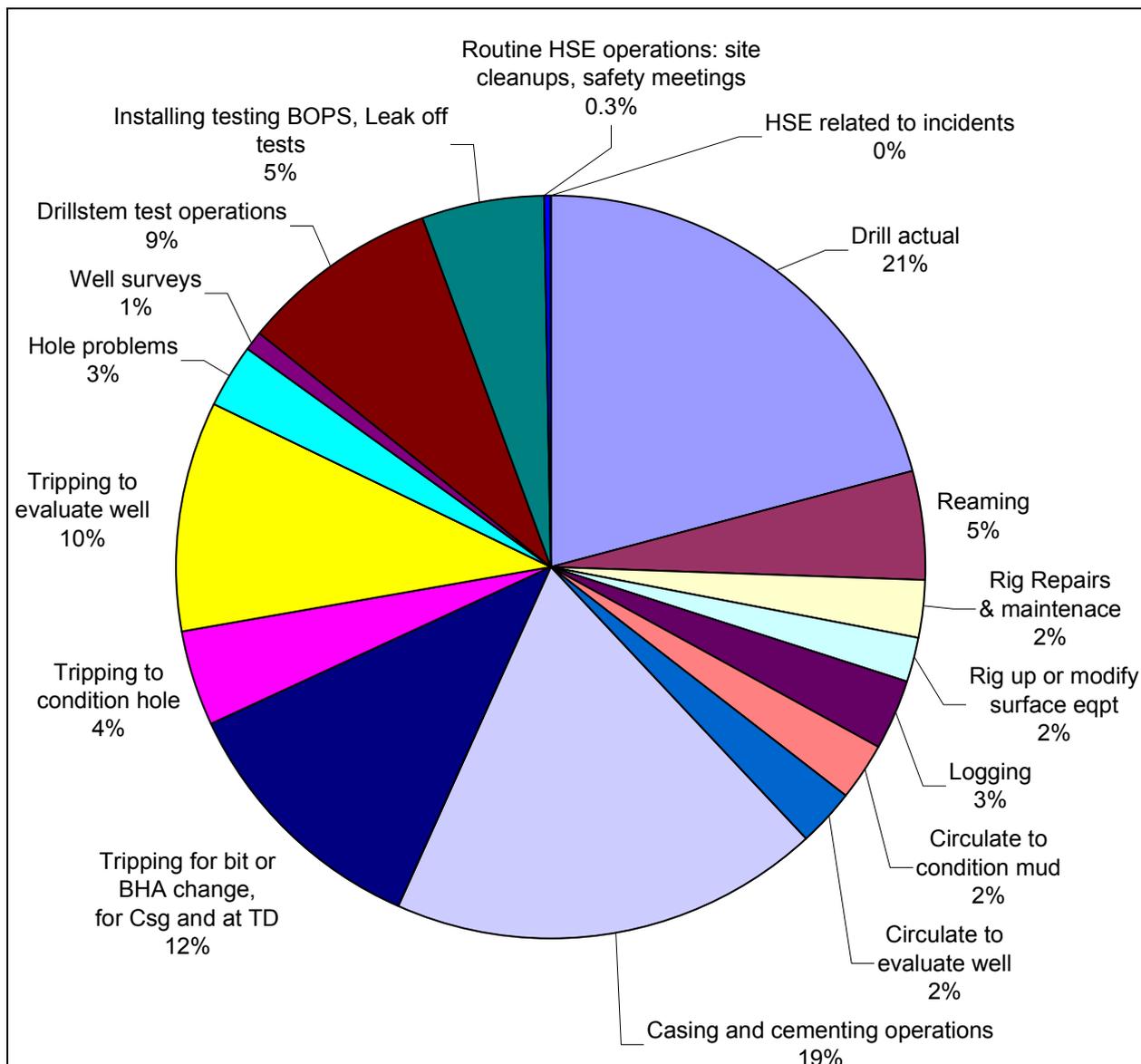


Figure 4: Time Analysis - Drilling Phase



3.3.3 Surveys

Deviation measured in the well did not exceed 3 ½ degrees.

Table 4: Deviation Surveys

Depth	Deviation
148	1°
299	1.5°
450	1°
821	Misrun
824	3 ½°
1044	3 ½°
1327	3 ½°

3.3 BHA AND BIT SUMMARIES

Drilling bits performed adequately. Air hammering proved effective in the basalt at surface. The rental PDC 8 1/2" bit delivered very high ROP. Low ROP at the end of the bit run was attributed to sub-optimal face cleaning.

Table 5: Bit and BHA Record

Bit No	in	mm	Jets	Make	Type	IADC code	In	Out	Made	Hrs	Cond	Reason Pulled
1	17 1/2	445		Drill quip	Air Hammer		6.5	31.5	25	2.75	good	Hole caving
	notes		Reamed 6.5-31.5m after 12 1/4" pilot hole air hammered to base basalt									
2	17 1/2	445		Bourne	Drag		31.5	78.2	46.70	4.75		Casing point
	BHA		2 x 8" DC									
3	12 1/4	311	20-16-16	Varel	ETR1GMPS	115S	78.2	821	742.80	23.5	2-2-WT-A-E-I-D	Casing point
	BHA		2 X 8" DC, 1 x 8" stabilizer, 16 x 6 1/4" DC, drilling jars, XO									
4	8 1/2	216	5 x 14	DBS	PDC		821	1327	506.00	28.5	1-1-1-A-X-I-P-R	Low ROP
	BHA		NBR, Pony DC, STB, 1 x DC, STB, jars, 2 x DC, XO									
5	8 1/2	216	13-13-13	Hughes	GT-03	417	1327	1550	223.00	11.5	2-2-WT-A-B-I-D	TD
	BHA		NBR, Pony DC, STB, 1 x DC, STB, jars, 2 x DC, XO									

3.4 CASING AND CEMENTING REPORT

The casing and cementing program is summarised in Table 5 below.

Table 6: Casing and Cementing Details

Hole Size (in)	Hole Depth (mRT)	Casing Size (in)	Shoe Depth (mRT)	Casing type	Casing Eqpt	Cementing	Comment
17 1/2	78.2	13 3/8"	67.4	K55 BTC	Open		
12 1/4	821	9 5/8"	812.0	47 ppf L80 BTC	Float shoe, float collar	277bbl 13.2 ppg lead, 52bbl 15.6ppg tail (100% excess), disp w/ 10bbl water 185 bbl mud.	Approx 90 bbl cement returns. Bump plugs w/ 1300psi. Floats held OK
8 1/2	1550.0	7"	1536	23 ppf J55 BTC	Float shoe, float collar	498sx, 578 ft3 Class G 15.8 ppg, rise: 670m +40% excess. Disp w/ 10bbl water & 199 bbl mud	Bump plugs w/ 3000 psi, held 5 min OK. Well flowed, shut in pressure 13PSI, bled off OK.

3.5 DRILLING FLUIDS

Drilling fluid details are summarised in the Operational summaries (Section 3.2). The drilling fluid contractor's mud recap is provided in Appendix 4. Drilling fluid chemistry was effective throughout the program.

3.6 WELL TESTING & COMPLETION

3.6.1 OPERATIONS SUMMARY

Site operations recommenced on 18 March 2002 with unloading and rigging up surface equipment. Contractor personnel worked a day shift, travelling to Port Fairy for accommodation. A well check shot survey was recorded.

A tubing head was installed and the Imperial snubbing unit positioned over the well. The BOP was installed and tested to 2500 PSI. A scraper and mill were run to TD and 7 lb/bbl KCl brine circulated into the well.

The testing assembly was run in to the hole and the packer set at 1389mRT. A 2.8bbl water cushion was pumped. Expertest ran a 2.3" gauge ring and then pulled the PX prong and PX plug. Schlumberger ran in for GR-CCL correlation and ran perforation guns.

The intervals 1402 – 1406mRT and 1443 – 1452mRT were perforated. Well flow was too small to measure. A build-up against a surface shut-in was measured with the Expertest surface-readout gauge.

Expertest ran in with a PX plug. Fluid was tagged at 930m, calculated fluid influx was 5.4 bbl. Fluid was reversed out through the sliding sleeve. No gas was present. The packer was pulled and an ESVZ bridge plug set at 1400m and tested at 2000 psi.

The packer was set above 842mRT, PX plug and prong pulled and 600ft water cushion pumped. Schlumberger ran GR CCL and perforated the interval 862m – 866mRT. Surface pressure built to 70psig but flow died when the well was open at surface. A 1.75" gauge cutter was run to check for hydrate plugging. An EMR gauge was run at 500 ft stages. Pressures indicated a normal water hydrostatic gradient in the tubing. The packer was unseated and re-seated at 870mRT. The well flowed water from the annulus at 10 bbl/hr. The sliding sleeve was opened and the tubing swabbed until steady flow was established. The well flowed fresh water at 10bbl/hr (240 BWPD). The well was shut in at surface and equipment rigged down. Operations ceased on 26 March.

Testing was recommenced on 7 August 2002 with Expertest. The fluid in the tubing was swabbed down to ~591m. Three short intervals in the Flaxman Formation in the zone 1347 – 1358 were perforated. Perforations at 1356.5 to 1358.0m were monitored for 15 minutes with no increase in wellhead pressure. After sitting overnight the fluid level in the well had risen to 529m, there was an air blow (no gas) at the wellhead. The zone 1352.5m to 1354m was perforated with a 2 psi pressure rise noted at the wellhead. Fluid had risen to 518m. The zone 1347m to 1348m was perforated with a 1 psi pressure increase noted at the wellhead. The fluid level was ~520m. The well was swabbed to catch a sample. A sample of oily material in water was taken for analysis and found to contain a refined product (lubricating oil).

The well was suspended until 16 September 2002 when a pressure of 900 psi was noted on the wellhead. The well was flared and a gas sample was taken on 21 September 2002. A static pressure gradient survey on 22 September showed approximately 223m of gas 15m of oil and 1120m of completion brine in the tubing (measurement from the base of

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the perforated interval at 1358m). Swabbing of the well on 23 September produced samples of light oil in water. Wellhead pressure returned to 900 psi. The oil sample was analysed to be 52° oil. Fluid analyses are presented in Appendix 10.

3.6.2 COMPLETION SUMMARY

The details of the completion are shown in the completion status diagram. Completion and testing time performance times achieved are shown in Table 7 and in Figure 5.

Table 7: Completion Time Summary

Operation	Hours	%
Travel to/from wellsite	7.25	6%
Site & surface Equipment	17	14%
Logging & perms	13.25	11%
Well head & BOPs	10.75	9%
Circulate fluid	1	1%
Tripping tubing	25.5	21%
Wireline & testing ops	41.5	34%
Plugging	2	2%
Rig up/down	5.5	4%
Total Hours	123.75	100%

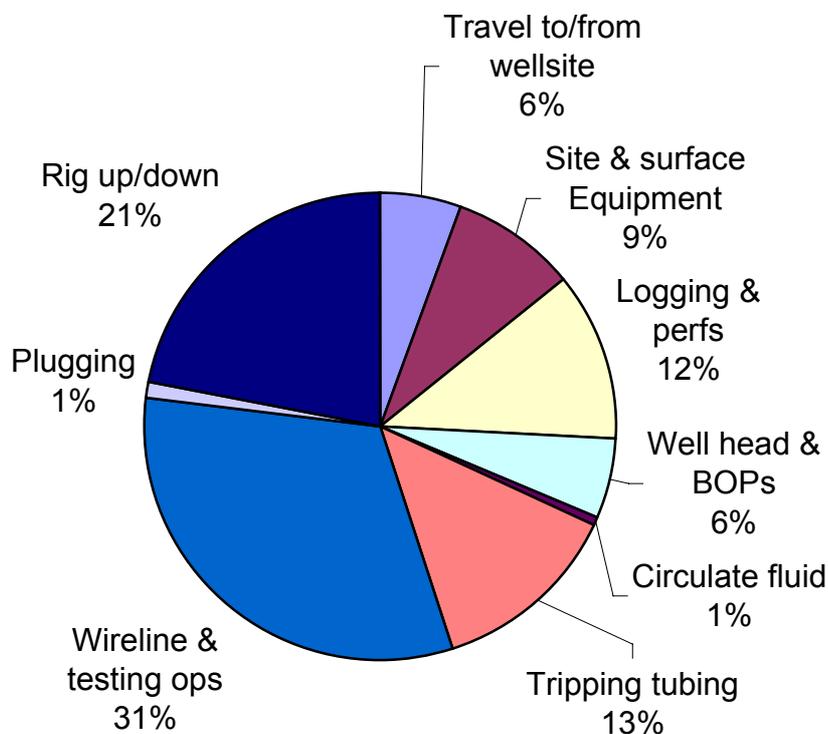
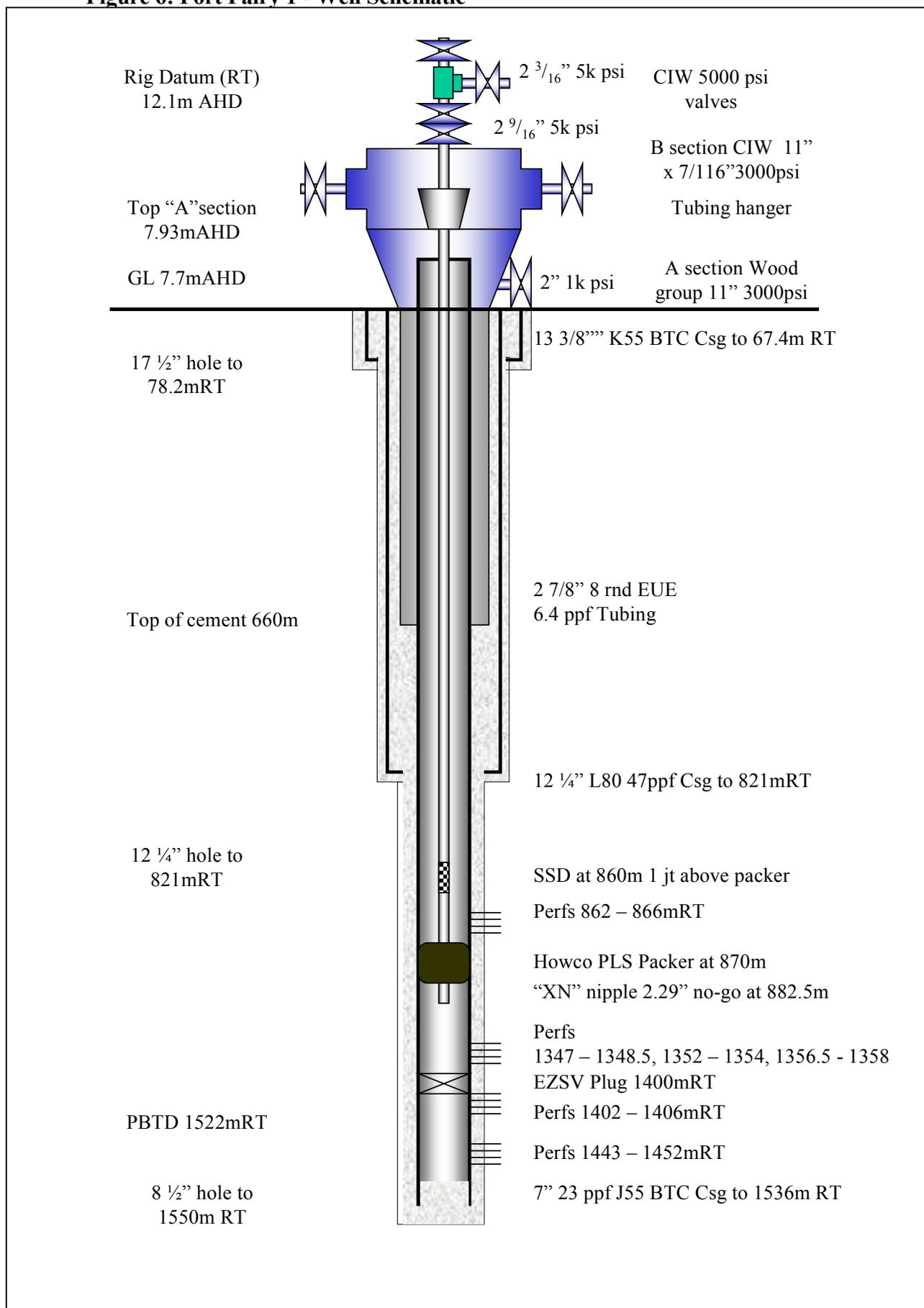


Figure 5: Time Breakdown - Testing phase

Figure 6: Port Fairy 1 - Well Schematic



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FORMATION SAMPLING AND TESTING

4.1 CUTTINGS

Cuttings were collected at 10metre intervals in the 12 ¼” hole section and then at 3m intervals to TD. Detailed cuttings descriptions are presented in Appendix 5.

4.2 CORES

No sidewall cores or conventional cores were cut.

4.3 TESTING

Straddle inflate testing was attempted after logging at TD. The results are summarised in Table 8. Drill stem testing was unsuccessful in evaluating the formation due to both the test tool plugging with drill cuttings and formation material, and packer failures. Drill stem test reports are provided in Appendix 6.

Table 8: Drill Stem Test Results

DST No	Interval	IF	ISI	FF	FSI	Result
1	1429 – 1451	9 minutes, weak blow throughout, NGTS	40 minutes	22 minutes. No Blow	40 minutes	Tool plugged during IF
2	1378 – 1402	Packer did not seat.				
3	860 – 868	5 minute, mod blow	45 minutes	No blow. test abandoned		Tool partially plugged during IF
4	859 – 868.9	Could not Inflate				Packer ruptured

4.4 SAMPLE ANALYSIS

Ten cuttings samples were submitted for palynological analysis to Biostrata Pty Ltd. The results of the palynological analysis are presented in Appendix 9. The palynology indicated that zone immediately above the top of the Eumeralla Formation contained an age equivalent of the lower part of the Waarre Formation (Waarre ‘B’). No material of age equivalent to the upper Waarre ‘C’ horizon, where good quality reservoir sands can be expected, was intersected in the well.

4.5 FLUID ANALYSES

Samples from fluid recoveries are presented in Appendix 10

4.6 MUD LOGGING

Geoservices provided a skid mounted mudlogging unit. Depth, penetration rate, mud gas, pump rate, and mud volume data as well as mud chromatographic analysis was recorded

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from surface to total depth. Rate of penetration, weight on bit, total gas and chromatography were recorded and plotted on the Formation Evaluation Log (Mud Log) and are presented in Enclosure 2.

4.7 WIRELINE LOGGING

Wireline logging was carried out by Schlumberger Seaco using a truck mounted MAXIS unit. The logging suite consisted of two logging runs. A composite log is provided in enclosure 1.

Logs are presented in Enclosure 3

Details of the log depth intervals for each log run are as follows.

Table 9: Detail of logs run

Run	Depth (mKB)	Log	Top Log Interval	Bottom Log Interval	BHT Deg. C
1	1523	Gamma Ray	15	1515	66
		SP	812	1501	
		LDT	812	1518	
		CNL	812	1515	
		DLL	812	1521	
		MSFL	812	1518	
		NGT	1200	1507	
		PEF	812	1518	
2	1523	Sonic	100	1510	NR

4.8 VELOCITY SURVEY

A velocity check shot survey in open hole was programmed, but could not be carried out because explosives could not be safely used with a microwave transmitter tower in close proximity. The velocity survey was eventually carried out using an airgun during the cased hole testing program. A synthetic seismogram was computed from the sonic log and checkshot surveys. The results are included in Appendix 7.

5 GEOLOGY

5.1 STRATIGRAPHY

The stratigraphic section penetrated in Port Fairy No 1 is shown in Table 9. Formation tops were picked on the basis of cuttings descriptions, rate of penetration and wireline logs and by correlation to Belfast No 4.

Table 10: Stratigraphic Table

Stratigraphic Unit		Depth RT (m)	Thickness (m)	Elevation AHD (m)
Newer Basalt		5.4	22.6	6.7
Quaternary undiff		28.0	14.0	-15.9
Pt Campbell Lst	Heytebury	42.0	151.0	-29.9
Gellibrand Fm		193.0	174.0	-180.9
Clifton Fm		367.0	20.0	-354.9
Narrawaturk Marl	Nirranda	387.0	33.0	-374.9
Mepunga Fm		420.0	75.0	-407.9
Dilwyn Fm	Wangerrip	495.0	168.0	-482.9
Top progrades		663.0	153.0	-650.9
Pebble Pt Formation		816.0	37.0	-803.9
Paaratte Fm	Sherbrook	853.0	266.5	-840.9
Skull Ck Mbr		1119.5	98.5	-1107.4
Nullawarre Gsnd		1218.0	32.0	-1205.9
Belfast Mdst (lwr)		1250.0	93.0	-1237.9
Flaxman Fm		1343.0	15.0	-1330.9
Waarre Fm		1358.0	44.0	-1345.9
Eumeralla Fm		1402.0	>148.0	-1389.9
TD		1550.0		-1537.9

5.2 LITHOLOGY

The full cutting descriptions are provided in Appendix 5 and summarised by interval on the Composite Well Log. Formations encountered in Port Fairy No 1 are described below.

5.2.1 Newer Basalt and unnamed Quaternary sediments

Basalt was encountered at a depth of 2m below the ground surface (6.5m). The base of basalt was at 29.5m. Below the basalt there was 1m of black sand overlying green clay to a depth of 39.5m. The sand below the basalt was unconsolidated and flowed into the well bore causing problems with the air drilling.

5.2.2 Heytesbury Group Late Eocene to Pliocene

5.2.2.1 Port Campbell Limestone (39.5 – 193m)

The Port Campbell Limestone consisted of a thin upper section of light grey to pale yellow fine to coarse grained *calcarenite*, overlying a lower section of calcareous *claystone* and *marl*. The sandy section is extremely friable and porous. The lower section consists of light grey soft marl interbedded with only minor light to yellowish grey calcarenite. The section is fossiliferous. The finer grained lithologies in the lower section are difficult to differentiate from those of the Gellibrand Marl in the cuttings. On logs the lower Port Campbell Limestone appears to be very thinly bedded. The base of the formation is picked on a slight change in log character to slightly thicker bedding and in increase in clays.

5.2.2.2 Gellibrand Marl (193 – 367m)

The Gellibrand Marl becomes increasingly lime-rich towards the base of the formation.

Marl: medium to predominantly light grey, soft and sticky, dispersive in the drilling mud, very fossiliferous in part, with trace glauconite and pyrite. The marl was interbedded with minor *Calcarenite*: white to pale greenish and brownish grey, fine to coarse grained, very fossiliferous, becoming finer grained toward the base of the formation and grading to *calcsiltite*.

5.2.2.3 Clifton Formation (367 – 387m)

Calcarenite: grading to *calcsiltite*, light grey, mottled, occasionally light greenish grey, fossiliferous. The Clifton Formation is poorly developed. On logs the interval appears as slightly cleaner, and more interbedded than the overlying basal Gellibrand Marl.

5.2.3 Nirranda Group Middle Eocene to Early Oligocene

5.2.3.1 Narrawaturk Marl (387 – 420m)

Marl: medium grey, soft, dispersive, calcarenitic at top of the interval, grades to *Calcilutite*: light grey. The top of the formation is picked at a slight increase on the gamma ray log. The base is picked at a sharp boundary. Overall the formation coarsens and cleans upward.

5.2.3.2 Mepunga Formation (420 – 495.0 m)

Sandstone: clear to brown, fine to very coarse, poorly sorted, subrounded, silty matrix and calcareous cement, quartzose, loose Fe-stained grains and soft aggregates, common carbonaceous fragments. *Siltstone*: carbonaceous in part, medium to dark brownish grey, abundant silt, micromicaceous, massive, soft, dispersive. Sandstone is the dominant

lithology. On logs the formation can be subdivided into an upper, siltier zone and a lower sandstone-dominated zone separated by a high gamma spike at 455m.

5.2.4 Wangerrip Group, Palaeocene to Middle Eocene

5.2.4.1 Dilwyn Formation (495 – 816m)

Sandstone: clear, white, light grey, occasionally pale brown, fine to predominantly coarse occasionally very coarse, well sorted, subangular, polished, predominantly loose, predominantly clean with occasional trace calcite cement and occasional trace dispersive silty matrix. Occasional fossils. There are rare thin interbeds of siltstone: dark to very dark brown, carbonaceous, grades to silty coal.

Siltstone bands at 663m on the gamma ray log are interpreted to be the top of a sequence of prograding beds identified in the seismic data. The base of the formation consists of a massive sandstone with a variable calcareous silty matrix increasing in prevalence toward the base. The sandstone is quartzose, but with trace greyish green lithic grains appearing near the base of the formation.

5.2.4.2 Pember Mudstone

The Pember Mudstone was prognosed but was not identified at Port Fairy No 1.

5.2.4.3 Pebble Point Formation (816 – 853m)

The Pebble Point Formation is thin and poorly developed. Lithologies are siltstone: greyish brown, mottled green, very sandy and argillaceous, glauconitic interbedded with sandstone: medium greyish brown, light mottled, green and brown, very fine to very coarse, poorly sorted, brown silty dispersive and occasionally calcitic/dolomitic matrix and grading to claystone: very soft, glauconitic.

On the wireline logs a characteristic high gamma spike occurs toward the base of a fining upward interbedded sequence. The age of this unit is tentatively assigned to the latest Cretaceous because caved material of Tertiary age was absent in cuttings samples taken immediately below, at 874m, suggesting there is minimal Tertiary section exposed below the casing shoe at 812mRT.

5.2.5 Sherbrook Group, Late Cretaceous

5.2.5.1 Paaratte Formation (853 – 1119.5m)

The Paaratte Formation consists of interbedded clean sands, siltstones and claystones. Overall the formation coarsens from silty clays with 1-2m silty sands, up to predominantly massive clean sandstones with 1-5m siltstone interbeds. Individual clean sand units at the top of the formation have fining-upward upper contacts.

Sandstone: clear to milky, very coarse to granular, well sorted, angular to subrounded occasionally well rounded, clean, loose, quartzose, trace grey cherty lithic grains, visible porosity excellent. Sandstone reservoir quality decreases with depth becoming clear to light brown, fine to very coarse grained, poorly sorted, dispersive silty matrix, irregular aggregates with dense pyrite cement, trace glauconite and coaly fragments, porosity poor to nil.

Claystone: medium to dark grey, soft to firm, micaceous in part, common pyrite nodules, siltstone: light to medium greyish brown, sticky, very finely quartz sandy. Minor coal: black to very dark brown, fibrous.

5.2.5.2 Skull Creek Mudstone (1119.5 – 1218.0 m)

The Skull Creek Mudstone is a silt and claystone dominated sequence with minor sandstone.

Siltstone: medium grey, finely sandy, laminated, pyritic in part. Claystone: blocky, trace carbonaceous material. Interbedded with to sandstone: very fine to coarse predominantly very fine grained, variable calcareous and dolomitic cement, glauconite trace to common, Toward base of the formation the sandstones become very light grey to light greyish brown, very fine to occasionally medium grained, silty in part, rare dolomite cement, poorly sorted, trace glauconite.

5.2.5.3 Nullawarre Greensand (1218.0 – 1250.0 m)

The Nullawarre Greensand is a coarsening upward sequence, the top is picked on a gamma break from the Skull Creek Mudstone silts to sand. The gamma ray response is affected by the high glauconite content.

Sandstone: greyish brown, very fine to fine occasionally medium, moderately sorted, common argillaceous matrix washing out, with occasional thin, very glauconitic laminae. The sandstone grades downward to siltstone: medium brownish grey to medium grey, very finely sandy, soft, amorphous, and minor silty claystone: rare carbonaceous flecks and fossil fragments

5.2.5.4 Belfast Mudstone (1250.0 – 1343.0 m)

The Belfast Mudstone is a relatively homogenous siltstone grading downwards to silty claystone. The top of the Belfast Formation is picked at an increase in clay content observed in the lithology and on the gamma ray and nuclear log characteristics.

Siltstone: medium brownish grey to dark grey, dark greenish grey, finely quartz sandy in part, in part abundantly glauconitic, interbedded at the base of the interval with minor thin sandstone: glauconitic, very fine to fine grained, soft, argillaceous, grades to glauconitic claystone: dark greenish grey, trace pyrite, firm.

5.2.5.5 Flaxman Formation (1343 – 1358m)

The Flaxman Formation was not differentiated from the lower Waarre Formation during drilling as the characteristic sandstone of the upper Waarre “C” Formation was not present. Differentiation into separate formations is based on wireline logs, and post-drill palynological results, which indicated a time break. The cuttings description is:

Claystone: glauconitic/pelloidal, very dark grey to greenish black, grades to argillaceous glauconitic sandstone: fine to medium grained, with loose quartz grains washing out of a grey clay matrix, inferred porosity poor, grades to siltstone.

Toward base of the interval the claystone becomes dark grey to medium brown, firm, subfissile, grades to siltstone: medium grey to brown, finely quartz sandy, Trace to common loose, very coarse quartz grains.

On logs the interval can be distinguished by a variable log character including slightly cleaner gamma ray curve, lower densities, very high neutron porosity and anomalously high PEF response.

5.2.5.6 Waarre Formation (1358 – 1402)

On wireline logs the Waarre Formation consists of a relatively homogenous mudstone.

Port Fairy No. 1 Well Completion Report

From post-drilling analysis of palynological samples the Waarre section intersected is equivalent to the lower Waarre “B” Formation in the Port Campbell area. The upper Waarre ‘C’ interval is not represented. Cuttings descriptions are:

Claystone: similar to that in the overlying Flaxman Formation interbedded toward base of interval with minor Sandstone: very light to medium grey, very fine to fine grained, loose grains and poorly sorted aggregates with silty clay matrix and/or trace calcareous cement, rarely w/ white tuffaceous grains and siltstone: light grey, trace lithic grains and biotite, Trace ?Tuff: pale bluish to greenish grey, translucent, aphanitic, friable.

5.2.6 Eumeralla Formation (1402 – 1550mTD)

The Eumeralla Formation consists of interbedded volcanoclastic sandstones and siltstones in coarsening upward cycles. Overall however the interval drilled was sandier toward the base.

Finer grained intervals consist of Siltstone: very light grey, finely sandy, argillaceous, with common white, grey, and trace red lithic grains, trace biotite soft, sticky, grades to silty sandstone and to silty claystone: light grey to greyish brown, trace carbonaceous flakes. Minor tuffaceous claystone: pale greyish green, waxy, smooth.

Sandstone: clear to grey, very fine to medium grained, moderately to poorly sorted, argillaceous matrix washing out, variable calcareous cement, abundant grey and black and trace red lithic grains, trace feldspar, trace biotite inferred porosity nil to poor.

5.3 RESERVOIR QUALITY AND HYDROCARBON INDICATIONS

Porosity was well developed in the sandstones of the Dilwyn and upper Paaratte Formations and the lower Mepunga Formation. Porosity in the Nullawarre, Flaxman, and Waarre Formations was generally poor. The Eumeralla Formation sands were of poor to moderate porosity.

Background gas became apparent within the lower Paaratte Formation and increased through the Skull Creek Mudstone. Heavy components (C2-C5) appeared in the Belfast Mudstone. Gas shows during drilling were recorded from 1143m to TD, particularly from the Flaxman, Waarre and uppermost Eumeralla Formations. Maximum gas readings came from the Waarre Formation. Gas background decreased in the Eumeralla Formation.

Apparent mobile hydrocarbons were interpreted in the upper Paaratte Formation from wireline logs. Petrophysics was complicated by the presence of glauconite. The zone was tested through casing and flowed fresh water. Subsequent testing of the well has proven the existence of mobile hydrocarbons in the Flaxman Formation (see Section 3.6 testing and Completion)

The observed and interpreted porosity and hydrocarbon indications in individual zones of interest are detailed in Table 11.

Port Fairy No. 1 Well Completion Report

Table 11: Reservoir Quality and Hydrocarbon Indications

Formation	Interval	Drill Porosity	Drill HC (maximum)	Log results	Test results
Mepunga Fm	480-495m	excellent	Nil	N/a	
Dilwyn Fm	495 - 780	Very good - excellent	Nil	N/a	
	780-816	fair	Nil	N/a	
Pebble Point Fm	816-842	Reverse drill breaks in sands, visible porosity nil	Nil	SW ~100% Øeff 10-15%	
Paaratte Fm	861 - 866	Drill break, clean sand, excellent visible porosity	Nil	3m Øeff 25-35% Sw 90-100%	Flowed 240 bbl/day fresh water
	889 – 928	Clean sand, vis porosity excellent	Nil	38m Øeff 25-35%. upper 9m SW 55-80%	
Skull Ck	1146 - 1160	Silty sand, vis porosity trace	C1 350ppm	2m Øeff 10-18% Sw 100%	
Nullawarre Greensand	1228 – 1243	silty sand, glauconite laminae, occ clean bands, vis porosity nil-poor	C1 120ppm	11m @ Øeff 10-23%, Sw 80-90%	
Flaxman Fm	1343 - 1359	Glauconitic sand and clay, vis porosity nil	C1 1000ppm C2 380ppm C3 120ppm nC4 35ppm iC5 20ppm	6.5m @ Øeff 10– 25% 2m Sw 50-90%	Gas plus 15m light 52°API crude oil and 1120m water in tubing.
Waarre Fm	1381 - 1399	Logged as Claystone with minor sand. Visible porosity Nil.	C1 89,000ppm C2 6,800ppm C3 120ppm nC4 35ppm iC5 20ppm	<1m at Øe 10% Sw 100%	
Eumeralla Fm	1442 - 1453	Vis porosity poor	C1 26,600ppm C2 850ppm C3 400ppm nC4 222ppm iC5 20ppm	8m Øeff 10-15 1.5m Øeff 20-30% Sw 70-90%	Produced 5.4 bbl water

5.4 CONTRIBUTION TO GEOLOGICAL KNOWLEDGE

- 1) Gas has flowed from the well, and a 15m column of oil has been observed in the production tubing by gradient survey. A swabbed sample showed a light 52° API full range naphtha. The oil and gas was produced from a glauconitic fine sand in the Flaxman Formation.
- 2) The sandy upper Waarre Formation (equivalent to Waarre C in the Port Campbell area) is absent at this location.
- 3) The interval from the uppermost Eumeralla to the Flaxman Formation contains gas and light oil fractions and would be prospective in the permit where a complete section of Waarre Formation is present.
- 4) The Pember Mudstone seal required to trap hydrocarbons in the Pebble Point or top Paaratte Formation is absent or very poorly developed at this location
- 5) The Eumeralla Formation is comparatively sand-prone in cuttings, has porosity but low permeability as evidenced by the small water influx during cased-hole testing.
- 6) Gas values observed in the lower Paaratte Formation were higher than normally seen at this stratigraphic horizon.

Appendix 1: Location Survey

Paul D Crowe, B.App.Sci. (Surv), LS, M.I.S.
Trevor W McDowell, B.App.Sci. (Surv), LS, M.I.S.

Paul Crowe
Licensed Surveyor
192 Koroit Street,
WARRNAMBOOL 3280
Ph 5561 1500
Fax 5561 2935
crowe@ansonie.com.au
ABN 5952 1601 183

RECEIVED
18 JAN 2002

BY:

17 Jan. 02

Essential Petroleum
226 Albert Road
SOUTH MELBOURNE 3205

Attention GORDON WAKELIN - KING
FAX 9699 3110

**PORT FAIRY #1
WELL SITE**

Dear Gordon

Following is a plan indicating the results of the survey of the location of the above well.

Yours faithfully



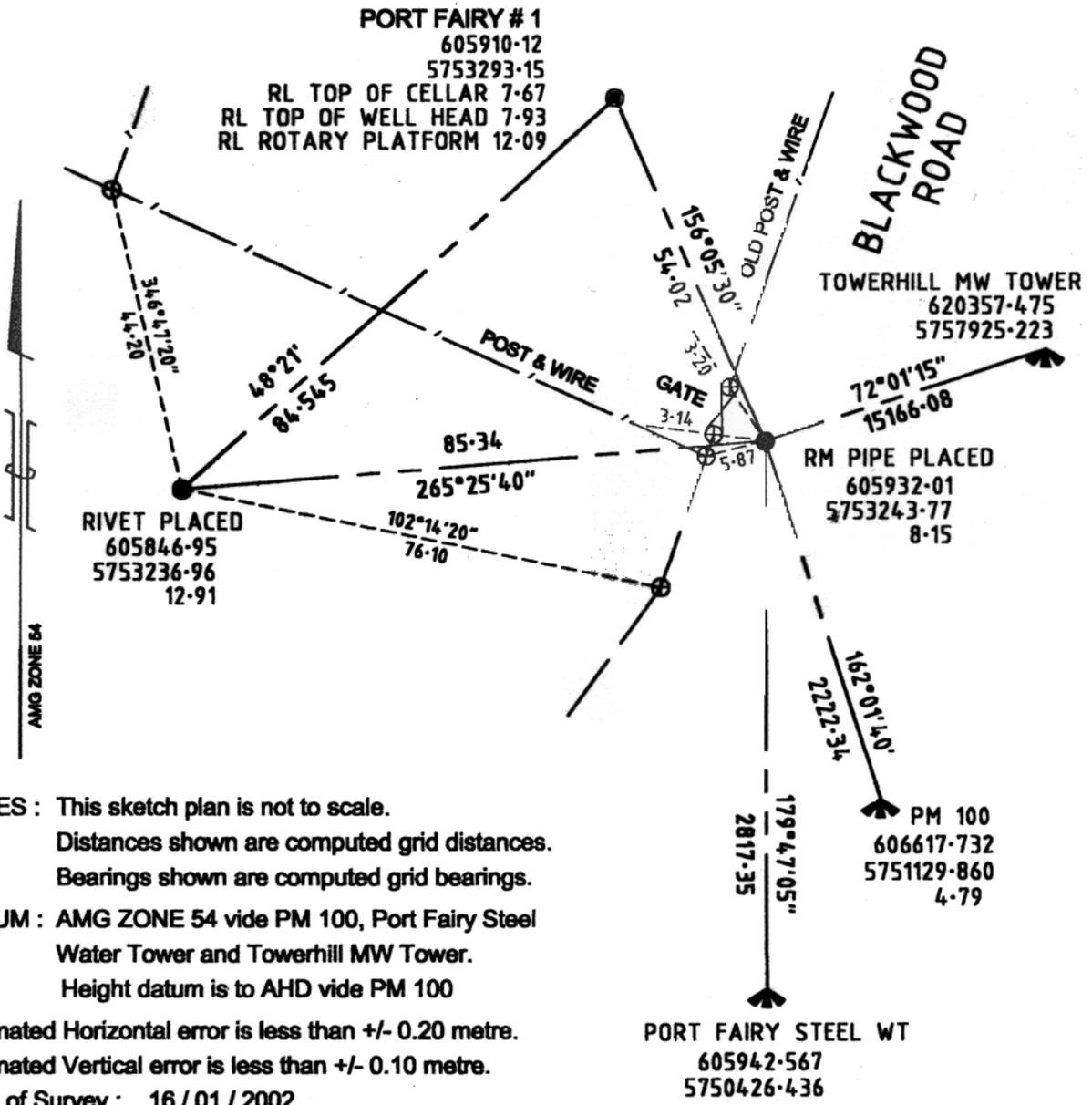
PAUL D CROWE

GAS WELL LOCATION

REFERENCE MARKS SKETCH PLAN

Well Name	PORT FAIRY # 1		
Spheroid	AGD	AMG	ZONE 54
Latitude	S 38°21'43.71"	Easting	605 910.12
Longitude	E 142°12'44.15"	Northing	5 753 293.15
Convergence	0°45'09"	Elevation	7.67 (AHD)
Scale Factor	0.99973627	Measurement units	(metres)

Spheroid	GDA94	MGA	ZONE 54
Latitude	S 38°21'38.40"	Easting	606 030.35
Longitude	E 142°12'49.03"	Northing	5 753 470.16



NOTES : This sketch plan is not to scale.
 Distances shown are computed grid distances.
 Bearings shown are computed grid bearings.
 DATUM : AMG ZONE 54 vide PM 100, Port Fairy Steel Water Tower and Towerhill MW Tower.
 Height datum is to AHD vide PM 100
 Estimated Horizontal error is less than +/- 0.20 metre.
 Estimated Vertical error is less than +/- 0.10 metre.
 Date of Survey : 16 / 01 / 2002

Date 16 / 01 / 2002
Trevor McDowell
 TREVOR McDOWELL
 LICENSED SURVEYOR

Paul Crowe Surveyor ABN 59521601183 "Ambleside" 192 Koroit Street Warrambool 3280 Ph. (03) 5561 1500	REF 1062
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Appendix 2: Daily Drilling Reports

Origin Energy Petroleum Ltd / Essential Petroleum Resources Limited.

Daily Drilling Report

WELL:	Port Fairy #1	DATE:	11.01.02
PERMIT:	Vic P-152	REPORT #	3
RIG:	Mitchell Drilling Rig #150	D.F.S.	2

DEPTH 2400 Hrs:	78.2	STATUS @ 06:00 Hrs:	Running 13.375" conductor
TVD:		FORMATION:	Port Campbell Lst
24 HR PROGRESS:	48	LAST CASING:	NA @
HOLE SIZE:	17½"	WD (LAT):	RT - GL / Air gap: 4.5
SURVEYS:		SHOE L.O.T.:	
		MAASP:	

MUD PROPERTIES	ADDITIVES	CONSUMABLES	FORMATION DATA	
Density (ppg)		Rig	Name	
Funnel viscosity.		Workboat	Lithology	
PH		Workboat	Top depth RT.	
PV/YP(cp/lb/100ft ²)			Trip gas %	
Gels 10secs / 10min			Connection Gas %	
WL API(cc/30min)			Background gas %	
WL HTHP(cc/30min)			ECD (ppg)	
Cake (1/16")			DRILLS / BOPS	
Solids %		PUMPS	LAST BOP DRILL	
Sand %		1	LAST FIRE DRILL	
Chlorides (mg/l)		2	LAST MOB DRILL	
KCl %		3	LAST ABN. RIG DRILL	
MBT (lb/bbl)			LAST BOP TEST	
Flowline Temp °C			BOP TEST DUE	
Hole volume bbls.				HRS
Surface volume bbls.				CUM
			1. Rig up / down.	6.00
			2. Drilling.	3.00
			3. Reaming.	5.50
			4. Trip	3.75
			5. Circ. / condition.	18.25
			6. Deviation survey	18.25
			7. Run casing	2.00
			8. Cementing	1.00
			9. Handle Preventors	21.25
			10. Marine riser.	21.25
			11. Logging.	21.25
			12. Press. test BOP	21.25
			13. Repair rig.	21.25
			14. Service rig.	0.25
			15. Slip / cut drtg line	21.50
			16. Drill stem test.	21.50
			17. Fishing.	21.50
			18. Well control.	21.50
			19. Hang-off.	21.50
			20. W.O.Weather	21.50
			21. Lost circ.	21.50
			22. Plug / Abandon.	21.50
			23. Mob / Demob	21.50
			24. Handle anchors.	21.50
			25. Position rig.	21.50
			26. Guide base / ROV.	21.50
			27. Others	2.50
				24.00
			TOTAL (HRS)	24.00

DOWNHOLE TOOLS	SERIAL No.	ROT/REAM HRS	DRILLING DATA
			DRAG - UP (mt)
			DRAG - DOWN (mt)
			TORQUE-On Bottom (amps)
			TORQUE-Off Bottom (amps)

BHA No.		BHA WEIGHT		STRING WT	
BHA Profile :					

 Essential Petroleum Resources Limited. Daily Drilling Report										
WELL:	Port Fairy #1				DATE:	15.01.02				
PERMIT:	PEP-152				REPORT #	7				
RIG:	Mitchell Drilling Rig #150				D.F.S.	6				
DEPTH 0600 Hrs:	Surface			STATUS @ 06:00 Hrs:	Nipple up BOP's & associated equipment					
TVD:	821.00 m			FORMATION:	N/A					
24 HR PROGRESS:	N/A		LAST CASING:	9 5/8 @ 812.0m		SHOE L.O.T.:	N/A			
HOLE SIZE:	12 1/4"		WD (LAT):	N/A		RT - GL / Air gap:	4.5m		MAASP:	N/A
SURVEYS:										
MUD PROPERTIES	FL	PIT	CONSUMABLES				FORMATION DATA			
Sample taken @		10:00 / 821m		Rig	Workboat	Workboat	Name	N/A		
Flowline Temp °C		-	Fuel				Lithology			
Weight ppg / SG		9.25 / 1.11	Potable water				Top depth RT.			
Funnel viscosity.		37	Drill water				Trip gas %			
PV/YP(cp/lb/100ft ²)		7 / 8	Barites				Connection Gas %			
Gels 10secs / 10min		8	Cement				Background gas %			
WL API(cc/30min)		20	Gel				ECD (ppg)			
WL HTHP(cc/30min)		-	Base Oil				DRILLS / BOPS			
Cake (1/32")		-	PUMPS	1	2	3	LAST BOP DRILL			
Solids %		6.8	TYPE	SOILMEC			LAST FIRE DRILL			
Sand %		0.75	STROKE(in)	7"			LAST MOB DRILL			
MBT(lb/bbl)		15	LINER(in)	7"			LAST ABN. RIG DRILL			
PH		9.0	SPM	140			LAST BOP TEST			
Chlorides (mg/l)		1000	GPM	480			BOP TEST DUE			
KCl %		-	AV-DP(Ft/min)	83				HRS	CUM	
PHPA (Calc ppb)		-	AV-DC(Ft/min)	102			1. Rig up / down.		38.75	
			SPP(kPa/psi)	367			2. Drilling.		31.75	
Hole volume bbls.		185	SCR @ 40				3. Reaming.			
Surface volume bbls.		-	SCR @ 50				4. Trip		16.75	
BIT DATA			WEATHER / RIG RESPONSE							
Bit Run	2		Wind Speed (kts)				5. Circ. / condition.	2.00	7.00	
Diameter	12 1/4"		Direction				6. Deviation survey			
Type & manufacture	122ETRIGMPS VAREL		Temperature				7. Run casing	5.25	18.25	
IADC code			Barometric pressure millibar				8. Cementing	9.00	17.75	
Serial number	165767		Barometer rise / fall				9. Handle Preventors			
Nozzles	16-16-20		Visibility(NM)				10. Riser, flowline	7.75		
Depth In (m)	78m		Sea state				11. Logging.			
Depth Out	821m		Swell / Period / Direction				12. Press. test BOP			
Drilled (m cum/dly)			Waves / period / direction				13. Repair rig.		1.50	
Hours (cum/dly)			Heave				14. Service rig.		0.25	
Dull grade			Pitch				15. Slip / cut drlg line			
Average ROP (m/hr)			Roll				16. Drill stem test.			
WOB Klbs			Anchor tension				17. Fishing.			
RPM			Anchor tension				18. Well control.			
Jet velocity			Riser tension				19. Hang-off.			
HHP @ BIT			VARIABLE DECK LOAD (Kips)				20. W.O.Weather			
BHA No.	1	BHA WEIGHT			STRING WT		21. Lost circ.			
BHA Profile :							22. Plug / Abandon.			
							23. Mob / Demob			
							24. Handle anchors.			
DOWNHOLE TOOLS	SERIAL No.	ROT/REAM HRS	DRILLING DATA				25. Position rig.			
			DRAG - UP (mt)				26. Guide base / ROV.			
			DRAG - DOWN (mt)				27. Others		10.25	
			TORQUE-On Bottom (amps)							
			TORQUE-Off Bottom (amps)							
							TOTAL (HRS)	24.00	142.25	

Origin Energy Ltd / Essential Petroleum Resources Limited.

Daily Drilling Report

WELL:	Port Fairy #1	DATE:	18-Jan-02
PERMIT:	PEP-152	REPORT #	10
RIG:	Mitchell Drilling Rig #150	D.F.S.	9

DEPTH 0600 Hrs:	1327.00 m	STATUS @ 06:00 Hrs:	Reaming, Circulating bottoms up
TVD:	1327.00 m	FORMATION:	Belfast Mudstone (Lwr)
24 HR PROGRESS:	0.00 m	LAST CASING:	9 5/8 @ 812.0m
HOLE SIZE:	8 1/2"	WD (LAT):	N/A
SURVEYS:	3.5deg @ 1327m	RT - GL / Air gap:	4.5m
		SHOE L.O.T.:	13.5 ppg
		MAASP:	620 psi

MUD PROPERTIES	FL	FL	CONSUMABLES			FORMATION DATA			
Sample taken @	12:00 -1320m	4:00 / 1327m		Rig	Workboat	Workboat	Name	Belfast Mudstone (Lwr)	
Flowline Temp °C	125	-		Fuel			Lithology		
Weight ppg / SG	9.60 / 1.15	9.65 / 1.16		Potable water			Top depth RT.	1235.00 m	
Funnel viscosity.	44	42		Drill water			Trip gas %		
PV/YP(cp/lb/100ft2)	15 / 19	14 / 16		Barites			Connection Gas %		
Gels 10secs / 10min	3 - 6	2 - 5		Cement			Background gas %		
WL API(cc/30min)	6.8	6.5		Gel			ECD (ppg)		
WL HTHP(cc/30min)				Base Oil			DRILLS / BOPS		
Cake (1/32")	1	1		PUMPS	1	2	3	LAST BOP DRILL	
Solids %	7.1	7.6		TYPE	SOILMEC			LAST FIRE DRILL	
Sand %	1	1.25		STROKE(in)	6			LAST MOB DRILL	
MBT(lb/bbl)	8.5	9.0		LINER(in)	6			LAST ABN. RIG DRILL	
PH	9.0	9.2		SPM	150			LAST BOP TEST	
Chlorides (mg/l)	25,000	21,000		GPM	378			BOP TEST DUE	
K+ (mg/l)	27,600	22,700		AV-DP(Ft/min)	154				
KCl %	5.1	4.2		AV-DC(Ft/min)	279				
PHPA (Calc ppb)	1.18	1.16		SPP	1150				
Hole volume bbls.	278			SCR @ 36	10bar				
Surface volume bbls.	160			SCR @ 64	28bar				
BIT DATA			WEATHER / RIG RESPONSE						
Bit Run	3	4		Wind Speed (kts)	10	5			
Diameter	8 1/2"	8 1/2"		Direction	SE	SE			
Type & manufacture	DBS	HTC		Temperature	18				
IADC code	PDC			Barometric pressure millibar					
Serial number	5996742 RW			Barometer rise / fall					
Nozzles	14 -14 -14 -14 -14			Visibility(NM)					
Depth In (m)	821m	1327m		Sea state					
Depth Out	1327m			Swell / Period / Direction					
Drilled (m cum/dly)	506m			Waves / period / direction					
Hours (cum/dly)	7¼ / 30¼			Heave					
Dull grade	Ring			Pitch					
Average ROP (m/hr)	16.7			Roll					
WOB Klbs	5-15			Anchor tension					
RPM	140			Anchor tension					
Jet velocity	135			Riser tension					
HHP @ BIT	39			VARIABLE DECK LOAD (Kips)					
BHA No.	2	BHA WEIGHT		STRING WT					
BHA Profile : Bit / NB / Pony/STB/ DC/STB/ 16 xDc/Jars/ 2 x Dc./Xo									
DOWNHOLE TOOLS			DRILLING DATA						
Jars	SERIAL No.	ROT/REAM HRS		DRAG - UP (mt)					
Nb stab	MDC	30¼		DRAG - DOWN (mt)					
Slab	MDC	30¼		TORQUE-On Bottom (amps)					
Slab	MDC	30¼		TORQUE-Off Bottom (amps)					
TOTAL (HRS)								24.00	195.40

Essential Petroleum Resources Limited.

Daily Drilling Report

WELL:	Port Fairy #1	DATE:	19-Jan-02
PERMIT:	PEP-152	REPORT #	11
RIG:	Mitchell Drilling Rig #150	D.F.S.	10

DEPTH 0600 Hrs:	1550.00 m	STATUS @ 06:00 Hrs:	Preparing to rig Schlumberger up.
TVD:	1550.00 m	FORMATION:	Eumerella
24 HR PROGRESS:	223.00 m	LAST CASING:	9 5/8 @ 812.0m
HOLE SIZE:	8 1/2"	WD (LAT):	N/A
		RT - GL / Air gap:	4.5m
SURVEYS:		SHOE L.O.T.:	13.5 ppg
		MAASP:	620 psi

MUD PROPERTIES	FL	PIT	CONSUMABLES			FORMATION DATA		
Sample taken @	1130 / 1371m	1930 / 1550m		Rig	Workboat	Workboat	Name	Eumerella
Flowline Temp °C	120	124	Fuel				Lithology	
Weight ppg / SG	9.60 / 1.15	9.70 / 1.16	Potable water				Top depth RT.	1369.50 m
Funnel viscosity.	46	48	Drill water				Trip gas %	
PVYP(cp/lb/100ft2)	16 / 21	19 / 23	Barites				Connection Gas %	
Gels 10secs / 10min	3 - 7	5 - 8	Cement				Background gas %	
WL API(cc/30min)	6	6.4	Gel				ECD (ppg)	
WL HTHP(cc/30min)			Base Oil				DRILLS / BOPS	
Cake (1/32")	1.5	1.5	PUMPS	1	2	3	LAST BOP DRILL	19/01/02
Solids %	7.4	8.2	TYPE	SOILMEC			LAST FIRE DRILL	
Sand %	1.75	1.50	STROKE(in)	6			LAST MOB DRILL	
MBT(lb/bbl)	9.0	9.5	LINER(in)	6			LAST ABN. RIG DRILL	
PH	8.8	9.0	SPM	150			LAST BOP TEST	15/01/02
Chlorides (mg/l)	21,500	21,000	GPM	378			BOP TEST DUE	29/01/02
K+ (mg/l)	23,200	21,600	AV-DP(Ft/min)	154				HRS
KCl %	4.3	4.0	AV-DC(Ft/min)	279			1. Rig up / down.	CUM
PHPA (Calc ppb)	1.23	1.22	SPP	1150			2. Drilling.	11.50
Hole volume bbls.	346		SCR @ 36	10bar			3. Reaming.	2.50
Surface volume bbls.	150		SCR @ 64	28bar			4. Trip	7.00
							5. Circ. / condition.	3.00
							6. Deviation survey	1.00
							7. Run casing	18.25
							8. Cementing	17.75
							9. Handle Preventors	3.25
							10. Riser, flowline	
							11. Logging.	
							12. Press. test BOP	5.00
							13. Repair rig.	3.75
							14. Service rig.	1.25
							15. Slip / cut drlg line	
							16. Drill stem test.	
							17. Fishing.	
							18. Well control.	
							19. Hang-off.	
							21. W.O.Weather	
							22. Lost circ.	
							23. Plug / Abandon.	
							24. Mob / Demob	
							25. Handle anchors.	
							26. Position rig.	
							27. Guide base / ROV.	
							28. Others	11.50
							TOTAL (HRS)	24.00
								212.25

DOWNHOLE TOOLS	SERIAL No.	ROT/REAM HRS	DRILLING DATA		
Jars	DAH 02993	35%	DRAG - UP (mt)		
Nb slab	MDC	30%	DRAG - DOWN (mt)		
Stab	MDC	30%	TORQUE-On Bottom (amps)		
Stab	MDC	30%	TORQUE-Off Bottom (amps)		

BHA No. 2 **BHA WEIGHT** **STRING WT**

BHA Profile : Bit / NB / Pony/STB/ DC/STB/ 16 xDc/Jars/ 2 x Dc/Xo

Origin Energy Ltd / Essential Petroleum Resources Limited.

Daily Drilling Report

WELL:	Port Fairy #1	DATE:	21-Jan-02
PERMIT:	PEP-152	REPORT #	13
RIG:	Mitchell Drilling Rig #150	D.F.S.	12

DEPTH 0600 Hrs:	1550.00 m	STATUS @ 06:00 Hrs:	POOH
TVD:	1550.00 m	FORMATION:	Eumeralla
24 HR PROGRESS:	-	LAST CASING:	9 5/8 @ 812.0m
HOLE SIZE:	8 1/2"	WD (LAT):	N/A
		RT - GL / Air gap:	4.5m
		SHOE L.O.T.:	13.5 ppg
		MAASP:	620 psi

MUD PROPERTIES	PIT	PIT	CONSUMABLES			FORMATION DATA		
Sample taken @	12:30 / 1550m	04:00 / 1513m		Rig	Workboat	Workboat	Name	Eumeralla
Flowline Temp °C			Fuel				Lithology	
Weight ppg / SG	9.55 / 1.15	9.65 / 1.16	Potable water				Top depth RT.	1369.50 m
Funnel viscosity.	40	46	Drill water				Trip gas %	
PV/YP(cp/lb/100ft2)	16 / 16	22 / 25	Barites				Connection Gas %	
Gels 10secs / 10min	4 / 8	5 / 10	Cement				Background gas %	
WL API(cc/30min)	5.8	5.4	Gel				ECD (ppg)	
WL HTHP(cc/30min)	-	-	Base Oil				DRILLS / BOPS	
Cake (1/32")	1.5	1.5	PUMPS	1	2	3	LAST BOP DRILL	19/01/02
Solids %	7.1	7.6	TYPE	SOILMEC			LAST FIRE DRILL	
Sand %	0.50	0.75	STROKE(in)	6			LAST MOB DRILL	
MBT(lb/bbl)	7.0	8.0	LINER(in)	6			LAST ABN. RIG DRILL	
PH	8.5	9.2	SPM	150			LAST BOP TEST	15/01/02
Chlorides (mg/l)	13,000	20,500	GPM	378			BOP TEST DUE	29/01/02
K+ (mg/l)	520	320	AV-DP(Ft/min)	154				HRS CUM
KCl %	2.1	3.7	AV-DC(Ft/min)	279			1. Rig up / down.	38.75
PHPA (Calc ppb)	1.00	1.10	SPP	1150			2. Drilling.	47.25
Hole volume bbls.		359	SCR @ 69	28bar			3. Reaming.	12.50
Surface volume bbls.		205					4. Trip	7.75 43.75
BIT DATA			WEATHER / RIG RESPONSE					
Bit Run	3	4	Wind Speed (kts)				5. Circ. / condition.	1.00 17.00
Diameter	8 1/2"	8 1/2"	Direction				6. Deviation survey	1.00
Type & manufacture	DBS	HTC	Temperature				7. Run casing	18.25
IADC code	PDC		Barometric pressure millibar				8. Cementing	17.75
Serial number	5996742 RW		Barometer rise / fall				9. Handle Preventors	3.25
Nozzles	14 -14 -14 -14 -14	13 - 13 - 13	Visibility(NM)				10. Riser, flowline	
Depth In (m)	821m	1327m	Sea state				11. Logging.	11.50
Depth Out	1327m	1550m	Swell / Period / Direction				12. Press. test BOP	5.00
Drilled (m cum/dly)	506m		Waves / period / direction				13. Repair rig.	3.75
Hours (cum/dly)	7¼ / 30¼		Heave				14. Service rig.	1.25
Dull grade	Ring		Pitch				15. Slip / cut drlg line	
Average ROP (m/hr)	16.7		Roll				16. Drill stem test.	15.25 25.25
WOB Klbs	5-15		Anchor tension				17. Fishing.	
RPM	140		Anchor tension				18. Well control.	
Jet velocity	135		Riser tension				19. Hang-off.	
HHP @ BIT	39		VARIABLE DECK LOAD (Kips)				21. W.O.Weather	
BHA No.	2	BHA WEIGHT		STRING WT			22. Lost circ.	
BHA Profile : 8 1/2" HTC bit - Drill collors - Drill pipe							23. Plug / Abandon.	
DOWNHOLE TOOLS	SERIAL No.	ROT/REAM HRS	DRILLING DATA				24. Mob / Demob	
			DRAG - UP (mt)				25. Handle anchors.	
			DRAG - DOWN (mt)				26. Position rig.	
			TORQUE-On Bottom (amps)				27. Guide base / ROV.	
			TORQUE-Off Bottom (amps)				28. Others	11.50
							TOTAL (HRS)	24.00 257.75

Origin Energy Ltd / Essential Petroleum Resources Limited.

Daily Drilling Report

WELL:	Port Fairy #1	DATE:	22-Jan-02
PERMIT:	PEP-152	REPORT #	14
RIG:	Mitchell Drilling Rig #150	D.F.S.	13

DEPTH 0600 Hrs:	1310.00 m	STATUS @ 06:00 Hrs:	RIH , wiper trip
TVD:	1550.00 m	FORMATION:	Eumeralla
24 HR PROGRESS:	-	LAST CASING:	9 5/8 @ 812.0m
HOLE SIZE:	8 1/2"	WD (LAT):	N/A
SURVEYS:		RT - GL / Air gap:	4.5m
		SHOE L.O.T.:	13.5 ppg
		MAASP:	620 psi

MUD PROPERTIES	PIT	PIT	CONSUMABLES			FORMATION DATA		
Sample taken @		17:00 / 1550m		Rig	Workboat	Workboat	Name	Eumeralla
Flowline Temp °C			Fuel				Lithology	
Weight ppg / SG		9.70 / 1.16	Potable water				Top depth RT.	1369.50 m
Funnel viscosity.		44	Drill water				Trip gas %	
PV/YP(cp/lb/100ft2)		19 / 20	Barites				Connection Gas %	
Gels 10secs / 10min		4 / 6	Cement				Background gas %	
WL API(cc/30min)		5.0	Gel				ECD (ppg)	
WL HTHP(cc/30min)		-	Base Oil				DRILLS / BOPS	
Cake (1/32")		1.5	PUMPS	1	2	3	LAST BOP DRILL	19/01/02
Solids %		8.0	TYPE	SOILMEC			LAST FIRE DRILL	
Sand %		1.25	STROKE(in)	6			LAST MOB DRILL	
MBT(lb/bbl)		8.5	LINER(in)	6			LAST ABN. RIG DRILL	
PH		9.2	SPM	150			LAST BOP TEST	15/01/02
Chlorides (mg/l)		20,500	GPM	378			BOP TEST DUE	29/01/02
K+ (mg/l)		200	AV-DP(Ft/min)	154				HRS
KCl %		2.5	AV-DC(Ft/min)	279			1. Rig up / down.	38.75
PHPA (Calc ppb)		1.10	SPP	1150			2. Drilling.	47.25
Hole volume bbls.		365	SCR @ 69	28bar			3. Reaming.	12.50
Surface volume bbls.		150	SCR @ 36	18bar			4. Trip	5.00 48.75
BIT DATA			WEATHER / RIG RESPONSE					
Bit Run	3	4	Wind Speed (kts)				5. Circ. / condition.	1.00 18.00
Diameter	8 1/2"	8 1/2"	Direction				6. Deviation survey	1.00
Type & manufacture	DBS	GT03	Temperature				7. Run casing	18.25
IADC code	PDC	HTC	Barometric pressure millibar				8. Cementing	17.75
Serial number	5996742 RW	L45CV	Barometer rise / fall				9. Handle Preventors	3.25
Nozzles	14 - 14 - 14 - 14 - 14	13 - 13 - 13	Visibility(NM)				10. Riser, flowline	
Depth In (m)	821m	1327m	Sea state				11. Logging.	11.50
Depth Out	1327m	1550m	Swell / Period / Direction				12. Press. test BOP	5.00
Drilled (m cum/dly)	506m	223m	Waves / period / direction				13. Repair rig.	3.75
Hours (cum/dly)	7¼ / 30¼		Heave				14. Service rig.	1.25
Dull grade	Ring		Pitch				15. Slip / cut drlg line	
Average ROP (m/hr)	16.7		Roll				16. Drill stem test.	18.00 43.25
WOB Klbs	5-15		Anchor tension				17. Fishing.	
RPM	140		Anchor tension				18. Well control.	
Jet velocity	135		Riser tension				19. Hang-off.	
HHP @ BIT	39		VARIABLE DECK LOAD (Kips)				20. W.O.Weather	
BHA No.	2	BHA WEIGHT		STRING WT			21. Lost circ.	
BHA Profile :			8 1/2" HTC bit - Drill collors - Drill pipe					
DOWNHOLE TOOLS	SERIAL No.	ROT/REAM HRS	DRILLING DATA					
			DRAG - UP (mt)				22. Plug / Abandon.	
			DRAG - DOWN (mt)				23. Mob / Demob	
			TORQUE-On Bottom (amps)				24. Handle anchors.	
			TORQUE-Off Bottom (amps)				25. Position rig.	
							26. Guide base / ROV.	
							27. Others	11.50
							TOTAL (HRS)	24.00 281.75

Origin Energy Ltd / Essential Petroleum Resources Limited.

Daily Drilling Report

WELL:	Port Fairy #1	DATE:	23-Jan-02
PERMIT:	PEP-152	REPORT #	15
RIG:	Mitchell Drilling Rig #150	D.F.S.	14

DEPTH 0600 Hrs:	873.02 m	STATUS @ 06:00 Hrs:	DST #3
TVD:	1550.00 m	FORMATION:	Eumeralla
24 HR PROGRESS:	-	LAST CASING:	9 5/8 @ 812.0m
HOLE SIZE:	8 1/2"	WD (LAT):	N/A
		RT - GL / Air gap:	4.5m
		SHOE L.O.T.:	13.5 ppg
		MAASP:	620 psi

MUD PROPERTIES	PIT	PIT	CONSUMABLES			FORMATION DATA			
Sample taken @			Rig	Workboat	Workboat	Name	Eumeralla		
Flowline Temp °C			Fuel			Lithology			
Weight ppg / SG			Potable water			Top depth RT.	1369.50 m		
Funnel viscosity.			Drill water			Trip gas %			
PV/YP(cp/lb/100ft2)			Barites			Connection Gas %			
Gels 10secs / 10min			Cement			Background gas %			
WL API(cc/30min)			Gel			ECD (ppg)			
WL HTHP(cc/30min)			Base Oil			DRILLS / BOPS			
Cake (1/32")			PUMPS	1	2	3	LAST BOP DRILL	19/01/02	
Solids %			TYPE	SOILMEC			LAST FIRE DRILL		
Sand %			STROKE(in)	6			LAST MOB DRILL		
MBT(lb/bbl)			LINER(in)	6			LAST ABN. RIG DRILL		
PH			SPM	150			LAST BOP TEST	15/01/02	
Chlorides (mg/l)			GPM	378			BOP TEST DUE	29/01/02	
K+ (mg/l)			AV-DP(Ft/min)	154				HRS CUM	
KCl %			AV-DC(Ft/min)	279			1. Rig up / down.	38.75	
PHPA (Calc ppb)			SPP	1150			2. Drilling.	47.25	
Hole volume bbls.			SCR @ 69	28bar			3. Reaming.	3.00 15.50	
Surface volume bbls.			SCR @ 36	18bar			4. Trip	5.00 53.75	
BIT DATA			WEATHER / RIG RESPONSE						
Bit Run	3	4	Wind Speed (kts)				5. Circ. / condition.	2.50 20.50	
Diameter	8 1/2"	8 1/2"	Direction				6. Deviation survey	1.00	
Type & manufacture	DBS	GT03	Temperature				7. Run casing	18.25	
IADC code	PDC	HTC	Barometric pressure millibar				8. Cementing	17.75	
Serial number	5996742 RW	L45CV	Barometer rise / fall				9. Handle Preventors	3.25	
Nozzles	14 - 14 - 14 - 14 - 14	13 - 13 - 13	Visibility(NM)				10. Riser, flowline		
Depth In (m)	821m	1327m	Sea state				11. Logging.	11.50	
Depth Out	1327m	1550m	Swell / Period / Direction				12. Press. test BOP	5.00	
Drilled (m cum/dly)	506m	223m	Waves / period / direction				13. Repair rig.	3.75	
Hours (cum/dly)	7¼ / 30¼		Heave				14. Service rig.	0.50 1.75	
Dull grade	Ring		Pitch				15. Slip / cut drlg line		
Average ROP (m/hr)	16.7		Roll				16. Drill stem test.	13.00 56.25	
WOB Klbs	5-15		Anchor tension				17. Fishing.		
RPM	140		Anchor tension				18. Well control.		
Jet velocity	135		Riser tension				19. Hang-off.		
HHP @ BIT	39		VARIABLE DECK LOAD (Kips)				20. W.O.Weather		
BHA No.	2	BHA WEIGHT		STRING WT			21. Lost circ.		
BHA Profile :	Refer to DST #3 BHA sheet.							22. Plug / Abandon.	
							23. Mob / Demob		
							24. Handle anchors.		
DOWNHOLE TOOLS	SERIAL No.	ROT/REAM HRS	DRILLING DATA				25. Position rig.		
			DRAG - UP (mt)				26. Guide base / ROV.		
			DRAG - DOWN (mt)				27. Others	11.50	
			TORQUE-On Bottom (amps)						
			TORQUE-Off Bottom (amps)						
							TOTAL (HRS)	24.00 305.75	

Appendix 3 Casing Tables

PORT FAIRY #1 9 5/8" SURFACE CASING RUNNING TALLY

Joint No.	Joint Length (meters)	Cumulative Length (meters)	Depth Landed 812.00m	Capacity (bbls) 0.07324bbl/ft	Displacement (bbls) 0.08117bbl/ft	String Weight klb 47.00lb/ft	Remarks
Shoe & Jt	12.82	12.82	812.00	3.08 bbl	3.41 bbl	1.977	shoe length 0.52m float length 0.35m
Float & Jt	12.52	25.34	799.18	3.01 bbl	6.75 bbl	3.907	
3	12.20	37.54	786.66	5.94 bbl	10.00 bbl	5.789	
4	12.12	49.66	774.46	8.85 bbl	13.22 bbl	7.657	
5	11.88	61.54	762.34	11.71 bbl	16.39 bbl	9.489	
6	11.77	73.31	750.46	14.54 bbl	19.52 bbl	11.304	
7	12.29	85.60	738.69	17.49 bbl	22.79 bbl	13.199	
8	11.93	97.53	726.40	20.35 bbl	25.97 bbl	15.039	
9	11.78	109.31	714.47	23.19 bbl	29.11 bbl	16.855	
10	12.51	121.82	702.69	26.19 bbl	32.44 bbl	18.784	
11	11.77	133.59	690.18	29.02 bbl	35.57 bbl	20.599	
12	12.22	145.81	678.41	31.96 bbl	38.83 bbl	22.484	
13	11.28	157.09	666.19	34.67 bbl	41.83 bbl	24.223	
14	11.14	168.23	654.91	37.34 bbl	44.80 bbl	25.941	
15	11.86	180.09	643.77	40.19 bbl	47.96 bbl	27.769	
16	11.07	191.16	631.91	42.85 bbl	50.90 bbl	29.476	
17	11.36	202.52	620.84	45.58 bbl	53.93 bbl	31.228	
18	12.41	214.93	609.48	48.56 bbl	57.23 bbl	33.142	
19	12.08	227.01	597.07	51.47 bbl	60.45 bbl	35.004	
20	12.44	239.45	584.99	54.46 bbl	63.76 bbl	36.923	
21	12.82	252.27	572.55	57.54 bbl	67.18 bbl	38.899	
22	12.00	264.27	559.73	60.42 bbl	70.37 bbl	40.750	
23	12.02	276.29	547.73	63.31 bbl	73.57 bbl	42.603	
24	12.34	288.63	535.71	66.27 bbl	76.86 bbl	44.506	
25	10.97	299.60	523.37	68.91 bbl	79.78 bbl	46.198	
26	12.18	311.78	512.40	71.84 bbl	83.02 bbl	48.076	
27	12.08	323.86	500.22	74.74 bbl	86.24 bbl	49.938	
28	11.84	335.70	488.14	77.58 bbl	89.39 bbl	51.764	
29	12.60	348.30	476.30	80.61 bbl	92.75 bbl	53.707	
30	11.60	359.90	463.70	83.40 bbl	95.84 bbl	55.496	
31	11.15	371.05	452.10	86.08 bbl	98.81 bbl	57.215	
32	12.09	383.14	440.95	88.98 bbl	102.03 bbl	59.079	
33	12.21	395.35	428.86	91.92 bbl	105.28 bbl	60.962	
34	12.42	407.77	416.65	94.90 bbl	108.59 bbl	62.877	
35	11.79	419.56	404.23	97.74 bbl	111.73 bbl	64.695	
36	12.10	431.66	392.44	100.64 bbl	114.95 bbl	66.561	
37	12.11	443.77	380.34	103.55 bbl	118.17 bbl	68.428	
38	11.98	455.75	368.23	106.43 bbl	121.36 bbl	70.276	
39	12.22	467.97	356.25	109.37 bbl	124.62 bbl	72.160	
40	11.55	479.52	344.03	112.14 bbl	127.69 bbl	73.941	
41	12.52	492.04	332.48	115.15 bbl	131.03 bbl	75.871	
42	11.65	503.69	319.96	117.95 bbl	134.13 bbl	77.668	
43	12.14	515.83	308.31	120.87 bbl	137.36 bbl	79.540	
44	11.83	527.66	296.17	123.71 bbl	140.51 bbl	81.364	
45	12.41	540.07	284.34	126.69 bbl	143.82 bbl	83.277	
46	11.58	551.65	271.93	129.47 bbl	146.90 bbl	85.063	
47	11.58	563.23	260.35	132.26 bbl	149.98 bbl	86.849	
48	10.99	574.22	248.77	134.90 bbl	152.91 bbl	88.543	
49	12.49	586.71	237.78	137.90 bbl	156.24 bbl	90.469	
50	12.08	598.79	225.29	140.80 bbl	159.45 bbl	92.332	
51	12.34	611.13	213.21	143.77 bbl	162.74 bbl	94.235	
52	11.91	623.04	200.87	146.63 bbl	165.91 bbl	96.071	
53	11.99	635.03	188.96	149.51 bbl	169.10 bbl	97.920	
54	12.21	647.24	176.97	152.44 bbl	172.35 bbl	99.803	
55	12.24	659.48	164.76	155.39 bbl	175.61 bbl	101.690	
56	12.42	671.90	152.52	158.37 bbl	178.92 bbl	103.605	
57	11.81	683.71	140.10	161.21 bbl	182.07 bbl	105.426	
58	12.19	695.90	128.29	164.14 bbl	185.31 bbl	107.306	
59	12.36	708.26	116.10	167.11 bbl	188.60 bbl	109.212	
60	12.54	720.80	103.74	170.12 bbl	191.94 bbl	111.146	
61	12.37	733.17	91.20	173.09 bbl	195.24 bbl	113.053	
62	12.59	745.76	78.83	176.12 bbl	198.59 bbl	114.994	
63	12.35	758.11	66.24	179.08 bbl	201.88 bbl	116.899	
64	12.52	770.63	53.89	182.09 bbl	205.21 bbl	118.829	

PORT FAIRY #1 7" CASING CEMENT JOB

EPR. Cementing Company : Dowell Date of Job: 24th Jan 2002

Single Stage

LEAD CEMENT	NA	ppg	TAIL CEMENT	15.8	ppg	Diesel Spacer	7.09	ppg
previous shoe	818	m	top of tail	670	m	Amount	n/a	bbl
bottom of lead		m	bottom of tail	1540	m	diesel	n/a	bbl
gauge hole (ft3)		ft3	gauge hole (ft3)	362.1	ft3	MCS B	n/a	
plus 100% excess		ft3	plus 40% excess	506.9	ft3	Chemical Wash	8.3	ppg
Caliper hole volume (logs)	n/a	ft3	Caliper hole volume (logs)	550.0	ft3	Amount	n/a	bbl
csg-csg ann. cap. (cuft/ft)		ft3/ft	csg-csg ann. cap. (cuft/ft)	0.1268	ft3/ft	water (39.9 galls/bbl)	n/a	bbl
length (ft)		ft	length (ft)	492	ft	MCS B (2.1 galls/bbl)	n/a	gal
csg-csg volume (cuft)		ft3	csg-csg volume (cuft)	62	ft3	FP9L	0	gal
shoe track		ft3	shoe track	9.0	ft3			
slurry volume (cuft)		ft3	slurry volume (cuft)	577.9	ft3	Pressures		
No. of sacks		sx	No. of sacks	498	sx	max differential	1325	psi
mix water theory		bbls	mix water theory	61.7	bbls			
mix water actual		bbls	mix water actual	61.7	bbls	Job Time Estimate		
D081 Retarder 0.04 gals/sx		gals	D145A Dispersant	32	gal	mixing slurry	40	min
bentonite (30kg/tonne)		sx	D144 Antifoam	5	gal	displacement	23	min
D144 Antifoam.		gals				total time	70	min
D145A Retarder						thickening time	4	hour
CaCl2	0	kgs						
Displacement	199.0	bbl	JOB SUMMARY					
Cementer	199	bbl Water	Time	mins	Description & Comments			
Rig pump	0.0	bbl 9.1 mud	04:30 - 04:32	2	Pump 10 bbls water ahead.			
liner size (in)	7.00	in	04:32 - 04:35	5	Test lines 3500psi Ok.			
97% efficiency	0.078	bbl/stk	04:35 - 05:15	40	Mix and pump tail.			
number of strokes	0		05:15 - 05:40	25	Wash out line. Drop top plug. Displace.			
rate	11	BPM	05:40 - 05:50	10	Bump plug w/ 3000 psi 5 mins OK.			
SPM	0				Nil cmt returns.			
annular velocity	110	fpm						
approx. time	17	minutes			Float held OK.			
					Well was flowing strongly after plug bumped. Shut annu:			
					Shut in pressure 10 psi. Observe 10mins. 13 psi.			
					Bled down OK.			

Joint No.	Joint Length	Cumulative Length	Depth Landed	Capacity (bbbls)	Displacement (bbbls)	String Weight MT	Remarks
		0.00	0.00				String wt is buoyed wt.
		0.00	0.00				
		0.00	0.00	0.0	0.00	0.000	
XN	0.28	0.28	850.00	0.0	0.00	0.002	
1	9.41	9.69	849.72	0.2	0.07	0.064	
Packer	1.15	10.84	840.31	0.2	0.08	0.072	
2	9.31	20.15	839.16	0.4	0.15	0.134	
SSD	1.18	21.33	829.85	0.4	0.16	0.142	
3	9.31	30.64	828.67	0.6	0.23	0.204	
4	9.35	39.99	819.36	0.8	0.29	0.266	
5	9.40	49.39	810.01	0.9	0.36	0.329	
6	9.34	58.73	800.61	1.1	0.43	0.391	
7	9.37	68.10	791.27	1.3	0.50	0.453	
8	9.41	77.51	781.90	1.5	0.57	0.516	
9	9.39	86.90	772.49	1.7	0.64	0.578	
10	9.41	96.31	763.10	1.8	0.71	0.641	
11	9.36	105.67	753.69	2.0	0.78	0.703	
12	9.32	114.99	744.33	2.2	0.85	0.765	
13	9.43	124.42	735.01	2.4	0.91	0.828	
14	9.29	133.71	725.58	2.5	0.98	0.890	
15	9.31	143.02	716.29	2.7	1.05	0.952	
16	9.43	152.45	706.98	2.9	1.12	1.014	
17	9.38	161.83	697.55	3.1	1.19	1.077	
18	9.41	171.24	688.17	3.3	1.26	1.139	
19	9.43	180.67	678.76	3.4	1.33	1.202	
20	9.36	190.03	669.33	3.6	1.40	1.264	
21	9.47	199.50	659.97	3.8	1.47	1.327	
22	9.44	208.94	650.50	4.0	1.54	1.390	
23	9.44	218.38	641.06	4.1	1.60	1.453	
24	9.47	227.85	631.62	4.3	1.67	1.516	
25	9.44	237.29	622.15	4.5	1.74	1.579	
26	9.32	246.61	612.71	4.7	1.81	1.641	
27	9.30	255.91	603.39	4.9	1.88	1.703	
28	9.43	265.34	594.09	5.0	1.95	1.765	
29	9.43	274.77	584.66	5.2	2.02	1.828	
30	9.29	284.06	575.23	5.4	2.09	1.890	
31	9.29	293.35	565.94	5.6	2.16	1.952	
32	9.32	302.67	556.65	5.7	2.22	2.014	
33	9.48	312.15	547.33	5.9	2.29	2.077	
34	9.46	321.61	537.85	6.1	2.36	2.140	
35	9.47	331.08	528.39	6.3	2.43	2.203	
36	9.47	340.55	518.92	6.5	2.50	2.266	
37	9.48	350.03	509.45	6.6	2.57	2.329	
38	9.47	359.50	499.97	6.8	2.64	2.392	
39	9.49	368.99	490.50	7.0	2.71	2.455	
40	9.49	378.48	481.01	7.2	2.78	2.518	
41	9.48	387.96	471.52	7.4	2.85	2.581	
42	9.49	397.45	462.04	7.5	2.92	2.644	
43	9.49	406.94	452.55	7.7	2.99	2.708	
44	9.46	416.40	443.06	7.9	3.06	2.771	
45	9.46	425.86	433.60	8.1	3.13	2.834	
46	9.46	435.32	424.14	8.3	3.20	2.896	
47	9.48	444.80	414.68	8.4	3.27	2.960	
48	9.47	454.27	405.20	8.6	3.34	3.023	
49	9.49	463.76	395.73	8.8	3.41	3.086	
50	9.48	473.24	386.24	9.0	3.48	3.149	
51	9.49	482.73	376.76	9.2	3.55	3.212	
52	9.49	492.22	367.27	9.4	3.62	3.275	
53	9.48	501.70	357.78	9.5	3.69	3.338	
54	9.44	511.14	348.30	9.7	3.76	3.401	
55	9.49	520.63	338.86	9.9	3.83	3.464	
56	9.48	530.11	329.37	10.1	3.90	3.527	
57	9.49	539.60	319.89	10.3	3.97	3.590	
58	9.48	549.08	310.40	10.4	4.04	3.653	
59	9.49	558.57	300.92	10.6	4.10	3.717	
60	9.48	568.05	291.43	10.8	4.17	3.780	
61	9.47	577.52	281.95	11.0	4.24	3.843	
62	9.47	586.99	272.48	11.2	4.31	3.906	

Joint No.	Joint Length	Cumulative Length	Depth Landed	Capacity (bbbls)	Displacement (bbbls)	String Weight MT	Remarks
63	9.44	596.43	263.01	11.3	4.38	3.968	
64	9.50	605.93	253.57	11.5	4.45	4.032	
65	9.49	615.42	244.07	11.7	4.52	4.095	
66	9.46	624.88	234.58	11.9	4.59	4.158	
67	9.49	634.37	225.12	12.1	4.66	4.221	
68	9.48	643.85	215.63	12.2	4.73	4.284	
69	9.47	653.32	206.15	12.4	4.80	4.347	
70	9.48	662.80	196.68	12.6	4.87	4.410	
71	9.46	672.26	187.20	12.8	4.94	4.473	
72	9.49	681.75	177.74	13.0	5.01	4.536	
73	9.48	691.23	168.25	13.1	5.08	4.599	
74	9.49	700.72	158.77	13.3	5.15	4.662	
75	9.47	710.19	149.28	13.5	5.22	4.725	
76	9.49	719.68	139.81	13.7	5.29	4.788	
77	9.47	729.15	130.32	13.9	5.36	4.851	
78	9.49	738.64	120.85	14.0	5.43	4.915	
79	9.48	748.12	111.36	14.2	5.50	4.978	
80	9.48	757.60	101.88	14.4	5.57	5.041	
81	9.49	767.09	92.40	14.6	5.64	5.104	
82	9.47	776.56	82.91	14.8	5.71	5.167	
83	9.49	786.05	73.44	14.9	5.78	5.230	
84	9.48	795.53	63.95	15.1	5.85	5.293	
85	9.45	804.98	54.47	15.3	5.92	5.356	
86	9.47	814.45	45.02	15.5	5.99	5.419	
87	9.47	823.92	35.55	15.7	6.06	5.482	
88	9.47	833.39	26.08	15.8	6.12	5.545	

PORT FAIRY #1 9 5/8" SURFACE CASING RUNNING TALLY

Joint No.	Joint Length	Cumulative Length	Depth Landed	Capacity (bbls)	Displacement (bbls)	String Weight klb	Remarks
65	12.51	783.14	41.37	185.10 bbl	208.54 bbl	120.758	
66	11.97	795.11	28.86	187.98 bbl	211.73 bbl	122.604	
67	12.09	807.20	16.89	190.88 bbl	214.95 bbl	124.468	
Lnd Jt	7.50	814.70	4.80	192.68 bbl	216.95 bbl	125.625	Landing joint
68	12.54	827.24	-2.70	195.70 bbl	220.29 bbl	127.558	OUT
69	13.10	840.34	-15.24	198.84 bbl	223.78 bbl	129.578	OUT
70	13.02	853.36	-28.34	201.97 bbl	227.24 bbl	131.586	OUT
71	12.68	866.04	-41.36	205.02 bbl	230.62 bbl	133.541	OUT
72	12.64	878.68	-54.04	208.06 bbl	233.98 bbl	135.490	OUT
73	12.47	891.15	-66.68	211.05 bbl	237.31 bbl	137.413	OUT
74	12.39	903.54	-79.15	214.03 bbl	240.60 bbl	139.324	OUT
75	12.35	915.89	-91.54	217.00 bbl	243.89 bbl	141.228	OUT
Stick up above RT		<u>-2.70m</u>					

CASING RUN SUMMARY

Drill to 821m. Run survey. POOH.
 Conduct pre-casing meeting.
 Rig up to run casing.
 Run shoe followed by next 5 joints of casing. (13.3/8" K-55 BTC Casing)
 Tag bottom. Pick up of bottom to cement.
 Prepare for cementing.
 Conduct pre-cementing meeting.
 Commence cement job.

Appendix 4: Drilling Fluid Recap

Operator : OCA Ltd
Well : Port Fairy # 1
Rig : Mitchell 50
Spud : 9th January 2002

DRILLING FLUID SUMMARY

FOR: *Oil Company of Australia Ltd*

WELL: Port Fairy # 1

Otway Basin

VICTORIA

Engineered by: Arun Madan
Prepared by: Arun Madan and Mark Scheide
Spud Date: 9th January 2002

Operator : OCA Ltd
Well : Port Fairy # 1
Rig : Mitchell 50
Spud : 9th January 2002

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Operator : OCA Ltd
Well : Port Fairy # 1
Rig : Mitchell 50
Spud : 9th January 2002

1. SUMMARY OF OPERATIONS

Port Fairy # 1 was an exploration well in PEP 152 of the onshore Otway Basin. The primary targets were the Flaxman and Warree sandstones while the secondary target was the Nullawarree Green sands. The well was spudded @ 0700 Hours on 9th January 2002, TD of 1550 Meters was reached @ 1830 Hours on 18th January 2002 and the rig was released on 24th January 2002.

HOLE SIZE : 17 1/2"
MUD TYPE : Air/Water
INTERVAL : Surface – 78.2 Metres
CASING : 13 3/8" conductor @ 67 metres

The well was spudded @ 07:00 hours on 9th January with 17 1/2" drag bit. As the bit would not drill below 2 metres, a 12 1/4" hammer assembly was picked up and the hole was drilled to 10 metres. The hole was further drilled using 17 1/2" hammer to 31 metres assembly just through basalt into sands. Some basalt cavings were evident at this stage. 23 sacks of cement were mixed and spotted at bottom.

After waiting on cement, the 12 1/4" pilot hole was further drilled using water from the mud tanks with returns to the sump. After drilling to 78.2 metres, the hole was enlarged to 17 1/2". 13 3/8" conductor casing was run in to 67 metres and cemented using rig mixing facilities and mud pumps.

HOLE SIZE : 12 1/4"
MUD TYPE : Spud Gel Mud
INTERVAL : 78 – 821 Metres
CASING : 9-5/8" @ 813 Metres

The make up water (from local bore plus haulage from Port Fairy township) was tested at location and found to have the following properties:

pH	8.5
pf/mf	0.05/0.3
Hardness	200 mg/l
Chlorides	800 mg/l

During waiting on cement on 13 3/8" conductor, the tanks were placed in position. 200 barrels of 20 ppb Trugel 13A and 0.25 ppb Caustic Soda were mixed in the tanks obtaining viscosity of more than 45 sec/qt. The shaker was dressed with 20/30 mesh screens.

A 12 1/4" bit was run in and the cement was tagged at 58 metres. The cement was drilled with gel mud with minimal cement contamination. Whilst drilling through the Limestone and Marl formations, water addition was made to counter the increasing viscosity. The shaker screens were washed continuously to prevent excessive run off from the shakers. Occasional by passing of the Possum belly and shale shakers were required in view of excessive cuttings.

Operator : OCA Ltd
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Mud rings were experienced while drilling at 270 metres due to anticipated Gumbo in lower Gellibrand Marl. The mud had started picking up in gels just prior to mud rings. The flow line was nipped down and cleaned. Provision for jet cleaning of flow line was made and the drilling was resumed. The mud was treated with SAPP (0.3 ppb) at this stage to prevent any mud rings.

The mud yield point decreased to less than 5 lbs/100ft² on addition of the SAPP and again gradually increased during further Marl drilling. Half a sack (0.075 ppb) of SAPP was again added when the mud viscosity increased at 420 m. Mud rings were again experienced during bottoms up after survey at 450 m.

While drilling through Dilwyn formation, Xanthan Gum and Pac Reg sweeps (addition to Suction during connections as no separate pill tank) were pumped around to keep the hole clean in view of low pump discharge (only one mud pump). Enersal Coarse was also added during Dilwyn sands on operator's request.

As the mud pump started jacking off during pumping of sweeps, these sweeps were discontinued. The shaker screens were upgraded to 60/80 mesh, however the bottom screen was almost immediately replaced with coarser screen (20 mesh) because of excessive run off. The upper screen was also continuously hosed in view of sand blinding.

A wiper trip to the drill collars was made after drilling to 818 metres. After drilling another 3 metres to 821 metres, for casing shoe adjustment, the pipes were pulled out. The pipes were slugged both prior to Wiper trip and the final pull out.

9 5/8" (47 ppf) casings were run in with shoe at 813 metres. After circulating the hole, the casings were cemented displacing the cement slurry with the mud. A good amount of cement slurry surfaced during displacement.

HOLE SIZE : 8½"
MUD TYPE : KCl - PHPA – Polymer
INTERVAL : 813 Meters – 1550 Meters
CASING : 7" Casing

During nipping up of the BOP's, the mud tanks were dumped and cleaned. 250 barrels of fresh KCl-PHPA-Polymer mud was mixed in the settling and suction pits (keeping 90 barrels in trip and reserve tanks), isolating sand-trap as suction for sand trap:

JK-261 (dry PHPA)	0.22 ppb
PAC-R	1.75 ppb
Xanthan Gum	0.22 ppb
KCl	37 ppb

The KCl concentration (10.5 %) was higher than recommended (3-4%) so as to have the initial mud weight of 8.9 ppg (1.07 SG) as requested by the operator. The fluid was sheared through the gun lines while the shakers were dressed with 20 / 40 mesh screens.

The cement was tagged at 774 meters with the 8 ½" bit. The shoe track and 2 meters of new formation to 823 meters were drilled with the mud from previous interval using the sandtrap as the

Operator : OCA Ltd
Well : Port Fairy # 1
Rig : Mitchell 50
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suction. After circulating the hole clean, an extended LOT was conducted obtaining EMW of 13.5 ppg.

The hole was displaced with fresh KCl – PHPA mud after LOT. A deviation survey was conducted immediately after displacement (the survey prior to casing was a miss-run), which gave enough time to mix another 140 barrels of fresh mud to replenish the surface volume. PHPA was not added to this fresh batch to avoid any run off from the shaker.

The drilling resumed after the survey. There was no run off from the shakers. PHPA (dry) was added, initially through the reserve tank but as the frequent shifting of the flexi-pump for water, pre-mix and other works became cumbersome, so continuous dry addition was started in the tanks to keep up with the drilling. The approximate rate of addition was 1.35 lbs per metre of formation drilled. The formation was argillaceous in nature but the cuttings were dry and well encapsulated.

The mud volume was built up with water and simultaneous addition of PAC –Reg. Xanthan Gum was added whenever required to maintain hole cleaning. Only one triplex mud pump with 7” stroke length and 6” liner was available, so the mud yield point was allowed to build up in view of lower pump discharge (310 – 325 gpm).

The yield point was more than 15 lbs/100ft² in the beginning and was allowed to gradually build to more than 17 lbs/100ft² as the drilling progressed though PHPA (dry) addition also accounted for some of this higher rheology.

The mud weight increased to 9.2 ppg (1.10 SG) while drilling at 1200 metres. Attempts were made to up grade the shaker screens but without success, so coarser screens were continued. While drilling at 1236 metres, gas up to 25 units was recorded. The mud weight was increased to 9.5 ppg (1.14 SG) on operator’s request using Barytes.

The drilling after 1236 metres was controlled with less weight on bit. The ROP became very poor at 1327 metres so it was decided to pull out of hole. A baryte slug was pumped which was mixed in the suction tank after stopping the circulation. The PDC condition was O.K. on pulling out.

A new tri-cone bit was run in. On encountering a ledge at 874 metres, further running in was done with washing and reaming. The availability of a top drive, facilitated this washing down. 20 metres of fill were encountered at bottom. During washing and reaming, Xanthan Gum and Pac Reg additions were made and the yield point was increased to more than 20 lbs/100ft².

On resumption of drilling, the yield point was continued to be maintained more than 20lbs/100ft². PHPA addition had to be decreased because of higher rheology and non-availability of any pre-mix facilities. The PHPA rate of addition was still 0.95 lbs per metre of formation drilled. The concentration of Pac Reg was kept on higher side. KCl addition was not required as the same was still more than 4 %.

The mud weight gradually increased to 9.6 – 9.7 ppg (1.15 – 1.16 SG) while drilling through lower Flaxman and Eumerrella formations. Although the desander and the desilter were run continuously, the sand was more than 1.0 % while drilling these formations though the MBC values were still low.

TD of 1550 metres was reached at 18:30 hours on 18th January 2002. After circulating the hole clean, the pipes were pumped out utilising the top drive facilities. As it was decided to pump out the pipes so the slug was not pumped thus the pull out was wet.

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POST TD

After pulling out, Schlumberger was rigged up and two runs of logs were recorded. Fill was encountered at 1523 metres during logging. After rigging down Schlumberger, test tools were run in and DST # 1 was conducted. After deflating the packer, the pipes were pulled out to 2nd object. Attempts to seat the packer failed so test tools were pulled out.

The sample chamber was found plugged with sand on pulling out. During logging and DST operations, 70 barrels of mud was mixed in the surface tanks to make up for the volume lost during wet pull out. Pac Reg was the only polymer used while building up the volume.

The old bit was run in for a wiper trip. Fill was encountered at 1513 metres. After circulating bottoms up at 1513 metres the pipes were pulled out. Water along with Pac Reg, Caustic and Idcide was added during circulation to build up the volume. After pumping slug, the pipes were pulled out.

Test tools were made up and run in for DST # 2 in Parratte. The tools got plugged after initial build up. The test tools were pulled out. Another trip was made after DST # 2. The fill from 1506 metres was washed and reamed. Xanthan Gum high viscous mud was pumped around during final bottoms up. A slug was pumped and the pipes were pulled out.

DST # 3 tools were run in to repeat the test in the Parratte formation. The packer did not inflate. The tools were pulled out and 7" casing was run in without any fill with shoe at 1546 metres. The casing was cemented, displacing the slurry with water and bumping the plug.

The rig was released on 24th of January 2002.

Operator : OCA Ltd
Well : Port Fairy # 1
Rig : Mitchell 50
Spud : 9th January 2002

2. OBSERVATIONS, RECOMMENDATIONS AND WELL ANALYSIS

The well Port Fairy # 1 was drilled to TD of 1550 meters. Two run of wireline logs and three DST's were carried out during post TD evaluation. The logging runs were successfully conducted though the test tools got plugged during DST # 1 and DST # 2 while the packers did not inflate for DST # 3 (re-test of DST # 2 object).

<i>HOLE SIZE</i>	<i>INTERVAL</i>	<i>Meters</i>	<i>COST</i>	<i>COST / FT</i>
12 ¼"	0 – 821. Metres	821	\$3309.42	\$ 4.03
8 ½"	821 – 1550 Meters	729	\$ 13003.69	\$ 17.84
TOTAL DRILLING COST (1550 Metres)			\$ 16,313.11	\$10.52
POST TD COSTS (logging / completion)			\$ 2,367.98	
TOTAL WELL COST			\$18,681.09	\$ 12.05
DAMAGED COST			\$ 131.72	
TOTAL COST (Damaged + Used)			\$ 18,812.81	

12¼" Surface Hole

The surface interval was drilled with Gel Spud Mud at the cost of \$3,309.42 i.e. \$ 4.03 per metre.

13 3/8" conductor was set at 67 metres so losses were not encountered in the upper limestone formations. Mud rings were experienced while drilling through the Marl section especially Gellibrand Marl. SAPP addition was made which helped in thinning down the mud.

Pac Reg and Xanthan Gum sweeps were pumped around while drilling through Dilwyn sands. The losses were not significant. LCM (Enerseal Coarse @ 1 ppb) though was added on Operator's request. The addition of Pac Reg provided stability to the mud system though yield point was only 10-11 lbs/100ft² at TD. Casing was run in without any problems. Good quantity of cement surfaced during displacement with mud.

8½" Production Hole

This interval was drilled using KCl PHPA mud at the total mud cost of \$ 13,003.69 or \$17.84 per metre again without any major mud related problems.

The initial mud weight was kept 8.9 ppg (1.07 SG) using KCl in anticipation of aquifer pressures. The mud weight was further increased to 9.5 ppg (1.14 SG) using Barytes when some gas indications were there in claystones prior to Nullawarre Green sands.

The hole was drilled without any major problems except for some fill during bit and logging trips (1523 metres). No wiper trip had been made prior to logging and DST # 1. The running in of 7" casing was smooth without encountering any fill at bottom with casing shoe at 1546 metres.

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Solids Control

The rig had very basic and inferior solids control system. The single double deck shaker could be operated with coarse screens (20 /30 to 60/20 mesh) during surface hole and any attempt to upgrade the screens resulted in run off from the shakers.

The desilter and desander (single cone) were available but were operated through single hopper pump. The desander had been requisitioned for this well but as the feed system was not properly set so effectiveness of hydrocyclones was low. As the cut size of screen was around 234 microns, so load on hydrocyclones was very high.

The settling in sand trap was utilised but faulty dump gate and lack of any high-pressure water hose for cleaning made it difficult to clean the sand trap frequently. The sand trap was dumped during surveys and trips only.

There was no direct dumping provision of the possum belly in the sump and the same had to be dumped through the sand trap. Though the possum belly was dumped frequently but it only added to solids in the sand trap.

Provision of gumbo sliding by pass line was an advantage, but lack of any proper jetting provision in the flow line resulted in non-productive rig time. Due to low operating volume, the LGS were only around 7.0 % by surface target depth despite drilling 821 metres of 12 ¼" hole.

During production interval, the shaker screens had to be downgraded to 20/40 mesh (cut size of 381 microns) because of the polymers. The shaker screen could not be upgraded due to continuous direct addition of PHPA. The PHPA addition in the pits further lowered the efficiency of solids control hydrocyclones. The settling rate was high due to PHPA but again the sand trap could not be dumped frequently.

The formations were quite argillaceous but the sufficient amount of PHPA in the system helped in keeping the solids on lower side. The LGS increased to only 3.5 % by 1050 metres and further to 5.5 % by 1255 feet. The LGS further increased during flaxman and Eumerrella formation drilling to 7.2 % v/v.

The sand in the system was always high with values of 1.0 – 1.75 % v/v in Flaxman and Eumerrella formations.

Mud Weight

The mud weight by surface casing depth was 9.25 – 9.3 ppg (1.11-1.115 SG) because of drilled solids. Due to anticipated aquifer pressure in the Dilwyn formation, the operator requisitioned minimum mud weight of 8.9 ppg (1.07 SG).

Again due to anticipated aquifer pressure, the operator requested the mud weight of 8.9 ppg (1.07 SG) for the initial brew for production hole. The casing seat formation was not sure at that stage. KCl was utilised as the initial weighing agent.

As the LGS increased, the KCl content was allowed to drop continuously from initial 10.5 % to specified 4 %. The mud weight was increased at 1236 feet from 9.2 ppg (1.10 SG) to 9.5 ppg (1.14 SG) using Barytes on operator's request. This was requisitioned in anticipation of high-pressure sands as 25 units of drilled gas were recorded in clay stone formations.

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The mud weight further increased to 9.6-9.7 ppg (1.15 – 1.16 SG) during fast drilling through Flaxman and Eumerrella formations. No effort was made to dump and dilute the system to cut back the mud weight.

Mud Losses

No significant mud losses were experienced in the surface or production intervals. The conductor was set quite deep (67 metres) which covered the thief limestone zones. While drilling the conductor hole with water from the sump, losses were evident.

Hole Gauge

The hole on the basis of single axis calliper logs was 6.4 % overgauge with average hole size of 8.74". The Pember Mud stone, Skull Creek and Belfast Mud Stone had higher average hole sizes i.e.9.20", 9.54" and 9.52" respectively.

Though the single axis calliper does not reflect the true picture, the lower concentration of PHPA due to mixing constraints might be a contributing factor in these argillaceous formations.

Mud System and Properties

Mud used for surface hole was basic gel spud mud. Initial gel concentration was 20 ppb, which gave the viscosity of more than 45 sec/qt in fresh make up water. The claystone of long sequence of Marl formations contributed further to mud viscosity.

SAPP addition (0.3 ppb) was added to the system at 270 metres when mud rings were experienced in Gallibrand Marl due to gumbo. Further additions of less than 0.1 ppb SAPP was made at 420 metres when a rapid viscosity increase was noticed. Mud rings were experienced after the survey at 450 metres.

During further drilling, Pac Regular and Xanthan Gum sweeps were pumped around to keep the hole clean and to increase the viscosity in Dilwyn sand formations in view of low pump discharge rate because of the single mud pump.

The running of casing was smooth though the yield point was in the range of 10 –11 lbs/100ft² only with lower gels because of sufficient polymers in the system at this stage.

KCl – PHPA Polymer mud system was used for the 8 ½" Production hole. The initial concentration of dry PHPA was 0.15 ppb, the concentration of PHPA was gradually increased to 1.0 ppb by continuous addition of PHPA during drilling.

The rate of addition was 1.35 lbs/metre of formation drilled until top of Flaxman. The average rate of addition was cut down to 0.95 lb/metre.in Flaxman and Eumerrella formations due to various factors like target sands, fish eyes due to higher rheology and direct additions of PHPA.

As the concentration of PHPA was kept lower in the beginning, due to shaker constraints, so the initial concentration of Pac Reg was kept more than 1.0 ppb. The concentration was maintained between 1.25 ppb to 1.50 ppb to maintain fluid loss and rheology properties.

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When the rate of addition of PHPA was decreased near the target, Pac Reg was supplemented with Pac Iv also, to have combined concentration of approximately 1.75 ppb. Xanthan Gum concentration was maintained between 0.25 to 0.4 ppb; additions more through sweeps.

As the pump discharge was expected to be low due to availability of only one mud pump (triples: 6" liner and 7" stroke length), so the yield point was kept more than 17 lbs/100ft² from the beginning itself. The yield point was 17- 23 lbs/100ft² during the drilling of 8 ½" hole though un-sheared PHPA and solids also contributed to this rheology.

Fluid loss throughout the section was less than 7.0 cc/30min and was below 6.5 cc/30min while drilling the targets.

Potassium chloride concentration was 10.5 % in the beginning of the hole as it was used as weighing agent for the starting fluid, but was allowed to decrease as the drilling progressed. The concentration was more than 4.0 % while drilling through target sands.

Due to non-availability of a pill tank, the suction tank was used as a makeshift pill tank for slugs and high viscous pills though the returns during pumping of these pills could not be isolated due to low surface capacity.

Appendix 5: Cuttings Description

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							Vis Por	Description and shows:
From	To	Sst	Slt	Clyst	Lst	Marl	Co			
80	90			100					CLAY medium grey, sticky, very soft, washing out of sample. Washed sample is predominantly cement.	
90	100			100					CLAY medium grey, soft, plastic,	
100	110			95	5				CALCAREOUS CLAY, medium grey, soft, CALCARENITE, light grey, fine grained, common marine fossils and glauconite.	
110	120			90	10				CALCAREOUS CLAYSTONE, medium to light grey, soft, sticky, minor fossils. CALCARENITE, light grey, fine grained, soft - firm, friable, fossiliferous, trace glauconite.	
120	130				10	90			MARL, as above, CALCARENITE, light grey, occasionally white, fine to coarse grained, soft - hard, friable to well cemented, fossiliferous, trace glauconite.	
130	140				5	95			MARL, as above, trace pyrite, soft, plastic, CALCARENITE, light grey, occasionally white, fine to coarse grained, soft - hard, friable to well cemented, fossiliferous, trace glauconite.	
140	150				10	90			MARL, as above, CALCARENITE, white to light grey, occ yellowish white, fine to coarse grained, poorly sorted, fossil frags, friable to firm, trace glauconite.	
150	160				10	90			MARL, as above, CALCARENITE, as above, laminated in part.	
160	170				10	90			MARL, as above, CALCARENITE, white to grey, mottled, fine to coarse, silty, fossiliferous,	
170	180				5	95			MARL, as above, very sticky, dispersive, fossiliferous, CALCARENITE, as above.	
180	190				20	80			MARL, as above, very finely calcarenitic in part, soft to firm, CALCARENITE, as above, glauconitic, occasionally well cemented.	
190	200				30	70			MARL, as above, very finely calcarenitic in part, soft to firm, CALCARENITE, as above, glauconitic, occasionally well cemented.	
200	210				10	90			MARL, as above, very finely calcarenitic in part, soft to firm, CALCARENITE, as above, glauconitic, occasionally well cemented.	
210	220				20	80			MARL, as above, very finely calcarenitic in part, soft to firm, CALCARENITE, as above, glauconitic, occasionally well cemented.	
220	230				10	90				
230	240									
240	250				10	90			MARL, light grey, soft/dispersive to firm, glauconitic, common sand size fossil grains.	
250	260				5	95			MARL, as above, occasionally pyritic	
260	270				60	40			MARL as above, washing over shakers, CALCARENITE, light grey to light greenish and brownish grey, fine to coarse grained, very silty grades to CALCISILTITE. Abundant fossil fragments	
270	280				60	40			MARL, light grey, firm, CALCARENITE, as above, fossiliferous, tr glauconite, common loose large fossil fragments.	
280	290			30	60	10			CLAYSTONE, medium grey, soft, slightly to very calcareous, silty, grades to CALCISILTITE, light grey soft, CALCARENITE, as above. Aundant large fossil fragments.	
290	300				80	20			CALCARENITE, pred light grey, occ brown, very fine to coarse grained, grades to MARL	

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							Vis Por	Description and shows:
From	To	Sst	Slt	Clyst	Lst	Marl	Co			
300	310			30	60	10			CLAYSTONE, medium grey, soft, slightly to very calcareous, silty, grades to MARL, light grey soft, CALCARENITE, as above. Abundant large fossil fragments.	
310	320				90	10			CALCARENITE, pred light grey, occ v pale greyish brown, very fine to coarse grained, grades to CALCISILTITE, clayey, abundant fossil fragments	
320	330				100	0			CALCARENITE, occ very pale greenish grey, predominantly very fine grained, silty grading to clayey CALCISILTITE,	
330	340				90	10			CALCARENITE, as above grades to clayey calcisiltite and MARL, Abundant fossil fragments	
340	350				80	20			CALCISILTITE, light to medium grey, fossiliferous, grades to very fine CALCARENITE and MARL	
350	360				70	30			CALCISILTITE, as above.	
360	370				90	10			CALCARENITE, light grey, mottled, occ light greenish grey, argillaceous, very fine grained, poorly sorted, grades to CALCISILTITE and MARL	
370	380				80	20			CALCISILTITE, light to medium grey, fossiliferous, grades to very fine CALCARENITE and MARL, light grey,	
380	390				40	60			Minor CALCARENITE, white, very fine grained, moderately sorted, laminated, soft, CALCISILTITE and MARL as above	
390	400				20	80			MARL, medium grey, occasionally light greenish grey, grades to CALCILUTITE, argillaceous, soft, plastic. CALCARENITE, light grey, very fine grained, silty.	
400	410				20	80			MARL medium grey, soft, dispersive, grades to calcilutite, CALCISILTITE, light grey, argillaceous, grades to very fine CALCARENITE,	
410	420	Tr	Tr		20	80			MARL and CALCISILTITE as above, trace SANDSTONE, loose, clear, medium grained, trace SILTSTONE, yellowish brown, ?limonitic, firm to hard	
420	430	5	0	0	20	75	0		as above, SANDSTONE clear, fine to medium grained, loose, occasionally well cemented with clear calcite.	
430	440	80	tr		0	20			SANDSTONE, clear to light brown, yellowish brown, fine to medium grained, quartzose, subangular, predominantly loose grains with Fe staining and calcite cement adhering, common carbonaceous grains. SILTSTONE, yellowish brown, calcareous, firm, common carbonaceous grains. MARL as above	
440	450	30	20	20		30			SANDSTONE, as above, occ coarse grained, siltstone, greyish brown to light grey, calcareous, grades to calcareous claystone, light grey,	
450	460	80	20						SANDSTONE, mottled, fine to coarse grained, poorly sorted, subangular, dispersive calcareous argillaceous matrix, common lithic and carbonaceous grains very soft. SILTSTONE, very calcareous.	
460	470	90	10						SANDSTONE, greyish brown, speckled, very fine to very coarse grained, poorly sorted, loose Fe-stained grains and very soft aggregates with dispersive argillaceous calcareous matrix. CARBONACEOUS SILTSTONE, very dark brown.	
470	480	90	10					p	SANDSTONE, clear, Fe-stained to greyish brown, fine to v coarse, loose grains and aggs with soft clay matrix or occ firm calcite cement	
480	490	90	10			0		p	SANDSTONE, as above, calcite cement decreasing, common carbonaceous silty laminae and inclusions.	

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							Vis Por	Description and shows:
From	To	Sst	Slt	Clyst	Lst	Marl	Co			
490	500	100						e	SANDSTONE, clear, transl, medium to predominantly very coarse, well sorted, subangular, trace irregular shaped ?composite grains w/ dark inclusions, sub ang to subrounded.	
500	510	100						e	SANDSTONE, clear, as above. ? reworked qtz cemented sst	
510	520	100						e	SANDSTONE, as above (Sample swamped w/ LCM)	
520	530	95	5					f	SANDSTONE, light brown, fine to coarse pred medium, poorly sorted, trace dispersive, argillaceous matrix. SILTSTONE, dark brown, carbonaceous, finely sandy	
530	540	100	Tr					vg	SANDSTONE, clear, light grey, yellowish brown, loose, fine to very coarse subangular polished grains.	
540	550	100						vg	SANDSTONE as above, clean loose grains, trace calcareous cement, trace carbonaceous grains	
550	560	100						vg	SANDSTONE as above, clean loose grains, trace silty matrix washing out, trace carbonaceous grains	
560	570	100						vg	SANDSTONE as above, angular to subrounded, polished	
570	580	90	10					f	SANDSTONE, as above but with dark grey silty matrix in part. SILTSTONE, dark grey to greyish brown, silty, soft to firm	
580	590	100						vg	SANDSTONE as above, becoming clean.	
590	600	100	tr					g	SANDSTONE as above, trace SILTSTONE as above	
600	610	100						vg	SANDSTONE, clear, white, light grey, medium to very coarse grained, moderately sorted, angular to subrounded, trace calcareous cement. trace chert.	
610	620	100						g	SANDSTONE as above	
620	630	100	tr					g	SANDSTONE as above, trace SANDY SILTSTONE very dark brown.	
630	640	100						vg	SANDSTONE as above, becoming well sorted predominantly very coarse grained	
640	650	100	tr					vg	SANDSTONE as above, trace pyrite, trace SILTSTONE, dark brown, carbonaceous	
650	660	100						vg	SANDSTONE as above, clean	
660	670	100						vg	SANDSTONE as above, coarse to very coarse grained	
670	680	100						vg	SANDSTONE, as above	
680	690	100						vg	SANDSTONE, as above	
690	700	100					tr	e	SANDSTONE, clear, white, occ light grey, very coarse grained well sorted, subangular loose polished grains, trace COAL and CARBONACEOUS SILTSTONE	
700	710	100						e	SANDSTONE as above, medium to very coarse grained, trace fossil fragments	
710	720	100						e	SANDSTONE, clear, translucent, medium to very coarse grained, quartzose, v sl tr calc cmt, lse, subang. TR COALY SILTSTONE, dark brown to black	
720	730	100						e	SANDSTONE, as above, tr Fe staining	
730	733	100						e	SANDSTONE, as above, medium to v coarse, pred coarse grained, well sorted.	
733	736	100						e	SANDSTONE, as above, becoming predominantly med grained.	
736	739	100						e	SANDSTONE as above, fine to coarse grained.	
739	742	100						e	SANDSTONE, as above	
742	745	100						e	SANDSTONE, as above, coarse to very coarse.	
745	748	100						e	SANDSTONE, as above, coarse to very coarse.	
748	751	100						e	SANDSTONE, as above,	
751	754	100						e	SANDSTONE, as above, coarse grained	
754	757	100						e	SANDSTONE, as above, medium to occ. very coarse	

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							
From	To	Sst	Slt	Clyst	Lst	Marl	Co	Vis Por	Description and shows:
757	760	100						e	SANDSTONE, as above, medium to coarse
760	763	100						e	SANDSTONE, as above, medium to coarse, predominantly angular, trace COAL, black, dull, silty
763	766	100						g	SANDSTONE, clear, occ milky, tr Fe stain, medium to coarse grained, well sorted, sl calc cmt, quartzose,
766	769	100						g	SANDSTONE, as above, fine to coarse pred medium, tr silty matrix washing out.
769	772	100						f	SANDSTONE, as above, dispersive silty matrix increasing slightly.
772	775	100						e	SANDSTONE, clear, medium to coarse grained, clean
775	778	100	tr					vg	SANDSTONE clear, medium to coarse grained, clean, sl trace calcareous cement, tr SILTSTONE, very dark brown, sandy.
778	781	100						vg	SANDSTONE, fine to coarse grained, occ very coarse, mod srt, angular, sl arg matx washing out.
781	784	100						f	SANDSTONE, clear to pale brown, fine to coarse grained predominantly medium, moderately sorted, ang to subang, pred loose, occ calc cemented aggs, minor silty matrix
784	787	100						f	SANDSTONE, as above, tr SILTSTONE, v dk brn
787	790	100						f	SANDSTONE, as above,
790	793	100						f	SANDSTONE, as above,
793	796	100						e	SANDSTONE, clear - white, coarse to very coarse grained,
796	799	100						f	SANDSTONE, clear to greyish brown, fine to very coarse grained, poorly sorted, angular to occ. rounded, pred loose w/ common arg and calc matrix. tr SILTSTONE, grey, pyritic
799	802	100						f	SANDSTONE as above, clear to greyish brown, mod srt,
802	805	100	tr					f	
805	808	100	tr					f	SANDSTONE clear, light greyish brown, fine to coarse grained angular to well rounded, loose w/ trace brownish calcareous cement, occ firm fine well cemented aggregates. Trace SILTSTONE dark grey.
808	811								SANDSTONE, as above, becoming medium to coarse,
811	814							f	SANDSTONE, as above, fine to very coarse, poorly sorted, angular to well rounded, dispersive silty matrix and calcareous cement adhering to predominantly loose grains. occasional cemented aggs, trace greenish grey lithic grains.
814	818	90	10					p	SANDSTONE, brown, fine to occ coarse, silty matrix increasing
818	822	60	40					n	SANDSTONE, lt brn to mott grn/brn, v fine to v co, p std, ang to srnd, brown silty mtx and calc cmt, dense pyritic cmt l/part, qtzose sst l/bedded w/ glauconite sst (30%) in dense brn mtx. SLTST, lt to v dk gy, vf sndy, blk, frm to hard, calc i/p.
822	825	10	90	0	Tr				SLTST, med gy to brn or grnsh gy, sandy w/ f & med qtz and glauc grains, v arg gds to slty, sndy CLYST. Tr ? Dol brn transl.
825	828	20	40	40	Tr				SLTST, as above, common f-co qtz gns gds to silty arg SST, med to lt gy greysh brn, glauc
828	837	50	20	30					SST, medium greysh brn, m-co, vp std w/ abndt disp silty arg mtx and occ dense ?dol cmt, gds to snady SLT and CLYST v sft, glauc, occ bands w/ v hd dol cmt.
837	843	60	30	10					ARG SST, medium gy, m to co gn, abndt silty arg mtx disp. gdsd to sndy SLTST and CLYST.

Depth (mRT)		Port Fairy No 1 - Sample Descriptions								
From	To	Sst	SlT	Clyst	Lst	Marl	Co	Vis Por	Description and shows:	
843	846	20	60	20					SLTST, gy, brn, mott grn, v sndy, v arg, abndt lse co & v co subang qtz gns washing out, gds to ARG SST and sndy CLYST	
846	852	60	20	20					SST, medium greysh brn, m-v co, vp std w/ abndt disp silty arg mtx and occ dense ?dol cmt, gds to snady SLT and CLYST v sft, glauc, occ bands w/ v hd dol cmt.	
852	855	60	20	20					ARG SST as above	
855	858	70	20	10	Tr			n-f	SST, (1), med gysh brn, arg, as above, (2) clr mlky, co to gran, qtz subang, lse	
858	861	100	tr					e	SST, clr mlky, v co- granular, w std, ang - srnd occ w rnd, clean, lse qtzose, tr gy cherty lithic gns, vis por excellent, no shows, TRace SLTST a/a	
861	867	100						e	SST as above	
867	873	tr		100					CLYST, m-dk gry, amorphous, sticky, very soft, very finely qtz sandy, Trace SST v co a/a	
873	885			100					CLYST a/a	
885	900	60		40				p	SST, clr, v lt gy, co -v co, wstd, sang, lt gy arg mtx washing out	
900	906	100						p	SST, clr - lt brn, m to co gn mod std, lt brn arg mtx washing out	
906	915	70	30					f	SST a/a, mtx decreasing, l/bedded w/ CLAYST a/a	
915	921	20		80					CLAYST, med-dk gy, amorphous, soft, sticky, v sl sandy	
921	927			100					CLAYST a/a ibeeds of coarse clean sst in interval	
927	933			100					CLYST a/a	
933	942	20		80					CLYST a/a, bec lt grysh brn, mottled sandy, common pyrite aggregates	
942	951	40	30	30			Tr		CLYST, m gy mmica, amorphous to occ firm/cemented, silty and sandy, gds to arg, sandy, SLTST, SST v co a/a, Tr COAL, black, fibrous to blocky	
951	960	50	40	10			Tr		SST, med brnsh grey, vf to co, p std, abndt silty arg mtx, gds to sandy SLTST and CLYST, com pyrite aggs, variably cmted w/ calc,	
960	963	60	30	10				n	SST, silty arg a/a variably cemented, tr min flu	
963	966	40	40	20				n	SST medish grysh brn, a/a grades to sandy CLYST, lse/disp to hard.	
966	969	40	40	20				n	SST a/a, as silty arg sst and ? clean stringers of co to v co sst	
969	972	60	30	10			Tr		SST med grysh brn, vf to co gn, v p std, silty arg disp matx i/p, occ well cmted, occ pyrite cemented aggs, tr grey chert grains, gds to silty Clayst,	
972	975	80					20	n	SANDSTONE, lt brnsh gy, f to co mod srt, ang to srnd, mod to sl arg matx and mod cmt, friable aggs and occ lse co to v co qtz gns, tr prite and lithic gns, COAL, blk to v dk brn, fibrous.	
975	978	60	20	10			10		SST a/a, silty arg matx increasing, tr min flu	
978	981	50	40	10			tr		SST a/a bec v silty vf gn, COAL gds to car MDST	
981	984	60	40						SST a/a soft ? laminated light-med grysh brn, patchy white clay matx l/p	
984	987	70	30				tr		SST gysh brn a/a, vf to co gn, occ lse v co gn, vp std, brn silty clay, white patchy matx and variable dol cmt, occ dense py cmt, gds to sandy siltst	
987	990	90	10						SST a/a, brn,	
990	993	90	10						SST, lt to m gysh brn, vf to co v p std, a/a gds to SLTST, i/p fine to med gn, clean	

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							Vis Por	Description and shows:
From	To	Sst	Slt	Clyst	Lst	Marl	Co			
993	996	90	10						SST, clr - lt brn gy, f to co, pred lse gns and aggs w/ silty mtx or pyrite cement.	
996	999	90	10						SST, m brnsh gry, vf -m, mod std, occ co, very dense silty mtx, tr CLYST, m-dk gy, silty, occ lt brn, tr glauconite	
999	1002	80	20						SST, gysh brn, vf to co gn, p std, sang srnd, very silty sl calc mtx, gds to SLTS	
1002	1005	80	20						a/a	
1005	1011	100							SST, lt gy, f - v co, p std, subang	
1011	1017	100							SST, a/a	
	1020									
1017	1023	20	80							
1023	1029	30	60	10					SLTST, m gy, fnly sndy, arg, gds to arg sst and slty clyst. SST, clr lse co gns,	
1029	1032	80	20						SST, gy-grn, vf -co, v p std,	
1032	1035	40	50	10						
1035	1038	60	30	10						
1038	1041	50	50						Interbedded SST, clr qtz in dense pyrite cement, SLTST, gds to CLYST, glauconitic laminae,	
1041	1044	50	50						SST co, lse or dense pyrite cement, SLTST, blocky, fnly sandy I/p, abndt pyrite	
1044	1047	40	50	10					SLTST, m brnsh gy, blk, sl sndy, SST, vf-co gn, p srt,	
1047	1050	70	30						SST a/a/ SLTST a/a tr glauconite,	
1050	1053	10	90						SLTST, m brnsh gy, arg, blocky, sft-firm, fnly snady gds to vf sst I/p, I/p smooth, tr pyrtite,	
1053	1056	20	80				tr		SLST, a/a, fine carb frags, sandy w/ fine qtz and minor lithic grns washing out, gds to SST	
1056	1059	20	80						SLTST a/a abndt pyrite as aggas and cement in SST	
1059	1062	20	80						SLTST, grysh brn, smth, soft/disp, sandy I/p, common pyrite aggs,	
1062	1065	40	60						SLTST, a/a gds to slty SST, abndt arg silty mtx washing out, abndt pyrite,	
1065	1068	30	70	0			tr		SLTST a/a gds to sst abndt pyrite	
1068	1071	20	70	10					CLYST, smooth, m gy, abndt pyrite as round aggs,	
1071	1074	10	70	20			tr		a/a abndt pyrite rounded aggs,	
1074	1077	50	40	10			tr		SST, clr, f-c ?bimodal, lse qtz gns, SLTST, lt gy, fnly snady, soft disp, comm carb flecks,	
1077	1080	10	70	20						
1080	1083	10	60	30					CLYST, m gy, slty, gds to SLTST	
1083	1086	10	70	20					SLTST m gy, grades to CLYST, blocky, firm,	
1086	1089	10	80	10					SLTST, m gy, blk, fnly sndy, lamianted w/ light gy vf sst, tr pyrite,	
1089	1092		50	50					SLTST gds to CLYST, m gry, sl sndy, carb flecks	
1092	1095		50	50					a/a	
1095	1098	10	70	20					SLTST, lt to medium grysh brown, carb flecks, firm, trace glauconite,	
1098	1101	0	0	100			0		silty clyst a/a, massive,	
1101	1104			100					silty clayst, massive	
1104	1107	80	20					vp	SST, lt gy, grysh brn, vf -c gn, p std, pred lse, occ, patchy silty matrix, trace to com glauconite in siltier aggs, gds to Siltst.	
1107	1110	50	50						SST, lt gy, grysh brn, vf -m gn, well std, dense calc cement, patchy silty matrix, trace glauconite.	
1110	1113	10	80	10					SST, bec v f gn, gds to siltst,	
1113	1116		50	50						

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							Vis Por	Description and shows:
From	To	Sst	Slt	Clyst	Lst	Marl	Co			
1116	1119		50	50					SLTY CLYST md gry, massive, v fnly sndy l/p, tr glauconite,	
1119	1125	0	100						a/a	
1125	1128	20	80						SLTY CLYST md gry, massive, v fnly sndy l/p grades to v f SST, tr glauconite, sandy, grades, tr carb mat. tr dolomite, common pyrite nodules	
1128	1131	20	80						SLTST, cly, a/a	
1131	1134	60	40							
1134	1137	60	40						SST brn, vf gn, slty, tr dol, gds to sndy SLTST	
1137	1140	20	50	30					SLTST, m gry, finely sandy, gds to v f sst, CLYST, m gry,	
1140	1143	30	40	30					SILTSTONE, gds to CLYST and silty SST a/a	
1143	1146	20	50	30					SST, gry, vf to co, v p std, ang, mic mic, pyritic, very silty, gds to SLTST	
1146	1149	30	50	20					SLTST, m gry, finely sandy, gds to v f sst, CLYST, m gry,	
1149	1152	60	30	10					SST, vf to m gn, pred lse, dispersive slty mtx, glauconitic	
1152	1155	40	50	10					SST, a/a	
1155	1158	30	50	10						
1158	1161	40	50	10						
1161	1164	40	50	10						
1164	1167	10	50	40					Silty CLYST, md to dk gy, gds, arg SLTST, micmicaceou, tr carb mat, SST gy, f-m occ co, p std, silty occ w/ dense calc cmt	
1167	1170	30	50	20					SST, lt gysh brn, vf m gn, p std, abndt slty arg mtx, sft, pulpy,	
1170	1173	30	60	10					SST, lt gysh brn, vf m gn, p std, abndt slty arg mtx, soft, gds to sandy SLTST	
1173	1176	40	40	20					SST, lt gy, lt yellsh gy, lt brn, vf to m gn, silty, occ dol, pred lse gns w/ abndt mtx washing out, gds to Siltstone,	
1176	1179	30	50	20					SLTST, v lt gy, spkled, v f sndy, tr carb specks, gds to SST, lt gy, vf to m gn, p std, soft arg, tr glauc,	
1179	1182	70	30					n	SST, l/p green, speckled, vf to f gn, v p std, silty, arg, micmic, com carb spks, dgs to SLTST.	
1182	1185	50	50	0				n	SST a/a/ SLTST a/a tr glauconite,	
1185	1188	10	80	10					SLTST, m gy, blk, fnly sndy, lamianted w/ light gy vf sst, tr pyrite,	
1188	1191	20	70	10						
1191	1194	30	60	10						
1194	1197	20	70	10					SLTST, m gy brn, sft, blk, f sndy, SST, lt gy	
1197	1200	20	70	10						
1200	1207	10	80	10					SLTST m -lt gy brn,	
1207	1216	40	30	30				p	SST, lt gy, lt gysh brn, very silty, sl dol cmt. glauconitic, SLTST, md gy brn, blk,	
1216	1222	50	40	10				p	SST, v lt gy, vf to rr m gn, p std, slty, tr glauc, ibdd w/ SLTST, gy brn, f sndy and glauc,	
1222	1231	50	40	10				n	SST, gyrsh brn, vf gn, slty, occ fn, tight, gds, to sandy SILTSTONE,	
1231	1237	20	80						SLTST, brnsh gy, v fnly sndy, gds to v f gn SST	
1237	1240	30	70	tr					a/a	
1240	1243	40	60						SLTST, bec fv sndier gds to SST.	
1243	1249	30	60	10					SLTST, a/a	
1249	1252	20	80						SLTST, m gy to grysh brn, v fnly sandy, v soft, gds to sst	
1252	1255	10	80	10					SLTST m gy, grades to CLYST, blocky, firm,	
1255	1258	10	70	20					SLTST a.a, tr glauconite, tr sst, dense calc cmt, glauc v f gn.	
1258	1261	10	70	20					SLTST a/a	
1261	1264	tr	60	40					SILTY CLAYSTONE, med brn gy, sft, rr fossil frags	

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							Vis Por	Description and shows:
From	To	Sst	Slt	Clyst	Lst	Marl	Co			
1264	1267	tr	60	40					a/a, minor fine glauconitic sst laminae in siltstone, tr carb frags.	
1267	1270	tr	50	50					Silty claystone, med brn gy, sft, rr fossil frags	
1270	1273	tr	40	60					a/a, minor fine glauconitic sst laminae in siltstone, tr carb frags.	
1273	1276	20	60	20					m brnsh gy, glauconitic, sandy gds to v f SST	
1276	1279	10	40	50					CLYST, m - dk gy, blocky, tr m gn weathrd felds,	
1279	1287	10	80	10					SLTST w/ hard dol cement, glauconitic	
1287	1290	10	20	70					CLYST, m - dk gy, blocky, tr m gn weathrd felds, sndy, micromicaceous, tr glauconite.	
1290	1293	10	10	80					CLYST, medium to dark grey, smooth, blocky.	
1293	1296		10	90					CLyst, slty, very glauconitic, up to 40 % glauconite in tray.	
1296	1299		10	90					Glauconitic Claystone, dark grey, glauconite is v dark greenish blacl	
1299	1302		10	90					a/a, minor fine glauconitic sst laminae in siltstone, tr carb frags.	
1302	1305	10	10	80					CLAYST, a/a v dk gry, glauconite	
1305	1308		10	90					CLAYST, 70 % glauc in tray, pyritic glaucoite viens	
1308	1311			100					CLAYST, abndt glauconite	
1311	1314	10	40	50					a/a bec sandy and silty,	
1314	1317			100					GLAUCONITE CLAYST	
1317	1320			100					a/a	
1320	1323			100					a/a glauconite decreasing to minor constituent	
1323	1326			100					a/a	
1326	1329			100					a/a	
1329	1332	20	30	50				n	GLAUCONITIC CLAYSTONE, v dk gry, soft abndt blk glauconit grains ashing out, gds to arg greensand	
1332	1335	50	0	50				n	clyst a/a bec v glauc gds to greensand, m gn tight w/ abndt clay mtx, and loose glauconite gns, also 20% lse clear co to v co lse qtz gns,	
1335	1338	50	30	20				n		
1338	1341	40	0	60				n	Glauconite Sandstone, v dark green, gds to glauconitic claystone, black m gn glauc gns and pellets of ?glau cly in solid dk gy clay mtx.	
1341	1344	10	30	60					Clyst 2 types, (1) pelloidal claystone, very dark grey to black, (2)dark grey to medium brown, firm, subfissile	
1344	1348	20	30	50					SLTST, med gry brn, Clyst, as above	
1348	1350	20	30	50					Sltst and Clyst as above	
1350	1353	30	30	40					Glauconite Sandstone, v dark green, gds to glauconitic claystone, black m gn glauc gns and pellets of ?glau cly in solid dk gy clay mtx.	
1353	1356	10	30	60						
1356	1359	20	40	40					SILTSTONE, medium grey to brown, finely qtz sandy, Trace to common lse, very coarse qtz grains.	
1359	1362	20	40	40					Sltst as above	
1362	1365	10	50	40						
1365	1368		20	80					Two types as above, predominantly dark grey to medium brown, firm, subfissile, gds to SILTSTONE, medium grey to brown, finely qtz sandy, Trace to common lse, very coarse qtz grains.	
1368	1371	10	20	70					Sst Sltst and Clyst as above	
1371	1374		30	70					Siltstone and Clyst as above	
1374	1377		20	80					Sltst and Clyst as above	
1377	1380	10	70	20					SLTST, m brnsh gy, fnly sndy, tr glauc, gds to v fn arg SST and to CLYST, dk gy, subfiss.	

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							Vis Por	Description and shows:
From	To	Sst	Slt	Clyst	Lst	Marl	Co			
1380	1383	10	30	60					SST, m gry, vf to f gn, slty, p std, calc I/p, pred v arg.gsd to SLTST and SLTY CLYST, tr lithic gns, red gns, mica,	
1383	1386	20	10	70					CLYST, v lt gy, occ v pale blu-gy-grn, v smooth, waxy. SST, ?lse gns washing out, vf to m gn, qtz, tr lithics, tr glauc, tr biotite	
1386	1389	20	30	50					CLYST,(1) v lt gy, v smooth, waxy. (2) m gy, sft, slty, gds to siltst, SST, I/p whi, ?tuffaceous, f gn, tr red, blk, gy lithic gns & felds, common lse gns washing out, vf to m gn, qtz, tr lithics, tr glauc, tr biotite gds to whi sndy sltst	
1389	1392	10	40	50					CLYST, (1) pale brnsh gy tov lt gy blocky, homogenous, (2) v lt gy to hi, v silty, sandy, gds to arg sandstone, and siltstone, tr lithics tr biotite. SLTST, I/p m gry brn, vf sndy, tr to minor glauc,	
1392	1395	10	70	20					sltst, md gy, tr glauc and lithic gns, occ v lt gy, sft, gds to v f SST,	
1395	1398	20	70	10					silty sst, v lt gy, soft, gds to sandy sltst, tr lithic gns,	
1398	1401	10	80	10					sltst, v lkt gy, sndy, sft, v fnly qtz sndy, gds to silty sst	
1401	1404	10	80	10					sltst, v lkt gy, sndy, sft, v fnly qtz sndy, gds to silty sst, biotite flakes,	
1404	1407		70	30					Arg sltst, md gryish brn and very light gry, sandy, Clyst, pale brown, waxy	
1407	1410		50	50					Arg sltst, v lt gry, sandy w/ wi, gy, tr red, and tr biotite gns, very soft stickt, gds to sndy, slty, clyst	
1410	1413		30	70					clyst, a/a tr biotite, gy lithic gns,	
1413	1417	20	60	20				n	sltst, v lt gry, sandy, arg, v soft stcky, gds to arg sst, vf gn, p std, minor lithics, tr biotite and felds	
1417	1420	20	60	20						
1420	1423	20		80					sandy cyst, v lt gy, com felds, minor biotite, gds to v f arg sst	
1423	1426		60	40				tr	clyst 10%, , pale gysh gm, smth, subfiss, 90% light grysh brn, vfly sndy, gds to slty clyst, tr coal frags,	
1426	1429		60	40					clyst pale bl-grnsh gy, 90 % lt gry sily clyst a/a tr biotite, tr carb frags,	
1429	1432		40	60					Clyst 40%, pale grnsh gry a/a, 60% light grys brn v fnly sndy, gds to tr v f sst,	
1432	1435									
1435	1438		80	20					siltst, lt gy, gry brn, arg gds to clyst, clyst I/p pale bluish gry,	
1438	1440	20	70	10				tr	siltst, lt gy, gry brn, arg gds to clyst, clyst I/p pale bluish gry,	
1440	1443	80	20					p	sst, clr gy, vf to m grn, mod std, arg mtx, occ dense calc cmt, abndt lithic gns, tr felds,	
1443	1446	80	20					p	sst as above, pred lse gns, minor aggs w/ silty cly mtx washing out.	
1446	1449	50	50						sst a/a, vf gn silty, gds to sltst,	
1449	1452	30	70					tr	sst, vf gn, gds to sltst,	
1452	1455	10	40	50				tr	clyst 20%, pale bluish gy, subfissile, sltst, light, greysh brn, v fnly sandy, sltst a/a	
1455	1458		70	30					Sltst, lt gy, grysh brn, firm, sndy w/ qtz and common lithic gns, tr carb mat. sltst a/a	
1458	1461		50	50					clyst, gy, pale grnsh gy, silty I/p gdst to	
1461	1464		50	50						
1464	1467		80	20					sltst, lt grysh brn, homogenous, tr carb mat, tr felds,	
1467	1470		80	20					a/a, tr large carb flecks, v fnly sndy I/p. , clyst, pale grnsh gy a/a	

Depth (mRT)		Port Fairy No 1 - Sample Descriptions							Vis Por	Description and shows:
From	To	Sst	Slt	Clyst	Lst	Marl	Co			
1470	1473	50	50						sst, gry, vf gn, slty, tr carb mat, felds, com lithic grains,gds to clyst, smooth	
1473	1476	70	30					tr	Sst, clear to grey, very fine to medium grained, moderately sorted, argillaceous matrix washing out, variable calcareous cement,abundant grey and black, trace red lithic grains,trace feldspar, vis porosity nil to poor.	
1476	1479	60	30	10						
1479	1482	50	40	10				nil-pr	Sltst, light grey to greyish brown, finely sandy, trace carbonaceous flakes and feldspar,	
1482	1485	20	50	30						
1485	1488	20	30	50					Clyst, in part brownish grey, in part pale greenish to bluish grey, smooth to waxy, friable ?tuff	
1488	1491	10	30	60						
1491	1494	10	40	50				nil-pr	Sltst, light grey to greyish brown, finely sandy, trace carbonaceous flakes and feldspar,	
1494	1497	10	30	60					Clyst, in part brownish grey, in part pale greenish to bluish grey, smooth to waxy, friable ?tuff	
1497	1500	50	30	20				nil-pr	Sst, clear to grey, very fine to medium grained, moderately sorted, argillaceous matrix washing out, variable calcareous cement,abundant grey and black, trace red lithic grains,trace feldspar, vis porosity nil to poor.	
1500	1503	10	40	50						
1503	1506	80	10	10				tr	Sst, lt gry, vf to f gnh, m std, ang, pred lse, cly mtx adhering to gns,abndt gy and black lithic tr casrb mat	
1506	1509	90	10					n	sst, gry, vf to f gn, slty, p std, ang, pred lse gns, occ slty aggs w/ clay mtx and calc cmt,	
1509	1512	80	10				10		sst, gry, vf gn, w std, ang, qtz and abndt lithic gn, ashing out of lt gy clay mtx, tr felds, tr coal, black, v dk brn,	
1512	1515	80	10	10				tr		
1515	1518	70	30					tr	sst, a/a, vf to f gn, abndt arg mtx washing out, gds to siltstone. red siltstone, dispersive,	
1518	1521	80	20					p	sst, gry, v fn gn, silty, p std, occ calc mtx, pred lse, occ tight aggs,	
1521	1524	90	10					p	sst a/a, vf gn silty, gy, red blk lithics, tr biotite, gds to sltst, , ang, abndt lithics, sl calc cmt, variable, cly mtx washing out.	
1524	1527	100						p	sltst, gry, vf gn, well std, , ang, abndt lithics, sl calc cmt, variable, cly mtx washing out.	
1527	1530	100							sst a/a,	
1530	1533	90	10						sst a/a, vf to occ m gn, tr felds, common lithics, common aggs ww/ whi cal cmt.	
1533	1536	100						p	sst a/a, pred lse, com aggs / hi clay mtx	
1536	1539	100							sst, gy, grnsh gry, speckled, vf to m gn, m std, ang, pred lse,	
1539	1542	90		10				p	sst a/a f - medium, m std, ang, variable calc cmt, abndt cly mtx, lithic, to 50% of sst, vis por poor,	
1542	1545	80		20					sst a/a	
1545	1548	90		10					SST a/a matrix increasing,	
1548	1550	70		30					SST a/a abundant grey cley matrix grades to sandy CLYST	

Appendix 6: Drill Stem Test Results

AUSTRALIAN



D.S.T.

COMPANY NAME	Essential Petroleum Resources
WELL NAME	Port Fairy # 1
LOCATION	Port Fairy # 1
TICKET # and DST #	312 One
TESTED INTERVAL	1429.00 to 1451.12 m (22.12 m)
FORMATION	Eumeralla
TEST TYPE	Inflate Straddle
TEST DATE	20-Jan-02

DRILL STEM TEST ANALYSIS FINAL REPORT

AUSTRALIAN DST (AUSTRALASIA) PTY LTD.

COMPANY NAME : Essential Petroleum Resources	TICKET # : 312
WELL NAME Port Fairy # 1	Province: Victoria DST # : One
LOCATION : Port Fairy # 1	Permit: FORMATION : Eumeralla
TESTED INTERVAL : 1429.00 to 1451.12 m (22.12 m)	TEST DATE : 20-Jan-02

DST FINAL REPORT: OBSERVATIONS AND CONCLUSIONS

All Measurements are Metric except Pressures which are PSI.

The drillstem test run at the above location was mechanically successful. The pressures recorded are within the accuracy limits of the recorders used.

Run tools to test depth. Open the tool for the preflow with a weak air blow throughout. No gas to surface. Close the tool for a 51 minute initial shutin. Open the tool for the main flow with no indication of a blow at surface. No gas to surface. Close the tool for a 30 minute final shutin then pull loose and out of the hole. The fluid recovery consisted of 33 metres of drilling mud.

The charts indicate a zone of very low pressure and very low permeability. The shutin curves have not attained infinite acting radial flow. This is confirmed by the enclosed Horner plots and the Derivative/TypeCurve plot. Further analysis is not possible.

If you have any queries with respect to this report please contact your Australian DST Representative at 076 222655.

FLUID RECORDER INTERPRETATION

The fluid chart indicates the following :	Recovery m	Average Rate m3/day
Fluid in pipe prior to test	0.0	
PreFlow	32.4	21.7
Second Flow	0.6	0.2
Third Flow		
Fluid into pipe after test		
Fluid remaining after test	33.0	

ANALYTICAL RESULTS for Gas

BASIC HORNER INTERPRETATION

		Drawdown (ISI-FSI)/ISI*100	
P* Initial Shutin	psig	Initial Shutin Semilog Slope	psig
P* Second Shutin	psig	Second Shutin Semilog Slope	psig
P* Final Shutin End Point	psig	Final Shutin Semilog Slope (End Point)	psig
P* Final Shutin Radial Flow	psig	Final Shutin Semilog Slope (Radial Flow)	psig

PLOT ANALYSIS

STORAGE and SKIN

HORNER

Transmissivity (kh/u)		md.ft/cp
Mobility (k/u)		md/cp
Flow Capacity (kh)		md.ft
Permeability (k)		md
Skin (s)		
Flow Efficiency		
Damage		
Radius of Investigation		feet
Predicted Capability for	Acres	
Stabilized Flow Rate (Calc Skin)	@ 2100 psi s =	= bbls/day
Stabilized Flow rate (Skin Removed)	@ 2100 psi s = 0.00 =	bbls/day
Stabilized Flow Rate (Improved Skin)	@ 2100 psi s = -4.00 =	bbls/day

AUSTRALIAN DST (AUSTRALASIA) PTY LTD.

COMPANY NAME : Essential Petroleum Resources	TICKET # : 312
WELL NAME Port Fairy # 1	Province: Victoria DST # : One
LOCATION : Port Fairy # 1	Permit: FORMATION : Eumeralla
TESTED INTERVAL : 1429.00 to 1451.12m (22.12 m)	TEST DATE : 20-Jan-02

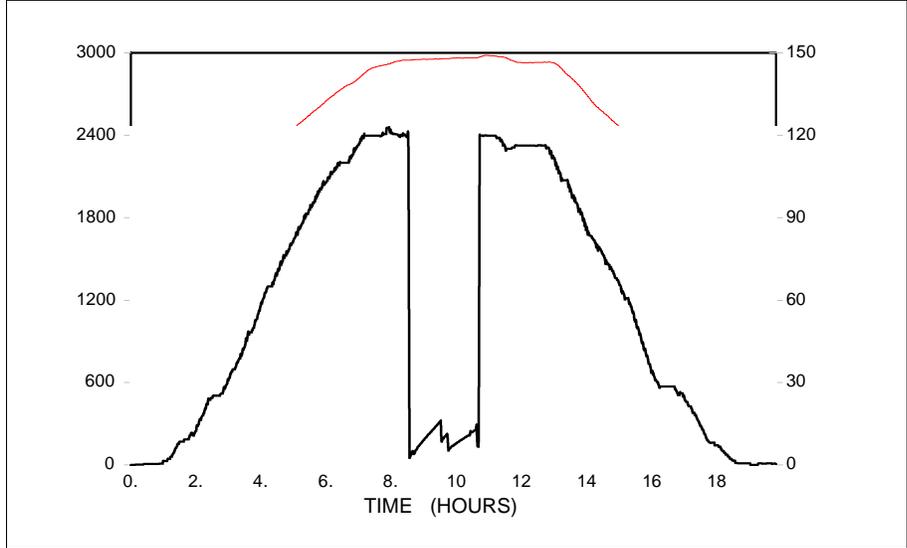
DST FINAL REPORT: FLUIDS, FLOWS AND PRESSURES

TEST PERIODS IN MINUTES

PreFlow	9	First Shutin	51
Second Flow	14	Second Shutin	53
Third Flow	0	Third Shutin	0

DOWNHOLE PRESSURE DATA

Recorder Number	080-552
Clock Type	EMP
Depth Metres	1423.00
Pressure Port	INSIDE
	psi
Initial Hydrostatic (A)	2404.0
Start Preflow (B)	53.0
End Preflow (B1)	80.0
First Shutin (C)	326.0
Second Flow (D)	180.0
End Second Flow (E)	108.0
Second Shutin (F)	299.0
Start Third Flow (H)	
End Third Flow (I)	
Third Shutin (J)	
Final Hydrostatic (G)	2397.0



BLOW DESCRIPTIONS

PREFLOW : Weak air blow.

SECOND FLOW : No blow throughout

TEST SUCCESSFUL

RECOVERY DURING TEST	Cushion Type: None	Amount:
LIQUID RECOVERY	API Gravity:	Salinity:
		Reverse Circulated: No
Total:	33.00 m	33.00 m in D.C. and
	33.00 m of Drilling mud	0.00 m in D.P.
	m of	

GAS RECOVERY	GAS RATES Measured With: No gas to surface.		
	TIME (Min)	Orifice (mm)	PRESSURE (psi)
			RATE (Mcf/d)
			REMARKS

AUSTRALIAN DST (AUSTRALASIA) PTY LTD.

COMPANY NAME : Essential Petroleum Resources	Province: Victoria	TICKET # : 312
WELL NAME Port Fairy # 1	DST # : One	
LOCATION : Port Fairy # 1	Permit:	FORMATION : Eumeralla
TESTED INTERVAL : 1429.00 to 1451.12m (22.12 m)		TEST DATE : 20-Jan-02

DST FINAL REPORT: TOOLS AND GENERAL DATA - INFLATE STRADDLE

TOTAL TOOL TO BOTTOM OF TOP PACKER	18.75 Metres		P.O. Sub	0.31
TOOL IN INTERVAL	4.08 Metres		P.O. Sub	0.31
BOTTOM PACKER AND ANCHOR	4.13 Metres		X.O. Sub	0.62
TOTAL TOOL	26.96 Metres		Rec	and 0.00
DRILL COLLAR IN INTERVAL	18.04 Metres		Rec 22199	1.52
DRILL PIPE IN INTERVAL	0.00 Metres		Choke Sub	0.00
DRILL COLLAR ANCHOR	0.00 Metres		Shut in Tool	0.00
DRILL PIPE ANCHOR	0.00 Metres		Hyd Tool and Sampler	2.70
TOTAL ASSEMBLY	45.00 Metres		Travel Sub	0.46
DRILL COLLARS ABOVE TOOLS	92.83 Metres		Tr Sub and Sampler	0.00
DRILL PIPE ABOVE TOOLS	1321.79 Metres		Tr Sub and Sampler	0.00
TOTAL D. COLLARS, D. PIPE AND TOOLS ABOVE PACKER	1433.37 Metres		Squeeze Valve	0.70
TOTAL DEPTH TO BOTTOM OF TOP PACKER(S)	1429.00 Metres		Rec 22201	and 1.52
			Rec 080-552	and 1.83
TOTAL STICKUP ABOVE KELLY BUSHING	4.37 Metres		Rec	0.00

DOWNHOLE PRESSURE RECORDERS

Rec #:	22199	22201	080-552	3149					
Range	6000	6157	5000	3800					
Type	EMP	24 Hr	24 Hr.	EMP	24 Hr	EMP	RTDT	24 Hr	24 Hr
Depth:	1411.00	1422.00	1423.00		1431.90				
Position:	Fluid	Fluid	Inside	Inside	Inside	Outside	Outside	Outside	Below

ADDITIONAL WELL, TEST AND PIPE INFORMATION

EVENT TIMES	MISCELLANEOUS DATA	Tool Above Interval 18.75 m
Time Started In	23:00 Hours	Depth
Time on Bottom	06:00 Hours	1429.00 m
Time Tool Opened	07:03 Hours	Stub
Time Tool Pulled	08:47 Hours	Prod Sub or Port
Time Out of Hole	05:30 Hours	0.00
		Rec
		and 0.00
		Rec
		and 0.00
		Rec 3149
		2.05
		Spacing
		0.00
		X.O. Sub
		0.31
		D.Collar
		18.04
		D. Pipe
		0.00
		X.O. Sub
		0.31
		Receiver Sub
		0.00
		Stub
		0.58
		Total Interval 22.12 m
		Depth 1451.12 m
		Packer
		1.73
		Packer
		0.00
		Comp. Blank.
		0.00
		Rec
		0.00
		Spacing2
		0.00
		X.O. Sub
		0.00
		D. Collar
		0.00
		D. Pipe
		0.00
		X.O. Sub
		0.00
		Dragspring
		2.40
		Total Tool 26.96 m

PIPE, WEIGHT and MUD DATA

Drill Collar I.D.	73.0 mm
Drill Pipe I.D.	70.2 mm
Drill Collar Length	92.83 m
Drill Pipe Length	1321.79 m
Weight Set on Packer	15000 daN
Initial String Weight	70000 daN
Weight Pulled	90000 daN
Tool Weight	5000 daN
Unseated String Weight	daN
Packer Size	190 mm
Mud Type	KCL PHPA
Mud Weight	1162 kg/m3
Mud Viscosity	0 S/L3
Water Loss	0.0 cm3
Filter Cake	1.5 mm
Mud Drop	0 m
Tool Skid	0 m

SAMPLES TAKEN

Bottom Hole Sampler #	
Fluid Samples	
Gas Samples	
Sent to	Customer
Tester	V. Sale
Company Rep.	W. Westman

Well Name :Essential Port Fairy # 1
 Location :Port Fairy # 1
 Recorder #:080-552

Ticket #:312
 Test # :One
 Depth :1423.00 m
 Page : 1

Electronic Pressure Analysis

Time	psig	kPag	psi^2	Time	T+DT/DT	psig	kPag	psi^2	d psi
Initial Flow				Initial Shut In					
0	2413.7	16642	5.826	0	-	80.0	552	0.006	0.0
1	2218.9	15298	4.923	1	10.00	81.8	564	0.007	1.8
2	53.0	366	0.003	2	5.50	87.9	606	0.008	7.8
3	59.3	409	0.004	3	4.00	96.7	666	0.009	16.6
4	70.9	489	0.005	4	3.25	104.6	721	0.011	24.6
5	79.0	545	0.006	5	2.80	111.6	770	0.012	31.6
6	90.2	622	0.008	6	2.50	118.1	814	0.014	38.0
7	101.1	697	0.010	7	2.29	124.4	858	0.015	44.3
8	103.7	715	0.011	8	2.12	130.1	897	0.017	50.1
9	80.0	552	0.006	9	2.00	135.8	936	0.018	55.8
				10	1.90	141.1	973	0.020	61.1
				12	1.75	151.4	1044	0.023	71.4
				14	1.64	161.3	1112	0.026	81.3
				16	1.56	170.8	1178	0.029	90.8
				18	1.50	179.9	1240	0.032	99.9
				20	1.45	189.1	1304	0.036	109.0
				22	1.41	198.0	1365	0.039	117.9
				24	1.37	206.8	1426	0.043	126.8
				26	1.35	215.5	1486	0.046	135.4
				28	1.32	224.4	1547	0.050	144.4
				30	1.30	233.0	1606	0.054	153.0
				35	1.26	254.8	1757	0.065	174.7
				40	1.23	276.5	1906	0.076	196.4
				45	1.20	298.4	2058	0.089	218.4
				50	1.18	319.7	2204	0.102	239.7
				51	1.18	326.2	2249	0.106	246.1
Second Flow				Second Shut In					
0	326.2	2249	0.106	0	-	108.0	745	0.012	0.0
1	179.9	1241	0.032	1	15.00	117.1	807	0.014	9.1
2	173.0	1193	0.030	2	8.00	121.5	838	0.015	13.5
3	184.5	1272	0.034	3	5.67	126.4	871	0.016	18.4
4	192.3	1326	0.037	4	4.50	130.7	901	0.017	22.7
5	198.6	1370	0.039	5	3.80	134.4	927	0.018	26.4
6	204.3	1409	0.042	6	3.33	138.0	952	0.019	30.0
7	209.6	1445	0.044	7	3.00	141.4	975	0.020	33.4
8	211.7	1459	0.045	8	2.75	140.5	969	0.020	32.5
9	216.7	1494	0.047	9	2.56	144.2	994	0.021	36.2
10	221.5	1527	0.049	10	2.40	147.4	1016	0.022	39.4
12	230.1	1586	0.053	12	2.17	153.3	1057	0.024	45.3
14	108.0	745	0.012	14	2.00	158.9	1096	0.025	50.9
				16	1.88	164.5	1134	0.027	56.5
				18	1.78	169.9	1171	0.029	61.9
				20	1.70	175.2	1208	0.031	67.2
				22	1.64	180.5	1244	0.033	72.5
				24	1.58	185.4	1278	0.034	77.4
				26	1.54	190.6	1314	0.036	82.6
				28	1.50	195.5	1348	0.038	87.5

Well Name :Essential Port Fairy # 1
Location :Port Fairy # 1
Recorder #:080-552

Ticket #:312
Test # :One
Depth :1423.00 m
Page : 2

Electronic Pressure Analysis

Time	psig	kPag	psi^2	Time	T+DT/DT	psig	kPag	psi^2	d psi
Second Shut In (continued)									
				30	1.47	200.9	1385	0.040	92.9
				35	1.40	213.5	1472	0.046	105.5
				40	1.35	226.4	1561	0.051	118.4
				45	1.31	244.8	1688	0.060	136.8
				50	1.28	259.6	1790	0.067	151.6
				53	1.26	298.7	2059	0.089	190.7



Well Name :Essential Port Fairy # 1
 Location :Port Fairy # 1
 Recorder #:080-552

Ticket #:312
 Test # :One
 Depth :1423.00 m
 Page : 3

Electronic Pressure Analysis

	Delta_time (Minutes)	Temperature (F)	Pressure (psig)	Delta_time (Minutes)	Temperature (F)	Pressure (psig)	Delta_time (Minutes)	Temperature (F)	Pressure (psig)
	493.00	146.9	2405	538.00	147.6	161	583.00	147.9	212
A IHYD	494.00	146.9	2404	539.00	147.6	166	584.00	147.9	217
	495.00	147.0	2404	540.00	147.7	171	585.00	147.9	222
	496.00	147.0	2402	541.00	147.7	175	586.00	147.9	226
	497.00	147.0	2398	542.00	147.7	180	587.00	147.9	230
	498.00	147.1	2392	543.00	147.7	185	588.00	148.0	220
	499.00	147.1	2387	544.00	147.7	189	E E2FL 589.00	148.0	108
	500.00	147.1	2402	545.00	147.7	194	590.00	148.0	117
	501.00	147.2	2400	546.00	147.7	198	591.00	148.0	121
	502.00	147.2	2398	547.00	147.7	202	592.00	148.0	126
	503.00	147.2	2397	548.00	147.7	207	593.00	148.0	131
	504.00	147.3	2393	549.00	147.6	211	594.00	148.1	134
	505.00	147.3	2414	550.00	147.6	215	595.00	148.1	138
	506.00	147.3	2410	551.00	147.6	220	596.00	148.1	141
	507.00	147.3	2408	552.00	147.7	224	597.00	148.1	140
	508.00	147.3	2405	553.00	147.7	229	598.00	148.1	144
	509.00	147.3	2401	554.00	147.7	233	599.00	148.1	147
	510.00	147.4	2396	555.00	147.7	237	600.00	148.1	150
	511.00	147.4	2390	556.00	147.7	242	601.00	148.1	153
	512.00	147.4	2389	557.00	147.7	246	602.00	148.1	156
	513.00	147.4	2384	558.00	147.7	250	603.00	148.1	159
	514.00	147.4	2430	559.00	147.7	255	604.00	148.1	162
BA OPEN	515.00	147.4	2414	560.00	147.7	259	605.00	148.1	164
	516.00	147.4	2219	561.00	147.7	263	606.00	148.1	167
B 1FLO	517.00	147.4	53	562.00	147.7	268	607.00	148.1	170
	518.00	147.4	59	563.00	147.7	272	608.00	148.1	173
	519.00	147.4	71	564.00	147.8	276	609.00	148.1	175
	520.00	147.4	79	565.00	147.8	281	610.00	148.1	178
	521.00	147.4	90	566.00	147.8	285	611.00	148.1	180
	522.00	147.5	101	567.00	147.8	290	612.00	148.1	183
	523.00	147.5	104	568.00	147.8	294	613.00	148.1	185
B1 EFLO	524.00	147.5	80	569.00	147.8	298	614.00	148.1	188
	525.00	147.5	82	570.00	147.7	303	615.00	148.1	191
	526.00	147.5	88	571.00	147.7	307	616.00	148.1	193
	527.00	147.5	97	572.00	147.7	312	617.00	148.1	196
	528.00	147.6	105	573.00	147.8	316	618.00	148.1	198
	529.00	147.6	112	574.00	147.8	320	619.00	148.1	201
	530.00	147.6	118	C 1SI 575.00	147.8	326	620.00	148.1	203
	531.00	147.6	124	D 2FLO 576.00	147.8	180	621.00	148.1	206
	532.00	147.6	130	577.00	147.8	173	622.00	148.1	208
	533.00	147.6	136	578.00	147.8	185	623.00	148.1	211
	534.00	147.6	141	579.00	147.8	192	624.00	148.1	213
	535.00	147.6	146	580.00	147.8	199	625.00	148.1	216
	536.00	147.6	151	581.00	147.8	204	626.00	148.1	219
	537.00	147.6	156	582.00	147.9	210	627.00	148.1	221

Well Name :Essential Port Fairy # 1
Location :Port Fairy # 1
Recorder #:080-552

Ticket #:312
Test # :One
Depth :1423.00 m
Page : 4

Electronic Pressure Analysis

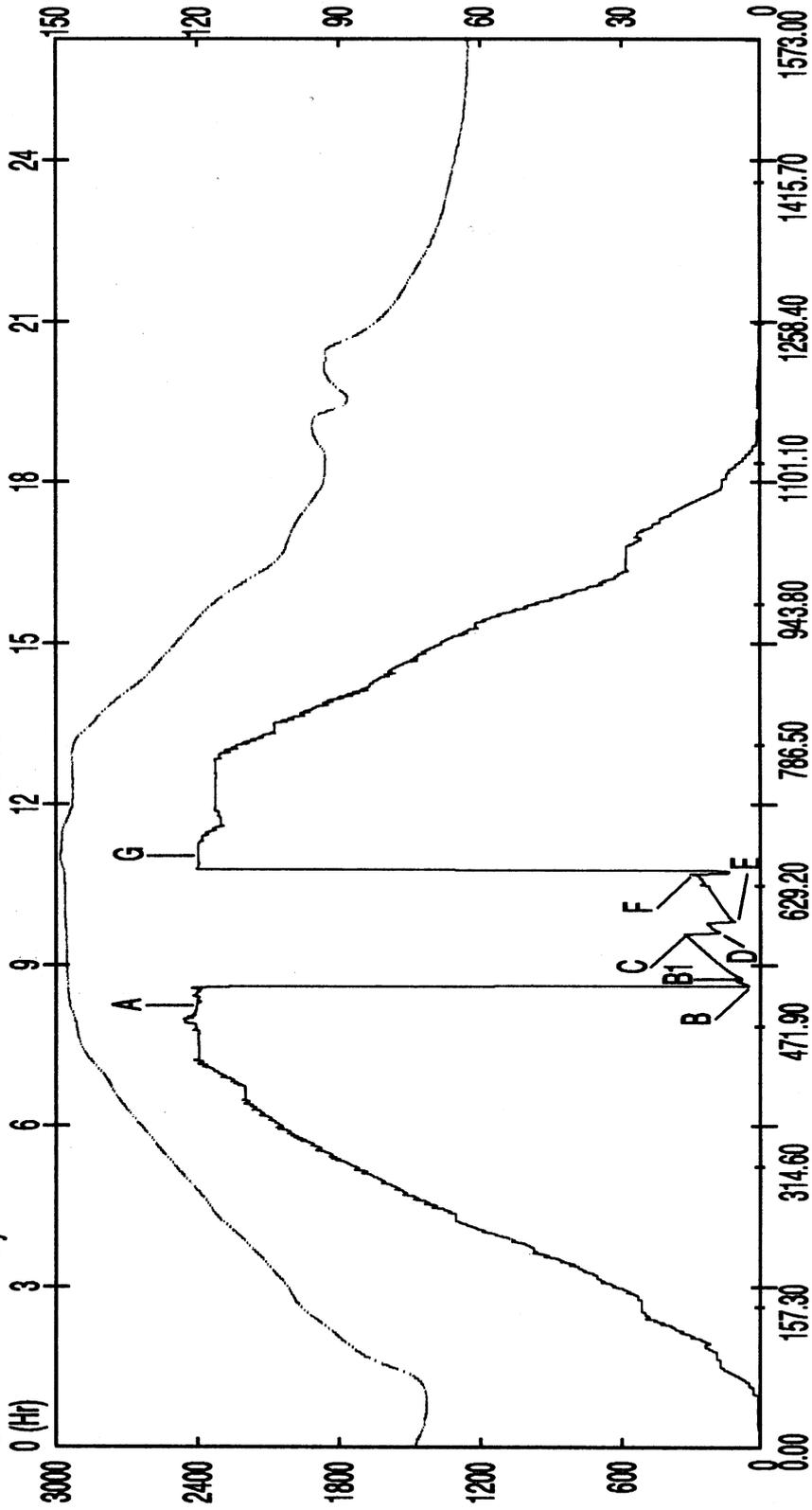
Delta_time (Minutes)	Temperature (F)	Pressure (psig)	Delta_time (Minutes)	Temperature (F)	Pressure (psig)	Delta_time (Minutes)	Temperature (F)	Pressure (psig)
628.00	148.1	218						
629.00	148.1	226						
630.00	148.1	252						
631.00	148.1	243						
632.00	148.1	240						
633.00	148.2	242						
634.00	148.2	245						
635.00	148.2	248						
636.00	148.2	251						
637.00	148.2	254						
638.00	148.2	257						
639.00	148.2	260						
640.00	148.2	262						
641.00	148.2	272						
F 2SI 642.00	148.2	299						
643.00	148.2	144						
644.00	148.2	136						
645.00	148.3	134						
646.00	148.3	203						
647.00	148.3	2404						
648.00	148.6	2398						
649.00	148.6	2397						
650.00	148.6	2396						
651.00	148.8	2397						
652.00	148.8	2398						
653.00	148.8	2395						
654.00	148.9	2393						
655.00	148.9	2395						
656.00	148.9	2398						
657.00	149.1	2398						
658.00	149.1	2398						
659.00	149.1	2398						
660.00	149.1	2398						
661.00	149.1	2397						
G FHYD 662.00	149.1	2397						
663.00	149.1	2397						

PROFILE PLOT

WELL NAME : Essential Port Fairy # 1
 LOCATION : Port Fairy # 1

TICKET : 312
 RECORDER : 080-552
 TEST # : One
 DEPTH : 1423.00 m

Inside



ELAPSED TIME (Min)

A	Initial Hydrostatic	2404	E	End Second Flow	108
B	First Flow	53	F	Second Shutin	299
B1	End First Flow	80	G	Final Hydrostatic	2397
C	First Shutin	326			
D	Second Flow	180			

Pressure PSIG

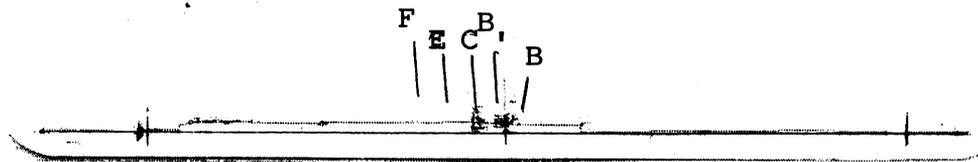
Temperature F

Well Name : Essential Port Fairy # 1
Location : Port Fairy # 1

Ticket #: 312
DST #: One

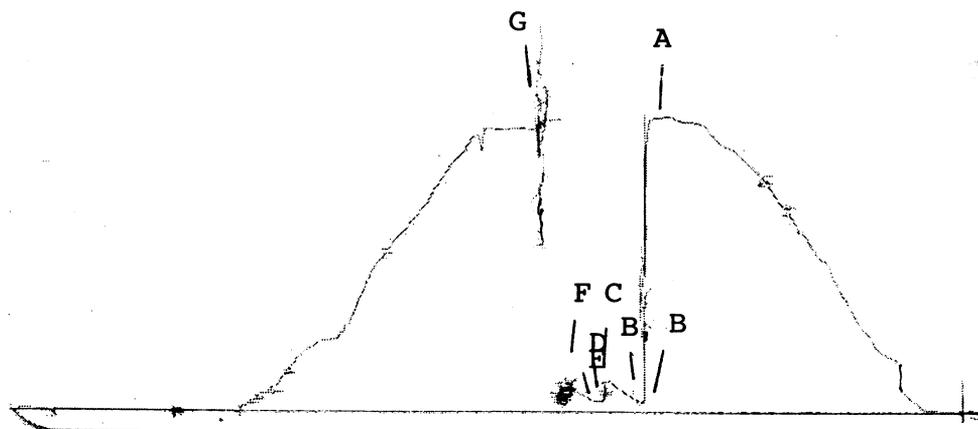
Pt Fairy 1 DST 1 FLUID 22199

Recorder : 22199
Depth : 1411.00
Port : Fluid
A IN Hydrostatic :
B Preflow : 0.0
B1 End Preflow : 77.7
C First Shutin : 79.3
D Second flow :
E End 2nd flow : 87.4
F Second Shutin : 79.3
G FL Hydrostatic :
H Third flow :
I End third flow :
J Third Shutin :



Pt. Fairy #1 DST #1 22201 Inside

Recorder : 22201
Depth : 1422.00
Port : Inside
A IN Hydrostatic : 2392.7
B Preflow : 51.6
B1 End Preflow : 78.1
C First Shutin : 323.4
D Second flow : 117.2
E End 2nd flow : 85.9
F Second Shutin : 214.1
G FL Hydrostatic : 2395.9
H Third flow :
I End third flow :
J Third Shutin :

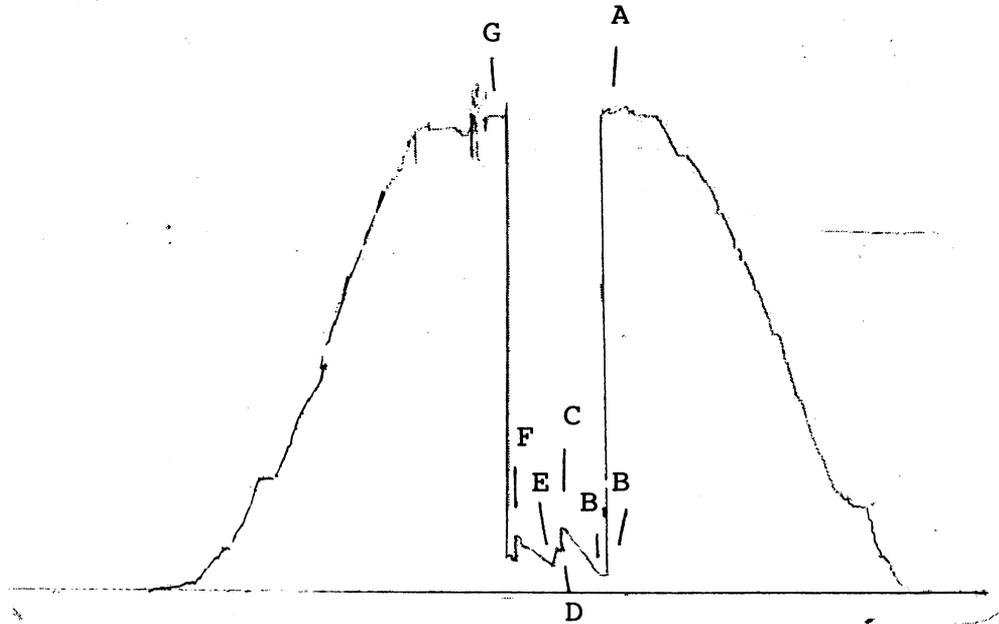


Well Name :Essential Port Fairy # 1
Location :Port Fairy # 1

Ticket #:312
DST # :One

P.F Fairy #1 DST #1 3149 outside

Recorder :3149
Depth :1431.90
Port :Outside
A IN Hydrostatic : 2417.9
B Preflow : 68.4
B1 End Preflow : 91.8
C First Shutin : 340.6
D Second flow : 188.6
E End 2nd flow : 121.9
F Second Shutin : 313.9
G FL Hydrostatic : 2411.2
H Third flow :
I End third flow :
J Third Shutin :





COMPANY NAME	Essential Petroleum Resources
WELL NAME	Port Fairy # 1
LOCATION	Port Fairy # 1
TICKET # and DST #	313 Two
TESTED INTERVAL	860.00 to 882.12 m (22.12 m)
FORMATION	Pebble Point
TEST TYPE	Inflate Straddle
TEST DATE	21-Jan-02

DRILL STEM TEST ANALYSIS FINAL REPORT

AUSTRALIAN DST (AUSTRALASIA) PTY LTD.

COMPANY NAME : Essential Petroleum Resources	TICKET # : 313
WELL NAME Port Fairy # 1	Province: Victoria DST # : Two
LOCATION : Port Fairy # 1	Permit: FORMATION : Pebble Point
TESTED INTERVAL : 860.00 to 882.12 m (22.12 m)	TEST DATE : 21-Jan-02

DST FINAL REPORT: OBSERVATIONS AND CONCLUSIONS

All Measurements are Metric except Pressures which are PSI.

The drillstem test run at the above location was not successful. The pressures recorded are within the accuracy limits of the recorders used.

Run tools to test depth. Open the tool for the preflow with moderate blow to bottom of bucket in 100 seconds. No gas to surface. Close the tool for a 45 minute shutin. Open the tool for the main flow with no blow throughout. Closed the tool and pulled loose and out of the hole. The calculated fluid recovery is 4.5 metres of drilling mud.

The charts indicate plugged tool. However a Horner plot and Derivative/Typecurve of the shutin indicates a zone of very low permeability. The shutin curve has not attained infinite acting radial flow.

If you have any queries with respect to this report please contact your Australian DST Representative at 076 222655.

FLUID RECORDER INTERPRETATION

The fluid chart indicates the following :	Recovery	Average Rate
	m	m3/day
Fluid in pipe prior to test	0.0	
PreFlow	4.5	
Second Flow		
Third Flow		
Fluid into pipe after test		
Fluid remaining after test	4.5	

ANALYTICAL RESULTS for Gas

BASIC HORNER INTERPRETATION

		Drawdown (ISI-FSI)/ISI*100	
P* Initial Shutin	psig	Initial Shutin Semilog Slope	psig
P* Second Shutin	psig	Second Shutin Semilog Slope	psig
P* Final Shutin End Point	psig	Final Shutin Semilog Slope (End Point)	psig
P* Final Shutin Radial Flow	psig	Final Shutin Semilog Slope (Radial Flow)	psig

PLOT ANALYSIS

STORAGE and SKIN

HORNER

Transmissivity (kh/u)		md.ft/cp
Mobility (k/u)		md/cp
Flow Capacity (kh)		md.ft
Permeability (k)		md
Skin (s)		
Flow Efficiency		
Damage		
Radius of Investigation		feet
Predicted Capability for	Acres	
Stabilized Flow Rate (Calc Skin)	@ 2100 psi s =	= bbls/day
Stabilized Flow rate (Skin Removed)	@ 2100 psi s = 0.00 =	bbls/day
Stabilized Flow Rate (Improved Skin)	@ 2100 psi s = -4.00 =	bbls/day

AUSTRALIAN DST (AUSTRALASIA) PTY LTD.

COMPANY NAME : Essential Petroleum Resources	TICKET # : 313
WELL NAME Port Fairy # 1	Province: Victoria DST # : Two
LOCATION : Port Fairy # 1	Permit: FORMATION : Pebble Point
TESTED INTERVAL : 860.00 to 882.12m (22.12 m)	TEST DATE : 21-Jan-02

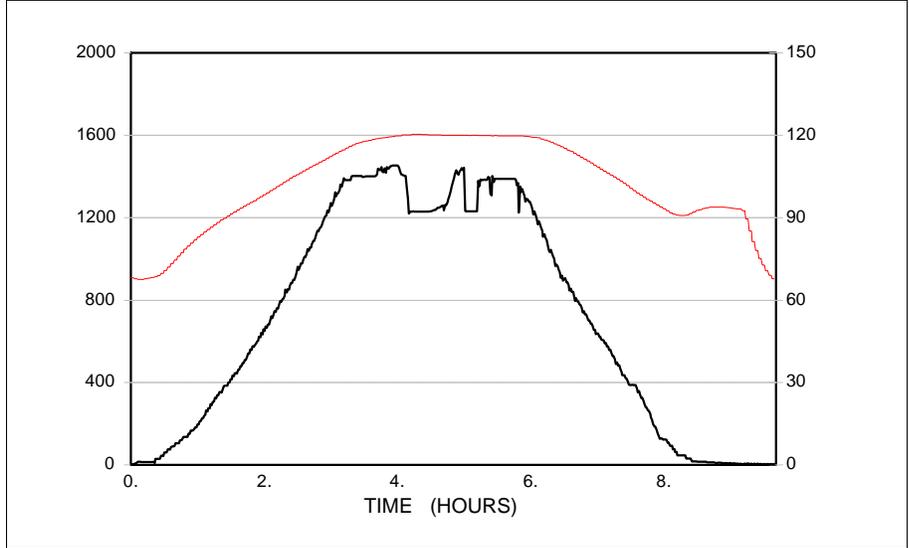
DST FINAL REPORT: FLUIDS, FLOWS AND PRESSURES

TEST PERIODS IN MINUTES

PreFlow	8	First Shutin	45
Second Flow	12	Second Shutin	0
Third Flow	0	Third Shutin	0

DOWNHOLE PRESSURE DATA

Recorder Number	080-522
Clock Type	EMP
Depth Metres	851.60
Pressure Port	INSIDE
	psi
Initial Hydrostatic (A)	1453.0
Start Preflow (B)	1221.0
End Preflow (B1)	1230.0
First Shutin (C)	1443.0
Second Flow (D)	1232.0
End Second Flow (E)	1231.0
Second Shutin (F)	
Start Third Flow (H)	
End Third Flow (I)	
Third Shutin (J)	
Final Hydrostatic (G)	1389.0



BLOW DESCRIPTIONS

PREFLOW : Moderate air blow to bottom of bucket in 100 seconds. Tool plugged off.

SECOND FLOW : No blow throughout. Closed tool and pulled out of the hole.

TEST MISRUN

RECOVERY DURING TEST	Cushion Type: None	Amount:
LIQUID RECOVERY	API Gravity:	Salinity:
		Reverse Circulated: No
Total:	4.50 m	4.50 m in D.C. and 0.00 m in D.P.
	4.50 m of	Drilling mud (Calculated from the fluid recorder data)
	m of	
	m of	
	m of	

GAS RECOVERY	GAS RATES Measured With: No gas to surface.				
	TIME (Min)	Orifice (mm)	PRESSURE (psi)	RATE (Mcf/d)	REMARKS

AUSTRALIAN DST (AUSTRALASIA) PTY LTD.

COMPANY NAME : Essential Petroleum Resources	Province: Victoria	TICKET # : 313
WELL NAME Port Fairy # 1	DST # : Two	
LOCATION : Port Fairy # 1	Permit:	FORMATION : Pebble Point
TESTED INTERVAL : 860.00 to 882.12m (22.12 m)		TEST DATE : 21-Jan-02

DST FINAL REPORT: TOOLS AND GENERAL DATA - INFLATE STRADDLE

TOTAL TOOL TO BOTTOM OF TOP PACKER	18.44 Metres		P.O. Sub	0.31
TOOL IN INTERVAL	4.08 Metres		P.O. Sub	0.31
BOTTOM PACKER AND ANCHOR	4.13 Metres		X.O. Sub	0.31
TOTAL TOOL	26.65 Metres		Rec	and 0.00
DRILL COLLAR IN INTERVAL	18.04 Metres		Rec 22201	1.52
DRILL PIPE IN INTERVAL	0.00 Metres		Choke Sub	0.00
DRILL COLLAR ANCHOR	0.00 Metres		Shut in Tool	0.00
DRILL PIPE ANCHOR	0.00 Metres		Hyd Tool and Sampler	2.70
TOTAL ASSEMBLY	44.69 Metres		Travel Sub	0.46
DRILL COLLARS ABOVE TOOLS	64.2 Metres		Tr Sub and Sampler	0.00
DRILL PIPE ABOVE TOOLS	780.13 Metres		Tr Sub and Sampler	0.00
TOTAL D. COLLARS, D. PIPE AND TOOLS ABOVE PACKER	862.77 Metres		Squeeze Valve	0.70
TOTAL DEPTH TO BOTTOM OF TOP PACKER(S)	860.00 Metres		Rec 22199	and 1.52
			Rec 080-522	and 1.83
			Rec	0.00
TOTAL STICKUP ABOVE KELLY BUSHING	2.77 Metres		Jars	2.24

DOWNHOLE PRESSURE RECORDERS

Rec #:	22201	22199	080-522	3149				
Range	6157	6000	5000	3800				
Type	EMP	24 Hr	24 Hr.	EMP	24 Hr	EMP	RTDT	24 Hr
Depth:	842.50	850.10	851.60	862.90				
Position:	Fluid	Fluid	Inside	Inside	Inside	Outside	Outside	Outside
								Below

ADDITIONAL WELL, TEST AND PIPE INFORMATION

EVENT TIMES	MISCELLANEOUS DATA	
Time Started In	11:30 Hours	K.B. Elevation
Time on Bottom	13:30 Hours	Gr. Elevation
Time Tool Opened	15:36 Hours	Total Depth
Time Tool Pulled	16:41 Hours	Hole Size
Time Out of Hole	21:00 Hours	Bottom Choke
		Hole Condition
		Formation Temperature
		Amount Fill
		Reverse Circulate
		Fluid Cushion
		Type
		Amount

PIPE, WEIGHT and MUD DATA

Drill Collar I.D.	73.0 mm
Drill Pipe I.D.	70.2 mm
Drill Collar Length	64.20 m
Drill Pipe Length	780.13 m
Weight Set on Packer	15000 daN
Initial String Weight	50000 daN
Weight Pulled	20000 daN
Tool Weight	5000 daN
Unseated String Weight	daN
Packer Size	190 mm
Mud Type	KCL PHPA
Mud Weight	1162 kg/m3
Mud Viscosity	0 S/L3
Water Loss	0.0 cm3
Filter Cake	1.5 mm
Mud Drop	0 m
Tool Skid	0 m

SAMPLES TAKEN

Bottom Hole Sampler #	
Fluid Samples	
Gas Samples	
Sent to	Customer
Tester	W. Westman
Company Rep.	V. Sale

Tool Above Interval	18.44 m
Depth	860.00 m
Stub	0.00
Prod Sub or Port	0.83
Rec	and 0.00
Rec	and 0.00
Rec 3149	2.05
Spacing	0.00
X.O. Sub	0.31
D.Collar	18.04
D. Pipe	0.00
X.O. Sub	0.31
Receiver Sub	0.00
Stub	0.58
Total Interval	22.12 m
Depth	882.12 m
Packer	1.73
Packer	0.00
Comp. Blank.	0.00
Rec	0.00
Spacing2	0.00
X.O. Sub	0.00
D. Collar	0.00
D. Pipe	0.00
X.O. Sub	0.00
Dragspring	2.40
Total Tool	26.65 m



Well Name :Essential Port Fairy # 1
 Location :Port Fairy # 1
 Recorder #:080-552

Ticket #:313
 Test # :Two
 Depth :851.60 m
 Page : 1

Electronic Pressure Analysis

Time	psig	kPag	psi^2	Time	T+DT/DT	psig	kPag	psi^2	d psi
Initial Flow				Initial Shut In					
0	1403.0	9674	1.968	0	-	1230.3	8483	1.514	0.0
1	1352.5	9325	1.829	1	9.00	1230.4	8483	1.514	0.1
2	1294.2	8923	1.675	2	5.00	1230.4	8483	1.514	0.1
3	1221.2	8420	1.491	3	3.67	1230.3	8483	1.514	0.0
4	1230.3	8483	1.514	4	3.00	1230.4	8483	1.514	0.1
5	1230.4	8483	1.514	5	2.60	1230.3	8483	1.514	0.0
6	1230.6	8485	1.514	6	2.33	1230.3	8483	1.514	0.0
7	1230.7	8485	1.515	7	2.14	1230.3	8482	1.514	-0.0
8	1230.3	8483	1.514	8	2.00	1230.3	8482	1.514	-0.0
				9	1.89	1230.3	8482	1.514	-0.0
				10	1.80	1230.3	8482	1.514	-0.0
				12	1.67	1230.4	8483	1.514	0.1
				14	1.57	1231.7	8492	1.517	1.4
				16	1.50	1233.1	8502	1.520	2.8
				18	1.44	1238.1	8537	1.533	7.8
				20	1.40	1243.2	8571	1.546	12.9
				22	1.36	1247.4	8600	1.556	17.1
				24	1.33	1254.7	8651	1.574	24.4
				26	1.31	1259.3	8682	1.586	29.0
				28	1.29	1261.8	8700	1.592	31.5
				30	1.27	1273.5	8780	1.622	43.2
				35	1.23	1371.8	9458	1.882	141.5
				40	1.20	1408.5	9711	1.984	178.2
				45	1.18	1443.0	9949	2.082	212.7
Second Flow				Second Shut In					
0	1443.0	9949	2.082						
1	1232.2	8496	1.518						
2	1231.0	8488	1.515						
3	1231.0	8488	1.515						
4	1230.9	8487	1.515						
5	1230.9	8487	1.515						
6	1230.9	8487	1.515						
7	1230.9	8487	1.515						
8	1230.8	8486	1.515						
9	1230.9	8487	1.515						
10	1230.9	8487	1.515						
12	1231.0	8488	1.515						

Well Name :Essential Port Fairy # 1
 Location :Port Fairy # 1
 Recorder #:080-552

Ticket #:313
 Test # :Two
 Depth :851.60 m
 Page : 2

Electronic Pressure Analysis

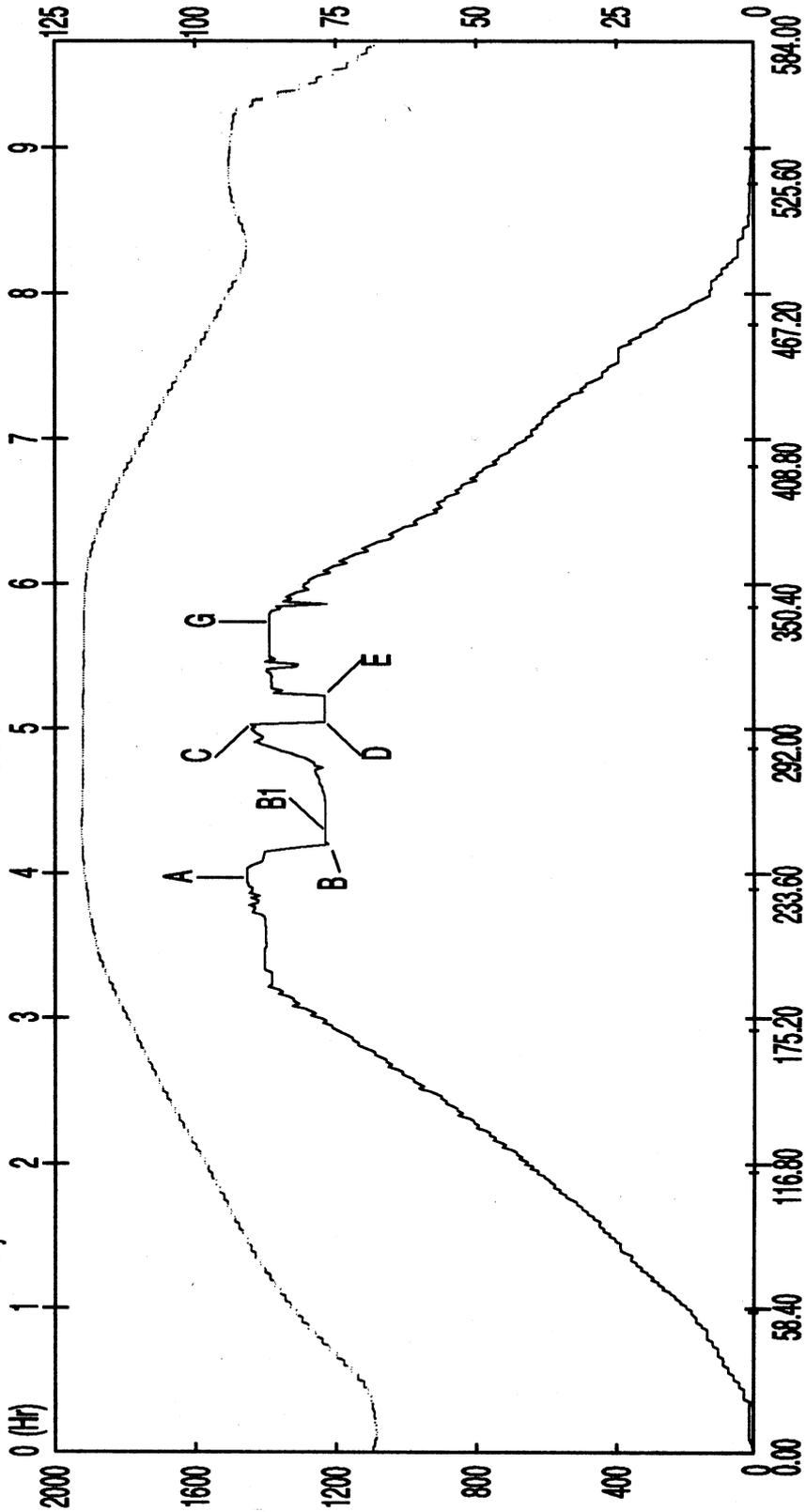
	Delta_time (Minutes)	Temperature (F)	Pressure (psig)	Delta_time (Minutes)	Temperature (F)	Pressure (psig)	Delta_time (Minutes)	Temperature (F)	Pressure (psig)
	237.00	119.6	1453	282.00	120.0	1258	327.00	119.9	1308
A IHYD	238.00	119.6	1453	283.00	120.0	1259	328.00	119.9	1403
	239.00	119.6	1453	284.00	120.0	1237	329.00	119.9	1374
	240.00	119.8	1454	285.00	120.0	1262	330.00	119.9	1389
	241.00	119.8	1453	286.00	120.0	1261	331.00	119.9	1389
	242.00	119.8	1453	287.00	120.0	1273	332.00	119.9	1389
	243.00	119.9	1444	288.00	120.0	1291	333.00	119.9	1389
	244.00	119.9	1428	289.00	120.0	1309	334.00	119.9	1389
	245.00	119.9	1411	290.00	120.0	1327	335.00	119.9	1389
	246.00	120.1	1408	291.00	120.0	1355	336.00	119.9	1389
	247.00	120.1	1406	292.00	120.0	1372	337.00	119.9	1389
	248.00	120.1	1404	293.00	120.0	1393	338.00	119.9	1389
BA OPEN	249.00	120.1	1403	294.00	120.0	1415	339.00	119.9	1389
	250.00	120.1	1352	295.00	120.0	1430	340.00	119.9	1389
	251.00	120.1	1294	296.00	120.0	1414	341.00	119.9	1389
B 1FLO	252.00	120.1	1221	297.00	120.0	1408	342.00	119.8	1389
	253.00	120.1	1230	298.00	120.0	1423	343.00	119.8	1389
	254.00	120.1	1230	299.00	120.0	1432	G FHYD 344.00	119.8	1389
	255.00	120.3	1231	300.00	120.0	1441	345.00	119.8	1389
	256.00	120.3	1231	301.00	120.0	1431			
B1 EFLO	257.00	120.3	1230	C 1SI 302.00	120.0	1443			
	258.00	120.3	1230	D 2FLO 303.00	120.0	1232			
	259.00	120.3	1230		304.00	120.0			
	260.00	120.3	1230		305.00	120.0			
	261.00	120.3	1230		306.00	119.9			
	262.00	120.3	1230		307.00	119.9			
	263.00	120.3	1230		308.00	119.9			
	264.00	120.2	1230		309.00	120.0			
	265.00	120.2	1230		310.00	120.0			
	266.00	120.2	1230		311.00	120.0			
	267.00	120.2	1230		312.00	120.0			
	268.00	120.2	1230		313.00	120.0			
	269.00	120.2	1230	E E2FL 314.00	120.0	1231			
	270.00	120.1	1230		315.00	119.9			1380
	271.00	120.1	1232		316.00	119.9			1353
	272.00	120.1	1231		317.00	119.9			1384
	273.00	120.1	1233		318.00	119.9			1383
	274.00	120.1	1235		319.00	119.9			1383
	275.00	120.1	1238		320.00	119.9			1383
	276.00	120.1	1238		321.00	119.9			1385
	277.00	120.1	1243		322.00	119.9			1383
	278.00	120.1	1247		323.00	119.9			1386
	279.00	120.1	1247		324.00	119.9			1398
	280.00	120.1	1249		325.00	119.9			1396
	281.00	120.1	1255		326.00	119.9			1316

PROFILE PLOT

WELL NAME : Essential Pot Fairy # 1
 LOCATION : Pot Fairy # 1

TICKET : 313
 RECORDER : 080-552

TEST # : Two
 DEPTH : 651.60 m



ELAPSED TIME (Min)

A	Initial Hydrostatic	1453	E	End Second Flow	1231
B	First Flow	1221	G	Final Hydrostatic	1389
B1	End First Flow	1230			
C	First Shutin	1443			
D	Second Flow	1232			

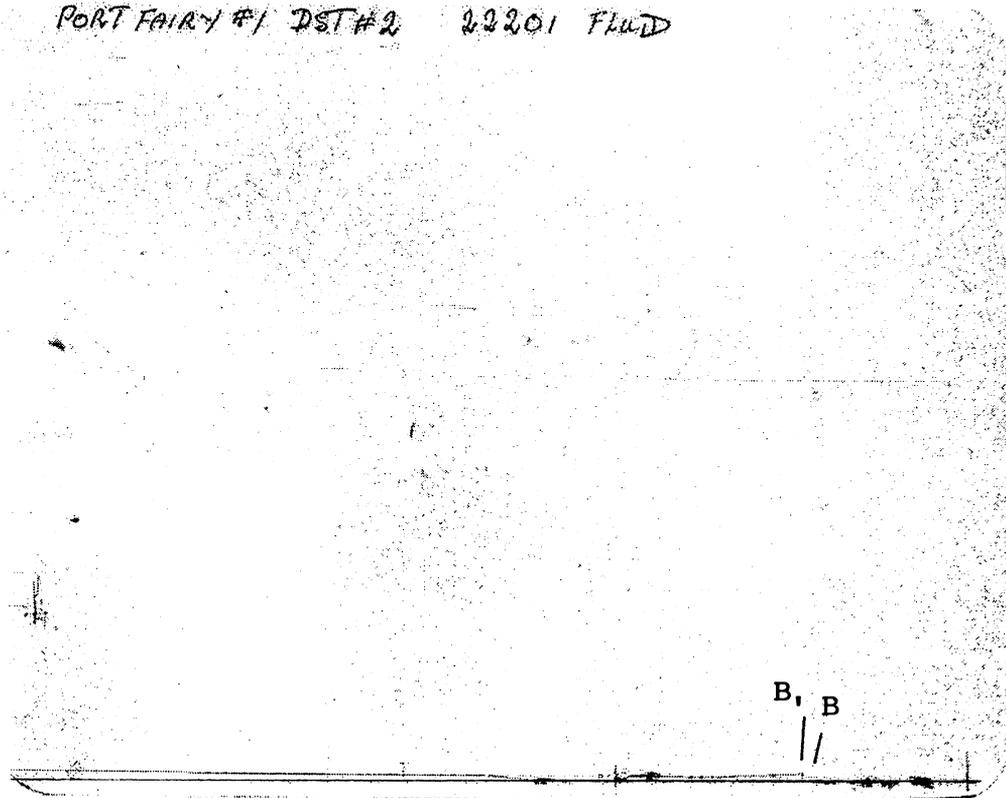
Well Name :Essential Port Fairy # 1
Location :Port Fairy # 1

Ticket #:313
DST # :Two

PORT FAIRY #1 DST#2 22201 FLUID

Recorder :22201
Depth :842.50
Port :Fluid

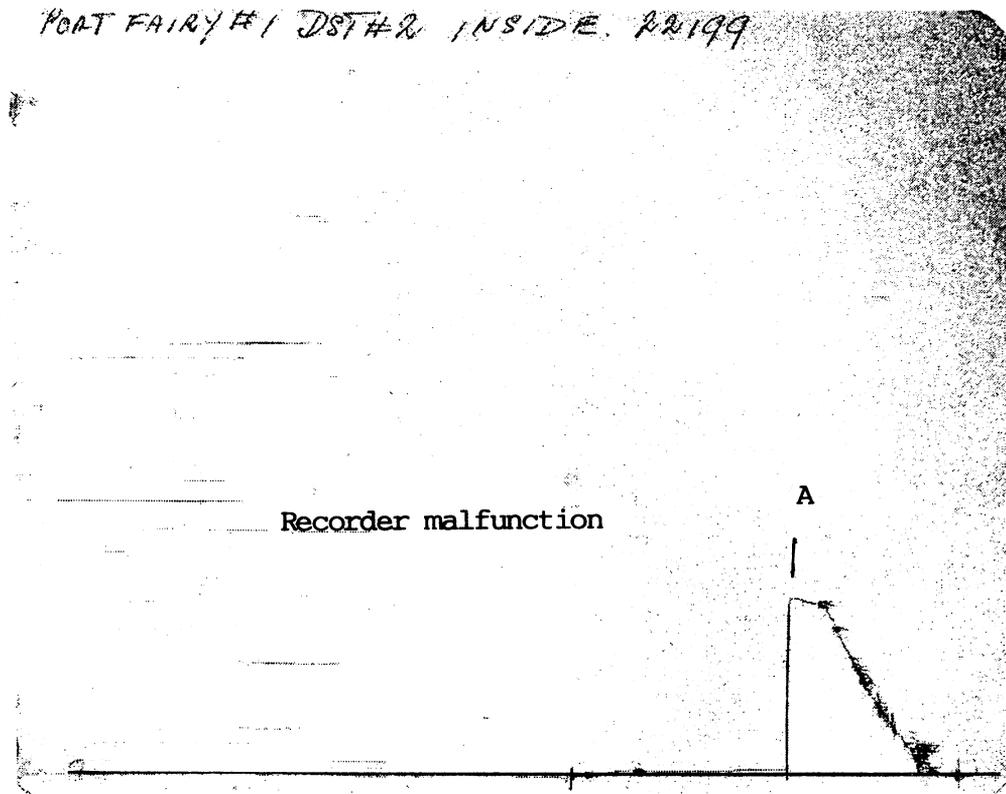
A IN Hydrostatic :
B Preflow : 0.0
B1 End Preflow : 53.1
C First Shutin :
D Second flow :
E End 2nd flow :
F Second Shutin :
G FL Hydrostatic :
H Third flow :
I End third flow :
J Third Shutin :



PORT FAIRY #1 DST#2 INSIDE 22199

Recorder :22199
Depth :850.10
Port :Inside

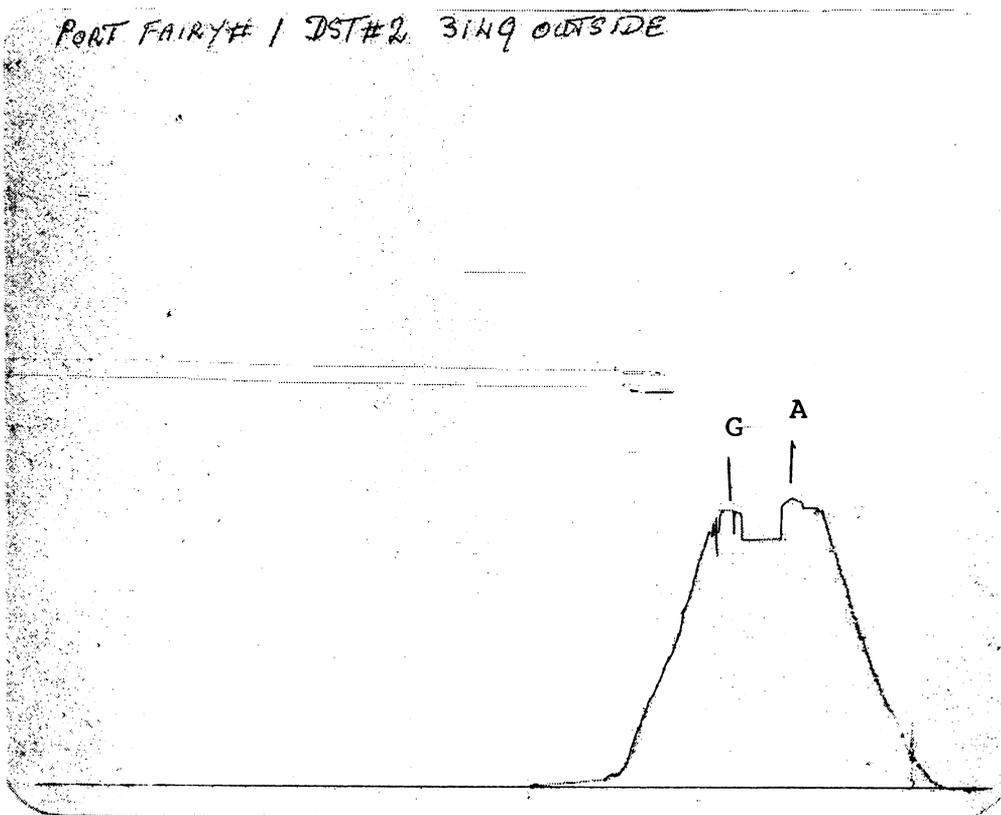
A IN Hydrostatic : 1450.9
B Preflow :
B1 End Preflow :
C First Shutin :
D Second flow :
E End 2nd flow :
F Second Shutin :
G FL Hydrostatic :
H Third flow :
I End third flow :
J Third Shutin :



Well Name :Essential Port Fairy # 1
Location :Port Fairy # 1

Ticket #:313
DST # :Two

Recorder :3149
Depth :862.90
Port :Outside
A IN Hydrostatic : 1471.8
B Preflow :
B1 End Preflow :
C First Shutin :
D Second flow :
E End 2nd flow :
F Second Shutin :
G FL Hydrostatic : 1407.1
H Third flow :
I End third flow :
J Third Shutin :





COMPANY NAME	Essential Petroleum Resources
WELL NAME	Port Fairy # 1
LOCATION	Port Fairy # 1
TICKET # and DST #	314 Three
TESTED INTERVAL	859.00 to 868.89 m (9.89 m)
FORMATION	Pebble Point
TEST TYPE	Inflate Straddle
TEST DATE	23-Jan-02

DRILL STEM TEST ANALYSIS FINAL REPORT

AUSTRALIAN DST (AUSTRALASIA) PTY LTD.

COMPANY NAME : Essential Petroleum Resources	TICKET # : 314
WELL NAME Port Fairy # 1	Province: Victoria DST # : Three
LOCATION : Port Fairy # 1	Permit: FORMATION : Pebble Point
TESTED INTERVAL : 859.00 to 868.89m (9.89 m)	TEST DATE : 23-Jan-02

DST FINAL REPORT: OBSERVATIONS AND CONCLUSIONS

All Measurements are Metric except Pressures which are PSI.

The drillstem test run at the above location was not successful. The pressures recorded are within the accuracy limits of the recorders used.

Run tools to test depth. Pump for 30 minutes without obtaining packer seat. After 3 additional attempts pulled out of the hole. Unable to inflate packers due to packer being ruptured.

If you have any queries with respect to this report please contact your Australian DST Representative at 076 222655.

FLUID RECORDER INTERPRETATION

The fluid chart indicates the following :	Recovery m	Average Rate m3/day
Fluid in pipe prior to test	61.0	
PreFlow		
Second Flow		
Third Flow		
Fluid into pipe after test		
Fluid remaining after test	61.0	

ANALYTICAL RESULTS for Fluid

BASIC HORNER INTERPRETATION

		Drawdown (ISI-FSI)/ISI*100	
P* Initial Shutin	psig	Initial Shutin Semilog Slope	psig
P* Second Shutin	psig	Second Shutin Semilog Slope	psig
P* Final Shutin End Point	psig	Final Shutin Semilog Slope (End Point)	psig
P* Final Shutin Radial Flow	psig	Final Shutin Semilog Slope (Radial Flow)	psig

PLOT ANALYSIS

STORAGE and SKIN

HORNER

Transmissivity (kh/u)		md.ft/cp
Mobility (k/u)		md/cp
Flow Capacity (kh)		md.ft
Permeability (k)		md
Skin (s)		
Flow Efficiency		
Damage		
Radius of Investigation		feet
Predicted Capability for	Acres	
Stabilized Flow Rate (Calc Skin)	@ 2100 psi s =	= bbls/day
Stabilized Flow rate (Skin Removed)	@ 2100 psi s = 0.00 =	bbls/day
Stabilized Flow Rate (Improved Skin)	@ 2100 psi s = -4.00 =	bbls/day

AUSTRALIAN DST (AUSTRALASIA) PTY LTD.

COMPANY NAME : Essential Petroleum Resources	TICKET # : 314
WELL NAME Port Fairy # 1	Province: Victoria DST # : Three
LOCATION : Port Fairy # 1	Permit: FORMATION : Pebble Point
TESTED INTERVAL : 859.00 to 868.89m (9.89 m)	TEST DATE : 23-Jan-02

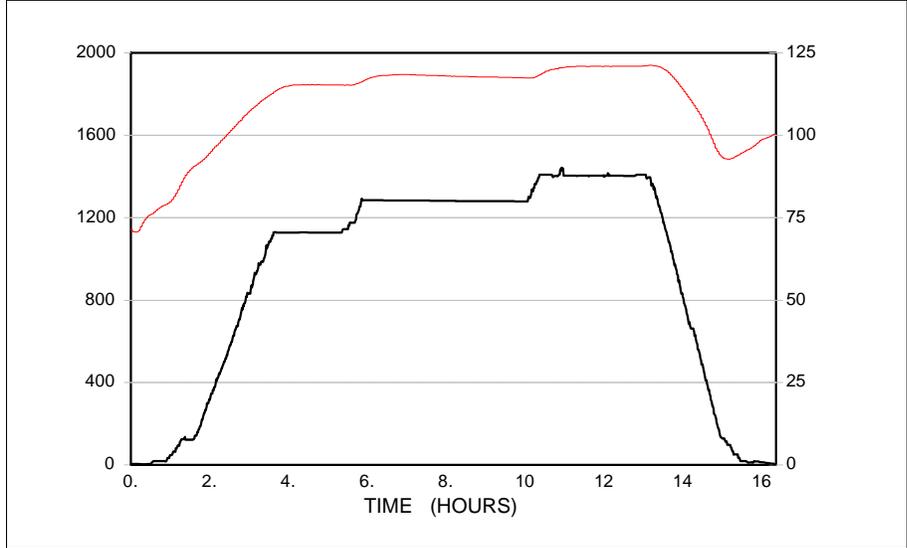
DST FINAL REPORT: FLUIDS, FLOWS AND PRESSURES

TEST PERIODS IN MINUTES

PreFlow	0	First Shutin	0
Second Flow	0	Second Shutin	0
Third Flow	0	Third Shutin	0

DOWNHOLE PRESSURE DATA

Recorder Number	080-522
Clock Type	EMP
Depth Metres	852.46
Pressure Port	INSIDE
	psi
Initial Hydrostatic (A)	1423.0
Start Prewflow (B)	
End Prewflow (B1)	
First Shutin (C)	
Second Flow (D)	
End Second Flow (E)	
Second Shutin (F)	
Start Third Flow (H)	
End Third Flow (I)	
Third Shutin (J)	
Final Hydrostatic (G)	1423.0



BLOW DESCRIPTIONS

Pumped for 30 minutes without obtaining a packer seat. Made 3 additional attempts without success. Pulled out of the hole. Failure due to a ruptured packer.

TEST MISRUN

RECOVERY DURING TEST	Cushion Type: Water	Amount: 61 m
LIQUID RECOVERY	API Gravity:	Salinity:
	Reverse Circulated: No	
Total:	61.00 m	61.00 m in D.C. and 0.00 m in D.P.
	61.00 m of Water cushion	
	m of	

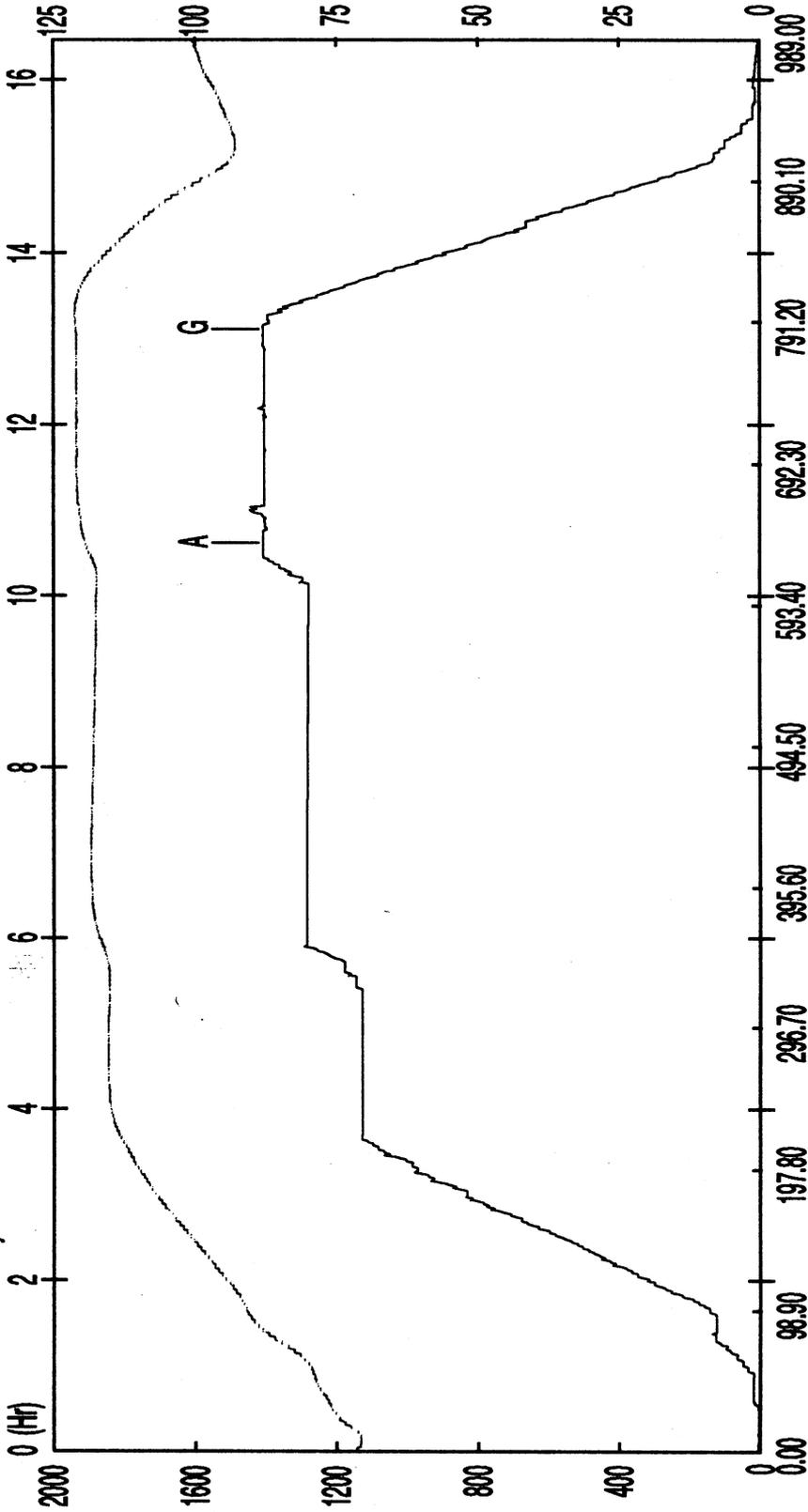
GAS RECOVERY	GAS RATES Measured With: No gas to surface.				
	TIME (Min)	Orifice (mm)	PRESSURE (psi)	RATE (Mcf/d)	REMARKS

PROFILE PLOT

WELL NAME : Essential Port Fairy # 1
 LOCATION : Port Fairy # 1

TICKET : 314
 RECORDER : 080-552

TEST # : Three
 DEPTH : 852.46 m



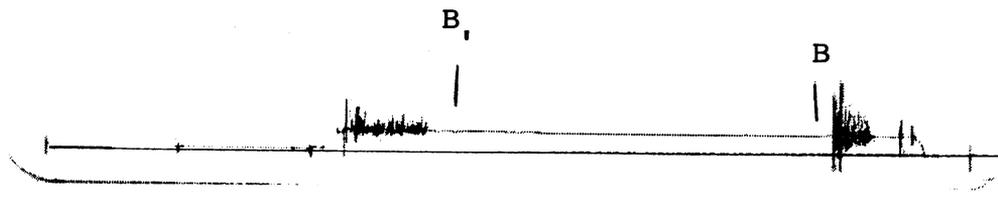
A Initial Hydrostatic 1408
 G Final Hydrostatic 1408

Well Name :Essential Port Fairy # 1
Location :Port Fairy # 1

Ticket #:314
DST # :Three

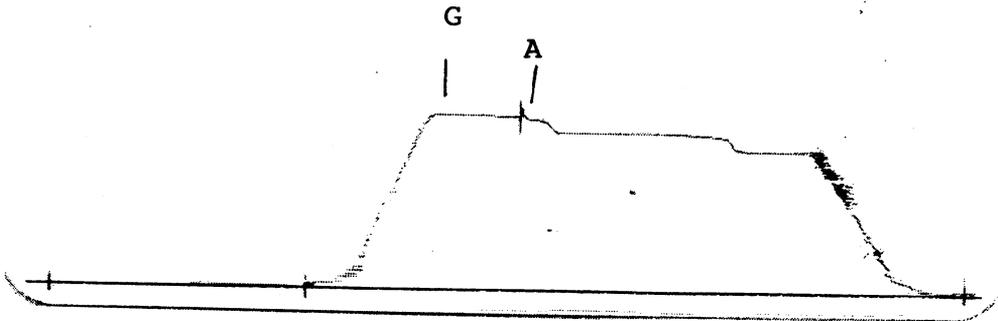
PORT FAIRY #1 DST #3 REC 3149 FLUID

Recorder :3149
Depth :841.49
Port :Fluid
A IN Hydrostatic :
B Preflow : 74.3
B1 End Preflow : 83.5
C First Shutin :
D Second flow :
E End 2nd flow :
F Second Shutin :
G FL Hydrostatic :
H Third flow :
I End third flow :
J Third Shutin :



Recorder :22199
Depth :849.11
Port :Inside
A IN Hydrostatic : 1403.5
B Preflow :
B1 End Preflow :
C First Shutin :
D Second flow :
E End 2nd flow :
F Second Shutin :
G FL Hydrostatic : 1403.5
H Third flow :
I End third flow :
J Third Shutin :

PORT FAIRY #1 REC 22199 INSIDE DST #3



Well Name :Essential Port Fairy # 1
Location :Port Fairy # 1

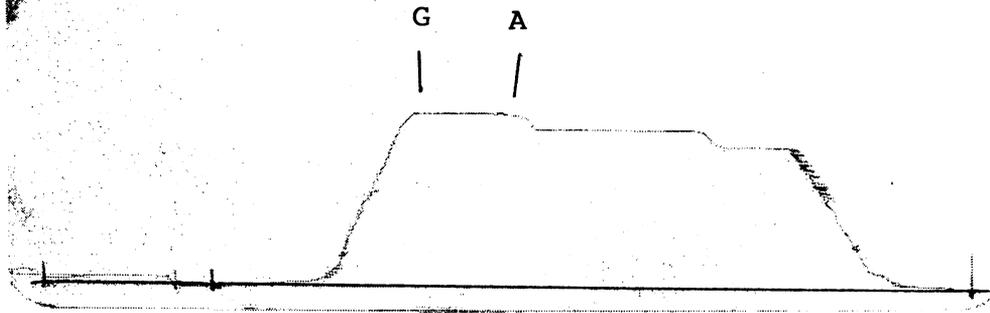
Ticket #:314
DST # :Three

PORT FAIRY #1 DST#3 REC 22201

OUTSIDE

Recorder :22201
Depth :861.88
Port :Outside

A IN Hydrostatic : 1423.0
B Preflow :
B1 End Preflow :
C First Shutin :
D Second flow :
E End 2nd flow :
F Second Shutin :
G FL Hydrostatic : 1423.0
H Third flow :
I End third flow :
J Third Shutin :



Appendix 7: Well checkshot survey and synthetic seismogram.

CHECKSHOT SURVEY SHOT SUMMARY LISTING

Gun and Hydrophone Coordinates:

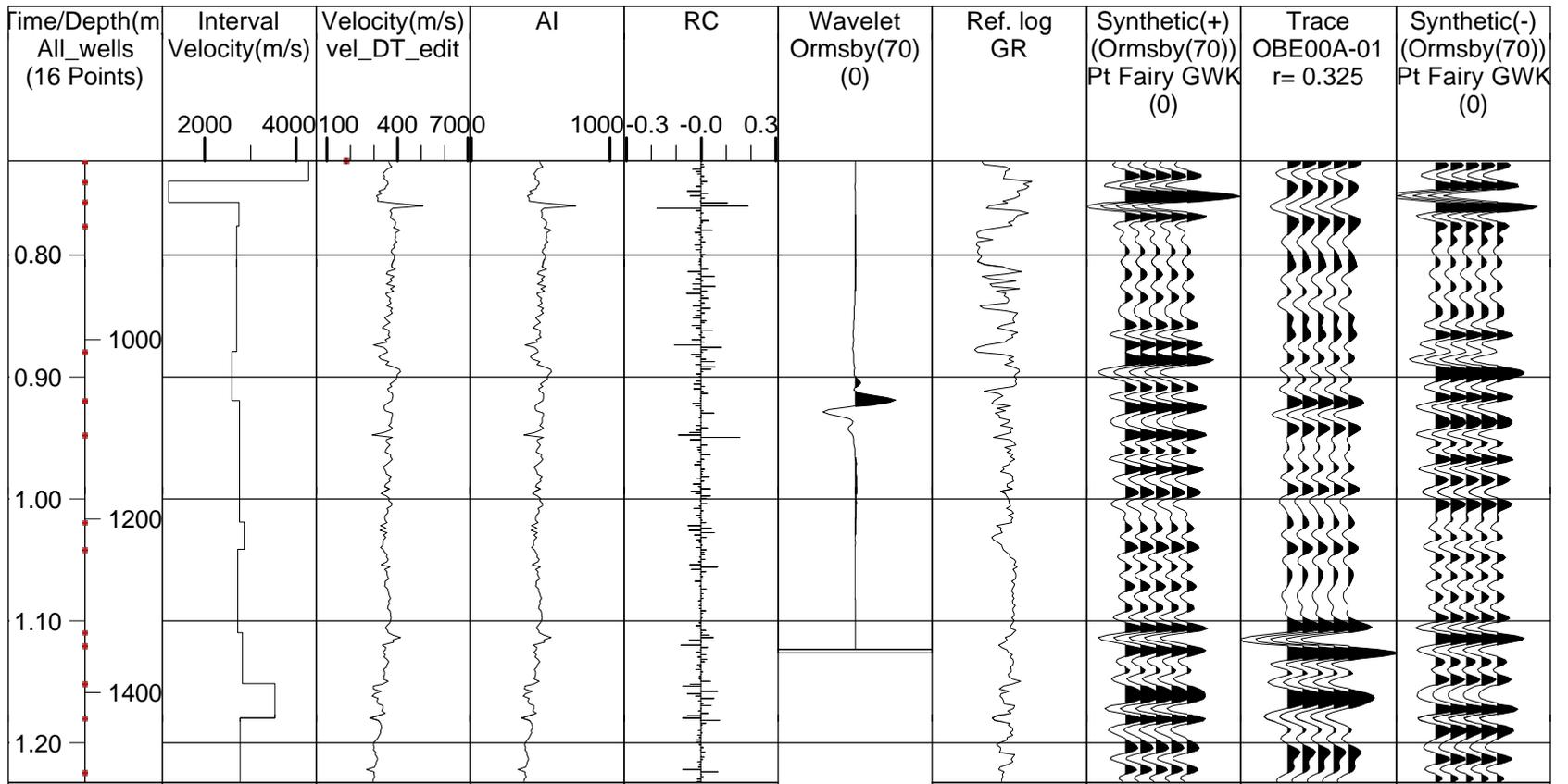
Gun Azimuth 283.0 DEG
 Gun Offset 32.0 M
 Gun Depth From Schlumberger Zero 10.5 M
 Hydrophone Depth From Schlumberger Zero 10.0 M
 SRD Depth From Schlumberger Zero 12.1 M

Other VSP constants:

True Vertical Time Correction YES
 Surface Velocity 1524.00 M/S

Shot number	Measured Depth (1) (M)	Measured Trans Time (MS)	True Vert. Depth from SRD (2) (M)	Corrected Trans Time (3) (MS)	Average Velocity (4) (M/S)
15	813.9	362.66	801.8	361.66	4285.80
14	849.5	370.95	837.4	369.97	2720.22
17	859.9	379.51	847.8	378.52	2057.14
16	887.0	389.33	874.9	388.36	2703.52
12	1025.9	440.79	1013.8	439.85	2675.38
11	1078.0	460.81	1065.9	459.89	2664.76
10	1117.0	474.90	1104.9	473.98	2769.68
9	1215.9	510.58	1203.8	509.68	2786.89
8	1248.0	521.79	1235.9	520.90	2750.11
7	1341.0	555.92	1328.9	555.04	2732.86
6	1356.0	561.22	1343.9	560.35	2831.16
5	1399.9	576.71	1387.8	575.85	2978.98
4	1450.0	592.77	1437.9	591.91	3073.18
3	1512.0	613.16	1499.9	612.30	0.00

- (1) Measured Depth is Cable Depth Referenced to Schlumberger Zero.
 (2) TVD is referenced to SRD (5)
 (3) Transit time with respect to SRD(5) corrected for Deviation.
 (4) Average Velocity corrected for Deviation.
 Average Velocity computed on 150 FT across each level.
 (5) SRD is Seismic Reference Depth.



Essential Petroleum Resources Limited

PEP152

Port Fairy 1

SynPAK: Pt Fairy GWK; Pt Fairy:1; Pt Fairy-1, Depth Type: TVD(Seismic), Distance Units: meter

Appendix 8: Cased hole testing results

Essential Petroleum Resources Limited.

Daily Drilling Report

Port Fairy #1	DATE:	22.03.02
PEP-152	REPORT #	5
ISS Long-stroke snubber	D.F.S.	

N/A	STATUS @ 06:00 Hrs:		Test Eumeralla formation. Flow to small to measure.			
1522.00 m	FORMATION:		N/A			
N/A	LAST CASING:	7" x 23ppf	@	1550.0m	SHOE L.O.T.:	N/A
6.125'	WD (LAT):	N/A	RT - GL / Air gap:	4.5m	MAASP:	N/A

FL	PIT	CONSUMABLES			FORMATION DATA		
		Rig	Workboat	Workboat	Name	N/A	
		Fuel			Lithology		
8.4ppg.		Potable water			Top depth RT.		
		Drill water			Trip gas %		
		Barites			Connection Gas %		
		Cement			Background gas %		
		Gel			ECD (ppg)		
		Base Oil			DRILLS / BOPS		
		PUMPS	1	2	3		
		TYPE				LAST BOP DRILL	
		STROKE(in)				LAST FIRE DRILL	
		LINER(in)				LAST MOB DRILL	
		SPM				LAST ABN. RIG DRILL	
		GPM				LAST BOP TEST	
						21.03.02	
7ppb		AV-DP(Ft/min)				BOP TEST DUE	
		AV-DC(Ft/min)				28.03.02	
		SPP(kPa/psi)				HRS	
		SCR @ 40				CUM	
		SCR @ 50				1. Rig up / down.	
						10.00	
80						2. Drilling.	
						3. Reaming.	
						4. Trip	
						10.00	
						18.50	
BIT DATA		WEATHER / RIG RESPONSE			5. Circ. / condition.	0.50	1.50
		Wind Speed (kts)		5	6. Deviation survey		
		Direction		S-E	7. Run casing		
		Temperature		20	8. Cementing		
		Barometric pressure millibar			9. Handle Preventors		5.50
		Barometer rise / fall			10. Riser, flowline		
		Visibility(NM)			11. Logging.	0.25	6.75
		Sea state			12. Press. test BOP		1.50
		Swell / Period / Direction			13. Repair rig.		
		Waves / period / direction			14. Service rig.		
		Heave			15. Slip / cut drlg line		
		Pitch			16. Drill stem test.		
		Roll			17. Fishing.		
		Anchor tension			18. Well control.		
		Anchor tension			19. Hang-off.		
		Riser tension			21. W.O.Weather		
		VARIABLE DECK LOAD (Kips)			22. Lost circ.		
	BHA WEIGHT			STRING WT	23. Plug / Abandon.		
					24. Mob / Demob.		
					25. Handle anchors.		
					26. Position rig.		
SERIAL No.	ROT/REAM HRS	DRILLING DATA			27. Guide base / ROV.		
		DRAG - UP (mt)			28. Others	1.25	4.25
		DRAG - DOWN (mt)			Slickline	4	4
		TORQUE-On Bottom (amps)					
		TORQUE-Off Bottom (amps)					
					TOTAL (HRS)	16.00	52.00



EXPERTEST PTY. LTD.

A.C.N. 008 034 062

**CLOSED CHAMBER DST
REPORT**

Customer: Essential Petroleum	Operator: N Hay
Location: PT Fairy # 1	Test Interval: 4599' - 4763'
Formation: Eumerella	Date: 23/03/2002
DST No.: PT Fairy # 1 230302	

Disclaimer: Reports submitted at field level have not completed the Expertest Quality Management process and as such are intended as a guide only and come without warranty.

	CLOSED CHAMBER DST PRE-TEST PLANNING	
	Customer: Essential Petroleum	Operator: N Hay
	Location: PT Fairy # 1	Test Interval: 4599' - 4763'
	Formation: Eumerella	Date: 23/03/2002
	DST No.: PT Fairy # 1 230302	

Expected Bottom Hole Conditions	
B.H.P. :	1230 PSI
B.H.T. :	165 Deg F

Expected Surface Conditions	
Pressure:	0 PSI
Temperature:	Deg F

Choke Parameters	
Choke Diameter:	1 1/2 inch
Choke Coefficient:	34.82

Gas Parameters	
Gas Specific Gravity:	0.7
Gas Deviation Factor:	0.94

Drill Pipe & Collar Dimensions	
Drill Pipe ID:	2.441 inches
Drill Pipe above KB:	Feet
Depth of Top Packer:	4527 Feet
Length of Tools Between Packer & Shut-in Tool:	0 Feet

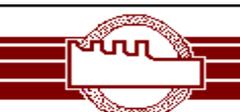
Water Cushion	
Water Cushion Length:	492 Feet

Calculated Chamber Parameters	
Length of Chamber:	4035 Feet
Total Chamber Volume:	26.20 BBLS
Volume of Water Cushion:	2.85 BBLS
Volume above Water Cushion:	23.35 BBLS
Gas-Water Ratio:	8.87 SCF/BBL

Calculated Maximum Rates and dp/dt for each Phase				
	Max. Possible Rate	Max. Surface Pressure Change		
		Before Breakout	After Breakout	Units
Pure Gas:	48.747 MMSCF/D	37.87	3317.14	PSI/Min
Pure Water:	39770.9 B/D		16.47	PSI/Min
Gas Saturated Water:	39770.9 B/D + 352.77 MSCF/D		24.01	PSI/Min

EXPERTEST PTY. LTD.	PRESSURE TEST	
	Customer: Essential Petroleum	Test Date: #####
	Location: PT Fairy # 1	Start Time: 0:49:00
	Formation: Eumerella	Gauge No:
	Test Interval: 4599' - 4763'	Operator: N Hay

Time	Elapsed Time (Mins)	Pressure (PSIG)	Temp (°F)	Remarks
0:49:00	0.00	14.70	48.40	
0:50:00	1.00	14.80	48.20	
0:51:00	2.00	14.70	48.20	
0:52:00	3.00	14.70	48.20	
0:53:00	4.00	14.70	48.10	
0:54:00	5.00	14.70	48.10	
0:55:00	6.00	14.80	48.10	
0:56:00	7.00	649.40	48.10	
0:57:00	8.00	615.40	48.10	
0:58:00	9.00	600.10	48.20	
0:59:00	10.00	588.60	48.10	
1:00:00	11.00	579.90	48.10	
1:01:00	12.00	572.50	48.10	
1:02:00	13.00	565.80	48.10	
1:03:00	14.00	558.40	48.00	
1:04:00	15.00	553.70	48.00	
1:05:00	16.00	548.40	47.80	
1:06:00	17.00	543.50	47.90	
1:07:00	18.00	537.60	47.90	
1:08:00	19.00	532.00	47.80	
1:09:00	20.00	526.80	47.70	
1:10:00	21.00	521.80	47.70	
1:11:00	22.00	517.70	47.70	
1:12:00	23.00	513.00	47.70	
1:13:00	24.00	508.60	47.60	
1:14:00	25.00	505.10	47.60	
1:15:00	26.00	500.90	47.60	
1:16:00	27.00	496.40	47.70	
1:17:00	28.00	493.40	47.60	
1:18:00	29.00	490.90	47.60	
1:19:00	30.00	488.60	47.60	
1:20:00	31.00	485.60	47.60	
1:21:00	32.00	483.00	47.60	
1:22:00	33.00	480.50	47.60	
1:23:00	34.00	477.90	47.60	
1:24:00	35.00	476.70	47.70	
1:25:00	36.00	473.40	47.60	
1:26:00	37.00	469.70	47.60	
1:27:00	38.00	467.40	47.60	
1:28:00	39.00	464.70	47.60	

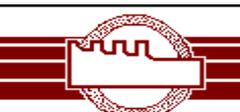
EXPERTEST PTY LTD	CLOSED CHAMBER DST MAIN FLOW	
	Customer: Essential Petroleum	Test Date: #####
	Location: PT Fairy # 1	Start Time: 4:37:00
	Formation: Eumerella	Gauge No: 0
	Test Interval 4599' - 4763'	Operator: N Hay

Chamber Volume:	23.35 (BBLs)	Gas Gravity:	0.7
Reservoir Temp:	165 (Deg F)	Gas Dev. Factor:	0.94
DST No.:	PT Fairy # 1 230302	Chamber Length:	4035

Comments

Run # 1 Guns fired at 04:40 NO change in pressure
 Run # 2 Guns fired at 0725 NO change in pressure **NO Change in Pressure**
 08:00 End of Test

Time HH:MM:SS	Delta Time (Mins)	Surface Pressure (PSIA)	dp/dt (PSI/Min)	Surface Temp. (Deg F)	Max. Gas		Max. Liquid	
					Rate (MSCF/D)	Produced (MSCF)	Rate (B/D)	Produced (BBLs)
4:37:00	0.00	14.70		46.60		0.000		0.000
4:38:00	1.00	14.70	0.00	46.70	0.000	0.007	0	0.000
4:39:00	2.00	14.80	0.00	46.60	0.000	0.008	0	0.158
4:40:00	3.00	14.70	-0.10	46.60	-1.256	0.007	-218	0.000
4:41:00	4.00	14.70	0.00	46.60	0.000	0.007	0	0.000
4:42:00	5.00	14.70	0.00	46.60	0.000	0.007	0	0.000
4:43:00	6.00	15.00	0.30	46.60	3.768	0.009	640	0.467
4:44:00	7.00	14.70	-0.30	46.50	-3.768	0.007	-653	0.000
4:45:00	8.00	14.80	0.10	46.50	1.256	0.008	216	0.158
4:46:00	9.00	14.70	-0.10	46.50	-1.256	0.007	-218	0.000
4:47:00	10.00	15.00	0.30	46.40	3.768	0.009	640	0.467
4:48:00	11.00	14.70	-0.30	46.40	-3.768	0.007	-653	0.000
4:49:00	12.00	14.80	0.10	46.50	1.256	0.008	216	0.158
4:50:00	13.00	14.70	-0.10	46.40	-1.256	0.007	-218	0.000
4:51:00	14.00	15.30	0.60	46.50	7.536	0.012	1254	0.916
4:52:00	15.00	14.70	-0.60	46.30	-7.537	0.007	-1305	0.000
4:53:00	16.00	15.00	0.30	46.40	3.768	0.009	640	0.467
4:54:00	17.00	14.80	-0.20	46.30	-2.512	0.008	-432	0.158
4:55:00	18.00	15.10	0.30	46.40	3.768	0.010	635	0.619
4:56:00	19.00	15.00	-0.10	46.20	-1.256	0.009	-213	0.467
4:57:00	20.00	15.30	0.30	46.30	3.769	0.012	627	0.916
4:58:00	21.00	14.80	-0.50	46.30	-6.281	0.008	-1081	0.158
4:59:00	22.00	15.60	0.80	46.40	10.049	0.015	1640	1.347
5:00:00	23.00	15.80	0.20	46.30	2.512	0.017	405	1.626
5:01:00	24.00	15.40	-0.40	46.30	-5.025	0.013	-831	1.062
5:02:00	25.00	15.00	-0.40	46.30	-5.025	0.009	-853	0.467
5:03:00	26.00	15.00	0.00	46.30	0.000	0.009	0	0.467
5:04:00	27.00	15.40	0.40	46.40	5.024	0.013	831	1.062
5:05:00	28.00	15.10	0.05	46.40	0.628	0.010	106	0.619
5:06:00	29.00	15.00	-0.10	46.30	-1.256	0.009	-213	0.467
5:07:00	30.00	15.90	0.90	46.40	11.305	0.018	1810	1.763
5:08:00	31.00	15.80	-0.10	46.40	-1.256	0.017	-202	1.626
5:09:00	32.00	14.80	-1.00	46.20	-12.563	0.008	-2161	0.158
5:10:00	33.00	15.00	0.20	46.30	2.512	0.009	426	0.467
5:11:00	34.00	15.30	0.03	46.20	0.419	0.012	70	0.916
5:12:00	35.00	15.40	0.10	45.90	1.257	0.013	208	1.062
5:13:00	36.00	15.80	0.40	45.80	5.027	0.017	810	1.626
5:14:00	37.00	15.00	-0.80	45.70	-10.055	0.010	-1706	0.467

EXPERTEST PTY LTD	CLOSED CHAMBER DST MAIN FLOW	
	Customer: Essential Petroleum	Test Date: #####
	Location: PT Fairy # 1	Start Time: 4:37:00
	Formation: Eumerella	Gauge No: 0
	Test Interval 4599' - 4763'	Operator: N Hay

Chamber Volume:	23.35 (BLS)	Gas Gravity:	0.7
Reservoir Temp:	165 (Deg F)	Gas Dev. Factor:	0.94
DST No.:	PT Fairy # 1 230302	Chamber Length:	4035

Comments

Run # 1 Guns fired at 04:40 NO change in pressure
 Run # 2 Guns fired at 0725 NO change in pressure **NO Change in Pressure**
 08:00 End of Test

Time HH:MM:SS	Delta Time (Mins)	Surface Pressure (PSIA)	dp/dt (PSI/Min)	Surface Temp. (Deg F)	Max. Gas		Max. Liquid	
					Rate (MSCF/D)	Produced (MSCF)	Rate (B/D)	Produced (BLS)
5:15:00	38.00	15.30	0.30	45.70	3.771	0.012	627	0.916
5:16:00	39.00	15.40	0.10	45.50	1.257	0.013	208	1.062
5:17:00	40.00	15.60	0.20	45.50	2.514	0.015	410	1.347
5:18:00	41.00	15.00	-0.60	45.60	-7.542	0.010	-1279	0.467
5:19:00	42.00	15.80	0.80	45.40	10.058	0.017	1619	1.626
5:20:00	43.00	15.80	0.00	45.50	0.000	0.017	0	1.626
5:21:00	44.00	16.10	0.30	45.50	3.771	0.020	596	2.031
5:22:00	45.00	16.10	0.00	45.50	0.000	0.020	0	2.031
5:23:00	46.00	15.30	-0.80	45.50	-10.057	0.012	-1672	0.916
5:24:00	47.00	16.20	0.90	45.50	11.314	0.020	1777	2.162
5:25:00	48.00	16.20	0.00	45.50	0.000	0.020	0	2.162
5:26:00	49.00	16.10	-0.10	45.50	-1.257	0.020	-199	2.031
5:27:00	50.00	16.40	0.30	45.30	3.772	0.022	585	2.421
5:28:00	51.00	15.90	-0.50	45.30	-6.287	0.018	-1006	1.763
5:29:00	52.00	16.50	0.60	45.30	7.544	0.023	1163	2.548
5:30:00	53.00	16.20	-0.30	45.10	-3.773	0.021	-592	2.162
5:31:00	54.00	15.90	-0.30	45.20	-3.772	0.018	-603	1.763
5:32:00	55.00	16.40	0.50	45.20	6.287	0.022	975	2.421
5:33:00	56.00	16.10	-0.30	45.10	-3.773	0.020	-596	2.031
5:34:00	57.00	15.90	-0.20	45.10	-2.515	0.018	-402	1.763
5:35:00	58.00	16.90	1.00	45.00	12.577	0.027	1892	3.040
5:36:00	59.00	16.20	-0.70	44.90	-8.804	0.021	-1382	2.162
5:37:00	60.00	17.00	0.80	44.80	10.063	0.028	1505	3.160
5:38:00	61.00	16.50	-0.50	44.90	-6.289	0.023	-969	2.548
5:39:00	62.00	16.70	0.20	44.90	2.516	0.025	383	2.797
5:40:00	63.00	16.50	-0.20	44.80	-2.516	0.023	-388	2.548
5:41:00	64.00	16.50	0.00	44.90	0.000	0.023	0	2.548
5:42:00	65.00	17.20	0.70	44.70	8.806	0.030	1302	3.395
5:43:00	66.00	16.90	-0.30	44.70	-3.774	0.027	-568	3.040
5:44:00	67.00	16.50	-0.40	44.70	-5.032	0.023	-775	2.548
5:45:00	68.00	16.50	0.00	44.70	0.000	0.023	0	2.548
5:46:00	69.00	17.50	1.00	44.70	12.580	0.032	1828	3.737
5:47:00	70.00	16.40	-1.10	44.60	-13.839	0.022	-2145	2.421
5:48:00	71.00	16.50	0.10	44.80	1.258	0.023	194	2.548
5:49:00	72.00	17.00	0.50	44.70	6.290	0.028	941	3.160
5:50:00	73.00	17.00	0.00	44.80	0.000	0.028	0	3.160
5:51:00	74.00	17.20	0.20	44.70	2.516	0.030	372	3.395

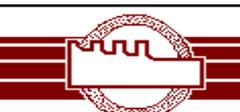
EXPERTEST PTY LTD	CLOSED CHAMBER DST MAIN FLOW	
	Customer: Essential Petroleum	Test Date: #####
	Location: PT Fairy # 1	Start Time: 4:37:00
	Formation: Eumerella	Gauge No: 0
	Test Interval 4599' - 4763'	Operator: N Hay

Chamber Volume:	23.35 (BBLs)	Gas Gravity:	0.7
Reservoir Temp:	165 (Deg F)	Gas Dev. Factor:	0.94
DST No.:	PT Fairy # 1 230302	Chamber Length:	4035

Comments

Run # 1 Guns fired at 04:40 NO change in pressure
 Run # 2 Guns fired at 0725 NO change in pressure **NO Change in Pressure**
 08:00 End of Test

Time HH:MM:SS	Delta Time (Mins)	Surface Pressure (PSIA)	dp/dt (PSI/Min)	Surface Temp. (Deg F)	Max. Gas		Max. Liquid	
					Rate (MSCF/D)	Produced (MSCF)	Rate (B/D)	Produced (BBLs)
5:52:00	75.00	16.90	-0.30	44.70	-3.774	0.027	-568	3.040
5:53:00	76.00	16.50	-0.40	44.80	-5.032	0.023	-775	2.548
5:54:00	77.00	16.20	-0.30	44.90	-3.773	0.021	-592	2.162
5:55:00	78.00	16.50	0.30	44.90	3.773	0.023	581	2.548
5:56:00	79.00	16.70	0.20	45.00	2.515	0.025	383	2.797
5:57:00	80.00	16.40	-0.30	44.90	-3.773	0.022	-585	2.421
5:58:00	81.00	16.20	-0.20	44.90	-2.516	0.021	-395	2.162
5:59:00	82.00	16.10	-0.10	45.10	-1.258	0.020	-199	2.031
6:00:00	83.00	16.50	0.40	45.20	5.030	0.023	775	2.548
6:01:00	84.00	16.70	0.20	45.20	2.515	0.025	383	2.797
6:02:00	85.00	17.00	0.30	45.20	3.772	0.028	564	3.160
6:03:00	86.00	15.90	-1.10	45.20	-13.832	0.018	-2213	1.763
6:04:00	87.00	15.80	-0.10	45.20	-1.257	0.017	-202	1.626
6:05:00	88.00	16.40	0.60	45.30	7.544	0.022	1170	2.421
6:06:00	89.00	16.20	-0.20	45.30	-2.515	0.020	-395	2.162
6:07:00	90.00	16.50	0.30	45.50	3.771	0.023	582	2.548
6:08:00	91.00	17.20	0.70	45.30	8.801	0.030	1302	3.395
6:09:00	92.00	16.20	-1.00	45.40	-12.572	0.020	-1974	2.162
6:10:00	93.00	16.70	0.50	45.50	6.286	0.025	958	2.797
6:11:00	94.00	16.50	-0.20	45.40	-2.514	0.023	-388	2.548
6:12:00	95.00	16.50	0.00	45.40	0.000	0.023	0	2.548
6:13:00	96.00	15.90	-0.60	45.30	-7.544	0.018	-1207	1.763
6:14:00	97.00	16.20	0.30	45.30	3.772	0.020	592	2.162
6:15:00	98.00	16.10	-0.10	45.20	-1.257	0.020	-199	2.031
6:16:00	99.00	16.70	0.60	45.10	7.545	0.025	1149	2.797
6:17:00	100.00	15.90	-0.80	45.20	-10.060	0.018	-1609	1.763
6:18:00	101.00	16.70	0.80	45.10	10.060	0.025	1532	2.797
6:19:00	102.00	17.00	0.30	45.20	3.772	0.028	564	3.160
6:20:00	103.00	16.50	-0.50	45.10	-6.288	0.023	-969	2.548
6:21:00	104.00	15.90	-0.60	45.10	-7.545	0.018	-1207	1.763
6:22:00	105.00	16.70	0.80	45.10	10.060	0.025	1532	2.797
6:23:00	106.00	15.90	-0.80	45.10	-10.060	0.018	-1609	1.763
6:24:00	107.00	15.80	-0.10	45.30	-1.257	0.017	-202	1.626
6:25:00	108.00	16.70	0.90	45.20	11.317	0.025	1724	2.797
6:26:00	109.00	17.00	0.30	45.30	3.772	0.028	564	3.160
6:27:00	110.00	16.70	-0.30	45.20	-3.772	0.025	-575	2.797
6:28:00	111.00	16.90	0.20	45.20	2.515	0.027	378	3.040

EXPERTEST PTY LTD	CLOSED CHAMBER DST MAIN FLOW	
	Customer: Essential Petroleum	Test Date: #####
	Location: PT Fairy # 1	Start Time: 4:37:00
	Formation: Eumerella	Gauge No: 0
	Test Interval 4599' - 4763'	Operator: N Hay

Chamber Volume:	23.35 (BBLs)	Gas Gravity:	0.7
Reservoir Temp:	165 (Deg F)	Gas Dev. Factor:	0.94
DST No.:	PT Fairy # 1 230302	Chamber Length:	4035

Comments

Run # 1 Guns fired at 04:40 NO change in pressure
 Run # 2 Guns fired at 0725 NO change in pressure **NO Change in Pressure**
 08:00 End of Test

Time HH:MM:SS	Delta Time (Mins)	Surface Pressure (PSIA)	dp/dt (PSI/Min)	Surface Temp. (Deg F)	Max. Gas		Max. Liquid	
					Rate (MSCF/D)	Produced (MSCF)	Rate (B/D)	Produced (BBLs)
6:29:00	112.00	16.70	-0.20	45.10	-2.515	0.025	-383	2.797
6:30:00	113.00	16.20	-0.50	45.20	-6.287	0.021	-987	2.162
6:31:00	114.00	16.40	0.20	45.30	2.515	0.022	390	2.421
6:32:00	115.00	17.00	0.60	45.30	7.544	0.028	1129	3.160
6:33:00	116.00	16.40	-0.60	45.30	-7.544	0.022	-1170	2.421
6:34:00	117.00	16.70	0.30	45.30	3.772	0.025	575	2.797
6:35:00	118.00	16.50	-0.20	45.30	-2.515	0.023	-388	2.548
6:36:00	119.00	16.40	-0.10	45.30	-1.257	0.022	-195	2.421
6:37:00	120.00	15.80	-0.60	45.20	-7.545	0.017	-1215	1.626
6:38:00	121.00	16.50	0.70	45.20	8.802	0.023	1357	2.548
6:39:00	122.00	16.10	-0.40	45.20	-5.030	0.020	-795	2.031
6:40:00	123.00	16.20	0.10	45.40	1.257	0.020	197	2.162
6:41:00	124.00	16.20	0.00	45.30	0.000	0.020	0	2.162
6:42:00	125.00	16.20	0.00	45.30	0.000	0.020	0	2.162
6:43:00	126.00	16.70	0.50	45.30	6.287	0.025	958	2.797
6:44:00	127.00	16.70	0.00	45.30	0.000	0.025	0	2.797
6:45:00	128.00	16.70	0.00	45.30	0.000	0.025	0	2.797
6:46:00	129.00	16.70	0.00	45.30	0.000	0.025	0	2.797
6:47:00	130.00	16.50	-0.20	45.40	-2.514	0.023	-388	2.548
6:48:00	131.00	16.10	-0.40	45.30	-5.029	0.020	-795	2.031
6:49:00	132.00	16.20	0.10	45.30	1.257	0.020	197	2.162
6:50:00	133.00	16.20	0.00	45.30	0.000	0.020	0	2.162
6:51:00	134.00	16.20	0.00	45.30	0.000	0.020	0	2.162
6:52:00	135.00	16.70	0.50	45.30	6.287	0.025	958	2.797
6:53:00	136.00	16.20	-0.50	45.30	-6.287	0.020	-987	2.162
6:54:00	137.00	16.40	0.20	45.30	2.515	0.022	390	2.421
6:55:00	138.00	17.00	0.60	45.40	7.543	0.028	1129	3.160
6:56:00	139.00	16.40	-0.60	45.20	-7.545	0.022	-1170	2.421
6:57:00	140.00	16.70	0.30	45.20	3.772	0.025	575	2.797
6:58:00	141.00	16.50	-0.20	45.40	-2.514	0.023	-388	2.548
6:59:00	142.00	16.40	-0.10	45.30	-1.257	0.022	-195	2.421
7:00:00	143.00	15.80	-0.60	45.30	-7.544	0.017	-1215	1.626
7:01:00	144.00	16.50	0.70	45.30	8.801	0.023	1357	2.548
7:02:00	145.00	16.10	-0.40	45.30	-5.029	0.020	-795	2.031
7:03:00	146.00	16.20	0.10	45.30	1.257	0.020	197	2.162
7:04:00	147.00	16.20	0.00	45.30	0.000	0.020	0	2.162
7:05:00	148.00	16.20	0.00	45.40	0.000	0.020	0	2.162

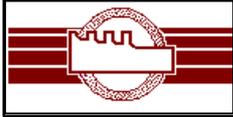
EXPERTEST PTY LTD	CLOSED CHAMBER DST MAIN FLOW	
	Customer: Essential Petroleum	Test Date: 23/03/02
	Location: PT Fairy # 1	Start Time: 4:37:00
	Formation: Eumerella	Gauge No: 0
	Test Interv 4599' - 4763'	Operator: N Hay

Chamber Volume:	23.35 (BLS)	Gas Gravity:	0.7
Reservoir Temp:	165 (Deg F)	Gas Dev. Factor:	0.94
DST No.:	PT Fairy # 1 230302	Chamber Length:	4035

**CLOSED CHAMBER DST
MAIN FLOW SUMMARY**

MAXIMUM AVERAGE GAS INFLUX RATE FOR PERIOD	
Start Time of Interval:	
End Time of Interval:	
Interval Flow Time:	0.00 Minutes
Initial Gas Production:	0.000 MSCF
Final Gas Production:	MSCF
Gas Production for Interval:	0.000 MSCF
Average Gas Influx Rate:	#DIV/0! MSCF/D

Disclaimer: Average flow rate is calculated on the basis of the total pressure rise - regardless of how long it may have taken, divided by the time of actual tool opening or by other method as directed by the client. It is given as a guide only and is not considered to be a final result or the basis for a press release.



EXPERTEST PTY. LTD.

A.C.N. 008 034 062

**CLOSED CHAMBER DST
REPORT**

Customer: Essential Petroleum	Operator: N Hay
Location: PT Fairy #1	Test Interval: 2828' / 2841
Formation: Pebble Point	Date: 24/03/2002
DST No.: PT Fairy #1 240302	

Disclaimer: Reports submitted at field level have not completed the Expertest Quality Management process and as such are intended as a guide only and come without warranty.

	CLOSED CHAMBER DST PRE-TEST PLANNING	
	Customer: Essential Petroleum	Operator: N Hay
	Location: PT Fairy #1	Test Interval: 2828' / 2841
	Formation: Pebble Point	Date: 24/03/2002
	DST No.: PT Fairy #1 240302	

Expected Bottom Hole Conditions	
B.H.P. :	1230 PSI
B.H.T. :	165 Deg F

Expected Surface Conditions	
Pressure:	0 PSI
Temperature:	Deg F

Choke Parameters	
Choke Diameter:	1 1/2 inch
Choke Coefficient:	34.82

Gas Parameters	
Gas Specific Gravity:	0.7
Gas Deviation Factor:	0.94

Drill Pipe & Collar Dimensions	
Drill Pipe ID:	2.441 inches
Drill Pipe above KB:	Feet
Depth of Top Packer:	2756 Feet
Length of Tools Between Packer & Shut-in Tool:	0 Feet

Water Cushion	
Water Cushion Length:	600 Feet

Calculated Chamber Parameters	
Length of Chamber:	2156 Feet
Total Chamber Volume:	15.95 BBLS
Volume of Water Cushion:	3.47 BBLS
Volume above Water Cushion:	12.48 BBLS
Gas-Water Ratio:	8.87 SCF/BBL

Calculated Maximum Rates and dp/dt for each Phase				
	Max. Possible Rate	Max. Surface Pressure Change		
		Before Breakout	After Breakout	Units
Pure Gas:	48.747 MMSCF/D	70.88	5448.73	PSI/Min
Pure Water:	39770.9 B/D		26.43	PSI/Min
Gas Saturated Water:	39770.9 B/D + 352.77 MSCF/D		39.43	PSI/Min

EXPERTEST PTY. LTD.		PRESSURE TEST		
		Customer: Essential Petroleum	Test Date: 24/03/2002	
		Location: PT Fairy #1	Start Time: 14:05:00	
		Formation: Pebble Point	Gauge No:	
		Test Interval: 2828' / 2841	Operator: N Hay	
Time	Elapsed Time (Mins)	Pressure (PSIG)	Temp (°F)	Remarks
14:05:00	0.00	16.00	101.20	
14:06:00	1.00	16.80	101.00	
14:07:00	2.00	15.90	100.60	
14:08:00	3.00	16.10	100.30	
14:09:00	4.00	16.10	100.30	
14:10:00	5.00	450.60	100.00	
14:11:00	6.00	694.80	99.80	
14:12:00	7.00	665.90	99.70	
14:13:00	8.00	644.70	99.50	
14:14:00	9.00	637.30	99.30	
14:15:00	10.00	635.90	99.20	
14:16:00	11.00	639.10	99.10	
14:17:00	12.00	642.80	99.30	
14:18:00	13.00	643.40	99.30	
14:19:00	14.00	637.80	99.40	
14:20:00	15.00	634.60	99.40	
14:21:00	16.00	635.00	99.50	
14:22:00	17.00	629.50	99.70	
14:23:00	18.00	627.10	99.70	
14:24:00	19.00	629.50	99.80	
14:25:00	20.00	631.10	100.10	
14:26:00	21.00	630.80	100.30	
14:27:00	22.00	628.90	100.20	
14:28:00	23.00	625.50	100.50	
14:29:00	24.00	618.50	100.60	
14:30:00	25.00	611.30	100.50	
14:31:00	26.00	610.20	100.60	
14:32:00	27.00	606.60	100.80	
14:33:00	28.00	604.10	100.80	
14:34:00	29.00	595.20	100.90	
14:35:00	30.00	578.50	100.80	
14:36:00	31.00	564.40	100.70	
14:37:00	32.00	558.50	100.40	
14:38:00	33.00	16.00	100.40	
14:39:00	34.00	15.60	100.50	
14:40:00	35.00	15.60	100.40	
14:41:00	36.00	15.50	100.30	
14:42:00	37.00	16.00	100.40	
14:43:00	38.00	15.70	100.40	
14:44:00	39.00	16.30	100.40	

EXPERTEST PTY LTD	CLOSED CHAMBER DST MAIN FLOW	
	Customer: Essential Petroleum	Test Date: 24/03/2002
	Location: PT Fairy #1	Start Time: 19:03:00
	Formation: Pebble Point	Gauge No: 0
	Test Interval: 2828' / 2841	Operator: N Hay

Chamber Volume:	12.48 (BBLs)	Gas Gravity:	0.7
Reservoir Temp:	165 (Deg F)	Gas Dev. Factor:	0.94
DST No.:	PT Fairy #1 240302	Chamber Length:	2156

Comments

Guns Fired at 19:03
 19:38 Open Well to Flare
 Zero Flow and Pressure
 19:44 End of Test

Time HH:MM:SS	Delta Time (Mins)	Surface Pressure (PSIA)	dp/dt (PSI/Min)	Surface Temp. (Deg F)	Max. Gas		Max. Liquid	
					Rate (MSCF/D)	Produced (MSCF)	Rate (B/D)	Produced (BBLs)
19:03:00	0.00	15.00		85.50		0.000		0.000
19:04:00	1.00	16.10	1.10	85.30	7.137	0.008	1196	0.853
19:05:00	2.00	15.30	0.00	85.10	0.000	0.005	0	0.245
19:06:00	3.00	15.00	-0.30	85.00	-1.947	0.003	-350	0.000
19:07:00	4.00	15.00	0.00	84.80	0.000	0.004	0	0.000
19:08:00	5.00	18.20	3.20	84.70	20.774	0.018	3079	2.194
19:09:00	6.00	21.30	3.10	84.80	20.123	0.032	2549	3.691
19:10:00	7.00	25.80	4.50	84.50	29.219	0.053	3054	5.224
19:11:00	8.00	25.80	0.00	84.50	0.000	0.053	0	5.224
19:12:00	9.00	30.60	4.80	84.40	31.169	0.075	2747	6.362
19:13:00	10.00	36.90	6.30	84.40	40.910	0.104	2990	7.406
19:14:00	11.00	43.60	6.70	84.30	43.511	0.134	2691	8.186
19:15:00	12.00	54.00	10.40	84.20	67.545	0.182	3373	9.013
19:16:00	13.00	63.60	9.60	84.10	62.355	0.226	2643	9.536
19:17:00	14.00	72.20	8.60	84.00	55.864	0.265	2086	9.886
19:18:00	15.00	79.70	7.50	83.80	48.727	0.300	1648	10.130
19:19:00	16.00	82.30	2.60	83.80	16.892	0.311	553	10.205
19:20:00	17.00	83.60	1.30	83.80	8.446	0.317	272	10.240
19:21:00	18.00	83.60	0.00	83.60	0.000	0.317	0	10.240
19:22:00	19.00	83.80	0.20	83.50	1.300	0.318	42	10.245
19:23:00	20.00	83.10	-0.70	83.40	-4.549	0.315	-148	10.227
19:24:00	21.00	83.00	-0.10	83.30	-0.650	0.315	-21	10.224
19:25:00	22.00	83.60	0.60	83.30	3.900	0.318	126	10.240
19:26:00	23.00	83.60	0.00	83.10	0.000	0.318	0	10.240
19:27:00	24.00	83.10	-0.50	83.00	-3.251	0.315	-105	10.227
19:28:00	25.00	83.10	0.00	82.80	0.000	0.315	0	10.227
19:29:00	26.00	83.20	0.10	82.70	0.650	0.316	21	10.229
19:30:00	27.00	83.10	-0.10	82.50	-0.650	0.316	-21	10.227
19:31:00	28.00	83.10	-0.05	82.40	-0.325	0.316	-11	10.227
19:32:00	29.00	82.90	-0.20	82.20	-1.301	0.315	-42	10.221
19:33:00	30.00	83.60	0.70	82.20	4.554	0.318	147	10.240
19:34:00	31.00	83.90	0.30	82.00	1.952	0.319	63	10.248
19:35:00	32.00	83.10	-0.80	81.80	-5.206	0.316	-169	10.227
19:36:00	33.00	83.40	0.30	81.50	1.953	0.317	63	10.235
19:37:00	34.00	82.90	-0.03	81.30	-0.217	0.315	-7	10.221
19:38:00	35.00	84.70	1.80	81.10	11.722	0.323	372	10.269

EXPERTEST PTY LTD	CLOSED CHAMBER DST MAIN FLOW	
	Customer: Essential Petroleum	Test Date: 24/03/2002
	Location: PT Fairy #1	Start Time: 19:03:00
	Formation: Pebble Point	Gauge No: 0
	Test Interv 2828' / 2841	Operator: N Hay

Chamber Volume:	12.48 (BBLs)	Gas Gravity:	0.7
Reservoir Temp:	165 (Deg F)	Gas Dev. Factor:	0.94
DST No.:	PT Fairy #1 240302	Chamber Length:	2156

**CLOSED CHAMBER DST
MAIN FLOW SUMMARY**

MAXIMUM AVERAGE GAS INFLUX RATE FOR PERIOD	
Start Time of Interval:	
End Time of Interval:	
Interval Flow Time:	0.00 Minutes
Initial Gas Production:	0.000 MSCF
Final Gas Production:	MSCF
Gas Production for Interval:	0.000 MSCF
Average Gas Influx Rate:	#DIV/0! MSCF/D

Disclaimer: Average flow rate is calculated on the basis of the total pressure rise - regardless of how long it may have taken, divided by the time of actual tool opening or by other method as directed by the client. It is given as a guide only and is not considered to be a final result or the basis for a press release.



EXPERTEST PTY. LTD.

A.C.N. 008 034 062

Production Testing Report

Test Details

Customer	Essential Petroleum
Well Name	Port Fairy #1
Formation	Eumerella / Pebble Point
Perforations	1402-1452/862-866mKb
Type Of Test	Wireline/CCDST/SGS
Operator	M.McCall / N.Hay
Date Of Test	19/3/02 - 26/3/02
Reference Date	25/03/02
Reference Time	0845
Control No.	Pt Fairy 1 250302

SEQUENCE OF EVENTS



Customer:	Essential Petroleum	Well Name	Port Fairy #1	Formation:	Eumerella / Pebble Point
Perforations:	1402-1452/862-866m	Type Of Test:	Wireline/CCDST/SGS	Operator:	M.McCall / N.Hay
Date Of Test:	19/3/02 - 26/3/02			Control No.:	Pt Fairy 1 250302

Date	Time	Description Of Events
19/3/02		
	0700	Mobilise crew and equipment from Adelaide.
	1630	Arrive Port Fairy.
20/3/02		
	0830	Arrive Port Fairy #1. Report to W. Westman. Drift tubing with 2.3" Gauge ring. Found that tubing would not drift. W.Westman to organise some tubing from Adelaide.
	0900	Prepare equipment. Repack and service stuffing box.
	1100	Depart for Portland to pick up Flow Prover.
	1300	Arrive location. Standby for Snubbing rig to be rigged up. Drift packers and SSD.
	1600	Released from location.
	1610	Arrive Port Fairy. Complete reports.
	1700	End of day.
21/3/02		
	0930	Arrive location. Function test XDH Sliding sleeve. Set PXN plug in XN nipple at surface. Standby.
	1430	Released from location.
	1440	Arrive Port Fairy. Go through closed chamber package. Complete reports.
	1530	End of day. Standby.
22/3/02		
	1910	Arrive location. Hold safety meeting.
	2120	Rig up wireline.
	2145	RIH 2.3" Gauge ring. Tag Prong @ 1388 mKb.
	2230	RIH 2" SB pulling tool. Latch and pull prong @ 1388 mKb.
	2300	RIH 2 1/2" GS pulling tool. Latch and pull Plug @ 1389 mKb.
	2330	At surface. Rig down for Shlumberger to perforate. Prepare CCDST Package.



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE					BOTTOM GAUGE				
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Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	8:45:01	0.000	5.43	57.57					
25/03/2002	8:51:42	0.112	5.25	58.50					
25/03/2002	8:58:23	0.223	5.05	60.96					
25/03/2002	9:05:04	0.334	5.21	62.96					
25/03/2002	9:06:19	0.355	10.54	63.09					
25/03/2002	9:06:51	0.364	15.77	63.16					
25/03/2002	9:13:32	0.476	16.52	64.19					
25/03/2002	9:20:09	0.586	21.54	65.37					
25/03/2002	9:20:37	0.594	26.66	65.36					
25/03/2002	9:21:03	0.601	31.78	65.32					
25/03/2002	9:21:16	0.604	37.19	65.30					
25/03/2002	9:21:25	0.607	42.26	65.28					
25/03/2002	9:21:33	0.609	48.00	65.27					
25/03/2002	9:21:40	0.611	53.59	65.25					
25/03/2002	9:21:47	0.613	59.13	65.23					
25/03/2002	9:21:53	0.615	64.15	65.22					
25/03/2002	9:21:59	0.616	69.26	65.21					
25/03/2002	9:22:05	0.618	75.03	65.20					
25/03/2002	9:22:11	0.620	80.73	65.19					
25/03/2002	9:22:17	0.621	86.45	65.18					
25/03/2002	9:22:23	0.623	92.18	65.17					
25/03/2002	9:22:29	0.625	97.92	65.17					
25/03/2002	9:22:35	0.626	103.64	65.17					
25/03/2002	9:22:41	0.628	109.38	65.17					
25/03/2002	9:22:46	0.629	114.61	65.18					
25/03/2002	9:22:51	0.631	119.75	65.19					
25/03/2002	9:22:56	0.632	125.09	65.20					
25/03/2002	9:23:01	0.634	130.30	65.21					
25/03/2002	9:23:06	0.635	135.54	65.23					
25/03/2002	9:23:11	0.636	140.77	65.24					
25/03/2002	9:23:16	0.638	146.09	65.26					
25/03/2002	9:23:21	0.639	151.41	65.29					
25/03/2002	9:23:26	0.641	156.62	65.31					
25/03/2002	9:23:31	0.642	161.92	65.34					
25/03/2002	9:23:36	0.643	167.21	65.37					
25/03/2002	9:23:41	0.645	172.54	65.40					
25/03/2002	9:23:46	0.646	177.81	65.43					
25/03/2002	9:23:51	0.648	183.09	65.47					
25/03/2002	9:23:56	0.649	188.33	65.52					
25/03/2002	9:24:01	0.650	193.43	65.56					
25/03/2002	9:24:06	0.652	198.61	65.60					
25/03/2002	9:24:11	0.653	203.77	65.65					
25/03/2002	9:24:16	0.654	208.97	65.71					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE					BOTTOM GAUGE				
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Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	9:24:21	0.656	214.05	65.76					
25/03/2002	9:24:28	0.658	219.11	65.84					
25/03/2002	9:30:12	0.753	224.91	69.69					
25/03/2002	9:30:18	0.755	230.51	69.74					
25/03/2002	9:30:24	0.757	236.21	69.79					
25/03/2002	9:30:30	0.758	241.95	69.84					
25/03/2002	9:30:36	0.760	247.68	69.89					
25/03/2002	9:30:41	0.761	252.74	69.94					
25/03/2002	9:30:46	0.763	257.91	69.98					
25/03/2002	9:30:51	0.764	263.10	70.03					
25/03/2002	9:30:56	0.766	268.23	70.08					
25/03/2002	9:31:01	0.767	273.38	70.13					
25/03/2002	9:31:06	0.768	278.40	70.18					
25/03/2002	9:31:11	0.770	283.53	70.24					
25/03/2002	9:31:16	0.771	288.66	70.30					
25/03/2002	9:31:22	0.773	294.66	70.37					
25/03/2002	9:31:27	0.774	299.84	70.43					
25/03/2002	9:31:32	0.776	304.93	70.50					
25/03/2002	9:31:37	0.777	310.10	70.57					
25/03/2002	9:31:42	0.778	315.27	70.64					
25/03/2002	9:31:47	0.780	320.70	70.71					
25/03/2002	9:31:52	0.781	326.36	70.78					
25/03/2002	9:31:57	0.783	331.97	70.86					
25/03/2002	9:32:02	0.784	337.57	70.94					
25/03/2002	9:32:07	0.785	343.16	71.02					
25/03/2002	9:32:12	0.787	348.71	71.11					
25/03/2002	9:32:17	0.788	354.29	71.19					
25/03/2002	9:32:22	0.789	359.79	71.28					
25/03/2002	9:32:27	0.791	365.32	71.38					
25/03/2002	9:32:32	0.792	370.85	71.47					
25/03/2002	9:32:37	0.794	376.42	71.57					
25/03/2002	9:32:42	0.795	382.00	71.67					
25/03/2002	9:32:47	0.796	387.64	71.77					
25/03/2002	9:32:52	0.798	393.14	71.88					
25/03/2002	9:32:57	0.799	398.71	71.99					
25/03/2002	9:33:02	0.801	404.36	72.10					
25/03/2002	9:33:07	0.802	409.89	72.22					
25/03/2002	9:33:12	0.803	415.58	72.33					
25/03/2002	9:33:17	0.805	421.12	72.45					
25/03/2002	9:33:22	0.806	426.81	72.58					
25/03/2002	9:33:27	0.808	432.41	72.70					
25/03/2002	9:33:33	0.809	437.97	72.85					
25/03/2002	9:39:08	0.902	443.67	79.90					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE	BOTTOM GAUGE
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Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	9:39:13	0.904	449.05	79.97					
25/03/2002	9:39:18	0.905	454.64	80.05					
25/03/2002	9:39:23	0.906	460.32	80.12					
25/03/2002	9:39:28	0.908	466.07	80.20					
25/03/2002	9:39:33	0.909	471.84	80.28					
25/03/2002	9:39:38	0.911	477.70	80.36					
25/03/2002	9:39:43	0.912	483.44	80.44					
25/03/2002	9:39:48	0.913	489.26	80.52					
25/03/2002	9:39:53	0.915	494.97	80.61					
25/03/2002	9:39:58	0.916	500.72	80.70					
25/03/2002	9:40:03	0.918	506.47	80.79					
25/03/2002	9:40:08	0.919	512.25	80.88					
25/03/2002	9:40:13	0.920	517.95	80.98					
25/03/2002	9:40:18	0.922	523.59	81.08					
25/03/2002	9:40:23	0.923	529.23	81.18					
25/03/2002	9:40:28	0.924	534.92	81.29					
25/03/2002	9:40:33	0.926	540.52	81.39					
25/03/2002	9:40:38	0.927	546.12	81.51					
25/03/2002	9:40:43	0.929	551.70	81.62					
25/03/2002	9:40:48	0.930	557.32	81.74					
25/03/2002	9:40:53	0.931	562.94	81.86					
25/03/2002	9:40:58	0.933	568.57	81.98					
25/03/2002	9:41:03	0.934	574.09	82.11					
25/03/2002	9:41:08	0.936	579.78	82.23					
25/03/2002	9:41:13	0.937	585.35	82.37					
25/03/2002	9:41:18	0.938	590.99	82.50					
25/03/2002	9:41:23	0.940	596.54	82.64					
25/03/2002	9:41:28	0.941	602.21	82.78					
25/03/2002	9:41:33	0.943	607.73	82.92					
25/03/2002	9:41:38	0.944	613.23	83.07					
25/03/2002	9:41:43	0.945	618.69	83.22					
25/03/2002	9:41:48	0.947	624.19	83.37					
25/03/2002	9:41:53	0.948	629.61	83.52					
25/03/2002	9:41:58	0.949	635.07	83.68					
25/03/2002	9:42:03	0.951	640.53	83.83					
25/03/2002	9:42:08	0.952	646.07	83.99					
25/03/2002	9:42:13	0.954	651.62	84.16					
25/03/2002	9:42:18	0.955	657.10	84.32					
25/03/2002	9:47:02	1.034	662.48	92.16					
25/03/2002	9:47:08	1.036	668.21	92.28					
25/03/2002	9:47:13	1.037	673.35	92.38					
25/03/2002	9:47:18	1.038	678.74	92.48					
25/03/2002	9:47:23	1.040	684.02	92.58					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	9:47:28	1.041	689.15	92.68					
25/03/2002	9:47:33	1.043	694.31	92.78					
25/03/2002	9:47:38	1.044	699.55	92.88					
25/03/2002	9:47:43	1.045	704.68	92.98					
25/03/2002	9:47:48	1.047	709.80	93.08					
25/03/2002	9:47:53	1.048	714.97	93.19					
25/03/2002	9:47:58	1.049	720.18	93.29					
25/03/2002	9:48:03	1.051	725.41	93.40					
25/03/2002	9:48:08	1.052	730.70	93.50					
25/03/2002	9:48:13	1.054	735.93	93.61					
25/03/2002	9:48:18	1.055	741.19	93.71					
25/03/2002	9:48:23	1.056	746.41	93.82					
25/03/2002	9:48:28	1.058	751.62	93.93					
25/03/2002	9:48:33	1.059	756.86	94.04					
25/03/2002	9:48:38	1.061	762.09	94.15					
25/03/2002	9:48:43	1.062	767.34	94.26					
25/03/2002	9:48:48	1.063	772.59	94.37					
25/03/2002	9:48:53	1.065	777.71	94.48					
25/03/2002	9:48:58	1.066	782.92	94.59					
25/03/2002	9:49:03	1.068	788.04	94.70					
25/03/2002	9:49:08	1.069	793.46	94.82					
25/03/2002	9:49:13	1.070	799.11	94.93					
25/03/2002	9:49:18	1.072	804.74	95.05					
25/03/2002	9:49:23	1.073	810.43	95.16					
25/03/2002	9:49:28	1.074	816.13	95.28					
25/03/2002	9:49:33	1.076	821.80	95.40					
25/03/2002	9:49:38	1.077	827.48	95.52					
25/03/2002	9:49:43	1.079	833.20	95.64					
25/03/2002	9:49:48	1.080	838.86	95.76					
25/03/2002	9:49:53	1.081	844.51	95.88					
25/03/2002	9:49:58	1.083	850.33	96.00					
25/03/2002	9:50:03	1.084	855.94	96.13					
25/03/2002	9:50:08	1.086	861.60	96.25					
25/03/2002	9:50:13	1.087	867.20	96.37					
25/03/2002	9:50:18	1.088	872.76	96.50					
25/03/2002	9:50:23	1.090	878.05	96.62					
25/03/2002	9:55:00	1.167	883.73	102.27					
25/03/2002	9:55:05	1.168	888.93	102.34					
25/03/2002	9:55:10	1.169	894.95	102.41					
25/03/2002	9:55:15	1.171	900.81	102.49					
25/03/2002	9:55:20	1.172	906.67	102.56					
25/03/2002	9:55:25	1.174	912.62	102.63					
25/03/2002	9:55:30	1.175	918.37	102.71					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	9:55:35	1.176	924.35	102.78					
25/03/2002	9:55:40	1.178	930.29	102.86					
25/03/2002	9:55:45	1.179	936.15	102.93					
25/03/2002	9:55:50	1.181	942.04	103.01					
25/03/2002	9:55:55	1.182	947.92	103.09					
25/03/2002	9:56:00	1.183	953.78	103.17					
25/03/2002	9:56:05	1.185	959.59	103.25					
25/03/2002	9:56:10	1.186	965.33	103.33					
25/03/2002	9:56:15	1.188	971.19	103.41					
25/03/2002	9:56:20	1.189	976.94	103.49					
25/03/2002	9:56:25	1.190	982.82	103.58					
25/03/2002	9:56:30	1.192	988.65	103.66					
25/03/2002	9:56:35	1.193	994.52	103.75					
25/03/2002	9:56:40	1.194	1000.41	103.83					
25/03/2002	9:56:45	1.196	1006.28	103.92					
25/03/2002	9:56:50	1.197	1012.10	104.01					
25/03/2002	9:56:55	1.199	1018.04	104.10					
25/03/2002	9:57:00	1.200	1023.90	104.19					
25/03/2002	9:57:05	1.201	1029.70	104.29					
25/03/2002	9:57:10	1.203	1035.53	104.38					
25/03/2002	9:57:15	1.204	1041.28	104.48					
25/03/2002	9:57:20	1.206	1047.04	104.57					
25/03/2002	9:57:25	1.207	1052.77	104.67					
25/03/2002	9:57:30	1.208	1058.54	104.77					
25/03/2002	9:57:35	1.210	1064.30	104.87					
25/03/2002	9:57:40	1.211	1070.04	104.97					
25/03/2002	9:57:45	1.213	1075.86	105.07					
25/03/2002	9:57:50	1.214	1081.75	105.17					
25/03/2002	9:57:55	1.215	1087.17	105.28					
25/03/2002	9:58:01	1.217	1092.74	105.40					
25/03/2002	10:03:05	1.301	1098.14	110.43					
25/03/2002	10:03:11	1.303	1103.60	110.50					
25/03/2002	10:03:17	1.305	1109.41	110.57					
25/03/2002	10:03:23	1.306	1115.35	110.64					
25/03/2002	10:03:29	1.308	1121.26	110.71					
25/03/2002	10:03:35	1.310	1127.21	110.78					
25/03/2002	10:03:41	1.311	1133.10	110.85					
25/03/2002	10:03:47	1.313	1138.98	110.92					
25/03/2002	10:03:53	1.315	1144.86	110.99					
25/03/2002	10:03:59	1.316	1150.76	111.07					
25/03/2002	10:04:05	1.318	1156.67	111.14					
25/03/2002	10:04:11	1.320	1162.62	111.21					
25/03/2002	10:04:17	1.321	1168.59	111.29					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	10:04:23	1.323	1174.56	111.36					
25/03/2002	10:04:29	1.325	1179.57	111.44					
25/03/2002	10:04:35	1.326	1184.58	111.52					
25/03/2002	10:04:41	1.328	1189.59	111.60					
25/03/2002	10:04:48	1.330	1195.41	111.69					
25/03/2002	10:04:55	1.332	1201.11	111.78					
25/03/2002	10:05:02	1.334	1206.30	111.88					
25/03/2002	10:05:09	1.336	1211.45	111.98					
25/03/2002	10:05:16	1.338	1216.58	112.07					
25/03/2002	10:05:23	1.340	1221.70	112.17					
25/03/2002	10:05:30	1.342	1226.86	112.28					
25/03/2002	10:05:37	1.344	1232.07	112.38					
25/03/2002	10:05:44	1.346	1237.07	112.48					
25/03/2002	10:05:52	1.348	1242.10	112.61					
25/03/2002	10:11:06	1.435	1236.92	116.40					
25/03/2002	10:11:13	1.437	1231.40	116.46					
25/03/2002	10:11:18	1.438	1225.72	116.50					
25/03/2002	10:11:22	1.439	1220.35	116.53					
25/03/2002	10:11:26	1.441	1214.94	116.57					
25/03/2002	10:11:30	1.442	1209.44	116.60					
25/03/2002	10:11:34	1.443	1203.88	116.63					
25/03/2002	10:11:38	1.444	1198.33	116.66					
25/03/2002	10:11:42	1.445	1192.70	116.68					
25/03/2002	10:11:46	1.446	1186.99	116.71					
25/03/2002	10:11:50	1.447	1181.14	116.73					
25/03/2002	10:11:54	1.448	1175.28	116.76					
25/03/2002	10:11:58	1.449	1169.36	116.78					
25/03/2002	10:12:02	1.451	1163.40	116.80					
25/03/2002	10:12:06	1.452	1157.27	116.82					
25/03/2002	10:12:10	1.453	1151.09	116.83					
25/03/2002	10:12:14	1.454	1144.99	116.85					
25/03/2002	10:12:18	1.455	1138.71	116.86					
25/03/2002	10:12:22	1.456	1132.51	116.87					
25/03/2002	10:12:26	1.457	1126.27	116.88					
25/03/2002	10:12:30	1.458	1119.97	116.89					
25/03/2002	10:12:34	1.459	1113.67	116.90					
25/03/2002	10:12:38	1.461	1107.36	116.91					
25/03/2002	10:12:42	1.462	1100.96	116.91					
25/03/2002	10:12:46	1.463	1094.52	116.91					
25/03/2002	10:12:50	1.464	1088.01	116.92					
25/03/2002	10:12:54	1.465	1081.48	116.92					
25/03/2002	10:12:58	1.466	1074.98	116.91					
25/03/2002	10:13:02	1.467	1068.42	116.91					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	10:13:06	1.468	1061.84	116.90					
25/03/2002	10:13:10	1.469	1055.32	116.90					
25/03/2002	10:13:14	1.471	1048.68	116.89					
25/03/2002	10:13:18	1.472	1042.11	116.88					
25/03/2002	10:13:22	1.473	1035.54	116.87					
25/03/2002	10:13:26	1.474	1029.09	116.86					
25/03/2002	10:13:30	1.475	1022.71	116.84					
25/03/2002	10:13:34	1.476	1016.27	116.82					
25/03/2002	10:13:38	1.477	1009.83	116.81					
25/03/2002	10:13:41	1.478	1004.79	116.79					
25/03/2002	10:13:45	1.479	998.28	116.77					
25/03/2002	10:13:49	1.480	991.80	116.75					
25/03/2002	10:13:53	1.481	985.29	116.73					
25/03/2002	10:13:56	1.482	980.17	116.71					
25/03/2002	10:14:00	1.483	973.51	116.68					
25/03/2002	10:14:03	1.484	968.47	116.66					
25/03/2002	10:14:06	1.485	963.42	116.64					
25/03/2002	10:14:09	1.486	958.26	116.62					
25/03/2002	10:14:12	1.487	953.09	116.59					
25/03/2002	10:14:15	1.488	947.90	116.57					
25/03/2002	10:14:18	1.488	942.75	116.54					
25/03/2002	10:14:21	1.489	937.60	116.52					
25/03/2002	10:14:24	1.490	932.36	116.49					
25/03/2002	10:14:27	1.491	927.18	116.46					
25/03/2002	10:14:31	1.492	920.89	116.42					
25/03/2002	10:14:35	1.493	914.74	116.38					
25/03/2002	10:14:39	1.494	908.46	116.34					
25/03/2002	10:14:43	1.495	902.21	116.29					
25/03/2002	10:14:47	1.496	895.92	116.24					
25/03/2002	10:14:51	1.498	889.68	116.20					
25/03/2002	10:14:55	1.499	883.32	116.15					
25/03/2002	10:14:59	1.500	876.98	116.10					
25/03/2002	10:15:03	1.501	870.51	116.05					
25/03/2002	10:15:07	1.502	864.00	115.99					
25/03/2002	10:15:11	1.503	857.44	115.94					
25/03/2002	10:15:15	1.504	850.85	115.88					
25/03/2002	10:15:18	1.505	845.84	115.84					
25/03/2002	10:15:22	1.506	839.30	115.78					
25/03/2002	10:15:26	1.507	832.72	115.72					
25/03/2002	10:15:30	1.508	826.06	115.66					
25/03/2002	10:15:33	1.509	821.03	115.61					
25/03/2002	10:15:37	1.510	814.49	115.55					
25/03/2002	10:15:40	1.511	809.48	115.50					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	10:15:44	1.512	802.86	115.44					
25/03/2002	10:15:47	1.513	797.83	115.39					
25/03/2002	10:15:50	1.514	792.73	115.34					
25/03/2002	10:15:53	1.515	787.66	115.28					
25/03/2002	10:15:56	1.516	782.60	115.23					
25/03/2002	10:15:59	1.516	777.40	115.18					
25/03/2002	10:16:02	1.517	772.33	115.12					
25/03/2002	10:16:05	1.518	767.15	115.07					
25/03/2002	10:16:08	1.519	761.91	115.01					
25/03/2002	10:16:11	1.520	756.61	114.96					
25/03/2002	10:16:14	1.521	751.29	114.90					
25/03/2002	10:16:17	1.521	745.85	114.84					
25/03/2002	10:16:20	1.522	740.49	114.78					
25/03/2002	10:16:23	1.523	735.12	114.72					
25/03/2002	10:16:26	1.524	729.77	114.66					
25/03/2002	10:16:29	1.525	724.45	114.60					
25/03/2002	10:16:32	1.526	719.15	114.54					
25/03/2002	10:16:35	1.526	713.74	114.48					
25/03/2002	10:16:38	1.527	708.34	114.41					
25/03/2002	10:16:41	1.528	703.00	114.35					
25/03/2002	10:16:44	1.529	697.66	114.28					
25/03/2002	10:16:47	1.530	692.34	114.21					
25/03/2002	10:16:50	1.531	686.89	114.15					
25/03/2002	10:16:53	1.531	681.45	114.08					
25/03/2002	10:16:56	1.532	675.93	114.01					
25/03/2002	10:16:59	1.533	670.41	113.94					
25/03/2002	10:17:02	1.534	664.99	113.87					
25/03/2002	10:17:05	1.535	659.52	113.80					
25/03/2002	10:17:08	1.536	654.07	113.73					
25/03/2002	10:17:11	1.536	648.55	113.66					
25/03/2002	10:17:14	1.537	643.05	113.58					
25/03/2002	10:17:17	1.538	637.47	113.51					
25/03/2002	10:17:20	1.539	631.95	113.44					
25/03/2002	10:17:23	1.540	626.44	113.36					
25/03/2002	10:17:26	1.541	620.89	113.28					
25/03/2002	10:17:29	1.541	615.25	113.20					
25/03/2002	10:17:32	1.542	609.56	113.12					
25/03/2002	10:17:35	1.543	603.95	113.04					
25/03/2002	10:17:38	1.544	598.20	112.96					
25/03/2002	10:17:41	1.545	592.48	112.88					
25/03/2002	10:17:44	1.546	586.63	112.79					
25/03/2002	10:17:47	1.546	580.69	112.71					
25/03/2002	10:17:50	1.547	574.68	112.62					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE	BOTTOM GAUGE
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Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	10:17:53	1.548	568.66	112.53					
25/03/2002	10:17:56	1.549	562.67	112.44					
25/03/2002	10:17:59	1.550	556.68	112.35					
25/03/2002	10:18:02	1.551	550.60	112.26					
25/03/2002	10:18:05	1.551	544.47	112.16					
25/03/2002	10:18:08	1.552	538.31	112.06					
25/03/2002	10:18:11	1.553	532.10	111.97					
25/03/2002	10:18:14	1.554	525.82	111.87					
25/03/2002	10:18:17	1.555	519.53	111.76					
25/03/2002	10:18:20	1.556	513.14	111.66					
25/03/2002	10:18:23	1.556	506.62	111.56					
25/03/2002	10:18:26	1.557	500.06	111.45					
25/03/2002	10:18:29	1.558	493.56	111.34					
25/03/2002	10:18:32	1.559	486.98	111.23					
25/03/2002	10:18:35	1.560	480.64	111.11					
25/03/2002	10:18:38	1.561	475.04	111.00					
25/03/2002	10:18:41	1.561	469.49	110.88					
25/03/2002	10:18:44	1.562	463.86	110.76					
25/03/2002	10:18:47	1.563	458.39	110.64					
25/03/2002	10:18:50	1.564	453.00	110.52					
25/03/2002	10:18:53	1.565	447.55	110.40					
25/03/2002	10:18:56	1.566	442.08	110.27					
25/03/2002	10:18:59	1.566	436.73	110.15					
25/03/2002	10:19:02	1.567	431.37	110.02					
25/03/2002	10:19:05	1.568	425.93	109.89					
25/03/2002	10:19:08	1.569	420.49	109.75					
25/03/2002	10:19:11	1.570	415.08	109.62					
25/03/2002	10:19:14	1.571	409.69	109.48					
25/03/2002	10:19:17	1.571	404.27	109.35					
25/03/2002	10:19:20	1.572	398.66	109.21					
25/03/2002	10:19:23	1.573	393.11	109.07					
25/03/2002	10:19:26	1.574	387.47	108.93					
25/03/2002	10:19:29	1.575	382.06	108.78					
25/03/2002	10:19:32	1.576	376.75	108.64					
25/03/2002	10:19:36	1.577	370.21	108.44					
25/03/2002	10:19:40	1.578	363.80	108.24					
25/03/2002	10:19:44	1.579	357.30	108.04					
25/03/2002	10:19:48	1.580	350.77	107.84					
25/03/2002	10:19:52	1.581	344.31	107.64					
25/03/2002	10:19:56	1.582	337.69	107.43					
25/03/2002	10:20:00	1.583	331.04	107.22					
25/03/2002	10:20:04	1.584	324.45	107.01					
25/03/2002	10:20:07	1.585	319.42	106.84					



Electronic Memory Recorder

Customer: Essential Petroleum	Well Name: Port Fairy #1
Perforations: 1402-1452/862-866	Formation: Eumerella / Pebble Point
Date Of Test: 19/3/02 - 26/3/02	Type Of Test: Wireline/CCDST/SGS
Operator: M.McCall / N.Hay	Control No.: Pt Fairy 1 250302

Data Filter: 400 Secs; 5 PSI Window
 Top EMP Serial Number: 2209 "
 EMP Calibration I.D.: 2209-20196 "
 Full Scale Pressure: 10000 psiA "
 Probe Started: 25/03/02 @ 08:45:00

TOP GAUGE					BOTTOM GAUGE				
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Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
25/03/2002	10:20:10	1.586	314.34	106.68					
25/03/2002	10:20:13	1.587	309.26	106.52					
25/03/2002	10:20:16	1.588	304.10	106.36					
25/03/2002	10:20:19	1.589	298.92	106.19					
25/03/2002	10:20:22	1.589	293.74	106.03					
25/03/2002	10:20:25	1.590	288.49	105.86					
25/03/2002	10:20:28	1.591	283.29	105.69					
25/03/2002	10:20:31	1.592	278.08	105.52					
25/03/2002	10:20:34	1.593	272.84	105.35					
25/03/2002	10:20:37	1.594	267.56	105.18					
25/03/2002	10:20:41	1.595	261.35	104.95					
25/03/2002	10:20:45	1.596	255.18	104.72					
25/03/2002	10:20:49	1.597	248.88	104.49					
25/03/2002	10:20:53	1.598	242.63	104.26					
25/03/2002	10:20:57	1.599	236.31	104.02					
25/03/2002	10:21:01	1.600	229.99	103.79					
25/03/2002	10:21:05	1.601	223.55	103.55					
25/03/2002	10:21:09	1.603	217.19	103.31					
25/03/2002	10:21:13	1.604	210.69	103.07					
25/03/2002	10:21:17	1.605	204.14	102.83					
25/03/2002	10:21:20	1.606	199.06	102.64					
25/03/2002	10:21:24	1.607	192.52	102.40					
25/03/2002	10:21:28	1.608	185.89	102.16					
25/03/2002	10:21:31	1.609	180.86	101.97					
25/03/2002	10:21:34	1.609	175.81	101.79					
25/03/2002	10:21:37	1.610	170.72	101.60					
25/03/2002	10:21:40	1.611	165.53	101.41					
25/03/2002	10:21:43	1.612	160.35	101.23					
25/03/2002	10:21:46	1.613	155.06	101.04					
25/03/2002	10:21:49	1.614	149.76	100.85					
25/03/2002	10:21:52	1.614	144.59	100.66					
25/03/2002	10:21:56	1.616	137.98	100.41					
25/03/2002	10:22:00	1.617	131.42	100.15					
25/03/2002	10:22:04	1.618	125.37	99.90					
25/03/2002	10:22:08	1.619	119.43	99.64					
25/03/2002	10:22:12	1.620	113.64	99.38					
25/03/2002	10:22:16	1.621	107.91	99.12					
25/03/2002	10:22:20	1.622	102.11	98.86					
25/03/2002	10:22:24	1.623	96.33	98.60					
25/03/2002	10:22:28	1.624	90.46	98.34					
25/03/2002	10:22:32	1.626	84.62	98.08					
25/03/2002	10:22:36	1.627	78.76	97.82					
25/03/2002	10:22:40	1.628	72.85	97.56					

EXPERTEST PTY. LTD.

Electronic Memory Recorder - Linear Plot

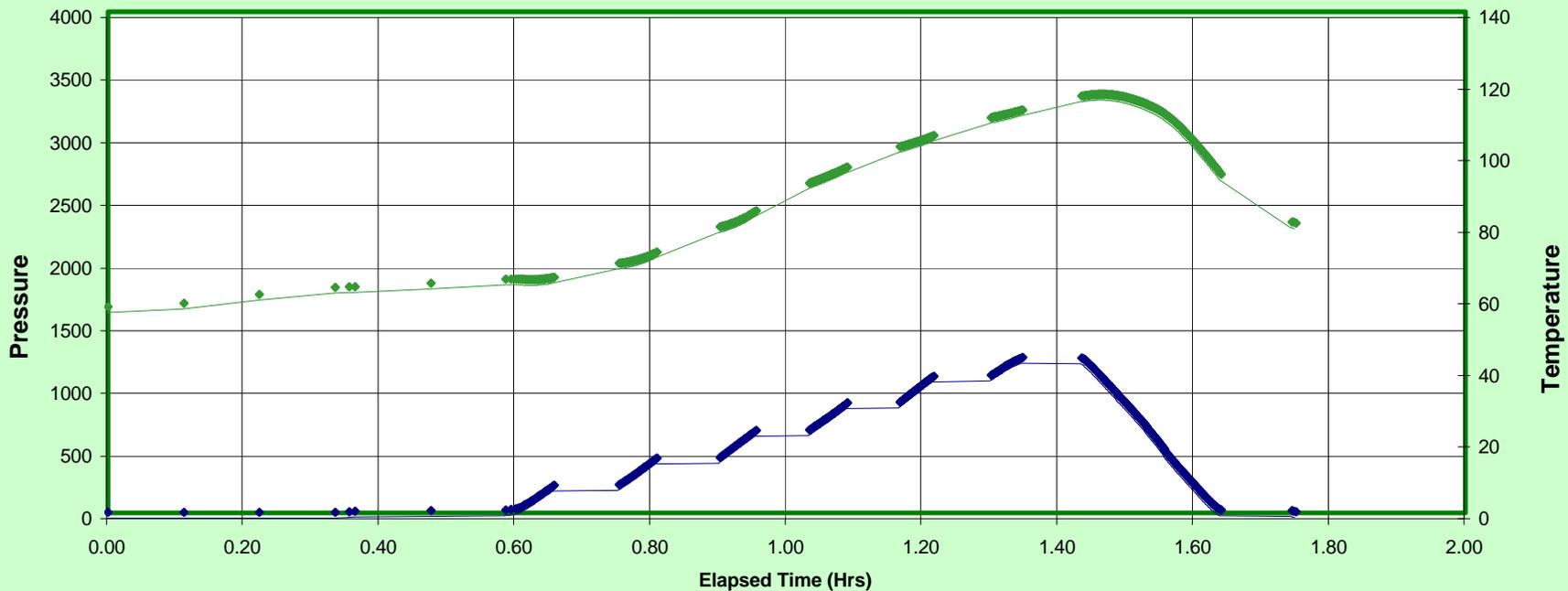


Customer:	Essential Petroleum	Well Name:	Port Fairy #1	Formation:	Eumerella / Pebble Point
Perforations:	1402-1452/862-866m	Type Of Test:	Wireline/CCDST/SGS	Operator:	M.McCall / N.Hay
Date Of Test:	19/3/02 - 26/3/02			Control No.:	Pt Fairy 1 250302
Top EMP Serial Number: 2209 "			0		
EMP Calibration I.D.: 2209-20196 "			0		
Full Scale Pressure: 10000 psiA "			0		

EMR Linear Plot

Legend:

- Top Pressure (PSIG)
- Bottom Pressure (PSIG)
- Top Temp. (°F)
- Bottom Temp. (°F)



Swabbing Report.

Day 1, 22/09/02.

Check SITHP 332psi.

Take 5 high pressure gas samples.

R/u Expertest and RIH w/ blind box. Tag Fluid at 280m. TD at 1394m.

Run pressure gradient survey to bottom perms.

Day 2, 23/09/02.

SITHP 337 psi.

Run pressure gradient survey to 610m to check gradient of top of fluid.

Blow down well head pressure. R/u to Swab.

Swab well. Fluid initially at 223m. Catch samples from top of fluid.

Gas slugs while swabbing. Well producing gas continuously.

Lubricate strong soap solution into well at nightfall.

Day 3, 24/09/02

Fluid level at 640m. SITHP 100psi.

Drop 5 soap "Slick Sticks" into well.

Continue to swab well from 840m. Estimate less than ½ bbl per run. Soapy foam and gas slugs.

Top of fluid masked by gas pockets but remains near 600m.

Volume of fluid recovered per swab varies between nil and a few gallons.

No large volumes of fluid appear to be entering wellbore.

Shut down and release Expertest.



EXPERTEST PTY. LTD.

A.B.N. 85 008 034 062

Production Testing Report

Test Details

Customer	Essential Petroleum
Well Name	Port Fairy 1
Formation	N/A
Perforations	1347 - 1358.5mkb
Type Of Test	Static Gradient Survey
Operator	N.Dover
Date Of Test	22/09/02
Reference Date	22/09/02
Reference Time	1308
Control No.	Port Fairy 1 220902

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 22/09/02	Type Of Test: Static Gradient Survey						
		Operator: N.Dover	Control No.: Port Fairy 1 220902						
Data Filter: 300 Secs; 3 PSI Window									
Top EMP Serial Number: 2208 "									
Bottom EMP Serial Number: 2209 "									
EMP-Q Calibration I.D.: 2208-19244 "									
EMP-Q Calibration I.D.: 2209-20196 "									
Full Scale Pressure: 10000 psi "									
Full Scale Pressure: 10000 psi "									
Probe Started: 22/09/02 @ 13:08:00									
Probe Started: 22/09/02 @ 13:09:00									
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
22/09/2002	13:08:01	0.000	2.31	69.50	22/09/2002	13:09:01	0.017	5.51	65.40
22/09/2002	13:13:11	0.086	1.98	67.44	22/09/2002	13:14:11	0.103	247.95	64.39
22/09/2002	13:14:01	0.100	102.02	67.30	22/09/2002	13:14:21	0.106	322.82	64.40
22/09/2002	13:14:11	0.103	322.87	67.28	22/09/2002	13:19:31	0.192	323.67	65.19
22/09/2002	13:19:21	0.189	324.07	67.88	22/09/2002	13:21:01	0.217	326.85	65.12
22/09/2002	13:20:51	0.214	327.30	67.53	22/09/2002	13:22:51	0.248	329.96	65.27
22/09/2002	13:23:01	0.250	330.32	67.37	22/09/2002	13:27:51	0.331	330.37	69.42
22/09/2002	13:28:11	0.336	330.66	70.91	22/09/2002	13:29:41	0.361	337.95	70.73
22/09/2002	13:29:41	0.361	340.52	71.73	22/09/2002	13:29:51	0.364	347.05	70.88
22/09/2002	13:29:51	0.364	349.20	71.87	22/09/2002	13:30:01	0.367	356.00	71.06
22/09/2002	13:30:01	0.367	358.30	72.07	22/09/2002	13:30:11	0.370	365.38	71.26
22/09/2002	13:30:11	0.370	367.39	72.32	22/09/2002	13:30:21	0.373	370.75	71.48
22/09/2002	13:35:11	0.453	369.40	79.79	22/09/2002	13:35:21	0.456	371.38	77.99
22/09/2002	13:35:31	0.459	378.07	80.08	22/09/2002	13:35:31	0.459	376.00	78.15
22/09/2002	13:35:41	0.461	387.42	80.22	22/09/2002	13:35:41	0.461	384.74	78.30
22/09/2002	13:35:51	0.464	398.22	80.37	22/09/2002	13:35:51	0.464	394.99	78.46
22/09/2002	13:36:01	0.467	409.24	80.53	22/09/2002	13:36:01	0.467	406.02	78.62
22/09/2002	13:36:11	0.470	420.26	80.71	22/09/2002	13:36:11	0.470	417.01	78.79
22/09/2002	13:36:21	0.473	431.37	80.90	22/09/2002	13:36:21	0.473	428.18	78.97
22/09/2002	13:36:31	0.475	442.40	81.11	22/09/2002	13:36:31	0.475	439.31	79.16
22/09/2002	13:36:41	0.478	453.35	81.34	22/09/2002	13:36:41	0.478	450.35	79.36
22/09/2002	13:36:51	0.481	464.20	81.59	22/09/2002	13:36:51	0.481	461.24	79.57
22/09/2002	13:37:01	0.484	475.20	81.86	22/09/2002	13:37:01	0.484	472.22	79.79
22/09/2002	13:37:11	0.486	486.13	82.15	22/09/2002	13:37:11	0.486	483.27	80.03
22/09/2002	13:37:21	0.489	497.12	82.45	22/09/2002	13:37:21	0.489	494.35	80.28
22/09/2002	13:37:31	0.492	508.40	82.78	22/09/2002	13:37:31	0.492	505.50	80.54
22/09/2002	13:37:41	0.495	519.93	83.12	22/09/2002	13:37:41	0.495	517.00	80.82
22/09/2002	13:37:51	0.498	531.39	83.48	22/09/2002	13:37:51	0.498	528.52	81.11
22/09/2002	13:38:01	0.500	542.88	83.86	22/09/2002	13:38:01	0.500	540.07	81.41
22/09/2002	13:38:11	0.503	554.31	84.25	22/09/2002	13:38:11	0.503	551.57	81.72
22/09/2002	13:38:21	0.506	565.79	84.65	22/09/2002	13:38:21	0.506	563.09	82.05
22/09/2002	13:38:31	0.509	577.12	85.07	22/09/2002	13:38:31	0.509	574.62	82.39
22/09/2002	13:38:41	0.511	581.02	85.50	22/09/2002	13:38:41	0.511	583.74	82.73
22/09/2002	13:43:51	0.598	583.16	94.35	22/09/2002	13:43:41	0.595	584.80	91.41
22/09/2002	13:44:01	0.600	588.47	94.52	22/09/2002	13:44:11	0.603	594.76	92.01
22/09/2002	13:44:11	0.603	597.33	94.69	22/09/2002	13:44:21	0.606	604.71	92.21
22/09/2002	13:44:21	0.606	607.92	94.86	22/09/2002	13:44:31	0.609	615.72	92.41
22/09/2002	13:44:31	0.609	619.69	95.03	22/09/2002	13:44:41	0.611	627.59	92.60
22/09/2002	13:44:41	0.611	631.44	95.22	22/09/2002	13:44:51	0.614	639.33	92.81
22/09/2002	13:44:51	0.614	643.23	95.41	22/09/2002	13:45:01	0.617	651.42	93.01
22/09/2002	13:45:01	0.617	655.61	95.61	22/09/2002	13:45:11	0.620	664.48	93.22
22/09/2002	13:45:11	0.620	668.94	95.82	22/09/2002	13:45:21	0.623	678.13	93.43
22/09/2002	13:45:21	0.623	682.83	96.04	22/09/2002	13:45:31	0.625	692.00	93.65

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 22/09/02	Type Of Test: Static Gradient Survey						
		Operator: N.Dover	Control No.: Port Fairy 1 220902						
Data Filter: 300 Secs; 3 PSI Window									
Top EMP Serial Number: 2208 "									
Bottom EMP Serial Number: 2209 "									
EMP-Q Calibration I.D.: 2208-19244 "									
EMP-Q Calibration I.D.: 2209-20196 "									
Full Scale Pressure: 10000 psi "									
Full Scale Pressure: 10000 psi "									
Probe Started: 22/09/02 @ 13:08:00									
Probe Started: 22/09/02 @ 13:09:00									
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
22/09/2002	13:45:31	0.625	696.89	96.26	22/09/2002	13:45:41	0.628	706.22	93.87
22/09/2002	13:45:41	0.628	711.25	96.49	22/09/2002	13:45:51	0.631	720.63	94.10
22/09/2002	13:45:51	0.631	725.65	96.73	22/09/2002	13:46:01	0.634	735.15	94.33
22/09/2002	13:46:01	0.634	739.87	96.98	22/09/2002	13:46:11	0.636	749.37	94.57
22/09/2002	13:46:11	0.636	754.09	97.24	22/09/2002	13:46:21	0.639	763.55	94.82
22/09/2002	13:46:21	0.639	768.54	97.50	22/09/2002	13:46:31	0.642	778.17	95.07
22/09/2002	13:46:31	0.642	782.33	97.78	22/09/2002	13:46:41	0.645	789.74	95.32
22/09/2002	13:46:41	0.645	791.88	98.06	22/09/2002	13:46:51	0.648	798.37	95.59
22/09/2002	13:46:51	0.648	798.24	98.35	22/09/2002	13:51:51	0.731	800.52	101.83
22/09/2002	13:52:01	0.734	799.02	104.21	22/09/2002	13:52:21	0.739	812.16	102.26
22/09/2002	13:52:11	0.736	805.21	104.32	22/09/2002	13:52:31	0.742	824.13	102.39
22/09/2002	13:52:21	0.739	816.33	104.43	22/09/2002	13:52:41	0.745	836.08	102.53
22/09/2002	13:52:31	0.742	828.28	104.54	22/09/2002	13:52:51	0.748	848.06	102.67
22/09/2002	13:52:41	0.745	840.24	104.65	22/09/2002	13:53:01	0.750	860.36	102.82
22/09/2002	13:52:51	0.748	852.15	104.77	22/09/2002	13:53:11	0.753	873.59	102.97
22/09/2002	13:53:01	0.750	865.05	104.91	22/09/2002	13:53:21	0.756	886.93	103.12
22/09/2002	13:53:11	0.753	878.29	105.04	22/09/2002	13:53:31	0.759	900.29	103.27
22/09/2002	13:53:21	0.756	891.62	105.19	22/09/2002	13:53:41	0.761	913.66	103.44
22/09/2002	13:53:31	0.759	905.07	105.34	22/09/2002	13:53:51	0.764	927.07	103.60
22/09/2002	13:53:41	0.761	918.41	105.51	22/09/2002	13:54:01	0.767	940.29	103.78
22/09/2002	13:53:51	0.764	931.58	105.68	22/09/2002	13:54:11	0.770	953.51	103.96
22/09/2002	13:54:01	0.767	944.92	105.87	22/09/2002	13:54:21	0.773	966.67	104.14
22/09/2002	13:54:11	0.770	958.04	106.06	22/09/2002	13:54:31	0.775	978.69	104.33
22/09/2002	13:54:21	0.773	971.08	106.25	22/09/2002	13:54:41	0.778	989.07	104.52
22/09/2002	13:54:31	0.775	981.79	106.46	22/09/2002	13:54:51	0.781	999.44	104.72
22/09/2002	13:54:41	0.778	992.22	106.66	22/09/2002	13:55:01	0.784	1009.81	104.92
22/09/2002	13:54:51	0.781	1002.68	106.88	22/09/2002	13:55:11	0.786	1017.76	105.13
22/09/2002	13:55:01	0.784	1013.12	107.09	22/09/2002	14:00:11	0.870	1017.87	110.00
22/09/2002	13:56:21	0.806	1016.15	108.74	22/09/2002	14:00:41	0.878	1023.58	110.34
22/09/2002	14:00:41	0.878	1025.94	112.00	22/09/2002	14:00:51	0.881	1032.09	110.44
22/09/2002	14:00:51	0.881	1035.17	112.08	22/09/2002	14:01:01	0.884	1041.82	110.55
22/09/2002	14:01:01	0.884	1045.04	112.17	22/09/2002	14:01:11	0.886	1051.92	110.66
22/09/2002	14:01:11	0.886	1055.41	112.27	22/09/2002	14:01:21	0.889	1062.53	110.77
22/09/2002	14:01:21	0.889	1066.58	112.36	22/09/2002	14:01:31	0.892	1074.09	110.89
22/09/2002	14:01:31	0.892	1078.06	112.47	22/09/2002	14:01:41	0.895	1085.61	111.00
22/09/2002	14:01:41	0.895	1089.50	112.58	22/09/2002	14:01:51	0.898	1097.10	111.12
22/09/2002	14:01:51	0.898	1101.04	112.70	22/09/2002	14:02:01	0.900	1108.72	111.25
22/09/2002	14:02:01	0.900	1112.62	112.82	22/09/2002	14:02:11	0.903	1120.18	111.37
22/09/2002	14:02:11	0.903	1124.05	112.95	22/09/2002	14:02:21	0.906	1131.59	111.50
22/09/2002	14:02:21	0.906	1135.37	113.09	22/09/2002	14:02:31	0.909	1143.03	111.64
22/09/2002	14:02:31	0.909	1146.86	113.23	22/09/2002	14:02:41	0.911	1154.48	111.78
22/09/2002	14:02:41	0.911	1158.35	113.39	22/09/2002	14:02:51	0.914	1166.06	111.93
22/09/2002	14:02:51	0.914	1169.96	113.55	22/09/2002	14:03:01	0.917	1177.67	112.08

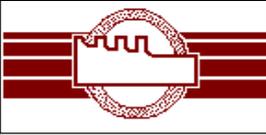
EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 22/09/02	Type Of Test: Static Gradient Survey						
		Operator: N.Dover	Control No.: Port Fairy 1 220902						
Data Filter: 300 Secs; 3 PSI Window									
Top EMP Serial Number: 2208 "									
Bottom EMP Serial Number: 2209 "									
EMP-Q Calibration I.D.: 2208-19244 "									
EMP-Q Calibration I.D.: 2209-20196 "									
Full Scale Pressure: 10000 psi "									
Full Scale Pressure: 10000 psi "									
Probe Started: 22/09/02 @ 13:08:00									
Probe Started: 22/09/02 @ 13:09:00									
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
22/09/2002	14:03:01	0.917	1181.44	113.72	22/09/2002	14:03:11	0.920	1189.25	112.24
22/09/2002	14:03:11	0.920	1192.96	113.90	22/09/2002	14:03:21	0.923	1200.74	112.41
22/09/2002	14:03:21	0.923	1204.35	114.09	22/09/2002	14:03:31	0.925	1212.18	112.57
22/09/2002	14:03:31	0.925	1215.98	114.27	22/09/2002	14:03:41	0.928	1223.60	112.75
22/09/2002	14:03:41	0.928	1227.00	114.47	22/09/2002	14:03:51	0.931	1232.24	112.93
22/09/2002	14:03:51	0.931	1232.83	114.67	22/09/2002	14:09:01	1.017	1234.26	117.41
22/09/2002	14:08:51	1.014	1232.83	118.77	22/09/2002	14:09:11	1.020	1237.88	117.51
22/09/2002	14:09:11	1.020	1240.24	118.93	22/09/2002	14:09:21	1.023	1246.06	117.61
22/09/2002	14:09:21	1.023	1248.65	119.01	22/09/2002	14:09:31	1.025	1254.36	117.71
22/09/2002	14:09:31	1.025	1256.95	119.09	22/09/2002	14:09:41	1.028	1262.68	117.81
22/09/2002	14:09:41	1.028	1265.17	119.18	22/09/2002	14:09:51	1.031	1270.99	117.91
22/09/2002	14:09:51	1.031	1273.41	119.27	22/09/2002	14:10:01	1.034	1279.22	118.01
22/09/2002	14:10:01	1.034	1281.63	119.36	22/09/2002	14:10:11	1.036	1287.40	118.12
22/09/2002	14:10:11	1.036	1290.14	119.46	22/09/2002	14:10:21	1.039	1296.56	118.23
22/09/2002	14:10:21	1.039	1299.56	119.57	22/09/2002	14:10:31	1.042	1306.03	118.34
22/09/2002	14:10:31	1.042	1309.07	119.68	22/09/2002	14:10:41	1.045	1315.54	118.45
22/09/2002	14:10:41	1.045	1318.59	119.80	22/09/2002	14:10:51	1.048	1325.12	118.57
22/09/2002	14:10:51	1.048	1328.14	119.92	22/09/2002	14:11:01	1.050	1334.63	118.70
22/09/2002	14:11:01	1.050	1337.68	120.04	22/09/2002	14:11:11	1.053	1344.26	118.82
22/09/2002	14:11:11	1.053	1347.26	120.18	22/09/2002	14:11:21	1.056	1353.83	118.95
22/09/2002	14:11:21	1.056	1356.60	120.32	22/09/2002	14:11:31	1.059	1363.41	119.09
22/09/2002	14:11:31	1.059	1366.22	120.46	22/09/2002	14:11:41	1.061	1373.03	119.23
22/09/2002	14:11:41	1.061	1375.82	120.61	22/09/2002	14:11:51	1.064	1382.63	119.37
22/09/2002	14:11:51	1.064	1385.43	120.77	22/09/2002	14:12:01	1.067	1392.25	119.52
22/09/2002	14:12:01	1.067	1394.97	120.93	22/09/2002	14:12:11	1.070	1401.79	119.68
22/09/2002	14:12:11	1.070	1404.51	121.10	22/09/2002	14:12:21	1.073	1411.31	119.83
22/09/2002	14:12:21	1.073	1414.03	121.28	22/09/2002	14:12:31	1.075	1420.80	120.00
22/09/2002	14:12:31	1.075	1423.53	121.46	22/09/2002	14:12:41	1.078	1430.28	120.17
22/09/2002	14:12:41	1.078	1432.97	121.64	22/09/2002	14:12:51	1.081	1439.75	120.34
22/09/2002	14:12:51	1.081	1442.47	121.84	22/09/2002	14:13:01	1.084	1449.31	120.52
22/09/2002	14:13:01	1.084	1449.74	122.03	22/09/2002	14:18:01	1.167	1451.31	125.08
22/09/2002	14:18:11	1.170	1452.30	126.55	22/09/2002	14:18:21	1.173	1457.34	125.30
22/09/2002	14:18:21	1.173	1459.29	126.64	22/09/2002	14:18:31	1.175	1465.04	125.40
22/09/2002	14:18:31	1.175	1467.59	126.73	22/09/2002	14:18:41	1.178	1473.86	125.51
22/09/2002	14:18:41	1.178	1476.36	126.82	22/09/2002	14:18:51	1.181	1482.66	125.61
22/09/2002	14:18:51	1.181	1485.17	126.92	22/09/2002	14:19:01	1.184	1491.44	125.72
22/09/2002	14:19:01	1.184	1493.95	127.02	22/09/2002	14:19:11	1.186	1500.21	125.83
22/09/2002	14:19:11	1.186	1502.74	127.12	22/09/2002	14:19:21	1.189	1508.97	125.95
22/09/2002	14:19:21	1.189	1511.45	127.23	22/09/2002	14:19:31	1.192	1517.71	126.07
22/09/2002	14:19:31	1.192	1520.16	127.35	22/09/2002	14:19:41	1.195	1526.41	126.19
22/09/2002	14:19:41	1.195	1528.82	127.47	22/09/2002	14:19:51	1.198	1535.02	126.32
22/09/2002	14:19:51	1.198	1537.39	127.60	22/09/2002	14:20:01	1.200	1543.68	126.45
22/09/2002	14:20:01	1.200	1546.05	127.74	22/09/2002	14:20:11	1.203	1552.23	126.59

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 22/09/02	Type Of Test: Static Gradient Survey						
		Operator: N.Dover	Control No.: Port Fairy 1 220902						
Data Filter: 300 Secs; 3 PSI Window									
Top EMP Serial Number: 2208 "									
Bottom EMP Serial Number: 2209 "									
EMP-Q Calibration I.D.: 2208-19244 "									
EMP-Q Calibration I.D.: 2209-20196 "									
Full Scale Pressure: 10000 psi "									
Full Scale Pressure: 10000 psi "									
Probe Started: 22/09/02 @ 13:08:00									
Probe Started: 22/09/02 @ 13:09:00									
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
22/09/2002	14:20:11	1.203	1554.58	127.88	22/09/2002	14:20:21	1.206	1560.79	126.73
22/09/2002	14:20:21	1.206	1563.19	128.03	22/09/2002	14:20:31	1.209	1569.37	126.87
22/09/2002	14:20:31	1.209	1571.83	128.19	22/09/2002	14:20:41	1.211	1578.10	127.03
22/09/2002	14:20:41	1.211	1580.48	128.35	22/09/2002	14:20:51	1.214	1586.77	127.18
22/09/2002	14:20:51	1.214	1589.12	128.52	22/09/2002	14:21:01	1.217	1595.39	127.34
22/09/2002	14:21:01	1.217	1597.73	128.70	22/09/2002	14:21:11	1.220	1604.04	127.51
22/09/2002	14:21:11	1.220	1606.38	128.88	22/09/2002	14:21:21	1.223	1612.63	127.68
22/09/2002	14:21:21	1.223	1615.08	129.07	22/09/2002	14:21:31	1.225	1621.38	127.86
22/09/2002	14:21:31	1.225	1623.78	129.26	22/09/2002	14:21:41	1.228	1630.07	128.04
22/09/2002	14:21:41	1.228	1632.42	129.46	22/09/2002	14:21:51	1.231	1638.80	128.23
22/09/2002	14:21:51	1.231	1641.15	129.67	22/09/2002	14:22:01	1.234	1647.44	128.42
22/09/2002	14:22:01	1.234	1649.79	129.88	22/09/2002	14:22:11	1.236	1656.08	128.62
22/09/2002	14:22:11	1.236	1658.50	130.10	22/09/2002	14:22:21	1.239	1664.79	128.82
22/09/2002	14:22:21	1.239	1665.26	130.33	22/09/2002	14:27:31	1.325	1666.97	134.06
22/09/2002	14:27:31	1.325	1665.24	135.42	22/09/2002	14:28:31	1.342	1673.48	134.73
22/09/2002	14:28:31	1.342	1674.94	135.98	22/09/2002	14:28:41	1.345	1680.44	134.83
22/09/2002	14:28:41	1.345	1681.89	136.07	22/09/2002	14:28:51	1.348	1687.31	134.94
22/09/2002	14:28:51	1.348	1688.88	136.16	22/09/2002	14:29:01	1.350	1694.24	135.04
22/09/2002	14:29:01	1.350	1695.82	136.26	22/09/2002	14:29:11	1.353	1701.13	135.15
22/09/2002	14:29:11	1.353	1702.80	136.35	22/09/2002	14:29:21	1.356	1708.21	135.26
22/09/2002	14:29:21	1.356	1709.78	136.46	22/09/2002	14:29:31	1.359	1715.26	135.38
22/09/2002	14:29:31	1.359	1716.82	136.57	22/09/2002	14:29:41	1.361	1722.34	135.49
22/09/2002	14:29:41	1.361	1723.91	136.68	22/09/2002	14:29:51	1.364	1729.37	135.61
22/09/2002	14:29:51	1.364	1731.00	136.80	22/09/2002	14:30:01	1.367	1736.45	135.73
22/09/2002	14:30:01	1.367	1738.04	136.92	22/09/2002	14:30:11	1.370	1743.53	135.86
22/09/2002	14:30:11	1.370	1745.09	137.05	22/09/2002	14:30:21	1.373	1750.56	135.99
22/09/2002	14:30:21	1.373	1752.06	137.18	22/09/2002	14:30:31	1.375	1757.55	136.13
22/09/2002	14:30:31	1.375	1759.08	137.33	22/09/2002	14:30:41	1.378	1764.53	136.27
22/09/2002	14:30:41	1.378	1766.05	137.48	22/09/2002	14:30:51	1.381	1771.51	136.42
22/09/2002	14:30:51	1.381	1773.00	137.63	22/09/2002	14:31:01	1.384	1778.44	136.57
22/09/2002	14:31:01	1.384	1779.92	137.80	22/09/2002	14:31:11	1.386	1785.38	136.72
22/09/2002	14:31:11	1.386	1786.87	137.97	22/09/2002	14:31:21	1.389	1792.31	136.89
22/09/2002	14:31:21	1.389	1793.80	138.15	22/09/2002	14:31:31	1.392	1799.21	137.06
22/09/2002	14:31:31	1.392	1800.64	138.34	22/09/2002	14:31:41	1.395	1806.04	137.23
22/09/2002	14:31:41	1.395	1807.47	138.53	22/09/2002	14:31:51	1.398	1812.92	137.41
22/09/2002	14:31:51	1.398	1814.32	138.73	22/09/2002	14:32:01	1.400	1819.79	137.60
22/09/2002	14:32:01	1.400	1821.23	138.94	22/09/2002	14:32:11	1.403	1826.68	137.79
22/09/2002	14:32:11	1.403	1828.16	139.15	22/09/2002	14:32:21	1.406	1833.63	137.98
22/09/2002	14:32:21	1.406	1835.09	139.37	22/09/2002	14:32:31	1.409	1840.62	138.19
22/09/2002	14:32:31	1.409	1842.11	139.60	22/09/2002	14:32:41	1.411	1846.94	138.40
22/09/2002	14:32:41	1.411	1845.59	139.83	22/09/2002	14:37:41	1.495	1847.59	143.55
22/09/2002	14:37:51	1.498	1845.92	144.97	22/09/2002	14:38:11	1.503	1851.18	143.91
22/09/2002	14:38:11	1.503	1851.32	145.17	22/09/2002	14:38:21	1.506	1855.19	144.02

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 22/09/02	Type Of Test: Static Gradient Survey						
		Operator: N.Dover	Control No.: Port Fairy 1 220902						
Data Filter: 300 Secs; 3 PSI Window									
Top EMP Serial Number: 2208 "									
Bottom EMP Serial Number: 2209 "									
EMP-Q Calibration I.D.: 2208-19244 "									
EMP-Q Calibration I.D.: 2209-20196 "									
Full Scale Pressure: 10000 psi "									
Full Scale Pressure: 10000 psi "									
Probe Started: 22/09/02 @ 13:08:00									
Probe Started: 22/09/02 @ 13:09:00									
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
22/09/2002	14:43:21	1.589	1854.04	147.45	22/09/2002	14:43:31	1.592	1855.79	146.70
22/09/2002	14:48:31	1.675	1853.84	148.42	22/09/2002	14:48:41	1.678	1855.60	148.01
22/09/2002	14:53:41	1.761	1860.28	148.85	22/09/2002	14:53:41	1.761	1859.87	148.63
22/09/2002	14:58:51	1.848	1861.32	149.35	22/09/2002	14:53:51	1.764	1863.50	148.64
22/09/2002	14:59:51	1.864	1853.71	149.42	22/09/2002	14:59:01	1.850	1863.13	149.25
22/09/2002	15:00:01	1.867	1847.22	149.42	22/09/2002	14:59:51	1.864	1858.13	149.32
22/09/2002	15:00:11	1.870	1839.16	149.42	22/09/2002	15:00:01	1.867	1852.23	149.34
22/09/2002	15:00:21	1.873	1830.63	149.42	22/09/2002	15:00:11	1.870	1844.99	149.34
22/09/2002	15:00:31	1.875	1822.08	149.40	22/09/2002	15:00:21	1.873	1836.47	149.35
22/09/2002	15:00:41	1.878	1813.63	149.38	22/09/2002	15:00:31	1.875	1827.98	149.35
22/09/2002	15:00:51	1.881	1805.17	149.34	22/09/2002	15:00:41	1.878	1819.46	149.34
22/09/2002	15:01:01	1.884	1796.72	149.29	22/09/2002	15:00:51	1.881	1810.96	149.32
22/09/2002	15:01:11	1.886	1788.35	149.22	22/09/2002	15:01:01	1.884	1802.52	149.29
22/09/2002	15:01:21	1.889	1780.02	149.15	22/09/2002	15:01:11	1.886	1794.07	149.26
22/09/2002	15:01:31	1.892	1771.45	149.06	22/09/2002	15:01:21	1.889	1785.72	149.21
22/09/2002	15:01:41	1.895	1762.08	148.95	22/09/2002	15:01:31	1.892	1777.40	149.15
22/09/2002	15:01:51	1.898	1752.48	148.84	22/09/2002	15:01:41	1.895	1768.35	149.09
22/09/2002	15:02:01	1.900	1742.91	148.71	22/09/2002	15:01:51	1.898	1758.79	149.01
22/09/2002	15:02:11	1.903	1733.26	148.57	22/09/2002	15:02:01	1.900	1749.19	148.93
22/09/2002	15:02:21	1.906	1723.58	148.41	22/09/2002	15:02:11	1.903	1739.60	148.83
22/09/2002	15:02:31	1.909	1713.84	148.25	22/09/2002	15:02:21	1.906	1729.93	148.72
22/09/2002	15:02:41	1.911	1704.07	148.07	22/09/2002	15:02:31	1.909	1720.22	148.61
22/09/2002	15:02:51	1.914	1694.29	147.89	22/09/2002	15:02:41	1.911	1710.43	148.48
22/09/2002	15:03:01	1.917	1684.52	147.69	22/09/2002	15:02:51	1.914	1700.65	148.35
22/09/2002	15:03:11	1.920	1674.81	147.49	22/09/2002	15:03:01	1.917	1690.92	148.20
22/09/2002	15:03:21	1.923	1665.08	147.28	22/09/2002	15:03:11	1.920	1681.21	148.05
22/09/2002	15:03:31	1.925	1655.48	147.07	22/09/2002	15:03:21	1.923	1671.46	147.89
22/09/2002	15:03:41	1.928	1645.98	146.85	22/09/2002	15:03:31	1.925	1661.83	147.73
22/09/2002	15:03:51	1.931	1636.37	146.62	22/09/2002	15:03:41	1.928	1652.28	147.56
22/09/2002	15:04:01	1.934	1626.77	146.40	22/09/2002	15:03:51	1.931	1642.69	147.39
22/09/2002	15:04:11	1.936	1617.13	146.16	22/09/2002	15:04:01	1.934	1633.02	147.20
22/09/2002	15:04:21	1.939	1607.45	145.92	22/09/2002	15:04:11	1.936	1623.47	147.02
22/09/2002	15:04:31	1.942	1597.76	145.67	22/09/2002	15:04:21	1.939	1613.81	146.83
22/09/2002	15:04:41	1.945	1588.05	145.41	22/09/2002	15:04:31	1.942	1604.15	146.63
22/09/2002	15:04:51	1.948	1578.43	145.15	22/09/2002	15:04:41	1.945	1594.45	146.42
22/09/2002	15:05:01	1.950	1568.87	144.89	22/09/2002	15:04:51	1.948	1584.80	146.21
22/09/2002	15:05:11	1.953	1559.24	144.62	22/09/2002	15:05:01	1.950	1575.21	146.00
22/09/2002	15:05:21	1.956	1549.75	144.34	22/09/2002	15:05:11	1.953	1565.63	145.77
22/09/2002	15:05:31	1.959	1540.18	144.06	22/09/2002	15:05:21	1.956	1556.08	145.55
22/09/2002	15:05:41	1.961	1530.55	143.78	22/09/2002	15:05:31	1.959	1546.53	145.31
22/09/2002	15:05:51	1.964	1520.87	143.49	22/09/2002	15:05:41	1.961	1536.94	145.08
22/09/2002	15:06:01	1.967	1511.19	143.20	22/09/2002	15:05:51	1.964	1527.26	144.84
22/09/2002	15:06:11	1.970	1501.47	142.90	22/09/2002	15:06:01	1.967	1517.59	144.59

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum				Well Name: Port Fairy 1			
		Perforations: 1347 - 1358.5mkb				Formation: N/A			
		Date Of Test: 22/09/02				Type Of Test: Static Gradient Survey			
		Operator: N.Dover				Control No.: Port Fairy 1 220902			
Data Filter: 300 Secs; 3 PSI Window									
Top EMP Serial Number: 2208 "					Bottom EMP Serial Number: 2209 "				
EMP-Q Calibration I.D.: 2208-19244 "					EMP-Q Calibration I.D.: 2209-20196 "				
Full Scale Pressure: 10000 psi "					Full Scale Pressure: 10000 psi "				
Probe Started: 22/09/02 @ 13:08:00					Probe Started: 22/09/02 @ 13:09:00				
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
22/09/2002	15:06:21	1.973	1491.70	142.61	22/09/2002	15:06:11	1.970	1507.92	144.34
22/09/2002	15:06:31	1.975	1481.88	142.31	22/09/2002	15:06:21	1.973	1498.20	144.09
22/09/2002	15:06:41	1.978	1471.97	142.00	22/09/2002	15:06:31	1.975	1488.40	143.84
22/09/2002	15:06:51	1.981	1462.12	141.70	22/09/2002	15:06:41	1.978	1478.49	143.58
22/09/2002	15:07:01	1.984	1451.39	141.39	22/09/2002	15:06:51	1.981	1468.66	143.31
22/09/2002	15:07:11	1.986	1440.34	141.08	22/09/2002	15:07:01	1.984	1458.50	143.05
22/09/2002	15:07:21	1.989	1429.30	140.77	22/09/2002	15:07:11	1.986	1447.51	142.78
22/09/2002	15:07:31	1.992	1418.25	140.46	22/09/2002	15:07:21	1.989	1436.42	142.51
22/09/2002	15:07:41	1.995	1407.21	140.14	22/09/2002	15:07:31	1.992	1425.33	142.24
22/09/2002	15:07:51	1.998	1396.21	139.82	22/09/2002	15:07:41	1.995	1414.31	141.96
22/09/2002	15:08:01	2.000	1385.29	139.50	22/09/2002	15:07:51	1.998	1403.30	141.68
22/09/2002	15:08:11	2.003	1374.41	139.17	22/09/2002	15:08:01	2.000	1392.38	141.39
22/09/2002	15:08:21	2.006	1363.38	138.84	22/09/2002	15:08:11	2.003	1381.46	141.10
22/09/2002	15:08:31	2.009	1352.35	138.51	22/09/2002	15:08:21	2.006	1370.47	140.81
22/09/2002	15:08:41	2.011	1341.28	138.17	22/09/2002	15:08:31	2.009	1359.47	140.51
22/09/2002	15:08:51	2.014	1330.19	137.83	22/09/2002	15:08:41	2.011	1348.42	140.21
22/09/2002	15:09:01	2.017	1319.07	137.49	22/09/2002	15:08:51	2.014	1337.34	139.91
22/09/2002	15:09:11	2.020	1307.94	137.15	22/09/2002	15:09:01	2.017	1326.23	139.61
22/09/2002	15:09:21	2.023	1296.79	136.80	22/09/2002	15:09:11	2.020	1315.10	139.30
22/09/2002	15:09:31	2.025	1285.68	136.46	22/09/2002	15:09:21	2.023	1303.99	138.99
22/09/2002	15:09:41	2.028	1274.65	136.11	22/09/2002	15:09:31	2.025	1292.86	138.68
22/09/2002	15:09:51	2.031	1263.51	135.77	22/09/2002	15:09:41	2.028	1281.76	138.37
22/09/2002	15:10:01	2.034	1252.43	135.42	22/09/2002	15:09:51	2.031	1270.64	138.05
22/09/2002	15:10:11	2.036	1241.40	135.07	22/09/2002	15:10:01	2.034	1259.58	137.73
22/09/2002	15:10:21	2.039	1230.30	134.72	22/09/2002	15:10:11	2.036	1248.51	137.42
22/09/2002	15:10:31	2.042	1219.28	134.38	22/09/2002	15:10:21	2.039	1237.45	137.10
22/09/2002	15:10:41	2.045	1208.28	134.03	22/09/2002	15:10:31	2.042	1226.38	136.78
22/09/2002	15:10:51	2.048	1197.16	133.68	22/09/2002	15:10:41	2.045	1215.32	136.46
22/09/2002	15:11:01	2.050	1187.73	133.34	22/09/2002	15:10:51	2.048	1204.38	136.14
22/09/2002	15:11:11	2.053	1178.82	132.99	22/09/2002	15:11:01	2.050	1193.83	135.82
22/09/2002	15:11:21	2.056	1169.94	132.65	22/09/2002	15:11:11	2.053	1184.88	135.49
22/09/2002	15:11:31	2.059	1160.43	132.31	22/09/2002	15:11:21	2.056	1176.11	135.17
22/09/2002	15:11:41	2.061	1150.37	131.97	22/09/2002	15:11:31	2.059	1167.06	134.85
22/09/2002	15:11:51	2.064	1139.82	131.62	22/09/2002	15:11:41	2.061	1157.16	134.53
22/09/2002	15:12:01	2.067	1129.22	131.29	22/09/2002	15:11:51	2.064	1146.69	134.21
22/09/2002	15:12:11	2.070	1118.58	130.94	22/09/2002	15:12:01	2.067	1136.06	133.89
22/09/2002	15:12:21	2.073	1107.89	130.60	22/09/2002	15:12:11	2.070	1125.51	133.57
22/09/2002	15:12:31	2.075	1097.27	130.26	22/09/2002	15:12:21	2.073	1114.93	133.25
22/09/2002	15:12:41	2.078	1086.66	129.92	22/09/2002	15:12:31	2.075	1104.27	132.92
22/09/2002	15:12:51	2.081	1075.93	129.57	22/09/2002	15:12:41	2.078	1093.58	132.60
22/09/2002	15:13:01	2.084	1065.18	129.23	22/09/2002	15:12:51	2.081	1082.90	132.27
22/09/2002	15:13:11	2.086	1054.51	128.89	22/09/2002	15:13:01	2.084	1072.19	131.94
22/09/2002	15:13:21	2.089	1043.84	128.55	22/09/2002	15:13:11	2.086	1061.47	131.62

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 22/09/02	Type Of Test: Static Gradient Survey						
		Operator: N.Dover	Control No.: Port Fairy 1 220902						
Data Filter: 300 Secs; 3 PSI Window									
Top EMP Serial Number: 2208 "					Bottom EMP Serial Number: 2209 "				
EMP-Q Calibration I.D.: 2208-19244 "					EMP-Q Calibration I.D.: 2209-20196 "				
Full Scale Pressure: 10000 psi "					Full Scale Pressure: 10000 psi "				
Probe Started: 22/09/02 @ 13:08:00					Probe Started: 22/09/02 @ 13:09:00				
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
22/09/2002	15:13:31	2.092	1033.10	128.20	22/09/2002	15:13:21	2.089	1050.80	131.29
22/09/2002	15:13:41	2.095	1022.41	127.87	22/09/2002	15:13:31	2.092	1040.00	130.96
22/09/2002	15:13:51	2.098	1011.78	127.53	22/09/2002	15:13:41	2.095	1029.32	130.64
22/09/2002	15:14:01	2.100	1001.04	127.19	22/09/2002	15:13:51	2.098	1018.72	130.31
22/09/2002	15:14:11	2.103	990.31	126.86	22/09/2002	15:14:01	2.100	1007.99	129.99
22/09/2002	15:14:21	2.106	979.47	126.52	22/09/2002	15:14:11	2.103	997.26	129.66
22/09/2002	15:14:31	2.109	968.69	126.19	22/09/2002	15:14:21	2.106	986.51	129.34
22/09/2002	15:14:41	2.111	957.80	125.85	22/09/2002	15:14:31	2.109	975.66	129.01
22/09/2002	15:14:51	2.114	946.92	125.52	22/09/2002	15:14:41	2.111	964.84	128.69
22/09/2002	15:15:01	2.117	936.01	125.18	22/09/2002	15:14:51	2.114	953.99	128.36
22/09/2002	15:15:11	2.120	925.12	124.85	22/09/2002	15:15:01	2.117	943.14	128.04
22/09/2002	15:15:21	2.123	914.21	124.52	22/09/2002	15:15:11	2.120	932.14	127.72
22/09/2002	15:15:31	2.125	903.26	124.19	22/09/2002	15:15:21	2.123	921.22	127.39
22/09/2002	15:15:41	2.128	892.29	123.86	22/09/2002	15:15:31	2.125	910.28	127.07
22/09/2002	15:15:51	2.131	881.29	123.53	22/09/2002	15:15:41	2.128	899.29	126.75
22/09/2002	15:16:01	2.134	870.28	123.19	22/09/2002	15:15:51	2.131	888.33	126.42
22/09/2002	15:16:11	2.136	859.29	122.86	22/09/2002	15:16:01	2.134	877.34	126.10
22/09/2002	15:16:21	2.139	848.27	122.52	22/09/2002	15:16:11	2.136	866.29	125.77
22/09/2002	15:16:31	2.142	837.25	122.18	22/09/2002	15:16:21	2.139	855.35	125.45
22/09/2002	15:16:41	2.145	826.27	121.85	22/09/2002	15:16:31	2.142	844.35	125.12
22/09/2002	15:16:51	2.148	815.30	121.51	22/09/2002	15:16:41	2.145	833.40	124.79
22/09/2002	15:17:01	2.150	804.40	121.17	22/09/2002	15:16:51	2.148	822.34	124.46
22/09/2002	15:17:11	2.153	793.35	120.83	22/09/2002	15:17:01	2.150	811.36	124.13
22/09/2002	15:17:21	2.156	782.41	120.49	22/09/2002	15:17:11	2.153	800.38	123.80
22/09/2002	15:17:31	2.159	771.51	120.16	22/09/2002	15:17:21	2.156	789.45	123.47
22/09/2002	15:17:41	2.161	760.61	119.82	22/09/2002	15:17:31	2.159	778.50	123.15
22/09/2002	15:17:51	2.164	749.56	119.48	22/09/2002	15:17:41	2.161	767.60	122.82
22/09/2002	15:18:01	2.167	738.53	119.14	22/09/2002	15:17:51	2.164	756.65	122.49
22/09/2002	15:18:11	2.170	727.45	118.81	22/09/2002	15:18:01	2.167	745.58	122.16
22/09/2002	15:18:21	2.173	716.38	118.47	22/09/2002	15:18:11	2.170	734.53	121.83
22/09/2002	15:18:31	2.175	705.28	118.13	22/09/2002	15:18:21	2.173	723.43	121.50
22/09/2002	15:18:41	2.178	694.12	117.79	22/09/2002	15:18:31	2.175	712.40	121.17
22/09/2002	15:18:51	2.181	682.92	117.45	22/09/2002	15:18:41	2.178	701.20	120.83
22/09/2002	15:19:01	2.184	671.69	117.10	22/09/2002	15:18:51	2.181	690.01	120.50
22/09/2002	15:19:11	2.186	660.45	116.76	22/09/2002	15:19:01	2.184	678.76	120.17
22/09/2002	15:19:21	2.189	649.25	116.41	22/09/2002	15:19:11	2.186	667.50	119.83
22/09/2002	15:19:31	2.192	638.01	116.06	22/09/2002	15:19:21	2.189	656.27	119.49
22/09/2002	15:19:41	2.195	626.86	115.71	22/09/2002	15:19:31	2.192	645.11	119.16
22/09/2002	15:19:51	2.198	615.57	115.37	22/09/2002	15:19:41	2.195	633.87	118.82
22/09/2002	15:20:01	2.200	604.43	115.02	22/09/2002	15:19:51	2.198	622.64	118.48
22/09/2002	15:20:11	2.203	593.20	114.66	22/09/2002	15:20:01	2.200	611.39	118.14
22/09/2002	15:20:21	2.206	582.04	114.31	22/09/2002	15:20:11	2.203	600.22	117.79
22/09/2002	15:20:31	2.209	570.87	113.95	22/09/2002	15:20:21	2.206	588.98	117.45

EXPERTEST PTY. LTD.		Electronic Memory Recorder								
		Customer: Essential Petroleum	Well Name: Port Fairy 1							
		Perforations: 1347 - 1358.5mkb	Formation: N/A							
		Date Of Test: 22/09/02	Type Of Test: Static Gradient Survey							
		Operator: N.Dover	Control No.: Port Fairy 1 220902							
Data Filter: 300 Secs; 3 PSI Window										
Top EMP Serial Number: 2208 "					Bottom EMP Serial Number: 2209 "					
EMP-Q Calibration I.D.: 2208-19244 "					EMP-Q Calibration I.D.: 2209-20196 "					
Full Scale Pressure: 10000 psi "					Full Scale Pressure: 10000 psi "					
Probe Started: 22/09/02 @ 13:08:00					Probe Started: 22/09/02 @ 13:09:00					
TOP GAUGE					BOTTOM GAUGE					
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)	
22/09/2002	15:20:41	2.211	559.71	113.59	22/09/2002	15:20:31	2.209	577.87	117.11	
22/09/2002	15:20:51	2.214	548.40	113.23	22/09/2002	15:20:41	2.211	566.67	116.76	
22/09/2002	15:21:01	2.217	537.14	112.86	22/09/2002	15:20:51	2.214	555.40	116.41	
22/09/2002	15:21:11	2.220	525.84	112.48	22/09/2002	15:21:01	2.217	544.15	116.06	
22/09/2002	15:21:21	2.223	514.56	112.10	22/09/2002	15:21:11	2.220	532.85	115.70	
22/09/2002	15:21:31	2.225	503.30	111.70	22/09/2002	15:21:21	2.223	521.53	115.34	
22/09/2002	15:21:41	2.228	492.04	111.29	22/09/2002	15:21:31	2.225	510.27	114.97	
22/09/2002	15:21:51	2.231	480.75	110.88	22/09/2002	15:21:41	2.228	498.93	114.59	
22/09/2002	15:22:01	2.234	469.46	110.45	22/09/2002	15:21:51	2.231	487.63	114.20	
22/09/2002	15:22:11	2.236	458.15	110.01	22/09/2002	15:22:01	2.234	476.29	113.81	
22/09/2002	15:22:21	2.239	446.82	109.55	22/09/2002	15:22:11	2.236	464.95	113.40	
22/09/2002	15:22:31	2.242	435.46	109.09	22/09/2002	15:22:21	2.239	453.54	112.99	
22/09/2002	15:22:41	2.245	424.25	108.61	22/09/2002	15:22:31	2.242	442.22	112.57	
22/09/2002	15:22:51	2.248	412.97	108.13	22/09/2002	15:22:41	2.245	430.92	112.14	
22/09/2002	15:23:01	2.250	401.86	107.63	22/09/2002	15:22:51	2.248	419.72	111.70	
22/09/2002	15:23:11	2.253	390.68	107.13	22/09/2002	15:23:01	2.250	408.47	111.26	
22/09/2002	15:23:21	2.256	379.48	106.61	22/09/2002	15:23:11	2.253	397.26	110.80	
22/09/2002	15:23:31	2.259	368.24	106.08	22/09/2002	15:23:21	2.256	386.06	110.34	
22/09/2002	15:23:41	2.261	356.90	105.55	22/09/2002	15:23:31	2.259	374.76	109.86	
22/09/2002	15:23:51	2.264	345.54	105.01	22/09/2002	15:23:41	2.261	363.45	109.39	
22/09/2002	15:24:01	2.267	333.16	104.46	22/09/2002	15:23:51	2.264	352.06	108.90	
22/09/2002	15:24:51	2.281	330.00	101.75	22/09/2002	15:24:01	2.267	340.66	108.40	
22/09/2002	15:26:41	2.311	326.95	96.86	22/09/2002	15:24:11	2.270	330.56	107.90	
22/09/2002	15:29:11	2.353	323.90	90.17	22/09/2002	15:26:11	2.303	327.51	102.20	
22/09/2002	15:34:21	2.439	321.12	80.01	22/09/2002	15:28:21	2.339	324.48	96.31	
22/09/2002	15:36:01	2.467	277.82	78.29	22/09/2002	15:33:01	2.417	321.44	84.70	
22/09/2002	15:36:11	2.470	157.02	78.13	22/09/2002	15:36:01	2.467	314.99	80.28	
22/09/2002	15:36:21	2.473	56.20	77.97	22/09/2002	15:36:11	2.470	222.56	80.07	
22/09/2002	15:36:31	2.475	3.10	77.79	22/09/2002	15:36:21	2.473	94.11	79.87	
22/09/2002	15:41:41	2.561	2.59	72.37	22/09/2002	15:36:31	2.475	6.93	79.65	
22/09/2002	15:46:51	2.648	1.83	70.11	22/09/2002	15:36:41	2.478	2.74	79.41	
22/09/2002	15:52:01	2.734	1.91	68.77	22/09/2002	15:41:51	2.564	4.08	74.18	
					22/09/2002	15:47:01	2.650	3.90	71.96	
					22/09/2002	15:52:11	2.736	4.20	70.32	

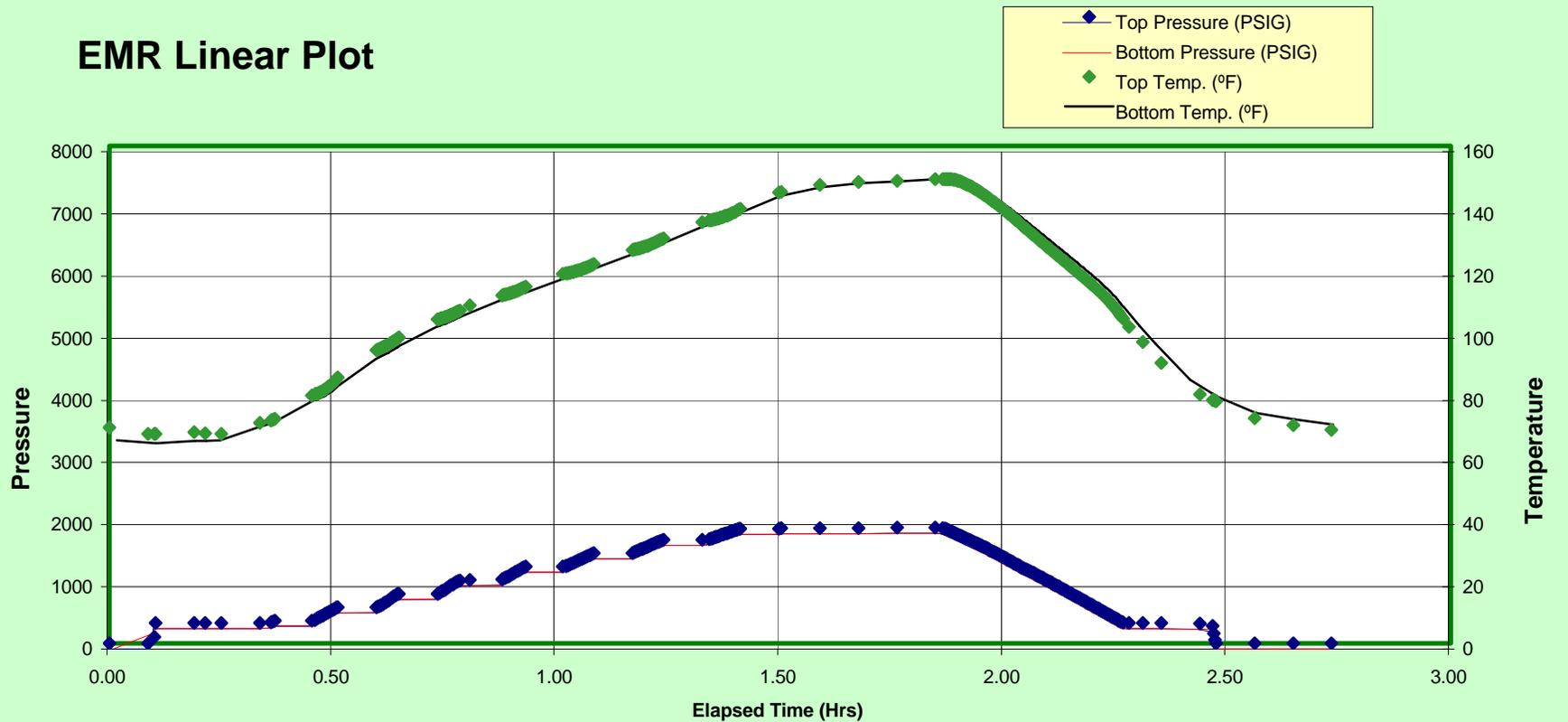
EXPERTEST PTY. LTD.

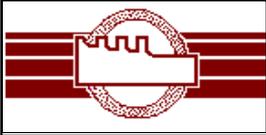
Electronic Memory Recorder - Linear Plot



Customer: Essential Petroleum	Well Name: Port Fairy 1	Formation: N/A
Perforations: 1347 - 1358.5mkb	Type Of Test: Static Gradient Survey	Operator: N.Dover
Date Of Test: 22/09/02		Control No.: Port Fairy 1 220902
Top EMP Serial Number: 2208 "		Bottom EMP Serial Number: 2209 "
EMP-Q Calibration I.D.: 2208-19244 "		EMP-Q Calibration I.D.: 2209-20196 "
Full Scale Pressure: 10000 psi "		Full Scale Pressure: 10000 psi "

EMR Linear Plot





Static Gradient Report

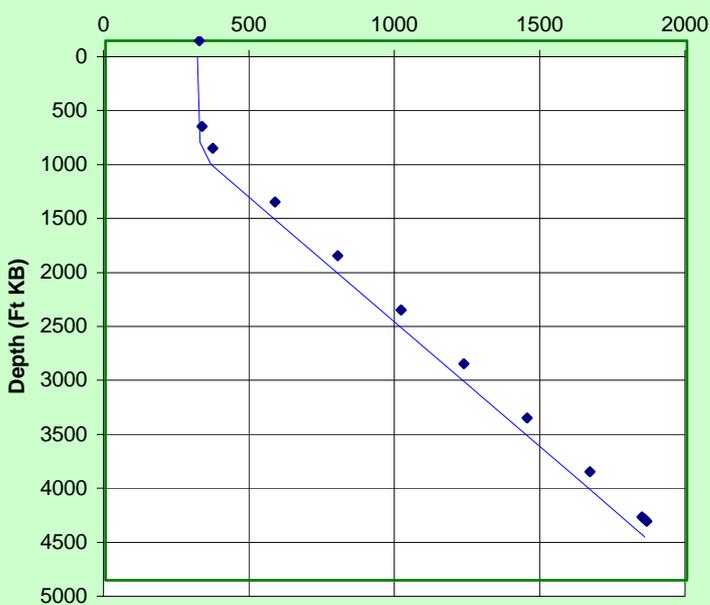
Well Name.....Port Fairy 1
Formation.....N/A

Operator: F.Heller		Control No.: Port Fairy 1 220902
Test Type: Static Gradient Survey		Recorder Depth: 4457ft
Test Date: 22/09/2002		Recorder Position: Top
		Serial Number: 2208

Reading Time		Depth Ft KB	Pressure PsiG	Temp. Deg F	Gradient Psi/ft	Remarks
MM/DD	hh:mm:ss					
09/22	13:08:00	0	323.71	67.94		
		794	331.22	71.41	0.009	
		994	369.26	79.48	0.190	
		1494	583.10	94.18	0.428	
		1994	798.97	103.98	0.432	
		2494	1016.43	111.64	0.435	
		2994	1232.82	118.68	0.433	
		3494	1449.66	126.27	0.434	
		3994	1665.23	135.71	0.431	
		4413	1845.90	144.87	0.431	
		4432	1853.60	148.80	0.405	
		4451	1861.32	149.37	0.406	

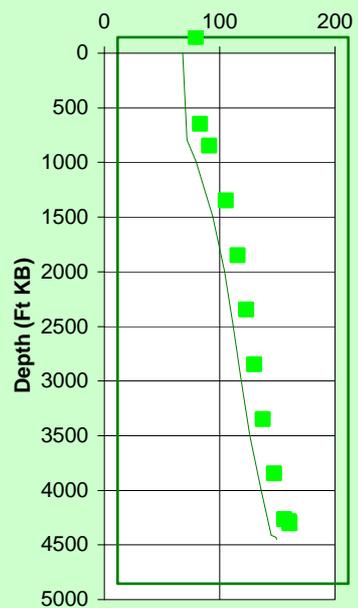
Gradient Plot

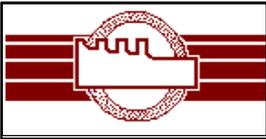
Pressure (PsiG)



Gradient Plot

Temperature (Deg F)





Static Gradient Report

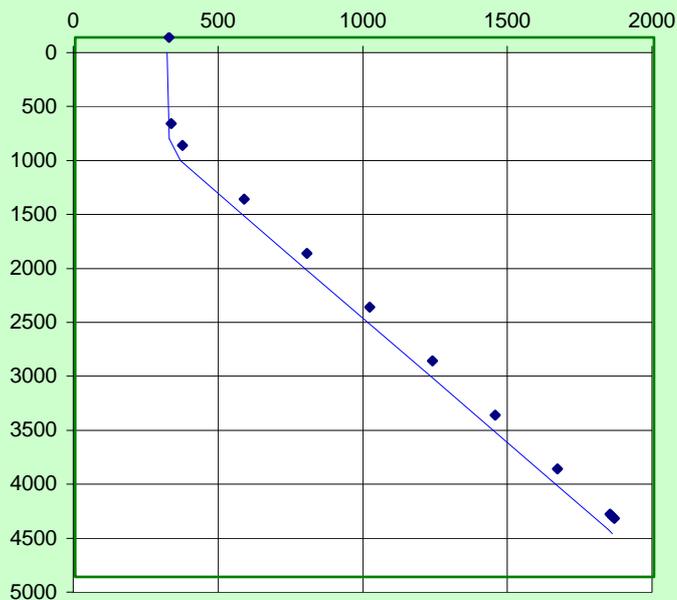
Well Name.....Port Fairy 1
Formation.....N/A

Operator: F.Heller		Control No.:	Port Fairy 1 220902
Test Type: Static Gradient Survey		Recorder Depth:	4457ft
Test Date: 22/09/2002		Recorder Position:	Bottom
		Serial Number:	2209

Reading Time		Depth Ft KB	Pressure PsiG	Temp. Deg F	Gradient Psi/ft	Remarks
MM/DD	hh:mm:ss					
09/22	13:09:00	0	323.66	65.17		
		800	330.96	70.34	0.009	
		1000	371.33	77.82	0.202	
		1500	584.76	91.20	0.427	
		2000	800.52	101.83	0.432	
		2500	1017.88	109.88	0.435	
		3000	1234.27	117.30	0.433	
		3500	1451.32	124.86	0.434	
		4000	1666.96	134.30	0.431	
		4419	1847.59	143.55	0.431	
		4438	1855.43	148.55	0.413	
		4457	1863.12	149.27	0.405	

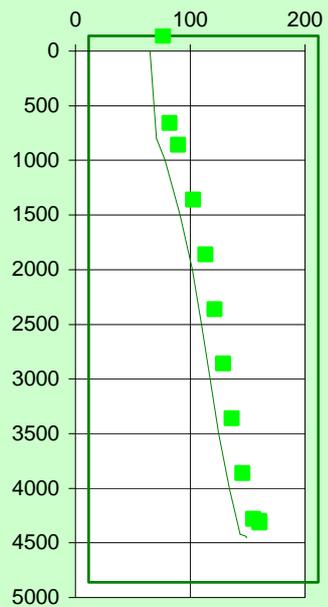
Gradient Plot

Pressure (PsiG)



Gradient Plot

Temperature (Deg F)





EXPERTEST PTY. LTD.

A.B.N. 85 008 034 062

Production Testing Report

Test Details

Customer	Essential Petroleum
Well Name	Port Fairy 1
Formation	N/A
Perforations	1347 - 1358.5mkb
Type Of Test	Static Gradient Survey
Operator	F.Heller
Date Of Test	23/09/02
Reference Date	23/09/02
Reference Time	0840
Control No.	Port Fairy 1 230902

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 23/09/02	Type Of Test: Static Gradient Survey						
		Operator: F.Heller	Control No.: Port Fairy 1 230902						
Data Filter: 200 Secs; 2 PSI Window									
Top EMP Serial Number: 2208 "									
Bottom EMP Serial Number: 2209 "									
EMP-Q Calibration I.D.: 2208-19244 "									
EMP-Q Calibration I.D.: 2209-20196 "									
Full Scale Pressure: 10000 psi "									
Full Scale Pressure: 10000 psi "									
Probe Started: 23/09/02 @ 08:40:00									
Probe Started: 23/09/02 @ 08:40:00									
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
23/09/2002	8:40:01	0.000	1.26	55.77	23/09/2002	8:40:01	0.000	5.67	56.16
23/09/2002	8:43:31	0.059	1.22	55.79	23/09/2002	8:43:31	0.059	5.62	55.91
23/09/2002	8:45:31	0.092	24.95	55.87	23/09/2002	8:45:31	0.092	8.13	55.95
23/09/2002	8:45:41	0.095	118.44	55.88	23/09/2002	8:45:41	0.095	150.94	55.96
23/09/2002	8:45:51	0.098	337.57	55.90	23/09/2002	8:45:51	0.098	337.77	55.97
23/09/2002	8:49:11	0.153	338.12	57.22	23/09/2002	8:49:11	0.153	338.28	56.60
23/09/2002	8:52:41	0.211	338.56	57.77	23/09/2002	8:52:41	0.211	338.52	57.18
23/09/2002	8:55:51	0.264	340.65	58.02	23/09/2002	8:55:51	0.264	340.70	57.57
23/09/2002	8:57:51	0.298	342.79	59.08	23/09/2002	8:57:31	0.292	342.90	58.23
23/09/2002	9:01:01	0.350	344.85	63.62	23/09/2002	8:59:11	0.320	344.93	59.87
23/09/2002	9:04:31	0.409	346.04	67.51	23/09/2002	9:02:31	0.375	345.71	64.26
23/09/2002	9:07:51	0.464	346.68	70.24	23/09/2002	9:06:01	0.434	346.41	67.78
23/09/2002	9:11:21	0.523	347.32	72.37	23/09/2002	9:09:21	0.489	346.86	70.61
23/09/2002	9:14:41	0.578	347.82	74.08	23/09/2002	9:12:51	0.548	347.48	73.05
23/09/2002	9:18:11	0.636	348.40	75.61	23/09/2002	9:16:11	0.603	348.07	74.88
23/09/2002	9:21:41	0.695	349.01	76.84	23/09/2002	9:19:41	0.661	348.37	76.41
23/09/2002	9:25:01	0.750	349.48	77.87	23/09/2002	9:23:11	0.720	349.12	77.61
23/09/2002	9:26:31	0.775	355.20	78.23	23/09/2002	9:26:21	0.773	351.66	78.43
23/09/2002	9:30:01	0.834	356.82	80.27	23/09/2002	9:26:31	0.775	357.94	78.47
23/09/2002	9:31:51	0.864	362.18	80.98	23/09/2002	9:30:01	0.834	358.69	80.02
23/09/2002	9:32:01	0.867	367.14	81.04	23/09/2002	9:31:51	0.864	364.88	80.66
23/09/2002	9:35:21	0.923	366.26	82.18	23/09/2002	9:32:01	0.867	369.13	80.72
23/09/2002	9:37:21	0.956	369.69	82.58	23/09/2002	9:35:21	0.923	367.89	81.77
23/09/2002	9:37:31	0.959	374.18	82.60	23/09/2002	9:37:21	0.956	372.14	82.22
23/09/2002	9:37:41	0.961	376.60	82.63	23/09/2002	9:37:31	0.959	376.60	82.25
23/09/2002	9:41:11	1.020	376.74	83.40	23/09/2002	9:40:51	1.014	378.40	82.99
23/09/2002	9:43:01	1.050	382.35	83.66	23/09/2002	9:43:01	1.050	384.97	83.35
23/09/2002	9:43:11	1.053	387.21	83.68	23/09/2002	9:43:11	1.053	389.55	83.37
23/09/2002	9:46:41	1.111	387.78	84.32	23/09/2002	9:46:41	1.111	389.44	84.01
23/09/2002	9:48:21	1.139	391.36	84.51	23/09/2002	9:48:21	1.139	393.88	84.24
23/09/2002	9:48:31	1.142	396.29	84.53	23/09/2002	9:48:31	1.142	398.82	84.27
23/09/2002	9:48:41	1.145	398.66	84.55	23/09/2002	9:51:51	1.198	400.46	84.83
23/09/2002	9:52:01	1.200	398.80	85.12	23/09/2002	9:53:51	1.231	404.39	85.09
23/09/2002	9:53:51	1.231	401.97	85.33	23/09/2002	9:54:01	1.234	409.03	85.11
23/09/2002	9:54:01	1.234	406.43	85.35	23/09/2002	9:54:11	1.236	411.47	85.13
23/09/2002	9:54:11	1.236	409.84	85.36	23/09/2002	9:57:41	1.295	411.47	85.70
23/09/2002	9:57:41	1.295	409.80	85.93	23/09/2002	9:59:21	1.323	414.81	85.91
23/09/2002	9:59:21	1.323	412.33	86.11	23/09/2002	9:59:31	1.325	419.26	85.92
23/09/2002	9:59:31	1.325	416.76	86.13	23/09/2002	9:59:41	1.328	422.58	85.95
23/09/2002	9:59:41	1.328	420.44	86.14	23/09/2002	10:03:11	1.386	422.55	86.52
23/09/2002	10:03:11	1.386	420.88	86.75	23/09/2002	10:04:51	1.414	425.57	86.73
23/09/2002	10:04:51	1.414	422.96	86.94	23/09/2002	10:05:01	1.417	430.30	86.75
23/09/2002	10:05:01	1.417	427.71	86.96	23/09/2002	10:05:11	1.420	433.04	86.77

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 23/09/02	Type Of Test: Static Gradient Survey						
		Operator: F.Heller	Control No.: Port Fairy 1 230902						
Data Filter: 200 Secs; 2 PSI Window									
Top EMP Serial Number: 2208 "									
Bottom EMP Serial Number: 2209 "									
EMP-Q Calibration I.D.: 2208-19244 "									
EMP-Q Calibration I.D.: 2209-20196 "									
Full Scale Pressure: 10000 psi "									
Full Scale Pressure: 10000 psi "									
Probe Started: 23/09/02 @ 08:40:00									
Probe Started: 23/09/02 @ 08:40:00									
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
23/09/2002	10:05:11	1.420	431.40	86.97	23/09/2002	10:08:31	1.475	433.20	87.30
23/09/2002	10:08:31	1.475	431.49	87.54	23/09/2002	10:10:21	1.506	439.79	87.53
23/09/2002	10:10:21	1.506	437.00	87.74	23/09/2002	10:10:31	1.509	444.39	87.55
23/09/2002	10:10:31	1.509	441.72	87.76	23/09/2002	10:13:51	1.564	444.22	88.10
23/09/2002	10:13:51	1.564	442.57	88.34	23/09/2002	10:15:51	1.598	449.73	88.36
23/09/2002	10:15:51	1.598	447.15	88.56	23/09/2002	10:16:01	1.600	454.25	88.38
23/09/2002	10:16:01	1.600	451.77	88.58	23/09/2002	10:19:31	1.659	455.29	88.94
23/09/2002	10:19:31	1.659	453.64	89.15	23/09/2002	10:21:21	1.689	459.56	89.16
23/09/2002	10:21:21	1.689	456.94	89.35	23/09/2002	10:21:31	1.692	464.31	89.18
23/09/2002	10:21:31	1.692	461.80	89.36	23/09/2002	10:21:41	1.695	466.38	89.20
23/09/2002	10:21:41	1.695	464.81	89.38	23/09/2002	10:25:01	1.750	466.35	89.73
23/09/2002	10:25:01	1.750	464.68	89.94	23/09/2002	10:26:51	1.781	471.72	89.95
23/09/2002	10:26:51	1.781	469.27	90.15	23/09/2002	10:27:01	1.784	476.47	89.97
23/09/2002	10:27:01	1.784	473.85	90.16	23/09/2002	10:30:21	1.839	477.13	90.52
23/09/2002	10:30:21	1.839	475.47	90.73	23/09/2002	10:32:21	1.873	484.19	90.77
23/09/2002	10:32:21	1.873	481.42	90.96	23/09/2002	10:32:31	1.875	487.68	90.79
23/09/2002	10:32:31	1.875	486.37	90.97	23/09/2002	10:36:01	1.934	488.14	91.36
23/09/2002	10:36:01	1.934	486.47	91.59	23/09/2002	10:38:01	1.967	491.12	91.60
23/09/2002	10:38:01	1.967	489.13	91.81	23/09/2002	10:38:11	1.970	493.48	91.62
23/09/2002	10:38:11	1.970	491.28	91.82	23/09/2002	10:38:21	1.973	496.52	91.64
23/09/2002	10:38:21	1.973	494.15	91.84	23/09/2002	10:38:31	1.975	498.94	91.66
23/09/2002	10:38:31	1.975	497.36	91.86	23/09/2002	10:42:01	2.034	499.30	92.23
23/09/2002	10:42:01	2.034	497.63	92.47	23/09/2002	10:43:51	2.064	502.11	92.46
23/09/2002	10:43:51	2.064	500.00	92.67	23/09/2002	10:44:01	2.067	504.83	92.48
23/09/2002	10:44:01	2.067	502.64	92.68	23/09/2002	10:44:11	2.070	507.51	92.50
23/09/2002	10:44:11	2.070	505.29	92.70	23/09/2002	10:44:21	2.073	509.93	92.52
23/09/2002	10:44:21	2.073	508.29	92.72	23/09/2002	10:47:41	2.128	510.17	93.06
23/09/2002	10:47:41	2.128	508.53	93.27	23/09/2002	10:49:31	2.159	512.36	93.30
23/09/2002	10:49:31	2.159	513.27	93.49	23/09/2002	10:49:41	2.161	515.63	93.31
23/09/2002	10:49:41	2.161	516.77	93.51	23/09/2002	10:49:51	2.164	519.10	93.33
23/09/2002	10:49:51	2.164	516.77	93.51	23/09/2002	10:50:01	2.167	521.25	93.36
23/09/2002	10:50:01	2.167	519.73	93.53	23/09/2002	10:53:21	2.223	521.18	93.92
23/09/2002	10:53:21	2.223	519.52	94.14	23/09/2002	10:55:21	2.256	524.76	94.18
23/09/2002	10:55:21	2.256	522.47	94.37	23/09/2002	10:55:31	2.259	528.81	94.19
23/09/2002	10:55:31	2.259	526.35	94.38	23/09/2002	10:55:41	2.261	531.88	94.21
23/09/2002	10:55:41	2.261	530.21	94.40	23/09/2002	10:59:11	2.320	532.13	94.76
23/09/2002	10:59:11	2.320	530.48	94.96	23/09/2002	10:59:51	2.331	536.83	94.84
23/09/2002	10:59:51	2.331	534.32	95.04	23/09/2002	11:00:01	2.334	540.33	94.86
23/09/2002	11:00:01	2.334	537.97	95.06	23/09/2002	11:00:11	2.336	542.70	94.88
23/09/2002	11:00:11	2.336	540.84	95.08	23/09/2002	11:03:41	2.395	543.04	95.46
23/09/2002	11:03:41	2.395	541.39	95.69	23/09/2002	11:05:21	2.423	546.94	95.66
23/09/2002	11:05:21	2.423	544.87	95.88	23/09/2002	11:05:31	2.425	550.42	95.68
23/09/2002	11:05:31	2.425	548.01	95.90	23/09/2002	11:05:41	2.428	553.77	95.70
23/09/2002	11:05:41	2.428	551.48	95.92					

EXPERTEST PTY. LTD.		Electronic Memory Recorder							
		Customer: Essential Petroleum	Well Name: Port Fairy 1						
		Perforations: 1347 - 1358.5mkb	Formation: N/A						
		Date Of Test: 23/09/02	Type Of Test: Static Gradient Survey						
		Operator: F.Heller	Control No.: Port Fairy 1 230902						
Data Filter: 200 Secs; 2 PSI Window									
Top EMP Serial Number: 2208 "									
Bottom EMP Serial Number: 2209 "									
EMP-Q Calibration I.D.: 2208-19244 "									
EMP-Q Calibration I.D.: 2209-20196 "									
Full Scale Pressure: 10000 psi "									
Full Scale Pressure: 10000 psi "									
Probe Started: 23/09/02 @ 08:40:00									
Probe Started: 23/09/02 @ 08:40:00									
TOP GAUGE					BOTTOM GAUGE				
Date	Real Time	Elapsed Time (Hrs)	Top Pressure (PSIG)	Top Temp. (°F)	Date	Real Time	Elapsed Time (Hrs)	Bottom Pressure (PSIG)	Bottom Temp. (°F)
23/09/2002	11:09:11	2.486	552.42	96.50	23/09/2002	11:09:11	2.486	554.06	96.25
23/09/2002	11:11:01	2.517	557.34	96.69	23/09/2002	11:11:01	2.517	559.76	96.47
23/09/2002	11:11:11	2.520	560.96	96.70	23/09/2002	11:11:11	2.520	563.27	96.49
23/09/2002	11:11:21	2.523	563.81	96.72	23/09/2002	11:11:21	2.523	565.36	96.51
23/09/2002	11:14:41	2.578	563.41	97.26	23/09/2002	11:14:41	2.578	565.04	97.03
23/09/2002	11:16:31	2.609	566.87	97.45	23/09/2002	11:16:31	2.609	569.36	97.25
23/09/2002	11:16:41	2.611	570.79	97.46	23/09/2002	11:16:41	2.611	573.10	97.26
23/09/2002	11:16:51	2.614	573.91	97.48	23/09/2002	11:16:51	2.614	575.44	97.28
23/09/2002	11:20:21	2.673	574.30	98.00	23/09/2002	11:20:21	2.673	575.94	97.79
23/09/2002	11:22:01	2.700	576.60	98.15	23/09/2002	11:22:01	2.700	578.82	97.97
23/09/2002	11:22:11	2.703	581.21	98.17	23/09/2002	11:22:11	2.703	583.85	97.98
23/09/2002	11:22:21	2.706	584.79	98.18	23/09/2002	11:22:21	2.706	586.53	98.00
23/09/2002	11:25:41	2.761	585.24	98.68	23/09/2002	11:25:41	2.761	586.86	98.48
23/09/2002	11:27:51	2.798	590.79	98.89	23/09/2002	11:27:51	2.798	593.45	98.71
23/09/2002	11:28:01	2.800	596.23	98.91	23/09/2002	11:28:01	2.800	598.02	98.72
23/09/2002	11:31:31	2.859	596.35	99.40	23/09/2002	11:31:31	2.859	597.97	99.20
23/09/2002	11:33:21	2.889	600.78	99.57	23/09/2002	11:33:21	2.889	603.35	99.39
23/09/2002	11:33:31	2.892	606.20	99.59	23/09/2002	11:33:31	2.892	608.63	99.40
23/09/2002	11:36:51	2.948	607.28	100.04	23/09/2002	11:36:51	2.948	608.90	99.83
23/09/2002	11:39:21	2.989	597.54	100.25	23/09/2002	11:39:11	2.986	606.11	100.05
23/09/2002	11:39:31	2.992	588.17	100.26	23/09/2002	11:39:21	2.989	597.18	100.07
23/09/2002	11:39:41	2.995	578.24	100.26	23/09/2002	11:39:31	2.992	587.82	100.08
23/09/2002	11:39:51	2.998	567.82	100.25	23/09/2002	11:39:41	2.995	577.70	100.08
23/09/2002	11:40:01	3.000	556.96	100.23	23/09/2002	11:39:51	2.998	567.18	100.08
23/09/2002	11:40:11	3.003	545.75	100.18	23/09/2002	11:40:01	3.000	556.20	100.07
23/09/2002	11:40:21	3.006	534.97	100.12	23/09/2002	11:40:11	3.003	545.03	100.05
23/09/2002	11:40:31	3.009	523.99	100.04	23/09/2002	11:40:21	3.006	534.15	100.01
23/09/2002	11:40:41	3.011	511.83	99.94	23/09/2002	11:40:31	3.009	522.90	99.96
23/09/2002	11:40:51	3.014	499.43	99.81	23/09/2002	11:40:41	3.011	510.76	99.90
23/09/2002	11:41:01	3.017	486.65	99.66	23/09/2002	11:40:51	3.014	498.02	99.83
23/09/2002	11:41:11	3.020	473.39	99.49	23/09/2002	11:41:01	3.017	485.09	99.73
23/09/2002	11:41:21	3.023	459.75	99.29	23/09/2002	11:41:11	3.020	471.74	99.62
23/09/2002	11:41:31	3.025	445.06	99.06	23/09/2002	11:41:21	3.023	457.68	99.49
23/09/2002	11:41:41	3.028	430.65	98.81	23/09/2002	11:41:31	3.025	443.01	99.35
23/09/2002	11:41:51	3.031	416.03	98.54	23/09/2002	11:41:41	3.028	428.57	99.18
23/09/2002	11:42:01	3.034	401.26	98.24	23/09/2002	11:41:51	3.031	413.79	99.00
23/09/2002	11:42:11	3.036	386.43	97.91	23/09/2002	11:42:01	3.034	398.95	98.80
23/09/2002	11:42:21	3.039	371.61	97.56	23/09/2002	11:42:11	3.036	384.04	98.58
23/09/2002	11:42:31	3.042	357.01	97.19	23/09/2002	11:42:21	3.039	369.17	98.34
23/09/2002	11:43:41	3.061	354.93	94.50	23/09/2002	11:42:31	3.042	355.63	98.08
23/09/2002	11:44:51	3.081	352.74	91.96	23/09/2002	11:43:51	3.064	353.37	95.76
23/09/2002	11:46:11	3.103	350.56	88.58	23/09/2002	11:45:01	3.084	351.20	93.53
23/09/2002	11:49:01	3.150	348.56	81.38	23/09/2002	11:46:11	3.103	349.12	90.93

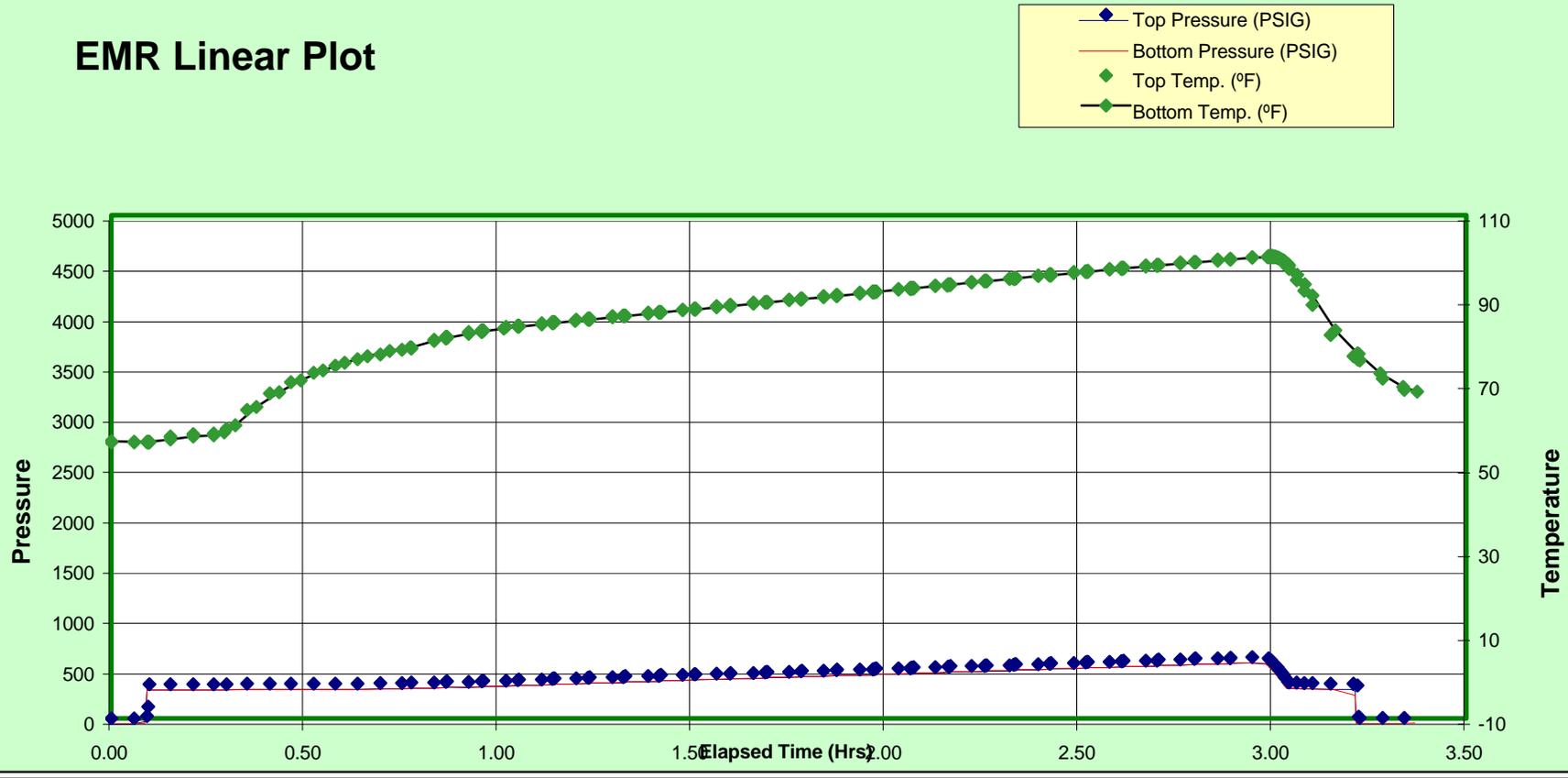
EXPERTEST PTY. LTD.

Electronic Memory Recorder - Linear Plot



Customer: Essential Petroleum	Well Name: Port Fairy 1	Formation: N/A
Perforations: 1347 - 1358.5mkb	Type Of Test: Static Gradient Surve	Operator: F.Heller
Date Of Test: 23/09/02		Control No.: Port Fairy 1 230902
Top EMP Serial Number: 2208 "		Bottom EMP Serial Number: 2209 "
EMP-Q Calibration I.D.: 2208-19244 "		EMP-Q Calibration I.D.: 2209-20196 "
Full Scale Pressure: 10000 psi "		Full Scale Pressure: 10000 psi "

EMR Linear Plot



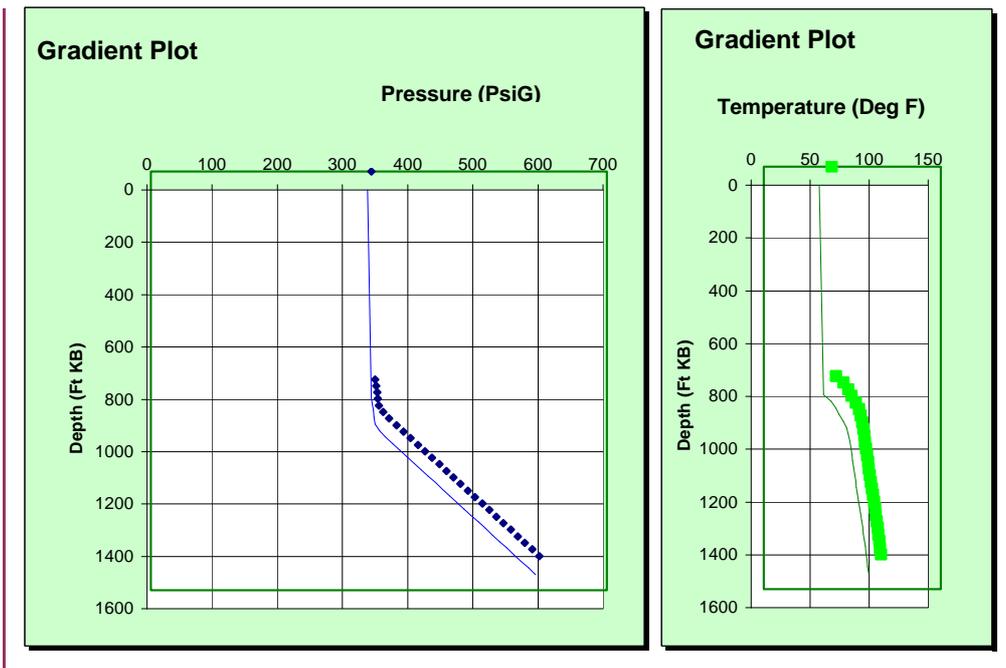


Static Gradient Report

Well Name.....Port Fairy 1

Operator: F.Heller		Control No.: Port Fairy 1 230902
Test Type: Static Gradient Survey		Recorder Depth: 1500ft
Test Date: 23/09/2002		Recorder Position: Top
		Serial Number: 2208

Reading Time		Depth Ft KB	Pressure PsiG	Temp. Deg F	Gradient Psi/ft	Remarks
MM/DD	hh:mm:ss					
09/23	8:40:00	0	338.67	57.89		
		794	344.46	61.48	0.007	
		819	346.07	67.67	0.064	
		844	347.21	71.86	0.046	
		869	348.13	74.58	0.037	
		894	349.59	78.07	0.058	
		919	356.81	80.75	0.289	
		944	365.92	82.46	0.364	
		969	376.85	83.59	0.437	
		994	387.86	84.46	0.440	
		1019	398.88	85.28	0.441	
		1044	409.89	86.06	0.440	
		1069	420.90	86.89	0.440	
		1094	431.52	87.68	0.425	
		1119	442.66	88.51	0.446	
		1144	453.72	89.30	0.442	
		1169	464.73	90.08	0.440	
		1194	475.54	90.89	0.432	
		1219	486.54	91.74	0.440	
		1244	497.72	92.60	0.447	
		1269	508.58	93.43	0.434	
		1294	519.58	94.32	0.440	
		1319	530.48	94.96	0.436	
		1344	541.44	95.81	0.438	
		1369	552.48	96.63	0.442	
		1394	563.49	97.40	0.440	
		1419	574.39	98.11	0.436	
		1444	585.31	98.85	0.437	
		1469	596.39	99.53	0.443	



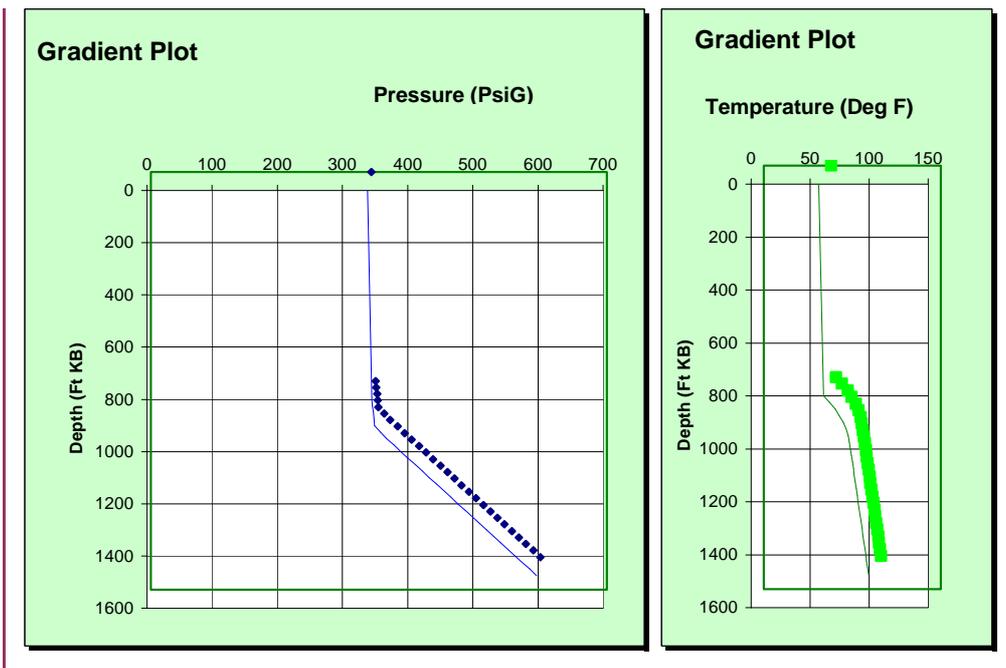


Static Gradient Report

Well Name.....Port Fairy 1

Operator: F.Heller		Control No.: Port Fairy 1 230902
Test Type: Static Gradient Survey		Recorder Depth: 1500ft
Test Date: 23/09/2002		Recorder Position: Bottom
		Serial Number: 2209

Reading Time		Depth Ft KB	Pressure PsiG	Temp. Deg F	Gradient Psi/ft	Remarks
MM/DD	hh:mm:ss					
09/23	8:40:00	0	338.59	57.37		
		800	345.28	61.26	0.008	
		825	346.29	66.45	0.040	
		850	347.19	71.32	0.036	
		875	348.04	74.63	0.034	
		900	349.46	78.32	0.057	
		925	358.63	80.39	0.367	
		950	367.62	82.12	0.360	
		975	378.49	83.25	0.435	
		1000	389.50	84.16	0.440	
		1025	400.53	85.01	0.441	
		1050	411.55	85.85	0.441	
		1075	422.56	86.65	0.440	
		1100	433.25	87.48	0.428	
		1125	444.30	88.30	0.442	
		1150	455.37	89.10	0.443	
		1175	466.40	89.88	0.441	
		1200	477.18	90.67	0.431	
		1225	488.19	91.51	0.440	
		1250	499.37	92.38	0.447	
		1275	510.21	93.24	0.434	
		1300	521.22	94.12	0.440	
		1325	532.13	94.75	0.436	
		1350	543.08	95.58	0.438	
		1375	554.11	96.40	0.441	
		1400	565.09	97.17	0.439	
		1425	576.00	97.92	0.436	
		1450	586.92	98.64	0.437	
		1475	597.99	99.32	0.443	



Appendix 9: Palynological Report

**Palynological analysis of cuttings
samples from Port Fairy-1,
onshore Otway Basin.**

by

Alan D. Partridge

Biostrata Pty Ltd

A.B.N. 39 053 800 945

Biostrata Report 2002/04

3rd May 2002

Palynological analysis of cuttings samples from Port Fairy–1, onshore Otway Basin.

by Alan D. Partridge

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Palynological analysis of cuttings samples from Port Fairy–1, onshore Otway Basin.

by Alan D. Partridge

INTERPRETATIVE DATA

SUMMARY.

Ten cuttings samples have been analysed over a 689 metre interval from the Sherbrook and Otway Groups in the Port Fairy–1 exploration well in the Portland Trough. The spore-pollen and microplankton assemblages recovered are diagnostic of the latest Maastrichtian Timboon Sandstone or Massacre Shale between 856 and 874m at the top of the Sherbrook Group, and the Turonian Flaxman and Waarre Formations between 1351 and 1387m at the base of the group. The palynology further indicates that the stratigraphic interval age equivalent to the Waarre Unit C reservoir sands is absent in Port Fairy–1. The spore-pollen assemblages recovered from the bottom ~150 metres penetrated in the well are diagnostic of the Late Albian Eumeralla Formation. Recovery of a distinctive new angiosperm species from these cuttings suggests that part or whole this section has not previously been intersected in the subsurface and Port Fairy–1 may contain the youngest known Eumeralla Formation in the Otway Basin. The stratigraphic distribution of all sample analysed is summarised in the following table:

Table 1. Stratigraphic and palynological summary of Port Fairy–1, Otway Basin.

AGE	STRATIGRAPHY	PALYNOLOGY	DEPTHS (mKB)
Recent to Paleocene		NOT ANALYSED	
Late Maastrichtian	SHERBROOK GROUP Massacre Shale and/or Timboon Sandstone	Upper <i>F. longus</i> SP Zone and <i>M. druggii</i> MP Zone	856 to 874m
Campanian to Coniacian	Paaratte Formation Skull Creek Mudstone Nullawarre Greensand Belfast Mudstone	NOT ANALYSED (but present in cavings)	
Late Turonian	Flaxman Formation	<i>G. ancorus</i> SP Subzone and <i>K. polypes</i> MP Subzone	1351 to 1357m
Early Turonian	Waarre Formation Units A and B	<i>P. mawsonii</i> SP Zone and <i>C. edwardsii</i> MP Acme Subzone	1369 to 1387m
Albian	OTWAY GROUP Eumeralla Formation	<i>P. pannosus</i> SP Zone	1405 to 1545m

SP = Spore-Pollen; MP = Microplankton

INTRODUCTION

Only cutting samples were submitted for analysis from the Port Fairy–1 well drilled by Essential Petroleum Resources Limited as no core or sidewall cores were taken in the well. An initial batch of eight samples was received and forwarded to Laola Pty Ltd in Perth on 18th February 2002 for palynological processing, and the prepared palynological slides received back on 1st March. These were immediately examined with an initial Provisional report submitted the same day, and a subsequent updated report with initial quantitative data submitted on 10th March. Based on these results an additional two cuttings samples at 856-59m and 1368m were selected for analysis and these were forwarded to Laola Pty Ltd on 18th March. Prepared palynological slides were received back on 27th March, and the third Provisional report was submitted the same day.

The zones identified from and ages assigned to the samples (Table 1) conform to the standard Australian palynological zonation scheme of Helby *et al.* (1987), subsequently improved and modified by Partridge (1999). Zone identification criteria, confident ratings and microplankton abundances in the samples are summarised on Table 2. The amount of sample processed averaged 15.7 gram, with the exception of the shallowest samples from which 53 grams was processed, to give mostly moderated to high yields of kerogen which contained moderate to high concentrations of palynomorphs which were mostly well-preserved (Tables 3 & 4). Species recorded during the microscope examination are listed in Table 5 & 6. Author citations for most species recorded in can be sourced from the Dettmann (1963), Helby *et al.* (1987), or the indexes for dinocysts and other organic-walled microplankton prepared by Fensome *et al.* (1990) and Williams *et al.* (1998).

GEOLOGICAL DISCUSSION

The ten cuttings samples analysed all gave good assemblages which can be confidently assigned to diagnostic zones and are not significantly complicated by downhole cavings. The samples can be grouped into three associations representing the top of the Sherbrook Group, the basal ~50 metres of the Sherbrook Group and the top ~150 metres of the underlying Otway Group. A section of 477 metres representing the bulk of the Sherbrook Group was not sampled between 874 and 1351m, but the likely zones present in this interval can be inferred from caved index species recorded in deeper cuttings.

The two shallowest samples contain diverse assemblages of latest Maastrichtian age (Upper *F. longus* Zone), which are representative of either the uppermost part of the Timboon Sandstone or the basal part of the Massacre Shale according to the correlation between the zones and lithological nomenclature advocated by Partridge (2001). Noteworthy in these two assemblages was the lack of any obvious down-hole contamination from either the Pebble Point Formation or overlying Pember Mudstone.

Between these and the top of the next sample from the Flaxman Formation is a 477 metre sampling gap. However the presence of caved specimens of *Nelsoniella aceras*, *Amphidiadema denticulata*, *Isabelidinium cretaceum*, *Odontochitina porifera*, *Chatangiella tripartita* and *Isabelidinium balmei* in the deeper samples suggests that section age equivalent to the Belfast Mudstone and younger Skull Creek Mudstone is present in the Port Fairy-1 well.

The five samples between 1351 and 1387m from the basal 40 to 50 metres of the Sherbrook Group all contain diagnostic assemblages. The top two samples at 1351 and 1357m contain distinctive assemblages belonging to the *G. ancorus* and *K. polypes* Subzones which are diagnostic of the Flaxman Formation. The significant abundance or spike of *Cupressacites* pollen (average 24%) in these two samples further restricts them to the upper part of the formation equivalent to the Banoon Member of Partridge (2001). The bottom three samples at 1369m, 1381m and 1387m also contain distinctive assemblages. The microplankton are referred to the *C. edwardsii* Acme Subzone, and the spore-pollen probably all belong to the *H. trinalis* Subzone even though the eponymous species was only confidently recorded at 1369m. The microplankton subzone is characteristic of Units A and B or the Waarre Formation in the Port Campbell Embayment, while the spore-pollen subzone extends slightly higher into the lower part of Unit C (= Unit Ca of Partridge 2001; fig.2). As there is only a 12 metre sampling gap between the Flaxman and Waarre assemblages it appears likely that the main reservoir sandstones that occur in the upper part of Unit C of the Waarre Formation are absent in the Port Fairy-1 well. Further, as there is no obvious caved species in the cuttings representative of either the *Laevigatosporites musa* or *Isabelidinium evexus* Subzones, which are characteristic of the upper part of Unit C, the most likely scenario is that the Flaxman Formation rests unconformably on Unit B of the Waarre Formation.

Finally, the deepest three samples between 1405 and 1545m, although contaminated with significant caved material, can all be confidently assigned to the *P. pannosus* Zone which is characteristic of the youngest part of the Eumeralla Formation. The occurrence in these three samples of a distinctive new pollen species here called *Tricolpites melusina* sp. nov., that has not previously been reported from

either the Eumeralla, Waarre or younger formations, suggests that the Port Fairy–1 well may have penetrated a younger part of the Eumeralla Formation that has not been intersected before.

BIOSTRATIGRAPHY

Upper *Forcipites longus* spore-pollen & *Manumiella druggii* microplankton Zones

Interval: 856 to 874 metres

Age: Latest Maastrichtian.

The spore-pollen assemblages from the shallowest two cuttings are dominated by angiosperm pollen, principally *Proteacidites* species (average 31% of spore-pollen count), and are no younger than the Upper *Forcipites* (al. *Tricolpites*) *longus* Zone based on the youngest occurrences of a number of species the most reliable of which are *Forcipites longus*, *Grapnelispora evansii*, *Nothofagidites senectus*, *Ornamentifera sentosa*, *Proteacidites* (al. *Cranwellipollis*) *palisadus*, *Proteacidites reticuloconcaus* ms and *Tricolporites lilliei*. The samples are also no older than the Upper *F. longus* Zone based on the oldest occurrence of *Tripunctisporis maastrichtiensis* and the moderate abundances of *Gambierina rudata* (~8%).

Marine microplankton are moderately abundant (average 15% of SP + MP count) in the samples, but species diversity is low with the assemblages overwhelmingly dominated by the index species *Manumiella conorata* (>70% of MP count) which is diagnostic of the *M. druggii* Zone.

***Phyllocladidites mawsonii* spore-pollen & *Palaeohystrichophora infusorioides* microplankton Zones**

Interval: 1351 to 1387 metres.

Age: Turonian.

The assemblages from the five cuttings samples from the basal ~50 metres of the Sherbrook Group are consistent with the revised understanding of these two broad zones, and can be further subdivided into the new subzones recognised by Partridge (1999, 2001). The composite spore-pollen assemblage recorded from the interval has a diversity of >50 species with the eponymous species recorded in all samples, but lacks *Hoegisporis uniformis* and other index species diagnostic of the older Cenomanian *H. uniformis* Zone (formerly the *A. distocarinus* Zone), and any significant species of the younger overlying *T. apoxyxinus* Zone. The composite microplankton assemblage has a recorded diversity of >35 species, and as such is of sufficient diversity for confident assignment to the *P. infusorioides* Zone, even though the eponymous species was only recorded in the shallowest two cuttings samples. The *P. infusorioides* Zone was originally defined on negative criteria. These are the absence of index species that, either become extinct at the top of the underlying *D. multispinum* Zone, or have their first appearance in the overlying *C. striatoconum* Zone (Helby *et al.*, 1987). Subsequently, other index species which have abundance acmes or extinctions within the *P. infusorioides* Zone have been documented and these form the basis of the new subzones (Partridge, 1999, 2001). As with other wells analysed from the Otway Basin none of the diagnostic species of the Cenomanian *D. multispinum* Zone have been found in the Port Fairy–1 well. Criteria for identification of the subzones is discussed in the following:

***Gleicheniidites ancorus* spore-pollen & *Kiokansium polypes* microplankton Subzones**

Interval: 1351 to 1357 metres.

Age: late Turonian.

The two cuttings are assigned to the upper part of the *G. ancorus* Subzone on the presence of the eponymous species and the spike in the abundance of *Cupressacites* pollen. Supporting criteria for the subzone identification is the youngest occurrences of *Appendicisporites distocarinus* and *Laevigatosporites musa* ms and presence of *Coptospora pileolus* ms. The spore-pollen assemblages are dominated by *Cupressacites* pollen (average 24%), *Podocarpidites* pollen (15%), and spores of *Gleicheniidites circinidites* (8.7%).

The samples are also interpreted to be no younger than the *K. polypes* Subzone based on the LADs of the index species *Kiokansium polypes* and *Valensiella griphus*. The microplankton assemblages are dominated by the colonial algae *Amosopollis cruciformis* (average 27%) and the dinocyst *Heterosphaeridium* spp. (13.5%). The index species *Palaeohystrichophora infusorioides*, *K. polypes* and *V. griphus* are all present in moderate abundances (range 3 to 5%). The moderate abundance of *Cribroperidinium edwardsii* (4%) in the deeper sample is considered to represent reworking rather than either an extension of the range of that species or possible top for the underlying subzones.

***Hoegisporis trinalis* spore-pollen & *Cribroperidinium edwardsii* microplankton Acme Subzones**
Interval: 1369 to 1387 metres.
Age: early Turonian.

The three cuttings all probably belong to the *H. trinalis* Subzone on the consistent presence of the spores *Appendicisporites distocarinatus* and *Verrucosisporites admirabilis* ms, even though the eponymous species *Hoegisporis trinalis* was only confidently recorded from the shallowest sample at 1369m. The spore-pollen assemblages are dominated by spores of *Cyathidites* (average 19%) and *Gleicheniidites circinidites* (17%), with a secondary dominance of *Podocarpidites* pollen (12%).

A samples can also be assigned to the *C. edwardsii* Acme on the dominance (>20%) of the eponymous species in the assemblages. The consistent presence of *Palaeoperidinium cretaceum* (4%) supports this assignment as does the sharp decline in abundance of *Amosopollis cruciformis* and *Heterosphaeridium* spp. Most of the 5% abundance of the latter two species is probably due to cavings.

***Phimopollenites pannosus* spore-pollen Zone**
Interval: 1405 to 1545 metres
Age: Late Albian.

The three deepest cuttings samples all contain Early Cretaceous spore-pollen assemblages typical of the Otway Group mixed with spore-pollen and microplankton caved from the overlying Sherbrook Group. The recorded assemblages are dominated by smooth trilete spores assigned to *Cyathidites* (average 26%) and bisaccate pollen assigned to *Podocarpidites* (16%), and show an increase in the abundance of *Corollina torosa* pollen (from <1% to 3%) and decline in *Gleicheniidites circinidites* spores (from 14% to 4%) relative to the overlying *P. mawsonii* Zone. The samples are assigned to the *P. pannosus* Zone on the presence of *Coptospora paradoxa* at 1405 and 1441m and the eponymous species *Phimopollenites pannosus* at 1441 and 1545m. A position high in the zone is suggested based on the frequent presence (>2%) of a new angiosperm species here informally named *Tricolpites melusina* sp. nov. This distinctive species has not been recorded from other sections of the *P. pannosus* Zone analysed from the Otway Basin, and may in future provide a useful criterion for subdivision of the zone. The moderate abundance (5 to 11%) of microplankton recorded in the counts (Table 5) consists mainly of caved species in the cuttings. Only *Sigmopollis carbonis*, *Horologinella* sp. cf. *H. lineata* and perhaps *Micrhystridium* sp. are considered to be *in situ* and these non-marine microplankton represent <2% of the assemblage count.

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

Alpha codes: Linked to sample		Numeric codes: Linked to fossil assemblage		
A	Core	1	Excellent confidence:	High diversity assemblage recorded with key zone species.
B	Sidewall core	2	Good confidence:	Moderately diverse assemblage recorded with key zone species.
C	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.

Table 1: Interpretative data from of Port Fairy–1, Otway Basin.

Sample Type	Depth	Spore-Pollen Zones (Microplankton Zones) and AGES	CR*	Comments & Key Species Present
Cuttings	856-59m	Upper <i>Forcipites longus</i> Zone (<i>Manumiella druggii</i> Zone) Latest MAASTRICHTIAN	D1 D3	MP 20% of total SP + MP count and dominated by <i>Manumiella conorata</i> . SP count dominated by <i>Proteacidites</i> pollen with FAD of <i>Tripunctisporis maastrichtiensis</i> and common <i>Gambierina rudata</i> at 10% confirming Upper subzone.
Cuttings	874m	Upper <i>Forcipites longus</i> Zone (<i>Manumiella druggii</i> Zone) Latest MAASTRICHTIAN	D1 D3	MP 12% dominated by <i>Manumiella conorata</i> . SP count dominated by <i>Proteacidites</i> pollen. Zones confirmed by FADs of <i>Forcipites longus</i> and <i>Manumiella conorata</i> .
Cuttings	1351m	<i>Gleicheniidites ancorus</i> Subzone (<i>Kiokansium polypes</i> Subzone) late TURONIAN	D1 D2	MP 11% dominated by <i>Amosopollis cruciformis</i> . SP count dominated by <i>Cupressacites</i> pollen 25% LADs of <i>Kiokansium polypes</i> and <i>Valensiella griphus</i> confirms assignment to <i>K. polypes</i> Subzone of <i>P. infusorioides</i> Zone.
Cuttings	1357m	<i>Gleicheniidites ancorus</i> Subzone (<i>Kiokansium polypes</i> Subzone) late TURONIAN	D1 D2	MP 16% dominated by <i>Amosopollis cruciformis</i> . SP count dominated by <i>Cupressacites</i> pollen 23% which with FAD of <i>Gleicheniidites ancorus</i> confirms assignment to subzone of <i>Phyllocladidites mawsonii</i> Zone.
Cuttings	1369m	<i>Phyllocladidites mawsonii</i> Zone & <i>Hoegisporis trinalis</i> Subzone (<i>C. edwardsii</i> Acme Subzone) early TURONIAN	D1 D2	MP 6% of total count with <i>Cribroperidinium edwardsii</i> at 26% of MP count. SP dominated by spores of <i>Gleicheniidites</i> 20% and <i>Cyathidites</i> 19% and containing LAD of <i>Hoegisporis trinalis</i> .
Cuttings	1381m	<i>Phyllocladidites mawsonii</i> Zone (<i>C. edwardsii</i> Acme Subzone) early TURONIAN	D1 D2	MP 14% of total count with <i>Cribroperidinium edwardsii</i> at 26% of MP count. SP count dominated by spores of <i>Gleicheniidites</i> 13% and <i>Cyathidites</i> 17%.
Cuttings	1387m	<i>Phyllocladidites mawsonii</i> Zone (<i>C. edwardsii</i> Acme Subzone) early TURONIAN	D1 D2	MP 10% of total count with <i>Cribroperidinium edwardsii</i> at 16% of MP count. SP count dominated by spores of <i>Gleicheniidites</i> 19% and <i>Cyathidites</i> 21%.
Cuttings	1405m	<i>Phimopollenites pannosus</i> Zone Late ALBIAN	D1	<i>In situ</i> non-marine MP <1% of total count. SP count dominated by <i>Cyathidites</i> spores 32% and contains LADs of <i>Coptospora paradoxa</i> , <i>Tricolpites melusina</i> sp. nov. and frequent <i>Crybelosporites striatus</i> and <i>Corollina torosa</i> .
Cuttings	1441m	<i>Phimopollenites pannosus</i> Zone Late ALBIAN	D1	<i>In situ</i> non-marine MP <2% of total count. SP count dominated by <i>Cyathidites</i> spores 31% and includes LAD of <i>Phimopollenites pannosus</i> .
Cuttings	1545m	<i>Phimopollenites pannosus</i> Zone Late ALBIAN	D5	<i>In situ</i> non-marine MP <2% of total count. SP count dominated by <i>Podocarpidites</i> pollen 26% and <i>Cyathidites</i> spores 16%. Sample contains significant down-hole contamination.

FAD & LAD = Last & First Appearance Datums.
MP = Microplankton
SP = Spore-pollen

BASIC DATA

Table 3: Basic sample data for Port Fairy–1, Otway Basin.

Sample Type	Depth	Lithology & Texture of cuttings	Wt (grams)	VOM (cc)	Lab. Yield
Cuttings	856-59m	Black-dark grey argillaceous quartz sandstone, very fine texture.	52.9	2.8	0.052
Cuttings	874m	Dark grey mudstone, very fine texture.	15.1	0.3	0.019
Cuttings	1351m	Black mudstone, fine texture.	15.3	0.7	0.045
Cuttings	1357m	Dark grey mudstone, fine-medium texture.	15.4	0.5	0.032
Cuttings	1369m	Medium grey mudstone, coarse-grain texture.	18.6	1.4	0.075
Cuttings	1381m	Medium grey mudstone, fine-medium texture.	15.0	1.1	0.073
Cuttings	1387m	Medium-light grey mudstone, powder to lumpy texture.	15.1	0.9	0.059
Cuttings	1405m	Medium grey mudstone, very fine texture.	15.3	0.4	0.026
Cuttings	1441m	Dark grey mudstone, medium texture.	15.4	0.4	0.025
Cuttings	1545m	Dark grey mudstone, lumpy texture.	15.3	0.2	0.013

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 for Port Fairy–1, Otway Basin.

Sample Type	Depth	Visual Yield	Palynomorph Concentration	Preservation	No. SP Species	No. MP Species
Cuttings	856-59m	High	Moderate	Poor-good	43+	8+
Cuttings	874m	High	Moderate-high	Good	43+	6+
Cuttings	1351m	High	High	Good	37+	27+
Cuttings	1357m	High	High	Fair-good	32+	25+
Cuttings	1369m	High	Moderate	Poor-fair	41+	17+
Cuttings	1381m	High	High	Poor-fair	32+	26+
Cuttings	1387m	High	Moderate-high	Poor	37+	23+
Cuttings	1405m	Moderate	Moderate	Poor-fair	33+	13+
Cuttings	1441m	High	Moderate	Poor-fair	37+	6+
Cuttings	1545m	Moderate	Low	Poor	26+	3+

Averages:

36.1

15.4

Table 5: Species abundances and occurrences in Port Fairy–1, Otway Basin.

Sample Type:	Cuttings	Cuttings
Depth:	856-59m	874m
Spore-Pollen Species		
Angiosperm pollen undiff.	0.6%	2.8%
<i>Australopollis obscurus</i>	1.2%	
<i>Araucariacites australis</i>	0.6%	2.1%
<i>Baculatisporites</i> spp.	2.4%	
<i>Beaupreaidites orbiculatus</i>		cf.
<i>Camarozonosporites apiculata</i> †	X	X
<i>Camarozonosporites bullatus</i>	X	X
<i>Camarozonosporites heskermensis</i>		X
<i>Clavifera triplex</i>	0.6%	X
<i>Cyathidites</i> spp. large >40µm	X	0.7%
<i>Cyathidites</i> spp. small <40µm	4.2%	2.8%
<i>Densoisporites velatus</i>		0.7%
<i>Dilwynites granulatus</i>	2.4%	
<i>Dictyophyllidites</i> spp.	1.2%	2.1%
<i>Forcipites longus</i>		X
<i>Gambierina rudata</i>	9.5%	6.4%
<i>Gleicheniidites circinidites</i>	3.0%	6.4%
<i>Grapnelispora evansii</i>	X	
<i>Herkosporites elliotii</i>	1.8%	1.4%
<i>Illexpollenites</i> spp.		0.7%
<i>Laevigatosporites major</i>	X	X
<i>Laevigatosporites ovatus</i>	5.4%	2.8%
<i>Latrobosporites amplus</i>	X	1.4%
<i>Liliacidites</i> spp.	X	1.4%
<i>Lygistepollenites balmei</i>	0.6%	0.7%
<i>Lygistepollenites florinii</i>	1.8%	1.4%
<i>Marattisporites scabratus</i>	1.2%	
<i>Microalatidites paleogenicus</i>		0.7%
<i>Microcachryidites antarcticus</i>	1.2%	2.1%
<i>Nothofagidites endurus</i>		X
<i>Nothofagidites senectus</i>	X	1.4%
<i>Ornamentifera sentosa</i>	X	
<i>Peninsulapollis gillii</i>	0.6%	
<i>Peromonolites baculatus</i> †	X	
<i>Perotrilites</i> spp.		X
<i>Phyllocladidites mawsonii</i>	4.2%	9.9%
<i>Phyllocladidites verrucosus</i>	1.2%	
<i>Podocarpidites</i> spp.	6.0%	13.5%
<i>Proteacidites</i> spp.	31.0%	25.5%
<i>Proteacidites clinei</i> †	1.2%	0.7%

Table 5: Species abundances and occurrences in Port Fairy-1, Otway Basin (continued).

Sample Type:	Cuttings	Cuttings
Depth:	856-59m	874m
<i>Proteacidites konfragosus</i> †	X	X
<i>Proteacidites palisadus</i>		0.7%
<i>Proteacidites prepolus</i> †	X	
<i>Proteacidites reticuloconcaus</i> †	1.8%	0.7%
<i>Pseudowinterapollis wahooensis</i>	X	
<i>Retitriteles</i> spp.	X	2.8%
<i>Stereisporites antiquisporites</i>	10.7%	2.1%
<i>Stereisporites regium</i>	1.2%	0.7%
<i>Tetracolporites verrucosus</i>		0.7%
<i>Trichotomosulcites subgranulatus</i>	0.6%	1.4%
Tricolp(or)ates spp.	1.2%	2.1%
<i>Tricolpites waiparaensis</i>		X
<i>Tricolporites lilliei</i>		X
Trilete spores undiff.	3.0%	
<i>Triporopollenites</i> spp.		0.7%
<i>Tripunctisporis maastrichtiensis</i>	X	
Total Spores:	34.5%	24.1%
Total Gymnosperms:		31.9%
Total Angiosperms:	47.6%	44.0%
Total Spore-Pollen:	168	141
MP count:	41	20
Combined SP + MP count:	209	161
MP% of combined MP + SP count:	19.6%	12.4%
Microplankton & Algae Species		
Microplankton undiff.	5%	15%
<i>Alterbidinium</i> sp. cf <i>A. acutulium</i>	X	5%
<i>Amosopollis cruciformis</i>	2%	
<i>Botryococcus braunii</i>		X
<i>Impletosphaeridium</i> sp.	7%	5%
<i>Manumiella conorata</i>	71%	70%
<i>Nummus</i> sp.		X
<i>Palaeostomocystis reticulata</i>	2%	
<i>Paralecaniella indentata</i>	12%	5%
<i>Spiniferites</i> spp.	2%	
Total Microplankton:	41	20
Reworked Palynomorphs	1.0%	3.1%
TOTAL COUNT:	209	161

Abbreviations:

X = Present
 cf. = Compared with
 † = Manuscript species.

Table 6: Species abundances and occurrences in Port Fairy-1, Otway Basin.

Sample Type:	Cutts							
Depth:	1351m	1357m	1369m	1381m	1387m	1405m	1441m	1545m
Spore-Pollen Species								
<i>Aequitriradites spinulosus</i>					X		1.3%	
<i>Appendicisporites distocarinus</i>	X		0.6%	X	X			
<i>Araucariacites australis</i>	1.3%	2.9%	2.4%	1.7%	1.6%	2.7%	1.3%	5.3%
<i>Asteropollis asteroides</i>		X						
<i>Australopollis obscurus</i>	0.6%	0.5%			0.8%	0.9%		
<i>Baculatisporites</i> spp.	0.6%	1.0%	1.8%	2.5%	3.2%	1.8%	1.9%	8.8%
<i>Balmeisporites glenelgensis</i>			X					
<i>Balmeisporites holodictyus</i>						X		
<i>Ceratospirites equalis</i>	X				X	X	0.6%	
<i>Cicatricosisporites</i> spp.	X	X		2.5%	1.6%	4.5%	7.6%	1.8%
<i>Clavifera triplex</i>	1.3%	X	X					
<i>Coptospora paradoxa</i>						X	0.6%	
<i>Coptospora pileolus</i> †	X							
<i>Corollina torosa</i>	0.6%	1.0%	1.2%		X	2.7%	4.5%	0.9%
<i>Crybelosporites striatus</i>					RW	2.7%	1.9%	2.6%
<i>Cupressacites</i> sp.	25%	23%	3.7%	5.9%	X	3.6%	3.8%	1.8%
<i>Cyathidites</i> spp. large >40µm	0.6%	1.4%	3.7%	1.7%	7.3%	3.6%	4.5%	1.8%
<i>Cyathidites</i> spp. small <40µm	4.5%	6.2%	15.2%	15.3%	13.7%	28.2%	26.8%	14.0%
<i>Cyclosporites hughesii</i>						X	X	
<i>Dacrycarpites australiensis</i>	0.6%							
<i>Densoisporites velatus</i>			0.6%					
<i>Dictyophyllidites</i> spp.	0.6%	4.3%	5.5%	4.2%	3.2%	3.6%	1.3%	1.8%
<i>Dictyotosporites speciosus</i>						X		
<i>Dilwynites</i> spp.	11.6%	12%	9.8%	14.4%	7.3%	2.7%	1.9%	0.9%
<i>Dilwynites echinatus</i> †	X		X			X		
<i>Dilwynites granulatus</i>	X	X	X	X	X	X	X	X
<i>Dilwynites pusillus</i> †	X	X	X	X	X	X	X	
<i>Foraminisporis asymmetricus</i>						X	X	
<i>Foraminisporis dailyi</i>	X		0.6%					
<i>Foveogleicheniidites confossus</i>			1.2%	X				
<i>Gleicheniidites ancorus</i> †	0.6%	1.0%						
<i>Gleicheniidites circinidites</i>	8.4%	9.1%	19.5%	12.7%	18.5%	6.4%	2.5%	4.4%
<i>Herkosporites elliotii</i>	X	2.4%	0.6%		1.6%			
<i>Herkosporites proxistriatus</i>	X		X	2.5%				
<i>Hoegisporis trinalis</i> †			X		?			
<i>Laevigatosporites musa</i> †		0.5%				0.9%		
<i>Laevigatosporites ovatus</i>	2.6%	1.9%	3.0%	2.5%	1.6%	2.7%	1.9%	
<i>Liliacidites</i> spp.			X	0.8%	0.8%	0.9%		
<i>Lygistepollenites florinii</i>	CV			CV				CV
<i>Marattisporites scabratus</i>	0.6%	1.4%	1.2%	0.8%	0.8%			0.9%
<i>Matonisporites cooksoniae</i>							X	
<i>Microcachryidites antarcticus</i>	6.5%	6.2%	3.0%	5.1%	2.4%	6.4%	3.8%	3.5%
<i>Neoraistrickia truncata</i>		X	X					
<i>Osmundacidites wellmanii</i>	0.6%	0.5%	1.8%	0.8%	1.6%	2.7%	1.9%	6.1%
<i>Peromonolites</i> spp.	X		X		2.4%			
<i>Perotrilites jubatus</i>			0.6%		1.6%	X		1.8%

Table 6: Species abundances and occurrences in Port Fairy-1, Otway Basin (continued).

Sample Type:	Cutts	Cutts	Cutts	Cutts	Cutts	Cutts	Cutts	Cutts
Depth:	1351m	1357m	1369m	1381m	1387m	1405m	1441m	1545m
<i>Perotrilites majus</i>			X	X				
<i>Phimopollenites pannosus</i>							3.2%	0.9%
<i>Phyllocladidites eunuchus</i> †		0.5%					X	
<i>Phyllocladidites mawsonii</i>	2.6%	1.0%	X	0.8%	0.8%		0.6%	2.6%
<i>Podocarpidites</i> spp.	20.6%	9.1%	12.8%	11.0%	11.3%	9.1%	12.1%	26.3%
<i>Proteacidites</i> spp.	X		0.6%	0.8%	2.4%	0.9%	0.6%	
<i>Retitriteles</i> spp.	0.6%	1.9%	X	2.5%	3.2%	2.7%	2.5%	1.8%
<i>Retitriteles austroclavatidites</i>						X	X	
<i>Retitriteles nodosus</i>	RW			X		X		
<i>Stereisporites antiquisporites</i>	0.6%	0.5%	0.6%	X	0.8%	1.8%	0.6%	0.9%
<i>Stoverisporites microverrucatus</i>						X		
<i>Trichotomosulcites subgranulatus</i>	5.8%	6.7%	1.8%	6.8%	6.5%	2.7%	5.1%	4.4%
Tricolp(or)ates spp.		1.0%	1.2%	0.8%	0.8%	1.8%	1.3%	
<i>Tricolporites melusina</i> †						2.7%	0.6%	3.5%
Trilete spores undiff.		3.3%	4.9%		4.0%	0.9%	1.9%	2.6%
<i>Trilobosporites trioreticulosus</i>			X					
<i>Triporoletes laevigatus</i>						X	1.9%	
<i>Triporoletes reticulatus</i>			X	X	X		0.6%	0.9%
<i>Verrucosporites admirabilis</i> †		1.0%	1.8%	2.5%	X	CV		
<i>Vitreisporites signatus</i>	2.6%			0.8%	X		0.6%	
Total Spores:	22%	36%	63%	51%	65%	63%	61%	50%
Total Gymnosperms:	77%	62%	35%	47%	30%	30%	34%	46%
Total Angiosperms:	0.6%	1.4%	1.8%	2.5%	4.8%	7.3%	5.7%	4.4%
Total Spore-Pollen:	155	209	164	118	124	110	157	114
Total MP in MP + SP count:	20	40	11	20	14	14	9	7
Combined MP + SP Count:	175	249	175	138	138	124	166	121
MP% in SP + MP counts	11.4%	16.1%	6.3%	14.5%	10.1%	11.3%	5.4%	5.8%
Microplankton								
Microplankton undiff.	5%	16%	5%	10%	16%	21%	11%	
<i>Amosopollis cruciformis</i>	31%	23%	3%	5%	3%	7%	11%	
<i>Amphidiadema denticulata</i>			CV					
<i>Callaiosphaeridium asymmetricum</i>	X	X						
<i>Chatangiella tripartita</i>	CV							
<i>Chatangiella victoriensis</i>	CV							
<i>Chlamydoxella nyei</i>		4%	X	6%	10%	7%		
<i>Cleistosphaeridium ancoriferum</i>	2%	1%	4%	3%	3%			
<i>Cribroperidinium apione</i>	5%	3%		X	7%			
<i>Cribroperidinium edwardsii</i>		4%	26%	26%	16%	7%	22%	29%
<i>Cyclonephelium compactum</i>				4%	5%			
<i>Cyclonephelium distinctum</i>	X		X					
<i>Cyclonephelium vannophorum</i>				3%				
<i>Cymatiosphaera</i> sp.				X	X			
<i>Exochosphaeridium</i> spp.	X	X	5%	4%	X	7%	CV	
<i>Flaxadinium</i> sp. nov. †	8%	1%		1%		7%		
<i>Florentinia deanei</i>					X			
<i>Heterosphaeridium</i> spp.	11%	16%	22%	8%	3%	7%	CV	43%

Table 6: Species abundances and occurrences in Port Fairy-1, Otway Basin (continued).

Sample Type:	Cutts							
Depth:	1351m	1357m	1369m	1381m	1387m	1405m	1441m	1545m
<i>Heterosphaeridium conjunctum</i>	X	X						
<i>Heterosphaeridium heteracanthum</i>	X	X	X	X	X	CV		
<i>Horologinella</i> sp. cf <i>H. lineata</i>						7%		
<i>Hystrichodinium pulchrum</i>		X		1%				
<i>Isabelidinium</i> spp.	5%	4%	1%					
<i>Isabelidinium balmei</i>	CV	3%			CV			
<i>Isabelidinium cretaceum</i>		CV						
<i>Kallosphaeridium</i> sp.	X	7%		3%	2%			
<i>Kiokansium polypes</i>	5%	3%	5%	4%	5%			
<i>Manumiella conorata</i>			CV					CV
<i>Micrhystridium</i> spp.	3%		1%	X	2%	14%		
<i>Microdinium ornatum</i>				X				
<i>Nelsoniella aceras</i>								CV
<i>Odontochitina costata</i>	X		4%		2%	CV		
<i>Odontochitina operculata</i>	X	3%						
<i>Odontochitina porifera</i>	3%	1%						
<i>Oligosphaeridium</i> spp.			14%	14%	7%		11%	
<i>Oligosphaeridium complex</i>	X		X	X	X		CV	
<i>Oligosphaeridium pulcherrimum</i>		X		X				
<i>Palaeohystrichophora infusorioides</i>	5%	3%				7%		
<i>Palaeoperidinium cretaceum</i>			5%	4%	3%	CV		
<i>Palambages</i> spp.	2%			X				
<i>Pterospermella australiensis</i>				X		CV		
<i>Sigmopollis carbonis/hispidus</i>					X	X	33%	29%
<i>Spiniferites</i> spp.	6%	4%	3%	4%	9%	7%	11%	
<i>Tanyosphaeridium salpinx</i>	5%							
<i>Trichodinium castanea</i>		X		3%	2%	CV		
<i>Trithyrodinium</i> spp.	2%							
<i>Valensiella griphus</i>	3%	4%					CV	
<i>Veryhachium</i> sp.					5%	X		
<i>Xenascus</i> sp.	X	X						
Total Microplankton count:	62	74	76	80	58	14	9	7
Other Palynomorph								
Fungal microfossils	1.3%	0.9%	1.2%			0.9%	2.5%	
<i>Botryococcus braunii</i>		X						
Reworked/Caved spore-pollen						0.9%		2.6%
<i>Aratrisporites</i> spp.					RW			RW
<i>Battenipollis sectilis</i>	CV							
<i>Forcipites sabulosus</i>	CV							
<i>Latrobosporites amplus/ ohaiensis</i>	CV					CV		
<i>Nothofagidites senectus</i>							CV	
<i>Ornamentifera sentosa</i>						CV	CV	
<i>Pilosisorites notensis</i>					RW			
Total Others:	2	2	2	118	124	2	4	3
TOTAL SP + Others COUNT:	157	211	166	118	124	112	161	117

Abbreviations:X= Present;
cf. = Compared with;CV = Caved;
† = Manuscript species

RW = Reworked;

PORT FAIRY-1 SPORE-POLLEN RANGE CHART — INTERPRETATIVE DATA VERSION

ANALYSIS BY: Alan D. PARTRIDGE — May 2002

		SP ALPHABETICAL LIST																				SPORE-POLLEN SPECIES																						ZONES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Appendix 10: Fluid Analysis

3 September 2002

Essential Petroleum Resources Ltd
Level 2
226 Albert Road
SOUTH MELBOURNE VIC 3205

Attention: Wally Westman

REPORT LQ11954

CLIENT REFERENCE: Letter of 15/8/02

WELL NAME/RE: Port Fairy #1

MATERIAL: Fluid

WORK REQUIRED: Extraction, qualitative gas chromatography & resistivity

AUTHOR'S NAME: Carmelina Valente

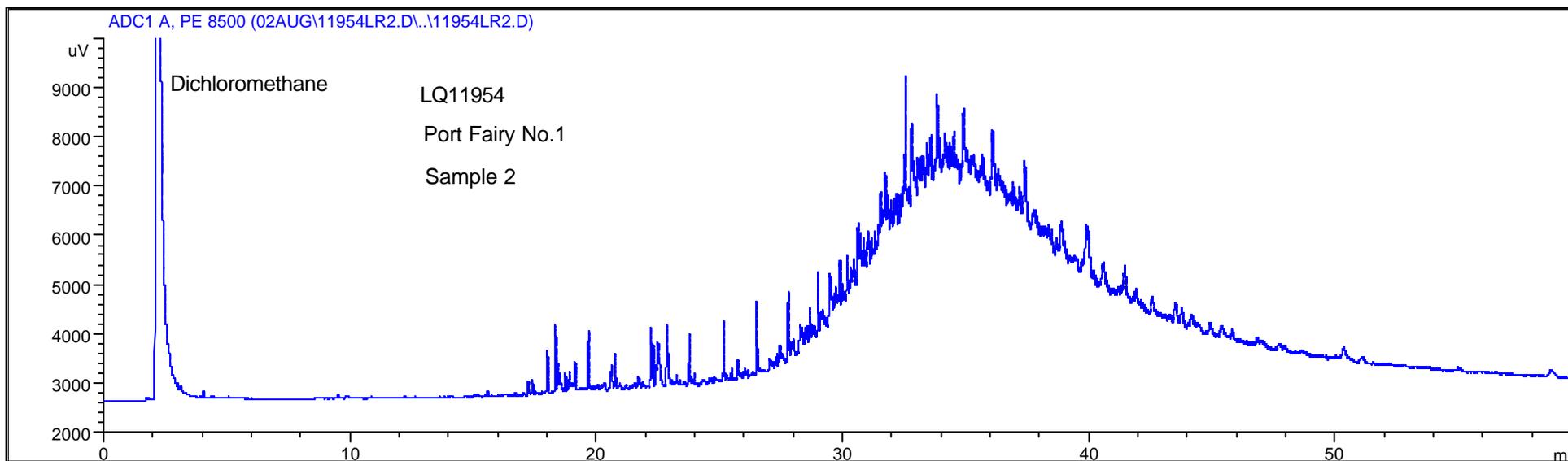
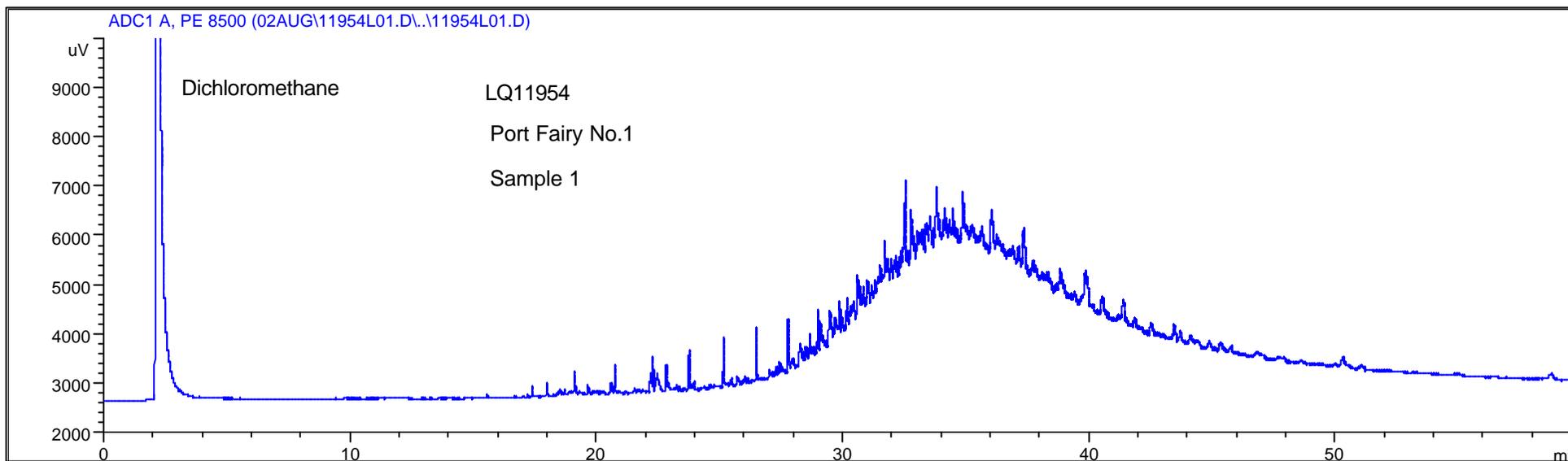
Please direct technical enquiries regarding this work, to the signatory below, under whose supervision the work was carried out. This report relates specifically to the sample or samples submitted for testing.

Diane Cass
Operations Manager
Petroleum Services

dc.cm

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Amdel Limited • 35-37 Stirling Street Thebarton SA 5031 • PO Box 338 Torrensville Plaza SA 5031
ABN 30 008 127 802 • Telephone: +61 8 8416 5200 • Facsimile: +61 8 8234 2933

1. INTRODUCTION

Amdel Limited received two liquid samples from Port Fairy No.1 for extraction, residual hydrocarbons and resistivity on 22 August 2002. This report is a formal presentation of results forwarded by facsimile on 28 August 2002.

2. PROCEDURE

The samples were extracted with dichloromethane and carefully dried down using a rotary evaporator.

The extracts were analysed on a Perkin Elmer 8500 Gas Chromatograph equipped with a capillary column, flame ionisation detector and nitrogen carrier gas.

3. RESULTS

The gas chromatograms are presented on the following pages.

SAMPLE ID	YIELD (mg/L)	RESISTIVITY ohm.M @ 25°C
Sample 1	5	1.81
Sample 2	3	1.78

The extracts appear to be medium to heavy boiling range hydrocarbon.

The naphthenic hydrocarbon fraction between 30 and 60 minutes (>400°C) appears to be a lubricating oil.

3 October 2002

Essential Petroleum Resources Ltd
Level 2
226 Albert Road
SOUTH MELBOURNE VIC 3205

RECEIVED
10 OCT 2002

BY:.....

Attention: Wally Westman / Roger Blake

REPORT LQ12088

CLIENT REFERENCE:

Request 25/9/02

WELL NAME/RE:

Port Fairy-1

MATERIAL:

Gas

WORK REQUIRED:

Cylinder rental, gas composition & mobilisation

AUTHOR'S NAME:

Carmelina Valente

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.



Diane Cass
Operations Manager
Petroleum Services

dc.cm

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PETROLEUM SERVICES GAS ANALYSIS

Method GL-01-01

ASTM D 1945-96 (modified)

Client: ESSENTIAL PETROLEUM

Report # LQ12088

Sample: PORT FAIRY-1
 Gas
 2850 kPag @ 10°C
 22/09/02, 1100 h, Cyl# 484

GAS	MOL %
Nitrogen	9.13
Carbon Dioxide	0.00
Methane	82.02
Ethane	4.21
Propane	2.60
I-Butane	0.96
N-Butane	0.71
I-Pentane	0.22
N-Pentane	0.08
Hexanes	0.04
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) using ISO 6976 and the physical constants from the GPSA SI Engineering Data Handbook 11 th Ed.

Average Molecular Weight	19.38
Lower Flammability limit	4.89
Upper Flammability limit	15.86
Ratio of upper to lower	3.24
Wobbe Index	47.39
Compressibility Factor	0.9976
Ideal Gas Density (Rel to air = 1)	0.669
Real gas Density (Rel to air = 1)	0.670
Ideal Nett Calorific Value MJ/m3	35.05
Ideal Gross Calorific Value MJ/m3	38.76
Real Nett Calorific Value MJ/m3	35.13
Real Gross Calorific Value MJ/m3	38.86
Gross calorific value of water-saturated gas MJ/m3	38.08

This report relates specifically to the sample submitted for analysis.

Approved Signatory _____

Accreditation No. : 2013
 Date : 12-12-02

15 October 2002

Essential Petroleum Resources Ltd
Level 2
226 Albert Road
SOUTH MELBOURNE VIC 3205

Attention: Roger Blake

REPORT LQ12106

CLIENT REFERENCE: Letter of 25/9/02

WELL NAME/RE: Port Fairy No. 1

MATERIAL: Liquid

WORK REQUIRED: Gas chromatographic analysis of oil & X-ray analysis

AUTHOR'S NAME: Carmelina Valente

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.

Diane Cass
Operations Manager
Petroleum Services

dc.cm

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1. INTRODUCTION

A sample of liquid was received for gas chromatography and determination of its mineralogy on 1 October 2002. This is a final presentation of results sent by e-mail on 3 and 10 October 2002.

2. PROCEDURE

The sample was analysed on a Perkin Elmer 8500 Gas Chromatograph equipped with a capillary column, flame ionisation detector and nitrogen carrier gas.

The sample was analysed by X-ray diffraction to identify the minerals present.

3. RESULTS

The gas chromatogram and composition is presented on the following page.

The low boiling hydrocarbon at 1.8-16 min with a boiling range (-11.7 - 235°C) appears to be a full range naphtha (without the black discolouration).

The gas chromatogram contains a small amount of mono aromatics and the density 0.7700 g/cm³. It is appears to be suitable to be used as a solvent in industry.

The semi-quantitative mineralogy of the sample follows.

Name	Composition	Relative abundance
Amorphous		D
Magnetite	Fe ₃ O ₄	A
Graphite	C	Tr-A
Talc	Magnesium silicate	Tr-A
Calcite	CaCO ₃	Tr
?Hematite	Fe ₂ O ₃	Tr

Semiquantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
- SD = Sub-dominant. The next most abundant component(s) providing its percentage level is judged above about 20.
- A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
- Tr = Trace. Components judged to be below about 5%.
- .

The X-ray diffraction indicates that the black particles in this sample are due to the carbon and Fe₃O₄ content.

Client: **ESSENTIAL PETROLEUM RESOURCES LTD**

Report # **LQ12106**

Sample: **PORT FAIRY NO. 1**

Boiling Point Range (Deg.C)	Component	Weight%	Mol%
-88.6	ETHANE	0.00	0.00
-42.1	PROPANE	0.00	0.01
-11.7	I-BUTANE	0.04	0.07
-0.5	N-BUTANE	0.19	0.35
27.9	I-PENTANE	1.86	2.77
36.1	N-PENTANE	2.33	3.46
36.1-68.9	HEXANE, C-6	12.22	15.23
80.0	BENZENE	0.00	0.00
80.7	CYCLOHEXANE	1.57	2.00
68.9-98.3	HEPTANE,C-7	18.61	19.94
100.9	METHYLCYCLOHEXANE	8.57	9.37
110.6	TOLUENE	0.07	0.09
98.3-125.6	OCTANE, C-8	24.23	22.77
136.1-144.4	ETHYLBZ+XYLENES	1.03	1.04
125.6-150.6	C-9	15.47	12.95
150.6-173.9	C-10	8.74	6.59
173.9-196.1	C-11	3.53	2.42
196.1-215.0	C-12	1.03	0.65
215.0-235.0	C-13	0.39	0.22
235.0-252.2	C-14	0.07	0.04
252.2-270.6	C-15	0.04	0.02
270.6-287.8	C-16	0.01	0.01
287.8-302.8	C-17	0.00	0.00
302.8-317.2	C-18	0.00	0.00
317.2-330.0	C-19	0.00	0.00
330.0-344.4	C-20	0.00	0.00
344.4-357.2	C-21	0.00	0.00
357.2-369.4	C-22	0.00	0.00
369.4-380.0	C-23	0.00	0.00
380.0-391.1	C-24	0.00	0.00
391.1-401.7	C-25	0.00	0.00
401.7-412.2	C-26	0.00	0.00
412.2-422.2	C-27	0.00	0.00
>422.2	C-28+	0.00	0.00
	Total	100.00	100.00

(0.00 = LESS THAN 0.01%)

The above boiling point ranges refer to the normal paraffin hydrocarbon boiling in that range. Aromatics, branched hydrocarbons, naphthenes and olefins may have higher or lower carbon numbers but are grouped and reported according to their boiling points.

Average molecular weight of C-8 plus fraction (calc) = 121 g/mol

This report relates specifically to the sample submitted for analysis.

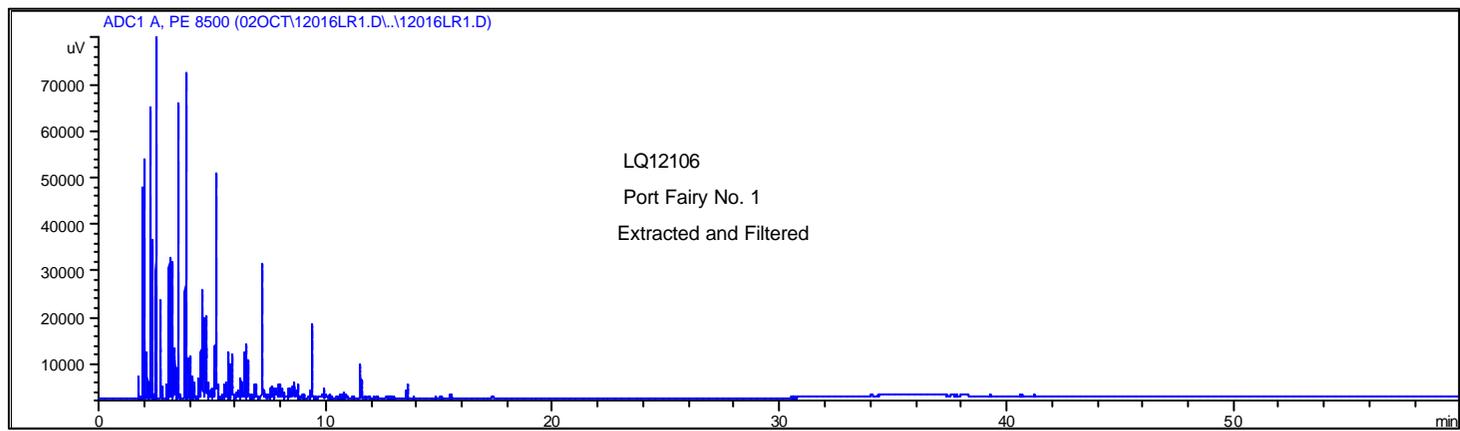
Approved Signatory

Accreditation No:

Date

2013

12-Dec-02





XI:18001

Your Ref: Reserve Pit Port Fairy No. 1

17 April 2002

Essential Petroleum Resource Limited
Level 2, 226 Albert Road
South Melbourne VIC 3205

Date Received: 5/04/2002

RECEIVED
24 APR 2002

Attention: **Mr. Wally Westman**

BY:.....

Certificate of Analysis

WSL Report Number: **443664**

The sample(s) referred to in this report were analysed by the following methods:

Analyte(s)	Method	Analyte(s)	Method
Alkalinity	APHA 2320 B	Cations	WSL 023A
Chloride	APHA 4500-CL,B	Cyanide	APHA 4120
Electrical Conductivity	APHA 2510B	Fluoride	WSL 077
Metals	WSL-032	Nitrate Nitrogen	APHA 4120
OCs	WSL8000	PAHs	WSL8000
PCBs	WSL8000	pH	APHA 4500H,B
Resistivity ^^	APHA 2510 B	Silica	APHA 4500-SI,C
Sulphate	APHA 4500SO4E	Total Phenolics	APHA 4120
TPH	WSL030	Volatiles	WSL3810A

Results pertain to samples as received

Yours faithfully
WSL Consultants Pty Ltd

Nick Bray
Manager Of Chemistry



This Laboratory is accredited by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of accreditation. This document shall not be reproduced except in full.

Date : 18-Dec-2002

WSL Report No: 443664

WSL JobNumber: 18001 Client: Essential Petroleum Resource Limited Job Reference: Reserve Pit Port Fairy No. 1

LAB NUM	Received	Sample	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Sn	Zn
443664	5-Apr-2002	PARTLY DEHYDRATED DRILLING MUD	19	<0.2	7	40	52	<0.05	<5	16	17	<5	<5	100

Date : 18-Dec-2002

WSL Report No: 443664

WSL JobNumber: 18001 Client: Essential Petroleum Resource Limited Job Reference: Reserve Pit Port Fairy No. 1

LAB NUM	Received	Sample	POTASSIUM	SODIUM	CALCIUM	MAGNESIUM	ALKALINITY as CaCO ₃	Bi- CARBONATE as CaCO ₃	CARBONATE as CaCO ₃	HYDROXIDE as CaCO ₃	CHLORIDE	SULPHATE
443665	5-Apr-2002	WATER SAMPLE FROM RESERVE PIT	310	930	32	24	450	450	<2	<2	1,500	55

Date : 18-Dec-2002

WSL Report No: 443664

WSL JobNumber: 18001 Client: Essential Petroleum Resource Limited Job Reference: Reserve Pit Port Fairy No. 1

LAB NUM	Received	Sample	CONDUCTIVITY (μ S/cm)	pH (pH Units)	NITRATE NITROGEN	SILICA	IRON	SOLUBLE IRON	RESISTIVITY (ohms-cm)
443665	5-Apr-2002	WATER SAMPLE FROM RESERVE PIT	5,700	7.3	0.02	31	3.6	0.94	180

Date : 18-Dec-2002

WSL Report No: 443664

WSL JobNumber: 18001 Client: Essential Petroleum Resource Limited Job Reference: Reserve Pit Port Fairy No. 1

LAB NUM	Received	Sample	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1,2,4-TRI- METHYL BENZENE	TOTAL PHENOLS	FLUORIDE	CYANIDE
443664	5-Apr-2002	PARTLY DEHYDRATED DRILLING MUD	58	31	300	170	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<5	<5

Date : 18-Dec-2002

WSL Report No: 443664

WSL JobNumber: 18001 Client: Essential Petroleum Resource Limited Job Reference: Reserve Pit Port Fairy No. 1

LAB NUM	Received	Sample	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL PAH
443664	5-Apr-2002	PARTLY DEHYDRATED DRILLING MUD	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1

Date : 18-Dec-2002

WSL Report No: 443664

WSL JobNumber: 18001 Client: Essential Petroleum Resource Limited Job Reference: Reserve Pit Port Fairy No. 1

LAB NUM	Received	Sample	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR- EPOXIDE	DDE	DIELDRIN
443664	5-Apr-2002	PARTLY DEHYDRATED DRILLING MUD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Date : 18-Dec-2002

WSL Report No: 443664

WSL JobNumber: 18001 Client: Essential Petroleum Resource Limited Job Reference: Reserve Pit Port Fairy No. 1

LAB NUM	Received	Sample	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
443664	5-Apr-2002	PARTLY DEHYDRATED DRILLING MUD	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Date : 18-Dec-2002

WSL Report No: 443664

WSL JobNumber: 18001 Client: Essential Petroleum Resource Limited Job Reference: Reserve Pit Port Fairy No. 1

LAB NUM	Received	Sample	AROCLOR 1016	AROCLOR 1221	AROCLOR 1232	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	TOTAL PCBs
443664	5-Apr-2002	PARTLY DEHYDRATED DRILLING MUD	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1



XI:18001

Your Ref: Reserve Pit Port Fairy No. 1

17 April 2002

Essential Petroleum Resource Limited
Level 2, 226 Albert Road
South Melbourne VIC 3205

Date Received: 5/04/2002

RECEIVED
24 APR 2002

Attention: **Mr. Wally Westman**

BY:.....

Certificate of Analysis

WSL Report Number: **443664**

The sample(s) referred to in this report were analysed by the following methods:

Analyte(s)	Method	Analyte(s)	Method
Alkalinity	APHA 2320 B	Cations	WSL 023A
Chloride	APHA 4500-CL,B	Cyanide	APHA 4120
Electrical Conductivity	APHA 2510B	Fluoride	WSL 077
Metals	WSL-032	Nitrate Nitrogen	APHA 4120
OCs	WSL8000	PAHs	WSL8000
PCBs	WSL8000	pH	APHA 4500H,B
Resistivity ^^	APHA 2510 B	Silica	APHA 4500-SI,C
Sulphate	APHA 4500SO4E	Total Phenolics	APHA 4120
TPH	WSL030	Volatiles	WSL3810A

Results pertain to samples as received

Yours faithfully
WSL Consultants Pty Ltd

Nick Bray
Manager Of Chemistry



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