

Figure 1: Location of Geographe North 1.

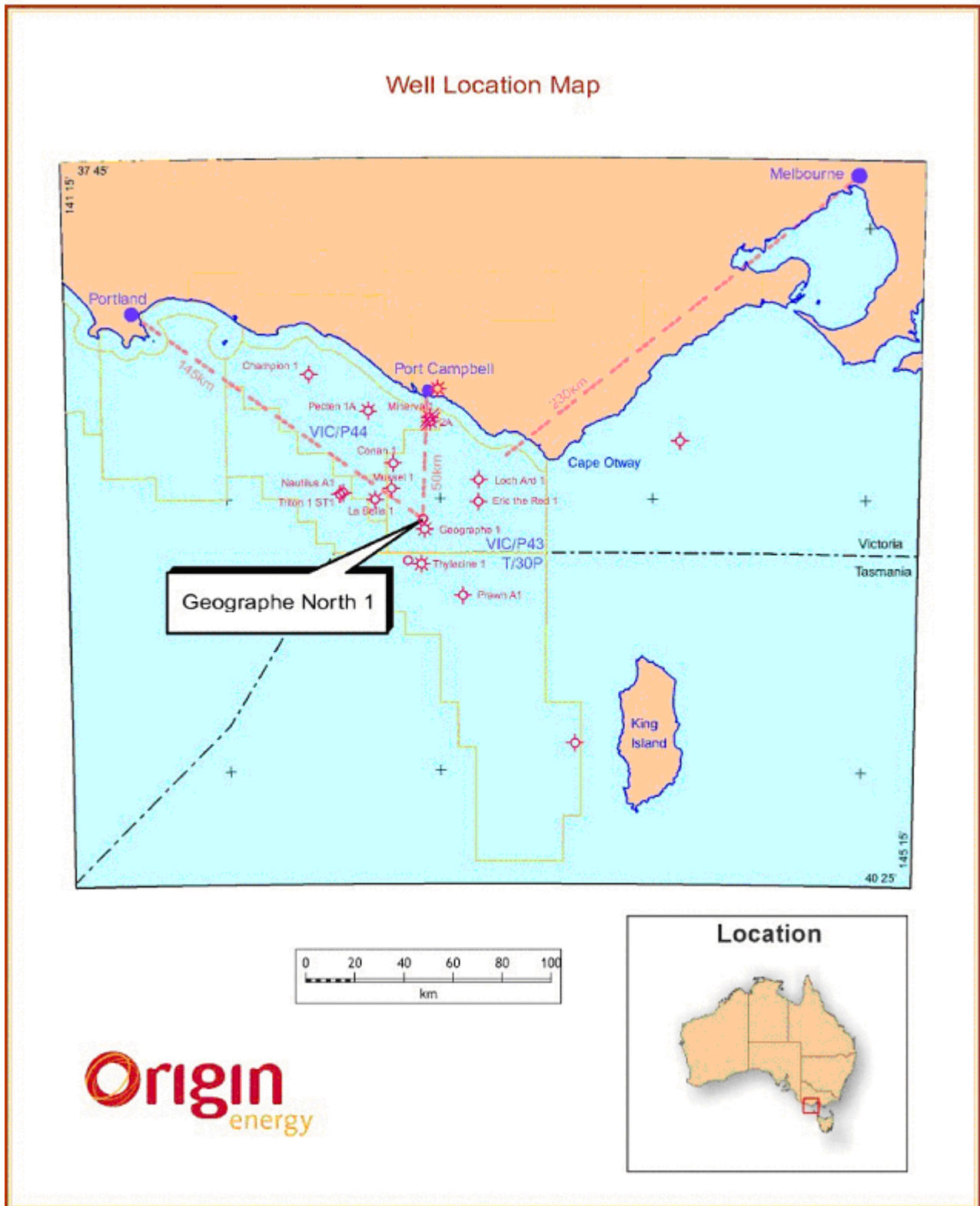


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WELL SUMMARY SHEET

Permit:	VIC/P43 Offshore Otway Basin
Well Path:	Vertical
Location:	Latitude :39°04'39.928"S Longitude:142°54'57.647"E Easting :665 736.2m Northing :5 672 832.3m This position is 5.6 m on a bearing of 240.0° (G) from the proposed Geographe North-1 location. All coordinates in this report are quoted in AGD84 datum and UTM Zone 54 (CM 141°) projection unless otherwise stated.
Seismic Reference:	Inline 870, CDP 2640, Investigator 3d.
Elevation:	25.0m (RT-sealevel)
Water Depth:	82.0m LAT
Total Depth Driller:	2156.0 mMDRT
Total Depth Logger:	2155.0 mMDRT
(TVD) Driller:	2155.7 mTVDRT
Casing:	20" @ 161.9 mMDRT 13 3/8" @ 557.8 mMDRT 9 5/8" @1784.9 mMDRT
Rig on Location:	16:30hrs 28/09/2001
Spud:	04:00hrs 29/09/2001
Reached TD:	16:30hrs 08/10/2001
Rig Released:	18:30hrs 14/10/2001
Total Rig Days:	17.08
Well Status:	Plugged and Abandoned
Permit Interests:	Origin Energy Resources Ltd 30% (OPERATOR) Woodside Energy Ltd 55% CalEnergy Gas (UK) Ltd 15%
Rig Name:	Ocean Bounty (Semi-submersible)
Drilling Contractor:	Diamond Offshore General Co.
Approx. Well Cost:	A\$ 10,407,615 - from Daily Drilling Reports, cumulative well cost.

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FINAL DRILLING REPORT

2.1 DRILLING OPERATIONS SUMMARY

Attached (following pages)

Additional drilling data is included in Baker Hughes' (Mudloggers) *End of Well Report* (Appendix 4) and Daily Drilling Reports (Appendix 9).

Geographe North-1 - Drilling Executive Summary

The Ocean Bounty MODU was towed from Thylacine-2 to Geographe North-1, the fourth well to be drilled in the Woodside/Origin Otway Basin campaign. The rig was towed with the Pacific Sentinel and Pacific Conqueror at drilling draft. Geographe North-1 officially started with last anchor up from Thylacine-2 at 07:30hrs 28/09/01. Anchor running operations at Geographe North-1 commenced at 16.30hrs 28/09/01 and were completed in technical limit time.

The well was spudded on the 29th September with a 36" hole section drilled from seabed (confirmed at 107mRT) to 163mRT using seawater and high viscosity prehydrated gel sweeps. A Totco survey was dropped at TD prior to pulling out of hole. The 30" x 20" casing was run and cemented at 161.9mRT. ROV observed good returns.

The 20" shoe was drilled out and a 17 1/2" section was drilled riserless to 565mRT using seawater. The hole was displaced to an unweighted gel/drispac and KCl inhibitive drilling fluid. Average ROP for the section was 43m/hr. The 13-3/8" casing was run to a shoe depth of 557.8m and cemented to seabed without problems. The BOPs were then landed and tested as per programme.

Difficulty was encountered drilling out the cement plugs, float collar and shoetrack as the plug rubber was packing off BHA/drillstring. While drilling out the hole was displaced to a KCL/PHPA/Glycol (Aquadrill) water-based mud system with Penetrex and Alplex mud additives and initially weighted at 1.14sg. Seven metres of new formation were eventually drilled and a leak off test (LOT) performed to 2.01sg EMW. The 12 1/4" section was drilled from 572 – 1790mRT. The mud weight was raised by 900m RT to 1.25 sg and was raised again at TD 1790m to 1.28 sg to combat stress relief related cavings. Average ROP for the section was 81m/hr. Mud losses were experienced over the shakers. Up to 150klbs overpull were seen while back reaming on a wiper trip from 1415m to 932mRT and the hole had to be reamed from 1700m to 1790mRT.

A 10-3/4" x 9-5/8" casing string was set with a shoe depth of 1784.4mRT. While circulating the casing before cementing, increased pump pressures either the annulus or running tool ports packing-off. This problem was solved by flushing the running tool with the kill line. The casing was cemented with good returns observed at surface throughout the job.

The shoe track was drilled out with a Smith MA89PX bit and the mud weight was reduced to 1.15 Sg. After waiting on weather an LOT was performed to 1.85sg EWM after drilling 7 metres of new formation at 1797mRT. The 8-1/2" hole was drilled to TD at 2156mRT. No significant gas shows were seen in the reservoir section. Average ROP for the section was 23m/hr.

Three logging runs were made. Pex (HRLA)-DSI-GPIT indicated the hole was slightly over gauge. 29 of 30 sidewall cores were recovered. Wireline tools measured TD at 2155mRT and indicated good hole condition. There was no drag or over-pull with any of the logging tools.

A cement plug was set from 1935 – 1700 mRT. The plug was tagged at 1729 mRT. The 10 ¾" was cut at 174 mRT but unable to pull free. It was cut again at 149 mRT at which point it was pulled with 340klbs overpull. A surface cement plug was set from 189 – 114 mRT. The BOP and risers were pulled, 20" casing cut and the 18 ¾" released from the 30" housing. After re-latching twice, the 18 ¾" housing fell to the seafloor. 30" casing was cut and the PGB/TGB was recovered. Attempts to recover the 18 ¾" housing were made while waiting on weather but this proved unsuccessful. There were 9 hours of WOW downtime while waiting to pull anchors.

The anchors were pulled without incident and the rig was handed over to Bass Strait Oil & Gas Company at 06.30hrs, 14/10/01.

GEOGRAPHE NORTH-1

Daily Drilling Report Summary

Date	Drilling Operations (Preceding 24hrs)
28/09/01	Completed towing Ocean Bounty from Thylacine-2 location to Geographe North-1 location. Ran primary anchors and commenced running secondary anchors.
29/09/01	Completed anchor running operations. Ran TGB on drillahead assembly and tagged seabed at 107mRT. Drilled 36" hole to 163mRT. Ran and cemented 30" x 20" conductor and drilled 17-1/2" hole to 176mRT.
30/09/01	Drilled 17-1/2" hole from 173m to 565mRT. Displaced hole to Gel/Drispac and KCl pills. Ran and cemented 13-3/8" casing.
01/10/01	Ran BOP's and riser. Made up 12-1/4" BHA and commenced running in the hole.
02/10/01	Pressure tested LMRP connector and 13-3/8" casing. Function tested BOP's and diverter. Drilled out cement plugs and shoe track and performed FIT to 2.01sg EMW. Drilled 12-1/4" hole to 1080mRT.
03/10/01	Drilled 12-1/4" hole from 1080m to 1670mRT.
04/10/01	Drilled 12-1/4" hole from 1670m to 1790mRT (section TD). Circulated hole to 1.28sg mud. Pulled out of hole to shoe. Back reamed tight hole. Pumped caustic pill around BHA. Ran in hole for wiper trip. Tagged firm fill at 1700m.
05/10/01	Washed and reamed hole from 1700m to 1790mRT (section TD). Circulated hole clean. Pulled out of hole and laid down BHA. Pulled wear bushing. Rigged up to run 9-5/8" casing. Ran shoe track and 112 joints casing to 1400mRT.
06/10/01	Ran 9-5/8" and 10-3/4" casing string and cemented in place. Set seal assembly and tested BOP's. Set wear bushing.
07/10/01	Completed testing surface equipment and making up 8-1/2" BHA. Tested 9-5/8" casing to 4500psi. Drilled out cement plugs, shoe track and 7m of new hole. Waited on weather to improve prior to rigging up for leak off test.
08/10/01	Conducted LOT and determined fracture gradient of 1.85sg at 1784mRT. Drilled 8-1/2" hole from 1797mRT to TD 2156mRT. No significant gas shows were observed. POOH. Held JSA and layed out FEWD/MWD BHA.
09/10/01	Rigged up to run Schlumberger wireline logs. Completed two logging runs; run #1 Pex-(HRLA)-DSI-GPIT (8.50hrs) and run #2 CSAT-GR (9.75hrs). RIH with logging run #3 CST-GR and fired the first 13 of the 30 side wall cores (SWCs).
10/10/01	Completed logging run #3. Recovered 29/30 SWC. Rigged down Schlumberger wireline. Picked up and RIH with 3-1/2" cement stinger to 2150mRT. Set cement plug from 1935 to 1700mRT. Tagged top of plug at 1729mRT. Commence laying down pipe.
11/10/01	Recovered wear bushing and 10-3/4" seal assembly. Cut and recovered 10-3/4" casing at 149mRT. Set cement abandonment plug #2. Unlatched BOP and commenced laying out riser.
12/10/01	Pulled and racked BOP's, tagged and confirmed TOC plug # 2 @ 115mRT. M/U and RIH with Smith tension cut system and attempted recovery of 18-3/4" housing. RIH with 30" cutting assembly, cut 30" conductor and retrieved PGB & TGB.
13/10/01	Removed recovered guidebases. Laid out excess tubulars from derrick (while waiting on weather). Work boats commenced handling anchors when adverse weather conditions ceased.
14/10/01	Continued deballasting rig to transit draft of 32 ft. Completed pulling anchors. Ocean Bounty handed over to BSOG at last anchor bolstered = 0630hrs; 14-10-01 (End of Geographe North 1).

Geographe North-1 Abandonment Schematic

Well: Geographe North-1
Permit: VIC/P43

Prepared by: S. Job
Date: 15/10/01

All depths RT unless specified

Sea Level 25mRT

18-3/4" wellhead
with 20" extension
approximately ~5m long

Water Depth ~ 82m LAT

20" and 30" cut @ 109mRT

Seabed @ 107mRT

Cement plug #2; 1.9sg "G" from
189 to 114mRT

30" x 20" casing shoe @ 162mRT

10-3/4" cut @ 149mRT

10-3/4" x 9-5/8" x-over @ 282mRT

Inhibited HiVis @ ±1.5sg from
289 to 189mRT

17-1/2" hole @ 565mRT

13-3/8" casing shoe @ 558mRT

Inhibited mud @ ±1.15sg from
1729 to 289mRT

Estimated TOC @ 750mRT

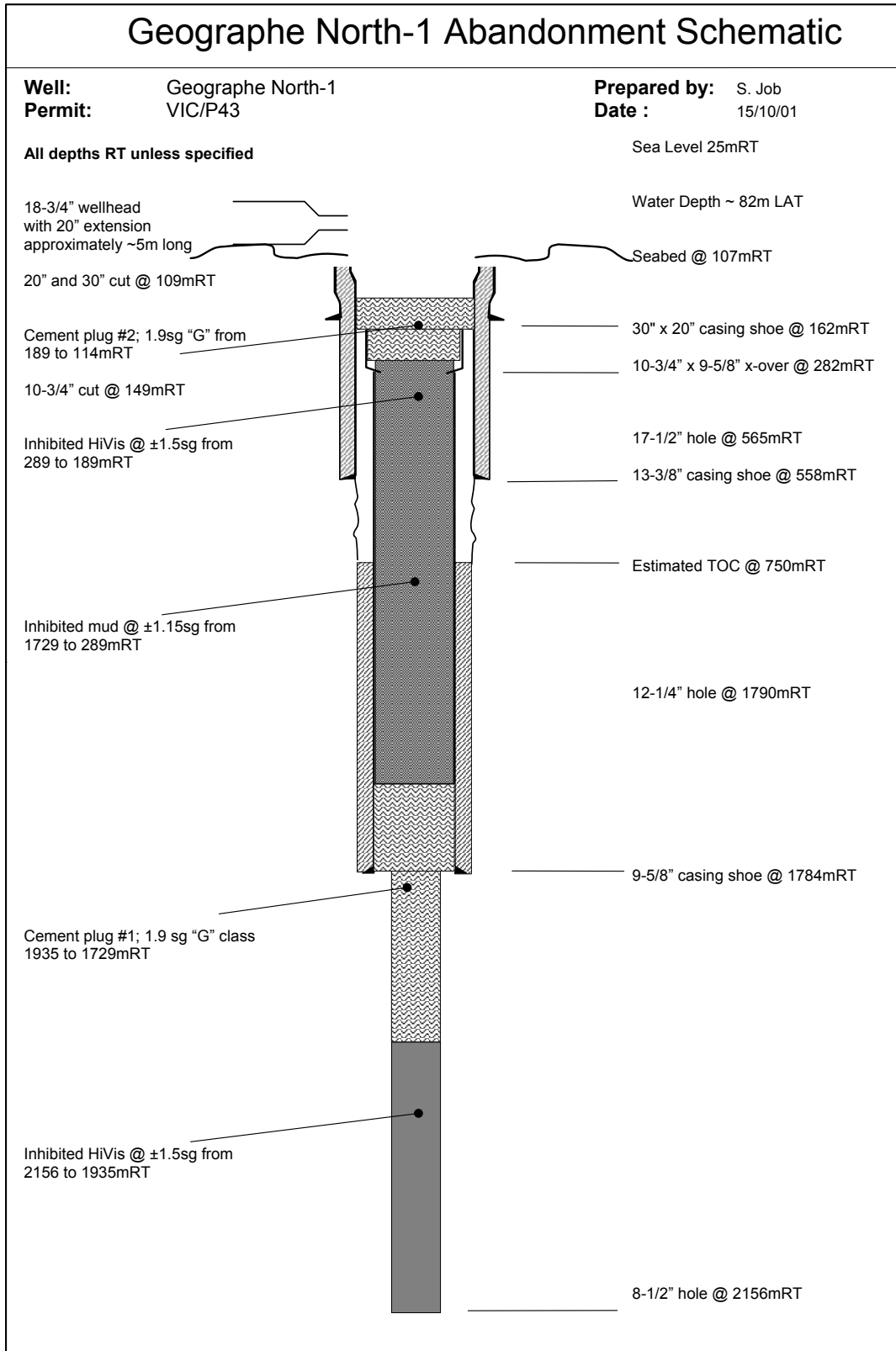
12-1/4" hole @ 1790mRT

Cement plug #1; 1.9 sg "G" class
1935 to 1729mRT

9-5/8" casing shoe @ 1784mRT

Inhibited HiVis @ ±1.5sg from
2156 to 1935mRT

8-1/2" hole @ 2156mRT



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FORMATION SAMPLING

3.1 DITCH CUTTINGS

Cuttings were collected over the interval 565 - 2156mRT. The sampling intervals were as follows:

565 - 1400 m : 10 metre intervals due to high ROP's.

1400 - 2156 m: 5 metre intervals.

A detailed collection and distribution list for all ditch cuttings samples collected from Geographe North-1 is included in the Baker Hughes *End of Well Report* Section 3.2. (Appendix 4)

Cuttings lithological descriptions sourced from daily geological reports and the Wellsite Litholog are enclosed. (Appendix 1). A complete collection of Daily Geological reports are also enclosed. (Appendix 10)

3.2 SIDEWALL and CONVENTIONAL CORES

One percussion sidewall core run (CST) was performed, of the 30 guns shot, 29 were recovered. The CST's were collected periodically over the interval 1794.0 – 2126.0 mRT. A sidewall core log and photos are enclosed. (Appendix 3)

Suite	Run	Type	Depth mMDRT	Attempted	Misfired	Lost	Empty	Rec
1	3	CST	2126.0-1794.0	30	-	1	-	29

No conventional core was cut in Geographe North-1.

3.3 PALYNOLOGY and MICROPALAEONTOLOGY

Palynology data was collected from 25 samples, all sidewall cores. These were collected from the interval 1794 – 2103mbRT. All samples were analysed by Morgan Palaeo Associates, South Australia. Geographe North-1 summary palynology data is included. (Appendix 8)

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FORMATION EVALUATION

4.1 MUDLOGGING

Mudlogging services for Geographe North-1 were provided by Baker Hughes Inteq., commencing below the 13.375" casing shoe at 558mMDRT and continuing to TD of 2156mMDRT. The Mudlogger's End of Well Report is included. (Appendix 4)

4.2 FORMATION EVALUATION WHILE DRILLING

Logging while drilling surveys were performed by Schlumberger/Anadrill over the interval 558-2156 mMDRT. Schlumberger's *MWD - LWD End of Well Report* is enclosed. (Appendix 5).

Suite	Run	Log	Interval (mMDRT)
1	1	PowerPulse/MVC/CDR	558-1790
1	2	PowerPulse/MVC/ARC	1784-2156

4.3 WIRELINE LOGGING

The following wireline logs were acquired at Geographe North-1 by Schlumberger Wireline.

Tools Used:

Suite	Run	Log	Interval (mMDRT)	Repeat Section (mMDRT)
1	1	PEX (HRLA)-DSI-GPIT	2155.0 - 1787.5	2075.0 - 2015.0
1	2	CSAT-GR Checkshot	2153.3 - 800.0	-
1	3	CST-GR	2126.0 - 1794.0	-

Logging Parameters:

Suite	Run	Bit Size	Fluid Type	Mud Weight (SG)	Viscosity (s)	Fluid Loss (ml)	pH	Rm (ohm.m @ °C)	Rmf (ohm.m @ °C)	Rmc (ohm.m @ °C)
1	1-3	8.5"	KCL- PHPA- Glycol	1.16	54	4.0	9.5	0.113 @ 22	0.100 @ 22	0.200 @ 22

Suite	Run	Max. rec. Temp. °C @ Depth (m)	Circulation stopped	Logger on bottom
1	1	89.2 @ 2109.5	08/10/01 17:00	09/10/01 04:10
1	2	93.0 @ 2131.0	08/10/01 17:00	09/10/01 14:25
1	3	Thermometer broken, no data.	08/10/01 17:00	09/10/01 23:20

4.4 HYDROCARBON INDICATIONS

A summary of the gaseous hydrocarbon indications from cuttings is included. (Appendix 2). No fluorescence was noted.

4.5 VELOCITY SURVEYS

No Vertical Seismic Profile was shot for Geographe North-1. A checkshot survey was conducted where 57 levels were shot with 54 being valid. The data is attached. (Appendix 6)

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FORMATION TESTING

5.1 PRESSURE TESTING AND FLUID SAMPLING

No MDT tests were performed in Geographe North-1.

5.2 PRODUCTION TESTING

No production tests were performed at Geographe North-1

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APPENDICES

Appendix 1: Cuttings Descriptions and Litholog

Appendix 2: Cuttings Gas Summary

Appendix 3: Sidewall Core Description Log
Enclosure: CST Photographs.

Appendix 4: *Baker Hughes* (Mudloggers) End of Well Report
Enclosure: Formation Evaluation Log
Drilling Data Plot
Pressure Data Plot
Pressure Summary Plot

Appendix 5: *Schlumberger* MWD-LWD End of Well Report

Appendix 6: *Schlumberger* Velocity Survey: Checkshot data
Enclosure: VSP charts

Appendix 7: *Fugro Survey* Rig Positioning Report

Appendix 8: a) Morgan Palaeo Associates: Basic Data Report
b) ISC Biostrat: Biostratigraphic Data
Enclosure: Palynology Range Chart

Appendix 9: Daily Drilling Reports

Appendix 10: Daily Geological Reports

Appendix 11: Daily Drilling Mud Reports