

Spikey Beach-1

WELL COMPLETION REPORT

- BASIC DATA -

T/38P

Bass Basin, Offshore Northern Tasmania



5065

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1 WELL INDEX SHEET**SPIKEY BEACH-1**

SEISMIC LOCATION:	Survey: Amoco Bass Basin Line: TNK4-99 SP: 772	PERMIT: T/38P BASIN: Offshore Bass Basin PARTICIPANTS: Beach Energy Ltd (Op.) 80% Galveston Mining Corp Pty Ltd 10% Exoil Ltd 10%
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SURFACE LOCATION:	Latitude: 40° 28' 53.879" S Longitude: 145° 52' 24.706" E Easting: 404 522.80m Northing: 5 518 174.63m Datum: GDA94 Spheroid: GRS80 Map Grid: MGA 94 Projection: UTM Zone 55, CM 147	WELL DESIGNATION: Exploration STATUS: Plugged and Abandoned STRUCTURE TYPE: Anticline RIG NAME AND TYPE: Ocean Patriot Semi-Submersible MODU RIG CONTRACTOR: Diamond Offshore Drilling Inc
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TOTAL DEPTH:	(mMD)	(mTVDSS)	HOLE SIZES:	Size	Interval (mMD)
Driller:	2100.0	2078.5		914mm (36")	95.5 - 155.0m
Logger:	N/A			445mm (17 1/2")	155.0 - 816.0m
				311mm (12 1/4")	816.0 - 2100.0m
ELEVATION:	Datum: MSL		CASING:	Size	Shoe (mMD)
	RT-ASL (MSL): 21.5m			762x508mm (30x20")	151.4
	WD (MSL): 74.0m			340mm (13 3/8")	805.8
	RT-ML: 95.5m		SPUD DATE:	21:00hrs	5/09/2009
			REACHED TD:	09:00hrs	13/09/2009
			RIG RELEASED:	14:30hrs	19/09/2009

LWD LOGS				
DATE	HOLE SIZE	RUN NUMBER	MEASUREMENT	INTERVAL
7-8/09/2009	445mm (17 1/2")	1	GR-DT_Shear DT_Comp-D&I	149.4 – 816.0m
10-14/09/2009	311mm (12 1/4")	2	GR-APWD-D&I-Resistivity-Shear DT-Comp DT-Density-Neutron-Caliper	816.0 – 2100.0m

WIRELINE LOGS – No wireline logs were run			
LOG TYPE	SUITE/RUN	INTERVAL mRT	BHT/TIME

DRILL STEM TESTING - No drill stem testing was undertaken				
TEST	TEST INTERVAL	FLOW RATE	CHOKE	FWHP

CEMENT PLUGS			
PLUG	INTERVAL	CEMENT TYPE	CEMENT VOLUME
1	1385 – 1520m	Abandonment	822 sacks
2	650 – 850m	Abandonment	404 sacks
3	115 – 215m	Abandonment	235 sacks

2 OPERATIONS SUMMARY

An attempt to drill the Spikey Beach-1 well using the West Triton jack-up rig was made in December 2008, but the rig was unable to successfully jack up at the well location. The decision was made to postpone the drilling of the well until a more suitable rig could be sourced.

The Ocean Patriot came on contract to Beach Energy for the tow to Spikey Beach-1 at 12:30 hrs on 2 September 2009 when the rig was 1 nautical mile from the ROC/ANZON BMG facility, the previous contract for the rig. The tow distance between the two locations was approximately 185 nautical miles and the average speed achieved over the tow was 4.3 knots. Anchor running operations commenced at 06:30 hrs on 4 September 2009, and were completed at 11:30 hrs on 5 September 2009. Anchor #3 could not be tensioned due to the weather conditions deteriorating and was finally reset and successfully tensioned following the running and cementing of the 30" conductor. An ROV was used to perform a seabed survey. The recorded water depth was measured at 74.0m and the Ocean Patriot rig elevation was measured 21.5m from rotary table to mean sea level.

2.2 Spikey Beach-1 Drilling Operations

2.2.1 914mm (36") Hole Section and 762mm (30/20" Conductor)

The well was spudded at 21:00 hrs on 5 September 2009, with a 26" Hughes Christensen, CR-1 rock bit run below a 36" hole opener. The seabed was tagged at 95.5m and a survey was taken with the Anderdrift, recording 0° inclination. The 36" hole was then drilled to section TD at 155mMDRT, in 1.7 hours without problems.

After reaching section TD, 150 barrels of hi-viscosity mud was pumped and another Anderdrift survey was taken on bottom, recording 0° inclination. A wiper trip was then conducted to 109m. The BHA was run in the hole and washed to bottom before the hole was displaced with 480 barrels of PHG mud and the BHA pulled out of hole and racked back.

The 30" x 20" shoe joint was made up and the conductor string run inside the PGB in the moonpool. The 30" running tool was then made up to the 30" housing and the conductor string landed and latched inside the PGB. The guidelines were installed and the PGB and conductor string was lowered to the seabed. The casing string was then run in hole placing the float shoe at 151.4m.

Cementing lines were rigged up and the 30" conductor was then cemented with 270 barrels of 15.8 class G cement, which was displaced with 21 barrels of seawater. The ROV observed cement returns to seabed.

2.2.2 445mm (17 ½") Hole Section and 311mm (13 ⅜") Surface Casing

A Baker Hughes GX-C1V mill tooth bit was made up to a BHA comprising ARC-9, Power Pulse NF and Sonic VISION MWD/LWD tools, and run in hole. The top of cement was tagged at 148.4m inside the conductor and the shoe track was drilled out to the bottom of the rathole at 155m. The 30" x 20" shoe joint was reamed twice before drilling ahead to section TD of 816m (661m section length) in a single bit run taking 9.2 hrs with an average drilling ROP of 71.85m/hr. The BHA was pulled out of hole without problems.

A two joint shoe track was made up and the float valves checked prior to running the 13 ⅜" casing. The Cameron STC-10 18 ¾" housing joint, comprising a 20" extension swaged over to 13 ⅜" casing, was made-up. This assembly was run complete with the Dowell cement head and Deep Sea Express plug launching equipment. The casing was run to 805m before being washed down to depth without problems and latched into the 30" housing. 348 barrels of class G lead slurry at 12.5 ppg was mixed and pumped, followed by 90 barrels of 15.8 ppg class G tail slurry. The cement was displaced with 343 barrels of seawater to place top of cement at seabed (95.5m). On releasing the final circulating casing pressure, the floats held and the ROV monitored good returns at seabed throughout the displacement.

2.2.3 Run BOP's

The BOP spool joint was made up to a double of riser and the BOP skidded over the well centre. The guidelines and pod lines were installed and BOP nipped up to the riser spool joint. The BOP was then run on riser and landed out onto the wellhead. The connector was latched and a 50 klbs over-pull test performed on the connector. After landing the BOP, the connector and the 20" x 13 ⅜" casing were pressure tested against the blind shear rams to 2750 psi.

2.2.4 311mm (12 ¼") Hole Section

A Baker Hughes HCM50ZX 12 ¼" PDC bit was made up to a BHA comprising a mud motor and the following Schlumberger MWD tools; ARC-8, Telescope 825NF, Sonic VISION 825 and ADN. The BHA was run in the hole and tagged cement at 794m. The 13 ⅜" shoe track was drilled out to the bottom of the rat-hole at 816m and the well circulated to 9.0 ppg KCl / Polymer / Klastop mud. Three (3) metres of new formation were drilled to 819m where a Leak-off Test (LOT) was conducted to 12.35 ppg equivalent mud weight.

The 12 ¼" hole was then drilled to 1452m, taking surveys every 90m. The mud was weighed up to 9.4 ppg by 1360m. Controlled drilling continued from 1452m to 1870m (Top of Eastern View Group) at 15-20 m/hr to allow for accurate sample analysis. Consistent splintery cuttings were observed at the shakers by 1590m and

the mud was weighed up to 9.8 ppg. Splintery cuttings were again observed at 1820m and the mud weight was further increased to 10 ppg. During the course of drilling this section, the well experienced string stalling due to variable formation with a maximum torque of 26 kft-lbs. Controlled drilling continued from 1807m to 2100m (TD) with a ROP of up to 40 m/hr.

Overall the 12 ¼" hole was drilled to well TD of 2,100m (1284m section length) without problems in a single bit run in 35.8 hours with an average drilling ROP of 33.1 m/hr.

A 200 barrels hi-vis sweep was pumped at TD and the well was circulated clean before pulling out of hole to 1606m. The well was then re-logged with MWD tools from 1606m to 1540m before the drill string was pulled out of hole to surface. The Schlumberger LWD tools successfully captured all the data required for petrophysical evaluation and therefore no wireline logs were required.

2.3 Plug and Abandonment

The well was plugged and abandoned as per the well schematic in Figure 3.

The well was plugged and abandoned with three (3) cement plugs. A 2 ⅞ barrel cement stinger was made up below 5" drill pipe and run in hole to 1620m. A 50 barrel hi-vis pill was spotted from 1620m to 1520m and abandonment Plug #1 was set from 1520m to 1370m with 79 barrels of 15.8 ppg class G cement. Excess drill pipe was pulled out of hole and laid down while waiting on cement before running back in the hole and tagging cement at 1385m. A 50 barrel hi-Vis pill was spotted from 950m to 838m before abandonment Plug #2 was set across the 13 ⅝" shoe from 850m to 700m with 81 barrels of 16 ppg class G cement. Drill pipe was laid down while pulling out of hole and the BOP's and wellhead were jettied. The wear bushing was pulled free and recovered to surface. Cement Plug #2 was successfully pressure tested to 1050 psi for 10 minutes. A mule shoe was then run in hole on drill pipe to 315m and a 50 barrel hi-vis pill spotted from 315m to 215m. Drill pipe was pulled out of hole and laid down prior to setting abandonment Plug #3 from 215m to 115m with 49 barrels of 15.8 ppg class G cement. The rest of the drill pipe was pulled out of hole and laid out. The BOPs were then recovered to surface without incident.

The 20" and 30" casing strings were cut at 97.1m (1.6m below the seabed). The PGB and wellhead were successfully retrieved to surface and a seabed clearance survey was completed with the ROV prior to commencing rig move operations.

After de-ballasting the rig, anchor retrieval operations were completed without problems in a total of 21 hours. The rig was then towed to Western Port Bay in 33 hours where the Ocean Patriot went off contract to Beach Energy Ltd at 14:30 hrs on 19 September 2009 when all eight anchors had been deployed and tensioned.

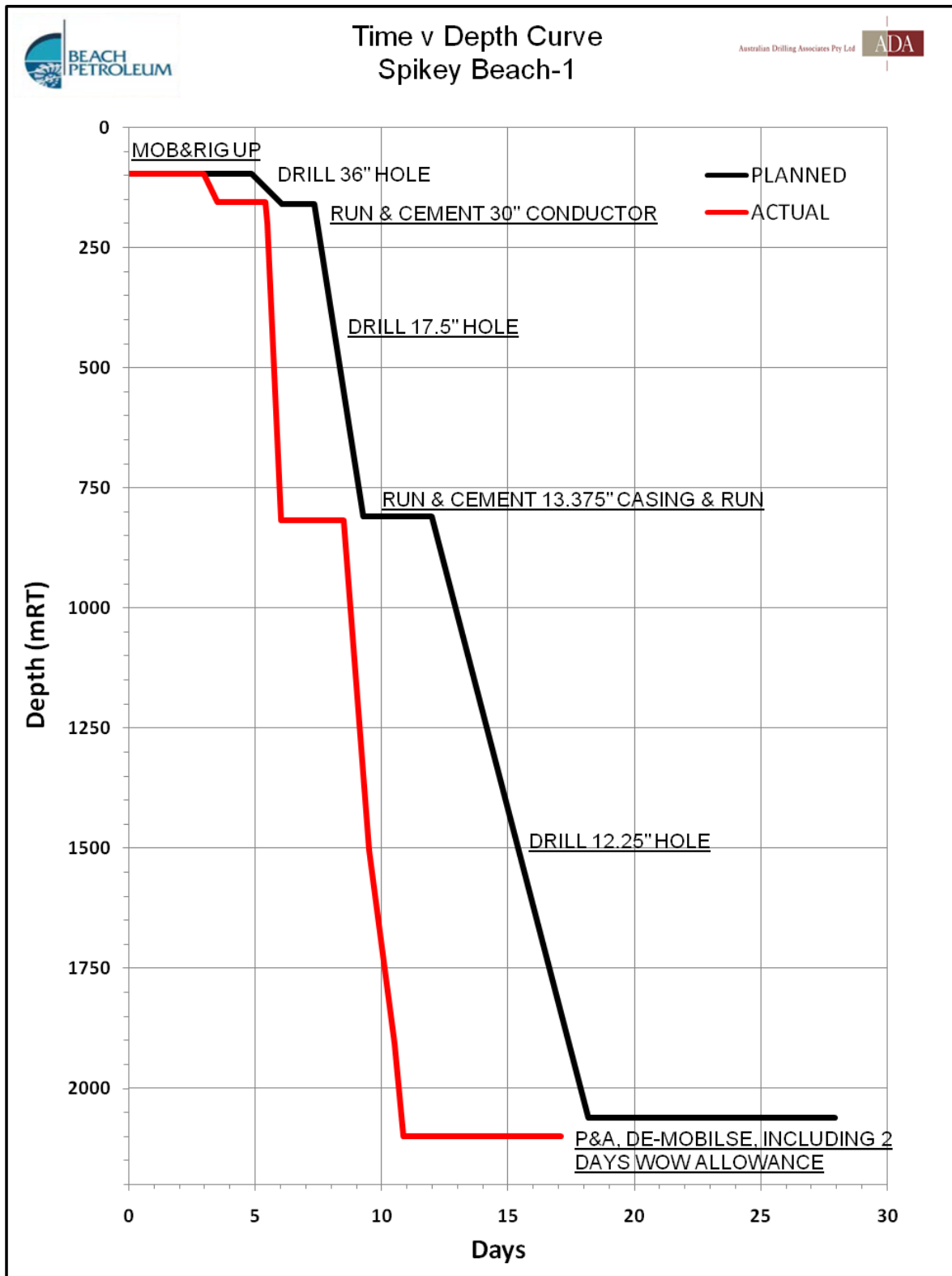


Figure 2: Spikey Beach-1 Drilling Time/Depth Curve

3 DRILLING AND COMPLETION DATA

The drilling and engineering End of Well Report, prepared by Australian Drilling Associates Pty Ltd (ADA) on behalf of Beach Energy Ltd is contained in Appendix 1 of this report. Copies of the Daily Drilling Reports are contained in Appendix 2. Summary documentation of the rig move and the final well location survey prepared by Neptune Geomatics is contained in Appendix 3 of this report and Attachment 9 of Appendix 1. A schematic diagram of the well bore after plug and abandonment is shown in Figure 3.

3.1 Hole Sizes and Depths

Hole sizes and the intervals for which they were drilled in Spikey Beach-1 were as follows:

914mm / 36"	95.5	to	155.0mMD
445mm / 17 ½"	155.0	to	816.0mMD
311mm / 12 ¼"	816.0	to	2100.0mMD

3.2 Casing Data – Spikey Beach-1

TYPE	Size	Weight	Grade	Thread	Shoe Depth
Conductor	762x508mm (30")	1" wall	X-52	D60/MT	
	508mm (20")	1" wall	X-52	D60/MT	151.4mMD
Surface Casing	340mm (13 ⅜")	101.2kg/m (68ppf)	N-80	BTC	805.8mMD

A full casing report for Spikey Beach-1 is contained in Appendix 1, Attachment 4.

3.3 Cementing Data

Cementing operations on Spikey Beach-1 are detailed in the cementing report contained in Appendix 1, Attachment 5.

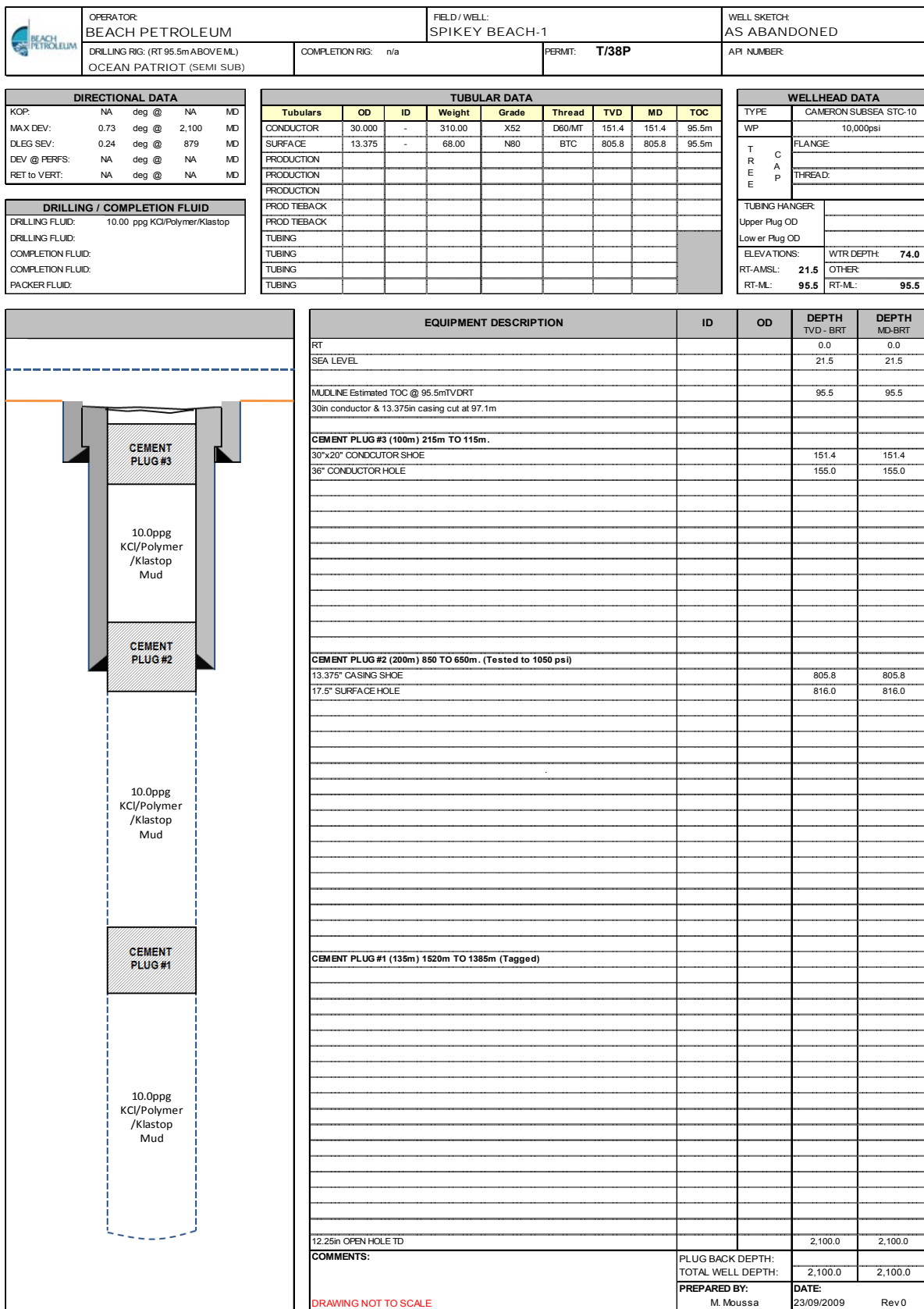


Figure 3: Spikey Beach-1 P&A Diagram

3.4 Surveys

Directional surveying of the well path was conducted by Schlumberger Drilling and Measurements using Measurement While Drilling (MWD) equipment. The final Geodetic Survey is listed on the following page. A full report is contained in Appendix 1, Attachment 7 and also in Appendix 4 of this report.

3.5 Bit Record

The bit and BHA record for Spikey Beach-1 is included in Appendix 1, Attachment 2.

3.6 Mud Data

Mi Swaco provided the drilling mud for Spikey Beach-1. A full report of drilling fluids, physical mud properties and chemicals used are provided in Appendix 1, Attachment 3.

3.7 Testing

No drill stem or other testing was performed in Spikey Beach-1.



Spikey Beach-1 Survey Report

Report Date: September 13, 2009	Survey / DLS Computation Method: Minimum Curvature / Lubinski
Client: Beach Petroleum	Vertical Section Azimuth: 0.000°
Field: Beach - Offshore Zone 55	Vertical Section Origin: N 0.000 m, E 0.000 m
Structure / Slot: Spikey Beach / New Slot	TVD Reference Datum: RKB
Well: Spikey Beach-1	TVD Reference Elevation: 21.5 m relative to MSL
Borehole: Spikey Beach-1	Sea Bed / Ground Level Elevation: -74.000 m relative to MSL
UWI/API#:	Magnetic Declination: 12.967°
Survey Name / Date: Spikey Beach-1 Surveys RM / September 9, 2009	Total Field Strength: 61230.271 nT
Tort / AHD / DDI / ERD ratio: 4.246° / 12.29 m / 2.234 / 0.006	Magnetic Dip: -70.905°
Grid Coordinate System: GDA94/MGA94 Zone 55	Declination Date: September 09, 2009
Location Lat/Long: S 40 28 53.879, E 145 52 24.706	Magnetic Declination Model: BGM 2008
Location Grid N/E Y/X: N 5518174.630 m, E 404522.800 m	North Reference: Grid North
Grid Convergence Angle: +0.73136463°	Total Corr Mag North -> Grid North: +12.236°
Grid Scale Factor: 0.99971221	Local Coordinates Referenced To: Well Head

Comments	Measured Depth (m)	Inclination (deg)	Azimuth Grid (deg)	TVD (m)	Vertical Section (m)	NS Grid North (m)	EW Grid North (m)	Closure (m)	Closure Azimuth (deg)	DLS (deg/30 m)	Mag / Grav Tool Face (deg)
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---
Sea Bed	95.50	0.00	0.00	95.50	0.00	0.00	0.00	0.00	0.00	0.00	83.43M
	179.35	0.24	83.43	179.35	0.02	0.02	0.17	0.18	83.43	0.09	40.89M
	206.93	0.26	40.89	206.93	0.07	0.07	0.27	0.28	74.82	0.20	50.63M
	294.67	0.37	50.63	294.67	0.40	0.40	0.62	0.74	56.99	0.04	101.79M
	338.42	0.10	101.79	338.42	0.49	0.49	0.77	0.91	57.70	0.22	96.28M
	352.67	0.17	96.28	352.67	0.48	0.48	0.80	0.94	59.04	0.15	48.22M
	382.26	0.19	48.22	382.26	0.51	0.51	0.88	1.02	60.01	0.15	55.57M
	468.33	0.04	55.57	468.33	0.62	0.62	1.01	1.19	58.49	0.05	259.09M
	514.50	0.11	259.09	514.50	0.62	0.62	0.98	1.16	57.69	0.10	276.07M
	556.06	0.15	276.07	556.06	0.62	0.62	0.89	1.08	55.13	0.04	259.55M
	642.56	0.27	259.55	642.56	0.60	0.60	0.58	0.83	44.11	0.05	254.10M
	727.80	0.25	254.10	727.80	0.51	0.51	0.20	0.55	21.55	0.01	261.45M
	755.00	0.16	261.45	755.00	0.49	0.49	0.11	0.50	12.29	0.10	245.91M
	786.24	0.17	245.91	786.24	0.46	0.46	0.02	0.46	2.53	0.04	263.56M
	803.80	0.18	263.56	803.80	0.45	0.45	-0.03	0.45	356.05	0.09	77.12M
	879.04	0.43	77.12	879.03	0.50	0.50	0.13	0.51	14.35	0.24	90.11M
	990.83	0.34	90.11	990.82	0.59	0.59	0.87	1.05	55.82	0.03	90.35M
	1078.27	0.31	90.35	1078.26	0.59	0.59	1.36	1.48	66.70	0.01	84.09M
	1164.94	0.40	84.09	1164.93	0.62	0.62	1.90	2.00	72.00	0.03	97.02M
	1221.27	0.44	97.02	1221.26	0.61	0.61	2.31	2.39	75.18	0.05	93.25M
	1338.66	0.51	93.25	1338.64	0.53	0.53	3.28	3.32	80.88	0.02	94.83M
	1367.75	0.54	94.83	1367.73	0.51	0.51	3.54	3.58	81.86	0.03	105.25M
	1456.65	0.52	105.25	1456.63	0.37	0.37	4.35	4.37	85.19	0.03	90.58M
	1530.18	0.55	90.58	1530.16	0.27	0.27	5.03	5.03	86.87	0.06	77.67M
	1596.34	0.49	77.67	1596.31	0.33	0.33	5.62	5.63	86.62	0.06	69.82M
	1625.50	0.47	69.82	1625.47	0.40	0.40	5.85	5.87	86.10	0.07	85.01M
	1682.67	0.41	85.01	1682.64	0.50	0.50	6.28	6.30	85.46	0.07	80.24M
	1767.94	0.46	80.24	1767.91	0.58	0.58	6.92	6.94	85.18	0.02	65.19M
	1858.33	0.33	65.19	1858.30	0.75	0.75	7.51	7.55	84.27	0.05	64.16M
	1913.35	0.48	64.16	1913.31	0.92	0.92	7.86	7.92	83.32	0.08	69.15M
	1941.91	0.47	69.15	1941.87	1.01	1.01	8.08	8.14	82.85	0.04	92.17M
	2028.47	0.60	92.17	2028.43	1.12	1.12	8.87	8.94	82.78	0.09	87.08M
	2076.18	0.73	87.08	2076.14	1.13	1.13	9.42	9.49	83.16	0.09	---
Projection to bit.	2100.00	0.73	87.08	2099.95	1.14	1.14	9.72	9.79	83.28	0.00	---

Survey Type: Non-Def Survey

Survey Error Model: SLB ISCWSA version 24 *** 3-D 95.00% Confidence 2.7955 sigma

Surveying Prog:

MD From (m)

MD To (m)

EQU Freq Survey Tool Type

Borehole -> Survey

0.00

95.50

Act-Stns SLB_INC-ONLY-Depth Only

Spikey Beach-1 -> Spikey Beach-1 Surveys RM

95.50

803.80

Act-Stns SLB_MWD+DMAG

Spikey Beach-1 -> Spikey Beach-1 Surveys RM

803.80

2100.00

Act-Stns SLB_MWD-STD

Spikey Beach-1 -> Spikey Beach-1 Surveys RM

Spikey Beach-1 Final Geodetic Survey Listing

4 FORMATION EVALUATION

4.1 Mudlogging

4.1.1 Mudlogging

Baker Hughes Inteq Mudlogging provided formation evaluation and monitoring of full drilling parameters from spud. Full mudlogging services, including cuttings collection and gas detection were provided from first returns to total depth using a high speed gas chromatograph system. The mudlog, gas log, drill log and pressure logs recording lithology, penetration rate, mud gas, drilling and other data were prepared and are contained as Enclosure 1, 2, 3 and 4 of this report. The Baker Hughes Inteq Final Well Report is contained in Appendix 5.

4.1.2 Ditch Cutting Samples

Cuttings were collected and described from 816m (first returns) to TD at 2100.0m. The sampling intervals are described in Appendix 5, Section 3.2. Several samples were missed due to a high rate of penetration (refer Appendix 5, Section 3.1). Details of cuttings sample sets are tabulated below:

Sample Type	Large Box No.	Interval (mMDRT)
Washed and dried Cutting Samples To be split into 3 x 200g samples	BAG 1	816.0 – 980.0
	BAG 2	980.0 – 1100.0
	BAG 3	1100.0 – 1248.0
	BAG 4	1248.0 – 1380.0
	BAG 5	1380.0 – 1470.0
	BAG 6	1470.0 – 1524.0
	BAG 7	1524.0 – 1599.0
	BAG 8	1599.0 – 1671.0
	BAG 9	1671.0 – 1749.0
	BAG 10	1749.0 – 1821.0
	BAG 11	1821.0 – 1857.0
	BAG 12	1857.0 – 1893.0
	BAG 13	1893.0 – 1941.0
	BAG 14	1941.0 – 2013.0
	BAG 15	2013.0 – 2100.0
	Box 1	ZIP LOCK BAGS (3 SETS) – 816.0 to 2100.0 METAL TAGS (3 SETS) – 816.0 to 2100.0
Samplex Tray Samples	Box 2 (Cardboard Box)	816.0 – 1290.0
Set D	Box 3 (Wooden Box)	1290.0 – 2100.0
Mud Sample (500ml) Set E	Box 4	1. 1410m– 12-1/4" section (2 bottles of 500ml) 2. 1493m- Reservoir section (2 bottles of 500ml) 3. 2100m-TD of 12-1/4" section Total – 5 bottles (500ml each) Packed inside 1 big box: Box 1 of 1 38cmx38cmx24cm Approximate Weight: 6 kg

Total Bags 15, Total Boxes 4

The wellsite daily geological reports are provided in Appendix 6 and the Geologists' cuttings sample descriptions are contained in Appendix 7.

4.1.3 Hydrocarbon Indications

Spikey Beach-1 was drilled with seawater and high viscosity Bentonite sweeps in the 36" and 16" hole sections with no returns. The 12 ¼" hole was drilled with a KCl / Polymer mud system. Gas was monitored from first returns at 810.0mMD and significant peaks and breakdowns are recorded in Appendix 5, Section 3.1 and on the Mudlog and Gas Ratio Logs (Enclosures 1 and 2).

No significant hydrocarbon shows were encountered during the drilling of Spikey Beach-1.

4.2 Coring

4.2.1 Coring

No conventional cores were taken in Spikey Beach-1.

4.2.2 Sidewall Cores

No wireline rotary or percussion cores were taken in Spikey Beach-1

4.3 MWD/LWD Logging

Real-time and recorded MWD /LWD data acquisition was provided by Schlumberger Drilling and Measurements in the 17 ½" and 12 ¼" hole sections. Run summaries are tabulated below:

Run	Hole Size	MWD/LWD Services	Start Depth (m)	Stop Depth (m)	Distance (m)	Start Date	Stop Date
1	17 ½"	arcVision9-TeleScope-SonicVision9 (GR-D&I-Shear DT-Compressional DT)	149.4	816.0	666.6	07/09/09	08/09/09
2	12 ¼"	PowerPak-ArcVISION-TeleScope-SonicVISION-adnVISION (Resisitivity-GR-D&I-Shear DT-Compressional DT-Caliper-Density-Neutron)	816.0	2100.0	1284.0	10/09/09	14/09/09

The Schlumberger D&M End of Well Report is contained in Appendix 4 of this report.

4.4 Wireline Logging

No wireline logs were acquired in Spikey Beach-1.

4.5 Temperature Surveys

No wireline temperature surveys were run in Spikey Beach-1, however MWD/LWD logging recorded the following maximum temperatures:

Logging Tool String	Max Depth (m)	Max Temp (deg C)	Total Pump Hours
ArcVISION-SonicVISION	816.0	23	19.0
ArcVISION-SonicVISION-SadnVISION	2100	65	48.9

4.6 Velocity Survey

A borehole seismic survey was not carried out in Spikey Beach-1.

5 POST WELL ANALYSIS (BASIC DATA)

5.1 Palynology Analysis

Palynology age dating was carried out on fifteen cuttings samples by Dr Alan D Partridge, Biostrata Pty Ltd. Tabulated results are contained in Appendix 8 of this report.

Appendix 1: Drilling End of Well Report



End of Well Report

SPIKEY BEACH-1

1	B	Final	DE	SDE	DES	
1	A	Issued for comment	DE	SDE	DES	
Issue	Rev	Description	Prepared By:	Reviewed By:	Approved By:	Date:

Spikey Beach-1

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1. Document Distribution List

Copy	Location	Recipient	No. of Copies
1	ADA	Document Control (File)	1
2	ADA	Spare	2
3	Beach	Drilling Operations Manager	1
4	Beach	Drilling Manager	1
5	Beach	Spare	1
6	DIER	Managing Geologist	



Spikey Beach-1

2. Approvals

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Date

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Date

Disclaimer

This document has been prepared on behalf of and for the use of Beach Petroleum Limited (Beach) in accordance with generally accepted consulting practices, and is issued in accordance with the agreement between Beach and Australian Drilling Associates Pty Ltd (ADA). The information contained in this document is provided as a guide only. Although every effort has been made to ensure the accuracy of the information, ADA disclaims any liability or responsibility for the accuracy of the information contained herein.

Spikey Beach-1

3. Executive Summary

Spikey Beach-1 was originally planned to be drilled in December of 2008 with the Seadrill operated jack-up rig "West Triton". During preloading operations at the Spikey Beach-1 location, unpredicted rapid penetration of the Port leg occurred causing the rig to list 5 degrees. It was decided to abort jack-up operations at the Spikey Beach location and drilling the well was deferred.

The Diamond Offshore semisubmersible "*Ocean Patriot*" subsequently became available and came on contract to Beach Petroleum at 12:30hrs on 2nd September 2009, when the rig was under tow, 1nm away from the ROC/ANZON BMG facility. The 185nm tow from the Gippsland Basin to the Spikey Beach-1 location and the running of anchors was completed without incident.

Total time spent on the well was 17.08 days, compared with the total AFE time for the well of 27.92 days. The well duration was 10.84 days (38.8%) under the AFE. The final tracked cost for the Spikey Beach-1 well is estimated to be A\$14.5 million, against an equivalent dry hole case AFE of A\$24.3 million which is 9.8 million (40.3%) under AFE. Of the 17.08 days spent on Spikey Beach-1, a total of 2.5hrs were recorded as non-productive time for the well, 2 hrs of this was recorded as rig repair and 0.5hrs as third party, non-productive time. A breakdown of the non-productive time is detailed in Section 5.2.

Spikey Beach-1 was spudded at 21:00hrs on 5th September 2009, in 74.0m of water with the rotary table being elevated 21.5m above SL. The well was drilled to TD at 2100mMDRT, the well intersected all targets within the prescribed tolerance and all required formation evaluation data was captured. The well was plugged and abandoned according to regulatory requirements. The well operations were completed at 14:30hrs on 19 September 2009 when the rig came off contract to Beach Petroleum, upon last anchor down following the rig tow to Western Port bay.

From an HSE perspective, Spikey Beach-1 was drilled very successfully with no accidents or incidents occurring during the well with no damage to the environment.

The main highlights on Spikey Beach-1 well were as follows:

- No incidents or accidents
- Well drilled well within time and cost targets
- All technical objectives met

The main lowlights on Spikey Beach-1 well were as follows:

- Requirements for a special helicopter to mobilise a replacement cementer
- Difficulties cleaning the vessels tanks at the end of the operation

Spikey Beach-1

4. Well Summary & Overview

4.1 Well Summary

Well Name	Spikey Beach-1
Country	Australia
Designation	Exploration Well
Field Name	Spikey Beach
License/Permit	T/38P
Rig Name/Type	<i>Ocean Patriot</i> / Semi-Submersible
Well Operator	Beach Petroleum Pty Ltd (80%)
Participants	Galveston Mining Corp Pty Ltd (Cue) (10%) Exoil Ltd (10%)
Rig On Contract	2nd September, 2009 @ 12:30 hrs
Rig on Location	4 th September, 2009 @ 06:30 hrs
Spud Date	5 th September, 2009 @ 21:00 hrs
Reached TD	13 th September, 2009 @ 09:00 hrs
Rig Off Location	17 th September, 2009 @ 17:10 hrs
Rig Off Contract	19th September, 2009 @ 14:30 hrs
Total Days on Operations	17.08 days
Total Days AFE	27.92 days
Total Depth	2078.5mTVDSS / 2099.95mTVDRT / 2100.0mMDRT
Well Type	Vertical
Maximum Deviation Angle	0.73°
Water Depth	74 m
RT above MSL	21.5 m
Rig Heading	246.5° True
Geocentric Datum	GDA94 CM147° East
Surface UTM	UTM Zone 55
Surface Latitude	40° 28' 53.879" S
Surface Longitude	145° 52' 24.706" E
Surface Easting	404 522.80 m E
Surface Northing	5 518 174.63 m N
Bottom Hole Location: Latitude	40° 28' 53.846" S
Bottom Hole Location: Longitude	145° 52' 25.11" E
Bottom Hole Location: Easting	404 532.52 m E
Bottom Hole Location: Northing	5 518 175.77 m N
36in Hole	155mTVDRT / 155mMDRT / 133.5mTVDSS
30in x 20in Conductor	151.4mTVDRT / 151.4m MDRT / 129.9mTVDSS
17.5in Hole	816mTVDRT / 816mMDRT / 794.5mTVDSS
13.375in Surface Casing	805.8mTVDRT / 805.8mMDRT / 784mTVDSS
12.25in Open Hole	2078.5mTVDSS / 2099.95mTVDRT / 2100.0mMDRT

Spikey Beach-1**4.2 Casing and Cementing Data***4.2.1 Casing Data*

Type	Size (inches)	Weight (ppf)	Grade	Thread	Depth (mMDRT)
Conductor (30in x 20in tapered shoe joint)	30	1" wall	X-52	D60/MT	
	20	1" wall	X-52	D60/MT	151.4
Surface Casing	13.375	68	N-80	BTC	805

4.2.2 Cementing Data

String / Plug	Cement Type	Dry Cmt Vol (sks)	Cement Additives	Mix Water (gal/sk)	Slurry Vol (bbls)	Slurry Density (ppg)	Cement to / from (mMDRT)	Csg Test Pressure (psi)
30in x 20in	Class G	1321	D047 Antifoam S001 Accelerator Seawater	5.329	270	15.8	95.5	n/a
13.375in Lead	Class G	868	D047 Antifoam D075 Extender D081 Retarder Seawater	13.228	348	12.5	95.5	2750
13.375in Tail	Class G	422	D047 Antifoam D145A Dispersant D081 Retarder Seawater	5.57	90	15.8	660	
Plug #1	Class G	822	Freshwater	1.16	79	15.8	1385-1520 (tagged)	n/a
Plug #2	Class G	404	Freshwater	1.13	81	16.0	650-850	1050
Plug #3	Class G	235	Seawater	1.18	49	15.8	115-215	n/a

Spikey Beach-1

4.3 Operations Summary

4.3.1 Rig Mobilisation and Rig Up

The Ocean Patriot came on contract to Beach Petroleum for the tow to Spikey Beach-1 at 12:30hrs on 2nd September 2009 when the rig was 1nm from the ROC/ANZON BMG facility. Tow distance between the two locations was approximately 185nm. The average speed achieved over the tow was 4.3kts.

Anchor running operations commenced at 06:30 hrs on 4th September 2009, anchor running operations were completed once 7 anchors were run, tensioned and holding position at 11:30 hrs on 5th September 2009. Anchor #3 could not be tensioned and due to the weather conditions deteriorating, it could not be recovered at this time. The anchor was finally reset and successfully tensioned following the running and cementing of the 30in conductor. The ROV was jumped and a seabed survey conducted. The recorded water depth was 74.0m. The Ocean Patriot rig elevation was measured 21.5m from rotary table to mean sea level.

4.3.1.1 Conclusions and Recommendations

- (i) Overall the rig move and anchoring operations went very well, in marginal weather.
- (ii) The EMAS vessel performance could have been better, with the *Lewek Swift* crew not being as proficient as the *Lewek Emerald* crew at anchor handling operations.
- (iii) Diamond's agreements to risk assess and allow the well to be spudded with 7 anchors set, saved around 48 hours of operational time. The anchor was pretensioned following running of the 30in conductor.

4.3.2 Drilling 36in Hole / Setting 30in x 20in Conductor

The well was spudded at 21:00hrs on 5th September 2009, with a 26in Hughes Christensen, CR-1 rock bit run below a 36in hole opener. The seabed was tagged at 95.5m. A survey was taken with the Anderdrift, recording 0° inclination. The 36in hole was then drilled to section TD at 155mMDRT, in 1.7 hrs without difficulty. Drilling parameters were: drilled first 4m with 300gpm, 0-2klbs WOB. The well was drilled ahead and flow was slowly built from 300gpm to 1000gpm. WOB increased from 2klbs to 5klbs. RPM ranged from 40 to 70rpm.

After reaching section TD, 150bbls of hi-vis mud was pumped and another Anderdrift survey was taken on bottom, recording 0° inclination. A wiper trip was then conducted to 109m, no drag was recorded while POOH. The BHA was RIH and tagged fill at 153.5m (1.5m) prior to washing to bottom. The hole was displaced with 480 bbls of PHG mud before the BHA was POOH and racked back.

The 30in x 20in shoe joint was made up and flow was checked through the float valve before running the conductor string inside the PGB in the moonpool. The 30in running tool was then made up to the 30in housing. The conductor string was landed and latched inside the PGB. The guidelines were installed and the PGB and conductor string together with 5jts of 5in drill pipe inside the casing as a cement stinger was RIH on drill pipe below sea level allowing the string to fill with water. The ball valve on the wellhead running tool was closed and the conductor string RIH to seabed. The ROV observed the conductor entering the 36in hole and no problems were encountered. The string was RIH placing the float shoe at 151.4m. The orientation of the PGB was checked, 243°-247°. Bullseye recording of 0°. Height of the 30in housing was ~2m above seabed.

Cementing lines were rigged up and 10 bbls seawater pumped with the cement unit before pressure testing surface lines to 1000psi for 10mins. 20 bbls of seawater preflush was then pumped followed by 10 bbls of seawater containing green dye. The 30in conductor was then cemented with 270bbls of 15.8 class G cement and displaced with 21bbls of seawater, and the floats confirmed as holding. The ROV observed cement returns to seabed. After waiting on cement (WOC) for 3.5hrs, bullseye readings were 0.5° aft.

Spikey Beach-1

4.3.2.1 Conclusions and Recommendations

- (i) No problems were experienced drilling the 36in hole. The hole was stable when filled with gel mud. The original plan for Spikey Beach with the West Triton was to run a 7 joint conductor to approximately 100m below the seabed, it was decided to change this to a 5 joint conductor run to 56m below the seabed, and this practice is recommended for any future wells drilled in this area.
- (ii) Cameron spears/latches for post tops were difficult to work with. Do not use Cameron spears/latches for post tops. Use IMENCO which are much easier to use on surface and release with the ROV

4.3.3 Drilling 17.5in Hole / Running 13.375in Casing

A Baker Hughes GX-C1V mill tooth bit was made up to a BHA comprising ARC-9, Power Pulse NF and Sonic VISION, and RIH. Top of Cement (TOC) was tagged at 148.4m inside the conductor and the shoe track was drilled out to the bottom of the rathole at 155m. The 30 x 20in shoe joint was reamed twice before drilling ahead to section TD of 816m (661m section length) in a single bit run in 9.2 hrs with an average drilling ROP of 71.85m/hr and overall average including connections of 45.6m/hr. The BHA was POOH without problems.

A two joint shoe track was made up and the float valves checked prior to running the remainder of the 13.375 in casing. The Cameron STC-10 18.75in housing joint, which comprised of a 20in extension swaged over to 13.375 in casing, was made-up. The assembly was run complete with the Dowell cement head and Deep Sea Express plug launching equipment. The casing was run to 805m before being washed down to depth without problems and latched into the 30in housing with 100lbs down-weight and an over-pull of 50klbs applied. The bullseye was checked once more and no changes were recorded with a reading of 0.5°. A Franks Shark-Bite had been pre-installed above the float collar to prevent the DSE non-rotating plugs from rotating during drilling out.

After pressure testing surface lines to 4000psi, the bottom dart was dropped and 6.2bbbls of seawater preflush was pumped. The bottom plug was observed to shear out at 1000psi. 348bbbls of class G lead slurry at 12.5ppg was mixed and pumped followed by 90bbbls of class G tail slurry at 15.8ppg. There was no indication of the bottom plug landing on the float collar. The top dart was dropped and displaced with 10bbbls and the top plug was released with 2200psi. The cement was then displaced with 343bbbls of seawater to place TOC at seabed at 95.5m. The top plug was bumped at 97% efficiency and pressure tested to 2500psi. On releasing the final circulating casing pressure the floats held and the ROV monitored good returns at seabed throughout the displacement.

4.3.3.1 Conclusions and Recommendations

- (i) Use of Shark-bite in 13.375in casing to stop the Dowell Deep Sea Express from rotating proved to be successful. (These plugs do not have a non-rotating design).
- (ii) The Dowell Subsea express air driven hydraulic unit was not operational. This resulted in the use of a manual pumping unit for hydraulic pressure and to open valves/release darts during 13.375in cement job. No backup was available should the unit have failed further.
- (iii) Consider using hydraulic operated lo-torque valve on cement jobs. Reduces requirement for man riding and time delays.
- (iv) The Dowell cement unit valves did not consistently hold pressure. Had to service/change out valves during BOP/Manifold testing and during #2 plug testing.
- (v) BJ casing running went well, however communication with crew was extremely difficult. Required repeating requirements, asking questions to confirm understanding, and follow up later to confirm compliance.

Spikey Beach-1

4.3.4 Run BOPs

During this phase 0.5hrs of downtime was experienced due to the *Lewek Swift* support vessel having to be released from the bulk hose due to azimuth thruster problems, the crane needed to be used to release the vessel and therefore interrupted critical path time whilst running the BOPs. The BOP spool joint was made up to a double of riser and the BOP skidded over the well centre. The guidelines and pod lines were installed and BOP nipped up to the riser spool joint. The BOP was picked up off the carrier and lowered into the carrier guides and the beacons were installed and beacon arm deployed. The BOP was run on riser and landed out onto the wellhead. The connector was latched and a 50klbs over-pull test performed on the connector. After landing the BOP, the connector and the 20in x 13.375in casing were pressure tested against the blind shear rams to 2750psi without problems. The BOP was run in a total of 22.5hrs. The BOP had previously been pressure tested on the test stump.

4.3.4.1 Conclusions and Recommendations

- (i) The running of the BOP was problem free and was run in a total of 22.5 hrs. This was an excellent performance by the rig crew.

4.3.5 Drill 12.25in Hole

A Baker Hughes HCM50ZX PDC bit was made up to a BHA comprising a mud motor and the following Schlumberger MWD tools; ARC-8, Telescope 825NF and Sonic VISION. The BHA was RIH and tagged cement at 794m. The 13.375in shoe track was drilled out to the bottom of the rathole at 816m. The well was then circulated to 9.0ppg KCl/Polymer/Klastop mud, and 3m of new formation was drilled to 819m where a Leak off Test (LOT) was conducted to 12.35ppg EMW. The 12.25in hole was then drilled to 1452m, taking surveys every 90m and the mud was weighed up to 9.4ppg by 1360m. The 12.25in hole was then drilled from 1452m to 1870m (Top of EVCM) with a controlled ROP in the order of 15-20m/hr to allow accurate sample analysis. Consistent splintery cuttings were observed at the shakers and the mud was weighed up to 9.8ppg at 1590m. Splintery cuttings were again observed at 1820m and the mud weight further increased to 10ppg.

During this section the well experienced string stalling due to the ratty formation with a maximum torque of 26kft-lbs. The 12.25in hole continued to be control drilled from 1807m to 2100m with an ROP of up to 40m/hr.

Overall the 12.25in hole was drilled to well TD of 2,100m (1284m section length) without problems in a single bit run in 35.8hrs with an average drilling ROP of 33.07m/hr and the overall average including connections was 26.92m/hr.

A 200bbls hi-vis sweep was pumped at TD and the well was circulated clean before POOH to 1606m. The well was then re-logged with MWD tools from 1606m to 1540m, a slug was pumped at 1540m and the BHA was POOH to surface without problems. The Schlumberger LWD tools successfully captured all data necessary hence there was no requirement to run wireline logs.

4.3.5.1 Conclusions and Recommendations

- (i) Successful use of MI Swaco Klastop mud system. Consider use of this system on similar wells.
- (ii) Use of motor in 12.25in section: the ROP for this section was controlled at 75-85 m/hr. Consider use of a motor on future wells in the area.
- (iii) Increasing the LWD data rate from 3bps to 6bps to allow fast ROP was successful. Evaluate benefit on future operations, where appropriate, of paying for higher data rate to allow faster ROP with acceptable sampling rate.
- (iv) Drilling reservoir with mud weight as low as possible. The reservoir was drilled with a much lower mud weight than the offset well PeeJay-1. The weight was only raised when the cuttings indicated a need to do so. It is recommended that this strategy be used on future wells.
- (v) Ensure good gauge protection for bits selected on long 12.25in section.

Spikey Beach-1

4.3.6 Abandonment Operations

As cuttings and LWD data indicated that there was no presence of hydrocarbons over the 12.25in section, the well was plugged and abandoned with three (3) cement plugs set in the well.

A 2.875in cement stinger was made up below 5in drill pipe and RIH to 1620m. Plug #1 was set across the top of the Eastern View Coal Measures formation. A 50bbl hi-vis pill was spotted from 1620m to 1520m and abandonment Plug #1 was set from 1520m – 1450m with 79bbls of 15.8ppg class G cement. Excess drill pipe was POOH and laid down while waiting on cement before RIH and tagging cement at 1385m.

A 50 bbl hi –Vis pill was spotted from 950m to 838m before abandonment Plug #2 was set across the 13.375in shoe from 850m - 700m with 81bbls of 16ppg class G cement. Drill pipe was laid down while POOH and the BOP and wellhead were jetted with 810gpm, 650psi and 30rpm. The wear bushing was pulled free with 30klbs over-pull and recovered to surface. An attempt to pressure test Plug #2 to 1050psi initially failed and this was then determined to be a leak at the cement unit. The problem was rectified offline and Plug #2 was successfully pressure tested to 1050psi for 10 minutes.

The mule shoe was then RIH on drill pipe to 315m. A 50bbl hi-vis pill was spotted from 315m to 215m and the drill pipe POOH prior to setting abandonment Plug #3 from 215m - 115m with 49bbl of 15.8ppg class G cement. The drill pipe was POOH and laid out. The BOPs were then pulled without incident.

The Smith 30in/20in 2M Single-Trip-Casing-Cutting-Assembly was then made up and run to the wellhead. The assembly was landed out and latched in the wellhead with 10klbs over-pull. Free turning torque was confirmed with 3kft-lbs and both the 20in and 30in casing were cut at 97.1m (1.6m below the seabed). The 18.75in housing did not suitably lock in 30in housing. During cutting the ROV observed the wellhead rotating slowly and intermittently in the 30in housing. Had it rotated quicker, the snap ring could have worn/snapped and then only the 18.75in wellhead would have been recovered. The PGB and wellhead were successfully retrieved to surface without any problems and a seabed clearance survey was completed with the ROV prior to commencing rig move operations.

4.3.6.1 Conclusions and Recommendations

- (i) A 30in housing recovery run would then have been required. Ensure that the 18.75in wellhead is positively locked into the 30in.
- (ii) 2.875in tubing cannot be racked back; it is weak and fiddly to use with tongs. Consider using 3.5in drill pipe instead of 2.875in tubing for abandonment. Provide 150m not 100m as plugs were at least 150m high.

4.3.7 Pull Anchors / Demob

After de-ballasting the rig, anchor retrieval operations were completed without problems in a total of 21hrs. The rig was then towed to Western Port bay in 33 hrs where the Ocean Patriot went off-contract to Beach Petroleum at 14:30 hrs on 19th September 2009 when all 8 anchors had been deployed and tensioned.

4.3.6.1 Conclusions and Recommendations

- (i) The abandonment and demobilising phase of the well was very efficiently handled by the offshore team.
- (ii) By keeping the rig inventory to a minimum, and back-loading equipment as soon as possible, no additional vessels were required to backload equipment.

Spikey Beach-1**4.4 Health Safety and Environment**

PARAMETER	NUMBER	UNITS	COMMENTS
SAFETY			
Manhours	14520		2 –15 Sep 09
Stop Cards Generated	834		2 –15 Sep 09
Total MODU Proactive Safety Efforts	1828		2 –15 Sep 09
AUDIT			
Regulatory Audit	0		
Internal EP Compliance Audit	1		The audit was held on the 10 th – 11 th Sept 2009. 40 areas deemed compliant, 10 areas with opportunity for improvement and 1 area with partial compliance were observed. Opportunity for improvement will be considered in any future drilling campaign. The area with partial compliance i.e. distribution of seabed survey has been closed.
MODU Mini HSE Audits	6		The following mini audits were held: Environmental Protection & Bulk Hoses (5/9/09); Waste Management (7/9/09); Manual Handling (6/9/09); Working at Height (8/9/09); Well Control (11/9/09); Hoisting Equipment Safety Devices (13/9/09). All identified actions have been closed.
Environmental Inspection	2		The inspections were held on the 8 th and 16 th of Sept 2009. The required action identified earlier on has been closed.
Safety Audit (Based on the Contractor Evaluation report during Roc Oil)	1		All earlier identified 9 observations in the previous report have been verified as closed on the 10 th – 11 th Sept 2009.
TRAINING			
ADA ERG Exercise	1		“Juno” live exercise was held on the 15 th Sept 2009. Objectives have been met.
Environment Plan Training			Communications on campaign’s environmental obligations were made by ADA DSV via MODU Induction
MODU Emergency Drill	2		Drills on Fire and Abandonment were held on the 6 th and 13 th Sept 2009. Mustering time target have been met in both drills. Objectives have been met.
REPORTABLE INCIDENT (NOPSA)			
Lost Time Injury (LTI)	0		18 days LTI free drilling program for Spikey Beach-1
Alternate Duties Injury (ADI)	0		No ADI occurrences
Medical Treatment Injury (MTI)	0		No MTI occurrences
NON REPORTABLE INCIDENT (NOPSA)			
First Aid Case	1		7 th Sept 2009 - IP received a small cut to his left index finger while using the end of a triangular file to assist with threading a support chain, for the Mud Loggers Geograph line through a small 45deg elbow which is attached to the bottom of the TDS dolly track. Incorrect tool was used for the job.

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PARAMETER	NUMBER	UNITS	COMMENTS
			IP returned to work after the small cut was cleaned and a band aid applied. Communication made at all pre-tour safety meetings & weekly general safety meeting. Corrective and preventive actions have been closed out.
Near Miss	0		
Property Damage	1		4 th Sept 2009 - Messenger Line used to retrieve the Towing Bridal from the Tow Vessel parted at the Fish Plate. Corrective and preventive actions have been closed out.
RECORDABLE INCIDENT (DIER)			
Spills – occurrence	0		No hydrocarbon / chemical spill occurrences
Spills – quantity	0		As above
Sewage Disposal			
Problems with sewage plant resulted in discharge of untreated sewage to the marine environment	0		No concerns identified.
Waste			
Hazardous waste	6.6 m ³		Transported via Toll Logistics shore base to Corio Waste Management for appropriate waste disposal.
Non-hazardous waste	60 m ³		As above
Marine User Interaction			
Cetacean sightings	0		No sightings observed
Errant vessel interaction	0		No interactions made
Impacts from Fishing Operations	0		No impacts identified
Water Based Muds (WBM)			
Volume water based drilling fluid dispose into the ocean (m ³) <i>Note: This number is taken from the mud report. In a well where drilling occurs in the lost circulation zone, sweeps etc are lost down hole, not to the ocean. This column is for mud lost at the shale shakers or dumped.</i>	1546 m ³		
Volume of drill cuttings using WBM disposed to the seabed (m ³) <i>Note: This data is basically the volume of rock excavated from the well. When drilling top hole, cuttings are lost down hole and should not be included.</i>	249 m ³		
Volume of drill cuttings using WBM injected into the annulus (m ³)	0		
Oil / Chemical spills discharged to the marine environment	0		No hydrocarbon / chemical spills recorded.

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4.5 Well Highlights

- Good planning process, given tight timeframe
 - No missing equipment or materials
 - All regulatory submissions processed in time
 - Site survey brought forward at very short notice
- Well drilled without any accidents or incidents
- Well drilled from spud to abandonment in 11.4 days
- Ocean Patriot rig and crew performed well
- Well run logistics both offshore and at the Geelong base
- Total well cost of A\$14.5m vs. AFE of A\$24.3m
- Successful well design, including 5 joint conductor
- Successful use of motor/PDC bit and Klastop mud in 12.25in section
- Equipment on-hired/off-hired efficiently
- Good ADA team that worked together
- Good communication between ADA and Beach

4.6 Well Lowlights

- Requirements for a special helicopter to mobilise a replacement cementer
- Difficulties cleaning the vessels tanks at the end of the operation

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5. Time Analysis

5.1 Breakdown by Well Phase

Table 1 summarizes the planned versus actual time breakdown, by operational phase, for the well. Figure 1 presents the same data in graphical format.

Operation Phase	Time (days)					
	Planned	Actual	Programmed	Unprogrammed	NPT Programmed	NPT Unprogrammed
Mobilisation	4.86	2.96	2.96	0.00	0.08	0.00
Drill 36in conductor hole	1.18	0.67	0.67	0.00	0.00	0.00
Set 30in conductor	1.30	0.65	0.65	0.00	0.00	0.00
Drill 17.5in hole	1.94	2.10	2.10	0.00	0.00	0.00
Set 13.375in casing	1.52	0.83	0.83	0.00	0.00	0.00
Run & Test BOPs	1.18	0.94	0.94	0.00	0.02	0.00
Drill 12.25in hole	6.19	3.35	3.35	0.00	0.00	0.00
Plug & Abandon	4.53	2.85	2.85	0.00	0.00	0.00
Demobilisation	3.23	2.73	2.73	0.00	0.00	0.00
On Location WOW Days	1.00	0.00	0.00	0.00	0.00	0.00
Demobilisation WOW Days	1.00	0.00	0.00	0.00	0.00	0.00
TOTALS	27.92	17.08	17.08	0.00	0.10	0.00

Table 1

Spikey Beach-1

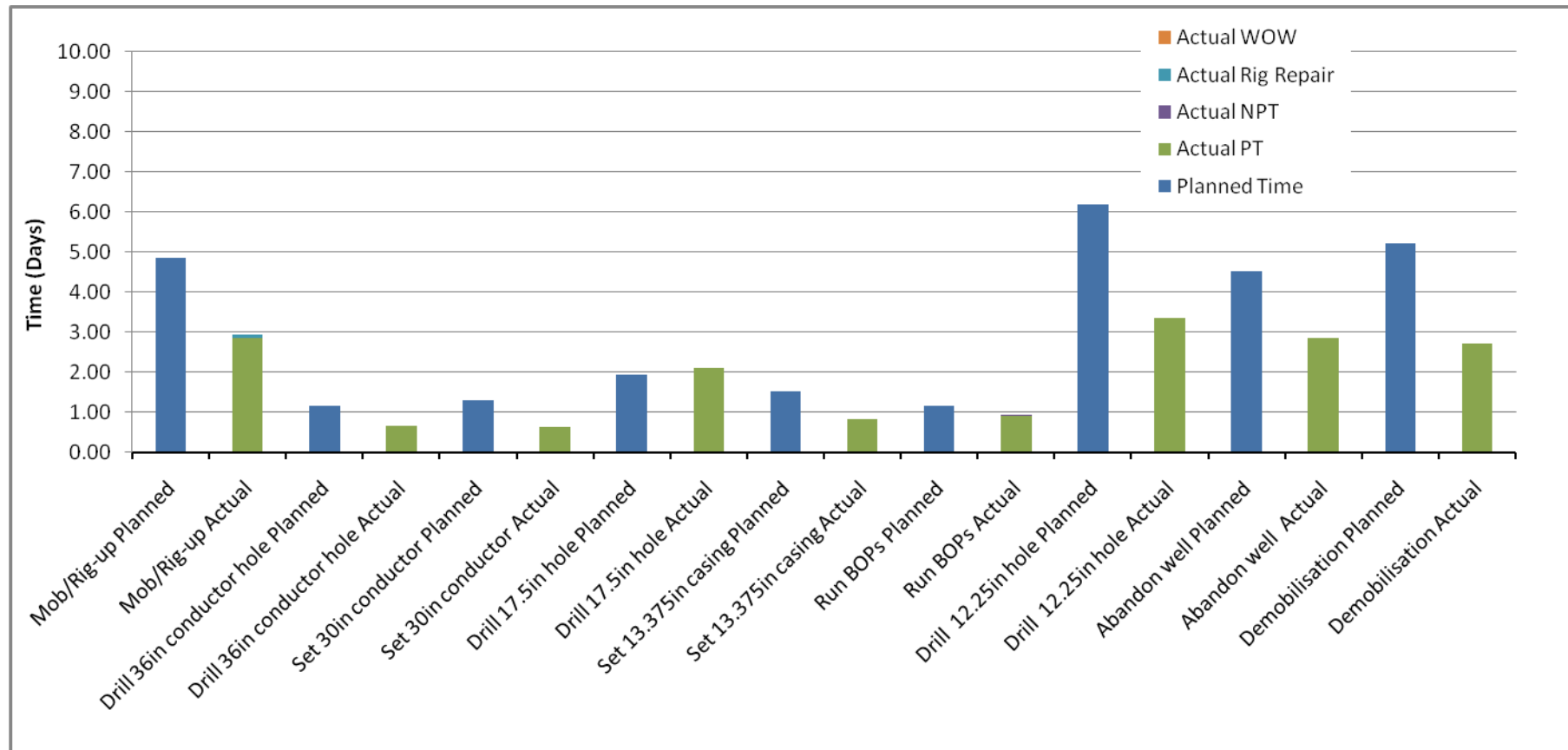


Figure 1

Spikey Beach-1

5.2 Non Productive Time Analysis

The total NPT incurred on the well was 2.5 hrs. Table 2 provides a breakdown of this non-productive time, which comprises 2 hrs due to Rig Repair and the remaining 0.5 hrs due to Third Party Equipment downtime. The following points describe the significant operational NPT events on the Spikey Beach-1 well:

Time Lost (hours)	Description
2.0	Starboard Crane thermostat failed – unable to recover #3 pennant from the Swift.
0.5	Released Lewek Swift from Bulk Hose to rig. Swift had Azimuth Thruster problem.

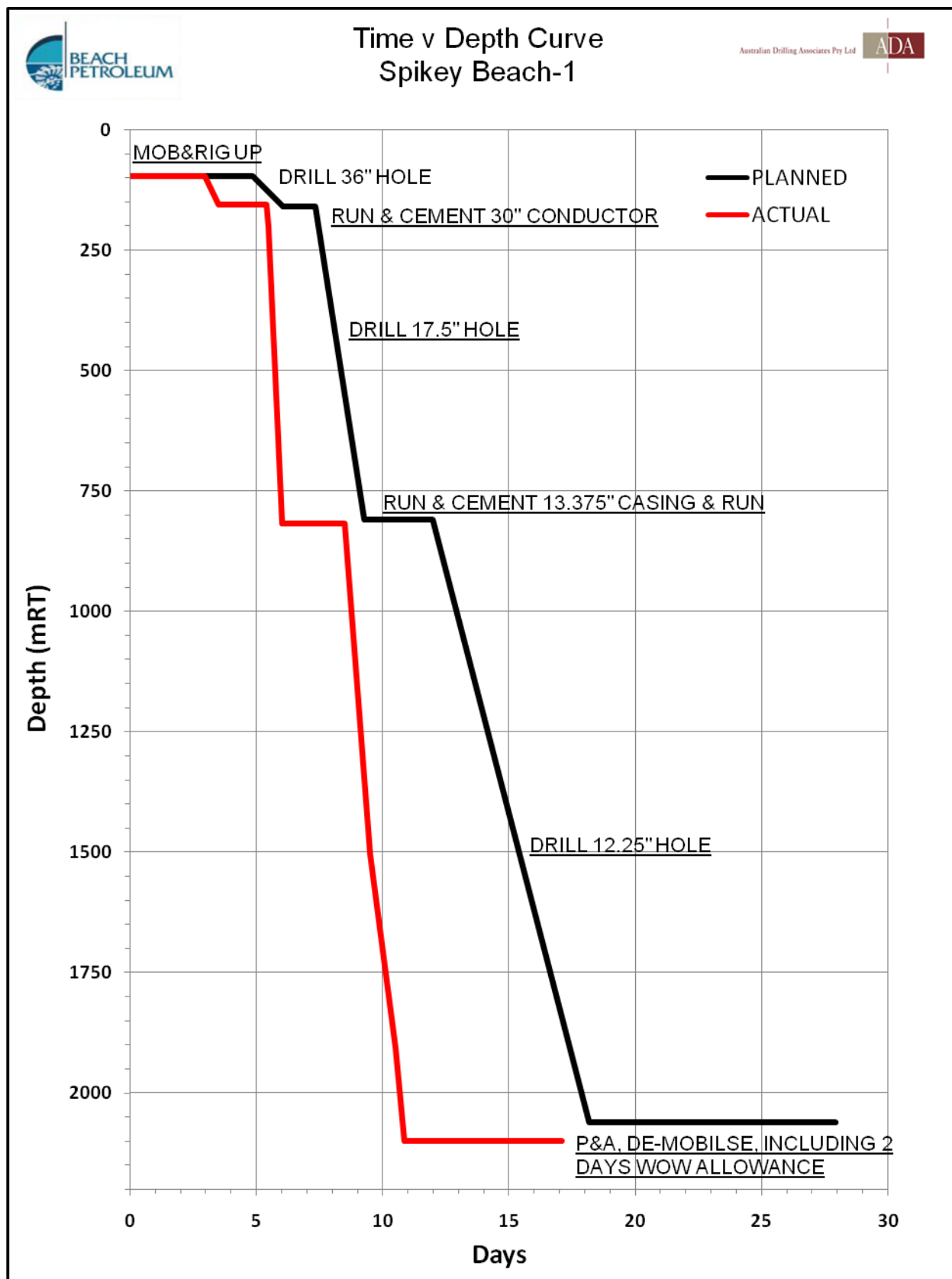
Spikey Beach-1

SPIKEY BEACH-1												
OPERATIONS DESCRIPTION	TIME BREAKDOWN											
	ACTUAL DURATIONS				TOTAL NPT		THIRD PARTY		RIG REPAIR		WOW	
	DEPTH (M MD)	HRS	DAYS	CUM DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS
Mobilisation (P1)	95.5	71	2.96	2.96	2.00	0.08	0.00	0.00	2.00	0.08	0.00	0.00
Drill 36in Hole (P2)	155	16	0.67	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Run 30in Casing (P3)	155	15.5	0.65	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drill 17.5in Hole (P4)	816	50.5	2.10	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Run 13.375in Casing (P5)	816	20.0	0.83	7.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Run & Test BOPs (P6)	816	22.5	0.94	8.15	0.50	0.02	0.50	0.02	0.00	0.00	0.00	0.00
Drill 12.25in Hole (P11)	2100	80.5	3.35	11.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plug & Abandon (P21)	2100	68.5	2.85	14.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demobilisation (P32)	2100	65.5	2.73	17.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On location WOW Days	2100	0.00	0.00	17.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demobilisation WOW Days	2100	0.00	0.00	17.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				17.08		0.10		0.02		0.08		0.00

Table 2

Spikey Beach-1

5.3 Time Depth Curve



6. Well Schematic

10-03-06-02-02 Post Well Report	Page 20 of 25	Issue No: 1
EOWR Spikey Beach-1	Approved	Rev No: B

Spikey Beach-1

7. Recommendations

The main lessons and recommendations arising out of operations on Spikey Beach-1 are summarised below.

Item	Phase	Keyword	Observation / Lesson Learnt	Action Required
1	All	Vessels	Logistics was excellent overall. Would have needed an extra vessel to improve logistics.	None
2	All	Helicopters	Good management of personnel on helicopters - constraints on seats and pilot hours	None
3	All	Patriot Crews	The assistance and commitment to the well programme of the Ocean Patriot crews was very high	None
4	All	Vessels	Lewek Swift was not a very good performer with either of its crews. E.g. 1. Taking 8 hours to back load 29 lifts at Western port 2. A reluctance to come alongside on location in less than perfect conditions	Be aware of EMAS vessel performance issues on future operations.
5	All	Vessels	Lack of experience or consistency with what they did. Very lucky with weather and flexibility of rig management to push ahead despite not all boxes being ticked	If feasible, review crew competence prior to contracting vessels.
6	Planning	Communications	Consider use of 1024k bandwidth system. 512k was a little slow during times of real-time data transmission. Need to order this ahead of time as it takes 10 days to implement	Note for future operations.
7	Planning	Helideck Refuelling	Helicopter refuelling system should have been commissioned	For future operations, this should be reviewed if a fuelling system is available.
8	Planning	Helicopter Payload	Restriction on payload and pilot hours took a lot of managing, resulting in some additional man days of service personnel.	Ensure helicopter provider supplies accurate payload calculation well in advance of operations commencing. Had we been aware earlier of the restricted payload the rig refuelling system could have been commissioned.
9	Planning	IT Equipment	IT and software issues & frustrations	Spend a bit more on IT & software in future to prevent offshore personnel frustration
10	Planning	IT Equipment	Low resolution of Ocean Patriot camera monitors in DSV office and accommodation	Review with drilling contractor

Spikey Beach-1

Item	Phase	Keyword	Observation / Lesson Learnt	Action Required
11	Planning	Conductor	Reducing conductor string length from 9 joints to 5 joints worked well with a semi-submersible.	Consider using this design again on similar wells in the area.
12	Planning	Mud	Successful use of Klastop	Consider use of this system on similar wells.
13	Planning	13.375in Casing	Use of Shark-bite in 13.375in casing to stop the Dowell Deep Sea Express from rotating. (These plugs do not have a non-rotating design).	Consider use of these in the future for any plugs that have a risk of rotating
14	Planning	12.25in Section	Use of motor in 12.25in section. The ROP for this section was controlled at 75-85 m/hr.	Consider use of a motor on future wells in the area.
15	Planning	Mud	Drilling reservoir with low mud weight. The reservoir was drilled with a much lower mud weight than PeeJay. The weight was only raised when the cuttings indicated a need to do so.	Use this strategy on future wells.
16	Rig Move	Vessels	Damage to chain chaser pennant lines due to not having been spooled onto the boat drum (occurred during ROC work - had to change out pennant line #7)	Damage was identified during previous operator's anchor handling time. Change out occurred on Beach anchor running operation.
17	Anchoring	Vessels	Vessel not holding anchor correctly on stern. Couple of hours were spent trying to manipulate on stern. Ended up decking all anchors and then running out.	Need to ensure crew competence
18	Offhire	Vessels	The brine and bulk tanks on both vessels were very hard to clean due to contamination by previous operator. Vessels were handed over with tanks full of product.	Need to try and ensure the condition of tanks at on-hire time of vessel. This is not always easy as the vessels were offshore at time of handover.
19	Running PGB	Cameron Spears/Latches	Cameron spears/latches for post tops were difficult to work with.	Do not use Cameron spears/latches for post tops. Use IMENCO. Much easier to use on surface with ROV
20	Running PGB	Cameron Bullseyes	Cameron supplied 2 x 5deg bullseyes (useless). Had no 2.5deg in town. Used rig 2.5deg set	Ensure 2.5deg bulls-eyes are supplied with the wellhead system.

Spikey Beach-1

Item	Phase	Keyword	Observation / Lesson Learnt	Action Required
21	Casing Running	BJ	BJ casing running went well, however communication with crew was extremely difficult. Required repeating requirements, asking questions to confirm understanding, and follow up later to confirm compliance.	
22	Cementing	Subsea Plugs	SLB Subsea express air driven hydraulic unit was not operational. Required manual pumping for hydraulic unit to load plugs and to open valves/release darts during 13.375in cement job. No backup was available should the unit have failed further.	
23	Cementing	Cement Heads	Consider using hydraulic operated lo-torque valve on cement jobs. Reduces requirement for man riding and time delays.	
24	Cementing	Cement Unit	SLB cement unit valves did not consistently hold pressure. Had to service/change out valves during BOP/Manifold testing and during #2 plug testing.	
25	12.25in section	LWD data rate	Increasing LWD data rate from 3bps to 6bps to allow fast ROP was successful	Evaluate benefit of paying for higher data rate to allow faster ROPs with acceptable sampling rate.
26	Drilling 12.25in hole	Gauge protection	Ensure good gauge protection on long 12.25in section	
27	Abandonment	18.75in Housing Lockdown	18.75in housing did not suitably lock in 30in housing. During cutting, wellhead rotated slowly and intermittently in housing. Had it rotated quicker, snap ring could have worn/snapped and only 18.75in would have been recovered. Then a 30in housing recovery run would have been required.	Ensure that the 18.75in wellhead is positively locked into the 30in.
28	Abandonment	Cement Stinger	2.875in tubing cannot be racked back, it is weak and fiddly to use with tongs.	Consider using 3.5in drill pipe instead of 2.875in tubing for abandonment. Provide 150m not 100m as plugs were at least 150m high.

Spikey Beach-1

Item	Phase	Keyword	Observation / Lesson Learnt	Action Required
29	Demob	Disposal	Need to review contract basis for responsibilities regarding disposal of used chemical drums (mud & cement)	Try to put this onus onto the supplier; otherwise the Operator has to pay.



Spikey Beach-1



8. Attachments

- 1 *Well Montage*
- 2 *Bit and BHA Record*
- 3 *Mud Report*
- 4 *Casing Report*
- 5 *Cementing Report*
- 6 *LOT/FIT Report*
- 7 *Deviation Survey and MWD Report (Schlumberger)*
- 8 *Activity Summary Reports*
- 9 *Final Rig Position Summary (Neptune MS)*
- 10 *Seabed Clearance*

Attachment 1

Well Montage

SPIKEY BEACH-1 POST WELL SUMMARY	
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		WELL: Spikey Beach-1 CLASSIFICATION: Exploration Well RIG: Ocean Patriot	SURFACE LOCATION: UTM: Longitude 40° 28' 53.879" S Latitude 145° 52' 24.706" E GDA94 Zone 55 5518174.63m N; 404522.80m E		DATUM: ELEVATION ABOVE SL (m): 21.5 WATER DEPTH MSL (m): 74 WELL SLOT: n/a		LICENCE: T/38P BASIN: Bass STATE: Tasmania OPERATOR: Beach Petroleum		PREPARED BY: Manelle Moussa APPROVED BY: Iain Robertson LAST UPDATED: 23/09/09		Australian Drilling Associates Pty Ltd 									
WELL SCHEMATIC		FORMATION DEPTH			CASING SHOES	Hole Size /Casing Depth	CASING				FRACTURE GRADIENT LOT/FIT (ppg)	BHST	MUD PROGRAM	MAJOR EVENTS / LESSONS LEARNT	CEMENTING PROGRAM				BOTTOM HOLE ASSEMBLIES	FORMATION EVALUATION
		Formation Tops	mTVDss	mTVDrt			SIZE	WEIGHT (ppf)	GRADE	CONNECT-ION					Additives	Density	TOC	Excess		
RT 0.0 MSL 21.5 Seabed 95.5 36in Hole 155.0 30x20in Casing 151.4 13.375in Casing 805.8 17.5in Hole 816.0 TD 12.25" Open Hole 2100.0		Sea bed Recent Torquay Gp (Reefal Carb) Torquay Gp (Marl) Oligocene Sandstone (Lower Torquay Gp) Demons Bluff Up Eastern View Gp Base Upper EVCM	74 100 680 985 1360 1440 1830 2078.5	95.5 121.5 701.5 1007 1381.5 1461.5 1851.5 2100	RT 36" to 151.4m 17.1/2" to 816m 805.8m 12.25"	30x20in 1" wall X52 D60MT 13.375in 68ppf N80 BTC 12.25in Open Hole	LOT: EMW = 12.35ppg @ 819mRT	10° C 37° C	Seawater & High Viscosity Bentonite Sweeps MW = S/W (8.8ppg) Funnel Viscosity >100 sec pH = 8-10.5 Seawater & High Viscosity Bentonite Sweeps MW =S/W (8.8ppg) Funnel Viscosity >100 sec pH = 8.0-10.5 KCI / POLYMER / KLA STOP - MW = 9.0-10.15ppg 6rpm = 9-12 API Filtrate = 6.8-4.5 KCI = 9-10% by weight Klastop = 2% by vol pH = 9.0-10.0 Ca<400mg/l	Conductor: Reducing conductor string length from 9 joints to 5 joints worked well with a semi-submersible. Consider using this design again on similar wells in the area. PGB: Cameron spears/latches for post tops were difficult to work with. Do not use Cameron spears/latches for post tops. Use IMENCO. Much easier to use on surface with ROV Bullseyes: Cameron supplied 2 x 5deg bullseyes (useless). Had no 2.5deg in town. Shark-bite: Use of Shark-bite in 13.375in casing to stop the Dowell DeepSea Express from rotating. (these plugs do not have a non-rotating design).Consider use of these in the future for any plugs that have a risk of rotating SLB: Subsea express air driven hydraulic unit was not operational. Required manual pumping for hydraulic unit to load plugs and to open valves/release darts during 13.375in cement job. No backup was available should the unit have failed further. Cementing: Consider using hydraulic operated lo-torque valve on cement jobs. Reduces requirement for man riding and time delays 12.25in motor: Use of motor in 12.25in section. The ROP for this section was controlled at 75-85 m/hr. Consider use of a motor on future wells in the area. Gauge Protection: Ensure good gauge protection on long 12.25in section Low MW: Drilling reservoir with low mud weight. The reservoir was drilled with a much lower mud weight than Peejay. The weight was only raised when the cuttings indicated a need to do so. Use this strategy on future wells. Klastop: Successful use of Klastop. Consider use of this system on similar wells. Cementing: SLB cement unit valves did not consistently hold pressure. Had to service/change out valves during BOP/Manifold testing and during #2 plug testing. LWD: Increasing LWD data rate from 3bps to 6bps to allow fast ROP was successful Abandonment: 18.75in housing did not suitably lock in 30in housing. During cutting, wellhead rotated slowly and intermittently in housing. Had it rotated quicker, snap ring could have worn/snapped and only 18.75in would have been recovered. Then a 30in housing recovery run would have been required. Ensure that the 18.75in wellhead is positively locked into the 30in. Cement Stinger: 2.875in tubing cannot be racked back, it is weak and fiddly to use with tongs. Consider using 3.5in drill pipe instead of 2.875in tubing for abandonment. Provide 150m not 100m as plugs were at least 150m high.	Conductor Cementation Class G + D047 Antifoam +S001 Accelerator Seawater Plug #3 Class G Sea water Casing Cementation Lead Slurry (Class G) Class G + D047 Antifoam + D075 Extender + D110 Seawater Tail Slurry (Class G) Class G + D047 Antifoam + D145A Dispersant + D081 Retarder Seawater Plug #2 Class G Cement D047 D168 D080 Freshwater Plug #1 Class G Cement D047 D168 D080 D081 Freshwater	15.8ppg 15.8ppg 12.5ppg 15.8ppg 16.0ppg 15.8ppg	mudline mudline 660m TVDRT 650-850m MDRT 1385-1520m MDRT	200% 115-215m TVDRT 20% 20% 650-850m MDRT	26in Bit & 36in Hole Opener (1 Run) 26" CR-1 Hughes Mill Tooth Bit (0-0-NO-A-0-I-TD) 36" Hole Opener Float Sub Anderdrift Inclination Tool 3 x 9-1/2" DC Cross Over Sub 7x 8" Spiral Drill Collars Cross Over Sub 6 x 5" HWDP (4-1/2" IF) 17.5" LWD BHA (1 Run) 17 1/2" Baker Hughes GX-C1V Mill Tooth (1-1-WT-A-1-I-NO-TD) NB stab ARC-9 17 3/8" Stab PowerPulse NF sonicVISION 900 17 3/8" Stab 3 x 9" Drill Collar Cross Over Sub 8 x 8" Collar Hydraulic Jar 3 x 8" Collar Cross Over Sub 6 x 5" HWDP (4-1/2" IF) 99 x 5" HWDP (4-1/2" IF) 12.25" MUD MOTOR/LWD BHA (1 Run) 12 1/4" Baker Hughes HCM506ZX PDC (1-1-CT-N-X-1-ER-TD) A625 Mud Motor 12 1/8" Inline Stab ARC 8 Telescope 825 NF sonicVISION 900 ADN-8 w/ 12" Stab 8 x 8" Collar Hydraulic Jar 3 x 8" Collar Crossover 6 x 5" HWDP (4-1/2" IF) 99 x 5" HWDP (4-1/2" IF) <u>Cuttings Sampling</u> Every 10m from 800m to 1200m MDRT Every 3m from 1200m MDRT to TD <u>Wireline Logging</u> None					

Attachment 2

Bit and BHA Record

Bit Record for Well Spikey Beach-1

Bit #1																				
Date In/Out	IADC	Size	Serial No	Make	Type	Jets	In (m)	Out (m)	Mtrge (m)	Hrs (h)	TFA (m²)	ROP (m/h)	Bitwear							
													I	O1	D	L	B	G	O2	R
05 Sep 2009 /	111	660 mm (26")	6076124	Hughes	Milled Tooth	3 x 20 1 x 16	99.0	157.3	58.0	1.7	0.001	34.12	0	0	NO	A	0	I		TD
Bit Run Comment :							Bit Wear Comment :													
Drilling Parameters for Bit #1																				
Day		SPP (psi)		Flow (gpm)			WOB (klb)			RPM (rpm)			RPM (DH) (rpm)							
Day #4 (05 Sep 2009)		660		587			2.40			55										

Bit #2																				
Date In/Out	IADC	Size	Serial No	Make	Type	Jets	In (m)	Out (m)	Mtrge (m)	Hrs (h)	TFA (m²)	ROP (m/h)	Bitwear							
													I	O1	D	L	B	G	O2	R
07 Sep 2009 / 08 Sep 2009	115	444 mm (17 1/2")	6079221	BHI (Hughes Christensen)	Milled Tooth	3 x 18 1 x 16	155.0	816.0	661.0	9.2	0.001	71.85	1	1	WT	A	1	I	NO	TD
Bit Run Comment :							Bit Wear Comment :													
Drilling Parameters for Bit #2																				
Day	SPP (psi)			Flow (gpm)			WOB (klb)			RPM (rpm)			RPM (DH) (rpm)							
Day #6 (07 Sep 2009)	1,243			767			3.00			71										

Bit #3																				
Date In/Out	IADC	Size	Serial No	Make	Type	Jets	In (m)	Out (m)	Mtrge (m)	Hrs (h)	TFA (m²)	ROP (m/h)	Bitwear							
													I	O1	D	L	B	G	O2	R
10 Sep 2009 / 13 Sep 2009	M323	311 mm (12 1/4")	7012700	Baker Huhes Chistensen	PDC	6 x 15	816.0	2,100.0	1,184.0	35.8	0.001	33.07	1	1	CT	N	X	1	ER	TD
Bit Run Comment :							Bit Wear Comment :													
Drilling Parameters for Bit #3																				
Day	SPP (psi)			Flow (gpm)			WOB (klb)			RPM (rpm)			RPM (DH) (rpm)							
Day #10 (11 Sep 2009)	2,697			929			20.40			123			225							
Day #11 (12 Sep 2009)	2,988			918			7.00			157			258							
Day #12 (13 Sep 2009)	3,340			912			10.10			155			255							
Day #13 (14 Sep 2009)	3,340			912			10.10			155			255							
Day #14 (15 Sep 2009)	3,340			912			10.10			155			255							

Attachment 3

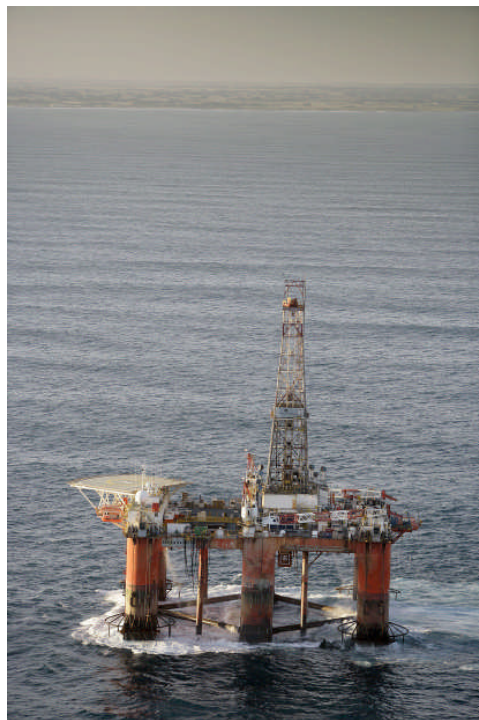
Mud Report (MI-Swaco)



DRILLING FLUIDS RECAP

Beach Petroleum Ltd / Australian Drilling Associates Ltd

Spikey Beach -1



Prepared by:

Manfred Olejniczak / Michael Olejniczak

Project Coordinator:

Son Huynh

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- 2. INTRODUCTION**
- 3. DISCUSSION BY INTERVAL**
- 4. MATERIAL RECONCILIATION**
- 5. CONSUMPTION BY INTERVAL – ACTUAL**
- 6. PLANNED WELL MUD COSTS**
- 7. SHAKER SCREENS CONSUMPTION**
- 8. DAILY VOLUME SUMMARY SHEET**
- 9. STATEMENT OF FACTS**

1. WELL SUMMARY

Total actual (DF) project Cost:	\$USD 358,137.67 (includes discharged bulk)
Total planned (DF) project costs:	\$USD 286,006.70
Screen Costs (M-I SWACO):	\$USD 5,468.00
Total engineering costs:	\$USD 20, 850.00

Drilling Fluid Data

Interval	Casing Size, in	Casing Depth, m	Drilled Depth, m	Mud Wt., ppg	Mud Type
36" Interval	30"	151	155	8.8	SW / PHG sweeps
17.5" Interval	13 3/8"	805	816	8.8	SW / PHG sweeps
12.25" Interval	P & A	n/a	2100	9.0 – 10.15	KCl/Polymer/KLA-STOP

Cost by Interval

Interval	Planned depth, m	Planned Cost \$USD	Actual depth, m	Actual costs \$USD
36" Interval	159	\$ 6,328.88	155	\$12,021.69
17.5" Interval	810	\$ 27,461.24	816	\$ 25,240.26
12.25" Interval	2061.5	\$ 252,216.58	2100	\$ 320,875.72
TOTAL	2061.5	\$ 286,006.70	2100	\$ 358,137.67

Note: Above includes 787 bbl 9.5 ppg KCl brine, 133 bbls of 9.0 ppg KCl brine, 54MT bulk bentonite and 42MT bulk barite which were discharged to seabed: \$71, 884.45

2. INTRODUCTION

The Ocean Patriot rig was towed to the Spikey Beach-1 location on 4 September 2009, 50 km north of Tasmania in the Bass Basin.

The well was spudded on 5 September 2009 at 21:00 hrs, with the seabed tagged at 95.5 m RT.

A 26" bit with 36" hole opener was used to drill to 155 m using seawater and Hi-Vis PHG sweeps. The 30" Conductor was then set at 151 m.

The 17-1/2" section was drilled to 816 m, again using seawater with Hi-Vis PHG sweeps. The 13-3/8" casing was then set at 805 m.

The main 12-1/4" hole was drilled vertically, reaching the final TD of 2100 m on 13 September 2009, using a KCl/KlaStop/Polymer mud system, without problems. No wire-line logs were run as the MWD logs were deemed sufficient.

The well was then plugged and abandoned.

3. DISCUSSION BY INTERVAL

Interval I	95.5 – 155 metres	36" Hole Interval	36" Conductor Set at 151m
------------	-------------------	-------------------	---------------------------

MUD TYPE : SEAWATER / High Viscosity Sweeps – Pre-Hydrated Bentonite

HOLE PROBLEMS : None

MUD PROPERTIES :

NOTE: The properties below relate only to the Hi-Vis pre-hydrated Bentonite pumped.

<u>Properties</u>	<u>Programmed</u>	<u>Actual</u>
Mud Density	8.7ppg	8.8ppg
Funnel Viscosity	100+ secs / qt	100+ secs / qt

OPERATIONS

After tagging the seabed at 95.5m, the 36" hole was drilled riser-less (returns to the seafloor) to 155m. The well was spudded with 250bbl Hi-Vis PHG, then drilled using seawater, with 100 bbl Hi-Vis PHG sweeps pumped mid stand and spotted on the connection. At TD a 150 bbl Hi-Vis PHG sweep was pumped, and then 480 bbl of Hi-Vis PHG was spotted in the hole, prior to pulling out.

The 30" conductor string was then run and cemented to 151m, without any problems.

MUD

1743 bbl of Hi-Vis 30ppb PHG and 350 bbl of 10ppg PHG Kill Mud was prepared. Of this, 463 bbl of Hi-Vis PHG and 350 bbl of Kill Mud were carried over to the 17.5" interval.

OBSERVATIONS AND RECOMMENDATIONS

There were no hole or drilling problems

Interval II	155 – 816 metres	17.5" Hole Interval	13 3/8" Casing Set at 805m
-------------	------------------	---------------------	-------------------------------

MUD TYPE 1 : SEAWATER / PHG
MUD TYPE 2 : 9.0PPG Weighted Displacement Mud

HOLE PROBLEMS : None

MUD PROPERTIES :

<u>Properties</u>	<u>Programmed</u>	<u>Actual</u>
Mud Density	As low as possible	8.8ppg
Funnel Viscosity	> 100 secs / qt	> 100 secs / qt

OPERATIONS

The first 10m (17-1/2" hole), cement and casing shoe, was drilled with Hi-Vis PHG only. Drilling then continued using seawater, pumping 50 bbl Hi-Vis PHG sweeps mid-stand and spotting 50 bbl Hi-Vis PHG sweeps at connections. At TD of 816 m, a 150 bbl Hi-Vis PHG sweep was chased with seawater, and then the hole was displaced with 800 bbl of 9.0ppg Hi-Vis PHG mud to provide hole stability for running casing.

The 13-3/8" casing was then run and cemented to 805 m without problems.

MUD

3902 bbl of Hi-Vis PHG was built for this section, including 463 bbl of Hi-Vis PHG that was left over from the 36" section.

660 bbl of 10ppg Kill Mud was mixed using the 350 bbl of Kill Mud left over from the previous section. At section TD, 210bbl of Kill mud was blended with 590 bbl of Hi-Vis PHG to make the 800 bbls of 9.0ppg displacement mud.

A total of 2811 bbl of Hi-Vis PHG was used as sweeps, and the remaining 501 bbl was dumped after the casing was cemented.

SOLIDS CONTROL

All returns were again to seabed, so no SCE was in use.

OBSERVATIONS AND RECOMMENDATIONS

- Rig pit capacity is quite limited. Equivalent of only 1800 bbl. This means that keeping up pumping sweeps and providing the required weighted displacement mud requires planning.
- A single pit of weighted PHG mud concentrate needs to be prepared before drilling for this type of interval. There is no time or pit capacity to mix it during drilling, and there is only just enough time to blend it with the required volume of PHG near TD.
- Guar Gum needs to be available as a contingency option due to lack of pit capacity.

Interval III	810 – 2100 metres	12.25" Hole Interval	Open Hole
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MUD TYPE : KCl / Polymer / Klastop

HOLE PROBLEMS : Observed cavings at surface

FLUID PROBLEMS : None

MUD PROPERTIES

<u>Properties</u>	<u>Programmed</u>	<u>Actual</u>
Mud Density, ppg	9.5	9.0 – 10.1+
6 RPM, Reading	12 - 16	9 – 12
YP, lb/100 sq ft		14 – 36
API Filtrate, mL	< 6	6.8 – 4.5
KCl % wt	6 – 8	9 – 10
LGS %		0.6 – 2.4
MBT ppb		4
Kla-Stop % vol	2	2

OPERATIONS

After running the BOP and riser, a 12-1/4" steerable BHA was run, washing down to the float collar at 795 m with seawater. The new 9.0ppg KCl/Polymer/Klastop mud was then displaced into the hole while drilling the float collar and cement inside the shoe track. 3 m of new hole was drilled out and a Leak-Off Test was undertaken rendering 12.34 ppg EMW.

The 12-1/4" hole was then drilled rapidly to the final well TD of 2100m, a hole length of 1290 m was drilled in two days.

There were no drilling or hole cleaning problems while drilling this interval, although the mud weight was raised to 9.8ppg at 1600 m and then 10.0ppg at 1800 m, as a precaution, in response to large cavings observed at the shakers.

At TD, no wire-line logs were run, as the MWD logs were sufficient, thus the well was plugged and abandoned without any wiper trip made.

DRILLING FLUID

As rapid drilling combined with poor solids control equipment were expected to make minimising mud weight a problem, the initial KCl/Polymer/Klastop fluid was left unweighted. In addition Soltex was not added, as this has a tendency to blind shaker screens during rapid drilling.

Initial fluid make-up was;

- 8 – 10% KCl brine
- 1.25 ppb Flowzan
- 2.5 ppb Drispac SL
- 0.75 ppb Polysal T
- 2% by volume Klastop

All new mud was mixed as premix and added to the active constantly during drilling to maintain active mud volume.

Just prior to the Upper Eastern View Formation at about 1460 m, the active system was treated with 5 ppb Calcium Carbonate to provide pore throat bridging in the sands to reduce seepage losses and improve API fluid loss control. At 1480m, the active system was also treated with 3 ppb Soltex as programmed. This had been premixed in concentrated form in a pit with fresh water and Caustic Soda to pre-solubilise it, to minimise plugging of the shaker screens. Subsequent premixes then maintained this concentration of 3ppb Soltex and 5ppb Calcium Carbonate.

Despite the rapid drilling the active system mud weight did not increase above 9.1 ppg, as the majority of drilled cuttings were sufficiently large enough and inhibited to be removed by the upper 20 mesh shaker scalper screens. As a result the active system was weighted up from 9.1ppg to 9.5ppg at 1360m, prior to the Upper Eastern View Formation, as the program specified a mud weight of 9.5ppg.

However, large cavings were still present in the cuttings, so the mud weight was increased to 9.8 ppg at 1600 m and then again to 10.0ppg at 1800, as directed by the drilling supervisor. No mud losses to the formation were observed.

The KCl content was deliberately run at a slightly higher concentration than programmed, starting at 10%. This had the purpose of obtaining (on the rig) as much concentrated brine as possible off the supply boats onto the rig to avoid logistical problems at a latter stage. This was then diluted back and maintained at 8 - 9 %.

Mud rheology was lower than programmed throughout the interval, but at pump rates of 900 gpm and running API 100 mesh screens this was all that the four shakers could feasibly handle. It proved impossible to constantly run the riser boost pump without excessive mud losses at the shakers, so it was only run for a few minutes at each connection. Despite the high drilling rates, large volumes of cuttings and lower than programmed rheology, hole cleaning was never a problem.

SOLIDS CONTROL

The Ocean Patriot has four Swaco BEM 650 shakers plus an old desander and desilter. These were all run constantly throughout the interval. There were no centrifuges on board.

Given the high drilling and pumping rates, this was never going to be adequate to control solids and mud weight increase without a high dilution rate.

Previously used API 80 mesh screens were used at the start of the interval while the mud was still new. After a couple of hours circulation these were changed to API 100 mesh on all shakers using some new screens and whatever used screens were available.

With rapid drilling expected, and a lack of secondary solids control equipment, the shakers were deliberately run to their maximum efficiency, by attempting to maintain a wet discharge and a moderate dilution rate. (ie controlled mud losses over the shakers) This kept the mud weight, LGS and sand content of the system very stable and under control.

The result was periodic difficulties with losses at the shakers and frequent shaker screen changes. A pressure washer was kept available at all times to clean and re-cycle the screens. Even so it was not possible to run finer than API 100 mesh screens, occasionally having to go back to API 80 mesh on one or two shakers due to large cuttings loading and high pump rates.

OBSERVATIONS AND RECOMMENDATIONS

- Careful logistical planning is the main mud issue on the Ocean Patriot. With only 2-3 days for the interval, potential bad weather stopping boat access, and one of the supply boats usually on a trip to base, all mud materials required for the interval basically need to be on board the rig. With only a small (1800 bbl) pit capacity and no other bulk mud or brine storage, this becomes very difficult. It requires taking as much concentrated brine on board as possible at the start of the interval and also having sufficient brine available on both supply boats.
- Being able to frequently change out, clean and repair or replace shaker screens is the key to controlling mud losses at the shakers. This requires a pressure washer to be available at the shakers at all times. With the policy of a permit being required to use a pressure washer, there should be a system of getting this done routinely every time before drilling commences, without the mud engineer having to chase it every shift.
- Use of Soltex in this interval is of dubious benefit. It definitely blinds fine shaker screens and makes loss control at the shakers more difficult. In a vertical well using a KCl/Polymer/Klastop system at very high drilling rates its hole stability benefit is at most marginal.

At the end of the well the supply boats and the rig had to be emptied of all bulk materials, including brine, bulk barite and bulk bentonite.

Altogether 787 bbl 9.5 ppg KCl brine, 133 bbls of 9.0 ppg KCl brine, 54MT bulk bentonite and 42MT bulk barite were dumped.

The large quantities of bulk materials dumped at the end of the well is a direct result of the need to maintain adequate contingency materials to allow for bad weather and supply boat issues.

A clear example of this was the failure of the Lewek Swift to be able to unload its full load of KCl brine prior to the start of the interval due to boat mechanical problems. 500 bbl had to be left on board, and was only able to be unloaded at the rig and dumped after drilling had ended. Luckily 750 bbl of extra contingency KCl brine had already been loaded onto the Lewek Emerald to ensure there was a reasonable supply on both boats, in case one was unavailable at the required time.

4. MATERIAL RECONCILIATION

Product Reconciliation

Received onto rig

Backloaded from Rig

Used on well

Spikey Beach-1

Description	UOM	unit price	End SOF (21/08/09)			CN 0180 / CN 0182	CN 0181	CN 0183 / CN 0185	CN 0184	CN 0186 / CN 0187	CN 0188 / CN 0189	CN 0190	Total rec	CN 0192	CN 0193	Total B L	4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	Total Used	End SOF (16/09/09)		
			Rig	Emerald	Swift																								Rig	Emerald	Swift
Casutic Soda	25 kg	\$ 33.11	42											20		20	7			4	9			2				22			
Soda Ash	25 kg	\$ 21.03	43												47	47										-4		4			
KCl	1 MT	\$ 1,023.33																													
EMI-2009	55 gal dm	\$ 1,547.62										60	60	12		12								32	16			48			
Flowzan	25 kg	\$ 272.33	84																					64	24	-4		84			
Drispac SL	50 lb	\$ 122.19	123									120	120	102		102								92	40	9		141			
Soltex	50 lb	\$ 88.67	155									120	120	90		90								10	175			185			
Safecide	5 gal	\$ 100.79	18											7		7								7	4			11			
Defoam A	5 gal	\$ 94.50	29											22		22								3	4			7			
Circal Y	25 kg	\$ 7.47	141									240	240	302		302								57	22			79			
Circal 60/16	25 kg	\$ 7.16	169									144	144	140		140								57	115	3	-2	173			
Kwik-seal F	40 lb	\$ 29.03					54						54	54		54															
Kwik-Seal M	40 lb	\$ 29.03					54						54	54		54															
Citric acid	25 kg	\$ 41.09	30										30	30		30															
SAPP	25 kg	\$ 53.51	40										40	40		40															
Guar Gum	25 kg	\$ 75.54					80						80	80		80															
Starglide	55 gal dm	\$ 1,268.41										16	16	16		16															
Polysal T	25 kg	\$ 38.07	34									17	17											33	14	4		51			
Circal 1000	25 kg	\$ 9.09	21											15		15											5	5			
Safe-surf WN	55 gal dm	\$ 966.86																													
Calcium Chloride	25 kg	\$ 18.71	11				29						29	29		29			11									11			
Sodium bicarbonate	25 kg	\$ 17.86	26											9		9								16		1		17			
KCL brine (1.15SG)	1bbl	\$ 48.86		462	1094					750			750											1596	352		358	2306			
KCL brine (1.08SG)	1bbl	\$ 27.35			470																			337			133	470			
Safe-cor	55 kg	\$ 333.15	2											2		2															
Flowvis Plus	25 kg	\$ 342.68	15											14		14															
OS-1	25 kg	\$ 41.99	28											32		32															
Safevis E	5 gal dm	\$ 192.53	4											4		4															
FloTrol	25 kg	\$ 92.51																													
Duovis	25 kg	\$ 224.23							35			70	105	69		69															
Barite	1 MT	\$ 284.39	63.5	75																				12	19	5		36			
Bentonite	1 MT	\$ 330.55	51			43		25			24.5		92.5				14	7	2.5	10	5		6	31	28	42	138.5				
																	16			28	32					61	143.5				

5. CONSUMPTION BY INTERVAL – ACTUAL

36" INTERVAL COST BREAKDOWN						
<p>OPERATOR: Beach Petroleum / ADA</p> <p>WELL NAME / No.: Spikey Beach-1 Mud System: SW/PHG sweeps</p> <p>RIG: Ocean Patriot Total mud cost: \$12,021.69</p> <p>Section Length: 59.5 m Cost / m: \$123.56 (based volume used)</p> <p>Days on Section: 3 days Cost / bbl: \$5.74</p> <p>Volume Built: 2093 bbl</p> <p>Volume Used: 1280 bbl</p>						
PRODUCT	UNIT SIZE	UNIT COST (US \$)	QTY USED	TOTAL COST (\$USD)	% of Total Cost	PROD. CONC (ppb)
Casutic Soda	25 kg	\$33.11	7	\$231.77	1.9	0.2
Soda Ash	25 kg	\$21.03				
KCl	1 MT	\$1,023.33				
EMI-2009	55 gal dm	\$1,547.62				
Flowzan	25 kg	\$272.33				
Drispac SL	50 lb	\$122.19				
Soltex	50 lb	\$88.67				
Safeicide	5 gal	\$100.79				
Defoam A	5 gal	\$94.50				
Circal Y	25 kg	\$7.47				
Circal 60/16	25 kg	\$7.16				
Kwik-seal F	40 lb	\$29.03				
Kwik-Seal M	40 lb	\$29.03				
Citric acid	25 kg	\$41.09				
SAPP	25 kg	\$53.51				
Guar Gum	25 kg	\$75.54				
Starglide	55 gal dm	\$1,268.41				
Polysal T	25 kg	\$38.07				
Circal 1000	25 kg	\$9.09				
Safe-surf WN	55 gal dm	\$966.86				
Calcium Chloride	25 kg	\$18.71	11	\$205.81	1.7	0.3
Sodium bicarbonate	25 kg	\$17.86				
KCL brine (1.15SG)	1bbl	\$48.86				
KCL brine (1.08SG)	1bbl	\$27.35				
Safe-cor	55 kg	\$333.15				
Flowvis Plus	25 kg	\$342.68				
OS-1	25 kg	\$41.99				
Safevis E	5 gal dm	\$192.53				
FloTrol	25 kg	\$92.51				
Duovis	25 kg	\$224.23				
Barite	1 MT	\$284.39	14	\$3,981.46	33.1	14.7
Bentonite	1 MT	\$330.55	23	\$7,602.65	63.2	24.2
Total Mud Cost :				\$12,021.69	100	%
Volume recieved from prev. section				bbl		
Volume transferred to Rig				bbl		
Volume transferred to next interval			813	bbl		
Volume used on interval			1280	bbl		

17.5" INTERVAL COST BREAKDOWN

OPERATOR: Beach Petroleum / ADA

WELL NAME / No.: Spikey Beach-1

RIG: Ocean Patriot

Section Length: 661 m

Days on Section: 3 days

Volume Built: 3749 bbl

Volume Used: 4562 bbl

Mud System: SW/PHG sweeps

Total mud cost: \$25,240.26

Cost / m: \$46.47 (based volume used)

Cost / bbl: \$6.73

PRODUCT	UNIT SIZE	UNIT COST (US \$)	QTY USED	TOTAL COST (\$USD)	% of Total Cost	PROD. CONC (ppb)
Casutic Soda	25 kg	\$33.11	13	\$430.43	1.7	0.2
Soda Ash	25 kg	\$21.03				
KCl	1 MT	\$1,023.33				
EMI-2009	55 gal dm	\$1,547.62				
Flowzan	25 kg	\$272.33				
Drispac SL	50 lb	\$122.19				
Soltex	50 lb	\$88.67				
Safecide	5 gal	\$100.79				
Defoam A	5 gal	\$94.50				
Circal Y	25 kg	\$7.47				
Circal 60/16	25 kg	\$7.16				
Kwik-seal F	40 lb	\$29.03				
Kwik-Seal M	40 lb	\$29.03				
Citric acid	25 kg	\$41.09				
SAPP	25 kg	\$53.51				
Guar Gum	25 kg	\$75.54				
Starglide	55 gal dm	\$1,268.41				
Polysal T	25 kg	\$38.07				
Circal 1000	25 kg	\$9.09				
Safe-surf WN	55 gal dm	\$966.86				
Calcium Chloride	25 kg	\$18.71				
Sodium bicarbonate	25 kg	\$17.86				
KCL brine (1.15SG)	1bbl	\$48.86				
KCL brine (1.08SG)	1bbl	\$27.35				
Safe-cor	55 kg	\$333.15				
Flowvis Plus	25 kg	\$342.68				
OS-1	25 kg	\$41.99				
Safevis E	5 gal dm	\$192.53				
FloTrol	25 kg	\$92.51				
Duovis	25 kg	\$224.23				
Barite	1 MT	\$284.39	17.5	\$4,976.83	19.7	10.3
Bentonite	1 MT	\$330.55	60	\$19,833.00	78.6	35.3
Total Mud Cost :				\$25,240.26	100	%
Volume recieved from prev. section				813	bbl	
Volume transferred to Rig					bbl	
Volume transferred to next interval					bbl	
Volume used on interval				4562	bbl	

12.25" INTERVAL COST BREAKDOWN

OPERATOR: Beach Petroleum / ADA

WELL NAME / No.: Spikey Beach-1

RIG: Ocean Patriot

Section Length: 1290 m

Days on Section: 6 days

Volume Built: 4651 bbl

Volume Used: 4651 bbl

Mud System: SW/PHG sweeps

Total mud cost: \$320,875.72

Cost / m: \$248.74

Cost / bbl: \$68.99

PRODUCT	UNIT SIZE	UNIT COST (US \$)	QTY USED	TOTAL COST (\$USD)	% of Total Cost	PROD. CONC (ppb)
Casutic Soda	25 kg	\$33.11	2	\$66.22	0.02	0.0
Soda Ash	25 kg	\$21.03	-4	-\$84.12		
KCl	1 MT	\$1,023.33				
EMI-2009	55 gal dm	\$1,547.62	48	\$74,285.76	23.2	1.40%
Flowzan	25 kg	\$272.33	84	\$22,875.72	7.1	1.0
Drispac SL	50 lb	\$122.19	141	\$17,228.79	5.4	1.7
Soltex	50 lb	\$88.67	185	\$16,403.95	5.1	2.2
Safecide	5 gal	\$100.79	11	\$1,108.69	0.3	0.1
Defoam A	5 gal	\$94.50	7	\$661.50	0.2	0.1
Circal Y	25 kg	\$7.47	79	\$590.13	0.2	0.9
Circal 60/16	25 kg	\$7.16	173	\$1,238.68	0.4	2.0
Kwik-seal F	40 lb	\$29.03				
Kwik-Seal M	40 lb	\$29.03				
Citric acid	25 kg	\$41.09				
SAPP	25 kg	\$53.51				
Guar Gum	25 kg	\$75.54				
Starglide	55 gal dm	\$1,268.41				
Polysal T	25 kg	\$38.07	51	\$1,941.57	0.6	0.4
Circal 1000	25 kg	\$9.09	6	\$54.54	0.0	0.1
Safe-surf WN	55 gal dm	\$966.86				
Calcium Chloride	25 kg	\$18.71				
Sodium bicarbonate	25 kg	\$17.86	17	\$303.62	0.1	0.2
KCL brine (1.15SG)	1bbl	\$48.86	2306	\$112,671.16	35.1	
KCL brine (1.08SG)	1bbl	\$27.35	470	\$12,854.50	4.0	
Safe-cor	55 kg	\$333.15				
Flowvis Plus	25 kg	\$342.68	1	\$342.68	0.1	0.0
OS-1	25 kg	\$41.99	-4	-\$167.96		
Safevis E	5 gal dm	\$192.53				
FloTrol	25 kg	\$92.51				
Duovis	25 kg	\$224.23	36	\$8,072.28	2.5	0.4
Barite	1 MT	\$284.39	107	\$30,429.73	9.5	50.7
Bentonite	1 MT	\$330.55	60.5	\$19,998.28	6.2	28.7
Total Mud Cost :				\$320,875.72	100	%

includes dumping of bulk products on the rig and on supply vessels after project

Volume recieved from prev. section		bbl
Volume transferred to Rig		bbl
Volume transferred to next interval		bbl
Volume used on interval	4651	bbl

6. PLANNED WELL MUD COSTS

Product Description	UOM	Unit Price	Expected use 36"	Section Cost 36"	Expected use 17.5"	Section Cost 17.5"	Expected use 12.25"	Section Cost 12.25"	Total Expected usage	Total Cost
Barite	1MT BB	\$284.39					59	\$16,779.01	59	\$16,779.01
Bentonite	1MT BB	\$330.55	18	\$5,949.90	78	\$25,782.90			96	\$31,732.80
Caustic Soda	25kg cn	\$33.11	7	\$231.77	31	\$1,026.41	20	\$662.20	58	\$1,920.38
Flowzan/Duovis	25kg bg	\$272.33					170	\$46,296.10	170	\$46,296.10
Safecide	25lt cn	\$100.79					7	\$705.53	7	\$705.53
Klastop/EMI-2009	55 gal dm	\$1,547.62					57	\$88,214.34	57	\$88,214.34
Soltex	25kg bg	\$88.67					238	\$21,103.46	238	\$21,103.46
Circal 60/16/Circal Y	25 kg bg	\$7.14					272	\$1,942.08	272	\$1,942.08
KCl	MT BB	\$1,023.33					50	\$51,166.50	50	\$51,166.50
Drispac SL	25kg bg	\$122.19					204	\$24,926.76	204	\$24,926.76
Starglide	55 gal dm									
Soda Ash	25kg bg	\$21.03	7	\$147.21	31	\$651.93	20	\$420.60	58	\$1,219.74
		Total		\$6,328.88		\$27,461.24		\$252,216.58		\$286,006.70

7. SHAKER SCREENS CONSUMPTION

Description	Prices	Start Inventory	12.25"	End inventory	Total Cost
M-I SWACO Screen stock		21/08/09	Used	16/09/09	
Scalper 10 MG	\$ 340.00	8		8	
Scalper 20 MG	\$ 340.00	16		16	
Scalper 30MG	\$ 340.00	6		6	
105 XL - 70mesh API	\$ 389.00	12		12	
120 XL - 100mesh API	\$ 399.00	13	4	9	\$ 1,596.00
165 XL - 120mesh API	\$ 408.00	11		11	
270 XL - 200mesh API	\$ 471.00	16		16	
165 HC - 80mesh API	\$ 465.00				
200 HC - 100mesh API	\$ 484.00	18	8	10	\$ 3,872.00
230 HC - 120mesh API	\$ 504.00				
					\$ 5,468.00

8. DAILY VOLUME SUMMARY SHEET

Daily Volume Summary - Spikey Beach-1

Hole Interval
36" Hole Interval
PHG Sweeps / Seawater

Mud Volume Status (bbl)							Mud Volume Built (bbl)						Mud Volume Lost (bbl)						
Date	Depth	Hole	Surf	Premix	Reserve	Total	Water	Mud	Chemical	Barite	Daily	Cum	Sweeps	Other	Dump	Transfer	Displace	Daily	Cummulative
2009	Meters		Vol	Vol	Vol	Vol		Received	Vol	Vol	Total	Built				to Next Interval	hole	Total	Lost
4-Sep	0	0				0					0	0						0	0
5-Sep	155	0	462		916	1378	2022		37	19	2078	2078	700					700	700
6-Sep	155	0	160		653	813			15		15	2093	507		73			580	1280
7-Sep	155					0					0	2093				813		813	2093

Hole Interval
17-1/2" Hole Interval
PHG Sweeps/Sea Water

Mud Volume Status (bbl)							Mud Volume Built (bbl)						Mud Volume Lost (bbl)						
Date	Depth	Hole	Surf	Premix	Reserve	Total	Water	Mud	Chem	Barite	Daily	Cum	Sweeps	Downhole	Dump	Transfer	Left In	Daily	Cummulative
2009	Meters		Vol	Vol	Vol	Vol		Received	Vol	Vol	Total	Built				to next interval	Hole	Total	Lost
7-Sep	200		462		1438	1900	1277	813	65		2155	2155	255					255	255
8-Sep	816		295		649	944	2315		85		2400	4555	3356					3356	3611
9-Sep	816		0		0	0			7		7	4562			951			951	4562
						0					0	4562						0	4562
						0					0	4562						0	4562

Hole Interval
12-1/4" Hole Interval
KCl/Polymer/Klastop

Mud Volume Status (bbl)							Mud Volume Built (bbl)						Mud Volume Lost (bbl)							
Date	Depth	Hole	Surf	Premix	Reserve	Total	Water	Brine	Mud	Chemical	Barite	Daily	Cum	Solids	Downhole	Trip Loss	Dumped	Left In	Daily	Cummulative
2009	Meters		Vol	Vol	Mud	Vol		Added	Received	Vol	Volume	Total	Built	Equip				Hole	Total	Lost
10-Sep	816					0						0	0						0	0
11-Sep	1504	776	463		1130	2369	1076	1933		71		3080	3080	711					711	711
12-Sep	1907	979	457		1137	2573	472	352		93		917	3997	653	60				713	1424
13-Sep	2100	1149	398		835	2382	90			43		133	4130	303	21				324	1748
14-Sep	2100	1135	447		1236	2818		521				521	4651			5	80		85	1833
15-Sep	2100					0						0	4651				2048	770	2818	4651
						0						0	4651						0	4651

9. STATEMENT OF FACTS: Beginning and End

Mi SWACO STATEMENT OF FACT

Operator	Rig	Well Name	Date
Anzon Australia	Ocean Patriot	Basker-7	21/09/2009 - 24:00
Drilling / Completion Fluid chemicals onboard Ocean Patriot - End Basker-7/ Start Beach			
Product	Unit Size	Quantity	Location
Barite (Bulk)	1 MT	63.5	Bulk
Bentonite (Bulk)	1 MT	51	Bulk
Bicarb	25 kg sx	26	Rig
CaCl ₂	25 kg sx	11	Rig
Caustic Soda	25 kg can	42	Rig
Circal 60/16	25 kg sx	169	Rig
Circal Y	25 kg sx	141	Rig
Circal 1000	25 kg sx	21	Rig
Flo-Vis Plus	25 kg sx	15	Rig
OS-1	25 kg sx	28	Rig
Safe-Cide	5 gal can	18	Rig
Safe-Cor	55 gal drum	2	Rig
Flowzan	25 kg sx	84	Rig
Defoam A	5 gal can	29	Rig
Citric Acid	25 kg sx	30	Rig
Drispac S/L	25 kg sx	123	Rig
Polysal T	25 kg sx	34	Rig
Safe Vis E	5 gal can	4	Rig
SAAP	25 kg sx	40	Rig
Soda Ash	25 kg sx	43	Rig
Soltex	50 lb sx	155	Rig
NON DIAMOND SHAKER SCREENS (Stored next to Cement Unit)			
Scalper 10 MG		8	Rig
Scalper 20 MG		16	Rig
Scalper 30 MG		6	Rig
105 XL - 70 mesh API		12	Rig
120 XL - 100 mesh API		13	Rig
165 XL - 120 mesh API		11	Rig
270 XL - 200 mesh API		16	Rig
165 HC - 80 mesh API			
200 HC - 100 mesh API		18	Rig
230 HC - 120 mesh API			
ON BOATS			
	KCl brine-bbls	Barite-MT	Gel-MT
Lewek Emerald		75	
Lewek Swift	1094		

Prepared by:
Graeme Garrick

Signature 

Operator Representative :
Anzon Oil
Ivan Parkhurst

Signature 

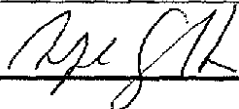


STATEMENT OF FACT

Operator	Rig	Well Name	Date
Beach Petroleum	Ocean Patriot	Spikey Beach-1	16-Sep-09
Drilling / Completion Fluid chemicals onboard Ocean Patriot - At End of Spikey Beach-1			
Product	Unit Size	Quantity	Location
M-I Barite (Bulk)	1 MT		Bulk
M-I Gel (Bulk)	1 MT		Bulk
Calcium Chloride	25 kg sx		Rig
Caustic Soda	25 kg can		Rig
Circal 1000	25 kg sx		Rig
Circal 60/16	25 kg sx		Rig
Circal Y	25 kg sx		Rig
Citric Acid	25 kg sx		Rig
Defoam A	5 gal can		Rig
Drispac SL	50 lb sx		Rig
Flo-Vis Plus	25 kg sx		Rig
Flowzan	25 kg sx		Rig
Guar Gum	25 kg sx		Rig
Kla-Stop	55 gal drum		Rig
Kwik Seal F	40 lb sx		Rig
Kwik Seal M	40 lb sx		Rig
OS-1	25 kg sx		Rig
Poly-Sal T	25 kg sx		Rig
Safe-Cide	5 gal can		Rig
Safe-Cor	55 gal drum		Rig
Safe-Vis E	5 gal can		Rig
Sapp	25 kg sx		Rig
Soda Ash	25 kg sx		Rig
Sodium Bicarbonate	25 kg sx		Rig
Soltex	50 lb sx		Rig
KCl Brine (9.0 ppg)	1 bbl		Rig
KCl Brine (9.5 ppg)	1 bbl		Rig
DuoVis	25 kg		Rig
Starglide	55 gal drum		Rig
NON DIAMOND SHAKER SCREENS (Stored next to Cement Unit)			
Scalper 10 MG		8	Rig
Scalper 20 MG		16	Rig
Scalper 30 MG		6	Rig
105 XL - 70 mesh API		12	Rig
120 XL - 100 mesh API		9	Rig
165 XL - 120 mesh API		11	Rig
270 XL - 200 mesh API		16	Rig
165 HC - 80 mesh API			Rig
200 HC - 100 mesh API		10	Rig
230 HC - 120 mesh API			Rig
ON BOATS			
	KCl brine-bbls	Barite-MT	Gel-MT
Lewek Emerald			
Lewek Swift			

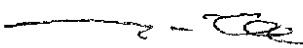
Prepared by MI Rep :
Manfred Olejniczak

Signature



Operator Representative :
Beach Petroleum
Tim Lee

Signature



16/9/09

Attachment 4

Casing Report

CASING REPORT

WELL DATA

Field Spikey-1
 Well Spikey Beach-1
 Date 6/09/2009
 Rig Ocean Patriot
 RTE - MSL 21.5 m
 Water Depth 75 m
 Running Co. _____

HOLE GEOMETRY

Last Casing Size _____ in
 Last Casing Set at _____ m
 Hole Diameter Drilled 36 in
 Hole Depth 155 m
 Size of Casing Run 30 in
 Casing Set At 153 m

CASING DATA

Weight : _____
 Grade : _____
 Connection Type : _____
 Make up Torque : _____
 No. Joints Received : _____
 No. Joints Run : _____
 No. Joints Returned : _____

CASING SIZE

_____ ppf
X-52
D-60
 _____ ft/lbs
5
5
0

TIME BREAKDOWN

START

FINISH

Rig up to Run Casing : 03:30hrs 6-Sept-09 04:30hrs 6-Sept-09
 Run Casing : 04:30hrs 6-Sept-09 07:30hrs 6-Sept-09
 Average Jts of Casing Run/hr : 1.6

CENTRALISATION

Type of Centraliser : Nil
 Number of Centralisers : Nil
 Position of Centralisers : Nil

CASING TALLY SUMMARY

JOINT No.	DESCRIPTION	LENGTH (m)	SETTING DEPTH BRT (m)
1	30" x 20" Shoe Joint	11.59	153.00
2	30" x 1" Intermediate Jt. D-60	11.68	141.32
3	30" x 1" Intermediate Jt. D-60	11.69	129.63
4	30" x 1" X/O Jt. D-60 to Lynx HT	11.21	118.42
5	30" x 1.5" Well Head Jt	11.73	106.69

COMMENTS

No locking dogs supplied on joint #2 & #3 D-60 connection. Locked connection with 3 x 2in welds.
 Float tested OK.

CASING REPORT

WELL DATA

HOLE GEOMETRY

Field	Spikey Beach	Last Casing Size	30	in
Well	Spikey Beach-1	Last Casing Set at	151.4	m
Date	09 Sep 09	Hole Diameter Drilled	17.5	in
Rig	Ocean Patriot	Hole Depth	816	m
RTE - MSL	21.5	Size of Casing Run	13.375	in
Water Depth	74	Casing Set At	805.96	m
Running Co.	BJ Services			

CASING DATA

CASING SIZE

Weight	:	68	ppf		ppf
Grade	:	N-80			
Connection Type	:	BTC			
Make up Torque	:	13000	ft/lbs		ft/lbs
No. Joints Received	:	81			
No. Joints Run	:	63			
No. Joints Returned	:	18			

TIME BREAKDOWN

START

FINISH

Rig up to Run Casing	:	21:30hrs 8-Sept-09	23:00hrs 8-Sept-09
Run Casing	:	23:00hrs 8-Sept-09	06:00hrs 9-Sept-09
Average Jts of Casing Run/hr	:	8.9 jts/hr	note: this includes makig up of shoetrack

CENTRALISATION

Type of Centraliser	:	Centek
Number of Centralisers	:	Total: 4 (2 x 16in, 2 x 17.5in)
Position of Centralisers	:	2 x 16in on shoe joint, 1 x 17.5in on float collar
	:	1 x 17.5in on joint above shoetrack

CASING TALLY SUMMARY

JOINT No.	CASING SIZE	DESCRIPTION	LENGTH (m)	SETTING DEPTH BRT (m)
Shoe A	13 3/8"	68ppf, Buttress	11.82	805.96
Float A	13 3/8"	68ppf, Buttress	12.34	794.15
72	13 3/8"	68ppf, Buttress	10.97	781.92
71	13 3/8"	68ppf, Buttress	11.15	771.08
70	13 3/8"	68ppf, Buttress	11.64	760.05
69	13 3/8"	68ppf, Buttress	11.43	748.54
68	13 3/8"	68ppf, Buttress	11.10	737.22
67	13 3/8"	68ppf, Buttress	11.47	726.25
66	13 3/8"	68ppf, Buttress	11.67	714.90
65	13 3/8"	68ppf, Buttress	11.34	703.36
64	13 3/8"	68ppf, Buttress	11.04	692.15
63	13 3/8"	68ppf, Buttress	11.56	681.23
62	13 3/8"	68ppf, Buttress	11.58	669.80
61	13 3/8"	68ppf, Buttress	11.24	658.34
60	13 3/8"	68ppf, Buttress	10.80	647.22
59	13 3/8"	68ppf, Buttress	10.80	636.55
58	13 3/8"	68ppf, Buttress	11.60	625.87
57	13 3/8"	68ppf, Buttress	11.59	614.39
56	13 3/8"	68ppf, Buttress	11.24	602.93
55	13 3/8"	68ppf, Buttress	11.48	591.81
54	13 3/8"	68ppf, Buttress	11.48	580.45
53	13 3/8"	68ppf, Buttress	11.10	569.09
52	13 3/8"	68ppf, Buttress	11.40	558.12
51	13 3/8"	68ppf, Buttress	11.48	546.84

50	13 3/8"	68ppf, Buttress	11.28	535.48
49	13 3/8"	68ppf, Buttress	11.22	524.32
48	13 3/8"	68ppf, Buttress	11.13	513.23
47	13 3/8"	68ppf, Buttress	11.59	502.22
46	13 3/8"	68ppf, Buttress	11.56	490.76
45	13 3/8"	68ppf, Buttress	11.79	479.32
44	13 3/8"	68ppf, Buttress	11.28	467.65
43	13 3/8"	68ppf, Buttress	11.69	456.50
42	13 3/8"	68ppf, Buttress	11.60	444.93
41	13 3/8"	68ppf, Buttress	11.50	433.46
40	13 3/8"	68ppf, Buttress	11.46	422.09
39	13 3/8"	68ppf, Buttress	11.62	410.74
38	13 3/8"	68ppf, Buttress	11.59	399.25
37	13 3/8"	68ppf, Buttress	11.11	387.78
36	13 3/8"	68ppf, Buttress	11.69	376.79
35	13 3/8"	68ppf, Buttress	10.97	365.23
34	13 3/8"	68ppf, Buttress	11.80	354.38
33	13 3/8"	68ppf, Buttress	11.48	342.70
32	13 3/8"	68ppf, Buttress	11.69	331.34
31	13 3/8"	68ppf, Buttress	11.59	319.78
30	13 3/8"	68ppf, Buttress	11.05	308.31
29	13 3/8"	68ppf, Buttress	11.47	297.38
28	13 3/8"	68ppf, Buttress	11.82	286.03
27	13 3/8"	68ppf, Buttress	11.47	274.33
26	13 3/8"	68ppf, Buttress	11.58	262.98
25	13 3/8"	68ppf, Buttress	11.97	251.53
24	13 3/8"	68ppf, Buttress	11.54	239.68
23	13 3/8"	68ppf, Buttress	11.52	228.26
22	13 3/8"	68ppf, Buttress	11.12	216.86
21	13 3/8"	68ppf, Buttress	11.54	205.86
20	13 3/8"	68ppf, Buttress	11.79	194.45
19	13 3/8"	68ppf, Buttress	11.59	182.78
18	13 3/8"	68ppf, Buttress	11.07	171.32
17	13 3/8"	68ppf, Buttress	11.27	160.37
16	13 3/8"	68ppf, Buttress	11.48	149.22
15	13 3/8"	68ppf, Buttress	11.47	137.87
14	13 3/8"	68ppf, Buttress	11.65	126.53
13	13 3/8"	68ppf, Buttress	11.59	115.01
18 3/4" Hanger	13 3/8" x 18-3/4"	20" swedge to 13 3/8"	10.04	103.54

COMMENTS

No rejects

REPORT BY: Manelle Moussa

DATE: 9-Sept-09

Attachment 5

Cementing Report (Dowell – Schlumberger)

Schlumberger

Cementing End of Well Report

Spikey Beach -1



Rig : Ocean Patriot
Well Type : Exploration
Customer : Beach Petroleum
Prepared by : Lam Nguyen Hoang Thao
Hnguyen14@perth.oilfield.slb.com
Tel (61) – 406 – 381 – 146
Date : 21st September 2009

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A. Well Summary

Client Representatives		
No	Name	Position
1	Iain Robertson	Rig Superintendant
2	Manelle Moussa	Drilling Engineer
3	Tim Lee	Drilling Supervisor
4	Chris Geater	Offshore logistics
5	Max Blakiston	Shorebase logistics

Dowell Personnel		
No	Name	Position
1	Edgardo Llagas	Field Specialist
2	Lee Gregson	Field Specialist
3	David Giam	Field Engineer 2
4	Mark Dawson	Equipment Operator
5	Argie Michael	Mechanics
6	Lam Nguyen Hoang Thao	General Field Engineer

Well Data						
Open Hole		Casing			Temperature	
Size	MD	Size	Weight	MD	BHST	BHCT
(in)	(m)	(in)	(lb/ft)	(m)	(degC)	(degC)
36"	157.3	30	310	155.4	10	25
17 ½ "	1061.7	13 3/8	68	1056.7	32	25
12 ¼"	2061.5	NA	NA	NA	NA	NA

B. Job summary

Date	Job Type	Cement Slurry		Displacement		Spacer		Cement Head	Plugs
		Density (ppg)	Volume (bbl)	Fluid	Volume (bbl)	Type	Volume (bbl)		
6/Sep/09	30Cond	15.8	270	Sea water	21	Sea water	40	none	none
9/Sep/09	13 3/8" csg	Lead : 12.5 Tail : 15.8	348 90	WBM	338	Sea water	11	DSE cmt head	1 top 1 btm
14/Sep/09	Plug 1	15.8	79	Mud	72	Drill water	15	NA	
14/Sep/09	Plug 2	16.0	81	Mud	33	Drill water	15	NA	
15/Sep/09	Plug 3	15.8	49	Mud	2	Sea water	15	NA	

C. Materials consumption

2009 Ocean Patriot Beach Petro						
	Spikey Beach-1	30Cond	13 38csg	Plug 1	Plug 2	Plug 3
TOTAL	Lead (bbl)		348			
	Tail (bbl)	270	90	79	81	49
	MUDPUSH (bbl)					
	Date					
	D047	15	20	5	5	5
	D075		477			
	D080			46	46	
	D081		10	5		
	D095					
	D110		20			
	D145A		25			
	D168			79	79	
	D175					
	D182					
	D193					
	D600G					
	Dye (kg)	2				
	G cement	56	54	18	18	10
	HTB cement					
	20" TOP					
	20" BOTTOM					
	13 3/8" TOP		1			
	13 3/8" BOTTOM		1			
	10 3/4" TOP					
	10 3/4" BOTTOM					
	9 5/8" TOP					
	9 5/8" BOTTOM					

D. Design – Execution - Evaluation summary

1. 30 Conductor

a) Design

The objective for the cementing of this section is

- Provide structural integrity for wellhead and BOP and provide shoe integrity for continued drilling operations.
- Minimize WOC

An inner string method was used to execute this job and single 15.8ppg class G cement slurry + 0.5%BWOC calcium chloride was designed to achieve a sufficient thickening, while minimizing the WOC to reduce rig time.

Temperature at sea bed (96.5mRT) estimated to be 7degC

BHST = 10degC

BHCT (simulated using CemCADE) = 25degC

Single 15.8 ppg (1.90 SG) tail slurry was proposed for this section

Stage	Tail Slurry
Density	15.8 ppg
TOC	96.5 m
Job Time	1:00 hr:min
Minimum required TT to 40Bc	3:00 hr:mn
Volume	242 bbl

Spacer Considerations:

It was recommended to pump 40 bbl of sea water ahead of the slurry as a pre-flush.

Testing:

See lab tests in Appendix for more details.

b) Execution

Cement job was expected to be on 6-Sept (Sunday), the lead cementer arrived on board at 11am Sat (1 day before job). After checking the cement unit, he could not get water circulated, he then contacted Karratha (Schlumberger Operation Base) and get troubleshoot advice. However, he did not feel confident to precede with the job execution.

A cementing engineer was then flied to standby in Melbourne on Sat night as a contingency plan.

In the end, the cementer on board still had not been surely confident which lead to Beach Petroelum had to arrange a special helicopter first thing Sunday morning to mobilise the cementing engineer to the rig. He arrived on the rig just in time to do an induction and go straight into the cement job.

This situation had potential to delay the cementing operation on the rig, with a worst case potential of requiring a re-spud. The cost of the special helicopter is in the order of AU\$15,000.

The job was executed by the cementing engineer. All went well and safely.

c) Evaluation

Job went safely, no incident no accident.

06/09/09 12:45 – start of 30" Conductor cement job

06/09/09 14:12 – complete of 30" Conductor cement job

WOC for 5 hrs prior to disconnect from PGB

2. 13 3/8" casing

a) Design

The objective for the cementing of this section was:

- Provide structural integrity for wellhead and BOP and provide shoe integrity for continued drilling operations.
- Avoid remedial work (squeeze, ect).
- Achieve expected LOT.

BHST = 37degC

BHCT (simulated using CemCADE) = 25degC

Summary of the proposed slurries:

Stage	Lead Slurry	Tail Slurry
Density	12.5 ppg	15.8 ppg
TOC	96.5	660 m
Job Time	2:35 hr:min	1:05 hr:min
Minimum required TT to 40Bc	4:35 hr:mn to POD	3:05 hr:mn to 40Bc
Volume	362 bbl (20%xs)	75 bbl (20% XS)

Spacer Considerations:

It was recommended to pump 40 bbl of seawater ahead of the slurry as a pre-flush.

Testing:

See lab tests in Appendix for more details.

Cement sample for testing was the main concern of this section:

- As per Schlumberger Cementing - KSQR (key service quality requirements), section 1.5 - Perform thickening time and rheology tests on ALL cement slurries being pumped using additives and cement that are to be used on the job and using representative samples of water.
- 13 3/8" cement job including lead and tail slurry. Lab tests done with cement sample from the rig. However, part of this cement has been used for 30"Cond and remained only small qty. The rig will upload new batch of cement from supply boat to do 13 3/8". There is not enough time to get sample of this new cement to the lab for another testing. Plan is to proceed with current cement recipes (done with "old" sample)
- A HARC [20090907094606](#) was assessed, discussed and communicated internally within Schlumberger organization for related risks of using different cement sample and an Exemption [20090907085325 \(17911-4\)](#) was raised in QUEST system for executing the job.

b) Execution

The job went well as planned, no incident accident

Cement head performed as expected, top plug dropped at 1100 psi and bottom plug dropped at 2200 psi

Refer to service report in Appendix for detailed operations

c) Evaluation

LOT was performed and expected value achieved.

3. P&As (plug 1,2,3)

a) Design

3 cement plugs were planned to set for plug and abandonment purposes with following requirements:

- Plug 1 – to be tagged
- Plug 2 – to be pressure tested
- Plug 3

The objectives of these jobs were to successfully abandon the well to prevent any excessive time WOC for tagging / pressure testing cement plugs

	Plug 1	Plug 2	Plug 3
MD (m)	1500-1350	850 - 700	215 - 115
Plug length (m)	150	150	100
Hole Diameter	12 1/4 "OH	12 1/4 "OH	Inside 13 3/8" csg
BHST / BHCT (degC)	66 / 41	39 / 27	27 / 27
Volume	79 bbl (10%OH xs)	75 bbl (10%OH xs)	49 bbl
Density	15.8	16.0	15.8
Drilling Fluid	9.5ppg WBM	9.5ppg WBM	9.5ppg WBM

Plug 2 was purposely designed @ 16.00 ppg to enhance its compressive strength development for being pressure tested

Spacer Considerations:

Due to mud in the hole in water-based mud and there was no concern about over-pressured formation, water was proposed to be spacer pumped ahead of each plug

Testing:

See lab tests in Appendix (plug 1, 2, 3) for more details.

b) Execution

28mt G cement was additionally loaded out to accommodate 100% contingency for the job. This qty of cement was not used in the end, however it should always be a good practice to abide to

All 3 plugs went well. Plug 1 was tagged and plug 2 was pressure tested successfully

c) Evaluation

P&A cement jobs went well and safely as planned. No issues were recorded.

Appendix

1. Laboratory Reports

Laboratory Cement Test Report – 30” Slurry

Fluid No : AUPT 1702001	Client : Beach Petroleum	Location / Rig : Ocean Patriot	Signatures
Date : Aug-24-2009	Well Name : Spikey Beach	Field : Bass Straite	PAul

Job Type	Conductor	Depth	159.0 m	TVD	159.0 m
BHST	10 degC	BHCT	25 degC	BHP	157 psi
Starting Temp.	27 degC	Time to Temp.	00:20	Heating Rate	(degF/min)
Starting Pressure	(200psi)	Time to Pressure	00:20	Schedule	()

Composition

Slurry Density	15.80 lb/gal	Yield	1.19 ft³/sk	Mix Fluid	5.329 gal/sk
Solid Vol. Fraction	40.0 %	Porosity	60.0 %	Slurry type	Conventional
Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	3.20 SG	Rig
Sea water	5.319 gal/sk		Base Fluid		Rig
D047	0.010 gal/sk		Antifoam		Lab
S001	0.500 %BWOC		Accelerator		Lab

Rheology (Average readings)

(rpm)	(deg)
300	101.0
200	72.5
100	46.5
6	23.0
3	14.0
10 sec Gel	15
10 min Gel	29
Temperature	25 degC
Pv : 79.352 cP	
Ty : 20.67 lbf/100ft ²	

Thickening Time

Consistency	Time
40 Bc	03:00 hr:mn
70 Bc	03:41 hr:mn
100 Bc	04:14 hr:mn
Remark : Thickening time do not include batch time	

Comments

Field mixing procedure :
<ul style="list-style-type: none"> Pit used for mix water need to be cleaned up completely to avoid any possible contamination Add required qty of sea water Add antifoam D047 Add calcium chloride Allow 1hr for prehydrate and reduce the temperature of mixfluid Supply mix fluid to cement unit for executing cement job

Laboratory Cement Test Report – 13 3/8 LEAD

Fluid No : AUPT 1710001	Client : Beach Petroleum	Location / Rig : Ocean Patriot	Signatures
Date : Sep-04-2009	Well Name : Spikey Beach	Field :	RONALD

Job Type	13 3/8"	Depth	810.0 m	TVD	810.0 m
BHST	37 degC	BHCT	25 degC	BHP	1708 psi
Starting Temp.	27 degC	Time to Temp.	01:15 hr:mn	Heating Rate	-0.04 degF/min
Starting Pressure	316 psi	Time to Pressure	01:15 hr:mn	Schedule	9.3-5

Composition

Slurry Density	12.50 lb/gal	Yield	2.24 ft³/sk	Mix Fluid	13.228 gal/sk
Solid Vol. Fraction	21.0 %	Porosity	79.0 %	Slurry type	Conventional

Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	3.20 SG	RIG
Sea water	12.698 gal/sk		Base Fluid		RIG
D047	0.010 gal/sk		Antifoam		
D075	0.500 gal/sk		Extender		
D110	0.020 gal/sk		Retarder		

Rheology (Average readings)

(rpm)	(deg)
300	20.0
200	15.5
100	10.5
6	4.5
3	2.5

10 sec Gel	4
10 min Gel	28

Temperature	25 degC
--------------------	----------------

Pv : 14.299 cP
Ty : 5.80 lbf/100ft²

Thickening Time

Consistency	Time
POD :	05:05 hr:mn
40 Bc	07:24 hr:mn

Free Fluid

1.1 mL/250mL	in 2 hrs
At 27 degC and 0 deg incl.	
Sedimentation	

Comments

Laboratory Cement Test Report – 13 3/8 TAIL

Fluid No : AUPT 1711001	Client : Beach Petroleum	Location / Rig : Ocean Patriot	Signatures
Date : Sep/04/2009	Well Name : Spikey Beach	Field :	RONALD

Job Type	13 3/8"	Depth	810.0 m	TVD	810.0 m
BHST	37 degC	BHCT	25 degC	BHP	1708 psi
Starting Temp.	27 degC	Time to Temp.	01:15 hr:mn	Heating Rate	-0.04 degF/min
Starting Pressure	316 psi	Time to Pressure	01:15 hr:mn	Schedule	9.3-5

Composition

Slurry Density	15.80 lb/gal	Yield	1.19 ft³/sk	Mix Fluid	5.351 gal/sk
Solid Vol. Fraction	39.7 %	Porosity	60.3 %	Slurry type	Conventional

Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	3.20 SG	RIG
Sea water	5.271 gal/sk		Base Fluid		RIG

D047	0.010 gal/sk		Antifoam
D145A	0.050 gal/sk		Dispersant
D081	0.020 gal/sk		Retarder

Rheology (Average readings)

(rpm)	(deg)
300	72.0
200	50.0
100	32.0
6	16.0
3	9.0

10 sec Gel	11
10 min Gel	25

Temperature	25 degC
--------------------	----------------

P_v : 57.979 cP
T_y : 13.05 lbf/100ft²

Thickening Time

Consistency	Time
40 Bc	03:38 hr:mn
70 Bc	04:28 hr:mn
100 Bc	05:17 hr:mn

Comments

Laboratory Cement Test Report – Plug 1

Fluid No : AUPT 1716001	Client : Beach Petroleum	Location / Rig : Ocean Patriot	Signatures
Date : Sep-13-2009	Well Name : Spikey Beach	Field : Bass Straite	P.Aul

Job Type	Plug 1	Depth	1500.0 m	TVD	1500.0 m
BHST	66 degC	BHCT	41 degC	BHP	2511 psi
Starting Temp.	27 degC	Time to Temp.	00:11 hr:mn	Heating Rate	4.23 degF/min
Starting Pressure	638 psi	Time to Pressure	00:11 hr:mn	Schedule	()

Composition

Slurry Density	15.80 lb/gal	Yield	1.16 ft³/sk	Mix Fluid	5.175 gal/sk
Solid Vol. Fraction	40.5 %	Porosity	59.5 %	Slurry type	Conventional

Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	3.20 SG	Rig
Fresh water	4.875 gal/sk		Base Fluid		Rig
D047	0.010 gal/sk		Antifoam		Rig
D168	0.200 gal/sk		Fluid loss		MA32168
D080	0.080 gal/sk		Dispersant		FAB0805950
D081	0.010 gal/sk		Retarder		870538

Rheology (Average readings)

(rpm)	(deg)	(deg)
300	99.0	82.0
200	70.5	62.5
100	51.0	44.5
6	16.5	13.0
3	9.0	7.0
10 sec Gel	11	6
10 min Gel	48	18
Temperature	27 degC	41 degC
Pv : 72.238 cP	Pv : 56.236 cP	
Ty : 25.43 lbf/100ft ²	Ty : 25.52 lbf/100ft ²	

Thickening Time

Consistency	Time
40 Bc	03:38 hr:mn
70 Bc	03:43 hr:mn
100 Bc	04:11 hr:mn
Remark : Thickening time do not include batch time	

Fluid Loss

API Fluid Loss	118	mL
59 mL in	30 min	at 41 degC and 1000 psi

Comments

General Comment :
Fann Reading Comment :
Thickening Time Comment :
Other test Comment : ; ; ;

Laboratory Cement Test Report – Plug 2

Fluid No : AUPT 1717001	Client : Beach Petroleum	Location / Rig : Ocean Patriot	Signatures
Date : 13/9/09	Well Name : Spikey Beach	Field : Bass Straite	P.Aul

Job Type	Plug 2	Depth	850.0 m	TVD	850.0 m
BHST	39 degC	BHCT	27 degC	BHP	1310 psi
Starting Temp.	27 degC	Time to Temp.	00:05 hr:mn	Heating Rate	4.10 degF/min
Starting Pressure	500 psi	Time to Pressure	00:05 hr:mn	Schedule	()

Composition

Slurry Density	16.00 lb/gal	Yield	1.13 ft³/sk	Mix Fluid	4.937 gal/sk
Solid Vol. Fraction	41.6 %	Porosity	58.4 %	Slurry type	Conventional

Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	3.20 SG	Rig
Fresh water	4.747 gal/sk		Base Fluid		Rig
D047	0.010 gal/sk		Antifoam		Rig
D168	0.100 gal/sk		Fluid loss		MA32168
D080	0.080 gal/sk		Dispersant		FAB0805950

Rheology (Average readings)

(rpm)	(deg)
300	114.0
200	79.0
100	56.5
6	22.5
3	11.0

10 sec Gel	12
10 min Gel	40

Temperature	27 degC
--------------------	----------------

P_v : 88.083 cP
T_y : 24.35 lbf/100ft²

Thickening Time

Consistency	Time
40 Bc	03:33 hr:mn
70 Bc	03:58 hr:mn
100 Bc	04:14 hr:mn
Remark : Thickening time do not include batch time	

Fluid Loss

API Fluid Loss	144 mL
72 mL in 30 min at 27 degC and (psi)	

Comments

General Comment :
Fann Reading Comment :
Thickening Time Comment :
Other test Comment : ; ; ; ;

Laboratory Cement Test Report – Plug 3

Fluid No : AUPT 1718001	Client : Beach Petroleum	Location / Rig : Ocean Patriot	Signatures
Date : Sep-13-2009	Well Name : Spikey Beach	Field : Bass Straite	P.Aul

Job Type	Plug 1	Depth	215.0 m	TVD	215.0 m
BHST	39 degC	BHCT	27 degC	BHP	800 psi
Starting Temp.	27 degC	Time to Temp.	00:05	Heating Rate	(degF/min)
Starting Pressure	(50 psi)	Time to Pressure	00:05	Schedule	()

Composition

Slurry Density	15.80 lb/gal	Yield	1.18 ft³/sk	Mix Fluid	5.334 gal/sk
Solid Vol. Fraction	39.8 %	Porosity	60.2 %	Slurry type	Conventional

Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	3.20 SG	Rig
Sea water	5.324 gal/sk		Base Fluid		Rig
D047	0.010 gal/sk		Antifoam		Rig

Rheology (Average readings)

(rpm)	(deg)
300	116.0
200	89.0
100	51.0
6	17.0
3	11.0

10 sec Gel	11
10 min Gel	44

Temperature	27 degC
--------------------	----------------

Pv : 98.158 cP
Ty : 19.97 lbf/100ft ²

Thickening Time

Consistency	Time
40 Bc	03:32 hr:mn
70 Bc	04:11 hr:mn
100 Bc	04:45 hr:mn
Remark : Thickening time do not include batch time	

Comments

General Comment :
Fann Reading Comment :
Thickening Time Comment :
Other test Comment : ; ; ; ;

2. Service Reports

DISTRICT APG		STATION		TYPE SERVICE 30" Cond. Cement Job		COMPANY Beach Petroleum		Schlumberger SERVICE REPORT			
TIME & DATE LEFT DISTRICT				TYPE OF WELL Expl.		FIELD Bass Straight		WELL NO. Spikey Beach 1		INVOICE NUMBER	
Equipment		Personnel		TOTAL DEPTH 157.3mRT		SIZE HOLE 36		DEVIATION		RIG Ocean Patriot	
TIME & DATE ON LOCATION				BHST		DRILL FLUID		FORMATION		JOB NUMBER	
Equipment		Personnel		Type		Wt.		Visc.			
TIME 12:45hrs		DATE JOB STARTED 6-Sep-09		Casing 30"		155.4mRT		310 #		0.3847	
TIME & DATE LEFT LOCATION				Size		Depth		Type		Wt.	
On Location				TUBING / DRILL PIPE 5"		146.7mRT		19.5 #		0.01776	
Equipment		Personnel		Size		Depth		Type		Wt.	
TIME & DATE ARRIVED DISTRICT				PACKER		TAIL PIPE		BRIDGE PLUG		JOB DONE DOWN	
On Location		Equipment		Type		Depth		Size		Depth	
										<input checked="" type="checkbox"/> TBG <input checked="" type="checkbox"/> DP <input checked="" type="checkbox"/> CSG <input type="checkbox"/> ANN	
CASING EQUIPMENT USED (Circle)											
Shoe		Guide Fillup		Collar		Baffle		Fillup		Plugs	
<input type="checkbox"/> Float		<input type="checkbox"/> Stab.		<input type="checkbox"/> Collar		<input type="checkbox"/> Float		<input type="checkbox"/> Stab.		<input type="checkbox"/> Top Bott	
										STAGE COLLAR	
										First Stage Opening Closing	
										Centr	
										Spacing : Qty :	
										Spacing : Qty :	
										P PP SS	
MUD CIRCULATION PRIOR TO JOB				SEA WATER				Silicat Solution (40% D075)			
Time-Min		Vol-bbl		Press-psi		Wt. ppg		Vol-bbl		Fill-ft	
						8.6 ppg		40			
				Wt.				Vol-bbl			
				Fill-ft				Wt. ppg			
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				Wt. ppg							

DISTRICT APG		STATION		TYPE SERVICE 13 3/8" Casing Cmt Job		COMPANY Beach Petroleum		Schlumberger SERVICE REPORT			
TIME & DATE LEFT DISTRICT				TYPE OF WELL Expl.		FIELD Bass Straight		WELL NO. Spikey Beach 1		INVOICE NUMBER	
Equipment		Personnel		TOTAL DEPTH		SIZE HOLE 17 1/2"		DEVIATION		RIG Ocean Patriot	
TIME & DATE ON LOCATION				BHST		DRILL FLUID		FORMATION		JOB NUMBER	
Equipment		Personnel		Type		Wt.		Visc.			
TIME 11:36 hrs		DATE JOB STARTED 9-Sep-09		Casing 13 3/8"		806.1 mRT		68 ppf		0.14972	
TIME & DATE LEFT LOCATION				Size		Depth m		Type		Wt.	
Equipment		Personnel		TUBING / DRILL PIPE 5"		19.5 ppf		0.01776		LAST CASING	
TIME & DATE ARRIVED DISTRICT				PACKER		TAIL PIPE		BRIDGE PLUG		JOB DONE DOWN	
Equipment		Personnel		Type		Depth		Type		Depth	
										<input checked="" type="checkbox"/> TBG <input checked="" type="checkbox"/> DP <input type="checkbox"/> CSG <input type="checkbox"/> ANN	
CASING EQUIPMENT USED (Circle)											
Shoe		Guide		Fillup		Collar		Baffle		Fillup	
Float		Stab.		Collar		Collar		Float		Stab.	
Plugs		Top		STAGE		First Stage		Spacing :		Spacing :	
Bott		COLLAR		Opening		Closing		Centr		Skrat	
								Qty :		Qty :	
CMT HEAD (Circle)											
P		PP		SS							
MUD CIRCULATION PRIOR TO JOB				SEA WATER				Silicat Solution (40% D075)			
Time-Min		Vol-bbl		Press-psi		8.6 ppg		11 bbl		Fill-ft	
Wt.		Vol-bbl		Fill-ft		Wt.		Vol-bbl		Fill-ft	
EQUIPMENT				MIX WATER				MIXING SYSTEM			
(1) <input type="checkbox"/> Frac Tanks		2) <input type="checkbox"/> Pump Units		(3) <input type="checkbox"/> Blender Paddle Tanks		(4) <input type="checkbox"/> Supply Track Pickups		HPJ		LPJ	
Pump Unit S/Nos		Temp		Salinity		TOR		BAT		MUD RETURNS	
										LOST <input type="checkbox"/> No <input type="checkbox"/> Yes	
MATERIALS HAULED TO LOCATION				TOTAL ROUND TRIPS				DURING JOB WAS PIPE			
ft Cement Blend (5)				Roteted Yes / <input type="checkbox"/> No				PARAMETERS RECORDED			
gal Water (6)				Reciprocated Yes / <input type="checkbox"/> No				Press Rate Vol Dty			
gal Oil (7)											
gal Acid (8)											
MATERIALS AND / OR TOOLS SUPPLIED OR USED (Indicated with (CUS) if Customer owned or supplied Add (INV) if previously invoiced) (For Tool Service state Qty. Size. Wt. Description. Serial No.)											
G-Cement = 1266 sks (54 MT)				D110 = 4 x 5gal cans (20gal)							
D047 = 4 x 5gal cans (20gal)				D145A = 1/2 drum in LAS (25gal)							
D075 = 9 x 53gal drums (477gal)				13 3/8" DSE Top Plug = 1 ea							
D081 = 2 x 5gal cans (10gal)				13 3/8" DSE Bottom Plug = 1 ea							
TOTAL PUMPED											
FILL & BREAKDOWN (A)				TREATED FLUID (B)				DISPLACEMENT (C)			
OH Size				Shots/ft				From To Treated			
MAX TREATING PRESS				MIN TREATING PRESS				PROP-POUNDS PER GAL			
PSI at BPM				PSI at BPM				Min Max Ave			
SHUTIN PRESSURE				SHUTIN PRESSURE				DISPLACEMENT FLUID			
at				Minutes Later				Type Mud Wt.			
TIME		PRESSURE (psi)		VOLUME		LT		RECORD SERVICE			
		Casing		BBL		BPM					
11:36hrs		50		5		6		Pumped 5bbls sea water ahead			
11:42hrs		4000						Pressure tested surface line			
11:50hrs								Dropped bottom dart			
11:58hrs		1100		6		2		Released bottom plug with sea water			
12:04hrs		150		348		6		Pumped 348bbl Lead Slurry at 12.5ppg			
13:04hrs		150		90		5.5		Pumped 90bbl Tail Slurry at 15.8ppg			
13:22hrs								Dropped top dart			
13:28hrs		2200		6		2		Released top dart with 3bbls slurry behind			
13:29hrs		50		4		6		Pumped 4bbls more SW			
13:30hrs		50		334		15		Switched to rig pumps to displace			
14:06hrs		1500						Top plug bumped on landing collar			
14:10hrs		2500						Pressure tested casing to 2500psi for 15mins			
14:26hrs				5				Bled off to cement unit and checked returns			
No. of DS PERSONNEL ON JOB											
WAS STEM 1 DONE ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				TOTAL LT 0 H				TOTAL OPERATING TIME 2:50 Hrs			
CUSTOMER COMMENTS				FAILURE CAT. 0				DS REPRESENTATIVE			
<input checked="" type="checkbox"/> Sup. <input type="checkbox"/> S.E. <input type="checkbox"/> Mech. <input checked="" type="checkbox"/> E.O. <input type="checkbox"/> HEL.				David Giam/Lee Gregson/Mark Dawson				CUSTOMER REPRESENTATIVE			
QUALITY OF SERVICE <input type="checkbox"/> GOOD <input type="checkbox"/> SATISFACTORY <input type="checkbox"/> POOR				Tim Lee				Name & Signature			

Figure 2 – 13 3/8" Casing



Cementing Service Report

Customer Beach Petroleum				Job Number													
Well Spikey Beach Spikey Beach -1		Location (legal) Offshore		Schlumberger Location Perth, Australia		Job Start 14/Sep/2009											
Field Bass Straight		Formation Name/Type		Deviation		Bit Size		Well MD 1520.0 m		Well TVD							
County Australia		State/Province Victoria		BHP		BHST 66 degC		BHCT 41 degC		Pore Press. Gradient							
Well Master		API/UWI															
Rig Name Ocean Patriot		Drilled For Oil & Gas		Service Via Offshore		Casing/Liner											
						Depth, m		Size, in		Weight, lb/ft		Grade		Thread			
Offshore Zone		Well Class New		Well Type Exploration		805.0		13.380		68.0		N/A		N/A			
						0.0		0.000		0.0							
Drilling Fluid Type Bentonite		Max. Density 10.00 lb/gal		Plastic Viscosity		Tubing/Drill Pipe											
						Depth, m		Size, in		Weight, lb/ft		Grade		Thread			
Service Line Cementing		Job Type P&A Plug -1				1520.0		2.875		6.5		N/A		N/A			
						0.0		0.000		0.0							
Max. Allowed Tub. Press 240 psi		Max. Allowed Ann. Press		WH Connection		Perforations/Open Hole											
						Top,		Bottom,				No. of Shots		Total Interval			
														Diameter			
						Treat Down Drill Pipe		Displacement 72.0 bbl		Packer Type		Packer Depth					
						Tubing Vol.		Casing Vol.		Annular Vol.		Openhole Vol. 79.0 bbl					
Casing/Tubing Secured <input checked="" type="checkbox"/>		1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/>				Casing Tools						Squeeze Job					
Lift Pressure						Shoe Type				Squeeze Type							
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>				Shoe Depth				Tool Type							
No. Centralizers		Top Plugs		Bottom Plugs		Stage Tool Type				Tool Depth							
Cement Head Type						Stage Tool Depth				Tail Pipe Size							
Job Scheduled For 14/Sep/2009 08:39		Arrived on Location 14/Sep/2009 08:39		Leave Location 14/Sep/2009 11:35		Collar Type				Tail Pipe Depth							
						Collar Depth				Sqr. Total Vol.							
Date		Time 24-hr clock		Treating Pressure PSI		Flow Rate B/M		Density LB/G		Volume BBL		Message					
09/14/2009		08:39:16										Started Acquisition					
09/14/2009		10:52:11		13		0.0		7.65		0.0							
09/14/2009		10:52:37										Start Job					
09/14/2009		10:52:37		13		0.0		7.64		0.0							
09/14/2009		10:54:16		245		3.8		7.65		3.7							
09/14/2009		10:56:06										Pressure Test Lines					
09/14/2009		10:56:06		63		0.0		7.66		4.7							
09/14/2009		10:56:46		1365		0.1		7.66		4.8							
09/14/2009		10:59:16		33		0.0		7.67		4.8							
09/14/2009		10:59:47										Start Pumping Spacer					
09/14/2009		10:59:47		33		0.0		7.69		4.8							
09/14/2009		11:01:46		283		4.1		7.70		6.6							
09/14/2009		11:03:31										Reset Total, Vol = 15.16 bbl					
09/14/2009		11:03:31		55		0.0		7.70		15.2							
09/14/2009		11:03:33										Reset Total, Vol = 0.00 bbl					
09/14/2009		11:03:33		68		0.0		7.71		15.2							
09/14/2009		11:03:50										Start Mixing Tail Slurry					
09/14/2009		11:03:50		93		0.0		7.71		0.0							
09/14/2009		11:04:16		101		0.0		7.72		0.0							
09/14/2009		11:06:46		108		0.3		14.90		0.4							
09/14/2009		11:09:16		475		5.9		15.77		10.4							

Well			Field	Job Start	Customer	Job Number
Spikey Beach Spikey Beach -1			Bass Straight	14/Sep/2009	Beach Petroleum	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
09/14/2009	11:14:16	239	5.9	15.95	42.6	
09/14/2009	11:16:46	305	6.6	15.92	57.8	
09/14/2009	11:19:16	302	6.6	16.19	74.2	
09/14/2009	11:20:30					Reset Total, Vol = 79.57 bbl
09/14/2009	11:20:30	76	0.0	16.16	79.6	
09/14/2009	11:21:02					Start Displacement
09/14/2009	11:21:02	78	1.2	16.14	79.6	
09/14/2009	11:21:36					Reset Total, Vol = 2.20 bbl
09/14/2009	11:21:36	30	0.0	16.13	81.8	
09/14/2009	11:21:40					Reset Total, Vol = 0.00 bbl
09/14/2009	11:21:40	35	0.0	16.15	81.8	
09/14/2009	11:21:46	36	0.0	16.12	0.0	
09/14/2009	11:24:16	142	6.8	16.12	10.0	
09/14/2009	11:26:46	132	6.8	16.12	26.7	
09/14/2009	11:29:16	137	6.7	16.11	43.4	
09/14/2009	11:31:46	131	6.6	16.09	60.1	
09/14/2009	11:34:16	43	0.0	16.09	72.7	
09/14/2009	11:35:39					End Displacement
09/14/2009	11:35:39	-4	0.0	16.11	72.7	
09/14/2009	11:36:46	-3	0.0	16.10	72.7	
09/14/2009	11:39:03	-4	0.0	16.09	72.7	

Post Job Summary

Average Pump Rates,				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate 6.5	Total Slurry 79.0	Mud 72.0	Spacer 15.0	N2
Treating Pressure Summary, psi				Breakdown Fluid			
Maximum 460	Final 76	Average 350	Bump Plug to	Breakdown	Type	Volume 47.0 bbl	Density 8.34 lb/gal
Avg. N2 Percent		Designed Slurry Volume 79.0 bbl	Displacement 72.0 bbl	Mix Water Temp	Cement Circulated to Surface?	Volume	
					Washed Thru Perfs	To	
Customer or Authorized Representative Tim Lee			Schlumberger Super Job Manny Rafallo	Circulation Lost	Job Completed <input checked="" type="checkbox"/>		

Figure 3 - Plug 1



Cementing Service Report

Customer Beach Petroleum				Job Number	
Well Spikey Beach -1 Spikey Beach -1		Location (legal) Offshore		Schlumberger Location Perth, Australia	
Field Bass Straight		Formation Name/Type		Job Start 14/Sep/2009	
County Australai		State/Province Victoria		Well MD 850.0 m	
Well Master		API/UWI		Well TVD	
Rig Name Ocean Patriot		Drilled For Oil & Gas		Service Via Offshore	
Offshore Zone		Well Class New		Well Type Exploration	
Drilling Fluid Type Bentonite		Max. Density 10.00 lb/gal		Plastic Viscosity	
Service Line Cementing		Job Type P&A Plug -2		Casing/Liner	
Max. Allowed Tub. Press		Max. Allowed Ann. Press		WH Connection	
Service Instructions D047 - 5 gals D080 - 46 gals - includes line volume loss D168 - 79 gals - includes line volume loss Cement - 18 MT		Perforations/Open Hole		Tubing/Drill Pipe	
Casing/Tubing Secured <input checked="" type="checkbox"/>		1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/>		Casing Tools	
Lift Pressure		Shoe Type		Squeeze Job	
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth	
No. Centralizers		Top Plugs		Bottom Plugs	
Cement Head Type		Stage Tool Type		Tool Depth	
Job Scheduled For 14/Sep/2009 19:37		Arrived on Location 14/Sep/2009 19:37		Leave Location 14/Sep/2009 21:43	
Date		Time 24-hr clock		Treating Pressure PSI	
Flow Rate B/M		Density LB/G		Volume BBL	
Message		Date		Time	
09/14/2009		19:37:18		Started Acquisition	
09/14/2009		21:04:58		Reset Total, Vol = 0.00 bbl	
09/14/2009		21:05:00		Start Job	
09/14/2009		21:06:47		215 4.8 7.62 0.0	
09/14/2009		21:07:18		39 0.0 7.63 1.9	
09/14/2009		21:08:24		Pressure Test Lines	
09/14/2009		21:08:24		43 0.0 7.62 1.9	
09/14/2009		21:09:48		52 0.0 7.65 1.9	
09/14/2009		21:12:18		2082 0.0 7.64 1.9	
09/14/2009		21:14:17		Start Pumping Spacer	
09/14/2009		21:14:17		48 0.0 7.64 1.9	
09/14/2009		21:14:48		95 3.4 7.64 2.1	
09/14/2009		21:16:42		Reset Total, Vol = 12.40 bbl	
09/14/2009		21:16:42		82 0.0 7.65 12.4	
09/14/2009		21:16:44		Reset Total, Vol = 0.00 bbl	
09/14/2009		21:16:44		95 0.0 7.63 12.4	
09/14/2009		21:16:46		Reset Total, Vol = 0.00 bbl	
09/14/2009		21:16:46		81 0.0 7.62 0.0	
09/14/2009		21:17:01		Start Mixing Tail Slurry	
09/14/2009		21:17:01		89 0.0 7.62 0.0	
09/14/2009		21:17:18		92 0.0 7.63 0.0	

Well Spikey Beach Spikey Beach -1			Field Bass Straight		Job Start 14/Sep/2009		Customer Beach Petroleum		Job Number	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
09/14/2009	11:14:16	239	5.9	15.95	42.6					
09/14/2009	11:16:46	305	6.6	15.92	57.8					
09/14/2009	11:19:16	302	6.6	16.19	74.2					
09/14/2009	11:20:30					Reset Total, Vol = 79.57 bbl				
09/14/2009	11:20:30	76	0.0	16.16	79.6					
09/14/2009	11:21:02					Start Displacement				
09/14/2009	11:21:02	78	1.2	16.14	79.6					
09/14/2009	11:21:36					Reset Total, Vol = 2.20 bbl				
09/14/2009	11:21:36	30	0.0	16.13	81.8					
09/14/2009	11:21:40					Reset Total, Vol = 0.00 bbl				
09/14/2009	11:21:40	35	0.0	16.15	81.8					
09/14/2009	11:21:46	36	0.0	16.12	0.0					
09/14/2009	11:24:16	142	6.8	16.12	10.0					
09/14/2009	11:26:46	132	6.8	16.12	26.7					
09/14/2009	11:29:16	137	6.7	16.11	43.4					
09/14/2009	11:31:46	131	6.6	16.09	60.1					
09/14/2009	11:34:16	43	0.0	16.09	72.7					
09/14/2009	11:35:39					End Displacement				
09/14/2009	11:35:39	-4	0.0	16.11	72.7					
09/14/2009	11:36:46	-3	0.0	16.10	72.7					
09/14/2009	11:39:03	-4	0.0	16.09	72.7					

Post Job Summary

Average Pump Rates,				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate 6.5	Total Slurry 79.0	Mud 72.0	Spacer 15.0	N2
Treating Pressure Summary, psi				Breakdown Fluid			
Maximum 460	Final 76	Average 350	Bump Plug to	Breakdown	Type	Volume 47.0 bbl	Density 8.34 lb/gal
Avg. N2 Percent		Designed Slurry Volume 79.0 bbl	Displacement 72.0 bbl	Mix Water Temp	Cement Circulated to Surface?	<input type="checkbox"/> Volume	
					Washed Thru Perfs	<input type="checkbox"/> To	
Customer or Authorized Representative Tim Lee			Schlumberger Superficial Manny Rafallo		Circulation Lost	<input type="checkbox"/> Job Completed	<input checked="" type="checkbox"/>

Figure 4 - Plug 2

Cementing Service Report

				Customer		Beach Petroleum		Job Number			
Well Spikey Beach -1 Spikey Beach -1				Location (legal) Offshore		Schlumberger Location Perth, Australia			Job Start 15/Sep/2009		
Field Bass Straight		Formation Name/Type		Deviation		Bit Size		Well MD 215.0 m		Well TVD	
County		State/Province Victoria		BHP		BHST 27 degC		BHCT 27 degC		Pore Press. Gradient	
Well Master		API/UWI									
Rig Name Ocean Patriot		Drilled For Oil & Gas		Service Via Offshore		Casing/Liner					
Offshore Zone		Well Class New		Well Type Exploration		Depth, m 215.0		Size, in 13.380		Weight, lb/ft 68.0	
						0.0		0.000		0.0	
Drilling Fluid Type Sea Water		Max. Density 8.34 lb/gal		Plastic Viscosity		Tubing/Drill Pipe					
Service Line Cementing		Job Type P&A Plug -3				Depth, m 215.0		Size, in 2.875		Weight, lb/ft 6.5	
						0.0		0.000		0.0	
Max. Allowed Tub. Press 235 psi		Max. Allowed Ann. Press		WH Connection		Perforations/Open Hole					
						Top,		Bottom,		No. of Shots	
										Total Interval	
										Diameter	
Service Instructions D047 - 5 gals G cement - 10 MT						Treat Down Drill Pipe		Displacement 2.0 bbl		Packer Type	
						Tubing Vol.		Casing Vol.		Packer Depth	
										Openhole Vol. 49.0 bbl	
Casing/Tubing Secured		<input checked="" type="checkbox"/> 1 Hole Vol. Circulated prior to Cement		<input checked="" type="checkbox"/>		Casing Tools				Squeeze Job	
Lift Pressure						Shoe Type				Squeeze Type	
Pipe Rotated		<input type="checkbox"/> Pipe Reciprocated		<input type="checkbox"/>		Shoe Depth				Tool Type	
No. Centralizers		Top Plugs		Bottom Plugs		Stage Tool Type				Tool Depth	
Cement Head Type						Stage Tool Depth				Tail Pipe Size	
Job Scheduled For 15/Sep/2009 12:21		Arrived on Location 15/Sep/2009 12:45		Leave Location 15/Sep/2009 12:45		Collar Type				Tail Pipe Depth	
						Collar Depth				Sqz. Total Vol.	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/H	Density LB/G	Volume BBL	Message					
09/15/2009	12:21:08					Started Acquisition					
09/15/2009	12:23:42	53	0.0	6.91	0.0						
09/15/2009	12:26:08	-14	0.0	6.94	5.1						
09/15/2009	12:26:40					Pressure Test Lines					
09/15/2009	12:26:40	-10	0.0	6.95	5.1						
09/15/2009	12:28:38	995	0.0	6.96	5.1						
09/15/2009	12:31:08	1	0.0	6.95	5.1						
09/15/2009	12:31:48					Start Pumping Spacer					
09/15/2009	12:31:48	0	0.0	6.96	5.1						
09/15/2009	12:33:38	136	5.6	6.88	12.8						
09/15/2009	12:34:28					Start Mixing Tail Slurry					
09/15/2009	12:34:28	37	0.0	6.97	15.1						
09/15/2009	12:36:08	38	0.3	13.79	15.4						
09/15/2009	12:38:38	171	6.5	15.47	24.9						
09/15/2009	12:41:08	184	6.5	16.00	41.1						
09/15/2009	12:42:41					Reset Total, Vol = 49.43 bbl					
09/15/2009	12:42:41	25	0.0	16.17	49.4						
09/15/2009	12:42:57					Start Displacement					
09/15/2009	12:42:57	23	0.0	16.08	0.0						
09/15/2009	12:43:38	108	5.9	15.96	1.3						
09/15/2009	12:43:53					Reset Total, Vol = 2.13 bbl					

Well Spikey Beach -1 Spikey Beach -1		Field Bass Straight		Job Start 15/Sep/2009		Customer Beach Petroleum		Job Number
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message		
09/15/2009	12:45:48					End Displacement		
09/15/2009	12:45:48	-10	0.0	15.87	2.2			
09/15/2009	12:46:08	-10	0.0	15.87	2.2			
09/15/2009	12:46:16	-11	0.0	15.87	2.2			

Post Job Summary


Average Pump Rates,				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry 49.0	Mud 2.0	Spacer 15.0	N2
Treating Pressure Summary, psi				Breakdown Fluid			
Maximum 235	Final 40	Average	Bump Plug to	Breakdown	Type	Volume	Density 8.34 lb/gal
Avg. N2 Percent	Designed Slurry Volume 49.0 bbl		Displacement 2.0 bbl	Mix Water Temp	Cement Circulated to Surface? <input type="checkbox"/>	Volume	
Customer or Authorized Representative Tim Lee 				Schlumberger Supervisor Manny Rafallo	Washed Thru Perfs <input type="checkbox"/>	To	
					Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>	

Figure 5 - Plug 3

Attachment 6

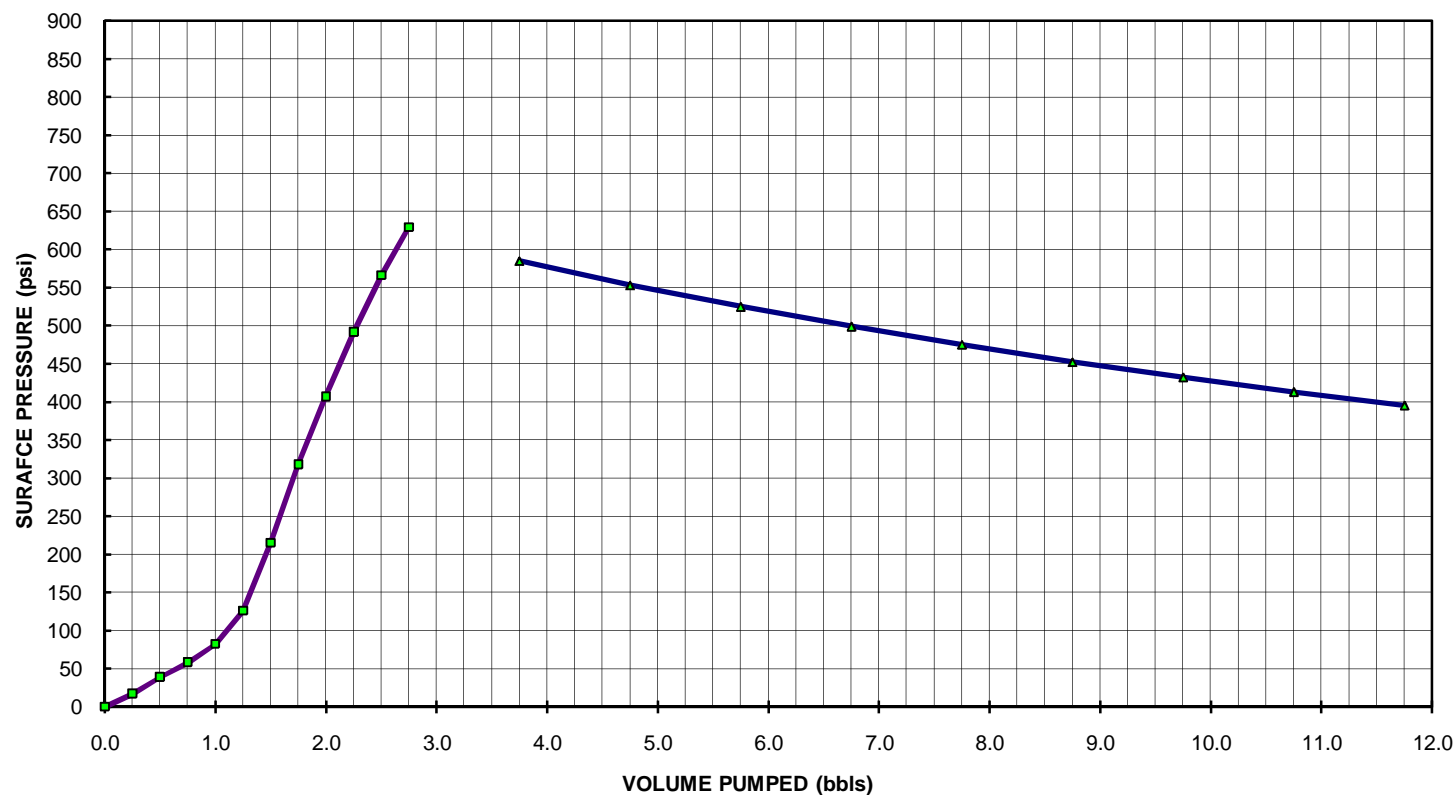
LOT/FIT Report

FORMATION LEAK-OFF TEST

WELL NAME	Spikey Beach-1	RIG	Ocean Patriot	DATE	11-Sep-09	
Casing size	13.375in	Mud Weight	9.00 ppg	Surface pressure	460 psi	LEAK-OFF VALUE 12.35 ppg EMW
Setting Depth mMD 806		PV	11	Leak-off (Yes/No)	Yes	
Setting depth mTVC 806		YP	14	Volume pumped	2.80 bbls	
		Gels	5/6/7	Volume returned	1.80 bbls	

Volume Pumped	Surface Pressure
(bbls)	(psi)
0.00	0.00
0.25	17.00
0.50	39.00
0.75	58.00
1.00	82.00
1.25	126.00
1.50	215.00
1.75	318.00
2.00	407.00
2.25	492.00
2.50	566.00
2.75	629.00
3.00	
3.25	
3.50	
3.75	

Pumps Off	
(mins)	(psi)
3.75	585.00
4.75	553.00
5.75	525.00
6.75	499.00
7.75	475.00
8.75	452.00
9.75	432.00
10.75	413.00
11.75	395.00



COMMENTS : Test conducted down choke line against closed upper annular.

REPORT BY:	Tim Lee - Senior Drilling Supervisor	DATE:	11/09/2009
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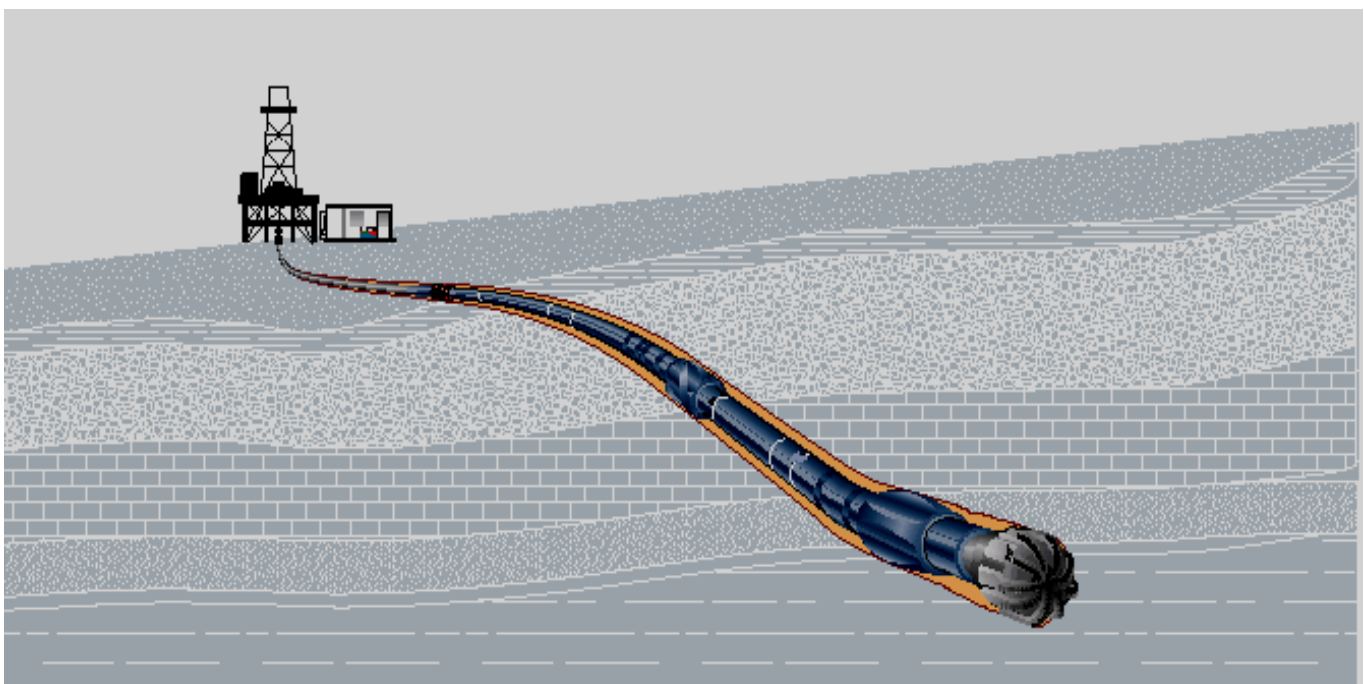
Attachment 7

Deviation Survey and MWD Report (Schlumberger)

Spikey Beach-1

END OF WELL REPORT

Schlumberger Private



Any further queries be directed to:

“Project Manager”
(Ali Al-Muhammad)

“FSM”
(Ali Al-Muhammad)

“Drilling Engineer”
(Ryan Mulligan)

Schlumberger Drilling & Measurements
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Sale, VIC, 3850

Tel: +61 3 5149 5600
Fax: +61 3 5143 2450

Schlumberger Private

Prepared by: Marganda Sihite	Checked by: Ryan Mulligan	Approved by: Ali Al-Muhammad	Client O.K:
Date: 21-Sep-09	Date: 21-Sep-09	Date: 21-Sep-09	

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Section 1

1.1 Well Specification

Client : Beach Petroleum Ltd
Well name : Spikey Beach-1
Well type : Vertical
State : Tasmania
Location : Beach Offshore
Drilling Contractor : Diamond Offshore
Rig Name : Ocean Patriot
Rig Type : Floating
Water Depth : 74 m
Drill Floor Height : 21.5 m relative to MSL
Spud Date : 5th Sep 2009
Date TD reached : 13th Sep 2009
Final Depth MD : 2100 m
Final Depth TVD : 2100 m

Well coordinates

UTM Zone 55s on Australian Datum 1984

X= E 404 521 m

Y= N 5 518 174m

Geographical co-ordinates

Longitude: E 40° 28' 53.9"

Latitude: S 145° 52' 24.63"

Geomagnetic Data

Date : 10th September 2009
Magnetic Field Strength : 61230.23 nT
Magnetic Dip angle : -70.91 °
Magnetic Declination : + 12.9673°
Grid Convergence : + 0.7314°
BGGM Model : BGGM 2009

1.2 Introduction and Objectives

Spikey Beach – 1 will be drilled as a vertical, exploration well offshore for Beach Petroleum LTD. Well is scheduled for 26 days, which encompasses rig mobilization, drilling and upon completion of Wireline formation evaluation will be plugged and abandoned. A 36" and 17 ½" hole sections will be drilled and cased, prior to running BOPs. Spikey Beach-1 will be TD'd in 12 ¼" section.

Section objectives are:

In the 12 ¼" section:

Drill to TD at 2100m.

Vertical section until TD.

Use LWD.

1.3 Schlumberger Services

Directional Drilling:

No Directional Drilling tools for 17.50 in Section
PowerPak Mud Motor (12.25 in section)

Measurements While Drilling (MWD):

Borehole Inclination and Azimuth
Continuous D&I and Magnetic/Gravity Tool Face
Drillstring Washout Detection
Real-Time LWD Tool Data Transmission

Surface Measurements:

Depth
Rate of Penetration
Total Hook load
Surface Weight on Bit
Standpipe Pressure

Logging While Drilling (LWD):

Attenuation Resistivity
Phase Shift Resistivity
Gamma Ray
Density
Neutron Porosity
Annulus Pressure and Temperature
Compressional Delta-T
Shear Delta-T

1.4 Schlumberger Personnel

File Personnel:

<i>Marganda Sihite</i>	Cell Manager
<i>Wissam Chehabi</i>	MWD/LWD Engineer
<i>Dallas Perkins</i>	MWD/LWD Engineer
<i>Daniel Priestley</i>	Directional Driller

Filed Support Group

<i>Ali Al-Mohammed</i>	Operations Manager
------------------------	--------------------

Drilling Engineering Support

<i>Iain McCourt</i>	Drilling Engineering Manager
<i>Ryan Mulligan</i>	Drilling Engineer

Section 2:

Operational Details

2.1 444 mm (17 ½") Hole Section

Rig BHA # 2 / Rig Bit Run # 2 / ERS Run # 1

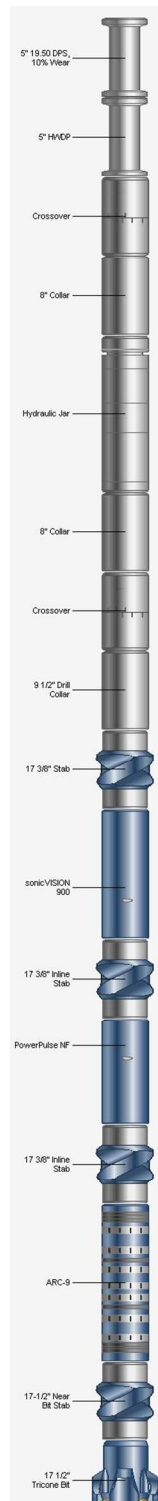
BHA consisting ARC9+TeleScope9 w/ILS+sonicVISION9 w/ILS was picked up to drill and evaluate the formation of 17.50" section of Spikey Beach-1. TeleScope was programmed with telemetry rate 12Hz/3bps configuration to provide real time GR, RES, Delta-T and D&I. All the tools were SHT'd on surface prior RIH with good outcome. Drilled the section from casing shoe 151.6 mMD to TD.

During the run, good real time data was acquired and Tool H kept out of FAC. DMAG was run to correct the survey. Minimum shocks and vibrations were encountered through out the run.

Reached TD at 816 mMD, circulating B/U and proceed to Down Link to sonicVISION to change the configuration/record rate to 1 s.

Laid out the BHA and download the data from tool and processed the data as required. Acquired very good data from both ARC and sonicVISION tool.

Schlumberger

[illegible]



Equipment Run Summary Report

Schlumberger Private

Job Number:	09ASQ0029	Company:	BEACH PETROLEUM LTD	Rig Name:	Ocean Patriot
Company Rep:	Tim, Kevin	Location:	MEA-APG-ASQ	Well Name:	Spikey Beach 1
Run Number:	1				

Run Information

Date In		Date Out		Drilling Distance:	666.60 m	Drilling Hours:	17.00 hrs
7-Sep-2009	4:30PM	8-Sep-2009	8:30PM	Rotary Drilling Distance:	666.60 m	Rotary Drilling Hrs:	17.00 hrs
Depth (MD):	149.4 m	to	816.0 m	Sliding Distance:	0.00 m	Sliding Hours:	0.00 hrs
Depth (TVD):	149.4 m	to	816.0 m	Reaming Distance:	0.00 m	Reaming Hours:	0.00 hrs
Inclination:	0.00 deg	to	0.17 deg			Hrs Below Rotary:	28.00 hrs
Azimuth:	0.00 deg	to	265.12 deg			Total Pumping Hrs:	19.00 hrs
Hole Size:	17.50 in					Min DLS:	0.00 deg/30 m
Last Casing Size:	30.000 in			North Ref Used:	Grid North	Max DLS:	0.00 deg/30 m
Last Casing Depth:	151.0 m	(MD)		Magnetic Dec:	12.970 deg	Max DLS Depth:	0.0 m
Tool Face Arc:	.0 cm			Grid Correction:	0.731 deg	Surface Screen:	No
Total Face Angle:	0.00 deg			Total Correction:	12.237 deg	DFS Used:	No
				Est. Mag. Int:	0.23 deg	Inline Filter:	No

Rig Information

Rig Type:	Semi-Submersible	Pump Type:	Triplex
Water Depth:	74.00 m	Pulse Damp Press:	psi
Air Gap:	21.50 m	Number of Pumps:	3
RKB Height:	m	Pump Line ID:	6.00 in
Ground Elevation:	-95.50 m	Pump Output:	4.30 galUS/stroke
		Pump Stroke Len:	12.00 in

Run Objective

Drilling 17.5in section (vertical) and evaluate the formation to approx 810mMD with ARC, MWD and Sonic tools using seawater mud. Surveys every 100m (3 stands)

D&M Crew List:

Cell Manager: Marganda Hasiholan Sihite
Crew: Wissam Chehabi, MWD
Dallas Perkins, LWD
Marganda Hasiholan Sihite, Cell Manager

DH Motor Information

Manufacturer:	Bit to Bend Dist:	m
Motor Type:	Bearing Play In:	in
Motor Size:	Bearing Play Out:	in
Serial No.:	Bent Sub Angle:	deg
Lobe Config:	Bent HSG Angle:	deg
Stage Length:	m	
Rubber:		
Sleeve Position:		
Sleeve Size:	in	
Bearing Type:		

RSS Information

RSS Manufacturer:	
RSS Type:	
RSS SN:	
RSS Size:	
Pulse Ht Threshold:	
Min Pulse Width:	
Max Pulse Width:	
Conn Phase Angle:	deg
Rise Time Const:	
Fall Time Const:	
Digit Time:	

MWD Configuration

Mod Type:	QPSK	Int Tool Face Offset:	0.00 deg	Bit Rate:	3 bps	Slimpulse Pulser Config:	
Mod Gap:	in	Turbine Config:	600-1200 galUS/min	Frequency:	12 Hz	Pred Sig Strength @ TD:	psi
SPT Type:	HA						

Drilling Parameters

	Min	Max	Avg	Total DH Shocks (k):	0 k
BH Temperature:	23.00 degC	23.00 degC	23.00 degC	Max Shock Level:	0
Surface RPM:	35.00 rpm	35.00 rpm	35.00 rpm	Max Shock Duration:	0 sec

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

ROP:	2.13 m/hr	46.23 m/hr	39.21 m/hr
Surface Torque:	3.00 kft.lbf	3.00 kft.lbf	3.00 kft.lbf
Flow Rate:	1,200.00 galUS/min	1,200.00 galUS/min	1,200.00 galUS/min
WOB Sliding:	3.00 klbm	3.00 klbm	3.00 klbm

Checkshot Type:
 Checkshot Depth: m
 Checkshot Incl: deg
 Checkshot Azim: deg

Average Pump Pressure: psi

H2S In Well: No

Turbine RPM @ Min Flow Rate:	4,141 rpm	Min Flow Rate:	1,200.00galUS/min
Turbine RPM @ Max Flow Rate:	4,141 rpm	Max Flow Rate:	1,200.00galUS/min

SPP Off Bottom: psi
SPP On Bottom: 2,996.00 psi

Mud Information

Mud Type:	Sea Water	Mud Clean:	No	pH:	9.00
Mud Company:	Mi Swaco	LCM Type:		Chlorides:	ppm
Mud Brand:		LCM Size:		Sand Content:	%
Funnel Viscosity:	100.00 s/qt	LCM Concentration:	lbs/bbl	Solids:	%
Plastic Viscosity:	cp	Weighting Material:		Percent Oil:	%
Yield Point:	lbm/100ft2	Mud Weight:	10.00 lbm/galUS		
Mud Resistivity:	0.20 ohm-m				

IADC Bit Grading

Manufacturer:	Hughes Christianson	Total Revs:	IADC Code:
Model:	gx-civ	Stick/Slip:	Jets (/ 32 in): 3X18 1X16
Type:	Insert	Reason Pulled:	Bit TFA: 0.95 in2
		Total Depth/Casing Depth	

Inner Row	Outer Row	Dull Char	Location	Bearings/Seals	Gauge	Other Chars
1.00	1.00	WT	A	0	1	NO

End of Run - Summary

Sync Hours:	14.00	hrs	Downhole Noise:	Yes	Run Failed:	No	
Jamming:	No	0.00 hrs	Surface System Failure:	No	D&M Trip:	No	
Surface Vibration:	No		Surface Noise:	No	Low Oil Flag:	No	0.00 hrs
Trans Fail:	No		H2S in Well:	No	Filter Screen/Plug Shear:	No	

Client Inconvenience: **No** Lost Time: hrs

Reason for POOH: Total Depth/Casing Depth

D&M Run Obj Met? [DD and MWD/LWD]: Yes

Brief Run Summary:

The BHA consists of ARC+MWD+SONIC was picked and successfully tested on surface (SHT'd).

During the run, there was not problem detected for the tool and very minimum shocks and vibrations.

Ran in hole and drilled ahead to 816 m MD, POOH after TD and laid down BHA.

Drill string interference was noticed and all surveys GMAG corrected upon submission to client.

Job Number:

09ASQ0029

Company Rep:

Tim, Kevin

Run Number:

1

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

Equipment on the Run

Equipment	Pump Hours		Software Version	Tool Size
	Start	Cumulative		
ARC9D-BB-4126	0.00 hrs	19.00 hrs	9.4	9.00 in
H524743-59974	hrs	hrs		9.00 in
H524743-61960	hrs	hrs		9.00 in
H524743-66244	hrs	hrs		9.00 in
H524743-66245	hrs	hrs		9.00 in
MDCIX-KA-ZA90	0.00 hrs	19.00 hrs	9.2	9.00 in
SD9C-AA-41250	0.00 hrs	19.00 hrs	6.8	9.00 in

Services on the Run

Equipment	Service	Tool Name	Real Time			Recorded Mode			CAF
			Hours	Failed	Depth	Hours	Failed	Depth	
LWD	Gamma Ray	arcVision	19.00 hrs		666.6 m	28.00 hrs		666.6 m	
MWD	Cont D&I	TeleScope	19.00 hrs		666.6 m	hrs			
MWD	D&I	TeleScope	19.00 hrs		666.6 m	28.00 hrs		666.6 m	
LWD	Shear DT	SonicVision	hrs			28.00 hrs		666.6 m	
LWD	Compressional DT	SonicVision	19.00 hrs		666.6 m	28.00 hrs		666.6 m	

Job Number: 09ASQ0029
Company Rep: Tim, Kevin
Run Number: 1

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ
BHA Type: Rotary

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

								Fishing Neck		Stab	Bottom Connection		Top Connection			
Item	Description	Vendor	Tool Name	Serial Number	Length		OD	ID	OD	Len, m	OD	Size	Type	Size	Type	Cumul Len
1	BIT	Hughes Christianson	Insert	6079221	0.42	m	17.50							7 5/8"	REG PIN	0.42 m
2	NEAR BIT STAB	Diamond	NB STAB	207A85	3.26	m	17.38					7 5/8"	REG BOX	7 5/8"	REG BOX	3.68 m
3	LWD	D&M	arcVISION	4126	5.92	m	9.00					7 5/8"	REG PIN	7 5/8"	H90 BOX	9.60 m
4	MWD	D&M	TeleScope	ZA90	9.19	m	9.00					7 5/8"	H90 PIN	7 5/8"	H90 BOX	18.79 m
5	LWD	D&M	SonicVISION	41250	8.28	m	9.00					7 5/8"	H90 PIN	7 5/8"	REG BOX	27.07 m
6	INLINE STAB	Diamond	ILS	207A211	2.17	m	17.38					7 5/8"	REG PIN	7 5/8"	REG BOX	29.24 m
7	DRILL COLLAR	Diamond	DC	n/a	28.43	m	9.50					7 5/8"	REG PIN	7 5/8"	REG BOX	57.67 m
8	CROSSOVER	Diamond	X-OVER	506A360	1.09	m	9.50					7 5/8"	REG PIN	6 5/8"	REG BOX	58.76 m
9	DRILL COLLAR	Diamond	DC	n/a	72.86	m	8.00					6 5/8"	REG PIN	6 5/8"	REG BOX	131.62 m
10	JAR	Diamond	Jar	101663H	9.78	m	8.25					6 5/8"	REG PIN	6 5/8"	REG BOX	141.40 m

Predicted BHA Tendency:

Hookload Out:	Wt Below Jars:
Pickup Out:	Wt Above Jars:
Slack Weight:	Total Air Wt:

	Mid Pt	Blade			Gauge		
Stab Description	to Bit	Type	Len	Width	Len	In	Out
NB STAB		int					

Bit to Read Out Port			Bit to Measurement Port		
LWD-arcVISION	6.90	m	arcVISION-Gamma Ray	5.80	m
MWD-TeleScope	11.60	m	TeleScope-D&I	13.98	m
LWD-SonicVISION	23.10	m	SonicVISION-Compressional	23.45	m
			SonicVISION-Shear DT	23.45	m



Job Number: 09ASQ0029

Company Rep: Tim, Kevin

Run Number: 1

Company: BEACH PETROLEUM LTD

Location: MEA-APG-ASQ

Rig Name: Ocean Patriot

Well Name: Spikey Beach 1

Date/Time		Depth		Description
7-Sep-2009	3:05PM	149.4	m	TOC
7-Sep-2009	4:30PM	0.0	m	Bit below R/T
7-Sep-2009	4:50PM	0.0	m	torque arc to mwd
7-Sep-2009	5:15PM	0.0	m	torqued arc to NB stab
7-Sep-2009	5:45PM	0.0	m	torque sonic to mwd
7-Sep-2009	6:05PM	0.0	m	Prepare for SHT
7-Sep-2009	6:27PM	0.0	m	GOOD SHT
7-Sep-2009	8:45PM	151.6	m	Set bit depth and start washing down to bottom
7-Sep-2009	9:00PM	170.0	m	Drilling ahead with good signal. SPT2 put as primary demodulation input.
7-Sep-2009	9:42PM	185.0	m	ARC shock level 1
8-Sep-2009	12:29AM	230.0	m	Attemp to take a survey (first survey). Acquired good Tool G and Tool H is slightly out. Keep drilling ahead as this is vertical hole.
8-Sep-2009	2:53AM	320.0	m	Take another survey and the Tool H still out of FAC. The survey will be DMAG'ed later at the end of the run. Drilling ahead.
8-Sep-2009	6:37AM	476.0	m	ARC shock level 1 detected
8-Sep-2009	8:00AM	612.0	m	Drilliong ahead with good signal.
8-Sep-2009	2:20PM	816.0	m	TD 17.5in section
8-Sep-2009	2:40PM	816.0	m	Downlinked to change sonic record rate to 1sec for ream up
8-Sep-2009	7:30PM	0.0	m	Begin Breaking out BHA.
8-Sep-2009	8:08PM	0.0	m	Lay down Sonic
8-Sep-2009	8:20PM	0.0	m	Lay out telescope
8-Sep-2009	8:30PM	0.0	m	bit above rotary
8-Sep-2009	8:50PM	0.0	m	lay down ARC



Job Number:

09ASQ0029

Company Rep:

Tim, Kevin

Run No:

1

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

			Depth in m		IADC Activity	Description
From	To	Elapsed	From	To		
Sep-2009						
12:00	16:00	4.00	0.0	0.0	Other	Pressure test and rig service
16:00	18:30	2.50	0.0	0.0	PU / LD BHA / Tripping	Make up BHA
18:30	19:00	0.50	0.0	0.0	Other	SHT SLB logging tools
19:00	20:00	1.00	0.0	149.4	PU / LD BHA / Tripping	TIH to TOC
20:00	20:45	0.75	149.4	151.0	Drilling	Drilling out casing track
20:45	00:00	3.25	151.0	215.0	Drilling	Continue drilling ahead
Sep-2009						
00:00	13:00	13.00	215.0	816.0	Drilling	Drilling F215 to 816m MD
13:00	15:00	2.00	816.0	816.0	Circulate / Condition mud	Circluate bottoms up + downlink to Sonic
15:00	19:30	4.50	816.0	0.0	PU / LD BHA / Tripping	POOH F816 to 0
19:30	21:00	1.50	0.0	0.0	PU / LD BHA / Tripping	Lay down BHA
21:00	21:30	0.50	0.0	0.0	Other	Clean rig floor
21:30	00:00	2.50	0.0	0.0	Run casing / cement	Run casing / cement



Drilling Parameters Report

9-Sep-2009

3:55:27PM

Job Number: 09ASQ0029
Company Rep: Tim, Kevin
Run Number: 1

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

	08-Sep-2009 10:00 AM
Field Engineer	Dallas Perkins
Depth	650.00 m
Avg ROP	29.32 m/hr
On Bottom ROP	41.74 m/hr
Flow Rate	1,200.00 galUS/min
Turbine RPM	4,141 rpm
Surface RPM	35 rpm
WOB Rotating	
WOB Sliding	3.00 klbm
DH WOB	
Surface Torque	3.00 kft.lbf
DH Torque	
Hookload	210 klbm
PickUp Weight	
Slack Weight	
Friction	
SPP On Bottom	2,996.00 psi
SPP Off Bottom	
Diff Pressure	
BH Temperature	23.00 degC
Total Shocks (k)	
Max Shock Level	
Max Shock Duration	
Torsional Vib	
Lateral Vib	
Axial Vib	
CRPM	37 rpm
Stick/Slip	16
Formation	Limestone
Signal Strength	26.40 psi
Percent Signal Conf	89 %

2.2 311 mm (12 ¼") Hole Section

Rig BHA # 3 / Rig Bit Run # 3 / ERS Run # 2

Objectives

- Perform a successful LOT.
- Perform drill the 12 ¼" section to 2100m.
- Control drill at 20m/hr from 1453m to TD.
- Drill the 12 ¼" section in 1 bit run.
- Maintain vertical well.

Results

- Performed a successful FIT to 12.35ppg
- Drilled the 12 ¼" section in 1 bit run.
- Maintained vertical well.

Highlights

- Good ROP from top of the 12 ¼" section.
- No hole problems.

Lowlights

- Sever stick'n'slip was seen from 1912m. The stick'n'slip was mitigated by increasing surface RPM. The stick'n'slip reduced when formation changed.

Schlumberger

[illegible]

Drilling Parameters Report

Slide Sheet

BHA: 12.25" PDM ARC PP SONIC SADN Rev1 (RM)

Client: Beach Petroleum		Well: Spikey Beach-1		Directional Driller: Daniel Priestley	
Field: Beach - Offshore Zone 55		Borehole: Spikey Beach-1		Directional Driller:	
Structure: Spikey Beach		UWI/API#:		Job #: 09ASQ0029	
Depth In: 822.00	Depth Out: 2100.00	Tot Distance: 1278.00		Total Time: 40.5	Total ROP: 31.5
Inclination In: 0.43	Inclination Out: 0.73	SLIDE: 0.00	% SLIDE 0.0	Time: 0.0	
Azimuth In: 77.12	Azimuth Out: 87.08	ROTATE: 1278.00	% ROTAT 100.0	40.5	ROTATE ROP: 31.5
Comments:					

Statistics:

Min	Max	Sum	Min	Max	Sum	Avg	None	Avg	Max	Max	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	None
	13/9/09 8:59	40.550	822.00	2100.00	1278.00	96.4		0		2076.18	0.47	84.08	0.01	4.03	0.06	140	15.5	6.4	996	2593	2783	185	

Start Time (d/m/yy h:mm)	End Time (d/m/yy h:mm)	Duration (hr)	Md From (m)	Md To (m)	Course (m)	Calc ROP (m/hr)	Orienting Method	TF Angle (°)	TF Mode (G/M)	Svy Md (m)	Incl (°)	Azmth (°)	BR (° / 30 m)	TR (° / 30 m)	DLS (° / 30 m)	RPM (c/min)	WOB (1000 lbf)	Torque (1000 ft.lbf)	Flow (gal/min)	SPP Off Bot (psi)	SPP On Bot (psi)	Delta P (psi)	Comment
11/9/09 9:32	11/9/09 9:45	0.217	822.00	847.00	25.00	115.4	ROTATE	0.0	M							40	17.0	6.5	900	1900	2079	179	
11/9/09 9:54	11/9/09 10:01	0.117	847.00	865.00	18.00	154.3	ROTATE	0.0	M							40	20.0	5.3	1000	2230	2265	35	
11/9/09 10:01	11/9/09 10:05	0.067	865.00	875.00	10.00	150.0	ROTATE	0.0	M							140	20.0	4.6	1000	2230	2273	43	
11/9/09 10:15	11/9/09 10:25	0.167	875.00	904.00	29.00	174.0	ROTATE	0.0	M	879.04	0.43	77.12	0.10	69.20	0.24	140	15.0	6.7	1000	2391	2510	119	
11/9/09 10:35	11/9/09 10:44	0.150	904.00	931.00	27.00	180.0	ROTATE	0.0	M							140	18.0	6.9	1000	2500	2650	150	
11/9/09 10:47	11/9/09 11:03	0.267	931.00	959.00	28.00	105.0	ROTATE	0.0	M							140	12.0	6.4	900	2180	2320	140	
11/9/09 11:25	11/9/09 11:29	0.067	959.00	1017.00	58.00	870.0	ROTATE	0.0	M	990.83	0.34	90.11	-0.02	3.49	0.03	140	15.0	5.9	1000	2512	2675	163	
11/9/09 11:49	11/9/09 12:00	0.183	1017.00	1046.00	29.00	158.2	ROTATE	0.0	M							140	14.0	6.1	1000	2520	2657	137	
11/9/09 12:09	11/9/09 12:22	0.217	1046.00	1074.00	28.00	129.2	ROTATE	0.0	M							140	12.0	6.3	1000	2525	2667	142	
11/9/09 12:37	11/9/09 12:46	0.150	1074.00	1103.00	29.00	193.3	ROTATE	0.0	M	1078.27	0.31	90.35	-0.01	0.08	0.01	140	16.0	6.6	1000	2524	2675	151	
11/9/09 13:00	11/9/09 13:25	0.417	1103.00	1132.00	29.00	69.6	ROTATE	0.0	M							140	16.0	6.3	1000	2540	2668	128	
11/9/09 13:30	11/9/09 13:51	0.350	1132.00	1161.00	29.00	82.9	ROTATE	0.0	M							140	20.0	6.0	1000	2530	2665	135	
11/9/09 13:57	11/9/09 14:40	0.717	1161.00	1190.00	29.00	40.5	ROTATE	0.0	M	1164.94	0.40	84.09	0.03	-2.17	0.03	140	22.0	5.9	1000	2523	2680	157	
11/9/09 14:23	11/9/09 14:43	0.333	1190.00	1218.00	28.00	84.0	ROTATE	0.0	M							140	25.0	6.1	1000	2530	2700	170	
11/9/09 15:00	11/9/09 15:15	0.250	1218.00	1247.00	29.00	116.0	ROTATE	0.0	M	1221.27	0.44	97.02	0.02	6.89	0.05	140	30.0	5.9	1000	2525	2710	185	



11/9/09 15:24	11/9/09 15:51	0.450	1247.00	1276.00	29.00	64.4	ROTATE	0.0	M							130	35.0	5.8	1000	2530	2720	190
11/9/09 16:00	11/9/09 16:22	0.367	1276.00	1306.00	30.00	81.8	ROTATE	0.0	M							130	35.0	5.9	1000	2530	2735	205
11/9/09 16:30	11/9/09 16:41	0.183	1306.00	1335.00	29.00	158.2	ROTATE	0.0	M							120	35.0	5.9	1000	2530	2748	218
11/9/09 16:47	11/9/09 17:22	0.583	1335.00	1364.00	29.00	49.7	ROTATE	0.0	M	1338.66	0.51	93.25	0.02	-0.96	0.02	130	35.0	5.3	1000	2535	2758	223 Hard stringer
11/9/09 17:36	11/9/09 18:05	0.483	1364.00	1393.00	29.00	60.0	ROTATE	0.0	M	1367.75	0.54	94.83	0.03	1.63	0.03	130	35.0	5.8	1000	2540	2784	244 Hard stringer
11/9/09 18:14	11/9/09 19:13	0.983	1393.00	1422.00	29.00	29.5	ROTATE	0.0	M							130	35.0	5.7	1000	2540	2790	250
11/9/09 19:22	11/9/09 20:01	0.650	1422.00	1453.00	31.00	47.7	ROTATE	0.0	M							130	38.0	5.7	1000	2545	2800	255
11/9/09 20:16	11/9/09 22:04	1.800	1453.00	1482.00	29.00	16.1	ROTATE	0.0	M	1456.65	0.52	105.25	-0.01	3.52	0.03	140	5.0	6.8	1000	2550	3003	453 Control ROP to 20m/hr
11/9/09 22:11	11/9/09 23:57	1.767	1482.00	1511.00	29.00	16.4	ROTATE	0.0	M							140	5.0	3.7	1000	2400	2675	275
12/9/09 0:07	12/9/09 1:28	1.350	1511.00	1534.00	23.00	17.0	ROTATE	0.0	M	1530.18	0.55	90.58	0.01	-5.99	0.06	150	5.0	3.6	1000	2524	2675	151
12/9/09 1:38	12/9/09 3:00	1.367	1534.00	1564.00	30.00	22.0	ROTATE	0.0	M							150	5.0	4.1	1000	2610	2689	79
12/9/09 3:12	12/9/09 5:11	1.983	1564.00	1593.00	29.00	14.6	ROTATE	0.0	M							150	10.0	3.2	1000	2460	2760	300
12/9/09 5:16	12/9/09 6:42	1.433	1593.00	1623.00	30.00	20.9	ROTATE	0.0	M	1596.34	0.49	77.67	-0.03	-5.85	0.06	150	10.0	2.4	1000	2460	2760	300
12/9/09 6:52	12/9/09 8:23	1.517	1623.00	1652.00	29.00	19.1	ROTATE	0.0	M	1625.50	0.47	69.82	-0.02	-8.08	0.07	150	8.0	7.9	1000	2445	2740	295
12/9/09 8:31	12/9/09 10:04	1.550	1652.00	1681.00	29.00	18.7	ROTATE	0.0	M							150	10.0	8.0	1000	2680	2866	186
12/9/09 10:11	12/9/09 11:40	1.483	1681.00	1709.00	28.00	18.9	ROTATE	0.0	M	1682.67	0.41	85.01	-0.03	7.97	0.07	150	7.0	5.5	1000	2602	2801	199
12/9/09 11:50	12/9/09 13:34	1.733	1709.00	1736.00	27.00	15.6	ROTATE	0.0	M							150	5.0	3.7	1000	2605	2840	235
12/9/09 13:49	12/9/09 15:00	1.183	1736.00	1764.00	28.00	23.7	ROTATE	0.0	M							150	6.0	6.1	1000	2831	2914	83
12/9/09 15:07	12/9/09 16:22	1.250	1764.00	1793.00	29.00	23.2	ROTATE	0.0	M	1767.94	0.46	80.24	0.02	-1.68	0.02	150	4.0	6.1	1000	2837	2910	73
12/9/09 16:35	12/9/09 17:53	1.300	1793.00	1824.00	31.00	23.8	ROTATE	0.0	M							155	4.0	2.6	1000	2711	2883	172
12/9/09 18:02	12/9/09 19:50	1.800	1824.00	1853.00	29.00	16.1	ROTATE	0.0	M							150	6.0	2.6	1000	2875	2963	88
12/9/09 20:06	12/9/09 21:47	1.683	1853.00	1882.00	29.00	17.2	ROTATE	0.0	M	1858.33	0.33	65.19	-0.04	-5.00	0.05	150	4.0	12.1	1000	2875	3065	190
12/9/09 22:00	12/9/09 23:53	1.883	1882.00	1912.00	30.00	15.9	ROTATE	0.0	M							150	2.0	17.2	1000	2875	3038	163
13/9/09 0:02	13/9/09 1:48	1.767	1912.00	1940.00	28.00	15.8	ROTATE	0.0	M	1913.35	0.48	64.16	0.08	-0.56	0.08	150	5.0	19.7	1000	2875	3065	190 High stick'n'slip was mitigated.
13/9/09 1:54	13/9/09 3:06	1.200	1940.00	1967.00	27.00	22.5	ROTATE	0.0	M	1941.91	0.47	69.15	-0.01	5.24	0.04	150	12.0	7.0	1000	2938	3065	127
13/9/09 3:13	13/9/09 4:10	0.950	1967.00	1994.00	27.00	28.4	ROTATE	0.0	M							150	10.0	8.9	1000	2898	3075	177
13/9/09 4:18	13/9/09 5:22	1.067	1994.00	2023.00	29.00	27.2	ROTATE	0.0	M							150	13.0	6.2	1000	2898	3069	171
13/9/09 5:35	13/9/09 6:40	1.083	2023.00	2054.00	31.00	28.6	ROTATE	0.0	M	2028.47	0.60	92.17	0.05	7.98	0.09	150	10.0	7.3	1000	2923	3087	164
13/9/09 6:49	13/9/09 8:08	1.317	2054.00	2084.00	30.00	22.8	ROTATE	0.0	M	2076.18	0.73	87.08	0.08	-3.20	0.09	150	17.0	5.3	1000	2945	3165	220
13/9/09 8:16	13/9/09 8:59	0.717	2084.00	2100.00	16.00	22.3	ROTATE	0.0	M							150	16.0	1.7	1000	2962	3278	316

Schlumberger Private



Equipment Run Summary Report

Schlumberger Private



Job Number: 09ASQ0029
Company Rep: Tim Lee, Kevin Monkhouse
Run Number: 2

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

Run Information

Date In		Date Out		Drilling Distance:		Drilling Hours:	
10-Sep-2009 6:40PM		14-Sep-2009 12:00AM		1,284.00 m		35.80 hrs	
Depth (MD):		816.0 m to 2100.0 m		Rotary Drilling Distance:		50.40 hrs	
Depth (TVD):		816.0 m to 2100.0 m		Sliding Distance:		0.00 hrs	
Inclination:		0.17 deg to 0.73 deg		Reaming Distance:		0.00 hrs	
Azimuth:		265.12 deg to 87.98 deg				Hrs Below Rotary:	
						Total Pumping Hrs:	
Hole Size:		12.25 in				Min DLS:	
						Max DLS:	
Last Casing Size:		13.375 in		North Ref Used:		0.24 deg/30 m	
Last Casing Depth:		805.8 m (MD)		Magnetic Dec:		Max DLS Depth:	
				Grid Correction:		879.0 m	
Tool Face Arc:		.0 cm		Grid Correction:		Surface Screen:	
Total Face Angle:		0.00 deg		Total Correction:		DFS Used:	
				Est. Mag. Int:		No	
						Inline Filter:	
						No	

Rig Information

Rig Type: Semi-Submersible		Pump Type: Triplex	
Water Depth: 74.00 m		Pulse Damp Press: psi	
Air Gap: 21.50 m		Number of Pumps: 3	
RKB Height: m		Pump Line ID: 6.00 in	
Ground Elevation: -95.50 m		Pump Output: 4.30 galUS/stroke	
		Pump Stroke Len: 12.00 in	

Run Objective

Drill a 12.25 inch section hole of Spikey Beach-1 with Quad Combo BHA with motor. Evaluate the formation of the primary target at 1600 m MD and 1860 m MD. Keep the hole vertical to TD at 2075 m MD.

D&M Crew List:

Cell Manager: Marganda Hasiholan Sihite
Crew: Wissam Chehabi, MWD
Dallas Perkins, LWD
Marganda Hasiholan Sihite, Cell Manager

DH Motor Information

Manufacturer: D&M		Bit to Bend Dist: 2.37 m	
Motor Type: PowerPak		Bearing Play In: 0.00 in	
Motor Size: 9.62		Bearing Play Out: in	
Serial No.: 05954		Bent Sub Angle: 0.0000 deg	
Lobe Config: 7:8		Bent HSG Angle: 0.0000 deg	
Stage Length: 4.80 m			
Rubber: HN234			
Sleeve Position:			
Sleeve Size: 12.13 in			
Bearing Type: Mud Lubricated			

RSS Information

RSS Manufacturer:	
RSS Type:	
RSS SN:	
RSS Size:	
Pulse Ht Threshold:	
Min Pulse Width:	
Max Pulse Width:	
Conn Phase Angle: deg	
Rise Time Const:	
Fall Time Const:	
Digit Time:	

MWD Configuration

Mod Type:	QPSK	Int Tool Face Offset:	0.00 deg	Bit Rate:	6 bps	Slimpulse Pulser Config:	
Mod Gap:	0.16000 in	Turbine Config:	800-1600 galUS/min	Frequency:	16 Hz	Pred Sig Strength @ TD:	psi
SPT Type:	HA						

Drilling Parameters

	Min	Max	Avg	Total DH Shocks (k):	0 k
BH Temperature:	29.00 degC	65.00 degC	51.50 degC	Max Shock Level:	1
Surface RPM:	100.00 rpm	160.00 rpm	139.25 rpm	Max Shock Duration:	20 sec



Job Number:

09ASQ0029

Company Rep:

Tim Lee, Kevin Monkhouse

Run Number:

2

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

Equipment on the Run

Equipment	Pump Hours		Software Version	Tool Size
	Start	Cumulative		
A962M-05954	0.00 hrs	48.90 hrs		9.63 in
ARC8D-BB-1216	0.00 hrs	48.90 hrs	9.4	8.25 in
H524743-62446	hrs	hrs		8.25 in
H524743-66244	hrs	hrs		8.25 in
H524743-66245	hrs	hrs		8.25 in
H524743-e13018	hrs	hrs		8.25 in
H524743-e13020	hrs	hrs		8.25 in
H524743-e13024	hrs	hrs		8.25 in
MDCIX-GA-ZH22	0.00 hrs	48.90 hrs	9.2	8.25 in
NDDC-CA-43225	0.00 hrs	48.90 hrs	8.3	8.25 in
SD8D-CA-42784	0.00 hrs	48.90 hrs	6.8	8.25 in

Services on the Run

Equipment	Service	Tool Name	Real Time			Recorded Mode			CAF
			Hours	Failed	Depth	Hours	Failed	Depth	
MOTORS	PowerPak	PowerPak	48.90 hrs		1,284.0 m	hrs			
LWD	Resistivity	arcVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	APWD	arcVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Gamma Ray	arcVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
MWD	Shock and Vibration	TeleScope	48.90 hrs		816.0 m	77.33 hrs		816.0 m	
MWD	Cont D&I	TeleScope	48.90 hrs		1,284.0 m	hrs			
MWD	D&I	TeleScope	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Shear DT	SonicVision	hrs			77.33 hrs		1,284.0 m	
LWD	Compressional DT	SonicVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Caliper	adnVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Density	adnVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Neutron	adnVision	48.90 hrs		1,284.0 m	77.33 hrs		816.0 m	

Job Number: 09ASQ0029
Company Rep: Tim Lee, Kevin Monkhouse
Run Number: 2

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ
BHA Type: Rotary

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

								Fishing Neck		Stab	Bottom Connection		Top Connection			
Item	Description	Vendor	Tool Name	Serial Number	Length	OD	ID	OD	Len, m	OD	Size	Type	Size	Type	Cumul Len	
1	BIT	Hughes Christianson	PDC	7012700	0.38	m	12.25						6 5/8"	REG PIN	0.38	m
2	MOTORS	D&M	PowerPak	05954	11.32	m	9.00				6 5/8"	REG BOX	6 5/8"	REG PIN	11.70	m
3	STABILIZER		Stabilizer	207A189	1.82	m	9.63				6 5/8"	REG BOX	6 5/8"	REG PIN	13.52	m
4	LWD	D&M	arcVISION	1216	6.24	m	8.00				6 5/8"	REG BOX	6 5/8"	FH PIN	19.76	m
5	INLINE STAB	D&M	Inline Stablizer	ASQ9029	0.91	m	12.25				6 5/8"	FH BOX	6 5/8"	FH PIN	20.67	m
6	MWD	D&M	TeleScope	ZH22	8.05	m	8.50				6 5/8"	FH BOX	6 5/8"	FH PIN	28.72	m
7	INLINE STAB	D&M	Inline Stablizer	AWA7261	0.85	m	12.25				6 5/8"	FH BOX	6 5/8"	FH PIN	29.57	m
8	LWD	D&M	SonicVISION	42784	6.86	m	8.25				6 5/8"	FH BOX	6 5/8"	FH PIN	36.43	m
9	LWD	D&M	adnVISION	43225	9.18	m	8.00				6 5/8"	FH BOX	6 5/8"	FH PIN	45.61	m

Predicted BHA Tendency:

Hookload Out:	Wt Below Jars:
Pickup Out:	Wt Above Jars:
Slack Weight:	Total Air Wt:

	Mid Pt	Blade			Gauge		
Stab Description	to Bit	Type	Len	Width	Len	In	Out
Stabilizer							

Bit to Read Out Port			Bit to Measurement Port		
MOTORS-PowerPak	2.30	m	arcVISION-Resistivity	16.37	m
LWD-arcVISION	17.50	m	arcVISION-Gamma Ray	16.42	m
MWD-TeleScope	22.10	m	TeleScope-D&I	24.45	m
LWD-SonicVISION	33.40	m	SonicVISION-Shear DT	33.83	m
LWD-adnVISION	40.50	m	SonicVISION-Compressional	33.83	m
			arcVISION-APWD	15.66	m
			adnVISION-Caliper	39.60	m
			adnVISION-Density	39.77	m
			adnVISION-Neutron	41.75	m

Job Number:

09ASQ0029

Company Rep:

Tim Lee, Kevin Monkhouse

Run Number:

2

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

Date/Time		Depth		Description
10-Sep-2009	4:00AM	0.0	m	Tools arrive on board.
10-Sep-2009	5:50PM	0.0	m	Begin picking up BHA.
10-Sep-2009	6:00PM	0.0	m	Pick up motor.
10-Sep-2009	6:30PM	0.0	m	Make up motor to bit.
10-Sep-2009	6:40PM	0.0	m	Bit below rotary
10-Sep-2009	7:15PM	0.0	m	Make up arc to stabilizer.
10-Sep-2009	7:35PM	0.0	m	arc below rotary
10-Sep-2009	7:40PM	0.0	m	make up telescope to arc.
10-Sep-2009	7:50PM	0.0	m	Telescope below rotary
10-Sep-2009	8:00PM	0.0	m	make up sonic to telescope
10-Sep-2009	8:20PM	0.0	m	Sonic below rotary
10-Sep-2009	8:30PM	0.0	m	Make up adn to Sonic
10-Sep-2009	8:45PM	0.0	m	ADN below rotary
10-Sep-2009	9:04PM	0.0	m	Conduct first shallow hole test without source. Good Test
10-Sep-2009	9:30PM	0.0	m	Load source to ADN
10-Sep-2009	10:10PM	0.0	m	Begin tripping in hole.
11-Sep-2009	12:28AM	1513.0	m	MWD stat 4 noticed
11-Sep-2009	12:29AM	320.0	m	Pump pressure calibration
11-Sep-2009	12:33AM	320.0	m	Conduct second shallow hole test with source. Good Test
11-Sep-2009	1:00AM	320.0	m	Begin function testing BOP.
11-Sep-2009	1:29AM	320.0	m	Hook load calibration
11-Sep-2009	4:52AM	730.0	m	Set bit depth
11-Sep-2009	5:50AM	760.0	m	Begin washing down to shoe, drilling through cement.
11-Sep-2009	7:41AM	821.0	m	Drilled 3m of new formation, preform LOT
11-Sep-2009	9:27AM	821.0	m	MW 9.7ppg Vis 47
11-Sep-2009	2:42PM	1242.0	m	Drilling ahead with good signal, minimal vibrations currently @165m/hr
11-Sep-2009	9:25PM	1470.0	m	Maxwell computer crashed, restarting aquisition.
11-Sep-2009	9:35PM	1473.0	m	mw=9.3ppg, vis=53s
12-Sep-2009	3:40AM	1564.0	m	Bit depth not updating.
12-Sep-2009	3:55AM	1564.0	m	Cable had come of Geolograph, reinstalled cable depth updating.
12-Sep-2009	4:30AM	1564.0	m	It was decided to ream down missing section of data, and ream down after td while POOH in order to get the missing data
12-Sep-2009	5:15AM	1567.0	m	Reset hole and bit depth.
12-Sep-2009	5:20AM	1567.0	m	HSPM back on bottom drilling.
12-Sep-2009	8:03AM	1644.0	m	MW 9.7ppg
12-Sep-2009	8:03AM	1644.0	m	Drilling ahead with good signal. minimal vibrations.
12-Sep-2009	1:05PM	1725.0	m	problems with interact and witts transmission, all services restarted again and working fine
12-Sep-2009	1:59PM	1735.0	m	MW 9.7ppg; vis 51
12-Sep-2009	3:35PM	1770.0	m	MW 9.7ppg; vis 51
12-Sep-2009	4:07PM	1784.0	m	Observed intermitten high stick and slip
12-Sep-2009	8:28PM	1856.0	m	Increased RPM to 160 in order to try to mitigate stick slip. Noticed improvment.
12-Sep-2009	9:21PM	1874.0	m	ARC shock level one noticed.
12-Sep-2009	9:45PM	1880.0	m	Stick slip approx 60-70%
12-Sep-2009	10:43PM	1888.0	m	Encountring problems with sticking pipe, driller and company man attempting diffrent measures to get through formation
13-Sep-2009	12:00AM	1900.0	m	DD woken up in order to attempt mitigation of stick slip.
13-Sep-2009	1:10AM	1929.0	m	Reducing RPM to 120 to try to mitigate stick slip. level 1 shocks on arc noticed.

Date/Time		Depth		Description
13-Sep-2009	1:40AM	1933.0	m	Still trying different RPM's in order to mitigate stick slip. still noticing 170% stick slip, rpm up to 140.
13-Sep-2009	2:12AM	1944.0	m	MW=10ppg
13-Sep-2009	3:33AM	1973.0	m	MW=10ppg Vis= 57s
13-Sep-2009	3:53AM	1980.0	m	HOOKLOAD and SWOB giving erratic values on occasion causing logs to wrap around.
13-Sep-2009	4:15AM	1995.0	m	Noticed hookload voltage dropping out and returning causing the spike in the hookload data.
13-Sep-2009	4:53AM	2007.0	m	Hookload installed correctly and same erratic values are occurring to BHI. Caused a 2 m gap in ADN data between 1985 and 1987m
13-Sep-2009	8:35AM	2090.0	m	MW 10.1ppg
13-Sep-2009	9:03AM	2100.0	m	TD called
13-Sep-2009	9:04AM	2100.0	m	Take a survey at TD



Job Number: 09ASQ0029 **Company:** BEACH PETROLEUM LTD
Company Rep: Tim Lee, Kevin Monkhouse **Location:** MEA-APG-ASQ
Run No: 2

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

			Depth in m		IADC Activity	Description
From	To	Elapsed	From	To		
9-Sep-2009						
00:00	15:00	15.00	0.0	0.0	Run casing / cement	Run casing/ Cement
15:00	17:30	2.50	0.0	0.0	PU / LD BHA / Tripping	Release running tool
17:30	19:30	2.00	0.0	0.0	Nipple up BOPs	JSA/ Rig up to run BOP
19:30	00:00	4.50	0.0	0.0	Nipple up BOPs	Rig up BOP
10-Sep-2009						
00:00	18:00	18.00	0.0	0.0	Nipple up BOPs	Rig up BOP's
18:00	21:00	3.00	0.0	0.0	PU / LD BHA / Tripping	Make up BHA
21:00	21:30	0.50	0.0	0.0	PU / LD BHA / Tripping	Shallow hole test
21:30	22:00	0.50	0.0	0.0	PU / LD BHA / Tripping	Load radioactive source
22:00	23:30	1.50	0.0	0.0	PU / LD BHA / Tripping	Continue picking up BHA
23:30	00:00	0.50	0.0	0.0	Nipple up BOPs	Rig up Diverter
11-Sep-2009						
00:00	01:00	1.00	0.0	0.0	Nipple up BOPs	Rig up Diverter
01:00	03:00	2.00	0.0	0.0	Test BOP	Function test BOP
03:00	08:30	5.50	0.0	816.0	PU / LD BHA / Tripping	RIH f/ 0 - 816 m MD
08:30	00:00	15.50	816.0	1509.0	Drilling	Drilling f/ 816 - 1509m MD
12-Sep-2009						
00:00	00:00	24.00	1509.0	1911.0	Drilling	Drilling f/ 1509 - 1911m MD
13-Sep-2009						
00:00	09:00	9.00	1911.0	2100.0	Drilling	Drilling f/1911 - 2100 m



Drilling Parameters Report

16-Sep-2009

11:14:41AM

Job Number: 09ASQ0029
Company Rep: Tim Lee, Kevin Monkhouse
Run Number: 2

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

	13-Sep-2009 1:15 AM	12-Sep-2009 4:13 PM	11-Sep-2009 9:56 PM	11-Sep-2009 10:37 AM
Field Engineer	Wissam Chehabi	Marganda Hasiholan	Wissam Chehabi	Dallas Perkins
Depth	1,929.00 m	1,787.00 m	1,478.00 m	914.00 m
Avg ROP	7.88 m/hr	16.75 m/hr	28.88 m/hr	28.88 m/hr
On Bottom ROP	21.00 m/hr	39.41 m/hr	44.71 m/hr	44.71 m/hr
Flow Rate	1,003.00 galUS/min	1,012.00 galUS/min	1,003.00 galUS/min	700.00 galUS/min
Turbine RPM	3,164 rpm	3,203 rpm	3,125 rpm	3,437 rpm
Surface RPM	100 rpm	160 rpm	151 rpm	146 rpm
WOB Rotating	3.70 klbm	2.39 klbm	1.26 klbm	10.00 klbm
WOB Sliding				
DH WOB				
Surface Torque	8.25 kft.lbf	5.03 kft.lbf	3.13 kft.lbf	6.00 kft.lbf
DH Torque				
Hookload	291 klbm	271 klbm	262 klbm	219 klbm
PickUp Weight				
Slack Weight				
Friction				
SPP On Bottom	3,038.00 psi	3,000.00 psi	2,632.00 psi	2,585.00 psi
SPP Off Bottom				
Diff Pressure				
BH Temperature	65.00 degC	62.00 degC	50.00 degC	29.00 degC
Total Shocks (k)				
Max Shock Level	1			
Max Shock Duration	20			
Torsional Vib				
Lateral Vib				
Axial Vib				
CRPM	155 rpm	146 rpm	132 rpm	122 rpm
Stick/Slip	234	246	60	27
Formation	Claystone	Claystone	Claystone	Claystone
Signal Strength	3.60 psi	32.00 psi	4.80 psi	8.22 psi
Percent Signal Conf	89 %	86 %	74 %	78 %

Bit Performance Report

Bit Performance Report				Schlumberger	
Run Number	3		BHA Type	Straight motor	
BHA Number	3				
Bit Manufacturer	Hughes Christianson		Bit Name	HCM506ZX	
Bit Serial Number	7012700				
Bit TFA	1.04 sq. in.		Effective Gauge Length (inches)		
Date in	10-Sep-09		Date out	14-Sep-09	
Depth in	816m		Depth out	2100m	
Inclination in	0°		Inclination out	1°	
Azimuth in	265°		Azimuth out	88°	
Steerability					
N/A					
Shock Levels					
No notible shocks were seen.					
Stick/Slip Behavior (Comparison with offsets)					
Server stick'n'slip was seen near the end of the run. This was mitigated but increasing to maxium surface RPM. The stick'n'slip disapeared when formation changed.					
ROP Behavior (Comparison with offsets)					
Any other observations					
Dull Bit Grading				Formation Tops / Max DLS Capability	
1	1	CT	N	I	ER
TD				Name	Depth (TVD)
Comments BHA performed as expected.				Max DLS	

Section 3: Post Job Analysis

3.1 Actual Trajectory Information

- 3.1.1 Client Sign-Off Sheet
- 3.1.2 Survey Listing
- 3.1.3 Well Path Plot, Planned vs. Actual

Schlumberger



Schlumberger Survey Management

Definitive Survey Sign-Off

Client:	Beach Petroleum	Slot Name:	N/A
Field:	T/38 - Bass Basin		
Structure:	Ocean Patriot	Well Name:	Spikey Beach-1

Surface Co-Ords	N 5518174.63 m	E 404522.800 m	Depth Units:	Meters
UTM Model:	GDA94/MGA94 Zone 55		Azimuth Ref:	Grid
Central Meridian:	147° East		Grid Converg:	0.73
Vertical Reference:	MSL			
RKB Elevation:	21.5	above	MSL	

Definitive Survey Construction

Report #	Instrument Type	Survey From	Survey To
1	SLB INC ONLY-Depth Only	0	95.50
2	SLB MWD+DMAG	95.50	803.80
3	SLB MWD-STD	803.80	2076.18
4	SLB BLIND+TREND	2076.18	2100.00

Definitive Survey Bottom Hole Location

Depth MD RKB	Depth TVD RKB	Depth TVD SS	Northing	Easting	Comment
2076.18	2376.14	2054.64	5518175.76	404532.22	Last MWD Survey
2100.00	2399.95	2076.45	5518175.77	404532.52	Projected to TD

Target Summary

Target Objectives Achieved	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
----------------------------	---	-----------------------------

Comments

TD called based on TVD, LWD and formation samples.
 Surveys for 17 1/2" required DMAG correction.
 12 1/4" surveys were standard surveys with a straight projection to well TD.

Definitive Survey Sign-Off

Schlumberger:		Beach Petroleum	
Name:	Ryan Mulligan	Name:	Manelle Moussa
Signed:		Signed:	
Date:	17-Sep-09	Date:	17/09/09

Spikey Beach-1 Definitive RM Survey Report

Report Date: September 17, 2009	Survey / DLS Computation Method: Minimum Curvature / Lubinski
Client:	Vertical Section Azimuth: 0.000°
Field: Beach - Offshore Zone 55	Vertical Section Origin: N 0.000 m, E 0.000 m
Structure / Slot: Spikey Beach / New Slot	TVD Reference Datum: RKB
Well: Spikey Beach-1	TVD Reference Elevation: 21.5 m relative to MSL
Borehole: Spikey Beach-1	Sea Bed / Ground Level Elevation: -74.000 m relative to MSL
UNWAPI#:	Magnetic Declination: 12.967°
Survey Name / Date: Spikey Beach-1 Definitive RM / September 9, 2009	Total Field Strength: 61230.271 nT
Tort / AHD / DDI / ERD ratio: 4.246° / 12.29 m / 2.234 / 0.006	Magnetic Dip: -70.905°
Grid Coordinate System: GDA94/MGA84 Zone 55	Declination Date: September 09, 2009
Location Lat/Long: S 40 28 53.879, E 145 52 24.706	Magnetic Declination Model: BGM 2009
Location Grid NE YDC: N 5518174.630 m, E 404522.800 m	North Reference: Grid North
Grid Convergence Angle: +0.73136463°	Total Corr Mag North -> Grid North: +12.236°
Grid Scale Factor: 0.99971221	Local Coordinates Referenced To: Well Head

Comments	Measured Depth (m)	Inclination (deg)	Azimuth Grid (deg)	TVD (m)	Sub-Sea TVD (m)	Vertical Section (m)	NS Grid North (m)	EW Grid North (m)	DLS (deg/30 m)	Closure (m)	Northing (m)	Easting (m)	Latitude	Longitude
Tie-In	0.00	0.00	0.00	0.00	-21.50	0.00	0.00	0.00	0.00	0.00	5518174.63	404522.80	S 40 28 53.879	E 145 52 24.706
Sea Bed	95.50	0.00	0.00	95.50	74.00	0.00	0.00	0.00	0.00	0.00	5518174.63	404522.80	S 40 28 53.879	E 145 52 24.706
	179.35	0.24	83.43	179.35	157.85	0.02	0.02	0.17	0.09	0.18	5518174.65	404522.97	S 40 28 53.878	E 145 52 24.713
	206.93	0.26	40.89	206.93	185.43	0.07	0.07	0.27	0.20	0.28	5518174.70	404523.07	S 40 28 53.877	E 145 52 24.718
	294.67	0.37	50.63	294.67	273.17	0.40	0.40	0.62	0.04	0.74	5518175.03	404523.42	S 40 28 53.866	E 145 52 24.733
	338.42	0.10	101.79	338.42	316.92	0.49	0.49	0.77	0.22	0.91	5518175.12	404523.57	S 40 28 53.863	E 145 52 24.739
	352.67	0.17	96.28	352.67	331.17	0.48	0.48	0.80	0.15	0.94	5518175.11	404523.60	S 40 28 53.864	E 145 52 24.740
	382.26	0.19	48.22	382.26	360.76	0.51	0.51	0.88	0.15	1.02	5518175.14	404523.68	S 40 28 53.863	E 145 52 24.744
	468.33	0.04	55.57	468.33	446.83	0.62	0.62	1.01	0.05	1.19	5518175.25	404523.81	S 40 28 53.859	E 145 52 24.749
	514.50	0.11	259.09	514.50	493.00	0.62	0.62	0.98	0.10	1.16	5518175.25	404523.78	S 40 28 53.859	E 145 52 24.748
	556.06	0.15	276.07	556.06	534.56	0.62	0.62	0.89	0.04	1.08	5518175.25	404523.69	S 40 28 53.859	E 145 52 24.744
	642.56	0.27	259.55	642.56	621.06	0.60	0.60	0.58	0.05	0.83	5518175.22	404523.38	S 40 28 53.860	E 145 52 24.731
	727.80	0.25	254.10	727.80	706.30	0.51	0.51	0.20	0.01	0.55	5518175.14	404523.00	S 40 28 53.863	E 145 52 24.715
	755.00	0.16	261.45	755.00	733.50	0.49	0.49	0.11	0.10	0.50	5518175.12	404522.91	S 40 28 53.863	E 145 52 24.711
	786.24	0.17	245.91	786.24	764.74	0.46	0.46	0.02	0.04	0.46	5518175.09	404522.82	S 40 28 53.864	E 145 52 24.707
17 1/2" TD at 816m	803.80	0.18	263.56	803.80	782.30	0.45	0.45	-0.03	0.09	0.45	5518175.08	404522.77	S 40 28 53.864	E 145 52 24.705
	879.04	0.43	77.12	879.03	857.53	0.50	0.50	0.13	0.24	0.51	5518175.13	404522.93	S 40 28 53.863	E 145 52 24.712
	990.83	0.34	90.11	990.82	969.32	0.59	0.59	0.87	0.03	1.05	5518175.22	404523.67	S 40 28 53.860	E 145 52 24.743
	1078.27	0.31	90.35	1078.26	1056.76	0.59	0.59	1.36	0.01	1.48	5518175.22	404524.16	S 40 28 53.860	E 145 52 24.764
	1164.94	0.40	84.09	1164.93	1143.43	0.62	0.62	1.90	0.03	2.00	5518175.25	404524.70	S 40 28 53.860	E 145 52 24.787
	1221.27	0.44	97.02	1221.26	1199.76	0.61	0.61	2.31	0.05	2.39	5518175.24	404525.11	S 40 28 53.860	E 145 52 24.804
	1339.66	0.51	93.25	1339.64	1317.14	0.53	0.53	3.28	0.02	3.32	5518175.16	404526.08	S 40 28 53.863	E 145 52 24.845
	1367.75	0.54	94.83	1367.73	1346.23	0.51	0.51	3.54	0.03	3.58	5518175.14	404526.34	S 40 28 53.864	E 145 52 24.857
	1456.65	0.52	105.25	1456.63	1435.13	0.37	0.37	4.35	0.03	4.37	5518175.00	404527.15	S 40 28 53.869	E 145 52 24.891
	1530.18	0.55	90.58	1530.16	1508.66	0.27	0.27	5.03	0.06	5.03	5518174.90	404527.82	S 40 28 53.872	E 145 52 24.920
	1596.34	0.49	77.67	1596.31	1574.81	0.33	0.33	5.62	0.06	5.63	5518174.96	404528.42	S 40 28 53.870	E 145 52 24.945
	1625.50	0.47	69.82	1625.47	1603.97	0.40	0.40	5.85	0.07	5.87	5518175.03	404528.65	S 40 28 53.868	E 145 52 24.955
	1682.67	0.41	85.01	1682.64	1661.14	0.50	0.50	6.28	0.07	6.30	5518175.13	404529.08	S 40 28 53.865	E 145 52 24.973
	1767.94	0.46	80.24	1767.91	1746.41	0.58	0.58	6.92	0.02	6.94	5518175.21	404529.72	S 40 28 53.863	E 145 52 25.000
	1858.33	0.33	65.19	1858.30	1836.80	0.75	0.75	7.51	0.05	7.55	5518175.38	404530.31	S 40 28 53.858	E 145 52 25.025
	1913.35	0.48	64.16	1913.31	1891.81	0.92	0.92	7.86	0.08	7.92	5518175.55	404530.66	S 40 28 53.852	E 145 52 25.040
	1941.91	0.47	69.15	1941.87	1920.37	1.01	1.01	8.08	0.04	8.14	5518175.64	404530.88	S 40 28 53.849	E 145 52 25.050
	2028.47	0.60	92.17	2028.43	2006.93	1.12	1.12	8.67	0.09	8.94	5518175.75	404531.66	S 40 28 53.846	E 145 52 25.083
	2076.18	0.73	87.08	2076.14	2054.64	1.13	1.13	9.42	0.09	9.49	5518175.76	404532.22	S 40 28 53.846	E 145 52 25.107
Projection to TD at 2100m	2100.00	0.73	87.08	2099.95	2078.45	1.14	1.14	9.72	0.00	9.79	5518175.77	404532.52	S 40 28 53.846	E 145 52 25.119

Survey Type: Definitive Survey

Survey Error Model: SLB ISCWSA version 24 *** 2-D 95.00% Confidence 2.4477 sigma

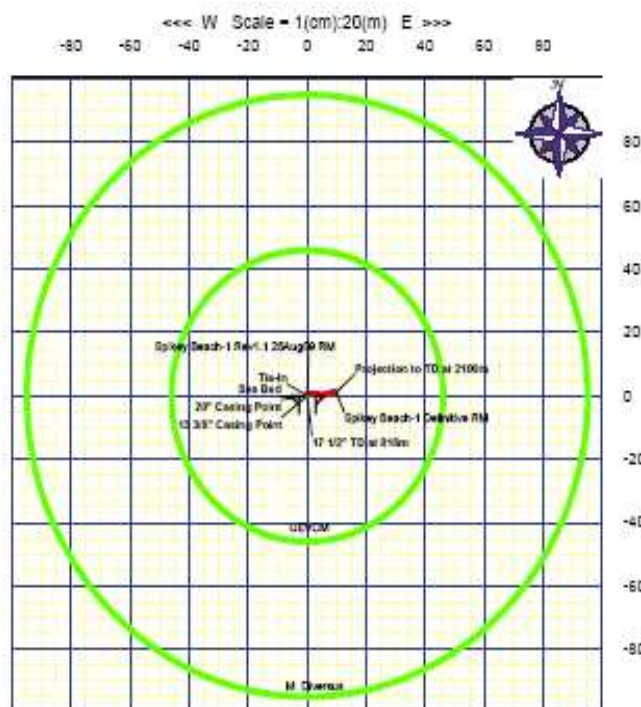
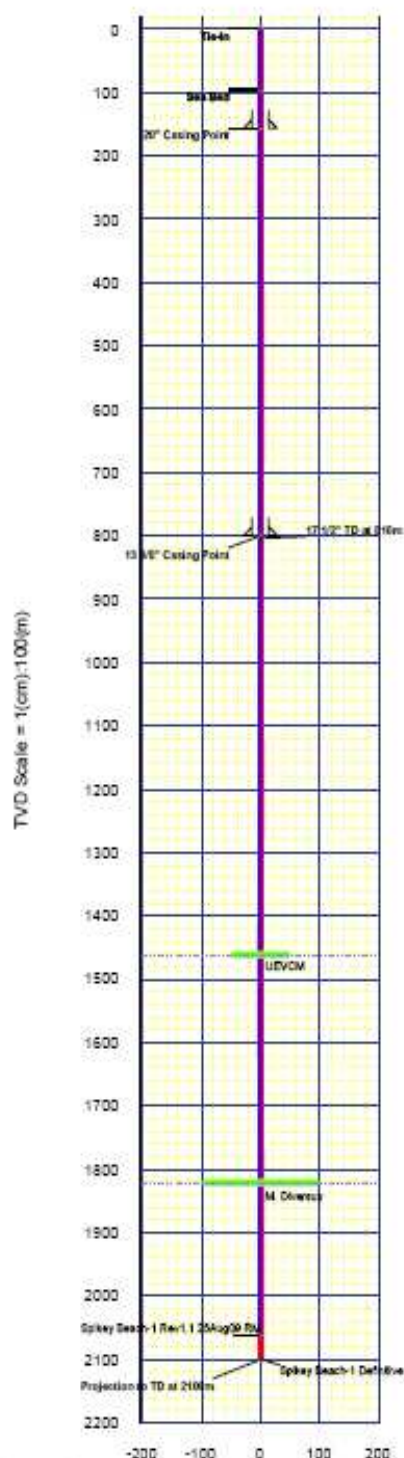
Surveying Prog:

MD From (m)	MD To (m)	EOU Freq	Survey Tool Type
0.00	95.50	Act-Stns	SLB_INC-ONLY-Depth Only
95.50	803.80	Act-Stns	SLB_MWD+DMAG
803.80	2076.18	Act-Stns	SLB_MWD-STD
2076.18	2100.00	Act-Stns	SLB_BLIND+TREND

Borehole -> Survey

Spikey Beach-1 -> Spikey Beach-1 Definitive RM
Spikey Beach-1 -> Spikey Beach-1 Definitive RM
Spikey Beach-1 -> Spikey Beach-1 Definitive RM
Spikey Beach-1 -> Spikey Beach-1 Definitive RM

WELL Spikey Beach-1			FIELD Beach - Offshore Zone 55			STRUCTURE Spikey Beach		
MagNet Parameters	Dr	TS	Dr	TS	Dr	TS	Dr	TS
Model: 60104 2008	Mag Dec: +12.867°	TS	December 06, 2008	81738.5 m	Surface Location	UAS 20 03.820	Heading: 604522.80 m	Grid Coord: +0.7313663°
					Lat: 51 48 51.34 N	Long: 004 52 31.55 E	Scale Factor: 0.980112098	Map Source: Open St
								TVD Ref: 1985 (21.83 m above MSL)
								Plan: Spikey Beach - 1 Collection History Date: September 25, 2008



Surface Location
Northing: 5518174.63 m Rating: 404522.80 m

Target Description		Grid Coord		Local Coord	
Target Name	Shape	Major Axis	Min/Max	Min/Max	Min/Max
UUVCM	Circle	92.00	5518174.63	404522.80	1461.50
M. Diverus	Circle	199.00	5518174.63	404522.80	1822.50

Critical Point		Critical Point		Critical Point		Critical Point	
Critical Point	MD	Depth	Depth	Depth	Depth	Depth	Depth
Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sea Bed	95.50	0.00	0.00	95.50	0.00	0.00	0.00
17 1/2" TD at 816m	802.80	0.18	263.56	802.80	0.45	0.45	0.09
Projection to TD at 2100m	2100.00	0.73	87.68	1099.95	1.14	1.14	9.72

Vertical Section (m) Azim = 0°, Scale = 1(cm):100(m) Origin = 0 N-S, 0 E-W


3.2 Drilling Performance Analysis



3.2.1 - Directional T-Plots

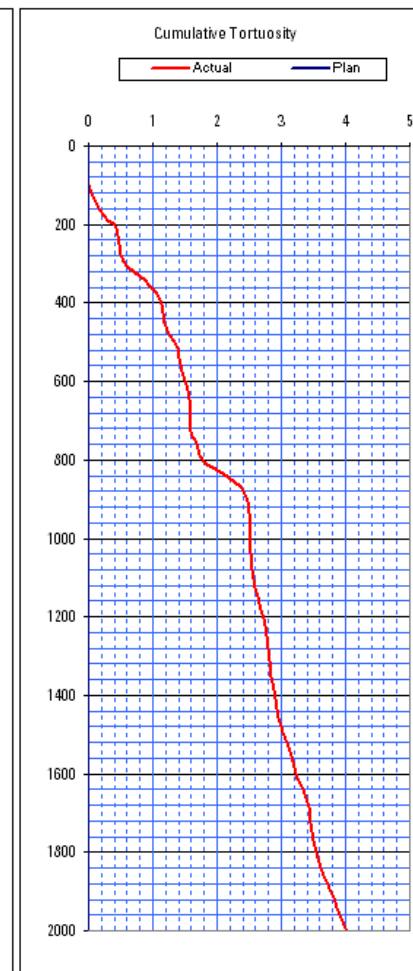
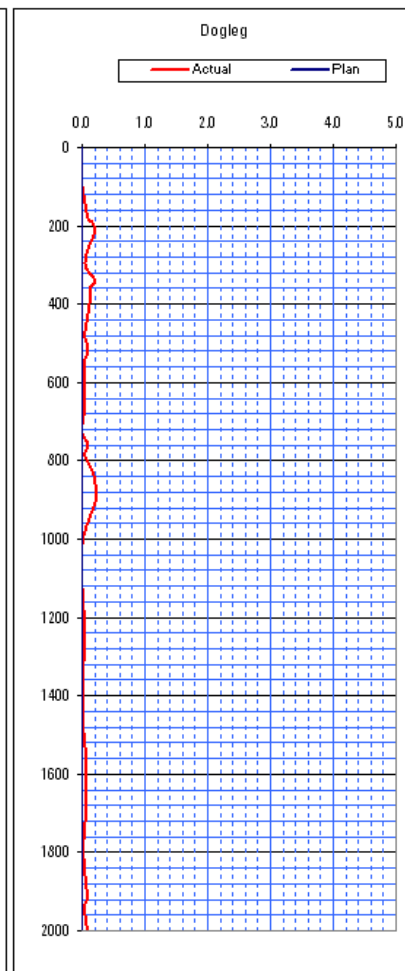
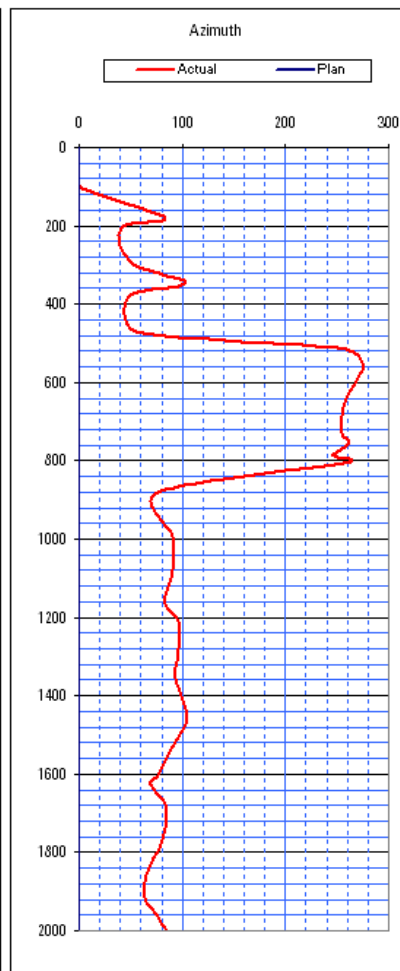
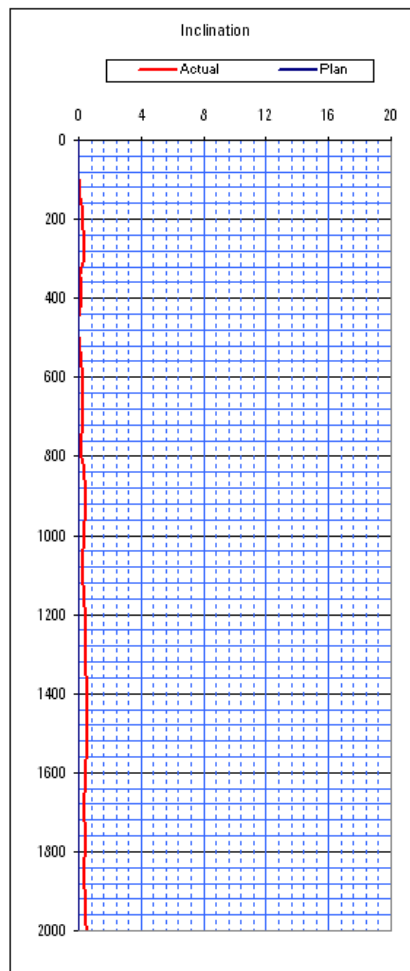
3.2.2 - Drilling KPIs

T-Plot

Client  Beach Petroleum

Well  Spikey Beach - 1

DDI Plan  0.00
Actual  2.23

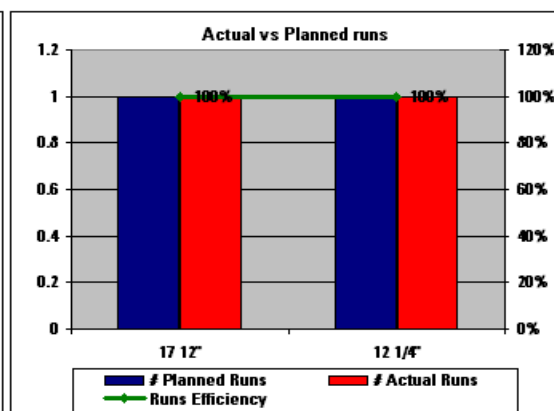
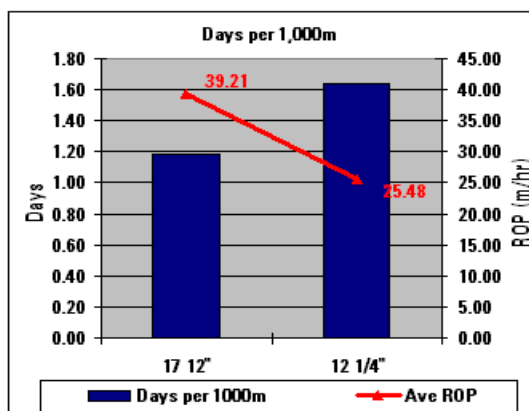


KEY PERFORMANCE INDICATORS (KPI'S) FOR DIRECTIONAL DRILLING SERVICES

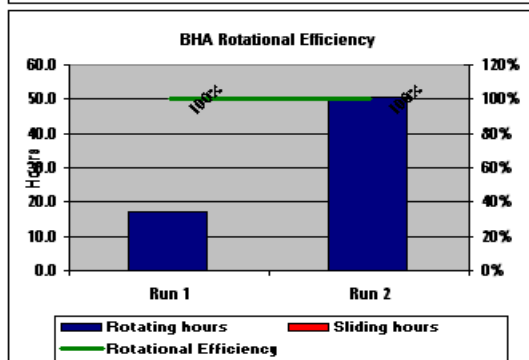
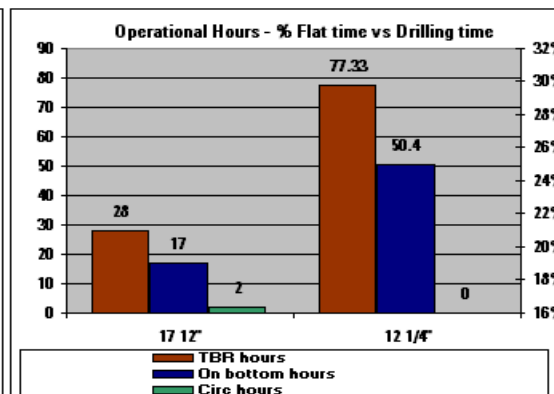
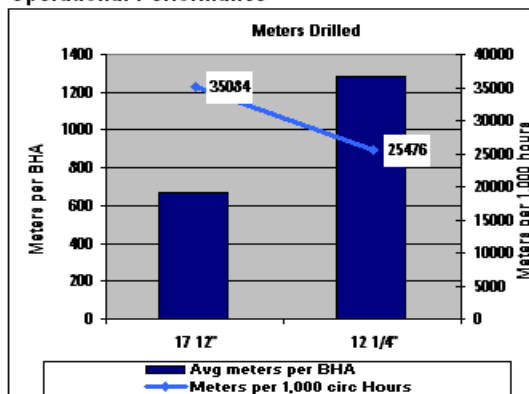
Client Beach Petroleum
Well Spikey Beach-1
Rig Ocean Patriot
Field T/38 - Bass Basin

Total Depth 2100.00 m
Date 18-Sep-09
D&M Yes

BHA Overview



Operational Performance



Summary

Non-Productive Time

Non-Productive Time 0.0 hrs
Total Operating Time 67.4 hrs

Operating Efficiency

NPT per 1,000m 0.00 hrs/1000m
Meters per 1000 Circ Hour(D&M) 28106.63 m / K circ hr.

DD Efficiency

Tortuosity (Plan v Actual) 0.0 / 4.246
DDI (Plan v. Actual) 0.0 / 2.234

General Comments

17 1/2" Section: Drilled vertically in one run, as planned, with on-bottom ROP of 39 m/hr. Minimal off bottom circulation.

12.1/4" Section: Drilled vertically with motor in one run with an on-bottom ROP of 25 m/hr. Minimal off bottom circulation.

Well Trajectory

Deviations from plan	No
If yes, acceptable	N/A
Hit Drillers Target	Yes
Hole cleaning problems	No
Run casing OK	Yes
SF > 1.5	Yes
Zero well collisions	Yes
Slide in hold sections	No
(If YES - Explain)	

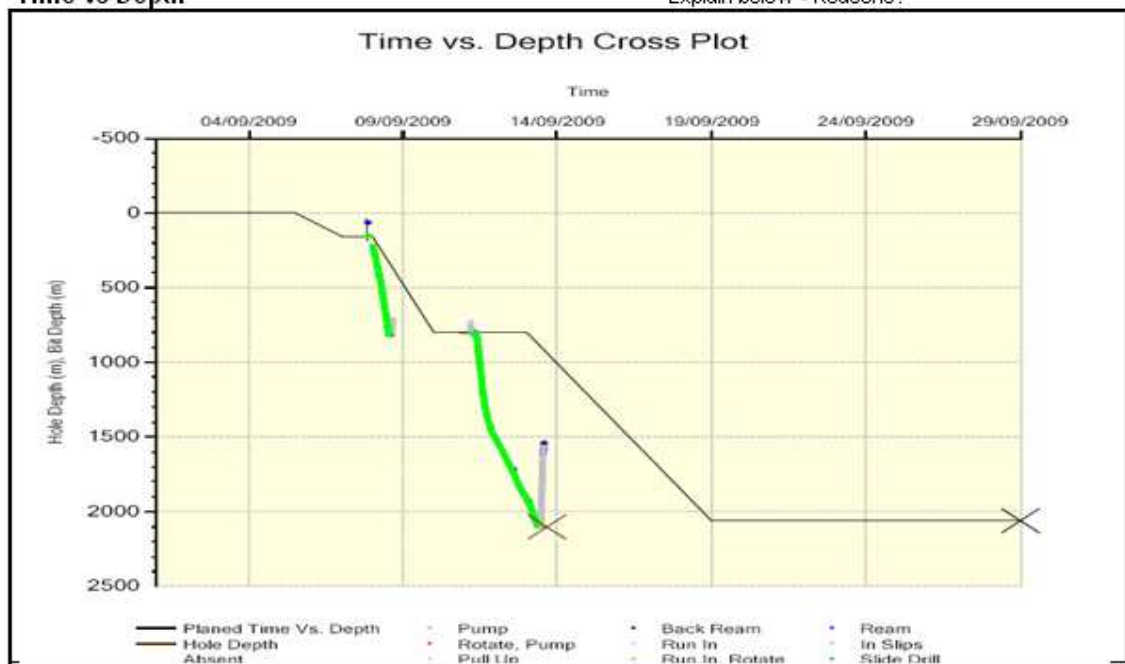
Tools & Delivery

Tools delivered fit for purpose	Yes
Backup tools available	Yes
Tools run within specifications	Yes
All tools pass shallow hole test	Yes

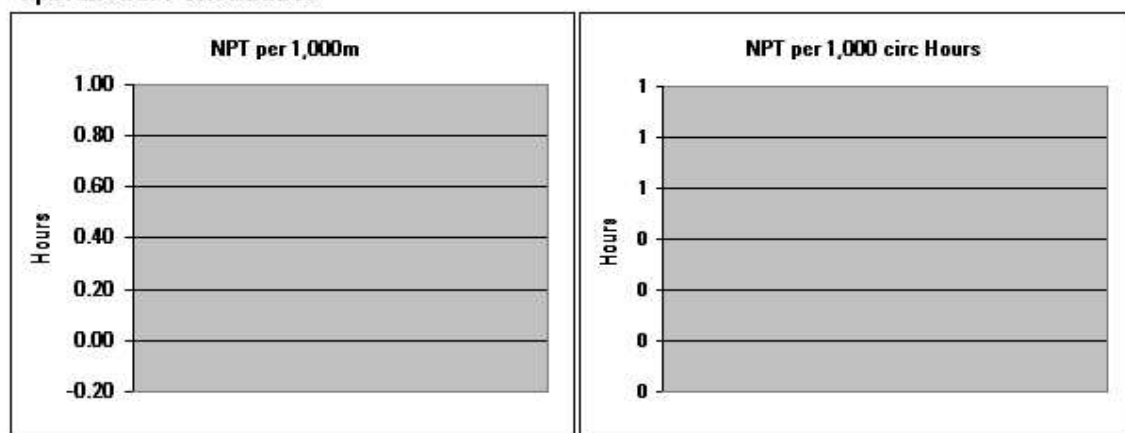
# of BHAs	Planned	2
	Actual	2

If # of actual BHAs > # of planned BHAs
Explain below - Reasons?

Time vs Depth



Operational Performance



Performance Summary

Zero drilling NPT hours recorded for well. Well was drilled under AFE by ~ 5 days.

Section 4:

Appendices

- A. Depth Control Report**
- B. Calibration Report**
- C. SQ Issues**

A. Depth Control Report

1. **Depth Acquisition Procedure Document**

Depth acquisition was performed as per the procedure outlined in the D&M-SQ-S016 Depth Control Standard and IDEAL 14.0 Field Reference Manual. Depth acquisition equipment used on the job is PDA (Precision Depth Assembly) which consists of Geolograph, Heave Motion Compensator, and Clamp Line Tensiometer (CLT). The sensors calibration was performed as per D&M-SQ-S004 Calibration Standard (See section B).

2. **Permanent Depth Datum Reference**

The permanent depth datum reference for this well is the Rotary Table (RKB), which is 21.50 m above MSL.

3. **Depth Reference Plan**

Depth is referenced to the Driller's Depth. The Driller's pipe tally is used to check acquired depth at frequent intervals, usually at each stand down. See depth tracking sheet attached.

SLB D&M - SQ-S016

Schlumberger

Pre-Job Depth Control Report

Job Information

Client	Beach Petroleum Ltd
Well Name / Field	Spikey Beach1
Job no.	09ASQ0029
Run #	1
Date in	07-Sep-09

Hole Section Information

Hole Size	17.5in
Depth Reference	Driller's Depth
Source of Depth	Driller's Tally
Depth System	Geograph + Heave Compensation
Permanent Datum	MSL

Expected Casing Shoe 151.6

Planned TD / Casing Point 810

Zones of Interest (As per Geologist Advice)

Depth Equipment Calibration Information

Drawworks Encoder Calibration

Standard Block Height Calibration Equipment is DWC	
DWE Serial No.	2681
Date of Last Drill Line Slip & Cut	7-Sep-09
Date of Last Calibration	7-Sep-09
Calibration Status	Valid

Calibration Data

Data Point	BPOS	PPM
1	-100	325
2	100	325
3		
4		

Clamp Line Tensiometer Calibration

CLT Serial No.	1009
Date of Last Calibration	7-Sep-09
Calibration Status	Valid

Calibration Data

Data Point	klbf	V
1	120	1.66
2	250	2.08

Comments (Include Exemption details, if any):

Schlumberger Private

BHA Report from acquisition computer

17:50 in Section_1.txt - Notepad

File Edit Format View Help

MAXWELL SYSTEM INFORMATION
TOOLSTRING DESCRIPTION:17-50 in Section

TOOLNAME	LENGTH m	OD in	ID in	MAX_OD in	WEIGHT kg	VOLUME m3	CUMM_LEN m	CUMM_WT kg	SERIAL_NUMBER
Bit: 17 1/2"	: 0.420	8.750	3.750	17.500	105.074	NaN	0.420	105.074	6079221
Stabilizer	: 2.840	0.000	3.000	NaN	0.000	NaN	3.260	105.074	207A83
ARC9	: 5.920	9.000	5.750	10.000	1338.097	0.142	9.180	1443.171	4126
Stab: 9 1/2"	: 0.980	9.500	2.813	NaN	306.264	NaN	10.160	1749.435	
TELE900	: 8.210	9.160	4.250	9.160	1943.643	0.347	18.370	3693.079	ZA90
Stab: 9 1/2"	: 0.840	9.500	2.813	NaN	262.512	NaN	19.210	3955.591	
SONICVISION9	: 7.440	9.000	4.385	10.050	19232.316	0.216	26.650	23187.907	41250

Sensor offsets			
TOOLNAME	Sensor	[To Bit]	[To Reference]
ARC9	: Pressure	5.04 m	1.83 m
ARC9	: Resistivity	5.75 m	1.12 m
ARC9	: GR	5.80 m	1.07 m
TELE900	: D&I	13.98 m	-2.35 m
SONICVISION9	: Delta-T	23.45 m	-0.37 m

TOOLNAME	Refpoint	[To Tool Btm]	[To Bit]
ARC9	: ROP	3.61 m	6.87 m
TELE900	: ROP	1.47 m	11.63 m
SONICVISION9	: ROP	3.87 m	23.08 m

SLB D&M SQ-S004 - Calibration; D&M SQ S016 - Depth Control

Schlumberger

Hookload Sensor Calibration

Job Information

Date	7-Sep-09	Client	Beach Petroleum Ltd
Job no.	09ASQ0029	Well Name	Spikey Beach1

Hookload Calibration Information

Hookload Sensor Type	CLT-DA
Hookload Sensor Serial Number	1009
Date of Calibration	7/9/2009
Time of Calibration	18:40
Calibration performed by	Marganda Sihite

Hookload Calibration to be performed as often as required while drilling is going on.

Notes

1. Calibration will be based on driller's hookload gauge

Snapshot of calibration from acquisition computer

cal Analog Sensor Calibration Panel

Hookload | Pump Pressure | Surface Torque | Surface Amps | Surface Rpm's | Analog DWE | Analog GTE |

Offset (A0) Gain (A1)

Working [-393.810] 309.5238 Default

Current [-393.810] 309.5238

HookLoad 111.50 klbf 1.63 V

Graph: HookLD vs V

Legend: Working Calibration (red dot), Current Calibration (blue dot)

User Input Data:

	klbf	V
1	120.00	1.660
2	250.00	2.080
3		
4		
5		
6		

Buttons: Take Point, Delete Point, Clear All

Buttons: Calculate, View History, Accept, Exit, Help

Depth Sensor Calibrations

Procedure Document:

D&M-SQ-S016 D&M Depth Control Standard

Job Information

Date	7-Sep-09	Client	Beach Petroleum Ltd
Job no.	09ASQ0029	Well Name	Spikey Beach1

Depth Calibration Screen Shot

Calibration type	Manual	DWC Serial No.	2681
Date of Last Drill Line Slip & Cut	7-Sep-09	Calibration Status	Valid
Date of Last Calibration	7-Sep-09		

Calibration must be done after every Slip&Cut operation

Snapshot of calibration from acquisition computer

Drawworks Calibration Panel [?] [X]

6 Wire Calibration | 4 Wire Calibration | Manual | Interactive Manual

Offset: m WL Pos: m Block Pos: m

Counts: Wrap No: On/Off Status: **MANUAL**

o Computed Calibration
o Current Calibration

User Input Data

	Block Pos	PPM
1	<input type="text" value="-100"/>	<input type="text" value="325"/>
2	<input type="text" value="100"/>	<input type="text" value="325"/>
3	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>

Take Pt Clear Calculate Accept Reject Exit Help

19:56:33 COMMENT: Set to Manual Mode Calibration

D&M SQ S016 - Depth Control Standard

Depth Tracking Data Sheet for floaters

Well / Field	Spikey Beach1
Client	Beach Petroleum Ltd
Hole Section	17.5in
Job Number	09ASQ0029
BHA #	1

Date in	07-Sep-09
Date out	08-Sep-09
Start Depth	146 m
End Depth	816 m
BHA Length	226.6 m

Stand #	Single length	Stand Length	DP Length	DP + BHA	Stick-up	Tide Correction	Expected KD Depth	IDEAL KD Depth	Depth Offset	Deeper/Shallower	Date/ Time	Comments
1	9.59	28.82	9.59	236.19			236.19					
	9.63		19.22	245.82			245.82					
	9.60		28.82	255.42			255.42					
2	9.57	28.83	38.39	264.99			264.99					
	9.65		48.04	274.64			274.64					
	9.61		57.65	284.25			284.25	283.48	-0.77	Shallow	2:15 AM	9/8/2009 0:00
3	9.60	28.76	67.25	293.85			293.85					
	9.54		76.79	303.39			303.39					BD+0.5@2:47 AM
	9.62		86.41	313.01			313.01	312.53	-0.48	Shallow	2:59 AM	9/8/2009
4	9.66	28.99	96.07	322.67			322.67					
	9.68		105.75	332.35			332.35					BD-0.4@3:30 AM
	9.65		115.40	342.00			342.00	342.35	0.35	Deep	3:40 AM	9/8/2009
5	9.53	28.70	124.93	351.53			351.53					
	9.57		134.50	361.10			361.10					
	9.60		144.10	370.70			370.70					
6	9.59	28.68	153.69	380.29			380.29					
	9.56		163.25	389.85			389.85					
	9.53		172.78	399.38			399.38					
7	9.65	28.83	182.43	409.03			409.03	409.67	0.64	Deep	5:32 AM	9/8/2009
	9.62		192.05	418.65			418.65					BD-0.5@ 5:43 AM
	9.56		201.61	428.21			428.21	428.78	0.57	Deep	5:48 AM	40064.00
8	9.63	28.75	211.24	437.84			437.84					
	9.57		220.81	447.41			447.41					bd-0.5@6:17 AM
	9.55		230.36	456.96			456.96	457.31	0.35	Deep	6:25 AM	9/8/2009
9	9.58	28.66	239.94	466.54			466.54					
	9.50		249.44	476.04			476.04					BD-0.5@6:51 AM
	9.58		259.02	485.62			485.62	486.39	0.77	Deep	6:59 AM	9/8/2009
10	9.60	28.82	268.62	495.22			495.22					
	9.57		278.19	504.79			504.79					bd-0.5@7:20 AM
	9.65		287.84	514.44			514.44	515.13	0.69	Deep		
11	9.67	28.88	297.51	524.11			524.11					
	9.67		307.18	533.78			533.78					
	9.54		316.72	543.32			543.32					
12	9.58	28.69	326.30	552.90			552.90					
	9.57		335.87	562.47			562.47					bd-0.5@8:34 AM
	9.54		345.41	572.01			572.01	572.05	0.04	Deep	8:44 AM	9/8/2009
13	9.63	28.85	355.04	581.64			581.64					
	9.64		364.68	591.28			591.28					
	9.58		374.26	600.86			600.86					

14	9.67	28.77	383.93	610.53			610.53					
	9.60		393.53	620.13			620.13					
	9.50		403.03	629.63			629.63	630.01	0.38	Deep	9:37 AM	9/8/2009
15	9.65	28.69	412.68	639.28			639.28					
	9.55		422.23	648.83			648.83					BD-0.3@10:11 AM
	9.49		431.72	658.32			658.32	658.72	0.40	Deep	10:14 AM	9/8/2009
16	9.60	28.84	441.32	667.92			667.92					
	9.59		450.91	677.51			677.51					
	9.65		460.56	687.16			687.16	687.26	0.10	Deep	10:44 AM	9/8/2009
17	9.60	28.76	470.16	696.76			696.76					
	9.51		479.67	706.27			706.27					
	9.65		489.32	715.92			715.92					
18	9.55	28.62	498.87	725.47			725.47					
	9.49		508.36	734.96			734.96					
	9.58		517.94	744.54			744.54					
19	9.61	28.74	527.55	754.15			754.15					
	9.56		537.11	763.71			763.71					
	9.57		546.68	773.28			773.28	773.18	-0.10	Shallow		
20	9.69	28.90	556.37	782.97			782.97	782.81	-0.16	Shallow	12:27 PM	9/8/2009
	9.68		566.05	792.65			792.65					
	9.53		575.58	802.18			802.18	801.53	-0.65	Shallow		
21	9.60	28.70	585.18	811.78			811.78					
	9.65		594.83	821.43			821.43					
	9.45		604.28	830.88			830.88					

SLB D&M - SQ-S016

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Post-Job Depth Control Report

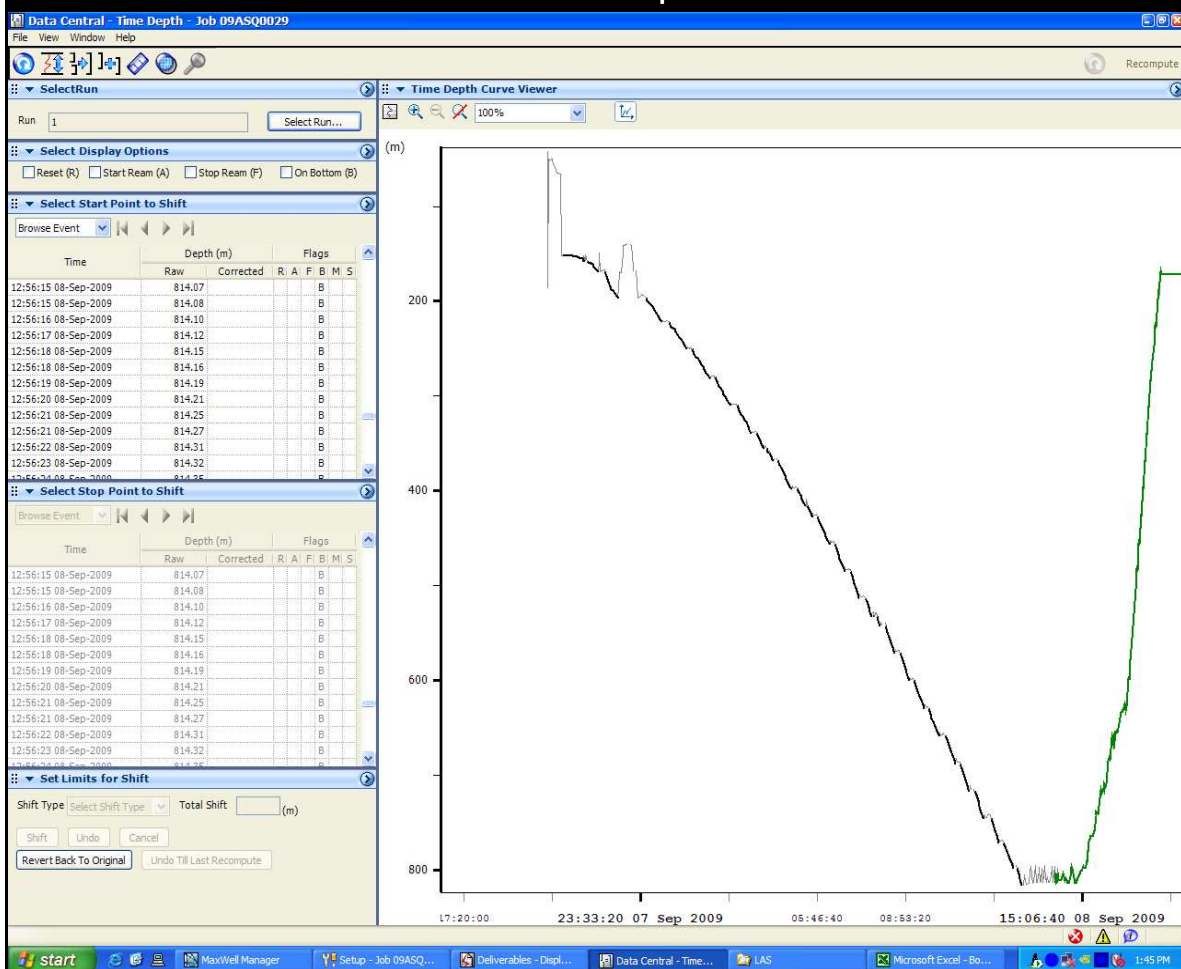
Job Information

Client	Beach Petroleum Ltd
Well Name / Field	Spikey Beach1
Job no.	09ASQ0029

Hole Section Information

Date	08-Sep-09
Start Depth	149.4 m
End Depth	816 m

IDEAL DTM Corrected Depth vs. Time Plot



Schlumberger Private

Insert the Plot here from IDEAL RM Utilities Corrected vs. Depth from bin_db file

Depth Equipments Used for the Run		
Equipment Type	Serial no.	Remarks
Geograph	2681	
Heave Compensator		
Drawworks Encoder	9002	
Clamp Line Tensiometer	1009	

Editing performed on raw depth and tool dump files

RAW DEPTH VS. TIME FILES		
Run no.	Edited	Editing done
1	None	

TOOL DUMP FILE		
Run no.	Edited	Editing done
1	None	

Cell Manager:	Marganda Sihite
Engineer Performing Edits:	Marganda Sihite

Depth Acquisition Equipment Details

DEPTH ENCODER SYSTEM (DES): Driven directly by the drawworks drum. For floaters a Heave Compensation Assembly shall be used in addition to the DES. In the event that this can not be done a Geograph may be used after prior approval from Drilling & Measurements management.

DEPTH WIRE CALIBRATOR (DWC): Provides calibration data to correct the DES signal with respect to true block displacement. In the event of such an equipment not available at the rigsite, a manual calibration is performed after prior approval from the Drilling & Measurements management.

CLAMP LINE TENSIO METER (CLT): Used to automate the depth tracking by providing a link between the traveling block motion and the bit motion.

SLB D&M - SQ-S016

Schlumberger

Pre-Job Depth Control Report

Job Information

Client	Beach Petroleum Ltd
Well Name / Field	Spikey Beach1
Job no.	09ASQ0029
Run #	2
Date in	10-Sep-09

Hole Section Information

Hole Size	12.25in
Depth Reference	Driller's Depth
Source of Depth	Driller's Tally
Depth System	Geolograph + Heave Compensation
Permanent Datum	MSL

Expected Casing Shoe 805.8

Planned TD / Casing Point 2100

Zones of Interest (As per Geologist Advice)

UEVCM formation 1440 m TVD. M.Diversus formation 1800 m TVD

Depth Equipment Calibration Information

Drawworks Encoder Calibration

Standard Block Height Calibration Equipment is DWC	
DWE Serial No.	2681
Date of Last Drill Line Slip & Cut	7-Sep-09
Date of Last Calibration	10-Sep-09
Calibration Status	Valid

Calibration Data

Data Point	BPOS	PPM
1	-100	325
2	100	325
3		
4		

Clamp Line Tensiometer Calibration

CLT Serial No.	1009
Date of Last Calibration	10-Sep-09
Calibration Status	Valid

Calibration Data

Data Point	klbf	V
1	120	1.66
2	250	2.08

Comments (Include Exemption details, if any):

Schlumberger Private

BHA Report from acquisition computer

12-25 in Section_1.txt - Notepad

File Edit Format View Help

MAXWELL SYSTEM INFORMATION

TOOLSTRING DESCRIPTION:12-25 in Section

TOOLNAME	LENGTH m	OD in	ID in	MAX_OD in	WEIGHT kg	VOLUME m3	CUMM_LEN m	CUMM_WT kg	SERIAL_NUMBER
Bit: 12 1/4"	0.380	8.500	3.750	12.250	88.507	NaN	0.380	88.507	7012700
Motor	11.320	9.625	0.000	NaN	0.000	NaN	11.700	88.507	05954
Stabilizer	1.820	9.250	4.000	NaN	0.000	NaN	13.520	88.507	207A189
ARC8	6.240	8.250	5.750	9.100	1156.661	0.105	19.760	1245.167	1216
Stab: 9"	0.910	9.000	2.813	NaN	284.388	NaN	20.670	1529.555	ASQ9029
TELE825	8.060	8.410	4.250	8.410	1762.206	0.287	28.730	3291.762	ZH22
Stab: 9"	0.850	9.000	2.813	NaN	265.637	NaN	29.580	3557.399	AWA7261
SONICVISIONS8	6.860	8.400	4.385	9.130	15422.141	0.179	36.440	18979.540	42784
SADN8	9.170	12.000	4.100	12.000	2086.525	0.500	45.610	21066.065	43225

| Sensor offsets |

TOOLNAME	Sensor	[To Bit]	[To Reference]
ARC8	Pressure	15.66 m	1.83 m
ARC8	Resistivity	16.37 m	1.12 m
ARC8	GR	16.42 m	1.07 m
TELE825	D&I	24.45 m	-2.35 m
SONICVISIONS8	Delta-T	33.83 m	-0.40 m
SADN8	UltraSonic	39.60 m	0.95 m
SADN8	Density	39.77 m	0.78 m
SADN8	Neutron	41.75 m	-1.21 m

TOOLNAME	Refpoint	[To Tool Btm]	[To Bit]
ARC8	ROP	3.97 m	17.49 m
TELE825	ROP	1.43 m	22.10 m
SONICVISIONS8	ROP	3.85 m	33.43 m
SADN8	ROP	4.11 m	40.55 m

Schlumberger

Job Information

Date	7-Sep-09	Client	Beach Petroleum Ltd
Job no.	09ASQ0029	Well Name	Spikey Beach1

Hookload Calibration Information

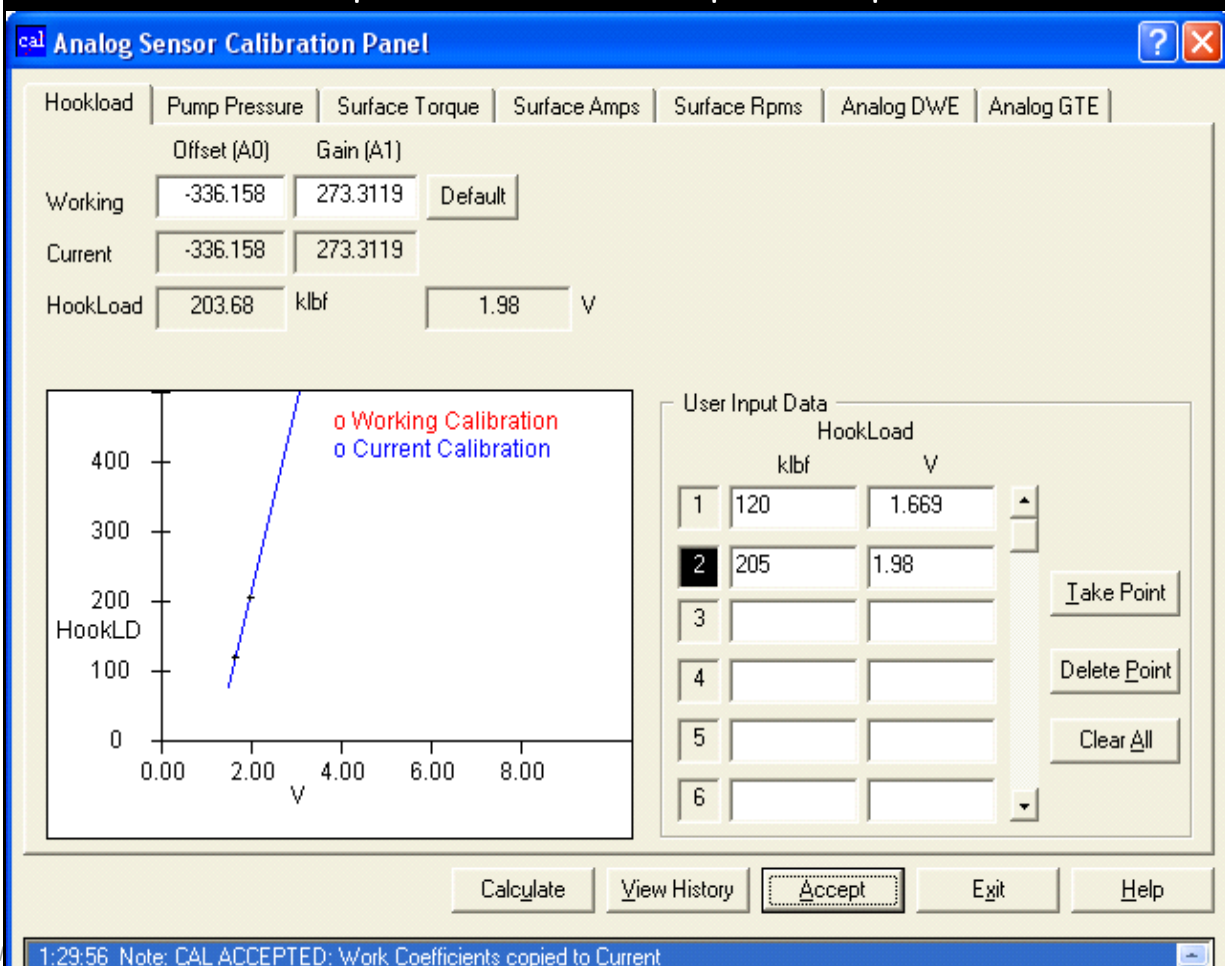
Hookload Sensor Type	CLT-DA
Hookload Sensor Serial Number	1009
Date of Calibration	10/9/2009
Time of Calibration	22:30
Calibration performed by	Marganda Sihite

Hookload Calibration to be performed as often as required while drilling is going on.

Notes

1. Calibration will be based on driller's hookload gauge

Snapshot of calibration from acquisition computer



Depth Sensor Calibrations

Procedure Document:

D&M-SQ-S016 D&M Depth Control Standard

Job Information

Date	10-Sep-09	Client	Beach Petroleum Ltd
Job no.	09ASQ0029	Well Name	Spikey Beach1

Depth Calibration Screen Shot

Calibration type	Manual	DWC Serial No.	2681
Date of Last Drill Line Slip & Cut	9-Jul-09	Calibration Status	Valid
Date of Last Calibration	10-Sep-09		

Calibration must be done after every Slip&Cut operation

Snapshot of calibration from acquisition computer

Drawworks Calibration Panel [?] [X]

6 Wire Calibration | 4 Wire Calibration | Manual | Interactive Manual

Offset: m WL Pos: m Block Pos: m

Counts: Wrap No: On/Off Status: **MANUAL**

Graph: pulses/m vs Block position(m)

Legend: o Computed Calibration, o Current Calibration

User Input Data:

	Block Pos	PPM
1	<input type="text" value="-100"/>	<input type="text" value="325"/>
2	<input type="text" value="100"/>	<input type="text" value="325"/>
3	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>

19:56:33 COMMENT: Set to Manual Mode Calibration

Exemption Request Reference

D&M SQ S016 - Depth Control Standard

Depth Tracking Data Sheet for floaters

Well / Field	Spikey Beach1
Client	Beach Petroleum Ltd
Hole Section	12.25in
Job Number	09ASQ0029
BHA #	2

Date in	10-Sep-09
Date out	14-Sep-09
Start Depth	816 m
End Depth	2100 m
BHA Length	213.9 m

Stand #	Single length	Stand Length	DP Length	DP + BHA	Stick-up	Tide Correction	Expected KD Depth	IDEAL KD Depth	Depth Offset	Deeper/Shallower	Date/ Time	Comments
1	9.59	28.82	9.59	223.49			223.49					
	9.63		19.22	233.12			233.12					
	9.60		28.82	242.72			242.72					
2	9.57	28.83	38.39	252.29			252.29					
	9.65		48.04	261.94			261.94					
	9.61		57.65	271.55			271.55					
3	9.60	28.76	67.25	281.15			281.15					
	9.54		76.79	290.69			290.69					
	9.62		86.41	300.31			300.31					
4	9.66	28.99	96.07	309.97			309.97					
	9.68		105.75	319.65			319.65					
	9.65		115.40	329.30			329.30					
5	9.53	28.70	124.93	338.83			338.83					
	9.57		134.50	348.40			348.40					
	9.60		144.10	358.00			358.00					
6	9.59	28.68	153.69	367.59			367.59					
	9.56		163.25	377.15			377.15					
	9.53		172.78	386.68			386.68					
7	9.65	28.83	182.43	396.33			396.33					
	9.62		192.05	405.95			405.95					
	9.56		201.61	415.51			415.51					
8	9.63	28.75	211.24	425.14			425.14					
	9.57		220.81	434.71			434.71					
	9.55		230.36	444.26			444.26					
9	9.58	28.66	239.94	453.84			453.84					
	9.50		249.44	463.34			463.34					
	9.58		259.02	472.92			472.92					
10	9.60	28.82	268.62	482.52			482.52					
	9.57		278.19	492.09			492.09					
	9.65		287.84	501.74			501.74					
11	9.67	28.88	297.51	511.41			511.41					
	9.67		307.18	521.08			521.08					
	9.54		316.72	530.62			530.62					
12	9.58	28.69	326.30	540.20			540.20					
	9.57		335.87	549.77			549.77					
	9.54		345.41	559.31			559.31					

13	9.63	28.85	355.04	568.94			568.94					
	9.64		364.68	578.58			578.58					
	9.58		374.26	588.16			588.16					
14	9.67	28.77	383.93	597.83			597.83					
	9.60		393.53	607.43			607.43					
	9.50		403.03	616.93			616.93					
15	9.65	28.69	412.68	626.58			626.58					
	9.55		422.23	636.13			636.13					
	9.49		431.72	645.62			645.62					
16	9.60	28.84	441.32	655.22			655.22					
	9.59		450.91	664.81			664.81					
	9.65		460.56	674.46			674.46					
17	9.60	28.76	470.16	684.06			684.06					
	9.51		479.67	693.57			693.57					
	9.65		489.32	703.22			703.22					
18	9.55	28.62	498.87	712.77			712.77					
	9.49		508.36	722.26			722.26					
	9.58		517.94	731.84			731.84					
19	9.61	28.74	527.55	741.45			741.45					
	9.56		537.11	751.01			751.01					
	9.57		546.68	760.58			760.58					
20	9.69	28.90	556.37	770.27			770.27					
	9.68		566.05	779.95			779.95					
	9.53		575.58	789.48	-0.10		789.58	789.78	0.20	Deep	9/11/2009 5:20	
21	9.60	28.70	585.18	799.08			799.08					
	9.65		594.83	808.73			808.73					
	9.45		604.28	818.18			818.18					
22	9.61	28.88	613.89	827.79			827.79					
	9.64		623.53	837.43			837.43					
	9.63		633.16	847.06			847.06					
23	9.66	28.82	642.82	856.72			856.72					
	9.63		652.45	866.35			866.35					
	9.53		661.98	875.88			875.88	874.97	-0.91	Shallow		BD +0.5
24	9.65	28.97	671.63	885.53			885.53					
	9.65		681.28	895.18			895.18					
	9.67		690.95	904.85			904.85					
25	9.62	28.83	700.57	914.47			914.47					
	9.59		710.16	924.06			924.06					
	9.62		719.78	933.68			933.68	933.48	-0.20	Shallow		
26	9.59	28.76	729.37	943.27			943.27					
	9.57		738.94	952.84			952.84					
	9.60		748.54	962.44	0.20		962.24	962.56	0.32	Deep		TOOL JOINT
27	9.67	29.03	758.21	972.11			972.11					
	9.68		767.89	981.79			981.79					
	9.68		777.57	991.47	2.00	0.40	989.07	989.27	0.20	Deep	11:20:00 AM	11/9/2009
28	9.66	28.84	787.23	1001.13			1001.13					
	9.58		796.81	1010.71			1010.71					
	9.60		806.41	1020.31	2.00	0.50	1017.81	1017.80	-0.01	Shallow	11:40:00 AM	11/9/2009
29	9.53	28.79	815.94	1029.84			1029.84					
	9.60		825.54	1039.44			1039.44					
	9.66		835.20	1049.10	2.00	0.50	1046.60	1046.66	0.06	Deep	12:00:00 PM	11/9/2009

30	9.63	28.76	844.83	1058.73			1058.73					
	9.50		854.33	1068.23			1068.23					
	9.63		863.96	1077.86	2.00	0.60	1075.26	1074.88	-0.38	Shallow	12:25	BD -0.3m
31	9.60	28.77	873.56	1087.46			1087.46					
	9.61		883.17	1097.07			1097.07					
	9.56		892.73	1106.63	2.00	0.60	1104.03	1103.36	-0.67	Shallow		
32	9.62	28.85	902.35	1116.25			1116.25					
	9.64		911.99	1125.89			1125.89					
	9.59		921.58	1135.48	2.00	0.60	1132.88	1132.20	-0.68	Shallow	1:13 PM	BD+0.3 m
33	9.66	28.79	931.24	1145.14			1145.14					
	9.63		940.87	1154.77			1154.77					
	9.50		950.37	1164.27	2.00	0.50	1161.77	1161.22	-0.55	Shallow	1:30 PM	BD+0.3 m
34	9.62	28.86	959.99	1173.89			1173.89					
	9.60		969.59	1183.49			1183.49					
	9.64		979.23	1193.13	2.00	0.50	1190.63	1190.65	0.02	Deep		
35	9.66	28.82	988.89	1202.79			1202.79					
	9.51		998.40	1212.30			1212.30					
	9.65		1008.05	1221.95	2.00	0.50	1219.45	1218.82	-0.63	Shallow	2:12 PM	BD+0.3 m
36	9.52	28.75	1017.57	1231.47			1231.47					
	9.60		1027.17	1241.07			1241.07					
	9.63		1036.80	1250.70	2.00	0.45	1248.25	1247.85	-0.40	Shallow	2:45 PM	BD+0.2 m
37	9.65	28.81	1046.45	1260.35			1260.35					
	9.56		1056.01	1269.91			1269.91					
	9.60		1065.61	1279.51	2.00	0.30	1277.21	1276.86	-0.35	Shallow	3:20 PM	BD+0.2 m
38	9.64	28.86	1075.25	1289.15			1289.15					
	9.69		1084.94	1298.84			1298.84					
	9.53		1094.47	1308.37	2.00	0.20	1306.17	1306.08	-0.09	Shallow	3:51 PM	9/11/2009
39	9.63	28.76	1104.10	1318.00			1318.00					
	9.59		1113.69	1327.59			1327.59					
	9.54		1123.23	1337.13	2.00	0.00	1335.13	1335.23	0.10	Deep	4:42 PM	9/11/2009
40	9.66	28.73	1132.89	1346.79			1346.79					
	9.57		1142.46	1356.36			1356.36					
	9.50		1151.96	1365.86	2.00	-0.20	1364.06	1364.52	0.46	Deep	5:29 PM	bd-02
41	9.64	28.83	1161.60	1375.50			1375.50					
	9.57		1171.17	1385.07			1385.07					
	9.62		1180.79	1394.69	2.00	-0.20	1392.89	1392.38	-0.51	Shallow	6:08 PM	BD+0.2 m
42	9.67	28.89	1190.46	1404.36			1404.36					
	9.62		1200.08	1413.98			1413.98					
	9.60		1209.68	1423.58	2.00	-0.50	1422.08	1423.33	1.25	Deep	7:15 PM	8:02 PM
43	9.54	28.74	1219.22	1433.12			1433.12					
	9.64		1228.86	1442.76			1442.76					
	9.56		1238.42	1452.32		-0.50	1452.82	1454.20	1.38	Deep	8:02 PM	
44	9.61	28.92	1248.03	1461.93			1461.93					
	9.65		1257.68	1471.58			1471.58					
	9.66		1267.34	1481.24			1481.24					
45	9.64	28.90	1276.98	1490.88			1490.88					
	9.63		1286.61	1500.51			1500.51					BD-0.7@12:01 AM
	9.63		1296.24	1510.14		-0.10	1510.24	1511.50	1.26	Deep	12:14 AM	9/12/2009
46	9.53	28.82	1305.77	1519.67			1519.67					
	9.63		1315.40	1529.30			1529.30					BD-0.7@1:31 AM
	9.66		1325.06	1538.96		0.05	1538.91	1538.71	-0.20	Shallow	1:39 AM	9/12/2009

47	9.50	28.76	1334.56	1548.46			1548.46					
	9.63		1344.19	1558.09			1558.09					
	9.63		1353.82	1567.72			1567.72	1567.72	0.00	On Depth		Reset bit depth
48	9.61	28.91	1363.43	1577.33			1577.33					
	9.72		1373.15	1587.05			1587.05					
	9.58		1382.73	1596.63		0.05	1596.58	1596.24	-0.34	Shallow	5:36 AM	9/12/2009
49	9.61	28.68	1392.34	1606.24			1606.24					
	9.52		1401.86	1615.76			1615.76					
	9.55		1411.41	1625.31		-0.20	1625.51	1624.87	-0.64	Shallow	7:08 AM	9/12/2009
50	9.53	28.75	1420.94	1634.84			1634.84					
	9.61		1430.55	1644.45			1644.45					
	9.61		1440.16	1654.06			1654.06					
51	9.63	28.89	1449.79	1663.69			1663.69					
	9.67		1459.46	1673.36			1673.36					
	9.59		1469.05	1682.95	2.00	0.00	1680.95	1681.07	0.12	Deep	9/12/2009 0:00	10:19 AM
52	9.65	28.85	1478.70	1692.60			1692.60					
	9.58		1488.28	1702.18			1702.18					
	9.62		1497.90	1711.80	2.00	0.30	1709.50	1709.43	-0.07	Shallow	9/12/2009 0:00	11:49 AM
53	9.62	28.74	1507.52	1721.42			1721.42					
	9.54		1517.06	1730.96			1730.96					
	9.58		1526.64	1740.54			1740.54					
54	9.58	28.76	1536.22	1750.12			1750.12					
	9.62		1545.84	1759.74			1759.74					
	9.56		1555.40	1769.30			1769.30					
55	9.60	28.83	1565.00	1778.90			1778.90					
	9.60		1574.60	1788.50			1788.50					
	9.63		1584.23	1798.13		0.40	1797.73	1796.80	-0.93	Shallow		
56	9.66	28.88	1593.89	1807.79			1807.79					
	9.60		1603.49	1817.39		0.10	1817.29					
	9.62		1613.11	1827.01		0.00	1827.01	1827.25	0.24	Deep	5:57 PM	
57	9.47	28.63	1622.58	1836.48			1836.48					
	9.56		1632.14	1846.04			1846.04					
	9.60		1641.74	1855.64		-0.50	1856.14	1856.65	0.51	Deep	7:55 PM	bd-0.5@7:55 PM
58	9.63	28.85	1651.37	1865.27			1865.27					
	9.62		1660.99	1874.89			1874.89					
	9.60		1670.59	1884.49		-0.50	1884.99	1886.01	1.02	Deep	10:15 PM	9/12/2009
59	9.63	28.85	1680.22	1894.12			1894.12					
	9.60		1689.82	1903.72			1903.72					BD-0.5
	9.62		1699.44	1913.34		-0.30	1913.64	1914.64	1.00	Deep	12:05 AM	
60	9.59	28.84	1709.03	1922.93			1922.93					
	9.66		1718.69	1932.59			1932.59					
	9.59		1728.28	1942.18		0.00	1942.18	1941.96	-0.22	Shallow	2:02 AM	9/13/2009
61	9.58	28.69	1737.86	1951.76			1951.76					
	9.60		1747.46	1961.36			1961.36					BD+0.5@3:07 AM
	9.51		1756.97	1970.87		0.10	1970.77	1970.21	-0.56	Shallow	3:17 AM	9/13/2009
62	9.52	28.64	1766.49	1980.39			1980.39					
	9.51		1776.00	1989.90			1989.90					BD+0.5@4:15 AM
	9.61		1785.61	1999.51		0.10	1999.41	1998.83	-0.58	Shallow	4:28 AM	9/13/2009
63	9.59	28.78	1795.20	2009.10			2009.10					
	9.55		1804.75	2018.65			2018.65					
	9.64		1814.39	2028.29		0.10	2028.19	2028.06	-0.13	Shallow	5:40 AM	9/13/2009
64	9.52	28.66	1823.91	2037.81			2037.81					
	9.55		1833.46	2047.36			2047.36					
	9.59		1843.05	2056.95	2.00	0.00	2054.95	2054.65	-0.30	Shallow	6:43	9/13/2009
65	9.59	28.83	1852.64	2066.54			2066.54					
	9.66		1862.30	2076.20			2076.20					
	9.58		1871.88	2085.78			2085.78					

SLB D&M - SQ-S016

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Post-Job Depth Control Report

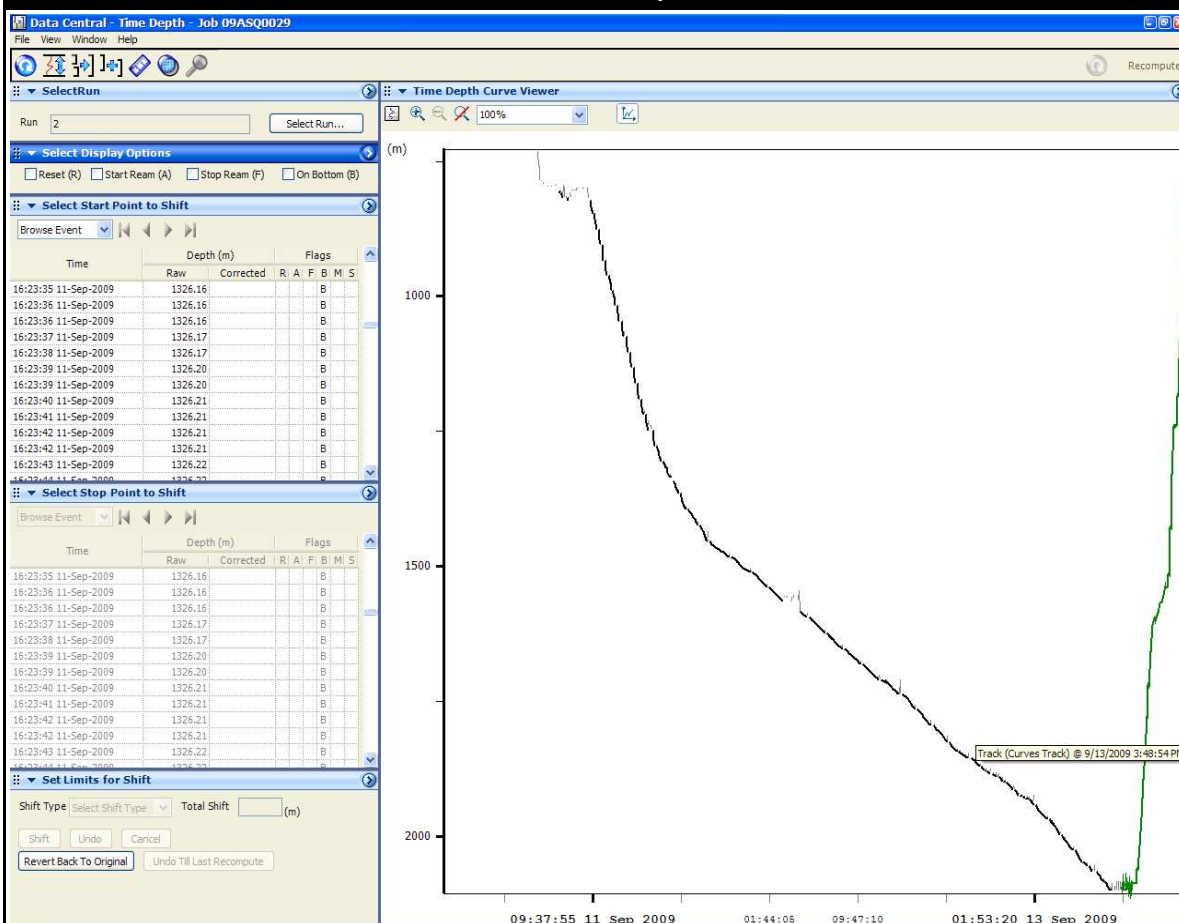
Job Information

Client	Beach Petroleum Ltd
Well Name / Field	Spikey Beach1
Job no.	09ASQ0029

Hole Section Information

Date	10-Sep-09
Start Depth	816 m
End Depth	2100 m

IDEAL DTM Corrected Depth vs. Time Plot



Insert the Plot here from IDEAL RM Utilities Corrected vs. Depth from bin_db file

Depth Equipments Used for the Run		
Equipment Type	Serial no.	Remarks
Geolograph	2681	
Heave Compensator		
Drawworks Encoder	9002	
Clamp Line Tensiometer	1009	



RAW DEPTH VS. TIME FILES		
Run no.	Edited	Editing done
1	none	

TOOL DUMP FILE		
Run no.	Edited	Editing done
1	none	

Cell Manager:	
Engineer Performing Edits:	



Depth Acquisition Equipment Details

DEPTH ENCODER SYSTEM (DES): Driven directly by the drawworks drum. For floaters a Heave Compensation Assembly shall be used in addition to the DES. In the event that this can not be done a Geolograph may be used after prior approval from Drilling & Measurements management.

DEPTH WIRE CALIBRATOR (DWC): Provides calibration data to correct the DES signal with respect to true block displacement. In the event of such an equipment not available at the rigsite, a manual calibration is performed after prior approval from the Drilling & Measurements management.

CLAMP LINE TENSIO METER (CLT): Used to automate the depth tracking by providing a link between the traveling block motion and the bit motion.

B. Calibration Report

1. Calibration Records

The sensors calibration was performed as per D&M-SQ-S004 Calibration Standard. Below are the calibration records for all the sensors.

Schlumberger

Surface Sensor Calibration

D&M-SQ-S004 D&M Calibration Standard

Run Information

Job no.	09ASQ0029	
Well Number	Spikey Beach 1	IDEAL Version 14_0c_14
Field	Exploration	HSPM Version 14_0c_03

Calibration Information

Type of Measurement	Sensor Type	Serial Number	Calibration Date	Calibration Time
Hookload	CLT-DA	1009	7-Sep-09	18:40
Calibration Reference Source	Calibration reference is drillers hook load gauge			

cal Analog Sensor Calibration Panel

Hookload | Pump Pressure | Surface Torque | Surface Amps | Surface Rpm's | Analog DWE | Analog GTE

Offset (A0) Gain (A1)

Working -393.810 309.5238 Default

Current -393.810 309.5238

HookLoad 111.50 klbf 1.63 V

Graph: HookLD vs V. Legend: Working Calibration (red), Current Calibration (blue).

User Input Data:

	HookLoad klbf	V
1	120.00	1.680
2	250.00	2.080
3		
4		
5		
6		

Take Point
Delete Point
Clear All

Calculate View History Accept Exit Help

Schlumberger Private

Schlumberger

Surface Sensor Calibration

D&M-SQ-S004 D&M Calibration Standard

Run Information

Job no.	09ASQ0029	
Well Number	Spikey Beach 1	IDEAL Version 14_0c_14
Field	Exploration	HSPM Version 14_0c_03

Calibration Information

Type of Measurement	Sensor Type	Serial Number	Calibration Date	Calibration Time
Pump Pressure	SPT-HA	2353699	7-Sep-09	18:50
Calibration Reference Source	Drillers console pump pressure indicator			

cal Analog Sensor Calibration Panel

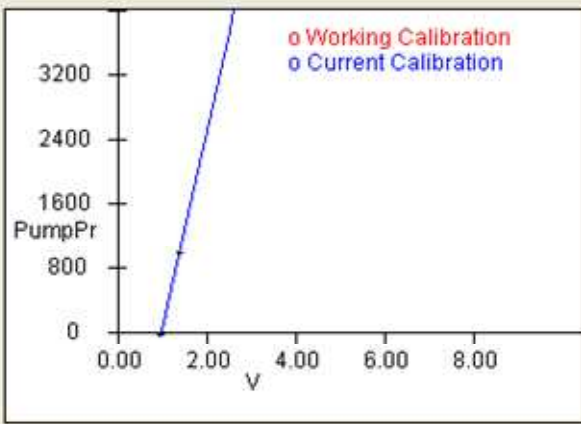
Hookload | Pump Pressure | Surface Torque | Surface Amps | Surface Rpm's | Analog DWE | Analog GTE

Offset (A0) Gain (A1)

Working -2456.790 2469.1358 Default

Current -2456.790 2469.1358

Pump Pressure 23.07 psi 1.00 V



User Input Data

	Pump Pressure psi	V
1	0	0.995
2	1000	1.40
3		
4		
5		
6		

Take Point
Delete Point
Clear All

Calculate View History Accept Exit Help

C. SQ Issues

1. **SQ Issues**

There is no SQ issue during the job.

Attachment 8

Activity Summary Report (IDS)

Wellname : Spikey Beach-1	Drilling Co :	Rig : Ocean Patriot
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Well History

#	Date	Depth (m)	24 Hour Summary
1	02 Sep 2009		On Contract at 12:30hrs. Commenced tow to Spikey Beach-1 location
2	03 Sep 2009		Continued with rig move from Basker-7 to Spikey Beach-1 Location
3	04 Sep 2009		Completed tow to Spikey Beach-1 location. Positioned rig and ran anchors #4, #8, #5, #1. Changed out #7 damaged pennant wire. Deployed anchors #7 and #3
4	05 Sep 2009	155.0	Ran anchors #3. Repaired starboard crane. Ran anchor #6. Began to ballast rig down. Ran anchor #2. Completed rig ballast down to drilling draft. Prepared for spud. Ran in and drilled top hole. Swept 150bbl PHG pill. Wiper trip
5	06 Sep 2009	155.0	Made up and ran 30in casing to 151.4m. Circulated and cemented 30in casing. Waited on cement. Disengaged 30in RT and POOH. Laid out RT and cement stand subs. Picked up 5in DP and racked back in derrick
6	07 Sep 2009	200.0	Picked up and racked back 67stands of 5in DP. Made up 17.5in BHA and racked in derrick. Made up 18.75in WHRT and racked back in derrick. Made up Dowell cement head and racked back in derrick. Diamond preformed Shallow gas JSA, Rig maintenance, changed out Kill hose in moon pool while Schlumberger MWD Engineers arrived on board and prepared tools. Made up and tested MWD/LWD tools. Made up BHA, tagged TOC, drilled out cement, shoe and rat hole. Drilled 17½in hole from 155m to 196m. Pull back and make up stand of 8in DC. Drilled 17½in hole from 196m to 200m
7	08 Sep 2009	816.0	Drilled 17.5in hole from 200m to 816m. Circulated clean and displaced well to mud. POOH and rigged up to run 13.375in casing. Made up shoe track
8	09 Sep 2009	816.0	Ran 13.375in casing. Landed in 30in housing. Circulated and cemented casing. POOH and laid out RT. Rigged up to run BOPs
9	10 Sep 2009	816.0	Ran BOP. Landed and tested connector to 2750psi. Rigged down BOP handling equipment and made up 12.25in drilling BHA.
10	11 Sep 2009	1,504.0	RIH to 786m. Performed BOP function test and well control drills. RIH Tag TOC at 794m. Drilled out shoe track and 3m hole while displaced well to 9.1ppg KCL mud. Performed LOT to 12.3ppg EMW. Drilled 12.25in hole from 819m to 1504m
11	12 Sep 2009	1,907.0	Drilled 12.25 in hole from 1504m to 1907m.
12	13 Sep 2009	2,100.0	Drilled 12.25in hole from 1907m to 2100m. Circulated well clean. POOH to 1606m. Re-logged interval 1606m to 1540m. POOH laid out DCs. Downloaded Schlumberger and rack back tools.
13	14 Sep 2009	2,100.0	Laid out Schlumberger drilling tools. Made up 2.875in cement stinger and RIH to 1620. Set hi vis pill on bottom. Pull back to 1520m and set cement plug #1. Laid out pipe while WOC. Tagged TOC at 1385m. POOH and set cement plug #2 at 850m. POOH to 650m and circulated.
14	15 Sep 2009	2,100.0	POOH laid out 5in DP and cement stinger. Recovered wear bushing. RIH with 5in mule shoe to 700m. Laid out 5in DP. Set #3 cement plug from 215m to 115m. Jetted BOP. Displaced riser to sea water. Laid out diverter. Unlatched BOP. Prepared to lay out slip joint.
15	16 Sep 2009	2,100.0	Laid out slip joint. Recovered BOPs to carrier and rigged down handling equipment. Made up 18.75in RT and stood back in derrick. Made up casing cutting assembly, RIH, cut casing and recovered PGB and wellhead to moonpool. Deballasted rig while laying out remaining pipe from derrick. Recovered #6 anchor.
16	17 Sep 2009	2,100.0	Recovered rig anchors. Began rig tow to Western Port.
17	18 Sep 2009	2,100.0	Rig transited under tow to Western Channel Entrance. Pilot boarded Swift and continued tow under pilotage into Western Channel
18	19 Sep 2009	2,100.0	Rig offhire to Beach @ 14:30Hrs EST on 19/09/09

Wellname : Spikey Beach-1	Drilling Co :	Rig : Ocean Patriot
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Activity Record

Date : 02 Sep 2009				Daily Cost : AUD 1,658,000				Report Number : 1
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P1	P	M1		12:30	24:00	11.50		<p>Commenced rig move from Basker-7 to Spikey Beach 1 location.</p> <p>Rig and vessels on contract to Beach @ 12:30hrs 2/9/2009; 1NM from Basker-7. Rig on tight tow.</p> <p>12:35.... Lat 38 17.98'S.. Long 148 42.39'E..</p> <p>16:00.... Lat 38 32.7' S.. Long 148 36.6'E..Speed 4.42knts..HDG 215deg... Travelled 15.5nm.. DTG 172.5nm.. ETA 07:00 4th</p> <p>18:00....Lat 38 39.19' S.. Long 148 29.06'E..Speed 4.5knts..HDG 227Deg... Travelled 23.7nm.. DTG 163.5nm.. ETA 06:20 4th</p> <p>21:00....Lat 38 52.68' S.. Long 148 17.44'E..Speed 4.7knts..HDG 229deg... Travelled 39.9nm.. DTG 144.5nm.. ETA 03:45 4th</p> <p>24:00....Lat 39 03.41'S.. Long 148 04.93'E..Speed 4.6knts...HDG 229deg... Travelled 54.2nm.. DTG 131nm.. ETA 04:30 4th</p> <p>Other offline activities: Pressure tested surface kill and choke manifold and safety valves to 250psi for 5min & to 5000psi for 10min. Painted and measured 30in casing. Rig crew continued with rig maintenance</p>
Date : 03 Sep 2009				Daily Cost : AUD 598,000				Report Number : 2
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P1	P	M1		00:00	12:00	12.00		<p>Continued rig move to Spikey Beach 1 location.</p> <p>03:00....Lat 39 13.49'S.. Long 147 52.26'E..Speed 4.3knts...HDG 224deg... Travelled 68.8nm.. DTG 119.0nm.. ETA 04:10 4th</p> <p>06:00....Lat 39 24.2'S.. Long 147 38.5'E..Speed 5.06knts...HDG 224deg... Travelled 83.8nm.. DTG 104nm.. ETA 02:48 4th</p> <p>09:00....Lat 39 35.2'S.. Long 147 23.7'E..Speed 5.3knts...HDG 233deg... Travelled 99.7nm.. DTG 88nm.. ETA 03:10 4th</p>
P1	P	M1		12:00	24:00	12.00		<p>12:00....Lat 39 43.7'S.. Long 147 08.9'E..Speed 4.73knts...HDG 233deg... Travelled 113.9nm.. DTG 73.8nm.. ETA 03:10 4th</p> <p>15:00....Lat 39 51.4'S.. Long 146 55.8'E..Speed 4.77knts...HDG 234deg... Travelled 126.6nm.. DTG 61.2nm.. ETA 03:50 4th</p> <p>18:00....Lat 39 51.1'S.. Long 146 43.2'E..Speed 4.71knts...HDG 233deg... Travelled 139nm.. DTG 48.8nm.. ETA 06:12 4th</p> <p>21:00....Lat 40 05.9'S.. Long 146 31.3'E..Speed 3.8knts...HDG 233deg... Travelled 150.4nm.. DTG 37.4nm.. ETA 06:20 4th</p> <p>24:00....Lat 40 12.9'S.. Long 146 19.1'E..Speed 3.86knts...HDG 233deg... Travelled 162nm.. DTG 25.8nm.. ETA 07:00 4th</p> <p>Offline Activities....Pressure tested choke manifold and HP</p>

Wellname : Spikey Beach-1	Drilling Co :	Rig : Ocean Patriot
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								lines 250psi/7500psi 5min/10min (90% completed).... Pressure tested Stand Pipe manifold and lines 250psi/5000psi 5min/10min (90% completed).... Prepared BHA components on deck.... Prepared PGB and posts, installed bulls eye frame.
Date : 04 Sep 2009				Daily Cost : AUD 881,000				Report Number : 3
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P1	P	M1		00:00	06:30	6.50		Continued rig move to Spikey Beach 1 location. 03:00....Lat 40 19.1'S.. Long 146 08.7'E..Speed 3.36knts...HDG 239deg... Travelled 172.1nm.. DTG 15.7nm.. ETA 07:30 4th 06:00.....Lat 40 25.1'S.. Long 145 58.6'E..Speed 3.26knts...HDG 239deg... Travelled 181.9nm.. DTG 5.9nm.. ETA 08:00 4th 06:30.... End of tow at Lat 40deg 26.8'S.... Long 145deg 56.8'E
P1	P	M4		06:30	08:45	2.25		Commenced run in to location
P1	P	M4		08:45	09:15	0.50		08:45 #4 PCC passed to Swift 09:12 #4 Anchor on deck and secured
P1	P	M4		09:15	10:20	1.08		Emerald and Swift manoeuvred rig to location
P1	P	M4		10:20	24:00	13.67		Deployed Anchors 10:20... #4 Pennant passed to swift 10:58... #4 Anchor on bottom (Statement of facts take from Emerald ad Swift) 11:50... #4 Pennant back on rig 12:05... #8 Pennant passed to Swift 12:28... Stopped running #8 anchor. Anchor upside down. Heaved back in to correct orientation of anchor 13:20... #8 Anchor on Swift Deck 13:35... Re-ran #8 anchor 13:55... #8 Anchor on bottom 14:35... #8 Pennant back on rig 14:55... #5 Pennant passed to Swift 15:15... #5 Anchor on Swift deck 15:55... #5 Anchor on bottom 16:40... #5 Pennant back on rig 17:10... #1 Pennant passed to Swift 17:35... #1 Anchor on Swift deck 18:00... #1 Anchor on bottom 18:30... #1 Pennant back on rig 19:05... Emerald disconnected from tow bridle 19:25... #7 Pennant passed to Swift 19:45... Changed out #7 Pennant wire after pay out 150mtrs chain 21:36... #7 Anchor on bottom 22:18... #7 Pennant back on rig 22:20... Emerald released to town 22:39... #3 Pennant passed to Swift 23:00... #3 Anchor at stern roller 23:18... #3 Anchor on bottom Offline Activities.... Choke and cement manifold Press Test 95% completed Stand Pipe Manifold Pressure Test 100% completed BOP Pressure Test 250psi/7500psi 5min/10min Rams and valves. 250psi/4000psi 5min/10min Annulars 80% completed. Shakers Dressed with screens. 30in Casing threads cleaned and checked 2.5deg bullseye installed on PGB
Date : 05 Sep 2009				Daily Cost : AUD 675,000				Report Number : 4
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description

Wellname : Spikey Beach-1	Drilling Co :	Rig : Ocean Patriot
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P1	P	M4		00:00	00:30	0.50		Swift returned to rig with #3 Pennant
P1	TP	M4	RE	00:30	02:30	2.00		Starboard crane thermostat failed. Unable to recover #3 Pennant from Swift.
P1	P	M4		02:30	04:45	2.25		Deployed Anchors 02:54... #3 Pennant back on rig 03:18... #6 Pennant passed to Swift 03:54... #6 Anchor on bottom 04:36... #6 Pennant back at rig 04:45... Adjust anchor winches to position rig over well centre 06:15... Complete cross tension on anchors #1 and #5 Ballasted rig down to drilling draft
P1	P	M4		04:45	06:15	1.50		Deployed Anchors
P1	P	M3		06:15	08:45	2.50		08:55... #2 Pennant passed to Swift 09:17... #2 Anchor at Swift stern roller 09:36... #2 Anchor on bottom 10:19... #2 Pennant back on rig
P1	P	M4		08:45	10:30	1.75		Continued to ballast down rig
P1	P	M3		10:30	11:30	1.00		Picked up and racked back 5 stands of 5in DP. 2 Stands of 5in HWDP. 2 Stands of 8in DCs. Made up cement stand and racked back. Made up 30in RT to stand of 5in DP and racked back.
P2	P	G2		11:30	17:30	6.00		Picked up and made up 26in bit, 36in hole opener, float sub and Anderdrift tool. Made up to DCs and RIH
P2	P	G6		17:30	20:30	3.00		Held shallow gas JSA on Drill floor prior to spud in
P2	P	G23		20:30	20:45	0.25		Filled pipe. Tagged sea bed at 95.5mRT MSL (Tide Corrected). Calibrated logger's instrumentation. Tested survey with Anderdrift tool above sea bed. 0deg
P2	P	G8		20:45	21:00	0.25		Spudded first well from 95.5m to 155.0mRT MSL. Spudded first 4m with 300gpm 0-2k WOB. Continued drilling ahead slowly building flow from 300gpm to 1000gpm. WOB from 2k to 5k. RPM from 40 to 70. Pumped 2 x 100bbl PHG pills per stand. Took Anderdrift survey on connections
P2	P	D2		21:00	23:00	2.00	155.0	Pumped 150bbl PHG sweep. Took Anderdrift survey on bottom (0deg).
P2	P	F4		23:00	23:30	0.50	155.0	Performed wiper trip to 109m
P2	P	G8		23:30	24:00	0.50	155.0	
Date : 06 Sep 2009				Daily Cost : AUD 721,000				Report Number : 5
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P2	P	G8		00:00	00:30	0.50	155.0	RIH. No hole problems. Tagged fill (1.5m). Washed fill to bottom at 155.0m
P2	P	F4		00:30	01:00	0.50	155.0	Circulated 2 x hole volumes of PHG mud (480bbl).
P2	P	G6		01:00	03:30	2.50	155.0	POOH. Racked BHA. Laid out bit, hole opener, Anderdrift and float sub.
P3	P	G1		03:30	04:15	0.75	155.0	Rigged up to run 30in casing.
P3	P	G23		04:15	04:30	0.25	155.0	Held pre job JSA on running casing
P3	P	G9		04:30	07:30	3.00	155.0	Picked up shoe, checked flow through float valve. Continued to make 30in intermediate joints, x/o and well head jt to 58m.
P3	P	G9		07:30	08:00	0.50	155.0	Ran 5 jts of 5in drill pipe inside 30in casing as cement stinger.
P3	P	G9		08:00	10:00	2.00	155.0	Made up 30in RT to 30in housing. Lowered housing and made up to PGB. Installed guide lines to PGB. Checked bullseye 0°
P3	P	G9		10:00	11:00	1.00	155.0	Ran 30in casing in hole on DP to 151.4m. Checked orientation of PGB (243° - 247°). Checked bullseye 0°. Checked height of 30in housing above seabed ~2m.
P3	P	F4		11:00	12:45	1.75	155.0	Rigged up cement hose. Broke circulation with 500gpm, 50psi. Reduced circulation to 350gpm, 50psi. Held cementing JSA while circulating.
P3	P	F3		12:45	13:00	0.25	155.0	Pumped 10bbl seawater with cement unit. Closed low torque and pressure tested surface lines to 1000psi for 5mins. Test ok. Opened low torque valve.
P3	P	F3		13:00	14:00	1.00	155.0	Cemented 30in casing with Cement Unit. Pumped 20bbl sea water followed by 10bbl of seawater with green dye. Pumped 270bbl 15.8ppg class G cement slurry (56MT) at 6BPM. Displaced cement with 21bbls of sea water. Checked bullseye, 0.5° aft.
P3	P	G1		14:00	17:30	3.50	155.0	Checked for back flow. No flow. Rigged down surface lines and flushed same. Waited on cement to harden. Periodically checked bullseye, steady at 0.5° aft, height steady at ~2m.
P3	P	G8		17:30	19:00	1.50	155.0	Unlatched 30in RT with 5 turns to right. POOH and racked back 5in DP. Laid out RT and TIW, side entry sub from cement stand. No change in bullseye (0.5° aft) No change in well head height ~2m.

Wellname : Spikey Beach-1	Drilling Co :	Rig : Ocean Patriot
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P4	P	G2		19:00	24:00	5.00	155.0	Offline: Worked #3 anchor. Brought in 'Swift' to re-set #3 anchor. Picked up 5in DP from deck and racked back 33 stands in derrick. Offline: Worked #3 anchor. 20:20hrs Cross tension of 200mt between # 3 / # 7 Anchor winch successfully completed.
Date : 07 Sep 2009				Daily Cost : AUD 701,000				Report Number : 6
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P4	P	G2		00:00	04:00	4.00	155.0	Picked up 5in DP from deck. 26 stands picked up. Total of 67stds 5in DP racked back in derrick
P4	P	G2		04:00	05:30	1.50	155.0	Made up 3 jts of 8in DCs and racked stand back in derrick
P4	P	G2		05:30	06:30	1.00	155.0	Performed rig maintenance while waited on jars to be off loaded from Emerald.
P4	P	G2		06:30	07:30	1.00	155.0	Pick up 2 x 8in DCs and made up to drilling jar. Racked stand back in derrick
P4	P	G2		07:30	09:00	1.50	155.0	Changed out Kill Hose in Moonpool.
P4	P	G2		09:00	12:00	3.00	155.0	Offline: Prepared MWD/LWD equipment. Made up 18.75in WHRT and racked back in derrick. Made up Dowell cement head and racked back in derrick.
P4	P	G11		12:00	13:00	1.00	155.0	Offline: Prepared MWD/LWD equipment. Rig serviced Top Drive and TDS Dolls.
P4	P	G6		13:00	16:00	3.00	155.0	Offline: Prepared MWD/LWD equipment. Schlumberger MWD Engineers prepared and programmed tools for BHA. (Held shallow gas JSA with Drill Crews. Shell tested choke manifold valves #7 & #8 to 15,000psi. Completed Kill hose change out in moonpool).
P4	P	G6		16:00	19:30	3.50	155.0	Made up Drilling Stand with bit, n/bit stab, Arc-9 tool, stab, MWD P/Pulse, Sonic Vision 900. Shallow tested Schlumberger tools.
P4	P	G6		19:30	21:00	1.50	155.0	Made up BHA. Entered well head at 20:00hr. Tag TOC at 148.4mRT MSL.
P4	P	D1		21:00	22:00	1.00	155.0	Drilled out shoe track (600gpm, 60 rpm, 10k WOB.) to bottom of rat hole at 155m. Ream shoe twice. Shoe at 151.4m
P4	P	D2		22:00	23:00	1.00	196.0	Drilled 17.5in hole from 155m to 196m. Maintained 60 rpm until top stabiliser clear of casing. Pump 50bbl PHG every 15m spotted pill around BHA on connections.
P4	P	G6		23:00	23:30	0.50	196.0	POOH from 196m to 140m. Racked back 2 stands of HWDP, made up 1 stand of 8in DCs and ran back to bottom on HWDP.
P4	P	D2		23:30	24:00	0.50	200.0	Drilled 17.5in hole from 196m to 200m. Attempted to take MWD survey. Survey failed due to noise interference of casing.
Date : 08 Sep 2009				Daily Cost : AUD 710,000				Report Number : 7
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P4	P	D2		00:00	13:00	13.00	816.0	Drilled 17.5in hole from 200m to 816m. Pump 50bbl PHG sweeps every 15m. Spotted PHG pill around BHA on connections. Took MWD Survey every 90m. 8-20k WOB, 1100gpm 2950psi, 140rpm, 7kft-lbs torque.
P4	P	F4		13:00	15:00	2.00	816.0	Took final survey 0.18deg at 803.60mRT MSL. Circulated 2 x bottoms up. Flow checked with ROV, well was static.
P4	P	G8		15:00	19:30	4.50	816.0	Displaced well with 800bbl PHG mud POOH from 816m. Worked through and cleaned tight spots from 725m - 629m, max overpulls 30klbs - 40klbs. Required no pumping or back reaming. From 629m continued to POOH with no issues.
P4	P	G6		19:30	21:30	2.00	816.0	Racked back BHA. Laid out Schlumberger MWD/LWD tools. Broke off Hughes GX-C1V (graded 1,1,WT,A,E,In,N,TD).
P5	P	G9		21:30	23:00	1.50	816.0	Cleared rig floor of excess equipment Rigged up to run 13.375in casing. Held JSA on drill floor with all involved parties
P5	P	G9		23:00	24:00	1.00	816.0	Made up shoe jt to float jt. Tested flow through valves. Baker locked joints.
Date : 09 Sep 2009				Daily Cost : AUD 711,000				Report Number : 8
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P5	P	G9		00:00	06:00	6.00	816.0	Made up and baker locked third joint of casing. Installed centralising ropes to guide lines. Ran 13.375in casing from 32m to 701m (entered well head at 01:15). Broke circulation at 20in conductor shoe. Filled every joint on the run. No reject joints. No hole problems RIH. Completed deck check of remaining joints.
P5	P	G9		06:00	07:00	1.00	816.0	Rigged down 500t elevators, bales and removed fill up tool.

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P5	P	G9		07:00	08:00	1.00	816.0	Made up 5in handling equipment
P5	P	G9		08:00	09:00	1.00	816.0	Picked up and made up 18¾in well head joint.
P5	P	G9		09:00	09:30	0.50	816.0	Laid out 18.75in handling WHRT. Made up cement plug assembly to WHRT stand and made up to well head.
P5	P	G9		09:30	10:00	0.50	816.0	Circulated with seawater through TDS with sea water.
P5	P	G9		10:00	10:30	0.50	816.0	300gpm, 400psi. Checked running tool for leaks
P5	P	F4		10:30	11:30	1.00	816.0	Ran 13.375in casing in on drill pipe from 702m to 796m.
P5	P	F3		11:30	12:00	0.50	816.0	Made up cement stand and washed down to 805m, 300gpm, 150psi.
P5	P	F3		12:00	13:30	1.50	816.0	Landed out 18.75in WH with 100k down. Took 50k over pull to confirm WH latched in 30in housing. Checked bullseyes, 0.5 degree aft (no change). Set string weight at 10k over landing string weight (145k MD) Circulated at 300gpm, 200psi. Held pre cement job JSA during circulation
P5	P	F3		13:30	14:30	1.00	816.0	Note:- Shoe at 805.74m, Well Head at 92.5m.
P5	P	F3		14:30	15:00	0.50	816.0	Rigged up cement lines. Pumped 5bbls of seawater with cementing unit. Pressure tested surface lines to 4000psi for 5 minutes, OK.
P5	P	G5		15:00	17:30	2.50	816.0	Dropped bottom dart. Displaced with 6.2 bbls seawater. Observed landing and shearing out bottom plug of 1000psi. Mixed and pumped 348bbl 12.5ppg lead slurry (37MT G cement), followed by 90bbl 15.8ppg tail slurry (18MT G cement). No indication of bottom plug landing on float collar. Dropped top dart. Displaced with 10 bbls, observing top plug releasing at 2200psi. Closed cement unit discharge valve (to allow for cleaning of unit) and opened TIW above cement head.
P6	P	G23		17:30	17:45	0.25	816.0	Displaced cement with rig pumps. Pumped 343bbls of seawater. Flushed cement head while circulating. Prior to bump, opened cement unit lines to string for monitoring of pressure. Bumped top plug (97% eff) to 2500psi. Held pressure for 15mins. Released pressure via cement unit and checked for backflow. 5 bbls returned with no backflow.
P6	P	G23		17:45	19:30	1.75	816.0	Rigged down surface lines and flushed through same.
P6	TP	G1	TP	19:30	20:00	0.50	816.0	Released running tool with 8 turns to right. POOH from 92m, laid out RT, plug basket. Laid out DSE cement head. Laid out stand of 9.5in DCs
P6	P	G13		20:00	21:30	1.50	816.0	Held JSA with crew on rigging up and running BOPs
P6	P	G13		21:30	24:00	2.50	816.0	Rigged up to run BOPs

Date : 10 Sep 2009				Daily Cost : AUD 722,000				Report Number : 9
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P6	P	G13		00:00	01:15	1.25	816.0	Picked up BOP off carrier. Skidded carrier back to BOP deployment position and lowered BOP into carrier guides. Installed beacons onto BOP. Deployed beacon arm.
P6	P	G13		01:15	03:00	1.75	816.0	Lowered BOP through splash zone. Made up 45ft and 10ft riser pup joints.
P6	P	G13		03:00	03:45	0.75	816.0	Pressure tested kill and choke lines 250psi/3000psi 5min/10min.
P6	P	G13		03:45	05:30	1.75	816.0	Picked up slip jt and landing jt. Ran BOP down to 85m
P6	P	G13		05:30	09:30	4.00	816.0	Installed kill and choke gooseneck connections to slip joint. Pressure tested kill and choke lines to 250psi/7500psi 5min/10mins.
P6	P	M7		09:30	10:30	1.00	816.0	Re-torqued new kill hose connections and retested kill hose to 250psi/15000psi. Re-torqued kill hose connections.
P6	P	G13		10:30	12:00	1.50	816.0	Picked up SDL ring. Installed pod hoses on storm saddles
P6	P	G13		12:00	13:00	1.00	816.0	Landed BOPs on well head. Latched connector and confirmed latch with 50k overpull on connector
P6	P	G13		13:00	13:30	0.50	816.0	Installed RBQ plated to pod reels
P6	P	G13		13:30	14:30	1.00	816.0	Rigged up and pressure tested BOP connector 250psi 5min / 2750psi 10mins. Good test
P6	P	G13		14:30	16:30	2.00	816.0	Scoped out slip joint. Laid out landing joint. Laid out riser handling equipment.
P6	P	G13		16:30	18:00	1.50	816.0	Picked up and installed diverter assembly
P11	P	G6		18:00	21:00	3.00	816.0	Made up 12.25in drilling BHA. Down hole motor, and Schlumberger ARC-8, Telescope 825NF, Sonicvision 825, ADN-8 logging assembly
P11	P	G6		21:00	21:30	0.50	816.0	Shallow tested Schlumberger down hole tools. 600gpm, 600psi
P11	P	G6		21:30	22:00	0.50	816.0	Loaded radioactive source in ADN-8 tool
P11	P	G6		22:00	23:30	1.50	816.0	Continued to make up 12.25in BHA to 213.9m

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P11	P	M7		23:30	24:00	0.50	816.0	Installed diverter bag in diverter housing
Date : 11 Sep 2009				Daily Cost : AUD 1,004,000				Report Number : 10
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P11	P	G8		00:00	00:30	0.50	816.0	Ran in hole to 336m.
P11	P	G15		00:30	00:45	0.25	816.0	Shallow tested Schlumberger down hole tools. 650gpm, 1000psi. Good test.
P11	P	P3		00:45	01:30	0.75	816.0	Performed function and pumping exercise on diverter overboard system.
P11	P	G13		01:30	03:00	1.50	816.0	Performed full function test on BOPs. BOP functions tested on Blue pod from Drill Floor and on Yellow pod from TP's remote panel
P11	P	P3		03:00	03:30	0.50	816.0	Closed annular and performed choke well kill drills with drill crew
P11	P	G8		03:30	05:30	2.00	816.0	Ran in hole from 330m and tagged TOC at 794m. (Held trip drill with drill crew)
P11	P	D1		05:30	07:30	2.00	816.0	Drilled out shoe track. Displaced well to 9.0ppg KCl/Polymer/Klastop mud while drilled out shoe track. Parameters WOB: 10-20klbs, 40RPM (108RPM at bit). Flow 605gpm, Torque: 1-5kft-lbs.
P11	P	D2		07:30	07:45	0.25	819.0	Drilled 12.25in hole from 816m to 819m
P11	P	F4		07:45	08:00	0.25	819.0	Circulated and conditioned mud. 9.0ppg in and out.
P11	P	E1		08:00	09:30	1.50	819.0	Pulled back into shoe and performed LOT. 460psi with 9.0ppg mud. EMW 12.3ppg
P11	P	D2		09:30	18:00	8.50	1,452.0	Drilled 12.25in hole from 816m to 1452m. Took MWD survey every 90m. Weighed mud up to 9.4ppg by 1360m. WOB: 20-35 (Max)Klbs, 920gpm, 2750psi, 140 rpm, 3-5kft-lb torque, Drilled with max ROP.
P11	P	D2		18:00	24:00	6.00	1,504.0	Drilled 12.25in hole from 1452m to 1504m at 930gpm and controlled ROP of 15-20 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. WOB: 5klbs, 920gpm, 2800psi, 145 rpm, 3-5kft-lb torque.
Date : 12 Sep 2009				Daily Cost : AUD 845,858				Report Number : 11
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P11	P	D2		00:00	21:15	21.25	1,870.0	Drilled 12.25in hole from 1504m to 1870m at controlled ROP of 15-20 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. Observed consistent splintery cuttings, commenced weighing mud up to 9.8ppg at 1590m. Observed splintery cuttings on riser boost, so further increased mud weight to 10ppg at 1810m. WOB: 5klbs, 920gpm, 2850psi, 145 rpm, 3-15kft-lb torque (Max 26kft-lbs and string stalling in ratty formation).
P11	P	D2		21:15	24:00	2.75	1,907.0	Drilled 12.25in hole from 1870m to 1907m at controlled ROP of up to 40 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. WOB: 5-10klbs, 920gpm, 2850psi, 150 rpm, 3-15kft-lb torque (Max 26kft-lbs and string stalling in ratty formation).
Date : 13 Sep 2009				Daily Cost : AUD 770,849				Report Number : 12
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P11	P	D2		00:00	09:00	9.00	2,100.0	Drilled 12.25in hole from 1907m to 2100m at controlled ROP of up to 40 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. WOB: 5-10klbs, 920gpm, 3200psi, 150 rpm, 3-15kft-lb torque (Max 26kft-lbs and string stalling in ratty formation).
P11	P	F4		09:00	11:00	2.00	2,100.0	Pumped 200bbl hi vis sweep and circulated well clean.
P11	P	G8		11:00	12:30	1.50	2,100.0	Flow checked well 10mins. Well static. POOH from 2100m to 1606m. No hole problems.
P11	P	M7		12:30	14:00	1.50	2,100.0	Re logged with Schlumberger LWD from 1606m to 1540m.
P11	P	G8		14:00	17:00	3.00	2,100.0	Pumped slug and POOH from 1540m to 213m. No hole problems.
P11	P	G6		17:00	20:00	3.00	2,100.0	Racked back 1 std of HWDP and 1 std of 8in DCs. Laid out 3 x 5in HWDP, 8 x 8in DCs and Drilling Jars.
P11	P	G6		20:00	20:30	0.50	2,100.0	Removed radioactive source from Schlumberger ADN tool
P11	P	G6		20:30	24:00	3.50	2,100.0	Cranes shut down due to high winds. Racked back Schlumberger LWD tools in derrick. Downloaded tools.
Date : 14 Sep 2009				Daily Cost : AUD 791,293				Report Number : 13
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P11	P	G6		00:00	00:30	0.50	2,100.0	Broke off bit (1-1-CT-N-X-1-ER-TD). Racked back mud motor in derrick on double of DP. (Bearing play in motor 5mm)
P21	P	G6		00:30	01:30	1.00	2,100.0	Made up cementing stand and stood back in derrick.
P21	P	G6		01:30	02:00	0.50	2,100.0	Prepared to run 2.875in tubing cement stinger.

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P21	P	G2		02:00	04:30	2.50	2,100.0	Wind dropped below 40knts allowing cranes to resume work. Laid out Schlumberger MWD/LWD tools and mud motor.
P21	P	G2		04:30	06:30	2.00	2,100.0	Rigged up 2.875in stinger handling equipment and made up 8 joints of 2.875in cement stinger to 98m
P21	P	G8		06:30	09:30	3.00	2,100.0	Ran stinger in hole to 1620m
P21	P	G8		09:30	10:30	1.00	2,100.0	Spotted 50bbl 12.6ppg hi vis pill on bottom. Pulled out to 1520m and made up cement stand.
P21	P	G1		10:30	11:00	0.50	2,100.0	Held JSA. Rigged up surface lines and pressure tested same to 2000psi
P21	P	F3		11:00	11:30	0.50	2,100.0	Dowell mixed and pumped 79bbl of 15.8ppg slurry. (16.3MT G cement, 44bbl of FW, Yield 1.16). Dowell displaced cement slurry with 2bbl FW followed by 72bbl 10ppg mud.
P21	P	G8		11:30	13:00	1.50	2,100.0	Racked cement stand back in derrick. POOH from 1520m to 1450m slowly
P21	P	F4		13:00	14:00	1.00	2,100.0	Rigged up and reverse circulated cement contamination out at 60spm, 300psi. 40bbls contaminated mud dumped at shakers
P21	P	G2		14:00	16:00	2.00	2,100.0	Racked back cement stand and laid out 33 joints of 5in DP
P21	P	G8		16:00	17:30	1.50	2,100.0	Ran in hole and tagged top of cement at 1385m with 5klbs weight down
P21	P	G8		17:30	20:00	2.50	2,100.0	Pumped slug and POOH to 950m. Laid out 42 joints of 5in DP on way out
P21	P	G8		20:00	21:00	1.00	2,100.0	Spotted 50bbl 12.6ppg hi vis pill on bottom and POOH from 950m to 838m
P21	P	G1		21:00	21:15	0.25	2,100.0	Held JSA. Picked up cement head and rigged up surface lines. Positioned at 850m. Pressure tested surface lines to 2000psi
P21	P	F3		21:15	21:45	0.50	2,100.0	Dowell pumped ahead 15bbl FW. Mixed and pumped 81bbl 16ppg cement slurry. (17.2MT G cement, 46bbl of fresh water. Yield 1.13). Dowell displaced slurry with 2 bbl of fresh water followed by 33bbl of 10ppg mud.
P21	P	G8		21:45	22:45	1.00	2,100.0	Racked back cement stand and pulled out slowly from 850m to 637m
P21	P	F4		22:45	23:30	0.75	2,100.0	Made up cement stand and positioned at 650m. Closed upper annular and reverse circulated cement contamination out of well. (37bbl of contaminated mud dumped at shakers.)
P21	P	F4		23:30	24:00	0.50	2,100.0	Lined up to circulate conventionally. Pumped 100bbls mud at high rate to flush pipe. Pumped slug

Date : 15 Sep 2009				Daily Cost : AUD 756,000				Report Number : 14
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P21	P	G2		00:00	03:15	3.25	2,100.0	Racked back 10stds of DP (Total of 850m DP remaining in derrick). Laid out 60 joints of 5in DP and 10 joints of 2.875in cement stinger.
P21	P	G8		03:15	03:45	0.50	2,100.0	Made up jet sub and stand below WBRT. RIH to 80m.
P21	P	G16		03:45	04:15	0.50	2,100.0	Jetted BOP and wellhead 810gpm, 650psi, 30rpm.
P21	P	G10		04:15	05:30	1.25	2,100.0	RIH and engaged WB with RT. Pulled wear bushing free with 30klbs over pull. POOH with wear bushing. Laid out wear bushing and RT. Racked back stand with jet tool.
Offline: Attempted pressure test of cement plug #2 to 1050psi against Blind/Shear rams. Leak in cement unit.								
P21	P	G8		05:30	07:00	1.50	2,100.0	Made up 5in mule shoe and RIH to 316m
P21	P	P1		07:00	07:30	0.50	2,100.0	Closed MPR and pressure tested #2 cement plug to 1050psi for 10minutes. Good test
P21	P	G8		07:30	09:00	1.50	2,100.0	Continued to RIH with 5in DP from 316m to 700m.
P21	P	G2		09:00	11:00	2.00	2,100.0	Pumped slug and POOH to 315m. Laid out 64 joints of 5in DP.
P21	P	G2		11:00	11:30	0.50	2,100.0	Spotted 50bbl 12.6ppg hi vis pill at 315m.
P21	P	F3		11:30	13:00	1.50	2,100.0	Picked up cement stand and spaced out to 215m. Rigged up and tested surface lines to 1000psi. Cement unit mixed and pumped 49bbl of 15.8ppg cement slurry. (10.0MT class G cement, 29.6 bbl of Sea Water. Yield 1.18). Displaced with 2bbl of seawater and 2bbls of 10.0ppg mud.
P21	P	F3		13:00	13:30	0.50	2,100.0	POOH from 215 to 107m
P21	P	F4		13:30	14:00	0.50	2,100.0	Rigged up and reverse circulated out contaminated cement returns at 80spm, 150psi.
P21	P	F4		14:00	15:30	1.50	2,100.0	Lined up to circulate conventionally. Circulated 35bbl of 10.0ppg mud. Lined up to sea water and displaced riser to sea water.
P21	P	G2		15:30	16:30	1.00	2,100.0	POOH. Laid out 12 joints of 5in DP
P21	P	G16		16:30	17:00	0.50	2,100.0	RIH with jet sub and jetted BOPs. 150spm, 400psi. POOH; laid out jet sub, racked back DP stand in derrick.
P21	P	G13		17:00	18:30	1.50	2,100.0	Held JSA and rigged up to recover BOPs.

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P21	P	G13		18:30	20:00	1.50	2,100.0	Made up diverter RT to diverter. Laid out diverter assembly.
P21	P	G13		20:00	21:30	1.50	2,100.0	Made up landing joint to Slip joint. Collapsed slip joint and locked inner barrel.
P21	P	G13		21:30	24:00	2.50	2,100.0	Unlatched BOP and lifted clear of PGB guide posts. Moved rig off location 15m to port. Removed storm saddles, secured SDL ring. Removed goosenecks from slip joint.

Date : 16 Sep 2009				Daily Cost : AUD 718,000				Report Number : 15
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PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P21	P	G13		00:00	01:30	1.50	2,100.0	Laid out landing joint and slip joint.
P21	P	G13		01:30	02:00	0.50	2,100.0	Laid out riser 10ft and 45ft pup joints.
P21	P	G13		02:00	04:00	2.00	2,100.0	Engaged carrier guides with BOP. Removed beacons. Picked up and landed BOP onto carrier. Removed guide lines. Pod guide wires. Disconnected termination spool and riser double. Skidded BOP to starboard park area.
P21	P	G13		04:00	05:00	1.00	2,100.0	Laid out riser double and termination spool
P21	P	G13		05:00	06:30	1.50	2,100.0	Rigged down BOP handling equipment.
P21	P	G6		06:30	07:00	0.50	2,100.0	Made up 18.75in RT to stand and racked in derrick
P21	P	G6		07:00	09:00	2.00	2,100.0	Made up Smith casing cutting and retrieval BHA.
P21	P	G12		09:00	10:00	1.00	2,100.0	Secured cutting BHA to guide lines with rope and RIH to 100m
P21	P	G12		10:00	14:30	4.50	2,100.0	Landed out in well head with latch tool with 10klbs down. Confirmed and maintained latch with 50klbs overpull. Confirmed free turning torque 3kft-lbs. Cut 20in and 30in casing @ 97.1m, 120rpm, 300psi, 5-6kft-lbs. 10:45 Cut 20in. 13:30 Stopped cutting. Overpulled 160klbs, no success. Continued cutting 120rpm, 400psi, 7-8kft-lbs increasing pressure to 800psi with 9-10kft-lbs.
P21	P	G12		14:30	15:00	0.50	2,100.0	Casing cut. Recovered PGB and well head to moonpool. Commenced de-ballasting rig to transit draft at 14:40.
P21	P	G12		15:00	21:00	6.00	2,100.0	Laid out casing cutting BHA. Laid out stand of 8in DCs and remaining DP from derrick. Stopped all deck operations from 17:00 to 19:00 while rig deballasted through transitional zone.
P32	P	M4		21:00	24:00	3.00	2,100.0	Commenced recovery of anchors with Lewek Emerald Anchor #6 PCC to Boat 21:10, Anchor off Bot 21:35, Anchor Racked 23:08, PCC to Rig 23:15. Anchor #2 PCC to Boat 23:35,

Date : 17 Sep 2009				Daily Cost : AUD 688,000				Report Number : 16
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PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P32	P	M4		00:00	17:00	17.00	2,100.0	Anchor #2 Anchor off Bot 00:05, Anchor Racked 01:32, PCC to Rig 01:42. Anchor #3 PCC to Emerald 01:52, Anchor off Bot 02:20, Anchor Racked 04:50, PCC to Rig 04:55. Anchor #7 PCC to Emerald 05:10, Anchor off Bot 05:43, Anchor racked 07:31, PCC back on rig 07:38 07:40 Lewek Swift connected to tow line 08:10 Swift at 300m standing by Anchor #1 PCC to Emerald 08:16, Anchor off Bot 09:10, Anchor racked 10:44, PCC back on rig 10:53 Anchor #5 PCC to Emerald 11:09, Anchor off Bot 11:31, Anchor racked 12:56, PCC back on rig 13:06 Anchor #8 PCC to Emerald 13:20, Anchor off Bot 13:43, Anchor racked 14:58, PCC back on rig 15:05 Anchor #4 PCC to Emerald 15:17, Anchor off Bot 15:53, Anchor racked 16:45, PCC back on rig 16:55
P32	P	M1		17:00	24:00	7.00	2,100.0	17:00 Rig on tow to Western Port 17:10 Rig 1mile from Spikey Beach-1 location 18:00 Lat 40° 25.5'S - Long 145° 50.5'E - Speed 4.5knts - Dist Gone 3nm - DTG 132nm - ETA 22:00 18th 21:00 Lat 40° 11.5'S - Long 145° 44.1'E - Speed 5.2knts -

Wellname : Spikey Beach-1	Drilling Co :	Rig : Ocean Patriot
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								Dist Gone 22nm - DTG 113nm - ETA 21:00 18th 24:00 Lat 39° 50.0'S - Long 145° 38.0'E - Speed 5.7knts - Dist Gone 38nm - DTG 97nm - ETA 20:00 18th
Date : 18 Sep 2009				Daily Cost : AUD 573,000				Report Number : 17
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P32	P	M1		00:00	22:00	22.00		03:00 Lat 39° 42.0'S - Long 145° 32.0'E - Speed 5.0knts - Dist Gone 54nm - DTG 81nm - ETA 19:10 18th 06:00 Lat 39° 27.1'S - Long 145° 25.05'E - Speed 4.6knts - Dist Gone 69nm - DTG 66nm - ETA 19:00 18th 09:00 Lat 39° 15.06'S - Long 145° 20.02'E - Speed 3.9knts - Dist Gone 80.8nm - DTG 54.2nm - ETA 19:00 18th 12:00 Lat 39° 03.3'S - Long 145° 11.4'E - Speed 4.3knts - Dist Gone 92.8nm - DTG 42.2nm - ETA 19:00 18th 15:00 Lat 38° 55.0'S - Long 145° 11.0'E - Speed 3.1knts - Dist Gone 104nm - DTG 31nm - ETA 22:00 18th 18:00 Lat 38° 44.0'S - Long 145° 07.0'E - Speed 3.5knts - Dist Gone 116nm - DTG 19nm - ETA 22:00 18th 21:00 Lat 38° 36.0'S - Long 145° 02.5'E - Speed 2.8knts - Dist Gone 122.3nm - DTG 10.5nm - ETA 22:00 18th 21:40 Pilot on board tow vessel Swift 22:00 End of tow to Western Channel Entrance Rig under pilotage tow to Western Port Anchorage 24:00 Lat 28° 28.06'S - Long 145° 08.55'E - Speed 4.3knts - Dist Gone 125nm - DTG 6.3nm - ETA 22:00 18th
P32	P	M1		22:00	24:00	2.00		
Date : 19 Sep 2009				Daily Cost : AUD 477,000				Report Number : 18
PHSE	CLS	OP	RC	From	To	Hrs	Depth (m)	Activity Description
P32	P	M1		00:00	02:00	2.00		Rig under pilotage tow to Western Port Anchorage
P32	P	M4		02:00	14:30	12.50		01:20 Slow down to secure Emerald 01:58 #5 PCC passed to Emerald 03:00 #5 Anchor on Bottom 04:10 #5 PCC Passed to rig 04:45 #4 PCC passed to Emerald 05:05 #4 Anchor on Bottom 05:25 #4 PCC Passed to rig 05:45 #1 PCC passed to Emerald 06:01 #1 Anchor on Bottom 06:30 #1 PCC Passed to rig 06:50 #8 PCC passed to Emerald 07:15 #8 Anchor on Bottom 07:45 #8 PCC Passed to rig 07:52 #7 PCC passed to Emerald 08:23 #7 Anchor on Bottom 09:05 #7 PCC Passed to rig 09:25 #6 PCC passed to Emerald 10:00 #6 Anchor on Bottom 10:25 #6 PCC Passed to rig 11:15 #3 PCC passed to Emerald 11:57 #3 Anchor on Bottom Anchor #3 slipping. Reset on bottom at 12:25 12:50 #3 PCC Passed to rig 13:02 #2 PCC passed to Emerald 13:30 #2 Anchor on Bottom 14:30 #2 anchor tensioned Rig off contract with Beach Petroleum at 14:30hrs EST

Wellname : Spikey Beach-1	Drilling Co :	Rig : Ocean Patriot
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Attachment 9

Final Rig Position Summary (Neptune MS)

PRELIMINARY DRILLING RIG POSITION NOTICE

Ocean Patriot Position at Western Port Bay

To: **Australian Drilling Associates**
Level 5 Rialto North Tower
525 Colin Street
Melbourne Vic 3000

From: **Neptune Geomatics**
Job No.: **9A415**
Signed:



Scott Hunter
Surveyor

Date: **19 September 2009**

Attn.: **ADA Drilling Supervisor**
Ocean Patriot Ballast Control
Ocean Patriot Barge Captain

opds@australiandrilling.com.au
patriot_bc@dodi.com
patriot_capt@dodi.com

Copy: **Anthony Kerr**
Jason French
Vanessa Knight

AKerr@neptunems.com
JFrench@neptunems.com
VKnight@neptunems.com

The final surface position of the Ocean Patriot Drill Stem at the Western Port Bay location was computed from Veripos Standard Differential GPS data recorded between 1439 and 1539 on 19 September 2009. The GPS data were recorded following the completion of final anchor tensioning operations. The following results were computed:

The final Western Port Bay Differential GPS Surface Position of the Ocean Patriot Drill Stem is:

Datum: Geocentric Datum of Australia 1994 (GDA94)

Latitude: 38° 26' 21.531" South

Longitude: 145° 16' 23.090" East

Projection: Map Grid of Australia (MGA) Zone 55 C.M. 147° East

Easting: 349 284.79m

Northing: 5 744 028.04m

The final Western Port Bay Differential GPS surface position of the Ocean Patriot drill stem is 14.62m on a bearing of 55.8° True from the intended location.

The final Rig Heading is 94.7° True.

Note: The following 7-parameter datum transformation was used to convert ITRF2000 coordinates to GDA94 coordinates (Epoch 2009.5):

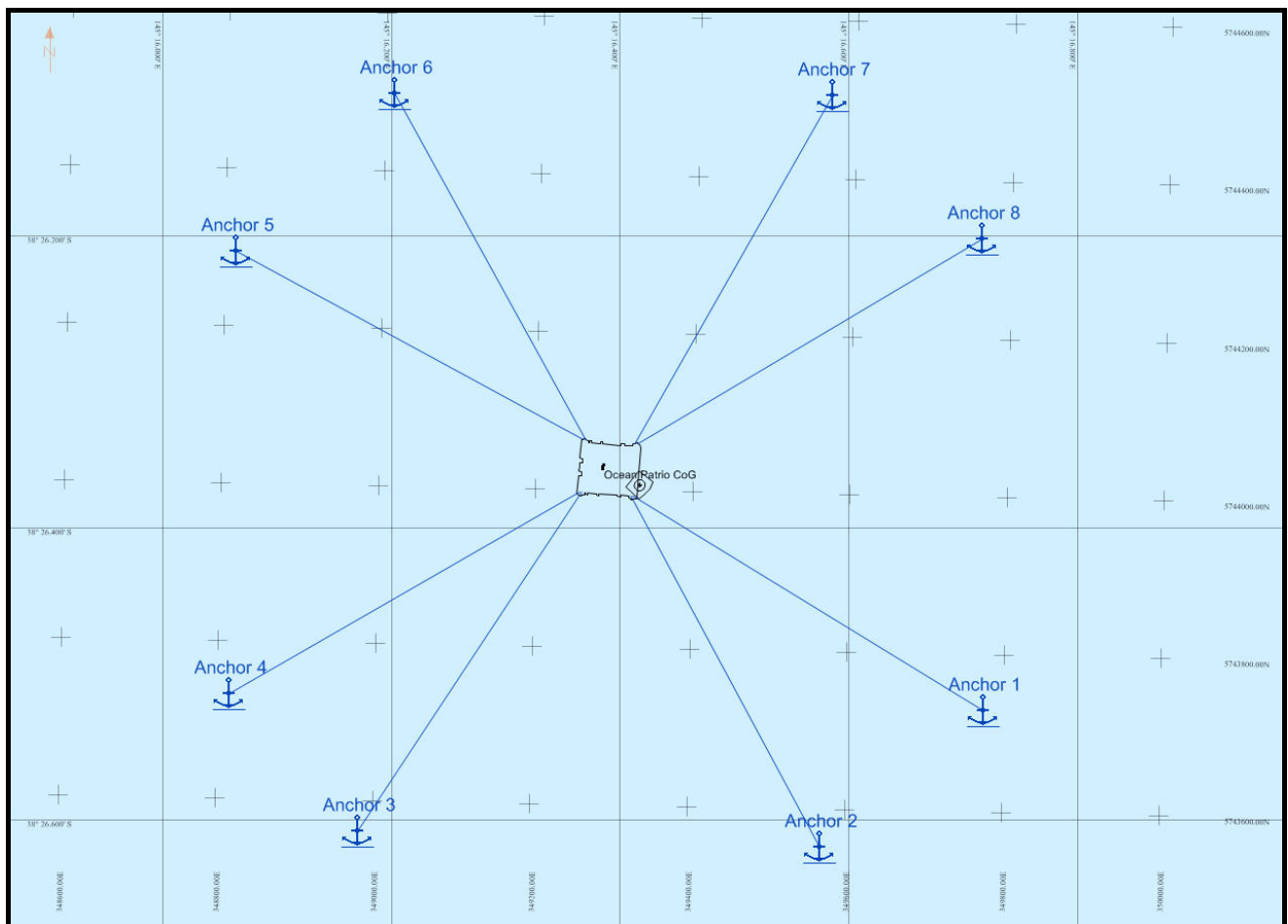
Dx	=	+0.028 40m
Dy	=	-0.052 80m
Dz	=	-0.120 90m
Rx	=	+0.018 588"
Ry	=	+0.015 736"
Rz	=	+0.019 196"
Scale	=	+0.002 824 p.p.m.

The final anchor positions corrected for catenary are as follows:


Anchor array of the Ocean Patriot at Western Port Bay							
Datum	Geocentric Datum of Australia 1994 (GDA94)						
Projection	Map Grid of Australia (MGA) Zone 55 C.M. 147° East						
Anchor	Easting (m)	Northing (m)	Horizontal Distance (m)	Bearing (True)	Chain Out (m)	Depth (m)	Tension (T)
1	349 744.25	5 743 729.93	520.4	121.3	522	19	82
2	349 569.78	5 743 552.98	504.4	151.6	506	19	85
3	348 981.61	5 743 561.53	515.4	213.6	517	19	81
4	348 814.63	5 743 733.59	513.4	240.3	515	19	84
5	348 812.84	5 744 294.18	503.3	298.5	505	19	74
6	349 010.76	5 744 498.50	503.3	331.1	505	19	77
7	349 568.58	5 744 505.56	508.3	29.6	510	19	74
8	349 761.81	5 744 326.96	509.3	59.3	511	19	77

Notes:

- Catenary calculations were performed in MK Catenary with chain out and tension values correct at time of issue.



Ocean Patriot anchor array at Western Port Bay

From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


RIG MOVE REPORT

OCEAN PATRIOT

Basker 7 to Spikey Beach 1

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5.0	RECOMMENDATIONS & COMMENTS	7

From: Basker 7 To: Spikey Beach 1 Document Number: 0290P	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


1.0 MOVE INFORMATION

DEPARTURE LOCATION	NAME:	<i>Basker 7</i>
	CLIENT:	<i>ROC Oil (ANZON)</i>
	LATITUDE:	<i>38° 17.'989 S</i>
	LONGITUDE:	<i>148° 42.'349 E</i>
	HEADING:	<i>≈ 249° (T)</i>
	WATER Depth:	<i>≈ 154 m</i>
ARRIVAL LOCATION	NAME:	<i>Spikey Beach 1</i>
	CLIENT:	<i>Beach Petroleum (Australian Drilling Associates)</i>
	LATITUDE:	<i>40° 28.'9 S</i>
	LONGITUDE:	<i>145° 52.'4 E</i>
HEADING:	PROPOSED:	<i>≈ 240°</i>
Position Tolerance	Heading	<i>-</i>
	DISTANCE:	<i>+/- 5.0 m</i>
	WATER DEPTH:	<i>≈ 76 m</i>
LOCATION APPROVAL REFERENCE:		<i>John LEBOURHIS & Associates, Inc. DOD09-0501 Dated 25 Aug 2009</i>
FINAL PROCEDURE REFERENCE:		<i>OCEAN PATRIOT ~ Basker 7 to Spikey Beach 1~ Rev 7</i>

2.0 DEPARTURE DETAILS

The location departure operation, from Basker 7 location, was completed by Offshore Marine Solutions on behalf of ROC OIL / ANZON.

The "OCEAN PATRIOT" was handed over to Beach Petroleum / Australian Drilling Associates at 1.0 nm from the Basker 7 location.

From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	

3.0 PASSAGE DETAILS

3.1 PASSAGE DETAILS

<i>TOW VESSEL</i>	<i>LEWEK EMERALD</i>	<i>BRIDLE PASSED</i>	-	<i>BRIDLE RETURNED</i>	<i>Fri 04 Sep 09 @ 1906</i>
<i>TOW COMMENCED</i>	<i>Wed 02 Sep 09 @ 1230</i>	<i>TOTAL DISTANCE</i>	<i>≈ 184 nm</i>	<i>TOW VESSEL POWER (avge)</i>	-
<i>TOW COMPLETED</i>	<i>Fri 04 Sep 09 @ 0630</i>	<i>GENERAL AVGE SPEED</i>	<i>≈ 4.40 kts</i>	<i>TOW WIRE TENSION (avge)</i>	<i>≈ 120 mt</i>
<i>TOTAL TIME</i>	<i>01 d 18 h 00 m</i>				
<i>WEATHER</i>	<i>Fine with light winds through out the rig move</i>				


4.0 ANCHOR DEPLOYMENT

4.1 SUPPORT VESSEL DEATILS

VESSEL NAME	MASTER	Horse Power	Bollard Pull	Manned for 24hr Ops	Tow wire hours (prior)	Work Wire hours (prior)
<i>LEWEK EMERALD</i>	<i>Palle STEENSEN [Gary MORRISON]</i>	<i>12400 bhp</i>	<i>150 mt</i>	<i>Yes</i>	<i>636.40 hrs</i>	-
<i>LEWEK SWIFT</i>	<i>Norm POTTER [Justin SMITH]</i>	<i>13340 bhp</i>	<i>180 mt</i>	<i>Yes</i>	<i>Not Reported</i>	-

4.1 RIG MOVE SENIOR PERSONNEL:

NAME	POSITION	COMPANY
<i>Rodney DOTSON</i>	<i>OIM</i>	<i>Diamond Offshore</i>
<i>Dennis PHILLIPS</i>	<i>Barge Master</i>	<i>Diamond Offshore</i>
<i>Timothy LEE</i>	<i>Drilling Supervisor</i>	<i>Australian Drilling Associates</i>
<i>Noel COBB</i>	<i>Marine Representative</i>	<i>Australian Drilling Associates</i>

From: Basker 7 To: Spikey Beach 1 Document Number: 0290P	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


4.2 ANCHOR DEPLOYMENT TIMES

ANCHOR	AHTS	PCP PASSED		ANCHOR ON BOTTOM		STRIP BACK		PCP RETURNED		TOTAL TIME
		Date	Time	Date	Time	Date	Time	Date	Time	
4	Rig / LEWEK SWIFT	04.09.09	0842	-	1100	-	1110	04.09.09	1148	03 h 06 m
8 ⁽¹⁾	LEWEK SWIFT	04.09.09	1206	-	1355	-	1400	04.09.09	1436	02 h 30 m
5	LEWEK SWIFT	04.09.09	1454	-	1555	-	1600	04.09.09	1642	01 h 48 m
1	LEWEK SWIFT	04.09.09	1712	-	1800	-	1806	04.09.09	1830	01 h 18 m
7 ⁽²⁾	LEWEK SWIFT	04.09.09	1924	-	2136	-	2142	04.09.09	2218	02 h 54 m
3 ⁽³⁾⁽⁴⁾	LEWEK SWIFT	04.09.09	2236	-	2318	-	2340	05.09.09	0254	04 h 30 m
6	LEWEK SWIFT	05.09.09	0318	-	0354	-	0400	05.09.09	0436	01 h 18 m
2 ⁽⁵⁾	LEWEK SWIFT	05.09.09	0842	-	0936	-	1940	05.09.09	1018	01 h 36 m
3 ⁽⁶⁾⁽⁷⁾	LEWEK SWIFT	06.09.09	1742	-	1910	-	1912	06.09.09	1948	02 h 06 m

Notes


- (1) Vessel worked to re-orient anchor after loosing orientation when anchor lifted off bolster
- (2) Change damaged PCP
- (3) Lost SCR assignment
- (4) Starboard crane fault
- (5) Wait on weather
- (6) Wait on weather
- (7) Re-run anchor

	Date	Time
Time Commence Anchors	04.09.09	0842
Time Completed Anchors	06.09.09	1948
Total Duration (start to finish)	01 d 11 h 06 m	
Total Time (sum of anchor handling)	00 d 21 h 06 m	

From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	

4.3 SUMMARY OF TIMES

ANCHOR	DURATION	EXPLANATION
8 ⁽¹⁾	04.09.09 1224 to 1324	Vessel needed to re-orient anchor prior to running because orientation lost while vessel maneuvering to pick up run line
7 ⁽²⁾	04.09.09 1948 to 2118	Change heavily damaged permanent chain chaser pennant
3 ⁽³⁾	04.09.09 2320 to 2330	Lost SCR assignment [Heaved #7 to tension up #3 to allow LEWEK SWIFT to strip off #3 anchor]
3 ⁽⁴⁾	05.09.09 0025 to 0225	Starboard crane shut down because of cooling system fault
2 ⁽⁵⁾	05.09.09 0436 to 0842	Stand-by until daylight before running #2 due to current and prevailing weather conditions LEWEK SWIFT advised unable to work either #2 or #3 anchor in prevailing weather conditions Wind 325 x 30 kts ⁺ and Hs \approx 3.0 m
3 ⁽⁶⁾	05.09.09 @ 1018 To 06.09.09 @ 1742	Stand-by before re-running #3 due to current and prevailing weather conditions LEWEK SWIFT advised unable to work #3 anchor in prevailing weather conditions Wind 325 x 30 kts ⁺ and Hs \approx 3.0 m
3 ⁽⁷⁾	06.09.09 1742 to 1948	Re-run anchor because anchor will not hold tension (anchor inverted)

From: Basker 7 To: Spikey Beach 1 Document Number: 0290P	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


4.4 FINAL POSITION DETAILS

FINAL RIG HEADING $\approx 246^\circ$ T

ANCHOR	BEARING (deg)	ANCHOR DISTANCE (m)	CHAIN PAYOUT (m)	TENSION (mt)	TOUCH DOWN (m)	WATER DEPTH (m)
1	≈ 270	1075	1085	≈ 119	-	≈ 76
2	≈ 300	1072	1082	≈ 118	-	≈ 76
3	≈ 000	1133	1142	≈ 140	-	≈ 76
4	≈ 029	1140	1148	≈ 160	-	≈ 76
5	≈ 090	1118	1127	≈ 140	-	≈ 76
6	≈ 120	1119	1128	≈ 127	-	≈ 76
7	≈ 179	1089	1198	≈ 130	-	≈ 76
8	≈ 210	1109	1119	≈ 113	-	≈ 76

4.5 PRE-TENSION

ANCHOR	DURATION	KIPS	COMMENT
4 & 8	10 ⁺ mins (completed 04.09.09 @ 2100)	≥ 440 kips	~
1 & 5	10 ⁺ mins (completed 05.09.09 @ 0615)	≥ 440 kips	~
2 & 6	10 ⁺ mins (completed 05.09.09 @ 1415)	≥ 440 kips	~
3 & 7	10 ⁺ mins (completed 06.09.09 @ 2020)	≥ 440 kips	~

From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


5.0 RECOMMENDATIONS & COMMENTS

RECOMMENDATIONS

- The rig move progressed slowly but steadily. The AHTS's correctly discontinued working anchors when the environmental conditions were not conducive to safe anchor handling operations. However environmental conditions in the region are rarely ideal, therefore it is recommended;
 - All parties, at all times maintain a positive and professional but judicious approach to the required anchor handling tasks.**
- The rig anchors appear to be a combination of Stevpris Mk 4 and Mk 5 anchors. As best could be determined, from the deck of the OCEAN PATRIOT, the anchors are set variously at either a 51° or a 32° fluke angle. It is recommended;
 - All anchors be inspected and a record of the fluke angles be maintained on board.**
- As best could be determined, from the deck of the OCEAN PATRIOT, some anchor fluke angle pins appeared to be partially disengaged. It is recommended;
 - All anchors be regularly inspected for fluke angle pin integrity given that the pin retaining mechanism on Mk 5 anchors required frequent inspection and reinstatement.**

COMMENTS

- Both the LEWEK SWIFT and LEWEK EMERALD demonstrated a comfortable power capacity to work the OCEAN PATRIOT in the frequently less than ideal environmental conditions of the Bass Strait.


From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	

Report written and compiled by



Noel Cobb
Master Mariner
Go Offshore

DISCLAIMER SIGNATURE PAGE: This report was compiled without prejudice. The report is written with the interests of the concerned parties and neither the company nor the undersigned shall be held liable whatsoever for any act, error, omission or default in connection therewith.

From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
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RIG MOVE REPORT

OCEAN PATRIOT

Basker 7 to Spikey Beach 1

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From: Basker 7 To: Spikey Beach 1 Document Number: 0290P	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


1.0 MOVE INFORMATION

DEPARTURE LOCATION	NAME:	<i>Basker 7</i>
	CLIENT:	<i>ROC Oil (ANZON)</i>
	LATITUDE:	<i>38° 17.'989 S</i>
	LONGITUDE:	<i>148° 42.'349 E</i>
	HEADING:	<i>≈ 249° (T)</i>
	WATER Depth:	<i>≈ 154 m</i>
ARRIVAL LOCATION	NAME:	<i>Spikey Beach 1</i>
	CLIENT:	<i>Beach Petroleum (Australian Drilling Associates)</i>
	LATITUDE:	<i>40° 28.'9 S</i>
	LONGITUDE:	<i>145° 52.'4 E</i>
HEADING:	PROPOSED:	<i>≈ 240°</i>
Position Tolerance	Heading	<i>-</i>
	DISTANCE:	<i>+/- 5.0 m</i>
	WATER DEPTH:	<i>≈ 76 m</i>
LOCATION APPROVAL REFERENCE:		<i>John LEBOURHIS & Associates, Inc. DOD09-0501 Dated 25 Aug 2009</i>
FINAL PROCEDURE REFERENCE:		<i>OCEAN PATRIOT ~ Basker 7 to Spikey Beach 1~ Rev 7</i>

2.0 DEPARTURE DETAILS

The location departure operation, from Basker 7 location, was completed by Offshore Marine Solutions on behalf of ROC OIL / ANZON.

The "OCEAN PATRIOT" was handed over to Beach Petroleum / Australian Drilling Associates at 1.0 nm from the Basker 7 location.

From: Basker 7 To: Spikey Beach 1 Document Number: 0290P	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	

3.0 PASSAGE DETAILS

3.1 PASSAGE DETAILS

<i>TOW VESSEL</i>	<i>LEWEK EMERALD</i>	<i>BRIDLE PASSED</i>	-	<i>BRIDLE RETURNED</i>	<i>Fri 04 Sep 09 @ 1906</i>
<i>TOW COMMENCED</i>	<i>Wed 02 Sep 09 @ 1230</i>	<i>TOTAL DISTANCE</i>	<i>≈ 184 nm</i>	<i>TOW VESSEL POWER (avge)</i>	-
<i>TOW COMPLETED</i>	<i>Fri 04 Sep 09 @ 0630</i>	<i>GENERAL AVGE SPEED</i>	<i>≈ 4.40 kts</i>	<i>TOW WIRE TENSION (avge)</i>	<i>≈ 120 mt</i>
<i>TOTAL TIME</i>	<i>01 d 18 h 00 m</i>				
<i>WEATHER</i>	<i>Fine with light winds through out the rig move</i>				


4.0 ANCHOR DEPLOYMENT

4.1 SUPPORT VESSEL DEATILS

VESSEL NAME	MASTER	Horse Power	Bollard Pull	Manned for 24hr Ops	Tow wire hours (prior)	Work Wire hours (prior)
<i>LEWEK EMERALD</i>	<i>Palle STEENSEN [Gary MORRISON]</i>	<i>12400 bhp</i>	<i>150 mt</i>	<i>Yes</i>	<i>636.40 hrs</i>	-
<i>LEWEK SWIFT</i>	<i>Norm POTTER [Justin SMITH]</i>	<i>13340 bhp</i>	<i>180 mt</i>	<i>Yes</i>	<i>Not Reported</i>	-

4.1 RIG MOVE SENIOR PERSONNEL:

NAME	POSITION	COMPANY
<i>Rodney DOTSON</i>	<i>OIM</i>	<i>Diamond Offshore</i>
<i>Dennis PHILLIPS</i>	<i>Barge Master</i>	<i>Diamond Offshore</i>
<i>Timothy LEE</i>	<i>Drilling Supervisor</i>	<i>Australian Drilling Associates</i>
<i>Noel COBB</i>	<i>Marine Representative</i>	<i>Australian Drilling Associates</i>

From: Basker 7 To: Spikey Beach 1 Document Number: 0290P	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


4.2 ANCHOR DEPLOYMENT TIMES

ANCHOR	AHTS	PCP PASSED		ANCHOR ON BOTTOM		STRIP BACK		PCP RETURNED		TOTAL TIME
		Date	Time	Date	Time	Date	Time	Date	Time	
4	Rig / LEWEK SWIFT	04.09.09	0842	-	1100	-	1110	04.09.09	1148	03 h 06 m
8 ⁽¹⁾	LEWEK SWIFT	04.09.09	1206	-	1355	-	1400	04.09.09	1436	02 h 30 m
5	LEWEK SWIFT	04.09.09	1454	-	1555	-	1600	04.09.09	1642	01 h 48 m
1	LEWEK SWIFT	04.09.09	1712	-	1800	-	1806	04.09.09	1830	01 h 18 m
7 ⁽²⁾	LEWEK SWIFT	04.09.09	1924	-	2136	-	2142	04.09.09	2218	02 h 54 m
3 ⁽³⁾⁽⁴⁾	LEWEK SWIFT	04.09.09	2236	-	2318	-	2340	05.09.09	0254	04 h 30 m
6	LEWEK SWIFT	05.09.09	0318	-	0354	-	0400	05.09.09	0436	01 h 18 m
2 ⁽⁵⁾	LEWEK SWIFT	05.09.09	0842	-	0936	-	1940	05.09.09	1018	01 h 36 m
3 ⁽⁶⁾⁽⁷⁾	LEWEK SWIFT	06.09.09	1742	-	1910	-	1912	06.09.09	1948	02 h 06 m

Notes


- (1) Vessel worked to re-orient anchor after loosing orientation when anchor lifted off bolster
- (2) Change damaged PCP
- (3) Lost SCR assignment
- (4) Starboard crane fault
- (5) Wait on weather
- (6) Wait on weather
- (7) Re-run anchor

	Date	Time
Time Commence Anchors	04.09.09	0842
Time Completed Anchors	06.09.09	1948
Total Duration (start to finish)	01 d 11 h 06 m	
Total Time (sum of anchor handling)	00 d 21 h 06 m	

From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	

4.3 SUMMARY OF TIMES

ANCHOR	DURATION	EXPLANATION
8 ⁽¹⁾	04.09.09 1224 to 1324	Vessel needed to re-orient anchor prior to running because orientation lost while vessel maneuvering to pick up run line
7 ⁽²⁾	04.09.09 1948 to 2118	Change heavily damaged permanent chain chaser pennant
3 ⁽³⁾	04.09.09 2320 to 2330	Lost SCR assignment [Heaved #7 to tension up #3 to allow LEWEK SWIFT to strip off #3 anchor]
3 ⁽⁴⁾	05.09.09 0025 to 0225	Starboard crane shut down because of cooling system fault
2 ⁽⁵⁾	05.09.09 0436 to 0842	Stand-by until daylight before running #2 due to current and prevailing weather conditions LEWEK SWIFT advised unable to work either #2 or #3 anchor in prevailing weather conditions Wind 325 x 30 kts ⁺ and Hs \approx 3.0 m
3 ⁽⁶⁾	05.09.09 @ 1018 To 06.09.09 @ 1742	Stand-by before re-running #3 due to current and prevailing weather conditions LEWEK SWIFT advised unable to work #3 anchor in prevailing weather conditions Wind 325 x 30 kts ⁺ and Hs \approx 3.0 m
3 ⁽⁷⁾	06.09.09 1742 to 1948	Re-run anchor because anchor will not hold tension (anchor inverted)

From: Basker 7 To: Spikey Beach 1 Document Number: 0290P	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


4.4 FINAL POSITION DETAILS

FINAL RIG HEADING $\approx 246^{\circ}$ T

ANCHOR	BEARING (deg)	ANCHOR DISTANCE (m)	CHAIN PAYOUT (m)	TENSION (mt)	TOUCH DOWN (m)	WATER DEPTH (m)
1	≈ 270	1075	1085	≈ 119	-	≈ 76
2	≈ 300	1072	1082	≈ 118	-	≈ 76
3	≈ 000	1133	1142	≈ 140	-	≈ 76
4	≈ 029	1140	1148	≈ 160	-	≈ 76
5	≈ 090	1118	1127	≈ 140	-	≈ 76
6	≈ 120	1119	1128	≈ 127	-	≈ 76
7	≈ 179	1089	1198	≈ 130	-	≈ 76
8	≈ 210	1109	1119	≈ 113	-	≈ 76

4.5 PRE-TENSION

ANCHOR	DURATION	KIPS	COMMENT
4 & 8	10 ⁺ mins (completed 04.09.09 @ 2100)	≥ 440 kips	~
1 & 5	10 ⁺ mins (completed 05.09.09 @ 0615)	≥ 440 kips	~
2 & 6	10 ⁺ mins (completed 05.09.09 @ 1415)	≥ 440 kips	~
3 & 7	10 ⁺ mins (completed 06.09.09 @ 2020)	≥ 440 kips	~

From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	


5.0 RECOMMENDATIONS & COMMENTS

RECOMMENDATIONS

1. The rig move progressed slowly but steadily. The AHTS's correctly discontinued working anchors when the environmental conditions were not conducive to safe anchor handling operations. However environmental conditions in the region are rarely ideal, therefore it is recommended;
 - **All parties, at all times maintain a positive and professional but judicious approach to the required anchor handling tasks.**
2. The rig anchors appear to be a combination of Stevpris Mk 4 and Mk 5 anchors. As best could be determined, from the deck of the OCEAN PATRIOT, the anchors are set variously at either a 51° or a 32° fluke angle. It is recommended;
 - **All anchors be inspected and a record of the fluke angles be maintained on board.**
3. As best could be determined, from the deck of the OCEAN PATRIOT, some anchor fluke angle pins appeared to be partially disengaged. It is recommended;
 - **All anchors be regularly inspected for fluke angle pin integrity given that the pin retaining mechanism on Mk 5 anchors required frequent inspection and reinstatement.**

COMMENTS

1. Both the LEWEK SWIFT and LEWEK EMERALD demonstrated a comfortable power capacity to work the OCEAN PATRIOT in the frequently less than ideal environmental conditions of the Bass Strait.

From: Basker 7 To: Spikey Beach 1 Document Number: 029OP	RIG Move Report	
	Date: 14 Sep 09	
	OCEAN PATRIOT	

Report written and compiled by



**Noel Cobb
Master Mariner
Go Offshore**

DISCLAIMER SIGNATURE PAGE: This report was compiled without prejudice. The report is written with the interests of the concerned parties and neither the company nor the undersigned shall be held liable whatsoever for any act, error, omission or default in connection therewith.

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Prepared for:
Australian Drilling Associates Pty Ltd

Report No.: 9A409-RR-001-R0
Revision No.: 0
Date: 18 September 2009



Spikey Beach-1 Positioning Report of the Ocean Patriot

**Prepared for
Australian Drilling Associates Pty Ltd**

**Report No.: 9A409-RR-001-R0
Revision No.: 0
Date: 18 September 2009**

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APPENDICES

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APPENDIX C - QINSY CONFIGURATION

APPENDIX D - HEADING SENSOR CALIBRATION

APPENDIX E - POSITION CHECK

APPENDIX F - DAILY OPERATIONS REPORT

ABSTRACT

Neptune Geomatics was contracted by Australian Drilling Associates Pty Ltd (ADA) to provide survey and positioning services for the semi-submersible drilling rig Ocean Patriot and the associated work boats Lewek Swift and Lewek Emerald. Positioning services for the Ocean Patriot move to the Spikey Beach-1 location were supplied for the period 30 August to 7 September 2009. The Spikey Beach-1 location is situated within Permit T/38 in the Bass Strait, Tasmania.

The final surface position of the Ocean Patriot drill stem at the Spikey Beach-1 location was computed by QINSy positioning software from Veripos Standard DGPS measurements recorded between 2216 and 2316 on 5 September 2009, immediately after spudding the well.

Spikey Beach-1 Surface Position

The final Spikey Beach-1 Differential GPS surface position of the Ocean Patriot drill stem is:

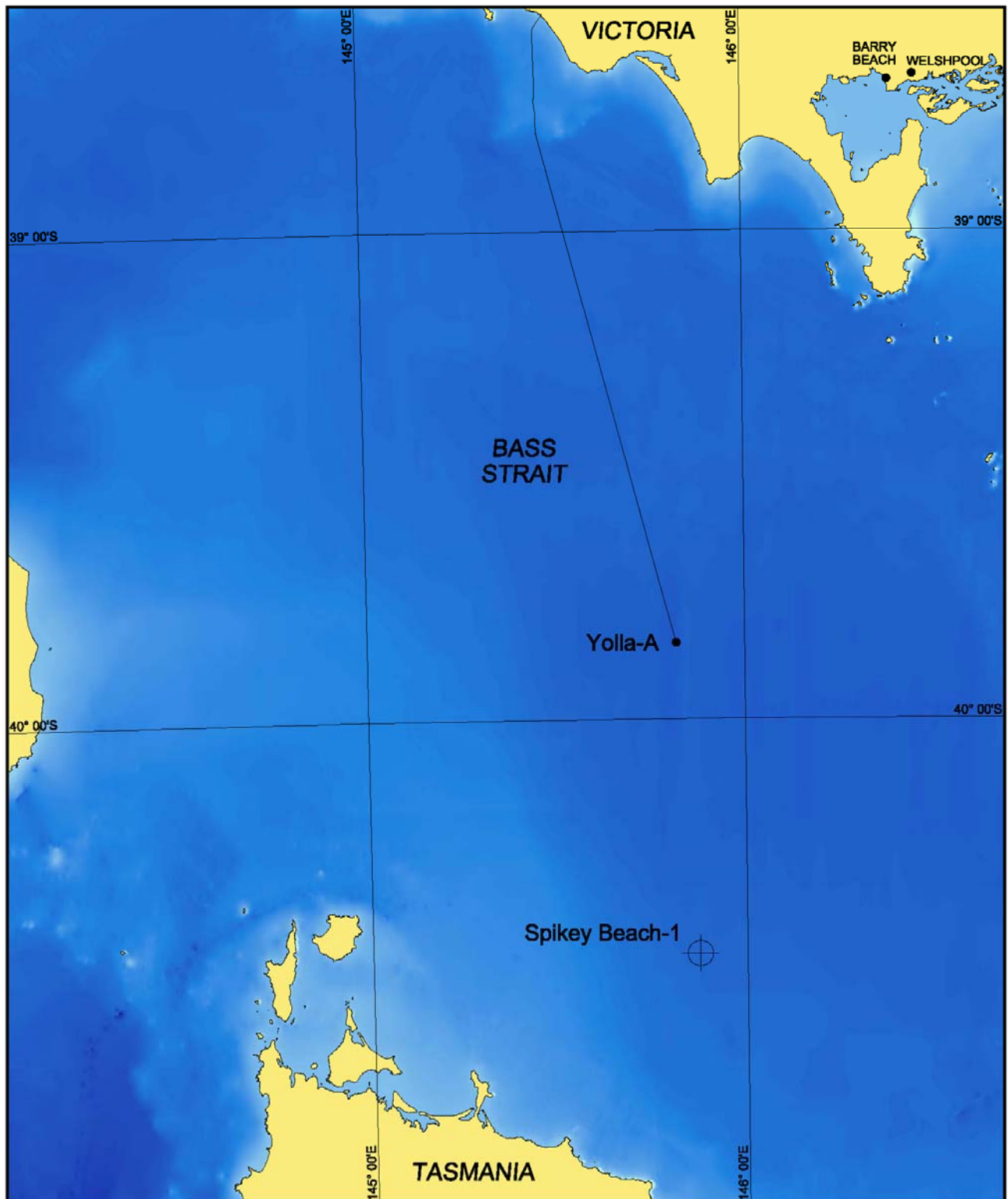
Datum	:	Geocentric Datum of Australia 1994 (GDA94)
Latitude	:	40° 28' 53.879" South
Longitude	:	145° 52' 24.706" East
Projection	:	Map Grid of Australia (MGA) Zone 55 CM 147° East
Easting	:	404 522.80m
Northing	:	5 518 174.63m

The final Spikey Beach-1 location differential GPS surface position of the Ocean Patriot drill stem is 1.84m on a bearing of 74.3° (True) from the intended Spikey Beach-1 location.

Rig Heading : 246.5° True

All times quoted in this report are Australian Eastern Standard Time (UTC + 10 hours).

LOCATION DIAGRAM



1 SURVEY RESULTS

1.1 Differential GPS Surface Position

The Ocean Patriot was positioned at the Spikey Beach-1 location at 2100 on 5 September 2009.

The final surface position of the Ocean Patriot drill stem at the Spikey Beach-1 location was determined between 2216 and 2316 on 5 September 2009. Veripos Standard Differential GPS measurements were recorded and processed within QINSy positioning software to determine the final surface position of the Ocean Patriot drill stem at the Spikey Beach-1 location (Appendix A). Refer to Table 1-1 for the final anchor positions of the Ocean Patriot at the Spikey Beach-1 location.

Final Spikey Beach-1 Location Differential GPS Surface Position of the Ocean Patriot Drill Stem:

The final Spikey Beach-1 location Differential GPS surface position of the Ocean Patriot drill stem is:

Datum	:	Geocentric Datum of Australia 1994 (GDA94)
Latitude	:	40° 28' 53.879" South
Longitude	:	145° 52' 24.706" East
Projection	:	Map Grid of Australia (MGA) Zone 55 CM 147° East
Easting	:	404 522.80m
Northing	:	5 518 174.63m
Final Rig Heading	:	246.5° (True)

Intended Spikey Beach-1 Location:

The intended Spikey Beach-1 location, as provided by ADA was:

Datum	:	Geocentric Datum of Australia 1994 (GDA94)
Latitude	:	40° 28' 53.895" South
Longitude	:	145° 52' 24.631" East
Projection	:	Map Grid of Australia (MGA) Zone 55 CM 147° East
Easting	:	404 521.04m
Northing	:	5 518 174.11m
Positioning Tolerance	:	+/- 10m
Intended Rig Heading	:	240.0° (True)
Heading Tolerance	:	+/- 5°

The final Spikey Beach-1 location differential GPS surface position of the Ocean Patriot drill stem is 1.84m on a bearing of 74.3° (True) from the intended Spikey Beach-1 location.

1.2 Final Spikey Beach-1 Anchor Positions

The final anchor positions, corrected for anchor catenary are as follows:

Datum : Geocentric Datum of Australia 1994 (GDA94)
Projection : Map Grid of Australia (MGA) Zone 55 CM 147° East

Anchor	Easting (m)	Northing (m)	Anchor Distance (m)	Anchor Bearing (True)
1	403 395.76	5 518 166.71	1075.2	269.6
2	403 536.34	5 518 710.11	1072.2	299.8
3	404 512.52	5 519 347.88	1133.0	359.8
4	405 071.64	5 519 220.89	1139.6	28.9
5	405 679.10	5 518 167.48	1118.0	90.1
6	405 534.23	5 517 607.04	1118.6	120.0
7	404 530.08	5 517 039.76	1088.7	179.2
8	403 957.79	5 517 158.56	1108.9	209.9

Table 1-1 Spikey Beach-1 anchor positions

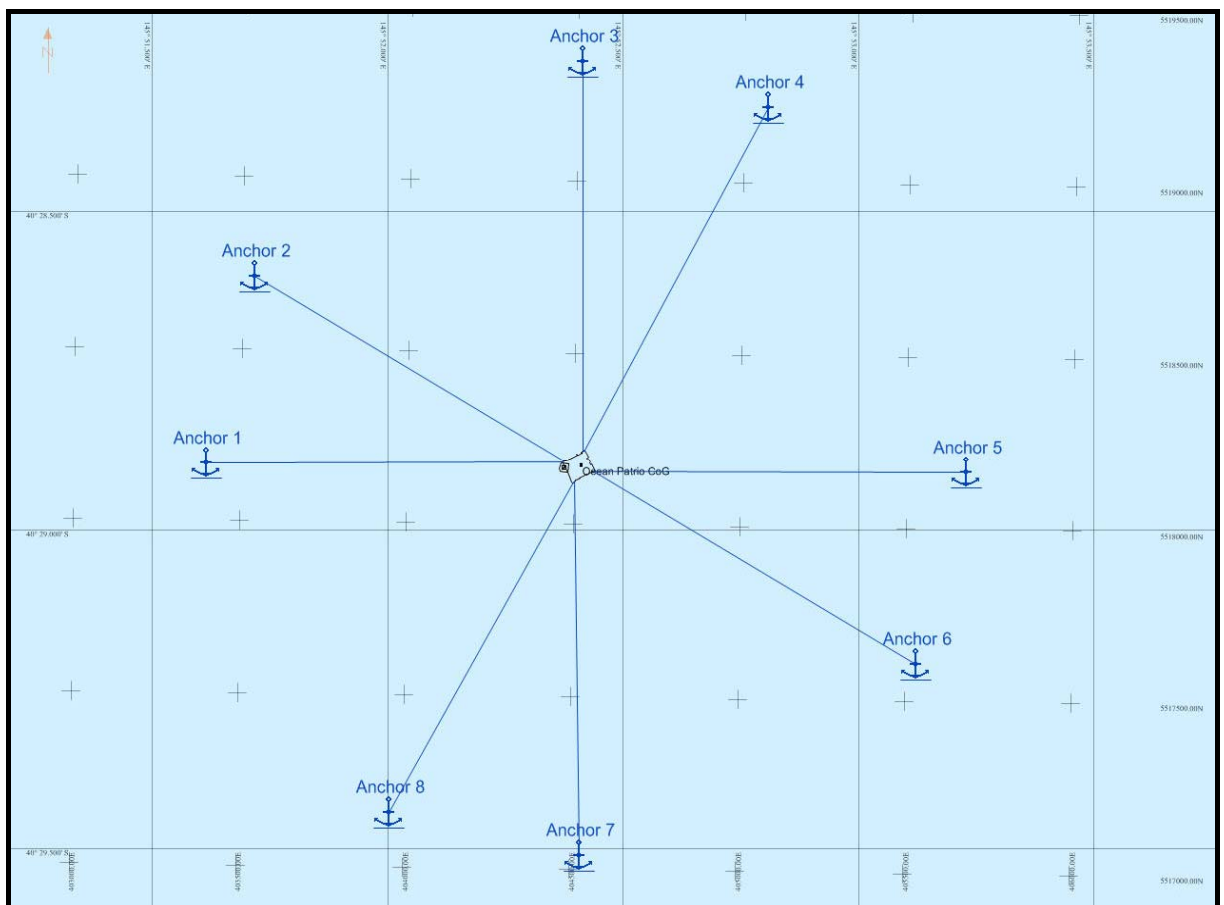


Figure 1-1 Spikey Beach-1 anchor locations

2 HEALTH SAFETY AND ENVIRONMENT

2.1 Health Safety and Environment Goals

The following **Neptune Geomatics** Health Safety and Environment goals were achieved for this project:

- **Neptune Geomatics** personnel were not involved in any health or safety incidents.
- Project operations did not involve any reportable environmental incidents.
- All health safety and environment related events (Project Briefings/Inductions, Job Safety Analysis Reports, Safety Meetings, etc) have been documented within this report.

2.2 Health Safety and Environment Documentation

The following Health Safety and Environment documents were available during project operations:

Neptune Geomatics Document Title	Document Number	Revision
Neptune Geomatics Quality Manual	QM-01	Revision 8
Neptune Geomatics Project Briefing Form	QF-07-10	Revision 0
Neptune Geomatics Job Safety Analysis Report	QF-05-03	Revision 3
Neptune Geomatics Hazard Identification Record	QF-05-05	Revision 2
Neptune Geomatics Incident Report	QF-08-02	Revision 1
Neptune Geomatics Injury Report	QF-08-03	Revision 1
Neptune Geomatics Project Debriefing Form	QF-07-03	Revision 1

Table 2-1 **Neptune Geomatics** health safety and environment documents

2.3 Project Briefings and Inductions

The following Project Briefings and Inductions were undertaken during the Ocean Patriot positioning operations:

Date	Project / Briefing	Location
7 September 2009	Bristow Heli pre-flight safety briefing	Ocean Patriot
8 September 2009	Neptune Geomatics project debriefing	Neptune Geomatics , Perth

Table 2-2 Schedule of project briefings and inductions

2.4 Safety Meetings and Exercises

Safety Meetings and Exercises conducted on the project are listed in the table below. Safety Meetings and Exercises have been documented within the Daily Operations Report. A copy of the Daily Operations Report is included within the Appendix F of this report.

Date	Safety Meeting / Exercise	Location
30 August 2009	Rig Abandonment Drill	Ocean Patriot
30 August 2009	Weekly Safety Meeting	Ocean Patriot
6 June 2009	Rig Abandonment Drill	Ocean Patriot
6 June 2009	Weekly Safety Meeting	Ocean Patriot

Table 2-3 Project safety meetings and exercises

3 SURVEY OPERATIONS

3.1 Scope of Work

Neptune Geomatics was contracted by ADA to provide the following services for rig positioning operations to the Spikey Beach-1 location:

- Operation of QINSy positioning software, Differential GPS (Veripos Standard, Hemisphere Crescent VS110) and heading systems (TSS Meridian gyrocompass, Hemisphere Crescent VS110) onboard the Ocean Patriot.
- Operation of QINSy positioning software, Differential GPS and heading system (Hemisphere Crescent VS110) onboard the work boats Lewek Swift and Lewek Emerald.
- Real time positioning of the Ocean Patriot and Lewek Emerald during the tow and on approach to the Spikey Beach-1 location.
- QINSy display of the bathymetry at the Spikey Beach-1 location.
- QINSy display of the Ocean Patriot tow route, as provided by the Tow Master, for approach to the Spikey Beach-1 location.
- QINSy display of the intended location of the Ocean Patriot drill stem at the Spikey Beach-1 location.
- QINSy display of the intended anchor pattern of the Ocean Patriot at the Spikey Beach-1 location.
- Final surface positioning of the Ocean Patriot drill stem at the Spikey Beach-1 location.
- Documentation / reporting of the Ocean Patriot drill stem position at the Spikey Beach-1 location to ADA.

3.2 Positioning Specifications

The intended location and tolerances of the Ocean Patriot drill stem at the Spikey Beach-1 location, as specified by ADA, were as follows:

Intended Spikey Beach-1 Location:

The intended Spikey Beach-1 location, as provided by ADA was:

Datum	:	Geocentric Datum of Australia 1994 (GDA94)
Latitude	:	40° 28' 53.895" South
Longitude	:	145° 52' 24.631" East
Projection	:	Map Grid of Australia (MGA) Zone 55 CM 147° East
Easting	:	404 521.04m
Northing	:	5 518 174.11m
Positioning Tolerance	:	+/- 10m

Intended Ocean Patriot Heading:

Intended Rig Heading	:	240.0° (True)
Heading Tolerance	:	+/- 5°

3.3 Summary of Events

A Summary of Events during Ocean Patriot positioning operations are listed in the table below. These excerpts have been taken from the Daily Operations Report. A copy of the Daily Operations Report is included within Appendix F of this report.

Date	Time	Comment
1 September 2009	1505	Commence anchor recovery operations
2 September 2009	1230	1Nm off Basker-7 location, change of client
4 September 2009	0630	Arrive on location Spikey Beach-1
5 September 2009	2100	Ocean Patriot drill stem spudded in
6 September 2009	2010	Position and insurance checks complete and accepted by Company Man
7 September 2009	0730	Final position notice issued to Company Man and Barge Captain
7 September 2009	0930	Neptune Geomatics personnel depart Ocean Patriot

Table 3-1 Summary of events

4 OCEAN PATRIOT SENSOR OFFSETS

Offsets for the Ocean Patriot are detailed below. An offset diagram is included in Appendix B of this report.

The QINSy database configuration is included as Appendix C of this report.

Ocean Patriot Sensor Offsets			
Sensor	X Offset (m) Port/Stbd (+ve stbd)	Y Offset (m) Fwd/Aft (+ve fwd)	Z Offset (m) Up/Down (+ve up)
Ocean Patriot Drill-Stem (reference point)	00.00	00.00	-
Veripos LD2 GPS Antenna	-12.07	+39.39	-
Hemisphere Crescent VS110 Antenna	-16.45	+38.18	-
Winch 1	+33.50	+42.00	-
Winch 2	+33.50	+39.00	-
Winch 3	+33.50	-24.00	-
Winch 4	+33.50	-27.00	-
Winch 5	-33.50	-27.00	-
Winch 6	-33.50	-24.00	-
Winch 7	-33.50	+39.00	-
Winch 8	-33.50	+42.00	-

Table 4-1 Sensor offsets for the Ocean Patriot

4.1 QINSy Sign Conventions

The following conventions for sensor offsets are used within QINSy positioning software:

1. X offset denotes measurements along the port / starboard axis from the reference point, positive to starboard.
2. Y offset denotes measurements along the fore / aft axis from the reference point, positive forward.
3. Z offset denotes measurements vertically above / below the reference point, positive above.

5 CALIBRATIONS AND CHECKS

5.1 Heading Sensor Calibration

The TSS Meridian gyrocompass installed onboard the Ocean Patriot was calibrated between 1655 and 1725 on 27 August 2009. Horizontal direction observations were recorded between the centreline of the Ocean Patriot helideck and the sun at the Basker-7 location.

Neptune Geomatics' Solar Azimuth Observation Spreadsheet was used to determine the Calculated (C) azimuth of the Ocean Patriot. The TSS Meridian gyrocompass was simultaneously logged within QINSy positioning software during the period of solar observations to record the Observed (O) rig heading. The following results were obtained:

Heading Sensor	Reciprocal Calculated (C) True Heading	Observed (O) True Heading	Mean C-O
TSS Meridian	250.99°	250.12°	+0.87°

Table 5-1 Ocean Patriot TSS Meridian gyrocompass calibration results 27 August 2009

The C-O for the heading sensor TSS Meridian gyrocompass of +0.87° was accepted as correct and used throughout the project. The heading sensor calibration data is included as Appendix D of this report.

5.2 Differential GPS Check

A Differential GPS Check of the Ocean Patriot drill stem position at the Basker-7 location was observed between 1327 and 1357 on 27 August 2009. QINSy positioning software logged the Veripos Standard Differential GPS data at 1 second intervals. A comparison between the observed and published position of the Ocean Patriot drill stem at the Basker-7 location is given below:

Observed Position of the Basker-7 Drill Stem:

The observed surface position of the Ocean Patriot drill stem position at the Basker-7 location is:

Datum	:	Geocentric Datum of Australia 1994 (GDA94)
Latitude	:	38° 17' 58.742" South
Longitude	:	148° 42' 22.378" East
Projection	:	Map Grid of Australia (MGA) Zone 55 CM 147° East
Easting	:	649 194.79m
Northing	:	5 759 560.25m
Rig Heading	:	245.5° (True)

Published Position of the Basker-7 Drill Stem:

The published surface position of the Ocean Patriot drill stem at the Basker-7 location, as provided by **Neptune Geomatics** (Reference Report 9A396-RR-001-R0) is:

Datum	:	Geocentric Datum of Australia 1994 (GDA94)
Latitude	:	38° 17' 58.779" South
Longitude	:	148° 42' 22.313" East
Projection	:	Map Grid of Australia (MGA) Zone 55 CM 147° East
Easting	:	649 193.19m
Northing	:	5 759 559.16m
Rig Heading	:	249.3° (True)

The observed surface position of the Ocean Patriot drill stem is 1.94m on a bearing of 54.7° (True) from the published surface position of the Ocean Patriot drill stem. Refer to Appendix E for Position Check Report.

6 GEODETTIC PARAMETERS

The geodetic datum for Australian Drilling Associates positioning projects in the Bass Strait, Tasmania, is the Geocentric Datum of Australia 1994 (GDA94). The Global Positioning System (GPS) is referenced to the World Geodetic System 1984 (WGS84). The Differential GPS positioning systems used by **Neptune Geomatics** are referenced to the International Terrestrial Reference Frame 2000 (ITRF2000). Due to the continual refinement of the WGS84 reference frame, the WGS84 and ITRF2000 reference frames are considered to be the same.

6.1 ITRF2000 Datum and Projection

Datum	:	ITRF2000
Ellipsoid	:	Geodetic Reference System 1980 (GRS80)
Semi-major Axis (a)	:	6 378 137.000m
Semi-minor Axis (b)	:	6 356 752.314m
Eccentricity Squared (e^2)	:	0.006 694 380
Flattening ($1/f$)	:	298.257 222 101

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

Note: The WGS84 datum and the ITRF2000 datum are consistent in the order of a few centimetres and are considered to be the same.

6.2 GDA94 Datum and Projection

Datum	:	Geocentric Datum of Australia 1994 (GDA94)
Ellipsoid	:	Geodetic Reference System 1980 (GRS80)
Semi-major Axis (a)	:	6 378 137.000m
Semi-minor Axis (b)	:	6 356 752.314m
Eccentricity Squared (e^2)	:	0.006 694 380
Flattening ($1/f$)	:	298.257 222 101

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

Note: Where an accuracy of a metre or greater is required, the WGS84 datum and the GDA94 datum are considered to be the same.

6.3 Datum Transformation - ITRF2000 to GDA94

6.3.1 *Ocean Patriot Transformation Parameters*

From the Geocentric Datum of Australia Technical Manual (Version 2.2) produced by the Inter-governmental Committee on Surveying & Mapping (ICSM), the ITRF2000 datum and the WGS84 datum are consistent at a level in the order of a few centimetres and are considered to be the same. Similarly, where an accuracy of a metre or greater is required, the GDA94 datum and the WGS84 datum are considered to be the same. In January 1994 the GDA94 datum and the ITRF datum were coincident, however since the Australian tectonic plate is moving in a north northeast direction at a rate of approximately 7 centimetres per year, the relationship between the GDA94 Datum and the ITRF2000 Datum is changing at a similar rate.

The following 7-parameter datum transformation is used to convert ITRF2000 coordinates to GDA94 coordinates:

Epoch	=	2009.5
Dx	=	+0.0284m
Dy	=	-0.0528m
Dz	=	-0.1209m
Rx	=	+0.018 588"
Ry	=	+0.015 736"
Rz	=	+0.019 196"
Scale	=	+0.002 824 p.p.m.

The sign convention used is that used by the US Department of Defence, where a positive rotation about the Z axis is an anti-clockwise movement of the X and Y axes (when viewed from the North Pole looking towards the centre of the Earth).

6.4 Datum Transformation Worked Example

The following Datum Transformation Worked Example was used to verify the input of Geodetic Datum and Transformation Parameters within the QINSy positioning software. A screen image of the QINSy Computation is included as Figure 6-1.

Datum : **International Terrestrial Reference Frame 2000**
Latitude : 37° 49' 45.87090" South
Longitude : 144° 58' 31.22030" East
Ellipsoidal Height : 40.750m

Datum : **Geocentric Datum of Australia 1994 (GDA94)**
Latitude : 37° 49' 45.89866" South
Longitude : 144° 58' 31.20698" East
Ellipsoidal Height : 40.802m

Projection : **Map Grid of Australia (MGA) Zone 55 CM 147° East**
Easting : 321 819.600m
Northing : 5 811 180.044m

Test Geodetical Parameters

Source Coordinates: ☒ Geographical Coordinates ☐ Projection Grid Coordinates

Coordinate Units: Geographical Units:

Source Datum / Ellipsoid: Vertical Datum / MSL Model:
Ellipsoid: WGS 1984 No Level Correction
Option: 7-parameter Height Offset: 0.000

Source Projection:

Source Position:
Latitude: 37;49;45.87090 S Easting: N/A
Longitude: 144;58;31.22030 E Northing: N/A
Height: 40.750 Height: N/A
MSL Height: N/A Scale Easting: N/A
Convergence: N/A Scale Northing: N/A

ECEF XYZ: -4130636.461 2894953.163 -3890530.826

Target Datum / Ellipsoid: Vertical Datum / MSL Model:
Ellipsoid: GRS 1980 No Level Correction
Option: 7-parameter Height Offset: 0.000

Target Projection:

Target Position:
Latitude: 37;49;45.89866 S Easting: 321819.600
Longitude: 144;58;31.20698 E Northing: 5811180.044
Height: 40.802 Height: 40.802
MSL Height: N/A Scale Easting: 1.000010
Convergence: 1.241752 Scale Northing: 1.000010

ECEF XYZ: -4130635.878 2894953.152 -3890531.533

Calculate Close Save to File Print Help

Figure 6-1 Geodetic datum and transformation parameters worked example

7 PERSONNEL AND EQUIPMENT

7.1 Personnel

Surveyor	Scott Hunter
Survey Engineer	Adam Bush

7.2 Equipment

7.2.1 Ocean Patriot

Positioning Software

- QINSy Survey Positioning Software
- Verify Multiple Reference Station Quality Control Software

Positioning Systems

- Veripos Standard Differential GPS Via LD2 GPS RTCM Receiver (Primary Positioning Source)
- Hemisphere Crescent VS110 Differential GPS (Secondary Positioning Source)

Heading Systems

- TSS Meridian Gyrocompass (Primary heading source)
- Hemisphere Crescent VS110 Differential GPS (Secondary heading source)

Terrestrial Survey Systems

- Topcon Total Station Instrument

Auxiliary Systems

- LAN PC Interconnectivity
- Satel 3Asd Radio Modem Telemetry
- Uninterruptible Power Supply
- Wireless LAN
- QINSy Survey Positioning Software Pilot Display

7.2.2 Lewek Swift / Lewek Emerald

Positioning Software

- QINSy Survey Positioning Software

Positioning Systems

- Hemisphere Crescent VS110

Heading Systems

- Hemisphere Crescent VS110

Auxiliary Systems

- Uninterruptible Power Supply
- Satel 3Asd Radio Modem Telemetry
- Wireless LAN

8 DISTRIBUTION

Copies of this report have been distributed as follows:

Australian Drilling Associates Pty Ltd	:	1 Hard copy
Attention: Mr Iain Robertson	:	1 Electronic copy
 Neptune Geomatics	:	1 Hard copy
	:	1 Electronic copy

APPENDIX A - FINAL SURFACE POSITIONING NOTICE

FINAL DRILLING RIG POSITION NOTICE

Ocean Patriot Position at Spikey Beach-1

To: **Beach Petroleum Limited**
25 Conyngham Street
Glenside, SA, 5065

From: **Neptune Geomatics**
Job No.: **9A409**
Signed:



Scott Hunter
Surveyor

Date: **9 September 2009**

Attn.: **ADA Drilling Supervisor**
Ocean Patriot Ballast Control
Ocean Patriot Barge Captain

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The final surface position of the Ocean Patriot Drill Stem at the Spikey Beach-1 location was computed from Veripos Standard Differential GPS data recorded between 2216 and 2316 on 5 September 2009. The GPS data were recorded immediately after spudding the well. The following results were computed:

The final Spikey Beach-1 Differential GPS Surface Position of the Ocean Patriot Drill Stem is:

Datum: Geocentric Datum of Australia 1994 (GDA94)

Latitude: 40° 28' 53.879" South

Longitude: 145° 52' 24.706" East

Projection: Map Grid of Australia (MGA) Zone 55 C.M. 147° East

Easting: 404 522.80m

Northing: 5 518 174.63m

The final Spikey Beach-1 Differential GPS surface position of the Ocean Patriot drill stem is 1.84m on a bearing of 74.3° True from the intended location.

The final Rig Heading is 246.5° True.

Note: The following 7-parameter datum transformation was used to convert ITRF2000 coordinates to GDA94 coordinates (Epoch 2009.5):

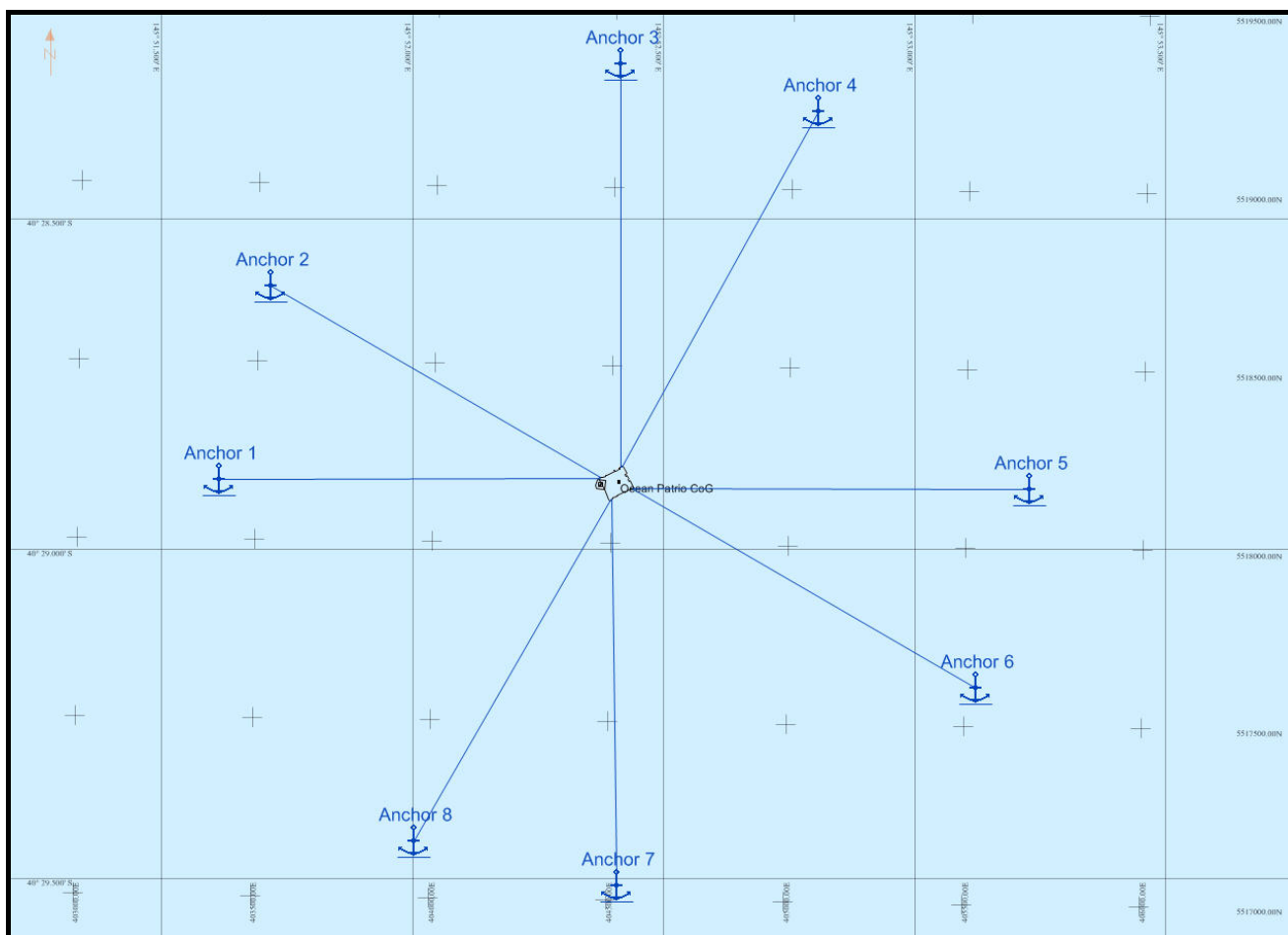
Dx	=	+0.028 40m
Dy	=	-0.052 80m
Dz	=	-0.120 90m
Rx	=	+0.018 588"
Ry	=	+0.015 736"
Rz	=	+0.019 196"
Scale	=	+0.002 824 p.p.m.

The final anchor positions corrected for catenary are as follows:

Anchor array of the Ocean Patriot at Spikey Beach-1							
Datum :	Geocentric Datum of Australia 1994 (GDA94)						
Projection :	Map Grid of Australia (MGA) Zone 55 C.M. 147° East						
Anchor	Easting (m)	Northing (m)	Horizontal Distance (m)	Bearing (True)	Chain Out (m)	Depth (m)	Tension (T)
1	403 395.76	5 518 166.71	1075.2	269.6	1085	76	119
2	403 536.34	5 518 710.11	1072.2	299.8	1082	76	118
3	404 512.52	5 519 347.88	1133.0	359.8	1142	76	140
4	405 071.64	5 519 220.89	1139.6	28.9	1148	76	160
5	405 679.10	5 518 167.48	1118.0	90.1	1127	76	140
6	405 534.23	5 517 607.04	1118.6	120.0	1128	76	127
7	404 530.08	5 517 039.76	1088.7	179.2	1098	76	130
8	403 957.79	5 517 158.56	1108.9	209.9	1119	76	113

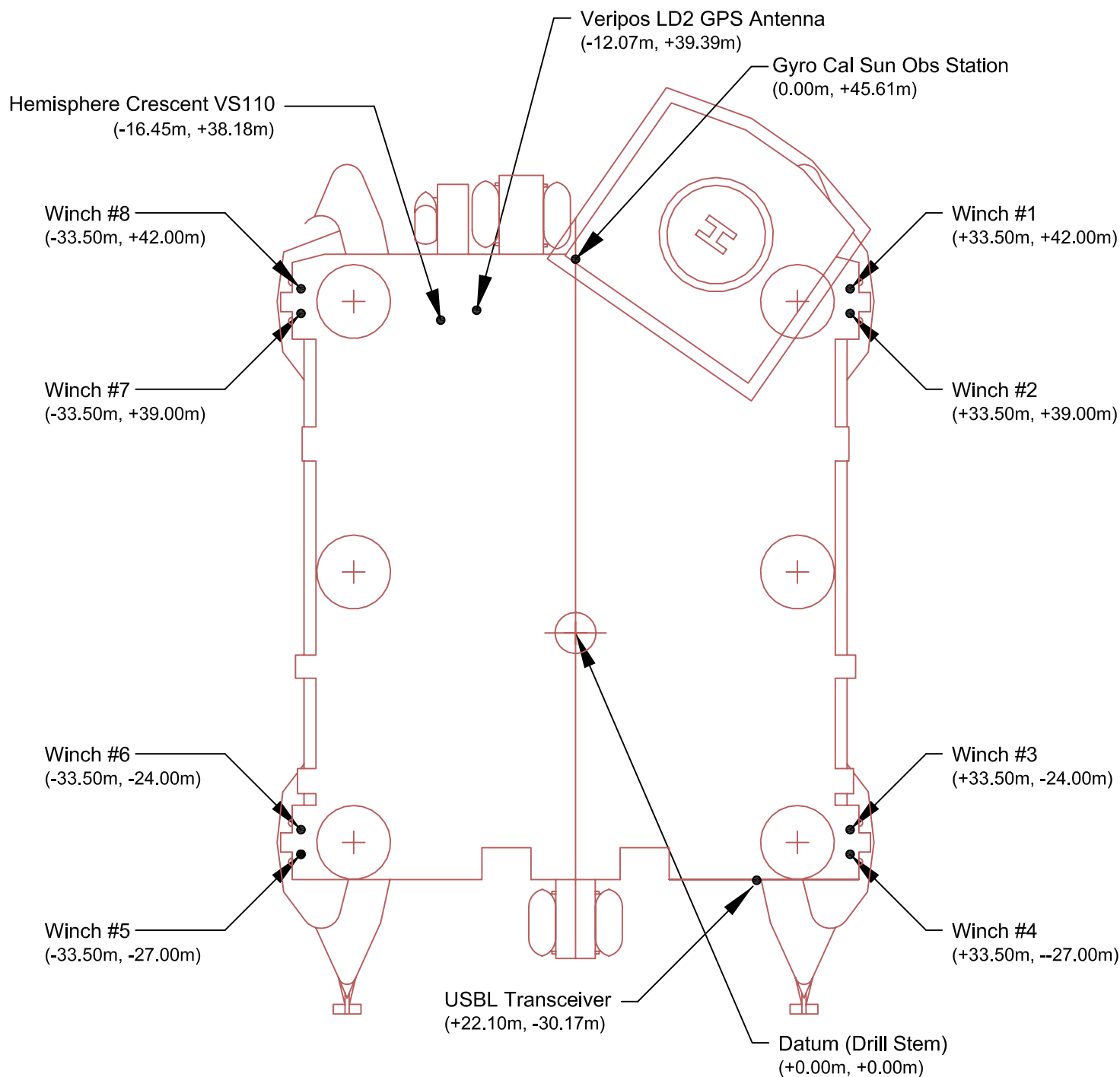
Notes:

- Catenary calculations performed in MK Catenary with chain out and tension values correct at time of issue.



Ocean Patriot anchor array at Spikey Beach-1

APPENDIX B - OCEAN PATRIOT OFFSET DIAGRAM



Vertical Offsets	
Drill Floor (CoG)	+0.0m
LD2 Ae	+5.4m
Hemisphere Ae	+4.8m
USBL Transceiver	-45.4m
Keel	-45.0m

APPENDIX C - QINSY CONFIGURATION

SURVEY DEFINITIONS

General Definitions

Line sequence number	:	1
Line description	:	
<hr/>		
UTC to GPS time correction	:	15.00 s
<hr/>		
Survey Unit Name	:	Meters
Conversion factor to meters	:	1.00000000

Geodetic Definitions

Magnetic Variation Information

Undefined

Datum Definitions

Additional Datum	:	WGS84
Spheroid name	:	WGS 1984
Semi-major axis (a)	:	6378137.000 m
Semi-minor axis (b)	:	6356752.314 m
Conversion factor to meters	:	1.000000
Inverse flattening (1/f)	:	298.25722356
First eccentricity (e**2)	:	0.00669438
Second eccentricity (e'**2)	:	0.00673950
<hr/>		
Survey Datum	:	Australia GDA 1994
Spheroid name	:	GRS 1980
Semi-major axis (a)	:	6378137.000 m
Semi-minor axis (b)	:	6356752.314 m
Conversion factor to meters	:	1.000000
Inverse flattening (1/f)	:	298.25722210
First eccentricity (e**2)	:	0.00669438
Second eccentricity (e'**2)	:	0.00673950

Datum Shift Definitions

WGS84 to Australia GDA 1994

Position vector rotation		Arc Seconds			
X shift	:	0.0284 m	X rotation	:	-0.018588 "
Y shift	:	-0.0528 m	Y rotation	:	-0.015736 "
Z shift	:	-0.1209 m	Z rotation	:	-0.019196 "
Scale correction	:	0.00282400 ppm			

Rotation center point : Not Defined

Height Datum Definition

Vertical datum	:	Australia GDA 1994
Height file	:	N/A
Height level	:	No Level Correction
Height file	:	N/A
Height offset	:	0.000 m

MSL model	:	Horizontal Datum
MSL file	:	N/A
MSL level	:	No Level Correction
MSL file	:	N/A
MSL offset	:	0.000 m
MSL st.dev.	:	0.000 m

DTM mode	:	Absolute DTM's
DTM datum	:	Australia GDA 1994
DTM file	:	N/A
DTM level	:	No Level Correction
DTM file	:	N/A
DTM offset	:	0.000 m

Projection Definition

Projection type	:	002
Projection name	:	Universal Transverse Mercator (South Oriented)
Conversion factor to meters	:	1.000000

UTM zone number	:	55
Latitude of grid origin	:	0;00;00.000 N
Longitude of grid origin	:	147;00;00.000 E
Grid Easting at grid origin	:	500000.000 E
Grid Northing at grid origin	:	10000000.000 N
Scale factor at longitude of origin	:	0.999600

Local Construction Grid Definition

Not Applicable

Offset Convention

Offset mode	:	Rectangular
Offset distances units	:	Meters
Offset angles units	:	Degrees

OBJECT DEFINITIONS

General Summary Information

Number of survey vessels or objects	:	7
Number of relay vessels or buoys	:	0
Number of external network nodes	:	0
Number of datums/spheroids defined	:	2

Vessel Definitions

Ocean Patriot					
Streamers	:	0	Gun arrays	:	0
Buoys	:	0	Echosounders	:	0
Satellite receivers	:	0	USBL systems	:	1
Network nodes	:	15	No Pitch/Roll/Heave sensors		

Correction to GMT	:	0.00 h
Correction to master vessel's time	:	0.000000 s

Height above draft reference	:	21.500 m
Ocean Patrio CoG		

Drill Stem (Note USBL Rx Changes with Draft, Offsets in Ranger USBL PC)

Veripos LD2

SHAPE	Point	X	Y	Z	Pen	Fill	Style
	1	-1.2	46.2	0.0	Up	Off	Solid
	2	-30.6	46.2	0.0	Down	Off	Solid
	3	-34.6	45.2	0.0	Down	Off	Solid
	4	-34.6	41.6	0.0	Down	Off	Solid
	5	-36.0	41.6	0.0	Down	Off	Solid
	6	-36.0	39.2	0.0	Down	Off	Solid
	7	-34.6	39.2	0.0	Down	Off	Solid
	8	-34.6	35.8	0.0	Down	Off	Solid
	9	-31.7	35.8	0.0	Down	Off	Solid
	10	-31.7	25.1	0.0	Down	Off	Solid
	11	-33.3	25.1	0.0	Down	Off	Solid
	12	-33.3	21.0	0.0	Down	Off	Solid
	13	-31.7	21.0	0.0	Down	Off	Solid
	14	-31.7	-2.7	0.0	Down	Off	Solid
	15	-34.2	-2.7	0.0	Down	Off	Solid
	16	-34.2	-5.5	0.0	Down	Off	Solid
	17	-31.7	-5.5	0.0	Down	Off	Solid
	18	-31.7	-16.5	0.0	Down	Off	Solid
	19	-33.9	-16.5	0.0	Down	Off	Solid
	20	-33.9	-19.6	0.0	Down	Off	Solid
	21	-31.7	-19.6	0.0	Down	Off	Solid
	22	-31.7	-21.0	0.0	Down	Off	Solid
	23	-34.6	-21.0	0.0	Down	Off	Solid
	24	-34.6	-24.4	0.0	Down	Off	Solid
	25	-36.0	-24.4	0.0	Down	Off	Solid
	26	-36.0	-26.7	0.0	Down	Off	Solid
	27	-34.6	-26.7	0.0	Down	Off	Solid
	28	-34.6	-30.1	0.0	Down	Off	Solid
	29	-11.4	-30.1	0.0	Down	Off	Solid
	30	-11.4	-26.2	0.0	Down	Off	Solid
	31	-5.4	-26.2	0.0	Down	Off	Solid
	32	-5.4	-30.1	0.0	Down	Off	Solid
	33	0.0	-30.1	0.0	Down	Off	Solid
	34	5.4	-30.1	0.0	Down	Off	Solid
	35	5.4	-26.2	0.0	Down	Off	Solid
	36	11.4	-26.2	0.0	Down	Off	Solid
	37	11.4	-30.1	0.0	Down	Off	Solid
	38	11.4	-30.1	0.0	Down	Off	Solid
	39	34.6	-30.1	0.0	Down	Off	Solid
	40	34.6	-26.7	0.0	Down	Off	Solid
	41	36.0	-26.7	0.0	Down	Off	Solid
	42	36.0	-24.4	0.0	Down	Off	Solid
	43	34.6	-24.4	0.0	Down	Off	Solid
	44	34.6	-21.0	0.0	Down	Off	Solid
	45	31.7	-21.0	0.0	Down	Off	Solid
	46	31.7	-19.6	0.0	Down	Off	Solid

Vessel Definitions (continued)

47	33.9	-19.6	0.0	Down	Off	Solid
48	33.9	-16.5	0.0	Down	Off	Solid
49	31.7	-16.5	0.0	Down	Off	Solid
50	31.7	-5.5	0.0	Down	Off	Solid
51	34.2	-5.5	0.0	Down	Off	Solid
52	34.2	-2.7	0.0	Down	Off	Solid
53	31.7	-2.7	0.0	Down	Off	Solid
54	31.7	21.0	0.0	Down	Off	Solid
55	33.3	21.0	0.0	Down	Off	Solid
56	33.3	25.1	0.0	Down	Off	Solid
57	31.7	25.1	0.0	Down	Off	Solid
58	31.7	35.8	0.0	Down	Off	Solid
59	34.6	35.8	0.0	Down	Off	Solid
60	34.6	39.2	0.0	Down	Off	Solid
61	36.0	39.2	0.0	Down	Off	Solid
62	36.0	41.6	0.0	Down	Off	Solid
63	34.6	41.6	0.0	Down	Off	Solid
64	34.6	46.2	0.0	Down	Off	Solid
65	31.8	45.9	0.0	Up	Off	Solid
66	34.0	49.1	0.0	Up	Off	Solid
67	21.1	30.5	0.0	Down	Off	Solid
68	-1.3	46.0	0.0	Down	Off	Solid
69	11.7	64.7	0.0	Down	Off	Solid
70	20.7	61.4	0.0	Down	Off	Solid
71	27.8	56.5	0.0	Down	Off	Solid
72	34.0	49.1	0.0	Up	Off	Solid
73	18.0	46.2	0.0	Up	Off	Solid
74	14.6	48.6	0.0	Down	Off	Solid
75	15.1	49.2	0.0	Down	Off	Solid
76	16.3	48.3	0.0	Down	Off	Solid
77	17.2	49.5	0.0	Down	Off	Solid
78	15.9	50.4	0.0	Down	Off	Solid
79	16.3	51.0	0.0	Down	Off	Solid
80	19.7	48.6	0.0	Down	Off	Solid
81	19.3	48.0	0.0	Down	Off	Solid
82	18.0	48.9	0.0	Down	Off	Solid
83	17.2	47.7	0.0	Down	Off	Solid
84	18.4	46.8	0.0	Up	Off	Solid
85	17.2	55.6	0.0	Up	Off	Solid
86	18.9	55.4	0.0	Down	Off	Solid
87	20.5	54.7	0.0	Down	Off	Solid
88	21.9	53.7	0.0	Down	Off	Solid
89	23.0	52.3	0.0	Down	Off	Solid
90	23.8	50.8	0.0	Down	Off	Solid
91	24.1	49.0	0.0	Down	Off	Solid
92	24.0	47.3	0.0	Down	Off	Solid
93	23.5	45.6	0.0	Down	Off	Solid
94	22.5	44.2	0.0	Down	Off	Solid
95	21.3	43.0	0.0	Down	Off	Solid
96	19.7	42.1	0.0	Down	Off	Solid
97	18.0	41.7	0.0	Down	Off	Solid
98	16.3	41.7	0.0	Down	Off	Solid
99	14.6	42.1	0.0	Down	Off	Solid
100	13.1	43.0	0.0	Down	Off	Solid
101	11.8	44.2	0.0	Down	Off	Solid
102	10.9	45.6	0.0	Down	Off	Solid
103	10.3	47.3	0.0	Down	Off	Solid
104	10.2	49.0	0.0	Down	Off	Solid
105	10.5	50.8	0.0	Down	Off	Solid
106	11.3	52.3	0.0	Down	Off	Solid
107	12.4	53.7	0.0	Down	Off	Solid
108	13.8	54.7	0.0	Down	Off	Solid
109	15.4	55.4	0.0	Down	Off	Solid
110	17.2	55.6	0.0	Up	Off	Solid

Vessel Definitions (continued)

Lewek Swift							
Streamers	:	0		Gun arrays	:	0	
Buoys	:	0		Echosounders	:	0	
Satellite receivers	:	0		USBL systems	:	0	
Network nodes	:	1		No Pitch/Roll/Heave sensors			
Correction to GMT	:			0.00 h			
Correction to master vessel's time	:			0.000000 s			
Height above draft reference	:			0.000 m			
Lewek Swift CS							
SHAPE	Point	X	Y	Z	Pen	Fill	Style
	1	0.0	0.0	0.0	Up	On	Solid
	2	7.5	0.0	0.0	Down	On	Solid
	3	7.5	55.0	0.0	Down	On	Solid
	4	0.0	70.0	0.0	Down	On	Solid
	5	-7.5	55.0	0.0	Down	On	Solid
	6	-7.5	0.0	0.0	Down	On	Solid
	7	0.0	0.0	0.0	Down	On	Solid
Lewek Emerald							
Streamers	:	0		Gun arrays	:	0	
Buoys	:	0		Echosounders	:	0	
Satellite receivers	:	0		USBL systems	:	0	
Network nodes	:	2		No Pitch/Roll/Heave sensors			
Correction to GMT	:			0.00 h			
Correction to master vessel's time	:			0.000000 s			
Height above draft reference	:			0.000 m			
Lewek Emerald CS							
SHAPE	Point	X	Y	Z	Pen	Fill	Style
	1	0.0	0.0	0.0	Up	On	Solid
	2	-7.8	0.0	0.0	Down	On	Solid
	3	-7.8	60.0	0.0	Down	On	Solid
	4	0.0	65.6	0.0	Down	On	Solid
	5	7.8	60.0	0.0	Down	On	Solid
	6	7.8	0.0	0.0	Down	On	Solid
BOP							
Streamers	:	0		Gun arrays	:	0	
Buoys	:	0		Echosounders	:	0	
Satellite receivers	:	0		USBL systems	:	0	
Network nodes	:	1		No Pitch/Roll/Heave sensors			
Correction to GMT	:			0.00 h			
Correction to master vessel's time	:			0.000000 s			
Height above draft reference	:			0.000 m			
BOP CoG							
SHAPE	Point	X	Y	Z	Pen	Fill	Style
	1	0.0	0.5	0.0	Up	On	Solid
	2	0.5	0.5	0.0	Down	On	Solid
	3	0.5	-0.5	0.0	Down	On	Solid
	4	-0.5	-0.5	0.0	Down	On	Solid
	5	-0.5	0.5	0.0	Down	On	Solid

Vessel Definitions (continued)

Riser

Streamers	:	0	Gun arrays	:	0
Buoys	:	0	Echosounders	:	0
Satellite receivers	:	0	USBL systems	:	0
Network nodes	:	1	No Pitch/Roll/Heave sensors		

Correction to GMT : 0.00 h

Correction to master vessel's time : 0.000000 s

Height above draft reference : 0.000 m

Riser CoG

SHAPE	Point	X	Y	Z	Pen	Fill	Style
	1	0.0	0.5	0.0	Up	On	Solid
	2	0.5	0.5	0.0	Down	On	Solid
	3	0.5	-0.5	0.0	Down	On	Solid
	4	-0.5	-0.5	0.0	Down	On	Solid
	5	-0.5	0.5	0.0	Down	On	Solid

B12

Streamers	:	0	Gun arrays	:	0
Buoys	:	0	Echosounders	:	0
Satellite receivers	:	0	USBL systems	:	0
Network nodes	:	1	No Pitch/Roll/Heave sensors		

Correction to GMT : 0.00 h

Correction to master vessel's time : 0.000000 s

Height above draft reference : 0.000 m

B12 CoG

SHAPE	Point	X	Y	Z	Pen	Fill	Style
	1	0.0	0.5	0.0	Up	On	Solid
	2	0.5	0.5	0.0	Down	On	Solid
	3	0.5	-0.5	0.0	Down	On	Solid
	4	-0.5	-0.5	0.0	Down	On	Solid
	5	-0.5	0.5	0.0	Down	On	Solid

B68

Streamers	:	0	Gun arrays	:	0
Buoys	:	0	Echosounders	:	0
Satellite receivers	:	0	USBL systems	:	0
Network nodes	:	1	No Pitch/Roll/Heave sensors		

Correction to GMT : 0.00 h

Correction to master vessel's time : 0.000000 s

Height above draft reference : 0.000 m

B68 CoG

SHAPE	Point	X	Y	Z	Pen	Fill	Style
	1	0.0	0.5	0.0	Up	On	Solid
	2	0.5	0.5	0.0	Down	On	Solid
	3	0.5	-0.5	0.0	Down	On	Solid
	4	-0.5	-0.5	0.0	Down	On	Solid
	5	-0.5	0.5	0.0	Down	On	Solid

Gun Array Definitions

NETWORK DEFINITIONS

Fixed Node Definitions

Variable Node Definitions

Ocean Patrio CoG

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	0.000 m
Y (Bow = Positive):	:	0.000 m
Z (Up = Positive):	:	0.000 m

Fairlead 1

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	33.500 m
Y (Bow = Positive):	:	42.000 m
Z (Up = Positive):	:	0.000 m

Fairlead 2

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	33.500 m
Y (Bow = Positive):	:	39.000 m
Z (Up = Positive):	:	0.000 m

Fairlead 3

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	33.500 m
Y (Bow = Positive):	:	-24.000 m
Z (Up = Positive):	:	0.000 m

Fairlead 4

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	33.500 m
Y (Bow = Positive):	:	-27.000 m
Z (Up = Positive):	:	0.000 m

Fairlead 5

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	-33.500 m
Y (Bow = Positive):	:	-27.000 m
Z (Up = Positive):	:	0.000 m

Fairlead 6

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	-33.500 m
Y (Bow = Positive):	:	-24.000 m
Z (Up = Positive):	:	0.000 m

Fairlead 7

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	-33.500 m
Y (Bow = Positive):	:	39.000 m
Z (Up = Positive):	:	0.000 m

Fairlead 8

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	-33.500 m
Y (Bow = Positive):	:	42.000 m
Z (Up = Positive):	:	0.000 m

Tow Point

Object location	:	Ocean Patriot
X (Stbd = Positive):	:	0.000 m
Y (Bow = Positive):	:	54.500 m
Z (Up = Positive):	:	0.000 m

Variable Node Definitions (continued)

LD2

Object location : Ocean Patriot
 X (Stbd = Positive): : -12.070 m
 Y (Bow = Positive): : 39.390 m
 Z (Up = Positive): : 5.400 m

Hemisphere

Object location : Ocean Patriot
 X (Stbd = Positive): : -16.450 m
 Y (Bow = Positive): : 38.180 m
 Z (Up = Positive): : 4.800 m

USBL Pole

Object location : Ocean Patriot
 X (Stbd = Positive): : 22.100 m
 Y (Bow = Positive): : -30.170 m
 Z (Up = Positive): : -45.380 m

Heli Obs Pnt

Object location : Ocean Patriot
 X (Stbd = Positive): : 0.000 m
 Y (Bow = Positive): : 45.610 m
 Z (Up = Positive): : 0.000 m

Lewek Swift CS

Object location : Lewek Swift
 X (Stbd = Positive): : 0.000 m
 Y (Bow = Positive): : 0.000 m
 Z (Up = Positive): : 0.000 m

Lewek Emeral CS

Object location : Lewek Emerald
 X (Stbd = Positive): : 0.000 m
 Y (Bow = Positive): : 0.000 m
 Z (Up = Positive): : 0.000 m

Antenna

Object location : Lewek Emerald
 X (Stbd = Positive): : 5.800 m
 Y (Bow = Positive): : 54.400 m
 Z (Up = Positive): : 0.000 m

BOP CoG

Object location : BOP
 X (Stbd = Positive): : 0.000 m
 Y (Bow = Positive): : 0.000 m
 Z (Up = Positive): : 0.000 m

Riser CoG

Object location : Riser
 X (Stbd = Positive): : 0.000 m
 Y (Bow = Positive): : 0.000 m
 Z (Up = Positive): : 0.000 m

B12 CoG

Object location : B12
 X (Stbd = Positive): : 0.000 m
 Y (Bow = Positive): : 0.000 m
 Z (Up = Positive): : 0.000 m

B68 CoG

Object location : B68
 X (Stbd = Positive): : 0.000 m
 Y (Bow = Positive): : 0.000 m
 Z (Up = Positive): : 0.000 m

Variable Node Definitions (continued)

USBL Rx
Object location : Ocean Patriot
X (Stbd = Positive): : 0.000 m
Y (Bow = Positive): : 0.000 m
Z (Up = Positive): : -23.880 m

Observation Definitions

Swift Satel Pos : Bearing (True)
"At" node : Lewek Swift CS
"To" node 1 :
Measurement unit code : Degrees
System description : Swift Satel Pos Rx
Propagation speed : 0.0000000000 m/s
Lanewidth on baseline : 0.0000000000 m/s
Scale factor : 1.0000000000
Fixed system (C-O) : 0.00000000 °
Variable (C-O) : 0.000000 °
A priori SD : 0.50 °
Maximum age : 0.00 °
Quality indicator : No quality info recorded

Emerald Satel Hd : Bearing (True)
"At" node : Lewek Emeral CS
"To" node 1 :
Measurement unit code : Degrees
System description : Emerald Satel Hdt Rx
Propagation speed : 0.0000000000 m/s
Lanewidth on baseline : 0.0000000000 m/s
Scale factor : 1.0000000000
Fixed system (C-O) : 0.00000000 °
Variable (C-O) : 0.000000 °
A priori SD : 0.50 °
Maximum age : 0.00 °
Quality indicator : No quality info recorded

Emerald GpsGate : Bearing (True)
"At" node : Lewek Emeral CS
"To" node 1 :
Measurement unit code : Degrees
System description : Emerald GpsGate Hdt Rx
Propagation speed : 0.0000000000 m/s
Lanewidth on baseline : 0.0000000000 m/s
Scale factor : 1.0000000000
Fixed system (C-O) : 0.00000000 °
Variable (C-O) : 0.000000 °
A priori SD : 0.50 °
Maximum age : 0.00 °
Quality indicator : No quality info recorded

Swift GpsGate Hd : Bearing (True)
"At" node : Lewek Swift CS
"To" node 1 :
Measurement unit code : Degrees
System description : Swift GpsGate Hdt Rx
Propagation speed : 0.0000000000 m/s
Lanewidth on baseline : 0.0000000000 m/s
Scale factor : 1.0000000000
Fixed system (C-O) : 0.00000000 °
Variable (C-O) : 0.000000 °
A priori SD : 0.50 °
Maximum age : 0.00 °
Quality indicator : No quality info recorded

Observation Definitions (continued)

Rig Gyro	: Bearing (True)
"At" node	: Ocean Patrio CoG
"To" node 1	:
Measurement unit code	: Degrees
System description	: Rig Gyro
Propagation speed	: 0.0000000000 m/s
Lanewidth on baseline	: 0.0000000000 m/s
Scale factor	: 1.0000000000
Fixed system (C-O)	: 0.60000000 °
Variable (C-O)	: 0.000000 °
A priori SD	: 0.50 °
Maximum age	: 0.00 °
Quality indicator	: No quality info recorded

VS110 HDT	: Bearing (True)
"At" node	: Ocean Patrio CoG
"To" node 1	:
Measurement unit code	: Degrees
System description	: VS110 HDT
Propagation speed	: 0.0000000000 m/s
Lanewidth on baseline	: 0.0000000000 m/s
Scale factor	: 1.0000000000
Fixed system (C-O)	: 0.10000000 °
Variable (C-O)	: 0.000000 °
A priori SD	: 0.50 °
Maximum age	: 0.00 °
Quality indicator	: No quality info recorded

Meridian Gyro	: Bearing (True)
"At" node	: Ocean Patrio CoG
"To" node 1	:
Measurement unit code	: Degrees
System description	: Meridian Gyro
Propagation speed	: 0.0000000000 m/s
Lanewidth on baseline	: 0.0000000000 m/s
Scale factor	: 1.0000000000
Fixed system (C-O)	: 0.87000000 °
Variable (C-O)	: 0.000000 °
A priori SD	: 0.50 °
Maximum age	: 0.00 °
Quality indicator	: No quality info recorded

Reference Station Definitions

SYSTEM DEFINITIONS

Position Navigation System

LD2 Pos

Interfacing

Type	:	Position Navigation System			
Driver	:	POS M/V (NMEA GGA GST GSA and Heading)			
Executable and Cmdlin	:	DrvPositionNMEA.exe			
Port	:	3			
Baud rate	:	9600	Data bits	:	8
Parity	:	None	Stop bits	:	1
Update rate	:	0.000 s	Latency	:	0.000 s

Satellite System Definition

Position datum	:	WGS84
Satellite system name	:	WGS84

Satellite Receiver Definition

Receiver number	:	0
Receiver description	:	
Node identifier	:	LD2
Object location	:	Ocean Patriot
X (Stbd = Positive):	:	-12.070 m
Y (Bow = Positive):	:	39.390 m
Z (Up = Positive):	:	5.400 m

Horizontal datum	:	WGS84
Vertical datum	:	WGS84
Height file	:	N/A
Height level	:	No Level Correction
Height file	:	N/A
Height offset	:	0.000 m

Connected Observations

Connected Nodes

Gyro Compass

Meridian Gyro

Interfacing

Type	:	Gyro Compass			
Driver	:	NMEA Compass (\$--HDT)			
Executable and Cmdlin	:	DrvGyroNMEA.exe 8			
Port	:	9			
Baud rate	:	4800	Data bits	:	8
Parity	:	None	Stop bits	:	1
Update rate	:	0.000 s	Latency	:	0.000 s

Connected Observations

Meridian Gyro	:	Bearing (True)
---------------	---	----------------

Connected Nodes

Ocean Patrio CoG	:	Ocean Patriot
------------------	---	---------------

Offset System

Offset System

Interfacing

Type : Offset System
 Driver : Unknown Driver (0)
 Executable and Cmdlin :

Output System

Anchor Output

Interfacing

Type : Output System
 Driver : Network - Anchor Output (UDP)
 Executable and Cmdlin : DrvOutAnchors.exe
 Port : 1234
 IP address : 192.168. 0.255
 Update rate : 2.000

Position Navigation System

VS110 pos

Interfacing

Type : Position Navigation System
 Driver : POS M/V (NMEA GGA GST GSA and Heading)
 Executable and Cmdlin : DrvPositionNMEA.exe
 Port : 8
 Baud rate : 19200 Data bits : 8
 Parity : None Stop bits : 1
 Update rate : 0.000 s Latency : 0.000 s

Satellite System Definition

Position datum : WGS84
 Satellite system name : WGS84

Satellite Receiver Definition

Receiver number : 1
 Receiver description :
 Node identifier : Hemisphere
 Object location : Ocean Patriot
 X (Stbd = Positive): : -16.450 m
 Y (Bow = Positive): : 38.180 m
 Z (Up = Positive): : 4.800 m

Horizontal datum : WGS84
 Vertical datum : WGS84
 Height file : N/A
 Height level : No Level Correction
 Height file : N/A
 Height offset : 0.000 m

Connected Observations

Connected Nodes

Gyro Compass

VS110 HDT

Interfacing

Type	:	Gyro Compass		
Driver	:	POS M/V (NMEA HDT Heading and Position)		
Executable and Cmdlin	:	DrvPositionNMEA.exe		
Port	:	8		
Baud rate	:	19200	Data bits	: 8
Parity	:	None	Stop bits	: 1
Update rate	:	0.000 s	Latency	: 0.000 s

Connected Observations

VS110 HDT : Bearing (True)

Connected Nodes

Ocean Patrio CoG : Ocean Patriot

Output System

GPSgatePosition Output

Interfacing

Type	:	Output System		
Driver	:	NMEA		
Executable and Cmdlin	:	DrvOutMultiNMEAUI.exe		
Port	:	30		
Baud rate	:	9600	Data bits	: 8
Parity	:	None	Stop bits	: 1
Update rate	:	2.000 s	Latency	: 0.000 s

Gyro Compass

Rig Gyro

Interfacing

Type	:	Gyro Compass		
Driver	:	NMEA Compass (\$--HDT)		
Executable and Cmdlin	:	DrvGyroNMEA.exe 8		
Port	:	10		
Baud rate	:	4800	Data bits	: 8
Parity	:	None	Stop bits	: 1
Update rate	:	0.000 s	Latency	: 0.000 s

Connected Observations

Rig Gyro : Bearing (True)

Connected Nodes

Ocean Patrio CoG : Ocean Patriot

Position Navigation System

Swift GpsGate Pos Rx

Interfacing

Type	:	Position Navigation System			
Driver	:	NMEA Position and Heading (Checksum)			
Executable and Cmdlin	:	DrvPositionNMEA.exe			
Port	:	27			
Baud rate	:	9600	Data bits	:	8
Parity	:	None	Stop bits	:	1
Update rate	:	0.000 s	Latency	:	0.000 s

Satellite System Definition

```
Position datum          : WGS84
Satellite system name    : WGS84
```

Satellite Receiver Definition

Receiver number	:	0
Receiver description	:	
Node identifier	:	Lewek Swift CS
Object location	:	Lewek Swift
X (Stbd = Positive):	:	0.000 m
Y (Bow = Positive):	:	0.000 m
Z (Up = Positive):	:	0.000 m
<hr/>		
Horizontal datum	:	WGS84
Vertical datum	:	WGS84
Height file	:	N/A
Height level	:	No Level Correction
Height file	:	N/A
Height offset	:	0.000 m

Connected Observations

Connected Nodes

Gyro Compass

Swift GpsGate Hdt Rx

Interfacing

Type	:	Gyro Compass			
Driver	:	NMEA Position and Heading (Checksum)			
Executable and Cmdlin	:	DrvPositionNMEA.exe			
Port	:	27			
Baud rate	:	9600	Data bits	:	8
Parity	:	None	Stop bits	:	1
Update rate	:	0.000 s	Latency	:	0.000 s

Connected Observations

Swift GpsGate Hd : Bearing (True)

Connected Nodes

Lewek Swift CS : Lewek Swift

Position Navigation System

Swift Satel Pos Rx

Interfacing

Type	:	Position Navigation System			
Driver	:	Subsea Telemetry Position			
Executable and Cmdlin	:	DrvSubseaTelemetry.exe SUBSEA			
Port	:	7			
Baud rate	:	19200	Data bits	:	8
Parity	:	None	Stop bits	:	1
Update rate	:	0.000 s	Latency	:	0.000 s

Satellite System Definition

Position datum	:	WGS84
Satellite system name	:	WGS84

Satellite Receiver Definition

Receiver number	:	4
Receiver description	:	
Node identifier	:	Lewek Swift CS
Object location	:	Lewek Swift
X (Stbd = Positive):	:	0.000 m
Y (Bow = Positive):	:	0.000 m
Z (Up = Positive):	:	0.000 m
Horizontal datum	:	WGS84
Vertical datum	:	WGS84
Height file	:	N/A
Height level	:	No Level Correction
Height file	:	N/A
Height offset	:	0.000 m

Connected Observations

Connected Nodes

Gyro Compass

Swift Satel Pos Rx

Interfacing

Type	:	Gyro Compass			
Driver	:	Subsea Telemetry Heading			
Executable and Cmdlin	:	DrvSubseaTelemetry.exe SUBSEA			
Port	:	7			
Baud rate	:	19200	Data bits	:	8
Parity	:	None	Stop bits	:	1
Update rate	:	0.000 s	Latency	:	0.000 s

Connected Observations

Swift Satel Pos	:	Bearing (True)
Slot 1	:	4

Connected Nodes

Lewek Swift CS	:	Lewek Swift
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Gyro Compass

Emerald GpsGate Hdt Rx

Interfacing

Type	:	Gyro Compass		
Driver	:	POS M/V (NMEA HDT Heading and Position)		
Executable and Cmdlin	:	DrvPositionNMEA.exe		
Port	:	28		
Baud rate	:	9600	Data bits	: 8
Parity	:	None	Stop bits	: 1
Update rate	:	0.000 s	Latency	: 0.000 s

Connected Observations

Emerald GpsGate : Bearing (True)

Connected Nodes

Lewek Emeral CS : Lewek Emerald

Position Navigation System

Emerald GpsGate Pos Rx

Interfacing

Type	:	Position Navigation System		
Driver	:	POS M/V (NMEA GGA GST GSA and Heading)		
Executable and Cmdlin	:	DrvPositionNMEA.exe		
Port	:	28		
Baud rate	:	9600	Data bits	: 8
Parity	:	None	Stop bits	: 1
Update rate	:	0.000 s	Latency	: 0.000 s

Satellite System Definition

Position datum : WGS84

Satellite system name : WGS84

Satellite Receiver Definition

Receiver number	:	1
Receiver description	:	
Node identifier	:	Lewek Emeral CS
Object location	:	Lewek Emerald
X (Stbd = Positive):	:	0.000 m
Y (Bow = Positive):	:	0.000 m
Z (Up = Positive):	:	0.000 m

Horizontal datum	:	WGS84
Vertical datum	:	WGS84
Height file	:	N/A
Height level	:	No Level Correction
Height file	:	N/A
Height offset	:	0.000 m

Connected Observations

Connected Nodes

Position Navigation System

Emerald Satel Pos Rx

Interfacing

Type	:	Position Navigation System			
Driver	:	Subsea Telemetry Position			
Executable and Cmdlin	:	DrvSubseaTelemetry.exe SUBSEA			
Port	:	7			
Baud rate	:	19200	Data bits	:	8
Parity	:	None	Stop bits	:	1
Update rate	:	0.000 s	Latency	:	0.000 s

Satellite System Definition

Position datum	:	WGS84
Satellite system name	:	WGS84

Satellite Receiver Definition

Receiver number	:	5
Receiver description	:	
Node identifier	:	Lewek Emeral CS
Object location	:	Lewek Emerald
X (Stbd = Positive):	:	0.000 m
Y (Bow = Positive):	:	0.000 m
Z (Up = Positive):	:	0.000 m
Horizontal datum	:	WGS84
Vertical datum	:	WGS84
Height file	:	N/A
Height level	:	No Level Correction
Height file	:	N/A
Height offset	:	0.000 m

Connected Observations

Connected Nodes

Gyro Compass

Emerald Satel Hdt Rx

Interfacing

Type	:	Gyro Compass			
Driver	:	Subsea Telemetry Heading			
Executable and Cmdlin	:	DrvSubseaTelemetry.exe SUBSEA			
Port	:	7			
Baud rate	:	19200	Data bits	:	8
Parity	:	None	Stop bits	:	1
Update rate	:	0.000 s	Latency	:	0.000 s

Connected Observations

Emerald Satel Hd	:	Bearing (True)
Slot 1	:	5

Connected Nodes

Lewek Emeral CS	:	Lewek Emerald
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USBL System

Sonardyne USBL

Interfacing

Type	:	USBL System		
Driver	:	Nautronics ATS (ASCII)		
Executable and Cmdlin	:	DrvUsblTerminated.exe NAUTRONICS_ATS_ASCII		
Port	:	31		
Baud rate	:	9600	Data bits	:
Parity	:	None	Stop bits	:
Update rate	:	0.000 s	Latency	:
				8
				1
				0.000 s

System Parameters

Sonardyne USBL		
Object	:	Ocean Patriot
USBL system reference number	:	1
Quality indicator type	:	No quality info recorded
Sign convention for Z-axis data	:	Positive downward (depth)
Measurement units X,Y,Z	:	Meters
Roll alignment	:	Corrected VRU
Pitch alignment	:	Corrected VRU
Horizontal alignment	:	No
Transducer alignment	:	Corrected
Turn around delays	:	Not corrected
Velocity of propagation	:	Assumed
Reduction to ship's reference point	:	No
Transducer	:	USBL Pole
Sign convention roll offset	:	Positive heeling to starboard
Sign convention pitch offset	:	Positive bow up
Sign convention heading offset	:	Positive to starboard
Roll alignment offset	:	0.000000 °
Pitch alignment offset	:	0.000000 °
Heading alignment offset	:	0.000000 °
Assumed velocity of propagation	:	1500.000000 Meters/s
Calibrated velocity of propagation	:	1500.000000 Meters/s
Turn around delay	:	0.000000 ms
Maximum age	:	10.000000 s

Connected Targets

B68 CoG			:	B68
Slot 1	:	4		
B12 CoG			:	B12
Slot 1	:	3		
Riser CoG			:	Riser
Slot 1	:	2		
BOP CoG			:	BOP
Slot 1	:	1		

APPENDIX D - HEADING SENSOR CALIBRATION

Solar Observation for Azimuth (Hour Angle) 2009

Neptune Geomatics Job Number: 9A409
Job Description: Spikey Beach-1
Client: Australian Drilling Associates Pty Ltd
Surveyor: S. Hunter
Vessel: Ocean Patriot
Date: 27 August 2009

Control Point Co-ordinates

Datum: World Geodetic System 1984 (WGS84)

Latitude (DMS): -038 18 00
 Longitude (DMS): 148 42 20
 UTC Correction (HMS): 10.00

Total Station Observations:

Face	Local Time (HMS)			Observed Direction to R.O. (DMS)			Observed Direction to Sun (DMS)			Observed (O) True Heading (D.D)
Left	16	56	02	000	00	00	038	04	28	250.30
Right	16	57	34	180	00	11	217	11	20	
Left	17	00	04	000	00	00	037	29	26	250.00
Right	17	00	41	180	01	04	216	51	49	
Left	17	03	18	000	00	00	036	51	48	250.10
Right	17	03	56	179	58	11	216	19	09	
Left	17	05	55	000	00	00	036	31	34	250.10
Right	17	06	26	179	58	19	216	04	23	
Left	17	08	07	000	00	00	036	12	50	250.10
Right	17	08	56	180	02	14	215	39	16	
Left	17	10	43	000	00	00	035	48	27	250.10
Right	17	11	21	180	00	20	216	09	37	
Left	17	13	04	000	00	00	035	19	50	250.10
Right	17	13	39	180	00	29	214	53	20	
Left	17	15	09	000	00	00	035	12	04	250.20
Right	17	15	46	180	03	30	214	18	10	
Left	17	17	20	000	00	00	034	32	30	250.10
Right	17	18	00	179	55	00	214	00	39	
Left	17	19	52	000	00	00	034	25	47	250.10
Right	17	20	31	180	01	11	213	36	11	
Left	17	22	22	000	00	00	034	08	05	250.20
Right	17	22	50	179	59	59	213	12	59	
Left	17	24	29	000	00	00	033	34	25	250.10
Right	17	24	58	180	00	24	213	00	19	

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Solar Observation for Azimuth (Hour Angle) 2009

Neptune Geomatics Job Number: 9A409
Job Description: Spikey Beach-1
Client: Australian Drilling Associates Pty Ltd
Surveyor: S. Hunter
Vessel: Ocean Patriot
Date: 27 August 2009

Datum: World Geodetic System 1984 (WGS84)

Average Local Time (HMS)			Average Horizontal Angle (DMS)			Azimuth Sun (DMS)			Azimuth RO (DMS)			Calculated (C) True Heading (D.D)	Observed (O) True Heading (D.D)	C-O (D.D)
16	56	48.0	037	37	54	288	46	56	251	09	07	251.15	250.30	0.85
17	00	22.5	037	10	38	288	12	02	251	01	57	251.03	250.00	1.03
17	03	37.0	036	35	29	287	40	35	251	04	12	251.07	250.10	0.97
17	06	10.5	036	17	59	287	15	52	250	57	03	250.95	250.10	0.85
17	08	31.5	035	56	03	286	53	15	250	58	19	250.97	250.10	0.87
17	11	02.0	035	59	02	286	29	12	250	30	20	250.51	250.10	0.41
17	13	21.5	035	06	35	286	06	58	251	00	38	251.01	250.10	0.91
17	15	27.5	034	45	07	285	46	58	251	03	36	251.06	250.20	0.86
17	17	40.0	034	16	35	285	25	59	251	06	54	251.12	250.10	1.02
17	20	11.5	034	00	59	285	02	04	251	01	40	251.03	250.10	0.93
17	22	36.0	033	40	32	284	39	19	250	58	46	250.98	250.20	0.78
17	24	43.5	033	17	22	284	19	18	251	02	08	251.04	250.10	0.94

Mean C-O 0.87

APPENDIX E - POSITION CHECK

POSITION FIX DEFINITIONS

Database

C:\data\9A391\Database\9A391 Ocean Patriot.db

Position Fix

Position Node computation	: LD2 Pos
Position Node name	: Ocean Patrio CoG

Geodetic Parameters

Survey Datum	: Australia GDA 1994 (GRS 1980)
Survey Projection	: Universal Transverse Mercator (South Oriented) (GRS 1980)
Vertical Datum	: Survey Datum
Meridian Convergence	: -1.057469 °

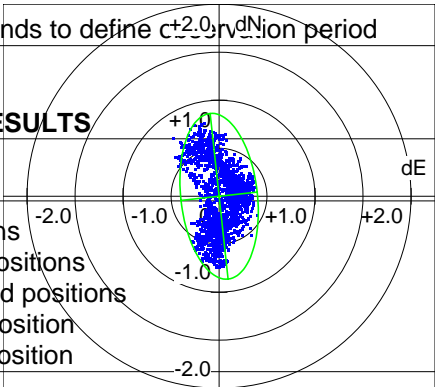
Observation Period

Time span in seconds to define observation period	: 1800.00
---	-----------

POSITION FIX RESULTS

Position Fixes

Number of positions	:	1802	
Number of used positions	:	1802	
Number of disabled positions	:	0	
UTC time of first position	:	13:27:11.165	: 2009-08-27
UTC time of last position	:	13:57:12.111	: 2009-08-27



Statistics

Value	:	Mean Value	:	St. Deviation
Easting	:	649194.79 m	:	0.17 m
Northing	:	5759560.25 m	:	0.35 m
Latitude	:	38;17;58.742 S	:	0.35 m
Longitude	:	148;42;22.378 E	:	0.17 m
Height	:	21.50 m	:	0.00 m

APPENDIX F - DAILY OPERATIONS REPORT

PROJECT OPERATIONS SUMMARY

9A409 Ocean Patriot Spikey Beach-1 Positioning

To: **Neptune Geomatics**

From: **Neptune Geomatics**
Job No.: **9A409**

Signed:



Date: **30 August to 7 September**

Scott Hunter
Surveyor

Attn.: **Neptune Geomatics**
Copy:

Via project digital data

Summary of Events

Code	From	To	Comment	Hrs
Sunday 30 August 2009				
	0001		On stanby waiting on weather	
	0545	0555	Attend preshift meeting	
	0600		All navigation equipment failure noticed, UPS issues	
	0615	0715	Restart all navigation equipment, system checks	
	1030	1100	Rig abandonment drill	
	1300	1400	Safety meeting	
	2359		On stanby waiting on weather	
				Total 24
Monday 31 August 2009				
	0001		On stanby waiting on weather	
	0545	0555	Attend preshift meeting	
	0930	1230	Run up navigation equipment on AHV's	
	1115		Notified A. Bush would be returning to the rig at approx 1600	
	1125		Rig crawling back over location Basker-7	
	1140		Rig move Basker-7	
	1145		Commence winching to Safe Location A (E:649253, N:5759642)	
	1440		Rig over safe location A	
	1640		A. Bush arrives onboard Ocean Patriot	
	2359		On standby waiting on weather	
				Total 24
Tuesday 1 September 2009				
	0000		Shift change	
	0001		On standby waiting for weather	
	0500		Updated tow route onto Lewek Swift and Emerald	
	1200		Shift change	
	1425		Emerald alongside	
	1505		#3 PCC passed to Emerald	
	1510		Start recording 0001 – Anchor Recovery.db	
	1515		Emerald chasing out to #3 Anchor	
	1605		#3 Anchor off the bottom	
	1626		#3 Anchor on deck of Emerald, begin winching in	
	1722		#3 Anchor racked	
	1740		#3 PCC passed back to rig	
	1745		Commence rig crawl from Safe Location A to /C (E:649193, N:5759643)	
	1940		Rig over Safe Location C	
	2005		#6 PCC passed to Swift	
	2020		#2 PCC passed to Emerald	
	2025		Swift chasing out to #6 Anchor	

	2030	Emerald chasing out to #2 Anchor	
	2045	#6 Anchor off the bottom, winching in	
	2055	#2 Anchor off the bottom, winching in	
	2205	#2 Anchor racked	
	2220	#2 PCC passed back to rig	
	2225	#6 Anchor racked	
	2245	#6 PCC passed back to rig	
	2255	#7 PCC passed to Swift	
	2305	Swift chasing out to #7 Anchor	
	2320	Emerald connected to Tow Bridle	
	2335	Emerald at tow length 300m	
	2340	#7 Anchor off the bottom, winching in	
			Total 24
Wednesday 2 September 2009			
	0001	Shift change, continue recovering anchors	
	0100	#7 Anchor racked	
	0110	#7 PCC passed back to rig	
	0135	#8 PCC passed to Swift	
	0145	Swift chasing out to #8 Anchor	
	0202	Swift at #8, rig paying out to get anchor off bottom.	
	0220	#8 off bottom, chasing back to rig	
	0325	#8 Anchor racked	
	0335	#8 PCC passed back to rig	
	0349	Rig winching in on #4 to reposition Rig	
	0415	Rig on location at safe zone B	
	0425	Swift moving around to pick up #4 PCC	
	0440	#4 PCC passed down to Swift	
	0450	Swift chasing out to #4 Anchor	
	0505	Swift at #4 anchor	
	0513	#4 off bottom, recovering to deck	
	0535	#4 on deck of Swift	
	0540	Chasing back to Rig	
	0630	#4 back in water 120m from rig, chasing back to rig	
	0645	#4 Anchor racked	
	0700	#4 PCC passed back to Rig	
	0725	Rig winching in to position over safe location C	
	0810	Rig on location at safe zone C	
	0830	#1 PCC passed down to Swift	
	0835	Swift chasing out to #1	
	0846	Swift at #1 anchor, rig paying out to pop anchor out	
	0853	#1 off bottom, recovering to Swift deck	
	0947	#1 anchor racked	
	0955	#1 PCC passed back to Rig	
	1025	#5 PCC passed down to Swift	
	1030	Swift chasing out to #5	
	1130	#5 off bottom, chasing back to rig	
	1200	#5 Anchor racked	
	1222	Commence recording 0003-Tow to Spikey Beach.db	
	1225	#5 PCC passed back to Rig, Ocean Patriot commence tow to Spikey Beach-1	
	1230	Ocean Patriot 1 Nm from Basker-7	
	1740	Emerald increase tow wire to 770m	
	1800	Lat: 38deg 39.19'S Long: 148deg 29.06'E CMG: 216.1 DTG: 163.52Nm BTG: 227.3 ETA:36.3hrs @ 4.5kn DTSF: 23.7Nm	
	2100	Lat: 38deg 52.68'S Long: 148deg 17.44'E CMG: 214.2 DTG: 144.50Nm BTG: 228.8 ETA:30.7hrs @ 4.7kn DTSF: 39.9Nm	
			Total 24
Thursday 3 September 2009			
	0000	Lat: 39deg 03.41'S Long: 148deg 04.93'E CMG: 226.0 DTG:131.05Nm BTG: 228.9 ETA: 28.5hrs @ 4.6kn DTSF: 54.2Nm	
	0001	Shift change	
	0300	Lat: 39deg 13.49'S Long: 147deg 52.26'E CMG: 222.5 DTG: 119.32Nm BTG: 230.1 ETA: 26.5hrs @ 4.6kn DTSF: 67.4Nm	

	0545	A. Bush attends daily safety meeting	
	0600	Lat: 39deg 23.89'S Long: 147deg 38.86'E CMG: 223.1 DTG: 104.34Nm BTG: 231.0 ETA: 19.3hrs @ 5.4kn DTSF: 82.6Nm	
	0900	Lat: 39deg 34.98'S Long: 147deg 24.21'E CMG: 234.1 DTG: 88.55Nm BTG: 232.1 ETA: 17.4hrs @ 5.1kn DTSF: 98.2Nm	
	1130	S. Hunter attends preshist meeting	
	1200	Lat: 39deg 43.52'S Long: 147deg 09.53'E CMG: 232.2 DTG: 74.51Nm BTG: 232.1 ETA: 17.3hrs @ 4.3kn DTSF: 111.7Nm	
	1201	Shift change	
	1410	Update Emerald with planned stern location for anchors	
	1500	Lat: 39deg 51.05'S Long: 146deg 56.53'E CMG: 230.9 DTG: 61.97Nm BTG: 232.1 ETA: 14.7hrs @ 4.2kn DTSF: 124.3Nm	
	1800	Lat: 39deg 58.78'S Long: 146deg 43.86'E CMG: 232.7 DTG: 49.53Nm BTG: 232.1 ETA: 12.7hrs @ 3.9kn DTSF: 136.6Nm	
	2100	Lat: 40deg 05.67'S Long: 146deg 31.74'E CMG: 236.6 DTG: 37.97Nm BTG: 232.1 ETA: 9.7hrs @ 3.9kn DTSF: 148.0Nm	
			Total 24
Friday 4 September 2009			
	0000	Lat: 40deg 12.41'S Long: 146deg 19.94'E CMG: 234.2 DTG: 26.65Nm BTG: 231.8 ETA: 7.4hrs @ 3.6kn DTSF: 159.1Nm	
	0001	Shift change	
	0300	Lat: 40deg 18.89'S Long: 146deg 09.28'E CMG: 232.2 DTG: 16.19Nm BTG: 232.12 ETA: 4.8hrs @ 3.4kn DTSF: 169.5Nm	
	0545	A. Bush attends daily safety meeting	
	0600	Lat: 40deg 25.01'S Long: 145deg 58.98'E CMG: 225.3 DTG: 6.31Nm BTG: 232.32 ETA: 2.5hrs @ 2.5kn DTSF: 179.2Nm	
	0630	Arrived on location, manovering rig across to Anchor 4 extended run line	
	0800	Stop logging, 0003 – Tow To Spikey Beach – 0001.db	
	0804	Start logging, 0004 – Spikey Beach-1 Anchors – 0001.db	
	0830	Swift moving into position to pick up #4 penant	
	0843	#4 PCC passed down to Swift	
	0850	#4 paying out some chain before moving rig onto line	
	1056	#4 Anchor on bottom. 405136.80mE 5519347.86mN	
	1105	Appears to be good tension, Swift chasing back	
	1146	#4 PCC passed back to Rig	
	1130	S. Hunter attend preshift meeting	
	1150	Swift moving around to receive #8 PCC	
	1200	Shift change	
	1209	#8 PCC passed down to Swift	
	1233	Swift chasing out to #8 Anchor	
	1245	Swift all stop, problem with anchor orientation	
	1330	Swift chasing out to #8 Anchor	
	1357	#8 Anchor on the bottom. 403871.17mE 5516998.24mN	
	1400	Swift stripping back	
	1438	#8 PCC passed back to Rig, Swift moving to recieve #5 PCC	
	1500	#5 PCC passed down to Swift	
	1532	Swift chasing out to #5 Anchor	
	1553	#5 Anchor on the bottom 405805.43mE 4418170.43mN	
	1600	Swift stripping back	
	1640	#5 PCC passed back to Rig, Swift heading to receive #1 PCC	
	1710	#1 PCC passed down to Swift	
	1735	Swift chasing out to #1 Anchor	
	1803	#1 Anchor on the bottom 403276.69mE 5518160.31mN	
	1810	Swift stripping back	
	1835	#1 PCC passed back to rig	
	1906	Emerald released from tow bridle	
	1924	#7 PCC passed down to Swift	
	2005	Swift changing out pennant wire	
	2017	Emerald departs for Geelong	
	2100	Complete pretension on Anchors #4 and #8	
	2118	Swift chasing out to #7 Anchor	
	2135	#7 Anchor on the bottom 404536.07mE 5516888.75mN	
	2140	Swift stripping back	
	2215	#7 PCC passed back to rig, Swift heading around to get #3 PCC	

	2245		#3 Pennant passed to Swift	
	2300		Swift chasing out to #3 Anchor	
	2310		Swift lowering #3 off roller to lower onto bottom	
	2315		#3 Anchor on the bottom 404526.86mE 5519442.60mN	
	2320		No power to winch #3	
	2340		Swift stripping back	
				Total 24
Saturday 5 September 2009				
	0000		Shift change	
	0020		Rig still having problems with winch #3.	
	0025		Rig having problems with stbd crane.	
	0245		Crane problems fixed, Swift moving in to pass PCC back	
	0255		#3 PCC passed back to Rig	
	0256		Swift moving around to #6 to get PCC	
	0315		#6 PCC passed to Swift	
	0353		#6 anchor on bottom. 405630.32mE 5517556.71mN	
	0355		Rig getting good tension on anchor, Swift chasing back to Rig	
	0435		#6 PCC passed back to Rig	
	0445		Swift standing by for daylight and weather to calm down before running last anchor.	
	0600		Unable to get tension on Anchor #3, needs to be redone	
	0630		Swift still standing by on weather	
	0830		Swift moving in to receive #2 PCC	
	0854		#2 PCC passed down to Swift	
	0910		Swift running out to #2 drop point	
	0934		#2 Anchor on bottom. 403417.14mE 5518773.39mN	
	0940		Swift chasing back	
	1016		#2 PCC passed back to Rig	
	1020		Swift not happy with weather conditions, standing by before trying to re-run #3 Anchor	
	1130		S.Hunter attend preshift meeting	
	1200		Shift change	
	1230	1300	Move equipment boxes out of weather to a safe location	
	1405	1415	Cross tensioning Anchors #2 and #6	
	1640		Commence positioning rig over location using winches	
	1835		Stop winching, rig approx 2m from location	
	1900	2000	1 hour preliminary position fix to monitor movement of rig	
	2100		Spudded in	
	2216	2316	1 hour final position fix (hdg=246.5)	
				Total 24
Sunday 6 September 2009				
	1030		Rig abandonment drill	
	1130		S. Hunter attend preshift meeting	
	1300		Weekly safety meeting	
	1742		#3 PCC passed down to Swift, chasing out to #3 Anchor	
	1806		#3 Anchor off the bottom	
	1810		Anchor upside down, trying to flip it around	
	1842		#3 on bottom, trying to drag it to flip the right way	
	1846		Anchor appears to be right way, Swift picking up anchor to check	
	1856		Anchor right way up, Swift moving ahead to put anchor back on bottom	
	1909		#3 anchor on bottom. 404506.21mE 5519458.71mN	
	1911		Swift chasing back to rig	
	1944		#3 PCC passed back to rig	
	2010		Cross tensioning complete	
				Total 24
Monday 7 September 2009				
	0745		Veripos signal deactivated	
	0800		A. Bush and S. Hunter attend heli briefing	
	0945		A.Bush and S. Hunter depart Ocean Patriot for Melbourne	
	1515		A. Bush and S. Hunter fly from Melbourne to Perth	
	1900		Personnel arrive in Perth	

				Total 19
Summary of Hours				
Description	Code	Total Hrs	Remarks	
Mobilisation	M			
Transit	TR			
Standby	SB			
Operational	OP	211		
Demobilisation	D			
Total		211		

Summary of Personnel				
Name	Function	Company	Arrival Date	Departure Date
Scott Hunter	Surveyor	Neptune Geomatics	30/08/2009	07/09/2009
Adam Bush	Survey Engineer	Neptune Geomatics	30/08/2009	07/09/2009

Summary of Equipment

Primary Rig setup consisting of:

Veripos Standard DGPS and Verify QC software
QPS QINSy positioning software
TSS Meridian Gyrocompass
Hemisphere Crescent VS110 DGPS (Secondary system)
Online PC
Offline PC for remote to Pilot display
Total Station, Tripod and Prism
SATEL radio modem
Cell Americas Wireless modem

Tugs (Lewek Swift and Lewek Emerald)

QPS QINSy positioning software
CSI Hemisphere V100 DGPS and heading unit
PC
SATEL radio modem
Cell Americas Wireless modem

Summary of QHSE			
Type	Total	Date	Details
Daily meetings including Safety Issues (incl project briefings, safety meetings, inductions, drills and JHA's) (excluding regular toolbox meetings)	4	30/08/2009 06/09/2009 07/09/2009 08/09/2009	Safety Meeting + Abandonment Drill Safety Meeting + Abandonment Drill Bristow Helicopter Briefing Project Debriefing
Incidents (Neptune Geomatics)	0		
Near Misses (Neptune Geomatics)	0		

Comments

DRILLING RIG POSITION NOTICE

Ocean Patriot Position at Spikey Beach-1

To: **Australian Drilling Associates**
Level 5 Rialto North Tower
525 Colin Street
Melbourne Vic 3000

From: **Neptune Geomatics**
Job No.: **9A409**
Signed:



Scott Hunter
Surveyor

Date: **6 September 2009**

Attn.: **ADA Drilling Supervisor**
Ocean Patriot Ballast Control
Ocean Patriot Barge Captain

opds@australiandrilling.com.au
patriot_bc@dodi.com
patriot_capt@dodi.com

Copy: **Anthony Kerr**
Jason French
Vanessa Knight

AKerr@neptunems.com
JFrench@neptunems.com
VKnight@neptunems.com

The final surface position of the Ocean Patriot Drill Stem at the Spikey Beach-1 location was computed from Veripos Standard Differential GPS data recorded between 2216 and 2316 on 5 September 2009. The GPS data were recorded immediately after spudding the well. The following results were computed:

The final Spikey Beach-1 Differential GPS Surface Position of the Ocean Patriot Drill Stem is:

Datum: Geocentric Datum of Australia 1994 (GDA94)

Latitude: 40° 28' 53.879" South

Longitude: 145° 52' 24.706" East

Projection: Map Grid of Australia (MGA) Zone 55 C.M. 147° East

Easting: 404 522.80m

Northing: 5 518 174.63m

The final Spikey Beach-1 Differential GPS surface position of the Ocean Patriot drill stem is 1.84m on a bearing of 74.3° True from the intended location.

The final Rig Heading is 246.5° True.

Note: The following 7-parameter datum transformation was used to convert ITRF2000 coordinates to GDA94 coordinates (Epoch 2009.5):

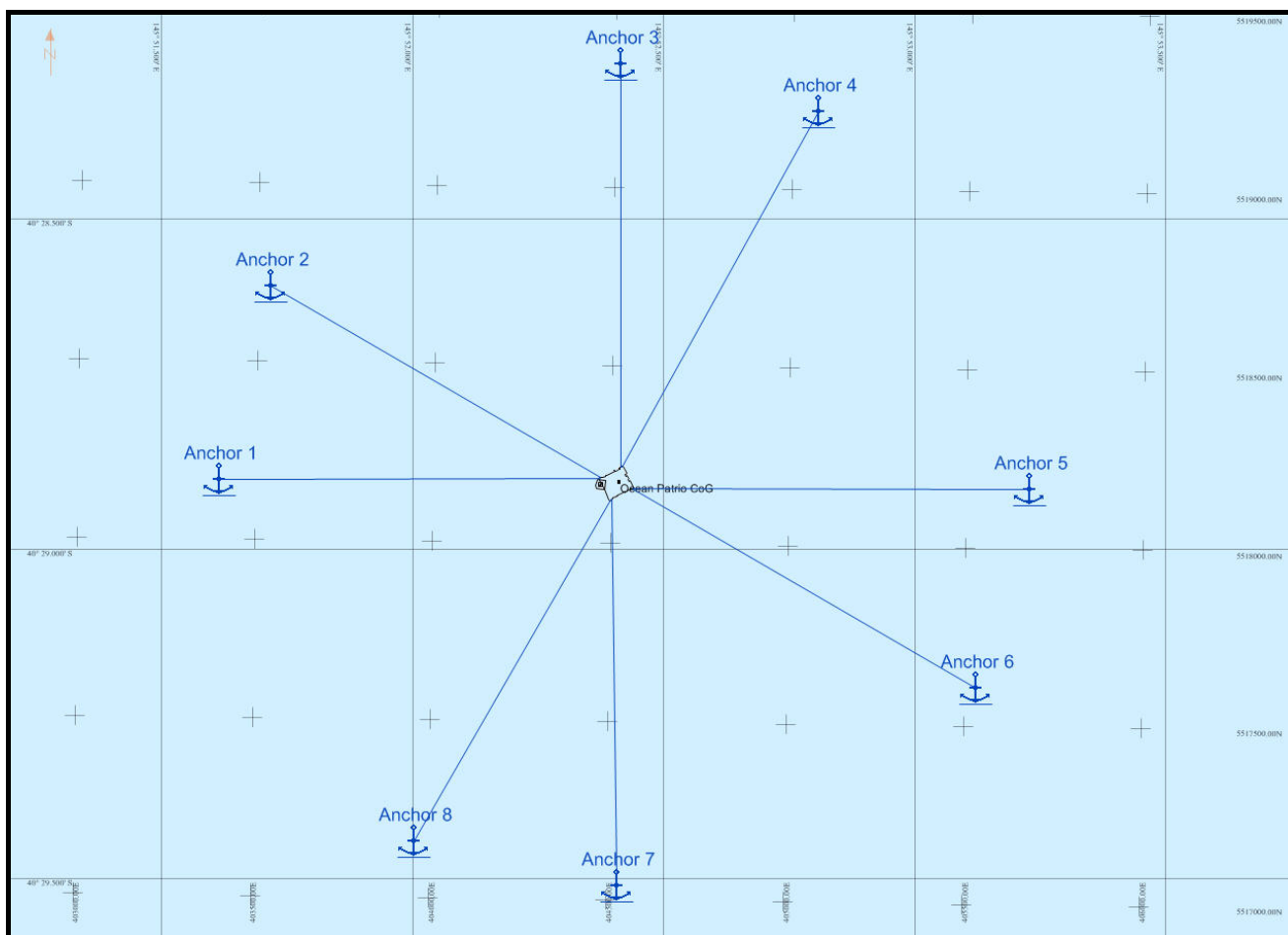
Dx	=	+0.028 40m
Dy	=	-0.052 80m
Dz	=	-0.120 90m
Rx	=	+0.018 588"
Ry	=	+0.015 736"
Rz	=	+0.019 196"
Scale	=	+0.002 824 p.p.m.

The final anchor positions corrected for catenary are as follows:

Anchor array of the Ocean Patriot at Spikey Beach-1							
Datum :	Geocentric Datum of Australia 1994 (GDA94)						
Projection :	Map Grid of Australia (MGA) Zone 55 C.M. 147° East						
Anchor	Easting (m)	Northing (m)	Horizontal Distance (m)	Bearing (True)	Chain Out (m)	Depth (m)	Tension (T)
1	403 395.76	5 518 166.71	1075.2	269.6	1085	76	119
2	403 536.34	5 518 710.11	1072.2	299.8	1082	76	118
3	404 512.52	5 519 347.88	1133.0	359.8	1142	76	140
4	405 071.64	5 519 220.89	1139.6	28.9	1148	76	160
5	405 679.10	5 518 167.48	1118.0	90.1	1127	76	140
6	405 534.23	5 517 607.04	1118.6	120.0	1128	76	127
7	404 530.08	5 517 039.76	1088.7	179.2	1098	76	130
8	403 957.79	5 517 158.56	1108.9	209.9	1119	76	113

Notes:

- Catenary calculations performed in MK Catenary with chain out and tension values correct at time of issue.

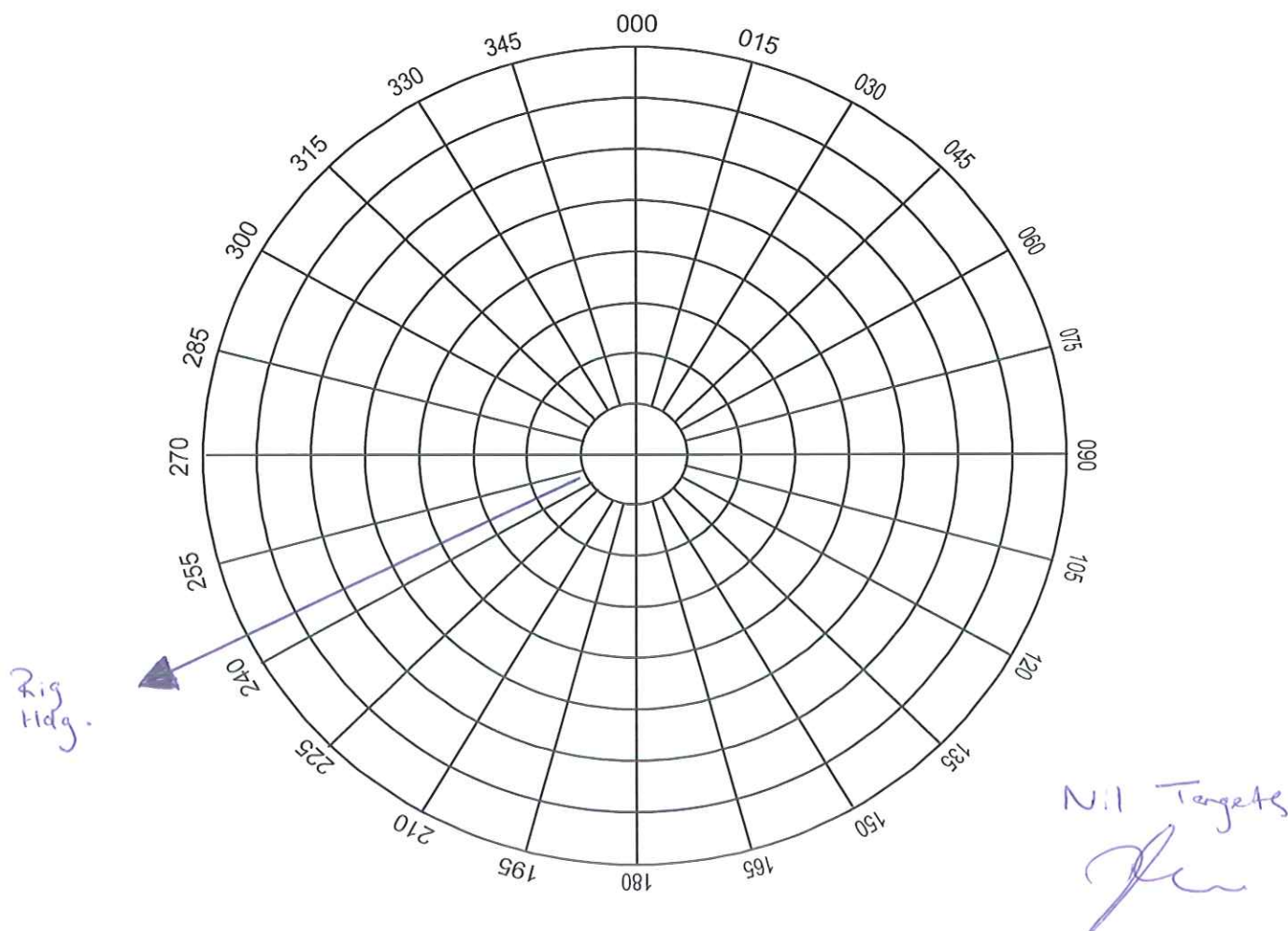


Ocean Patriot anchor array at Spikey Beach-1

Attachment 10

Seabed Clearance

Date: 16th September 2009
 Location/Well: Spikey Beach 1 Rig: Ocean Patriot
 Co-ordinates: Lat: _____ Long: _____
 Geodetic Datum: _____
 Reason for Survey (Arrival/Departure): Final Seabed Survey
 Method of Survey: Visual (Colour Camera) & Sonar
 Type of Equipment Used: Sonar & Video Camera (Pioneer 005 HD)
 Range of Coverage: 50 Metres video, sonar 50Meters
 No. of Scans: 30
 Rig Heading (Indicate on Diagram): 245 deg
 Position of Rig Relevant to Well During Scans: On Location.
 Height of Scanning Unit during Scans: 1 1/2 Metres
 Nature of Seabed: Silt / Sand Flat (with indentations previously left by Jack Up)
 Type of Wellhead: N.A. - Recovered to deck
 Type of Records Made: DVD



SPECIFY SCALE OF DIAGRAM: 200 meter Diameter.

LIST OF TARGETS					
	POSITION (DISTANCE & BEARING)	APPROX. DIMENS. (M)	DESCRIPTION	Means of identification	Recovered yes/no
1.	PGB RECOVERED, NO EQUIPMENT LEFT ON SEABED. NO DEBRIS SIGHTED OR DETECTED				
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.			(continue on separate sheet)		
MEANS OF IDENTIFICATION			Reasons for not removing remaining debris:		
A	SONAR SCAN	D	RIG RECORDS	N/A	
B	DIVING INSPECTION				
C	R.O.V.				

SIGNATORIES1. NAME T. LeePOSITION Client RepresentativeCOMPANY Beach2. NAME:  D. CrossPOSITION: Rov SupervisorCOMPANY: Subsea 7GUIDANCE NOTES

- Survey should extend to at least 70m from the Wellhead
- The first signatory should be the person responsible for the rig - either the O.I.M. or Client's Rep. The second signatory should be the person supervising the seabed survey, the SONAR Operator, the Diving Superintendent etc.

Appendix 2: Daily Drilling Reports

DRILLING MORNING REPORT # 1**02 Sep 2009****From:****To:****Spikey Beach-1****Well Data**

Country	Australia	MDBRT	m	Cur. Hole Size	in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	m	Last Casing OD	in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	m	Daily Cost	AUD 1,658,000
Rig	Ocean Patriot (semi)	Days From Spud	0.00	Shoe MDBRT	m	Cum Cost	AUD 1,658,000
Wtr Depth (MSL)	75 m	Days On Well	0.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600 Lat 39deg 24.2'S, Long 147deg 38.5E. On tow to Spikey Beach-1 at 5.06knts hdg 224deg			
RT To Seabed	96.5 m	Planned TD	2,062 m				
		TVDBRT		Planned Op	Continue rig tow to Spikey Beach-1 location		

Summary of Period 0000 to 2400 Hrs

On Contract at 12:30hrs. Commenced tow to Spikey Beach-1 location

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
STOP Card	59	0	Safe 47 Unsafe 12	DODI 47 Third Party 3 ADA 0 Catering 9
JSA	31	0		Drill 5 Trip 1 Pump Room 1 Crane Crew 12 Mechanic 1 Electrician 2 Welder 6 Subsea 3

Operations For Period 0000 Hrs to 2400 Hrs On 02 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P1	P	M1	12:30	24:00	11.50	m	<p>Commenced rig move from Basker-7 to Spikey Beach 1 location.</p> <p>Rig and vessels on contract to Beach @ 12:30hrs 2/9/2009; 1NM from Basker-7. Rig on tight tow.</p> <p>12:35.... Lat 38 17.98'S.. Long 148 42.39'E..</p> <p>16:00.... Lat 38 32.7' S.. Long 148 36.6'E..Speed 4.42knts..HDG 215deg... Travelled 15.5nm.. DTG 172.5nm.. ETA 07:00 4th</p> <p>18:00....Lat 38 39.19' S.. Long 148 29.06'E..Speed 4.5knts..HDG 227Deg... Travelled 23.7nm.. DTG 163.5nm.. ETA 06:20 4th</p> <p>21:00....Lat 38 52.68' S.. Long 148 17.44'E..Speed 4.7knts..HDG 229deg... Travelled 39.9nm.. DTG 144.5nm.. ETA 03:45 4th</p> <p>24:00....Lat 39 03.41'S.. Long 148 04.93'E..Speed 4.6knts...HDG 229deg... Travelled 54.2nm.. DTG 131nm.. ETA 04:30 4th</p> <p>Other offline activities: Pressure tested surface kill and choke manifold and safety valves to 250psi for 5min & to 5000psi for 10min. Painted and measured 30in casing. Rig crew continue with rig maintenance</p>

Operations For Period 0000 Hrs to 0600 Hrs On 03 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P1	P	M1	00:00	06:00	6.00	m	Continued rig move to Spikey Beach 1 location. 03:00....Lat 39 13.49'S.. Long 147 52.26'E..Speed 4.3knts...HDG 224deg... Travelled 68.8nm.. DTG 119.0nm.. ETA 04:10 4th 06:00....Lat 39 24.2'S.. Long 147 38.5'E..Speed 5.06knts...HDG 224deg... Travelled 83.8nm.. DTG 104nm.. ETA 02:48 4th

Phase Data to 2400hrs, 02 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	11.50	02 Sep 2009	02 Sep 2009	11.50	0.479	

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	0.0	0.0	63.00
Bentonite	MT	0.0	0.0	0.0	51.00
Cement - G Neat	MT	0.0	0.0	0.0	103.00
Fuel	M3	0.0	2.0	0.0	460.00
Potable Water	m3	0.0	4.0	0.0	363.00
Drill Water	m3	13.0	30.0	0.0	489.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00		97								
2	National	6.00		97								
3	National	6.00		97								

Personnel On Board

Company	Pax
Diamond Offshore	43
Diamond Offshore	13
Catering	8
	5
ADA Services	8
Total	77

Marine
Weather on 02 Sep 2009

Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency
10.0 NM	18 kn	45.0 °	1,014.0 mbar	14 °C	0.5 m	45.0 °	3 s
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments	
			1.5 m	45.0 °	11 s		
Comments							



Support Vessels										
Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Emerald	02 Sep 2009 12:30		On tow bridle	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	87
				Barite (MT)	MT	0.0	0.0	0.00	0.0	75
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	43
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	462
				Fuel (M3)	M3	0.0	18.5	0.00	0.0	247.5
				Potable Water (m3)	m3	0.0	3.0	0.00	0.0	195
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	365
Lewek Swift	02 Sep 2009 12:30		Tow Support	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	25
				Fuel (M3)	M3	0.0	8.0	0.00	0.0	311
				Potable Water (m3)	m3	0.0	0.0	0.00	0.0	466
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	335
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1564
David Rossow of Hart Aviation completed a CAP437 Helideck Inspection.										

03 Sep 2009

From: Tim Lee / Kevin Monkhouse
To: Iain Robertson

DRILLING MORNING REPORT # 2**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	m	Cur. Hole Size	in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	m	Last Casing OD	in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	m	Daily Cost	AUD 598,000
Rig	Ocean Patriot (semi)	Days From Spud	0.00	Shoe MDBRT	m	Cum Cost	AUD 2,256,000
Wtr Depth (MSL)	75 m	Days On Well	1.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	At position Lat 40 25.1'S.. Long 145 58.6'E heading 239deg at 3.26knts on tow to Spikey Beach-1. ETA 08:00hrs		
RT To Seabed	96.5 m	Planned TD TVDRT	2,062 m	Planned Op			
					Run Anchors on Spikey Beach-1 Location. Ballast down and prepare for Spud in		

Summary of Period 0000 to 2400 Hrs

Continued with rig move from Basker-7 to Spikey Beach-1 Location

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	0		
Days Since LTI	0	972		
STOP Card	62	0	Safe 50 Unsafe 12	DODI 52 Third Party 1 ADA 2 Catering 7
JSA	36	0		Drill 1 Trip 0 Pump Room 1 Crane Crew 15 Mechanic 8 Electrician 2 Welder 6 Subsea 3
Permit To Work	21	0	Hot 13 Cold 8	
Safety Meeting	1	0	Spikey Beach 1 Prespud	Conducted prespud during all pre tour meetings.
Abandon Drill	0	0		
Fire Drill	0	0		

Operations For Period 0000 Hrs to 2400 Hrs On 03 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P1	P	M1	00:00	12:00	12.00	m	Continued rig move to Spikey Beach 1 location. 03:00....Lat 39 13.49'S.. Long 147 52.26'E..Speed 4.3knts...HDG 224deg... Travelled 68.8nm.. DTG 119.0nm.. ETA 04:10 4th 06:00....Lat 39 24.2'S.. Long 147 38.5'E..Speed 5.06knts...HDG 224deg... Travelled 83.8nm.. DTG 104nm.. ETA 02:48 4th 09:00....Lat 39 35.2'S.. Long 147 23.7'E..Speed 5.3knts...HDG 233deg... Travelled 99.7nm.. DTG 88nm.. ETA 03:10 4th

Operations For Period 0000 Hrs to 2400 Hrs On 03 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P1	P	M1	12:00	24:00	12.00	m	<p>12:00....Lat 39 43.7'S.. Long 147 08.9'E..Speed 4.73knts...HDG 233deg... Travelled 113.9nm.. DTG 73.8nm.. ETA 03:10 4th</p> <p>15:00....Lat 39 51.4'S.. Long 146 55.8'E..Speed 4.77knts...HDG 234deg... Travelled 126.6nm.. DTG 61.2nm.. ETA 03:50 4th</p> <p>18:00....Lat 39 51.1'S.. Long 146 43.2'E..Speed 4.71knts...HDG 233deg... Travelled 139nm.. DTG 48.8nm.. ETA 06:12 4th</p> <p>21:00....Lat 40 05.9'S.. Long 146 31.3'E..Speed 3.8knts...HDG 233deg... Travelled 150.4nm.. DTG 37.4nm.. ETA 06:20 4th</p> <p>24:00....Lat 40 12.9'S.. Long 146 19.1'E..Speed 3.86knts...HDG 233deg... Travelled 162nm.. DTG 25.8nm.. ETA 07:00 4th</p> <p>Offline Activities....Pressure tested choke manifold and HP lines 250psi/7500psi 5min/10min (90% completed).... Pressure tested Stand Pipe manifold and lines 250psi/5000psi 5min/10min (90% completed).... Prepared BHA components on deck.... Prepared PGB and posts, installed bulls eye frame.</p>

Operations For Period 0000 Hrs to 0600 Hrs On 04 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P1	P	M1	00:00	06:00	6.00	m	<p>Continued rig move to Spikey Beach 1 location.</p> <p>03:00....Lat 40 19.1'S.. Long 146 08.7'E..Speed 3.36knts...HDG 239deg... Travelled 172.1nm.. DTG 15.7nm.. ETA 07:30 4th</p> <p>06:00....Lat 40 25.1'S.. Long 145 58.6'E..Speed 3.26knts...HDG 239deg... Travelled 181.9nm.. DTG 5.9nm.. ETA 08:00 4th</p>

Phase Data to 2400hrs, 03 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	35.50	02 Sep 2009	03 Sep 2009	35.50	1.479	

General Comments

00:00 TO 24:00 Hrs ON 03 Sep 2009

Operational Comments	Conducted Pre Spud review during pre tour meetings with on coming crews
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Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	0.0	0.0	63.00
Bentonite	MT	0.0	0.0	0.0	51.00
Cement - G Neat	MT	0.0	0.0	0.0	103.00
Fuel	M3	0.0	5.4	0.0	454.60
Potable Water	m3	0.0	23.0	0.0	340.00
Drill Water	m3	0.0	14.0	0.0	475.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00		97								
2	National	6.00		97								
3	National	6.00		97								

Personnel On Board

Company	Pax
Diamond Offshore	43
Diamond Offshore	13
Catering	8
ADA Services	5
Cameron	1
Dowell Schlumberger	1
Schlumberger (Wireline)	1
MI Drilling Fluids	1
BJ Tubulars	3
Subsea 7	3
Other Contractor	2
Go Offshore	1
Total	82

Marine

Weather on 03 Sep 2009

Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency
10.0 NM	15 kn	23.0 °	1,012.0 mbar	14 °C	0.5 m	23.0 °	2 s
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments	
°	klb	3,508.00 klb	1.5 m	45.0 °	11 s	Mainly Cloudy	
Comments							

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Emerald	02 Sep 2009 12:30		On tow bridle	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	87
				Barite (MT)	MT	0.0	0.0	0.00	0.0	75
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	43
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	462
				Fuel (M3)	M3	0.0	32.0	0.00	0.0	215.5
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	190
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	365
Lewek Swift	02 Sep 2009 12:30		Tow Support	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	25
				Fuel (M3)	M3	0.0	9.6	0.00	0.0	301.4
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	462
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	335
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1564

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	10:00 / 10:15	8/ 3	

04 Sep 2009
From: Tim Lee / Kevin Monkhouse
To: Iain Robertson
DRILLING MORNING REPORT # 3**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	m	Cur. Hole Size	in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	m	Last Casing OD	in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	m	Daily Cost	AUD 650,000
Rig	Ocean Patriot (semi)	Days From Spud	0.00	Shoe MDBRT	m	Cum Cost	AUD 2,906,000
Wtr Depth (MSL)	75 m	Days On Well	2.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Positioning rig over well centre and cross tensioning anchors. Cross tension to 200t and hold for 10mins		
RT To Seabed	96.5 m	Planned TD TVDRT	2,062 m	Planned Op			
					Complete running anchors. Ballast rig down. Mix kill mud, gel. Make up 30in RT, cement stand, BHA and drill 36in top hole		

Summary of Period 0000 to 2400 Hrs

Completed tow to Spikey Beach-1 location. Positioned rig and ran anchors #4,#8, #5, #1. Changed out #7 damaged pennant wire. Deployed anchors #7 and #3

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	1		
Days Since LTI	0	1,002		
STOP Card	45	0	Safe 34 Unsafe 121	DODI 32 Third Party 1 ADA 4 Catering 8
JSA	38	0		Drill 7 Trip 0 Pump Room 0 Crane Crew 16 Mechanic 4 Electrician 5 Welder 6 Subsea 0
Permit To Work	21	0	Hot 8 Cold 12	
Safety Meeting	0	1		
Abandon Drill	0	6		
Fire Drill	0	6		

Operations For Period 0000 Hrs to 2400 Hrs On 04 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P1	P	M1	00:00	06:30	6.50	m	Continued rig move to Spikey Beach 1 location. 03:00.....Lat 40 19.1'S.. Long 146 08.7'E..Speed 3.36knts...HDG 239deg... Travelled 172.1nm.. DTG 15.7nm.. ETA 07:30 4th 06:00.....Lat 40 25.1'S.. Long 145 58.6'E..Speed 3.26knts...HDG 239deg... Travelled 181.9nm.. DTG 5.9nm.. ETA 08:00 4th 06:30.... End of tow at Lat 40deg 26.8'S.... Long 145deg 56.8'E
P1	P	M4	06:30	08:45	2.25	m	Commenced run in to location
P1	P	M4	08:45	09:15	0.50	m	08:45 #4 PCC passed to Swift 09:12 #4 Anchor on deck and secured

Operations For Period 0000 Hrs to 2400 Hrs On 04 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P1	P	M4	09:15	10:20	1.08	m	Emerald and Swift manouvered rig to location
P1	P	M4	10:20	24:00	13.67	m	Deployed Anchors 10:20... #4 Pennant passed to swift 10:58... #4 Anchor on bottom (Statement of facts take from Emerald ad Swift) 11:50... #4 Pennant back on rig 12:05... #8 Pennant passed to Swift 12:28... Stopped running #8 anchor. Anchor upside down. Heaved back in to correct orientation of anchor 13:20... #8 Anchor on Swift Deck 13:35... Re-ran #8 anchor 13:55... #8 Anchor on bottom 14:35... #8 Pennant back on rig 14:55... #5 Pennant passed to Swift 15:15... #5 Anchor on Swift deck 15:55... #5 Anchor on bottom 16:40... #5 Pennant back on rig 17:10... #1 Pennant passed to Swift 17:35... #1 Anchor on Swift deck 18:00... #1 Anchor on bottom 18:30... #1 Pennant back on rig 19:05... Emerald disconnected from tow bridle 19:25... #7 Pennant passed to Swift 19:45... Changed out #7 Pennant wire after pay out 150mtrs chain 21:36... #7 Anchor on bottom 22:18... #7 Pennant back on rig 22:20... Emerald released to town 22:39... #3 Pennant passed to Swift 23:00... #3 Anchor at stern roller 23:18... #3 Anchor on bottom Offline Activities.... Choke and cement manifold Press Test 95% completed Stand Pipe Manifold Pressure Test 100% completed BOP Pressure Test 250psi/7500psi 5min/10min Rams and valves. 250psi/4000psi 5min/10min Annulars 80% completed. Shakers Dressed with screens. 30" Casing threads cleaned and checked 2½deg bullseye installed on PGB

Operations For Period 0000 Hrs to 0600 Hrs On 05 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P1	P	M4	00:00	00:30	0.50	m	Swift returned to rig with #3 Pennant
P1	TP (RE)	M4	00:30	02:30	2.00	m	Starboard crane thermostat failed. Unable to recover #3 Pennant from Swift.
P1	P	M4	02:30	04:40	2.17	m	Deployed Anchors 02:54... #3 Pennant back on rig 03:18... #6 Pennant passed to Swift 03:54... #6 Anchor on bottom 04:36... #6 Pennant back at rig
P1	P	M4	04:40	06:00	1.33	m	Adjust anchor winches to position rig over well centre

Phase Data to 2400hrs, 04 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	59.50	02 Sep 2009	04 Sep 2009	59.50	2.479	

General Comments

00:00 TO 24:00 Hrs ON 04 Sep 2009

Operational Comments

Transferred 2 x personnel from Swift to Patriot at 18:50hrs. Unable to transferr personnel to Emerald due to weather deteriorating.

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	0.0	0.0	63.00
Bentonite	MT	0.0	0.0	0.0	51.00
Cement - G Neat	MT	0.0	0.0	0.0	103.00
Fuel	M3	0.0	11.9	0.0	442.70
Potable Water	m3	0.0	8.0	0.0	332.00
Drill Water	m3	29.0	11.0	0.0	493.00

Pumps**Pump Data - Last 24 Hrs****Slow Pump Data**

No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00		97								
2	National	6.00		97								
3	National	6.00		97								

Personnel On Board

Company	Pax
Diamond Offshore	43
Diamond Offshore	13
Catering	8
ADA Services	5
Cameron	1
Dowell Schlumberger	2
Schlumberger (Wireline)	0
MI Drilling Fluids	1
BJ Tubulars	3
Subsea 7	3
Other Contractor	2
Go Offshore	1
Total Marine	2
Total	84

Marine

Weather on 04 Sep 2009

Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency
10.0 NM	20 kn	270.0 °	1,011.0 mbar	13 °C	1.0 m	270.0 °	2 s
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments	
°	klb	3,508.00 klb	1.5 m	225.0 °	11 s	Over cast	
Comments							

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Emerald	02 Sep 2009 12:30	04 Sep 2009 20:20	In transit to Geelong	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	87
				Barite (MT)	MT	0.0	0.0	0.00	0.0	75
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	43
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	462
				Fuel (M3)	M3	0.0	15.0	0.00	0.0	200.5
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	185
				Drill Water (m3)	m3	0.0	167.0	0.00	0.0	198
Lewek Swift	02 Sep 2009 12:30		Deploying Rig Anchors	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	25
				Fuel (M3)	M3	0.0	19.6	0.00	0.0	281.8
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	458
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	335
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1564

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
	Bristow Helicopters	/	0/ 0	

DRILLING MORNING REPORT # 4**05 Sep 2009**
From: Tim Lee / Kevin Monkhouse
To: Iain Robertson
Spikey Beach-1**Well Data**

Country	Australia	MDBRT	155.0 m	Cur. Hole Size	36.000 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	155.0 m	Last Casing OD	in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress	58.00 m	Shoe TVDBRT	m	Daily Cost	AUD 650,000
Rig	Ocean Patriot (semi)	Days From Spud	0.00	Shoe MDBRT	m	Cum Cost	AUD 3,556,000
Wtr Depth (MSL)	74 m	Days On Well	3.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Run 30in casing to 33m		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Continue to run 30in casing. Circulate & cement casing. POOH with RT. P/U drill pipe. M/U 17½in BHA.		

Summary of Period 0000 to 2400 Hrs

Ran anchors #3. Repaired starboard crane. Ran anchor #6. Began to ballast rig down. Ran anchor #2. Completed rig ballast down to drilling draft. Prepared for spud. Ran in and drilled top hole . Swept 150bbl PHG pill. Wiper trip

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	1	2	Dropped tow bridle.	Deployment/recovery wire for tow bridle parted, dropping tow bridle/fishplate into water. Bridle remains suspended between pontoons. No injuries.
Days Since LTI	0	1,003		
STOP Card	67	0	Safe 44 Unsafe 23	DODI 45 Third Party 12 ADA 3 Catering 7
JSA	38	0		Drill 10 Trip 7 Pump Room 5 Crane Crew 18 Mechanic 5 Electrician 3 Welder 6 Subsea 0
Permit To Work	21	1	Hot 9 Cold 11	
Safety Meeting	0	2		
Abandon Drill	0	7		
Fire Drill	0	7		

Operations For Period 0000 Hrs to 2400 Hrs On 05 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P1	P	M4	00:00	00:30	0.50	m	Swift returned to rig with #3 Pennant
P1	TP (RE)	M4	00:30	02:30	2.00	m	Starboard crane thermostat failed. Unable to recover #3 Pennant from Swift.
P1	P	M4	02:30	04:45	2.25	m	Deployed Anchors 02:54... #3 Pennant back on rig 03:18... #6 Pennant passed to Swift 03:54... #6 Anchor on bottom 04:36... #6 Pennant back at rig
P1	P	M4	04:45	06:15	1.50	m	04:45... Adjust anchor winches to position rig over well centre 06:15... Complete cross tension on anchors #1 and #5
P1	P	M3	06:15	08:45	2.50	m	Ballasted rig down to drilling draft

Operations For Period 0000 Hrs to 2400 Hrs On 05 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P1	P	M4	08:45	10:30	1.75	m	Deployed Anchors 08:55... #2 Pennant passed to Swift 09:17... #2 Anchor at Swift stern roller 09:36... #2 Anchor on bottom 10:19... #2 Pennant back on rig
P1	P	M3	10:30	11:30	1.00	m	Continued to ballast down rig
P4	P	G6	11:30	17:30	6.00	m	Picked up and racked back 5 stands of 5in DP. 2 Stands of 5in HWDP. 2 Stands of 8in DCs. Made up cement stand and racked back. Made up 30in RT to stand of 5in DP and racked back.
P4	P	G6	17:30	20:30	3.00	m	Picked up and made up 26in bit, 36in hole opener, float sub and Anderdrift tool. Made up to DCs and RIH
P4	P	G23	20:30	20:45	0.25	m	Held shallow gas JSA on Drill floor prior to spud in
P4	P	E5	20:45	21:00	0.25	m	Filled pipe. Tagged sea bed at 95.5mRT MSL (Tide Corrected). Calibrated loggers instrumentation. Tested survey with Anderdrift tool above sea bed. 0deg
P4	P	D2	21:00	23:00	2.00	155.0 m	Spudded well from 95.5m to 155mRT MSL. Spudded first 4m with 300gpm 0-2k wob. Continued drilling ahead slowly buiding flow from 300gpm to 1000gpm. WOB from 2k to 5k. RPM from 40 to 70. Pumped 2 x 100bbl PHG pills per stad. Took Anderdrift survey on connections
P4	P	F4	23:00	23:30	0.50	155.0 m	Pumped 150bbl PHG sweep. Took Anderdrift survey on bottom (0deg).
P4	P	G8	23:30	24:00	0.50	155.0 m	Performed wiper trip to 109m

Operations For Period 0000 Hrs to 0600 Hrs On 06 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P4	P	G8	00:00	00:30	0.50	155.0 m	RIH. No hole problems. Tagged fill (1.5m). Washed fill to bottom at 157.3m
P4	P	F4	00:30	01:00	0.50	155.0 m	Circulated 2 x hole volumes of PHG mud (480bbl)
P4	P	G8	01:00	03:30	2.50	155.0 m	POOH. Racked BHA. Laid out bit, hole opener, Anderdrift and float sub.
P5	P	G1	03:30	04:15	0.75	155.0 m	Rigged up to run 30in casing
P5	P	G23	04:15	04:30	0.25	155.0 m	Held pre job JSA on runing casing
P5	P	G9	04:30	06:00	1.50	155.0 m	Picked up shoe, checked flow through float valve. Continued to make 30in intermediate joints to 33m

Phase Data to 2400hrs, 05 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Surface Hole(P4)	12.50	05 Sep 2009	05 Sep 2009	83.50	3.479	155.0 m

General Comments

00:00 TO 24:00 Hrs ON 05 Sep 2009

Operational Comments	Rig location at Spud in:... Latitude - 40deg 28' 53.875"S ... Longitude - 145deg 52' 24.704" E
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WBM Data
Cost Today AUD

Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%	Viscosity	100 s/qt
Sample-From:	Pit 4	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity	%vol	PV	cP
Time:	21:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	Solids:	%	YP	lbf/100ft ²
Weight:	8.80 ppg	HTHP-cake:	/32nd"	MBT:	30.0	H2O:	%	Gels 10s	lbf/100ft ²
Temp:	°C			Pm:		Oil:	%	Gels 10m	lbf/100ft ²
				Pf:		Sand:		Fann 003	
						pH:	9.5	Fann 006	
						PHPA:	ppb	Fann 100	
						PHPA(Density):	kg/m ³	Fann 200	
								Fann 300	
								Fann 600	
Comment									

Bit #1				Wear	I	O1	D	L	B	G	O2	R
					0	0	NO	A	0	I		TD
				Bit wear comment:								
Size ("):	660 mm (26")	IADC#	111	Nozzles		Drilled over last 24 hrs		Calculated over Bit Run				
Mfr:	Hughes	WOB(avg)	2.40 klb	No.	Size	Progress	58.0 m	Cum. Progress		58.0 m		
Type:	Milled Tooth	RPM(avg)	55 rpm	1	16/32nd"	On Bottom Hrs	1.7 h	Cum. On Btm Hrs		1.7 h		
Serial No.:	6076124	F.Rate	587 gpm	3	20/32nd"	IADC Drill Hrs	2.0 h	Cum IADC Drill Hrs		2.0 h		
Bit Model	CR1	SPP	660 psi			Total Revs		Cum Total Revs				
Depth In	99.0 m	HSI	hp/in²			ROP(avg)		34.12 m/h	ROP(avg)			
Depth Out	157.3 m	TFA	0.001 m²									
Bit Comment												

BHA #1

Weight(Wet)	50.00 klb	Length	149.1 m	Torque(max)	3,500 ft.lbf	D.C. (1) Ann Velocity	25 ft/min
Wt Below Jar(Wet)	klb	String Weight	50.00 klb	Torque(Off.Btm)	200 ft.lbf	D.C. (2) Ann Velocity	23 ft/min
		Pick-Up Weight	50.00 klb	Torque(On.Btm)	1,800 ft.lbf	H.W.D.P. Ann Velocity	22 ft/min
		Slack-Off Weight	50.00 klb			D.P. Ann Velocity	22 ft/min
BHA Run Description		Top Hole Rotary Assembly with Anderdrift tool					
BHA Run Comment		26in Bit with 36in Hole Opener					

Equipment	Length	OD	ID	Serial #	Comment
Bit	0.59 m	26.00 in	in	6076124	Mill tooth Tricone bit. 3x20, 1x16 nozzles
Hole Opener	2.77 m	36.00 in	in	203A3	4x20 Nzzles
Bit Sub	0.93 m	9.56 in	3.06 in	186-0063	
Anderdrift	2.86 m	9.44 in	3.06 in	ADB954	
9 1/2 drill collars	28.43 m	9.56 in	3.19 in		
X/Over	1.09 m	9.50 in	3.00 in	508A360	
8in DC	55.89 m	8.00 in	2.88 in		
X/Over	1.16 m	8.00 in	2.81 in	508A33	
HWDP	56.51 m	5.00 in	3.00 in		

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	6.0	0.0	57.00
Bentonite	MT	0.0	24.0	0.0	27.00
Cement - G Neat	MT	0.0	0.0	0.0	103.00
Fuel	M3	0.0	9.7	0.0	433.00
Potable Water	m3	9.0	20.0	0.0	321.00
Drill Water	m3	21.0	232.0	0.0	282.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00	8.80	97	77	1,150	329					
2	National	6.00	8.80	97	77	1,150	329					
3	National	6.00	8.80	97	76	1,150	325					

Personnel On Board

Company	Pax
Diamond Offshore	43
Diamond Offshore	12
Catering	8
ADA Services	5
Cameron	1
Dowell Schlumberger	3
Schlumberger (Wireline)	0
MI Drilling Fluids	2
BJ Tubulars	3
Subsea 7	6
Other Contractor	2
Go Offshore	1
Baker Hughes Inteq	2
Total	88

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer :

Available	462.0	Losses	238.0	Equipment	Description	Mesh Size	Comments
Active	462.0 bbl	Downhole	238.0 bbl				
Mixing		Surf+ Equip					
Hole		Dumped					
Slug		De-Gasser					
Reserve		De-Sander					
Kill		De-Silter					
		Centrifuge					

Marine

Weather on 05 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	20 kn	293.0 °	1,014.0 mbar	13 °C	1.5 m	293.0 °	2 s	#1 Anchor	265.00 klb
								#2 Anchor	225.00 klb
								#3 Anchor	116.00 klb
								#4 Anchor	98.00 klb
								#5 Anchor	220.00 klb
								#6 Anchor	214.00 klb
								#7 Anchor	223.00 klb
								#8 Anchor	243.00 klb

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Emerald	02 Sep 2009 12:30	04 Sep 2009 20:20	In transit to Geelong	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	87
				Barite (MT)	MT	0.0	0.0	0.00	0.0	75
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	43
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	462
				Fuel (M3)	M3	0.0	0.0	0.00	0.0	200.5
				Potable Water (m3)	m3	0.0	0.0	0.00	0.0	185
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	198
Lewek Swift	02 Sep 2009 12:30		Stand by on Rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	25
				Fuel (M3)	M3	0.0	18.0	0.00	0.0	263.8
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	454
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	335
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1564

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	09:35 / 09:45	8/ 4	

DRILLING MORNING REPORT # 5**06 Sep 2009**
From: Tim Lee / Kevin Monkhouse
To: Iain Robertson
Spikey Beach-1**Well Data**

Country	Australia	MDBRT	155.0 m	Cur. Hole Size	36.000 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	155.0 m	Last Casing OD	30.000 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	151.4 m	Daily Cost	AUD 721,000
Rig	Ocean Patriot (semi)	Days From Spud	0.00	Shoe MDBRT	151.4 m	Cum Cost	AUD 4,533,000
Wtr Depth (MSL)	74 m	Days On Well	4.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Make up and rack back 8in Drill Collar.		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Make up 17.5in BHA. RIH, drill out shoe and drill 17.5in hole		

Summary of Period 0000 to 2400 Hrs

Made up and ran 30in casing to 151.4m. Circulated and cemented 30in casing. Waited on cement. Disengaged 30in RT and POOH. Layed out RT and cement stand subs. Picked up 5in DP and racked back in derrick

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	2	Dropped tow bridle.	
Days Since LTI	0	1,004		
STOP Card	59	0	Safe 47 Unsafe 12	DODI 42 Third Party 5 ADA 3 Catering 9
JSA	43	0		Drill 2 Trip 14 Pump Room 2 Crane Crew 12 Mechanic 5 Electrician 2 Welder 6 Subsea 0
Permit To Work	21	0	Hot 5 Cold 10	
Safety Meeting	1	0		Weekly Safety Meeting
Abandon Drill	1	32		
Fire Drill	1	32		Fire in accomodation
JHA/HSE Audit	1	1	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 06 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P2	P	G8	00:00	00:30	0.50	155.0 m	RIH. No hole problems. Tagged fill (1.5m). Washed fill to bottom at 155.0m
P2	P	F4	00:30	01:00	0.50	155.0 m	Circulated 2 x hole volumes of PHG mud (480bbl).
P2	P	G6	01:00	03:30	2.50	155.0 m	POOH. Racked BHA. Laid out bit, hole opener, Anderdrift and float sub.
P3	P	G1	03:30	04:15	0.75	155.0 m	Rigged up to run 30in casing.
P3	P	G23	04:15	04:30	0.25	155.0 m	Held pre job JSA on runing casing
P3	P	G9	04:30	07:30	3.00	155.0 m	Picked up shoe, checked flow through float valve. Continued to make 30in intermediate joints, x/o and well head jt to 58m.
P3	P	G9	07:30	08:00	0.50	155.0 m	Ran 5 jts of 5in drill pipe inside 30in casing as cement stinger.
P3	P	G9	08:00	10:00	2.00	155.0 m	Made up 30in RT to 30in housing. Lowered housing and made up to PGB. Installed guide lines to PGB. Checked bullseye 0°

Operations For Period 0000 Hrs to 2400 Hrs On 06 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P3	P	G9	10:00	11:00	1.00	155.0 m	Ran 30in casing in hole on DP to 151.4m. Checked orientation of PGB (243° - 247°). Checked bullseye 0°. Checked height of 30in housing above seabed ~2m.
P3	P	F4	11:00	12:45	1.75	155.0 m	Rigged up cement hose. Broke circulation with 500gpm, 50psi. Reduced circulation to 350gpm, 50psi. Held cementing JSA while circulating.
P3	P	F3	12:45	13:00	0.25	155.0 m	Pumped 10bbl seawater with cement uit. Closed low torq and pressure tested surface lines to 1000psi for 5mins. Test ok. Opened low torq valve.
P3	P	F3	13:00	14:00	1.00	155.0 m	Cemented 30in casing with Cement Unit. Pumped 20bbl sea water followed by 10bbl of seawater with green dye. Pumped 270bbl 15.8ppg class G cement slurry (56MT) at 6BPM. Displaced cement with 21bbls of sea water. Checked bullseye, 0.5° aft.
P3	P	G1	14:00	17:30	3.50	155.0 m	Checked for back flow. no flow. Rigged down surface lines and flushed same. Waited on cement to harden. Periodically checked bullseye, steady at 0.5° aft, height steady at ~2m.
P3	P	G8	17:30	19:00	1.50	155.0 m	Unlatched 30in RT with 5 turns to right. POOH and racked back 5in DP. Laid out RT and TIW, side entry sub from cement stand. No change in bullseye (0.5° aft) No change in well head height ~2m.
P4	P	G2	19:00	24:00	5.00	155.0 m	Offline: Worked #3 anchor. Brought in 'Swift' to re-set #3 anchor. Picked up 5in DP from deck and racked back 33 stands in derrick. Offline: Worked #3 anchor. 20:20hrs Cross tension of 200mt between # 3 / # 7 Anchor winch successfully completed.

Operations For Period 0000 Hrs to 0600 Hrs On 07 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P4	P	G2	00:00	04:00	4.00	155.0 m	Picked up 5in DP from deck. Total of 67stds 5in DP racked back in derrick
P4	P	G2	04:00	06:00	2.00	155.0 m	Made up 5 jts of 8in DCs and 8in jar. Racked stands back in derrick

Phase Data to 2400hrs, 06 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	5.00	06 Sep 2009	06 Sep 2009	107.50	4.479	155.0 m

General Comments

00:00 TO 24:00 Hrs ON 06 Sep 2009

Operational Comments	Rig location at Spud in:... Latitude - 40deg 28' 53.875"S ... Longitude - 145deg 52' 24.704" E
Operational Comments	Anchor #3 reset. Anchors #3 and #7 cross tensioned 200t 10mins.
Operational Comments	Bullseye on PGB checked before cementation 0°. After cementation check bullseye was 0.5° aft

WBM Data
Cost Today AUD2,495

Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%	Viscosity	100 s/qt
Sample-From:	Pit 4	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity	%vol	PV	cP
Time:	16:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	Solids:		YP	lbf/100ft ²
Weight:	8.80 ppg	HTHP-cake:	/32nd"	MBT:		H2O:	%	Gels 10s	lbf/100ft ²
Temp:	°C			Pm:		Oil:	%	Gels 10m	lbf/100ft ²
				Pf:		Sand:		Fann 003	
						pH:	9.0	Fann 006	
						PHPA(Density):	kg/m ³	Fann 100	
								Fann 200	
								Fann 300	
								Fann 600	
Comment									

WBM Data				Cost Today AUD			
Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%
Sample-From:	Pit #5	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity	%vol
Time:	19:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	Solids:	%
Weight:	8.80 ppg	HTHP-cake:	/32nd"	MBT:		H2O:	%
Temp:	°C			Pm:		Oil:	%
				Pf:		Sand:	
						pH:	9.5
						PHPA(Density):	kg/m ³
Comment							

WBM Data				Cost Today AUD			
Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%
Sample-From:	Pit #3	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity	%vol
Time:	22:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	Solids:	%
Weight:	11.50 ppg	HTHP-cake:	/32nd"	MBT:		H2O:	%
Temp:	°C			Pm:		Oil:	%
				Pf:		Sand:	
						pH:	8.5
						PHPA(Density):	kg/m ³
Comment							

Bulk Stocks						
Name	Unit	In	Used	Adjust	Balance	
Barite	MT	0.0	10.0	0.0	47.00	
Bentonite	MT	0.0	11.0	0.0	16.00	
Cement - G Neat	MT	0.0	56.0	0.0	47.00	
Fuel	M3	0.0	11.9	0.0	421.10	
Potable Water	m3	30.0	23.0	0.0	328.00	
Drill Water	m3	434.0	278.0	0.0	438.00	

Pumps													
Pump Data - Last 24 Hrs										Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)		Check	SPM	Pressure ()	Flow ()
1	National	6.00	8.80	97	77	1,150	329						
2	National	6.00	8.80	97	77	1,150	329						
3	National	6.00	8.80	97	76	1,150	325						

Personnel On Board	
Company	Pax
Diamond Offshore	54
Catering	8
ADA Services	4
Cameron	1
Dowell Schlumberger	4
Schlumberger (Wireline)	0
MI Drilling Fluids	2
BJ Tubulars	3
Subsea 7	6
Other Contractor	2
Go Offshore	1
Baker Hughes Inteq	2
Beach Petroleum Ltd	1
Total	88

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	813.0	Losses	161.0	Equipment	Description	Mesh Size	Comments
Active	160.0 bbl	Downhole	161.0 bbl				
Mixing		Surf+ Equip					
Hole		Dumped					
Slug		De-Gasser					
Reserve	303.0 bbl	De-Sander					
Kill	350.0 bbl	De-Silter					
		Centrifuge					

Marine

Weather on 06 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	18 kn	293.0 °	1,014.0 mbar	12 °C	0.5 m	293.0 °	2 s	#1 Anchor	262.00 klb
								#2 Anchor	260.00 klb
								#3 Anchor	265.00 klb
								#4 Anchor	265.00 klb
								#5 Anchor	262.00 klb
								#6 Anchor	280.00 klb
								#7 Anchor	287.00 klb
								#8 Anchor	249.00 klb
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments			
240.0 °	klb	3,881.00 klb	1.5 m	315.0 °	11 s	Rain			
Comments									

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Emerald	02 Sep 2009 12:30		In transit to Rig location	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	87
				Barite (MT)	MT	0.0	0.0	0.00	0.0	75
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	43
				Brine (bbl)	bbl	758.0	0.0	0.00	0.0	1220
				Fuel (M3)	M3	338.1	40.2	0.00	0.0	498.4
				Potable Water (m3)	m3	0.0	0.0	0.00	0.0	185
				Drill Water (m3)	m3	70.0	0.0	0.00	0.0	268
Lewek Swift	02 Sep 2009 12:30		Stand by on Rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	25
				Fuel (M3)	M3	0.0	18.7	0.00	-0.8	244.3
				Potable Water (m3)	m3	0.0	4.0	0.00	-270.0	180
				Drill Water (m3)	m3	0.0	0.0	0.00	-164.0	171
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1564

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	10:00 / 10:10	1 / 1	Unscheduled flight to transport cementer to rig

DRILLING MORNING REPORT # 6**07 Sep 2009**
From: Tim Lee / Kevin Monkhouse
To: Iain Robertson
Spikey Beach-1**Well Data**

Country	Australia	MDBRT	200.0 m	Cur. Hole Size	17.500 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	200.0 m	Last Casing OD	30.000 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress	45.00 m	Shoe TVDBRT	151.4 m	Daily Cost	AUD 701,000
Rig	Ocean Patriot (semi)	Days From Spud	0.00	Shoe MDBRT	151.4 m	Cum Cost	AUD 5,234,000
Wtr Depth (MSL)	74 m	Days On Well	5.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Drilled 17.5in hole to 428m		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Drill 17.5in hole to TD at ca 810m. Sweep pill, displace well to weighted mud and POOH. Rig up and run 13.375in casing		

Summary of Period 0000 to 2400 Hrs

Picked up and racked back 67stands of 5in DP. Made up 17.5in BHA and racked in derrick. Made up 18.75in WHRT and racked back in derrick. Made up Dowell cement head and racked back in derrick. Diamond preformed Shallow gas JSA, Rig maintenance, changed out Kill hose in moon pool while Schlumberger MWD Engineers arrived on board and prepared tools. Made up and tested MWD/LWD tools. Made up BHA, tagged TOC, drilled out cement, shoe and rat hole. Drilled 17½in hole from 155m to 196m. Pull back and make up stand of 8in DC. Drilled 17½in hole from 196m to 200m

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	1	0	First Aid	Individual sustained minor cut while installing Geograph line to Top Drive. The cut was treated by the Medic and the IP returned to work
Days Since LTI	0	1,005		
STOP Card	63	0	Safe 47 Unsafe 12	DODI 45 Third Party 9 ADA 2 Catering 7
JSA	50	0		Drill 4 Trip 13 Pump Room 2 Crane Crew 12 Mechanic 7 Electrician 1 Welder 6 Subsea 5
Permit To Work	21	1	Hot 4 Cold 9	
Safety Meeting	0	1		
Abandon Drill	0	2		
Fire Drill	0	2		
JHA/HSE Audit	1	1	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 07 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P4	P	G2	00:00	04:00	4.00	155.0 m	Picked up 5in DP from deck. 26 stands picked up. Total of 67stds 5in DP racked back in derrick
P4	P	G2	04:00	05:30	1.50	155.0 m	Made up 3 jts of 8in DCs and racked stand back in derrick
P4	P	G2	05:30	06:30	1.00	155.0 m	Performed rig maintenance while waited on jars to be off loaded from Emerald.
P4	P	G2	06:30	07:30	1.00	155.0 m	Pick up 2 x 8in DCs and made up to drilling jar. Racked stand back in derrick
P4	P	G2	07:30	09:00	1.50	155.0 m	Changed out Kill Hose in Moonpool. Offline: Prepared MWD/LWD equipment.

Operations For Period 0000 Hrs to 2400 Hrs On 07 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P4	P	G2	09:00	12:00	3.00	155.0 m	Made up 18.75in WHRT and racked back in derrick. Made up Dowell cement head and racked back in derrick. Offline: Prepared MWD/LWD equipment.
P4	P	G11	12:00	13:00	1.00	155.0 m	Rig serviced Top Drive and TDS Dollies. Offline: Prepared MWD/LWD equipment.
P4	P	G6	13:00	16:00	3.00	155.0 m	Schlumberger MWD Engineers prepared and programmed tools for BHA. (Held shallow gas JSA with Drill Crews. Shell tested choke manifold valves #7 & #8 to 15,000psi. Completed Kill hose change out in moonpool).
P4	P	G6	16:00	19:30	3.50	155.0 m	Made up Drilling Stand with bit, n/bit stab, Arc-9 tool, stab, MWD P/Pulse, Sonic Vision 900. Shallow tested Schlumberger tools.
P4	P	G6	19:30	21:00	1.50	155.0 m	Made up BHA. Entered well head at 20:00hr. Tag TOC at 148.4mRT MSL.
P4	P	D1	21:00	22:00	1.00	155.0 m	Drilled out shoe track (600gpm, 60 rpm, 10k wob.) to bottom of rat hole at 155m. Ream shoe twice. Shoe at 151.4m
P4	P	D2	22:00	23:00	1.00	196.0 m	Drilled 17.5in hole from 155m to 196m. Maintained 60 rpm until top stabiliser clear of casing. Pump 50bbl PHG every 15m spotted pill around BHA on connections.
P4	P	G6	23:00	23:30	0.50	196.0 m	POOH from 196m to 140m. Racked back 2 stands of HWDP, made up 1 stand of 8in DCs and ran back to bottom on HWDP.
P4	P	D2	23:30	24:00	0.50	200.0 m	Drilled 17.5in hole from 196m to 200m. Attempted to take MWD survey. Survey failed due to noise interference of casing.

Operations For Period 0000 Hrs to 0600 Hrs On 08 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P4	P	D2	00:00	06:00	6.00	460.0 m	Drilled 17.5in hole from 200m to 428m. Pump 50bbl PHG sweeps every 15m. Spot PHG pill around BHA on connections. MWD Survey every 90m. 0-10k WOB, 1100gpm 2700psi, 100rpm, 6kft-lbs torq.

Phase Data to 2400hrs, 07 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	29.00	06 Sep 2009	07 Sep 2009	131.50	5.479	200.0 m

General Comments

00:00 TO 24:00 Hrs ON 07 Sep 2009

Operational Comments	
	Beach Co Rep witnessed loading of the Dowell Cement Head. Beach Co Rep witnessed satisfactory draw down of BOP accumulator unit.

WBM Data
Cost Today AUD10,099

Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%	Viscosity	100 s/qt
Sample-From:	Pit 3	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity	%vol	PV	cP
Time:	09:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	Solids:		YP	lbf/100ft ²
Weight:	10.00 ppg	HTHP-cake:	/32nd"	MBT:	23.0	H2O:	%	Gels 10s	lbf/100ft ²
Temp:	°C			Pm:		Oil:	%	Gels 10m	lbf/100ft ²
				Pf:		Sand:		Fann 003	
						pH:	9.0	Fann 006	
						PHPA(Density):	kg/m ³	Fann 100	
								Fann 200	
								Fann 300	
								Fann 600	
Comment									

WBM Data				Cost Today AUD			
Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%
Sample-From:	Pit #5	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity Solids:	%vol
Time:	14:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	H2O:	%
Weight:	8.80 ppg	HTHP-cake:	/32nd"	MBT:	30.0	Oil:	%
Temp:	°C			Pm:		Sand:	
				Pf:		pH:	9.5
						PHPA(Density):	kg/m ³
Comment							

WBM Data				Cost Today AUD			
Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%
Sample-From:	Pit #4	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity Solids:	%vol
Time:	21:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	H2O:	%
Weight:	8.80 ppg	HTHP-cake:	/32nd"	MBT:	30.0	Oil:	%
Temp:	°C			Pm:		Sand:	
				Pf:		pH:	9.0
						PHPA(Density):	kg/m ³
Comment							

Bit #2				Wear	I	O1	D	L	B	G	O2	R
				Bit wear comment:								

Size ("):	444 mm (17 1/2")	IADC#	115	Nozzles		Drilled over last 24 hrs		Calculated over Bit Run	
MfBHI (Hughes Christensen)	WOB(avg)	3.00 klb	No.	Size	Progress	45.0 m	Cum. Progress	45.0 m	
Type:	Milled Tooth	RPM(avg)	71 rpm	1	16/32nd"	On Bottom Hrs	1.0 h	Cum. On Btm Hrs	1.0 h
Serial No.:	6079221	F.Rate	767 gpm	3	18/32nd"	IADC Drill Hrs	1.5 h	Cum IADC Drill Hrs	1.5 h
Bit Model	GX-CIV	SPP	1,243 psi			Total Revs	4,300	Cum Total Revs	4,300
Depth In	155.0 m	HSI	1.95 hp/in ²			ROP(avg)	45.00 m/h	ROP(avg)	45.00 m/h
Depth Out	m	TFA	0.001 m ²						

Bit Comment

BHA #2					
Weight(Wet)	75.00 klb	Length	226.6 m	Torque(max)	2,500 ft.lbf
Wt Below Jar(Wet)	65.00 klb	String Weight	210.00 klb	Torque(Off.Btm)	200 ft.lbf
		Pick-Up Weight	210.00 klb	Torque(On.Btm)	1,800 ft.lbf
		Slack-Off Weight	210.00 klb		

BHA Run Description	Rotary drilling assembly with ARC-9 and MWD toolstring
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BHA Run Comment

Equipment	Length	OD	ID	Serial #	Comment
17 1/2" Bit	0.42 m	17.50 in	in	6079221	Tri-cone mill tooth
NB Stabiliser	2.84 m	in	3.00 in	207A85	17 3/8" Stab with non ported float installed
ARC Tool	6.00 m	10.00 in	3.50 in	4126	
string stabilizer	0.98 m	in	4.25 in	550902164	17 3/8" Stab
PowerPulse MWD	8.22 m	9.06 in	4.25 in	KA-ZA90	
Sonic	8.24 m	in	4.25 in	41250	With 17 3/8 in line stab
String Stabiliser	2.17 m	in	3.00 in	207A211	17 3/8 Stab
9 1/2 drill collars	28.43 m	9.56 in	3.19 in		

Equipment	Length	OD	ID	Serial #	Comment
X/Over	1.09 m	9.50 in	3.00 in	508A360	
8in DC	72.83 m	8.00 in	2.81 in		
Drilling Jars	8.77 m	7.82 in	2.81 in	101663H	
8in DC	28.01 m	8.00 in	2.81 in		
X/O	1.16 m	8.00 in	2.81 in	508A336	
HWDP	56.51 m	in	in		

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	0.0	0.0	47.00
Bentonite	MT	69.0	16.0	0.0	69.00
Cement - G Neat	MT	82.0	0.0	0.0	129.00
Fuel	M3	0.0	15.1	0.0	406.00
Potable Water	m3	31.0	30.0	0.0	329.00
Drill Water	m3	120.0	45.0	0.0	513.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00	8.80	97	77	1,990	329					
2	National	6.00	8.80	97	77	1,990	329					
3	National	6.00	8.80	97	76	1,990	325					

Personnel On Board

Company	Pax
Diamond Offshore	54
Catering	8
ADA Services	4
Cameron	1
Dowell Schlumberger	4
Schlumberger (Wireline)	0
MI Drilling Fluids	2
BJ Tubulars	3
Subsea 7	6
Other Contractor	2
Go Offshore	1
Baker Hughes Inteq	2
Beach Petroleum Ltd	1
Total	88

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	2,362.0	Losses	255.0	Equipment	Description	Mesh Size	Comments
Active	462.0 bbl	Downhole	255.0 bbl				
Mixing		Surf+ Equip					
Hole		Dumped					
Slug		De-Gasser					
Reserve	777.0 bbl	De-Sander					
Kill	661.0 bbl	De-Silter					
KCL Brine	462.0 bbl	Centrifuge					

Marine

Weather on 07 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	4 kn	135.0 °	1,007.0 mbar	13 °C	0.5 m	135.0 °	2 s	#1 Anchor	260.00 klb
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments		#2 Anchor	262.00 klb
240.0 °	klb	4,721.00 klb	1.5 m	90.0 °	11 s	Part Cloud		#3 Anchor	262.00 klb
Comments					#4 Anchor			267.00 klb	
					#5 Anchor			260.00 klb	
							#6 Anchor	276.00 klb	
							#7 Anchor	282.00 klb	
							#8 Anchor	254.00 klb	

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Emerald	02 Sep 2009 12:30	07 Sep 2009 19:35	In transit to Geelong	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	87.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	75
				Bentonite Bulk (MT)	MT	0.0	0.0	43.00	0.0	0
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1220
				Fuel (M3)	M3	0.0	18.0	0.00	0.0	480.4
				Potable Water (m3)	m3	0.0	5.0	0.00	40.0	220
				Drill Water (m3)	m3	0.0	0.0	46.00	0.0	222
Emerald released from rig at 19:30. ETA pilot loading at 08:00 8/9/09.										
Lewek Swift	02 Sep 2009 12:30		Stand by on Rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	25.00	0.0	0
				Fuel (M3)	M3	0.0	17.9	0.00	0.0	226.4
				Potable Water (m3)	m3	0.0	0.0	0.00	0.0	180
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	171
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1564

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	09:10 / 09:20	8/ 6	



08 Sep 2009

From: Tim Lee / Kevin Monkhouse
To: Iain Robertson

DRILLING MORNING REPORT # 7

Spikey Beach-1

Well Data

Country	Australia	MDBRT	816.0 m	Cur. Hole Size	17.500 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	816.0 m	Last Casing OD	30.000 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress	616.00 m	Shoe TVDBRT	151.4 m	Daily Cost	AUD 710,000
Rig	Ocean Patriot (semi)	Days From Spud	0.00	Shoe MDBRT	151.4 m	Cum Cost	AUD 5,944,000
Wtr Depth (MSL)	74 m	Days On Well	6.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Rigging down and laying out 500t bails, elevators, fill tool.		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Run & land 13.375in casing. Cement casing. POOH and run BOP.		

Summary of Period 0000 to 2400 Hrs

Drilled 17.5in hole from 200m to 816m. Circulated clean and displaced well to mud. POOH and rigged up to run 13.375in casing. Made up shoe track

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	1		
Days Since LTI	0	1,006		
STOP Card	45	0	Safe 33 Unsafe 12	DODI 33 Third Party 8 ADA 1 Catering 3
JSA	47	0		Drill 5 Trip 11 Pump Room 5 Crane Crew 18 Mechanic 2 Electrician 0 Welder 6 Subsea 0
Permit To Work	21	0	Hot 6 Cold 8	
Safety Meeting	0	2		
Abandon Drill	0	3		
Fire Drill	0	3		
JHA/HSE Audit	1	1	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 08 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P4	P	D2	00:00	13:00	13.00	816.0 m	Drilled 17.5in hole from 200m to 816m. Pump 50bbl PHG sweeps every 15m. Spotted PHG pill around BHA on connections. Took MWD Survey every 90m. 8-20k WOB, 1100gpm 2950psi, 140rpm, 7kft-lbs torq.
P4	P	F4	13:00	15:00	2.00	816.0 m	Took final survey 0.18deg at 803.60mRT MSL. Circulated 2 x bottoms up. Flow checked with ROV, well was static. Displaced well with 800bbl PHG mud
P4	P	G8	15:00	19:30	4.50	816.0 m	POOH from 816m. Worked through and cleaned tight spots from 725m - 629m, max overpulls 30klbs - 40klbs. Required no pumping or back reaming. From 629m continued to POOH with no issues.
P4	P	G6	19:30	21:30	2.00	816.0 m	Racked back BHA. Laid out Schlumberger MWD/LWD tools. Broke off Hughes GX-C1V (graded 1,1,WT,A,E,In,N,TD). Cleared rig floor of excess equipment
P5	P	G9	21:30	23:00	1.50	816.0 m	Rigged up to run 13.375in casing. Held JSA on drill floor with all involved parties
P5	P	G9	23:00	24:00	1.00	816.0 m	Made up shoe jt to float jt. Tested flow through valves. Bakerlocked joints.



Operations For Period 0000 Hrs to 0600 Hrs On 09 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P5	P	G9	00:00	06:00	6.00	816.0 m	Made up and bakerlocked third joint of casing. Installed centralising ropes to guide lines. Ran 13.375in casing from 32m to 701m (entered well head at 01:15). Broke circulation at 20in conductor shoe. Completed deck check of remaining joints.

Phase Data to 2400hrs, 08 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	2.50	08 Sep 2009	08 Sep 2009	155.50	6.479	816.0 m

WBM Data

Cost Today AUD13,719

Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%	Viscosity	100 s/qt
Sample-From:	Pit #4	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity	%vol	PV	cP
Time:	04:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	Solids:	%	YP	lbf/100ft ²
Weight:	8.80 ppG	HTHP-cake:	/32nd"	MBT:	30.0	H2O:	%	Gels 10s	lbf/100ft ²
Temp:	°C			Pm:		Oil:	%	Gels 10m	lbf/100ft ²
				Pf:		Sand:		Fann 003	
						pH:	9.5	Fann 006	
						PHPA(Density):	kg/m ³	Fann 100	
								Fann 200	
								Fann 300	
								Fann 600	
Comment									

WBM Data

Cost Today AUD

Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%	Viscosity	100 s/qt
Sample-From:	Pit 5	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity	%vol	PV	cP
Time:	08:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	Solids:	%	YP	lbf/100ft ²
Weight:	8.70 ppG	HTHP-cake:	/32nd"	MBT:	30.0	H2O:	%	Gels 10s	lbf/100ft ²
Temp:	°C			Pm:		Oil:	%	Gels 10m	lbf/100ft ²
				Pf:		Sand:		Fann 003	
						pH:	9.0	Fann 006	
						PHPA(Density):	kg/m ³	Fann 100	
								Fann 200	
								Fann 300	
								Fann 600	
Comment									

WBM Data

Cost Today AUD

Mud Type:	Water Based	API FL:	cm ³ /30min	Cl:	mg/L	Solids:	%	Viscosity	100 s/qt
Sample-From:	Pit #4	Filter-Cake:	/32nd"	K+C*1000:	%	Low-Gravity	%vol	PV	cP
Time:	12:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	mg/L	Solids:	%	YP	lbf/100ft ²
Weight:	8.80 ppG	HTHP-cake:	/32nd"	MBT:	30.0	H2O:	%	Gels 10s	lbf/100ft ²
Temp:	°C			Pm:		Oil:	%	Gels 10m	lbf/100ft ²
				Pf:		Sand:		Fann 003	
						pH:	9.5	Fann 006	
						PHPA(Density):	kg/m ³	Fann 100	
								Fann 200	
								Fann 300	
								Fann 600	
Comment									

Bit #2			Wear	I	O1	D	L	B	G	O2	R
				1	1	WT	A	1	I	NO	TD
			Bit wear comment:								
Size ("):	444 mm (17 1/2")	IADC#	115	Nozzles		Drilled over last 24 hrs		Calculated over Bit Run			
MfBHI (Hughes Christensen)	WOB(avg)			No.	Size	Progress	616.0 m	Cum. Progress	661.0 m		
Type:	Milled Tooth	RPM(avg)		1	16/32nd"	On Bottom Hrs	8.2 h	Cum. On Btm Hrs	9.2 h		
Serial No.:	6079221	F.Rate		3	18/32nd"	IADC Drill Hrs	13.0 h	Cum IADC Drill Hrs	14.5 h		
Bit Model	GX-CIV	SPP				Total Revs	55,600	Cum Total Revs	59,900		
Depth In	155.0 m	HSI	3.37 hp/in²			ROP(avg)	75.12 m/h	ROP(avg)	71.85 m/h		
Depth Out	816.0 m	TFA	0.001 m²								
Bit Comment											

BHA #2						
Weight(Wet)	75.00 klb	Length	226.6 m	Torque(max)	10,400 ft.lbf	D.C. (1) Ann Velocity 0 ft/min
Wt Below Jar(Wet)	65.00 klb	String Weight	240.00 klb	Torque(Off.Btm)	1,000 ft.lbf	D.C. (2) Ann Velocity 0 ft/min
		Pick-Up Weight	240.00 klb	Torque(On.Btm)	4,600 ft.lbf	H.W.D.P. Ann Velocity 0 ft/min
		Slack-Off Weight	240.00 klb			D.P. Ann Velocity 0 ft/min
BHA Run Description		Rotary drilling assembly with ARC-9 and MWD toolstring				
BHA Run Comment						

Equipment	Length	OD	ID	Serial #	Comment
17 1/2" Bit	0.42 m	17.50 in	in	6079221	Tri-cone mill tooth
NB Stabiliser	2.84 m	in	3.00 in	207A85	17 3/8" Stab with non ported float installed
ARC Tool	6.00 m	10.00 in	3.50 in	4126	17 3/8" Stab
string stabilizer	0.98 m	in	4.25 in	550902164	
PowerPulse MWD	8.22 m	9.06 in	4.25 in	KA-ZA90	
Sonic	8.24 m	in	4.25 in	41250	
String Stabiliser	2.17 m	in	3.00 in	207A211	
9 1/2 drill collars	28.43 m	9.56 in	3.19 in		With 17 3/8 in line stab 17 3/8 Stab
X/Over	1.09 m	9.50 in	3.00 in	508A360	
8in DC	72.83 m	8.00 in	2.81 in		
Drilling Jars	8.77 m	7.82 in	2.81 in	101663H	
8in DC	28.01 m	8.00 in	2.81 in		
X/O	1.16 m	8.00 in	2.81 in	508A336	
HWDP	56.51 m	in	in		

Survey								
MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N/-S (m)	E/-W (m)	DLS (deg/30m)	Tool Type
556.06	0.2	278.4						
642.56	0.3	259.6						
727.80	0.3	253.6						
786.24	0.2	243.8						
803.80	0.2	265.1						

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	15.0	0.0	32.00
Bentonite	MT	0.0	32.0	0.0	37.00
Cement - G Neat	MT	0.0	0.0	0.0	129.00
Fuel	M3	0.0	10.9	0.0	395.10
Potable Water	m3	35.0	30.0	0.0	334.00
Drill Water	m3	160.0	373.0	0.0	300.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00	8.80	97	82	2,644	350					
2	National	6.00	8.80	97	82	2,644	350					
3	National	6.00	8.80	97	82	2,644	350					

Personnel On Board

Company	Pax
Diamond Offshore	55
Catering	8
ADA Services	5
Cameron	1
Dowell Schlumberger	3
Schlumberger MWD/LWD	3
MI Drilling Fluids	2
BJ Tubulars	4
Subsea 7	6
Go Offshore	0
Baker Hughes Inteq	4
Beach Petroleum Ltd	1
Total	92

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	1,008.0	Losses	3,356.0	Equipment	Description	Mesh Size	Comments
Active	295.0 bbl	Downhole	3356.0 bbl				
Mixing		Surf+ Equip					
Hole		Dumped					
Slug		De-Gasser					
Reserve	379.0 bbl	De-Sander					
Kill	270.0 bbl	De-Silter					
KCL Brine	64.0 bbl	Centrifuge					

Marine

Weather on 08 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	24 kn	210.0 °	1,011.0 mbar	12 °C	2.0 m	210.0 °	4 s	#1 Anchor	265.00 klb
								#2 Anchor	267.00 klb
								#3 Anchor	258.00 klb
								#4 Anchor	262.00 klb
								#5 Anchor	256.00 klb
								#6 Anchor	273.00 klb
								#7 Anchor	287.00 klb
								#8 Anchor	258.00 klb



Support Vessels										
Boats		Arrived Time	Departed Time	Status	Bulks					
Lewek Emerald	02 Sep 2009 12:30	07 Sep 2009 19:35	Load Bunkers at Geelong	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	75
				Bentonite Bulk (MT)	MT	24.5	0.0	0.00	0.0	24.5
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1220
				Fuel (M3)	M3	224.4	12.0	0.00	0.0	692.8
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	215
				Drill Water (m3)	m3	149.0	0.0	100.00	0.0	271
Lewek Swift	02 Sep 2009 12:30		Stand by on Rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	15.8	0.00	0.0	210.6
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	176
				Drill Water (m3)	m3	0.0	0.0	160.00	0.0	11
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1564
Helicopter Movement										
Flight #		Company	Arr/Dep. Time		Pax In/Out		Comment			
1	Bristow Helicopters		10:10 / 10:20		10/ 8					

09 Sep 2009

From: Tim Lee / Kevin Monkhouse
To: Iain Robertson

DRILLING MORNING REPORT # 8**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	816.0 m	Cur. Hole Size	17.500 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	816.0 m	Last Casing OD	13.375 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	805.8 m	Daily Cost	AUD 711,000
Rig	Ocean Patriot (semi)	Days From Spud	4.13	Shoe MDBRT	805.8 m	Cum Cost	AUD 6,655,000
Wtr Depth (MSL)	74 m	Days On Well	7.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Installing kill and choke goosenecks to slip joint		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Run and land BOP. Pressure test connector to 2750psi. Make up 12.25in BHA and RIH to drill out shoe. Change out to 9.0ppg KCL Polymer mud system		

Summary of Period 0000 to 2400 Hrs

Ran 13.375in casing. Landed in 30in housing. Circulated and cemented casing. POOH and laid out RT. Rigged up to run BOPs

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	2		
Days Since LTI	0	1,007		
STOP Card	65	0	Safe 43 Unsafe 22	DODI 40 Third Party 16 ADA 1 Catering 8
JSA	31	1		Drill 7 Trip 3 Pump Room 1 Crane Crew 10 Mechanic 2 Electrician 3 Welder 5 Subsea 0
Permit To Work	21	1	Hot 5 Cold 9	
Safety Meeting	0	3		
Abandon Drill	0	4		
Fire Drill	0	4		
JHA/HSE Audit	2	1	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 09 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P5	P	G9	00:00	06:00	6.00	816.0 m	Made up and bakerlocked third joint of casing. Installed centralising ropes to guide lines. Ran 13.375in casing from 32m to 701m (entered well head at 01:15). Broke circulation at 20in conductor shoe. Filled every joint on the run. No reject joints. No hole problems RIH. Completed deck check of remaining joints.
P5	P	G9	06:00	07:00	1.00	816.0 m	Rigged down 500t elevators, bales and removed fill up tool. Made up 5in handling equipment
P5	P	G9	07:00	08:00	1.00	816.0 m	Picked up and made up 18¾in well head joint.
P5	P	G9	08:00	09:00	1.00	816.0 m	Laid out 18.75in handling WHRT. Made up cement plug assembly to WHRT stand and made up to well head.
P5	P	G9	09:00	09:30	0.50	816.0 m	Circulated with seawater through TDS with sea water. 300gpm, 400psi. Checked running tool for leaks
P5	P	G9	09:30	10:00	0.50	816.0 m	Ran 13.375in casing in on drill pipe from 702m to 796m.

Operations For Period 0000 Hrs to 2400 Hrs On 09 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P5	P	G9	10:00	10:30	0.50	816.0 m	Made up cement stand and washed down to 805m, 300gpm, 150psi.
P5	P	F4	10:30	11:30	1.00	816.0 m	Landed out 18.75in WH with 100k down. Took 50k over pull to confirm WH latched in 30in housing. Checked bullseys, 0.5 degree aft (no change). Set string weight at 10k over landing string weight (145k MD) Circulated at 300gpm, 200psi. Held pre cement job JSA during circulation Note:- Shoe at 805.74m, Well Head at 92.5m.
P5	P	CMT	11:30	12:00	0.50	816.0 m	Rigged up cement lines. Pumped 5bbls of seawater with cementing unit. Pressure tested surface lines to 4000psi for 5 minutes, OK.
P5	P	CMT	12:00	13:30	1.50	816.0 m	Dropped bottom dart. Displaced with 6.2 bbls seawater. Observed landing and shearing out bottom plug of 1000psi. Mixed and pumped 348bbl 12.5ppg lead slurry (37MT G cement), followed by 90bbl 15.8ppg tail slurry (18MT G cement). No indication of bottom plug landing on float collar. Dropped top dart. Displaced with 10 bbls, observing top plug releasing at 2200psi. Closed cement unit discharge valve (to allow for cleaning of unit) and opened TIW above cement head.
P5	P	CMT	13:30	14:30	1.00	816.0 m	Displaced cement with rig pumps. Pumped 343bbls of seawater. Flushed cement head while circulating. Prior to bump, opened cement unit lines to string for monitoring of pressure. Bumped top plug (97% eff) to 2500psi. Held pressure for 15mins. Released pressure via cement unit and checked for backflow. 5 bbls returned with no backflow.
P5	P	CMT	14:30	15:00	0.50	816.0 m	Rigged down surface lines and flushed through same.
P5	P	G5	15:00	17:30	2.50	816.0 m	Released running tool with 8 turns to right. POOH from 92m, laid out RT, plug basket. Laid out DSE cement head. Laid out stand of 9.5in DCs
P6	P	G23	17:30	17:45	0.25	816.0 m	Held JSA with crew on rigging up and running BOPs
P6	P	G23	17:45	19:30	1.75	816.0 m	Rigged up to run BOPs
P6	TP (TP)	G1	19:30	20:00	0.50	816.0 m	Released Lewek Swift from Bulk Hose to rig. Swift had Azimuth Thruster problem
P6	P	G13	20:00	21:30	1.50	816.0 m	Picked up BOP spool joint and made up to double of riser
P6	P	G13	21:30	24:00	2.50	816.0 m	Skidded BOP to well centre. Installed guide lines, pod lines and nipples BOP to riser spool joint.

Operations For Period 0000 Hrs to 0600 Hrs On 10 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P6	P	G13	00:00	01:15	1.25	m	Picked up BOP off carrier. Skided carrier back and lowered BOP into carrier guides. Installed beacons onto BOP. Deployed beacon arm
P6	P	G13	01:15	03:00	1.75	m	Lowered BOP through splash zone. Made up 45ft and 10ft riser pup joints
P6	P	G13	03:00	03:45	0.75	m	Pressure tested kill and choke lines 250psi/3000psi 5min/10min
P6	P	G13	03:45	05:30	1.75	m	Picked up slip jt and landing jt. Ran BOP down to 85m
P6	P	G13	05:30	06:00	0.50	m	Installed kill and choke gooseneck connections to slip joint

Phase Data to 2400hrs, 09 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	6.50	09 Sep 2009	09 Sep 2009	179.50	7.479	816.0 m

Survey

MD (m)	Incl (°)	Azim (°)	TVD (m)	VSect (m)	N-S (m)	E-W (m)	DLS (deg/30m)	Tool Type
556.06	0.2	278.4						
642.56	0.3	259.6						
727.80	0.3	253.6						
786.24	0.2	243.8						

Survey

MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N/-S (m)	E/-W (m)	DLS (deg/30m)	Tool Type
803.80	0.2	265.1						

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	0.0	0.0	32.00
Bentonite	MT	0.0	0.0	0.0	37.00
Cement - G Neat	MT	0.0	54.0	0.0	75.00
Fuel	M3	0.0	10.8	0.0	384.30
Potable Water	m3	30.0	28.0	0.0	336.00
Drill Water	m3	0.0	12.0	0.0	288.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00	8.80	97	82	2,644	350					
2	National	6.00	8.80	97	82	2,644	350					
3	National	6.00	8.80	97	82	2,644	350					

Personnel On Board

Company	Pax
Diamond Offshore	55
Catering	8
ADA Services	5
Cameron	1
Dowell Schlumberger	3
Schlumberger MWD/LWD	3
MI Drilling Fluids	2
BJ Tubulars	4
Subsea 7	6
Go Offshore	0
Baker Hughes Inteq	4
Beach Petroleum Ltd	1
Total	92

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	0.0	Losses	0.0	Equipment	Description	Mesh Size	Comments
Active	0.0 bbl	Downhole	0.0 bbl				
Mixing		Surf+ Equip					
Hole		Dumped					
Slug		De-Gasser					
Reserve	0.0 bbl	De-Sander					
Kill	0.0 bbl	De-Silter					
	0.0 bbl	Centrifuge					

Marine

Weather on 09 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	24 kn	200.0 °	1,011.0 mbar	13 °C	2.0 m	200.0 °	4 s	#1 Anchor	260.00 klb
								#2 Anchor	262.00 klb
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments		#3 Anchor	254.00 klb
								#4 Anchor	258.00 klb
240.0 °	klb	4,015.00 klb	1.0 m	290.0 °	11 s	Partly Cloudy		#5 Anchor	256.00 klb
Comments								#6 Anchor	271.00 klb
								#7 Anchor	287.00 klb
								#8 Anchor	262.00 klb

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Swift	02 Sep 2009 12:30		Stand by on Rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	15.1	0.00	0.0	195.5
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	172
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	11
				Brine (bbl)	bbl	0.0	0.0	1,073.00	0.0	491
Swift having trouble with Azimuth thruster which is preventing her from being able hold station for material transfers										
Lewek Emerald	02 Sep 2009 12:30	07 Sep 2009 19:35	Enroute to Rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	75
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	24.5
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	1220
				Fuel (M3)	M3	0.0	15.0	0.00	0.0	677.8
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	210
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	271

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	10:25 / 10:35	7 / 7	

DRILLING MORNING REPORT # 9**10 Sep 2009****From:** Tim Lee / Kevin Monkhouse**To:** Iain Robertson**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	816.0 m	Cur. Hole Size	17.500 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	816.0 m	Last Casing OD	13.375 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	805.8 m	Daily Cost	AUD 722,000
Rig	Ocean Patriot (semi)	Days From Spud	5.13	Shoe MDBRT	805.8 m	Cum Cost	AUD 7,377,000
Wtr Depth (MSL)	74 m	Days On Well	8.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Drill out shoe track and rat hole.		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Perform LOT. Drill 12.25in hole		

Summary of Period 0000 to 2400 Hrs

Ran BOP. Landed and tested connector to 2750psi. Rigged down BOP handling equipment and made up 12.25in drilling BHA.

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	3		
Days Since LTI	0	1,008		
STOP Card	58	0	Safe 48 Unsafe 10	DODI 37 Third Party 8 ADA 4 Catering 9
JSA	35	1		Drill 5 Trip 2 Pump Room 3 Crane Crew 13 Mechanic 5 Electrician 1 Welder 6 Subsea 0
Permit To Work	21	1	Hot 6 Cold 14	
Safety Meeting	0	4		
Abandon Drill	0	5		
Fire Drill	0	5		
JHA/HSE Audit	2	2	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 10 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P6	P	G13	00:00	01:15	1.25	816.0 m	Picked up BOP off carrier. Skidded carrier back to BOP deployment position and lowered BOP into carrier guides. Installed beacons onto BOP. Deployed beacon arm.
P6	P	G13	01:15	03:00	1.75	816.0 m	Lowered BOP through splash zone. Made up 45ft and 10ft riser pup joints.
P6	P	G13	03:00	03:45	0.75	816.0 m	Pressure tested kill and choke lines 250psi/3000psi 5min/10min.
P6	P	G13	03:45	05:30	1.75	816.0 m	Picked up slip jt and landing jt. Ran BOP down to 85m
P6	P	G13	05:30	09:30	4.00	816.0 m	Installed kill and choke gooseneck connections to slip joint. Pressure tested kill and choke lines to 250psi/7500psi 5min/10mins.
P6	U	M7	09:30	10:30	1.00	816.0 m	Re-torqued new kill hose connections and retested kill hose to 250psi/15000psi. Re-torqued kill hose connections.
P6	P	G13	10:30	12:00	1.50	816.0 m	Picked up SDL ring. Installed pod hoses on storm saddles
P6	P	G13	12:00	13:00	1.00	816.0 m	Landed BOPs on well head. Latched connector and confirmed latch with 50k overpull on connector

Operations For Period 0000 Hrs to 2400 Hrs On 10 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P6	P	G13	13:00	13:30	0.50	816.0 m	Installed RBQ plated to pod reels
P6	P	G13	13:30	14:30	1.00	816.0 m	Rigged up and pressure tested BOP connector 250psi 5min / 2750psi 10mins. Good test
P6	P	G13	14:30	16:30	2.00	816.0 m	Scoped out slip joint. Laid out landing joint. Laid out riser handling equipment.
P6	P	G13	16:30	18:00	1.50	816.0 m	Picked up and installed diverter assembly
P11	P	G6	18:00	21:00	3.00	816.0 m	Made up 12.25in drilling BHA. Down hole motor, and Schlumberger ARC-8, Telescope 825NF, Sonicvision 825, ADN-8 logging assembly
P11	P	G6	21:00	21:30	0.50	816.0 m	Shallow tested Schlumberger down hole tools. 600gpm, 600psi
P11	P	G6	21:30	22:00	0.50	816.0 m	Loaded radio active source in ADN-8 tool
P11	P	G6	22:00	23:30	1.50	816.0 m	Continued to make up 12.25in BHA to 213.9m
P11	P	M7	23:30	24:00	0.50	816.0 m	Installed diverter bag in diverter housing

Operations For Period 0000 Hrs to 0600 Hrs On 11 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P11	P	G8	00:00	00:30	0.50	816.0 m	Ran in hole to 330m
P11	P	G15	00:30	00:45	0.25	816.0 m	Shallow tested Schlumberger down hole tools.
P11	P	P3	00:45	01:30	0.75	816.0 m	Performed function and pumping exercise on diverter overboard system.
P11	P	G13	01:30	03:00	1.50	816.0 m	Performed full function test on BOPs. BOP functions tested on Blue pod from Drill Floor and on Yellow pod from TPs remote panel
P11	P	P3	03:00	03:30	0.50	816.0 m	Closed annular and performed choke well kill drills with drill crew
P11	P	G8	03:30	05:30	2.00	816.0 m	Ran in hole from 330m and tag TOC at 794m.
P11	P	G8	05:30	06:00	0.50	816.0 m	Drilled out shoe track. Displaced well to 9.0ppg KCl/Polymer/Klastop mud while drilling. Parameters WOB: 10klbs, 20RPM (88RPM at bit). Flow 605gpm, Torque: 1kft-lbs.

Phase Data to 2400hrs, 10 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	6.00	10 Sep 2009	10 Sep 2009	203.50	8.479	816.0 m

General Comments

00:00 TO 24:00 Hrs ON 10 Sep 2009

Operational Comments	ADA/Beach HSE audit team conducting Environmental audit and review of contractor evaluation. Built 1413 bbls new unweighted KCl/polymer/Klastop mud. ROV monitored landing of BOP. ROV Crew down manned.
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WBM Data

Mud Type: Water Based		API FL: 6.5 cm ³ /30min	Cl: 55,000 mg/L	Solids: 4 %	Viscosity 43 s/qt
Sample-From: Pit #3	Filter-Cake: 1 /32nd"	K+C*1000: 11 %	Low-Gravity	%vol	PV 11 cP
Time:	HTHP-FL: cm ³ /30min	Hard/Ca: mg/L	Solids:		YP 14 lbf/100ft ²
Weight: 9.00 ppg	HTHP-cake: /32nd"	MBT:	H2O: 96 %		Gels 10s lbf/100ft ²
Temp: °C		Pm:	Oil: 0 %		Gels 10m lbf/100ft ²
		Pf:	Sand: 0		Fann 003
			pH: 9.0		Fann 006
			PHPA(Density): kg/m ³		Fann 100
					Fann 200
					Fann 300
					Fann 600
Comment					



Bit #3			Wear	I	O1	D	L	B	G	O2	R
			Bit wear comment:								
Size ("):	311 mm (12 1/4")	IADC#	M323	Nozzles		Drilled over last 24 hrs		Calculated over Bit Run			
Mfr:	Baker Huges Chistensen	WOB(avg)		No.	Size	Progress		m	Cum. Progress		0.0 m
Type:	PDC	RPM(avg)		6	15/32nd"	On Bottom Hrs		h	Cum. On Btm Hrs		0.0 h
Serial No.:	7012700	F.Rate				IADC Drill Hrs		h	Cum IADC Drill Hrs		0.0 h
Bit Model	HCM506ZX	SPP				Total Revs			Cum Total Revs		0
Depth In	816.0 m	HSI	hp/in²			ROP(avg)		0.00 m/h	ROP(avg)		0.00 m/h
Depth Out	m	TFA	0.001 m²								
Bit Comment											

BHA #3							
Weight(Wet)	80.00 klb	Length	213.9 m	Torque(max)	ft.lbf	D.C. (1) Ann Velocity	0 ft/min
Wt Below Jar(Wet)	58.00 klb	String Weight	klb	Torque(Off.Btm)	ft.lbf	D.C. (2) Ann Velocity	0 ft/min
		Pick-Up Weight	klb	Torque(On.Btm)	ft.lbf	H.W.D.P. Ann Velocity	0 ft/min
		Slack-Off Weight	klb			D.P. Ann Velocity	0 ft/min
BHA Run Description		Mud Motor Logging Assembly					
BHA Run Comment							

Equipment	Length	OD	ID	Serial #	Comment
12 1/4" bit	0.38 m	12.25 in	in	7012700	PDC bit
A625 Mud Motor	11.32 m	9.63 in	in	5954	
12 1/4in stab	1.82 m	8.25 in	2.81 in	207A189	
ARC8	6.24 m	8.25 in	in	1216	
Telescope 825NF	8.96 m	8.19 in	in	ZH22	
sonicVISION 825	7.71 m	8.11 in	in	42784	
ADN-8 w/12" stabiliser	9.18 m	8.38 in	in	43225	
8in DC	72.79 m	8.25 in	2.81 in		
Drilling Jars	9.78 m	8.25 in	2.81 in	101663H	
8in DC	28.01 m	8.25 in	2.81 in		
X/Over	1.16 m	8.00 in	3.00 in	508A33	
HWDP	56.51 m	in	in		

Survey										
MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N/-S (m)	E/-W (m)	DLS (deg/30m)	Tool Type		
556.06	0.2	278.4								
642.56	0.3	259.6								
727.80	0.3	253.6								
786.24	0.2	243.8								
803.80	0.2	265.1								

Bulk Stocks						
Name	Unit	In	Used	Adjust	Balance	
Barite	MT	42.0	0.0	0.0	74.00	
Bentonite	MT	0.0	0.0	0.0	37.00	
Cement - G Neat	MT	0.0	0.0	0.0	75.00	
Fuel	M3	0.0	8.7	0.0	375.60	
Potable Water	m3	29.0	28.0	-1.0	336.00	
Drill Water	m3	371.0	124.0	0.0	535.00	

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00	8.80	97	82	2,644	350					
2	National	6.00	8.80	97	82	2,644	350					
3	National	6.00	8.80	97	82	2,644	350					

Personnel On Board

Company	Pax
Diamond Offshore	55
Catering	8
ADA Services	7
Cameron	0
Dowell Schlumberger	3
Schlumberger MWD/LWD	3
MI Drilling Fluids	2
BJ Tubulars	0
Subsea 7	3
Go Offshore	0
Baker Hughes Inteq	6
Beach Petroleum Ltd	1
Schlumberger DD	1
Total	89

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	1,863.0	Losses	0.0	Equipment	Description	Mesh Size	Comments
Active		Downhole					
Mixing	1413.0 bbl	Surf+ Equip					
Hole		Dumped					
Slug		De-Gasser					
Reserve		De-Sander					
Kill		De-Silter					
KCl Brine	450.0 bbl	Centrifuge					

Marine

Weather on 10 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	24 kn	250.0 °	1,017.0 mbar	10 °C	2.0 m	250.0 °	2 s	#1 Anchor	251.00 klb
								#2 Anchor	254.00 klb
								#3 Anchor	258.00 klb
								#4 Anchor	267.00 klb
								#5 Anchor	240.00 klb
								#6 Anchor	258.00 klb
								#7 Anchor	271.00 klb
								#8 Anchor	249.00 klb

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Emerald	10 Sep 2009 03:20		Stand by on rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	42.00	0.0	33
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	24.5
				Brine (bbl)	bbl	0.0	0.0	360.00	0.0	860
				Fuel (M3)	M3	0.0	20.0	0.00	-0.8	657
				Potable Water (m3)	m3	0.0	5.0	100.00	0.0	105
				Drill Water (m3)	m3	0.0	0.0	271.00	0.0	0
Lewek Swift		10 Sep 2009 07:15	Enroute to Geelong.	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	21.2	0.00	0.0	174.3
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	168
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	11
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	491

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
2	Bristow Helicopters	13:40 / 13:50	8/ 8	
1	Bristow Helicopters	09:25 / 09:40	9/ 12	

11 Sep 2009

From: Tim Lee / Kevin Monkhouse
To: Iain Robertson

DRILLING MORNING REPORT # 10**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	1,504.0 m	Cur. Hole Size	12.250 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	1,504.0 m	Last Casing OD	13.375 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress	688.00 m	Shoe TVDBRT	805.8 m	Daily Cost	AUD 1,004,000
Rig	Ocean Patriot (semi)	Days From Spud	6.13	Shoe MDBRT	805.8 m	Cum Cost	AUD 8,381,000
Wtr Depth (MSL)	74 m	Days On Well	9.48	FIT/LOT	sg / 1.47 sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Drilled 12.25in hole to 1605m		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Continue to drill 12.25in hole while evaluate samples and logs		

Summary of Period 0000 to 2400 Hrs

RIH to 786m. Performed BOP function test and well control drills. RIH Tag TOC at 794m. Drilled out shoe track and 3m hole while displaced well to 9.1ppg KCL mud. Performed LOT to 12.3ppg EMW. Drilled 12.25in hole from 819m to 1504m

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	4		
Days Since LTI	0	1,009		
STOP Card	73	0	Safe 51 Unsafe 22	DODI 51 Third Party 13 ADA 0 Catering 9
JSA	34	0		Drill 3 Trip 4 Pump Room 4 Crane Crew 13 Mechanic 4 Electrician 0 Welder 6 Subsea 0
Permit To Work	21	0	Hot 5 Cold 7	
Safety Meeting	0	5		
Abandon Drill	0	6		
Fire Drill	0	6		
JHA/HSE Audit	1	1	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 11 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	G8	00:00	00:30	0.50	816.0 m	Ran in hole to 336m.
P11	P	G15	00:30	00:45	0.25	816.0 m	Shallow tested Schlumberger down hole tools. 650gpm, 1000psi. Good test.
P11	P	P3	00:45	01:30	0.75	816.0 m	Performed function and pumping exercise on diverter overboard system.
P11	P	G13	01:30	03:00	1.50	816.0 m	Performed full function test on BOPs. BOP functions tested on Blue pod from Drill Floor and on Yellow pod from TP's remote panel
P11	P	P3	03:00	03:30	0.50	816.0 m	Closed annular and performed choke well kill drills with drill crew
P11	P	G8	03:30	05:30	2.00	816.0 m	Ran in hole from 330m and tagged TOC at 794m. (Held trip drill with drill crew)
P11	P	D1	05:30	07:30	2.00	816.0 m	Drilled out shoe track. Displaced well to 9.0ppg KCl/Polymer/Klastop mud while drilled outshoe track. Parameters WOB: 10-20klbs, 40RPM (108RPM at bit). Flow 605gpm, Torque: 1-5kft-lbs.
P11	P	D2	07:30	07:45	0.25	819.0 m	Drilled 12.25in hole from 816m to 819m

Operations For Period 0000 Hrs to 2400 Hrs On 11 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	F4	07:45	08:00	0.25	819.0 m	Circulated and conditioned mud. 9.0ppg in and out.
P11	P	E1	08:00	09:30	1.50	819.0 m	Pulled back into shoe and performed LOT. 460psi with 9.0ppg mud. EMW 12.3ppg
P11	P	D2	09:30	18:00	8.50	1,452.0 m	Drilled 12.25in hole from 816m to 1452m. Took MWD survey every 90m. Weighed mud up to 9.4ppg by 1360m. WOB: 20-35 (Max)klbs, 920gpm, 2750psi, 140 rpm, 3-5kft-lb torq, Drilled with max ROP.
P11	P	D2	18:00	24:00	6.00	1,504.0 m	Drilled 12.25in hole from 1452m to 1504m at 930gpm and controlled ROP of 15-20 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. WOB: 5klbs, 920gpm, 2800psi, 145 rpm, 3-5kft-lb torq.

Operations For Period 0000 Hrs to 0600 Hrs On 12 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P11	P	D2	00:00	06:00	6.00	1,605.0 m	Drilled 12.25in hole from 1504m to 1605m at controlled ROP of 15-20 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. Observed consistent splintery cuttings, commenced weighing mud up to 9.8ppg at 1590m. WOB: 5klbs, 920gpm, 2850psi, 145 rpm, 3-5kft-lb torq.

Phase Data to 2400hrs, 11 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	30.00	10 Sep 2009	11 Sep 2009	227.50	9.479	1,504.0 m

WBM Data
Cost Today AUD171,065

Mud Type:	Water Based	API FL:	6.8 cm ³ /30min	Cl:	49,000 mg/L	Solids:	5 %	Viscosity	75 s/qt
Sample-From:	Active	Filter-Cake:	/32nd"	K+C*1000:	10 %	Low-Gravity	%vol	PV	14 cP
Time:	11:30	HTHP-FL:	cm ³ /30min	Hard/Ca:	260 mg/L	Solids:		YP	14 lbf/100ft ²
Weight:	9.10 ppg	HTHP-cake:	/32nd"	MBT:		H2O:	95 %	Gels 10s	lbf/100ft ²
Temp:	75 °C			Pm:	1.3	Oil:	0 %	Gels 10m	lbf/100ft ²
				Pf:	1.0	Sand:	0.25	Fann 003	3
						pH:	9.0	Fann 006	5
						PHPA(Density):	kg/m ³	Fann 100	16
								Fann 200	23
								Fann 300	28
								Fann 600	42

Comment

WBM Data
Cost Today AUD

Mud Type:	Water Based	API FL:	5.8 cm ³ /30min	Cl:	50,000 mg/L	Solids:	6 %	Viscosity	54 s/qt
Sample-From:	Active	Filter-Cake:	/32nd"	K+C*1000:	10 %	Low-Gravity	%vol	PV	12 cP
Time:	15:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	560 mg/L	Solids:		YP	17 lbf/100ft ²
Weight:	9.10 ppg	HTHP-cake:	/32nd"	MBT:	1.5	H2O:	94 %	Gels 10s	5 lbf/100ft ²
Temp:	77 °C			Pm:	1.2	Oil:	0 %	Gels 10m	7 lbf/100ft ²
				Pf:	0.5	Sand:	.4	Fann 003	4
						pH:	9.5	Fann 006	6
						PHPA(Density):	kg/m ³	Fann 100	17
								Fann 200	24
								Fann 300	29
								Fann 600	41

Comment



WBM Data				Cost Today AUD					
Mud Type:	Water Based	API FL:	5.8 cm³/30min	Cl:	50,000 mg/L	Solids:	7 %	Viscosity	62 s/qt
Sample-From:	Active	Filter-Cake:	/32nd"	K+C*1000:	10 %	Low-Gravity	%vol	PV	16 cP
Time:	22:00	HTHP-FL:	cm³/30min	Hard/Ca:	480 mg/L	Solids:		YP	30 lbf/100ft²
Weight:	9.40 ppg	HTHP-cake:	/32nd"	MBT:	2.5	H2O:	93 %	Gels 10s	8 lbf/100ft²
Temp:	77 °C			Pm:	0.9	Oil:	0 %	Gels 10m	11 lbf/100ft²
				Pf:	0.5	Sand:	6.9	Fann 003	7
						pH:	9.5	Fann 006	9
						PHPA(Density):	kg/m³	Fann 100	28
								Fann 200	38
								Fann 300	46
								Fann 600	62
Comment									

Bit #3				Wear	I	O1	D	L	B	G	O2	R
				Bit wear comment:								
Size ("):	311 mm (12 1/4")	IADC#	M323	Nozzles		Drilled over last 24 hrs			Calculated over Bit Run			
Mfr:	Baker Huges Chistensen	WOB(avg)	20.40 klb	No.	Size	Progress	688.0 m	Cum. Progress		688.0 m		
Type:	PDC	RPM(avg)	123 rpm	6	15/32nd"	On Bottom Hrs	10.1 h	Cum. On Btm Hrs		10.1 h		
Serial No.:	7012700	F.Rate	929 gpm			IADC Drill Hrs	14.8 h	Cum IADC Drill Hrs		14.8 h		
Bit Model	HCM506ZX	SPP	2,697 psi			Total Revs	149,700	Cum Total Revs		149,700		
Depth In	816.0 m	HSI	3.43 hp/in²			ROP(avg)	68.12 m/h	ROP(avg)		68.12 m/h		
Depth Out	m	TFA	0.001 m²									
Bit Comment												

BHA #3							
Weight(Wet)	80.00 klb	Length	213.9 m	Torque(max)	13,900 ft.lbf	D.C. (1) Ann Velocity	264 ft/min
Wt Below Jar(Wet)	58.00 klb	String Weight	270.00 klb	Torque(Off.Btm)	400 ft.lbf	D.C. (2) Ann Velocity	264 ft/min
		Pick-Up Weight	270.00 klb	Torque(On.Btm)	5,700 ft.lbf	H.W.D.P. Ann Velocity	182 ft/min
		Slack-Off Weight	270.00 klb			D.P. Ann Velocity	182 ft/min
BHA Run Description		Mud Motor Logging Assembly					
BHA Run Comment							

Equipment	Length	OD	ID	Serial #	Comment
12 1/4" bit	0.38 m	12.25 in	in	7012700	PDC bit
A625 Mud Motor	11.32 m	9.63 in	in	5954	
12 1/4in stab	1.82 m	8.25 in	2.81 in	207A189	
ARC8	6.24 m	8.25 in	in	1216	
Telescope 825NF	8.96 m	8.19 in	in	ZH22	
sonicVISION 825	7.71 m	8.11 in	in	42784	
ADN-8 w/12" stabiliser	9.18 m	8.38 in	in	43225	
8in DC	72.79 m	8.25 in	2.81 in		
Drilling Jars	9.78 m	8.25 in	2.81 in	101663H	
8in DC	28.01 m	8.25 in	2.81 in		
X/Over	1.16 m	8.00 in	3.00 in	508A33	
HWDP	56.51 m	in	in		

Survey								
MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N/-S (m)	E/-W (m)	DLS (deg/30m)	Tool Type
1,164.94	0.4	84.1	1,164.93	1.1	1.1	2.0	0.0	Telescope 825NF
1,221.27	0.4	97.0	1,221.26	1.1	1.1	2.4	0.1	Telescope 825NF
1,338.66	0.5	93.3	1,338.64	1.0	1.0	3.4	0.0	Telescope 825NF
1,367.75	0.5	94.8	1,367.73	1.0	1.0	3.7	0.0	Telescope 825NF

Survey

MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N/-S (m)	E/-W (m)	DLS (deg/30m)	Tool Type
1,456.65	0.5	105.3	1,456.63	0.9	0.9	4.5	0.0	Telescope 825NF

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	6.0	0.0	68.00
Bentonite	MT	0.0	0.0	0.0	37.00
Cement - G Neat	MT	0.0	0.0	0.0	75.00
Fuel	M3	200.0	19.2	0.0	556.40
Potable Water	m3	30.0	28.0	0.0	338.00
Drill Water	m3	0.0	102.0	0.0	433.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure (psi)	Flow (gpm)
1	National	6.00	8.80	97	109	2,697	466	1,360.0		20	170	85
										30	210	128
										40	260	170
2	National	6.00	8.80	97	0	0	0					
3	National	6.00	8.80	97	108	2,697	462	1,360.0		20	170	85
										30	210	128
										40	260	170

Personnel On Board

Company	Pax
Diamond Offshore	55
Catering	8
ADA Services	4
Cameron	0
Dowell Schlumberger	2
Schlumberger MWD/LWD	3
MI Drilling Fluids	2
BJ Tubulars	0
Subsea 7	3
Go Offshore	0
Baker Hughes Inteq	6
Beach Petroleum Ltd	2
Schlumberger DD	1
Total	86

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	1,593.0	Losses	397.0	Equipment	Description	Mesh Size	Comments
Active	463.0 bbl	Downhole					
Mixing		Surf+ Equip	397.0 bbl				
Hole		Dumped					
Slug		De-Gasser					
Reserve	1130.0 bbl	De-Sander					
Kill		De-Silter					
		Centrifuge					

Marine

Weather on 11 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
8.0 NM	28 kn	290.0 °	1,007.0 mbar	13 °C	3.0 m	290.0 °	5 s	#1 Anchor	238.00 klb
								#2 Anchor	240.00 klb
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments		#3 Anchor	280.00 klb
								#4 Anchor	249.00 klb
240.0 °	360.00 klb	4,298.00 klb	1.0 m	290.0 °	12 s	Overcast		#5 Anchor	245.00 klb
Comments								#6 Anchor	236.00 klb
								#7 Anchor	276.00 klb
								#8 Anchor	245.00 klb

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Swift		10 Sep 2009 07:15	Enroute to Geelong.	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	0.0	0.00	0.0	174.3
				Potable Water (m3)	m3	0.0	0.0	0.00	0.0	168
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	11
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	491
Lewek Emerald	10 Sep 2009 03:20		Stand by on rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	33
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	24.5
				Brine (bbl)	bbl	0.0	0.0	500.00	0.0	360
				Fuel (M3)	M3	0.0	13.0	204.00	0.0	440
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	100
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	0

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	13:35 / 13:45	3/ 6	

12 Sep 2009

From: Tim Lee / Kevin Monkhouse
To: Iain Robertson

DRILLING MORNING REPORT # 11**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	1,907.0 m	Cur. Hole Size	12.250 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	1,907.0 m	Last Casing OD	13.375 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress	403.00 m	Shoe TVDBRT	805.8 m	Daily Cost	AUD
Rig	Ocean Patriot (semi)	Days From Spud	7.13	Shoe MDBRT	805.8 m	Cum Cost	AUD 8,381,000
Wtr Depth (MSL)	74 m	Days On Well	10.48	FIT/LOT	sg / 1.47 sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Drill 12.25in hole. Depth 2037m.		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	TD 12¼ in section. Circulate well clean. POOH. Run cement stinger for P&A		

Summary of Period 0000 to 2400 Hrs

Drilled 12¼ in hole from 1504m to 1907m

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	5		
Days Since LTI	0	1,010		
STOP Card	67	0	Safe 38 Unsafe 23	DODI 45 Third Party 5 ADA 4 Catering 7
JSA	44	0		Drill 5 Trip 3 Pump Room 6 Crane Crew 18 Mechanic 4 Electrician 1 Welder 5 Subsea 2
Permit To Work	21	0	Hot 8 Cold 14	
Safety Meeting	0	6		
Abandon Drill	0	7		
Fire Drill	0	7		
JHA/HSE Audit	5	1	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 12 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	D2	00:00	21:15	21.25	1,870.0 m	Drilled 12.25in hole from 1504m to 1870m at controlled ROP of 15-20 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. Observed consistent splintery cuttings, commenced weighing mud up to 9.8ppg at 1590m. Observed splintery cuttings on riser boost, so further increased mud weight to 10ppg at 1810m. WOB: 5klbs, 920gpm, 2850psi, 145 rpm, 3-15kft-lb torq (Max 26kft-lbs and string stalling in ratty formation).
P11	P	D2	21:15	24:00	2.75	1,907.0 m	Drilled 12.25in hole from 1870m to 1907m at controlled ROP of up to 40 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. WOB: 5-10klbs, 920gpm, 2850psi, 150 rpm, 3-15kft-lb torq (Max 26kft-lbs and string stalling in ratty formation).

Operations For Period 0000 Hrs to 0600 Hrs On 13 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P11	P	D2	00:00	06:00	6.00	2,015.0 m	Drilled 12.25in hole from 1907m to 2037m at controlled ROP of up to 40 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. WOB: 5-10klbs, 920gpm, 2850psi, 150 rpm, 3-15kft-lb torq (Max 26kft-lbs and string stalling in ratty formation).

Phase Data to 2400hrs, 12 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	54.00	10 Sep 2009	12 Sep 2009	251.50	10.479	1,907.0 m

WBM Data
Cost Today AUD82,680

Mud Type:	Water Based	API FL:	5.5 cm ³ /30min	Cl:	48,000 mg/L	Solids:	7 %	Viscosity	59 s/qt
Sample-From:	Active	Filter-Cake:	1 /32nd"	K+C*1000:	9 %	Low-Gravity	%vol	PV	16 cP
Time:	10:20	HTHP-FL:	cm ³ /30min	Hard/Ca:	400 mg/L	Solids:		YP	33 lbf/100ft ²
Weight:	9.80 ppg	HTHP-FL:	cm ³ /30min	MBT:	4.0	H2O:	93 %	Gels 10s	7 lbf/100ft ²
Temp:	80 °C	HTHP-cake:	/32nd"	Pm:	1.0	Oil:	0 %	Gels 10m	12 lbf/100ft ²
				Pf:	0.4	Sand:	.5	Fann 003	7
						pH:	9.5	Fann 006	11
						PHPA(Density):	kg/m ³	Fann 100	31
								Fann 200	41
								Fann 300	49
								Fann 600	65
Comment									

WBM Data
Cost Today AUD

Mud Type:	Water Based	API FL:	5.5 cm ³ /30min	Cl:	50,000 mg/L	Solids:	9 %	Viscosity	56 s/qt
Sample-From:	Active	Filter-Cake:	1 /32nd"	K+C*1000:	10 %	Low-Gravity	%vol	PV	17 cP
Time:	15:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	440 mg/L	Solids:		YP	31 lbf/100ft ²
Weight:	9.80 ppg	HTHP-FL:	cm ³ /30min	MBT:	4.0	H2O:	92 %	Gels 10s	8 lbf/100ft ²
Temp:	80 °C	HTHP-cake:	/32nd"	Pm:	0.9	Oil:	0 %	Gels 10m	13 lbf/100ft ²
				Pf:	0.5	Sand:	.5	Fann 003	8
						pH:	9.5	Fann 006	11
						PHPA(Density):	kg/m ³	Fann 100	30
								Fann 200	41
								Fann 300	48
								Fann 600	65
Comment									

WBM Data
Cost Today AUD

Mud Type:	Water Based	API FL:	5.8 cm ³ /30min	Cl:	50,000 mg/L	Solids:	7 %	Viscosity	62 s/qt
Sample-From:	Active	Filter-Cake:	/32nd"	K+C*1000:	10 %	Low-Gravity	%vol	PV	17 cP
Time:	21:30	HTHP-FL:	cm ³ /30min	Hard/Ca:	400 mg/L	Solids:		YP	36 lbf/100ft ²
Weight:	10.00 ppg	HTHP-FL:	cm ³ /30min	MBT:	4.0	H2O:	93 %	Gels 10s	10 lbf/100ft ²
Temp:	80 °C	HTHP-cake:	/32nd"	Pm:	0.9	Oil:	0 %	Gels 10m	14 lbf/100ft ²
				Pf:	0.5	Sand:	6.9	Fann 003	10
						pH:	9.5	Fann 006	12
						PHPA(Density):	kg/m ³	Fann 100	34
								Fann 200	45
								Fann 300	53
								Fann 600	70
Comment									



Bit #3				Wear	I	O1	D	L	B	G	O2	R
				Bit wear comment:								
Size ("):	311 mm (12 1/4")	IADC#	M323	Nozzles		Drilled over last 24 hrs			Calculated over Bit Run			
Mfr:	Baker Huges Chistensen	WOB(avg)	7.00 klb	No.	Size	Progress	403.0 m	Cum. Progress		1,091.0 m		
Type:	PDC	RPM(avg)	157 rpm	6	15/32nd"	On Bottom Hrs	19.5 h	Cum. On Btm Hrs		29.6 h		
Serial No.:	7012700	F.Rate	918 gpm			IADC Drill Hrs	24.0 h	Cum IADC Drill Hrs		38.8 h		
Bit Model	HCM506ZX	SPP	2,988 psi			Total Revs	303,900	Cum Total Revs		453,600		
Depth In	816.0 m	HSI	2.70 hp/in²			ROP(avg)	20.67 m/h	ROP(avg)		36.86 m/h		
Depth Out	m	TFA	0.001 m²									
Bit Comment												

BHA #3						
Weight(Wet)	80.00 klb	Length	213.9 m	Torque(max)	20,300 ft.lbf	D.C. (1) Ann Velocity 261 ft/min
Wt Below Jar(Wet)	58.00 klb	String Weight	305.00 klb	Torque(Off.Btm)	3,000 ft.lbf	D.C. (2) Ann Velocity 261 ft/min
		Pick-Up Weight	305.00 klb	Torque(On.Btm)	5,300 ft.lbf	H.W.D.P. Ann Velocity 180 ft/min
		Slack-Off Weight	305.00 klb			D.P. Ann Velocity 180 ft/min
BHA Run Description		Mud Motor Logging Assembly				
BHA Run Comment						

Equipment	Length	OD	ID	Serial #	Comment
12 1/4" bit	0.38 m	12.25 in	in	7012700	PDC bit
A625 Mud Motor	11.32 m	9.63 in	in	5954	
12 1/4in stab	1.82 m	8.25 in	2.81 in	207A189	
ARC8	6.24 m	8.25 in	in	1216	
Telescope 825NF	8.96 m	8.19 in	in	ZH22	
sonicVISION 825	7.71 m	8.11 in	in	42784	
ADN-8 w/12" stabiliser	9.18 m	8.38 in	in	43225	
8in DC	72.79 m	8.25 in	2.81 in		
Drilling Jars	9.78 m	8.25 in	2.81 in	101663H	
8in DC	28.01 m	8.25 in	2.81 in		
X/Over	1.16 m	8.00 in	3.00 in	508A33	
HWDP	56.51 m	in	in		

Survey								
MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N/-S (m)	E/-W (m)	DLS (deg/30m)	Tool Type
1,596.34	0.5	77.7	1,596.31	0.8	0.8	5.8	0.1	Telescope 825NF
1,625.50	0.5	69.8	1,625.47	0.9	0.9	6.0	0.1	Telescope 825NF
1,682.67	0.4	85.0	1,682.63	1.0	1.0	6.4	0.1	Telescope 825NF
1,767.94	0.5	80.2	1,767.90	1.1	1.1	7.1	0.0	Telescope 825NF
1,858.33	0.3	65.2	1,858.29	1.2	1.2	7.6	0.1	Telescope 825NF

Bulk Stocks					
Name	Unit	In	Used	Adjust	Balance
Barite	MT	33.0	31.0	0.0	70.00
Bentonite	MT	17.0	0.0	0.0	54.00
Cement - G Neat	MT	0.0	0.0	0.0	75.00
Fuel	M3	0.0	13.0	0.0	543.40
Potable Water	m3	33.0	24.0	0.0	347.00
Drill Water	m3	0.0	90.0	-1.0	342.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure (psi)	Flow (gpm)
1	National	6.00	10.00	97	107	2,988	458	1,855.0		40	330	170
										30	270	128
										20	230	85
2	National	6.00	10.00	97	0	0	0					
3	National	6.00	10.00	97	106	2,988	453	1,855.0		40	330	170
										20	230	85
										30	270	128

Personnel On Board

Company	Pax
Diamond Offshore	55
Catering	8
ADA Services	4
Cameron	0
Dowell Schlumberger	2
Schlumberger MWD/LWD	3
MI Drilling Fluids	2
BJ Tubulars	0
Subsea 7	3
Go Offshore	0
Baker Hughes Inteq	6
Beach Petroleum Ltd	2
Schlumberger DD	1
Schlumberger - Wireline	8
Total	94

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	1,594.0	Losses	713.0	Equipment	Description	Mesh Size	Comments
Active	457.0 bbl	Downhole	60.0 bbl				
Mixing		Surf+ Equip	653.0 bbl				
Hole		Dumped					
Slug		De-Gasser					
Reserve	1137.0 bbl	De-Sander					
Kill		De-Silter					
		Centrifuge					

Marine

Weather on 12 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	31 kn	260.0 °	1,004.0 mbar	15 °C	3.0 m	280.0 °	5 s	#1 Anchor	256.00 klb
								#2 Anchor	254.00 klb
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments		#3 Anchor	258.00 klb
								#4 Anchor	231.00 klb
240.0 °	240.00 klb	4,070.00 klb	2.0 m	290.0 °	13 s	Overcast		#5 Anchor	240.00 klb
Comments								#6 Anchor	227.00 klb
								#7 Anchor	271.00 klb
								#8 Anchor	258.00 klb

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Emerald	10 Sep 2009 03:20		Stand by on rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	33.00	0.0	0
				Bentonite Bulk (MT)	MT	0.0	0.0	24.50	0.0	0
				Brine (bbl)	bbl	0.0	0.0	422.00	62.0	0
				Fuel (M3)	M3	0.0	10.0	0.00	0.0	430
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	95
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	0
Lewek Swift		10 Sep 2009 07:15	Enroute to Ocean Patriot	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	9.5	0.0	0.00	418.8	602.6
				Potable Water (m3)	m3	0.0	4.0	0.00	313.0	477
				Drill Water (m3)	m3	0.0	0.0	0.00	204.0	215
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	491

Crew change effected in Geelong

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	13:10 / 13:20	8/ 0	

13 Sep 2009
From: Tim Lee / Kevin Monkhouse
To: Iain Robertson
DRILLING MORNING REPORT # 12**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	2,100.0 m	Cur. Hole Size	12.250 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	2,100.0 m	Last Casing OD	13.375 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress	93.00 m	Shoe TVDBRT	805.8 m	Daily Cost	AUD 770,849
Rig	Ocean Patriot (semi)	Days From Spud	8.13	Shoe MDBRT	805.8 m	Cum Cost	AUD 9,997,707
Wtr Depth (MSL)	74 m	Days On Well	11.48	FIT/LOT	sg / 1.47 sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Making up 2 7/8in cement stinger to 78m		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	RIH and set P&A cement plugs #1, #2 and #3		

Summary of Period 0000 to 2400 Hrs

Drilled 12.25in hole from 1907m to 2100m. Circulated well clean. POOH to 1606m. Re-logged interval 1606m to 1540m. POOH layed out DCs. Downloaded Schlumberger and rack back tools.

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	6		
Days Since LTI	0	1,011		
STOP Card	67	0	Safe 42 Unsafe 25	DODI 51 Third Party 11 ADA 2 Catering 3
JSA	47	0		Drill 4 Trip 13 Pump Room 2 Crane Crew 17 Mechanic 4 Electrician 1 Welder 5 Subsea 1
Permit To Work	21	0	Hot 5 Cold 9	
Safety Meeting	1	0		
Abandon Drill	1	1		
Fire Drill	1	1		
JHA/HSE Audit	1	1	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 13 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	D2	00:00	09:00	9.00	2,100.0 m	Drilled 12.25in hole from 1907m to 2100m at controlled ROP of up to 40 mtr/hr to allow accurate sample analysis. Took MWD survey every 90m. WOB: 5-10klbs, 920gpm, 3200psi, 150 rpm, 3-15kft-lb torq (Max 26kft-lbs and string stalling in ratty formation).
P11	P	F4	09:00	11:00	2.00	2,100.0 m	Pumped 200bbl hi vis sweep and circulated well clean.
P11	P	G8	11:00	12:30	1.50	2,100.0 m	Flow checked well 10mins. Well static. POOH from 2100m to 1606m. No hole problems.
P11	P	M7	12:30	14:00	1.50	2,100.0 m	Re logged with Schlumberger LWD from 1606m to 1540m.
P11	P	G8	14:00	17:00	3.00	2,100.0 m	Pumped slug and POOH from 1540m to 213m. No hole problems.
P11	P	G6	17:00	20:00	3.00	2,100.0 m	Racked back 1 std of HWDP and 1 std of 8in DCs. Laid out 3 x 5in HWDP, 8 x 8in DCs and Drilling Jars.
P11	P	G6	20:00	20:30	0.50	2,100.0 m	Removed radioactive source from Schlumberger ADN tool

Operations For Period 0000 Hrs to 2400 Hrs On 13 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	G6	20:30	24:00	3.50	2,100.0 m	Cranes shut down due to high winds. Racked back Schlumberger LWD tools in derrick. Downloaded tools.

Operations For Period 0000 Hrs to 0600 Hrs On 14 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P11	P	G6	00:00	00:30	0.50	2,100.0 m	Broke off bit (1-1-CT-N-X-1-ER-TD). Racked back mud motor in derrick on double of DP. (Bearing play in motor 5mm)
P21	P	G6	00:30	01:30	1.00	2,100.0 m	Made up cementing stand and stood back in derrick.
P21	P	G6	01:30	02:00	0.50	2,100.0 m	Prepared to run 2 7/8in tubing cement stinger.
P21	P	G2	02:00	04:30	2.50	2,100.0 m	Wind dropped below 40knts allowing cranes to resume work. Layed out Schlumberger MWD/LWD tools and mud motor.
P21	P	G2	04:30	06:00	1.50	2,100.0 m	Rigged up 2 7/8in stinger handling equipment and made up 8 joints of 2 7/8in cement stinger to 78m

Phase Data to 2400hrs, 13 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	78.00	10 Sep 2009	13 Sep 2009	275.50	11.479	2,100.0 m

General Comments

00:00 TO 24:00 Hrs ON 13 Sep 2009

Operational Comments	Crane operations suspended 22:00hr to 02:00hrs due to high winds. Fire and abandon drill conducted. Weekly safety meetings.
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WBM Data
Cost Today AUD13,893

Mud Type:	Water Based	API FL:	4.5 cm ³ /30min	Cl:	50,000 mg/L	Solids:	10 %	Viscosity	55 s/qt
Sample-From:	Active	Filter-Cake:	1 /32nd"	K+C*1000:	9 %	Low-Gravity	%vol	PV	16 cP
Time:	08:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	400 mg/L	Solids:		YP	34 lbf/100ft ²
Weight:	10.10 ppg	HTHP-cake:	/32nd"	MBT:	4.0	H2O:	90 %	Gels 10s	9 lbf/100ft ²
Temp:	°C			Pm:	1.0	Oil:	0 %	Gels 10m	15 lbf/100ft ²
				Pf:	0.4	Sand:	.5	Fann 003	8
						pH:	9.5	Fann 006	11
						PHPA(Density):	kg/m ³	Fann 100	31
								Fann 200	41
								Fann 300	50
								Fann 600	66
Comment									

WBM Data
Cost Today AUD

Mud Type:	Water Based	API FL:	4.5 cm ³ /30min	Cl:	50,000 mg/L	Solids:	10 %	Viscosity	54 s/qt
Sample-From:	Active	Filter-Cake:	1 /32nd"	K+C*1000:	9 %	Low-Gravity	%vol	PV	16 cP
Time:	14:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	400 mg/L	Solids:		YP	36 lbf/100ft ²
Weight:	10.10 ppg	HTHP-cake:	/32nd"	MBT:	4.0	H2O:	90 %	Gels 10s	10 lbf/100ft ²
Temp:	°C			Pm:	1.0	Oil:	0 %	Gels 10m	15 lbf/100ft ²
				Pf:	0.5	Sand:	.5	Fann 003	9
						pH:	9.5	Fann 006	12
						PHPA(Density):	kg/m ³	Fann 100	33
								Fann 200	43
								Fann 300	52
								Fann 600	68
Comment									



Bit #3				Wear	I	O1	D	L	B	G	O2	R
					1	1	CT	N	X	1	ER	TD
Bit wear comment:												
Size ("):		311 mm (12 1/4")	IADC#	M323	Nozzles		Drilled over last 24 hrs		Calculated over Bit Run			
Mfr:		Baker Huges Chistensen	WOB(avg)	10.10 klb	No. Size		Progress 93.0 m		Cum. Progress		1,184.0 m	
Type:		PDC	RPM(avg)	155 rpm	6	15/32nd"		On Bottom Hrs 6.2 h		Cum. On Btm Hrs		35.8 h
Serial No.:		7012700	F.Rate	912 gpm			IADC Drill Hrs 10.0 h		Cum IADC Drill Hrs		48.8 h	
Bit Model		HCM506ZX	SPP	3,340 psi			Total Revs 94,400		Cum Total Revs		548,000	
Depth In		816.0 m	HSI	2.70 hp/in²			ROP(avg) 15.00 m/h		ROP(avg)		33.07 m/h	
Depth Out		2,100.0 m	TFA	0.001 m²								
Bit Comment												

BHA #3							
Weight(Wet)	80.00 klb	Length	213.9 m	Torque(max)	19,500 ft.lbf	D.C. (1) Ann Velocity	260 ft/min
Wt Below Jar(Wet)	58.00 klb	String Weight	310.00 klb	Torque(Off.Btm)	3,000 ft.lbf	D.C. (2) Ann Velocity	260 ft/min
		Pick-Up Weight	310.00 klb	Torque(On.Btm)	7,700 ft.lbf	H.W.D.P. Ann Velocity	179 ft/min
		Slack-Off Weight	310.00 klb			D.P. Ann Velocity	179 ft/min
BHA Run Description		Mud Motor Logging Assembly					
BHA Run Comment		Well TD					

Equipment	Length	OD	ID	Serial #	Comment
12 1/4" bit	0.38 m	12.25 in	in	7012700	PDC bit
A625 Mud Motor	11.32 m	9.63 in	in	5954	
12 1/4in stab	1.82 m	8.25 in	2.81 in	207A189	
ARC8	6.24 m	8.25 in	in	1216	
Telescope 825NF	8.96 m	8.19 in	in	ZH22	
sonicVISION 825	7.71 m	8.11 in	in	42784	
ADN-8 w/12" stabiliser	9.18 m	8.38 in	in	43225	
8in DC	72.79 m	8.25 in	2.81 in		
Drilling Jars	9.78 m	8.25 in	2.81 in	101663H	
8in DC	28.01 m	8.25 in	2.81 in		
X/Over	1.16 m	8.00 in	3.00 in	508A33	
HWDP	56.51 m	in	in		

Survey								
MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N/-S (m)	E/-W (m)	DLS (deg/30m)	Tool Type
1,858.33	0.3	65.2	1,858.29	1.2	1.2	7.6	0.1	Telescope 825NF
1,913.35	0.5	64.2	1,913.31	1.0	1.0	8.1	0.1	Telescope 825NF
1,941.91	0.5	69.2	1,941.87	1.1	1.1	8.3	0.0	Telescope 825NF
2,028.47	0.6	92.2	2,028.43	1.2	1.2	9.1	0.1	Telescope 825NF
2,076.18	0.7	87.1	2,076.13	1.2	1.2	9.6	0.1	Telescope 825NF

Bulk Stocks					
Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	28.0	0.0	42.00
Bentonite	MT	0.0	0.0	0.0	54.00
Cement - G Neat	MT	27.0	0.0	0.0	102.00
Fuel	M3	0.0	19.5	0.0	523.90
Potable Water	m3	32.0	22.0	0.0	357.00
Drill Water	m3	0.0	36.0	0.0	306.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure (psi)	Flow (gpm)
1	National	6.00	10.00	97	107	3,340	458	2,100.0		30	260	128
										40	340	170
										20	230	85
2	National	6.00	10.00	97	0	0	0					
3	National	6.00	10.00	97	106	3,340	453	2,100.0		40	320	170
										30	260	128
										20	220	85

Personnel On Board

Company	Pax
Diamond Offshore	55
Catering	8
ADA Services	4
Cameron	0
Dowell Schlumberger	2
Schlumberger MWD/LWD	2
MI Drilling Fluids	2
BJ Tubulars	0
Subsea 7	3
Go Offshore	0
Baker Hughes Inteq	6
Beach Petroleum Ltd	2
Schlumberger DD	0
Schlumberger - Wireline	0
Total	84

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	1,233.0	Losses	324.0	Equipment	Description	Mesh Size	Comments
Active	398.0 bbl	Downhole	21.0 bbl				
Mixing		Surf+ Equip	303.0 bbl				
Hole		Dumped					
Slug		De-Gasser					
Reserve	835.0 bbl	De-Sander					
Kill		De-Silter					
		Centrifuge					

Marine

Weather on 13 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
8.0 NM	37 kn	250.0 °	1,013.0 mbar	13 °C	3.0 m	250.0 °	5 s	#1 Anchor	278.00 klb
								#2 Anchor	275.00 klb
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments		#3 Anchor	254.00 klb
								#4 Anchor	231.00 klb
240.0 °	240.00 klb	3,905.00 klb	2.0 m	290.0 °	13 s	Overcast		#5 Anchor	231.00 klb
Comments								#6 Anchor	223.00 klb
								#7 Anchor	276.00 klb
								#8 Anchor	271.00 klb



Support Vessels										
Boats		Arrived Time	Departed Time	Status	Bulks					
Lewek Emerald	10 Sep 2009 03:20	13 Sep 2009 12:30	Stand by on rig	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	0
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	0.0	0.00	0.0	430
				Potable Water (m3)	m3	0.0	0.0	0.00	0.0	95
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	0
Lewek Swift	13 Sep 2009 06:30		Standby on rig location	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	17.4	0.00	0.0	585.2
				Potable Water (m3)	m3	0.0	7.0	0.00	0.0	470
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	215
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	491
Helicopter Movement										
Flight #		Company	Arr/Dep. Time		Pax In/Out		Comment			
1		Bristow Helicopters	11:55 / 12:05		0/ 10					

14 Sep 2009

From: Tim Lee / Kevin Monkhouse
To: Iain Robertson

DRILLING MORNING REPORT # 13**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	2,100.0 m	Cur. Hole Size	12.250 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	2,100.0 m	Last Casing OD	13.375 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	805.8 m	Daily Cost	AUD 791,293
Rig	Ocean Patriot (semi)	Days From Spud	9.13	Shoe MDBRT	805.8 m	Cum Cost	AUD 10,789,000
Wtr Depth (MSL)	74 m	Days On Well	12.48	FIT/LOT	sg / 1.47 sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	RIH with 5in mule shoe.		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Cement abandonment plug #3. Displace riser to seawater. Pull BOP.		

Summary of Period 0000 to 2400 Hrs

Laid out Schlumberger drilling tools. Made up 2.875in cement stinger and RIH to 1620. Set hi vis pill on bottom. Pull back to 1520m and set cement plug #1. Laid out pipe while WOC. Tagged TOC at 1385m. POOH and set cement plug #2 at 850m. POOH to 650m and circulated.

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	7		
Days Since LTI	0	1,012		
STOP Card	52	0	Safe 36 Unsafe 16	DODI 38 Third Party 6 ADA 0 Catering 8
JSA	51	0		Drill 6 Trip 18 Pump Room 1 Crane Crew 15 Mechanic 2 Electrician 1 Welder 8 Subsea 0
Permit To Work	21	1	Hot 5 Cold 9	
Safety Meeting	1	1		
Abandon Drill	1	2		
Fire Drill	1	2		
JHA/HSE Audit	0	2	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 14 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	G6	00:00	00:30	0.50	2,100.0 m	Broke off bit (1-1-CT-N-X-1-ER-TD). Racked back mud motor in derrick on double of DP. (Bearing play in motor 5mm)
P21	P	G6	00:30	01:30	1.00	2,100.0 m	Made up cementing stand and stood back in derrick.
P21	P	G6	01:30	02:00	0.50	2,100.0 m	Prepared to run 2.875in tubing cement stinger.
P21	P	G2	02:00	04:30	2.50	2,100.0 m	Wind dropped below 40knts allowing cranes to resume work. Layed out Schlumberger MWD/LWD tools and mud motor.
P21	P	G2	04:30	06:30	2.00	2,100.0 m	Rigged up 2.875in stinger handling equipment and made up 8 joints of 2.875in cement stinger to 98m
P21	P	G8	06:30	09:30	3.00	2,100.0 m	Ran stinger in hole to 1620m
P21	P	G8	09:30	10:30	1.00	2,100.0 m	Spotted 50bbl 12.6ppg hi vis pill on bottom. Pulled out to 1520m and made up cement stand.
P21	P	G1	10:30	11:00	0.50	2,100.0 m	Held JSA. Rigged up surface lines and pressure tested same to 2000psi

Operations For Period 0000 Hrs to 2400 Hrs On 14 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P21	P	CMT	11:00	11:30	0.50	2,100.0 m	Dowell mixed and pumped 79bbl of 15.8ppg slurry. (16.3MT G cement, 44bbl of FW, Yield 1.16). Dowell displaced cement slurry with 2bbl FW followed by 72bbl 10ppg mud.
P21	P	G8	11:30	13:00	1.50	2,100.0 m	Racked cement stand back in derrick. POOH from 1520m to 1450m slowly
P21	P	F4	13:00	14:00	1.00	2,100.0 m	Rigged up and reverse circulated cement contamination out at 60spm, 300psi. 40bbls contaminated mud dumped at shakers
P21	P	G2	14:00	16:00	2.00	2,100.0 m	Racked back cement stand and laid out 33 joints of 5in DP
P21	P	G8	16:00	17:30	1.50	2,100.0 m	Ran in hole and tagged top of cement at 1385m with 5klbs weight down
P21	P	G8	17:30	20:00	2.50	2,100.0 m	Pumped slug and POOH to 950m. Laid out 42 joints of 5in DP on way out
P21	P	G8	20:00	21:00	1.00	2,100.0 m	Spotted 50bbl 12.6ppg hi vis pill on bottom and POOH from 950m to 838m
P21	P	G1	21:00	21:15	0.25	2,100.0 m	Held JSA. Picked up cement head and rigged up surface lines. Positioned at 850m. Pressure tested surface lines to 2000psi
P21	P	CMT	21:15	21:45	0.50	2,100.0 m	Dowell pumped ahead 15bbl FW. Mixed and pumped 81bbl 16ppg cement slurry. (17.2MT G cement, 46bbl of fresh water. Yield 1.13). Dowell displaced slurry with 2 bbl of fresh water followed by 33bbl of 10ppg mud.
P21	P	G8	21:45	22:45	1.00	2,100.0 m	Racked back cement stand and pulled out slowly from 850m to 637m
P21	P	F4	22:45	23:30	0.75	2,100.0 m	Made up cement stand and positioned at 650m. Closed upper annular and reverse circulated cement contamination out of well. (37bbl of contaminated mud dumped at shakers.)
P21	P	F4	23:30	24:00	0.50	2,100.0 m	Lined up to circulate conventionally. Pumped 100bbls mud at high rate to flush pipe. Pumped slug

Operations For Period 0000 Hrs to 0600 Hrs On 15 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P21	P	G2	00:00	03:15	3.25	2,100.0 m	Racked back 10stds of DP (Total of 850m DP remaining in derrick). Laid out 60 joints of 5in DP and 10 joints of 2.875in cement stinger.
P21	P	G8	03:15	03:45	0.50	2,100.0 m	Made up jet sub and stand below WBRT. RIH to 80m.
P21	P	G16	03:45	04:15	0.50	2,100.0 m	Jetted BOP and wellhead 810gpm, 650psi, 3 rpm.
P21	P	G10	04:15	05:30	1.25	2,100.0 m	RIH and engaged WB with RT. Pulled wear bushing free with 30k over pull. POOH with wear bushing. Laid out wear bushing and RT. Racked back stand with jet tool.
							Offline: Attempted pressure test of cement plug #2 to 1050psi against Blind/Shear rams. Leak in cement unit.
P21	P	G8	05:30	06:00	0.50	2,100.0 m	Made up 5in mule shoe and RIH to 67m

Phase Data to 2400hrs, 14 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	78.50	10 Sep 2009	14 Sep 2009	276.00	11.5	2,100.0 m
Suspend and Abandon(P21)	23.50	14 Sep 2009	14 Sep 2009	299.50	12.479	2,100.0 m

General Comments

00:00 TO 24:00 Hrs ON 14 Sep 2009

Operational Comments	Pressure tested #2 cement plug offline to 1050psi. Pressure bled off 52psi in 10mins. Leak identified on cement unit.
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WBM Data				Cost Today AUD22,174			
Mud Type:	Water Based	API FL:	4.5 cm ³ /30min	Cl:	50,000 mg/L	Solids:	10 %
Sample-From:	Active	Filter-Cake:	1 /32nd"	K+C*1000:	9 %	Low-Gravity Solids:	%vol
Time:	11:00	HTHP-FL:	cm ³ /30min	Hard/Ca:	400 mg/L	H2O:	90 %
Weight:	10.10 ppg	HTHP-cake:	/32nd"	MBT:	4.0	Oil:	0 %
Temp:	°C			Pm:		Sand:	.5
				Pf:	0.4	pH:	9.5
						PHPA(Density):	kg/m ³
Comment							

Personnel On Board

Company	Pax
Diamond Offshore	53
Catering	8
ADA Services	4
Cameron	1
Dowell Schlumberger	2
Schlumberger MWD/LWD	0
MI Drilling Fluids	2
BJ Tubulars	0
Subsea 7	6
Go Offshore	0
Baker Hughes Inteq	4
Beach Petroleum Ltd	1
Schlumberger DD	0
Schlumberger - Wireline	0
Total	81

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	1,683.0	Losses	85.0	Equipment	Description	Mesh Size	Comments
Active	447.0 bbl	Downhole					
Mixing		Surf+ Equip	5.0 bbl				
Hole		Dumped	80.0 bbl				
Slug		De-Gasser					
Reserve	1236.0 bbl	De-Sander					
Kill		De-Silter					
		Centrifuge					

Marine

Weather on 14 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	12 kn	250.0 °	1,021.0 mbar	12 °C	0.5 m	250.0 °	3 s	#1 Anchor	256.00 klb
								#2 Anchor	258.00 klb
								#3 Anchor	258.00 klb
								#4 Anchor	240.00 klb
								#5 Anchor	249.00 klb
								#6 Anchor	247.00 klb
								#7 Anchor	262.00 klb
								#8 Anchor	256.00 klb



Support Vessels										
Boats		Arrived Time	Departed Time	Status	Bulks					
Lewek Emerald	10 Sep 2009 03:20	13 Sep 2009 12:30	On route to rig location	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	0
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Brine (bbl)	bbl	0.0	0.0	0.00	30.0	30
				Fuel (M3)	M3	336.4	8.0	0.00	-15.2	743.2
				Potable Water (m3)	m3	145.0	5.0	0.00	-10.0	225
				Drill Water (m3)	m3	138.0	0.0	0.00	0.0	138
Lewek Swift	13 Sep 2009 06:30		Standby on rig location	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	9.1	0.00	0.0	576.2
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	466
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	215
				Brine (bbl)	bbl	0.0	0.0	491.00	0.0	0
Helicopter Movement										
Flight #		Company	Arr/Dep. Time		Pax In/Out		Comment			
1	Bristow Helicopters		14:25 / 14:35		4/ 7					

15 Sep 2009

From: Tim Lee / Kevin Monkhouse
To: Iain Robertson

DRILLING MORNING REPORT # 14**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	2,100.0 m	Cur. Hole Size	12.250 in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	2,100.0 m	Last Casing OD	13.375 in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	805.8 m	Daily Cost	AUD 756,000
Rig	Ocean Patriot (semi)	Days From Spud	10.13	Shoe MDBRT	805.8 m	Cum Cost	AUD 11,545,000
Wtr Depth (MSL)	74 m	Days On Well	13.48	FIT/LOT	sg / 1.47 sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Rigging down BOP handling equipment.		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Recover BOP to carrier. Make up 18.75in WHRT and rack in derrick. Make up casing cutting/recovery assembly. RIH, cut and recover PGB and well head. Deballast. Lay out remaining pipe in derrick. Begin anchor handling.		

Summary of Period 0000 to 2400 Hrs

POOH laid out 5in DP and cement stinger. Recovered wear bushing. RIH with 5in mule shoe to 700m. Laid out 5in DP. Set #3 cement plug from 215m to 115m. Jetted BOP. Displaced riser to sea water. Laid out diverter. Unlatched BOP. Prepared to lay out slip joint.

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	8		
Days Since LTI	0	1,013		
STOP Card	69	0	Safe 52 Unsafe 17	DODI 55 Third Party 7 ADA 1 Catering 6
JSA	44	0		Drill 8 Trip 13 Pump Room 1 Crane Crew 9 Mechanic 3 Electrician 2 Welder 8 Subsea 0
Permit To Work	21	2	Hot 4 Cold 12	
Safety Meeting	1	2		
Abandon Drill	1	3		
Fire Drill	1	3		
JHA/HSE Audit	0	3	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 15 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P21	P	G2	00:00	03:15	3.25	2,100.0 m	Racked back 10stds of DP (Total of 850m DP remaining in derrick). Laid out 60 joints of 5in DP and 10 joints of 2.875in cement stinger.
P21	P	G8	03:15	03:45	0.50	2,100.0 m	Made up jet sub and stand below WBRT. RIH to 80m.
P21	P	G16	03:45	04:15	0.50	2,100.0 m	Jetted BOP and wellhead 810gpm, 650psi, 30rpm.

Operations For Period 0000 Hrs to 2400 Hrs On 15 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P21	P	G10	04:15	05:30	1.25	2,100.0 m	RIH and engaged WB with RT. Pulled wear bushing free with 30klbs over pull. POOH with wear bushing. Laid out wear bushing and RT. Racked back stand with jet tool. Offline: Attempted pressure test of cement plug #2 to 1050psi against Blind/Shear rams. Leak in cement unit.
P21	P	G8	05:30	07:00	1.50	2,100.0 m	Made up 5in mule shoe and RIH to 316m
P21	P	P1	07:00	07:30	0.50	2,100.0 m	Closed MPR and and pressure tested #2 cement plug to 1050psi for 10minutes. Good test
P21	P	G8	07:30	09:00	1.50	2,100.0 m	Continued to RIH with 5in DP from 316m to 700m.
P21	P	G2	09:00	11:00	2.00	2,100.0 m	Pumped slug and POOH to 315m. Laid out 64 joints of 5in DP.
P21	P	G2	11:00	11:30	0.50	2,100.0 m	Spotted 50bbl 12.6ppg hi vis pill at 315m.
P21	P	F3	11:30	13:00	1.50	2,100.0 m	Picked up cement stand and spaced out to 215m. Rigged up and tested surface lines to 1000psi. Cement unit mixed and pumped 49bbl of 15.8ppg cement slurry. (10.0MT class G cement, 29.6 bbl of Sea Water. Yield 1.18). Displaced with 2bbl of seawater and 2bbls of 10.0ppg mud.
P21	P	F3	13:00	13:30	0.50	2,100.0 m	POOH from 215 to 107m
P21	P	F4	13:30	14:00	0.50	2,100.0 m	Rigged up and reverse circulated out contaminated cement returns at 80spm, 150psi.
P21	P	F4	14:00	15:30	1.50	2,100.0 m	Lined up to circulate conventionally. Circulated 35bbl of 10.0ppg mud. Lined up to sea water and displaced riser to sea water.
P21	P	G2	15:30	16:30	1.00	2,100.0 m	POOH. Laid out 12 joints of 5in DP
P21	P	G16	16:30	17:00	0.50	2,100.0 m	RIH with jet sub and jetted BOPs. 150spm, 400psi. POOH; laid out jet sub, racked back DP stand in derrick.
P21	P	G13	17:00	18:30	1.50	2,100.0 m	Held JSA and rigged up to recover BOPs.
P21	P	G13	18:30	20:00	1.50	2,100.0 m	Made up diverter RT to diverter. Laid out diverter assembly.
P21	P	G13	20:00	21:30	1.50	2,100.0 m	Made up landing joint to Slip joint. Collapsed slip joint and locked inner barrel.
P21	P	G13	21:30	24:00	2.50	2,100.0 m	Unlatched BOP and lifted clear of PGB guide posts. Moved rig off location 15m to port. Removed storm saddles, secured SDL ring. Removed goosenecks from slip joint.

Operations For Period 0000 Hrs to 0600 Hrs On 16 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P21	P	G13	00:00	01:00	1.00	2,100.0 m	Laid out landing joint and slip joint.
P21	P	G13	01:00	02:00	1.00	2,100.0 m	Laid out riser pup joints.
P21	P	G13	02:00	04:00	2.00	2,100.0 m	Engaged carrier guides with BOP. Removed beacons. Picked up and landed BOP onto carrier. Removed guide lines. Pod guide wires. Disconnected riser double and skidded bop to park area.
P21	P	G13	04:00	05:00	1.00	2,100.0 m	Laid out riser double.
P21	P	G13	05:00	06:00	1.00	2,100.0 m	Rigged down BOP handling equipment.

Phase Data to 2400hrs, 15 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	78.50	10 Sep 2009	14 Sep 2009	276.00	11.5	2,100.0 m
Suspend and Abandon(P21)	47.50	14 Sep 2009	15 Sep 2009	323.50	13.479	2,100.0 m

WBM Data				Cost Today AUD29,794					
Mud Type:	Water Based	API FL:	4.5 cm³/30min	Cl:	50,000 mg/L	Solids:	10 %	Viscosity	54 s/qt
Sample-From:	Active	Filter-Cake:	1 /32nd"	K+C*1000:	9 %	Low-Gravity	%vol	PV	16 cP
Time:	10:00			Hard/Ca:	400 mg/L	Solids:		YP	34 lbf/100ft²
Weight:	10.00 ppg	HTHP-FL:	cm³/30min	MBT:	4.0	H2O:	90 %	Gels 10s	9 lbf/100ft²
Temp:	°C	HTHP-cake:	/32nd"	Pm:		Oil:	0 %	Gels 10m	15 lbf/100ft²
				Pf:	0.4	Sand:	.5	Fann 003	9
						pH:	9.5	Fann 006	12
						PHPA(Density):	kg/m³	Fann 100	31
								Fann 200	41
								Fann 300	50
								Fann 600	66
Comment									

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Manfred Olejniczak

Available	0.0	Losses	2,818.0	Equipment	Description	Mesh Size	Comments
Active	0.0 bbl	Downhole	770.0 bbl				
Mixing		Surf+ Equip					
Hole		Dumped	2048.0 bbl				
Slug		De-Gasser					
Reserve	0.0 bbl	De-Sander					
Kill		De-Silter					
		Centrifuge					

Marine

Weather on 15 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
10.0 NM	18 kn	280.0 °	1,020.0 mbar	12 °C	1.0 m	280.0 °	3 s	#1 Anchor	247.00 klb
								#2 Anchor	258.00 klb
								#3 Anchor	276.00 klb
								#4 Anchor	254.00 klb
								#5 Anchor	245.00 klb
								#6 Anchor	254.00 klb
								#7 Anchor	284.00 klb
								#8 Anchor	247.00 klb
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments			
240.0 °	0.00 klb	3,462.00 klb	1.0 m	290.0 °	13 s	Mainly Cloudy			
Comments									

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Swift	13 Sep 2009 06:30		En route to Geelong	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	13.5	0.00	0.0	562.7
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	462
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	215
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	0
Lewek Emerald	10 Sep 2009 03:20	13 Sep 2009 12:30	On route to rig location	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	0
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	30
				Fuel (M3)	M3	0.0	14.2	0.00	0.0	729
				Potable Water (m3)	m3	0.0	10.0	0.00	0.0	215
				Drill Water (m3)	m3	0.0	52.0	0.00	0.0	86

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	09:00 / 09:10	6/ 4	

16 Sep 2009
From: Tim Lee / Kevin Monkhouse
To: Iain Robertson
DRILLING MORNING REPORT # 15**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	2,100.0 m	Cur. Hole Size	in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	2,100.0 m	Last Casing OD	in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	m	Daily Cost	AUD 718,000
Rig	Ocean Patriot (semi)	Days From Spud	11.13	Shoe MDBRT	m	Cum Cost	AUD 12,263,000
Wtr Depth (MSL)	74 m	Days On Well	14.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	Recovering #7 anchor.		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Recover secondary anchors. Swift return to rig and offload material. Connect Swift to tow bridle. Recover primary anchors. Begin rig tow to Western Port.		

Summary of Period 0000 to 2400 Hrs

Laid out slip joint. Recovered BOPs to carrier and rigged down handling equipment. Made up 18.75in RT and stood back in derrick. Made up casing cutting assembly, RIH, cut casing and recovered PGB and wellhead to moonpool. Deballasted rig while laying out remaining pipe from derrick. Recovered #6 anchor.

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	9		
Days Since LTI	0	1,014		
STOP Card	70	0	Safe 50 Unsafe 20	DODI 57 Third Party 7 ADA 1 Catering 5
JSA	47	0		Drill 11 Trip 8 Pump Room 1 Crane Crew 14 Mechanic 4 Electrician 0 Welder 6 Subsea 3
Permit To Work	21	0	Hot 7 Cold 7	
Safety Meeting	0	3		
Abandon Drill	0	4		
Fire Drill	0	4		
JHA/HSE Audit	0	4	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 16 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P21	P	G13	00:00	01:30	1.50	2,100.0 m	Laid out landing joint and slip joint.
P21	P	G13	01:30	02:00	0.50	2,100.0 m	Laid out riser 10ft and 45ft pup joints.
P21	P	G13	02:00	04:00	2.00	2,100.0 m	Engaged carrier guides with BOP. Removed beacons. Picked up and landed BOP onto carrier. Removed guide lines. Pod guide wires. Disconnected termination spool and riser double. Skidded BOP to starboard park area.
P21	P	G13	04:00	05:00	1.00	2,100.0 m	Laid out riser double and termination spool
P21	P	G13	05:00	06:30	1.50	2,100.0 m	Rigged down BOP handling equipment.
P21	P	G6	06:30	07:00	0.50	2,100.0 m	Made up 18.75in RT to stand and racked in derrick
P21	P	G6	07:00	09:00	2.00	2,100.0 m	Made up Smith casing cutting and retrieval BHA.

Operations For Period 0000 Hrs to 2400 Hrs On 16 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P21	P	G12	09:00	10:00	1.00	2,100.0 m	Secured cutting BHA to guide lines with rope and RIH to 100m
P21	P	G12	10:00	14:30	4.50	2,100.0 m	Landed out in well head with latch tool with 10klbs down. Confirmed and maintained latch with 50klbs overpull. Confirmed free turning torque 3kft-lbs. Cut 20in and 30in casing @ 97.1m, 120rpm, 300psi, 5-6kft-lbs. 10:45 Cut 20in. 13:30 Stopped cutting. Overpulled 160klbs, no success. Continued cutting 120rpm, 400psi, 7-8kft-lbs increasing pressure to 800psi with 9-10kft-lbs.
P21	P	G12	14:30	15:00	0.50	2,100.0 m	Casing cut. Recovered PGB and well head to moopool. Commenced de-ballasting rig to transit draft at 14:40.
P21	P	G12	15:00	21:00	6.00	2,100.0 m	Laid out casing cutting BHA. Laid out stand of 8in DCs and remaining DP from derrick. Stopped all deck operations from 17:00 to 19:00 while rig deballasted through transitional zone.
P32	P	M4	21:00	24:00	3.00	2,100.0 m	Commenced recovery of anchors with Lewek Emerald Anchor #6 PCC to Boat 21:10, Anchor off Bot 21:35, Anchor Racked 23:08, PCC to Rig 23:15. Anchor #2 PCC to Boat 23:35,

Operations For Period 0000 Hrs to 0600 Hrs On 17 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P32	P	M4	00:00	06:00	6.00	2,100.0 m	Anchor #2 Anchor off Bot 00:05, Anchor Racked 01:32, PCC to Rig 01:42. Anchor #3 PCC to Boat 01:52, Anchor off Bot 02:20, Anchor Racked 04:50, PCC to Rig 04:55. Anchor #7 PCC to Boat 05:10, Anchor off Bot 05:43,

Phase Data to 2400hrs, 16 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	78.50	10 Sep 2009	14 Sep 2009	276.00	11.5	2,100.0 m
Suspend and Abandon(P21)	68.50	14 Sep 2009	16 Sep 2009	344.50	14.354	2,100.0 m
Demob(P32)	3.00	16 Sep 2009	16 Sep 2009	347.50	14.479	2,100.0 m

Survey

MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N-S (m)	E-W (m)	DLS (deg/30m)	Tool Type
1,858.33	0.3	65.2	1,858.29	1.2	1.2	7.6	0.1	Telescope 825NF
1,913.35	0.5	64.2	1,913.31	1.0	1.0	8.1	0.1	Telescope 825NF
1,941.91	0.5	69.2	1,941.87	1.1	1.1	8.3	0.0	Telescope 825NF
2,028.47	0.6	92.2	2,028.43	1.2	1.2	9.1	0.1	Telescope 825NF
2,076.18	0.7	87.1	2,076.13	1.2	1.2	9.6	0.1	Telescope 825NF

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	34.0	1.0	3.00
Bentonite	MT	0.0	44.0	1.0	1.00
Cement - G Neat	MT	0.0	56.0	0.0	2.00
Fuel	M3	0.0	13.0	0.0	489.30
Potable Water	m3	34.0	27.0	0.0	378.00
Drill Water	m3	0.0	34.0	0.0	200.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00		97	0	0	0					
2	National	6.00		97	0	0	0					
3	National	6.00		97	0	0	0					

Personnel On Board

Company	Pax
Diamond Offshore	55
Catering	8
ADA Services	4
Cameron	1
Dowell Schlumberger	2
Smith Red Baron	1
Subsea 7	6
Go Offshore	1
Other Contractor	3
Total	81

Marine

Weather on 16 Sep 2009								Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency	Anchors	Tension
6.0 NM	24 kn	290.0 °	1,012.0 mbar	13 °C	1.0 m	0.0 °	3 s	#1 Anchor	269.00 klb
								#2 Anchor	214.00 klb
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments		#3 Anchor	276.00 klb
								#4 Anchor	280.00 klb
240.0 °	0.00 klb	3,080.00 klb	1.0 m	290.0 °	13 s	Overcast		#5 Anchor	271.00 klb
Comments								#6 Anchor	klb
								#7 Anchor	284.00 klb
								#8 Anchor	284.00 klb

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Swift	13 Sep 2009 06:30		En route to rig location	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	19.2	0.00	0.0	543.5
				Potable Water (m3)	m3	0.0	4.0	0.00	0.0	458
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	215
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	0
Lewek Emerald	10 Sep 2009 03:20		Recovering anchors	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	0
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	30
				Fuel (M3)	M3	0.0	14.0	0.00	0.0	715
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	210
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	86

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	09:05 / 09:20	6/ 8	

17 Sep 2009
From: Tim Lee / Kevin Monkhouse
To: Iain Robertson
DRILLING MORNING REPORT # 16**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	2,100.0 m	Cur. Hole Size	in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	2,100.0 m	Last Casing OD	in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	m	Daily Cost	AUD 688,000
Rig	Ocean Patriot (semi)	Days From Spud	12.13	Shoe MDBRT	m	Cum Cost	AUD 12,951,000
Wtr Depth (MSL)	74 m	Days On Well	15.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600	On tow to Western Port.		
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Continue tow to Western Port. Rendezvous with Pilot and negotiate channel into Western Port anchorage.		

Summary of Period 0000 to 2400 Hrs

Recovered rig anchors. Began rig tow to Western Port.

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	10		
Days Since LTI	0	1,015		
STOP Card	42	0	Safe 35 Unsafe 7	DODI 31 Third Party 4 ADA 1 Catering 6
JSA	38	0		Drill 4 Trip 0 Pump Room 1 Crane Crew 17 Mechanic 9 Electrician 0 Welder 6 Subsea 1
Permit To Work	21	0	Hot 7 Cold 12	
Safety Meeting	0	4		
Abandon Drill	0	5		
Fire Drill	0	5		
JHA/HSE Audit	0	5	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 17 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P32	P	M4	00:00	17:00	17.00	2,100.0 m	Anchor #2 Anchor off Bot 00:05, Anchor Racked 01:32, PCC to Rig 01:42. Anchor #3 PCC to Emerald 01:52, Anchor off Bot 02:20, Anchor Racked 04:50, PCC to Rig 04:55. Anchor #7 PCC to Emerald 05:10, Anchor off Bot 05:43, Anchor racked 07:31, PCC back on rig 07:38 07:40 Lewek Swift connected to tow line 08:10 Swift at 300m standing by Anchor #1 PCC to Emerald 08:16, Anchor off Bot 09:10, Anchor racked 10:44, PCC back on rig 10:53 Anchor #5 PCC to Emerald 11:09, Anchor off Bot 11:31, Anchor racked 12:56, PCC back on rig 13:06 Anchor #8 PCC to Emerald 13:20, Anchor off Bot 13:43, Anchor racked 14:58, PCC back on rig 15:05 Anchor #4 PCC to Emerald 15:17, Anchor off Bot 15:53, Anchor racked 16:45, PCC back on rig 16:55
P32	P	M1	17:00	24:00	7.00	2,100.0 m	17:00 Rig on tow to Western Port 17:10 Rig 1mile from Spikey Beach-1 location 18:00 Lat 40° 25.5'S - Long 145° 50.5'E - Speed 4.5knts - Dist Gone 3nm - DTG 132nm - ETA 22:00 18th 21:00 Lat 40° 11.5'S - Long 145° 44.1'E - Speed 5.2knts - Dist Gone 22nm - DTG 113nm - ETA 21:00 18th 24:00 Lat 39° 50.0'S - Long 145° 38.0'E - Speed 5.7knts - Dist Gone 38nm - DTG 97nm - ETA 20:00 18th

Operations For Period 0000 Hrs to 0600 Hrs On 18 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P32	P	M1	00:00	06:00	6.00	2,100.0 m	03:00 Lat 39° 42.0'S - Long 145° 32.0'E - Speed 5.0knts - Dist Gone 54nm - DTG 81nm - ETA 19:10 18th 06:00 Lat 39° 27.1'S - Long 145° 25.05'E - Speed 4.6knts - Dist Gone 69nm - DTG 66nm - ETA 19:00 18th

Phase Data to 2400hrs, 17 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	78.50	10 Sep 2009	14 Sep 2009	276.00	11.5	2,100.0 m
Suspend and Abandon(P21)	68.50	14 Sep 2009	16 Sep 2009	344.50	14.354	2,100.0 m
Demob(P32)	27.00	16 Sep 2009	17 Sep 2009	371.50	15.479	2,100.0 m

Survey

MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N-S (m)	E-W (m)	DLS (deg/30m)	Tool Type
1,858.33	0.3	65.2	1,858.29	1.2	1.2	7.6	0.1	Telescope 825NF
1,913.35	0.5	64.2	1,913.31	1.0	1.0	8.1	0.1	Telescope 825NF
1,941.91	0.5	69.2	1,941.87	1.1	1.1	8.3	0.0	Telescope 825NF
2,028.47	0.6	92.2	2,028.43	1.2	1.2	9.1	0.1	Telescope 825NF



Survey

MD (m)	Incl (°)	Azim (°)	TVD (m)	Vsect (m)	N/-S (m)	E/-W (m)	DLS (deg/30m)	Tool Type
2,076.18	0.7	87.1	2,076.13	1.2	1.2	9.6	0.1	Telescope 825NF

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	0.0	0.0	3.00
Bentonite	MT	0.0	0.0	0.0	1.00
Cement - G Neat	MT	0.0	0.0	0.0	2.00
Fuel	M3	0.0	7.3	0.0	482.00
Potable Water	m3	31.0	28.0	0.0	381.00
Drill Water	m3	0.0	8.0	0.0	192.00

Pumps

Pump Data - Last 24 Hrs

Slow Pump Data

No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00		97	0	0	0					
2	National	6.00		97	0	0	0					
3	National	6.00		97	0	0	0					

Personnel On Board

Company	Pax
Diamond Offshore	55
Catering	7
ADA Services	3
Dowell Schlumberger	2
Subsea 7	3
Go Offshore	1
Other Contractor	3
Total	74

Marine

Weather on 17 Sep 2009

Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency
6.0 NM	25 kn	225.0 °	41,012.0 mbar	12 °C	2.0 m	225.0 °	4 s
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments	
342.0 °	0.00 klb	3,131.00 klb	3.0 m	225.0 °	12 s	Overcast	
Comments							

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Swift	13 Sep 2009 06:30		On Tow Bridle	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	22.5	0.00	0.0	521
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	453
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	215
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	0
Lewek Emerald	10 Sep 2009 03:20		Rig support during tow	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	0
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Brine (bbl)	bbl	0.0	0.0	0.00	-30.0	0
				Fuel (M3)	M3	0.0	15.0	0.00	0.0	700
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	205
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	86

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	09:50 / 10:05	0/ 7	

18 Sep 2009
From: Kevin Monkhouse
To: Iain Robertson
DRILLING MORNING REPORT # 17**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	m	Cur. Hole Size	in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	m	Last Casing OD	in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	m	Daily Cost	AUD 573,000
Rig	Ocean Patriot (semi)	Days From Spud	13.13	Shoe MDBRT	m	Cum Cost	AUD 13,524,000
Wtr Depth (MSL)	74 m	Days On Well	16.48	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600			
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op	Complete rig move to Western Port anchorage. Deploy rig anchors with Emerald. Final back load to Swift. Rig off contract to Beach with final anchor on bottom. Decommission positioning equipment from Emerald and Swift and release vessels from rig to Geelong.		

Summary of Period 0000 to 2400 Hrs

Rig transited under tow to Western Channel Entrance. Pilot boarded Swift and continued tow under pilotage into Western Channel

HSE Summary

Events	Num. Events	Days Since	Description	Remarks
Incident	0	11		
Days Since LTI	0	1,016		
STOP Card	62	0	Safe 39 Unsafe 23	DODI 57 Third Party 0 ADA 0 Catering 5
JSA	33	0		Drill 7 Trip 1 Pump Room 3 Crane Crew 13 Mechanic 3 Electrician 0 Welder 6 Subsea 0
Permit To Work	21	0	Hot 6 Cold 12	
Safety Meeting	0	5		
Abandon Drill	0	6		
Fire Drill	0	6		
JHA/HSE Audit	3	0	Supervisor Audit	

Operations For Period 0000 Hrs to 2400 Hrs On 18 Sep 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P32	P	M1	00:00	22:00	22.00	m	03:00 Lat 39° 42.0'S - Long 145° 32.0'E - Speed 5.0knts - Dist Gone 54nm - DTG 81nm - ETA 19:10 18th 06:00 Lat 39° 27.1'S - Long 145° 25.05'E - Speed 4.6knts - Dist Gone 69nm - DTG 66nm - ETA 19:00 18th 09:00 Lat 39° 15.06'S - Long 145° 20.02'E - Speed 3.9knts - Dist Gone 80.8nm - DTG 54.2nm - ETA 19:00 18th 12:00 Lat 39° 03.3'S - Long 145° 11.4'E - Speed 4.3knts - Dist Gone 92.8nm - DTG 42.2nm - ETA 19:00 18th 15:00 Lat 38° 55.0'S - Long 145° 11.0'E - Speed 3.1knts - Dist Gone 104nm - DTG 31nm - ETA 22:00 18th 18:00 Lat 38° 44.0'S - Long 145° 07.0'E - Speed 3.5knts - Dist Gone 116nm - DTG 19nm - ETA 22:00 18th 21:00 Lat 38° 36.0'S - Long 145° 02.5'E - Speed 2.8knts - Dist Gone 122.3nm - DTG 10.5nm - ETA 22:00 18th 21:40 Pilot on board tow vessel Swift 22:00 End of tow to Western Channel Entrance
P32	P	M1	22:00	24:00	2.00	m	Rig under pilotage tow to Western Port Anchorage 24:00 Lat 28° 28.06'S - Long 145° 08.55'E - Speed 4.3knts - Dist Gone 125nm - DTG 6.3nm - ETA 22:00 18th

Operations For Period 0000 Hrs to 0600 Hrs On 19 Sep 2009

PHSE	CLS (RC)	OP	From	To	Hrs	Depth	Activity Description
P32	P	M1	00:00	02:00	2.00	m	Rig under pilotage tow to Western Port Anchorage
P32	P	M4	02:00	06:00	4.00	m	01:20 Slow down to secure Emerald 01:58 #5 PCC passed to Emerald 03:00 #5 Anchor on Bottom 04:10 #5 PCC Passed to rig 04:45 #4 PCC passed to Emerald 05:05 #4 Anchor on Bottom 05:25 #4 PCC Passed to rig 05:45 #1 PCC passed to Emerald 06:01 #1 Anchor on Bottom 06:30 #1 PCC Passed to rig

Phase Data to 2400hrs, 18 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	78.50	10 Sep 2009	14 Sep 2009	276.00	11.5	2,100.0 m
Suspend and Abandon(P21)	68.50	14 Sep 2009	16 Sep 2009	344.50	14.354	2,100.0 m
Demob(P32)	51.00	16 Sep 2009	18 Sep 2009	395.50	16.479	2,100.0 m

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Barite	MT	0.0	3.0	0.0	0.00
Bentonite	MT	0.0	1.0	0.0	0.00
Cement - G Neat	MT	0.0	2.0	0.0	0.00
Fuel	M3	0.0	7.6	-0.3	474.10
Potable Water	m3	33.0	22.0	-1.0	391.00
Drill Water	m3	0.0	42.0	0.0	150.00

Pumps

Pump Data - Last 24 Hrs									Slow Pump Data			
No.	Type	Liner (in)	MW (ppg)	Eff (%)	SPM	SPP (psi)	Flow (gpm)	Depth (m)	Check	SPM	Pressure ()	Flow ()
1	National	6.00		97	0	0	0					
2	National	6.00		97	0	0	0					
3	National	6.00		97	0	0	0					

Personnel On Board

Company	Pax
Diamond Offshore	52
Catering	7
ADA Services	2
Dowell Schlumberger	2
Go Offshore	1
Other Contractor	3
Total	67

Marine

Weather on 18 Sep 2009

Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Frequency
10.0 NM	15 kn	35.0 °	1,015.0 mbar	14 °C	0.5 m	0.4 °	3 s
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Frequency	Weather Comments	
°	0.00 klb	3,123.00 klb	0.5 m	250.0 °	11 s	Partly Cloudy	
Comments							

Support Vessels

Boats	Arrived Time	Departed Time	Status	Bulks						
Lewek Swift	13 Sep 2009 06:30		On Tow Bridle	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	19.7	0.00	-0.2	501.1
				Potable Water (m3)	m3	0.0	3.0	0.00	0.0	450
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	215
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	0
Lewek Emerald	10 Sep 2009 03:20		Rig support during tow	Item	Unit	In	Used	Transfer to Rig	Adjust	Quantity
				Cement - G Neat (MT)	MT	0.0	0.0	0.00	0.0	0
				Barite (MT)	MT	0.0	0.0	0.00	0.0	0
				Bentonite Bulk (MT)	MT	0.0	0.0	0.00	0.0	0
				Brine (bbl)	bbl	0.0	0.0	0.00	0.0	0
				Fuel (M3)	M3	0.0	12.0	0.00	0.0	688
				Potable Water (m3)	m3	0.0	5.0	0.00	0.0	200
				Drill Water (m3)	m3	0.0	0.0	0.00	0.0	86



Helicopter Movement				
Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	08:45 / 08:55	0/ 7	



19 Sep 2009

From: Kevin Monkhouse
To: Iain Robertson

DRILLING MORNING REPORT # 18**Spikey Beach-1****Well Data**

Country	Australia	MDBRT	m	Cur. Hole Size	in	AFE Cost	AUD 24,270,065
Field	Spikey Beach	TVDBRT	m	Last Casing OD	in	AFE No.	09/036
Drill Co.	Diamond Offshore	Progress		Shoe TVDBRT	m	Daily Cost	AUD 477,000
Rig	Ocean Patriot (semi)	Days From Spud	13.73	Shoe MDBRT	m	Cum Cost	AUD 14,001,000
Wtr Depth (MSL)	74 m	Days On Well	17.08	FIT/LOT	sg / sg		
Datum	21.50 m RT MSL	Planned TD MD	2,062 m	Current Op @ 0600			
RT To Seabed	95.5 m	Planned TD TVDRT	2,062 m	Planned Op			

Summary of Period 0000 to 2400 Hrs**Operations For Period 0000 Hrs to 2400 Hrs On 19 Sep 2009**

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P32	P	M1	00:00	02:00	2.00	m	Rig under pilotage tow to Western Port Anchorage
P32	P	M4	02:00	14:30	12.50	m	01:20 Slow down to secure Emerald 01:58 #5 PCC passed to Emerald 03:00 #5 Anchor on Bottom 04:10 #5 PCC Passed to rig 04:45 #4 PCC passed to Emerald 05:05 #4 Anchor on Bottom 05:25 #4 PCC Passed to rig 05:45 #1 PCC passed to Emerald 06:01 #1 Anchor on Bottom 06:30 #1 PCC Passed to rig 06:50 #8 PCC passed to Emerald 07:15 #8 Anchor on Bottom 07:45 #8 PCC Passed to rig 07:52 #7 PCC passed to Emerald 08:23 #7 Anchor on Bottom 09:05 #7 PCC Passed to rig 09:25 #6 PCC passed to Emerald 10:00 #6 Anchor on Bottom 10:25 #6 PCC Passed to rig 11:15 #3 PCC passed to Emerald 11:57 #3 Anchor on Bottom Anchor #3 slipping. Reset on bottom at 12:25 12:50 #3 PCC Passed to rig 13:02 #2 PCC passed to Emerald 13:30 #2 Anchor on Bottom 14:30 #2 aNCHOR tENSIONED Rig off contract with Beach Petroleum at 14:30hrs EST

Phase Data to 2400hrs, 19 Sep 2009

Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
Mob(P1)	71.00	02 Sep 2009	05 Sep 2009	71.00	2.958	
Conductor Hole(P2)	16.00	05 Sep 2009	06 Sep 2009	87.00	3.625	155.0 m
Conductor Casing(P3)	15.50	06 Sep 2009	06 Sep 2009	102.50	4.271	155.0 m
Surface Hole(P4)	50.50	06 Sep 2009	08 Sep 2009	153.00	6.375	816.0 m
Surface Casing(P5)	20.00	08 Sep 2009	09 Sep 2009	173.00	7.208	816.0 m



Phase Data to 2400hrs, 19 Sep 2009						
Phase	Phase Hrs	Start On	Finish On	Cum Hrs	Cum Days	Max Depth
BOPs/Risers(P6)	24.50	09 Sep 2009	10 Sep 2009	197.50	8.229	816.0 m
Production Hole (1)(P11)	78.50	10 Sep 2009	14 Sep 2009	276.00	11.5	2,100.0 m
Suspend and Abandon(P21)	68.50	14 Sep 2009	16 Sep 2009	344.50	14.354	2,100.0 m
Demob(P32)	65.50	16 Sep 2009	19 Sep 2009	410.00	17.083	2,100.0 m

Appendix 3: Rig Positioning Report

DRILLING RIG POSITION NOTICE

Ocean Patriot Position at Spikey Beach-1

To: **Australian Drilling Associates**
Level 5 Rialto North Tower
525 Colin Street
Melbourne Vic 3000

From: **Neptune Geomatics**
Job No.: **9A409**
Signed:



Scott Hunter
Surveyor

Date: **6 September 2009**

Attn.: **ADA Drilling Supervisor**
Ocean Patriot Ballast Control
Ocean Patriot Barge Captain

opds@australiandrilling.com.au
patriot_bc@dodi.com
patriot_capt@dodi.com

Copy: **Anthony Kerr**
Jason French
Vanessa Knight

AKerr@neptunems.com
JFrench@neptunems.com
VKnight@neptunems.com

The final surface position of the Ocean Patriot Drill Stem at the Spikey Beach-1 location was computed from Veripos Standard Differential GPS data recorded between 2216 and 2316 on 5 September 2009. The GPS data were recorded immediately after spudding the well. The following results were computed:

The final Spikey Beach-1 Differential GPS Surface Position of the Ocean Patriot Drill Stem is:

Datum: Geocentric Datum of Australia 1994 (GDA94)

Latitude: 40° 28' 53.879" South

Longitude: 145° 52' 24.706" East

Projection: Map Grid of Australia (MGA) Zone 55 C.M. 147° East

Easting: 404 522.80m

Northing: 5 518 174.63m

The final Spikey Beach-1 Differential GPS surface position of the Ocean Patriot drill stem is 1.84m on a bearing of 74.3° True from the intended location.

The final Rig Heading is 246.5° True.

Note: The following 7-parameter datum transformation was used to convert ITRF2000 coordinates to GDA94 coordinates (Epoch 2009.5):

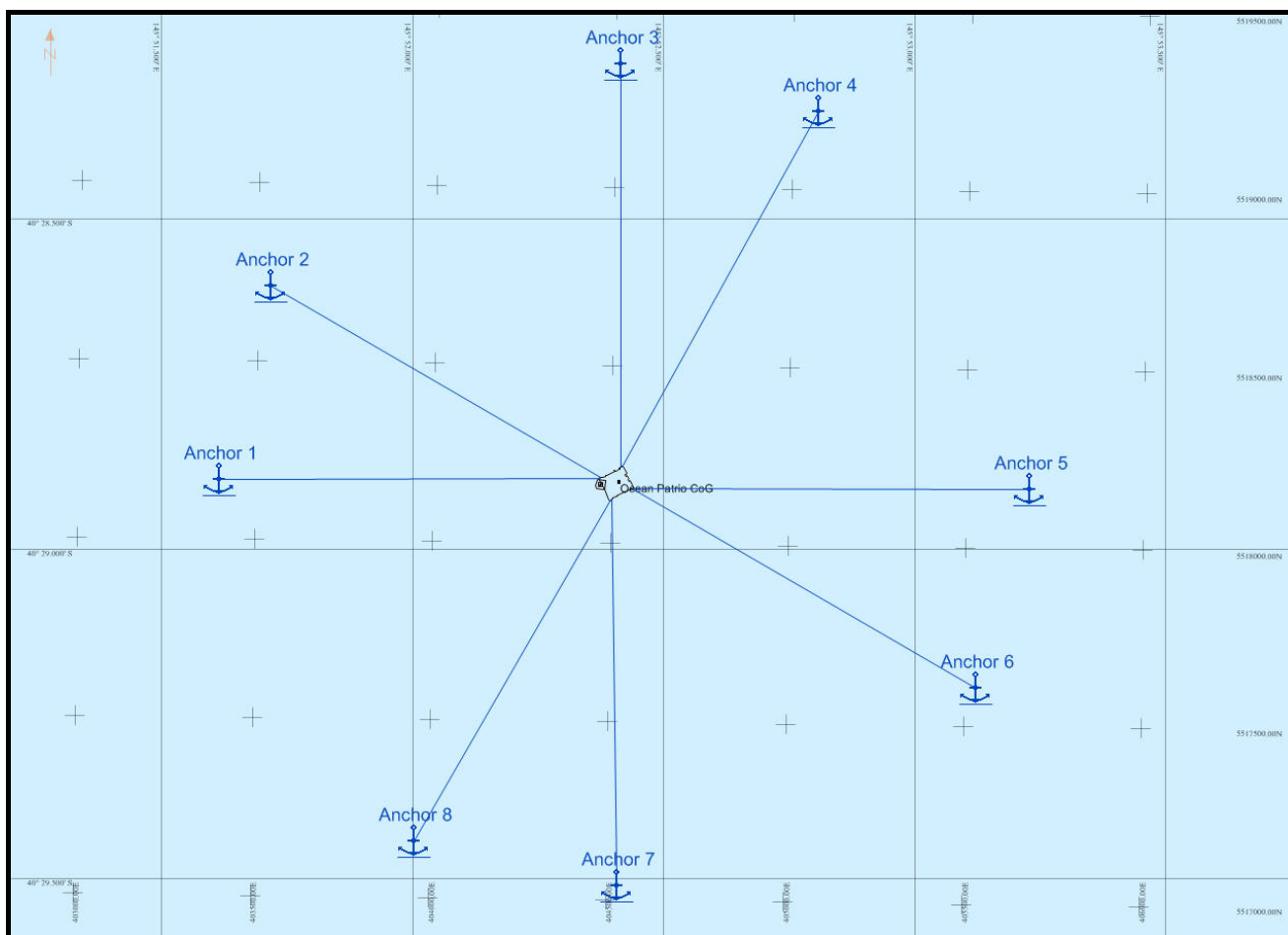
Dx	=	+0.028 40m
Dy	=	-0.052 80m
Dz	=	-0.120 90m
Rx	=	+0.018 588"
Ry	=	+0.015 736"
Rz	=	+0.019 196"
Scale	=	+0.002 824 p.p.m.

The final anchor positions corrected for catenary are as follows:

Anchor array of the Ocean Patriot at Spikey Beach-1							
Datum :	Geocentric Datum of Australia 1994 (GDA94)						
Projection :	Map Grid of Australia (MGA) Zone 55 C.M. 147° East						
Anchor	Easting (m)	Northing (m)	Horizontal Distance (m)	Bearing (True)	Chain Out (m)	Depth (m)	Tension (T)
1	403 395.76	5 518 166.71	1075.2	269.6	1085	76	119
2	403 536.34	5 518 710.11	1072.2	299.8	1082	76	118
3	404 512.52	5 519 347.88	1133.0	359.8	1142	76	140
4	405 071.64	5 519 220.89	1139.6	28.9	1148	76	160
5	405 679.10	5 518 167.48	1118.0	90.1	1127	76	140
6	405 534.23	5 517 607.04	1118.6	120.0	1128	76	127
7	404 530.08	5 517 039.76	1088.7	179.2	1098	76	130
8	403 957.79	5 517 158.56	1108.9	209.9	1119	76	113

Notes:

- Catenary calculations performed in MK Catenary with chain out and tension values correct at time of issue.



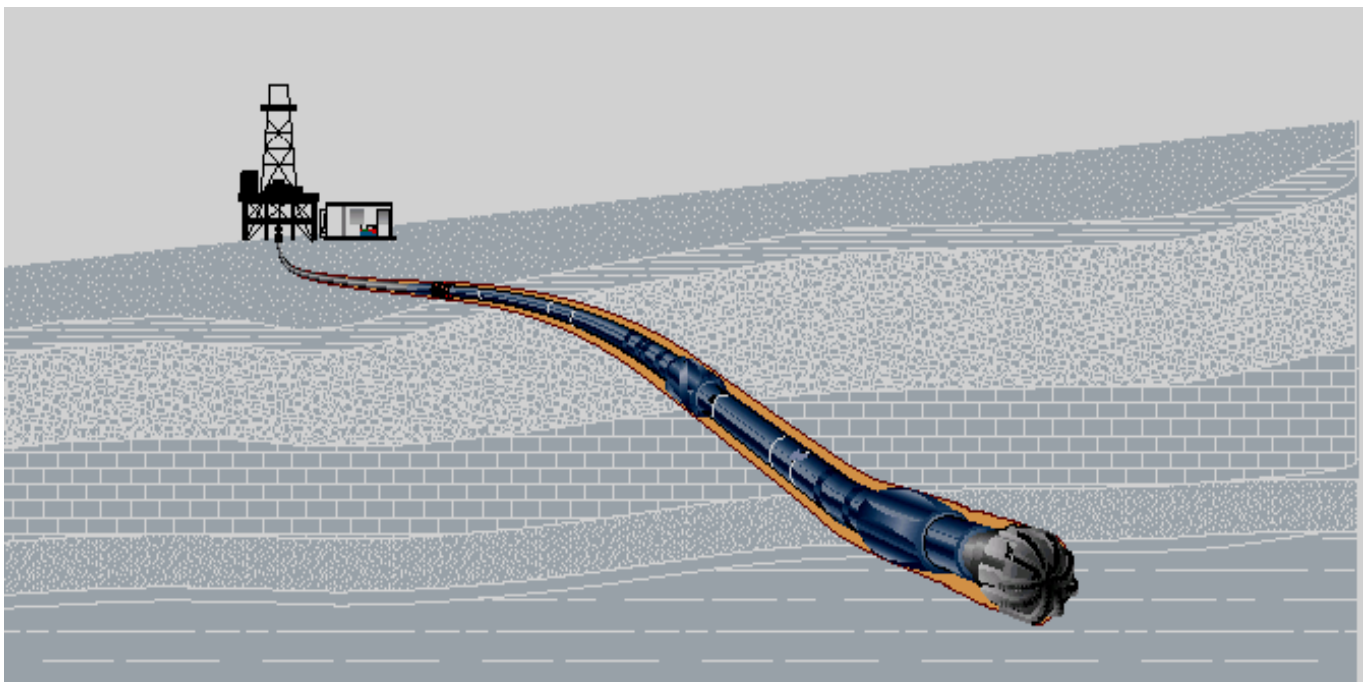
Ocean Patriot anchor array at Spikey Beach-1

Appendix 4: Directional Drilling MWD and LWD End of Well Report

Spikey Beach-1

END OF WELL REPORT

Schlumberger Private



Any further queries be directed to:

“Project Manager”
(Ali Al-Muhammad)

“FSM”
(Ali Al-Muhammad)

“Drilling Engineer”
(Ryan Mulligan)

Schlumberger Drilling & Measurements
314 Raglan St
Sale, VIC, 3850

Tel: +61 3 5149 5600
Fax: +61 3 5143 2450

Schlumberger Private

Prepared by: Marganda Sihite	Checked by: Ryan Mulligan	Approved by: Ali Al-Muhammad	Client O.K:
Date: 21-Sep-09	Date: 21-Sep-09	Date: 21-Sep-09	

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Section 1

1.1 Well Specification

Client : Beach Petroleum Ltd
Well name : Spikey Beach-1
Well type : Vertical
State : Tasmania
Location : Beach Offshore
Drilling Contractor : Diamond Offshore
Rig Name : Ocean Patriot
Rig Type : Floating
Water Depth : 74 m
Drill Floor Height : 21.5 m relative to MSL
Spud Date : 5th Sep 2009
Date TD reached : 13th Sep 2009
Final Depth MD : 2100 m
Final Depth TVD : 2100 m

Well coordinates

UTM Zone 55s on Australian Datum 1984

X= E 404 521 m

Y= N 5 518 174m

Geographical co-ordinates

Longitude: E 40° 28' 53.9"

Latitude: S 145° 52' 24.63"

Geomagnetic Data

Date : 10th September 2009
Magnetic Field Strength : 61230.23 nT
Magnetic Dip angle : -70.91 °
Magnetic Declination : + 12.9673°
Grid Convergence : + 0.7314°
BGGM Model : BGGM 2009

1.2 Introduction and Objectives

Spikey Beach – 1 will be drilled as a vertical, exploration well offshore for Beach Petroleum LTD. Well is scheduled for 26 days, which encompasses rig mobilization, drilling and upon completion of Wireline formation evaluation will be plugged and abandoned. A 36" and 17 ½" hole sections will be drilled and cased, prior to running BOPs. Spikey Beach-1 will be TD'd in 12 ¼" section.

Section objectives are:

In the 12 ¼" section:

Drill to TD at 2100m.

Vertical section until TD.

Use LWD.

1.3 Schlumberger Services

Directional Drilling:

No Directional Drilling tools for 17.50 in Section
PowerPak Mud Motor (12.25 in section)

Measurements While Drilling (MWD):

Borehole Inclination and Azimuth
Continuous D&I and Magnetic/Gravity Tool Face
Drillstring Washout Detection
Real-Time LWD Tool Data Transmission

Surface Measurements:

Depth
Rate of Penetration
Total Hook load
Surface Weight on Bit
Standpipe Pressure

Logging While Drilling (LWD):

Attenuation Resistivity
Phase Shift Resistivity
Gamma Ray
Density
Neutron Porosity
Annulus Pressure and Temperature
Compressional Delta-T
Shear Delta-T

1.4 Schlumberger Personnel

File Personnel:

<i>Marganda Sihite</i>	Cell Manager
<i>Wissam Chehabi</i>	MWD/LWD Engineer
<i>Dallas Perkins</i>	MWD/LWD Engineer
<i>Daniel Priestley</i>	Directional Driller

Filed Support Group

<i>Ali Al-Mohammed</i>	Operations Manager
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Drilling Engineering Support

<i>Iain McCourt</i>	Drilling Engineering Manager
<i>Ryan Mulligan</i>	Drilling Engineer

Section 2:

Operational Details

2.1 444 mm (17 ½") Hole Section

Rig BHA # 2 / Rig Bit Run # 2 / ERS Run # 1

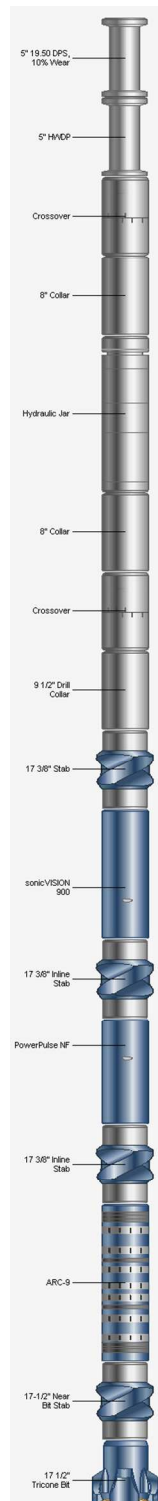
BHA consisting ARC9+TeleScope9 w/ILS+sonicVISION9 w/ILS was picked up to drill and evaluate the formation of 17.50" section of Spikey Beach-1. TeleScope was programmed with telemetry rate 12Hz/3bps configuration to provide real time GR, RES, Delta-T and D&I. All the tools were SHT'd on surface prior RIH with good outcome. Drilled the section from casing shoe 151.6 mMD to TD.

During the run, good real time data was acquired and Tool H kept out of FAC. DMAG was run to correct the survey. Minimum shocks and vibrations were encountered through out the run.

Reached TD at 816 mMD, circulating B/U and proceed to Down Link to sonicVISION to change the configuration/record rate to 1 s.

Laid out the BHA and download the data from tool and processed the data as required. Acquired very good data from both ARC and sonicVISION tool.

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Equipment Run Summary Report

Schlumberger Private

Job Number:	09ASQ0029	Company:	BEACH PETROLEUM LTD	Rig Name:	Ocean Patriot
Company Rep:	Tim, Kevin	Location:	MEA-APG-ASQ	Well Name:	Spikey Beach 1
Run Number:	1				

Run Information

Date In		Date Out		Drilling Distance:	666.60 m	Drilling Hours:	17.00 hrs
7-Sep-2009	4:30PM	8-Sep-2009	8:30PM	Rotary Drilling Distance:	666.60 m	Rotary Drilling Hrs:	17.00 hrs
Depth (MD):	149.4 m	to	816.0 m	Sliding Distance:	0.00 m	Sliding Hours:	0.00 hrs
Depth (TVD):	149.4 m	to	816.0 m	Reaming Distance:	0.00 m	Reaming Hours:	0.00 hrs
Inclination:	0.00 deg	to	0.17 deg			Hrs Below Rotary:	28.00 hrs
Azimuth:	0.00 deg	to	265.12 deg			Total Pumping Hrs:	19.00 hrs
Hole Size:	17.50 in					Min DLS:	0.00 deg/30 m
Last Casing Size:	30.000 in			North Ref Used:	Grid North	Max DLS:	0.00 deg/30 m
Last Casing Depth:	151.0 m	(MD)		Magnetic Dec:	12.970 deg	Max DLS Depth:	0.0 m
Tool Face Arc:	.0 cm			Grid Correction:	0.731 deg	Surface Screen:	No
Total Face Angle:	0.00 deg			Total Correction:	12.237 deg	DFS Used:	No
				Est. Mag. Int:	0.23 deg	Inline Filter:	No

Rig Information

Rig Type:	Semi-Submersible	Pump Type:	Triplex
Water Depth:	74.00 m	Pulse Damp Press:	psi
Air Gap:	21.50 m	Number of Pumps:	3
RKB Height:	m	Pump Line ID:	6.00 in
Ground Elevation:	-95.50 m	Pump Output:	4.30 galUS/stroke
		Pump Stroke Len:	12.00 in

Run Objective

Drilling 17.5in section (vertical) and evaluate the formation to approx 810mMD with ARC, MWD and Sonic tools using seawater mud. Surveys every 100m (3 stands)

D&M Crew List:

Cell Manager: Marganda Hasiholan Sihite
Crew: Wissam Chehabi, MWD
Dallas Perkins, LWD
Marganda Hasiholan Sihite, Cell Manager

DH Motor Information

Manufacturer:	Bit to Bend Dist:	m
Motor Type:	Bearing Play In:	in
Motor Size:	Bearing Play Out:	in
Serial No.:	Bent Sub Angle:	deg
Lobe Config:	Bent HSG Angle:	deg
Stage Length:	m	
Rubber:		
Sleeve Position:		
Sleeve Size:	in	
Bearing Type:		

RSS Information

RSS Manufacturer:	
RSS Type:	
RSS SN:	
RSS Size:	
Pulse Ht Threshold:	
Min Pulse Width:	
Max Pulse Width:	
Conn Phase Angle:	deg
Rise Time Const:	
Fall Time Const:	
Digit Time:	

MWD Configuration

Mod Type:	QPSK	Int Tool Face Offset:	0.00 deg	Bit Rate:	3 bps	Slimpulse Pulser Config:	
Mod Gap:	in	Turbine Config:	600-1200 galUS/min	Frequency:	12 Hz	Pred Sig Strength @ TD:	psi
SPT Type:	HA						

Drilling Parameters

	Min	Max	Avg	Total DH Shocks (k):	0 k
BH Temperature:	23.00 degC	23.00 degC	23.00 degC	Max Shock Level:	0
Surface RPM:	35.00 rpm	35.00 rpm	35.00 rpm	Max Shock Duration:	0 sec

Job Number:

09ASQ0029

Company Rep:

Tim, Kevin

Run Number:

1

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

Equipment on the Run

Equipment	Pump Hours		Software Version	Tool Size
	Start	Cumulative		
ARC9D-BB-4126	0.00 hrs	19.00 hrs	9.4	9.00 in
H524743-59974	hrs	hrs		9.00 in
H524743-61960	hrs	hrs		9.00 in
H524743-66244	hrs	hrs		9.00 in
H524743-66245	hrs	hrs		9.00 in
MDCIX-KA-ZA90	0.00 hrs	19.00 hrs	9.2	9.00 in
SD9C-AA-41250	0.00 hrs	19.00 hrs	6.8	9.00 in

Services on the Run

Equipment	Service	Tool Name	Real Time			Recorded Mode			CAF
			Hours	Failed	Depth	Hours	Failed	Depth	
LWD	Gamma Ray	arcVision	19.00 hrs		666.6 m	28.00 hrs		666.6 m	
MWD	Cont D&I	TeleScope	19.00 hrs		666.6 m	hrs			
MWD	D&I	TeleScope	19.00 hrs		666.6 m	28.00 hrs		666.6 m	
LWD	Shear DT	SonicVision	hrs			28.00 hrs		666.6 m	
LWD	Compressional DT	SonicVision	19.00 hrs		666.6 m	28.00 hrs		666.6 m	

Job Number: 09ASQ0029
Company Rep: Tim, Kevin
Run Number: 1

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ
BHA Type: Rotary

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

								Fishing Neck		Stab	Bottom Connection		Top Connection			
Item	Description	Vendor	Tool Name	Serial Number	Length		OD	ID	OD	Len, m	OD	Size	Type	Size	Type	Cumul Len
1	BIT	Hughes Christianson	Insert	6079221	0.42	m	17.50							7 5/8"	REG PIN	0.42 m
2	NEAR BIT STAB	Diamond	NB STAB	207A85	3.26	m	17.38					7 5/8"	REG BOX	7 5/8"	REG BOX	3.68 m
3	LWD	D&M	arcVISION	4126	5.92	m	9.00					7 5/8"	REG PIN	7 5/8"	H90 BOX	9.60 m
4	MWD	D&M	TeleScope	ZA90	9.19	m	9.00					7 5/8"	H90 PIN	7 5/8"	H90 BOX	18.79 m
5	LWD	D&M	SonicVISION	41250	8.28	m	9.00					7 5/8"	H90 PIN	7 5/8"	REG BOX	27.07 m
6	INLINE STAB	Diamond	ILS	207A211	2.17	m	17.38					7 5/8"	REG PIN	7 5/8"	REG BOX	29.24 m
7	DRILL COLLAR	Diamond	DC	n/a	28.43	m	9.50					7 5/8"	REG PIN	7 5/8"	REG BOX	57.67 m
8	CROSSOVER	Diamond	X-OVER	506A360	1.09	m	9.50					7 5/8"	REG PIN	6 5/8"	REG BOX	58.76 m
9	DRILL COLLAR	Diamond	DC	n/a	72.86	m	8.00					6 5/8"	REG PIN	6 5/8"	REG BOX	131.62 m
10	JAR	Diamond	Jar	101663H	9.78	m	8.25					6 5/8"	REG PIN	6 5/8"	REG BOX	141.40 m

Predicted BHA Tendency:

Hookload Out:	Wt Below Jars:
Pickup Out:	Wt Above Jars:
Slack Weight:	Total Air Wt:

	Mid Pt	Blade			Gauge		
Stab Description	to Bit	Type	Len	Width	Len	In	Out
NB STAB		int					

Bit to Read Out Port			Bit to Measurement Port		
LWD-arcVISION	6.90	m	arcVISION-Gamma Ray	5.80	m
MWD-TeleScope	11.60	m	TeleScope-D&I	13.98	m
LWD-SonicVISION	23.10	m	SonicVISION-Compressional	23.45	m
			SonicVISION-Shear DT	23.45	m

Job Number:

09ASQ0029

Company Rep:

Tim, Kevin

Run Number:

1

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

Date/Time		Depth		Description
7-Sep-2009	3:05PM	149.4	m	TOC
7-Sep-2009	4:30PM	0.0	m	Bit below R/T
7-Sep-2009	4:50PM	0.0	m	torque arc to mwd
7-Sep-2009	5:15PM	0.0	m	torqued arc to NB stab
7-Sep-2009	5:45PM	0.0	m	torque sonic to mwd
7-Sep-2009	6:05PM	0.0	m	Prepare for SHT
7-Sep-2009	6:27PM	0.0	m	GOOD SHT
7-Sep-2009	8:45PM	151.6	m	Set bit depth and start washing down to bottom
7-Sep-2009	9:00PM	170.0	m	Drilling ahead with good signal. SPT2 put as primary demodulation input.
7-Sep-2009	9:42PM	185.0	m	ARC shock level 1
8-Sep-2009	12:29AM	230.0	m	Attemp to take a survey (first survey). Acquired good Tool G and Tool H is slightly out. Keep drilling ahead as this is vertical hole.
8-Sep-2009	2:53AM	320.0	m	Take another survey and the Tool H still out of FAC. The survey will be DMAG'ed later at the end of the run. Drilling ahead.
8-Sep-2009	6:37AM	476.0	m	ARC shock level 1 detected
8-Sep-2009	8:00AM	612.0	m	Drilliong ahead with good signal.
8-Sep-2009	2:20PM	816.0	m	TD 17.5in section
8-Sep-2009	2:40PM	816.0	m	Downlinked to change sonic record rate to 1sec for ream up
8-Sep-2009	7:30PM	0.0	m	Begin Breaking out BHA.
8-Sep-2009	8:08PM	0.0	m	Lay down Sonic
8-Sep-2009	8:20PM	0.0	m	Lay out telescope
8-Sep-2009	8:30PM	0.0	m	bit above rotary
8-Sep-2009	8:50PM	0.0	m	lay down ARC



Job Number:

09ASQ0029

Company Rep:

Tim, Kevin

Run No:

1

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

			Depth in m		IADC Activity	Description
From	To	Elapsed	From	To		
<u>Sep-2009</u>						
12:00	16:00	4.00	0.0	0.0	Other	Pressure test and rig service
16:00	18:30	2.50	0.0	0.0	PU / LD BHA / Tripping	Make up BHA
18:30	19:00	0.50	0.0	0.0	Other	SHT SLB logging tools
19:00	20:00	1.00	0.0	149.4	PU / LD BHA / Tripping	TIH to TOC
20:00	20:45	0.75	149.4	151.0	Drilling	Drilling out casing track
20:45	00:00	3.25	151.0	215.0	Drilling	Continue drilling ahead
<u>Sep-2009</u>						
00:00	13:00	13.00	215.0	816.0	Drilling	Drilling F215 to 816m MD
13:00	15:00	2.00	816.0	816.0	Circulate / Condition mud	Circluate bottoms up + downlink to Sonic
15:00	19:30	4.50	816.0	0.0	PU / LD BHA / Tripping	POOH F816 to 0
19:30	21:00	1.50	0.0	0.0	PU / LD BHA / Tripping	Lay down BHA
21:00	21:30	0.50	0.0	0.0	Other	Clean rig floor
21:30	00:00	2.50	0.0	0.0	Run casing / cement	Run casing / cement



Drilling Parameters Report

9-Sep-2009

3:55:27PM

Job Number: 09ASQ0029
Company Rep: Tim, Kevin
Run Number: 1

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

	08-Sep-2009 10:00 AM
Field Engineer	Dallas Perkins
Depth	650.00 m
Avg ROP	29.32 m/hr
On Bottom ROP	41.74 m/hr
Flow Rate	1,200.00 galUS/min
Turbine RPM	4,141 rpm
Surface RPM	35 rpm
WOB Rotating	
WOB Sliding	3.00 klbm
DH WOB	
Surface Torque	3.00 kft.lbf
DH Torque	
Hookload	210 klbm
PickUp Weight	
Slack Weight	
Friction	
SPP On Bottom	2,996.00 psi
SPP Off Bottom	
Diff Pressure	
BH Temperature	23.00 degC
Total Shocks (k)	
Max Shock Level	
Max Shock Duration	
Torsional Vib	
Lateral Vib	
Axial Vib	
CRPM	37 rpm
Stick/Slip	16
Formation	Limestone
Signal Strength	26.40 psi
Percent Signal Conf	89 %

2.2 311 mm (12 ¼") Hole Section

Rig BHA # 3 / Rig Bit Run # 3 / ERS Run # 2

Objectives

- Perform a successful LOT.
- Perform drill the 12 ¼" section to 2100m.
- Control drill at 20m/hr from 1453m to TD.
- Drill the 12 ¼" section in 1 bit run.
- Maintain vertical well.

Results

- Preformed a successful FIT to 12.35ppg
- Drilled the 12 ¼" section in 1 bit run.
- Maintained vertical well.

Highlights

- Good ROP from top of the 12 ¼" section.
- No hole problems.

Lowlights

- Sever stick'n'slip was seen from 1912m. The stick'n'slip was mitigated by increasing surface RPM. The stick'n'slip reduced when formation changed.

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Drilling Parameters Report

Slide Sheet

BHA: 12.25" PDM ARC PP SONIC SADN Rev1 (RM)

Client: Beach Petroleum		Well: Spikey Beach-1		Directional Driller: Daniel Priestley	
Field: Beach - Offshore Zone 55		Borehole: Spikey Beach-1		Directional Driller:	
Structure: Spikey Beach		UWI/API#:		Job #: 09ASQ0029	
Depth In: 822.00	Depth Out: 2100.00	Tot Distance: 1278.00		Total Time: 40.5	Total ROP: 31.5
Inclination In: 0.43	Inclination Out: 0.73	SLIDE: 0.00	% SLIDE 0.0	Time: 0.0	
Azimuth In: 77.12	Azimuth Out: 87.08	ROTATE: 1278.00	% ROTAT 100.0	40.5	ROTATE ROP: 31.5
Comments:					

Statistics:

Min	Max	Sum	Min	Max	Sum	Avg	None	Avg	Max	Max	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	None
	13/9/09 8:59	40.550	822.00	2100.00	1278.00	96.4		0		2076.18	0.47	84.08	0.01	4.03	0.06	140	15.5	6.4	996	2593	2783	185

Start Time (d/m/yy h:mm)	End Time (d/m/yy h:mm)	Duration (hr)	Md From (m)	Md To (m)	Course (m)	Calc ROP (m/hr)	Orienting Method	TF Angle (°)	TF Mode (G/M)	Svy Md (m)	Incl (°)	Azmth (°)	BR (° / 30 m)	TR (° / 30 m)	DLS (° / 30 m)	RPM (c/min)	WOB (1000 lbf)	Torque (1000 ft.lbf)	Flow (gal/min)	SPP Off Bot (psi)	SPP On Bot (psi)	Delta P (psi)	Comment
11/9/09 9:32	11/9/09 9:45	0.217	822.00	847.00	25.00	115.4	ROTATE	0.0	M							40	17.0	6.5	900	1900	2079	179	
11/9/09 9:54	11/9/09 10:01	0.117	847.00	865.00	18.00	154.3	ROTATE	0.0	M							40	20.0	5.3	1000	2230	2265	35	
11/9/09 10:01	11/9/09 10:05	0.067	865.00	875.00	10.00	150.0	ROTATE	0.0	M							140	20.0	4.6	1000	2230	2273	43	
11/9/09 10:15	11/9/09 10:25	0.167	875.00	904.00	29.00	174.0	ROTATE	0.0	M	879.04	0.43	77.12	0.10	69.20	0.24	140	15.0	6.7	1000	2391	2510	119	
11/9/09 10:35	11/9/09 10:44	0.150	904.00	931.00	27.00	180.0	ROTATE	0.0	M							140	18.0	6.9	1000	2500	2650	150	
11/9/09 10:47	11/9/09 11:03	0.267	931.00	959.00	28.00	105.0	ROTATE	0.0	M							140	12.0	6.4	900	2180	2320	140	
11/9/09 11:25	11/9/09 11:29	0.067	959.00	1017.00	58.00	870.0	ROTATE	0.0	M	990.83	0.34	90.11	-0.02	3.49	0.03	140	15.0	5.9	1000	2512	2675	163	
11/9/09 11:49	11/9/09 12:00	0.183	1017.00	1046.00	29.00	158.2	ROTATE	0.0	M							140	14.0	6.1	1000	2520	2657	137	
11/9/09 12:09	11/9/09 12:22	0.217	1046.00	1074.00	28.00	129.2	ROTATE	0.0	M							140	12.0	6.3	1000	2525	2667	142	
11/9/09 12:37	11/9/09 12:46	0.150	1074.00	1103.00	29.00	193.3	ROTATE	0.0	M	1078.27	0.31	90.35	-0.01	0.08	0.01	140	16.0	6.6	1000	2524	2675	151	
11/9/09 13:00	11/9/09 13:25	0.417	1103.00	1132.00	29.00	69.6	ROTATE	0.0	M							140	16.0	6.3	1000	2540	2668	128	
11/9/09 13:30	11/9/09 13:51	0.350	1132.00	1161.00	29.00	82.9	ROTATE	0.0	M							140	20.0	6.0	1000	2530	2665	135	
11/9/09 13:57	11/9/09 14:40	0.717	1161.00	1190.00	29.00	40.5	ROTATE	0.0	M	1164.94	0.40	84.09	0.03	-2.17	0.03	140	22.0	5.9	1000	2523	2680	157	
11/9/09 14:23	11/9/09 14:43	0.333	1190.00	1218.00	28.00	84.0	ROTATE	0.0	M							140	25.0	6.1	1000	2530	2700	170	
11/9/09 15:00	11/9/09 15:15	0.250	1218.00	1247.00	29.00	116.0	ROTATE	0.0	M	1221.27	0.44	97.02	0.02	6.89	0.05	140	30.0	5.9	1000	2525	2710	185	



11/9/09 15:24	11/9/09 15:51	0.450	1247.00	1276.00	29.00	64.4	ROTATE	0.0	M							130	35.0	5.8	1000	2530	2720	190
11/9/09 16:00	11/9/09 16:22	0.367	1276.00	1306.00	30.00	81.8	ROTATE	0.0	M							130	35.0	5.9	1000	2530	2735	205
11/9/09 16:30	11/9/09 16:41	0.183	1306.00	1335.00	29.00	158.2	ROTATE	0.0	M							120	35.0	5.9	1000	2530	2748	218
11/9/09 16:47	11/9/09 17:22	0.583	1335.00	1364.00	29.00	49.7	ROTATE	0.0	M	1338.66	0.51	93.25	0.02	-0.96	0.02	130	35.0	5.3	1000	2535	2758	223 Hard stringer
11/9/09 17:36	11/9/09 18:05	0.483	1364.00	1393.00	29.00	60.0	ROTATE	0.0	M	1367.75	0.54	94.83	0.03	1.63	0.03	130	35.0	5.8	1000	2540	2784	244 Hard stringer
11/9/09 18:14	11/9/09 19:13	0.983	1393.00	1422.00	29.00	29.5	ROTATE	0.0	M							130	35.0	5.7	1000	2540	2790	250
11/9/09 19:22	11/9/09 20:01	0.650	1422.00	1453.00	31.00	47.7	ROTATE	0.0	M							130	38.0	5.7	1000	2545	2800	255
11/9/09 20:16	11/9/09 22:04	1.800	1453.00	1482.00	29.00	16.1	ROTATE	0.0	M	1456.65	0.52	105.25	-0.01	3.52	0.03	140	5.0	6.8	1000	2550	3003	453 Control ROP to 20m/hr
11/9/09 22:11	11/9/09 23:57	1.767	1482.00	1511.00	29.00	16.4	ROTATE	0.0	M							140	5.0	3.7	1000	2400	2675	275
12/9/09 0:07	12/9/09 1:28	1.350	1511.00	1534.00	23.00	17.0	ROTATE	0.0	M	1530.18	0.55	90.58	0.01	-5.99	0.06	150	5.0	3.6	1000	2524	2675	151
12/9/09 1:38	12/9/09 3:00	1.367	1534.00	1564.00	30.00	22.0	ROTATE	0.0	M							150	5.0	4.1	1000	2610	2689	79
12/9/09 3:12	12/9/09 5:11	1.983	1564.00	1593.00	29.00	14.6	ROTATE	0.0	M							150	10.0	3.2	1000	2460	2760	300
12/9/09 5:16	12/9/09 6:42	1.433	1593.00	1623.00	30.00	20.9	ROTATE	0.0	M	1596.34	0.49	77.67	-0.03	-5.85	0.06	150	10.0	2.4	1000	2460	2760	300
12/9/09 6:52	12/9/09 8:23	1.517	1623.00	1652.00	29.00	19.1	ROTATE	0.0	M	1625.50	0.47	69.82	-0.02	-8.08	0.07	150	8.0	7.9	1000	2445	2740	295
12/9/09 8:31	12/9/09 10:04	1.550	1652.00	1681.00	29.00	18.7	ROTATE	0.0	M							150	10.0	8.0	1000	2680	2866	186
12/9/09 10:11	12/9/09 11:40	1.483	1681.00	1709.00	28.00	18.9	ROTATE	0.0	M	1682.67	0.41	85.01	-0.03	7.97	0.07	150	7.0	5.5	1000	2602	2801	199
12/9/09 11:50	12/9/09 13:34	1.733	1709.00	1736.00	27.00	15.6	ROTATE	0.0	M							150	5.0	3.7	1000	2605	2840	235
12/9/09 13:49	12/9/09 15:00	1.183	1736.00	1764.00	28.00	23.7	ROTATE	0.0	M							150	6.0	6.1	1000	2831	2914	83
12/9/09 15:07	12/9/09 16:22	1.250	1764.00	1793.00	29.00	23.2	ROTATE	0.0	M	1767.94	0.46	80.24	0.02	-1.68	0.02	150	4.0	6.1	1000	2837	2910	73
12/9/09 16:35	12/9/09 17:53	1.300	1793.00	1824.00	31.00	23.8	ROTATE	0.0	M							155	4.0	2.6	1000	2711	2883	172
12/9/09 18:02	12/9/09 19:50	1.800	1824.00	1853.00	29.00	16.1	ROTATE	0.0	M							150	6.0	2.6	1000	2875	2963	88
12/9/09 20:06	12/9/09 21:47	1.683	1853.00	1882.00	29.00	17.2	ROTATE	0.0	M	1858.33	0.33	65.19	-0.04	-5.00	0.05	150	4.0	12.1	1000	2875	3065	190
12/9/09 22:00	12/9/09 23:53	1.883	1882.00	1912.00	30.00	15.9	ROTATE	0.0	M							150	2.0	17.2	1000	2875	3038	163
13/9/09 0:02	13/9/09 1:48	1.767	1912.00	1940.00	28.00	15.8	ROTATE	0.0	M	1913.35	0.48	64.16	0.08	-0.56	0.08	150	5.0	19.7	1000	2875	3065	190 High stick'n'slip was mitigated.
13/9/09 1:54	13/9/09 3:06	1.200	1940.00	1967.00	27.00	22.5	ROTATE	0.0	M	1941.91	0.47	69.15	-0.01	5.24	0.04	150	12.0	7.0	1000	2938	3065	127
13/9/09 3:13	13/9/09 4:10	0.950	1967.00	1994.00	27.00	28.4	ROTATE	0.0	M							150	10.0	8.9	1000	2898	3075	177
13/9/09 4:18	13/9/09 5:22	1.067	1994.00	2023.00	29.00	27.2	ROTATE	0.0	M							150	13.0	6.2	1000	2898	3069	171
13/9/09 5:35	13/9/09 6:40	1.083	2023.00	2054.00	31.00	28.6	ROTATE	0.0	M	2028.47	0.60	92.17	0.05	7.98	0.09	150	10.0	7.3	1000	2923	3087	164
13/9/09 6:49	13/9/09 8:08	1.317	2054.00	2084.00	30.00	22.8	ROTATE	0.0	M	2076.18	0.73	87.08	0.08	-3.20	0.09	150	17.0	5.3	1000	2945	3165	220
13/9/09 8:16	13/9/09 8:59	0.717	2084.00	2100.00	16.00	22.3	ROTATE	0.0	M							150	16.0	1.7	1000	2962	3278	316

Schlumberger Private



Equipment Run Summary Report

Schlumberger Private

Job Number:

09ASQ0029

Company Rep:

Tim Lee, Kevin Monkhouse

Run Number:

2

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

Run Information

Date In		Date Out		Drilling Distance:		Drilling Hours:	
10-Sep-2009 6:40PM		14-Sep-2009 12:00AM		1,284.00 m		35.80 hrs	
Depth (MD):		2100.0 m		Rotary Drilling Distance:		50.40 hrs	
816.0 m		to		1,284.00 m		Rotary Drilling Hrs:	
Depth (TVD):		2100.0 m		Sliding Distance:		0.00 hrs	
816.0 m		to		0.00 m		Sliding Hours:	
Inclination:		0.73 deg		Reaming Distance:		0.00 hrs	
0.17 deg		to		0.00 m		Reaming Hours:	
Azimuth:		87.98 deg				Hrs Below Rotary:	
265.12 deg		to				77.33 hrs	
Hole Size:						Total Pumping Hrs:	
12.25 in						48.90 hrs	
Last Casing Size:				North Ref Used:		Min DLS:	
13.375 in				Grid North		0.01 deg/30 m	
Last Casing Depth:		(MD)		Magnetic Dec:		Max DLS:	
805.8 m				12.970 deg		0.24 deg/30 m	
Tool Face Arc:		.0 cm		Grid Correction:		Max DLS Depth:	
Total Face Angle:		0.00 deg		0.731 deg		879.0 m	
				Total Correction:		Surface Screen:	
				12.237 deg		No	
				Est. Mag. Int:		DFS Used:	
				0.06 deg		No	
						Inline Filter:	
						No	

Rig Information

Rig Type:		Semi-Submersible		Pump Type:		Triplex	
Water Depth:		74.00 m		Pulse Damp Press:		psi	
Air Gap:		21.50 m		Number of Pumps:		3	
RKB Height:		m		Pump Line ID:		6.00 in	
Ground Elevation:		-95.50 m		Pump Output:		4.30 galUS/stroke	
				Pump Stroke Len:		12.00 in	

Run Objective

Drill a 12.25 inch section hole of Spikey Beach-1 with Quad Combo BHA with motor. Evaluate the formation of the primary target at 1600 m MD and 1860 m MD. Keep the hole vertical to TD at 2075 m MD.

D&M Crew List:

Cell Manager: Marganda Hasiholan Sihite

Crew: Wissam Chehabi, MWD

Dallas Perkins, LWD

Marganda Hasiholan Sihite, Cell Manager

DH Motor Information

Manufacturer:	D&M	Bit to Bend Dist:	2.37 m
Motor Type:	PowerPak	Bearing Play In:	0.00 in
Motor Size:	9.62	Bearing Play Out:	in
Serial No.:	05954	Bent Sub Angle:	0.0000 deg
Lobe Config:	7:8	Bent HSG Angle:	0.0000 deg
Stage Length:	4.80 m		
Rubber:	HN234		
Sleeve Position:			
Sleeve Size:	12.13 in		
Bearing Type:	Mud Lubricated		

RSS Information

RSS Manufacturer:			
RSS Type:			
RSS SN:			
RSS Size:			
Pulse Ht Threshold:			
Min Pulse Width:			
Max Pulse Width:			
Conn Phase Angle:		deg	
Rise Time Const:			
Fall Time Const:			
Digit Time:			

MWD Configuration

Mod Type:		QPSK		Int Tool Face Offset:		0.00 deg		Bit Rate:		6 bps		Slimpulse Pulser Config:	
Mod Gap:		0.16000 in		Turbine Config:		800-1600 galUS/min		Frequency:		16 Hz		Pred Sig Strength @ TD:	
SPT Type:		HA										psi	

Drilling Parameters

	Min	Max	Avg	Total DH Shocks (k):	0 k
BH Temperature:	29.00 degC	65.00 degC	51.50 degC	Max Shock Level:	1
Surface RPM:	100.00 rpm	160.00 rpm	139.25 rpm	Max Shock Duration:	20 sec

Job Number:

09ASQ0029

Company Rep:

Tim Lee, Kevin Monkhouse

Run Number:

2

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

Equipment on the Run

Equipment	Pump Hours		Software Version	Tool Size
	Start	Cumulative		
A962M-05954	0.00 hrs	48.90 hrs		9.63 in
ARC8D-BB-1216	0.00 hrs	48.90 hrs	9.4	8.25 in
H524743-62446	hrs	hrs		8.25 in
H524743-66244	hrs	hrs		8.25 in
H524743-66245	hrs	hrs		8.25 in
H524743-e13018	hrs	hrs		8.25 in
H524743-e13020	hrs	hrs		8.25 in
H524743-e13024	hrs	hrs		8.25 in
MDCIX-GA-ZH22	0.00 hrs	48.90 hrs	9.2	8.25 in
NDDC-CA-43225	0.00 hrs	48.90 hrs	8.3	8.25 in
SD8D-CA-42784	0.00 hrs	48.90 hrs	6.8	8.25 in

Services on the Run

Equipment	Service	Tool Name	Real Time			Recorded Mode			CAF
			Hours	Failed	Depth	Hours	Failed	Depth	
MOTORS	PowerPak	PowerPak	48.90 hrs		1,284.0 m	hrs			
LWD	Resistivity	arcVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	APWD	arcVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Gamma Ray	arcVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
MWD	Shock and Vibration	TeleScope	48.90 hrs		816.0 m	77.33 hrs		816.0 m	
MWD	Cont D&I	TeleScope	48.90 hrs		1,284.0 m	hrs			
MWD	D&I	TeleScope	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Shear DT	SonicVision	hrs			77.33 hrs		1,284.0 m	
LWD	Compressional DT	SonicVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Caliper	adnVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Density	adnVision	48.90 hrs		1,284.0 m	77.33 hrs		1,284.0 m	
LWD	Neutron	adnVision	48.90 hrs		1,284.0 m	77.33 hrs		816.0 m	

Job Number: 09ASQ0029
Company Rep: Tim Lee, Kevin Monkhouse
Run Number: 2

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ
BHA Type: Rotary

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

								Fishing Neck		Stab	Bottom Connection		Top Connection			
Item	Description	Vendor	Tool Name	Serial Number	Length	OD	ID	OD	Len, m	OD	Size	Type	Size	Type	Cumul Len	
1	BIT	Hughes Christianson	PDC	7012700	0.38	m	12.25						6 5/8"	REG PIN	0.38	m
2	MOTORS	D&M	PowerPak	05954	11.32	m	9.00				6 5/8"	REG BOX	6 5/8"	REG PIN	11.70	m
3	STABILIZER		Stabilizer	207A189	1.82	m	9.63				6 5/8"	REG BOX	6 5/8"	REG PIN	13.52	m
4	LWD	D&M	arcVISION	1216	6.24	m	8.00				6 5/8"	REG BOX	6 5/8"	FH PIN	19.76	m
5	INLINE STAB	D&M	Inline Stablizer	ASQ9029	0.91	m	12.25				6 5/8"	FH BOX	6 5/8"	FH PIN	20.67	m
6	MWD	D&M	TeleScope	ZH22	8.05	m	8.50				6 5/8"	FH BOX	6 5/8"	FH PIN	28.72	m
7	INLINE STAB	D&M	Inline Stablizer	AWA7261	0.85	m	12.25				6 5/8"	FH BOX	6 5/8"	FH PIN	29.57	m
8	LWD	D&M	SonicVISION	42784	6.86	m	8.25				6 5/8"	FH BOX	6 5/8"	FH PIN	36.43	m
9	LWD	D&M	adnVISION	43225	9.18	m	8.00				6 5/8"	FH BOX	6 5/8"	FH PIN	45.61	m

Predicted BHA Tendency:

Hookload Out:	Wt Below Jars:
Pickup Out:	Wt Above Jars:
Slack Weight:	Total Air Wt:

	Mid Pt	Blade			Gauge		
Stab Description	to Bit	Type	Len	Width	Len	In	Out
Stabilizer							

Bit to Read Out Port			Bit to Measurement Port		
MOTORS-PowerPak	2.30	m	arcVISION-Resistivity	16.37	m
LWD-arcVISION	17.50	m	arcVISION-Gamma Ray	16.42	m
MWD-TeleScope	22.10	m	TeleScope-D&I	24.45	m
LWD-SonicVISION	33.40	m	SonicVISION-Shear DT	33.83	m
LWD-adnVISION	40.50	m	SonicVISION-Compressional	33.83	m
			arcVISION-APWD	15.66	m
			adnVISION-Caliper	39.60	m
			adnVISION-Density	39.77	m
			adnVISION-Neutron	41.75	m

Job Number:

09ASQ0029

Company Rep:

Tim Lee, Kevin Monkhouse

Run Number:

2

Company:

BEACH PETROLEUM LTD

Location:

MEA-APG-ASQ

Rig Name:

Ocean Patriot

Well Name:

Spikey Beach 1

Date/Time		Depth		Description
10-Sep-2009	4:00AM	0.0	m	Tools arrive on board.
10-Sep-2009	5:50PM	0.0	m	Begin picking up BHA.
10-Sep-2009	6:00PM	0.0	m	Pick up motor.
10-Sep-2009	6:30PM	0.0	m	Make up motor to bit.
10-Sep-2009	6:40PM	0.0	m	Bit below rotary
10-Sep-2009	7:15PM	0.0	m	Make up arc to stabilizer.
10-Sep-2009	7:35PM	0.0	m	arc below rotary
10-Sep-2009	7:40PM	0.0	m	make up telescope to arc.
10-Sep-2009	7:50PM	0.0	m	Telescope below rotary
10-Sep-2009	8:00PM	0.0	m	make up sonic to telescope
10-Sep-2009	8:20PM	0.0	m	Sonic below rotary
10-Sep-2009	8:30PM	0.0	m	Make up adn to Sonic
10-Sep-2009	8:45PM	0.0	m	ADN below rotary
10-Sep-2009	9:04PM	0.0	m	Conduct first shallow hole test without source. Good Test
10-Sep-2009	9:30PM	0.0	m	Load source to ADN
10-Sep-2009	10:10PM	0.0	m	Begin tripping in hole.
11-Sep-2009	12:28AM	1513.0	m	MWD stat 4 noticed
11-Sep-2009	12:29AM	320.0	m	Pump pressure calibration
11-Sep-2009	12:33AM	320.0	m	Conduct second shallow hole test with source. Good Test
11-Sep-2009	1:00AM	320.0	m	Begin function testing BOP.
11-Sep-2009	1:29AM	320.0	m	Hook load calibration
11-Sep-2009	4:52AM	730.0	m	Set bit depth
11-Sep-2009	5:50AM	760.0	m	Begin washing down to shoe, drilling through cement.
11-Sep-2009	7:41AM	821.0	m	Drilled 3m of new formation, preform LOT
11-Sep-2009	9:27AM	821.0	m	MW 9.7ppg Vis 47
11-Sep-2009	2:42PM	1242.0	m	Drilling ahead with good signal, minimal vibrations currently @165m/hr
11-Sep-2009	9:25PM	1470.0	m	Maxwell computer crashed, restarting aquisition.
11-Sep-2009	9:35PM	1473.0	m	mw=9.3ppg, vis=53s
12-Sep-2009	3:40AM	1564.0	m	Bit depth not updating.
12-Sep-2009	3:55AM	1564.0	m	Cable had come of Geolograph, reinstalled cable depth updating.
12-Sep-2009	4:30AM	1564.0	m	It was decided to ream down missing section of data, and ream down after td while POOH in order to get the missing data
12-Sep-2009	5:15AM	1567.0	m	Reset hole and bit depth.
12-Sep-2009	5:20AM	1567.0	m	HSPM back on bottom drilling.
12-Sep-2009	8:03AM	1644.0	m	MW 9.7ppg
12-Sep-2009	8:03AM	1644.0	m	Drilling ahead with good signal. minimal vibrations.
12-Sep-2009	1:05PM	1725.0	m	problems with interact and witts transmission, all services restarted again and working fine
12-Sep-2009	1:59PM	1735.0	m	MW 9.7ppg; vis 51
12-Sep-2009	3:35PM	1770.0	m	MW 9.7ppg; vis 51
12-Sep-2009	4:07PM	1784.0	m	Observed intermitten high stick and slip
12-Sep-2009	8:28PM	1856.0	m	Increased RPM to 160 in order to try to mitigate stick slip. Noticed improvment.
12-Sep-2009	9:21PM	1874.0	m	ARC shock level one noticed.
12-Sep-2009	9:45PM	1880.0	m	Stick slip approx 60-70%
12-Sep-2009	10:43PM	1888.0	m	Encountring problems with sticking pipe, driller and company man attempting diffrent measures to get through formation
13-Sep-2009	12:00AM	1900.0	m	DD woken up in order to attempt mitigation of stick slip.
13-Sep-2009	1:10AM	1929.0	m	Reducing RPM to 120 to try to mitigate stick slip. level 1 shocks on arc noticed.

Date/Time		Depth		Description
13-Sep-2009	1:40AM	1933.0	m	Still trying different RPM's in order to mitigate stick slip. still noticing 170% stick slip, rpm up to 140.
13-Sep-2009	2:12AM	1944.0	m	MW=10ppg
13-Sep-2009	3:33AM	1973.0	m	MW=10ppg Vis= 57s
13-Sep-2009	3:53AM	1980.0	m	HOOKLOAD and SWOB giving erratic values on occasion causing logs to wrap around.
13-Sep-2009	4:15AM	1995.0	m	Noticed hookload voltage dropping out and returning causing the spike in the hookload data.
13-Sep-2009	4:53AM	2007.0	m	Hookload installed correctly and same erratic values are occurring to BHI. Caused a 2 m gap in ADN data between 1985 and 1987m
13-Sep-2009	8:35AM	2090.0	m	MW 10.1ppg
13-Sep-2009	9:03AM	2100.0	m	TD called
13-Sep-2009	9:04AM	2100.0	m	Take a survey at TD



Job Number: 09ASQ0029 **Company:** BEACH PETROLEUM LTD
Company Rep: Tim Lee, Kevin Monkhouse **Location:** MEA-APG-ASQ
Run No: 2

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

			Depth in m		IADC Activity	Description
From	To	Elapsed	From	To		
9-Sep-2009						
00:00	15:00	15.00	0.0	0.0	Run casing / cement	Run casing/ Cement
15:00	17:30	2.50	0.0	0.0	PU / LD BHA / Tripping	Release running tool
17:30	19:30	2.00	0.0	0.0	Nipple up BOPs	JSA/ Rig up to run BOP
19:30	00:00	4.50	0.0	0.0	Nipple up BOPs	Rig up BOP
10-Sep-2009						
00:00	18:00	18.00	0.0	0.0	Nipple up BOPs	Rig up BOP's
18:00	21:00	3.00	0.0	0.0	PU / LD BHA / Tripping	Make up BHA
21:00	21:30	0.50	0.0	0.0	PU / LD BHA / Tripping	Shallow hole test
21:30	22:00	0.50	0.0	0.0	PU / LD BHA / Tripping	Load radioactive source
22:00	23:30	1.50	0.0	0.0	PU / LD BHA / Tripping	Continue picking up BHA
23:30	00:00	0.50	0.0	0.0	Nipple up BOPs	Rig up Diverter
11-Sep-2009						
00:00	01:00	1.00	0.0	0.0	Nipple up BOPs	Rig up Diverter
01:00	03:00	2.00	0.0	0.0	Test BOP	Function test BOP
03:00	08:30	5.50	0.0	816.0	PU / LD BHA / Tripping	RIH f/ 0 - 816 m MD
08:30	00:00	15.50	816.0	1509.0	Drilling	Drilling f/ 816 - 1509m MD
12-Sep-2009						
00:00	00:00	24.00	1509.0	1911.0	Drilling	Drilling f/ 1509 - 1911m MD
13-Sep-2009						
00:00	09:00	9.00	1911.0	2100.0	Drilling	Drilling f/1911 - 2100 m



Drilling Parameters Report

16-Sep-2009

11:14:41AM

Job Number: 09ASQ0029
Company Rep: Tim Lee, Kevin Monkhouse
Run Number: 2

Company: BEACH PETROLEUM LTD
Location: MEA-APG-ASQ

Rig Name: Ocean Patriot
Well Name: Spikey Beach 1

	13-Sep-2009 1:15 AM	12-Sep-2009 4:13 PM	11-Sep-2009 9:56 PM	11-Sep-2009 10:37 AM
Field Engineer	Wissam Chehabi	Marganda Hasiholan	Wissam Chehabi	Dallas Perkins
Depth	1,929.00 m	1,787.00 m	1,478.00 m	914.00 m
Avg ROP	7.88 m/hr	16.75 m/hr	28.88 m/hr	28.88 m/hr
On Bottom ROP	21.00 m/hr	39.41 m/hr	44.71 m/hr	44.71 m/hr
Flow Rate	1,003.00 galUS/min	1,012.00 galUS/min	1,003.00 galUS/min	700.00 galUS/min
Turbine RPM	3,164 rpm	3,203 rpm	3,125 rpm	3,437 rpm
Surface RPM	100 rpm	160 rpm	151 rpm	146 rpm
WOB Rotating	3.70 klbm	2.39 klbm	1.26 klbm	10.00 klbm
WOB Sliding				
DH WOB				
Surface Torque	8.25 kft.lbf	5.03 kft.lbf	3.13 kft.lbf	6.00 kft.lbf
DH Torque				
Hookload	291 klbm	271 klbm	262 klbm	219 klbm
PickUp Weight				
Slack Weight				
Friction				
SPP On Bottom	3,038.00 psi	3,000.00 psi	2,632.00 psi	2,585.00 psi
SPP Off Bottom				
Diff Pressure				
BH Temperature	65.00 degC	62.00 degC	50.00 degC	29.00 degC
Total Shocks (k)				
Max Shock Level	1			
Max Shock Duration	20			
Torsional Vib				
Lateral Vib				
Axial Vib				
CRPM	155 rpm	146 rpm	132 rpm	122 rpm
Stick/Slip	234	246	60	27
Formation	Claystone	Claystone	Claystone	Claystone
Signal Strength	3.60 psi	32.00 psi	4.80 psi	8.22 psi
Percent Signal Conf	89 %	86 %	74 %	78 %

Bit Performance Report

[illegible]

Section 3: Post Job Analysis

3.1 Actual Trajectory Information

- 3.1.1 Client Sign-Off Sheet
- 3.1.2 Survey Listing
- 3.1.3 Well Path Plot, Planned vs. Actual

Schlumberger



Schlumberger Survey Management

Definitive Survey Sign-Off

Client:	Beach Petroleum	Slot Name:	N/A
Field:	T/38 - Bass Basin		
Structure:	Ocean Patriot	Well Name:	Spikey Beach-1

Surface Co-Ords	N 5518174.63 m	E 404522.800 m	Depth Units:	Meters
UTM Model:	GDA94/MGA94 Zone 55		Azimuth Ref:	Grid
Central Meridian:	147° East		Grid Converg:	0.73
Vertical Reference:	MSL			
RKB Elevation:	21.5	above	MSL	

Definitive Survey Construction

Report #	Instrument Type	Survey From	Survey To
1	SLB INC ONLY-Depth Only	0	95.50
2	SLB MWD+DMAG	95.50	803.80
3	SLB MWD-STD	803.80	2076.18
4	SLB BLIND+TREND	2076.18	2100.00

Definitive Survey Bottom Hole Location

Depth MD RKB	Depth TVD RKB	Depth TVD SS	Northing	Easting	Comment
2076.18	2376.14	2054.64	5518175.76	404532.22	Last MWD Survey
2100.00	2399.95	2076.45	5518175.77	404532.52	Projected to TD


Target Summary

Target Objectives Achieved	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
----------------------------	---	-----------------------------

Comments

TD called based on TVD, LWD and formation samples.
 Surveys for 17 1/2" required DMAG correction.
 12 1/4" surveys were standard surveys with a straight projection to well TD.

Definitive Survey Sign-Off

Schlumberger:		Beach Petroleum	
Name:	Ryan Mulligan	Name:	Manelle Moussa
Signed:		Signed:	
Date:	17-Sep-09	Date:	17/09/09

Spikey Beach-1 Definitive RM Survey Report

Report Date: September 17, 2009	Survey / DLS Computation Method: Minimum Curvature / Lubinski
Client:	Vertical Section Azimuth: 0.000°
Field: Beach - Offshore Zone 55	Vertical Section Origin: N 0.000 m, E 0.000 m
Structure / Slot: Spikey Beach / New Slot	TVD Reference Datum: RKB
Well: Spikey Beach-1	TVD Reference Elevation: 21.5 m relative to MSL
Borehole: Spikey Beach-1	Sea Bed / Ground Level Elevation: -74.000 m relative to MSL
UWI/API#:	Magnetic Declination: 12.967°
Survey Name / Date: Spikey Beach-1 Definitive RM / September 9, 2009	Total Field Strength: 61230.271 nT
Tort / AHD / DDI / ERD ratio: 4.246° / 12.29 m / 2.234 / 0.006	Magnetic Dip: -70.905°
Grid Coordinate System: GDA94/MGA84 Zone 55	Declination Date: September 09, 2009
Location Lat/Long: S 40 28 53.879, E 145 52 24.706	Magnetic Declination Model: BGM 2009
Location Grid NE YDC: N 5518174.630 m, E 404522.800 m	North Reference: Grid North
Grid Convergence Angle: +0.73136463°	Total Corr Mag North -> Grid North: +12.236°
Grid Scale Factor: 0.99971221	Local Coordinates Referenced To: Well Head

Comments	Measured Depth (m)	Inclination (deg)	Azimuth Grid (deg)	TVD (m)	Sub-Sea TVD (m)	Vertical Section (m)	NS Grid North (m)	EW Grid North (m)	DLS (deg/30 m)	Closure (m)	Northing (m)	Easting (m)	Latitude	Longitude
Tie-In	0.00	0.00	0.00	0.00	-21.50	0.00	0.00	0.00	0.00	0.00	5518174.63	404522.80	S 40 28 53.879	E 145 52 24.706
Sea Bed	95.50	0.00	0.00	95.50	74.00	0.00	0.00	0.00	0.00	0.00	5518174.63	404522.80	S 40 28 53.879	E 145 52 24.706
	179.35	0.24	83.43	179.35	157.85	0.02	0.02	0.17	0.09	0.09	5518174.65	404522.97	S 40 28 53.878	E 145 52 24.713
	206.93	0.26	40.89	206.93	185.43	0.07	0.07	0.27	0.20	0.28	5518174.70	404523.07	S 40 28 53.877	E 145 52 24.718
	294.67	0.37	50.63	294.67	273.17	0.40	0.40	0.62	0.04	0.74	5518175.03	404523.42	S 40 28 53.866	E 145 52 24.733
	338.42	0.10	101.79	338.42	316.92	0.49	0.49	0.77	0.22	0.91	5518175.12	404523.57	S 40 28 53.863	E 145 52 24.739
	352.67	0.17	96.28	352.67	331.17	0.48	0.48	0.80	0.15	0.94	5518175.11	404523.60	S 40 28 53.864	E 145 52 24.740
	382.26	0.19	48.22	382.26	360.76	0.51	0.51	0.88	0.15	1.02	5518175.14	404523.68	S 40 28 53.863	E 145 52 24.744
	468.33	0.04	55.57	468.33	446.83	0.62	0.62	1.01	0.05	1.19	5518175.25	404523.81	S 40 28 53.859	E 145 52 24.749
	514.50	0.11	259.09	514.50	493.00	0.62	0.62	0.98	0.10	1.16	5518175.25	404523.78	S 40 28 53.859	E 145 52 24.748
	556.06	0.15	276.07	556.06	534.56	0.62	0.62	0.89	0.04	1.08	5518175.25	404523.69	S 40 28 53.859	E 145 52 24.744
	642.56	0.27	259.55	642.56	621.06	0.60	0.60	0.58	0.05	0.83	5518175.22	404523.38	S 40 28 53.860	E 145 52 24.731
	727.80	0.25	254.10	727.80	706.30	0.51	0.51	0.20	0.01	0.55	5518175.14	404523.00	S 40 28 53.863	E 145 52 24.715
	755.00	0.16	261.45	755.00	733.50	0.49	0.49	0.11	0.10	0.50	5518175.12	404522.91	S 40 28 53.863	E 145 52 24.711
	786.24	0.17	245.91	786.24	764.74	0.46	0.46	0.02	0.04	0.46	5518175.09	404522.82	S 40 28 53.864	E 145 52 24.707
17 1/2" TD at 816m	803.80	0.18	263.56	803.80	782.30	0.45	0.45	-0.03	0.09	0.45	5518175.08	404522.77	S 40 28 53.864	E 145 52 24.705
	879.04	0.43	77.12	879.03	857.53	0.50	0.50	0.13	0.24	0.51	5518175.13	404522.93	S 40 28 53.863	E 145 52 24.712
	990.83	0.34	90.11	990.82	969.32	0.59	0.59	0.87	0.03	1.05	5518175.22	404523.67	S 40 28 53.860	E 145 52 24.743
	1078.27	0.31	90.35	1078.26	1056.76	0.59	0.59	1.36	0.01	1.48	5518175.22	404524.16	S 40 28 53.860	E 145 52 24.764
	1164.94	0.40	84.09	1164.93	1143.43	0.62	0.62	1.90	0.03	2.00	5518175.25	404524.70	S 40 28 53.860	E 145 52 24.787
	1221.27	0.44	97.02	1221.26	1199.76	0.61	0.61	2.31	0.05	2.39	5518175.24	404525.11	S 40 28 53.860	E 145 52 24.804
	1339.66	0.51	93.25	1339.64	1317.14	0.53	0.53	3.28	0.02	3.32	5518175.16	404526.08	S 40 28 53.863	E 145 52 24.845
	1367.75	0.54	94.83	1367.73	1346.23	0.51	0.51	3.54	0.03	3.58	5518175.14	404526.34	S 40 28 53.864	E 145 52 24.857
	1456.65	0.52	105.25	1456.63	1435.13	0.37	0.37	4.35	0.03	4.37	5518175.00	404527.15	S 40 28 53.869	E 145 52 24.891
	1530.18	0.55	90.58	1530.16	1508.66	0.27	0.27	5.03	0.06	5.03	5518174.90	404527.82	S 40 28 53.872	E 145 52 24.920
	1596.34	0.49	77.67	1596.31	1574.81	0.33	0.33	5.62	0.06	5.63	5518174.96	404528.42	S 40 28 53.870	E 145 52 24.945
	1625.50	0.47	69.82	1625.47	1603.97	0.40	0.40	5.85	0.07	5.87	5518175.03	404528.65	S 40 28 53.868	E 145 52 24.955
	1682.67	0.41	85.01	1682.64	1661.14	0.50	0.50	6.28	0.07	6.30	5518175.13	404529.08	S 40 28 53.865	E 145 52 24.973
	1767.94	0.46	80.24	1767.91	1746.41	0.58	0.58	6.92	0.02	6.94	5518175.21	404529.72	S 40 28 53.863	E 145 52 25.000
	1858.33	0.33	65.19	1858.30	1836.80	0.75	0.75	7.51	0.05	7.55	5518175.38	404530.31	S 40 28 53.858	E 145 52 25.025
	1913.35	0.48	64.16	1913.31	1891.81	0.92	0.92	7.86	0.08	7.92	5518175.55	404530.66	S 40 28 53.852	E 145 52 25.040
	1941.91	0.47	69.15	1941.87	1920.37	1.01	1.01	8.08	0.04	8.14	5518175.64	404530.88	S 40 28 53.849	E 145 52 25.050
	2028.47	0.60	92.17	2028.43	2006.93	1.12	1.12	8.67	0.09	8.94	5518175.75	404531.66	S 40 28 53.846	E 145 52 25.083
	2076.18	0.73	87.08	2076.14	2054.64	1.13	1.13	9.42	0.09	9.49	5518175.76	404532.22	S 40 28 53.846	E 145 52 25.107
Projection to TD at 2100m	2100.00	0.73	87.08	2099.95	2078.45	1.14	1.14	9.72	0.00	9.79	5518175.77	404532.52	S 40 28 53.846	E 145 52 25.119

Survey Type: Definitive Survey

Survey Error Model: SLB ISCSWA version 24 *** 2-D 95.00% Confidence 2.4477 sigma

Surveying Prog:

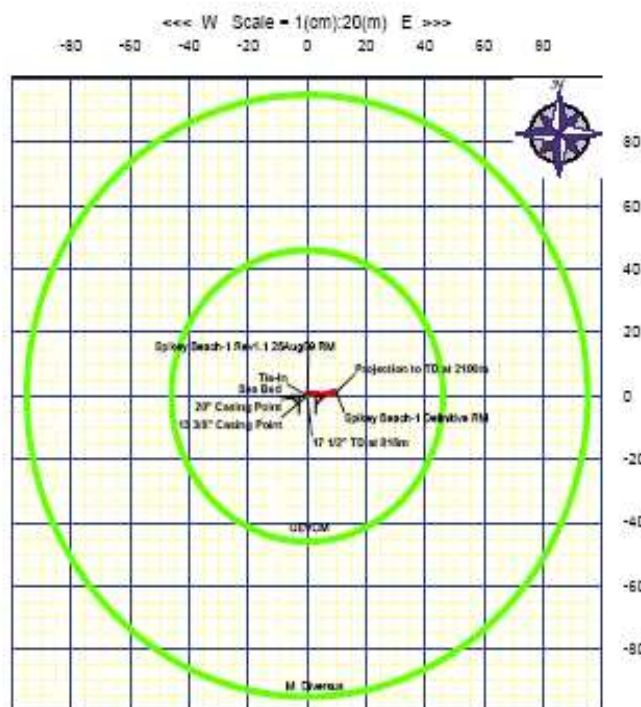
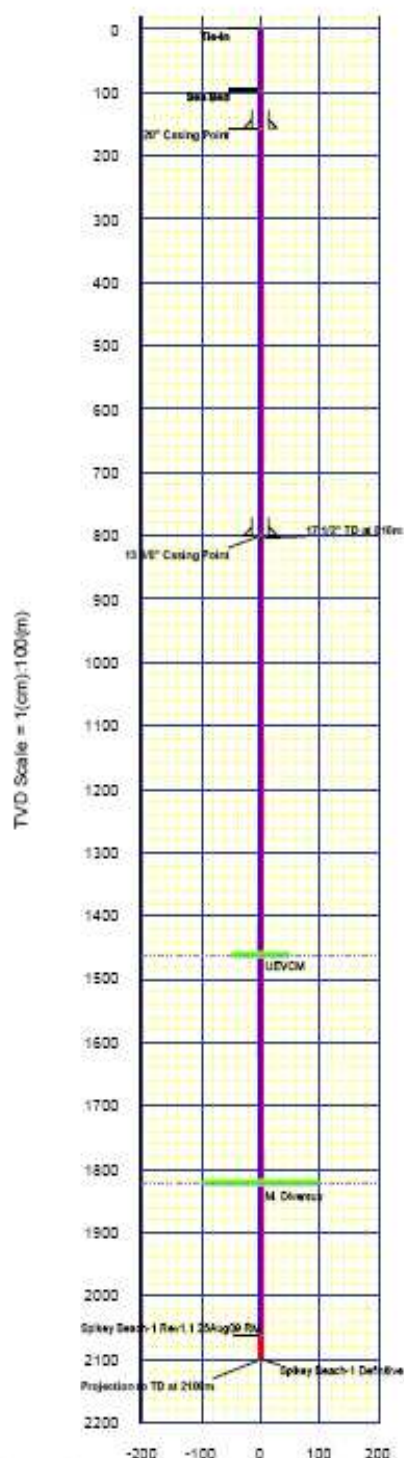
MD From (m)	MD To (m)	EOU Freq	Survey Tool Type
0.00	95.50	Act-Stns	SLB_INC-ONLY-Depth Only
95.50	803.80	Act-Stns	SLB_MWD+DMAG
803.80	2076.18	Act-Stns	SLB_MWD-STD
2076.18	2100.00	Act-Stns	SLB_BLIND+TREND

Borehole -> Survey

Spikey Beach-1 -> Spikey Beach-1 Definitive RM
Spikey Beach-1 -> Spikey Beach-1 Definitive RM
Spikey Beach-1 -> Spikey Beach-1 Definitive RM
Spikey Beach-1 -> Spikey Beach-1 Definitive RM

WELL	FIELD	STRUCTURE
Spikey Beach-1	Beach - Offshore Zone 55	Spikey Beach

Magnetic Parameters Model: 60104 2008 Dip: 75.88° Mag Dec: +12.86°	Date 06 September 06, 2008 01:30:54	Surface Location UTM Easting: 494522.80 m Northing: 5518174.63 m Zone: 55	Well Location UTM Easting: 494522.80 m Northing: 5518174.63 m Zone: 55	Well Information Well Name: Spikey Beach-1 Well Type: Oil Well Status: Active Well Depth: 2100 m Well Completion Date: September 05, 2008
--	--	--	---	---



Surface Location							
Northing: 5518174.63 m		Easting: 404522.80 m					
Target Description			Grid Coord			Local Coord	
Target Name	Shape	Major Axis	Min. Axis	Easting	TVD	WGS	
UWCM	Circle	92.00	5518174.63	404522.80	1461.50	0.00	0.00
M. Diverus	Circle	199.00	5518174.63	404522.80	1822.50	0.00	0.00

Critical Point		Critical Points						
Critical Point	MD	INCL	AZIM	TVD	WGS	WGS/MD	WGS/INCL	WGS/AZIM
Ticks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sea Bed	95.50	0.00	0.00	95.50	0.00	0.00	0.00	0.00
17 1/2' TD at 816m	802.80	0.18	263.56	802.80	0.45	0.45	-0.03	0.09
Projection to TD	2100.00	0.73	87.68	1099.95	1.14	1.14	9.72	0.00

Vertical Section (m) Azim = 0°, Scale = 1(cm):100(m) Origin = 0 N-S, 0 E-W


3.2 Drilling Performance Analysis



3.2.1 - Directional T-Plots

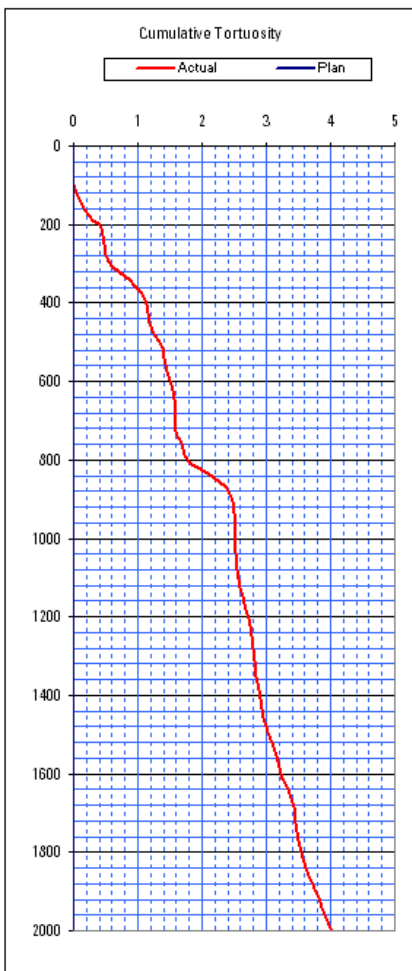
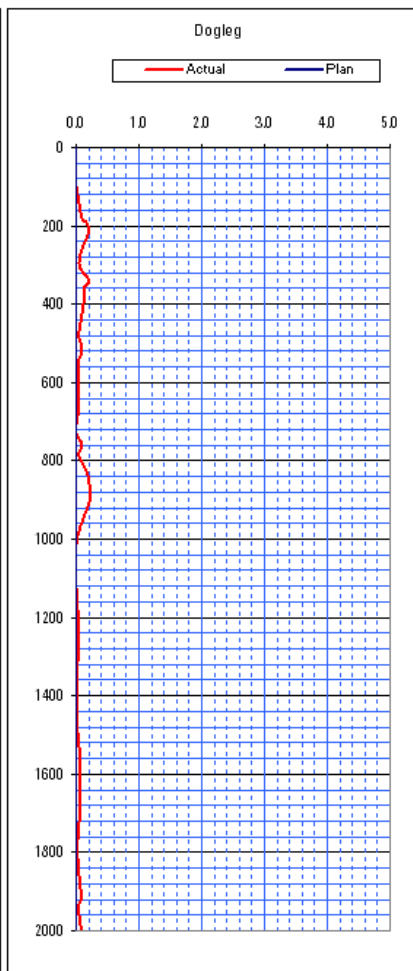
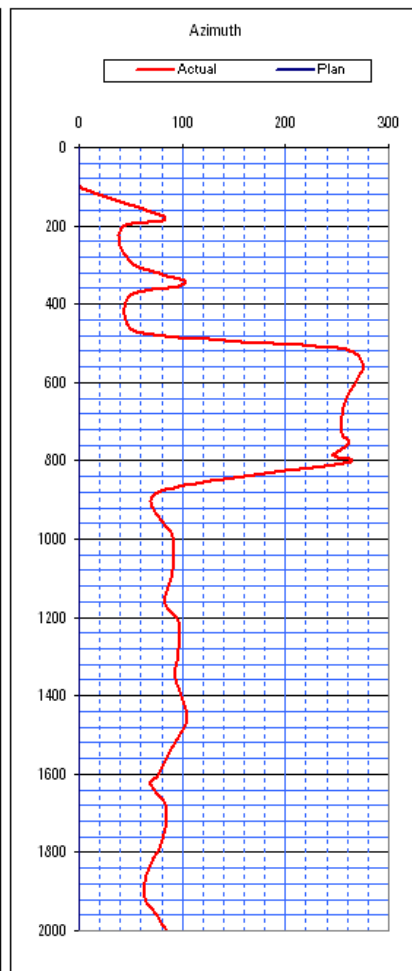
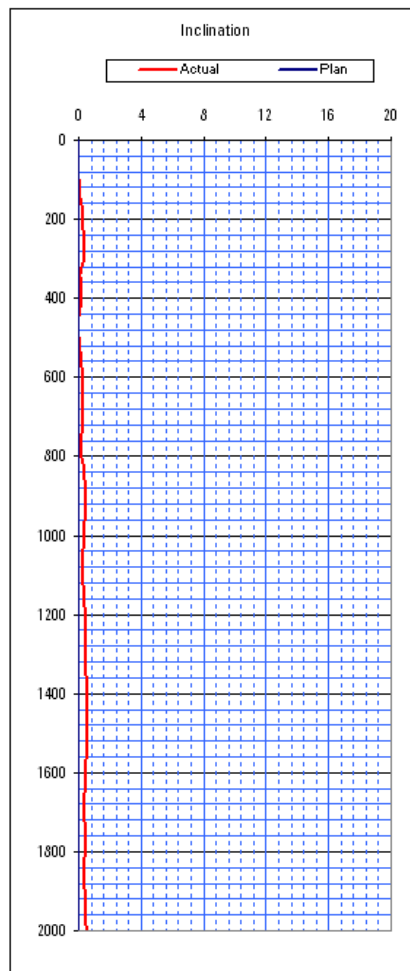
3.2.2 - Drilling KPIs

T-PLOT

Client  Beach Petroleum

Well  Spikey Beach - 1

DDI Plan  0.00
Actual  2.23

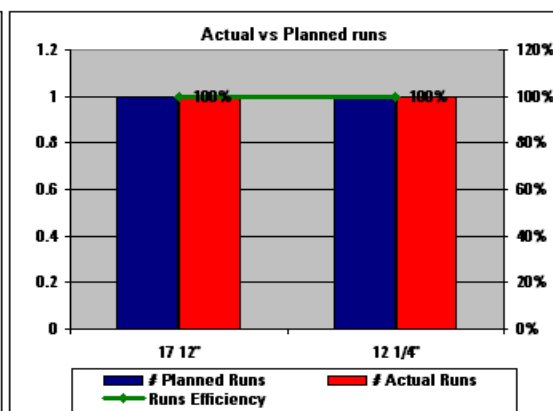
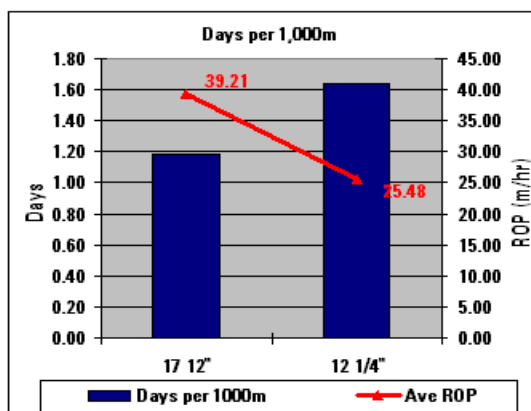


KEY PERFORMANCE INDICATORS (KPI'S) FOR DIRECTIONAL DRILLING SERVICES

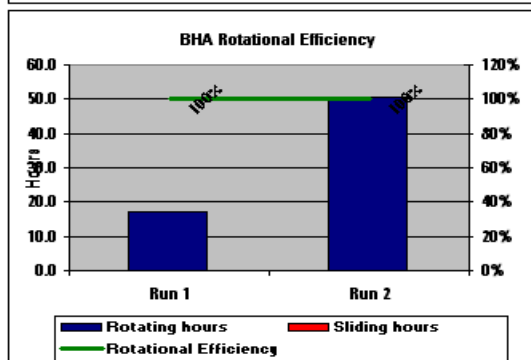
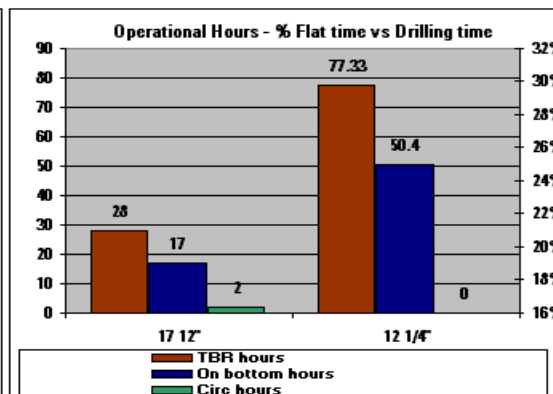
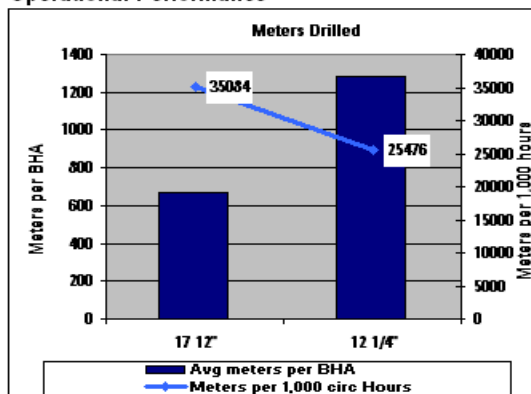
Client Beach Petroleum
Well Spikey Beach-1
Rig Ocean Patriot
Field T/38 - Bass Basin

Total Depth 2100.00 m
Date 18-Sep-09
D&M Yes

BHA Overview



Operational Performance



Summary

Non-Productive Time

Non-Productive Time 0.0 hrs
Total Operating Time 67.4 hrs

Operating Efficiency

NPT per 1,000m 0.00 hrs/1000m
Meters per 1000 Circ Hour(D&M) 28106.63 m / K circ hr.

DD Efficiency

Tortuosity (Plan v Actual) 0.0 / 4.246
DDI (Plan v. Actual) 0.0 / 2.234

General Comments

17 1/2" Section: Drilled vertically in one run, as planned, with on-bottom ROP of 39 m/hr. Minimal off bottom circulation.

12.1/4" Section: Drilled vertically with motor in one run with an on-bottom ROP of 25 m/hr. Minimal off bottom circulation.

Well Trajectory

Deviations from plan	No
If yes, acceptable	N/A
Hit Drillers Target	Yes
Hole cleaning problems	No
Run casing OK	Yes
SF > 1.5	Yes
Zero well collisions	Yes
Slide in hold sections	No
(If YES - Explain)	

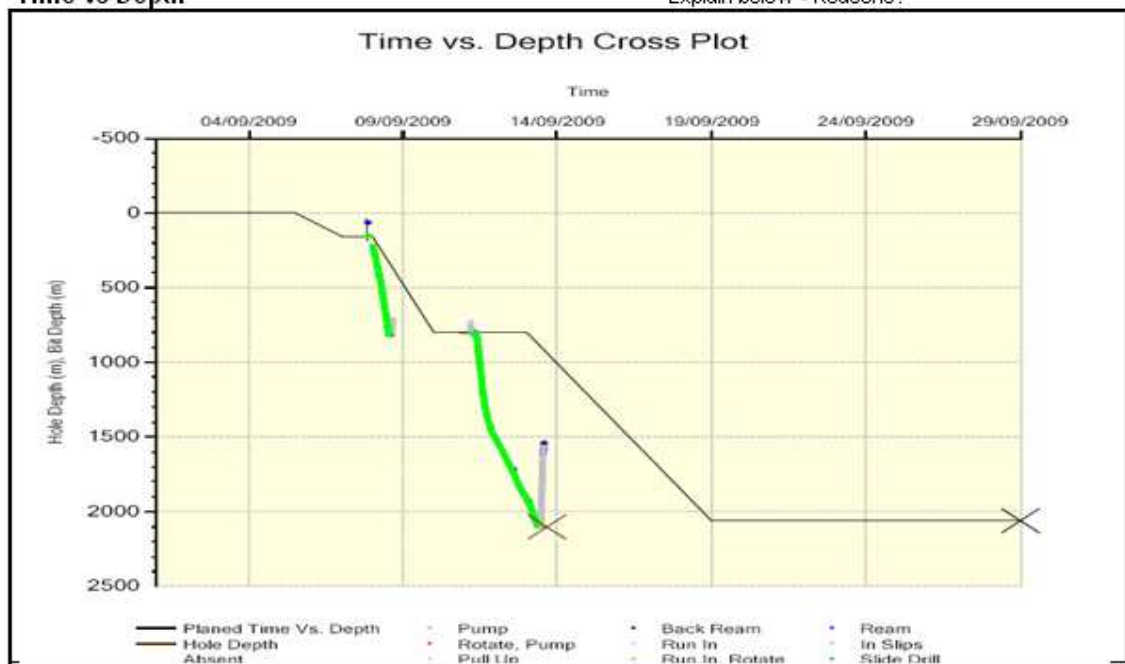
Tools & Delivery

Tools delivered fit for purpose	Yes
Backup tools available	Yes
Tools run within specifications	Yes
All tools pass shallow hole test	Yes

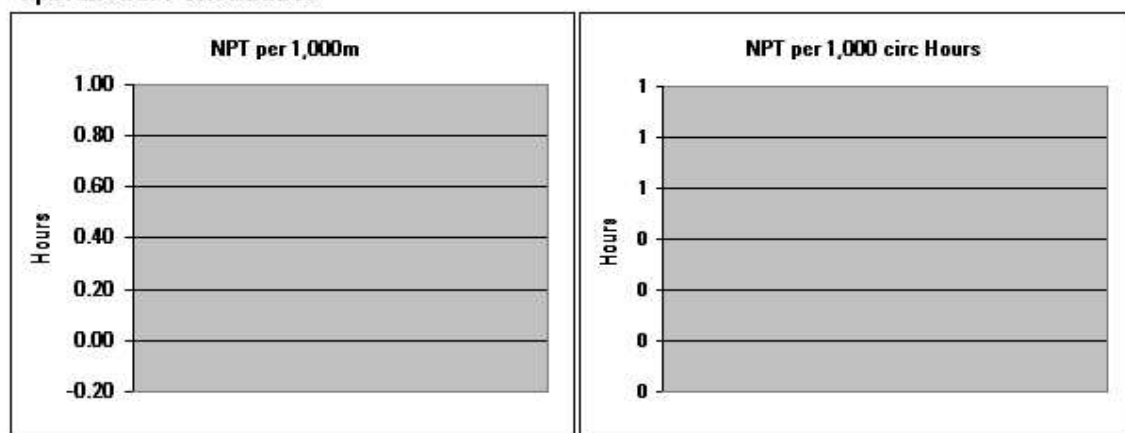
# of BHAs	Planned	2
	Actual	2

If # of actual BHAs > # of planned BHAs
Explain below - Reasons?

Time vs Depth



Operational Performance



Performance Summary

Zero drilling NPT hours recorded for well. Well was drilled under AFE by ~ 5 days.

Section 4:

Appendices

- A. Depth Control Report**
- B. Calibration Report**
- C. SQ Issues**

A. Depth Control Report

1. **Depth Acquisition Procedure Document**

Depth acquisition was performed as per the procedure outlined in the D&M-SQ-S016 Depth Control Standard and IDEAL 14.0 Field Reference Manual. Depth acquisition equipment used on the job is PDA (Precision Depth Assembly) which consists of Geolograph, Heave Motion Compensator, and Clamp Line Tensiometer (CLT). The sensors calibration was performed as per D&M-SQ-S004 Calibration Standard (See section B).

2. **Permanent Depth Datum Reference**

The permanent depth datum reference for this well is the Rotary Table (RKB), which is 21.50 m above MSL.

3. **Depth Reference Plan**

Depth is referenced to the Driller's Depth. The Driller's pipe tally is used to check acquired depth at frequent intervals, usually at each stand down. See depth tracking sheet attached.

SLB D&M - SQ-S016

Schlumberger

Pre-Job Depth Control Report

Job Information

Client	Beach Petroleum Ltd
Well Name / Field	Spikey Beach1
Job no.	09ASQ0029
Run #	1
Date in	07-Sep-09

Hole Section Information

Hole Size	17.5in
Depth Reference	Driller's Depth
Source of Depth	Driller's Tally
Depth System	Geograph + Heave Compensation
Permanent Datum	MSL

Expected Casing Shoe 151.6

Planned TD / Casing Point 810

Zones of Interest (As per Geologist Advice)

Depth Equipment Calibration Information

Drawworks Encoder Calibration

Standard Block Height Calibration Equipment is DWC	
DWE Serial No.	2681
Date of Last Drill Line Slip & Cut	7-Sep-09
Date of Last Calibration	7-Sep-09
Calibration Status	Valid

Calibration Data

Data Point	BPOS	PPM
1	-100	325
2	100	325
3		
4		

Clamp Line Tensiometer Calibration

CLT Serial No.	1009
Date of Last Calibration	7-Sep-09
Calibration Status	Valid

Calibration Data

Data Point	klbf	V
1	120	1.66
2	250	2.08

Comments (Include Exemption details, if any):

Schlumberger Private

BHA Report from acquisition computer

17:50 in Section_1.txt - Notepad

File Edit Format View Help

MAXWELL SYSTEM INFORMATION
TOOLSTRING DESCRIPTION:17-50 in Section

TOOLNAME	LENGTH m	OD in	ID in	MAX_OD in	WEIGHT kg	VOLUME m3	CUMM_LEN m	CUMM_WT kg	SERIAL_NUMBER
Bit: 17 1/2"	0.420	8.750	3.750	17.500	105.074	NaN	0.420	105.074	6079221
Stabilizer	2.840	0.000	3.000	NaN	0.000	NaN	3.260	105.074	207A83
ARC9	5.920	9.000	5.750	10.000	1338.097	0.142	9.180	1443.171	4126
Stab: 9 1/2"	0.980	9.500	2.813	NaN	306.264	NaN	10.160	1749.435	
TELE900	8.210	9.160	4.250	9.160	1943.643	0.347	18.370	3693.079	ZA90
Stab: 9 1/2"	0.840	9.500	2.813	NaN	262.512	NaN	19.210	3955.591	
SONICVISION9	7.440	9.000	4.385	10.050	19232.316	0.216	26.650	23187.907	41250

Sensor offsets			
TOOLNAME	Sensor	[To Bit]	[To Reference]
ARC9	Pressure	5.04 m	1.83 m
ARC9	Resistivity	5.75 m	1.12 m
ARC9	GR	5.80 m	1.07 m
TELE900	D&I	13.98 m	-2.35 m
SONICVISION9	Delta-T	23.45 m	-0.37 m

TOOLNAME	Refpoint	[To Tool Btm]	[To Bit]
ARC9	ROP	3.61 m	6.87 m
TELE900	ROP	1.47 m	11.63 m
SONICVISION9	ROP	3.87 m	23.08 m

SLB D&M SQ-S004 - Calibration; D&M SQ S016 - Depth Control

Schlumberger

Hookload Sensor Calibration

Job Information

Date	7-Sep-09	Client	Beach Petroleum Ltd
Job no.	09ASQ0029	Well Name	Spikey Beach1

Hookload Calibration Information

Hookload Sensor Type	CLT-DA
Hookload Sensor Serial Number	1009
Date of Calibration	7/9/2009
Time of Calibration	18:40
Calibration performed by	Marganda Sihite

Hookload Calibration to be performed as often as required while drilling is going on.

Notes

1. Calibration will be based on driller's hookload gauge

Snapshot of calibration from acquisition computer

cal Analog Sensor Calibration Panel

Hookload | Pump Pressure | Surface Torque | Surface Amps | Surface Rpm's | Analog DWE | Analog GTE |

Offset (A0) Gain (A1)

Working [-393.810] 309.5238 Default

Current [-393.810] 309.5238

HookLoad 111.50 klbf 1.63 V

Graph: HookLD vs V

Legend: Working Calibration (red), Current Calibration (blue)

User Input Data:

	klbf	V
1	120.00	1.660
2	250.00	2.080
3		
4		
5		
6		

Buttons: Take Point, Delete Point, Clear All

Buttons: Calculate, View History, Accept, Exit, Help

Depth Sensor Calibrations

Procedure Document:

D&M-SQ-S016 D&M Depth Control Standard

Job Information

Date	7-Sep-09	Client	Beach Petroleum Ltd
Job no.	09ASQ0029	Well Name	Spikey Beach1

Depth Calibration Screen Shot

Calibration type	Manual	DWC Serial No.	2681
Date of Last Drill Line Slip & Cut	7-Sep-09	Calibration Status	Valid
Date of Last Calibration	7-Sep-09		

Calibration must be done after every Slip&Cut operation

Snapshot of calibration from acquisition computer

Drawworks Calibration Panel [?] [X]

6 Wire Calibration | 4 Wire Calibration | Manual | Interactive Manual

Offset: m WL Pos: m Block Pos: m

Counts: Wrap No: On/Off Status: **MANUAL**

o Computed Calibration
o Current Calibration

User Input Data

	Block Pos	PPM
1	<input type="text" value="-100"/>	<input type="text" value="325"/>
2	<input type="text" value="100"/>	<input type="text" value="325"/>
3	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>

Take Pt Clear Calculate Accept Reject Exit Help

19:56:33 COMMENT:Set to Manual Mode Calibration

D&M SQ S016 - Depth Control Standard

Depth Tracking Data Sheet for floaters

Well / Field	Spikey Beach1
Client	Beach Petroleum Ltd
Hole Section	17.5in
Job Number	09ASQ0029
BHA #	1

Date in	07-Sep-09
Date out	08-Sep-09
Start Depth	146 m
End Depth	816 m
BHA Length	226.6 m

Stand #	Single length	Stand Length	DP Length	DP + BHA	Stick-up	Tide Correction	Expected KD Depth	IDEAL KD Depth	Depth Offset	Deeper/Shallower	Date/ Time	Comments
1	9.59	28.82	9.59	236.19			236.19					
	9.63		19.22	245.82			245.82					
	9.60		28.82	255.42			255.42					
2	9.57	28.83	38.39	264.99			264.99					
	9.65		48.04	274.64			274.64					
	9.61		57.65	284.25			284.25	283.48	-0.77	Shallow	2:15 AM	9/8/2009 0:00
3	9.60	28.76	67.25	293.85			293.85					
	9.54		76.79	303.39			303.39					BD+0.5@2:47 AM
	9.62		86.41	313.01			313.01	312.53	-0.48	Shallow	2:59 AM	9/8/2009
4	9.66	28.99	96.07	322.67			322.67					
	9.68		105.75	332.35			332.35					BD-0.4@3:30 AM
	9.65		115.40	342.00			342.00	342.35	0.35	Deep	3:40 AM	9/8/2009
5	9.53	28.70	124.93	351.53			351.53					
	9.57		134.50	361.10			361.10					
	9.60		144.10	370.70			370.70					
6	9.59	28.68	153.69	380.29			380.29					
	9.56		163.25	389.85			389.85					
	9.53		172.78	399.38			399.38					
7	9.65	28.83	182.43	409.03			409.03	409.67	0.64	Deep	5:32 AM	9/8/2009
	9.62		192.05	418.65			418.65					BD-0.5@ 5:43 AM
	9.56		201.61	428.21			428.21	428.78	0.57	Deep	5:48 AM	40064.00
8	9.63	28.75	211.24	437.84			437.84					
	9.57		220.81	447.41			447.41					bd-0.5@6:17 AM
	9.55		230.36	456.96			456.96	457.31	0.35	Deep	6:25 AM	9/8/2009
9	9.58	28.66	239.94	466.54			466.54					
	9.50		249.44	476.04			476.04					BD-0.5@6:51 AM
	9.58		259.02	485.62			485.62	486.39	0.77	Deep	6:59 AM	9/8/2009
10	9.60	28.82	268.62	495.22			495.22					
	9.57		278.19	504.79			504.79					bd-0.5@7:20 AM
	9.65		287.84	514.44			514.44	515.13	0.69	Deep		
11	9.67	28.88	297.51	524.11			524.11					
	9.67		307.18	533.78			533.78					
	9.54		316.72	543.32			543.32					
12	9.58	28.69	326.30	552.90			552.90					
	9.57		335.87	562.47			562.47					bd-0.5@8:34 AM
	9.54		345.41	572.01			572.01	572.05	0.04	Deep	8:44 AM	9/8/2009
13	9.63	28.85	355.04	581.64			581.64					
	9.64		364.68	591.28			591.28					
	9.58		374.26	600.86			600.86					

14	9.67	28.77	383.93	610.53			610.53					
	9.60		393.53	620.13			620.13					
	9.50		403.03	629.63			629.63	630.01	0.38	Deep	9:37 AM	9/8/2009
15	9.65	28.69	412.68	639.28			639.28					
	9.55		422.23	648.83			648.83					BD-0.3@10:11 AM
	9.49		431.72	658.32			658.32	658.72	0.40	Deep	10:14 AM	9/8/2009
16	9.60	28.84	441.32	667.92			667.92					
	9.59		450.91	677.51			677.51					
	9.65		460.56	687.16			687.16	687.26	0.10	Deep	10:44 AM	9/8/2009
17	9.60	28.76	470.16	696.76			696.76					
	9.51		479.67	706.27			706.27					
	9.65		489.32	715.92			715.92					
18	9.55	28.62	498.87	725.47			725.47					
	9.49		508.36	734.96			734.96					
	9.58		517.94	744.54			744.54					
19	9.61	28.74	527.55	754.15			754.15					
	9.56		537.11	763.71			763.71					
	9.57		546.68	773.28			773.28	773.18	-0.10	Shallow		
20	9.69	28.90	556.37	782.97			782.97	782.81	-0.16	Shallow	12:27 PM	9/8/2009
	9.68		566.05	792.65			792.65					
	9.53		575.58	802.18			802.18	801.53	-0.65	Shallow		
21	9.60	28.70	585.18	811.78			811.78					
	9.65		594.83	821.43			821.43					
	9.45		604.28	830.88			830.88					

SLB D&M - SQ-S016

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Post-Job Depth Control Report

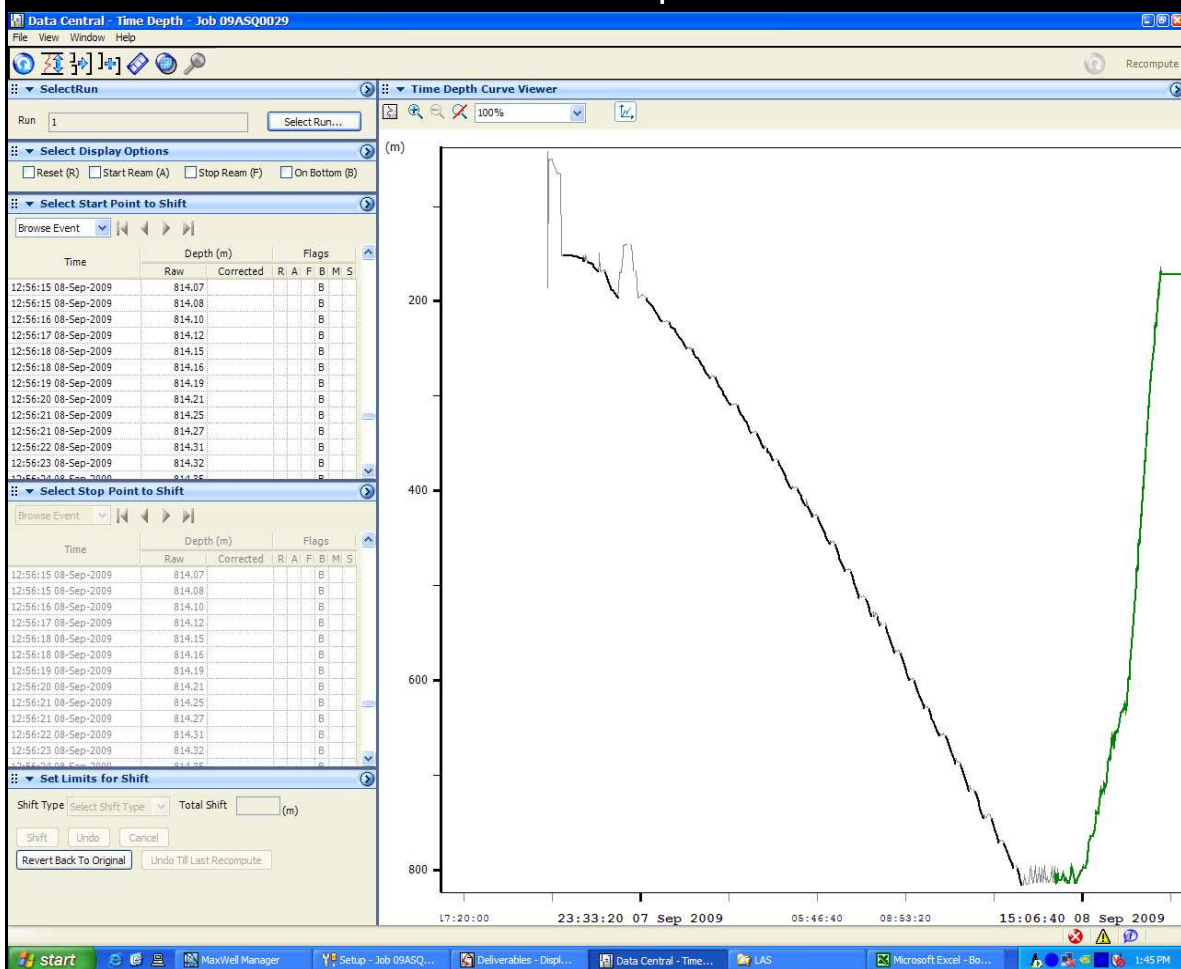
Job Information

Client	Beach Petroleum Ltd
Well Name / Field	Spikey Beach1
Job no.	09ASQ0029

Hole Section Information

Date	08-Sep-09
Start Depth	149.4 m
End Depth	816 m

IDEAL DTM Corrected Depth vs. Time Plot



Schlumberger Private

Insert the Plot here from IDEAL RM Utilities Corrected vs. Depth from bin_db file

Depth Equipments Used for the Run		
Equipment Type	Serial no.	Remarks
Geograph	2681	
Heave Compensator		
Drawworks Encoder	9002	
Clamp Line Tensiometer	1009	

Editing performed on raw depth and tool dump files

RAW DEPTH VS. TIME FILES		
Run no.	Edited	Editing done
1	None	

TOOL DUMP FILE		
Run no.	Edited	Editing done
1	None	

Cell Manager:	Marganda Sihite
Engineer Performing Edits:	Marganda Sihite

Depth Acquisition Equipment Details

DEPTH ENCODER SYSTEM (DES): Driven directly by the drawworks drum. For floaters a Heave Compensation Assembly shall be used in addition to the DES. In the event that this can not be done a Geograph may be used after prior approval from Drilling & Measurements management.

DEPTH WIRE CALIBRATOR (DWC): Provides calibration data to correct the DES signal with respect to true block displacement. In the event of such an equipment not available at the rigsite, a manual calibration is performed after prior approval from the Drilling & Measurements management.

CLAMP LINE TENSIO METER (CLT): Used to automate the depth tracking by providing a link between the traveling block motion and the bit motion.

SLB D&M - SQ-S016

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Pre-Job Depth Control Report

Job Information

Client	Beach Petroleum Ltd
Well Name / Field	Spikey Beach1
Job no.	09ASQ0029
Run #	2
Date in	10-Sep-09

Hole Section Information

Hole Size	12.25in
Depth Reference	Driller's Depth
Source of Depth	Driller's Tally
Depth System	Geolograph + Heave Compensation
Permanent Datum	MSL

Expected Casing Shoe 805.8

Planned TD / Casing Point 2100

Zones of Interest (As per Geologist Advice)

UEVCM formation 1440 m TVD. M.Diversus formation 1800 m TVD

Depth Equipment Calibration Information

Drawworks Encoder Calibration

Standard Block Height Calibration Equipment is DWC	
DWE Serial No.	2681
Date of Last Drill Line Slip & Cut	7-Sep-09
Date of Last Calibration	10-Sep-09
Calibration Status	Valid

Calibration Data

Data Point	BPOS	PPM
1	-100	325
2	100	325
3		
4		

Clamp Line Tensiometer Calibration

CLT Serial No.	1009
Date of Last Calibration	10-Sep-09
Calibration Status	Valid

Calibration Data

Data Point	klbf	V
1	120	1.66
2	250	2.08

Comments (Include Exemption details, if any):

Schlumberger Private

BHA Report from acquisition computer

12-25 in Section_1.txt - Notepad

File Edit Format View Help

MAXWELL SYSTEM INFORMATION

TOOLSTRING DESCRIPTION:12-25 in Section

TOOLNAME	LENGTH m	OD in	ID in	MAX_OD in	WEIGHT kg	VOLUME m3	CUMM_LEN m	CUMM_WT kg	SERIAL_NUMBER
Bit: 12 1/4"	0.380	8.500	3.750	12.250	88.507	NaN	0.380	88.507	7012700
Motor	11.320	9.625	0.000	NaN	0.000	NaN	11.700	88.507	05954
Stabilizer	1.820	9.250	4.000	NaN	0.000	NaN	13.520	88.507	207A189
ARC8	6.240	8.250	5.750	9.100	1156.661	0.105	19.760	1245.167	1216
Stab: 9"	0.910	9.000	2.813	NaN	284.388	NaN	20.670	1529.555	ASQ9029
TELE825	8.060	8.410	4.250	8.410	1762.206	0.287	28.730	3291.762	ZH22
Stab: 9"	0.850	9.000	2.813	NaN	265.637	NaN	29.580	3557.399	AWA7261
SONICVISIONS8	6.860	8.400	4.385	9.130	15422.141	0.179	36.440	18979.540	42784
SADN8	9.170	12.000	4.100	12.000	2086.525	0.500	45.610	21066.065	43225

| Sensor offsets |

TOOLNAME	Sensor	[To Bit]	[To Reference]
ARC8	Pressure	15.66 m	1.83 m
ARC8	Resistivity	16.37 m	1.12 m
ARC8	GR	16.42 m	1.07 m
TELE825	D&I	24.45 m	-2.35 m
SONICVISIONS8	Delta-T	33.83 m	-0.40 m
SADN8	UltraSonic	39.60 m	0.95 m
SADN8	Density	39.77 m	0.78 m
SADN8	Neutron	41.75 m	-1.21 m

TOOLNAME	Refpoint	[To Tool Btm]	[To Bit]
ARC8	ROP	3.97 m	17.49 m
TELE825	ROP	1.43 m	22.10 m
SONICVISIONS8	ROP	3.85 m	33.43 m
SADN8	ROP	4.11 m	40.55 m

SLB D&M SQ-S004 - Calibration; D&M SQ S016 - Depth Control

Schlumberger

Hookload Sensor Calibration

Job Information

Date	7-Sep-09	Client	Beach Petroleum Ltd
Job no.	09ASQ0029	Well Name	Spikey Beach1

Hookload Calibration Information

Hookload Sensor Type	CLT-DA
Hookload Sensor Serial Number	1009
Date of Calibration	10/9/2009
Time of Calibration	22:30
Calibration performed by	Marganda Sihite

Hookload Calibration to be performed as often as required while drilling is going on.

Notes

1. Calibration will be based on driller's hookload gauge

Snapshot of calibration from acquisition computer

cal

Analog Sensor Calibration Panel

?

X

Hookload

Pump Pressure

Surface Torque

Surface Amps

Surface Rpm's

Analog DWE

Analog GTE

Offset (A0)

Gain (A1)

Working

-336.158

273.3119

Default

Current

-336.158

273.3119

HookLoad

203.68

klbf

1.98

V

400

300

200

100

0

HookLD

0.00

2.00

4.00

6.00

8.00

V

o Working Calibration

o Current Calibration

User Input Data

HookLoad

klbf

V

1

120

1.669

2

205

1.98

3

4

5

6

Take Point

Delete Point

Clear All

Calculate

View History

Accept

Exit

Help

1:29:56 Note: CAL ACCEPTED: Work Coefficients copied to Current

Depth Sensor Calibrations

Procedure Document:

D&M-SQ-S016 D&M Depth Control Standard

Job Information

Date	10-Sep-09	Client	Beach Petroleum Ltd
Job no.	09ASQ0029	Well Name	Spikey Beach1

Depth Calibration Screen Shot

Calibration type	Manual	DWC Serial No.	2681
Date of Last Drill Line Slip & Cut	9-Jul-09	Calibration Status	Valid
Date of Last Calibration	10-Sep-09		

Calibration must be done after every Slip&Cut operation

Snapshot of calibration from acquisition computer

Drawworks Calibration Panel [?] [X]

6 Wire Calibration | 4 Wire Calibration | Manual | Interactive Manual

Offset: m WL Pos: m Block Pos: m

Counts: Wrap No: On/Off Status: **MANUAL**

pulses/m

590

480

370

260

150

0 12 24 36 48

Block position(m)

o Computed Calibration

o Current Calibration

User Input Data

	Block Pos	PPM
1	<input type="text" value="-100"/>	<input type="text" value="325"/>
2	<input type="text" value="100"/>	<input type="text" value="325"/>
3	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>

19:56:33 COMMENT:Set to Manual Mode Calibration

Exemption Request Reference

D&M SQ S016 - Depth Control Standard

Depth Tracking Data Sheet for floaters

Well / Field	Spikey Beach1
Client	Beach Petroleum Ltd
Hole Section	12.25in
Job Number	09ASQ0029
BHA #	2

Date in	10-Sep-09
Date out	14-Sep-09
Start Depth	816 m
End Depth	2100 m
BHA Length	213.9 m

Stand #	Single length	Stand Length	DP Length	DP + BHA	Stick-up	Tide Correction	Expected KD Depth	IDEAL KD Depth	Depth Offset	Deeper/Shallower	Date/ Time	Comments
1	9.59	28.82	9.59	223.49			223.49					
	9.63		19.22	233.12			233.12					
	9.60		28.82	242.72			242.72					
2	9.57	28.83	38.39	252.29			252.29					
	9.65		48.04	261.94			261.94					
	9.61		57.65	271.55			271.55					
3	9.60	28.76	67.25	281.15			281.15					
	9.54		76.79	290.69			290.69					
	9.62		86.41	300.31			300.31					
4	9.66	28.99	96.07	309.97			309.97					
	9.68		105.75	319.65			319.65					
	9.65		115.40	329.30			329.30					
5	9.53	28.70	124.93	338.83			338.83					
	9.57		134.50	348.40			348.40					
	9.60		144.10	358.00			358.00					
6	9.59	28.68	153.69	367.59			367.59					
	9.56		163.25	377.15			377.15					
	9.53		172.78	386.68			386.68					
7	9.65	28.83	182.43	396.33			396.33					
	9.62		192.05	405.95			405.95					
	9.56		201.61	415.51			415.51					
8	9.63	28.75	211.24	425.14			425.14					
	9.57		220.81	434.71			434.71					
	9.55		230.36	444.26			444.26					
9	9.58	28.66	239.94	453.84			453.84					
	9.50		249.44	463.34			463.34					
	9.58		259.02	472.92			472.92					
10	9.60	28.82	268.62	482.52			482.52					
	9.57		278.19	492.09			492.09					
	9.65		287.84	501.74			501.74					
11	9.67	28.88	297.51	511.41			511.41					
	9.67		307.18	521.08			521.08					
	9.54		316.72	530.62			530.62					
12	9.58	28.69	326.30	540.20			540.20					
	9.57		335.87	549.77			549.77					
	9.54		345.41	559.31			559.31					

13	9.63	28.85	355.04	568.94			568.94					
	9.64		364.68	578.58			578.58					
	9.58		374.26	588.16			588.16					
14	9.67	28.77	383.93	597.83			597.83					
	9.60		393.53	607.43			607.43					
	9.50		403.03	616.93			616.93					
15	9.65	28.69	412.68	626.58			626.58					
	9.55		422.23	636.13			636.13					
	9.49		431.72	645.62			645.62					
16	9.60	28.84	441.32	655.22			655.22					
	9.59		450.91	664.81			664.81					
	9.65		460.56	674.46			674.46					
17	9.60	28.76	470.16	684.06			684.06					
	9.51		479.67	693.57			693.57					
	9.65		489.32	703.22			703.22					
18	9.55	28.62	498.87	712.77			712.77					
	9.49		508.36	722.26			722.26					
	9.58		517.94	731.84			731.84					
19	9.61	28.74	527.55	741.45			741.45					
	9.56		537.11	751.01			751.01					
	9.57		546.68	760.58			760.58					
20	9.69	28.90	556.37	770.27			770.27					
	9.68		566.05	779.95			779.95					
	9.53		575.58	789.48	-0.10		789.58	789.78	0.20	Deep	9/11/2009 5:20	
21	9.60	28.70	585.18	799.08			799.08					
	9.65		594.83	808.73			808.73					
	9.45		604.28	818.18			818.18					
22	9.61	28.88	613.89	827.79			827.79					
	9.64		623.53	837.43			837.43					
	9.63		633.16	847.06			847.06					
23	9.66	28.82	642.82	856.72			856.72					
	9.63		652.45	866.35			866.35					
	9.53		661.98	875.88			875.88	874.97	-0.91	Shallow		BD +0.5
24	9.65	28.97	671.63	885.53			885.53					
	9.65		681.28	895.18			895.18					
	9.67		690.95	904.85			904.85					
25	9.62	28.83	700.57	914.47			914.47					
	9.59		710.16	924.06			924.06					
	9.62		719.78	933.68			933.68	933.48	-0.20	Shallow		
26	9.59	28.76	729.37	943.27			943.27					
	9.57		738.94	952.84			952.84					
	9.60		748.54	962.44	0.20		962.24	962.56	0.32	Deep		TOOL JOINT
27	9.67	29.03	758.21	972.11			972.11					
	9.68		767.89	981.79			981.79					
	9.68		777.57	991.47	2.00	0.40	989.07	989.27	0.20	Deep	11:20:00 AM	11/9/2009
28	9.66	28.84	787.23	1001.13			1001.13					
	9.58		796.81	1010.71			1010.71					
	9.60		806.41	1020.31	2.00	0.50	1017.81	1017.80	-0.01	Shallow	11:40:00 AM	11/9/2009
29	9.53	28.79	815.94	1029.84			1029.84					
	9.60		825.54	1039.44			1039.44					
	9.66		835.20	1049.10	2.00	0.50	1046.60	1046.66	0.06	Deep	12:00:00 PM	11/9/2009

30	9.63	28.76	844.83	1058.73			1058.73					
	9.50		854.33	1068.23			1068.23					
	9.63		863.96	1077.86	2.00	0.60	1075.26	1074.88	-0.38	Shallow	12:25	BD -0.3m
31	9.60	28.77	873.56	1087.46			1087.46					
	9.61		883.17	1097.07			1097.07					
	9.56		892.73	1106.63	2.00	0.60	1104.03	1103.36	-0.67	Shallow		
32	9.62	28.85	902.35	1116.25			1116.25					
	9.64		911.99	1125.89			1125.89					
	9.59		921.58	1135.48	2.00	0.60	1132.88	1132.20	-0.68	Shallow	1:13 PM	BD+0.3 m
33	9.66	28.79	931.24	1145.14			1145.14					
	9.63		940.87	1154.77			1154.77					
	9.50		950.37	1164.27	2.00	0.50	1161.77	1161.22	-0.55	Shallow	1:30 PM	BD+0.3 m
34	9.62	28.86	959.99	1173.89			1173.89					
	9.60		969.59	1183.49			1183.49					
	9.64		979.23	1193.13	2.00	0.50	1190.63	1190.65	0.02	Deep		
35	9.66	28.82	988.89	1202.79			1202.79					
	9.51		998.40	1212.30			1212.30					
	9.65		1008.05	1221.95	2.00	0.50	1219.45	1218.82	-0.63	Shallow	2:12 PM	BD+0.3 m
36	9.52	28.75	1017.57	1231.47			1231.47					
	9.60		1027.17	1241.07			1241.07					
	9.63		1036.80	1250.70	2.00	0.45	1248.25	1247.85	-0.40	Shallow	2:45 PM	BD+0.2 m
37	9.65	28.81	1046.45	1260.35			1260.35					
	9.56		1056.01	1269.91			1269.91					
	9.60		1065.61	1279.51	2.00	0.30	1277.21	1276.86	-0.35	Shallow	3:20 PM	BD+0.2 m
38	9.64	28.86	1075.25	1289.15			1289.15					
	9.69		1084.94	1298.84			1298.84					
	9.53		1094.47	1308.37	2.00	0.20	1306.17	1306.08	-0.09	Shallow	3:51 PM	9/11/2009
39	9.63	28.76	1104.10	1318.00			1318.00					
	9.59		1113.69	1327.59			1327.59					
	9.54		1123.23	1337.13	2.00	0.00	1335.13	1335.23	0.10	Deep	4:42 PM	9/11/2009
40	9.66	28.73	1132.89	1346.79			1346.79					
	9.57		1142.46	1356.36			1356.36					
	9.50		1151.96	1365.86	2.00	-0.20	1364.06	1364.52	0.46	Deep	5:29 PM	bd-02
41	9.64	28.83	1161.60	1375.50			1375.50					
	9.57		1171.17	1385.07			1385.07					
	9.62		1180.79	1394.69	2.00	-0.20	1392.89	1392.38	-0.51	Shallow	6:08 PM	BD+0.2 m
42	9.67	28.89	1190.46	1404.36			1404.36					
	9.62		1200.08	1413.98			1413.98					
	9.60		1209.68	1423.58	2.00	-0.50	1422.08	1423.33	1.25	Deep	7:15 PM	8:02 PM
43	9.54	28.74	1219.22	1433.12			1433.12					
	9.64		1228.86	1442.76			1442.76					
	9.56		1238.42	1452.32		-0.50	1452.82	1454.20	1.38	Deep	8:02 PM	
44	9.61	28.92	1248.03	1461.93			1461.93					
	9.65		1257.68	1471.58			1471.58					
	9.66		1267.34	1481.24			1481.24					
45	9.64	28.90	1276.98	1490.88			1490.88					
	9.63		1286.61	1500.51			1500.51					BD-0.7@12:01 AM
	9.63		1296.24	1510.14		-0.10	1510.24	1511.50	1.26	Deep	12:14 AM	9/12/2009
46	9.53	28.82	1305.77	1519.67			1519.67					
	9.63		1315.40	1529.30			1529.30					BD-0.7@1:31 AM
	9.66		1325.06	1538.96		0.05	1538.91	1538.71	-0.20	Shallow	1:39 AM	9/12/2009

47	9.50	28.76	1334.56	1548.46			1548.46					
	9.63		1344.19	1558.09			1558.09					
	9.63		1353.82	1567.72			1567.72	1567.72	0.00	On Depth		Reset bit depth
48	9.61	28.91	1363.43	1577.33			1577.33					
	9.72		1373.15	1587.05			1587.05					
	9.58		1382.73	1596.63		0.05	1596.58	1596.24	-0.34	Shallow	5:36 AM	9/12/2009
49	9.61	28.68	1392.34	1606.24			1606.24					
	9.52		1401.86	1615.76			1615.76					
	9.55		1411.41	1625.31		-0.20	1625.51	1624.87	-0.64	Shallow	7:08 AM	9/12/2009
50	9.53	28.75	1420.94	1634.84			1634.84					
	9.61		1430.55	1644.45			1644.45					
	9.61		1440.16	1654.06			1654.06					
51	9.63	28.89	1449.79	1663.69			1663.69					
	9.67		1459.46	1673.36			1673.36					
	9.59		1469.05	1682.95	2.00	0.00	1680.95	1681.07	0.12	Deep	9/12/2009 0:00	10:19 AM
52	9.65	28.85	1478.70	1692.60			1692.60					
	9.58		1488.28	1702.18			1702.18					
	9.62		1497.90	1711.80	2.00	0.30	1709.50	1709.43	-0.07	Shallow	9/12/2009 0:00	11:49 AM
53	9.62	28.74	1507.52	1721.42			1721.42					
	9.54		1517.06	1730.96			1730.96					
	9.58		1526.64	1740.54			1740.54					
54	9.58	28.76	1536.22	1750.12			1750.12					
	9.62		1545.84	1759.74			1759.74					
	9.56		1555.40	1769.30			1769.30					
55	9.60	28.83	1565.00	1778.90			1778.90					
	9.60		1574.60	1788.50			1788.50					
	9.63		1584.23	1798.13		0.40	1797.73	1796.80	-0.93	Shallow		
56	9.66	28.88	1593.89	1807.79			1807.79					
	9.60		1603.49	1817.39		0.10	1817.29					
	9.62		1613.11	1827.01		0.00	1827.01	1827.25	0.24	Deep	5:57 PM	
57	9.47	28.63	1622.58	1836.48			1836.48					
	9.56		1632.14	1846.04			1846.04					
	9.60		1641.74	1855.64		-0.50	1856.14	1856.65	0.51	Deep	7:55 PM	bd-0.5@7:55 PM
58	9.63	28.85	1651.37	1865.27			1865.27					
	9.62		1660.99	1874.89			1874.89					
	9.60		1670.59	1884.49		-0.50	1884.99	1886.01	1.02	Deep	10:15 PM	9/12/2009
59	9.63	28.85	1680.22	1894.12			1894.12					
	9.60		1689.82	1903.72			1903.72					BD-0.5
	9.62		1699.44	1913.34		-0.30	1913.64	1914.64	1.00	Deep	12:05 AM	
60	9.59	28.84	1709.03	1922.93			1922.93					
	9.66		1718.69	1932.59			1932.59					
	9.59		1728.28	1942.18		0.00	1942.18	1941.96	-0.22	Shallow	2:02 AM	9/13/2009
61	9.58	28.69	1737.86	1951.76			1951.76					
	9.60		1747.46	1961.36			1961.36					BD+0.5@3:07 AM
	9.51		1756.97	1970.87		0.10	1970.77	1970.21	-0.56	Shallow	3:17 AM	9/13/2009
62	9.52	28.64	1766.49	1980.39			1980.39					
	9.51		1776.00	1989.90			1989.90					BD+0.5@4:15 AM
	9.61		1785.61	1999.51		0.10	1999.41	1998.83	-0.58	Shallow	4:28 AM	9/13/2009
63	9.59	28.78	1795.20	2009.10			2009.10					
	9.55		1804.75	2018.65			2018.65					
	9.64		1814.39	2028.29		0.10	2028.19	2028.06	-0.13	Shallow	5:40 AM	9/13/2009
64	9.52	28.66	1823.91	2037.81			2037.81					
	9.55		1833.46	2047.36			2047.36					
	9.59		1843.05	2056.95	2.00	0.00	2054.95	2054.65	-0.30	Shallow	6:43	9/13/2009
65	9.59	28.83	1852.64	2066.54			2066.54					
	9.66		1862.30	2076.20			2076.20					
	9.58		1871.88	2085.78			2085.78					

SLB D&M - SQ-S016

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Post-Job Depth Control Report

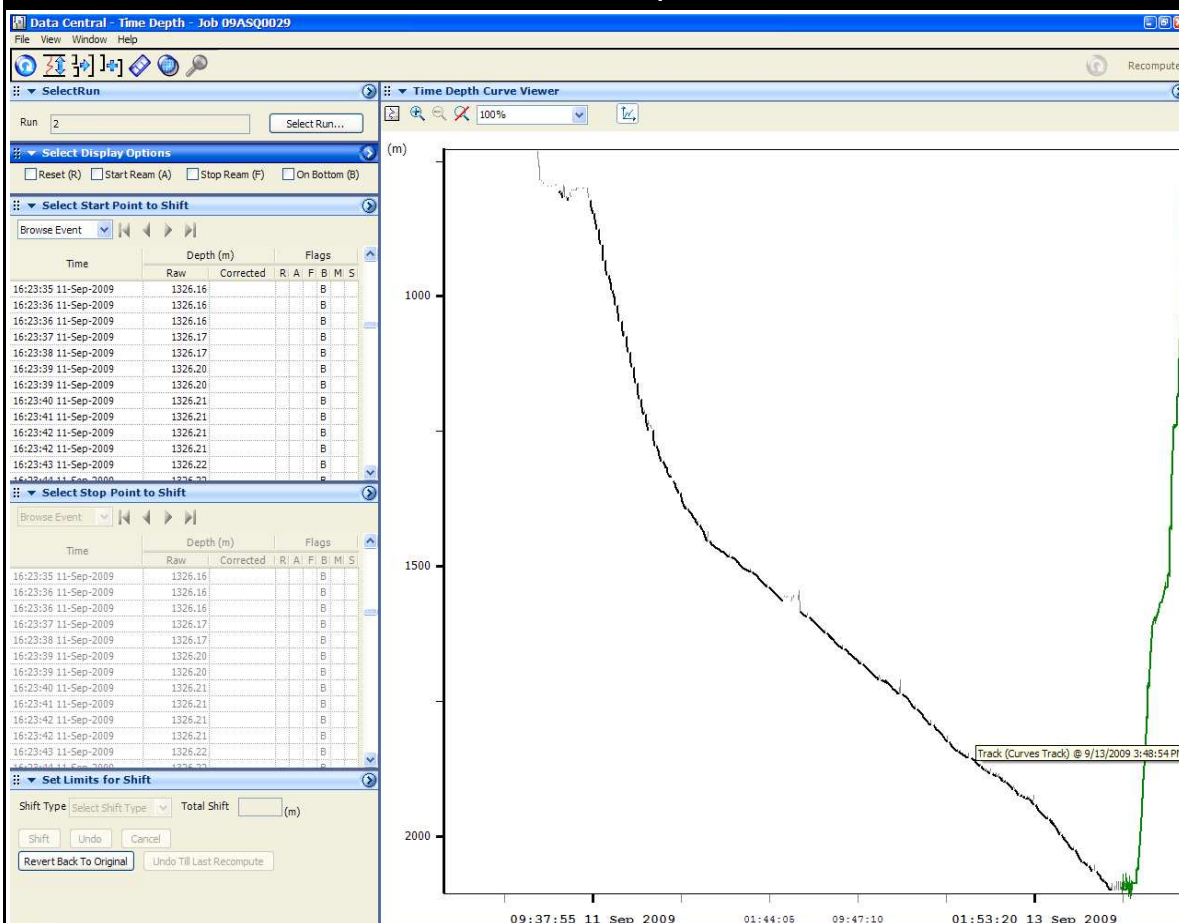
Job Information

Client	Beach Petroleum Ltd
Well Name / Field	Spikey Beach1
Job no.	09ASQ0029

Hole Section Information

Date	10-Sep-09
Start Depth	816 m
End Depth	2100 m

IDEAL DTM Corrected Depth vs. Time Plot



Insert the Plot here from IDEAL RM Utilities Corrected vs. Depth from bin_db file

Depth Equipments Used for the Run		
Equipment Type	Serial no.	Remarks
Geolograph	2681	
Heave Compensator		
Drawworks Encoder	9002	
Clamp Line Tensiometer	1009	



RAW DEPTH VS. TIME FILES		
Run no.	Edited	Editing done
1	none	

TOOL DUMP FILE		
Run no.	Edited	Editing done
1	none	

Cell Manager:	
Engineer Performing Edits:	

Depth Acquisition Equipment Details

DEPTH ENCODER SYSTEM (DES): Driven directly by the drawworks drum. For floaters a Heave Compensation Assembly shall be used in addition to the DES. In the event that this can not be done a Geolograph may be used after prior approval from Drilling & Measurements management.

DEPTH WIRE CALIBRATOR (DWC): Provides calibration data to correct the DES signal with respect to true block displacement. In the event of such an equipment not available at the rigsite, a manual calibration is performed after prior approval from the Drilling & Measurements management.

CLAMP LINE TENSIO METER (CLT): Used to automate the depth tracking by providing a link between the traveling block motion and the bit motion.

B. Calibration Report

1. Calibration Records

The sensors calibration was performed as per D&M-SQ-S004 Calibration Standard. Below are the calibration records for all the sensors.

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Surface Sensor Calibration

D&M-SQ-S004 D&M Calibration Standard

Run Information

Job no.	09ASQ0029	
Well Number	Spikey Beach 1	IDEAL Version 14_0c_14
Field	Exploration	HSPM Version 14_0c_03

Calibration Information

Type of Measurement	Sensor Type	Serial Number	Calibration Date	Calibration Time
Hookload	CLT-DA	1009	7-Sep-09	18:40
Calibration Reference Source	Calibration reference is drillers hook load gauge			

cal Analog Sensor Calibration Panel

Hookload | Pump Pressure | Surface Torque | Surface Amps | Surface Rpm's | Analog DWE | Analog GTE

Offset (A0) Gain (A1)

Working [-393.810] 309.5238 Default

Current [-393.810] 309.5238

HookLoad 111.50 klbf 1.63 V

Graph: HookLD vs V. Legend: Working Calibration (red), Current Calibration (blue).

User Input Data:

	HookLoad klbf	V
1	120.00	1.680
2	250.00	2.080
3		
4		
5		
6		

Take Point
Delete Point
Clear All

Calculate View History Accept Exit Help

Schlumberger Private

Schlumberger

Surface Sensor Calibration

D&M-SQ-S004 D&M Calibration Standard

Run Information

Job no.	09ASQ0029	
Well Number	Spikey Beach 1	IDEAL Version 14_0c_14
Field	Exploration	HSPM Version 14_0c_03

Calibration Information

Type of Measurement	Sensor Type	Serial Number	Calibration Date	Calibration Time
Pump Pressure	SPT-HA	2353699	7-Sep-09	18:50
Calibration Reference Source	Drillers console pump pressure indicator			

cal Analog Sensor Calibration Panel

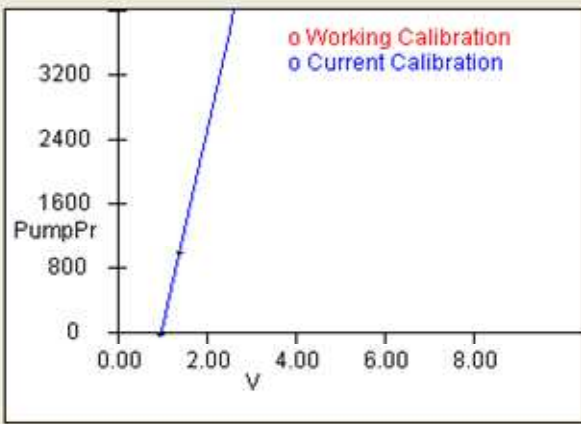
Hookload | Pump Pressure | Surface Torque | Surface Amps | Surface Rpm's | Analog DWE | Analog GTE

Offset (A0) Gain (A1)

Working -2456.790 2469.1358 Default

Current -2456.790 2469.1358

Pump Pressure 23.07 psi 1.00 V



User Input Data

	Pump Pressure psi	V
1	0	0.995
2	1000	1.40
3		
4		
5		
6		

Take Point
Delete Point
Clear All

Calculate View History Accept Exit Help

C. SQ Issues

1. **SQ Issues**

There is no SQ issue during the job.

Appendix 5: Mudlogging End of Well Report



FINAL WELL REPORT

Beach Petroleum Ltd

Spikey Beach-1

05 – 15 September 2009

by

BAKER HUGHES INTEQ

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



Spikey Beach-1

Final Well Report

Section 1	Well Summary
Section 2	Drilling and Engineering
	2.1 Bit Run Summaries
	2.2 Casing, Cementing and Suspension Summaries
Section 3	Geology and Shows
	3.1 Geology Summary and Shows
	3.2 Sampling Summary and Record of Distribution
Section 4	Pressure Evaluation
	4.1 Pore Pressure Evaluation
	4.2 Fracture Pressure Evaluation
Tables	1 - Bit Table
	2 - Bit Hydraulics Table
	3 - Time Depth Curve
	4 – Survey Report
Appendices	
	A - Formation Evaluation Log 1 : 500
	B - Gas Ratio Plot 1 : 500
	C - Pressure Evaluation Plot 1 : 1000
	D - Drilling Data Plot 1 : 1000

SECTION 1

WELL SUMMARY

1 Well Data Summary

Well Name	Spikey Beach-1
Rig Name:	Ocean Patriot
Rig Type:	Semi-submersible
Drilling Contractor:	Diamond Offshore
Drilling Datum:	Rotary Table
RT to AHD:	21.5m
RT to Seabed:	95.5 mMDRT
Surface Coordinates:	Lat 40° 28' 53.879" S Long 145° 52' 24.706" E
Grid Coordinates: (MGA Zone 55)	E 404 522.80m N 5 518 174.63m
Block:	T / 38P
Well Type:	Exploration
Spud Date:	05 September 2009
Spud Depth:	95.5 mMDRT
Total Depth:	2100.0 mMDRT / 2099.9 mTVDRT
TD Date:	13 September 2009
Well Status:	Plug and Abandon
Baker Hughes INTEQ Crew:	
Data Engineers:	Sathiamorthy Subramanian, Yeong Chen Wong,
Logging Geologists:	Raman Dhanda, Rahul Gade
Sample Technicians:	James Bladen, Rashid Ashfaq

1.1 Well Summary

Baker Hughes INTEQ SLS provided formation evaluation, drill monitoring services for Spikey Beach-1 from 95.5 mMDRT, on 05 September 2009 to 2100.0 mMDRT / 2099.9. mTVDRT reached on 13 September 2009. Data was processed and stored using **Advantage version 2.10U3** software. All depths were measured depth below Rotary Table (mMDRT) referenced to Australian Height Datum (AHD) unless otherwise stated.

The Spikey Beach-1 prospect is located on the southwestern margin of the Pelican Trough in the south central Bass Basin. With well defined four-way dip closure and its position on the edge of the Pelican Trough, the structure presented itself as one of the best opportunities for a significant oil discovery to be made in the basin.

Spikey Beach-1 was designed as a vertical exploration well targeting as its primary objective, oil in the Upper Eastern View Group. Sandstones of the upper Eastern View Group are proven petroleum-bearing units, having been tested by the Cormorant-1 and Yolla-1 wells where the units comprised fine to coarse-grained sandstones of excellent reservoir quality.

The well was spudded at 95.5 mMDRT using a 660 mm (26") bit with a 914mm (36") hole opener. The 914mm (36") hole section was drilled from 95.5 to 155.0 mMDRT using sea water and pumping hi-vis pills as per program while returns were dumped to the sea-bed. After reaching section TD and the hole was circulated clean, the BHA was pulled out of the hole and the 762mm (30") casing was ran in hole. The 508mm (20") casing shoe was set at 151.4 mMDRT.

The 445mm (17-1/2") BHA was made up with MWD tools, then the shoe track and rat hole were drilled out to 155.0 mMDRT. The 445mm (17-1/2") hole was then drilled to 816.0 mMDRT pumping a 7.95m³ (50bbl) hi-vis pill at mid stand and stand down. The bit drilled from 119.0 mMDRT to section TD at 816.0 mMDRT. Two bottoms up were circulated before being displaced with 127.19m³ (800bbl) of PHG. A tight spot around 725.0 - 629.0 mMDRT was encountered while pulling out of the hole. The BHA was then pulled out of hole to surface. The 340mm (13-3/8") casing was then run in hole and the shoe was set at 805.8 mMDRT.

The 311mm (12-1/4") BHA was made up with a motor and MWD tools and was run to drill out the float collar, shoe track, float shoe, and 3.0m of new formation to 819.0 mMDRT. A Leak Off Test (LOT) was conducted with 1.08sg (9.0ppg) mud yielding 1.47sg (12.3ppg) EMW at 3171kPa (460psi). The bit continued drilling from 819.0 mMDRT to well TD at 2100.0 mMDRT. 31.80 m³ (200bbl) of hi-vis sweeps were pumped to circulate the well clean.

A Relog run of the Schlumberger MWD was done from 1606.0 to 1540.0 mMDRT before the bit was pulled out of the hole to surface.

Cement plug #1 was set from 1520.0 to 1370.0 mMDRT. Cement plug #2 was set across the 340mm (13-3/8") shoe from 850.0 to 700.0mMDRT while cement plug #3 was set from 215.0 to 115.0mMDRT.

SECTION 2

DRILLING & ENGINEERING

2.1 Drilling Summary

Spikey Beach-1 660mm (26") x 914mm (36") Hole Section 05 - 06 September 2009

Bit Run No. 1 Summary

Bit No.	NB1
Bit Size	660mm
Bit Type	Hughes CR1
Serial Number	6076124
Jets	3x20, 1x16
Depth In, mMDRT	95.5
Depth Out, mMDRT	155.0
Bit Grading	0-0-NO-A-0-I-NO-TD

Drilling Parameters

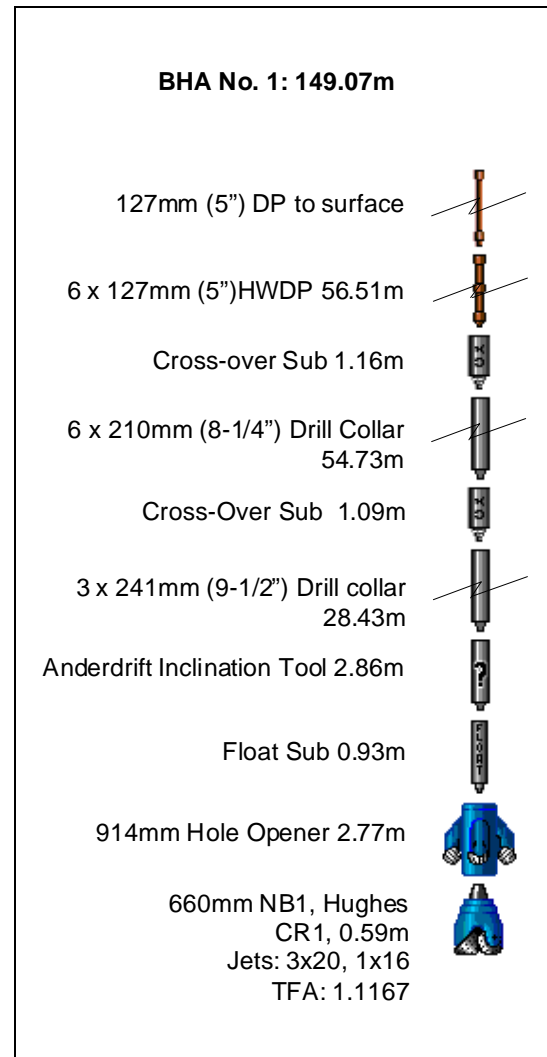
WOB klb	0.1	-	9.2
RPM Surf	40	-	70
Pump Pressure psi	97	-	1161
Flow In gpm	225	-	750
Torque kft.lb	0.2	-	3.5

Mud

Sea water / hi-vis sweep 1.05sg (8.8 ppg)

Lithology

Returns to Seabed



Spikey Beach-1
445mm (17-1/2") Hole Section
07 - 08 September 2009

Bit Run No. 2 Summary

Bit No.	NB2
Bit Size	406mm
Bit Type	Hughes GX-CIV
Serial Number	6079221
Jets	3x18, 1x16
Depth In, mMDRT	155.0
Depth Out, mMDRT	816.0
Bit Grading	1-1-WT-A-1-IN-NO-TD

Drilling Parameters

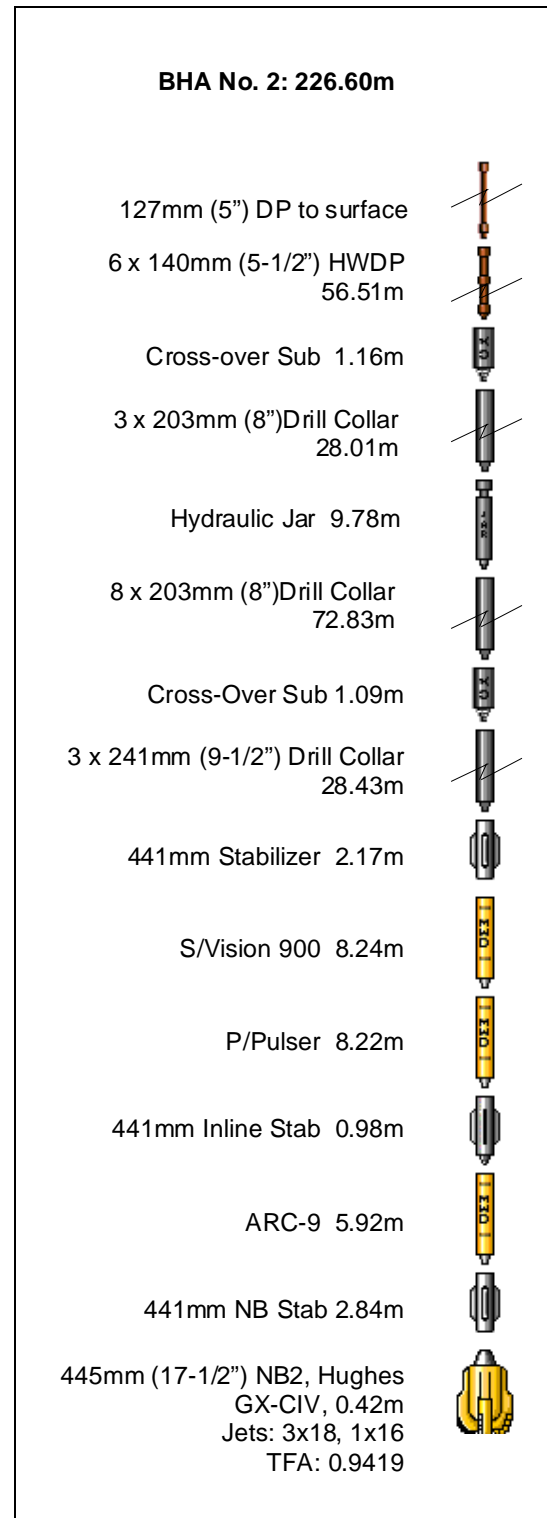
WOB klb	0.1	-	21.5
RPM Surf	58	-	159
Pump Pressure psi	697	-	3610
Flow In gpm	555	-	1197
Torque kft.lb	0.2	-	10.3

Mud

Sea water / hi-vis sweep	1.05sg (8.8 ppg)
--------------------------	------------------

Lithology

Returns to seabed



Spikey Beach-1
311mm (12-1/4") Hole Section
10 - 13 September 2009

Bit Run No. 3 Summary

Bit No.	NB 3
Bit Size	311mm (12-1/4")
Bit Type	Hughes HCM506ZX
Serial Number	7012700
Jets	3x16
Depth In, mMDRT	816.0
Depth Out, mMDRT	2100.0
Bit Grading	1-1-CT-N-X-1/16-ER-TD

Drilling Parameters

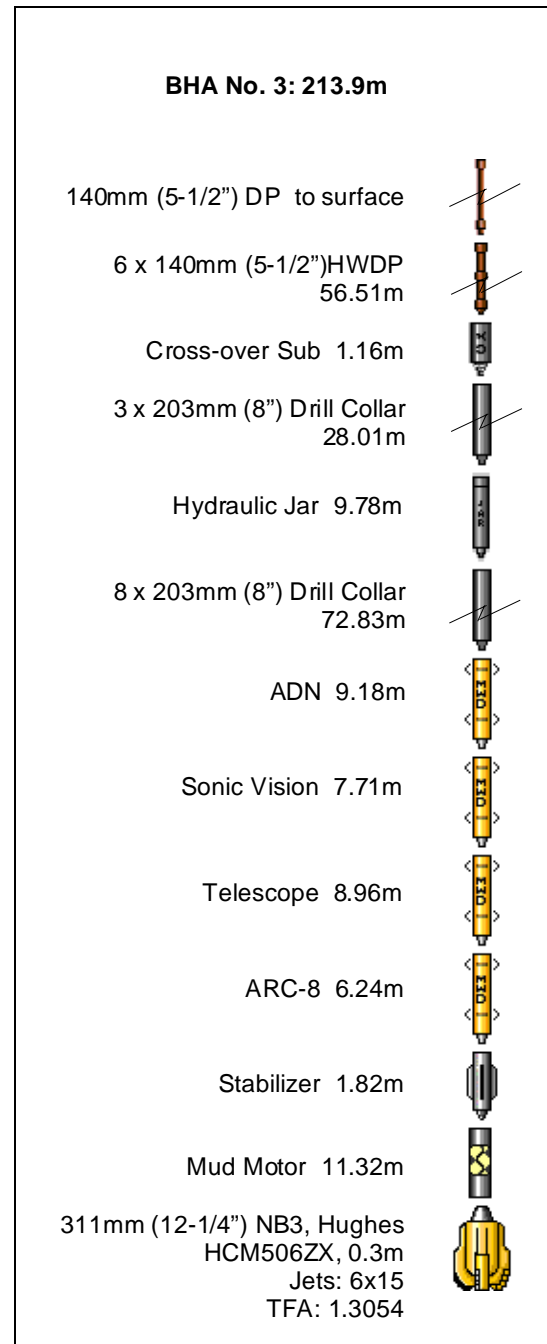
WOB klf	0.1	-	39.4
RPM Surf	19	-	202
Pump Pressure psi	1395	-	3603
Flow In gpm	698	-	1133
Torque kft.lb	0.2	-	20.3

Mud

KCl / Polymer 1.08 – 1.21sg (9.0 – 10.1ppg)

Lithology

Limestone, Calcareous, Carbonaceous
 Claystone, Calcareous Claystone, Claystone,
 Calcareous Siltstone, Siltstone, Coal, Sandstone



2.2 Casing / Cementing Summary

Spikey Beach-1 762mm (30") x 508mm (20") Casing 06 September 2009

Hole Size: 914 mm (36")
Depth: 155.0 mMDRT

762mm (30") x 508mm (20") Casing
Casing 762mm (30") Wellhead Housing
Joint
762mm (30") Intermediate X/O Joint
2 x 762mm (30") Intermediate Joint
762mm (30") x 508mm (20")
Crossover Shoe Joint
508mm (20") Float Shoe

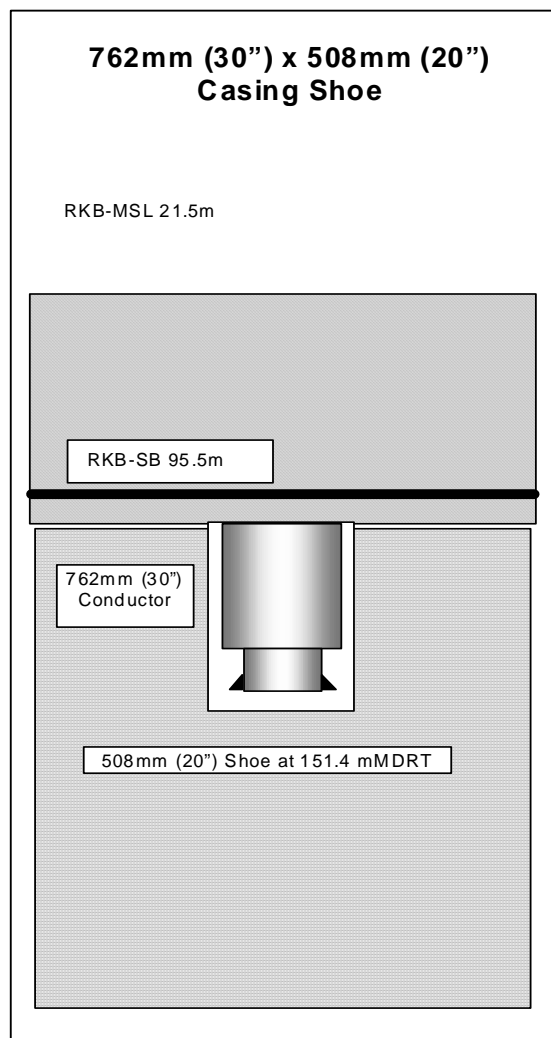
ID 711mm (28")
Weight 310kg/m (208.3lb/ft)
Grade X-52
Shoe Depth 151.4 mMDRT

Cement Details:

Type Class "G"
Weight 1.89sg (15.8ppg)
Volume 42.92m³ (270bbl)

Summary

A total of 5 joints of 762mm (30") casing were run in hole with the shoe set at 151.4 mMDRT. Upon setting the casing shoe, the hole was circulated clean prior to cementing. 1.59m³ (10bbl) of seawater spacer was pumped and cement lines were pressure tested to 6895kPa (1000psi), followed by pumping another 3.18m³ (20bbl) of seawater spacer. 42.92m³ (270bbl) of class "G" cement slurry of 1.89sg (15.8ppg) was pumped and was displaced with 3.34m³ (21bbl) of sea water. After circulating bottoms up, the cementing assembly were pulled out and laid down.



Spikey Beach-1
340mm (13-3/8") Casing
09 – 09 September 2009

Hole Size 445mm (17-1/2")
 Depth 816.0 mMDRT

340mm (13-3/8") Casing

Casing 1 x Shoe joint A
 1 x Float Collar Joint A
 60 x 340mm (13-3/8") Casing

ID 315.3mm (12.415")
 Weight 101.2kg/m (68lb/ft)
 Grade N-80
 Shoe Depth 805.8 mMDRT

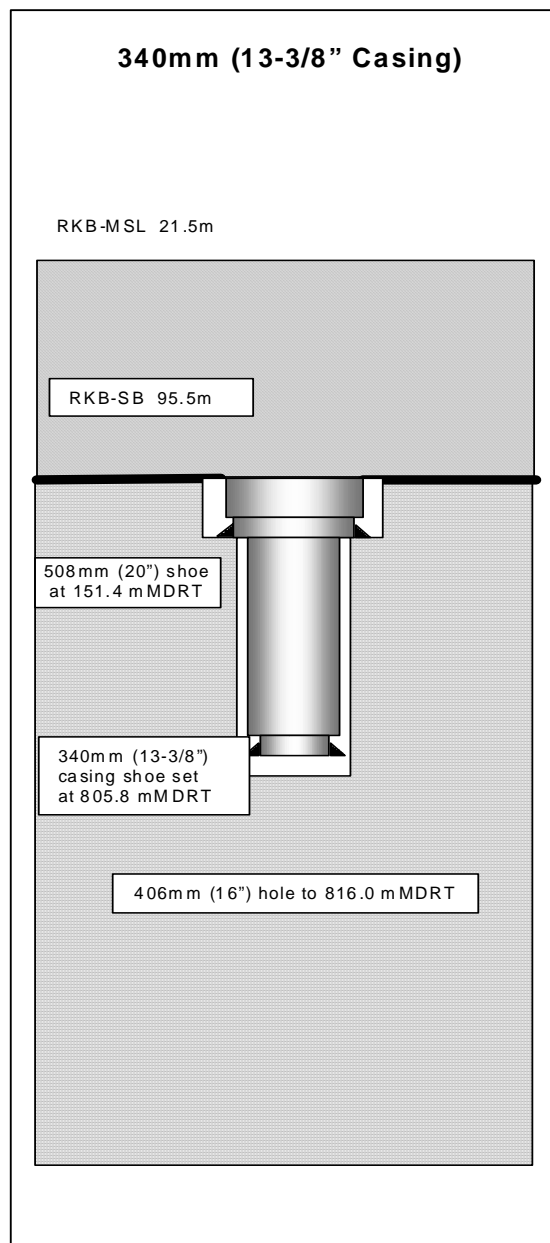
Cement Details:

Lead slurry
 Type Class "G"
 Weight 1.50sg (12.5ppg)
 Volume 55.33m³ (348bbl)

Tail slurry
 Type Class "G"
 Weight 1.89sg (15.8ppg)
 Volume 14.31m³ (90bbl)

Summary

A total of 60 joints of 340mm (13-3/8") casing were ran in hole with the shoe set at 805.8 mMDRT. Upon setting the casing shoe, the hole was circulated clean prior to cementing. 0.79m³ (5bbl) of seawater spacer was pumped and cement lines were pressure tested to 27579kPa (4000psi). Dart was dropped and displaced with 0.98m³ (6.2bbl) of seawater. 55.33m³ (348bbl) of lead slurry class "G" cement of 1.50sg (12.5ppg) was mixed and pumped, followed by 14.31 m³ (90bbl) of tail slurry class "G" cement of 1.89sg (15.8ppg). There was no indication of the bottom plug landing on the float collar. The top dart was then dropped and displaced with 1.59m³ (10bbl) of seawater, the top plug released at 15168kPa (2200psi). The cement was displaced with 54.53m³ (343bbl) of seawater with the rig pump. The top plug was bumped to 17237kPa (2500psi) and was held for 15 minutes. The surface line was then rigged down.



Spikey Beach-1 Cement Plug 14 – 15 September 2009

Hole Size: 311mm (12-1/4")
Depth: 2100.0 mMDRT

Cement Details

CEMENT PLUG #1:

Type: Class "G"
Weight: 1.89sg (15.8ppg)
Slurry Vol: 12.56m³ (79bbl)

CEMENT PLUG #2:

Type: Class "G"
Weight: 1.92sg (16.0ppg)
Slurry Vol: 12.88m³ (81bbl)

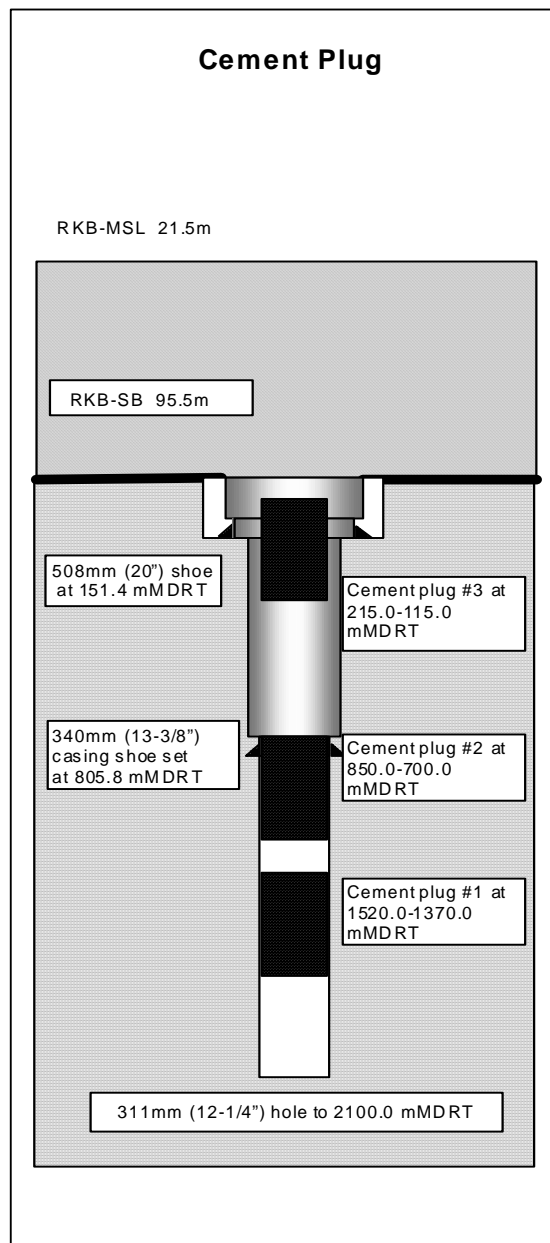
CEMENT PLUG #3:

Type: Class "G"
Weight: 1.89sg (15.8ppg)
Slurry Vol: 7.79m³ (49bbl)

Summary

The cement stinger made up of 127mm (5") drill pipe was run in the hole to 1620.0 mMDRT. 7.95m³ (50bbl) of balanced 1.51sg (12.6ppg) hi-vis pill was spotted at 1620.0 mMDRT. The cement stinger was pulled out of the hole to 1520.0 mMDRT to start circulation with 1.20sg (10.0ppg) mud.

Cement plug #1 was set from 1520.0 to 1370.0 mMDRT. Cement plug #2 was set across the 340mm (13-3/8") shoe from 850.0 to 700.0 mMDRT while cement plug #3 was set from 215.0 to 115.0 mMDRT.



SECTION 3

GEOLOGICAL LOGGING

3.1 ROP, Gas and Shows

Geological logging Spikey Beach-1 commenced at 820.0 mMDRT, below the 340 mm (13-3/8") casing shoe at 805.8 mMDRT to the total depth of 2100.0 mMDRT. (All depths given in this section are measured from the Rotary Table, unless otherwise specified).

During the course of the well all gas equipment were checked and calibrated regularly, and spot samples were taken during drilling breaks and other changes in drilling parameters to better assess lithological change. Drilled gas, trip gas, connection gas, re-circulated gas and swab gas levels were monitored.

The lithology of Spikey Beach-1 is described below. For more detailed descriptions, see Appendix 1: Formation Evaluation Log. Please note that the descriptions on the Formation Evaluation Log were provided by the Beach Petroleum Wellsite Geologists.

DITCH CUTTING SAMPLING INTERVAL

Depth (mMDRT)	Sample interval	Sample Type
816.0 – 820.0	4m	normal
820.0 – 1200.0	10m	normal
1200.0 – 2100.0	3m	normal

Missed samples

The following samples are missed at 10m interval due to high ROP:
920.0 – 930.0 mMDRT

The following samples are missed at 3m interval due to high ROP:

1200.0 – 1203.0, 1203.0 – 1206.0, 1206.0 – 1209.0, 1212.0 – 1215.0, 1215.0 – 1218.0, 1218.0 – 1221.0, 1224.0 – 1227.0, 1227.0 – 1230.0, 1230.0 – 1233.0, 1236.0 – 1239.0, 1239.0 – 1242.0, 1242.0 – 1245.0, 1248.0 – 1251.0, 1251.0 – 1254.0, 1254.0 – 1257.0, 1260.0 – 1263.0, 1263.0 – 1266.0, 1266.0 – 1269.0, 1272.0 – 1275.0, 1275.0 – 1278.0, 1281.0 – 1284.0, 1284.0 – 1287.0, 1290.0 – 1293.0, 1293.0 – 1296.0, 1299.0 – 1302.0, 1302.0 – 1305.0, 1308.0 – 1311.0, 1311.0 – 1314.0, 1317.0 – 1320.0, 1320.0 – 1323.0, 1326.0 – 1329.0, 1329.0 – 1332.0, 1335.0 – 1338.0, 1338.0 – 1341.0, 1344.0 – 1347.0, 1347.0 – 1350.0, 1353.0 – 1356.0, 1356.0 – 1359.0, 1362.0 – 1365.0, 1365.0 – 1368.0, 1371.0 – 1374.0, 1374.0 – 1377.0, 1380.0 – 1383.0, 1383.0 – 1386.0, 1389.0 – 1392.0, 1392.0 – 1395.0, 1398.0 – 1401.0, 1401.0 – 1404.0, 1407.0 – 1410.0, 1410.0 – 1413.0, 1416.0 – 1419.0, 1419.0 – 1422.0, 1425.0 – 1428.0, 1428.0 – 1431.0, 1434.0 – 1437.0, 1437.0 – 1440.0, 1443.0 – 1446.0, 1446.0 – 1449.0, 1452.0 – 1455.0, 1458.0 – 1461.0, 1464.0 – 1467.0, 1470.0 – 1473.0, 1476.0 – 1479.0, 1482.0 – 1485.0, 1488.0 – 1491.0, 1494.0 – 1497.0, 1500.0 – 1503.0, 1506.0 – 1509.0, 1512.0 – 1515.0, 1518.0 – 1521.0, 1524.0 – 1527.0, 1530.0 – 1533.0, 1536.0 – 1539.0, 1542.0 – 1545.0, 1548.0 – 1551.0, 1554.0 – 1557.0, 1560.0 – 1563.0, 1566.0 – 1569.0, 1572.0 – 1575.0, 1578.0 – 1581.0, 1584.0 – 1587.0, 1590.0 – 1593.0, 1596.0 – 1599.0, 1602.0 – 1605.0, 1608.0 – 1611.0, 1614.0 – 1617.0, 1620.0 – 1623.0, 1626.0 – 1629.0, 1632.0 – 1635.0, 1638.0 – 1641.0, 1644.0 – 1647.0, 1650.0 – 1653.0, 1656.0 – 1659.0, 1662.0 – 1665.0, 1668.0 – 1671.0, 1674.0 – 1677.0, 1680.0 – 1683.0, 1686.0 – 1689.0, 1692.0 – 1695.0, 1698.0 – 1701.0, 1704.0 – 1707.0, 1710.0 – 1713.0, 1716.0 – 1719.0, 1722.0 – 1725.0, 1728.0 – 1731.0, 1734.0 – 1737.0, 1740.0 – 1743.0, 1746.0 – 1749.0, 1752.0 – 1755.0, 1758.0 – 1761.0, 1764.0 – 1767.0, 1770.0 – 1773.0, 1776.0 – 1779.0, 1782.0 – 1785.0, 1788.0 – 1791.0, 1794.0 – 1797.0, 1800.0 – 1803.0, 1806.0 – 1809.0, 1812.0 – 1815.0, 1818.0 – 1821.0, 1824.0 – 1827.0, 1830.0 – 1833.0, 1836.0 – 1839.0, 1842.0 – 1845.0, 1848.0 – 1851.0, 1854.0 – 1857.0, 1860.0 – 1863.0, 1866.0 – 1869.0, 1872.0 – 1875.0, 1878.0 – 1881.0, 1884.0 – 1887.0, 1890.0 – 1893.0, 1896.0 – 1899.0, 1902.0 – 1905.0, 1908.0 – 1911.0, 1914.0 – 1917.0, 1920.0 – 1923.0, 1926.0 – 1929.0, 1932.0 – 1935.0, 1938.0 – 1941.0, 1944.0 – 1947.0, 1950.0 – 1953.0, 1956.0 – 1959.0, 1962.0 – 1965.0, 1968.0 – 1971.0, 1974.0 – 1977.0, 1980.0 – 1983.0, 1986.0 – 1989.0, 1992.0 – 1995.0, 1998.0 – 2001.0, 2004.0 – 2007.0, 2010.0 – 2013.0, 2016.0 – 2019.0, 2022.0 – 2025.0, 2028.0 – 2031.0, 2034.0 – 2037.0, 2040.0 – 2043.0, 2046.0 – 2049.0, 2052.0 – 2055.0, 2058.0 – 2061.0, 2064.0 – 2067.0, 2070.0 – 2073.0, 2076.0 – 2079.0, 2082.0 – 2085.0, 2088.0 – 2091.0, 2094.0 – 2097.0, 2100.0 – 2103.0 mMDRT.

FORMATION DESCRIPTION**816.0 to 1023.0 mMDRT / ROP 42.9 – 304.7m/hr (Ave 147.8)**

CALCARENITE (5 to 80%): light grey to white, light blue grey, abundant fossils, common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky

CLAYSTONE (20 to 85%): light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, common fossil fragments, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, firm to moderately hard, sub-blocky to blocky

1023.0 to 1398.0 mMDRT / ROP 17.4 – 249.9m/hr (Ave 98.6)

CALCAREOUS CLAYSTONE (0 to 90%): light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace fossil fragments, firm to moderately hard, blocky

CLAYSTONE (0 to 100%): light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, moderate calcareous, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace fossil fragments, trace disseminated pyrite, rare micro mica, firm to moderately hard, sub-blocky to blocky

CALCAREOUS SILTSTONE (0 to 10%): light to medium grey, light to medium olive grey, argillaceous, trace carbonaceous specks and glauconite, trace calcareous veins, trace fossil fragments, firm to moderately hard, sub-blocky to blocky

SILTSTONE(0 to 80%): light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky

SANDSTONE (0 to 25%): light brown to brown grey, clear to translucent, very fine grained, moderately sorted, sub-angular to sub-rounded, moderate siliceous cement, moderate to strong calcareous (dolomitic) cement, common to abundant argillaceous to silty matrix, in part grading to a Sandy Siltstone, trace carbonaceous specks and glauconite, trace siderite, friable to moderately hard, very poor inferred porosity, no fluorescence

CALCARENITE(0 to 15%): light to medium grey, light blue grey to white, light brown grey, common very fine quartz grains, common fossil fragments, trace carbonaceous specks, firm, sub-blocky to blocky

1398.0 to 1478.0 mMDRT / ROP 7.7 – 93.9m/hr (Ave 25.0)

CLAYSTONE (90 to 100%): dark grey, brownish grey to brownish black, non to slightly calcareous, carbonaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile

CLAYSTONE (0 to 5%): very light grey to light grey, light brownish grey, grading to SILTSTONE, non to moderate calcareous, soft to firm, sub-blocky to blocky

LIMESTONE (0 to 5%): light brown to moderate brown, light brownish grey to brownish grey, trace white to very light grey, trace bluish grey, predominantly microcrystalline, trace bioclastic, sandy in part, dolomitic in part, angular cuttings, predominantly micritic, trace sparitic, argillaceous in part and grading to Marl, soft to hard, platy to splintery

SANDSTONE (0 to 50%): light brownish grey, translucent, transparent, very fine to fine, moderate to well sorted, sub angular to sub rounded, sub spherical to sub elongate, predominantly rare siliceous cement, occasional calcareous cement, common to abundant silty matrix, rare dark lithic fragments, loose to unconsolidated, rare friable, no fluorescence

1478.0 to 1868.0 mMDRT / ROP 0.6 – 75.3m/hr (Ave 20.3)

CARBONACEOUS CLAYSTONE (0 to 75%): dark brown to dark brown grey, dark grey to grey black, dark olive grey, trace to common disseminated pyrite, common micro-micaceous, moderately hard, sub-fissile to sub-blocky, fissile in part

CLAYSTONE (5 to 75%): brownish grey to brownish black, non to slightly calcareous, carbonaceous, micro-micaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile

LIMESTONE (tr to 5%): light brownish grey to brownish grey, trace white to very light grey, predominantly micritic, trace sparitic, argillaceous in part and grading to Marl, soft to moderate hard, platy to splintery

SILTSTONE (5 to 90%): olive grey, brownish grey, non to slightly calcareous, rare micro mica, rare very fine quartz, trace carbonaceous laminae and material, trace very fine disseminated pyrite, soft, amorphous to sub-blocky, grading to and interlaminated with very fine SANDSTONE

GLAUCONITIC SANDSTONE (5 to 20%): moderate to dark yellowish green, very fine, well sorted, sub rounded, siliceous cement, pervasive glauconitic staining, grading to glauconitic Siltstone, friable, tight to poor visible porosity, no fluorescence

SANDSTONE (5 to 100%): light grey, light olive grey, moderate yellowish green, translucent, transparent, predominantly very fine to fine well sorted aggregates, 5% fine to coarse moderate sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence

COAL (5 to 95%): black, brownish black, earthy to sub vitreous, rare vitreous, lignitic, soft to brittle, angular, grading to carbonaceous Claystone

1868.0 to 2100.0 mMDRT / ROP 2.3 – 111.5m/hr (Ave 28.3)

CARBONACEOUS CLAYSTONE (20 to 90%): brownish grey to brownish black, arenaceous, abundant carbonaceous laminae, soft to firm, sub-blocky to fissile

SILTSTONE (5 to 70%): medium brown to brown grey, medium dark brown, sandy, in part grading to a very fine Sandstone, carbonaceous, common carbonaceous micro laminations, common micro-micaceous, firm to in part moderately hard, sub-blocky to blocky

SANDSTONE (5 to 100%): clear to translucent, fine to medium grains, predominantly fine grains, moderately sort, sub-angular to rounded, moderate siliceous cement mainly as quartz overgrowths, common argillaceous to silty matrix, trace carbonaceous specks, trace lithics, minor moderately hard aggregates, predominantly loose, no fluorescence

COAL (5 to 90%): black, sub-vitreous to vitreous, earthy in part, argillaceous and grading to carbonaceous Claystone in part, moderate hard, uneven to angular fracture

Gas and ROP Readings for Spikey Beach-1

Interval (mMDRT)	Total Gas range Min-max (unit)	Total Gas Average (unit)	ROP Range (m/hr)	ROP Average (m/hr)
816.0 – 1023.0	0.016 – 0.122	0.029	42.9 – 304.7	147.8
1023.0 – 1398.0	0.049 – 7.745	1.111	17.4 – 249.9	98.6
1398.0 – 1478.0	0.043 – 1.825	0.478	7.7 – 93.9	25.0
1478.0 – 1868.0	0.011 – 0.46	0.060	0.6 – 75.3	20.3
1868.0 – 2100.0	0.011 – 0.503	0.239	2.3 – 111.5	28.3

Gas Peak readings for Spikey Beach-1**311mm (12-1/4”) Hole Section**

Depth Interval (mMDRT)	Total Gas (unit)	Depth Max Gas (mMDRT)	C1 Range (ppm)	C2 Range (ppm)	C3 Range (ppm)	iC4 Range (ppm)	nC4 Range (ppm)	iC5 Range (ppm)	nC5 Range (ppm)
816.0 – 1023.0	0.016 – 0.122	1016.0	2 – 23	0 – 2	0	0	0	0	0
1023.0 – 1398.0	0.049 – 7.745	1269.0	6 – 979	0 – 2	0	0	0	0	0
1398.0 – 1478.0	0.043 – 1.825	1448.0	3 – 230	0 – 6	0 – 2	0	0	0	0
1478.0 – 1868.0	0.011 – 0.464	1645.0	1 – 49	0 – 3	0 – 2	0	0	0	0
1868.0 – 2100.0	0.011 – 0.503	2100.0	4 – 26	0 – 5	0 – 2	0 – 1	0	0	0

3.2 Sampling Summary and Record of Distribution:

Well: Spikey Beach-1

Rig: Ocean Patriot

From: BHI Unit 573

Total 15 Bags, 3 Cardboard Boxes and 1 Wooden Box

To be consigned to

Beach Petroleum
c/o Challenger Geological Services Pty Ltd.
13A Weaver St,
Edwardstown SA 5039
Tel (08) 8277 6777

Items being shipped: Geological Samples

Date Shipped: 16-Sep-2009

Method of Shipment: Emerald Supply Boat

Consignee signature:

Date: 14/09/2009

Geological Sample Summary**SAMPLES TO BE SPLIT**

Sample Type	Large Box No.	Interval (mMDRT)
Washed and dried Cutting Samples To be split into 3 x 200g samples	BAG 1	816.0 – 960.0
	BAG 2	960.0 – 1100.0
	BAG 3	1100.0 – 1248.0
	BAG 4	1248.0 – 1380.0
	BAG 5	1380.0 – 1470.0
	BAG 6	1470.0 – 1524.0
	BAG 7	1524.0 – 1599.0
	BAG 8	1599.0 – 1671.0
	BAG 9	1671.0 – 1749.0
	BAG 10	1749.0 – 1821.0
	BAG 11	1821.0 – 1857.0
	BAG 12	1857.0 – 1893.0
	BAG 13	1893.0 – 1941.0
	BAG 14	1941.0 – 2013.0
	BAG 15	2013.0 – 2100.0
	Box 1	ZIP LOCK BAGS (3 SETS) – 816.0 to 2100.0 METAL TAGS (3 SETS) – 816.0 to 2100.0
Samplex Tray Samples Set D	Box 2 (Cardboard Box)	816.0 – 1290.0
	Box 3 (Wooden Box)	1290.0 – 2100.0
Mud Sample (500ml) Set E	Box 4	1. 1410m– 12-1/4" section (2 bottles of 500ml) 2. 1493m- Reservoir section (2 bottles of 500ml) 3. 2100m-TD of 12-1/4" section Total – 5 bottles (500ml each) Packed inside 1 big box: Box 1 of 1 38cmx38cmx24cm Approximate Weight: 6 kg

Total Bags 15, Total Boxes 4

Depth (mMDRT)	Sample interval	Sample Type
816.0 – 820.0	4m	normal
820.0 – 1200.0	10m	normal
1200.0 – 2100.0	3m	normal

The following samples are missed at 10m interval due to high ROP:
 920.0 – 930.0 mMDRT

The following samples are missed at 3m interval due to high ROP:
 1200.0 – 1203.0, 1203.0 – 1206.0, 1206.0 – 1209.0, 1212.0 – 1215.0, 1215.0 – 1218.0, 1218.0 – 1221.0, 1224.0 – 1227.0, 1227.0 – 1230.0, 1230.0 – 1233.0, 1236.0 – 1239.0, 1239.0 – 1242.0, 1242.0 – 1245.0, 1248.0 – 1251.0, 1251.0 – 1254.0, 1254.0 – 1257.0, 1260.0 – 1263.0, 1263.0 – 1266.0, 1266.0 – 1269.0, 1272.0 – 1275.0, 1275.0 – 1278.0, 1281.0 – 1284.0, 1284.0 – 1287.0, 1290.0 – 1293.0, 1293.0 – 1296.0, 1299.0 – 1302.0, 1302.0 – 1305.0, 1308.0 – 1311.0, 1311.0 – 1314.0, 1317.0 – 1320.0, 1320.0 – 1323.0, 1326.0 – 1329.0, 1329.0 – 1332.0, 1335.0 – 1338.0, 1338.0 – 1341.0, 1344.0 – 1347.0, 1347.0 – 1350.0, 1353.0 – 1356.0, 1356.0 – 1359.0, 1362.0 – 1365.0, 1365.0 – 1368.0, 1371.0 – 1374.0, 1374.0 – 1377.0, 1380.0 – 1383.0, 1383.0 – 1386.0, 1389.0 – 1392.0, 1392.0 – 1395.0, 1398.0 – 1401.0, 1401.0 – 1404.0, 1407.0 – 1410.0, 1410.0 – 1413.0, 1416.0 – 1419.0, 1419.0 – 1422.0, 1425.0 – 1428.0, 1428.0 – 1431.0, 1434.0 – 1437.0, 1437.0 – 1440.0, 1443.0 – 1446.0, 1446.0 – 1449.0, 1452.0 – 1455.0, 1458.0 – 1461.0, 1464.0 – 1467.0, 1470.0 – 1473.0, 1476.0 – 1479.0, 1482.0 – 1485.0, 1488.0 – 1491.0, 1494.0 – 1497.0, 1500.0 – 1503.0, 1506.0 – 1509.0, 1512.0 – 1515.0, 1518.0 – 1521.0, 1524.0 – 1527.0, 1530.0 – 1533.0, 1536.0 – 1539.0, 1542.0 – 1545.0, 1548.0 – 1551.0, 1554.0 – 1557.0, 1560.0 – 1563.0, 1566.0 – 1569.0, 1572.0 – 1575.0, 1578.0 – 1581.0, 1584.0 – 1587.0, 1590.0 – 1593.0, 1596.0 – 1599.0, 1602.0 – 1605.0, 1608.0 – 1611.0, 1614.0 – 1617.0, 1620.0 – 1623.0, 1626.0 – 1629.0, 1632.0 – 1635.0, 1638.0 – 1641.0, 1644.0 – 1647.0, 1650.0 – 1653.0, 1656.0 – 1659.0, 1662.0 – 1665.0, 1668.0 – 1671.0, 1674.0 – 1677.0, 1680.0 – 1683.0, 1686.0 – 1689.0, 1692.0 – 1695.0, 1698.0 – 1701.0, 1704.0 – 1707.0, 1710.0 – 1713.0, 1716.0 – 1719.0, 1722.0 – 1725.0, 1728.0 – 1731.0, 1734.0 – 1737.0, 1740.0 – 1743.0, 1746.0 – 1749.0, 1752.0 – 1755.0, 1758.0 – 1761.0, 1764.0 – 1767.0, 1770.0 – 1773.0, 1776.0 – 1779.0, 1782.0 – 1785.0, 1788.0 – 1791.0, 1794.0 – 1797.0, 1800.0 – 1803.0, 1806.0 – 1809.0, 1812.0 – 1815.0, 1818.0 – 1821.0, 1824.0 – 1827.0, 1830.0 – 1833.0, 1836.0 – 1839.0, 1842.0 – 1845.0, 1848.0 – 1851.0, 1854.0 – 1857.0, 1860.0 – 1863.0, 1866.0 – 1869.0, 1872.0 – 1875.0, 1878.0 – 1881.0, 1884.0 – 1887.0, 1890.0 – 1893.0, 1896.0 – 1899.0, 1902.0 – 1905.0, 1908.0 – 1911.0, 1914.0 – 1917.0, 1920.0 – 1923.0, 1926.0 – 1929.0, 1932.0 – 1935.0, 1938.0 – 1941.0, 1944.0 – 1947.0, 1950.0 – 1953.0, 1956.0 – 1959.0, 1962.0 – 1965.0, 1968.0 – 1971.0, 1974.0 – 1977.0, 1980.0 – 1983.0, 1986.0 – 1989.0, 1992.0 – 1995.0, 1998.0 – 2001.0, 2004.0 – 2007.0, 2010.0 – 2013.0, 2016.0 – 2019.0, 2022.0 – 2025.0, 2028.0 – 2031.0, 2034.0 – 2037.0, 2040.0 – 2043.0, 2046.0 – 2049.0, 2052.0 – 2055.0, 2058.0 – 2061.0, 2064.0 – 2067.0, 2070.0 – 2073.0, 2076.0 – 2079.0, 2082.0 – 2085.0, 2088.0 – 2091.0, 2094.0 – 2097.0, 2100.0 – 2103.0, 2106.0 – 2109.0, 2112.0 – 2115.0, 2118.0 – 2121.0, 2124.0 – 2127.0, 2130.0 – 2133.0, 2136.0 – 2139.0, 2142.0 – 2145.0, 2148.0 – 2151.0, 2154.0 – 2157.0, 2160.0 – 2163.0, 2166.0 – 2169.0, 2172.0 – 2175.0, 2178.0 – 2181.0, 2184.0 – 2187.0, 2190.0 – 2193.0, 2196.0 – 2199.0, 2202.0 – 2205.0, 2208.0 – 2211.0, 2214.0 – 2217.0, 2220.0 – 2223.0, 2226.0 – 2229.0, 2232.0 – 2235.0, 2238.0 – 2241.0, 2244.0 – 2247.0, 2250.0 – 2253.0, 2256.0 – 2259.0, 2262.0 – 2265.0, 2268.0 – 2271.0, 2274.0 – 2277.0, 2280.0 – 2283.0, 2286.0 – 2289.0, 2292.0 – 2295.0, 2298.0 – 2301.0, 2304.0 – 2307.0, 2310.0 – 2313.0, 2316.0 – 2319.0, 2322.0 – 2325.0, 2328.0 – 2331.0, 2334.0 – 2337.0, 2340.0 – 2343.0, 2346.0 – 2349.0, 2352.0 – 2355.0, 2358.0 – 2361.0, 2364.0 – 2367.0, 2370.0 – 2373.0, 2376.0 – 2379.0, 2382.0 – 2385.0, 2388.0 – 2391.0, 2394.0 – 2397.0, 2400.0 – 2403.0, 2406.0 – 2409.0, 2412.0 – 2415.0, 2418.0 – 2421.0, 2424.0 – 2427.0, 2430.0 – 2433.0, 2436.0 – 2439.0, 2442.0 – 2445.0, 2448.0 – 2451.0, 2454.0 – 2457.0, 2460.0 – 2463.0, 2466.0 – 2469.0, 2472.0 – 2475.0, 2478.0 – 2481.0, 2484.0 – 2487.0, 2490.0 – 2493.0, 2496.0 – 2499.0, 2502.0 – 2505.0, 2508.0 – 2511.0, 2514.0 – 2517.0, 2520.0 – 2523.0, 2526.0 – 2529.0, 2532.0 – 2535.0, 2538.0 – 2541.0, 2544.0 – 2547.0, 2550.0 – 2553.0, 2556.0 – 2559.0, 2562.0 – 2565.0, 2568.0 – 2571.0, 2574.0 – 2577.0, 2580.0 – 2583.0, 2586.0 – 2589.0, 2592.0 – 2595.0, 2598.0 – 2601.0, 2604.0 – 2607.0, 2610.0 – 2613.0, 2616.0 – 2619.0, 2622.0 – 2625.0, 2628.0 – 2631.0, 2634.0 – 2637.0, 2640.0 – 2643.0, 2646.0 – 2649.0, 2652.0 – 2655.0, 2658.0 – 2661.0, 2664.0 – 2667.0, 2670.0 – 2673.0, 2676.0 – 2679.0, 2682.0 – 2685.0, 2688.0 – 2691.0, 2694.0 – 2697.0, 2700.0 – 2703.0, 2706.0 – 2709.0, 2712.0 – 2715.0, 2718.0 – 2721.0, 2724.0 – 2727.0, 2730.0 – 2733.0, 2736.0 – 2739.0, 2742.0 – 2745.0, 2748.0 – 2751.0, 2754.0 – 2757.0, 2760.0 – 2763.0, 2766.0 – 2769.0, 2772.0 – 2775.0, 2778.0 – 2781.0, 2784.0 – 2787.0, 2790.0 – 2793.0, 2796.0 – 2799.0, 2802.0 – 2805.0, 2808.0 – 2811.0, 2814.0 – 2817.0, 2820.0 – 2823.0, 2826.0 – 2829.0, 2832.0 – 2835.0, 2838.0 – 2841.0, 2844.0 – 2847.0, 2850.0 – 2853.0, 2856.0 – 2859.0, 2862.0 – 2865.0, 2868.0 – 2871.0, 2874.0 – 2877.0, 2880.0 – 2883.0, 2886.0 – 2889.0, 2892.0 – 2895.0, 2898.0 – 2901.0, 2904.0 – 2907.0, 2910.0 – 2913.0, 2916.0 – 2919.0, 2922.0 – 2925.0, 2928.0 – 2931.0, 2934.0 – 2937.0, 2940.0 – 2943.0, 2946.0 – 2949.0, 2952.0 – 2955.0, 2958.0 – 2961.0, 2964.0 – 2967.0, 2970.0 – 2973.0, 2976.0 – 2979.0, 2982.0 – 2985.0, 2988.0 – 2991.0, 2994.0 – 2997.0, 3000.0 – 3003.0, 3006.0 – 3009.0, 3012.0 – 3015.0, 3018.0 – 3021.0, 3024.0 – 3027.0, 3030.0 – 3033.0, 3036.0 – 3039.0, 3042.0 – 3045.0, 3048.0 – 3051.0, 3054.0 – 3057.0, 3060.0 – 3063.0, 3066.0 – 3069.0, 3072.0 – 3075.0, 3078.0 – 3081.0, 3084.0 – 3087.0, 3090.0 – 3093.0, 3096.0 – 3099.0, 3102.0 – 3105.0, 3108.0 – 3111.0, 3114.0 – 3117.0, 3120.0 – 3123.0, 3126.0 – 3129.0, 3132.0 – 3135.0, 3138.0 – 3141.0, 3144.0 – 3147.0, 3150.0 – 3153.0, 3156.0 – 3159.0, 3162.0 – 3165.0, 3168.0 – 3171.0, 3174.0 – 3177.0, 3180.0 – 3183.0, 3186.0 – 3189.0, 3192.0 – 3195.0, 3198.0 – 3201.0, 3204.0 – 3207.0, 3210.0 – 3213.0, 3216.0 – 3219.0, 3222.0 – 3225.0, 3228.0 – 3231.0, 3234.0 – 3237.0, 3240.0 – 3243.0, 3246.0 – 3249.0, 3252.0 – 3255.0, 3258.0 – 3261.0, 3264.0 – 3267.0, 3270.0 – 3273.0, 3276.0 – 3279.0, 3282.0 – 3285.0, 3288.0 – 3291.0, 3294.0 – 3297.0, 3300.0 – 3303.0, 3306.0 – 3309.0, 3312.0 – 3315.0, 3318.0 – 3321.0, 3324.0 – 3327.0, 3330.0 – 3333.0, 3336.0 – 3339.0, 3342.0 – 3345.0, 3348.0 – 3351.0, 3354.0 – 3357.0, 3360.0 – 3363.0, 3366.0 – 3369.0, 3372.0 – 3375.0, 3378.0 – 3381.0, 3384.0 – 3387.0, 3390.0 – 3393.0, 3396.0 – 3399.0, 3402.0 – 3405.0, 3408.0 – 3411.0, 3414.0 – 3417.0, 3420.0 – 3423.0, 3426.0 – 3429.0, 3432.0 – 3435.0, 3438.0 – 3441.0, 3444.0 – 3447.0, 3450.0 – 3453.0, 3456.0 – 3459.0, 3462.0 – 3465.0, 3468.0 – 3471.0, 3474.0 – 3477.0, 3480.0 – 3483.0, 3486.0 – 3489.0, 3492.0 – 3495.0, 3498.0 – 3501.0, 3504.0 – 3507.0, 3510.0 – 3513.0, 3516.0 – 3519.0, 3522.0 – 3525.0, 3528.0 – 3531.0, 3534.0 – 3537.0, 3540.0 – 3543.0, 3546.0 – 3549.0, 3552.0 – 3555.0, 3558.0 – 3561.0, 3564.0 – 3567.0, 3570.0 – 3573.0, 3576.0 – 3579.0, 3582.0 – 3585.0, 3588.0 – 3591.0, 3594.0 – 3597.0, 3600.0 – 3603.0, 3606.0 – 3609.0, 3612.0 – 3615.0, 3618.0 – 3621.0, 3624.0 – 3627.0, 3630.0 – 3633.0, 3636.0 – 3639.0, 3642.0 – 3645.0, 3648.0 – 3651.0, 3654.0 – 3657.0, 3660.0 – 3663.0, 3666.0 – 3669.0, 3672.0 – 3675.0, 3678.0 – 3681.0, 3684.0 – 3687.0, 3690.0 – 3693.0, 3696.0 – 3699.0, 3702.0 – 3705.0, 3708.0 – 3711.0, 3714.0 – 3717.0, 3720.0 – 3723.0, 3726.0 – 3729.0, 3732.0 – 3735.0, 3738.0 – 3741.0, 3744.0 – 3747.0, 3750.0 – 3753.0, 3756.0 – 3759.0, 3762.0 – 3765.0, 3768.0 – 3771.0, 3774.0 – 3777.0, 3780.0 – 3783.0, 3786.0 – 3789.0, 3792.0 – 3795.0, 3798.0 – 3801.0, 3804.0 – 3807.0, 3810.0 – 3813.0, 3816.0 – 3819.0, 3822.0 – 3825.0, 3828.0 – 3831.0, 3834.0 – 3837.0, 3840.0 – 3843.0, 3846.0 – 3849.0, 3852.0 – 3855.0, 3858.0 – 3861.0, 3864.0 – 3867.0, 3870.0 – 3873.0, 3876.0 – 3879.0, 3882.0 – 3885.0, 3888.0 – 3891.0, 3894.0 – 3897.0, 3900.0 – 3903.0, 3906.0 – 3909.0, 3912.0 – 3915.0, 3918.0 – 3921.0, 3924.0 – 3927.0, 3930.0 – 3933.0, 3936.0 – 3939.0, 3942.0 – 3945.0, 3948.0 – 3951.0, 3954.0 – 3957.0, 3960.0 – 3963.0, 3966.0 – 3969.0, 3972.0 – 3975.0, 3978.0 – 3981.0, 3984.0 – 3987.0, 3990.0 – 3993.0, 3996.0 – 3999.0, 4002.0 – 4005.0, 4008.0 – 4011.0, 4014.0 – 4017.0, 4020.0 – 4023.0, 4026.0 – 4029.0, 4032.0 – 4035.0, 4038.0 – 4041.0, 4044.0 – 4047.0, 4050.0 – 4053.0, 4056.0 – 4059.0, 4062.0 – 4065.0, 4068.0 – 4071.0, 4074.0 – 4077.0, 4080.0 – 4083.0, 4086.0 – 4089.0, 4092.0 – 4095.0, 4098.0 – 4101.0, 4104.0 – 4107.0, 4110.0 – 4113.0, 4116.0 – 4119.0, 4122.0 – 4125.0, 4128.0 – 4131.0, 4134.0 – 4137.0, 4140.0 – 4143.0, 4146.0 – 4149.0, 4152.0 – 4155.0, 4158.0 – 4161.0, 4164.0 – 4167.0, 4170.0 – 4173.0, 4176.0 – 4179.0, 4182.0 – 4185.0, 4188.0 – 4191.0, 4194.0 – 4197.0, 4200.0 – 4203.0, 4206.0 – 4209.0, 4212.0 – 4215.0, 4218.0 – 4221.0, 4224.0 – 4227.0, 4230.0 – 4233.0, 4236.0 – 4239.0, 4242.0 – 4245.0, 4248.0 – 4251.0, 4254.0 – 4257.0, 4260.0 – 4263.0, 4266.0 – 4269.0, 4272.0 – 4275.0, 4278.0 – 4281.0, 4284.0 – 4287.0, 4290.0 – 4293.0, 4296.0 – 4299.0, 4302.0 – 4305.0, 4308.0 – 4311.0, 4314.0 – 4317.0, 4320.0 – 4323.0, 4326.0 – 4329.0, 4332.0 – 4335.0, 4338.0 – 4341.0, 4344.0 – 4347.0, 4350.0 – 4353.0, 4356.0 – 4359.0, 4362.0 – 4365.0, 4368.0 – 4371.0, 4374.0 – 4377.0, 4380.0 – 4383.0, 4386.0 – 4389.0, 4392.0 – 4395.0, 4398.0 – 4401.0, 4404.0 – 4407.0, 4410.0 – 4413.0, 4416.0 – 4419.0, 4422.0 – 4425.0, 4428.0 – 4431.0, 4434.0 – 4437.0, 4440.0 – 4443.0, 4446.0 – 4449.0, 4452.0 – 4455.0, 4458.0 – 4461.0, 4464.0 – 4467.0, 4470.0 – 4473.0, 4476.0 – 4479.0, 4482.0 – 4485.0, 4488.0 – 4491.0, 4494.0 – 4497.0, 4500.0 – 4503.0, 4506.0 – 4509.0, 4512.0 – 4515.0, 4518.0 – 4521.0, 4524.0 – 4527.0, 4530.0 – 4533.0, 4536.0 – 4539.0, 4542.0 – 4545.0, 4548.0 – 4551.0, 4554.0 – 4557.0, 4560.0 – 4563.0, 4566.0 – 4569.0, 4572.0 – 4575.0, 4578.0 – 4581.0, 4584.0 – 4587.0, 4590.0 – 4593.0, 4596.0 – 4599.0, 4602.0 – 4605.0, 4608.0 – 4611.0, 4614.0 – 4617.0, 4620.0 – 4623.0, 4626.0 – 4629.0, 4632.0 – 4635.0, 4638.0 – 4641.0, 4644.0 – 4647.0, 4650.0 – 4653.0, 4656.0 – 4659.0, 4662.0 – 4665.0, 4668.0 – 4671.0, 4674.0 – 4677.0, 4680.0 – 4683.0, 4686.0 – 4689.0, 4692.0 – 4695.0, 4698.0 – 4701.0, 4704.0 – 4707.0, 4710.0 – 4713.0, 4716.0 – 4719.0, 4722.0 – 4725.0, 4728.0 – 4731.0, 4734.0 – 4737.0, 4740.0 – 4743.0, 4746.0 – 4749.0, 4752.0 – 4755.0, 4758.0 – 4761.0, 4764.0 – 4767.0, 4770.0 – 4773.0, 4776.0 – 4779.0, 4782.0 – 4785.0, 4788.0 – 4791.0, 4794.0 – 4797.0, 4800.0 – 4803.0, 4806.0 – 4809.0, 4812.0 – 4815.0, 4818.0 – 4821.0, 4824.0 – 4827.0, 4830.0 – 4833.0, 4836.0 – 4839.0, 4842.0 – 4845.0, 4848.0 – 4851.0, 4854.0 – 4857.0, 4860.0 – 4863.0, 4866.0 – 4869.0, 4872.0 – 4875.0, 4878.0 – 4881.0, 4884.0 – 4887.0, 4890.0 – 4893.0, 4896.0 – 4899.0, 4902.0 – 4905.0, 4908.0 – 4911.0, 4914.0 – 4917.0, 4920.0 – 4923.0, 4926.0 – 4929.0, 4932.0 – 4935.0, 4938.0 – 4941.0, 4944.0 – 4947.0, 4950.0 – 4953.0, 4956.0 – 4959.0, 4962.0 – 4965.0, 4968.0 – 4971.0, 4974.0 – 4977.0, 4980.0 – 4983.0, 4986.0 – 4989.0, 4992.0 – 4995.0, 4998.0 – 5001.0, 5004.0 – 5007.0, 5010.0 – 5013.0, 5016.0 – 5019.0, 5022.0 – 5025.0, 5028.0 – 5031.0, 5034.0 – 5037.0, 5040.0 – 5043.0, 5046.0 – 5049.0, 5052.0 – 5055.0, 5058.0 – 5061.0, 5064.0 – 5067.0, 5070.0 – 5073.0, 5076.0 – 5079.0, 5082.0 – 5085.0, 5088.0 – 5091.0, 5094.0 – 5097.0, 5100.0 – 5103.0, 5106.0 – 5109.0, 5112.0 – 5115.0, 5118.0 – 5121.0, 5124.0 – 5127.0, 5130.0 – 5133.0, 5136.0 – 5139.0, 5142.0 – 5145.0, 5148.0 – 5151.0, 5154.0 – 5157.0, 5160.0 – 5163.0, 5166.0 – 5169.0, 5172.0 – 5175.0, 5178.0 – 5181.0, 5184.0 – 5187.0, 5190.0 – 5193.0, 5196.0 – 5199.0, 5202.0 – 5205.0, 5208.0 – 5211.0, 5214.0 – 5217.0, 5220.0 – 5223.0, 5226.0 – 5229.0, 5232.0 – 5235.0, 5238.0 – 5241.0, 5244.0 – 5247.0, 5250.0 – 5253.0, 5256.0 – 5259.0, 5262.0 – 5265.0, 5268.0 – 5271.0, 5274.0 – 5277.0, 5280.0 – 5283.0, 5286.0 – 5289.0, 5292.0 – 5295.0, 5298.0 – 5301.0, 5304.0 – 5307.0, 5310.0 – 5313.0, 5316.0 – 5319.0, 5322.0 – 5325.0, 5328.0 – 5331.0, 5334.0 – 5337.0, 5340.0 – 5343.0, 5346.0 – 5349.0, 5352.0 – 5355.0, 5358.0 – 5361.0, 5364.0 – 5367.0, 5370.0 – 5373.0, 5376.0 – 5379.0, 5382.0 – 5385.0, 5388.0 – 5391.0, 5394.0 – 5397.0, 5400.0 – 5403.0, 5406.0 – 5409.0, 5412.0 – 5415.0, 5418.0 – 5421.0, 5424.0 – 5427.0, 5430.0 – 5433.0, 5436.0 – 5439.0, 5442.0 – 5445.0, 5448.0 – 5451.0, 5454.0 – 5457.0, 5460.0 – 5463.0, 5466.0 – 5469.0, 5472.0 – 5475.0, 5478.0 – 5481.0, 5484.0 – 5487.0, 5490.0 – 5493.0, 5496.0 – 5499.0, 5502.0 – 5505.0, 5508.0 – 5511.0, 5514.0 – 5517.0, 5520.0 – 5523.0, 5526.0 – 5529.0, 5532.0 – 5535.0, 5538.0 – 5541.0, 5544.0 – 5547.0, 5550.0 – 5553.0, 5556.0 – 5559.0, 5562.0 – 5565.0, 5568.0 – 5571.0, 5574.0 – 5577.0, 5580.0 – 5583.0, 5586.0 – 5589.0, 5592.0 – 5595.0, 55

SECTION 4

PRESSURE EVALUATION

4.1 Pore Pressure Evaluation

Spikey Beach-1

In drilling Spikey Beach-1, a seawater density of 8.8ppg was assumed as normal saline pressure gradient for all calculations. The equivalent depth method was applied in the Dxc analysis, with all the relevant data, such as connection gas, trip gas, background gas, hole condition, and mud flowline temperature all taken into consideration in the analysis of the formation pore pressure.

914mm (36") / 660mm (26") Hole section: 95.5 – 155.0 mMDRT

This hole section was drilled riserless utilizing seawater and Pre-hydrated Gel sweeps. Pore pressure analysis was based roughly on hole condition and observations by the ROV for the presence of shallow gas. No hole problems were encountered whilst drilling this section and the ROV did not report any indication of shallow gas. The hole was drilled vertically in this section and drilling initially made use of jetting prior to setting the 762mm (30") x 508mm (20") conductor.

445mm (17-1/2") Hole Section: 155.0 – 816.0 mMDRT

This hole section was drilled with riser (returns to seabed) utilizing seawater and Pre-hydrated Gel sweeps to 816.0 mMDRT. Pore pressure analysis was based roughly on hole condition and observations by the ROV for the presence of shallow gas. No hole problem was encountered in drilling this section while the ROV did not report any indication of shallow gas. The hole was drilled vertically. The resulting Dxc values showed a general increasing value with depth which indicates a normally pressured formation.

311mm (12-1/4") Hole Section: 816.0 – 2100.0 mMDRT

This hole section was drilled using WBM until well TD. It was drilled with the initial mud weight of 1.08sg (9.0ppg) and was increased gradually to 1.21sg (10.1ppg) at TD. One PDC bit was used to drill this section. The PDC bit drilled from 816.0 to 2100.0 mMDRT with an average ROP of 35.9 m/hr. The ROP was largely affected by the controlled parameters, due to attaining as straight a hole as possible and to collect as much cutting samples as possible.

The Dxc plot for this section shows a general increase in values with respect to depth and shows a general trendline to the right as is expected for a normally pressured formation. Occasional deviations to the normal trend, however, are observed which might possibly point to a slight increase in pore pressure. These Dxc trend reversals might be attributed to the changes in lithology and also to occasional wide variations in the drilling parameters. A few amounts of cavings were observed in some intervals but no connection gases were recorded. The background gas was generally steady and no large amount of formation gas (7.745 units was the maximum) was recorded; nevertheless mud weight was gradually increased from 1.08sg (9.0ppg) to 1.21sg (10.1ppg) until well TD, sufficient in countering any abnormal pressure that might be encountered in the well.

The flowline temperature in this section ranged from 19.4 to 51.9degC. This temperature reading was largely affected by the cooling effect of seawater to the mud column in the riser. The occasional addition of drilling water and newly mixed mud to the active pits system also contributed to the limitation of temperature analysis in predicting pore pressure increase. Nevertheless, there is no abnormal high temperature increase observed in this section that might point to a possible increase in pore pressure.

4.2 Fracture Pressure Evaluation

The well was spudded at 95.5 mMDRT using a 914mm (36") hole opener made up on a 660mm (26") bit. The 914mm (36") hole section was drilled from 95.5 to 155.0 mMDRT with sea water followed by Hi-Vis sweeps and returns to sea bed. The 762mm (30") x 508mm (20") casing was then set and cemented at 151.4 mMDRT. No LOT/FIT was conducted at the 762mm (30") x 508mm (20") casing shoe.

The 445mm (17-1/2") BHA was made up on MWD tools and drilled out the shoe at 151.4 mMDRT and cement to 155.0 mMDRT. The 445mm (17-1/2") hole was drilled to 816.0 mMDRT while pumping 7.95m³ (50bbl) Hi-vis sweeps at mid stand and stand down, with returns to seabed. The 340 mm (13-3/8") casing shoe was set at 805.8 mMDRT and cemented as per plan.

The 311 mm (12-1/4") BHA was made up on MWD tools and shallow tested. BHA 3 was run in the hole and tagged the top of the cement at 794.0 mMDRT. The well was displaced to 9.0ppg prior to drilling out the float collar, shoe track and float shoe to 816.0 mMDRT. The bit drilled 3.0m of new formation to 819.0 mMDRT before performing the LOT. The formation broke down at 3171kPa (460psi) - EMW 1.47sg (12.3ppg).

The 311mm (12-1/4") hole was then drilled from 816.0 to 2100.0 mMDRT using 1 bit with the mud weight gradually increasing from 1.08 sg (9.0ppg) to 1.21sg (10.1ppg).

The following is a summary of the Leak off Test (LOT) conducted in this well:

Hole Size	Hole Depth	Casing	Shoe Depth	Pressure	Mud Weight	EMW
311mm (12-1/4")	819.0 mMDRT	13-3/8"	805.8 mMDRT	460psi	9.0ppg	12.3ppg
	819.0 mTVDRT	340mm	805.8 mTVDRT	3171kPa	1.08sg	1.47sg

TABLES

Table 1: Bit Run Summary




OPERATOR				Beach Petroleum Ltd		WELL NAME		Spikey Beach-1				LOCATION		T/38P		CONTRACTOR		Diamond Offshore										RIG		Ocean Patriot									
<div><div></div><div></div><div></div></div>				Mud Pump Data				BIT DULL CHARACTERISTICS										REASONS PULLED																					
				Pumps 1, 2, and 3 152mm 6" Liners 305mm 12" Stroke 97% Efficiency, 16.28 litre/stk (0.10238 bbl/stk)		JETS x 1/32"		SERIAL No.		DEPTH IN m		METRES ON BIT		HRS ON BOTTOM		AV ROP m/hr		CIRC HRS		WOB klbf		RPM Surf/Motor		TBR krev		SPP psi		FLOW gpm		TQ kft.lb		BHA - Bottomhole Assembly LOG - Run Logs FM - Formation Change TD - Total / Csg depth DMF - Downhole Motor failure RIG - Rig repair HP - Hole Problems TQ - Torque DSF - Drill String failure CM - Condition Mud HR - Hours TW - Twist-Off DST - Drill Stem Test CP - Core Point PP - Pump Pressure WC - Weather Conditions DTF - Downhole Tool Failure DP - Drill Plug PR - Penetration rate WD - Washout - Drill String							
BHA #	BIT No.	MAKE	TYPE	TFA sq.in.	JETS x 1/32"	SERIAL No.	DEPTH IN m	METRES ON BIT	HRS ON BOTTOM	AV ROP m/hr	CIRC HRS	WOB klbf	RPM Surf/Motor	TBR krev	SPP psi	FLOW gpm	TQ kft.lb	GRADE								MW ppg	REMARKS												
I	O	D	L	B	G	O	R																																
Spikey Beach-1																																							
660mm (26") x 914mm (36") Hole section 75.5 - 155.0 mMDRT																																							
1	NB1	Hughes	Mill tooth / RC1	1.1167	3x20, 1x16	6076124	95.5	59.5	1.7	35.0	2.5	0.1 - 9.2	40 - 70	5.6	97 - 1161	225-750	0.2 - 3.5	0	0	NO	A	0	I	NO	TD	8.8 (SW)	30" Casing Point												
445mm (17-1/2") Hole Section 155.0 - 816.0 mMDRT																																							
2	NB2	Hughes	Mill tooth / GX-CIV	0.9419	3x18, 1x16	6079221	155.0	661.0	9.2	71.8	15.4	0.1 - 21.5	58 - 159	59.9	697 - 3610	555 - 1197	0.2 - 10.3	1	1	WT	A	1	IN	NO	TD	8.8 (SW)	13-3/8" Casing Point												
311mm (12-1/4") Hole Section 816.0 - 2100.0 mMDRT																																							
3	NB3	Hughes	PDC / HCM506ZX	1.0354	3x16	7012700	816.0	1284.0	35.8	35.9	48.9	0.1 - 39.4	19-202	548.0	1395 - 3603	698 - 1133	0.2 - 20.3	1	1	CT	N	X	1/16	ER	TD	9.0 - 10.1	Well TD												
RT-AHD (m) 21.50 mMDRT																																							

Table 2: Bit Hydraulics Summary

Tables



<div><div> INTEQ</div><div>Bit Hydraulics Summary</div><div></div></div>																					
Operator Beach Petroleum Ltd					Well Name Spikey Beach-1				Location T/38P		Drilling Contractor Diamond Offshore					Rig Ocean Patriot					
Drillstring Abbreviations N Normal M MWD P Positive Displacement Motor A Adjustable Gauge Stabilizer									S Powerdrive T TRACS Tool C Core			Hydraulics Models Power Law Model used for drilling with Mud Bingham Model used for coring and drilling with seawater									
Bit No.	Depth AHD (m)	Hole Size mm	Jets x 1/32"	Drill String Type	Mud Type	Mud Density ppg	PV cP	YP lbs/100 ft sq	Flow Rate gpm	Jet Vel m/sec	Impact Force lbf / in2	Hydraulic Power hhp	Power/ Area hp/sq in	Bit Loss psi	Bit Loss %	Pipe* Loss psi	ECD ppg	Annular Velocities			
																		DP OH m/min	DC OH m/min	DP Max Dia m/min	
Spikey Beach-1																					
445mm (17-1/2") Hole Section 155.0 - 816.0 mMDRT																					
NB2	200.0	445	3x18, 1x16	M	Sea water	8.8	-	-	1000	103.8	6.45	1222.1	1.95	792	37.8	1244	8.80	-	10.79	8.65	
NB2	816.0	445	3x18, 1x16	M	Sea water	8.8	-	-	1200	124.6	9.29	2488.5	3.37	1140	32.1	2289	8.80	31.87	37.01	11.81	
311 mm (12-1/4") Hole Section 816.0 - 2100.0 mMDRT																					
NB3	1498.0	311	3x16	P	KCL / PHPA	9.4	16	30	920	86.9	10.83	1481.5	2.74	592	21.5	2025	9.70	54.96	79.86	18.83	
NB3	1907.0	311	3x16	P	KCL / PHPA	9.9	16	30	900	85.0	10.92	1645.3	2.70	597	19.1	2384	10.10	51.23	72.88	18.42	
NB3	2100.0	311	3x16	P	KCL / PHPA	10.1	17	36	920	86.9	11.64	1815.1	2.94	636	18.8	2565	10.40	52.37	74.50	18.83	
* Note: Pipe Loss includes DP,HWDp, DC, MWD, Motor																					

Table: 3 Time and Depth Curve

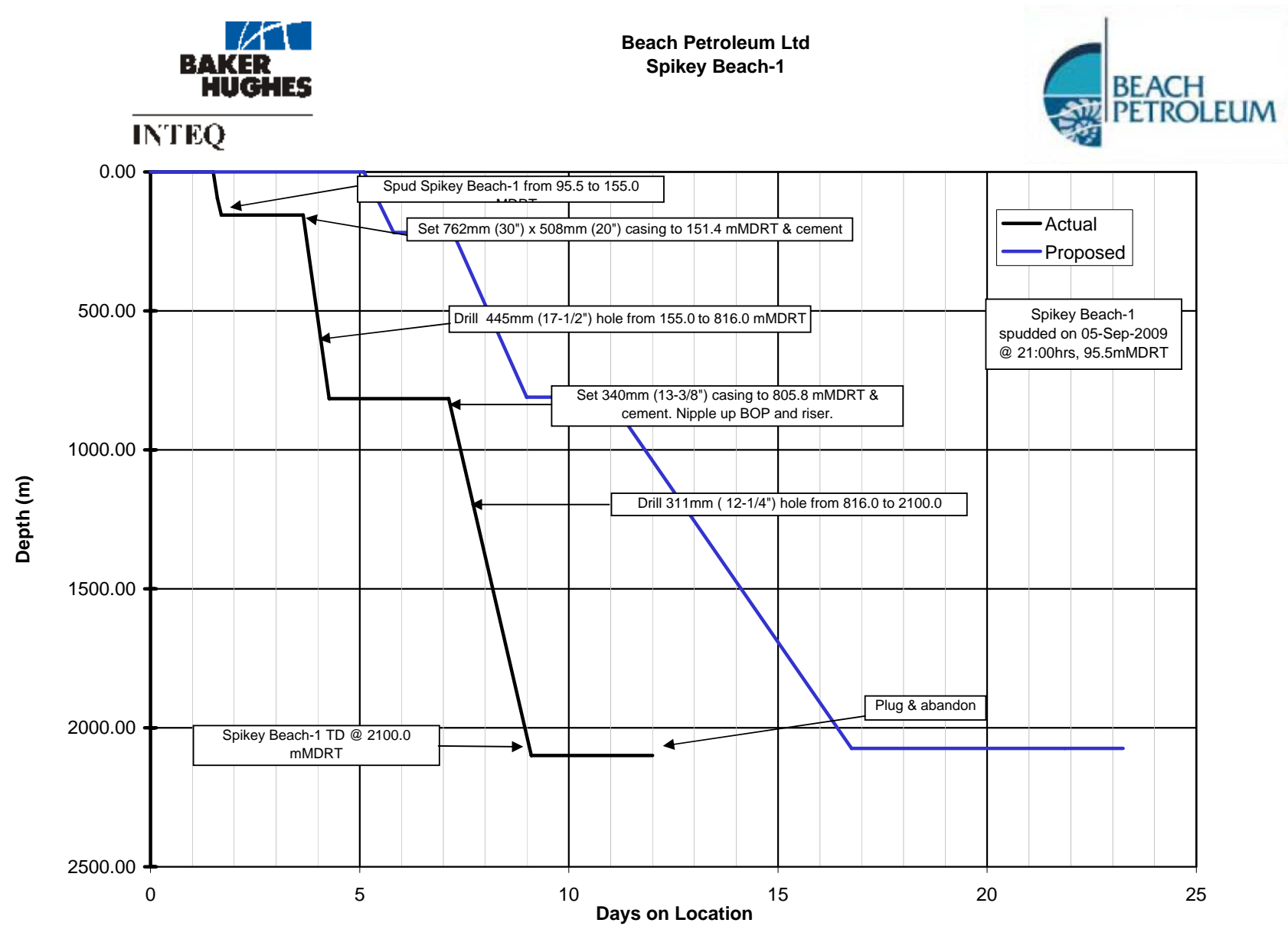


Table 4 Survey Report



INTEQ

Survey Report



Comments	Measured Depth (m)	Inclination (deg)	Azimuth (deg)	TVD (m)	NS (m)	EW (m)	Vertical Section (m)	DLS (deg/30 m)
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seabed	95.50	0.00	0.00	95.50	0.00	0.00	0.00	0.00
	179.35	0.24	83.43	179.35	0.02	0.17	0.02	0.09
	206.93	0.26	40.89	206.93	0.07	0.27	0.07	0.20
	294.67	0.37	50.63	294.67	0.40	0.62	0.40	0.04
	338.42	0.10	101.79	338.42	0.49	0.77	0.49	0.22
	352.67	0.17	96.28	352.67	0.48	0.80	0.48	0.15
	382.26	0.19	48.22	382.26	0.51	0.88	0.51	0.15
	468.33	0.04	55.57	468.33	0.62	1.01	0.62	0.05
	514.50	0.11	259.09	514.50	0.62	0.98	0.62	0.10
	556.06	0.15	276.07	556.06	0.62	0.89	0.62	0.04
	642.56	0.27	259.55	642.56	0.60	0.58	0.60	0.05
	727.80	0.25	254.10	727.80	0.51	0.20	0.51	0.01
	755.00	0.16	261.45	755.00	0.49	0.11	0.49	0.10
	786.24	0.17	245.91	786.24	0.46	0.02	0.46	0.04
	803.80	0.18	263.56	803.80	0.45	-0.03	0.45	0.09
	879.04	0.43	77.12	879.03	0.50	0.13	0.50	0.24
	990.83	0.34	90.11	990.82	0.59	0.87	0.59	0.03
	1078.27	0.31	90.35	1078.26	0.59	1.36	0.59	0.01
	1164.94	0.40	84.09	1164.93	0.62	1.90	0.62	0.03
	1221.27	0.44	97.02	1221.26	0.61	2.31	0.61	0.05
	1338.66	0.51	93.25	1338.64	0.53	3.28	0.53	0.02
	1367.75	0.54	94.83	1367.73	0.51	3.54	0.51	0.03
	1456.65	0.52	105.25	1456.63	0.37	4.35	0.37	0.03
	1530.18	0.55	90.58	1530.16	0.27	5.03	0.27	0.06
	1596.34	0.49	77.67	1596.31	0.33	5.62	0.33	0.06
	1625.50	0.47	69.82	1625.47	0.40	5.85	0.40	0.07
	1682.67	0.41	85.01	1682.64	0.50	6.28	0.50	0.07
	1767.94	0.46	80.24	1767.91	0.58	6.92	0.58	0.02
	1858.33	0.33	65.19	1858.30	0.75	7.51	0.75	0.05
	1913.35	0.48	64.16	1913.31	0.92	7.86	0.92	0.08
	1941.91	0.47	69.15	1941.87	1.01	8.08	1.01	0.04
	2028.47	0.60	92.17	2028.43	1.12	8.87	1.12	0.09
	2076.18	0.73	87.08	2076.14	1.13	9.42	1.13	0.09
	2100.00	0.73	87.08	2099.95	1.14	9.72	1.14	0.00

Appendix 6: Daily Geological Reports

DAILY GEOLOGICAL REPORT

Date:	06 September 2009	Rig:	Ocean Patriot
Report Number:	1	Bit Diameter:	36.00 in
Report Period:	06:00 AM - 06:00 AM	Last Casing:	-
Spud Date:	05-Sep-2009 21:00 Hours	Integrity Test:	N/A
Days From Spud:	0.40	Mud Weight:	8.80 ppg
Depth @ 2400 Hrs:	155.0 m MDRT	ECD:	-
	155.0 m TVDRT	Mud Type:	Sea Water & PHG
	-133.5 m SS	Mud Chlorides:	-
Lag Depth:	155.0 m MDRT	Est. Pore Pressure:	-
Last Depth:	N/A	DXC:	-
Progress:	59.5 m	Last Survey:	-
Water Depth:	74.0 m	Deviation:	-
RT:	21.5 m		

OPERATIONS SUMMARY

24 HOUR SUMMARY: Ran and tensioned anchors. Made up 26/36" drilling assembly and ran in hole to sea-floor. Held pre-spud safety meeting with crews. Spudded Spikey Beach 1 @ 21:00 hrs on 05-Sept-2009. Sea floor tagged at 95.5 m. Drilled 36" hole from 95.5-155.0 mMDRT with sea water and pre-hydrated gel with returns to sea floor, monitored with ROV. Circulated and conditioned well, pulled out of hole to run 30" conductor. Ran in hole 30" conductor casing.

NEXT 24 HOURS: Run in hole 30" conductor and cement at 151.4 mMDRT. Pick up 5" drill pipe and rack in derrick, pick up 17 1/2" drilling assembly.

CURRENT OPERATION @ 06:00 HRS (07-Sep-2009): Running in hole 30" conductor.

GEOLOGICAL SUMMARY

SAMPLE QUALITY

Returns to sea floor

MUDLOGGING EQUIPMENT / PERSONNEL

Mudlogging unit equipment calibrated and functional.

WELLSITE GEOLOGISTS

Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	07 September 2009	Rig:	Ocean Patriot
Report Number:	2	Bit Diameter:	36.00 in
Report Period:	06:00 AM - 06:00 AM	Last Casing:	30"csg, 26" shoe track @ 151.4 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	Integrity Test:	N/A
Days From Spud:	1.4	Mud Weight:	8.80 ppg
Depth @ 2400 Hrs:	155.0 m MDRT	ECD:	-
	155.0 m TVDRT	Mud Type:	Sea Water & PHG
	-133.5 m SS	Mud Chlorides:	-
Lag Depth:	155.0 m MDRT	Est. Pore Pressure:	-
Last Depth:	155.0 m MDRT	DXC:	-
Progress:	0 m	Last Survey:	155.0 m MDRT
Water Depth:	74.0 m	Deviation:	Inc.0°
RT:	21.5 m		Az.°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Ran in hole 30"/26" conductor casing to 151.4 mMDRT. Circulated and conditioned well, rigged cementing unit line and pressure tested same. Mixed and pumped 270 bbl of class 'G' single cement slurry, displaced cement with 21 bbl of sea water. Rigged down cement lines, waited on cement sample to harden. Retrieved casing running tool and racked in derrick. Picked up 67 stands of 5" drill pipe.

NEXT 24 HOURS: Make up 17 1/2" MWD/LWD drilling assembly (GR-Directional-Sonic). Run in hole, drill cement & shoe track. Drill 17 1/2" hole from 155.0 mMDRT with sea water & pre-hydrated gel sweeps to ~800.0 mMDRT.

CURRENT OPERATION @ 06:00 HRS (07-Sep-2009): Picking up 8" drill collars.

GEOLOGICAL SUMMARY**LITHOLOGY**

No new formation drilled in the past 24 hours

SAMPLE QUALITY

No new formation drilled in the past 24 hours.

MUDLOGGING EQUIPMENT / PERSONNEL

Gas system calibrated on 6th Sept 2009.

REMARKS

LWD engineers scheduled to arrive on the rig at 10:00 hours on 07th Sept 2009.

WELLSITE GEOLOGISTS

Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	08 September 2009	Rig:	Ocean Patriot
Report Number:	3	Bit Diameter:	17.50 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	30"csg, 20" shoe track @ 151.4 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	Integrity Test:	N/A
Days From Spud:	2.4	Mud Weight:	8.80 ppg
Depth @ 0600 Hrs:	428.0 m MDRT	ECD:	8.90 ppg
	428.0 m TVDRT	Mud Type:	Sea Water & PHG
	-406.5 m TVDSS	Mud Chlorides:	-
Lag Depth:	-	Est. Pore Pressure:	-
Last Depth:	155.0 m MDRT	DXC:	-
Progress:	273.0 m	Last Survey:	338.42 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.08°
RT:	21.5 m		Az. 102.37°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Picked up 8" drill collars and racked in derrick. Conducted rig maintenance while waiting on LWD engineers to prepare 17 1/2" tools. Made up 17 1/2" drilling assembly, ran in hole, shallow tested LWD tools - good test. Ran in hole 17 1/2" drilling assembly, tagged top of cement at 148.4 mMDRT, drilled cement & shoe track. Drilled 17 1/2" hole section from 155.0 to 428.0 mMDRT.

NEXT 24 HOURS: Drill 17 1/2" hole section to ~810.0 mMDRT. Circulate and condition well, conduct wiper trip to casing shoe. Pull out of hole to run 13 3/8" casing. Run and cement 13 3/8" casing.

CURRENT OPERATION @ 06:00 HRS (08-Sep-2009): Drilling 17 1/2" hole in the Torque Group at 50-60 m/hr.

GEOLOGICAL SUMMARY

LITHOLOGY

Returns to sea floor.

SAMPLE QUALITY

Returns to sea floor.

MWD

Sensor Offsets:

GR	: 5.80 m
Res	: 5.75 m
Directional	: 13.98 m
Sonic	: 23.45 m

PROVISIONAL FORMATION TOPS

Formation Name	Prognosed Depths			Actual Depths			Diff. TVT (m)	Picks Based On
	MD (m)	TVDRT (m)	TVDSS (m)	MD (m)	TVDRT (m)	TVDSS (m)		
Recent Carbonates	118.0	118.0	(96.5)	95.5	95.5	(74.0)	22.5 H	Offset Stratigraphy
Torquay Group (Reefal Carbonate)	138.0	138.0	(116.5)	131.0	131.0	(109.5)	7.0 H	ROP
Torquay Group (Marl)	718.0						-	
Oligocene Sandstones (Lower Torqay Group)	1023.0						-	
Demons Bluff Formation	1398.0						-	
Upper Eastern View Group	1478.0						-	
Middle Eastern View Group	1868.0						-	

SURVEY DATA

MD (m)	Inc (°)	Azi (°)	TVD (m)	TVDSS (m)	V.Sec (m)	Dogleg (°/100ft)	E/W (m)	N/S (m)
155.0	0.00	0.00	155.0	133.5	0.00	0.00	0.00	0.00
206.9	0.26	42.95	206.9	185.4	0.09	0.15	0.08	0.09
294.9	0.36	50.37	294.9	273.4	0.41	0.04	0.43	0.41
338.4	0.08	102.37	338.4	316.9	0.49	0.22	0.56	0.49

WELLSITE GEOLOGISTS

Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	09 September 2009	Rig:	Ocean Patriot
Report Number:	4	Bit Diameter:	17.50 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	30"csg, 20" shoe track @ 151.4 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	Integrity Test:	N/A
Days From Spud:	3.4	Mud Weight:	8.80 ppg
Depth @ 0600 Hrs:	816.0 m MDRT	ECD:	8.90 ppg
	816.0 m TVDRT	Mud Type:	Sea Water & PHG
	-794.5 m TVDSS	Mud Chlorides:	-
Lag Depth:	-	Est. Pore Pressure:	-
Last Depth:	428.0 m MDRT	DXC:	-
Progress:	388.0 m	Last Survey:	803.80 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.17°
RT:	21.5 m		Az. 265.12°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled 17 1/2" hole from 428.0 to 816.0 mMDRT with sea water and pre-hydrated gel sweeps. Section total depth called at 816.0 mMDRT, circulated and conditioned well. Pulled out of hole to run 13 3/8" casing, worked tight hole section from 725.0 to 629.0 mMDRT - maximum recorded overpull of 30-40 klb. Laid out LWD tools and bit. Held pre-job safety meeting, rigged up and ran in hole 60 joints of N80 68 lb/ft 13 3/8" casing.

NEXT 24 HOURS: Land 13 3/8" casing, rig up cement line and pressure test same. Cement 13 3/8" casing, retrieve landing string. Run blow out preventers & marine riser.

CURRENT OPERATION @ 06:00 HRS (09-Sep-2009): Rigging down casing elevators.

GEOLOGICAL SUMMARY**LITHOLOGY**

Returns to sea floor.

SAMPLE QUALITY

Returns to sea floor.

MWD

Sensor Offsets:

GR	: 5.80 m
Res	: 5.75 m
Directional	: 13.98 m
Sonic	: 23.45 m

PROVISIONAL FORMATION TOPS

Formation Name	Prognosed Depths			Actual Depths			Diff. TVT (m)	Picks Based On
	MD (m)	TVDRT (m)	TVDSS (m)	MD (m)	TVDRT (m)	TVDSS (m)		
Recent Carbonates	118.0	118.0	(96.5)	95.5	95.5	(74.0)	22.5 H	Offset Stratigraphy
Torquay Group (Reefal Carbonate)	138.0	138.0	(116.5)	131.0	131.0	(109.5)	7.0 H	ROP
Torquay Group (Marl)	718.0	718.0	(696.5)	715.0	715.0	(693.5)	3.0 H	ROP
Oligocene Sandstones (Lower Torqay Group)	1023.0						-	
Demons Bluff Formation	1398.0						-	
Upper Eastern View Group	1478.0						-	
Middle Eastern View Group	1868.0						-	

SURVEY DATA

MD (m)	Inc (°)	Azi (°)	TVD (m)	TVDSS (m)	V.Sec (m)	Dogleg (°/100ft)	E/W (m)	N/S (m)
206.9	0.26	42.95	206.9	185.4	0.09	0.15	0.08	0.09
294.9	0.36	50.37	294.9	273.4	0.41	0.04	0.43	0.41
338.4	0.08	102.37	338.4	316.9	0.49	0.22	0.56	0.49
468.3	0.03	49.52	468.3	446.8	0.49	0.02	0.68	0.49
556.1	0.15	273.02	556.1	534.6	0.51	0.06	0.58	0.51
642.6	0.26	259.10	642.6	621.1	0.48	0.04	0.28	0.48
727.8	0.24	254.77	727.8	706.3	0.40	0.01	-0.09	0.40
786.2	0.17	248.62	786.2	764.7	0.33	0.04	-0.29	0.33
803.8	0.18	261.59	803.8	782.3	0.32	0.07	-0.34	0.32

REMARKS

13 3/8" casing shoe to be set at 805.8 mMDRT.

WELLSITE GEOLOGISTS

Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	10 September 2009	Rig:	Ocean Patriot
Report Number:	5	Bit Diameter:	17.50 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	13 3/8" @ 805.8 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	Integrity Test:	N/A
Days From Spud:	4.4	Mud Weight:	9.30 ppg
Depth @ 0600 Hrs:	816.0 m MDRT	ECD:	9.30 ppg
	816.0 m TVDRT	Mud Type:	Brine
	-794.5 m TVDSS	Mud Chlorides:	96000.00 mg/L
Lag Depth:	-	Est. Pore Pressure:	-
Last Depth:	816.0 m MDRT	DXC:	-
Progress:	0 m	Last Survey:	803.80 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.17°
RT:	21.5 m		Az. 265.12°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Rigged down 13 3/8" casing running equipment, shoe set 805.8 mMDRT. Circulated casing, rigged up cement line and pressure tested same. Mixed and pumped 348.0 bbl of lead slurry at 12.5 ppg followed by 90.0 bbl of tail slurry at 15.8 ppg. Displaced cement with 343.0 bbl of sea water, bumped top plug with 2500 psi, held pressure for 15 minutes. Released pressure via cement unit. Retrieved landing string. Rigged up blow out preventer's running equipment. Ran blow out preventer's and marine riser.

NEXT 24 HOURS: Run and land blow out preventer's, pressure test blow out preventers. Make up 12 1/4" LWD (GR-Resistivity-Neutron-Density-Sonic-Directional) drilling assembly. Run in hole with 12 1/4" LWD drilling assembly, drill cement, float and shoe track along with 3.0 m of new formation. Displace well to 9.00 ppg KCL polymer mud system, conduct leak off test. Drill 12 1/4" hole.

CURRENT OPERATION @ 06:00 HRS (10-Sep-2009): Installing choke and kill goosenecks to slip joint.

GEOLOGICAL SUMMARY

LITHOLOGY

No new formation drilled in the past 24 hours.

MUDLOGGING EQUIPMENT / PERSONNEL

Gas equipment calibrated on 09-Sept-2009.

MWD

12 1/4" section onboard on 10-Sept-2009.

WELLSITE GEOLOGISTS

Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	11 September 2009	Rig:	Ocean Patriot
Report Number:	6	Bit Diameter:	12.25 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	13 3/8" @ 805.8 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	Integrity Test:	N/A
Days From Spud:	5.4	Mud Weight:	9.00 ppg
Depth @ 0600 Hrs:	816.0 m MDRT	ECD:	9.40 ppg
	816.0 m TVDRT	Mud Type:	KCL/Klastop/Polymer
	-794.5 m TVDSS	Mud Chlorides:	55000 mg/L
Lag Depth:	-	Est. Pore Pressure:	-
Last Depth:	816.0 m MDRT	DXC:	-
Progress:	0 m	Last Survey:	803.80 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.17°
RT:	21.5 m		Az. 265.12°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Installed choke & kill gooseneck connections to slip joint, pressure tested same. Landed blow out preventer's, latched connectors, latch confirmed with 50k overpull on connectors. Pressure tested blow out preventer connections to 250/2700 psi for 5/10 minutes - good test. Scoped out slip joint, laid riser handling equipment and landing joint. Installed diverter assembly. Made up 12 1/4" LWD (GR-Resistivity-Neutron-Density-Sonic-Directional) drilling assembly. Shallow test LWD tools - good test. Load LWD sources, continued making up drilling assembly. Ran in hole to 300.0 mMDRT, tested LWD tools - good test. Functioned tested blow out preventer's. Continued running in hole with LWD drilling assembly to 794.0 MDRT, displaced well to KCL Polymer mud while drilling cement - tagged top of cement at 794.0 mMDRT.

NEXT 24 HOURS: Drill 13 3/8" float & shoe track along with 3.0 m of new formation. Circulate and condition well, conduct leak off test. Drill 12 1/4" hole.

CURRENT OPERATION @ 06:00 HRS (11-Sep-2009): Drilling 13 3/8" casing float & shoe track.

GEOLOGICAL SUMMARY

LITHOLOGY

No new formation drilled in the past 24 hours.

SAMPLE QUALITY

No new formation drilled in the past 24 hours.

MUDLOGGING EQUIPMENT / PERSONNEL

H2S sensors & CO2 gas pannel calibrated on 10-Sept-2009.

MWD

Sensor Offsets: Run 2

GR	: 16.45 m
Res	: 16.37 m
Directional	: 24.45 m
Sonic	: 33.83 m
Density	: 39.78 m
Neutron	: 41.76 m



WELLSITE GEOLOGISTS

Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	12 September 2009	Rig:	Ocean Patriot
Report Number:	7	Bit Diameter:	12.25 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	13 3/8 in @ 805.8 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	LOT:	12.35 ppg EMW @ 805.8 m MDRT
Days From Spud:	6.4	Mud Weight:	9.40 ppg
Depth @ 0600 Hrs:	1605.0 m MDRT	ECD:	9.70 ppg
	1605.0 m TVDRT	Mud Type:	KCL/Klastop/Polymer
	-1583.5 m TVDSS	Mud Chlorides:	50000.00 mg/L
Lag Depth:	1595.0 m MDRT	Est. Pore Pressure:	9.14 ppg
Last Depth:	816.0 m MDRT	DXC:	1.06
Progress:	789.0 m	Last Survey:	1530.18 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.55°
RT:	21.5 m		Az. 90.58°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled cement, float & shoe track along with 3.0 m of new formation from 816.0 to 819.0 m MDRT. Circulated hole clean, conducted leak off test with 9.0 ppg mud, leak achieved with 629.0 psi, equivalent mud weight calculated at 12.35 ppg. Drilled 12 1/4" hole from 819.0 to 1450.0 m MDRT, control drilled 12 1/4" hole from 1450.0 to 1605.0 m MDRT.

NEXT 24 HOURS: Drill 12 1/4" hole to total depth of 2078.0 m MDRT.

CURRENT OPERATION @ 06:00 HRS (12-Sep-2009): Control drilling 12 1/4" hole in the Upper Eastern View Group at 20 m/hr.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 816.0 to 970.0 m MDRT (-794.5 to -948.5 m TVDSS)
ROP (Range): 47.0 to 305.0 m/h
Av. ROP: 160.0 m/h

CALCARENITE with CALCAREOUS CLAYSTONE interbeds.

CALCARENITE: light grey to white, light blue grey, abundant fossils (coral, byozoa, ammonoids), common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky.

CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, common fossil fragments, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, firm to moderately hard, sub-blocky to blocky.

INTERVAL: 970.0 to 1040.0 m MDRT (-948.5 to -1018.5 m TVDSS)
ROP (Range): 61.0 to 199.0 m/h
Av. ROP: 145.0 m/h

Interbedded CALCARENITE and CALCAREOUS CLAYSTONE with minor CALCAREOUS SILTSTONE.

CALCARENITE: light grey to white, light blue grey, abundant fossils (coral, byozoa, ammonoids), common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky.

CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace fossil fragments, firm to moderately hard, blocky.

CALCAREOUS SILTSTONE: medium to dark grey, medium olive grey, medium brown grey, argillaceous, grading to Arenaceous Claystone, trace to common fossil fragments, trace carbonaceous specks, trace glauconite, firm, sub-blocky to blocky.

INTERVAL: 1040.0 to 1090.0 m MDRT (-1018.5 to -1068.5 m TVDSS)
ROP (Range): 78.0 to 223.0 m/h
Av. ROP: 162.0 m/h

CALCAREOUS CLAYSTONE with minor interbedded CALCARENITE.

CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace to common fossil fragments, traces of disseminated and nodular pyrite, firm to moderately hard, sub-blocky to blocky.

CALCARENITE: light to medium grey, light blue grey to white, light brown grey, common very fine quartz grains, common fossil fragments, trace carbonaceous specks, trace pyrite, firm, sub-blocky to blocky.

INTERVAL: 1090.0 to 1250.0 m MDRT (-1068.5 to -1228.5 m TVDSS)
ROP (Range): 53.0 to 250.0 m/h
Av. ROP: 163.0 m/h

CLAYSTONE.

CLAYSTONE: light to medium grey, light brown to brown grey, medium olive grey, medium dark grey, calcareous, trace carbonaceous specks and micro-laminations, trace to abundant disseminated and nodular pyrite, trace very fine glauconite grains, trace fossil fragments, rare micro mica, firm to moderately hard, sub-blocky to blocky.

INTERVAL: 1250.0 to 1290.0 m MDRT (-1178.5 to -1268.5 m TVDSS)
ROP (Range): 42.0 to 203.0 m/h
Av. ROP: 141.0 m/h

SILTSTONE with minor CLAYSTONE interbeds.

SILTSTONE: light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky.

CLAYSTONE: medium to dark grey, medium olive grey, medium brown grey, moderately calcareous, trace to common nodular pyrite, common carbonaceous specks, trace micro mica and glauconite, firm to moderately hard, sub-blocky to blocky.

INTERVAL: 1290.0 to 1344.0 m MDRT (-1268.5 to -1322.5 m TVDSS)
ROP (Range): 27.0 to 124.0 m/h
Av. ROP: 63.0 m/h

SILTSTONE with SANDSTONE and CLAYSTONE interbeds.

SILTSTONE: light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky.

SANDSTONE: light brown to brown grey, clear to translucent, very fine grained, moderately sorted, sub-angular to sub-rounded, moderate siliceous cement, moderate to strong calcareous (dolomitic) cement, common to abundant argillaceous to silty matrix, in part grading to a Sandy Siltstone, trace carbonaceous specks and glauconite, trace siderite, friable to moderately hard, very poor inferred porosity, no

fluorescence.

CLAYSTONE: medium to dark brown grey, medium olive grey, weak to moderately calcareous, trace to common nodular pyrite, common carbonaceous specks, trace micro mica and glauconite, firm to moderately hard, sub-blocky to blocky.

INTERVAL: 1344.0 to 1393.5 m MDRT (-1322.5 to -1372.0 m TVDSS)
ROP (Range): 24.0 to 145.0 m/h
Av. ROP: 77.0 m/h

SILTSTONE with minor SANDSTONE and LIMESTONE interbeds.

SILTSTONE: light to medium brown, medium to dark brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to moderately calcareous, trace to common micro mica & glauconite, trace disseminated and nodular pyrite, rare to minor carbonaceous material, soft to firm, sub-blocky to blocky.

SANDSTONE: light brown to brown grey, clear to translucent, very fine grained, moderately sorted, sub-angular to sub-rounded, moderate siliceous cement, moderate to strong calcareous (dolomitic) cement, common to abundant argillaceous to silty matrix, in part grading to a Sandy Siltstone, trace carbonaceous specks and glauconite, trace siderite, friable to moderately hard, very poor inferred porosity, no fluorescence.

LIMESTONE: light brown to moderate brown, microcrystalline, sandy in part, dolomitic in part, angular cuttings, moderate hard to hard.

INTERVAL: 1393.5 to 1434.0 m MDRT (-1372.0 to -1412.5 m TVDSS)
ROP (Range): 9.0 to 61.0 m/h
Av. ROP: 36.0 m/h

CLAYSTONE with rare LIMESTONE laminations.

CLAYSTONE (1): dark grey, brownish grey to brownish black, non to slightly calcareous, carbonaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.

CLAYSTONE (2): very light grey to light grey, light brownish grey, grading to SILTSTONE, non to moderate calcareous, soft to firm, sub-blocky to blocky.

LIMESTONE: light brown to moderate brown, trace bluish grey, predominantly microcrystalline, trace bioclastic, sandy in part, dolomitic in part, angular cuttings, moderate hard to hard.

INTERVAL: 1434.0 to 1473.0 m MDRT (-1412.5 to -1451.5 m TVDSS)
ROP (Range): 8.0 to 94.0 m/h
Av. ROP: 37.0 m/h

CLAYSTONE with rare LIMESTONE laminations.

CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micro-micaceous, rare disseminated very fine pyrite, traces nodular pyrite, rare micro-mica, and soft to firm, sub-blocky to sub-fissile.

LIMESTONE: light brownish grey to brownish grey, trace white to very light grey, predominantly micritic, trace sparitic, argillaceous in part and grading to Marl, soft to moderate hard, platy to splintery.

INTERVAL: 1473.0 to 1494.0 m MDRT (-1451.5 to -1472.5 m TVDSS)
ROP (Range): 11.0 to 57.0 m/h
Av. ROP: 23.0 m/h

Interbedded CLAYSTONE and SANDSTONE.

CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micro-micaceous, rare disseminated very fine pyrite, traces nodular pyrite, rare micro-mica, and soft to firm, sub-

blocky to fissile.

SANDSTONE: translucent, transparent, minor light brownish grey to brownish grey aggregates, very fine to fine, moderate to well sorted aggregates with moderate to poor sorted loose, sub angular to sub rounded, weak to moderate siliceous cement, minor to abundant calcareous clay matrix, trace carbonaceous material, trace dark lithics, trace Fe staining on loose grains, loose to friable, poor visible porosity, good inferred porosity, no fluorescence.

INTERVAL: 1494.0 to 1512.0 m MDRT (-1472.5 to -1490.5 m TVDSS)
ROP (Range): 9.0 to 49.0 m/h
Av. ROP: 23.0 m/h

Interbedded CLAYSTONE and SANDSTONE.

CLAYSTONE: olive grey, brownish grey, yellowish grey, non to slightly calcareous, rare micro mica, rare very fine quartz, trace carbonaceous material, trace very fine disseminated pyrite, soft, amorphous to sub-blocky, grading to SILTSTONE.

GLAUCONITIC SANDSTONE: moderate to dark yellowish green, very fine, well sorted, sub rounded, siliceous cement, pervasive glauconitic staining, grading to glauconitic Siltstone, friable, tight to poor visible porosity, no fluorescence.

SANDSTONE: translucent, transparent, frosted in part, fine to coarse, poor sorted, sub rounded to rounded, loose, good inferred porosity, no fluorescence.

INTERVAL: 1512.0 to 1560.0 m MDRT (-1490.5 to -1538.5 m TVDSS)
ROP (Range): 14.0 to 59.0 m/h
Av. ROP: 27.0 m/h

Interbedded SILTSTONE and SANDSTONE.

SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, predominantly very fine to fine well sorted aggregates, 5% fine to coarse moderate sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.

SILTSTONE: olive grey, light brownish grey, non to slightly calcareous, rare micro mica, trace carbonaceous laminae and material, trace nodular pyrite, trace coarse embedded quartz grains, trace black Coal fragments and laminae, soft to firm, sub-blocky, grading to and interlaminated with very fine SANDSTONE.

INTERVAL: 1560.0 to 1595.0 m MDRT (-1538.5 to -1573.5 m TVDSS)
ROP (Range): 20.0 to 25.0 m/h
Av. ROP: 22.0 m/h

Interbedded SILTSTONE and SANDSTONE with minor COAL seams.

SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, predominantly very fine to fine well sorted aggregates, 5% fine to coarse moderate sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.

SILTSTONE: olive grey, light brownish grey, non to slightly calcareous, rare micro mica, trace carbonaceous laminae and material, trace nodular pyrite, trace coarse embedded quartz grains, trace black Coal fragments and laminae, soft to firm, sub-blocky, grading to and interlaminated with very fine SANDSTONE.

COAL: black, brownish black, earthy to sub vitreous, rare vitreous, lignitic, soft to brittle, angular, grading to carbonaceous Claystone.

GAS SUMMARY

Background Gas							
INTERVAL (m MDRT)	Total Gas (Units)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
816.0 - 970.0	0	5	0	0	0	0	0
970.0 - 1040.0	0	9	11	0	0	0	0
1040.0 - 1090.0	0	14	0	0	0	0	0
1090.0 - 1250.0	1	92	0	0	0	0	0
1250.0 - 1344.0	2	294	0	0	0	0	0
1344.0 - 1393.5	1	103	0	0	0	0	0
1393.5 - 1434.0	1	92	20	0	0	0	0
1434.0 - 1473.0	0	33	3	0	0	0	0
1473.0 - 1494.0	0	10	0	0	0	0	0
1494.0 - 1512.0	0	9	0	0	0	0	0
1512.0 - 1560.0	0	8	0	0	0	0	0
1560.0 - 1595.0	0	7	0	0	0	0	0

MWD

Sensor Offsets: Run 2

GR : 16.45 m

Res : 16.37 m

Directional : 24.45 m

Sonic : 33.83 m

Density : 39.78 m

Neutron : 41.76 m

Lost depth tracking / RT data between 1567.0 to 1584.0 mMDRT.

PROVISIONAL FORMATION TOPS

Formation Name	Prognosed Depths			Actual Depths			Diff. TVT (m)	Picks Based On
	MD (m)	TVDRT (m)	TVDSS (m)	MD (m)	TVDRT (m)	TVDSS (m)		
Recent Carbonates	118.0	118.0	(96.5)	95.5	95.5	(74.0)	22.5 H	Offset Stratigraphy
Torquay Group (Reefal Carbonate)	138.0	138.0	(116.5)	131.0	131.0	(109.5)	7.0 H	ROP
Torquay Group (Marl)	718.0	718.0	(696.5)	715.0	715.0	(693.5)	3.0 H	ROP
Oligocene Sandstones (Lower Torqay Group)	1023.0	1023.0	(1001.5)				-	
Demons Bluff Formation	1398.0	1398.0	(1376.5)	1393.5	1393.5	(1372.0)	4.5 H	LWD Lithology
Upper Eastern View Group	1478.0	1478.0	(1456.5)	1480.5	1480.5	(1459.0)	2.5 L	LWD
Middle Eastern View Group	1868.0						-	

SURVEY DATA

MD (m)	Inc (°)	Azi (°)	TVD (m)	TVDSS (m)	V.Sec (m)	Dogleg (°/100ft)	E/W (m)	N/S (m)
879.0	0.43	77.12	879.0	857.5	0.98	0.24	0.24	0.98

990.8	0.34	90.11	990.8	969.3	1.08	0.03	0.98	1.08
1078.3	0.31	90.35	1078.3	1056.8	1.08	0.01	1.47	1.08
1106.4	0.42	79.90	1106.4	1084.9	1.09	0.14	1.65	1.09
1136.0	0.37	78.73	1136.0	1114.5	1.13	0.05	1.85	1.13
1164.9	0.40	84.09	1164.9	1143.4	1.16	0.05	2.04	1.16
1191.9	0.35	86.03	1191.8	1170.3	1.17	0.06	2.22	1.17
1221.3	0.44	97.02	1221.3	1199.8	1.17	0.12	2.42	1.17
1338.7	0.51	93.25	1338.6	1317.1	1.08	0.02	3.39	1.08
1367.8	0.54	94.83	1367.7	1346.2	1.06	0.03	3.66	1.06
1456.7	0.52	105.25	1456.6	1435.1	0.92	0.03	4.46	0.92
1530.2	0.55	90.58	1530.2	1508.7	0.83	0.06	5.14	0.83

WELLSITE GEOLOGISTS

Peter Morris / Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	13 September 2009	Rig:	Ocean Patriot
Report Number:	8	Bit Diameter:	12.25 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	13 3/8" @ 805.8 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	LOT:	12.35 ppg EMW @ 805.8 m MDRT
Days From Spud:	7.4	Mud Weight:	10.00 ppg
Depth @ 0600 Hrs:	2037.0 m MDRT	ECD:	10.35 ppg
	2037.0 m TVDRT	Mud Type:	KCL/Klastop/Polymer
	-2015.5 m TVDSS	Mud Chlorides:	50000.00 mg/L
Lag Depth:	2019.0 m MDRT	Est. Pore Pressure:	9.14 ppg
Last Depth:	1605.0 m MDRT	DXC:	1.1
Progress:	432.0 m	Last Survey:	1913.35 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.48°
RT:	21.5 m		Az. 64.16°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled 12.25 in hole with surveys from 1605.0 to 2037.0 m MDRT.

NEXT 24 HOURS: Drill ahead to TD of 2061.5 m MDRT. Circulate hole clean and POOH.

CURRENT OPERATION @ 06:00 HRS (13-Sep-2009): Drilling 12.25 in hole in the Middle Eastern View Group at 15 m/hr.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1595.0 to 1645.0 m MDRT (-1573.5 to -1623.5 m TVDSS)
ROP (Range): 12.0 to 33.0 m/h
Av. ROP: 21.0 m/h

SANDSTONE interbedded with minor SILTSTONE and COAL seams.

SANDSTONE: clear to translucent, minor opaque grains, fine to medium grained, minor coarse grains, poorly sorted, sub-angular to sub-rounded, moderate siliceous cement, weak calcareous cement, rare pyritic cement, trace silty matrix, common quartz overgrowths, trace to common nodular pyrite, rare lithics fragments, predominantly loose, minor moderately hard to hard aggregates, fair visible porosity, fair inferred porosity, no fluorescence.

SANDSTONE: clear to translucent, minor opaque grains, fine to coarse grained, predominantly medium grained, moderately sorted, angular to sub-rounded, weak to moderate siliceous cement mainly as quartz overgrowths, rare pyritic cement, rare light grey to white argillaceous to silty matrix, trace to rare nodular pyrite, trace lithics, common quartz overgrowths, loose, trace moderately hard aggregates, fair to poor visible and inferred porosity, no fluorescence.

SILTSTONE: light to medium brown, light brown grey, light olive grey, common disseminated and nodular pyrite, rare pyrite veins, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.

COAL: black, brownish black, sub vitreous, rare vitreous, soft to brittle, angular to sub-blocky, sub-conchoidal.

INTERVAL: 1645.0 to 1752.0 m MDRT (-1623.5 to -1730.5 m TVDSS)
ROP (Range): 7.0 to 46.0 m/h
Av. ROP: 23.0 m/h

Interbedded SANDSTONE, SILTSTONE with minor CARBONACEOUS CLAYSTONE and COAL seams.

SANDSTONE: clear to translucent, fine to coarse grained, predominantly fine to medium grained, poorly sorted, sub-angular to sub-rounded, moderate siliceous cement, trace pyritic cement, common to abundant white argillaceous to silty matrix (Kalonitic), common nodular pyrite, trace lithics and carbonaceous material, loose, minor friable aggregates, poor inferred porosity, no fluorescence.

SILTSTONE: medium brown to brown grey, light to medium olive grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.

CARBONACEOUS CLAYSTONE: dark brown to dark brown grey, dark grey to grey black, dark olive grey, trace to common disseminated pyrite, common micro-micaceous, moderately hard, sub-fissile to sub-blocky.
COAL: black to grey black, dark brown, dull to earthy luster, in part sub-vitreous, angular to sub-conchoidal fracture.

INTERVAL: 1752.0 to 1820.0 m MDRT (-1730.5 to -1798.5 m TVDSS)
ROP (Range): 14.0 to 70.0 m/h
Av. ROP: 26.0 m/h

Interbedded SILTSTONE and SANDSTONE.

SILTSTONE: medium to dark brown grey, medium olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, carbonaceous, trace common disseminated and nodular pyrite, common micro mica, firm to moderately hard, in part very hard, sub-blocky to blocky.

SANDSTONE: white to light grey, clear to translucent, very fine to fine grained, predominantly fine grained, poorly sorted, sub-angular to sub-rounded, weak siliceous cement, minor pyritic cement, common to abundant silty matrix, common disseminated and nodular pyrite, trace carbonaceous specks, rare lithics, predominantly loose, common friable aggregates, poor inferred & visible porosity, no fluorescence.

SANDSTONE: clear to translucent, fine to medium grained, moderately sorted, sub-angular to sub-rounded, weak siliceous cement, common argillaceous to silty matrix, common nodular pyrite, trace carbonaceous specks, rare lithics, loose, minor moderately hard to hard aggregates, poor inferred & visible porosity, no fluorescence.

INTERVAL: 1820.0 to 1870.0 m MDRT (-1798.5 to -1848.5 m TVDSS)
ROP (Range): 10.0 to 56.0 m/h
Av. ROP: 23.0 m/h

Interbedded SANDSTONE and SILTSTONE with minor COALS.

COAL: black to brownish black, dark brown, dull to earthy luster, in part sub-vitreous, angular to sub-conchoidal fracture, grading to carbonaceous shale

SANDSTONE: translucent, transparent, very light grey, very fine to fine, well sorted, sub angular to sub rounded, weak siliceous cement, localised pyritic cement, abundant white clay matrix, rare carbonaceous material, trace nodular pyrite, grades to sandy SILTSTONE, predominantly disaggregated, minor loose, poor visible porosity, no fluorescence.

SILTSTONE: pale brown, light olive grey to olive grey, brownish grey, argillaceous to arenaceous, sandy and in part and grading to a very fine Sandstone, minor to very carbonaceous in part, common micro mica, soft to firm, sub-blocky to blocky, fissile in part.

INTERVAL: 1870.0 to 1959.0 m MDRT (-1848.5 to -1937.5 m TVDSS)
ROP (Range): 2.0 to 112.0 m/h
Av. ROP: 30.0 m/h

Interbedded SANDSTONE and SILTSTONE with minor Coals.

COAL: black, occasional brownish black, sub vitreous, minor earthy, firm, brittle in part, sub conchoidal to angular fracture, grading to carbonaceous Claystone.

SANDSTONE: very light grey to light grey, translucent, transparent, very fine to fine, well sorted, sub angular to sub rounded, minor aggregates with weak siliceous cement, abundant slightly calcareous white clay matrix, trace lithics, trace pyrite, grading to arenaceous SILTSTONE, predominantly disaggregated to

friable, fair visible porosity, no fluorescence.

SILTSTONE: light brownish grey, light olive grey, are, minor carbonaceous material / laminae, rare micro-mica, weakly dolomitic in part, firm, sub-blocky to blocky.

INTERVAL: 1959.0 to 1983.0 m MDRT (-1937.5 to -1961.5 m TVDSS)
ROP (Range): 14.0 to 101.0 m/h
Av. ROP: 34.0 m/h

SANDSTONE.

SANDSTONE : translucent, transparent, very light grey to light grey, light olive grey, very fine to fine, well sorted, sub rounded, rare aggregates with siliceous cement, trace to abundant white clay matrix, slightly calcareous in part, trace dark lithics, trace carbonaceous material, predominantly loose, rare friable to moderate hard aggregates, good inferred porosity, fair to good visible porosity, no fluorescence.

HYDROCARBON FLUORESCENCE

No Shows

GAS SUMMARY

Background Gas							
INTERVAL (m MDRT)	Total Gas (Units)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
1605.0 - 1645.0	0	9	0	0	0	0	0
1645.0 - 1752.0	0	9	0	0	0	0	0
1752.0 - 1820.0	0	6	2	0	0	0	0
1820.0 - 1870.0	0	3	1	0	0	0	0
1870.0 - 1959.0	0	11	0	0	0	0	0
1959.0 - 1983.0	0	9	0	0	0	0	0

MUDLOGGING EQUIPMENT / PERSONNEL

Gas lag is not accurate due to off-line pump being used to boost riser.
 Swapped to CVGT gastrap at lag of 2009 metres.

MWD

Sensor Offsets: Run 2

GR : 16.45 m
 Res : 16.37 m
 Directional : 24.45 m
 Sonic : 33.83 m
 Density : 39.78 m
 Neutron : 41.76 m

Formation Name	Prognosed Depths			Actual Depths			Diff. TVT (m)	Picks Based On
	MD (m)	TVDRT (m)	TVDSS (m)	MD (m)	TVDRT (m)	TVDSS (m)		
Recent Carbonates	118.0	118.0	(96.5)	95.5	95.5	(74.0)	22.5 H	Offset Stratigraphy
Torquay Group (Reefal Carbonate)	138.0	138.0	(116.5)	131.0	131.0	(109.5)	7.0 H	ROP
Torquay Group (Marl)	718.0	718.0	(696.5)	715.0	715.0	(693.5)	3.0 H	ROP
Oligocene Sandstones (Lower Torqay Group)	1023.0	1023.0	(1001.5)				-	
Demons Bluff Formation	1398.0	1398.0	(1376.5)	1393.5	1393.5	(1372.0)	4.5 H	LWD Lithology
Upper Eastern View Group	1478.0	1478.0	(1456.5)	1480.5	1480.5	(1459.0)	2.5 L	LWD
Middle Eastern View Group	1868.0	1868.0	(1846.5)	1870.0	1870.0	(1848.5)	2.0 L	Lithology LWD

SURVEY DATA

MD (m)	Inc (°)	Azi (°)	TVD (m)	TVDSS (m)	V.Sec (m)	Dogleg (°/100ft)	E/W (m)	N/S (m)
1530.2	0.55	90.58	1530.2	1508.7	0.83	0.06	5.14	0.83
1596.3	0.49	77.67	1596.3	1574.8	0.89	0.06	5.73	0.89
1625.5	0.47	69.82	1625.5	1604.0	0.96	0.07	5.97	0.96
1682.7	0.41	85.01	1682.6	1661.1	1.05	0.07	6.39	1.05
1767.9	0.46	80.24	1767.9	1746.4	1.14	0.02	7.03	1.14
1858.3	0.33	65.19	1858.3	1836.8	1.31	0.05	7.62	1.31
1913.4	0.48	64.16	1913.3	1891.8	1.48	0.08	7.98	1.48

WELLSITE GEOLOGISTS

Peter Morris / Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	14 September 2009	Rig:	Ocean Patriot
Report Number:	9	Bit Diameter:	12.25 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	13 3/8" @ 805.8 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	LOT:	12.35 ppg EMW @ 805.8 m MDRT
Days From Spud:	8.4	Mud Weight:	10.10 ppg
Depth @ 0600 Hrs:	2100.0 m MDRT	ECD:	-
	2100.0 m TVDRT	Mud Type:	KCL/Klastop/Polymer
	-2078.5 m TVDSS	Mud Chlorides:	50000.00 mg/L
Lag Depth:	-	Est. Pore Pressure:	9.14 ppg
Last Depth:	2037.0 m MDRT	DXC:	1.1
Progress:	63.0 m	Last Survey:	2100.00 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.73°
RT:	21.5 m		Az. 87.08°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled 12.25 in hole from 2037.0 to 2100.0 m MDRT. Spikey Beach 1 total depth called at 2100.0 m MDRT, TD reached at 09:00 hrs on 13-Sep-2009. Circulated and conditioned well at 2100.0 m MDRT. Pulled out of hole to 1600.0 m MDRT, reamed out of the hole from 1600.0 to 1540.0 m MDRT to acquire missing LWD data. Pumped heavy weighted mud pill and pulled out of the hole to commence plug and abandonment program. Laid out LWD tools and drilling assembly. Made up 2 7/8" cement stinger assembly, run in hole to set abandonment plugs.

NEXT 24 HOURS: Make up cementing assembly. RIH and complete Plug and Abandon Program setting Plug.1 (~1520 to 1370 m MDRT), Plug.2 (~850 to 700 m MDRT) and Plug.3 (~215 to 115 m MDRT). Prepare to pull BOPs.

CURRENT OPERATION @ 06:00 HRS (14-Sep-2009): Running in hole with cement stinger to set abandonment plugs.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1983.0 to 2100.0 m MDRT (-1961.5 to -2078.5 m TVDSS)
ROP (Range): 11.0 to 80.0 m/h
Av. ROP: 37.0 m/h

Interbedded SANDSTONE and SILTSTONE with minor COAL seams.

SANDSTONE: clear to translucent, fine to medium grains, predominantly fine grains, moderately sort, sub-angular to rounded, moderate siliceous cement mainly as quartz overgrowths, minor moderate calcareous cement in part, common argillaceous to silty matrix, trace carbonaceous specks, trace lithics, minor moderately hard aggregates, predominantly loose, poor inferred porosity, no fluorescence.

SILTSTONE: medium brown to brown grey, medium dark brown, sandy, in part grading to a very fine Sandstone, carbonaceous, common carbonaceous micro laminations, common micro-micaceous, firm to in part moderately hard, sub-blocky to blocky.

COAL: black, sub-vitreous to vitreous, earthy in part, argillaceous and grading to carbonaceous Claystone in part, moderate hard, uneven to angular fracture.

HYDROCARBON FLUORESCENCE

No Shows

GAS SUMMARY

Background Gas							
INTERVAL (m MDRT)	Total Gas (Units)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
2085.0 - 2086.0	1	14	287	0	0	0	0

MUDLOGGING EQUIPMENT / PERSONNEL

Two sample catchers demobilized 14-Sept-2009.

MWD

Possible demobilization of LWD crew 14-Sept-2009.

WIRELINE

Wireline crew & tools demobilized from rig on 13-Sep-09.

PROVISIONAL FORMATION TOPS

Formation Name	Prognosed Depths			Actual Depths			Diff. TVT (m)	Picks Based On
	MD (m)	TVDRT (m)	TVDSS (m)	MD (m)	TVDRT (m)	TVDSS (m)		
Recent Carbonates	118.0	118.0	(96.5)	95.5	95.5	(74.0)	22.5 H	Offset Stratigraphy
Torquay Group (Reefal Carbonate)	138.0	138.0	(116.5)	131.0	131.0	(109.5)	7.0 H	ROP
Torquay Group (Marl)	718.0	718.0	(696.5)	715.0	715.0	(693.5)	3.0 H	ROP
Oligocene Sandstones (Lower Torqay Group)	1023.0	1023.0	(1001.5)				-	
Demons Bluff Formation	1398.0	1398.0	(1376.5)	1393.5	1393.5	(1372.0)	4.5 H	LWD Lithology
Upper Eastern View Group	1478.0	1478.0	(1456.5)	1480.5	1480.5	(1459.0)	2.5 L	LWD
Middle Eastern View Group	1868.0	1868.0	(1846.5)	1870.0	1870.0	(1848.5)	2.0 L	Lithology LWD

SURVEY DATA

MD (m)	Inc (°)	Azi (°)	TVD (m)	TVDSS (m)	V.Sec (m)	Dogleg (°/100ft)	E/W (m)	N/S (m)
1913.4	0.48	64.16	1913.3	1891.8	1.48	0.08	7.98	1.48
1941.9	0.47	69.15	1941.9	1920.4	1.57	0.04	8.19	1.57
2028.5	0.60	92.17	2028.4	2006.9	1.68	0.09	8.98	1.68
2039.0	0.73	89.98	2038.9	2017.4	1.68	0.38	9.10	1.68
2076.2	0.73	87.08	2076.1	2054.6	1.69	0.03	9.57	1.69

WELLSITE GEOLOGISTS

Peter Morris / Fred Fernandes

DAILY GEOLOGICAL REPORT

Date:	15 September 2009	Rig:	Ocean Patriot
Report Number:	10	Bit Diameter:	12.25 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	13 3/8" @ 805.8 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	LOT:	12.35 ppg EMW @ 805.8 m MDRT
Days From Spud:	9.4	Mud Weight:	10.15 ppg
Depth @ 0600 Hrs:	2100.0 m MDRT	ECD:	-
	2100.0 m TVDRT	Mud Type:	KCL/Klastop/Polymer
	-2078.5 m TVDSS	Mud Chlorides:	50000.00 mg/L
Lag Depth:	-	Est. Pore Pressure:	9.14 ppg
Last Depth:	2100.0 m MDRT	DXC:	1.1
Progress:	0 m	Last Survey:	2100.00 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.73°
RT:	21.5 m		Az. 87.08°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Ran in hole with cement stinger assembly to 1620.0 m MDRT. Pumped heavy weighted mud pill at 1620.0 m MDRT. Pulled back to 1520.0 m MDRT, mixed and pumped cement plug #1, cement plug #1 set from 1520.0 to 1370.0 m MDRT. Pulled out of hole to above cement plug #1, laid out drill pipe while waiting on cement for 4 hours. Ran in hole and tagged top of cement plug #1 @ 1385.0 m MDRT, pulled back to 950.0 m MDRT. Pumped heavy weight mud pill at 838.0 m MDRT, mixed and pumped cement plug #2, cement plug #2 set from 850.0 to 700.0 m MDRT. Pull out of hole to above cement plug, wait on cement for 4 hours. Laid out drill pipe & retrieved wear bushing, while waiting on cement.

NEXT 24 HOURS: Run in hole tag top of cement. Pull out back to 215.0 m MDRT, mix and pump cement plug #3 (215.0 to 115.0 m MDRT). Wait on cement for 4 hours, tag top of cement. Displace well to riser to sea water, prepare to retrieve blow out preventer's, marine riser.

CURRENT OPERATION @ 06:00 HRS (15-Sep-2009): Running in hole to tag abandonment cement plug #2.

GEOLOGICAL SUMMARY

LITHOLOGY

No new formation drilled in the past 24 hrs.

MUDLOGGING EQUIPMENT / PERSONNEL

Two sample catchers demobilized 14-Sep-2009.

MWD

LWD crew and tools demobilized 14-Sep-2009.

WELLSITE GEOLOGISTS

Fred Fernandes

Appendix 7: Cuttings Descriptions

Cuttings Descriptions

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
Main				
816.0 - 820.0	90.0	CEMENT:		
	10.0	CALCARENITE: light grey to white, light blue grey, abundant fossils (coral, byozoa, ammonoids), common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky.		
820.0 - 830.0	80.0	CALCARENITE: light grey to white, light blue grey, abundant fossils (coral, byozoa, ammonoids), common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky.		
	10.0	CEMENT:		
	10.0	CALCAREOUS CLAYSTONE: light to medium grey, medium dark grey, light olive grey to light brown grey, slightly arenaceous, trace carbonaceous specks, rare very fine glauconite grains, soft to firm, sub-blocky to blocky.		
830.0 - 840.0	70.0	CALCARENITE: as above		
	20.0	CALCAREOUS CLAYSTONE: as above		
	10.0	CEMENT:		
840.0 - 850.0	70.0	CALCARENITE: as above		
	30.0	CALCAREOUS CLAYSTONE: as above		
850.0 - 860.0	60.0	CALCARENITE: as above		
	40.0	CALCAREOUS CLAYSTONE: as above		
860.0 - 870.0	50.0	CALCAREOUS CLAYSTONE: as above, common fossil fragments, minor very fine quartz grains, soft to firm.		
	50.0	CALCARENITE: light grey to white, light blue grey, abundant fossils (coral, byozoa, ammonoids), common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky.		
870.0 - 880.0	70.0	CALCAREOUS CLAYSTONE: as above		
	30.0	CALCARENITE: as above		
880.0 - 890.0	80.0	CALCARENITE: light to medium grey, light blue grey to white, light brown grey, common very fine quartz grains, common fossil fragments, trace carbonaceous specks, firm, sub-blocky to blocky.		
	20.0	CALCAREOUS CLAYSTONE: as above, firm to moderate hard.		
890.0 - 900.0	60.0	CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, common fossil fragments, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, firm to moderately hard, sub-blocky to blocky.		
	40.0	CALCARENITE: as above		
900.0 - 910.0	60.0	CALCARENITE: as above		
	40.0	CALCAREOUS CLAYSTONE: as above, light to light blue grey.		
910.0 - 920.0	80.0	CALCARENITE: light grey to white, light blue grey, common fossils fragments, common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky.		
	20.0	CALCAREOUS CLAYSTONE: as above		
930.0 - 940.0	60.0	CALCAREOUS CLAYSTONE: as above, arenaceous in part and grading to Argillaceous Siltstone.		
	40.0	CALCARENITE: as above.		
940.0 - 950.0	55.0	CALCARENITE: as above		
	45.0	CALCAREOUS CLAYSTONE: as above		
950.0 - 960.0	70.0	CALCARENITE: as above		
	30.0	CALCAREOUS CLAYSTONE: as above		
960.0 - 970.0	80.0	CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, common fossil fragments, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, firm to moderately hard, sub-blocky to blocky.		
	20.0	CALCARENITE: light to medium grey, light blue grey to white, light brown grey, common very fine quartz grains, common fossil fragments, trace carbonaceous specks, firm, sub-blocky to blocky.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
970.0 - 980.0	60.0	CALCAREOUS CLAYSTONE: as above		
	30.0	CALCAREOUS SILTSTONE: medium to dark grey, medium olive grey, medium brown grey, argillaceous, grading to Arenaceous Claystone, trace to common fossil fragments, trace carbonaceous specks, trace glauconite, firm, sub-blocky to blocky.		
	10.0	CALCARENITE: as above		
980.0 - 990.0	70.0	CALCAREOUS CLAYSTONE: as above		
	20.0	CALCARENITE: as above		
	10.0	CALCAREOUS SILTSTONE: as above		
990.0 - 1000.0	70.0	CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace fossil fragments, firm to moderately hard, blocky.		
	10.0	CALCAREOUS SILTSTONE: light to medium grey, light to medium olive grey, argillaceous, trace carbonaceous specks and glauconite, trace calcareous veins, trace fossil fragments, firm to moderately hard, sub-blocky to blocky.		
	5.0	CALCARENITE: as above		
1000.0 - 1010.0	70.0	CALCAREOUS CLAYSTONE: as above		
	25.0	CALCAREOUS SILTSTONE: as above		
	5.0	CALCARENITE: as above		
1010.0 - 1020.0	85.0	CALCAREOUS CLAYSTONE: as above		
	10.0	CALCAREOUS SILTSTONE: as above		
	5.0	CALCARENITE: as above		
1020.0 - 1030.0	80.0	CALCAREOUS CLAYSTONE: as above		
	10.0	CALCARENITE: as above		
	10.0	CALCAREOUS SILTSTONE: as above		
1030.0 - 1040.0	88.0	CALCAREOUS CLAYSTONE: as above		
	10.0	CALCAREOUS SILTSTONE: as above		
	2.0	CALCARENITE: as above		
1040.0 - 1050.0	90.0	CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace to common fossil fragments, firm to moderately hard, sub-blocky to blocky.		
	10.0	CALCARENITE: light to medium grey, light blue grey to white, light brown grey, common very fine quartz grains, common fossil fragments, trace carbonaceous specks, firm, sub-blocky to blocky.		
1050.0 - 1060.0	95.0	CALCAREOUS CLAYSTONE: as above		
	15.0	CALCARENITE: as above		
1060.0 - 1070.0	90.0	CALCAREOUS CLAYSTONE: as above, trace of nodular pyrite.		
	10.0	CALCARENITE: as above		
1070.0 - 1080.0	90.0	CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, moderate to strong calcareous, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace fossil fragments, trace disseminated pyrite, rare micro mica, firm to moderately hard, sub-blocky to blocky.		
	5.0	CALCARENITE: as above		
1080.0 - 1090.0	90.0	CLAYSTONE: as above		
	5.0	CALCARENITE: as above		
1090.0 - 1100.0	100.0	CLAYSTONE: light to medium grey, light brown to brown grey, medium olive grey, medium dark grey, calcareous, trace carbonaceous specks and micro-laminations, trace disseminated and nodular pyrite, trace very fine glauconite grains, trace fossil fragments, rare micro mica, firm to moderately hard, sub-blocky to blocky.		
1100.0 - 1110.0	100.0	CLAYSTONE: as above		
1110.0 - 1120.0	100.0	CLAYSTONE: light to medium grey, light brown to brown grey, medium olive grey, medium dark grey, calcareous, trace carbonaceous specks and micro-laminations, trace disseminated and nodular pyrite, trace very fine glauconite grains, trace fossil fragments, rare micro mica, firm to moderately hard, sub-blocky to blocky.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1120.0 - 1130.0	100.0	CLAYSTONE: as above		
1130.0 - 1140.0	100.0	CLAYSTONE: as above		
1140.0 - 1150.0	100.0	CLAYSTONE: light to medium grey, light brown to brown grey, medium olive grey, medium dark grey, calcareous, trace carbonaceous specks and micro-laminations, trace disseminated and nodular pyrite, trace very fine glauconite grains, trace fossil fragments, rare micro mica, firm to moderately hard, sub-blocky to blocky.		
1150.0 - 1160.0	100.0	CLAYSTONE: as above		
1160.0 - 1170.0	100.0	CLAYSTONE: as above		
1170.0 - 1180.0	100.0	CLAYSTONE: light to medium grey, light brown to brown grey, medium olive grey, medium dark grey, calcareous, trace carbonaceous specks and micro-laminations, trace disseminated and nodular pyrite, trace very fine glauconite grains, trace fossil fragments, rare micro mica, firm to moderately hard, sub-blocky to blocky.		
1180.0 - 1190.0	100.0	CLAYSTONE: as above, common to abundant nodular pyrite.		
1190.0 - 1200.0	100.0	CLAYSTONE: as above		
1200.0 - 1212.0	100.0	CLAYSTONE: light to medium grey, light brown to brown grey, medium olive grey, medium dark grey, calcareous, trace carbonaceous specks and micro-laminations, common disseminated and nodular pyrite, trace very fine glauconite grains, trace fossil fragments, rare micro mica, firm to moderately hard, sub-blocky to blocky.		
		Collect 12m samples due fast ROP - in excess of 140 m/hr.		
1212.0 - 1224.0	100.0	CLAYSTONE: medium to dark grey, medium olive grey, medium brown grey, moderately calcareous, trace to common nodular pyrite, common carbonaceous specks, trace micro mica and glauconite, firm to moderately hard, sub-blocky to blocky.		
1224.0 - 1236.0	90.0	CLAYSTONE: medium to dark grey, medium olive grey, medium brown grey, moderately calcareous, trace to common nodular pyrite, common carbonaceous specks, trace micro mica and glauconite, firm to moderately hard, sub-blocky to blocky.		
	10.0	CALCARENITE: light brown to light brown grey, buff, common very fine quartz grains, trace fossil fragment, moderately hard to hard, blocky.		
1236.0 - 1248.0	95.0	CLAYSTONE: as above		
	5.0	CALCARENITE: as above		
1248.0 - 1260.0	60.0	SILTSTONE: light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky.		
	40.0	CLAYSTONE: as above		
1260.0 - 1272.0	80.0	SILTSTONE: light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky.		
	20.0	CLAYSTONE: as above		
1272.0 - 1281.0	80.0	SILTSTONE: as above		
	20.0	CLAYSTONE: as above		
1281.0 - 1290.0	90.0	SILTSTONE: as above, traces of siderite.		
	10.0	CLAYSTONE: as above		
1290.0 - 1299.0	80.0	SILTSTONE: light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky.		
	10.0	CLAYSTONE: as above		
	10.0	SANDSTONE: light brown to brown grey, clear to translucent, very fine grained, moderately sorted, sub-angular to sub-rounded, moderate siliceous cement, moderate to strong calcareous (dolomitic) cement, common to abundant argillaceous to silty matrix, in part grading to a Sandy Siltstone, trace carbonaceous specks and glauconite, trace siderite, friable to moderately hard, very poor inferred porosity, no fluorescence.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1299.0 - 1308.0	70.0	SILTSTONE: as above		
	25.0	SANDSTONE: as above		
	5.0	CLAYSTONE: as above		
1308.0 - 1317.0	75.0	SILTSTONE: as above		
	20.0	SANDSTONE: as above		
	5.0	CLAYSTONE: as above		
1317.0 - 1326.0	75.0	SILTSTONE: as above		
	20.0	SANDSTONE: as above		
	5.0	CLAYSTONE: as above		
1326.0 - 1335.0	75.0	SILTSTONE: as above		
	15.0	SANDSTONE: as above		
	10.0	CLAYSTONE: medium to dark brown grey, medium olive grey, weak to moderately calcareous, trace to common nodular pyrite, common carbonaceous specks, trace micro mica and glauconite, firm to moderately hard, sub-blocky to blocky.		
1335.0 - 1344.0	70.0	SILTSTONE: as above		
	25.0	SANDSTONE: as above		
	5.0	CLAYSTONE: as above		
1344.0 - 1353.0	80.0	SILTSTONE: light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated and nodular pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky.		
	20.0	SANDSTONE: light brown to brown grey, clear to translucent, very fine to fine grained, moderately to well sorted, sub-angular to sub-rounded, moderate siliceous cement, rare aggregates with moderate to strong calcareous (dolomitic) cement, common to abundant argillaceous to silty matrix, in part grading to a Sandy Siltstone, trace carbonaceous specks and glauconite, trace siderite, friable to moderately hard, very poor inferred porosity, no fluorescence.		
1353.0 - 1362.0	85.0	SILTSTONE: as above		
	15.0	SANDSTONE: as above		
1362.0 - 1371.0	80.0	SILTSTONE: as above		
	20.0	SANDSTONE: as above		
1371.0 - 1380.0	80.0	SILTSTONE: light to medium brown, medium to dark brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to moderately calcareous, trace to common micro mica & glauconite, trace disseminated and nodular pyrite, rare to minor carbonaceous material, soft to firm, sub-blocky to blocky.		
	20.0	SANDSTONE: as above		
1380.0 - 1389.0	75.0	SILTSTONE: as above, becoming more carbonaceous.		
	20.0	SANDSTONE: as above		
	5.0	LIMESTONE: light brown to moderate brown, microcrystalline, sandy in part, dolomitic in part, angular cuttings, moderate hard to hard.		
1389.0 - 1398.0	65.0	CLAYSTONE: pale brown, non to slightly calcareous, trace carbonaceous specks, trace nodular pyrite, soft to firm, dispersive in part, sub-blocky to blocky.		
	30.0	SILTSTONE: medium grey to dark grey, medium to dark brown grey, argillaceous to arenaceous, common very fine sands grains, grading to a very fine Sandstone, nil to moderately calcareous, trace to common micro mica & glauconite, trace disseminated and nodular pyrite, rare to minor carbonaceous material, soft to firm, sub-blocky to blocky.		
	5.0	SANDSTONE: light brown to brown grey, clear to translucent, very fine to fine grained, moderately to well sorted, sub-angular to sub-rounded, moderate siliceous cement, rare aggregates with moderate to strong calcareous (dolomitic) cement, common to abundant argillaceous to silty matrix, in part grading to a Sandy Siltstone, trace carbonaceous specks and glauconite, friable to moderately hard, very poor inferred porosity, no fluorescence.		
1398.0 - 1407.0	90.0	CLAYSTONE: dark grey, brownish grey to brownish black, non to slightly calcareous, carbonaceous, rare disseminated very fine pyrite, trace nodular		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.		
	9.0	CLAYSTONE: very light grey to light grey, light brownish grey, grading to SILTSTONE, non to moderate calcareous, soft to firm, sub-blocky to blocky.		
	1.0	LIMESTONE: light brown to moderate brown, trace bluish grey, predominantly microcrystalline, trace bioclastic, sandy in part, dolomitic in part, angular cuttings, moderate hard to hard.		
1407.0 - 1416.0	94.0	CLAYSTONE: dark grey, brownish grey to brownish black, non to slightly calcareous, carbonaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.		
	5.0	CLAYSTONE: very light grey to light grey, light brownish grey, grading to SILTSTONE, non to moderate calcareous, soft to firm, sub-blocky to blocky.		
	1.0	LIMESTONE: as above.		
1416.0 - 1425.0	92.0	CLAYSTONE: dark grey, brownish grey to brownish black, non to slightly calcareous, carbonaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.		
	5.0	CLAYSTONE: very light grey to light grey, light brownish grey, grading to SILTSTONE, non to moderate calcareous, soft to firm, sub-blocky to blocky.		
	3.0	LIMESTONE: as above		
1425.0 - 1434.0	99.0	CLAYSTONE: as above		
	1.0	LIMESTONE: dark grey, brownish grey to brownish black, non to slightly calcareous, carbonaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.		
1434.0 - 1443.0	100.0	CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile, trace black and fissile.		
1443.0 - 1452.0	100.0	CLAYSTONE: as above, rare angular pyrite fragments and trace pyrite veinlets and burrow castes.		
1452.0 - 1455.0	100.0	CLAYSTONE: as above		
1455.0 - 1458.0	100.0	CLAYSTONE: as above		
1458.0 - 1461.0	100.0	CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micro-micaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.		
1461.0 - 1464.0	100.0	CLAYSTONE: as above		
1464.0 - 1467.0	95.0	CLAYSTONE: as above		
	5.0	LIMESTONE: white, light brownish grey to brownish grey, micritic, argillaceous in part and grading to Marl, soft to moderate hard, platy to splintery.		
1467.0 - 1470.0	95.0	CLAYSTONE: as above		
	5.0	LIMESTONE: as above		
1470.0 - 1473.0	97.0	CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micro-micaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.		
	3.0	LIMESTONE: light brownish grey to brownish grey, trace white to very light grey, predominantly micritic, trace sparitic, argillaceous in part and grading to Marl, soft to moderate hard, platy to splintery.		
1473.0 - 1476.0	50.0	SANDSTONE: light brownish grey, translucent, transparent, very fine to fine, moderate to well sorted, sub angular to sub rounded, sub spherical to sub elongate, predominantly rare siliceous cement, occasional calcareous cement, common to abundant silty matrix, rare dark lithic fragments, loose to unconsolidated, rare friable, no fluorescence.		
	47.0	CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micro-micaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.		
	3.0	LIMESTONE: light brownish grey to brownish grey, trace white to very light grey, predominantly micritic, trace sparitic, argillaceous in part and grading to Marl, soft to moderate hard, platy to splintery.		
1476.0 - 1479.0	90.0	SANDSTONE: translucent, transparent, minor light brownish grey to brownish grey aggregates, very fine to fine, moderate to well sorted aggregates with moderate to poor sorted loose, sub angular to sub rounded, weak to moderate siliceous cement, minor to abundant calcareous clay matrix, trace		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		carbonaceous material, trace dark lithics, trace Fe staining on loose grains, loose to friable, poor visible porosity, good inferred porosity, no fluorescence.		
	10.0	CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micro-micaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to fissile.		
1479.0 - 1482.0	95.0	SANDSTONE: translucent, transparent, rare light brownish grey to brownish grey aggregates, very fine to fine, moderate to well sorted, sub angular to sub rounded, trace brownish grey clay matrix, trace carbonaceous material, trace dark lithics, loose, good inferred porosity, no fluorescence.		
	5.0	CLAYSTONE: as above		
1482.0 - 1485.0	90.0	SANDSTONE: translucent, transparent, minor light brownish grey to brownish grey aggregates, very fine to fine, moderate to well sorted, sub angular to sub rounded, weak to moderate siliceous cement, minor to abundant calcareous clay matrix, trace carbonaceous material, trace dark lithics, 40% unconsolidated to friable, 60% loose, poor to fair visible porosity, good inferred porosity, no fluorescence.		
	10.0	CLAYSTONE: as above		
1485.0 - 1488.0	90.0	SANDSTONE: brownish grey, medium dark grey, very fine to fine, well sorted, sub angular to sub rounded, weak to moderate siliceous cement, common silty clay matrix, grading to sandy Siltstone, rare brown and dark lithics, trace glauconite, unconsolidated to friable, poor visible porosity, no fluorescence.		
	10.0	CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micro-micaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to fissile.		
1488.0 - 1491.0	70.0	CLAYSTONE: olive grey, brownish grey, non to slightly calcareous, rare micro mica, rare very fine quartz, trace carbonaceous material, trace very fine disseminated pyrite, soft, amorphous to sub-blocky.		
	30.0	SANDSTONE: as above, 20% loose.		
1491.0 - 1494.0	70.0	CLAYSTONE:		
	30.0	SANDSTONE:		
1494.0 - 1497.0	65.0	CLAYSTONE: as above		
	20.0	GLAUCONITIC SANDSTONE: moderate to dark yellowish green, very fine, well sorted, sub rounded, siliceous cement, pervasive glauconitic staining, grading to glauconitic Siltstone, friable, tight to poor visible porosity, no fluorescence.		
	15.0	SANDSTONE: translucent, transparent, frosted in part, fine to coarse, poor sorted, sub rounded to rounded, loose, good inferred porosity, no fluorescence.		
1497.0 - 1500.0	50.0	SANDSTONE: as above		
	40.0	CLAYSTONE: as above		
	10.0	GLAUCONITIC SANDSTONE: as above		
1500.0 - 1503.0	50.0	CLAYSTONE: olive grey, brownish grey, yellowish grey, non to slightly calcareous, rare micro mica, rare very fine quartz, trace carbonaceous material, trace very fine disseminated pyrite, soft, amorphous to sub-blocky, grading to SILTSTONE.		
	40.0	SANDSTONE: as above		
	10.0	GLAUCONITIC SANDSTONE:		
1503.0 - 1506.0	50.0	CLAYSTONE: as above		
	40.0	SANDSTONE: as above		
	10.0	GLAUCONITIC SANDSTONE:		
1506.0 - 1509.0	85.0	SANDSTONE: light grey, light olive grey, translucent, transparent, very fine to fine well sorted aggregates with 30% fine to coarse poor sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, trace glauconite, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.		
	10.0	CLAYSTONE: as above		
	5.0	GLAUCONITIC SANDSTONE:		
1509.0 - 1512.0	85.0	SANDSTONE: as above, rare moderate yellowish green, grading to glauconite SANDSTONE.		
	15.0	CLAYSTONE: olive grey, brownish grey, non to slightly calcareous, rare micro		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		mica, rare very fine quartz, trace carbonaceous laminae and material, trace very fine disseminated pyrite, soft, amorphous to sub-blocky, grading to SILTSTONE.		
1512.0 - 1515.0	50.0	SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, very fine to fine well sorted aggregates with 10% fine to coarse poor sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.		
	50.0	SILTSTONE: olive grey, brownish grey, non to slightly calcareous, rare micro mica, rare very fine quartz, trace carbonaceous laminae and material, trace very fine disseminated pyrite, soft, amorphous to sub-blocky, grading to and interlaminated with very fine SANDSTONE.		
1515.0 - 1518.0	70.0	SILTSTONE: as above		
	30.0	SANDSTONE: as above		
1518.0 - 1521.0	70.0	SILTSTONE: olive grey, brownish grey, non to slightly calcareous, rare micro mica, trace carbonaceous laminae and material, trace very fine disseminated pyrite, soft, sub-blocky, grading to and interlaminated with very fine SANDSTONE.		
	30.0	SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, very fine to fine well sorted aggregates with 20% very fine to coarse poor sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.		
1521.0 - 1524.0	70.0	SANDSTONE: as above		
	30.0	SILTSTONE: as above		
1524.0 - 1527.0	80.0	SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, predominantly very fine to fine well sorted aggregates, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.		
	20.0	SILTSTONE: olive grey, brownish grey, non to slightly calcareous, rare micro mica, trace carbonaceous laminae and material, trace very fine disseminated pyrite, trace coarse embedded quartz grains, tr black Coal fragments, soft, sub-blocky, grading to and interlaminated with very fine SANDSTONE.		
1527.0 - 1530.0	70.0	SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, predominantly very fine to fine well sorted aggregates, 5% fine to coarse moderate sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.		
	30.0	SILTSTONE: as above		
1530.0 - 1533.0	70.0	SILTSTONE: as above		
	30.0	SANDSTONE: as above, rare sideritic nodules.		
1533.0 - 1536.0	90.0	SILTSTONE: as above		
	10.0	SANDSTONE: as above		
1536.0 - 1539.0	90.0	SILTSTONE: olive grey, light brownish grey, non to slightly calcareous, rare micro mica, trace carbonaceous laminae and material, trace nodular pyrite, trace coarse embedded quartz grains, trace black Coal fragments and laminae, soft to firm, sub-blocky, grading to and interlaminated with very fine SANDSTONE.		
	10.0	SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, predominantly very fine to fine well sorted aggregates, trace fine to coarse moderate sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1539.0 - 1542.0	90.0	SILTSTONE: as above		
	10.0	SANDSTONE: as above		
1542.0 - 1545.0	90.0	SANDSTONE: translucent, transparent, very fine to medium, moderate sorted, angular to sub rounded, elongated to sub spherical, loose, trace siliceous cement, trace mica, trace coal fragments, trace carbonaceous material, loose, good inferred porosity, no fluorescence.		
	10.0	SILTSTONE: as above		
1545.0 - 1551.0	100.0	SANDSTONE: as above, trace coal fragments, trace nodular pyrite, no fluorescence.		
1551.0 - 1554.0	95.0	SANDSTONE: as above, sub angular to sub rounded, predominantly sub spherical.		
	5.0	SILTSTONE: olive grey, light brownish grey, non to slightly calcareous, rare micro mica, trace carbonaceous laminae and material, trace nodular pyrite, trace coarse embedded quartz grains, trace black Coal fragments and laminae, soft to firm, sub-blocky, grading to and interlaminated with very fine SANDSTONE.		
1554.0 - 1557.0	99.0	SANDSTONE: as above		
	1.0	SILTSTONE: as above		
1557.0 - 1560.0	70.0	SANDSTONE: translucent, transparent, very fine to medium, moderate to well sorted, angular to sub rounded, elongated to sub spherical, trace siliceous cement, trace to common brown argillaceous matrix, trace mica, trace coal fragments and laminae, loose to friable, good inferred porosity, fair to tight visible porosity, no fluorescence.		
	30.0	SILTSTONE: as above		
1560.0 - 1563.0	80.0	SILTSTONE: olive grey, light brownish grey to brownish grey, non calcareous, rare micro mica, trace nodular pyrite, trace coarse embedded quartz grains, interlaminated Coal / carbonaceous Claystone, soft to firm, sub-blocky.		
	10.0	SANDSTONE: as above		
	10.0	COAL: black, brownish black, earthy to sub vitreous, rare vitreous, lignitic, soft to brittle, angular, grading to carbonaceous Claystone.		
1563.0 - 1566.0	80.0	SANDSTONE: translucent, transparent, fine to coarse, moderate sorted, angular to sub rounded, sub elongated to sub spherical, trace siliceous cement, trace localised pyritic cement, trace to common brown argillaceous matrix, trace mica, trace coal fragments and laminae, loose to rare friable, good inferred porosity, fair to tight visible porosity, no fluorescence.		
	18.0	SILTSTONE: as above		
	2.0	COAL: as above		
1566.0 - 1569.0	95.0	SANDSTONE: translucent, transparent, very fine to medium, moderate sorted, sub angular to sub rounded, sub spherical, trace siliceous cement, trace localised pyritic cement, trace aggregates with common brown argillaceous matrix, trace mica, trace coal frags, loose to trace friable, good inferred porosity, fair to tight visible porosity, no fluorescence.		
	5.0	SILTSTONE: olive grey, light brownish grey to brownish grey, non calcareous, rare micro mica, trace nodular pyrite, trace, soft to firm, sub-blocky.		
1569.0 - 1572.0	95.0	SANDSTONE: as above		
	5.0	SILTSTONE: as above		
1572.0 - 1575.0	95.0	SANDSTONE: as above		
	5.0	SILTSTONE: as above		
1575.0 - 1578.0	100.0	SANDSTONE: translucent, transparent, light grey, very fine to fine, rare medium, moderate to well sorted, sub angular to sub rounded, siliceous cement, localised pyritic cement, rare white clay matrix, trace carbonaceous specks, trace mica, predominantly loose, rare friable, good inferred porosity, fair to good visible porosity, no fluorescence.		
1578.0 - 1581.0	100.0	SANDSTONE: as above.		
1581.0 - 1584.0	100.0	SANDSTONE: as above, loose to friable, rare carbonaceous material, trace to 15% white clay matrix.		
1584.0 - 1587.0	95.0	SANDSTONE: as above		
	5.0	SILTSTONE:		
1587.0 - 1590.0	60.0	SILTSTONE: dark brown to brown grey, dark grey to grey black, dark olive		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		grey, carbonaceous, common disseminated pyrite, trace micro mica, moderately hard, sub-fissile to sub-blocky, common large splintery caving observed at shakers.		
	40.0	SANDSTONE: translucent, transparent, light grey, very fine to fine, rare medium, moderate to well sorted, sub angular to sub rounded, siliceous cement, localised pyritic cement, rare white clay matrix, trace carbonaceous specks, trace mica, predominantly loose, rare friable, good inferred porosity, fair to good visible porosity, no fluorescence.		
1590.0 - 1593.0	80.0	SILTSTONE: dark brown to brown grey, dark grey to grey black, dark olive grey, carbonaceous, common disseminated pyrite, trace micro mica, moderately hard, sub-fissile to sub-blocky, common large splintery caving observed at shakers.		
	20.0	SANDSTONE: as above		
		MW incrs due splintery caving		
1593.0 - 1596.0	80.0	SANDSTONE: clear to translucent, minor opaque grains, fine to medium grained, minor coarse grains, poorly sorted, sub-angular to sub-rounded, moderate siliceous cement, weak calcareous cement, rare pyritic cement, trace silty matrix, common quartz overgrowths, trace to common nodular pyrite, rare lithics fragments, predominantly loose, minor moderately hard to hard aggregates, fair visible porosity, fair inferred porosity, no fluorescence.		
	20.0	SILTSTONE: as above		
1596.0 - 1599.0	100.0	SANDSTONE: as above, loose, no visible aggregates, fair inferred porosity, no fluorescence.		
1599.0 - 1602.0	100.0	SANDSTONE: as above, fine to medium grained, common coarse grains, sub-rounded to rounded, fair inferred porosity, no fluorescence.		
1602.0 - 1605.0	100.0	SANDSTONE: clear to translucent, medium to coarse grained, well sorted, sub-angular to rounded, traces of siliceous cement mainly as quartz overgrowths, trace of kaolinitic matrix, rare nodular pyrite, rare lithics and carbonaceous materail, loose, fair inferred porosity, no fluorescence.		
1605.0 - 1608.0	100.0	SANDSTONE: as above		
1608.0 - 1611.0	100.0	SANDSTONE: as above, trace to common matrix, trace of nodular pyrite.		
1611.0 - 1614.0	100.0	SANDSTONE: as above		
1614.0 - 1617.0	100.0	SANDSTONE: as above, common to abundant pyrite (nodular and cement).		
1617.0 - 1620.0	95.0	SANDSTONE: clear to translucent, minor opaque grains, fine to medium grains, common coarse grained, poor to moderately sorted, sub-angular to sub-rounded, weak to moderate siliceous cement, common pyritic cement, common light grey to white argillaceous to silty matrix, common to abundant nodular pyrite, trace lithics, common quartz overgrowths, loose, trace moderately hard aggregates, fair visible and inferred porosity, no fluorescence.		
	5.0	SILTSTONE: light to medium brown, light brown grey, light olive grey, common disseminated pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
1620.0 - 1623.0	90.0	SANDSTONE: as above		
	5.0	SILTSTONE: as above		
	5.0	COAL: black to grey black, dark brown, dull to earthy luster, in part sub-vitreous, sub-blocky to sub-conchoidal fracture.		
1623.0 - 1626.0	80.0	SANDSTONE: as above		
	20.0	SILTSTONE: light to medium brown, light brown grey, light olive grey, common disseminated pyrite, rare pyrite veins, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
1626.0 - 1629.0	80.0	SANDSTONE: as above		
	20.0	SILTSTONE: as above		
1629.0 - 1632.0	75.0	SANDSTONE: as above		
	25.0	SILTSTONE: light to medium brown, light brown grey, light olive grey, common disseminated and nodular pyrite, rare pyrite veins, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
1632.0 - 1635.0	100.0	SANDSTONE: clear to translucent, minor opaque grains, fine to coarse grained, predominantly medium grained, moderately sorted, angular to sub-rounded, weak to moderate siliceous cement mainly as quartz overgrowths,		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		rare pyritic cement, rare light grey to white argillaceous to silty matrix, trace to rare nodular pyrite, trace lithics, common quartz overgrowths, loose, trace moderately hard aggregates, fair to poor visible and inferred porosity, no fluorescence.		
1635.0 - 1638.0	100.0	SANDSTONE: as above		
1638.0 - 1641.0	100.0	SANDSTONE: as above		
1641.0 - 1644.0	70.0	SANDSTONE: as above		
	20.0	COAL: black, brownish black, sub vitreous, rare vitreous, soft to brittle, angular to sub-blocky, sub-conchoidal.		
	10.0	SILTSTONE:		
1644.0 - 1647.0	85.0	SANDSTONE: as above		
	10.0	COAL: as above		
	5.0	SILTSTONE:		
1647.0 - 1650.0	75.0	SANDSTONE: as above		
	25.0	CLAYSTONE: light brown to buff, very light grey to very pale orange, slightly arenaceous in part, trace micro mica, soft to firm, sub-blocky to blocky.		
1650.0 - 1653.0	50.0	SANDSTONE: as above		
	25.0	CLAYSTONE: as above		
	25.0	SILTSTONE: medium brown to brown grey, light to medium olive grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
1653.0 - 1656.0	75.0	SANDSTONE: clear to translucent, very fine to medium grained, common coarse grained, predominantly very fine to fine grained, poorly sorted, sub-angular to sub-rounded, weak to moderate siliceous cement, common to abundant argillaceous to silty matrix, trace nodular pyrite, trace lithics and carbonaceous material, loose, minor friable aggregates, poor inferred porosity, no fluorescence.		
	25.0	SILTSTONE: as above		
1656.0 - 1659.0	95.0	SANDSTONE: as above		
	5.0	SILTSTONE: as above		
1659.0 - 1662.0	50.0	CARBONACEOUS CLAYSTONE: dark brown to dark brown grey, dark grey to grey black, dark olive grey, trace to common disseminated pyrite, common micro-micaceous, moderately hard, sub-fissile to sub-blocky, fissile in part.		
	40.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1662.0 - 1665.0	60.0	SANDSTONE: as above, common to abundant pyrite.		
	30.0	SILTSTONE: as above		
	10.0	CARBONACEOUS CLAYSTONE: as above		
1665.0 - 1668.0	80.0	SANDSTONE: clear to translucent, fine to coarse grained, predominantly medium grained, poorly sorted, sub-angular to sub-rounded, weak to moderate siliceous cement, trace pyritic cement, common white argillaceous to silty matrix (kalonitic?), common nodular pyrite, trace lithics and carbonaceous material, loose, minor friable aggregates, poor inferred porosity, no fluorescence.		
	20.0	SILTSTONE: as above		
1668.0 - 1671.0	65.0	SANDSTONE: as above		
	35.0	SILTSTONE: medium brown to brown grey, light to medium olive grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
1671.0 - 1674.0	65.0	SANDSTONE: as above		
	35.0	SILTSTONE: as above		
1674.0 - 1677.0	75.0	SANDSTONE: clear to translucent, fine to coarse grained, predominantly fine to medium grained, poorly sorted, sub-angular to sub-rounded, moderate siliceous cement, trace pyritic cement, common white argillaceous to silty matrix (kalonitic?), common nodular pyrite, trace lithics and carbonaceous material, loose, minor friable aggregates, poor inferred porosity, no fluorescence.		
	25.0	SILTSTONE: as above		
1677.0 - 1680.0	60.0	SANDSTONE: as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
	25.0	SILTSTONE: medium brown to brown grey, light to medium olive grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
	15.0	COAL: black to grey black, dark brown, dull to earthy luster, in part sub-vitreous, angular to sub-conchoidal fracture.		
1680.0 - 1683.0	89.0	SANDSTONE: clear to translucent, predominantly fine to medium grained, minor coarse grains, moderate to poorly sorted, sub-angular to rounded, moderate siliceous cement, trace pyritic cement, common white argillaceous to silty matrix (kalonitic?), trace nodular pyrite, trace lithics and carbonaceous material, loose, minor friable aggregates, poor inferred porosity, no fluorescence.		
	10.0	SILTSTONE: as above		
	1.0	COAL: as above		
1683.0 - 1686.0	90.0	SANDSTONE: as above		
	10.0	CARBONACEOUS CLAYSTONE: dark brown to dark brown grey, dark grey to grey black, dark olive grey, trace to common disseminated pyrite, common micro-micaceous, moderately hard, sub-fissile to sub-blocky.		
1686.0 - 1689.0	95.0	SANDSTONE: as above		
	5.0	CARBONACEOUS CLAYSTONE: as above		
1689.0 - 1692.0	100.0	SANDSTONE: clear to translucent, fine to coarse grained, predominantly fine to medium grained, poorly sorted, sub-angular to sub-rounded, moderate siliceous cement, trace pyritic cement, common to abundant white argillaceous to silty matrix (Kalonitic), common nodular pyrite, trace lithics and carbonaceous material, loose, minor friable aggregates, poor inferred porosity, no fluorescence.		
1692.0 - 1695.0	70.0	SANDSTONE: as above		
	30.0	SILTSTONE:		
1695.0 - 1698.0	90.0	SANDSTONE: clear to translucent, fine to coarse grained, predominantly fine to medium grained, poorly sorted, sub-angular to sub-rounded, moderate siliceous cement, trace pyritic cement, common to abundant white argillaceous to silty matrix (Kalonitic), common nodular pyrite, trace lithics and carbonaceous material, loose, minor friable aggregates, poor inferred porosity, no fluorescence.		
	10.0	SILTSTONE:		
1698.0 - 1701.0	100.0	SANDSTONE: as above		
1701.0 - 1704.0	90.0	SANDSTONE: as above		
	10.0	CARBONACEOUS CLAYSTONE: black to grey black, dark olive grey, grading to Coal, trace micro-micaceous, trace disseminated pyrite, common disseminated pyrite veins, firm to moderately hard, sub-blocky to blocky.		
1704.0 - 1707.0	75.0	SANDSTONE: as above		
	25.0	SILTSTONE: medium brown grey, light to medium olive grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
1707.0 - 1710.0	75.0	SANDSTONE: as above		
	25.0	SILTSTONE: as above		
1710.0 - 1713.0	75.0	CARBONACEOUS CLAYSTONE: black to grey black, dark olive grey, grading to Coal, trace micro-micaceous, trace disseminated pyrite, common disseminated pyrite veins, firm to moderately hard, sub-blocky to blocky.		
	20.0	SANDSTONE: as above, common pyritic cement.		
	5.0	COAL: black to grey black, dark brown, dull to earthy luster, in part sub-vitreous, angular to sub-conchoidal fracture.		
1713.0 - 1716.0	75.0	CARBONACEOUS CLAYSTONE: as above		
	20.0	SANDSTONE: as above		
	5.0	COAL: as above		
1716.0 - 1719.0	75.0	SILTSTONE: medium brown grey, medium olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		mica, soft to firm, sub-blocky to blocky.		
	25.0	CARBONACEOUS CLAYSTONE: as above		
1719.0 - 1722.0	80.0	SILTSTONE: as above		
	20.0	CARBONACEOUS CLAYSTONE: as above		
1722.0 - 1725.0	95.0	SILTSTONE: medium brown grey, medium olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
	5.0	CARBONACEOUS CLAYSTONE: as above		
1725.0 - 1728.0	70.0	SILTSTONE: medium brown grey, light to medium olive grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
	30.0	SANDSTONE: clear to translucent, very fine to medium grained, common medium to coarse grained, poorly sorted, sub-angular to sub-rounded, weak siliceous cement, minor pyritic cement, common to abundant silty matrix, common disseminated and nodular pyrite, trace carbonaceous specks, rare lithics, predominantly loose, minor friable aggregates, poor inferred & visible porosity, no fluorescence.		
1728.0 - 1731.0	80.0	SILTSTONE: as above		
	20.0	SANDSTONE: as above, common coarse grains.		
1731.0 - 1734.0	90.0	SILTSTONE: as above		
	15.0	SANDSTONE: as above		
1734.0 - 1737.0	90.0	SILTSTONE: medium brown grey, medium olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, trace common disseminated and nodular pyrite, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
	10.0	SANDSTONE: as above		
1737.0 - 1740.0	90.0	SILTSTONE: as above		
	10.0	SANDSTONE: as above		
1740.0 - 1743.0	80.0	SILTSTONE: as above		
	20.0	SANDSTONE: white to light grey, clear to translucent, very fine to medium grained, predominantly fine grained, poorly sorted, sub-angular to sub-rounded, weak siliceous cement, minor pyritic cement, common to abundant silty matrix, common disseminated and nodular pyrite, trace carbonaceous specks, rare lithics, predominantly loose, common friable aggregates, poor inferred & visible porosity, no fluorescence.		
1743.0 - 1746.0	60.0	SILTSTONE: as above		
	40.0	SANDSTONE: as above		
1746.0 - 1749.0	50.0	SANDSTONE: as above		
	50.0	SILTSTONE:		
1749.0 - 1752.0	70.0	SILTSTONE: medium to dark brown grey, medium olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, carbonaceous, trace common disseminated and nodular pyrite, common micro mica, firm to moderately hard, in part very hard, sub-blocky to blocky.		
	30.0	SANDSTONE: as above		
1752.0 - 1755.0	75.0	SILTSTONE: as above		
	25.0	SANDSTONE: as above		
1755.0 - 1758.0	90.0	SILTSTONE: as above		
	10.0	SANDSTONE: as above		
1758.0 - 1761.0	90.0	SILTSTONE: medium brown grey, medium olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, carbonaceous, trace common disseminated and nodular pyrite, common micro mica, firm to moderately hard, in part very hard, sub-blocky to blocky.		
	5.0	SANDSTONE: as above		
1761.0 - 1764.0	100.0	SILTSTONE: medium to dark brown grey, medium olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, carbonaceous, trace common disseminated and nodular pyrite, common micro mica, firm to moderately hard, in part very hard, sub-blocky to blocky.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1764.0 - 1767.0	90.0	SILTSTONE: as above		
	10.0	SANDSTONE: white to light grey, clear to translucent, very fine to fine grained, predominantly fine grained, poorly sorted, sub-angular to sub-rounded, weak siliceous cement, minor pyritic cement, common to abundant silty matrix, common disseminated and nodular pyrite, trace carbonaceous specks, rare lithics, predominantly loose, common friable aggregates, poor inferred & visible porosity, no fluorescence.		
1767.0 - 1770.0	75.0	SILTSTONE: as above		
	25.0	SANDSTONE: as above, becoming fine to medium grained.		
1770.0 - 1773.0	60.0	SANDSTONE: clear to translucent, fine to medium grained, moderately sorted, sub-angular to sub-rounded, weak siliceous cement, common argillaceous to silty matrix, common nodular pyrite, trace carbonaceous specks, rare lithics, loose, minor moderately hard to hard aggregates, poor inferred & visible porosity, no fluorescence.		
	40.0	SILTSTONE: as above		
1773.0 - 1776.0	65.0	SANDSTONE: as above		
	45.0	SILTSTONE: dark brown grey, medium to dark olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, carbonaceous, trace common disseminated and nodular pyrite, common micro mica, firm to moderately hard, in part very hard, sub-blocky to blocky.		
1776.0 - 1779.0	70.0	SILTSTONE: as above		
	30.0	SANDSTONE: as above		
1779.0 - 1782.0	90.0	SILTSTONE: as above		
	10.0	SANDSTONE: as above		
1782.0 - 1785.0	85.0	SILTSTONE: as above		
	15.0	SANDSTONE: very light grey to white, light grey, clear to translucent, very fine to fine grained, moderately sorted, sub-angular to sub-rounded, weak siliceous cement, common to abundant argillaceous to silty matrix, grading to a sandy Siltstone, trace nodular pyrite, trace carbonaceous specks, rare lithics, loose, minor moderately hard to hard aggregates, poor inferred & visible porosity, no fluorescence.		
1785.0 - 1788.0	60.0	SANDSTONE: very light grey to white, light grey, clear to translucent, very fine to fine grained, moderately sorted, sub-angular to sub-rounded, weak siliceous cement, common to abundant argillaceous to silty matrix, grading to a sandy Siltstone, trace nodular pyrite, trace carbonaceous specks, rare lithics, loose, minor moderately hard to hard aggregates, poor inferred & visible porosity, no fluorescence.		
	40.0	SILTSTONE: as above, light to medium grey, brown grey, medium olive grey.		
1788.0 - 1791.0	80.0	SANDSTONE: as above		
	20.0	SILTSTONE: as above		
1791.0 - 1794.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1794.0 - 1797.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1797.0 - 1800.0	80.0	SANDSTONE: as above, grading to a cleaner sandstone, fine to medium grained.		
	20.0	SILTSTONE: dark brown grey, medium to dark olive grey, medium to dark grey, sandy and in part grading to a very fine Sandstone, carbonaceous, trace common disseminated and nodular pyrite, common micro mica, firm to moderately hard, in part very hard, sub-blocky to blocky.		
1800.0 - 1803.0	70.0	SANDSTONE: as above		
	30.0	SILTSTONE: as above		
1803.0 - 1806.0	90.0	SANDSTONE: very light grey to white, light grey, clear to translucent, very fine to fine grained, rare medium grained, moderately sorted, sub-angular to sub-rounded, weak siliceous cement, common to abundant argillaceous to silty matrix, grading to a sandy Siltstone, trace nodular pyrite and pyritic cement, trace carbonaceous specks, rare lithics, loose, minor moderately hard to hard aggregates, poor inferred & visible porosity, no fluorescence.		
	10.0	SILTSTONE: dark brown grey, medium to dark olive grey, medium to dark		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		grey, sandy and in part grading to a very fine Sandstone, carbonaceous, trace common disseminated and nodular pyrite, common micro mica, firm to moderately hard, in part very hard, sub-blocky to blocky.		
1806.0 - 1809.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1809.0 - 1812.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1812.0 - 1815.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1815.0 - 1818.0	90.0	SANDSTONE: as above		
	8.0	SILTSTONE: as above.		
	2.0	COAL: black to brownish black, dark brown, dull to earthy luster, in part sub-vitreous, angular to sub-conchoidal fracture, grading to carbonaceous shale		
1818.0 - 1821.0	55.0	SANDSTONE: as above		
	40.0	COAL: black to brownish black, earthy to sub vitreous, angular to sub-conchoidal fracture, grading to carbonaceous shale		
	5.0	SILTSTONE: as above		
1821.0 - 1824.0	95.0	COAL: as above		
	5.0	SANDSTONE: as above		
1824.0 - 1827.0	40.0	COAL: as above		
	30.0	SANDSTONE: as above		
	30.0	SILTSTONE: pale brown, argillaceous, sandy and in part and grading to a very fine Sandstone, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
1827.0 - 1830.0	95.0	SANDSTONE: very light grey, translucent, transparent, very fine to fine, well sorted, sub angular to sub rounded, weak siliceous cement, abundant white clay matrix, grades to sandy SILTSTONE, predominantly dissaggregated, rare loose, poor visible porosity, no fluorescence.		
	5.0	SILTSTONE: as above		
1830.0 - 1833.0	70.0	SANDSTONE: as above.		
	30.0	SILTSTONE: pale brown, argillaceous, sandy and in part and grading to a very fine Sandstone, trace carbonaceous specks, common micro mica, soft to firm, sub-blocky to blocky.		
1833.0 - 1836.0	70.0	SANDSTONE: as above, 20% loose.		
	30.0	SILTSTONE: as above		
1836.0 - 1839.0	60.0	SANDSTONE: as above		
	40.0	SILTSTONE: as above		
1839.0 - 1842.0	60.0	SANDSTONE: as above		
	40.0	SILTSTONE: as above		
1842.0 - 1845.0	50.0	SANDSTONE: translucent, transparent, very light grey, very fine to fine, well sorted, sub angular to sub rounded, weak siliceous cement, localised pyritic cement, abundant white clay matrix, rare carbonaceous material, trace nodular pyrite, grades to sandy SILTSTONE, predominantly dissaggregated, minor loose, poor visible porosity, no fluorescence.		
	45.0	SILTSTONE: pale brown, argillaceous to arenaceous, sandy and in part and grading to a very fine Sandstone, minor carbonaceous material and laminae, common micro mica, soft to firm, sub-blocky to blocky, fissile in part.		
	5.0	COAL: black to brownish black, dark brown, dull to earthy luster, in part sub-vitreous, angular to sub-conchoidal fracture, grading to carbonaceous shale		
1845.0 - 1848.0	70.0	SANDSTONE: as above		
	30.0	SILTSTONE: as above		
1848.0 - 1851.0	90.0	SILTSTONE: light olive grey to olive grey, arenaceous, carbonaceous, common carbonaceous laminae, minor micro-mica, soft to occasional firm, sub-fissile to fissile.		
	10.0	SANDSTONE: as above		
1851.0 - 1854.0	70.0	SILTSTONE: as above		
	30.0	SANDSTONE: as above		
1854.0 - 1857.0	70.0	SANDSTONE: as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
	30.0	SILTSTONE: light olive grey to olive grey, brownish grey, arenaceous, carbonaceous, rare to common carbonaceous laminae, minor micro-mica, soft to occasional firm, sub-fissile to fissile.		
1857.0 - 1860.0	90.0	SANDSTONE: very light grey to light grey, translucent, transparent, very fine to fine, well sorted, sub angular to sub rounded, rare aggregates with weak siliceous cement, minor white clay matrix, trace lithics, trace pyrite, predominantly loose, good inferred porosity, fair visible porosity, no fluorescence.		
	10.0	SILTSTONE: as above		
1860.0 - 1863.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1863.0 - 1866.0	95.0	COAL: black, occasional brownish black, sub vitreous, minor earthy, firm, brittle in part, sub conchoidal to angular fracture.		
	10.0	SILTSTONE: as above		
1866.0 - 1869.0	85.0	SANDSTONE: very light grey to light grey, translucent, transparent, very fine to fine, well sorted, sub angular to sub rounded, minor aggregates with weak siliceous cement, common white clay matrix, trace lithics, trace pyrite, predominantly loose to disaggregated, fair visible porosity, no fluorescence.		
	10.0	SILTSTONE: as above		
	5.0	COAL: as above.		
1869.0 - 1872.0	78.0	SANDSTONE: white to light grey, minor light brownish grey, predominantly very fine, well sorted, sub rounded, weak siliceous cement, minor white to light brown clay matrix, trace carbonaceous specks, trace lithics, trace carbonaceous laminae, grading to arenaceous SILTSTONE, predominantly disaggregated to friable, tight visible porosity, no fluorescence.		
	20.0	SILTSTONE: light olive grey to olive grey, brownish grey, arenaceous, carbonaceous, rare to common carbonaceous laminae, minor micro-mica, soft to occasional firm, sub-fissile to fissile.		
	2.0	COAL: as above		
1872.0 - 1875.0	100.0	SANDSTONE: very light grey to light grey, translucent, transparent, very fine to fine, well sorted, sub angular to sub rounded, minor aggregates with weak siliceous cement, minor white clay matrix, trace lithics, trace pyrite, predominantly loose to disaggregated, fair visible porosity, no fluorescence.		
1875.0 - 1878.0	100.0	SANDSTONE: very light grey to light grey, translucent, transparent, very fine to fine, well sorted, sub angular to sub rounded, minor aggregates with weak siliceous cement, abundant slightly calcareous white clay matrix, trace lithics, trace pyrite, grading to arenaceous SILTSTONE, predominantly disaggregated to friable, fair visible porosity, no fluorescence.		
1878.0 - 1881.0	100.0	SANDSTONE: as above.		
1881.0 - 1884.0	100.0	SANDSTONE: very light grey to light grey, translucent, transparent, very fine to fine, rare medium, moderate to well sorted, sub angular to sub rounded, minor aggregates with weak siliceous cement, abundant slightly calcareous white clay matrix, trace lithics, trace pyrite, grading to arenaceous SILTSTONE, predominantly disaggregated to friable, fair visible porosity, no fluorescence.		
1884.0 - 1887.0	70.0	SANDSTONE: as above		
	30.0	SILTSTONE: light brownish grey, light olive grey, are, minor carbonaceous material / laminae, rare micro-mica, weakly dolomitic in part, firm, sub-blocky to blocky.		
1887.0 - 1890.0	80.0	SANDSTONE: as above		
	20.0	SILTSTONE: as above, rare carbonaceous material.		
1890.0 - 1893.0	78.0	SANDSTONE: as above		
	20.0	SILTSTONE: as above		
	2.0	COAL: black, occasional brownish black, sub vitreous, minor earthy, firm, brittle in part, sub conchoidal to angular fracture.		
1893.0 - 1896.0	60.0	SANDSTONE: very light grey to light grey, translucent, transparent, very fine to fine, rare medium, moderate to well sorted, sub angular to sub rounded, siliceous cement, trace to abundant white clay matrix, trace lithics, trace pyrite, locally common carbonaceous / Coal fragments, grading to arenaceous SILTSTONE, disaggregated to moderate hard, fair visible porosity, no		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		fluorescence.		
	20.0	COAL: as above		
	20.0	SILTSTONE: as above		
1896.0 - 1899.0	95.0	COAL: as above		
	3.0	SANDSTONE: as above		
	2.0	SILTSTONE: as above		
1899.0 - 1902.0	80.0	COAL: as above		
	17.0	SILTSTONE: light olive grey to olive grey, arenaceous, rare micro-mica, rare carbonaceous specks, soft, dispersive, amorphous, grading to very fine SANDSTONE.		
	3.0	SANDSTONE: as above		
1902.0 - 1905.0	60.0	SANDSTONE: very light grey to light grey, translucent, transparent, very fine to fine, rare medium, moderate to well sorted, sub angular to sub rounded, weak siliceous cement, abundant white clay matrix, trace lithics, trace pyrite, grading to arenaceous SILTSTONE, predominantly disaggregated, fair visible porosity, no fluorescence.		
	39.0	SILTSTONE: as above		
	1.0	COAL: as above		
1905.0 - 1911.0	90.0	SANDSTONE: translucent, transparent, very light grey to light grey, very fine to fine, well sorted, sub rounded, minor aggregates with siliceous cement, trace to abundant white clay matrix, trace dark lithics, trace carbonaceous material, predominantly loose, good inferred porosity, no fluorescence.		
	10.0	SILTSTONE: light olive grey to olive grey, arenaceous, rare micro-mica, rare carbonaceous specks, soft, dispersive, amorphous, grading to very fine SANDSTONE.		
1911.0 - 1917.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1917.0 - 1923.0	90.0	SANDSTONE: translucent, transparent, very light grey to light grey, light olive grey, very fine to fine, well sorted, sub rounded, minor aggregates with siliceous cement, trace to abundant white clay matrix, slightly calcareous in part, trace dark lithics, trace carbonaceous material, predominantly loose, minor friable to moderate hard, good inferred porosity, no fluorescence.		
	10.0	SILTSTONE: as above		
1923.0 - 1926.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
1926.0 - 1929.0	95.0	SANDSTONE: as above, predominantly loose.		
	5.0	SILTSTONE: as above		
1929.0 - 1932.0	95.0	SANDSTONE: as above		
	5.0	SILTSTONE: as above		
1932.0 - 1935.0	100.0	SANDSTONE: translucent, transparent, very light grey to light grey, light olive grey, very fine to fine, well sorted, sub rounded, rare aggregates with siliceous cement, trace to abundant white clay matrix, slightly calcareous in part, trace dark lithics, trace carbonaceous material, predominantly loose, minor friable to moderate hard, good inferred porosity, no fluorescence.		
1935.0 - 1941.0	95.0	SANDSTONE: as above		
	5.0	SILTSTONE: light olive grey to olive grey, arenaceous, rare micro-mica, rare carbonaceous specks, locally common carbonaceous laminae, soft to occasional firm, dispersive, amorphous, grading to very fine SANDSTONE.		
1941.0 - 1947.0	95.0	SANDSTONE: as above		
	5.0	SILTSTONE: as above		
1947.0 - 1953.0	70.0	SILTSTONE: brownish grey to brownish black, olive grey, arenaceous, carbonaceous, common to abundant carbonaceous and Coal laminae, rare micro-mic, soft to firm, sub-blocky to fissile.		
	20.0	COAL: black, occasional brownish black, sub vitreous, minor earthy, firm, brittle in part, sub conchoidal to angular fracture, grading to carbonaceous Claystone.		
	10.0	SANDSTONE: as above		
1953.0 - 1959.0	50.0	SANDSTONE: translucent, transparent, very light grey to light grey, light olive grey, very fine to fine, well sorted, sub rounded, rare aggregates with siliceous cement, trace to abundant white clay matrix, slightly calcareous in part, trace		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		dark lithics, trace carbonaceous material, trace nodular pyrite, predominantly loose, minor friable, good inferred porosity, fair visible porosity, no fluorescence.		
	30.0	SILTSTONE: brownish grey to brownish black, light olive grey to olive grey, light brownish grey, arenaceous, carbonaceous, locally common to abundant carbonaceous and Coal laminae, rare micro-mic, soft to firm, sub-blocky to fissile.		
	20.0	COAL: as above		
1959.0 - 1965.0	100.0	SANDSTONE: as above, trace orange quartz grains,		
1965.0 - 1971.0	100.0	SANDSTONE: as above		
1971.0 - 1977.0	100.0	SANDSTONE: translucent, transparent, very light grey to light grey, light olive grey, very fine to fine, well sorted, sub rounded, rare aggregates with siliceous cement, trace to abundant white clay matrix, slightly calcareous in part, trace dark lithics, trace carbonaceous material, predominantly loose, rare friable to moderate hard aggregates, good inferred porosity, fair to good visible porosity, no fluorescence.		
1977.0 - 1983.0	100.0	SANDSTONE: as above		
1983.0 - 1989.0	70.0	SANDSTONE: as above		
	20.0	CARBONACEOUS CLAYSTONE: brownish grey to brownish black, arenaceous, abundant carbonaceous laminae, soft to firm, sub-blocky to fissile.		
	10.0	COAL:		
1989.0 - 1995.0	65.0	SANDSTONE: as above		
	30.0	SILTSTONE: light brownish grey, light olive grey, arenaceous, common very fine sand grains, trace micro-mica, rare carbonaceous material, soft, dispersive, amorphous to sub-blocky, grading to very fine silty SANDSTONE.		
	5.0	COAL: black, occasionally brownish black, sub vitreous, minor earthy, firm, brittle in part, sub conchoidal to angular fracture, grading to carbonaceous Claystone.		
1995.0 - 2001.0	65.0	SANDSTONE: as above		
	35.0	SILTSTONE: as above		
2001.0 - 2007.0	75.0	SANDSTONE: as above		
	25.0	SILTSTONE: as above		
2007.0 - 2013.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
2013.0 - 2019.0	75.0	SANDSTONE: as above, moderate calcareous cement.		
	20.0	COAL: black, sub-vitreous to vitreous, earthy in part, argillaceous and grading to carbonaceous Claystone in part, moderate hard, uneven to angular fracture.		
	5.0	SILTSTONE: light brownish grey, light olive grey, arenaceous, common very fine sand grains, trace micro-mica, rare carbonaceous material, soft, dispersive, amorphous to sub-blocky, grading to very fine silty SANDSTONE.		
2019.0 - 2025.0	75.0	SANDSTONE: as above		
	15.0	SILTSTONE: as above		
	10.0	COAL: as above		
2025.0 - 2031.0	75.0	SANDSTONE: very light grey to light grey, light brown grey, clear to translucent, very fine to fine grains, minor medium grains, poor sort, sub-angular to rounded, moderate siliceous cement mainly as quartz overgrowths, common argillaceous to silty matrix, trace carbonaceous specks, trace lithics, minor moderately hard aggregates, predominantly loose, no fluorescence.		
	40.0	SILTSTONE: medium brown to brown grey, medium dark brown, sandy, in part grading to a very fine Sandstone, carbonaceous in part, common micro-micaceous, firm to in part moderately hard, sub-blocky to blocky.		
2031.0 - 2037.0	95.0	SANDSTONE: as above		
	5.0	SILTSTONE: as above		
2037.0 - 2043.0	90.0	CARBONACEOUS CLAYSTONE: dark grey to grey black, dark olive grey, grading to argillaceous Coal in part, trace micro-micaceous, firm to moderately hard, sub-blocky to blocky.		
	10.0	SANDSTONE: as above		
2043.0 - 2049.0	70.0	SANDSTONE: as above		
	30.0	SILTSTONE: medium brown to brown grey, medium dark brown, sandy, in part		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		grading to a very fine Sandstone, carbonaceous in part, common micro-micaceous, firm to in part moderately hard, sub-blocky to blocky.		
2049.0 - 2055.0	80.0	SANDSTONE: as above, common moderate calcareous cement.		
	20.0	SILTSTONE: as above		
2055.0 - 2061.0	70.0	SANDSTONE: as above		
	30.0	SILTSTONE: as above		
2061.0 - 2067.0	70.0	SANDSTONE: clear to translucent, fine to medium grains, predominantly fine grains, moderately sort, sub-angular to rounded, moderate siliceous cement mainly as quartz overgrowths, common argillaceous to silty matrix, trace carbonaceous specks, trace lithics, minor moderately hard aggregates, predominantly loose, no fluorescence.		
	20.0	SILTSTONE: as above		
	10.0	COAL: black, sub-vitreous to vitreous, earthy in part, argillaceous and grading to carbonaceous Claystone in part, moderate hard, uneven to angular fracture.		
2067.0 - 2073.0	60.0	SANDSTONE: as above		
	35.0	SILTSTONE: medium brown to brown grey, medium dark brown, sandy, in part grading to a very fine Sandstone, carbonaceous, common carbonaceous micro laminations, common micro-micaceous, firm to in part moderately hard, sub-blocky to blocky.		
	5.0	COAL: as above		
2073.0 - 2079.0	75.0	SANDSTONE: as above		
	25.0	SILTSTONE: as above		
2079.0 - 2085.0	75.0	SANDSTONE: as above		
	25.0	SILTSTONE: as above, weak to moderate calcareous cement, common to abundant argillaceous to silty matrix.		
2085.0 - 2091.0	90.0	SANDSTONE: as above		
	10.0	SILTSTONE: as above		
2091.0 - 2097.0	100.0	SANDSTONE: as above, very fine to fine, predominantly fine grained, minor medium grains, moderately sorted, sub-angular to sub-rounded, weak siliceous cement, common white argillaceous to silty matrix.		
2097.0 - 2100.0	100.0	SANDSTONE: as above		
		TD called at 2100.0 mMDRT.		

Appendix 8: Palynology Report

BASIC DATA.
Palynological analysis of cuttings samples
between 1236-48 and 2079-85 metres in
Spikey Beach-1, Bass Basin.

by

Alan D. Partridge

Biostrata Pty Ltd

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BASIC DATA.
Palynological analysis of cuttings samples between
1236-48 and 2079-85 metres in Spikey Beach-1, Bass Basin.

by Alan D. Partridge

Introduction

Palynological analysis has been conducted on fifteen cuttings samples over the bottom 864 metres of the Cenozoic succession penetrated in the Spikey Beach-1 well drilled by Beach Petroleum Ltd in permit T/38P in the offshore Bass Basin. The objective of the study was to provide age dating of the succession penetrated using palynology.

Basic assemblage data comprising the visual yields and palynomorph concentrations on the slides, the preservation of the palynomorphs, and the number of species of spore-pollen and microplankton recorded from individual samples are given in Table 1. Basic sample data comprising the lithologies and weights of samples processed are provided in Table 2. All palynological slides prepared are listed in Table 3. Finally, the distribution of all species identified are plotted on the accompanying StrataBugs™ range chart.

Materials and Methods: The cuttings samples analysed were selected and forwarded by geologists at Beach Petroleum Ltd directly to Core Laboratories Australia Pty Ltd, in Perth, for laboratory processing. The prepared palynological slides were received by the author on 15th December 2009.

The Spikey Beach-1 well was drilled using the KCl-PHPA-Polymer drilling mud additive, and because this additive has previously caused difficulties with the laboratory extraction of the palynomorphs (resulting in low concentrations and poor palynomorph preservation on the microscope slides), some modifications to the industry standard processing procedure have been employed. Firstly, larger quantities of sample (51 to 53 grams) were selected and then subjected to an initial soaking and washing in a detergent/solvent to dilute and remove the polymer mud additive. Secondly, as an extra precaution, the samples were all processed using a modification of the standard processing stream whereby the dispersed organic-matter (kerogen) and any undissolved mineral matter remaining after the initial dissolution of the samples in hydrofluoric acid are oxidised with nitric acid **before** the density separation using zinc bromide solution. This modified procedure was specified to counteract processing difficulties caused by the impregnation of the palynomorphs with micron-size pyrite crystals, and any residual effects of the polymer drilling mud additive. Finally, based on experience gained from the recent analysis of the PeeJay-1 well the amount of oxidation given to the residues was increased, with 3:00 minutes duration given to the shallowest seven samples, and 4:00 minutes applied to the deepest eight samples.

The microscope analysis consisted of an initial count of approximately 150 palynomorphs to determine the proportion of spores and pollen to all types of organic-walled microplankton, as well as the relative proportions of spores, gymnosperm pollen and angiosperm pollen, within this count. Once these initial proportions were established and separately recorded, the slides were further scanned to record rare species, and some extra counts made of the microplankton species.

Results: An average of 52 grams per sample was processed to give moderate to high organic-residue yields. The concentration of the palynomorphs in the residues, based on examination of the prepared slides, is mostly moderate to high, with the carbonized samples containing the lowest palynomorph concentrations. The preservation of palynomorphs is variable on most slides, typically poor to fair, to occasionally poor to good. Most palynomorphs recovered from the five samples

between 1590 and 1785m are carbonized with poor to very poor preservation. Across all samples the diversity of spores and pollen was moderate to high ranging from 18 to 66 species per sample (average 38+ species). In contrast, the diversity of *in situ* microplankton is low to high from the five shallowest samples (range 4 to 26 species, average 14 species), but very low in the ten samples deepest samples (zero to 2 species). However, all of the latter samples contain Oligocene to Miocene microplankton species interpreted to be caved from the younger section.

Description of Range Chart: The palynomorphs identified in the samples are documented on the accompanying StrataBugs™ range chart which displays the recorded species proportional to the sample depths, and in terms of their absolute abundances. The palynomorphs recorded are also split between different groups. The first biostratigraphic panel on the chart is for the categories of spore-pollen, comprising the sum of all angiosperm-pollen, gymnosperm-pollen, and spores in the initial count. The next three panels labelled Spores, Gymnosperms Pollen and Angiosperm Pollen display the absolute abundances of the individual species within these three categories. The following panel for categories of microplankton (labelled MP%) displays the percentage abundance of selected groups of organic-walled microplankton, and is followed by a panel for individual Microplankton species expressed in terms of their absolute abundance. The final panel is for all Other palynomorph categories recorded, which are also expressed in terms of their absolute abundance. The following codes or abbreviations apply to the individual species occurrences and abundances on the range chart:

Numbers	=	Absolute abundances
+	=	Species outside of count
C	=	Caved species
R	=	Reworked species
?	=	Questionable identification of species.

Author citations for most of the recorded spore-pollen species can be sourced from the papers by Dettmann (1963), Dettmann & Playford (1968), Helby *et al.* (1987), Macphail (1999), Partridge (1973) and Stover & Partridge (1973), while the author citations for the microplankton species can be sourced from the indexes for dinocysts and other organic-walled microplankton prepared by Fensome *et al.* (1990) and Williams *et al.* (1998). Manuscript species names and combinations are indicated by “sp. nov.” or “comb. nov.” on the range charts.

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Table 1. Basic palynological assemblage data for Spikey Beach-1, Bass Basin.

Sample Type	Depth metres	Visual Yield	Palynomorph Concentration	Palynomorph Preservation	No. SP Species	No. MP Species†
Cuttings	1236-1248	Moderate	High	Poor-Good	54+	26+
Cuttings	1353-1362	Moderate	Moderate	Poor-Good	30+	15+
Cuttings	1407-1416	Moderate	Moderate	Poor	39+	16+
Cuttings	1467-1470	High	Low	Very Poor	30+	4+
Cuttings	1533-1536	High	Very High	Poor-Good	66+	12+
Cuttings	1590-1593	Moderate	Low	Very Poor (carbonized)	22+	2+ (2+)
Cuttings	1659-1662	High	High	Very Poor (carbonized)	32+	(2+)
Cuttings	1710-1713	High	High	Very Poor (carbonized)	41+	1+ (2+)
Cuttings	1761-1764	Moderate	Low	Poor (60% carbonized)	18+	(7+)
Cuttings	1782-1785	Moderate	Moderate	Poor (45% carbonized)	37+	(9+)
Cuttings	1851-1854	High	Moderate	Poor-Fair	48+	2+ (4+)
Cuttings	1902-1905	Moderate	High	Poor-Fair	35+	(3+)
Cuttings	1947-1953	High	High	Poor-Fair	46+	1+ (1+)
Cuttings	2037-2043	High	High	Poor-Fair	37+	2+ (5+)
Cuttings	2079-2085	Moderate	Moderate	Poor-Fair	34+	(10+)

Average: 38+ 8+

†**Note:** Microplankton species numbers shown in brackets are interpreted to be carved species.

Table 2. Basic sample data for Spikey Beach-1, offshore Bass Basin.

Sample Type	Depth metres	Lithology	Weight grams
Cuttings	1236-1248	Claystone 95%: olive to brown grey, moderately calcareous, common pyrite & carbonaceous specks, trace mica & glaucony. Calcareenite 5%: Light brown-grey.	51.0
Cuttings	1353-1362	Siltstone 85%: Lt-med brown-grey, weakly calcareous, tr.-common mica & glaucony, tr. pyrite & carbonaceous specks. Sandstone 15%: Light brown to grey, very fine to fine, tr. glaucony.	52.0
Cuttings	1407-1416	Claystone 94%: Dark brownish grey to black, carbonaceous, tr. pyrite & mica, non-calcareous. Siltstone 5%: Lt-brownish grey. Limestone 1%: Light brown, fairly hard.	51.1
Cuttings	1467-1470	Claystone 95%: Brown-grey to black, micaceous carbonaceous, tr. pyrite. Limestone 5%: White to brownish grey, grading to marl.	51.4
Cuttings	1533-1536	Siltstone 90%: Olive to brownish grey, trs coal laminae, pyrite & crs quartz, non calcareous. Sandstone 10%: Light olive-grey, vf-f, tr. carbonaceous specks & glaucony.	52.4
Cuttings	1590-1593	Siltstone 80%: Dark brown-grey to black, carbonaceous, common pyrite, common large shards. Sandstone 20%: Light grey, vf to f-grained.	51.8
Cuttings	1659-1662	Carbonaceous Claystone 50%: Dark brown-grey-black, common pyrite & mica. Sandstone 40%: Translucent, vf-f grained. Siltstone 10%: Med brown-grey, grading to fine sandstone.	51.2
Cuttings	1710-1713	Carbonaceous Claystone 75%: Grey-black grading to Coal 5%: Earthy to sub-vitreous. Sandstone 20%: Translucent, fine to coarse grained.	51.1
Cuttings	1761-1764	Siltstone 100%: Medium to dark, brown to grey, carbonaceous, common mica, tr. pyrite.	52.1
Cuttings	1782-1785	Siltstone 85%: Dark brown grey, carbonaceous, common mica, tr. pyrite. Sandstone 15%: Light grey to white, vf. to f. grained.	52.5
Cuttings	1851-1854	Siltstone 70%: Olive grey, common carbonaceous, laminae. Sandstone 30%: Translucent to light grey, vf. to f. grained, grading to sandy siltstone.	51.2
Cuttings	1902-1905	Sandstone 60%: Light grey to translucent, vf. to f. grained, grading to sandy Siltstone 39%: Light olive grey. Coal 1%: Black, sub-vitreous.	52.3
Cuttings	1947-1953	Siltstone 70%: Brownish grey-black, carbonaceous. Coal 20%: Black, sub-vitreous. Sandstone 10%: Translucent to light grey, vf. to f. grained.	52.5
Cuttings	2037-2043	Carbonaceous Claystone 90%: Grey-black to olive-grey. Sandstone 10%: Light grey fine-med grained.	52.7
Cuttings	2079-2085	Sandstone 75%: Light grey to translucent, vf. to f. grained. Siltstone 25%: Med brown, slightly calc. matrix.	51.1

Average Sample Weight Processed: **51.8****Note:** The Weight in grams column gives the sample weights recorded by the processing laboratory.

Table 3. Palynological slides from Spikey Beach-1, offshore Bass Basin.

No.	Depth Metres	Sample Type	Catalogue Number	Core Lab. Prep. No.	Description
1	1236-1248	Cuttings		12204	Oxidised Slide 1
2	1236-1248	Cuttings		12204	Oxidised Slide 2
3	1236-1248	Cuttings		12204	Oxidised Slide 3
4	1353-1362	Cuttings		12205	Oxidised Slide 1
5	1353-1362	Cuttings		12205	Oxidised Slide 2
6	1353-1362	Cuttings		12205	Oxidised Slide 3
7	1407-1416	Cuttings		12206	Oxidised Slide 1
8	1407-1416	Cuttings		12206	Oxidised Slide 2
9	1407-1416	Cuttings		12206	Oxidised Slide 3
10	1467-1470	Cuttings		12207	Oxidised Slide 1
11	1467-1470	Cuttings		12207	Oxidised Slide 2
12	1467-1470	Cuttings		12207	Oxidised Slide 3
13	1533-1536	Cuttings		12208	Oxidised Slide 1
14	1533-1536	Cuttings		12208	Oxidised Slide 2
15	1533-1536	Cuttings		12208	Oxidised Slide 3
16	1590-1593	Cuttings		12209	Oxidised Slide 1
17	1590-1593	Cuttings		12209	Oxidised Slide 2
18	1590-1593	Cuttings		12209	Oxidised Slide 3
19	1659-1662	Cuttings		12210	Oxidised Slide 1
20	1659-1662	Cuttings		12210	Oxidised Slide 2
21	1659-1662	Cuttings		12210	Oxidised Slide 3
22	1710-1713	Cuttings		12211	Oxidised Slide 1
23	1710-1713	Cuttings		12211	Oxidised Slide 2
24	1710-1713	Cuttings		12211	Oxidised Slide 3
25	1761-1764	Cuttings		12212	Oxidised Slide 1
26	1761-1764	Cuttings		12212	Oxidised Slide 2
27	1761-1764	Cuttings		12212	Oxidised Slide 3
28	1782-1785	Cuttings		12213	Oxidised Slide 1
29	1782-1785	Cuttings		12213	Oxidised Slide 2
30	1782-1785	Cuttings		12213	Oxidised Slide 3
31	1851-1854	Cuttings		12214	Oxidised Slide 1
32	1851-1854	Cuttings		12214	Oxidised Slide 2
33	1851-1854	Cuttings		12214	Oxidised Slide 3
34	1902-1905	Cuttings		12215	Oxidised Slide 1
35	1902-1905	Cuttings		12215	Oxidised Slide 2
36	1902-1905	Cuttings		12215	Oxidised Slide 3
37	1947-1953	Cuttings		12216	Oxidised Slide 1
38	1947-1953	Cuttings		12216	Oxidised Slide 2
39	1947-1953	Cuttings		12216	Oxidised Slide 3
40	2037-2043	Cuttings		12217	Oxidised Slide 1
41	2037-2043	Cuttings		12217	Oxidised Slide 2
42	2037-2043	Cuttings		12217	Oxidised Slide 3
43	2079-2085	Cuttings		12218	Oxidised Slide 1
44	2079-2085	Cuttings		12218	Oxidised Slide 2
45	2079-2085	Cuttings		12218	Oxidised Slide 3

Well Name : Spikey Beach-1
Operator : Beach Petroleum
Well Code : SPIKEYBEACH-1
Lat/Long : 40°28' 53.88"S 145°52' 24.71"E
Interval : 1220m - 2120m
Scale : 1:4000
Chart date: 12 January 2010

Spudded : 05 September 2009
Completed : 19 September 2009
BASIC Range Chart
Sample interval 1236-48m to 2079-85m
Microscope analysis by Alan D. Partridge

Spikey Beach-1

Biostrata Pty Ltd
AUSTRALIA

Attachment to Biostrata Report 2010/01B

