Triclops-1

ATP 539

Cooper/Eromanga Basin
Queensland

Well Completion Report

July 2013

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Well Data Card

General

Location:	**Latitude GDA 94:**	25°59'43.43"S	**Operator**	Drillsearch 100%	
	Longitude GDA 94:	141°14'40.40"E	**Status:**	Plugged & Abandoned	
	GDA 94, Zone 54	524 475 E	**Rig:**	Ensign 918	
	GDA 94, Zone 54	7 124 803 N	**Total Depth:**	**Driller:**	1926.5 m
	Seismic Survey	2012 Kaden 3D		**Logger:**	1927.0 m
	Seismic Lines	Inline 3238			
		Crossline 2170	**Plugs:**	#1	1926 to 1826 m - 34.4 bbl
Permit		ATP 539P		#2	1727 to 1604 m - 39.8 bbl
Elevation:	**GL (AMSL):**	141.0 m		#3	1422 to 1315 m - 35.2 bbl
	RT (AMSL):	146.2 m		#4	1633 to 1583 m - 100 bbl
				#5	792 to 702 m - 26.7 bbl
Map:	1:250,000	Canterbury		#6	Surface - 6.3 bbl
Date spudded:	14/01/2013	12:30 hrs	**Casing**	**Size**	**Shoe**
Date rig release:	01/02/2013	11:00 hrs		9-5/8"	762.7 m
Type Structure:		Fault-Bounded Anticline	**Hole Size**	12-1/4"	766.1 m MD
				8-1/2"	1927m MD

Stratigraphy

Age	Formation	Depth (m RT)	Elevation (m SS)	Thickness (m)
Recent - Late Cretaceous	Surficial & Winton Formation	5.2	141.0	636.3
Early Cretaceous	Mackunda Formation	641.5	-495.3	103.5
	Allaru Mudstone	745.0	-598.8	297.0
	Toolebuc Formation	1042.1	-895.8	46.3
	Wallumbilla Formation	1088.5	-942.1	228.6
	Cadna-Owie Formation	1317.2	-1170.7	82.0
Early Cret - Late Jurassic	Murta Formation	1399.2	-1252.7	23.0
Late Jurassic	Namur Sandstone	1422.2	-1275.7	96.3
	Westbourne Formation	1518.6	-1372.0	102.4
	Adori Sandstone	1621.0	-1474.4	15.1
Late to Middle Jurassic	Birkhead Formation	1636.1	-1489.5	91.4
Middle Jurassic	Hutton Sandstone	1727.5	-1580.9	199.0
Early Jurassic	Poolowanna Formation	1926.5	-1779.9	-
	Loggers TD	1927.0	-1780.4	

Wireline Logs

Log	Run	Interval	BHT / Time
ADT	1	TD to Surface Casing Shoe	130.6°C / 15.5 hours after final circulation at 1899.6 m.
HRLA	1	TD to Surface Casing Shoe	
PEX	1	TD to Surface Casing Shoe	
NGS	1	TD to Surface Casing Shoe	
MSIP	2	TD to Surface Casing Shoe	131^0C / 24.5hrs after final circulation
GPIT	2	TD to Surface Casing Shoe	

Drill Stem Tests

No	Interval / Formation (metres)	Periods (mins)	EMP IP/FP (psig)	EMP FSIP (psig)	Fluid To Surface (mins)	Max. Surface Press. (psia)	TC. mm	BC. mm	Rev Out	Result
No drill stem tests conducted.										

Conventional Full Bore Cores

No.	Interval	Formation	Cut (m)	Rec.(m)
N/A No Cores Cut.				

Sidewall Cores

Depth	Formation	Recovered	Depth	Formation	Recovered
No SideWall Cores.					

Perforations

Interval	Formation	Shots / m	Interval	Formation	Shots / m
Plugged and abandoned. Not cased.					

Log Interpretation

Interval (mRT)	Formation	Porosity (%)	Sw (%)	Vsh (%)	Net Pay (m)
1397.5 to 1424.5	Murta Formation	9.5	51	18.7	0.89
1424.5 to 1516.5	Namur Sandstone	9.8	49.9	14.8	1.19
1594.4 to 1634.4	Westbourne / Adori	10.6	53.2	9.5	5.44

1634.4 to 1726.9	Birkhead Formation	16.3	42	9.6	0.86
1726.9 to 1909.5	Hutton Sandstone	10.5	47.5	5.9	4.52

Core Analysis

Interval	Por.	Perm.	So	Sw	Interval	Por.	Perm.	So	Sw
N/A No Cores Cut.									

Summary

The objectives of Triclops -1 were to

- Test the hydrocarbon prospectivity of a new play fairway within the "Inland Cook" region by demonstrating oil migration from the Yamma Yamma Depression into the western flank of the SWQ Eromanga Basin. Triclops-1 is the first closure encountered on the western flank of the depression.
- Evaluate the potential for economic oil within Triclops-1.

Triclops-1 is an oil exploration well in the central Eromanga Basin, 10 km northeast of Katta-1 and 8km southeast of Planet Downs-1 in ATP 539P, SW Queensland. It is located approximately 250km northeast of Moomba, 25km east of the Queensland/South Australia border (**Figure 1**).

The primary targets were the Hutton Sandstone and sands of the Birkhead Formation. Secondary targets were the Namur Sandstone and sands of the Poolowanna Formations, the Westbourne Formation and Adori Formation. The pre-drill structure was interpreted as a fault-related anticline with 15m of independent closure.

Participation interest in Triclops-1 was 100% Drillsearch Energy Limited.

Triclops-1 was spudded at 12:30hrs on the 14th January 2013 and surface hole (12-1/4") was drilled to 766.10m MDRT while taking teledrift surveys approximately every 3 stands drilled. Maximum measured deviation was 1.0° between 580m to 753m MDRT. The 9-5/8" surface casing was set at 762.61m MDRT. The shoe track was tagged at 741.00m MDRT, well displaced to water and the shoe track was drilled out prior to cleaning out rat hole to 769.00m MDRT. The well was displaced to 8.9ppg mud and a Leak-Off Test (LOT) was performed (**Appendix 4**). Leak-off at 16.7ppg EMW.

The Blow-Out-Preventer (BOP) was nippled up and the 8-1/2" production hole drilled to 1138m MDRT. Maximum measured deviation was 2.0° and because the angle was building a decision was made to Pull Out of the Hole (POOH) to change the Bottom Hole Assembly (BHA), and also to arrange for Measurement While Drilling (MWD) tools to arrive on site, in an attempt to control the angle. Drilling continued with a directional pendulum BHA while waiting on MWD tools to arrive on location. Drilling ahead continued to 1296m MDRT with maximum deviation reaching 3.5°. The direction pendulum BHA was POOH and replaced with MWD directional BHA. The BHA was RIH to 784m MDRT and MWD surveys taken every stand. The deviation was quickly reduced to less than 1.0° and maintained to approximately 1.0° (average) while drilling the remainder of the 8-1/2" hole. Drilling continued to 1926.50m MDRT when the ROP dropped significantly (0.3m/hr.) Since all the primary and secondary targets had been penetrated a decision was taken to stop drilling. The Total Depth (TD) of the well was reached on 28th February 2013 after 15 days drilling.

A normal Eromanga Basin sedimentary section (Cretaceous and Jurassic) was penetrated with Formation tops being from 30m low (Adori Sandstone) to 28m high (Mackunda Formation) to prognosis. The Hutton Sandstone primary target was 7.1m high to prognosis and drilling was terminated after penetrating the full thickness of the Hutton Sandstone and approximately 0.5m of Poolowanna Formation.

Hydrocarbon fluorescence was observed in the Murta Formation, Namur Sandstone, Westbourne Formation, Birkhead Formation and Hutton Sandstone are all interpreted as being residual oil shows. with no net pay interpreted from the petrophysical analysis.

Schlumberger wireline logging rigged up and the open hole was evaluated as per logging program (Dry Case scenario):

Run 1: ADT-HNGS-PEX-HRLA-SP.
Run 2: MAST-GPIT.

Net pay interpreted from the Petrophysical analysis ranged from 0.86m to 5.44m through the Murta Member, the Namur, Westbourne, Adori, Birkhead and the Hutton Formations (**Table 4 and Appendix 11**).

Triclops-1 was plugged and abandoned (P&A) with the drilling rig Ensign 918 being released on 1st February 2013 and the drill site rehabilitated.

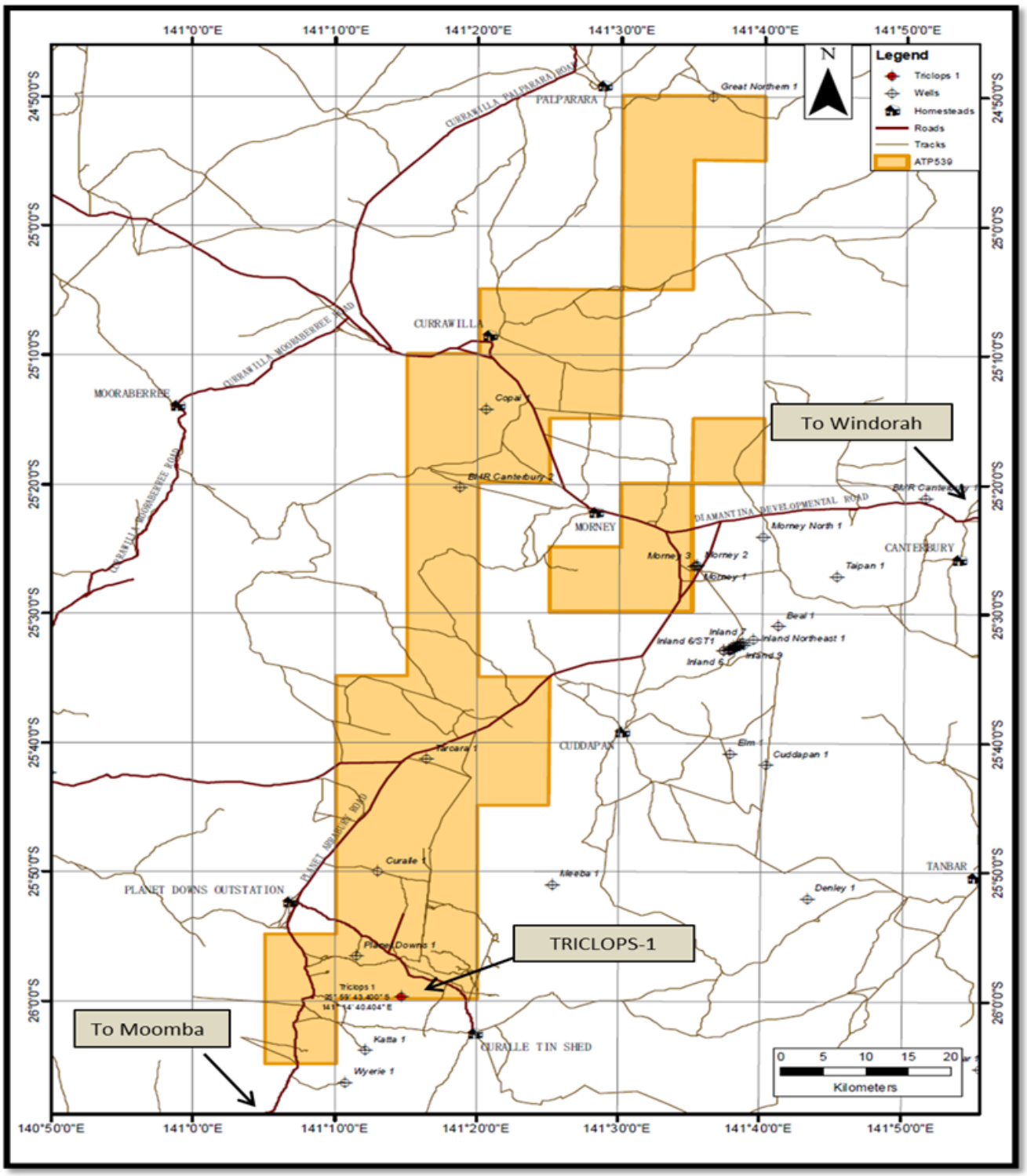


Figure 1: *ATP 539: Location map with Triclops-1 Location*

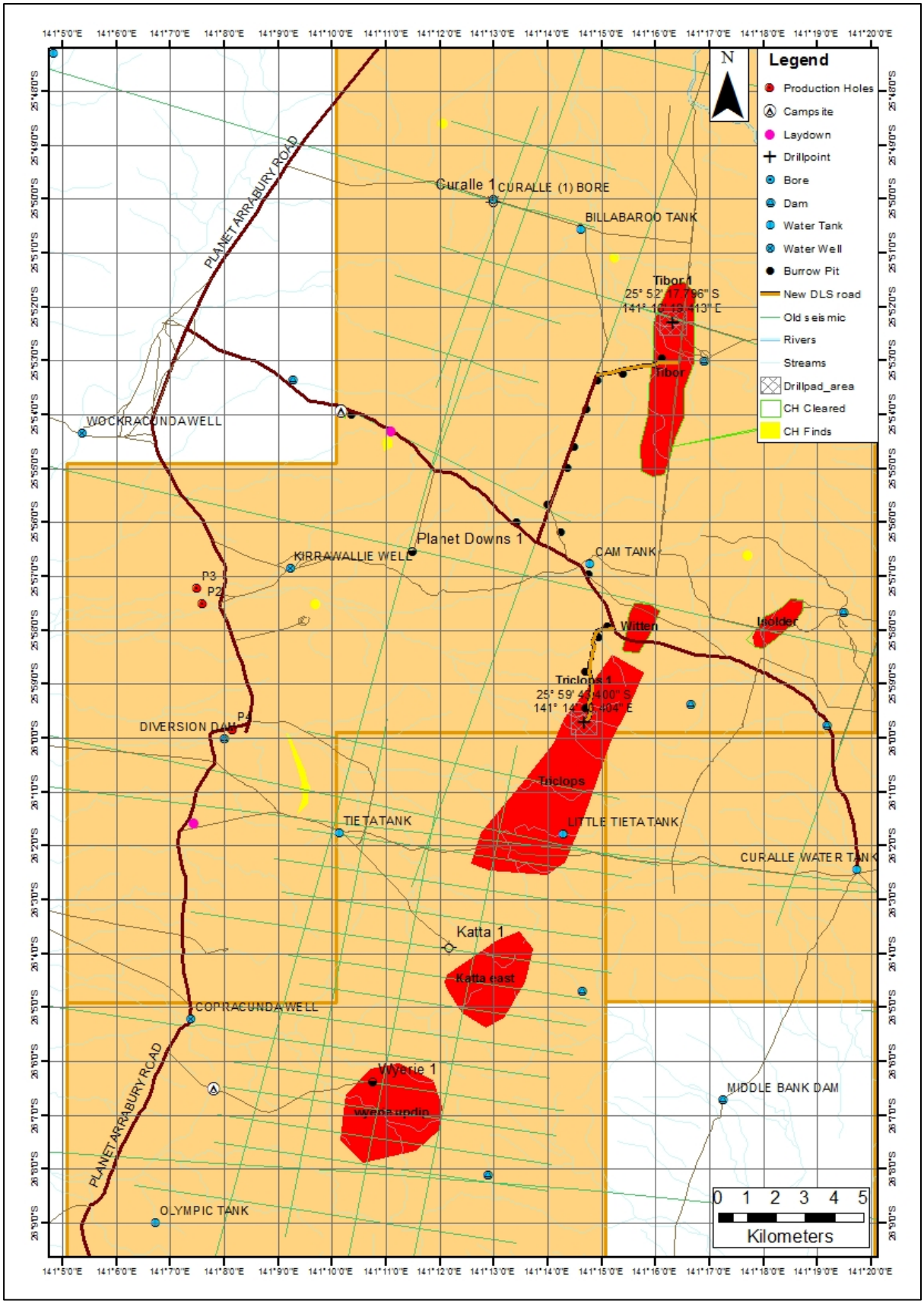


Figure 2: Water Bore Location

2.0 Drilling & Completion Data

A well schematic is included in **Section 2.3**. A final time-depth curve is provided in **Section 2.4**.

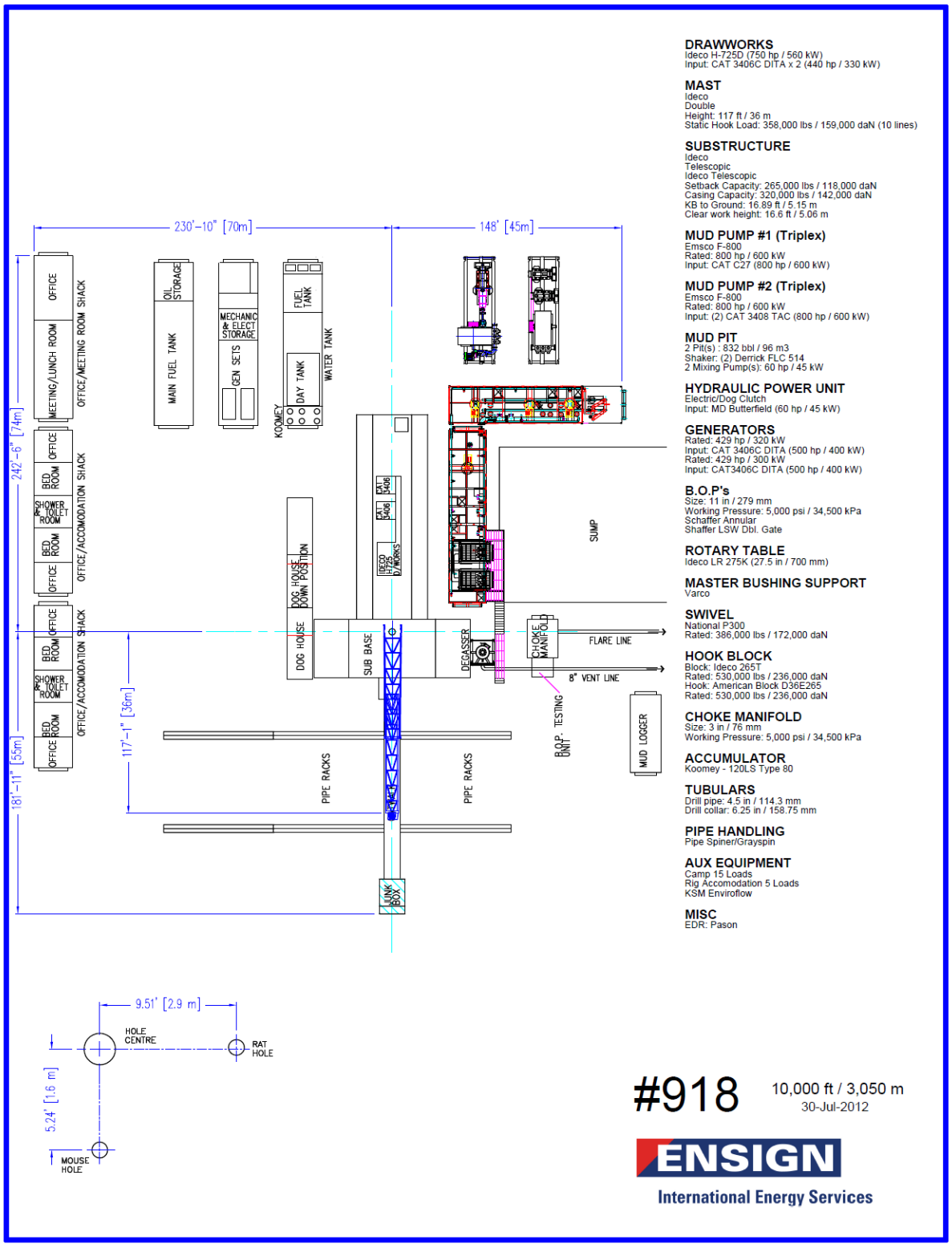
The daily drilling reports are contained in **Appendix 1**. Daily Mud Reports are all included in **Appendix 2.**

A full Deviation Survey Report is included in **Appendix 3**. Drilling water for the well was supplied from Water Bore # 4 (P4 – **Figure 2**), located approximately 10kms west of Triclops-1. Water was transported by tanker.

2.1 General

Well Name		Triclops-1
Operator		DrillSearch (100%)
		55 Clarence Street
		Sydney NSW 2000
Permit		ATP – 539P, Cooper Basin, Queensland
Well Designation		Vertical Exploration
Location	**Latitude**	$25^0$59'43.43041"S
	Longitude	$141^0$14'40.40189"E
	Easting:	524 475m
	Northing:	7 124 803m
	Projection	MGA 54
	Spheroid	GRS 80
	Datum	GDA 94
	Seismic	Inline 3238
		Crossline 2170
Elevations	**RT (mAMSL)**	146.86
	GL (mAMSL)	141.86
Date Drilling Commenced		12:30 hrs. 14th January 2013
Date drilling Completed		18:00 hrs. 28th January 2013
Date Rig Released		11:00 hrs. 1st February 2013
Total Depth	**Driller**	1926.5 m
	Logger	1927.0 m
Status		Plugged and Abandoned

2.2 Rig Data



DRAWWORKS
Ideco H-725D (750 hp / 560 kW)
Input: CAT 3406C DITA x 2 (440 hp / 330 kW)

MAST
Ideco
Double
Height: 117 ft / 36 m
Static Hook Load: 358,000 lbs / 159,000 daN (10 lines)

SUBSTRUCTURE
Ideco
Telescopic
Ideco Telescopic
Setback Capacity: 265,000 lbs / 118,000 daN
Casing Capacity: 320,000 lbs / 142,000 daN
KB to Ground: 16.89 ft / 5.15 m
Clear work height: 16.6 ft / 5.06 m

MUD PUMP #1 (Triplex)
Emsco F-800
Rated: 800 hp / 600 kW
Input: CAT C27 (800 hp / 600 kW)

MUD PUMP #2 (Triplex)
Emsco F-800
Rated: 800 hp / 600 kW
Input: (2) CAT 3408 TAC (800 hp / 600 kW)

MUD PIT
2 Pit(s) : 832 bbl / 96 m3
Shaker: (2) Derrick FLC 514
2 Mixing Pump(s): 60 hp / 45 kW

HYDRAULIC POWER UNIT
Electric/Dog Clutch
Input: MD Butterfield (60 hp / 45 kW)

GENERATORS
Rated: 429 hp / 320 kW
Input: CAT 3406C DITA (500 hp / 400 kW)
Rated: 429 hp / 300 kW
Input: CAT3406C DITA (500 hp / 400 kW)

B.O.P's
Size: 11 in / 279 mm
Working Pressure: 5,000 psi / 34,500 kPa
Schaffer Annular
Shaffer LSW Dbl. Gate

ROTARY TABLE
Ideco LR 275K (27.5 in / 700 mm)

MASTER BUSHING SUPPORT
Varco

SWIVEL
National P300
Rated: 386,000 lbs / 172,000 daN

HOOK BLOCK
Block: Ideco 265T
Rated: 530,000 lbs / 236,000 daN
Hook: American Block D36E265
Rated: 530,000 lbs / 236,000 daN

CHOKE MANIFOLD
Size: 3 in / 76 mm
Working Pressure: 5,000 psi / 34,500 kPa

ACCUMULATOR
Koomey - 120LS Type 80

TUBULARS
Drill pipe: 4.5 in / 114.3 mm
Drill collar: 6.25 in / 158.75 mm

PIPE HANDLING
Pipe Spiner/Grayspin

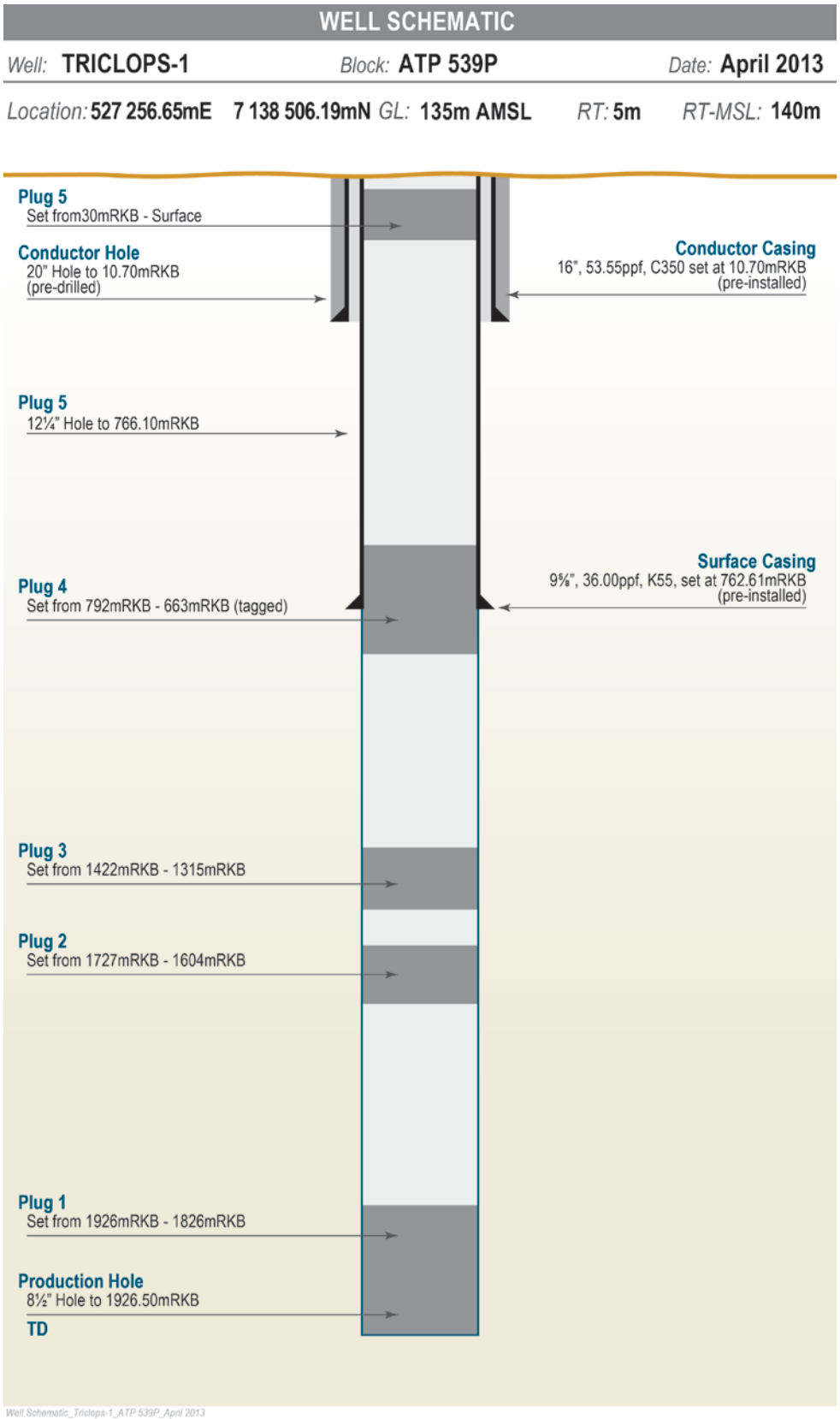
AUX EQUIPMENT
Camp 15 Loads
Rig Accomodation 5 Loads
KSM Enviroflow

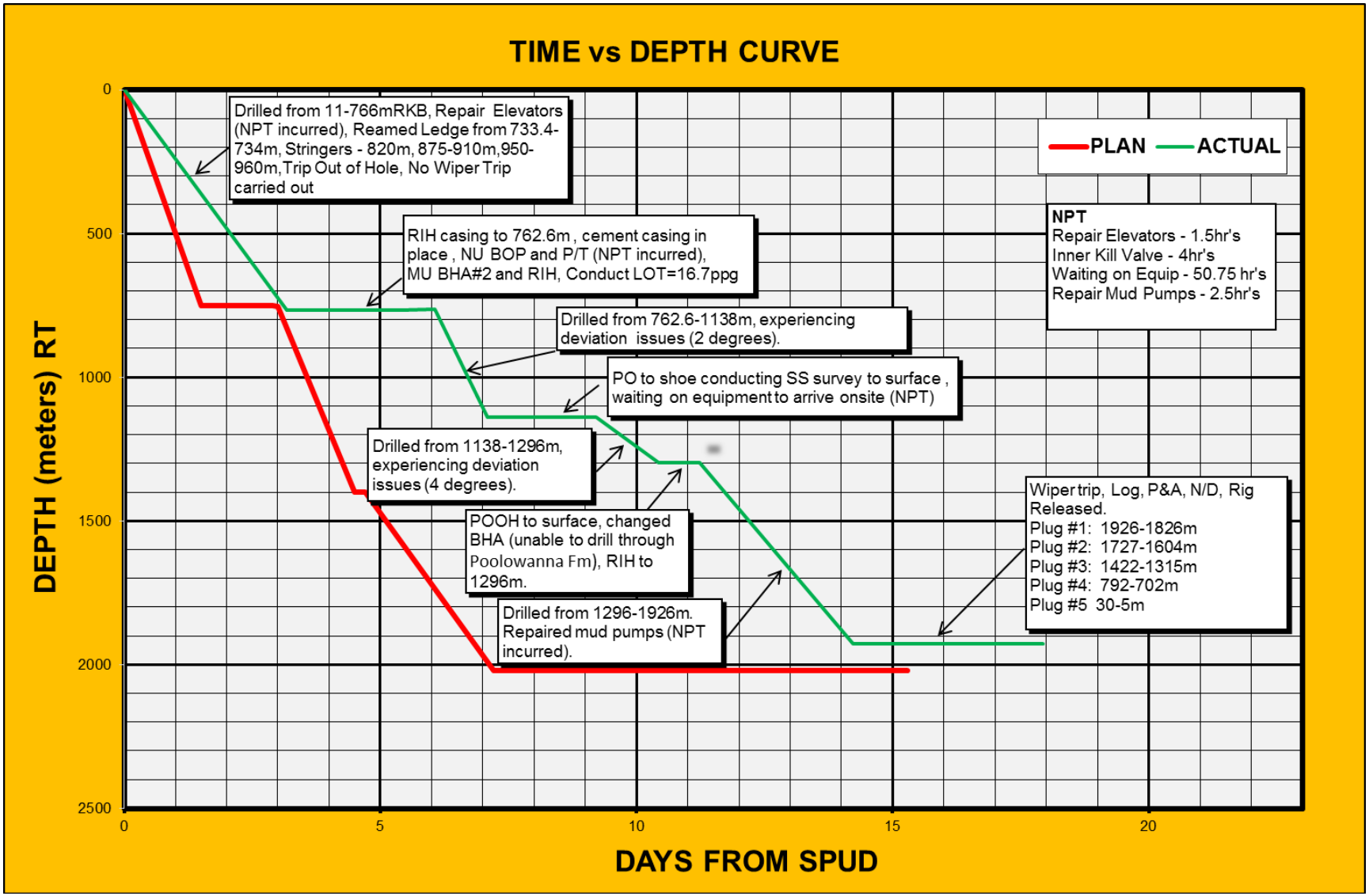
MISC
EDR: Pason

#918 10,000 ft / 3,050 m
30-Jul-2012

ENSIGN
International Energy Services

2.3 Well Schematic




TIME vs DEPTH CURVE
DEPTH (meters) RT
DAYS FROM SPUD
0
500
1000
1500
2000
2500
0
5
10
15
20
PLAN
ACTUAL
Drilled from 11-766mRKB, Repair Elevators (NPT incurred), Reamed Ledge from 733.4-734m, Stringers - 820m, 875-910m,950-960m,Trip Out of Hole, No Wiper Trip carried out
RIH casing to 762.6m , cement casing in place , NU BOP and P/T (NPT incurred), MU BHA#2 and RIH, Conduct LOT=16.7ppg
Drilled from 762.6-1138m, experiencing deviation issues (2 degrees).
PO to shoe conducting SS survey to surface , waiting on equipment to arrive onsite (NPT)
Drilled from 1138-1296m, experiencing deviation issues (4 degrees).
POOH to surface, changed BHA (unable to drill through Poolowanna Fm), RIH to 1296m.
Drilled from 1296-1926m. Repaired mud pumps (NPT incurred).
NPT
Repair Elevators - 1.5hr's
Inner Kill Valve - 4hr's
Waiting on Equip - 50.75 hr's
Repair Mud Pumps - 2.5hr's
Wiper trip, Log, P&A, N/D, Rig Released.
Plug #1: 1926-1826m
Plug #2: 1727-1604m
Plug #3: 1422-1315m
Plug #4: 792-702m
Plug #5 30-5m

2.5 Drilling Data Summary

The following is the daily operations summary for Triclops-1. It has been compiled from the daily drilling reports, all of which are contained in **Appendix 1**. The depths in the following summary are those reached at 24:00hrs on each day with the operations given for the previous 24 hour period.

Ray Millar and Guy Holmes provided onsite drilling supervision for Drillsearch Energy Ltd.

Date	Depth (m MDRT)	24 Hour Summary
03 Jan 2013		Rig down and prepare for rig move
04 Jan 2013		Rig down and prepare for rig move
05 Jan 2013		Loaded out the rig to the Triclops-1 location. Approximately 20% remains to be loaded out from Cypress-1 location.
06 Jan 2013		Loaded out the rig to the Triclops-1 location. Approximately 20% remains to be loaded out from Cypress-1 location
07 Jan 2013		Waited on daylight. Resumed rig move operations from Cypress 1 to Triclops-1.
08 Jan 2013		Continued rigging up on Triclops-1.
09 Jan 2013		Held PJSM and continued rigging up on Triclops 1. Inspected all lifting and hoisting equipment. Raised Dog House, spotted Centrifuge, Rigged up Turkey Nest pump, Mud Tanks. Installed new Bridal Line in derrick. Rigged up air and hydraulics.
10 Jan 2013		Raised the Derrick to half-mast. Continued rigging up the derrick and stringing line prior to raising the Derrick to full height. Installed handrails to Carrier and stairways. Conducted mast inspection. Lowered Monkey Board. Installed Centrifuge. Continued NDT inspection of rig equipment. Unspooled guy lines, winched and tong hanging lines.
11 Jan 2013		Held PJSM and continued rigging up. Repaired cracks in Monkey Board. Finished overhauling Drawworks Cat motor. Installed overhauled Cat motor onto Drawworks. Continued with NDT inspection of Ensign subs and fishing tools and pipe handling equipment (slips/elevators/dog collars). Installed rig lighting, ran mud pump cables. Installed Draw works brake linkages after NDT. Installed ESD lines from rig floor to Rig Office.
12 Jan 2013		Strung drilling line onto crown and blocks. Telescoped up the derrick. Raised the Substructure. Continued rigging up.

Date	Depth (m MDRT)	24 Hour Summary
13 Jan 2013		Completed rigging up.
14 Jan 2013	107.0	Completed rigging up - Conduct pre-spud checks - ***Spud Triclops @ 12:30hrs - drilling ahead***
15 Jan 2013	421.1	Drilling 12-1/4" hole from 107m to 421m with surveys every 30m
16 Jan 2013	672.1	Drilling 12-1/4" hole from 421m to 672m with surveys.
17 Jan 2013	766.1	Drill 12-1/4" hole to 766m - Circulate hole clean - Pull out of hole to run 9-5/8" casing
18 Jan 2013	766.1	Nipple down Riser joint and Flow line - Installed Landing base - Rigged up and run 9-5/8" casing. Cemented casing and land off same in cellar - Wait on cement to harden - Rigged down cementing equipment - Backed off Landing joint - Installed Bradenhead (Casing bowl) - Nipple up BOP's
19 Jan 2013	766.1	Nipple up BOP's - Flow lines - Install vent lines - Pressure test surface lines and valves - test BOP as per test schedule - Replace inner kill valve - Complete testing BOP. Making up BHA
20 Jan 2013	916.1	Complete tests on BOP- RIH with BHA #2 - Conduct Accumulator tests - Tag Plugs - Drill out Shoe track - Drill out Rat hole + 3m new hole - Conduct LOT - Drill 8-1/2" hole
21 Jan 2013	1,138.0	Drill 8-1/2" hole from 916m to 1138m - Deviation survey @ 1043 1.75 Deg Following survey @ 1120m = 2.0Deg, Rack kelly and pull out with check surveys every stand pulled.
22 Jan 2013	1,138.0	Pulling out of hole taking survey every stand pulled back from 831m to 328m. Survey film depleted. RIH to inside 9-5/8" casing shoe @ 740m. Monitor Annulus via trip tank. Wait on orders.
23 Jan 2013	1,168.0	Monitor well over trip tank - Circulate - Pull out and change BHA. RIH - Circulate and wash to bottom Drill from 1138m to 1166m - with surveys.

Date	Depth (m MDRT)	24 Hour Summary
24 Jan 2013	1,296.0	Drilling 8-1/2" hole from 1166m to 1296m - Ran deviation surveys every 20m drilled
25 Jan 2013	1,336.0	Trip out to change drilling assembly to directional assembly - RIH to 9-5/8" casing shoe - Take MWD surveys a intervals while continuing to running in hole - Slide and rotate while drilling 8-1/2" hole from 1296m to 1336m
26 Jan 2013	1,568.0	Drill 8-1/2" hole from 1336m to 1568m as directed by Pathfinder DD - MWD surveys taken on connections
27 Jan 2013	1,795.0	Directional drilling with mud motor from 1568m to 1795m. Slide and rotate as directed by Pathfinder.
28 Jan 2013	1,926.5	Drill 8-1/2" hole from 1795m 1926.50m - Circulate hole clean - Wiper trip to 1300m - Run back in hole to 1926.50 m TD - Circulate hole clean - Tripping out
29 Jan 2013	1,926.5	Tripping out of hole - Lay down MWD and Pathfinder directional tools - PJSM rigging up Schlumberger logging tools - Run Log #1 ADT-HRLA-PEX-HNGS-SP
30 Jan 2013	1,926.5	Schlumberger POOH after Log #2 and rigged down - RIH with BHA components from derrick - POOH and laid down BHA components - Picked up 2-7/8" cmt stinger - RIH and set #1 and #2 abandonment cement plugs.
31 Jan 2013	1,926.5	Pump P&A Plug 3: 1315m -1422m and Plug 4: 702m - 792m. Pull back and lay out drill pipe. RIH to 617m and tag top of cement @ 663m. Pressure test cement to 1600psi, 10min Test. POOH and lay out drill pipe. RIH with stinger and place Plug 5 from 30m MDRT to GL.
01 Feb 2013	1,926.5	Lay out cementing tools and rig down cementers. Layout handling gear and clear drill pipe from racks. Flush BOP, Kill and Choke manifold. Open doors and clean BOP cavities and bolt doors. Rig down flowline, kill and choke lines. Nipple down BOPs and mount on stump. Cut Casing head above cellar floor and cap well. Clean tanks. RIG RELEASED 11:00 Hrs.

3.0 Formation Sampling, Evaluation and Testing

3.1 Wellsite Geologist

Andrew James provided onsite geological supervision for Drillsearch Energy Ltd and he prepared the Well Composite Log included as **Appendix 8**.

3.2 Mudlogging

Geoservices Overseas S.A provided mudlogging services. Cuttings gas was monitored from surface conductor shoe to TD using a FID gas chromatograph. A mudlog recording lithology, penetration rate, mud gas and other data was prepared and along with the drill Log, 24hr TimeLog, digital mudlogging drill and gas data and the sample manifest is included in **Appendix 12**

3.3 Ditch Cutting Samples

Three sets (each 150-200gms) of washed and air-dried cuttings were collected and described from 10m to 1926.5m MDRT. They were stored in suitably labelled plastic bags with one set preserved in Samplex trays.

The sampling frequency was every 10m from 10m to 1300m, and every 3m from 1300m to 1926.5m TD.

All samples were delivered to *Challenger Geological Services, 13-17 Weaver Street, Edwardstown 5039, South Australia* for distribution.

Set 1 was despatched to the Queensland Government Regulator in Brisbane.

Sets 2 and 3 (Samplex) were retained for Drillsearch at Challenger Geological in Adelaide.

3.4 Conventional Coring

No cores were obtained from Triclops-1

3.5 Sidewall Cores

No sidewall coring was conducted in Triclops-1

3.6 Mud Gas Sampling

No Isotubes or Isojars were collected for Mud Gas Isotope Logging

3.7 Cuttings Lithology Descriptions

Descriptions for each individual ditch cuttings sample (collected at 3m and 10m intervals) are included in **Appendix 9**

3.8 Hydrocarbon Shows

Total gas was recorded and analysed (chromatograph) from surface to TD. All ditch cuttings were checked for hydrocarbon fluorescence. Hydrocarbon fluorescence was recorded in sandstones of the Murta Member and the Namur, Westbourne, Adori, Birkhead and Hutton Formations from 1401m to 1760m MDRT. Descriptions of hydrocarbon fluorescence observed in the drill cuttings are included in **Section 4.4**.

3.9 LWD Logging

MWD/LWD was not utilised on Triclops-1

3.10 Wireline Logging

Wireline logs were run by Schlumberger. The full details of the wireline runs along with the digital data files are included in **Appendix 10**. Andrew James (Wellsite Geologist) and Rothi Hamza (AfriQA) were the wireline witnesses. In Run 2 the GR and Sonic were continued through the 9-5/8" casing to surface.

Run #	Type log	Name	Interval mMDRT
1	EDTC/SP/HGNS/PEX-TLD / HRLA/ADT	Laterolog, Compensated Z-Density, Compensated Neutron Log, Spectral Gamma Ray Log, Dielectric, Spontaneous potential	725 – 1926.5
2	ERCD/EDTC/PPC/MAST/GPIT	Power positioning caliper, Sonic Scanner, Geometric position inclination tool	0 – 1926.5

Table 1: *Wireline logs suite for Triclops-1*

3.11 Temperature

The following maximum temperatures **(Table 2)** were recorded from wireline logs (logger depth).

Run	Temperature	Time Since Circ. stopped
EDTC/SP/HGNS/PEX-TLD / HRLA/ADT	130 Deg C at 1920m MDRT	15.66 hours
EDTC/PPC/MAST/GPIT	131 Deg C at 1905m MDRT	24 .5 hours

Table 2: *Maximum temperatures recorded for Triclops-1*

The extrapolated bottom-hole temperature is calculated at 132.8 deg C (**Figure 3**)

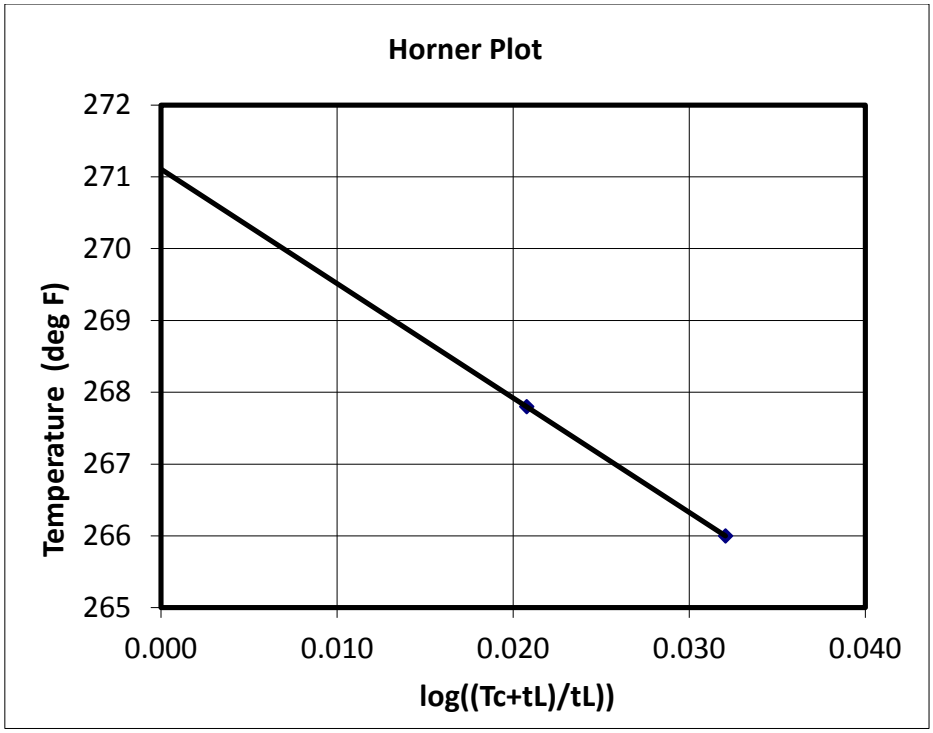


Figure 3: *Horner Plot for Triclops-1*

3.12 Velocity Survey

A Velocity Survey was not run.

4.0 Geology

4.1 Reasons for Drilling

Triclops-1 was proposed as an exploration well to test the hydrocarbon potential of a four-way dip closure (a fault related anticline with approximately 15m of independent closure) on the Curalle anticline on the northern flank of the Cooper/Eromanga basin.

The primary targets were the Middle Jurassic Hutton Sandstone and sands of the Late Jurassic Birkhead Formation. Secondary targets were sands of the Late Jurassic Namur Sandstone and Early Jurassic Poolowanna Formation. Stacked pay was anticipated as mapping indicated that the closure extends from the Top of the Early Cretaceous Murta Formation to the Basal Jurassic Poolowanna Formation. Sands of the Westbourne Formation and the Adori Sandstone were also considered to have potential to be hydrocarbon bearing if porosity is preserved.

The closest wells to Triclops-1 are Curalle-1 in the north and Wyerie-1 & Katta-1 in the south. The Inland Oil Field, a Hutton oil producer, is located 60 km to the northeast, and the Cook oilfield, a Hutton oil producer as well, is approximately 85 km to the south.

4.2 Stratigraphy - Formation Tops

The stratigraphic prognosis for Triclops-1 was made utilising the results of surrounding wells and interpretation of the 3D seismic data. The well penetrated a stratigraphic section comprising approximately 1926.5 metres of surficial, Eromanga Basin sediments and terminating in the top of the Poolowanna Sandstone (**Table 3**).

Formation	Actual		Predicted		High / Low (m)	
	mSS	m MD	mSS	m MD		
Winton	141.0	5.2				
Mackunda	-495.3	641.5	-524	670	28.7	high
Allaru Mudstone	-598.8	745.0	-587	733	11.8	low
Toolebuc	-895.8	1042.1	-898	1044	2.2	high
Wallumbilla	-942.1	1088.5	-944	1090	1.9	high
Cadna-owie	-1170.7	1317.2	-1176	1322	5.3	high
Murta Formation	-1252.7	1399.2	-1255	1401	2.3	high
Namur Sst	-1275.7	1422.2	-1285	1431	9.3	high
Westbourne	-1372.0	1518.6	-1377	1523	5.0	high
Adori Sst	-1474.4	1621.0	-1445	1591	30.6	low
Birkhead	-1489.5	1636.1	-1494	1640	4.5	high
Hutton Sst	-1580.9	1727.5	-1588	1730	7.1	high
Poolowanna	-1779.9	1926.5	-1784	1930	5.9	low

Table 3: *Triclops-1, Formation Tops Actual vs. Prognosed*

4.3 Stratigraphy

The stratigraphic section encountered in Triclops-1 is briefly described below.

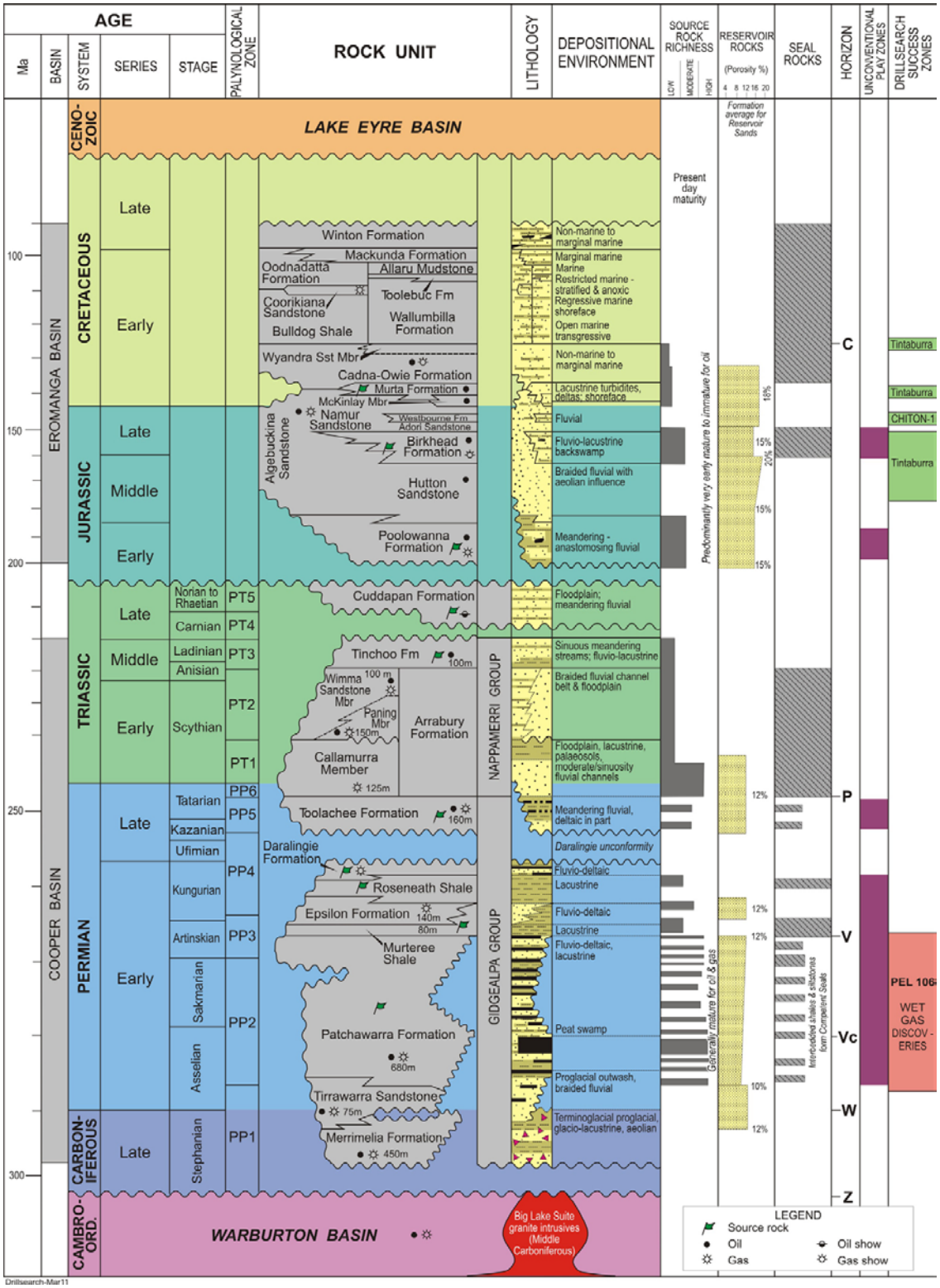


***Figure 4**: Generalised Stratigraphic Column: Eromanga and Cooper Basins*

Detailed lithology descriptions of the section encountered in Triclops-1 are presented in **Appendix 8** -Composite Well Log and **Appendix 9 –** Cuttings Descriptions

The following stratigraphic description is a summary of the lithologies seen in the well, based on their broad lithostratigraphic subdivisions. All depths are measured and referenced to the rotary table.

There have been no biostratigraphic studies performed and any ages referred to are inferred.

Surficial & Winton Formation

Depth: 5.2 – 641.5m MDRT **Thickness**: 636.3m

The Winton Formation is a very argillaceous sequence characterised by interbedded argillaceous sandstone, sandstones, claystones and siltstone with abundant carbonaceous laminae.

SANDSTONE: light grey to very light green grey, very fine to fine, sub-angular to angular, well sorted, friable to moderately hard, weak siliceous cement to locally strong calcareous cement, very light grey argillaceous matrix, occasionally 10-40% argillaceous supported matrix, 10-20% grey lithic fragments, trace carbonaceous detritus, trace micro-mica, very poor visible porosity, no hydrocarbon fluorescence.
CLAYSTONE: green grey to olive grey becoming yellow grey to light brown with depth, very light grey in parts, sub-blocky, soft to firm, 5-10% quartz silt increasing up to 30% with depth, trace carbonaceous detritus, trace micro-mica.
SILTSTONE: light olive grey to pale brown, minor very light grey, sub-blocky to blocky, soft to dominantly firm, 10% very fine quartz grains, 10% lithic fragments, trace micro-mica, trace very fine uniformly distributed carbonaceous detritus, rare fine coaly laminations.

Mackunda Formation

Depth: 641.5 –745.0m MDRT **Thickness**: 103.5m

The Mackunda Formation is represented by siltstones with strongly calcareous sandstone.

SILTSTONE*:* olive grey to light brown grey, sub-blocky, firm to moderately hard in part, 10% clay, trace very fine carbonaceous detritus.
SANDSTONE*:* mottled white, light grey and green grey, very fine to fine grained, sub-angular to dominantly sub-rounded, sub-spherical, well sorted, friable to locally hard, strong calcareous cement, 5-10% argillaceous matrix, 5-10% fine lithic and feldspar fragments, trace carbonaceous wisps, very poor to no visible porosity, no hydrocarbon fluorescence.

Allaru Mudstone

Depth: 745.0 – 1042.1m MDRT **Thickness**: 297.1m

The Allaru Mudstone is characterised by siltstones with minor interbedded strongly calcareous sandstones and rare dolomite.

SILTSTONE: medium light grey to dominantly medium dark grey, sub-blocky to dominantly sub-fissile, minor fissile, firm to moderately hard, 10-20% very fine quartz grains rarely grading to arenaceous siltstone, generally uniformly textured, trace micro-mica, trace carbonaceous specks.

SANDSTONE: light grey to medium grey, , very fine grading to silty sandstone in parts, very well sorted, sub-angular to angular, sub-spherical, moderately hard, strong calcareous cement, 5-10% very fine to fine lithic and feldspar fragments, trace carbonaceous specks, no visible porosity, no hydrocarbon fluorescence.
DOLOMITE: olive grey to brown grey, crypto- to micro-crystalline, sub-fissile to fissile, very hard, generally homogenous – trace very fine carbonaceous / black mineral specks (?) and isolated pyrite grains.

Toolebuc Formation

Depth: 1042.1 – 1088.5m MDRT **Thickness**: 50.4m

The Toolebuc Formation is represented by strongly calcareous siltstone.

SILTSTONE: grey black to olive black becoming medium dark grey to dark grey with depth, sub-fissile to fissile, firm to moderately hard, strongly calcareous, very finely arenaceous, 5% Inoceramus fragments in upper beds, trace micro-mica, trace pyrite.

Wallumbilla Formation

Depth: 1088.5 – 1317.2m MDRT **Thickness**: 228.7m

The Wallumbilla Formation is represented by siltstone, commonly grading into silty, strongly calcareous sandstone.

SILTSTONE: medium dark grey becoming dominantly dark grey, sub-blocky to sub-fissile, locally very finely arenaceous grading to silty sandstone, firm to moderately hard, trace-minor micro-mica, trace pyritic streaks, trace very fine glauconite.
SANDSTONE: medium light grey to medium grey increasing to mottled white, very light grey with depth, , very fine to minor fine, well sorted, sub-angular to sub-rounded, sub-spherical, friable to dominantly hard, strong calcareous cement, common white fine lithic fragments, very poor visible porosity, no hydrocarbon fluorescence.

Cadna-Owie Formation

Depth: 1317.2 – 1399.2m MDRT **Thickness**: 82.0m

The Cadna-Owie Formation is characterised by siltstone, occasionally grading into calcareous sandstone.

SILTSTONE: dusky yellow brown to brown grey progressing into predominantly dark grey with depth, sub-fissile to dominantly fissile, generally uniformly textured – very finely arenaceous grading to arenaceous siltstone, firm to dominantly moderately hard, trace carbonaceous specks, trace to locally minor micro-mica.
SANDSTONE: dark yellow brown to dusky yellow brown becoming white to very light grey with depth, , very fine, very well sorted, sub-angular, sub-spherical, hard to very hard, in part strong calcareous cement, white lithic fragments, very poor to no visible porosity, no hydrocarbon fluorescence.

Murta Formation

Depth: 1399.2 – 1422.2m MDRT **Thickness**: 23.0m

The Murta Formation is characterised by a series of interbedded sandstone and siltstone.

SANDSTONE: light grey to medium light grey, very fine, very well sorted, sub-angular to angular, sub-spherical, grades to silty sandstone in part, moderately hard to hard, weak calcareous cement, trace black mineral / carbonaceous specks, no visible porosity, no hydrocarbon fluorescence.
SILTSTONE: dark grey, , sub-blocky to dominant sub-fissile, firm to moderately hard in part, minor very fine lithic fragments, trace carbonaceous detritus and micro-mica.

Namur Sandstone

Depth: 1422.2 – 1518.6m MDRT **Thickness**: 96.4m

The Namur Sandstone is comprised of calcareous sandstone with minor finely arenaceous siltstone laminations.

SANDSTONE: very light to pale brown aggregates, dominantly dis-aggregated translucent to clear grains, fine to dominantly medium, rarely coarse, well sorted, sub-angular to minor sub-rounded, sub-spherical to sub-elongate, friable, weak to strong calcareous cement with depth, trace to 5% argillaceous matrix, poor to fair porosity, *5-70% dull green pinpoint fluorescence generally no cut but occasionally with very slow diffuse crush cut in tight sandstone aggregates in the upper most units decreasing with depth, no visible residue.*
SILTSTONE: brown grey to olive grey transitioning to grey black with depth, sub-fissile to minor fissile, firm to moderately hard, very finely arenaceous, moderate to very carbonaceous, trace micro-mica.

Westbourne Formation

Depth: 1518.6 – 1621.0m MDRT **Thickness**: 102.4m

The Westbourne Formation is an interbedded and interlaminated sandstone and siltstone sequence.

SILTSTONE: yellow brown becoming dominantly brown grey, firm to moderately hard, sub-blocky to sub-fissile, 40-50% very fine quartz grains grading to silty sandstone, non-calcareous, trace carbonaceous specks, minor micro-mica.
SANDSTONE: light grey to pale yellow becoming very white to very light grey with depth, , very fine to fine, well sorted, sub-angular to dominantly sub-rounded, sub-spherical to spherical, friable to moderately hard, weak calcareous in part, strong siliceous cement, minor white argillaceous matrix, fair inferred to no visible porosity, *trace pinpoint dull to moderately bright green to 100% solid bright yellow green, slow diffuse cut to instant green white crush cut, green white residual ring of variable thickness, no visible residue.*

Adori Sandstone

Depth: 1621.0 – 1636.1m MDRT **Thickness**: 15.1m

The Adori Sandstone is medium to coarse sandstone with minor siltstone beds.

SANDSTONE: very light grey, fine, dominantly medium to coarse, moderately to well sorted, angular - common broken coarse grains, sub-spherical to sub-elongated, hard, moderate to locally strong siliceous cement with occasional quartz overgrowths, poor visible porosity, minor very pale brown staining
SILTSTONE: brown black, firm, sub-fissile to fissile, moderately arenaceous, uniformly carbonaceous, trace micro-mica.

Birkhead Formation

Depth: 1636.1 – 1727.5m MDBRT **Thickness**: 91.4m

The Birkhead Formation is characterised by finely arenaceous siltstone with minor interbedded sandstone.

SILTSTONE: brown grey to brown black, sub-blocky to dominantly sub-fissile, firm to moderately hard, finely arenaceous, and moderately carbonaceous, and trace micro-mica.
SANDSTONE: white to very light grey, translucent to clear, very fine to fine, very well sorted, sub-angular to sub-rounded, friable, loose, poorly cemented, trace to minor argillaceous matrix, trace lithic fragments, poor inferred porosity, *30-100% moderately bright dull green white fluorescence, slow dull blue white streaming cut, thin white blue residual ring, no visible residue.*

Hutton Sandstone

Depth: 1727.5 – 1926.5m MDBRT **Thickness**: 199.0m

The Hutton Sandstone is comprised of translucent grained sandstone with minor interbedded siltstone.

SANDSTONE: very light grey, milky to translucent grains, medium to dominantly coarse, minor fine, well sorted, angular to sub-angular, minor sub-rounded, sub-spherical to dominate sub-elongate, dominantly dis-aggregated, weakly calcareous, friable to moderately hard in aggregates, weak to moderate siliceous cement with minor quartz overgrowths, poor to fair inferred porosity, *trace pinpoint dull to moderately bright yellow fluorescence, very slow dull blue white streaming cut, thin dull green residual ring, no visible residue*
SILTSTONE: olive black to dark grey with depth, , sub-block to sub-fissile, firm, finely arenaceous, trace lithic fragments, trace carbonaceous specks.

Poolowanna Formation

Depth: 1926.5 –TD m MDBRT **Thickness**: unknown

The Poolowanna Formation is represented by siltstone with minor coaly laminations.

SILTSTONE: grey black to brown black, firm to moderately hard, sub-fissile to fissile in part, trace very fine arenaceous material, locally moderately carbonaceous with trace to 5% coaly laminations / fragments, and trace micro-pyritic aggregates.

4.4 Hydrocarbon Shows

Total gas and chromatographic analysis were recorded and analysed from surface to TD. All ditch cuttings were checked for hydrocarbon fluorescence. Descriptions of hydrocarbon shows observed in drill cuttings are detailed below.

Murta Formation
1401 to 1404m: Trace pinpoint moderately bright green yellow fluorescence in tight sandstone aggregates, very weak very slow diffuse dull green white cut, very thin residual ring fluorescence, no visible residue. Poor show - no associated gas peak.

1419 to 1424.5m: 100% patchy very dull orange mineral fluorescence with trace pinpoint / scattered green yellow fluorescence in tight sandstone aggregates with trace carbonaceous detritus (locally generated?),slow streaming dull to moderately bright blue white cut, moderately thick residual ring fluorescence, no visible residue. Poor show: broad gas peak 57 units on a 35 unit background

Namur Sandstone
1424.5 to 1435.5m: 30 to 10% very dull green patchy fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue. Poor show - no associated gas peak.

1435.5 to 1451m: 10% to 70% (from 1440 to 1443 m) dull green pinpoint to patchy fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue. Poor show - weak gas peaks of 45 units on a 30 unit background.

1460 to 1487m: 5% to trace dull green pinpoint fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue. Poor show - potentially largely cavings in lower part of section. Not supported by any elevated gas values.

1494 to 1503m: 20% to trace moderately bright green yellow scattered fluorescence in tight sandstone aggregates, slow diffuse dull blue white crush cut, very thin residual ring, no visible residue. Poor show - gas trap down over part of interval but not supported by any increase in gas levels.

Westbourne Formation
1516.5 to 1536m: trace to 70% pinpoint to patchy dull moderately to bright green yellow fluorescence, very weak slow dull blue white diffuse crush cut, very thin dull blue white residual ring, no visible residue. Poor show - 95 unit peak on 45 unit background.

1572.5 to 1574m: 100% decreasing to 15% solid to patchy bright yellow green fluorescence, slow diffuse green white cut - instant bright green white crush cut with secondary streaming grains, thick moderately bright green white residual ring, no visible residue. A fair show with a gas peak of 449 units on a 65 unit background. Chromatograph breakdown: 55/9/13/14/9. ROP break is neither fast nor distinct: 11 m/hr. on 9 m/hr.

1578 to 1594.5m: trace pinpoint yellow green fluorescence, slow diffuse green white cut - instant bright green white crush cut with secondary streaming grains, thin moderately bright green white residual ring, no visible residue. Poor show - no associated gas peak.

1604 to 1608m: 70% to 20% patchy bright green white fluorescence, instant diffuse dull green white cut - slow streaming moderately bright blue white cut, thick green white residual ring, no visible residue.

1614 to 1623m: 30 to 20% patchy moderately bright to dull yellow fluorescence, instant blue white crush cut, thick green residual ring, no visible residue. Mud sample collected at gas peak at 1616 m. When mixed with boiling water and placed in a cup under the fluoroscope, oil bubbles observed breaking out on surface - bright green yellow droplets and streaks. Gas peaks of 218, 602 and 461 units on a 35 unit background at 1604.5, 1615.5 and 1623 m respectively.

Birkhead Formation
1647 to 1649.5m: 50% patchy dull green fluorescence, slow dull blue white streaming cut, thin blue white residual ring, no visible residue. Poor show - no associated gas peak.

1674 to 1680m: 100% solid moderately bright to dull green white fluorescence, slow dull blue white streaming cut, thin blue white residual ring, no visible residue. Poor show - gas peak of 180 units on 90 unit background.

1702.5 to 1708m: 30 to 50% scattered very dull green white fluorescence in tight aggregates, slow very dull blue white crush cut, very thin residual ring, no visible residue. Poor show - 162 unit gas peak on 100 unit background.

Hutton Sandstone
1750 to 1760m: trace pinpoint dull to moderately bright yellow fluorescence, very slow dull blue white streaming cut, thin dull green residual ring, no visible residue. Very poor show - no significant gas peaks.

4.5 Petrophysical Evaluation and Core Analysis

4.5.1 Petrophysics

Net pay (interpreted with residual hydrocarbons) was identified from wireline logs in the Murta Formation, the Namur Sandstone, the Westbourne Formation, the Adori Sandstone, the Birkhead Formation and the Hutton Sandstone. The calculated petrophysical results are summarised in **Table 4**.

The detailed Petrophysical Analysis Report is included as **Appendix 11**

Interval	Formation	Porosity (%)	Sw (%)	Vsh (%)	Net Pay (m)
1397.5 to 1424.5	Murta Formation	9.5	51	18.7	0.89
1424.5 to 1516.5	Namur Sandstone	9.8	49.9	14.8	1.19
1594.4 to 1634.4	Westbourne / Adori	10.6	53.2	9.5	5.44
1634.4 to 1726.9	Birkhead Formation	16.3	42	9.6	0.86
1726.9 to 1909.5	Hutton Sandstone	10.5	47.5	5.9	4.52

Table 4: *Petrophysical Pay Summary*

4.5.2 Coring

No cores were cut in Triclops-1

4.6 Prospect Evaluation

The differences between the predicted and actual depths of formation tops in Triclops-1 are given in the well card and as shown in **Table 3**

Pre- and post- drill depth interpretation maps of the top Hutton Formation are included as **Figure 5**

Pre- and post- drill seismic sections through the Triclops-1 location are presented in **Figures 6 and 7** respectively.

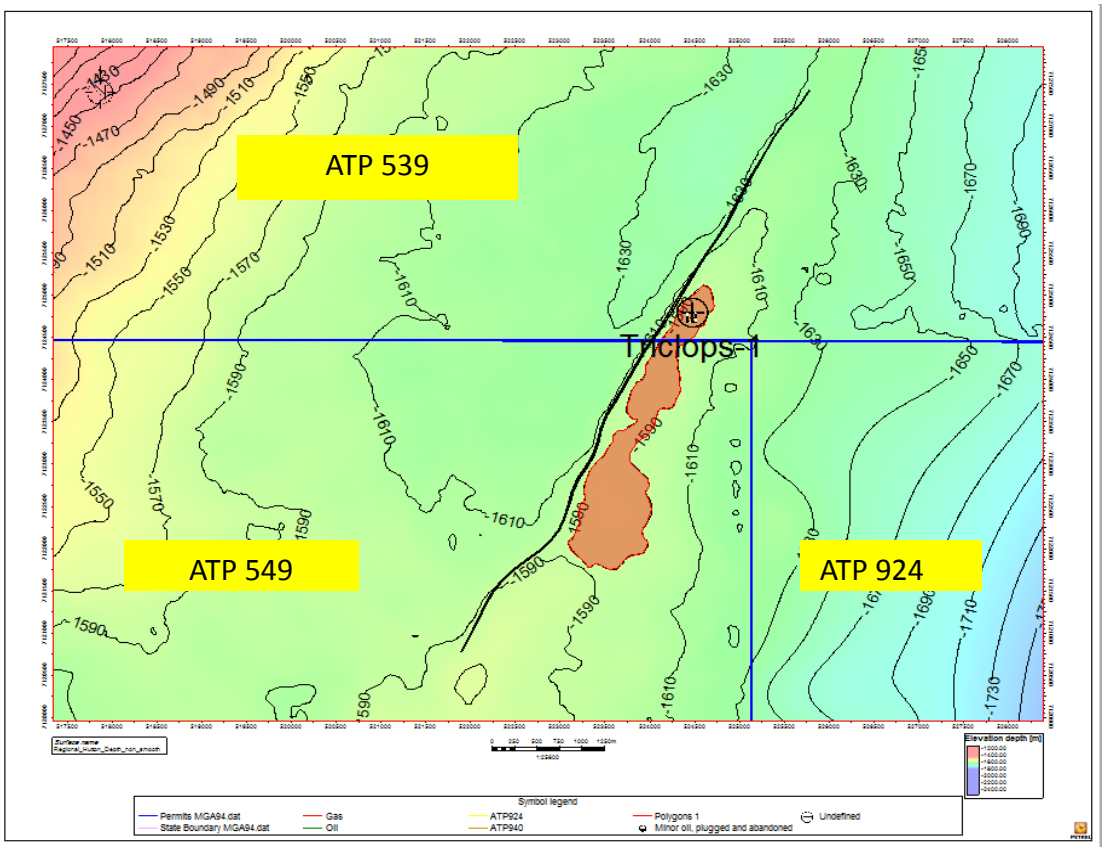


Figure 5: *Triclops-1, Hutton Formation pre-drill (no change post-drill) depth structure map*

4.6.1 Trap

Triclops-1 was drilled to test a four-way dip closure on the Curalle anticline, approximately 3.5km long and on average 0.5km in width.

4.6.2 Seal

The shales of the Birkhead Formation were predicted to act as a top seal for both the primary and secondary target sands. The shales were intersected as expected.

4.6.3 Reservoir

The porosity of sands of the Birkhead Formation was better than expected, however the porosity of the sands of the primary target, the Hutton Sandstone, were of a poorer quality than predicted pre-drill. The target sands were water wet with only a trace of hydrocarbon shows observed.

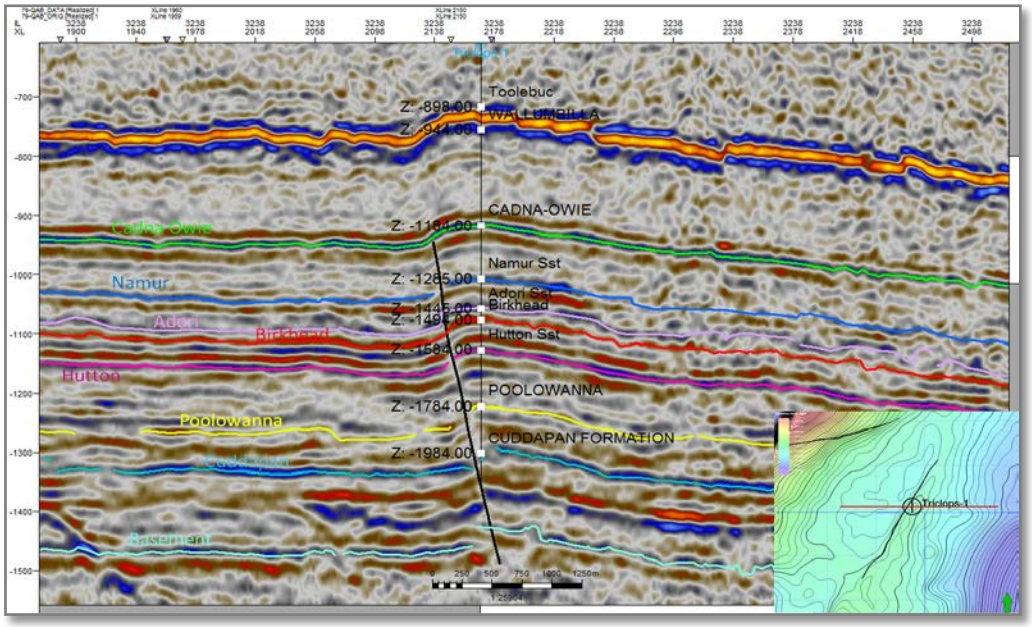


Figure 6: Triclops-1 *Inline Seismic Section 3238 through the Triclops Structure showing wellpath, formation tops (pre-drill) and major bounding fault*

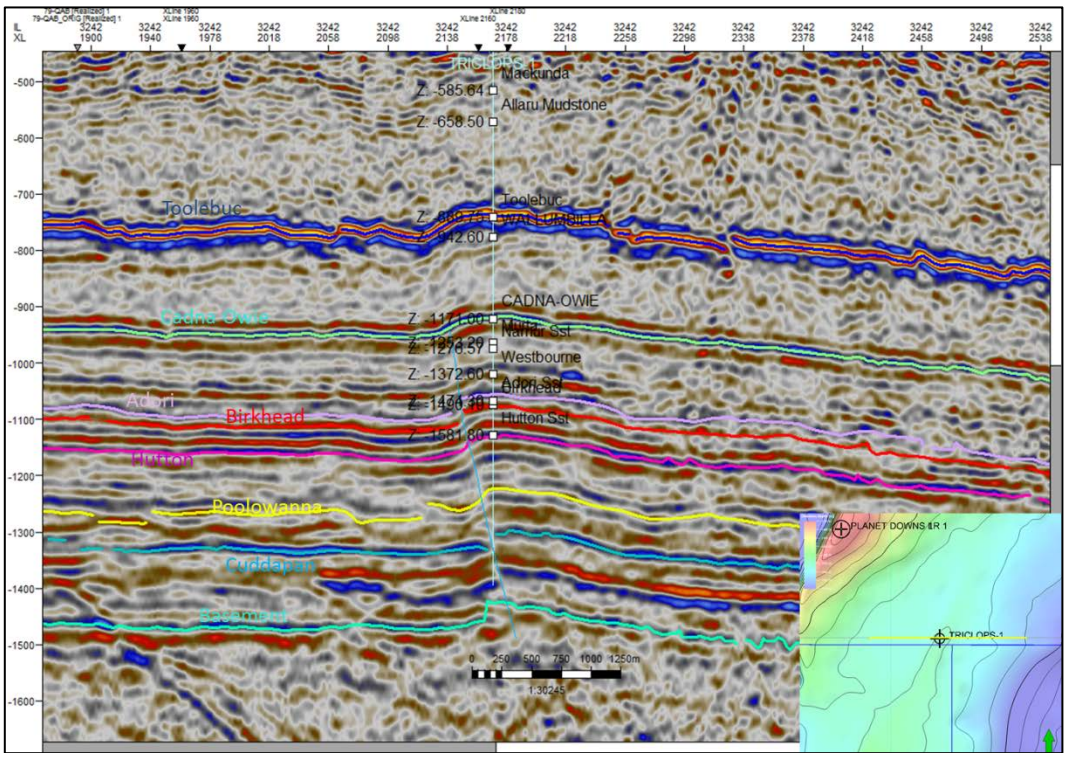


Figure 7: Triclops-1 *Inline Seismic Section 3238 through the Triclops Structure showing wellpath, formation tops (post-drill) and major bounding fault*

4.6.4 Charge

A trace to 100% fluorescence was observed in a number of tight argillaceous sandstones throughout the drilled sequence (**Section 4.4**). The shows are interpreted as residual oil caught in the poorest quality sands and siltstones.

Triclops-1 was the first mapped closure lying outside the nearby Windorah Trough. Prolific oil shows were observed in offset wells locally, however timing is considered a likely reason for failure at Triclops. The structure is interpreted as post-dating peak oil expulsion (~90mya).

4.7 Formation Testing

4.7.1 Wireline Pressures/Samples

No pressures or samples were obtained in Triclops-1

4.7.2 Drillstem Testing

A drillstem test was not conducted in Triclops-1

5.0 Conclusions and Contribution to Geological Understanding

The Triclops-1 well was designed as a vertical oil exploration well to test a four-way dip closure on the Curalle anticline on the northern flank of the Cooper/Eromanga Basin. The Basal Birkhead Formation and Hutton Sandstone were the primary targets of the well whilst the Namur Sandstone and Poolowanna Formation were considered secondary targets.

The well intersected the expected stratigraphic section with all primary and secondary targets penetrated. The well was terminated early, due to the necessity to change the drilling bit (ROP reduced to 0.3m/hr), with the well having already tested the primary basal Birkhead Formation and Hutton Sandstone objectives.

The primary targets, the Birkhead Formation and Hutton Sandstones, were both intersected high to prognosis, 4.5m and 7.1m respectively but well within the margins of error dictated by the seismic time/depth ties. They did not have significant hydrocarbon shows.

The secondary objective, the Namur Sandstone, was intersected approximately 9.3m high to prognosis, but again had insignificant oil shows. The Poolowanna Formation was probably tagged / penetrated at TD (causing the bit to cease drilling). No shows were recorded in the Poolowanna Formation.

Interpretation of the well data indicates the primary target sands were tighter than expected, and peak hydrocarbon migration likely pre-dated the timing of the structural closure. Wireline log analysis indicated small amounts of net pay (with residual hydrocarbons) in the Murta Formation, the Namur Sandstone, Adori Sandstone, Westbourne Formation, Birkhead Formation and Hutton Sandstone ranging from 0.86m to 5.44m **(Table 4)**.

Despite the formation tops coming in close to prognosis only limited quantities of net pay were present and although oil fluorescence was observed in the Murta Formation, Namur Sandstone, Westbourne Formation, Adori Sandstone, Birkhead Formation and Hutton Sandstone the well failed to intersect commercial quantities of unswept oil in these target zones.

Triclops-1 was subsequently plugged and abandoned as a dry well with oil shows. Ensign Rig 918 was released on 1st February 2013

6.0 Bibliography

1. *Drillsearch Energy Ltd., 6th December 2012:* ATP 539 Triclops-1 Well Proposal and Geological Program (unpub)
2. *Drillsearch Energy Ltd., 5th December 2012:* ATP 539 Triclops-1 Drilling Program (unpub)

Appendix 1 – Daily Drilling Reports (DDR)

Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	1	Day Wellsite Representative:	Ray Millar	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	1.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 47,391
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,162,862
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:	PJSM prior to loading out camp
Planned Op:	Move camp and set up on new location. Remove mast from carrier ready to load. Install Xmas tree on well.

Summary for Period 0000 Hrs to 2400 Hrs on 03 Jan 2013

Rig down and prepare for rig move

Operations for Period 0000 Hrs to 2400 Hrs On 03 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
	P	RM	00:00	06:00	6.00		Wait on daylight
	P	RM	06:00	18:00	12.00		PJSM - Scope mast top section - spool all guidelines - lay down mast - unstring and reave block with softline - tie down blocks and secure mast for move - rig down high and low pressure mud lines - secure mud tanks for move - pack up lights, hoses, electrical cables, stairs and walkways. Backload 105 jts drillpipe for inspection. Crane and trucks arriving tonight.
	P	RM	18:00	24:00	6.00		Wait on daylight

Operations for Period 0000 Hrs to 0600 Hrs On 04 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Wait on daylight

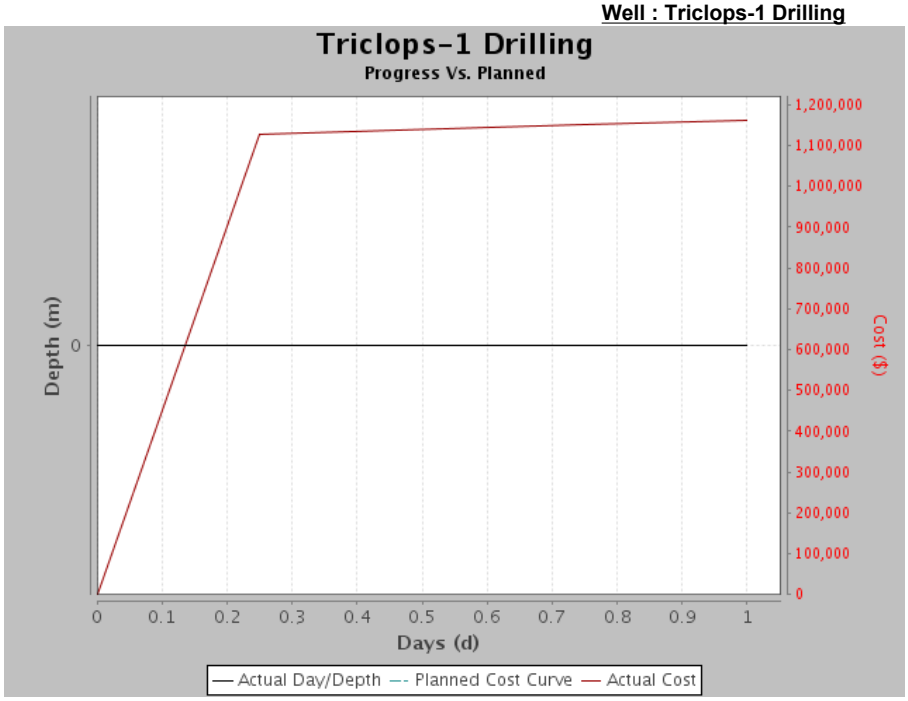
Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	24.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	24.0	100.0

Printed on 5 February 2013 01:46 PM (GMT+08:00)

Drillsearch

Well : Triclops-1 Drilling



Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	2	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	2.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 60,141
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,223,003
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:
Planned Op:

Summary for Period 0000 Hrs to 2400 Hrs on 04 Jan 2013

Operations for Period 0000 Hrs to 2400 Hrs On 04 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Wait on daylight
RMO	P	RM	06:00	18:00	12.00		Held PJSM and loaded out the main camp. Prepared Mast for crane lift, removed the drilling line. Pulled out Substructure and installed the Tree. Loaded out mud pump #2. Spotted another Donga on location for excess personnel. Loaded out the shale shakers. Removed and loaded out the Derrick.
RMO	P	RM	18:00	24:00	6.00		Waited on daylignt.

Operations for Period 0000 Hrs to 0600 Hrs On 05 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rigging down operations. NOTE: As of this morning 30% of the Rig has been moved to the Triclops-1 location. This figure includes the Main Camp.

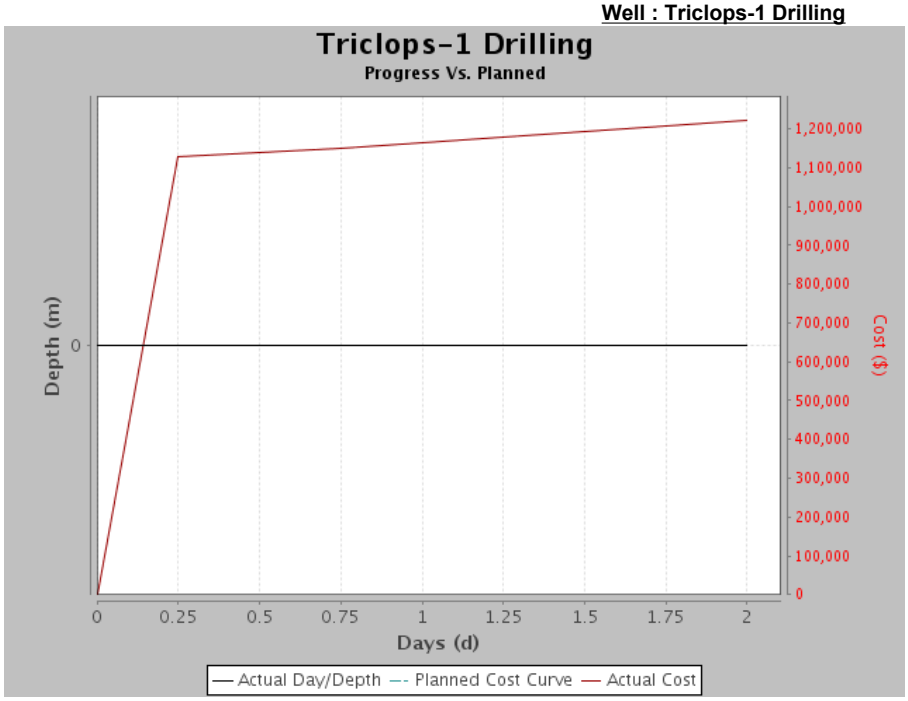
Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	48.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	48.0	100.0

Printed on 5 February 2013 01:46 PM (GMT+08:00)

Drillsearch

Well : Triclops-1 Drilling



Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	3	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	3.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 61,141
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,284,144
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:
Planned Op: Continue moving the rig and rig site camp to Triclops-1

Summary for Period 0000 Hrs to 2400 Hrs on 05 Jan 2013

Loaded out the rig to the Triclops-1 locaton. Approximately 20% remains to be loaded out from Cypress-1 location.

HSE Summary

Events	Num. Events	Date of Last	Days Since	Description	Remarks
Wellsite Permit To Work Issued	1	05 Jan 2013 06:30	0	Pressure	Pressure test wellhead to 1000psi
Walkabout	1	05 Jan 2013 08:00	0	Rig lease	Watch and advise on rig move operations
Pre-Job Meetings	1	05 Jan 2013 06:00	0	Daily Pretour	Discussed rig move ops. Heat stress and other hazards likely to be encountered

Operations for Period 0000 Hrs to 2400 Hrs On 05 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rigging down operations. NOTE: As of this morning 30% of the Rig has been moved to the Triclops-1 location. This figure includes the Main Camp.
RMO	P	RM	06:00	18:00	12.00		Continued rigging down. Prepared mud tanks for removal. (Pressure tested Tree against cement plug to 1,000 Psi. for 10 minutes.) Loaded out the Sub Base, BOP and Poorboy de-gasser, Mud Pump, Rig Carrier and Generator. Loaded out the Mud Tanks. As of 18:00 hrs. an estimated 20% of the rig (which includes the Rig Site Camp) remains on location to be moved tomorrow. This comprises the Pony Base, Electrician/Mechanic shacks and a few pipe bins/miscellanenous items, and of course the Rig Site Camp.
RMO	P	RM	18:00	24:00	6.00		Waited on daylight to resume rig move operatons.

Operations for Period 0000 Hrs to 0600 Hrs On 06 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rigging down operations.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	72.0	100.0

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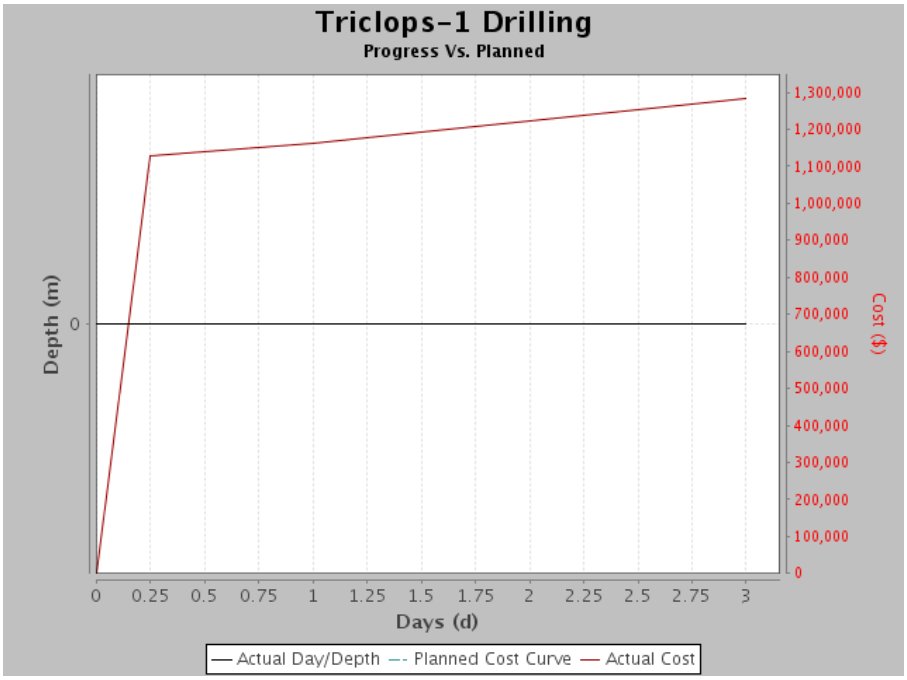
Drillsearch

Well : Triclops-1 Drilling

Performance Summary				
	Daily		Cumulative Well	
	Hrs	%	Hrs	%
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	72.0	100.0



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	4	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	4.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 61,141
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,345,284
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:
Planned Op:

Summary for Period 0000 Hrs to 2400 Hrs on 06 Jan 2013

Operations for Period 0000 Hrs to 2400 Hrs On 06 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rigging down operations.
RMO	P	RM	06:00	18:00	12.00		Loaded up the Carrier Pony Base. Loaded out the Mechanic and Electrician's shacks, matting, Pipe Racks, and Pipe Bins and all other equipment. De-mobed the Rig Camp and loaded out.
RMO	P	RM	18:00	24:00	6.00		Waited on daylight to resume rig move operations.

Operations for Period 0000 Hrs to 0600 Hrs On 07 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rig move operations.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	96.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	96.0	100.0

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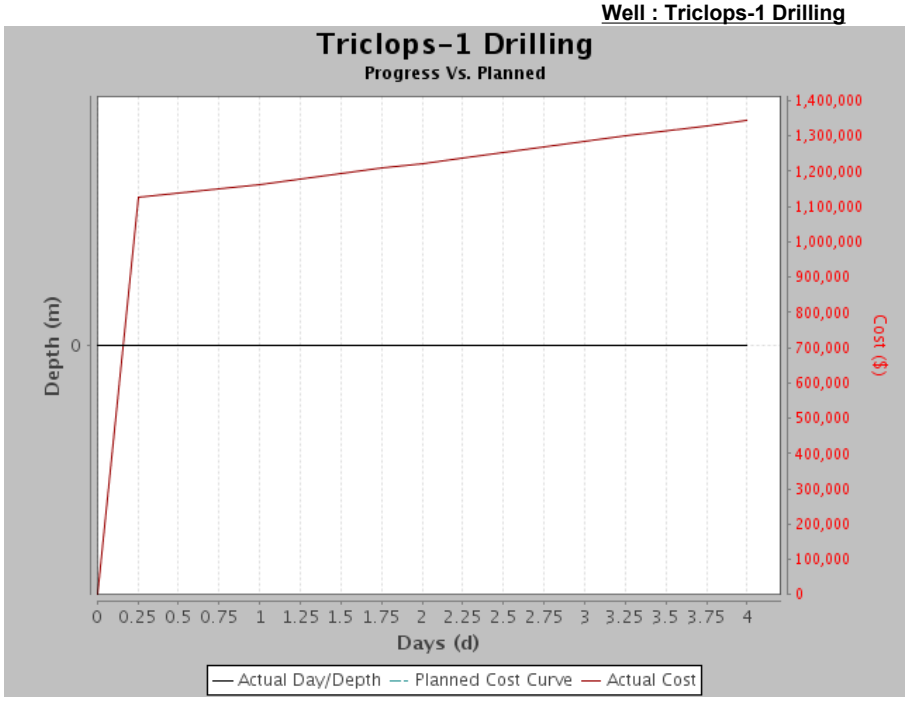
Drillsearch

Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	5	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	5.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 61,941
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,407,225
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:	Holding PJSM before beginninig rig move operations.
Planned Op:	Rig move.

Summary for Period 0000 Hrs to 2400 Hrs on 07 Jan 2013

Waited on daylight. Resumed rig move operations from Cypress 1 to Triclops 1.

Operations for Period 0000 Hrs to 2400 Hrs On 07 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rig move operations.
RMO	P	RM	06:00	18:00	12.00		Loaded out the remaining loads from Cypress 1 to Triclops-1. Fuel tank, Generator Shack, 20' container, Mud Pump, Geologgers container, Pipe Bins and racks.
RMO	P	RM	18:00	24:00	6.00		Waited on daylight ro resume operatons.

Operations for Period 0000 Hrs to 0600 Hrs On 08 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rig move operations.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	120.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	120.0	100.0

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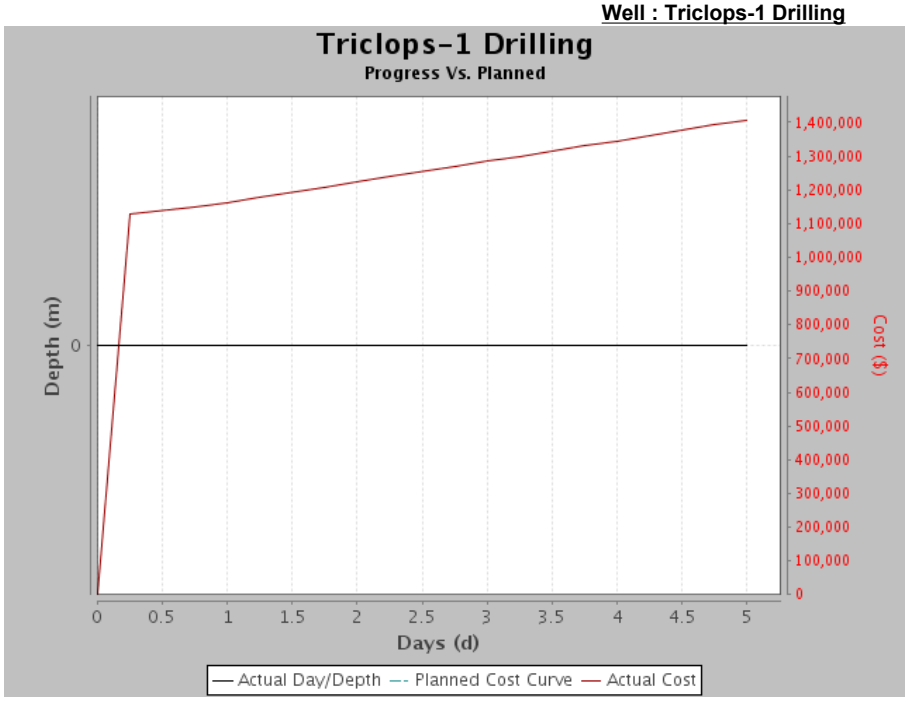
Drillsearch

Well : Triclops-1 Drilling



Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	6	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	6.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 62,941
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,470,166
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	
Current Op @ 0600:		Holding JSA prior to daily operations entailing rigging up.					
Planned Op:		Continue rigging up.					

Summary for Period 0000 Hrs to 2400 Hrs on 08 Jan 2013

Continued rigging up on Triclops 1.

Operations for Period 0000 Hrs to 2400 Hrs On 08 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rig move operations.
RMO	P	RM	06:00	18:00	12.00		Continued rigging up on Tirclops-1. Spotted Carrier and Sub base. Mud Tanks, Choke Manifold and Poorboy Degasser, Dog House, Catwalk. Installed the Derrick onto the Carrier. Installed Koomey Unit in place, Generator Shack, 62,000 liter fuel tank, second mud pump. Flanged up both pumps to suction lines.
RMO	P	RM	18:00	24:00	6.00		Waited on daylight to resume rig move operations.

Operations for Period 0000 Hrs to 0600 Hrs On 09 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rig move operations.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	144.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	144.0	100.0

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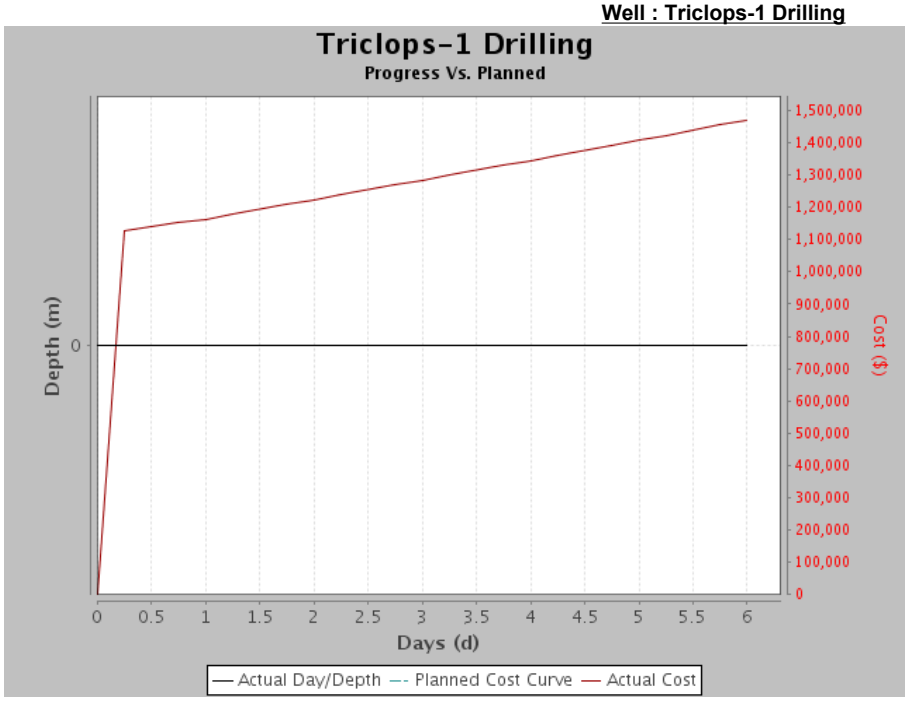
Drillsearch

Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	7	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Dave Dougherty.
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	7.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 48,191
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,518,357
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:	Holding PJSM before resuming operation.
Planned Op:	Continue rigging up, raise the derrick.

Summary for Period 0000 Hrs to 2400 Hrs on 09 Jan 2013

Held PJSM and continued rigging up on Triclops 1. Inspected all lifting and hoisting equipment. Raised Dog House, spotted Centrifuge, Rigged up Turkey Nest pump, Mud Tanks. Installed new Bridal Line in derrick. Rigged up air and hydraulics.

Operations for Period 0000 Hrs to 2400 Hrs On 09 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume rig move operations.
RMO	P	RM	06:00	18:00	12.00		Held PJSM and continued rigging up on Triclops 1. Inspected all lifting and hoisting equipment. Raised Dog House, spotted Centrifuge, Rigged up Turkey Nest pump, Mud Tanks. Installed new Bridal Line in derrick. Rigged up air and hydraulics.
RMO	P	RM	18:00	24:00	6.00		Waited on daylight to resume operations.

Operations for Period 0000 Hrs to 0600 Hrs On 10 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume operations.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	168.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	168.0	100.0

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr	56,500		0	0	0	56,500

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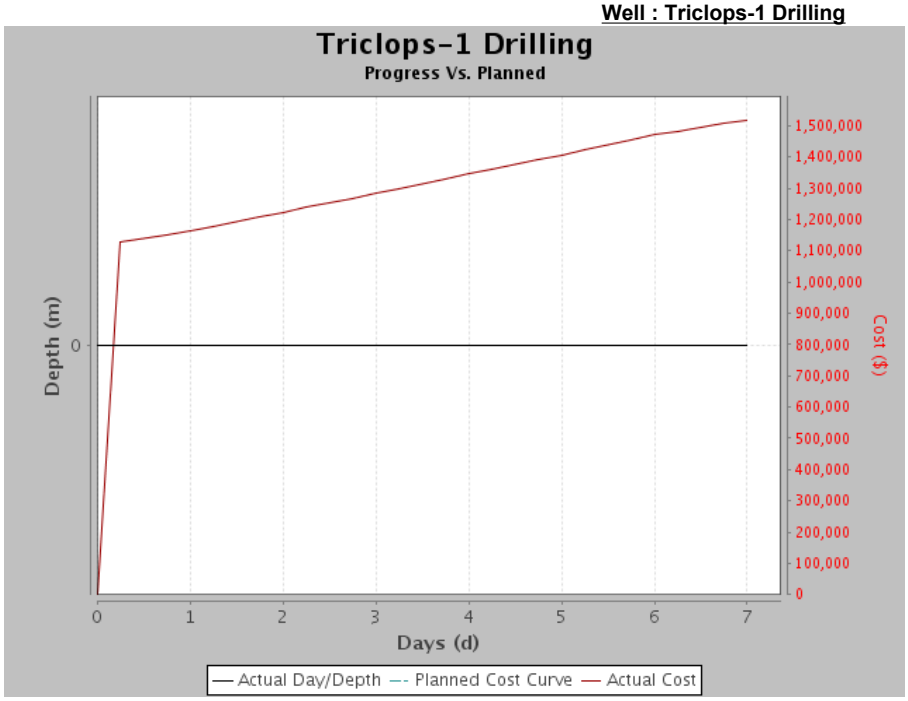
Drillsearch

Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	8	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Dave Dougherty.
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	8.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 35,391
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,553,748
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:	Holding PJSM before resuming rigging up.
Planned Op:	Telescope the derrick up to full height and continue rigging up.

Summary for Period 0000 Hrs to 2400 Hrs on 10 Jan 2013

Raised the Derrick to half mast. Continued rigging up the derrick and stringing line prior to raising the Derrick to full height. Installed handrails to Carrier and stairways. Conducted mast inspection. Lowered Monkey Board. Installed Centrifuge. Continued NDT inspection of rig equipment. Unspooled guy lines, winched and tong hanging lines.

Operations for Period 0000 Hrs to 2400 Hrs On 10 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume operations.
RMO	P	RM	06:00	10:30	4.50		Continued rigging up. Prepared to raise the Derrick to 1/2 Mast. (not telescoped up)
RMO	P	RM	10:30	18:00	7.50		Raised the Derrick to half mast. Continued rigging up the derrick and stringing line prior to raising the Derrick to full height. Installed handrails to Carrier and stairways. Conducted mast inspection. Lowered Monkey Board. Installed Centrifuge. Continued NDT inspection of rig equipment. Unspooled guy lines, winched and tong hanging lines.
RMO	P	RM	18:00	24:00	6.00		Waited on daylignt to resume operations.

Operations for Period 0000 Hrs to 0600 Hrs On 11 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume operations.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	192.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	192.0	100.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	20
		Drillsearch	3
		3rd Party National	11
		Oil Industry Catering Services	4
		Total	38

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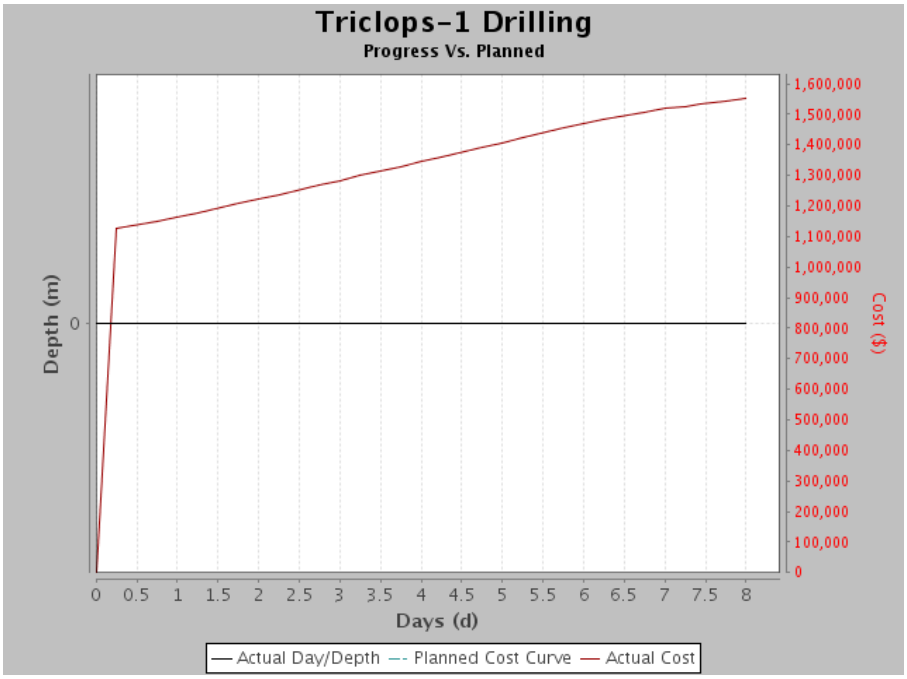
Drillsearch

Well : Triclops-1 Drilling

Bulk Stocks							
Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		56,500	0	1,250	0	55,250



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling

Report Number :	9	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Dave Dougherty.
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles.	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data

Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	9.00	TOL TVD:		Daily Cost:	$ 34,391
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Cum. Cost:	$ 1,588,139
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Last LTI Date:	
		FIT/LOT:	/			Days Since LTI:	

Current Op @ 0600:	Holding PJSM prior to resuming operations.
Planned Op:	String drilling line. Telescope up the mast and continue to rig up.

Summary for Period 0000 Hrs to 2400 Hrs on 11 Jan 2013

Held PJSM and continued rigging up. Repaired cracks in Monkey Board. Finished overhauling Drawworks Cat motor. Installed overhauled Cat motor onto Drawworks. Continued with NDT inspection of Ensign subs and fishing tools and pipe handling equipment (slips/elevators/dog collars). Installed rig lighting, ran mud pump cables. Installed Drawworks brake linkages afte NDT. Installed ESD lines from rig floor to Rig Office.

Operations for Period 0000 Hrs to 2400 Hrs On 11 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
RMO	P	RM	00:00	06:00	6.00		Waited on daylight to resume operations.
RMO	P	RM	06:00	18:00	12.00		Held PJSM and continued rigging up. Repaired cracks in Monkey Board. Finished overhauling Drawworks Cat motor. Installed overhauled Cat motor onto Drawworks. Continued with NDT inspection of Ensign subs and fishing tools and pipe handling equipment (slips/elevators/dog collars). Installed rig lighting, ran mud pump cables. Installed Drawworks brake linkages afte NDT. Installed ESD lines from rig floor to Rig Office.
RMO	P	RM	18:00	24:00	6.00		Waited on daylight to resume operations.

Operations for Period 0000 Hrs to 0600 Hrs On 12 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PS	P	RM	00:00	06:00	6.00		Waited on daylight to resume operations.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	216.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	216.0	100.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	21
		Drillsearch	3
		3rd Party National	10
		Oil Industry Catering Services	4
		Total	38

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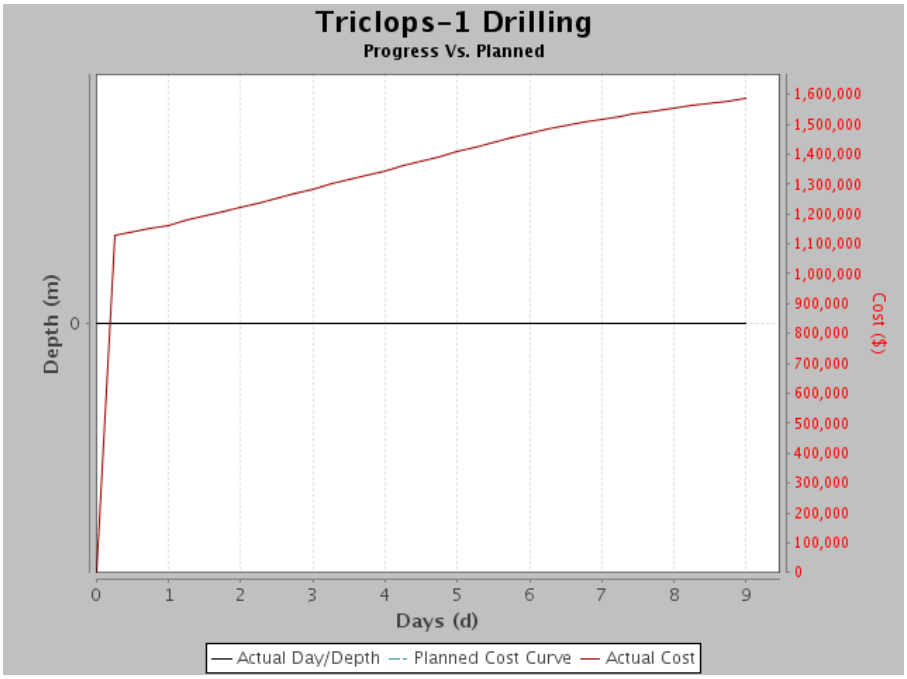
Drillsearch

Well : Triclops-1 Drilling

Bulk Stocks							
Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		55,250	0	900	200	54,550



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	10	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Dave Dougherty.
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles.	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	10.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 35,391
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,623,530
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:	Continue rigging up drillfloor equipment
Planned Op:	Pick up the Kelly. Rig up the floor. Install the Riser, Install mouse hole and rat hole. Begin Pre-Spud inspection.

Summary for Period 0000 Hrs to 2400 Hrs on 12 Jan 2013

Strung drilling line onto crown and blocks. Telescoped up the derrick. Raised the Substructure. Continued rigging up.

Operations for Period 0000 Hrs to 2400 Hrs On 12 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PS	P	RM	00:00	06:00	6.00		Waited on daylight to resume operations.
PS	P	RM	06:00	12:30	6.50		Held PJSM before continuing rigging up. Rigged up Monkey Board for derrick extension. Held PJSM and strung drilling line through blocks and crown. Installed lights to substructure. Installed drillers console.
PS	P	RM	12:30	24:00	11.50		Telescoped the derrick up. Raised the Substructure. Continued rigging up on drill floor. Adjusted the mast to hole center. Installed high pressure valves on mud line at rig floor. Broke tour. Both crews off until midnight when one crew will come back on tour.

Operations for Period 0000 Hrs to 0600 Hrs On 13 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PS	P	RM	00:00	06:00	6.00		[In Progress] Continued rigging up. Install 101.6mm shock hose to Standpipe. Installed kill line elbow. Continue dressing rig floor . Installed false floor plates and derrick access ladder. Ran Pason cables and instrumentation lines. Picked up Kelly swivel and installed wash pipe. Repaired leaking water line to Dwks. brake drum cooling system. Began mixing spud mud. Installed Mud Riser and flow line. Installed shock hose to standpipe line. Installed false floor on Rig floor. Held Icebreaker meeting with both crews at 12:00 hrs.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	240.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	240.0	100.0

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Drillsearch

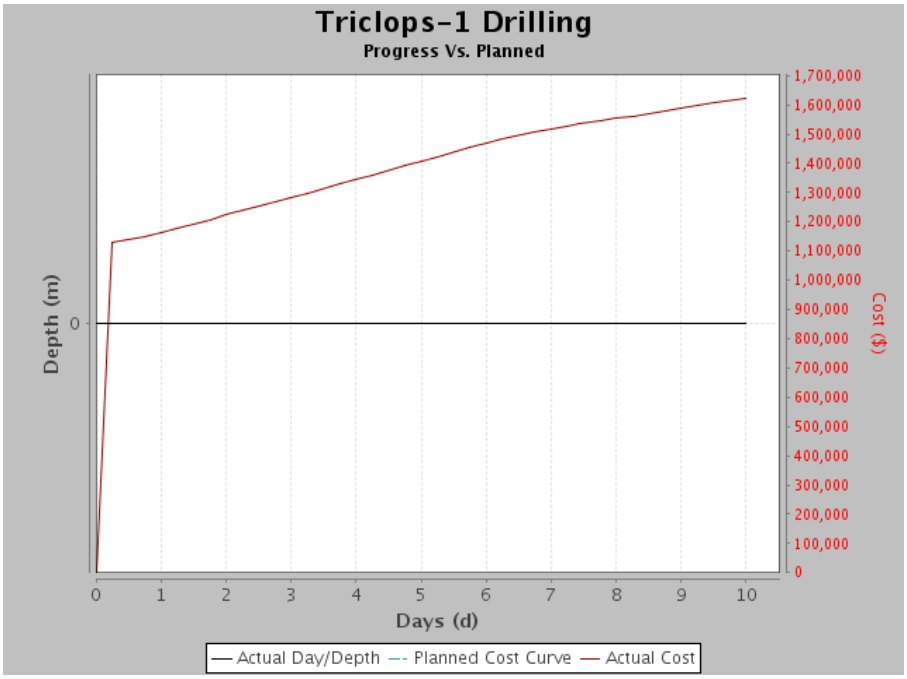
Well : Triclops-1 Drilling

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	21
		Drillsearch	3
		Sub Contractor	7
		Oil Industry Catering Services	4
		Total	35

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		54,550	0	900	0	53,650



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	11	Day Wellsite Representative:	Ray C. Miller	Rig Manager:	Dave Dougherty.
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles.	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	

Well Data							
Country:	Australia	Current Hole Size:		Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:		Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:		Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	11.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.00	Lnr Shoe MD:		Daily Cost:	$ 62,146
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,685,676
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:	Preparing to pick up the 12 1/4" bit and bit sub, BHA to spud in.
Planned Op:	Complete the rig inspection and spud in.

Summary for Period 0000 Hrs to 2400 Hrs on 13 Jan 2013

Completed rigging up.

Operations for Period 0000 Hrs to 2400 Hrs On 13 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PS	P	RM	00:00	12:00	12.00		Continued rigging up. Install 101.6mm shock hose to Standpipe. Installed kill line elbow. Continue dressing rig floor . Installed false floor plates and derrick access ladder. Ran Pason cables and instrumentation lines. Picked up Kelly swivel and installed wash pipe. Repaired leaking water line to Dwks. brake drum cooling system. Began mixing spud mud. Installed Mud Riser and flow line. Installed shock hose to standpipe line. Installed false floor on Rig floor. Held Icebreaker meeting with both crews at 12:00 hrs.
PS	P	RM	12:00	24:00	12.00		Prespud Icebreaker meeting with drilling crews, third party services and drillsearch rep's completed at 12:30. Continue rigging up Pason cables. Scomi checking unit is operational. Run survey line and install Geronimo buggy onto escape line at monkey board. Installed return line from poorboy to mud tanks. Continue mixing spud mud. Installed riser, flowline to shakers. kill line, fillup line, jet line installed on to riser joint. Test Hydromatic water line on completion of repairs for possible leaks OK. Replace draw-works covers, Test all ESD units, all units shut down OK. Set pipe racks and load joints of 9.5/8" surface csg, install BHA for strap and cleaning. Held PJSM prior to picking up kelly hose and installing to swivel. Held PJSM prior to picking up and installing kelly to swivel. Install kelly and rat hole, Installed bail arms. Make up lower kelly cock and saver sub, installed rotary bushings Run analogue instrumentation, Conduct Dropped objects inspection.

Operations for Period 0000 Hrs to 0600 Hrs On 14 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	DA	00:00	06:00	6.00		[In Progress] Continued rigging up. Made up kelly and kelly hose. Repaired H2o line to dwks brake drums. Mixed mud. Installed Riser and flow line. Held Ice-Breaker meeting with both crews. Ran survey line up derrick. Tested ESD to all engines. Finished pre-spud inspection list. Laid out BHA components onto racks. Made up Bit and subs for spud in. Held pre-spud meeting on rig floor.

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Drillsearch

Well : Triclops-1 Drilling

Performance Summary

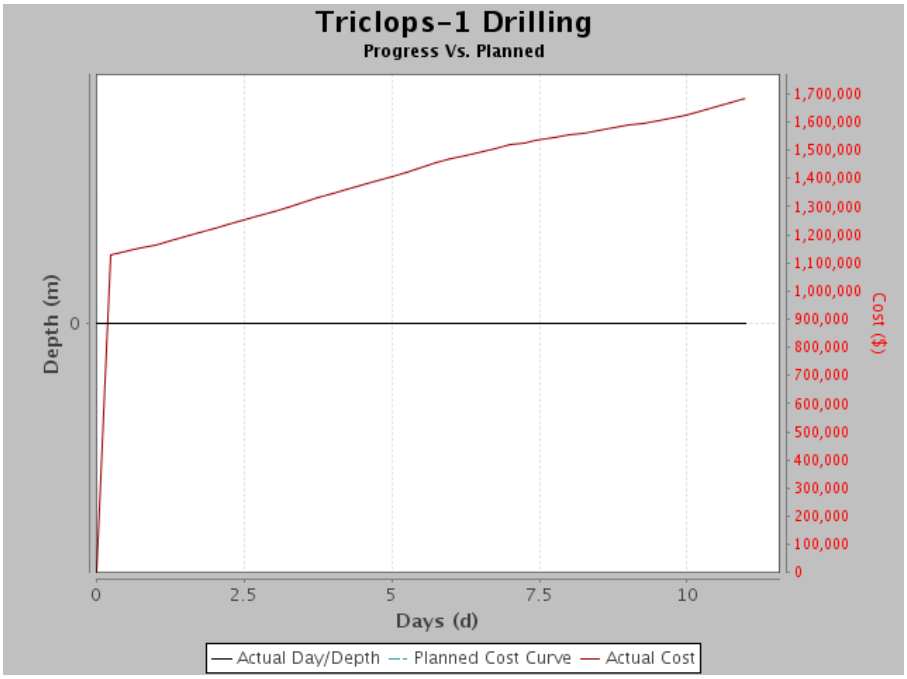
	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	264.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	264.0	100.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	21
		Drillsearch	3
		Sub Contractor	7
		Oil Industry Catering Services	4
		Total	35

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		53,650	0	1,150	0	52,500
Pot Water (ltr)	ltr	24,600		0	0	0	24,600



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	12	Day Wellsite Representative:	Ray C. Miller...	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	12.250 in	Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:	107.0 m	Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	107.0 m	Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	95.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	12.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	0.48	Lnr Shoe MD:		Daily Cost:	$ 73,789
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,759,465
		FIT/LOT:	/			Last LTI Date:	
						Days Since LTI:	

Current Op @ 0600:	Drilling through 182 meters
Planned Op:	Drilling 12 1/4" hole with surveys @ 30m intervals

Summary for Period 0000 Hrs to 2400 Hrs on 14 Jan 2013

Completed rigging up - Conduct pre-spud checks - Spud Triclops @ 12.30hrs - Drilling ahead

Operations for Period 0000 Hrs to 2400 Hrs On 14 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	DA	00:00	12:30	12.50		Continued rigging up. Made up kelly and kelly hose. Repaired H2o line to dwks brake drums. Mixed mud. Installed Riser and flow line. Held Ice-Breaker meeting with both crews. Ran survey line up derrick. Tested ESD to all engines. Finished pre-spud inspection list. Laid out BHA components onto racks. Made up Bit and subs for spud in. Held pre-spud meeting on rig floor.
SH	P	DA	12:30	14:00	1.50		Spudded in Triclops 1 at 12:30 hrs. Drilled ahead in 12 1/4" hole from 7 meters (being 16" Conductor Shoe) to 15m.
SH	P	DA	14:00	14:45	0.75		Rack back kelly and install elevators - PJSM - Picked up 2 x 8 1/2" drill collars.
SH	P	DA	14:45	17:00	2.25		Pickup kelly - Drill 12-1/4" hole from 15m to 35m.
SH	P	DA	17:00	17:45	0.75		Rack back kelly and install elevators - PJSM - Picked up 2 x 8 1/2" drill collars.
SH	P	DA	17:45	24:00	6.25		Pickup Kelly and Drill 12 1/4" hole from 35m to 107m Ran surveys @ 79m and 103m 0.25 deg

Operations for Period 0000 Hrs to 0600 Hrs On 15 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	DA	00:00	02:15	2.25		Drilling 12 1/4" hole from 107m to 135m
SH	P	SVY	02:15	02:30	0.25		Run Survey # 5 at 130m - Inc 0.5deg
SH	P	DA	02:30	04:15	1.75		Drilling 12 1/4" hole from 135m to 163m
SH	P	SVY	04:15	04:30	0.25		Survey # 6 @ 159m - Inc 0.5deg
SH	P	DA	04:30	06:00	1.50		Drilling 12 1/4" hole from 163m to 191m.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	288.0	100.0
Undefined	0.0	0.0	0.0	0.0

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Drillsearch

Well : Triclops-1 Drilling

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
Total	24.0	100.0	288.0	100.0

WBM Data

Cost Today:

Mud Desc:	4KPP	API FL:		Cl:	1,950 %	Solids:	3.7 %	Glycol:	
Check Depth:	60.0 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	96 %	Viscosity:	38 s/qt
Time:	21:00	HTHP-FL:		Hard/Ca:	500.00 mg/L	Sand:	0.2 %	PV:	8 cP
Weight:	8.80 ppg	HTHP-Cake:		MBT:		pH:	10	YP:	4 lbf/100ft²
Temp:	30.0 °C	HTHP-Temp:		Pm:		PHPA:	0.18 ppb	Gel 10s:	4 lbf/100ft²
		HTHP-Press:		Pf:		Mf:		Gel 10m:	7 lbf/100ft²

Comment:	RPM	Reading

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP
1	F800 Ensco	5.500	78	97		185		8.70		
2	F800 Emsco	5.500	80	97		185		8.70		

BHA #1

BHA Type:	Pendulum	Total Weight Wet:	42 klb
Depth In/Out:	12.5 m/766.1 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#12 (14 Jan 2013)/#15 (17 Jan 2013)		
Total Length:	179.6 m		

BHA Description: 12.25" PDC - Bit sub - Teledrift - 1x 8" DC - 1 x 12.25" Stab - 3 x 8" DC - 1 x x/o - 1 x 6.25" Monel DC
7 x 6.25" DC - 1 x 6" Jar - 2 x 6.25" DC - 4 x 4.5" HWDP

BHA Run Comment: Surface Hole assembly

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Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	41 klb	Torque (max):	4 ft-lbs	D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:	39 klb	Torque Avg. Off Bottom:	2 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	40 klb	Torque Avg. On Bottom:	3 ft-lbs	H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:				D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	PDC Bit	0.39	12.250		7032698	
Bit Sub		0.95	8.500	3.062	ENS 002	
	Teledrift Survey Tool	2.63	8.780	2.781		
8" DC		8.87	8.780	3.125		
Stab		1.32	8.780	2.750	12017-0	11.50
8" DC		8.84	7.750	2.906	ODE 34	
8" DC		9.43	8.063	2.906	16376	
8" DC		9.03	7.875	2.844	ODE 33	
X-Over		0.74	7.813	2.969	XOS 18-03	
NMDC		9.18	6.531	2.844	JFC BT 15	
Drill Collars		63.34	6.219	2.938		
6 1/2" Hydraulic Jar		9.31	6.375	3.094	D1 004	
Drill Collar	6.1/4" DC	8.46	6.156	3.156	GP59	
Drill Collar	6.1/4" DC	9.30	6.250	3.156	29.013	
Heavy Weight	4.1/2" HWDP	37.82	6.250	2.938		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:		HSI:	0.00 hp/in²		

Bit #1

Size:	311 mm (12 1/4")	Type:	PDC	IADC #:	
Manufacturer:	BHI (Hughes Christensen)	Model:	FC519	TFA:	1.052 in²
		Bit Wear:	1-1-ER-S-X-I-ER-TD	Cost:	$
Serial #:	7032698				

Nozzles

#		Size (/32nd")
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14

Bit Run Comment:

Bit Wear Comment: Minor erosion -inner cutter area

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
33.0	0.5	0.00						
61.0	0.5	0.00						
79.0	0.5	0.00						

Drillsearch

Well : Triclops-1 Drilling

Formations

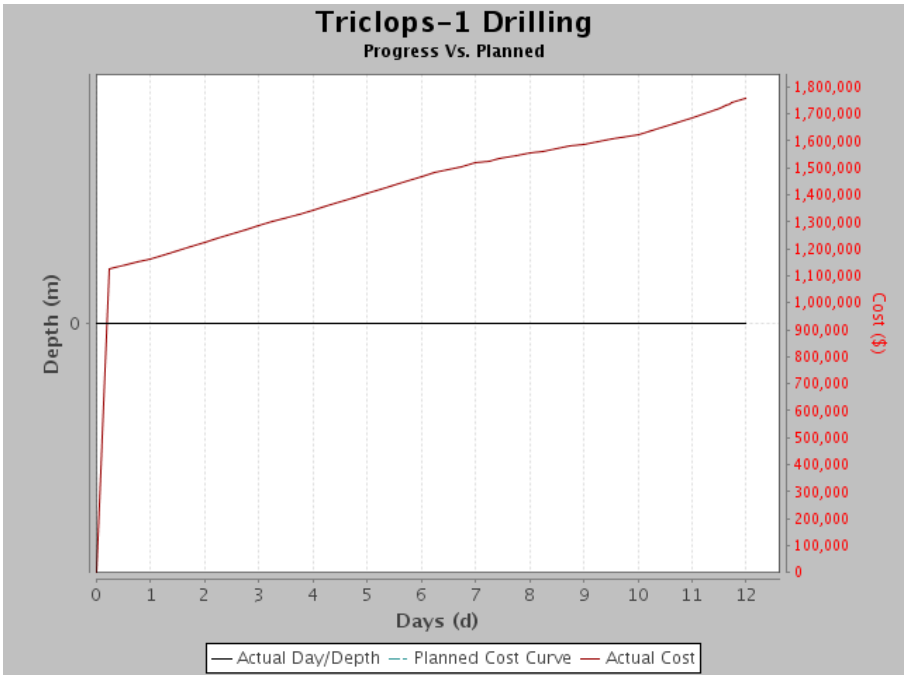
Name	Top (m)
Winton Formation	5.2

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	5
		Sub Contractor	8
		Oil Industry Catering Services	4
		Total	39

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr	52,500		24,700	1,250	0	75,950
Pot Water (ltr)	ltr	20,000		0	0	0	20,000



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	13	Day Wellsite Representative:	Ray C. Miller...	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	12.250 in	Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:	421.1 m	Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	421.1 m	Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	326.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	13.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	1.48	Lnr Shoe MD:		Daily Cost:	$ 73,939
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,833,404
		FIT/LOT:	/			Last LTI Date:	05 Feb 2012
						Days Since LTI:	345

Current Op @ 0600:	Drilling 12.1/4" hole through 489 m
Planned Op:	Drill ahead to casing setting depth

Summary for Period 0000 Hrs to 2400 Hrs on 15 Jan 2013

Drilling 12.1/4" hole from 107m to 421m with surveys every 30m

Operations for Period 0000 Hrs to 2400 Hrs On 15 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	DA	00:00	02:15	2.25		Drilling 12 1/4" hole from 107m to 135m
SH	P	SVY	02:15	02:30	0.25		Run Survey # 5 at 130m - Inc 0.5deg
SH	P	DA	02:30	04:15	1.75		Drilling 12 1/4" hole from 135m to 163m
SH	P	SVY	04:15	04:30	0.25		Survey # 6 @ 159m - Inc 0.5deg
SH	P	DA	04:30	06:00	1.50		Drilling 12 1/4" hole from 163m to 191m.
SH	P	DA	06:00	18:30	12.50		Drilled 12 1/4" hole from 191m to 354 meters surveying each 30 meters. Inclination remained at less than 1/2deg. Ran Singleshot at 187m, inc. 0.25deg/S-60-W: MW in 8.9 MW out 9.0: RPM=107: GPM=434 ROP Ave.=30 to 38M/hr.
SH	P	RS	18:30	19:00	0.50		Rig Service
SH	P	DA	19:00	24:00	5.00		Drill 12.1/4" hole from 354m to 421m with surveys every 30 meters Surveys run @ 330m, 360m , 417m Inclination at less than 1/2deg Mud wt 9.0 - Rpm: 110 - Gpm : 435, Rop : 30 to 37M/hr

Operations for Period 0000 Hrs to 0600 Hrs On 16 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	DA	00:00	01:00	1.00	450.1	Drilling 12.1/4" hole from 421m to 450m
SH	P	SVY	01:00	01:30	0.50	450.1	Ran Single Shot Survey at 398m 0.5deg. N 245 W.
SH	P	DA	01:30	06:00	4.50	508.1	[In Progress] Drilled ahead from 450m to 508m.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	312.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	312.0	100.0

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Drillsearch

Well : Triclops-1 Drilling

WBM Data										Cost Today:	$ 11,793
Mud Desc:	4KPP	API FL:		Cl:		Solids:		Glycol:			
Check Depth:	361.0 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	94 %	Viscosity:	40 s/qt		
Time:	20:00	HTHP-FL:		Hard/Ca:		Sand:	1.5 %	PV:	4 cP		
Weight:	8.90 ppg	HTHP-Cake:		MBT:		pH:	9	YP:	23 lbf/100ft²		
Temp:	31.0 °C	HTHP-Temp:	31.0 °C	Pm:	0.14 m³	PHPA:	0.15 ppb	Gel 10s:	5 lbf/100ft²		
		HTHP-Press:		Pf:	0.25	Mf:	0.80 m³	Gel 10m:	7 lbf/100ft²		
Comment:										**RPM**	**Reading**

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP
1	F800 Ensco	5.500	80	97		220		9.00		
2	F800 Emsco	5.500	82	97		220		9.00		

BHA #1

BHA Type:	Pendulum	Total Weight Wet:	42 klb
Depth In/Out:	12.5 m/766.1 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#12 (14 Jan 2013)/#15 (17 Jan 2013)		
Total Length:	179.6 m		

BHA Description: 12.25" PDC - Bit sub - Teledrift - 1x 8" DC - 1 x 12.25" Stab - 3 x 8" DC - 1 x x/o - 1 x 6.25" Monel DC 7 x 6.25" DC - 1 x 6" Jar - 2 x 6.25" DC - 4 x 4.5" HWDP

BHA Run Comment: Surface Hole assembly

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Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	69 klb	Torque (max):	3 ft-lbs	D.C. (1) Ann Velocity:	2 ft/s
Slack-Off Weight:	67 klb	Torque Avg. Off Bottom:	2 ft-lbs	D.C. (2) Ann Velocity:	2 ft/s
String Weight:	67 klb	Torque Avg. On Bottom:	3 ft-lbs	H.W.D.P. Ann. Velocity:	1 ft/s
Jars Hours Logged:	22.00 h			D.P. Ann. Velocity:	1 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	PDC Bit	0.39	12.250		7032698	
Bit Sub		0.95	8.500	3.062	ENS 002	
	Teledrift Survey Tool	2.63	8.780	2.781		
8" DC		8.87	8.780	3.125		
Stab		1.32	8.780	2.750	12017-0	11.50
8" DC		8.84	7.750	2.906	ODE 34	
8" DC		9.43	8.063	2.906	16376	
8" DC		9.03	7.875	2.844	ODE 33	
X-Over		0.74	7.813	2.969	XOS 18-03	
NMDC		9.18	6.531	2.844	JFC BT 15	
Drill Collars		63.34	6.219	2.938		
6 1/2" Hydraulic Jar		9.31	6.375	3.094	D1 004	
Drill Collar	6.1/4" DC	8.46	6.156	3.156	GP59	
Drill Collar	6.1/4" DC	9.30	6.250	3.156	29.013	
Heavy Weight	4.1/2" HWDP	37.82	6.250	2.938		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	113 Krevs	HSI:	0.36 hp/in²		

Bit #1

Size:	311 mm (12 1/4")	Type:	PDC	IADC #:	
Manufacturer:	BHI (Hughes Christensen)	Model:	FC519	TFA:	1.052 in²
		Bit Wear:	1-1-ER-S-X-I-ER-TD	Cost:	$
Serial #:	7032698				

Nozzles		
#		Size (/32nd")
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14

Bit Run Comment:

Bit Wear Comment: Minor erosion -inner cutter area

Drillsearch

Well : Triclops-1 Drilling

Drilling Parameters

BHA Run #1

Top Depth:	12.5 m	PWD ECD:	9.00 kg/m³
Bottom Depth:	421.1 m		

	Min	Avg	Max
Flow	426 galUS/min	436 galUS/min	445 galUS/min
Surface RPM	100 rpm	100 rpm	100 rpm
Downhole RPM	100 rpm	100 rpm	100 rpm
Pressure	424 psi	489 psi	554 psi
Torque	2 ft-lbs	2 ft-lbs	2 ft-lbs
WOB	4 klbs	9 klbs	14 klbs
ROP	15.50 m/h	20.63 m/h	16.00 m/h

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
105.0	0.5	0.00						
137.0	0.5	240.00						TOTCO
159.0	0.5	0.00						
187.0	0.5	0.00						
216.0	0.5	0.00						
244.0	0.5	0.00						
273.0	0.5	0.00						
303.0	0.5	0.00						
330.0	0.5	0.00						
360.0	0.5	0.00						
398.0	0.5	335.00						TOTCO
417.1	0.5	0.00						

Formations

Name	Top (m)
Winton Formation	5.2

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	5
		Sub Contractor	9
		Oil Industry Catering Services	4
		Total	40

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		75,950	0	2,250	-6,800	66,900
Pot Water (ltr)	ltr		20,000	10,500	0	0	30,500

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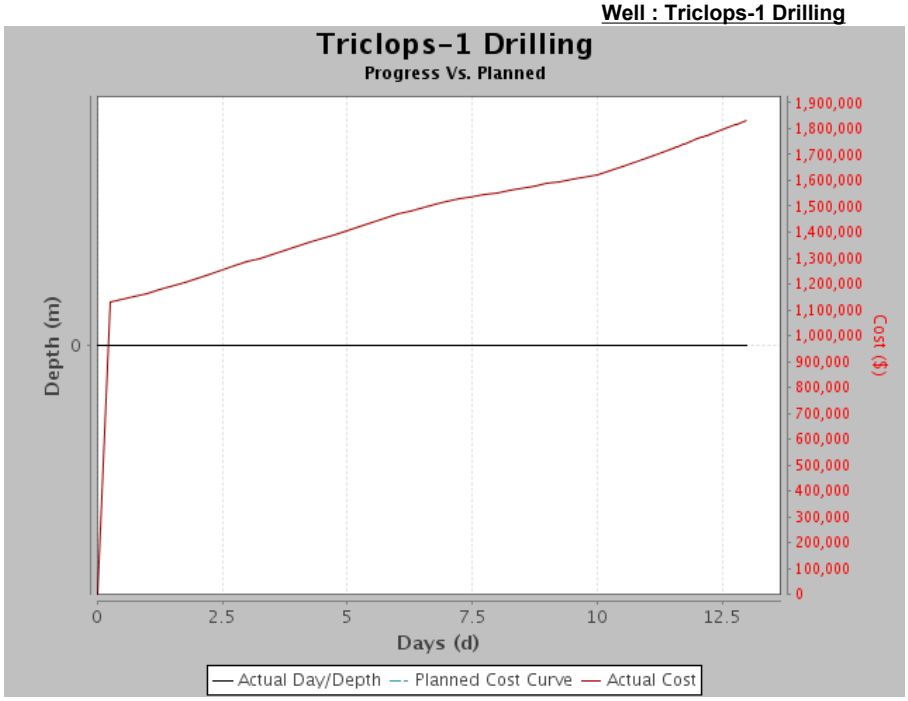
Drillsearch

Well : Triclops-1 Drilling



Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	14	Day Wellsite Representative:	Ray C. Miller...	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	12.250 in	Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:	672.1 m	Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	672.1 m	Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	251.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	14.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	2.48	Lnr Shoe MD:		Daily Cost:	$ 85,369
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,918,773
		FIT/LOT:	/			Last LTI Date:	05 Feb 2012
						Days Since LTI:	346

Current Op @ 0600:	Drilling through 723 meters
Planned Op:	Drill 12.1/4"hole to section TD - Circulate hole clean - Spot High Vis mud pill - Check trip -Pull out to run 9.5/8" csg.

Summary for Period 0000 Hrs to 2400 Hrs on 16 Jan 2013

Drilling 12.1/4" hole from 421m to 672m with surveys.

Operations for Period 0000 Hrs to 2400 Hrs On 16 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	DA	00:00	01:00	1.00	450.1	Drilling 12.1/4" hole from 421m to 450m
SH	P	SVY	01:00	01:30	0.50	450.1	Ran Single Shot Survey at 398m 0.5deg. N 245 W.
SH	P	DA	01:30	08:00	6.50	508.1	Drilled ahead from 450m to 508m.
SH	P	CMD	08:00	08:45	0.75	508.1	Teledrift recorder malfunctioned. Circulated before running Single Shot Survey at 455m.
SH	P	SVY	08:45	09:00	0.25	508.1	Ran Single Shot Survey at 455m. (being depth of survey instrument in Monel D/C) 0.5deg. N 20 W.
SH	P	DA	09:00	12:00	3.00	537.1	Drilled ahead from 508m to 537m. MW in 8.9 MW out 9.0 RPM=110: GPM=434: ROP avg.=10m to 15m hour. Pump Psi.= 515.
SH	P	DA	12:00	24:00	12.00	672.1	Drilling 12.1/4" hole from 537m to 672m MW 9.1 - Vis : 43 - Rpm: 140 Gpm 424 - Spp: 510 Psi Teledrift Surveys @ 535m - 593m - 624m - 652m all reading 0.5 Deg

Operations for Period 0000 Hrs to 0600 Hrs On 17 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	DA	00:00	06:00	6.00	730.1	[In Progress] Drilled 12 1/4" hole from 672m to 730m.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	336.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	336.0	100.0

General Comments for Period 0000 Hrs to 2400 Hrs on 16 Jan 2013

Category	Comments
General Comment	Halliburton Cementers and cementing equipment arrived on site at 14:45 hrs.

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Drillsearch

Well : Triclops-1 Drilling

WBM Data									Cost Today:	$ 17,866
Mud Desc:	4KPP	API FL:		Cl:	43,000 %	Solids:	7.8 %	Glycol:		
Check Depth:	614.1 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	92 %	Viscosity:	44 s/qt	
Time:	20:00	HTHP-FL:		Hard/Ca:		Sand:	2.0 %	PV:	6 cP	
Weight:	9.10 ppg	HTHP-Cake:		MBT:		pH:	10	YP:	25 lbf/100ft²	
Temp:	31.0 °C	HTHP-Temp:		Pm:		PHPA:	1.00 ppb	Gel 10s:	8 lbf/100ft²	
		HTHP-Press:		Pf:	0.15	Mf:	0.60 m³	Gel 10m:	10 lbf/100ft²	
Comment:								**RPM**	**Reading**	

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP
1	F800 Ensco	5.500	82	97		250		9.10		
2	F800 Emsco	5.500	82	97		250		9.10		

BHA #1

BHA Type:	Pendulum	Total Weight Wet:	42 klb
Depth In/Out:	12.5 m/766.1 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#12 (14 Jan 2013)/#15 (17 Jan 2013)		
Total Length:	179.6 m		

BHA Description: 12.25" PDC - Bit sub - Teledrift - 1x 8" DC - 1 x 12.25" Stab - 3 x 8" DC - 1 x x/o - 1 x 6.25" Monel DC 7 x 6.25" DC - 1 x 6" Jar - 2 x 6.25" DC - 4 x 4.5" HWDP

BHA Run Comment: Surface Hole assembly

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Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	83 klb	Torque (max):	3 ft-lbs	D.C. (1) Ann Velocity:	2 ft/s
Slack-Off Weight:	77 klb	Torque Avg. Off Bottom:	2 ft-lbs	D.C. (2) Ann Velocity:	2 ft/s
String Weight:	80 klb	Torque Avg. On Bottom:	2 ft-lbs	H.W.D.P. Ann. Velocity:	1 ft/s
Jars Hours Logged:	24.00 h			D.P. Ann. Velocity:	1 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	PDC Bit	0.39	12.250		7032698	
Bit Sub		0.95	8.500	3.062	ENS 002	
	Teledrift Survey Tool	2.63	8.780	2.781		
8" DC		8.87	8.780	3.125		
Stab		1.32	8.780	2.750	12017-0	11.50
8" DC		8.84	7.750	2.906	ODE 34	
8" DC		9.43	8.063	2.906	16376	
8" DC		9.03	7.875	2.844	ODE 33	
X-Over		0.74	7.813	2.969	XOS 18-03	
NMDC		9.18	6.531	2.844	JFC BT 15	
Drill Collars		63.34	6.219	2.938		
6 1/2" Hydraulic Jar		9.31	6.375	3.094	D1 004	
Drill Collar	6.1/4" DC	8.46	6.156	3.156	GP59	
Drill Collar	6.1/4" DC	9.30	6.250	3.156	29.013	
Heavy Weight	4.1/2" HWDP	37.82	6.250	2.938		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	111 Krevs	HSI:	0.36 hp/in²		

Bit #1

Size:	311 mm (12 1/4")	Type:	PDC	IADC #:	
Manufacturer:	BHI (Hughes Christensen)	Model:	FC519	TFA:	1.052 in²
		Bit Wear:	1-1-ER-S-X-I-ER-TD	Cost:	$
Serial #:	7032698				

Nozzles

#		Size (/32nd")
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14

Bit Run Comment:

Bit Wear Comment: Minor erosion -inner cutter area

Drillsearch

Well : Triclops-1 Drilling

Drilling Parameters

BHA Run #1

Top Depth:	12.5 m	PWD ECD:	14.92 kg/m³
Bottom Depth:	672.1 m		

	Min	Avg	Max
Flow	418 galUS/min	430 galUS/min	442 galUS/min
Surface RPM	115 rpm	129 rpm	142 rpm
Downhole RPM	115 rpm	129 rpm	142 rpm
Pressure	456 psi	523 psi	589 psi
Torque	1 ft-lbs	2 ft-lbs	2 ft-lbs
WOB	1 klbs	2 klbs	3 klbs
ROP	1.00 m/h	27.48 m/h	55.00 m/h

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
137.0	0.3	240.00	0.0			0.0	0.0	TOTCO
398.0	0.5	355.00	261.0	0.312	1.767	0.3	-0.6	TOTCO
446.1	0.5	0.00						
455.0	0.5	340.00	318.0	0.853	1.152	0.9	-0.2	TOTCO
455.1	0.5	340.00						TOTCO
477.1	0.5	0.00						
535.1	0.5	0.00						
593.1	0.5	0.00						
624.1	0.5	0.00						
624.1	1.0	0.00						
652.1	0.5	0.00						
652.1	1.0	0.00						
680.1	0.8	375.00						TOTCO

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	5
		Sub Contractor	8
		Oil Industry Catering Services	4
		Total	39

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		66,900	0	2,950	0	63,950
Pot Water (ltr)	ltr		30,500	0	0	0	30,500

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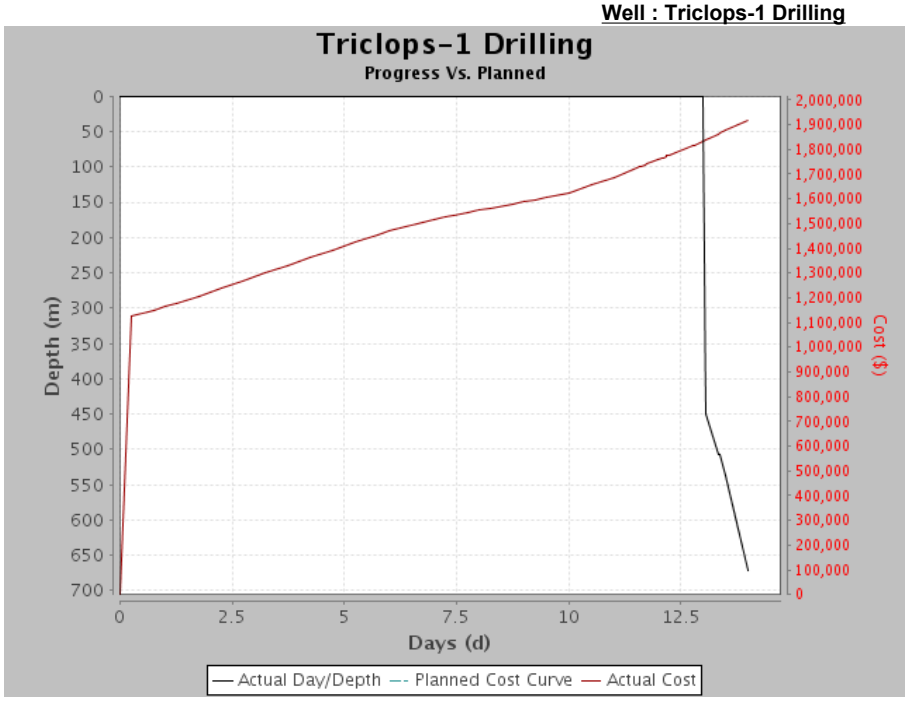
Drillsearch

Well : Triclops-1 Drilling



Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	15	Day Wellsite Representative:	Ray C. Miller...	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	12.250 in	Casing OD:		AFE Number:	OPS-13-015
Field:		Measured Depth:	766.1 m	Casing MD:		Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	766.1 m	Casing TVD:		Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	94.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	15.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	3.48	Lnr Shoe MD:		Daily Cost:	$ 65,221
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Cum. Cost:	$ 1,983,994
		FIT/LOT:	/			Last LTI Date:	05 Feb 2012
						Days Since LTI:	347

Current Op @ 0600:	Running surface casing
Planned Op:	Run 9.5/8" Surface casing - Land casing on landing plate after spacing out - Circulate hole content - Cement casing - WOC

Summary for Period 0000 Hrs to 2400 Hrs on 17 Jan 2013

Drill 12.1/4" hole to 766m - Circulate hole clean - Pull out of hole to run 9.5/8" casing

Operations for Period 0000 Hrs to 2400 Hrs On 17 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	DA	00:00	07:45	7.75	730.1	Drilled 12 1/4" hole from 672m to 730m.
SH	P	CMD	07:45	08:00	0.25	730.1	Circulated bottoms up prior to running Single Shot survey on wire line.
SH	P	SVY	08:00	08:15	0.25	730.1	Ran Single Shot survey on wire line @ 680m N 05 W
SH	P	DA	08:15	10:30	2.25	730.1	Drilled from 730meters to 740 meters.
SH	P	RW	10:30	11:30	1.00	740.1	Reamed ledge from 733.4m to 734m. Unable to pass the ledge without rotation. Finally made a connection and rotated past the ledge with 5k WOB and rotated with the Kelly Spinner.
SH	P	DA	11:30	14:30	3.00	766.1	Drilled ahead from 740 meters to 766 meters, being hole section TD. MW in 9.1 MW out 9.0: RPM=152: GPM=462: ROP ave.=10: Pump Psi.=633.
SH	P	CMD	14:30	15:15	0.75	766.1	Pumped a 10 barrel high viscosity slug and circulated the hole twice until clean at the Shakers prior to pulling out to run Surface Casing.
SH	P	RS	15:15	15:45	0.50	766.1	Rig service
SH	P	CCMD	15:45	16:00	0.25	766.1	Circulate and pumped 25Bbl of Hi Vis mud and spot on bottom
SH	P	CCMD	16:00	16:30	0.50	766.1	Run wire line deviation survey @ 716m - 3/4 Deg N 15 E
SH	P	TO	16:30	19:00	2.50	766.1	POOH from 758m to 180m
SH	P	REPR	19:00	20:30	1.50	766.1	Repair elevators - Retainer pins not holding main pin in place.
SH	P	TO	20:30	21:45	1.25	766.1	Continue trip-out of hole from 180m to 42m - Crew reviewed new SOP for handling and layout of drill collars.
SH	P	TO	21:45	24:00	2.25	766.1	POOH from 42m to surface laying down 4ea 8" DC - 1 x 12.1/4" stab - Bit sub - 12.1/4" bit Clear drill floor and prepare for rigging down flow line.

Operations for Period 0000 Hrs to 0600 Hrs On 18 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	RRC	00:00	00:30	0.50	766.1	Complete clearing rig floor of all non required equipment for casing run.
SH	P	RRC	00:30	03:00	2.50	766.1	PJSM - Nipple down Dresser sleeve , turnbuckle, and chains connected to Riser joint and Flow line Nipple down Flowline and remove riser pipe from cellar. Prep out cellar area and cut off conductor pipe. Rig up casing tongs, pickup and install Stabbing board, Install 9.5/8" casing Landing base in cellar

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Well : Triclops-1 Drilling

SH	P	RRC	03:00	03:30	0.50	766.1	PJSM with crew and review casing running procedures and safety related items.
SH	P	RCG	03:30	06:00	2.50	766.1	[In Progress] Pick up Shoe joint fill with mud and check float function - OK , makeup Float collar and joint #2 , (Thread locked connections), Filled with mud and checked float funtion - OK - Installed Bow centralizers as per programme. Continue running 9.5/8" Surface casing

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	360.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	360.0	100.0

WBM Data — **Cost Today:** **$ 3,075**

Mud Desc:	4KPP	API FL:		Cl:	35,500 %	Solids:	5.8 %	Glycol:	
Check Depth:	766.1 m	Filter-Cake:	2 /32nd"	KCl:	3.3 %	H2O:	94 %	Viscosity:	49 s/qt
Time:	20:00	HTHP-FL:		Hard/Ca:	1,600.00 mg/L	Sand:	1.5 %	PV:	15 cP
Weight:	8.90 ppg	HTHP-Cake:		MBT:		pH:	10	YP:	25 lbf/100ft²
Temp:	43.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:	1.00 ppb	Gel 10s:	10 lbf/100ft²
		HTHP-Press:		Pf:	0.20	Mf:	1.00 m³	Gel 10m:	14 lbf/100ft²

Comment:	**RPM**	**Reading**

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP
1	F800 Ensco	5.500	90	97		261		9.10		
2	F800 Emsco	5.500	90	97		261		9.10		

BHA #1

BHA Type:	Pendulum	Total Weight Wet:	42 klb
Depth In/Out:	12.5 m/766.1 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#12 (14 Jan 2013)/#15 (17 Jan 2013)		
Total Length:	179.6 m		

BHA Description: 12.25" PDC - Bit sub - Teledrift - 1x 8" DC - 1 x 12.25" Stab - 3 x 8" DC - 1 x x/o - 1 x 6.25" Monel DC 7 x 6.25" DC - 1 x 6" Jar - 2 x 6.25" DC - 4 x 4.5" HWDP

BHA Run Comment: Surface Hole assembly

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Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	90 klb	Torque (max):	3,100 ft-lbs	D.C. (1) Ann Velocity:	2 ft/s
Slack-Off Weight:	86 klb	Torque Avg. Off Bottom:	2,200 ft-lbs	D.C. (2) Ann Velocity:	2 ft/s
String Weight:	88 klb	Torque Avg. On Bottom:	2,500 ft-lbs	H.W.D.P. Ann. Velocity:	1 ft/s
Jars Hours Logged:	14.50 h			D.P. Ann. Velocity:	1 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	PDC Bit	0.39	12.250		7032698	
Bit Sub		0.95	8.500	3.062	ENS 002	
	Teledrift Survey Tool	2.63	8.780	2.781		
8" DC		8.87	8.780	3.125		
Stab		1.32	8.780	2.750	12017-0	11.50
8" DC		8.84	7.750	2.906	ODE 34	
8" DC		9.43	8.063	2.906	16376	
8" DC		9.03	7.875	2.844	ODE 33	
X-Over		0.74	7.813	2.969	XOS 18-03	
NMDC		9.18	6.531	2.844	JFC BT 15	
Drill Collars		63.34	6.219	2.938		
6 1/2" Hydraulic Jar		9.31	6.375	3.094	D1 004	
Drill Collar	6.1/4" DC	8.46	6.156	3.156	GP59	
Drill Collar	6.1/4" DC	9.30	6.250	3.156	29.013	
Heavy Weight	4.1/2" HWDP	37.82	6.250	2.938		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	79 Krevs	HSI:	0.42 hp/in²		

Bit #1

Size:	311 mm (12 1/4")	Type:	PDC	IADC #:	
Manufacturer:	BHI (Hughes Christensen)	Model:	FC519	TFA:	1.052 in²
		Bit Wear:	1-1-ER-S-X-I-ER-TD	Cost:	$
Serial #:	7032698				

Nozzles

#		Size (/32nd")
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14
1	x	14

Bit Run Comment:

Bit Wear Comment: Minor erosion -inner cutter area

Drillsearch

Well : Triclops-1 Drilling

Drilling Parameters

BHA Run #1

Top Depth:	12.5 m	PWD ECD:	1,116.77 kg/m³
Bottom Depth:	766.1 m		

	Min	Avg	Max
Flow	426 galUS/min	456 galUS/min	485 galUS/min
Surface RPM	95 rpm	125 rpm	156 rpm
Downhole RPM	95 rpm	125 rpm	156 rpm
Pressure	519 psi	618 psi	716 psi
Torque	2,200 ft-lbs	2,650 ft-lbs	3,100 ft-lbs
WOB	3 klbs	5 klbs	6 klbs
ROP	1.40 m/h	45.67 m/h	34.20 m/h

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
716.1	0.8	15.00						TOTCO

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	23
		Drillsearch	5
		Sub Contractor	10
		Oil Industry Catering Services	4
		Total	42

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		63,950	0	2,750	0	61,200
Pot Water (ltr)	ltr		30,500	0	0	0	30,500
Camp Fuel (ltr)	ltr	5,650		0	250	0	5,400

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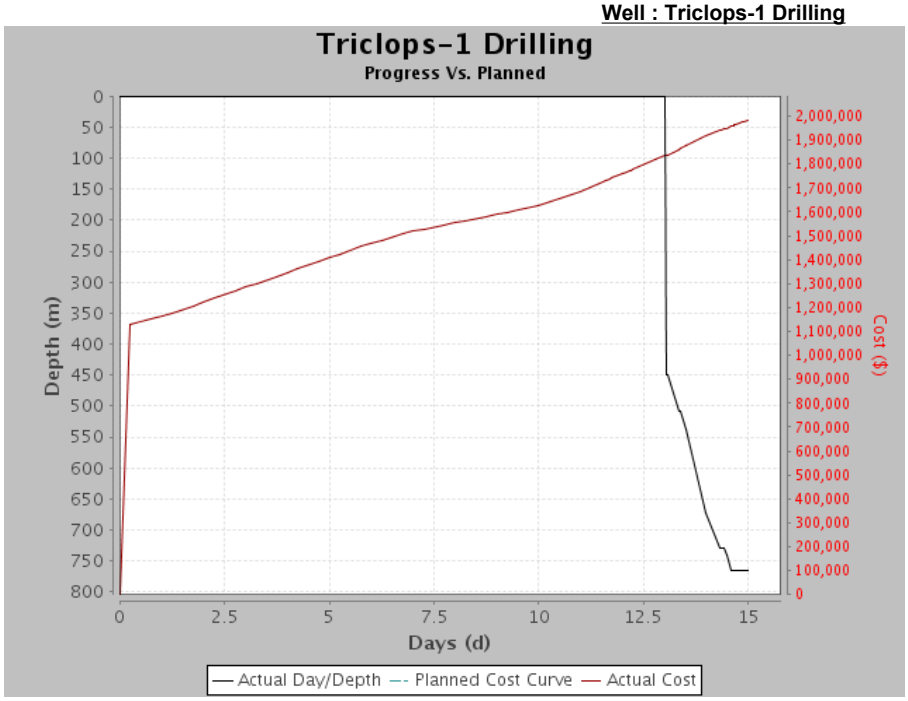
Drillsearch

Well : Triclops-1 Drilling



Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	16	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	12.250 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	766.1 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	766.1 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:		TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	16.00	TOL TVD:		Daily Cost:	$ 134,054
Plan TD (MD):	2,021.0 m	Days Since Spud:	4.48	Lnr Shoe MD:		Cum. Cost:	$ 2,118,048
Plan TD (TVD):	2,021.0 m	Last BOP Date:		Lnr Shoe TVD:		Last LTI Date:	05 Feb 2012
		FIT/LOT:	/			Days Since LTI:	348

Current Op @ 0600:	Prepare to test mud lines and BOP
Planned Op:	Complete testing of BOP and surface equipment. Strap and pickup BHA and run in to drill out cement - Drill ahead 8.1/2". LOT . Continue drilling ahead.

Summary for Period 0000 Hrs to 2400 Hrs on 18 Jan 2013

Nipple down Riser joint and Flow line - Installed Landing base - Rigged up and run 9.5/8" casing
Cemented casing and land off same in cellar - Wait on cement to harden - Rigged down cementing equipment - Backed off Landing joint - Installed Bradenhead (Casing bowl) - Nipple up BOP's

Operations for Period 0000 Hrs to 2400 Hrs On 18 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	RRC	00:00	00:30	0.50	766.1	Complete clearing rig floor of all non required equipment for casing run.
SH	P	RRC	00:30	03:00	2.50	766.1	PJSM - Nipple down Dresser sleeve , turnbuckle, and chains connected to Riser joint and Flow line Nipple down Flowline and remove riser pipe from cellar. Prep out cellar area and cut off conductor pipe. Rig up casing tongs, pickup and install Stabbing board, Install 9.5/8" casing Landing base in cellar
SH	P	RRC	03:00	03:30	0.50	766.1	PJSM with crew and review casing running procedures and safety related items.
SH	P	RCG	03:30	09:45	6.25	766.1	Pick up Shoe joint fill with mud and check float function - OK , makeup Float collar and joint #2 , (Thread locked connections), Filled with mud and checked float funtion - OK - Installed Bow centralizers as per programme. Continue running 9.5/8" Surface casing
SH	P	RCG	09:45	10:15	0.50	766.1	PJSM - Install swage and 2" circulating assembly - Picked up Landing joint. Make up landing joint and back out 1 turn of collar on last joint of 9.5/8" casing
SH	P	RCG	10:15	12:00	1.75	766.1	Break circulation and wash to bottom - Confirm correct space out for landing casing in hanger plate - Circulate 2 times casing volume. Meanwhile hold Cement job PJSM with oncoming crew and Halliburton.
SH	P	CMT	12:00	15:00	3.00	766.1	Load plugs in cement head. Rig up cement head and pumped 35bbl spacer. Pressure test cement lines to 3,000Psi/ 10min - Pump spacer #2 5bbl- Mixed and pumped 210,40 Bbls Lead slurry @ 11.80ppg - Mixed and pumped 41.50bbl Tail slurry @ 15.80ppg - Dropped top plug and displaced with 189bbls of water. Bump plug @ 2800psi - Held pressure for 10min - Good test. Bleed of pressure and rig down Halliburton cementing lines -Clean out cellar- Set casing slips and land 9.5/8"casing in landing plate
SH	P	WOC	15:00	19:00	4.00	766.1	Wait on cement - Layout cement head and Halliburton manifold

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Drillsearch

Well : Triclops-1 Drilling

Operations for Period 0000 Hrs to 2400 Hrs On 18 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
SH	P	RDC	19:00	21:00	2.00	766.1	Backout 9.5/8" landing joint and top casing collar - Install Bradenhead with top of flange at ground level
SH	P	NUB	21:00	24:00	3.00	766.1	Skid BOP over wellhead - Install spacer spool and land BOP on wellhead

Operations for Period 0000 Hrs to 0600 Hrs On 19 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	NUB	00:00	02:30	2.50	766.1	Torque bolts up on spacer spool, mud cross and HCR
PH0	P	NUB	02:30	05:30	3.00	766.1	Change out spacers in bell nipple and install same and flow line - Install hard line from HCR to Choke manifold
PH0	P	NUB	05:30	06:00	0.50	766.1	[In Progress] Pickup kelly and pump water through surface lines prior to testing, Install Koomey hydraulic to BOP's, Centre BOP with drill floor rotary. Install Blooie line and Vent line to Choke.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	384.0	100.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	384.0	100.0

WBM Data — **Cost Today:** **$ 1,089**

Mud Desc:	4PHB	API FL:		Cl:	32,000 %	Solids:	7.8 %	Glycol:	
Check Depth:	766.1 m	Filter-Cake:	2 /32nd"	KCl:	3.0 %	H2O:	92 %	Viscosity:	49 s/qt
Time:	08:00	HTHP-FL:		Hard/Ca:	1,500.00 mg/L	Sand:	2.0 %	PV:	10 cP
Weight:	9.10 ppg	HTHP-Cake:		MBT:		pH:	10	YP:	29 lbf/100ft²
Temp:		HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	10 lbf/100ft²
		HTHP-Press:		Pf:	0.20	Mf:	0.70 m³	Gel 10m:	14 lbf/100ft²

Comment:	RPM	Reading

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		61,200	0	1,200	0	60,000
Pot Water (ltr)	ltr		30,500	0	0	0	30,500
Camp Fuel (ltr)	ltr		5,400	0	250	0	5,150

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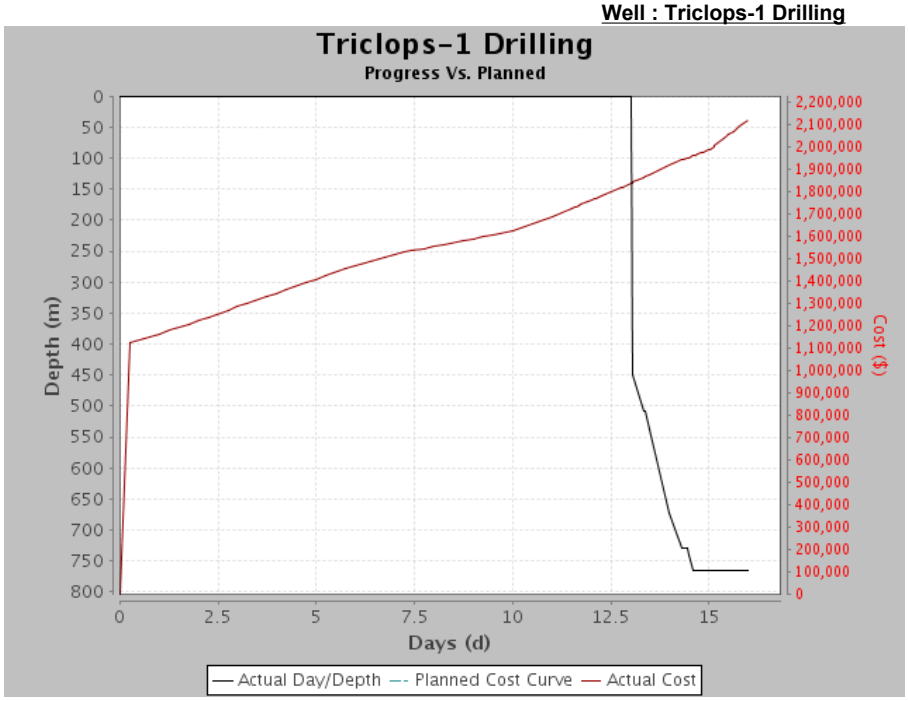
Drillsearch

Well : Triclops-1 Drilling



Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling

Report Number :	17	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data

Country:	Australia	Current Hole Size:	12.250 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	766.1 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	766.1 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	0.0 m	TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	17.00	TOL TVD:		Daily Cost:	$ 63,097
Plan TD (MD):	2,021.0 m	Days Since Spud:	5.48	Lnr Shoe MD:		Cum. Cost:	$ 2,181,145
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Last LTI Date:	05 Feb 2012
		FIT/LOT:	/			Days Since LTI:	349

Current Op @ 0600:	Complete Accumulater Test - Recharge Final pressure.
Planned Op:	Tag cement plugs - Drill out plugs and shoe track - Drill rat hole and 3m of new hole - Displace to new mud - Circulate until mud even in and out - Conduct and record LOT - Drill 8.1/2" hole

Summary for Period 0000 Hrs to 2400 Hrs on 19 Jan 2013

Nipple up BOP's - Flow lines - Install vent lines - Pressure test surface lines and valves - test BOP as per test schedule - Replace inner kill valve - Complete testing BOP. Making up BHA

Operations for Period 0000 Hrs to 2400 Hrs On 19 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	NUB	00:00	02:30	2.50	766.1	Torque bolts up on spacer spool, mud cross and HCR
PH0	P	NUB	02:30	05:30	3.00	766.1	Change out spacers in bell nipple and install same and flow line - Install hard line from HCR to Choke manifold
PH0	P	NUB	05:30	06:15	0.75	766.1	Pickup kelly and pump water through surface lines prior to testing, Install Koomey hydraulic to BOP's, Centre BOP with drill floor rotary. Install Blooie line and Vent line to Choke.
PH0	P	PTB	06:15	09:00	2.75	766.1	Pressure test surface lines and hoses to 250Psi Low for 5min 5,000Psi high for 10min
PH0	P	PTB	09:00	15:00	6.00	766.1	Breakout surface test tools and pickup DP single and combination running and testing tool set tool in wellhead - Backout drill pipe from combination tool and pull out. Pressure up Koomey unit supply hoses - Function test BOP's - Fill annulus in BOP with water. Testing against test plug blind Rams, HCR, Choke Line / Kill line valves - 250Psi Low for 5min - 5000Psi high -10min
PH0	TP (RE)	SRV	15:00	19:00	4.00	766.1	Attempt to repair inner kill valve - unsuccessful change out with new Wellhead 2.1/16 valve
PH0	P	PTB	19:00	20:00	1.00	766.1	Continue testing BOP's - Annular to 250Psi Low f/5min 3500Psi high f/ 10min Pipe ram 300 low f/5min 5,00Psi high f/10min - Test Inner Kill valve as per procedures to 5,000Psi Conducted Accumulator function test and remote panel function check - OK
PH0	P	WB	20:00	22:00	2.00	766.1	Pull combination test/ running tool and make up Wear Bushing - Run in and set in wellhead - Several attempts were required to set in place.
PH0	P	PTB	22:00	23:15	1.25	766.1	Pressure test Blind rams -9.5/8"casing against Inner kill valve and HCR to 300 Psi f/5min 2,000Psi high f/10min
PH0	P	HBH	23:15	24:00	0.75	766.1	Start picking up 8.1/2" BHA

Operations for Period 0000 Hrs to 0600 Hrs On 20 Jan 2013

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Drillsearch

Well : Triclops-1 Drilling

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	PTB	00:00	00:15	0.25	766.1	Test repairs previousley made to Blind Ram hinge pin seal - Test with 3,000Psi High pressure on Bypass
PH0	P	HBH	00:15	01:00	0.75	766.1	Making up 8.1/2" Bit and BHA - Gauge Bit and 6.50" Stabilizers while making up drilling assembly
PH0	P	TI	01:00	01:45	0.75	766.1	RIH with 6.50" drill collars from derrick to 89m
PH0	P	TI	01:45	02:30	0.75	766.1	PJSM - Pickup additional 6.50" DC from racks and RIH to 154m
PH0	P	TI	02:30	04:00	1.50	766.1	RIH with DP f/154m to 683m - Layout 6 x DP singles back to 635m - Continue RIH with DP f/635m to 711m
PH0	P	SCL	04:00	05:30	1.50	766.1	Slip and cut drill line
PH0	P	OTH	05:30	06:00	0.50	766.1	Complete Accumulater test - Recharge final pressure buildup.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	20.0	83.3	404.0	99.0
TP	4.0	16.7	4.0	1.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	408.0	100.0

WBM Data — **Cost Today:** **$ 951**

Mud Desc:	4PHB	API FL:		Cl:		Solids:	6.5 %	Glycol:	
Check Depth:		Filter-Cake:	2 /32nd"	KCl:	3.0 %	H2O:	94 %	Viscosity:	46 s/qt
Time:	16:00	HTHP-FL:		Hard/Ca:	520.00 mg/L	Sand:	1.5 %	PV:	9 cP
Weight:	9.00 ppg	HTHP-Cake:		MBT:		pH:	10	YP:	30 lbf/100ft²
Temp:		HTHP-Temp:		Pm:	0.20 m³	PHPA:		Gel 10s:	10 lbf/100ft²
		HTHP-Press:		Pf:	0.24	Mf:	1.80 m³	Gel 10m:	17 lbf/100ft²

Comment:	**RPM**	**Reading**

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #2

BHA Type:	Packed	Total Weight Wet:	41 klb
Depth In/Out:	766.1 m/1,138.0 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#18 (20 Jan 2013)/#21 (23 Jan 2013)		
Total Length:	191.9 m		

BHA Description: 8.1/2"PDC bit - 8.1/2"NB - x/o - Teledrift -x/o-8.1/2"Stab-NMDC- 8.1/2"Stab - 12 x 6.50 DC's - Jar -2 x 6.50 DC's - 4 x 4.50" HWDP

BHA Run Comment: Production Hole Section

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	Torque (max):	D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:	Torque Avg. Off Bottom:	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	Torque Avg. On Bottom:	H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:		D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Hughes PDC	0.35	8.500		7033845	0.00
Near Bit Stab		1.28	6.500		T3660-0	
X/O		0.78	6.188	2.500	L5-59	
	Teledrift Survey tool	2.82	6.500		2158/1896	
X/O		0.45	6.406	2.781	R16 30 -002	
String Stabiliser		1.55	6.500	2.937	T3310-10	
NM Drill Collar		9.18	6.531	2.844	JFC BT 15	
String Stab		1.55	6.500	2.844	T 3308.0	
6 1/2" DC	#59 2226 -GP 5922-9/ 30.2.21 / 30.2.2/922.2 /29018/EDC 03231/GP59/29.013/GP 3837/ 29.004/29.007	108.18	6.250	3.312		
6 1/2" HE Hydra-Jar		9.53	6.375	2.500		
6-1/2" DC	S26 132 - 10 / 29.008	18.41	6.313	2.500		
HWDP	A58 715/ A58 730/ A58 716/A58 720	37.86	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:		HSI:	0.00 hp/in²		

Bit #2

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	Hughes Christiansen	Model:	Q505F	TFA:	0.552 in²
Serial #:	7033845	Bit Wear:	1-2-CT-S-X-I-WT-BHA	Cost:	$

Nozzles

#		Size (/32nd")
1	x	12
1	x	12
1	x	12
1	x	12
1	x	12

Bit Run Comment: 8.50" Production hole

Bit Wear Comment:

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		60,000	0	1,900	0	58,100
Pot Water (ltr)	ltr		30,500	0	21,400	0	9,100
Camp Fuel (ltr)	ltr		5,150	0	250	0	4,900

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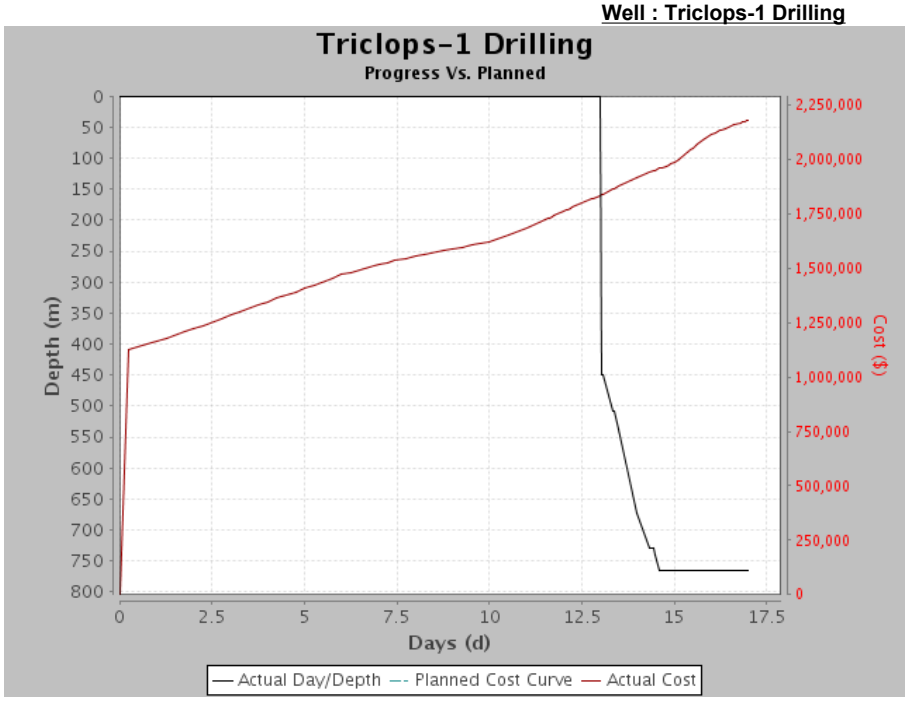
Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	18	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	916.1 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	916.1 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	150.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	18.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	6.48	Lnr Shoe MD:		Daily Cost:	$ 65,752
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Cum. Cost:	$ 2,246,897
		FIT/LOT:	/16.72 ppg			Last LTI Date:	05 Feb 2012
						Days Since LTI:	350
Current Op @ 0600:	Drilling 8.1/2" hole through 1015m						
Planned Op:	Drilling ahead						

Summary for Period 0000 Hrs to 2400 Hrs on 20 Jan 2013

Complete tests on BOP- RIH with BHA #2 - Conduct Accumulater tests - Tag Plugs - Drill out Shoe track - Drill out Rat hole + 3m new hole - Conduct LOT - Drill 8.1/2" hole

Operations for Period 0000 Hrs to 2400 Hrs On 20 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	PTB	00:00	00:15	0.25	766.1	Test repairs previousley made to Blind Ram hinge pin seal - Test with 3,000Psi High pressure on Bypass
PH0	P	HBH	00:15	01:00	0.75	766.1	Making up 8.1/2" Bit and BHA - Gauge Bit and 6.50" Stabilizers while making up drilling assembly
PH0	P	TI	01:00	01:45	0.75	766.1	RIH with 6.50" drill collars from derrick to 89m
PH0	P	TI	01:45	02:30	0.75	766.1	PJSM - Pickup additional 6.50" DC from racks and RIH to 154m
PH0	P	TI	02:30	04:00	1.50	766.1	RIH with DP f/154m to 683m - Layout 6 x DP singles back to 635m - Continue RIH with DP f/635m to 711m
PH0	P	SCL	04:00	05:30	1.50	766.1	Slip and cut drill line
PH0	P	OTH	05:30	06:00	0.50	766.1	Complete Accumulater test - Recharge final pressure buildup.
PH0	P	TI	06:00	07:00	1.00	766.1	Pickup kelly -RIH and tag top of cement @ 741m
PH0	P	DFS	07:00	11:15	4.25	766.1	Drill out Plugs, Float @ 750.25m and shoe to 762.4m
PH0	P	DFS	11:15	12:00	0.75	766.1	Drill out Rat hole and 3.0m of new formation @ 769m
PH0	P	DFS	12:00	13:00	1.00	766.1	Condition mud and circulate even properties in and out - Pull back into shoe
PH0	P	FLOT	13:00	15:00	2.00	766.1	Rig up and proform leakoff test - M/WT 8.9ppg - Leak off pressure 1010Psi EMW 16.7Ppg
PH0	P	SCR	15:00	15:30	0.50	769.1	Break circulation and perform SCR @769m with 8.9 Ppg mud
PH0	P	DA	15:30	19:45	4.25	849.1	Drilling 8.50" Production hole from 769m to 849m Wob: 4K - Rpm : 90/135 Rop: 20/30 m/hr Spp : 1,000Psi
PH0	P	RS	19:45	20:15	0.50	849.1	Rig Service
PH0	P	DA	20:15	23:15	3.00	907.1	Drilling 8.1/2" hole from 849m to 907m
PH0	P	SVY	23:15	23:30	0.25	907.1	Circulate - Perform SCR @ 906mWt 8.9Ppg - Teledrift survey @ 906m 0.5 Deg SCR @ 907m Mwt: 8.9 - Pump#1 / #2 @ 40 Spm 180Psi / 60 Spm 210Psi
PH0	P	DA	23:30	24:00	0.50	916.1	Drill 8.1/2" hole from 907m to 916m Wob: 4K Rpm:135 - Rop: 22/30m/hr - Spp:1050

Operations for Period 0000 Hrs to 0600 Hrs On 21 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description

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Drillsearch

Well : Triclops-1 Drilling

PH0	P	DA	00:00	06:00	6.00	916.0	[In Progress] Drilling 8.1/2" hole from 916m to 1061m Wob: 4-5K Rpm: 130 Spp 1190Psi Rop: 15 - 25 m/hr

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	428.0	99.1
TP	0.0	0.0	4.0	0.9
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	432.0	100.0

WBM Data — **Cost Today: $ 2,051**

Mud Desc:	4PHB	API FL:		Cl:		Solids:	6.3 %	Glycol:	
Check Depth:	849.1 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	94 %	Viscosity:	45 s/qt
Time:	20:00	HTHP-FL:		Hard/Ca:	550.00 mg/L	Sand:	2.0 %	PV:	11 cP
Weight:	8.90 ppg	HTHP-Cake:		MBT:		pH:	10	YP:	27 lbf/100ft²
Temp:		HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	10 lbf/100ft²
		HTHP-Press:		Pf:	0.20	Mf:	0.90 m³	Gel 10m:	15 lbf/100ft²

Comment:	RPM	Reading

Pumps

		Pump data - Last 24 Hrs							Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	F800 / Ensco	5.500	83	97		1,100	907.1	9.00		
2	F800/Ensco	5.500	83	97		1,100	907.1	9.00	60	210
									40	180

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #2

BHA Type:	Packed	Total Weight Wet:	41 klb
Depth In/Out:	766.1 m/1,138.0 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#18 (20 Jan 2013)/#21 (23 Jan 2013)		
Total Length:	191.9 m		
BHA Description:	8.1/2"PDC bit - 8.1/2"NB - x/o - Teledrift -x/o-8.1/2"Stab-NMDC- 8.1/2"Stab - 12 x 6.50 DC's - Jar -2 x 6.50 DC's - 4 x 4.50" HWDP		
BHA Run Comment:	Production Hole Section		

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Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	91 klb	Torque (max):	3,254 ft-lbs	D.C. (1) Ann Velocity:	4 ft/s
Slack-Off Weight:	89 klb	Torque Avg. Off Bottom:	2,656 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	90 klb	Torque Avg. On Bottom:	2,181 ft-lbs	H.W.D.P. Ann. Velocity:	2 ft/s
Jars Hours Logged:	14.75 h			D.P. Ann. Velocity:	2 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Hughes PDC	0.35	8.500		7033845	0.00
Near Bit Stab		1.28	6.500		T3660-0	
X/O		0.78	6.188	2.500	L5-59	
	Teledrift Survey tool	2.82	6.500		2158/1896	
X/O		0.45	6.406	2.781	R16 30 -002	
String Stabiliser		1.55	6.500	2.937	T3310-10	
NM Drill Collar		9.18	6.531	2.844	JFC BT 15	
String Stab		1.55	6.500	2.844	T 3308.0	
6 1/2" DC	#59 2226 -GP 5922-9/ 30.2.21 / 30.2.2/922.2 /29018/EDC 03231/GP59/29.013/GP 3837/ 29.004/29.007	108.18	6.250	3.312		
6 1/2" HE Hydra-Jar		9.53	6.375	2.500		
6-1/2" DC	S26 132 - 10 / 29.008	18.41	6.313	2.500		
HWDP	A58 715/ A58 730/ A58 716/A58 720	37.86	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	43 Krevs	HSI:	1.02 hp/in²		

Bit #2

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	Hughes Christiansen	Model:	Q505F	TFA:	0.552 in²
Serial #:	7033845	Bit Wear:	1-2-CT-S-X-I-WT-BHA	Cost:	$

Nozzles

#		Size (/32nd")
1	x	12
1	x	12
1	x	12
1	x	12
1	x	12

Bit Run Comment: 8.50" Production hole

Bit Wear Comment:

Drilling Parameters

BHA Run #2

Top Depth:	766.1 m	PWD ECD:	1.10 kg/m³
Bottom Depth:	916.1 m		

	Min	Avg	Max
Flow	184 galUS/min	314 galUS/min	443 galUS/min
Surface RPM	67 rpm	104 rpm	140 rpm
Downhole RPM	67 rpm	104 rpm	140 rpm
Pressure	415 psi	764 psi	1,112 psi
Torque	2,181 ft-lbs	2,718 ft-lbs	3,254 ft-lbs
WOB	2 klbs	5 klbs	7 klbs
ROP	6.30 m/h	17.65 m/h	43.70 m/h

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Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
907.1	0.5	0.00						

Formations

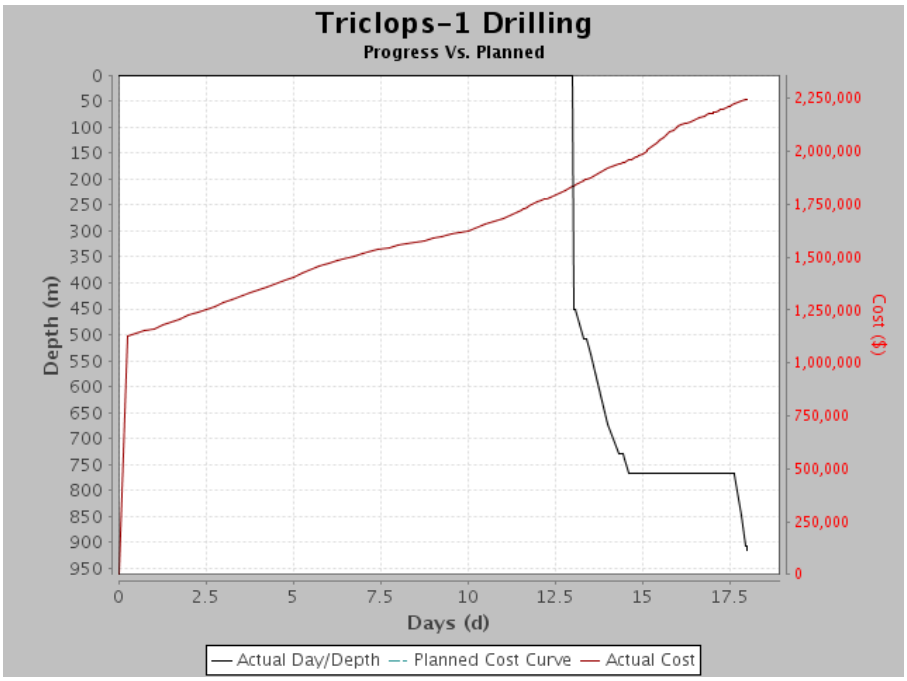
Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	5
		Sub Contractor	4
		Oil Industry Catering Services	4
		Total	35

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		58,100	0	1,700	0	56,400
Pot Water (ltr)	ltr		9,100	24,500	0	0	33,600
Camp Fuel (ltr)	ltr		4,900	0	250	0	4,650



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	19	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,138.0 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,138.0 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	222.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	19.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	7.48	Lnr Shoe MD:		Daily Cost:	$ 141,991
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Cum. Cost:	$ 2,388,888
		FIT/LOT:	/16.72 ppg			Last LTI Date:	05 Feb 2012
						Days Since LTI:	351

Current Op @ 0600:	Pull out conducting Surveys ever 1 stand pulled - Current depth 599m
Planned Op:	Continue pulling out each stand and running surveys - Condition mud and displace mud in pipe every 5 stands. Run back to shoe and monitor well via trip tank.

Summary for Period 0000 Hrs to 2400 Hrs on 21 Jan 2013

Drill 8.1/2" hole from 916m to 1138m - Deviation survey @ 1043 1.75 Deg Following survey @ 1120m = 2.0Deg, Rack kelly and pull out with check surveys every stand pulled.

Operations for Period 0000 Hrs to 2400 Hrs On 21 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	DA	00:00	08:45	8.75	916.0	Drilling 8.1/2" hole from 916m to 1061m Wob: 4-5K Rpm: 130 Spp 1190Psi Rop: 15 - 25 m/hr
PH0	P	CMD	08:45	09:00	0.25	1,061.0	Circulate hole clean and bottoms up
PH0	P	SVY	09:00	09:45	0.75	1,061.0	Run deviation survey with Teledrift / Run Single shot survey @ 1043m to confirm 1.75 deviation S15E
PH0	P	DA	09:45	13:15	3.50	1,119.0	Drill 8.1/2" hole from 1061m to 1119m Wob: 10 K -Rpm : 130/140 - Spp:1350Psi Spm: 90/90
PH0	P	SVY	13:15	13:30	0.25	1,119.0	Circulate / Run Teledrift survey 1.5Deg
PH0	P	SVY	13:30	14:00	0.50	1,119.0	Totco Deviation survey @ 1101m 2deg S 05 W
PH0	P	DA	14:00	14:45	0.75	1,125.0	Drilling 8.1/2" hole from 1119m to 1125m Wob: 5K - Rpm: 135 - Spm 72/72 - Spp: 900Psi
PH0	P	RS	14:45	15:15	0.50	1,125.0	Rig Service
PH0	P	DA	15:15	15:45	0.50	1,138.0	Drilling 8.1/2" hole from 1125m to 1138m
PH0	P	SCR	15:45	16:15	0.50	1,138.0	Circulate 1.50 times bottoms up - Take SCR's - Mwt 9.0 Pumps's 1&2 @ 40spm 100Psi / 60spm 200Psi
PH0	P	SVY	16:15	16:45	0.50	1,138.0	Deviation survey @ 1120m = 2.0Deg S 05 E
PH0	P	SVY	16:45	24:00	7.25	1,138.0	Rack kelly - Flow check - Pull out from 1127m and conduct Wire Line surveys every stand pulled from 1081m, 1062m, 1023m, 1004m, 985m, 966m, 945m, 927m, 908m, 889m, 869m, 850m,

Operations for Period 0000 Hrs to 0600 Hrs On 22 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	CMD	00:00	00:15	0.25	1,138.0	Circulate and condition mud at 839m
PH0	P	CMD	00:15	00:30	0.25	1,138.0	Run Wire line deviation survey @ 831m 0.5deg S 75 E

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Drillsearch

Well : Triclops-1 Drilling

PH0	P	SVY	00:30	06:00	5.50	1,138.0	[In Progress] Pull out by stand and recover surveys for each stand pulled from 811m, 792m, 773m, 753m, 734m, 715m, 695m, 674m, 657m, 637m, 618m, 599m, 580m, 560m,541m, 522m, 502m, 483m, 464m, 444m 425, 406m, 386m, 367m, 348m, 328m, Used all available film. Break circulation after every 5 stands pulled

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	452.0	99.1
TP	0.0	0.0	4.0	0.9
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	456.0	100.0

General Comments for Period 0000 Hrs to 2400 Hrs on 21 Jan 2013

Category	Comments
General Comment	Deviation while drilling production hole with packed BHA increased to 2 degrees at 1143m was assesed as too high and control of azimuth inadequate to reliably hit the target. Direction drilling equipment and personnel mobilised. Meanwhile the hole is surveyed at 20m intervals back to surface.

WBM Data — **Cost Today:** **$ 2,606**

Mud Desc:	4PHB	API FL:		Cl:		Solids:	7.0 %	Glycol:	
Check Depth:	1,134.0 m	Filter-Cake:	2 /32nd"	KCl:	5.0 %	H2O:	93 %	Viscosity:	48 s/qt
Time:	20:00	HTHP-FL:		Hard/Ca:	450.00 mg/L	Sand:	2.0 %	PV:	9 cP
Weight:	9.00 ppg	HTHP-Cake:		MBT:		pH:	10	YP:	27 lbf/100ft²
Temp:		HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	17 lbf/100ft²
		HTHP-Press:		Pf:	0.16	Mf:	0.60 m³	Gel 10m:	23 lbf/100ft²

Comment:	RPM	Reading

Pumps

Pump data - Last 24 Hrs

No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	**Slow Pump Data** SPM	SPP (psi)
1	F800 / Ensco	5.500	90	97		1,350	907.1	9.00		
2	F800/Ensco	5.500	90	97		1,350	907.1	9.00	60	250
									40	200

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #2

BHA Type:	Packed	Total Weight Wet:	41 klb
Depth In/Out:	766.1 m/1,138.0 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#18 (20 Jan 2013)/#21 (23 Jan 2013)		
Total Length:	191.9 m		

BHA Description:	8.1/2"PDC bit - 8.1/2"NB - x/o - Teledrift -x/o-8.1/2"Stab-NMDC- 8.1/2"Stab - 12 x 6.50 DC's - Jar -2 x 6.50 DC's - 4 x 4.50" HWDP
BHA Run Comment:	Production Hole Section

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Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	98 klb	Torque (max):	3,427 ft-lbs	D.C. (1) Ann Velocity:	6 ft/s
Slack-Off Weight:	97 klb	Torque Avg. Off Bottom:	1,995 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	98 klb	Torque Avg. On Bottom:	2,593 ft-lbs	H.W.D.P. Ann. Velocity:	3 ft/s
Jars Hours Logged:	13.50 h			D.P. Ann. Velocity:	3 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Hughes PDC	0.35	8.500		7033845	0.00
Near Bit Stab		1.28	6.500		T3660-0	
X/O		0.78	6.188	2.500	L5-59	
	Teledrift Survey tool	2.82	6.500		2158/1896	
X/O		0.45	6.406	2.781	R16 30 -002	
String Stabiliser		1.55	6.500	2.937	T3310-10	
NM Drill Collar		9.18	6.531	2.844	JFC BT 15	
String Stab		1.55	6.500	2.844	T 3308.0	
6 1/2" DC	#59 2226 -GP 5922-9/ 30.2.21 / 30.2.2/922.2 /29018/EDC 03231/GP59/29.013/GP 3837/ 29.004/29.007	108.18	6.250	3.312		
6 1/2" HE Hydra-Jar		9.53	6.375	2.500		
6-1/2" DC	S26 132 - 10 / 29.008	18.41	6.313	2.500		
HWDP	A58 715/ A58 730/ A58 716/A58 720	37.86	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	117 Krevs	HSI:	2.66 hp/in²		

Bit #2

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	Hughes Christiansen	Model:	Q505F	TFA:	0.552 in²
Serial #:	7033845	Bit Wear:	1-2-CT-S-X-I-WT-BHA	Cost:	$

Nozzles

#		Size (/32nd")
1	x	12
1	x	12
1	x	12
1	x	12
1	x	12

Bit Run Comment: 8.50" Production hole

Bit Wear Comment:

Drilling Parameters

BHA Run #2

Top Depth:	766.0 m	PWD ECD:	9.20 kg/m³
Bottom Depth:	1,138.0 m		

	Min	Avg	Max
Flow	369 galUS/min	430 galUS/min	490 galUS/min
Surface RPM	114 rpm	130 rpm	145 rpm
Downhole RPM	114 rpm	130 rpm	145 rpm
Pressure	869 psi	1,155 psi	1,440 psi
Torque	1,995 ft-lbs	2,711 ft-lbs	3,427 ft-lbs
WOB	1 klbs	6 klbs	11 klbs
ROP	11.70 m/h	22.89 m/h	45.10 m/h

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Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
850.0	1.0	115.00	713.0	4.679	0.813	4.7	0.9	TOTCO
869.0	1.3	140.00	732.0	4.444	0.912	4.4	1.2	TOTCO
889.0	1.8	130.00	751.9	4.068	0.850	4.1	1.6	TOTCO
908.0	1.5	140.00	770.9	3.686	0.655	3.7	2.0	TOTCO
927.0	1.5	145.00	789.9	3.291	0.207	3.3	2.3	TOTCO
945.0	1.5	150.00	807.9	2.894	0.218	2.9	2.5	TOTCO
966.0	1.5	195.00	828.9	2.391	1.639	2.4	2.6	TOTCO
985.0	1.5	165.00	847.9	1.910	1.225	1.9	2.6	TOTCO
1,004.0	1.5	175.00	866.9	1.422	0.413	1.4	2.7	TOTCO
1,023.0	1.5	170.00	885.9	0.930	0.207	0.9	2.8	TOTCO
1,043.0	1.8	165.00						TOTCO
1,043.0	1.8	165.00	905.9	0.369	0.499	0.4	2.9	TOTCO
1,062.0	1.8	170.00	906.2	-11.931	273.372	-11.9	5.3	TOTCO
1,081.0	2.0	185.00	906.6	-24.422	273.125	-24.4	6.6	TOTCO
1,101.0	2.0	185.00						TOTCO
1,101.0	2.0	185.00	926.6	-25.117	0.000	-25.1	6.5	TOTCO
1,120.0	2.0	175.00	945.6	-25.778	0.550	-25.8	6.5	TOTCO

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0

Personnel On Board

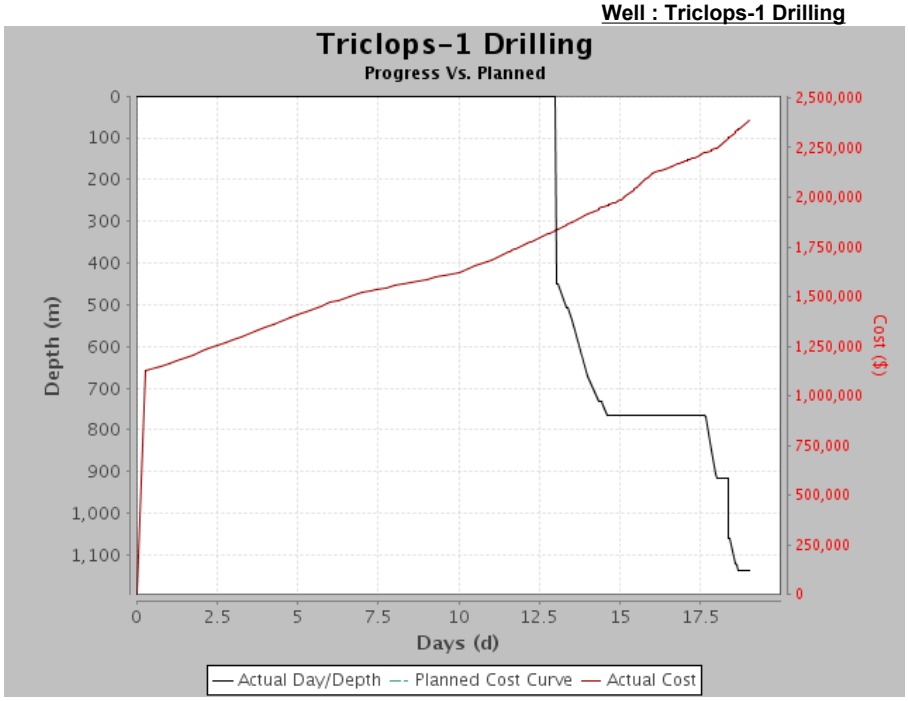
Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	4
		Sub Contractor	7
		Oil Industry Catering Services	4
		Total	37

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		56,400	0	3,500	0	52,900
Pot Water (ltr)	ltr		33,600	11,400	0	0	45,000
Camp Fuel (ltr)	ltr		4,650	0	250	0	4,400

Drillsearch

Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling

Report Number :	20	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data

Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,138.0 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,138.0 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	0.0 m	TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	20.00	TOL TVD:		Daily Cost:	$ 63,398
Plan TD (MD):	2,021.0 m	Days Since Spud:	8.48	Lnr Shoe MD:		Cum. Cost:	$ 2,452,287
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Last LTI Date:	05 Feb 2012
		FIT/LOT:	/16.72 ppg			Days Since LTI:	352

Current Op @ 0600:	Wait on orders
Planned Op:	Wait on decision regarding way forward.

Summary for Period 0000 Hrs to 2400 Hrs on 22 Jan 2013

Pulling out of hole taking survey every stand pulled back from 831m to 328m. Survey film depleted. RIH to inside 9.5/8" casing shoe @ 740m. Monitor Annulus via trip tank. Wait on orders.

Operations for Period 0000 Hrs to 2400 Hrs On 22 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	CMD	00:00	00:15	0.25	1,138.0	Circulate and condition mud at 839m
PH0	P	CMD	00:15	00:30	0.25	1,138.0	Run Wire line deviation survey @ 831m 0.5deg S 75 E
PH0	P	SVY	00:30	11:30	11.00	1,138.0	Pull out by stand and recover surveys for each stand pulled from 811m, 792m, 773m, 753m, 734m, 715m, 695m, 674m, 657m, 637m, 618m, 599m, 580m, 560m,541m, 522m, 502m, 483m, 464m, 444m 425, 406m, 386m, 367m, 348m, 328m, Used all available film. Break circulation after every 5 stands pulled
PH0	P	TI	11:30	12:45	1.25	1,138.0	Run back in hole to 741m
PH0	P	TI	12:45	13:15	0.50	1,138.0	Circulate full DP and casing content
PH0	P	WOR	13:15	19:15	6.00	1,138.0	Wait on Directional Tools. Monitor well over trip tank
PH0	P	RS	19:15	19:45	0.50	1,138.0	Rig service / Dropped object Mast inspection
PH0	P	WOR	19:45	22:15	2.50	1,138.0	Wait on Directional Tools. Monitor well over trip tank.
PH0	P	TO	22:15	22:30	0.25	1,138.0	Pull out from 740m - 644m after comformation on BHA change
PH0	P	TI	22:30	22:45	0.25	1,138.0	Change of plan received - Run back in hole from 644m to 740m
PH0	P	CMD	22:45	23:15	0.50	1,138.0	Circulate pipe and 9.5/8" casing content
PH0	P	WOR	23:15	24:00	0.75	1,138.0	Monitor well over the trip tank - Wait on further orders

Operations for Period 0000 Hrs to 0600 Hrs On 23 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	U	WOTE	00:00	06:00	6.00	1,138.0	[In Progress] Monitor well via trip tank inside shoe. Wait on Pathfinder directional drilling package.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	476.0	99.2

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Drillsearch

Well : Triclops-1 Drilling

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
TP	0.0	0.0	4.0	0.8
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	480.0	100.0

WBM Data

Cost Today: $ 253

Mud Desc:	4PHB	API FL:		Cl:		Solids:	6.3 %	Glycol:	
Check Depth:	1,134.0 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	94 %	Viscosity:	45 s/qt
Time:	18:00	HTHP-FL:		Hard/Ca:	500.00 mg/L	Sand:	2.0 %	PV:	8 cP
Weight:	8.90 ppg	HTHP-Cake:		MBT:		pH:	10	YP:	28 lbf/100ft²
Temp:		HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	13 lbf/100ft²
		HTHP-Press:		Pf:	0.20	Mf:	0.70 m³	Gel 10m:	19 lbf/100ft²

Comment:	RPM	Reading

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	F800 / Ensco	5.500	0	97		0	0.0	9.00		
2	F800/Ensco	5.500	0	97		0	0.0	9.00	60	250
									40	200

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #2

BHA Type:	Packed	Total Weight Wet:	41 klb
Depth In/Out:	766.1 m/1,138.0 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#18 (20 Jan 2013)/#21 (23 Jan 2013)		
Total Length:	191.9 m		

BHA Description: 8.1/2"PDC bit - 8.1/2"NB - x/o - Teledrift -x/o-8.1/2"Stab-NMDC- 8.1/2"Stab - 12 x 6.50 DC's - Jar -2 x 6.50 DC's - 4 x 4.50" HWDP

BHA Run Comment: Production Hole Section

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	Torque (max):	D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:	Torque Avg. Off Bottom:	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	Torque Avg. On Bottom:	H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:		D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Hughes PDC	0.35	8.500		7033845	0.00
Near Bit Stab		1.28	6.500		T3660-0	
X/O		0.78	6.188	2.500	L5-59	
	Teledrift Survey tool	2.82	6.500		2158/1896	
X/O		0.45	6.406	2.781	R16 30 -002	
String Stabiliser		1.55	6.500	2.937	T3310-10	
NM Drill Collar		9.18	6.531	2.844	JFC BT 15	
String Stab		1.55	6.500	2.844	T 3308.0	
6 1/2" DC	#59 2226 -GP 5922-9/ 30.2.21 / 30.2.2/922.2 /29018/EDC 03231/GP59/29.013/GP 3837/ 29.004/29.007	108.18	6.250	3.312		
6 1/2" HE Hydra-Jar		9.53	6.375	2.500		
6-1/2" DC	S26 132 - 10 / 29.008	18.41	6.313	2.500		
HWDP	A58 715/ A58 730/ A58 716/A58 720	37.86	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:		HSI:	0.00 hp/in²		

Bit #2

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	Hughes Christiansen	Model:	Q505F	TFA:	0.552 in²
Serial #:	7033845	Bit Wear:	1-2-CT-S-X-I-WT-BHA	Cost:	$

Nozzles

#		Size (/32nd")
1	x	12
1	x	12
1	x	12
1	x	12
1	x	12

Bit Run Comment: 8.50" Production hole

Bit Wear Comment:

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
328.0	0.3	330.00	191.0	0.183	0.067	0.2	-0.7	TOTCO
348.0	0.3	325.00	211.0	0.271	0.039	0.3	-0.7	TOTCO
367.0	0.3	130.00	230.0	0.280	0.939	0.3	-0.7	TOTCO
386.0	0.5	85.00	249.0	0.255	0.564	0.3	-0.6	TOTCO
406.0	0.8	40.00	269.0	0.390	2.135	0.4	-0.5	TOTCO
425.0	0.8	40.00	288.0	0.593	0.000	0.6	-0.4	TOTCO
444.0	0.5	30.00	307.0	0.766	0.504	0.8	-0.2	TOTCO
464.0	0.8	48.00	327.0	0.932	2.560	0.9	-0.2	TOTCO
483.0	0.5	10.00	346.0	1.102	0.804	1.1	-0.1	TOTCO
502.0	0.8	350.00	365.0	1.314	0.587	1.3	-0.1	TOTCO

Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
522.0	0.5	20.00	385.0	1.534	0.666	1.5	-0.1	TOTCO
541.0	0.8	20.00	404.0	1.737	0.473	1.7	0.0	TOTCO
580.0	1.0	350.00	443.0	2.328	0.388	2.3	0.0	TOTCO
599.0	1.0	30.00	462.0	2.634	1.080	2.6	0.1	TOTCO
618.0	1.0	60.00	481.0	2.861	0.817	2.9	0.3	TOTCO
657.0	1.0	340.00	520.0	3.351	0.988	3.4	0.5	TOTCO
674.0	1.0	85.00	537.0	3.503	2.799	3.5	0.6	TOTCO
680.0	0.8	355.00	543.0	3.549	6.400	3.5	0.6	TOTCO
695.0	0.5	300.00	558.0	3.687	1.313	3.7	0.6	TOTCO
715.0	1.0	305.00	578.0	3.830	0.755	3.8	0.3	TOTCO
716.0	0.8	15.00	579.0	3.842	31.347	3.8	0.3	TOTCO
734.0	1.0	5.00	597.0	4.120	0.422	4.1	0.4	TOTCO
753.0	1.0	45.00	616.0	4.402	1.080	4.4	0.5	TOTCO
773.0	0.5	355.00	636.0	4.613	1.168	4.6	0.6	TOTCO
792.0	0.5	310.00	655.0	4.748	0.604	4.7	0.6	TOTCO
811.0	0.3	95.00	674.0	4.797	1.208	4.8	0.6	TOTCO
831.0	0.5	105.00	694.0	4.770	0.317	4.8	0.7	TOTCO

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	4
		Sub Contractor	7
		Oil Industry Catering Services	4
		Total	37

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		52,900	0	1,150	0	51,750
Pot Water (ltr)	ltr		45,000	0	0	0	45,000
Camp Fuel (ltr)	ltr		4,400	0	250	0	4,150

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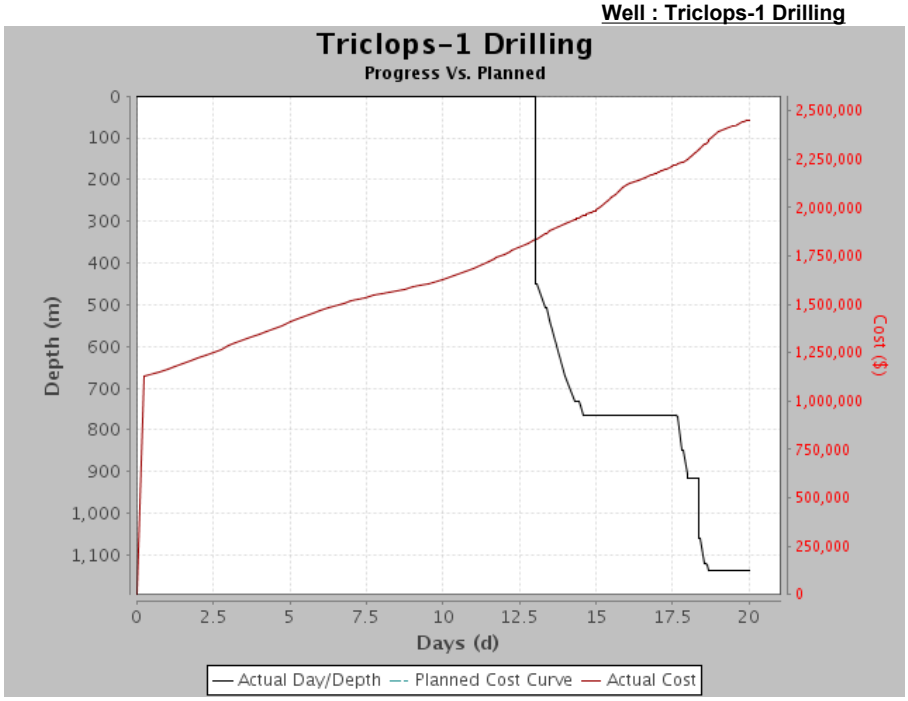
Drillsearch

Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling

Report Number :	21	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data

Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,168.0 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,168.0 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	28.0 m	TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	21.00	TOL TVD:			
Plan TD (MD):	2,021.0 m	Days Since Spud:	9.48	Lnr Shoe MD:		Daily Cost:	$ 89,234
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Cum. Cost:	$ 2,541,521
		FIT/LOT:	/16.72 ppg			Last LTI Date:	05 Feb 2012
						Days Since LTI:	353

Current Op @ 0600:	Drilled to 1202m - Ran survey @ 1186m 3.0 Deg
Planned Op:	Drill ahead with light weight high RPM. Pull out to run directional assembly.

Summary for Period 0000 Hrs to 2400 Hrs on 23 Jan 2013

Monitor well over trip tank - Circulate - Pull out and change BHA. RIH - Circulate and wash to bottom Drill from 1138m to 1166m - With surveys.

HSE Summary

Events	Num. Events	Date of Last	Days Since	Description	Remarks
Environmental Inspection Check	1	23 Jan 2013 08:00	0	Driver had no Weed Delaration	Vehicle transporting equipment from Dalby Qld failed to have vehicle washed down and obtain a Weed declaration prior to journey.

Operations for Period 0000 Hrs to 2400 Hrs On 23 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	U	WOTE	00:00	08:30	8.50	1,138.0	Monitor well via trip tank inside shoe. Wait on Pathfinder directional drilling package.
PH0	U	WOTE	08:30	09:30	1.00	1,138.0	Circulate and condition mud at shoe
PH0	U	TO	09:30	14:00	4.50	1,138.0	Pull out of hole to make up pendulum drilling assembly. Break out and lay down string stabiliser, near bit stabiliser and Teledrift sub. All tools in gauge.
PH0	U	TI	14:00	17:00	3.00	1,138.0	Make up BHA No:3 8 1/2" Pendulum Drilling Assembly and run in hole to shoe.
PH0	P	RS	17:00	17:30	0.50	1,138.0	Rig Service
PH0	P	TI	17:30	19:00	1.50	1,138.0	Continue run in hole with drill pipe.Pickup kelly and wash to bottom @ 1138m
PH0	P	DA	19:00	21:00	2.00	1,152.0	Drilling 8.1/2" hole from 1138m to 1152m Wob 1-3K - Rpm : 100.120 - Spm: 158 - Spp:970Psi - Rop: 3 /9m/hr
PH0	U	SVY	21:00	21:30	0.50	1,152.0	Run Wire line deviation survey @ 1139m - (Miss run)
PH0	U	DA	21:30	23:00	1.50	1,161.0	Drilling 8.1/2" hole from 1152m to 1161m Wob: 2-3K - Rpm: 100 / 110 - Spm: 158 - Spp: 975Psi - Rop: 5/10m/hr
PH0	U	SVY	23:00	23:30	0.50	1,161.0	Run Wire line deviation survey @ 1148m 2.75Deg S10E
PH0	U	DA	23:30	24:00	0.50	1,168.0	Drilling 8.1/2" hole from 1161m to 1168m Wob: 2/4k - Rpm: 100-114- Spm:158 Spp:975Psi - Rop: 8-11m/hr

Operations for Period 0000 Hrs to 0600 Hrs On 24 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description

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Drillsearch

Well : Triclops-1 Drilling

PH0	P	DA	00:00	00:30	0.50	1,171.0	Drill 8.1/2" hole from 1168m to 1171m
PH0	P	SCR	00:30	00:45	0.25	1,171.0	Circulate and record SCR pressures @ 1171m Mwt 9.0ppg
PH0	U	SVY	00:45	01:15	0.50	1,171.0	Deviation Survey @ 1158m, 2.5 degrees, S 15 E
PH0	P	DA	01:15	02:30	1.25	1,181.0	Drill from 1171m to 1181m WOB: 2-3klb RPM: 100-120 Flow: 425gpm, SPP: 980psi, ROP: 7-14m/hr
PH0	U	SVY	02:30	03:00	0.50	1,181.0	Deviation Survey @ 1168m, 2.75 degrees, S 18 E
PH0	P	DA	03:00	05:15	2.25	1,200.0	Drilling 8.1/2" hole from 1181m to 1200m
PH0	U	CMD	05:15	05:30	0.25	1,200.0	Circulate prior to running survey @ 1186m
PH0	U	SVY	05:30	06:00	0.50	1,200.0	Deviation Survey @ 1186m. 3 degrees, S 20 E

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	4.0	16.7	480.0	95.2
TP	0.0	0.0	4.0	0.8
U	20.0	83.3	20.0	4.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	504.0	100.0

WBM Data — **Cost Today:** $ 707

Mud Desc:	4PHB	API FL:	12.5 cm³/30min	Cl:		Solids:	6.5 %	Glycol:	
Check Depth:	1,140.0 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	94 %	Viscosity:	41 s/qt
Time:	20:00	HTHP-FL:		Hard/Ca:	450.00 mg/L	Sand:	1.5 %	PV:	5 cP
Weight:	9.00 ppg	HTHP-Cake:		MBT:		pH:	9	YP:	19 lbf/100ft²
Temp:		HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	6 lbf/100ft²
		HTHP-Press:		Pf:	0.20	Mf:	0.60 m³	Gel 10m:	11 lbf/100ft²

Comment:	RPM	Reading

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	Contnental Emsco / F-800	5.500	77	97		949	1,171.0	9.00		
2	Continental Emsco / F-800	5.500	77	97		949	1,171.0	9.00	60 40	200 100

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #2

BHA Type:	Packed	Total Weight Wet:	41 klb
Depth In/Out:	766.1 m/1,138.0 m	Weight Below Jar Wet:	32 klb
Date In/Out:	#18 (20 Jan 2013)/#21 (23 Jan 2013)		
Total Length:	191.9 m		

BHA Description: 8.1/2"PDC bit - 8.1/2"NB - x/o - Teledrift -x/o-8.1/2"Stab-NMDC- 8.1/2"Stab - 12 x 6.50 DC's - Jar -2 x 6.50 DC's - 4 x 4.50" HWDP

BHA Run Comment: Production Hole Section

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	103 klb	Torque (max):	5,585 ft-lbs	D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:	100 klb	Torque Avg. Off Bottom:	4,445 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	100 klb	Torque Avg. On Bottom:	2,716 ft-lbs	H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:	4.50 h			D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Hughes PDC	0.35	8.500		7033845	0.00
Near Bit Stab		1.28	6.500		T3660-0	
X/O		0.78	6.188	2.500	L5-59	
	Teledrift Survey tool	2.82	6.500		2158/1896	
X/O		0.45	6.406	2.781	R16 30 -002	
String Stabiliser		1.55	6.500	2.937	T3310-10	
NM Drill Collar		9.18	6.531	2.844	JFC BT 15	
String Stab		1.55	6.500	2.844	T 3308.0	
6 1/2" DC	#59 2226 -GP 5922-9/ 30.2.21 / 30.2.2/922.2 /29018/EDC 03231/GP59/29.013/GP 3837/ 29.004/29.007	108.18	6.250	3.312		
6 1/2" HE Hydra-Jar		9.53	6.375	2.500		
6-1/2" DC	S26 132 - 10 / 29.008	18.41	6.313	2.500		
HWDP	A58 715/ A58 730/ A58 716/A58 720	37.86	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	0 Krevs	HSI:	0.00 hp/in²		

Bit #2

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	Hughes Christiansen	Model:	Q505F	TFA:	0.552 in²
Serial #:	7033845	Bit Wear:	1-2-CT-S-X-I-WT-BHA	Cost:	$

Nozzles

#		Size (/32nd")
1	x	12
1	x	12
1	x	12
1	x	12
1	x	12

Bit Run Comment: 8.50" Production hole

Bit Wear Comment:

BHA #3

BHA Type:	Pendulum	Total Weight Wet:	
Depth In/Out:	1,138.0 m/1,296.0 m	Weight Below Jar Wet:	
Date In/Out:	#21 (23 Jan 2013)/#23 (25 Jan 2013)		
Total Length:	185.9 m		

BHA Description: 8 1/2" PDC Bit, Bit Sub (Float & Totco Baffle), 6 1/2" NMDC, 8 1/2" String Stabiliser, 12 x 6 1/2" DC, 6 1/2" Drilling Jar, 2 x 6 1/2" DC, 4 x 4 1/2" HWDP,

BHA Run Comment: Pendulum assembly to correct deviation

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Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	105 klb	Torque (max):	5,585 ft-lbs	D.C. (1) Ann Velocity:	5 ft/s
Slack-Off Weight:	100 klb	Torque Avg. Off Bottom:	2,716 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	103 klb	Torque Avg. On Bottom:	4,445 ft-lbs	H.W.D.P. Ann. Velocity:	3 ft/s
Jars Hours Logged:	33.25 h			D.P. Ann. Velocity:	3 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Hughes Christian PDC Bit 2 RR1	0.40	8.500		7033845	
Bit Sub	Float sub comes with ported float and Totco landing baffle	0.92	6.438	2.844	GUW02427	
NM Drill Collar		9.18	6.438	2.844	JFCBT15	
8-1/2" String Stab		1.55	6.500	2.844	T3308.0	
6 1/2" DC	SN: 592226, GP5922-9, 30-2-21, 30-2-2, 922 -2, 29018, EDC03231, GP5922-9, 29013, GP3837.3, 29004, 29007,	108.17	6.188	2.938		
6 1/2" Hydraulic Jar	Bico Hydro-Mechanical	9.53	6.375	2.500	004. BD003.135398	
6 1/2" DC	SN: S26132.10, 29008	18.41	6.313	2.938		
HWDP	SN: A5875, A58730, A58716, A58720	37.82	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	20 Krevs	HSI:	2.17 hp/in²		

Bit #2RR1

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	BHI (Hughes Christensen)	Model:	Q505F	TFA:	0.552 in²
		Bit Wear:	1-2-CT-S-X-I-WT-BHA	Cost:	$
Serial #:	7033845				

Nozzles

#		Size (/32nd")
5	x	12

Bit Run Comment:

Bit Wear Comment: Chipped cutter attribute to difficulties experienced drilling plugs and shoe track, high erratic torque. Large quantity of steel swarf recovered by ditch magnets

Drilling Parameters

BHA Run #3

Top Depth:	766.0 m	PWD ECD:	9.24 kg/m³
Bottom Depth:	1,166.0 m		

	Min	Avg	Max
Flow	393 galUS/min	402 galUS/min	410 galUS/min
Surface RPM	95 rpm	114 rpm	133 rpm
Downhole RPM	95 rpm	114 rpm	133 rpm
Pressure	900 psi	947 psi	993 psi
Torque	2,716 ft-lbs	4,151 ft-lbs	5,585 ft-lbs
WOB	1 klbs	3 klbs	5 klbs
ROP	3.00 m/h	160.00 m/h	28.50 m/h

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
1,120.0	0.0	0.00						TOTCO
1,139.0	2.0	0.00						TOTCO

Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
1,148.0	2.8	0.00						TOTCO
1,148.0	2.8	170.00	973.5	-26.938	0.885	-26.9	6.7	TOTCO
1,158.0	2.5	0.00						TOTCO
1,158.0	2.5	165.00	983.5	-27.389	1.135	-27.4	6.8	TOTCO
1,168.0	2.8	162.00	993.5	-27.832	0.991	-27.8	6.9	TOTCO
1,186.0	3.0	0.00						TOTCO

Formations

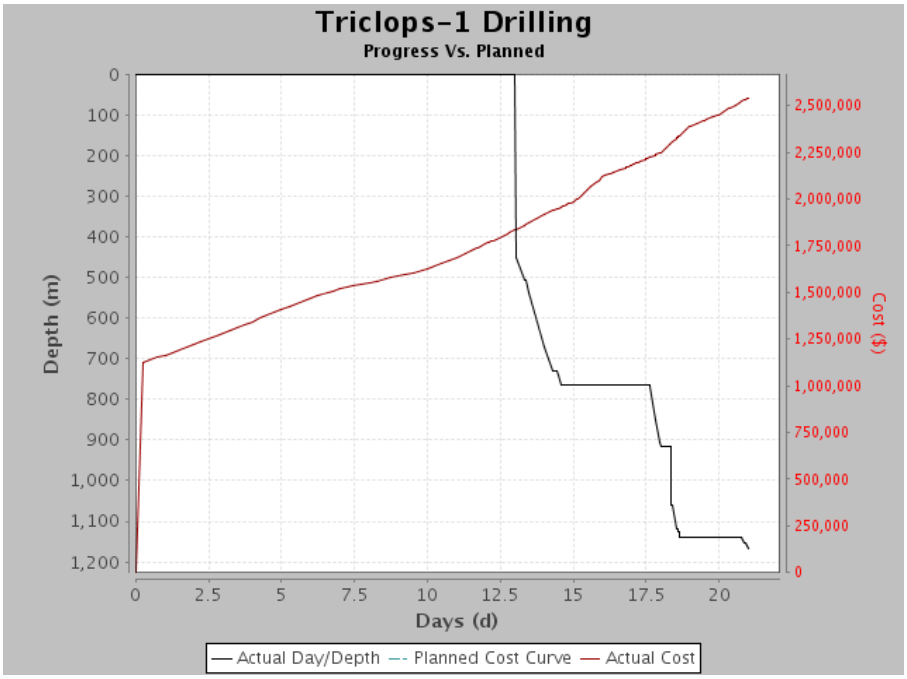
Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	4
		Sub Contractor	6
		Oil Industry Catering Services	4
		Total	36

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		51,750	0	0	0	51,750
Pot Water (ltr)	ltr		45,000	0	0	0	45,000
Camp Fuel (ltr)	ltr		4,150	0	0	0	4,150



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	22	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,296.0 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,296.0 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	130.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	22.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	10.48	Lnr Shoe MD:		Daily Cost:	$ 76,330
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Cum. Cost:	$ 2,617,850
		FIT/LOT:	/16.72 ppg			Last LTI Date:	05 Feb 2012
						Days Since LTI:	354

Current Op @ 0600:	Making up Directional tools and RIH
Planned Op:	Make up and RIH with direction drilling assemby. Check survey every stand from shoe to drilled depth. Drill directional 8 1/2" hole from 1296m to TD correcting well path to intersect target.

Summary for Period 0000 Hrs to 2400 Hrs on 24 Jan 2013

Drilling 8.1/2" hole from 1166m to 1296m - Ran deviation surveys every 20m drilled

Operations for Period 0000 Hrs to 2400 Hrs On 24 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	DA	00:00	00:30	0.50	1,171.0	Drill 8.1/2" hole from 1168m to 1171m
PH0	P	SCR	00:30	00:45	0.25	1,171.0	Circulate and record SCR pressures @ 1171m Mwt 9.0ppg
PH0	U	SVY	00:45	01:15	0.50	1,171.0	Deviation Survey @ 1158m, 2.5 degrees, S 15 E
PH0	P	DA	01:15	02:30	1.25	1,181.0	Drill from 1171m to 1181m WOB: 2-3klb RPM: 100-120 Flow: 425gpm, SPP: 980psi, ROP: 7-14m/hr
PH0	U	SVY	02:30	03:00	0.50	1,181.0	Deviation Survey @ 1168m, 2.75 degrees, S 18 E
PH0	P	DA	03:00	05:15	2.25	1,200.0	Drilling 8.1/2" hole from 1181m to 1200m
PH0	U	CMD	05:15	05:30	0.25	1,200.0	Circulate prior to running survey @ 1186m
PH0	U	SVY	05:30	06:00	0.50	1,200.0	Deviation Survey @ 1186m. 3 degrees, S 20 E
PH0	P	DA	06:00	09:15	3.25	1,219.0	Drill ahead to 1219m
PH0	U	SVY	09:15	09:45	0.50	1,219.0	Deviation Survey @ 1207m. 3.5 degrees, S 5 E
PH0	P	DA	09:45	14:00	4.25	1,239.0	Drill ahead to 1239m
PH0	U	SVY	14:00	14:30	0.50	1,239.0	Deviation Survey @ 1226m. 3 degrees, S 10 E
PH0	P	DA	14:30	16:45	2.25	1,258.0	Drill ahead to 1258m
PH0	U	SVY	16:45	17:15	0.50	1,258.0	Deviation Survey@ 1245m. 2.75 Deg S15E
PH0	P	DA	17:15	18:15	1.00	1,268.0	Drill ahead from 1258 to 1268m
PH0	P	RS	18:15	18:45	0.50	1,268.0	Rig Service
PH0	P	DA	18:45	19:45	1.00	1,277.0	Drill ahead from 1268m to 1277m
PH0	U	DEV	19:45	20:15	0.50	1,277.0	Run deviation survey @ 1264m.
PH0	P	DA	20:15	23:30	3.25	1,296.0	Drill from 1277m to 1296m
PH0	U	CMD	23:30	24:00	0.50	1,296.0	Circulate hole clean over shakers

Operations for Period 0000 Hrs to 0600 Hrs On 25 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	U	DEV	00:00	00:15	0.25	1,296.0	Run deviation survey @ 1284m 3 Deg S 20 E
PH0	P	SCR	00:15	00:30	0.25	1,296.0	Circulate - Perform SCRs @ 1296m Pump # 1 & 2 at 40/60spm 100Psi - 200Psi Mud Wt 9.0ppg Pumped 10Bbl weighted pill - Racked Kelly.
PH0	U	TO	00:30	04:30	4.00	1,296.0	Flow check - Pull out to change BHA and run Mud motor and Directional tools

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Drillsearch

Well : Triclops-1 Drilling

PH0	U	HBH	04:30	05:00	0.50	1,296.0	Clean and clear tools and 8 1/2" bit from drill floor
PH0	U	HBH	05:00	06:00	1.00	1,296.0	Move subs and Mud motor to cat-walk - Pickup 6.3/4" motor and make up BHA No:4 Directional Assembly.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	19.8	82.3	499.8	94.6
TP	0.0	0.0	4.0	0.8
U	4.2	17.7	24.2	4.6
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	528.0	100.0

WBM Data — **Cost Today:** **$ 1,803**

Mud Desc:	4PHB	API FL:	12.5 cm³/30min	Cl:		Solids:	6.5 %	Glycol:	
Check Depth:	1,277.0 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	94 %	Viscosity:	44 s/qt
Time:	20:00	HTHP-FL:		Hard/Ca:	450.00 mg/L	Sand:	1.5 %	PV:	9 cP
Weight:	9.00 ppg	HTHP-Cake:		MBT:		pH:	9	YP:	21 lbf/100ft²
Temp:	60.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	12 lbf/100ft²
		HTHP-Press:		Pf:	0.20	Mf:	0.70 m³	Gel 10m:	16 lbf/100ft²

Comment:	**RPM**	**Reading**

Pumps

		Pump data - Last 24 Hrs							**Slow Pump Data**	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	Continental Emsco/F-800	5.500	77	97		949	1,171.0	9.00		
2	Continental Emsco/F-800	5.500	77	97		949	1,171.0	9.00	60	200
									40	100

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #3

BHA Type:	Pendulum	Total Weight Wet:	
Depth In/Out:	1,138.0 m/1,296.0 m	Weight Below Jar Wet:	
Date In/Out:	#21 (23 Jan 2013)/#23 (25 Jan 2013)		
Total Length:	185.9 m		

BHA Description:	8 1/2" PDC Bit, Bit Sub (Float & Totco Baffle), 6 1/2" NMDC, 8 1/2" String Stabiliser, 12 x 6 1/2" DC, 6 1/2" Drilling Jar, 2 x 6 1/2" DC, 4 x 4 1/2" HWDP,
BHA Run Comment:	Pendulum assembly to correct deviation

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	110 klb	Torque (max):	5,585 ft-lbs	D.C. (1) Ann Velocity:	5 ft/s
Slack-Off Weight:	108 klb	Torque Avg. Off Bottom:	2,398 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	110 klb	Torque Avg. On Bottom:	4,181 ft-lbs	H.W.D.P. Ann. Velocity:	3 ft/s
Jars Hours Logged:	20.00 h			D.P. Ann. Velocity:	3 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Hughes Christian PDC Bit 2 RR1	0.40	8.500		7033845	
Bit Sub	Float sub comes with ported float and Totco landing baffle	0.92	6.438	2.844	GUW02427	
NM Drill Collar		9.18	6.438	2.844	JFCBT15	
8-1/2" String Stab		1.55	6.500	2.844	T3308.0	
6 1/2" DC	SN: 592226, GP5922-9, 30-2-21, 30-2-2, 922 -2, 29018, EDC03231, GP5922-9, 29013, GP3837.3, 29004, 29007,	108.17	6.188	2.938		
6 1/2" Hydraulic Jar	Bico Hydro-Mechanical	9.53	6.375	2.500	004. BD003.135398	
6 1/2" DC	SN: S26132.10, 29008	18.41	6.313	2.938		
HWDP	SN: A5875, A58730, A58716, A58720	37.82	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	106 Krevs	HSI:	2.17 hp/in²		

Bit #2RR1

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	BHI (Hughes Christensen)	Model:	Q505F	TFA:	0.552 in²
		Bit Wear:	1-2-CT-S-X-I-RR-BHA	Cost:	$
Serial #:	7033845				

Nozzles

#		Size (/32nd")
5	x	12

Bit Run Comment:

Bit Wear Comment: Chipped cutter attribute to difficulties experienced drilling plugs and shoe track, high erratic torque. Large quantity of steel swarf recovered by ditch magnets

Drilling Parameters

BHA Run #3

Top Depth:	766.0 m	PWD ECD:	9.23 kg/m³
Bottom Depth:	1,296.0 m		

	Min	Avg	Max
Flow	393 galUS/min	402 galUS/min	410 galUS/min
Surface RPM	82 rpm	112 rpm	142 rpm
Downhole RPM	82 rpm	112 rpm	142 rpm
Pressure	900 psi	974 psi	1,048 psi
Torque	2,398 ft-lbs	4,048 ft-lbs	5,698 ft-lbs
WOB	1 klbs	6 klbs	10 klbs
ROP	2.50 m/h	22.08 m/h	28.50 m/h

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
1,186.0	3.0	160.00	1,011.5	-28.693	0.373	-28.7	7.2	TOTCO
1,207.0	3.5	175.00	1,032.4	-29.848	1.403	-29.8	7.5	TOTCO

Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
1,226.0	3.0	170.00	1,051.4	-30.915	0.906	-30.9	7.6	TOTCO
1,245.0	2.8	165.00	1,070.4	-31.853	0.509	-31.9	7.8	TOTCO
1,264.0	2.8	160.00	1,089.4	-32.738	0.385	-32.7	8.1	TOTCO
1,284.0	3.0	160.00	1,109.3	-33.689	0.300	-33.7	8.4	TOTCO

Formations

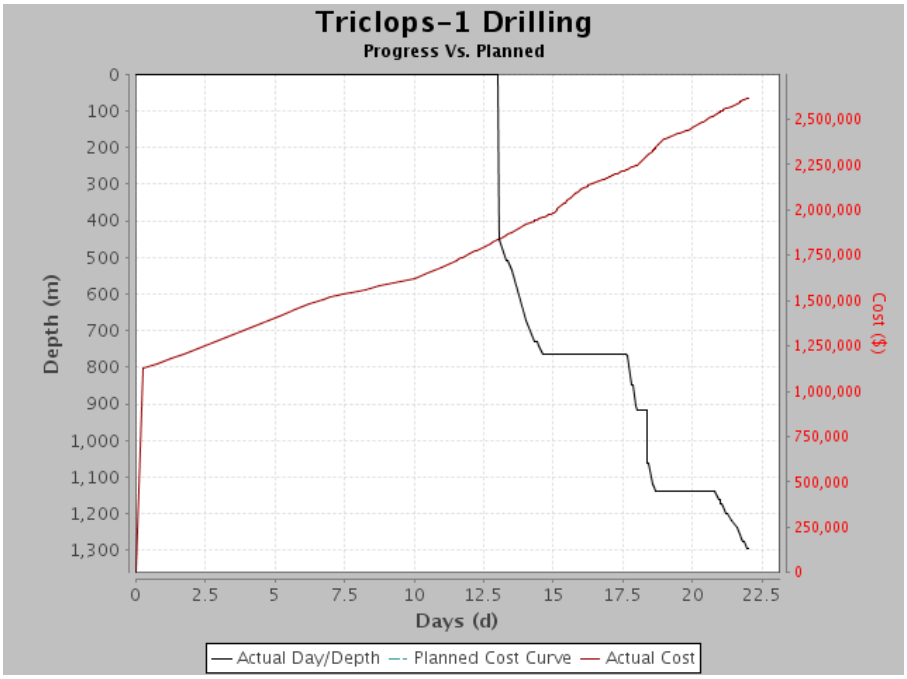
Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	5
		Sub Contractor	13
		Oil Industry Catering Services	4
		Total	44

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		51,750	0	6,445	0	45,305
Pot Water (ltr)	ltr		45,000	0	4,000	0	41,000
Camp Fuel (ltr)	ltr		4,150	0	250	0	3,900



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling

Report Number :	23	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data

Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,336.0 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,336.0 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	170.0 m	TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	23.00	TOL TVD:		Daily Cost:	$ 73,884
Plan TD (MD):	2,021.0 m	Days Since Spud:	11.48	Lnr Shoe MD:		Cum. Cost:	$ 2,691,734
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Last LTI Date:	05 Feb 2012
		FIT/LOT:	/16.72 ppg			Days Since LTI:	355

Current Op @ 0600:	Drilling 8.1/2" hole with directional tools through 1413m
Planned Op:	Drill and Slide as directed by Pathfinder to correct well path

Summary for Period 0000 Hrs to 2400 Hrs on 25 Jan 2013

Trip out to change drilling assembly to directional assembly - RIH to 9.5/8" casing shoe - Take MWD surveys a intervalls while continuing to running in hole - Slide and rotate while drilling 8.1/2" hole from 1296m to 1336m

HSE Summary

Events	Num. Events	Date of Last	Days Since	Description	Remarks
Non Conformance	1	25 Jan 2013 00:00	0	Transport failed to supply Weed and Seed declaration. Washdown not carried out.	Truck from Roma Transport arrived at approximately 13: 00Hrs. Did not have washdown prior to departure and consequently did not have independent Weed 7 Seed Declaration. Driver had been specificaly instructed prior to departure to perform the task and on his own part decided not to carry out the requirement. Truck held at laydown and later offloaded. Driver blacklisted from further work with Drillsearch.

Operations for Period 0000 Hrs to 2400 Hrs On 25 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	U	DEV	00:00	00:15	0.25	1,296.0	Run deviation survey @ 1284m 3 Deg S 20 E
PH0	P	SCR	00:15	00:30	0.25	1,296.0	Circulate - Perform SCRs @ 1296m Pump # 1 & 2 at 40/60spm 100Psi - 200Psi Mud Wt 9.0ppg Pumped 10Bbl weighted pill - Racked Kelly.
PH0	U	TO	00:30	04:30	4.00	1,296.0	Flow check - Pull out to change BHA and run Mud motor and Directional tools
PH0	U	HBH	04:30	05:00	0.50	1,296.0	Clean and clear tools and 8 1/2" bit from drill floor
PH0	U	HBH	05:00	06:00	1.00	1,296.0	Move subs and Mud motor to cat-walk - Pickup 6.3/4" motor and make up BHA No:4 Directional Assembly.
PH0	U	TI	06:00	11:00	5.00	1,296.0	Run in hole to to 765m
PH0	U	MWD	11:00	11:30	0.50	1,296.0	Fill pipe and function test MWD Tool
PH0	U	TI	11:30	11:45	0.25	1,296.0	Continue running in from 765m to 785m
PH0	U	DEV	11:45	12:00	0.25	1,296.0	Take MWD Survey @ 784m

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Drillsearch

Well : Triclops-1 Drilling

Operations for Period 0000 Hrs to 2400 Hrs On 25 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	U	TI	12:00	14:00	2.00	1,296.0	Run in hole from 785m to 862m. Take MWD survey on each stand - Surveys taken @ 804, 824, 843m, 862m -
PH0	U	TI	14:00	19:00	5.00	1,296.0	Continue run in hole. MWD surveys from 862m to 1287m, surveys taken every second stand @ 900m, 919m, 959m, 997m, 1036m, 1075m, 1113m, 1152m, 1191m, 1230m, 1268m. Layout last 2 joints of drill pipe and pick up kelly.
PH0	U	TI	19:00	20:00	1.00	1,296.0	Wash in hole picking up singles from 1287m to 1296m
PH0	P	DM	20:00	24:00	4.00	1,336.0	Drilling ahead (Slideing) 8.1/2" hole with Mud motor from 1296m to 1336m. Slide and rotate as instructed by Pathfinder DD, MWD surveys @ 1305m, 1315m, 1324m, 1334m.

Operations for Period 0000 Hrs to 0600 Hrs On 26 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	U	REPR	00:00	00:30	0.50	1,336.0	Repair Mud pump #2 - Suction module #3
PH0	P	DM	00:30	06:00	5.50	1,461.0	[In Progress] Drill 8.1/2" hole from 1336m to 1461m - Slide and rotate as per Pathfinder instructions - MWD surveys at 1336m,1345m, 1355m, 1365m, 1374m, 1394m, 1413m,1432m, 1442m.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	4.2	17.7	504.0	91.3
TP	0.0	0.0	4.0	0.7
U	19.8	82.3	44.0	8.0
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	552.0	100.0

WBM Data — **Cost Today:** **$ 357**

Mud Desc:	4PHB	API FL:		Cl:		Solids:	7.3 %
Check Depth:	1,297.0 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	93 %
Time:	20:00	HTHP-FL:		Hard/Ca:	500.00 mg/L	Sand:	1.5 %
Weight:	9.10 ppg	HTHP-Cake:		MBT:		pH:	9
Temp:	58.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:	
		HTHP-Press:		Pf:	0.20	Mf:	0.70 m³

Glycol:	
Viscosity:	41 s/qt
PV:	6 cP
YP:	27 lbf/100ft²
Gel 10s:	12 lbf/100ft²
Gel 10m:	16 lbf/100ft²

Comment:	RPM	Reading

Pumps

		Pump data - Last 24 Hrs							Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	Continental Emsco/F-800	5.500	86	97		1,683	1,171.0	9.10		
2	Continental Emsco/F-800	5.500	86	97		1,683	1,171.0	9.10	60 40	200 100

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m

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Drillsearch

Well : Triclops-1 Drilling

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #3

BHA Type:	Pendulum	Total Weight Wet:	
Depth In/Out:	1,138.0 m/1,296.0 m	Weight Below Jar Wet:	
Date In/Out:	#21 (23 Jan 2013)/#23 (25 Jan 2013)		
Total Length:	185.9 m		

BHA Description: 8 1/2" PDC Bit, Bit Sub (Float & Totco Baffle), 6 1/2" NMDC, 8 1/2" String Stabiliser, 12 x 6 1/2" DC, 6 1/2" Drilling Jar, 2 x 6 1/2" DC, 4 x 4 1/2" HWDP,

BHA Run Comment: Pendulum assembly to correct deviation

BHA Daily Summary

Pickup Weight:	110 klb	Torque (max):	5,585 ft-lbs	D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:	108 klb	Torque Avg. Off Bottom:	2,398 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	110 klb	Torque Avg. On Bottom:	4,181 ft-lbs	H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:	20.00 h			D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Hughes Christian PDC Bit 2 RR1	0.40	8.500		7033845	
Bit Sub	Float sub comes with ported float and Totco landing baffle	0.92	6.438	2.844	GUW02427	
NM Drill Collar		9.18	6.438	2.844	JFCBT15	
8-1/2" String Stab		1.55	6.500	2.844	T3308.0	
6 1/2" DC	SN: 592226, GP5922-9, 30-2-21, 30-2-2, 922 -2, 29018, EDC03231, GP5922-9, 29013, GP3837.3, 29004, 29007,	108.17	6.188	2.938		
6 1/2" Hydraulic Jar	Bico Hydro-Mechanical	9.53	6.375	2.500	004. BD003.135398	
6 1/2" DC	SN: S26132.10, 29008	18.41	6.313	2.938		
HWDP	SN: A5875, A58730, A58716, A58720	37.82	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:	106 Krevs	HSI:	0.00 hp/in²		

Bit #2RR1

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	BHI (Hughes Christensen)	Model:	Q505F	TFA:	0.552 in²
		Bit Wear:	1-2-CT-S-X-I-RR-BHA	Cost:	$
Serial #:	7033845				

Nozzles

#		Size (/32nd")
5	x	12

Bit Run Comment:

Bit Wear Comment: Chipped cutter attribute to difficulties experienced drilling plugs and shoe track, high erratic torque. Large quantity of steel swarf recovered by ditch magnets

Drillsearch

Well : Triclops-1 Drilling

BHA #4

BHA Type:	Directional	Total Weight Wet:	
Depth In/Out:	1,296.0 m/1,926.5 m	Weight Below Jar Wet:	
Date In/Out:	#23 (25 Jan 2013)/#27 (29 Jan 2013)		
Total Length:	196.2 m		

BHA Description: 8 1/2" PDC Bit, 6 3/4" Mud Motor, 8" Stabiliser, 6 3/4" Float Sub (with float), 6 3/4" HDSI Collar, X/O, X/O, 12 x 6 1/2" DC, 6 1/2" Drilling Jar, 2 x 6 1/2" DC, 4 x 4 1/2" HWDP.

BHA Run Comment: Directional BHA run to correct deviation and return well path to target centre.

BHA Daily Summary

Pickup Weight:	115 klb	Torque (max):	2,977 ft-lbs	D.C. (1) Ann Velocity:	5 ft/s
Slack-Off Weight:	113 klb	Torque Avg. Off Bottom:	1,607 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	114 klb	Torque Avg. On Bottom:	2,402 ft-lbs	H.W.D.P. Ann. Velocity:	3 ft/s
Jars Hours Logged:	77.25 h			D.P. Ann. Velocity:	3 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Baker Hughes Christian PDC 5 Blade, Bit No: 3	0.35	8.500		7033541	
Mud Motor	Standard Pathfinder motor 7 stator/8 rotor, 1.15degree bend. bit to bend 1.98 degrees	7.85	3.750	3.000	F67270	
Stabilizer		1.78	6.750	2.750	B 67T135	
Float Sub	Float sub comes with ported float	1.02	6.865	2.750	D67F742	
NM Drill Collar	HDS1 Collar	9.16	6.750	2.750	D67F742	
X-Over	NC50 Box 5 1/2" FH Pin	0.98	6.875	3.000	D67CX637	
X-Over	NC46 Box NC50 Pin	1.10	6.500	2.750	B65X053A	
6 1/2" DC	SN: 592226, GP5922-9, 30-2-21, 30-2-2, 922 -2, 29018, EDC03231, GP5922-9, 29013, GP3837.3, 29004, 29007,	108.20	6.188	2.938		
6 1/2" Hydraulic Jar	Bico Hydro-Mechanical	9.53	6.375	2.500	004. BD003.135398	
6 1/2" DC	SN: S26132.10, 29008	18.41	6.313	2.938		
HWDP	SN: A5875, A58730, A58716, A58720	37.82	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:	2.90 h	Circ. Time:	8.00 h
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	2.90 h	Total Circ. Time:	8.00 h
Total Revs:	10 Krevs	HSI:	3.14 hp/in²		

Bit #3

Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223
Manufacturer:	BHI (Hughes Christensen)	Model:	Q505F	TFA:	0.552 in²
		Bit Wear:	1-2-CT-S-X-I-RR-BHA	Cost:	$
Serial #:	7033541				

Nozzles

#		Size (/32nd")
5	x	12

Bit Run Comment:

Bit Wear Comment:

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Drillsearch

Well : Triclops-1 Drilling

Drilling Parameters

BHA Run #4

Top Depth:	1,296.0 m	PWD ECD:	9.41 kg/m³
Bottom Depth:	1,336.0 m		

	Min	Avg	Max
Flow	433 galUS/min	453 galUS/min	472 galUS/min
Surface RPM	45 rpm	53 rpm	60 rpm
Downhole RPM	125 rpm	160 rpm	195 rpm
Pressure	1,495 psi	1,660 psi	1,824 psi
Torque	1,607 ft-lbs	2,292 ft-lbs	2,977 ft-lbs
WOB	3 klbs	6 klbs	8 klbs
ROP	8.60 m/h	10.00 m/h	30.70 m/h

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
792.0	0.7	94.85	792.0	-7,124,798.651	0.520	4.3	1.3	MWD
801.6	0.4	347.27	801.6	-7,124,798.623	2.827	4.4	1.3	MWD
811.3	0.3	355.57	811.3	-7,124,798.565	0.346	4.4	1.3	MWD
830.7	0.3	2.96	830.7	-7,124,798.464	0.060	4.5	1.3	MWD
850.0	0.4	124.82	850.0	-7,124,798.452	0.954	4.5	1.4	MWD
888.7	1.2	133.38	888.7	-7,124,798.807	0.625	4.2	1.8	MWD
908.0	1.4	141.98	907.9	-7,124,799.132	0.433	3.9	2.1	MWD
946.5	1.4	159.55	946.4	-7,124,799.943	0.333	3.1	2.5	MWD
985.0	1.5	169.95	984.9	-7,124,800.880	0.219	2.1	2.8	MWD
1,023.4	1.4	175.36	1,023.3	-7,124,801.842	0.132	1.2	2.9	MWD
1,062.2	1.7	178.22	1,062.1	-7,124,802.890	0.239	0.1	2.9	MWD
1,100.8	2.0	185.30	1,100.7	-7,124,804.133	0.293	-1.1	2.9	MWD
1,139.4	2.4	177.39	1,139.3	-7,124,805.611	0.389	-2.6	2.9	MWD
1,178.1	2.4	177.09	1,177.9	-7,124,807.229	0.010	-4.2	2.9	MWD
1,216.8	3.4	177.71	1,216.6	-7,124,809.185	0.775	-6.2	3.0	MWD
1,255.3	2.8	173.33	1,255.0	-7,124,811.260	0.502	-8.3	3.2	MWD
1,274.6	2.7	168.62	1,274.3	-7,124,812.174	0.384	-9.2	3.3	MWD
1,294.0	2.6	163.33	1,293.7	-7,124,813.044	0.408	-10.0	3.6	MWD
1,303.6	1.9	158.99	1,303.3	-7,124,813.401	2.249	-10.4	3.7	MWD

Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
1,313.2	1.2	151.31	1,312.9	-7,124,813.637	2.276	-10.6	3.8	MWD
1,322.9	0.9	142.34	1,322.6	-7,124,813.787	1.055	-10.8	3.9	MWD
1,332.6	0.7	139.31	1,332.3	-7,124,813.892	0.632	-10.9	4.0	MWD
1,342.2	0.5	132.53	1,341.9	-7,124,813.965	0.662	-11.0	4.0	MWD
1,351.9	0.2	123.62	1,351.6	-7,124,814.003	0.940	-11.0	4.1	MWD
1,371.3	0.2	101.48	1,371.0	-7,124,814.028	0.119	-11.0	4.1	MWD
1,380.9	0.4	93.29	1,380.6	-7,124,814.034	0.637	-11.0	4.2	MWD
1,390.7	0.2	93.86	1,390.4	-7,124,814.037	0.612	-11.0	4.2	MWD
1,400.3	0.4	91.70	1,400.0	-7,124,814.039	0.626	-11.0	4.3	MWD
1,419.6	0.5	92.36	1,419.3	-7,124,814.044	0.156	-11.0	4.4	MWD
1,429.3	0.6	87.59	1,429.0	-7,124,814.044	0.340	-11.0	4.5	MWD

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0
Cadna-Owie Formation	1,311.0

Personnel On Board

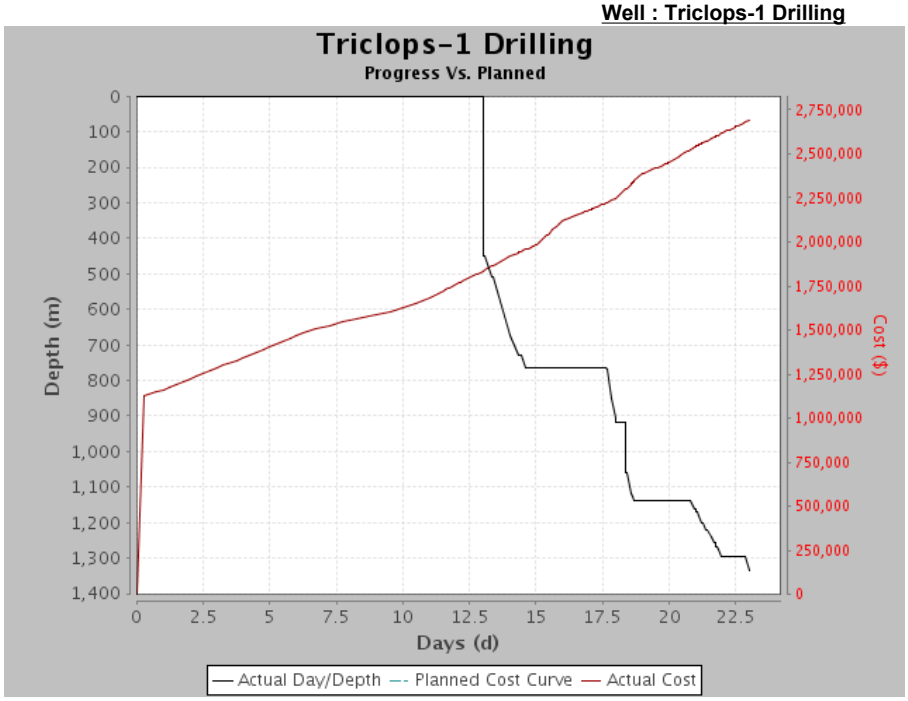
Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	4
		Sub Contractor	13
		Oil Industry Catering Services	4
		Total	43

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		45,305	0	2,393	0	42,912
Pot Water (ltr)	ltr		41,000	3,500	0	0	44,500
Camp Fuel (ltr)	ltr		3,900	0	300	0	3,600

Drillsearch

Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	24	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,568.0 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,568.0 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	232.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	24.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	12.48	Lnr Shoe MD:		Daily Cost:	$ 76,065
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Cum. Cost:	$ 2,767,799
		FIT/LOT:	/16.72 ppg			Last LTI Date:	05 Feb 2012
						Days Since LTI:	356

Current Op @ 0600:	Drilled to 1609 mMD
Planned Op:	Drill ahead as directed by Pathfinder DD to return well path to target.

Summary for Period 0000 Hrs to 2400 Hrs on 26 Jan 2013

Drill 8,1/2" hole from 1336m to 1568m as directed by Pathfinder DD - MWD surveys taken on connections

Operations for Period 0000 Hrs to 2400 Hrs On 26 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	U	REPR	00:00	00:30	0.50	1,336.0	Repair Mud pump #2 - Suction module #3
PH0	P	DM	00:30	09:15	8.75	1,461.0	Drill 8.1/2" hole from 1336m to 1461m - Slide and rotate as per Pathfinder instructions - MWD surveys at 1336m,1345m, 1355m, 1365m, 1374m, 1394m, 1413m,1432m, 1442m.
PH0	U	RRP	09:15	10:00	0.75	1,461.0	Repair mud pump No:2 module 2.
PH0	P	DM	10:00	10:45	0.75	1,464.0	Drill 8.1/2" hole from 1461m to 1464m - Slide and rotate as per Pathfinder instructions - MWD survey at 1461m
PH0	U	RRP	10:45	12:00	1.25	1,464.0	Repair mud pump No:2 module 2. Take SCRs @ 1464m MW = 9.1ppg, 40spm @ 200psi, 60spm @ 300psi
PH0	P	DM	12:00	12:45	0.75	1,473.0	Drill 8.1/2" hole from 1464m to 1473m - Slide and rotate as per Pathfinder instructions
PH0	U	REPR	12:45	15:00	2.25	1,473.0	Repair Mud pump # 2 - Module #2
PH0	P	DM	15:00	19:30	4.50	1,519.0	Drill 8.1/2" hole from 1473m to 1519m - Slide and rotate as instructed by Pathfinder. Surveys taken by MWD @ 1469m, 1479m,1498m,1508m.
PH0	P	RS	19:30	20:00	0.50	1,519.0	Service Rig equipment
PH0	P	DM	20:00	24:00	4.00	1,568.0	Drill 8.1/2" hole from 1519m to 1568m. Slide and rotate as instructed by Pathfinder DD Wob:7-10K Rpm: 176 Dh/ 51Sfc Spp: 1689Psi Rop: 19 / 23M/hr. Surveys taken by MWD @ 1518m, 1528m, 1547m, 1566m.

Operations for Period 0000 Hrs to 0600 Hrs On 27 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	DM	00:00	04:15	4.25	1,596.0	Drilling ahead in 8.1/2" hole from 1568m to 1596m - Slide and rotate as per Pathfinder DD instructions. MWD Surveys @ 1586m, 1588m, 1595m.
PH0	P	SCR	04:15	04:30	0.25	1,596.0	Circulate and Perform SCR @ 1596m Mud Weight: 9.1, Pumps 1 & 2 40spm @ 300Psi 60spm @ 400psi

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Well : Triclops-1 Drilling

PH0	P	DM	04:30	06:00	1.50	1,673.0	[In Progress] Drill ahead 8 1/2" hole from 1596m to 1673m. Slide and rotate as per Pathfinder DD instructions MWD Surveys @ 1624m, 1644m, 1663m,

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	19.2	80.2	523.2	90.8
TP	0.0	0.0	4.0	0.7
U	4.8	19.8	48.8	8.5
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	576.0	100.0

WBM Data — **Cost Today:** **$ 1,538**

Mud Desc:	4PHB	API FL:	13.5 cm³/30min	Cl:		Solids:	7.3 %	Glycol:	
Check Depth:	1,521.0 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	93 %	Viscosity:	43 s/qt
Time:	20:00	HTHP-FL:		Hard/Ca:	450.00 mg/L	Sand:	1.5 %	PV:	9 cP
Weight:	9.10 ppg	HTHP-Cake:		MBT:		pH:	9	YP:	22 lbf/100ft²
Temp:	64.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:	0.25 ppb	Gel 10s:	10 lbf/100ft²
		HTHP-Press:		Pf:	0.18	Mf:	0.70 m³	Gel 10m:	14 lbf/100ft²

Comment:	**RPM**	**Reading**

Pumps

		Pump data - Last 24 Hrs							**Slow Pump Data**	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	Continental Emsco/F-800	5.500	84	97		1,570	1,171.0	9.10		
2	Continental Emsco/F-800	5.500	84	97		1,570	1,464.0	9.10	60	300
									40	200

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #4

BHA Type:	Directional	Total Weight Wet:	
Depth In/Out:	1,296.0 m/1,926.5 m	Weight Below Jar Wet:	
Date In/Out:	#23 (25 Jan 2013)/#27 (29 Jan 2013)		
Total Length:	196.2 m		
BHA Description:	8 1/2" PDC Bit, 6 3/4" Mud Motor, 8" Stabiliser, 6 3/4" Float Sub (with float), 6 3/4" HDSI Collar, X/O, X/O, 12 x 6 1/2" DC, 6 1/2" Drilling Jar, 2 x 6 1/2" DC, 4 x 4 1/2" HWDP.		
BHA Run Comment:	Directional BHA run to correct deviation and return well path to target centre.		

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	128 klb	Torque (max):	4,635 ft-lbs	D.C. (1) Ann Velocity:	5 ft/s
Slack-Off Weight:	126 klb	Torque Avg. Off Bottom:	1,962 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	127 klb	Torque Avg. On Bottom:	2,849 ft-lbs	H.W.D.P. Ann. Velocity:	3 ft/s
Jars Hours Logged:	9.25 h			D.P. Ann. Velocity:	3 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Baker Hughes Christian PDC 5 Blade, Bit No: 3	0.35	8.500		7033541	
Mud Motor	Standard Pathfinder motor 7 stator/8 rotor, 1.15degree bend. bit to bend 1.98 degrees	7.85	3.750	3.000	F67270	
Stabilizer		1.78	6.750	2.750	B 67T135	
Float Sub	Float sub comes with ported float	1.02	6.865	2.750	D67F742	
NM Drill Collar	HDS1 Collar	9.16	6.750	2.750	D67F742	
X-Over	NC50 Box 5 1/2" FH Pin	0.98	6.875	3.000	D67CX637	
X-Over	NC46 Box NC50 Pin	1.10	6.500	2.750	B65X053A	
6 1/2" DC	SN: 592226, GP5922-9, 30-2-21, 30-2-2, 922 -2, 29018, EDC03231, GP5922-9, 29013, GP3837.3, 29004, 29007,	108.20	6.188	2.938		
6 1/2" Hydraulic Jar	Bico Hydro-Mechanical	9.53	6.375	2.500	004. BD003.135398	
6 1/2" DC	SN: S26132.10, 29008	18.41	6.313	2.938		
HWDP	SN: A5875, A58730, A58716, A58720	37.82	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	2.90 h	Total Circ. Time:	8.00 h
Total Revs:	55 Krevs	HSI:	3.15 hp/in²		

Bit #3

						Nozzles		
Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223	#		Size (/32nd")
Manufacturer:	BHI (Hughes Christensen)	Model:	Q505F	TFA:	0.552 in²	5	x	12
Serial #:	7033541	Bit Wear:	2-7-RO-S-X-I-BT-PR	Cost:	$			

Bit Run Comment:

Bit Wear Comment:

Drilling Parameters

BHA Run #4

Top Depth:	1,296.0 m	PWD ECD:	9.35 kg/m³
Bottom Depth:	1,568.0 m		

	Min	Avg	Max
Flow	402 galUS/min	453 galUS/min	504 galUS/min
Surface RPM	45 rpm	53 rpm	60 rpm
Downhole RPM	130 rpm	168 rpm	206 rpm
Pressure	1,078 psi	1,516 psi	1,954 psi
Torque	1,962 ft-lbs	3,299 ft-lbs	4,635 ft-lbs
WOB	1 klbs	7 klbs	13 klbs
ROP	4.80 m/h	11.57 m/h	36.10 m/h

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Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
1,448.6	0.4	78.86	1,448.3	-7,124,814.027	0.332	-11.0	4.7	MWD
1,458.2	0.4	72.88	1,457.9	-7,124,814.01(	0.130	-11.0	4.8	MWD
1,467.9	0.4	64.01	1,467.6	-7,124,813.98[	0.191	-11.0	4.8	MWD
1,477.6	0.6	20.79	1,477.2	-7,124,813.92[	1.275	-10.9	4.9	MWD
1,487.7	0.7	348.40	1,487.3	-7,124,813.81[	1.114	-10.8	4.9	MWD
1,496.7	1.2	338.58	1,496.3	-7,124,813.67[	1.746	-10.7	4.8	MWD
1,515.8	1.4	334.75	1,515.4	-7,124,813.27[	0.342	-10.3	4.7	MWD
1,535.0	1.4	326.88	1,534.6	-7,124,812.86(	0.300	-9.9	4.4	MWD
1,554.3	1.3	322.23	1,553.9	-7,124,812.49[	0.230	-9.5	4.2	MWD
1,573.5	1.3	319.45	1,573.1	-7,124,812.15[	0.098	-9.2	3.9	MWD

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0
Cadna-Owie Formation	1,311.0
Murta Formation	1,397.5
Namur Sandstone	1,424.5
Westbourne Formation	1,516.5

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	4
		Sub Contractor	13
		Oil Industry Catering Services	4
		Total	43

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		42,912	0	6,727	0	36,185
Pot Water (ltr)	ltr		44,500	5,000	0	0	49,500
Camp Fuel (ltr)	ltr		3,600	0	400	-1,600	1,600

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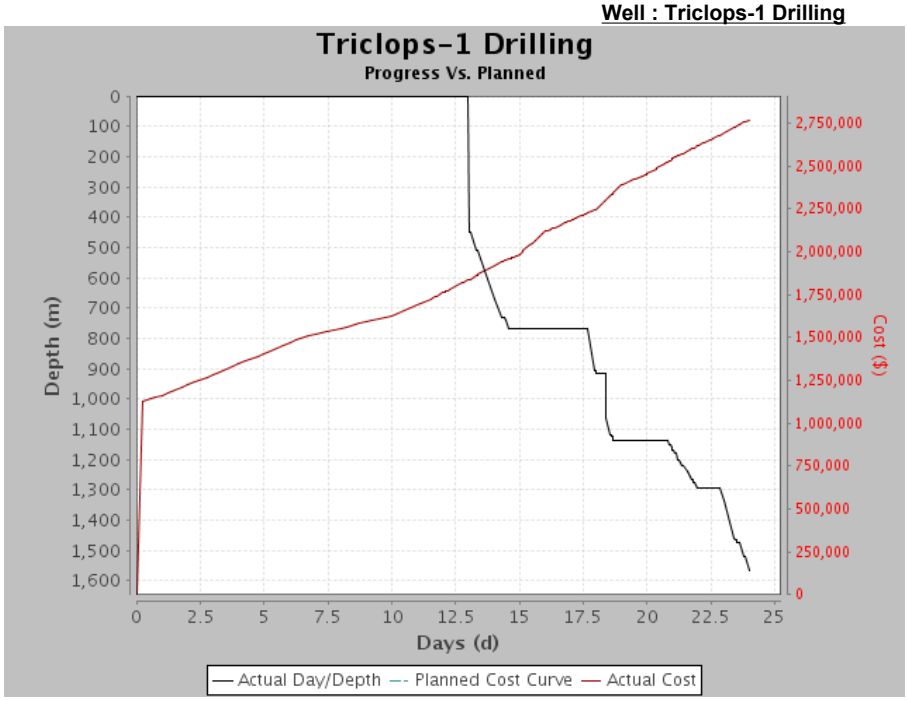
Drillsearch

Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	25	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,795.0 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,795.0 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	227.0 m	TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	25.00	TOL TVD:		Daily Cost:	$ 84,716
Plan TD (MD):	2,021.0 m	Days Since Spud:	13.48	Lnr Shoe MD:		Cum. Cost:	$ 2,852,514
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Last LTI Date:	05 Feb 2012
		FIT/LOT:	/16.72 ppg			Days Since LTI:	357

Current Op @ 0600:	Drilling through 1839m
Planned Op:	Drill ahead with down hole motor as instructed by directional driller.

Summary for Period 0000 Hrs to 2400 Hrs on 27 Jan 2013

Directional drilling with mud motor from 1568m to 1795m. Slide and rotate as directed by Pathfinder.

Operations for Period 0000 Hrs to 2400 Hrs On 27 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	DM	00:00	04:15	4.25	1,596.0	Drilling ahead in 8.1/2" hole from 1568m to 1596m - Slide and rotate as per Pathfinder DD instructions. MWD Surveys @ 1586m, 1588m, 1595m.
PH0	P	SCR	04:15	04:30	0.25	1,596.0	Circulate and Perform SCR @ 1596m Mud Weight: 9.1, Pumps 1 & 2 40spm @ 300Psi 60spm @ 400psi
PH0	P	DM	04:30	17:30	13.00	1,673.0	Drill ahead 8 1/2" hole from 1596m to 1673m. Slide and rotate as per Pathfinder DD instructions MWD Surveys @ 1624m, 1644m, 1663m,
PH0	P	RS	17:30	18:00	0.50	1,673.0	Rig service
PH0	P	DM	18:00	24:00	6.00	1,795.0	Continue drilling 8.1/2" hole from 1673m to 1795m. Slide / Rotate as per Pathfinder DD instructions MWD Surveys @ 1692m, 1711m, 1730m, 1740m, 1759m.

Operations for Period 0000 Hrs to 0600 Hrs On 28 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	DM	00:00	02:15	2.25	1,808.0	Drilling 8.1/2" hole from 1795m to 1808m. Slide and rotate as instructed by Pathfinder. MWD surveys @ 1798m, 1808m.
PH0	P	SCR	02:15	02:30	0.25	1,808.0	Circulate and perforn SCR's @ 1808m Mwt: 9.10 M/P 1&2 40Spm : 300Psi 60Spm : 400Psi
PH0	P	DM	02:30	06:00	3.50	1,926.5	[In Progress] Drill 8.1/2" hole from 1808m to 1926.50m. MDTD MWD surveys @ 1818m, 1837m, 1856m, 1875m, 1885m, 1894m, 1904m, 1923m

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	547.2	91.2

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Drillsearch

Well : Triclops-1 Drilling

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
TP	0.0	0.0	4.0	0.7
U	0.0	0.0	48.8	8.1
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	600.0	100.0

WBM Data

Cost Today: $ 11,189

Mud Desc:	4PHB	API FL:	13.0 cm³/30min	Cl:		Solids:	7.3 %	Glycol:	
Check Depth:	1,521.0 m	Filter-Cake:	2 /32nd"	KCl:	4.0 %	H2O:	93 %	Viscosity:	43 s/qt
Time:	20:00	HTHP-FL:		Hard/Ca:	450.00 mg/L	Sand:	1.5 %	PV:	10 cP
Weight:	9.10 ppg	HTHP-Cake:		MBT:	0.60 %	pH:	9	YP:	19 lbf/100ft²
Temp:	64.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:	0.25 ppb	Gel 10s:	10 lbf/100ft²
		HTHP-Press:		Pf:	0.18	Mf:	0.60 m³	Gel 10m:	14 lbf/100ft²

Comment:	RPM	Reading

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	Continental Emsco/F-800	5.500	80	97		1,532	1,624.0	9.10		
2	Continental Emsco/F-800	5.500	80	97		1,532	1,624.0	9.10	60 40	400 300

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #4

BHA Type:	Directional	Total Weight Wet:	
Depth In/Out:	1,296.0 m/1,926.5 m	Weight Below Jar Wet:	
Date In/Out:	#23 (25 Jan 2013)/#27 (29 Jan 2013)		
Total Length:	196.2 m		

BHA Description: 8 1/2" PDC Bit, 6 3/4" Mud Motor, 8" Stabiliser, 6 3/4" Float Sub (with float), 6 3/4" HDSI Collar, X/O, X/O, 12 x 6 1/2" DC, 6 1/2" Drilling Jar, 2 x 6 1/2" DC, 4 x 4 1/2" HWDP.

BHA Run Comment: Directional BHA run to correct deviation and return well path to target centre.

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	139 klb	Torque (max):	3,542 ft-lbs	D.C. (1) Ann Velocity:	5 ft/s
Slack-Off Weight:	135 klb	Torque Avg. Off Bottom:	1,025 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	137 klb	Torque Avg. On Bottom:	2,843 ft-lbs	H.W.D.P. Ann. Velocity:	3 ft/s
Jars Hours Logged:	23.25 h			D.P. Ann. Velocity:	3 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Baker Hughes Christian PDC 5 Blade, Bit No: 3	0.35	8.500		7033541	
Mud Motor	Standard Pathfinder motor 7 stator/8 rotor, 1.15degree bend. bit to bend 1.98 degrees	7.85	3.750	3.000	F67270	
Stabilizer		1.78	6.750	2.750	B 67T135	
Float Sub	Float sub comes with ported float	1.02	6.865	2.750	D67F742	
NM Drill Collar	HDS1 Collar	9.16	6.750	2.750	D67F742	
X-Over	NC50 Box 5 1/2" FH Pin	0.98	6.875	3.000	D67CX637	
X-Over	NC46 Box NC50 Pin	1.10	6.500	2.750	B65X053A	
6 1/2" DC	SN: 592226, GP5922-9, 30-2-21, 30-2-2, 922 -2, 29018, EDC03231, GP5922-9, 29013, GP3837.3, 29004, 29007,	108.20	6.188	2.938		
6 1/2" Hydraulic Jar	Bico Hydro-Mechanical	9.53	6.375	2.500	004. BD003.135398	
6 1/2" DC	SN: S26132.10, 29008	18.41	6.313	2.938		
HWDP	SN: A5875, A58730, A58716, A58720	37.82	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	2.90 h	Total Circ. Time:	8.00 h
Total Revs:	128 Krevs	HSI:	2.79 hp/in²		

Bit #3

						Nozzles		
Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223	#		Size (/32nd")
Manufacturer:	BHI (Hughes Christensen)	Model:	Q505F	TFA:	0.552 in²	5	x	12
Serial #:	7033541	Bit Wear:	2-7-RO-S-X-I-BT-PR	Cost:	$			

Bit Run Comment:

Bit Wear Comment:

Drilling Parameters

BHA Run #4

Top Depth:	1,296.0 m	PWD ECD:	9.33 kg/m³
Bottom Depth:	1,795.0 m		

	Min	Avg	Max
Flow	377 galUS/min	435 galUS/min	493 galUS/min
Surface RPM	40 rpm	45 rpm	50 rpm
Downhole RPM	109 rpm	148 rpm	187 rpm
Pressure	1,376 psi	1,624 psi	1,872 psi
Torque	1,025 ft-lbs	2,284 ft-lbs	3,542 ft-lbs
WOB	3 klbs	11 klbs	19 klbs
ROP	3.20 m/h	20.79 m/h	33.90 m/h

Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
1,583.1	1.3	320.67	1,582.7	-7,124,811.991	0.086	-9.0	3.8	MWD
1,592.6	1.4	322.46	1,592.2	-7,124,811.815	0.343	-8.8	3.6	MWD
1,611.7	1.1	302.07	1,611.3	-7,124,811.533	0.835	-8.5	3.3	MWD
1,631.0	0.9	306.20	1,630.6	-7,124,811.345	0.330	-8.3	3.0	MWD
1,650.2	1.1	315.80	1,649.8	-7,124,811.124	0.406	-8.1	2.8	MWD
1,659.9	0.9	316.77	1,659.5	-7,124,811.002	0.620	-8.0	2.7	MWD
1,669.6	1.0	331.96	1,669.2	-7,124,810.871	0.835	-7.9	2.6	MWD
1,679.3	1.1	334.98	1,678.9	-7,124,810.712	0.353	-7.7	2.5	MWD
1,698.7	1.4	336.32	1,698.3	-7,124,810.327	0.466	-7.3	2.3	MWD
1,718.0	1.3	329.29	1,717.6	-7,124,809.922	0.300	-6.9	2.1	MWD
1,727.7	1.3	323.97	1,727.3	-7,124,809.739	0.373	-6.7	2.0	MWD
1,747.0	1.4	319.25	1,746.6	-7,124,809.383	0.232	-6.4	1.7	MWD
1,766.2	1.2	307.68	1,765.8	-7,124,809.083	0.514	-6.1	1.4	MWD
1,785.6	1.1	300.71	1,785.2	-7,124,808.863	0.266	-5.9	1.1	MWD
1,795.4	1.3	300.39	1,795.0	-7,124,808.759	0.612	-5.8	0.9	MWD

Formations

Name	Top (m)
Winton Formation	5.2
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0
Cadna-Owie Formation	1,311.0
Murta Formation	1,397.5
Namur Sandstone	1,424.5
Westbourne Formation	1,516.5
Adori Sandstone	1,594.5
Birkhead Formation	1,634.5
Hutton Sandstone	1,727.0

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	4
		Sub Contractor	12
		Oil Industry Catering Services	4

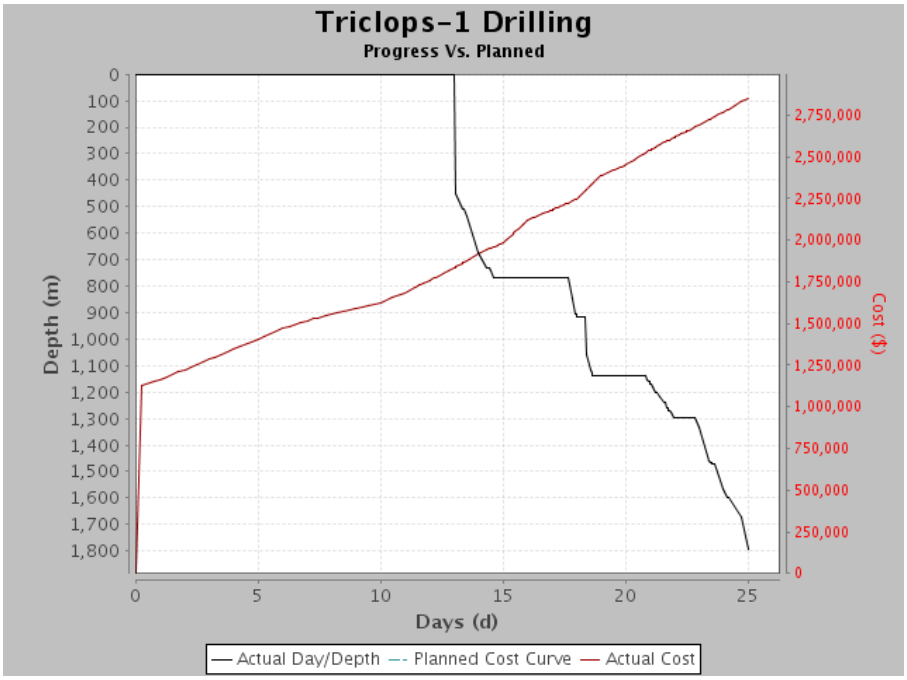
Drillsearch

Well : Triclops-1 Drilling

Personnel On Board			
Job Title	Personnel	Company	Pax
		Total	42

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		36,185	0	6,003	0	30,182
Pot Water (ltr)	ltr		49,500	3,900	0	0	53,400
Camp Fuel (ltr)	ltr		1,600	0	150	0	1,450



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	26	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,926.5 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,926.5 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	132.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	26.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	14.48	Lnr Shoe MD:		Daily Cost:	$ 85,575
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Cum. Cost:	$ 2,938,089
		FIT/LOT:	/16.72 ppg			Last LTI Date:	05 Feb 2012
						Days Since LTI:	358

Current Op @ 0600:	Pulling out of hole and handling BHA
Planned Op:	Complete tripping out of hole - Layout Pathfinder directional tools - Rig up Schlumberger Logging - Logging well

Summary for Period 0000 Hrs to 2400 Hrs on 28 Jan 2013

Drill 8.1/2" hole from 1795m 1926.50m - Circulate hole clean - Wiper trip to 1300m - Run back in hole to 1926.50 m TD - Circulate hole clean - Tripping out

Operations for Period 0000 Hrs to 2400 Hrs On 28 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	DM	00:00	02:15	2.25	1,808.0	Drilling 8.1/2" hole from 1795m to 1808m. Slide and rotate as instructed by Pathfinder. MWD surveys @ 1798m, 1808m.
PH0	P	SCR	02:15	02:30	0.25	1,808.0	Circulate and perforn SCR's @ 1808m Mwt: 9.10 M/P 1&2 40Spm : 300Psi 60Spm : 400Psi
PH0	P	DM	02:30	18:00	15.50	1,926.5	Drill 8.1/2" hole from 1808m to 1926.50m. MDTD MWD surveys @ 1818m, 1837m, 1856m, 1875m, 1885m, 1894m, 1904m, 1923m
PH0	P	CMD	18:00	19:00	1.00	1,926.5	Circulate and condition mud until clean over shakers
PH0	P	WT	19:00	21:00	2.00	1,926.5	Flow check - Rack kelly - Pull out of hole (Wiper Trip) from 1922m to 1300m - Flow check
PH0	P	WT	21:00	22:30	1.50	1,926.5	Run back in hole to bottom from 1300m to TD 1926.50m - Hole condition (Good) Nil fill on bottom
PH0	P	CMD	22:30	23:30	1.00	1,926.5	Pickup kelly Circulate full hole volume until clean over shakers - Take mud sample for Schlumberger.
PH0	P	TO	23:30	24:00	0.50	1,926.5	Rack back kelly - Pull out from 1922m to 1823m

Operations for Period 0000 Hrs to 0600 Hrs On 29 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	TO	00:00	04:30	4.50	1,926.5	Pulling out from 1823m to 418m to layout Directional /MWD tools and conduct Wireline logging.
PH0	U	TO	04:30	05:00	0.50	1,926.5	Flow check - Mix additional mud.
PH0	P	TO	05:00	06:00	1.00	1,926.5	[In Progress] Continue pulling out from481m to surface laying down directional tools. Review JSA and flush DH motor.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	571.2	91.5

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Drillsearch

Well : Triclops-1 Drilling

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
TP	0.0	0.0	4.0	0.6
U	0.0	0.0	48.8	7.8
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	624.0	100.0

General Comments for Period 0000 Hrs to 2400 Hrs on 28 Jan 2013

Category	Comments
Lessons Learned	Progress ceased on reaching the top of the Poolawanna at 1965.2mMD. Increased WOB and reduced flow through motor to lower RPM failed to make a significant inprovement, 0.3m/h. Drilling the Poolawanna with the this PDC, particularly coupled with a down hole motor is not an option to drill the formation to any depth. Future wells may require a bit run and use of a hard formation tricone for this formation.

WBM Data

Cost Today: **$ 7,715**

Mud Desc:	4PHB	API FL:	8.0 cm³/30min	Cl:		Solids:	7.3 %	Glycol:	
Check Depth:	1,926.0 m	Filter-Cake:	1 /32nd"	KCl:	3.0 %	H2O:	92 %	Viscosity:	42 s/qt
Time:	20:00	HTHP-FL:		Hard/Ca:	400.00 mg/L	Sand:	1.5 %	PV:	9 cP
Weight:	9.10 ppg	HTHP-Cake:		MBT:	0.30 %	pH:	9	YP:	20 lbf/100ft²
Temp:	64.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	9 lbf/100ft²
		HTHP-Press:		Pf:	0.15	Mf:	0.50 m³	Gel 10m:	14 lbf/100ft²

Comment:	RPM	Reading

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10		
2	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10	60	400
									40	300

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #4

BHA Type:	Directional	Total Weight Wet:	
Depth In/Out:	1,296.0 m/1,926.5 m	Weight Below Jar Wet:	
Date In/Out:	#23 (25 Jan 2013)/#27 (29 Jan 2013)		
Total Length:	196.2 m		

BHA Description:	8 1/2" PDC Bit, 6 3/4" Mud Motor, 8" Stabiliser, 6 3/4" Float Sub (with float), 6 3/4" HDSI Collar, X/O, X/O, 12 x 6 1/2" DC, 6 1/2" Drilling Jar, 2 x 6 1/2" DC, 4 x 4 1/2" HWDP.
BHA Run Comment:	Directional BHA run to correct deviation and return well path to target centre.

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	145 klb	Torque (max):	4,655 ft-lbs	D.C. (1) Ann Velocity:	5 ft/s
Slack-Off Weight:	141 klb	Torque Avg. Off Bottom:	1,095 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	143 klb	Torque Avg. On Bottom:	2,988 ft-lbs	H.W.D.P. Ann. Velocity:	3 ft/s
Jars Hours Logged:	17.75 h			D.P. Ann. Velocity:	3 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Baker Hughes Christian PDC 5 Blade, Bit No: 3	0.35	8.500		7033541	
Mud Motor	Standard Pathfinder motor 7 stator/8 rotor, 1.15degree bend. bit to bend 1.98 degrees	7.85	3.750	3.000	F67270	
Stabilizer		1.78	6.750	2.750	B 67T135	
Float Sub	Float sub comes with ported float	1.02	6.865	2.750	D67F742	
NM Drill Collar	HDS1 Collar	9.16	6.750	2.750	D67F742	
X-Over	NC50 Box 5 1/2" FH Pin	0.98	6.875	3.000	D67CX637	
X-Over	NC46 Box NC50 Pin	1.10	6.500	2.750	B65X053A	
6 1/2" DC	SN: 592226, GP5922-9, 30-2-21, 30-2-2, 922 -2, 29018, EDC03231, GP5922-9, 29013, GP3837.3, 29004, 29007,	108.20	6.188	2.938		
6 1/2" Hydraulic Jar	Bico Hydro-Mechanical	9.53	6.375	2.500	004. BD003.135398	
6 1/2" DC	SN: S26132.10, 29008	18.41	6.313	2.938		
HWDP	SN: A5875, A58730, A58716, A58720	37.82	6.250	2.875		

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	2.90 h	Total Circ. Time:	8.00 h
Total Revs:	180 Krevs	HSI:	2.42 hp/in²		

Bit #3

						Nozzles		
Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223	#		Size (/32nd")
Manufacturer:	BHI (Hughes Christensen)	Model:	Q505F	TFA:	0.552 in²	5	x	12
Serial #:	7033541	Bit Wear:	2-7-RO-S-X-I-BT-PR	Cost:	$			

Bit Run Comment:

Bit Wear Comment:

Drilling Parameters

BHA Run #4

Top Depth:	1,296.0 m	PWD ECD:	9.43 kg/m³
Bottom Depth:	1,926.5 m		

	Min	Avg	Max
Flow	369 galUS/min	415 galUS/min	460 galUS/min
Surface RPM	40 rpm	44 rpm	47 rpm
Downhole RPM	118 rpm	144 rpm	169 rpm
Pressure	1,401 psi	1,565 psi	1,728 psi
Torque	1,095 ft-lbs	2,875 ft-lbs	4,655 ft-lbs
WOB	4 klbs	11 klbs	18 klbs
ROP	0.50 m/h	35.03 m/h	30.50 m/h

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Drillsearch

Well : Triclops-1 Drilling

Survey

MD (m)	Incl. (°)	Corr. Az (°)	TVD (m)	'V' Sect (m)	Dogleg (deg/30m)	N/S (m)	E/W (m)	Tool Type
1,805.1	1.4	300.93	1,804.7	-7,124,808.643	0.312	-5.6	0.7	MWD
1,824.4	1.3	299.88	1,824.0	-7,124,808.411	0.130	-5.4	0.3	MWD
1,843.4	1.1	293.37	1,843.0	-7,124,808.227	0.359	-5.2	-0.1	MWD
1,862.8	1.0	298.57	1,862.4	-7,124,808.071	0.301	-5.1	-0.4	MWD
1,872.5	1.1	302.83	1,872.1	-7,124,807.984	0.363	-5.0	-0.5	MWD
1,882.0	1.1	302.87	1,881.6	-7,124,807.888	0.002	-4.9	-0.7	MWD
1,891.7	1.1	305.89	1,891.3	-7,124,807.787	0.173	-4.8	-0.8	MWD
1,911.0	1.1	300.99	1,910.6	-7,124,807.590	0.141	-4.6	-1.1	MWD
1,914.8	1.0	301.81	1,914.4	-7,124,807.555	0.719	-4.6	-1.2	MWD
1,927.1	1.0	301.81	1,926.6	-7,124,807.446	0.000	-4.4	-1.3	MWD

Formations

Name	Top (m)
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0
Cadna-Owie Formation	1,311.0
Murta Formation	1,397.5
Namur Sandstone	1,424.5
Westbourne Formation	1,516.5
Adori Sandstone	1,594.5
Birkhead Formation	1,634.5
Hutton Sandstone	1,727.0
Poolowanna Formation	1,926.5

Personnel On Board

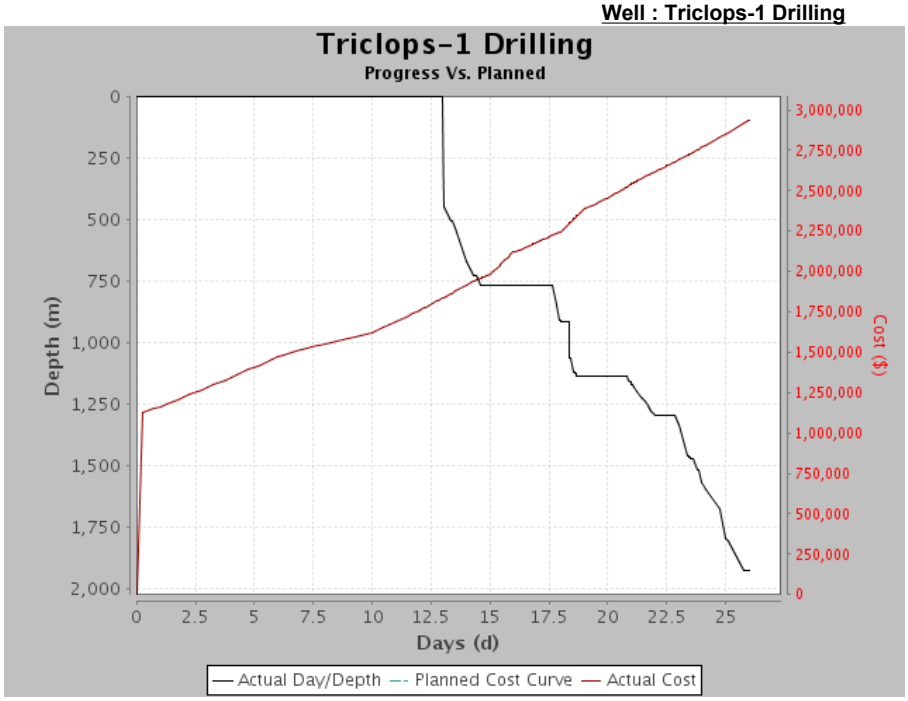
Job Title	Personnel	Company	Pax
		ENSIGN	22
		Drillsearch	4
		Sub Contractor	19
		Oil Industry Catering Services	4
		Total	49

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		30,182	0	3,521	0	26,661
Pot Water (ltr)	ltr		53,400	0	0	0	53,400
Camp Fuel (ltr)	ltr		1,450	0	450	2,000	3,000

Drillsearch

Well : Triclops-1 Drilling



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	27	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Dave Dougherty
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Don Castles	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,926.5 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,926.5 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	0.0 m	TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	27.00	TOL TVD:		Daily Cost:	$ 77,464
Plan TD (MD):	2,021.0 m	Days Since Spud:	15.48	Lnr Shoe MD:		Cum. Cost:	$ 3,015,553
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Last LTI Date:	05 Feb 2012
		FIT/LOT:	/16.72 ppg			Days Since LTI:	359

Current Op @ 0600:	Pull out with HWT and 6.1/2" DC laying down HWT drill pipe
Planned Op:	Layout drill collars - Makeup cement stinger and run in to set plugs - Halliburton setting cement plugs as per program

Summary for Period 0000 Hrs to 2400 Hrs on 29 Jan 2013

Tripping out of hole - Lay down MWD and Pathfinder directional tools - PJSM rigging up Schlumberger logging tools - Run Log #1 ADT-HRLA-PEX-HNGS-SP

Operations for Period 0000 Hrs to 2400 Hrs On 29 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	TO	00:00	04:30	4.50	1,926.5	Pulling out from 1823m to 418m to layout Directional /MWD tools and conduct Wireline logging.
PH0	U	TO	04:30	05:00	0.50	1,926.5	Flow check - Mix additional mud.
PH0	P	TO	05:00	10:15	5.25	1,926.5	Continue pulling out from481m to surface laying down directional tools. Review JSA and flush DH motor.
PH0	P	WL	10:15	12:15	2.00	1,926.5	Hold PJSM with Schlumberger. Rig up to run wireline logs. Pick up and make up tool string
PH0	P	WL	12:15	19:30	7.25	1,926.5	Run No: 1 - ADT - HRL - HNGS - SP
PH0	P	WL	19:30	21:30	2.00	1,926.5	Run #1 on surface - Layout and pickup run #2 tools SSCAN - GPIT
PH0	P	WL	21:30	24:00	2.50	1,926.5	Schlumberger running in hole with log #2 - Logging SSCAN - GPIT

Operations for Period 0000 Hrs to 0600 Hrs On 30 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	WL	00:00	04:00	4.00	1,926.5	Schlumberger running Log #2 SSCAN - GPIT - Log at surface.
PH0	P	WL	04:00	04:30	0.50	1,926.5	Rigging down Schlumberger tools and clear from drill floor
PH0	P	HBH	04:30	06:00	1.50	1,926.5	[In Progress] RIH with 6.50" Drill collars and HWDP, Lay down same.- Service break Kelly connections

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	23.5	97.9	594.8	91.8
TP	0.0	0.0	4.0	0.6
U	0.5	2.1	49.2	7.6
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	648.0	100.0

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Drillsearch

Well : Triclops-1 Drilling

WBM Data									Cost Today:	$ 604
Mud Desc:	4PHB	API FL:		Cl:		Solids:	7.8 %	Glycol:		
Check Depth:	1,926.0 m	Filter-Cake:	1 /32nd"	KCl:	2.0 %	H2O:	92 %	Viscosity:	42 s/qt	
Time:	16:00	HTHP-FL:		Hard/Ca:	400.00 mg/L	Sand:	2.0 %	PV:	10 cP	
Weight:	9.10 ppg	HTHP-Cake:		MBT:	0.30 %	pH:	9	YP:	20 lbf/100ft²	
Temp:	38.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	9 lbf/100ft²	
		HTHP-Press:		Pf:	0.15	Mf:	0.50 m³	Gel 10m:	13 lbf/100ft²	
Comment:								**RPM**	**Reading**	

Pumps

Pump data - Last 24 Hrs									Slow Pump Data	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10		
2	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10	60	400
									40	300

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #4

BHA Type:	Directional	Total Weight Wet:	
Depth In/Out:	1,296.0 m/1,926.5 m	Weight Below Jar Wet:	
Date In/Out:	#23 (25 Jan 2013)/#27 (29 Jan 2013)		
Total Length:	196.2 m		
BHA Description:	8 1/2" PDC Bit, 6 3/4" Mud Motor, 8" Stabiliser, 6 3/4" Float Sub (with float), 6 3/4" HDSI Collar, X/O, X/O, 12 x 6 1/2" DC, 6 1/2" Drilling Jar, 2 x 6 1/2" DC, 4 x 4 1/2" HWDP.		
BHA Run Comment:	Directional BHA run to correct deviation and return well path to target centre.		

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	0 klb	Torque (max):	0 ft-lbs	D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:	0 klb	Torque Avg. Off Bottom:	0 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	0 klb	Torque Avg. On Bottom:	0 ft-lbs	H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:	0.00 h			D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
Bit	Baker Hughes Christian PDC 5 Blade, Bit No: 3	0.35	8.500		7033541	
Mud Motor	Standard Pathfinder motor 7 stator/8 rotor, 1.15degree bend. bit to bend 1.98 degrees	7.85	3.750	3.000	F67270	
Stabilizer		1.78	6.750	2.750	B 67T135	
Float Sub	Float sub comes with ported float	1.02	6.865	2.750	D67F742	
NM Drill Collar	HDS1 Collar	9.16	6.750	2.750	D67F742	
X-Over	NC50 Box 5 1/2" FH Pin	0.98	6.875	3.000	D67CX637	
X-Over	NC46 Box NC50 Pin	1.10	6.500	2.750	B65X053A	
6 1/2" DC	SN: 592226, GP5922-9, 30-2-21, 30-2-2, 922 -2, 29018, EDC03231, GP5922-9, 29013, GP3837.3, 29004, 29007,	108.20	6.188	2.938		
6 1/2" Hydraulic Jar	Bico Hydro-Mechanical	9.53	6.375	2.500	004. BD003.135398	
6 1/2" DC	SN: S26132.10, 29008	18.41	6.313	2.938		
HWDP	SN: A5875, A58730, A58716, A58720	37.82	6.250	2.875		

Directional Data

Slide Time:	0.00 h	Rotate Time:	0.00 h	Circ. Time:	0.00 h
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	2.90 h	Total Circ. Time:	8.00 h
Total Revs:	0 Krevs	HSI:	0.00 hp/in²		

Bit #3

						Nozzles		
Size:	216 mm (8 1/2")	Type:	PDC	IADC #:	M223	#		Size (/32nd")
Manufacturer:	BHI (Hughes Christensen)	Model:	Q505F	TFA:	0.552 in²	5	x	12
Serial #:	7033541	Bit Wear:	2-7-RO-S-X-I-BT-PR	Cost:	$			

Bit Run Comment:

Bit Wear Comment:

Drilling Parameters

BHA Run #4

Top Depth:	PWD ECD:
Bottom Depth: 1,926.5 m	

	Min	Avg	Max
Flow	0 galUS/min	0 galUS/min	0 galUS/min
Surface RPM	0 rpm	0 rpm	0 rpm
Downhole RPM	0 rpm	0 rpm	0 rpm
Pressure	0 psi	0 psi	0 psi
Torque	0 ft-lbs	0 ft-lbs	0 ft-lbs
WOB	0 klbs	0 klbs	0 klbs
ROP	0.00 m/h	0.00 m/h	0.00 m/h

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Drillsearch

Well : Triclops-1 Drilling

Formations

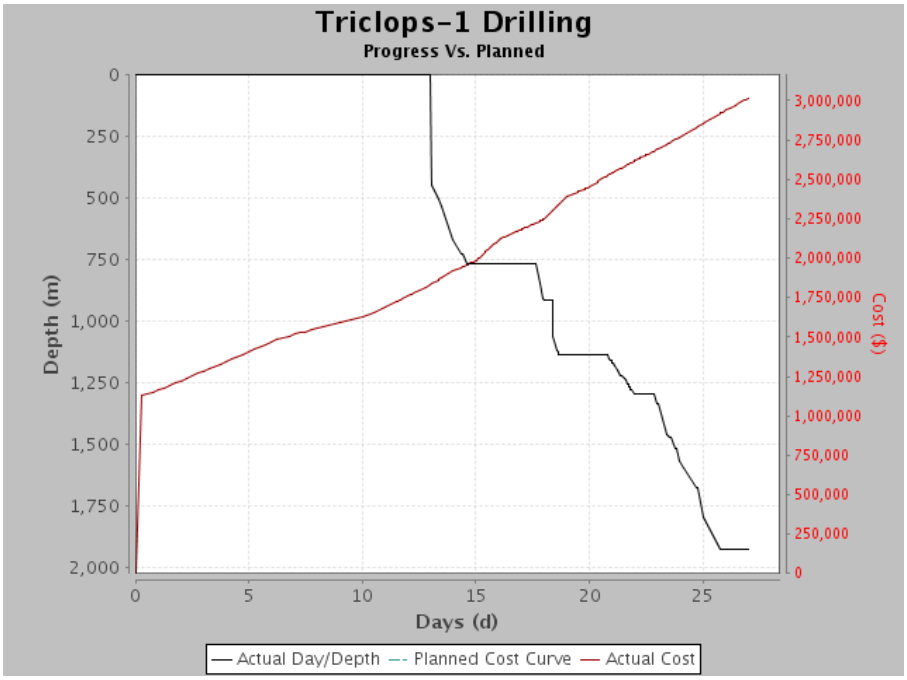
Name	Top (m)
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0
Cadna-Owie Formation	1,311.0
Murta Formation	1,397.5
Namur Sandstone	1,424.5
Westbourne Formation	1,516.5
Adori Sandstone	1,594.5
Birkhead Formation	1,634.5
Hutton Sandstone	1,727.0
Poolowanna Formation	1,926.5

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	23
		Drillsearch	4
		Sub Contractor	20
		Oil Industry Catering Services	4
		Total	51

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		26,661	0	3,580	0	23,081
Pot Water (ltr)	ltr		53,400	0	7,400	0	46,000
Camp Fuel (ltr)	ltr		3,000	0	400	0	2,600



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling					
Report Number :	28	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data							
Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,926.5 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,926.5 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	0.0 m	TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	28.00	TOL TVD:			
Plan TD (MD):	2,021.0 m	Days Since Spud:	16.48	Lnr Shoe MD:		Daily Cost:	$ 347,533
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Cum. Cost:	$ 3,363,086
		FIT/LOT:	/16.72 ppg			Last LTI Date:	05 Feb 2012
						Days Since LTI:	360

Current Op @ 0600:	POOH laying down drill pipe
Planned Op:	Continue setting abandonment cement plugs as per programme.

Summary for Period 0000 Hrs to 2400 Hrs on 30 Jan 2013

Schlumberger POOH after Log #2 and rigged down - RIH with BHA components from derrick - POOH and laid down BHA components - Picked up 2 7/8" cmt stinger - RIH and set #1 and #2 abandonment cement plugs.

Operations for Period 0000 Hrs to 2400 Hrs On 30 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
PH0	P	WL	00:00	04:00	4.00	1,926.5	Schlumberger running Log #2 SSCAN - GPIT - Log at surface.
PH0	P	WL	04:00	04:30	0.50	1,926.5	Rigging down Schlumberger tools and clear from drill floor
PH0	P	HBH	04:30	08:00	3.50	1,926.5	RIH with 6.50" Drill collars and HWDP, Lay down same.- Service break Kelly connections
PH0	P	TRCP	08:00	09:00	1.00	1,926.5	Rig up 2 7/8" tubing equipment - Make up 2 7/8" cement stinger to 47m.
PH0	P	TRCP	09:00	12:00	3.00	1,926.5	RIH with 2 7/8" cement stinger on DP f/ 47m t/ 1186m.
PH0	P	TRCP	12:00	14:30	2.50	1,926.5	Continue RIH f/ 1186m t/ 1918m.
PH0	P	CMP	14:30	17:30	3.00	1,926.5	Make up circulating swage - RIH and tag bottom @ 1926.43m - Circulate and condition hole for abandonment plugs.
PH0	P	CMP	17:30	18:30	1.00	1,926.5	Held PJSM with Halliburton - Rig up cement equipment and surface lines.
PH0	P	CMP	18:30	19:30	1.00	1,926.5	Cement plug #1 1926m to 1826m - Halliburton pump 5bbl water - Pressure test surface lines t/ 2000psi f/ 5mins Mix and pump 34.4bbl of 15.6ppg cement slurry - Pump 3.3bbl water - Displace cement with 76bbl mud - CIP (cement in place) @ 20:14hrs.
PH0	P	CMP	19:30	20:30	1.00	1,926.5	Rig down surface lines - POOH slowly f/ 1926m t/ 1727m.
PH0	P	CMP	20:30	21:30	1.00	1,926.5	Circulate 1.5 x bottoms up to flush cement from drill sting and annulus.
PH0	P	CMP	21:30	22:30	1.00	1,926.5	Cement plug #2 1727m to 1604m - Mix and pump 39.8bbl of 15.8ppg cement slurry - Pump 3.6bbl water - Displace cement with 68bbl mud - CIP @ 22:25hrs.
PH0	P	CMP	22:30	23:30	1.00	1,926.5	Rig down surface lines - POOH slowly f/ 1727m t/ 1422m.
PH0	P	CMP	23:30	24:00	0.50	1,926.5	Circulate 1.5 x bottoms up to flush cement from drill sting and annulus.

Operations for Period 0000 Hrs to 0600 Hrs On 31 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
ABN	P	CMP	00:00	00:30	0.50	1,926.5	Continue circulate bottoms up to flush cement from drill string and annulus.
ABN	P	CMP	00:30	01:30	1.00	1,926.5	Cement Plug #3: From 1,422m to 1,315m - Mix and pump 35.2bbl of 15.6ppg cement slurry - Pump 3.7bbl water - Displace cement with 51bbl mud - CIP @ 01:15hrs.
ABN	P	CMP	01:30	02:00	0.50	1,926.5	Rig down surface lines - POOH slowly from 1,422 to 1,237m.

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Drillsearch

Well : Triclops-1 Drilling

ABN	P	CMP	02:00	02:30	0.50	1,926.5	Circulate 1.5 x bottoms up to flush cement from drill string and annulus.
ABN	P	CMP	02:30	03:00	0.50	1,926.5	POOH from 1,237 to 892m.
ABN	P	CMP	03:00	03:30	0.50	1,926.5	Pump 30bbl Hi-Vis pill and displace with 34.5bbl mud.
ABN	P	CMP	03:30	03:45	0.25	1,926.5	POOH from 892m to 792m.
ABN	P	CMP	03:45	04:45	1.00	1,926.5	Cement Plug #4: from 792m to 702m. Mix and pump 26.7bbl of 15.8ppg cement slurry. Pump 4.9bbl water. Displace cement with 22.5bbl mud. CIP @ 04:25hrs.
ABN	P	CMP	04:45	05:15	0.50	1,926.5	POOH from 792m to 617m.
ABN	P	CMP	05:15	05:45	0.50	1,926.5	Circulate 1.5 x bottoms up to flush cement from drill sting and annulus.
ABN	P	CMP	05:45	06:00	0.25	1,926.5	[In Progress] POOH laying out DP from 617m to 48m.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	618.8	92.1
TP	0.0	0.0	4.0	0.6
U	0.0	0.0	49.2	7.3
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	672.0	100.0

WBM Data — **Cost Today:** $ 853

Mud Desc:	4PHB	API FL:	9.0 cm³/30min	Cl:	34,200 %	Solids:	7.8 %	Glycol:	
Check Depth:	1,926.0 m	Filter-Cake:	1 /32nd"	KCl:	2.5 %	H2O:	92 %	Viscosity:	42 s/qt
Time:	08:00	HTHP-FL:		Hard/Ca:	450.00 mg/L	Sand:	2.0 %	PV:	10 cP
Weight:	9.10 ppg	HTHP-Cake:		MBT:	0.30 %	pH:	9	YP:	18 lbf/100ft²
Temp:	38.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	8 lbf/100ft²
		HTHP-Press:		Pf:	0.15	Mf:	0.50 m³	Gel 10m:	12 lbf/100ft²

Comment:	RPM	Reading

Pumps

Pump data - Last 24 Hrs

No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	Slow Pump Data SPM	Slow Pump Data SPP (psi)
1	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10		
2	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10	60 40	400 300

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #5

BHA Type:	Cement Stinger	Total Weight Wet:	
Depth In/Out:	1,926.0 m/1,926.0 m	Weight Below Jar Wet:	
Date In/Out:	#28 (30 Jan 2013)/#30 (01 Feb 2013)		
Total Length:	59.7 m		
BHA Description:	5 X 2-7/8" EUE TBG, X/O, X/O		
BHA Run Comment:			

Drillsearch

Well : Triclops-1 Drilling

BHA Daily Summary

Pickup Weight:	84 klb	Torque (max):	0 ft-lbs	D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:	84 klb	Torque Avg. Off Bottom:	0 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	84 klb	Torque Avg. On Bottom:	0 ft-lbs	H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:	0.00 h			D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
2.875" EUE Tubing	Open Ended	58.48	2.875	2.091		
Crossover	2-7/8" EUE PIN X NC38 BOX	0.53	4.875	2.375	475-20	
Crossover	NC38 PIN X NC46 BOX	0.67	6.250	2.375	65-120	

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:		HSI:	0.00 hp/in²		

Drilling Parameters

BHA Run #4

Top Depth:		PWD ECD:	
Bottom Depth:	1,926.5 m		

	Min	Avg	Max
Flow	0 galUS/min	0 galUS/min	0 galUS/min
Surface RPM	0 rpm	0 rpm	0 rpm
Downhole RPM	0 rpm	0 rpm	0 rpm
Pressure	0 psi	0 psi	0 psi
Torque	0 ft-lbs	0 ft-lbs	0 ft-lbs
WOB	0 klbs	0 klbs	0 klbs
ROP	0.00 m/h	0.00 m/h	0.00 m/h

Formations

Name	Top (m)
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0
Cadna-Owie Formation	1,311.0
Murta Formation	1,397.5
Namur Sandstone	1,424.5
Westbourne Formation	1,516.5
Adori Sandstone	1,594.5
Birkhead Formation	1,634.5
Hutton Sandstone	1,727.0
Poolowanna Formation	1,926.5

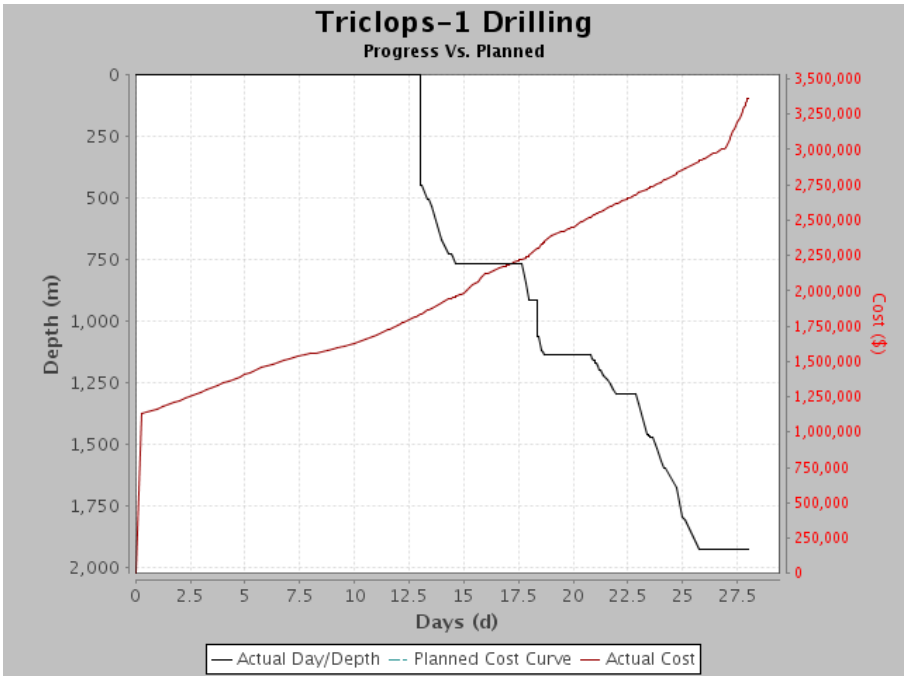
Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	21
		Drillsearch	4
		Sub Contractor	9
		Oil Industry Catering Services	4
		Total	38

Drillsearch

Well : Triclops-1 Drilling

Bulk Stocks							
Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		23,081	0	81	0	23,000
Pot Water (ltr)	ltr		46,000	0	11,100	0	34,900
Camp Fuel (ltr)	ltr		2,600	0	300	0	2,300



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling

Report Number :	29	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data

Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,926.5 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,926.5 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	0.0 m	TOL MD:		Orig. & Sup.	$ 3,447,294
RT to GL	5.20 m	Days On Well:	29.00	TOL TVD:		AFE:	
Plan TD (MD):	2,021.0 m	Days Since Spud:	17.48	Lnr Shoe MD:		Daily Cost:	$ 156,181
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Cum. Cost:	$ 3,519,268
		FIT/LOT:	/16.72 ppg			Last LTI Date:	05 Feb 2012
						Days Since LTI:	361

Current Op @ 0600:	Nipple down BOP
Planned Op:	Complete nipple down BOP. Remove CHF. Complete tank cleaning. Rig Release. Rig Down and prepare to move.

Summary for Period 0000 Hrs to 2400 Hrs on 31 Jan 2013

Pump P&A Plug 3: 1,315m -1,422m and Plug 4: 702m - 792m. Pull back and lay out drill pipe. RIH to 617m and tag top of cement @ 663m. Pressure test cement to 1600psi, 10min Test. POOH and lay out drill pipe. RIH with stinger and place Plug 5 from 30mRT to GL.

Operations for Period 0000 Hrs to 2400 Hrs On 31 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
ABN	P	CMP	00:00	00:30	0.50	1,926.5	Continue circulate bottoms up to flush cement from drill string and annulus.
ABN	P	CMP	00:30	01:30	1.00	1,926.5	Cement Plug #3: From 1,422m to 1,315m - Mix and pump 35.2bbl of 15.6ppg cement slurry - Pump 3.7bbl water - Displace cement with 51bbl mud - CIP @ 01:15hrs.
ABN	P	CMP	01:30	02:00	0.50	1,926.5	Rig down surface lines - POOH slowly from 1,422 to 1,237m.
ABN	P	CMP	02:00	02:30	0.50	1,926.5	Circulate 1.5 x bottoms up to flush cement from drill string and annulus.
ABN	P	CMP	02:30	03:00	0.50	1,926.5	POOH from 1,237 to 892m.
ABN	P	CMP	03:00	03:30	0.50	1,926.5	Pump 30bbl Hi-Vis pill and displace with 34.5bbl mud.
ABN	P	CMP	03:30	03:45	0.25	1,926.5	POOH from 892m to 792m.
ABN	P	CMP	03:45	04:45	1.00	1,926.5	Cement Plug #4: from 792m to 702m. Mix and pump 26.7bbl of 15.8ppg cement slurry. Pump 4.9bbl water. Displace cement with 22.5bbl mud. CIP @ 04:25hrs.
ABN	P	CMP	04:45	05:15	0.50	1,926.5	POOH from 792m to 617m.
ABN	P	CMP	05:15	05:45	0.50	1,926.5	Circulate 1.5 x bottoms up to flush cement from drill sting and annulus.
ABN	P	CMP	05:45	08:00	2.25	1,926.5	POOH laying out DP from 617m to 48m.
ABN	P	CMP	08:00	09:00	1.00	1,926.5	RIH with DP stands from derrick to 480m.
ABN	P	CMP	09:00	10:30	1.50	1,926.5	POOH laying out DP from 480m to 48m.
ABN	P	CMP	10:30	11:30	1.00	1,926.5	RIH with DP stands from derrick to 617m.
ABN	P	CMP	11:30	15:00	3.50	1,926.5	Circulate hole clean while wait on cement.
ABN	P	CMP	15:00	15:30	0.50	1,926.5	RIH and tag hard cement @ 663m - POOH to 655m.
ABN	P	CMP	15:30	16:45	1.25	1,926.5	Pressure test cement plug to 1600psi from 10mins.
ABN	P	CMP	16:45	19:45	3.00	1,926.5	Held PJSM - POOH laying out DP from 655m to 48m.
ABN	P	CMP	19:45	20:30	0.75	1,926.5	Change elevators - Rack 2 7/8" EUE cement stinger in derrick.
ABN	P	CMP	20:30	21:00	0.50	1,926.5	Change elevators and retrieve wear bushing.
ABN	P	CMP	21:00	21:30	0.50	1,926.5	RIH with balance of DP stands from derrick to 192m.
ABN	P	CMP	21:30	22:15	0.75	1,926.5	POOH laying out DP from 192m to surface.
ABN	P	CMP	22:15	23:30	1.25	1,926.5	Change elevators - Pick up cement stinger - Push chemical sacks down hole to form raft at 30m.

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Drillsearch

Well : Triclops-1 Drilling

Operations for Period 0000 Hrs to 2400 Hrs On 31 Jan 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
ABN	P	CMP	23:30	24:00	0.50	1,926.5	Set cement Plug #5: from 30mRT to 5mRT - Halliburton pump 10bbl water - Mix and pump 6.3bbl cement slurry @ 15.8ppg - Displace cement with 0.1bbl water.

Operations for Period 0000 Hrs to 0600 Hrs On 01 Feb 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
ABN	P	CMP	00:00	01:00	1.00	1,926.5	Rig down Halliburton cement equipment and lines - Lay out 2 7/8" cement stinger.
ABN	P	CMP	01:00	01:30	0.50	1,926.5	Lay out 2 7/8" equipment - Clear DP and 2 7/8" cement stinger from pipe racks.
RMO	P	RBR	01:30	06:00	4.50	1,926.5	[In Progress] Flush BOP, Kill, Choke manifold, and Kelly with fresh water. Open ram doors, clean ram cavities, close and retorque doors. Dump and start cleaning mud tanks. Remove flowline, bell nipple, kill and choke lines, Mud gas separator vent line, flare line. Depressure Koomey system and remove Koomey control lines. Nipple down BOP stanck and install on stump.

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	24.0	100.0	642.8	92.3
TP	0.0	0.0	4.0	0.6
U	0.0	0.0	49.2	7.1
Undefined	0.0	0.0	0.0	0.0
Total	24.0	100.0	696.0	100.0

WBM Data — **Cost Today:** $ 0

Mud Desc:	4PHB	API FL:	8.0 cm³/30min	Cl:	33,500 %	Solids:	7.3 %	Glycol:	
Check Depth:	1,926.0 m	Filter-Cake:	1 /32nd"	KCl:	2.0 %	H2O:	93 %	Viscosity:	42 s/qt
Time:	08:00	HTHP-FL:		Hard/Ca:	400.00 mg/L	Sand:	1.5 %	PV:	8 cP
Weight:	9.10 ppg	HTHP-Cake:		MBT:	0.10 %	pH:	9	YP:	22 lbf/100ft²
Temp:	38.0 °C	HTHP-Temp:		Pm:	0.10 m³	PHPA:		Gel 10s:	9 lbf/100ft²
		HTHP-Press:		Pf:	0.14	Mf:	0.50 m³	Gel 10m:	13 lbf/100ft²

Comment:	**RPM**	**Reading**

Pumps

		Pump data - Last 24 Hrs							**Slow Pump Data**	
No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	SPM	SPP (psi)
1	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10		
2	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10	60	400
									40	300

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

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Drillsearch

Well : Triclops-1 Drilling

BHA #5

BHA Type:	Cement Stinger	Total Weight Wet:	
Depth In/Out:	1,926.0 m/1,926.0 m	Weight Below Jar Wet:	
Date In/Out:	#28 (30 Jan 2013)/#30 (01 Feb 2013)		
Total Length:	59.7 m		

BHA Description: 5 X 2-7/8" EUE TBG, X/O, X/O

BHA Run Comment:

BHA Daily Summary

Pickup Weight:	84 klb	Torque (max):	0 ft-lbs	D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:	84 klb	Torque Avg. Off Bottom:	0 ft-lbs	D.C. (2) Ann Velocity:	0 ft/s
String Weight:	84 klb	Torque Avg. On Bottom:	0 ft-lbs	H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:	0.00 h			D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
2.875" EUE Tubing	Open Ended	58.48	2.875	2.091		
Crossover	2-7/8" EUE PIN X NC38 BOX	0.53	4.875	2.375	475-20	
Crossover	NC38 PIN X NC46 BOX	0.67	6.250	2.375	65-120	

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:		HSI:	0.00 hp/in²		

Drilling Parameters

BHA Run #4

Top Depth:		PWD ECD:	
Bottom Depth:	1,926.5 m		

	Min	Avg	Max
Flow	0 galUS/min	0 galUS/min	0 galUS/min
Surface RPM	0 rpm	0 rpm	0 rpm
Downhole RPM	0 rpm	0 rpm	0 rpm
Pressure	0 psi	0 psi	0 psi
Torque	0 ft-lbs	0 ft-lbs	0 ft-lbs
WOB	0 klbs	0 klbs	0 klbs
ROP	0.00 m/h	0.00 m/h	0.00 m/h

Formations

Name	Top (m)
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0
Cadna-Owie Formation	1,311.0
Murta Formation	1,397.5
Namur Sandstone	1,424.5
Westbourne Formation	1,516.5
Adori Sandstone	1,594.5
Birkhead Formation	1,634.5
Hutton Sandstone	1,727.0
Poolowanna Formation	1,926.5

Drillsearch

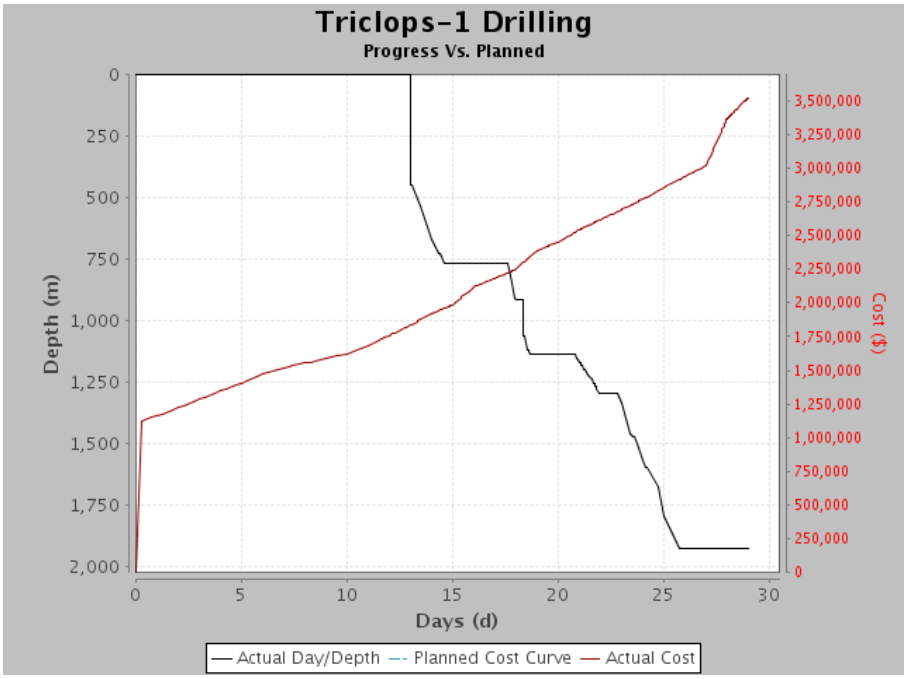
Well : Triclops-1 Drilling

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	20
		Drillsearch	4
		Sub Contractor	10
		Oil Industry Catering Services	4
		Total	38

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		23,000	0	1,500	0	21,500
Pot Water (ltr)	ltr		34,900	0	3,400	0	31,500
Camp Fuel (ltr)	ltr		2,300	0	350	0	1,950



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Drillsearch

Well : Triclops-1 Drilling

Triclops-1 Drilling

Report Number :	30	Day Wellsite Representative:	Guy L. Holmes	Rig Manager:	Scott Cameron
Latitude (South)	141° 14' 40.40"	Night Wellsite Representative:	Kevin Gordon	Drilling Company:	ENSIGN
Longitude (East)	25° 59' 43.40"			Wellsite Geologist:	Andrew James

Well Data

Country:	Australia	Current Hole Size:	8.500 in	Casing OD:	9.625 in	AFE Number:	OPS-13-015
Field:		Measured Depth:	1,926.5 m	Casing MD:	762.7 m	Original AFE:	$ 3,447,294
Rig:	Ensign 918	True Vertical Depth:	1,926.5 m	Casing TVD:	762.7 m	Supp AFE No:	
Ground Level:	141.0 m	24 Hr Progress:	0.0 m	TOL MD:		Orig. & Sup. AFE:	$ 3,447,294
RT to GL	5.20 m	Days On Well:	29.46	TOL TVD:		Daily Cost:	$ 63,146
Plan TD (MD):	2,021.0 m	Days Since Spud:	17.94	Lnr Shoe MD:		Cum. Cost:	$ 3,582,414
Plan TD (TVD):	2,021.0 m	Last BOP Date:	19 Jan 2013	Lnr Shoe TVD:		Last LTI Date:	05 Feb 2012
		FIT/LOT:	/16.72 ppg			Days Since LTI:	362

Current Op @ 0600:
Planned Op:

Summary for Period 0000 Hrs to 2400 Hrs on 01 Feb 2013

Lay out cementing tools and rig down cementers. Layout handling gear and clear drill pipe from racks. Flush BOP, Kill and Choke manifold. Open doors and clean BOP cavities and bolt doors.
Rig down flowline, kill and choke lines. Nipple down BOPs and mount on stump. Cut Casing head above cellar floor and cap well. Clean tanks.

RIG RELEASE 11:00 Hrs.

Operations for Period 0000 Hrs to 2400 Hrs On 01 Feb 2013

PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
ABN	P	CMP	00:00	01:00	1.00	1,926.5	Rig down Halliburton cement equipment and lines - Lay out 2 7/8" cement stinger.
ABN	P	CMP	01:00	01:30	0.50	1,926.5	Lay out 2 7/8" equipment - Clear DP and 2 7/8" cement stinger from pipe racks.
RMO	P	RBR	01:30	09:30	8.00	1,926.5	Flush BOP, Kill, Choke manifold, and Kelly with fresh water. Open ram doors, clean ram cavities, close and retorque doors. Dump and start cleaning mud tanks. Remove flowline, bell nipple, kill and choke lines, Mud gas separator vent line, flare line. Depressure Koomey system and remove Koomey control lines. Nipple down BOP stanck and install on stump.
RMO	P	CCT	09:30	11:00	1.50	1,926.5	Rig up casing head drive tool, unable to back off casing head. Cut 9 5/8" stump above cellar floor. Layout head. Tanks cleaned. RIG RELEASE

Performance Summary

	Daily		Cumulative Well	
	Hrs	%	Hrs	%
P	11.0	100.0	653.8	92.5
TP	0.0	0.0	4.0	0.6
U	0.0	0.0	49.2	7.0
Undefined	0.0	0.0	0.0	0.0
Total	11.0	100.0	707.0	100.0

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Drillsearch

Well : Triclops-1 Drilling

Pumps

Pump data - Last 24 Hrs

No	Type	Liner (in)	SPM	Eff. (%)	Flow (galUS/min)	SPP (psi)	Depth (m)	MW (ppg)	Slow Pump Data SPM	Slow Pump Data SPP (psi)
1	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10		
2	Continental Emsco/F-800	5.500	80	97		1,532	1,808.0	9.10	60	400
									40	300

Casing

OD	LOT	FIT	Casing Shoe (MD)	Casing Shoe (TVD)
406 mm (16")			11.0 m	11.0 m
244 mm (9 5/8")	16.70 ppg		762.7 m	762.7 m

BHA #5

BHA Type:	Cement Stinger	Total Weight Wet:	
Depth In/Out:	1,926.0 m/1,926.0 m	Weight Below Jar Wet:	
Date In/Out:	#28 (30 Jan 2013)/#30 (01 Feb 2013)		
Total Length:	59.7 m		

BHA Description: 5 X 2-7/8" EUE TBG, X/O, X/O

BHA Run Comment:

BHA Daily Summary

Pickup Weight:		Torque (max):		D.C. (1) Ann Velocity:	0 ft/s
Slack-Off Weight:		Torque Avg. Off Bottom:		D.C. (2) Ann Velocity:	0 ft/s
String Weight:		Torque Avg. On Bottom:		H.W.D.P. Ann. Velocity:	0 ft/s
Jars Hours Logged:	0.00 h			D.P. Ann. Velocity:	0 ft/s

Summary:

BHA Component

Equipment	Description	Length (m)	OD (in)	ID (in)	Serial #	Hours
2.875" EUE Tubing	Open Ended	58.48	2.875	2.091		
Crossover	2-7/8" EUE PIN X NC38 BOX	0.53	4.875	2.375	475-20	
Crossover	NC38 PIN X NC46 BOX	0.67	6.250	2.375	65-120	

Directional Data

Slide Time:		Rotate Time:		Circ. Time:	
Slide (%):		Rotate (%):		Circ. (%):	
Total Slide Time:	0.00 h	Total Rotate Time:	0.00 h	Total Circ. Time:	0.00 h
Total Revs:		HSI:	0.00 hp/in²		

Drilling Parameters

BHA Run #4

Top Depth:		PWD ECD:	
Bottom Depth:	1,926.5 m		

	Min	Avg	Max
Flow	0 galUS/min	0 galUS/min	0 galUS/min
Surface RPM	0 rpm	0 rpm	0 rpm
Downhole RPM	0 rpm	0 rpm	0 rpm
Pressure	0 psi	0 psi	0 psi
Torque	0 ft-lbs	0 ft-lbs	0 ft-lbs
WOB	0 klbs	0 klbs	0 klbs
ROP	0.00 m/h	0.00 m/h	0.00 m/h

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Drillsearch

Well : Triclops-1 Drilling

Formations

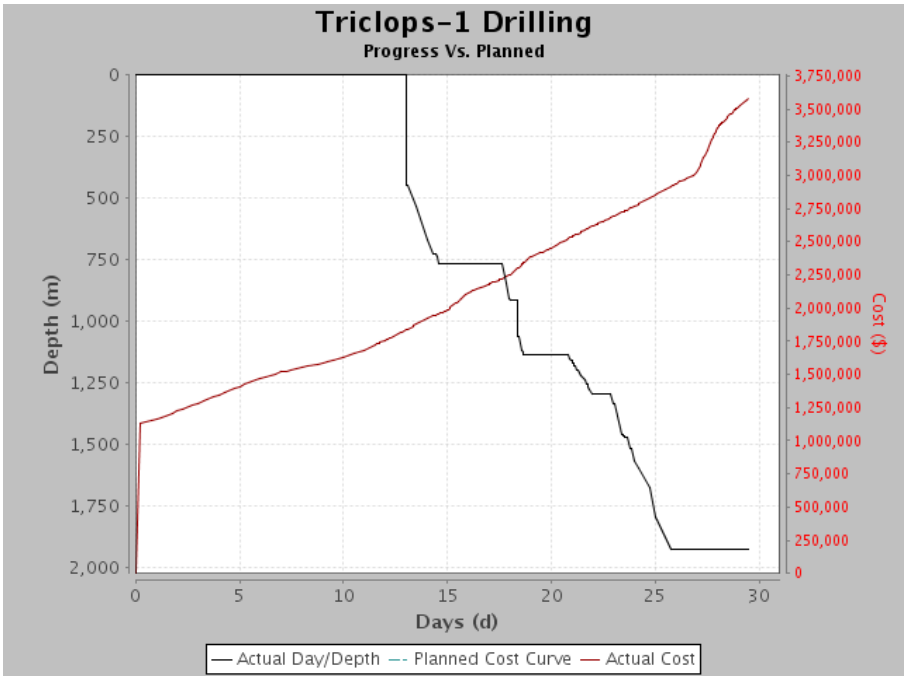
Name	Top (m)
Mackunda Formation	641.5
Allaru Mudstone	745.0
Toolebuc Formation	1,038.0
Wallumbilla Formation	1,094.0
Cadna-Owie Formation	1,311.0
Murta Formation	1,397.5
Namur Sandstone	1,424.5
Westbourne Formation	1,516.5
Adori Sandstone	1,594.5
Birkhead Formation	1,634.5
Hutton Sandstone	1,727.0
Poolowanna Formation	1,926.5

Personnel On Board

Job Title	Personnel	Company	Pax
		ENSIGN	20
		Drillsearch	4
		Sub Contractor	10
		Oil Industry Catering Services	4
		Total	38

Bulk Stocks

Name	Unit	Start Amount	Previous Balance	In	Used	Adjust	Balance
Diesel Fuel (ltr)	ltr		21,500	0	0	0	21,500
Pot Water (ltr)	ltr		31,500	0	0	0	31,500
Camp Fuel (ltr)	ltr		1,950	0	0	0	1,950



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Appendix 2 – Drilling Mud Reports

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	1	Total MD	60	to	60	m
Rig #	918	Total VD	0	to	60	m
Date	1/14/2013	Daily Depth Drilled			0	m
Spud Date	1/14/2013	Interval Depth Drilled			0	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Ray Miller/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 12.25	Baker Hughes PDC	14 14 14 14 14 / 14 14 0 0 0	15.25 Riser Length m	HOLE VOL 18 / MUD INHOLE 18	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (")	TYPE	LENGTH 0 m	16 Conductor @ 20 m	Active Pits 338 / Reserve Pits 141	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (")	TYPE HW	LENGTH 0 m	Surface @ m	TOTAL CIRCULATING VOL 356	BBL / STK 0.0642 / STK / MIN 169
DRILL COLLAR SIZE (") 8	6.5	LENGTH 51 9 m	Intermediate @ m	STORAGE TANKS 0	BBL / MIN 10.84 / GAL / MIN 455
			Prod. or LNR @ m		CIRCULATION PRESS 114 psi; SURFACE TO BIT 0 min; BOTTOMS UP 2 min; TOT CIRC TIME 33 min; ECD

MUD PROPERTIES

		Pit	Pit
SAMPLE FROM			
MUD TYPE		4KPP	4KPP
TIME SAMPLE TAKEN		16:00	20:00
FLOWLINE TEMPERATURE	°F / °C	84 29	86 30
TOTAL MEASURED DEPTH (TMD)	Metres	25	60
WEIGHT	ppg / SG	8.7 1.04	8.8 1.06
FUNNEL VISCOSITY (sec / qt) API		35	38
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	16 10	20 12
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	8 5	10 6
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	4 2	6 4
PLASTIC VISCOSITY cP @	120 °F / 49 °C	6	8
YIELD POINT (lb / 100 ft^2)	120 °F / 49 °C	4	4
GEL STRENGTH (lb / 100 ft^2)	10sec/10min/30min	2 4	4 7
LOW SHEAR RATE VISCOSITY (LSRV)			
n K (lb / 100 ft^2)		0.68 0.15	0.74 0.12
API FILTRATE (cm^3 / 30 min.)		13.6	14
HPHT FILTRATE (cm^3 / 30 min.)	°F / °C		
API : HPHT (Cake / 32nd in.)		2	2
pH		9.5	9.5
ALKALINITY MUD (Pm)		0.15	0.20
ALKALINITY FILTRATE (Pf / Mf)		0.14 0.4	0.17 0.5
CHLORIDE (mg / L)		2100	1950
TOTAL HARDNESS AS CALCIUM (mg / L)		430	500
SULPHITE (mg / L)			
KCL (% by Wt.)		4.0	4.0
K + (mg / L)		21616	21616
PHPA (Calc ppb)		0.5	0.5
METHYLENE BLUE CAPACITY (ppb / % by vol)			
BENTONITE ADDED (ppb / % by vol)		25 2.8	25 2.8
OTHER PRODUCTS ADDED (ppb / % by vol)		0.0	
OIL (% by Vol)			
TOTAL WATER (% by Vol)		97.1	96.3
TOTAL SOLIDS (% by Vol)		3.0	3.7
SAND (% by Vol)		0.2	0.2

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.8 - 9.0	Vis (F)	40 - 65	Yld Pt	5 - 18
API Los	15 - 12	pH	9.0 - 9.5	KCl	4 - 3

MUD COMMENTS

We analysed water sample at the turkeys nest and characterized to be high in chlorides and total hardness of 2000 ppm and 450 ppm respectively. The water was treated with soda ash and caustic soda at 0.2 ppb to raised pH to 9.0-9.5. Premixing 4% KCl, 0.5 ppb PAC-LV and 25-30 ppb PHB at premix tank. A total of 420 bbls of fresh mud at the active system has been prepared. Applied max shear by hopper and gunline nozzle, mud pump for 3 hours.Spudded in ran the Scomo cetrifuge after the 1st 20 m drilled with finer shaker screen.

OPERATIONAL COMMENTS

Made up 12.25 in dia PDC bit and BHA. Spudded at 1230H from surface to 60 mVD with FMR at reporting time. Note: Totco survey every 30 m drilled.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	486	S.C.E.	21	Start Vol	0
Chemical	32	Discharge	0	Received	0
Sump/SeaWat	0	Downhole	0	Backload	0
Other Rec'd	0	Tripping	0	Built	518
Other Built	0	Other	0	Lost sub	0
				Lost srf	21

TOTAL MUD ON RIG (bbls) : 497

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Maxigel	25 Kg Sack	756	0	291	465
KCl (fine)	25 Kg Sack	960	0	164	796
Rheopac L	25 Kg Sack	105	0	8	97
Caustic Soda	25 Kg Drum	32	0	4	28
Soda Ash	25 Kg Sack	48	0	4	44
Xanthan Gum (P)	25 Kg Sack	80	0	3	77

SOLIDS CONTROL EQUIPMENT

Type		Hrs	OF	UF
Desander	Cone Size Qty 0	0	0	0
Desilter	Cone Size Qty 0	0	0	0
Mud Cleaner		0	0	0
Centrifuge 1	Scomo DE-1000	6	8.9	10.3
Centrifuge 2		0	0	0
Cuttings Dryer		0	0	0
Degasser		0		
Shale Shaker #1	100x100x100x170	8		
Shale Shaker #2	170x170x100x100	8		
		0		
		0		
		0		

SOLIDS ANALYSIS

Salt %	0.9	HGS %	
		LGS %	2.6
Corrected Solids %	2.6	Drilled Solids%	-0.1

Time Breakdown

Analysis Item	Hrs
Drilling	11
M/U BHA	3
Other	10

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$10.642.65	$10.642.65

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	2	Total MD	60	to	361	m
Rig #	918	Total VD	60	to	361	m
Date	1/15/2013	Daily Depth Drilled			301	m
Spud Date	1/14/2013	Interval Depth Drilled			301	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Ray Miller/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD: ATP539	LOCATION: Cooper Basin / STATE: Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 12.25	Baker Hughes PDC	14 14 14 14 14 / 14 14 0 0 0	15.25 Riser Length m	HOLE VOL 147 / MUD INHOLE 147	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 181 m	16 Conductor @ 20 m	Active Pits 269 / Reserve Pits 140	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	Surface @ m	TOTAL CIRCULATING VOL 416	BBL / STK 0.0642 / STK / MIN 165
DRILL COLLAR SIZE (") 8	6.5	LENGTH 51 90 m	Intermediate @ m	STORAGE TANKS 0	BBL / MIN 10.59 / GAL / MIN 445
			Prod. or LNR @ m		

CIRCULATION DATA		
CIRCULATION PRESS	229	psi
SURFACE TO BIT	1	min
BOTTOMS UP	13	min
TOT CIRC TIME	39	min
ECD		

MUD PROPERTIES

MUD PROPERTIES		Pit	Pit	Pit
SAMPLE FROM		Pit	Pit	Pit
MUD TYPE		4KPP	4KPP	4KPP
TIME SAMPLE TAKEN		8:00	14:00	20:00
FLOWLINE TEMPERATURE	°F / °C	88 31	88 31	88 31
TOTAL MEASURED DEPTH (TMD)	Metres	195	265	361
WEIGHT	ppg / SG	8.8 1.06	9.0 1.08	9.0 1.08
FUNNEL VISCOSITY (sec / qt) API		38	40	40
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	30 25	32 29	31 27
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	18 13	22 17	20 15
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	5 3	5 3	6 4
PLASTIC VISCOSITY cP @	120 °F / 49 °C	5	3	4
YIELD POINT (lb / 100 ft2)	120 °F / 49 °C	20	26	23
GEL STRENGTH (lb / 100 ft2)	10sec/10min/30min	3 5	4 6	5 7
LOW SHEAR RATE VISCOSITY (LSRV)				
n K (lb / 100 ft2)		0.26 4.85	0.14 11.97	0.20 7.80
API FILTRATE (cm3 / 30 min.)		12	11.5	12
HPHT FILTRATE (cm3 / 30 min.)	°F / °C			
API : HPHT (Cake / 32nd in.)		2	2	2
pH		9.5	9.5	9.0
ALKALINITY MUD (Pm)		0.14	0.15	0.14
ALKALINITY FILTRATE (Pf / Mf)		0.24 0.6	0.26 1.1	0.25 0.8
CHLORIDE (mg / L)		35000	40000	38000
TOTAL HARDNESS AS CALCIUM (mg / L)		450	500	550
SULPHITE (mg / L)				
KCL (% by Wt.)		4.0	4.0	4.0
K + (mg / L)		21616	21616	21616
PHPA (Calc ppb)		0.5	0.5	0.15
METHYLENE BLUE CAPACITY (ppb / % by vol)		25.0 2.7	26.0 2.9	25.0 2.7
BENTONITE ADDED (ppb / % by vol)		30 3.3	25 2.8	28 3.1
OTHER PRODUCTS ADDED (ppb / % by vol)				
OIL (% by Vol)				
TOTAL WATER (% by Vol)		95.0	93.0	93.5
TOTAL SOLIDS (% by Vol)		5.0	7.0	6.5
SAND (% by Vol)		1.5	2	1.5

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.8 - 9.0	Vis (F)	40 - 65	Yld Pt	5 - 18
API Los	15 - 12	pH	9.0 - 9.5	KCl	4 - 3

MUD COMMENTS

Prepared fresh mud for dilution at the premix to raise the FV of the active system from 38 to 40 spq as required to ensure hole cleaning and maintain active mud volume. Treated the active mud with caustic soda,soda ash and idcide 20 to maintain the pH-9.0-9.5, reduced total hardness and prevent bacterial degradation of polymers. Added KCl (depletion rate 1%), PHB, pac-LV, JK-161LV additives to maintain good mud properties of the active. Changed shaker screen from fine to coarse due to coarse size cuttings done by a PDC bit. Ran the centrifuge to reduce solids maintaining MW between 8.8 - 9.0 ppg.

OPERATIONAL COMMENTS

Drilling ahead 12.25 in dia hole from 60 mVD to 361 mVD at reporting time. Circulated bottoms up prior to Totco survey every 30 mVD drilled.

Losses of mud about 80 bbls to sump when Shaker no. 2 broke down. Circulating at low pumprate while underwent repair.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
				Start Vol	497
Drill Water	218	S.C.E.	169	Received	0
Chemical	30	Discharge	0	Backload	0
Sump/SeaWat	0	Downhole	0	Built	248
Other Rec'd	0	Tripping	10	Lost sub	0
Other Built	0	Other	10	Lost srf	189

TOTAL MUD ON RIG (bbls) : 556

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Maxigel	25 Kg Sack	465	0	253	212
KCl (fine)	25 Kg Sack	796	0	152	644
Rheopac L	25 Kg Sack	97	0	12	85
Xanthan Gum (P)	25 Kg Sack	77	0	8	69
Caustic Soda	25 Kg Drum	28	0	7	21
Soda Ash	25 Kg Sack	44	0	4	40
Idcide-20	20 Ltr Drum	64	0	2	62
JK-161 LV	25 Kg Sack	80	0	2	78

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		24	8.9	9.8
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	100x100x100x100		24		
Shale Shaker #2	100x100x100x100		24		
			0		
			0		
			0		

SOLIDS ANALYSIS

Salt %	2.9	HGS %	
		LGS %	2.1
Corrected Solids %	2.1	Drilled Solids%	-1.0

Time Breakdown

Analysis Item	Hrs
Drilling	22
Circulating	2

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$11,792.95	$22,435.60

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	3	Total MD	361 to 614		m
Rig #	918	Total VD	361 to 614		m
Date	1/16/2013	Daily Depth Drilled		253	m
Spud Date	1/14/2013	Interval Depth Drilled		554	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Ray Miller/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 12.25	Baker Hughes PDC	14 14 14 14 14 / 14 14 0 0 0	15.25 Riser Length m	HOLE VOL 264 / MUD INHOLE 264	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 372 m	16 Conductor @ 20 m	Active Pits 267 / Reserve Pits 163	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	Surface @ 0 m	TOTAL CIRCULATING VOL 531	BBL / STK 0.0642 / STK / MIN 164
DRILL COLLAR SIZE (") 8	6.5	LENGTH 51 90 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 10.52 / GAL / MIN 442
			Prod. or LNR @ 0 m		CIRCULATION PRESS 500 psi; SURFACE TO BIT 2 min; BOTTOMS UP 23 min; TOT CIRC TIME 50 min; ECD 9.2

MUD PROPERTIES

		Pit	FL	Pit
SAMPLE FROM				
MUD TYPE		4KPP	4KPP	4KPP
TIME SAMPLE TAKEN		8:00	14:00	20:00
FLOWLINE TEMPERATURE	°F / °C	87 / 31		88 / 31
TOTAL MEASURED DEPTH (TMD)	Metres	515	552	614
WEIGHT	ppg / SG	9.1 / 1.09	9.1 / 1.09	9.1 / 1.09
FUNNEL VISCOSITY (sec / qt) API		45	44	44
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	38 / 32	39 / 32	37 / 31
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	23 / 16	24 / 15	22 / 14
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	9 / 7	9 / 6	9 / 7
PLASTIC VISCOSITY cP @	120 °F / 49 °C	6	7	6
YIELD POINT (lb / 100 ft2)	120 °F / 49 °C	26	25	25
GEL STRENGTH (lb / 100 ft2)	10sec/10min/30min	8 12	7 11	8 10
LOW SHEAR RATE VISCOSITY (LSRV)				
n K (lb / 100 ft2)		0.25 6.82	0.29 5.40	0.26 6.32
API FILTRATE (cm3 / 30 min.)		12	11	12
HPHT FILTRATE (cm3 / 30 min.)	°F / °C			
API : HPHT (Cake / 32nd in.)		2	2	2
pH		9.0	9.5	9.5
ALKALINITY MUD (Pm)		0.20	0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.30 0.7	0.20 0.7	0.15 0.6
CHLORIDE (mg / L)		42000	46000	43000
TOTAL HARDNESS AS CALCIUM (mg / L)		1000	1800	1400
SULPHITE (mg / L)				
KCL (% by Wt.)		5.0	4.0	4.0
K + (mg / L)		27020	21616	21616
PHPA (Calc ppb)		1	1	1
METHYLENE BLUE CAPACITY (ppb / % by vol)		28.0 3.1	27.0 3.0	28.0 3.1
BENTONITE ADDED (ppb / % by vol)				25 2.8
OTHER PRODUCTS ADDED (ppb / % by vol)				
OIL (% by Vol)				
TOTAL WATER (% by Vol)		92.3	92.8	92.3
TOTAL SOLIDS (% by Vol)		7.8	7.3	7.8
SAND (% by Vol)		2	1.5	2

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.8 - 9.0	Vis (F)	40 - 65	Yld Pt	5 - 18
API Los	15 - 12	pH	9.0 - 9.5	KCl	4 - 3

MUD COMMENTS

Prepared fresh mud 4% KCl/PHPA/PHB at the premix for dilution and to maintained active mud volume level due to mud losses at the surface equipments and downhole seepages. Treated active with soda ash and SI-70P at .5 ppb each due to the progressive increase in TH from 1000 ppm to 1800 ppm.

Dressed up screen to finer mesh when cuttings appeared to be from coarse size to little bit finersize.Maintained good mud properties as per program. Increased the FV of the active from 40 to 45 spq to gained a YP of 25 to ensure the hole is cleaned.

OPERATIONAL COMMENTS

Drilling ahead 12.25 in dia hole from 361 mVD to 614 mVD with FMR. Circulated bottoms up prior to Totco survey. There was no reported obstruction nor drag while drilling at reporting time.

Water Source Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	254	S.C.E.	102	Start Vol	556
Chemical	16	Discharge	5	Received	0
Sump/SeaWat	0	Downhole	10	Backload	0
Other Rec'd	0	Tripping	10	Built	270
Other Built	0	Other	5	Lost sub	10
				Lost srf	122

TOTAL MUD ON RIG (bbls) : 694

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Maxigel	25 Kg Sack	212	0	107	105
KCl (fine)	25 Kg Sack	644	0	80	564
JK-161 LV	25 Kg Sack	78	0	10	68
Xanthan Gum (P)	25 Kg Sack	69	0	7	62
Caustic Soda	25 Kg Drum	21	0	4	17
Rheopac L	25 Kg Sack	85	0	3	82
Soda Ash	25 Kg Sack	40	0	3	37
SI-70P	20 Ltr Drum	16	0	2	14

SOLIDS CONTROL EQUIPMENT

Type		Hrs	OF	UF
Desander	Cone Size Qty 0	0	0	0
Desilter	Cone Size Qty 0	0	0	0
Mud Cleaner		0	0	0
Centrifuge 1	Scomo DE-1000	24	8.6	12.8
Centrifuge 2		0	0	0
Cuttings Dryer		0	0	0
Degasser		0		
Shale Shaker #1	170x170x100x100	24		
Shale Shaker #2	100x100x100x100	24		
		0		
		0		
		0		

SOLIDS ANALYSIS

Salt %	3.2	HGS %	
		LGS %	2.6
Corrected Solids %	2.6	Drilled Solids%	-0.2

Time Breakdown

Analysis Item	Hrs
Drilling	22
Circulating	2

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$7,223.55	$29,659.15

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	4	Total MD	614	to	766	m
Rig #	918	Total VD	614	to	766	m
Date	1/17/2013	Daily Depth Drilled			152	m
Spud Date	1/14/2013	Interval Depth Drilled			706	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Ray Miller/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD: ATP539	LOCATION: Cooper Basin / STATE: Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 12.25	Baker Hughes PDC	14 14 14 14 14 / 14 14 0 0 0	15.25 Riser Length m	HOLE VOL 331 / MUD INHOLE 331	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 586 m	Conductor @ 0 m	Active Pits 232 / Reserve Pits 17	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	Surface @ m	TOTAL CIRCULATING VOL 563	BBL / STK 0.0642 / STK / MIN 177
DRILL COLLAR SIZE (") 8	6.5	LENGTH 51 90 m	Intermediate @ m	STORAGE TANKS 0	BBL / MIN 11.36 / GAL / MIN 477
			Prod. or LNR @ m		CIRCULATION PRESS 628 psi; SURFACE TO BIT 2 min; BOTTOMS UP 27 min; TOT CIRC TIME 50 min; ECD 9.2

MUD PROPERTIES

		Pit	Pit	Pit
SAMPLE FROM		Pit	Pit	Pit
MUD TYPE		4KPP	4KPP	4KPP
TIME SAMPLE TAKEN		8:00	14:00	20:00
FLOWLINE TEMPERATURE	°F / °C	108 42	110 43	
TOTAL MEASURED DEPTH (TMD)	Metres	731	740	766
WEIGHT	ppg / SG	9.0 1.08	9.1 1.09	8.9 1.07
FUNNEL VISCOSITY (sec / qt) API		46	47	49
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	50 40	55 40	55 40
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	33 26	35 28	35 28
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	12 9	13 10	13 10
PLASTIC VISCOSITY cP @	120 °F / 49 °C	10	15	15
YIELD POINT (lb / 100 ft2)	120 °F / 49 °C	30	25	25
GEL STRENGTH (lb / 100 ft2)	10sec/10min/30min	9 11 13	10 12 14	10 12 14
LOW SHEAR RATE VISCOSITY (LSRV)				
n K (lb / 100 ft2)		0.32 5.38	0.46 2.28	0.46 2.28
API FILTRATE (cm3 / 30 min.)		12	11	11
HPHT FILTRATE (cm3 / 30 min.)	°F / °C			
API : HPHT (Cake / 32nd in.)		2	2	2
pH		9.5	9.5	9.5
ALKALINITY MUD (Pm)		0.10	0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.22 0.8	0.22 1.0	0.20 1.0
CHLORIDE (mg / L)		33400	35500	35500
TOTAL HARDNESS AS CALCIUM (mg / L)		1500	1600	1600
SULPHITE (mg / L)				
KCL (% by Wt.)		3.6	3.3	3.3
K + (mg / L)		19454	17833	17833
PHPA (Calc ppb)		1	1	1
METHYLENE BLUE CAPACITY (ppb / % by vol)		27.0 3.0	26.0 2.9	26.0 2.9
BENTONITE ADDED (ppb / % by vol)		25 2.8	25 2.8	25 2.8
OTHER PRODUCTS ADDED (ppb / % by vol)				
OIL (% by Vol)				
TOTAL WATER (% by Vol)		93.0	92.8	94.3
TOTAL SOLIDS (% by Vol)		7.0	7.3	5.8
SAND (% by Vol)		2	1.5	1.5

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.8 - 9.0	Vis (F)	40 - 65	Yld Pt	5 - 18
API Los	15 - 12	pH	9.0 - 9.5	KCl	4 - 3

MUD COMMENTS

Treated the active by mixing soda ash and SI-70P to neutralize the high TH. Post treatment showed decline by 200 ppm TH and 10,000 ppm Cl. We minimized fresh mud build up nearing TD by limiting the volume in the active at 232 bbls. Maintained good mud properties by adding Pac-LV and JK161-LV.

Dressed up the shaker screens with finer mesh and ran the centrifuge till TD at 766 mVD to decrease the amount of solids from MW of 9.1 ppg to 8.9 ppg.

OPERATIONAL COMMENTS

Drillling 12 1/4 in. dia. Hole from 614 mVD to programmed TD at 766 mVD. Circulated 3 cycles to clean the hole. Pumped 35 bbls HVM and set at the bottom. POOH to surface at reporting time. Note:A tight spot at 733 mVD was encountered. Reamed and proceeded drilling ahead.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
				Start Vol	694
Drill Water	44	S.C.E.	127	Received	0
Chemical	4	Discharge	0	Backload	0
Sump/SeaWat	0	Downhole	15	Built	48
Other Rec'd	0	Tripping	10	Lost sub	15
Other Built	0	Other	10	Lost srf	147

TOTAL MUD ON RIG (bbls) : 580

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	1042	0	44	998
JK-161 LV	25 Kg Sack	68	0	12	56
Soda Ash	25 Kg Sack	37	0	10	27
Xanthan Gum (P)	25 Kg Sack	62	0	6	56
Rheopac L	25 Kg Sack	82	0	1	81
SI-70P	20 Ltr Drum	14	0	1	13

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		22	8.9	10.5
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	170x170x170x170		18		
Shale Shaker #2	140x140x140x140		18		

SOLIDS ANALYSIS

Salt %	2.6	HGS %	
		LGS %	1.6
Corrected Solids %	1.6	Drilled Solids%	-1.1

Time Breakdown

Analysis Item	Hrs
Drilling	14
Circulating	4
Tripping	6

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$3,074.70	$32,733.95

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	5	Total MD	766	to	766	m
Rig #	918	Total VD	766	to	766	m
Date	1/18/2013	Daily Depth Drilled			0	m
Spud Date	1/14/2013	Interval Depth Drilled			0	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD: ATP539	LOCATION: Cooper Basin / STATE: Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 12.25	None	0 0 0 0 0 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 188 / MUD INHOLE 188	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 0 m	16 Conductor @ 20 m	Active Pits 421 / Reserve Pits 129	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 0 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 609	BBL / STK / STK / MIN
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 0 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN / GAL / MIN
			Prod. or LNR @ 0 m		

CIRCULATION PRESS psi
SURFACE TO BIT 0 min
BOTTOMS UP 0 min
TOT CIRC TIME min
ECD

MUD PROPERTIES

SAMPLE FROM		Pit								
MUD TYPE		4PHB								
TIME SAMPLE TAKEN		8:00								
FLOWLINE TEMPERATURE	°F / °C									
TOTAL MEASURED DEPTH (TMD)	Metres	766								
WEIGHT	ppg / SG	9.1	1.09							
FUNNEL VISCOSITY (sec / qt) API		48								
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	49	39							
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	32	25							
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	12	9							
PLASTIC VISCOSITY cP @	120 °F / 49 °C	10								
YIELD POINT (lb / 100 ft2)	120 °F / 49 °C	29								
GEL STRENGTH (lb / 100 ft2)	10sec/10min/30min	10	12	14						
LOW SHEAR RATE VISCOSITY (LSRV)										
n K (lb / 100 ft2)		0.33	5.01							
API FILTRATE (cm3 / 30 min.)		12								
HPHT FILTRATE (cm3 / 30 min.)	°F / °C									
API : HPHT (Cake / 32nd in.)		2								
pH		9.5								
ALKALINITY MUD (Pm)		0.10								
ALKALINITY FILTRATE (Pf / Mf)		0.20	0.7							
CHLORIDE (mg / L)		32000								
TOTAL HARDNESS AS CALCIUM (mg / L)		1500								
SULPHITE (mg / L)										
KCL (% by Wt.)		3.0								
K + (mg / L)		16212								
PHPA (Calc ppb)										
METHYLENE BLUE CAPACITY (ppb / % by vol)		26.0	2.9							
BENTONITE ADDED (ppb / % by vol)		25	2.8							
OTHER PRODUCTS ADDED (ppb / % by vol)										
OIL (% by Vol)										
TOTAL WATER (% by Vol)		92.3								
TOTAL SOLIDS (% by Vol)		7.8								
SAND (% by Vol)		2								

MUD PROPERTY SPECIFICATIONS

Mud Wt	0	Vis (F)	0	Yld Pt	0
API Los	0	pH	0	KCl	0

MUD COMMENTS

The active recycled KPP has been treated with 0.5 ppb soda ash, SI-70P, Sod bicarbonate and idcide 20 to reduce hardness,prevent cement contam and prevent bacterial infection in polymers.Pre-mixing the total active mud using the hopper.
The shale shaker being dressed with 170x4 for SS#1 and 200x4 for SS#2. Ran centrifuge to bring down MW from 9.1 to 8.9 ppg due to solids.
Dumped sand trap (OCR approval) to free from cuttings and solids and cleaned up.

OPERATIONAL COMMENTS

Rigged up 9 5/8 casing tools. RIH 66 joints K55, 9 5/8 in. casing succesfully and set at 761 mVD. Circulated 2x casing volume and clean hole.
Rigged up Halliburton cementing head. Conducted cementing job with Lead slurry of 11.8 ppg and tail of 15.8 ppg. WOC at 1530H.. Nippling up BOP at reporting time.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	26	S.C.E.	35	Start Vol	580
Chemical	1	Discharge	10	Received	0
Sump/SeaWat	0	Downhole	-106	Backload	0
Other Rec'd	0	Tripping	20	Built	27
Other Built	0	Other	-90	Lost sub	-106
				Lost srf	-25

TOTAL MUD ON RIG (bbls) : 738

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	998	0	26	972
SI-70P	20 Ltr Drum	13	0	4	9
Soda Ash	25 Kg Sack	27	0	4	23
Idcide-20	20 Ltr Drum	62	0	3	59
Sodium Bicarbonate	25 Kg Sack	48	0	1	47

SOLIDS CONTROL EQUIPMENT

Type					Hrs	OF	UF
Desander	Cone Size		Qty	0	0	0	0
Desilter	Cone Size		Qty	0	0	0	0
Mud Cleaner					0	0	0
Centrifuge 1	Scomo DE-1000				15	8.9	12.6
Centrifuge 2					0	0	0
Cuttings Dryer					0	0	0
Degasser					0		
Shale Shaker #1	170x170x170x170				12		
Shale Shaker #2	140x140x140x140				12		

SOLIDS ANALYSIS

Salt %	2.4	HGS %	
		LGS %	3.4
Corrected Solids %	3.4	Drilled Solids%	0.6

Time Breakdown

Analysis Item	Hrs
Running Casing	9
Circulating	2
Tripping	2
Cementing Job	4
Nipple-up BOP	2
Other	5

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$1,089.10	$33,823.05

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	6	Total MD	766	to 766	m
Rig #	918	Total VD	766	to 766	m
Date	1/19/2013	Daily Depth Drilled		0	m
Spud Date	1/14/2013	Interval Depth Drilled		0	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	None	0 0 0 0 0 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 187 / MUD INHOLE 187	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 0 m	16 Conductor @ 20 m	Active Pits 421 / Reserve Pits 129	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 0 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 608	BBL / STK / STK / MIN
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 0 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN / GAL / MIN
			Prod. or LNR @ 0 m		CIRCULATION PRESS psi; SURFACE TO BIT 0 min; BOTTOMS UP 0 min; TOT CIRC TIME min; ECD 9 ppg

MUD PROPERTIES

SAMPLE FROM		Pit			Pit					
MUD TYPE		4PHB			4PHB					
TIME SAMPLE TAKEN		8:00			16:00					
FLOWLINE TEMPERATURE	°F / °C									
TOTAL MEASURED DEPTH (TMD)	Metres	766			766					
WEIGHT	ppg / SG	9.0	1.08		9.0	1.08				
FUNNEL VISCOSITY (sec / qt) API		47			46					
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	50	39		48	39				
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	35	30		37	33				
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	15	11		14	10				
PLASTIC VISCOSITY cP @	120 °F / 49 °C	11			9					
YIELD POINT (lb / 100 ft2)	120 °F / 49 °C	28			30					
GEL STRENGTH (lb / 100 ft2)	10sec/10min/30min	11	15	18	10	14	17			
LOW SHEAR RATE VISCOSITY (LSRV)										
n K (lb / 100 ft2)		0.36	4.18		0.30	6.03				
API FILTRATE (cm3 / 30 min.)		12			11.5					
HPHT FILTRATE (cm3 / 30 min.)	°F / °C									
API : HPHT (Cake / 32nd in.)		2			2					
pH		9.5			9.5					
ALKALINITY MUD (Pm)		0.20			0.20					
ALKALINITY FILTRATE (Pf / Mf)		0.34	1.9		0.24	1.8				
CHLORIDE (mg / L)		32200			32000					
TOTAL HARDNESS AS CALCIUM (mg / L)		640			520					
SULPHITE (mg / L)		80			80					
KCL (% by Wt.)		3.0			3.0					
K + (mg / L)		16212			16212					
PHPA (Calc ppb)										
METHYLENE BLUE CAPACITY (ppb / % by vol)		26.0	2.9		26.0	2.9				
BENTONITE ADDED (ppb / % by vol)		25	2.8		25	2.8				
OTHER PRODUCTS ADDED (ppb / % by vol)										
OIL (% by Vol)										
TOTAL WATER (% by Vol)		93.5			93.5					
TOTAL SOLIDS (% by Vol)		6.5			6.5					
SAND (% by Vol)		1.5			1.5					

MUD PROPERTY SPECIFICATIONS

Mud Wt	0	Vis (F)	0	Yld Pt	0
API Los	0	pH	0	KCl	0

MUD COMMENTS

Pretreated premix with the sodium sulphite to neutralize the oxygenated recycled active mud. Post lab test on the active at static cond has been done after treatment with SI-70P and Soda ash.The TH has already been declined by 65% relative to DMR#5. The TH has a conc of 520 ppm while Chloride is 32000 ppm.

Dressed up shale shakers with 170x4 for SS#1 and 200x4 for SS#2 has already been done and completed. Conducted regular PMS on centrifuge by opening the bowl removed cakes and washed down, greasingl etc.and done. Resumed operation to bring down the MW from 9.0 to 8.9 ppg prior to LOT.

OPERATIONAL COMMENTS

Nippled up BOP and accessories. BOP pressure tests at reporting time.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	10	S.C.E.	13	Start Vol	738
Chemical	2	Discharge	0	Received	0
Sump/SeaWat	0	Downhole	0	Backload	0
Other Rec'd	0	Tripping	0	Built	12
Other Built	0	Other	0	Lost sub	0
				Lost srf	13

TOTAL MUD ON RIG (bbls) : 737

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	972	0	22	950
KCl (fine)	25 Kg Sack	564	0	12	552
Sodium Sulphite	25 Kg Sack	48	0	4	44
SI-70P	20 Ltr Drum	9	0	2	7
Soda Ash	25 Kg Sack	23	0	2	21
Idcide-20	20 Ltr Drum	59	0	1	58

SOLIDS CONTROL EQUIPMENT

Type					Hrs	OF	UF
Desander	Cone Size		Qty	0	0	0	0
Desilter	Cone Size		Qty	0	0	0	0
Mud Cleaner					0	0	0
Centrifuge 1	Scomo DE-1000				15	8.8	14.5
Centrifuge 2					0	0	0
Cuttings Dryer					0	0	0
Degasser					0		
Shale Shaker #1	170x170x170x170				0		
Shale Shaker #2	140x140x140x140				0		
					0		
					0		
					0		

SOLIDS ANALYSIS

Salt %	2.4	HGS %	
		LGS %	2.6
Corrected Solids %	2.6	Drilled Solids%	-0.1

Time Breakdown

Analysis Item	Hrs
Nipple-up BOP	8
BOP Test	12
Other	4

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$951.30	$34,774.36

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	7	Total MD	766	to 849	m
Rig #	918	Total VD	766	to 849	m
Date	1/20/2013	Daily Depth Drilled		83	m
Spud Date	1/14/2013	Interval Depth Drilled		83	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 171 / MUD INHOLE 171	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 658 m	16 Conductor @ 20 m	Active Pits 485 / Reserve Pits 140	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 656	BBL / STK 0.0642 / STK / MIN 160
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 154 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 10.27 / GAL / MIN 431
			Prod. or LNR @ 0 m		CIRCULATION PRESS 550 psi; SURFACE TO BIT 3 min; BOTTOMS UP 14 min; TOT CIRC TIME 64 min; ECD 9.32 ppg

MUD PROPERTIES

SAMPLE FROM				Pit		Pit				
MUD TYPE				4PHB		4PHB				
TIME SAMPLE TAKEN				17:00		20:00				
FLOWLINE TEMPERATURE		°F / °C		114	46	113	45			
TOTAL MEASURED DEPTH (TMD)		Metres		811		849				
WEIGHT		ppg / SG		8.9	1.07	8.9	1.07			
FUNNEL VISCOSITY (sec / qt) API				44		45				
RHEOLOGY 600 : 300 RPM		120 °F / 49 °C		50	39	49	38			
RHEOLOGY 200 : 100 RPM		120 °F / 49 °C		32	26	30	25			
RHEOLOGY 6 : 3 RPM		120 °F / 49 °C		13	9	12	10			
PLASTIC VISCOSITY cP @		120 °F / 49 °C		11		11				
YIELD POINT (lb / 100 ft2)		120 °F / 49 °C		28		27				
GEL STRENGTH (lb / 100 ft2)		10sec/10min/30min		9	12 14	10	13 15			
LOW SHEAR RATE VISCOSITY (LSRV)										
n K (lb / 100 ft2)				0.36	4.18	0.37	3.86			
API FILTRATE (cm3 / 30 min.)				12.5		12				
HPHT FILTRATE (cm3 / 30 min.)		°F / °C								
API : HPHT (Cake / 32nd in.)				2		2				
pH				9.5		9.5				
ALKALINITY MUD (Pm)				0.10		0.10				
ALKALINITY FILTRATE (Pf / Mf)				0.20	1.1	0.20	0.9			
CHLORIDE (mg / L)				33500		33000				
TOTAL HARDNESS AS CALCIUM (mg / L)				600		550				
SULPHITE (mg / L)				80		80				
KCL (% by Wt.)				3.5		4.0				
K + (mg / L)				18914		21616				
PHPA (Calc ppb)										
METHYLENE BLUE CAPACITY (ppb / % by vol)				26.0	2.9	26.0	2.9			
BENTONITE ADDED (ppb / % by vol)				25	2.8	25	2.8			
OTHER PRODUCTS ADDED (ppb / % by vol)										
OIL (% by Vol)										
TOTAL WATER (% by Vol)				93.8		93.8				
TOTAL SOLIDS (% by Vol)				6.3		6.3				
SAND (% by Vol)				2		2				

MUD PROPERTY SPECIFICATIONS

Mud Wt	0	Vis (F)	0	Yld Pt	0
API Los	0	pH	0	KCl	0

MUD COMMENTS

The 4% KCl/PHB/Pol recycled mud sheared slowly to the system by displacing the water inside hole after DOC. Pre-treated the recycled mud with sod bicarbonate to neutralize cement contamination.Maintained the treatment on hardness by soda ash and SI-70P in the active mud.Prepare 130 bbls fresh KPP mud for dilution on the active system.

Ran the centrifuge and maintained MW-8.9 ppg.

OPERATIONAL COMMENTS

BOP pressure tested and done. Made up BHA and 8 1/2 in dia PDC bit. RIH drill string and tagged TOC at 741 m. DOC and shoe with water on a short system.Clean hole and shifted from water to recycled mud. Resumed drilling 8 1/2 in dia hole from 766 mVD to 769 mVD and conducted LOT.Continued drilling from 769 mVD to 849 mVD with FMR at reporting time.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	121	S.C.E.	35	Start Vol	737
Chemical	4	Discharge	9	Received	0
Sump/SeaWat	0	Downhole	15	Backload	0
Other Rec'd	0	Tripping	5	Built	125
Other Built	0	Other	2	Lost sub	15
				Lost srf	51

TOTAL MUD ON RIG (bbls) : 796

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	780	0	121	659
KCl (fine)	25 Kg Sack	552	0	38	514
Rheopac L	25 Kg Sack	81	0	2	79
Sodium Bicarbonate	25 Kg Sack	47	0	2	45
Xanthan Gum (P)	25 Kg Sack	56	0	2	54
Idcide-20	20 Ltr Drum	58	0	1	57
SI-70P	20 Ltr Drum	7	0	1	6
Soda Ash	25 Kg Sack	21	0	1	20
Sodium Sulphite	25 Kg Sack	44	0	1	43

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		17	8.7	14.3
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	170x170x170x170		17		
Shale Shaker #2	200x200x200x200		17		
			0		
			0		
			0		

SOLIDS ANALYSIS

Salt %	2.6	HGS %	
		LGS %	1.6
Corrected Solids %	1.6	Drilled Solids%	-1.1

Time Breakdown

Analysis Item	Hrs
BOP Test	1
Tripping	3
Drilling	20

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$2,050.91	$36,825.28

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	8	Total MD	849	to	1134	m
Rig #	918	Total VD	849	to	1134	m
Date	1/21/2013	Daily Depth Drilled			285	m
Spud Date	1/14/2013	Interval Depth Drilled			368	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 272 / MUD INHOLE 230	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 942 m	16 Conductor @ 20 m	Active Pits 420 / Reserve Pits 109	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 650	BBL / STK 0.0642 / STK / MIN 164
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 154 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 10.52 / GAL / MIN 442
			Prod. or LNR 0 m		CIRCULATION PRESS 1171 psi; SURFACE TO BIT 4 min; BOTTOMS UP 18 min; TOT CIRC TIME 62 min; ECD 9.5 ppg

MUD PROPERTIES

		FL	FL	Pit
SAMPLE FROM				
MUD TYPE		4PHB	4PHB	4PHB
TIME SAMPLE TAKEN		8:00	16:00	20:00
FLOWLINE TEMPERATURE	°F / °C	134 / 57	136 / 58	
TOTAL MEASURED DEPTH (TMD)	Metres	1046	1134	1134
WEIGHT	ppg / SG	9.0 / 1.08	9.0 / 1.08	9.0 / 1.08
FUNNEL VISCOSITY (sec / qt) API		52	48	48
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	56 / 42	45 / 36	45 / 36
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	31 / 25	34 / 30	34 / 30
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	15 / 13	17 / 15	18 / 16
PLASTIC VISCOSITY cP @	120 °F / 49 °C	14	9	9
YIELD POINT (lb / 100 ft2)	120 °F / 49 °C	28	27	27
GEL STRENGTH (lb / 100 ft2)	10sec/10min/30min	18 20 22	17 20 23	17 20 23
LOW SHEAR RATE VISCOSITY (LSRV)				
n K (lb / 100 ft2)		0.41 3.16	0.32 4.84	0.32 4.84
API FILTRATE (cm3 / 30 min.)		13	13	13
HPHT FILTRATE (cm3 / 30 min.)	°F / °C			
API : HPHT (Cake / 32nd in.)		2	2	2
pH		9.5	9.5	9.5
ALKALINITY MUD (Pm)		0.20	0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.32 1.7	0.16 0.6	0.16 0.6
CHLORIDE (mg / L)		34000	35000	35000
TOTAL HARDNESS AS CALCIUM (mg / L)		500	450	450
SULPHITE (mg / L)		80	80	80
KCL (% by Wt.)		4.0	4.5	5.0
K + (mg / L)		21616	24318	27020
PHPA (Calc ppb)				
METHYLENE BLUE CAPACITY (ppb / % by vol)		10.0 1.1	10.0 1.1	10.0 1.1
BENTONITE ADDED (ppb / % by vol)		8 0.9	8 0.9	8 0.9
OTHER PRODUCTS ADDED (ppb / % by vol)				
OIL (% by Vol)				
TOTAL WATER (% by Vol)		93.5	93.0	93.0
TOTAL SOLIDS (% by Vol)		6.5	7.0	7.0
SAND (% by Vol)		1.5	2	2

MUD PROPERTY SPECIFICATIONS

Mud Wt	0	Vis (F)	0	Yld Pt	0
API Los	0	pH	0	KCl	0

MUD COMMENTS

There was a progessive increase in FV from the normal of 45 spq went up to 60 spq,MW-9.0 ppg. The cuttings came out at the shakers appeared a matrix of sticky clay with small amout of cuttings thus, attributed to the increase in the viscosity of the active mud. All other mud properties are within limits per DF prog. To prevent bit balling,we rectified it by slowly sheared fresh light mud from premix with 4%KCl/.5 ppb PAC-LV and soda ash to active to return back the FV to normal levels. A make up water at possum belly being in place at 1-2 bbls to augment evaportion effects due to temp increased significantly from 40 to 57 deg C.at flow line.

OPERATIONAL COMMENTS

Drilling ahead 8.5 in dia from 849 mVD to 1134 mVD.Circulated hole clean.POOH to 9 5/8 in. dia. Surface casing to conduct survey using single shot at reporting time.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	60	S.C.E.	61	Start Vol	796
Chemical	7	Discharge	20	Received	0
Sump/SeaWat	0	Downhole	16	Backload	0
Other Rec'd	0	Tripping	5	Built	67
Other Built	0	Other	2	Lost sub	16
				Lost srf	88

TOTAL MUD ON RIG (bbls) : 759

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
KCl (fine)	25 Kg Sack	514	0	76	438
Water	1 bbl	659	0	60	599
Rheopac L	25 Kg Sack	79	0	4	75
Soda Ash	25 Kg Sack	20	0	2	18

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		16	8.9	11
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	270x270x270x270		16		
Shale Shaker #2	200x200x200x200		16		

SOLIDS ANALYSIS

Salt %	2.9	HGS %	
		LGS %	2.1
Corrected Solids %	2.1	Drilled Solids%	1.2

Time Breakdown

Analysis Item	Hrs
Drilling	16
Circulating	2
Logging	6

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$2,605.81	$39,431.09

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	9	Total MD	1134 to 1134		m
Rig #	918	Total VD	1134 to 1134		m
Date	1/22/2013	Daily Depth Drilled		0	m
Spud Date	1/14/2013	Interval Depth Drilled		368	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD: ATP539	LOCATION: Cooper Basin / STATE: Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 272 / MUD INHOLE 230	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 942 m	16 Conductor @ 20 m	Active Pits 374 / Reserve Pits 131	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 604	BBL / STK / STK / MIN
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 154 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN / GAL / MIN
			Prod. or LNR 0 m		CIRCULATION PRESS psi; SURFACE TO BIT 0 min; BOTTOMS UP 0 min; TOT CIRC TIME min; ECD 9 ppg

MUD PROPERTIES

		Pit	Pit
SAMPLE FROM		Pit	Pit
MUD TYPE		4PHB	4PHB
TIME SAMPLE TAKEN		8:00	16:00
FLOWLINE TEMPERATURE	°F / °C		
TOTAL MEASURED DEPTH (TMD)	Metres	1134	1134
WEIGHT	ppg / SG	9.0 1.08	8.9 1.07
FUNNEL VISCOSITY (sec / qt) API		47	45
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	45 36	44 36
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	34 30	30 27
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	18 16	14 10
PLASTIC VISCOSITY cP @	120 °F / 49 °C	9	8
YIELD POINT (lb / 100 ft2)	120 °F / 49 °C	27	28
GEL STRENGTH (lb / 100 ft2)	10sec/10min/30min	17 20 23	13 16 19
LOW SHEAR RATE VISCOSITY (LSRV)			
n K (lb / 100 ft2)		0.32 4.84	0.29 5.93
API FILTRATE (cm3 / 30 min.)		14	14
HPHT FILTRATE (cm3 / 30 min.)	°F / °C		
API : HPHT (Cake / 32nd in.)		2	2
pH		9.5	9.5
ALKALINITY MUD (Pm)		0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.20 0.6	0.20 0.7
CHLORIDE (mg / L)		33000	32500
TOTAL HARDNESS AS CALCIUM (mg / L)		550	500
SULPHITE (mg / L)		80	80
KCL (% by Wt.)		4.5	4.0
K + (mg / L)		24318	21616
PHPA (Calc ppb)			
METHYLENE BLUE CAPACITY (ppb / % by vol)		10.0 1.1	10.0 1.1
BENTONITE ADDED (ppb / % by vol)		8 0.9	8 0.9
OTHER PRODUCTS ADDED (ppb / % by vol)			
OIL (% by Vol)			
TOTAL WATER (% by Vol)		93.0	93.8
TOTAL SOLIDS (% by Vol)		7.0	6.3
SAND (% by Vol)		2	2

MUD PROPERTY SPECIFICATIONS

Mud Wt	0	Vis (F)	0	Yld Pt	0
API Los	0	pH	0	KCl	0

MUD COMMENTS

Treated the active mud while on static with Idcide 20 to prevent bacterial degradation in polymers. Equalized the active mud during mud conditioning. Ran agitators.

Ran the centrifuge maintained the feed rate at 35 gpm to drop the MW from 9.0 to 8.9 ppg.

Cleaned up possom belly, the shale shakers and ditches.

OPERATIONAL COMMENTS

Conducted single shot surveys at 20 m interval back to shoe till 548 mVD and well done. Full circulation/mud conditioning. RIH from 548 mVD to 741 mVD(inside casing) while waiting for Schlumberger DD and tools at reporting time.

Water Source Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	13	S.C.E.	27	Start Vol	759
Chemical	0	Discharge	0	Received	0
Sump/SeaWat	0	Downhole	0	Backload	0
Other Rec'd	0	Tripping	10	Built	13
Other Built	0	Other	0	Lost sub	0
				Lost srf	37

TOTAL MUD ON RIG (bbls) : 735

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	599	0	13	586
Idcide-20	20 Ltr Drum	57	32	2	87
Soda Ash	25 Kg Sack	18	48	1	65
Barite	25 Kg Sack	1120	152	0	1272
Fracseal (fine)	25 lb Sack	105	105	0	210
JK-161 LV	25 Kg Sack	56	40	0	96
KCl (fine)	25 Kg Sack	438	860	0	1298
Maxigel	25 Kg Sack	105	504	0	609
Quickseal (M)	18 Kg Sack	50	50	0	100
Sodium Sulphite	25 Kg Sack	43	48	0	91

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		15	8.8	14
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	270x270x270x270		3		
Shale Shaker #2	200x200x200x200		3		
			0		
			0		
			0		

SOLIDS ANALYSIS

Salt %	2.6	HGS %	
		LGS %	1.6
Corrected Solids %	1.6	Drilled Solids%	0.8

Time Breakdown

Analysis Item	Hrs
Logging	12
Tripping	9
Circulating	3

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$252.50	$39,683.59

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	10	Total MD	1134	to	1140	m
Rig #	918	Total VD	1134	to	1140	m
Date	1/23/2013	Daily Depth Drilled			6	m
Spud Date	1/14/2013	Interval Depth Drilled			374	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD: ATP539	LOCATION: Cooper Basin / STATE: Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 273; MUD INHOLE 232	PUMP SIZE 5.5 x 9 Inches; CIRCULATION PRESS 892 psi
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 954 m	16 Conductor @ 20 m	Active Pits 365; Reserve Pits 144	PUMP MODEL Emco F-800; % EFFICIENCY 97; SURFACE TO BIT 4 min
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 597	BBL / STK 0.0642; STK / MIN 151; BOTTOMS UP 20 min
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 148 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 9.69; GAL / MIN 407; TOT CIRC TIME 62 min
			Prod. or LNR @ 0 m		ECD 9.29 ppg

MUD PROPERTIES

		Pit	Pit	FL
SAMPLE FROM				
MUD TYPE		4PHB	4PHB	4PHB
TIME SAMPLE TAKEN		8:00	16:00	20:00
FLOWLINE TEMPERATURE	°F / °C			131 / 55
TOTAL MEASURED DEPTH (TMD)	Metres	1134	1134	1140
WEIGHT	ppg / SG	8.9 / 1.07	9.0 / 1.08	9.0 / 1.08
FUNNEL VISCOSITY (sec / qt) API		45	42	41
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	44 / 36	30 / 24	29 / 24
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	30 / 27	20 / 15	23 / 19
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	14 / 10	6 / 4	5 / 3
PLASTIC VISCOSITY cP @	120 °F / 49 °C	8	6	5
YIELD POINT (lb / 100 ft 2)	120 °F / 49 °C	28	18	19
GEL STRENGTH (lb / 100 ft 2)	10sec/10min/30min	13 16 19	5 8 10	6 8 11
LOW SHEAR RATE VISCOSITY (LSRV)				
n K (lb / 100 ft 2)		0.29 5.93	0.32 3.23	0.27 4.38
API FILTRATE (cm 3 / 30 min.)		12	12	12.5
HPHT FILTRATE (cm 3 / 30 min.)	°F / °C			
API : HPHT (Cake / 32nd in.)		2	2	2
pH		9.5	9.0	9.0
ALKALINITY MUD (Pm)		0.10	0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.20 0.7	0.22 0.8	0.20 0.6
CHLORIDE (mg / L)		32500	33500	33400
TOTAL HARDNESS AS CALCIUM (mg / L)		500	500	450
SULPHITE (mg / L)		40	40	40
KCL (% by Wt.)		4.0	4.0	4.0
K + (mg / L)		21616	21616	21616
PHPA (Calc ppb)				
METHYLENE BLUE CAPACITY (ppb / % by vol)		8.0 0.9	7.0 0.8	7.0 0.8
BENTONITE ADDED (ppb / % by vol)		6 0.7	6 0.7	6 0.7
OTHER PRODUCTS ADDED (ppb / % by vol)				
OIL (% by Vol)				
TOTAL WATER (% by Vol)		93.8	93.5	93.5
TOTAL SOLIDS (% by Vol)		6.3	6.5	6.5
SAND (% by Vol)		2	1.5	1.5

MUD PROPERTY SPECIFICATIONS

Mud Wt	0	Vis (F)	0	Yld Pt	0
API Los	0	pH	0	KCl	0

MUD COMMENTS

Treated active mud with 0.5 ppb Citric acid to reduce the pH from 9.5 to 9.0 unit. The recycled active mud has been sheared with the hopper pump for 3 hours.Conditioned mud by premixing 2 ppb PHB, 1 ppb Xantham gum and 0.5 Pac-Lv to reduce filter cake thickness and fluid loss and YP.

Dressed the shaker #1 with 325x4 while Shaker #2 with 200 x 4.

OPERATIONAL COMMENTS

POOH from 761 mVD to surface to change BHA.Made up BHA#3 (Pendulum). RIH from surface to shoe at 761 m.Crculated botms up.Continued RIH to 1102 mVD and reamed to 1136 mVD. Commenced drilling 8.5 in dia top hole production from 1136 mVD to 1140 mVD with FMR at reporting time.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	66	S.C.E.	40	Start Vol	735
Chemical	1	Discharge	0	Received	0
Sump/SeaWat	0	Downhole	6	Backload	0
Other Rec'd	0	Tripping	10	Built	67
Other Built	0	Other	5	Lost sub	6
				Lost srf	55

TOTAL MUD ON RIG (bbls) : 741

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	586	0	66	520
Maxigel	25 Kg Sack	609	0	10	599
Citric Acid	25 Kg Sack	20	0	2	18
Rheopac L	25 Kg Sack	75	0	2	73
Xanthan Gum (P)	25 Kg Sack	54	0	1	53

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		15	8.7	14
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	325x325x325x325		5		
Shale Shaker #2	200x200x200x200		5		
			0		
			0		
			0		

SOLIDS ANALYSIS

Salt %	2.7	HGS %	
		LGS %	2.3
Corrected Solids %	2.3	Drilled Solids%	1.7

Time Breakdown

Analysis Item	Hrs
M/U BHA	3
Tripping	8
Drilling	13

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$707.11	$40,390.70

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	11	Total MD	1140	to	1277	m
Rig #	918	Total VD	1140	to	1277	m
Date	1/24/2013	Daily Depth Drilled			137	m
Spud Date	1/14/2013	Interval Depth Drilled			511	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 305 / MUD INHOLE 261	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 1.091 m	16 Conductor @ 20 m	Active Pits 350 / Reserve Pits 130	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 611	BBL / STK 0.0642 / STK / MIN 155
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 148 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 9.94 / GAL / MIN 418
			Prod. or LNR @ 0 m		CIRCULATION PRESS 1000 psi; SURFACE TO BIT 5 min; BOTTOMS UP 21 min; TOT CIRC TIME 61 min; ECD 9.42 ppg

MUD PROPERTIES

SAMPLE FROM		Pit		Pit		Pit		
MUD TYPE		4PHB		4PHB		4PHB		
TIME SAMPLE TAKEN		8:00		16:00		20:00		
FLOWLINE TEMPERATURE	°F / °C	132	56	140	60	140	60	
TOTAL MEASURED DEPTH (TMD)	Metres	1213		1253		1277		
WEIGHT	ppg / SG	9.0	1.08	9.0	1.08	9.0	1.08	
FUNNEL VISCOSITY (sec / qt) API		45		43		44		
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	37	30	40	34	39	30	
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	27	23	27	23	26	22	
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	15	13	14	12	13	11	
PLASTIC VISCOSITY cP @	120 °F / 49 °C	7		6		9		
YIELD POINT (lb / 100 ft 2)	120 °F / 49 °C	23		28		21		
GEL STRENGTH (lb / 100 ft2)	10sec/10min/30min	11	13	15	10	12	14	12	14	16
LOW SHEAR RATE VISCOSITY (LSRV)								
n K (lb / 100 ft 2)		0.30	4.55	0.23	7.89	0.38	2.84	
API FILTRATE (cm 3 / 30 min.)		12		12.5		13		
HPHT FILTRATE (cm 3 / 30 min.)	°F / °C							
API : HPHT (Cake / 32nd in.)		2		2		2		
pH		9.0		9.0		9.0		
ALKALINITY MUD (Pm)		0.10		0.10		0.10		
ALKALINITY FILTRATE (Pf / Mf)		0.18	0.8	0.20	0.8	0.20	0.7	
CHLORIDE (mg / L)		34500		34500		34000		
TOTAL HARDNESS AS CALCIUM (mg / L)		400		450		450		
SULPHITE (mg / L)		40		40		40		
KCL (% by Wt.)		4.5		4.0		4.0		
K + (mg / L)		24318		21616		21616		
PHPA (Calc ppb)								
METHYLENE BLUE CAPACITY (ppb / % by vol)		5.0	0.6	6.0	0.7	6.0	0.7	
BENTONITE ADDED (ppb / % by vol)		4	0.4	4	0.4	5	0.6	
OTHER PRODUCTS ADDED (ppb / % by vol)								
OIL (% by Vol)								
TOTAL WATER (% by Vol)		93.0		93.5		93.5		
TOTAL SOLIDS (% by Vol)		7.0		6.5		6.5		
SAND (% by Vol)		2		1.5		1.5		

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.9-9.0	Vis (F)	40-45	Yld Pt	2 - 17
API Los	9-14	pH	9.0 - 9.5	KCl	%-3%

MUD COMMENTS

Active mud treated with 0.25 ppb of soda ash, SI-70P, sod sulphite and IDCIde 20 to control hardness, oxygenated water,and prevent from bacterial infection in polymers. The viscosity in the active being maintained and controlled by Xantham gum and maxigel betw 40-45 spq. Dilution of active with light mud done due to the flowline temp went up from 55 deg C to 60 deg C.
Re-dressed the SS#1 from 200x4 to 270x4 due to cuttings appeared to be fined siltstone. Ran the centrifuge to bring down MW from 9.0 ppg to 8.9 ppg.

OPERATIONAL COMMENTS

Drilling 8.5 in top hole production from 1140 mVD to 1277 mVD with FMR at reporting time. Note: Circulated btms up prior to conduct single shot survey every 20 m drilled.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	94	S.C.E.	58	Start Vol	741
Chemical	2	Discharge	5	Received	0
Sump/SeaWat	0	Downhole	18	Backload	0
Other Rec'd	0	Tripping	10	Built	96
Other Built	0	Other	5	Lost sub	18
				Lost srf	78

TOTAL MUD ON RIG (bbls) : 741

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	520	0	94	426
Maxigel	25 Kg Sack	599	0	8	591
Rheopac L	25 Kg Sack	73	0	7	66
Idcide-20	20 Ltr Drum	87	0	2	85
Xanthan Gum (P)	25 Kg Sack	53	0	2	51
SI-70P	20 Ltr Drum	6	0	1	5
Soda Ash	25 Kg Sack	65	0	1	64
Sodium Sulphite	25 Kg Sack	91	0	1	90

SOLIDS CONTROL EQUIPMENT

Type					Hrs	OF	UF
Desander	Cone Size		Qty	0	0	0	0
Desilter	Cone Size		Qty	0	0	0	0
Mud Cleaner					0	0	0
Centrifuge 1	Scomo DE-1000				22	8.7	14
Centrifuge 2					0	0	0
Cuttings Dryer					0	0	0
Degasser					0		
Shale Shaker #1	325x325x325x325				22		
Shale Shaker #2	270x270x270x270				22		
					0		
					0		
					0		

SOLIDS ANALYSIS

Salt %	2.7	HGS %	
		LGS %	2.3
Corrected Solids %	2.3	Drilled Solids%	1.8

Time Breakdown

Analysis Item	Hrs
Drilling	22
Circulating	2

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$1,803.01	$42,193.71

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	12	Total MD	1277	to	1297	m
Rig #	918	Total VD	1277	to	1297	m
Date	1/25/2013	Daily Depth Drilled			20	m
Spud Date	1/14/2013	Interval Depth Drilled			531	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD: ATP539	LOCATION: Cooper Basin / STATE: Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 309 / MUD INHOLE 263	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 1.101 m	16 Conductor @ 20 m	Active Pits 310 / Reserve Pits 92	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 573	BBL / STK 0.0642 / STK / MIN 170
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 158 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 10.91 / GAL / MIN 458
			Prod. or LNR @ 0 m		CIRCULATION PRESS 1486 psi; SURFACE TO BIT 4 min; BOTTOMS UP 20 min; TOT CIRC TIME 53 min; ECD 9.1 ppg

MUD PROPERTIES

		Pit		FL				
SAMPLE FROM		Pit		FL				
MUD TYPE		4PHB		4PHB				
TIME SAMPLE TAKEN		8:00		20:00				
FLOWLINE TEMPERATURE	°F / °C			136	58			
TOTAL MEASURED DEPTH (TMD)	Metres	1296		1297				
WEIGHT	ppg / SG	9.1	1.09	9.1	1.09			
FUNNEL VISCOSITY (sec / qt) API		42		41				
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	39	31	39	33			
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	26	22	27	23			
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	12	10	14	12			
PLASTIC VISCOSITY cP @	120 °F / 49 °C	8		6				
YIELD POINT (lb / 100 ft 2)	120 °F / 49 °C	23		27				
GEL STRENGTH (lb / 100 ft 2)	10sec/10min/30min	10	12	14	12	14	16	
LOW SHEAR RATE VISCOSITY (LSRV)								
n K (lb / 100 ft 2)		0.33	3.93	0.24	7.35			
API FILTRATE (cm 3 / 30 min.)		12		13				
HPHT FILTRATE (cm 3 / 30 min.)	°F / °C							
API : HPHT (Cake / 32nd in.)		2		2				
pH		9.0		9.0				
ALKALINITY MUD (Pm)		0.10		0.10				
ALKALINITY FILTRATE (Pf / Mf)		0.20	0.7	0.20	0.7			
CHLORIDE (mg / L)		33500		34000				
TOTAL HARDNESS AS CALCIUM (mg / L)		450		500				
SULPHITE (mg / L)		40		40				
KCL (% by Wt.)		4.0		4.0				
K + (mg / L)		21616		21616				
PHPA (Calc ppb)								
METHYLENE BLUE CAPACITY (ppb / % by vol)		6.0	0.7	6.0	0.7			
BENTONITE ADDED (ppb / % by vol)		5	0.6	4	0.4			
OTHER PRODUCTS ADDED (ppb / % by vol)								
OIL (% by Vol)								
TOTAL WATER (% by Vol)		92.8		92.8				
TOTAL SOLIDS (% by Vol)		7.3		7.3				
SAND (% by Vol)		1.5		1.5				

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.9-9.0	Vis (F)	40-45	Yld Pt	2 - 17
API Los	9-14	pH	9.0 - 9.5	KCl	%-3%

MUD COMMENTS

Pill tank with HVM has been premixed with Barite to increase MW from 9.0 to 11.0 ppg.15 bbls of which being slug into the drill string with hot mud (60 deg C) for safety of the crew during POOH break-out stands of pipe. The mud properties maintained good within the specs.

Ran the centrifuge with feedrate of 38 gpm to reduce the MW from 9.1 ppg(with barite contam MW 11.0 ppg) to 8.9 ppg

OPERATIONAL COMMENTS

Drilling 8.5 in dia top production hole from 1277 mVD to 1296 mVD. Circulated clean hole. POOH to run directional drilling assy.Made up DD BHA with mud motor and run from surface to casing shoe.Circulated bottoms up.Commenced survey by DD till the bottom at 1296 mVD. Commenced sliding 8.5 in hole from 1296 mVD to 1297 mVD with FMR at reporting time.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	15	S.C.E.	57	Start Vol	741
Chemical	1	Discharge	0	Received	0
Sump/SeaWat	0	Downhole	10	Backload	0
Other Rec'd	0	Tripping	15	Built	16
Other Built	0	Other	10	Lost sub	10
				Lost srf	82

TOTAL MUD ON RIG (bbls) : 665

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Barite	25 Kg Sack	1272	320	30	1562
Water	1 bbl	426	0	18	408
Caustic Soda	25 Kg Drum	17	32	0	49
Cellplug (Coarse)	25 lb Sack	35	35	0	70
Citric Acid	25 Kg Sack	18	20	0	38
Microflow	20 Ltr	32	16	0	48
Quickseal (C)	18 Kg Sack	25	25	0	50
Rheopac L	25 Kg Sack	66	70	0	136
Salt	25 Kg Sack	384	384	0	768
Sand Seal (fine)	25 Kg Sack	25	25	0	50
Xanthan Gum (P)	25 Kg Sack	51	40	0	91

SOLIDS CONTROL EQUIPMENT

Type					Hrs	OF	UF
Desander	Cone Size		Qty	0	0	0	0
Desilter	Cone Size		Qty	0	0	0	0
Mud Cleaner					0	0	0
Centrifuge 1	Scomo DE-1000				22	8.8	14
Centrifuge 2					0	0	0
Cuttings Dryer					0	0	0
Degasser					0		
Shale Shaker #1	325x325x325x325				4		
Shale Shaker #2	270x270x270x270				4		
					0		
					0		
					0		

SOLIDS ANALYSIS

Salt %	2.7	HGS %	
		LGS %	3.1
Corrected Solids %	3.1	Drilled Solids%	2.6

Time Breakdown

Analysis Item	Hrs
Drilling	4
Tripping	17
M/U BHA	3

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$357.00	$42,550.71

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	13	Total MD	1297	to	1521	m
Rig #	918	Total VD	1297	to	1521	m
Date	1/26/2013	Daily Depth Drilled			224	m
Spud Date	1/14/2013	Interval Depth Drilled			224	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD: ATP539	LOCATION: Cooper Basin / STATE: Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 361 / MUD INHOLE 310	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 1.325 m	16 Conductor @ 20 m	Active Pits 352 / Reserve Pits 49	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 662	BBL / STK 0.0642 / STK / MIN 182
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 158 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 11.68 / GAL / MIN 490
			Prod. or LNR @ 0 m		CIRCULATION PRESS 1778 psi; SURFACE TO BIT 5 min; BOTTOMS UP 22 min; TOT CIRC TIME 57 min; ECD 9.48 ppg

MUD PROPERTIES

		FL	Pit	Pit
SAMPLE FROM				
MUD TYPE		4PHB	4PHB	4PHB
TIME SAMPLE TAKEN		8:00	16:00	20:00
FLOWLINE TEMPERATURE	°F / °C	148 / 64		
TOTAL MEASURED DEPTH (TMD)	Metres	1440	1490	1521
WEIGHT	ppg / SG	9.1 / 1.09	9.1 / 1.09	9.1 / 1.09
FUNNEL VISCOSITY (sec / qt) API		40	44	43
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	38 / 30	42 / 32	40 / 31
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	25 / 21	27 / 21	26 / 21
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	12 / 10	14 / 11	13 / 11
PLASTIC VISCOSITY cP @	120 °F / 49 °C	8	10	9
YIELD POINT (lb / 100 ft 2)	120 °F / 49 °C	22	22	22
GEL STRENGTH (lb / 100 ft 2)	10sec/10min/30min	9 / 11 / 13	10 / 12 / 14	10 / 12 / 14
LOW SHEAR RATE VISCOSITY (LSRV)				
n K (lb / 100 ft 2)		0.34 / 3.58	0.39 / 2.78	0.37 / 3.13
API FILTRATE (cm 3 / 30 min.)		13	13	13.5
HPHT FILTRATE (cm 3 / 30 min.)	°F / °C			
API : HPHT (Cake / 32nd in.)		2	2	2
pH		9.0	9.0	
ALKALINITY MUD (Pm)		0.10	0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.18 / 0.5	0.16 / 0.8	0.18 / 0.7
CHLORIDE (mg / L)		35400	35000	34500
TOTAL HARDNESS AS CALCIUM (mg / L)		450	500	450
SULPHITE (mg / L)		40	40	40
KCL (% by Wt.)		4.5	4.0	4.0
K + (mg / L)		24318	21616	21616
PHPA (Calc ppb)		0.25	0.25	0.25
METHYLENE BLUE CAPACITY (ppb / % by vol)		5.0 / 0.6	6.0 / 0.7	6.0 / 0.7
BENTONITE ADDED (ppb / % by vol)		4 / 0.4	4 / 0.4	4 / 0.4
OTHER PRODUCTS ADDED (ppb / % by vol)				
OIL (% by Vol)				
TOTAL WATER (% by Vol)		92.8	92.8	92.8
TOTAL SOLIDS (% by Vol)		7.3	7.3	7.3
SAND (% by Vol)		1.5	1.5	1.5

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.9-9.0	Vis (F)	40-45	Yld Pt	2 - 17
API Los	9-14	pH	9.0 - 9.5	KCl	%-3%

MUD COMMENTS

Treated dilution water with 0.25 ppb soda ash. Premix KCl/PHB/poly at 1 -2 ppb to the active system to cover the depletion rate. DW total of about 30 bbls added into the active system to compensate the eveporation with flow line temp of 148 deg F.
Damaged Shaker screens of SS#1 with 325 mesh x 4 has been replaced with brand new 230x4. We don't have stock on the 325 mesh screens at site.

Ran the centrifuge with increased feedrate at 50 gpm to lower the MW from 9.1 ppg to 9.0 ppg.

OPERATIONAL COMMENTS

Drilling (Sliding/rotating) 8.5 in main production hole from 1297 mVD to 1521 mVD with FMR at reporting time. Take note: Rig pump #1 underwent repairs while circulating.

Water Source Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	141	S.C.E.	64	Start Vol	665
Chemical	2	Discharge	0	Received	0
Sump/SeaWat	0	Downhole	18	Backload	0
Other Rec'd	0	Tripping	10	Built	143
Other Built	0	Other	5	Lost sub	18
				Lost srf	79

TOTAL MUD ON RIG (bbls) : 711

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	411	0	141	270
KCl (fine)	25 Kg Sack	1298	0	8	1290
Maxigel	25 Kg Sack	591	0	8	583
Rheopac L	25 Kg Sack	136	0	4	132
Soda Ash	25 Kg Sack	64	0	4	60
JK-161 LV	25 Kg Sack	96	0	2	94
Xanthan Gum (P)	25 Kg Sack	91	0	2	89

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		24	8.8	15
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	230x230x230x230		24		
Shale Shaker #2	270x270x270x270		24		
			0		
			0		
			0		

SOLIDS ANALYSIS

Salt %	2.7	HGS %	
		LGS %	3.0
Corrected Solids %	3.0	Drilled Solids%	2.6

Time Breakdown

Analysis Item	Hrs
Drilling	19
Circulating	2
Other	3

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$1,538.01	$44,088.72

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	14	Total MD	1521	to	1759	m
Rig #	918	Total VD	1521	to	1759	m
Date	1/27/2013	Daily Depth Drilled			238	m
Spud Date	1/14/2013	Interval Depth Drilled			462	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 416 / MUD INHOLE 359	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 1.563 m	16 Conductor @ 20 m	Active Pits 362 / Reserve Pits 49	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 721	BBL / STK 0.0642 / STK / MIN 156
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 158 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 10.01 / GAL / MIN 420
			Prod. or LNR @ 0 m		CIRCULATION PRESS 1554 psi; SURFACE TO BIT 7 min; BOTTOMS UP 29 min; TOT CIRC TIME 72 min; ECD 9.5 ppg

MUD PROPERTIES

		FL	Pit	Pit
SAMPLE FROM				
MUD TYPE		4PHB	4PHB	4PHB
TIME SAMPLE TAKEN		8:00	16:00	20:00
FLOWLINE TEMPERATURE	°F / °C	148 / 64		
TOTAL MEASURED DEPTH (TMD)	Metres	1426	1728	
WEIGHT	ppg / SG	9.1 / 1.09	9.1 / 1.09	9.1 / 1.09
FUNNEL VISCOSITY (sec / qt) API		55	43	43
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	45 / 34	40 / 30	39 / 29
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	26 / 20	26 / 21	25 / 21
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	14 / 12	13 / 11	12 / 10
PLASTIC VISCOSITY cP @	120 °F / 49 °C	11	10	10
YIELD POINT (lb / 100 ft 2)	120 °F / 49 °C	23	20	19
GEL STRENGTH (lb / 100 ft 2)	10sec/10min/30min	9 / 11 / 12	11 / 12 / 14	10 / 12 / 14
LOW SHEAR RATE VISCOSITY (LSRV)				
n K (lb / 100 ft 2)		0.40 / 2.73	0.41 / 2.26	0.43 / 2.02
API FILTRATE (cm 3 / 30 min.)		13.5	13	13
HPHT FILTRATE (cm 3 / 30 min.)	°F / °C			
API : HPHT (Cake / 32nd in.)		2	2	2
pH		9.0	9.0	9.0
ALKALINITY MUD (Pm)		0.10	0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.18 / 0.7	0.16 / 0.8	0.18 / 0.6
CHLORIDE (mg / L)		33500	35000	33500
TOTAL HARDNESS AS CALCIUM (mg / L)		500	400	450
SULPHITE (mg / L)				
KCL (% by Wt.)		4.5	3.3	4.0
K + (mg / L)		24318	17833	21616
PHPA (Calc ppb)		0.25		
METHYLENE BLUE CAPACITY (ppb / % by vol)		5.0 / 0.6	5.0 / 0.6	5.0 / 0.6
BENTONITE ADDED (ppb / % by vol)		4 / 0.4	4 / 0.4	4 / 0.4
OTHER PRODUCTS ADDED (ppb / % by vol)				
OIL (% by Vol)				
TOTAL WATER (% by Vol)		92.8	92.8	92.8
TOTAL SOLIDS (% by Vol)		7.3	7.3	7.3
SAND (% by Vol)		1.5	1.5	1.5

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.9-9.0	Vis (F)	40-45	Yld Pt	2 - 17
API Los	9-14	pH	9.0 - 9.5	KCl	%-3%

MUD COMMENTS

Premixed 12 cans x 20 lit Micro flow into the active when we reached the Birkhead formation at 1640 m while 4 cans of this type at Hutton Sst depth 1730 mVD as per DF progammed (OCR Approval)-completed and done. Diluted active with light fresh mud to cover the depletion rate and bring down the viscosity from 55 spq (due to effects of evap, FLT-148 deg F) to a working viscosity ange between 40-45 spq.
Run the centrifuge by incresing the feed rate from 35 gpm to 55 gpm to bringdown the MW from 9.1 ppg to 9.0 ppg. Shaker screen replaced by coarser mesh due to fine screen out of stock. Seeking new stocks from Drillsearch.

OPERATIONAL COMMENTS

Drilling (sliding/rotating) 8.5 in dia main production hole from 1521 mVD to 1759 mVD with FMR at reporting time.

Water Source Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	163	S.C.E.	78	Start Vol	711
Chemical	7	Discharge	0	Received	0
Sump/SeaWat	0	Downhole	18	Backload	0
Other Rec'd	0	Tripping	10	Built	170
Other Built	0	Other	5	Lost sub	18
				Lost srf	93

TOTAL MUD ON RIG (bbls) : 770

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	270	0	163	107
KCl (fine)	25 Kg Sack	1290	0	38	1252
Microflow	20 Ltr	48	0	16	32
Maxigel	25 Kg Sack	583	0	8	575
Rheopac L	25 Kg Sack	132	0	4	128
Idcide-20	20 Ltr Drum	85	0	2	83
JK-161 LV	25 Kg Sack	94	0	2	92
Soda Ash	25 Kg Sack	60	0	2	58

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		24	8.8	15
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	230x230x230x230		24		
Shale Shaker #2	230x230x230x230		24		
			0		
			0		
			0		

SOLIDS ANALYSIS

Salt %	2.7	HGS %	
		LGS %	3.1
Corrected Solids %	3.1	Drilled Solids%	2.7

Time Breakdown

Analysis Item	Hrs
Drilling	22
Circulating	2

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$11,189.02	$55,277.74

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

RHEOCHEM

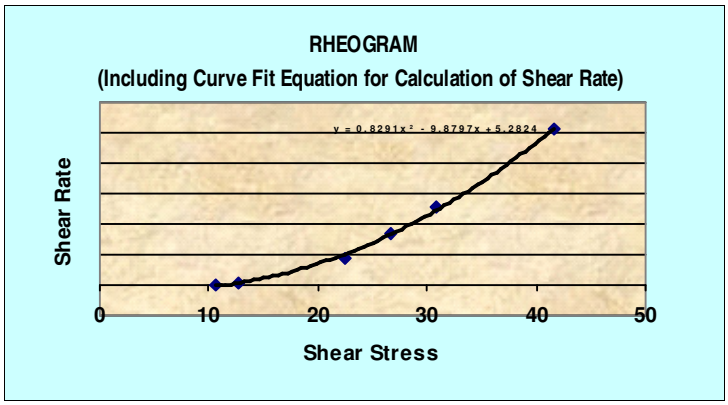
Well: Triclops 1 {Rev 5} Date: 1/27/2013

Operator: DrillSearch DMR: 14

DRILLING FLUID RHEOLOGY AND HOLE CLEANING REPORT

(in accordance with API Recommended Practice 13D)

Input Data for Rheogram			
Bob Speed (rpm)	Shear Rate (Sec -1)	Dial Readings (dynes/cm 2)	Shear Stress (lb/100 ft 2)
600	1022	39	41.6
300	511	29	30.9
200	341	25	26.7
100	170	21	22.4
6	10	12	12.8
3	5	10	10.7



Hole Size (inches)	Cuttings Diameter (inches)	Particle Density (sg)	Mud Weight (ppg)	Flow Rate (GPM)	Riser Booster (GPM)
8.5	0.2	2.6	9.1	420	0

FLOW REGIME (API 13D, Eqn 1)	REYNOLDS NUMBER (NRe)	FLOW REGIME
FOR DP IN OPEN HOLE	1051	LAMINAR
FOR DP INSIDE CASING	924	LAMINAR
FOR DP INSIDE RISER	110	LAMINAR

CALCULATION OF CUTTINGS SLIP VELOCITY (by Walker Mayes (API) Method)

Boundry Shear Rate:	308.3
Particle Shear Stress: (lb/100^2)	12.1
Particle Shear Rate:	0
Apparent Viscosity (cP)	578866

	Slip Velocity (Vs)			
	ft / sec	ft / min	m / sec	m / min
FOR DP IN OPEN HOLE	0.01	0.4	0.00	0.1
FOR DP INSIDE CASING	0.01	0.4	0.00	0.1
FOR DP INSIDE RISER	0.01	0.4	0.00	0.1

CUTTINGS TRANSPORT RATIO (Rt) (API 13D Equation 115)

Drill Pipe OD (in)	4.5
Casing ID (in)	8.755
Riser ID (in)	15.3

	Cuttings Transport Ratio	Annular Velocity ft / min	Efficiency %
FOR DP IN OPEN HOLE	1.00	198	100
FOR DP INSIDE CASING	1.00	182	100
FOR DP INSIDE RISER	0.99	48	99

CUTTINGS CARRYING INDEX (CCI) (API 13D Equation 122)

MW (ppg)	9.1
PV (cP)	10
YP (lb/100 ft^2)	19
n	0.231
k	35.0

	Cuttings Carrying Index	eqn 126	
FOR DP IN OPEN HOLE	4.64	GOOD	n/a
FOR DP INSIDE CASING	4.28	GOOD	n/a
FOR DP INSIDE RISER	1.14	GOOD	n/a

CUTTINGS CONCENTRATION IN ANNULUS (Ca) (API 13D Equation 114)

ROP (m/hr)	11
ROP (ft/hr)	36

	Cuttings Conc. Annulus %	Max Ca %	Max ROP (m/hr)
FOR DP IN OPEN HOLE	1.387	6	48
FOR DP INSIDE CASING	1.387	6	48
FOR DP INSIDE RISER	1.396	6	47

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	15	Total MD	1759	to	1926	m
Rig #	918	Total VD	1759	to	1926	m
Date	1/28/2013	Daily Depth Drilled			167	m
Spud Date	1/14/2013	Interval Depth Drilled			629	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD: ATP539	LOCATION: Cooper Basin / STATE: Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	Baker Hughes PDC	12 12 12 12 12 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 454; MUD INHOLE 393	PUMP SIZE 5.5 x 9 Inches; CIRCULATION PRESS 1663 psi
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 1.730 m	16 Conductor @ 20 m	Active Pits 260; Reserve Pits 49	PUMP MODEL Emco F-800; % EFFICIENCY 97; SURFACE TO BIT 7 min
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 653	BBL / STK 0.0642; STK / MIN 162; BOTTOMS UP 31 min
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 158 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN 10.39; GAL / MIN 437; TOT CIRC TIME 63 min
			Prod. or LNR @ 0 m		ECD 9.43 ppg

MUD PROPERTIES

		FL	Pit	Pit
SAMPLE FROM				
MUD TYPE		4PHB	4PHB	4PHB
TIME SAMPLE TAKEN		8:00	16:00	20:00
FLOWLINE TEMPERATURE	°F / °C	154 / 68		
TOTAL MEASURED DEPTH (TMD)	Metres	1845	1921	1926
WEIGHT	ppg / SG	9.1 / 1.09	9.1 / 1.09	9.1 / 1.09
FUNNEL VISCOSITY (sec / qt) API		43	42	42
RHEOLOGY 600 : 300 RPM	°F / °C	39 / 29	38 / 28	38 / 29
RHEOLOGY 200 : 100 RPM	°F / °C	25 / 20	24 / 20	24 / 20
RHEOLOGY 6 : 3 RPM	°F / °C	10 / 8	12 / 10	11 / 9
PLASTIC VISCOSITY cP @	°F / °C	10	10	9
YIELD POINT (lb / 100 ft^2)	°F / °C	19	18	20
GEL STRENGTH (lb / 100 ft^2)	10sec/10min/30min	9 / 11 / 13	10 / 12 / 14	9 / 11 / 14
LOW SHEAR RATE VISCOSITY (LSRV)				
n K (lb / 100 ft^2)		0.43 / 2.02	0.44 / 1.80	0.39 / 2.55
API FILTRATE (cm^3 / 30 min.)		9	8.5	8
HPHT FILTRATE (cm^3 / 30 min.)	°F / °C			
API : HPHT (Cake / 32nd in.)		1	1	1
pH		9.0	9.0	9.0
ALKALINITY MUD (Pm)		0.10	0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.18 / 0.6	0.16 / 0.6	0.15 / 0.5
CHLORIDE (mg / L)		34500	35500	34500
TOTAL HARDNESS AS CALCIUM (mg / L)		400	450	400
SULPHITE (mg / L)				
KCL (% by Wt.)		3.3	3.0	3.0
K + (mg / L)		17833	16212	16212
PHPA (Calc ppb)				
METHYLENE BLUE CAPACITY (ppb / % by vol)		5.0 / 0.6	2.5 / 0.3	2.5 / 0.3
BENTONITE ADDED (ppb / % by vol)		3 / 0.3	2 / 0.2	2 / 0.2
OTHER PRODUCTS ADDED (ppb / % by vol)				
OIL (% by Vol)				
TOTAL WATER (% by Vol)		92.3	92.3	92.8
TOTAL SOLIDS (% by Vol)		7.8	7.8	7.3
SAND (% by Vol)		2	2	1.5

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.9-9.0	Vis (F)	40-45	Yld Pt	0 - 15
API Los	=<9 cc	pH	9.0	KCl	%-2%

MUD COMMENTS

Premix PAC-LV at 2 ppb to reduce the FL from 13 cc to =<9 cc at main production hole. Maintained all other mud properties in good condition. Minimized build-up mud while nearing TD.DW at a rate 1.5 -2 bbls/hr has been premixed into the active (with FLT of 154 deg F) to prevent gelled-up mud due to evaporation.Premixed barite weighted mud at the pill tank 25 bbls with MW-11.7 ppg hot pipe trippings. Ran the centrifuge at steady feedrate at 55 gpm to compensate solids pass through the coarser mesh screen while waiting for the arrival of 325 mesh screen.

OPERATIONAL COMMENTS

Drilling (sliding/rotating) 8.5 in dia hole from 1759 mVD to 1926 mVD with FMR. Circulated bottoms up. POOH to surface to conduct Shlumberger wireline logs at reporting time.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	48	S.C.E.	91	Start Vol	770
Chemical	14	Discharge	0	Received	0
Sump/SeaWat	0	Downhole	24	Backload	0
Other Rec'd	0	Tripping	10	Built	62
Other Built	0	Other	5	Lost sub	24
				Lost srf	106

TOTAL MUD ON RIG (bbls) : 702

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
KCl (fine)	25 Kg Sack	1252	0	64	1188
Barite	25 Kg Sack	1562	0	48	1514
Water	1 bbl	107	0	48	59
Maxigel	25 Kg Sack	575	0	40	535
Rheopac L	25 Kg Sack	128	0	14	114
Idcide-20	20 Ltr Drum	83	0	10	73
Xanthan Gum (P)	25 Kg Sack	89	0	6	83
JK-161 LV	25 Kg Sack	92	0	4	88
Defoam A	25 Kg Drum	12	0	1	11
SI-70P	20 Ltr Drum	5	0	1	4

SOLIDS CONTROL EQUIPMENT

Type			Hrs	OF	UF
Desander	Cone Size	Qty 0	0	0	0
Desilter	Cone Size	Qty 0	0	0	0
Mud Cleaner			0	0	0
Centrifuge 1	Scomo DE-1000		24	8.8	14
Centrifuge 2			0	0	0
Cuttings Dryer			0	0	0
Degasser			0		
Shale Shaker #1	230x230x230x230		24		
Shale Shaker #2	230x230x230x230		24		
			0		
			0		
			0		

SOLIDS ANALYSIS

Salt %	2.5	HGS %	
		LGS %	3.2
Corrected Solids %	3.2	Drilled Solids%	3.0

Time Breakdown

Analysis Item	Hrs
Drilling	18
Circulating	2
Tripping	4

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$7,714.90	$62,992.64

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

RHEOCHEM

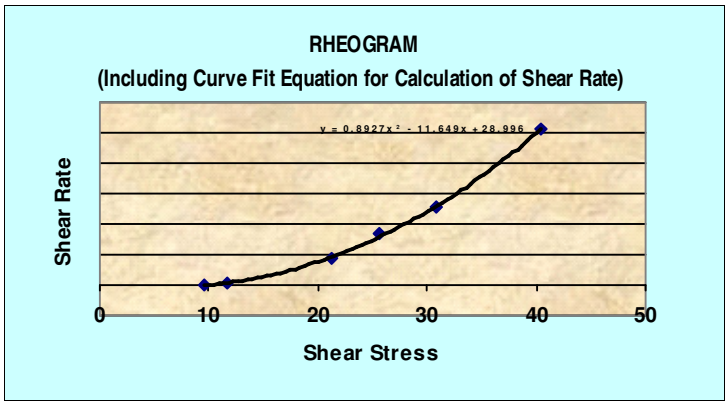
Well: Triclops 1 {Rev 5} Date: 1/28/2013

Operator: DrillSearch DMR: 15

DRILLING FLUID RHEOLOGY AND HOLE CLEANING REPORT

(in accordance with API Recommended Practice 13D)

Input Data for Rheogram			
Bob Speed (rpm)	Shear Rate (Sec -1)	Dial Readings (dynes/cm 2)	Shear Stress (lb/100 ft 2)
600	1022	38	40.5
300	511	29	30.9
200	341	24	25.6
100	170	20	21.3
6	10	11	11.7
3	5	9	9.6



Hole Size (inches)	Cuttings Diameter (inches)	Particle Density (sg)	Mud Weight (ppg)	Flow Rate (GPM)	Riser Booster (GPM)
8.5	0.2	2.6	9.1	437	0

FLOW REGIME (API 13D, Eqn 1)	REYNOLDS NUMBER (NRe)	FLOW REGIME
FOR DP IN OPEN HOLE	1164	LAMINAR
FOR DP INSIDE CASING	1026	LAMINAR
FOR DP INSIDE RISER	128	LAMINAR

CALCULATION OF CUTTINGS SLIP VELOCITY (by Walker Mayes (API) Method)

Boundry Shear Rate:	308.3
Particle Shear Stress: (lb/100^2)	12.1
Particle Shear Rate:	0
Apparent Viscosity (cP)	218073

	Slip Velocity (Vs)			
	ft / sec	ft / min	m / sec	m / min
FOR DP IN OPEN HOLE	0.01	0.6	0.00	0.2
FOR DP INSIDE CASING	0.01	0.6	0.00	0.2
FOR DP INSIDE RISER	0.01	0.6	0.00	0.2

CUTTINGS TRANSPORT RATIO (Rt) (API 13D Equation 115)

Drill Pipe OD (in)	4.5
Casing ID (in)	8.755
Riser ID (in)	15.3

	Cuttings Transport Ratio	Annular Velocity ft / min	Efficiency %
FOR DP IN OPEN HOLE	1.00	206	100
FOR DP INSIDE CASING	1.00	190	100
FOR DP INSIDE RISER	0.99	50	99

CUTTINGS CARRYING INDEX (CCI) (API 13D Equation 122)

MW (ppg)	9.1
PV (cP)	9
YP (lb/100 ft^2)	20
n	0.254
k	30.4

	Cuttings Carrying Index		eqn 126
FOR DP IN OPEN HOLE	6.10	GOOD	n/a
FOR DP INSIDE CASING	5.63	GOOD	n/a
FOR DP INSIDE RISER	1.49	GOOD	n/a

CUTTINGS CONCENTRATION IN ANNULUS (Ca) (API 13D Equation 114)

ROP (m/hr)	12
ROP (ft/hr)	39

	Cuttings Conc. Annulus %	Max Ca %	Max ROP (m/hr)
FOR DP IN OPEN HOLE	1.456	6	49
FOR DP INSIDE CASING	1.456	6	49
FOR DP INSIDE RISER	1.470	6	49

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	16	Total MD	1926	to 1926	m
Rig #	918	Total VD	1926	to 1926	m
Date	1/29/2013	Daily Depth Drilled		0	m
Spud Date	1/14/2013	Interval Depth Drilled		629	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	None	0 0 0 0 0 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 454 / MUD INHOLE 393	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 1.730 m	16 Conductor @ 20 m	Active Pits 125 / Reserve Pits 43	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 38 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 518	BBL / STK / STK / MIN
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 158 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN / GAL / MIN
			Prod. or LNR @ 0 m		CIRCULATION PRESS psi; SURFACE TO BIT 0 min; BOTTOMS UP 0 min; TOT CIRC TIME min; ECD 9.1 ppg

MUD PROPERTIES

		Pit	Pit
SAMPLE FROM			
MUD TYPE		4PHB	4PHB
TIME SAMPLE TAKEN		8:00	16:00
FLOWLINE TEMPERATURE	°F / °C	120 / 49	100 / 38
TOTAL MEASURED DEPTH (TMD)	Metres	1296	1926
WEIGHT	ppg / SG	9.1 / 1.09	9.1 / 1.09
FUNNEL VISCOSITY (sec / qt) API		42	42
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	38 / 29	40 / 30
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	25 / 23	24 / 21
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	12 / 10	11 / 9
PLASTIC VISCOSITY cP @	120 °F / 49 °C	9	10
YIELD POINT (lb / 100 ft^2)	120 °F / 49 °C	20	20
GEL STRENGTH (lb / 100 ft^2)	10sec/10min/30min	10 / 12 / 14	9 / 11 / 13
LOW SHEAR RATE VISCOSITY (LSRV)			
n K (lb / 100 ft^2)		0.39 / 2.55	0.41 / 2.26
API FILTRATE (cm^3 / 30 min.)		8	8.5
HPHT FILTRATE (cm^3 / 30 min.)	°F / °C		
API : HPHT (Cake / 32nd in.)		1	1
pH		9.0	9.0
ALKALINITY MUD (Pm)		0.10	0.10
ALKALINITY FILTRATE (Pf / Mf)		0.16 / 0.6	0.15 / 0.5
CHLORIDE (mg / L)		34000	33500
TOTAL HARDNESS AS CALCIUM (mg / L)		400	400
SULPHITE (mg / L)			
KCL (% by Wt.)		2.5	2.0
K + (mg / L)		13510	10808
PHPA (Calc ppb)			
METHYLENE BLUE CAPACITY (ppb / % by vol)		2.5 / 0.3	2.5 / 0.3
BENTONITE ADDED (ppb / % by vol)		2 / 0.2	2 / 0.2
OTHER PRODUCTS ADDED (ppb / % by vol)			
OIL (% by Vol)			
TOTAL WATER (% by Vol)		92.3	92.3
TOTAL SOLIDS (% by Vol)		7.8	7.8
SAND (% by Vol)		2	2

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.9-9.0	Vis (F)	40-45	Yld Pt	0 - 15
API Los	=<9 cc	pH	9.0	KCl	⅜-2%

MUD COMMENTS

Premixed 120 bbls fresh KCl/PHB/Pac-LV at 1 ppb at the premix tank to maintain short system volume level at suction.Take note: The suction tank is isolated from the settling tank. The active mud from suction has been used to refill the open hole with 6 bbl/hr drop (mudlogger mud loss estimate) while logging.

Centrifuge on stopped operation since 0400H. Conducted preventive servicing while on standby.

OPERATIONAL COMMENTS

POOH wet to surface. Laid down DD BHA - done. Rigged up Schlumberger logging tools at rig floor.Conducted DH wireline logging at reporting time.

Water Source Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	100	S.C.E.	24	Start Vol	702
Chemical	1	Discharge	10	Received	0
Sump/SeaWat	0	Downhole	144	Backload	0
Other Rec'd	0	Tripping	44	Built	101
Other Built	0	Other	20	Lost sub	144
				Lost srf	98

TOTAL MUD ON RIG (bbls) : 561

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	59	2000	100	1959
KCl (fine)	25 Kg Sack	1188	0	8	1180
Maxigel	25 Kg Sack	535	0	8	527
Rheopac L	25 Kg Sack	114	0	2	112
Soda Ash	25 Kg Sack	58	0	1	57

SOLIDS CONTROL EQUIPMENT

Type		Hrs	OF	UF
Desander	Cone Size Qty 0	0	0	0
Desilter	Cone Size Qty 0	0	0	0
Mud Cleaner		0	0	0
Centrifuge 1	Scomo DE-1000	4	8.7	14
Centrifuge 2		0	0	0
Cuttings Dryer		0	0	0
Degasser		0		
Shale Shaker #1	230x230x230x230	4		
Shale Shaker #2	230x230x230x230	4		
		0		
		0		
		0		

SOLIDS ANALYSIS

Salt %	2.3	HGS %	
		LGS %	3.5
Corrected Solids %	3.5	Drilled Solids%	3.3

Time Breakdown

Analysis Item	Hrs
Tripping	8
Logging	16

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$603.51	$63,596.15

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	17	Total MD	1926	to	1926	m
Rig #	918	Total VD	1926	to	1926	m
Date	1/30/2013	Daily Depth Drilled			0	m
Spud Date	1/14/2013	Interval Depth Drilled			0	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	None	0 0 0 0 0 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 454 / MUD INHOLE 409	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 1.926 m	16 Conductor @ 20 m	Active Pits 163 / Reserve Pits 75	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 0 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 572	BBL / STK / STK / MIN
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 0 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN / GAL / MIN
			Prod. or LNR @ 0 m		CIRCULATION PRESS psi; SURFACE TO BIT 0 min; BOTTOMS UP 0 min; TOT CIRC TIME min; ECD 9.1 ppg

MUD PROPERTIES

SAMPLE FROM		Pit							
MUD TYPE		4PHB							
TIME SAMPLE TAKEN		8:00							
FLOWLINE TEMPERATURE	°F / °C	100	38						
TOTAL MEASURED DEPTH (TMD)	Metres	1926							
WEIGHT	ppg / SG	9.1	1.09						
FUNNEL VISCOSITY (sec / qt) API		42							
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	38	28						
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	23	21						
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	10	9						
PLASTIC VISCOSITY cP @	120 °F / 49 °C	10							
YIELD POINT (lb / 100 ft^2)	120 °F / 49 °C	18							
GEL STRENGTH (lb / 100 ft^2)	10sec/10min/30min	8	10	12					
LOW SHEAR RATE VISCOSITY (LSRV)									
n K (lb / 100 ft^2)		0.44	1.80						
API FILTRATE (cm^3 / 30 min.)		9							
HPHT FILTRATE (cm^3 / 30 min.)	°F / °C								
API : HPHT (Cake / 32nd in.)		1							
pH		9.0							
ALKALINITY MUD (Pm)		0.10							
ALKALINITY FILTRATE (Pf / Mf)		0.15	0.5						
CHLORIDE (mg / L)		34200							
TOTAL HARDNESS AS CALCIUM (mg / L)		450							
SULPHITE (mg / L)									
KCL (% by Wt.)		2.5							
K + (mg / L)		13510							
PHPA (Calc ppb)									
METHYLENE BLUE CAPACITY (ppb / % by vol)		2.5	0.3						
BENTONITE ADDED (ppb / % by vol)		2	0.2						
OTHER PRODUCTS ADDED (ppb / % by vol)									
OIL (% by Vol)									
TOTAL WATER (% by Vol)		92.3							
TOTAL SOLIDS (% by Vol)		7.8							
SAND (% by Vol)		2							

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.9-9.0	Vis (F)	40-45	Yld Pt	0 - 15
API Los	=<9 cc	pH	9.0	KCl	%-2%

MUD COMMENTS

Premixed 60 bbls HVM with Xantham gum at pill tank. Increased the MW from 8.7 ppg to 9.1 by Salt weighted material. This is in prep for plug #3 set at 1422 m - 1315 m. The cement plug displaced by active mud has been returned to the suction on a short system. Subsequent plug #s 1 to 4.followed the same sequence with water a spacer.

OPERATIONAL COMMENTS

Rigged down Schlumberger logging tools and acc. Laid down HWDP and DCs. RIH OEDP from surface to bottom at 1926 m.Circulated well cleaned 1.5x hole volume. Conduct P&A, the 1st cement plug set at 1926 mVD to 1826 mVD was done at reporting time.

Water Source Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	165	S.C.E.	15	Start Vol	561
Chemical	3	Discharge	10	Received	0
Sump/SeaWat	0	Downhole	12	Backload	0
Other Rec'd	0	Tripping	30	Built	168
Other Built	0	Other	15	Lost sub	12
				Lost srf	70

TOTAL MUD ON RIG (bbls) : 647

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	1959	0	165	1794
Salt	25 Kg Sack	768	0	36	732
Xanthan Gum (P)	25 Kg Sack	83	0	3	80

SOLIDS CONTROL EQUIPMENT

Type					Hrs	OF	UF
Desander	Cone Size		Qty	0	0	0	0
Desilter	Cone Size		Qty	0	0	0	0
Mud Cleaner					0	0	0
Centrifuge 1	Scomo DE-1000						
Centrifuge 2					0	0	0
Cuttings Dryer					0	0	0
Degasser					0		
Shale Shaker #1	230x230x230x230				10		
Shale Shaker #2	230x230x230x230				10		
					0		
					0		
					0		

SOLIDS ANALYSIS

Salt %	2.4	HGS %	
		LGS %	3.3
Corrected Solids %	3.3	Drilled Solids%	3.1

Time Breakdown

Analysis Item	Hrs
Logging	8
Tripping	12
Cementing Job	4

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$853.22	$64,449.37

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

WATER BASED MUD
Daily Drilling Report

RHEOCHEM

Report #	18	Total MD	1926	to	1926	m
Rig #	918	Total VD	1926	to	1926	m
Date	1/31/2013	Daily Depth Drilled			0	m
Spud Date	1/14/2013	Interval Depth Drilled			0	m

OPERATOR	DrillSearch	CONTRACTOR	Ensign
REPORT FOR	Guy Holmes/Don Castle	REPORT FOR	David Doherty
WELL NAME AND No.	Triclops 1 {Rev 5}	FIELD	ATP539
LOCATION	Cooper Basin	STATE	Queensland

BHA	BIT TYPE	JET SIZE	DEPTHS/CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE (") 8.5	None	0 0 0 0 0 / 0 0 0 0 0	15.25 Riser Length m	HOLE VOL 454 / MUD INHOLE 454	PUMP SIZE 5.5 x 9 Inches
DRILL PIPE SIZE (") 4.5	TYPE	LENGTH 0 m	16 Conductor @ 20 m	Active Pits 226 / Reserve Pits 72	PUMP MODEL Emco F-800 / % EFFICIENCY 97
DRILL PIPE SIZE (") 4.5	TYPE HW	LENGTH 0 m	9.625 Surface @ 761 m	TOTAL CIRCULATING VOL 680	BBL / STK / STK / MIN
DRILL COLLAR SIZE (") 8	6.5	LENGTH 0 0 m	Intermediate @ 0 m	STORAGE TANKS 0	BBL / MIN / GAL / MIN
			Prod. or LNR @ 0 m		CIRCULATION PRESS psi; SURFACE TO BIT 0 min; BOTTOMS UP 0 min; TOT CIRC TIME min; ECD

MUD PROPERTIES

SAMPLE FROM		Pit							
MUD TYPE		4PHB							
TIME SAMPLE TAKEN		8:00							
FLOWLINE TEMPERATURE	°F / °C	120	49						
TOTAL MEASURED DEPTH (TMD)	Metres	1926							
WEIGHT	ppg / SG	9.1	1.09						
FUNNEL VISCOSITY (sec / qt) API		42							
RHEOLOGY 600 : 300 RPM	120 °F / 49 °C	38	30						
RHEOLOGY 200 : 100 RPM	120 °F / 49 °C	23	21						
RHEOLOGY 6 : 3 RPM	120 °F / 49 °C	12	10						
PLASTIC VISCOSITY cP @	120 °F / 49 °C	8							
YIELD POINT (lb / 100 ft^2)	120 °F / 49 °C	22							
GEL STRENGTH (lb / 100 ft^2)	10sec/10min/30min	9	11	13					
LOW SHEAR RATE VISCOSITY (LSRV)									
n K (lb / 100 ft^2)		0.34	3.58						
API FILTRATE (cm^3 / 30 min.)		8							
HPHT FILTRATE (cm^3 / 30 min.)	°F / °C								
API : HPHT (Cake / 32nd in.)		1							
pH		9.0							
ALKALINITY MUD (Pm)		0.10							
ALKALINITY FILTRATE (Pf / Mf)		0.14	0.5						
CHLORIDE (mg / L)		33500							
TOTAL HARDNESS AS CALCIUM (mg / L)		400							
SULPHITE (mg / L)									
KCL (% by Wt.)		2.0							
K + (mg / L)		10808							
PHPA (Calc ppb)									
METHYLENE BLUE CAPACITY (ppb / % by vol)		1.0	0.1						
BENTONITE ADDED (ppb / % by vol)		0.5	0.1						
OTHER PRODUCTS ADDED (ppb / % by vol)									
OIL (% by Vol)									
TOTAL WATER (% by Vol)		92.8							
TOTAL SOLIDS (% by Vol)		7.3							
SAND (% by Vol)		1.5							

MUD PROPERTY SPECIFICATIONS

Mud Wt	8.9-9.0	Vis (F)	40-45	Yld Pt	0 - 15
API Los	=<9 cc	pH	9.0	KCl	%-2%

MUD COMMENTS

Spotted pill 30 bblks of HVM with salt weighting material and set at 892 m (CP#3).

No treatment made on the active mud system.

OPERATIONAL COMMENTS

Continued CP#s 2 to 4 (1727 MVD-1604 mVD, 1422 mVD-1315 mVD, shoe 792 mVD - 702 mVD respectively) and done. WOC for 12 hours.Laid down drill pipes. RIH OEDP to 624 mVD to tag TOC. POOH and laid down drill pipes. RIH OEDP to 30 mVD. Conducted the CP# 5 from surface 30 mVD - 5 MVD at reporting time.

Water Source	Turkeys Nest

MUD ACCOUNTING (BBLS)

FLUID BUILT		FLUID LOSSES		SUMMARY	
Drill Water	175	S.C.E.	20	Start Vol	647
Chemical	0	Discharge	10	Received	0
Sump/SeaWat	0	Downhole	0	Backload	0
Other Rec'd	0	Tripping	30	Built	175
Other Built	0	Other	10	Lost sub	0
				Lost srf	70

TOTAL MUD ON RIG (bbls) : 752

PRODUCT USAGE

Product	UnitSize	Start	Received	Used	Close
Water	1 bbl	1794	0	175	1619

SOLIDS CONTROL EQUIPMENT

Type					Hrs	OF	UF
Desander	Cone Size		Qty	0	0	0	0
Desilter	Cone Size		Qty	0	0	0	0
Mud Cleaner					0	0	0
Centrifuge 1	Scomo DE-1000						
Centrifuge 2					0	0	0
Cuttings Dryer					0	0	0
Degasser					0		
Shale Shaker #1	230x230x230x230				12		
Shale Shaker #2	230x230x230x230				12		
					0		
					0		
					0		

SOLIDS ANALYSIS

Salt %	2.3	HGS %	
		LGS %	3.5
Corrected Solids %	3.5	Drilled Solids%	3.4

Time Breakdown

Analysis Item	Hrs
Cementing Job	12
Tripping	12

CURRENCY	DAILY COST	CUMULATIVE COSTS
AUD	$0.02	$64,449.39

Rheochem Engineer: Rico Macambac **Office:** Rheochem Limited **Telephone:** 0894108214 **Fax:** 0894108282

Appendix 3 – Deviation Survey Report

PATHFINDER
A Schlumberger Company

Drill Search - Triclops-1 FINAL Survey Geodetic Report

(Def Survey)

Report Date:	January 29, 2013 - 04:34 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Drill Search	**Vertical Section Azimuth:**	0.000 ° (Grid North)
Field:	ATP 539	**Vertical Section Origin:**	0.000 m, 0.000 m
Structure / Slot:	Triclops-1 / Triclops-1	**TVD Reference Datum:**	RKB
Well:	Triclops-1	**TVD Reference Elevation:**	146.150 m above MSL
Borehole:	Triclops-1	**Seabed / Ground Elevation:**	141.000 m above MSL
UWI / API#:	Unknown / 13AUS0009	**Magnetic Declination:**	7.250 °
Survey Name:	Drill Search - Triclops-1 FINAL	**Total Gravity Field Strength:**	998.2823mgn (9.80665 Based)
Survey Date:	January 29, 2013	**Total Magnetic Field Strength:**	53856.332 nT
Tort / AHD / DDI / ERD Ratio:	32.149 ° / 33.274 m / 3.545 / 0.017	**Magnetic Dip Angle:**	-57.346 °
Coordinate Reference System:	GDA94/MGA94 Zone 54 Austr Geodetic Datum 94/Austr Map Grid 94	**Declination Date:**	January 25, 2013
Location Lat / Long:	S 25° 59' 43.42988", E 141° 14' 40.38024"	**Magnetic Declination Model:**	HDGM 2012
Location Grid N/E Y/X:	N 7124803.000 m, E 524475.000 m	**North Reference:**	Grid North
CRS Grid Convergence Angle:	-0.1072 °	**Grid Convergence Used:**	-0.1072 °
Grid Scale Factor:	0.9996074	**Total Corr Mag North->Grid North:**	7.3574 °
		Local Coord Referenced To:	Structure Reference Point

Comments	MD (m)	Incl (°)	Azim Grid (°)	TVD (m)	TVDSS (m)	VSEC (m)	NS (m)	EW (m)	DLS (°/30m)	Northing (m)	Easting (m)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Triclops-1 Tie-In	0.00	0.00	0.00	0.00	-146.15	0.00	0.00	0.00	N/A	7124803.00	524475.00	S 25 59 43.43	E 141 14 40.38
	137.00	0.25	247.36	137.00	-9.15	-0.12	-0.12	-0.28	0.05	7124802.88	524474.72	S 25 59 43.43	E 141 14 40.37
	328.00	0.25	337.36	328.00	181.85	0.11	0.11	-0.82	0.06	7124803.11	524474.18	S 25 59 43.43	E 141 14 40.35
	348.00	0.25	332.36	348.00	201.85	0.19	0.19	-0.86	0.03	7124803.19	524474.14	S 25 59 43.42	E 141 14 40.35
	367.00	0.25	137.36	367.00	220.85	0.19	0.19	-0.85	0.78	7124803.19	524474.15	S 25 59 43.42	E 141 14 40.35
	386.00	0.50	92.36	386.00	239.85	0.16	0.16	-0.74	0.58	7124803.16	524474.26	S 25 59 43.42	E 141 14 40.35
	398.00	0.50	2.36	398.00	251.85	0.21	0.21	-0.68	1.77	7124803.21	524474.32	S 25 59 43.42	E 141 14 40.36
	406.00	0.75	47.36	406.00	259.85	0.28	0.28	-0.64	1.99	7124803.28	524474.36	S 25 59 43.42	E 141 14 40.36
	425.00	0.75	47.36	425.00	278.85	0.45	0.45	-0.46	0.00	7124803.45	524474.54	S 25 59 43.42	E 141 14 40.36
	444.00	0.50	37.36	443.99	297.84	0.60	0.60	-0.32	0.43	7124803.60	524474.68	S 25 59 43.41	E 141 14 40.37
	455.00	0.50	347.36	454.99	308.84	0.68	0.68	-0.30	1.15	7124803.68	524474.70	S 25 59 43.41	E 141 14 40.37
	464.00	0.75	55.36	463.99	317.84	0.76	0.76	-0.26	2.43	7124803.76	524474.74	S 25 59 43.41	E 141 14 40.37
	483.00	0.50	17.36	482.99	336.84	0.91	0.91	-0.13	0.74	7124803.91	524474.87	S 25 59 43.40	E 141 14 40.38
	502.00	0.75	357.36	501.99	355.84	1.11	1.11	-0.11	0.52	7124804.11	524474.89	S 25 59 43.39	E 141 14 40.38
	522.00	0.50	27.36	521.99	375.84	1.32	1.32	-0.08	0.61	7124804.32	524474.92	S 25 59 43.39	E 141 14 40.38
	541.00	0.75	27.36	540.99	394.84	1.50	1.50	0.01	0.39	7124804.50	524475.01	S 25 59 43.38	E 141 14 40.38
	580.00	1.00	357.36	579.98	433.83	2.07	2.07	0.12	0.39	7124805.07	524475.12	S 25 59 43.36	E 141 14 40.38
	599.00	1.00	37.36	598.98	452.83	2.37	2.37	0.21	1.08	7124805.36	524475.21	S 25 59 43.35	E 141 14 40.39
	618.00	1.00	67.36	617.98	471.83	2.56	2.56	0.46	0.82	7124805.56	524475.46	S 25 59 43.35	E 141 14 40.40
	657.00	1.00	347.36	656.97	510.82	3.02	3.02	0.70	0.99	7124806.02	524475.70	S 25 59 43.33	E 141 14 40.41
	674.00	1.00	92.36	673.97	527.82	3.16	3.16	0.82	2.80	7124806.16	524475.82	S 25 59 43.33	E 141 14 40.41
	680.00	0.75	2.36	679.97	533.82	3.20	3.20	0.87	6.25	7124806.20	524475.87	S 25 59 43.33	E 141 14 40.41
	695.00	0.50	307.36	694.97	548.82	3.34	3.34	0.82	1.24	7124806.34	524475.82	S 25 59 43.32	E 141 14 40.41
	715.00	1.00	312.36	714.97	568.82	3.51	3.51	0.63	0.76	7124806.51	524475.63	S 25 59 43.32	E 141 14 40.40
	716.00	0.75	22.36	715.97	569.82	3.52	3.52	0.62	30.73	7124806.52	524475.62	S 25 59 43.32	E 141 14 40.40
	734.00	1.00	12.36	733.97	587.82	3.78	3.78	0.70	0.49	7124806.78	524475.70	S 25 59 43.31	E 141 14 40.41
	753.00	1.00	52.36	752.97	606.82	4.05	4.05	0.87	1.08	7124807.04	524475.87	S 25 59 43.30	E 141 14 40.41
	792.00	0.70	94.85	791.96	645.81	4.23	4.23	1.37	0.52	7124807.23	524476.37	S 25 59 43.29	E 141 14 40.43
	801.60	0.44	347.27	801.56	655.41	4.26	4.26	1.42	2.91	7124807.26	524476.42	S 25 59 43.29	E 141 14 40.43
	811.30	0.26	355.57	811.26	665.11	4.32	4.32	1.41	0.58	7124807.32	524476.41	S 25 59 43.29	E 141 14 40.43
	830.70	0.26	2.96	830.66	684.51	4.41	4.41	1.41	0.05	7124807.41	524476.41	S 25 59 43.29	E 141 14 40.43
	850.00	0.44	124.82	849.96	703.81	4.41	4.41	1.48	0.96	7124807.41	524476.48	S 25 59 43.29	E 141 14 40.43
	888.70	1.23	133.38	888.66	742.51	4.04	4.04	1.90	0.62	7124807.04	524476.90	S 25 59 43.30	E 141 14 40.45
	908.00	1.41	141.98	907.95	761.80	3.71	3.71	2.20	0.42	7124806.71	524477.20	S 25 59 43.31	E 141 14 40.46
	946.50	1.41	159.55	946.44	800.29	2.90	2.90	2.65	0.34	7124805.89	524477.65	S 25 59 43.34	E 141 14 40.48
	985.00	1.49	169.95	984.93	838.78	1.96	1.96	2.91	0.21	7124804.96	524477.91	S 25 59 43.37	E 141 14 40.48
	1023.40	1.41	175.36	1023.32	877.17	1.00	1.00	3.03	0.12	7124804.00	524478.03	S 25 59 43.40	E 141 14 40.49
	1062.20	1.67	178.22	1062.10	915.95	-0.04	-0.04	3.09	0.21	7124802.96	524478.09	S 25 59 43.43	E 141 14 40.49
	1100.80	2.02	185.30	1100.68	954.53	-1.28	-1.28	3.04	0.32	7124801.72	524478.04	S 25 59 43.47	E 141 14 40.49
	1139.40	2.37	177.39	1139.25	993.10	-2.76	-2.76	3.02	0.36	7124800.24	524478.02	S 25 59 43.52	E 141 14 40.49
	1178.10	2.37	177.09	1177.92	1031.77	-4.36	-4.36	3.09	0.01	7124798.64	524478.09	S 25 59 43.57	E 141 14 40.49
	1216.80	3.43	177.71	1216.57	1070.42	-6.31	-6.31	3.18	0.82	7124796.69	524478.18	S 25 59 43.63	E 141 14 40.50
	1255.30	2.81	173.33	1255.01	1108.86	-8.40	-8.40	3.34	0.52	7124794.60	524478.34	S 25 59 43.70	E 141 14 40.50
	1274.60	2.73	168.62	1274.29	1128.14	-9.32	-9.32	3.48	0.37	7124793.68	524478.48	S 25 59 43.73	E 141 14 40.51
	1294.00	2.55	163.33	1293.67	1147.52	-10.19	-10.19	3.70	0.47	7124792.82	524478.70	S 25 59 43.76	E 141 14 40.51
	1303.60	1.85	158.99	1303.26	1157.11	-10.54	-10.54	3.81	2.25	7124792.47	524478.81	S 25 59 43.77	E 141 14 40.52
	1313.20	1.23	151.31	1312.86	1166.71	-10.77	-10.77	3.92	2.04	7124792.23	524478.92	S 25 59 43.78	E 141 14 40.52
	1322.90	0.88	142.34	1322.56	1176.41	-10.92	-10.92	4.01	1.19	7124792.08	524479.01	S 25 59 43.78	E 141 14 40.53
	1332.60	0.70	139.31	1332.26	1186.11	-11.03	-11.03	4.10	0.57	7124791.98	524479.10	S 25 59 43.79	E 141 14 40.53
	1342.20	0.53	132.53	1341.86	1195.71	-11.10	-11.10	4.17	0.58	7124791.90	524479.17	S 25 59 43.79	E 141 14 40.53
	1351.90	0.18	123.62	1351.56	1205.41	-11.14	-11.14	4.22	1.09	7124791.86	524479.21	S 25 59 43.79	E 141 14 40.53
	1371.30	0.18	101.48	1370.96	1224.81	-11.16	-11.16	4.27	0.11	7124791.84	524479.27	S 25 59 43.79	E 141 14 40.53
	1380.90	0.35	93.29	1380.55	1234.40	-11.17	-11.17	4.31	0.54	7124791.84	524479.31	S 25 59 43.79	E 141 14 40.54
	1390.70	0.18	93.86	1390.35	1244.20	-11.17	-11.17	4.36	0.52	7124791.83	524479.36	S 25 59 43.79	E 141 14 40.54
	1400.30	0.44	91.70	1399.95	1253.80	-11.17	-11.17	4.41	0.81	7124791.83	524479.41	S 25 59 43.79	E 141 14 40.54
	1419.60	0.53	92.36	1419.25	1273.10	-11.18	-11.18	4.58	0.14	7124791.83	524479.57	S 25 59 43.79	E 141 14 40.55
	1429.30	0.62	87.59	1428.95	1282.80	-11.18	-11.18	4.67	0.32	7124791.83	524479.67	S 25 59 43.79	E 141 14 40.55
	1448.60	0.44	78.86	1448.25	1302.10	-11.16	-11.16	4.85	0.31	7124791.85	524479.85	S 25 59 43.79	E 141 14 40.56
	1458.20	0.44	72.98	1457.85	1311.70	-11.14	-11.14	4.92	0.14	7124791.86	524479.92	S 25 59 43.79	E 141 14 40.56
	1467.90	0.44	64.01	1467.55	1321.40	-11.11	-11.11	4.99	0.21	7124791.89	524479.99	S 25 59 43.79	E 141 14 40.56
	1477.60	0.62	20.79	1477.25	1331.10	-11.05	-11.05	5.04	1.31	7124791.96	524480.04	S 25 59 43.79	E 141 14 40.56
	1487.20	0.79	348.40	1486.85	1340.70	-10.93	-10.93	5.05	1.33	7124792.07	524480.05	S 25 59 43.78	E 141 14 40.56
	1496.70	1.23	338.58	1496.35	1350.20	-10.78	-10.78	5.00	1.49	7124792.23	524479.99	S 25 59 43.78	E 141 14 40.56
	1515.80	1.49	334.75	1515.44	1369.29	-10.36	-10.36	4.82	0.43	7124792.64	524479.81	S 25 59 43.77	E 141 14 40.55
	1535.00	1.41	326.88	1534.64	1388.49	-9.94	-9.94	4.58	0.33	7124793.07	524479.58	S 25 59 43.75	E 141 14 40.55
	1554.30	1.32	322.23	1553.93	1407.78	-9.56	-9.56	4.31	0.22	7124793.44	524479.31	S 25 59 43.74	E 141 14 40.54
	1573.50	1.32	319.45	1573.13	1426.98	-9.22	-9.22	4.04	0.10	7124793.78	524479.03	S 25 59 43.73	E 141 14 40.53
	1583.10	1.32	320.67	1582.72	1436.57	-9.05	-9.05	3.89	0.09	7124793.95	524478.89	S 25 59 43.72	E 141 14 40.52
	1592.60	1.41	322.46	1592.22	1446.07	-8.87	-8.87	3.75	0.31	7124794.13	524478.75	S 25 59 43.72	E 141 14 40.52
	1611.70	1.06	302.07	1611.32	1465.17	-8.59	-8.59	3.46	0.87	7124794.41	524478.46	S 25 59 43.71	E 141 14 40.51
	1631.00	0.88	306.20	1630.62	1484.47	-8.41	-8.41	3.19	0.30	7124794.59	524478.19	S 25 59 43.70	E 141 14 40.50
	1650.20	1.06	315.80	1649.81	1503.66	-8.20	-8.20	2.95	0.38	7124794.81	524477.95	S 25 59 43.70	E 141 14 40.49
	1659.90	0.88	316.77	1659.51	1513.36	-8.08	-8.08	2.83	0.56	7124794.93	524477.83	S 25 59 43.69	E 141 14 40.48
	1669.60	0.97	331.96	1669.21	1523.06	-7.95	-7.95	2.74	0.80	7124795.05	524477.74	S 25 59 43.69	E 141 14 40.48
	1679.30	1.06	334.98	1678.91	1532.76	-7.80	-7.80	2.67	0.32	7124795.21	524477.67	S 25 59 43.68	E 141 14 40.48
	1698.70	1.41	336.32	1698.30	1552.15	-7.42	-7.42	2.49	0.54	7124795.59	524477.49	S 25 59 43.67	E 141 14 40.47
	1718.00	1.32	329.29	1717.60	1571.45	-7.01	-7.01	2.29	0.30	7124796.00	524477.28	S 25 59 43.66	E 141 14 40.46
	1727.66	1.32	323.97	1727.26	1581.11	-6.82	-6.82	2.16	0.38	7124796.18	524477.16	S 25 59 43.65	E 141 14 40.46
	1747.00	1.41	319.35	1746.59	1600.44	-6.46	-6.46	1.88	0.22	7124796.54	524476.88	S 25 59 43.64	E 141 14 40.45
	1766.20	1.23	307.68	1765.79	1619.64	-6.16	-6.16	1.56	0.50	7124796.85	524476.56	S 25 59 43.63	E 141 14 40.44
	1785.60	1.14	300.71	1785.18	1639.03	-5.93	-5.93	1.23	0.26	7124797.07	524476.23	S 25 59 43.62	E 141 14 40.42
	1795.40	1.32	300.39	1794.98	1648.83	-5.82	-5.82	1.05	0.55	7124797.18	524476.05	S 25 59 43.62	E 141 14 40.42
	1805.10	1.41	300.93	1804.68	1658.53	-5.70	-5.70	0.85	0.28	7124797.30	524475.85	S 25 59 43.62	E 141 14 40.41
	1824.40	1.32	299.88	1823.97	1677.82	-5.47	-5.47	0.45	0.15	7124797.53	524475.45	S 25 59 43.61	E 141 14 40.40
	1843.40	1.14	293.37	1842.97	1696.82	-5.29	-5.29	0.09	0.36	7124797.71	524475.09	S 25 59 43.60	E 141 14 40.38
	1862.80	0.97	298.57	1862.36	1716.21	-5.13	-5.13	-0.23	0.30	7124797.87	524474.77	S 25 59 43.60	E 141 14 40.37
	1872.50	1.06	302.83	1872.06	1725.91	-5.04	-5.04	-0.38	0.36	7124797.96	524474.62	S 25 59 43.59	E 141 14 40.37
	1882.00	1.06	302.87	1881.56	1735.41	-4.95	-4.95	-0.53	0.00	7124798.05	524474.47	S 25 59 43.59	E 141 14 40.36
	1891.70	1.06	305.89	1891.26	1745.11	-4.85	-4.85	-0.67	0.17	7124798.15	524474.33	S 25 59 43.59	E 141 14 40.36
	1911.00	1.06	300.99	1910.55	1764.40	-4.65	-4.65	-0.97	0.14	7124798.35	524474.03	S 25 59 43.58	E 141 14 40.35
	1914.80	0.97	301.81	1914.35	1768.20	-4.62	-4.62	-1.03	0.72	7124798.39	524473.97	S 25 59 43.58	E 141 14 40.34
Triclops-1 Projection to TD	1927.09	0.97	301.81	1926.64	1780.49	-4.51	-4.51	-1.21	0.00	7124798.49	524473.79	S 25 59 43.58	E 141 14 40.34

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

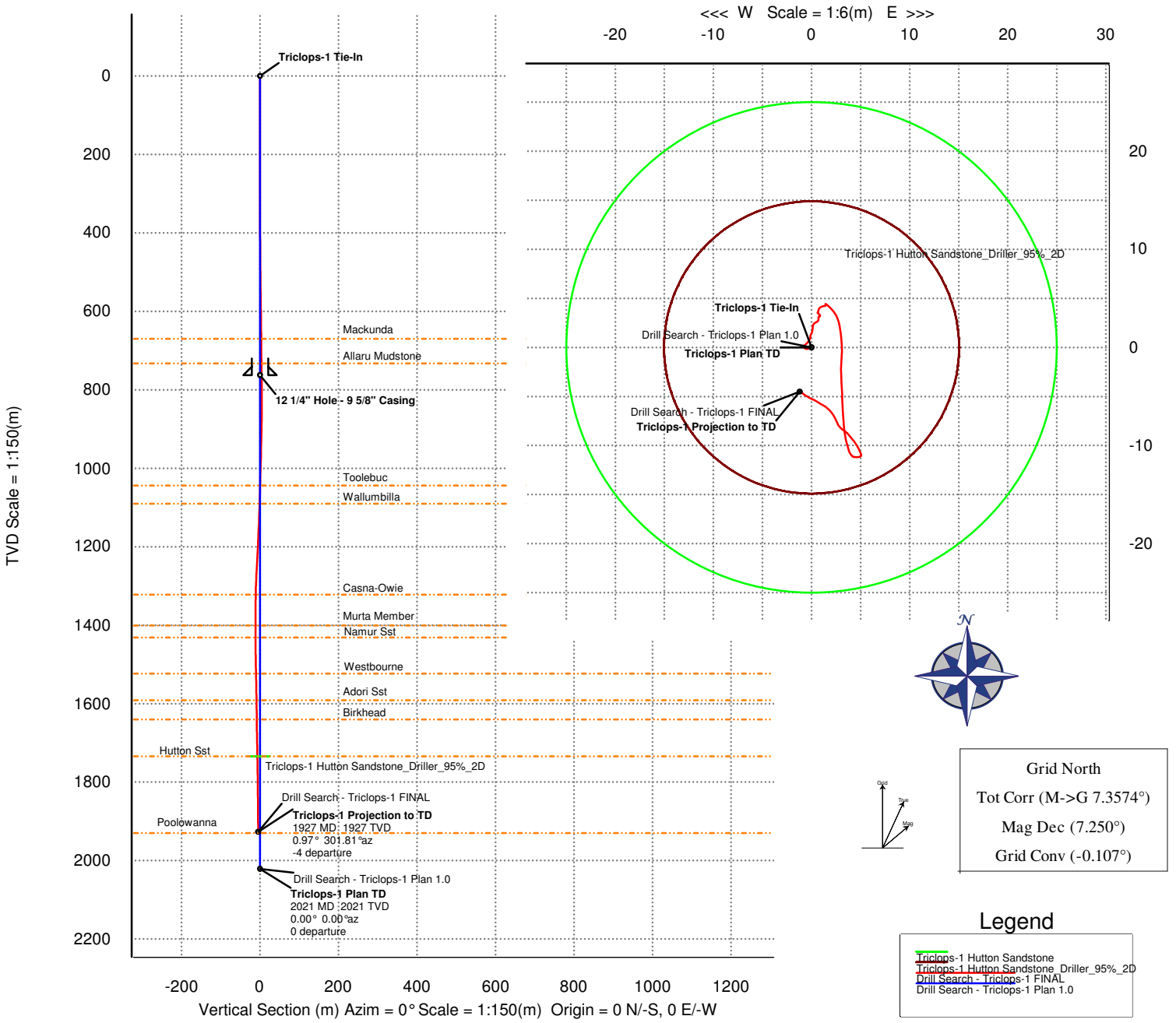
Description	MD From (m)	MD To (m)	EOU Freq (m)		Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	5.150		Act Stns	12.250	9.625	SLB_PHOTO-MSS-Depth Only	Triclops-1 / Drill Search - Triclops-1 FINAL
	5.150	762.600		Act Stns	12.250	9.625	SLB_PHOTO-MSS	Triclops-1 / Drill Search - Triclops-1 FINAL
	762.600	1914.090		Act Stns	8.500	7.000	SLB_INC_ONLY<10	Triclops-1 / Drill Search - Triclops-1 FINAL
	1914.090	1927.090		Act Stns	8.500	7.000	SLB_BLIND+TREND	Triclops-1 / Drill Search - Triclops-1 FINAL

PATHFINDER
A Schlumberger Company

Drill Search

WELL	FIELD	STRUCTURE
Triclops-1	ATP 539	Triclops-1

Magnetic Parameters					Surface Location					Miscellaneous			
Model:	HDGM 2012	Dip:	-57.346°	Date:	January 25, 2013	Lat:	S 25 59 43.430	Northing:	7124803.00 m	Grid Conv:	-0.107°	Slot:	Triclops-1	TVD Ref:	RKB(146.15m above MSL)
		Mag Dec:	7.250°	FS:	53856.3nT	Lon:	E 141 14 40.380	Easting:	524475.00 m	Scale Fact:	0.99960740	Plan:	Drill Search - Triclops-1 FINAL	Survey Date:	January 29, 2013



Surface Location

Northing: 7124803.00 Easting: 524475.00

Target Description			Grid Coord				Local Coord	
Target Name	**Shape**	**Major Axis**	**N(+)/S(-)**	**E(+)/W(-)**	**TVD**	**VSec**	**N(+)/S(-)**	**E(+)/W(-)**
Triclops-1 Hutton Sandstone	Circle	50.00	7124803.00	524475.00	1734.00	0.00	0.00	0.00
Triclops-1 Hutton Sandstone_Driller_95%_2D	Polygon	0.00	7124803.00	524475.00	1734.00	0.00	0.00	0.00

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Triclops-1 Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Triclops-1 Projection to TD	1927.09	0.97	301.81	1926.64	-4.51	-4.51	-1.21	0.00

Quality Control
Date Drawn: January 29, 2013 04:50:29 PM
Drawn by: Jessica Ortiz
Checked by: Troy Narvaez
Client OK:

Appendix 4 – Leak Off Test Report

Drillsearch	Standard No:		
	Revision No: 1	Revised By: Kirby Sayles	
	Revision Date: 07/12/2012	Date:	
	Approved By: Kirby Sayles	Time:	

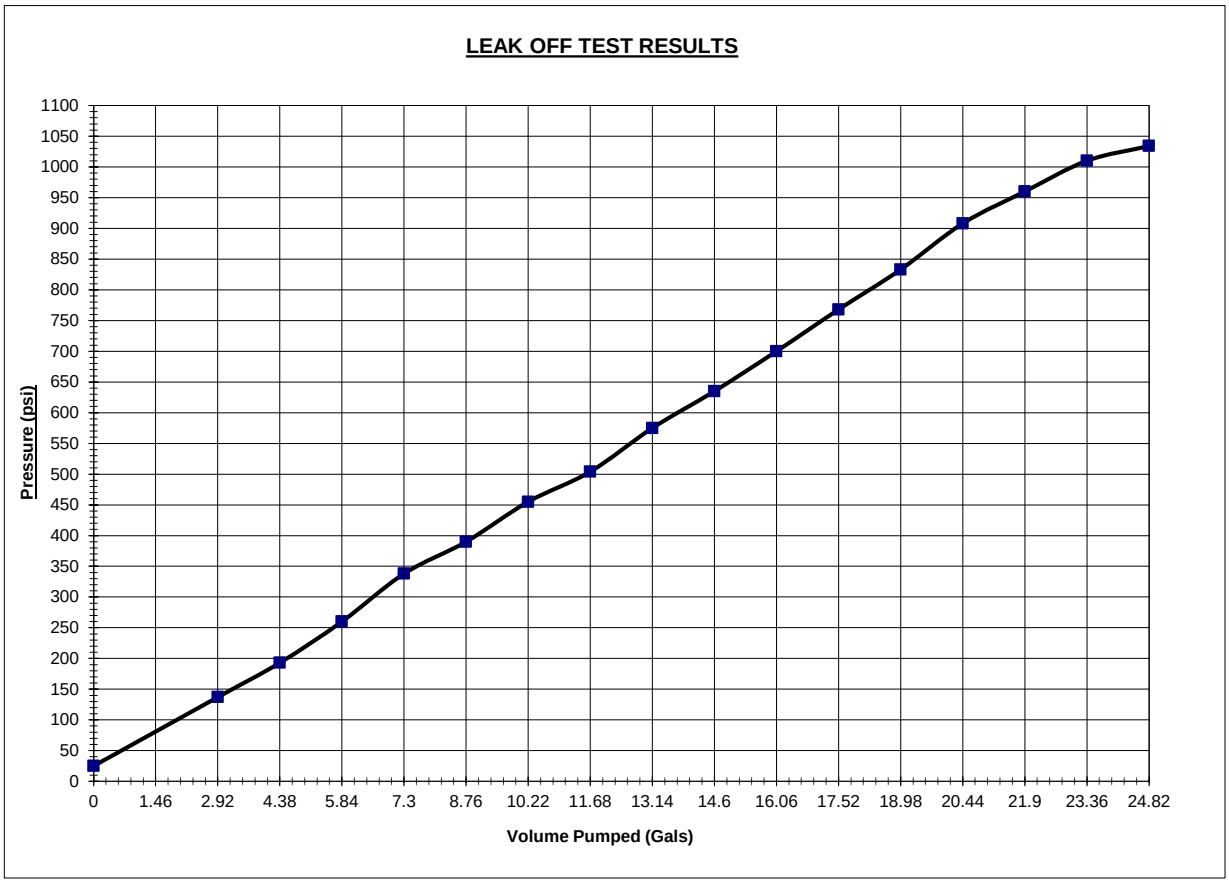
LEAK OFF TEST

WELL: TRICLOPS 1 **RIG:** ENSIGN 918 **DATE:** 20.01.2013

CASING SIZE: 9.625 (inch) DLS Rig Representative GUY L HOLMES

A.	MUD DENSITY IN USE:	8.9	(ppg)
B.	HOLE DEPTH:	2523	(ft)
C.	SHOE DEPTH:	2502	(ft)
D.	LEAK-OFF PRESSURE (GRAPH):	1010	(psi)
E.	EQUIVALENT DENSITY: LEAK-OFF PRES. (D) (psi) + MUD DENSITY IN USE (A) (ppg) / SHOE DEPTH (C) (ft) x 0.052	**16.7**	**(ppg) (EMW)**
F.	MAXIMUM PRESSURE RECORDED:	1034	(psi)
G.	VOLUME PUMPED:	43.8	(gals)
H.	VOLUME REGAINED:	37.96	(gals)

Gals pumped	0	2.92	4.38	5.84	7.3	8.76	10.2	11.7	13.1	14.6	16.1	17.52	19	20.4	21.9	23.4	24.8
PRESSURE:	25	137	193	260	338	390	455	504	575	635	700	768	833	908	960	1010	1034



Appendix 5 – Casing and Cementing Report

Drillsearch

Oil and Gas Production and Exploration
Level 16 / 55 Clarence Street Sydney NSW 2000

Cooper Basin Onshore

Triclops #1 (Oil Well)

Post Job Report

Prepared for Martik Berberian and Matthew Siegmann
5th March 2013
Revision: 2.0

Submitted by Ekkalak Wuthayavanich

HALLIBURTON

Tuesday 05th March 2013

TO: Drillsearch
ATT: **Martik Berberian and Matthew Siegmann**
RE: **Triclops #1 – Post Job Report Rev 2.0**

Dear Martik, Matthew

Please find attached a Post Job Report for Triclops #1– 9-5/8" Surface Casing cement job and the P&A cement job.

Included are the following:

- 9-5/8" Surface Casing to ≈750m
  - Lead Slurry planned to be 11.8 ppg ; TOC is at surface with 75% OH Excess.
  - Tail Slurry planned to be 15.8 ppg to 100m above the 9 5/8 with 75% OH Excess

  Note Excess to Be Reviewed before the job. Amount of Cement to be requested from Drillsearch co-man.
- Job Summary
  - Job Log
  - Key Performance Indicators
  - Customer Satisfaction Survey
- Job Charts.

- Plug and Abandonment
  - Plug #1, 2 and 3 are planned to be 15.6 ppg slurry HTB Cement blend with 20% OH excess based on calliper data.
  - Plug #4 and 5 are planned to be 15.8 ppg slurry Class "G" with 20% OH excess based on calliper data

  Note Excess to Be Reviewed before the job. Amount of Cement to be requested from Drillsearch co-man.
- Job Summary
  - Job Log
  - Key Performance Indicators
  - Customer Satisfaction Survey
- Job Charts

Regards,

Ekkalak Wuthayavanich
Technical Professional
Cementing

Revision History

Rev. 0.0	*Initial End of the well report*
Rev 1.0	*Updated with actual job volumes*
Rev 2.0	*Updated with Plug#3 graph*

Table of Contents

1.0 Proposed 9-5/8" Surface Casing

JOB PARAMETERS

Casing measured depth:	750m	BHST temperature:	54°C
True vertical depth:	750m	BHCT temperature:	41°C
Depth to top lead:	Surface	Drilling mud type:	WBM -KCl+Polymer
Depth to top tail:	650m	Drilling mud density:	≈8.90ppg

WELLBORE

Casing/Tubing

0-750m 9 5/8in 36ppf Casing (K-55 BTC)

Annulus

0-750m 12.25in open hole (75% excess)

SPACERS

Spacer - 40.0bbl Freshwater at 8.33ppg

Freshwater	42.00 gal/bbl	(125m OH annular fill / 5min contact time)

Contact times are based on the displacement rate.

LEAD CEMENT - EconoCem™

Composition		Properties	
Adelaide Brighton Class G		Surface density:	11.80 ppg
Bentonite	12.00 %BWOC	Surface yield:	2.77 ft³/sk
HR-5	0.26 %BWOC	Total mixing fluid:	16.61 gal/sk
Freshwater	16.61 gal/sk	Laboratory Report REF :	
NF-6	0.125		

Note that %BWOC are based on a 94 lb sack

TAIL CEMENT - HalCem™

Composition		Properties	
Adelaide Brighton Class G		Surface density:	15.80 ppg
Freshwater	5.08 gal/sk	Surface yield:	1.15 ft³/sk
HR-5	0.09% BWOC	Total mixing fluid:	5.08 gal/sk
NF-6	0.125	Laboratory Report REF :	

VOLUME CALCULATIONS

Lead Cement

9 5/8in Casing / 12.25in hole volume	650 m x 0.1830 bbl/m	119.0 bbl
9 5/8in Casing / 12.25in hole excess	0.75 x 119.0 bbl	89.2 bbl
	Total lead slurry volume =208.2 bbl	
Quantity of lead cement	208.2 bbl x 5.6146 / 2.77 ft³/sk	422 sacks
Quantity of lead mix fluid	422 sacks x 16.61 gal/sk	166.9 bbl

Tail Cement

9 5/8in Casing / 12.25in hole volume	100 m x 0.1830 bbl/m	18.3 bbl
9 5/8in Casing / 12.25in hole excess	0.75 x 18.3 bbl	13.7 bbl
Shoe track volume	12 m x 0.2536 bbl/m	3.0 bbl
	Total tail slurry volume =35.1 bbl	
Quantity of tail cement	35.1 bbl x 5.6146 / 1.15 ft³/sk	171 sks
Quantity of tail mix fluid	171 sks x 5.08 gal/sk	20.7 bbl

Displacement

9 5/8in Casing volume	738 m x 0.2536 bbl/m	187.2 bbl
	Total displacement volume =187.2 bbl	

The final job calculations are to be completed on location by cementer, based on actual well parameters. All calculations from slurry volumes to additive dosages & requirements must be verified by the independent calculations of the drilling rep.

PUMPING SCHEDULE & TIMES

	Volume (bbl)	Rate (bbl/min)	Time (min)
Make up lines	N/A	N/A	30
Rig circulate 2 x Hole volume:	860.9	8.0	108
CMT Unit pump Fresh Water + Test lines	40.0	8.0	5
Release bottom plug:	N/A	N/A	5
Mix & pump lead cement:	208.2	5.0	42
Mix & pump tail cement:	35.1	4.0	9
Release top plug + Flush Lines	N/A	N/A	10
CMT Unit pump displacement:	187.2	8.0	23

Total job time (including circulation):	***232 min***	***3hr 52min***
Minimum lead cement thickening time (with 2hr safety factor):	***204 min***	***3hr 24min***
Minimum tail cement thickening time (with 2hr safety factor):	***162 min***	***2hr 42min***

2.0 9-5/8" Job Summary

HALLIBURTON	CUSTOMER	Start Date mm/dd/yy	End Date mm/dd/yy
	Drillsearch	17-Jan-13	19-Jan-12

Cementing Services Post Job Report Summary

WELL Name & Number	RIG Name & Number	HES REP	CUSTOMER REP
Triclops# 1	Ensign # 18	Scott Redding	Guy Holmes
JOB PURPOSE CODE		**SALES ORDER No.**	**CUSTOMER PO#**
SURFACE CASING 7521		0 9001489S2	0

WELL CATEGORY	WELL TYPE	TECHNOLOGY	COUNTRY	BASE OF OPS	BDA
01 Development	01 OIL	20 Other	Australia	Moomba	Perth

PERSONELL

SAP#	PERSONNEL	HOURS	SAP#	PERSONNEL	HOURS	SAP#	PERSONNEL	HOURS
497686	Jamie Wandel	104.5						
488759	Scott Redding	104.5						
488324	Jason Batson	104.5						
413978	Stephan Vianello	4						

EQUIPMENT

SAP#	PUMPING / MIXING	HOURS	SAP#	BULK/COMPRESSORS	HOURS	SAP#	VEHICLES/OTHER	HOURS
10967410	Elite 2 - Blackadder	104.5	10375408	10375408C A Trailer	104.5	11813016	KW DAY CAB - SB22ES	104.5
			10375408	B Trailer	104.5	11557328	KW DAY CAB - SB65EE	104.5
						RENTAL	380 bbl Tank	104.5

FLOAT EQUIPMENT AND CASING EQUIPMENT

PN#	FLOAT EQUIPMENT	QTY	PN#	PLUGS	QTY	PN#	OTHER	QTY
	Centralisers	17		Bottom Plug	1		Weld "A"	1
	Float And Shoe	1		Top Plug	1			

WELL PROFILE

WELL COMPONENT	SIZE (in)	WEIGHT (ppf)	GRADE	THREAD	TOP (MD) (ft)	END (MD) (ft)	END (TVD) (ft)	EXCESS %	LENGTH (ft)
NEW CASING	9 5/8	36	k55	butt	0	2502	2502	80%	2502

HALLIBURTON	CUSTOMER	Start Date mm/dd/yy	End Date mm/dd/yy
	Drillsearch	17-Jan-13	19-Jan-12

Cementing Services Post Job Report Summary

WELL Name & Number	RIG Name & Number	HES REP	CUSTOMER REP
Triclops# 1	Ensign # 18	Scott Redding	Guy Holmes
JOB PURPOSE CODE		**SALES ORDER No.**	**CUSTOMER PO#**
SURFACE CASING 7521		0 9001489S2	0

WELL CATEGORY	WELL TYPE	TECHNOLOGY	COUNTRY	BASE OF OPS	BDA
01 Development	01 OIL	20 Other	Australia	Moomba	Perth

FLUID SUMMARY (Refer to Lab Reports for full details)

	DETAIL	UOM	FLUID 1	2 Lead	3 Tail	4 Displace	5	6	7	8	9	10	11	12	TOTAL
PROPERTIES	Volume	bbls		210.40	41.50	191.00									443
	Density	ppg		11.80	15.80										NA
	Yield	cuft/sk		2.76	1.16										NA
	Water Requirement	gal/sk		16.56	5.09										NA
	Total Fluid Req	gal/sk		16.58	5.11										NA
CMT	ABC Class 'G'	sk		428											428
	HTB	sk		201.00											201
H2O		bbls													0
		bbls													0
CHEMICAL	Bentonite	lb		4817											4,817
	HR-5	lb		104	17.00										121
	NF6	gal/sk		1.00	3.00										4
															0
															0

HALLIBURTON

CUSTOMER SATISFACTION SURVEY

Sales Order #:	0 9C0148952	**Line Item:**	10
Customer:	Drillsearch	**Job Type (BOM):**	SURFACE CASING 7521
Customer	Guy Holmes	**API / UWI:** (Leave Blank if unknown)	
Well Name:	Triclops# 1	**Well Number:**	
Well Type:	01 OIL	**Well Country:**	Australia
H2S Present:	No/Yes	**Well State:**	Perth

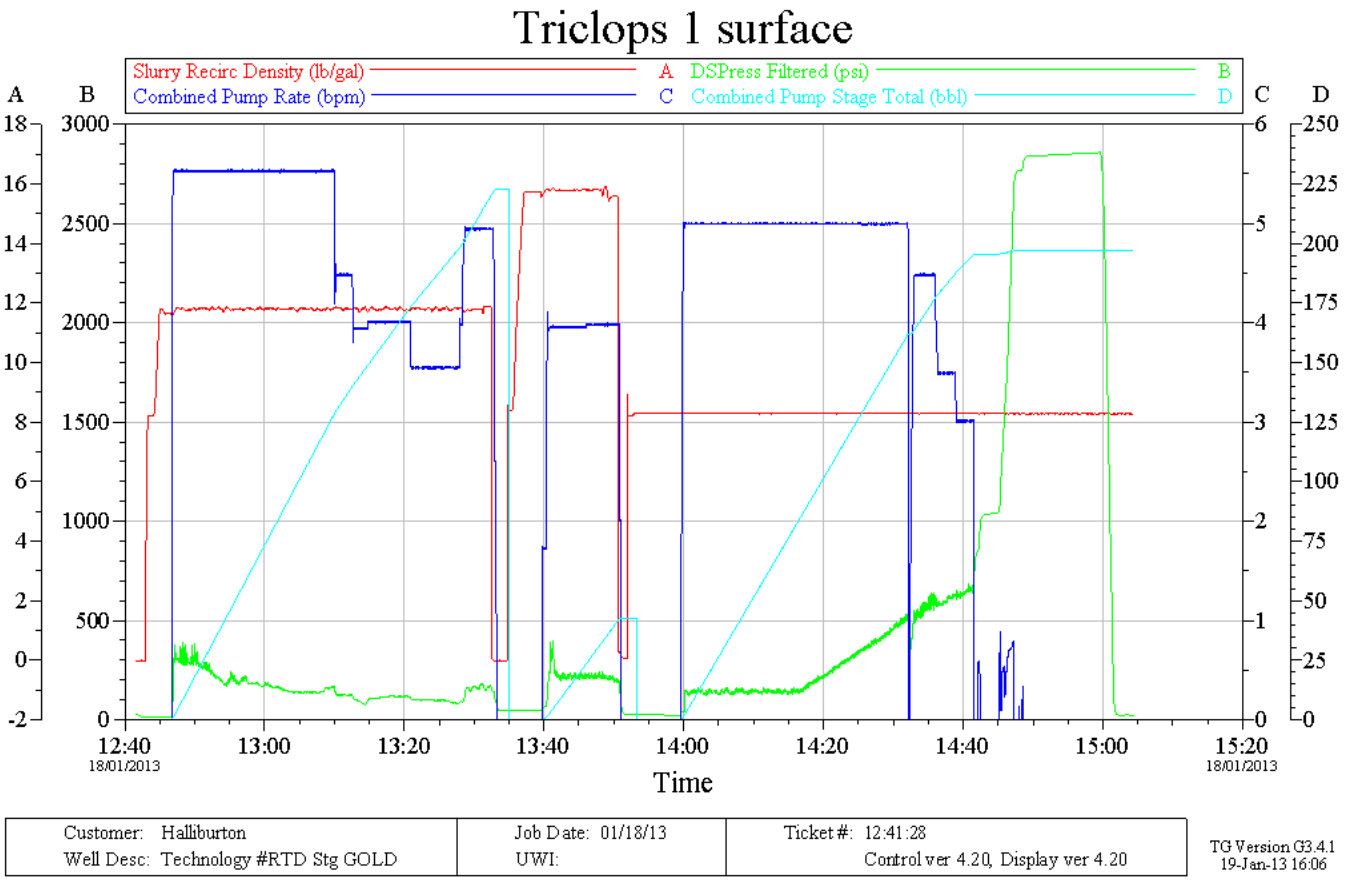
Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	The date the survey was conducted	19/01/2012
Survey Interviewer	The survey interviewer is the person who initiated the survey.	Jamie Wandel
Customer Participation	Did the customer partipcipate in this survey? (Y/N)	Y
Customer Representative	Enter the Customer representative name	Guy Holmes
HSE	Was our HSE performance satisfactory? Circle Y or N	Y
Equipment	Were you satisfied with our Equipment? Circle Y or N	Y
Personnel	Were you satisfied with our people? Circle Y or N	Y
Customer Comment	Good Job, May need to use defomer for future jobs	
CUSTOMER SIGNATURE	G.H.	

3.0 9-5/8" Job Charts



4.0 Plug and Abandonment

4.1 P&A Plug #1 8 ½" OH Section 1,926-1,826 mRT

JOB PARAMETERS

Plug bottom MD:	1,926 mRT	BHST temperature:	130°C
Plug bottom TVD:	1,926 mRT	BHCT temperature:	110°C
Plug top MD:	1,826 mRT	Drilling mud type:	WBM
Plug length:	100m	Drilling mud density:	≈9.10ppg
Plug length with DP in:	105m		

WELLBORE

Workstring

0-1,926mRT	4 ½ in 16.6 ppf tubing (ID= 3.826 in)

Annulus

0-1,926mRT	9.478234 in open hole (20% excess)- 20% Excess Calliper data

SPACERS

Spacer - Freshwater at 8.34ppg

Freshwater	42.00 gal/bbl	20.0bbl ahead and 3.3bbl behind to balance (60 m annular fill / 3min contact time)

Contact times are based on the displacement rate.

CEMENT SLURRY - PlugCem™

Composition		**Properties**	
Adelaide Brighton Class G		Surface density:	15.60 ppg
SSA-1	35.0% BWOC	Surface yield:	1.57 ft³/sk
Halad-344	0.60% BWOC	Total mixing fluid:	6.58 gal/sk
Halad-413	0.65% BWOC		
SCR-100	0.40% BWOC		
Freshwater	6.58 gal/sk		
NF-6	0.125 gal/10bblMF		

Note that %BWOC are based on a 94 lb sack
Note : HTB Blend = ABC "G" + 35% BWOC SSA-1

VOLUME CALCULATIONS

Cement

9.478234 in hole volume	100 m x 0.2863 bbl/m	28.6 bbl
9.478234 in hole excess	0.20 x 28.6 bbl	5.7 bbl
	Slurry volume =34.4 bbl	
Quantity of cement	34.4 bbl x 5.6146 / 1.57 ft³/sk	123 sacks
Quantity of mix fluid	123 sacks x 6.58 gal/sk	19.3 bbl

Displacement

4 ½ in tubing volume	1,749 m x 0.0467 bbl/m	81.6 bbl
	Total displacement volume =81.6 bbl	

The final job calculations are to be completed on location by cementer, based on actual well parameters. All calculations from slurry volumes to additive dosages & requirements must be verified by the independent calculations of the drilling rep.

PUMPING SCHEDULE & TIMES

	Volume (bbl)	Rate (bbl/min)	Time (min)
Make up lines & pressure test:	N/A	N/A	30
Circulate 1.5 x hole volume::	940.9	6.0	157
Pump spacers ahead:	20.0	6.0	3
Mix & pump cement:	34.4	5.0	7
Pump spacers behind:	3.3	6.0	1
Pump displacement:	81.6	6.0	14
Pull workstring 152 m above TOC:	252m	9.1m/min	28
Note: The flow rate is to be slowed down to 1-2 BPM for the last 5 bbls of the displacement.			
Drop wiper ball:	N/A	N/A	5
Circulate workstring clean:	78.0	6.0	13

Total job time (including circulation):	***258 min***	***4hr 18min***
Minimum cement thickening time (with 2hr safety factor):	***188 min***	***3hr 08min***

MINIMUM MATERIAL REQUIREMENTS

Spacer - Freshwater

Freshwater	23.3 bbl

Cement

Adelaide Brighton Class G	5 MT(117 ft³)
SSA-1	4,047 lbs
Halad-344	69 lbs
Halad-413	75 lbs
SCR-100	46 lbs
Fresh Water	19.3 bbl
NF-6	1 gal

These are estimates calculated on the information given. Calculations should be confirmed on the job site well in advance. The final job calculations are to be completed by cementer, based on actual well parameters. All Calculations must be verified by the independent calculation of the Drillsearch Co-man on site.

4.2 Plug #1 Job Procedure

Note: Set firm base below the plug such as Fast Drill bridge plug or Hi-Vis Pill at depth for successful cement plug

Note: Prior to commencing the balance plug, drill pipe should be run to 1,926 m and the well circulated thoroughly (1.5 times hole volumes recommended) in order to adequately clean and to remove any debris that may be left prior to spotting cement plug.

1. Rig up cementing unit to pump down the drill pipe.
2. Pump 5.0 bbls freshwater spacer ahead to establish circulation.
3. Pressure test surface lines to 2,000 psi. Bleed off.

   Note: Max pressure to be discussed with Drillsearch co-man.
4. Pump 15.0 bbls freshwater spacer ahead.
5. Mix and pump 34.4 bbls of 15.6ppg slurry on surface
6. Pump 3.3 bbl freshwater behind.
7. Displace with 81.6 bbls of displacement fluid to spot the balanced plug. (Under displaced by 0.5 bbls to aid dry POOH, **OR** as agreed by Company Representative onsite)

   Note: The flow rate is to be slowed down to 1-2 BPM for the last 5 bbls of the displacement.

   Note: re-calculate numbers above with actual string and actual well condition on location and double check with Drillsearch co-man.
8. Begin pulling drill pipe slowly (1 joint per minute) back to 152m above theoretical TOC and reverse circulate drill pipe clean.
9. Ensure that workstring clean before POOH

4.3 P&A Plug #2 8 ½" OH Section 1,727-1,604 mRT

JOB PARAMETERS

Plug bottom MD:	1,727 mRT	BHST temperature:	120°C
Plug bottom TVD:	1,727 mRT	BHCT temperature:	97°C
Plug top MD:	1,604 mRT	Drilling mud type:	WBM
Plug length:	123 m	Drilling mud density:	≈9.10ppg
Plug length with DP in:	130 m		

WELLBORE

Workstring

0-1,727mRT 4 ½ in 16.6 ppf tubing (ID= 3.826 in)

Annulus

0-1,727mRT 9.195241 in open hole (20% excess) - 20% Excess Calliper data

SPACERS

Spacer - Freshwater at 8.34ppg

Freshwater	42.00 gal/bbl	20.0bbl ahead and 3.6 bbl behind to balance (64 m annular fill / 3min contact time)

Contact times are based on the displacement rate.

CEMENT SLURRY - PlugCem™

Composition		**Properties**	
Adelaide Brighton Class G		Surface density:	15.60 ppg
SSA-1	35.0% BWOC	Surface yield:	1.57 ft³/sk
Halad-344	0.60% BWOC	Total mixing fluid:	6.56 gal/sk
Halad-413	0.65% BWOC		
SCR-100	0.40% BWOC		
Freshwater	6.58 gal/sk		
NF-6	0.125 gal/10bblMF		

Note that %BWOC are based on a 94 lb sack
Note : HTB Blend = ABC "G" + 35% BWOC SSA-1

VOLUME CALCULATIONS

Cement

9.195241 in hole volume	123 m x 0.2695 bbl/m	33.1 bbl
9.195241in hole excess	0.20 x 33.1 bbl	6.6 bbl
	Slurry volume =39.8 bbl	
Quantity of cement	39.8 bbl x 5.6146 / 1.57 ft³/sk	142 sacks
Quantity of mix fluid	142 sacks x 6.58 gal/sk	22.3 bbl

Displacement

4 ½ in tubing volume	1,520 m x 0.0467 bbl/m	70.9 bbl
	Total displacement volume =70.9 bbl	

The final job calculations are to be completed on location by cementer, based on actual well parameters. All calculations from slurry volumes to additive dosages & requirements must be verified by the independent calculations of the drilling rep.

PUMPING SCHEDULE & TIMES

	Volume (bbl)	Rate (bbl/min)	Time (min)
Make up lines & pressure test:	N/A	N/A	30
Circulate 1.5 x hole volume::	791.3	6.0	132
Pump spacers ahead:	20.0	6.0	3
Mix & pump cement:	39.8	5.0	8
Pump spacers behind:	3.6	6.0	1
Pump displacement:	70.9	6.0	12
Pull workstring 152 m above TOC:	275m	9.1m/min	30
Note: The flow rate is to be slowed down to 1-2 BPM for the last 5 bbls of the displacement.			
Drop wiper ball:	N/A	N/A	5
Circulate workstring clean:	68.0	6.0	11

Total job time (including circulation):	***232 min***	***3hr 52min***
Minimum cement thickening time (with 2hr safety factor):	***187 min***	***3hr 07min***

MINIMUM MATERIAL REQUIREMENTS

Spacer - Freshwater

Freshwater	23.6 bbl

Cement

Adelaide Brighton Class G	6 MT(141 ft³)
SSA-1	4,672 lbs
Halad-344	80 lbs
Halad-413	87 lbs
SCR-100	53 lbs
Fresh Water	22.2 bbl
NF-6	1 gal

These are estimates calculated on the information given. Calculations should be confirmed on the job site well in advance. The final job calculations are to be completed by cementer, based on actual well parameters. All Calculations must be verified by the independent calculation of the Drillsearch Co-man on site.

4.4 Plug #2 Job Procedure

Note: Set firm base below the plug such as Fast Drill bridge plug or Hi-Vis Pill at depth for successful cement plug

Note: Prior to commencing the balance plug, drill pipe should be run to 1,727 m and the well circulated thoroughly (1.5 times hole volumes recommended) in order to adequately clean and to remove any debris that may be left prior to spotting cement plug.

1. Rig up cementing unit to pump down the drill pipe.
2. Pump 5.0 bbls freshwater spacer ahead to establish circulation.
3. Pressure test surface lines to 2,000 psi. Bleed off.

   Note: Max pressure to be discussed with Drillsearch co-man.
4. Pump 15.0 bbls freshwater spacer ahead.
5. Mix and pump 39.8 bbls of 15.6ppg slurry on surface
6. Pump 3.6 bbl freshwater behind.
7. Displace with 70.9 bbls of displacement fluid to spot the balanced plug. (Under displaced by 0.5 bbls to aid dry POOH, **OR** as agreed by Company Representative onsite)

   Note: The flow rate is to be slowed down to 1-2 BPM for the last 5 bbls of the displacement.

   Note: re-calculate numbers above with actual string and actual well condition on location and double check with Drillsearch co-man*.*
8. Begin pulling drill pipe slowly (1 joint per minute) back to 152m above theoretical TOC and reverse circulate drill pipe clean.
9. Ensure that workstring clean before POOH

4.5 P&A Plug #3 8 ½" OH Section 1,422-1,315 mRT

JOB PARAMETERS

Plug bottom MD:	1,422 mRT	BHST temperature:	103°C
Plug bottom TVD:	1,422 mRT	BHCT temperature:	83°C
Plug top MD:	1,315 mRT	Drilling mud type:	WBM
Plug length:	107m	Drilling mud density:	≈9.10ppg
Plug length with DP in:	113m		

WELLBORE

Workstring

0-1,422mRT 4 ½ in 16.6 ppf tubing (ID= 3.826 in)

Annulus

0-1,422mRT 9.129036 in open hole (20% excess) - 20% Excess Calliper data

SPACERS

Spacer - Freshwater at 8.34ppg

Freshwater	42.00 gal/bbl	20.0bbl ahead and 3.7bbl behind to balance (66m annular fill / 3min contact time)

Contact times are based on the displacement rate.

CEMENT SLURRY - PlugCem™

Composition		**Properties**	
Adelaide Brighton Class G		Surface density:	15.60 ppg
SSA-1	35.0% BWOC	Surface yield:	1.57 ft³/sk
Halad-344	0.60% BWOC	Total mixing fluid:	6.56 gal/sk
Halad-413	0.65% BWOC		
SCR-100	0.40% BWOC		
Freshwater	6.58 gal/sk		
NF-6	0.125 gal/10bblMF		

Note that %BWOC are based on a 94 lb sack
Note : HTB Blend = ABC "G" + 35% BWOC SSA-1

VOLUME CALCULATIONS

Cement

9.129036 in hole volume	107 m x 0.2656 bbl/m	28.4 bbl
9.129036in hole excess	0.20 x 28.4 bbl	5.7 bbl
	Slurry volume =34.1 bbl	
Quantity of cement	34.1 bbl x 5.6146 / 1.57 ft³/sk	122 sacks
Quantity of mix fluid	122 sacks x 6.58 gal/sk	19.1 bbl

Displacement

4 ½ in tubing volume	1,230 m x 0.0467 bbl/m	57.4 bbl
	Total displacement volume =57.4 bbl	

The final job calculations are to be completed on location by cementer, based on actual well parameters. All calculations from slurry volumes to additive dosages & requirements must be verified by the independent calculations of the drilling rep.

PUMPING SCHEDULE & TIMES

	Volume (bbl)	Rate (bbl/min)	Time (min)
Make up lines & pressure test:	N/A	N/A	30
Circulate 1.5 x hole volume::	641.7	6.0	107
Pump spacers ahead:	20.0	6.0	3
Mix & pump cement:	34.1	5.0	7
Pump spacers behind:	3.7	6.0	1
Pump displacement:	57.4	6.0	10
Pull workstring 152 m above TOC:	259 m	9.1m/min	28
Note: The flow rate is to be slowed down to 1-2 BPM for the last 5 bbls of the displacement.			
Drop wiper ball:	N/A	N/A	5
Circulate workstring clean:	54.0	6.0	9

Total job time (including circulation):	***200 min***	***3hr 20min***
Minimum cement thickening time (with 2hr safety factor):	***180 min***	***3hr 00 min***

MINIMUM MATERIAL REQUIREMENTS

Spacer - Freshwater

Freshwater	23.7 bbl

Cement

Adelaide Brighton Class G	5 MT(164 ft³)
SSA-1	4,014 lbs
Halad-344	69 lbs
Halad-413	75 lbs
SCR-100	46 lbs
Fresh Water	19.1 bbl
NF-6	1 gal

These are estimates calculated on the information given. Calculations should be confirmed on the job site well in advance. The final job calculations are to be completed by cementer, based on actual well parameters. All Calculations must be verified by the independent calculation of the Drillsearch Co-man on site.

4.6 Plug #3 Job Procedure

Note: Set firm base below the plug such as Fast Drill bridge plug or Hi-Vis Pill at depth for successful cement plug

Note: Prior to commencing the balance plug, drill pipe should be run to 1,422 m and the well circulated thoroughly (1.5 times hole volumes recommended) in order to adequately clean and to remove any debris that may be left prior to spotting cement plug.

1. Rig up cementing unit to pump down the drill pipe.
2. Pump 5.0 bbls freshwater spacer ahead to establish circulation.
3. Pressure test surface lines to 2,000 psi. Bleed off.

   Note: Max pressure to be discussed with Drillsearch co-man.
4. Pump 15.0 bbls freshwater spacer ahead.
5. Mix and pump 34.1 bbls of 15.6ppg slurry on surface
6. Pump 3.7 bbl freshwater behind.
7. Displace with 57.4 bbls of displacement fluid to spot the balanced plug. (Under displaced by 0.5 bbls to aid dry POOH, **OR** as agreed by Company Representative onsite)

   Note: The flow rate is to be slowed down to 1-2 BPM for the last 5 bbls of the displacement.

   Note: re-calculate numbers above with actual string and actual well condition on location and double check with Drillsearch co-man.
8. Begin pulling drill pipe slowly (1 joint per minute) back to 152m above theoretical TOC and reverse circulate drill pipe clean.
9. Ensure that workstring clean before POOH

4.7 P&A Plug #4 8 ½" OH & 9 5/8" CSG Section 702-792 mRT

JOB PARAMETERS

Plug bottom MD:	792 mRT	BHST temperature:	56°C
Plug bottom TVD:	792 mRT	BHCT temperature:	45°C
Plug top MD:	702 mRT	Drilling mud type:	WBM
Plug length:	90 m	Drilling mud density:	≈9.10ppg
Plug length with DP in:	97 m		

WELLBORE

Workstring

0-792 mRT	4 ½ in 16.6 ppf tubing (ID= 3.826 in)

Annulus

0-750 mRT	9 5/8 in 36 ppf Casing (8.921in ID)
750-792 mRT	9.518518 in open hole (20% OH excess) 20% Excess based on Calliper Data

SPACERS

Spacer - Freshwater at 8.34ppg

Freshwater	42.00 gal/bbl	20.0bbl ahead and 4.9bbl behind to balance (79m annular fill / 3min contact time)

Contact times are based on the displacement rate.

CEMENT SLURRY - PlugCem™

Composition		Properties	
Adelaide Brighton Class G		Surface density:	15.80 ppg
Freshwater	5.08 gal/sk	Surface yield:	1.15 ft³/sk
NF-6	0.125 gal/10bblMF	Total mixing fluid:	5.08 gal/sk

Note that %BWOC are based on a 94 lb sack

VOLUME CALCULATIONS

Cement

9 5/8in casing volume	48 m x 0.2536 bbl/m	12.2 bbl
9.518518 in hole volume	42 m x 0.2887 bbl/m	12.1 bbl
9.518518 in hole excess	0.20 x 12.1 bbl	2.4 bbl
	Slurry volume =26.7 bbl	

Quantity of cement	26.7 bbl x 5.6146 / 1.15 ft³/sk	130 sacks
Quantity of mix fluid	130 sacks x 5.08 gal/sk	15.7 bbl

Displacement

4 ½ in tubing volume	589 m x 0.0467 bbl/m	27.5 bbl
	Total displacement volume = 27.5 bbl	

The final job calculations are to be completed on location by cementer, based on actual well parameters. All calculations from slurry volumes to additive dosages & requirements must be verified by the independent calculations of the drilling rep.

PUMPING SCHEDULE & TIMES

	Volume (bbl)	Rate (bbl/min)	Time (min)
Make up lines & pressure test:	N/A	N/A	30
Circulate 1.5 x hole volume::	285.9	6.0	48
Pump spacers ahead:	20.0	6.0	3
Mix & pump cement:	26.7	5.0	5
Pump spacers behind:	4.9	6.0	1
Pump displacement:	27.5	6.0	5
Pull workstring 152 m above TOC:	242 m	9.1m/min	26
Note: The flow rate is to be slowed down to 1-2 BPM for the last 5 bbls of the displacement.			
Drop wiper ball:	N/A	N/A	5
Circulate workstring clean:	26.0	6.0	4

Total job time (including circulation):	***127 min***	***2hr 07min***
Minimum cement thickening time (with 2hr safety factor):	***166 min***	***2hr 46min***

MINIMUM MATERIAL REQUIREMENTS

Spacer - Freshwater

Freshwater	24.9 bbl

Cement

Adelaide Brighton Class G	6 MT(141 ft³)
Fresh Water	15.7 bbl
NF-6	1 gal

These are estimates calculated on the information given. Calculations should be confirmed on the job site well in advance. The final job calculations are to be completed by cementer, based on actual well parameters. All Calculations must be verified by the independent calculation of the Drillsearch Co-man on site.

4.8 Plug #4 Job Procedure

Note: Set firm base below the plug such as Fast Drill bridge plug or Hi-Vis Pill at depth for successful cement plug

Note: Prior to commencing the balance plug, drill pipe should be run to 792 m and the well circulated thoroughly (1.5 times hole volumes recommended) in order to adequately clean and to remove any debris that may be left prior to spotting cement plug.

1. Rig up cementing unit to pump down the drill pipe.
2. Pump 5.0 bbls freshwater spacer ahead to establish circulation.
3. Pressure test surface lines to 2,000 psi. Bleed off.

   Note: Max pressure to be discussed with Drillsearch co-man.
4. Pump 15.0 bbls freshwater spacer ahead.
5. Mix and pump 26.7 bbls of 15.8ppg slurry on surface
6. Pump 4.9 bbl freshwater behind.
7. Displace with 27.5 bbls of displacement fluid to spot the balanced plug. (Under displaced by 0.5 bbls to aid dry POOH, **OR** as agreed by Company Representative onsite)

   Note: The flow rate is to be slowed down to 1-2 BPM for the last 5 bbls of the displacement.

   Note: re-calculate numbers above with actual string and actual well condition on location and double check with Drillsearch co-man*.*
8. Begin pulling drill pipe slowly (1 joint per minute) back to 152m above theoretical TOC and reverse circulate drill pipe clean.
9. Ensure that workstring clean before POOH
10. WOC and tag cement plug to confirm cement is hard and in place.
11. Pressure test cement plug to 1,510 psi to confirm shoe cement is hard and in place (≈500 psi above leak off)

    Note : WOC should be at least the time for the cement plug reach 500 psi or 3,000 psi for a KOP. Best results have been obtained by a mandatory 24 Hrs before disturbing the plug.

4.9 P&A Plug 5 Details – 9 5/8 in Casing (5-30 mRT)

JOB PARAMETERS

Plug bottom MD:	30 mRT	BHST temperature:	33°C
Plug bottom TVD:	30 mRT	BHCT temperature:	27°C
Plug top MD:	5 mRT	Drilling mud type:	WBM
Plug length:	25 m	Drilling mud density:	≈9.10ppg
Plug length with DP in:	27 m		

WELLBORE

Workstring

0-30 mRT 4 ½ in 16.6 ppf tubing (ID= 3.826 in)

Annulus

0-30 mRT 9 5/8 in 36 ppf Casing (8.921in ID)

SPACERS

Spacer - Freshwater at 8.34ppg

Freshwater	42.00 gal/bbl	10.0bbl ahead and 0.1bbl behind to (53m annular fill / 2min contact time)

Contact times are based on the displacement rate.

CEMENT SLURRY - PlugCem™

Composition		**Properties**	
Adelaide Brighton Class G		Surface density:	15.80 ppg
Freshwater	5.08 gal/sk	Surface yield:	1.15 ft³/sk
NF-6	0.125	Total mixing fluid:	5.08 gal/sk

Note that %BWOC are based on a 94 lb sack

VOLUME CALCULATIONS

Cement

9 5/8in casing volume	25 m x 0.2536 bbl/m	6.3 bbl
	Slurry volume =6.3 bbl	
Quantity of cement	6.3 bbl x 5.6146 / 1.15 ft³/sk	31 sacks
Quantity of mix fluid	31 sacks x 5.08 gal/sk	3.8 bbl

Displacement

4 ½ in tubing volume

Total displacement volume = --- bbl

The final job calculations are to be completed on location by cementer, based on actual well parameters. All calculations from slurry volumes to additive dosages & requirements must be verified by the independent calculations of the drilling rep.

PUMPING SCHEDULE & TIMES

	Volume (bbl)	Rate (bbl/min)	Time (min)
Make up lines & pressure test:	N/A	N/A	30
Circulate 1.5 x hole volume::	10.6	6.0	2
Pump spacers ahead:	10.0	6.0	2
Mix & pump cement:	6.3	5.0	1
Pump spacers behind:	0.1	6	-
Pump displacement:	-	-	-
Slowly Pull workstring to Surface and Flush	-	-	-
Drop wiper ball:	N/A	N/A	-
Circulate workstring clean:	20.0	6.0	3

Total job time (including circulation):	***38 min***	***0hr 38min***
Minimum cement thickening time (with 2hr safety factor):	***158 min***	***2hr 38min***

MINIMUM MATERIAL REQUIREMENTS

Spacer - Freshwater

Freshwater	10.1 bbl

Cement

Adelaide Brighton Class G	1 MT(23 ft³)
Fresh Water	3.8 bbl
NF-6	1 gal

These are estimates calculated on the information given. Calculations should be confirmed on the job site well in advance. The final job calculations are to be completed by cementer, based on actual well parameters. All Calculations must be verified by the independent calculation of the Drillsearch Co-man on site.

4.10 Plug #5 Job Procedure

Note: Set firm base below the plug such as Fast Drill bridge plug or Hi-Vis Pill at depth for successful cement plug

Note: Prior to commencing the balance plug, drill pipe should be run to 792 m and the well circulated thoroughly (1.5 times hole volumes recommended) in order to adequately clean and to remove any debris that may be left prior to spotting cement plug.

1. Rig up cementing unit to pump down the drill pipe.
2. Pump 5.0 bbls freshwater spacer ahead to establish circulation.
3. Pressure test surface lines to 1,500 psi. Bleed off.

   Note: Max pressure to be discussed with Drillsearch co-man.
4. Pump 5.0 bbls freshwater spacer ahead.
5. Mix and pump 6.3 bbls of 15.8ppg slurry on surface
6. Pump 0.1 bbl freshwater behind.
7. Begin pulling drill pipe slowly (1 joint per minute) back to Surface and flush lines.
8. Pump Fresh Water through Workstring , ensure that workstrings are clean.
9. WOC should be at least the time for the cement plug reach 500 psi or 3,000 psi for a KOP. Best results have been obtained by a mandatory 24 Hrs before disturbing the plug.

5.0 Plug and Abandonment Job Summary

HALLIBURTON

CUSTOMER	Start Date mm/dd/yy	End Date mm/dd/yy
Drill Search	29-Jan-13	01-Feb-13

Cementing Services Post Job Report Summary

WELL Name & Number	RIG Name & Number	HES REP	CUSTOMER REP
Tryclops #1	Ensign #918	Wayne Penna	Guy Holmes
JOB PURPOSE CODE		**SALES ORDER No.**	**CUSTOMER PO#**
PLUG TO ABANDON 7528		0 9001811118	0

WELL CATEGORY	WELL TYPE	TECHNOLOGY	COUNTRY	BASE OF OPS	BDA
06 Abandoned	01 OIL	02 Multi - Lateral	Australia	Moomba	Perth

PERSONELL

SAP#	PERSONNEL	HOURS	SAP#	PERSONNEL	HOURS	SAP#	PERSONNEL	HOURS
398365	Wayne Penna	74	328939	Ralph Goehring	12	413978	Stephan Vianello	3
515629	Jesse Quinn	74	402573	Michael Jamieson	12			

EQUIPMENT

SAP#	PUMPING / MIXING	HOURS	SAP#	BULK/COMPRESSORS	HOURS	SAP#	VEHICLES/OTHER	HOURS
10954421	Elite 1 - White Knight	62	12082460	MARIA - SY42DF	62	11534231	WAN544 - MACK BUNK TRUCK	62
			10048826	78404	62	10942587	XIT-524 KENWORTH T900	62
						10330266	YCV997 DOLLY	62
						12043887	LANDCRUISER S827ASP	22

FLOAT EQUIPMENT AND CASING EQUIPMENT

PN#	FLOAT EQUIPMENT	QTY	PN#	PLUGS	QTY	PN#	OTHER	QTY

WELL PROFILE

WELL COMPONENT	SIZE (in)	WEIGHT (ppf)	GRADE	THREAD	TOP (MD) (ft)	END (MD) (ft)	END (TVD) (ft)	EXCESS %	LENGTH (ft)
PREVIOUS CSG	9 5/8	36	k55	BTC	0	2598	2598		2598

HALLIBURTON

CUSTOMER	Start Date mm/dd/yy	End Date mm/dd/yy
Drill Search	29-Jan-13	01-Feb-13

Cementing Services Post Job Report Summary

WELL Name & Number	RIG Name & Number	HES REP	CUSTOMER REP
Tryclops #1	Ensign #918	Wayne Penna	Guy Holmes

JOB PURPOSE CODE	SALES ORDER No.	CUSTOMER PO#
PLUG TO ABANDON 7528	0 9001811 8	0

WELL CATEGORY	WELL TYPE	TECHNOLOGY	COUNTRY	BASE OF OPS	BDA
06 Abandoned	01 OIL	02 Multi - Lateral	Australia	Moomba	Perth

FLUID SUMMARY (Refer to Lab Reports for full details)

	DETAIL	UOM	FLUID 1 Spacer	2 Plug #1	3 Plug #2	4 Plug #3	5 Plug #4	6 Plug #5	7	8	9	10	11	12	TOTAL
PROPERTIES	Volume	bbls		37	40	35	27	8							147
	Density	ppg	8.33	15.60	15.60	15.60	15.80	15.80							NA
	Yield	cuft/sk		1.57	1.57	1.57	1.16	1.16							NA
	Water Requirement	gal/sk		6.58	6.58	6.58	5	5							NA
	Total Fluid Req	gal/sk		6.58	6.58	6.58	5	5							NA
CMT	ABC Class 'G'	sk					130	31							161
	HTB	sk		123	142	122									387
H2O		bbls													0
		bbls													0
CHEMICAL	Halad-344	lb		69	80	69									218
	Halad-413	lb		75	87	75									237
	SCR-100	lb		46	53	46									145
	NF-6			2	2	2	1	1							8
															0

HALLIBURTON

CUSTOMER SATISFACTION SURVEY

Sales Order #:	0 9001811 8	**Line Item:**	10
Customer:	Drill Search	**Job Type (BOM):**	PLUG TO ABANDON 7528
Customer	Guy Holmes	**API / UWI:** (Leave Blank if unknown)	
Well Name:	Tryclops #1	**Well Number:**	
Well Type:	01 OIL	**Well Country:**	Australia
H2S Present:	No/Yes	**Well State:**	Perth

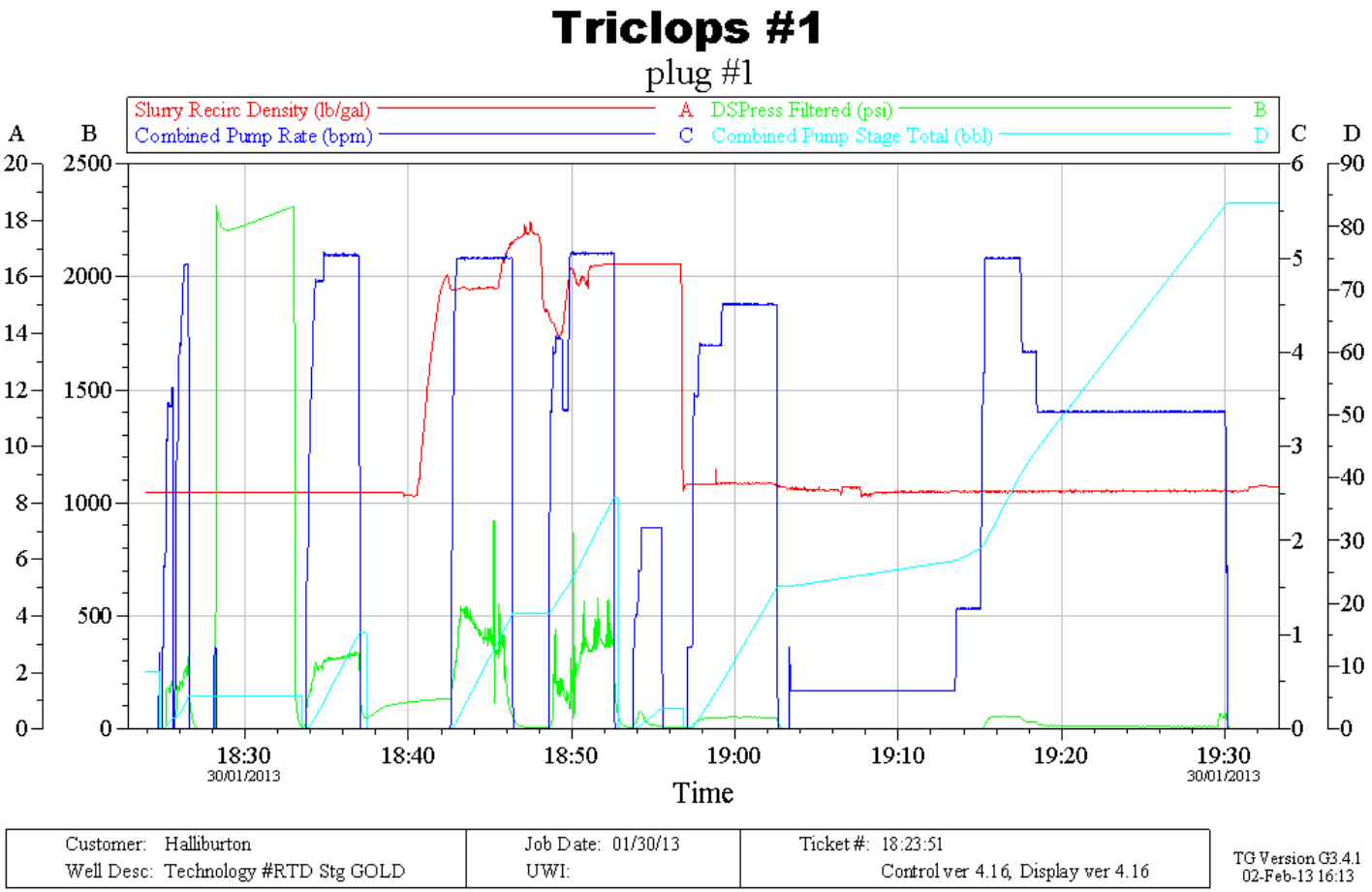
Dear Customer,

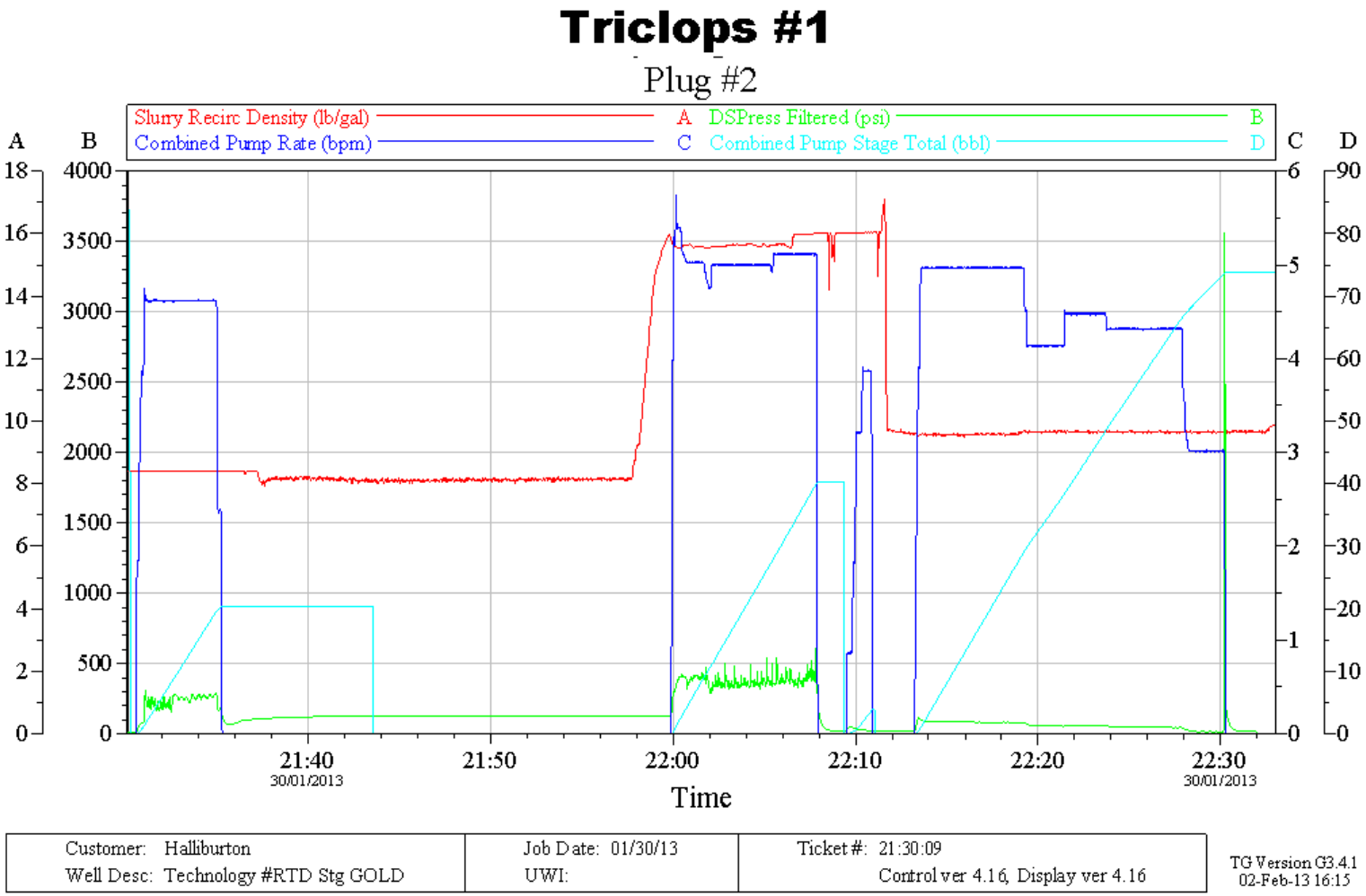
We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	The date the survey was conducted	1/02/2013
Survey Interviewer	The survey interviewer is the person who initiated the survey.	Wayne Penna
Customer Participation	Did the customer partipcipate in this survey? (Y/N)	Y
Customer Representative	Enter the Customer representative name	Guy Holmes
HSE	Was our HSE performance satisfactory? Circle Y or N	Y
Equipment	Were you satisfied with our Equipment? Circle Y or N	Y
Personnel	Were you satisfied with our people? Circle Y or N	Y
Customer Comment	Efficient good service impressed with trainee .	
CUSTOMER SIGNATURE		

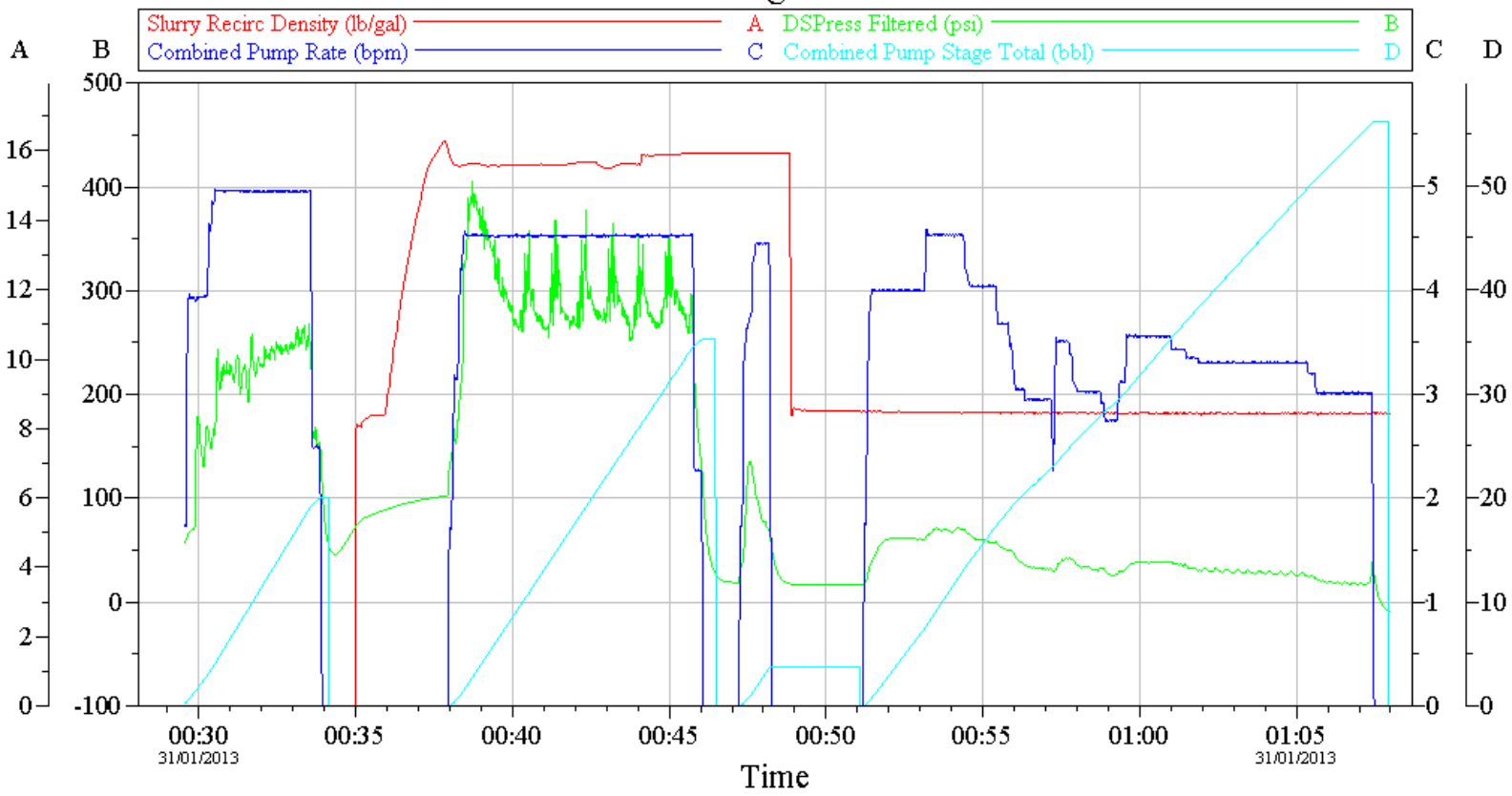
6.0 Plug and Abandonment Job Charts




Triclops #1
Plug #2
Slurry Recirc Density (lb/gal)
Combined Pump Rate (bpm)
A DSPress Filtered (psi)
C Combined Pump Stage Total (bbl)
B
D
A
B
C
D
18
16
14
12
10
8
6
4
2
0
4000
3500
3000
2500
2000
1500
1000
500
0
6
5
4
3
2
1
0
90
80
70
60
50
40
30
20
10
0
21:40
30/01/2013
21:50
22:00
22:10
22:20
22:30
30/01/2013
Time
Customer: Halliburton
Well Desc: Technology #RTD Stg GOLD
Job Date: 01/30/13
UWI:
Ticket #: 21:30:09
Control ver 4.16, Display ver 4.16
TG Version G3.4.1
02-Feb-13 16:15

Triclops #1

Plug #3

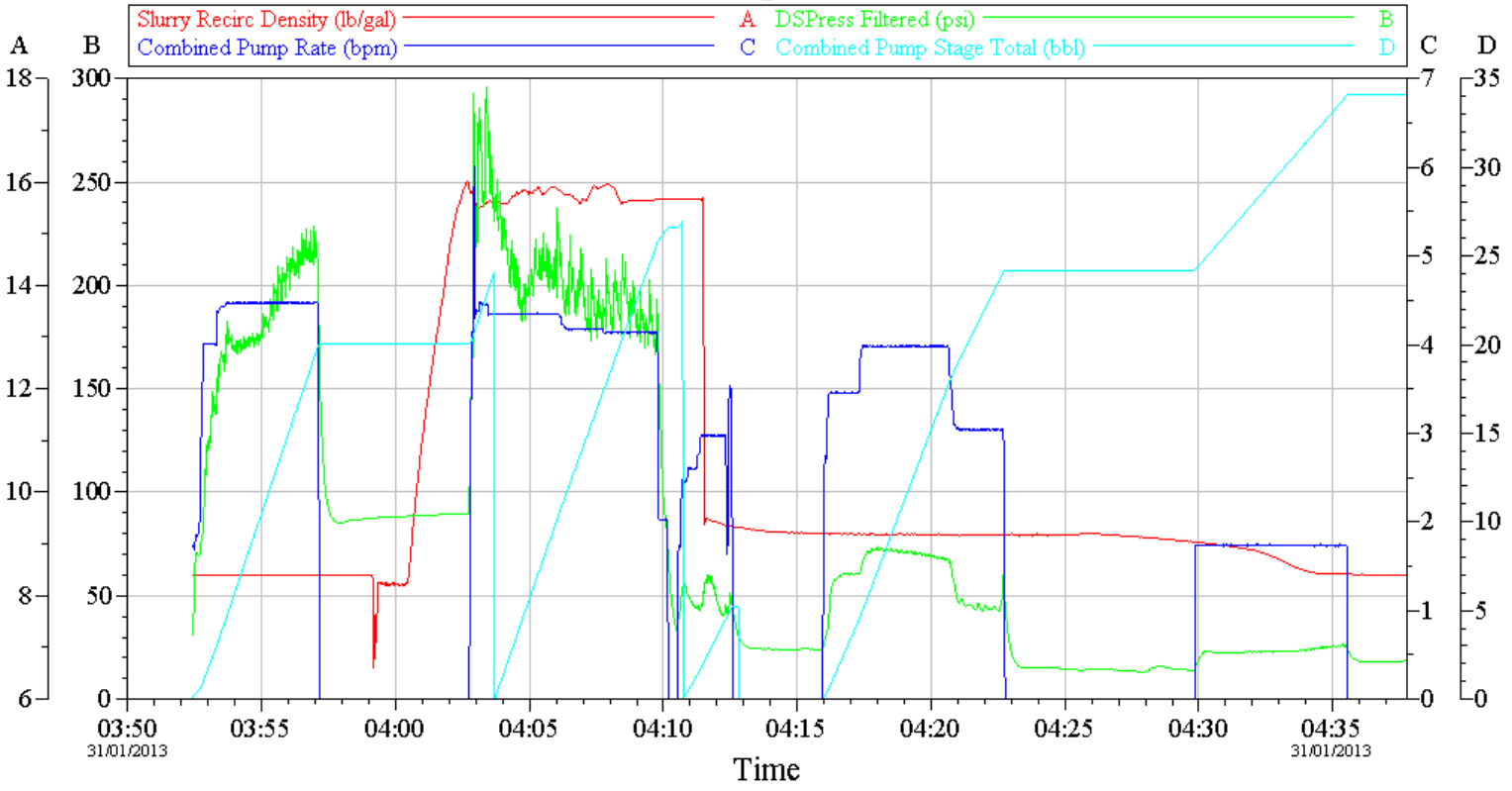


Customer: Halliburton	Job Date: 01/31/13	Ticket #: 00:29:32
Well Desc: Technology #RTD Stg GOLD	UWI:	Control ver 4.16, Display ver 4.16

TG Version G3.4.1
02-Feb-13 16:18

Triclops #1

Plug #4

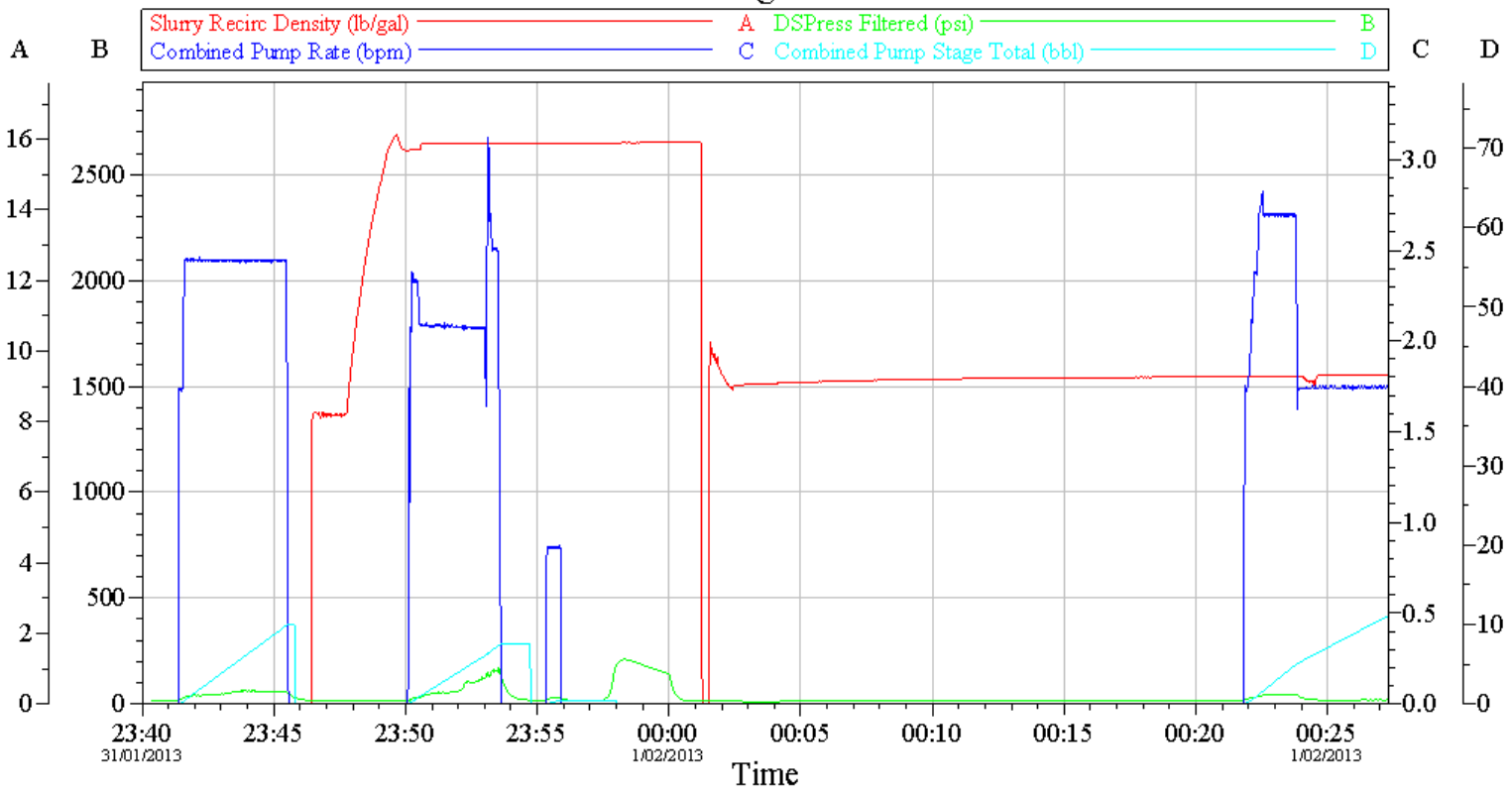


Customer: Halliburton	Job Date: 01/31/13	Ticket #: 03:52:23
Well Desc: Technology #RTD Stg GOLD	UWI:	Control ver 4.16, Display ver 4.16

TG Version G3.4.1
02-Feb-13 16:20

Triclops #1

Plug #5



Customer: Halliburton	Job Date: 01/31/13	Ticket #: 23:40:18
Well Desc: Technology #RTD Stg GOLD	UWI:	Control ver 4.16, Display ver 4.16

TG Version G3.4.1
02-Feb-13 16:23

Appendix 6 – Bit Record

PERFORMANCE AND DULL GRADING REPORT

Customer	Drillsearch	Location	Triclops-1	Rig	Ensign-918
Bit Type	12 ¼" FC519	Serial No.	7032698	Date Run	14-01-2013

BIT PERFORMANCE	
Depth Out	766m
Footage	753.5m
Hours (drilling)	70.5
KREV	303
ROP (On Bottom)	24.4m/hr (avg.)
WOB	2-6klbs (3.25 avg)
RPM	30-160 (110 avg)
Drive System	Rotary
Inc – Start	0.25deg
Inc – End	0.75deg
Mud Weight	8.7 – 9.1ppg
Nozzles/TFA	7 x 14/32" / 1.052in^2
Flowrate	426-485GPM (456 avg)
SPP	460psi (avg)
HSI	0.72
Mud Type	WBM
Formation	Winton/Mackunda/Allaru
Lithology	Silts/Sands/Clays Coal/Cemented-Sands/Carbonate Stringers
Recommendation	Re-runnable

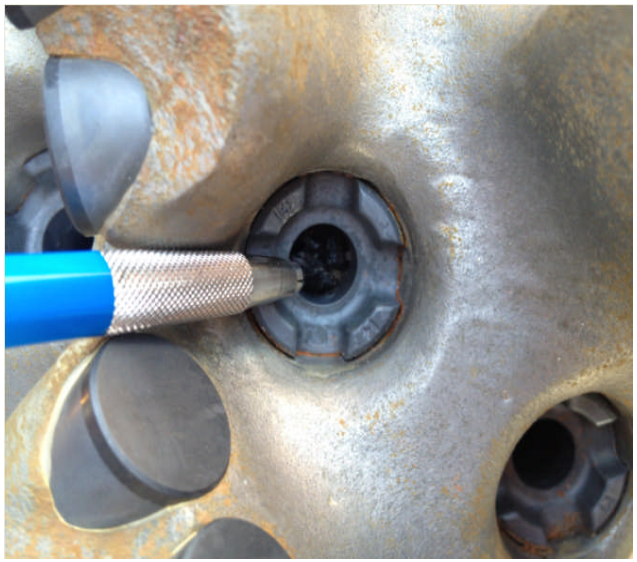
Dull Grade	I	O	DC	L	B	G	OC	RP
Rig	1	1	WT	A	X	I	ER	TD
HCC	1	1	WT	A	X	I	ER	TD

Customer	Drillsearch	Location	Triclops-1	Rig	Ensign-918
Bit Type	12 ¼" FC519	Serial No.	7032698	Date Run	14-01-2013

Comments

Good drilling performance through 753.3m 12-1/4" drilling section. Good penetration rates through top formations while control drilling to hold inclination. Carbonate, cemented sand and coal stringers encountered throughout run resulting in reduced penetration rate in parts. Green dull with minimum wear. Minor erosion and tiger stripes to bit body indicate formation – matrix contact due to high depth of cut. One blocked nozzle was observed, apparently caused while drilling formation or possibly while POOH, since no significant suface SPP spike observed during the run. Bit in-guage and recommended for re-run.

Green cutters and evidence of minor tiger stripe/matrix erosion.



Blocked nozzle – no identifiable SPP spike. No known impact on hydraulic efficiency.

PERFORMANCE AND DULL GRADING REPORT

Customer	Drillsearch	Location	Triclops-1	Rig	Ensign-918
Bit Type	8 ½" Q505F	Serial No.	7033845	Date Run	20-01-2013

BIT PERFORMANCE	
Depth Out	1138.72m
Footage	357.72m
Hours (drilling)	16
KREV	117
ROP (On Bottom)	23.3m/hr
WOB	1-11klbs (4.5 avg)
RPM	60-150 (127 avg)
Drive System	Rotary
Inc – Start	0.75
Inc – End	2.00
Mud Weight	9.0ppg
Nozzles/TFA	5 x 12/32" / 0.552in^2
Flowrate	430GPM (avg)
SPP	1100psi (avg)
HSI	1.61
Mud Type	WBM
Formation	Allaru/Toolebuc/Wallumbilla
Lithology	Siltstone w/ minor sand and dolomite
Recommendation	Re-runnable

Dull Grade	I	O	DC	L	B	G	OC	RP
Rig	1	2	BT	S	X	I	WT	BHA
HCC	1	2	BT	S	X	I	WT	BHA

Customer	Drillsearch	Location	Triclops-1	Rig	Ensign-918
Bit Type	8 ½" Q505F	Serial No.	7033845	Date Run	20-01-2013

Comments Drilling through predominantly sand stone, the Q505F maintained ROP's above 25m/hr for majority of drilling section. Drilling parameters optimized at 1041m where penetration rate dropped below 10m/hr. Bit pulled for BHA due to unacceptable hole deviation. Relatively green dull, with broken cutters in the shoulder. Each of these broken cutters has a back up ovoid. In re-runnable condition.

Blade-1: broken Teeth in shoulder, minor ovoid wear.

Broken cutter in shoulder blade-3

PERFORMANCE AND DULL GRADING REPORT

Customer	Drillsearch	Location	Triclops-1	Rig	Ensign-918
Bit Type	8 ½" Q505F	Serial No.	7033541	Date Run	24-01-2013

BIT PERFORMANCE	
Depth Out	1926.6m
Footage	630.6m
Hours (drilling)	46.5
KREV	180
ROP (On Bottom)	13.6m/hr
WOB	1-19klbs (8.3 avg)
RPM (Total)	95-206 (165 avg)
Drive System	Rotary + Motor
Inc – Start	3.00
Inc – End	1.10
Mud Weight	9.1ppg
Nozzles/TFA	5 x 12/32" / 0.552in^2
Flowrate	435 GPM (avg)
SPP	psi (avg)
HSI	1.61
Mud Type	WBM
Formation	Cadna-Owie, Murta, Namur, Westbourne, Adori, Birkhead, Hutton, Poolowanna
Lithology	Interbedded Siltstone / Sandstone
Recommendation	More heavy set PDC required for motor application

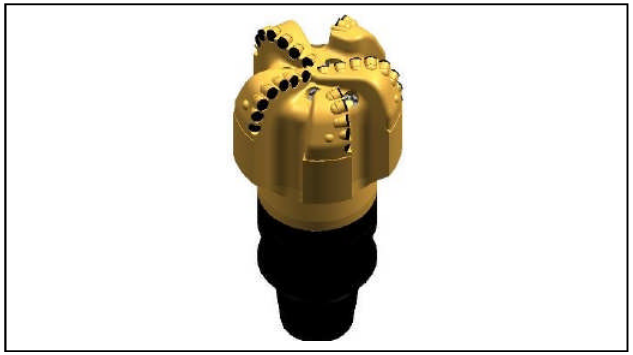
Dull Grade	I	O	DC	L	B	G	OC	RP
Rig	2	7	RO	S	X	I	BT	PR
HCC	2	7	RO	S	X	I	BT	PR

Customer	Drillsearch	Location	Triclops-1	Rig	Ensign-918
Bit Type	8 ½" Q505F	Serial No.	7033541	Date Run	24-01-2013

Comments

Drilling with motor and bent sub directional BHA, the Q505F drilled 630.6m through lower Wallumbilla formation to production hole TD in Poolowanna. With penetration rate dying early in the the Poolowanna formation, the decision was made pull for penetration rate, with TD subsequently called early. Good performance observed with mud motor through upper formations but unable to drill at low RPM in the Hutton and Poolowanna formations resulting in poor drilling efficiency. Bit recovered on surface rung out in shoulder area. Recommend more heavier set PDC option for motor drilling in this application.

Ring Out in Shoulder Blade-3



Ring Out in Shoulder Blade-2

Appendix 7 – Daily Geology Reports (DGR)

Drillsearch

Triclops-1 Drilling

Date: 14 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 1** | (associated DDR # 1)

Well Details

Depth MDBRT	: 107.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 14 Jan 2013
Depth TVDBRT	: 107.0 m	**Last Csg Size**	:	**Progress**	: 95.0 m
Depth TVDSS	:	**Last Csg Shoe MD**	:	**Report Start Depth**	: 12.0 m
RT - GL	: 5.2 m	**Last Csg Shoe TVD**	:	**Report End Depth**	: 130.5 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 0.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 12.250 in	**FIT / LOT**	: /	**Mud Weight**	: 8.80 ppg
Lag Depth	:	**Hole Size Carbide**	:	**Mud Type**	: Spud mud
Last Survey (MDRT/TVDRT)	: /	**Liner (MDRT/TVDRT)**	: /	**Est. Pore Pressure**	:
Survey Deviation	:				

Geology 24hr Operations Summary

24hr Summary:	Completed rig up and spudded Triclops-1 at 1230 hrs. Drilled ahead in 311 mm hole out of surface conductor from 12 m picking up BHA.
24hr Forward Plan:	Drill ahead in 311 mm hole towards 244 mm casing point.

Formation Tops

Formation	Inverted?	Prognosed			Actual			Diff.	Thickness TVD (m)	Pick Criteria
		MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)		
Winton Formation	No	5.2	5.2	-140.95	5.2	5.2	-140.95	0 High		From surface.
Mackunda Formation	No	670.2	670.2	524.05				670.2 High	0.0	
Allaru Mudstone	No	733.2	733.2	587.05				733.2 High	0.0	
Toolebuc Formation	No	1044.2	1044.2	898.05				1,044.2 High	0.0	
Wallumbilla Formation	No	1090.2	1090.2	944.05				1,090.2 High	0.0	
Cadna-Owie Formation	No	1322.2	1322.2	1176.05				1,322.2 High	0.0	
Murta Formation	No	1401.2	1401.2	1255.05				1,401.2 High	0.0	
Namur Sandstone	No	1431.2	1431.2	1285.05				1,431.2 High	0.0	
Westbourne Formation	No	1523.2	1523.2	1377.05				1,523.2 High	0.0	
Adori Sandstone	No	1591.2	1591.2	1445.05				1,591.2 High	0.0	
Birkhead Formation	No	1640.2	1640.2	1494.05				1,640.2 High	0.0	
Hutton Sandstone	No	1734.2	1734.2	1588.05				1,734.2 High	0.0	
Poolwanna Formation	No	1930.2	1930.2	1784.05				1,930.2 High	0.0	

Printed on 15 Jan 2013

Drillsearch

Lithology Summary

Internal m MDRT	ROP (m/h)	Lithology Comments	
12.0 - 38.0	Min :7.50 Avg :15.00 Max :45.00	**Lithology Summary**	CLAYSTONE with minor interbedded ARGILLACEOUS SANDSTONE
		Lithology Description	CLAYSTONE (90%): very pale orange to grey orange, soft to firm in part, sub-blocky, very weakly calcareous, trace very fine arenaceous material, 10% silt, trace carbonaceous detritus. ARGILLACEOUS SANDSTONE (10%): dark yellow orange, friable, 0% argillaceous matrix, fine to dominantly very fine, sub-rounded to angular, well sorted, sub-spherical, weak siliceous cement, very poor visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	
38.0 - 54.0	Min :15.00 Avg :18.00 Max :25.00	**Lithology Summary**	CLAYSTONE
		Lithology Description	CLAYSTONE (100%): green grey to light olive grey, soft to firm, sub-blocky, 10 % silt, trace carbonaceous detritus.
		Gas & Shows Comments	Nil.
		ROP Comments	
54.0 - 71.0	Min :8.00 Avg :20.00 Max :44.00	**Lithology Summary**	ARGILLACEOUS SANDSTONE
		Lithology Description	ARGILLACEOUS SANDSTONE (100%): medium light grey to green grey, friable to firm in part, 40% argillaceous matrix supported, fine to dominantly very fine, sub-angular to dominantly rounded, well sorted, sub-spherical to sub-elongate, weak siliceous cement, up to 3% lithic fragments, trace carbonaceous detritus, very poor visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	
71.0 - 89.0	Min :11.00 Avg :17.50 Max :28.00	**Lithology Summary**	ARENACEOUS SILTSONE
		Lithology Description	ARENACEOUS SILTSTONE (100%): light grey to light green grey, firm, sub-blocky, weakly calcareous, 10% clay material and up to 40% very fine to minor fine sand, sub-angular, well sorted, trace to minor lithic fragments, trace carbonaceous detritus.
		Gas & Shows Comments	Nil.
		ROP Comments	
89.0 - 130.5	Min :8.00 Avg :26.00 Max :40.00	**Lithology Summary**	Interbedded SANDSTONE and CLAYSTONE.
		Lithology Description	SANDSTONE (30 to 70%): light grey to light green grey aggregates, friable to moderately hard, minor argillaceous matrix, very fine to fine, dominantly medium, sub-angular to angular, moderately sorted, sub-elongate, weakly calcareous in part, trace mica flecks and lithic fragments, very poor visible porosity, no hydrocarbon fluorescence. CLAYSTONE (30 to 70%): yellow grey to very light brown grey, soft to firm in part, sub-blocky, slightly silty with up 10% very fine quartz grains, trace carbonaceous specks and brown black coally fragments with woody texture.
		Gas & Shows Comments	Nil.
		ROP Comments	

Gas Summary

Gas Type	Depth m	Total Gas %	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm	(GWR/LHR/OCQ)
Drilled	12.0 - 130.5	(Min) 0.0 (Max) 0.0 (Avg.) 0.0										GWR - not required LHR - not required OCQ - not required

General Comments

Comments
Nil.

Printed on 15 Jan 2013

06:00 Hrs Update	
Time / Date:	06:00 Hrs on 15 Jan 2013
Depth (MDRT):	182.0m
Progress Since Midnight:	75.0m
Status @ 0600hrs:	Drilled ahead in 311 mm hole.
ROP Summary:	
Formation Summary:	Winton Formation
Lithology Summary:	Interbedded CLAYSTONE and SANDSTONE.
Gas Summary:	Nil gas.

Wellsite Geologist(s)	
(Days) - Andrew James	(Nights) - Andrew James

Drillsearch

Triclops-1 Drilling

Date: 15 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 2** | (associated DDR # 2)

Well Details

Depth MDBRT	: 421.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 15 Jan 2013
Depth TVDBRT	: 421.0 m	**Last Csg Size**	:	**Progress**	: 326.0 m
Depth TVDSS	:	**Last Csg Shoe MD**	:	**Report Start Depth**	: 130.5 m
RT - GL	: 5.2 m	**Last Csg Shoe TVD**	:	**Report End Depth**	: 466.5 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 1.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 12.250 in	**FIT / LOT**	: /	**Mud Weight**	: 9.00 ppg
Lag Depth	:	**Hole Size Carbide**	:	**Mud Type**	: KCl - PHPA - Pre Hydrated Bentonite
Last Survey (MDRT/TVDRT)	: /	**Liner (MDRT/TVDRT)**	: /		
Survey Deviation	:			**Est. Pore Pressure**	:

Geology 24hr Operations Summary

24hr Summary:	Drilled ahead in 12.1/4" hole from 107 to 421 m with surveys.
24hr Forward Plan:	Drill ahead in 12.1/4" hole towards 9.5/8" casing point.

Formation Tops

Formation	Inverted?	Prognosed			Actual			Diff.	Thickness TVD (m)	Pick Criteria
		MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)		
Winton Formation	No	5.2	5.2	-140.95	5.2	5.2	-140.95	0 High		From surface.
Mackunda Formation	No	670.2	670.2	524.05				670.2 High	0.0	
Allaru Mudstone	No	733.2	733.2	587.05				733.2 High	0.0	
Toolebuc Formation	No	1044.2	1044.2	898.05				1,044.2 High	0.0	
Wallumbilla Formation	No	1090.2	1090.2	944.05				1,090.2 High	0.0	
Cadna-Owie Formation	No	1322.2	1322.2	1176.05				1,322.2 High	0.0	
Murta Formation	No	1401.2	1401.2	1255.05				1,401.2 High	0.0	
Namur Sandstone	No	1431.2	1431.2	1285.05				1,431.2 High	0.0	
Westbourne Formation	No	1523.2	1523.2	1377.05				1,523.2 High	0.0	
Adori Sandstone	No	1591.2	1591.2	1445.05				1,591.2 High	0.0	
Birkhead Formation	No	1640.2	1640.2	1494.05				1,640.2 High	0.0	
Hutton Sandstone	No	1734.2	1734.2	1588.05				1,734.2 High	0.0	
Poolwanna Formation	No	1930.2	1930.2	1784.05				1,930.2 High	0.0	

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Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
130.5 - 191.5	Min :7.50 Avg :27.50 Max :50.10	**Lithology Summary**	ARGILLACEOUS SANDSTONE with interbedded CLAYSTONE
		Lithology Description	ARGILLACEOUS SANDSTONE (10 to 100%): light grey to very light green grey, friable, 30% very light grey argillaceous matrix, very fine to fine, 10% medium, sub-angular to angular, moderately to well sorted, sub-spherical, weak siliceous cement, abundant grey green lithic fragments, very poor visible porosity, no hydrocarbon fluorescence. CLAYSTONE (0 to 90%): yellow grey to very light brown grey, soft to very soft, sub-blocky, 5% silty material, trace carbonaceous detritus, trace micro-mica.
		Gas & Shows Comments	Nil.
		ROP Comments	
191.5 - 287.0	Min :4.20 Avg :29.50 Max :46.50	**Lithology Summary**	Interbedded ARGILLACEOUS SANDSTONE and ARGILLACEOUS SILTSTONE
		Lithology Description	ARGILLACEOUS SANDSTONE (30 to 100%): light grey to very light green grey, light olive grey in part, friable, 30 to 40% very light grey argillaceous matrix, fine to dominantly very fine, sub-angular to angular, well sorted, sub-spherical, weak siliceous cement, trace lithic fragments, trace carbonaceous specks, very poor visible porosity, no hydrocarbon fluorescence. ARGILLACEOUS SILTSTONE (0 to 70%): very light grey to light green grey, minor pale brown, soft to minor firm, 30 to 40% argillaceous material, trace very fine carbonaceous specks and fine carbonaceous wisps, locally minor coally detritus, trace micro-mica.
		Gas & Shows Comments	Nil.
		ROP Comments	
287.0 - 319.0	Min :3.40 Avg :28.10 Max :62.80	**Lithology Summary**	SANDSTONE with interbedded SILTY CLAYSTONE
		Lithology Description	SANDSTONE (30 to 90%): mottled very light grey to light green grey, friable, 10 to 15% argillaceous matrix, very fine to fine, sub-angular to dominantly angular, well sorted, sub-spherical, minor weak calcareous to dominantly weak siliceous cement, 20 to 30% green grey lithics, trace micro mica, very poor visible porosity, no hydrocarbon fluorescence. SILTY CLAYSTONE (10 to 70%): light olive grey to light brown grey, soft, sub-blocky to weakly amorphous and sticky, 20 to 25% quartz silt, up to 5% very fine sand, trace carbonaceous specks and detritus, trace micro-mica.
		Gas & Shows Comments	Nil.
		ROP Comments	
319.0 - 365.5	Min :2.60 Avg :23.10 Max :60.50	**Lithology Summary**	SANDSTONE with interbedded SILTY CLAYSTONE
		Lithology Description	SANDSTONE (10 to 80%): mottled very light grey to light green grey, friable to moderately hard, minor very light grey to white argillaceous matrix, minor very fine grained - dominantly fine to medium, angular to sub-sounded, well sorted, minor weak siliceous cement to dominantly moderately strong calcareous cement, 20 to 25% green grey lithic fragments, trace mica flecks, very poor visible porosity, no hydrocarbon fluorescence. SILTY CLAYSTONE (20 to 90%): light olive grey to light brown grey, soft becoming firm in part, sub-blocky to weakly amorphous, 20 to 25% quartz silt, trace carbonaceous specks and detritus, trace micro-mica.
		Gas & Shows Comments	First detected gas from 345 m.
		ROP Comments	

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Lithology Summary

Internal m MDRT	ROP (m/h)	Lithology Comments	
365.5 - 403.0	Min :3.70 Avg :29.00 Max :41.00	**Lithology Summary**	SILTY CLAYSTONE with SANDSTONE interbeds
		Lithology Description	SILTY CLAYSTONE (0 to 90%): light olive grey to light brown grey, very pale green grey in part, soft becoming dominantly form, sub-blocky, 20 to 25% quartz silt, trace carbonaceous specks and detritus, trace micro-mica. SANDSTONE (10 to 100%): mottled very light grey to light green grey, trace red and pale orange stained quartz grains, friable to moderately hard, up 15% very light grey to white argillaceous matrix, minor very fine grained - dominantly fine to medium, angular to sub-sounded, well sorted, minor weak siliceous cement to dominantly moderately strong calcareous cement, 20 to 25 % green grey lithic fragments, trace mica flecks, very poor visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	
403.0 - 465.5	Min :2.80 Avg :30.30 Max :51.20	**Lithology Summary**	SILTY CLAYSTONE
		Lithology Description	SILTY CLAYSTONE (100%): pale brown becoming dominantly very light grey, up to 30% quartz silt, locally 20 to 40% very fine quartz grading to ARENACEOUS CLAYSTONE, locally up to 5% coarse calcite (vein / fracture infill) fragments, 5 to 10% pale brown to moderate brown fragments with abundant coally detritus.
		Gas & Shows Comments	Nil.
		ROP Comments	

Gas Summary

Gas Type	Depth m	Total Gas %	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm	(GWR/LHR/OCQ)
Drilled	345.0 - 466.5	(Min) 0.0 (Max) 0.2 (Avg.) 0.1	837	6								GWR - not required LHR - not required OCQ - not required

General Comments

Comments
Nil.

06:00 Hrs Update

Time / Date:	06:00 Hrs on 16 Jan 2013
Depth (MDRT):	489.0m
Progress Since Midnight:	68.0m
Status @ 0600hrs:	Drilled ahead in 12.1/4" hole from 421 to 489 m with surveys.
ROP Summary:	Effective penetration rate since 2400 hrs 11.3 m/hr.
Formation Summary:	Winton Formation
Lithology Summary:	Interbedded SILTY CLAYSTONE and ARGILLACEOUS SANDSTONE
Gas Summary:	Maximum: 14 units Average: 9 units

Wellsite Geologist(s)

(Days) - Andrew James (Nights) - Andrew James

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Drillsearch

Triclops-1 Drilling

Date: 16 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 3** | (associated DDR # 3)

Well Details

Depth MDBRT	: 672.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 16 Jan 2013
Depth TVDBRT	: 672.0 m	**Last Csg Size**	:	**Progress**	: 251.0 m
Depth TVDSS	:	**Last Csg Shoe MD**	:	**Report Start Depth**	: 466.5 m
RT - GL	: 5.2 m	**Last Csg Shoe TVD**	:	**Report End Depth**	: 691.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 2.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 12.250 in	**FIT / LOT**	: /	**Mud Weight**	: 9.10 ppg
Lag Depth	:	**Hole Size Carbide**	:	**Mud Type**	: KCl - PHPA - Pre Hydrated Bentonite
Last Survey (MDRT/TVDRT)	: 652.0 m /	**Liner (MDRT/TVDRT)**	: /		
Survey Deviation	: Inc. 1.00 ° Az 0.00 °			**Est. Pore Pressure**	:

Geology 24hr Operations Summary

24hr Summary:	Drilled ahead in 12.1/4" hole from 421 to 672 m with surveys.
24hr Forward Plan:	Drill ahead to proposed section TD at 758 m. Condition hole and pull out. Rig up and commence running 9.5/8" casing.

Formation Tops

Formation	Inverted?	Prognosed			Actual			Diff.	Thickness	Pick Criteria
		MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	No	5.2	5.2	-140.95	5.2	5.2	-140.95	0 High	636.3	From surface.
Mackunda Formation	No	670.2	670.2	524.05	641.5	641.5	495.35	28.7 High	0.0	Lithology / ROP
Allaru Mudstone	No	733.2	733.2	587.05				733.2 High	0.0	
Toolebuc Formation	No	1044.2	1044.2	898.05				1,044.2 High	0.0	
Wallumbilla Formation	No	1090.2	1090.2	944.05				1,090.2 High	0.0	
Cadna-Owie Formation	No	1322.2	1322.2	1176.05				1,322.2 High	0.0	
Murta Formation	No	1401.2	1401.2	1255.05				1,401.2 High	0.0	
Namur Sandstone	No	1431.2	1431.2	1285.05				1,431.2 High	0.0	
Westbourne Formation	No	1523.2	1523.2	1377.05				1,523.2 High	0.0	
Adori Sandstone	No	1591.2	1591.2	1445.05				1,591.2 High	0.0	
Birkhead Formation	No	1640.2	1640.2	1494.05				1,640.2 High	0.0	
Hutton Sandstone	No	1734.2	1734.2	1588.05				1,734.2 High	0.0	
Poolwanna Formation	No	1930.2	1930.2	1784.05				1,930.2 High	0.0	

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Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
466.5 - 540.0	Min :1.30 Avg :22.10 Max :50.10	**Lithology Summary**	ARGILLACEOUS SANDSTONE with minor interbedded SILTY CLAYSTONE
		Lithology Description	ARGILLACEOUS SANDSTONE (40 to 90%): very light grey, friable to minor moderately hard aggregates, common white argillaceous matrix, very fine to fine, sub-angular to dominantly sub-sounded, well sorted, sub-spherical, weak siliceous cement - dominantly locally strong calcareous cement, 5% pale green lithics, rare aggregates with carbonaceous / coally laminations, coarse carbonaceous detritus in part, very poor visible porosity, no hydrocarbon fluorescence. SILTY CLAYSTONE (10 to 60%): pale brown to moderate brown, very light grey in part, soft to firm, minor moderately hard, minor to locally common carbonaceous detritus and rare very fine coally laminations.
		Gas & Shows Comments	Nil.
		ROP Comments	
540.0 - 626.5	Min :1.80 Avg :22.80 Max :55.90	**Lithology Summary**	SANDSTONE with thin SILTSTONE interbeds
		Lithology Description	SANDSTONE (20 to 90%): mottled light grey / white / green grey, friable to dominantly moderately hard, locally hard, 5 to 10% argillaceous matrix, very fine, minor fine to medium, well sorted, sub-spherical, moderately strong to strong calcareous cement - locally very strong, common lithics and carbonaceous detritus, trace fine feldspar fragments, very poor visible porosity, no hydrocarbon fluorescence. SILTSTONE (10 to 80%): light olive grey to pale brown, minor very light grey, soft to dominantly firm, minor moderately hard, sub-blocky, 10% very fine quartz grains, 10% lithics, trace to locally minor micro mica, trace uniformly distributed very fine carbonaceous detritus, rare fine coally laminations.
		Gas & Shows Comments	Nil.
		ROP Comments	Strong calcareously cemented sandstones giving reverse drilling breaks throughout interval.
626.5 - 641.5	Min :8.30 Avg :30.10 Max :53.80	**Lithology Summary**	Interbedded SILTSTONE and SANDSTONE
		Lithology Description	SILTSTONE (10 to 70%): medium grey to light brown grey, minor brown grey, soft to dominantly firm, sub-blocky to blocky, 15 to 20% clay locally grading to ARGILLACEOUS SILTSTONE and slightly sticky, trace very fine carbonaceous wisps and coally laminations, trace to locally common micro mica. SANDSTONE (30 to 90%): mottled light grey / white / green grey, friable to moderately hard, 5 to 10% argillaceous matrix, very fine to fine, well sorted, sub-spherical, moderately strong to strong calcareous cement, common lithics and carbonaceous detritus, trace fine feldspar fragments, very poor visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	
641.5 - 691.0	Min :6.40 Avg :26.10 Max :53.80	**Lithology Summary**	SILTSTONE with minor SANDSTONE interbeds
		Lithology Description	SILTSTONE (20 to 70%): olive grey to minor brown grey, 10%, clay, trace very fine carbonaceous detritus - uniformly textured. SANDSTONE (30 to 80%): mottled white / very light grey / green grey, moderately hard to dominantly friable, 10% white argillaceous matrix, very fine to fine, sub-angular to dominantly sub-sounded, well sorted, sub-spherical, weak siliceous to pervasive weak to locally moderately strong calcareous cement, 5 to 10% lithics and fine feldspar fragments, trace carbonaceous detritus, very poor visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	

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Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm	(GWR/LHR/OCQ)
Drilled	466.5 - 540.0	(Min) 5.0 (Max) 18.6 (Avg.) 11.8	2,332	22	5							GWR - not required LHR - not required OCQ - not required
Drilled	540.0 - 626.5	(Min) 5.6 (Max) 21.4 (Avg.) 13.5	2,161	32	16							GWR - not required LHR - not required OCQ - not required
Drilled	626.5 - 641.5	(Min) 9.2 (Max) 28.0 (Avg.) 18.6	3,169	70	39							GWR - not required LHR - not required OCQ - not required
Drilled	641.5 - 691.0	(Min) 8.9 (Max) 23.0 (Avg.) 16.0	2,894	72	44							GWR - not required LHR - not required OCQ - not required

General Comments

Comments
Nil.

06:00 Hrs Update

Time / Date:	06:00 Hrs on 17 Jan 2013
Depth (MDRT):	723.0m
Progress Since Midnight:	51.0m
Status @ 0600hrs:	Drilled ahead in 12.1/4" hole from 672 to m with surveys.
ROP Summary:	Effective penetration rate since 2400 hrs 8.5 m/hr.
Formation Summary:	Mackunda Formation
Lithology Summary:	SILTSTONE with interbedded SANDSTONE
Gas Summary:	Maximum: 21 units Average: 15.8 units

Wellsite Geologist(s)

(Days) - Andrew James (Nights) - Andrew James

Drillsearch

Triclops-1 Drilling

Date: 17 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 4** | (associated DDR # 4)

Well Details

Depth MDBRT	: 766.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 17 Jan 2013
Depth TVDBRT	: 766.0 m	**Last Csg Size**	:	**Progress**	: 94.0 m
Depth TVDSS	: 619.85 m	**Last Csg Shoe MD**	:	**Report Start Depth**	: 691.0 m
RT - GL	: 5.2 m	**Last Csg Shoe TVD**	:	**Report End Depth**	: 766.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 3.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 12.250 in	**FIT / LOT**	: /	**Mud Weight**	: 8.90 ppg
Last Survey (MDRT/TVDRT)	: 716.0 m /	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: KCl - PHPA - Pre Hydrated Bentonite
Survey Deviation	: Inc. 0.80 ° Az 0.00 °				

Geology 24hr Operations Summary

24hr Summary:	Drilled ahead in 12.1/4" hole from 672 to 766 m with surveys. Reached section TD, conditioned hole and pulled out. Laid out 8" drill collars, cleared drill floor and prepared to rig down flow line.
24hr Forward Plan:	Run and cement 9.5/8" surface casing. Wait on cement.

Formation Tops

Formation	Inverted?	Prognosed			Actual			Diff.	Thickness TVD (m)	Pick Criteria
		MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)		
Winton Formation	No	5.2	5.2	-140.95	5.2	5.2	-140.95	0 High	636.3	From surface.
Mackunda Formation	No	670.2	670.2	524.05	641.5	641.5	495.35	28.7 High	103.5	Lithology / ROP
Allaru Mudstone	No	733.2	733.2	587.05	745.0	745.0	598.85	11.8 Low	0.0	Lithology / ROP
Toolebuc Formation	No	1044.2	1044.2	898.05				1,044.2 High	0.0	
Wallumbilla Formation	No	1090.2	1090.2	944.05				1,090.2 High	0.0	
Cadna-Owie Formation	No	1322.2	1322.2	1176.05				1,322.2 High	0.0	
Murta Formation	No	1401.2	1401.2	1255.05				1,401.2 High	0.0	
Namur Sandstone	No	1431.2	1431.2	1285.05				1,431.2 High	0.0	
Westbourne Formation	No	1523.2	1523.2	1377.05				1,523.2 High	0.0	
Adori Sandstone	No	1591.2	1591.2	1445.05				1,591.2 High	0.0	
Birkhead Formation	No	1640.2	1640.2	1494.05				1,640.2 High	0.0	
Hutton Sandstone	No	1734.2	1734.2	1588.05				1,734.2 High	0.0	
Poolwanna Formation	No	1930.2	1930.2	1784.05				1,930.2 High	0.0	

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Lithology Summary

Internal m MDRT	ROP (m/h)	Lithology Comments	
691.0 - 745.0	Min :1.40 Avg :11.30 Max :25.00	**Lithology Summary**	SANDSTONE with thin SILTSTONE interbeds
		Lithology Description	SANDSTONE (40 to 95%): mottled light grey / light green grey, friable to locally hard, 5% argillaceous matrix, very fine to minor fine grained, very well sorted, sub-angular to dominantly sub-sounded, sub-spherical, strong calcareous cement, 10% very fine to fine lithic and feldspar fragments, trace carbonaceous wisps, very poor to no visible porosity, no hydrocarbon fluorescence. SILTSTONE (5 to 60%): olive grey to minor brown grey, firm to moderately hard in part, sub-blocky, 10% clay, trace very fine carbonaceous detritus - uniformly textured.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A
745.0 - 766.0	Min :2.50 Avg :12.60 Max :17.60	**Lithology Summary**	SILTSTONE with minor SANDSTONE
		Lithology Description	SILTSTONE (20 to 70%): light olive grey to minor pale brown, firm to moderately hard, sub-blocky, 10 to 20% very fine quartz grains locally grading to ARENACEOUS SILTSTONE, 5 to 10% very fine lithics and feldspar fragments, 1% micro mica, trace carbonaceous wisps and very thin coally laminations. SANDSTONE (30 to 80%): mottled light grey / light green grey, friable to moderately hard, 5% argillaceous matrix, dominantly very fine to minor fine grained, very well sorted, sub-angular to dominantly sub-sounded, sub-spherical, strong to moderate calcareous cement, 10% very fine to fine lithic and feldspar fragments, trace carbonaceous wisps, very poor to no visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A

Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm	(GWR/LHR/OCQ)
Drilled	691.0 - 745.0	(Min) 9.0 (Max) 16.0 (Avg.) 12.5	1,815	56	40	16	9	6	2			GWR - not required LHR - not required OCQ - not required
Drilled	745.0 - 766.0	(Min) 8.0 (Max) 31.0 (Avg.) 19.5	1,808	72	38	14	6	5	2			GWR - not required LHR - not required OCQ - not required

General Comments

Comments
Nil.

06:00 Hrs Update

Time / Date:	06:00 Hrs on 18 Jan 2013
Depth (MDRT):	766.0m
Progress Since Midnight:	0.0m
Status @ 0600hrs:	Rigged down flow line. Rigged up to run 9.5/8" surface casing. Commenced running casing: shoe at 241 m at 0600 hrs.
ROP Summary:	N/A
Formation Summary:	Allaru Mudstone
Lithology Summary:	N/A
Gas Summary:	N/A

Wellsite Geologist(s)	
(Days) - Andrew James	(Nights) - Andrew James

Drillsearch

Triclops-1 Drilling

Date: 18 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 5** | (associated DDR # 5)

Well Details

Depth MDBRT	: 766.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 18 Jan 2013
Depth TVDBRT	: 766.0 m	**Last Csg Size**	: 9.625 in	**Progress**	:
Depth TVDSS	: 619.85 m	**Last Csg Shoe MD**	: 762.6 m	**Report Start Depth**	: 766.0 m
RT - GL	: 5.2 m	**Last Csg Shoe TVD**	: 762.6 m	**Report End Depth**	: 766.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 4.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 12.250 in	**FIT / LOT**	: /	**Mud Weight**	: 9.10 ppg
Last Survey (MDRT/TVDRT)	: 716.0 m /	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: KCl - PHPA - Pre Hydrated Bentonite
Survey Deviation	: Inc. 0.80 ° Az 0.00 °				

Geology 24hr Operations Summary

24hr Summary:	Ran and cemented 9.5/8" casing. Waited on cement. Commenced nippling up BOPs.
24hr Forward Plan:	Complete nippling up BOPs and pressure test. Pick up 8.1/2" BHA and run in hole with slip and cut of drilling line. Drill out cement and 3 m of new formation. Conduct LOT. Drill ahead in 8.1/2" hole.

Formation Tops

Formation	Inverted?	Prognosed			Actual			Diff.	Thickness TVD (m)	Pick Criteria
		MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)		
Winton Formation	No	5.2	5.2	-140.95	5.2	5.2	-140.95	0 High	636.3	From surface.
Mackunda Formation	No	670.2	670.2	524.05	641.5	641.5	495.35	28.7 High	103.5	Lithology / ROP
Allaru Mudstone	No	733.2	733.2	587.05	745.0	745.0	598.85	11.8 Low	0.0	Lithology / ROP
Toolebuc Formation	No	1044.2	1044.2	898.05					0.0	
Wallumbilla Formation	No	1090.2	1090.2	944.05					0.0	
Cadna-Owie Formation	No	1322.2	1322.2	1176.05					0.0	
Murta Formation	No	1401.2	1401.2	1255.05					0.0	
Namur Sandstone	No	1431.2	1431.2	1285.05					0.0	
Westbourne Formation	No	1523.2	1523.2	1377.05					0.0	
Adori Sandstone	No	1591.2	1591.2	1445.05					0.0	
Birkhead Formation	No	1640.2	1640.2	1494.05					0.0	
Hutton Sandstone	No	1734.2	1734.2	1588.05					0.0	
Poolwanna Formation	No	1930.2	1930.2	1784.05					0.0	

Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm	(GWR/LHR/OCQ)
Trip	766.0 -	18.0										GWR - not required LHR - not required OCQ - not required
Comment -	Gas recorded while circulating casing prior to cement job.											

General Comments

Comments
Ran carbide lag test at TD. Estimated hole size 12.48".

Drillsearch

06:00 Hrs Update	
Time / Date:	06:00 Hrs on 19 Jan 2013
Depth (MDRT):	766.0m
Progress Since Midnight:	0.0m
Status @ 0600hrs:	Completed nippling up BOPs. Commencing pressure testing.
ROP Summary:	N/A
Formation Summary:	Allaru Mudstone
Lithology Summary:	N/A
Gas Summary:	18 unit peak recorded while circulating casing on bottom.

Wellsite Geologist(s)	
(Days) - Andrew James	(Nights) - Andrew James

Drillsearch

Triclops-1 Drilling

Date: 19 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 6** | (associated DDR # 6)

Well Details

Depth MDBRT	: 766.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 19 Jan 2013
Depth TVDBRT	: 766.0 m	**Last Csg Size**	: 9.625 in	**Progress**	:
Depth TVDSS	: 619.85 m	**Last Csg Shoe MD**	: 762.6 m	**Report Start Depth**	: 766.0 m
RT - GL	: 5.2 m	**Last Csg Shoe TVD**	: 762.6 m	**Report End Depth**	: 766.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 5.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 12.250 in	**FIT / LOT**	: /	**Mud Weight**	: 9.10 ppg
Last Survey (MDRT/TVDRT)	: 716.0 m /	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: KCl - PHPA - Pre Hydrated Bentonite
Survey Deviation	: Inc. 0.80 ° Az 0.00 °				

Geology 24hr Operations Summary

24hr Summary:	Completed nippling up BOPs and pressure tested. Commenced picking up 8.5" BHA.
24hr Forward Plan:	Run in hole. Slip and cut drilling line. Drill out cement and 3 m of new formation. Displace well to mud and conduct LOT. Drill ahead in 8.5" hole.

Formation Tops

Formation	Inverted?	Prognosed			Actual			Diff.	Thickness TVD (m)	Pick Criteria
		MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)		
Winton Formation	No	5.2	5.2	-140.95	5.2	5.2	-140.95	0 High	636.3	From surface.
Mackunda Formation	No	670.2	670.2	524.05	641.5	641.5	495.35	28.7 High	103.5	Lithology / ROP
Allaru Mudstone	No	733.2	733.2	587.05	745.0	745.0	598.85	11.8 Low	0.0	Lithology / ROP
Toolebuc Formation	No	1044.2	1044.2	898.05					0.0	
Wallumbilla Formation	No	1090.2	1090.2	944.05					0.0	
Cadna-Owie Formation	No	1322.2	1322.2	1176.05					0.0	
Murta Formation	No	1401.2	1401.2	1255.05					0.0	
Namur Sandstone	No	1431.2	1431.2	1285.05					0.0	
Westbourne Formation	No	1523.2	1523.2	1377.05					0.0	
Adori Sandstone	No	1591.2	1591.2	1445.05					0.0	
Birkhead Formation	No	1640.2	1640.2	1494.05					0.0	
Hutton Sandstone	No	1734.2	1734.2	1588.05					0.0	
Poolwanna Formation	No	1930.2	1930.2	1784.05					0.0	

General Comments

Comments

06:00 Hrs Update

Time / Date:	06:00 Hrs on 20 Jan 2013
Depth (MDRT):	766.0m
Progress Since Midnight:	0.0m
Status @ 0600hrs:	Picked up 8.5" BHA and ran in hole. Slipped and cut drilling line. Completed Accumulater Test.
ROP Summary:	N/A
Formation Summary:	Allaru Mudstone
Lithology Summary:	N/A
Gas Summary:	N/A.

Wellsite Geologist(s)

(Days) - Andrew James (Nights) - Andrew James

Printed on 19 Jan 2013

Drillsearch

Triclops-1 Drilling

Date: 20 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 7** | (associated DDR # 7)

Well Details

Depth MDBRT	: 916.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 20 Jan 2013
Depth TVDBRT	: 916.0 m	**Last Csg Size**	: 9.625 in	**Progress**	: 150.0 m
Depth TVDSS	: 769.85 m	**Last Csg Shoe MD**	: 762.6 m	**Report Start Depth**	: 766.0 m
RT - GL	: 5.2 m	**Last Csg Shoe TVD**	: 762.6 m	**Report End Depth**	: 990.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 6.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 8.90 ppg
Last Survey (MDRT/TVDRT)	: 907.0 m /	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 0.50 ° Az 0.00 °				

Geology 24hr Operations Summary

24hr Summary:	Completed picking up 8 1/2" BHA and ran in hole. Slipped and cut drilling line. Completed accumulater test. Drilled out cement, shoe track and 3 m of new formation. Conducted LOT to 16.7 ppg EMW. Commenced drilling ahead in 8 1/2" hole from 769 to 916 m with survey.
24hr Forward Plan:	Drill ahead in 8 1/2" hole.

Formation Tops

Formation	Inverted?	Prognosed			Actual			Diff.	Thickness	Pick Criteria
		MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	No	5.2	5.2	-140.95	5.2	5.2	-140.95	0 High	636.3	From surface.
Mackunda Formation	No	670.2	670.2	524.05	641.5	641.5	495.35	28.7 High	103.5	Lithology / ROP
Allaru Mudstone	No	733.2	733.2	587.05	745.0	745.0	598.85	11.8 Low	0.0	Lithology / ROP
Toolebuc Formation	No	1044.2	1044.2	898.05					0.0	
Wallumbilla Formation	No	1090.2	1090.2	944.05					0.0	
Cadna-Owie Formation	No	1322.2	1322.2	1176.05					0.0	
Murta Formation	No	1401.2	1401.2	1255.05					0.0	
Namur Sandstone	No	1431.2	1431.2	1285.05					0.0	
Westbourne Formation	No	1523.2	1523.2	1377.05					0.0	
Adori Sandstone	No	1591.2	1591.2	1445.05					0.0	
Birkhead Formation	No	1640.2	1640.2	1494.05					0.0	
Hutton Sandstone	No	1734.2	1734.2	1588.05					0.0	
Poolwanna Formation	No	1930.2	1930.2	1784.05					0.0	

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Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
766.0 - 811.0	Min :2.60 Avg :25.40 Max :43.70	**Lithology Summary**	SILTSTONE with minor thin SANDSTONE interbeds
		Lithology Description	SILTSTONE (70 to 95%): medium light grey becoming dominantly medium grey, firm to moderately hard in part, sub-blocky to minor blocky, up to 20% very fine sand grading in part to ARENACEOUS SILTSTONE, trace lithics and fine carbonaceous detritus, trace pyrite, trace calcareous vein fragments. SANDSTONE (5 to 30%): light grey to minor medium grey, moderately hard, very fine to minor fine grained - silty in part grading to SILTY SANDSTONE, very well sorted, sub-angular, sub-spherical, strong calcareous cement, 5 to 10 % very fine to fine lithic and feldspar fragments, trace carbonaceous specks, no visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A
811.0 - 858.0	Min :26.20 Avg :33.00 Max :43.70	**Lithology Summary**	SILTSTONE with rare, thin SANDSTONE interbeds and rare very thin DOLOMITIC laminations
		Lithology Description	SILTSTONE (70 to 100%): medium grey to dominantly medium dark grey, moderately hard to dominantly firm, sub-blocky to minor sub-fissile, 10 to 15% very finely arenaceous, uniformly textured with trace disseminated pyrite and very fine carbonaceous specks, trace micro mica. SANDSTONE (0 to 30%): medium light grey to medium grey, moderately hard, very fine, silty grading to SILTY SANDSTONE, very well sorted, sub-angular to angular, sub-spherical, strong calcareous cement, 5 to 10% very fine to minor feldspar and lithics, trace uniformly distributed carbonaceous specks and very fine wisps. DOLOMITE (0 to 5%): olive grey to brown grey, very hard, sub-fissile to fissile, crypto- to micro-crystalline, generally homogenous - trace very fine carbonaceous / black mineral specks (?) and isolated pyrite grains.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A.
858.0 - 990.0	Min :10.10 Avg :29.30 Max :41.20	**Lithology Summary**	SILTSTONE with rare very thin DOLOMITIC laminations
		Lithology Description	SILTSTONE (97 to 100%): medium dark grey becoming dominantly medium grey, firm, sub-blocky to dominantly sub-fissile, minor fissile, generally uniformly textured - slightly argillaceous in part, weakly calcareous, trace carbonaceous specks, rare shell fragments, trace granular pyrite fragments. DOLOMITE (0 to 3%): olive grey to brown grey, very hard, sub-fissile to fissile, crypto- to micro-crystalline, generally homogenous - trace very fine carbonaceous / black mineral specks (?) and isolated pyrite grains.
		Gas & Shows Comments	No shows - lithology interval still open but closed off as at 0400 hrs.
		ROP Comments	N/A

Drillsearch

Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm	(GWR/LHR/OCQ)
Drilled	766.0 - 811.0	(Min) 1.0 (Max) 10.0 (Avg.) 5.5	977	44	35	11	4	2	1			GWR - not required LHR - not required OCQ - not required
Drilled	811.0 - 858.0	(Min) 6.0 (Max) 13.0 (Avg.) 9.5	1,717	88	84	26	10	4	1			GWR - not required LHR - not required OCQ - not required
Drilled	858.0 - 990.0	(Min) 8.0 (Max) 30.0 (Avg.) 19.0	2,257	154	173	51	31	10	3			GWR - not required LHR - not required OCQ - not required

General Comments

Comments
Chromatograph integrator problem from 922 to 1014 m. C1 values approximately 25 to 30% of what they should be. Data to be recovered from memory and replayed to return corrected values as operations permit. Interval noted on mudlog. Reported values on this report allow for this error.

06:00 Hrs Update

Time / Date:	06:00 Hrs on 21 Jan 2013
Depth (MDRT):	1,015.0m
Progress Since Midnight:	99.0m
Status @ 0600hrs:	Drilled ahead in 8 1/2" hole from 916 to 1015 m.
ROP Summary:	Effective penetration rate since 2400 hrs 16.5 m/hr.
Formation Summary:	Allaru Mudstone
Lithology Summary:	SILTSTONE
Gas Summary:	Maximum: 30.3 units Average: 22.1 units

Wellsite Geologist(s)

(Days) - Andrew James (Nights) - Andrew James

Printed on 20 Jan 2013

Drillsearch

Triclops-1 Drilling

Date: 21 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 8** | (associated DDR # 8)

Well Details

Depth MDBRT	: 1,138.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 21 Jan 2013
Depth TVDBRT	: 1,138.0 m	**Last Csg Size**	: 9.625 in	**Progress**	: 222.0 m
Depth TVDSS	: 991.80 m	**Last Csg Shoe MD**	: 762.7 m	**Report Start Depth**	: 990.0 m
RT - GL	: 5.20 m	**Last Csg Shoe TVD**	: 762.7 m	**Report End Depth**	: 1,138.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 7.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 9.00 ppg
Last Survey (MDRT/TVDRT)	: 1,101.0 m /	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 2.00 ° Az 185.00 °				

Geology 24hr Operations Summary

24hr Summary:	Drilled ahead in 8 1/2" hole from 916 to 1138 m. Survey indicated well undesirably building angle. Circulated hole clean and commenced pulling out taking a single shot survey each stand.
24hr Forward Plan:	Complete surveying well. Rig up directional drilling service.

Formation Tops

Formation	Prognosed			Actual			Diff.	Thickness	Pick Criteria
	MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	5.3	5.3	-140.95	5.2	5.2	-141	0.1 High	636.3	From surface.
Mackunda Formation	670.3	670.3	524.05	641.5	641.5	495.3	28.8 High	103.5	Lithology / ROP
Allaru Mudstone	733.3	733.3	587.05	745.0	745.0	598.8	11.7 Low	293.0	Lithology / ROP
Toolebuc Formation	1044.3	1044.3	898.05	1038.0	1038.0	891.8	6.3 High	56.0	Lithology / ROP
Wallumbilla Formation	1090.3	1090.3	944.05	1094.0	1094.0	947.8	3.7 Low	0.0	Lithology / ROP
Cadna-Owie Formation	1322.3	1322.3	1176.05					0.0	
Murta Formation	1401.3	1401.3	1255.05					0.0	
Namur Sandstone	1431.3	1431.3	1285.05					0.0	
Westbourne Formation	1523.3	1523.3	1377.05					0.0	
Adori Sandstone	1591.3	1591.3	1445.05					0.0	
Birkhead Formation	1640.3	1640.3	1494.05					0.0	
Hutton Sandstone	1734.3	1734.3	1588.05					0.0	
Poolwanna Formation	1930.3	1930.3	1784.05					0.0	

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Lithology Summary

Internal m MDRT	ROP (m/h)	Lithology Comments	
990.0 - 1,038.0	Min :13.30 Avg :20.20 Max :27.30	**Lithology Summary**	SILTSTONE
		Lithology Description	SILTSTONE: medium grey, firm to minor moderately hard, sub-fissile to fissile in part, generally uniformly textured - slightly argillaceous in part, trace carbonaceous specks.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A.
1,038.0 - 1,094.0	Min :19.20 Avg :30.00 Max :45.10	**Lithology Summary**	SILTSTONE
		Lithology Description	SILTSTONE (1) (10 to 100%): grey black to olive black, minor brown black, firm to moderately hard, sub fissile to fissile, strongly calcareous - uniformly very finely arenaceous, up to 5% shell and Inoceramus fragments, trace pyrite. Becoming SILTSTONE (2) (0 to 90%): medium dark grey to dominantly dark grey, firm to dominantly moderately hard, sub-fissile to fissile, strongly calcareous, locally 5 to 10% very fine quartz grains, trace micro mica.
		Gas & Shows Comments	Wet gas peak associated with high TOC Toolebuc Formation
		ROP Comments	N/A
1,094.0 - 1,138.0	Min :11.70 Avg :28.40 Max :37.10	**Lithology Summary**	SILTSTONE
		Lithology Description	SILTSTONE (100%): medium dark grey, moderately hard, sub-blocky to sub-fissile, generally weakly calcareous with 5% moderate brown carbonate fragments (as vein partings?), uniformly 15 to 20% very finely arenaceous grading to ARENACEOUS SILTSTONE in part with associated trace to 10% very fine to fine glauconite, trace micro mica and pyritic streaks.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A.

Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm
Drilled	990.0 - 1,038.0	(Min) 18.0 (Max) 52.7 (Avg.) 35.4	2,811	323	618	140	317	95	69		
Drilled	1,038.0 - 1,094.0	(Min) 51.0 (Max) 519.0 (Avg.) 285.0	12,851	1,757	3,594	629	1,940	428	466		
Drilled	1,094.0 - 1,138.0	(Min) 35.0 (Max) 128.3 (Avg.) 81.7	4,747	604	1,317	267	908	259	317		

General Comments

Comments
Nil.

06:00 Hrs Update

Time / Date:	06:00 Hrs on
Depth (MDRT):	1,138.0m
Progress Since Midnight:	0.0m
Status @ 0600hrs:	Contiinued to pull out of hole taking a single shot survey each stand.
ROP Summary:	N/A
Formation Summary:	Wallumbilla Formation
Lithology Summary:	SILTSTONE
Gas Summary:	N/A

Wellsite Geologist(s)

(Days) - Andrew James (Nights) - Andrew James

Printed on 21 Jan 2013

Drillsearch

Triclops-1 Drilling

Date: 22 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 9** | (associated DDR # 9)

Well Details

Depth MDBRT	: 1,138.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 22 Jan 2013
Depth TVDBRT	: 1,138.0 m	**Last Csg Size**	: 9.625 in	**Progress**	: 0.0 m
Depth TVDSS	: 991.80 m	**Last Csg Shoe MD**	: 762.7 m	**Report Start Depth**	: 1,138.0 m
RT - GL	: 5.20 m	**Last Csg Shoe TVD**	: 762.7 m	**Report End Depth**	: 1,138.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 8.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 9.00 ppg
Last Survey (MDRT/TVDRT)	: 1,120.0 m /	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 2.00 ° Az 175.00 °				

Geology 24hr Operations Summary

24hr Summary:	Completed surveying well, pulling out of hole taking single shot surveys each stand. Ran back in to shoe and waited on directional advice.
24hr Forward Plan:	Pull out of hole and make up pendulum BHA. Run in hole and drill ahead in 8 1/2" hole from 1138 m.

Formation Tops

Formation	Prognosed			Actual			Diff.	Thickness	Pick Criteria
	MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	5.3	5.3	-140.95	5.2	5.2	-141	0.1 High	636.3	From surface.
Mackunda Formation	670.3	670.3	524.05	641.5	641.5	495.3	28.8 High	103.5	Lithology / ROP
Allaru Mudstone	733.3	733.3	587.05	745.0	745.0	598.8	11.7 Low	293.0	Lithology / ROP
Toolebuc Formation	1044.3	1044.3	898.05	1038.0	1038.0	891.8	6.3 High	56.0	Lithology / ROP
Wallumbilla Formation	1090.3	1090.3	944.05	1094.0	1094.0	947.8	3.7 Low	0.0	Lithology / ROP
Cadna-Owie Formation	1322.3	1322.3	1176.05					0.0	
Murta Formation	1401.3	1401.3	1255.05					0.0	
Namur Sandstone	1431.3	1431.3	1285.05					0.0	
Westbourne Formation	1523.3	1523.3	1377.05					0.0	
Adori Sandstone	1591.3	1591.3	1445.05					0.0	
Birkhead Formation	1640.3	1640.3	1494.05					0.0	
Hutton Sandstone	1734.3	1734.3	1588.05					0.0	
Poolwanna Formation	1930.3	1930.3	1784.05					0.0	

General Comments

Comments
Nil.

06:00 Hrs Update

Depth (MDRT):	1,138.0m
Progress Since Midnight:	0.0m
Status @ 0600hrs:	Standby on equipment
ROP Summary:	N/A
Formation Summary:	Wallumbilla Formation
Lithology Summary:	N/A
Gas Summary:	N/A

Wellsite Geologist(s)

(Days) - Andrew James (Nights) - Andrew James

Printed on 22 Jan 2013

Drillsearch

Triclops-1 Drilling

Date: 24 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 11** | (associated DDR # 11)

Well Details

Depth MDBRT	: 1,296.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 24 Jan 2013
Depth TVDBRT	: 1,296.0 m	**Last Csg Size**	: 9.625 in	**Progress**	: 130.0 m
Depth TVDSS	: 1,149.80 m	**Last Csg Shoe MD**	: 762.7 m	**Report Start Depth**	: 1,180.0 m
RT - GL	: 5.20 m	**Last Csg Shoe TVD**	: 762.7 m	**Report End Depth**	: 1,296.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 10.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 9.00 ppg
Last Survey (MDRT/TVDRT)	: 1,284.0 m /	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 3.00 ° Az 160.00 °				

Geology 24hr Operations Summary

24hr Summary:	Drilled ahead in 8-1/2" hole from 1168 to 1296 m with single shot surveys. Commenced circulating hole clean.
24hr Forward Plan:	Pull out of hole and pick up directional drilling assembly. Run in hole and drill ahead in 8-1/2" hole from 1296 m directionally correcting wellbore trajectory back to target centre.

Formation Tops

Formation	Prognosed			Actual			Diff.	Thickness	Pick Criteria
	MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	5.3	5.3	-140.95	5.2	5.2	-141	0.1 High	636.3	From surface.
Mackunda Formation	670.3	670.3	524.05	641.5	641.5	495.3	28.8 High	103.5	Lithology / ROP
Allaru Mudstone	733.3	733.3	587.05	745.0	745.0	598.8	11.7 Low	293.0	Lithology / ROP
Toolebuc Formation	1044.3	1044.3	898.05	1038.0	1038.0	891.8	6.3 High	56.0	Lithology / ROP
Wallumbilla Formation	1090.3	1090.3	944.05	1094.0	1094.0	947.8	3.7 Low	0.0	Lithology / ROP
Cadna-Owie Formation	1322.3	1322.3	1176.05						
Murta Formation	1401.3	1401.3	1255.05						
Namur Sandstone	1431.3	1431.3	1285.05						
Westbourne Formation	1523.3	1523.3	1377.05						
Adori Sandstone	1591.3	1591.3	1445.05						
Birkhead Formation	1640.3	1640.3	1494.05						
Hutton Sandstone	1734.3	1734.3	1588.05						
Poolwanna Formation	1930.3	1930.3	1784.05						

Lithology Summary

Internal m MDRT	ROP (m/h)	Lithology Comments	
1,180.0 - 1,296.0	Min :2.50 Avg :8.90 Max :18.40	**Lithology Summary**	SILTSTONE with minor SILTY SANDSTONE interbeds in upper part of interval
		Lithology Description	SILTSTONE (60 to 100%): dark grey, firm to moderately hard, fissile to minor sub-fissile, generally uniformly textured with trace micro mica, locally very finely arenaceous grading to SILTY SANDSTONE - occasional cuttings with both fine silt and sand laminations associated with 5 to 10% glauconite and included pyritic aggregates. SILTY SANDSTONE (0 to 40%): mottled white / very light grey, 5 to locally 10 % dusky green glauconite, very fine, well sorted, sub-angular to sub-sounded, sub-spherical, strong calcareous cement, common fine white lithics, very poor visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	Efficient penetration rate reduced due to application of reduced WOB in order to control well inclination.

Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm
Drilled	1,180.0 - 1,296.0	(Min) 4.8 (Max) 24.2 (Avg.) 14.5	952	93	172	36	101	25	31		

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General Comments
Comments
Nil.

06:00 Hrs Update	
Depth (MDRT):	1,296.0m
Progress Since Midnight:	0.0m
Status @ 0600hrs:	Making up directional drilling BHA.
ROP Summary:	N/A
Formation Summary:	Wallumbilla Formation.
Lithology Summary:	SILTSTONE with minor SILTY SANDSTONE interbeds
Gas Summary:	N/A

Wellsite Geologist(s)	
(Days) - Andrew James	(Nights) - Andrew James

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Triclops-1 Drilling

Date: 25 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 12** | (associated DDR # 23)

Well Details

Depth MDBRT	: 1,336.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 25 Jan 2013
Depth TVDBRT	: 1,336.0 m	**Last Csg Size**	: 9.625 in	**Progress**	: 170.0 m
Depth TVDSS	: 1,189.80 m	**Last Csg Shoe MD**	: 762.7 m	**Report Start Depth**	: 1,296.0 m
RT - GL	: 5.20 m	**Last Csg Shoe TVD**	: 762.7 m	**Report End Depth**	: 1,360.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 11.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 9.10 ppg
Last Survey (MDRT/TVDRT)	: 1,284.0 m /	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 3.00 ° Az 160.00 °				

Geology 24hr Operations Summary

24hr Summary:	Circulated hole and pulled out. Picked up directional drilling assembly and ran in hole taking check surveys with MWD tool. Tagged bottom and commenced drilling / sliding ahead from 1296 m as required under instruction from directional driller to correct wellbore trajectory.
24hr Forward Plan:	Continue to drill ahead in 8-1/2" hole sliding as required.

Formation Tops

Formation	Prognosed			Actual			Diff.	Thickness	Pick Criteria
	MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	5.3	5.3	-140.95	5.2	5.2	-141	0.1 High	636.3	From surface.
Mackunda Formation	670.3	670.3	524.05	641.5	641.5	495.3	28.8 High	103.5	Lithology / ROP
Allaru Mudstone	733.3	733.3	587.05	745.0	745.0	598.8	11.7 Low	293.0	Lithology / ROP
Toolebuc Formation	1044.3	1044.3	898.05	1038.0	1038.0	891.8	6.3 High	56.0	Lithology / ROP
Wallumbilla Formation	1090.3	1090.3	944.05	1094.0	1094.0	947.8	3.7 Low	217.0	Lithology / ROP
Cadna-Owie Formation	1322.3	1322.3	1176.05	1311.0	1311.0	1164.8	11.3 High	0.0	Lithology
Murta Formation	1401.3	1401.3	1255.05						
Namur Sandstone	1431.3	1431.3	1285.05						
Westbourne Formation	1523.3	1523.3	1377.05						
Adori Sandstone	1591.3	1591.3	1445.05						
Birkhead Formation	1640.3	1640.3	1494.05						
Hutton Sandstone	1734.3	1734.3	1588.05						
Poolowanna Formation	1930.3	1930.3	1784.05						

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Lithology Summary

Internal m MDRT	ROP (m/h)	Lithology Comments	
1,296.0 - 1,311.0	Min :6.90 Avg :17.90 Max :26.00	**Lithology Summary**	SILTSTONE
		Lithology Description	SILTSTONE (100%): dark grey, firm to moderately hard, fissile to splintery in part, generally uniformly textured with trace to locally common micro mica.
		Gas & Shows Comments	Nil.
		ROP Comments	ROP influenced by directional drilling sliding and rotating.
1,311.0 - 1,318.0	Min :16.40 Avg :27.10 Max :30.50	**Lithology Summary**	SILTSTONE with SANDSTONE interbed
		Lithology Description	SILTSTONE (80 to 90%): dark grey to dominantly olive black, dusky yellow brown in part, firm to dominantly moderately hard, sub-fissile to dominantly fissile, generally uniformly textured - locally very finely arenaceous with associated minor micro mica, trace pyrite aggregates. SANDSTONE (10 to 20%): dark yellow brown to dusky yellow brown, mottled medium grey in part, hard to very hard, very fine, very well sorted, sub-angular to angular, sub-spherical, slightly silty in part, strong calcareous-dolomitic cement, common white lithic / feldspar fragments, trace glauconite, very poor to no visible porosity, 100% uniform dull orange brown mineral fluorescence, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	ROP influenced by directional drilling sliding and rotating.
1,318.0 - 1,321.5	Min :8.60 Avg :20.40 Max :26.80	**Lithology Summary**	Interbedded ARGILLACEOUS SANDSTONE and ARENACEOUS SILTSTONE
		Lithology Description	ARGILLACEOUS SANDSTONE (50%): white to very light grey, pale brown in part, hard, very fine, very well sorted, sub-angular to sub-sounded, sub-spherical, 25 to 30% white argillaceous matrix, strong calcareous cement, weakly dolomitic in part, 5% white lithics / feldspar fragments, trace pyritic cement / matrix, very poor to no visible porosity, 20% dull orange brown mineral fluorescence, no hydrocarbon fluorescence. ARENACEOUS SILTSTONE (50%): dusky yellow brown, firm to dominantly moderately hard, sub-blocky to dominantly sub-fissile, 20 to 30% very fine quartz grains, common very fine lithics, minor micro mica, trace very fine carbonaceous detritus.
		Gas & Shows Comments	Nil.
		ROP Comments	ROP influenced by directional drilling sliding and rotating.
1,321.5 - 1,360.0	Min :3.20 Avg :25.20 Max :34.70	**Lithology Summary**	SANDSTONE with minor SILTSTONE interbeds
		Lithology Description	SANDSTONE (20 to 100%): generally white / very light grey, 30 to 40% as dis-aggregated loose clear to translucent grains, very fine to fine, commonly medium to coarse, moderately sorted, sub-angular in part - dominantly sub-sounded to rounded, sub-spherical to sub-elongate, 10 to 15% white argillaceous matrix, moderate to locally strong calcareous cement, minor fine carbonaceous laminations, poor inferred porosity, no hydrocarbon fluorescence. SILTSTONE (0 to 80%): dusky yellow brown to brown grey, moderately hard to hard, sub-fissile to minor fissile, uniformly very finely arenaceous grading to ARENACEOUS SILTSTONE, minor cuttings fragments with sandstone visible as laminations grading back to siltstone, locally common fine carbonaceous detritus and laminations.
		Gas & Shows Comments	Nil.
		ROP Comments	ROP influenced by directional drilling sliding and rotating.

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Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm
Trip	1,296.0 -	10.0									
Drilled	1,296.0 - 1,311.0	(Min) 5.0 (Max) 19.1 (Avg.) 12.0	1,415	140	215	42	99	22	26		
Drilled	1,311.0 - 1,318.0	(Min) 19.2 (Max) 44.6 (Avg.) 31.9	2,716	302	509	120	275	80	84		
Drilled	1,318.0 - 1,321.5	(Min) 17.8 (Max) 30.2 (Avg.) 24.0	2,017	208	358	88	213	66	73		
Drilled	1,321.5 - 1,360.0	(Min) 11.4 (Max) 22.3 (Avg.) 16.9	2,132	181	266	58	157	51	60		

General Comments

Comments
Last slide from 1346 to 1351 m.

06:00 Hrs Update

Depth (MDRT):	1,413.0m
Progress Since Midnight:	77.0m
Status @ 0600hrs:	Drilling ahead in 8-1/2" hole.
ROP Summary:	Effective penetration rate since 2400 hrs 12.8 m/hr.
Formation Summary:	Cadna Owie Formation
Lithology Summary:	ARENACEOUS SILTSTONE with minor interbedded SANDSTONE
Gas Summary:	Maximum: 40 units Average: 25 units

Wellsite Geologist(s)

(Days) - Andrew James	(Nights) - Andrew James

Printed on 25 Jan 2013

Drillsearch

Triclops-1 Drilling

Date: 26 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 13** | (associated DDR # 24)

Well Details

Depth MDBRT	: 1,568.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 26 Jan 2013
Depth TVDBRT	: 1,568.0 m	**Last Csg Size**	: 9.625 in	**Progress**	: 232.0 m
Depth TVDSS	: 1,421.80 m	**Last Csg Shoe MD**	: 762.7 m	**Report Start Depth**	: 1,360.0 m
RT - GL	: 5.20 m	**Last Csg Shoe TVD**	: 762.7 m	**Report End Depth**	: 1,578.0 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 12.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 9.10 ppg
Last Survey (MDRT/TVDRT)	: 1,554.3 m / 1,553.9 m	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 1.30 ° Az 322.23 °				

Geology 24hr Operations Summary

24hr Summary:	Drilled ahead in 8-1/2" hole from 1336 to 1568 m directionally drilling as required to maintain target trajectory.
24hr Forward Plan:	Continue to drill ahead in 8-1/2" hole directionally drilling as required.

Formation Tops

Formation	Prognosed			Actual			Diff.	Thickness	Pick Criteria
	MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	5.3	5.3	-140.95	5.2	5.2	-141	0.1 High	636.3	From surface.
Mackunda Formation	670.3	670.3	524.05	641.5	641.5	495.3	28.8 High	103.5	Lithology / ROP
Allaru Mudstone	733.3	733.3	587.05	745.0	745.0	598.8	11.7 Low	293.0	Lithology / ROP
Toolebuc Formation	1044.3	1044.3	898.05	1038.0	1038.0	891.8	6.3 High	56.0	Lithology / ROP
Wallumbilla Formation	1090.3	1090.3	944.05	1094.0	1094.0	947.8	3.7 Low	217.0	Lithology / ROP
Cadna-Owie Formation	1322.3	1322.3	1176.05	1311.0	1311.0	1164.8	11.3 High	86.5	Lithology
Murta Formation	1401.3	1401.3	1255.05	1397.5	1397.5	1251.3	3.8 High	27.0	Lithology
Namur Sandstone	1431.3	1431.3	1285.05	1424.5	1424.5	1278.3	6.8 High	92.0	Lithology
Westbourne Formation	1523.3	1523.3	1377.05	1516.5	1516.5	1370.3	6.8 High	0.0	Lithology / ROP
Adori Sandstone	1591.3	1591.3	1445.05						
Birkhead Formation	1640.3	1640.3	1494.05						
Hutton Sandstone	1734.3	1734.3	1588.05						
Poolowanna Formation	1930.3	1930.3	1784.05						

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Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
1,360.0 - 1,389.0	Min :16.50 Avg :26.00 Max :34.80	**Lithology Summary**	ARENACEOUS SILTSTONE with minor interbedded SANDSTONE
		Lithology Description	ARENACEOUS SILTSTONE (20 to 80%): dusky yellow brown to dominantly brown grey, hard, sub-fissile to fissile, 20 to 40% very finely arenaceous grading in part to SILTY SANDSTONE, trace carbonaceous specks and micro mica. SANDSTONE (20 to 80%): white to very light grey, hard to very hard in part, very fine, sacharoidally textured, very well sorted, sub-angular, sub-spherical, 10% white argillaceous matrix, strong calcareous cement, trace very fine carbonaceous specks and white lithics, very poor to no visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A
1,389.0 - 1,397.5	Min :25.80 Avg :29.20 Max :33.90	**Lithology Summary**	SILTSTONE with minor interbedded SANDSTONE
		Lithology Description	SILTSTONE (70 to 90%): medium dark grey to dark grey, moderately hard, fissile to dominantly sub-fissile, uniformly textured - very finely arenaceous in part, trace carbonaceous detritus, trace to locally minor micro mica. SANDSTONE (10 to 30%): light grey to medium light grey, moderately hard to hard, very fine, sacharoidally textured, very well sorted, sub-angular to angular, sub-spherical, grades to SILTY SANDSTONE in part, trace black mineral / carbonaceous specks, no visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A
1,397.5 - 1,409.5	Min :11.00 Avg :28.30 Max :34.40	**Lithology Summary**	Interbedded SANDSTONE and ARENACEOUS SILTSTONE
		Lithology Description	SANDSTONE (10 to 60%): mottled white / translucent aggregates - 5% loose clear to translucent grains, moderately hard, medium to coarse, minor very coarse, moderately to well sorted, angular to sub-angular, sub-elongated, 5 to 10% white argillaceous matrix, weak calcareous cement, very poor visible to fair inferred porosity. ARENACEOUS SILTSTONE (40 to 90%): dark grey, firm to moderately hard in part, sub-blocky to dominantly sub-fissile, minor very fine lithic fragments, trace carbonaceous detritus and micro mica.
		Gas & Shows Comments	FLUORESCENCE 1401 to 1404 m: trace pinpoint moderately bright green yellow fluorescence in tight sandstone aggregates, very weak very slow diffuse dull green white cut, very thin residual ring fluorescence, no visible residue. Poor show - no associated gas peak.
		ROP Comments	N/A
1,409.5 - 1,424.5	Min :31.10 Avg :29.90 Max :36.10	**Lithology Summary**	SANDSTONE and interbedded ARENACEOUS SILTSTONE
		Lithology Description	SANDSTONE (20 to 70%): light grey aggregates - very fine, 50% as fine to dominantly medium translucent to clear dis-aggregated grains, friable to moderately hard, moderately to well sorted, sub-angular to dominantly sub-sounded, rounded in part, sub-elongate to dominantly sub-spherical, 5 to 10% white argillaceous matrix, weak calcareous cement, poor visible to fair inferred porosity. ARENACEOUS SILTSTONE (30 to 80%): dark grey, firm to moderately hard in part, sub-blocky to dominantly sub-fissile, minor very fine lithic fragments, common very fine carbonaceous / coally laminations and detritus.
		Gas & Shows Comments	FLUORESCENCE 1419 to 1424.5 m: 100% patchy very dull orange mineral fluorescence with trace pinpoint / scattered green yellow fluorescence in tight sandstone aggregates with trace carbonaceous detritus (locally generated?), slow streaming dull to moderately bright blue white cut, moderately thick residual ring fluorescence, no visible residue. Poor show: broad gas peak 57 units on a 35 unit background.
		ROP Comments	N/A

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Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
1,424.5 - 1,435.5	Min :28.60 Avg :31.10 Max :33.90	**Lithology Summary**	SANDSTONE with thin interbeds of SILTSTONE
		Lithology Description	SANDSTONE (70 to 95%): white to very light grey aggregates, dominantly as translucent to clear disaggregated grains, moderately hard to dominantly friable, fine to dominantly medium, rarely coarse, sub-angular to sub-rounded, well sorted, weakly calcareous, trace to 5% white argillaceous matrix, rare carbonaceous laminations, poor to fair inferred porosity. SILTSTONE (5 to 30%): dark grey to brown black, sub-blocky, moderately hard, very finely arenaceous in part with locally common micro mica, occasionally moderately carbonaceous.
		Gas & Shows Comments	FLUORESCENCE 1424.5 to 1435.5 m: 30 to 10% very dull green patchy fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue. Poor show - no associated gas peak.
		ROP Comments	N/A
1,435.5 - 1,460.0	Min :10.70 Avg :27.10 Max :35.10	**Lithology Summary**	SANDSTONE with interbedded SILTSTONE
		Lithology Description	SANDSTONE: very light to minor very pale brown aggregates, dominantly as dis-aggregated translucent to clear grains, friable, fine to dominantly medium, minor coarse, well sorted, sub-angular to minor sub-sounded, sub-spherical to sub-elongate, minor elongated, weak calcareous cement - weakly siliceous in part, 5% decreasing white argillaceous matrix, fair inferred porosity. SILTSTONE: brown grey to olive grey, moderately hard, sub-fissile to minor fissile, uniformly very finely arenaceous, trace fine mica flecks, trace fine carbonaceous detritus.
		Gas & Shows Comments	FLUORESCENCE 1435.5 to 1451 m: 10% to 70% (from 1440 to 1443 m) dull green pinpoint to patchy fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue. Poor show - weak gas peaks of 45 units on a 30 unit background.
		ROP Comments	N/A
1,460.0 - 1,487.0	Min :11.60 Avg :21.40 Max :31.80	**Lithology Summary**	SANDSTONE with minor SILTSTONE interbeds
		Lithology Description	SANDSTONE (30 to 100%): minor very light grey aggregates - dominantly as broken / dis-aggregated translucent to clear grains, fine to dominantly medium rarely coarse, well sorted, sub-angular to angular, sub-spherical to sub-elongate, very weakly calcareous, weak siliceous cement, trace white argillaceous matrix, poor visible to dominantly fair inferred porosity. SILTSTONE (0 to 70%): grey black, firm to moderately hard, sub-fissile, very finely arenaceous, moderately to very carbonaceous, trace micro mica.
		Gas & Shows Comments	FLUORESCENCE 1460 to 1487 m: 5% to trace dull green pinpoint fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue. Poor show - potentially largely cavings in lower part of section. Not supported by elevated gas values.
		ROP Comments	N/A

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Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
1,487.0 - 1,516.5	Min :4.80 Avg :15.30 Max :35.30	**Lithology Summary**	SANDSTONE with minor interbedded SILTSTONE
		Lithology Description	SANDSTONE (60 to 100%): white to very pale brown aggregates, 30 to 40% as dis-aggregated clear to translucent grains, friable, medium to dominantly fine, rarely coarse, moderately to well sorted, sub-angular to minor sub-sounded, sub-spherical, strong calcareous cement, 15 to 20% white argillaceous matric in part grading to ARGILLACEOUS SANDSTONE, very poor visible porosity. SILTSTONE (0 to 40%): grey black becoming commonly dusky yellow brown, firm to moderately hard, sub-fissile, very finely arenaceous, common carbonaceous detritus, trace micro mica.
		Gas & Shows Comments	FLUORESENCE 1494 to 1503 m: 20% to trace moderately bright green yellow scattered fluorescence in tight sandstone aggregates, slow diffuse dull blue white crush cut, very thin residual ring, no visible residue. Poor show - gas trap down over part of interval but not supported by any increase in gas levels.
		ROP Comments	N/A
1,516.5 - 1,556.0	Min :7.50 Avg :14.80 Max :26.50	**Lithology Summary**	Interbedded SILTSTONE and sacharoidally textured SANDSTONE
		Lithology Description	SILTSTONE (10 to 80%): yellow brown becoming dominantly brown grey, firm to moderately hard, sub blocky to sub-fissile, uniformly very finely arenaceous, minor micro mica and trace very fine carbonaceous specks. SANDSTONE (20 to 90%): light grey to yellow grey in part, friable to moderately hard, very fine to fine - uniformly sacharoidally textured, well sorted, sub-angular to angular, sub-spherical to spherical, 5 to 10% white argillaceous matrix, weakly calcareous - moderate siliceous cement, trace carbonaceous specks - rare brown grey silty laminations, very poor visible porosity.
		Gas & Shows Comments	FLUORESCENCE 1516.5 to 1536 m: trace to 70% pinpoint to patchy dull moderately to bright green yellow fluorescence, very weak slow dull blue white diffuse crush cut, very thin dull blue white residual ring, no visible residue. Poor show - 95 unit peak on 45 unit background.
		ROP Comments	N/A
1,556.0 - 1,572.5	Min :11.10 Avg :19.70 Max :29.80	**Lithology Summary**	Interbedded ARENACEOUS SILTSTONE and sacharoidally textured SANDSTONE
		Lithology Description	ARENACEOUS SILTSTONE (20 to 90%): uniformly brown grey, firm to moderately hard in part, sub-fissile to minor sub-blocky, 40 to 50% very fine quartz grains grading to SILTY SANDSTONE, non-calcareous, trace carbonaceous specks, locally common micro mica. SANDSTONE (10 to 80%): white to pale yellow brown, firm to dominantly moderately hard, very fine to minor fine - uniformly sacharoidally textured, very well sorted, sub-angular, sub-spherical, minor white argillaceous matrix, very weakly calcareous in part - dominantly as strong siliceous cement, very poor to no visible porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A

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Lithology Summary

Internal m MDRT	ROP (m/h)	Lithology Comments	
1,572.5 - 1,578.0	Min :3.90 Avg :7.90 Max :10.70	**Lithology Summary**	SANDSTONE with thin SILTSTONE interbeds
		Lithology Description	SANDSTONE (80 to 100%): dominantly as translucent to minor clear dis-aggregated quartz grains, minor very light grey aggregates, friable to minor moderately hard, fine to minor medium, well sorted, sub-angular to dominantly sub-rounded, sub-spherical to spherical, weak siliceous cement, poor visible to fair inferred porosity. SILTSTONE (0 to 20%): dusky yellow brown, firm to moderately hard, sub blocky to sub-fissile, uniformly very finely arenaceous, minor micro mica and trace very fine carbonaceous specks and detritus.
		Gas & Shows Comments	FLUORESCENCE 1572.5 to 1574 m: 100% decreasing to 15% solid to patchy bright yellow green fluorescence, slow diffuse green white cut - instant bright green white crush cut with secondary streaming grains, thick moderately bright green white residual ring, no visible residue. Fair show - 449 unit peak on a 65 unit background. Chromatograph breakdown: 55/9/13/14/9. ROP break is neither fast nor distinct: 11 m/hr on 9 m/hr.
		ROP Comments	N/A

Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm
Drilled	1,360.0 - 1,389.0	(Min) 15.0 (Max) 32.8 (Avg.) 23.9	2,412	208	296	67	180	65	72		
Drilled	1,389.0 - 1,397.5	(Min) 31.0 (Max) 39.5 (Avg.) 35.3	3,270	317	452	108	271	103	107		
Drilled	1,397.5 - 1,409.5	(Min) 21.9 (Max) 44.7 (Avg.) 33.3	3,105	296	416	108	266	111	111		
Drilled	1,409.5 - 1,424.5	(Min) 27.1 (Max) 56.8 (Avg.) 42.0	4,017	339	424	106	269	116	117		
Drilled	1,424.5 - 1,435.5	(Min) 18.4 (Max) 38.5 (Avg.) 28.5	3,319	229	252	64	172	79	83		
Drilled	1,435.5 - 1,460.0	(Min) 24.0 (Max) 44.7 (Avg.) 34.4	3,485	244	263	68	182	87	91		
Drilled	1,460.0 - 1,487.0	(Min) 12.0 (Max) 41.8 (Avg.) 26.9	2,249	147	138	33	89	47	55		
Drilled	1,487.0 - 1,516.5	(Min) 10.0 (Max) 40.3 (Avg.) 25.2	2,625	208	217	53	121	61	55		
Drilled	1,516.5 - 1,556.0	(Min) 12.0 (Max) 95.4 (Avg.) 53.7	5,787	508	570	163	340	177	137		
Drilled	1,556.0 - 1,572.5	(Min) 23.2 (Max) 73.3 (Avg.) 48.3	5,783	508	567	160	355	187	153		
Drilled	1,572.5 - 1,578.0	(Min) 32.7 (Max) 449.4 (Avg.) 241.1	9,796	1,448	2,131	718	1,538	782	639		

Drillsearch

General Comments

Comments
Generally, shows noted in this report are interpreted to be residual or locally generated from carbonaceous siltstones in the oil window as evidenced by the thin residual rings obtained from crushed carbonaceous samples. Often these carbonaceous, cutting siltstones are interbedded with fluorescing, tight sandstone aggregates. Oil show in the interval from from 1572.5 to 1578 m is much better quality with a strong gas peak. The sand is likely to be poorly developed based on ROP data however.

06:00 Hrs Update

Depth (MDRT):	1,609.0m
Progress Since Midnight:	41.0m
Status @ 0600hrs:	Drilling ahead in 8-1/2" hole.
ROP Summary:	Effective penetration rate since 2400 hrs 6.8 m/hr.
Formation Summary:	Adori Sandstone
Lithology Summary:	SANDSTONE
Gas Summary:	Maximum: 449 units Average: 75 units

Wellsite Geologist(s)

(Days) - Andrew James (Nights) - Andrew James

Printed on 26 Jan 2013

Drillsearch

Triclops-1 Drilling

Date: 27 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 14** | (associated DDR # 25)

Well Details

Depth MDBRT	: 1,795.0 m	**Report Period**	: 00:00 - 24:00	**Date**	: 27 Jan 2013
Depth TVDBRT	: 1,795.0 m	**Last Csg Size**	: 9.625 in	**Progress**	: 227.0 m
Depth TVDSS	: 1,648.80 m	**Last Csg Shoe MD**	: 762.7 m	**Report Start Depth**	: 1,578.0 m
RT - GL	: 5.20 m	**Last Csg Shoe TVD**	: 762.7 m	**Report End Depth**	: 1,796.5 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 13.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 9.10 ppg
Last Survey (MDRT/TVDRT)	: 1,785.6 m / 1,795.0 m	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 1.10 ° Az 300.71 °				

Geology 24hr Operations Summary

24hr Summary:	Drilled ahead in 8-1/2" hole from 1568 to 1795 m directionally drilling as required to maintain target trajectory.
24hr Forward Plan:	Continue to drill ahead in 8-1/2" hole directionally drilling as required towards well TD in the Poolowanna Formation. Circulate and condition well. Pull out of hole to run wireline logs.

Formation Tops

Formation	Prognosed			Actual			Diff.	Thickness	Pick Criteria
	MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	5.3	5.3	-140.95	5.2	5.2	-141	0.1 High	636.3	From surface.
Mackunda Formation	670.3	670.3	524.05	641.5	641.5	495.3	28.8 High	103.5	Lithology / ROP
Allaru Mudstone	733.3	733.3	587.05	745.0	745.0	598.8	11.7 Low	293.0	Lithology / ROP
Toolebuc Formation	1044.3	1044.3	898.05	1038.0	1038.0	891.8	6.3 High	56.0	Lithology / ROP
Wallumbilla Formation	1090.3	1090.3	944.05	1094.0	1094.0	947.8	3.7 Low	217.0	Lithology / ROP
Cadna-Owie Formation	1322.3	1322.3	1176.05	1311.0	1311.0	1164.8	11.3 High	86.5	Lithology
Murta Formation	1401.3	1401.3	1255.05	1397.5	1397.5	1251.3	3.8 High	27.0	Lithology
Namur Sandstone	1431.3	1431.3	1285.05	1424.5	1424.5	1278.3	6.8 High	92.0	Lithology
Westbourne Formation	1523.3	1523.3	1377.05	1516.5	1516.5	1370.3	6.8 High	78.0	Lithology / ROP
Adori Sandstone	1591.3	1591.3	1445.05	1594.5	1594.5	1448.3	3.2 Low	40.0	Lithology / ROP
Birkhead Formation	1640.3	1640.3	1494.05	1634.5	1634.5	1488.3	5.8 High	92.5	Lithology / ROP
Hutton Sandstone	1734.3	1734.3	1588.05	1727.0	1727.0	1580.8	7.3 High	0.0	Lithology / ROP
Poolowanna Formation	1930.3	1930.3	1784.05						

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Drillsearch

Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
1,578.0 - 1,594.5	Min :3.20 Avg :8.20 Max :16.10	**Lithology Summary**	SANDSTONE
		Lithology Description	SANDSTONE (100%): white, hard to friable in part, very fine to dominantly fine grained, well sorted, sub-angular to angular, moderately strong siliceous cement with minor quartz overgrowths, trace carbonaceous specks, very poor visible porosity.
		Gas & Shows Comments	FLUORESCENCE 1578 to 1594.5 m: trace pinpoint yellow green fluorescence, slow diffuse green white cut - instant bright green white crush cut with secondary streaming grains, thin moderately bright green white residual ring, no visible residue. Poor show - no associated gas peak.
		ROP Comments	N/A
1,594.5 - 1,634.5	Min :3.20 Avg :11.10 Max :30.30	**Lithology Summary**	SANDSTONE with minor thin SILTSTONE interbeds
		Lithology Description	SANDSTONE (97 to 100%): very light grey, minor very pale brown staining, fine, dominantly medium to coarse, moderately to well sorted, angular - common broken coarse grains, sub-spherical to sub-elongated, moderate to locally strong siliceous cement with occasional quartz overgrowths, poor visible porosity, trace intergranular (in aggregates) black bitumen staining. SILTSTONE (0 to 3%): brown black, firm, sub-fissile to fissile, moderately arenaceous - uniformly carbonaceous, trace micro mica.
		Gas & Shows Comments	FLUORESCENCE 1604 to 1608 m: 70% to 20% patchy bright green white fluorescence, instant diffuse dull green white cut - slow streaming moderately bright blue white cut, thick green white residual ring, no visible residue. FLUORESCENCE 1614 to 1623 m: 30 to 20% patchy moderately bright to dull yellow fluorescence, instant blue white crush cut, thick green residual ring, no visible residue. Mud sample collected at gas peak at 1616 m. When mixed with boiling water and placed in a cup under the fluoroscope, oil bubbles observed breaking out on surface - bright green yellow droplets and streaks. Gas peaks of 218, 602 and 461 units on a 35 unit background at 1604.5, 1615.5 and 1623 m respectively. Average chromatograph breakdown: 56/10/14/13/7.
		ROP Comments	N/A
1,634.5 - 1,649.5	Min :5.00 Avg :19.30 Max :33.60	**Lithology Summary**	SILTSTONE with thin SANDSTONE interbeds
		Lithology Description	SILTSTONE (60 to 95%): brown grey to brown black, firm, sub-blocky to dominantly sub-fissile, generally uniformly textured - locally moderately arenaceous, moderately carbonaceous in part - trace carbonaceous detritus and micro mica. SANDSTONE (5 to 40%): medium light grey, moderately hard, very fine to minor fine, very well sorted, 10 to 15% argillaceous matrix, weakly calcareous, common lithics and feldspar fragments, trace carbonaceous detritus and wisps, very poor to no visible porosity.
		Gas & Shows Comments	FLUORESCENCE 1647 to 1649.5 m: 50% patchy dull green fluorescence, slow dull blue white streaming cut, thin blue white residual ring, no visible residue. Poor show - no associated gas peak.
		ROP Comments	N/A

Drillsearch

Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
1,649.5 - 1,672.0	Min :12.50 Avg :26.60 Max :32.70	**Lithology Summary**	SILTSTONE with minor thin SANDSTONE interbeds
		Lithology Description	SILTSTONE (40 to 100%): dark grey to brown black, sub-blocky to dominantly sub-fissile, firm to moderately hard, generally very finely arenaceous - slightly argillaceous in part, locally moderately carbonaceous. SANDSTONE (0 to 60%): white to very light grey, translucent to clear loose individual grains, friable, very fine to fine, rarely medium, well sorted, sub-angular to angular, sub-spherical, weakly calcareous, trace argillaceous matrix, trace fine lithics, poor inferred porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A
1,672.0 - 1,702.5	Min :12.10 Avg :21.30 Max :33.90	**Lithology Summary**	Interbedded SILTSTONE and SANDSTONE with thin COAL seam
		Lithology Description	SILTSTONE (10 to 90%): dark grey to dominantly brown grey, sub-blocky to dominantly sub-fissile, firm to moderately hard, generally very finely arenaceous - slightly argillaceous in part, locally moderately carbonaceous. SANDSTONE (10 to 90%): white to very light grey, translucent to clear loose individual grains, friable to minor hard aggregates, very fine to dominantly fine, very well sorted, sub-angular to sub-rounded, sub-spherical, moderate calcareous cement, trace to minor argillaceous matrix, trace fine lithics, poor inferred porosity. COAL (0 to 10%): black, earthy to sub-vitreous, brittle, hackly break, blocky.
		Gas & Shows Comments	FLUORESCENCE 1674 to 1680 m: 100% solid moderately bright to dull green white fluorescence, slow dull blue white streaming cut, thin blue white residual ring, no visible residue. Poor show - gas peak of 180 units on 90 unit background. Sand porosity apeears to be low.
		ROP Comments	N/A
1,702.5 - 1,727.0	Min :8.30 Avg :23.90 Max :32.20	**Lithology Summary**	SILTSTONE with interbedded SANDSTONE
		Lithology Description	SILTSTONE (20 to 90%): brown grey becoming dominantly uniformly olive black, sub-blocky to dominantly sub-fissile, firm to moderately hard, generally very finely arenaceous, moderately carbonaceous. SANDSTONE (10 to 80%): white to very light grey, friable, fine, very well sorted, sub-angular to dominantly sub-sounded, sub-spherical, minor white argillaceous matrix, weak to locally moderate siliceous cement, trace lithics, very poor visible porosity.
		Gas & Shows Comments	FLUORESCENCE 1702.5 to 1708 m: 30 to 50% scattered very dull green white fluorescence in tight aggregates, slow very dull blue white crush cut, very thin residual ring, no visible residue. Poor show - 162 unit gas peak on 100 unit background.
		ROP Comments	N/A
1,727.0 - 1,750.0	Min :7.90 Avg :12.10 Max :19.50	**Lithology Summary**	SANDSTONE with thin SILTSTONE interbeds
		Lithology Description	SANDSTONE (80 to 100%): very light grey, dominantly as dis-aggregated translucent to loose grains, friable, fine to dominantly medium, minor coarse, well sorted, angular - common broken grains and trace crystal faces, weak to moderate in part siliceous cement, rare quartz overgrowths, trace fine pale orange garnet fragments, poor to fair inferred porosity, no hydrocarbon fluorescence. SILTSTONE (0 to 20%): olive black, firm, sub-blocky, finely arenaceous with trace lithics / feldspar fragments, locally common carbonaceous detritus.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A

Drillsearch

Lithology Summary

Internal m MDRT	ROP (m/h)	Lithology Comments	
1,750.0 - 1,796.5	Min :4.80 Avg :12.40 Max :29.00	**Lithology Summary**	SANDSTONE with minor thin SILTSTONE interbeds
		Lithology Description	SANDSTONE (70 to 100%): very light grey - dominantly as dis-aggregated translucent aggregates, minor aggregates with trace white argillaceous matrix, fine to medium in part - dominantly coarse to very coarse, moderately to poorly sorted, angular - minor crystal faces, sub-elongate to elongate, common quartz overgrowths, trace pale orange garnet fragments, poor to fair inferred porosity. SILTSTONE (0 to 30%): olive black to dark grey, firm, sub fissile, uniformly very finely arenaceous, minor very fine SANDSTONE laminations.
		Gas & Shows Comments	FLUORESCENCE 1750 to 1760 m: trace pinpoint dull to moderately bright yellow fluorescence, very slow dull blue white streaming cut, thin dull green residual ring, no visible residue. Very poor show - no significant gas peaks.
		ROP Comments	N/A

Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm
Drilled	1,578.0 - 1,594.5	(Min) 28.9 (Max) 63.8 (Avg.) 46.4	2,837	228	271	90	232	156	150		
Drilled	1,594.5 - 1,634.5	(Min) 16.3 (Max) 602.1 (Avg.) 309.2	6,847	936	1,276	403	915	431	393		
Drilled	1,634.5 - 1,649.5	(Min) 77.1 (Max) 385.6 (Avg.) 231.4	17,190	2,226	2,336	505	1,227	434	422		
Drilled	1,649.5 - 1,672.0	(Min) 100.1 (Max) 271.7 (Avg.) 185.9	17,015	2,369	2,446	472	1,187	414	343		
Drilled	1,672.0 - 1,702.5	(Min) 65.7 (Max) 182.2 (Avg.) 124.0	9,724	1,331	1,356	303	735	444	250		
Drilled	1,702.5 - 1,727.0	(Min) 89.1 (Max) 163.8 (Avg.) 126.5	10,549	1,430	1,329	338	696	465	252		
Drilled	1,727.0 - 1,750.0	(Min) 30.4 (Max) 106.3 (Avg.) 68.4	3,554	352	292	82	179	273	95		
Drilled	1,750.0 - 1,796.5	(Min) 25.6 (Max) 64.4 (Avg.) 45.0	3,711	313	224	59	118	243	50		

General Comments

Comments
Unusual to get such intense fluorescence in Adori Sandstone although interval is most likely to be of low permeability.

06:00 Hrs Update

Depth (MDRT):	1,839.0m
Progress Since Midnight:	44.0m
Status @ 0600hrs:	Drilling ahead in 8-1/2" hole.
ROP Summary:	Effective penetration rate since 2400 hrs 7.3 m/hr.
Formation Summary:	Hutton Sandstone
Lithology Summary:	SANDSTONE
Gas Summary:	Maximum: 57 units Average: 38 units

Wellsite Geologist(s)	
(Days) - Andrew James	(Nights) - Andrew James

Drillsearch

Triclops-1 Drilling

Date: 28 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 15** | (associated DDR # 26)

Well Details

Depth MDBRT	: 1,926.5 m	**Report Period**	: 00:00 - 24:00	**Date**	: 28 Jan 2013
Depth TVDBRT	: 1,926.5 m	**Last Csg Size**	: 9.625 in	**Progress**	: 132.0 m
Depth TVDSS	: 1,780.30 m	**Last Csg Shoe MD**	: 762.7 m	**Report Start Depth**	: 1,796.5 m
RT - GL	: 5.20 m	**Last Csg Shoe TVD**	: 762.7 m	**Report End Depth**	: 1,926.5 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 14.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 9.10 ppg
Last Survey (MDRT/TVDRT)	: 1,914.8 m / 1,914.4 m	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 1.00 ° Az 301.81 °				

Geology 24hr Operations Summary

24hr Summary:	Drilled ahead from 1795 to 1926.5 m. ROP dropped to zero at suspected top of Poolowanna Formation. Called well TD. Condtioned hole and conducted wiper trip to 1300 m. Ran back to bottom, circulated and conditioned well and commenced pulling out.
24hr Forward Plan:	Complete pulling out of hole. Rig up and run wireline logs.

Formation Tops

Formation	Prognosed			Actual			Diff.	Thickness	Pick Criteria
	MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	5.3	5.3	-140.95	5.2	5.2	-141	0.1 High	636.3	From surface.
Mackunda Formation	670.3	670.3	524.05	641.5	641.5	495.3	28.8 High	103.5	Lithology / ROP
Allaru Mudstone	733.3	733.3	587.05	745.0	745.0	598.8	11.7 Low	293.0	Lithology / ROP
Toolebuc Formation	1044.3	1044.3	898.05	1038.0	1038.0	891.8	6.3 High	56.0	Lithology / ROP
Wallumbilla Formation	1090.3	1090.3	944.05	1094.0	1094.0	947.8	3.7 Low	217.0	Lithology / ROP
Cadna-Owie Formation	1322.3	1322.3	1176.05	1311.0	1311.0	1164.8	11.3 High	86.5	Lithology
Murta Formation	1401.3	1401.3	1255.05	1397.5	1397.5	1251.3	3.8 High	27.0	Lithology
Namur Sandstone	1431.3	1431.3	1285.05	1424.5	1424.5	1278.3	6.8 High	92.0	Lithology
Westbourne Formation	1523.3	1523.3	1377.05	1516.5	1516.5	1370.3	6.8 High	78.0	Lithology / ROP
Adori Sandstone	1591.3	1591.3	1445.05	1594.5	1594.5	1448.3	3.2 Low	40.0	Lithology / ROP
Birkhead Formation	1640.3	1640.3	1494.05	1634.5	1634.5	1488.3	5.8 High	92.5	Lithology / ROP
Hutton Sandstone	1734.3	1734.3	1588.05	1727.0	1727.0	1580.8	7.3 High	199.5	Lithology / ROP
Poolowanna Formation	1930.3	1930.3	1784.05	1926.5	1926.5	1780.3	3.8 High	0.0	Lithology / ROP

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Drillsearch

Lithology Summary			
Internal m MDRT	**ROP (m/h)**	**Lithology Comments**	
1,796.5 - 1,858.5	Min :4.40 Avg :8.60 Max :18.80	**Lithology Summary**	SANDSTONE with minor thin SILTSTONE interbeds
		Lithology Description	SANDSTONE (95 to 100%): very light grey, dominantly as dis-aggregated milky to translucent grains, occasionally as moderately hard aggregates, medium to dominantly coarse, minor fine and very coarse, moderately to poorly sorted, angular to sub-angular, minor sub-sounded, sub-elongate to elongated, trace broken crystal faces - weakly calcareous, locally moderately strong siliceous cement with trace quartz overgrowths, trace pale orange garnet fragments, fair inferred porosity, trace bitumen staining, no hydrocarbon fluorescence. SILTSTONE (0 to 5%): grey black, moderately hard, sub-fissile, carbonaceous.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A
1,858.5 - 1,889.5	Min :4.10 Avg :11.20 Max :30.50	**Lithology Summary**	SANDSTONE
		Lithology Description	SANDSTONE (100%): very light grey to light grey, minor very pale brown stained aggregates, dominantly as dis-aggregated clear to translucent / minor milky quartz grains, friable to moderately hard in aggregates, medium grained, minor fine and coarse, well sorted, sub-sounded to sub-angular, minor angular, sub-spherical to sub-elongate, weakly calcareous - minor quartz overgrowths, trace white argillaceous matrix, fair inferred porosity, no hydrocarbon fluorescence.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A
1,889.5 - 1,926.0	Min :5.40 Avg :9.50 Max :21.50	**Lithology Summary**	SANDSTONE with minor SILTSTONE interbeds
		Lithology Description	SANDSTONE (20 to 100%): light grey - dominantly as dis-aggregated translucent to milky quartz grains, friable, fine to dominantly medium, occasionally coarse, well sorted, angular to sub-angular, minor sub-sounded, sub-spherical to dominantly sub-elongate, trace to locally up to 10% white argillaceous matrix, weakly calcareous, weak to moderate siliceous cement with minor quartz overgrowths, poor to fair inferred porosity, no hydrocarbon fluorescence. SILTSTONE (0 to 80%): dark grey, firm, sub-fissile to fissile, generally uniformly textured - locally very finely arenaceous, trace lithics and carbonaceous specks.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A
1,926.0 - 1,926.5	Min :0.50 Avg :0.50 Max :0.50	**Lithology Summary**	SILTSTONE
		Lithology Description	SILTSTONE (5%): grey black to brown black, firm to moderately hard, sub-fissile to fissile in part, trace very fine arenaceous material, locally moderately carbonaceous with trace to 5% bright coally laminations / fragments, trace micro pyritic aggregates.
		Gas & Shows Comments	Nil.
		ROP Comments	N/A

Drillsearch

Gas Summary

Gas Type	Depth m	Total Gas Units	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	iC5 ppm	nC5 ppm	CO2 ppm	H2S ppm
Drilled	1,796.5 - 1,858.5	(Min) 22.3 (Max) 120.7 (Avg.) 71.5	3,808	324	208	54	97	170	33		
Drilled	1,858.5 - 1,889.5	(Min) 22.4 (Max) 66.0 (Avg.) 44.2	3,521	274	152	37	64	142	20		
Drilled	1,889.5 - 1,926.0	(Min) 21.0 (Max) 46.7 (Avg.) 33.9	3,169	304	171	36	66	91	18		
Drilled	1,926.0 - 1,926.5	(Min) 27.1 (Max) 27.1 (Avg.) 27.1	2,870	218	103	20	38	70	12		

General Comments

Comments
Nil.

06:00 Hrs Update

Depth (MDRT):	1,926.5m
Progress Since Midnight:	0.0m
Status @ 0600hrs:	Pulling out of hole after wiper trip - preparing to handle BHA.
ROP Summary:	N/A
Formation Summary:	N/A
Lithology Summary:	N/A
Gas Summary:	N/A

Wellsite Geologist(s)

(Days) - Andrew James (Nights) - Andrew James

Printed on 28 Jan 2013

Drillsearch

Triclops-1 Drilling

Date: 29 Jan 2013 | **DAILY GEOLOGY REPORT NUMBER: 16** | (associated DDR # 27)

Well Details

Depth MDBRT	: 1,926.5 m	**Report Period**	: 00:00 - 00:00	**Date**	: 29 Jan 2013
Depth TVDBRT	: 1,926.5 m	**Last Csg Size**	: 9.625 in	**Progress**	: 0.0 m
Depth TVDSS	: 1,780.30 m	**Last Csg Shoe MD**	: 762.7 m	**Report Start Depth**	: 1,926.5 m
RT - GL	: 5.20 m	**Last Csg Shoe TVD**	: 762.7 m	**Report End Depth**	: 1,926.5 m
Ground Level	: 141.0 m	**Liner MD**	:	**Days since Spud**	: 15.48
RT - Hanger	:	**Liner TVD**	:	**Rig**	: Ensign 918
Hole Size	: 8.500 in	**FIT / LOT**	: / 16.72 ppg	**Mud Weight**	: 9.10 ppg
Last Survey (MDRT/TVDRT)	: 1,914.8 m / 1,914.4 m	**Liner (MDRT/TVDRT)**	: /	**Mud Type**	: 4% KCl - Pre Hydrated Bentonite - Polymer
Survey Deviation	: Inc. 1.00 ° Az 301.81 °				

Geology 24hr Operations Summary

24hr Summary:	Completed pulling out of hole and laid out mud motor and MWD collar. Rigged up and ran wireline logs: Run 1 ADT-HRLA-PEX-HNGS-SP. Commenced Run 2 GPIT-PPC-Sonic Scanner-PPC.
24hr Forward Plan:	Complete wireline logging. Commence plug and abandon operations.

Formation Tops

Formation	Prognosed			Actual			Diff.	Thickness	Pick Criteria
	MDRT (m)	TVDRT (m)	TVDSS (m)	MDRT (m)	TVDRT (m)	TVDSS (m)	+/- TVD (m)	TVD (m)	
Winton Formation	5.3	5.3	-140.95	5.2	5.2	-141	0.1 High	636.3	From surface.
Mackunda Formation	670.3	670.3	524.05	641.5	641.5	495.3	28.8 High	103.5	Lithology / ROP
Allaru Mudstone	733.3	733.3	587.05	745.0	745.0	598.8	11.7 Low	293.0	Lithology / ROP
Toolebuc Formation	1044.3	1044.3	898.05	1038.0	1038.0	891.8	6.3 High	56.0	Lithology / ROP
Wallumbilla Formation	1090.3	1090.3	944.05	1094.0	1094.0	947.8	3.7 Low	217.0	Lithology / ROP
Cadna-Owie Formation	1322.3	1322.3	1176.05	1311.0	1311.0	1164.8	11.3 High	86.5	Lithology
Murta Formation	1401.3	1401.3	1255.05	1397.5	1397.5	1251.3	3.8 High	27.0	Lithology
Namur Sandstone	1431.3	1431.3	1285.05	1424.5	1424.5	1278.3	6.8 High	92.0	Lithology
Westbourne Formation	1523.3	1523.3	1377.05	1516.5	1516.5	1370.3	6.8 High	78.0	Lithology / ROP
Adori Sandstone	1591.3	1591.3	1445.05	1594.5	1594.5	1448.3	3.2 Low	40.0	Lithology / ROP
Birkhead Formation	1640.3	1640.3	1494.05	1634.5	1634.5	1488.3	5.8 High	92.5	Lithology / ROP
Hutton Sandstone	1734.3	1734.3	1588.05	1727.0	1727.0	1580.8	7.3 High	199.5	Lithology / ROP
Poolowanna Formation	1930.3	1930.3	1784.05	1926.5	1926.5	1780.3	3.8 High	0.0	Lithology / ROP

General Comments

Comments

Final Daily Geological Report for Triclops-1.
Field Wireline Log Formation top picks:
Toolebuc Formation: 1042.1 m
Wallumbilla Formation: 1088.6 m
Cadna Owie Formation: 1315.2 m
Murta Member: 1399.2 m
Namur Sandstone Member: 1422.2 m
Westbourne Formation: 1518.6 m
Adori Sandstone: 1604.5 m
Birkhead Formation: 1636.1 m
Hutton Sandstone: 1727.5 m
Poolowanna Formation: 1926.5 m
Loggers TD: 1927 m

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Drillsearch

06:00 Hrs Update	
Depth (MDRT):	1,926.5m
Progress Since Midnight:	0.0m
Status @ 0600hrs:	Laying out BHA after rigging down wireline.
ROP Summary:	N/A
Formation Summary:	N/A
Lithology Summary:	N/A
Gas Summary:	N/A

Wellsite Geologist(s)	
(Days) - Andrew James	(Nights) - Andrew James

Printed on 29 Jan 2013

Appendix 8 – Composite Log

Provided electronically on CD

Appendix 9 – Cuttings Descriptions

TRICLOPS-1 Cuttings Descriptions

LITHOLOGY: colour, hardness, fracture and texture, grain size, sorting, angularity, sphericity, matrix, cementation, accessories and fossils, porosity, hydrocarbon shows.

Depth From	Depth To	CLYST %	SLTST %	SST %	COAL %	LST %	DOL %	META %	VOLC %	PLUT %	CMT %	Description	Comments
10	20	90		10								CLAYSTONE: very pale orange to grey orange, soft to firm in part, sub-blocky, very weakly calcareous, trace very fine arenaceous material, 10% silt, trace carbonaceous detritus. ARGILLACEOUS SANDSTONE: dark yellow orange, friable, 40% argillaceous matrix, fine to dominantly very fine, sub-rounded to angular, well sorted, sub-spherical, weak siliceous cement, very poor visible porosity, no hydrocarbon fluorescence.	**Surficial Sediments & Winton Formation** from surface.
20	30	90		10								CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
30	40	100										CLAYSTONE: green grey to light olive grey, soft to firm, sub-blocky, 10% silt, trace carbonaceous detritus.	
40	50	100										CLAYSTONE: as above.	
50	60			100								ARGILLACEOUS SANDSTONE: medium light grey to green grey, friable to firm in part, 40% argillaceous matrix supported, fine to dominantly very fine, sub-angular to dominantly rounded, well sorted, sub-spherical to sub-elongate, weak siliceous cement, up to 3% lithic fragments, trace carbonaceous detritus, very poor visible porosity, no hydrocarbon fluorescence.	
60	70			100								ARGILLACEOUS SANDSTONE: as above - becoming commonly light grey.	
70	80		100									ARENACEOUS SILTSTONE: light grey to light green grey, firm, sub-blocky, weakly calcareous, 10% clay material and up to 40% very fine to minor fine sand, sub-angular, well sorted, trace to minor lithic fragments, trace carbonaceous detritus.	
80	90		100									ARGILLACEOUS SANDSTONE: as above.	
90	100		30	70								ARENACEOUS SILTSTONE: as above. SANDSTONE: light grey to light green grey aggregates, friable to moderately hard, minor argillaceous matrix, very fine to fine, dominantly medium, sub-angular to angular, moderately sorted, sub-elongate, weakly calcareous in part, trace mica flecks and lithic fragments, very poor visible porosity, no hydrocarbon fluorescence.	
100	110	40		60								CLAYSTONE: yellow grey to very light brown grey, soft to firm in part, sub-blocky, slightly silty with up 10% very fine quartz grains, trace carbonaceous specks and brown black coally fragments with woody texture. SANDSTONE: as above - locally coarse carbonaceous flecks and detritus.	
110	120	60		40								CLAYSTONE: as above. SANDSTONE: as above - locally coarse carbonaceous flecks and detritus.	
120	130	70		30								CLAYSTONE: as above. SANDSTONE: as above.	
130	140			100								ARGILLACEOUS SANDSTONE: light grey to very light green grey, friable, 30% very light grey argillaceous matrix, very fine to fine, 10% medium, sub-angular to angular, moderately to well sorted, sub-spherical, weak siliceous cement, abundant grey green lithic fragments, very poor visible porosity, no hydrocarbon fluorescence.	
140	150	90		10								CLAYSTONE: yellow grey to very light brown grey, soft to very soft, sub-blocky, 5% silty material, trace carbonaceous detritus, trace micro-mica. ARGILLACEOUS SANDSTONE: as above.	
150	160	90		10								CLAYSTONE: as above - becoming commonly very light grain grey. ARGILLACEOUS SANDSTONE: as above.	
160	170	60		40								CLAYSTONE: as above - locally common mica flecks. ARGILLACEOUS SANDSTONE: as above.	
170	180	30		70								CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: as above - dominantly very fine grained, well sorted.	
180	190			100								ARGILLACEOUS SANDSTONE: as above.	
190	200			100								ARGILLACEOUS SANDSTONE: light grey to very light green grey, light olive grey in part, friable, 30 to 40% very light grey argillaceous matrix, fine to dominantly very fine, sub-angular to angular, well sorted, sub-spherical, weak siliceous cement, trace lithic fragments, trace carbonaceous specks, very poor visible porosity, no hydrocarbon fluorescence.	
200	210			100								ARGILLACEOUS SANDSTONE: as above.	
210	220			100								ARGILLACEOUS SANDSTONE: as above.	
220	230			100								ARGILLACEOUS SANDSTONE: as above.	
230	240		70	30								ARGILLACEOUS SILTSTONE: very light grey to light green grey, minor pale brown, soft to minor firm, 30 to 40% argillaceous material, trace very fine carbonaceous specks and fine carbonaceous wisps, locally minor coally detritus, trace micro-mica. ARGILLACEOUS SANDSTONE: as above.	
240	250		50	50								ARGILLACEOUS SILTSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
250	260		40	60								ARGILLACEOUS SILTSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
260	270		50	50								ARGILLACEOUS SILTSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
270	280		70	30								ARGILLACEOUS SILTSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
280	290		20	80								ARGILLACEOUS SILTSTONE: as above. SANDSTONE: mottled very light grey to light green grey, friable, 10 to 15% argillaceous matrix, very fine to fine, sub-angular to dominantly angular, well sorted, sub-spherical, minor weak calcareous to dominantly weak siliceous cement, 20 to 30% green grey lithics, trace micro mica, very poor visible porosity, no hydrocarbon fluorescence.	
290	300		10	90								ARGILLACEOUS SILTSTONE: as above. SANDSTONE: as above - becoming dominantly fine to medium, sub-sounded in part, weak to moderately calcareous cement, poor inferred porosity, no hydrocarbon fluorescence.	
300	310	70		30								SILTY CLAYSTONE: light olive grey to light brown grey, soft, sub-blocky to weakly amorphous and sticky, 20 to 25% quartz silt, up to 5% very fine sand, trace carbonaceous specks and detritus, trace micro-mica. SANDSTONE: as above - commonly as disaggregated clear to minor translucent loose quartz grains, becoming dominantly medium and sub-sounded to rounded.	
310	320	100										SILTY CLAYSTONE: as above, becoming firm in part.	
320	330	30		70								SILTY CLAYSTONE: as above. SANDSTONE: mottled very light grey to light green grey, friable to moderately hard, minor very light grey to white argillaceous matrix, minor very fine grained - dominantly fine to medium, angular to sub-sounded, well sorted, minor weak siliceous cement to dominantly moderately strong calcareous cement, 20 to 25% green grey lithic fragments, trace mica flecks, very poor visible porosity, no hydrocarbon fluorescence.	
330	340	20		80								SILTY CLAYSTONE: as above. SANDSTONE: as above.	
340	350	90		10								SILTY CLAYSTONE: as above. SANDSTONE: as above.	
350	360	60		40								SILTY CLAYSTONE: as above. SANDSTONE: as above becoming up to 15% very light grey argillaceous matrix.	
360	370	90		10								SILTY CLAYSTONE: light olive grey to light brown grey, very pale green grey in part, soft becoming dominantly form, sub-blocky, 20 to 25% quartz silt, trace carbonaceous specks and detritus, trace micro-mica. SANDSTONE: as above.	
370	380	90		10								SILTY CLAYSTONE: as above. SANDSTONE: as above.	
380	390			100								SANDSTONE: as above - trace red and pale orange stained quartz grains.	
390	400	20		80								SILTY CLAYSTONE: as above. SANDSTONE: as above.	
400	410	80		20								SILTY CLAYSTONE: as above. SANDSTONE: as above.	
410	420	100										SILTY CLAYSTONE: very light grey to pale brown, up to 30% quartz silt, locally 20 to 40% very fine quartz grading to ARENACEOUS CLAYSTONE, trace carbonaceous detritus.	
420	430	100										SILTY CLAYSTONE: as above - becoming dominantly very light grey.	
430	440	100										SILTY CLAYSTONE: as above.	
440	450	100										SILTY CLAYSTONE: as above - up to 5% coarse calcite (vein / fracture infill) fragments, 5 to 10% pale brown to moderate brown fragments with abundant coally detritus.	
450	460	100										SILTY CLAYSTONE: as above.	
460	470	60		40								SILTY CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: very light grey, friable to minor moderately hard aggregates, common white argillaceous matrix, very fine to fine, sub-angular to dominantly sub-sounded, well sorted, sub-spherical, weak siliceous cement - dominantly locally strong calcareous cement, 5% pale green lithics, trace carbonaceous detritus, very poor visible porosity, no hydrocarbon fluorescence.	
470	480	10		90								SILTY CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
480	490	30		70								SILTY CLAYSTONE: pale brown to moderate brown, very light grey in part, soft to firm, minor moderately hard, minor to locally common carbonaceous detritus and rare very fine coally laminations. ARGILLACEOUS SANDSTONE: as above.	
490	500	30		70								SILTY CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
500	510	40		60								SILTY CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
510	520	30		70								SILTY CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: as above - more lithic, trace feldspar fragments?	
520	530	20		80								SILTY CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: as above.	
530	540	30		70								SILTY CLAYSTONE: as above. ARGILLACEOUS SANDSTONE: as above - rare aggregates with carbonaceous / coally laminations, coarse carbonaceous detritus in part.	

540	550		80	20									SILTSTONE: light olive grey to pale brown, minor very light grey, soft to dominantly firm, minor moderately hard, sub-blocky, 10% very fine quartz grains, 10% lithics, trace to locally minor micro mica, trace uniformly distributed very fine carbonaceous detritus, rare fine coally laminations. ARGILLACEOUS SANDSTONE: as above - rare aggregates with carbonaceous / coally laminations, coarse carbonaceous detritus in part.	
550	560		70	30									SILTSTONE: as above. ARGILLACEOUS SANDSTONE: as above .	
560	570		20	80									SILTSTONE: as above. SANDSTONE: mottled light grey / white / green grey, friable to dominantly moderately hard, locally hard, 5 to 10% argillaceous matrix, very fine, minor fine to medium, well sorted, sub-spherical, moderately strong to strong calcareous cement, common lithics and carbonaceous detritus, trace fine feldspar fragments, very poor visible porosity, no hydrocarbon fluorescence.	
570	580		20	80									SILTSTONE: as above. SANDSTONE: as above.	
580	590		10	90									SILTSTONE: as above. SANDSTONE: as above.	
590	600		30	70									SILTSTONE: as above. SANDSTONE: as above.	
600	610		30	70									SILTSTONE: as above. SANDSTONE: as above - variable calcareous cement - weak to strong.	
610	620		30	70									SILTSTONE: as above. SANDSTONE: as above.	
620	630		70	30									SILTSTONE: medium grey to light brown grey, minor brown grey, soft to dominantly firm, sub-blocky to blocky, 15 to 20% clay locally grading to ARGILLACEOUS SILTSTONE and slightly sticky, trace very fine carbonaceous wisps and coally laminations, trace to locally common micro mica. SANDSTONE: as above.	
630	640		10	90									SILTSTONE: as above. SANDSTONE: as above.	
640	650		70	30									SILTSTONE: olive grey to minor brown grey, firm to moderately hard in part, sub-blocky, 10% clay, trace very fine carbonaceous detritus - uniformly textured. SANDSTONE: as above.	**Mackunda Formation** picked from cuttings and ROP at 641.5 m.
650	660		60	40									SILTSTONE: as above. SANDSTONE: as above.	
660	670		30	70									SILTSTONE: as above. SANDSTONE: mottled white / very light grey / green grey, moderately hard to dominantly friable, 10% white argillaceous matrix, very fine to fine, sub-angular to dominantly sub-sounded, well sorted, sub-spherical, weak siliceous to pervasive weak to locally moderately strong calcareous cement, 5 to 10% lithics and fine feldspar fragments, trace carbonaceous detritus, very poor visible porosity, no hydrocarbon fluorescence.	
670	680		20	80									SILTSTONE: as above. SANDSTONE: as above.	
680	690		40	60									SILTSTONE: as above. SANDSTONE: as above.	
690	700		60	40									SILTSTONE: as above - locally common very fine carbonaceous laminations. SANDSTONE: as above.	
700	710		10	90									SILTSTONE: as above. SANDSTONE: mottled light grey / light green grey, friable to locally hard, 5% argillaceous matrix, very fine to minor fine grained, very well sorted, sub-angular to dominantly sub-sounded, sub-spherical, strong calcareous cement, 10% very fine to fine lithic and feldspar fragments, trace carbonaceous wisps, very poor to no visible porosity, no hydrocarbon fluorescence.	
710	720		5	95									SILTSTONE: as above. SANDSTONE: as above.	
720	730		5	95									SILTSTONE: as above. SANDSTONE: as above.	
730	740		5	95									SILTSTONE: as above. SANDSTONE: as above.	
740	750		20	80									SILTSTONE: light olive grey to minor pale brown, firm to moderately hard, sub-blocky, 10 to 20% very fine quartz grains locally grading to ARENACEOUS SILTSTONE, 5 to 10% very fine lithics and feldspar fragments, trace micro mica, trace carbonaceous wisps and very thin coally laminations. SANDSTONE: as above.	**Allaru Mudstone** picked from cuttings and ROP at 745 m.
750	760		30	70									SILTSTONE: as above. SANDSTONE: as above.	
760	766		70	30									SILTSTONE: as above. SANDSTONE: as above.	Spot sample: bottoms up from 12 1/4" hole section TD.
760	770		15	15								70	SILTSTONE: as above. SANDSTONE: as above.	Start of 8 1/2" hole section: sample heavily cement contaminated.
770	780		70	30									SILTSTONE: medium light grey becoming dominantly medium grey, firm to moderately hard in part, sub-blocky to minor blocky, up to 20% very fine sand grading in part to ARENACEOUS SILTSTONE, trace lithics and fine carbonaceous detritus, trace pyrite, trace calcareous vein fragments. SANDSTONE: as below.	
780	790		90	10									SILTSTONE: as above. SANDSTONE: light grey to minor medium grey, moderately hard, very fine to minor fine grained - silty in part grading to SILTY SANDSTONE, very well sorted, sub-angular, sub-spherical, strong calcareous cement, 5 to 10% very fine to fine lithic and feldspar fragments, trace carbonaceous specks, no visible porosity, no hydrocarbon fluorescence.	
790	800		90	10									SILTSTONE: as above. SANDSTONE: as above.	
800	810		95	5									SILTSTONE: as above - becoming slightly argillaceous with associated trace micro mica. SANDSTONE: as above.	
810	820		95				5						SILTSTONE: as above. DOLOMITE: olive grey to brown grey, very hard, sub-fissile to fissile, crypto- to micro-crystalline, generally homogenous - trace very fine carbonaceous / black mineral specks (?) and isolated pyrite grains.	
820	830		98				2						SILTSTONE: as above. DOLOMITE: as above.	
830	840		80	20									SILTSTONE: as above - trace shell fragments. SANDSTONE: medium light grey to medium grey, moderately hard, very fine, silty grading to SILTY SANDSTONE, very well sorted, sub-angular to angular, sub-spherical, strong calcareous cement, 5 to 10% very fine to minor feldspar and lithics, trace uniformly distributed carbonaceous specks and very fine wisps,	
840	850		70	30									SILTSTONE: as above. SANDSTONE: as above.	
850	860		100										SILTSTONE: medium grey to dominantly medium dark grey, moderately hard to dominantly firm, sub-blocky to minor sub-fissile, 10 to 15% very finely arenaceous, uniformly textured with trace disseminated pyrite and very fine carbonaceous specks, trace micro mica.	
860	870		100										SILTSTONE: as above.	
870	880		100										SILTSTONE: as above - uniformly medium dark grey, homogenously textured - 10% very fine quartz grains.	
880	890		98				2						SILTSTONE: as above - trace calcareous vein / fossil (?) fragments. DOLOMITE: as above.	
890	900		98				2						SILTSTONE: as above - becoming less very finely arenaceous and slightly argillaceous in part. DOLOMITE: as above.	
900	910		97				3						SILTSTONE: as above. DOLOMITE: as above.	
910	920		100										SILTSTONE: medium dark grey becoming commonly medium grey, firm, sub-blocky to dominantly sub-fissile, minor fissile, generally uniformly textured - slightly argillaceous in part, weakly calcareous, trace carbonaceous specks.	
920	930		100										SILTSTONE: as above.	
930	940		100										SILTSTONE: as above.	
940	950		100										SILTSTONE: as above - trace granular pyrite fragments.	
950	960		98				2						SILTSTONE: as above - becoming very finely arenaceous, trace carbonaceous detritus, trace shell fragments. DOLOMITE: as above.	
960	970		100										SILTSTONE: as above - dominantly medium grey.	
970	980		100										SILTSTONE: as above.	
980	990		100										SILTSTONE: as above.	
990	1000		97				3						SILTSTONE: as above. DOLOMITE: as above.	
1000	1010		100										SILTSTONE: medium grey, firm to minor moderately hard, sub-fissile to fissile in part, uniformly textured, trace carbonaceous specks.	
1010	1020		100										SILTSTONE: as above - slightly argillaceous in part.	
1020	1030		100										SILTSTONE: as above.	
1030	1040		100										SILTSTONE: as above - 1 to 2% Inoceramus fragments.	
1040	1050		100										SILTSTONE: grey black to olive black, minor brown black, firm to moderately hard, sub fissile to fissile, strongly calcareous - uniformly very finely arenaceous, 5% Inoceramus fragments, trace pyrite.	Spot sample at 1043 m: 3% Inoceramus. **Toolebuc Formation** picked from cuttings and ROP at 1038 m.
1050	1060		100										SILTSTONE: as above.	
1060	1070		100										SILTSTONE: as above.	
1070	1080		100										SILTSTONE: medium dark grey to dominantly dark grey, firm to dominantly moderately hard, sub-fissile to fissile, strongly calcareous, locally 5 to 10% very fine quartz grains, trace micro mica.	
1080	1090		100										SILTSTONE: as above.	
1090	1100		100										SILTSTONE: medium dark grey, moderately hard, sub-blocky to sub-fissile, generally weakly calcareous with 5% moderate brown carbonate fragments (as vein partings?), uniformly 15 to 20% very finely arenaceous grading to ARENACEOUS SILTSTONE in part with associated trace very fine glauconite, trace micro mica and pyritic streaks.	**Wallumbilla Formation** picked from cuttings and ROP at 1094 m.
1100	1110		100										SILTSTONE: as above.	
1110	1120		100										SILTSTONE: as above.	

1120	1130		100									SILTSTONE: as above - finely arenaceous in part grading to ARENACEOUS SILTSTONE with up to 10% glauconite.	
1130	1138		100									SILTSTONE: as above.	Trip out of hole with single shot every stand due to directional concerns.
1138	1150		70	30								SILTSTONE: medium dark grey becoming dominantly dark grey, firm, sub-blocky to dominantly sub-fissile, locally very finely arenaceous grading to SILTY SANDSTONE, minor micro-mica, trace pyritic streaks. SILTY SANDSTONE: medium light grey to medium grey, friable to dominantly hard, very fine to minor fine, very well sorted, sub-angular to angular, sub-spherical, 30 to 40% quartz silt matrix, strong calcareous cement, minor to locally common glauconite with trace very fine white lithic / feldspar fragments, no visible porosity, no hydrocarbon fluorescence.	Waited on orders and directional advice. Pulled out and made up pendulum assembly.
1150	1160		40	60								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1160	1170		50	50								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1170	1180		70	30								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1180	1190		80	20								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1190	1200		80	20								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1200	1210		90	10								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1210	1220		80	20								SILTSTONE: as above - dark grey, becoming dominantly fissile. SILTY SANDSTONE: as above	
1220	1230		70	30								SILTSTONE: dark grey, firm to moderately hard, fissile to minor sub-fissile, generally uniformly textured with trace micro mica, locally very finely arenaceous grading to SILTY SANDSTONE - occasional cuttings with both fine silt and sand laminations associated with 5 to 10% glauconite and included pyritic aggregates. SILTY SANDSTONE: mottled white / very light grey, 5 to locally 10% dusky green glauconite, very fine, well sorted, sub-angular to sub-sounded, sub-spherical, strong calcareous cement, common fine white lithics, very poor visible porosity, no hydrocarbon fluorescence.	
1230	1240		70	30								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1240	1250		60	40								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1250	1260		70	30								SILTSTONE: as above - dark grey, fissile, uniformly textured. SILTY SANDSTONE: as above.	
1260	1270		80	20								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1270	1280		80	20								SILTSTONE: as above. SILTY SANDSTONE: as above.	
1280	1290		90	10								SILTSTONE: as above - dark grey, fissile and splintery in part, locally common micro mica. SILTY SANDSTONE: as above.	
1290	1300		100									SILTSTONE: as above.	Trip out of hole to pick up directional drilling assembly at 1296 m.
1300	1305		95	5								SILTSTONE: as above - dark grey, uniformly textured. SILTY SANDSTONE: as above.	
1305	1308		100									SILTSTONE: as above.	
1308	1311		100									SILTSTONE: as above.	
1311	1314		90	10								SILTSTONE: dark grey to dominantly olive black, dusky yellow brown in part, firm to dominantly moderately hard, sub-fissile to dominantly fissile, generally uniformly textured - locally very finely arenaceous with associated minor micro mica, trace pyrite aggregates. SANDSTONE: dark yellow brown to dusky yellow brown, mottled medium grey in part, hard to very hard, very fine, very well sorted, sub-angular to angular, sub-spherical, slightly silty in part, strong calcareous-dolomitic cement, common white lithic / feldspar fragments, trace glauconite, very poor to no visible porosity, 100% uniform dull orange brown mineral fluorescence, no hydrocarbon fluorescence.	Noticeable colour change from uniformly textured dark grey siltstone above. **Cadna Owie Formation** picked from cuttings and ROP (?) at 1311 m. ROP strongly influenced by directional drilling.
1314	1317		80	20								SILTSTONE: as above. SANDSTONE: as above.	
1317	1320		50	50								SILTSTONE: as above. SANDSTONE: as above - becoming fine to rarely medium, sub-sounded, trace mica flecks and trace carbonaceous detritus.	
1320	1323		50	50								ARENACEOUS SILTSTONE: dusky yellow brown, firm to dominantly moderately hard, sub-blocky to dominantly sub-fissile, 20 to 30% very fine quartz grains, common very fine lithics, minor micro mica, trace very fine carbonaceous detritus. ARGILLACEOUS SANDSTONE: white to very light grey, pale brown in part, hard, very fine, very well sorted, sub-angular to sub-sounded, sub-spherical, 25 to 30% white argillaceous matrix, strong calcareous cement, weakly dolomitic in part, 5% white lithics / feldspar fragments, trace pyritic cement / matrix, very poor to no visible porosity, 20% dull orange brown mineral fluorescence, no hydrocarbon fluorescence.	
1323	1326		40	60								ARENACEOUS SILTSTONE: as above - common carbonaceous detritus and rarely as fine laminations. SANDSTONE: generally white / very light grey, 30 to 40% as dis-aggregated loose clear to translucent grains, very fine to fine, commonly medium to coarse, moderately sorted, sub-angular in part - dominantly sub-sounded to rounded, sub-spherical to sub-elongate, 10 to 15% white argillaceous matrix, moderate to locally strong calcareous cement, minor fine carbonaceous laminations, poor inferred porosity, no hydrocarbon fluorescence.	
1326	1329		20	80								ARENACEOUS SILTSTONE: as above. SANDSTONE: as above - fine to medium, becoming well sorted with up to 20% white argillaceous matrix grading to ARGILLACEOUS SANDSTONE, very poor visible porosity, no hydrocarbon fluorescence.	
1329	1332			100								SANDSTONE: as above - very fine to dominantly fine, rare medium to coarse grains, grading to ARGILLACEOUS SANDSTONE.	
1332	1335			100								SANDSTONE: as above - very poor to dominantly no visible porosity, no hydrocarbon fluorescence.	
1335	1338		10	90								SILTSTONE: dusky yellow brown to brown grey, moderately hard to hard, sub-fissile to minor fissile, uniformly very finely arenaceous grading to ARENACEOUS SILTSTONE. SANDSTONE: as above.	
1338	1341			100								SANDSTONE: as above - very fine to minor fine, very well sorted.	
1341	1344		20	80								SILTSTONE: as above - trace very fine to fine white lithics, trace carbonaceous detritus. SANDSTONE: as above.	
1344	1347		20	80								SILTSTONE: as above. SANDSTONE: as above.	
1347	1350		70	30								SILTSTONE: as above - brown grey. SANDSTONE: as above.	
1350	1353		80	20								SILTSTONE: as above - locally common fine carbonaceous detritus and laminations, minor cuttings fragments with sandstone visible as laminations grading back to siltstone. SANDSTONE: as above.	
1353	1356		20	80								SILTSTONE: as above. SANDSTONE: as above - very fine with strong calcareous cement.	
1356	1359		20	80								SILTSTONE: as above. SANDSTONE: as above.	
1359	1362		50	50								SILTSTONE: as above - minor to locally common carbonaceous detritus with minor micro mica. SANDSTONE: as above.	
1362	1365		10	90								SILTSTONE: as above. SANDSTONE: white to very light grey, hard to very hard in part, very fine, sacharoidally textured, very well sorted, sub-angular, sub-spherical, 10% white argillaceous matrix, strong calcareous cement, trace very fine carbonaceous specks and white lithics, very poor to no visible porosity, no hydrocarbon fluorescence.	
1365	1368		20	80								SILTSTONE: as above. SANDSTONE: as above.	
1368	1371		40	60								ARENACEOUS SILTSTONE: dusky yellow brown to dominantly brown grey, hard, sub-fissile to fissile, 20 to 40% very finely arenaceous grading in part to SILTY SANDSTONE, trace carbonaceous specks and micro mica. SANDSTONE: as above.	
1371	1374		40	60								ARENACEOUS SILTSTONE: as above. SANDSTONE: as above.	
1374	1377		50	50								ARENACEOUS SILTSTONE: as above. SANDSTONE: as above - sacharoidally textured.	
1377	1380		60	40								ARENACEOUS SILTSTONE: as above. SANDSTONE: as above - sacharoidally textured.	
1380	1383		60	40								ARENACEOUS SILTSTONE: as above - locally common micro mica. SANDSTONE: as above.	
1383	1386		80	20								ARENACEOUS SILTSTONE: as above. SANDSTONE: as above.	
1386	1389		80	20								ARENACEOUS SILTSTONE: as above grading to SILTSTONE. SANDSTONE: as above.	
1389	1392		90	10								SILTSTONE: as above - becoming common dark grey and slightly carbonaceous. SANDSTONE: as above.	
1392	1395		90	10								SILTSTONE: medium dark grey to dark grey, moderately hard, fissile to dominantly sub-fissile, uniformly textured - very finely arenaceous in part, trace carbonaceous detritus, trace to locally minor micro mica. SANDSTONE: as above.	
1395	1398		70	30								SILTSTONE: as above. SANDSTONE: light grey to medium light grey, moderately hard to hard, very fine, sacharoidally textured, very well sorted, sub-angular to angular, sub-spherical, grades to SILTY SANDSTONE in part, trace black mineral / carbonaceous specks, no visible porosity, no hydrocarbon fluorescence.	
1398	1401		90	10								SILTSTONE: as above - becoming uniformly medium dark grey. SANDSTONE: as above - no hydrocarbon fluorescence.	**Murta Member** picked from cuttings at 1397.5 m

1401	1404		60	40								SILTSTONE: as above. SANDSTONE (1) 20%: as above. SANDSTONE (2) 20%: mottled white / translucent aggregates - 5% loose clear to translucent grains, moderately hard, medium to coarse, minor very coarse, moderately to well sorted, angular to sub-angular, sub-elongated, 5 to 10% white argillaceous matrix, weak calcareous cement, very poor visible to fair inferred porosity, trace pinpoint moderately bright green yellow fluorescence in tight sandstone aggregates, very weak very slow diffuse dull green white cut, very thin residual ring fluorescence, no visible residue.	Murta sand in this sample. Top Murta above here?
1404	1407		40	60								SILTSTONE: as above. SANDSTONE (1) 30%: as above. SANDSTONE (2) 30%: as above - becoming dominantly as dis-aggregated medium grains, no hydrocarbon fluorescence.	
1407	1410		40	60								ARENACEOUS SILTSTONE: dark grey, firm to moderately hard in part, sub-blocky to dominantly sub-fissile, minor very fine lithic fragments, trace carbonaceous detritus and micro mica. SANDSTONE (1) 30%: as above. SANDSTONE (2) 30%: as above - dominantly as dis-aggregated medium grains.	
1410	1413		30	70								ARENACEOUS SILTSTONE: as above. SANDSTONE: light grey aggregates - very fine, 50% as fine to dominantly medium translucent to clear dis-aggregated grains, friable to moderately hard, moderately to well sorted, sub-angular to dominantly sub-sounded, rounded in part, sub-elongate to dominantly sub-spherical, 5 to 10% white argillaceous matrix, weak calcareous cement, poor visible to fair inferred porosity, no hydrocarbon fluorescence.	
1413	1416		60	40								ARENACEOUS SILTSTONE: as above - common very fine carbonaceous / coally laminations and detritus. SANDSTONE: as above - trace fluorescence as below.	
1416	1419		60	40								ARENACEOUS SILTSTONE: as above - common very fine carbonaceous / coally laminations and detritus. SANDSTONE: as above - 50% as below.	
1419	1422		80	20								ARENACEOUS SILTSTONE: as above. SANDSTONE: as above - 100% patchy very dull orange mineral fluorescence with trace pinpoint / scattered green yellow fluorescence in tight sandstone aggregates with trace carbonaceous detritus (locally generated?), slow streaming dull to moderately bright blue white cut, moderately thick residual ring fluorescence, no visible residue.	
1422	1425		30	70								ARENACEOUS SILTSTONE: as above - slightly carbonaceous in part. SANDSTONE: white to very light grey aggregates, dominantly as translucent to clear disaggregated grains, moderately hard to dominantly friable, fine to dominantly medium, rarely coarse, sub-angular to sub-rounded, well sorted, weakly calcareous, trace to 5% white argillaceous matrix, rare carbonaceous laminations, poor to fair inferred porosity, 30% very dull green patchy fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue.	Top Namur? Probably yes. **Namur Sandstone Member** picked from cuttings at 1424.5 m
1425	1428		10	90								SILTSTONE: dark grey to brown black, sub-blocky, moderately hard, very finely arenaceous in part with locally common micro mica, occasionally moderately carbonaceous. SANDSTONE: as above - 30% fluorescence as above.	
1428	1431		5	95								SILTSTONE: as above. SANDSTONE: as above - becoming dominantly medium, sub-sounded - 10% fluorescence as above.	
1431	1434		10	90								SILTSTONE: as above. SANDSTONE: as above - 30% fluorescence as above.	
1434	1437		2	98								SILTSTONE: as above. SANDSTONE: very light to minor very pale brown aggregates, dominantly as dis-aggregated translucent to clear grains, friable, fine to dominantly medium, minor coarse, well sorted, sub-angular to minor sub-sounded, sub-spherical to sub-elongate, minor elongated, weak calcareous cement - weakly siliceous in part, 5% decreasing white argillaceous matrix, fair inferred porosity, 10% dull green pinpoint fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue.	
1437	1440		30	70								SILTSTONE: brown grey to olive grey, moderately hard, sub-fissile to minor fissile, uniformly very finely arenaceous, trace fine mica flecks, trace fine carbonaceous detritus. SANDSTONE: as above - trace fluorescence as above.	
1440	1443		60	40								SILTSTONE: as above. SANDSTONE: as above - 70% fluorescence as above.	
1443	1449		80	20								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1449	1452		10	90								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1452	1455		10	90								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1455	1458		10	90								SILTSTONE: as above - locally moderately carbonaceous. SANDSTONE: as above - no hydrocarbon fluorescence.	
1458	1461			100								SANDSTONE: minor very light grey aggregates - dominantly as broken / dis-aggregated translucent to clear grains, fine to dominantly medium rarely coarse, well sorted, sub-angular to angular, sub-spherical to sub-elongate, very weakly calcareous, weak siliceous cement, trace white argillaceous matrix, poor visible to dominantly fair inferred porosity, 5% dull green pinpoint fluorescence in tight sandstone aggregates, no crush cut, very thin residual ring fluorescence, no visible residue.	
1461	1464		5	95								SILTSTONE: as above - locally abundant carbonaceous detritus. SANDSTONE: as above - trace pinpoint dull green fluorescence.	
1464	1467			100								SANDSTONE: as above - angular, trace pinpoint fluorescence as above.	
1467	1470			100								SANDSTONE: as above - angular, trace pinpoint fluorescence as above.	
1470	1473			100								SANDSTONE: as above - angular, 5% pinpoint fluorescence generally as above crush cut, no visible residue.	
1473	1476			100								SANDSTONE: as above - locally 5 to 10% white argillaceous matrix becoming commonly as fine to medium aggregates, 5% pinpoint fluorescence generally as above crush cut, no visible residue.	
1476	1479			100								SANDSTONE: as above - fine to dominantly medium, well sorted, dominantly dis-aggregated, trace weakly calcareous - generally weak siliceous cement, fair inferred porosity, trace pinpoint fluorescence as above.	
1479	1482		10	90								SILTSTONE: grey black, firm to moderately hard, sub-fissile, very finely arenaceous, moderately to very carbonaceous, trace micro mica. SANDSTONE: as above.	
1482	1485		10	90								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1485	1488		70	30								SILTSTONE: as above - becoming dominantly dusky yellow brown with common carbonaceous detritus. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1488	1491		70	30								SILTSTONE: as above. SANDSTONE: as above - no hydrocarbon fluorescence.	
1491	1494			100								SANDSTONE: white to very pale brown aggregates, 30 to 40% as dis-aggregated clear to translucent grains, friable, medium to dominantly fine, rarely coarse, moderately to well sorted, sub-angular to minor sub-sounded, sub-spherical, strong calcareous cement, 15 to 20% white argillaceous matric in part grading to ARGILLACEOUS SANDSTONE, very poor visible porosity, no hydrocarbon fluorescence.	
1494	1497		40	60								SILTSTONE: as above. SANDSTONE: as above - becoming commonly coarse - moderately sorted. FLUORESENCE: 20% moderately bright green yellow scattered fluorescence in tight sandstone aggregates, slow diffuse dull blue white crush cut, very thin residual ring, no visible residue.	
1497	1500		20	80								SILTSTONE: as above. SANDSTONE: as above - becoming commonly coarse - moderately sorted, 10% fluorescence as above.	
1500	1503		10	90								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1503	1506			100								SANDSTONE: as above - fine to medium, angular, no hydrocarbon fluorescence.	
1506	1509			100								SANDSTONE: as above.	
1509	1512			100								SANDSTONE: as above.	
1512	1515		10	90								SILTSTONE: as above. SANDSTONE: as above - medium to coarse, sub-angular to angular, trace crystal faces, becoming fair to good (?) inferred porosity.	
1515	1518		20	80								SILTSTONE: as above. SANDSTONE: as above - medium to coarse, sub-angular to angular, trace crystal faces, becoming fair to good (?) inferred porosity.	
1518	1521		40	60								SILTSTONE: yellow brown becoming dominantly brown grey, firm to moderately hard, sub blocky to sub-fissile, uniformly very finely arenaceous, minor micro mica and trace very fine carbonaceous specks. SANDSTONE: light grey to yellow grey in part, friable to moderately hard, very fine to fine - uniformly sacharoidally textured, well sorted, sub-angular to angular, sub-spherical to spherical, 5 to 10% white argillaceous matrix, weakly calcareous - moderate siliceous cement, trace carbonaceous specks - rare brown grey silty laminations, very poor visible porosity, trace pinpoint dull to moderately bright green yellow fluorescence, very weak slow dull blue white diffuse crush cut, very thin dull blue white residual ring, no visible residue. (and composited from known Westbourne Formation interval below)	**Westbourne Formation** picked from cuttings and ROP at 1516.5 m
1521	1524		20	80								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1524	1527		10	90								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1527	1530		50	50								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1530	1533		80	20								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1533	1536		70	30								SILTSTONE: as above - locally abundant micro mica. SANDSTONE: as above - becoming more siliceous, no visible porosity, 70% dull green yellow patchy fluorescence, very weak slow dull blue white diffuse crush cut, very thin dull blue white residual ring, no visible residue.	
1536	1539		60	40								SILTSTONE: as above. SANDSTONE: as above - no hydrocarbon fluorescence.	
1539	1542		20	80								SILTSTONE: as above. SANDSTONE: as above - mottled light brown very light grey in part.	

1542	1545		40	60									SILTSTONE: as above - becoming dominantly dusky yellow brown, locally very finely arenaceous grading to ARENACEOUS SILTSTONE. SANDSTONE: as above.	
1545	1548		30	70									SILTSTONE: as above. SANDSTONE: as above.	
1548	1551		30	70									SILTSTONE: as above. SANDSTONE: as above.	
1551	1554		20	80									SILTSTONE: as above. SANDSTONE: as above.	
1554	1557		90	10									ARENACEOUS SILTSTONE: uniformly brown grey, firm to moderately hard in part, sub-fissile to minor sub-blocky, 40 to 50% very fine quartz grains grading to SILTY SANDSTONE, non-calcareous, trace carbonaceous specks, locally common micro mica. SANDSTONE: as above.	
1557	1560		60	40									ARENACEOUS SILTSTONE: as above. SANDSTONE: white to pale yellow brown, firm to dominantly moderately hard, very fine to minor fine - uniformly sacharoidally textured, very well sorted, sub-angular, sub-spherical, minor white argillaceous matrix, very weakly calcareous in part - dominantly as strong siliceous cement, very poor to no visible porosity, no hydrocarbon fluorescence.	
1560	1563		70	30									SILTSTONE: as above. SANDSTONE: as above.	
1563	1566		70	30									SILTSTONE: as above - trace carbonaceous detritus. SANDSTONE: as above.	
1566	1569		70	30									SILTSTONE: as above - trace carbonaceous detritus and becoming dominantly dusky yellow brown. SANDSTONE: as above.	
1569	1572		20	80									SILTSTONE: as above. SANDSTONE: as above - no hydrocarbon fluorescence.	
1574	1574			100									SANDSTONE: dominantly as translucent to minor clear dis-aggregated quartz grains, minor very light grey aggregates, friable to minor moderately hard, fine to minor medium, well sorted, sub-angular to dominantly sub-rounded, sub-spherical to spherical, weak siliceous cement, poor visible to fair inferred porosity, 100% solid bright yellow green fluorescence, slow diffuse green white cut - instant bright green white crush cut with secondary streaming grains, thick moderately bright green white residual ring, no visible residue.	Spot sample.
1572	1575		10	90									SILTSTONE: as above. SANDSTONE: 70% as sacharoidal aggregates, 30% as above, 100% solid bright yellow green fluorescence as above.	
1575	1578		20	80									SILTSTONE: as above. SANDSTONE: 70% as sacharoidally textured aggregates, 30% as dis-aggregated grains as above, 15% patchy bright yellow green fluorescence as above.	
1578	1581			100									SANDSTONE: white, hard to friable in part, very fine to dominantly fine grained, well sorted, sub-angular to angular, moderately strong siliceous cement with minor quartz overgrowths, trace carbonaceous specks, very poor visible porosity, trace pinpoint fluorescence as above.	
1581	1587			100									SANDSTONE: as above - trace pinpoint fluorescence as above.	
1587	1590			100									SANDSTONE: as above - trace pinpoint fluorescence as above.	
1590	1593			100									SANDSTONE: as above - trace pinpoint fluorescence as above.	
1593	1596			100									SANDSTONE: as above - fine grained, very well sorted, trace pinpoint fluorescence as above.	
1596	1599			100									SANDSTONE: white to commonly as dis-aggregated translucent quartz grains, friable, fine, very well sorted, sub-angular to angular, sub-spherical, non-calcareous, weak to moderate siliceous cement - trace quartz overgrowths, minor white argillaceous matrix, very poor to locally fair inferred porosity, trace pinpoint fluorescence as above.	**Adori Sandstone** picked from cuttings and ROP at 1594.5 m
1599	1602			100									SANDSTONE: as above - trace pinpoint fluorescence as above.	
1604	1604			100									SANDSTONE: very light grey, minor very pale brown staining, fine, dominantly medium to coarse, moderately to well sorted, angular - common broken coarse grains, sub-spherical to sub-elongated, moderate to locally strong siliceous cement with occasional quartz overgrowths, poor visible porosity, trace intergranular (in aggregates) black bitumen staining, 70% patchy bright green white fluorescence, instant diffuse dull green white cut - slow streaming moderately bright blue white cut, thick green white residual ring, no visible residue.	
1602	1605			100									SANDSTONE: as above - 30% fluorescence as above, trace bitumen staining - slow streaming cuts.	
1605	1608			100									SANDSTONE: as above - 20% fluorescence.	
1608	1611		1	99									SANDSTONE: as above - becoming dominantly fine, strong siliceous cement, very poor to no visible porosity, trace fluorescence as above.	
1611	1614		3	97									SILTSTONE: brown black, firm, sub-fissile to fissile, moderately arenaceous - uniformly carbonaceous, trace micro mica. SANDSTONE: as above - 20% fluorescence as above.	
1614	1620		3	97									SANDSTONE: as above - 5% white kaolinite fragments, 30% patchy moderately bright to dull yellow fluorescence, instant blue white crush cut, thick green residual ring, no visible residue.	Mud sample collected at gas peak at 1616 m. When mixed with boiling water and placed in a cup under the fluoroscope, oil bubbles observed breaking out on surface - bright green yellow droplets and streaks.
1620	1623			100									SANDSTONE: as above, 20% patchy moderately bright to dull yellow fluorescence, instant blue white crush cut, thick green residual ring, no visible residue.	
1623	1626			100									SANDSTONE: as above - common pale brown staining, fine, sub-angular to dominantly angular - rarely as broken quartz crystal faces, trace fluorescence as above.	
1626	1629			100									SANDSTONE: as above, trace fluorescence as above.	
1629	1632			100									SANDSTONE: as above - fine, becoming dominantly sub-sounded, trace fluorescence as above.	
1632	1635		40	60									SILTSTONE: as below. SANDSTONE: as above, trace fluorescence as above.	
1635	1641		90	10									SILTSTONE: brown grey to brown black, firm, sub-blocky to dominantly sub-fissile, generally uniformly textured - locally moderately arenaceous, moderately carbonaceous in part - trace carbonaceous detritus and micro mica. SANDSTONE: medium light grey, moderately hard, very fine to minor fine, very well sorted, 10 to 15% argillaceous matrix, weakly calcareous, common lithics and feldspar fragments, trace carbonaceous detritus and wisps, very poor to no visible porosity, no hydrocarbon fluorescence.	**Birkhead Formation** picked from cuttings and ROP at 1634.5 m.
1641	1644		90	10									SILTSTONE: as above. SANDSTONE: as above - no hydrocarbon fluorescence.	
1644	1647		95	5									SILTSTONE: as above. SANDSTONE: as above.	
1647	1650		60	40									SILTSTONE: as above. SANDSTONE: as above - 50% patchy dull green fluorescence, slow dull blue white streaming cut, thin blue white residual ring, no visible residue.	
1650	1653		80	20									SILTSTONE: as above. SANDSTONE: as above.	
1653	1656		50	50									SILTSTONE: as above. SANDSTONE: white to very light grey, translucent to clear loose individual grains, friable, very fine to fine, rarely medium, well sorted, sub-angular to angular, sub-spherical, weakly calcareous, trace argillaceous matrix, trace fine lithics, poor inferred porosity, no hydrocarbon fluorescence.	
1656	1659		40	60									SILTSTONE: as above. SANDSTONE: as above.	
1659	1662		50	50									SILTSTONE: as above - becoming argillaceous in part. SANDSTONE: as above.	
1662	1665		100										SILTSTONE: dark grey to brown black, sub-blocky to dominantly sub-fissile, firm to moderately hard, generally very finely arenaceous - slightly argillaceous in part, locally moderately carbonaceous.	
1665	1668		100										SILTSTONE: as above.	
1668	1671		100										SILTSTONE: as above.	
1671	1674		100										SILTSTONE as above - becoming dominantly very finely arenaceous grading to ARENACEOUS SILTSTONE.	
1674	1677		90	10									SILTSTONE: as above. SANDSTONE: as below - 100% fluorescence as below.	
1677	1680		20	80									SILTSTONE: as above. SANDSTONE: white to very light grey, translucent to clear loose individual grains, friable to minor hard aggregates, very fine to dominantly fine, very well sorted, sub-angular to sub-rounded, sub-spherical, moderate calcareous cement, trace to minor argillaceous matrix, trace fine lithics, poor inferred porosity, 100% solid moderately bright to dull green white fluorescence, slow dull blue white streaming cut, thin blue white residual ring, no visible residue.	
1680	1683		30	70									SILTSTONE: as above. SANDSTONE: as above - 10% fluorescence as above.	
1683	1686		30	70									SILTSTONE: as above. SANDSTONE: as above - 10% fluorescence as above.	
1686	1689		90	10									SILTSTONE: as above. SANDSTONE: as above - no hydrocarbon fluorescence.	
1689	1692		50	50									SILTSTONE: as above. SANDSTONE: as above - no hydrocarbon fluorescence.	
1692	1695		40	60									SILTSTONE: as above. SANDSTONE: as above - no hydrocarbon fluorescence.	
1695	1698		10	80	10								SILTSTONE: as above. SANDSTONE: as above - becoming moderately argillaceous, very poor visible porosity, no hydrocarbon fluorescence. COAL: black, earthy to sub-vitreous, brittle, hackly break, blocky.	
1698	1701		10	90									SILTSTONE: as above. SANDSTONE: as above - rare coarse grains, moderately sorted, common white argillaceous matrix.	
1701	1704		40	60									SILTSTONE: as above. SANDSTONE: as above.	
1704	1707		70	30									SILTSTONE: as above - becoming dominantly brown grey. SANDSTONE: as above, 30% scattered very dull green white fluorescence in tight aggregates, slow very dull blue white crush cut, very thin residual ring, no visible residue.	
1707	1710		50	50									SILTSTONE: as above - becoming dominantly brown grey. SANDSTONE: white to very light grey, friable, fine, very well sorted, sub-angular to dominantly sub-sounded, sub-spherical, minor white argillaceous matrix, weak to locally moderate siliceous cement, trace lithics, very poor visible porosity, 50% scattered fluorescence as above.	

1710	1716		20	80								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1716	1719		70	30								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1719	1722		40	60								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1722	1725		90	10								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1725	1728		80	20								SILTSTONE: as above - uniformly olive black. SANDSTONE: as below.	
1728	1731		5	95								SILTSTONE: as below. SANDSTONE: very light grey, dominantly as dis-aggregated translucent to loose grains, friable, fine to dominantly medium, minor coarse, well sorted, angular - common broken grains and trace crystal faces, weak to moderate in part siliceous cement, rare quartz overgrowths, poor to fair inferred porosity, no hydrocarbon fluorescence.	**Hutton Sandstone** picked from cuttings and ROP at 1727 m.
1731	1734		20	80								SILTSTONE: olive black, firm, sub-blocky, finely arenaceous with trace lithics / feldspar fragments, locally common carbonaceous detritus. SANDSTONE: as above - no hydrocarbon fluorescence.	
1734	1737			100								SANDSTONE: as above - no hydrocarbon fluorescence.	
1737	1740		5	95								SILTSTONE: as above. SANDSTONE: as above - becoming dominantly coarse and sub-sounded in part.	
1740	1743		5	95								SILTSTONE: as above. SANDSTONE: as above.	
1743	1746			100								SANDSTONE: as above - trace fine pale orange garnet fragments.	
1746	1749		10	90								SILTSTONE: as below. SANDSTONE: as above.	
1749	1752		90	10								SILTSTONE: olive black to dark grey, firm, sub fissile, uniformly very finely arenaceous, minor very fine SANDSTONE laminations. SANDSTONE: as below - trace pinpoint fluorescence.	
1752	1755		80	20								SILTSTONE: as above. SANDSTONE: as below - trace pinpoint fluorescence.	
1755	1758		10	90								SILTSTONE: as above. SANDSTONE: very light grey - dominantly as dis-aggregated translucent aggregates, minor aggregates with trace white argillaceous matrix, fine to medium in part - dominantly coarse to very coarse, moderately to poorly sorted, angular - minor crystal faces, sub-elongate to elongate, common quartz overgrowths, trace pale orange garnet fragments, poor to fair inferred porosity, trace pinpoint dull to moderately bright yellow fluorescence, very slow dull blue white streaming cut, thin dull green residual ring, no visible residue.	
1758	1761		3	97								SILTSTONE: as above. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1761	1764			100								SANDSTONE: as above - no hydrocarbon fluorescence.	
1764	1767			100								SANDSTONE: as above.	
1767	1770			100								SANDSTONE: as above.	
1770	1773			100								SANDSTONE: as above.	
1773	1776			100								SANDSTONE: as above - dominantly coarse to very coarse, becoming sub-angular to sub-sounded in part, no hydrocarbon fluorescence.	
1776	1779		30	70								SILTSTONE: as above - brown black to dark grey. SANDSTONE: as above - trace pinpoint fluorescence as above.	
1779	1782		20	80								SILTSTONE: as above. SANDSTONE: as above - no hydrocarbon fluorescence.	
1782	1785			100								SANDSTONE: as above.	
1785	1788			100								SANDSTONE: as above.	
1788	1791			100								SANDSTONE: as above - trace pinpoint fluorescence as above	
1791	1794			100								SANDSTONE: as above.	
1794	1797			100								SANDSTONE: as above.	
1797	1800			100								SANDSTONE: very light grey, dominantly as dis-aggregated milky to translucent grains, occasionally as moderately hard aggregates, medium to dominantly coarse, minor fine and very coarse, moderately to poorly sorted, angular to sub-angular, minor sub-sounded, sub-elongate to elongated, trace broken crystal faces - weakly calcareous, locally moderately strong siliceous cement with trace quartz overgrowths, trace pale orange garnet fragments, fair inferred porosity, trace bitumen staining, no hydrocarbon fluorescence.	
1800	1803			100								SANDSTONE: as above - becoming dominantly medium grained with 10% white argillaceous matrix and common fine lithics.	
1803	1806			100								SANDSTONE: as above - 5% white argillaceous matrix, dominantly medium grained, becoming commonly sub-sounded.	
1806	1809			100								SANDSTONE: as above - trace bitumen staining.	
1809	1812			100								SANDSTONE: as above - strong siliceous cement with minor quartz overgrowths, fair to poor inferred porosity.	
1812	1815			100								SANDSTONE: as above - dominantly fine grained, well sorted.	
1815	1818			100								SANDSTONE: as above - fine to dominantly medium, minor coarse, angular to minor sub-angular.	
1818	1821			100								SANDSTONE: as above - dominantly medium, minor coarse, well sorted.	
1821	1824			100								SANDSTONE: as above - sub-angular to commonly sub-sounded.	
1824	1827		5	95								SILTSTONE: grey black, moderately hard, sub-fissile, carbonaceous. SANDSTONE:as above.	
1827	1830			100								SANDSTONE: as above - trace pinpoint fluorescence as above.	
1830	1833			100								SANDSTONE: as above.	
1833	1836			100								SANDSTONE: as above - moderately calcareous, minor quartz overgrowths.	
1836	1839			100								SANDSTONE: as above - minor pale brown stained aggregates.	
1839	1842			100								SANDSTONE: as above - fine dominantly medium, minor coarse, dominantly angular to sub-angular, minor sub-sounded, minor quartz overgrowths - trace black mineral inclusions.	
1842	1845			100								SANDSTONE: as above.	
1845	1848			100								SANDSTONE: as above.	
1848	1851			100								SANDSTONE: as above.	
1851	1854			100								SANDSTONE: as above.	
1854	1857			100								SANDSTONE: as above.	
1857	1860			100								SANDSTONE: very light grey to light grey, minor very pale brown stained aggregates, dominantly as dis-aggregated clear to translucent / minor milkly quartz grains, friable to moderately hard in aggregates, medium grained, minor fine and coarse, well sorted, sub-sounded to sub-angular, minor angular, sub-spherical to sub-elongate, weakly calcareous - minor quartz overgrowths, trace white argillaceous matrix, fair inferred porosity, no hydrocarbon fluorescence.	
1860	1863			100								SANDSTONE: as above - becoming very coarse and moderately to poorly sorted.	
1863	1866			100								SANDSTONE: as above - coarse to very coarse, angular.	
1866	1872			100								SANDSTONE: as above - coarse to dominantly medium, angular.	
1872	1875			100								SANDSTONE: as above.	
1875	1878			100								SANDSTONE: as above.	
1878	1881			100								SANDSTONE: as above - medium, angular, moderately calcareous to minor quartz overgrowths, fair inferred porosity.	
1881	1884			100								SANDSTONE: as above.	
1884	1887			100								SANDSTONE: becoming dominantly medium to fine and sub-sounded.	
1887	1890			100								SANDSTONE: as above - medium to coarse, angular.	
1890	1893		20	80								SILTSTONE: as below. SANDSTONE: as above.	
1893	1896			100								SANDSTONE: as above + becoming very coarse to granular in part - poorly sorted.	
1896	1899		80	20								SILTSTONE: dark grey, firm, sub-fissile to fissile, generally uniformly textured - locally very finely arenaceous, trace lithics and carbonaceous specks. SANDSTONE: as above.	
1899	1902		40	60								SILTSTONE: as above. SANDSTONE: light grey - dominantly as dis-aggregated translucent to milkly quartz grains, friable, fine to dominantly medium, occasionally coarse, well sorted, angular to sub-angular, minor sub-sounded, sub-spherical to dominantly sub-elongate, trace to locally up to 10% whitea rgillaceous matrix,weakly calcareous, weak to moderate siliceous cement with minor quartz overgrowths, poor to fair inferred porosity, no hydrocarbon fluorescence.	
1902	1905		80	20								SILTSTONE: as above. SANDSTONE: as above.	
1905	1908		20	80								SILTSTONE: as above. SANDSTONE: as above.	
1908	1911		10	90								SILTSTONE: as above. SANDSTONE: as above - medium to dominantly coarse, very coarse to granular in part, poorly sorted, angular.	
1911	1914			100								SANDSTONE: as above.	
1914	1917			100								SANDSTONE: as above - trace red orange (jasper) lithic fragments, trace sub-sounded to rounded coarse sub-spherical grains.	
1917	1920			100								medium to dominantly coarse to very coarse and commonly sub-sounded.	
1920	1923			100								SANDSTONE: as above - weakly calcareous, medium to dominantly coarse, 5% kaolinitic fragments and locally common white argillaceous matrix, strong siliceous cement, very poor inferred porosity, no hydrocarbon fluorescence.	
1923	1926			100								SANDSTONE: as above.	
1926.5	1926.5		5	95								SILTSTONE: grey black to brown black, firm to moderately hard, sub-fissile to fissile in part, trace very fine arenaceous material, locally moderately carbonaceous with trace to 5% coally laminations / fragments, trace micro pyritic aggregates. SANDSTONE: as above.	**Poolowanna Formation** picked from cuttings and ROP at 1926.5 m.

Appendix 10 – Wireline Report and Log Data

Log Data provided electronically on CD

Electric Wireline Operations
End of Well Report

Triclops - 1
Queenlands/Australia

Prepared by:

Mohd Rothi Hamzah
afriQA Ltd
2 February 2013

Table of Contents

1. Introduction

This EOW report is intended to serve as a permanent and accurate record of the Wireline Formation Evaluation program performed on exploration well Triclops-1. Triclops - 1 is located in Queensland Block- ATP 539 and operated by Drillsearch Energy Limited.

An operational audit was performed by afriQA Ltd, a specialist Wireline Operations Quality Assurance consultancy group. An audit was performed for Run 1 (8.5" whole section)

The main purpose of the audit was to ensure:

- The safety culture espoused by the Contractor was consistent with industry norms and compliant with both the Contractor's and the Clients own policies
- That the Formation Evaluation objectives were met
- The Formation Evaluation program was completed in an efficient manner possible
- To assist with continuous improvement

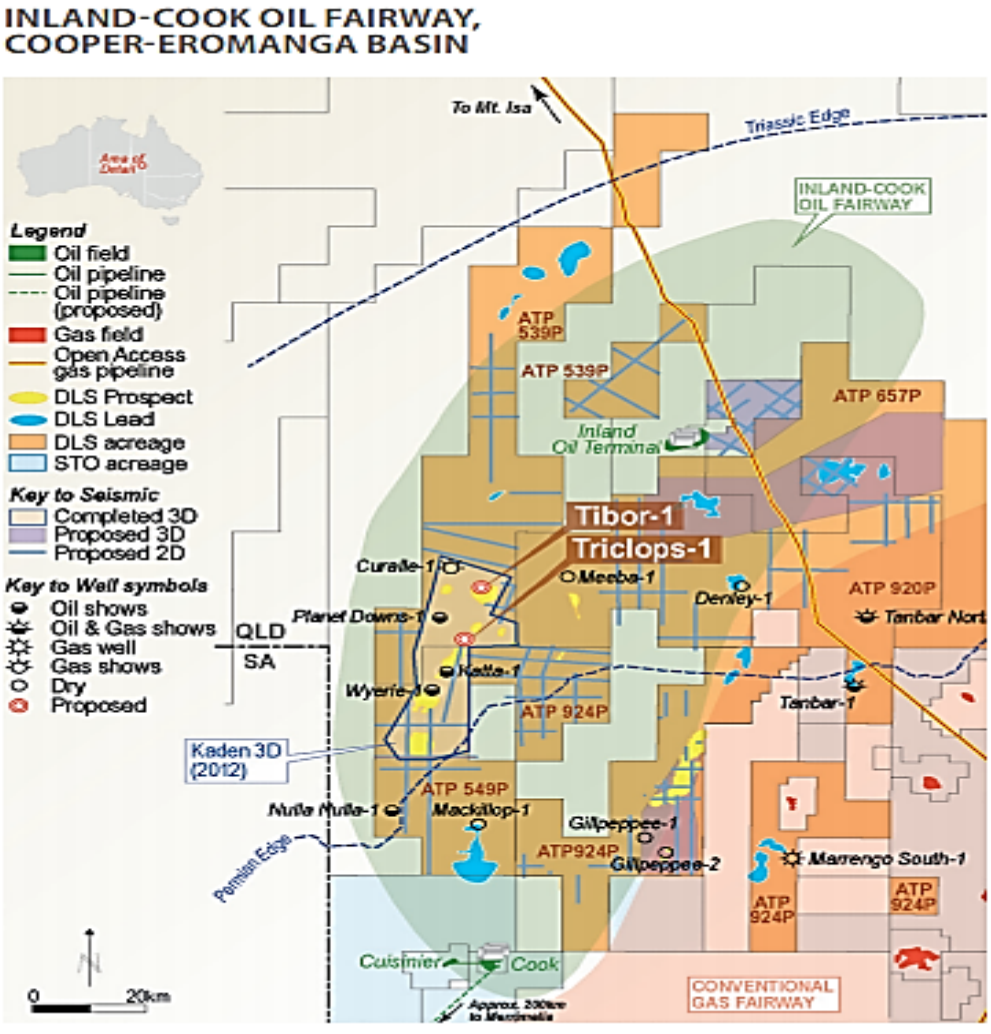
In addition to the EOW report, a technical report for each logging operation performed on Triclops-1 was completed and delivered by afriQA Ltd.

The Formation Evaluation program was performed by Schlumberger. The afriQA audit was performed by Mohd Rothi Hamzah.

2. Critical Formation Evaluation Objectives

The wireline logging programme was a fundamental part of the data acquisition required to achieve the FE objectives, namely the acquisition of appropriate wireline logs to fully evaluate the drilled section as per the detailed logging program.

The main objective of Triclops-1 exploration well is to test the hydrocarbon propectivity of the Inland-Cook Oil Fairway by demonstrating oil migration from the Yamma Yamma Depression into the Western Flank of the SWQ Eromanga Basin. Triclops-1 in ATP 539P, is located approximately 25km east of the South Australian and Queensland border and 250km northeast of Fairway. Triclops-1 is an exploration commitment well in ATP 539P area.



Source: Drillsearch Energy Limited

The two closest offset well that can be used to correlate Triclops-1 are Planet Down -1 and Katta-1 well, as shown in the figure above.

Triclops-1 Exploration well is a vertical well. The primary hydrocarbon formation targets are Hutton Sandstone and Birkhead Sandstone formations. The secondary target will be Westbourne Sandstone and Namur Sandstone formations.

To summarize, the main objectives drilling Triclop-1 well are;

- Drill a safe and environmentally sound, low cost well
- Establish presence of oil in place and associated liquids in the primary target: Hutton and Birkhead sandstone formations and secondary target: Westbourne and Namur formations. To also establish the following over these targets
    - Determine net pay
    - Evaluate reservoir properties including porosity and hydrocarbon saturation
- TD the well in the Poolowanna Formation to a depth sufficient to meet the well objectives of establishing properties and identifying the presence of hydrocarbons. The planned total depth for Triclops-1 will be +/- 2021 m.
- Run wireline logs including a minimum of GR, Density/Neutron, Sonic and resistivity logs (Laterolog and Dielectric tool)
    - Run appropriate cement bond logs if required

Having identified the presence of oil and/or associated liquids through mud logs and wireline logging in any one of the 2 primary targets, the next step is to establish the following key reservoir parameters to characterise the reservoir and enable reservoir development planning including estimates of the following for each oil bearing zone. This information is likely to be determined through a combination of wireline results and well testing:

- Reservoir Fluid properties including gas composition and condensate yield for PVT modelling.
- Zone pressure and temperature
- Reservoir kh
- Skin and non-darcy skin parameters
- AOF and inflow potential of each zone

3. Safety

There were no **LTI's** during Schlumberger operations on Triclops -1.

The planning and execution of the well objectives in a safe and environmentally sound manner was a fundamental requirement of all aspects of the drilling programme. All operations were executed in accordance with the HSE management systems and the Schlumberger SOP.

In accordance with these overall objectives, specifically to the wireline logging activities, prior to individual operations, a toolbox talk was held at the worksite where the immediate operation was outlined and any safety issues were discussed between the crews. The Wireline QA Supervisor was present at every Toolbox talk, and reviewed and approved the JSA in agreement with the worksite supervisors.

SAFETY	**PRE-JOB SAFETY MEETING HELD ADEQUATE FOR THE OPERATION**	✓
	CORRECT PPE WORN AT ALL TIMES	✓
	RA SOURCE HANDLING PROCEDURES CORRECTLY EXECUTED	✓
	BEFORE AND AFTER LOG SURVEYS COMPLETED	✓
	RA STORED IN A SAFE AREA CORRECTLY BARRIERED OFF	✓
	LIFTING PLAN IN PLACE FOR EQUIPMENT TRANSFER TO AND FROM CATWALK	✓
	SP GROUND CABLES FOR LOGGING IN GOOD CONDITION	✓
	SAFETY SWITCH OPERATIONAL	✓
	GENERAL SAFETY PROCEDURES FOLLOWED AT ALL TIMES	✓

4. General Well Information

Background

The 12.25" open hole section on Triclops-1 was drilled from 24.0 m to 766.0 m. No basic formation evaluation wireline log was performed for this section. The hole was cased with 9 5/8" casing before commencing to drill the Triclops-1, 8.5" hole section. The 8.5" section was drilled from 766.0 m to a total depth (TD) of 1962.5 m at which point wireline log Run 1 and 2 were completed.

The well was planned to be a vertical well. After drilling to 1138 m the well started to build up angle to 2.75 degrees. While waiting for the directional assembly and mud motor to arrive at the well site, drilling was continued using pendulum BHA to 1208 m. The well was then steered and drilled from

1208 m to 1962.5 m to target path when the drill bit failed. The decision was taken to stop drilling and getting ready for wireline operations. The maximum deviation recorded was 3.43 degrees at 1216.8 m.

General

Well	Triclops-1
Block	**ATP 539P**
Type	**Exploration**
Operator	**Drillsearch Energy Limited**
EWL Contractor	**Schlumberger**
Area	**Roma**
Latitude	**25° 59' 43.4298" S**
Longitude	**141° 14' 40.3804" E**
Drilling Supervisor	**Guy Holmes**
Logging Engineer	**Astrid Mon Panieda/ Jamie Fraser**
Logging Witness	**Mohd Rothi Hamzah**

Rig data

Rig	**ENSIGN 918**	
KB-RT	**NA**	**m**
RT-GL	**5.2**	**m**
GL-MSL	**141.0**	**m**

Sub-surface well information

	Run 1: Triclops - 1
Bit Size	**8.5 in**
TD Driller	**1926.5 m**
TD Logger	**1926.5 m**
Casing Shoe Driller	**762.5 m**
Casing Shoe Logger	**762.7 m**
Circulation Stopped at TD	**28-Jan-2013 23:40 dd/mm/yy**
Circulation Time	**70 min**
Max Well Deviation	**3.43 deg @ 1216.8 mDRT**
Casing size	**9 5/8 in**

Mud system

	Run 1:
Mud Type	KCL-PHB-Polymer
Mud Weight	9.1 ppg
Mud Viscosity	11.0 sec
HPHT Fluid Loss	9.0 cc
PH	9.0
Corr Solids	4.0 %vol
Oil/Water Ratio	NA
CL (whole mud)	33,500 mg/l
Rmf @Temp	0.1649 @ 34.7°C
Rm @ Temp	0.1970 @ 34.2°C
Rmc @ Temp	0.2040 @ 33.7°C

5. Schlumberger tool mnemonics

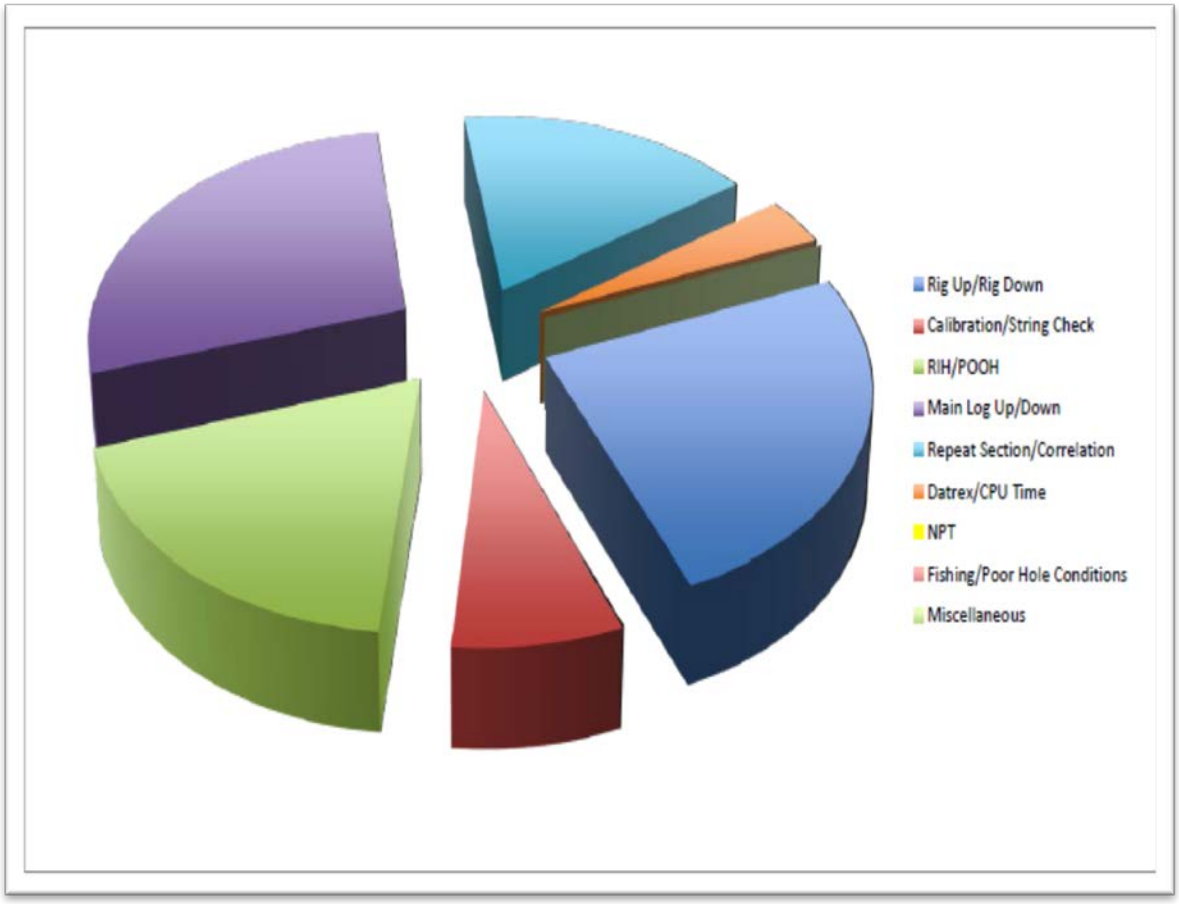
EDTC	Gamma Telemetry tool
HNGS	Natural Gamma Ray Spectrometry tool
HGNS	Highly Integrated Gamma Ray Neutron Sonde
PEX(TLD)	Platform Express (Three-Detector Lithology Density)
HRLA	High-Resolution Laterolog Array
MAST	Sonic Scanner
ADT	Array Dielectric Tool
SP	Spontaneous Potential
PPC	Powered Caliper
GPIT	General Purpose Inclinometry Tool

6. Triclops -1 Run 1 Activity summary and Operating Efficiency

For a detailed account of the Activity Summary, please refer to the afriQA Operational Reports for each logging suite.

RUN	SERVICES	RIG UP	RIG DOWN	TOTAL	LOST TIME	BHT
		dd/mm hh:mm	dd/mm hh:mm	TIME	(Contractor)	°C
1	EDTC/SP/HGNS/PEX/HRLA/ADT	29/01 10:15	29/01 20:30	10:15	00:00	130
2	EDTC/PPC/MAST/GPIT	29/01 20:30	30/01 04:10	07:40	00:00	130
	TOTAL TIME FOR WIRELINE OPERATIONS			17:55	00:00	
	OPERATING EFFICIENCY (1-LT/OT)x 100			100.0%		

Triclops-1 Operating Efficiency Run 1 and 2



6.1 Summary Run-1A: EDTC/HGNS/TLD/HRLA/DSLT/SP

Run 1 was completed in 10 hours and 15 min without NPT recorded.

Narrative

Upon arrival at the Triclops-1 wellsite, a complete operational and mobilisation audit was conducted by afriQA representative on the Contractors equipment. Refer to the operational audit report submitted for operational detail of Run 1 logging operations.

After an initial HSE meeting, standard open-hole logging conveyance equipment was rigged up in the derrick. An **EDTC/SP/HGNS/PEX-TLD/HRLA/ADT** combination was rigged up and run in hole. The Schlumberger primary depth control procedures were followed closely. The first point of reference was taken around 140m. The run in hole speed was set to around 3600 ft/hr to avoid undesired depth slippage for the first run. HRLA and MCFL calibration performed below the casing shoe. The TLD and ADT caliper were also verified inside casing prior to logging down.

Down log was logged from casing shoe to 1870 m and avoiding area around TD. Only HRLA, GR, Spectra GR and TNPH data were valid as all calipers were closed. Another depth control observation was done during down log. The measurements indicated that the downlog depth could be used as depth references. Tools were pulled back to log repeat pass from 1655 to 1555 m for all sensors. This specific interval would cover top of Birkhead sandstone and all Adori sandstone. Upon completion of repeat pass, data and plot were produced to be sent to town.

The main pass was recorded from TD to 50m above casing show depth (762.5 m) at 1800 ft/hr to allow for high resolution playback of the data if required. The main pass data file was depth shifted +0.38m to depth match the down log. On completion of the main pass, the tool string was pulled to surface.

The tool string was kept at 100 m in order to prepare ADT data for processing in town. Due to huge amount of ADT data recorded; the Maxwell program was very slow to process even for the depth shifting.

The tool string was pulled out of the hole, all after-log verifications were performed and the string was rigged down.

Summary

1. Run 1 was the 1st run in the hole and the down log would serve as the main depth reference log as per Schlumberger procedures.

2. Experienced over pull over the 1655 to 1555 m interval. Stick and pull observed during the main or the repeat pass, due to major washouts over this interval. The maximum overpull applied on both passes was around 1,600 lbs.
3. Neutron was corrected for whole mud salinity of 25616 ppm and logged in Limestone matrix.
4. RHOZ Density was corrected for borehole and mud density; and presented in Limestone Compatible scale.
5. RXO from the MCFL electrodes failed to function. The inversion process from the HRLA can be used as replacement.
6. The hole volume and cement volume was computed from the HCAL calliper (density tool), verified in casing (8.9" ID), tool reading 8.63". HCAL reset to Casing ID.
7. Maximum reading BHT from thermometer was 130 Deg C at 1940.5m MDRT 15hrs and 30 min after final TD circulation.
8. Bulk Density (RHOZ) and ADT data were affected badly by washout and borehole rugosity.

OBSERVATIONS AND LOG QUALITY CONTROL	
1. DEPTH CONTROL	**Run 1 down log was the main depth reference log**
2. RHOZ	**Good repeatable data recorded. Density corrections (HDRA) within expected range over gauge hole. Borehole rugosity (washout) affected density data badly.**
3. GR	**Good data recorded.**
4. TPHI	**Good repeatable data recorded. Corrected for whole mud salinity of 25616 ppm. Borehole rugosity (washout) affected porosity data badly.**
5. HNGS	**Good data recorded. NO Uranium rich formation seen.**
6. ADT	**Good data recorded. Proper QC cannot be done because of processing requirement. All the QC flags were OK.**
7. HRLA	**Good repeatable data recorded. Different invasion profile seen when comparing TD section and top section of the log.**

6.2 Summary Run-2: EDTC/PPC/MAST(Sonic Scanner)/GPIT

Run 2 was completed in 7 hours 40 Minutes with no NPT recorded.

Narrative

On completion of Run 1, the PPC/MAST (Sonic Scanner)/GPIT was rigged up. The PPC caliper and GR were calibrated before setting tool “ZERO” depth and run in hole. The crew ran the cable at 60,000 ft/hr to top of 9 5/8” casing shoe before setting the sonic scanner for down log. For down log the

sonic scanner was set for compressional slowness only – BHC mode. In this case, the down log can be logged from casing to 1870 m at 60,000 ft/hr. Run 1 was used for correlation in order to put this log on depth.

The tool was then moved up to 1655.0 m for repeat pass. The repeat pass interval was consistent with run 1. With PPC caliper set to open and sonic scanner set to standard mode (full wave and crosss dipole), the repeat pass was logged from 1655 m to 1550 m. GPIT QC flags were all showing good responses. GPIT data was required in order to orientate the anisotropy seen by the cross dipole sonic processing. The compressional slowness and shear wave slowness (compressional and dipole) were all showing good data. The compressional slowness also follow the same trend seen in the offset well, Planet Down-1. The tool was then moved to TD for main pass.

Main pass was logged using same sonic scanner standard from TD to surface at 1800 ft/hr. GR was also logged to surface as per client request. The sonic scanner data required more processing at Schlumberger data centre.

Summary

1. Run 2 was correlated to Run 1
2. Sonic scanner was logged in BHC mode for down log in order to log using faster logging speed at 6000 ft/hr.
3. Sonic scanner log in standard sonic mode for repeat pass and main pass. Fullwave monopole, inline dipole and cross dipole were recorded in this mode.
4. GPIT data and QC flags were all showing good inclinometry data: which were also recorded. GPIT also read good field intensity and field magnetometer for the well.
5. PPC caliper showing same borehole washout seen by the density tool. PPC is a 2-axis calipers. The washout only showed on one side of the well with the other orthogonal side still in gauge.

OBSERVATIONS AND LOG QUALITY CONTROL	
1. Depth Control	**Run 2 down log tied into run 1**
2. GR	Good repeatable data recorded
3. MAST(Sonic Scanner)	Reasonable data recorded. Sonic fullwave and cross dipole need further processing in Schlumberger data centre.
4. GPIT	Good data recorded
5. PPC	Good data recorded

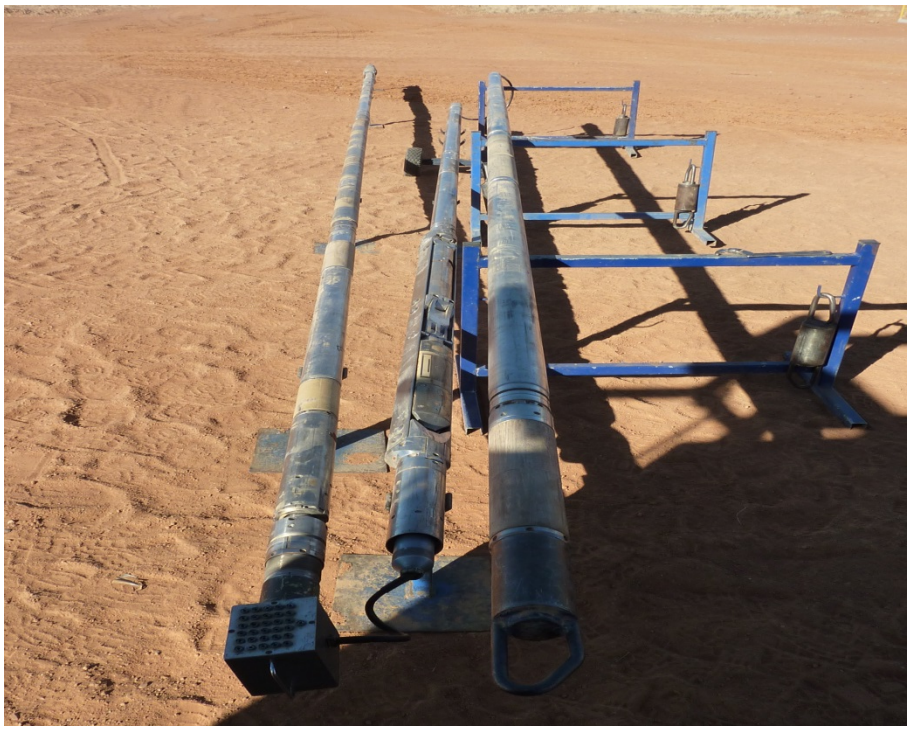


Figure-1 Schlumberger tool checkout for Run 1 EDTC/SP/HNGS/PEX-TLD/HRLA/ADT

Figure-2 Showing MCFL buttons situated in between the TLD detectors.

Figure 4- ADT top and lower Transmitters (in the middle) and 4 set-Top and Bottom receivers

Figure 4- ADT caliper and large caliper ring used to calibrate the caliper section.

7. Summary and Recommendations for continuous improvement

During the Triclops-1 wireline logging operations, there were no NPT recorded. The seismic checkshot planned for DRY CASE logging operation was cancelled due to Schlumberger not being able to mobilize on time. The first two runs were performed successfully without any backup tools at all. The mobilizations also included the MDT, MSCT and FMI tools, which were not run. The crew failed to setup the satellite communication due to very low satellite signal received at the wellsite. This setback affected the logging crew to perform real time logs monitoring via "INTERACT".

The assigned engineers for this job were quite new. They appear knowledgeable in operating the logging system and logging tools. However they were still lacking in experiences to read log. They weren't paying attention to how all the data or curves behaving on the screen. They also showed lack of attention to QC all input spectrums, data graph and waveforms, which is the first step to getting good data.

Client faced difficulties to read in time with the logging as the process monitor was also used for display monitor. In future assigning a separate monitor will improve the operation between client and logging engineers. Running MDT without a second screen would negatively impact the process of achieving good results.

Nevertheless, the advantages of schlumberger system and logging tools are its reliability and easiness for engineers to operate with.

7.1 Highlights:

1. No accidents recorded during the logging operation.
2. No environmental incidents recorded.
3. Good commitment shown by the on-site wireline crew to perform the operation in a safe and efficient manner.
4. All formation evaluation objectives were met during Run 1 and 2 operations.
5. With the exception of RXO data from the MCFL pad of TLD tool, generally good quality data was received.

7.2 Lowlights:

1. Full back up strings were not loaded out for the job. This current well location is quite remote and not having the capability of changing tools when tool failures occur is not good practise.
2. Crew refusal to check MDT at the wellsite was not acceptable. MDT tool and operations had been in operation for a long time. Hence, the crew should find ways to overcome the problem of handling heavy tool at the wellsite.

3. Logging truck was not set up properly for this logging. Plotter wasn't connected to provide plots for QC.
4. Logging system should have two monitors; one for process and the other for display. This way log LQC can be done by the client also.
5. Data depth shifting took considerable time after logging.
6. Slow data transfer due to big data size. For critical data transfer, only required curves or data should be transferred.
7. Complete formation slowness should be provided to client for all types sonic run. Engineers should QC the data real time and try to find the best sonic setup to get the best formation slowness result.

Run 1 Wireline operations

1. Run 1 – The RXO reading from the TLD pad failed to operate. The similar RXO reading can also be derived from ADT and HRLA tool through inversion process. Both reading were checked and compared real time, and reading from HRLA appeared to be the best choice.

Run 2 Wireline operations

1. Run 2 – Sonic Scanner slowness were satisfactorily good real time. Engineers still refused to release the shear and stoneley slowness to client.

7.3 Best practices and Continuous improvement:

1. Inspect all rig-up equipment before every load out or at the wellsite to ensure operational status
2. Mobilise QA/QC supervisor to assist with tool checks in SLB base in ROMA or MOOMBA, reducing time required on site for an audit and in so, significantly reducing the direct cost due to equipment standby rates on site.
3. Perform pre-job logging plan review with SLB in ROMA or MOOMBA to ensure correct equipment is mobilised to site for upcoming operations.
4. Initiate a customer rig book in aiding efficient hand-over between engineers in charge and being consistent to client requirements.
5. Request RITE maintenance history for the specific Schlumberger equipment being mobilised to site.

HEADING INFORMATION & RUN SUMMARY

Well	Triclops-1	Rig	Ensign 918		Mud Type	KCL PHB POLYMER	
Block	ATP 539	RKB	NA	m	Mud Weight	9.10	ppg
Type	Exploration	RT Elevation	5.20	m above GL	Mud Viscosity	11	s
Operator	Drillsearch	Ground Level	141.00	m above MSL	Fluid Loss	9	cc
EWL Contractor	Schlumberger	Bit Size	8.50	in	PH	9.0	
Area	Queensland	TD Driller	1926.50	m	Corr Solids	4.0	%vol
Latitude	25degs 59' 43.42988" S	TD Logger	1926.50	m	Oil/Water Ratio	NA	
Longitude	141degs 14' 40.38024 " E	CSG Shoe Driller	762.70	m	Cl^- (whole mud)	33,500	mg/L
Drilling Supervisor	Guy Holmes	CSG Shoe Logger	762.50	m	Rmf @ temp	0.1649	34.7 °C
Logging Engineer	Astrid Mon Panieda/Jamie Fisher	Circ Stopped at TD	28-Jan-13 23:40	dd/mm/yy hh:mm	Rm @ temp	0.197	34.2 °C
Logging Witness	Rothi Hamzah/Andrew James	Circulation time	70	mins	Rmc @ temp	0.204	33.7 °C
Job start date	29-Jan-13	Max Dev @ depth	3.43	at 1216.8 m			

SERVICES	RIG UP dd/mm hh:mm	RIG DOWN dd/mm hh:mm	TOTAL TIME	LOST TIME (Due to Contractor)	LOST TIME (3rd party NPT)	TOP LOGGED INTERVAL (m)	BOTTOM LOGGED INTERVAL (m)
Run 1 : ERCD/EDTC/SP/HNGS/PEX/HRLA/ADT	29/01 10:15	29/01 20:30	10:15	00:00	00:00	725.0	1926.5
Run 2: ERCD/EDTC/PPC/MAST/GPIT	29/01 20:30	30/01 04:10	7:40	00:00	00:00	0.0	1926.5
TOTAL TIME FOR THE LOGGING JOB			17:55	0:00	0:00		
OPERATING EFFICIENCY (1-LT/OT)x 100			100.00%				

SCHLUMBERGER SERVICE QUALITY

The Schlumberger logging crew on the Ensign 918 performed well during the logging operation and showed good commitment. Unfortunately due to failures on setting the satellite communication, real time data streaming could not be done. All crew worked safely and no HS&E occurred throughout the logging operations. It could have been better if Schlumberger crew had brought backup tool for 100% coverage. One of the tool failed downhole and the crew had no choice but to log without it. The truck should be equipped with all the required test harness, in order to check the tool properly on surface and trouble shoot any existing problems. The level of experiences of the operators and specialist were good. The level of experiences of the logging engineers were satisfactory. The total operating efficiency was good with the jobs running flawlessly without any operational problems. Good quality geological and petro-physical data was recorded. The equipment failures need to be investigated and reports on error-cause-removal submitted.

EQUIPMENT QA/QC

Well	**Triclops-1**	**TD Driller**	**1926.50**	**m**	**CSG Shoe Driller**	**762.70**	**m**
Block	**ATP 539**	**TD Logger**	**1926.50**	**m**	**CSG Shoe Logger**	**762.50**	**m**
EWL Contractor	**Schlumberger**	**Bit Size**	**8.50**	**in**	**Circ Stopped at TD**	**28-Jan-13 23:40**	**dd/mm/yy hh:mm**
Job date	**29-Jan-13**	**Max Dev @ depth**	**3.43**	**at 1216.8 m**	**Circulation time**	**70**	**min**
Logging Engineer	**Astrid Mon Panieda/Jamie Fisher**	**Mud Type**	**KCL PHB POLYMER**		**Rmf @ temp**	**0.1649**	**34.7 °C**
Logging Witness	**Rothi Hamzah/Andrew James**	**Mud Weight**	**9.10**	**ppg**	**Rm @ temp**	**0.197**	**34.2 °C**
Report Date	**31-Jan-13**	**Suite**	**1**		**Rmc @ temp**	**0.204**	**33.7 °C**

Equipment QC

Logging Run	Tool Type	Description	Primary Equipment Asset Number	CALIBRATED	Backup Equipment Asset Number	CALIBRATED	COMMENTS
Run 1: ECRD/EDTC/SP/ HNGS/PEX/HRLA/ADT	LEH-QT	Cable head	9004	NA			
	ECRD	Electrical release cable head	-	NA			8k weak point
	SPA-A	Spontaneous Potential	9999	NA			
	AH-369	Mass Isolation sub	752	NA			
	EDTC-BB	Down hole telemetry	8378	28 January 2013			
	EDTH-B	Down hole telemetry	8379	28 January, 2013			
	HEH-K	Spectral GR HNGS housing	19	NA			
	HNGS-BA	Spectral GR Sonde	19	11 January 2013			
	HNGH-AA	Spectral GR housing	47	NA			
	HNGC-AA	Spectral GR cartridge	221	NA			
	HNGH-AA	Neutron and Gamma Ray	2954	27 November 2012			
	HNGS-BA	Neutron and Gamma Ray	3852	28 January, 2013			
	HRCC-H	Density Housing	4854	NA			
	HRMS-H	Density Sonde	4973	NA			
	HRGD-H	Density Pad	4967	10 January 2013			
	AH-184	Mass Isolation sub	5955	NA			
	HRUC-B	Laterolog Upper cartridge	939	NA			
	HRUH-B	Laterolog Upper housing	933	NA			
	HRLS-B	Laterolog Sonde	928	29 January, 2013			
	HRLC-B	Laterolog Lower cartridge	920	NA			
	HRLH-B	Laterolog Lower housing	915	NA			
	AH-270	Mass Isolation sub	845	NA			
	HECH-KDB	ADT	772	NA			
	ADC-C	ADT	759	29 January, 2013			
	ADS-C	ADT	761	NA			
	ADP-C	ADT	761	NA			
Run 2: ECRD/EDTC/PPC/MAST/GPIT	LEH-QT	Cable head	9004				8k weak point
	ECRD	Electrical release cable head	-				
	EDTC-BB	Down hole telemetry	8378	29 January 2013			
	EDTH-B	Down hole telemetry	8379	29 January, 2013			
	PPC	4-arm Caliper	8291	29 January, 2013			
	ECH-SF	Sonic Scanner	6733	NA			
	MAPC-BA	Sonic Scanner	8265	NA			
	MAMS-BA	Sonic Scanner	8262	NA			
	MASS-BA	Sonic Scanner	8218	NA			
	MAXS-BA	Sonic Scanner	8221	NA			
	GPIH-B	GPIT	2816	28 January 2013			
	DHRU-F	GPIT	1823	NA			
	GPIC-H	GPIT	1823	NA			
Surface	MSLC	Wireline logging truck	3144	NA			
	IDW	Depth measuring device	978	26/10/2012			
	7-46ZVXS	Wireline	75134	NA			

EQUIPMENT PREPARATION REMARKS

1. Only one (1) set of complete string mobilized to the wellsite

2. Only standalone system was inside the logging truck. No backup system available inside the truck or mobilized for this job.

3. The logging operations were based on DRY CASE programme. The seismic checkshot planned for third run has been cancelled due to unavailability of the vibrator unit.

4. All pre-log verifications performed during pre-job check at surface and before rig-up. Resistivity tools were checked without test harness.

5. Unable to set up satellite communication system due to poor signal.

6. All tool stand-offs calipered manually and the tool diagram handed to the company representative before rig-up.

7. The HNGS tools were cooled with CO2 before rig-up as per Schlumberger SOP.

8. MAST cross operation was tested on surface but dipole waveforms and monopole waveforms were not tested because special shuck or half-trough was not mobilized.

9. All PPC level was checked during surface test. Level 2 will be used for logging with MAST (Sonic Scanner)

10. MDT and MSCT were not tested on surface.

EQUIPMENT QA/QC

Well	**Triclops-1**	**TD Driller**	**1926.50**	**m**	**CSG Shoe Driller**	**762.70**	**m**
Block	**ATP 539**	**TD Logger**	**1926.50**	**m**	**CSG Shoe Logger**	**762.50**	**m**
EWL Contractor	**Schlumberger**	**Bit Size**	**8.50**	**in**	**Circ Stopped at TD**	**28-Jan-13 23:40**	**dd/mm/yy hh:mm**
Job date	**29-Jan-13**	**Max Dev @ depth**	**3.43**	**at 1216.8 m**	**Circulation time**	**70**	**min**
Logging Engineer	**Astrid Mon Panieda/Jamie Fisher**	**Mud Type**	**KCL PHB POLYMER**		**Rmf @ temp**	**0.1649**	**34.7 °C**
Logging Witness	**Rothi Hamzah/Andrew James**	**Mud Weight**	**9.10**	**ppg**	**Rm @ temp**	**0.197**	**34.2 °C**
Report Date	**31-Jan-13**	**Suite**	**1**		**Rmc @ temp**	**0.204**	**33.7 °C**

Equipment QC

Logging Run	Tool Type	Description	Primary Equipment Asset Number	CALIBRATED	Backup Equipment Asset Number	CALIBRATED	COMMENTS
Run 3: MDT	LEH-QT	Cable head	9004				
	ECRD	Electrical release cable head	-				
	EDTC-BB	Down hole telemetry	8611				
	EDTH-B	Down hole telemetry	8600				
	MRPC	MDT power cartridge	1083				
	MRCH	MDT power cartridge housing	1083				
	MRMS	6 Tank sample carrier	75				
	MPSR	450cc Sample chamber					
	MPSR	450cc Sample chamber					
	MPSR	450cc Sample chamber					
	MPSR	450cc Sample chamber					
	MPSR	450cc Sample chamber					
	MPSR	450cc Sample chamber					
	MRSC	Sample chamber - large volume					
	MRSC	Sample chamber - large volume					
	MRPO	MDT Pump	734				
	MRSC	Sample chamber - large volume	612				
	MRFA	MDT Fluid analyser	8263				
	MRPO	MDT Pump	734				
	MRHY	MDT hydraulics	751				
	MRPQ	MDT probe section	3290				
	MRPP	MDT Power panel					
	MRTM	MDT communications panel					
Run 4: MSCT	LEH-QT	Cable head	9004				
	SGH-K	Gamma Ray	3322				
	MCCM	Rotary coring tool	239				
	MCEC-AA	Rotary coring tool	240				
	MDMU-AA	Rotary coring tool	8090				
	MCRCM	Rotary coring tool	691				
	MCPP	Power panel	239				

EQUIPMENT PREPARATION REMARKS

1. DRY CASE operations- run 3 and run 4 were cancelled

2. Tools for these runs were not checked.

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PRE-JOB QA/QC CHECKS

Drillsearch

Well	**Triclops-1**	**TD Driller**	**1926.50**	**m**	**CSG Shoe Driller**	**762.70**	**m**
Block	**ATP 539**	**TD Logger**	**1926.50**	**m**	**CSG Shoe Logger**	**762.50**	**m**
EWL Contractor	**Schlumberger**	**Bit Size**	**8.50**	**in**	**Circ Stopped at TD**	**28-Jan-13 23:40**	**dd/mm/yy hh:mm**
Job date	**29-Jan-13**	**Max Dev @ depth**	**3.43**	**at 1216.8 m**	**Circulation time**	**70**	**min**
Logging Engineer	**Astrid Mon Panieda/Jamie Fisher**	**Mud Type**	**KCL PHB POLYMER**		**Rmf @ temp**	**0.1649**	**34.7 °C**
Logging Witness	**Rothi Hamzah/Andrew James**	**Mud Weight**	**9.10**	**ppg**	**Rm @ temp**	**0.197**	**34.2 °C**
Report Date	**31-Jan-13**	**Suite**	**1**		**Rmc @ temp**	**0.204**	**33.7 °C**

Pre-Job QA/QC Checks		STATUS	COMMENTS
SURFACE EQUIPMENT	WIRELINE CONTINUITY AND INSOLATION	Good	Checked at the base and was recorded on the cable sheet
	CABLEHEAD CONTINUITY AND INSOLATION	NA	inside the truck
	WIRELINE LENGTH SUFFICIENT FOR LOGGING JOB	NA	Primary 75134 = 3900m;
	WIRELINE TORTURE TEST	NA	Not checked, readily installed with ERCD and ready to go
	DEPTH ENCODER SURFACE CHECK	NA	IDW # 1933 Calibration date 26-Oct-2012.
	MULTI METER AND MEGGER IN GOOD WORKING ORDER	28/1/2013	
	GEIGER COUNTER IN GOOD WORKING ORDER	28 January, 2013	Calibration due date July 2013.
	RA SOURCE INSTALLATION TOOL IN GOOD WORKING ORDER	NA	
	SOURCE CATCHER IN GOOD WORKING ORDER	11/1/2013	Using makeup plate - Dual purposes
	LIFTING CAPS IN GOOD CONDITION AND CERTIFIED	NA	Certified in in date
	TOOL STAND-OFFS CALIPERED FOR ACCURATE OD AND DIAGRAMS WITH CO-MAN	NA	Physically measured OK
	EQUIPMENT FUNCTIONALLITY CHECK ON PRIMARY AND BACK-UP SYSTEM	27/11/2012	No BACK up tool supplied
	COPY OF MASTER CALIBRATION ON PRIMARY AND BACK-UP SYSTEM	28 January, 2013	Verified during logging
	RIG-UP EQUIPMENT CERTIFICATION	NA	
	CABLE CUTTER AVAILABILITY	NA	Not checked
	WEAK POINT SELECTION	10/1/2013	8k weak point in ECRD.
CALIBRATIONS	SHOP CALIBRATION	NA	
	BEFORE LOG SURVEY	NA	
	AFTER LOG SURVEY	NA	
	CALIBRATION EQUIPMENT CONDITION	29 January, 2013	
SAFETY	PRE-JOB SAFETY MEETING HELD ADEQUATE FOR THE OPERATION	NA	
	CORRECT PPE WORN AT ALL TIMES	NA	
	RA SOURCE HANDLING PROCEDURES CORRECTLY EXECUTED	NA	
	BEFORE AND AFTER LOG SURVEYS COMPLETED	NA	
	RA AND EXPLOSIVE BUNKERS STORED IN A SAFE AREA CORRECTLY BARRIERED OFF	29 January, 2013	Stored behind logging truck for transport. NO Bunker
	LIFTING PLAN IN PLACE FOR EQUIPMENT TRANSFER TO AND FROM CATWALK	NA	Picked up sources using wireline
	GROUND CABLES FOR EXPLOSIVE OPERATIONS IN GOOD CONDITION	NA	
	SAFETY SWITCH OPERATIONAL	NA	
	GENERAL SAFETY PROCEDURES FOLLOWED AT ALL TIMES	29 January, 2013	
FISHING	FISHING BOX INVENTORY UPDATED AND COMPLETE	29 January, 2013	Not checked-Short on time-Crew arrived late
	FISHING EQUIPMENT CERTIFIED AND IN GOOD CONDITION	29 January, 2013	
	COPY OF FISHING OPERATING PROCEDURES IN THE FISHING BOX	NA	
	FISHING HAND TOOLS IN GOOD OPERATING CONDITION	NA	
	TWO UNUSED CABLE HEAD GRAPPLES AVAILABLE	NA	
	CABLE CLAMP IN GOOD CONDITION	NA	
TLC KIT	MALE WET CONNECT CHECKED FOR CONTINUITY AND INSOLATION	NA	
	FEMALE WET CONNECT CHECKED FOR CONTINUITY AND INSOLATION	28/1/2013	
	SIDE ENTRY SUB AVAILABLE AND CERTIFIED	NA	
	ALL RELEVANT CROSS-OVERS AVAILABLE AND CERTIFIED	NA	
	WET CONNECTS FUNCTION TESTED FOR LATCHING AND SYSTEM COMMUNICATION	NA	
	CABLE GUARD AVAILABLE	NA	
	TLC HAND TOOL IN GOOD CONDITION	NA	
	COPY OF TLC PROCEDURES AVAILABLE IN UNIT	NA	
UNIT	SYSTEM AND BACK-UP OPERATING CORRECTLY	NA	No back-up. Stand alone system
	WINCH IN OPERATIONAL CONDITION	Good	Need to remedy- brake catching the drum flange when drum moving downward.
	BACK-UP WIRELINE AVAILABLE ON LOCATION AND IN GOOD CONDITION	NA	
	ALL FLUID LEVELS CHECKED AND SATISFACTORY	Good	
	AC'S OPERATIONAL	Good	Not enough, only one unit available
	LIGHTS ADQUATE	Good	
	POWER PACK AND GENERATOR OPERATIONAL	Good	
	UNIT CHECK SHEET COMPLETED BEFORE EVERY JOB	Not Done	Late arrival to location
WORKSHOP	RE-HEAD SPARE PARTS AVAILABLE	Good	
	BACK-OFF EQUIPMENT CHECKED, LABLED AND STORED READY STATE	NA	
	MECHANICAL SETTING TOOL OPERATIONAL, REDRESS KITS AVAILABLE	NA	
	BOP AVAILABLE, SERVICED AND IN READY STATE	NA	
	SQUEEZE GUNS AVAILABLE	NA	
	SPARE CABLE HEAD BUILD, CHECKED AND READY	NA	
	AC'S OPERATIONAL	NA	
	LIGHTS ADEQUATE	NA	
	GR/CCL TOOLS AVAILABLE FOR VARIOUS OPERTIONS AND HOLE ID's	NA	
	HAND TOOLS ADEQUATE	NA	

PRE-JOB QA/QC R E M A R K S

1. The Schlumberger crew arrived on site about 16hrs from rig up time. Only the first two (2) confirmed runs were surface checked.

2. All down-hole equipment was checked on site as per the Equipment QC sheet

3. All rig-up equipment was checked on site

4. Satellite communication was attempted but failed due to poor 'signal' in this remote location.

5. RA survey was done prior to moving the sources to assigned secured location.

6. Cablehead was already made up, hence cable test only limited to insulation and continuity test.

SEQUENCE OF EVENTS RUN 1

Well	Triclops-1	TD Driller	1926.50	m	CSG Shoe Driller	762.70	m
Block	ATP 539	TD Logger	1926.50	m	CSG Shoe Logger	762.50	m
EWL Contractor	Schlumberger	Bit Size	8.50	in	Circ Stopped at TD	28-Jan-13 23:40	dd/mm/yy hh:mm
Job date	29-Jan-13	Max Dev @ depth	3.43	at 1216.8 m	Circulation time	70	min
Logging Engineer	Astrid Mon Panieda/Jamie Fisher	Mud Type	KCL PHB POLYMER		Rmf @ temp	0.165	34.7 °C
Logging Witness	Rothi Hamzah/Andrew James	Mud Weight	9.1	ppg	Rm @ temp	0.197	34.2 °C
Report Date	31-Jan-13	Logging Suite	1		Rmc @ temp	0.204	33.7 °C

Start	End	Hrs	Code	Operation and Comments
dd/mm hh:mm	dd/mm hh:mm	(hh:mm)		***Run 1: ERCD/EDTC/SP/HNGS/PEX/HRLA/ADT***
29/01 10:15	29/01 10:30	0:15	1	Conducted pre-job safety meeting on drill floor
29/01 10:30	29/01 11:40	1:10	1	Rig up wireline equipment and made up Run 1 tool string
29/01 11:40	29/01 12:05	0:25	2	Performed surface Ops checks; Loaded thermometers into cable head
29/01 12:05	29/01 12:25	0:20	2	Installed R/A sources to PEX tool
29/01 12:25	29/01 12:30	0:05	2	Zero tool string at head = 26.05m. Checked head tension at surface = 1435 lb. Surface 1400 lb.
29/01 12:30	29/01 12:40	0:10	3	RIH to 150m to perform depth control for first run
29/01 12:40	29/01 13:25	0:45	3	Continue run in hole to casing shoe @ 762.7 m and performed calipers verification, HRLA and MCFL calibration
29/01 13:25	29/01 14:30	1:05	4	Recorded log file 'log down CS' at 3600ft/hr from 726.0 m to 1870m with SP/HNGS/PEX/HRLA. Stopped at 1760m to do another depth control and continue run in hole to 1870m. Tension up at 3670lbs and HTEN at 1820 lbs.
29/01 14:30	29/01 14:45	0:15	3	Picked up tool to 1665 m for repeat pass. Opened PEX and ADT calipers when approaching close to repeat depth.
29/01 14:45	29/01 15:05	0:20	4	Recorded repeat pass file 'REPEAT Pass' @ 1800ft/hr from 1655 to 1555m (Top of Birkhead and Adori formations). Depth shifted +0.5 m to tie into down pass in the interval 1655 m - 1555 m. Experienced overpull of 1,500lbs due to washout hole.
29/01 15:05	29/01 15:20	0:15	3	Run in hole back to TD and slack cable around 2 m.
29/01 15:20	29/01 17:50	2:30	4	Recorded main pass from TD to 50m above 9 5/8" casing shoe at 1800ft/he in Hi-Resolution (4spf). Experienced tight spot at 1607m and pulling 1600lbs overpull. Data over this depth can be bad due to this stick and pull problems.
29/01 17:50	29/01 18:20	0:30	3	POOH and stopped at 100m for safety with radiation sources.
29/01 18:20	29/01 19:00	0:40	6	Standby at 100m to process data for transfer to town- ADT data priority to be processed to decide next runs
29/01 19:00	29/01 19:30	0:30	3	Pull out of hole, on surface and remove R/A sources.
29/01 19:30	29/01 20:30	1:00	1	At surface and rig down Run 1 tool string
Total hours:		**10.25**	(decimal)	

Logging Codes:

1. Rigging up, rigging down	4. Logging up, logging down	7. NPT due to wireline
2. Calibrations, tool checks	5. Repeat Section, depth correlation	8. Drilling / wellbore co
3. Running in, pulling out of hole	6. Data transmission, CPU time.	

REMARKS

1. Run 1 was the first run in the hole and will serve as the primary depth reference. A depth shift of +0.12m was applied to get the first repeat pass on depth with downlog. A further +0.36m adjustment required by the main pass to put on depth with down log.

2. All wireline depth was measured from RT - 5.2 m above GL.

3. Run 1 was deployed on wireline. All passes were done in high resolution (2")

4. PEX/ADT data was adversely affected by borehole conditions in sections resulting in stick and pull during Run 1. Severe stick and pull between 1605 and 1607m due to washout borehole. Maximum over pull applied was 1600lbs. Pads closed and opened to free the tool. A repeat log was completed over this interval when the stick and pull observed were improving.

5. TLD PEX was recorded in Limestone matrix and real time borehole corrections were applied.

6. The SP data was recorded for all passes. No noisy SP experienced during logging.

7. The LDT calliper read 8.6" and ADT caliper read 8.3" inside casing. True casing ID = 8.914". Caliper data was corrected to true casing ID before recording repeat and main pass.

8. The HRLA run stood off at high resolution. 2 rubber standoffs were positioned below and above the sonde.

9. The top tool string was run, decentralised using decentralizer on the Neutron Housing. The tool below PEX ran with a knuckle joint to position HRLT about 2" from the borehole wall. Another knuckle joint below the HRLA was used to make the ADT decentralized again.

10. Total hole volume = 48.31 m^3 computed from 1926.5 m - 730 m using data from HRMS (CALI)-arm calliper.

11. Total cement volume = 30.42 m^3 computed from 1926 m - 730 m using data from HRMS (CALI)-arm calliper for 5.5" casing to set.

12. The borehole temperature from the maximum reading themometers were 129 degC, 130 degC and 129 degC at 1920.0 m, 15 hrs 40 mins after bottom hole circulation at TD.

OBSERVATIONS AND LOG QUALITY CONTROL

1. DEPTH CONTROL:	**Run1 will serve as the main depth reference file. Downlog was used as the reference after doing measurement on surface and close to TD.**
2. EDTC:	**Good repeatable data recorded.**
3. HNGS:	**The spectra data real-time QC flags were all good. No anomalies seen on the log**
4. PEX:	**Density and Neutron data affected by the borehole washout and rugosity. Stick and pull over these zones also affected the data. Over the gauge hole, data was repeated well. MCFL -for rxo data failed to read correctly**
5. SP:	**Good data recorded - SP data recorded for all passes.**
6. HRLA:	**Good repeatable data recorded. FMI image data affected in wash-outs and slight amount of stick/slip.**
7. ADT:	**Tool requires good pad contact to work well. Output curves/data were not QC while logging due to requiring further processing by DCS(Schlumberger). The QC flags were found to be good while logging.**

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SEQUENCE OF EVENTS RUN 2

Drillsearch

Well	**Triclops-1**	**TD Driller**	**1926.50**	**m**	**CSG Shoe Driller**	**762.70**	**m**
Block	**ATP 539**	**TD Logger**	**1926.50**	**m**	**CSG Shoe Logger**	**762.50**	**m**
EWL Contractor	**Schlumberger**	**Bit Size**	**8.50**	**in**	**Circ Stopped at TD**	**28-Jan-13 23:40**	**dd/mm/yy hh:mm**
Job date	**29-Jan-13**	**Max Dev @ depth**	**3.43**	**at 1216.8 m**	**Circulation time**	**70**	**min**
Logging Engineer	**Astrid Mon Panieda/Jamie Fisher**	**Mud Type**	**KCL PHB POLYMER**		**Rmf @ temp**	**0.165**	**34.7 °C**
Logging Witness	**Rothi Hamzah/Andrew James**	**Mud Weight**	**9.1**	**ppg**	**Rm @ temp**	**0.197**	**34.2 °C**
Report Date	**31-Jan-13**	**Logging Suite**	**1**		**Rmc @ temp**	**0.204**	**33.7 °C**

Start	End	Hrs	Code	Operation and Comments
dd/mm hh:mm	dd/mm hh:mm	(hh:mm)		***Run 2 - ERCD/EDTC/PPC/MAST/GPIT***
29/01 20:30	29/01 21:30	1:00	1	Rig-up Run 2 tool string
29/01 21:30	29/01 21:40	0:10	1	Installed thermometers in cable head.
29/01 21:40	29/01 22:10	0:30	2	Performed tool string ops check at surface. Calibrated EDTC(GR). Zero tool string at 19.13m.
29/01 22:10	29/01 22:30	0:20	3	RIH to 9 5/8" casing shoe.
29/01 22:30	29/01 23:20	0:50	4	Recorded downlog in BHC mode from casing shoe to 1870.0 m at 6,000 ft/hr
29/01 23:20	29/01 23:40	0:20	3	Pulled up to 1655m for Repeat pass over birkheads and Adori formations
29/01 23:40	29/01 23:55	0:15	4	Recorded repeat pass with Sonic Scanner set for Standard Mode (Fullwave monopole/Inline and X-dipole)
29/01 23:55	30/01 00:10	0:15	3	RIH back to TD for Main pass and slack 2 m.
30/01 00:10	30/01 03:15	3:05	5	Recorded Main pass from TD to surface.
30/01 03:15	30/01 04:00	0:45	1	Verified EDTC(GR) and rig down run 2
30/01 04:00	30/01 04:10	0:10	1	Completed rig down Schlumberger.
Total hours:		**7.67**	(decimal)	

Logging Codes:

1. Rigging up, rigging down
2. Calibrations, tool checks
3. Running in, pulling out of hole
4. Logging up, logging down
5. Repeat Section, depth correlation
6. Data transmission, CPU time.
7. NPT due to wireline
8. Drilling / wellbore co

REMARKS

1. Run 2 was tied into Run 1 depth at 1655 m. Run 1 is the main depth reference file.

2. The GPIT real time QC flag indicated good data. All the reading seen during logging were within the tolerances of this location.
3. Sonic scanner (MAST) was logged in Standard mode to acquire inline dipole, cross dipole and monopole data sets. The DT compressional was compared with the offset well and the reading were all within ranges. The DTS from the inline dipole were also reading good with a very tight coherence confidences.

4. Cross dipole data were not QC during logging but the raw waveforms look fine. More processing required to be done by geoscience centre.

5. PPC caliper showed all the breakouts over the washout zone were one sided-at minimum stress.

6. All tool ran centralized using 4 slipover centralizers and standoff on the MAST isolator section.

7. Sonic scanner and GR were logged to surface. Sonic scanner was logged using the same standard mode.

8. The borehole temperature from the maximum reading themometers were 131 degC, 131 degC and 130 degC at 1905.0 m, 24 hrs 30mins after bottom hole circulation at TD.

OBSERVATIONS AND LOG QUALITY CONTROL

1. DEPTH CONTROL:	**Log correlated to Run 1 - ECRD/EDTC/SP/HNGS/PEX/HRLA/ADT**
2. EDTC:	**Good repeatable data recorded.**
3. PPC:	**Caliper from PPC showed same washout as seen from the PEX-TLD caliper. Interesting part was the washout only happened to one of the orthogonal calipers. This indicated breakout only on the low stress side of the formation.**
4. MAST:	**The compressional arrival read almost the same as the offset well used for Triclops-1. The inline dipole, cross dipole and monopole worked well as seen on the display screen.**

Operating Efficiency Chart

Drillsearch Energy Limited

Triclops-1

Runs 1 - 2

SUMMARY AND RECOMMENDATIONS

Well	Triclops-1	TD Driller	1926.50	m	CSG Shoe Driller	762.70	m
Block	ATP 539	TD Logger	1926.50	m	CSG Shoe Logger	762.50	m
EWL Contractor	Schlumberger	Bit Size	8.50	in	Circ Stopped at TD	28-Jan-13 23:40	dd/mm/yy hh:mm
Job date	29-Jan-13	Max Dev @ depth	3.43	at 1216.8 m	Circulation time	70	min
Logging Engineer	Astrid Mon Panieda/Jamie Fisher	Mud Type	KCL PHB POLYMER		Rmf @ temp	0.165	34.7 °C
Logging Witness	Rothi Hamzah/Andrew James	Mud Weight	9.1	ppg	Rm @ temp	0.197	34.2 °C
Report Date	31-Jan-13	Run	1		Rmc @ temp	0.204	33.7 °C

RUN	SERVICES	RIG UP dd/mm hh:mm	RIG DOWN dd/mm hh:mm	TOTAL TIME	LOST TIME (due to Contractor)	LOST TIME (3rd Party NPT)	BHT °C	TEMP DEPTH m TVDBRT
Run 1 : ERCD/EDTC/SP/HNGS/PEX/HRLA/ADT		29/01 10:15	29/01 20:30	10:15	00:00	00:00	130.0	1926.5
Run 2: ERCD/EDTC/PPC/MAST/GPIT		29/01 20:30	30/01 04:10	07:40	00:00	00:00	131.0	1926.5
TOTAL TIME FOR WIRELINE OPERATIONS				17:55	0:00	00:00		
OPERATING EFFICIENCY (1-LT/OT)x 100				100.00%				

SUMMARY

Triclops-1: The extensive 5 runs logging operation was cut down to only 2 runs when the well status changed to DRY CASE. The logging crew arrived quite late but still in time to check the tools. The first run EDTC/SP/HNGS/PEX/HRLT/ADT ran without any big problem. The MCFL pad section of HRMS tool, which was located within the HDRS (Density)pad, wasn't working but all the density data was good. With the MCFL buttons failing, the log run failed to provide the best RXO data available. The ADT and HRLT tool could also produce RXO curve using inversion process but not as good as from the MCFL buttons. Although no backup tool was mobilized, logging was continued. The repeat pass was done first over pre-selected interval between 1655 to 1555 m (with all sensors). This interval was chosen because it covered the top of Birkhead Sandstone and all Adori Sandstone interval. Massive washout due to formation broke out over this repeated interval. ADT, density and neutron data were badly affected. A couple of stick and pulls were also experienced during recording. The maximum overpull applied to get free was around 1600lbs. The main pass was done from TD to 50m above 9 5/8 casing shoe. No additional tools problem occurred except the same stick and pull over the same zone as seen during repeat pass. On surface, all the auxiliary items were still intact on the tool body and radioactive source were retrieved safely. Run 2: EDTC/PPC/MAST/GPIT - Sonic array was ran in a full waveform mode which consisted of monopole, inline dipole and cross dipole. The GPIT was in the string, for the cross dipole process to provide the azimuthal direction of the anisotropy. The PPC was used for tool centralization and to provide an orthogonal caliper reading. The downlog was recorded from casing shoe to 1870m in compressional mode (BHC) only at 6000 ft/hr. The repeat pass was also recorded over the same interval as run 1. The main pass was done from TD to surface. The PPC data showed the same washout severity as density run but only in one direction of the PPC orthogonal caliper. This highlighted the possibility of running dual density or short-axis arrangement over the same formations on the next well. Tool reached surface without any problem and rigged down safely.

HIGHLIGHTS INCLUDED

1. Good commitment shown by the logging crew during the entire operation.
2. Good quality geological and petrophysical data recorded.
3. Good collaboration between Schlumberger office based personnel and the field to process the ADT log.
4. No HS&E issues during the entire operation.

LOWLIGHTS INCLUDED

1. The data playback to apply depth shift with Maxwell was extremely slow, delaying the final data delivery. This happened involving ADT data on the first run.
2. Standalone system with no backup wasn't desirable for a job that is far away from any wireline base. At the very least, the main CPU where the system program reside should have backup.
3. Only one (1) set of tools was mobilized to location. We weren't that lucky on this job because MCFL data failed to work.
4. Crew refused to even consider to check MDT because it is not common practise and tools are heavy and they would need special crane to lift the tool properly for connections. Schlumberger should be flexible enough to come up with ways to use the rig fork lift and couple of good slings or fixtures for this.
5. The truck did not have a special test box to check HRLT and MCFL during wellsite surface checkout. Theses boxes are very important to the success of client formation evaluations. Reasoning with not having enough boxes to supply each truck was not acceptable.
6. The small truck layout was not a problem, but without a specific display monitor for client to view the real time log was bad. Having to share the same monitor with engineer process screen was a nightmare.
7. Logging engineers were not interested in reading the log time and QC it. They were lucky because most of the tools were automatically setup by the system without much engineers' interventions.
8. Intercom between logging truck and rig floor was not available. The rig up and rig down operations only relied on hand signals. Several times during rig up, the winchman assumed the next steps prior to the operators on the rig floor giving the signal. This wasn't safe at all.
9. Printer inside the logging truck wasn't setup for logging.
10. Crew left immediately after logging ended. Engineer should check with geologist or client representative to verify all logs and data have been QC and complete.

RECOMMENDATIONS

1. A short axis contingency run for PEX and ADT should be planned during equipment preparation at the base. It is also wise to plan PPC run on the first run in the event of irregular formation breakouts are suspected.
2. Cable head maintenance records and cable book need to be kept inside the logging truck at all times.
3. Provide a second display screen for client to view and QC logs real time
4. Ability to switch-off certain tools during recording can be an advantage to increase logging speed if required.
5. Logging engineers should use all the best practise available during logging e.g. checking casing DT (57us/ft.)- sonic verification downhole.
6. Logging engineers should provide preliminary field final plots and data to be QC. The final field plot will then be generated and provided to client before leaving the wellsite. NO log QC performed for this well because this is quite common practise as crew departed the location before providing the final log. This practise should be stopped.
7. ALARA should be followed closely during any type of radioactive usages at the wellsite. Ensure new operators trained to handle radioactive.
8. Follow logging orders provided at the wellsite closely. A lot of details on how to manage the logging operation and data delivery are provided.

BEST PRACTICES

Ensure all runs are checked on primary and back-up surface system and that all calibrations are available on both systems.
Assign dedicated crew chiefs to assist engineers during rig-up and rig-down operations, thus eliminating extended working hours.
All field logs to be QC'ed by afriQA witness before final field copies are distributed.
Unspliced and marked wirelines needs to be assigned for all exploration projects.
Make use of dedicated field crews as much as practically possible to drive continuous improvement.

Appendix 11 – Petrophysical Report

Provided electronically on CD

Appendix 12 – MudLogging Data *(Geoservices)*

Provided electronically on CD

DATA PROCESSING REPORT

Triclops 1 Well Completion Report:

Appendix 8 – Geologists's Composite Log
Appendix 10 – Wireline Report Logs
Appendix 11 – Petrophysical Report Data
Appendix 12 – Mudlogging Data

DUE TO ITS LARGE FILE SIZE

DATA CAN BE OBTAINED FROM

QDEX Scanning Manager
Department of Natural Resources and Mines (DNRM)
Geological Survey of Queensland
Exploration Data Centre
68 Pineapple St.
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Queensland Australia
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