

# Fluids Recap

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## **Nexus Energy**

**Culverin-1**

**VIC/P-56**

**Vertical Exploration**

**Gippsland Basin**



**Prepared by:**

**Steve Jones**



**M-I L.L.C.**  
**ONE-TRAX**  
**DRILLING FLUID DATA MANAGEMENT SYSTEM**

**Operator:** Nexus Energy  
**Well Name:** Culverin-1  
**Field/Area:** VIC/P-56  
**Description:** Vertical Exploration  
**Location:** Gippsland Basin  
**Warehouse:** Melbourne  
**Contractor:** Diamond Offshore

**Spud Date:** 16/12/2005  
**TD Date:** 06/01/2006  
**Location Code:** 7001  
**Project Engineer:** Steve Jones  
**Sales Engineer:** Melendez/Singh  
**Sales Engineer:** Sharpe/Leong  
**M-I Well No.** 31415

Comments:

Type	Size in	Depth m	TVD m	Hole in	Max MW lb/gal	Fluid 1	Fluid2	Drilling Problem	Days	Cost A\$
Casing	30	650	650	36	8.8	Spud Mud		None	3	7964.33
Casing	13.375	1511	1511	17.5	8.7	Spud Mud	Spud Mud	None	5	16365.54
Open Hole	.	3758	3754	12.25	10.3	GLYDRIL	GLYDRIL	None	25	270525.37

Total Depth: 3758 m

TVD: 3754 m

Water Depth: 585 m

Drilling Days: 31

Total Cost:

294,855.24

**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**CONTENTS:**

- **DISCUSSION BY INTERVAL**
- **DAILY DISCUSSION REPORT**
- **COST BY INTERVAL**
- **DAILY VOLUME SUMMARY SHEET**
- **TOTAL MATERIAL COST**
- **DRILLING FLUIDS SUMMARY**
- **PRODUCT CONSUMPTION**
- **DAILY MUD REPORTS**

**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**DISCUSSION  
BY  
INTERVAL**

## **DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1**

### **INTRODUCTION**

Nexus Energy was the operator of vertical exploration well Culverin-1 drilled in Vic/P56, Bass Strait, Australia using the Diamond Offshore semi-submersible rig, Ocean Patriot. The rig was moved to location on 6 November 2005 after finishing Apache's Furseal-1. Culverin-1 was spudded on 16 December 2005 at 15:00 hrs. The water depth was 585m and air gap of 21.5m.

The 36" hole was drilled to the interval TD, 650 metres RKB using seawater with PHG sweeps to ensure good hole cleaning. At the interval TD, the hole was filled with PHG, (2 times the actual hole volume was pumped) before POOH to run the 30" casing.

The 17½" section was drilled to 1525m using seawater and PHG/Guar Gum sweeps. The 13⅜" casing was set at 1511m and BOP stack was lowered. The 12¼" bit was run in hole and cement top was tagged at 1478 m. The cement and shoe track/plugs were drilled using seawater and PHG sweeps. The well was displaced with 3% KCl/NaCl polymer mud weighted to 9.5 ppg with Barite. The 3 metres of formation was drilled while displacement and a LOT of 15.8 ppg was obtained.

The KCl and NaCl concentrations were increased to 6% by weight at 2500m and 3% by volume of Glydrill LC was introduced into the system. The NaCl concentration was further increased to 8% by 2700m and the KCl concentration was enhanced to 8% by 3200m.

A bit trip was made at 3402m due to poor rate of penetration. The hole condition was reported to be good except from 2867m to 2819m which required backreaming for 30 minutes. A new bit was run in hole with motor without any trouble and drilling resumed. The drilling continued at less than 10m per hour to 3571m when, due to pressure drop, it was decided to pull out of hole to check for wash out. As no apparent wash out was found in the string, the drilling jars were changed and the motor removed from the BHA and run in hole. Drilling continued with low ROP 2.5m/hr from 3571m to 3758m when it was called final depth. The hole was circulated clean and the string pulled out of the hole to run wireline logging. Schlumberger wireline tools were rigged up and log well as per program. After hole evaluation it was decided to P&A.

The rig was released on the 15 January 2006 and towed to Manta-2 well.

**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1****FORMATION TOPS**

<b>Formation</b>	<b>Prognosed</b>		<b>Actual</b>	
	<b>(mSS)</b>	<b>(mRT)</b>	<b>MDRT</b>	<b>TVDSS</b>
Datum	0	22	0	21.5
Sea Floor	585	607	607.5	607.5
Top Lakes Entrance	2560	2582	2508	2484.9
Top Latrobe	2885	2907	2824	2800.0
Base Tuna Flounder Channel	2915	2937	2835	2811.0
Top 67.5Ma Sand	2925	2947	2836	2812.0
Near 68.5Ma Sand	3235	3257	3103	3078.5
Near 70.3Ma Sand	3520	3542	3478	3452.8
<b>TD</b>	<b>3590</b>	<b>3612</b>	<b>3758</b>	<b>3742.0</b>

## DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1

Interval 1	607 – 650 metres	914 mm (36") Hole Interval	762 mm ( 30") Casing Set at 650m
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**MUD TYPE** : SEAWATER / PRE HYDRATED GEL

**HOLE PROBLEMS** : None

**MUD PROPERTIES** :

Mud Weight	:	8.8 ppg
YP	:	120 lb/100ft2
API FL	:	N.C
Funnel Vis	:	> 120 sec/qt
Hardness	:	40 mg/l
MBT	:	>26 ppb

### OPERATIONS

Culverin-1 was spudded on 16 December 2005 at 14:00 hrs using 17½" bit with a 36" hole opener pumping seawater add Hi-Vis PHG sweeps. This section was drilled to 650m in 2 hrs without any problems.

### MUD

In preparation of spudding 1615 bbls of 27 ppb Gel was mixed in the pits and allowed to hydrate. The hole was drilled using seawater and 75 bbl sweeps mid-stand and 100 bbl gel sweeps were pumped every connection. The hole was swept with 100 bbls at TD and hole displaced with 150 bbls of unflocculated Gel mud prior to pull out to run casing.

A total of 735 bbls of Pre Hydrated Gel was used for this section. The remaining 880 bbls of Pre-hydrated Gel was carried over for the next section.

160 bbls of seawater with 11 sacks of Calcium Chloride were mixed for cementing.

### SOLIDS CONTROL

None used as returns were directed to seabed.

### OBSERVATIONS AND RECOMMENDATIONS

No changes are proposed.

## DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1

Interval II	650 – 1525 metres	444 mm (17½") Hole Interval	340 mm (13⅜") Casing Set at 1511m
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MUD TYPE : SEAWATER / PRE HYDRATED GEL/ GUAR GUM

HOLE PROBLEMS : None

MUD PROPERTIES :

Mud Weight	:	8.8 ppg
YP	:	30 lb/100ft <sup>2</sup>
API FL	:	15
Funnel Vis	:	> 100 sec/qt
PV	:	10 cp
MBT	:	>20 ppb

### OPERATIONS

The 17½" drilling assembly was made up and drilling commenced using seawater with PHG sweeps. The sweep regime consisted of 35 bbls Guar Gum midstand and 50 bbls PHG on connections. No problems were encountered as drilling progressed. At TD of 1525m the hole was swept with 150 bbls PHG and displaced with 840 bbls PHG. The 13⅜" casing was run to 1511m and was filled with PHG and cemented with no problems.

### MUD

880 bbls of PHG mud from the previous section was carried over to this section. 1100 bbls of Guar Gum was used at 3.5 ppb to supplement the PHG as there was limited drill water. As drilling progressed a further 2759 bbls of PHG was built to provide mud volume for the sweeps, filling the casing as it was run and drilling out the casing shoe.

A total of 3639 bbls of PHG and 1100 bbls of Guar Gum were used for this section. 210 bbls of PHG were saved for the next section to be used as sweeps when drilling cement before displacement to the KCl / NaCl / polymer mud.

### SOLIDS CONTROL

No solids control was used as returns were to seabed.



## DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1

### OBSERVATIONS AND RECOMMENDATIONS

No changes are recommended as the Pre Hydrated Gel sweep system is the most cost effective way to drill this interval.

### Key Parameters Analysis

	Actual	Planned	Variance
Caustic Soda, lbs	441	716	-38.4%
M-I Gel Bulk, lbs	105840	136710	-22.5%
Volume Built, bbl	4374	4624	-5.4%
Guar Gum, lbs	3859	0	100%
Volume Built, bbl	1100	0	100%
Total Volume Built, bbl	5474	4624	18.3%
Cost per bbl, \$	\$ 4.41	\$ 5.26	-16.1%
Cost per M, \$	\$ 26.32	\$ 26.48	-0.6%
Bbl/m	5.9	5.0	18%
Cost, \$	\$24,161.24	\$ 24,314.00	-0.6%
M-I Gel Concentration, ppb	24.19	29.56	-18.1%
Other ( CaCl <sub>2</sub> for cmt job)	\$168.63		

The riserless section was completed using a greater volume than planned at the programmed cost. This was achieved using 24.19 ppb PHG instead of the planned 29.56 ppb. The reduction was made as there was a limited bulk stock of Bentonite on board.

The Guar Gum was used as supply of drill water was limited. The cost difference between a barrel of Guar Gum and a barrel of PHG is negligible. Guar Gum was mixed at 4 ppb in seawater and proved effective in good hole cleaning.

## DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1

Interval III	1525 – 3758 metres	311 mm (12 $\frac{1}{4}$ ") Hole Interval	Open Hole
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MUD TYPE : KCL/NACL/POLYMER/GLYCOL

HOLE PROBLEMS : None

MUD PROPERTIES :

Mud Weight	:	9.5 – 10.2 ppg
YP	:	12-33 lb/100 ft <sup>2</sup>
API FL	:	6.8 – 3.9
KCl	:	7-8 %
PV	:	9 – 17 CP
MBT	:	<7.5 ppb
HPHT	:	11.5-13.6
PHPA	:	0.4-1.0 ppb
Drill Solids	:	<5 %
PH	:	8.5 – 9.5
6 rpm	:	4 - 9
Gels (10 sec)	:	3-11 lb/100 ft <sup>2</sup>
Gels (10 min)	:	3-15 lb/100 ft <sup>2</sup>

### OPERATIONS

The 12 $\frac{1}{2}$ " bit and BHA were run in hole to tag the cement at 1478m. The cement was drilled out using seawater and PHG sweeps to clean the hole. All returns were dumped at the shakers. After drilling the shoe and while drilling 3m of new hole, the well was displaced to 9.5 ppg 3% KCl / 3% NaCl / Polymer mud. Once the new mud returned at the shakers the system was closed in to maintain the active system while filling the sandtraps and returning mud to the active pit. The mud was circulated with the bit pulled back into the casing. There were considerable losses over the shakers (100 bbls) when the first cold unsheared mud returned. A leak off test was performed which indicated an equivalent mud weight of 15.8 ppg.

The interval was drilled to 3402m when a bit trip was performed due to poor rate of drilling. The interval from 2867m to 2819m was back reamed while trip out due to 50Klbs overpull for 30 minutes. The rest of the open hole section was reported as trouble free. The second PDC bit was made up with a motor and run in hole with no troubles to bottom and drilling continued to 3571m with an average rate of less than 10m per hour. The string was pulled out of hole at 3571m due to gradual pressure drop of 500 psi over 3 hrs but no apparent wash out was found in the drill string.

## **DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1**

The motor was removed from the BHA and jar changed prior to running into the hole with the Smith bit. Drilling continued with low ROP 2.5m/hr to final depth 3758m and the hole circulated clean prior to pull out to run wireline logging.

### **MUD**

The permission to dump and clean pits was given by the Barge Engineer only after all the riser was run in and BOP stack latched on to the well head due to ship stability considerations. The pits were then cleaned and 1770 bbls of 3% KCl, 3% NaCl polymer mud weighted to 9.5 ppg was mixed quickly while the 12¼ BHA was picked.

The well was displaced to new mud using a 100 bbl PHG sweep and 100 bbl seawater spacer. On return at shakers 65 bbls were dumped until clear returns observed. The shakers were not able to handle 800 gpm flow rate as the mud was very cold and unsheared resulting in losing 100 bbls overboard. The pump discharge was reduced to 650 gpm while circulating prior to conducting the LOT. In one complete circulation the shakers were able to handle the flow rate of 800 gpm.

The PHPA concentration was gradually increased in the active system from 0.4 ppb to 0.7 ppb keeping the whole mud losses over the shakers under control as the mud returns were less than 70° F. The header box was also jetted regularly to keep it free of cuttings and allow streamlined flow over all the shakers.

The rheology was also enhanced using Duovis addition to the active system and 6 rpm reading increased from 4 rpm to 8 rpm at 120° F.

The mud properties were further changed from 3% KCl/NaCl to 6% KCl/NaCl while drilling from 2450m to 2530m. The 3% Glydrill LC was also introduced prior to entering into the Lakes Entrance formation and the cuttings appearance at the shakers changed considerably. The bit cutter marks were seen on the cuttings showing good inhibition and encapsulation. The addition of mix salt increased the mud weight from 9.6 ppg to 9.9 ppg. A further 2% addition of KCl/NaCl was carried out at 2750 m to give complete hydrate suppression properties prior to drilling into any hydrocarbon bearing formations. The NaCl concentration was further increased to 8% by 2700m and the KCl concentration was enhanced to 8% by 3200m.

The hardness was maintained below 400 mg/l using Soda Ash and the sulphite excess was kept at 25-50 mg/l using dry OS-1. The drilled solids were maintained using close monitoring of shakers screens and occasional use of desilter. The volumes and mud properties were maintained by using unweighted premixes. The

## **DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1**

PHPA concentration was kept around 1 ppb through premixes and the low end rheology was maintained in the range of 7 - 9 dial readings due to low ROP via Duovis additions to the active system.

### **SOLIDS CONTROL**

The shakers were dressed initially with (4 x 120), (4 x 52), (4 x 84), (4 x 84) mesh used screens with 10 mesh scalping screens. The shaker screens were upgraded to 120 mesh by 2700m and then further to 165 mesh gradually as dictated by the shaker handling capacity with a pump discharge rate of 800 - 900 gallons per minute and riser booster pump rate of 350 gpm. At 3650m the screens were updated to combination of 230, 200 and 165 mesh sizes.

The desilter was run selectively only when the mud showed tendencies to go above 10.2 ppg and the volume lost at the rate of 15-20 bbl per hour was replaced by premixes to reduce density below 10.2 ppg. The desilter was then run continuously to control and reduce LGS sand build up.

### **DOWNHOLE LOSSES**

No downhole losses were observed while drilling the section.

### **OBSERVATIONS AND RECOMMENDATIONS**

The mud properties were changed initially with consultation with the operator's representative considering the logistical issues of getting chemicals in time due to Christmas holiday period. The initial salt concentration was cut from 8% to 3% and Glycol was introduced at 2530 m. The Gippsland formation drilled from casing shoe to 2500m did not require higher KCl levels and Glycol for cuttings inhibition. These properties were enhanced to programmed properties by 2800m. The fluid loss remained less than 5 cc per 30 minutes and the HPHT fluid loss at 250°F below 13 cc. The total hardness was treated below 400 mg/l to prevent any scaling tendencies.

The desilter and desander performance with respect to removing solids is questionable but due to the absence of centrifuge, they should be run continuously to control LGS build up. The inclusion of centrifuge to the SCE would have been perfect to remove fine solids and some colloidal size particles. Despite non availability of Centrifuge the mud weights were kept below 10.2 ppg via dilution.

## **DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1**

The new BEM 650 shaker installed out performed the Thule shakers in removing cuttings uninterrupted and less screen consumption. Damaged screens from this shaker were never catastrophic (full hole through filter mesh and wire support layers) and allowed them to be patched and reused frequently. The versatility of changing deck angle helped in operating the shaker at optimum levels. Also the addition of this shale shaker contributed to lower costs because it allowed drilling with programmed flow parameters and not having to reduce it to avoid losses over the shakers.

### **Post TD Operations**

The 12¼" section was logged for 21 hours without incident. The following Schlumberger logs were run:

1. PEX(HALS)-DSI-GR
2. VSI-4-GR

Once logging operations were completed Plug and Abandonment operations proceeded. A total of 180 bbls Hi-Vis mud was mixed with 100+ sec viscosity and the cement plugs were set as follows:

Cement plug No 1:	3750m to 3560m
Cement plug No 2:	2865m to 2745m
Cement plug No 3:	1550m to 1430m

The 300 bbls of mud left in Pit3 was inhibited with Glute Biocide and Safecor corrosion inhibitor and displaced inside the casing. Total cost for this operation was \$3,608.56.

The riser and BOP stack were then retrieved, the 20" casing cut and well head recovered and the 18¾" and 30" housing retrieved.

The bulk 22.2MTGel and 24MTbarite remaining were dumped.

Once all DP lay out was completed the anchors were pulled out. The rig was released on 15 of January 2006 and towed to the next well Manta-2.

## DRILLING FLUIDS RECAP FOR NEXUS ENERGY CULVERIN-1

### Key Parameters Analysis


PRODUCTS	Actual	Planned	Variance
Barite Bulk, MT	55	50	10.0%
KOH, 25kg bag	42	23	82.6%
Polypac UL, 25kg bag	96	181	-46.9%
Polyplus, 25kg bag	112	136	-17.6%
Duo-Vis, 25 kg bag	127	132	-3.7%
Glute 25, 25lt can	13	4	225%
KCl Bulk, 1MT	71	66	7.5%
NaCl Bulk, 1MT	54	66	-18.1%
OS-1, 25kg bag	64	32	100%
Soda Ash, 25kg bag	22	23	-4.3%
Glydril LC, 55 Gal Drums	108	175	-38.2%
Drispac, 25kg bag	20	0	100%
Flowzan, 25kg bag	25	0	100%
Volume Built, bbl	5599	5000	11.9%
Cost per bbl, \$	\$ 44.62	\$ 59.98	-25.6%
Cost per M, \$	\$ 110.25	\$142.00	-22.3%
Bbl/m	2.47	2.36	4.6%
Interval Cost, \$	\$249,839.20	\$ 299,915	-16.7%
P & A	\$3,608.56		
Other (Gel and Bar Dump)	\$17,077.61		

The above table does not consider the decision made to drill to a deeper depth of 3758m than the programmed 3612m, but still the overall interval cost was 16.9% lower than programmed.


The main contributors to lower costs were due to less consumption of PAC-UL and Glydril-LC to programmed properties and because the Glydril LC was incorporated from 2530m onward through the Lakes Entrance reactive formation.


**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**DAILY DISCUSSION  
REPORT**


		<b>Operator :</b> Nexus Energy <b>Well Name :</b> Culverin-1 <b>Contractor :</b> Diamond Offshore	<b>Field/Area :</b> VIC/P-56 <b>Description :</b> Vertical Exploration <b>Location :</b> Gippsland Basin	<b>Daily Discussion</b> M-I Well : 31415
16/12/2005	TD = 650 m	Day 1	Pick up drill string. Spud well and drilled to 650 m MDRT with PHG sweeps. TD. Displaced hole to PHG. POOH. Run conductor casing. Mixed 1615 bbl of 27 ppb Gel. Used 735 bbl for sweeps/displacement. Also mixed 160 bbl CaCl2 mix for cementing.	
17/12/2005	TD = 650 m	Day 2	Lowered casing to bottom. Circulated and cemented. WOC. Pick up drill string. Mixed more PHG to fill pits.	
18/12/2005	TD = 1006 m	Day 3	RIH. MWD tool failure. POOH.RIH.Unable to stab in . POOH. Run back in. Drilled to 1006 m. Pumping 50 bbl PHG on connections and 35 bbl Guar Gum mid stand. Mixing on the run.	
19/12/2005	TD = 1436 m	Day 4	Drilled to 1436 m. Continued mixing PHG and Guar Gum for sweeps. Pumped 35 bbl Guar Gum and 50 bbl PHG sweeps.	
20/12/2005	TD = 1525 m	Day 5	Drilled ahead to TD 1525m pumping 50 bbls PHG on connections and 30 bbls Guar gum mid stand. At TD swept hole clean with 150 bbl PHG sweep then displaced open hole to 840 bbls PHG. POOH. Run casing. Continued mixing PHG as required. Pumped 50 bbl PHG & 35 bbl Guar Gum every stand. Dumped 35 bbls Guar Gum to create room for more PHG for final displacement. Filled casing with PHG.	
21/12/2005	TD = 1525 m	Day 6	Landed 13 3/8" casing, circulated clean with seawater then cemented as per program. WOC. Running BOP stack on new riser. Dumped and cleaned pits for mixing new mud. Waiting to run riser to reduce deck load prior to start mixing mud. Chemicals required for mixing expected to arrive tomorrow night on Far Grip. 210 bbl PHG saved for sweeps to drill cement.	
22/12/2005	TD = 1525 m	Day 7	Continued running marine riser. Cleaned pits when all riser joints made up.	




	<b>Operator :</b> Nexus Energy <b>Well Name :</b> Culverin-1 <b>Contractor :</b> Diamond Offshore	<b>Field/Area :</b> VIC/P-56 <b>Description :</b> Vertical Exploration <b>Location :</b> Gippsland Basin	<b>Daily Discussion</b> M-I Well : 31415
23/12/2005	TD = 1525 m	Day 8	<p>Test choke and kill lines. Land and latch BOPs. Lay down 17 1/2" BHA and pick up 12 1/4" BHA.</p> <p>Started mixing mud. Mixed 1000 bbl of 3% KCl/3%NaCl/Polymer mud weighted to 9.5 ppg and filled sandtraps. Further mixing is in progress.</p>
24/12/2005	TD = 1544 m	Day 9	<p>RIH with 12 1/4 BHA, drilled cement plugs, track and shoe, displaced to KCl/NaCl/Polymer mud and drilled 3 m of new hole. Circulated BU, performed LOT at 1511 m EMW 15.8 ppg. Continued to drill 12 1/4" hole to 1544 m.</p> <p>Displaced hole with mud at 1510 m and dumped 65 bbl of contaminated returns. Lost 108 bbl over shakers due to unsheared mud.</p>
25/12/2005	TD = 2131 m	Day 10	<p>Continued to drill 12 1/4" hole to 2131 m.</p> <p>Added 0.1 ppb Duovis and PHPA to active to boost 6 rpm and PHPA concentration. Lost 110 bbls over the shakers as mud was too cold. Changed shaker 3 to 4 x 84 new screens @ 1855m &amp; Shaker 1 to 145 @ 2100m. Added 12 Duovis to active gradually limited by shakers. Cuttings well inhibited/encapsulated. Corrected Glycol inventory by 16 drums quoted twice on Manifest.</p>
26/12/2005	TD = 2641 m	Day 11	<p>Continued to drill 12 1/4" hole to 2641 m.</p> <p>Used new 8 x 120 screens. Added 10 Soda Ash &amp; 8 OS-1. Increased KCl/NaCl conc to 6% &amp; introduced 3% Glydrill LC into system from 2400-2550 m. Cuttings with good integrity and bit cutter marks observed. Losses at shakers when jetting cuttings box.</p>
27/12/2005	TD = 3115 m	Day 12	<p>Continued to drill 12 1/4" hole to 3115 m.</p> <p>Changed shaker 3 to new 4 x 120 mesh &amp; increased NaCl to 8 % in active system @ 2750. Maintaining active volume and properties with premix. Upgraded shakers to 165 mesh @ 2900 m. Used 4 x 165 BEM &amp; 16 x 165XR new. Changed shakers 2&amp;3 back to 120 mesh @ 22:00 hrs to handle flow.</p>
28/12/2005	TD = 3277 m	Day 13	<p>Added 8 bags KCl to active once boat arrived and maintained programmed properties. Screened up shaker 2 &amp; 3 to 165 mesh using old screens. Changed 2 screens on BEM 650 to new 165 mesh. Used 6 x 165XR new screens. Later screened back shaker 3 to 120 mesh to cope with flow surges due to weather.</p>
29/12/2005	TD = 3385 m	Day 14	<p>Drilled ahead to 3385m.</p> <p>Added unweighted premix &amp; ran desilter (discharging 20 bbl/hr, 10.4 ppg) to control mud wt 10.1-10.2 ppg. Used 2x165 and 2x120 mesh new screens. Took 8 x 165 screens from diamond stock.</p>

	<b>Operator :</b> Nexus Energy <b>Well Name :</b> Culverin-1 <b>Contractor :</b> Diamond Offshore	<b>Field/Area :</b> VIC/P-56 <b>Description :</b> Vertical Exploration <b>Location :</b> Gippsland Basin	<b>Daily Discussion</b> M-I Well : 31415
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30/12/2005	TD = 3402 m	Day 15
Drilled ahead to 3402 m. POH for bit change. Back reamed from 2867 m to 2819 m. Made up new motor and bit and RIH. Ran desilter to maintain mud weight (20 bbl/hr 10.4ppg). Added unweighted premix to maintain volume. Changed out damaged shaker screens with good used screens.		
31/12/2005	TD = 3473 m	Day 16
RIH to 3330 m. Reamed and logged to 3350 m. Washed down to bottom and drilled ahead to 3473 m. BHT=56 C Screened down front screens on all shakers to 84 and 120 mesh for start of circulation. Lost 100 bbl initially over shakers. Took 8 new 165 mesh screens from Diamond stock. Added unweighted premix to maintain volume and mud weight. No fill observed on bottom. Cuttings showing good inhibition and integrity.		
1/01/2006	TD = 3571 m	Day 17
Drilled ahead to 3571 m. Pressure drop indicated washout in drill string. Pulling out of hole to investigate. Maintained volume and programmed properties by adding unweighted premix. Replaced damaged shaker screens with patched screens.		
2/01/2006	TD = 3571 m	Day 18
RIH to 2134m. Reamed down to 2593m. POH dt MWD tool failure. Screened down front screens on shakers 1,2,3 to 84 mesh for start up with cold mud. Maintained programmed properties and active volume with unweighted premix. Took 8 x 145 new screens from diamond.		
3/01/2006	TD = 3571 m	Day 19
Pulled out to casing shoe. Pressure tested pump manifold to 4200 psi. Continued pulling out of hole. Made up new BHA, RIH to casing shoe, slip and cut drillline and WOW. Changed front screens on shakers 1,2,3 to 84 mesh for startup circulation to minimize mud losses due to cold mud.  Pooh due to pressure loss and MWD failure. M/u new BHA, rih to shoe and WOW.		
4/01/2006	TD = 3619 m	Day 20
Continued WOW. RIH and drilled ahead to 3619 m. Bled new premix into active to maintain active volume. Added Duovis and Caustic Potash to the active to adjust flow properties and PH respectively. Once mud temperature increased upgraded shaker screens to finer mesh old 120 and 165 to minimize solids build up.  Continued to WOW. Rih and drill ahead to 3619 m.		
5/01/2006	TD = 3697 m	Day 21
Continued to drill to 3697 m at report time. Added unweighted premix to maintain active volume. Used 4 x 120 new mesh screens from MI stock on shaker 3. Upgraded shaker 1,2&4 to 200 and 230 screens to minimize LGS build up. Also run Desilter continuously to control LGS.		

		<b>Operator :</b> Nexus Energy <b>Well Name :</b> Culverin-1 <b>Contractor :</b> Diamond Offshore	<b>Field/Area :</b> VIC/P-56 <b>Description :</b> Vertical Exploration <b>Location :</b> Gippsland Basin	<b>Daily Discussion</b> M-I Well : 31415
6/01/2006	TD = 3758 m	Day 22	Drilled to TD 3758 m and at present circulating hole prior to Pooh. Ran desilter continuously to minimise LGS build up. Used 4 new 200 mesh screens from Diamond stock. Backloaded 78T Bayrite and 16T Bentonite.  Continued to drill to TD 3758 m and circulate hole.	
7/01/2006	TD = 3758 m	Day 23	Circulated hole clean, Pooh to 3668 m, re-logged interval to 3582 m (mwd tool 22 m above bit), repaired broken hose and POOH. R/u Wireline tools and run logs as per program. Bled premix to the active as required for pit levels.  Circulated hole and Pooh to 3668m and re-logged interval to 3582m. R/u wireline logging tools and run as per program.	
8/01/2006	TD = 3758 m	Day 24	Continued to log well (first run PEX-HALS-DSI-GR, second run vsi-4-gr). RIH with open end pipe to conduct P&A operation. Mixed 70bbls hi-vis mud for P&A. Installed coarse shaker screens on the front of all shakers to prevent cold mud losses. Received chemicals on board from the Far Grip and will be recheck qty when able to open containers.  Log well as per program.	
9/01/2006	TD = 3758 m	Day 25	RIH to 3750 m. Circulated bottoms up. Cemented with 102 bbl slurry from 3750 m to 3560 m. Pulled up to 2965 m and spot 60 bbl hi vis pill. Set second cement plug at 2865 m to 2745 m. Pulled out to 1650 m and spot 60 bbl hi vis pill. Set third cement plug at 1550 m to 1430 m. Circulated casing clean, filling with inhibited mud. Made up and pumped another batch of 60 bbl hi vis pill. Displaced casing with Inhibited mud with Glute 25, Conqor 303, OS1 and KOH after setting third cement plug. Made up and pumped 50 bbl slug.  Rih to 3750m and P&A hole as per program	
10/01/2006	TD = 3758 m	Day 26	Continued with P&A operation, set cmt plug4 from 725m to 625m as per program. At present pulling out BOP as per DOGC procedures. Mixed a batch of hi-vis mud and spotted prior to set cmt Plug4. After cmt plugs, dump and clean sand traps and pits.  Continued to P&A operation.	
11/01/2006	TD = 3758 m	Day 27	Continued to pull out Riser-BOP. No mud treatment today. Dumped bulk materials: 22.2MT Gel Bulk and 24MT Barite in preparation for rig move.  Pull out Riser-BOP	
12/01/2006	TD = 3758 m	Day 28	Continued to pull Riser-BOP. Cut 20" casing and recover welhead. Prepare to retrieve 18 3/4" and 30" housing at report time. No mud treatment today.  Continued to retrieve BOP. Cut 20" casing and recovered well head.	

	<b>Operator :</b> Nexus Energy <b>Well Name :</b> Culverin-1 <b>Contractor :</b> Diamond Offshore	<b>Field/Area :</b> VIC/P-56 <b>Description :</b> Vertical Exploration <b>Location :</b> Gippsland Basin	<b>Daily Discussion</b> M-I Well : 31415
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13/01/2006	TD = 3758 m	Day 29
Retrieve 18 3/4"-30" housing. Lay down DP and DC. Prepare to pull the Anchors at rpt time.  Cut and retrieve 18 3/4" - 30" hosing		
14/01/2006	TD = 0 m	Day 30
At present pull anchors to move rig. Clean pits in preparation for the next well.  Pull anchors		
15/01/2006	TD = 0 m	Day 31
Completed pulling anchors. Rig released at 15:00 hrs. Moved off location.  Completed pulling anchors and rig released at 15:00hrs		

**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**COST  
BY  
INTERVAL**



## PRODUCT SUMMARY

**Operator :** Nexus Energy  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin

### SUMMARY OF PRODUCT USAGE FOR 914 mm INTERVAL 16/12/2005 - 16/12/2005, 607 - 650 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST (A\$)	PROD COST (A\$)
1 - CALCIUM CHLORIDE Sacks	25 KG BG	11	15.33	168.63
2 - CAUSTIC SODA	25 KG DM	5	30.46	152.30
3 - MI Gel (Bulk)	1 MT BG	20	382.17	7643.40
SUB TOTAL:				7964.33
TAX:				0.00
WATER-BASED MUD TOTAL COST:				7964.33
TOTAL MUD COST FOR INTERVAL:				7964.33



## PRODUCT SUMMARY

**Operator :** Nexus Energy  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin

### SUMMARY OF PRODUCT USAGE FOR 444 mm INTERVAL 17/12/2005 - 21/12/2005, 650 - 1525 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST (A\$)	PROD COST (A\$)
1 - CAUSTIC SODA	25 KG DM	3	30.46	91.38
2 - GUAR GUM	25 KG BG	70	79.62	5573.40
3 - MI Gel (Bulk)	1 MT BG	28	382.17	10700.76
SUB TOTAL:				16365.54
TAX:				0.00
WATER-BASED MUD TOTAL COST:				16365.54
TOTAL MUD COST FOR INTERVAL:				16365.54



## PRODUCT SUMMARY

**Operator :** Nexus Energy  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin

### SUMMARY OF PRODUCT USAGE FOR 311 mm INTERVAL 22/12/2005 - 15/01/2006, 1525 - 3758 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST (A\$)	PROD COST (A\$)
1 - DEFOAM A	5 GA CN	13	92.24	1199.12
2 - DUO-VIS	25 KG BG	133	302.03	40169.99
3 - GLUTE 25	25 LT CN	14	121.35	1698.90
4 - OS-1	25 KG BG	65	50.29	3268.85
5 - POLYPAC UL	25 KG BG	96	126.76	12168.96
6 - SODA ASH	25 KG BG	22	17.19	378.18
7 - POTASSIUM HYDROXIDE	25 KG CN	43	45.13	1940.59
8 - KCl BB	1 MT BG	71	669.89	47562.19
9 - MI BAR (Bulk)	1 MT BG	82	358.06	29360.92
10 - MI Gel (Bulk)	1 MT BG	24	382.17	9248.51
11 - POLY PLUS DRY	25 KG BG	112	140.00	15680.00
12 - CONQOR 303A	55 GA DM	1	505.43	505.43
13 - GLYDRIL LC	55 GA DM	108	774.13	83606.04
14 - SALT	1.2 MT BG	54	252.81	13651.74
15 - FLOWZAN	25 KG BG	25	302.03	7550.75
16 - DRISPAC	50 LB BG	20	126.76	2535.20
SUB TOTAL:				270525.37
TAX:				0.00
WATER-BASED MUD TOTAL COST:				270525.37
TOTAL MUD COST FOR INTERVAL:				270525.37



**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**DAILY VOLUME  
SUMMARY SHEET**

Nexus Energy

Culverin-1

Daily Volume Summary

30" Interval - Seawater/Gel Sweeps

		Mud Volume (m3)					Volume Built m3								Volume Lost m3							
Date	Depth	Hole Active	Surf Active	Premix	Reserve	Total Vol	Drill Water	Mud Received	Synthetic Added	Brine Added	Chemical Volume	Barite Volume	Daily Built	Cum Built	Displacement	Centrifuge	Desilter	Dump	Hole Displ	Sweeps	Daily Lost	Cummul Lost
16-Dec-05	650			880		880	1566				49		1615	1615						735	735	735
						0							0								0	0

17.5" Interval - Seawater / Hi Vis Sweeps

		Mud Volume (m3)					Volume Built m3								Volume Lost m3							
Date	Depth	Hole Active	Surf Active	Premix	Reserve	Total Vol	Drill Water	Mud Received	Synthetic Added	Brine Added	Chemical Volume	Barite Volume	Daily Built	Cum Built	Displacement	Centrifuge	Transfer Next Sec	Dump	Fill Casing	Sweeps	Daily Lost	Cummul Lost
17-Dec-05	650			1635		1635	736	880			19		1635	1635							0	0
18-Dec-05	1006			1911		1911	1275				21		1296	2931						1020	1020	1020
19-Dec-05	1436			1881		1881	1260				28		1288	4219						1318	1318	2338
20-Dec-05	1525			597		597	510				10		520	4739	840			35		929	1804	4142
21-Dec-05	1525					0												597			597	4739

12.25" Interval - KCl/NaCl/PHPA/Glydrill

		Mud Volume (bbl)					Volume Built bbl								Volume Lost bbl							
Date	Depth	Hole	Surf	Premix	Reserve	Total	Drill	Mud	Synthetic	Brine	Chemical	Barite	Daily	Cum	Shakers	Sweeps	Desilter	Dump	Hole	Other	Daily	Cummul
		Active	Active		(Brine)	Vol	Water	Received	Added	Added	Volume	Volume	Built	Built							Lost	Lost
22-Dec-05	1525					0							0	0							0	0
23-Dec-05	1525			1000		1000	941				59		1000	1000							0	0
24-Dec-05	1544	1165	433	500		2098	1201				70		1271	2271	108			65			173	173
25-Dec-05	2131	1433	400	679		2512	683				60		743	3014	329						329	502
26-Dec-05	2641	1666	435	390		2491	205				150		355	3369	376						376	878
27-Dec-05	3115	1883	387	271		2541	309				76		385	3754	335						335	1213
28-Dec-05	3277	1957	499	685		3141	804				137		941	4695	341						341	1554
29-Dec-05	3385	2006	496	405		2907					1		1	4696	74		161				235	1789
30-Dec-05	3402	2104	360	740		3204	365				56		421	5117	69		40	15			124	1913
31-Dec-05	3473	2046	410	500		2956							0	5117	248						248	2161
01-Jan-06	3571	2091	455	730		3276	405				55		460	5577	140						140	2301
02-Jan-06	3571	2114	375	730		3219							0	5577	57						57	2358

**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**TOTAL  
MATERIAL  
COST**



## PRODUCT SUMMARY

**Operator :** Nexus Energy  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin

### SUMMARY OF PRODUCT USAGE FOR INTERVAL

16/12/2005 - 15/01/2006, 0 - 3758 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST (A\$)	PROD COST (A\$)
1 - CALCIUM CHLORIDE Sacks	25 KG BG	11	15.33	168.63
2 - CAUSTIC SODA	25 KG DM	8	30.46	243.68
3 - DEFOAM A	5 GA CN	13	92.24	1199.12
4 - DUO-VIS	25 KG BG	133	302.03	40169.99
5 - GLUTE 25	25 LT CN	14	121.35	1698.90
6 - GUAR GUM	25 KG BG	70	79.62	5573.40
7 - OS-1	25 KG BG	65	50.29	3268.85
8 - POLYPAC UL	25 KG BG	96	126.76	12168.96
9 - SODA ASH	25 KG BG	22	17.19	378.18
10 - POTASSIUM HYDROXIDE	25 KG CN	43	45.13	1940.59
11 - KCl BB	1 MT BG	71	669.89	47562.19
12 - MI BAR (Bulk)	1 MT BG	82	358.06	29360.92
13 - MI Gel (Bulk)	1 MT BG	72	382.17	27592.67
14 - POLY PLUS DRY	25 KG BG	112	140.00	15680.00
15 - CONQOR 303A	55 GA DM	1	505.43	505.43
16 - GLYDRIL LC	55 GA DM	108	774.13	83606.04
17 - SALT	1.2 MT BG	54	252.81	13651.74
18 - FLOWZAN	25 KG BG	25	302.03	7550.75
19 - DRISPAC	50 LB BG	20	126.76	2535.20
SUB TOTAL:				294855.24
TAX:				0.00
WATER-BASED MUD TOTAL COST:				294855.24
TOTAL MUD COST FOR INTERVAL:				294855.24

**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**DRILLING  
FLUIDS  
SUMMARY**



Field/Area : VIC/P-56

**Description :** Vertical Exploration

**Location :** Gippsland Basin

[illegible]

16/12/2005:
17/12/2005:
18/12/2005:
19/12/2005:
20/12/2005:
21/12/2005:



Field/Area : VIC/P-56

**Description :** Vertical Exploration

**Location :** Gippsland Basin

[illegible]

22/12/2005:  
23/12/2005:  
24/12/2005:  
25/12/2005:



Field/Area : VIC/P-56

**Description :** Vertical Exploration

**Location :** Gippsland Basin

[illegible]

## 26/12/2005:

27/12/2005:

28/12/2005:





Field/Area : VIC/P-56

**Description :** Vertical Exploration

**Location :** Gippsland Basin

REMARKS

31/12/2005:



Field/Area : VIC/P-56

**Description :** Vertical Exploration

**Location :** Gippsland Basin

REMARKS

1/01/2006:

2/01/2006:

3/01/2006: Pooh due to pressure loss and MWD failure. M/u new BHA. rih to shoe and WOW.



Field/Area : VIC/P-56

**Description :** Vertical Exploration

**Location :** Gippsland Basin

[illegible]

6/01/2006: Continued to dill to TD 3758 m and circulate hole



Field/Area : VIC/P-56

**Description :** Vertical Exploration

**Location :** Gippsland Basin

[illegible]

## REMARKS

7/01/2006: Circulated hole and Pooh to 3668m and re-logged interval to 3582m. R/u wireline logging tools and run as per program.

8/01/2006: Log well as per program.

9/01/2006: Rih to 3750m and P&A hole as per program



Field/Area : VIC/P-56

**Description :** Vertical Exploration

**Location :** Gippsland Basin

REMARKS

10/01/2006: Continued to P&A operation.  
11/01/2006: Pull out Riser-BOP  
12/01/2006: Continued to retrieve BOP. Cut 20" casing and recovered well head.  
13/01/2006: Cut and retrieve 18 3/4" - 30" hosing  
14/01/2006: Pull anchors

## DRILLING FLUIDS SUMMARY

**Operator :** Nexus Energy

**Field/Area :** VIC/P-56

**Well Name :** Culverin-1

**Description :** Vertical Exploration

**Contractor :** Diamond Offshore

**Location :** Gippsland Basin

[illegible]

## REMARKS

15/01/2006: Completed pulling anchors and rig released at 15:00hrs

**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**PRODUCT  
CONSUMPTION**



**Contractor:** Diamond Offshore  
**M-I Engineer:** Melendez/Singh  
**Rig Name:** Ocean Patriot  
**Stock Point:** Melbourne

Page 1 - 1





**Contractor:** Diamond Offshore  
**M-I Engineer:** Melendez/Singh  
**Rig Name:** Ocean Patriot  
**Stock Point:** Melbourne

Page 1 - 2



**Contractor:** Diamond Offshore  
**M-I Engineer:** Melendez/Singh  
**Rig Name:** Ocean Patriot  
**Stock Point:** Melbourne

Page 1 - 3



**Contractor:** Diamond Offshore  
**M-I Engineer:** Melendez/Singh  
**Rig Name:** Ocean Patriot  
**Stock Point:** Melbourne

Page 1 - 4

## Product Consumption

**Operator :** Nexus Energy  
**Well Name :** Culverin-1  
**Location :** Gippsland Basin  
**Field/Area:** VIC/P-56

**Contractor:** Diamond Offshore  
**M-I Engineer:** Melendez/Singh  
**Rig Name:** Ocean Patriot  
**Stock Point:** Melbourne

[illegible]



**Contractor:** Diamond Offshore  
**M-I Engineer:** Melendez/Singh  
**Rig Name:** Ocean Patriot  
**Stock Point:** Melbourne

Page 1 - 6



**Contractor:** Diamond Offshore  
**M-I Engineer:** Melendez/Singh  
**Rig Name:** Ocean Patriot  
**Stock Point:** Melbourne

Page 1 - 7

**DRILLING FLUIDS RECAP FOR NEXUS ENERGY  
CULVERIN-1**

**DAILY  
MUD  
REPORTS**



# WATER-BASED MUD REPORT No. 1

Date	16/12/2005	Depth/TVD	650 m / 650 m
Spud Date	16/12/2005	Mud Type	SW/PHG
Water Depth	585	Activity	Run Conductor

**Operator :** Nexus Energy  
**Report For :** Wally Westman/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Troy Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size	36 in Reed T-11C	Surface	Hole 179.7	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles	16 /3x22 / 1/32"			Pump Size	6.5 X 12.in	6.5 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits .3	Pump Cap	gal/stk	gal/stk
in	m			Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol .3	Flow Rate		gal/min
in	m			Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage 880	Total Circ Time		
in	m			Circulating Pressure		

## MUD PROPERTIES

Sample From	Pit@16:00
Flow Line Temp	°C
Depth/TVD	m 650/650
Mud Weight	lb/gal 8.8
Funnel Viscosity	s/qt > 120
Rheology Temp	°C
R600/R300	
R200/R100	
R6/R3	
PV	cP
YP	lb/100ft <sup>2</sup>
10s/10m/30m Gel	lb/100ft <sup>2</sup>
API Fluid Loss	cc/30 min
HTHP FL Temp	cc/30 min
Cake API/HTHP	1/32"
Solids	%Vol
Oil/Water	%Vol
Sand	%Vol
MBT	lb/bbl
pH	
Alkal Mud (Pm)	
Pf/Mf	
Chlorides	mg/l
Hardness Ca	mg/l
KCl	% wt
PHPA	ppb
Glycol	% Vol
Sulphite	ppm
NaCl	% wt

## PRODUCTS USED LAST 24 HRS

Products	Size	Amt
CALCIUM CHLORIDE Sacks	25 KG BG	11.00
CAUSTIC SODA	25 KG DM	5.00
MI Gel (Bulk)	1 MT BG	20.00

SOLIDS EQUIP	Size	Hr
Shaker 1		0
Shaker 2		0
Shaker 3		0
BEM650	4 x 120	0
D-Sander		0
D-Silter		0

## MUD PROPERTY SPECIFICATIONS

Weight	8.7-8.8
Viscosity	> 100
Filtrate	NC

## REMARKS AND TREATMENT

Mixed 1615 bbl of 27 ppb Gel. Used 735 bbl for sweeps/displacement. Also mixed 160 bbl CaCl<sub>2</sub> mix for cementing.

## REMARKS

Pick up drill string. Spud well and drilled to 650 m MDRT with PHG sweeps. TD. Displaced hole to PHG. POOH. Run conductor casing.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	14	Oil Added	0	NaCl	-1.5/	np/na Values	
Drilling	3	Water Added	1566	KCl	/	kp/ka (lb•sⁿ/100ft²)	
Tripping	4	Mud Received	0	Low Gravity	/	Bit Loss (psi / %)	
Non-Productive Tim		Dumped	0	Bentonite	/	Bit HHP (hhp / HSI)	
Running Casing	3	Shakers	0	Drill Solids	/	Bit Jet Vel (m/s)	
		Desilter & Desander	0	Weight Material	/	Ann. Vel DP (m/min)	
		Formation	0	Chemical Conc	- /	Ann. Vel DC (m/min)	
		Left in Hole	0	Inert/React		Crit Vel DP (m/min)	
		Other	0	Average SG		Crit Vel DC (m/min)	
		Sweeps/Displacement	735	Carb/BiCarb (m mole/L)	/		
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh Glen Sharpe		08-9302 8790				A\$ 7,964.33	A\$ 7,964.33



## WATER-BASED MUD REPORT No. 2

Date	17/12/2005	Depth/TVD	650 m / 650 m
Spud Date	16/12/2005	Mud Type	SW/PHG
Water Depth	585	Activity	P/U Drill Pipe

**Operator :** Nexus Energy  
**Report For :** Wally Westman/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Troy Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 17.5 in		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 1/32"		30in @650m (650TVD)	108.7	Pump Size	6.5 X 12.in	6.5 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
in	m		.3	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
in	m		.3	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
in	m		1635	Circulating Pressure		

MUD PROPERTIES		
Sample From		Pit
Flow Line Temp	°C	
Depth/TVD	m	650/650
Mud Weight	lb/gal	8.7
Funnel Viscosity	s/qt	> 120
Rheology Temp	°C	
R600/R300		
R200/R100		
R6/R3		
PV	cP	
YP	lb/100ft²	
10s/10m/30m Gel	lb/100ft²	
API Fluid Loss	cc/30 min	
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	
Solids	%Vol	
Oil/Water	%Vol	
Sand	%Vol	
MBT	lb/bbl	
pH		
Alkal Mud (Pm)		
Pf/Mf		
Chlorides	mg/l	
Hardness Ca	mg/l	
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

[illegible]

<b>SOLIDS EQUIP</b>	<b>Size</b>	<b>Hr</b>
Shaker 1		0
Shaker 2		0
Shaker 3		0
BEM650	4 x 120	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS	
Weight	8.7-8.8
Viscosity	> 100
Filtrate	NC

REMARKS AND TREATMENT		REMARKS	
Mixed more PHG to fill pits.		Lowered casing to bottom. Circulated and cemented. WOC. Pick up drill string.	

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	23	Oil Added	0	NaCl	-1.5/	np/na	Values
Drilling		Water Added	736	KCl	/	kp/ka	(lb•s^n/100ft²)
Tripping		Mud Received	0	Low Gravity	/	Bit Loss	(psi / %)
Non-Productive Tim		Dumped	0	Bentonite	/	Bit HHP	(hhp / HSI)
Running Casing		Shakers	0	Drill Solids	/	Bit Jet Vel	(m/s)
Cementing	1	Desilter & Desander	0	Weight Material	/	Ann. Vel DP	(m/min)
Wait on Cement		Formation	0	Chemical Conc	- /	Ann. Vel DC	(m/min)
		Left in Hole	0	Inert/React		Crit Vel DP	(m/min)
		Other	0	Average SG		Crit Vel DC	(m/min)
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	/		

<b>M-I ENGR / PHONE</b>		<b>RIG PHONE</b>	<b>WAREHOUSE PHONE</b>	<b>DAILY COST</b>	<b>CUMULATIVE COST</b>
Jasdeep Singh	08-9302 8790			A\$ 3,057.36	A\$ 11,021.69
Glen Sharpe					

**WATER-BASED MUD REPORT No. 3**

Date	18/12/2005	Depth/TVD	1006 m / 1006 m
Spud Date	16/12/2005	Mud Type	SW/PHG
Water Depth	585	Activity	Drilling 17.5" Hole

**Operator :** Nexus Energy  
**Report For :** Wally Westman/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Troy Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 17.5 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 3x22 /16 / 1/32"		30in @650m (650TVD)	460.1	Pump Size	6.5 X 12.in	6.5 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	5.016 gal/stk	5.016 gal/stk
5 in	763 m		-.1	Pump stk/min	75@97%	75@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	752 gal/min	
5 in	138 m		460	Bottoms Up	22.8 min	3423 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	25.7 min	3854 stk
8 in	56 m		1911	Circulating Pressure	2400 psi	

**MUD PROPERTIES**

Sample From		Pit@19:20
Flow Line Temp	°C	
Depth/TVD	m	840/840
Mud Weight	lb/gal	8.6@20°C
Funnel Viscosity	s/qt	100
Rheology Temp	°C	20
R600/R300		40/31
R200/R100		29/24
R6/R3		17/16
PV	cP	9
YP	lb/100ft²	22
10s/10m/30m Gel	lb/100ft²	18/18/20
API Fluid Loss	cc/30 min	18
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	1/
Solids	%Vol	3
Oil/Water	%Vol	/97
Sand	%Vol	
MBT	lb/bbl	18
pH		9
Alkal Mud (Pm)		0
Pf/Mf		0.08/1.6
Chlorides	mg/l	2200
Hardness Ca	mg/l	80
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
CAUSTIC SODA	25 KG DM	1.00
GUAR GUM	25 KG BG	44.00
MI Gel (Bulk)	1 MT BG	7.00

SOLIDS EQUIP	Size	Hr
Shaker 1		0
Shaker 2		0
Shaker 3		0
BEM650	4 x 120	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	8.7-8.8
Viscosity	> 100
Filtrate	NC

**REMARKS AND TREATMENT**

Pumping 50 bbl PHG on connections and 35 bbl Guar Gum mid stand. Mixing on the run.

**REMARKS**

RIH. MWD tool failure. POOH.RIH.Unable to stab in . POOH. Run back in. Drilled to 1006 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	10.5	Oil Added	0	NaCl	.1/ 1.2	np/na Values	0.368/0.116
Drilling	10	Water Added	1270	KCl	. / .	kp/ka (lb•s^n/100ft²)	3.339/14.137
Tripping	3.5	Mud Received	0	Low Gravity	2./ 18.1	Bit Loss (psi / %)	261 / 1
Non-Productive Tim		Dumped	0	Bentonite	2./ 18.	Bit HHP (hhp / HSI)	115 / 1
		Shakers	0	Drill Solids	. / .1	Bit Jet Vel (m/s)	56
		Desilter & Desander	0	Weight Material	NA/ NA	Ann. Vel DP (m/min)	19.97
		Formation	0	Chemical Conc	- / .	Ann. Vel DC (m/min)	23.19
		Left in Hole	0	Inert/React	.0063	Crit Vel DP (m/min)	111
		Other	0	Average SG	2.5	Crit Vel DC (m/min)	113
		Sweeps/Displacement	1020	Carb/BiCarb (m mole/L)	1.6/ 8.	ECD @ 1006 (lb/gal)	8.66
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh	08-9302 8790					A\$ 6,208.93	A\$ 17,230.62
Glen Sharpe							

**WATER-BASED MUD REPORT No. 4**

Date	19/12/2005	Depth/TVD	1436 m / 1436 m
Spud Date	16/12/2005	Mud Type	SW/PHG
Water Depth	585	Activity	Drill 17.5"

**Operator :** Nexus Energy  
**Report For :** Wally Westman/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Troy Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 17.5 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 3x22 /16 / 1/32"		30in @650m (650TVD)	870.6	Pump Size	6.5 X 12.in	6.5 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	5.016 gal/stk	5.016 gal/stk
5 in	1193 m		-6	Pump stk/min	75@97%	75@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	1129 gal/min	
5 in	138 m		870	Bottoms Up	29.5 min	6647 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	32.4 min	7282 stk
8 in	56 m		1881	Circulating Pressure	3300 psi	

**MUD PROPERTIES**

Sample From	Pit@19:45	
Flow Line Temp	°C	
Depth/TVD	m	1390/1390
Mud Weight	lb/gal	8.7@20°C
Funnel Viscosity	s/qt	110
Rheology Temp	°C	20
R600/R300		54/40
R200/R100		35/28
R6/R3		21/20
PV	cP	14
YP	lb/100ft²	26
10s/10m/30m Gel	lb/100ft²	22/28/35
API Fluid Loss	cc/30 min	14
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	1/
Solids	%Vol	2
Oil/Water	%Vol	/98
Sand	%Vol	
MBT	lb/bbl	20
pH		9.2
Alkal Mud (Pm)		0.35
Pf/Mf		0.18/0.3
Chlorides	mg/l	600
Hardness Ca	mg/l	20
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
CAUSTIC SODA	25 KG DM	2.00
GUAR GUM	25 KG BG	26.00
MI Gel (Bulk)	1 MT BG	9.00

SOLIDS EQUIP	Size	Hr
Shaker 1		0
Shaker 2		0
Shaker 3		0
BEM650	4 x 120	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	8.7-8.8
Viscosity	> 100
Filtrate	NC

**REMARKS AND TREATMENT**

Continued mixing PHG and Guar Gum for sweeps. Pumped 35 bbl Guar Gum and 50 bbl PHG sweeps.

**REMARKS**

Drilled to 1436 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	. / .3	np/na Values	0.433/0.096
Drilling	24	Water Added	1260	KCl	. / .	kp/ka (lb•s^n/100ft²)	2.868/18.248
Tripping		Mud Received	0	Low Gravity	2.3/ 21.	Bit Loss (psi / %)	595 / 1
Non-Productive Tim		Dumped	0	Bentonite	2.2/ 19.9	Bit HHP (hhp / HSI)	392 / 1
		Shakers	0	Drill Solids	.1/ 1.2	Bit Jet Vel (m/s)	84
		Desilter & Desander	0	Weight Material	NA/ NA	Ann. Vel DP (m/min)	29.99
		Formation	0	Chemical Conc	- / .	Ann. Vel DC (m/min)	34.82
		Left in Hole	0	Inert/React	.0523	Crit Vel DP (m/min)	121
		Other	0	Average SG	2.37	Crit Vel DC (m/min)	122
		Sweeps/Displacement	1318	Carb/BiCarb (m mole/L)	3.6/ 11.3	ECD @ 1436 (lb/gal)	8.8
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh Glen Sharpe		08-9302 8790				A\$ 5,570.57	A\$ 22,801.19

# WATER-BASED MUD REPORT No. 5

<b>Date</b>	<b>20/12/2005</b>	<b>Depth/TVD</b>	<b>1525 m / 1525 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>SW/PHG</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>Run 13 3/8</b>

**Operator :** Nexus Energy  
**Report For :** Wally Westman/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Troy Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size	17.5 in Reed	Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles	3x22 /16 / 1/32"	30in @650m (650TVD)	1235.3(Tot)/644.8(Bit)	Pump Size	6.5 X 12.in	6.5 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	5.016 gal/stk	5.016 gal/stk
5 in	2 m		-.3	Pump stk/min	75@97%	75@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	1129 gal/min	
13.375 in	919 m		644.5	Bottoms Up	7.2 min	1620 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	24 min	5394 stk
in	m		597	Circulating Pressure	3300 psi	

## MUD PROPERTIES

MUD PROPERTIES		Pit@10:00
Sample From		
Flow Line Temp	°C	
Depth/TVD	m	1525/1525
Mud Weight	lb/gal	8.6@20°C
Funnel Viscosity	s/qt	105
Rheology Temp	°C	20
R600/R300		58/44
R200/R100		40/33
R6/R3		23/22
PV	cP	14
YP	lb/100ft²	30
10s/10m/30m Gel	lb/100ft²	22/27/35
API Fluid Loss	cc/30 min	14
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	1/
Solids	%Vol	2.5
Oil/Water	%Vol	/97.5
Sand	%Vol	
MBT	lb/bbl	20
pH		9
Alkal Mud (Pm)		0.3
Pf/Mf		0.1/0.2
Chlorides	mg/l	600
Hardness Ca	mg/l	40
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

### PRODUCTS USED LAST 24 HRS

[illegible]

SOLIDS EQUIP	
1	1000000
2	1000000
3	1000000
4	1000000
5	1000000
6	1000000
7	1000000
8	1000000
9	1000000
10	1000000
11	1000000
12	1000000
13	1000000
14	1000000
15	1000000
16	1000000
17	1000000
18	1000000
19	1000000
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90	1000000
91	1000000
92	1000000
93	1000000
94	1000000
95	1000000
96	1000000
97	1000000
98	1000000
99	1000000
100	1000000

SOLIDS EQUIP	SIZE	TH
Shaker 1		0
Shaker 2		0
Shaker 3		0
BEM650	4 x 120	0
D-Sander		0
D-Silter		0

## MUD PROPERTY SPECIFICATIONS

MOISTURE PROPERTY SPECIFICATIONS	
Weight	8.7-8.8
Viscosity	> 100
Filtrate	NC

## REMARKS AND TREATMENT

Continued mixing PHG as required. Pumped 50 bbl PHG & 35 bbl Guar Gum every stand. Dumped 35 bbls Guar Gum to create room for more PHG for final displacement. Filled casing with PHG.

## REMARKS

Drilled ahead to TD 1525m pumping 50 bbls PHG on connections and 30 bbls Guar gum mid stand. At TD swept hole clean with 150 bbl PHG sweep then displaced open hole to 840 bbls PHG. POOH. Run casing.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	2.5	Oil Added	0	NaCl	./ .3	np/na Values	0.399/0.116
Drilling	8.5	Water Added	510	KCl	./ .	kp/ka (lb*s^n/100ft²)	3.910/19.439
Tripping	4.5	Mud Received	0	Low Gravity	2.2/ 19.9	Bit Loss (psi / %)	588 / 1
Non-Productive Tim		Dumped	35	Bentonite	2.2/ 20.	Bit HHP (hhp / HSI)	387 / 1
Running Casing	6.5	Shakers	0	Drill Solids	./ -.1	Bit Jet Vel (m/s)	84
Condition Hole	2	Desilter & Desander	0	Weight Material	NA/ NA	Ann. Vel DP (m/min)	
		Formation	0	Chemical Conc	- / .	Ann. Vel DC (m/min)	66.22
		Left in Hole	0	Inert/React	- .0058	Crit Vel DP (m/min)	
		Other	0	Average SG	2.45	Crit Vel DC (m/min)	141
		Sweeps/Displacement	1769	Carb/BiCarb (m mole/L)	2./ 10.	ECD @ 920 (lb/gal)	8.81
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh Glen Sharpe		08-9302 8790				A\$ 1,528.68	A\$ 24,329.87

# WATER-BASED MUD REPORT No. 6

<b>Date</b>	<b>21/12/2005</b>	<b>Depth/TVD</b>	<b>1525 m / 1525 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>SW/PHG</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>Run BOP</b>

**Operator :** Nexus Energy  
**Report For :** Wally Westman/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Troy Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 17.5 in		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 1/32"		30in @650m (650TVD)	926.8(Tot)/913.1(Bit)	Pump Size	6.5 X 12.in	6.5 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
5 in	608 m		.2	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
13.375 in	904 m		913.3	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
in	m			Circulating Pressure		

MUD PROPERTIES		
Sample From		Pit@09:00
Flow Line Temp	°C	
Depth/TVD	m	1525/1525
Mud Weight	lb/gal	8.6@20°C
Funnel Viscosity	s/qt	100
Rheology Temp	°C	20
R600/R300		55/45
R200/R100		35/32
R6/R3		25/24
PV	cP	10
YP	lb/100ft²	35
10s/10m/30m Gel	lb/100ft²	24/26/30
API Fluid Loss	cc/30 min	13
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	1/
Solids	%Vol	2
Oil/Water	%Vol	/98
Sand	%Vol	
MBT	lb/bbl	18
pH		9
Alkal Mud (Pm)		0.4
Pf/Mf		0.1/0.2
Chlorides	mg/l	600
Hardness Ca	mg/l	40
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

[illegible]

<b>SOLIDS EQUIP</b>	<b>Size</b>	<b>Hr</b>
Shaker 1		0
Shaker 2		0
Shaker 3		0
BEM650	4 x 120	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS	
Weight	8.7-8.8
Viscosity	> 100
Filtrate	NC

## REMARKS AND TREATMENT

Dumped and cleaned pits for mixing new mud. Waiting to run riser to reduce deck load prior to start mixing mud. Chemicals required for mixing expected to arrive tomorrow night on Far Grip. 210 bbl PHG saved for sweeps to drill cement.

## REMARKS

Landed 13 3/8" casing, circulated clean with seawater then cemented as per program.  
WOC. Running BOP stack on new riser.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	16	Oil Added	0	NaCl	./ .3	np/na Values	0.290/0.082
Drilling		Water Added	0	KCl	./ .	kp/ka (lb's'n/100ft²)	7.894/22.400
Tripping		Mud Received	0	Low Gravity	2./ 18.	Bit Loss (psi / %)	/ 1
Non-Productive Tim		Dumped	597	Bentonite	2./ 18.	Bit HHP (hhp / HSI)	/ 1
Running Casing	4.5	Shakers	0	Drill Solids	./ .	Bit Jet Vel (m/s)	
Cementing	3.5	Desilter & Desander	0	Weight Material	NA/ NA	Ann. Vel DP (m/min)	
		Formation	0	Chemical Conc	- / .	Ann. Vel DC (m/min)	
		Left in Hole	0	Inert/React	.001	Crit Vel DP (m/min)	127
		Other	0	Average SG	2.6	Crit Vel DC (m/min)	137
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	2./ 10.	ECD @ 1511 (lb/gal)	8.6
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh Glen Sharpe		08-9302 3790				A\$ 0.00	A\$ 24,329.87

# WATER-BASED MUD REPORT No. 7

<b>Date</b>	<b>22/12/2005</b>	<b>Depth/TVD</b>	<b>1525 m / 1525 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>KCl-NaCl-Polymer</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>Run BOP</b>

**Operator :** Nexus Energy  
**Report For :** Ron King/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size	12.25 in	Surface 30in @650m (650TVD)	Hole 1206.1	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles	1/32"			Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
in	m	13.375in @1511m (1511TVD)	-1	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
in	m		-1	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
in	m			Circulating Pressure		

[illegible]

REMARKS AND TREATMENT	REMARKS
Cleaned pits when all riser joints made up.	Continued running marine riser.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./	np/na	Values
Drilling		Water Added	0	KCl	/	kp/ka	(lb*s^n/100ft²)
Tripping		Mud Received	0	Low Gravity	/	Bit Loss	(psi / %)
Non-Productive Tim		Dumped	0	Bentonite	/	Bit HHP	(hhp / HSI)
Run Riser	24	Shakers	0	Drill Solids	/	Bit Jet Vel	(m/s)
		Desilter & Desander	0	Weight Material	NA/ NA	Ann. Vel DP	(m/min)
		Formation	0	Chemical Conc	- /	Ann. Vel DC	(m/min)
		Left in Hole	0	Inert/React		Crit Vel DP	(m/min)
		Other	0	Average SG		Crit Vel DC	(m/min)
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	/		

M-I ENGR / PHONE		RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Jasdeep Singh	08-9302 3790				
Glen Sharpe				A\$ 0.00	A\$ 24,329.87



**WATER-BASED MUD REPORT No. 8**

Date	23/12/2005	Depth/TVD	1525 m / 1525 m
Spud Date	16/12/2005	Mud Type	KCl-NaCl-Polymer
Water Depth	585	Activity	Pick up BHA

**Operator :** Nexus Energy  
**Report For :** Ron King/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 1/32"		30in @650m (650TVD)	1206.1	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
in	m	13.375in @1511m (1511TVD)	-1	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate		gal/min
in	m		-1	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
in	m		1000	Circulating Pressure		

**MUD PROPERTIES**

Sample From		Pit@23:10
Flow Line Temp	°C	
Depth/TVD	m	1525/1525
Mud Weight	lb/gal	9.5@20°C
Funnel Viscosity	s/qt	50
Rheology Temp	°C	49
R600/R300		30/21
R200/R100		18/13
R6/R3		4/3
PV	cP	9
YP	lb/100ft²	12
10s/10m/30m Gel	lb/100ft²	3/3/3
API Fluid Loss	cc/30 min	6.8
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	1/
Solids	%Vol	5.5
Oil/Water	%Vol	/94.5
Sand	%Vol	
MBT	lb/bbl	0
pH		9.5
Alkal Mud (Pm)		0.28
Pf/Mf		0.15/0.32
Chlorides	mg/l	35500
Hardness Ca	mg/l	80
KCl	% wt	3
PHPA	ppb	0.4
Glycol	% Vol	0
Sulphite	ppm	0
NaCl	% wt	3

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DEFOAM A	5 GA CN	2.00
DUO-VIS	25 KG BG	4.00
POLYPAC UL	25 KG BG	24.00
POTASSIUM HYDROXIDE	25 KG CN	4.00
KCl BB	1 MT BG	6.00
MI BAR (Bulk)	1 MT BG	14.00
MI Gel (Bulk)	1 MT BG	2.00
POLY PLUS DRY	25 KG BG	8.00
SALT	1 MT BG	4.00
FLOWZAN	25 KG BG	12.00

**SOLIDS EQUIP**

	Size	Hr
Shaker 1	4 x 84	0
Shaker 2	4 x 84	0
Shaker 3	4 x 52	0
BEM650	4 x 120	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Started mixing mud. Mixed 1000 bbl of 3% KCl/3%NaCl/Polymer mud weighted to 9.5 ppg and filled sandtraps. Further mixing is in progress.

**REMARKS**

Test choke and kill lines. Land and latch BOPs. Lay down 17 1/2" BHA and pick up 12 1/4" BHA.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)	MUD RHEOLOGY & HYDRAULICS
Rig Up/Service	24	Oil Added	0	NaCl	1/ 11.6
Drilling		Water Added	941	KCl	1.1/ 10.2
Tripping		Mud Received	0	Low Gravity	.6/ 5.8
Non-Productive Tim		Dumped	0	Bentonite	. / .
BOP NU		Shakers	0	Drill Solids	.5/ 4.2
BOP Testing		Desilter & Desander	0	Weight Material	2.8/ 40.9
		Formation	0	Chemical Conc	- / 2.
		Left in Hole	0	Inert/React	-
		Other	0	Average SG	3.9
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	3/ 4.7
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE	DAILY COST
Jasdeep Singh		08-9302 3790			A\$ 20,167.48
Glen Sharpe					A\$ 44,497.35



# WATER-BASED MUD REPORT No. 9

Date	24/12/2005	Depth/TVD	1544 m / 1544 m
Spud Date	16/12/2005	Mud Type	KCl-NaCl-Polymer
Water Depth	585	Activity	Drill 12.25"

**Operator :** Nexus Energy  
**Report For :** Ron King/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 4x18 / 2x28 / 1/32"		30in @650m (650TVD)	1164.9	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	1276 m	13.375in @1511m (1511TVD)	433.1	Pump stk/min	90@97%	90@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	769 gal/min	
5 in	193 m		1598	Bottoms Up	59.1 min	10646 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	87.3 min	15710 stk
8 in	75 m		500	Circulating Pressure	1750 psi	

## MUD PROPERTIES

Sample From		Pit@21:00
Flow Line Temp	°C	20
Depth/TVD	m	1527/1527
Mud Weight	lb/gal	9.5@20°C
Funnel Viscosity	s/qt	48
Rheology Temp	°C	49
R600/R300		33/23
R200/R100		19/14
R6/R3		4/3
PV	cP	10
YP	lb/100ft²	13
10s/10m/30m Gel	lb/100ft²	4/6/12
API Fluid Loss	cc/30 min	6.6
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	1/
Solids	%Vol	5.35
Oil/Water	%Vol	/94.65
Sand	%Vol	-
MBT	lb/bbl	1
pH		9.5
Alkal Mud (Pm)		0.5
Pf/Mf		0.35/0.55
Chlorides	mg/l	36000
Hardness Ca	mg/l	240
KCl	% wt	3
PHPA	ppb	0.47
Glycol	% Vol	-
Sulphite	ppm	60
NaCl	% wt	3

## PRODUCTS USED LAST 24 HRS

Products	Size	Amt
DEFOAM A	5 GA CN	3.00
DUO-VIS	25 KG BG	11.00
GLUTE 25	25 LT CN	6.00
OS-1	25 KG BG	8.00
POLYPAC UL	25 KG BG	8.00
POTASSIUM HYDROXIDE	25 KG CN	7.00
KCl BB	1 MT BG	6.00
MI BAR (Bulk)	1 MT BG	22.00
POLY PLUS DRY	25 KG BG	20.00
SALT	1 MT BG	3.00
FLOWZAN	25 KG BG	13.00
DRISPAC	50 LB BG	20.00

## SOLIDS EQUIP

	Size	Hr
Shaker 1	4 x 84	8
Shaker 2	4 x 84	8
Shaker 3	4 x 52	8
BEM650	4 x 120	8
D-Sander		0
D-Silter		0

## MUD PROPERTY SPECIFICATIONS

Weight	9.6-10
Viscosity	40-60
Filtrate	6

## REMARKS AND TREATMENT

Displaced hole with mud at 1510 m and dumped 65 bbl of contaminated returns. Lost 108 bbl over shakers due to unsheared mud.

## REMARKS

RIH with 12 1/4 BHA, drilled cement plugs, track and shoe, displaced to KCl/NaCl/Polymer mud and drilled 3 m of new hole. Circulated BU, performed LOT at 1511 m EMW 15.8 ppg. Continued to drill 12 1/4" hole to 1544 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	12.5	Oil Added	0	NaCl	1./ 11.9	np/na Values	0.521/0.439
Drilling	8.5	Water Added	1201	KCl	1.1/ 10.2	kp/ka (lb-s^n/100ft²)	0.953/1.563
Tripping	2	Mud Received	0	Low Gravity	.3/ 2.9	Bit Loss (psi / %)	107 / 1
Non-Productive Tim		Dumped	65	Bentonite	.1/ 1.	Bit HHP (hhp / HSI)	48 / 1
Condition Mud	1	Shakers	108	Drill Solids	./ -2	Bit Jet Vel (m/s)	34
		Desilter & Desander	0	Weight Material	2.9/ 42.9	Ann. Vel DP (m/min)	44.49
		Formation	0	Chemical Conc	- / 2.	Ann. Vel DC (m/min)	66.75
		Left in Hole	0	Inert/React	-.1415	Crit Vel DP (m/min)	65
		Other	0	Average SG	4.04	Crit Vel DC (m/min)	76
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	7./ 11.	ECD @ 1544 (lb/gal)	9.58
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh Glen Sharpe		08-9302 3790				A\$ 27,976.14	A\$ 72,473.49



**WATER-BASED MUD REPORT No. 10**

<b>Date</b>	<b>25/12/2005</b>	<b>Depth/TVD</b>	<b>2131 m / 2131 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>KCl-NaCl-Polymer</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>Drill 12.25"</b>

**Operator :** Nexus Energy  
**Report For :** Ron King/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 4x18 /2x28 / 1/32"		30in @650m (650TVD)	1433.1	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	1863 m	13.375in @1511m (1511TVD)	399.9	Pump stk/min	105@97%	105@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	898 gal/min	
5 in	193 m		1833	Bottoms Up	61.6 min	12934 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	85.7 min	18003 stk
8 in	75 m		679	Circulating Pressure	2750 psi	

**MUD PROPERTIES**

Sample From		Pit@21:00	F/L@09:00
Flow Line Temp	°C	20	16
Depth/TVD	m	2070/2070	1756/1756
Mud Weight	lb/gal	9.65@20°C	9.5@16°C
Funnel Viscosity	s/qt	56	50
Rheology Temp	°C	49	49
R600/R300		50/35	34/24
R200/R100		29/21	20/14
R6/R3		6/4	4/2
PV	cP	15	10
YP	lb/100ft²	20	14
10s/10m/30m Gel	lb/100ft²	4/5/6	4/5/5
API Fluid Loss	cc/30 min	6	6.2
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	6	6
Oil/Water	%Vol	/94	/94
Sand	%Vol	1	0
MBT	lb/bbl	1	0
pH		9	9.5
Alkal Mud (Pm)		0.2	0.5
Pf/Mf		0.1/0.3	0.2/0.7
Chlorides	mg/l	36500	35000
Hardness Ca	mg/l	200	240
KCl	% wt	3	2.5
PHPA	ppb	0.8	0.65
Glycol	% Vol	0	0
Sulphite	ppm	60	200
NaCl	% wt	3	3

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DEFOAM A	5 GA CN	5.00
DUO-VIS	25 KG BG	27.00
GLUTE 25	25 LT CN	1.00
OS-1	25 KG BG	8.00
POLYPAC UL	25 KG BG	18.00
POTASSIUM HYDROXIDE	25 KG CN	4.00
KCl BB	1 MT BG	8.00
MI BAR (Bulk)	1 MT BG	9.00
POLY PLUS DRY	25 KG BG	18.00
SALT	1 MT BG	4.00

**SOLIDS EQUIP**

	Size	Hr
Shaker 1	4 x 145	24
Shaker 2	4 x 84	24
Shaker 3	4 x 84	24
BEM650	4 x 120	24
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Added 0.1 ppb Duovis and PHPA to active to boost 6 rpm and PHPA concentration. Lost 110 bbls over the shakers as mud was too cold. Changed shaker 3 to 4 x 84 new screens @ 1855m & Shaker 1 to 145 @ 2100m. Added 12 Duovis to active gradually limited by shakers. Cuttings well inhibited/encapsulated. Corrected Glycol inventory by 16 drums quoted twice on Manifest.

**REMARKS**

Continued to drill 12 1/4" hole to 2131 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)	MUD RHEOLOGY & HYDRAULICS
Rig Up/Service		Oil Added	0	NaCl	1/ 12.1
Drilling	24	Water Added	683	KCl	1.1/ 10.2
Tripping		Mud Received	0	Low Gravity	.5/ 4.4
Non-Productive Tim		Dumped	0	Bentonite	.1/ .6
Condition Mud		Shakers	329	Drill Solids	.4/ 3.8
		Desilter & Desander	0	Weight Material	3.4/ 49.8
		Formation	0	Chemical Conc	- / .
		Left in Hole	0	Inert/React	3.4047
		Other	0	Average SG	4.
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	2/ 10.

**M-I ENGR / PHONE**

Jasdeep Singh 08-9302 3790  
Glen Sharpe

**RIG PHONE****WAREHOUSE PHONE****DAILY COST**

A\$ 23,714.78

**CUMULATIVE COST**

A\$ 96,188.27

**WATER-BASED MUD REPORT No. 11**

Date	26/12/2005	Depth/TVD	2641 m / 2641 m
Spud Date	16/12/2005	Mud Type	MixSalt-Poly-Glycol
Water Depth	585	Activity	Drill 12.25"

**Operator :** Nexus Energy  
**Report For :** Ron King/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 4x18 /2x28 / 1/32"		30in @650m (650TVD)	1666.1	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	2373 m	13.375in @1511m (1511TVD)	434.9	Pump stk/min	107@97%	104@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	902	gal/min
5 in	193 m		2101	Bottoms Up	70.8 min	14935 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	97.8 min	20642 stk
8 in	75 m		390	Circulating Pressure	3400 psi	

**MUD PROPERTIES**

Sample From		Pit@23:00	F/L@09:00
Flow Line Temp	°C	22	17
Depth/TVD	m	2600/2600	2320/2320
Mud Weight	lb/gal	10@20°C	9.5@17°C
Funnel Viscosity	s/qt	55	60
Rheology Temp	°C	49	49
R600/R300		57/41	55/40
R200/R100		34/25	34/25
R6/R3		7/5	7/5
PV	cP	16	15
YP	lb/100ft²	25	25
10s/10m/30m Gel	lb/100ft²	6/9/12	7/9/11
API Fluid Loss	cc/30 min	4	5.4
HTHP FL Temp	cc/30 min	13.6@121°C	
Cake API/HTHP	1/32"	1/1	1/
Solids	%Vol	10	7
Oil/Water	%Vol	/90	/93
Sand	%Vol	0.8	1
MBT	lb/bbl	5	5
pH		8.7	9
Alkal Mud (Pm)		0	0.4
Pf/Mf		0.04/0.45	0.05/0.55
Chlorides	mg/l	65000	36000
Hardness Ca	mg/l	240	360
KCl	% wt	6	2.5
PHPA	ppb	1	1
Glycol	% Vol	3	
Sulphite	ppm	25	25
NaCl	% wt	6	3

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DUO-VIS	25 KG BG	17.00
GLUTE 25	25 LT CN	1.00
OS-1	25 KG BG	12.00
POLYPAC UL	25 KG BG	5.00
SODA ASH	25 KG BG	10.00
POTASSIUM HYDROXIDE	25 KG CN	5.00
KCl BB	1 MT BG	14.00
POLY PLUS DRY	25 KG BG	7.00
GLYDRIL LC	55 GA DM	48.00
SALT	1 MT BG	11.00

**SOLIDS EQUIP**

	Size	Hr
Shaker 1	4 x 120	24
Shaker 2	4 x 120	24
Shaker 3	4 x 84	24
BEM650	4 x 120	24
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Used new 8 x 120 screens. Added 10 Soda Ash & 8 OS-1. Increased KCl/NaCl conc to 6% & introduced 3% Glydril LC into system from 2400-2550 m. Cuttings with good integrity and bit cutter marks observed. Losses at shakers when jetting cuttings box.

**REMARKS**

Continued to drill 12 1/4" hole to 2641 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	1.7/ 18.7	np/na Values	0.475/0.459
Drilling	24	Water Added	205	KCl	2.2/ 20.1	kp/ka (lb•s²/n/100ft²)	2.257/2.523
Tripping		Mud Received	0	Low Gravity	4.3/ 39.2	Bit Loss (psi / %)	155 / 1
Non-Productive Tim		Dumped	0	Bentonite	.1/ 1.3	Bit HHP (hhp / HSI)	82 / 1
Condition Mud		Shakers	376	Drill Solids	3.6/ 32.9	Bit Jet Vel (m/s)	40
		Desilter & Desander	0	Weight Material	1.8/ 27.2	Ann. Vel DP (m/min)	53.88
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	78.3
		Left in Hole	0	Inert/React	5.841	Crit Vel DP (m/min)	91
		Other	0	Average SG	3.08	Crit Vel DC (m/min)	106
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	.8/ 7.9	ECD @ 2641 (lb/gal)	10.17
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh Glen Sharpe		08-9302 3790				A\$ 57,188.30	A\$ 153,376.57

**WATER-BASED MUD REPORT No. 12**

Date	27/12/2005	Depth/TVD	3115 m / 3112 m
Spud Date	16/12/2005	Mud Type	MixSalt-Glydrill
Water Depth	585	Activity	Drill 12.25"

**Operator :** Nexus Energy  
**Report For :** Ron King/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 4x18 /2x28 / 1/32"		30in @650m (650TVD)	1882.7	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	2847 m	13.375in @1511m (1511TVD)	386.3	Pump stk/min	107@97%	104@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	902	gal/min
5 in	193 m		2269	Bottoms Up	71.4 min	15057 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	92.9 min	19611 stk
8 in	75 m		271	Circulating Pressure	3400 psi	

**MUD PROPERTIES**

Sample From		Pit@21:00	F/L@04:30
Flow Line Temp	°C	25	18
Depth/TVD	m	3052/3052	2740/2739
Mud Weight	lb/gal	10.2@25°C	9.9@18°C
Funnel Viscosity	s/qt	57	56
Rheology Temp	°C	49	49
R600/R300		60/43	55/40
R200/R100		36/26	33/24
R6/R3		7/5	7/5
PV	cP	17	15
YP	lb/100ft²	26	25
10s/10m/30m Gel	lb/100ft²	7/9/12	7/11/12
API Fluid Loss	cc/30 min	4	4.6
HTHP FL Temp	cc/30 min	12.8@121°C	13@121°C
Cake API/HTHP	1/32"	1/1	1/1
Solids	%Vol	10	10
Oil/Water	%Vol	/90	/90
Sand	%Vol	1.25	1.5
MBT	lb/bbl	6	7.5
pH		9	9.5
Alkal Mud (Pm)		0	0
Pf/Mf		0.05/0.3	0.05/0.7
Chlorides	mg/l	75000	68000
Hardness Ca	mg/l	260	240
KCl	% wt	6	6
PHPA	ppb	1	1
Glycol	% Vol	3	3
Sulphite	ppm	20	10
NaCl	% wt	8	6

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DUO-VIS	25 KG BG	8.00
GLUTE 25	25 LT CN	1.00
POLYPAC UL	25 KG BG	4.00
SODA ASH	25 KG BG	4.00
POTASSIUM HYDROXIDE	25 KG CN	4.00
KCl BB	1 MT BG	5.00
POLY PLUS DRY	25 KG BG	11.00
GLYDRIL LC	55 GA DM	12.00
SALT	1 MT BG	12.00

**SOLIDS EQUIP**

	Size	Hr
Shaker 1	4 x 165	0
Shaker 2	4 x 120	0
Shaker 3	4 x 120	0
BEM650	4 x 165	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Changed shaker 3 to new 4 x 120 mesh & increased NaCl to 8 % in active system @ 2750. Maintaining active volume and properties with premix. Upgraded shakers to 165 mesh @ 2900 m. Used 4 x 165 BEM & 16 x 165XR new. Changed shakers 2&3 back to 120 mesh @ 22:00 hrs to handle flow.

**REMARKS**

Continued to drill 12 1/4" hole to 3115 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)	MUD RHEOLOGY & HYDRAULICS
Rig Up/Service		Oil Added	0	NaCl	2.2/ 24.2
Drilling	24	Water Added	309	KCl	2.2/ 20.1
Tripping		Mud Received	0	Low Gravity	2.4/ 22.2
Non-Productive Tim		Dumped	0	Bentonite	.5/ 4.6
Condition Mud		Shakers	335	Drill Solids	1.4/ 12.6
		Desilter & Desander	0	Weight Material	3.2/ 47.2
		Formation	0	Chemical Conc	- / 5.
		Left in Hole	0	Inert/React	1.8622
		Other	0	Average SG	3.51
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	1/ 5.
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE	
Jasdeep Singh		08-9302 3790		DAILY COST	
Kelvin Leong				A\$ 20,506.64	
				CUMULATIVE COST	
				A\$ 173,883.21	

**WATER-BASED MUD REPORT No. 13**

Date	28/12/2005	Depth/TVD	3277 m / 3274 m
Spud Date	16/12/2005	Mud Type	MixSalt-Glydrill
Water Depth	585	Activity	Drill 12.25"

**Operator :** Nexus Energy  
**Report For :** Ron King/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 4x18 /2x28 / 1/32"		30in @650m (650TVD)	1956.7	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	3009 m	13.375in @1511m (1511TVD)	498.3	Pump stk/min	107@97%	104@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	902	gal/min
5 in	193 m		2455	Bottoms Up	74.4 min	15691 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	100.3 min	21163 stk
8 in	75 m		685	Circulating Pressure	3400 psi	

**MUD PROPERTIES**

Sample From		Pit@21:00	Active@03:00
Flow Line Temp	°C	32	32
Depth/TVD	m	3260/3260	3155/3147
Mud Weight	lb/gal	10.3@25°C	10.2@25°C
Funnel Viscosity	s/qt	57	58
Rheology Temp	°C	49	49
R600/R300		60/43	57/42
R200/R100		36/26	34/24
R6/R3		7/5	7/5
PV	cP	17	15
YP	lb/100ft²	26	27
10s/10m/30m Gel	lb/100ft²	6/9/13	6/8/9
API Fluid Loss	cc/30 min	4	4
HTHP FL Temp	cc/30 min	12@121°C	12@121°C
Cake API/HTHP	1/32"	1/1	1/1
Solids	%Vol	10.5	10
Oil/Water	%Vol	/89.5	/90
Sand	%Vol	1.25	0.7
MBT	lb/bbl	6	5
pH		9	9
Alkal Mud (Pm)		0	0
Pf/Mf		0.05/0.5	0.05/0.6
Chlorides	mg/l	81500	74000
Hardness Ca	mg/l	260	240
KCl	% wt	8	6
PHPA	ppb	1	1
Glycol	% Vol	3	3
Sulphite	ppm	25	10
NaCl	% wt	8	8

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DUO-VIS	25 KG BG	26.00
GLUTE 25	25 LT CN	2.00
OS-1	25 KG BG	12.00
POLYPAC UL	25 KG BG	20.00
POTASSIUM HYDROXIDE	25 KG CN	5.00
KCl BB	1 MT BG	20.00
POLY PLUS DRY	25 KG BG	24.00
GLYDRIL LC	55 GA DM	24.00
SALT	1 MT BG	10.00

**SOLIDS EQUIP**

	Size	Hr
Shaker 1	4 x 165	0
Shaker 2	4 x 165	0
Shaker 3	4 x 120	0
BEM650	4 x 165	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Added 8 bags KCl to active once boat arrived and maintained programmed properties. Screened up shaker 2 & 3 to 165 mesh using old screens. Changed 2 screens on BEM 650 to new 165 mesh. Used 6 x 165XR new screens. Later screened back shaker 3 to 120 mesh to cope with flow surges due to weather.

**REMARKS**

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	2./ 22.9	np/na Values	0.481/0.470
Drilling	24	Water Added	804	KCl	2.8/ 25.9	kp/ka (lb•s^ <sup>n</sup> /100ft²)	2.290/2.478
Tripping		Mud Received	0	Low Gravity	2.1/ 18.9	Bit Loss (psi / %)	160 / 1
Non-Productive Tim		Dumped	0	Bentonite	.6/ 5.	Bit HHP (hhp / HSI)	84 / 1
Condition Mud		Shakers	341	Drill Solids	1./ 8.9	Bit Jet Vel (m/s)	40
		Desilter & Desander	0	Weight Material	3.5/ 51.8	Ann. Vel DP (m/min)	53.88
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	78.3
		Left in Hole	0	Inert/React	1.321	Crit Vel DP (m/min)	90
		Other	0	Average SG	3.61	Crit Vel DC (m/min)	107
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	1./ 5.	ECD @ 3277 (lb/gal)	10.48
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh		08-9302 3790				A\$ 49,324.83	A\$ 223,208.04
Kelvin Leong							

**WATER-BASED MUD REPORT No. 14**

Date	29/12/2005	Depth/TVD	3385 m / 3381 m
Spud Date	16/12/2005	Mud Type	MixSalt-Glydrill
Water Depth	585	Activity	Drill 12.25"

**Operator :** Nexus Energy  
**Report For :** Ron King/Bryan Webb  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 4x18 /2x28 / 1/32"		30in @650m (650TVD)	2006	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	3117 m	13.375in @1511m (1511TVD)	496	Pump stk/min	107@97%	104@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	902	gal/min
5 in	193 m		2502	Bottoms Up	75.4 min	15906 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	100.8 min	21277 stk
8 in	75 m		405	Circulating Pressure	3800 psi	

**MUD PROPERTIES**

Sample From		Pit@21:00	Active@03:30
Flow Line Temp	°C	33	33
Depth/TVD	m	3380/3380	3299/3296
Mud Weight	lb/gal	10.2@33°C	10.2@25°C
Funnel Viscosity	s/qt	57	60
Rheology Temp	°C	49	49
R600/R300		64/47	58/42
R200/R100		40/28	35/25
R6/R3		8/6	7/5
PV	cP	17	16
YP	lb/100ft²	30	26
10s/10m/30m Gel	lb/100ft²	7/9/11	6/9/10
API Fluid Loss	cc/30 min	4	4.1
HTHP FL Temp	cc/30 min	12@121°C	11.5@121°C
Cake API/HTHP	1/32"	1/1	1/1
Solids	%Vol	10.5	10.5
Oil/Water	%Vol	/89.5	/89.5
Sand	%Vol	1.25	1.3
MBT	lb/bbl	6	7.5
pH		9	8.8
Alkal Mud (Pm)		0	0.35
Pf/Mf		0.05/0.3	0.05/0.5
Chlorides	mg/l	82000	82000
Hardness Ca	mg/l	320	240
KCl	% wt	7	8
PHPA	ppb	1	1
Glycol	% Vol	3	3
Sulphite	ppm	25	50
NaCl	% wt	8	8

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DUO-VIS	25 KG BG	6.00
OS-1	25 KG BG	6.00
POLYPAC UL	25 KG BG	1.00
SODA ASH	25 KG BG	8.00
POTASSIUM HYDROXIDE	25 KG CN	2.00

**SOLIDS EQUIP**

	Size	Hr
Shaker 1	4 x 165	20
Shaker 2	2x165, 2x120	24
Shaker 3	2x165, 2x120	24
BEM650	2x165, 2x120	24
D-Sander		0
D-Silter		12

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Added unweighted premix & ran desilter (discharging 20 bbl/hr, 10.4 ppg) to control mud wt 10.1-10.2 ppg. Used 2x165 and 2x120 mesh new screens. Took 8 x 165 screens from diamond stock.

**REMARKS**

Drilled ahead to 3385m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)	MUD RHEOLOGY & HYDRAULICS
Rig Up/Service		Oil Added	0	NaCl	2.2/ 25.
Drilling	24	Water Added	0	KCl	2.6/ 23.5
Tripping		Mud Received	0	Low Gravity	3/ 27.
Non-Productive Tim		Dumped	0	Bentonite	.4/ 4.
Condition Mud		Shakers	74	Drill Solids	2./ 18.
		Desilter & Desander	161	Weight Material	2.7/ 39.8
		Formation	0	Chemical Conc	- / 5.
		Left in Hole	0	Inert/React	2.6597
		Other	0	Average SG	3.36
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	1/ 5.
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE	
Jasdeep Singh		08-9302 3790		DAILY COST	
Kelvin Leong				A\$ 2,468.46	
				CUMULATIVE COST	
				A\$ 225,676.50	



**WATER-BASED MUD REPORT No. 15**

Date	30/12/2005	Depth/TVD	3402 m / 3399 m
Spud Date	16/12/2005	Mud Type	MixSalt-Glydrill
Water Depth	585	Activity	Trip Bit change

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Reed		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 4x18 /2x28 / 1/32"		30in @650m (650TVD)	2103.9	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
in	m	13.375in @1511m (1511TVD)	360.1	Pump stk/min	107@97%	104@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	902 gal/min	
in	m		360.1	Bottoms Up	-9.8 min	-2076 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	2.2 min	473 stk
in	m		740	Circulating Pressure	3800 psi	

**MUD PROPERTIES**

Sample From	Pit@21:00	Active@03:00
Flow Line Temp °C	32	32
Depth/TVD m	3402/3997	3390/3387
Mud Weight lb/gal	10.2@30°C	10.1@25°C
Funnel Viscosity s/qt	60	60
Rheology Temp °C	49	49
R600/R300	60/44	59/43
R200/R100	37/27	36/26
R6/R3	7/5	7/6
PV cP	16	16
YP lb/100ft²	28	27
10s/10m/30m Gel lb/100ft²	7/9/11	6/9/10
API Fluid Loss cc/30 min	4	4
HTHP FL Temp cc/30 min	11.8@121°C	11.6@121°C
Cake API/HTHP 1/32"	1/1	1/1
Solids %Vol	10.5	10
Oil/Water %Vol	/89.5	/90
Sand %Vol	1	0.8
MBT lb/bbl	7	7.5
pH	9	9
Alkal Mud (Pm)	0	0.4
Pf/Mf	0.04/0.5	0.05/0.7
Chlorides mg/l	82500	83000
Hardness Ca mg/l	260	240
KCl % wt	7	6.9
PHPA ppb	1	1
Glycol % Vol	3	3
Sulphite ppm	50	150
NaCl % wt	8	8

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DEFOAM A	5 GA CN	2.00
DUO-VIS	25 KG BG	14.00
POLYPAC UL	25 KG BG	8.00
POTASSIUM HYDROXIDE	25 KG CN	4.00
KCl BB	1 MT BG	6.00
POLY PLUS DRY	25 KG BG	12.00
GLYDRIL LC	55 GA DM	12.00
SALT	1 MT BG	5.00

SOLIDS EQUIP	Size	Hr
Shaker 1	4 x 165	6
Shaker 2	4x165	9
Shaker 3	2x165, 2x120	9
BEM650	2x165, 2x120	9
D-Sander		0
D-Silter		2

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Ran desilter to maintain mud weight (20 bbl/hr 10.4ppg). Added unweighted premix to maintain volume. Changed out damaged shaker screens with good used screens.

**REMARKS**

Drilled ahead to 3402 m. POH for bit change. Back reamed from 2867 m to 2819 m. Made up new motor and bit and RIH.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	2.3/ 25.3	np/na Values	
Drilling	9	Water Added	365	KCl	2.6/ 23.5	kp/ka (lb•s^n/100ft²)	
Tripping	15	Mud Received	0	Low Gravity	2.9/ 26.8	Bit Loss (psi / %)	
Non-Productive Tim		Dumped	15	Bentonite	.6/ 5.2	Bit HHP (hhp / HSI)	
Condition Mud		Shakers	69	Drill Solids	1.8/ 16.6	Bit Jet Vel (m/s)	
		Desilter & Desander	40	Weight Material	2.7/ 39.7	Ann. Vel DP (m/min)	
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	
		Left in Hole	0	Inert/React	2.1112	Crit Vel DP (m/min)	
		Other	0	Average SG	3.37	Crit Vel DC (m/min)	
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	.8/ 4.		
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Jasdeep Singh		08-9302 3790				A\$ 21,860.45	A\$ 247,536.95
Kelvin Leong							

## WATER-BASED MUD REPORT No. 16

<b>Date</b>	<b>31/12/2005</b>	<b>Depth/TVD</b>	<b>3473 m / 3469 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>MixSalt-Glydrill</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>Drill 12.25"</b>

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA	
Bit Size	12.25 in Hycalog	Surface	Hole	Pump Make	NATIONAL 12P-160
Nozzles	4x18 /2x28 / 1/32"	30in @650m (650TVD)	2046.2	Pump Size	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk
5 in	3205 m	13.375in @1511m (1511TVD)	409.8	Pump stk/min	107@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	902 gal/min
5 in	193 m		2456	Bottoms Up	77 min 16250 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	99.8 min 21061 stk
8 in	75 m		500	Circulating Pressure	3800 psi

## MUD PROPERTIES

MUD PROPERTIES		Pits@20:30	Pit@03:00
Sample From			
Flow Line Temp	°C	29	
Depth/TVD	m	3452/3448	3402/3399
Mud Weight	lb/gal	10.2@27°C	10.2@25°C
Funnel Viscosity	s/qt	62	62
Rheology Temp	°C	49	49
R600/R300		67/50	59/43
R200/R100		42/30	36/26
R6/R3		9/7	7/6
PV	cP	17	16
YP	lb/100ft²	33	27
10s/10m/30m Gel	lb/100ft²	8/11/13	6/9/10
API Fluid Loss	cc/30 min	3.6	4
HTHP FL Temp	cc/30 min	12@121°C	11.6@121°C
Cake API/HTHP	1/32"	1/1	1/1
Solids	%Vol	10.5	10.5
Oil/Water	%Vol	/89.5	/89.5
Sand	%Vol	1.5	1
MBT	lb/bbl	6	7.5
pH		9	9
Alkal Mud (Pm)		0.1	0.4
Pf/Mf		0.05/0.4	0.05/0.7
Chlorides	mg/l	84000	83000
Hardness Ca	mg/l	200	240
KCl	% wt	7	7
PHPA	ppb	1	1
Glycol	% Vol	3	3
Sulphite	ppm	50	50
NaCl	% wt	8	8

### PRODUCTS USED LAST 24 HRS

[illegible]

SOLIDS EQUIP	
1	1000000
2	1000000
3	1000000
4	1000000
5	1000000
6	1000000
7	1000000
8	1000000
9	1000000
10	1000000
11	1000000
12	1000000
13	1000000
14	1000000
15	1000000
16	1000000
17	1000000
18	1000000
19	1000000
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87	1000000
88	1000000
89	1000000
90	1000000
91	1000000
92	1000000
93	1000000
94	1000000
95	1000000
96	1000000
97	1000000
98	1000000
99	1000000
100	1000000

SOLIDS EQUIP.	SIZE	PH
Shaker 1	4 x 165	14
Shaker 2	4x165	14
Shaker 3	3x165, 1x120	14
BEM650	3x165, 1x120	14
D-Sander		0
D-Silter		0

## MUD PROPERTY SPECIFICATIONS

MODIFIER PROPERTY SPECIFICATIONS	
Weight	9.6-10
Viscosity	40-60
Filtrate	6

## REMARKS AND TREATMENT

Screened down front screens on all shakers to 84 and 120 mesh for start of circulation. Lost 100 bbl initially over shakers. Took 8 new 165 mesh screens from Diamond stock. Added unweighted premix to maintain volume and mud weight. No fill observed on bottom. Cuttings showing good inhibition and integrity.

## REMARKS

RIH to 3330 m. Reamed and logged to 3350 m. Washed down to bottom and drilled ahead to 3473 m. BHT=56 C

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	2.4/ 26.1	np/na Values	0.422/0.415
Drilling	11.5	Water Added	0	KCl	2.6/ 23.5	kp/ka (lb*s^n/100ft²)	3.833/3.795
Tripping	9	Mud Received	0	Low Gravity	2.9/ 26.2	Bit Loss (psi / %)	158 / 1
Non-Productive Tim		Dumped	0	Bentonite	.5/ 4.1	Bit HHP (hhp / HSI)	83 / 1
Condition Mud		Shakers	248	Drill Solids	1.9/ 17.1	Bit Jet Vel (m/s)	40
Reaming	3.5	Desilter & Desander	0	Weight Material	2.7/ 39.4	Ann. Vel DP (m/min)	53.88
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	78.3
		Left in Hole	0	Inert/React	2.5391	Crit Vel DP (m/min)	104
		Other	0	Average SG	3.37	Crit Vel DC (m/min)	119
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	1./ 5.	ECD @ 3473 (lb/gal)	10.42

M-I ENGR / PHONE

RIG PHONE

**WAREHOUSE PHONE**

**DAILY COST**

**CUMULATIVE COST**

Jasdeep Singh 08-9302 3790  
Kelvin Leong

A\$ 301.74

A\$ 247,838.69

**WATER-BASED MUD REPORT No. 17**

Date	1/01/2006	Depth/TVD	3571 m / 3567 m
Spud Date	16/12/2005	Mud Type	MixSalt-Glydrill
Water Depth	585	Activity	POOH for Wash Out

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Hycalog		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 4x18 /2x28 / 1/32"		30in @650m (650TVD)	2091	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	3303 m	13.375in @1511m (1511TVD)	455	Pump stk/min	107@97%	104@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	902	gal/min
5 in	193 m		2546	Bottoms Up	78.8 min	16634 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	103.4 min	21821 stk
8 in	75 m		730	Circulating Pressure	3800 psi	

**MUD PROPERTIES**

Sample From		Pit@19:00	Active@03:30
Flow Line Temp	°C	33	31
Depth/TVD	m	3571/3567	3511/3507
Mud Weight	lb/gal	10.2@32°C	10.2@25°C
Funnel Viscosity	s/qt	62	65
Rheology Temp	°C	49	49
R600/R300		63/45	64/47
R200/R100		37/27	38/28
R6/R3		8/6	8/6
PV	cP	18	17
YP	lb/100ft²	27	30
10s/10m/30m Gel	lb/100ft²	7/9/11	7/10/12
API Fluid Loss	cc/30 min	3.6	3.9
HTHP FL Temp	cc/30 min	12@121°C	11.6@121°C
Cake API/HTHP	1/32"	1/1	1/1
Solids	%Vol	10.5	10.5
Oil/Water	%Vol	/89.5	/89.5
Sand	%Vol	1.25	1.3
MBT	lb/bbl	6	5
pH		9	8.5
Alkal Mud (Pm)		0.2	0.3
Pf/Mf		0.04/0.5	0.05/0.7
Chlorides	mg/l	82000	82000
Hardness Ca	mg/l	200	220
KCl	% wt	7	7
PHPA	ppb	1	1
Glycol	% Vol	3	3
Sulphite	ppm	25	100
NaCl	% wt	8	8

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DEFOAM A	5 GA CN	1.00
DUO-VIS	25 KG BG	8.00
GLUTE 25	25 LT CN	2.00
POLYPAC UL	25 KG BG	8.00
POTASSIUM HYDROXIDE	25 KG CN	4.00
KCl BB	1 MT BG	6.00
POLY PLUS DRY	25 KG BG	12.00
GLYDRIL LC	55 GA DM	12.00
SALT	1 MT BG	5.00

SOLIDS EQUIP	Size	Hr
Shaker 1	145,165,120,165	20
Shaker 2	180,180,84,120	20
Shaker 3	165,165,120,120	20
BEM650	165,165,120,120	20
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Maintained volume and programmed properties by adding unweighted premix.  
Replaced damaged shaker screens with patched screens.

**REMARKS**

Drilled ahead to 3571 m. Pressure drop indicated washout in drill string. Pulling out of hole to investigate.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	2.2/ 25.	np/na Values	0.485/0.429
Drilling	19	Water Added	405	KCl	2.6/ 23.5	kp/ka (lb•s^n/100ft²)	2.326/3.180
Tripping	5	Mud Received	0	Low Gravity	3/ 27.	Bit Loss (psi / %)	158 / 1
Non-Productive Tim		Dumped	0	Bentonite	.4/ 4.	Bit HHP (hhp / HSI)	83 / 1
Condition Mud		Shakers	140	Drill Solids	2/ 18.	Bit Jet Vel (m/s)	40
Reaming		Desilter & Desander	0	Weight Material	2.7/ 39.8	Ann. Vel DP (m/min)	53.88
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	78.3
		Left in Hole	0	Inert/React	2.6597	Crit Vel DP (m/min)	96
		Other	0	Average SG	3.36	Crit Vel DC (m/min)	111
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	.8/ 4.	ECD @ 3571 (lb/gal)	10.4

**M-I ENGR / PHONE**

Jasdeep Singh 08-9302 3790  
Kelvin Leong

**RIG PHONE****WAREHOUSE PHONE****DAILY COST**

A\$ 20,198.73

**CUMULATIVE COST**

A\$ 268,037.42



## WATER-BASED MUD REPORT No. 18

Date	2/01/2006	Depth/TVD	3571 m / 3567 m
Spud Date	16/12/2005	Mud Type	MixSalt-Glydrill
Water Depth	585	Activity	P/O for MWD Tools

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size	12.25 in Smith	Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles	3x18 / 1/32"	30in @650m (650TVD)	2114.2(Tot)/1596.2(Bit)	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	2220 m	13.375in @1511m (1511TVD)	374.8	Pump stk/min	85@97%	85@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	727 gal/min	
5 in	193 m		1971	Bottoms Up	71 min	12073 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	93.6 min	15904 stk
8 in	75 m		730	Circulating Pressure	2900 psi	

## MUD PROPERTIES

Mud Properties		FL@20:15	Active@03:30
Sample From			
Flow Line Temp	°C	30	
Depth/TVD	m	3571/3567	3571/3567
Mud Weight	lb/gal	10.2@30°C	10.2@25°C
Funnel Viscosity	s/qt	66	65
Rheology Temp	°C	49	49
R600/R300		65/48	61/44
R200/R100		41/30	36/26
R6/R3		8/6	7/5
PV	cP	17	17
YP	lb/100ft²	31	27
10s/10m/30m Gel	lb/100ft²	7/9/11	7/9/11
API Fluid Loss	cc/30 min	3.6	3.5
HTHP FL Temp	cc/30 min	11.8@121°C	11.6@121°C
Cake API/HTHP	1/32"	1/1	1/1
Solids	%Vol	10.5	10.5
Oil/Water	%Vol	/89.5	/89.5
Sand	%Vol	1	1
MBT	lb/bbl	7	7.5
pH		8.5	9
Alkal Mud (Pm)		0	0.2
Pf/Mf		0.02/0.5	0.05/0.7
Chlorides	mg/l	82000	83000
Hardness Ca	mg/l	240	200
KCl	% wt	7	7
PHPA	ppb	1	1
Glycol	% Vol	3	3
Sulphite	ppm	25	100
NaCl	% wt	8	8

### PRODUCTS USED LAST 24 HRS

[illegible]

SOLIDS EQUIP	
1	1000000
2	1000000
3	1000000
4	1000000
5	1000000
6	1000000
7	1000000
8	1000000
9	1000000
10	1000000
11	1000000
12	1000000
13	1000000
14	1000000
15	1000000
16	1000000
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89	1000000
90	1000000
91	1000000
92	1000000
93	1000000
94	1000000
95	1000000
96	1000000
97	1000000
98	1000000
99	1000000
100	1000000

SOLIDS EQUIP.	SIZE	TN
Shaker 1	145,165,84,84	6
Shaker 2	180,180,84,84	6
Shaker 3	165,165,84,84	6
BEM650	165,165,120,120	6
D-Sander		0
D-Silter		0

## MUD PROPERTY SPECIFICATIONS

MODIFIER PROPERTY SPECIFICATIONS	
Weight	9.6-10
Viscosity	40-60
Filtrate	6

## REMARKS AND TREATMENT

Screened down front screens on shakers 1,2,3 to 84 mesh for start up with col mud. Maintained programmed properties and active volume with unweighted premix. Took 8 x 145 new screens from diamond.

## REMARKS

RIH to 2134m. Reamed down to 2593m. POH dt MWD tool failure.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	2.2/ 25.	np/na Values	0.437/0.459
Drilling		Water Added	0	KCl	2.6/ 23.5	kp/ka (lb*s^n/100ft²)	3.348/3.028
Tripping	21	Mud Received	0	Low Gravity	3./ 27.	Bit Loss (psi / %)	893 / 1
Non-Productive Tim		Dumped	0	Bentonite	.6/ 5.1	Bit HHP (hhp / HSI)	379 / 1
Condition Mud		Shakers	57	Drill Solids	1.8/ 16.8	Bit Jet Vel (m/s)	95
Reaming	3	Desilter & Desander	0	Weight Material	2.7/ 39.8	Ann. Vel DP (m/min)	43.43
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	63.11
		Left in Hole	0	Inert/React	2.1369	Crit Vel DP (m/min)	101
		Other	0	Average SG	3.36	Crit Vel DC (m/min)	118
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	.4/ 6.3	ECD @ 2488 (lb/gal)	10.38

M-I ENGR / PHONE

RIG PHONE

**WAREHOUSE PHONE**

**DAILY COST**

**CUMULATIVE COST**

Jasdeep Singh 08-9302 3790  
Kelvin Leong

A\$ 0.00

A\$ 268,037.42

## WATER-BASED MUD REPORT No. 19

<b>Date</b>	<b>3/01/2006</b>	<b>Depth/TVD</b>	<b>3571 m / 3567 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>MixSalt-Glydrill</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>WOW</b>

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY				CASING		MUD VOLUME (bbl)		CIRCULATION DATA			
Bit Size 12.25 in Smith		Surface		Hole		Pump Make		NATIONAL 12P-160		NATIONAL 12P-160	
Nozzles 3x18 / 1/32"		30in @650m (650TVD)		2127(Tot)/1141.8(Bit)		Pump Size		6 X 12.in		6 X 12.in	
Drill Pipe Size Length		Intermediate		Active Pits		Pump Cap		4.274 gal/stk		4.274 gal/stk	
5 in 1235 m		13.375in @1511m (1511TVD)		413		Pump stk/min		85@97%		85@97%	
Drill Pipe Size Length		Intermediate		Total Circulating Vol		Flow Rate		727 gal/min			
5 in 138 m				1554.8		Bottoms Up		48.1 min		8171 stk	
Drill Collar Size Length		Production or Liner		In Storage		Total Circ Time		68.8 min		11694 stk	
8 in 138 m				660		Circulating Pressure		2900 psi			
MUD PROPERTIES						PRODUCTS USED LAST 24 HRS					
Sample From		Active@21:50		Active@03:00		Products		Size		Amt	
Flow Line Temp °C											
Depth/TVD m		3571/3567		3571/3567							
Mud Weight lb/gal		10.15@20°C		10.2@25°C							
Funnel Viscosity s/qt		57		66							
Rheology Temp °C		49		49							
R600/R300		59/43		60/44							
R200/R100		37/27		36/26							
R6/R3		7/5		7/6							
PV cP		16		16							
YP lb/100ft²		27		28							
10s/10m/30m Gel lb/100ft²		6/8/12		6/9/11							
API Fluid Loss cc/30 min		3.8		3.7							
HTHP FL Temp cc/30 min		11.6@121°C		11.6@121°C							
Cake API/HTHP 1/32"		1/1		1/1							
Solids %Vol		10.5		10.5							
Oil/Water %Vol		/89.5		/89.5							
Sand %Vol		1		1							
MBT lb/bbl		7.5		7.5							
pH		8.5		8.5							
Alkal Mud (Pm)		0.35		0.3							
Pf/Mf		0.06/0.7		0.05/0.8							
Chlorides mg/l		78000		81000							
Hardness Ca mg/l		200		200							
KCl % wt		7		7							
PHPA ppb		1		1							
Glycol % Vol		3		3							
Sulphite ppm		25		25							
NaCl % wt		8		8							
REMARKS AND TREATMENT						REMARKS					
Changed front screens on shakers 1,2,3 to 84 mesh for startup circulation to minimize mud losses due to cold mud.						Pulled out to casing shoe. Pressure tested pump manifold to 4200 psi. Continued pulling out of hole. Made up new BHA, RIH to casing shoe, slip and cut drillline and WOW.					
TIME DISTR		Last 24 Hrs		MUD VOL ACCTG (bbl)		SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS			
Rig Up/Service		2		Oil Added 0		NaCl 2./ 22.9		np/na Values		0.456/0.481	
Drilling				Water Added 0		KCl 2.6/ 23.5		kp/ka (lb•s^n/100ft²)		2.664/2.435	
Tripping		18.5		Mud Received 0		Low Gravity 3.5/ 31.8		Bit Loss (psi / %)		889 / 1	
Non-Productive Tim				Dumped 0		Bentonite .6/ 5.1		Bit HHP (hhp / HSI)		377 / 1	
Wait on Weather		3.5		Shakers 19		Drill Solids 2.4/ 21.7		Bit Jet Vel (m/s)		95	
Reaming				Desilter & Desander 0		Weight Material 2.4/ 35.1		Ann. Vel DP (m/min)		42.06	
				Formation 0		Chemical Conc - / 5.		Ann. Vel DC (m/min)		60.26	
				Left in Hole 0		Inert/React 2.5706		Crit Vel DP (m/min)		92	
				Other 0		Average SG 3.25		Crit Vel DC (m/min)		109	
				Sweeps/Displacement 0		Carb/BiCarb (m mole/L) 1.2/ 19.		ECD @ 1511 (lb/gal)		10.3	
M-I ENGR / PHONE				RIG PHONE		WAREHOUSE PHONE		DAILY COST		CUMULATIVE COST	
Eladio Melendez 08-9302 3790								AS 0.00		AS 268,037.42	
Kelvin Leong											

## WATER-BASED MUD REPORT No. 20

<b>Date</b>	<b>4/01/2006</b>	<b>Depth/TVD</b>	<b>3619 m / 3616 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>MixSalt-Glydrill</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>Drilling</b>

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size	12.25 in Smith	Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles	3x18 / 1/32"	30in @650m (650TVD)	2104.9	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	3343 m	13.375in @1511m (1511TVD)	410.1	Pump stk/min	85@97%	85@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	727 gal/min	
5 in	138 m		2515	Bottoms Up	96.6 min	16423 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	124.3 min	21133 stk
8 in	138 m		570	Circulating Pressure	2900 psi	

## MUD PROPERTIES

Sample From		FL@21:20	Active@03:00
Flow Line Temp	°C	30	
Depth/TVD	m	3576/3572	3571/3567
Mud Weight	lb/gal	10.15@28°C	10.1@25°C
Funnel Viscosity	s/qt	64	59
Rheology Temp	°C	49	49
R600/R300		67/50	57/42
R200/R100		43/30	35/25
R6/R3		9/7	7/5
PV	cP	17	15
YP	lb/100ft²	33	27
10s/10m/30m Gel	lb/100ft²	8/11/15	5/8/10
API Fluid Loss	cc/30 min	3.6	3.5
HTHP FL Temp	cc/30 min	11.0@121°C	11.5@121°C
Cake API/HTHP	1/32"	1/1	1/1
Solids	%Vol	10.5	10.5
Oil/Water	%Vol	/89.5	/89.5
Sand	%Vol	1	1
MBT	lb/bbl	7.5	7.5
pH		9	8.5
Alkal Mud (Pm)		0.4	0.3
Pf/Mf		0.08/0.7	0.05/0.7
Chlorides	mg/l	79000	80000
Hardness Ca	mg/l	200	200
KCl	% wt	7	7
PHPA	ppb	1	1
Glycol	% Vol	3	3
Sulphite	ppm		25
NaCl	% wt	8	8

### PRODUCTS USED LAST 24 HRS

[illegible]

SOLIDS EQUIP	
1	1000000
2	1000000
3	1000000
4	1000000
5	1000000
6	1000000
7	1000000
8	1000000
9	1000000
10	1000000
11	1000000
12	1000000
13	1000000
14	1000000
15	1000000
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92	1000000
93	1000000
94	1000000
95	1000000
96	1000000
97	1000000
98	1000000
99	1000000
100	1000000

Shaker	165,165,165,145	15
Shaker 2	145,145,165,120	15
Shaker 3	145,145,120,120	15
BEM650	165,165,120,120	15
D-Sander		0
D-Silter		0

## MUD PROPERTY SPECIFICATIONS

MOISTURE PROPERTIES OF EMULSIONS	
Weight	9.6-10
Viscosity	40-60
Filtrate	6

## REMARKS AND TREATMENT

Bled new premix into active to maintain active volume. Added Duovis and Caustic Potash to the active to adjust flow properties and PH respectively. Once mud temperature increased upgraded shaker screens to finer mesh old 120 and 165 to minimize solids build up.

## REMARKS

Continued WOW. RIH and drilled ahead to 3619 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	2.1/ 23.4	np/na Values	0.422/0.415
Drilling	15	Water Added	0	KCl	2.6/ 23.5	kp/ka (lb•s•n/100ft²)	3.833/3.795
Tripping	3	Mud Received	0	Low Gravity	3.5/ 31.4	Bit Loss (psi / %)	889 / 1
Non-Productive Tim		Dumped	0	Bentonite	.6/ 5.1	Bit HHP (hhp / HSI)	377 / 1
Wait on Weather	6	Shakers	131	Drill Solids	2.3/ 21.3	Bit Jet Vel (m/s)	95
		Desilter & Desander	0	Weight Material	2.4/ 34.9	Ann. Vel DP (m/min)	43.43
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	63.11
		Left in Hole	0	Inert/React	2.5244	Crit Vel DP (m/min)	104
		Other	0	Average SG	3.25	Crit Vel DC (m/min)	120
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	1.6/ 8.	ECD @ 3619 (lb/gal)	10.36

## M-I ENGR / PHONE

Eladio Melendez 08-9302 3790  
Kelvin Leong

## RIG PHONE

**WAREHOUSE PHONE**

**DAILY COST**

A\$ 5,829.91

**CUMULATIVE COST**

A\$ 273,867.33

## WATER-BASED MUD REPORT No. 21

<b>Date</b>	<b>5/01/2006</b>	<b>Depth/TVD</b>	<b>3697 m / 3693 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>MixSalt-Glydrill</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>Drilling</b>

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size	12.25 in Smith	Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles	3x18 / 1/32"	30in @650m (650TVD)	2140.5	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	3421 m	13.375in @1511m (1511TVD)	434.5	Pump stk/min	85@97%	85@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	727 gal/min	
5 in	138 m		2575	Bottoms Up	98.4 min	16729 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	127.3 min	21645 stk
8 in	138 m		370	Circulating Pressure	2900 psi	

MUD PROPERTIES			
Sample From		Pit@22:30	Active@03:00
Flow Line Temp	°C	32	32
Depth/TVD	m	3661/3657	3628/3624
Mud Weight	lb/gal	10.15@25°C	10.2@25°C
Funnel Viscosity	s/qt	61	64
Rheology Temp	°C	49	49
R600/R300		62/46	64/47
R200/R100		39/28	39/29
R6/R3		9/6	9/7
PV	cP	16	17
YP	lb/100ft²	30	30
10s/10m/30m Gel	lb/100ft²	8/12/15	7/11/13
API Fluid Loss	cc/30 min	3.6	3.8
HTHP FL Temp	cc/30 min	11@121°C	11.2@121°C
Cake API/HTHP	1/32"	1/1	1/1
Solids	%Vol	10.5	10.5
Oil/Water	%Vol	/89.5	/89.5
Sand	%Vol	0.8	1
MBT	lb/bbl	7.5	5
pH		9	9
Alkal Mud (Pm)		0.3	0.3
Pf/Mf		0.06/0.7	0.05/0.8
Chlorides	mg/l	79000	82000
Hardness Ca	mg/l	200	200
KCl	% wt	7	7
PHPA	ppb	1	1
Glycol	% Vol	3	3
Sulphite	ppm		100
NaCl	% wt	8	8

[illegible]

<b>SOLIDS EQUIP</b>	<b>Size</b>	<b>Hr</b>
Shaker 1	230,230,165,165	0
Shaker 2	230,230,230,165	0
Shaker 3	120,120,120,120	0
BEM650	200,200,165,165	0
D-Sander		0
D-Silter		12

MUD PROPERTY SPECIFICATIONS	
Weight	9.6-10
Viscosity	40-60
Filtrate	6

## REMARKS AND TREATMENT

Added unweighted premix to maintain active volume. Used 4 x 120 new mesh screens from MI stock on shaker 3. Upgraded shaker 1,2&4 to 200 and 230 screens to minimize LGS build up. Also run Desilter continuously to control LGS.

## REMARKS

Continued to drill to 3697 m at report time.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	2.1/ 23.4	np/na Values	0.431/0.439
Drilling	24	Water Added	0	KCl	2.6/ 23.5	kp/ka (lb*s^n/100ft²)	3.346/3.127
Tripping		Mud Received	0	Low Gravity	3.5/ 31.4	Bit Loss (psi / %)	889 / 1
Non-Productive Tim		Dumped	0	Bentonite	.6/ 5.1	Bit HHP (hhp / HSI)	377 / 1
		Shakers	90	Drill Solids	2.3/ 21.3	Bit Jet Vel (m/s)	95
		Desilter & Desander	50	Weight Material	2.4/ 34.9	Ann. Vel DP (m/min)	43.43
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	63.11
		Left in Hole	0	Inert/React	2.5244	Crit Vel DP (m/min)	98
		Other	0	Average SG	3.25	Crit Vel DC (m/min)	114
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	1.2/ 6.	ECD @ 3697 (lb/gal)	10.34

M-I ENGR / PHONE		RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Eladio Melendez 08-9302 3790				A\$ 0.00	A\$ 273,867.33
Kelvin Leong					

## WATER-BASED MUD REPORT No. 22

<b>Date</b>	<b>6/01/2006</b>	<b>Depth/TVD</b>	<b>3758 m / 3754 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>MixSalt-Glydrill</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>Circulating</b>

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size	12.25 in Smith	Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles	3x18 / 1/32"	30in @650m (650TVD)	2168.4	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	4.274 gal/stk	4.274 gal/stk
5 in	3482 m	13.375in @1511m (1511TVD)	469.6	Pump stk/min	85@97%	85@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	727 gal/min	
5 in	138 m		2638	Bottoms Up	99.8 min	16967 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	130.3 min	22152 stk
8 in	138 m		110	Circulating Pressure	2900 psi	

## MUD PROPERTIES

Sample From	Pit@21:30	Active@03:30
Flow Line Temp °C	32	31
Depth/TVD m	3752/3752	3713/3709
Mud Weight lb/gal	10.15@25°C	10.1@25°C
Funnel Viscosity s/qt	59	58
Rheology Temp °C	49	49
R600/R300	60/45	60/45
R200/R100	39/28	37/27
R6/R3	9/6	8/6
PV cP	15	15
YP lb/100ft²	30	30
10s/10m/30m Gel lb/100ft²	7/11/15	7/10/12
API Fluid Loss cc/30 min	3.8	3.8
HTHP FL Temp cc/30 min	11@121°C	11@121°C
Cake API/HTHP 1/32"	1/1	1/1
Solids %Vol	10.5	10.5
Oil/Water %Vol	/89.5	/89.5
Sand %Vol	0.7	0.75
MBT lb/bbl	5	5
pH	9	9
Alkal Mud (Pm)	0.3	0.2
Pf/Mf	0.06/0.8	0.05/0.75
Chlorides mg/l	79000	80000
Hardness Ca mg/l	240	240
KCl % wt	7	7
PHPA ppb	0.9	1
Glycol % Vol	2.8	3
Sulphite ppm	50	25
NaCl % wt	8	8

### PRODUCTS USED LAST 24 HRS

[illegible]**SOLIDS EQUIP**

Shaker	230,165,165,120	24
Shaker 2	230,230,200,200	24
Shaker 3	120,120,120,120	24
BEM650	200,200,165,165	24
D-Sander		0
D-Silter		0

## MUD PROPERTY SPECIFICATIONS

MOISTURE PROPERTIES OF EMULSIONS	
Weight	9.6-10
Viscosity	40-60
Filtrate	6

## REMARKS AND TREATMENT

Ran desilter continuously to minimise LGS build up. Used 4 new 200 mesh screens from Diamond stock. Backloaded 78T Bayrite and 16T Bentonite.

## REMARKS

Drilled to TD 3758 m and at present circulating hole prior to Pooh.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	2.1/ 23.4	np/na Values	0.415/0.439
Drilling	24	Water Added	0	KCl	2.6/ 23.5	kp/ka (lb•s"/100ft²)	3.608/3.127
Tripping		Mud Received	0	Low Gravity	3.5/ 31.4	Bit Loss (psi / %)	889 / 1
Non-Productive Tim		Dumped	0	Bentonite	.3/ 2.3	Bit HHP (hhp / HSI)	377 / 1
		Shakers	134	Drill Solids	2.6/ 24.1	Bit Jet Vel (m/s)	95
		Desilter & Desander	63	Weight Material	2.4/ 34.9	Ann. Vel DP (m/min)	43.43
		Formation	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	63.11
		Left in Hole	0	Inert/React	4.2866	Crit Vel DP (m/min)	98
		Other	0	Average SG	3.25	Crit Vel DC (m/min)	114
		Sweeps/Displacement	0	Carb/BiCarb (m mole/L)	1.2/ 6.	ECD @ 3758 (lb/gal)	10.34

M-I ENGR / PHONE

Eladio Melendez 08-9302 3790  
Kelvin Leong

RIG PHONE

**WAREHOUSE PHONE**

**DAILY COST**

A\$ 301.74

**CUMULATIVE COST**

A\$ 274,169.07



# WATER-BASED MUD REPORT No. 23

Date	7/01/2006	Depth/TVD	3758 m / 3754 m
Spud Date	16/12/2005	Mud Type	MixSalt-Glydrill
Water Depth	585	Activity	Logging

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size	12.25 in Smith	Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles	3x18 / 1/32"	30in @650m (650TVD)	2274.1	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
5 in	m	13.375in @1511m (1511TVD)	363.9	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
5 in	138 m		363.9	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
8 in	138 m		110	Circulating Pressure		

MUD PROPERTIES		
Sample From		Pit@20:00
Flow Line Temp	°C	Active@09:00
Depth/TVD	m	3758/3754
Mud Weight	lb/gal	10.15@20°C
Funnel Viscosity	s/qt	59
Rheology Temp	°C	49
R600/R300		60/44
R200/R100		38/28
R6/R3		8/6
PV	cP	16
YP	lb/100ft²	28
10s/10m/30m Gel	lb/100ft²	7/10/15
API Fluid Loss	cc/30 min	3.6
HTHP FL Temp	cc/30 min	11@121°C
Cake API/HTHP	1/32"	1/1
Solids	%Vol	10.5
Oil/Water	%Vol	/89.5
Sand	%Vol	0.7
MBT	lb/bbl	5
pH		9
Alkal Mud (Pm)		0.35
Pf/Mf		0.04/0.7
Chlorides	mg/l	79000
Hardness Ca	mg/l	240
KCl	% wt	6.8
PHPA	ppb	1
Glycol	% Vol	2.7
Sulphite	ppm	75
NaCl	% wt	8

[illegible]

<b>SOLIDS EQUIP</b>	<b>Size</b>	<b>Hr</b>
Shaker 1	230,165,165,120	0
Shaker 2	230,230,200,200	0
Shaker 3	120,120,120,120	0
BEM650	200,200,165,165	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS	
Weight	9.6-10
Viscosity	40-60
Filtrate	6

## REMARKS AND TREATMENT

Bled premix to the active as required for pit levels.

## REMARKS

Circulated hole clean, Pooh to 3668 m, re-logged interval to 3582 m (mwd tool 22 m above bit), repaired broken hose and POOH. R/u Wireline tools and run logs as per programm.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	1	Oil Added	0	NaCl	2.1/ 23.4	np/na Values	
Drilling		Water Added	0	KCl	2.6/ 23.5	kp/ka (lb*s^n/100ft²)	
Tripping	13	Mud Received	0	Low Gravity	3.5/ 31.4	Bit Loss (psi / %)	
Non-Productive Tim		Other	0	Bentonite	.3/ 2.3	Bit HHP (hhp / HSI)	
Condition Hole	2	Sweeps/Displacement	0	Drill Solids	2.6/ 24.1	Bit Jet Vel (m/s)	
Wireline Logs	3	Dumped	0	Weight Material	2.4/ 34.9	Ann. Vel DP (m/min)	
Testing	5	Shakers	0	Chemical Conc	- / 5.	Ann. Vel DC (m/min)	
		Desilter & Desander	0	Inert/React	4.2866	Crit Vel DP (m/min)	
		Formation	0	Average SG	3.25	Crit Vel DC (m/min)	
		Left in Hole	0	Carb/BiCarb (m mole/L)	8/ 4.		

M-I ENGR / PHONE		RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Eladio Melendez	08-9302 3790			A\$ 0.00	A\$ 274,169.07
Kelvin Leong					

# WATER-BASED MUD REPORT No. 24

<b>Date</b>	<b>8/01/2006</b>	<b>Depth/TVD</b>	<b>3758 m / 3754 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>MixSalt-Glydrill</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>RIH</b>

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Paul Baker/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

[illegible]

**WATER-BASED MUD REPORT No. 25**

Date	9/01/2006	Depth/TVD	3758 m / 3754 m
Spud Date	16/12/2005	Mud Type	MixSalt-Glydrill
Water Depth	585	Activity	Circulating

**Operator :** Nexus Energy  
**Report For :** Ron King/Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Ray Breaud/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Smith		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 3x18 / 1/32"		30in @650m (650TVD)	2274.1	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
5 in	m	13.375in @1511m (1511TVD)	358.9	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate		
5 in	m		358.9	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
8 in	m		110	Circulating Pressure		

**MUD PROPERTIES**

Sample From	Pit	Active@09:00
Flow Line Temp °C		
Depth/TVD m	3758/3754	3758/3754
Mud Weight lb/gal	10.2	10.1@20°C
Funnel Viscosity s/qt	100+	56
Rheology Temp °C		49
R600/R300		60/45
R200/R100		37/27
R6/R3		8/6
PV cP		15
YP lb/100ft²		30
10s/10m/30m Gel lb/100ft²		7/10/12
API Fluid Loss cc/30 min		3.6
HTHP FL Temp cc/30 min		11@121°C
Cake API/HTHP 1/32"		1/1
Solids %Vol		10.5
Oil/Water %Vol		/89.5
Sand %Vol		0.5
MBT lb/bbl		5
pH		9
Alkal Mud (Pm)		0.3
Pf/Mf		0.05/0.7
Chlorides mg/l		79000
Hardness Ca mg/l		220
KCl % wt		6.8
PHPA ppb		1
Glycol % Vol		2.7
Sulphite ppm		25
NaCl % wt		8

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
DUO-VIS	25 KG BG	4.00
GLUTE 25	25 LT CN	1.00
OS-1	25 KG BG	1.00
POTASSIUM HYDROXIDE	25 KG CN	1.00
MI BAR (Bulk)	1 MT BG	3.00
CONQOR 303A	55 GA DM	1.00

SOLIDS EQUIP	Size	Hr
Shaker 1	230,165,165,120	0
Shaker 2	230,230,89,89	0
Shaker 3	120,120,120,120	0
BEM650	200,200,120,120	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Made up and pumped another batych of 60 bbl hi vis pill. Displaced casing with RIH to 3750 m. Circulated bottoms up. Cemented with 102 bbl slurry from 3750 m to 3560 m. Pulled up to 2965 m and spot 60 bbl hi vis pill. Set second cement plug at 2865 m to 2745 m. Pulled out to 1650 m and spot 60 bbl hi vis pill. Set third cement plug at 1550 m to 1430 m. Circulated casing clean, filling with inhibited mud.

**REMARKS**

RIH to 3750 m. Circulated bottoms up. Cemented with 102 bbl slurry from 3750 m to 3560 m. Pulled up to 2965 m and spot 60 bbl hi vis pill. Set second cement plug at 2865 m to 2745 m. Pulled out to 1650 m and spot 60 bbl hi vis pill. Set third cement plug at 1550 m to 1430 m. Circulated casing clean, filling with inhibited mud.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	-1.5/-19.7	np/na	Values
Drilling		Water Added	0	KCl	2.9/ 26.3	kp/ka	(lb•s^n/100ft²)
Tripping	14	Mud Received	0	Low Gravity	-16.4/-148.9	Bit Loss	(psi / %)
Non-Productive Tim		Other	0	Bentonite	./ .	Bit HHP	(hhp / HSI)
Condition Hole	6	Sweeps/Displacement	0	Drill Solids	-19./ -173.2	Bit Jet Vel	(m/s)
Cementing	4	Dumped	0	Weight Material	15./ 220.9	Ann. Vel DP	(m/min)
		Shakers	11	Chemical Conc	- / 5.	Ann. Vel DC	(m/min)
		Desilter & Desander	0	Inert/React	-	Crit Vel DP	(m/min)
		Formation	0	Average SG	-15.4	Crit Vel DC	(m/min)
		Left in Hole	0	Carb/BiCarb (m mole/L)	./ -1		
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Eladio Melendez		08-9302 3790				A\$ 3,004.50	A\$ 277,777.63
Kelvin Leong							



# WATER-BASED MUD REPORT No. 26

<b>Date</b>	<b>10/01/2006</b>	<b>Depth/TVD</b>	<b>3758 m / 3754 m</b>
<b>Spud Date</b>	<b>16/12/2005</b>	<b>Mud Type</b>	<b>MixSalt-Glydrill</b>
<b>Water Depth</b>	<b>585</b>	<b>Activity</b>	<b>P &amp; A</b>

**Operator :** Nexus Energy  
**Report For :** Simon Rodda /Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Ray Breaud/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

[illegible]

**WATER-BASED MUD REPORT No. 27**

Date	11/01/2006	Depth/TVD	3758 m / 3754 m
Spud Date	16/12/2005	Mud Type	SW
Water Depth	585	Activity	P&A

**Operator :** Nexus Energy  
**Report For :** Simon Rodda /Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Ray Breaud/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 1/32"		30in @650m (650TVD)	2274.1	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
5 in	m	13.375in @1511m (1511TVD)	-2274.1	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
5 in	m		-2274.1	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
8 in	m			Circulating Pressure		

**MUD PROPERTIES**

Sample From		
Flow Line Temp	°C	
Depth/TVD	m	
Mud Weight	lb/gal	
Funnel Viscosity	s/qt	
Rheology Temp	°C	
R600/R300		
R200/R100		
R6/R3		
PV	cP	
YP	lb/100ft <sup>2</sup>	
10s/10m/30m Gel	lb/100ft <sup>2</sup>	
API Fluid Loss	cc/30 min	
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	
Solids	%Vol	
Oil/Water	%Vol	
Sand	%Vol	
MBT	lb/bbl	
pH		
Alkal Mud (Pm)		
Pf/Mf		
Chlorides	mg/l	
Hardness Ca	mg/l	
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt
MI BAR (Bulk)	1 MT BG	24.00
MI Gel (Bulk)	1 MT BG	22.20

SOLIDS EQUIP	Size	Hr
Shaker 1	230,165,165,120	0
Shaker 2	230,230,89,89	0
Shaker 3	120,120,120,120	0
BEM650	200,200,120,120	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

No mud treatment today. Dumped bulk materials: 22.2MT Gel Bulk and 24MT Barite in preparation for rig move.

**REMARKS**

Continued to pull out Riser-BOP.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	-1.5/	np/na	Values
Drilling		Water Added	0	KCl	/	kp/ka	(lb•s <sup>n</sup> /100ft <sup>2</sup> )
Tripping		Mud Received	0	Low Gravity	/	Bit Loss	(psi / %)
Non-Productive Tim		Other	0	Bentonite	/	Bit HHP	(hhp / HSI)
Condition Hole		Sweeps/Displacement	0	Drill Solids	/	Bit Jet Vel	(m/s)
Cementing		Dumped	0	Weight Material	/	Ann. Vel DP	(m/min)
P&A		Shakers	0	Chemical Conc	- /	Ann. Vel DC	(m/min)
		Desilter & Desander	0	Inert/React		Crit Vel DP	(m/min)
		Formation	0	Average SG		Crit Vel DC	(m/min)
		Left in Hole	0	Carb/BiCarb (m mole/L)	/		
<b>M-I ENGR / PHONE</b>		<b>RIG PHONE</b>		<b>WAREHOUSE PHONE</b>		<b>DAILY COST</b>	<b>CUMULATIVE COST</b>
Eladio Melendez Glen Sharpe		08-9302 3790				A\$ 17,077.61	A\$ 294,855.24

# WATER-BASED MUD REPORT No. 28

Date	12/01/2006	Depth/TVD	3758 m / 3754 m
Spud Date	16/12/2005	Mud Type	SW
Water Depth	585	Activity	P&A

**Operator :** Nexus Energy  
**Report For :** Simon Rodda /Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Ray Breaud/Ken Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 1/32"		30in @650m (650TVD)	2274.1	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
5 in	m	13.375in @1511m (1511TVD)	-2274.1	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
5 in	m		-2274.1	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
8 in	m			Circulating Pressure		

MUD PROPERTIES		
Sample From		
Flow Line Temp	°C	
Depth/TVD	m	
Mud Weight	lb/gal	
Funnel Viscosity	s/qt	
Rheology Temp	°C	
R600/R300		
R200/R100		
R6/R3		
PV	cP	
YP	lb/100ft²	
10s/10m/30m Gel	lb/100ft²	
API Fluid Loss	cc/30 min	
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	
Solids	%Vol	
Oil/Water	%Vol	
Sand	%Vol	
MBT	lb/bbl	
pH		
Alkal Mud (Pm)		
Pf/Mf		
Chlorides	mg/l	
Hardness Ca	mg/l	
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

[illegible]

<b>SOLIDS EQUIP</b>	<b>Size</b>	<b>Hr</b>
Shaker 1	230,165,165,120	0
Shaker 2	230,230,89,89	0
Shaker 3	120,120,120,120	0
BEM650	200,200,120,120	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS	
Weight	9.6-10
Viscosity	40-60
Filtrate	6

REMARKS AND TREATMENT		REMARKS	
No mud treatment today.		Continued to pull Riser-BOP. Cut 20" casing and recover welhead. Pepare to retrieve 18 3/4" and 30" housing at report time.	

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	-1.5/	np/na	Values
Drilling		Water Added	0	KCl	/	kp/ka	(lb•s^n/100ft²)
Tripping		Mud Received	0	Low Gravity	/	Bit Loss	(psi / %)
Non-Productive Tim		Other	0	Bentonite	/	Bit HHP	(hhp / HSI)
Condition Hole		Sweeps/Displacement	0	Drill Solids	/	Bit Jet Vel	(m/s)
Cementing		Dumped	0	Weight Material	/	Ann. Vel DP	(m/min)
P&A	24	Shakers	0	Chemical Conc	- /	Ann. Vel DC	(m/min)
		Desilter & Desander	0	Inert/React		Crit Vel DP	(m/min)
		Formation	0	Average SG		Crit Vel DC	(m/min)
		Left in Hole	0	Carb/BiCarb (m mole/L)	/		

M-I ENGR / PHONE		RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Eladio Melendez 08-9302 3790				A\$ 0.00	A\$ 294,855.24
Glen Sharpe					

## WATER-BASED MUD REPORT No. 29

Date	13/01/2006	Depth/TVD	3758 m / 3754 m
Spud Date	16/12/2005	Mud Type	SW
Water Depth	585	Activity	P&A

**Operator :** Nexus Energy  
**Report For :** Simon Rodda /Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Ray Breaud/Ken Williams

Field/Area : VIC/P-56  
Description : Vertical Exploration  
Location : Gippsland Basin  
M-I Well No. : 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 1/32"		30in @650m (650TVD)	2274.1	Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
5 in	m	13.375in @1511m (1511TVD)	-2274.1	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
5 in	m		-2274.1	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
8 in	m			Circulating Pressure		

[illegible]

REMARKS AND TREATMENT		REMARKS	
		Retrieve 18 3/4"-30" housing. Lay down DP and DC. Prepare to pull the Anchors at rpt time.	

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG (bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	-1.5/	np/na Values
Drilling		Water Added	0	KCl	/	kp/ka (lb•s^n/100ft²)
Tripping		Mud Received	0	Low Gravity	/	Bit Loss (psi / %)
Non-Productive Tim		Other	0	Bentonite	/	Bit HHP (hhp / HSI)
Condition Hole		Sweeps/Displacement	0	Drill Solids	/	Bit Jet Vel (m/s)
Cementing		Dumped	0	Weight Material	/	Ann. Vel DP (m/min)
P&A		Shakers	0	Chemical Conc	- /	Ann. Vel DC (m/min)
		Desilter & Desander	0	Inert/React		Crit Vel DP (m/min)
		Formation	0	Average SG		Crit Vel DC (m/min)
		Left in Hole	0	Carb/BiCarb (m mole/L)	/	

M-I ENGR / PHONE		RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Eladio Melendez	08-9302 3790				
Glen Sharpe				A\$ 0.00	A\$ 294,855.24

**WATER-BASED MUD REPORT No. 30**

Date	14/01/2006	Depth/TVD	m / m
Spud Date	16/12/2005	Mud Type	
Water Depth	585	Activity	Pull Anchors

**Operator :** Nexus Energy  
**Report For :** Simon Rodda /Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Ray Breaud/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size in		Surface	Hole	Pump Make	NATIONAL 12P-16C	NATIONAL 12P-16C
Nozzles 1/32"		30in @650m (650TVD)		Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
5 in	m	13.375in @1511m (1511TVD)		Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
5 in	m			Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
8 in	m			Circulating Pressure		

**MUD PROPERTIES**

Sample From		
Flow Line Temp	°C	
Depth/TVD	m	
Mud Weight	lb/gal	
Funnel Viscosity	s/qt	
Rheology Temp	°C	
R600/R300		
R200/R100		
R6/R3		
PV	cP	
YP	lb/100ft <sup>2</sup>	
10s/10m/30m Gel	lb/100ft <sup>2</sup>	
API Fluid Loss	cc/30 min	
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	
Solids	%Vol	
Oil/Water	%Vol	
Sand	%Vol	
MBT	lb/bbl	
pH		
Alkal Mud (Pm)		
Pf/Mf		
Chlorides	mg/l	
Hardness Ca	mg/l	
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt

SOLIDS EQUIP	Size	Hr
Shaker 1	230,165,165,120	0
Shaker 2	230,230,89,89	0
Shaker 3	120,120,120,120	0
BEM650	200,200,120,120	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT**

Clean pits in preparation for the next well.

**REMARKS**

At present pull anchors to move rig.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	-1.5/	np/na	Values
Drilling		Water Added	0	KCl	/	kp/ka	(lb·s <sup>n</sup> /100ft²)
Tripping		Mud Received	0	Low Gravity	/	Bit Loss	(psi / %)
Non-Productive Tim		Other	0	Bentonite	/	Bit HHP	(hhp / HSI)
Condition Hole		Sweeps/Displacement	0	Drill Solids	/	Bit Jet Vel	(m/s)
Cementing		Dumped	0	Weight Material	/	Ann. Vel DP	(m/min)
P&A	24	Shakers	0	Chemical Conc	- /	Ann. Vel DC	(m/min)
		Desilter & Desander	0	Inert/React		Crit Vel DP	(m/min)
		Formation	0	Average SG		Crit Vel DC	(m/min)
		Left in Hole	0	Carb/BiCarb (m mole/L)	/		
M-I ENGR / PHONE		RIG PHONE		WAREHOUSE PHONE		DAILY COST	CUMULATIVE COST
Eladio Melendez		08-9302 3790				A\$ 0.00	A\$ 294,855.24
Glen Sharpe							

**WATER-BASED MUD REPORT No. 31**

Date	15/01/2006	Depth/TVD	m / m
Spud Date	16/12/2005	Mud Type	
Water Depth	585	Activity	Pull Anchors

**Operator :** Nexus Energy  
**Report For :** Simon Rodda /Jeff Webster  
**Well Name :** Culverin-1  
**Contractor :** Diamond Offshore  
**Report For :** Ray Breaud/Ken Williams

**Field/Area :** VIC/P-56  
**Description :** Vertical Exploration  
**Location :** Gippsland Basin  
**M-I Well No. :** 31415

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size in		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 1/32"		30in @650m (650TVD)		Pump Size	6 X 12.in	6 X 12.in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
5 in	m	13.375in @1511m (1511TVD)		Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
5 in	m			Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
8 in	m			Circulating Pressure		

**MUD PROPERTIES**

Sample From		
Flow Line Temp	°C	
Depth/TVD	m	
Mud Weight	lb/gal	
Funnel Viscosity	s/qt	
Rheology Temp	°C	
R600/R300		
R200/R100		
R6/R3		
PV	cP	
YP	lb/100ft <sup>2</sup>	
10s/10m/30m Gel	lb/100ft <sup>2</sup>	
API Fluid Loss	cc/30 min	
HTHP FL Temp	cc/30 min	
Cake API/HTHP	1/32"	
Solids	%Vol	
Oil/Water	%Vol	
Sand	%Vol	
MBT	lb/bbl	
pH		
Alkal Mud (Pm)		
Pf/Mf		
Chlorides	mg/l	
Hardness Ca	mg/l	
KCl	% wt	
PHPA	ppb	
Glycol	% Vol	
Sulphite	ppm	
NaCl	% wt	

**PRODUCTS USED LAST 24 HRS**

Products	Size	Amt

SOLIDS EQUIP	Size	Hr
Shaker 1	230,165,165,120	0
Shaker 2	230,230,89,89	0
Shaker 3	120,120,120,120	0
BEM650	200,200,120,120	0
D-Sander		0
D-Silter		0

**MUD PROPERTY SPECIFICATIONS**

Weight	9.6-10
Viscosity	40-60
Filtrate	6

**REMARKS AND TREATMENT****REMARKS**

Completed pulling anchors. Rig released at 15:00 hrs. Moved off location.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	-1.5/	np/na	Values
Drilling		Water Added	0	KCl	/	kp/ka	(lb•s <sup>n</sup> /100ft <sup>2</sup> )
Tripping		Mud Received	0	Low Gravity	/	Bit Loss	(psi / %)
Non-Productive Tim		Left in Hole	0	Bentonite	/	Bit HHP	(hhp / HSI)
Condition Hole		Other	0	Drill Solids	/	Bit Jet Vel	(m/s)
Cementing		Sweeps/Displacement	0	Weight Material	/	Ann. Vel DP	(m/min)
P&A		Dumped	0	Chemical Conc	- /	Ann. Vel DC	(m/min)
		Shakers	0	Inert/React		Crit Vel DP	(m/min)
		Desilter & Desander	0	Average SG		Crit Vel DC	(m/min)
		Formation	0	Carb/BiCarb (m mole/L)	/		
<b>M-I ENGR / PHONE</b>		<b>RIG PHONE</b>		<b>WAREHOUSE PHONE</b>		<b>DAILY COST</b>	<b>CUMULATIVE COST</b>
Eladio Melendez 08-9302 3790						A\$ 0.00	A\$ 294,855.24
Glen Sharpe							