

**TXU**

# **WELL COMPLETION REPORT**

**Iona-6**

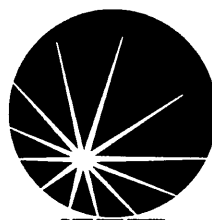
**PPL2**  
**ONSHORE OTWAY BASIN,**  
**VICTORIA**

**VOLUME 1 OF 2**  
**TEXT, TABLES, FIGURES, APPENDICES**  
**& ENCLOSURES 1-3**

**September 2004**

**Copy 1 of 6**

908148 002



**TXU**

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**Iona-6**

**PPL2  
ONSHORE OTWAY BASIN,  
VICTORIA**

**VOLUME 1 OF 2  
TEXT, TABLES, FIGURES, APPENDICES  
& ENCLOSURES 1-3**

*Petroleum Development*

*16 NOV 2004*

**September 2004**

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908148 003

**TXU Gas Storage Pty Ltd**

**PPL 2  
ONSHORE OTWAY BASIN, VICTORIA**

**WELL COMPLETION REPORT**

**Iona 6**

**October 2004**

# VOLUME 1

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- Enclosure 1. Formation Evaluation Log (mudlog) by Geoservices
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- Enclosure 6. Environmentally Corrected Well Logs Measured Depth 1:200  
Nuclear-Resistivity-DSI-Sonic-GR

## 2.0 WELL HISTORY

908148 009

### 2.1 LOCATION DATA

Basin: Otway, onshore western Victoria

Lease: PPL-2

Surface Coordinates: 5 728 761.684 metres north  
677 185.619 metres east

Surface Elevation: Ground Level (GL): 104.5 metres AHD  
Kelly Bushing (KB): 110.5 metres AHD (Datum)  
(All depths relative to KB unless otherwise stated)

Bottom Hole Coordinates: 5 729 138.0 metres north  
676 669.9 metres east

Coordinate system Australian Map Grid 66, Zone 54  
Central Meridian: 141 East

908148 010

**Insert figure 1.1 here**

Figure 1.1 Locality Diagram Iona Field



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**Insert figure 1.2 here**

Figure 1.2 Locality Diagram Iona 6

## 2.2 GENERAL DATA

908148 012

Well Name: Iona 6

Classification: Plugged and Suspended

Operator: TXU Gas Storage Pty Ltd

Property Owner: TXU Gas Storage Pty Ltd

Nearest Town: The coastal township of Port Campbell, approximately 7 km south of the Gas Field.

Nearest Well: Iona Obs 2 located approx. 25m E from surface location.

Final Total Depth: Driller: 1686 m MDKB (1411m TVDKB, 1300.5m TVDSS)  
Logger: 1683.2 m MDKB(1409.1m TVDKB,1298.6m TVDSS)

Spud date: 21:30 hrs on 20 May 2004.

TD reached: 13:40 hrs on 3 June 2004.

Days to Drill: 12.7 days

Rig Released: 2400 hrs, 6 June 2004

Well Status: Plugged and Suspended

## 2.3 WELL SUMMARY

908148 013

Table 2.1 Well Summary

WELL NAME	Iona 6		
DESIGNATION	Plugged and Suspended		
BASIN	Onshore Otway		
OPERATIONS BASE	Upstream Petroleum, Como House, corner Toorak Rd. and Chapel Street, Melbourne		
FIELD OPERATIONS BASE	On site @ Iona , Waarre Rd, Port Campbell, Vic.		
DRILLING CONTRACTOR	Century		
RIG	Rig 18		
KB to GL	6.0 m		
GL to MSL	104.5 m		
TOTAL DEPTH ( M DKB )	1686.0 m MDKB (driller depth)		
RIG MOBILISED	6 May 2004		
SPUD DATE	20 May 2004 @ 21:30 hrs		
17 ½" HOLE SECTION TD Depth/Time	664 m @ 0330 hrs 23 May 2004		
12 1/4" HOLE SECTION TD Depth/Time	1686 m @ 13:40 hrs 3 June 2004		
SPUD TO TOTAL DEPTH TIME	12 Days 16.17 hrs		
SPUD TO WELL SUSPENDED	17 Days 2.5 hrs		
CASING STRINGS	20 "	Conductor	17 m
	13 3/8 "	Surface Casing	664 m
FINAL WELL STATUS	Plugged & Suspended		

## 2.4 CONTRACTORS

Table 2.2 Contractors

908148 014

PROJECT MANAGERS	Upstream Petroleum Pty Ltd
DRILLING	Century
LOCATION SURVEY	Worley
SITE CONSTRUCTION	Timboon Earthmoving
WATER SUPPLY	Onsite water well and dam
FUEL SUPPLY	K&S Agencies
CEMENTING	Halliburton
MUD SYSTEM	
- Drilling Fluids	Baroid
- Solids Control	DFE
MUD LOGGING	Geoservices
ELECTRIC LOGGING	Schlumberger
DRILLING TOOLS	Weatherford
DIRECTIONAL DRILLING	Sperry/Halliburton
GYRO SERVICES	Gyrodata via Halliburton
CASING & TUBING	Marubeni/Sumitomo
WELLHEADS	
- Drilling Spools	- Wood Group
- Xmas Trees	- Wood Group
- Miscellaneous Flanges/cross-overs	- Deer Park Engineering

### **3.0 DRILLING DATA**

#### **3.1 OPERATIONAL SUMMARY**

908148 015

##### **3.1.1 Logistics and Planning**

Upstream Petroleum Pty Ltd managed the drilling of the Iona-6 well on behalf of TXU Gas Storage Pty Ltd as part of the project to enhance reservoir production and injection rates.

Materials and logistics were managed out of the Upstream Melbourne office with the input of the rig site team. Periodic visits to the well site by the materials and logistics coordinator ensured that inventory and service records were managed properly.

Halliburton supplied mud and cement chemicals, from their Cheltenham facility. Directional drilling surveying and Measurement While Drilling ("MWD") equipment was provided by Halliburton from a number of locations, mainly from Perth and Darwin.

The Iona gas field site is set in a rural part of South West Victoria, approximately seven kilometers north of the township of Port Campbell. Two wells, Iona 1 and Iona 2, had commenced production at the site in 1992 and 1994 respectively. Subsequently Iona-3, Iona-4 and Iona-5 were drilled and commenced production/injection in 1999. Iona Obs-1 and Iona Obs-2 were also drilled in 1999 and used as observation wells. The surface locations of the existing wells and the Iona-6 well lie within the security fence of the existing TXU gas plant, which was built in 1999. The overall site area for the TXU gas plant is approximately 0.5 km x 0.6 km.

##### **3.1.2 Site Preparation**

Site construction for Iona-6 commenced in early April 2004. The lease area was on a sloping paddock immediately to the south-west of the Iona Obs-2 drilling pad. A construction contractor was appointed to cut and fill the site with access roads to the east and south of the site. The site sloped away onto the adjoining farmer's property to the northwest meaning there was some risk of waste drilling fluids leaking and causing some environmental impact on the adjoining property. This was addressed through the design of a closed loop mud system where the mud was processed, the solids and contaminants removed and the mud reused. In addition the outside area of the pad and the area surrounding the drilling rig contained drains which collected any liquids from the pad which was stored in a nearby pit. The pad also was constructed with a slight slope to the east so no liquids were spilt onto the adjoining property. Site construction included the installation of a 1.8m x 1.8m x 1.8m deep cellar and 5m of 13 3/8" conductor pipe cemented in place.

Water from a nearby dam was pumped and used in the drilling operation and replenished with a water bore, which is located in the Iona Gas Plant's grounds. Located to the south of the pad was the flare pit, measuring 10m x 3m x 3m. An earthen embankment was constructed around the flare pit.

Rig crew accommodation facilities were provided remote from the site at the Twelve Apostles Motel, approximately 11 kilometers SSW of Iona-6 by road.

A schematic of the overall site showing the location of Iona 6 within the site boundary is shown on Figure 1.2.

### 3.1.3 Mobilisation

Century Rig 18 was mobilised from western Queensland on May 6, 2004 where it had been used to drill a well for Samson

Rig 18 is a National 610-M rig with 2 Caterpillar 3406 TA diesel engines powering the draw-works and Rotary Table through a National URC compound drive group four 600 kW generators powered by four CAT 3412 PCTA diesel engines. The generators were replaced with quiet generators for the duration of the project to meet noise guidelines provided in the environmental management plan.

The rig is a triple rig with a Rudd and Hodgson cantilever type mast and a nominal capacity of 550,000 lbs. The mud pumps consist of two National 8-P-80 Triplex – 8 ½” pumps.

Iona-6 was drilled during May/June 2004.

### 3.1.4 Pre Spud

The Iona-6 pre-spud meeting was held at the Port Campbell Surf Lifesaving Club on May 17, 2004. All key drilling and subsurface personnel were in attendance at the rig site meeting, which focused on lessons learned from Iona Obs-2 and other wells.

### 3.1.5 17 ½” Hole Section

After a full safety briefing with the rig crews, Iona 6 was spudded at 21:30 hrs on May 20, 2004. A 17- ½” hole was drilled using a KCL/PHPA/Polymer fresh water mud system. The PHPA was used to inhibit the reactive clays present within the Tertiary and Late Cretaceous claystones, i.e. in the Gellibrand marl, Pember mudstone and Paaratte Formation.

Drilling proceeded without incident to 664 m. The 13-3/8” casing was run and cemented with a lead slurry of 630 sx class “A” cement (12.5 ppg), followed by a tail slurry of 159 sx class “A” neat at 15.8 ppg, back to surface. The casing head was welded to the casing and the blow out preventers (“BOP’s”) were rigged up and tested to 2000 psi.

### 3.1.6 12 1/4” Hole section

A Formation Integrity Test (“FIT”) was performed 5m below the shoe resulting in a leak off of 10.5 ppg. The kick off assembly was run from the shoe with a tri-cone bit. The 12-1/4” hole was drilled to 976 m building hole angle to 45.3 deg. At this stage the string was pulled and the bit was replaced with a PDC bit for the tangent section of the hole. The hole was drilled to 1008m however the hole angle was dropping to

an extent that the target could have been missed so the string was pulled and a tri-cone bit replaced the PDC bit. The hole was drilled to 1515m where the string began torquing up. A PDC bit was run and the remainder of the section was drilled in rotary mode to TD. Open hole logs were run at TD.

### **3.1.7 Plugging and Suspension**

The well was plugged and suspended with balanced cement plugs set across the Waarre C1 and C2 formation (1645-1475 m) with 427 sxs of class "G" cement, the Skull Creek top (1102-1000 m) with 250 sxs class "G" cement and across the casing shoe (714-604 m) with 275 sxs class "G" cement.

The rig was put on standby at 2400 hrs on June 6, 2004. Pending a go/no-go side track decision.

## **3.2 DAILY OPERATIONS**

### **3.2.1 Daily Drilling Reports**

The details of the daily activities during rig up and drilling operations for the Iona 6 well are presented in the Daily Drilling Reports in Appendix 1.

### **3.2.2 Time Depth curve**

The time-depth curve can be found in figure 3.4.

### **3.2.3 Directional Drilling End of Well Report**

A gyro was run from surface to 630m and the MWD from 630m to total depth. In addition, a gyro was run at total depth as a check on the MWD results. The results are presented in Appendix 2.

### **3.2.4 Directional Drilling**

Iona-6 encountered no angle problems in the vertical 17 ½" section of the well.

The well was kicked-off in the 12-1/4" hole outside the shoe and built to target inclination. The build assembly was very effective with easy slides and good response. This assembly was pulled early in the hope that the following PDC bit would offer higher ROP however it was un-steerable and was pulled after 2 slides. The original build assembly was re-run and drilled through the target before being pulled at 1515m. The motor and the MWD were layed out and the remainder of the hole was drilled with a rotary hold assembly.

### **3.2.5 Iona 6 Time Performance**

Iona 6 was spudded at 21:30 hrs on May 20, 2004, with Century Rig 18. The rig was put on standby at 2400 hrs on June6, 2004.

Table 3.1 and Figure 3.4 illustrates the time performance.

## 3.2.6 Time Analysis

908148 018

Table 3.1 Time Summary

ACTIVITY	HOURS	DAYS
Drilling	169	7.04
Rig Repairs	9	0.38
Surveys	6.5	0.27
Circulate & Condition	15	0.63
Tripping	49	2.04
Casing & Cementing	55.5	2.31
Reaming	6.5	0.27
Wellhead & BOPs	28.5	1.19
Test BOP	12	0.5
Change BHA	17.5	0.73
Slip & Cut Line	1.5	0.06
Logging	18.5	0.77
Laying Down Pipe	7	0.29
Miscellaneous	15	0.63
<b>TOTAL</b>	<b>410.5</b>	<b>17.10</b>



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**Insert figure 3.4 here**

**FIGURE 3.4 – TIME DEPTH CURVE**

### 3.3 Bottom Hole Assembly SUMMARY

908148 020

The BHA's and bit records are detailed in the Directional Drilling report in Appendix 2.

## 3.4 CASING AND CEMENTING REPORT

908148 021

## 3.4.1 17 1/2" Hole Section : 13 3/8" Surface Casing (Surface to 664 m RT)

Table 3.2 13 3/8" Surface Casing Tally

WELL NAME:	Iona 6	DATE RUN:	24/04/2004
ELEVATIONS:	KB: 6.0 m	M.S.L.:	110.5 m T.D.: 664 m
STRING TYPE:	13 3/8" Surface K55	RKB TO TOP OF LAST SPOOL:	6.0 m

## SURFACE CASING &amp; EQUIPMENT RECORD AS RUN FROM TOP TO BOTTOM

Size O.D. (ins)	Weight (lb/ft)	No. of Joints	Thread Type	Length (m)	From (m)	To (m)	Remarks
13-3/8"	54.5	57	BTC R3				

CASING SPOOL TYPE:	WG	SIZE:	13-3/8" SOW x 13-5/8" 3000 psi
--------------------	----	-------	--------------------------------

Table 3.3 13 3/8" Surface Casing cement details

DRILLING FLUID PRIOR TO CEMENTING:	KCL/PHPA
PREFLUSH, SPACER DETAILS:	40 bbls fresh water

CLASS	No. SX	ADDITIVE	FUNCTION	QUANTITY OF ADDITIVE (lbs/ gal)	%	HOW ADDED BLEND OR MIX WATER	REMARKS
'A'	630	Econolite NF-6		1.46 0.03			Lead Slurry
'A'	159	Calcium Chloride NF-6		0.30 0.03			Tail Slurry

THEORETICAL TOP OF CEMENT (m):	Surface	AVERAGE SLURRY WEIGHT (ppg):	Lead 12.50 ppg Tail 15.60 ppg
DISPLACEMENT FLUID:	KCL/PHPA	DISPLACEMENT RATE (bbl/min):	5-10
PLUG BUMPED WITH (psi):	Did not bump	DISPLACEMENT VOLUME (bbl):	335
REMARKS:	Did not pump plug, Returns 25 bbls of water contaminated cement		
ELEVATIONS:	KB: 6.0 m	M.S.L.:	110.5 m T.D.: 664 m
STRING TYPE:	13-3/8" Surface	RKB TO TOP OF LAST SPOOL:	6.0m

**3.4.2 12-1/4" Hole Section : Plug and Suspension Program**

The 9-5/8" casing was not run as planned because formation tops were not as expected. Instead, a Plug & Suspension program was carried out. Three cement plugs were set at the following depths:

- Plug 1: 1645-1475 m MDKB
- Plug 2: 1100-1000 m MDKB
- Plug 3: 700-600 m MDKB

Plugs 1 and 2 were mixed at 15.6 ppg with Halad-413L at 10 gal/10 bbl Mix Fluid to control fluid losses. HR-6L was also used at a concentration of 3.0 gal/10 bbl Mix Fluid to prevent cement setting on the drill pipe when pulling out of the hole. Plug 3 was mixed at 15.8 ppg with Halad-413L at 10 gal/10 bbl Mix Fluid to control fluid losses. Plugs 1 and 2 were set inside 12-1/4 inch open hole and plug 3 was set inside 12-1/4 inch OH x 13-3/8inch Casing. All plugs were displaced with rig mud by the Halliburton unit.

### 3.6 DRILLING FLUID RECAP

908148 023

The drilling fluid details are found in the drilling fluids recap in Appendix 3.

## **4.0 FORMATION SAMPLING AND TESTING**

908148 024

### **4.1 CUTTINGS**

Cuttings were collected at 10m intervals from 70m to 664m and then at 3m intervals from 669m to total depth. Detailed cuttings descriptions for 669m to total depth are presented in Appendix 4.

### **4.2 CORES**

#### **4.2.1 Conventional Core**

No conventional cores were cut in Iona-6.

#### **4.2.2 Sidewall Cores**

No sidewall cores were acquired in Iona 6.

### **4.3 TESTING**

No drill stem tests or wireline formation tests were carried out in Iona 6.

### **4.4 SAMPLE ANALYSIS**

No palynological, petrography or geochemical analyses were carried out on samples from Iona 6.

### **4.5 LOGGING AND SURVEYS**

#### **4.5.1 Mud Logging**

A standard Geoservices skid mounted unit for continuous recording of depth, penetration rate, mud gas, pump rate, and mud volume data as well as mud chromatographic analysis was operated from surface to total depth. Rate of penetration, total gas and chromatography were recorded and plotted on the Formation Evaluation Log (Mud Log) and are presented in Enclosure 1.

### **4.6 WIRELINE LOGGING**

Wireline logging was carried out at TD by Schlumberger Seaco using a standard truck mounted MAXIS unit. The logging suite consisted of one logging run and a velocity check shot survey as follows.

908148 025

Table 4.1 Wireline Logging Enclosure Numbers

LOG	Interval (m MDKB)	Enclosure No.
Run-1 HALS-DSI-PEX 1:200 and 1:500	1681.2 - 665	XX
Run-2 Velocity Survey	Surface to TD	XX

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

Table 4.2 Details of Wireline Logs run

LOG	Logging/Processing Date	Depth Logger (m MDKB)	Depth Driller (m MDKB)	Top Log Interval	Bottom Log Interval	Max Temp Deg: C
Resistivity Curves HLLD, HLLS, RXOZ, SP, GR, HCAL: 1:200 & 1:500	4/6/2004 4/6/2004	1683.2	1686	665	1681.2	132
Dipole SONIC, Shear (DSTM), Compressional (DTCO): 1:200 & 1:500	4/6/2004 4/6/2004	1683.2	1686	665	1681.2	132
NUCLEAR CURVES Neutron (TNPH), Density (RHOZ), Pe (PEFZ): 1:200 & 1:500	4/6/2004 4/6/2004	1683.2	1686	665	1681.2	132
OFFSET VELOCITY SURVEY	4/6/2004 4/6/2004	1683.2	1686	surface	TD	132

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**Insert figure 5.1 here**

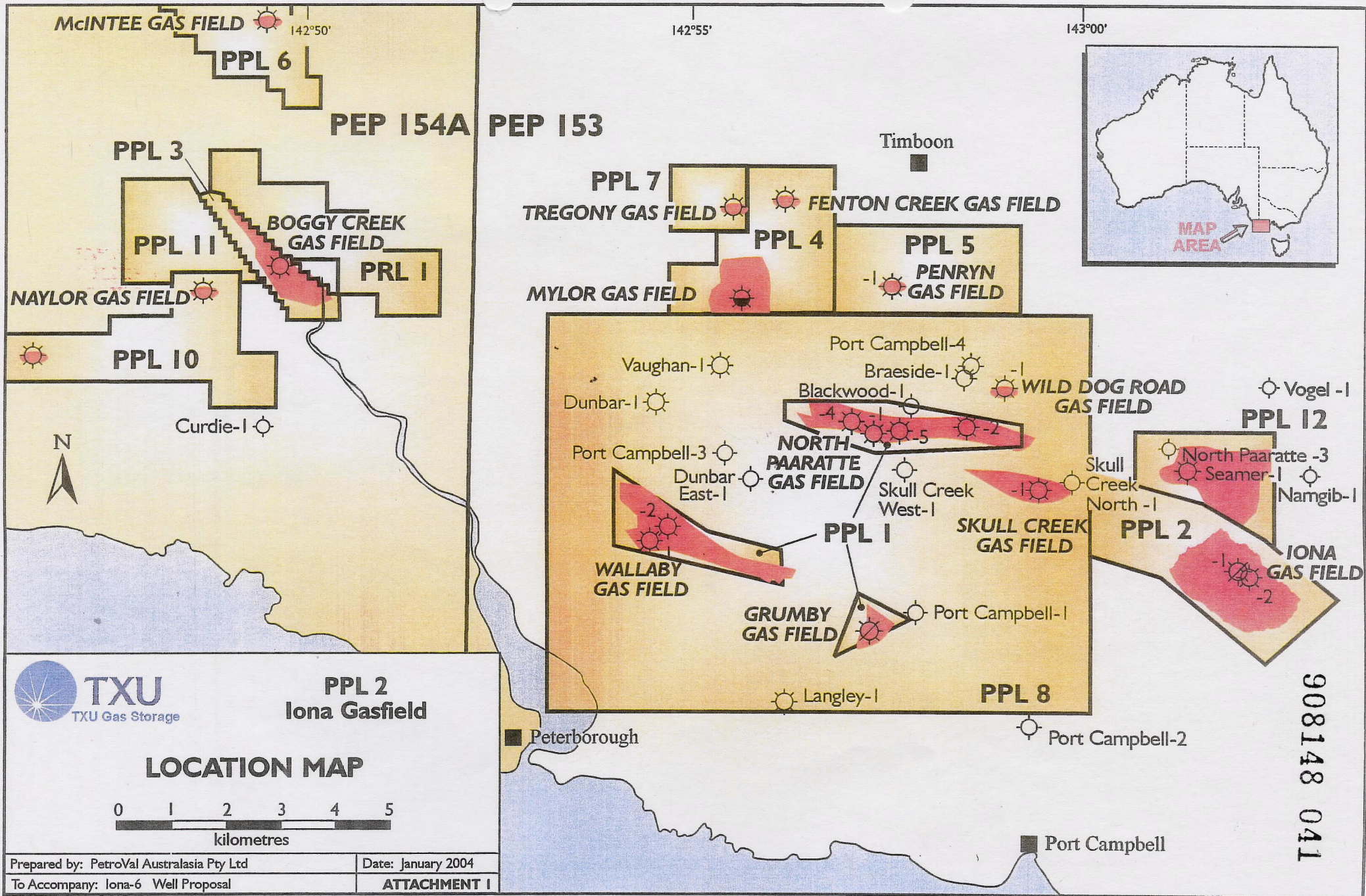
**FIGURE 5.1 – PREDICTED WELL TRAJECTORY  
AND  
FORMATION TOPS**



908148 040

## 7.0 PETROPHYSICS

The petrophysics are found in the petrophysics report in Appendix 7.



Prepared by: PetroVal Australasia Pty Ltd  
 To Accompany: Iona-6 Well Proposal

Date: January 2004  
 ATTACHMENT I

FIGURE 1.1



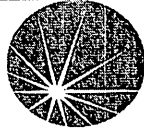
**APPENDIX 1**

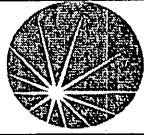
908148 045

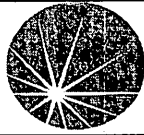
**Daily Drilling Reports by Upstream Petroleum Pty. Ltd.**



Report No.		1										DAILY DRILLING REPORT - IONA 6									
General Data		Date	Rig			Spud date		DSS	Last LTA												
		20-May-04	Century 18			20-May-04		1	140												
Drilling Data		Depth (m)		Progress (m)			Rot. Hours		Formation					Rot. Wt.	P. U. Wt	S. O. Wt					
		32		32			4.5		Heytsbury					2k							
Drilling Fluid		Density		Viscosity		PV / YP		Gels 10s/10m		MBT	R3 / R6		PH		% LGS		Mud Losses				
		8.6		37		5/11		4 5		0.5	3/4		8.5		1.08		0				
		% Sand		FL	HPHT	PHPA ppb		Chlorides		Alkalinity		Shaker Screen Size			C <sub>1</sub>	Total Gas					
0.1		20		0.5		21000		0.1		50	50	50	50								
Bit Data		Bit #	IADC	Size		Manuf		Type		Serial #		Nozzles		Cum. Mtrs	Cum. Hrs	ROP					
		1	115	17 1/2"		Security		XT1SC		753075		3x16,1x18		32	2.5	12.8					
		Depth Out		WOB	RPM	TORQUE		Total Rev's		Motor RPM		IADC Dull Bit Grading									
Hydraulics		Pump #		Liner	Gal / Stk		SPM		GPM		SPP		DP AV	DC AV	ECD						
1		6"		3		130		785		1700			25	8.6							
2		6"		3		130															
BHA		BHA #	1	BHA Length		188.84		BHA Weight				Wt below Jars									
		Bit, Bit sub w/ float, 2 x 8"DCs, 17 1/2" stabiliser																			
		BHA #		BHA Length				BHA Weight				Wt below Jars									
Surveys		Measured Depth			Angle		Azimuth		TVD		N/S (-)		E/W (-)		V. S.	DLS					
Casing		Last Casing Size			20		Last Liner Size					Next Liner Size									
		Shoe Depth (m)			17		Shoe Depth(m)					Shoe Depth(m)									
		Weight (ppf)			94		Weight (ppf)					Weight (ppf)									
Tests & Drills		Last BOP Test					Last Pit Drill					Last Trip Drill									
Well Control		Pump #	Depth	Mud Wt.		SPM #1		Pressure		SPM #2		Pressure	SPM #3		Pressure						
Personnel		TXU		6	Rig		18	Service Co.		10	Caterer		Others		TOTAL		34				
Well Cost		Daily Drilling Cost			Cumulative Drilling Cost				Daily Mud Cost			Cumulative Mud Cost									
		\$1,077,704			\$1,077,704				\$6,902			\$6,902									
From	To	Hrs		Operations ( 00:00 - 24:00)																	
21	2400	2.50		Drilled 17 1/2" hole to 32m.																	
Accepted rig after checking equipment and systems. Spudded well at 21:30hrs. Commenced with low pump and rotary until stabiliser below conductor. All cuttings being processed over shakers into 'D' tank.																					
06:00 Activity		Drilling 17 1/2" hole at 77m.																			
24 hr Forecast		Drill 17 1/2" hole																			
Fuel Usage (litres)					Water Usage				Water on hand				Serial #		Hrs	Cum					
		Rig		Camp		BBLs				BBLs				MOTOR							
		Used		n/a										JARS							
Stock		21,600		n/a		S SUB															
Drilling Supervisors		Peter Dwyer/Andy Urdevics						Mud Engineer				Tun Aung									

Report No.		2										DAILY DRILLING REPORT - IONA 6										 <b>TXU</b>	
General Data		Date		Rig		Spud date		DSS		Last LTA													
		21-May-04		Century 18		20-May-04		2		141													
Drilling Data		Depth (m)		Progress (m)		Rot. Hours		Formation				Rot. Wt.		P. U. Wt		S. O. Wt							
		367		335		22.00		Dilwyn				70		72		67							
Drilling Fluid		Density		Viscosity		PV / YP		Gels 10s/10m		MBT		R3 / R6		PH		% LGS		Mud Losses					
		9.05		43		43/11		9 11		11		8.0/10.0		8.5		3.00		0					
		% Sand		FL		HPHT		PHPA ppb		KCl		Alkalinity		Shaker Screen Size				C <sub>1</sub>		Total Gas			
		0.5		16.2				0.4		3.50%		0.1		84 84 84 84									
Bit Data		Bit #	IADC	Size		Manuf		Type		Serial #		Nozzles		Cum. Mtrs		Cum. Hrs		ROP					
		1	115	17 1/2"		Security		XT1SC		753075		3x16,1x18		367.00		24.50		15.0					
		Depth Out		WOB	RPM	TORQUE		Total Rev's		Motor RPM		IADC Dull Bit Grading											
				2-5	70																		
Hydraulics		Pump #		Liner		Gal / Stk		SPM		GPM		SPP		DP AV		DC AV		ECD					
		1		6"		3.03		125		755		900		20.0		23.3		8.6					
BHA		BHA #	1	BHA Length		199.34		BHA Weight		40klbs		Wt below Jars		25klbs									
		Bit, Bit sub w/ float, 2 x 8" DCs, 17 1/2" stabiliser, 6 x 8" DC's, 8" jars, 14 x 5" HWDP																					
		BHA #		BHA Length				BHA Weight				Wt below Jars											
Surveys		Measured Depth		Angle		Azimuth		TVD		N/S (-)		E/W (-)		V. S.		DLS							
		354m		0.25																			
Casing		Last Casing Size		20		Last Liner Size				Next Liner Size													
		Shoe Depth (m)		17		Shoe Depth(m)				Shoe Depth(m)													
		Weight (ppf)		94		Weight (ppf)				Weight (ppf)													
Tests & Drills		Last BOP Test				Last Pit Drill				Last Trip Drill													
Well Control		Pump #	Depth	Mud Wt.		SPM #1		Pressure		SPM #2		Pressure		SPM #3		Pressure							
Personnel		TXU		6		Rig		18		Service Co.		10		Caterer		Others		TOTAL		34			
Well Cost		Daily Drilling Cost				Cumulative Drilling Cost				Daily Mud Cost				Cumulative Mud Cost									
		\$83,578				\$1,161,282				\$3,639				\$10,541									
From		To		Hrs		Operations ( 00:00 - 24:00)																	
0700		0030		0.50		Repaired rig fuel system (line closed)																	
0800		0930		9.00		Drilled 17 1/2" hole from 32m to 108m																	
0930		1000		0.50		Circulated hole. Ran WLS @ 96m - 1/2 deg																	
1000		1530		5.50		Drilled from 108m to 210m																	
1530		1600		0.50		Circulated hole. Ran WLS @ 199m - 3/4 deg																	
1600		2330		7.50		Drilled from 210m to 367m																	
2330		2400		0.50		Circulated hole clean. Ran WLS @ 354m - 1/4 deg																	
06:00 Activity		RIH after wiper trip																					
24 hr Forecast		Drill 17 1/2" hole to casing point																					
Fuel Usage (litres)				Water Usage		Water on hand				Serial #		Hrs		Cum									
		Used	20,000	Camp	n/a	BBLs		BBLs		MOTOR													
		Stock	21,600	n/a							JARS		W 19792		22.0		24.5						
Drilling Supervisors		Peter Dwyer/Andy Urdevics										Mud Engineer				Tun Aung							

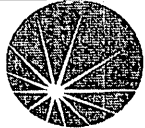
Report No.		3										DAILY DRILLING REPORT - IONA 6										 <b>TXU</b>	
General Data		Date		Rig		Spud date		DSS		Last LTA													
		22-May-04		Century 18		20-May-04		3		142													
Drilling Data		Depth (m)		Progress (m)		Rot. Hours		Formation		Rot. Wt.		P. U. Wt		S. O. Wt									
		636		269		20.00		Pebble Point		90		95		87									
Drilling Fluid		Density		Viscosity		PV / YP		Gels 10s/10m		MBT		R3 / R6		PH		% LGS		Mud Losses					
		9.75		47		12/22		10 14		17.5		7.0/9.0		8.5		7.60		0					
		% Sand		FL		HPHT		PHPA ppb		KCl		Alkalinity		Shaker Screen Size		C <sub>1</sub>		Total Gas					
		0.6		12.8				0.4		4.30%		0.1		84 84 84 84									
Bit Data		Bit #	IADC	Size		Manuf		Type		Serial #		Nozzles		Cum. Mtrs		Cum. Hrs		ROP					
		1	115	17 1/2"		Security		XT1SC		753075		3x16,1x18		636.00		44.50		14.3					
		Depth Out		WOB	RPM	TORQUE		Total Rev's		Motor RPM		IADC Dull Bit Grading											
				5-20	120																		
Hydraulics		Pump #		Liner		Gal / Stk		SPM		GPM		SPP		DP AV		DC AV		ECD					
		1		6"		3.03		125		755		900		20.0		23.3		9.8					
		2		6"		3.03		125															
BHA		BHA #	1	BHA Length		199.34		BHA Weight		40klbs		Wt below Jars		25klbs									
		Bit, Bit sub w/ float, 2 x 8" DCs, 17 1/2" stabiliser, 6 x 8" DC's, 8" jars, 14 x 5" HWDP																					
		BHA #		BHA Length				BHA Weight				Wt below Jars											
Surveys		Measured Depth		Angle		Azimuth		TVD		N/S (-)		E/W (-)		V. S.		DLS							
		511m		0.75																			
Casing		Last Casing Size		20		Last Liner Size				Next Liner Size													
		Shoe Depth (m)		17		Shoe Depth(m)				Shoe Depth(m)													
		Weight (ppf)		94		Weight (ppf)				Weight (ppf)													
Tests & Drills		Last BOP Test				Last Pit Drill				Last Trip Drill													
Well Control		Pump #	Depth	Mud Wt.		SPM #1		Pressure		SPM #2		Pressure		SPM #3		Pressure							
Personnel		TXU		6	Rig	18	Service Co.		10	Caterer		Others		TOTAL		34							
Well Cost		Daily Drilling Cost		Cumulative Drilling Cost		Daily Mud Cost		Cumulative Mud Cost															
		\$69,000		\$1,230,282		\$6,111		\$16,652															
From		To		Hrs		Operations ( 00:00 - 24:00)																	
06:00		0330		3.50		Drilled 17 1/2" hole from 367m to 415m																	
0330		0400		0.50		Circulated hole clean																	
0400		0700		3.00		Made wiper trip to DC's. Hole good, some minor drag through Heytesbury Gp (280m)																	
0700		1430		7.50		Drilled from 415m to 521m																	
1430		1500		0.50		Circulated hole. WLS @ 511m - 3/4 deg																	
1500		2400		9.00		Drilled from 521m to 636m																	
06:00 Activity		POOH on wiper trip @ 200m																					
24 hr Forecast		POH and run 13 3/8" casing																					
Fuel Usage (litres)				Water Usage		Water on hand				Serial #	Hrs	Cum											
		Used	14,600	Camp	n/a	BBLs		BBLs		MOTOR													
		Stock	21,600	n/a						JARS	W 19792	24.0	48.5										
Drilling Supervisors		Peter Dwyer/Andy Urdevics										Mud Engineer				Tun Aug							


Report No.	4											DAILY DRILLING REPORT - IONA 6											 <b>TXU</b>	
General Data	Date	Rig			Spud date	DSS	Last LTA																	
	23-May-04	Century 18			20-May-04	4	143																	
Drilling Data	Depth (m)	Progress (m)			Rot. Hours	Formation					Rot. Wt.	P. U. Wt	S. O. Wt											
	664	28			3.50	Paaratte																		
Drilling Fluid	Density	Viscosity		PV / YP	Gels 10s/10m		MBT	R3 / R6		PH	% LGS	Mud Losses												
	9.8	48		13/22	10	15	18	7.0/9.0		8.5	8.40	0												
	% Sand	FL	HPHT	PHPA ppb	KCl		Alkalinity		Shaker Screen Size		C <sub>1</sub>		Total Gas											
	1.5	17.5		0.4	3.80%		0.1		84	84	84	84												
Bit Data	Bit #	IADC	Size	Manuf	Type	Serial #	Nozzles		Cum. Mtrs	Cum. Hrs	ROP													
	1	115	17 1/2"	Security	XT1SC	753075	3x16,1x18		664.00	48.00	13.8													
	Depth Out	WOB	RPM	TORQUE	Total Rev's	Motor RPM	IADC Dull Bit Grading																	
	664	2-5	70				2	1	WT	A	E	0	NO	TD										
Hydraulics	Pump #	Liner	Gal / Stk	SPM	GPM	SPP	DP AV	DC AV	ECD															
	1	6"	3.03	125	755	950	20.0	23.3	8.6															
	2	6"	3.03	125																				
BHA	BHA #	1	BHA Length	199.34	BHA Weight	40kibs	Wt below Jars	25kibs																
	Bit, Bit sub w/ float, 2 x 8" DCs, 17 1/2" stabiliser, 6 x 8" DC's, 8" jars, 14 x 5" HWDP																							
	BHA #		BHA Length		BHA Weight		Wt below Jars																	
Surveys	Measured Depth			Angle	Azimuth	TVD	N/S (-)	E/W (-)	V. S.	DLS														
	654			0.41																				
Casing	Last Casing Size			20	Last Liner Size			Next Liner Size																
	Shoe Depth (m)			17	Shoe Depth(m)			Shoe Depth(m)																
	Weight (ppf)			94	Weight (ppf)			Weight (ppf)																
Tests & Drills	Last BOP Test				Last Pit Drill				Last Trip Drill															
Well Control	Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure															
Personnel	TXU	6	Rig	18	Service Co.	10	Caterer		Others		TOTAL	34												
Well Cost	Daily Drilling Cost			Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost														
	\$53,242			\$1,283,524			\$303			\$16,955														
From	To	Hrs	Operations ( 00:00 - 24:00)																					
0330	0330	3.50	Drilled 17 1/2" hole from 636m to 664m (hole section TD)																					
0330	0400	0.50	Circulated hole clean - mud cleaned up quickly after bottoms up indicating hole is in gauge																					
0400	0730	3.50	POH for wiper trip. Wiped tight hole @ 527m (max 50k o/pull). Pulled from 482m to 300m (w/ 20 to 30k o/pull)																					
0730	0900	1.50	Cleaned up badly stabiliser and RIH. Tight hole at 344m																					
0900	0930	0.50	Reamed tight section from 344m to 376m																					
0930	1030	1.00	Continued RIH to 664m. Hole condition good.																					
1030	1400	3.50	Circulated hole clean. Prepared casing running equipment and shoe track.																					
1400	1430	0.50	Pumped down gyro survey tool at low pump rate																					
1430	1730	3.00	POH. Recovered gyro (0.41 degrees @ 654m)																					
1730	1800	0.50	Cleaned rig floor in preparation for running casing.																					
1800	2130	3.50	Rigged up to run casing																					
2130	2230	1.00	Repaired casing running equipment																					
2230	2300	0.50	Held safety meeting before running casing																					
2300	2400	1.00	Made up 13 3/8" casing shoe track, and checked that floats were functioning correctly.																					
06:00 Activity		Running 13 3/8" casing																						
24 hr Forecast		Cement casing and install wellhead 'A' Section																						
Fuel Usage (litres)			Water Usage			Water on hand					Serial #	Hrs	Cum											
			Rig	Camp							MOTOR													
	Used			n/a	BBLs			BBLs			JARS	W 19792	14.0	62.5										
Stock			n/a							S SUB														
Drilling Supervisors		Peter Dwyer/Andy Urdevics				Mud Engineer				Tun Aung														



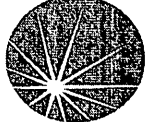


Report No.		5										DAILY DRILLING REPORT - IONA 6									
General Data		Date	Rig	Spud date	DSS	Last LTA															
		24-May-04	Century 18	20-May-04	5	144															
Drilling Data		Depth (m)	Progress (m)	Rot. Hours	Formation					Rot. Wt.	P. U. Wt	S. O. Wt									
		664	0	0.00	Paaratte																
Drilling Fluid		Density	Viscosity	PV / YP	Gels 10s/10m	MBT	R3 / R6			PH	% LGS	Mud Losses									
		9.8	49	13/23	10	15	17.5	7.0/9.0			8.3	8.30	0								
		% Sand	FL	HPHT	PHPA ppb	KCl	Alkalinity		Shaker Screen Size			C <sub>1</sub>	Total Gas								
Bit Data		Bit #	IADC	Size	Manuf	Type	Serial #		Nozzles	Cum. Mtrs	Cum. Hrs	ROP									
		Depth Out		WOB	RPM	TORQUE	Total Rev's	Motor RPM		IADC Dull Bit Grading											
Hydraulics		Pump #	Liner	Gal / Stk	SPM	GPM	SPP	DP AV	DC AV	ECD											
		1	6"	3.03																	
BHA		BHA #	1	BHA Length	199.34	BHA Weight	40klbs	Wt below Jars	25klbs												
		BHA #		BHA Length		BHA Weight		Wt below Jars													
Surveys		Measured Depth		Angle	Azimuth	TVD	N/S (-)	E/W (-)	V. S.	DLS											
		654		0.41																	
Casing		Last Casing Size		13 3/8"	Last Liner Size		Next Liner Size														
		Shoe Depth (m)		664	Shoe Depth(m)		Shoe Depth(m)														
		Weight (ppf)		54.5	Weight (ppf)		Weight (ppf)														
Tests & Drills		Last BOP Test			Last Pit Drill			Last Trip Drill													
Well Control		Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure											
Personnel		TXU	6	Rig	18	Service Co.	10	Caterer		Others		TOTAL	34								
Well Cost		Daily Drilling Cost			Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost										
		\$157,209			\$1,440,733			\$70			\$17,025										
From	To	Hrs	Operations ( 00:00 - 24:00)																		
00	1100	11.00	Ran 57 joints 13 3/8" 54.5# K55 BTC R3 casing to 664m.																		
1100	1300	2.00	Installed Halliburton cement head. Reciprocated while circulating at 8.7bbl/min.																		
1300	1330	0.50	Held cement job safety meeting. Pumped 40bbl water preflush and tested cementing lines.																		
1330	1530	2.00	Mixed and pumped 234bbl 12.5ppg lead slurry (630sx)																		
			Mixed and pumped 34bbl 15.6ppg tail slurry (159sx)																		
			Displaced with 20bbl water, 290bbl mud and 25bbl water. Did not bump plug. Approx 25bbl water contaminated cement returns.																		
1530	2130	6.00	Waited on cement. Cut conductor, prepared BOP's.																		
21.30	2400	2.50	Cut and removed conductor from cellar, removed cement head and crossover. Released tension from casing, made rough cut on 13 3/8" casing, removed conductor and flow line from under rig floor, removed landing joint.																		
06:00 Activity		Installing wellhead "A" section																			
24 hr Forecast		Install and test BOPs																			
Fuel Usage (litres)				Water Usage		Water on hand				Serial #	Hrs	Cum									
	Used	Rig	Camp	BBLs		BBLs		MOTOR													
	Stock	1,000	n/a					JARS													
Drilling Supervisors		Peter Dwyer/Andy Urdevics				Mud Engineer				Tun Aung											

Report No.	6 DAILY DRILLING REPORT - IONA 6										 <b>TXU</b>	
General Data	Date	Rig		Spud date	DSS	Last LTA						
	25-May-04	Century 18		20-May-04	6	145						
Drilling Data	Depth (m)	Progress (m)		Rot. Hours	Formation			Rot. Wt.	P. U. Wt	S. O. Wt		
	664	0		0.00	Paaratte							
Drilling Fluid	Density	Viscosity	PV / YP	Gels 10s/10m	MBT	R3 / R6	PH	% LGS	Mud Losses			
	% Sand	FL	HPHT	PHPA ppb	KCl	Alkalinity	Shaker Screen Size		C <sub>1</sub>	Total Gas		
Bit Data	Bit #	IADC	Size	Manuf	Type	Serial #	Nozzles	Cum. Mtrs	Cum. Hrs	ROP		
	Depth Out		WOB	RPM	TORQUE	Total Rev's	Motor RPM	IADC Dull Bit Grading				
Hydraulics	Pump #	Liner	Gal / Stk	SPM	GPM	SPP	DP AV	DC.AV	ECD			
	1	6"	3.03									
BHA	BHA #	1	BHA Length	199.34	BHA Weight	40klbs	Wt below Jars	25klbs				
	BHA #		BHA Length		BHA Weight		Wt below Jars					
Surveys	Measured Depth		Angle	Azimuth	TVD	N/S (-)	E/W (-)	V. S.	DLS			
	654		0.41									
Casing	Last Casing Size		13 3/8"	Last Liner Size		Next Liner Size						
	Shoe Depth (m)		664	Shoe Depth(m)		Shoe Depth(m)						
	Weight (ppf)		54.5	Weight (ppf)		Weight (ppf)						
Tests & Drills	Last BOP Test			Last Pit Drill			Last Trip Drill					
Well Control	Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure			
Personnel	TXU	6	Rig	18	Service Co.	10	Caterer	Others	TOTAL	34		
Well Cost	Daily Drilling Cost		Cumulative Drilling Cost			Daily Mud Cost		Cumulative Mud Cost				
	\$74,039		\$1,514,772			\$0		\$17,025				
From	To	Hrs	Operations ( 00:00 - 24:00)									
0930	0930	9.50	Welded casing head. Prepared BOP's.									
1000	1000	0.50	Tested casing head weld. Minor internal leak.									
1200	1200	2.00	Rewelded casing head.									
1230	1230	0.50	Tested casing head to 1000psi.									
1230	1330	1.00	Installed DSA, spacer spool and mud cross.									
1330	2200	8.50	Nippled up BOPs									
2200	2330	1.50	Attempted to run Gyro inside 13 3/8" casing. Tool hung up at 150m.									
2330	2400	0.50	Continued to nipple up BOPs									
			Mixing new mud system in surface tanks.									
06:00 Activity		Pressure testing BOPs										
24 hr Forecast		RIH to drill out casing										
Fuel Usage (litres)			Water Usage		Water on hand		Serial #	Hrs	Cum			
	Used	Rig	Camp	BBLs	BBLs	MOTOR						
	Stock	1,000	n/a			JARS						
	19,600	n/a	S SUB									
Drilling Supervisors		Peter Dwyer/Andy Urdevics			Mud Engineer			Tun Aung				

Report No.	7										DAILY DRILLING REPORT - IONA 6										 <b>TXU</b>	
General Data	Date	Rig			Spud date	DSS	Last LTA															
	26-May-04	Century 18			20-May-04	6	146															
Drilling Data	Depth (m)	Progress (m)			Rot. Hours	Formation			Rot. Wt.	P. U. Wt	S. O. Wt											
	664	0			0.00	Paaratte																
Drilling Fluid	Density	Viscosity		PV / YP	Gels 10s/10m		MBT	R3 / R6		PH	% LGS		Mud Losses									
	8.7	56		7/10	3 5		1	3/4		8.3	1.10											
	% Sand	FL	HPHT	PHPA ppb	KCl		Alkalinity		Shaker Screen Size		C <sub>1</sub>		Total Gas									
	0.1	10.1		0.25	4.70%		0.3		50 50 50 50													
Bit Data	Bit #	IADC	Size	Manuf	Type	Serial #	Nozzles	Cum. Mtrs	Cum. Hrs	ROP												
	2	417W	12.25	Sec	EBXS02SC	10615071	3x18,1x20															
	Depth Out		WOB	RPM	TORQUE	Total Rev's	Motor RPM	IADC Dull Bit Grading														
Hydraulics	Pump #	Liner	Gal / Stk	SPM	GPM	SPP	DP AV	DC AV	ECD													
	1	6"	3.03																			
	2	6"	3.03																			
BHA	BHA #	2	BHA Length		BHA Weight		Wt below Jars															
	12 1/4" Bit, 8" motor,flt sub,11.75" stab,8" monel,8" h/off,8" monel,3 x 8" DCs,X/O,18xHWDP,6.5" jar,6xHWDP																					
	BHA #		BHA Length		BHA Weight		Wt below Jars															
Surveys	Measured Depth			Angle	Azimuth	TVD	N/S (-)	E/W (-)	V. S.	DLS												
	654			0.41																		
Casing	Last Casing Size			13 3/8"	Last Liner Size			Next Liner Size														
	Shoe Depth (m)			664	Shoe Depth(m)			Shoe Depth(m)														
	Weight (ppf)			54.5	Weight (ppf)			Weight (ppf)														
Tests & Drills	Last BOP Test				Last Pit Drill				Last Trip Drill													
Well Control	Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure													
Personnel	TXU	6	Rig	18	Service Co.	10	Caterer		Others		TOTAL	34										
Well Cost	Daily Drilling Cost			Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost												
	\$88,188			\$1,602,960			\$8,849			\$25,874												
From	To	Hrs	Operations ( 00:00 - 24:00)																			
	0230	2.50	Installed Koomey lines and function tested accumulator, flushed lines and filled BOP with water.																			
			Closed blind rams and pressure tested casing to 500/2000psi for 15 minutes against blind rams and HCR.																			
0230	0400	1.50	Picked up test plug and landed in wellhead. Connected test lines from Halliburton unit.																			
0400	0500	1.00	Flushed water through lines and choke manifold, pressure tested Halliburton test line, closed and attempted to pressure test pipe rams. Bonnet seal leaking at 200psi.																			
0500	0700	2.00	Rig repair - replaced bonnet seal and pressure tested																			
0700	0800	1.00	Tested manifold, HCR, kill valves against pipe rams and annular preventer.																			
0800	0900	1.00	Laid out test plug and installed wear bushing.																			
0900	1130	2.50	Tested circulating system to 500/2500psi. Tested kelly/standpipe/pump/stab/BOP valves to 500/2000psi.																			
1130	1330	2.00	Installed flow line.																			
1330	1430	1.00	Laid out extra 8" DC's.																			
1430	1730	3.00	Picked up mud motor and directional BHA. Set 1.5 deg bend. Laid out 8" jars.																			
1730	1900	1.50	RIH w/8" DCs, L/O 8" jars and tested MWD/PDM.																			
1900	2300	4.00	RIH with HWDP scribing line on each stand, took weight @ 632m																			
2300	2400	1.00	Laid out 12 DP singles, RIH with remaining stands to 620m																			
06:00 Activity		After drilling to 669m and conducting FIT to 10.5ppg EMW running gyro survey																				
24 hr Forecast		Drilling 12 1/4" directional hole - build mode																				
Fuel Usage (litres)	Rig		Camp		Water Usage		Water on hand		Serial #		Hrs	Cum										
	Used	700	n/a		BBLs		BBLs		MOTOR													
	Stock	18,900	n/a						JARS													
S SUB																						
Drilling Supervisors			Peter Dwyer/Andy Urdevics				Mud Engineer				Tun Aung											





Report No.		9										DAILY DRILLING REPORT - IONA 6										
General Data		Date		Rig		Spud date		DSS		Last LTA												
		28-May-04		Century 18		20-May-04		9		148												
Drilling Data		Depth (m)		Depth TVD		Prog. (m)		Rot. Hours		Formation		Rot. Wt.		P. U. Wt		S. O. Wt						
		976				160.00		18		Paaratte		104		120		88						
Drilling Fluid		Density		Viscosity		PV / YP		Gels 10s/10m		MBT		R3 / R6		PH		% LGS		Mud Losses				
		8.8		39		7/16		4 7		4		4/5		8.9		1.50		0				
		% Sand		FL	HPHT	PHPA ppb		KCl		Alkalinity		Shaker Screen Size		C <sub>1</sub>		Total Gas						
0.5		7.6		1		4.40%		0.05		84 50 50 50				0-0.3								
Bit Data		Bit #	IADC	Size		Manuf		Type		Serial #		Nozzles		Cum. Mtrs		Cum. Hrs		ROP				
		2	417W	12.25		Sec		EBXS02SC		10615071		3x18,1x20		312.00		35.50		8.8				
		Depth Out	WOB	RPM	TORQUE		Total Rev's		Motor RPM		IADC Dull Bit Grading											
976	30	Slid			291,000		120		1 2 WT A E I NO BHA													
Hydraulics		Pump #		Liner		Gal / Stk		SPM		GPM		SPP		DP AV		DC AV		ECD				
		1		6"		3.03		124		750		1400		45.0		65.0		8.9				
		2		6"		3.03		124														
BHA		BHA #	2	BHA Length		283.9		BHA Weight		52k		Wt below Jars		46k								
		Bit, 8" Motor, Flt sub, 11 3/4" stab, 8" Monel, DWD sub, 8" monel, 3x8" DCs, X/O, 18 HWDP, Jars, 6 HWDP																				
		BHA #		BHA Length				BHA Weight				Wt below Jars										
Surveys		Measured Depth		Angle		Azimuth		TVD		N/S (-)		E/W (-)		V. S.		DLS						
Casing		Last Casing Size		13 3/8"		Last Liner Size				Next Liner Size												
		Shoe Depth (m)		664		Shoe Depth(m)				Shoe Depth(m)												
		Weight (ppf)		54.5		Weight (ppf)				Weight (ppf)												
Tests & Drills		Last BOP Test		26-May-04		Last Pit Drill				Last Trip Drill		26-May-04										
Well Control		Pump #	Depth	Mud Wt.		SPM #1		Pressure		SPM #2		Pressure		SPM #3		Pressure						
Personnel		TXU		6		Rig		18		Service Co.		10		Caterer		Others		TOTAL		34		
Well Cost		Daily Drilling Cost		Cumulative Drilling Cost		Daily Mud Cost		Cumulative Mud Cost														
		\$78,007		\$1,752,756		\$3,975		\$36,592														
From	To	Hrs	Operations ( 00:00 - 24:00)																			
06:00	1800	18.00	Drill 12 1/4" hole from 816m to 976m. Build hole angle to 45.3 deg.																			
1800	1900	1.00	Circulate havis sweep to clean hole.																			
1900	2230	3.50	POH. Hole condition good.																			
2230	2400	1.50	Attempt to retrieve wear bushing. Unable to pass thru bell nipple flange. Rig down flow line and repair.																			
06:00 Activity		RIH with bit#3																				
24 hr Forecast		RIH to 976m. Drill ahead in tangent section.																				
Fuel Usage (litres)				Water Usage		Water on hand				Serial #		Hrs		Cum								
		Used	5,900	Camp	n/a	BBLs		BBLs		MOTOR		37.0		19.0								
		Stock	8,400	n/a	n/a					JARS		37.0		19.0								
Drilling Supervisors		Peter Dwyer/Andy Urdevics										Mud Engineer					Tun Aung					



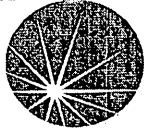
**TXU**

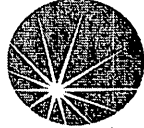
Report No.	DAILY DRILLING REPORT - IONA 6													
General Data	Date	Rig	Spud date	DSS	Last LTA									
	29-May-04	Century 18	20-May-04	10	149									
Drilling Data	Depth (m)	Depth TVD	Prog. (m)	Rot. Hours	Formation	Rot. Wt.	P. U. Wt	S. O. Wt						
	1008	963	34.00	7	Paaratte	115	115	95						
Drilling Fluid	Density	Viscosity	PV / YP	Gels 10s/10m	MBT	R3 / R6	PH	% LGS	Mud Losses					
	8.8	41	7/16	4 7	4	4/5	9.0	0.90	0					
	% Sand	FL	HPHT	PHPA ppb	KCl	Alkalinity	Shaker Screen Size	C <sub>1</sub>	Total Gas					
	0.25	7.4		1.1	4.20%	0.05	84 50 50 50		0-0.3					
Bit Data	Bit #	IADC	Size	Manuf	Type	Serial #	Nozzles	Cum. Mtrs	Cum. Hrs	ROP				
	rr3	S223	12.25	Sec	FM2565	7970231	5x18	32.00	8.00	4.0				
	Depth Out	WOB	RPM	TORQUE	Total Rev's	Motor RPM	IADC Dull Bit Grading							
	1008	30	Slid		64,800	120	1	1	WT	A	X	I	NO	BHA
Hydraulics	Pump #	Liner	Gal / Stk	SPM	GPM	SPP	DP AV	DC AV	ECD					
	1	6"	3.03	124	750	1500	45.0	65.0	8.9					
	2	6"	3.03	124										
BHA	BHA #	3	BHA Length	292.76	BHA Weight	51k	Wt below Jars	46k						
	Bit,8" Motor,Fit sub,12" stab,8" Monel,DWD sub,8" monel,3x8" DCs,X/O,18 HWDP,Jars,6 HWDP													
	BHA #		BHA Length	292.76	BHA Weight	51klb	Wt below Jars	45klb						
Surveys	Measured Depth	Angle	Azimuth	TVD	N/S (-)	E/W (-)	V. S.	DLS						
	978.61	44.85	304.81	942.43	66.188	105.629	124.49	0.54						
Casing	Last Casing Size	13 3/8"	Last Liner Size			Next Liner Size								
	Shoe Depth (m)	664	Shoe Depth(m)			Shoe Depth(m)								
	Weight (ppf)	54.5	Weight (ppf)			Weight (ppf)								
Tests & Drills	Last BOP Test	26-May-04	Last Pit Drill			Last Trip Drill	26-May-04							
Well Control	Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure					
Personnel	TXU	6	Rig	18	Service Co.	11	Caterer	Others	TOTAL	35				
Well Cost	Daily Drilling Cost	Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost						
	\$84,131	\$1,836,887			\$3,442			\$40,034						
From	To	Hrs	Operations (00:00 - 24:00)											
0230	0230	2.50	Repaired bell nipple. Removed wear bushing. Tested pipe rams to 500/2000psi. Installed wear bushing.											
0230	0430	2.00	Picked up bit #3, changed out stabiliser, changed motor bend to 1.15. Checked motor and correlated MWD											
0430	0600	1.50	RIH to bottom. Hole condition good.											
0600	1230	6.50	Drilled 12 1/4" hole from 976 to 989m. BHA hanging up, unable to slide and build required final hole angle.											
1230	1330	1.00	Repaired mud pump #2.											
1330	1600	2.50	Drilled from 989m to 1008m. Hole angle dropping, BHA hanging up in hole.											
1600	1700	1.00	Circulated hole clean. Pumped KCl pill.											
1700	2030	3.50	POH to change BHA											
2030	2230	2.00	Changed out stabiliser and correlate tool. RIH to shoe.											
2230	2300	0.50	Slipped 22ft of drill line.											
2300	2400	1.00	Repaired drawworks drum clutch.											
06:00 Activity	Drilling ahead @ 1024m													
24 hr Forecast	Drill ahead in tangent section.													
Fuel Usage (litres)			Water Usage		Water on hand			Serial #	Hrs	Cum				
	Used	Rig	Camp	BBLs	BBLs	MOTOR		45.0	10.0					
	Stock	3,500	n/a			JARS		45.0	10.0					
	26,900	n/a	S SUB											
Drilling Supervisors	Peter Dwyer/Andy Urdevics				Mud Engineer			Tun Aung						


Report No.	11											DAILY DRILLING REPORT - IONA 6											
<b>General Data</b>		Date	Rig	Spud date	DSS	Last LTA																	
		30-May-04	Century 18	20-May-04	11	0																	
<b>Drilling Data</b>		Depth (m)	Depth TVD	Prog. (m)		Rot. Hours		Formation			Rot. Wt.	P. U. Wt	S. O. Wt										
		1074	1010	66.00		13		Paaratte			106	115	95										
<b>Drilling Fluid</b>		Density	Viscosity	PV / YP	Gels 10s/10m		MBT	R3 / R6		PH	% LGS		Mud Losses										
		8.9	41	9/17	5	6	4	4/6		8.9	1.50		0										
		% Sand	FL	HPHT	PPHA ppb		KCl	Alkalinity		Shaker Screen Size			C <sub>1</sub>	Total Gas									
		0.5	7.2		1.1		5.30%	0.04		84	50	50	50	46ppm	1.0U								
<b>Bit Data</b>		Bit #	IADC	Size	Manuf	Type	Serial #	Nozzles		Cum. Mtrs	Cum. Hrs	ROP											
		rr3rr	S223	12.25	Sec	FM2565	7970231	5x18		29.00	9.50	3.1											
		4	417M	12.25	Sec	EBXS02DSC	10615073	3x18, 1x20		37.00	3.50	10.6											
		Depth Out	WOB	RPM	TORQUE		Total Rev's	Motor RPM		IADC Dull Bit Grading													
		1037	15	50			73,000	120		1	1	WT	A	X	I	NO	BHA						
<b>Hydraulics</b>		Pump #	Liner	Gal / Stk	SPM		GPM	SPP	DP AV	DC AV	ECD												
		1	6"	3.03	124		750	1500	45.0	65.0	8.9												
		2	6"	3.03	124																		
<b>BHA</b>		BHA #	4	BHA Length		292.76	BHA Weight		51k	Wt below Jars		46k											
		Bit,8" Motor,Flt sub,11-3/4" stab,8" Monel,DWD sub,8" monel,3x8" DCs,X/O,18 HWDP,Jars,6 HWDP																					
		BHA #	5	BHA Length		292.96	BHA Weight		51klb	Wt below Jars		45klb											
		Bit,8" Motor,Flt sub,11-31/2" stab,8" Monel,DWD sub,8" monel,3x8" DCs,X/O,18 HWDP,Jars,6 HWDP																					
<b>Surveys</b>		Measured Depth		Angle	Azimuth		TVD	N/S (-)	E/W (-)	V. S.	DLS												
		1066.11		47.95	306.15		1004.45	102.14N	155.77W	186.19	3.56												
<b>Casing</b>		Last Casing Size		13 3/8"	Last Liner Size		Next Liner Size																
		Shoe Depth (m)		664	Shoe Depth(m)		Shoe Depth(m)																
		Weight (ppf)		54.5	Weight (ppf)		Weight (ppf)																
<b>Tests &amp; Drills</b>		Last BOP Test		26-May-04	Last Pit Drill		Last Trip Drill			26-May-04													
<b>Well Control</b>		Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure													
		1	1037	8.9																			
<b>Personnel</b>		TXU	6	Rig	18	Service Co.	12	Caterer	Others		TOTAL			36									
<b>Well Cost</b>		Daily Drilling Cost		Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost													
		\$81,910		\$1,918,797			\$3,471			\$43,505													
From	To	Hrs	Operations (00:00 - 24:00)																				
0030	0030	0.50	Repaired drawworks drum clutch.																				
0030	0100	0.50	RIH to 710m.																				
0100	0130	0.50	Broke circulation. Tested motor and pulser unit.																				
0130	0200	0.50	RIH to 987m.																				
0200	0230	0.50	Washed from 987m to 1008m.																				
0230	1200	9.50	Drilled 12 1/4" hole from 1008m to 1037m. Unable to build hole angle.(Slide 20m - 9 hrs,rotate 9m - 0.5hr)																				
1200	1300	1.00	Circulated hole clean. Pumped KCl pill.																				
1300	1530	2.50	POH.																				
1530	1700	1.50	Changed out to 11 1/2" stabiliser, picked up new bit #4 and adjusted motor to 1.5 bend.																				
1700	1900	2.00	RIH to shoe.																				
1900	1930	0.50	Filled pipe, broke circulation and checked MWD.																				
1930	2030	1.00	RIH to 1006m picked up kelly and washed 3 DP singles to 1037m																				
2030	2400	3.50	Drilled 12 1/4" directional hole from 1037 to 1074m (slide 14m - 2hrs, rotate 21m - 1.5hrs)																				
06:00 Activity		Drilling 12 1/4" hole at 1120m																					
24 hr Forecast		Drill ahead.																					
<b>Fuel Usage (litres)</b>				<b>Water Usage</b>		<b>Water on hand</b>				Serial #	Hrs	Cum											
		Rig	Camp	BBLs		BBLs		MOTOR	8052	14.5	61.5												
		Used	3,700	n/a				JARS		14.5	61.5												
		Stock	23,200	n/a				S SUB															
Drilling Supervisors		Peter Dwyer/Andy Urdevics				Mud Engineer				Tun Aung													


Report No.	12 DAILY DRILLING REPORT - IONA 6										 <b>TXU</b>	
General Data	Date	Rig	Spud date	DSS	Last LTA							
	31-May-04	Century 18	20-May-04	12	151							
Drilling Data	Depth (m)	Depth TVD	Prog. (m)	Rot. Hours	Formation	Rot. Wt.	P. U. Wt	S. O. Wt				
	1247	1125	173.00	24	Skull Creek	110	125	90				
Drilling Fluid	Density	Viscosity	PV / YP	Gels 10s/10m	MBT	R3 / R6	PH	% LGS	Mud Losses			
	9.2	42	11/21	6 10	7	5/7	8.8	4.30	0			
	% Sand	FL	HPHT	PHPA ppb	KCl	Alkalinity	Shaker Screen Size		C <sub>1</sub>	Total Gas		
	0.6	6.8		1.1	4.80%	0.05	84 50	50 50	3800ppm	19U		
Bit Data	Bit #	IADC	Size	Manuf	Type	Serial #	Nozzles	Cum. Mtrs	Cum. Hrs	ROP		
	4	417M	12.25	Sec	EBXS02DSC	10615073	3x18, 1x20	210.00	27.50	7.6		
	Depth Out	WOB	RPM	TORQUE	Total Rev's	Motor RPM	IADC Dull Bit Grading					
Hydraulics	Pump #	Liner	Gal / Stk	SPM	GPM	SPP	DP AV	DC AV	ECD			
	1	6"	3.03	120	727	1800	43.1	63.1	9.4			
	2	6"	3.03	120								
BHA	BHA #	5	BHA Length	292.96	BHA Weight	51klb	Wt below Jars	45klb				
	Bit,8" Motor (1.5B),Flt sub,11-1/2" stab,8" Monel,DWD sub,8" monel,3x8" DCs,X/O,18 HWDP,Jars,6 HWDP											
	BHA #		BHA Length		BHA Weight		Wt below Jars					
Surveys	Measured Depth	Angle	Azimuth	TVD	N/S (-)	E/W (-)	V. S.	DLS				
	1231.16	49.37	305.03	1114.22	174.79N	255.32W	309.4	0.47				
Casing	Last Casing Size	13 3/8"	Last Liner Size	Next Liner Size								
	Shoe Depth (m)	664	Shoe Depth(m)	Shoe Depth(m)								
	Weight (ppf)	54.5	Weight (ppf)	Weight (ppf)								
Tests & Drills	Last BOP Test	26-May-04	Last Pit Drill	31-May-04	Last Trip Drill	30-May-04						
Well Control	Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure			
	1	1240	9.1	60	200	80	290					
	2	1240	9.1	60	190	80	280					
Personnel	TXU	6	Rig	18	Service Co.	12	Caterer	Others	TOTAL	36		
Well Cost	Daily Drilling Cost	Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost				
	\$72,194	\$1,990,991			\$6,305			\$49,810				
From	To	Hrs	Operations (00:00 - 24:00)									
06:00	2400	24.00	Drilled 12 1/4" hole from 1074m to 1247m.									
			Sliding -22m - 9hrs - AROP 2.33m/hr									
			Rotating - 151m - 15hrs - AROP 10.07m/hr									
06:00 Activity			Drilling 12 1/4" hole at 1311m									
24 hr Forecast			Drill ahead to 1550m(TD)									
Fuel Usage (litres)			Water Usage		Water on hand			Serial #	Hrs	Cum		
	Used	Rig	Camp	BBLs	BBLs	MOTOR	8052	24.0	85.5			
	Stock	5,400	n/a			JARS		24.0	85.5			
	17,800	n/a	S SUB									
Drilling Supervisors			Peter Dwyer/Andy Urdevics			Mud Engineer			Tun Aung			

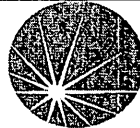


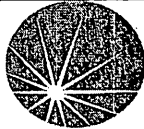
Report No.		13										DAILY DRILLING REPORT - IONA 6										 <b>TXU</b>	
General Data		Date	Rig			Spud date	DSS	Last LTA															
		1-Jun-04	Century 18			20-May-04	13	152															
Drilling Data		Depth (m)	Depth TVD	Prog. (m)			Rot. Hours		Formation			Rot. Wt.	P. U. Wt	S. O. Wt									
		1473	1272	226.00			23.5		Belfast			120	135	105									
Drilling Fluid		Density	Viscosity		PV / YP	Gels 10s/10m		MBT	R3 / R6		PH	% LGS		Mud Losses									
		9.4	45		13/23	6	14	12	6/8		8.8	5.00		0									
		% Sand	FL	HPHT	PHPA ppb	KCl		Alkalinity		Shaker Screen Size			C <sub>1</sub>	Total Gas									
		0.6	6.3		1.1	4.40%		0.04		110	110	84	50	5562		37U							
Bit Data		Bit #	IADC	Size	Manuf	Type	Serial #		Nozzles		Cum. Mtrs	Cum. Hrs	ROP										
		4	417M	12.25	Sec	EBXS02DSC	10615073		3x18, 1x20		436.00	51.00	8.6										
		Depth Out	WOB	RPM	TORQUE	Total Rev's		Motor RPM		IADC Dull Bit Grading													
Hydraulics		Pump #	Liner	Gal / Stk	SPM		GPM	SPP	DP AV	DC AV	ECD												
		1	6"	3.03	112		678	1900	40.5	63.1	9.6												
		2	6"	3.03	112																		
BHA		BHA #	5	BHA Length		292.96	BHA Weight		51klb	Wt below Jars		45klb											
		Bit, 8" Motor (1.5B), Fit sub, 11-1/2" stab, 8" Monel, DWD sub, 8" monel, 3x8" DCs, X/O, 18 HWDP, Jars, 6 HWDP																					
		BHA #		BHA Length			BHA Weight			Wt below Jars													
Surveys		Measured Depth			Angle	Azimuth	TVD		N/S (-)	E/W (-)	V. S.	DLS											
		1471.69			48.75	309.32	1271.61		284.14N	400.60W	491.12	0.42											
Casing		Last Casing Size			13 3/8"		Last Liner Size			Next Liner Size													
		Shoe Depth (m)			664		Shoe Depth(m)			Shoe Depth(m)													
		Weight (ppf)			54.5		Weight (ppf)			Weight (ppf)													
Tests & Drills		Last BOP Test			26-May-04		Last Pit Drill			1-Jun-04		Last Trip Drill		30-May-04									
Well Control		Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure													
		1	1460	9.3	60	240	100	420															
		2	160	9.3	60	240	100	420															
Personnel		TXU	6	Rig	18	Service Co.	15	Caterer			Others			TOTAL	39								
Well Cost		Daily Drilling Cost			Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost												
		\$83,864			\$2,074,855			\$6,424			\$56,235												
From	To	Hrs	Operations (00:00 - 24:00)																				
00:00	2230	24.00	Drilled 12 1/4" hole from 1247 to 1463m.																				
2230	2300	0.50	Repair Mudpump presure relief valve																				
2300	2400	1.00	Drilled 12 1/4" hole from 1463 to 1473m.																				
		Daily Drilling																					
		Sliding - 0m - 0 hrs																					
		Rotating - 226m - 23.5hrs - AROP - 9.62m/hr																					
06:00 Activity		Drilling 12 1/4" hole at 1515m																					
24 hr Forecast		Drill ahead to TD																					
Fuel Usage (litres)					Water Usage			Water on hand					Serial #	Hrs	Cum								
					BBLs			BBLs			MOTOR		8052	23.5	109.0								
		Used			6,800			n/a			JARS			23.5	109.0								
Stock			11,000			n/a			S SUB														
Drilling Supervisors			Peter Dwyer/Andy Urdevics					Mud Engineer					Tun Aung										

Report No.		14										DAILY DRILLING REPORT - IONA 6										
General Data		Date		Rig		Spud date		DSS		Last LTA												
		2-Jun-04		Century 18		20-May-04		14		153												
Drilling Data		Depth (m)		Depth TVD		Prog. (m)		Rot. Hours		Formation		Rot. Wt.		P. U. Wt		S. O. Wt						
		1515		1302		42.00		6		Flaxmans		120		135		105						
Drilling Fluid		Density		Viscosity		PV / YP		Gels 10s/10m		MBT		R3 / R6		PH		% LGS		Mud Losses				
		9.45		45		13/21		6 15		14		5/7		9.0		5.50		0				
		% Sand		FL	HPHT	PHPA ppb		KCl		Alkalinity		Shaker Screen Size		C <sub>1</sub>		Total Gas						
		0.5		6.2		1.1		4.60%		0.05		110 110 84 50		18695ppm		1515U						
Bit Data		Bit #	IADC	Size		Manuf		Type		Serial #		Nozzles		Cum. Mtrs		Cum. Hrs		ROP				
		4	417M	12.25		Sec		EBXS02DSC		10615073		3x18, 1x20		478.00		57.00		8.4				
		rr3rr2	223	12.25		Sec		FM2565		7970231		5x18										
		Depth Out		WOB	RPM	TORQUE		Total Rev's		Motor RPM		IADC Dull Bit Grading										
1515		30	50			410k		110		2 2		WT A		F 1		NO TQ						
Hydraulics		Pump #		Liner		Gal / Stk		SPM		GPM		SPP		DP AV		DC AV		ECD				
		1		6"		3.03		125		750		1500		44.8		65.2		9.4				
		2		6"		3.03		125														
BHA		BHA #		5		BHA Length		292.96		BHA Weight		51klb		Wt below Jars		45klb						
		Bit, 8" Motor (1.5B), Flt sub, 11-1/2" stab, 8" Monel, DWD sub, 8" monel, 3x8" DCs, X/O, 18 HWDP, Jars, 6 HWDP																				
		BHA #		6		BHA Length		267.6		BHA Weight		46klb		Wt below Jars		37klb						
		Bit, bitsub w/float, 12" stab, 1x8" DC, 11-1/2" stab, 2x8" DC, XO, 18x5" HWDP, jars, 6x5" HWDP																				
Surveys		Measured Depth		Angle		Azimuth		TVD		N/S (-)		E/W (-)		V. S.		DLS						
		1490.73		48.75		310.05		1284.17		293.28		411.61		505.39		0.86						
Casing		Last Casing Size		13 3/8"		Last Liner Size				Next Liner Size												
		Shoe Depth (m)		664		Shoe Depth(m)				Shoe Depth(m)												
		Weight (ppf)		54.5		Weight (ppf)				Weight (ppf)												
Tests & Drills		Last BOP Test		26-May-04		Last Pit Drill		1-Jun-04		Last Trip Drill		30-May-04										
Well Control		Pump #	Depth	Mud Wt.		SPM #1		Pressure		SPM #2		Pressure		SPM #3		Pressure						
		1	1460	9.3		60		240		100		420										
		2	160	9.3		60		240		100		420										
Personnel		TXU	6	Rig	18	Service Co.	19	Caterer		Others		TOTAL	43									
Well Cost		Daily Drilling Cost		Cumulative Drilling Cost				Daily Mud Cost				Cumulative Mud Cost										
		\$69,318		\$2,144,173				\$4,129				\$60,364										
From	To	Hrs	Operations (00:00 - 24:00)																			
0600	0600	6.00	Drilled 12 1/4" hole from 1473m to 1515m. String torquing up.																			
0600	0700	1.00	Circulated and cleaned hole. Pumped KCl pill.																			
0700	1130	4.50	POH. Hole condition good.																			
1130	1330	2.00	Laid out MWD/motor.																			
1330	1530	2.00	Picked up bit#RR3. RIH.																			
1530	1830	3.00	RIH, broke circulation at shoe, continued RIH in stands																			
1830	2400	5.50	Worked new BHA through tight hole from 837m to 1336m																			
06:00 Activity		Drilling 12 1/4" hole at 15XXm																				
24 hr Forecast		Run wireline logs																				
Fuel Usage (litres)				Water Usage		Water on hand				Serial #	Hrs	Cum										
		Used	440	Rig	Camp	BBLs		BBLs		MOTOR	8052	7.0	116.0									
		Stock	6,600	n/a	n/a					JARS		22.0	131.0									
Drilling Supervisors		Peter Dwyer/Andy Urdevics				Mud Engineer				Tun Aung												

Report No.	15 DAILY DRILLING REPORT - IONA 6										 <b>TXU</b>	
General Data	Date	Rig		Spud date	DSS	Last LTA						
	3-Jun-04	Century 18		20-May-04	15	154						
Drilling Data	Depth (m)	Depth TVD	Prog. (m)		Rot. Hours	Formation		Rot. Wt.	P. U. Wt	S. O. Wt		
	1686	1416	171.00		9	Eumeralla		125	130	110		
Drilling Fluid	Density	Viscosity	PV / YP	Gels 10s/10m	MBT	R3 / R6	PH	% LGS	Mud Losses			
	9.8	52	16/24	7 21	16	6/8	9.0	8.00	0			
	% Sand	FL	HPHT	PHPA ppb	KCl	Alkalinity	Shaker Screen Size		C <sub>1</sub>	Total Gas		
	1.1	5.8		1	4.50%	0.1	110 110	84 50	18695ppm	187u		
Bit Data	Bit #	IADC	Size	Manuf	Type	Serial #	Nozzles	Cum. Mtrs	Cum. Hrs	ROP		
	rr3rr2	S223	12.25	Sec	FM2565	7970231	5x18	171.00	9.00	19.0		
	Depth Out	WOB	RPM	TORQUE	Total Rev's	Motor RPM	IADC Dull Bit Grading					
	1686	25	80									
Hydraulics	Pump #	Liner	Gal / Stk	SPM	GPM	SPP	DP AV	DC AV	ECD			
	1	6"	3.03	125	750	1500	44.8	65.2	10.0			
	2	6"	3.03	125								
BHA	BHA #	6	BHA Length	267.6	BHA Weight	46klb	Wt below Jars	37klb				
	Bit, bitsub w/float, 12" stab, 1x8" DC, 11-1/2" stab, 2x8" DC, XO, 18x5" HWDP, jars, 6x5" HWDP											
	BHA #		BHA Length		BHA Weight		Wt below Jars					
Surveys	Measured Depth	Angle	Azimuth	TVD	N/S (-)	E/W (-)	V. S.	DLS				
	1490.73	48.75	310.05	1284.17	293.28	411.61	505.39	0.86				
Casing	Last Casing Size	13 3/8"		Last Liner Size	Next Liner Size							
	Shoe Depth (m)	664		Shoe Depth(m)	Shoe Depth(m)							
	Weight (ppf)	54.5		Weight (ppf)	Weight (ppf)							
Tests & Drills	Last BOP Test	26-May-04		Last Pit Drill	1-Jun-04	Last Trip Drill	30-May-04					
Well Control	Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure			
	1	1460	9.3	60	240	100	420					
	2	160	9.3	60	240	100	420					
Personnel	TXU	6	Rig	18	Service Co.	19	Caterer	Others	TOTAL		43	
Well Cost	Daily Drilling Cost	Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost				
	\$104,592	\$2,248,765			\$6,503			\$66,867				
From	To	Hrs	Operations (00:00 - 24:00)									
09	0300	3.00	RIH. Reaming from 1336m to 1515m.									
05	1030	6.50	Drilled 12 1/4" hole from 1515m to 1636m.									
1030	1100	0.50	Repaired mud pump #1.									
1100	1330	2.50	Drilled to 1686m TD.									
1330	1530	2.00	Circulated hole clean. Pumped 50bbl Barolift sweep. Circulated out.									
1530	1730	2.00	Made wiper trip to 1000m. Worked tight sections. RIH to bottom.									
1730	1900	1.50	Circulated hole clean. Pumped 50bbl Barolift sweep. Circulated out.									
1900	1930	0.50	Worked pipe through tight hole from 1540 to 1650m									
1930	2200	2.50	Picked up kelly, circulated, swept hole with 50bbl Baralift and circulated hole clean									
2200	2400	2.00	Disable #1 mud pump. Drop gyro and pump slowly to bottom									
06:00 Activity		Logging										
24 hr Forecast		Run logs.										
Fuel Usage (litres)			Water Usage		Water on hand				Serial #	Hrs	Cum	
	Used	Rig	Camp	BBLs		BBLs		MOTOR				
	Stock	4,800	n/a					JARS	9.0	140.0		
							S SUB					
Drilling Supervisors		Peter Dwyer/Andy Urdevics			Mud Engineer			Tun Aung				

Report No.		16										DAILY DRILLING REPORT - IONA 6										
General Data		Date		Rig		Spud date		DSS		Last LTA												
		4-Jun-04		Century 18		20-May-04		16		155												
Drilling Data		Depth (m)		Depth TVD		Prog. (m)		Rot. Hours		Formation		Rot. Wt.		P. U. Wt		S. O. Wt						
		1686		1416						Eumeralla		125		130		110						
Drilling Fluid		Density		Viscosity		PV / YP		Gels 10s/10m		MBT		R3 / R6		PH		% LGS		Mud Losses				
		9.8		53		16/24		7 21		16		6/8		9.0		8.00		0				
		% Sand		FL HPHT		PHPA ppb		KCl		Alkalinity		Shaker Screen Size		C <sub>1</sub>		Total Gas						
		1.1		5.8		1		4.50%		0.1		110 110 84 50		18695		187						
Bit Data		Bit #	IADC	Size		Manuf		Type		Serial #		Nozzles		Cum. Mtrs		Cum. Hrs		ROP				
		r3rr2	S223	12.25		Sec		FM2565		7970231		5x18		171.00		9.00		19.0				
		Depth Out	WOB	RPM	TORQUE		Total Rev's		Motor RPM		IADC Dull Bit Grading											
		1686	25	80							2 2		WT A X I		NO TD							
Hydraulics		Pump #		Liner		Gal / Stk		SPM		GPM		SPP		DP AV		DC AV		ECD				
		1		6"		3.03		125		750		1500		44.8		65.2		9.9				
		2		6"		3.03		125														
BHA		BHA #	6	BHA Length		267.6		BHA Weight		46klb		Wt below Jars		37klb								
		Bit, bitsub w/float, 12" stab, 1x8" DC, 11-1/2" stab, 2x8" DC, XO, 18x5" HWDP, jars, 6x5" HWDP																				
		BHA #		BHA Length				BHA Weight				Wt below Jars										
Surveys		Measured Depth		Angle		Azimuth		TVD		N/S (-)		E/W (-)		V. S.		DLS						
		1490.73		48.75		310.05		1284.17		293.28		411.61		505.39		0.86						
Casing		Last Casing Size		13 3/8"		Last Liner Size				Next Liner Size												
		Shoe Depth (m)		664		Shoe Depth(m)				Shoe Depth(m)												
		Weight (ppf)		54.5		Weight (ppf)				Weight (ppf)												
Tests & Drills		Last BOP Test		26-May-04		Last Pit Drill		1-Jun-04		Last Trip Drill		30-May-04										
Well Control		Pump #	Depth	Mud Wt.		SPM #1		Pressure		SPM #2		Pressure		SPM #3		Pressure						
		1	1460	9.3		60		240		100		420										
		2	160	9.3		60		240		100		420										
Personnel		TXU	6	Rig	18	Service Co.	14	Caterer		Others		TOTAL	38									
Well Cost		Daily Drilling Cost		Cumulative Drilling Cost				Daily Mud Cost				Cumulative Mud Cost										
		\$133,739		\$2,382,504				\$800				\$66,867										
From	To	Hrs	Operations (00:00 - 24:00)																			
0500	0500	5.00	Continued POH, Recovered Gyro at surface Laid out stabilisers and bit																			
0500	0530	0.50	Clear and clean rig floor																			
0530	0600	0.50	Held safety meeting and rigged up to log.																			
0600	1430	8.50	Ran Log #1 triple combo and logged																			
1430	2330	9.00	Ran Log #2 (VSP)																			
2330	2400	0.50	Rigged down Logging equipment																			
06:00 Activity		Circulating at 1645m																				
24 hr Forecast		Suspend well																				
Fuel Usage (litres)				Water Usage		Water on hand				Serial #		Hrs		Cum								
		Rig	Camp	BBLs		BBLs		MOTOR														
		Used	2,800	n/a					JARS													
Stock	15,500	n/a					S SUB															
Drilling Supervisors		Peter Dwyer/Andy Urdevics						Mud Engineer				Tun Aung										

Report No.		17										DAILY DRILLING REPORT - IONA 6										 <b>TXU</b>	
General Data		Date		Rig		Spud date		DSS		Last LTA													
		5-Jun-04		Century 18		20-May-04		17		156													
Drilling Data		Depth (m)		Depth TVD		Prog. (m)		Rot. Hours		Formation		Rot. Wt.		P. U. Wt		S. O. Wt							
		604		604																			
Drilling Fluid		Density		Viscosity		PV / YP		Gels 10s/10m		MBT		R3 / R6		PH		% LGS		Mud Losses					
		% Sand		FL	HPHT	PHPA ppb		KCl		Alkalinity		Shaker Screen Size		C <sub>1</sub>		Total Gas							
Bit Data		Bit #	IADC	Size		Manuf		Type		Serial #		Nozzles		Cum. Mtrs		Cum. Hrs		ROP					
		Depth Out		WOB	RPM	TORQUE		Total Rev's		Motor RPM		IADC Dull Bit Grading											
Hydraulics		Pump #		Liner		Gal / Stk		SPM		GPM		SPP		DP AV		DC AV		ECD					
		1		6"		3.03																	
		2		6"		3.03																	
BHA		BHA #		BHA Length				BHA Weight				Wt below Jars											
		BHA #		BHA Length				BHA Weight				Wt below Jars											
Surveys		Measured Depth		Angle		Azimuth		TVD		N/S (-)		E/W (-)		V. S.		DLS							
Casing		Last Casing Size		13 3/8"		Last Liner Size				Next Liner Size													
		Shoe Depth (m)		664		Shoe Depth(m)				Shoe Depth(m)													
		Weight (ppf)		54.5		Weight (ppf)				Weight (ppf)													
Tests & Drills		Last BOP Test		26-May-04		Last Pit Drill		1-Jun-04		Last Trip Drill		30-May-04											
Well Control		Pump #	Depth	Mud Wt.		SPM #1		Pressure		SPM #2		Pressure		SPM #3		Pressure							
Personnel		TXU	6	Rig	18	Service Co.		11	Caterer		Others		TOTAL		35								
Well Cost		Daily Drilling Cost		Cumulative Drilling Cost				Daily Mud Cost				Cumulative Mud Cost											
		\$66,739		\$2,449,243								\$66,867											
From	To	Hrs	Operations (00:00 - 24:00)																				
00	0130	1.50	Laid out 3 x 8" DCs and rearranged HWDP in derrick																				
01	0500	3.50	Made up cementing stinger & RIH to 1645m																				
0500	0700	2.00	Installed circulating sub and cementing hose, circulated hole clean																				
0700	0730	0.50	Held safety meeting and pressure tested cement lines.																				
0730	0900	1.50	Set Cement plug #1 from 1645 to 1475m- Pumped 20bbls water preflush, mixed and pumped 95bbls 1.8SG slurry (427 sxs 'G' cement) , tailed with 3 bbls water and displaced with 75 bbls mud. CIP 0830hrs																				
0900	0930	0.50	Pulled 8 stands to 1422m slowly																				
0930	1400	5.50	Circulated DP at high rates while waiting on cement.																				
1400	1430	0.50	RIH. Tagged cement plug at 1486m with 15klb.																				
1430	1700	2.50	Laid out 39 jts DP.																				
1700	1730	0.50	Set Cement plug #2 from 1102 to 1000m- Pumped 20bbls water preflush, mixed and pumped 53bbls 1.8SG slurry (250 sxs 'G' cement) , tailed with 3 bbls water and displaced with 52 bbls mud. CIP 1720hrs																				
1730	1800	0.50	Pulled 5 stands to 956m slowly																				
1800	1900	1.00	Circulated DP at high rates.																				
1900	2030	1.50	Laid out 25 jts DP and 7 jts HWDP.																				
2030	2100	0.50	Rigged up circulating swage and circulate hole																				
2100	2230	1.50	Set Cement plug #3 from 714 to 604m- Pumped 20bbls water preflush, mixed and pumped 56bbls 1.8SG slurry (275 sxs 'G' cement) , tailed with 3 bbls water and displaced with 29 bbls mud. CIP 21:45hrs																				
2230	2400	1.50	Pulled 5stds slowly to 558m & circulated DP at high rate. Racked back 6 stds DP & RIH 6 stds HWDP																				
06:00 Activity		Laying out drill pipe																					
24 hr Forecast		Prepare rig for standby																					
Fuel Usage (litres)				Water Usage		Water on hand				Serial #		Hrs		Cum									
		Rig	Camp					MOTOR															
		Used	1,100	n/a	BBLS		BBLS		JARS														
Stock	14,400	n/a					S SUB																
Drilling Supervisors		Peter Dwyer/Andy Urdevics						Mud Engineer				Tun Aug											

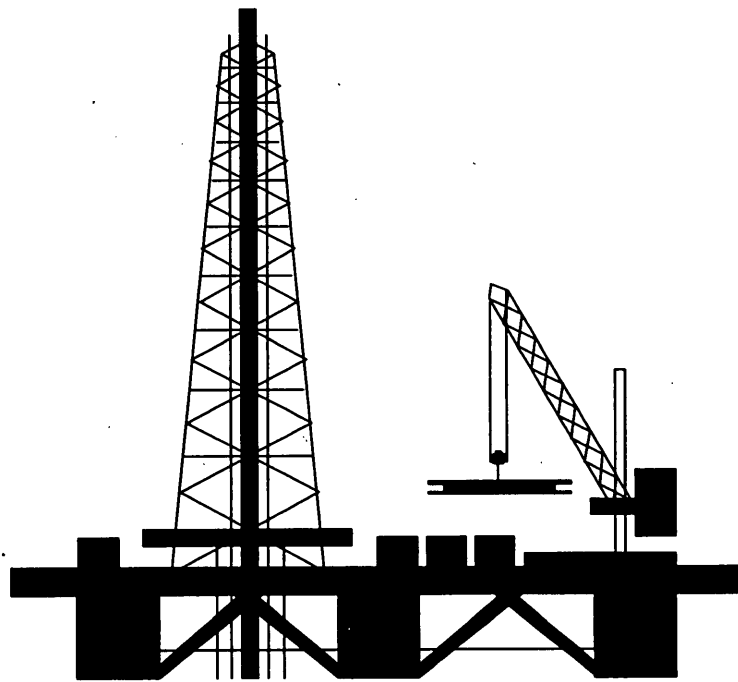
Report No.	18										DAILY DRILLING REPORT - IONA 6										
General Data	Date	Rig			Spud date	DSS	Last LTA														
	6-Jun-04	Century 18			20-May-04	18	157														
Drilling Data	Depth (m)	Depth TVD	Prog. (m)			Rot. Hours	Formation				Rot. Wt.	P. U. Wt	S. O. Wt								
	604	604																			
Drilling Fluid	Density	Viscosity	PV / YP	Gels 10s/10m	MBT	R3 / R6	PH	% LGS	Mud Losses												
	% Sand	FL	HPHT	PHPA ppb	KCl	Alkalinity	Shaker Screen Size	C <sub>1</sub>	Total Gas												
Bit Data	Bit #	IADC	Size	Manuf	Type	Serial #	Nozzles	Cum. Mtrs	Cum. Hrs	ROP											
	Depth Out	WOB	RPM	TORQUE	Total Rev's	Motor RPM	IADC Dull Bit Grading														
Hydraulics	Pump #	Liner	Gal / Stk	SPM	GPM	SPP	DP AV	DC AV	ECD												
	1	6"	3.03																		
BHA	BHA #	BHA Length			BHA Weight			Wt below Jars													
	BHA #	BHA Length			BHA Weight			Wt below Jars													
Surveys	Measured Depth			Angle	Azimuth	TVD	N/S (-)	E/W (-)	V. S.	DLS											
	Last Casing Size			13 3/8"	Last Liner Size			Next Liner Size													
Casing	Shoe Depth (m)			664	Shoe Depth(m)			Weight (ppf)													
	Weight (ppf)			54.5	Weight (ppf)																
Tests & Drills	Last BOP Test			26-May-04	Last Pit Drill			1-Jun-04	Last Trip Drill			30-May-04									
Well Control	Pump #	Depth	Mud Wt.	SPM #1	Pressure	SPM #2	Pressure	SPM #3	Pressure												
Personnel	TXU	6	Rig	18	Service Co.	6	Caterer	Others	TOTAL	30											
Well Cost	Daily Drilling Cost			Cumulative Drilling Cost			Daily Mud Cost			Cumulative Mud Cost											
	\$43,689			\$2,492,932						\$66,867											
From	To	Hrs	Operations (00:00 - 24:00)																		
0300	0300	3.00	Waited on cement. Laid out 3 x 8" DCs and rearranged HWDP in derrick																		
0300	0400	1.00	RIH and tagged TOC with 15K lbs at 603m																		
0400	0800	4.00	POH laying out drill pipe																		
0800	0930	1.50	Laid out drillpipe from derrick. Clean and dope connections.																		
0930	10.00	0.50	Flushed kelly and standpipe using both pumps																		
10.00	10.30	0.50	Made up cup tester and pulled wear busing																		
10.30	11.00	0.50	Installed cup tester, closed HydriL, flushed choke / kill lines and degasser																		
11.00	11.30	0.50	Pulled cup tester and closed Blind rams. Tested cement plug to 1000psi for 10 minutes.																		
11.30	24.00	12.50	Broke kelly and laid out. Cleaned mud pits, cleaned and stored handling equipment from rig floor.																		
												<b>RIG ON STANDBY AT 2400 HOURS</b>									
06:00 Activity												Cotinuig to suspend operations.									
24 hr Forecast												Rig on Standby									
Fuel Usage (litres)				Water Usage		Water on hand				Serial #	Hrs	Cum									
	Used	Rig	Camp	BBLs		BBLs		MOTOR													
	Stock	1,300	n/a					JARS													
Drilling Supervisors												Peter Dwyer/Andy Urdevics		Mud Engineer		Tun Aung					

**APPENDIX 2a**

**Definitive Survey by Halliburton/Sperry Sun**



**TXU Gas Storage Pty. Ltd.**



Directional Drilling End of Well Report

**Well : Iona #6**

Date: May 2004



908148 066

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1. Well Summary
  2. Definitive Survey Report and A4 Plot
  3. Survey and Drilling Parameters
  4. BHA Data
  5. Motor Performance Reports
  6. Daily Directional Drilling Reports
-

Customer : TXU Gas Storage Pty Ltd.

908148 067

Well Name : Iona #6

**Job Objectives:**

The primary objective of the Iona #6 well is to test an anomaly in the north west perimeter of the lease for the production and/or storage of gas from the Warre reservoir.

The well has been planned to kick off from vertical below the 13 3/8" shoe and build at 5°/30m to a sail angle of 45 degrees on an azimuth of 305 degrees. A tangent section will then be drilled to intersect the target at 1250m TVD and continue to well TD at 1685m MD.

**Summary of Results:****17½" Hole Section**

The well was spudded 17m from the proposed location and surface hole drilled and 13 3/8" casing set 20m deeper than the proposed kick off point. With these new amendments a new proposal was created to kick off ASAP below the shoe and build to 47° inclination along the new azimuth of 306° degrees.

**12 1/4" Hole Section.**

The kick-off assembly was scribed in the hole and kicked off once outside the shoe on a heading of 304° azimuth and built at 5°/30m to target inclination. The pipe tally was found to be longer by 8 metres which caused the inclination to be built to 49 degrees for target centre. The build assembly was very effective with easy slides and good turn response. This assembly was pulled early on the hope the following PDC bit would offer higher ROP. This assembly was unsteerable and was pulled after the 2 slides in high side dropped.

The original build assembly was re-run and drilled through target before being pulled. There was a priority on target centre and this aim was achieved without excessive slided time. At 1515m this assembly was pulled and the motor and MWD layed out. The well was drilled to TD (1685m) with a rotary hold assembly.

**Discussion:**

BHA #	Bit #	Motor Run #	Hole Size (in)	MD In (m)	MD Out (m)	TVD In (m)	TVD Out (m)	Inc In (deg)	Inc Out (deg)	Azi In (deg)	Azi Out (deg)	Drig hrs	Circ hrs
1	1		17.500	0	664	0	664	0.0	0.7	0	233	47	5
2	2	1	12.250	664	976	664	941	0.7	44.9	233	305	36	4
3	3rr1	2	12.250	976	1008	941	963	44.9	43.7	305	305	7	3
4	3rr2	3	12.250	1008	1037	963	984	43.7	44.5	305	307	10	2
5	4	5	12.250	1037	1515	984	1300	44.5	48.7	307	311	58	3
6	3rr3		12.250	1515	1515	1300	1300	48.7	48.7	311	311	0	6

Table 1 - BHA Summary

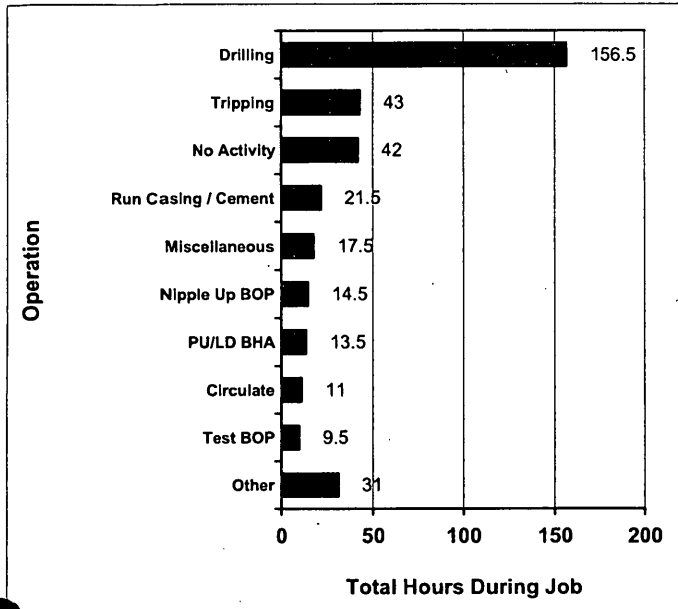
Motor Run #	Manufacturer	Type	Lobe	OD (in)	Gauge (in)	Bend (deg)	Adj	DLS (Ori) (°/30m)	ROP (Ori) (m/hr)	ROP (Rot) (m/hr)
1	SSDS	SperryDrill	6/7	8.000	12.125	1.50	Y		7	14
2	SSDS	SperryDrill	6/7	8.000	12.125	1.15	Y		1	6
3	SSDS	SperryDrill	6/7	8.000	12.125		Y		2	7
5	SSDS	SperryDrill	6/7	8.000	12.125	1.50	Y		6	9

Table 2 - Motor Run Summary

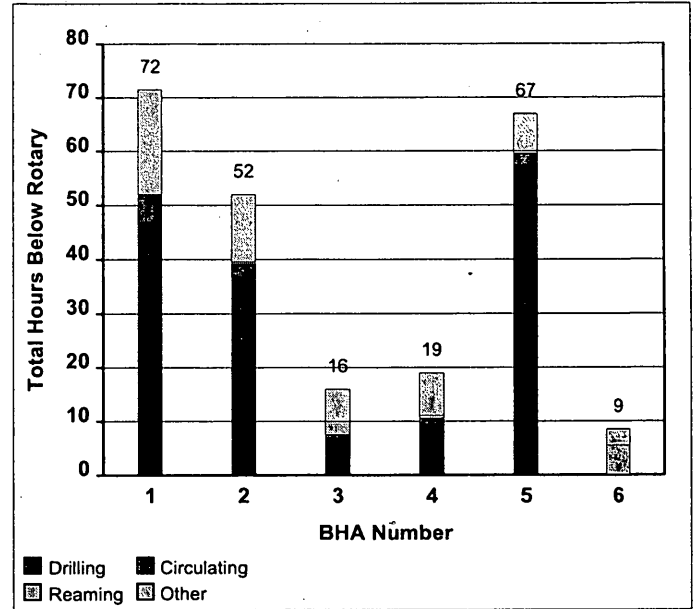
Bit #	Manufacturer	Style	OD (in)	Gge Len (in)	Nozzles (/32's)	TFA (in²)	Dull Grades I O D L B G O R	Ftge (m)	Drig hrs	ROP (m/hr)
1	Security DBS	XT15C	17.500		3x16, 1x18	0.838	1-1-WT- A-E-I-NO-TD	664	47.00	14
2	Security DBS	EBXS02S	12.250		3x18, 1x20	1.052	1-2-WT- A-E-I-NO-BHA	312	35.50	9
3rr1	Security DBS	FM2565	12.250		5x18	1.243	1-1-WT- A-X-I-NO-BHA	32	7.00	5
3rr2	Security DBS	FM2565	12.250		5x18	1.243	1-1-WT- A-X-I-NO-BHA	29	9.50	3
4	Security DBS	EBXS02S	12.250		5x18	1.243		478	57.50	8
3rr3	Security DBS	FM2565	12.250		5x18	1.243		0	0.00	

Table 3 - Bit Run Summary

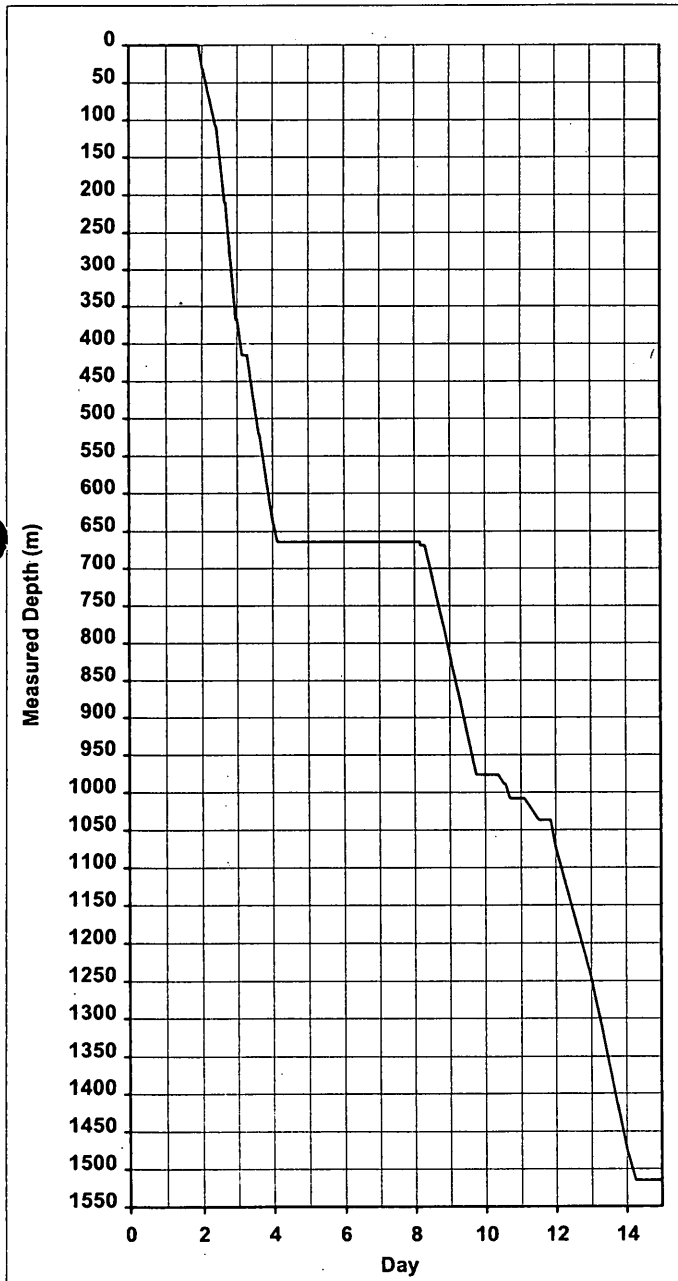
### Hours by Operation Summary



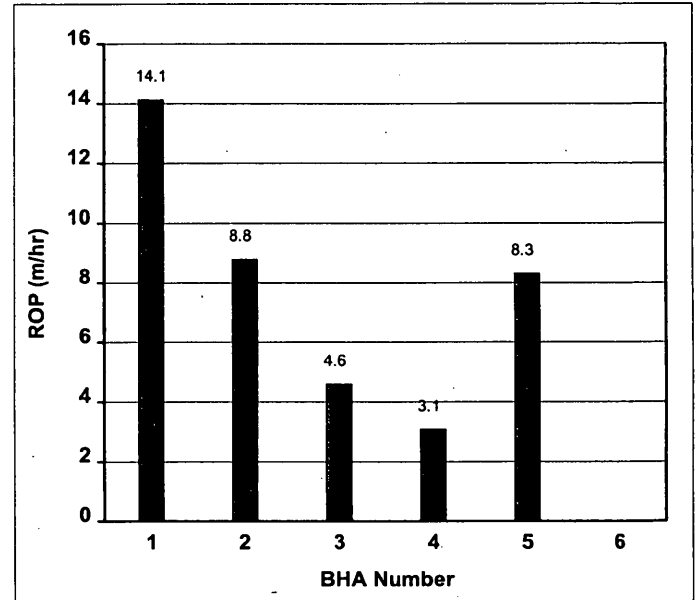
### Hours per BHA Breakdown



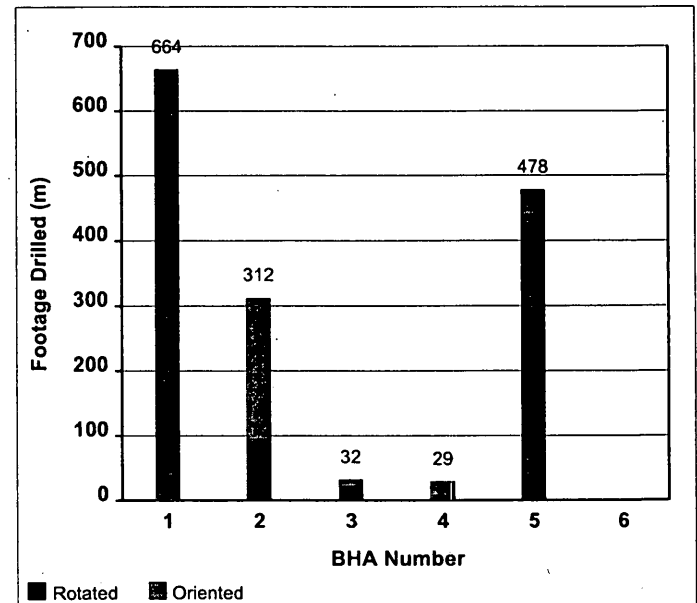
### Days vs. Depth



### Average Rate of Penetration per BHA



### Footage per BHA



Otway Basin  
Iona  
AU-DD-0002999700

TXU Gas Storage Pty Ltd.  
Iona #6  
Century Rig 18

Sperry-Sun Drilling Services

MD (m)	Formation Name MD/IVD	Inclination DLS	Bit Data	Drilling Parameters	Motor	BHA Stabilizers	Comments	BHA ID
0 - 664		0 - 10	XT15C 3x16, 1x18 /32's 0.77 ft/min 47.00 hrs	WOB 17 lbs RPM 121 FLO 719 gpm SPP 981 psi		17.500 in @ 20.67 m	Iona - 6 spudded @ 21:30 hrs 20/05/04	#1 @ 0
664 - 976		10 - 35	EBXS02S 3x18, 1x20 /32's 0.48 ft/min 35.50 hrs	WOB 24 lbs RPM 51 FLO 722 gpm SPP 1347 psi	8" SperryDrill 6/7 L 1.50" ABH	12.125 in @ 1.10 m 11.750 in @ 10.94 m	Motor RPM - 0.17 rev/gal Bent housing to be set at 1.5" Non-ported float valve installed	#2 @ 664
976 - 1008		35 - 45	FM2565 5x18 /32's 0.25 ft/min 7.00 hrs	WOB 18 lbs RPM 60 FLO 748 gpm SPP 1333 psi	8" SperryDrill 6/7 L 1.15" ABH	12.125 in @ 1.10 m 12.000 in @ 10.99 m	Non-ported float in string.	#3 @ 976
1008 - 1037		45 - 50	FM2565 5x18 /32's 0.17 ft/min 9.50 hrs	WOB 20 lbs RPM 60 FLO 725 gpm SPP 1638 psi	8" SperryDrill 6/7 L ABH	12.125 in @ 1.10 m 11.750 in @ 10.94 m		#4 @ 1008
1037 - 1600		50 - 10	EBXS02S 5x18 /32's 0.45 ft/min 57.50 hrs	WOB 29 lbs RPM 59 FLO 708 gpm SPP 1777 psi	8" SperryDrill 6/7 L 1.50" ABH	12.125 in @ 1.10 m 11.500 in @ 11.17 m		#5 @ 1037



908148 070

**TXU Gas Storage Pty. Ltd.**  
**Iona**  
**Iona #6 - 12¼" Gyro / MWD Surveys**

**Sperry-Sun**  
**Survey Report**

**27 June, 2004**

Your Ref: Gyro from surface to 630m, MWD from 630m - TD  
Surface Coordinates: 5728761.68 N, 677185.62 E (38° 34' 19.0150" S, 143° 02' 02.1251" E)  
Grid Coordinate System: UTM Zone 54S - WGS84

Kelly Bushing Elevation: 109.30m above Mean Sea Level

Survey Ref: svy6502

**HALLIBURTON**

**Survey Report for Iona #6 - 12¼" Gyro / MWD Surveys**  
**Your Ref: Gyro from surface to 630m, MWD from 630m - TD**

Measured Depth (m)	Incl.	Grid Azim.	Sub-Sea Depth (m)	Vertical Depth (m)	Local Coordinates		UTM Zone 54S - WGS84		Dogleg Rate (°/30m)	Vertical Section (m)
					Northings (m)	Eastings (m)	Northings (m)	Eastings (m)		
0.00	0.000	0.000	-109.30	0.00	0.00 N	0.00 E	5728761.68 N	677185.62 E		0.00
30.00	0.330	312.610	-79.30	30.00	0.06 N	0.06 W	5728761.74 N	677185.56 E	0.33	0.09
60.00	0.350	287.450	-49.30	60.00	0.14 N	0.21 W	5728761.82 N	677185.41 E	0.15	0.26
90.00	0.270	241.660	-19.30	90.00	0.14 N	0.36 W	5728761.82 N	677185.26 E	0.25	0.38
120.00	0.310	272.280	10.70	120.00	0.11 N	0.51 W	5728761.79 N	677185.11 E	0.16	0.48
150.00	0.290	232.600	40.70	150.00	0.07 N	0.65 W	5728761.75 N	677184.97 E	0.20	0.57
180.00	0.550	259.510	70.70	180.00	0.01 S	0.85 W	5728761.67 N	677184.77 E	0.32	0.69
210.00	0.540	301.850	100.70	210.00	0.04 N	1.11 W	5728761.72 N	677184.51 E	0.39	0.94
240.00	0.530	290.530	130.69	239.99	0.16 N	1.36 W	5728761.84 N	677184.26 E	0.11	1.21
270.00	0.450	325.770	160.69	269.99	0.31 N	1.56 W	5728761.99 N	677184.06 E	0.31	1.46
300.00	0.570	307.060	190.69	299.99	0.50 N	1.74 W	5728762.18 N	677183.88 E	0.20	1.71
330.00	0.630	325.790	220.69	329.99	0.72 N	1.96 W	5728762.40 N	677183.66 E	0.20	2.02
360.00	0.480	319.210	250.69	359.99	0.96 N	2.13 W	5728762.64 N	677183.49 E	0.16	2.29
390.00	0.420	289.870	280.69	389.99	1.09 N	2.32 W	5728762.77 N	677183.30 E	0.24	2.52
420.00	0.390	292.340	310.69	419.99	1.16 N	2.51 W	5728762.84 N	677183.11 E	0.03	2.73
450.00	0.440	296.640	340.69	449.99	1.25 N	2.71 W	5728762.93 N	677182.91 E	0.06	2.94
480.00	0.430	305.000	370.69	479.99	1.37 N	2.91 W	5728763.05 N	677182.71 E	0.06	3.17
510.00	0.480	304.490	400.69	509.99	1.51 N	3.10 W	5728763.19 N	677182.52 E	0.05	3.41
540.00	0.390	300.200	430.68	539.98	1.63 N	3.29 W	5728763.31 N	677182.33 E	0.10	3.63
570.00	0.380	312.730	460.68	569.98	1.75 N	3.46 W	5728763.43 N	677182.16 E	0.08	3.83
600.00	0.460	333.320	490.68	599.98	1.92 N	3.58 W	5728763.60 N	677182.04 E	0.17	4.04
630.00	0.690	306.890	520.68	629.98	2.14 N	3.78 W	5728763.82 N	677181.84 E	0.35	4.32
658.84	0.420	297.270	549.52	658.82	2.29 N	4.01 W	5728763.97 N	677181.61 E	0.30	4.60
677.88	2.280	207.050	568.55	677.85	1.99 N	4.25 W	5728763.67 N	677181.37 E	3.66	4.62
689.60	3.380	217.750	580.26	689.56	1.51 N	4.57 W	5728763.19 N	677181.05 E	3.11	4.60
699.33	4.610	242.920	589.97	699.27	1.10 N	5.09 W	5728762.78 N	677180.53 E	6.52	4.80
718.89	8.360	268.350	609.40	718.70	0.70 N	7.21 W	5728762.38 N	677178.41 E	7.11	6.31
747.43	11.120	296.270	637.54	746.84	1.86 N	11.76 W	5728763.54 N	677173.86 E	5.67	10.70
776.45	13.860	310.520	665.88	775.18	5.36 N	16.91 W	5728767.04 N	677168.71 E	4.24	16.93
804.75	18.700	304.530	693.04	802.34	10.14 N	23.23 W	5728771.82 N	677162.39 E	5.42	24.84
833.60	25.060	301.570	719.80	829.10	15.96 N	32.25 W	5728777.64 N	677153.37 E	6.71	35.58
862.41	31.080	303.110	745.21	854.51	23.23 N	43.69 W	5728784.91 N	677141.93 E	6.31	49.11
891.69	36.400	305.850	769.55	878.85	32.45 N	57.08 W	5728794.13 N	677128.54 E	5.67	65.37
920.84	42.860	304.720	791.99	901.29	43.17 N	72.25 W	5728804.85 N	677113.37 E	6.69	83.95
949.57	45.290	304.410	812.63	921.93	54.51 N	88.71 W	5728816.19 N	677096.91 E	2.55	103.93
978.61	44.850	304.810	833.14	942.44	66.19 N	105.63 W	5728827.87 N	677079.99 E	0.54	124.49
997.99	44.030	304.850	846.97	956.27	73.94 N	116.77 W	5728835.62 N	677068.85 E	1.27	138.06
1006.45	43.690	304.810	853.07	962.37	77.28 N	121.58 W	5728838.96 N	677064.04 E	1.21	143.92
1036.86	44.490	306.550	874.92	984.22	89.63 N	138.76 W	5728851.31 N	677046.86 E	1.43	165.08
1066.11	47.950	306.150	895.15	1004.45	102.14 N	155.77 W	5728863.82 N	677029.85 E	3.56	186.19
1095.26	47.920	305.600	914.68	1023.98	114.82 N	173.31 W	5728876.50 N	677012.31 E	0.42	207.82
1105.00	47.900	305.740	921.21	1030.51	119.04 N	179.18 W	5728880.72 N	677006.44 E	0.33	215.05
1114.68	49.120	305.730	927.62	1036.92	123.27 N	185.06 W	5728884.95 N	677000.56 E	3.78	222.30
1124.39	49.490	306.530	933.95	1043.25	127.61 N	191.01 W	5728889.29 N	676994.61 E	2.20	229.66
1153.42	48.300	307.150	953.04	1062.34	140.73 N	208.52 W	5728902.41 N	676977.10 E	1.32	251.52
1163.15	47.810	306.890	959.54	1068.84	145.08 N	214.29 W	5728906.76 N	676971.33 E	1.62	258.76
1172.90	47.770	307.130	966.09	1075.39	149.43 N	220.06 W	5728911.11 N	676965.56 E	0.56	265.97
1182.63	48.000	305.950	972.62	1081.92	153.73 N	225.86 W	5728915.41 N	676959.76 E	2.79	273.19
1192.33	48.010	306.530	979.11	1088.41	157.99 N	231.67 W	5728919.67 N	676953.95 E	1.33	280.40
1202.04	48.180	305.500	985.59	1094.89	162.24 N	237.52 W	5728923.92 N	676948.10 E	2.43	287.62
1211.82	48.210	305.020	992.11	1101.41	166.45 N	243.47 W	5728928.13 N	676942.15 E	1.10	294.91
1221.62	48.270	305.290	998.64	1107.94	170.66 N	249.45 W	5728932.34 N	676936.17 E	0.64	302.22
1231.16	49.370	305.030	1004.92	1114.22	174.79 N	255.32 W	5728936.47 N	676930.30 E	3.51	309.40
1240.71	49.610	305.020	1011.13	1120.43	178.96 N	261.27 W	5728940.64 N	676924.35 E	0.75	316.66
1250.50	49.420	305.270	1017.48	1126.78	183.24 N	267.35 W	5728944.92 N	676918.27 E	0.82	324.11
1260.23	49.280	305.770	1023.82	1133.12	187.53 N	273.36 W	5728949.21 N	676912.26 E	1.25	331.49
1269.83	48.990	305.790	1030.10	1139.40	191.78 N	279.25 W	5728953.46 N	676906.37 E	0.91	338.75
1279.60	49.000	305.140	1036.51	1145.81	196.06 N	285.26 W	5728957.74 N	676900.36 E	1.51	346.12
1289.38	49.580	305.620	1042.89	1152.19	200.35 N	291.30 W	5728962.03 N	676894.32 E	2.10	353.54
1298.99	49.670	305.410	1049.12	1158.42	204.60 N	297.26 W	5728966.28 N	676888.36 E	0.57	360.86
1308.77	49.420	305.870	1055.46	1164.76	208.94 N	303.31 W	5728970.62 N	676882.31 E	1.32	368.30
1318.44	49.420	306.030	1061.75	1171.05	213.25 N	309.25 W	5728974.93 N	676876.37 E	0.38	375.64
1328.16	49.440	306.480	1068.07	1177.37	217.62 N	315.21 W	5728979.30 N	676870.41 E	1.06	383.02
1337.81	49.310	306.410	1074.36	1183.66	221.97 N	321.10 W	5728983.65 N	676864.52 E	0.44	390.34
1356.88	48.970	306.890	1086.83	1196.13	230.58 N	332.67 W	5728992.26 N	676852.95 E	0.78	404.76
1376.21	48.710	307.820	1099.55	1208.85	239.41 N	344.24 W	5729001.09 N	676841.38 E	1.16	419.30
1395.47	48.910	307.910	1112.24	1221.54	248.30 N	355.68 W	5729009.98 N	676829.94 E	0.33	433.78
1414.75	49.010	308.250	1124.90	1234.20	257.27 N	367.13 W	5729018.95 N	676818.49 E	0.43	448.30
1433.90	48.980	308.480	1137.46	1246.76	266.24 N	378.46 W	5729027.92 N	676807.16 E	0.28	462.72
1452.41	48.890	309.010	1149.62	1258.92	274.98 N	389.34 W	5729036.66 N	676796.28 E	0.66	476.65

**HALLIBURTON**

**Survey Report for Iona #6 - 12¼" Gyro / MWD Surveys**  
**Your Ref: Gyro from surface to 630m, MWD from 630m - TD**

908148 072

Measured Depth (m)	Incl.	Grid Azim.	Sub-Sea Depth (m)	Vertical Depth (m)	Local Coordinates		UTM Zone 54S - WGS84		Dogleg Rate (°/30m)	Vertical Section (m)
					Northings (m)	Eastings (m)	Northings (m)	Eastings (m)		
1471.69	48.760	309.320	1162.31	1271.61	284.14 N	400.60 W	5729045.82 N	676785.02 E	0.42	491.12
1490.73	48.750	310.050	1174.87	1284.17	293.28 N	411.61 W	5729054.96 N	676774.01 E	0.86	505.39

All data is in Metres unless otherwise stated. Directions and coordinates are relative to Grid North.  
Vertical depths are relative to RT. Northings and Eastings are relative to Well.  
Global Northings and Eastings are relative to UTM Zone 54S - WGS84.

The Dogleg Severity is in Degrees per 30 metres.  
Vertical Section is from Well and calculated along an Azimuth of 304.985° (Grid).

Coordinate System is UTM Zone 54S - WGS84.  
Grid Convergence at Surface is -1.268°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 1490.73m.,  
The Bottom Hole Displacement is 505.41m., in the Direction of 305.471° (Grid).

The survey penetrates target Iona #6 Target at a measured depth of 1438.02m at a distance of 6.45m from the target centre.

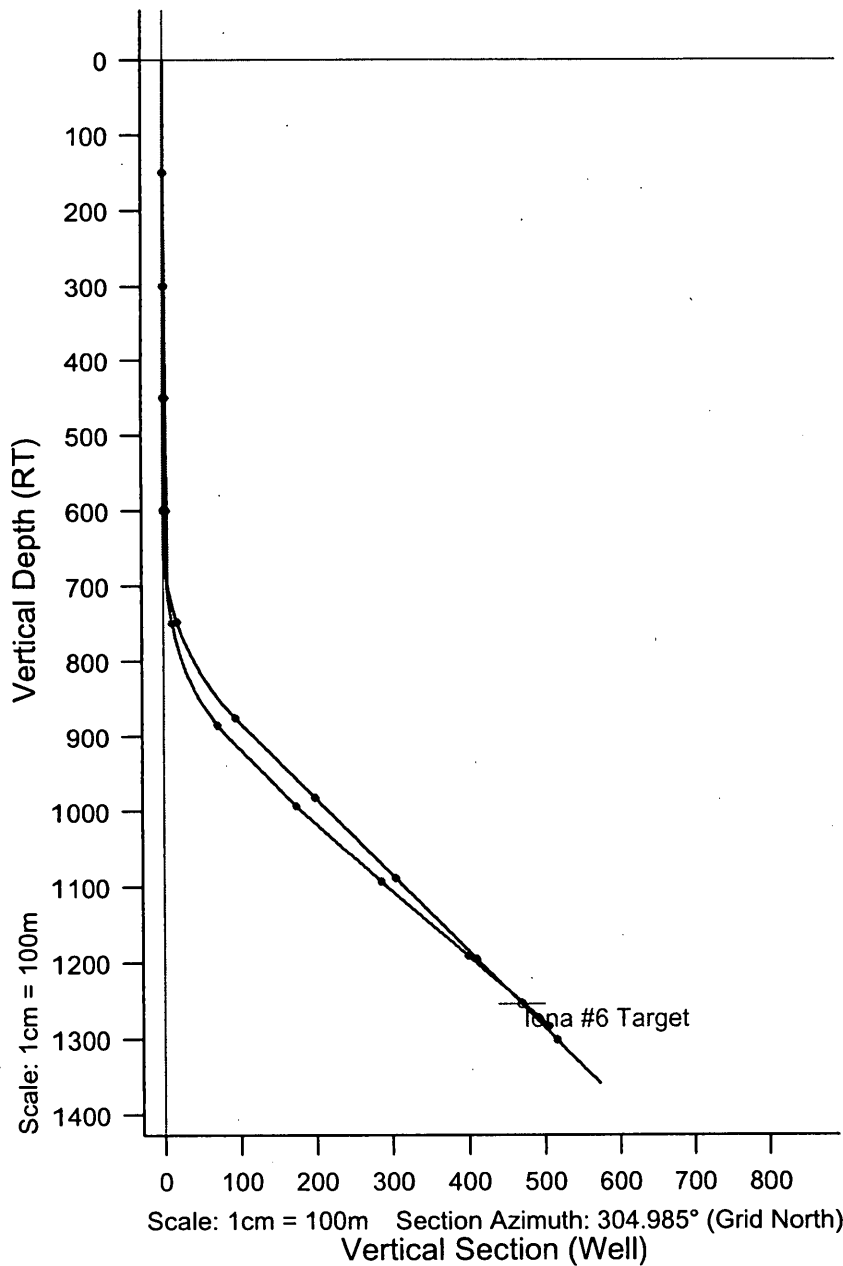
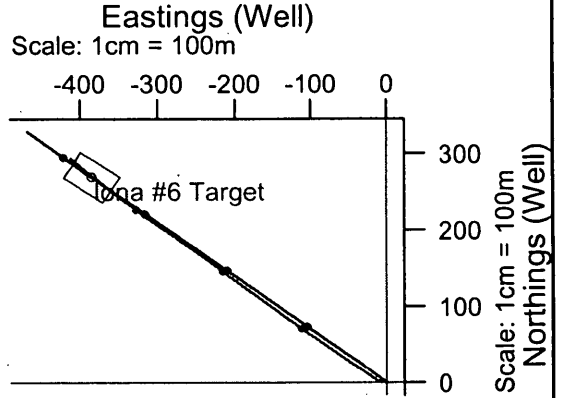
HALLIBURTON

TXU Gas Storage Pty. Ltd.

DrillQuest

Sperry-Sun

Field : Iona  
Well : Iona #6





# SPERRY-SUN

## SURVEY AND DRILLING PARAMETERS

Customer : TXU Gas Storage Pty Ltd.  
Well Name : Iona #6  
Rig : Century Rig 18

Field : Otway Basin  
Slot : Iona  
Job # : AU-DD-0002999700  
North Ref : Grid Declination : ° VS Dir : 304.98° (from Wellhead)

WELLBORE SURVEY										DRILLING PARAMETERS									
Measured Depth (m)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (m)	Vertical Section (m)	Coordinates N/S (m)	Coordinates E/W (m)	DLS (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)	WOB (lbs)	RPM	Flow Rate (gpm)	Stand Pipe (psi)	Orientation From (m)	Orientation To (m)	Tool Face (deg)	ROP (m/hr)	BHA No. (#)	Comment
0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	5	70	605	80				10	1	Tieon
30.00	0.33	312.61	30.0	0.1	0.1	-0.1	0.33	0.33	0.00	5	70	605	80				10	1	
60.00	0.35	287.45	60.0	0.3	0.1	-0.2	0.15	0.02	0.00	5	120	725	650				10	1	
90.00	0.27	241.66	90.0	0.4	0.1	-0.4	0.25	-0.08	0.00	5	120	725	650				10	1	
120.00	0.31	272.28	120.0	0.5	0.1	-0.5	0.16	0.04	0.00	5	120	725	650				10	1	
150.00	0.29	232.60	150.0	0.6	0.1	-0.6	0.20	-0.02	0.00	5	120	725	650				10	1	
180.00	0.55	259.51	180.0	0.7	0.0	-0.9	0.32	0.26	0.00	20	130	725	1000				20	1	
210.00	0.54	301.85	210.0	0.9	0.0	-1.1	0.39	-0.01	0.00	20	130	725	1000				20	1	
240.00	0.53	290.53	240.0	1.2	0.2	-1.4	0.11	-0.01	0.00	20	130	725	1000				20	1	
270.00	0.45	325.77	270.0	1.5	0.3	-1.6	0.31	-0.08	0.00	20	130	725	1000				20	1	
300.00	0.57	307.06	300.0	1.7	0.5	-1.7	0.20	0.12	0.00	20	130	725	1000				20	1	
330.00	0.63	325.79	330.0	2.0	0.7	-2.0	0.20	0.06	0.00	20	130	725	1000				20	1	
360.00	0.48	319.21	360.0	2.3	1.0	-2.1	0.16	-0.15	0.00	20	130	725	1000				20	1	
390.00	0.42	289.87	390.0	2.5	1.1	-2.3	0.24	-0.06	0.00	20	120	725	1200				20	1	
420.00	0.39	292.34	420.0	2.7	1.2	-2.5	0.03	-0.03	0.00	20	120	725	1200				20	1	
450.00	0.44	296.64	450.0	2.9	1.3	-2.7	0.06	0.05	0.00	20	120	725	1200				20	1	
480.00	0.43	305.00	480.0	3.2	1.4	-2.9	0.06	-0.01	0.00	20	120	725	1200				20	1	
510.00	0.48	304.49	510.0	3.4	1.5	-3.1	0.05	0.05	0.00	20	120	725	1200				20	1	
540.00	0.39	300.20	540.0	3.6	1.6	-3.3	0.10	-0.09	0.00	20	120	725	1200				20	1	
570.00	0.38	312.73	570.0	3.8	1.7	-3.5	0.08	-0.01	0.00	20	120	725	1200				20	1	
600.00	0.46	333.32	600.0	4.0	1.9	-3.6	0.17	0.08	0.00	20	120	725	1200				20	1	
630.00	0.69	306.89	630.0	4.3	2.1	-3.8	0.35	0.23	0.00	20	120	725	1200				20	1	
658.84	0.42	297.27	658.8	4.6	2.3	-4.0	0.30	-0.28	0.00	20	120	725	1200				20	1	
677.88	2.28	207.05	677.9	4.6	2.0	-4.2	3.66	2.93	0.00	15		600	1100	664	678	56L	8	2	
689.60	3.38	217.75	689.6	4.6	1.5	-4.6	3.11	2.82	27.39	15		600	1000	678	682	56L	12	2	
699.33	4.61	242.92	699.3	4.8	1.1	-5.1	6.52	3.79	77.61	15		700	1300	682	690	50L	15	2	
718.89	8.36	268.35	718.7	6.3	0.7	-7.2	7.11	5.75	39.00	15		700	1300	692	699	90R	20	2	
														701	719	70R	20	2	

# sperry-sun

## SURVEY AND DRILLING PARAMETERS

Customer : TXU Gas Storage Pty Ltd.  
Well Name : Iona #6  
Rig : Century Rig 18

Field : Otway Basin  
Slot : Iona  
Job # : AU-DD-0002999700

North Ref : Grid Declination : ° VS Dir : 304.98° (from Wellhead)

WELLBORE SURVEY											DRILLING PARAMETERS										
Measured Depth (m)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (m)	Vertical Section (m)	Coordinates N/S (m)	Coordinates E/W (m)	DLS (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)	WOB (lbs)	RPM	Flow Rate (gpm)	Stand Pipe (psi)	Orientation From (m)	Orientation To (m)	Tool Face (deg)	ROP (m/hr)	BHA No. (#)	Comment		
747.43	11.12	296.27	746.8	10.7	1.9	-11.8	5.67	2.90	29.35	18		735	1350	719	721	70R	12	2			
776.45	13.86	310.52	775.2	16.9	5.4	-16.9	4.24	2.83	14.73	25		735	1350	740	740	90R	18	2			
804.75	18.70	304.53	802.3	24.8	10.1	-23.2	5.42	5.13	-6.35	25	40	735	1300	776	776	HS	35	2			
833.60	25.06	301.57	829.1	35.6	16.0	-32.3	6.71	6.61	-3.08	25	40	735	1300	807	812	HS	25	2			
862.41	31.08	303.11	854.5	49.1	23.2	-43.7	6.31	6.27	1.60	30		735	1350	838	845	HS	10	2			
891.69	36.40	305.85	878.8	65.4	32.5	-57.1	5.67	5.45	2.81	40		750	1400	862	868	HS	7	2			
920.84	42.86	304.72	901.3	84.0	43.2	-72.3	6.69	6.65	-1.16	40		740	1500	892	898	HS	10	2			
949.57	45.29	304.41	921.9	103.9	54.5	-88.7	2.55	2.54	-0.32	15	60	740	1500	921	923	HS	20	2			
978.61	44.85	304.81	942.4	124.5	66.2	-105.6	0.54	-0.45	0.41	10	60	725	1200	961	967	30R	15	3			
997.99	44.03	304.85	956.3	138.1	73.9	-116.8	1.27	-1.27	0.06	20	60	750	1350	979	987	HS	20	3			
1006.45	43.69	304.81	962.4	143.9	77.3	-121.6	1.21	-1.21	-0.14	20	60	750	1350	999	1001	HS	20	3			
1036.86	44.49	306.55	984.2	165.1	89.6	-138.8	1.43	0.79	1.72	20	60	725	1600	1008	1025	HS	15	4			
1066.11	47.95	306.15	1004.5	186.2	102.1	-155.8	3.56	3.55	-0.41	40	50	755	1750	1028	1032	HS	20	4			
1095.26	47.92	305.60	1024.0	207.8	114.8	-173.3	0.42	-0.03	-0.57	40	50	755	1750	1037	1052	HS	20	5			
1105.00	47.90	305.74	1030.5	215.1	119.0	-179.2	0.33	-0.06	0.43	40	50	755	1750				20	5			
1114.68	49.12	305.73	1036.9	222.3	123.3	-185.1	3.78	3.78	-0.03	40		735	1750	1111	1115	HS	5	5			
1124.39	49.49	306.53	1043.3	229.7	127.6	-191.0	2.20	1.14	2.47	30	60	725	1750	1115	1116	HS	10	5			
1153.42	48.30	307.15	1062.3	251.5	140.7	-208.5	1.32	-1.23	0.64	30	60	725	1750				10	5			
1163.15	47.81	306.89	1068.8	258.8	145.1	-214.3	1.62	-1.51	-0.80	30	60	725	1750				10	5			
1172.90	47.77	307.13	1075.4	266.0	149.4	-220.1	0.56	-0.12	0.74	30	60	725	1750				10	5			
1182.63	48.00	305.95	1081.9	273.2	153.7	-225.9	2.79	0.71	-3.64	30	60	725	1750	1174	1180	45L	10	5			

Customer : TXU Gas Storage Pty Ltd.  
 Well Name : Iona #6  
 Rig : Century Rig 18  
 Field : Otway Basin  
 Slot : Iona  
 Job # : AU-DD-0002999700  
 North Ref : Grid Declination : ° VS Dir : 304.98° (from Wellhead)

WELLBORE SURVEY											DRILLING PARAMETERS							
Measured Depth (m)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (m)	Vertical Section (m)	Coordinates N/S (m)	E/W (m)	DLS (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)	WOB (lbs)	RPM	Flow Rate (gpm)	Stand Pipe (psi)	Orientation From (m) To (m)	Tool Face (deg)	ROP (m/hr)	BHA No. (#)	Comment
1192.33	48.01	306.53	1088.4	280.4	158.0	-231.7	1.33	0.03	1.79	30	60	725	1750			10	5	
1202.04	48.18	305.50	1094.9	287.6	162.2	-237.5	2.43	0.53	-3.18	30	60	725	1750	1195	30L	10	5	
1211.82	48.21	305.02	1101.4	294.9	166.4	-243.5	1.10	0.09	-1.47	30	60	725	1750			10	5	
1221.62	48.27	305.29	1107.9	302.2	170.7	-249.4	0.64	0.18	0.83	30	60	725	1750			10	5	
1231.16	49.37	305.03	1114.2	309.4	174.8	-255.3	3.51	3.46	-0.82	30	60	725	1750	1223	10L	10	5	
1240.71	49.61	305.02	1120.4	316.7	179.0	-261.3	0.75	0.75	-0.03	30	60	725	1750			10	5	
1250.50	49.42	305.27	1126.8	324.1	183.2	-267.4	0.82	-0.58	0.77	25	60	725	2000			25	5	
1260.23	49.28	305.77	1133.1	331.5	187.5	-273.4	1.25	-0.43	1.54	25	60	725	2000			25	5	
1269.83	48.99	305.79	1139.4	338.8	191.8	-279.3	0.91	-0.91	0.06	25	60	725	2000			25	5	
1279.60	49.00	305.14	1145.8	346.1	196.1	-285.3	1.51	0.03	-2.00	25	60	725	2000			25	5	
1289.38	49.58	305.62	1152.2	353.5	200.3	-291.3	2.10	1.78	1.47	25	60	725	2000			25	5	
1298.99	49.67	305.41	1158.4	360.9	204.6	-297.3	0.57	0.28	-0.66	25	60	725	2000			25	5	
1308.77	49.42	305.87	1164.8	368.3	208.9	-303.3	1.32	-0.77	1.41	25	60	725	2000			25	5	
1318.44	49.42	306.03	1171.1	375.6	213.2	-309.3	0.38	0.00	0.50	25	60	725	2000			25	5	
1328.16	49.44	306.48	1177.4	383.0	217.6	-315.2	1.06	0.06	1.39	30	60	725	1800			30	5	
1337.81	49.31	306.41	1183.7	390.3	222.0	-321.1	0.44	-0.40	-0.22	30	60	725	1800			30	5	
1356.88	48.97	306.89	1196.1	404.8	230.6	-327.7	0.78	-0.53	0.76	30	60	725	1800			30	5	
1376.21	48.71	307.82	1208.9	419.3	239.4	-344.2	1.16	-0.40	1.44	30	60	725	1800			30	5	
1395.47	48.91	307.91	1221.5	433.8	248.3	-355.7	0.33	0.31	0.14	30	60	725	1800			30	5	
1414.45	49.01	308.25	1234.0	448.1	257.1	-366.9	0.44	0.16	0.54	25	60	635	1700			5	5	
1433.90	48.98	308.48	1246.8	462.7	266.2	-378.5	0.27	-0.05	0.35	25	60	635	1700			5	5	
1452.41	48.89	309.01	1258.9	476.6	275.0	-389.3	0.66	-0.15	0.86	25	60	635	1700			5	5	
1471.69	48.76	309.32	1271.6	491.1	284.1	-400.6	0.42	-0.20	0.48	25	60	635	1700			5	5	
1490.73	48.75	310.05	1284.2	505.4	293.3	-411.6	0.86	-0.02	1.15	25	60	635	1700			5	5	

908148 076

# sperry-sun

## DRILLING SERVICES

### BHA Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

# 908148 077

BHA# 1

BHA# 1 : Date In :20/05/200 MD In (m) : 0 TVD In (m) : 0 Date Out 23/05/200 MD Out (m): 664 TVD Out (m): 664

#### BIT DATA

Bit #	OD (in)	MFR	Style	Serial#	Nozzles (/32's)	TFA (in")	Dull Condition
1	17.500	Security DBS	XT15C	1039131	3x16, 1x18	0.838	1-1-WT- A-E-I-NO-TD

#### MOTOR DATA

Run #	OD (in)	MFR	Model	Serial#	Bend	Nzl (/32's)	Avg Dif (psi)	Cum Circ Hrs

#### COMPONENT DATA

Item #	Description	Serial #	OD (in)	ID (in)	Gauge (in)	Weight (lbs/ft)	Top Con	Length (m)	Bit - Center Blade (m)
1	17½" Milled Tooth Bit	1039131	17.500	3.000	17.500	795.63	B 7-5/8" Reg	0.40	
2	Bit Sub		9.500	3.000		217.48	B 6-5/8" Reg	0.76	
3	2 x 8" Drill collars		8.000	3.000		147.00	B 6-5/8" Reg	18.65	
4	17½" String Stabiliser	700179	6.000	3.000	17.500	72.27	B 6-5/8" Reg	1.72	20.67
5	3 x 8" Drill collars		8.000	3.000		147.00	B 6-5/8" Reg	27.69	
6	Jar	W019792	8.000	3.000		147.22	B 6-5/8" Reg	8.62	
7	Cross Over Sub		8.000	3.000		147.22	B 4-1/2" IF	0.90	
8	14 x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	130.10	
								188.84	

Parameter	Min	Max	Ave
WOB (lbs) :	5	20	17
RPM (rpm) :	70	130	121
Flow (gpm) :	605	725	719
SPP (psi) :	80	1200	981

Activity	Hrs
Drilling :	47.00
Reaming :	0.00
Circ-Other :	5.00
<b>Total :</b>	<b>52.00</b>

BHA Weight (lb)	
in Air (Total) :	49984
in Mud (Total) :	
in Air (Bel Jars) :	24343
in Mud (Bel Jars) :	

Drill String	OD(in)	Len(m)

#### PERFORMANCE

	In	Out
Inclination (deg)	0.00	0.69
Azimuth (deg)	0.00	233.46

	Distance (m)	ROP (m/hr)	Build (°/30m)	Turn (°/30m)	DLS (°/30m)
Oriented :	0.00	0			
Rotated :	664.00	14			
<b>Total :</b>	<b>664.00</b>	<b>14</b>	<b>0.03</b>	<b>0.00</b>	<b>0.03</b>

#### COMMENTS

Iona - 6 spudded @ 21:30 hrs 20/05/04

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 078

BHA# 1

**OBJECTIVES:**

Spud well and drill 17½" hole vertically to 640m.

**RESULTS:**

The top hole section was drilled vertically to a TD of 664m and a drop gyro survey run prior to POOH. One survey was obtained before the gyro failed on bottom before tripping out of hole. The one survey showed an inclination on bottom of 0.4 degrees. On the trip out the hole was very sticky from 559m to 327m with a constant 15-20k drag, at times the string taking up to 50k overpull. A wiper trip was made prior to POOH to run 13 3/8" casing.

# Sperry-Sun

## DRILLING SERVICES

### BHA Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 079

BHA# 2

BHA# 2 : Date In :26/05/200 MD In (m) : 664 TVD In (m) : 664 Date Out 29/05/200 MD Out (m): 976 TVD Out (m): 941

#### BIT DATA

Bit #	OD (in)	MFR	Style	Serial#	Nozzles (/32's)	TFA (in <sup>2</sup> )	Dull Condition
2	12.250	Security DBS	EBXS02S	10615071	3x18, 1x20	1.052	1-2-WT- A-E-I-NO-BHA

#### MOTOR DATA

Run #	OD (in)	MFR	Model	Serial#	Bend	Nzl (/32's)	Avg Dif (psi)	Cum Circ Hrs
1	8.000	SSDS	SperryDrill	800052	1.50°		85	39.50

#### COMPONENT DATA

Item #	Description	Serial #	OD (in)	ID (in)	Gauge (in)	Weight (lbs/ft)	Top Con	Length (m)	Bit - Center Blade (m)
1	12 1/4" Insert Bit	10615071	12.250	3.000	12.250	377.57	B 6-5/8" Reg	0.30	
2	8" SperryDrill Lobe 6/7 - 4.0 stg	800052	8.000	5.250	12.125	97.54	B 6-5/8" Reg	8.91	1.10
3	Float Sub	A-604	8.250	2.810		161.04	B 6-5/8" Reg	0.81	
4	11 3/4" String Stabiliser	A-469	8.000	2.810	11.750	150.17	B 6-5/8" Reg	2.10	10.94
5	1x Non-Mag Drill collar	47625	7.880	3.250		137.93	B 6-5/8" Reg	8.86	
6	8" DWD Hangoff Sub	3001	7.750	3.375		130.28	B 6-5/8" Reg	1.45	
7	1x Non-Mag Drill collar	6484	8.000	2.875		149.18	B 6-5/8" Reg	8.33	
8	3x 8" Drill collars		8.000	3.000		147.00	B 6-5/8" Reg	28.03	
9	Cross Over Sub		8.000	2.810		150.17	B 4-1/2" IF	1.00	
10	18x 18 x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	167.19	
11	Jar		6.500	2.750		92.85	B 4-1/2" IF	9.14	
12	6x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	56.14	
								292.26	

Parameter	Min	Max	Ave
WOB (lbs)	15	40	24
RPM (rpm)	40	60	51
Flow (gpm)	600	750	722
SPP (psi)	1000	1500	1347

Activity	Hrs
Drilling	35.50
Reaming	0.00
Circ-Other	4.00
<b>Total</b>	<b>39.50</b>

BHA Weight (lb)
in Air (Total) : 66310
in Mud (Total) : 57416
in Air (Bel Jars) : 54445
in Mud (Bel Jars) : 47142

Drill String	OD(in)	Len(m)
DP(S)-NC50(XH)-19.50#	5.000	684

#### PERFORMANCE

	In	Out
Inclination (deg)	0.69	44.89
Azimuth (deg)	233.46	304.77

	Distance (m)	ROP (m/hr)	Build (°/30m)	Turn (°/30m)	DLS (°/30m)
Oriented :	217.00	7			
Rotated :	95.00	14			
<b>Total :</b>	<b>312.00</b>	<b>9</b>	<b>4.25</b>	<b>0.00</b>	<b>4.30</b>

#### COMMENTS

Motor RPM - 0.17 rev/gal  
 Bent housing to be set at 1.5°  
 Non-ported float valve installed

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 080

BHA# 2

**OBJECTIVES:**

Kick the well off below the 13 3/8" shoe and build at 5°/30m to 45° inclination on a 305° azimuth. Once the sail angle has been reached the assembly will be tripped, and the tangent section drilled to TD with a PDC bit.

**RESULTS:**

The 12¼" steerable assembly was made up and the drillstring scribed in the hole, as the 13 3/8" shoe had been set 24m deeper than planned, resulting in the well having to be kicked off directly below the shoe. Initially the well had to be turned from 207° to 305° azimuth, then the build commenced at 5°/30m as per the wellplan.

The assembly mostly slid OK with the insert bit providing reasonably steady toolface, although the string could only be turned and held with the use of a tigger chain round the kelly bushing, as the rotary table brake did not work. This was a problem when only a few degrees of turn was needed, or when the assembly hung up, as the string could not be picked up without removing the chain, with the resultant loss of toolface. The 1.5° bend provided equivalent 7.5°/30m as expected, which meant virtually 100% sliding throughout the build up, as the revised wellplan called for 6° doglegs. ROP's ranged from 10 to 20m/hr.

With the inclination at 45° and the assembly hanging up more and more frequently, the assembly was tripped to run a PDC bit to complete the build to 47 degrees, and drill the tangent section to TD.

# Sperry-Sun

## DRILLING SERVICES

### BHA Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

# 908148 081

BHA# 3

BHA# 3 : Date In :29/05/200 MD In (m) : 976 TVD In (m) : 941 Date Out 29/05/200 MD Out (m): 1008 TVD Out (m): 963

#### BIT DATA

Bit #	OD (in)	MFR	Style	Serial#	Nozzles (/32's)	TFA (in <sup>2</sup> )	Dull Condition
3rr1	12.250	Security DBS	FM2565	7970231	5x18	1.243	1-1-WT- A-X-I-NO-BHA

#### MOTOR DATA

Run #	OD (in)	MFR	Model	Serial#	Bend	Nzl (/32's)	Avg Dif (psi)	Cum Circ Hrs
2	8.000	SSDS	SperryDrill	800052	1.15°		50	49.50

#### COMPONENT DATA

Item #	Description	Serial #	OD (in)	ID (in)	Gauge (in)	Weight (lbs/ft)	Top Con	Length (m)	Bit - Center Blade (m)
1	12 1/4" PDC Bit	7970231	12.250	3.000	12.250	377.57	B 6-5/8" Reg	0.30	
2	8" SperryDrill Lobe 6/7 - 4.0 stg	800052	8.000	5.250	12.125	97.54	B 6-5/8" Reg	8.91	1.10
3	Float Sub	A-604	8.250	2.810		161.04	B 6-5/8" Reg	0.81	
4	12" String Stabiliser	47567	8.250	2.810	12.000	161.04	B 6-5/8" Reg	2.10	10.99
5	1x Non-Mag Drill collar	47625	7.880	3.250		137.93	B 6-5/8" Reg	8.86	
6	8" DWD Hangoff Sub	3001	7.750	3.375		130.28	B 6-5/8" Reg	1.45	
7	1x Non-Mag Drill collar	6484	8.000	2.875		149.18	B 6-5/8" Reg	8.33	
8	3 x 8" Drill collars		8.000	3.000		147.00	B 6-5/8" Reg	27.91	
9	Cross Over Sub		8.000	2.810		150.17	B 4-1/2" IF	0.90	
10	18 x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	167.19	
11	Jar		6.500	2.750		92.85	B 4-1/2" IF	9.86	
12	6 x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	56.14	
								292.76	

Parameter	Min	Max	Ave
WOB (lbs)	10	20	18
RPM (rpm)	60	60	60
Flow (gpm)	725	750	748
SPP (psi)	1200	1500	1333

Activity	Hrs
Drilling	7.00
Reaming	2.50
Circ-Other	0.50
<b>Total</b>	<b>10.00</b>

BHA Weight (lb)
in Air (Total) : 66497
in Mud (Total) : 57578
in Air (Bel Jars) : 54413
in Mud (Bel Jars) : 47115

Drill String	OD(in)	Len(m)

#### PERFORMANCE

	In	Out
Inclination (deg)	44.89	43.73
Azimuth (deg)	304.77	304.90

	Distance (m)	ROP (m/hr)	Build (°/30m)	Turn (°/30m)	DLS (°/30m)
Oriented :	10.00	1			
Rotated :	22.00	6			
<b>Total :</b>	<b>32.00</b>	<b>5</b>	<b>-1.09</b>	<b>0.12</b>	<b>1.09</b>

#### COMMENTS

Non-ported float in string.



Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 082

BHA# 3

**OBJECTIVES:**

Complete the build to 47 degrees and drill the tangent section through the target to well TD at 1530m.

**RESULTS:**

The motor bend was changed to 1.15° and an FM2565 PDC bit run, along with a 12" string stabiliser in place of the 11¼". Sliding however proved to be more difficult than previously, with weight stacking more frequent and the reactive torque generated by the PDC bit unable to drill off, making toolface control virtually impossible, particularly as the rotary table could only be turned by means of a tugger chain round the kelly bushing.

After 5 hours trying to achieve 9m of what was very poor slide, the string was rotated for a single and a second slide attempted, but with the same problems as before, and with very little progress being made. The survey from the first slide in fact showed a slight drop from what was supposedly a highside toolface set, and the following surveys showed the assembly also dropping in rotary. With the tangent angle requirement now 48° it was decided to trip to change the top stabiliser back to 11¼".

# Sperry-SUN

## DRILLING SERVICES

### BHA Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

# 908148 083

BHA# 4

BHA# 4 : Date In :29/05/200 MD In (m) : 1008 TVD In (m) : 963 Date Out 30/05/200 MD Out (m): 1037 TVD Out (m): 984

#### BIT DATA

Bit #	OD (in)	MFR	Style	Serial#	Nozzles (/32's)	TFA (in <sup>2</sup> )	Dull Condition
3rr2	12.250	Security DBS	FM2565	7970231	5x18	1.243	1-1-WT- A-X-I-NO-BHA

#### MOTOR DATA

Run #	OD (in)	MFR	Model	Serial#	Bend	Nzl (/32's)	Avg Dif (psi)	Cum Circ Hrs
3	8.000	SSDS	SperryDrill	800052			36	60.50

#### COMPONENT DATA

Item #	Description	Serial #	OD (in)	ID (in)	Gauge (in)	Weight (lbs/ft)	Top Con	Length (m)	Bit - Center Blade (m)
1	12 1/4" PDC Bit	7970231	12.250	3.000	12.250	377.57	B 6-5/8" Reg	0.30	
2	8" SperryDrill Lobe 6/7 - 4.0 stg	800052	8.000	5.250	12.125	97.54	B 6-5/8" Reg	8.91	1.10
3	Float Sub	A-604	8.250	2.810		161.04	B 6-5/8" Reg	0.81	
4	1 1/4" String Stabiliser	A-469	8.250	2.810	11.750	161.04	B 6-5/8" Reg	2.10	10.94
5	1x Non-Mag Drill collar	47625	7.880	3.250		137.93	B 6-5/8" Reg	8.86	
6	8" DWD Hangoff Sub	3001	7.750	3.375		130.28	B 6-5/8" Reg	1.45	
7	1x Non-Mag Drill collar	6484	8.000	2.875		149.18	B 6-5/8" Reg	8.33	
8	3 x 8" Drill collars		8.000	3.000		147.00	B 6-5/8" Reg	27.91	
9	Cross Over Sub		8.000	2.810		150.17	B 4-1/2" IF	-0.90	
10	18 x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	167.19	
11	Jar		6.500	2.750		92.85	B 4-1/2" IF	9.86	
12	6 x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	56.14	
								292.76	

Parameter	Min	Max	Ave
WOB (lbs) :	20	20	20
RPM (rpm) :	60	60	60
Flow (gpm) :	725	725	725
SPP (psi) :	1600	1650	1636

Activity	Hrs
Drilling :	9.50
Reaming :	0.50
Circ-Other :	1.00
<b>Total :</b>	<b>11.00</b>

BHA Weight (lb)	
in Air (Total) :	66497
in Mud (Total) :	57578
in Air (Bel Jars) :	54413
in Mud (Bel Jars) :	47115

Drill String	OD(in)	Len(m)

#### PERFORMANCE

	In	Out
Inclination (deg)	43.73	44.51
Azimuth (deg)	304.90	306.55

	Distance (m)	ROP (m/hr)	Build (°/30m)	Turn (°/30m)	DLS (°/30m)
Oriented :	21.00	2			
Rotated :	8.00	7			
<b>Total :</b>	<b>29.00</b>	<b>3</b>	<b>0.80</b>	<b>1.70</b>	<b>1.43</b>

#### COMMENTS

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 084

BHA# 4

**OBJECTIVES:**

Build to 48° inclination on 306° azimuth and hold through the target to well TD.

**RESULTS:**

The assembly was run to bottom and the first 15m drilled in sliding mode with some success, although the weight stacking and toolface problems persisted, the change in top stabiliser making little or no difference to the assembly's behaviour. This slide only succeeded in stopping the drop trend without building any angle, so having drilled only 29m the assembly was again tripped to run an insert bit.

# Sperry-Sun

## DRILLING SERVICES

### BHA Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 085

BHA# 5

BHA# 5 : Date In :30/05/2004 MD In (m) : 1037 TVD In (m) : 984 Date Out 2/06/2004 MD Out (m): 1515 TVD Out(m): 1300

#### BIT DATA

Bit #	OD (in)	MFR	Style	Serial#	Nozzles (/32's)	TFA (in <sup>2</sup> )	Dull Condition
4	12.250	Security DBS	EBXS02S	10615071	5x18	1.243	

#### MOTOR DATA

Run #	OD (in)	MFR	Model	Serial#	Bend	Nzl (/32's)	Avg Dif (psi)	Cum Circ Hrs
4	8.000	SSDS	SperryDrill	800052	1.50°		88	120.50

#### COMPONENT DATA

Item #	Description	Serial #	OD (in)	ID (in)	Gauge (in)	Weight (lbs/ft)	Top Con	Length (m)	Bit - Center Blade (m)
1	12 1/4" Insert Bit	10615071	12.250	3.000	12.250	377.57	B 6-5/8" Reg	0.30	
2	8" SperryDrill Lobe 6/7 - 4.0 stg	800052	8.000	5.250	12.125	97.54	B 6-5/8" Reg	8.91	1.10
3	Float Sub	A-604	8.250	2.810		161.04	B 6-5/8" Reg	0.81	
4	1 1/2" String Stabiliser	47570	8.250	2.810	11.500	161.04	B 6-5/8" Reg	2.30	11.17
5	1x Non-Mag Drill collar	47625	7.880	3.250		137.93	B 6-5/8" Reg	8.86	
6	8" DWD Hangoff Sub	3001	7.750	3.375		130.28	B 6-5/8" Reg	1.45	
7	1x Non-Mag Drill collar	6484	8.000	2.875		149.18	B 6-5/8" Reg	8.33	
8	3 x 8" Drill collars		8.000	3.000		147.00	B 6-5/8" Reg	27.91	
9	Cross Over Sub		8.000	2.810		150.17	B 4-1/2" IF	0.90	
10	18 x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	167.19	
11	Jar		6.500	2.750		92.85	B 4-1/2" IF	9.86	
12	6 x 5" HWDP		5.000	3.000		49.30	B 4-1/2" IF	56.14	
								292.96	

Parameter	Min	Max	Ave
WOB (lbs) :	18	40	29
RPM (rpm) :	50	60	59
Flow (gpm) :	635	755	708
SPP (psi) :	1600	2000	1777

Activity	Hrs
Drilling :	57.50
Reaming :	0.50
Circ-Other :	2.00
<b>Total :</b>	<b>60.00</b>

BHA Weight	(lb)
in Air (Total) :	66602
in Mud (Total) :	57263
in Air (Bel Jars) :	54519
in Mud (Bel Jars) :	46874

Drill String	OD(in)	Len(m)

#### PERFORMANCE

	In	Out
Inclination (deg)	44.51	48.74
Azimuth (deg)	306.55	310.98

	Distance (m)	ROP (m/hr)	Build (°/30m)	Turn (°/30m)	DLS (°/30m)
Oriented :	37.00	6			
Rotated :	441.00	9			
<b>Total :</b>	<b>478.00</b>	<b>8</b>	<b>0.27</b>	<b>0.28</b>	<b>0.33</b>

#### COMMENTS

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 086

BHA# 5

**OBJECTIVES:**

To build to 49° inclination on a 306° azimuth and hold through the target to well TD.

**RESULTS:**

The motor bend was changed to 1.50° and the motor top stabilizer changed to an 11 1/2". The assembly was ideal for the well characteristics. With the weight stacking problem the 1.50° bend made effective build sections and in rotary the assembly had only minor drop tendencies, with a trend to walk right at 0.45°/30m on average.

The target was penetrated 1.7m from centre and drilled on to 1515m when pulled due to high torque and low ROP. The motor and DWD was layed out.

Motor Serial # : 800052 Job # : AU-DD-0002999700 **908148 087**  
 Directional Driller(s) : Tim Gallagher, Paul Gallagher Customer : TXU Gas Storage Pty Ltd.  
 Location : Iona Rig : Century Rig 18  
 Well Name : Iona #6 Bit Run # : 2 BHA # : 2 Motor Run # : 1  
 Depth In/Out : 664 / 976 m Date In/Out : 26/05/2004 / 29/05/2004 Hole Size : 12.250 in  
 Application Details : Steerate Drilling

**MOTOR CONFIGURATION**

	From Bit (m)	Component	Type	Diam In/Out (in)
Upr Stab	1 1.10	Sleeve Stab/Pad	Yes	12.125 12.125
Lwr Stab/Pad Sub	2 3.7	Bent Housing	Yes	Adjustate: 1.50° bend
Mor Top	3	Housing Tool Used	No	
Pad	4 9.21	Stator Elastomer	No	
Bend (busing)	5	Bent Sub / 2nd Bent Hsg	No	
	6 10.94	Lower String Stab	Yes	11.750 11.750
	7	Upper String Stab	No	

Additional Features				Arr	Ret
Flex Collar	: No	Short Brg Pack	: No	Pick Up Sub	: No No
Brg Cfg (Off/On)	:	Lobe Cfg	: 6/7	Bit Box Protr	: Yes No
		Rtr Noz / Size	: /32's		
		BHA OD/ID	: 8.250 / 2.810 in		

**MOTOR RUN DATA**

Max Dogleg While Rotating	: /30m	RPM	: 60	Motor Stalled	: No	Prev Job/Well Hrs	: 0.00
Max Dogleg Overpulled In	: /30m	Force	: lbf	Float Valve	: Yes	Drilling Hrs	: 9.50
Max Dogleg Pushed Through	: /30m	Force	: lbf	DP Filter	: Yes	Circ Hrs	: 4.00
Hole Azimuth Start / End	: 236° / 84.77°	Inc Start / End	: 0.69° / 44.89°	Reaming Hrs	: 0.00	Total Hrs This Run	: 9.50
Interval Oriented / Rot.	: 217 / 95 m	Directional Perf Ori / Rot	: / /30m	New Cumulative Hrs	: 9.50		
Jarring Occured	: No						

	Diff Press (psi)	Str RPM	Rotn Torque (ft-lbs)	Drag Up/Dn (lbf)	WOB (lbs)	ROP Oriented (ml/hr)	ROP Rotated (ml/hr)
Avg	: 85	51		/	24	7	14
Max	: 150	60		/	40	20	5

**PRE-RUN TESTS**

Motor Tested Pre-Run : Yes with 2 Collars, Bit, W  
 Dump Sub Operating : N/A Brg Play : mm  
 Flow 1 : 600 gpm Pressure 1 : 1000 psi  
 Flow 2 : gpm Pressure 2 : psi  
 Driveshaft Rotation Observed : No  
 Bearing Leakage Observed : No

**POST-RUN TESTS**

Motor Tested Post-Run : No with :  
 Dump Sub Operating : N/A Brg Play : mm  
 Flow 1 : gpm Pressure 1 : psi  
 Flow 2 : gpm Pressure 2 : psi  
 Driveshaft Rotation Observed : No  
 Bearing Leakage Observed : No  
 Driveshaft Rotated to Drain Mud : No  
 Fluid Flushed : No Fluid Used :

**MUD DATA**

Base : Water Additives : Mud Wt : 8.8 ppg SPP Start/End : 1100 / 1400 psi  
 % Oil/Water : / % Solids : 1.60 % Sand : 0.50 PV : 7 cp YP : 16.0 lb/100ft<sup>2</sup> pH : 8.9  
 DH Temp Avg/Max : / FlowRate Avg/Max : 722 / 750 gpm Chloride Content : 2800 ppm  
 Principle Formation Name(s) : Lithology :

**BIT DATA**

Make : Security DBS	Type : EBXS02S	Serial # : 10615071	Dull Grade	1	2	3	4	5	6	7	8
Pre Existing Hours From Other Wells:			In	NEW							
Prev Drilling Hrs : 0.00	Prev Reaming Hrs : 0.00	No of Runs This Bit : 1	Out	1	2	W	A	E	I	NO	BA
Jet Sizes (/32's) : #8, 1#0	TFA : 1.052 in <sup>2</sup>	Gage Length : in									

**PERFORMANCE COMMENTS**

Problem Perceived : No Problem Date : Service Interrupt : No Service Interrupt Hrs :  
 Performance Motor : Yes Tandem Motor : No LIH : No PPR Ref # :

The motor performed to specification and was re-run in the follow-up assembly to drill the tangent section to TD.

Customer Representative's Signature (optional) : ..... Date : .....

Motor Serial # : 800052 Job # : AU-DD-0002999700  
 Directional Driller(s) : Tim Gallagher, Paul Gallagher Customer : TXU Gas Storage Pty Ltd. **908148 088**  
 Location : Iona Rig : Century Rig 18  
 Well Name : Iona #6 Bit Run # : 61 BHA # : 3 Motor Run # : 2  
 Depth In/Out : 976 / 1008 m Date In/Out : 29/05/2004 / 29/05/2004 Hole Size : 12.250 in  
 Application Details :

**MOTOR CONFIGURATION**

	From Bit (m)	Component	Type	Diam In/Out (in)
Upr Stab	1 1.10	Sleeve Stab/Pad	Yes Stab510°	12.125 12.125
Lwr Stab/Pad Sub	2 3.07	Bent Housing	Yes Adjustab: 1.15°and	
Mor Top	3	Housing Tool Used	No	
Pad	4 9.21	Stator Elastomer		
Bent (blasing)	5	Bent Sub / 2nd Bent Hsg	No	
Sleeve Tool	6 10.99	Lower String Stab	Yes Stab370°	12.000 12.000
	7	Upper String Stab	No	

Additional Features :

Flex Collar : No	Short Brg Pack : No	Rtr Noz / Size : 132's	Pick Up Sub : No No
Brg Cfg (Off/On) :	Lobe Cfg : 6/7	BHA OD/ID : 8.250 / 2.810 in	Bit Box Protr : Yes No

**MOTOR RUN DATA**

Max Dogleg While Rotating : 130m	RPM :	Motor Stalled : No	Prev Job/Well Hrs : 9.50
Max Dogleg Overpulled In : 130m	Force : lbf	Float Valve : No	Drilling Hrs : 7.00
Max Dogleg Pushed Through : 130m	Force : lbf	DP Filter : No	Circ Hrs : 0.50
Hole Azimuth Start / End : 04.77°/ 04.90°	Inc Start / End : 44.89°/ 43°3		Reaming Hrs : 2.50
Interval Oriented / Rot. : 10 / 22 m	Directional Perf Ori / Rot : / 130m		Total Hrs This Run : 10.00
Jarring Occured : No			New Cumulative Hrs : 49.50

	Diff Press (psi)	Str RPM	Rotn Torque (ft-lbs)	Drag Up/Dn (lbf)	WOB (lbs)	ROP Oriented (m/hr)	ROP Rotated (m/hr)
Avg :	50	60		/	18	1	6
Max :	50	60		/	20	5	20

**PRE-RUN TESTS**

Motor Tested Pre-Run : Yes with 2 Collars, Bit, W  
 Dump Sub Operating : N/A Brg Play : mm  
 Flow 1 : 600 gpm Pressure 1 : 1000 psi  
 Flow 2 : gpm Pressure 2 : psi  
 Driveshaft Rotation Observed : No  
 Bearing Leakage Observed : No

**POST-RUN TESTS**

Motor Tested Post-Run : No with :  
 Dump Sub Operating : N/A Brg Play : mm  
 Flow 1 : gpm Pressure 1 : psi  
 Flow 2 : gpm Pressure 2 : psi  
 Driveshaft Rotation Observed : No  
 Bearing Leakage Observed : No  
 Driveshaft Rotated to Drain Mud : No  
 Fluid Flushed : No Fluid Used :

**MUD DATA**

Base : Wter Additives : Mud Wt : 8.8 ppg SPP Start/End : 1200 / 180 psi  
 % Oil/Water : / % Solids : 1.00 % Sand : 0.25 PV : 7 cp YP : 16.0 lb/100ft² pH : 9.0  
 DH Temp Avg/Max : / FlowRate Avg/Max : 748 / 750 gpm Chloride Content : 2800 ppm  
 Principle Formation Name(s) : Lithology :

**BIT DATA**

Make : Security DBS Type : #665 Serial # : 797023	Dull Grade	1	2	3	4	5	6	7	8
Pre Existing Hours From Other Wells:	In								RR
Prev Drilling Hrs : 0.00 Prev Reaming Hrs : 0.00 No of Runs This Bit : 1	Out	1	1	W	A	X	I	NO	BM
Jet Sizes (132's) : 5x8 TFA : 1.243 in² Gage Length : in									

**PERFORMANCE COMMENTS**

Problem Perceived : No Problem Date : Service Interrupt : No Service Interrupt Hrs :  
 Performance Motor : Yes Tandem Motor : No LIH : No PPR Ref # :

Customer Representative's Signature (optional) : ..... Date: .....

Motor Serial # : 800052      Job # : AU-DD-0002999700  
 Directional Driller(s) : Tim Gallagher, Paul Gallagher      Customer : TXU Gas Storage Pty Ltd.      **908148 089**  
 Location : Iona      Rig : Century Rig 18  
 Well Name : Iona #6      Bit Run # : 82      BHA # : 4      Motor Run # : 3  
 Depth In/Out : 1008 / 103 m      Date In/Out : 29/05/2004 / 0/05/2004      Hole Size : 12.250 in  
 Application Details :

**MOTOR CONFIGURATION**

	From Bit (m)	Component	Type	Diam In/Out (in)
Upr Stab	1 1.10	Sleeve Stab/Pad	Yes	Stab 10°
	2 37	Bent Housing	Yes	Adjustable End
Lwr Stab/Pad Sub	3	Housing Tool Used	No	
Motor Top	4 9.21	Stator Elastomer		
Pad	5	Bent Sub / 2nd Bent Hsg	No	
Bent (Missing)	6 10.94	Lower String Stab	Yes	Stab 370°
	7	Upper String Stab	No	11.750 11.750

Additional Features :      Arr Ret

Flex Collar : No      Short Brg Pack : No      Rtr Noz / Size : 132's      Pick Up Sub : No No

Brg Cfg (Off/On) :      Lobe Cfg : 6/7      BHA OD/ID : 8.250 / 2.810 in      Bit Box Protr : Yes No

**MOTOR RUN DATA**

Max Dogleg While Rotating : 1/30m	RPM :	Motor Stalled : No	Prev Job/Well Hrs : 49.50
Max Dogleg Overpulled In : 1/30m	Force : lbf	Float Valve : No	Drilling Hrs : 9.50
Max Dogleg Pushed Through : 1/30m	Force : lbf	DP Filter : No	Circ Hrs : 1.00
Hole Azimuth Start / End : 04.90° / 06.55°	Inc Start / End : 433 44.51°		Reaming Hrs : 0.50
Interval Oriented / Rot. : 21 / 8 m	Directional Perf Ori / Rot : / 1/30m		Total Hrs This Run : 11.00
Jarring Occured : No			New Cumulative Hrs : 60.50

	Diff Press (psi)	Str RPM	Rotn Torque (ft-lbs)	Drag Up/Dn (lbf)	WOB (lbs)	ROP Oriented (m/hr)	ROP Rotated (m/hr)
Avg :	8	60		/	20	2	7
Max :	50	60		/	20	4	15

**PRE-RUN TESTS**

Motor Tested Pre-Run : Yes with 2 Collars, Bit, W

Dump Sub Operating : N/A      Brg Play : mm

Flow 1 : 600 gpm      Pressure 1 : 1000 psi

Flow 2 : gpm      Pressure 2 : psi

Driveshaft Rotation Observed : No

Bearing Leakage Observed : No

**POST-RUN TESTS**

Motor Tested Post-Run : No with :

Dump Sub Operating : N/A      Brg Play : mm

Flow 1 : gpm      Pressure 1 : psi

Flow 2 : gpm      Pressure 2 : psi

Driveshaft Rotation Observed : No

Bearing Leakage Observed : No

Driveshaft Rotated to Drain Mud : No

Fluid Flushed : No      Fluid Used :

**MUD DATA**

Base : Water      Additives :      Mud Wt : 8.8 ppg      SPP Start/End : 1650 / 1600 psi

% Oil/Water : /      % Solids : 1.00      % Sand : 0.25      PV : 7 cp      YP : 16.0 lb/100ft²      pH : 9.0

DH Temp Avg/Max : /      FlowRate Avg/Max : 725 / 725 gpm      Chloride Content : 2800 ppm

Principle Formation Name(s) :      Lithology :

**BIT DATA**

Make : Security DBS      Type : B565      Serial # : 797023	Dull Grade	1	2	3	4	5	6	7	8
Pre Existing Hours From Other Wells:	In	1	1	W	A	X	I	NO	RR
Prev Drilling Hrs : 7.00      Prev Reaming Hrs : 2.50      No of Runs This Bit : 2	Out	1	1	W	A	X	I	NO	BN
Jet Sizes (132's) : 548      TFA : 1.243 in²      Gage Length : in									

**PERFORMANCE COMMENTS**

Problem Perceived : No      Problem Date :      Service Interrupt : No      Service Interrupt Hrs :  
 Performance Motor : Yes      Tandem Motor : No      LIH : No      PPR Ref # :

Customer Representative's Signature (optional) : .....      Date: .....



Motor Serial # : 800052 Job # : AU-DD-0002999700  
 Directional Driller(s) : Tim Gallagher, Paul Gallagher Customer : TXU Gas Storage Pty Ltd. **908148 090**  
 Location : Iona Rig : Century Rig 18  
 Well Name : Iona #6 Bit Run # : 4 BHA # : 5 Motor Run # : 4  
 Depth In/Out : 103 / 1515 m Date In/Out : 0/05/2004 / 2/06/2004 Hole Size : 12.250 in  
 Application Details :

**MOTOR CONFIGURATION**

	From Bit (m)	Component	Type	Diam In/Out (in)
Upr Stab	1 1.10	Sleeve Stab/Pad	Yes Stab 510°	12.125 12.125
	2 37	Bent Housing	Yes Adjust: 1.50° bend	
Lwr Stab/Pad Sub	3	Housing Tool Used	No	
Motor Top	4 9.21	Stator Elastomer	No	
Pad	5	Bent Sub / 2nd Bent Hsg	No	
Bent (blasing)	6 11.17	Lower String Stab	Yes Stab 270°	11.500 11.500
Sleeve Tool	7	Upper String Stab	No	

Additional Features : Arr Ret  
 Flex Collar : No Short Brg Pack : No Rtr Noz / Size : 132's Pick Up Sub : No No  
 Brg Cfg (Off/On) : Lobe Cfg : 6/7 BHA OD/ID : 8.250 / 2.810 in Bit Box Protr : Yes No

**MOTOR RUN DATA**

Max Dogleg While Rotating : 130m	RPM :	Motor Stalled : No	Prev Job/Well Hrs : 60.50
Max Dogleg Overpulled In : 130m	Force : lbf	Float Valve : No	Drilling Hrs : 57.50
Max Dogleg Pushed Through : 130m	Force : lbf	DP Filter : No	Circ Hrs : 2.00
Hole Azimuth Start / End : 06.55° / 30.98°	Inc Start / End : 44.51° / 48.74°		Reaming Hrs : 0.50
Interval Oriented / Rot. : 3 / 441 m	Directional Perf Ori / Rot : / 130m		Total Hrs This Run : 60.00
Jarring Occured : No			New Cumulative Hrs : 120.50

	Diff Press (psi)	Str RPM	Rotn Torque (ft-lbs)	Drag Up/Dn (lbf)	WOB (lbs)	ROP Oriented (ml/hr)	ROP Rotated (ml/hr)
Avg :	88	59		/	29	6	9
Max :	100	60		/	40	22	0

**PRE-RUN TESTS**

Motor Tested Pre-Run : Yes with 2 Collars, Bit, W  
 Dump Sub Operating : N/A Brg Play : mm  
 Flow 1 : 600 gpm Pressure 1 : 1000 psi  
 Flow 2 : gpm Pressure 2 : psi  
 Driveshaft Rotation Observed : No  
 Bearing Leakage Observed : No

**POST-RUN TESTS**

Motor Tested Post-Run : No with :  
 Dump Sub Operating : N/A Brg Play : mm  
 Flow 1 : gpm Pressure 1 : psi  
 Flow 2 : gpm Pressure 2 : psi  
 Driveshaft Rotation Observed : No  
 Bearing Leakage Observed : No  
 Driveshaft Rotated to Drain Mud : No  
 Fluid Flushed : No Fluid Used :

**MUD DATA**

Base : Water Additives : Mud Wt : 9.2 ppg SPP Start/End : 1600 / 1700 psi  
 % Oil/Water : / % Solids : 30 % Sand : 0.60 PV : 11 cp YP : 21.0 lbf/100ft² pH : 8.8  
 DH Temp Avg/Max : / FlowRate Avg/Max : 708 / 755 gpm Chloride Content : 26500 ppm  
 Principle Formation Name(s) : Lithology :

**BIT DATA**

Make : Security DBS Type : EBXS02S Serial # : 10615071	Dull Grade	1	2	3	4	5	6	7	8
Pre Existing Hours From Other Wells: 24	In								NEW
Prev Drilling Hrs : 9.5 C Prev Reaming Hrs : 1.50 No of Runs This Bit : 2	Out								
Jet Sizes (/32's) : 518 TFA : 1.243 in² Gage Length : in									

**PERFORMANCE COMMENTS**

Problem Perceived : No Problem Date : Service Interrupt : No Service Interrupt Hrs :  
 Performance Motor : Yes Tandem Motor : No LIH : No PPR Ref # :

Customer Representative's Signature (optional) : Date:

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.  
 Well Name : Iona #6  
 Field : Otway Basin  
 Slot : Iona  
 Rig : Century Rig 18  
 Job # : AU-DD-0002999700

908148 091

**CURRENT STATUS** Report # 1 19/05/2004

Total Depth (m) :	0	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	0	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (1)
Hole Size (in) :		Casing ID (in) :			

**LAST SURVEY**

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
0.00	0.00	0.00	0.00	0.00	N00.00E

**LAST FORMATION TOP**

Formation Name	MD Top (m)	TVD Top (m)

**BHA SUMMARY**

**MUD DATA**

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
KCl/Polymer	8.8	40	6	12.0	4.0 / 8.0	11	9.5	1.00	0.40	

**TIME BREAKDOWN**

From	To	Hours	TMD (m)	BHA #	Activity
00:00	00:00	24.00	0.00		No Activity

**COMMENTS**

Directional Driller on location

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

908148 092

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

CURRENT STATUS Report # 2 20/05/2004

Total Depth (m) :	32	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	32	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (2)
Hole Size (in) :	17.500	Casing ID (in) :			

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
30.00	0.33	312.61	30.00	0.09	N47.39W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

BHA 1: 188.84 m; Bit #1 (2.5 hrs), Sub, 2 x DC, Stab, 3 x DC, Jar, Sub, HWDP

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lb/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
KCl/Polymer	8.8	39	7	16.0	4.0 / 7.0	8	8.9	1.60	0.50	

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	18:00	18.00	0.00		No Activity
18:00	21:30	3.50	0.00	1	M/up 17½" spud assembly and RIH
21:30	00:00	2.50	32.00	1	Drill from surface to 32m

#### COMMENTS

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 093

**CURRENT STATUS** Report # 3 21/05/2004

Total Depth (m) : 367  
 Drilled last 24 hrs (m) : 335  
 Hole Size (in) : 17.500

Casing Depth (m) :  
 Casing Diameter (in) :  
 Casing ID (in) :

Operator Reps : Peter Dwyer, Andy Urdevics  
 SSDS Reps : Tim Gallagher (3)

**LAST SURVEY**

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
360.00	0.48	319.21	359.99	2.34	N65.84W

**LAST FORMATION TOP**

Formation Name	MD Top (m)	TVD Top (m)

**BHA SUMMARY**

BHA 1: 188.84 m; Bit #1 (24. hrs), Sub, 2 x DC, Stab, 3 x DC, Jar, Sub, HWDP

**MUD DATA**

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)

**TIME BREAKDOWN**

From	To	Hours	TMD (m)	BHA #	Activity
00:00	00:30	0.50	32.00	1	Repair diesel supply problem
00:30	09:00	8.50	108.00	1	Drill from 32 - 108m
09:00	09:30	0.50	108.00	1	Circ. and survey at 96m
09:30	15:30	6.00	210.00	1	Drill from 108 - 210m
15:30	16:00	0.50	210.00	1	Circ. and survey at 196m - 3/4°
16:00	23:00	7.00	367.00	1	Drill from 210 - 367m
23:00	00:00	1.00	367.00	1	Circ. and survey at 353m - 1/4°

**COMMENTS**

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 094

**CURRENT STATUS** Report # 4 22/05/2004

Total Depth (m) :	636	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	269	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (4), Paul Gallagher (1)
Hole Size (in) :	17.500	Casing ID (in) :			

**LAST SURVEY**

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
630.00	0.69	306.89	629.98	4.34	N60.50W

**LAST FORMATION TOP**

Formation Name	MD Top (m)	TVD Top (m)

**BHA SUMMARY**

BHA 1: 188.84 m; Bit #1 (44. hrs), Sub, 2 x DC, Stab, 3 x DC, Jar, Sub, HWDP

**MUD DATA**

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
					/					

**TIME BREAKDOWN**

From	To	Hours	TMD (m)	BHA #	Activity
00:00	03:30	3.50	415.00	1	Drill from 367 - 415m
03:30	04:00	0.50	415.00	1	Circulate hole clean
04:00	07:00	3.00	415.00	1	Wiper trip to 40m
07:00	14:30	7.50	521.00	1	Drill from 415 - 521m
14:30	15:00	0.50	521.00	1	Circ. and survey at 521m - 3/4°
15:00	00:00	9.00	636.00	1	Drill from 521 - 636m

**COMMENTS**

2nd Directional Driller on location.

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.  
 Well Name : Iona #6  
 Field : Otway Basin  
 Slot : Iona  
 Rig : Century Rig 18  
 Job # : AU-DD-0002999700

908148 095

CURRENT STATUS Report # 5 23/05/2004

Total Depth (m) :	664	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	28	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (5), Paul Gallagher (2)
Hole Size (in) :	17.500	Casing ID (in) :			

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
658.84	0.42	297.27	658.82	4.62	N60.27W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

BHA 1: 188.84 m; Bit #1 (47. hrs), Sub, 2 x DC, Stab, 3 x DC, Jar, Sub, HWDP

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	03:00	3.00	664.00	1	Drill from 636 - 664m
03:00	04:00	1.00	664.00	1	Circulate hole clean
04:00	09:00	5.00	664.00	1	POOH. Very sticky 559 - 327m - max o/pull 50k. RIH.
09:00	10:30	1.50	664.00	1	RIH to bottom
10:30	14:00	3.50	664.00	1	Circulate hole clean
14:00	14:30	0.50	664.00	1	Break off kelly, insert gyro and pump down
14:30	17:00	2.50	664.00	1	Pump pill and POOH w/gyro
17:00	17:30	0.50	664.00	1	Retrieve gyro. B/off bit and lay down bit sub & stab
17:30	18:00	0.50	664.00	1	Clean rig floor
18:00	00:00	6.00	664.00		Rig up & run 13 3/8" casing

#### COMMENTS

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 096

**CURRENT STATUS** Report # 6 24/05/2004

Total Depth (m) :	664	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	0	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (6), Paul Gallagher (3)
Hole Size (in) :		Casing ID (in) :			

**LAST SURVEY**

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
658.84	0.42	297.27	658.82	4.62	N60.27W

**LAST FORMATION TOP**

Formation Name	MD Top (m)	TVD Top (m)

**BHA SUMMARY**

**MUD DATA**

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lb/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
					/					

**TIME BREAKDOWN**

From	To	Hours	TMD (m)	BHA #	Activity
00:00	11:00	11.00	664.00		Continue to run 13 3/8" casing
11:00	11:30	0.50	664.00		Rig up cement head
11:30	13:00	1.50	664.00		Circulate hole clean prior to cementing
13:00	15:30	2.50	664.00		Cement as per program
15:30	23:00	7.50	664.00		Wait on Cement
23:00	00:00	1.00	664.00		Cut csg. and l/out. Remove conductor riser & dress csg. stump for wellhead

**COMMENTS**

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 097

#### CURRENT STATUS Report # 7 25/05/2004

Total Depth (m) :	664	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	0	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (7), Paul Gallagher (4)
Hole Size (in) :		Casing ID (in) :			

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
658.84	0.42	297.27	658.82	4.62	N60.27W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
					/					

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	13:30	13.50	664.00		Con't to install well head. P/Test to 1000psi.
13:30	00:00	10.50	664.00		Nipple Up BOP

#### COMMENTS

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# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 098

#### CURRENT STATUS Report # 8 26/05/2004

Total Depth (m) :	664	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	0	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (8), Paul Gallagher (5)
Hole Size (in) :	12.250	Casing ID (in) :			

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
658.84	0.42	297.27	658.82	4.62	N60.27W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

BHA 2: 292.26 m; Bit #2 (1.5 hrs), PDM #1 (1. hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3x DC, Sub, 18x HWDP, Jar, 6x HWDP

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lb/100ft <sup>3</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
					/					

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	03:00	3.00	664.00		Nipple Up BOP
03:00	12:00	9.00	664.00		Test BOP
12:00	12:30	0.50	664.00		Rig down test tools.
12:30	13:30	1.00	664.00		Install Bell nipple & flow line.
13:30	14:30	1.00	664.00		LD 3 x 8" DC's
14:30	17:30	3.00	664.00		PU Motor/set bend & m/u bit.PU NMDc & HOS, scribe to probe.
17:30	19:00	1.50	664.00		RIH 8" DC, L/D 8" jars.Shallow test MWD & Motor.RIH 6x HWDP. Scribe same.
19:00	20:00	1.00	664.00		POH HWDP & rescribe as RIH.
20:00	23:00	3.00	664.00	2	P/U 10 jts HWDP & 6 1/2" jars, Scribe as RIH, Tag cmt @ 626m.
23:00	00:00	1.00	664.00	2	POH/ LD 12jts DP.RIH (scribe) 12jts DP fm Drk to 626m.

#### COMMENTS

Scribe in hole to kick off at casing shoe 664m.

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 099

CURRENT STATUS Report # 9 27/05/2004

Total Depth (m) :	816	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	152	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (9), Paul Gallagher (6)
Hole Size (in) :	12.250	Casing ID (in) :			

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
804.75	18.70	304.53	802.34	25.34	N66.43W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

BHA 2: 292.26 m; Bit #2 (19. hrs), PDM #1 (20.5 hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3x DC, Sub, 18x HWDP, Jar, 6x HWDP

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lb/100ft <sup>3</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
KCl/Polymer	8.8	40	6	12.0	4.0 / 8.0	11	9.5	1.00	0.40	

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	01:00	1.00	664.00	2	Circulate Hole to new mud
01:00	02:00	1.00	664.00	2	Slip & Cut 28' Drill Line
02:00	03:30	1.50	664.00	2	Drill Cement/ csg shoe
03:30	04:00	0.50	669.00	2	Drill 12 1/4" hole 664 - 669m
04:00	04:30	0.50	669.00	2	Circulate hole clean
04:30	05:00	0.50	669.00	2	FIT 10.5ppg.EMW.
05:00	07:00	2.00	669.00	2	Deviation Survey/ Run Gyro
07:00	00:00	17.00	816.00	2	Drill 12 1/4" hole 669 - 816m

#### COMMENTS

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 100

#### CURRENT STATUS Report # 10 28/05/2004

Total Depth (m) :	976	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	160	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (10), Paul Gallagher (7)
Hole Size (in) :	12.250	Casing ID (in) :			

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
949.57	45.29	304.41	921.93	104.12	N58.43W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

BHA 2: 292.26 m; Bit #2 (37. hrs), PDM #1 (39.5 hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3x DC, Sub, 18x HWDP, Jar, 6x HWDP

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
KCl/Polymer	8.8	39	7	16.0	4.0 / 7.0	8	8.9	1.60	0.50	

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	18:00	18.00	976.00	2	Drill 12¼" hole 816 - 976m
18:00	19:00	1.00	976.00	2	Pump sweep & circulate hole clean
19:00	22:30	3.50	976.00	2	POOH to surface
22:30	00:00	1.50	976.00	2	Attempt pull WB - multitool h/up in BOP. Remove bell nipple, investigate problem

#### COMMENTS

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

908148 101

CURRENT STATUS Report # 11 29/05/2004

Total Depth (m) : 1008

Drilled last 24 hrs (m) : 32

Hole Size (in) : 12.250

Casing Depth (m) :

Casing Diameter (in) :

Casing ID (in) :

Operator Reps : Peter Dwyer, Andy Urdevics

SSDS Reps : Tim Gallagher (11), Paul Gallagher (8)

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
1006.45	43.69	304.81	962.37	144.06	N57.56W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

BHA 2: 292.26 m; Bit #2 (37. hrs), PDM #1 (39.5 hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3x DC, Sub, 18x HWDP, Jar, 6x HWDP

BHA 3: 292.76 m; Bit #3rr1 (9.5 hrs), PDM #2 (49.5 hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3 x DC, Sub, HWDP, Jar, 6 x HWDP

BHA 4: 292.76 m; Bit #3rr2 (10. hrs), PDM #3 (50. hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3 x DC, Sub, HWDP, Jar, 6 x HWDP

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
KCl/Polymer	8.8	41	7	16.0	4.0 / 7.0	7	9.0	1.00	0.25	

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	02:30	2.50	976.00	2	Remove bell nipple & wear bushing. Test pipe rams & re-install bell nipple & WB.
02:30	04:30	2.00	976.00	3	M/up bit, change bend on motor and string stab.
04:30	06:00	1.50	976.00	3	RIH to 669m
06:00	08:30	2.50	976.00	3	Wash/ream 669 - 976m
08:30	12:30	4.00	989.00	3	Drill 976 - 989m
12:30	13:30	1.00	989.00	3	Repair pop-off on #2 pump
13:30	16:30	3.00	1008.00	3	Drill 989 - 1008m
16:30	17:00	0.50	1008.00	3	Pump sweep & circulate hole clean
17:00	20:00	3.00	1008.00	3	POOH to surface
20:00	20:30	0.50	1008.00	3	Change out stabiliser
20:30	22:30	2.00	1008.00	4	RIH to shoe
22:30	23:00	0.50	1008.00	4	Slip & cut 22' drill line
23:00	00:00	1.00	1008.00	4	Replace low drum clutch on drawworks

#### COMMENTS

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.  
 Well Name : Iona #6  
 Field : Otway Basin  
 Slot : Iona  
 Rig : Century Rig 18  
 Job # : AU-DD-0002999700

908148 102

**CURRENT STATUS** Report # 12 30/05/2004

Total Depth (m) :	1074	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	66	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (12), Paul Gallagher (9)
Hole Size (in) :	12.250	Casing ID (in) :			

**LAST SURVEY**

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
1066.11	47.95	306.15	1004.45	186.27	N56.75W

**LAST FORMATION TOP**

Formation Name	MD Top (m)	TVD Top (m)

**BHA SUMMARY**

BHA 4: 292.76 m; Bit #3rr2 (19.5 hrs), PDM #3 (60.5 hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3 x DC, Sub, HWDP, Jar, 6 x HWDP  
 BHA 5: 292.96 m; Bit #4 (41. hrs), PDM #4 (65. hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3 x DC, Sub, HWDP, Jar, 6 x HWDP

**MUD DATA**

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lb/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
KCl/Polymer	8.9	41	9	17.0	5.0 / 6.0	7	8.9	1.60	0.50	

**TIME BREAKDOWN**

From	To	Hours	TMD (m)	BHA #	Activity
00:00	00:30	0.50	1008.00	4	Cont. replace low drum clutch on drawworks
00:30	01:00	0.50	1008.00	4	RIH to 710m
01:00	01:30	0.50	1008.00	4	P/up kelly & break circulation
01:30	02:00	0.50	1008.00	4	RIH 710 - 987m
02:00	02:30	0.50	1008.00	4	Wash down 987 - 1008m
02:30	12:00	9.50	1037.00	4	Drill 1008 - 1037m
12:00	12:30	0.50	1037.00	4	Pump sweep & circulate hole clean./ Mix and pump slug.
12:30	15:00	2.50	1037.00	4	POOH
15:00	15:30	0.50	1037.00	4	Trip Out (at Surface)
15:30	17:00	1.50	1037.00	4	C/o Stab to 11½". Change bit, & motor bend to 1.50°, Scribe to MWD.
17:00	19:00	2.00	1037.00	5	Trip In to shoe.
19:00	19:30	0.50	1037.00	5	P/U Kelly & fill pipe, test MWD & motor.
19:30	20:00	0.50	1037.00	5	Trip In to 1006m
20:00	20:30	0.50	1037.00	5	P/U Kelly, Wash & ream 1006 - 1037m.
20:30	00:00	3.50	1074.00	5	Drill from 1037 - 1074m

**COMMENTS**

# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.

Well Name : Iona #6

Field : Otway Basin

Slot : Iona

Rig : Century Rig 18

Job # : AU-DD-0002999700

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#### CURRENT STATUS Report # 13 31/05/2004

Total Depth (m) :	1247	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	173	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (13), Paul Gallagher (10)
Hole Size (in) :	12.250	Casing ID (in) :			

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
1240.71	49.61	305.02	1120.43	316.68	N55.59W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

BHA 5: 292.96 m; Bit #4 (65. hrs), PDM #4 (89. hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3 x DC, Sub, HWDP, Jar, 6 x HWDP

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
KCl/Polymer	9.2	42	11	21.0	6.0 / 10.0	8	8.8	3.90	0.60	

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	06:45	6.75	1125.69	5	Drilling from 1074 - 1125.69m
06:45	00:00	17.25	1247.00	5	Drilling from 1125.69 - 1247m

#### COMMENTS



# sperry-sun

## DRILLING SERVICES

### Daily Drilling Report

Customer : TXU Gas Storage Pty Ltd.  
 Well Name : Iona #6  
 Field : Otway Basin  
 Slot : Iona  
 Rig : Century Rig 18  
 Job # : AU-DD-0002999700

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#### CURRENT STATUS Report # 15 2/06/2004

Total Depth (m) :	1515	Casing Depth (m) :		Operator Reps :	Peter Dwyer, Andy Urdevics
Drilled last 24 hrs (m) :	42	Casing Diameter (in) :		SSDS Reps :	Tim Gallagher (15), Paul Gallagher (12)
Hole Size (in) :	12.250	Casing ID (in) :			

#### LAST SURVEY

Depth (m)	Inclination	Azimuth	TVD (m)	Displ (m)	Direction
1490.73	48.75	310.05	1284.17	505.41	N54.53W

#### LAST FORMATION TOP

Formation Name	MD Top (m)	TVD Top (m)

#### BHA SUMMARY

BHA 5: 292.96 m; Bit #4 (95. hrs), PDM #4 (120.5 hrs), Sub, Stab, 1x DC, MWD, 1x DC, 3 x DC, Sub, HWDP, Jar, 6 x HWDP  
 BHA 6: 266.83 m; Bit #3rr3 (25. hrs), Sub, Stab, 1 x DC, Stab, 2 x DC, Sub, HWDP, Jar, 6 x HWDP

#### MUD DATA

Type	Weight (ppg)	FV (sec)	PV (cp)	YP (lbf/100ft <sup>2</sup> )	Gels	Fluid Loss	pH	Solids (%)	Sand (%)	Oil (%)
KCl/Polymer	9.2	42	11	21.0	6.0 / 10.0	8	8.8	3.90	0.60	

#### TIME BREAKDOWN

From	To	Hours	TMD (m)	BHA #	Activity
00:00	06:00	6.00	1515.00	5	Drill 1473 - 1515m
06:00	07:30	1.50	1515.00	5	Circulate/ Mix KCl slug & pump.
07:30	11:00	3.50	1515.00	5	Trip Out
11:00	12:00	1.00	1515.00	5	Trip Out (at Surface)
12:00	13:30	1.50	1515.00	5	LD motor/ mwd / bit.
13:30	15:30	2.00	1515.00	5	PU rotary BHA
15:30	18:30	3.00	1515.00	6	Trip In to shoe / break circ.
18:30	00:00	5.50	1515.00	6	Reaming / Washing from 837 - 1336m.

#### COMMENTS



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**APPENDIX 2b**

**Gyro Survey by Gyrodata**

Gyro 040604 LAS

#ASCII Save - LAS format output

~Version Information

VERS. 3.0 : Log ASCII Standard  
 WRAP. NO : One line per depth step  
 DLM. SPACE : Column Data Section Delimiter  
 ~Well  
 STRT.m 658.8 : START DEPTH  
 STOP.m 1660.2 : STOP DEPTH  
 STEP.m 0.0 : STEP  
 NULL. -99999.00 : NULL VALUE  
 COMP. Texas Utilities : Company  
 WELL. Iona Gas Storage Plant Iona 6 : well  
 FLD. Field: Otway Basin : Field  
 LOC. Victoria : Location  
 SRVC. Gyrodata : Service Company  
 CTRY. : Country  
 DATE. 01/06/2004 : Service Date  
 LATI. -38.57 : Latitude  
 LONG. 143.03 : Longitude  
 GDAT. : Geodetic Datum

~Parameter

outrun. : Outrun Survey

#Array names

~Curve

MD.m : 1 MEASURED DEPTH  
 Type : 2 STATION TYPE  
 INCL.DEG : 3 INCLINATION (DEG)  
 AZIM.DEG : 4 AZIMUTH (DEG)  
 TVD.m : 5 TRUE VERTICAL DEPTH  
 TVDSS.m : 6 TRUE VERTICAL DEPTH FROM SUB SEA  
 LOCAL-NS.m : 7 NORTHING  
 LOCAL-EW.m : 8 EASTING  
 VS.m : 9 VERTICAL SECTION  
 DL.DEG : 9 DOG LEG (DEG/30 METERS)

#	MD	Type	INC	AZ	TVD	TVDSS	LOCAL-N
LOCAL-E		V/S	DOGLEG				
~Ascii	668.4	0	1.02	202.88	668.42	668.42	2.23
-4.07		4.62	3.53				
	697.7	0	5.48	256.96	697.66	697.66	1.67
-5.54		5.50	5.07				
	726.3	0	10.95	280.71	725.91	725.91	1.87
-9.53		8.88	6.65				
	755.3	0	11.77	308.83	754.38	754.38	4.24
-14.55		14.35	5.73				
	783.6	0	15.83	308.88	781.86	781.86	8.47
-19.81		21.09	4.30				
	812.5	0	21.86	302.79	809.15	809.15	13.86
-27.40		30.39	6.59				
	841.3	0	28.65	301.38	835.20	835.20	20.37
-37.82		42.66	7.10				
	870.5	0	34.60	303.66	860.12	860.12	28.64
-50.74		57.99	6.21				
	899.7	0	40.20	304.58	883.27	883.27	38.57
-65.39		75.69	5.79				
	928.4	0	45.42	303.27	904.34	904.34	49.45
-81.59		95.20	5.53				
	957.5	0	45.45	304.38	924.71	924.71	60.97
-98.77		115.88	0.82				
	986.6	0	44.51	304.31	945.35	945.35	72.60
-115.80		136.50	0.97				
	1015.7	0	43.75	306.15	966.22	966.22	84.28
-132.34		156.74	1.54				
	1045.0	0	47.88	305.76	986.61	986.61	96.59
-149.31		177.71	4.25				
	1074.1	0	48.00	304.77	1006.14	1006.14	109.08
-166.98		199.35	0.77				
	1103.1	0	48.47	305.97	1025.47	1025.47	121.61

## Gyro 040604 LAS

-184.64	221.00	1.04					
	1132.3	0	48.81	306.58	1044.72	1044.72	134.55
-202.26	242.85	0.59					
	1161.5	0	47.98	306.87	1064.11	1064.11	147.61
-219.77	264.69	0.88					
	1190.7	0	48.16	304.29	1083.62	1083.62	160.24
-237.43	286.40	1.98					
	1219.6	0	49.04	305.11	1102.72	1102.72	172.57
-255.24	308.07	1.12					
	1248.7	0	49.58	304.64	1121.71	1121.71	185.20
-273.36	330.15	0.66					
	1277.8	0	49.12	305.01	1140.70	1140.70	197.83
-291.52	352.27	0.55					
	1307.0	0	49.36	304.88	1159.75	1159.75	210.49
-309.63	374.36	0.27					
	1335.7	0	49.59	305.44	1178.41	1178.41	223.06
-327.48	396.19	0.51					
	1364.6	0	48.87	307.38	1197.26	1197.26	236.03
-345.07	418.04	1.70					
	1393.6	0	49.01	308.04	1216.31	1216.31	249.41
-362.37	439.89	0.53					
	1422.3	0	49.14	308.09	1235.11	1235.11	262.77
-379.44	461.54	0.14					
	1450.5	0	48.95	307.57	1253.62	1253.62	275.86
-396.29	482.85	0.47					
	1478.6	0	48.70	309.72	1272.13	1272.13	289.06
-412.81	503.95	1.75					
	1507.6	0	48.51	310.24	1291.29	1291.29	303.03
-429.47	525.61	0.45					
	1535.7	0	48.21	310.29	1309.95	1309.95	316.60
-445.49	546.52	0.33					
	1564.5	0	48.09	311.10	1329.15	1329.15	330.57
-461.74	567.84	0.64					
	1593.2	0	47.74	309.38	1348.41	1348.41	344.35
-478.02	589.08	1.38					
	1621.8	0	47.62	310.60	1367.65	1367.65	357.93
-494.21	610.13	0.96					
	1650.6	0	47.48	310.40	1387.11	1387.11	371.74
-510.39	631.30	0.21					
	1660.2	0	47.51	310.76	1393.56	1393.56	376.32
-515.73	638.31	0.84					

**APPENDIX 3**

Drilling Fluid Recap

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**TXU GAS STORAGE PTY LTD  
DRILLING FLUID RECAP  
IONA - 6  
PORT CAMPBELL, PPL - 2, OTWAY BASIN, VICTORIA**



Prepared by : Tun Aung

Date : 07 June, 2004

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**WELL SUMMARY**

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**1.1 Well Data**

Well Name	:	Iona - 6
Operator	:	TXU Gas Storage Pty Ltd.
Well Type	:	Directional
Maximum Deviation & Direction	:	49.67° / 305.41
Horizontal Displacement at TD	:	491.12 m+
Bottom Hole Temperature	:	65.0°C ( 149°F )
Location	:	Port Campbell, PPL 2, Otway Basin, Victoria
Contractor/Rig	:	Century Rig 18
Start Date	:	15 May, 2004
Spud Date	:	20 May, 2004 ( 21:30 hrs )
RT to Ground level	:	4.8 m
Total Depth	:	1,686 m MD, 1,413 m TVD
Date TD Reached	:	03 June, 2004 ( 13:30 hrs )
Total Days Drilling	:	10 1/2
Date Released	:	05 June, 2004
Total Days on Well	:	17

**1.2 Formation Tops (Prognosed Only, Actual Tops are Lower, Data Not Available)**

Formation	Lithology	MD (m) KB	TVD (m) KB	Inclination (deg)
Heytesbury / Port Campbell	Limestone	Surface	Surface	0
Narrawaturk / Gellibrand Marl	Limestone / Clay	201	201	0.5
Mepunga Formation	Silt / Clay	280	280	0.4
Dilwyn Formation	Sandstone	339	339	0.6
Pember Mudstone	Clay	547	547	0.4
Pebble Point Formation	Clay	624	624	0.7
Paaratte Formation	Sandstone	668	668	1.3
Skull Creek Member	Clay	1070	1008	47.9
Nullawarre Greensand	Sandstone	1269	1139	48.9
Belfast Mudstone	Clay /Silt	1409	1229	48.9
Waarre Formation	Sandstone	1470	1270	48.8
Total Depth (In Eumeralla)	Silt	1686	1413	-

**1.3 Casing Program**

20"	Conductor	11 m
13 3/8"	Surface Casing	664 m
P & A	Cement Plugs	Three Plugs

**1.4 Personnel**

Drilling Supervisors	:	Peter Dwyer	Andy Urdevics
Baroid Field Service Reps.	:	Tun Aung	

2.

**COST SUMMARY**

## 2.1 Drilling Fluid Costs

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	Drilling Fluid	Hole Size	MD From	MD To	Cost (AUD\$)
1.	KCl / PHPA / Polymer	17 1/2"	11 m	664 m	16,974.66
2.	KCl / PHPA / Polymer	12 1/4"	664 m	1686 m	49,841.61

Mud Materials Used For Drilling Total AUD\$ 66,816.27

Mud Materials Used For Non Drilling AUD\$ 50.34

( Cementing / Other )

Mud Materials Used For Completion AUD\$ Nil

( 8.6 ppg KCl Brine )

Total Materials AUD\$ 66,866.61

## 2.2 Engineering Costs

Service Representatives	From (date)	To (date)	Days
Tun Aung	20/05/2004	04/06/2004	16

Total Days 16

Service Cost (AUD \$) @ \$800.00 per day Total AUD \$ 12,800.00

Total Costs AUD \$ 79,666.61



3.

**PERFORMANCE SUMMARY**

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**3.1 Comments**

- A KCl/PHPA/ Polymer fluid was used for the well, to provide maximum inhibition of the reactive clays in the area.
- Surface 17 1/2" hole was drilled trouble free to 664 m, and 13 3/8" casing was set.
- A 12 1/4" production hole was drilled from 664 m to 1686 m, and the well was plugged and abandoned with three cement plugs..

**3.2 Performance Indicators**

	Program	Actual	Achieved (± 10 %)
<b>Interval 1. 17 1/2" Hole</b>			
<b>11 m - 664 m ( 653 m drilled )</b>			
• Salvaged Mud	Nil	Nil	Yes
• New Volume Used, bbl	1682	1288	No
• Dilution Rate, bbl/m	1.20	0.52	No
• Consumption Rate, bbl/m	2.70	1.97	No
• Mud Cost/bbl, A\$	21.64	13.18	No
• Mud Cost/m, A\$	57.75	25.99	No
• Interval Mud Cost, A\$	36,385.50	16,974.66	No
• No differential sticking		-	Yes
• Successfully set 13 3/8" surface casing		-	Yes
• Rotating Hours ( Logging Unit )			-
• Average ROP, m/hr		31.92 20.46	-

	Program	Actual	Achieved (± 10 %)
<b>Interval 2. 12 1/4" Hole</b>			
<b>664 m - 1686 m ( 1022 m drilled )</b>			
• Salvaged Mud from 17 1/2" section	615	Nil	No
• New Volume Used, bbl	2304	2201	Yes
• Dilution Rate, bbl/m	1.30	1.05	No
• Consumption Rate, bbl/m	2.43	2.15	No
• Mud Cost/bbl., A\$	17.54	22.64	No
• Mud Cost/m., A\$	42.54	48.77	No
• Interval Mud Cost, A\$	40,414.14	49,841.61	No
• No differential sticking.		-	Yes
• Successfully run wireline logs		-	Yes
• Rotating Hours ( Logging Unit )		79.53	-
• Average ROP, m/hr		12.85	-

**Entire Well**

- Total Drilling Fluid Cost A\$ **76,799.64** **66,816.27** **No**

**Completion Interval**

- Completion Fluid Cost, A\$ - - -

**Explanation of Non-Conformance****17 1/2" Interval**

- All the performance indicators were not met, because due to environmental restrictions a sump was not available, and direct dumping of the mud was prohibited. As a result the performance indicators of Volume Used, Dilution and Consumption Rates, Cost/bbl and Cost/m were much lower than estimated, as compared to similar wells in the surrounding area.

- The mud cost was 50 % of the estimated cost, but the resulting mud weight was very much higher than programmed ( 9.8 as compared to 9.1 ppg).

**12 1/4" Interval**

- The 337 bbl of heavy 9.8 ppg mud from the 17 ½ inch interval was displaced out with new 8.7 ppg mud. The heavy mud was pumped into a tanker truck and carted away for disposal at a selected site.
- The Dilution and Consumption rates were lower than programmed mainly due to environmental restrictions. Since direct dumping of the mud could not be carried out, dilution had to be done by transferring mud into a spare tank, then pumping this mud into the tanker truck to be carted away for disposal.
- The mud Cost/bbl, Cost/m and Interval Mud Cost was higher than programmed mainly due to two reasons :
  - a). A larger amount of KCl was used ( The programmed concentration was 4 %, while the actual amount used was 6 %. The TXU program for the KCl concentration was 4 – 5 %, and the mud mixed was at 5 % KCl Content. Apart from the first heavy weight pill, all the remaining pills were made up of KCl, which increased the overall usage and incurred an additional cost of \$ 4305 ).
  - b). A larger amount of BARAZAN was used ( The programmed concentration was 1.3 ppb, while the actual amount used was 1.45 ppb which incurred an additional cost of \$ 4985. For the first five days of drilling, the MBT was low and the Yield Point / 6 Rpm values were also low, resulting in a higher consumption of BARAZAN ).

**Entire Well Mud Cost**

- The Total Mud Cost for the well was 13 % lesser than the programmed cost.

4. INTERVAL - 1

## 4.1 SUMMARY

171/2" Hole From 11 m To 664 m In 2 1/2 Drilling Days

Drilling Fluid KCl / PHPA / Polymer

Formations Heytesbury Group, Narrawaturk Marl, Mepunga Fm, Dilwyn Fm, Pember Mudstone, Pebble Point Fm.

**Operations Summary**

Drilled to casing point of 664 m. Made a wiper trip to surface, prior to running in and cementing 13 3/8 inch casing to surface with full returns. No sweeps were pumped for the interval.

Properties	Programmed		Actual (Typical Drilling)		Conformance
	Min	Max	Min	Max	
Mud Weight, ppg	-	9.1	8.55	9.8	No
Yield Point, lb/100 ft <sup>2</sup>	25	45	11	23	No
6 rpm, lb/100 ft <sup>2</sup>	8	12	4	10	No
API Filtrate, ml		6	12.8	19.2	No
HPHT Filtrate, ml		12	-	-	-
KCl Content, % wt	3	4	3.3	4.5	Yes
PHPA Content, ppb	1.0		0.4	0.5	No
Low Gravity Solids, %v/v		8.0	0.1	8.4	No
pH	8.8	9.5	8.3	9.5	No
Residual Sulphites	100		20	50	No

**Explanation of Non-Conformance**

- Since dumping of the sand trap was prohibited due to environmental restrictions, the mud weight could not be maintained within programmed limits. Even dilution of the system was restricted by the fact, there was not enough storage space to store the excess volume. Any excess volume had to be pumped into a tanker truck and carted away for disposal. Apart from that, all the liquid effluent, including fines from the Desander / Desilter underflow discharge were put back into the mud system, sometimes after centrifuging and sometimes directly. The sand trap was occasionally centrifuged and put back into the system. At 500 m, the centrifuge broke down, and the mud weight increased from 9.3 ppg to 9.8 ppg upon reaching casing point at 664 m.
- Initially the Yield Point was low, since after displacement some screen blinding occurred due to the effect of PHPA in the fluid. Once the mud had been sufficiently sheared, the yield point was gradually increased, but was still in the lower range than programmed.
- After displacement the 6 Rpm reading was low. After sufficient shearing had been achieved, the 6 Rpm value was maintained at the 9 to 10 range.
- The API Filtrate was also higher than programmed, in accordance with the TXU program of less than 15 ml. Fluid loss additives of PAC-L / DEXTRID was only used upon approaching surface casing point.
- Even though the KCl Content was within the programmed range, there was difficulty in monitoring and maintaining. Every 6 hours or so, the KCl Content would drop by 1 to 1.3 % mainly due to continuous hosing down of the two cuttings dump chutes which diverted the cuttings onto the DFE shaker, and also the additional hose down water directed onto the cuttings lumped / piled up on the DFE shaker itself. All the liquid effluent, including fines from the Desander / Desilter underflow discharge were then put back into the mud system, sometimes after centrifuging and sometimes directly.
- PHPA content was maintained in the 0.4 to 0.5 ppb range mainly to minimize screen blinding

- at the high pump rates used for the 17 ½ inch section.
- Upon reaching casing depth the mud weight had increased to 9.8 ppg, at which stage the low gravity solids exceeded the programmed value of 8.0 % volume.
- While drilling through the clays, the pH was kept in the lower range of 8.3 to minimize dispersion and clay swelling. Due to the high MBT of the mud, addition of caustic also tended to thicken up the mud.
- Residual Sulphites were also in the lower ranges, since continuous running of the solids control equipment caused agitation which consumed more chemical.

#### Maintenance

- Due to environmental restrictions, and the absence of a sump, mud or cuttings could not be dumped on the ground. The cuttings coming over the two Derrick Shakers (#50 mesh) were channeled over one DFE shaker (#110 mesh). The cuttings coming over this shaker was dumped into a metal holding "D" container, from which it was scooped out with a excavating machine, loaded onto a tipper dump truck and then carted away for disposal.
- The Desander and Desilter underflow discharge effluent was also channeled over the DFE Shaker. The solids were dumped into the metal holding "D" container, and the liquid effluent which passed through the screens were collected in a plastic rainwater tank. This was then centrifuged or directly returned to the system.
- The one centrifuge on site was mainly used for the mud system, Since the Sand Trap could not be dumped, it was occasionally centrifuged and put back into the system.
- At a later stage the sand trap was completely blocked up, and could not be centrifuged.
- The Intermediate #2 Tank was used as a holding tank to store heavy mud. This mud was then pumped out into a tanker truck ( 180 bbl capacity ) and carted away for disposal.
- The make up water used was freshwater from a nearby dam with a composition of : pH – 6.5, Hardness – 20 mg/L, Chlorides – 150 mg/L, Carbonates – Nil, and Bicarbonates – 61 mg/L.
- Mud volume and properties were maintained with new premixed mud with a basic composition of : BARACIDE – 0.1 ppb, Caustic Potash – 0.4 ppb, KCl – 4.5 %, BARAZAN D PLUS – 1 ppb, PHPA – 0.5 ppb. No fluid loss additives were used.
- Upon approaching casing point, 0.85 ppb each of fluid loss additives PAC-L and DEXTRID was directly added to the system.

#### Solids Control Equipment

- The two Derrick FLC58 linear motion shale shakers were fitted with # 50 mesh screens ( Due to the larger hole size of 17 ½ inch which generated a large amount of cuttings, and pump rates of 727 gpm, finer screens could not be used ).
- The Harrisburg Desander ( 2 cone x 10 inch ) was run continuously. Underflow discharge rates ranged from 1.0 - 1.7 bbl/hr, with a weight of 9.9 - 15.5 ppg.
- The Harrisburg Desilter ( 12 cone x 5 inch ) was run continuously. Underflow discharge rates ranged from 2.1 - 4.5 bbl/hr, with a weight of 10.3 - 10.4 ppg.
- Ran the DFE centrifuge continuously while drilling or circulating, operating with a slightly wet discharge to increase colloidal solids removal.

## 4.2 EVALUATION

### Comments

- The system in use performed well, as regards to hole cleaning and stability.

### Problems, Causes, Remedial Action Taken or Recommended

#### Hole Conditions

- 1) Problem During the wiper trip at casing point, the hole was sticky from 559 m (Pember Mudstone, Clay) to 327 m (Mepunga Fm, Silt/Clay), with a maximum overpull of 50 K lb, and a constant drag of 15-20 K lb.
- Cause Possible clay swelling.
- Action Worked pipe. Cleaned out stabiliser. Upon running back in washed from 344 to 376 m.

#### Drilling Fluid

- 1) Problem No problems encountered.
- Cause
- Action

#### Solids Control and Mud Mixing Equipment

- 1) Problem Centrifuge not working from 500 m.
- Cause Motor breakdown.
- Action Replaced motor for the next hole section.

## 4.3 RECOMMENDATIONS FOR IMPROVEMENT

#### Hole Conditions

- Better stability can be achieved, by minimizing swelling of clays by using a slightly higher KCl Content of 4 – 5 % range.

#### Drilling Fluid

- The KCl / PHPA / Polymer fluid performed well.

#### Solids Control and Mud Mixing Equipment.

- Since direct dumping of the mud is prohibited, improved Solids Control measures are needed.
  - a). To better handle the cuttings generated by the larger 17 ½ inch hole and high flow rates of 727 gpm, three shakers will be required to permit the use of finer screens. This can be set up by removing the Desander.
  - b). Two Centrifuges are required, one to process the active system and the other to process the sand trap continuously to prevent clogging.
  - c). The liquid effluent from the Desander/Desilter underflow discharge and the DFE Shaker which has been collected in the Rainwater Tank should be carted away for disposal instead of pumping back into the system, sometimes without centrifuging.

5. INTERVAL - 2

## 5.1 SUMMARY

121/4 " Hole From 664 m To 1686 m In 8 Drilling Days

Drilling Fluid KCI / PHPA / Polymer

Formations Pebble Point Fm, Paaratte Fm, Skull Creek Member, Nullawarre Greensand, Belfast Mudstone, Eumeralla Fm, Waare Formation.

**Operations Summary**

This section was drilled in 79.5 rotating hours ( Logging Unit Data ), with five bit runs to a Total Depth of 1686 m. Pumped 50 bbl of BAROLIFT sweep (0.3 ppb) before and after the wiper trip with a minimal increase of returns. Carried out two logging runs, after which the well was plugged backed.

Properties	Programmed		Actual (Typical Drilling)		Conformance
	Min	Max	Min	Max	
Mud Weight, ppg		9.4	8.75	9.8	No
Yield Point, lb/100 ft <sup>2</sup>	-	-	12	24	-
6 rpm, lb/100 ft <sup>2</sup>	10	15	4	8	No
API Filtrate, ml		6	5.7	10.6	No
HPHT Filtrate, ml		12	17.2	23.4	No
KCI Content, % wt	3	4	4.2	5.3	No
PHPA Content, ppb	1.0		1.0	1.1	Yes
Low Gravity Solids, % v/v		8	0.6	8.0	Yes
pH	8.8	9.5	8.8	9.5	Yes
Residual Sulphites	100		20	100	No

**Explanation of Non-Conformance**

- Up to 1500 m, the mud weight was within programmed limits, at which stage the shaker screens had been upgraded from #50 mesh on both shakers to 3 x #110 on one shaker and #84/84/50 on the other. At 1582 m added 2.5 ppb each of graded limestone Circal 60/16 (25 micron) and Circal Y (100 micron) which increased the mud weight from 9.45 to 9.55 ppg. While drilling through the Basal Belfast Mudstone (Clay/Silt), Warre Sandstone and Eumeralla Fm (Silt) the mud weight increased to 9.75 – 9.8 ppg.
- Initially the Yield Point, 6 Rpm reading and MBT value was low. From 1250 m onwards, when the MBT increased to more than 7 ppb, the Yield Point / 6 Rpm reading increased, but was still on the lower side. In order to minimize cost, the Yield Point was maintained around 20 (TXU program) which corresponded to a 6 Rpm reading of 7-8 range.
- In order to minimize cost, both the API Filtrate and HPHT was kept on the higher side, in accordance with the TXU program ( API Filtrate of less than 10 above the Warre Fm, and in the Warre Fm, an API Filtrate of less than 6 and HPHT of less than 20 ml ).
- In order to minimize chances of clay swelling and tight hole conditions during trips, the KCI Content was kept in the higher range of 4 – 5 % wt.
- Due to the agitation caused by the continuous running of the solids control equipment, the BARACOR 129 oxygen scavenger added was being depleted at a fast rate.

**Maintenance**

- After tagging cement stringer at 626 m, displaced the hole with 680 bbl of new 8.75 ppg KCI/PHPA/Polymer mud which had been pretreated with 0.3 ppb each of Citric Acid and Soda Bicarb. To minimize screen blinding and shaker losses, the new mud only had 0.25 ppb of PHPA. The new mud did not contain any caustic.

- After drilling out cement, drilled 5 m of new hole to 669 m, and carried out a FIT test to 10.5 ppg EMW.
- As drilling progressed, trickled in PHPA to a concentration of 1.0 ppb by 860 m, and maintained till Total Depth.
- The basic Premix had the following composition : BARACIDE – 0.15 ppb, KCl – 5 % wt, BARAZAN – 1.0 ppb, PAC L – 0.5 ppb, DEXTRID – 0.5 ppb, and PHPA – 1.0 to 1.5 ppb. Caustic Potash was not added in the Premix, to prevent the mud from getting too thick and clogging up the mixing hopper.
- Mud volume and properties were maintained by the addition of new premixed mud, and the premix formulation was slightly changed as required to maintain fluid properties.
- Up to 1500 m, the mud weight was within the programmed limit of 9.3 - 9.4 ppg.
- To minimize cost, the Yield Point / 6 Rpm reading was kept in the lower ranges, while the API and HPHT Filtrate was maintained in the higher ranges.
- To minimize clay swelling and dispersion, the KCl Content was maintained in the higher 4 – 5 % range, while the pH was kept in the lower ranges of 8.8 to 9.0 units.
- Used a Barite pill for the first trip, after which KCl slugs were used.
- For this hole section, the sand trap was continuously centrifuged to prevent clogging, with the overflow returns lined up to the suction pit. During trips, fluid in the active system was circulated and centrifuged.
- At 1582 m prior to entering the Warre Formation, added 2.5 ppb each of Circal 60/16 / Circal Y ( Total 5 ppb ) to the system, which increased the mud weight from 9.45 to 9.55 ppg.
- While drilling through the fine sands and silts of the Warre and Eumeralla Formations, the mud weight increased to 9.75 – 9.8 ppg range.
- Prior to reaching Total Depth, the fluid was treated with additional Caustic and BARACIDE to minimize the chances of bacterial degradation.
- At Total Depth of 1686 m, pumped 50 bbl of BAROLIFT sweep (0.3 ppb), before and after the wiper trip with a minimal increase in returns.
- After carrying out two logging runs, cement plugs were set.

#### Solids Control Equipment

- The two Derrick linear motion shale shakers were initially fitted with # 50 mesh screens. After 1000 m, the shakers were slowly upgraded to #84 mesh screens. By 1500 m, one shaker was dressed with #110 mesh screens with #84 mesh screens on the other. ( With flow rates of 727 to 751 gpm, finer screens could not be fitted ).
- The Harrisburg Desander ( 2 cone x 10 inch ) was run continuously. Underflow discharge rates ranged from 0.7 – 1.2 bbl/hr with a weight of 12.5 – 16.4 ppg.
- The Harrisburg Desilter ( 12 cone x 5 inch ) was run continuously. Underflow discharge rates ranged from 1.1 – 3.3 bbl/hr with a weight of 10.9 – 13.6 ppg.
- Ran the DFE Centrifuge with a slightly wet discharge to increase colloidal solids removal. While drilling, the centrifuge was lined up continuously to the sand trap, and during trips was lined up to the active mud system.

## 5.2 EVALUATION

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### Comments

- A combination of 1.0 ppb of PHPA and 4 – 5 % wt of KCl provided sufficient inhibition. ( During trips the hole was in good condition ).

### Problems, Causes, Remedial Action Taken or Recommended

#### Hole Conditions

- 1) Problem At 1515 m, a trip was made and the directional assembly was laid out. Upon running back in with a stiffer BHA, tight hole had to be reamed from 1001 m to 1515 m.  
Cause Most likely due to a stiffer BHA.  
Action Reamed tight section.
- 2) Problem During the wiper trip at Total Depth, tight hole was encountered from 1540 to 1650 m, upon running back in.  
Cause Most likely due to filter cake build up in the Warre Sandstone.  
Action Worked pipe.

#### Drilling Fluid

- 1) Problem No problems encountered.  
Cause  
Action

#### Solids Control and Mud Mixing Equipment

- 1) Problem None.  
Cause  
Action

## 5.3 RECOMMENDATIONS FOR IMPROVEMENT

#### Hole Conditions

- Good hole stability can be achieved by the present combination of 1.0 ppb of PHPA and 4 – 5 % wt of KCl.

#### Drilling Fluid

- The system used on this well is satisfactory.

#### Solids Control and Mud Mixing Equipment.

- In order to help control the mud weight improvements to the solids control equipment is needed, as described in the previous section. If these improvements are difficult to carry out, the PHPA Content should be reduced to 0.5 ppb to enable the use of finer screens on the two available shakers.



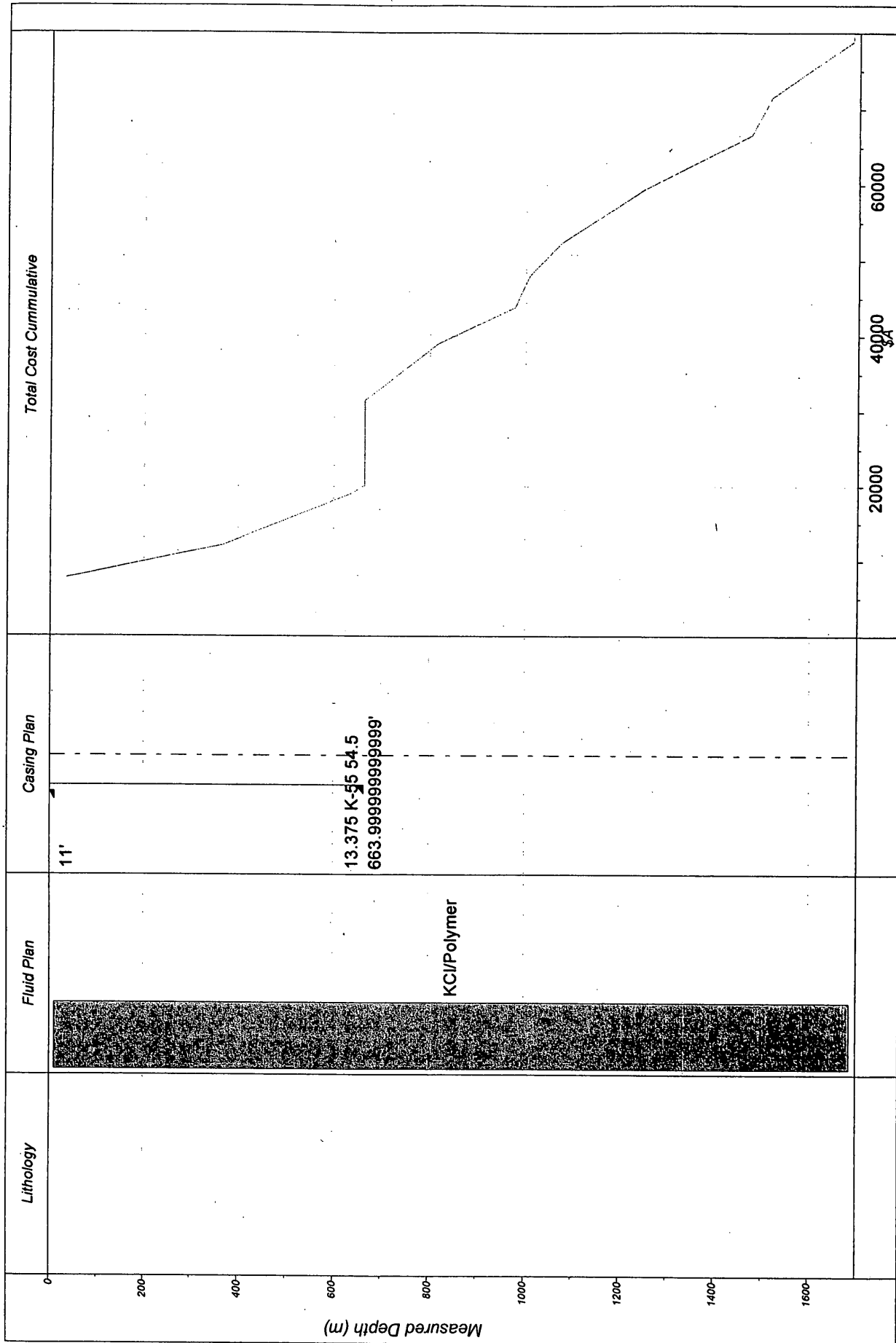
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# GRAPHS

Well : Iona-6

Operator : TXU GAS STORAGE PTY LTD

# Daily Costs vs Depth

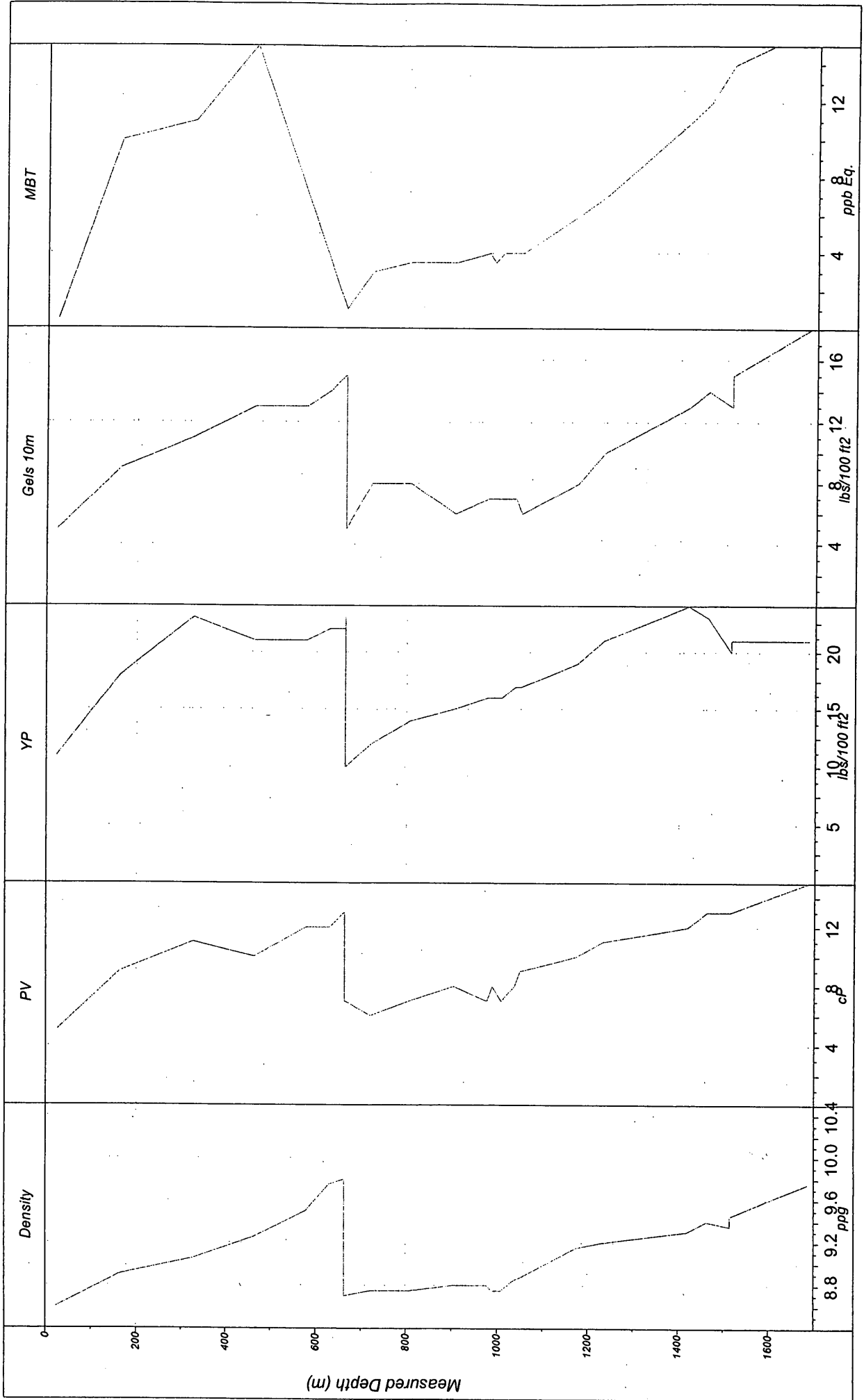




# Recap Properties Water Based vs Depth Set 1

Well : Iona-6

Operator : TXU GAS STORAGE PTY LTD



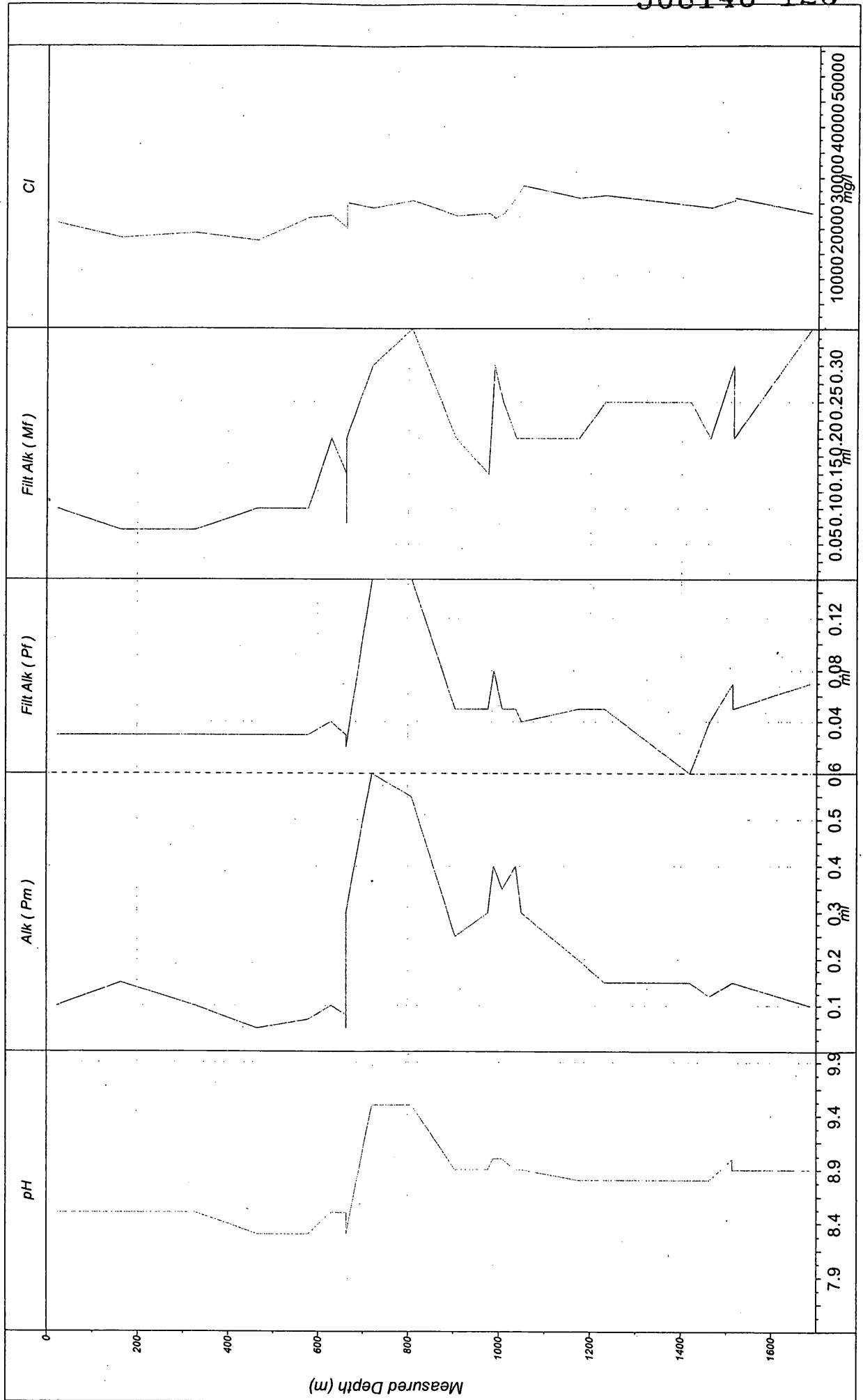


# Recap Properties Water Based vs Depth Set 2

Well : Iona-6

Operator : TXU GAS STORAGE PTY LTD

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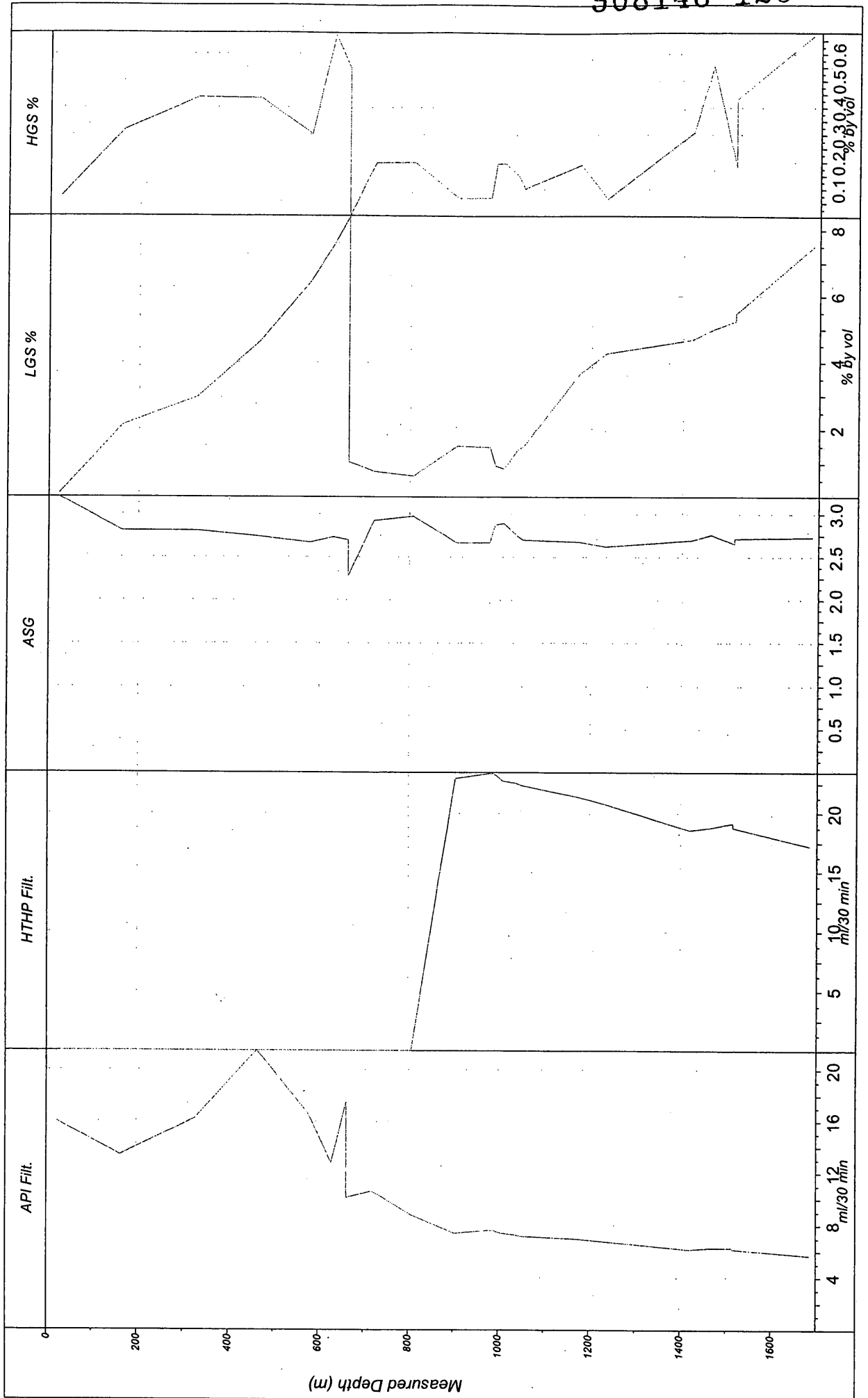


# Recap Properties Water Based vs Depth Set 3

Well : Iona-6

Operator : TXU GAS STORAGE PTY LTD

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# POSTWELL AUDIT



# Well Summary

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Well: Iona-6

Operator: TXU GAS STORAGE PTY LTD

## Well Data

Spud Date	May/20/04	Products/Fluids Drilling Cost	\$A66,816.27
TD Date	Jun/03/04	Products/Fluids Completion Cost	\$A0.00
Project	1003	Solids Control/ Waste Management Cost	\$A0.00
Days on Well	15	Products/Fluids Cementing Cost	\$A50.34
From Date	May/20/04	Products Lost/Damaged Cost	\$A0.00
To Date	Jun/4/04	Engineering Services Cost	\$A12,800.00
Drilling Days	12	Equipment Cost	\$A0.00
Rotating Hours	179.00	Transport / Packaging	\$A0.00
Average ROP	m/hr 9.9	Other Cost	\$A0.00
Maximum Density	ppg 9.80	Total Well Cost	\$A79,666.61
Total Measured Depth	m 1,686.0	Planned Cost	\$A0.00
True Vertical Depth	m 1,413.0	Cost per Fluid Volume	\$A / bbl 22.84
Distance Drilled	m 1,675.0	Cost per m Drilled	\$A / m 47.56
Maximum Deviation	degrees 49.28	Cost / Volume of Hole Drilled	\$A / bbl 70.74
Maximum Horiz. Displacement	m 491.1	Fluid Volume / Hole Volume	bbl / bbl 3.098
Bottom Hole Temperature	Deg C 65.00	Fluid Volume / Length Drilled	bbl/m 2.080

## Casing Design

Casing Description	Set Date and Time	Top MD m	Top TVD m	End MD m	End TVD m	Csg OD in	Csg ID in	Hole Size in	Hole MD m	Hole TVD m
20 H-40 94.0	05/18/2004 00:00	0.0	0.0	11.0	11.0	20.000	19.124	24.000	11.0	11.0
13.375 K-55 54.5	05/24/2004 15:30	0.0	0.0	664.0	664.0	13.375	12.615	17.500	664.0	664.0

## Mud Program

Interval #	Mud Type	Interval Days	BHT Deg C	Max. Dens ppg	Planned Fluid Cost	Actual Fluids and Products Cost	Variance
01	KCI/PHPA/Polymer	6	40	9.80	\$A 0.00	\$A 16,974.66	\$A 16,974.66
02	KCI/PHPA/Polymer	10	65	9.80	\$A 0.00	\$A 49,841.61	\$A 49,841.61

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**Total Cost Breakdown**

Well : Iona-6

Operator: TXU GAS STORAGE PTY LTD

Material	Unit Size	Quantity	Total Cost
<b>Engineering/Services</b>			
Drilling Fluids Engineer	Day(s)	16.00	\$A 12,800.00
		Subtotal	\$A 12,800.00
<b>Prod/Fluids : Cementing</b>			
calcium chloride	25 Kg bag	3.00	\$A 50.34
		Subtotal	\$A 50.34
<b>Prod/Fluids : Drilling</b>			
Baracide	25 Kg can	10.00	\$A 2,776.30
BARACOR 129	25 Kg can	46.00	\$A 2,626.14
BARA-DEFOAM W300	25 l can	2.00	\$A 150.00
BARAZAN D PLUS	25 Kg bag	76.00	\$A 21,046.68
barite	25 Kg bag	51.00	\$A 369.75
BAROLIFT	15 lb box	3.00	\$A 879.99
bentonite	25 Kg bag	2.00	\$A 19.80
Circal 60/16	25 Kg bag	48.00	\$A 624.96
Circal Y	25 Kg bag	58.00	\$A 926.84
citric acid	25 Kg bag	4.00	\$A 285.52
DEXTRID LTE	25 Kg bag	21.00	\$A 752.43
DEXTRID LTE	50 lb bag	40.00	\$A 1,302.80
PAC-L	25 Kg bag	64.00	\$A 7,286.40
phpa	25 Kg bag	50.00	\$A 6,113.50
potassium chloride tech	25 Kg sack	1,245.00	\$A 18,675.00
potassium hydroxide	20 Kg pail	48.00	\$A 2,916.00
sodium bicarbonate	25 Kg bag	4.00	\$A 64.16
		Subtotal	\$A 66,816.27
		<b>Total Well Cost</b>	<b>\$A 79,666.61</b>

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Iona/PPL-2  
Victoria

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# Net Well Cost Breakdown

Well : Iona-6  
Operator: TXU GAS STORAGE PTY LTD

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Cost Breakdown I	\$A	Interval 01	Interval 02	Total
Fluids/Products : Drilling		16,974.66	49,841.61	66,816.27
Fluids Products : Comp/Filtration				
Solids Control/Waste Managment		50.34		50.34
Fluids/Products : Cementing		4,800.00	8,000.00	12,800.00
Engineering Services				
Fluids/Products : Lost Damaged				
Other Cost				
Equipment cost				
Transport / Packaging Cost		21,825.00	57,841.61	79,666.61
Total Cost				

Cost Breakdown II	\$A	Interval 01	Interval 02	Total
Total Products Cost		17,025.00	49,841.61	66,866.61
Total Fluids Cost				
Total Charges Cost		4,800.00	8,000.00	12,800.00
Total Cost		21,825.00	57,841.61	79,666.61
Planned Cost				
Variance		21,825.00	57,841.61	79,666.61

Volumes Breakdown	bbl	Interval 01	Interval 02	Total
Total Base Fluids Additions		41.4	103.9	145.3
Total Chemical Additions		0.9	1.0	1.9
Total Barite Additions		1,122.1	2,096.1	3,218.2
Total Water Additions		1,164.4	2,201.0	3,365.4
Total Fluid Built				
Total Fluids Received		123.3		123.3
Total Mixing Additions				
Total Influx Additions				
Total Other Additions		1,287.7	2,201.0	3,488.7
Total Fluid Volume				

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## Interval Summary

Well : Iona-6

Operator: TXU GAS STORAGE PTY LTD

Interval #	01	Bit Size	17.500 in	Hole Size Maximum	17.500 in
Interval Start Date	May/20/2004	Planned Cost	\$A	0.00	
Interval End Date	May/25/2004	Total Interval Cost	\$A	21,825.00	
Interval TD Date	May/23/2004	Programmed Variance	\$A	21,825.00	
Drilling Days	4.00	Total Products Cost	\$A	17,025.00	
Rotating / Drilling Hours	48.00 / 47.50	Total Fluids Cost	\$A	0.00	
Top of Int. MD/TVD	m 11.0 / 11.0	Total Charges Cost	\$A	4,800.00	
End of Int. MD/TVD	m 664.0 / 664.0	Total Cementing Cost	\$A	50.34	
Footage	m 653.0	Fluid Cost per Vol unit	\$A/bbl	16.95	
Average ROP	m/hr 13.7	Fluid Cost / Hole Drilled	\$A/m	33.42	
Max. Hole Angle	degrees 0.75	Fluid Cost / Vol Drilled	\$A/bbl	34.24	
Casing Size	in 13.375	Total Fluid Volume	bbl	1,287.70	
Casing Shoe MD	m 664.0	Vol Fluid / Vol Drilled	bbl/bbl	2.02	
Casing Length	m 664.0	Vol Fluid / Hole Drilled	bbl/m	1.97	
Bottom Hole Temp.	Deg C 65	Fluid Loss / Vol Drilled	bb/bbl	1.49	
Max. Fluid Density	ppg 9.80	Fluid Loss / Hole Drilled	bbl/m	1.46	

## Interval Products and Base Fluids Usage and Cost

Product Function / Name	Packaging	Drilling Fluid	Total Used	Product Cost
<b>Alkalinity Control</b>				
potassium hydroxide	20 Kg pail	KCl/Polymer	18.00	\$A 1,093.50
			Total	\$A 1,093.50
<b>Bactericides</b>				
Baracide	25 Kg can	KCl/Polymer	3.00	\$A 832.89
			Total	\$A 832.89
<b>Filtration Control</b>				
DEXTRID LTE	50 lb bag	KCl/Polymer	14.00	\$A 455.98
PAC-L	25 Kg bag	KCl/Polymer	14.00	\$A 1,593.90
			Total	\$A 2,049.88
<b>Shale Control</b>				
phpa	25 Kg bag	KCl/Polymer	9.00	\$A 1,100.43
potassium chloride tech	25 Kg sack	KCl/Polymer	398.00	\$A 5,970.00
			Total	\$A 7,070.43
<b>Viscosifier/Suspension Agent</b>				
bentonite	25 Kg bag	KCl/Polymer	2.00	\$A 19.80
BARAZAN D PLUS	25 Kg bag	KCl/Polymer	18.00	\$A 4,984.74
			Total	\$A 5,004.54
<b>Weighting Material</b>				
barite	25 Kg bag	KCl/Polymer	25.00	\$A 181.25
calcium chloride	25 Kg bag	No Fluid	3.00	\$A 50.34
			Total	\$A 231.59
<b>Corrosion Inhibitor</b>				
BARACOR 129	25 Kg can	KCl/Polymer	13.00	\$A 742.17
			Total	\$A 742.17
<b>Total Products and Base Fluids Cost</b>				<b>\$A 17,025.00</b>

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Otway Basin, Victoria

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**Interval Summary**

Well : Iona-6

Operator: TXU GAS STORAGE PTY LTD

Interval #	02	Bit Size	12.250 in	Hole Size Maximum	12.250 in
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Interval Start Date	May/26/2004	Planned Cost	\$A	0.00
Interval End Date	Jun/04/2004	Total Interval Cost	\$A	57,841.61
Interval TD Date	Jun/03/2004	Programmed Variance	\$A	57,841.61
Drilling Days	8.00	Total Products Cost	\$A	49,841.61
Rotating / Drilling Hours	131.00 / 121.50	Total Fluids Cost	\$A	0.00
Top of Int. MD/TVD m	664.0 / 664.0	Total Charges Cost	\$A	8,000.00
End of Int. MD/TVD m	1,686.0 / 1,412.9	Total Cementing Cost	\$A	0.00
Footage m	1,022.0	Fluid Cost per Vol unit	\$A/bbl	26.28
Average ROP m/hr	8.4	Fluid Cost / Hole Drilled	\$A/m	56.60
Max. Hole Angle degrees	49.28	Fluid Cost / Vol Drilled	\$A/bbl	118.34
Casing Size in	13.375	Total Fluid Volume	bbl	2,201.00
Casing Shoe MD m	664.0	Vol Fluid / Vol Drilled	bb/bbl	4.50
Casing Length m	664.0	Vol Fluid / Hole Drilled	bb/m	2.15
Bottom Hole Temp. Deg C	65	Fluid Loss / Vol Drilled	bb/bbl	2.90
Max. Fluid Density ppg.	9.80	Fluid Loss / Hole Drilled	bb/m	1.39

**Interval Products and Base Fluids Usage and Cost**

Product Function / Name	Packaging	Drilling Fluid	Total Used	Product Cost
<b>Alkalinity Control</b>				
sodium bicarbonate	25 Kg bag	KCl/Polymer	4.00	\$A 64.16
citric acid	25 Kg bag	KCl/Polymer	4.00	\$A 285.52
potassium hydroxide	20 Kg pail	KCl/Polymer	30.00	\$A 1,822.50
			Total	\$A 2,172.18
<b>Bactericides</b>				
Baracide	25 Kg can	KCl/Polymer	7.00	\$A 1,943.41
			Total	\$A 1,943.41
<b>Filtration Control</b>				
PAC-L	25 Kg bag	KCl/Polymer	50.00	\$A 5,692.50
DEXTRID LTE	50 lb bag	KCl/Polymer	26.00	\$A 846.82
DEXTRID LTE	25 Kg bag	KCl/Polymer	21.00	\$A 752.43
			Total	\$A 7,291.75
<b>Lost Circulation/Bridging Agent</b>				
Circal 60/16	25 Kg bag	KCl/Polymer	48.00	\$A 624.96
Circal Y	25 Kg bag	KCl/Polymer	58.00	\$A 926.84
			Total	\$A 1,551.80
<b>Shale Control</b>				
phpa	25 Kg bag	KCl/Polymer	41.00	\$A 5,013.07
potassium chloride tech	25 Kg sack	KCl/Polymer	847.00	\$A 12,705.00
			Total	\$A 17,718.07
<b>Viscosifier/Suspension Agent</b>				
bentonite	25 Kg bag	KCl/Polymer	0.00	\$A 0.00
BARAZAN D PLUS	25 Kg bag	KCl/Polymer	58.00	\$A 16,061.94
BAROLIFT	15 lb box	KCl/Polymer	3.00	\$A 879.99
			Total	\$A 16,941.93
<b>Weighting Material</b>				
barite	25 Kg bag	KCl/Polymer	26.00	\$A 188.50
			Total	\$A 188.50

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**Interval Summary**

Well: Iona-6

Operator: TXU GAS STORAGE PTY LTD

Interval #	02	Bit Size	12.250 in	Hole Size Maximum	12.250 in
<b>Corrosion Inhibitor</b>					
BARACOR 129	25 Kg can	KCl/Polymer	33.00	\$A	1,883.97
			Total	\$A	1,883.97
<b>Defoamer</b>					
BARA-DEFOAM W300	25 l can	KCl/Polymer	2.00	\$A	150.00
			Total	\$A	150.00
<b>Total Products and Base Fluids Cost</b>				<b>\$A</b>	<b>49,841.61</b>

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## Interval Cost Breakdown

Well : Iona-6

Operator: TXU GAS STORAGE PTY LTD

Interval #	01	From Report Date	20/05/2004	Top of Interval	11.0	m	
Hole Size	17.500	in	To Report Date	25/05/2004	Bottom of Interval	664.0	m
Material	Unit Size		Quantity	Total Cost			
<b>Engineering/Services</b>							
Drilling Fluids Engineer	Day(s)		6.00	\$A	4,800.00		
				Subtotal	\$A	4,800.00	
<b>Prod/Fluids : Cementing</b>							
calcium chloride	25 Kg bag		3.00	\$A	50.34		
				Subtotal	\$A	50.34	
<b>Prod/Fluids : Drilling</b>							
Baracide	25 Kg can		3.00	\$A	832.89		
BARACOR 129	25 Kg can		13.00	\$A	742.17		
BARAZAN D PLUS	25 Kg bag		18.00	\$A	4,984.74		
barite	25 Kg bag		25.00	\$A	181.25		
bentonite	25 Kg bag		2.00	\$A	19.80		
DEXTRID LTE	50 lb bag		14.00	\$A	455.98		
PAC-L	25 Kg bag		14.00	\$A	1,593.90		
phpa	25 Kg bag		9.00	\$A	1,100.43		
potassium chloride tech	25 Kg sack		398.00	\$A	5,970.00		
potassium hydroxide	20 Kg pail		18.00	\$A	1,093.50		
				Subtotal	\$A	16,974.66	
				Interval Cost	\$A	21,825.00	
				Programmed Cost	\$A	0.00	
				Programmed Variance	\$A	21,825.00	

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## Interval Cost Breakdown

Well : Iona-6

Operator: TXU GAS STORAGE PTY LTD

Interval #	02	From Report Date	26/05/2004	Top of Interval	664.0	m	
Hole Size	12.250	in	To Report Date	4/06/2004	Bottom of Interval	1,686.0	m
Material	Unit Size		Quantity		Total Cost		
<b>Engineering/Services</b>							
Drilling Fluids Engineer	Day(s)		10.00		\$A	8,000.00	
					Subtotal	\$A 8,000.00	
<b>Prod/Fluids : Drilling</b>							
Baracide	25 Kg can		7.00		\$A	1,943.41	
BARACOR 129	25 Kg can		33.00		\$A	1,883.97	
BARA-DEFOAM W300	25 l can		2.00		\$A	150.00	
BARAZAN D PLUS	25 Kg bag		58.00		\$A	16,061.94	
barite	25 Kg bag		26.00		\$A	188.50	
BAROLIFT	15 lb box		3.00		\$A	879.99	
Circal 60/16	25 Kg bag		48.00		\$A	624.96	
Circal Y	25 Kg bag		58.00		\$A	926.84	
citric acid	25 Kg bag		4.00		\$A	285.52	
DEXTRID LTE	25 Kg bag		21.00		\$A	752.43	
DEXTRID LTE	50 lb bag		26.00		\$A	846.82	
PAC-L	25 Kg bag		50.00		\$A	5,692.50	
phpa	25 Kg bag		41.00		\$A	5,013.07	
potassium chloride tech	25 Kg sack		847.00		\$A	12,705.00	
potassium hydroxide	20 Kg pail		30.00		\$A	1,822.50	
sodium bicarbonate	25 Kg bag		4.00		\$A	64.16	
					Subtotal	\$A 49,841.61	
					Interval Cost	\$A 57,841.61	
					Programmed Cost	\$A 0.00	
					Programmed Variance	\$A 57,841.61	

Australia  
Otway BasinIona/PPL-2  
VictoriaHalliburton Australia Pty Ltd  
Otway Basin, Victoria

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# Interval Inventory Report

Well : Iona-6  
Operator: TXU GAS STORAGE PTY LTD

Interval #	01	From Report Date	20/05/2004	Top of Interval	11.0	m	
Hole Size	17.500 in	To Report Date	25/05/2004	Bottom of Interval	664.0	m	
Product Name	Unit	Starting	Received	Used	Returned	Ending	Weight lb
BARABUF	50 lb bag						
Baracide	25 Kg can		16.00	3.00		13.00	716.5
BARACOR 100	55 gal drum						
BARACOR 129	25 Kg can		64.00	13.00		51.00	2,810.9
BARA-DEFOAM W300	25 l can		2.00			2.00	96.7
BARAFILM-Petrofree	55 Gal drum		1.00			1.00	367.0
BARAZAN D PLUS	25 Kg bag		80.00	18.00		62.00	3,417.1
barite	25 Kg bag		960.00	25.00		935.00	51,532.5
BAROFIBRE	25 lb bag		56.00			56.00	1,400.0
BAROLIFT	15 lb box		4.00			4.00	60.0
bentonite	25 Kg bag		48.00	2.00		46.00	2,535.3
calcium chloride	25 Kg bag		7.00	3.00		4.00	220.5
Circal 60/16	25 Kg bag		192.00			192.00	10,582.1
Circal Y	25 Kg bag		192.00			192.00	10,582.1
citric acid	25 Kg bag		20.00			20.00	1,102.3
DEXTRID LTE	25 Kg bag		120.00			120.00	6,613.8
DEXTRID LTE	50 lb bag		80.00	14.00		66.00	3,300.0
EZ SPOT	55 gal drum		4.00			4.00	4,220.0
Kwikseal Fine	40 lb bag		40.00			40.00	1,600.0
N-VIS P PLUS	50 lb bag						
Omyacarb 50	25 Kg bag						
PAC-L	25 Kg bag		80.00	14.00		66.00	3,637.6
phpa	25 Kg bag		120.00	9.00		111.00	6,117.8
potassium chloride tech	25 Kg sack		746.00	398.00		348.00	19,180.0
potassium hydroxide	20 Kg pail		63.00	18.00		45.00	1,984.1
soda ash	25 Kg bag		10.00			10.00	551.2
sodium bicarbonate	25 Kg bag		20.00			20.00	1,102.3
<b>Total Weight of Products in Stock, lb</b>							<b>133,729.8</b>
<b>Total Weight of Products in Stock, Metric Tons</b>							<b>60.66</b>

Australia  
Otway Basin

Iona/PPL-2  
Victoria

Halliburton Australia Pty Ltd  
Otway Basin, Victoria



# Interval Inventory Report

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Well: Iona-6  
Operator: TXU GAS STORAGE PTY LTD

Interval #	02	From Report Date	26/05/2004	Top of Interval	664.0	m	
Hole Size	12.250	To Report Date	4/06/2004	Bottom of Interval	1,686.0	m	
Product Name	Unit	Starting	Received	Used	Returned	Ending	Weight lb
BARABUF	50 lb bag		1.00			1.00	50.0
Baracide	25 Kg can	13.00		7.00		6.00	330.7
BARACOR 100	55 gal drum		2.00			2.00	917.4
BARACOR 129	25 Kg can	51.00		33.00		18.00	992.1
BARA-DEFOAM W300	25 l can	2.00	4.00	2.00		4.00	193.5
BARAFILM-Petrofree	55 Gal drum	1.00				1.00	367.0
BARAZAN D PLUS	25 Kg bag	62.00		58.00		4.00	220.5
barite	25 Kg bag	935.00		26.00		909.00	50,099.5
BAROFIBRE	25 lb bag	56.00				56.00	1,400.0
BAROLIFT	15 lb box	4.00		3.00		1.00	15.0
bentonite	25 Kg bag	46.00				46.00	2,535.3
calcium chloride	25 Kg bag	4.00				4.00	220.5
Circal 60/16	25 Kg bag	192.00	10.00	48.00		154.00	8,487.7
Circal Y	25 Kg bag	192.00		58.00		134.00	7,385.4
citric acid	25 Kg bag	20.00		4.00		16.00	881.8
DEXTRID LTE	25 Kg bag	120.00		21.00		99.00	5,456.4
DEXTRID LTE	50 lb bag	66.00		26.00		40.00	2,000.0
EZ SPOT	55 gal drum	4.00				4.00	4,220.0
Kwikseal Fine	40 lb bag	40.00				40.00	1,600.0
N-VIS P PLUS	50 lb bag		5.00			5.00	250.0
Omyacarb 50	25 Kg bag		30.00			30.00	1,653.5
PAC-L	25 Kg bag	66.00		50.00		16.00	881.8
phpa	25 Kg bag	111.00		41.00		70.00	3,858.1
potassium chloride tech	25 Kg sack	348.00	798.00	847.00		299.00	16,479.4
potassium hydroxide	20 Kg pail	45.00		30.00		15.00	661.4
soda ash	25 Kg bag	10.00				10.00	551.2
sodium bicarbonate	25 Kg bag	20.00		4.00		16.00	881.8
<b>Total Weight of Products in Stock, lb</b>						<b>112,590.0</b>	
<b>Total Weight of Products in Stock, Metric Tons</b>						<b>51.07</b>	





# Fluid Volume Record

Well: Iona-6  
Operator: TXU GAS STORAGE PTY LTD

Interval # 01

Rpt #	Rpt Date	ADDITIONS						LOSSES				VOLUMES						
		Initial Volume	Received & Mixed	Base	Water	Barite	Chem	Influx	Daily Total	SCE	Down Hole	Misc	Returned & Mixed	Daily Total	Hole Volume	Active Pits Volume	Reserve Pits Volume	Final Volume
001	05/2004				525.4		15.2		540.6	74.9				74.9	27.7	318.0	120.0	465.7
002	05/2004	465.7	74.0		258.5		4.1		336.6	68.0				68.0	339.3	337.0	58.0	734.3
003	05/2004	734.3	126.0		154.0		6.0		286.0	145.4				145.4	595.8	273.0	6.0	874.8
004	05/2004	874.8	123.3			0.9	0.2		124.4	37.0				37.0	650.2	296.0	16.0	962.2
005	05/2004	962.2					0.1		0.1	28.0				28.0	336.8	316.0	218.0	870.8
006	05/2004	870.8								534.0				534.0	336.8			336.8
Cumulative Volumes:			323.3		937.9	0.9	25.6		1,287.7	353.3				950.8				

Fluid Name: KCI/PPHA/Polymer

Fluid Name: Premix

002	05/2004				76.8		3.2		80.0					74.0				6.0
003	05/2004	6.0			107.4		12.6		120.0					126.0				
Cumulative Volumes:					184.2		15.8		200.0					200.0				

Fluid Name: Recovered Mud

004	05/2004		123.2						123.2					123.3				
Cumulative Volumes:			123.2						123.2					123.3				

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Australia  
Otway Basin

Iona/PPL-2  
Victoria

Halliburton Australia Pty Ltd  
Otway Basin, Victoria



# Fluid Volume Record

Well: Iona-6  
Operator: TXU GAS STORAGE PTY LTD

Interval # 02

Rpt #	Rpt Date	ADDITIONS				LOSSES				VOLUMES								
		Initial Volume	Received & Mixed	Base	Water	Barite	Chem	Influx	Daily Total	SCE	Down Hole	Misc	Returned & Mixed	Daily Total	Hole Volume	Active Pits Volume	Reserve Pits Volume	Final Volume
007	/05/2004	336.8			658.5		21.5		680.0				336.8		305.8	266.2	108.0	680.0
008	/05/2004	680.0	117.0				2.2		119.2	47.1			47.1		375.1	348.0	29.0	752.1
009	/05/2004	752.1	118.0		58.3	1.0	1.6		178.9	59.0			59.0		486.0	275.0	111.0	872.0
010	/05/2004	872.0	92.0				4.0		96.0	52.8			52.8		462.3	358.0	95.0	915.3
011	/05/2004	915.3	83.0				4.5		87.5	52.0	123.4		175.4		492.3	335.0		827.3
012	/05/2004	827.3	292.0				1.3		293.3	59.0	161.4		220.4		571.2	329.0		900.2
013	/06/2004	900.2	382.0				0.5		382.5	98.0	175.5		273.5		674.3	335.0		1,009.3
014	/06/2004	1,009.3	146.0				3.9		149.9	41.0	92.6		133.6		697.6	328.0		1,025.6
015	/06/2004	1,025.6	200.0				13.8		213.8	75.0	44.8		119.8		775.6	309.0	35.0	1,119.6
Cumulative Volumes:		1,430.0			716.8	1.0	53.3		2,201.1	483.9	934.5		1,418.4					

Fluid Name: KCI/PHPA/Polymer

Fluid Name: Premix

008	/05/2004				181.3		8.7		190.0				117.0		73.0			73.0
009	/05/2004	73.0			90.7		4.3		95.0				118.0			50.0		50.0
010	/05/2004	50.0			105.4		4.6		110.0				92.0			68.0		68.0
011	/05/2004	68.0			82.1		2.9		85.0				83.0			70.0		70.0
012	/05/2004	70.0			275.0		10.0		282.0				292.0			63.0		63.0
013	/06/2004	63.0			367.5		12.5		380.0				382.0			61.0		61.0
014	/06/2004	61.0			183.5		6.5		190.0				146.0			105.0		105.0
015	/06/2004	105.0			93.8		1.2		95.0				200.0					
Cumulative Volumes:					1,379.3		50.7		1,430.0				1,430.0					

Australia  
Otway Basin

Iona/PPL-2  
Victoria

Halliburton Australia Pty Ltd  
Otway Basin, Victoria

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**Interval Chemical Concentrations**

Well : Iona-6  
Operator: TXU GAS STORAGE PTY LTD

Interval #	01	From Report Date	20/05/2004	Top of Interval	11.0 m
Hole Size	17.500 in	To Report Date	25/05/2004	Bottom of Interval	664.0 m

Fluid Name: KCl/PHPA/Polymer						
Material	Average	ppb	Minimum	ppb	Maximum	ppb
Baracide	0.13		0.10		0.15	
BARACOR 129	0.55		0.41		0.63	
BARAZAN D PLUS	0.87		0.71		1.22	
barite	1.38		1.38		1.38	
bentonite	0.11		0.11		0.11	
DEXTRID LTE	0.62		0.60		0.69	
PAC-L	0.69		0.66		0.76	
phpa	0.41		0.37		0.51	
potassium chloride tech	16.61		13.20		19.45	
potassium hydroxide	0.56		0.16		0.65	

Fluid Name: Premix						
Material	Average	ppb	Minimum	ppb	Maximum	ppb
Baracide	0.36		0.03		0.69	
BARAZAN D PLUS	1.31		0.54		2.07	
phpa	0.80		0.69		0.91	
potassium chloride tech	44.07		20.67		67.47	
potassium hydroxide	0.47		0.38		0.55	

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**Interval Chemical Concentrations**

Well : Iona-6  
Operator: TXU GAS STORAGE PTY LTD

<b>Interval #</b>	02	<b>From Report Date</b>	26/05/2004	<b>Top of Interval</b>	664.0 m
<b>Hole Size</b>	12.250 in	<b>To Report Date</b>	4/06/2004	<b>Bottom of Interval</b>	1,686.0 m

**Fluid Name:** KCl/PHPA/Polymer

Material	Average ppb	Minimum ppb	Maximum ppb
Baracide	0.20	0.15	0.27
BARACOR 129	0.56	0.16	0.85
BARA-DEFOAM W300	0.03	0.02	0.05
BARAZAN D PLUS	1.49	0.89	1.71
barite	0.96	0.39	1.85
BAROLIFT	0.02	0.01	0.03
Circal 60/16	2.13	2.13	2.13
Circal Y	2.58	2.58	2.58
citric acid	0.25	0.11	0.46
DEXTRID LTE	0.67	0.22	0.84
PAC-L	1.03	0.54	1.67
phpa	0.88	0.28	1.06
potassium chloride tech	32.10	17.62	40.11
potassium hydroxide	0.58	0.26	0.78
sodium bicarbonate	0.25	0.11	0.46

**Fluid Name:** Premix

Material	Average ppb	Minimum ppb	Maximum ppb
Baracide	0.12	0.00	0.36
BARAZAN D PLUS	1.18	0.54	1.73
Circal Y	2.76	2.76	2.76
DEXTRID LTE	0.80	0.11	1.94
PAC-L	1.33	0.33	2.16
phpa	1.09	0.48	1.46
potassium chloride tech	26.70	7.73	67.47
potassium hydroxide	0.13	0.00	0.38

Australia Otway Basin	Iona/PPL-2 Victoria	Halliburton Australia Pty Ltd Otway Basin, Victoria
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# Fluid Property Recap: Water-Based Fluid

Well: Iona-6  
Operator: TXU GAS STORAGE PTY LTD

Date	Depth m	FL Temp Deg C	Density ppg	Fun Visc sec/qt	Rheology @ 48.89C			Filtration			Filtrate Analysis					Retort Analysis			MBT ppb Eq	Rheometer Dial Reading						
					PV	YP	Gels	API ml/30 min	HTHP ml/30 min	Cake API/HTHP 32nd in	Temp Deg C	pH	Pm ml	MF ml	CI mg/l	Total Hard mg/l	Sand % by Vol	Coir Sol % by Vol		LGS % by Vol	Oil % by Vol	Water % by Vol	600	300	200	100
05/20/04	11.0	19	8.55	45	7	11	4	6	19.2	0.15	0.15	0.25	22,000	120	0.05	-0.2	-0.2		98.3	0.5	25	18	15	11	4.0	3.0
05/20/04	23.0	20	8.60	37	5	11	4	5	16.0	0.10	0.03	0.10	21,000	140	0.10	0.2	0.1		98.0	0.5	21	16	14	10	4.0	3.0
05/21/04	164.0	35	8.90	39	9	18	7	9	13.4	0.15	0.03	0.07	18,000	280	0.75	2.5	2.1		96.0	10.0	36	27	22	17	7.0	6.0
05/21/04	328.0	38	9.05	43	11	23	9	11	16.2	0.10	0.03	0.07	19,000	300	0.50	3.4	3.0		95.0	11.0	45	34	29	24	10.0	8.0
05/22/04	465.0	44	9.25	41	10	21	10	13	21.5	0.05	0.03	0.10	17,500	400	0.40	5.0	4.6		93.5	15.0	41	31	27	22	10.0	8.0
05/22/04	579.0	46	9.50	46	12	21	9	13	16.6	0.07	0.03	0.10	22,000	480	0.50	6.7	6.4		91.5	16.0	45	33	28	22	10.0	8.0
05/22/04	630.0	46	9.75	47	12	22	10	14	12.8	0.10	0.04	0.20	22,500	360	0.60	8.2	7.6		90.0	17.5	46	34	28	22	9.0	7.0
05/22/04	664.0	43	9.80	48	13	22	10	15	17.5	0.08	0.03	0.15	20,000	500	1.50	8.9	8.4		89.5	18.0	48	35	28	22	9.0	7.0
05/24/04	664.0	40	9.80	49	13	23	10	15	17.4	0.05	0.02	0.08	21,000	520	1.70	8.8	8.3		89.5	17.5	49	36	29	23	9.0	7.0
05/26/04	664.0	19	8.70	56	7	10	3	5	10.1	0.30	0.02	0.20	25,000	340	0.10	0.9	1.1		97.0	1.0	24	17	14	10	4.0	3.0
05/27/04	721.0	42	8.75	40	6	12	4	8	10.6	0.60	0.15	0.30	24,000	320	0.40	1.0	0.8		97.0	3.0	24	18	14	10	4.0	3.0
05/27/04	807.0	45	8.75	40	7	14	4	8	8.8	0.55	0.15	0.35	25,500	400	0.60	0.8	0.6		97.0	3.5	28	21	17	13	5.0	4.0
05/28/04	904.0	46	8.80	39	8	15	4	6	7.4	0.25	0.05	0.20	22,500	400	0.50	1.6	1.5		96.5	3.5	31	23	18	14	5.0	4.0
05/28/04	976.0	48	8.80	39	7	16	4	7	7.6	0.30	0.05	0.15	23,000	360	0.50	1.6	1.5		96.5	4.0	30	23	18	14	5.0	4.0
05/29/04	988.0	46	8.75	40	8	16	4	7	7.6	0.40	0.08	0.30	22,000	260	0.25	1.1	0.9		97.0	3.5	32	24	19	14	5.0	4.0
05/29/04	1,008.0	46	8.75	41	7	16	4	7	7.4	0.35	0.05	0.25	23,000	280	0.25	1.0	0.9		97.0	4.0	30	23	19	14	5.0	4.0
05/30/04	1,037.0	44	8.85	40	8	17	4	7	7.3	0.40	0.05	0.20	26,500	360	0.40	1.6	1.4		96.2	4.0	33	25	21	15	5.0	4.0
05/30/04	1,050.0	43	8.87	41	9	17	5	6	7.2	0.30	0.04	0.20	28,500	380	0.50	1.6	1.5		96.0	4.0	35	26	22	17	6.0	4.0
05/31/04	1,174.0	49	9.15	42	10	19	5	8	7.0	0.20	0.05	0.20	26,000	360	0.70	3.9	3.7		94.0	6.0	39	29	24	18	6.0	5.0
05/31/04	1,232.0	51	9.20	42	11	21	6	10	6.8	0.15	0.05	0.25	26,500	400	0.60	4.3	4.3		93.5	7.0	43	32	27	20	7.0	5.0
06/01/04	1,420.0	54	9.30	45	12	24	6	13	6.2	0.15	0.05	0.25	26,500	400	0.70	5.0	4.7		93.0	11.0	48	36	30	23	8.0	6.0
06/01/04	1,463.0	55	9.40	45	13	23	6	14	6.3	0.12	0.04	0.20	24,000	420	0.60	5.6	5.0		92.5	12.0	49	36	30	23	8.0	6.0
06/02/04	1,515.0	34	9.35	47	13	20	6	13	6.3	0.15	0.07	0.30	25,500	340	0.50	5.4	5.3		92.5	14.0	46	33	27	20	7.0	5.0
06/02/04	1,515.0	36	9.45	46	13	21	6	15	6.2	0.15	0.05	0.20	26,000	360	0.50	5.9	5.5		92.0	14.0	47	34	27	20	7.0	5.0
06/03/04	1,686.0	56	9.75	49	15	21	6	18	5.7	0.10	0.07	0.35	23,000	520	1.00	8.2	7.5		90.0	16.0	51	36	30	21	7.0	5.0
06/03/04	1,686.0	48	9.80	52	16	24	7	21	5.8	0.15	0.10	0.35	25,000	480	1.10	8.5	8.0		89.5	16.0	56	40	32	23	8.0	6.0
06/04/04	1,686.0	40	9.80	53									0	0		8.5	8.0		89.5	0.0						

Australia  
Otway Basin

Iona/PPL-2  
Victoria

Halliburton Australia Pty Ltd  
Otway Basin, Victoria

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# Fluid Program Exceptions Report

Well : Iona-6  
Operator: TXU GAS STORAGE PTY LTD

Report No	Date	Time	Depth m	Property Name	Units	Actual Value	Exception	Program Min	Program Max
001	05/20/04	09:30	11	Potassium Chloride	% by vol	4.5	High	3.0	4.0
001	05/20/04	09:30	11	Yield Point	lbs/100 ft2	11	Low	25	45
001	05/20/04	22:50	23	Yield Point	lbs/100 ft2	11	Low	25	45
001	05/20/04	22:50	23	pH	-	8.50	Low	8.80	9.50
001	05/20/04	22:50	23	Potassium Chloride	% by vol	4.2	High	3.0	4.0
002	05/21/04	13:00	164	Yield Point	lbs/100 ft2	18	Low	25	45
002	05/21/04	13:00	164	pH	-	8.50	Low	8.80	9.50
002	05/21/04	22:05	328	pH	-	8.50	Low	8.80	9.50
002	05/21/04	22:05	328	Yield Point	lbs/100 ft2	23	Low	25	45
003	05/22/04	10:35	465	Density	ppg	9.25	High	8.50	9.10
003	05/22/04	10:35	465	pH	-	8.30	Low	8.80	9.50
003	05/22/04	10:35	465	Yield Point	lbs/100 ft2	21	Low	25	45
003	05/22/04	20:00	579	Yield Point	lbs/100 ft2	21	Low	25	45
003	05/22/04	20:00	579	Density	ppg	9.50	High	8.50	9.10
003	05/22/04	20:00	579	Potassium Chloride	% by vol	4.1	High	3.0	4.0
003	05/22/04	20:00	579	pH	-	8.30	Low	8.80	9.50
003	05/22/04	23:30	630	Yield Point	lbs/100 ft2	22	Low	25	45
003	05/22/04	23:30	630	Density	ppg	9.75	High	8.50	9.10
003	05/22/04	23:30	630	Potassium Chloride	% by vol	8.50	Low	8.80	9.50
004	05/23/04	14:00	664	pH	-	4.3	High	3.0	4.0
004	05/23/04	14:00	664	Density	ppg	8.50	Low	8.80	9.50
004	05/23/04	14:00	664	PHPA Concentration	ppb	9.80	High	8.50	9.40
005	05/24/04	12:00	664	Density	ppg	0.40	Low	1.50	1.50
005	05/24/04	12:00	664	pH	-	9.80	High	8.50	9.40
005	05/24/04	12:00	664	PHPA Concentration	ppb	8.30	Low	8.80	9.50
005	05/24/04	12:00	664	Potassium Chloride	% by vol	0.30	Low	1.00	1.50
007	05/26/04	01:25	664	pH	-	4.7	High	3.0	4.0
007	05/26/04	01:25	664	PHPA Concentration	ppb	8.30	Low	8.80	9.50
007	05/26/04	01:25	664	Potassium Chloride	% by vol	0.25	Low	1.00	1.50
008	05/27/04	12:45	721	Potassium Chloride	% by vol	4.5	High	3.0	4.0
008	05/27/04	12:45	721	PHPA Concentration	ppb	0.60	Low	1.00	1.50
008	05/27/04	22:25	807	Potassium Chloride	% by vol	4.6	High	3.0	4.0
008	05/27/04	22:25	807	PHPA Concentration	ppb	0.75	Low	1.00	1.50
009	05/28/04	10:45	904	Potassium Chloride	% by vol	4.3	High	3.0	4.0
009	05/28/04	18:20	976	Potassium Chloride	% by vol	4.4	High	3.0	4.0
010	05/29/04	13:05	988	Potassium Chloride	% by vol	4.2	High	3.0	4.0
010	05/29/04	17:15	1,008	Potassium Chloride	% by vol	4.2	High	3.0	4.0
011	05/30/04	12:40	1,037	Potassium Chloride	% by vol	5.0	High	3.0	4.0
011	05/30/04	22:50	1,050	Potassium Chloride	% by vol	5.3	High	3.0	4.0
012	05/31/04	12:20	1,174	Potassium Chloride	% by vol	4.8	High	3.0	4.0
012	05/31/04	22:30	1,232	Potassium Chloride	% by vol	4.8	High	3.0	4.0

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# Fluid Program Exceptions Report

Well : Iona-6  
 Operator: TXU GAS STORAGE PTY LTD

Report No	Date	Time	Depth m	Property Name	Units	Actual Value	Exception	Program Min	Program Max
013	06/01/04	15:00	1,420	Potassium Chloride	% by vol	4.5	High	3.0	4.0
013	06/01/04	22:15	1,463	Potassium Chloride	% by vol	4.4	High	3.0	4.0
014	06/02/04	14:50	1,515	Potassium Chloride	% by vol	4.6	High	3.0	4.0
014	06/02/04	22:00	1,515	Density	ppg	9.45	High	8.50	9.40
014	06/02/04	22:00	1,515	Potassium Chloride	% by vol	4.6	High	3.0	4.0
015	06/03/04	15:20	1,686	Density	ppg	9.75	High	8.50	9.40
015	06/03/04	15:20	1,686	Potassium Chloride	% by vol	4.2	High	3.0	4.0
015	06/03/04	23:20	1,686	Potassium Chloride	% by vol	4.5	High	3.0	4.0
015	06/03/04	23:20	1,686	Density	ppg	9.80	High	8.50	9.40
016	06/04/04	02:00	1,686	Density	ppg	9.80	High	8.50	9.40



Well: Iona-6  
Operator: TXU GAS STORAGE PTY LTD

# Operations Log Recap

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<b>For report #001A on 20/05/2004</b>	
Activity	<b>Operation at depth(m) 32</b> Drill 17 1/2" Hole.
Rig Activity	Rigged up. Spudded and drilled from 11 m to 32 m.
Fluid Treatments	Make Up Water - Fresh. pH - 6.5. Hardness - 20 mg/L. Chlorides - 150 mg/L. Carbonates - Nil. Bicarbonates - 61 mg/L. Baroid on location from 15/5/2004. Received all chemicals sent. Checked all valves on mud tanks for leakages. Fixed leaking valves. Installed 6 x new #50 mesh screens on the two Derrick shakers. Installed 3 x new #110 mesh screens on the DFE shaker.  Daily Volume Mixed : 540.6 bbl. Total Volume Mixed : 540.6 bbl.  Spudded Iona - 6 at 21:30 hrs on 20/5/2004.
<b>For report #002A on 21/05/2004</b>	
Activity	<b>Operation at depth(m) 367</b> Drill 17 1/2" Hole.
Rig Activity	Drilled from 32 m to 366 m with surveys.
Fluid Treatments	Daily Volume Made : 342.6 bbl Total Volume Made : 883.2 bbl Installed 6 x new #84 mesh screens on the Derrick shakers. Desander : Underflow 9.9 ppg @ 1.0 bph. Desilter : Underflow 10.3 ppg @ 2.1 bph. Centrifuge : Overflow 8.95 ppg. Cuttings from shakers channeled onto DFE shaker and into holding tank for disposal. Sand trap occasionally centrifuged back to system. DFE shaker now dressed with #110, #250, #110 mesh screens.
<b>For report #003A on 22/05/2004</b>	
Activity	<b>Operation at depth(m) 636</b> Drill 17 1/2" Hole
Rig Activity	Drilled from 367 m to 636 m with surveys.
Fluid Treatments	Daily Volume Made : 280 bbl Total Volume Made : 1163.2 bbl Desander : Underflow 15.5 ppg @ 1.7 bph. Desilter : Underflow 10.4 ppg @ 4.5 bph. Centrifuge undergoing maintenance. Reduced fluid loss with a combination of PAC-L and DEXTRID. DFE shaker dressed with #110, #250, #110 mesh screens. Mud weight increasing due to being unable to dump and dilute, because of environmental restrictions. At 23:30 hrs started using diluted salvaged mud as requested.
<b>For report #004A on 23/05/2004</b>	
Activity	<b>Operation at depth(m) 664</b> Run 13 3/8" casing.
Rig Activity	Drilled from 636 m to casing point of 664 m (Pebble Point Clay). Circulated clean. Wiper trip to surface. Hole sticky from 559 m (Pember Mudstone) to 327 m (Mepunga Fm, Silty/Clay). Maximum overpull of 50 K lb, constant drag of 15 - 20 K lb. Cleaned out stabiliser. Ran in to bottom (washed from 344 m to 376 m). Circulated clean. Pumped down survey tool. Pulled out of hole. Rigged up and run in 13 3/8" casing.
Fluid Treatments	Daily Volume Made : 124.4 bbl (123.3 bbl of Recovered Mud already charged) Total Volume Used : 1287.6 bbl  Added Recovered Mud from tanker truck to maintain volume as requested.
<b>For report #005A on 24/05/2004</b>	
Activity	<b>Operation at depth(m) 664</b> Cement Casing.WOC.
Rig Activity	Ran in 13 3/8 " casing to bottom. Rigged up and circulated hole clean. Cemented 13 3/8" casing in place (cement to surface). WOC.
Fluid Treatments	Daily Volume Made : Nil Total volume Made : 1287.6  Calcium Chloride used for cementing. Bentonite used for gelling up mud tanks. After cementing, started transporting mud from mud tanks for disposal.
<b>For report #006A on 25/05/2004</b>	
Activity	<b>Operation at depth(m) 664</b> Nipple Up BOP.
Rig Activity	Installed well head and pressure tested. Nipple up BOP.





Well: Iona-6  
Operator: TXU GAS STORAGE PTY LTD

# Operations Log Recap

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<b>For report #006A on 25/05/2004</b>		<b>Operation at depth(m) 664</b>
Fluid Treatments	Daily Volume Made : Nil Total Volume Made : 1287.6	
Dressed both shakers with #50 mesh screens ( 3 x New, 3 x Used). DFE shaker to be fitted with 3 x New #110 mesh screens. Transported 534 bbl of heavy surface mud from mud tanks for disposal. Commenced mixing up new mud.		
<b>For report #007A on 26/05/2004</b>		<b>Operation at depth(m) 664</b>
Activity	Run In Hole	
Rig Activity	Nipped up BOP and pressure tested. Made up and run in with drilling assembly to tag cement stringer at 626 m.	
Fluid Treatments	Daily Volume Made :680 bbl Total Volume Made :680 bbl	
Mixed up 680 bbl of new mud. New mud has a PHPA content of 0.25 ppb to minimise losses during displacement. Pretreated fluid with Citric Acid / Soda Bicarb before drilling cement.  While running in hole, returns of old mud lined up to slug pit and pumped into haulage truck for disposal.		
<b>For report #008A on 27/05/2004</b>		<b>Operation at depth(m) 816</b>
Activity	Drill 12 1/4"Hole	
Rig Activity	Tagged stringer at 626 m. Rigged up circulating head. Displaced hole to new mud. Slipped and cut line. Washed and drilled cement to 664 m. Drilled 5 m of new hole to 669 m, circulated clean and carried out FIT test to 10.5 ppg EMW. Ran Gyro Survey. Drill / steered from 669 m to 816 m (Paaratte Sand).	
Fluid Treatments	Daily Volume Made : 192.2 bbl Total Volume Made : 872.2 bbl	
Desander Underflow : 16.4 ppg @ 1.2 bph Desilter Underflow : 13.6 ppg @ 1.1 bph Centrifuge Overflow : 8.75 ppg At 626 m displaced hole with new KCl/PHPA/Polymer mud. Old mud from hole (336.8 bbl) pumped to haulage truck and storage tanker for disposal. After displacement, commenced trickling in additional PHPA.		
<b>For report #009A on 28/05/2004</b>		<b>Operation at depth(m) 976</b>
Activity	Tripping.	
Rig Activity	Drilled / steered from 816 m to 976 m (Paaratte Sand). Pumped 30 bbl of Barolift sweep. Tripped out. Pressure tested BOP.	
Fluid Treatments	Daily Volume Made : 155.9 bbl Total Volume Made : 1028.1 bbl	
Installed 1 x new #84 mesh screen. Desander Underflow : 16.0 ppg @ 0.9 bph. Desilter Underflow : 12.6 ppg @ 2.2 bph. Centrifuge Overflow : 8.75 ppg. Before tripping, pumped 30 bbl of BAROLIFT sweep (0.2 ppb). No noticeable increase of returns.		
<b>For report #010A on 29/05/2004</b>		<b>Operation at depth(m) 1008</b>
Activity	Drill. Trip.	
Rig Activity	Pressure tested pipe rams. Made up new bit, changed bend on motor, and changed stabiliser. Ran in hole, washed / reamed near bottom. Drilled through Paaratte Sand from 976 m to 1008 m. Circulated clean. Tripped for BHA change. Changed stabiliser.	
Fluid Treatments	Daily Volume Made : 114 bbl Total Volume Made : 1142.1 bbl	
Desander Underflow : 15.6 ppg @ 1.2 bph. Desilter Underflow : 12.8 ppg @ 2.8 bph. Centrifuge Overflow : 8.7 ppg. Used Barite slug for previous trip, KCl slug for present trip. For 12 1/4" interval, continuously centrifuging sand trap while drilling. During trips centrifuge run in settling pit.		
<b>For report #011A on 30/05/2004</b>		<b>Operation at depth(m) 1074</b>
Activity	Drill. Trip. Drill.	



Well: Iona-6  
Operator: TXU GAS STORAGE PTY LTD

# Operations Log Recap

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<b>For report #011A on 30/05/2004</b>	<b>Operation at depth(m) 1074</b>
Rig Activity	Ran in to 987 m. Washed to bottom of 1008 m (hole in good condition). Drilled / steered from 1008 m to 1037 m. Circulated clean. Tripped out. Changed bit, stabiliser and angle on lobe. Ran in to 1006 m and washed to 1037 m (hole stable). Drilled / steered from 1037 m to 1074 m (approaching silt).
Fluid Treatments	Daily Volume Made : 89.4 bbl Total Volume Made : 1231.5 bbl  Desander Underflow : 12.5 ppg @ 1.0 bph. Desilter Underflow : 11.0 ppg @ 2.8 bph. Centrifuge Overflow : 8.75 ppg. Used KCl slug for present trip. Increase of KCl Content due to slug.
<b>For report #012A on 31/05/2004</b>	<b>Operation at depth(m) 1247</b>
Activity	Drilling
Rig Activity	Drilled / steered from 1074 m to 1247 m.
Fluid Treatments	Daily Volume Made : 286.3 bbl Total Volume Made : 1517.8 bbl  Used 3 x New #84 mesh and 2 x New #50 mesh screens.  Desander Underflow : 12.9 ppg @ 0.6 bph. Desilter Underflow : 10.9 ppg @ 1.9 bph. Centrifuge Overflow : 9.05 ppg. Mud weight increased in the Skull Creek clays.
<b>For report #013A on 1/06/2004</b>	<b>Operation at depth(m) 1473</b>
Activity	Drilling
Rig Activity	Drilled / steered from 1247 m to 1473 m. (Using reduced pump rates to drill from 1473 m).
Fluid Treatments	Daily Volume Made : 380.5 bbl Total Volume Made : 1898.3 bbl  Used 3 x New #110 mesh screens. Desander Underflow : 12.6 ppg @ 0.8 bph. Desilter Underflow : 12.2 ppg @ 3.3 bph. Centrifuge Overflow : 9.05 ppg. Increase of mud weight and MBT in the clays of the Skull Creek and Belfast Fm.
<b>For report #014A on 2/06/2004</b>	<b>Operation at depth(m) 1515</b>
Activity	Bit Trip. Run In Hole.
Rig Activity	Drilled from 1473 m to 1515 m in Belfast Mudstone. (High torque and pump pressure). Circulated clean. Tripped out. Laid out directional assembly. Ran in with new bit and stiffer BHA to 1001 m. Ream from 1001 m to 1336 m.
Fluid Treatments	Daily Volume Made : 193.9 bbl Total Volume Made : 2092.2 bbl  Desander Underflow : 13.0 ppg @ 0.7 bph. Desilter Underflow : 12.1 ppg @ 2.5 bph. Centrifuge Overflow : 9.05 ppg.  Used KCl for slug. Increase of mud weight while reaming to bottom with stiffer BHA.
<b>For report #015A on 3/06/2004</b>	<b>Operation at depth(m) 1686</b>
Activity	Total Depth. Pull Out To Log.
Rig Activity	Continued reaming from 1336 m to 1515 m. Drilled from 1515 m to Total Depth of 1686 m in the Eumeralla Fm (13:30 hrs on 3/6/2004). Circulated and pumped 50 bbl of BAROLIFT pill. Made a 25 stand wiper trip. Ran in to bottom (working tight section from 1540 to 1650 m). Circulated clean with 50 bbl of BAROLIFT pill. Pumped Gyro tool. Pulled out to log.



**Bit Record**

Well: Iona-6  
Operator: TXU GAS STORAGE PTY LTD

Run No	Bit No	Bit Size in	Bit Manufacturer	Bit Type	Bit Style	IADC Code	Serial No	Jet or TFA	Depth Out m	Run Length m	ROP m/hr	WOB lb	Bit RPM	Pump Pres psi	Pump Output gpm	Fluid Type	Fluid Density ppg	Dev Angle	Bit Grading	Reason Pulled
1	1	17.500	SEC	XT1SC	MT	115	753075	1x18 3x16	664.0	653.0	20.4 20,000.0	110	1,100.0	727	KCl/Polymer	9.80	0.41	2,1,WT,A,E,O,N O,TD	TD - Total/Casing Depth	
2	2	12.250	SEC-DBS	EBXS02S	IN	417	10615071	4x18	976.0	312.0	13.1 50,000.0	173	1,350.0	751	KCl/Polymer	8.80	45.30	1,2,WT,A,E,I,N O,BHA	Bit and BHA Change	
3	3	12.250	DBS	FM2565	FC	M423	7970231	5x18	1,008.0	32.0	6.6 22,000.0	183	1,450.0	751	KCl/Polymer	8.80	44.80	1,1,WT,A,X,I,N O,BHA	BHA - Change BHA	
4	3	12.250	DBS	FM2565	FC	M423	7970231	5x18	1,037.0	29.0	4.4 15,000.0	164	1,520.0	696	KCl/Polymer	8.90	43.00	1,1,WT,A,X,I,N BHA	Bit and BHA Change	
5	4	12.250	SEC-DBS	EBXS02S	IN	417	10615073	3x18 1x20	1,515.0	478.0	12.7 25,000.0	169	1,850.0	727	KCl/Polymer	9.40	48.90	2,2,WT,A,F,1,N O,TQ	BHA - Change BHA	
6	5	12.250	DBS	FM2565	FC	M423	7970231	5x18	1,686.0	171.0	24.5 20,000.0	70	1,575.0	727	KCl/Polymer	9.80	48.70	Not Available	TD - Total/Casing Depth	

Australia  
Oway Basin

Iona|PPL-2  
Victoria

Halliburton Australia Pty Ltd  
Oway Basin, Victoria



# Deviation Actual

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Well : Iona-6

Operator: TXU GAS STORAGE PTY LTD

Survey Date	MD m	TVD m	Angle	Direction	Horiz Displacement m
21/05/2004	96.0	96.0	0.50	0.0	
21/05/2004	196.0	196.0	0.75	0.0	
22/05/2004	355.0	355.0	0.25	0.0	
23/05/2004	509.0	509.0	0.75	0.0	
23/05/2004	663.9	663.9	0.41	0.0	
28/05/2004	677.9	677.8	2.28	207.0	4.6
28/05/2004	699.3	699.2	4.61	242.9	4.8
28/05/2004	718.9	718.7	8.36	268.3	6.3
28/05/2004	747.4	746.8	11.12	296.2	10.6
28/05/2004	776.4	775.1	13.86	310.5	16.9
28/05/2004	804.7	802.3	18.70	304.5	24.8
29/05/2004	833.6	829.1	25.06	301.5	35.5
29/05/2004	862.4	854.5	31.08	303.1	49.1
29/05/2004	891.7	878.8	36.40	305.8	65.3
29/05/2004	920.8	901.2	42.86	304.7	83.9
29/05/2004	949.5	921.9	45.29	304.4	103.9
29/05/2004	978.6	942.4	44.85	304.8	124.5
1/06/2004	1,006.4	962.3	43.69	304.8	143.9
1/06/2004	1,066.1	1,004.4	47.95	306.1	186.2
1/06/2004	1,114.6	1,036.9	49.12	305.7	222.3
1/06/2004	1,172.9	1,075.4	47.77	307.1	265.9
2/06/2004	1,211.8	1,101.4	48.21	305.0	294.9
2/06/2004	1,260.2	1,133.1	49.28	305.7	331.4
2/06/2004	1,356.8	1,196.1	48.97	306.8	404.7
2/06/2004	1,452.4	1,258.9	48.89	309.0	476.6
3/06/2004	1,471.7	1,271.6	48.76	309.3	491.1

Australia  
Otway Basin

Iona/PPL-2  
Victoria

Halliburton Australia Pty Ltd  
Otway Basin, Victoria

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# DAILY MUD REPORTS



Daily Drilling Fluid Report

Report No 001

Baroid, a Halliburton Company

Date	20/05/2004	Depth	32.0 m
Spud Date	20/05/2004	Rig Activity	Drill 17 1/2" Hole.

Operator TXU GAS STORAGE PTY LTD	Report For Peter Dwyer / Andy Urdevics	Well Name Iona-6
Contractor Century Drilling Ltd	Report For Scott Bucknell/Neville Scutcheon	Rig Name 18
Country Australia	State/Province/Region Victoria	County/Geographic Area Otway Basin
Field or Block Iona/PPL-2		
<b>Bit Information</b>		
Bit Size	17.500 in	Drill St ring
Make/Type	SEC / XT1SC	ITEM
Jets	1x18 3x16	Drill Collar
TFA	0.838 sq-in	OD
Jets Velocity	52.9 m/sec	ID
Jet Impact Force	350.6 lbf	Length
HHSI	0.25 hhp/in2	OD
Pres Drop @ Bit	230.9 psi	Casing
Bit Depth	32.0 m	Set
ECD @ Shoe	8.63 ppq	MD
ECD @ Bit	8.63 ppq	
<b>Circulation/Hydraulics Data</b>		
Model	Nat 8-P-80	Nat 8-P-80
Bore in	6.000	6.000
Stroke in	8.500	8.500
Eff (%)	97	97
bbl/strk	.072	.072
SPM	50	100
gpm	151	303
Total gpm	454	AV, Riser
Total Circ Time	32.0	AV, DP
BU Time, min	2.5	AV, DC
Total Strokes	4,796	BU Stroke
		Circ Pressure psi
		Tot Prs Loss psi
		Pres Drop DP psi
		Pres Drop An psi

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Mixing - 1	Suction - 1			1 2 3 4		<b>Fluid Type: KCI/PHPA/Polymer</b>
Time	09:30	22:50					Baroid on location from 15/5/2004.
Depth m	11.0	23.0					Received all chemicals sent.
FL Temp Deg C	19	20					Checked all valves on mud tanks for leakages. Fixed leaking valves.
Density ppq @ Deg C	8.55 @ 19	8.60 @ 20				8.50   9.10	Installed 6 x new #50 mesh screens on the two Derrick shakers. Installed 3 x new #110 mesh screens on the DFE shaker.
FV @ Deg C	45 @ 19	37 @ 20					Daily Volume Mixed : 540.6 bbl.
PV @ Deg C	7 @ 49	5 @ 49					Total Volume Mixed : 540.6 bbl.
YP lbs/100 ft2	11	11			* *	25   45	Spudded Iona - 6 at 21:30 hrs on 20/5/2004.
Gals lbs/100 ft2	4/6/0	4/5/0					
600/300	25.0/18.0	21.0/16.0					
200/100	15.0/11.0	14.0/10.0					
6/3	4.0/3.0	4.0/3.0					
API Filtr ml/30 min	19.2	16.0			* *	6.0	
HTHP ml/30 min @Deg C							
Cake 32nd in	1.0/0.0	1.0/0.0					
Corr Solids % by vol	-0.2	0.2					
NAP/Water % by vol	0.0/98.3	0.0/98.0					
Sand % by vol	0.05	0.10					
MBT ppb Eq.	0.5	0.5				8.80   9.50	
pH	9.50	8.50			*		
Alk Mud (Pm)	0.15	0.10					
Alk Filtr (P/Mf)	0.15/0.25	0.03/0.10					
Chlorides mg/l	22,000	21,000					
Hard Ca mg/l	120	140					
LGS/HGS %	-0.2/0.0	0.1/0.1					
LGS/HGS ppb	-1.78/-0.04	1.08/1.05					
ASG	2.621	3.199					
PHPA ppb	0.50	0.50					
Potassium % by vol	4.5	4.2			* *	3.0   4.0	
Sulfite residual mg/l	20	50					

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	Drilling
BARAZAN D PLUS	25 Kg bag		80	12	68	\$A 3,323.16	FLC 58	2.50
potassium chloride tech	25 Kg sack		746	156	590	\$A 2,340.00	FLC 58	20.0
phpa	25 Kg bag		120	5	115	\$A 611.35	Hydrocyclones	20.0
Baracide	25 Kg can		16	1	15	\$A 277.63	Cones	2.0
BARACOR 129	25 Kg can		64	4	60	\$A 228.36	Harrisburg Desand	2.0
potassium hydroxide	20 Kg pail		63	2	61	\$A 121.50	Harrisburg Desilter	1.0
BARA-DEFOAM W300	25 l can		2		2		Centrifuge	1.0
BARAFILM-Petrofree	55 Gal drum		1		1		DFE600	1.0
barite	25 Kg bag		960		960		Speed	21.50
BAROFIBRE	25 lb bag		56		56		Feed Rate	24.00
BAROLIFT	15 lb box		4		4			2.50
bentonite	25 Kg bag		48		48			8.4
calcium chloride	25 Kg bag		7		7			
Circal 60/16	25 Kg bag		192		192			
Circal Y	25 Kg bag		192		192			
citric acid	25 Kg bag		20		20			
DEXTRID LTE	25 Kg bag		120		120			
DEXTRID LTE	50 lb bag		80		80			
EZ SPOT	55 gal drum		4		4			
Kwikseal Fine	40 lb bag		40		40			
PAC-L	25 Kg bag		80		80			
soda ash	25 Kg bag		10		10			
sodium bicarbonate	25 Kg bag		20		20			

Daily Products Cost	\$A 6,902.00	Total Daily Cost	\$A 7,702.00
Cumulative Products Cost	\$A 6,902.00	Total Cumulative Cost	\$A 7,702.00
<b>Baroid Representatives: Tun Aung</b>			
Office	90 Talinga Rd	Melbourne	Tel 61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	via Toora	Victoria Tel 61-3-56-881-445

Fluid Volume Breakdown KCI/PHPA/Polymer		Deviation Information	
Active	bbl	Losses	bbl
Annulus	26.8	Dumped	
Pipe Cap	1.0	Transferred	
Active Pits	318.0	SC Equip	-74.9
Total Hole	27.7	Evaporation	
Total Circ	345.7	Trips	
Reserve	120.0	Other	
Prev Vol		Chemicals	15.2
Net Chg	465.7	Total Surface	-74.9
Total Vol	465.7	Downhole	
		Total Losses	-74.9

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



# Daily Drilling Fluid Report

# 908148 152

Report No 002

Baroid, a Halliburton Company

Date	21/05/2004	Depth	367.0 m
Spud Date	20/05/2004	Rig Activity	Drill 17 1/2" Hole.

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia		State/Province/Region Victoria		County/Geographic Area Otway Basin	
Field or Block Iona/PPL-2					
<b>Bit Information</b>		<b>Drill String</b>		<b>Circulation/Hydraulics Data</b>	
Bit Size	17.500 in	ITEM	OD	ID	Length
Make/Type	SRB / XT1SC	Drill Pipe	5.000	4.276	168.0
Jets	1x18 3x16	Drill Pipe	5.000	3.000	141.0
TFA	0.838 sq-in	Drill Collar	8.000	3.000	9.2
Jets Velocity	84.6 m/sec	Drill Collar	8.000	3.063	48.8
Jet Impact Force	944.4 lbf				
HHSI	1.10 hhp/in2				
Pres Drop @ Bit	622.1 psi				
Bit Depth	367.0 m	Open Hole	17.500		356.0
ECD @ Shoe	9.10 ppg				
ECD @ Bit	9.12 ppg				
		OD	Casing	MD	
		in	Set	m	
		20.000	@	11.0	
		Model		Circulation/Hydraulics Data	
		Bore in		Nat 8-P-80	
		Stroke in		6.000	
		Eff (%)		8.500	
		bbi/stk		97	
		SPM		.072	
		gpm		120	
		Total gpm		727	
		Total Circ Time		39.1	
		BU Time, min		18.7	
		Total Strokes		9,382	
		AV, Riser		Circ Pressure psi	
		AV, DP		15.9	
		AV, DC		22.4	
		BU Stroke		4,493	
		Pres Drop An		psi	
				965.0	
				1,085.4	
				287.8	
				4.4	

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Suction - 1			1 2 3 4		<b>Fluid Type: KCI/PHPA/Polymer</b> Daily Volume Made : 342.6 bbl Total Volume Made : 883.2 bbl Installed 6 x new #84 mesh screens on the Derrick shakers. Desander : Underflow 9.9 ppg @ 1.0 bph. Desilter : Underflow 10.3 ppg @ 2.1 bph. Centrifuge : Overflow 8.95 ppg. Cuttings from shakers channeled onto DFE shaker and into holding tank for disposal. Sand trap occasionally centrifuged back to system. DFE shaker now dressed with #110, #250, #110 mesh screens.
Time	13:00	22:05					
Depth m	164.0	328.0					
FL Temp Deg C	35	38					
Density ppg @ Deg C	8.90 @ 35	9.05 @ 38				8.50   9.10	
FV @ Deg C	39 @ 35	43 @ 38					
PV @ Deg C	9 @ 49	11 @ 49					
YP lbs/100 ft2	18	23				25   45	
Gels lbs/100 ft2	7/9/0	9/11/0					
600/300	36.0/27.0	45.0/34.0					
200/100	22.0/17.0	29.0/24.0					
6/3	7.0/6.0	10.0/8.0					
API Filtr ml/30 min	13.4	16.2				6.0	
HTFP ml/30 min @ Deg C							
Cake 32nd in	1.0/0.0	1.0/0.0					
Corr Solids % by vol	2.5	3.4					
NAP/Water % by vol	0.0/96.0	0.0/95.0					
Sand % by vol	0.75	0.50					
MBT ppb Eq.	10.0	11.0					
pH	8.50	8.50				8.80   9.50	
Alk Mud (Pm)	0.15	0.10					
Alk Filtr (P/MF)	0.03/0.07	0.03/0.07					
Chlorides mg/l	18,000	19,000					
Hard Ca mg/l	280	300					
LGS/HGS %	2.1/0.3	3.0/0.4					
LGS/HGS ppb	19.59/4.66	27.03/6.43					
ASG	2.805	2.805					
PHPA ppb	0.50	0.40					
Potassium % by vol	3.4	3.5				3.0   4.0	
Sulfite residual mg/l	40	30					

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	22.00
BARAZAN D PLUS	25 Kg bag	68		5	63	\$A 1,384.65	Screens	
potassium chloride tech	25 Kg sack	590		60	530	\$A 900.00	FLC 58	24.0
potassium hydroxide	20 Kg pail	61		9	52	\$A 546.75	FLC 58	24.0
BARACOR 129	25 Kg can	60		5	55	\$A 285.45	Hydrocyclones	
Baracide	25 Kg can	15		1	14	\$A 277.63	Cones	
phpa	25 Kg bag	115		2	113	\$A 244.54	Screens	
BARA-DEFOAM W300	25 l can	2			2		Hrs	
BARAFILM-Petrofree	55 Gal drum	1			1		Harrisbura Desand	23.0
barite	25 Kg bag	960			960		Harrisbura Desilter	23.0
BAROFIBRE	25 lb bag	56			56		Centrifuge	24.0
BAROLIFT	15 lb box	4			4		Speed	
bentonite	25 Kg bag	48			48		Feed Rate	
calcium chloride	25 Kg bag	7			7		Hrs	
Circal 60/16	25 Kg bag	192			192		DFE600	24.0
Circal Y	25 Kg bag	192			192			
citric acid	25 Kg bag	20			20			
DEXTRID LTE	25 Kg bag	120			120			
DEXTRID LTE	50 lb bag	80			80			
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
PAC-L	25 Kg bag	80			80			
soda ash	25 Kg bag	10			10			
sodium bicarbonate	25 Kg bag	20			20			

Daily Products Cost	\$A	3,639.02	Total Daily Cost	\$A	4,439.02
Cumulative Products Cost	\$A	10,541.02	Total Cumulative Cost	\$A	12,141.02
Baroid Representatives: Tun Aung					
Office		90 Talinga Rd	Melbourne	Tel 61-03-9581-7555	
Warehouse		c/o of Esso Australia Ltd	via Toora	Victoria	Tel 61-3-56-881-445

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



Daily Drilling Fluid Report

908148 153

Report No 003

Baroid, a Halliburton Company

Date	22/05/2004	Depth	636.0 m
Spud Date	20/05/2004	Rig Activity	Drill 17 1/2" Hole

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia		State/Province/Region Victoria		County/Geographic Area Otway Basin	
Field or Block Iona/PPL-2					
<b>Bit Information</b>		<b>Drill String</b>		<b>Circulation/Hydraulics Data</b>	
Bit Size	17.500 in	ITEM	OD	ID	Length
Make/Type	SRB / XT15C	Drill Pipe	5.000	4.276	437.0
Jets	1x18 3x16	Drill Pipe	5.000	3.000	141.0
TFA	0.838 sq-in	Drill Collar	8.000	3.000	9.2
Jets Velocity	84.6 m/sec	Drill Collar	8.000	3.063	48.8
Jet Impact Force	1,017.5 lbf			OD	Casing
HHSI	1.18 hhp/in2			in	Set
Pres Drop @ Bit	670.2 psi			m	m
Bit Depth	636.0 m			Model	
ECD @ Shoe	9.80 ppg			Nat 8-P-80	
ECD @ Bit	9.81 ppg			Bore in	
				Stroke in	
				Eff (%)	
				bbl/strk	
				SPM	
				gpm	
				Total gpm	
				Total Circ Time	
				BU Time, min	
				Total Strokes	

Properties	1	2	3 Hyd	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Suction - 1	Suction - 1		1 2 3 4		Fluid Type: KCI/PHPA/Polymer
Time	10:35	20:00	23:30				Daily Volume Made : 280 bbl
Depth m	465.0	579.0	630.0				Total Volume Made : 1163.2 bbl
FL Temp Deg C	44	46	46				Desander : Underflow 15.5 ppg @ 1.7 bph.
Density ppg @ Deg C	9.25 @ 44	9.50 @ 46	9.75 @ 46		*	8.50   9.10	Desilter : Underflow 10.4 ppg @ 4.5 bph.
FV @ Deg C	41 @ 44	46 @ 46	47 @ 46				Centrifuge undergoing maintenance.
PV @ Deg C	10 @ 49	12 @ 49	12 @ 49				Reduced fluid loss with a combination of
YP lbs/100 ft2	21	21	22		*	25   45	PAC-L and DEXTRID.
Gels lbs/100 ft2	10/13/0	9/13/0	10/14/0				DFE shaker dressed with #110, #250, #110
600/300	41.0/31.0	45.0/33.0	46.0/34.0				mesh screens.
200/100	27.0/22.0	28.0/22.0	28.0/22.0				Mud weight increasing due to being unable to
63	10.0/8.0	10.0/8.0	9.0/7.0		*		dump and dilute, because of environmental
API Filtr ml/30 min	21.5	16.6	12.8		*	6.0	restrictions. At 23:30 hrs started using diluted
HTHP ml/30 min @ Deg C							salvaged mud as requested.
Cake 32nd in	1.0/0.0	1.0/0.0	1.0/0.0				<b>Rig Activity</b>
Corr Solids % by vol	5.0	6.7	8.2				Drilled from 367 m to 636 m with surveys.
NAP/Water % by vol	0.0/93.5	0.0/91.5	0.0/90.0				
Sand % by vol	0.40	0.50	0.60				
MBT ppb Eq.	15.0	16.0	17.5				
pH	8.30	8.30	8.50		*	8.80   9.50	
Alk Mud (Pm)	0.05	0.07	0.10				
Alk Filtr (P/Mf)	0.03/0.10	0.03/0.10	0.04/0.20				
Chlorides mg/l	17,500	22,000	22,500				
Hard Ca mg/l	400	480	360				
LGS/HGS %	4.6/0.4	6.4/0.3	7.6/0.7				
LGS/HGS ppb	42.01/6.39	58.61/4.43	68.83/9.88				
ASG	2.738	2.672	2.731				
PHPA ppb	0.40	0.40	0.40				
Potassium % by vol	3.3	4.1	4.3		*	3.0   4.0	
Sulfite residual mg/l	20	30	40				

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	
potassium chloride tech	25 Kg sack	530		182	348	\$A 2,730.00	Screens	Hrs
PAC-L	25 Kg bag	80		14	66	\$A 1,593.90	FLC 58	24.0
DEXTRID LTE	25 Kg bag	120			120		FLC 58	24.0
DEXTRID LTE	50 lb bag	80		14	66	\$A 455.98	Hydrocyclones	Hrs
potassium hydroxide	20 Kg pail	52		5	47	\$A 303.75	Harrisburg Desand	24.0
Baracide	25 Kg can	14		1	13	\$A 277.63	Harrisburg Desilter	23.0
BARAZAN D PLUS	25 Kg bag	63		1	62	\$A 276.93	Centrifuge	Hrs
phpa	25 Kg bag	113		2	111	\$A 244.54	DFE600	13.0
BARACOR 129	25 Kg can	55		4	51	\$A 228.36	Speed	
BARA-DEFOAM W300	25 l can	2			2		Feed Rate	
BARAFILM-Petrofree	55 Gal drum	1			1			
barite	25 Kg bag	960			960			
BAROFIBRE	25 lb bag	56			56			
BAROLIFT	15 lb box	4			4			
bentonite	25 Kg bag	48			48			
calcium chloride	25 Kg bag	7			7			
Circal 60/16	25 Kg bag	192			192			
Circal Y	25 Kg bag	192			192			
citric acid	25 Kg bag	20			20			
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
soda ash	25 Kg bag	10			10			
sodium bicarbonate	25 Kg bag	20			20			

Daily Products Cost	\$A	6,111.09	Total Daily Cost	\$A	6,911.09
Cumulative Products Cost	\$A	16,652.11	Total Cumulative Cost	\$A	19,052.11
Baroid Representatives:	Tun Aung				
Office	90 Talinga Rd		Melbourne	Tel 61-03-9581-7555	
Warehouse	c/o of Esso Australia Ltd		via Toora	Victoria	Tel 61-3-56-881-445

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Daily Drilling Fluid Report

Report No 004

Baroid, a Halliburton Company

Date	23/05/2004	Depth	664.0 m
Spud Date	20/05/2004	Rig Activity	Run 13 3/8" casing.

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia		State/Province/Region Victoria		County/Geographic Area Otway Basin	
Field or Block Iona/PPL-2					
Bit Information		Drill String	OD	ID	Length
Make/Type /		ITEM	in	in	m
Jets					
TFA					
Jets Velocity					
Jet Impact Force					
HHSI					
Pres Drop @ Bit					
Bit Depth					
ECD @ Shoe					
ECD @ Bit					
		Open Hole	17.500		653.0
		OD		Casing	MD
		in		Set	m
		20.000		@	11.0
		Circulation/Hydraulics Data			
		Model		Nat 8-P-80	
		Bore in		6.000	
		Stroke in		8.500	
		Eff (%)		97	
		bbl/strk		.072	
		SPM			
		gpm			
		Total gpm		AV, Riser	
		Total Circ Time		AV, DP	
		BU Time, min		AV, DC	
		Total Strokes		BU Stroke	
				Circ Pressure psi	
				Tot Prs Loss psi	
				Pres Drop DP psi	
				Pres Drop An psi	

Properties	1 Hyd	2	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1				1 2 3 4		Fluid Type: KCI/PHPA/Polymer
Time	14:00						Daily Volume Made : 124.4 bbl (123.3 bbl of Recovered Mud already charged)
Depth m	664.0						Total Volume Used : 1287.6 bbl
FL Temp Deg C	43						Added Recovered Mud from tanker truck to maintain volume as requested.
Density ppg @ Deg C	9.80 @ 43				*	8.50   9.40	
FV @ Deg C	48 @ 43						
FV @ Deg C	13 @ 49						
YP lbs/100 ft2	22				*		
Gels lbs/100 ft2	107/15/0						
600/300	48.0/35.0						
200/100	28.0/22.0						
6/3	9.0/7.0						
API Filtr ml/30 min	17.5				*	6.0	
HTHP ml/30 min @ Deg C							
Cake 32nd in	1.0/0.0						
Corr Solids % by vol	8.9						
NAP/Water % by vol	0.0/89.5						
Sand % by vol	1.50						
MBT ppb Eq.	18.0						
pH	8.50				*	8.80   9.50	
Alk Mud (Fm)	0.08						
Alk Filtr (P/Mf)	0.03/0.15						
Chlorides mg/l	20,000						
Hard Ca mg/l	500						
LGS/HGS %	8.4/0.5						
LGS/HGS ppb	76.34/8.02						
ASG	2.698						
PHPA ppb	0.40						
Potassium % by vol	3.8					3.0   4.0	
Sulfite residual mg/l	30						

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	Drilling 3.00
barite	25 Kg bag	960		25	935	\$A 181.25	Screens	Circulating 4.50
potassium hydroxide	20 Kg pail	47		2	45	\$A 121.50	FLC 58	Trips 8.50
Baracide	25 Kg can	13			13		FLC 58	Rig
BARACOR 129	25 Kg can	51			51		Hydrocyclones	Surveys 0.50
BARA-DEFOAM W300	25 l can	2			2		Cones	Fishing
BARAFILM-Petrofree	55 Gal drum	1			1		Screens	Run Casing 4.00
BARAZAN D PLUS	25 Kg bag	62			62		Harrisburg Desand	Coring
BAROFIBRE	25 lb bag	56			56		2 10	Reaming 0.50
BAROLIFT	15 lb box	4			4		Harrisburg Desilter	Testing
bentonite	25 Kg bag	48			48		12 5	Logging
calcium chloride	25 Kg bag	7			7		Centrifuge	Dir Work
Circal 60/16	25 Kg bag	192			192		Speed	Repair
Circal Y	25 Kg bag	192			192		Feed Rate	Other 3.00
citric acid	25 Kg bag	20			20		Hrs	Total 24.00
DEXTRID LTE	25 Kg bag	120			120			Rotating 3.50
DEXTRID LTE	50 lb bag	66			66			ROP 9.3
EZ SPOT	55 gal drum	4			4			Dil Rate
Kwikseal Fine	40 lb bag	40			40			
PAC-L	25 Kg bag	66			66			
phpa	25 Kg bag	111			111			
potassium chloride tech	25 Kg sack	348			348			
soda ash	25 Kg bag	10			10			
sodium bicarbonate	25 Kg bag	20			20			

Daily Products Cost	\$A	302.75	Total Daily Cost	\$A	1,102.75
Cumulative Products Cost	\$A	16,954.86	Total Cumulative Cost	\$A	20,154.86
Baroid Representatives: Tun Aung					
Office 90 Talinga Rd			Melbourne Tel 61-03-9581-7555		
Warehouse c/o of Esso Australia Ltd			via Toora Victoria Tel 61-3-56-881-445		

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# Daily Drilling Fluid Report

# 908148 155

Report No 005

Baroid, a Halliburton Company

Date	24/05/2004	Depth	664.0 m
Spud Date	20/05/2004	Rig Activity	Cement Casing.WOC.

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia		State/Province/Region Victoria		County/Geographic Area Otway Basin	
Field or Block Iona/PPL-2					
<b>Bit Information</b>		<b>Drill String</b>		<b>Circulation/Hydraulics Data</b>	
Bit Size	in	ITEM	OD	ID	Length
Make/Type	/		in	in	m
Jets			20.000	@	11.0
TFA	sq-in		13.375	@	664.0
Jets Velocity	m/sec				
Jet Impact Force	lbf				
HHSI	hhp/in2				
Pres Drop @ Bit	psi				
Bit Depth	664.0 m				
ECD @ Shoe	ppg				
ECD @ Bit	ppg				
		OD		Casing	MD
		in		Set	m
				Model	
				Bore in	Nat 8-P-80
				Stroke in	6.000
				Eff (%)	6.000
				bbi/strk	8.500
				SPM	97
				gpm	.072
				Total gpm	AV, Riser
				Total Circ Time	AV, DP
				BU Time, min	AV, DC
				Total Strokes	BU Stroke
					Circ Pressure psi
					Tot Prs Loss psi
					Pres Drop DP psi
					Pres Drop An psi

Properties	1 Hyd	2	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1				1 2 3 4		Fluid Type: KC/PHPA/Polymer
Time	12:00						Daily Volume Made : Nil
Depth m	664.0						Total volume Made : 1287.6
FL Temp Deg C	40						Calcium Chloride used for cementing. Bentonite used for gelling up mud tanks. After cementing, started transporting mud from mud tanks for disposal.
Density ppg @ Deg C	9.80 @ 40				*	8.50   9.10	
FV @ Deg C	49 @ 40						
PV @ Deg C	13 @ 49						
YP lbs/100 ft2	23					25   45	
Gels lbs/100 ft2	10/15/0						
600/300	49.0/36.0						
200/100	29.0/23.0						
6/3	9.0/7.0						
API Filtr ml/30 min	17.4				*	6.0	
HTFP ml/30 min @ Deg C							
Cake 32nd in	2.0/0.0						
Corr Solids % by vol.	8.8						
NAP/Water % by vol	0.0/89.5						
Sand % by vol	1.70						
MBT ppb Eq.	17.5						
pH	8.30				*	8.80   9.50	
Alk Mud (Pm)	0.05						
Alk Filtr (P/Mf)	0.02/0.08						
Chlorides mg/l	21,000						
Hard Ca mg/l	520						
LGS/HGS %	8.3/0.5						
LGS/HGS ppb	75.66/8.02						
ASG	2.698						
PHPA ppb	0.30						
Potassium % by vol	3.8					3.0   4.0	
Sulfite residual mg/l	10						

Ran in 13 3/8 " casing to bottom. Rigged up and circulated hole clean. Cemented 13 3/8" casing in place (cement to surface). WOC.

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	Drilling
calcium chloride	25 Kg bag	7		3	4	\$A 50.34	FLC 58	Circulating
bentonite	25 Kg bag	48		2	46	\$A 19.80	FLC 58	Trips
Baracide	25 Kg can	13			13		Hydrocyclones	Rig
BARACOR 129	25 Kg can	51			51		Cones	Surveys
BARA-DEFOAM W300	25 l can	2			2		Harrisburg Desand	Fishing
BARAFILM-Petrofree	55 Gal drum	1			1		Harrisburg Desilter	Run Casing
BARAZAN D PLUS	25 Kg bag	62			62		Centrifuge	Coring
barite	25 Kg bag	935			935		Speed	Reaming
BAROFIBRE	25 lb bag	56			56		Feed Rate	Testing
BAROLIFT	15 lb box	4			4		Hrs	Logging
Circal 60/16	25 Kg bag	192			192			Dir Work
Circal Y	25 Kg bag	192			192			Repair
citric acid	25 Kg bag	20			20			Other
DEXTRID LTE	25 Kg bag	120			120			Total
DEXTRID LTE	50 lb bag	66			66			Rotating
EZ SPOT	55 gal drum	4			4			ROP
Kwikseal Fine	40 lb bag	40			40			Dil Rate
PAC-L	25 Kg bag	66			66			
phpa	25 Kg bag	111			111			
potassium chloride tech	25 Kg sack	348			348			
potassium hydroxide	20 Kg pail	45			45			
soda ash	25 Kg bag	10			10			
sodium bicarbonate	25 Kg bag	20			20			

Active	bbi	Additions	bbi	Losses	bbi
Annulus	336.8	NAP Base		Dumped	
Pipe Cap		Drill Water		Transferred	
Active Pits	316.0	Dewatering		SC Equip	-28.0
Total Hole	336.8	Sea Water		Evaporation	
Total Circ	316.0	Whole Mud		Trips	
Reserve	218.0	Barite		Other	-63.5
Prev Vol	962.2	Chemicals	0.1	Total Surface	-91.5
Net Chg	-91.4	Other Adds.		Downhole	
Total Vol	870.8	Total Added	0.1	Total Losses	-91.5

Daily Products Cost	\$A	70.14	Total Daily Cost	\$A	870.14
Cumulative Products Cost	\$A	17,025.00	Total Cumulative Cost	\$A	21,025.00
Baroid Representatives: Tun Aung					
Office		90 Talinga Rd		Melbourne	
Warehouse		c/o of Esso Australia Ltd		via Toora	
				Victoria	
				Tel 61-03-9581-7555	
				Tel 61-3-56-881-445	

Other Fluid Types	Vol bbl	Deviation Information
Survey MD		664 m
Survey TVD		664 m
Angle		0.41
Direction		
Horiz Displ.		m

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



Daily Drilling Fluid Report

Report No 006

Baroid, a Halliburton Company

Date	25/05/2004	Depth	664.0 m
Spud Date	20/05/2004	Rig Activity	Nipple Up BOP.

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia	State/Province/Region Victoria	County/Geographic Area Otway Basin		Field or Block Iona/PPL-2	
<b>Bit Information</b>		<b>Drill String</b>	<b>OD</b>	<b>ID</b>	<b>Length</b>
Bit Size	in	ITEM	in	in	m
Make/Type /					
Jets					
TFA	sq-in				
Jets Velocity	m/sec				
Jet Impact Force	lbf				
HHSI	hhp/in2				
Pres Drop @ Bit	psi				
Bit Depth	m				
ECD @ Shoe	ppg				
ECD @ Bit	ppg				
		<b>OD</b>	<b>Casing</b>	<b>MD</b>	
		in	Set	m	
		20.000	@	11.0	
		13.375	@	664.0	
					<b>Circulation/Hydraulics Data</b>
		Model		Nat 8-P-80	
		Bore in		6.000	
		Stroke in		8.500	
		Eff (%)		97	
		bbl/stk		.072	
		SPM		.072	
		gpm			
		Total gpm		AV, Riser	
		Total Circ Time		AV, DP	
		BU Time, min		AV, DC	
		Total Strokes		BU Stroke	
				Circ Pressure psi	
				Tot Prs Loss psi	
				Pres Drop DP psi	
				Pres Drop An psi	

Properties		Targets				Program		Fluid Treatments	
		1	2	3	4				
Source								Fluid Type: KCI/PHPA/Polymer	
Time								Daily Volume Made : Nil	
Depth m								Total Volume Made : 1287.6	
FL Temp Deg C								Dressed both shakers with #50 mesh screens (3 x New, 3 x Used). DFE shaker to be fitted with 3 x New #110 mesh screens.	
Density ppg @ Deg C								Transported 534 bbl of heavy surface mud from mud tanks for disposal.	
FV @ Deg C								Commenced mixing up new mud.	
PV @ Deg C									
YP lbs/100 ft2									
Gels lbs/100 ft2									
600/300						See Rpt Tgts			
200/100									
6/3									
API Filtr ml/30 min									
HTHP ml/30 min @Deg C									
Cake 32nd in									
Corr Solids % by vol									
NAP/Water % by vol						See Rpt Tgts		Rig Activity	
Sand % by vol								Installed well head and pressure tested.	
MBT ppb Eq.								Nipple up BOP.	
pH									
Alk Mud (Pm)									
Alk Filtr (P/M)						See Rpt Tgts			
Chlorides mg/l									
Hard Ca mg/l									
LGS/HGS %									
LGS/HGS ppb									
ASG									

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment				Time (Hrs)	
							Shaker	Screens	Hrs			
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	FLC 58	50 50 50	0.0			Drilling
Baracide	25 Kg can	13			13		FLC 58	50 50 50	0.0			Circulating
BARACOR 129	25 Kg can	51			51		Hydrocyclones					Trips
BARA-DEFOAM W300	25 l can	2			2		Harrisburg Desand	2 10				Rig
BARAFILM-Petrofree	55 Gal drum	1			1		Harrisburg Desilter	12 5				Surveys
BARAZAN D PLUS	25 Kg bag	62			62		Centrifuge	Speed Feed Rate Hrs				Fishing
barite	25 Kg bag	935			935		DFE600					Run Casing
BAROFIBRE	25 lb bag	56			56							Coring
BAROLIFT	15 lb box	4			4							Reaming
bentonite	25 Kg bag	46			46							Testing
calcium chloride	25 Kg bag	4			4							Logging
Circal 60/16	25 Kg bag	192			192							Dir Work
Circal Y	25 Kg bag	192			192							Repair
citric acid	25 Kg bag	20			20							Other
DEXTRID LTE	25 Kg bag	120			120							Total
DEXTRID LTE	50 lb bag	66			66							Rotating
EZ SPOT	55 gal drum	4			4							ROP
Kwikseal Fine	40 lb bag	40			40							Dil Rate
PAC-L	25 Kg bag	66			66		Fluid Volume Breakdown KCI/PHPA/Polymer					
phpa	25 Kg bag	111			111		Active	bbl	Additions	bbl	Losses	bbl
potassium chloride tech	25 Kg sack	348			348		Annulus	336.8	NAP Base		Dumped	
potassium hydroxide	20 Kg pail	45			45		Pipe Cap		Drill Water		Transferred	
soda ash	25 Kg bag	10			10		Active Pits		Dewatering		SC Equip	
sodium bicarbonate	25 Kg bag	20			20		Total Hole	336.8	Sea Water		Evaporation	
							Total Circ		Whole Mud		Trips	
							Reserve		Barite		Other	-534.0
							Prev Vol	870.8	Chemicals		Total Surface	-534.0
							Net Chg	-534.0	Other Adds.		Downhole	
							Total Vol	336.8	Total Added		Total Losses	-534.0

Daily Products Cost	\$A	0.00	Total Daily Cost	\$A	800.00	Other Fluid Types		Vol bbl	Deviation Information	
Cumulative Products Cost	\$A	17,025.00	Total Cumulative Cost	\$A	21,825.00				Survey MD	664 m
Baroid Representatives: Tun Aung									Survey TVD	664 m
Office 90 Taling Rd Melbourne Tel 61-03-9581-7555									Angle	0.41
Warehouse c/o of Esso Australia Ltd via Toora Victoria Tel 61-3-56-881-445									Direction	
									Horiz Displ.	m

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.

908148 157



Daily Drilling Fluid Report

Report No 007

Baroid, a Halliburton Company

Date	26/05/2004	Depth	664.0 m
Spud Date	20/05/2004	Rig Activity	Run In Hole

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics			Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon			Rig Name 18	
Country Australia	State/Province/Region Victoria	County/Geographic Area Otway Basin			Field or Block Iona/PPL-2	
<b>Bit Information</b>		<b>Drill St rlng</b>	<b>OD</b>	<b>ID</b>	<b>Length</b>	<b>OD</b>
Bit Size	12.250 in	ITEM	in	in	m	Casing
Make/Type	SEC-DBS / EBXS02S	Drill Pipe	5.000	4.276	380.5	@
Jets	4x18	Drill Pipe	5.000	3.000	54.0	11.0
TFA	0.994 sq-in	Drill Collar	6.500	2.750	9.1	13.375
Jets Velocity	59.4 m/sec	Drill Pipe	5.000	3.000	162.0	@
Jet Impact Force	531.5 lbf	Drill Collar	8.000	3.000	49.5	664.0
HHSI	0.88 hhp/in2	Drill Motor	8.000	0.000	8.9	
Pres Drop @ Bit	295.2 psi					
Bit Depth	664.0 m					
ECD @ Shoe	8.76 ppg					
ECD @ Bit	8.76 ppg					
					<b>Circulation/Hydraulics Data</b>	
					Model	Nat 8-P-80
					Bore in	6.000
					Stroke in	8.500
					Eff (%)	97
					bb/stk	.072
					SPM	100
					gpm	303
					Total gpm	606
					Total Circ Time	39.7
					BU Time, min	19.2
					Total Strokes	7,935
					AV, Riser	
					AV, DP	33.7
					AV, DC	47.5
					BU Stroke	3,830
					Circ Pressure	psi 1,000.0
					Tot Prs Loss	psi 975.2
					Pres Drop DP	psi 343.9
					Pres Drop An	psi 7.2

Properties	1 Hyd	2	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1				1 2 3 4		Fluid Type: KCI/PHPA/Polymer
Time	01:25						Daily Volume Made :680 bbl
Depth m	664.0						Total Volume Made :680 bbl
FL Temp Deg C	19						Mixed up 680 bbl of new mud. New mud has a PHPA content of 0.25 ppb to minimise losses during displacement. Pretreated fluid with Citric Acid / Soda Bicarb before drilling cement.
Density ppg @ Deg C	8.70 @ 19					8.50   9.10	
FV @ Deg C	56 @ 19						
PV @ Deg C	7 @ 49						
YP lbs/100 fl2	10					25   45	
Gels lbs/100 fl2	3/5/0						
600/300	24.0/17.0						
200/100	14.0/10.0						
6/3	4.0/3.0						
API Filt ml/30 min	10.1						
HTHP ml/30 min @Deg C						6.0	
Cake 32nd in	1.0/0.0						
Corr Solids % by vol	0.9						
NAP/Water % by vol	0.0/97.0						
Sand % by vol	0.10						
MBT ppb Eq.	1.0						
pH	8.30					8.80   9.50	
Alk Mud (Pm)	0.30						
Alk Filt (P/MF)	0.02/0.20						
Chlorides mg/l	25,000						
Hard Ca mg/l	340						
LGS/HGS %	1.1/-0.2						
LGS/HGS ppb	9.65/-2.62						
ASG	2.277						
PHPA ppb	0.25						
Potassium % by vol	4.7					3.0   4.0	

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	
BARAZAN D PLUS	25 Kg bag	62		12	50	\$A 3,323.16	Screens	
potassium chloride tech	25 Kg sack	348	798	221	925	\$A 3,315.00	FLC 58	10.0
PAC-L	25 Kg bag	66		6	60	\$A 683.10	FLC 58	10.0
Baracide	25 Kg can	13		2	11	\$A 555.26	Hydrocyclones	
phpa	25 Kg bag	111		3	108	\$A 366.81	Cones	
citric acid	25 Kg bag	20		4	16	\$A 285.52	Screens	
DEXTRID LTE	25 Kg bag	120			120		Harrisburg Desand	2 10
DEXTRID LTE	50 lb bag	66		6	60	\$A 195.42	Harrisburg Desilter	12 5
sodium bicarbonate	25 Kg bag	20		4	16	\$A 64.16	Centrifuge	
potassium hydroxide	20 Kg pail	45		1	44	\$A 60.75	Speed	
BARACOR 100	55 gal drum		2				Feed Rate	
BARACOR 129	25 Kg can	51			51		Hrs	
BARA-DEFOAM W300	25 l can	2	4		6		DFE600	
BARAFILM-Petrofree	55 Gal drum	1			1			
barite	25 Kg bag	935			935			
BAROFIBRE	25 lb bag	56			56			
BAROLIFT	15 lb box	4			4			
bentonite	25 Kg bag	46			46			
calcium chloride	25 Kg bag	4			4			
Circal 60/16	25 Kg bag	192	10		202			
Circal Y	25 Kg bag	192			192			
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
Omyacarb 50	25 Kg bag		30		30			
soda ash	25 Kg bag	10			10			

Daily Products Cost	\$A	8,849.18	Total Daily Cost	\$A	9,649.18
Cumulative Products Cost	\$A	25,874.18	Total Cumulative Cost	\$A	31,474.18
Baroid Representatives: Tun Aung					
Office	90 Talinga Rd	Melbourne	Tel 61-03-9581-7555		
Warehouse	c/o of Esso Australia Ltd	via Toora	Victoria Tel 61-3-56-981-445		

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



# Daily Drilling Fluid Report

## 908148 158

Report No 008

Baroid, a Halliburton Company

Date	27/05/2004	Depth	816.0 m
Spud Date	20/05/2004	Rig Activity	Drill 12 1/4" Hole

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6		
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18		
Country Australia	State/Province/Region Victoria	County/Geographic Area Otway Basin		Field or Block Iona/PPL-2		
<b>Bit Information</b>		<b>Drill String</b>	<b>OD</b>	<b>ID</b>	<b>Length</b>	
Bit Size	12.250 in	ITEM	in	in	m	
Make/Type	SEC-DBS / EBXS02S	Drill Pipe	5.000	4.276	532.5	
Jets	4x18	Drill Pipe	5.000	3.000	54.0	
TFA	0.994 sq-in	Drill Collar	6.500	2.750	9.1	
Jets Velocity	73.7 m/sec	Drill Pipe	5.000	3.000	162.0	
Jet Impact Force	822.0 lbf	Drill Collar	8.000	3.000	49.5	
HHSI	1.70 hhp/in2	Drill Motor	8.000	0.000	8.9	
Pres Drop @ Bit	456.5 psi	Open Hole		12.250	152.0	
Bit Depth	816.0 m					
ECD @ Shoe	8.83 ppg					
ECD @ Bit	8.84 ppg					
		<b>OD</b>	<b>Casing</b>	<b>MD</b>	<b>Circulation/Hydraulics Data</b>	
		in	Set	m	Model	Nat 8-P-80
		20.000	@	11.0	Bore in	6.000
		13.375	@	664.0	Stroke in	8.500
					Eff (%)	97
					bbi/strk	.072
					SPM	124
					gpm	375
					Total gpm	751
					Total Circ Time	40.4
					BU Time, min	18.8
					Total Strokes	10,031
					AV, Riser	41.8
					AV, DP	65.2
					AV, DC	65.2
					Circ Pressure	psi 1,250.0
					Tot Prs Loss	psi 1,336.3
					Pres Drop DP	psi 497.6
					Pres Drop An	psi 12.8

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Suction - 1			1 2 3 4		Fluid Type: <b>KCI/PHPA/Polymer</b>
Time	12:45	22:25					Daily Volume Made : 192.2 bbl
Depth m	721.0	807.0					Total Volume Made : 872.2 bbl
FL Temp Deg C	42	45					Desander Underflow : 16.4 ppg @ 1.2 bph
Density ppg @ Deg C	8.75 @ 42	8.75 @ 45				8.50   9.40	Desilter Underflow : 13.6 ppg @ 1.1 bph
FV @ Deg C	40 @ 42	40 @ 45					Centrifuge Overflow : 8.75 ppg
PV @ Deg C	6 @ 49	7 @ 49					At 626 m displaced hole with new KCI/PHPA/Polymer mud. Old mud from hole (336.8 bbl) pumped to haulage truck and storage tanker for disposal.
YP lbs/100 ft2	12	14					After displacement, commenced trickling in additional PHPA.
Gels lbs/100 ft2	4/8/0	4/8/0					
600/300	24.0/18.0	28.0/21.0					
200/100	14.0/10.0	17.0/13.0					
6/3	4.0/3.0	5.0/4.0					
API Filt ml/30 min	10.6	8.8					
HYHP ml/30 min @ Deg C							
Cake 32nd in	1.0/0.0	1.0/0.0					
Corr Solids % by vol	1.0	0.8					
NAP/Water % by vol	0.0/97.0	0.0/97.0					
Sand % by vol	0.40	0.60					
MBT ppb Eq.	3.0	3.5					
pH	9.50	9.50				8.80   9.50	
Alk Mud (Pm)	0.60	0.55					
Alk Filt (P/Alf)	0.15/0.30	0.15/0.35					
Chlorides mg/l	24,000	25,500					
Hard Ca mg/l	320	400					
LGS/HGS %	0.8/0.2	0.6/0.2					
LGS/HGS ppb	7.00/2.87	5.85/2.91					
ASG	2.924	2.976					
PHPA ppb	0.60	0.75				1.00   1.50	
Potassium % by vol	4.5	4.6				3.0   4.0	
Sulfite residual mg/l	100	100					

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	Drilling 19.00
BARAZAN D PLUS	25 Kg bag	50		12	38	\$A 3,323.16	Screens	Circulating 1.00
potassium chloride tech	25 Kg sack	925		85	840	\$A 1,275.00	FLC 58	Trips
phpa	25 Kg bag	108		9	99	\$A 1,100.43	FLC 58	Rig
BARACOR 129	25 Kg can	51		7	44	\$A 399.63	Hydrocyclones	Surveys 2.00
Baracide	25 Kg can	11		1	10	\$A 277.63	Cones	Fishing
PAC-L	25 Kg bag	60		2	58	\$A 227.70	Screens	Run Casing
BARA-DEFOAM W300	25 l can	6		1	5	\$A 75.00	Harrisbura Desand	Coring
DEXTRID LTE	25 Kg bag	120			120		Harrisbura Desilter	Reaming
DEXTRID LTE	50 lb bag	60		2	58	\$A 65.14	Centrifuge	Testing 2.00
BARACOR 100	55 gal drum	2			2		Speed	Logging
BARAFILM-Petrofree	55 Gal drum	1			1		Feed Rate	Dir Work
barite	25 Kg bag	935			935		Hrs	Repair
BAROFIBRE	25 lb bag	56			56		DFE600	Other
BAROLIFT	15 lb box	4			4			Total 24.00
bentonite	25 Kg bag	46			46			Rotating 19.00
calcium chloride	25 Kg bag	4			4			ROP 8.0
Dil Rate								
Circal 60/16	25 Kg bag	202			202			
Circal Y	25 Kg bag	192			192			
citric acid	25 Kg bag	16			16			
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
Omycarb 50	25 Kg bag	30			30			
potassium hydroxide	20 Kg pail	44			44			
soda ash	25 Kg bag	10			10			
sodium bicarbonate	25 Kg bag	16			16			

Daily Products Cost	\$A	6,743.69	Total Daily Cost	\$A	7,543.69	Other Fluid Types	Vol bbl	Deviation Information
Cumulative Products Cost	\$A	32,617.87	Total Cumulative Cost	\$A	39,017.87	Premix	73.0	Survey MD 805 m
Baroid Representatives: Tun Aung		Melbourne		Tel 61-03-9581-7555		Survey TVD		802 m
Office 90 Talanga Rd		Melbourne		Tel 61-03-9581-7555		Angle		18.70
Warehouse c/o of Esso Australia Ltd		via Toora		Victoria		Direction		305
						Horiz Displ.		25 m

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Daily Drilling Fluid Report

Report No 009

Baroid, a Halliburton Company

Date	28/05/2004	Depth	976.0 m
Spud Date	20/05/2004	Rig Activity	Tripping

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia		State/Province/Region Victoria		County/Geographic Area Otway Basin	
Field or Block Iona/PPL-2					
Bit Information		Drill St ring		Circulation/Hydraulics Data	
Bit Size	in	ITEM	OD	ID	Length
Make/Type	/		in	in	m
Jets			20.000	@	11.0
TFA	sq-in		13.375	@	664.0
Jets Velocity	m/sec				
Jet Impact Force	lbf				
HHSI	hhp/in <sup>2</sup>				
Pres Drop @ Bit	psi				
Bit Depth	m	Open Hole	12.250		312.0
ECD @ Shoe	ppg				
ECD @ Bit	ppg				
Form Integrity		10.50		ppg	
Model		Nat 8-P-80		Nat 8-P-80	
Bore in		6.000		6.000	
Stroke in		8.500		8.500	
Eff (%)		97		97	
bbl/strk		.072		.072	
SPM					
gpm					
Total gpm		AV, Riser		Circ Pressure	
Total Circ Time		AV, DP		psi	
BU Time, min		AV, DC		Tot Prs Loss	
Total Strokes		BU Stroke		psi	
				Pres Drop DP	
				psi	
				Pres Drop An	
				psi	

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Suction - 1			1 2 3 4		Fluid Type: KCI/PHPA/Polymer
Time	10:45	18:20					Daily Volume Made : 155.9 bbl
Depth m	904.0	976.0					Total Volume Made : 1028.1 bbl
FL Temp Deg C	46	48					Installed 1 x new #84 mesh screen.
Density ppg @ Deg C	8.80 @ 46	8.80 @ 48				8.50   9.40	Desander Underflow : 16.0 ppg @ 0.9 bph.
FV @ Deg C	39 @ 46	39 @ 48					Desilter Underflow : 12.6 ppg @ 2.2 bph.
PV @ Deg C	8 @ 49	7 @ 49					Centrifuge Overflow : 8.75 ppg.
YP lbs/100 ft <sup>2</sup>	15	16					Before tripping, pumped 30 bbl of BAROLIFT
Gels lbs/100 ft <sup>2</sup>	4/6/0	4/7/0					sweep (0.2 ppb). No noticeable increase of
600/300	31.0/23.0	30.0/23.0					returns.
200/100	18.0/14.0	18.0/14.0					
6/3	5.0/4.0	5.0/4.0					
API Fil ml/30 min	7.4	7.6			*	*	
HTHP ml/30 min @ Deg C	23.0 @	23.4 @					6.0
Cake 32nd in	1.0/2.0	1.0/2.0					
Corr Solids % by vol	1.6	1.6					
NAP/Water % by vol	0.0/96.5	0.0/96.5					
Sand % by vol	0.50	0.50					
MBT ppb Eq.	3.5	4.0					
pH	8.90	8.90					8.80   9.50
Aik Mud (Pm)	0.25	0.30					
Aik Fil (P/Mf)	0.05/0.20	0.05/0.15					
Chlorides mg/l	22,500	23,000					
Hard Ca mg/l	400	360					
LGS/HGS %	1.5/0.1	1.5/0.1					
LGS/HGS ppb	13.93/0.99	13.56/0.99					
ASG	2.667	2.669					
PHPA ppb	1.10	1.00					1.00   1.50
Potassium % by vol	4.3	4.4			*	*	3.0   4.0
Sulfite residual mg/l	80	70					

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)			
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	18.00			
BARAZAN D PLUS	25 Kg bag	38		5	33	\$A 1,384.65	Screens	20.0			
phpa	25 Kg bag	99		8	91	\$A 978.16	FLC 58	20.0			
potassium chloride tech	25 Kg sack	840		42	798	\$A 630.00	FLC 58	20.0			
BAROLIFT	15 lb box	4		1	3	\$A 293.33	Hydrocyclones	19.0			
barite	25 Kg bag	935		26	909	\$A 188.50	Cones	19.0			
potassium hydroxide	20 Kg pail	44		3	41	\$A 182.25	Harrisburg Desand	19.0			
BARACOR 129	25 Kg can	44		3	41	\$A 171.27	Harrisburg Desilter	19.0			
PAC-L	25 Kg bag	58		1	57	\$A 113.85	Centrifuge	20.0			
DEXTRID LTE	25 Kg bag	120			120		Speed				
DEXTRID LTE	50 lb bag	58		1	57	\$A 32.57	Feed Rate				
Baracide	25 Kg can	10			10		Hrs				
BARACOR 100	55 gal drum	2			2		DFE600	2.00			
BARA-DEFOAM W300	25 l can	5			5			24.00			
BARAFILM-Petrofree	55 Gal drum	1			1			18.00			
BAROFIBRE	25 lb bag	56			56			8.9			
bentonite	25 Kg bag	46			46						
calcium chloride	25 Kg bag	4			4						
Circal 60/16	25 Kg bag	202			202						
Circal Y	25 Kg bag	192			192						
citric acid	25 Kg bag	16			16						
EZ SPOT	55 gal drum	4			4						
Kwikseal Fine	40 lb bag	40			40						
Omyacarb 50	25 Kg bag	30			30						
soda ash	25 Kg bag	10			10						
sodium bicarbonate	25 Kg bag	16			16						
Daily Products Cost	\$A	3,974.58	Total Daily Cost	\$A	4,774.58	Fluid Volume Breakdown KCI/PHPA/Polymer					
Cumulative Products Cost	\$A	36,592.45	Total Cumulative Cost	\$A	43,792.45	Active	bbl	Additions	bbl	Losses	bbl
Baroid Representatives: Tun Aung						Annulus	486.0	NAP Base		Dumped	
Office 90 Talinga Rd Melbourne Tel 61-03-9581-7555						Pipe Cap		Drill Water	58.3	Transferred	
Warehouse c/o of Esso Australia Ltd via Toora Victoria Tel 61-3-56-881-445						Active Pits	275.0	Dewatering		SC Equip	-59.0
						Total Hole	486.0	Sea Water		Evaporation	
						Total Circ	275.0	Whole Mud	118.0	Trips	
						Reserve	111.0	Barite	1.0	Other	
						Prev Vol	752.1	Chemicals	1.6	Total Surface	-59.0
						Net Chg	119.9	Other Adds.		Downhole	
						Total Vol	872.0	Total Added	178.9	Total Losses	-59.0
						Other Fluid Types	Vol	bbl	Deviation Information		
						Premix	50.0	Survey MD	950	m	
								Survey TVD	922	m	
								Angle	45.29		
								Direction	304		
								Horiz Displ.	104	m	

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



Daily Drilling Fluid Report

908148 160

Report No 010

Baroid, a Halliburton Company

Date	29/05/2004	Depth	1,008.0 m
Spud Date	20/05/2004	Rig Activity	Drill. Trip.

Operator TXU GAS STORAGE PTY LTD	Report For Peter Dwyer / Andy Urdevics	Well Name Iona-6
Contractor Century Drilling Ltd	Report For Scott Bucknell/Neville Scutcheon	Rig Name 18
Country Australia	State/Province/Region Victoria	County/Geographic Area Otway Basin
		Field or Block Iona/PPL-2

Bit Information				Drill St ring			OD			ID			Length			OD			Casing			MD			Circulation/Hydraulics Data												
Bit Size	12.250	in	ITEM	in	in	m	in	Set	m	Model	Nat 8-P-80	Nat 8-P-80	Bore in	6.000	6.000	Stroke in	8.500	8.500	Eff (%)	97	97	bbl/stk	.072	.072	SPM	124	124	gpm	375	375	Total gpm	751	AV, Riser	Circ Pressure	psi	1,450.0	
Make/Type	DBS / FM2565		Drill Pipe	5.000	4.276	715.7	20.000	@	11.0																												
Jets	5x18		Drill Pipe	5.000	3.000	56.1	13.375	@	664.0																												
TFA	1.243 sq-in		Drill Collar	6.500	2.750	9.8																															
Jets Velocity	58.9 m/sec		Drill Pipe	5.000	3.000	167.2																															
Jet Impact Force	657.3 lbf		Drill Collar	8.000	3.000	50.3																															
HHSI	1.08 hhp/in <sup>2</sup>		Drill Motor	8.000	0.000	8.9																															
Pres Drop @ Bit	291.9 psi																																				
Bit Depth	1,008.0 m		Open Hole	12.250		344.0																															
ECD @ Shoe	8.84 ppg																																				
ECD @ Bit	8.85 ppg																																				

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments							
Source	Suction - 1	Suction - 1			1	2	3	4	Fluid Type: KCI/PHPA/Polymer					
Time	13:05	17:15							Daily Volume Made : 114 bbl					
Depth m	988.0	1,008.0							Total Volume Made : 1142.1 bbl					
FL Temp Deg C	46	46							Desander Underflow : 15.6 ppg @ 1.2 bph.					
Density ppg @ Deg C	8.75 @ 46	8.75 @ 46							Desilter Underflow : 12.8 ppg @ 2.8 bph.					
FV @ Deg C	40 @ 46	41 @ 46							Centrifuge Overflow : 8.7 ppg.					
PV @ Deg C	8 @ 49	7 @ 49							Used Barite slug for previous trip, KCl slug for present trip. For 12 1/4" interval, continuously centrifuging sand trap while drilling. During trips centrifuge run in settling pit.					
YP lbs/100 ft <sup>2</sup>	16	16												
Gels lbs/100 ft <sup>2</sup>	4/7/0	4/7/0												
600/300	32.0/24.0	30.0/23.0												
200/100	19.0/14.0	19.0/14.0												
6/3	5.0/4.0	5.0/4.0												
API Filtr ml/30 min	7.6	7.4												
HTHP ml/30 min @ Deg C	23.4 @	22.8 @												
Cake 32nd in	1.0/2.0	1.0/2.0												
Corr Solids % by vol	1.1	1.0												
NAP/Water % by vol	0.0/97.0	0.0/97.0												
Sand % by vol	0.25	0.25												
MBT ppb Eq.	3.5	4.0												
pH	9.00	9.00												
Alk Mud (Pm)	0.40	0.35												
Alk Filtr (P/Mf)	0.08/0.30	0.05/0.25												
Chlorides mg/l	22,000	23,000												
Hard Ca mg/l	280	280												
LGS/HGS %	0.9/0.2	0.9/0.2												
LGS/HGS ppb	8.51/2.84	7.76/2.85												
ASG	2.874	2.897												
PHPA ppb	1.10	1.10												
Potassium % by vol	4.2	4.2												
Sulfite residual mg/l	80	60												

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment				Time (Hrs)	
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	Screens	Hrs	Drilling	8.00	
potassium chloride tech	25 Kg sack	798		84	714	\$A 1,260.00	FLC 58	50 50 50	22.0	Circulating	0.50	
BARAZAN D PLUS	25 Kg bag	33		4	29	\$A 1,107.72	FLC 58	84 50 50	22.0	Trips	13.00	
phpa	25 Kg bag	91		3	88	\$A 366.81	Hydrocyclones	Cones	Screens	Hrs	Rig	
potassium hydroxide	20 Kg pail	41		4	37	\$A 243.00	Harrisburg Desand	2 10		8.0	Surveys	
PAC-L	25 Kg bag	57		2	55	\$A 227.70	Harrisburg Desilter	12 5		8.0	Fishing	
BARACOR 129	25 Kg can	41		3	38	\$A 171.27	Centrifuge	Speed	Feed Rate	Hrs	Run Casing	
DEXTRID LTE	25 Kg bag	120			120		DFE600			18.5	Coring	
DEXTRID LTE	50 lb bag	57		2	55	\$A 65.14					Reaming	
Baracide	25 Kg can	10			10						Testing	
BARACOR 100	55 gal drum	2			2						Logging	
BARA-DEFOAM W300	25 l can	5			5						Dir Work	
BARAFILM-Petrofree	55 Gal drum	1			1						Repair	
barite	25 Kg bag	909			909						Other	
BAROFIBRE	25 lb bag	56			56						Total	
BAROLIFT	15 lb box	3			3						24.00	
bentonite	25 Kg bag	46			46						8.00	
calcium chloride	25 Kg bag	4			4						4.0	
Circal 60/16	25 Kg bag	202			202							
Circal Y	25 Kg bag	192			192							
citric acid	25 Kg bag	16			16							
EZ SPOT	55 gal drum	4			4							
Kwikseal Fine	40 lb bag	40			40							
Omyacarb 50	25 Kg bag	30			30							
soda ash	25 Kg bag	10			10							
sodium bicarbonate	25 Kg bag	16			16							

Daily Products Cost	\$A 3,441.64	Total Daily Cost	\$A 4,241.64
Cumulative Products Cost	\$A 40,034.09	Total Cumulative Cost	\$A 48,034.09
Baroid Representatives:	Tun Aung		
Office	90 Talinga Rd	Melbourne	Tel 61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	via Toora	Victoria Tel 61-3-56-881-445

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



# Daily Drilling Fluid Report

# 908148 161

Report No 011

Baroid, a Halliburton Company

Date	30/05/2004	Depth	1,074.0 m
Spud Date	20/05/2004	Rig Activity	Drill. Trip. Drill.

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia		State/Province/Region Victoria		County/Geographic Area Otway Basin	
Field or Block Iona/PPL-2					
<b>Bit Information</b>		<b>Drill String</b>		<b>OD ID Length</b>	
Bit Size	12.250 in	ITEM	in	in	m
Make/Type	SEC-DBS / EBXS02S	Drill Pipe	5.000	4.276	781.5
Jets	3x18 1x20	Drill Pipe	5.000	3.000	56.1
TFA	1.052 sq-in	Drill Collar	6.500	2.750	9.8
Jets Velocity	67.4 m/sec	Drill Pipe	5.000	3.000	167.2
Jet Impact Force	737.3 lbf	Drill Collar	8.000	3.000	50.5
HHSI	1.39 hhp/in <sup>2</sup>	Drill Motor	8.000	0.000	8.9
Pres Drop @ Bit	386.9 psi			OD	Casing MD
Bit Depth	1,074.0 m			in	Set m
ECD @ Shoe	8.97 ppg			20.000	@ 11.0
ECD @ Bit	8.99 ppg			13.375	@ 664.0
				Form Integrity 10.50 ppg	
				Circulation/Hydraulics Data	
				Model	
				Nat 8-P-80	
				Bore in	
				6.000	
				Stroke in	
				8.500	
				Eff (%)	
				97	
				bbl/strk	
				.072	
				SPM	
				120	
				gpm	
				363	
				Total gpm	
				727	
				AV, Riser	
				Circ Pressure psi	
				1,600.0	
				Total Circ Time	
				47.8	
				AV, DP	
				40.5	
				Tot Prs Loss psi	
				1,316.8	
				BU Time, min	
				25.4	
				AV, DC	
				63.1	
				Pres Drop DP psi	
				549.9	
				Total Strokes	
				11,477	
				BU Stroke	
				6,095	
				Pres Drop An psi	
				20.7	

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Suction - 1			1 2 3 4		Fluid Type: KCI/PHPA/Polymer
Time	12:40	22:50					Daily Volume Made : 89.4 bbl
Depth m	1,037.0	1,050.0					Total Volume Made : 1231.5 bbl
FL Temp Deg C	44	43					Desander Underflow : 12.5 ppg @ 1.0 bph.
Density ppg @ Deg C	8.85 @ 44	8.87 @ 43			8.50   9.40		Desilter Underflow : 11.0 ppg @ 2.8 bph.
FV @ Deg C	40 @ 44	41 @ 43					Centrifuge Overflow : 8.75 ppg.
PV @ Deg C	8 @ 49	9 @ 49					Used KCI slug for present trip. Increase of KCI Content due to slug.
YP lbs/100 ft <sup>2</sup>	17	17					
Gels lbs/100 ft <sup>2</sup>	4/7/0	5/6/0					
600/300	33.0/25.0	35.0/26.0					
200/100	21.0/15.0	22.0/17.0					
6/3	5.0/4.0	6.0/4.0					
API Filtr ml/30 min	7.3	7.2			*	*	
HTHP ml/30 min @ Deg C	22.6 @	22.4 @					6.0
Clay 32nd in	1.0/2.0	1.0/2.0					
Clay Solids % by vol	1.6	1.6					
NAP/Water % by vol	0.0/96.2	0.0/96.0					
Sand % by vol	0.40	0.50					
MBT ppb Eq.	4.0	4.0					
pH	8.90	8.90					
Alk Mud (Pm)	0.40	0.30					8.80   9.50
Alk Filtr (P/Mf)	0.05/0.20	0.04/0.20					
Chlorides mg/l	26,500	28,500					
Hard Ca mg/l	360	380					
LGS/HGS %	1.40/1	1.50/1					
LGS/HGS ppb	13.01/2.16	13.78/1.50					
ASG	2.749	2.701					
PHPA ppb	1.10	1.10					1.00   1.50
Potassium % by vol	5.0	5.3			*	*	3.0   4.0
Sulfite residual mg/l	50	40					

Ran in to 987 m. Washed to bottom of 1008 m (hole in good condition). Drilled / steered from 1008 m to 1037 m. Circulated clean. Tripped out. Changed bit, stabiliser and angle on lobe. Ran in to 1006 m and washed to 1037 m (hole stable). Drilled / steered from 1037 m to 1074 m (approaching silt).

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	
BARAZAN D PLUS	25 Kg bag	29		4	25	\$A 1,107.72	Screens	Hrs
potassium chloride tech	25 Kg sack	714		63	651	\$A 945.00	FLC 58	24.0
BARACOR 129	25 Kg can	38		5	33	\$A 285.45	FLC 58	24.0
Baracide	25 Kg can	10		1	9	\$A 277.63	Hydrocyclones	Hrs
phpa	25 Kg bag	88		2	86	\$A 244.54	Cones	Hrs
potassium hydroxide	20 Kg pail	37		4	33	\$A 243.00	Harrisburg Desand	13.5
PAC-L	25 Kg bag	55		2	53	\$A 227.70	Harrisburg Desilter	13.5
BARA-DEFOAM W300	25 l can	5		1	4	\$A 75.00	Centrifuge	Hrs
DEXTRID LTE	25 Kg bag	120			120		Speed	Hrs
DEXTRID LTE	50 lb bag	55		2	53	\$A 65.14	Feed Rate	Hrs
BARACOR 100	55 gal drum	2			2		DFE600	24.0
BARAFILM-Petrofree	55 Gal drum	1			1			
barite	25 Kg bag	909			909			
BAROFIBRE	25 lb bag	56			56			
BAROLIFT	15 lb box	3			3			
bentonite	25 Kg bag	46			46			
calcium chloride	25 Kg bag	4			4			
Circal 60/16	25 Kg bag	202			202			
Circal Y	25 Kg bag	192			192			
citric acid	25 Kg bag	16			16			
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
Omyacarb 50	25 Kg bag	30			30			
soda ash	25 Kg bag	10			10			
sodium bicarbonate	25 Kg bag	16			16			

Active	bbl	Additions	bbl	Losses	bbl
Annulus	439.4	NAP Base		Dumped	
Pipe Cap	53.0	Drill Water		Transferred	
Active Pits	335.0	Dewatering		SC Equip	
Total Hole	492.3	Sea Water		Evaporation	
Total Circ	827.3	Whole Mud	83.0	Trips	-52.0
Reserve		Barite		Other	-123.4
Prev Vol	68.0	Chemicals	4.5	Total Surface	-175.4
Net Chg	-87.9	Other Adds.		Downhole	
Total Vol	70.0	Total Added	87.5	Total Losses	-175.4

Daily Products Cost	\$A	3,471.18	Total Daily Cost	\$A	4,271.18
Cumulative Products Cost	\$A	43,505.27	Total Cumulative Cost	\$A	52,305.27
Baroid Representatives: Tun Aung					
Office	90 Talinga Rd	Melbourne	Tel	61-03-9581-7555	
Warehouse	c/o of Esso Australia Ltd	via Toora	Victoria	Tel	61-3-56-881-445

Other Fluid Types	Vol bbl	Deviation Information
Premix	70.0	Survey MD 1,066 m
		Survey TVD 1,004 m
		Angle 47.95
		Direction 306
		Honz Displ. 186 m

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.





Daily Drilling Fluid Report

Report No 012

Baroid, a Halliburton Company

Date	31/05/2004	Depth	1,247.0 m
Spud Date	20/05/2004	Rig Activity	Drilling

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia		State/Province/Region Victoria		County/Geographic Area Otway Basin	
Field or Block Iona/PPL-2					
<b>Bit Information</b>		<b>Drill String</b>		<b>Circulation/Hydraulics Data</b>	
Bit Size	12.250 in	ITEM	OD	ID	Length
Make/Type	SEC-DBS / EBXS02S	Drill Pipe	5.000	4.276	954.5
Jets	3x18 1x20	Drill Pipe	5.000	3.000	56.1
TFA	1.052 sq-in	Drill Collar	6.500	2.750	9.8
Jets Velocity	67.4 m/sec	Drill Pipe	5.000	3.000	167.2
Jet Impact Force	764.8 lbf	Drill Collar	8.000	3.000	50.5
HHSI	1.44 hhp/in2	Drill Motor	8.000	0.000	8.9
Pres Drop @ Bit	401.3 psi	Open Hole		12.250	583.0
Bit Depth	1,247.0 m				
ECD @ Shoe	9.32 ppg				
ECD @ Bit	9.35 ppg				
		Form Integrity		10.50 ppg	
		OD		Casing MD	
		in		Set m	
		20.000		@ 11.0	
		13.375		@ 664.0	
		Model		Nat 8-P-80	
		Bore in		6.000	
		Stroke in		8.500	
		Eff (%)		97	
		bbl/stk		.072	
		SPM		120	
		gpm		363	
		Total gpm		727	
		Total Circ Time		52.0	
		BU Time, min		29.4	
		Total Strokes		12,488	
		AV, Riser		Circ Pressure psi	
		AV, DP		psi	
		AV, DC		psi	
		BU Stroke		psi	
				psi	

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Suction - 1			1 2 3 4		<b>Fluid Type: KCI/PHPA/Polymer</b>
Time	12:20	22:30					Daily Volume Made : 286.3 bbl
Depth m	1,174.0	1,232.0					Total Volume Made : 1517.8 bbl
FL Temp Deg C	49	51					Used 3 x New #84 mesh and 2 x New #50 mesh screens.
Density ppg @ Deg C	9.15 @ 49	9.20 @ 51				8.50   9.40	Desander Underflow : 12.9 ppg @ 0.6 bph.
FV @ Deg C	42 @ 49	42 @ 51					Desilter Underflow : 10.9 ppg @ 1.9 bph.
PV @ Deg C	10 @ 49	11 @ 49					Centrifuge Overflow : 9.05 ppg.
YP lbs/100 ft2	19	21					Mud weight increased in the Skull Creek clays.
Gels lbs/100 ft2	5/8/0	6/10/0					
600/300	39.0/29.0	43.0/32.0					
200/100	24.0/18.0	27.0/20.0					
6/3	6.0/5.0	7.0/5.0					
API Filtr ml/30 min	7.0	6.8					
RTHP ml/30 min @ Deg C	21.4 @	20.8 @				1.6.0	
cake 32nd in	1.0/2.0	1.0/2.0					
Corr Solids % by vol	3.9	4.3					
NAP/Water % by vol	0.0/94.0	0.0/93.5					
Sand % by vol	0.70	0.60					
MBT ppb Eq.	6.0	7.0					
pH	8.80	8.80				8.80   9.50	
Alk Mud (Pm)	0.20	0.15					
Alk Filtr (P/Mf)	0.05/0.20	0.05/0.25					
Chlorides mg/l	26,000	26,500					
Hard Ca mg/l	360	400					
LGS/HGS %	3.7/0.2	4.3/0.1					
LGS/HGS ppb	33.51/2.78	38.94/0.94					
ASG	2.678	2.624					
PHPA ppb	1.10	1.10				1.00   1.50	
Potassium % by vol	4.8	4.8				3.0   4.0	
Sulfite residual mg/l	60	50					

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)			
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	24.00			
BARAZAN D PLUS	25 Kg bag	25		9	16	\$A 2,492.37	Screens				
potassium chloride tech	25 Kg sack	651		86	565	\$A 1,290.00	FLC 58	24.0			
PAC-L	25 Kg bag	53		7	46	\$A 796.95	FLC 58	24.0			
phpa	25 Kg bag	86		6	80	\$A 733.62	Hydrocyclones				
BARACOR 129	25 Kg can	33		7	26	\$A 399.63	Cones				
potassium hydroxide	20 Kg pail	33		6	27	\$A 364.50	Screens				
DEXTRID LTE	25 Kg bag	120			120		Harrisburg Desand	24.0			
DEXTRID LTE	50 lb bag	53		7	46	\$A 227.99	Harrisburg Desilter	24.0			
Baracide	25 Kg can	9			9		Centrifuge	24.0			
BARACOR 100	55 gal drum	2			2		Speed				
BARA-DEFOAM W300	25 l can	4			4		Feed Rate				
BARAFILM-Petrofree	55 Gal drum	1			1		Hrs				
barite	25 Kg bag	909			909		DFE600	24.0			
BAROFIBRE	25 lb bag	56			56						
BAROLIFT	15 lb box	3			3						
bentonite	25 Kg bag	46			46						
calcium chloride	25 Kg bag	4			4						
Circal 60/16	25 Kg bag	202			202						
Circal Y	25 Kg bag	192			192						
citric acid	25 Kg bag	16			16						
EZ SPOT	55 gal drum	4			4						
Kwikseal Fine	40 lb bag	40			40						
Omyacarb 50	25 Kg bag	30			30						
soda ash	25 Kg bag	10			10						
sodium bicarbonate	25 Kg bag	16			16						
Daily Products Cost	\$A	6,305.06	Total Daily Cost	\$A	7,105.06	Fluid Volume Breakdown KCI/PHPA/Polymer					
Cumulative Products Cost	\$A	49,810.33	Total Cumulative Cost	\$A	59,410.33	Active	bbl	Additions	bbl	Losses	bbl
Baroid Representatives: Tun Aung						Annulus	508.3	NAP Base		Dumped	
Office 90 Talinga Rd Melbourne Tel 61-03-9581-7555						Pipe Cap	62.9	Drill Water		Transferred	
Warehouse c/o of Esso Australia Ltd via Toora Victoria Tel 61-3-56-881-445						Active Pits	329.0	Dewatering		SC Equip	-59.0
						Total Hole	571.2	Sea Water		Evaporation	
						Total Circ	900.2	Whole Mud	292.0	Trips	
						Reserve		Barite		Other	-161.4
						Prev Vol	70.0	Chemicals	1.3	Total Surface	-220.4
						Net Chg	72.9	Other Adds.		Downhole	
						Total Vol	63.0	Total Added	293.3	Total Losses	-220.4
						Other Fluid Types	Vol bbl	Deviation Information			
						Premix	63.0	Survey MD		1,212 m	
								Survey TVD		1,101 m	
								Angle		48.21	
								Direction		305	
								Horiz Displ.		295 m	

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



Daily Drilling Fluid Report

Report No 013

Baroid, a Halliburton Company

Date	1/06/2004	Depth	1,473.0 m
Spud Date	20/05/2004	Rig Activity	Drilling

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia		State/Province/Region Victoria		County/Geographic Area Otway Basin	
Field or Block Iona/PPL-2					
<b>Bit Information</b>		<b>Drill String</b>		<b>OD ID Length</b>	
Bit Size 12.250 in		ITEM		in in m	
Make/Type SEC-DBS / EBXS02S		Drill Pipe 5.000		4.276 1,180.5	
Jets 3x18 1x20		Drill Pipe 5.000		3.000 56.1	
TFA 1.052 sq-in		Drill Collar 6.500		2.750 9.8	
Jets Velocity 67.4 m/sec		Drill Pipe 5.000		3.000 167.2	
Jet Impact Force 781.4 lbf		Drill Collar 8.000		3.000 50.5	
HHSI 1.47 hhp/in2		Drill Motor 8.000		0.000 8.9	
Pres Drop @ Bit 410.0 psi					
Bit Depth 1,473.0 m		Open Hole 12.250		809.0	
ECD @ Shoe 9.54 ppg					
ECD @ Bit 9.58 ppg					
		Form Integrity 10.50 ppg			
		<b>OD Casing MD</b>		<b>Circulation/Hydraulics Data</b>	
		in Set m		Model	
		20.000 @ 11.0		Nat 8-P-80 Nat 8-P-80	
		13.375 @ 664.0		Bore in 6.000 6.000	
				Stroke in 8.500 8.500	
				Eff (%) 97 97	
				bbl/strk .072 .072	
				SPM 120 120	
				gpm 363 363	
				Total gpm 727 AV, Riser	
				Circ Pressure psi 1,850.0	
				Total Circ Time 58.3 AV, DP 40.5 Tot Prs Loss psi 1,633.6	
				BU Time, min 34.6 AV, DC 63.1 Pres Drop DP psi 792.7	
				Total Strokes 14,001 BU Stroke 8,301 Pres Drop An psi 38.1	

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Suction - 1			1 2 3 4		Fluid Type: KCI/PHPA/Polymer
Time	15:00	22:15					Daily Volume Made : 380.5 bbl
Depth m	1,420.0	1,463.0					Total Volume Made : 1898.3 bbl
FL Temp Deg C	54	55					Used 3 x New #110 mesh screens.
Density ppg @ Deg C	9.30 @ 54	9.40 @ 55			8.50   9.40		Desander Underflow : 12.6 ppg @ 0.8 bph.
FV @ Deg C	45 @ 54	45 @ 55					Desilter Underflow : 12.2 ppg @ 3.3 bph.
PV @ Deg C	12 @ 49	13 @ 49					Centrifuge Overflow : 9.05 ppg.
YP lbs/100 ft2	24	23					Increase of mud weight and MBT in the clays of the Skull Creek and Belfast Fm.
Gels lbs/100 ft2	6/13/0	6/14/0					
600/300	48.0/36.0	49.0/36.0					
200/100	30.0/23.0	30.0/23.0					
6/3	8.0/6.0	8.0/6.0					
API Filtr ml/30 min	6.2	6.3			* *	16.0	
HTHP ml/30 min @ Deg C	18.6 @	18.8 @					
Cake 32nd in	1.0/2.0	1.0/2.0					
Corr Solids % by vol	5.0	5.6					
NAP/Water % by vol	0.0/93.0	0.0/92.5					
Sand % by vol	0.70	0.60					
MBT ppb Eq.	11.0	12.0					
pH	8.80	8.80				8.80   9.50	
Alk Mud (Pm)	0.15	0.12					
Alk Filtr (P/Mf)	0.00/0.25	0.04/0.20					
Chlorides mg/l	24,500	24,000					
Hard Ca mg/l	380	420					
LGS/HGS %	4.7/0.3	5.0/0.6					
LGS/HGS ppb	42.82/4.54	45.58/8.18					
ASG	2.698	2.760					
PHPA ppb	1.10	1.10				1.00   1.50	
Potassium % by vol	4.5	4.4			* *	3.0   4.0	
Sulfite residual mg/l	40	30					

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	
BARAZAN D PLUS	25 Kg bag	16		6	10	\$A 1,661.58	Screens	Drilling 23.50
potassium chloride tech	25 Kg sack	565		104	461	\$A 1,560.00	FLC 58	Circulating 0.50
PAC-L	25 Kg bag	46		12	34	\$A 1,366.20	FLC 58	Trips 24.0
phpa	25 Kg bag	80		7	73	\$A 855.89	Hydrocyclones	Rig 24.0
Baracide	25 Kg can	9		1	8	\$A 277.63	Cones	Surveys 24.0
DEXTRID LTE	25 Kg bag	120		6	114	\$A 214.98	Screens	Fishing 24.0
DEXTRID LTE	50 lb bag	46		6	40	\$A 195.42	Harrisburg Desand	Run Casing 24.0
BARACOR 129	25 Kg can	26		3	23	\$A 171.27	Harrisburg Desilter	Coring 24.0
potassium hydroxide	20 Kg pail	27		2	25	\$A 121.50	Centrifuge	Reaming 24.0
BARACOR 100	55 gal drum	2			2		Speed	Testing 24.0
BARA-DEFOAM W300	25 l can	4			4		Feed Rate	Logging 24.0
BARAFILM-Petrofree	55 Gal drum	1			1		Hrs	Dir Work 24.0
barite	25 Kg bag	909			909			Repair 24.0
BAROFIBRE	25 lb bag	56			56			Other 24.0
BAROLIFT	15 lb box	3			3			Total 24.00
bentonite	25 Kg bag	46			46			Rotating 23.50
calcium chloride	25 Kg bag	4			4			ROP 9.6
Circal 60/16	25 Kg bag	202			202			
Circal Y	25 Kg bag	192			192			
citric acid	25 Kg bag	16			16			
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
Omyacarb 50	25 Kg bag	30			30			
soda ash	25 Kg bag	10			10			
sodium bicarbonate	25 Kg bag	16			16			

Fluid Volume Breakdown		KCI/PHPA/Polymer			
Active	bbl	Additions	bbl	Losses	bbl
Annulus	598.4	NAP Base		Dumped	
Pipe Cap	75.9	Drill Water		Transferred	
Active Pits	335.0	Dewatering		SC Equip	
Total Hole	674.3	Sea Water		Evaporation	-98.0
Total Circ	1,009.3	Whole Mud	382.0	Trips	
Reserve		Barite		Other	-175.5
Prev Vol	63.0	Chemicals	0.5	Total Surface	-273.5
Net Chg	109.0	Other Adds.		Downhole	
Total Vol	61.0	Total Added	382.5	Total Losses	-273.5

Daily Products Cost	\$A 6,424.47	Total Daily Cost	\$A 7,224.47
Cumulative Products Cost	\$A 56,234.80	Total Cumulative Cost	\$A 66,634.80
Baroid Representatives: Tun Aung			
Office	90 Talinga Rd	Melbourne	Tel 61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	via Toora	Victoria Tel 61-3-56-881-445

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



Daily Drilling Fluid Report

Baroid, a Halliburton Company

Date	2/06/2004	Depth	1,515.0 m
Spud Date	20/05/2004	Rig Activity	Bit Trip, Run In Hole.

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia	State/Province/Region Victoria	County/Geographic Area Otway Basin		Field or Block Iona/PPL-2	
<b>Bit Information</b>		<b>Drill String</b>	<b>OD</b>	<b>ID</b>	<b>Length</b>
Bit Size	12.250 in	ITEM	in	in	m
Make/Type	DBS / FM2565	Drill Pipe	5.000	4.276	1,248.3
Jets	5x18	Drill Pipe	5.000	3.000	58.1
TFA	1.243 sq-in	Drill Collar	6.500	2.750	9.8
Jets Velocity	m/sec	Drill Pipe	5.000	3.000	167.2
Jet Impact Force	lbf	Drill Collar	8.000	3.000	33.6
HHSI	hhp/in2				
Pres Drop @ Bit	psi				
Bit Depth	1,515.0 m	Open Hole	12.250		851.0
ECD @ Shoe	9.45 ppg				
ECD @ Bit	9.45 ppg				
		Form Integrity		10.50 ppg	
		<b>Circulation/Hydraulics Data</b>			
		Model	Nat 8-P-80		Nat 8-P-80
		Bore in	6.000		6.000
		Stroke in	8.500		8.500
		Eff (%)	97		97
		bb/stk	.072		.072
		SPM	gpm		
		Total gpm	AV, Riser		Circ Pressure psi
		Total Circ Time	AV, DP		Tot Prs Loss psi
		BU Time, min	AV, DC		Pres Drop DP psi
		Total Strokes	BU Stroke		Pres Drop An psi

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Suction - 1			1 2 3 4		<b>Fluid Type: KCI/PHPA/Polymr</b>
Time	14:50	22:00					Daily Volume Made : 193.9 bbl
Depth m	1,515.0	1,515.0					Total Volume Made : 2092.2 bbl
FL Temp Deg C	34	36					Desander Underflow : 13.0 ppg @ 0.7 bph.
Density ppg @ Deg C	9.35 @ 34	9.45 @ 36				8.50   9.40	Desilter Underflow : 12.1 ppg @ 2.5 bph.
FV @ Deg C	47 @ 34	46 @ 36					Centrifuge Overflow : 9.05 ppg.
PV @ Deg C	13 @ 49	13 @ 49					Used KCI for slug. Increase of mud weight while reaming to bottom with stiffer BHA.
YP lbs/100 ft2	20	21					
Gels lbs/100 ft2	6/13/0	6/15/0					
600/300	46.0/33.0	47.0/34.0					
200/100	27.0/20.0	27.0/20.0					
6/3	7.0/5.0	7.0/5.0					
API Filtr ml/30 min	6.3	6.2			*		
HTHP ml/30 min @ Deg C	19.2 @	18.8 @				1.6.0	
Cake 32nd in	1.0/2.0	1.0/2.0					
Corr Solids % by vol	5.4	5.9					
NAP/Water % by vol	0.0/92.5	0.0/92.0					
Sand % by vol	0.50	0.50					
MBT ppb Eq.	14.0	14.0					
pH	9.00	8.90				8.80   9.50	
Alk Mud (Pm)	0.15	0.15					
Alk Filtr (P/M)	0.07/0.30	0.05/0.20					
Chlorides mg/l	25,500	26,000					
Hard Ca mg/l	340	360					
LGS/HGS %	5.3/0.2	5.5/0.4					
LGS/HGS ppb	47.90/2.70	49.93/6.37					
ASG	2.654	2.717					
PHPA ppb	1.10	1.10				1.00   1.50	
Potassium % by vol	4.6	4.6			*		
Sulfite residual mg/l	40	20			*		

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	
potassium chloride tech	25 Kg sack	461		92	369	\$A 1,380.00	Screens	Hrs Drilling 6.00
PAC-L	25 Kg bag	34		8	26	\$A 910.80	FLC 58	110 110 110 20.0 Circulating 1.50
BARAZAN D PLUS	25 Kg bag	10		2	8	\$A 553.86	FLC 58	84 84 50 20.0 Trips 11.00
phpa	25 Kg bag	73		3	70	\$A 366.81	Hydrocyclones	Cones Screens Hrs Rig
DEXTRID LTE	25 Kg bag	114		8	106	\$A 286.64	Harrisburg Desand	2 10 13.0 Surveys
DEXTRID LTE	50 lb bag	40			40		Harrisburg Desilter	12 5 13.0 Fishing
Baracide	25 Kg can	8		1	7	\$A 277.63	Centrifuge	Speed Feed Rate Hrs Run Casing
potassium hydroxide	20 Kg pail	25		3	22	\$A 182.25	DFE600	24.0 Coring
BARACOR 129	25 Kg can	23		3	20	\$A 171.27		Reaming 5.50
BARABUF	50 lb bag		1		1			Testing
BARACOR 100	55 gal drum	2			2			Logging
BARA-DEFOAM W300	25 l can	4			4			Dir Work
BARAFILM-Petrofree	55 Gal drum	1			1			Repair
barite	25 Kg bag	909			909			Other
BAROFIBRE	25 lb bag	56			56			Total 24.00
BAROLIFT	15 lb box	3			3			Rotating 11.50
bentonite	25 Kg bag	46			46			ROP 7.0
calcium chloride	25 Kg bag	4			4			
Circal 60/16	25 Kg bag	202			202			
Circal Y	25 Kg bag	192			192			
citric acid	25 Kg bag	16			16			
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
N-VIS P PLUS	50 lb bag		5		5			
Omyacarb 50	25 Kg bag	30			30			

Daily Products Cost	\$A	4,129.26	Total Daily Cost	\$A	4,929.26																		
Cumulative Products Cost	\$A	60,364.06	Total Cumulative Cost	\$A	71,564.06																		
Baroid Representatives: Tun Aung																							
Office	90 Talinga Rd	Melbourne	Tel 61-03-9581-7555																				
Warehouse	c/o of Esso Australia Ltd via Toora		Victoria	Tel 61-3-56-881-445																			
<table border="1"> <thead> <tr> <th>Other Fluid Types</th> <th>Vol bbl</th> <th>Deviation Information</th> </tr> </thead> <tbody> <tr> <td>Premix</td> <td>105.0</td> <td>Survey MD 1,472 m</td> </tr> <tr> <td></td> <td></td> <td>Survey TVD 1,272 m</td> </tr> <tr> <td></td> <td></td> <td>Angle 48.76</td> </tr> <tr> <td></td> <td></td> <td>Direction 309</td> </tr> <tr> <td></td> <td></td> <td>Horiz Displ. 491 m</td> </tr> </tbody> </table>						Other Fluid Types	Vol bbl	Deviation Information	Premix	105.0	Survey MD 1,472 m			Survey TVD 1,272 m			Angle 48.76			Direction 309			Horiz Displ. 491 m
Other Fluid Types	Vol bbl	Deviation Information																					
Premix	105.0	Survey MD 1,472 m																					
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		Horiz Displ. 491 m																					

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Daily Drilling Fluid Report

Baroid, a Halliburton Company

Date	3/06/2004	Depth	1,686.0 m
Spud Date	20/05/2004	Rig Activity	Total Depth. Pull Out To Log.

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6	
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18	
Country Australia	State/Province/Region Victoria	County/Geographic Area Otway Basin		Field or Block Iona/PPL-2	
<b>Bit Information</b>		<b>Drill St ring</b>	<b>OD</b>	<b>ID</b>	<b>Length</b>
Bit Size	12.250 in	ITEM	in	in	m
Make/Type	DBS / FM2565	Drill Pipe	5.000	4.276	1,419.3
Jets	5x18	Drill Pipe	5.000	3.000	56.1
TFA	1.243 sq-in	Drill Collar	6.500	2.750	9.8
Jets Velocity	57.0 m/sec	Drill Pipe	5.000	3.000	167.2
Jet Impact Force	689.5 lbf	Drill Collar	8.000	3.000	33.6
HHSI	1.10 hhp/in <sup>2</sup>				
Pres Drop @ Bit	306.2 psi				
Bit Depth	1,686.0 m	Open Hole	12.250		1,022.0
ECD @ Shoe	9.93 ppg				
ECD @ Bit	9.97 ppg				
		Form Integrity		10.50 ppg	
		Casing		MD	
		20.000 @		11.0	
		13.375 @		664.0	
		Circulation/Hydraulics Data			
Model		Nat 8-P-80		Nat 8-P-80	
Bore in		6.000		6.000	
Stroke in		8.500		8.500	
Eff (%)		97		97	
bbl/stk		.072		.072	
SPM		120		120	
gpm		363		363	
Total gpm		727 AV, Riser		Circ Pressure psi 1,575.0	
Total Circ Time		62.7 AV, DP		40.5 Tot Prs Loss psi 1,564.8	
BU Time, min		39.7 AV, DC		63.1 Pres Drop DP psi 985.0	
Total Strokes		15,046 BU Stroke		9,524 Pres Drop An psi 42.1	

Properties	1	2 Hyd	3	4	Targets	Program	Fluid Treatments
Source	Suction - 1	Flow Line			1 2 3 4		<b>Fluid Type: KCl/PHPA/Polymer</b>
Time	15:20	23:20					Daily Volume Made : 108.8 bbl.
Depth m	1,686.0	1,686.0					Total Volume Made : 2201.0 bbl.
FL Temp Deg C	56	48					Desander Underflow : 13.8 ppg @ 0.7 bph.
Density ppg @ Deg C	9.75 @ 56	9.80 @ 48			* *	8.50   9.40	Desilter Underflow : 13.2 ppg @ 3.0 bph.
FV @ Deg C	49 @ 56	52 @ 48					Centrifuge Overflow : 9.5 ppg.
PV @ Deg C	15 @ 49	16 @ 49					Added 2.5 ppb each of Circal 60/16
YP lbs/100 ft <sup>2</sup>	21	24					(Barcarb 25) and Circal Y (Barcarb 100) at
Gels lbs/100 ft <sup>2</sup>	6/18/0	7/21/0					1582 m. While drilling through the Warre
600/300	51.0/36.0	56.0/40.0					Sands and Eumeralla Silts mud weight
200/100	30.0/21.0	32.0/23.0					increased from 9.5 + to 9.7+ ppg.
6/3	7.0/5.0	8.0/6.0					At TD, pumped 50 bbl BAROLIFT sweep (0.3
API Filtr ml/30 min	5.7	5.8				6.0	ppb) before and after wiper trip, minimal
HTHP ml/30 min @ Deg C	17.2 @	17.4 @					increase in returns. Pumped 2 x KCl pills.
Cake 32nd in	1.0/2.0	1.0/2.0					
Corr Solids % by vol	8.2	8.5					
NAP/Water % by vol	0.0/90.0	0.0/89.5					
Sand % by vol	1.00	1.10					
MBT ppb Eq.	16.0	16.0					
pH	8.90	9.00				8.80   9.50	
Alk Mud (Pm)	0.10	0.15					
Alk Filtr (P/Mf)	0.07/0.35	0.10/0.35					
Chlorides mg/l	23,000	25,000					
Hard Ca mg/l	520	480					
LGS/HGS %	7.5/0.7	8.0/0.5					
LGS/HGS ppb	68.48/9.89	72.87/8.07					
ASG	2.731	2.703					
PHPA ppb	1.00	1.00				1.00   1.50	
Potassium % by vol	4.2	4.5			* *	3.0   4.0	
Sulfite residual mg/l	80	30					

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	Drilling 10.00
PAC-L	25 Kg bag	26		10	16	\$A 1,138.50	Screens	Circulating 4.50
BARAZAN D PLUS	25 Kg bag	8		4	4	\$A 1,107.72	FLC 58	Trips 4.50
potassium chloride tech	25 Kg sack	369		70	299	\$A 1,050.00	FLC 58	Rig
Circal Y	25 Kg bag	192		58	134	\$A 926.84	Hydrocyclones	Surveys 1.50
Circal 60/16	25 Kg bag	202		48	154	\$A 624.96	Cones	Fishing
BAROLIFT	15 lb box	3		2	1	\$A 586.66	Screens	Run Casing
potassium hydroxide	20 Kg pail	22		7	15	\$A 425.25	Hamisburg Desand	Coring
Baracide	25 Kg can	7		1	6	\$A 277.63	2 10	Reaming 3.00
DEXTRID LTE	25 Kg bag	106		7	99	\$A 250.81	Hamisburg Desilter	Testing
DEXTRID LTE	50 lb bag	40			40		12 5	Logging
BARACOR 129	25 Kg can	20		2	18	\$A 114.18	Centrifuge	Dir Work
BARABUF	50 lb bag	1			1		Speed	Repair
BARACOR 100	55 gal drum	2			2		Feed Rate	Other 0.50
BARA-DEFOAM W300	25 l can	4			4		Hrs	Total 24.00
BARAFILM-Petrofree	55 Gal drum	1			1		DFE600	Rotating 13.00
barite	25 Kg bag	909			909			ROP 17.0
BAROFIBRE	25 lb bag	56			56			Dil Rate
bentonite	25 Kg bag	46			46			
calcium chloride	25 Kg bag	4			4			
citric acid	25 Kg bag	16			16			
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
N-VIS P PLUS	50 lb bag	5			5			
Omyacarb 50	25 Kg bag	30			30			
phpa	25 Kg bag	70			70			

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.



Daily Drilling Fluid Report

908148 166

Report No 016

Baroid, a Halliburton Company

Date	4/06/2004	Depth	1,686.0 m
Spud Date	20/05/2004	Rig Activity	Logging

Operator TXU GAS STORAGE PTY LTD		Report For Peter Dwyer / Andy Urdevics		Well Name Iona-6								
Contractor Century Drilling Ltd		Report For Scott Bucknell/Neville Scutcheon		Rig Name 18								
Country Australia	State/Province/Region Victoria	County/Geographic Area Otway Basin		Field or Block Iona/PPL-2								
<b>Bit Information</b>		Drill String	OD	ID	Length	OD	Casing	MD	<b>Circulation/Hydraulics Data</b>			
Bit Size in		ITEM	in	in	m	in	Set	m	Model	Nat 8-P-80	Nat 8-P-80	
Make/Type /						20.000	@	11.0	Bore in	6.000	6.000	
Jets						13.375	@	664.0	Stroke in	8.500	8.500	
TFA sq-in									Eff (%)	97	97	
Jets Velocity m/sec									bbl/stk	.072	.072	
Jet Impact Force lbf									SPM			
HHSI hhp/in2									gpm			
Pres Drop @ Bit psi									Total gpm	AV, Riser	Circ Pressure	psi
Bit Depth m		Open Hole	12.250		1,022.0				Total Circ Time	AV, DP	Tot Prs Loss	psi
ECD @ Shoe ppg									BU Time, min	AV, DC	Pres Drop DP	psi
ECD @ Bit ppg									Total Strokes	BU Stroke	Pres Drop An	psi
									Form Integrity	10.50	ppg	

Properties	1	2	3	4	Targets	Program	Fluid Treatments		
Source	Suction - 1				1	2	3	4	Fluid Type: KCI/PHPA/Polymer
Time	02:00								Daily Volume Made : Nil.
Depth m	1,686.0								Total Volume Made : 2201.0 bbl.
FL Temp Deg C	40								No chemicals used today. Inventory adjustment made on Report #15.
Density ppg @ Deg C	9.80 @				*		8.50	9.40	Total 48 pallets to be sent back (including 1 pallet of mud testing equipment).
FV @ Deg C	53 @ 48								Baroid off location on 5/6/2004.
PV @ Deg C	0 @ 49								
YP lbs/100 ft2	0								
Gels lbs/100 ft2	0/0/0								
600/300	0.0/0.0								
200/100	0.0/0.0								
6/3	0.0/0.0								
API Filt ml/30 min	0.0								
HTHP ml/30 min @Deg C							6.0		
Cake 32nd in	0.0/0.0								
Corr Solids % by vol	8.5								
NAP/Water % by vol	0.0/89.5								
Sand % by vol	0.00								
MBT ppb Eq.	0.0								
pH	0.00						8.80	9.50	
Alk Mud (Pm)	0.00								
Alk Filt (P/AM)	0.00/0.00								
Chlorides mg/l	0								
Hard Ca mg/l	0								
LGS/HGS %	8.0/0.5								
LGS/HGS ppb	72.87/8.07								
ASG	2.703								

Product Name	Units	Start	Rec	Used	End	Cost	Solid Control Equipment	Time (Hrs)
Drilling Fluids Engineer	Day(s)			1		\$A 800.00	Shaker	Drilling
BARABUF	50 lb bag	1			1		FLC 58	Circulating
Baracide	25 Kg can	6			6		FLC 58	Trips
BARACOR 100	55 gal drum	2			2		Hydrocyclones	Rig
BARACOR 129	25 Kg can	18			18		Cones	Surveys
BARA-DEFOAM W300	25 l can	4			4		Screens	Fishing
BARAFILM-Petrofree	55 Gal drum	1			1		Harrisburg Desand	Run Casing
BARAZAN D PLUS	25 Kg bag	4			4		Harrisburg Desilter	Coreing
barite	25 Kg bag	909			909		Centrifuge	Reaming
BAROFIBRE	25 lb bag	56			56		Speed	Testing
BAROLIFT	15 lb box	1			1		Feed Rate	Logging
bentonite	25 Kg bag	46			46		Hrs	Dir Work
calcium chloride	25 Kg bag	4			4		DFE600	Repair
Circal 60/16	25 Kg bag	154			154			Other
Circal Y	25 Kg bag	134			134			Total
citric acid	25 Kg bag	16			16			Rotating
DEXTRID LTE	25 Kg bag	99			99			ROP
DEXTRID LTE	50 lb bag	40			40			Dil Rate
EZ SPOT	55 gal drum	4			4			
Kwikseal Fine	40 lb bag	40			40			
N-VIS P PLUS	50 lb bag	5			5			
Omyacarb 50	25 Kg bag	30			30			
PAC-L	25 Kg bag	16			16			
phpa	25 Kg bag	70			70			
potassium chloride tech	25 Kg sack	299			299			
potassium hydroxide	20 Kg pail	15			15			

Daily Products Cost	\$A	0.00	Total Daily Cost	\$A	800.00	Other Fluid Types	Vol bbl	Deviation Information
Cumulative Products Cost	\$A	66,866.61	Total Cumulative Cost	\$A	79,666.61			Survey MD
Baroid Representatives: Tun Aung		Office		90 Talinga Rd		Melbourne		Survey TVD
		Warehouse		c/o of Esso Australia Ltd		via Toora		Angle
				Victoria		Tel 61-03-9581-7555		Direction
						Tel 61-3-56-881-445		Horiz Displ.

The recommendations made hereon shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Baroid, a Halliburton Company or its agents, and are statements of opinion only.

**APPENDIX 4**

Cuttings Descriptions (664m – TD)

IONA-6 CUTTINGS DESCRIPTION 664M-TD	
Depth (mRT)	Lithology & Texture
669	95% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse to vcse, poorly - mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic). Fair to good inferred porosity. 5% Siltstone, lt-med gry, had, blocky, ?qtz cmt, sandy, micro-micaceous. Trace Claystone, med-gry to rd-brn, hd, angular, massive, micaceous
672	100% Sandstone, translucent to lt gry, loose -friable, med-cse grned, occ vcse, poorly - mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic). Fair to good inferred porosity. Tr Siltstone and Claystone as above.
675	100% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse to vcse, poorly - mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic). Fair to good inferred porosity. tr Siltstone and Claystone as above.
678	100% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse to vcse, poorly - mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic). Fair to good inferred porosity. tr Siltstone lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous.and Claystone as above.
681	100% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse to vcse, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic). Fair to good inferred porosity. tr Siltstone lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous.and Claystone as above.
684	95% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to vcse, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic). Fair to good inferred porosity. 5% Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry, had, massive, micromicac.
687	95% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to vcse, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic). Fair to good inferred porosity. 5% Siltstone,lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous Tr Claystone, med-dk gry, had, massive, micromicac.
690	95% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to vcse, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic). Fair to good inferred porosity. 5% Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry, had, massive, micromicac.
693	95% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to med, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. 5% Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry, had, massive, micromicac.
696	95% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to med, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. 5% Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry to rd-brn, had, massive, micromicac.
699	sample missed
702-705	95% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to med, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. 5% Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry to rd-brn, had, massive, micromicac.
708	95% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to med, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. 5% Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry to rd-brn, had, massive, micromicac.
711	90% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to vcse, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. 10% Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry to rd-brn, hrd, massive, micromicac.
714	100% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to med, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. Tr Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry, hrd, massive, micromicac.
717	100% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to vcse, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. Tr Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry, hrd, massive, micromicac.
720	100% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to vcse, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. Tr Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. Tr Claystone, med-dk gry, hrd, massive, micromicac.
723	80% Sandstone, translucent to lt gry to rare lt yel grey, loose -friable, med-vcse grned, dom cse to vcse, poorly-mod srtd, ang - submnded, trace lithic grns (granitic, & quartzitic), tr pyrite. Fair to good inferred porosity. 5% Siltstone, lt-med gry to lt gry-grn, had, blocky, ?qtz cmt, micro-micaceous. 15% Claystone, med-dk gry, hrd, blocky-platy fract, massive, micromicac.













1008	80% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse, mod-poorly srtd, ang - subang, tr pyrite. Good to excellent inferred porosity. 20% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd, blocky-platy fract, massive, micromicac.
1011-1014	95% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse, mod-poorly srtd, ang - subang, tr pyrite. Good to excellent inferred porosity. 5% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd, blocky-platy fract, massive, micromicac.
1017	90% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse, mod-poorly srtd, ang - subang, tr pyrite. Good to excellent inferred porosity. 10% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd, blocky-platy fract, massive, micromicac.
1020	90% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med, mod-well srtd, ang - subang, tr pyrite. Good to excellent inferred porosity. 10% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd, blocky-platy fract, massive, micromicac.
1023	90% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse-vcse, mod-priy srtd, ang - subang, tr pyrite. Good inferred porosity. 10% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd, blocky-platy fract, massive, micromicac.
1026	95% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 5% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd, blocky-platy fract, massive, micromicac.
1029	90% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse-vcse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 10% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd. Tr Coal, blk, vitreous.
1032	90% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse-vcse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 10% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd. Tr Coal, blk, vitreous.
1035	90% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse-vcse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 10% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd. Tr Coal, blk, vitreous.
1038	90% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse-vcse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 10% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd. Tr Coal, blk, vitreous.
1041-1044	95% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 5% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd.
1047	95% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 5% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd.
1050	90% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 5% Siltstone, med-dk gry, sft-firm, argillac, blocky, micro-micaceous. 5% Claystone, med-dk gry to blk-gry, hrd., blk, micac.
1053	60% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 40% Siltstone, lt-med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd., blk, micac.
1056	60% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 40% Siltstone, lt-med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd., blk, micac.
1059-1062	85% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 15% Siltstone, lt-med-dk gry, sft-firm, argillac, blocky, micro-micaceous. Tr Claystone, med-dk gry, hrd., blk, micac.
1065-1068	30% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity. 70% Siltstone, lt-med-dk gry, sft-firm, argillac, blocky. Tr Claystone, med-dk gry, hrd., blk, micac.
1071	85% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom cse, mod srtd, ang - subang, tr pyrite. Good inferred porosity.















	<p>Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  10% Silty Claystone, med gryish-grn, sft, dispersive, glauconitic.</p>
1530	<p>90% Sandstone, translucent to lt gry, loose -friable, med-cse grned, occ vcse, mod srted, subang to submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  10% Silty Claystone, med gryish-grn, sft, dispersive, glauconitic.</p>
1533-1536	<p>95% Sandstone, translucent to lt gry, loose -friable, med-cse grned, occ vcse, mod srted, subang to submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  5% Silty Claystone, med gryish-grn, sft, dispersive, glauconiti.c.</p>
1539-1542	<p>90% Sandstone, translucent to lt gry, loose -friable, med-cse grned, occ vcse, mod srted, subang to submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  10% Silty Claystone, med gry, sft, dispersive, glauconitic.</p>
1545-1551	<p>95% Sandstone, translucent to lt gry, loose -friable, med-cse grned, dom cse, occ vcse, mod srted, subang to submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  5% Silty Claystone, med gry to med-gry, sft, dispersive.</p>
1554-1557	<p>95% Sandstone, translucent to lt gry, loose -friable, med-cse grned, dom cse, occ vcse, mod srted, subang to submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  5% Silty Claystone, to med-gry, sft, dispersive.</p>
1560-1563	<p>95% Sandstone, translucent to lt gry, loose -friable, cse-vcse grned, mod srted, subang to dom submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  5% Silty Claystone, med-gry, sft, dispersive.</p>
1566-1569	<p>95% Sandstone, translucent to lt gry, loose -friable, cse-vcse grned, mod srted, subang to dom submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  5% Silty Claystone, to med-gry, sft, dispersive.</p>
1572-1578	<p>95% Sandstone, translucent to lt gry, loose -friable, med-cse-vcse grned, mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  5% Silty Claystone, med gryish-brn to med-gry, sft, dispersive.</p>
1581-1584	<p>95% Sandstone, translucent to lt gry, loose -friable, med-cse-vcse grned, mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  5% Silty Claystone, med gryish-brn to med-gry, sft, dispersive.</p>
1587	<p>95% Sandstone, translucent to lt gry, loose -friable, med-cse-vcse grned, mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  Tr Sandy Siltstone, lt gry-brn to occ yell-gry, sli argillac, brittle-sft, blocky.  5% Silty Claystone, med gryish-brn to med-gry, sft, dispersive.</p>
1590	<p>80% Sandstone, translucent to lt gry, loose -friable, med-cse-vcse grned, mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  10% Silty Claystone, med gry-brn to med-gry, sft, dispersive.  10% Coal,blk, brittle, fissile, vitreous.</p>
1593-1596	<p>70% Sandstone, translucent to lt gry, loose -friable, med-cse-vcse grned, mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  20% Silty Claystone, med gry-brn to med-gry, sft, dispersive.  10% Coal,blk, brittle, fissile, vitreous.</p>
1599-1602	<p>80% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  20% Silty Claystone, med gry-brn to med-gry, sft, dispersive.  Tr Coal,blk, brittle, fissile, vitreous.</p>
1605	<p>80% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  20% Silty Claystone, med gry-brn to med-gry, sft, dispersive.  Tr Coal,blk, brittle, fissile, vitreous.</p>
1608	<p>80% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  20% Silty Claystone, med gry-brn to med-gry, sft, dispersive.</p>
1611	<p>80% Sandstone, translucent to lt gry, loose -friable, med-vcse grned, dom med-cse mod-poorly srted, dom subang submdded, tr pyrite. Good to excellent inferred porosity.  20% Silty Claystone gading to Argillaceous Siltstone, med gry-brn to med-gry, sft, dispersive.</p>
1614	<p>80% Sandstone, translucent to lt gry, loose -friable to firm, med-vcse grned, dom med, mod-poorly srted, dom subang submdded, tr pyrite, patchily cmted with calcite in finer grain fraction. Good inferred porosity.  20% Silty Claystone gading to Argillaceous Siltstone, med gry-brn to med-gry, sft, dispersive.</p>
1617	<p>80% Sandstone, translucent to lt gry, loose -friable to firm, med-vcse grned, dom med, mod-poorly srted, dom subang submdded, tr pyrite, patchily cmted with calcite in finer grain fraction. Good inferred porosity.  20% Silty Claystone gading to Argillaceous Siltstone, med gry-brn to med-gry, sft, dispersive.</p>
1620	<p>80% Sandstone, translucent to lt gry, loose -friable to firm, med-vcse grned, dom med-cse mod-poorly srted, dom subang submdded, tr pyrite, patchily cmted with calcite in finer grain fraction. Good inferred porosity.  20% Silty Claystone gading to Argillaceous Siltstone, med gry-brn to med-gry, sft, dispersive.</p>



**APPENDIX 5**

Daily Geological Reports by ECL Australia

**APPENDIX 6**

Well Seismic Edit & Geogram Report

**TXU Gas Storage Pty Ltd**

**IONA-6**

**WELL SEISMIC PROCESSING REPORT  
CHECKSHOT / GEOGRAM**

FIELD: Iona

COUNTRY: Australia

COORDINATES: Easting: 677 185.6 m  
: Northing: 5 728 761.7 m

PERMIT: PPL2

DATE OF SURVEY: 4-JUN-2004

SURVEY TYPE: Offset Source Checkshot, Onshore, Airgun

REFERENCE NO: DS 1004-05

Prepared by: L. Dahlhaus

Schlumberger Oilfield Australia Pty Ltd  
Level 5, 256 St. Georges Terrace, Perth  
WA 6000 Australia



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PE908150

This is an enclosure indicator page.  
The enclosure PE908150 is enclosed within the  
container PE908148 at this location in this  
document.

The enclosure PE908150 has the following characteristics:

ITEM\_BARCODE = PE908150  
CONTAINER\_BARCODE = PE908148  
NAME = Iona-6 VSP Composite Display 1  
BASIN = OTWAY  
OFFSHORE? = Y  
DATA\_TYPE = SYNTH\_SEISMOGRAM  
DATA\_SUB\_TYPE = HARDCOPY-PAPER  
DESCRIPTION =  
REMARKS = 04-JUN-2004  
DATE\_WRITTEN =  
DATE\_PROCESSED = TXU Gas Storage Pty Ltd  
DATE\_RECEIVED =  
RECEIVED\_FROM = 16-NOV-2004  
WELL\_NAME =  
CONTRACTOR =  
AUTHOR =  
ORIGINATOR = DH00\_SW  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY =

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908148 250

PE908151

This is an enclosure indicator page.  
The enclosure PE908151 is enclosed within the  
container PE908148 at this location in this  
document.

The enclosure PE908151 has the following characteristics:

ITEM\_BARCODE = PE908151  
CONTAINER\_BARCODE = PE908148  
NAME = Iona-6 VSP Composite Display 2  
BASIN = OTWAY  
OFFSHORE? = Y  
DATA\_TYPE = SYNTH SEISMOGRAM  
DATA\_SUB\_TYPE = HARDCOPY-PAPER  
DESCRIPTION =  
REMARKS = 04-JUN-2004  
DATE\_WRITTEN =  
DATE\_PROCESSED = TXU Gas Storage Pty Ltd  
DATE\_RECEIVED =  
RECEIVED\_FROM = 16-NOV-2004  
WELL\_NAME =  
CONTRACTOR =  
AUTHOR =  
ORIGINATOR = DH00\_SW  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY =

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PE908152

This is an enclosure indicator page.  
The enclosure PE908152 is enclosed within the  
container PE908148 at this location in this  
document.

The enclosure PE908152 has the following characteristics:

ITEM\_BARCODE = PE908152  
CONTAINER\_BARCODE = PE908148  
NAME = Iona-6 Velocity Cross Plot  
BASIN = OTWAY  
OFFSHORE? = Y  
DATA\_TYPE = VELOCITY\_CHART  
DATA\_SUB\_TYPE = HARDCOPY-PAPER  
DESCRIPTION =  
REMARKS = 04-JUN-2004  
DATE\_WRITTEN =  
DATE\_PROCESSED = TXU Gas Storage Pty Ltd  
DATE\_RECEIVED =  
RECEIVED\_FROM = 16-NOV-2004  
WELL\_NAME =  
CONTRACTOR =  
AUTHOR =  
ORIGINATOR = DH00\_SW  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY =

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**APPENDIX 7**

Petrophysics Report

## 12. Reference

Kuttan, K., Kulla, J.B. and Neumann, R.G. 1986 APEA Journal:

908148 293

Freshwater Influx In The Gippsland Basin: Impact On Formation Evaluation, Hydrocarbon Volumes, and Hydrocarbon Migration.

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PE613660

This is an enclosure indicator page.  
The enclosure PE613660 is enclosed within the  
container PE908148 at this location in this  
document.

The enclosure PE613660 has the following characteristics:

ITEM\_BARCODE = PE613660  
CONTAINER\_BARCODE = PE908148  
NAME = Iona-6 mudlog 1:200  
BASIN = OTWAY  
OFFSHORE? = Y  
DATA\_TYPE = MUD\_LOG  
DATA\_SUB\_TYPE = HARDCOPY-PAPER  
DESCRIPTION =  
REMARKS = 30-SEP-2004  
DATE\_WRITTEN =  
DATE\_PROCESSED = TXU Gas Storage Pty Ltd  
DATE\_RECEIVED =  
RECEIVED\_FROM = 16-NOV-2004  
WELL\_NAME = 1681.2  
CONTRACTOR =  
AUTHOR =  
ORIGINATOR = DH00\_SW  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY =

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PE613661

This is an enclosure indicator page.  
The enclosure PE613661 is enclosed within the  
container PE908148 at this location in this  
document.

The enclosure PE613661 has the following characteristics:

ITEM\_BARCODE = PE613661  
CONTAINER\_BARCODE = PE908148  
    NAME = Iona-6 composite log  
    BASIN = OTWAY  
    OFFSHORE? = Y  
    DATA\_TYPE = COMPOSITE\_LOG  
    DATA\_SUB\_TYPE = HARDCOPY-PAPER  
    DESCRIPTION =  
    REMARKS = 30-SEP-2004  
    DATE\_WRITTEN =  
DATE\_PROCESSED = TXU Gas Storage Pty Ltd  
DATE\_RECEIVED =  
RECEIVED\_FROM = 16-NOV-2004  
    WELL\_NAME = 1686  
    CONTRACTOR =  
    AUTHOR =  
    ORIGINATOR = DH00\_SW  
    TOP\_DEPTH =  
    BOTTOM\_DEPTH =  
ROW\_CREATED\_BY =

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PE613662

This is an enclosure indicator page.  
The enclosure PE613662 is enclosed within the  
container PE908148 at this location in this  
document.

The enclosure PE613662 has the following characteristics:

ITEM\_BARCODE = PE613662  
CONTAINER\_BARCODE = PE908148  
    NAME = Iona-6 composite log reservoir section  
    BASIN = OTWAY  
    OFFSHORE? = Y  
    DATA\_TYPE = COMPOSITE LOG  
    DATA\_SUB\_TYPE = HARDCOPY-PAPER  
    DESCRIPTION =  
    REMARKS = 30-SEP-2004  
    DATE\_WRITTEN =  
DATE\_PROCESSED = TXU Gas Storage Pty Ltd  
DATE\_RECEIVED =  
RECEIVED\_FROM = 16-NOV-2004  
    WELL\_NAME = 1349  
    CONTRACTOR =  
    AUTHOR =  
    ORIGINATOR = DH00\_SW  
    TOP\_DEPTH =  
    BOTTOM\_DEPTH =  
ROW\_CREATED\_BY =

(Inserted by DNRE - Vic Govt Mines Dept)