



WATER-BASED MUD REPORT No. 12

Date	27/08/2005	Depth/TVD	1131 m / 1131 m
Spud Date	16/08/2005	Mud Type	KCl/PHPA/Polymer
Water Depth		Activity	Drilling

Operator : Origin Energy Report For : Chris Dann / Bryan Webb Well Name : Peterborough - 01 ST1 Contractor : Century Resources Report For : Ben Hale	Field/Area : Onshore Otway Basin Description : Exploration Location : Victoria M-I Well No. :
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DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA	
Bit Size	8.5 in Smith M704VC	Surface	Hole	Pump Make	NATIONAL 8P-80
Nozzles	18x3 / 1/32"	20in @16m (16TVD)	225.2	Pump Size	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	3.027 gal/stk
4.5 in	907 m	9.625in @496m (496TVD)	329.8	Pump stk/min	90@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	545 gal/min
4.5 in	37 m	in @m (TVD)	555	Bottoms Up	13.7 min 2459 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	42.8 min 7699 stk
6.75 in	167 m		42	Circulating Pressure	1650 psi

MUD PROPERTIES			
Sample From		PIT@12:00	PIT@23:30
Flow Line Temp	°C	37	39
Depth/TVD	m	1005/1005	1131/1131
Mud Weight	sp.gr.	1.08@37°C	1.08@39°C
Funnel Viscosity	s/qt	57	55
Rheology Temp	°C	49	49
R600/R300		66/47	64/45
R200/R100		38/28	36/27
R6/R3		7/5	7/5
PV	cP	19	19
YP	lb/100ft²	28	26
10s/10m/30m Gel	lb/100ft²	6/8/11	5/8/13
API Fluid Loss	cc/30 min	6.4	6.2
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	4.5	4.5
Oil/Water	%Vol	0/95.5	0/95.5
Sand	%Vol	1	1
MBT	lb/bbl	7.5	7.5
pH		9.5	9
Alkal Mud (Pm)		0.4	0.3
Pf/Mf		0.25/0.8	0.2/0.6
Chlorides	mg/l	20000	19000
Hardness Ca	mg/l	220	200
KCl	%	3.5	3.5
Excess Sulphite	mg/L	100	100
PHPA	ppb	1.3	1.3

PRODUCTS USED LAST 24 HRS		
Products	Size	Amt
CITRIC ACID	25 KG BG	6
SODIUM BICARBONATE	25 KG BG	8
M-I BAR	25 KG BG	80
POTASSIUM CHLORIDE	25 KG BG	30
DEFOAM A	25 LT CN	3
Polyplus Powder	25 KG BG	6
DUOTEC	25 KG BG	5
POLYPAC UL	25 KG BG	8
OS-1	25 KG BG	2

SOLIDS EQUIP		
	Size	Hr
DFE Shaker 1	140	24
DFE Shaker 2	140	24
D-Sander	2 x 12"	16
D-Silter	10 x 6"	16

MUD PROPERTY SPECIFICATIONS	
Weight	1.08-1.13
Viscosity	35 - 50
Filtrate	<7

REMARKS AND TREATMENT
 Continue treating for cement contamination of mud with sodium bicarbonate and citric acid. Add Pac UL for fluid loss control, Duotec for low enf rheology. Adding defoamer as required to minimise aeration of mud. Installed 2 x 110 mesh screens to lower shaker bed angle as poor removal of cuttings from screens was causing high screen elevation and short screen life. Shall replace with 140 mesh screens when conditions permit.

REMARKS
 Continue drilling sidetrack to 1131 meters as per DD's instructions for straight hole.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG (bbl)	SOLIDS ANALYSIS (%/lb/bbl)	MUD RHEOLOGY & HYDRAULICS
Rig Up/Service		Oil Added	NaCl	np/na Values
Drilling	24	Water Added	KCl	kp/ka (lb*s^n/100ft²)
Tripping		Mud Received	Low Gravity	Bit Loss (psi / %)
Non-Productive Tim		Formation	Bentonite	Bit HHP (hhp / HSI)
Condition Hole		Tripping	Drill Solids	Bit Jet Vel (m/s)
Wait on Cement		Desander	Weight Material	Ann. Vel DP (m/min)
Dir Survey		Dumped	Chemical Conc	Ann. Vel DC (m/min)
		Shakers	Inert/React	Crit Vel DP (m/min)
		Left in Hole	Average SG	Crit Vel DC (m/min)
			Carb/BiCarb (m mole/L)	ECD @ 1131 (sp.gr.)

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Peter Dwyer	0415 845 672		A\$ 4,623.69	A\$ 41,978.91