

# DRILLING FLUID REPORT



Report #	50	Date :	27-Oct-2006
Rig No	32	Spud :	8-Sep-2006
Depth	3700 to 3701	Metres	

<b>OPERATOR</b> BEACH Petroleum LTD	<b>CONTRACTOR</b> ENSIGN Int'l Energy SVCs		
<b>REPORT FOR</b> Brian Marriott	<b>REPORT FOR</b> Andy Baker		
<b>WELL NAME AND No</b> GLENAIRE # 1 ST1	<b>FIELD</b> PEP 160	<b>LOCATION</b> OTWAY Basin	<b>STATE</b> VICTORIA

<b>DRILLING ASSEMBLY</b>	<b>JET SIZE</b>	<b>CASING</b>	<b>MUD VOLUME (BBL)</b>	<b>CIRCULATION DATA</b>
BIT SIZE 6.00 TYPE Reed DSX111	18 18 18	13 3/8 SURFACE 997 ft SET @ 304 M	HOLE 381 PITS 308	PUMP SIZE 5 X 8.5 Inches CIRCULATION PRESS (PSI) 1550 psi
DRILL PIPE SIZE 3.5 TYPE 15.5 #	Length 3454 Mtrs	9 5/8 INTERMEDIATE 4107 ft SET @ 1252 M	TOTAL CIRCULATING VOL. 909	PUMP MODEL 3 x NAT 8-P80 ASSUMED EFF 97 % BOTTOMS UP (min) 69 min
DRILL PIPE SIZE 3.50 TYPE HW	Length 86 Mtrs	7 PRODUCTION. o LINER Set @ 2999 M	IN STORAGE 220	BBL/STK 0.0516 STK / MIN 90 TOTAL CIRC. TIME (min) 202 min
DRILL COLLAR SIZE (") 4.75	Length 161 Mtrs	MUD TYPE 5% KCI-PHPA-POLYMER		BBL/MIN 4.50 GAL / MIN 189 ANN VEL. (ft/min) 195 DP 345 Lam Lam

<b>SAMPLE FROM</b>	<b>MUD PROPERTIES</b>	<b>MUD PROPERTY SPECIFICATIONS</b>
TIME SAMPLE TAKEN	Below Shkrs 11.00 Below Shkrs 01.30	Mud Weight 12 - 12.2 API Filtrate 6 - 8 HPHT Filtrate NA
DEPTH (ft) - (m)	Metres 3,701 3,701	Plastic Vis ALAP Yield Point 8 - 15 pH 9.0 - 9.5
FLOWLINE TEMPERATURE	°C 49 °F 45	KCI >5% PHPA 0.75 - 1.5 Sulphites 80 - 120
WEIGHT	ppg / SG 11.10 1.333 12.10 1.453	<b>OBSERVATIONS</b>
FUNNEL VISCOSITY (sec/qt) API @ °C	40 41	Increasing mud weight led to increased downhole losses. Kwikseal Fine additions appeared to minimise the losses.
PLASTIC VISCOSITY cP @ 55 °C	13 14	Initial mud weight increases were made with barite, but when further volume was required calcium carbonate was the main additive to increase the weight to 12.1 ppg. The calcium carbonate also acted as a LCM
YIELD POINT (lb/100ft²)	14 18	Shakers occasionally bypassed when large amounts of LCM returned. Shaker screens changed to 84 mesh later in the day to prevent stripping out of weight material.
GEL STRENGTHS (lb/100ft²) 10 sec/10 min	2:6 3:6	Note that volume and material usage was through to 3.00 am 28th Oct.
RHEOLOGY q 600 / q 300	40 27 46 32	Mud Storage : Pill Tank has 78 bbls @ 14.4 ppg Premix Tank has 84 bbls @ 11.7 ppg Suction Tank has 58 bbls @ 12.1 ppg
RHEOLOGY q 200 / q 100	22 15 26 18	<b>OPERATIONS SUMMARY</b>
RHEOLOGY q 6 / q 3	3 2 4 3	RIH to 1200 m. Circulate out heavy weight slug and store in pill tank. RIH to shoe. Circulate bottoms up and repair top drive. RIH to 3652 m. Wash to bottom. Drill to 2701 m. Circulate hole clean. Flow check - slight flow. Weight up incrementally, with regular flow checks, to 12.1 ppg.
FILTRATE API (cc's/30 min)	6.4 6.8	
HPHT FILTRATE (cc's/30 min) @ °F		
CAKE THICKNESS API : HPHT (32nd in)	1 1	
SOLIDS CONTENT (% by Volume)	9.9 16.0	
LIQUID CONTENT (% by Volume) OIL/WATER	90.1 84.0	
SAND CONTENT (% by Vol.)	Tr Tr	
METHYLENE BLUE CAPACITY (ppb equiv.)	6.5 7.0	
pH	9.5 8.5	
ALKALINITY MUD (Pm)		
ALKALINITY FILTRATE (Pf / Mf)	0.20 1.40 0.12 0.85	
CHLORIDE (mg/L)	144,000 140,000	
TOTAL HARDNESS AS CALCIUM (mg/L)	60 100	
SULPHITE (mg/L)	120 100	
K+ (mg/L)	42,000 52,500	
KCI (% by Wt.)	8.0 10.0	
PHPA (ppb)	0.69 0.61	

<b>Mud Accounting (bbls)</b>				<b>Solids Control Equipment</b>							
FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY		Type	Hrs	Cones	Hrs	Size	Hrs
Premix (drill water)	220	Desander		INITIAL VOLUME	885	Centrifuge		Desander		Shaker #1	4 x 84 19
Premix (recirc from sump)		Desilter		+ FLUID RECEIVED	220	Degasser		Desilter		Shaker #2	4 x 84 19
Drill Water		Downhole	197	- FLUID LOST	197						
Direct Recirc Sump		Dumped		+ FLUID IN STORAGE	220						
Other (eg Diesel)		Other						Overflow (ppg)	Underflow (ppg)	Output (Gal/Min.)	
TOTAL RECEIVED	220	TOTAL LOST	197	FINAL VOLUME	1,129	Desander			0		
Desilter						Desilter			0		

<b>Product</b>	<b>Price</b>	<b>Start</b>	<b>Received</b>	<b>Used</b>	<b>Close</b>	<b>Cost</b>	<b>Solids Analysis</b>	<b>Bit Hydraulics &amp; Pressure Data</b>
AMC Biocide G	\$ 185.35	8		1	7	\$ 185.35	% PPB	Jet Velocity 42
Baryte	\$ 8.20	1240		1184	56	\$ 9,708.80	High Grav solids 9.3 136.58	Impact force 49
Calcium carbonate F	\$ 14.20	192		192		\$ 2,726.40	Total LGS 6.7 63.5	HHP 2
Calcium carbonate M	\$ 12.60	384		384		\$ 4,838.40	Bentonite 0.0 0.3	HSI 0.1
Calcium carbonate L	\$ 17.40	192		192		\$ 3,340.80	Drilled Solids 6.7 60.7	Bit Press Loss 19
Caustic Soda	\$ 48.90	22		1	21	\$ 48.90	Salt 8.7 81.1	CSG Seat Frac Press 2200 psi
KWIKSEAL - F	\$ 56.39	74		20	54	\$ 1,127.80	n @ 01.30 Hrs 0.52	Equiv. Mud Wt. 13.80 ppg
Potassium Chloride	\$ 18.95	252		252		\$ 4,775.40	K @ 01.30 Hrs 6.26	ECD 12.70 ppg
Salt	\$ 8.65	48		48		\$ 415.20		Max Pressure @ Shoe : 870 psi
Xanthan Gum	\$ 359.25	58		8	50	\$ 2,874.00		

<b>DAILY COST</b>	<b>CUMULATIVE COST</b>
<b>\$30,041.05</b>	<b>\$198,403.90</b>
<b>RMN ENGINEER</b> Andre Skujins	<b>CITY</b> Adelaide Office
<b>TELEPHONE</b>	08 8338 7266

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