DRILLING FLUID SUMMARY

FOR : ESSENTIAL PETROLEUM RESOURCES LTD

WELL : FINDRA # 1

OTWAY BASIN

VICTORIA

Prepared by : Neil Kyberd
Andre Skujins

Date : July 2004

R M N
Drilling Fluids

CONTENTS

Operator : **Essential Petroleum Resources LTD**
Well : **Findra # 1**
Rig : **Hunt Energy # 2**
Spud : **26th June 2004**

1. SUMMARY OF OPERATIONS

Findra # 1 was spudded in at 00:30 hours on the 26th June 2004 utilising Hunt Energy # 2 and reached a total depth of 889 m on the 29th June 2004.

Make up water was sourced from a local evaporation pond and had the following properties :

pH	:	8.5
Pf / Mf	:	Tr / 0.35
Chlorides	:	300 mg/l
Hardness	:	Tr

HOLE SIZE : **12¼"**
MUD TYPE : **Gel Spud Mud**
INTERVAL : **61 - 153 m**
CASING : **9-5/8" @ 150 m**

All tanks were filled with water. The Pill tank and trough were isolated and lined up to drill cement from the conductor shoe. Into the suction tank, 180 bbls of 25ppb Gel-Caustic Spud mud was mixed and allowed to yield. S55 mesh shaker screens were fitted to the single shaker.

The well was spudded and drilling continued (slowly initially) with the thick gel spud mud. Once the 8" collar was below the conductor shoe, the entire mud system was used by gradually blending the spud mud into the remainder of the water filled tanks. This diluted and thinned the mud back, (viscosity of 36 sec/qt and yield point of 8 lb/100ft²) but as drilling continued, native clays started bringing the viscosity back up.

Water was added to maintain volume and control the viscosity and mud weight. From the top of the Gellibrand marl formation SAPP was added to the system to aid clay dispersion and prevent mud rings from occurring.

The mud weight reached 9.1 ppg and the yield point was 27 lb/100ft² by 110 m, but by the time the section TD of 153 m was reached, the weight had been watered back to 8.7 ppg and the yield point was 9 lb/100ft².

At casing point, the hole was circulated clean and the pipe pulled out to run casing. 9-5/8" surface casing was then run in the hole. The casing was circulated to bottom and the hole was circulated clean. The casing was then cemented, with good returns to surface.

Operator : **Essential Petroleum Resources LTD**
Well : **Findra # 1**
Rig : **Hunt Energy # 2**
Spud : **26th June 2004**

HOLE SIZE : **8½" Production hole**
MUD TYPE : **4% KCl PHPA Polymer**
INTERVAL : **153 m - 889 m (TD)**

While nippling up BOP's the tanks were dumped, cleaned and refilled with water. The pill tank and trough were again isolated for drilling cement. The coarsest shaker screens (S55) used on surface hole were left on the shaker.

Into the remaining tanks 450bbls of KCL-PHPA fluid was prepared with :

- 4% KCl,
- 0.15ppb PHPA,
- 0.5ppb Pac-R and
- 0.1ppb Xanvis.

The system was then continually circulated via the hopper and gun line to shear up the fluid as much as possible before use. This low concentration of polymers was intentionally mixed to prevent major mud loss over the single shaker due to unsheared polymer blinding.

An 8½" bit and BHA was run into the hole and tagged cement at 132m. The cement was drilled with water via the trough and pill tank and while drilling on the shoe the hole was displaced to the stored KCl-PHPA fluid.

After the F.I.T. was performed, drilling resumed, with a circulation rate of 336 gpm. Further Polymer additions, both from premix addition and direct to the system to build up the PHPA concentration and other fluid properties were made. Due to the small sump size, all premixes made thereafter were built with recycled sump water which required treatment for hardness and Biocide additions.

Once the system was within spec's and the new polymers sheared, the shaker screens were upgraded to 84 - 84 - 84 mesh.

Drilling continued with fluid properties and volume controlled with premix additions. The sand trap was dumped of solids when required, and the Desilter run continuously. Mud losses to various sand formations occurred, but were self-healing. Losses over the shaker due to polymer blinding also occurred due to the speed in which the polymers were added in the effort to gain optimum fluid properties before the first target zone was drilled.

AMC Pac-R was the primary additive by this stage as it aided in increasing the yield point to 10 - 15 lb/100ft² and reducing the fluid loss to 6 - 7 cc's. KCl additions were also maintained to keep a 4% concentration.

Drilling continued to 889m where the hole was circulated clean and the pipe slugged with Barytes. The pipe was pulled out for a wiper trip to the shoe which found tight hole from 470m through to 250m. While running back to bottom a bridge was tagged

at 505m and was washed & reamed to 516m. Fill was tagged at 873m and the bit was washed to bottom. The hole was circulated clean and the pipe slugged, and pulled out of the hole for logging. No tight hole was recorded on this trip out.

Logging tools were made up and run into the hole successfully to bottom (9m of fill) and the full logging program completed without hole problems.

Open ended drill-pipe was then run in to bottom and the hole circulated clean. Cement plugs were then set as per the P & A program.

2. OBSERVATIONS, RECOMMENDATIONS AND WELL ANALYSIS

Findra # 1 was drilled to a total depth of 889 m for a mud cost of $9,867.80 or $11.10 per metre. The well was drilled problem free from a mud viewpoint and hole conditions were good throughout.

As on the previous well, the rigs solids control equipment worked well. The linear motion shaker worked well as expected and both the desander and desilter put out underflows indicating that the equipment was working fairly optimally.

12¼" Surface Hole 61m – 153m

This section of hole was drilled for a mud cost of $1,314.70 or $8.59 per metre, slightly higher than expected. Again, as on the previous well, extra gel was mixed at the start to fill the larger suction tank as the spud mud couldn't be mixed into the smaller intermediate tank.

Once again SAPP was used to great effect in the problematic Gellibrand Marl formation, and successfully removed the threat of Mud Rings and pack-offs.

8½" Production Hole 153m – 889m

This section of hole was drilled for a mud cost of $8,553.10 or $11.62 per metre.

The main thing to note in this section is the lower circulation rate used (336 gpm) as compared to the previous well in this program (Killarney #1, 448 gpm.) The calliper shows a good gauge hole throughout. Polymers were able to be added faster without excessive screen blinding, which was a requirement to get the fluid properties up before the first target zone was intersected. The only other variable which relates to the difference in the calliper logs would be the short time that this well was "open".

Some tight hole was seen and a bridge was encountered on the wiper trip prior to logging, but the hole was in good condition after being wiped, with only some fill (9 m) preventing logs reaching bottom.

The mud program worked well again and achieved its aims of helping drill the hole quickly, efficiently and without undue amounts of hole problems.

3. INTERVAL COSTS

Product	Cost	Unit Size	12-1/4" Surface Hole Interval : 0 - 153 m Used	Cost	%Cost	8-1/2" Main Hole 153 m - 889 m Used	Cost	%Cost	Total Well Consumption 0 - 889 m (TD) Used	Cost	%Cost
AMC Biocide G	$ 210.00	25 lt				2	$420.00	4.9%	2	$420.00	4.3%
AMC Pac L	$ 148.20	25 kg				3	$444.60	5.2%	3	$444.60	4.5%
AMC Pac R	$ 148.20	25 kg				17	$2,519.40	29.5%	17	$2,519.40	25.5%
Aus-Gel 25kg (Aust)	$ 11.10	25 kg	84	$932.40	70.9%				84	$932.40	9.4%
Baryte	$ 6.30	25 kg				40	$252.00	2.9%	40	$252.00	2.6%
Caustic Soda	$ 37.30	25 kg	1	$37.30	2.8%				1	$37.30	0.4%
PHPA	$ 105.70	25 kg				7	$739.90	8.7%	7	$739.90	7.5%
Potassium Chloride	$ 13.80	25 kg				230	$3,174.00	37.1%	230	$3,174.00	32.2%
SAPP	$ 57.50	25 kg	6	$345.00	26.2%				6	$345.00	3.5%
Soda Ash	$ 19.50	25 kg				6	$117.00	1.4%	6	$117.00	1.2%
Sodium Sulphite	$ 32.50	25 kg				6	$195.00	2.3%	6	$195.00	2.0%
Xan-Bore	$ 345.60	25 kg				2	$691.20	8.1%	2	$691.20	7.0%
Totals :				**$1,314.70**	**100.0%**		**$8,553.10**	**100.0%**		**$9,867.80**	**100.0%**
Cost per Metre :				**$8.59**			**$11.62**			**$11.10**	

4. MATERIALS RECONCILIATION

Previous Well : **Kilarney # 1**
Well : **Findra # 1**
Transferred to : **Adelaide Stores**

PRODUCT	UNIT	TOTAL RECEIVED	TOTAL USED	TRANSFER BALANCE
AMC Biocide G	25 lt	7	2	5
AMC Defoamer	25 lt	8		8
AMC Pac - Low	25 kg	17	3	14
AMC Pac - Reg	25 kg	19	17	2
Aus-Gel	25 kg	84	84	
Barytes	25 kg	290	40	250
Calcium Carbonate (ESS)	25 kg	40		40
Calcium Chloride (ESS)	25 kg	80		80
Caustic Soda	25 kg	17	1	16
Kwikseal Fine	40 lb	21		21
Kwikseal Med	40 lb	28		28
Lime	25 kg	6		6
PHPA	25 kg	49	7	42
Potassium Chloride	25 kg	336	135	
Potassium Chloride (ESS)	25 kg	95	95	
Rod-Free	208 lt	1		1
Salt (ESS)	25 kg	144		144
SAPP	25 kg	18	6	12
Soda Ash	25 kg	25	6	19
Sodium Sulphite	25 kg	22	6	16
Xan-Bore	25 kg	4	2	2

5. FLUID PROPERTIES SUMMARY

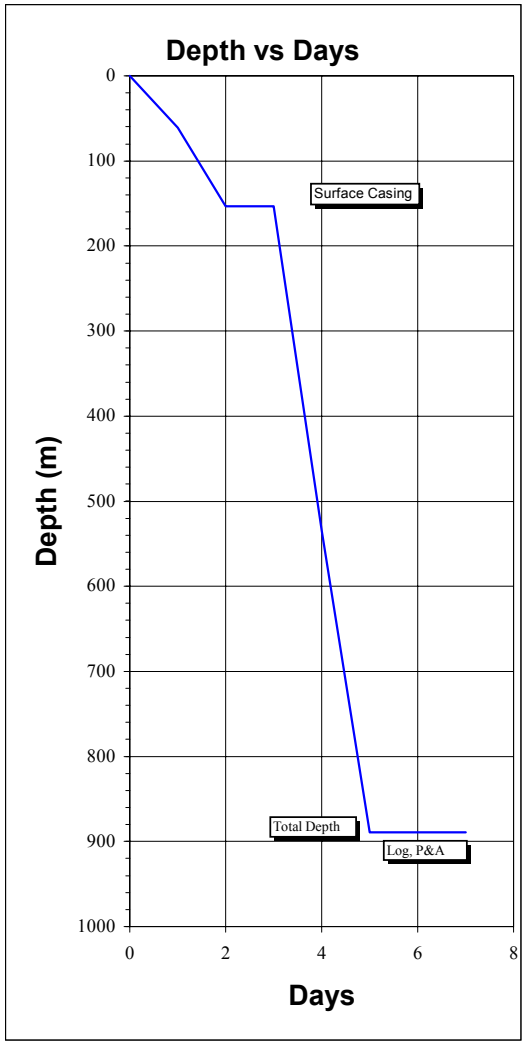
							Gels		Filtrate		Solids												
Date	Mud Type	Depth	Weight	Vis	PV	YP	10 sec	10 min	API	Cake	Solids	Water	MBT	pH	Pm	Pf	Mf	Cl-	Ca++	K+	KCl	PHPA
25-Jun-04	Spud Mud	61	8.50	60	10	22	9	19			1.1	98.9	25.0	8.5	0.05	0.05	0.90	800	80			
26-Jun-04	Spud Mud	110	9.10	47	11	27	12	27			5.4	94.6	32.0	9.0		0.10	0.70	800	80			
	Spud Mud	153	8.70	32	5	9	5	11			2.5	97.5	15.0	8.8		0.10	0.70	800	280			
27-Jun-04	4%KCL PHPA Polymer	153	8.60	38	3	5	1	2	8	1	0.7	99.3		8.5		0.10	0.60	20,000	120	21,616	4.0	0.15
28-Jun-04	4%KCL PHPA Polymer	330	8.70	37	8	12	1	2		1	1.2	98.8	5.0	9.0		0.20	1.20	22,000	320			0.30
	4%KCL PHPA Polymer	534	9.00	39	11	15	2	4	7	1	3.5	96.5	7.5	8.8		0.15	1.20	21,000	260	22,156	4.1	0.50
29-Jun-04	4%KCL PHPA Polymer	730	9.10	39	12	15	2	4	6.2	1	4.2	95.8	7.5	8.8		0.10	0.70	20,000	80	21,616	4.0	0.50
	4%KCL PHPA Polymer	889	9.20	39	11	15	2	4	6.8	1	5.0	95.0	7.5	8.8		0.05	0.60	19,000	40	21,076	3.9	0.40
30-Jun-04	4%KCL PHPA Polymer	889	9.20	41	11	15	2	4	7.0	1	5.0	95.0	7.5	8.8		0.05	0.50	19,000	40	21,076	3.9	0.40
1-Jul-04	4%KCL PHPA Polymer	889	9.20	41	11	15	2	4	7.0	1	5.0	95.0	7.5	8.8		0.05	0.50	19,000	40	21,076	3.9	0.40

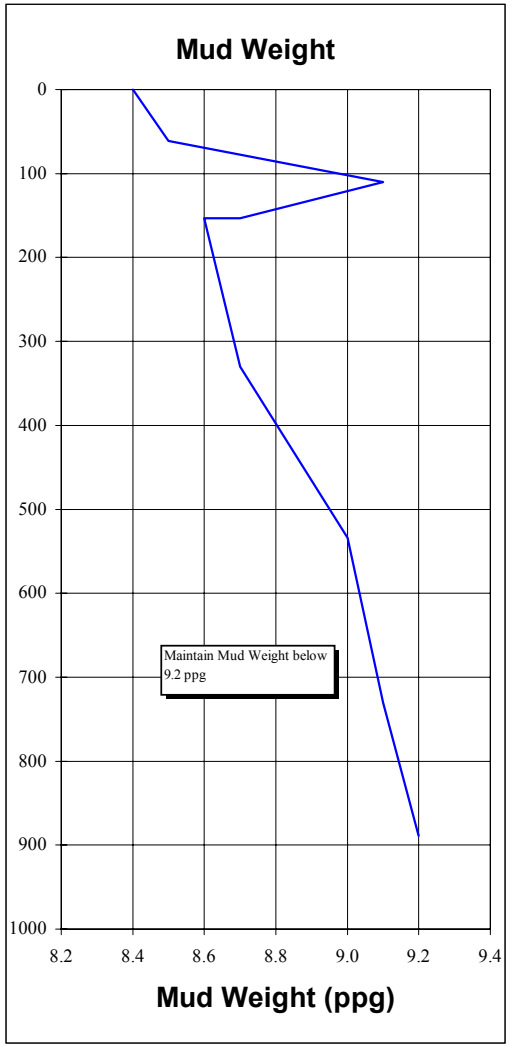
6. Mud Volume Analysis

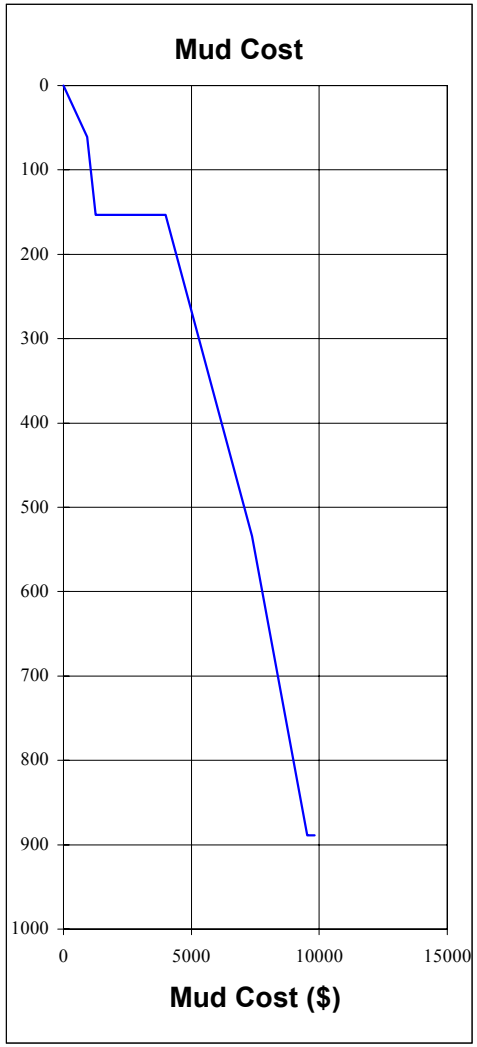
Date	Hole Size	Interval From	Interval To	Mud Type	Fluid Built & Received: Fresh Premix	Sump Premix	Direct Recirc	Water	Other	Fluid Disposed: De-sander	De-silter	Down-hole	Dumped	Other	Summary: Initial	Received	Disposed	Final
25-Jun-04	12-1/4"	0 m	61 m	Spud Mud	180			28							0	208	0	208
26-Jun-04	12-1/4"	61 m	153 m	Spud Mud				400					100	68	208	400	168	440
Sub Total					**180**	**0**	**0**	**428**	**0**	**0**	**0**	**0**	**100**			**608**	**168**	
27-Jun-04	8-1/2"	153 m	153 m	KCl PHPA	450											450	0	450
28-Jun-04	8-1/2"	153 m	534 m	KCl PHPA	45	180		30			12	72	45	95	450	255	224	481
29-Jun-04	8-1/2"	534 m	889 m	KCl PHPA		225					23	80		45	481	225	148	558
30-Jun-04	8-1/2"	889 m	889 m	KCl PHPA											558	0	0	558
1-Jul-04	8-1/2"	889 m	889 m	KCl PHPA											558	0	0	558
Sub Total					**495**	**405**	**0**	**30**	**0**	**0**	**35**	**152**	**45**	**140**		**930**	**372**	
Well Total					**675**	**405**	**0**	**458**	**0**	**0**	**35**	**152**	**145**	**140**		**1538**	**540**	

Dilution Factors			
	Interval Length	**Dilution Vol**	**Dilution Factor**
12¼" Surface Hole	153 m	428 bbls	2.8 bbls/m
8½" Mudded Up Hole	736 m	480 bbls	0.7 bbls/m

7. Graphs


Depth vs Days
Depth (m)
0
100
200
300
400
500
600
700
800
900
1000
Surface Casing
Total Depth
Log, P&A
0
2
4
6
8
Days

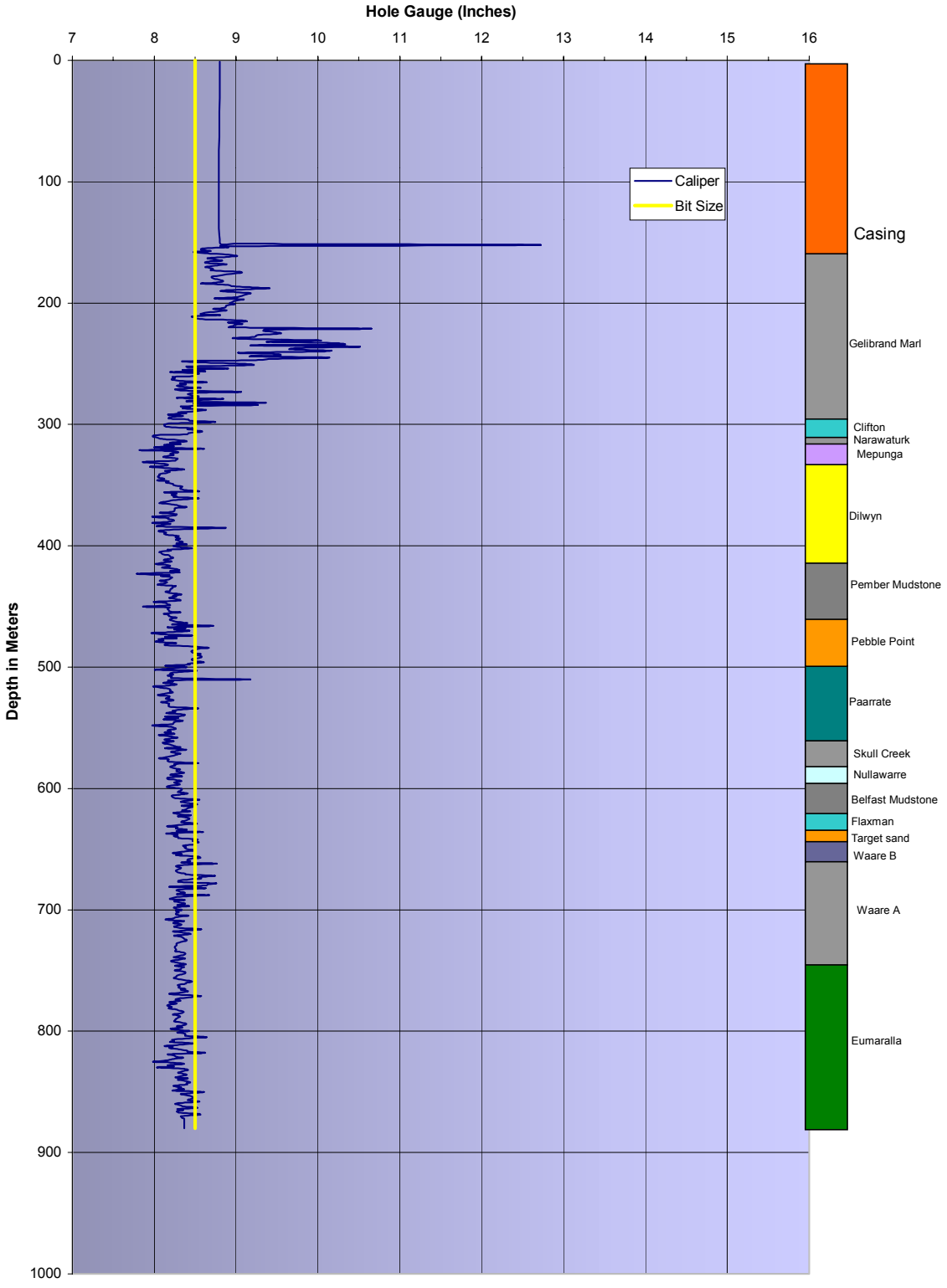

Mud Weight
0
100
200
300
400
500
600
700
800
900
1000
Maintain Mud Weight below 9.2 ppg
8.2
8.4
8.6
8.8
9.0
9.2
9.4
Mud Weight (ppg)


Mud Cost
0
100
200
300
400
500
600
700
800
900
1000
0
5000
10000
15000
Mud Cost ($)

8. Bit & Hydraulics Record

Bit #	Size	Make	Type	Jets			Depth Out	Depth Drilled	Hours	Cumm Hours	WOB	RPM	GPM	Mud Wt	Jet Vel	HHPb/sq"	Impact Force
1	12 1/4"	HTC	M22	18	18	18	153	153	5	5	15	110	615	8.7	264	196	732
2	8 1/2"	Varel	CH04MS	13	13	13	889	736	37	42	2	120	340	9.2	280	128	453

Findra # 1 Caliper



10. Daily Drilling Fluid Reports

DRILLING FLUID REPORT

RMN Drilling Fluids

Report #	1	Date :	25-Jun-2004
Rig No	2	Spud :	26-Jun-2004
Depth		to 61	Metres

OPERATOR	Essential Petroleum Recourses Ltd	CONTRACTOR	Hunt Energy
REPORT FOR	Vilnis Ozlins	REPORT FOR	Noel Mills
WELL NAME AND No	Findra # 1	FIELD: PEP 159	LOCATION: Otway Basin / STATE: Victoria

DRILLING ASSEMBLY		JET SIZE			CASING		MUD VOLUME (BBL)		CIRCULATION DATA			
BIT SIZE	TYPE	18	18	18	SURFACE / SET @	ft / M	HOLE	PITS	PUMP SIZE		CIRCULATION PRESS (PSI)	psi
12.25	Var M22						28	180	5.5 X 6 Inches			
DRILL PIPE SIZE	TYPE	Length			INT. / SET @	ft / M	TOTAL CIRCULATING VOL.		PUMP MODEL	ASSUMED EFF	BOTTOMS UP (min)	min
4.5	#	61 Mtrs					208		Emsco DB550	95 %	#DIV/0!	
DRILL PIPE SIZE	TYPE	Length			PROD. or LNR Set @	ft / M	IN STORAGE		BBL/STK	STK / MIN	TOTAL CIRC. TIME (min)	min
	HW	Mtrs							0.1404		#DIV/0!	
DRILL COLLAR SIZE (")		Length			MUD TYPE				BBL/MIN	GAL / MIN	ANN VEL. (ft/min) DP / DCs	
6.25	8.00	Mtrs			Spud Mud							

MUD PROPERTIES

SAMPLE FROM		Pit	Pit
TIME SAMPLE TAKEN		23:00	
DEPTH (ft) - (m)	Metres	61	
FLOWLINE TEMPERATURE	^{0}C / ^{0}F		
WEIGHT	ppg / SG	8.50 1.020	
FUNNEL VISCOSITY (sec/qt) API @	^{0}C	60	
PLASTIC VISCOSITY cP @	^{0}C	10	
YIELD POINT (lb/100ft^2)		22	
GEL STRENGTHS (lb/100ft^2) 10 sec/10 min		9 19	
FILTRATE API (cc's/30 min)			
HPHT FILTRATE (cc's/30 min) @	^{0}F		
CAKE THICKNESS API : HPHT (32nd in)			
SOLIDS CONTENT (% by Volume)		1.1	
LIQUID CONTENT (% by Volume) OIL/WATER		98.9	
SAND CONTENT (% by Vol.)			
METHYLENE BLUE CAPACITY (ppb equiv.)		25.0	
pH		8.5	
ALKALINITY MUD (Pm)		0	
ALKALINITY FILTRATE (Pf / Mf)		0.05 0.90	
CHLORIDE (mg/L)		800	
TOTAL HARDNESS AS CALCIUM (mg/L)		80	
SULPHITE (mg/L)			
K+ (mg/L)			
KCl (% by Wt.)			
PHPA (ppb)			

MUD PROPERTY SPECIFICATIONS

Mud Weight	8.8 - 9.4	API Filtrate	N/C	HPHT Filtrate	
Plastic Vis	min	Yield Point	12 - 25	pH	8.0 - 9.5
KCl		PHPA		Sulphites	

OBSERVATIONS

Built 180 bbls of 25ppb Gel Caustic Spud mud and allow to Yield.

OPERATIONS SUMMARY

Complete Rig up over Findra # 1

Make Up BHA

Mud Accounting (bbls)

FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY	
Premix (drill water)	180	Desander		INITIAL VOLUME	0
Premix (recirc from sump)		Desilter			
Drill Water	28	Downhole		+ FLUID RECEIVED	208
Direct Recirc Sump		Dumped		-FLUID LOST	
Other (eg Diesel)		Other		+ FLUID IN STORAGE	
TOTAL RECEIVED	208	TOTAL LOST		FINAL VOLUME	208

Solids Control Equipment

	Type	Hrs		Cones	Hrs		Size	Hrs
Centrifuge	Nil		Desander	2		Shaker #1	3x54	
Degasser	P-B		Desilter	8		Shaker #2	n/a	

	Overflow (ppg)	Underflow (ppg)	Output (Gal/Min.)
Desander		0	
Desilter		0	

Product	Price	Start	Received	Used	Close	Cost
Aus-Gel	$ 10.50	84		84		$ 882.00
Caustic Soda	$ 37.30	17		1	16	$ 37.30

Solids Analysis	PPB	%
High Grav solids		
Total LGS		
Bentonite		
Drilled Solids		
Salt		
n @ Hrs		
K @ Hrs		

Bit Hydraulics & Pressure Data
Jet Velocity
Impact force
HHP
HSI
Bit Press Loss
CSG Seat Frac Press
Equiv. Mud Wt.
ECD
Max Pressure @ Shoe :

DAILY COST	CUMULATIVE COST
$919.30	$919.30

RMN ENGINEER Neil Kyberd CITY Adelaide Office TELEPHONE 08 8338 7266

DRILLING FLUID REPORT

RMN Drilling Fluids

Report #	2	Date :	26-Jun-2004
Rig No	2	Spud :	26-Jun-2004
Depth	61 to 153		Metres

OPERATOR	Essential Petroleum Recourses Ltd	CONTRACTOR	Hunt Energy
REPORT FOR	Vilnis Ozlins	REPORT FOR	Dave Hair
WELL NAME AND No	Findra # 1	FIELD: PEP 159	LOCATION: Otway Basin / STATE: Victoria

DRILLING ASSEMBLY		JET SIZE			CASING		MUD VOLUME (BBL)		CIRCULATION DATA			
BIT SIZE	TYPE	18	18	18	SURFACE ft		HOLE	PITS	PUMP SIZE		CIRCULATION PRESS (PSI)	900 psi
12.25	Var M22				SET @ M		60	380	5.5 X 6 Inches			
DRILL PIPE SIZE 4.5	TYPE #	Length 21 Mtrs			INT. ft		TOTAL CIRCULATING VOL.		PUMP MODEL	ASSUMED EFF	BOTTOMS UP (min)	3 min
					SET @ M		440		Emsco DB550	95 %		
DRILL PIPE SIZE 4.5	TYPE HW	Length 37 Mtrs			PROD. or ft		IN STORAGE		BBL/STK	STK / MIN	TOTAL CIRC. TIME (min)	30 min
					LNR Set @ M				0.1404	110		
DRILL COLLAR SIZE (")		Length			MUD TYPE				BBL/MIN	GAL / MIN	ANN VEL. DP	116
6.25	8.00	75	21	Mtrs	Spud Mud				14.67	616	(ft/min) DCs	136 175

MUD PROPERTIES			
SAMPLE FROM		Pit	Pit
TIME SAMPLE TAKEN		05:00	09:00
DEPTH (ft) - (m)	Metres	110	153
FLOWLINE TEMPERATURE	^{0}C / ^{0}F		
WEIGHT	ppg / SG	9.10 1.092	8.70 1.044
FUNNEL VISCOSITY (sec/qt) API @	^{0}C	47	32
PLASTIC VISCOSITY cP @	^{0}C	11	5
YIELD POINT (lb/100ft^2)		27	9
GEL STRENGTHS (lb/100ft^2) 10 sec/10 min		12 27	5 11
FILTRATE API (cc's/30 min)			
HPHT FILTRATE (cc's/30 min) @	^{0}F		
CAKE THICKNESS API : HPHT (32nd in)			
SOLIDS CONTENT (% by Volume)		5.4	2.5
LIQUID CONTENT (% by Volume) OIL/WATER		94.6	97.5
SAND CONTENT (% by Vol.)			
METHYLENE BLUE CAPACITY (ppb equiv.)		32.0	15.0
pH		9.0	8.8
ALKALINITY MUD (Pm)			
ALKALINITY FILTRATE (Pf / Mf)		0.10 0.70	0.10 0.70
CHLORIDE (mg/L)		800	800
TOTAL HARDNESS AS CALCIUM (mg/L)		80	280
SULPHITE (mg/L)			
K+ (mg/L)			
KCl (% by Wt.)			
PHPA (ppb)			

MUD PROPERTY SPECIFICATIONS					
Mud Weight	8.8 - 9.4	API Filtrate	N/C	HPHT Filtrate	
Plastic Vis	min	Yield Point	12 - 25	pH	8.0 - 9.5
KCl		PHPA		Sulphites	

OBSERVATIONS

Fitted 3 x S55 shaker screens to the single shaker.
Drilled out cement and new formation with "short system" to maintain the High Vis until the 8" collars were below the conductor shoe.
From 70m began blending the spud mud with stored water in the other tanks.
From 110m circulated "long" using the full tank system.

Drilled ahead through mud making clays, adding water for new volume and viscosity control.
SAPP added to reduce clay sticking and mud rings. 2 sx damaged beyond use and written off.

OPERATIONS SUMMARY

Spud well at 00:30 Hrs and drill out conductor cement.
Drill ahead with surveys to 153m
POOH wiper trip to surface.
RIH and circulate hole clean. POOH.
Run 9 5/8" casing.
Circulate casing and cement as per program with cement returned to surface.

Mud Accounting (bbls)

FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY	
Premix (drill water)		Desander		INITIAL VOLUME	208
Premix (recirc from sump)		Desilter			
Drill Water	400	Downhole	0	+ FLUID RECEIVED	400
Direct Recirc Sump		Dumped	100	-FLUID LOST	168
Other (eg Diesel)		Other	68	+ FLUID IN STORAGE	
TOTAL RECEIVED	400	TOTAL LOST	168	FINAL VOLUME	440

Solids Control Equipment

	Type	Hrs		Cones	Hrs		Size	Hrs
Centrifuge	Nil		Desander	2		Shaker #1	3x54	9
Degasser	P-B		Desilter	8		Shaker #2	n/a	

	Overflow (ppg)	Underflow (ppg)	Output (Gal/Min.)
Desander		0	
Desilter		0	

Product	Price	Start	Received	Used	Close	Cost
SAPP	$ 57.50	18		6	12	$ 345.00

Solids Analysis

	PPB	%
High Grav solids		
Total LGS	23.1	2.5
Bentonite	15.0	1.6
Drilled Solids	8.1	0.9
Salt		
n @ 09:00 Hrs	0.44	
K @ 09:00 Hrs	0.90	

Bit Hydraulics & Pressure Data

Jet Velocity	264
Impact force	735
HHP	197
HSI	1.7
Bit Press Loss	547
CSG Seat Frac Press	
Equiv. Mud Wt.	
ECD	
Max Pressure @ Shoe :	

DAILY COST	CUMULATIVE COST
$345.00	$1,264.30

RMN ENGINEER Neil Kyberd CITY Adelaide Office TELEPHONE 08 8338 7266

DRILLING FLUID REPORT

RMN Drilling Fluids

Report #	3	Date :	27-Jun-2004
Rig No	2	Spud :	26-Jun-2004
Depth	153 to 153		Metres

OPERATOR	Essential Petroleum Recourses Ltd	CONTRACTOR	Hunt Energy
REPORT FOR	Vilnis Ozlins	REPORT FOR	Dave Hair
WELL NAME AND No	Findra # 1	FIELD: PEP 159	LOCATION: Otway Basin / STATE: Victoria

DRILLING ASSEMBLY			JET SIZE			CASING			MUD VOLUME (BBL)		CIRCULATION DATA			
BIT SIZE 8.5	TYPE					9 5/8" SURFACE	492	ft	HOLE	PITS	PUMP SIZE 5.5 X 6 Inches		CIRCULATION PRESS (PSI)	psi
DRILL PIPE SIZE 4.5	TYPE #	Length 42 Mtrs				SET @	150	M	29	450				
DRILL PIPE SIZE 4.5	TYPE HW	Length 37 Mtrs				INT. SET @		ft / M	TOTAL CIRCULATING VOL. 450		PUMP MODEL Emsco DB550	ASSUMED EFF 95 %	BOTTOMS UP (min)	min
DRILL COLLAR SIZE (") 6.25		Length 75 Mtrs				PROD. or LNR Set @		ft / M	IN STORAGE -29		BBL/STK 0.1404	STK / MIN	TOTAL CIRC. TIME (min)	min
						MUD TYPE 4%KCL PHPA Polymer					BBL/MIN	GAL / MIN	ANN VEL. (ft/min) DP DCs	

MUD PROPERTIES		Pit	Pit
SAMPLE FROM			
TIME SAMPLE TAKEN			21:00
DEPTH (ft) - (m)	Metres		153
FLOWLINE TEMPERATURE	^{0}C / ^{0}F		
WEIGHT	ppg / SG		8.60 1.032
FUNNEL VISCOSITY (sec/qt) API @	^{0}C		38
PLASTIC VISCOSITY cP @	^{0}C		3
YIELD POINT (lb/100ft^2)			5
GEL STRENGTHS (lb/100ft^2) 10 sec/10 min			1 2
FILTRATE API (cc's/30 min)			8.0
HPHT FILTRATE (cc's/30 min) @	^{0}F		
CAKE THICKNESS API : HPHT (32nd in)			1
SOLIDS CONTENT (% by Volume)			0.7
LIQUID CONTENT (% by Volume) OIL/WATER			99.3
SAND CONTENT (% by Vol.)			
METHYLENE BLUE CAPACITY (ppb equiv.)			
pH			8.5
ALKALINITY MUD (Pm)			
ALKALINITY FILTRATE (Pf / Mf)			0.10 0.60
CHLORIDE (mg/L)			20,000
TOTAL HARDNESS AS CALCIUM (mg/L)			120
SULPHITE (mg/L)			
K+ (mg/L)			21,616
KCl (% by Wt.)			4.0
PHPA (ppb)			0.15

MUD PROPERTY SPECIFICATIONS					
Mud Weight	8.8 - 9.4	API Filtrate	6 - 8	HPHT Filtrate	
Plastic Vis	min	Yield Point	12 - 25	pH	8.0 - 9.5
KCl	4%	PHPA	1.00 ppb	Sulphites	80 - 120

OBSERVATIONS

Dumped and cleaned all tanks.
Prepared 450bbls of KCL-PHPA fluid with:
4% KCl, 0.15 ppb PHPA, 0.5ppb PAC-R and 0.1 ppb Xanvis.
Circulating all tanks via gun lines and hopper to aid in shearing the new fluid.
Once the New fluid has sheared and the shaker can handle the fluid further
PHPA and Yield Point building polymers will be added.

OPERATIONS SUMMARY

Nipple up BOP's
Pressure test all surface equipment
Make up 8 1/2" BHA

Mud Accounting (bbls)

FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY	
Premix (drill water)	450	Desander		INITIAL VOLUME	
Premix (recirc from sump)		Desilter			
Drill Water		Downhole	0	+ FLUID RECEIVED	450
Direct Recirc Sump		Dumped		-FLUID LOST	0
Other (eg Diesel)		Other		+ FLUID IN STORAGE	-29
TOTAL RECEIVED	450	TOTAL LOST	0	FINAL VOLUME	421

Solids Control Equipment

	Type	Hrs		Cones	Hrs		Size	Hrs
Centrifuge	Nil		Desander	2		Shaker #1	3x54	
Degasser	P-B		Desilter	8		Shaker #2	n/a	

	Overflow (ppg)	Underflow (ppg)	Output (Gal/Min.)
Desander		0	
Desilter		0	

Product	Price	Start	Received	Used	Close	Cost
AMC Pac - Reg	$ 148.20	19		4	15	$ 592.80
PHPA	$ 105.70	49		2	47	$ 211.40
Pot. Chloride	$ 13.80	336		20	316	$ 276.00
Pot. Chloride (ESS)	$ 13.80	95		95		$ 1,311.00
Xan-Bore	$ 345.60	4		1	3	$ 345.60

Solids Analysis	PPB	%
High Grav solids		
Total LGS	6.0	0.7
Bentonite		
Drilled Solids	6.0	0.7
Salt		
n @ 21:00 Hrs	0.46	
K @ 21:00 Hrs	0.46	

Bit Hydraulics & Pressure Data
Jet Velocity
Impact force
HHP
HSI
Bit Press Loss
CSG Seat Frac Press
Equiv. Mud Wt.
ECD
Max Pressure @ Shoe :

DAILY COST	CUMULATIVE COST
$2,736.80	$4,001.10

RMN ENGINEER Neil Kyberd CITY Adelaide Office TELEPHONE 08 8338 7266

DRILLING FLUID REPORT

RMN Drilling Fluids

Report #	4	Date :	28-Jun-2004
Rig No	2	Spud :	26-Jun-2004
Depth	153 to 534		Metres

OPERATOR	Essential Petroleum Recourses Ltd	CONTRACTOR	Hunt Energy
REPORT FOR	Vilnis Ozlins	REPORT FOR	Dave Hair
WELL NAME AND No	Findra # 1	FIELD	PEP 159
LOCATION	Otway Basin	STATE	Victoria

DRILLING ASSEMBLY		JET SIZE		
BIT SIZE	TYPE	13	13	13
8.5	CHO4MS			
DRILL PIPE SIZE 4.5	TYPE #	Length 289 Mtrs		
DRILL PIPE SIZE 4.5	TYPE HW	Length 55 Mtrs		
DRILL COLLAR SIZE (")		Length		
6.25		190 Mtrs		

CASING		
9 5/8" SURFACE	492	ft
SET @	150	M
INT.		ft
SET @		M
PROD. or LNR Set @		ft
		M
MUD TYPE	4%KCL PHPA Polymer	

MUD VOLUME (BBL)	
HOLE	PITS
101	380
TOTAL CIRCULATING VOL.	481
IN STORAGE	

CIRCULATION DATA			
PUMP SIZE		CIRCULATION PRESS (PSI)	850 psi
5.5 X 6 Inches			
PUMP MODEL	ASSUMED EFF	BOTTOMS UP (min)	9 min
Emsco DB550	95 %		
BBL/STK	STK / MIN	TOTAL CIRC. TIME (min)	60 min
0.1404	60		
BBL/MIN	GAL / MIN	ANN VEL. DP	158
8.00	336	(ft/min) DCs	248

MUD PROPERTIES		Pit	Pit
SAMPLE FROM		Pit	Pit
TIME SAMPLE TAKEN		14:00	24:00
DEPTH (ft) - (m)	Metres	330	534
FLOWLINE TEMPERATURE	^{0}C ^{0}F		
WEIGHT	ppg / SG	8.70 1.044	9.00 1.080
FUNNEL VISCOSITY (sec/qt) API @	^{0}C	37	39
PLASTIC VISCOSITY cP @	^{0}C	8	11
YIELD POINT (lb/100ft^2)		12	15
GEL STRENGTHS (lb/100ft^2) 10 sec/10 min		1 2	2 4
FILTRATE API (cc's/30 min)			6.5
HPHT FILTRATE (cc's/30 min) @	^{0}F		
CAKE THICKNESS API : HPHT (32nd in)		1	1
SOLIDS CONTENT (% by Volume)		1.2	3.5
LIQUID CONTENT (% by Volume) OIL/WATER		98.8	96.5
SAND CONTENT (% by Vol.)			
METHYLENE BLUE CAPACITY (ppb equiv.)		5.0	7.5
pH		9.0	8.8
ALKALINITY MUD (Pm)			
ALKALINITY FILTRATE (Pf / Mf)		0.20 1.20	0.15 1.20
CHLORIDE (mg/L)		22,000	21,000
TOTAL HARDNESS AS CALCIUM (mg/L)		320	260
SULPHITE (mg/L)			
K+ (mg/L)			22,156
KCl (% by Wt.)			4.1
PHPA (ppb)		0.3	0.5

MUD PROPERTY SPECIFICATIONS					
Mud Weight	8.8 - 9.4	API Filtrate	6 - 8	HPHT Filtrate	
Plastic Vis	min	Yield Point	12 - 25	pH	8.0 - 9.5
KCl	4%	PHPA	1.00 ppb	Sulphites	80 - 120

OBSERVATIONS

Displaced hole to new KCL-PHPA fluid
once the fluid had sheared sufficiently, shaker screens upgraded to 84 mesh.
Further Polymer additions made to build Yield Point, PHPA conc, and lower water loss.
Soda Ash additions to treat hardness from sump water.
All premixes built with recycled sump water.
OTHER losses from shakers due to Polymer blinding, Sand Blinding and cuttings overloading.
during fast ROP.

OPERATIONS SUMMARY

RIH with 8 1/2" bit and BHA, Tag cement at 132m
Drill Shoe track with water to 153m
Displace hole to Stored KCL-PHPA fluid while drilling to 156m
Circulate hole clean and perform L.O.T
Drill ahead with surveys to 534m, circulating samples as required.

Mud Accounting (bbls)

FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY	
Premix (drill water)	45	Desander		INITIAL VOLUME	450
Premix (recirc from sump)	180	Desilter	12		
Drill Water	30	Downhole	72	+ FLUID RECEIVED	255
Direct Recirc Sump		Dumped	45	-FLUID LOST	224
Other (eg Diesel)		Other	95	+ FLUID IN STORAGE	
TOTAL RECEIVED	255	TOTAL LOST	224	FINAL VOLUME	481

Solids Control Equipment

	Type	Hrs		Cones	Hrs		Size	Hrs
Centrifuge	Nil		Desander	2		Shaker #1	3x84	20
Degasser	P-B		Desilter	8	17	Shaker #2	n/a	

	Overflow (ppg)	Underflow (ppg)	Output (Gal/Min.)
Desander		0	
Desilter	8.7	11.1	0.50

Product	Price	Start	Received	Used	Close	Cost
AMC Biocide G	$ 210.00	7		1	6	$ 210.00
AMC Pac - Reg	$ 148.20	15		9	6	$ 1,333.80
PHPA	$ 105.70	47		5	42	$ 528.50
Pot. Chloride	$ 13.80	316		55	261	$ 759.00
Soda Ash	$ 19.50	25		6	19	$ 117.00
Sodium Sulphite	$ 32.50	22		2	20	$ 65.00
Xan-Bore	$ 345.60	3		1	2	$ 345.60

Solids Analysis	PPB	%
High Grav solids		
Total LGS	31.5	3.5
Bentonite	7.5	0.8
Drilled Solids	24.0	2.6
Salt		
n @ 24:00 Hrs	0.51	
K @ 24:00 Hrs	1.09	

Bit Hydraulics & Pressure Data	
Jet Velocity	277
Impact force	434
HHP	121
HSI	2.1
Bit Press Loss	619
CSG Seat Frac Press	
Equiv. Mud Wt.	
ECD	
Max Pressure @ Shoe :	

DAILY COST	CUMULATIVE COST
$3,358.90	$7,360.00

RMN ENGINEER Neil Kyberd CITY Adelaide Office TELEPHONE 08 8338 7266

DRILLING FLUID REPORT

RMN Drilling Fluids

Report #	5	Date :	29-Jun-2004
Rig No	2	Spud :	26-Jun-2004
Depth	534 to 889		Metres

OPERATOR	Essential Petroleum Recourses Ltd	CONTRACTOR	Hunt Energy
REPORT FOR	Vilnis Ozlins	REPORT FOR	Dave Hair
WELL NAME AND No	Findra # 1	FIELD: PEP 159	LOCATION: Otway Basin / STATE: Victoria

DRILLING ASSEMBLY		JET SIZE			CASING		MUD VOLUME (BBL)		CIRCULATION DATA			
BIT SIZE 8.5	TYPE CHO4MS	13	13	13	9 5/8" SURFACE 492 ft		HOLE 178	PITS 380	PUMP SIZE 5.5 X 6 Inches		CIRCULATION PRESS (PSI)	1110 psi
DRILL PIPE SIZE 4.5	TYPE #	Length 644 Mtrs			INT. ft SET @ M		TOTAL CIRCULATING VOL. 558		PUMP MODEL Emsco DB550	ASSUMED EFF 95 %	BOTTOMS UP (min)	18 min
DRILL PIPE SIZE 4.5	TYPE HW	Length 55 Mtrs			PROD. or LNR Set @ ft M		IN STORAGE		BBL/STK 0.1404	STK / MIN 60	TOTAL CIRC. TIME (min)	70 min
DRILL COLLAR SIZE (") 6.25		Length 190 Mtrs			MUD TYPE 4%KCL PHPA Polymer				BBL/MIN 8.00	GAL / MIN 336	ANN VEL. (ft/min) DP	158
											DCs	248

MUD PROPERTIES			
SAMPLE FROM		Pit	Pit
TIME SAMPLE TAKEN		14:00	22:30
DEPTH (ft) - (m)	Metres	730	889
FLOWLINE TEMPERATURE	^{0}C / ^{0}F	/	/
WEIGHT	ppg / SG	9.10 / 1.092	9.20 / 1.104
FUNNEL VISCOSITY (sec/qt) API @	^{0}C	39	39
PLASTIC VISCOSITY cP @	^{0}C	12	11
YIELD POINT (lb/100ft^2)		15	15
GEL STRENGTHS (lb/100ft^2) 10 sec/10 min		2 / 4	2 / 4
FILTRATE API (cc's/30 min)		6.2	6.8
HPHT FILTRATE (cc's/30 min) @	^{0}F		
CAKE THICKNESS API : HPHT (32nd in)		1 /	1 /
SOLIDS CONTENT (% by Volume)		4.2	5.0
LIQUID CONTENT (% by Volume) OIL/WATER		/ 95.8	/ 95.0
SAND CONTENT (% by Vol.)			
METHYLENE BLUE CAPACITY (ppb equiv.)		7.5	7.5
pH		8.8	8.8
ALKALINITY MUD (Pm)			
ALKALINITY FILTRATE (Pf / Mf)		0.10 / 0.70	0.05 / 0.60
CHLORIDE (mg/L)		20,000	19,000
TOTAL HARDNESS AS CALCIUM (mg/L)		80	40
SULPHITE (mg/L)			
K+ (mg/L)		21,616	21,076
KCl (% by Wt.)		4.0	3.9
PHPA (ppb)		0.5	0.4

MUD PROPERTY SPECIFICATIONS					
Mud Weight	8.8 - 9.4	API Filtrate	6 - 8	HPHT Filtrate	
Plastic Vis	min	Yield Point	12 - 25	pH	8.0 - 9.5
KCl	4%	PHPA	1.00 ppb	Sulphites	80 - 120

OBSERVATIONS

Maintained volume and properties with premix additions.
Recycled sump water used for building premixes.
Biocide used to treat sump water.

OPERATIONS SUMMARY

Drill ahead from 534m to a Total depth of 889m with surveys
Circulate hole clean,
POOH for wiper trip to the shoe.

Mud Accounting (bbls)

FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY	
Premix (drill water)		Desander		INITIAL VOLUME	481
Premix (recirc from sump)	225	Desilter	23		
Drill Water		Downhole	80	+ FLUID RECEIVED	225
Direct Recirc Sump		Dumped		-FLUID LOST	148
Other (eg Diesel)		Other	45	+ FLUID IN STORAGE	
TOTAL RECEIVED	225	TOTAL LOST	148	FINAL VOLUME	558

Solids Control Equipment

	Type	Hrs		Cones	Hrs		Size	Hrs
Centrifuge	Nil		Desander	2		Shaker #1	3x84	23
Degasser	P-B		Desilter	8	23	Shaker #2	n/a	

	Overflow (ppg)	Underflow (ppg)	Output (Gal/Min.)
Desander		0	
Desilter	8.9	11.3	0.70

Product	Price	Start	Received	Used	Close	Cost
AMC Biocide G	$ 210.00	6		1	5	$ 210.00
AMC Pac - Low	$ 148.20	17		3	14	$ 444.60
AMC Pac - Reg	$ 148.20	6		2	4	$ 296.40
Barytes	$ 6.30	290		40	250	$ 252.00
Pot. Chloride	$ 13.80	261		60	201	$ 828.00
Sodium Sulphite	$ 32.50	20		4	16	$ 130.00

Solids Analysis	PPB	%
High Grav solids		
Total LGS	45.5	5.0
Bentonite	7.5	0.8
Drilled Solids	38.0	4.2
Salt		
n @ 22:30 Hrs	0.51	
K @ 22:30 Hrs	1.09	

Bit Hydraulics & Pressure Data	
Jet Velocity	277
Impact force	443
HHP	124
HSI	2.2
Bit Press Loss	633
CSG Seat Frac Press	
Equiv. Mud Wt.	
ECD	
Max Pressure @ Shoe :	

DAILY COST	CUMULATIVE COST
$2,161.00	$9,521.00

RMN ENGINEER Neil Kyberd CITY Adelaide Office TELEPHONE 08 8338 7266

DRILLING FLUID REPORT

RMN Drilling Fluids

Report #	6	Date :	30-Jun-2004
Rig No	2	Spud :	26-Jun-2004
Depth	889 to 889		Metres

OPERATOR	Essential Petroleum Recourses Ltd	CONTRACTOR	Hunt Energy
REPORT FOR	Vilnis Ozlins	REPORT FOR	Dave Hair
WELL NAME AND No	Findra # 1	FIELD	PEP 159
LOCATION	Otway Basin	STATE	Victoria

DRILLING ASSEMBLY			JET SIZE		
BIT SIZE	TYPE				
8.5					
DRILL PIPE SIZE 4.5	TYPE #	Length 644 Mtrs			
DRILL PIPE SIZE 4.5	TYPE HW	Length 55 Mtrs			
DRILL COLLAR SIZE (")		Length			
6.25		190 Mtrs			

CASING		
9 5/8" SURFACE	492	ft
SET @	150	M
INT.		ft
SET @		M
PROD. or LNR Set @		ft
		M
MUD TYPE	4%KCL PHPA Polymer	

MUD VOLUME (BBL)	
HOLE	PITS
178	380
TOTAL CIRCULATING VOL.	
558	
IN STORAGE	

CIRCULATION DATA		
PUMP SIZE		CIRCULATION PRESS (PSI) psi
5.5 X 6 Inches		
PUMP MODEL	ASSUMED EFF	BOTTOMS UP (min) min
Emsco DB550	95 %	
BBL/STK	STK / MIN	TOTAL CIRC. TIME (min) min
0.1404		
BBL/MIN	GAL / MIN	ANN VEL. DP (ft/min) DCs

MUD PROPERTIES			
SAMPLE FROM		Pit	Pit
TIME SAMPLE TAKEN			21:00
DEPTH (ft) - (m)	Metres		889
FLOWLINE TEMPERATURE	^{0}C ^{0}F		
WEIGHT	ppg / SG		9.20 1.104
FUNNEL VISCOSITY (sec/qt) API @	^{0}C		41
PLASTIC VISCOSITY cP @	^{0}C		11
YIELD POINT (lb/100ft^2)			15
GEL STRENGTHS (lb/100ft^2) 10 sec/10 min			2 4
FILTRATE API (cc's/30 min)			7.0
HPHT FILTRATE (cc's/30 min) @	^{0}F		
CAKE THICKNESS API : HPHT (32nd in)			1
SOLIDS CONTENT (% by Volume)			5.0
LIQUID CONTENT (% by Volume) OIL/WATER			95.0
SAND CONTENT (% by Vol.)			
METHYLENE BLUE CAPACITY (ppb equiv.)			7.5
pH			8.8
ALKALINITY MUD (Pm)			
ALKALINITY FILTRATE (Pf / Mf)			0.05 0.50
CHLORIDE (mg/L)			19,000
TOTAL HARDNESS AS CALCIUM (mg/L)			40
SULPHITE (mg/L)			
K+ (mg/L)			21,076
KCl (% by Wt.)			3.9
PHPA (ppb)			0.4

MUD PROPERTY SPECIFICATIONS					
Mud Weight	8.8 - 9.4	API Filtrate	6 - 8	HPHT Filtrate	
Plastic Vis	min	Yield Point	12 - 25	pH	8.0 - 9.5
KCl	4%	PHPA	1.00 ppb	Sulphites	80 - 120

OBSERVATIONS

Monitor Hole for static losses.

OPERATIONS SUMMARY

Continue POOH to the shoe for wiper trip.
Pulled through tight hole from 470 to 250m
RIH and tag bridge at 505m
Circulate and wash through tight hole to 516m
RIH and tag fill at 873m, wash to bottom and circulate hole clean.
POOH to log.
Rig up and run Logging tools to bottom finding 9m of Fill.
Logging continues.

Mud Accounting (bbls)

FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY	
Premix (drill water)		Desander		INITIAL VOLUME	558
Premix (recirc from sump)		Desilter			
Drill Water		Downhole		+ FLUID RECEIVED	
Direct Recirc Sump		Dumped		-FLUID LOST	
Other (eg Diesel)		Other		+ FLUID IN STORAGE	
TOTAL RECEIVED		TOTAL LOST		FINAL VOLUME	558

Solids Control Equipment

	Type	Hrs		Cones	Hrs		Size	Hrs
Centrifuge	Nil		Desander	2		Shaker #1	3x84	
Degasser	P-B		Desilter	8		Shaker #2	n/a	

	Overflow (ppg)	Underflow (ppg)	Output (Gal/Min.)
Desander		0	
Desilter		0	

Product	Price	Start	Received	Used	Close	Cost

Solids Analysis	PPB	%
High Grav solids		
Total LGS	45.5	5.0
Bentonite	7.5	0.8
Drilled Solids	38.0	4.2
Salt		
n @ 21:00 Hrs	0.51	
K @ 21:00 Hrs	1.09	

Bit Hydraulics & Pressure Data
Jet Velocity
Impact force
HHP
HSI
Bit Press Loss
CSG Seat Frac Press
Equiv. Mud Wt.
ECD
Max Pressure @ Shoe :

DAILY COST	CUMULATIVE COST
	$9,521.00

RMN ENGINEER Neil Kyberd CITY Adelaide Office TELEPHONE 08 8338 7266

DRILLING FLUID REPORT

RMN Drilling Fluids

Report #	7	Date :	1-Jul-2004
Rig No	2	Spud :	26-Jun-2004
Depth	889	to 889	Metres

OPERATOR	Essential Petroleum Recourses Ltd	CONTRACTOR	Hunt Energy
REPORT FOR	Vilnis Ozlins	REPORT FOR	Dave Hair
WELL NAME AND No	Findra # 1	FIELD	PEP 159
LOCATION	Otway Basin	STATE	Victoria

DRILLING ASSEMBLY			JET SIZE			CASING			MUD VOLUME (BBL)		CIRCULATION DATA			
BIT SIZE	TYPE					9 5/8" SURFACE	492	ft	HOLE	PITS	PUMP SIZE		CIRCULATION	
8.5						SET @	150	M	178	380	5.5 X 6	Inches	PRESS (PSI)	psi
DRILL PIPE	TYPE	Length				INT.		ft	TOTAL CIRCULATING VOL.		PUMP MODEL	ASSUMED EFF	BOTTOMS	
SIZE 4.5	#	644	Mtrs			SET @		M	558		Emsco DB550	95 %	UP (min)	min
DRILL PIPE	TYPE	Length				PROD. or		ft	IN STORAGE		BBL/STK	STK / MIN	TOTAL CIRC.	
SIZE 4.5	HW	55	Mtrs			LNR Set @		M			0.1404		TIME (min)	min
DRILL COLLAR SIZE (")		Length				MUD TYPE					BBL/MIN	GAL / MIN	ANN VEL. DP	
6.25		190	Mtrs			4%KCL PHPA Polymer							(ft/min) DCs	

MUD PROPERTIES			
SAMPLE FROM		Pit	Pit
TIME SAMPLE TAKEN			13:00
DEPTH (ft) - (m)	Metres		889
FLOWLINE TEMPERATURE	^{0}C ^{0}F		
WEIGHT	ppg / SG		9.20 1.104
FUNNEL VISCOSITY (sec/qt) API @	^{0}C		41
PLASTIC VISCOSITY cP @	^{0}C		11
YIELD POINT (lb/100ft^2)			15
GEL STRENGTHS (lb/100ft^2) 10 sec/10 min			2 4
FILTRATE API (cc's/30 min)			7.0
HPHT FILTRATE (cc's/30 min) @	^{0}F		
CAKE THICKNESS API : HPHT (32nd in)			1
SOLIDS CONTENT (% by Volume)			5.0
LIQUID CONTENT (% by Volume) OIL/WATER			95.0
SAND CONTENT (% by Vol.)			
METHYLENE BLUE CAPACITY (ppb equiv.)			7.5
pH			8.8
ALKALINITY MUD (Pm)			
ALKALINITY FILTRATE (Pf / Mf)			0.05 0.50
CHLORIDE (mg/L)			19,000
TOTAL HARDNESS AS CALCIUM (mg/L)			40
SULPHITE (mg/L)			
K+ (mg/L)			21,076
KCl (% by Wt.)			3.9
PHPA (ppb)			0.4

MUD PROPERTY SPECIFICATIONS					
Mud Weight	8.8 - 9.4	API Filtrate	6 - 8	HPHT Filtrate	
Plastic Vis	min	Yield Point	12 - 25	pH	8.0 - 9.5
KCl	4%	PHPA	1.00 ppb	Sulphites	80 - 120

OBSERVATIONS

Pac- R written off damaged during loading.

OPERATIONS SUMMARY

Continue logging without hole problems

RIH open ended to set plugs as per P & A program

Mud Accounting (bbls)

FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY	
Premix (drill water)		Desander		INITIAL VOLUME	558
Premix (recirc from sump)		Desilter			
Drill Water		Downhole		+ FLUID RECEIVED	
Direct Recirc Sump		Dumped		-FLUID LOST	
Other (eg Diesel)		Other		+ FLUID IN STORAGE	
TOTAL RECEIVED		TOTAL LOST		FINAL VOLUME	558

Solids Control Equipment

	Type	Hrs		Cones	Hrs		Size	Hrs
Centrifuge	Nil		Desander	2		Shaker #1	3x84	
Degasser	P-B		Desilter	8		Shaker #2	n/a	

	Overflow (ppg)	Underflow (ppg)	Output (Gal/Min.)
Desander		0	
Desilter		0	

Product	Price	Start	Received	Used	Close	Cost

Solids Analysis	PPB	%
High Grav solids		
Total LGS	45.5	5.0
Bentonite	7.5	0.8
Drilled Solids	38.0	4.2
Salt		
n @ 13:00 Hrs	0.51	
K @ 13:00 Hrs	1.09	

Bit Hydraulics & Pressure Data
Jet Velocity
Impact force
HHP
HSI
Bit Press Loss
CSG Seat Frac Press
Equiv. Mud Wt.
ECD
Max Pressure @ Shoe :

DAILY COST	CUMULATIVE COST
	$9,817.40

RMN ENGINEER	Neil Kyberd	CITY	Adelaide Office	TELEPHONE	08 8338 7266