



DRILLING FLUID SUMMARY

FOR : CENTRAL PETROLEUM

WELL : SURPRISE # 1 RE-ENTRY H

AMADEUS BASIN

NORTHERN TERRITORY

Prepared by : Warren Mills
Andre Skujins

Date : December 2011

Operator : Central Petroleum
Well : Surprise # 1 Re-Entry H
Rig : Hunt Energy Rig 3
Spud : 22nd December 2011



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1. SUMMARY OF OPERATIONS

Surprise 1 Re-Entry H is located in Central Australia in Permit EP-115 within the Amadeus Basin. It is situated on the South-west part of the Northern Territory 400 km west of Alice Springs. The well is an extension of the just drilled Surprise # 1 ST1. This section commenced on the 22nd December 2011.

The drill water was carted from the local water well CTP JOW High Flow and had the following properties:-

pH : 7.5
Pf/mf : 0.0 / 0.22
Cl : 1300 mg/l
Ca : 660 mg/l

HOLE SIZE : 6" Horizontal Section
MUD TYPE : KCl Brine

All Mud tanks were dumped and cleaned. Sufficient fresh KCl based (3.5%) brine was made in the surface system so as to be able to displace the hole prior to drilling the horizontal section.

After running in with a directional assembly, the casing shoe was drilled out. The hole was displaced to the KCl brine and the old drilling fluid dumped to the sump.

After drilling 1 m of new formation, an FIT was conducted to an equivalent mud weight of 11.5 ppg. Drilling then continued horizontally. Sodium sulphite was added to maintain corrosion control in the saline environment and 5 bbls Xtra-Sweep pills were pumped prior to every connection, with some extra cuttings being returned with these sweeps. Surface volume was increased with further 3% KCl brine additions.

The Mud Engineer was released at this stage.

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2. OBSERVATIONS, RECOMMENDATIONS AND WELL ANALYSIS

Surprise 1 Re-entry H was drilled horizontally for a mud cost of \$8,916.60. The Mud engineer was released soon after drilling of this section had commenced.

A 3% KCl brine was the major component of the drilling fluid. Salt was also added for weight control.



3. INTERVAL COSTS

Product	Cost	Unit Size	6-1/8" Production Hole		
			Used	Cost	%Cost
AMC Xtra-Sweep	\$ 122.65	12 lb	2	\$245.30	2.8%
Flossy Salt	\$ 7.50	25 kg	252	\$1,890.00	21.2%
Liquipol	\$ 105.00	25 lt	1	\$105.00	1.2%
Potassium Chloride	\$ 33.60	25 kg	133	\$4,468.80	50.1%
Soda Ash	\$ 24.10	25 kg	5	\$120.50	1.4%
Sodium Sulphite	\$ 42.60	25 kg	18	\$766.80	8.6%
Xanbore	\$ 188.60	25 kg	7	\$1,320.20	14.8%
Totals :				\$8,916.60	100.0%



4. FLUID PROPERTIES SUMMARY

Date								Gels		Filtrate		Solids											
	Mud Type	Temp	Depth	Weight	Vis	PV	YP	10 sec	10 min	API	Cake	Solids	Water	Sand	MBT	pH	Pf	Mf	Cl-	Ca++	SO3=	K+	KCl
22-Dec-11	3% KCl Brine	29	2430	8.50	27	1	1	1	1	NC			100.0			8.5	0.03	0.20	17,200	40	80	17,325	3.3
22-Dec-11	3% KCl Brine	38	2453	8.50	27	1	1	1	1	NC			100.0			9.0	0.03	0.20	17,000	60	80	17,860	3.4



DRILLING FLUID REPORT



Report #	1	Date :	22-Dec-2011
Rig No	Rig#3	Spud :	22-Dec-2012
Depth	2429	to	2463 Metres

OPERATOR	Central Petroleum Ltd	CONTRACTOR	Hunt Energy
REPORT FOR	R Miller/D Hallgren	REPORT FOR	M Damon
WELL NAME AND No	Surprise 1 Re-Entry H	FIELD	EP-115
		LOCATION	Amadeus Basin
		STATE	Northern Territory

DRILLING ASSEMBLY		JET SIZE		CASING		MUD VOLUME (BBL)		CIRCULATION DATA									
BIT SIZE	TYPE	15	15	15	9 5/8	SURFACE SET @	4758	ft	HOLE	PITS	PUMP SIZE		CIRCULATION				
6.00	REED R30AP					SET @	1450	M	316	420	5.5	X	7.5	Inches	PRESS (PSI)	1196	psi
DRILL PIPE SIZE	TYPE	Length		Mtrs	7	INTERMEDIATE SET @	8953	ft	TOTAL CIRCULATING VOL.		PUMP MODEL		ASSUMED EFF		BOTTOMS		
3.5	S #					SET @	2729	M	736		Triplex1		97 %		UP (min)		
DRILL PIPE SIZE	TYPE	Length		Mtrs		PRODUCTION. or LINER Set @		ft	IN STORAGE		BBL/STK		STK / MIN		TOTAL CIRC.		
3.50	HW	169						M			0.0550		80		TIME (min)		
DRILL COLLAR SIZE (")		Length		Mtrs		MUD TYPE					BBL/MIN		GAL / MIN		ANN VEL. DP		
4.75		27				3% KCl Brine					4.27		179		(ft/min) DCs		
															185 Tur		
															327 Tur		

SAMPLE FROM		MUD PROPERTIES		MUD PROPERTY SPECIFICATIONS				
TIME SAMPLE TAKEN		FI	FI	Mud Weight	ALAP	API Filtrate	N/C	HPHT Filtrate
DEPTH (ft) - (m)		10:00	20:00	Plastic Vis		Yield Point		pH
FLOWLINE TEMPERATURE °C		2,430	2,453	KCl	3%	PHPA		Sulphites
WEIGHT ppg / SG		8.50	1.020					80 - 120

FUNNEL VISCOSITY (sec/qt) API @ °C		27	27	OBSERVATIONS Prepare 3% KCl brine. Dump mud from Surprise 1 Re-Entry and displace to brine. Prepare 0.5ppb Xtra-Sweep sweep mud. Add Sodium Sulphite as required. Pump 5bbl sweeps every connection, some extra cuttings returning with sweeps.					
PLASTIC VISCOSITY cP @ 120 °C		1	1						
YIELD POINT (lb/100ft ²)		1	1						
GEL STRENGTHS (lb/100ft ²) 10 sec/10 min		1	1						
RHEOLOGY θ 600 / θ 300		3	2					3	2
RHEOLOGY θ 200 / θ 100		1	1					1	1
RHEOLOGY θ 6 / θ 3		1	1					1	1
FILTRATE API (cc's/30 min)		N/C	N/C						
HPHT FILTRATE (cc's/30 min) @ °F									
CAKE THICKNESS API : HPHT (32nd in)									

LIQUID CONTENT (% by Volume) OIL/WATER		99.9	100.0	OPERATIONS SUMMARY RIH with directional assembly. Drill 1m of new formation, conduct FIT. EMW of 11.5ppg. Drill ahead 6" horizontal hole under DD direction. Last survey info: 2457m MD, 2452m TVD, 9.67 Inclination, 152.89 Azimuth.					
SAND CONTENT (% by Vol.)									
METHYLENE BLUE CAPACITY (ppb equiv.)									
pH		8.5	9.0						
ALKALINITY MUD (Pm)									
ALKALINITY FILTRATE (Pf / Mf)		0.03	0.20					0.03	0.20
CHLORIDE (mg/L)		17,200	17,000						
TOTAL HARDNESS AS CALCIUM (mg/L)		40	60						
SULPHITE (mg/L)		80	80						
K+ (mg/L)		17,325	17,850						

Mud Accounting (bbls)				Solids Control Equipment								
FLUID BUILT & RECEIVED		FLUID DISPOSED		SUMMARY		Type	Hrs	Cones	Hrs	Size	Hrs	
Premix (drill water)	736	Desander		INITIAL VOLUME	0	Centrifuge		Desander		Shaker #1	3 x 210	16
Premix (recirc from sump)		Desilter				Degasser		Desilter		Shaker #2		
Drill Water		Downhole	0	+ FLUID RECEIVED	736							
Direct Recirc Sump		Dumped		- FLUID LOST	0							
Other (eg Diesel)		Other		+ FLUID IN STORAGE								
TOTAL RECEIVED	736	TOTAL LOST	0	FINAL VOLUME	736	Desander		0				
						Desilter		0				

Product	Price	Start	Received	Used	Close	Cost	Solids Analysis		Bit Hydraulics & Pressure Data	
AMC Xtra-Sweep	\$ 122.65	42		2	40	\$ 245.30	%	PPB	Jet Velocity	111
Aus-Ben	\$ 16.50	5		1	4	\$ 16.50	High Grav solids		Impact force	87
Potassium Chloride	\$ 33.60	684		154	530	\$ 5,174.40	Total LGS	0.0	HHP	10
Soda Ash	\$ 24.10	49		12	37	\$ 289.20	Bentonite	0.0	HSI	0.3
Sodium Sulphite	\$ 42.60	59		2	57	\$ 85.20	Drilled Solids	0.1	Bit Press Loss	94
							Salt	1.0	CSG Seat Frac Press	
							n @ 20:00 Hrs	0.58	Equiv. Mud Wt.	11.5 ppg
							K @ 20:00 Hrs	0.27	Max Pressure @ Shoe :	1397 psi
							DAILY COST		CUMULATIVE COST	
							\$5,810.60		\$5,810.60	

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