PSI
PRECISION SURVEY INC.

Cement Bond Log
Gamma Ray - CCL - VDL

Company: Rosetta Resources Operating, LP
Well: Cardinal 35-04
Field: Peregrine
County: Yuma
State: Colorado

Rosetta Resources Operating, LP
Well: Cardinal 35D4
Field: Peregrine
County: Yuma
State: Colorado

API#: 05-125-11803-00
Location: 35N-56W-35-SESWSW
Permanent Datum: GL
Elevation: 3597 ft
Log Measured From: KB
Drilling Measured From: KB
Elev.: K.B. 3610 ft, G.L. 3597 ft

Date	15-MAY-2010		
Run Number	ONE		
Depth Driller	7100 ft		
Schlumberger Depth	7104 ft		
Bottom Logged Interval	7100 ft		
Top Logged Interval	200 ft		
Type Fluid in Hole	Water		
Salinity	0 ppm		
Density	8.4 lbm/gal		
Level	Full		
Max Rec. Temperature	0 F		
Equipment Number	PSI		
Location	Yuma, CO		
Recorded By	Tyler Ellis		
Witnessed By	Mike Bowling		

Run Number	ONE		
Bit Size	7.875 in		
Casing Driller	8.625 in @ 200 ft		
Casing Schlumberger	200 ft		
Depth Logger	7104 ft		
Bottom Logged Interval	7100 ft		
Top Logged Interval	200 ft		
Type Fluid in Hole	Water		
Density / Viscosity	8.4 lbm/gal		
Max Rec. Temperature	0 F		
Estimated Cement Top	Surface		
Time Circulation Stopped	15-MAY-10		
Time Logger on Bottom	15-MAY-10		

Tool Number	1329	1329	1329
Tool Type	SGR	SDS	CBL
Tool Description	Triple Combo	Triple Combo	Triple Combo
Tool Length	15.00 ft	15.00 ft	15.00 ft
Weight	200.00 lb	200.00 lb	200.00 lb
Max Recorded Temperature	0 F	0 F	0 F
Max Recorded Pressure	0 psi	0 psi	0 psi
Calibration Date	14-APR-10	14-APR-10	14-APR-10
Calibration Number	1	1	1

Sensor Offset	SGR 0.00 ft	SDS 3.63 ft	CBL 12.04 ft
Standoff	0.00 in	0.00 in	0.00 in
Mud Density	8.4 lbm/gal	8.4 lbm/gal	8.4 lbm/gal
Mud Viscosity	0 s/qt	0 s/qt	0 s/qt
Mud Resistivity	0 ohmm	0 ohmm	0 ohmm
Mud Filtrate Density	0 lbm/gal	0 lbm/gal	0 lbm/gal
Mud Filtrate Viscosity	0 s/qt	0 s/qt	0 s/qt
Mud Filtrate Resistivity	0 ohmm	0 ohmm	0 ohmm
Mud Cake Density	0 lbm/gal	0 lbm/gal	0 lbm/gal
Mud Cake Viscosity	0 s/qt	0 s/qt	0 s/qt
Mud Cake Resistivity	0 ohmm	0 ohmm	0 ohmm

Sensor Offset	WVF3 12.04 ft	WVF5 11.04 ft	GR 0.90 ft
Standoff	0.00 in	0.00 in	0.00 in
Mud Density	8.4 lbm/gal	8.4 lbm/gal	8.4 lbm/gal
Mud Viscosity	0 s/qt	0 s/qt	0 s/qt
Mud Resistivity	0 ohmm	0 ohmm	0 ohmm
Mud Filtrate Density	0 lbm/gal	0 lbm/gal	0 lbm/gal
Mud Filtrate Viscosity	0 s/qt	0 s/qt	0 s/qt
Mud Filtrate Resistivity	0 ohmm	0 ohmm	0 ohmm
Mud Cake Density	0 lbm/gal	0 lbm/gal	0 lbm/gal
Mud Cake Viscosity	0 s/qt	0 s/qt	0 s/qt
Mud Cake Resistivity	0 ohmm	0 ohmm	0 ohmm

Logging Rig Time	0 hr	0 hr	0 hr
Logging Engineer	Tyler Ellis	Tyler Ellis	Tyler Ellis
Logging Unit Number	1329	1329	1329
Logging Unit Location	Yuma, CO	Yuma, CO	Yuma, CO
Recorded By	Tyler Ellis	Tyler Ellis	Tyler Ellis
Witnessed By	Mike Bowling	Mike Bowling	Mike Bowling

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Standoff	0.00 in	0.00 in	0.00 in
Mud Density	8.4 lbm/gal	8.4 lbm/gal	8.4 lbm/gal
Mud Viscosity	0 s/qt	0 s/qt	0 s/qt
Mud Resistivity	0 ohmm	0 ohmm	0 ohmm
Mud Filtrate Density	0 lbm/gal	0 lbm/gal	0 lbm/gal
Mud Filtrate Viscosity	0 s/qt	0 s/qt	0 s/qt
Mud Filtrate Resistivity	0 ohmm	0 ohmm	0 ohmm
Mud Cake Density	0 lbm/gal	0 lbm/gal	0 lbm/gal
Mud Cake Viscosity	0 s/qt	0 s/qt	0 s/qt
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Logging Engineer	Tyler Ellis	Tyler Ellis	Tyler Ellis
Logging Unit Number	1329	1329	1329
Logging Unit Location	Yuma, CO	Yuma, CO	Yuma, CO
Recorded By	Tyler Ellis	Tyler Ellis	Tyler Ellis
Witnessed By	Mike Bowling	Mike Bowling	Mike Bowling

Field data is preliminary

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except to the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Depth Ref to PSI Tripple Combo Log dated 15-MAY-2010.
Run CBL from TD to 200' above cement top.
Perforate 2180-2190' @ 4 SPF, 10' NET, 40 Shots,
using Titan 10gm, 0.40"EHD, 40.99"PENE, 120deg phasing.
API# 05-125-11803-00
Thank you for using Phoenix Surveys!!

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STNDRD Standard Cable Head	1.00	1.69	1.00
			SDSCENT Centralizer	2.87	2.75	24.00
WVF3	12.04		CBL-Probe (050215)	8.75	2.75	93.00
WVF5	11.04					
			SDSCENT Centralizer	2.87	2.75	24.00
CCL	3.63					
			GR_CCL-ISDS (SDSSENCI) SeeCCL-Inferred Picks	4.92	2.75	60.00
GR	0.90					

Dataset: rosetta_cardinal_35-04.db: field\well\run1\pass2
Total Length: 22.41 ft
Total Weight: 202.00 lb
O.D: 2.75 in

Database File: rosetta_cardinal_35-04.db
Dataset Pathname: pass2
Dataset Creation: Fri Jun 11 13:05:15 2010 by Log Std Cased\hole 09061
Charted by: Depth in Feet scaled 1:240

324	Travel Time (usec)	225
0	CCL	1
0	GR (GAPI)	300

0	Amplified Amplitude (mv)	20,000
0	Amplitude (mv)	500

Variable Density 1200

Ext. Top of Cement (TOC)

Flap Junk

Amplified Amplitude

Casing Collars

Amplitude

Gamma Ray

Travel Time

Total Depth @ 2367'

324	Travel Time (usec)	225
0	CCL	1
0	GR (GAPI)	300

0	Amplified Amplitude (mv)	20,000
0	Amplitude (mv)	500

Variable Density 1200