GAMMA RAY CCL CEMENT BOND VDL SECTOR MAP

PIONEER
Pioneer Energy Services

Company	EnCana Oil & Gas (USA) Inc.
Well	Frederiksen 1B-28H-H368
Field	Wattenberg
County	Weld
State	Colorado

Country USA

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Location: API #: 05123376670000
2260' FNL & 255' FEL
SENE
SEC 28 TWP 3N RGE 68W

Other Services
None

Permanent Datum	GL	Elevation 4975	Elevation
Log Measured From	KB		K.B. 4988
Drilling Measured From	KB		D.F. 4988
			G.L. 4975

Date	June 1, 2014
Run Number	1
Depth Driller	11509'
Depth Logger	7425'
Bottom Logged Interval	7423'
Top Log Interval	0
Open Hole Size	8-3/4"
Type Fluid	Drilling Mud
Density / Viscosity	10.2 / 36
Max. Recorded Temp.	NA
Estimated Cement Top	500'
Time Well Ready	0100
Time Logger on Bottom	0215
Equipment Number	49
Location	Brighton, CO
Recorded By	Matt Gill
Witnessed By	Dennis Zarosky

Borehole Record			Tubing Record		
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	7"	26 lbs	0	7474'
Liner				

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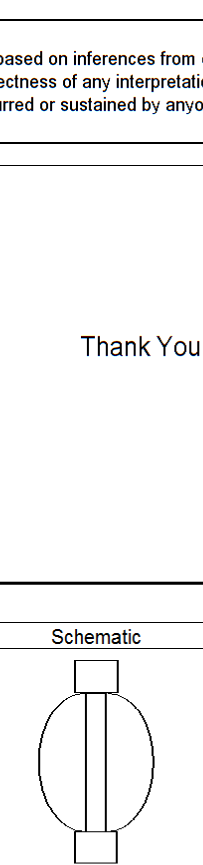
All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

Comments

Thank You for using Pioneer Energy Services
Ensign Drilling Rig 135



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CENT #2 -A (1)	2.83	2.75	20.00
IntTemp	15.91				
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	12.66 12.66 12.66 12.66 12.66 12.66 12.66 12.66 12.66 12.66 11.66	RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
		CENT-A (1)	2.83	2.75	20.00
CCL	5.17				
		GR-probe 2.75 (111205) proble Digital CCL Gamma	4.33	2.75	100.00
GR	2.38				
TEMP	0.08	TEMP-1.375TEMP (0001) Temperature Tool	1.25	1.38	30.00

Dataset: 13567.db: field/well/run1/pass2
Total Length: 20.16 ft
Total Weight: 260.00 lb
O.D. 2.75 in

Database File: 13567.db
Dataset Pathname: pass2
Presentation Format: scbl02
Dataset Creation: Sun Jun 01 02:12:54 2014 by Log 0
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File:	13567.db
Dataset Pathname:	pass2
Dataset Creation:	Sun Jun 01 02:12:54 2014 by Log 0

Temperature Calibration Report

Serial Number:	0001
Tool Model:	1.375TEMP
Performed:	Fri May 23 09:48:57 2014

	Reference		Reading	
Low Reference:	0.00	degF	0.00	cps
High Reference:	1.00	degF	1.00	cps

Gain:	0.08
Offset:	15.00
Delta Spacing	2

Gamma Ray Calibration Report

Serial Number: 111205

Serial Number: 111205
Tool Model: probe 2.75
Performed: Sat May 03 17:02:46 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.9500 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: Base
Tool Model: Probe

Calibration Casing Diameter: 4.500 in
Calibration Depth: 239.842 ft

Master Calibration, performed Sun Jun 01 01:34:29 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.012	0.861	0.000	62.200	60.211	-0.061
CAL	0.012	1.015				
5'	0.012	0.934	0.000	62.200	58.737	-0.644
SUM						
S1	0.005	0.969	0.000	100.000	67.277	0.025
S2	0.012	0.953	0.000	100.000	67.701	-0.298
S3	0.012	0.843	0.000	100.000	68.985	-0.344
S4	0.012	0.764	0.000	100.000	75.152	-0.292
S5	0.012	0.747	0.000	100.000	79.572	-0.581
S6	0.012	0.760	0.000	100.000	79.499	-0.452
S7	0.012	0.821	0.000	100.000	72.533	-0.136
S8	0.012	0.887	0.000	100.000	69.258	-0.142

Internal Reference Calibration, performed Tue Nov 21 12:42:07 2006:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	1.015	1.000	0.000

Air Zero Calibration, performed Thu Apr 24 09:23:40 2008:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000