PIONEER
Pioneer Energy Services

GAMMA RAY CCL CEMENT BOND VDL SECTOR MAP

Company EnCana Oil & Gas (USA) Inc.
Well Billings 3C-18H
Field Wattenberg
County Weld
State Colorado
Country USA

Location: API #: 05-123-36984
1609' FSL & 762' FWL NWSW
SEC 18 TWP 3N RGE 68W

Other Services
None

Permanent Datum GL Elevation 5145
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 5177
D.F. 5176
G.L. 5145

Company EnCana Oil & Gas (USA) Inc.
Well Billings 3C-18H
Field Wattenberg
County Weld
State Colorado Country USA

Date	November 09, 2014
Run Number	1
Depth Driller	14105
Depth Logger	7390
Bottom Logged Interval	7390
Top Log Interval	0
Open Hole Size	8-3/4"
Type Fluid	Gel/Polymer
Density / Viscosity	11.4 / 40
Max. Recorded Temp.	NA
Estimated Cement Top	480
Time Well Ready	14:30
Time Logger on Bottom	15:45
Equipment Number	49
Location	Ft. Morgan
Recorded By	Tracy Crane
Witnessed By	Ira Cox

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9 5/8			885
Prot. String	7"	26 lbs	0	7537
Production String				
Liner				

<<< Fold Here >>>

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.

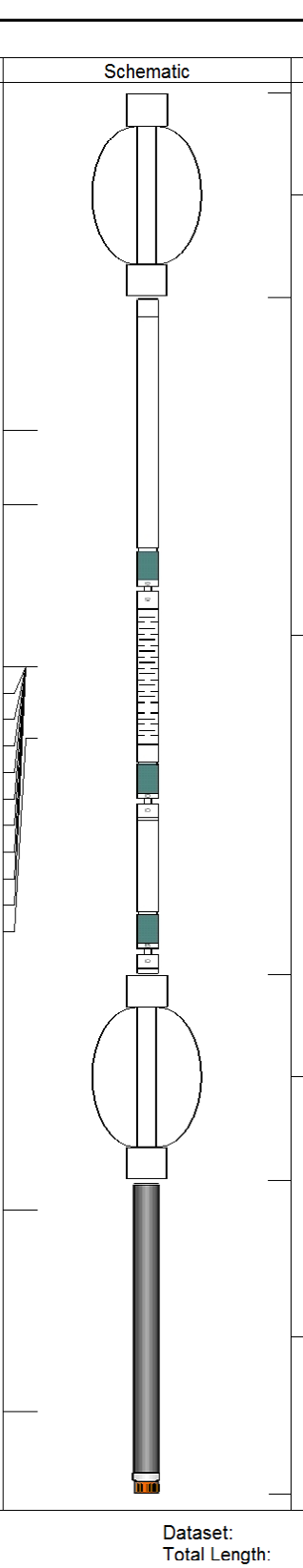
Comments

Depth Correlated to 7" Tally & MWD at 7140'

Patterson Rig 326

Thank You for using Pioneer Energy Services

SO# 2-013827



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CENT #2 -A (1)	2.83	2.75	20.00
IntTemp	14.66				
TEMP	13.64				
WVF3FT	11.41	RBT-RBT-C3 (130584) Probe Radii Bond Tool with Digital Telemetry	9.33	2.75	90.00
WVFCAL	11.41				
WVFS1	11.41				
WVFS2	11.41				
WVFS3	11.41				
WVFS4	11.41				
WVFS5	11.41				
WVFS6	11.41				
WVFS7	11.41				
WVFS8	11.41				
WVF5FT	10.41				
		CENT-A (1)	2.83	2.75	20.00
CCL	3.92				
GR	1.13	GR-probe 2.75 (51013) proble Digital CCL Gamma	4.33	2.75	100.00

Dataset: 13827.db: field/well/run1/pass2
Total Length: 19.32 ft
Total Weight: 230.00 lb
O.D. 2.75 in

Database File: 13827.db
Dataset Pathname: pass2.3
Presentation Format: scbl02
Dataset Creation: Sun Nov 09 16:40:04 2014 by Calc 0
Charted by: Depth in Feet scaled 1:240

Log Variables

Database:C:\Warrior\Data\13827.db
Dataset: field/well/run1/pass2

Top - Bottom

PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	CASEOD in	PERFS
0	26	0	1	0.08	7	0

TDEPTH ft	BOTTEMP degF	BOREID in
0	187	8.75

Calibration Report

Database File: 13827.db
Dataset Pathname: pass2
Dataset Creation: Sun Nov 09 15:06:09 2014 by Log 0

Gamma Ray Calibration Report

Serial Number:	51013	
Tool Model:	probe 2.75	
Performed:	Thu Oct 23 02:18:02 2014	
Calibrator Value:	1400.0	GAPI
Background Reading:	26.8	cps
Calibrator Reading:	1120.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	130584	
Tool Model:	RBT-C3	
Calibration Casing Diameter:	7.000	in

Calibration Depth: 145.996 ft

Master Calibration, performed Sat Nov 01 00:02:03 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.012	0.378	1.500	62.165	69.000	-0.570
CAL	0.012	1.029				
5'	0.012	0.239	1.500	62.165	70.000	-1.811
SUM						
S1	0.010	0.384	0.000	100.000	102.000	-2.698
S2	0.012	0.425	0.000	100.000	101.000	-3.023
S3	0.012	0.441	0.000	100.000	102.500	-2.894
S4	0.012	0.420	0.000	100.000	103.000	-3.034
S5	0.012	0.378	0.000	100.000	104.000	-3.372
S6	0.010	0.352	0.000	100.000	105.000	-2.925
S7	0.012	0.346	0.000	100.000	102.000	-3.679
S8	0.012	0.362	0.000	100.000	103.000	-3.547

Internal Reference Calibration, performed Sun Nov 02 17:00:00 2014:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	1.029	1.000	0.000

Air Zero Calibration, performed Sun Nov 09 11:38:23 2014:

	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

Temperature Calibration Report

Serial Number:	130584
Tool Model:	RBT-C3
Performed:	Wed Aug 13 16:18:33 2014

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

Gain:	0.77
Offset:	15.00
Delta Spacing	1