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Cement Bond Log With CCL / VDL And Gamma Ray

Company	PDC Energy Inc.
Well	Alles 22S-432
Field	Wattenberg
County	Weld
State	Colorado

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Field Wattenberg
County Weld State Colorado
Location: API # : 05-123-37799
NENE
2151'FSL & 572'FEL
SEC 22 TWP 5N RGE 65W

Other Services
Set Plug
Dump
Cement

Permanent Datum	Ground Level	Elevation	4645'
Log Measured From	Kelly Bushing	15'A.P.D.	
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 4660'
D.F. 4659'
G.L. 4645'

Date	28-Mar-2014
Run Number	Two
Depth Driller	12,497'
Depth Logger	7015'
Bottom Logged Interval	7013'
Top Log Interval	Surface
Open Hole Size	8.75"
Type Fluid	Mud
Density / Viscosity	9.6#/41Visc.
Max. Recorded Temp.	NR
Estimated Cement Top	639'
Time Well Ready	14:05
Time Logger on Bottom	14:25
Equipment Number	96
Location	Ft. Morgan
Recorded By	Bruce Miller
Witnessed By	Randy Jevny

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.625"	36#	Surface	943'
Prot. String				
Production String	7.0"	26#	Surface	7398'
Liner				

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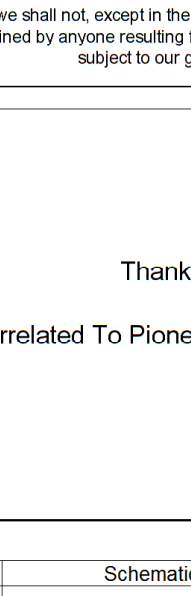
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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

Thank You For Using Pioneer Energy Services

Log Is Correlated To Pioneer Energy Services Dual Induction Log Dated March 6, 2014.

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			PTS275	2.83	2.75	
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	11.86 11.86 11.86 11.86 11.86 11.86 11.86 11.86 11.86 11.86 10.78		RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
			PTS275	2.83	2.75	
CCL TEMP GR	3.84 3.14 2.30		GCT-GRCCLTEMP (130608) Probe GCT	4.69	2.75	100.00

Dataset: pdc_2-205398.db: field/well/run2/pass1
Total Length: 19.27 ft
Total Weight: 190.00 lb
O.D. 2.75 in

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Main Pass

Database File: pdc_2-205398.db
Dataset Pathname: run2/pass1
Presentation Format: cbl_drs
Dataset Creation: Fri Mar 28 14:20:26 2014 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

9	Collar Locator	-1
0	Gamma Ray (GAPI)	200
372	TT3FT (usec)	272

0	AMP AMPLITUDE (mV)	20
0	AMPLITUDE (mV)	100

200 VDL 1200

Calibration Report

Database File: pdc_2-205398.db
Dataset Pathname: run2/pass1
Dataset Creation: Fri Mar 28 14:20:26 2014 by Log SCH 120430

Gamma Ray Calibration Report

Serial Number:	130608	
Tool Model:	GRCCLTEMP	
Performed:	Sun Jun 13 14:33:21 1993	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Temperature Calibration Report

Serial Number:	130608	
Tool Model:	GRCCLTEMP	
Performed:	Thu Aug 15 08:56:46 2013	
	Reference	Reading
Low Reference:	100.00 degF	6509.65degF
High Reference:	350.00 degF	27350.70degF
Gain:	0.01	
Offset:	21.91	
Delta Spacing	1	

Segmented Cement Bond Log Calibration Report

Serial Number:	Base	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	319.100	ft

Master Calibration, performed Fri Mar 28 14:02:27 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.014	0.789	2.000	62.165	74.959	3.056
CAL	1.000	1.008				
5'	0.164	0.810	2.000	62.165	93.179	-13.317
SUM						
S1	-0.068	0.719	0.000	95.000	120.788	8.160
S2	-0.077	0.790	0.000	95.000	109.582	8.389
S3	-0.042	0.854	0.000	95.000	106.064	4.452
S4	-0.030	0.878	0.000	95.000	104.642	3.120
S5	-0.043	0.827	0.000	95.000	109.172	4.719
S6	-0.047	0.764	0.000	95.000	117.176	5.462
S7	-0.030	0.714	0.000	95.000	127.703	3.806
S8	-0.077	0.711	0.000	95.000	120.472	9.310

Internal Reference Calibration, performed Wed Aug 21 12:08:58 2013:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.000	1.008	1.000	0.000

Air Zero Calibration, performed Fri Mar 28 13:52:54 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

Log Variables

Database:C:\Warrior\Data\pdc_2-205398.db
Dataset: field/well/run2/pass1

Top - Bottom

PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	CASEOD in	PERFS	TDEPTH ft
0	26	62	2	0.8	7	0	7400
BOTTEMP degF	**BOREID in**						
220	8.75						

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