V.D.L. C.C.L. GAMMA RAY CEMENT BOND LOG

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Company	Bonanza Creek Energy
Well	Pronghorn C13-W43-28 HNB
Field	Wattenberg
County	Weld
State	Colorado

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Location: API # : 05-123-41218
SHL: 1250' FSL X 409' FWL
SEC 28 TWP 5n RGE 61W

Other Services
None

Permanent Datum	GL		Elevation 4597'	Elevation
Log Measured From	KB	17'		K.B. 4614'
Drilling Measured From	KB			D.F. 4613' G.L. 4597

Date	9-Sept-2015
Run Number	One
Depth Driller	NA
Depth Logger	5824'
Bottom Logged Interval	5812'
Top Log Interval	Surface
Open Hole Size	NA
Type Fluid	Water
Density / Viscosity	8.34 LB/G
Max. Recorded Temp.	NA
Estimated Cement Top	NA
Time Well Ready	8:20
Time Logger on Bottom	13:10
Equipment Number	P109
Location	Fort Morgan
Recorded By	Randy Azevedo
Witnessed By	Kurt Dodge

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.875"	36#	Surface	776'
Prot. String				
Production String	7"	26#	Surface	6539'
Liner	4.5"	11.6#	5676'	NA

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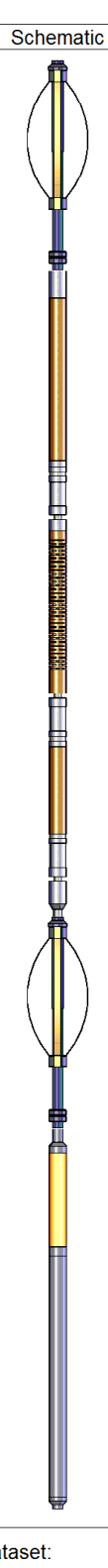
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

Log ran as per customer request
Log ran from Liner top to Surface.
Log ran with 0 PSI surface induced pressure
Log Measured from KB.
Liner top @ 5676'.
KOP @ 5702'.
Limited Header Info on location.

Thank you for choosing Pioneer Energy Services.
SO#2-310090



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CENT-PTS275 (1)	2.88	2.75	
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	12.38 12.38 12.38 12.38 12.38 12.38 12.38 12.38 12.38 12.38 11.29	RBT-Probe (130433) Probe Radii Bond Tool with Digital Telemetry	8.77	2.75	90.00
		CENT-PTS275 (2)	2.88	2.75	
CCL GR	3.63 2.30	GR_CCL-Probe (110246) Probe Gamma CCL	5.17	2.75	100.00

Dataset: pronghorn c13-w43-28 cbl.db: field/well/run1/pass3
Total Length: 19.69 ft
Total Weight: 190.00 lb
O.D. 2.75 in

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7" Main Pass

Log Ran under 0 PSI surface induced pressure.

Database File:	pronghorn c13-w43-28 cbl.db
Dataset Pathname:	pass3
Presentation Format:	cbl_drs
Dataset Creation:	Wed Sep 09 13:20:36 2015 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

9	Collar Locator	-1
0	Gamma Ray (GAPI)	200

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

200	VDL	1200

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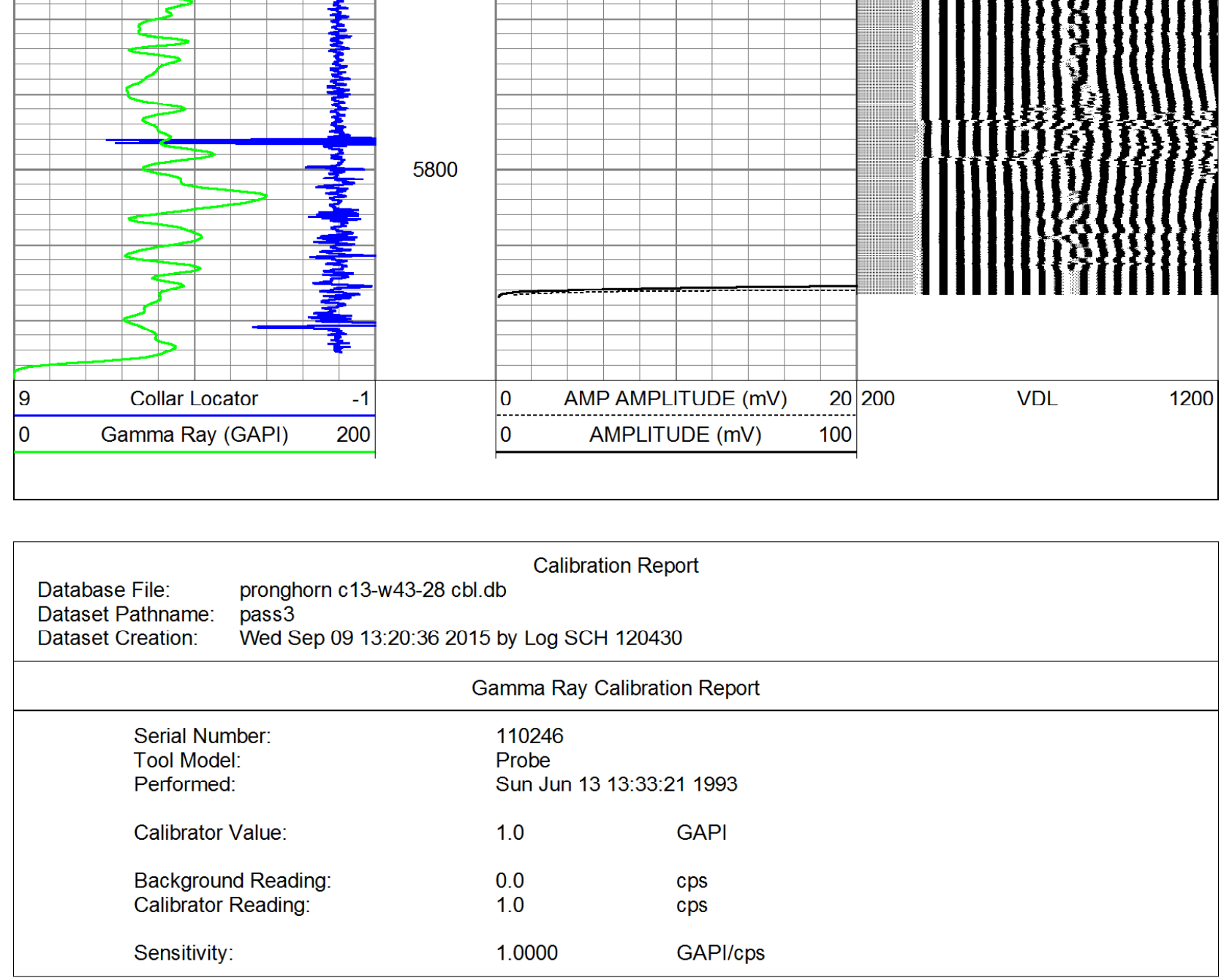
Repeat Section

Log ran under 0 PSI surface induced pressure.

Database File: pronghorn c13-w43-28 cbl.db
Dataset Pathname: pass2
Presentation Format: cbl_drs
Dataset Creation: Wed Sep 09 13:16:20 2015 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: pronghorn c13-w43-28 cbl.db
Dataset Pathname: pass3
Dataset Creation: Wed Sep 09 13:20:36 2015 by Log SCH 120430

Gamma Ray Calibration Report

Serial Number:	110246	
Tool Model:	Probe	
Performed:	Sun Jun 13 13:33:21 1993	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	130433	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	302.817	ft

Master Calibration, performed Wed Sep 09 13:48:52 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.022	1.006	-0.020	62.165	60.482	1.302
CAL	-0.006	1.325				
5'	-0.006	0.993	-0.800	62.165	63.037	-0.411
SUM						
S1	0.056	0.962	0.000	100.000	110.385	-6.178
S2	-0.001	0.958	0.000	100.000	104.346	0.079
S3	-0.000	0.980	0.000	100.000	102.058	0.014
S4	-0.000	1.014	0.000	100.000	98.604	0.008
S5	-0.001	1.019	0.000	100.000	98.044	0.095
S6	-0.001	1.022	0.000	100.000	97.755	0.128
S7	-0.002	1.005	0.000	100.000	99.298	0.232
S8	-0.002	0.981	0.000	100.000	101.683	0.218

Internal Reference Calibration, performed Tue Jul 28 16:29:49 2015:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.006	1.325	1.000	0.000

Air Zero Calibration, performed Tue Jul 28 15:54:12 2015:

	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

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