HALLIBURTON

ACOUSTIC CEMENT BOND LOG

Company	LARAMIE ENERGY II
Well	REPPO 34-11C
Field	GRAND VALLEY
County	GARFIELD State CO

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API No.: 05045157900000 Serv #: 7047310
Location: SURFACE HOLE: 2747' FSL & 2460' FEL
BOTTOM HOLE: 1907' FSL & 1898' FWL

Other Services
TEMPERATURE
RMTE

Sec: 34 Twp: 7S Rge: 96W

Permanent Datum	GROUND LEVEL	Elevation 5044'	Elevation
Log Measured From	KB . 21 Ft. above perm. datum		K.B. 5065'
Drilling Measured From	KB		D.F. ------
			G.L. 5044'

Date @ Time Logged	7 DEC 2009 @ 10:00	Type Fluid in Hole	WATER
Run No.	ONE	Density of Fluid	8.34 #
Depth - Driller	5115'	Fluid Level	FULL
Depth - Logger	5090'	Cement Top Est. Logged	LOGGED
Bottom - Logged Interval	5086'	Equipment / Location	10549604 / G.J.
Top - Log Interval	1800'	Recorded by	M. CHANEY
Max. Recorded Temp.	179 F	Witnessed by	M. ROBERTS

CEMENTING DATA	Surface	Protection	Production	Liner
	String	String	String	
Date / Time Cemented	N/A	N/A	N/A	N/A
Primary / Squeeze				
Expected Compressive Strength	psi@ hrs	psi@ hrs	psi@ hrs	psi@ hrs
Cement Volume	/	/	/	/
Cement Type / Weight	/	/	/	/
Formulation				
Mud Type / Mud Wgt.	/	/	/	/

Borehole Record				Casing & Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	20"	SURFACE	40'	16"	65#	SURFACE	40'
TWO	12.25"	40'	806'	8.625"	32#	SURFACE	806'
THREE	7.875"	806'	5115'	4.5"	11.6#	SURFACE	5115'

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HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHCIH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

H.E.S. ACOUSTIC CEMENT BOND LOG DATED 7 DEC 2009 IS THE PRIMARY LOG FOR THIS WE

LOG INTERVALS PER CUSTOMER REQUEST

CBL, GR, CCL RAN IN COMBINATION

SHORT JOINT: 2016' - 2037' & 4108' - 4130'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES

Service Ticket No. 7047310 API No. 05045157900000 PGM Ver 081210

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

GAMMA RAY		COLLAR LOCATOR		BOND TOOL			
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	
Serial No.	081029	Serial No.	081029	Serial No.	061115	Serial No.	
Model No.	GR-PROBE	Model No.	CCL-PROBE	Model No.	CBL-PROBE	Model No.	
Diameter	2.75"	Diameter	2.75"	Diameter	2.75"	Diameter	

LOGGING DATA

General Data

Pass	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
ONE	5090'	1800'	0	65	MAIN LOG SECTION

	GR		CCL		AMP		MSG	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	9	-1	0	100	200	1200

DIRECTIONAL INFORMATION

Maximum Deviation	N/A	deg. @	N/A	KOP	N/A

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MAIN LOG SECTION

SCALE: 5" = 100'

Database File: reppo_34_11c_cbl.db
Dataset Pathname: CBL/MAIN1
Presentation Format: cbl_main
Dataset Creation: Mon Dec 07 09:59:24 2009 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

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MAIN LOG SECTION

SCALE: 5" = 100'

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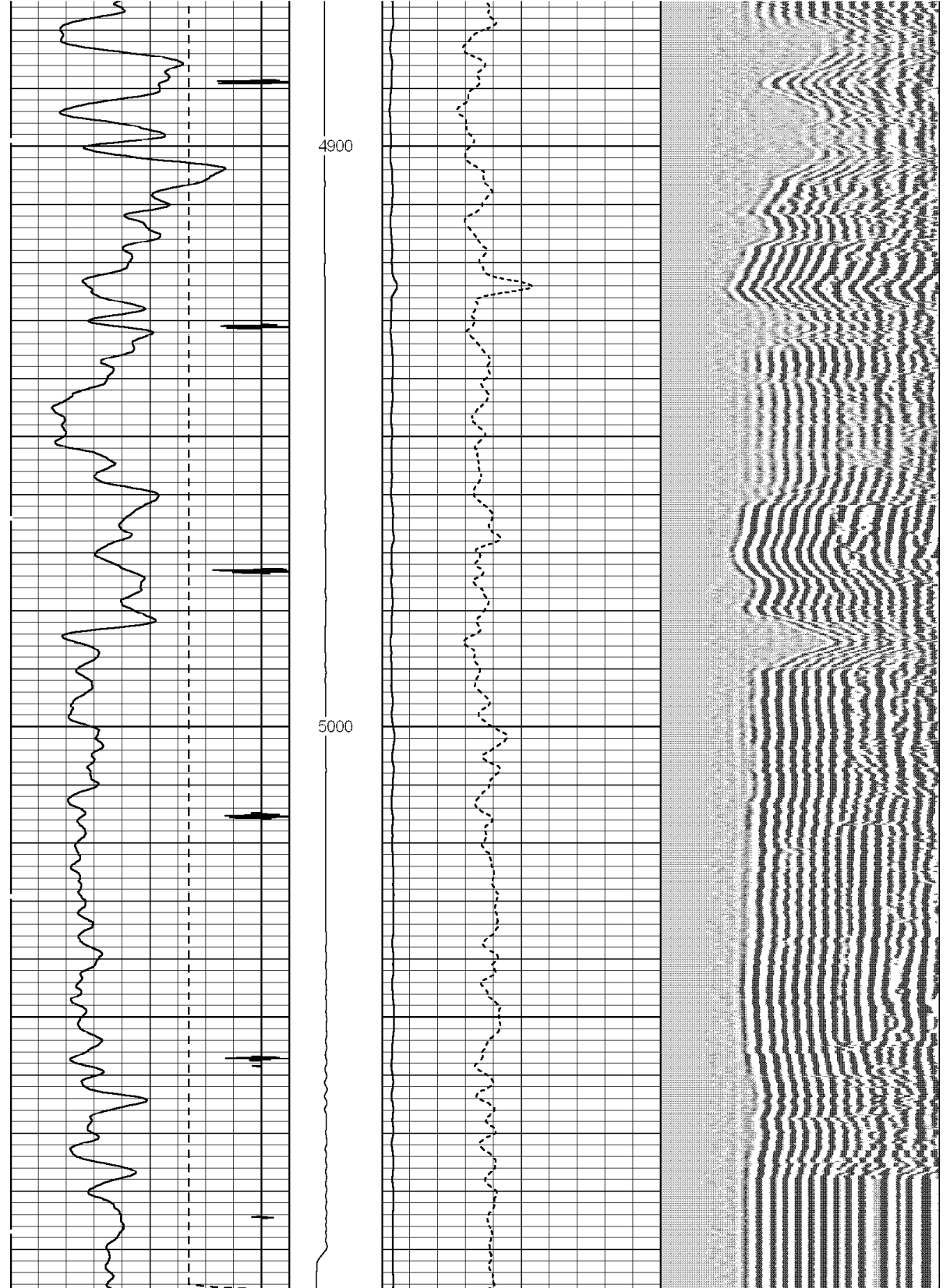
REPEAT LOG SECTION

SCALE: 5" = 100'

Database File: reppo_34_11c_cbl.db
Dataset Pathname: CBL/REPEAT1
Presentation Format: cbl_main
Dataset Creation: Mon Dec 07 09:49:28 2009 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240



440 TRAVEL TIME (usec) 240	LTEN	0 AMP AMPLITUDE (mV) 10	200 MSG 1200
-9 Collar Locator 1	0 (lb 3000	0 AMPLITUDE (mV) 100	
0 Gamma Ray (GAPI) 200			

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REPEAT LOG SECTION

SCALE: 5" = 100'

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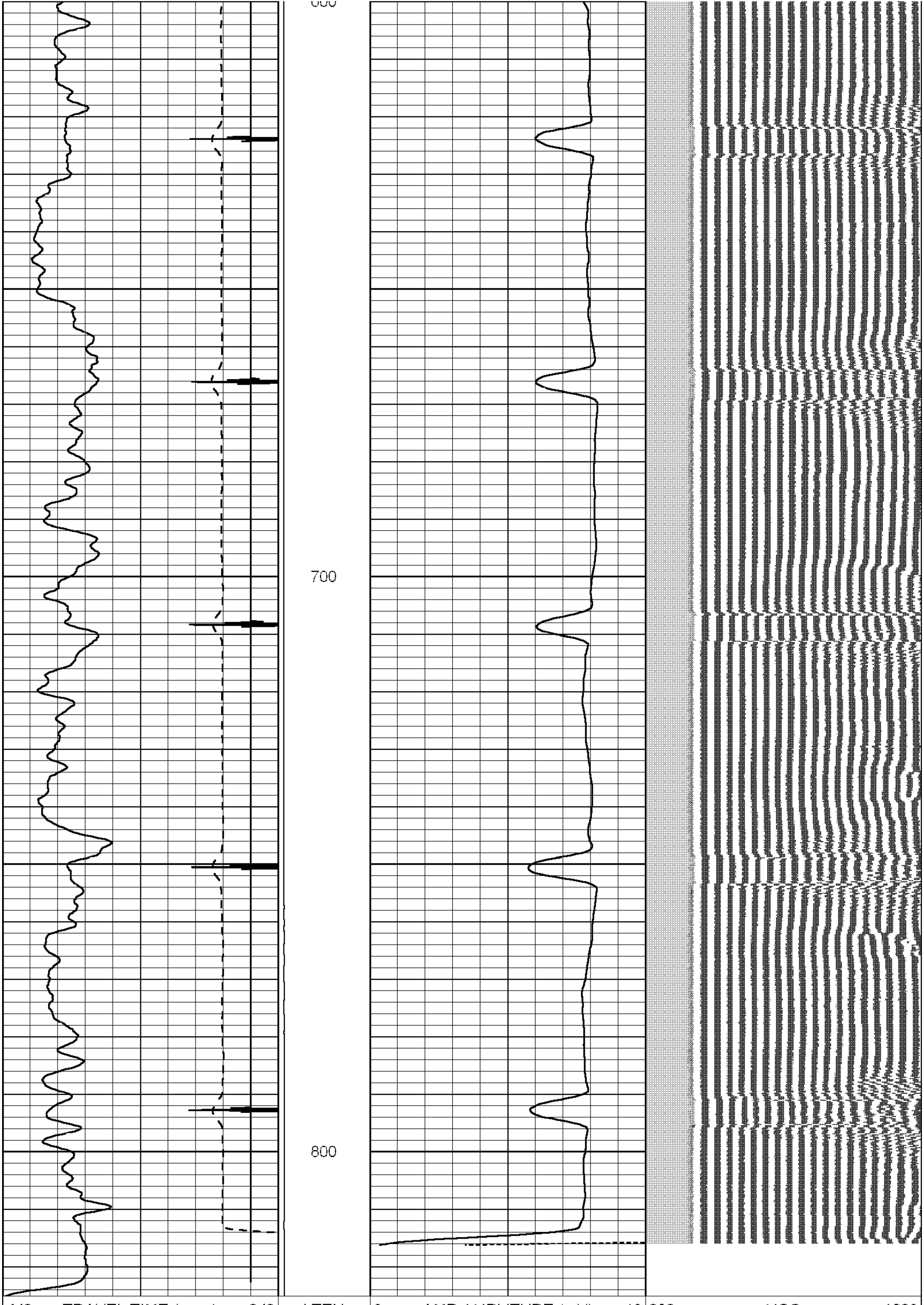
FREE PIPE LOG SECTION

SCALE: 5" = 100'

Database File:	reppo_34_11c_cbl.db
Dataset Pathname:	CBL/FREE1
Presentation Format:	cbl_main
Dataset Creation:	Mon Dec 07 08:37:29 2009 by Log Halliburton Casedho
Charted by:	Depth in Feet scaled 1:240

440 TRAVEL TIME (usec) 240	LTEN	0 AMP AMPLITUDE (mV) 10	200 MSG 1200
9 Collar Locator -1	0 (lb 4500	0 AMPLITUDE (mV) 100	
0 Gamma Ray (GAPI) 200			



440 TRAVEL TIME (usec) 240	LTEN	0 AMP AMPLITUDE (mV) 10	200 MSG 1200
9 Collar Locator -1	0 (lb 4500	0 AMPLITUDE (mV) 100	
0 Gamma Ray (GAPI) 200			

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FREE PIPE LOG SECTION

SCALE: 5" = 100'

Calibration Report

Database File:	reppo_34_11c_cbl.db
Dataset Pathname:	CBL/MAIN1
Dataset Creation:	Mon Dec 07 09:59:24 2009 by Log Halliburton Casedho

Temperature Calibration Report

Serial Number:	080505			
Tool Model:	1.375TEMP			
Performed:	Mon Dec 07 08:20:41 2009			
	Reference		Reading	
Low Reference:	0.00	degF	0.00	cps
High Reference:	1.00	degF	1.00	cps
Gain:	0.10			
Offset:	0.00			
Delta Spacing	1			

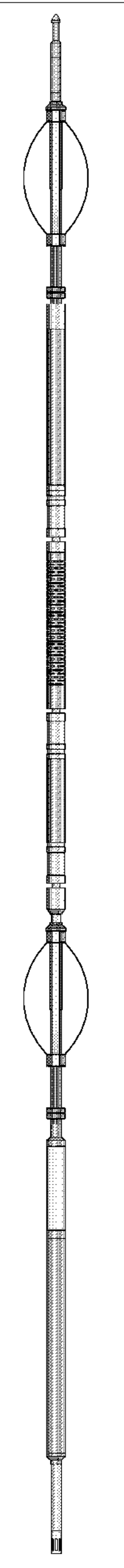
Gamma Ray Calibration Report

Type / Serial: Probe / 081029

	Counts/Sec.	Gain	Offset	Jig	Units
SHOP CALIBRATION	Mon Dec 07 08:01:40 2009				
Background	85.7				cps
Calibrator	382.0				cps
		0.7155			GAPI/cps
PRIMARY VERIFICATION	Mon Dec 07 08:03:57 2009				
Background	59.1				cps
Calibrator	275.4				cps
Difference				216.2	GAPI
BEFORE SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
AFTER SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Cement Bond Log Calibration Report

Serial Number:	061115		
Tool Model:	Probe		
Performed:	Mon Dec 07 08:36:02 2009		
Depth:	705.478	ft	
Casing Diameter:	4.5	in	
	3' Spacing	5' Spacing	
Signal Zero:	2	2	mV
Calibrated Amplitude:	82	82	mV
Reading at Signal Zero:	0.00161133	0.0013916	V
Reading in Free Pipe:	2.12766	2.09365	V
Gain:	37.6285	38.2362	
Offset:	1.93937	1.94679	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STND_CH 1.4375 IN CABLE HEAD	1.25	1.44	1.00
			CENT-Probe (PT_MONO2)	2.88	2.75	35.00
WVF3	13.15		CBL-Probe (061115) Probe 2.75" Dual Receiver Bond	8.79	2.75	118.00
WVF5	12.15					
			CENT-Probe (PT_MONO2)	2.88	2.75	35.00
CCL	5.17					
GR	3.79		GR-Probe (081029) Probe 2.75" 4 Channel Pulse	4.83	2.75	60.00
TEMP	0.13		TEMP-1.375TEMP (080505) Temperature Tool	1.25	1.38	5.00
LLMTEN	0.00					

Dataset:	reppo_34_11c_cbl.db: field/well/CBL/MAIN1
Total Length:	21.88 ft
Total Weight:	254.00 lb
O.D.	2.75 in

Company	LARAMIE ENERGY II		
Well	REPPO 34-11C		
Field	GRAND VALLEY		
County	GARFIELD	State	CO

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ACOUSTIC CEMENT BOND LOG