HALLIBURTON

ACOUSTIC CEMENT BOND LOG

Company BILL BARRETT CORPORATION
Well MILLER 44D-36-692
Field MAMM CREEK
County GARFIELD State CO

Company	BILL BARRETT CORPORATION
Well	MILLER 44D-36-692
Field	MAMM CREEK
County	GARFIELD
State	CO
API No.:	0504517616
Serv #:	7088341
Location:	SURFACE HOLE: 2357' FNL & 1046' FEL BOTTOM HOLE: 1200' FSL & 659' FEL
Other Services	JUNK BASKET GAUGE RING RMTE
Sec:	36
Twp:	6S
Rge:	92W

Permanent Datum	GROUND LEVEL	Elevation	5949'
Log Measured From	KB . 22 Ft. above perm. datum	Elevation	KB. 5971' D.F. ---- G.L. 5949'
Drilling Measured From	KB		

Date @ Time Logged	29 DEC 2009 @ 1515	Type Fluid in Hole	WATER
Run No.	ONE	Density of Fluid	8.4 #
Depth - Driller	7480'	Fluid Level	100'
Depth - Logger	7441'	Cement Top Est. Logged	LOGGED
Bottom - Logged Interval	7437'	Equipment / Location	10988010 / G.J.
Top - Log Interval	650'	Recorded by	M. CHANEY
Max. Recorded Temp.	205 F	Witnessed by	N/A

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	12.25"	SURFACE	796'	9.625"	36 #	SURFACE	796'
TWO	7.875"	796'	7478'	4.5"	11.6 #	SURFACE	7478'

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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 DATED 29 DEC 2009 IS CORRELATED TO WEATHERFORD TEMPERATURE CCL LOG DATED 22 DEC 2009

CBL, GR, CCL RAN IN COMBINATION

SHORT JOINT: 5286' - 5307' & 7049' - 7070'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES

Service Ticket No. 7088341 API No. 0504517616 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.	061015	Serial No.	061015	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 No.	Depths From	Depths To	Well Head Pressure	Speed Ft/Min	Logging Run Comments
ONE	7441'	650'	0	65	MAIN LOG SECTION

Pass	GAMMA RAY Scale		COLLAR LOCATOR Scale		AMPLITUDE Scale		MSG 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: miller_44d_36_692_cbl1.db
Dataset Pathname: CBL/MAINF
Presentation Format: cbl_main
Dataset Creation: Tue Dec 29 17:03:03 2009
Charted by: Depth in Feet scaled 1:240

430 TRAVEL TIME (usec) 230	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			

430 TRAVEL TIME (usec) 230	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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MAIN LOG SECTION

SCALE: 5" = 100'

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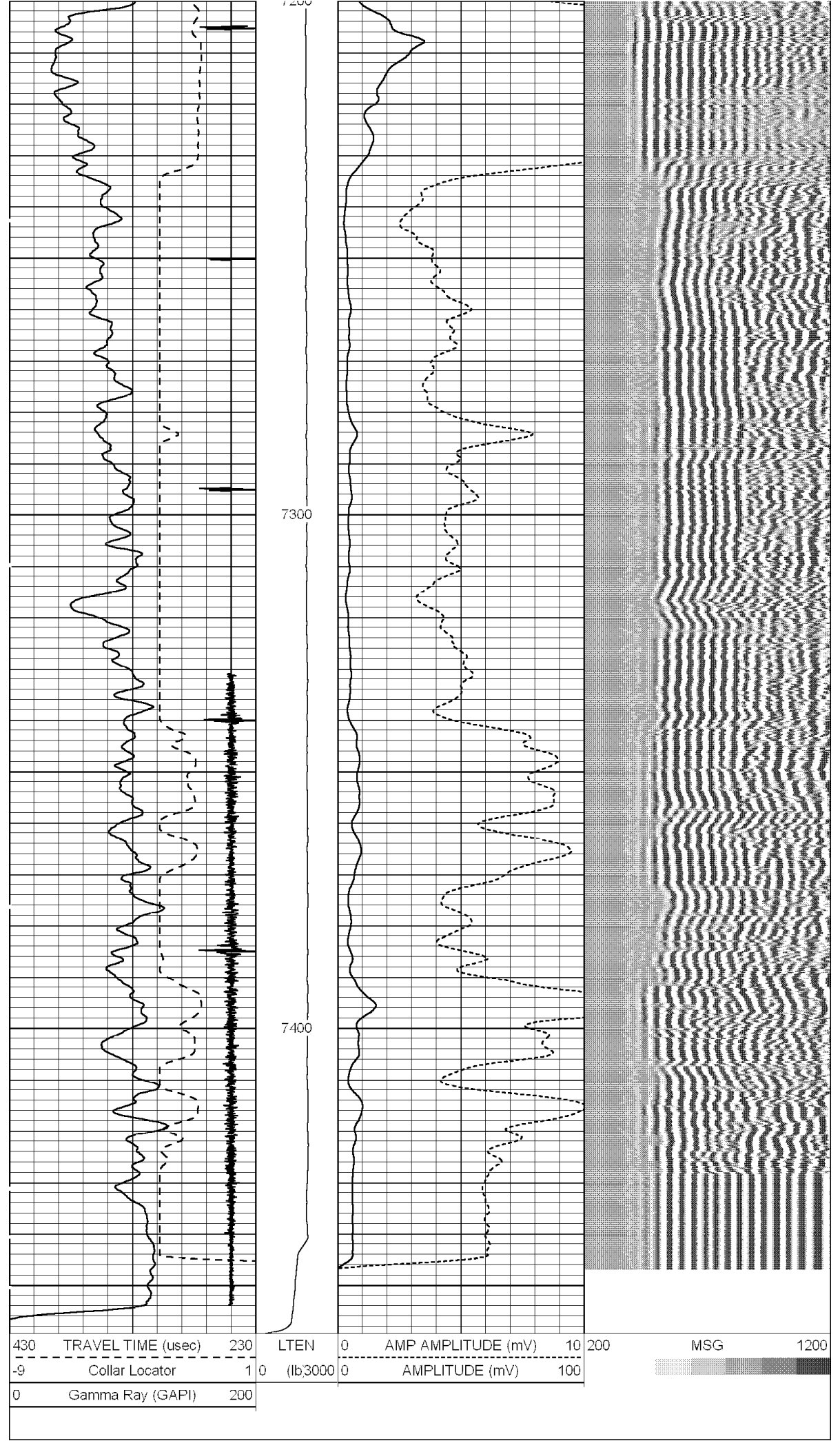
REPEAT LOG SECTION

SCALE: 5" = 100'

Database File: miller_44d_36_692_cbl1.db
Dataset Pathname: CBL/REPEAT1
Presentation Format: cbl_main
Dataset Creation: Tue Dec 29 14:20:19 2009 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

430 TRAVEL TIME (usec) 230	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			



430 TRAVEL TIME (usec) 230	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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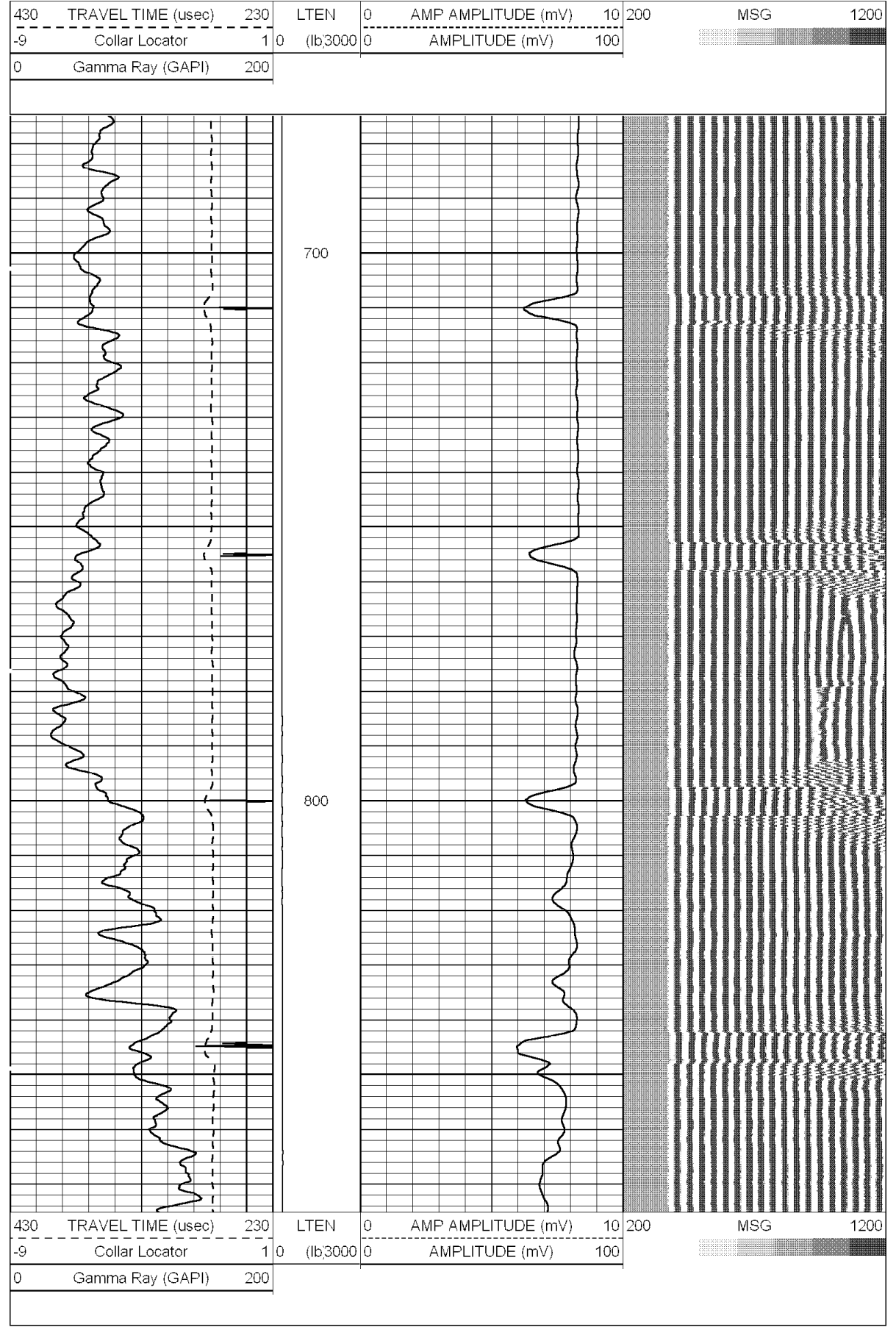
FREE PIPE LOG SECTION

SCALE: 5" = 100'

Database File: miller_44d_36_692_cbl1.db
Dataset Pathname: CBL/FREE1
Presentation Format: cbl_main
Dataset Creation: Tue Dec 29 13:41:43 2009 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

430 TRAVEL TIME (usec) 230	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			



430 TRAVEL TIME (usec) 230	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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FREE PIPE LOG SECTION

SCALE: 5" = 100'

Calibration Report

Database File: miller_44d_36_692_CBL1.db
Dataset Pathname: CBL/MAINF
Dataset Creation: Tue Dec 29 17:03:03 2009

Temperature Calibration Report

Serial Number: 080951
Tool Model: 1.375TEMP
Performed: Tue Dec 29 14:29:44 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 / 080924

SHOP CALIBRATION Tue Dec 29 14:14:30 2009

	Counts/Sec.	Gain	Offset	Jig	Units
Background	87.8				cps
Calibrator	379.7				cps
		0.8805			GAPI/cps

PRIMARY VERIFICATION Tue Dec 29 14:16:52 2009

Background	74.5		cps
Calibrator	333.9		cps
Difference		259.5	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

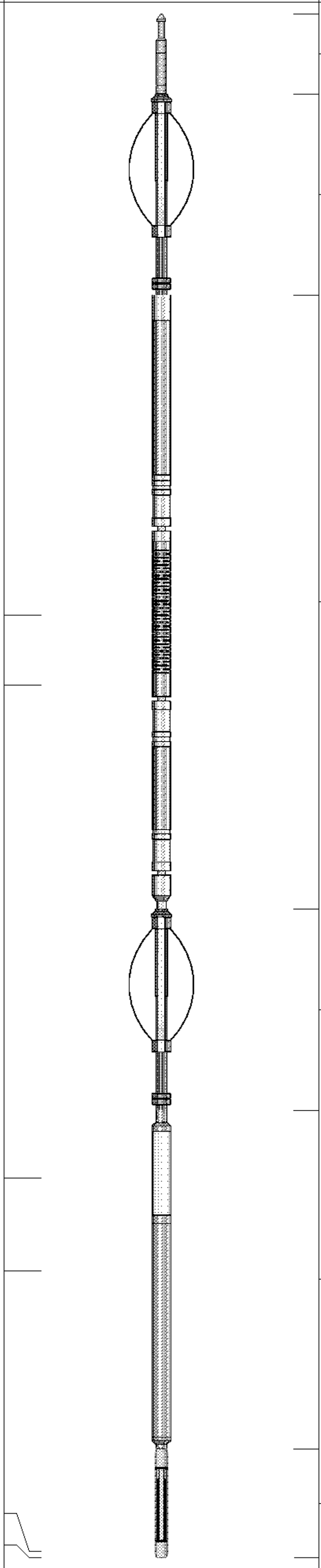
Cement Bond Log Calibration Report

Serial Number:	061115		
Tool Model:	Probe		
Performed:	Tue Dec 29 14:40:34 2009		
Depth:	786.773	ft	
Casing Diameter:	4.5	in	

	3' Spacing	5' Spacing	
Signal Zero:	2	2	mV
Calibrated Amplitude:	82	82	mV
Reading at Signal Zero:	0.064917	0.0664063	V
Reading in Free Pipe:	1.91038	1.88755	V
Gain:	43.3496	43.9285	
Offset:	-0.814129	-0.917125	

Sensor	Offset (ft)
WVF3	13.44
WVF5	12.44
CCL	5.42
GR	4.08
TEMP	0.08
LLMTEN	0.00

Schematic



Description	Len (ft)	OD (in)	Wt (lb)
STNDRD Standard Cable Head - F.N. 1 3/8"	1.15	1.44	1.10
CENT-Probe (PTS_MONO) Probe 2 3/4 Centralizer	2.88	2.75	35.00
CBL-Probe (061115) Probe 2.75" Dual Receiver Bond	8.75	2.75	108.00
CENT-Probe (PT_MONO2) Probe 2 3/4 Centralizer	2.88	2.75	35.00
GR-Probe (080924) Probe 2.75" 4 Channel Pulse	4.83	2.75	60.00
TEMP-1.375TEMP (080951) Temperature Tool	1.54	1.38	10.00

Dataset:	miller_44d_36_692_CBL1.db: field/well/CBL/MAINF
Total Length:	22.02 ft
Total Weight:	249.10 lb
O.D.	2.75 in

Company	BILL BARRETT CORPORATION		
Well	MILLER 44D-36-692		
Field	MAMM CREEK		
County	GARFIELD	State	CO

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ACOUSTIC CEMENT
BOND LOG