HALLIBURTON

ACOUSTIC CEMENT BOND LOG

Company LARAMIE ENERGY II, LLC
Well BRUTON 30-6B
Field BRUSH CREEK
County MESA State CO

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API No.: 05-077-10104-0000 Serv #: 9484573
Location: SURFACE HOLE: 2535' FSL & 1807' FEL
BOTTOM HOLE: 1833' FNL & 2021' FWL

Other Services
TEMPERATURE

Sec: 30 Twp: 09S Rge: 93W

Permanent Datum GROUND LEVEL Elevation 7647'
Log Measured From KB , 21' Ft. above perm. datum
Drilling Measured From KB

Elevation
K.B. 7668
D.F. 7667'
G.L. 7647'

Date @ Time Logged	02 MAY 2012	Type Fluid in Hole	WATER
Run No.	ONE	Density of Fluid	8.3
Depth - Driller	7975'	Fluid Level	FULL
Depth - Logger	7888'	Cement Top Est. Logged	SEE LOG
Bottom - Logged Interval	7888'	Equipment / Location	11726117 / G.J
Top - Log Interval	1300'	Recorded by	D. SOLIS
Max. Recorded Temp.	228 DEG F	Witnessed by	N/A

CEMENTING DATA	Surface String	Protection String	Production String	Liner
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	1560'	8.625"	32.0#	SURFACE	1560'
TWO	7.875"	1560'	7980'	4.5"	11.6#	SURFACE	7975'

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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

CORRELATED TO HALLIBURTON DENSITY-NEUTRON LOG DATED: 12 FEB 2012.

CBL-GR-TEMP RAN IN COMBINATION.

LOG INTERVALS PER CUSTOMER REQUEST.

SHORT JOINTS @: 4845' - 4856' AND 6929' - 6950'.

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.

Service Ticket No. 9484573 API No. 05-077-10104-0000 PGM Ver 111027_R1

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

EQUIPMENT DATA

ACOUSTIC BOND TOOL		GAMMA RAY / CCL		TEMPERATURE TOOL			
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	
Serial No.	080544	Serial No.	061015	Serial No.	001	Serial No.	
Model No.	CBL-PROBE	Model No.	GR-PROBE	Model No.	TEMP 1.375"	Model No.	
Diameter	2.75"	Diameter	2.75"	Diameter	1.375"	Diameter	

LOGGING DATA

General Data

Pass	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
ONE	7888'	1300'	0	70	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

5" = 100'

Database File: bruton_30_6b_cbl.db
Dataset Pathname: FINAL2
Presentation Format: cbl_main
Dataset Creation: Mon May 02 16:42:44 2011
Charted by: Depth in Feet scaled 1:240

374 TRAVEL TIME (usec) 274	LTEN	0 AMP AMPLITUDE (mV) 10
-9 Collar Locator 1	0 (lb) 3000	0 AMPLITUDE (mV) 100
0 Gamma Ray (GAPI) 200		

200 MSG 1200

374	TRAVEL TIME (usec)	274	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

5" = 100'

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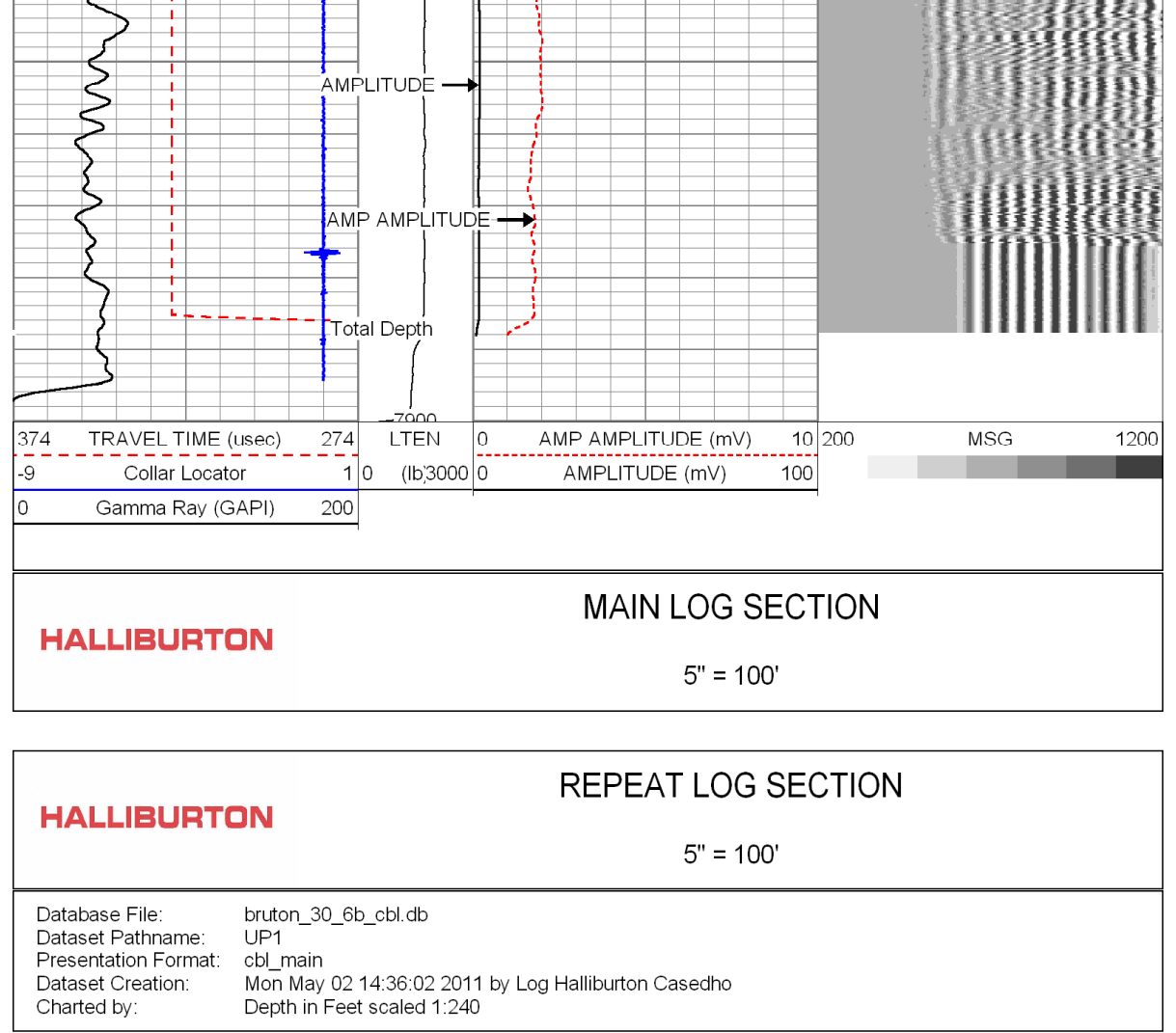
REPEAT LOG SECTION

5" = 100'

Database File: bruton_30_6b_cbl.db
Dataset Pathname: UP1
Presentation Format: cbl_main
Dataset Creation: Mon May 02 14:36:02 2011 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

374	TRAVEL TIME (usec)	274	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							



374	TRAVEL TIME (usec)	274	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

5" = 100'

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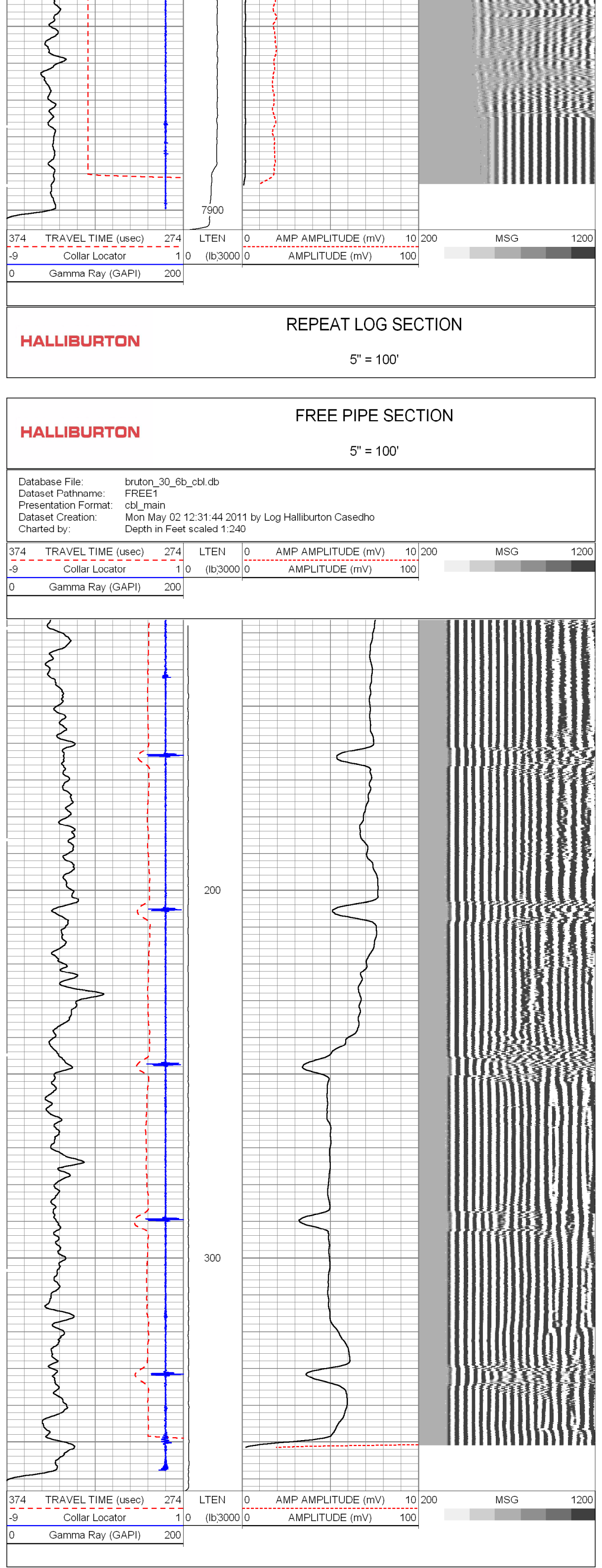
FREE PIPE SECTION

5" = 100'

Database File: bruton_30_6b_cbl.db
Dataset Pathname: FREE1
Presentation Format: cbl_main
Dataset Creation: Mon May 02 12:31:44 2011 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

374	TRAVEL TIME (usec)	274	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							



374	TRAVEL TIME (usec)	274	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 SECTION

5" = 100'

Calibration Report

Database File: bruton_30_6b_cbl.db
Dataset Pathname: FINAL2
Dataset Creation: Mon May 02 16:42:44 2011

Temperature Calibration Report

Serial Number: 0001
Tool Model: 1.375TEMP
Performed: Fri Jul 05 03:18:21 1996

	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 / 061015

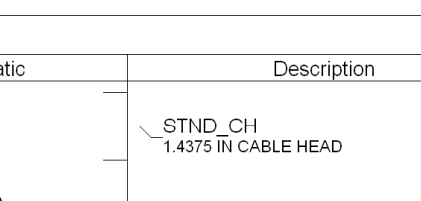
	Counts/Sec.	Gain	Offset	Jig	Units
SHOP CALIBRATION Mon May 02 07:36:50 2011					
Background	50.8				cps
Calibrator	295.4				cps
		0.9934			GAPI/cps
PRIMARY VERIFICATION Mon May 02 07:39:02 2011					
Background	51.5				cps
Calibrator	290.3				cps
Difference				238.8	GAPI
BEFORE SURVEY VERIFICATION					
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

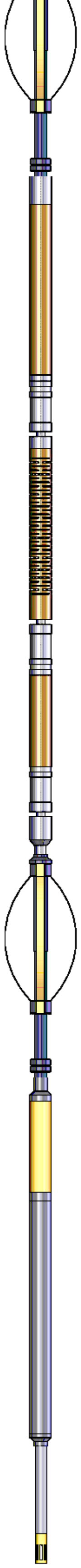
Serial Number: 080544
Tool Model: Probe
Performed: Mon May 02 07:51:58 2011

Depth: 246.018 ft
Casing Diameter: 4.5 in

	3' Spacing	5' Spacing	
Signal Zero:	1	1	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	0.000976563	0.00131836	V
Reading in Free Pipe:	1.74688	1.47192	V
Gain:	45.934	54.5327	
Offset:	0.955143	0.928106	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STND_CH 1.4375 IN CABLE HEAD	1.02	1.44	2.00

WVF3	13.34
WVF5	12.34
CCL	5.50
GR	4.08
TEMP	0.08
LLMTEN	0.00



CENT-Probe (PT_MONO2) Probe 2 3/4 Centralizer	2.88	2.75	35.00
CBL-Probe (080544) 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 (061015) Probe 2.75" 4 Channel Pulse	4.77	2.75	60.00
TEMP-1.375TEMP (0001) Temperature Tool	1.50	1.38	5.00

Dataset:	bruton_30_6b_cbl.db: field/well/run1/FINAL2
Total Length:	21.81 ft
Total Weight:	245.00 lb
O.D.	2.75 in

Company	LARAMIE ENERGY II, LLC
Well	BRUTON 30-6B
Field	BRUSH CREEK
County	MESA
State	CO

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BOND LOG