HALLIBURTON

CEMENT BOND LOG
GR-CCL

Company URSA OPERATING COMPANY
Well Monument Ridge B 43A-08-07-95
Field Parachute
County Garfield State CO

Company	URSA OPERATING COMPANY
Well	Monument Ridge B 43A-08-07-95
Field	Parachute
County	Garfield
State	CO

API No.: 05-045-229600000 Serv #: 903057509
Location:
SHL: 1035' FSL & 166' FEL
Sec: 8 Twp: 7S Rge: 95 W

Other Services
JB/RMTi

Permanent Datum Ground Level Elevation 5701.8'
Log Measured From KB , 17 Ft. above perm. datum
Drilling Measured From KB

Elevation
K.B. 5718.8'
D.F. 5718.8'
G.L. 5701.8'

Date @ Time Logged	22-Jan-2016	Type Fluid in Hole	Water
Run No.	One	Density of Fluid	8.4 PPG
Depth - Driller	7396'	Fluid Level	Full
Depth - Logger	7200'	Cement Top Est. Logged	n/a
Bottom - Logged Interval	7198'	Equipment / Location	RS / 11808537
Top - Log Interval	1750'	Recorded by	Pedro Gonzalez Baqueiro
Max. Recorded Temp.	n/a	Witnessed by	Oscar Molinar

CEMENTING DATA	Surface String	Protection String	Production String	Liner
Date / Time Cemented				
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	24	surface	60'	16"	75#	surface	60'
Two	12.25"	surface	1780.7'	8.625"	32#	surface	1780.7
Three	7.875"	surface	7396'	4.5"	11.6#	surface	7396'

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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 WHICH 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

HES Cement Bond Log First Log in to the Well Correlated by KB 17'
Log Interval Percustomer Request
Log Ran in combo with RMTi tool

THANK YOU FOR CHOOSING HALLIBURTON ENERGY ROCKSPRING WY

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MAIN PASS

5"=100'

Database File	monument ridge 43a-08-07-95.db
Dataset Pathname	MAIN
Presentation Format	cbl_main
Dataset Creation	Fri Jan 22 08:42:28 2016
Charted by	Depth in Feet scaled 1:240

400 TRAVEL TIME (usec) 200	LTEN	0 AMP AMPLITUDE (mV) 10	200 MSG 1060	
-5500 CCL 550	0 (lb 2200	0 AMPLITUDE (mV) 100		
0 Gamma Ray (GAPI) 150				

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MAIN PASS

5"=100'

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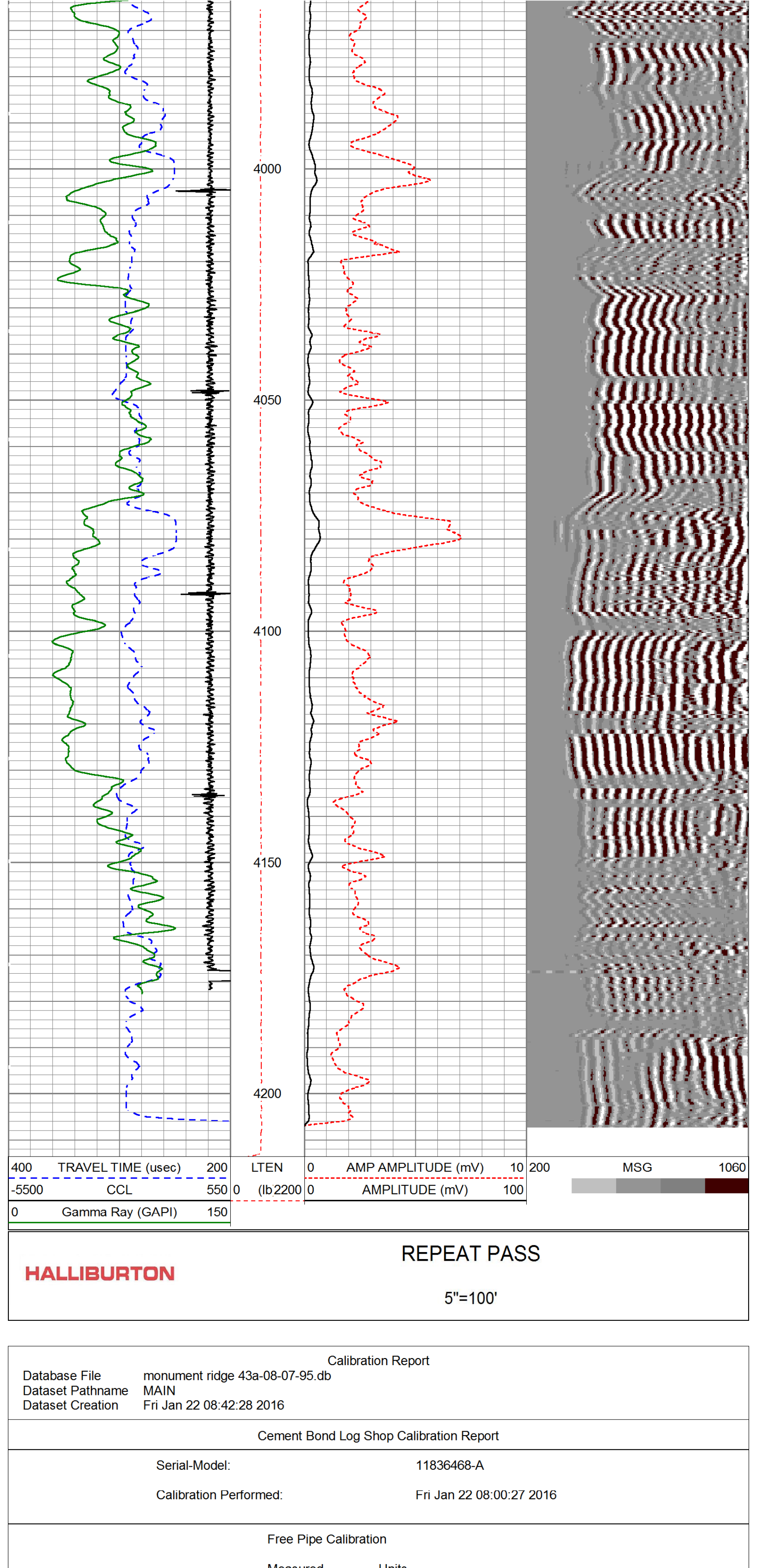
REPEAT PASS

5"=100'

Database File monument ridge 43a-08-07-95.db
Dataset Pathname REPEAT
Presentation Format cbl_main
Dataset Creation Fri Jan 22 08:13:27 2016
Charted by Depth in Feet scaled 1:240

400 TRAVEL TIME (usec) 200	LTEN	0 AMP AMPLITUDE (mV) 10	200 MSG 1060
-5500 CCL 550	0 (lb 2200	0 AMPLITUDE (mV) 100	
0 Gamma Ray (GAPI) 150			



400 TRAVEL TIME (usec) 200	LTEN	0 AMP AMPLITUDE (mV) 10	200 MSG 1060
-5500 CCL 550	0 (lb 2200	0 AMPLITUDE (mV) 100	
0 Gamma Ray (GAPI) 150			

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REPEAT PASS

5"=100'

Calibration Report

Database File monument ridge 43a-08-07-95.db
Dataset Pathname MAIN
Dataset Creation Fri Jan 22 08:42:28 2016

Cement Bond Log Shop Calibration Report

Serial-Model: 11836468-A
Calibration Performed: Fri Jan 22 08:00:27 2016

Free Pipe Calibration

	Measured	Units
TT	245.4	usec
Amplitude	569.6	mV
Log Base Line	19.9	mV

Calibration References and Gain

Name	Value	Units
Pipe O.D.	4.500	in
Pipe Weight	11.6	lb/ft
Pipe Ref. Amp.	81.2	mV
Amp. Gain	0.144	

Reservoir Monitor Tool I Calibration Report

Serial-Model: 12270693-A
Shop Calibration Performed: Sun Jan 10 18:03:51 2016

Carbon/Oxygen Mode

Stabilization

Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	92.00	80.00	12.00	+/-15.00	V
ITCR2	3435	3250	185	+/-250	cps

Near Detector

	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0268	5.37	<6.00
Fe	207	206 +/-2	0.0948	-----	-----
NGAIN = 0.996	NZOFF = 0.3				

Far Detector

	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0341	6.02	<6.50
Fe	209	208 +/-2	0.0916	-----	-----
FGAIN = 0.991	FZOFF = 0.6				

Flask Temperature 55.3 degF

Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.37	1.36	0.01	+/-0.05	
TCCR2	5506	5000	506	+/-1000	cps
ITCR2	3432	3200	232	+/-250	cps

Sigma Mode

Stabilization

Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	91.00	80.00	11.00	+/-15.00	V
FCAP	10099	10000	99	+/-500	cps

Horizontal Water Tank

Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	1.01	0.95	0.06		
N/F Inel Norm	0.65	0.61	0.04		
RNF	0.99	1.07	-0.08	+/-0.12	
RINC	1.54	1.64	-0.10	+/-0.18	
SGFN	24.11	24.00	0.11	+/-0.50	cu
SGFF	22.94	22.85	0.09	+/-0.50	cu
FSIN	23744	24000	-256	+/-2000	cps
FCAP	10025	10000	25	+/-1000	cps
NFTR	0.81			<5.00	
FFTR	0.89			<5.00	
NBKG	214			<500	cps
FBKG	108			<500	cps
RTN	0.40	0.40	-0.00	+/-0.10	usec
RTF	0.41	0.40	0.01	+/-0.10	usec

Calibration Software Modules

HRMTI Module	2015.5.4.0
RMTI Module	2015.5.15.1

Log Data Acquisition Software Modules

HRMTI Module	2015.5.4.0
RMTI Module	2015.5.15.1

Gamma Ray Calibration Report

Type / Serial: 002 / 11159411

SHOP CALIBRATION Tue Dec 15 21:01:01 2015

	Counts/Sec.	Gain	Offset	Jig	Units
Background	28.7				cps
Calibrator	323.0				cps
		1.3864			GAPI/cps

PRIMARY VERIFICATION

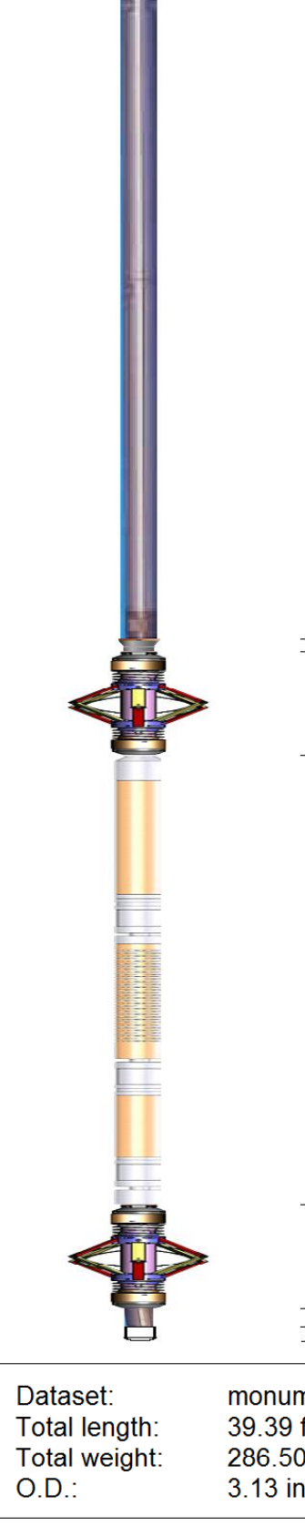
Background	40.3				cps
Calibrator	454.6				cps
Difference				414.4	GAPI

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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
CCL	35.82					
GR	33.56		TTTCU-002 (11159411) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	30.00
			XHU-003 (11983708) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtTFGT	22.91					
RmtTNGT	22.41		RMTI-A (12270693) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V	14.66		X-OVER-GoxSondex Go Box x Sondex Pin CrossOver	0.27	1.69	1.00
RmtNFwvMcsPl	14.66					
RmtCommFWa	14.66		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
Temp	9.57					
TT3FT	7.32		HCBLM-A (11836468) Halliburton HCBLM Tool	9.38	2.75	116.00
AMP3FT	7.32					
WVF5FT	6.36					
			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
WVF3FT	2.84		AUH-001 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
LLMTEN	0.00		BUL-001 (000001) Bullnose	0.30	1.69	1.50

Dataset: monument ridge 43a-08-07-95.db: field/well/run1/MAIN
Total length: 39.39 ft
Total weight: 286.50 lb
O.D.: 3.13 in

Company URSA OPERATING COMPANY
Well Monument Ridge B 43A-08-07-95
Field Parachute
County Garfield State CO

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