HALLIBURTON

RADIAL CEMENT BOND LOG

Company AXIA ENERGY LLC
Well KIMBALL CREEK #11-416D-995
Field BUZZARD
County MESA State CO

Company	AXIA ENERGY LLC
Well	KIMBALL CREEK #11-416D-995
Field	BUZZARD
County	MESA
State	CO
API No.:	05077101370000
Serv #:	7943476
Location:	SURFACE HOLE: 1678' FNL & 347' FEL SENE
Other Services	RMTE JUNK BASKET GAUGE RING
Sec:	14
Twp:	9S
Rge:	95W

Permanent Datum	GROUND LEVEL	Elevation	6974'
Log Measured From	KB	25 Ft. above perm. datum	
Drilling Measured From	KB	Elevation	K.B. 6999 D.F. 6998 G.L. 6974
Date @ Time Logged	2/FEB/2011 @ 2230	Type Fluid in Hole	WATER
Run No.	ONE	Density of Fluid	8.34 PPG
Depth - Driller	7815'	Fluid Level	FULL
Depth - Logger	7726'	Cement Top Est. Logged	LOGGED
Bottom - Logged Interval	7719'	Equipment / Location	10678538 / GJ
Top - Log Interval	2500'	Recorded by	GILBERT
Max. Recorded Temp.	190	Witnessed by	C. WOLD

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 Type / Weight	/	/	/	/
Cement Volume				
Formulation				
Mud Type / Mud Wgt.	/	/	/	/

Run Number	Borehole Record Bit	From	To	Casing & Tubing Record Size	Weight	From	To
ONE	12.25"	SURFACE	1970'	8.625"	32#	SURFACE	1970'
TWO	7.875"	1970'	7815'	4.5"	11.6#	SURFACE	7815'

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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

HES OH LOG DATED 25/JAN/2011 IS THE PRIMARY LOG FOR THIS WELL

GR-CCL-RCBL-RMT RUN IN COMBINATION

LOGGED INTERVALS PER CUSTOMER REQUEST

SHORT JOINTS: 5827' - 5848' & 6787' - 6808'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, GRAND JUNCTION, CO

Service Ticket No. 7943476 API No. 05077101370000 PGM Ver WARRIOR 7.0

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

EQUIPMENT DATA

TELEMETRY		RMTE		RCBL			
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	
Serial No.	1000278	Serial No.	A010	Serial No.	2214	Serial No.	
Model No.	TTTC-U	Model No.	RMTE-A	Model No.	RBT-004	Model No.	
Diameter	1.69"	Diameter	2.125"	Diameter	3.125"	Diameter	

LOGGING DATA

General Data

Pass No.	Depths From	Depths To	Well Head Pressure	Speed Ft/Min	Logging Run Comments
ONE	7726'	2500'	0 PSI	15	MAIN LOG SECTION

Pass	GAMMA RAY Scale		CCL Scale		AMPLITUDE Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	-3600	400	0	100		

DIRECTIONAL INFORMATION

Maximum Deviation		deg. @		KOP			

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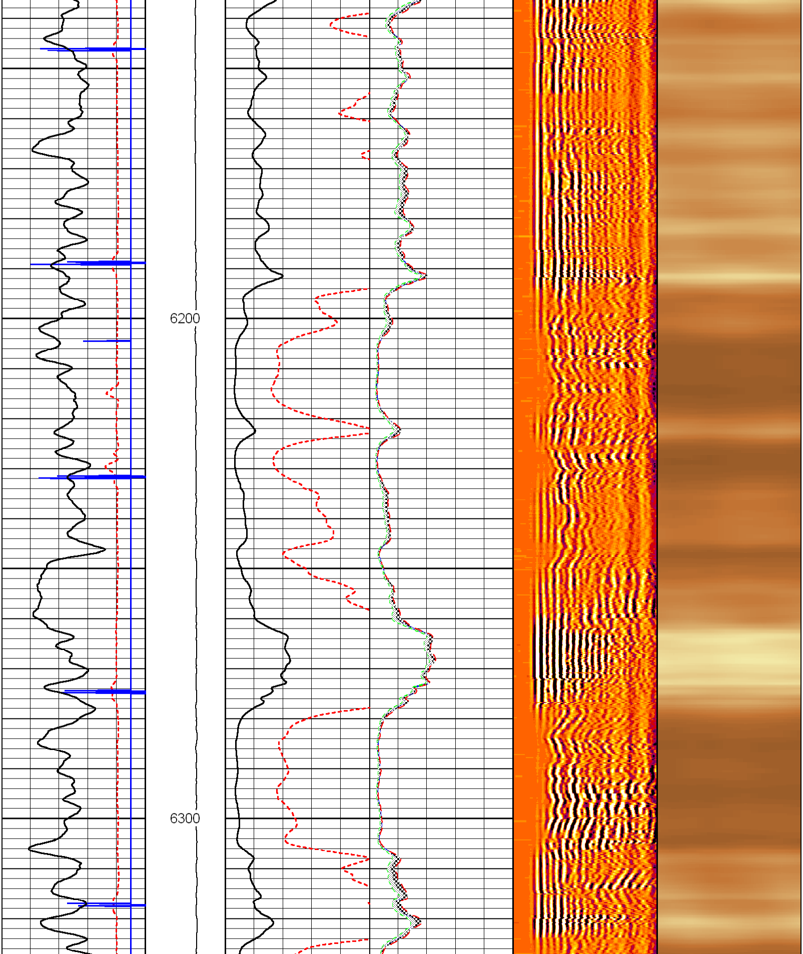
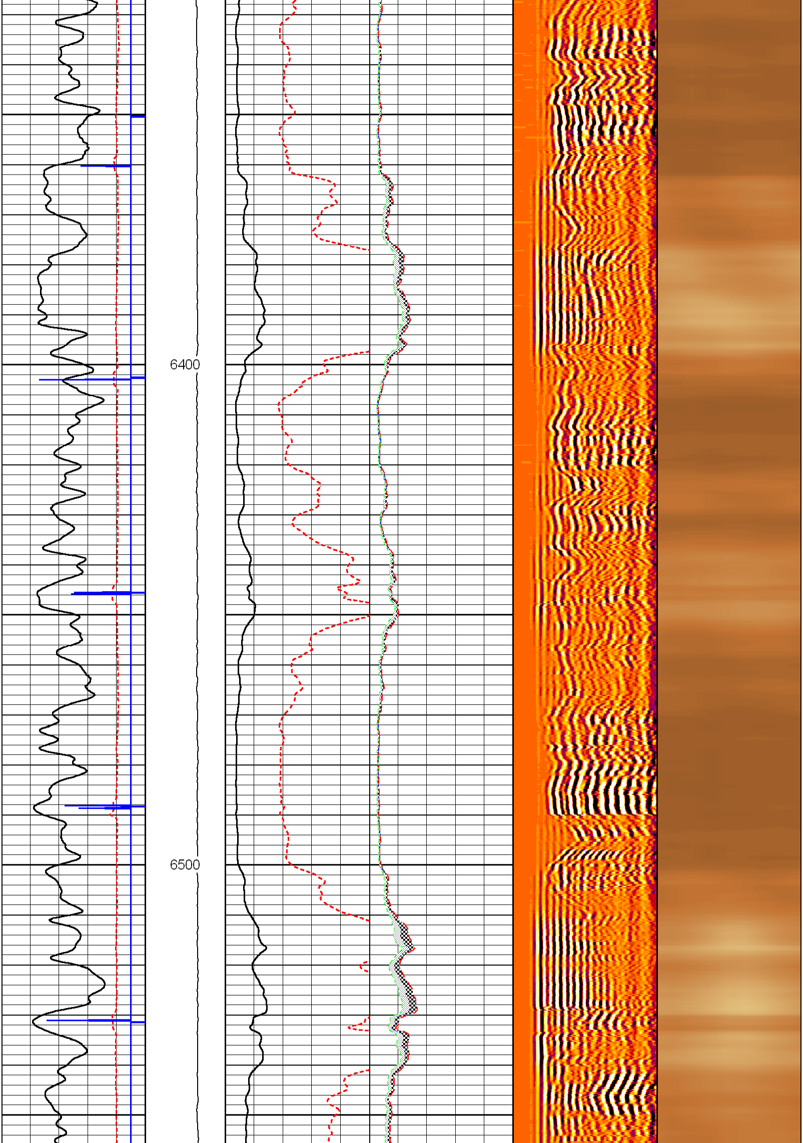
MAIN LOG SECTION

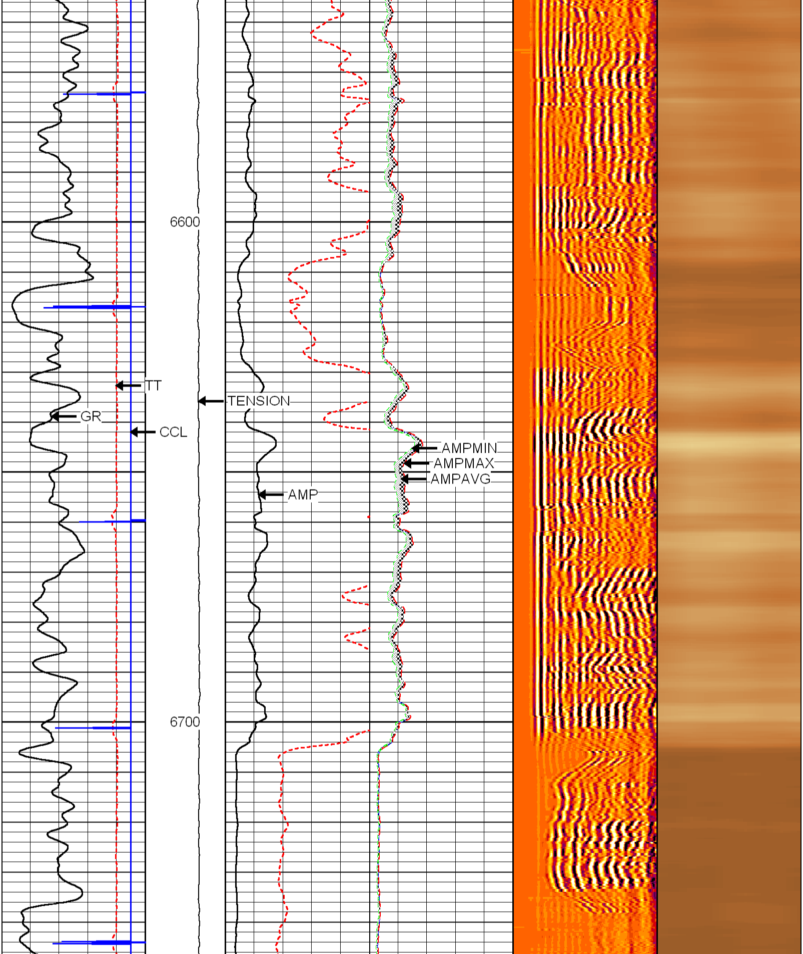
5" = 100'

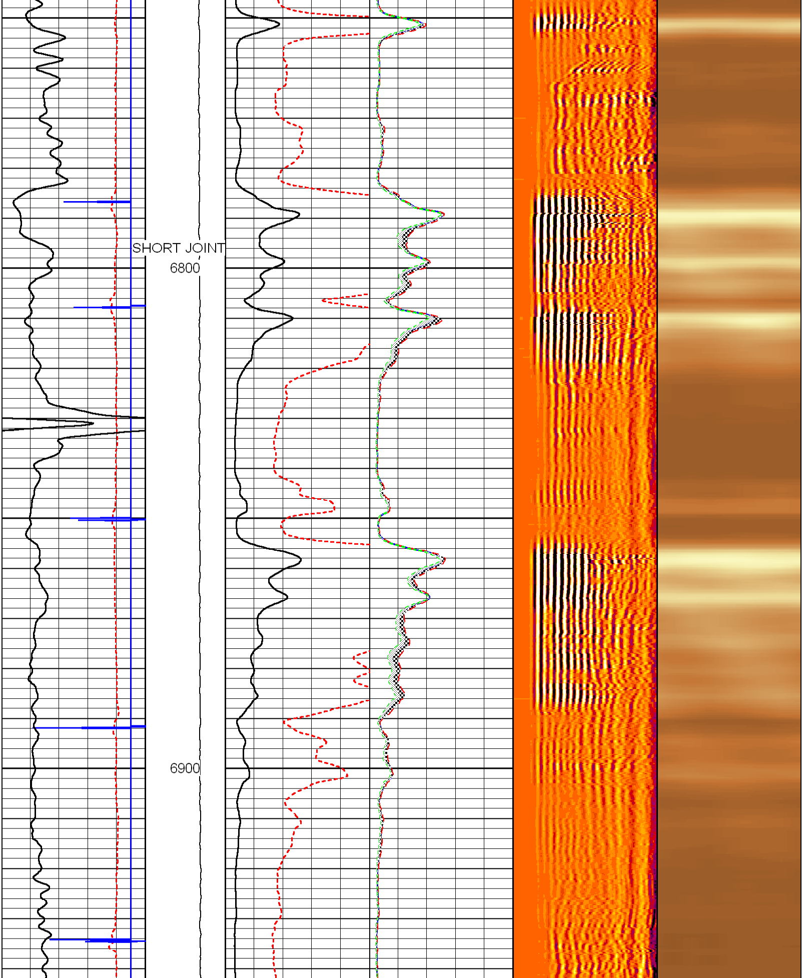
Database File: axia_11_416_combo.db
Dataset Pathname: main1
Presentation Format: radial
Dataset Creation: Wed Feb 02 23:04:01 2011 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

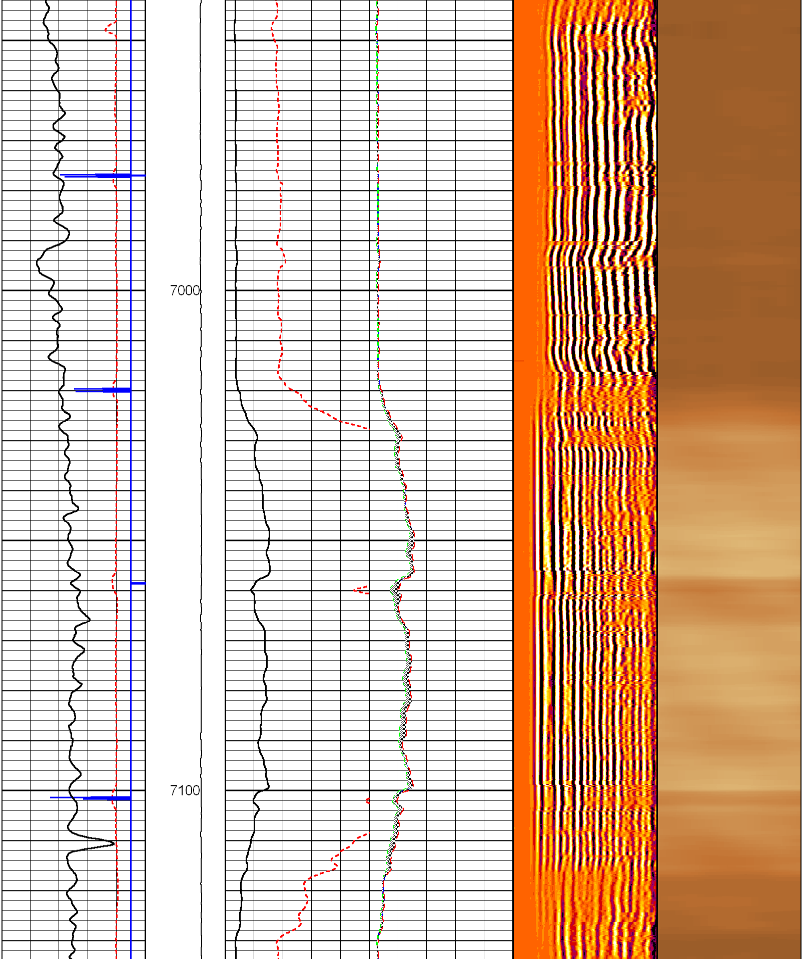
370 TT (usec) 170	TENSION	0 AMP (mV) 100	0 AMPAVG 100	200 MSG 1200
-3600 CCL 400	0 (lb) 3000	0 AMPx5 (mV) 20	0 AMPMAX 100	1 SECTORS 8
0 GR (GAPI) 200			0 AMPMIN 100	1 100

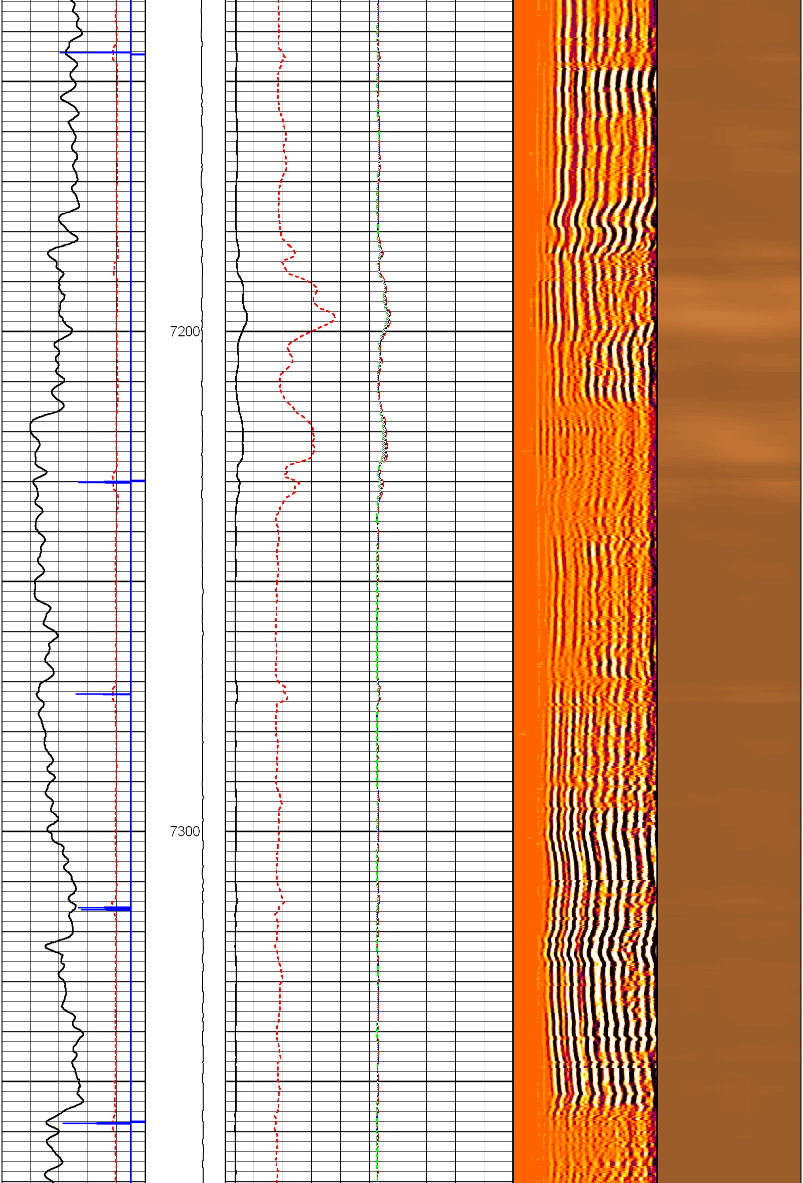


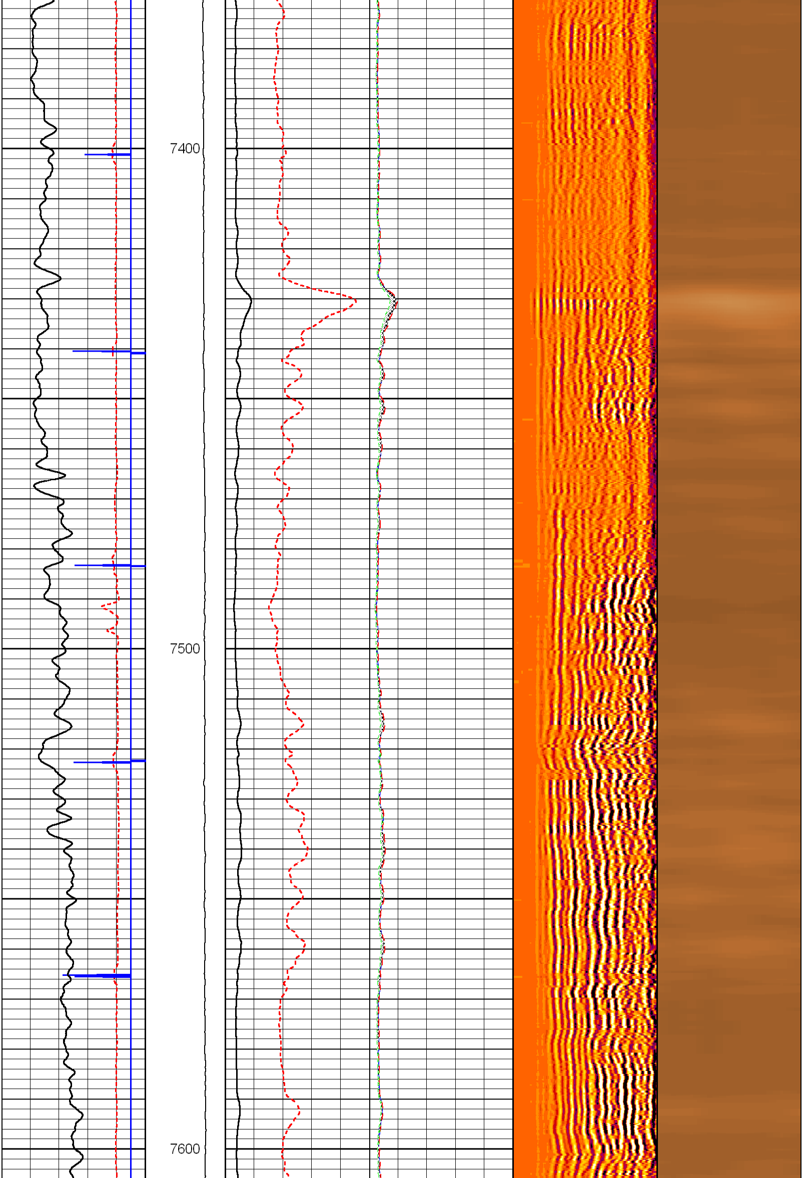


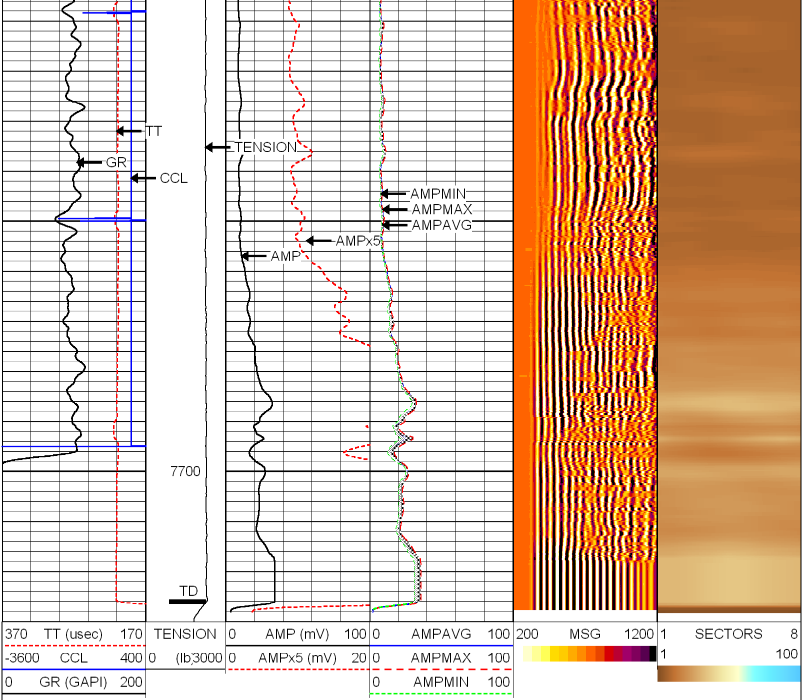












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MAIN LOG SECTION

5" = 100'

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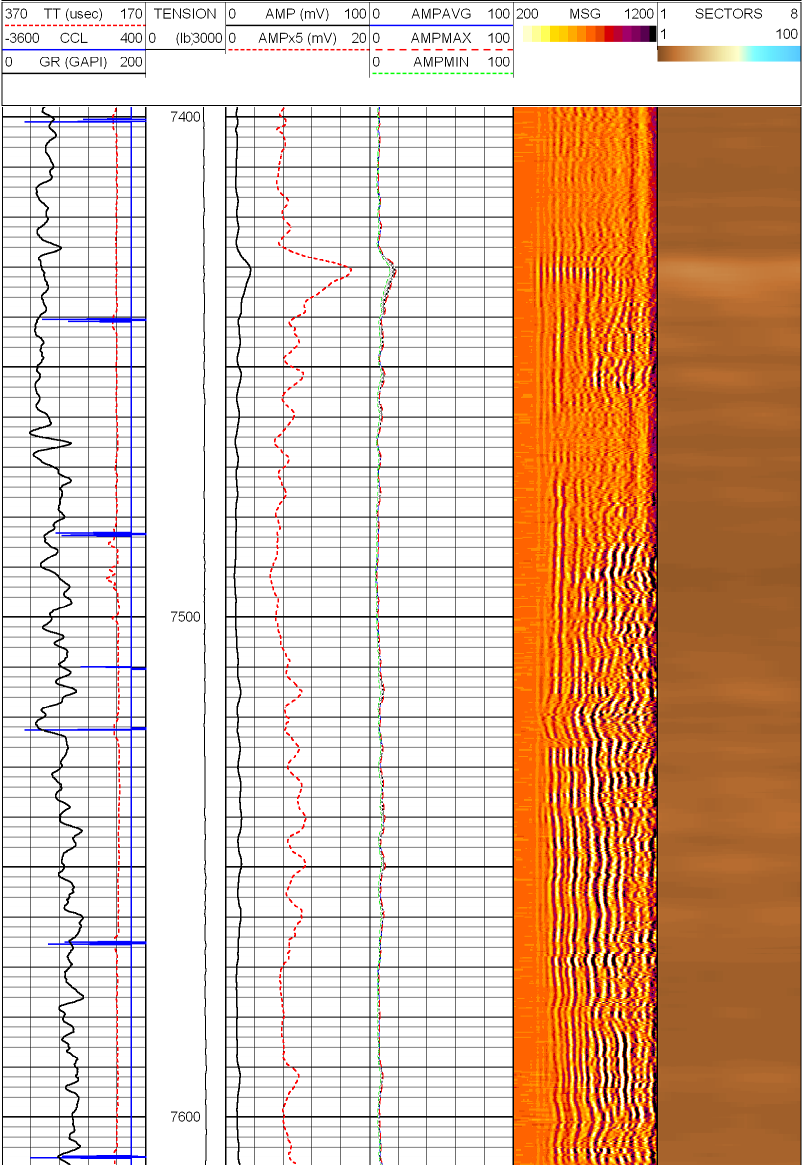
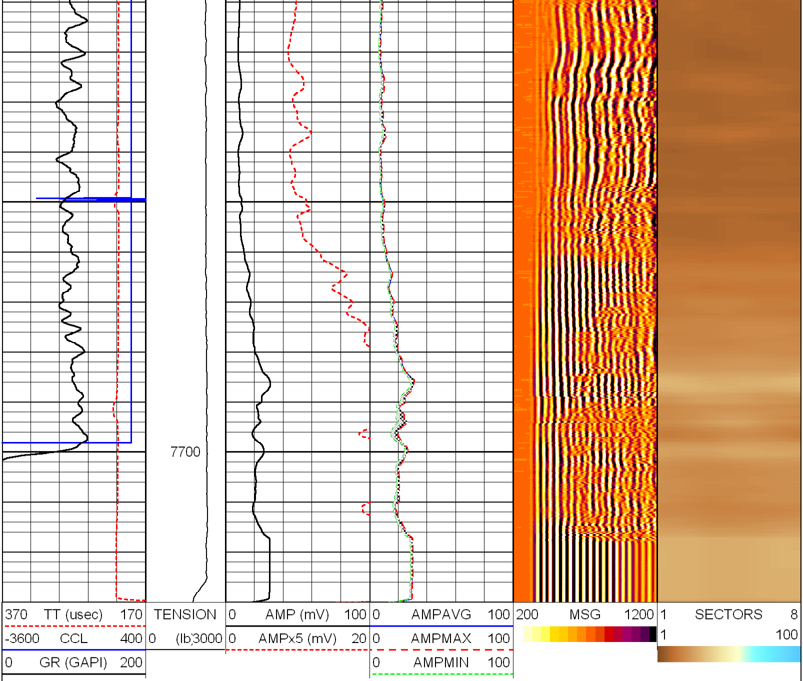
REPEAT LOG SECTION

5" = 100'

Database File: axia_11_416_combo.db
Dataset Pathname: repeat1
Presentation Format: radial
Dataset Creation: Wed Feb 02 22:43:51 2011 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240





HALLIBURTON

REPEAT LOG SECTION

5" = 100'

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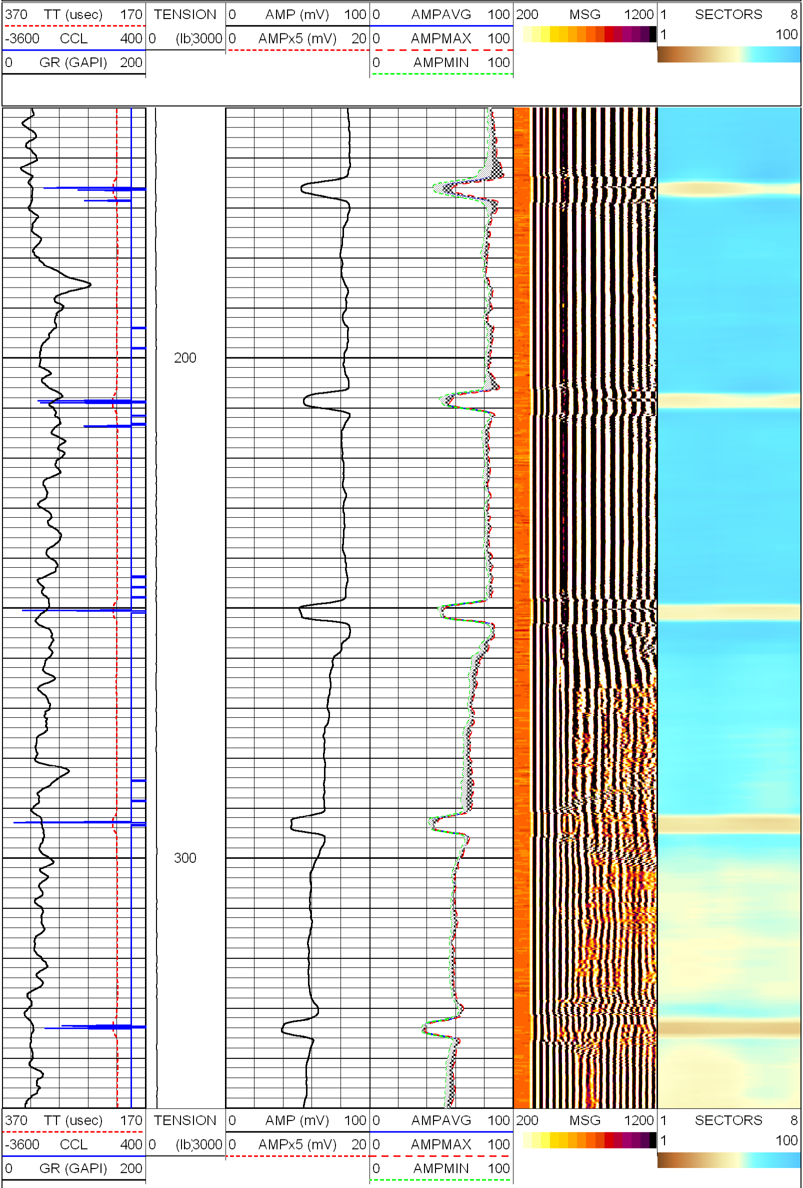
FREE PIPE SECTION

5" = 100'

Database File: axia_11_416_combo.db
Dataset Pathname: free1
Presentation Format: radial
Dataset Creation: Wed Feb 02 21:34:36 2011 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240



HALLIBURTON

FREE PIPE SECTION

5" = 100'

Calibration Report

Database File: axia_11_416_combo.db
Dataset Pathname: main1
Dataset Creation: Wed Feb 02 23:04:01 2011 by Log Halliburton Casedho

Segmented Cement Bond Log Calibration Report

Serial Number:	2214	
Tool Model:	004	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	237.785	ft

Master Calibration, performed Wed Feb 02 15:19:30 2011:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.021	0.936	2.000	81.196	82.735	3.717
5FT	-0.014	0.963	2.000	81.196	81.096	3.103
S1	-0.023	0.969	0.000	81.196	81.839	1.899
S2	-0.024	0.903	0.000	81.196	87.549	2.137
S3	-0.026	0.894	0.000	81.196	88.255	2.326
S4	-0.026	0.912	0.000	81.196	86.622	2.221
S5	-0.027	0.941	0.000	81.196	83.885	2.225
S6	-0.027	0.987	0.000	81.196	80.080	2.140
S7	-0.027	1.014	0.000	81.196	77.977	2.103
S8	-0.027	0.973	0.000	81.196	81.157	2.224

Calibration Report

Serial Number: 2214
Tool Model: 004
Performed:

	Reference (degF)	Reading ()
Low:	0.000	0.000
High:	1.000	1.000
	Gain = 1.000	Offset = 0.000

Reservoir Monitor Tool Elite Calibration Report

Serial-Model: A010-A

Shop Calibration Performed: Fri Jan 21 09:07:59 2011

Linearity Results (Generator Off)

INITIAL GAIN/OFFSET ADJUSTMENTS NEAR

Fe edge	204.90	Hy peak	47.91
Gain	0.93	Offset	7.44

Near Detector 6 Peaks Found

Channel	Amplitude	FWHM	Tol.
52.37	0.01060	5.02	< 6.00
94.45	0.00387	5.37	
107.08	0.00731	7.90	< 9.00
134.58	0.00024	8.82	
147.77	0.00026	10.00	
182.22	0.00051	9.58	
0.00	0.00000	0.00	
0.00	0.00000	0.00	
0.00	0.00000	0.00	
0.00	0.00000	0.00	

Near Detector

H Position 52.37 C Position 107.08 FE Position 182.22

Linearity Correction 3.88

INITIAL GAIN/OFFSET ADJUSTMENTS FAR

Fe edge	201.71	Hy peak	51.47
Gain	0.99	Offset	1.30

Far Detector 7 Peaks Found

Channel	Amplitude	FWHM	Tol.
52.41	0.01408	5.83	< 6.50
96.45	0.00163	4.84	
109.51	0.00584	8.19	< 9.00
138.47	0.00011	3.47	
150.81	0.00041	9.90	
184.39	0.00053	8.10	
197.07	0.00087	11.85	
0.00	0.00000	0.00	
0.00	0.00000	0.00	
0.00	0.00000	0.00	

Far Detector

H Position 52.41 C Position 109.51 FE Position 184.39

Linearity Correction 2.45

Carbon/Oxygen Mode

Stabilization

	Reading	Range
GENV	87.42	70 - 100 Volts
RAW ITCR2	3415	3000 - 3500 CPS

Near Detector

	Channel	Expected	Amplitude	FWHM	Tol
H	49	52	0.0343	4.66	<6.00
FE	203	198	0.0826	----	----

NGAIN = 0.948 NZOFF = 6.512

Far Detector

	Channel	Expected	Amplitude	FWHM	Tol
H	52	52	0.0354	6.24	<6.50
FE	202	198	0.0829	----	----

FGAIN = 0.986 FZOFF = 0.899

	Result	Expected
COIR2	0.439	0.41 - 0.47
LIRI2	1.416	1.20 - 1.60

TCCR2	4395	3000 - 5000 CPS
ITCR2	3500	3000 - 3500 CPS

Capture Mode

Stabilization

	Reading	Range
GENV	93.08	70 - 100 Volts
FCAP	10192	9500 - 10500 CPS

Result	Logged	Expected Value	Diff.	Tol.	Units
Ratio Normalizer	4.91	4.90	0.01	+/- 0.40	
Ratio Inel Norm	1.03	1.00	0.03	+/- 0.15	
Near Spaced Count	11104	8100 - 13000			CPS
Far Spaced Count	10582	9000 - 11000			CPS
Sigma Form Near	23.77	23.50	0.27	+/- 1.00	C.U.
Sigma Bore Near	77.40	77.00	0.40	+/- 5.00	C.U.
Sigma Form Far	22.40	22.40	-0.00	+/- 0.50	C.U.
Ratio Near/Far	1.05	1.05	-0.00	+/- 0.15	
Ratio N/F Inel	1.79	1.81	-0.02	+/- 0.25	
Near Error	0.69	<5.00			
Far Error	1.37	<5.00			
Near Background	105	<500			
Far Background	85	<200			
Near Resolving Time	1.279	0.00 - 2.00			
Far Resolving Time	1.249	0.00 - 2.00			

Calibration Software Modules

PNLS Module	2010.9.24.0
RMTE Module	2010.10.1.1

Gamma Ray Calibration Report

Type / Serial: 001 / 1000278

SHOP CALIBRATION Wed Feb 02 14:52:12 2011

	Counts/Sec.	Gain	Offset	Jig	Units
Background	30.7				cps
Calibrator	185.6				cps
		1.6591			GAPI/cps

PRIMARY VERIFICATION Wed Feb 02 14:56:33 2011

	Counts/Sec.	Gain	Offset	Jig	Units
Background	49.3				cps
Calibrator	308.7				cps
Difference				259.5	GAPI

BEFORE SURVEY VERIFICATION

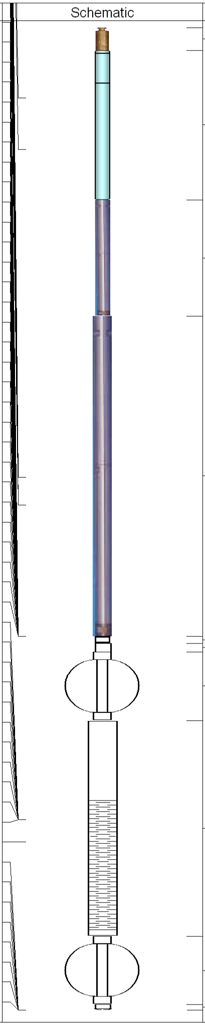
	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

AFTER SURVEY VERIFICATION

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Sensor	Offset (ft)
REPV	16.39
REPI	16.39
GENV	16.39
GENI	16.39
ISV	16.39
ISI	16.39
IONI	16.39
LSHV	16.39
SSHV	16.39
ROMTEMP	16.39
FLASKTEMP	16.39
CNTL	16.39
GNCTL	16.39
SPECSTAT	16.39
FSTAT	16.39
REPV	16.39
REPI	16.39
GENV	16.39
GENI	16.39
ISV	16.39
ISI	16.39
IONI	16.39
LSHV	16.39
SSHV	16.39
ROMTEMP	16.39
FLASKTEMP	16.39
CNTL	16.39
GNCTL	16.39
SPECSTAT	16.39
FSTAT	16.39
WVF3FT	8.36
WVFS1	8.36
WVFS2	8.36
WVFS3	8.36
WVFS4	8.36
WVFS5	8.36
WVFS6	8.36
WVFS7	8.36
WVFS8	8.36
CBLTEMP	8.36
CBLROT	8.36
WVF5FT	7.36
LLMTEN	0.00
XHUTEMP	0.00
XHUCURR	0.00
XHUVOLT	0.00
XHUSTAT	0.00
TSTAMP	0.00
ITEMPX	0.00
HVOLTX	0.00

Schematic



Description	Len (ft)	OD (in)	Wt (lb)
STND_CH 1.4375 IN CABLE HEAD	1.00	1.44	1.00
TTTCU-001 (1000278) Through Tubing Telemetry Cartridge - Ultrawire	6.55	1.69	33.00
RMTE_PS-PS_RMTE (033) POWER SUPPLY RMTE	5.09	1.69	18.50
RMTE-A (A010) RMTE	14.06	2.13	77.00
SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
AUH-001 (000001) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
CENCBL Centralizer CENCBL	3.00	1.44	10.69
RBT-004 (2214) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
CENCBL Centralizer CENCBL	3.00	1.44	10.69
BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20

Dataset:	axia_11_416_combo.db: field/well/run1/main1
Total Length:	43.09 ft
Total Weight:	296.08 lb
O.D.	3.13 in

Company	AXIA ENERGY LLC
Well	KIMBALL CREEK #11-416D-995
Field	BUZZARD
County	MESA
State	CO

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RADIAL CEMENT BOND LOG