HALLIBURTON

RADIAL CEMENT BOND LOG

Company	AXIA ENERGY LLC
Well	KIMBALL CREEK #14-406D-995
Field	BUZZARD
County	MESA
State	CO

Company AXIA ENERGY LLC

Well KIMBALL CREEK #14-406D-995

Field BUZZARD

County MESA State CO

API No.: 05077101240000 Serv #: 7943469

Location: SURFACE HOLE:
1686' FNL & 347' FEL SENE

Sec: 14 Twp: 9S Rge: 95W

Other Services

RMTE

JUNK BASKET
GAUGE RING

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 @ 1700	Type Fluid in Hole	WATER
Run No.	ONE	Density of Fluid	8.34 PPG
Depth - Driller	7325	Fluid Level	FULL
Depth - Logger	7266'	Cement Top Est. Logged	LOGGED
Bottom - Logged Interval	7259'	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 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	1957'	8.625"	32#	SURFACE	1950'
TWO	7.875"	1957'	7325'	4.5"	11.6#	SURFACE	7325'

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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 OH LOG DATED 19/JAN/2011 IS THE PRIMARY LOG FOR THIS WELL

GR-CCL-RCBL-RMT RUN IN COMBINATION

LOGGED INTERVALS PER CUSTOMER REQUEST

SHORT JOINTS: 4929' - 4950' & 6268' - 6289'

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

Service Ticket No. 7943469 API No. 05077101240000 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	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
ONE	7266'	2500'	0 PSI	15	MAIN LOG SECTION

Pass	GAMMA RAY		CCL		AMPLITUDE			
	Scale		Scale		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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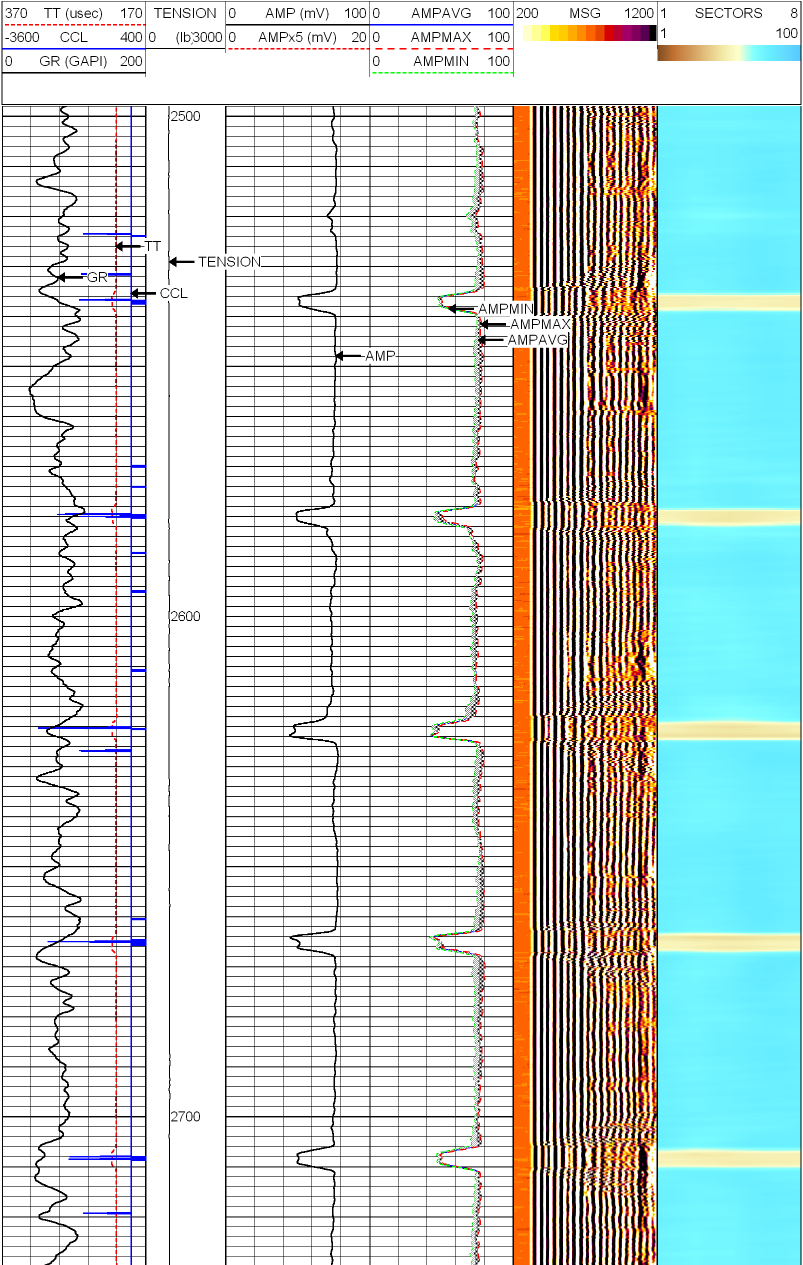
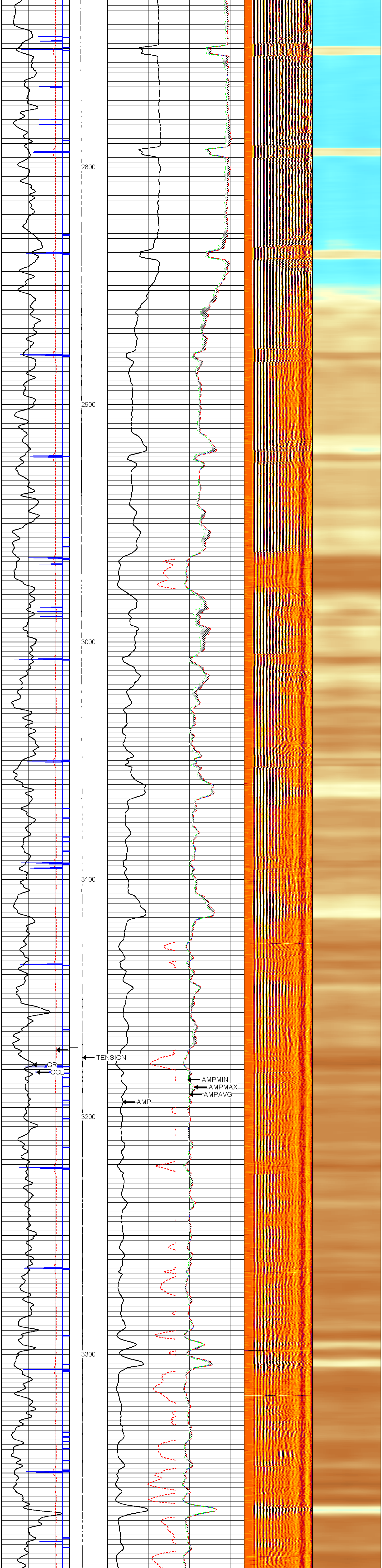
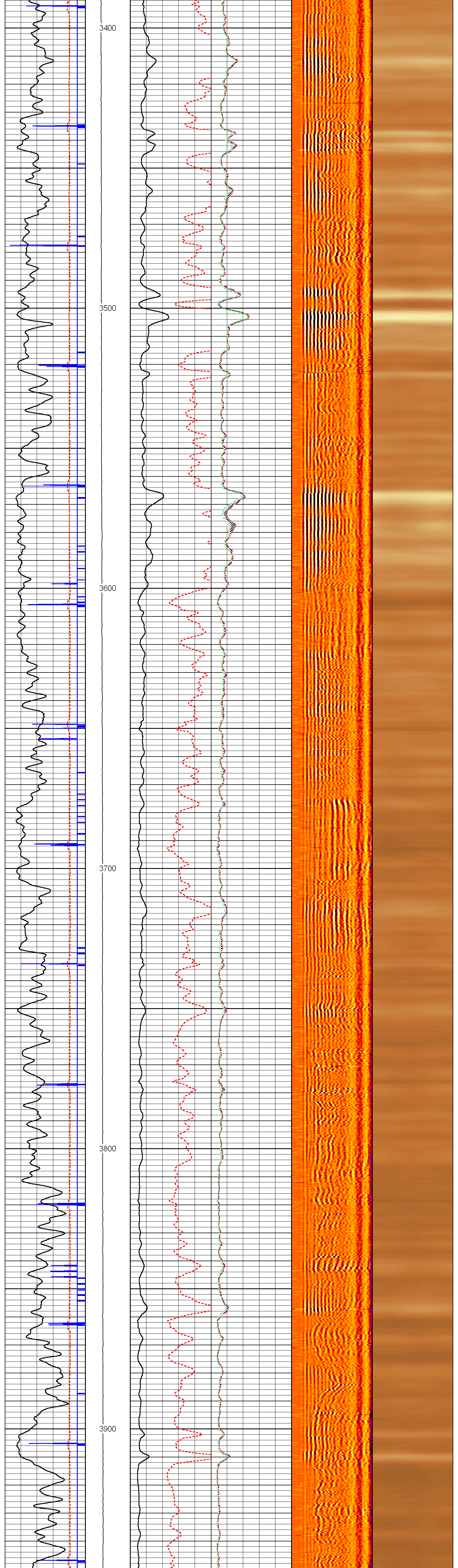
MAIN LOG SECTION

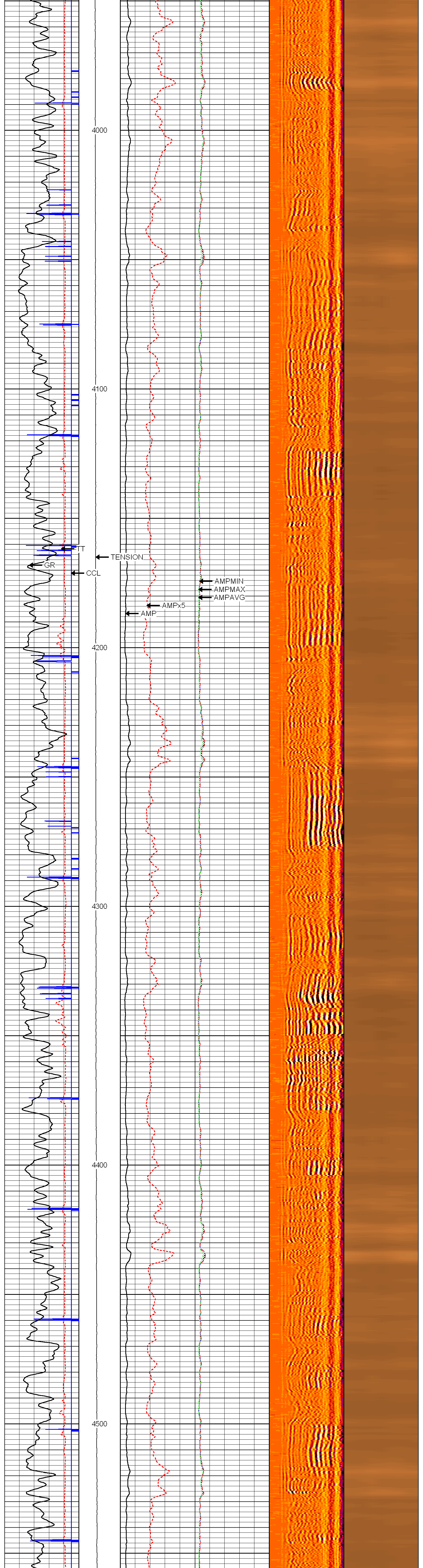
5" = 100'

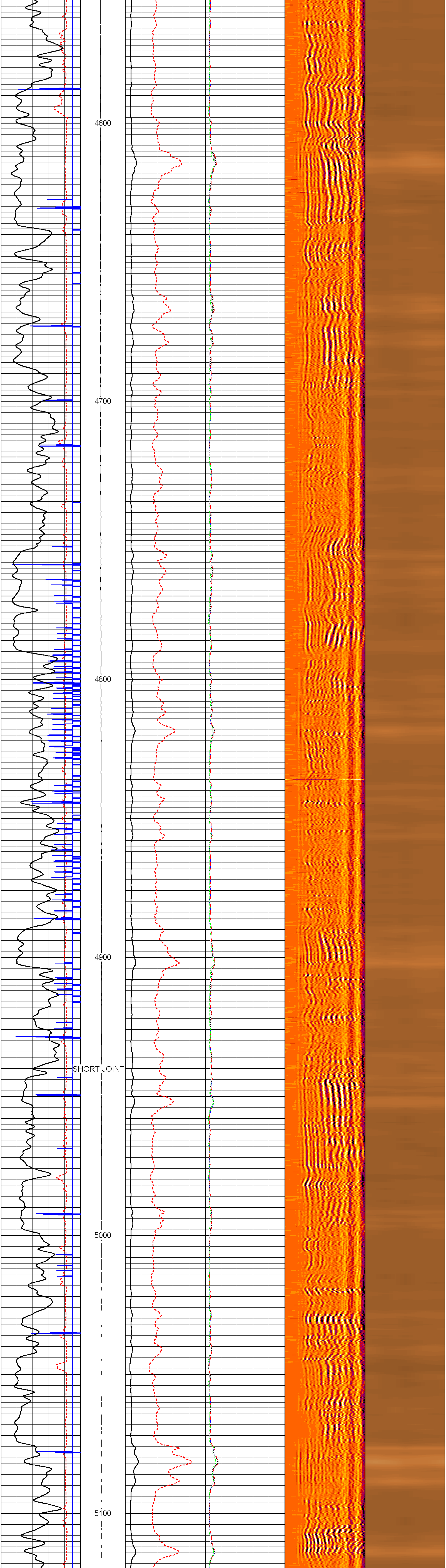
Database File:	axia_14_406_combo.db
Dataset Pathname:	MAIN2
Presentation Format:	radial
Dataset Creation:	Wed Feb 02 17:38:24 2011 by Log Halliburton Casedho
Charted by:	Depth in Feet scaled 1:240

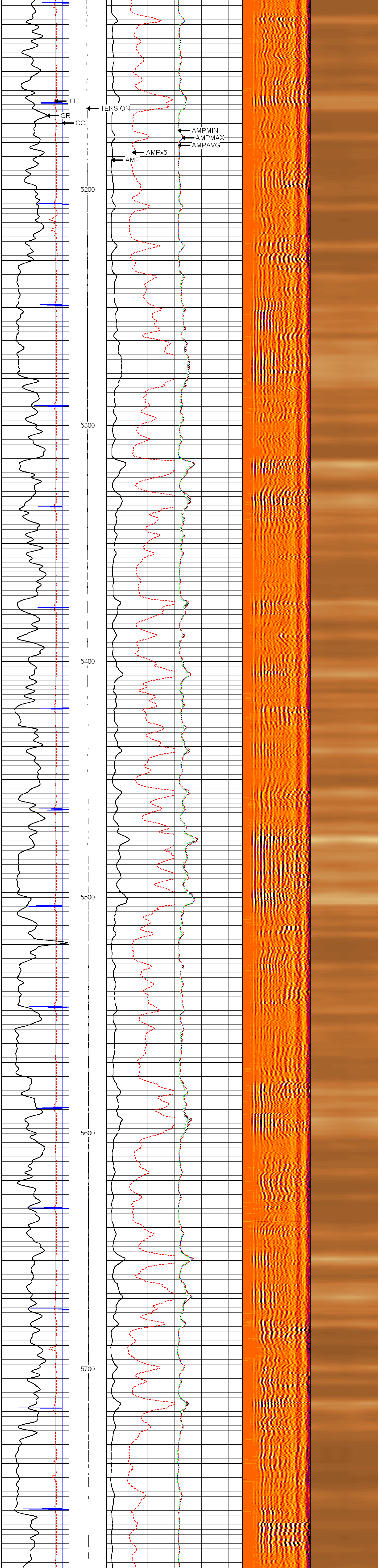


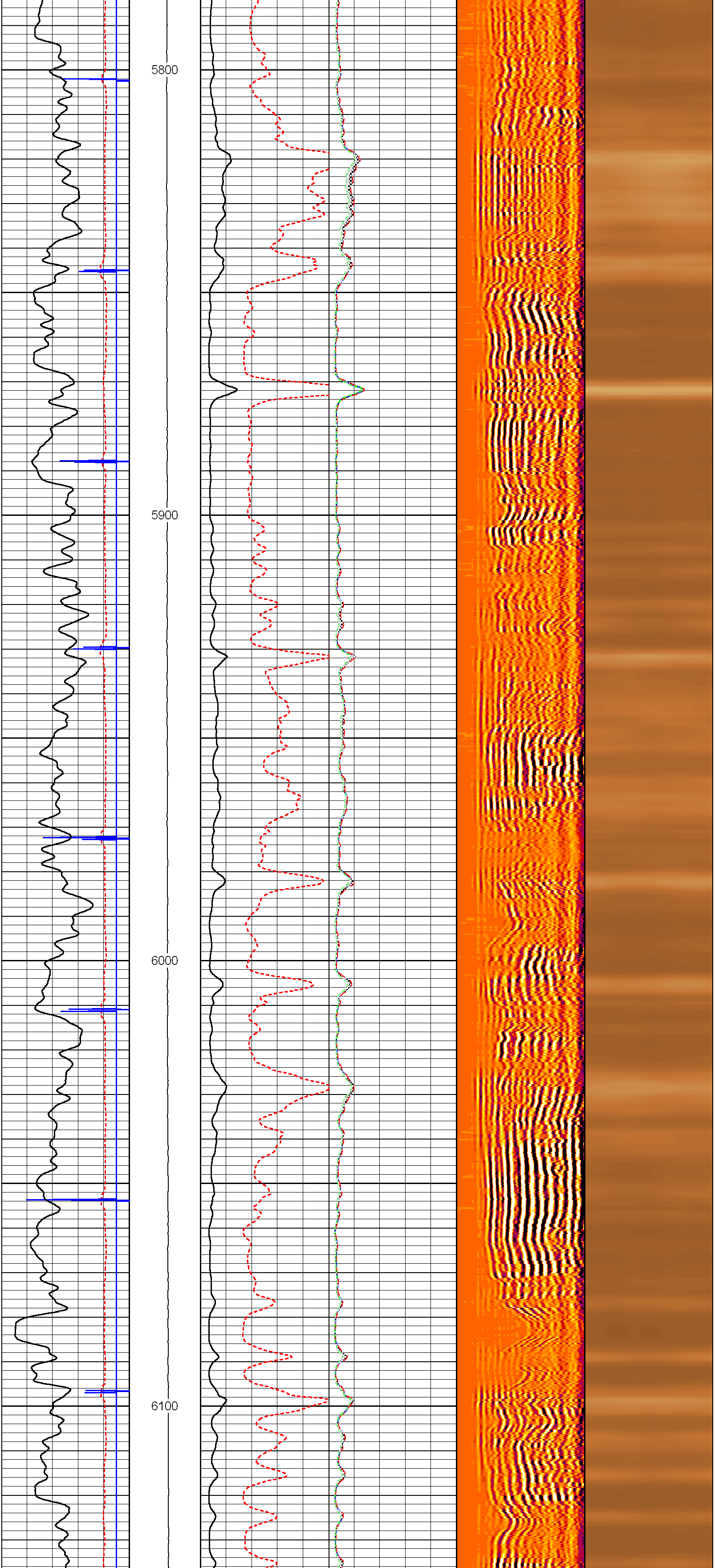


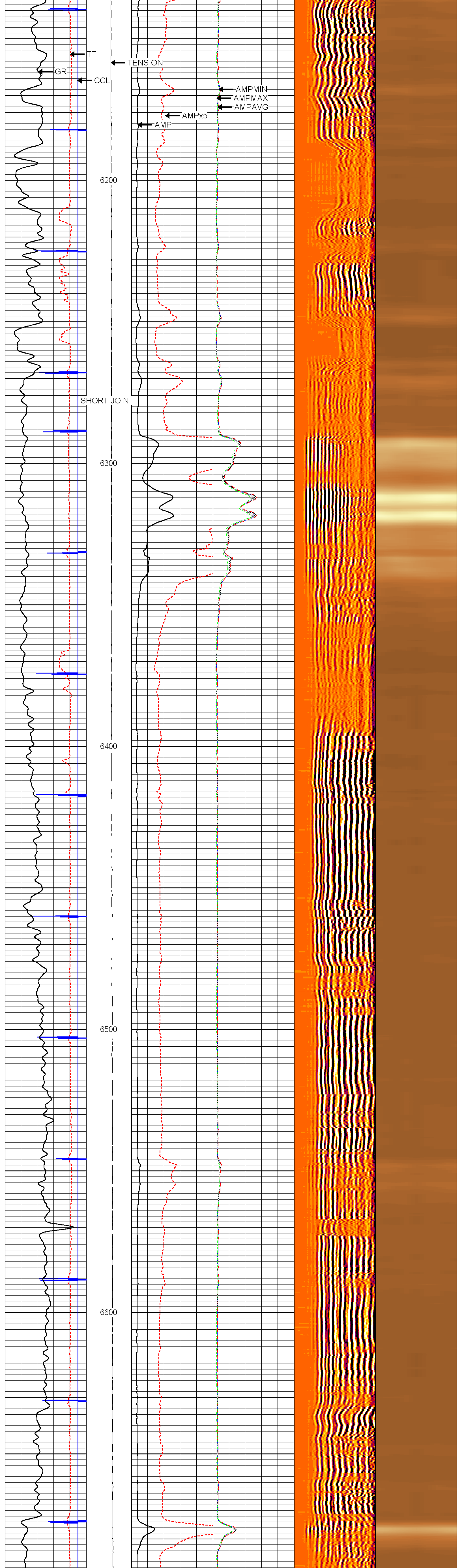


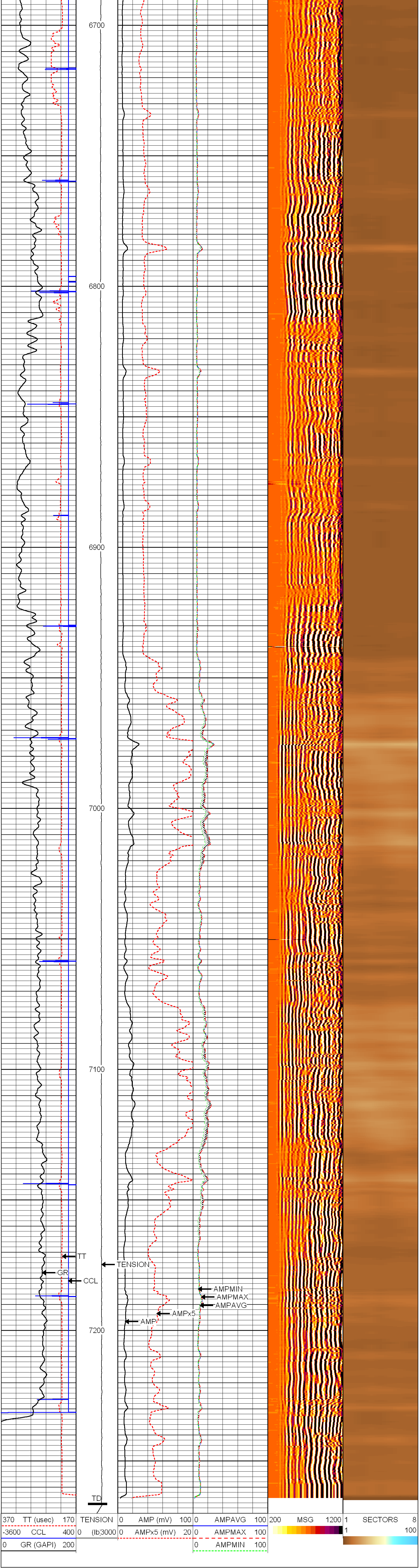












MAIN LOG SECTION

HALLIBURTON

5" = 100'

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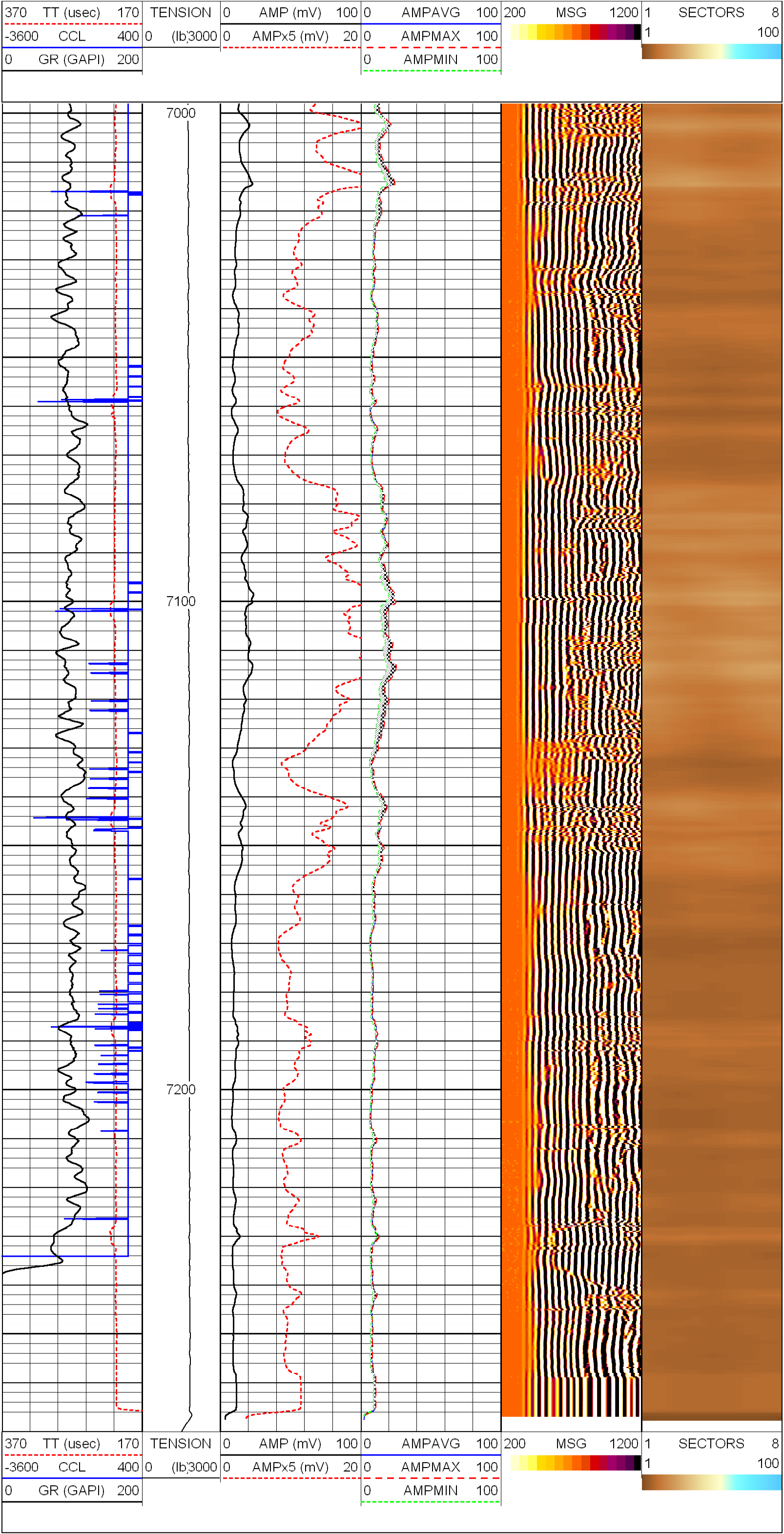
REPEAT LOG SECTION

5" = 100'

Database File: axia_14_406_combo.db
Dataset Pathname: REPEAT2
Presentation Format: radial
Dataset Creation: Wed Feb 02 16:54:29 2011 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240



HALLIBURTON

REPEAT LOG SECTION

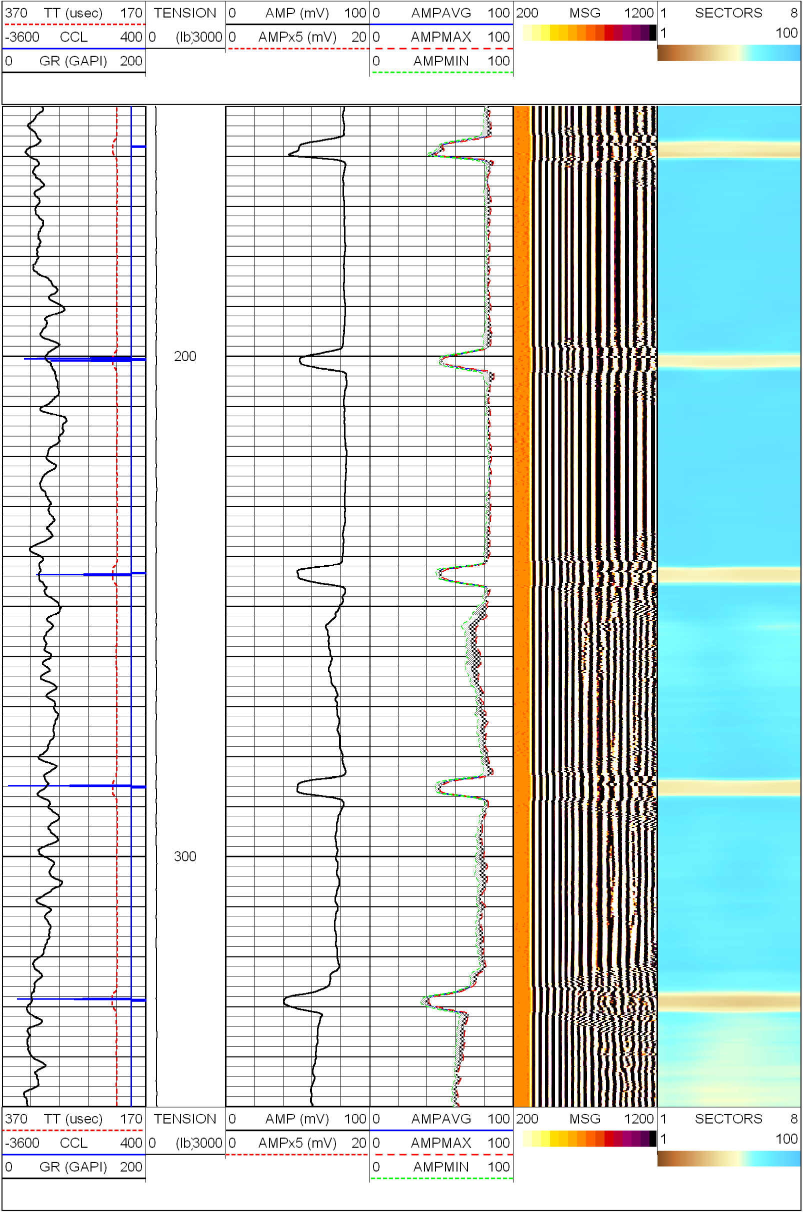
5" = 100'

HALLIBURTON

FREE PIPE SECTION

5" = 100'

Database File: axia_14_406_combo.db
Dataset Pathname: FREE1
Presentation Format: radial
Dataset Creation: Wed Feb 02 15:20:45 2011 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240



HALLIBURTON

FREE PIPE SECTION

5" = 100'

Calibration Report

Database File: axia_14_406_combo.db
Dataset Pathname: MAIN2
Dataset Creation: Wed Feb 02 17:38:24 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

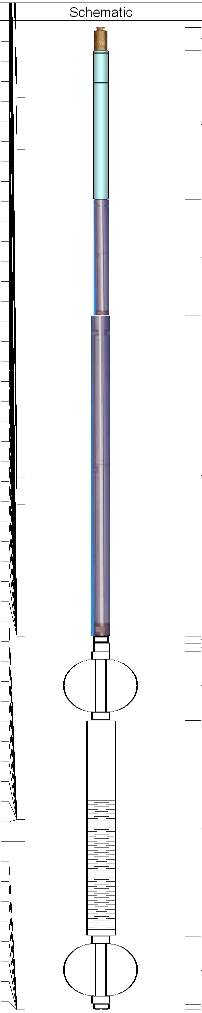
	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

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_14_406_combo.db: field/well/run1/MAIN2
Total Length:	43.09 ft
Total Weight:	296.08 lb
O.D.	3.13 in

Company	AXIA ENERGY LLC		
Well	KIMBALL CREEK #14-406D-995		
Field	BUZZARD		
County	MESA	State	CO

HALLIBURTON

RADIAL CEMENT
BOND LOG