

Radial Cement Bond Gamma Ray Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	UPRR 21 Pan AM UT L #1
Field	Wattenberg
County	Weld
State	Colorado
Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	UPRR 21 Pan AM UT L #1
Field	Wattenberg
County	Weld
State	Colorado
Location:	API # : 05-123-14466
SHL: 994' FNL 1380' FEL	Other Services
SEC 9 TWP 3N RGE 66W	None
Permanent Datum	Ground Level
Log Measured From	Kelly Bushing
Drilling Measured From	Kelly Bushing
	Elevation
	K.B. 4834'
	D.F. 4833'
	G.L. 4824'

Date	18-August-2014
Run Number	One
Depth Driller	7980 FT
Depth Logger	1383 FT
Bottom Logged Interval	1378 FT
Top Log Interval	Surface
Open Hole Size	9.5"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	88°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	8:15
Equipment Number	HD-0311
Location	Fort Lupton, CO
Recorded By	Brent Kalkwarf
Witnessed By	Edgar Chavez

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top	Bottom		
Surface Casing	8.63	24	J-55	Surface	570 FT		
Intermediate #1	5.50	17	N-80	Surface	7980 FT		
Intermediate #2							
Liner							

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

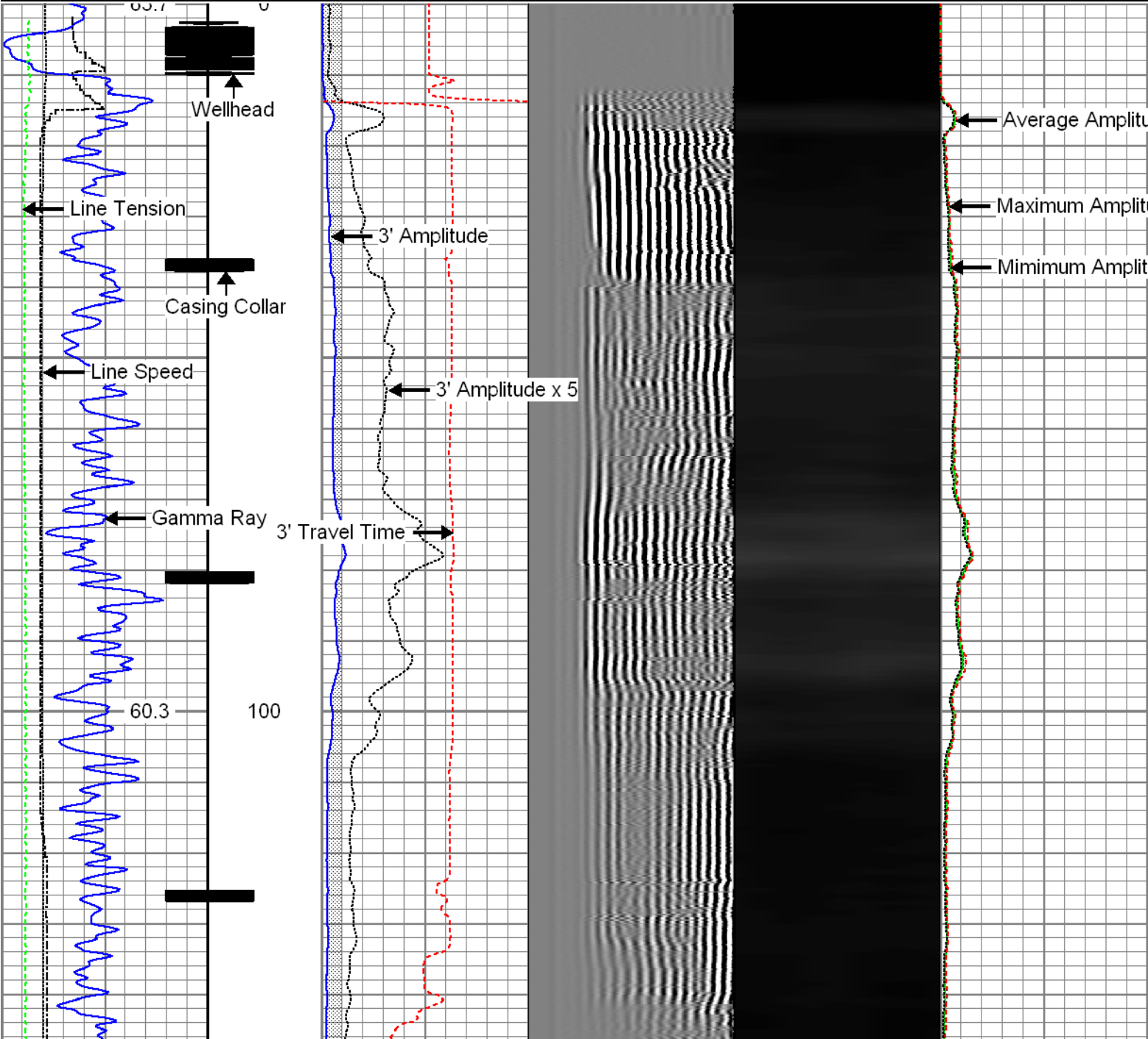
Comments

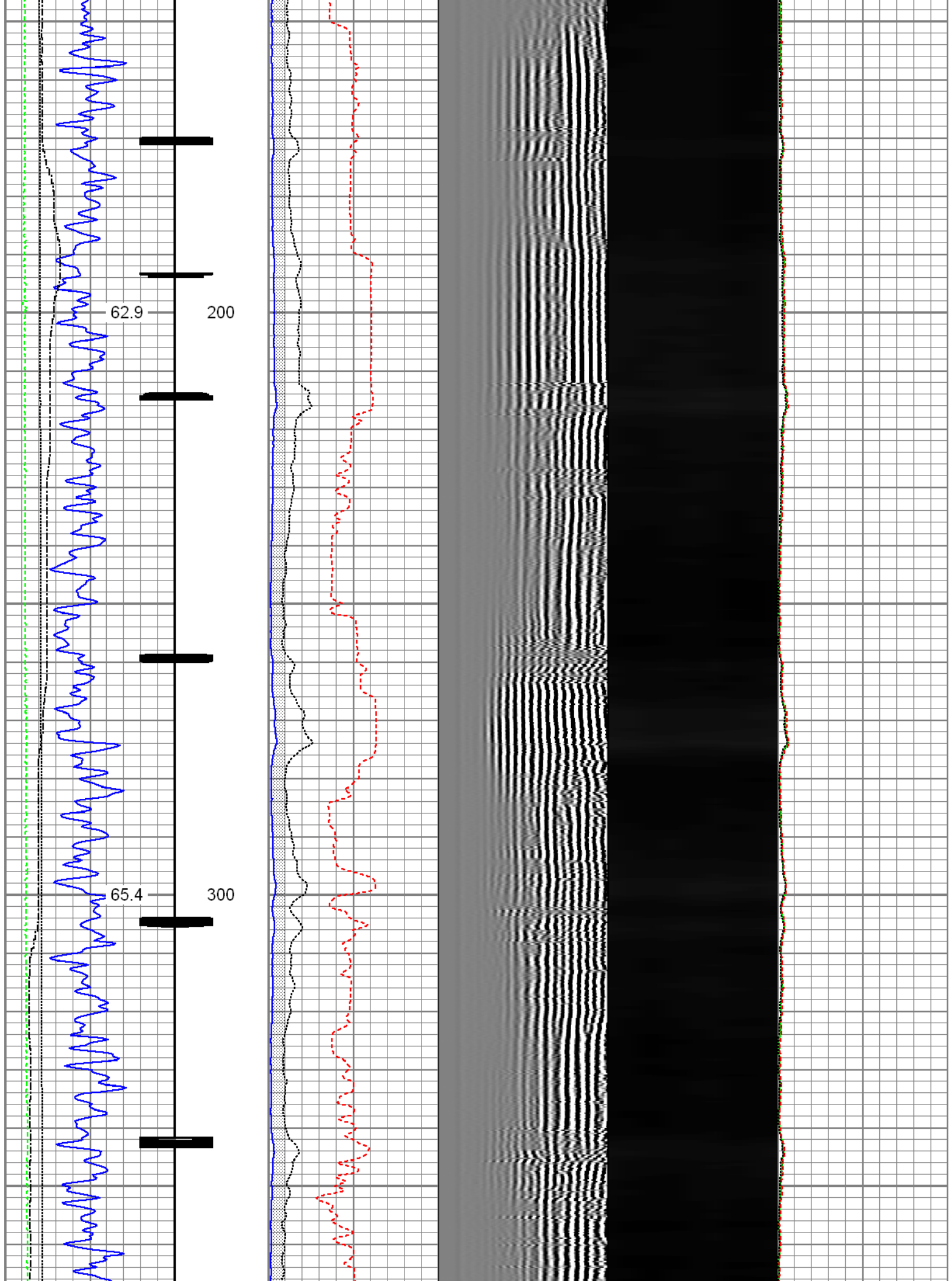
Log ran as per Customer request.
 Depth reference to Kelly Bushing reported at 10 FT above ground level.
 Log ran from 1383 FT to surface.
 Log ran with 0 PSI surface induced pressure.

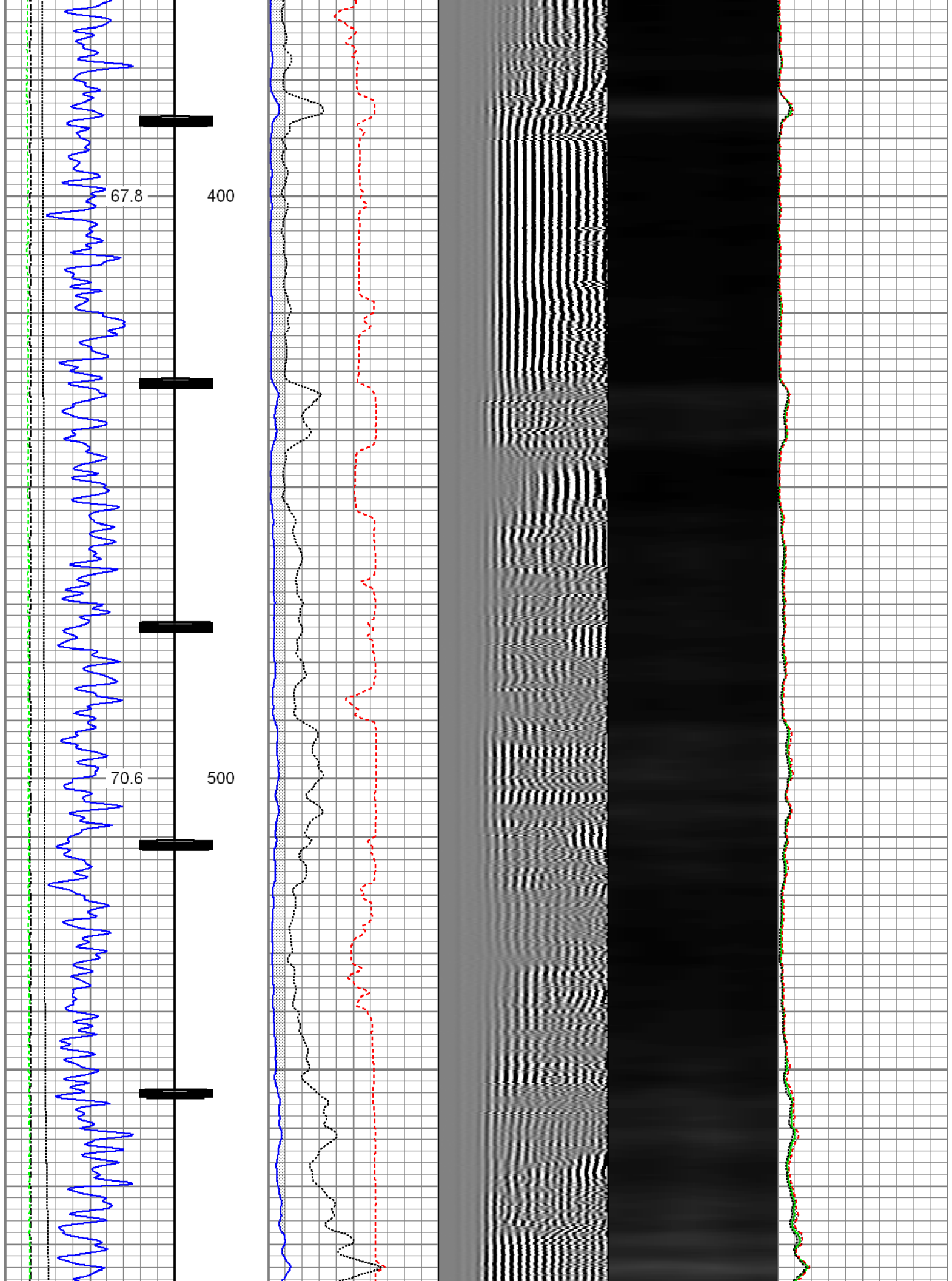
Thank you for choosing FMC Technologies Completion Services, Inc.!!

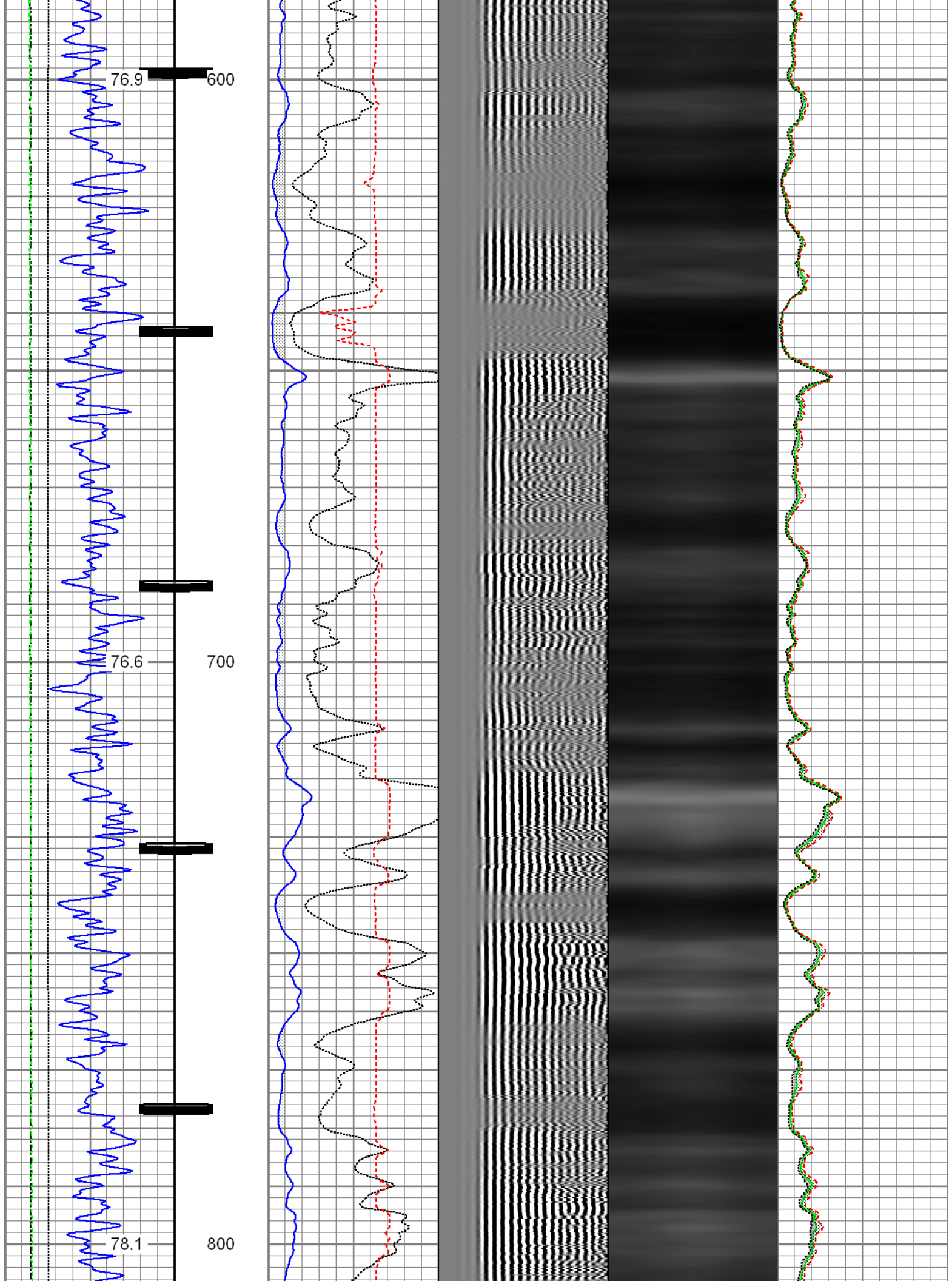
Database File: 0512314466_anadarko_uprr 21 pan am ut l #1_08-18-14_rbl.db
Dataset Pathname: Main
Presentation Format: radii
Dataset Creation: Mon Aug 18 08:28:01 2014 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

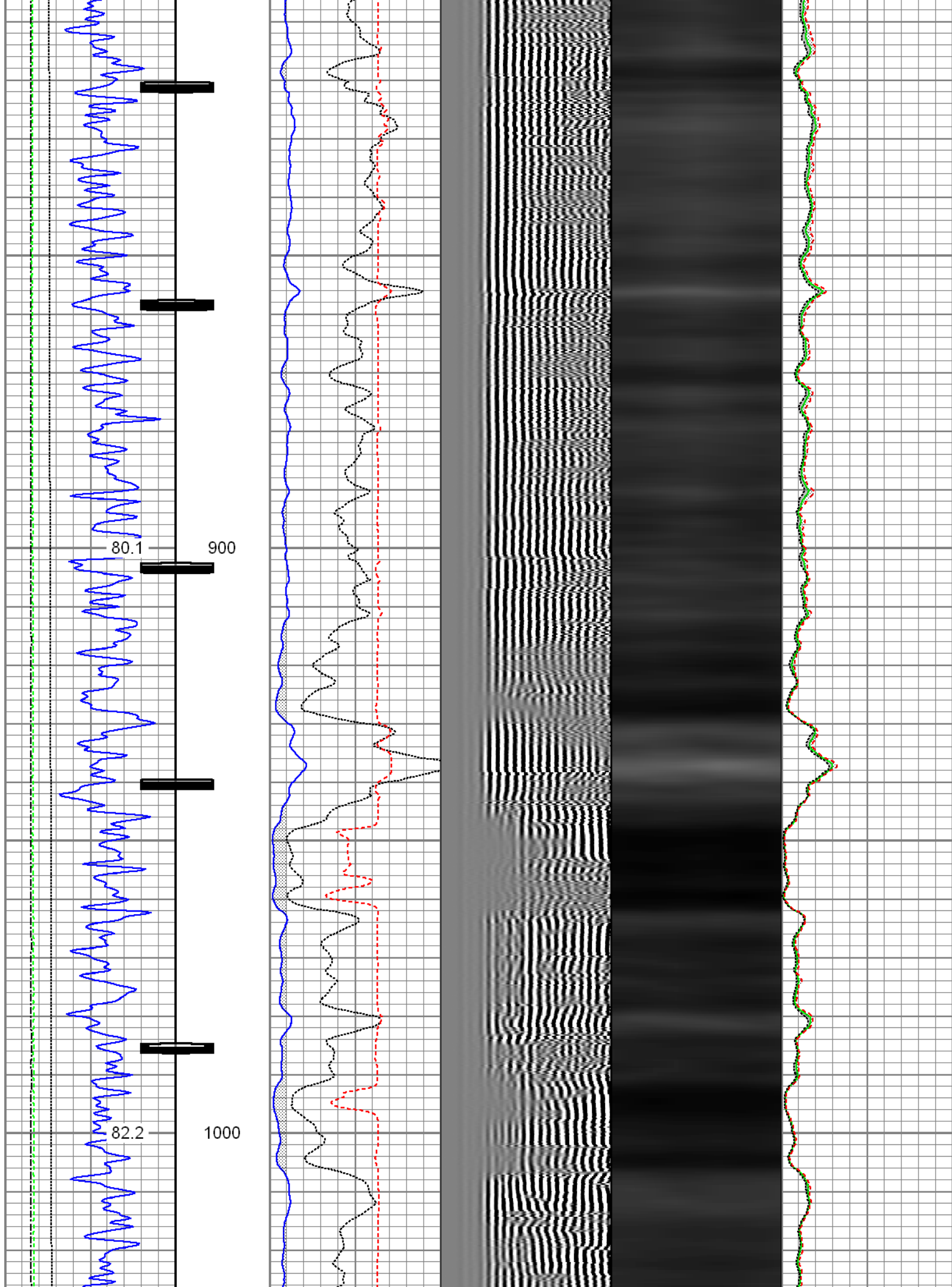
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 300	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150				
Line Tension				
0 (lb) 2000				

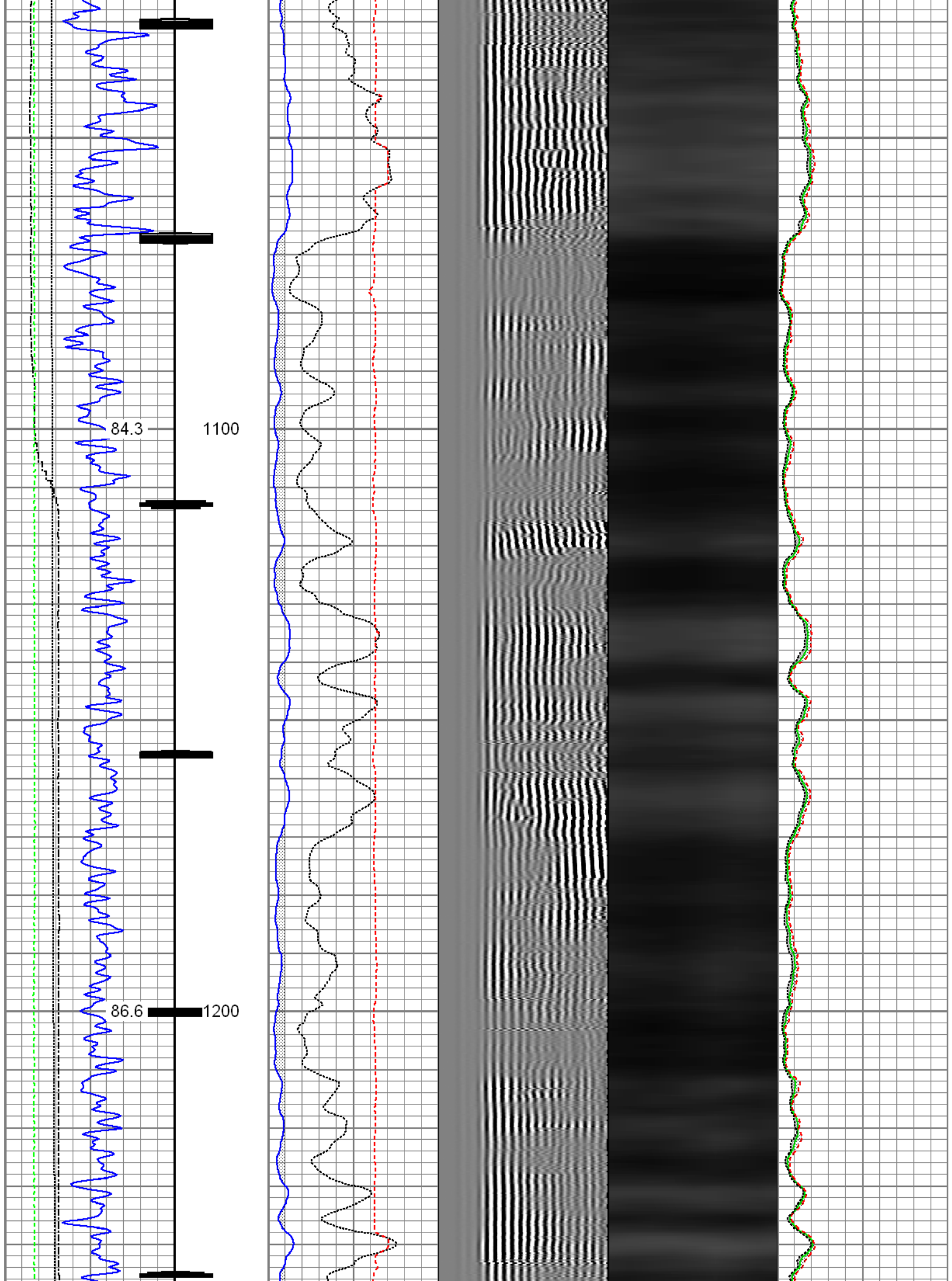


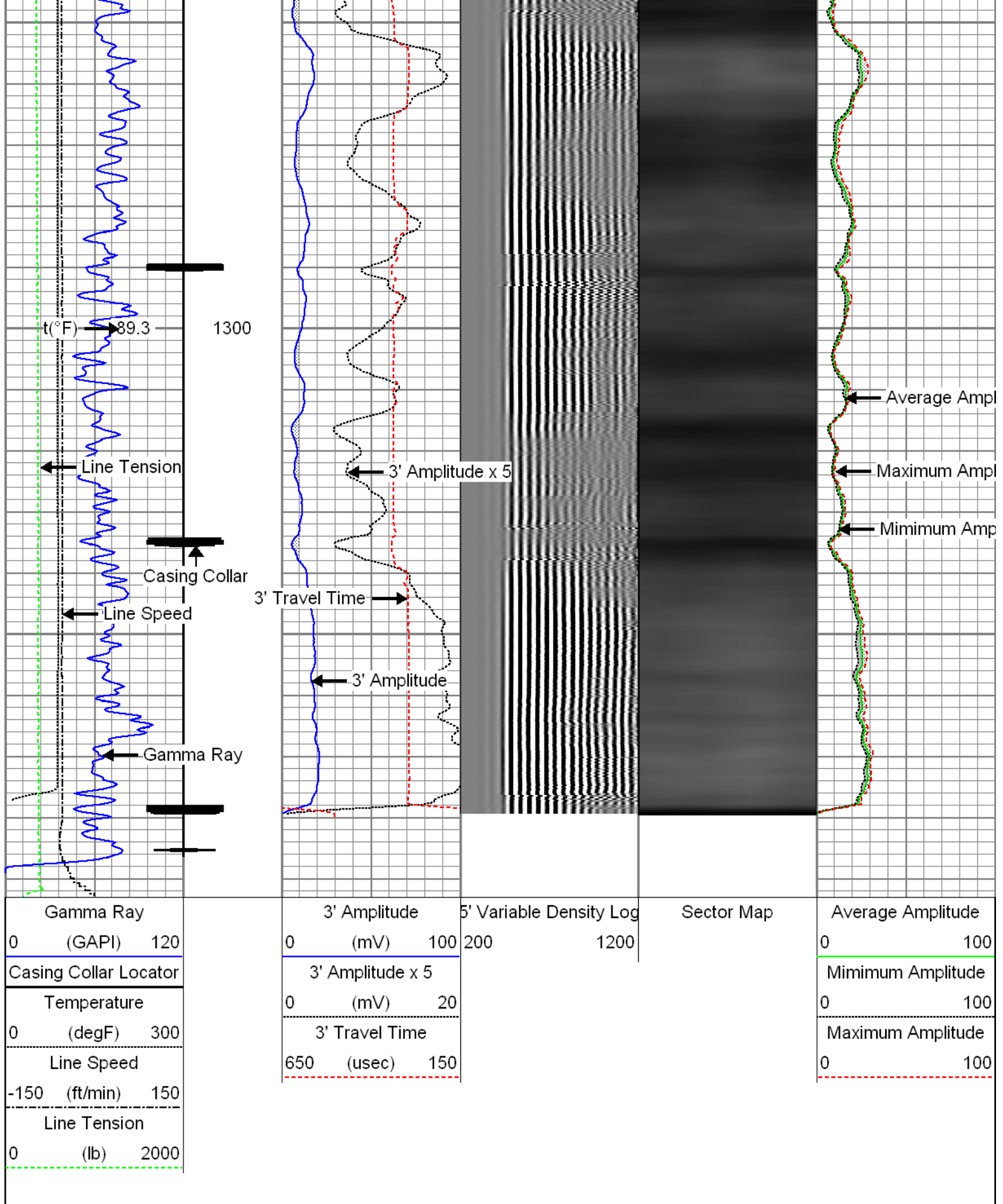






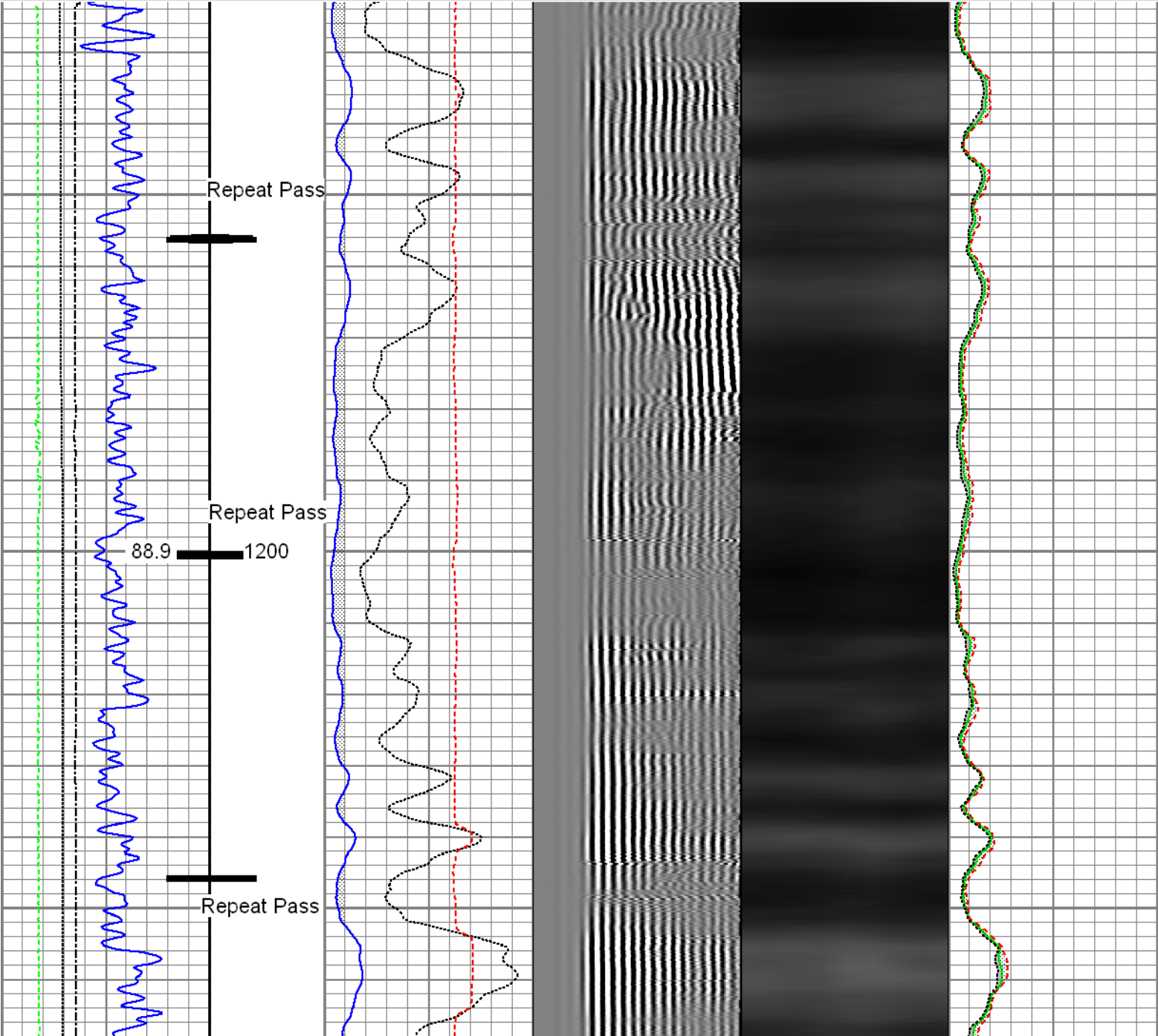


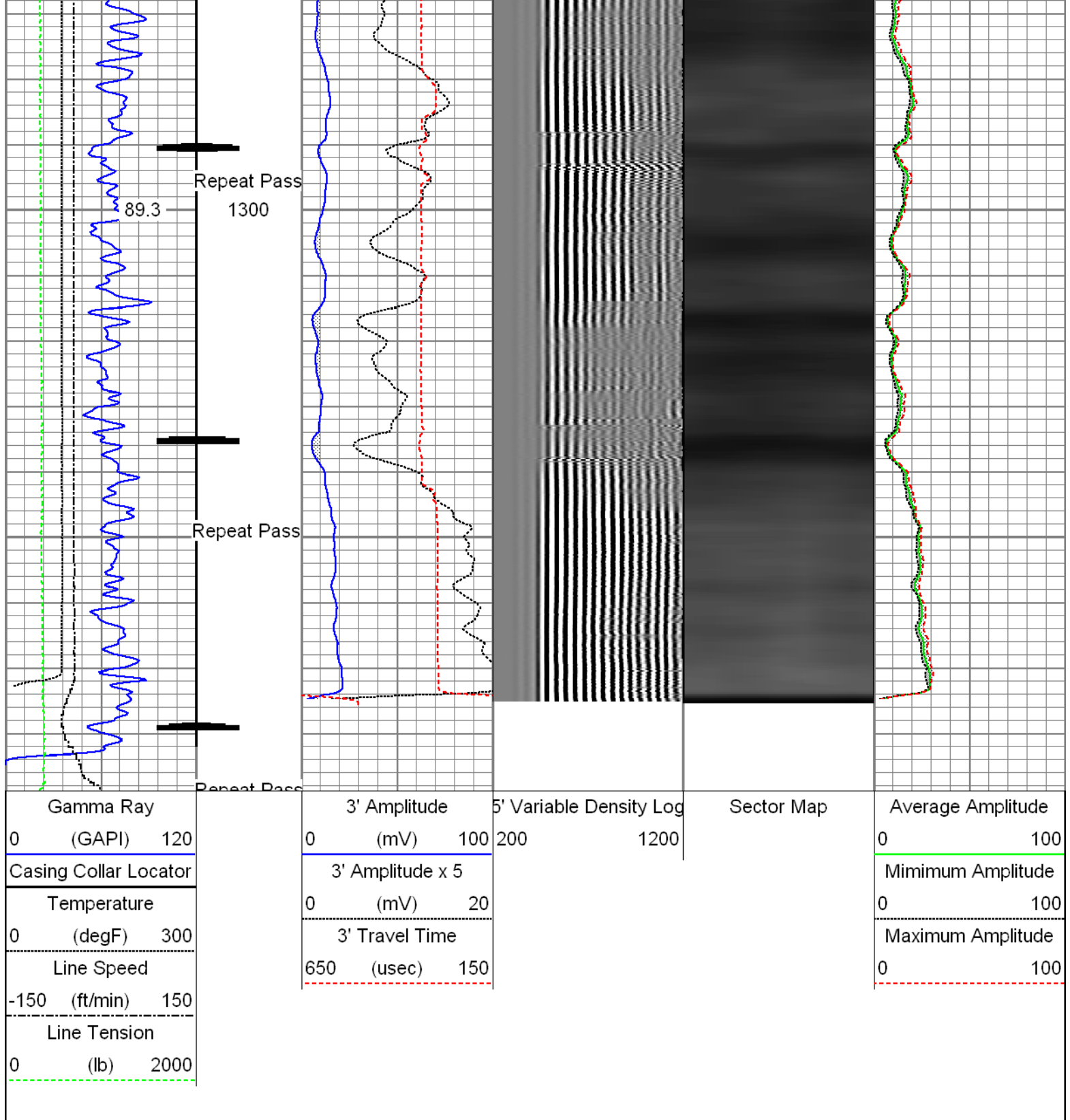




Database File: 0512314466_anadarko_uprr 21 pan am ut l #1_08-18-14_rbl.db
Dataset Pathname: pass4
Presentation Format: radii
Dataset Creation: Mon Aug 18 08:17:06 2014 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 300	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150				
Line Tension				
0 (lb) 2000				





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			Titan_1_11_16	1.04	1.69	5.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00

Temp	16.68					
WVF3FT	14.57		Probe_RADII-C-2-3/4" (FW1302-001in7")	9.21	2.75	100.00
WVFCAL	14.57		Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe			
WVFS1	14.57					
WVFS2	14.57					
WVFS3	14.57					
WVFS4	14.57					
WVFS5	14.57					
WVFS6	14.57					
WVFS7	14.57					
WVFS8	14.57					
WVF5FT	13.57					
RHeadVolt	10.34					
		Probe_IL_BS_Cent	2.88	2.75	10.00	
		Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer				
CCL	6.59					
DCCL	6.59					
GR	5.25	Probe_CCL_GR-2.75"Digital (FW1302-119)	4.58	2.75	55.00	
		Probe 2-3/4" Digital CCL / Gamma Ray Combined				
		Probe_IL_BS_Cent	2.88	2.75	10.00	
		Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer				
Dataset: 0512314466_Anadarko_UPRR 21 Pan AM UT L #1_08-18-14_RBL.db: field/well/run1/Main Total Length: 23.47 ft Total Weight: 190.00 lb O.D. 2.75 in						

Calibration Report	
Database File:	0512314466_Anadarko_UPRR 21 Pan AM UT L #1_08-18-14_RBL.db
Dataset Pathname:	Main
Dataset Creation:	Mon Aug 18 08:28:01 2014 by Log SCH 111116

Gamma Ray Calibration Report

Serial Number:	FW1302-119
Tool Model:	2.75"Digital
Performed:	Mon Apr 01 19:31:10 2013

Calibrator Value:	100.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	150.0	cps
Sensitivity:	0.6667	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1302-001in7"
Tool Model:	2-3/4"
Calibration Casing Diameter:	5.500 in
Calibration Depth:	50.421 ft

Master Calibration, performed Mon Aug 18 08:02:51 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.011	0.712	1.000	72.000	101.293	-0.114
CAL	1.151	0.716				
5'	0.013	0.692	1.000	72.000	104.565	-0.347
SUM						
S1	0.003	0.712	0.000	100.000	141.059	-0.394
S2	0.009	0.707	0.000	100.000	143.174	-1.295
S3	0.010	0.708	0.000	100.000	143.287	-1.398
S4	0.009	0.714	0.000	100.000	141.855	-1.233
S5	0.009	0.708	0.000	100.000	143.077	-1.280
S6	0.009	0.700	0.000	100.000	144.676	-1.277
S7	0.010	0.688	0.000	100.000	147.396	-1.407
S8	0.013	0.711	0.000	100.000	143.237	-1.811

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.151	0.716	1.000	0.000

Air Zero Calibration, performed Mon Aug 18 07:36:19 2014:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000



Well	UPRR 21 Pan AM UT L #1
Field	Wattenberg
County	Weld
State	Colorado