



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Acco-Terra-State 39		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.	
	Well	Acco-Terra-State 39	
	Field	Wattenberg	
	County	Weld	
Location:	State	Colorado	
	API # :	05-123-07808	
	Other Services	---	
	Elevation	---	
Permanent Datum	Ground Level	Elevation 4968'	
Log Measured From	Kelly Bushing	13 FT	
Drilling Measured From	Kelly Bushing	G.L. 4968'	

Date	02-Jan-2016
Run Number	One
Depth Driller	7908 FT
Depth Logger	2033 FT
Bottom Logged Interval	2027 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	100°F
Estimated Cement Top	456 FT
Time Well Ready	17:02
Time Logger on Bottom	17:58
Equipment Number	HD-0311
Location	Ft. Lupton, CO
Recorded By	A. Olmsted
Witnessed By	Chris Row

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 5/8	24	K-55	13 FT	983 FT		
Intermediate #1	4 1/2	11.6	K-55	13 FT	7891 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  
Log ran from 2033 FT to Surface  
Recorded with 0 PSI Surface Induced Pressure  
Logging tools were clean and free of debris upon completion of operations  
  
Thank you for choosing FMC Technologies Surface Integrated Services.

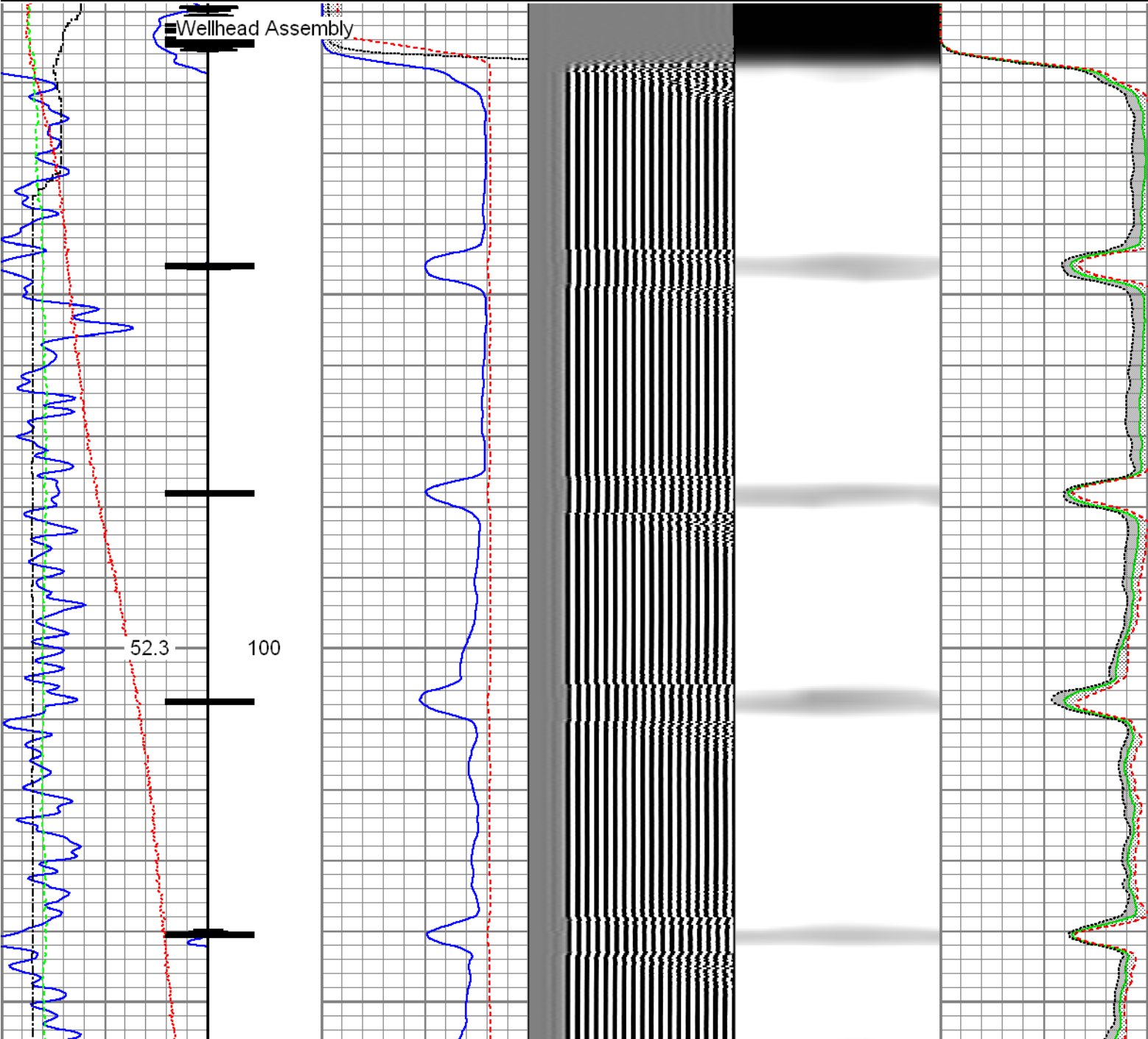


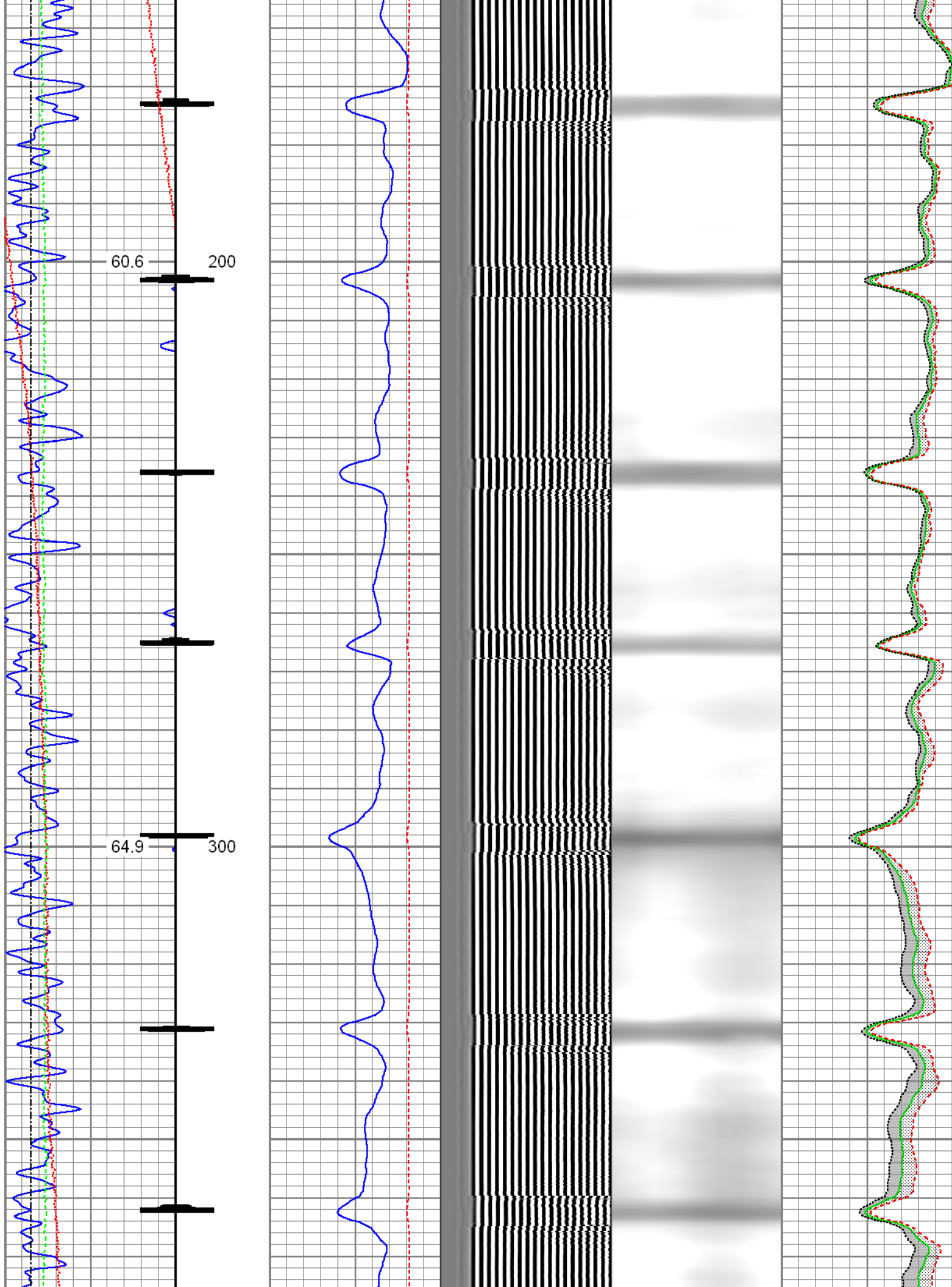
Main Pass

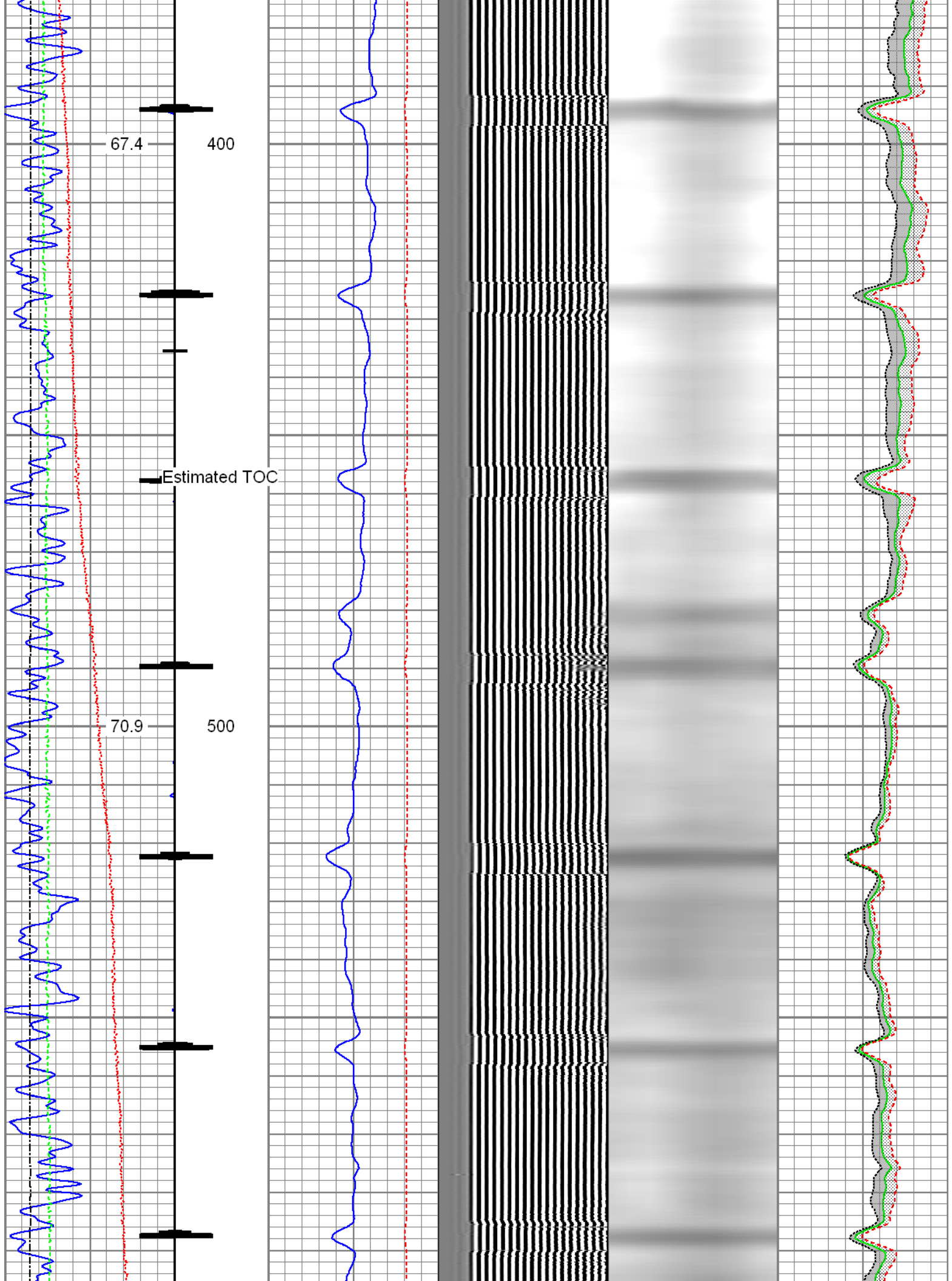
Recorded with 0 PSI Surface Induced Pressure

Database File: 0512307808\_anadarko\_acco-terra-state 39\_01-02-16\_rbl.db  
Dataset Pathname: pass7.1  
Presentation Format: radii  
Dataset Creation: Sat Jan 02 18:23:35 2016 by Calc 7.0 B1  
Charted by: Depth in Feet scaled 1:240

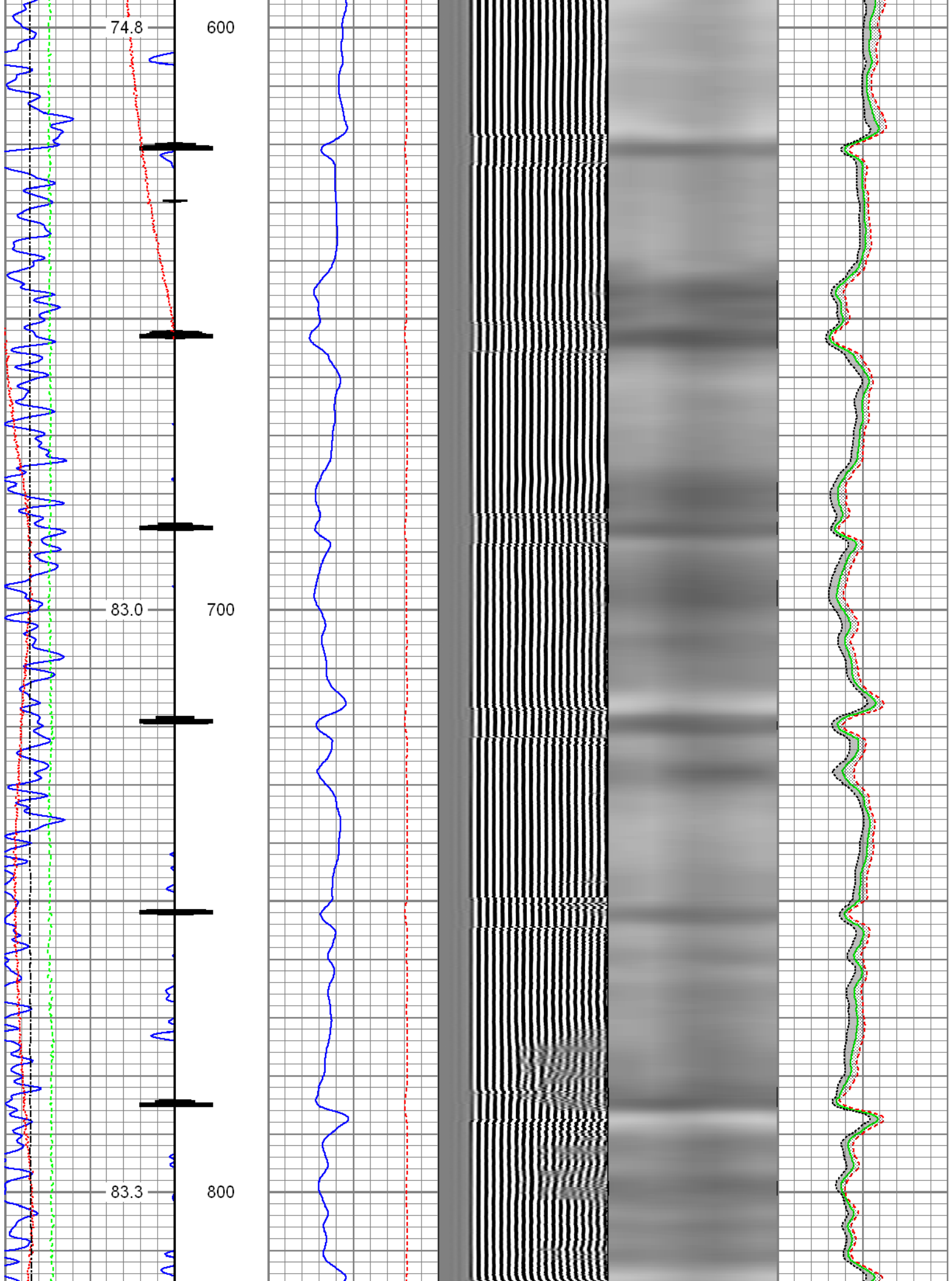
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
30 (GAPI) 130	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150				
Line Tension				
0 (lb) 2000				

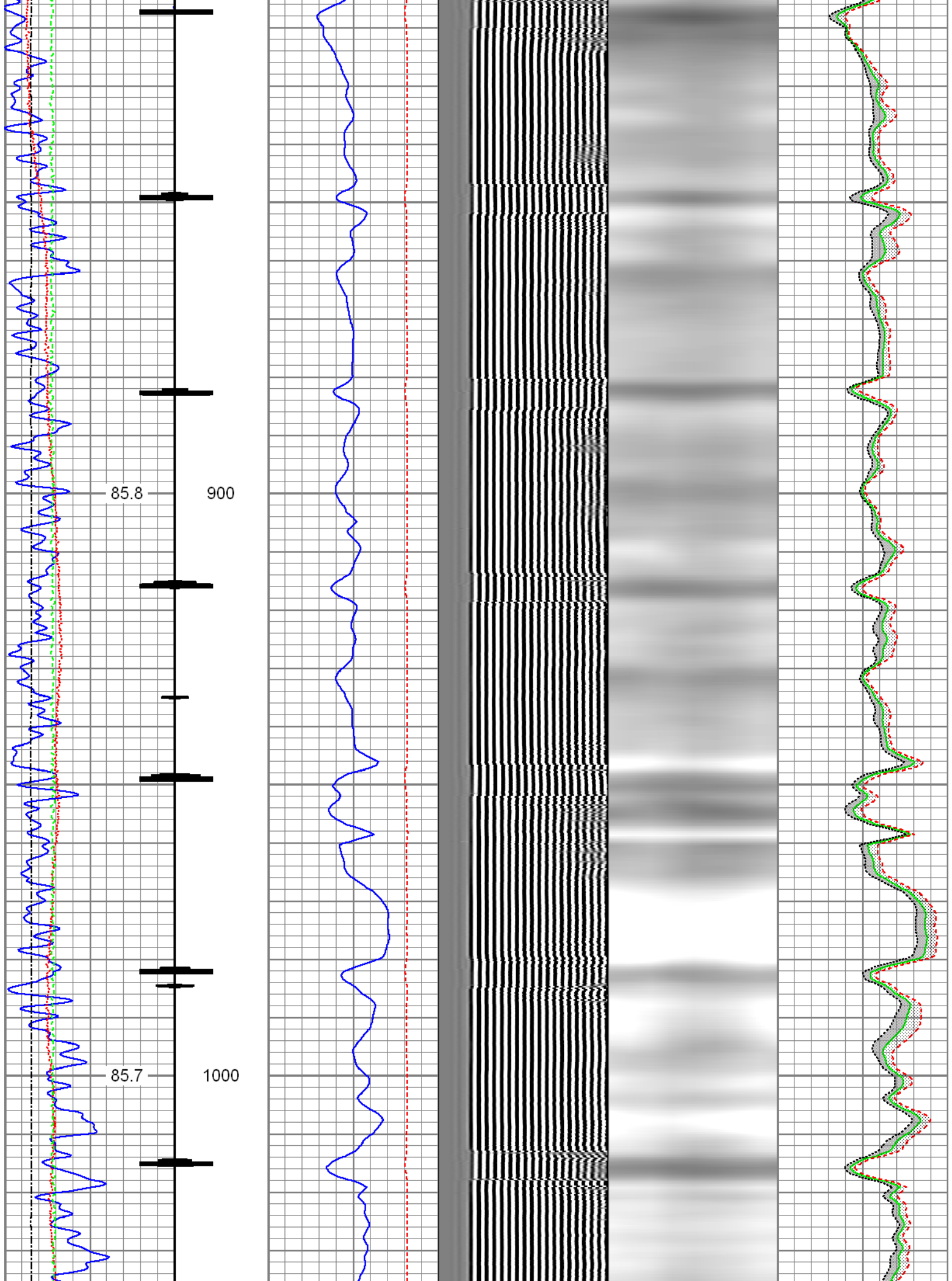


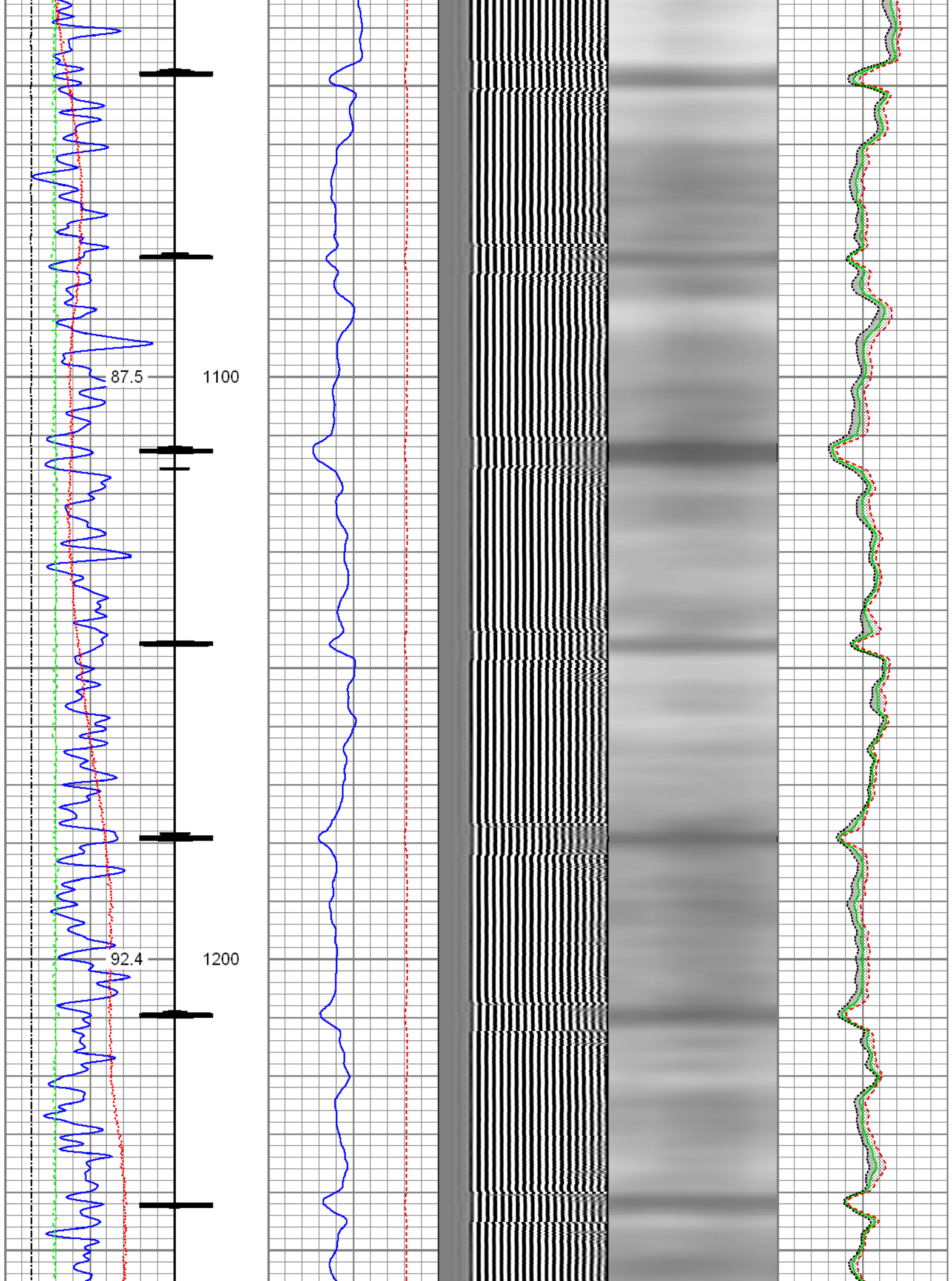


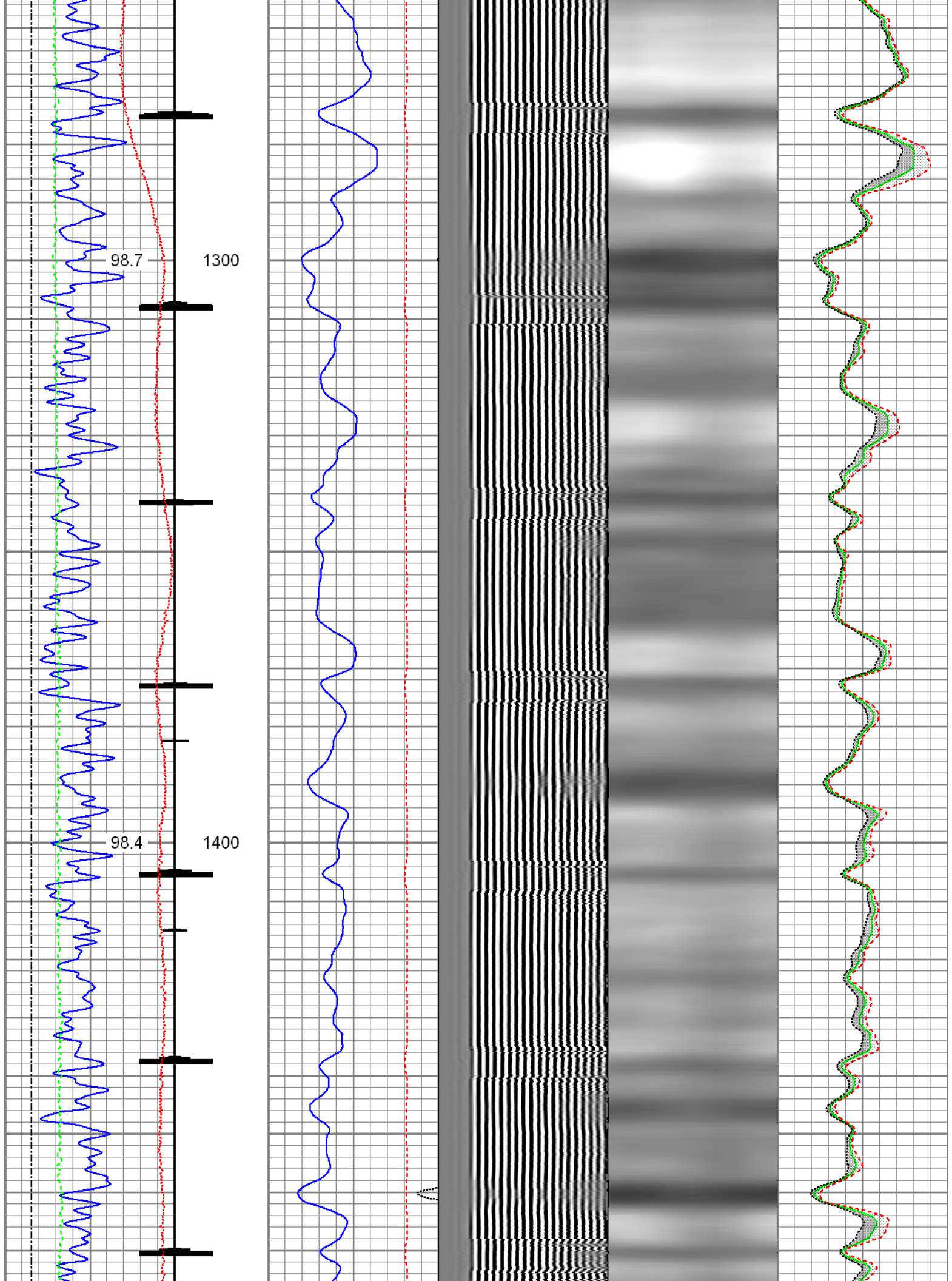




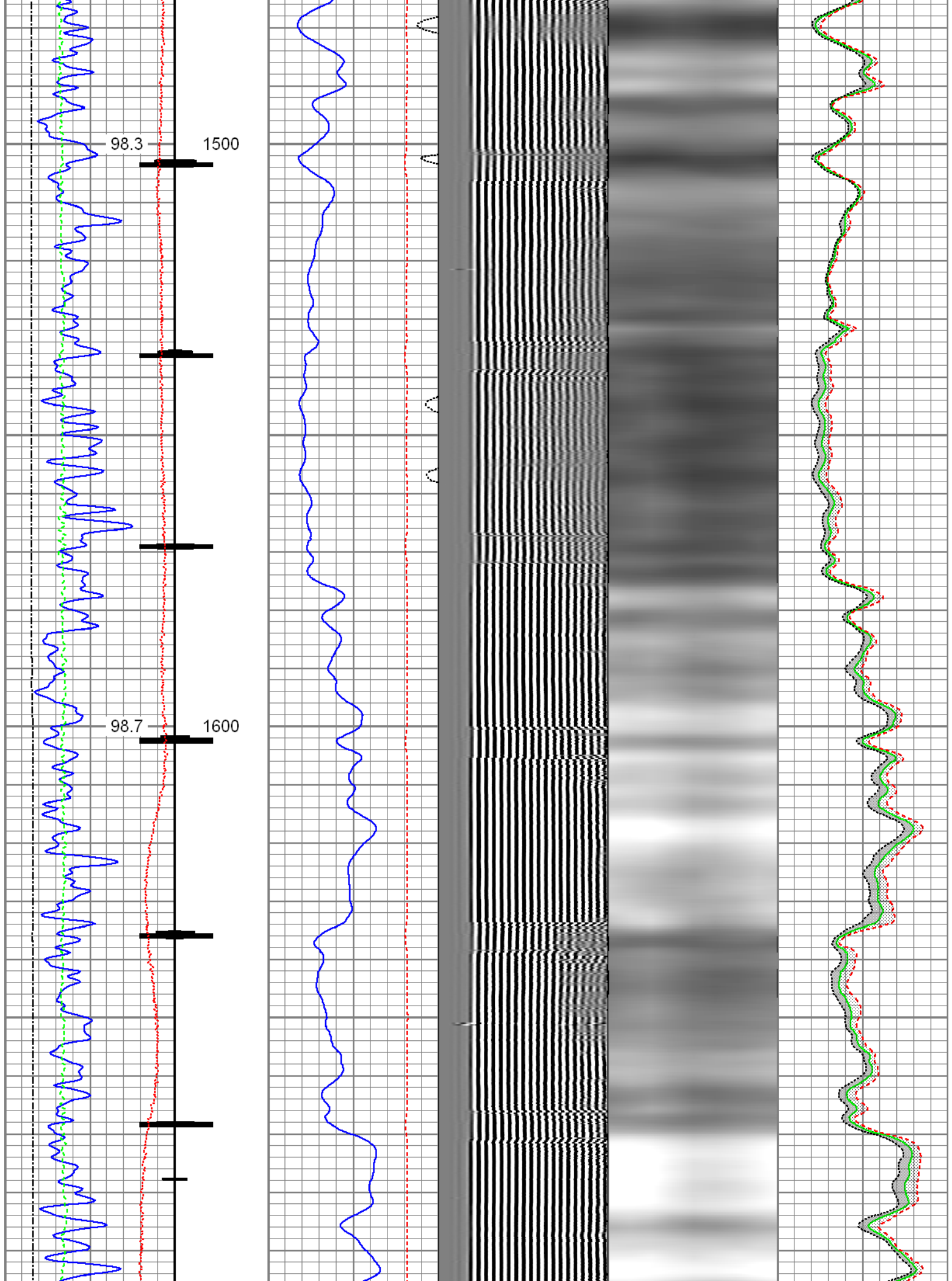


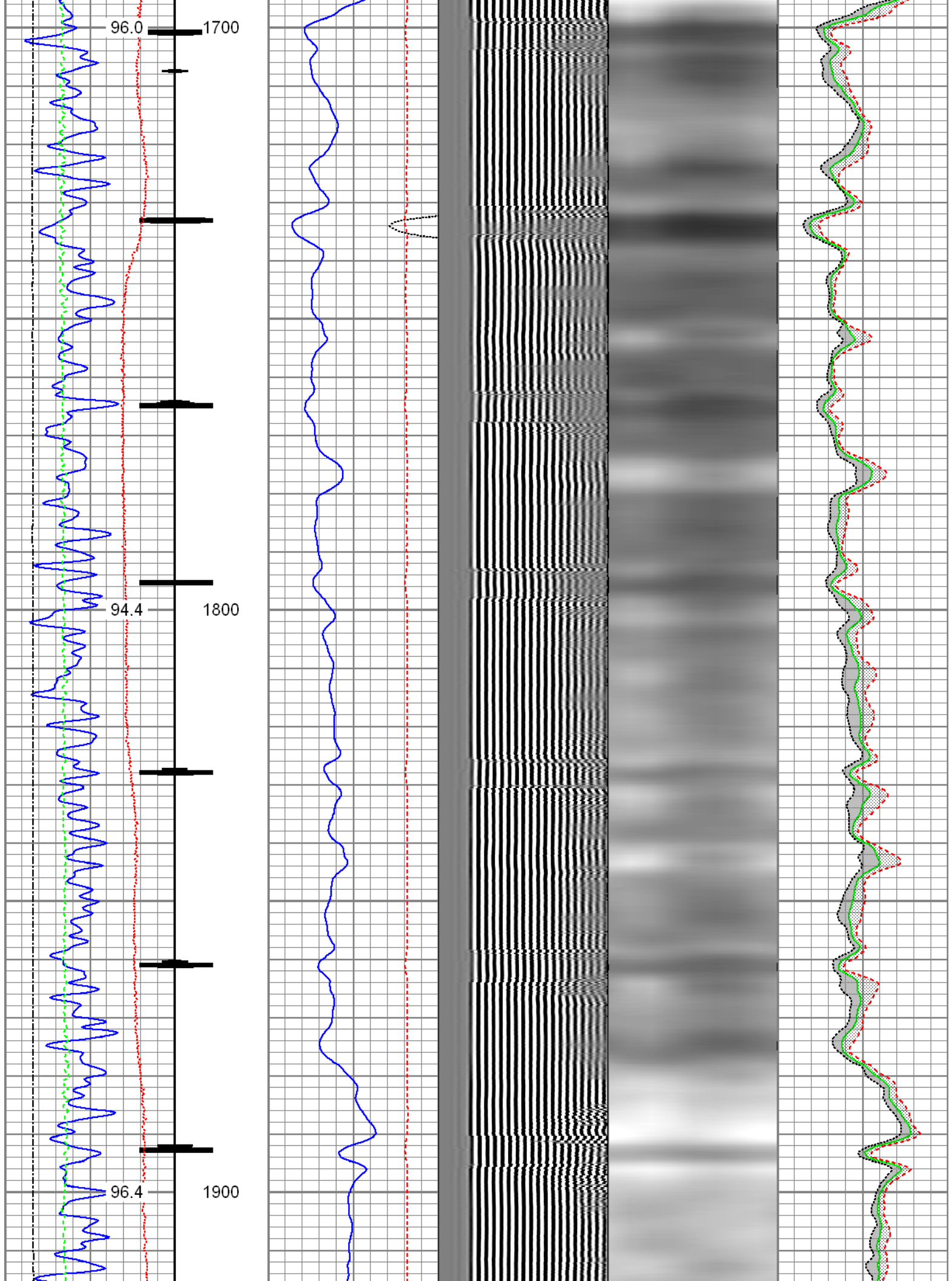


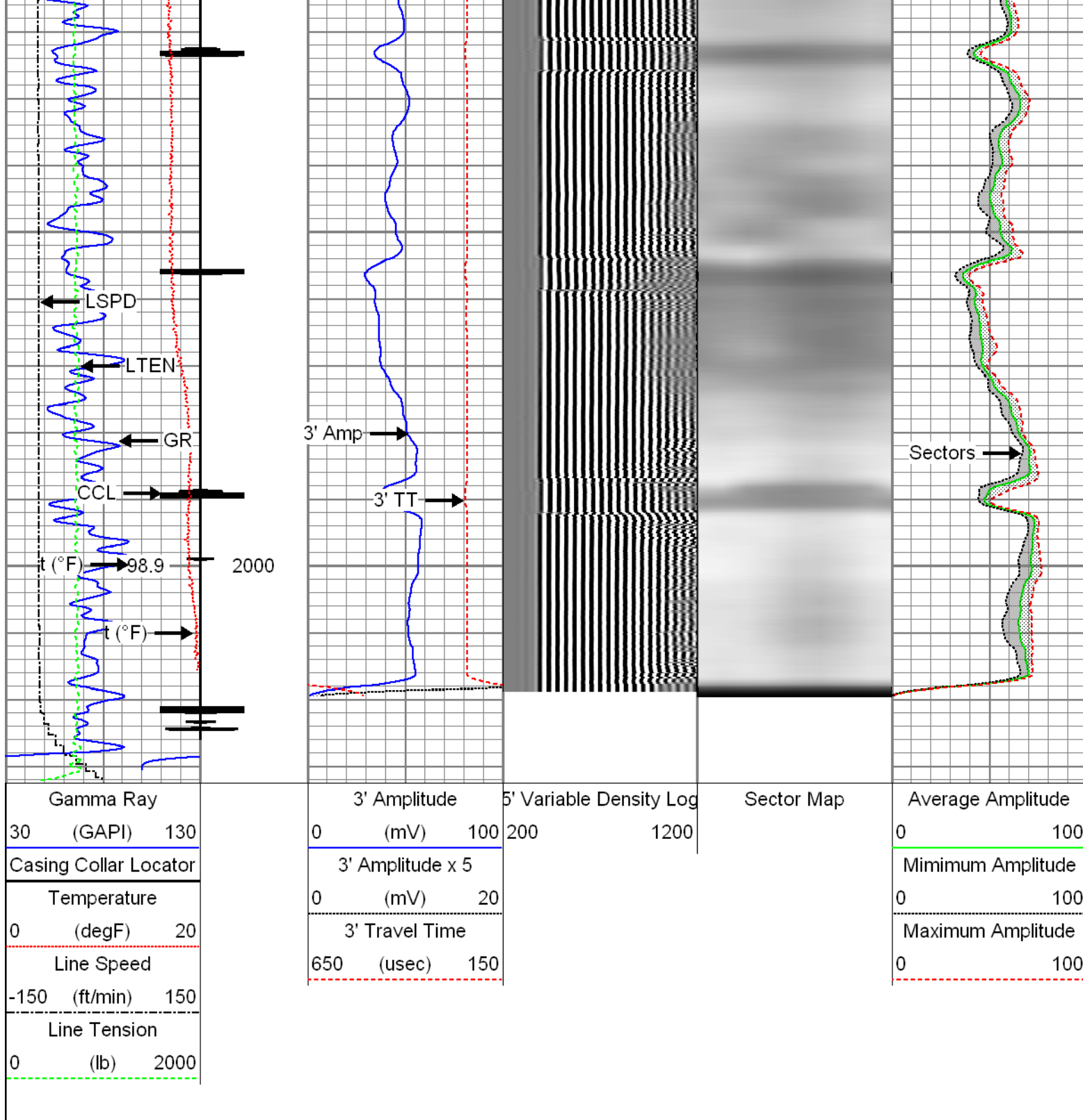









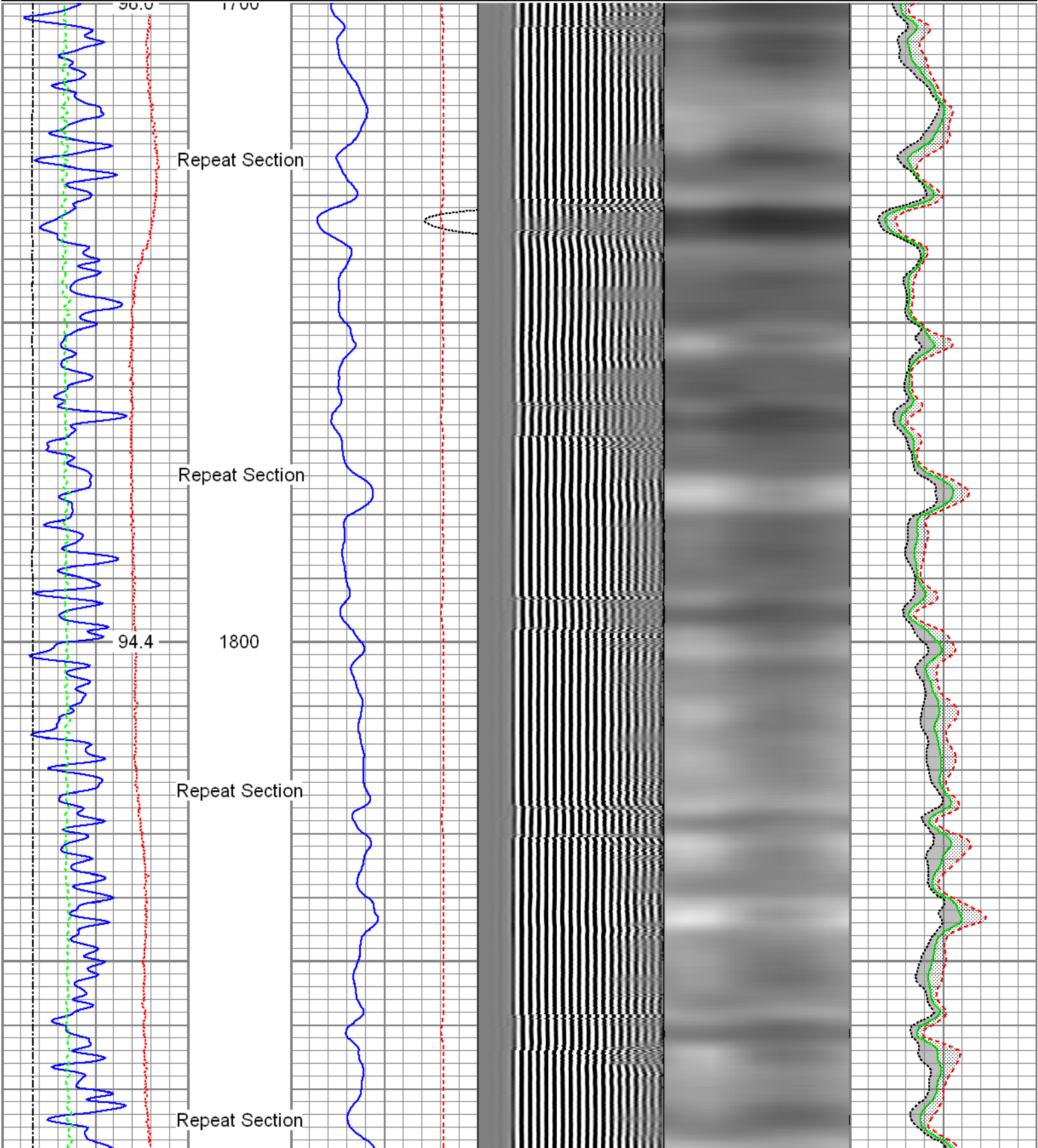




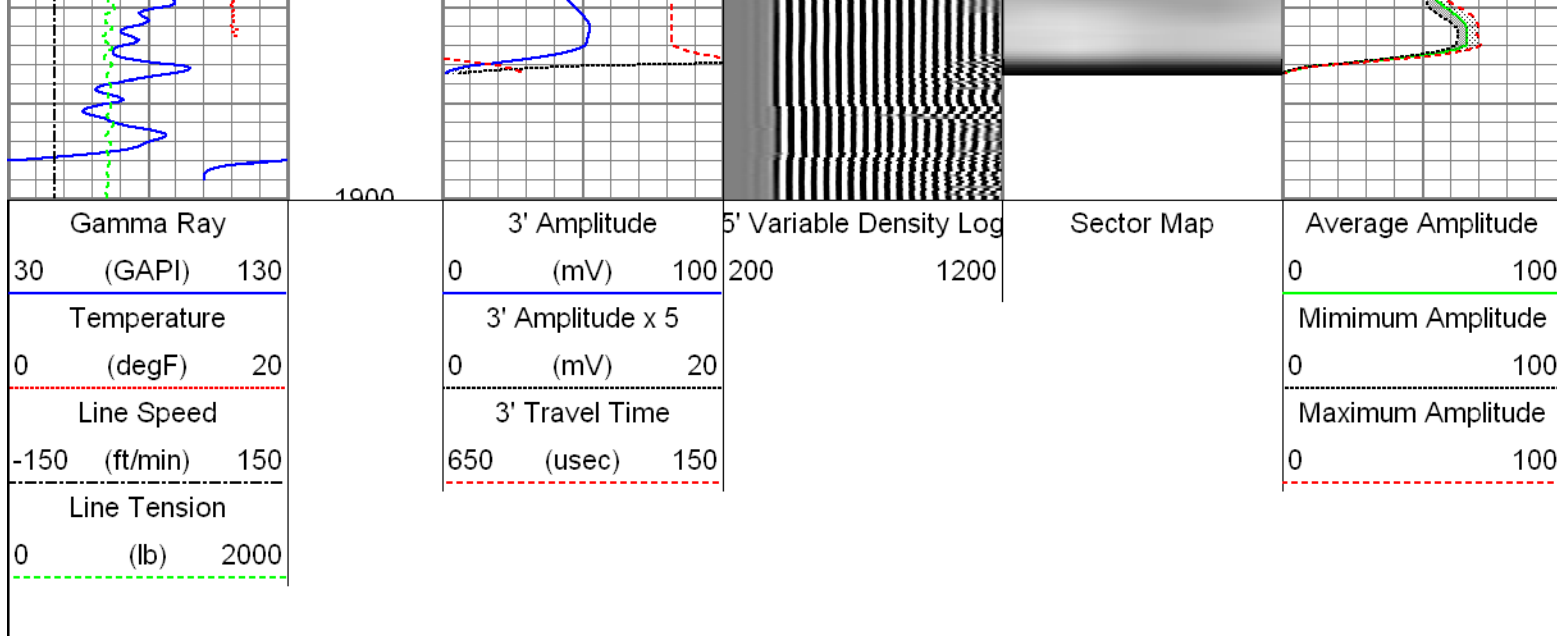
	<div>Repeat Pass</div> <div>Recorded with 0 PSI Surface Induced Pressure</div>
<div>Database File: 0512307808_anadarko_acco-terra-state 39_01-02-16_rbl.db</div> <div>Dataset Pathname: pass6</div> <div>Presentation Format: radii</div> <div>Dataset Creation: Sat Jan 02 18:25:04 2016 by Calc 7.0 B1</div> <div>Charted by: Depth in Feet scaled 1:240</div>	

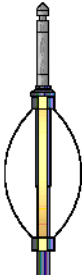

Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
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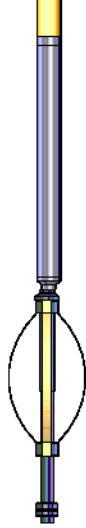
30	(GAPI)	130	0	(mV)	100	200	1200	0	100	
Temperature			3' Amplitude x 5			Minimum Amplitude				
0	(degF)	20	0	(mV)	20	0				100
Line Speed			3' Travel Time			Maximum Amplitude				
-150	(ft/min)	150	650	(usec)	150	0				100
Line Tension										
0	(lb)	2000								







Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
Head/Volt	19.49		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Temp	16.72					
WVF3FT	14.55		Probe_RADII-C-2-3/4" (FW1305-098) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WVFCAL	14.55					
WVFS1	14.55					
WVFS2	14.55					
WVFS3	14.55					
WVFS4	14.55					
WVFS5	14.55					
WVFS6	14.55					
WVFS7	14.55					
WVFS8	14.55					
WVF5FT	13.55					
CCI	6.51		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00

CCL	0.97		Probe_CCL_GR-2.75"Digital (FW1211-026) 4.54 Probe 2-3/4" Digital CCL / Gamma Ray Combined			
DCCL	6.51					
GR	3.77		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 0512307808_Anadarko_Acco-Terra-State 39_01-02-16_RBL.db: field/well/run1/pass6 Total Length: 23.40 ft Total Weight: 194.00 lb O.D. 2.75 in						

Calibration Report						
Database File:	0512307808_anadarko_acco-terra-state 39_01-02-16_rbl.db					
Dataset Pathname:	pass7.1					
Dataset Creation:	Sat Jan 02 18:23:35 2016 by Calc 7.0 B1					
Gamma Ray Calibration Report						
Serial Number:	FW1211-026					
Tool Model:	2.75"Digital					
Performed:	Fri Jan 01 17:41:46 2016					
Calibrator Value:	1.0	GAPI				
Background Reading:	0.0	cps				
Calibrator Reading:	1.0	cps				
Sensitivity:	0.6000	GAPI/cps				
Segmented Cement Bond Log Calibration Report						
Serial Number:	FW1305-098					
Tool Model:	2-3/4"					
Calibration Casing Diameter:	4.500	in				
Calibration Depth:	3.224	ft				
Master Calibration, performed Sat Jan 02 18:23:32 2016:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.005	0.675	0.800	81.196	120.000	0.154
CAL	0.773	0.758				
5'	0.009	0.500	0.800	81.196	163.716	-0.643
SUM						
S1	0.002	0.621	0.000	100.000	161.760	-0.373
S2	0.006	0.681	0.000	100.000	148.105	-0.868
S3	0.005	0.748	0.000	100.000	134.547	-0.688
S4	0.006	0.785	0.000	100.000	128.352	-0.798
S5	0.006	0.761	0.000	100.000	132.465	-0.821
S6	0.003	0.727	0.000	100.000	125.177	-0.821

S6	0.006	0.695	0.000	100.000	145.175	-0.884
S7	0.006	0.637	0.000	100.000	158.528	-0.971
S8	0.006	0.600	0.000	100.000	168.362	-0.960

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	0.773	0.758	1.000	0.000

Air Zero Calibration, performed Sat Jan 02 17:21:27 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.005		0.000		0.000	
5'	0.007		0.000		-0.000	
SUM						
S1	0.001		0.000		0.000	
S2	0.005		0.000		-0.000	
S3	0.005		0.000		-0.000	
S4	0.005		0.000		0.000	
S5	0.005		0.000		0.000	
S6	0.005		0.000		0.000	
S7	0.005		0.000		0.000	
S8	0.005		0.000		0.000	



Company Kerr-McGee Oil & Gas Onshore, L.P.  
Well Acco-Terra-State 39  
Field Wattenberg  
County Weld  
State Colorado