



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Kerr-McGee Oil & Gas Onshore, L.P.	
Well		Stieber 12-24A	
Field		Wattenberg	
County		Weld	
State		Colorado	
Location:		API # : 05-123-20737	
Permanent Datum		SEC 24 TWP 1N RGE 67W	
Log Measured From		Ground Level	
Drilling Measured From		Kelly Bushing	
		Elevation 4932'	
		Elevation K.B. 4944'	
		D.F. 4943'	
		G.L. 4932'	
Other Services		None	
Date		11-OCT-2016	
Run Number		One	
Depth Driller		8201 FT	
Depth Logger		2000 FT	
Bottom Logged Interval		1996 FT	
Top Log Interval		Surface	
Open Hole Size		7.875"	
Type Fluid		Water	
Density / Viscosity		8.34 lbm/gal	
Max. Recorded Temp.		98.3°F	
Estimated Cement Top		906 FT	
Time Well Ready		ROA	
Time Logger on Bottom		07:30	
Equipment Number		HD-0324	
Location		Fort Lupton, CO	
Recorded By		Wayne Wacker	
Witnessed By		Luis Morales	
Run Number		Borehole Record	
Bit		From	
		To	
		Size	
		Weight	
		From	
		To	
Casing Record		Size (in)	
Surface Casing		8 5/8	
Intermediate #1		4 1/2	
Intermediate #2		11.6	
Liner			
		Wgt (lbs/ft)	
		24	
		Grade	
		J-55	
		Top	
		Surface	
		Bottom	
		892 FT	
		8201 FT	

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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 referenced to Kelly Bushing at 12 FT
Log ran from 2000 FT to surface
Log ran with 0 PSI surface induced pressure
Logging tools were clean and free of any debris upon completion of operations

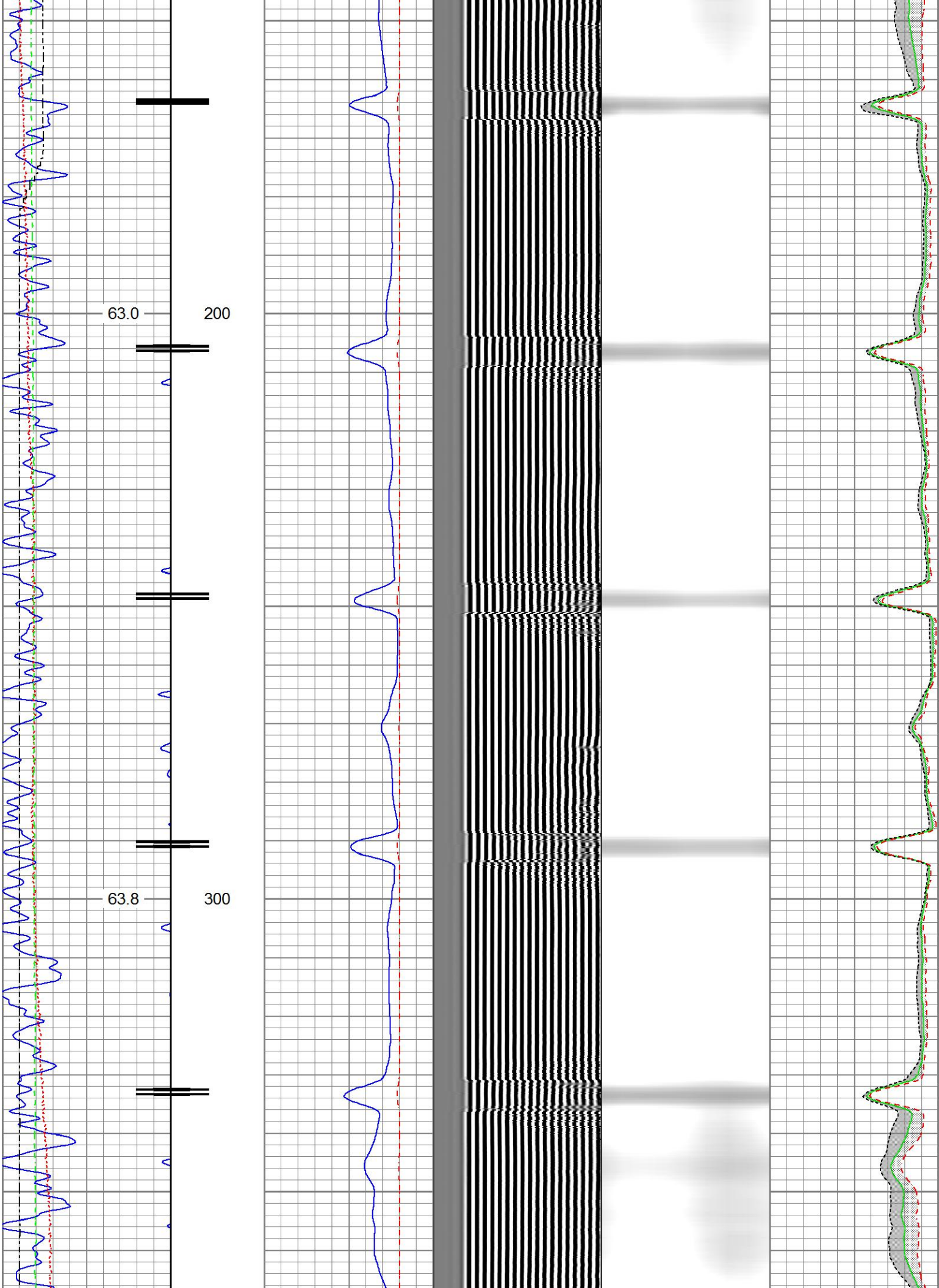
Thank you for choosing Reliance Oilfield Services, LLC!!

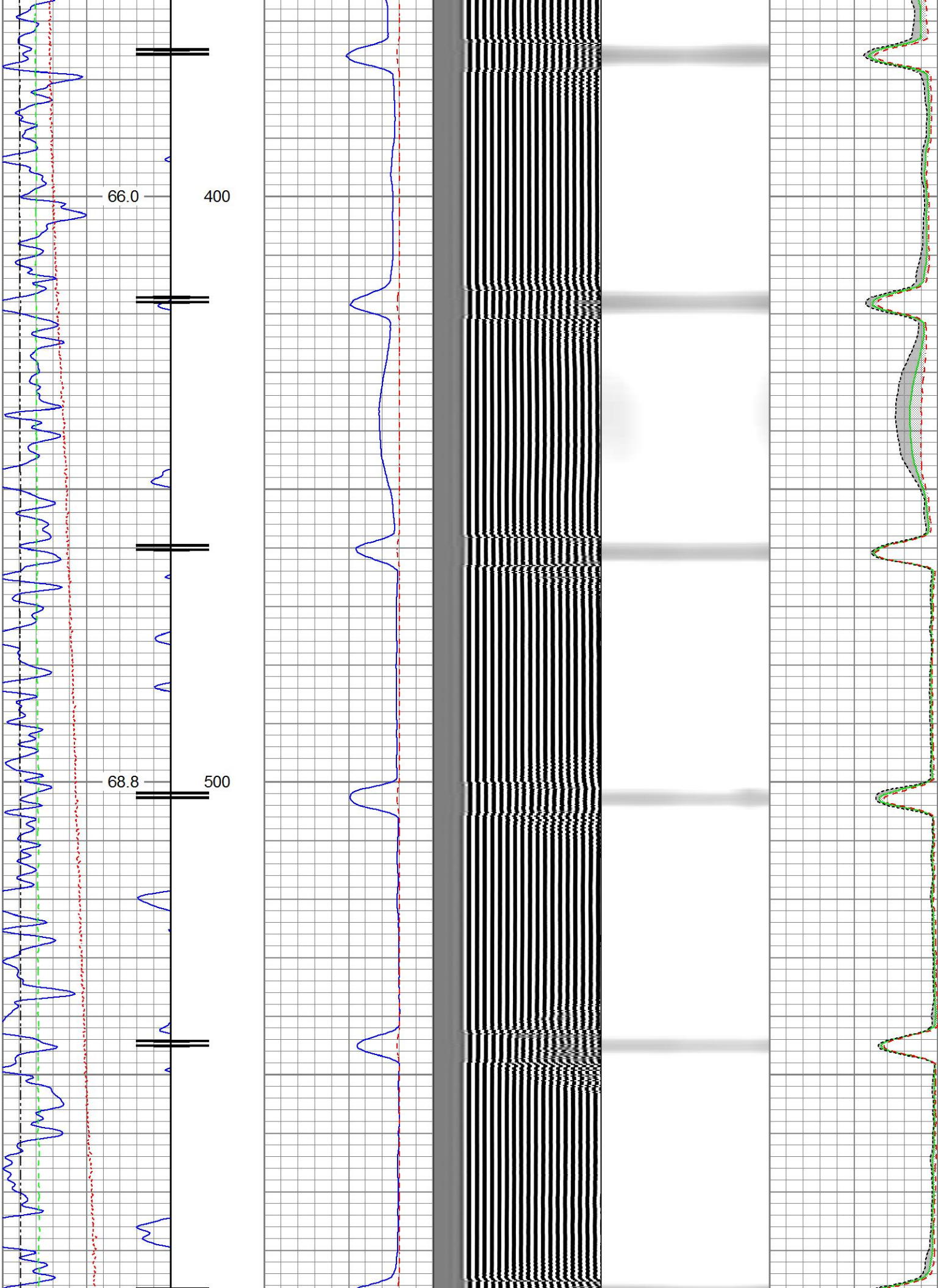


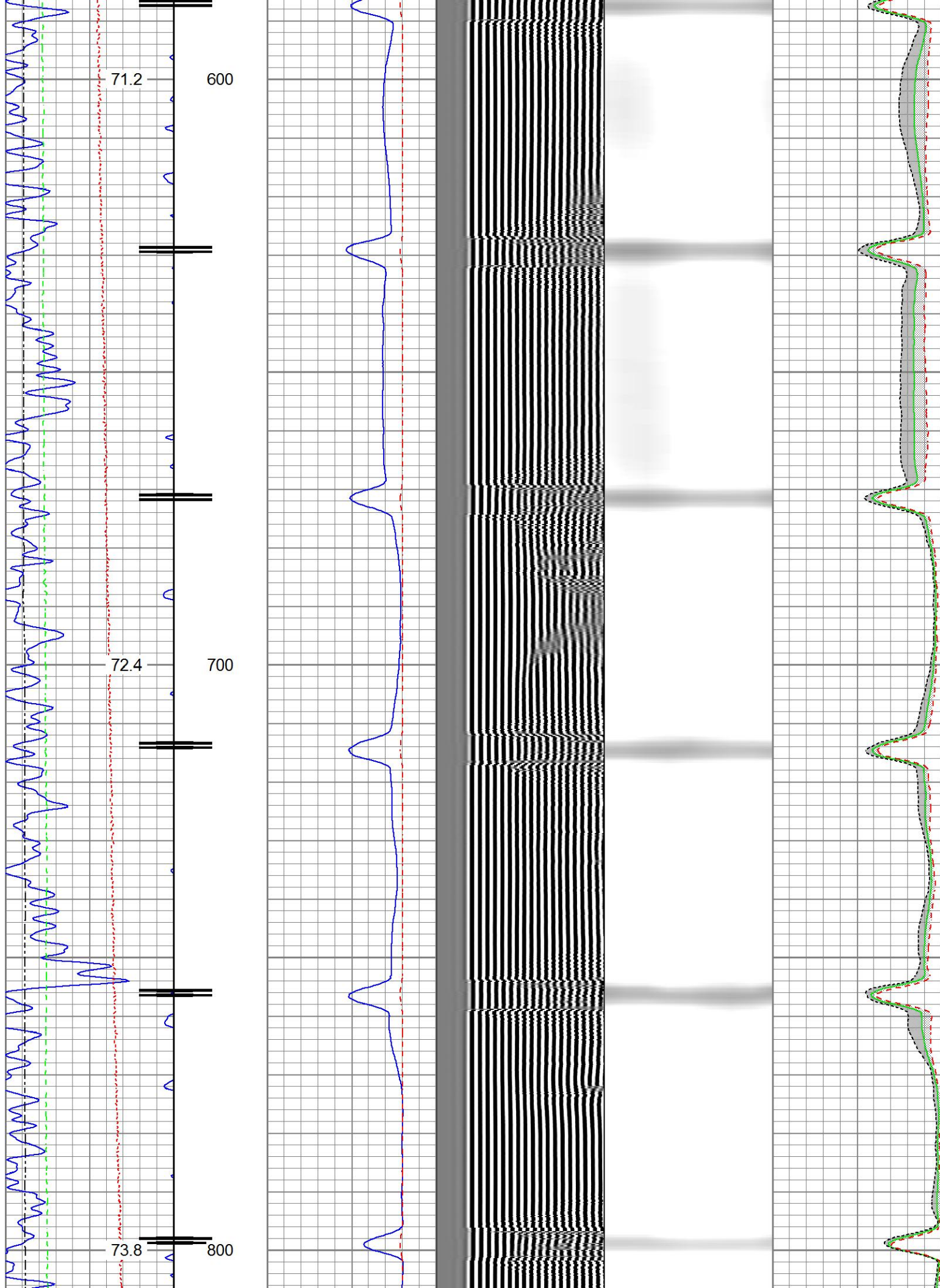
Main Pass

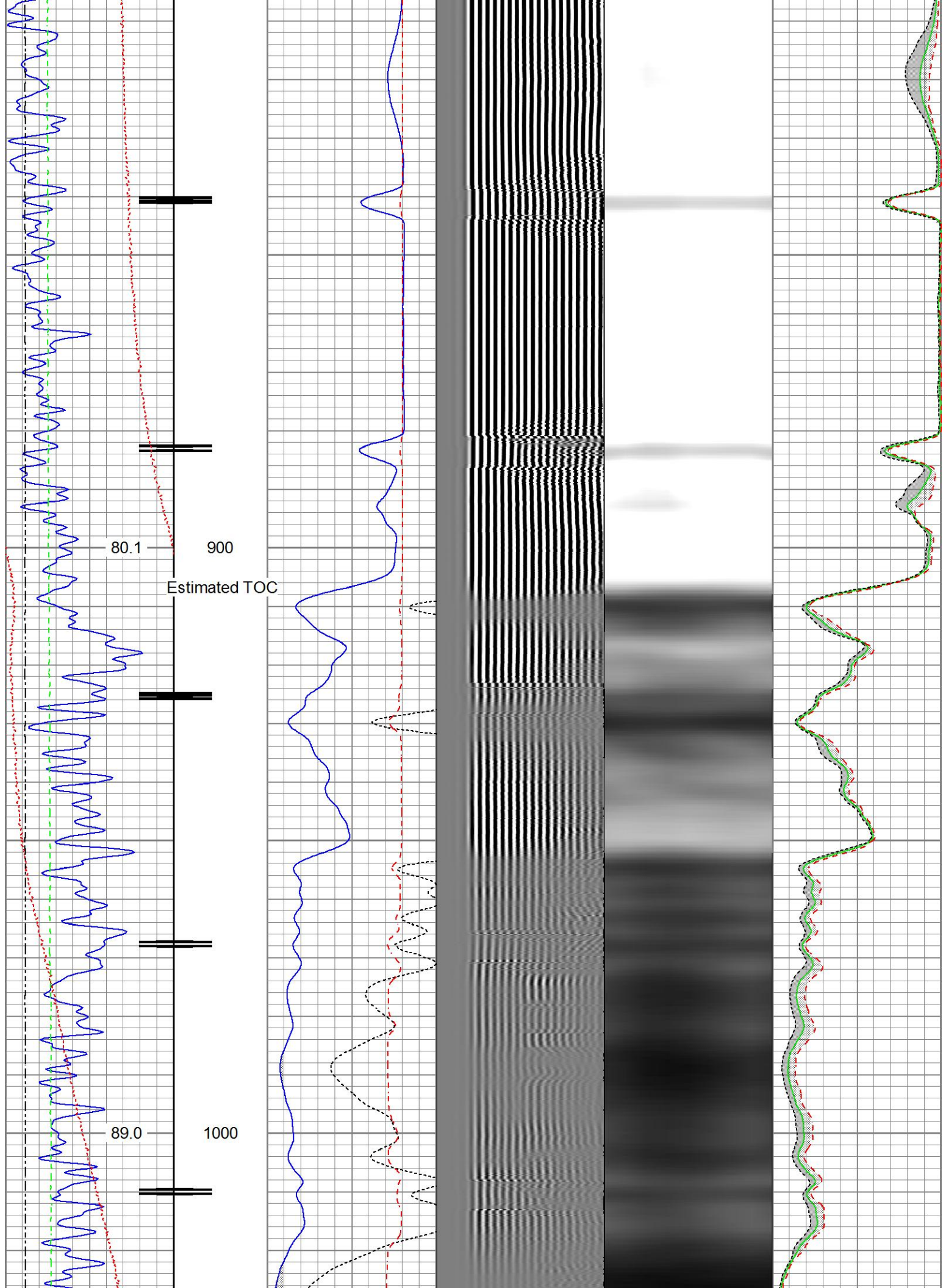
Recorded With 0 PSI Surface Induced Pressure

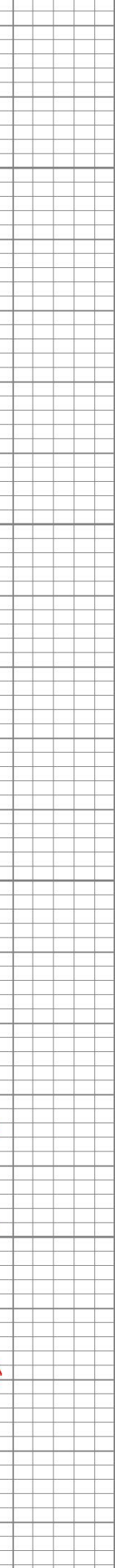
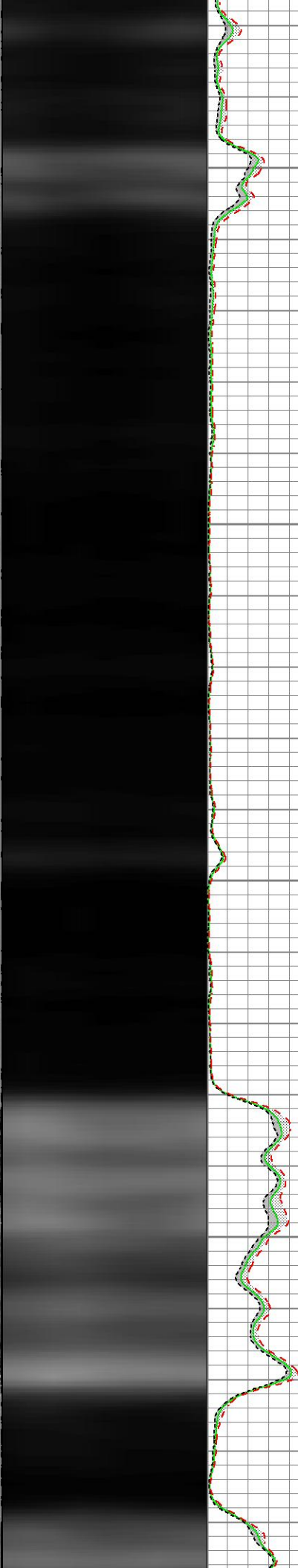
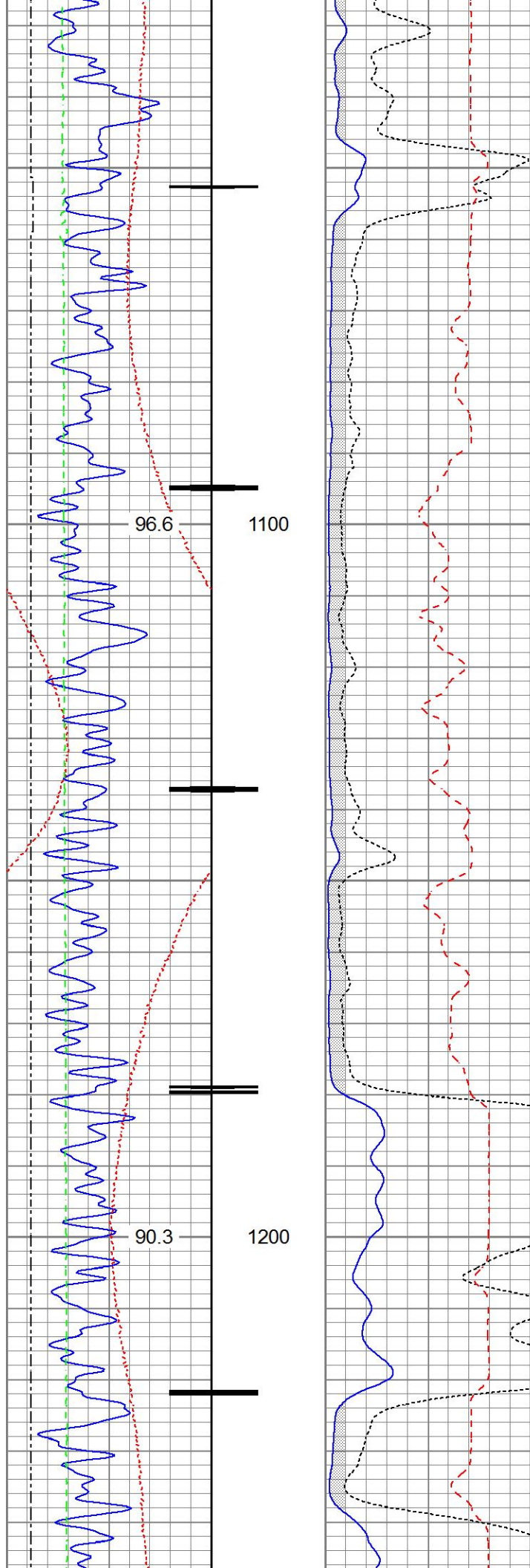
Gamma Ray			3' Amplitude			5' Variable Density Log		Sector Map	Average Amplitude	
30	(GAPI)	130	0	(mV)	100	200	1200		0	100
Casing Collar Locator			3' Amplitude x 5						Minimum Amplitude	
Temperature			0 (mV) 20						0 100	
0	(degF)	20	3' Travel Time						Maximum Amplitude	
Line Speed			650 (usec) 150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

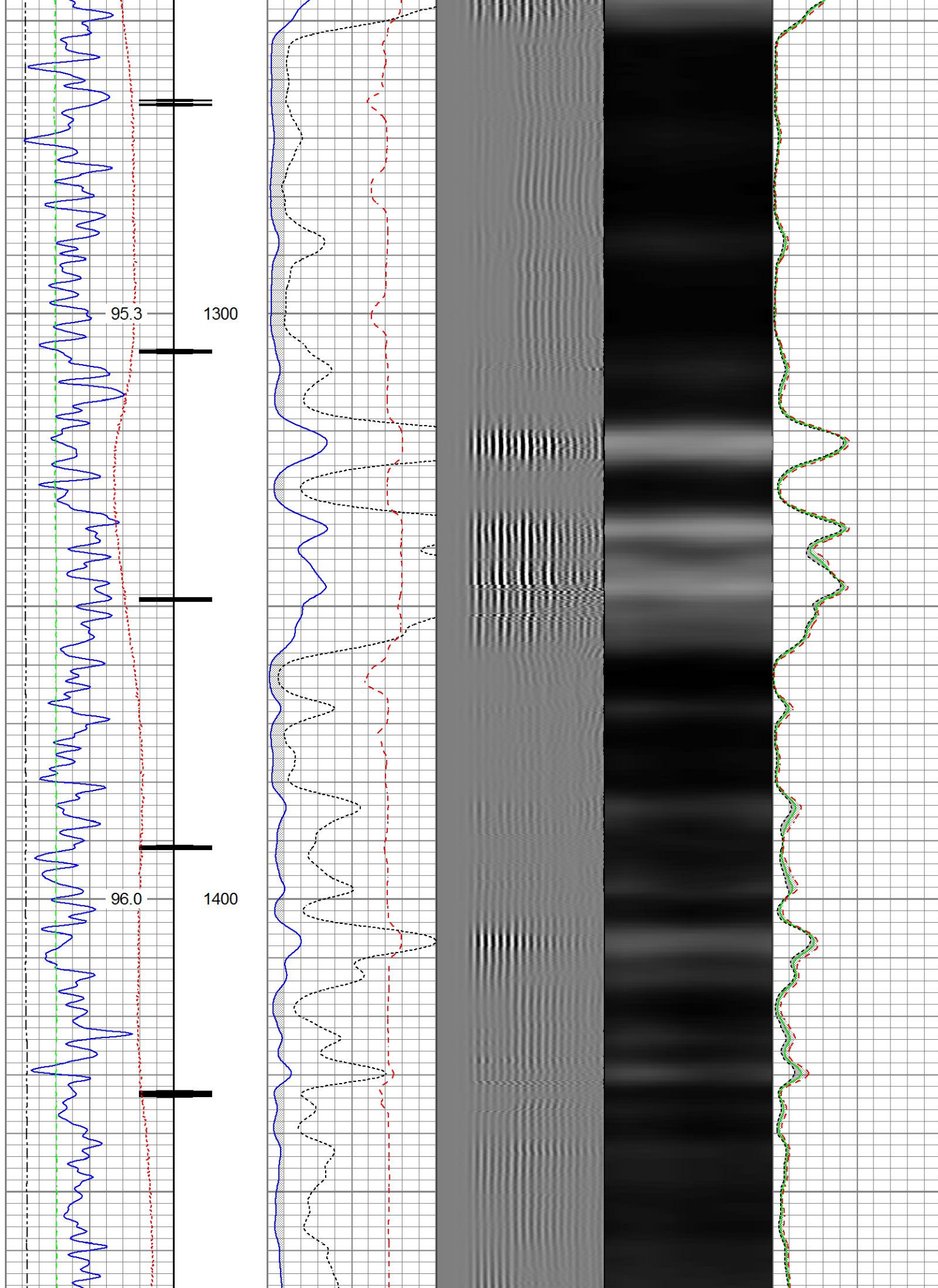


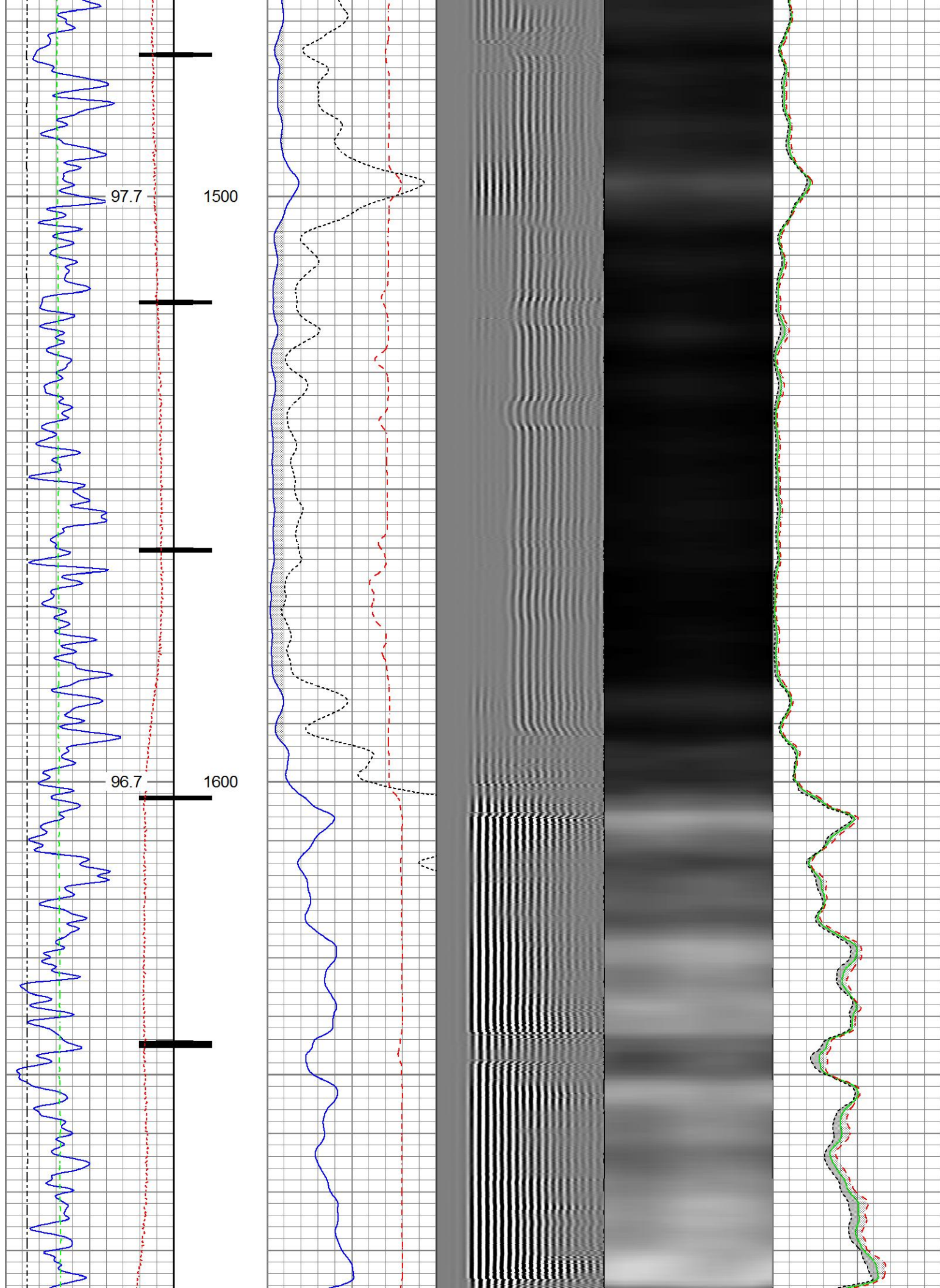


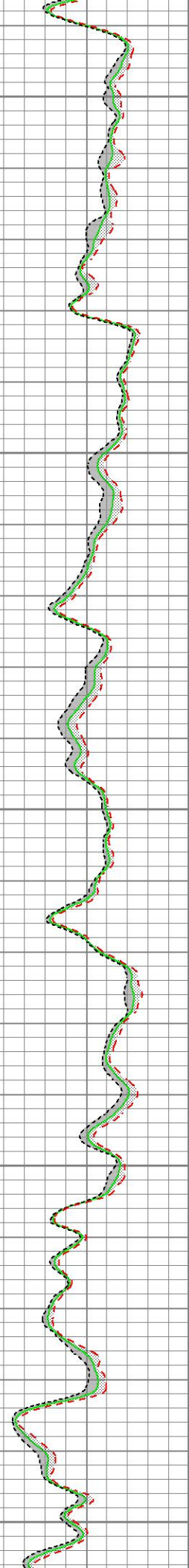
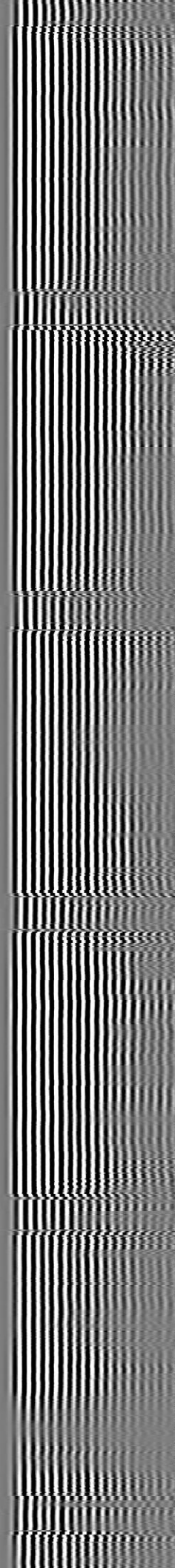
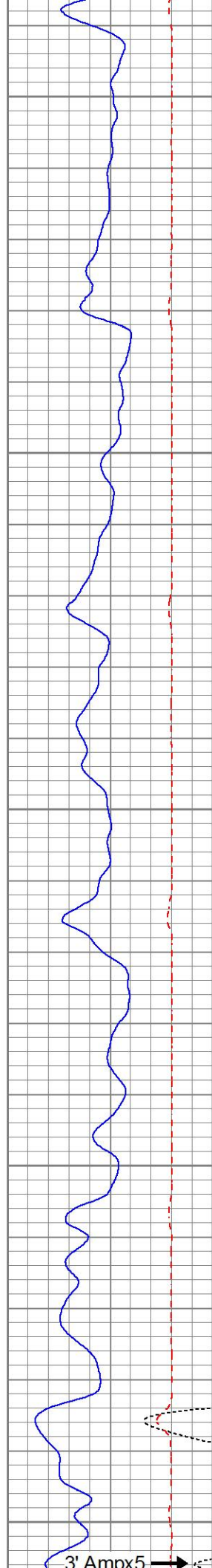
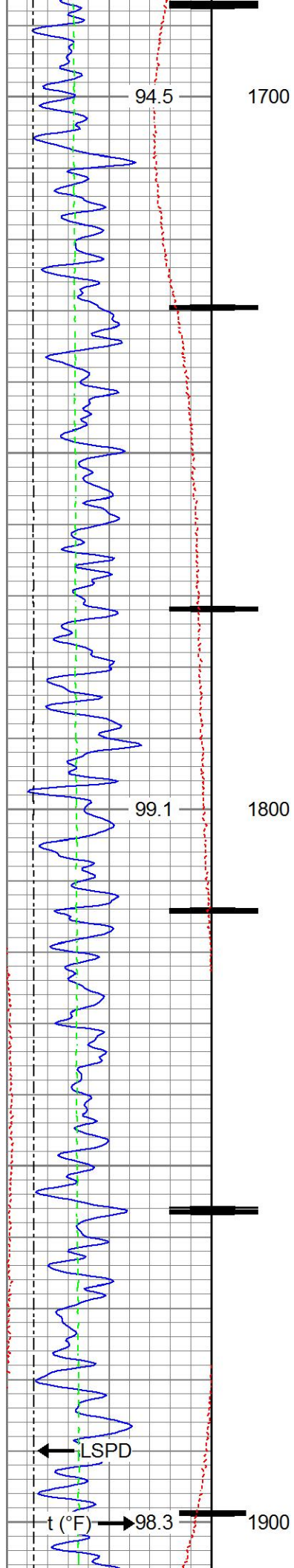


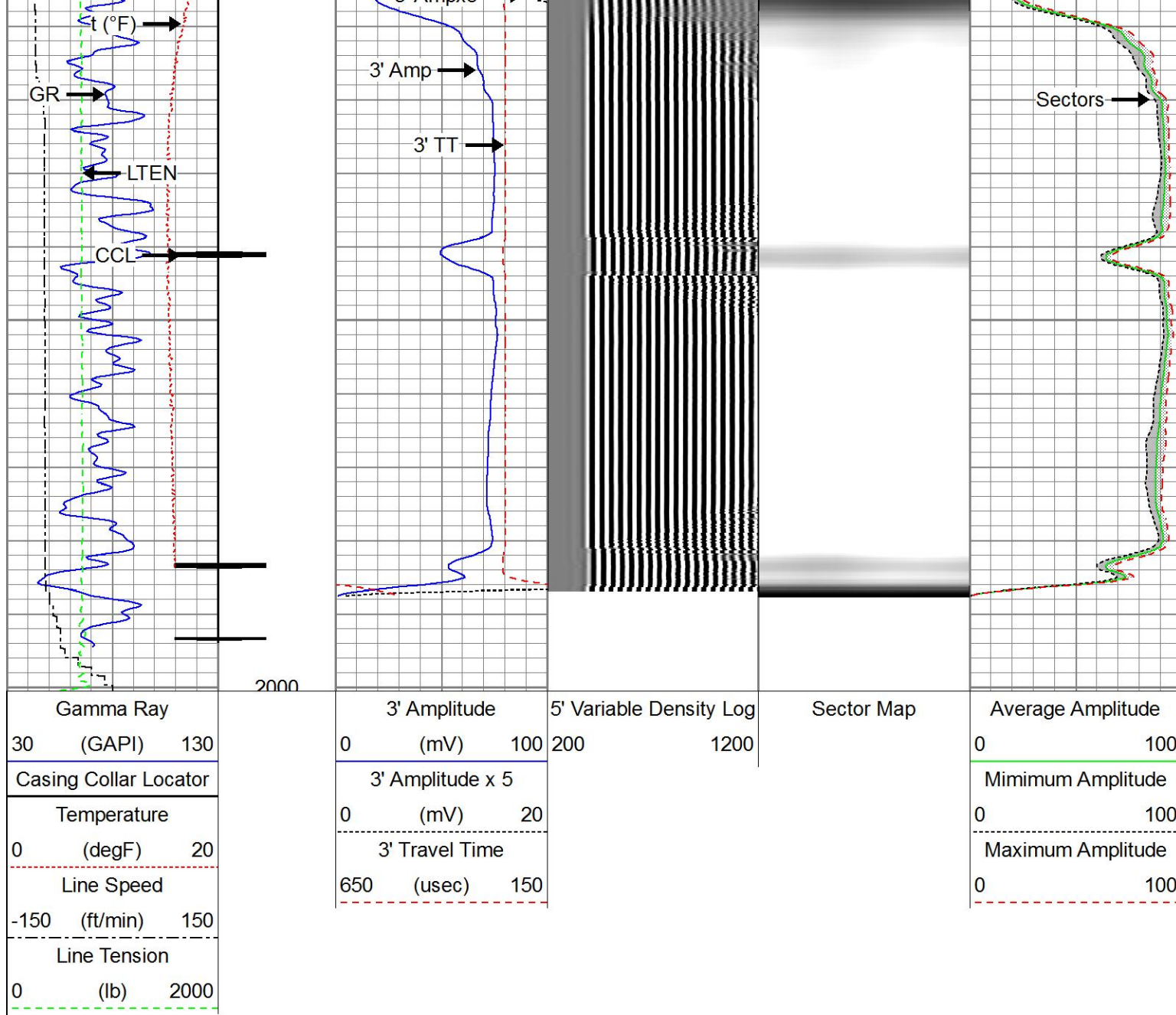








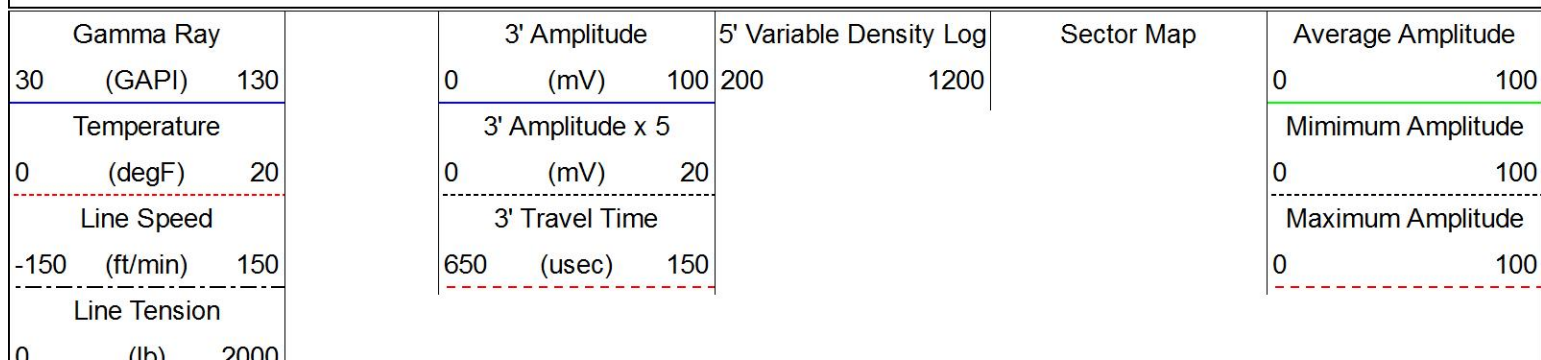


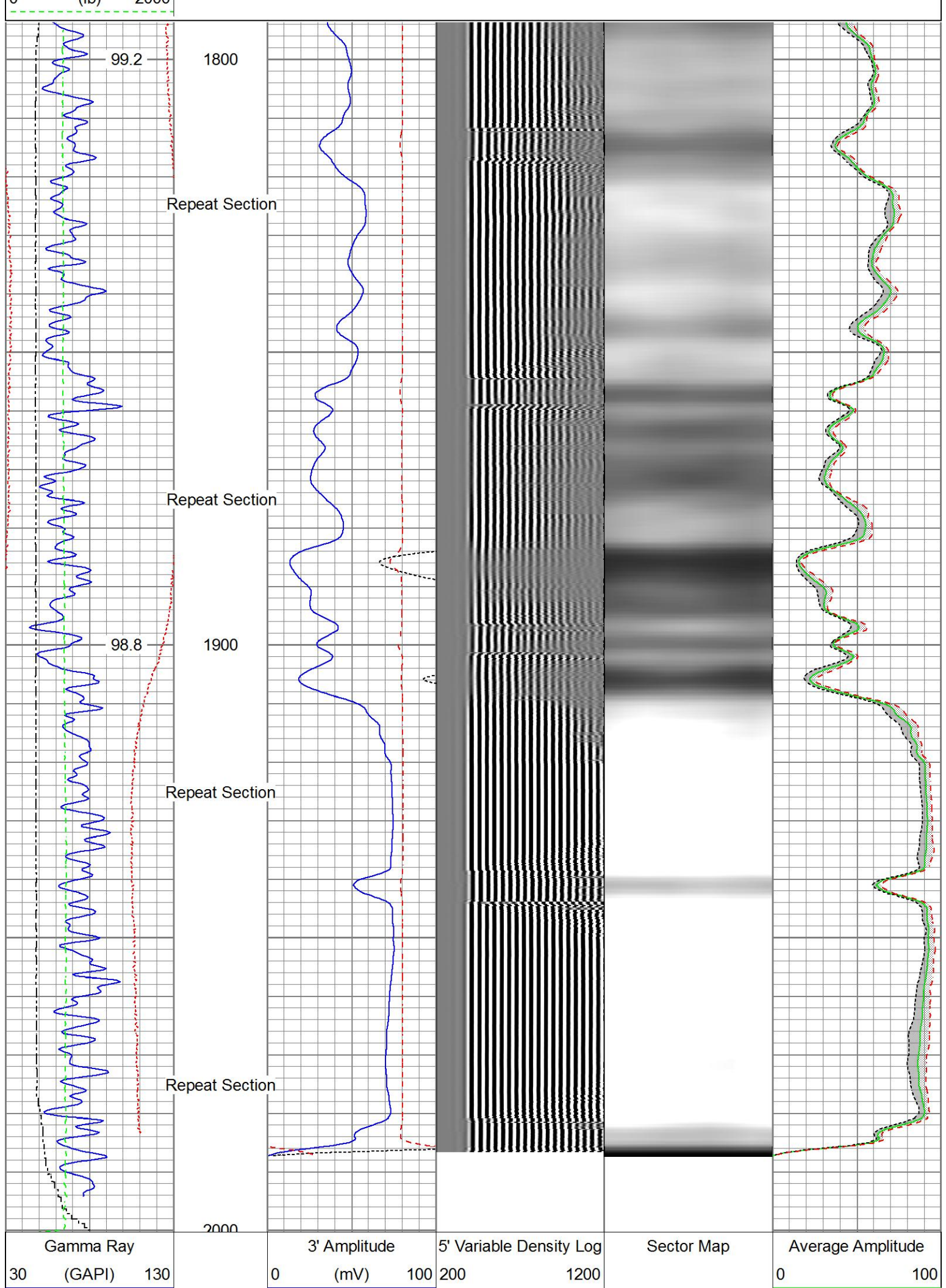


Repeat Pass

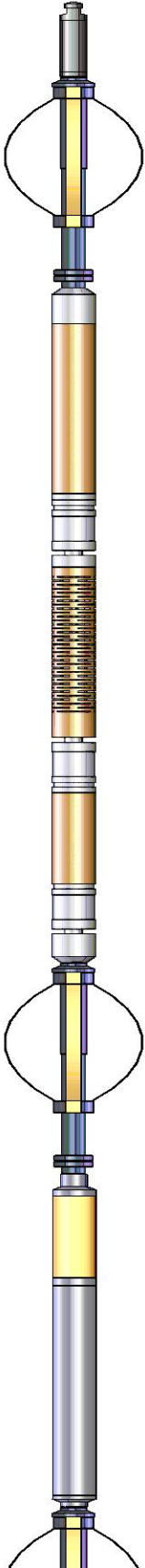
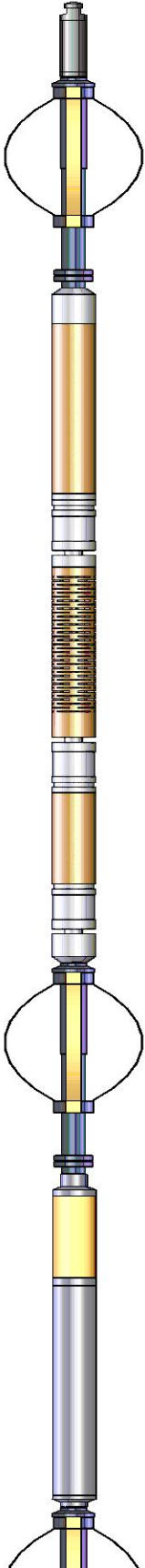
Recorded With 0 PSI Surface Induced Pressure

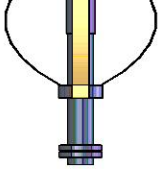
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 Dataset Pathname repeat.1
 Presentation Format ros_radii
 Dataset Creation Tue Oct 11 11:19:08 2016
 Charted by Depth in Feet scaled 1:240





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	Length (ft)	O.D. (in)	Weight (lb)
Temp	16.72		Titan_Electric_Cable_Heads-Titan_1-11/161.03 Electric Cable Head with 1" Fishing Neck	1.69	1.69	5.40
			Probe_ELine_BowSpring_Centralizer-P_EE2.88.275 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	2.75	20.00
			Probe_RADII-C-P_RBT_2750 (FW1302-009.19 Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	2.75	2.75	105.00
			Probe_ELine_BowSpring_Centralizer-P_EE2.88.275 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	2.75	20.00
DCCL CCL	6.51 6.51		Probe_GR_CCL-P_CGR_2750_S (FW1304.543) Probe 2-3/4" Digital CCL / Gamma Ray Combined	2.75	2.75	55.00
GR	3.77					

			Probe_ELine_BowSpring_Centralizer-P Probe 2-3/4" Electric Inline Bowspring Centralizer	EE2.88.275	2.75	20.00
Dataset: 0512320737_anadarko_stieber 12-24a_10-11-16_rbl_w8.db: field/well/run1/main.2 Total length: 23.40 ft Total weight: 225.40 lb O.D.: 2.75 in						

Calibration Report	
Database File	0512320737_anadarko_stieber 12-24a_10-11-16_rbl_w8.db
Dataset Pathname	main.2
Dataset Creation	Tue Oct 11 08:04:58 2016

Gamma Ray Calibration Report

Serial Number:	FW1307-038	
Tool Model:	P_CGR_2750_S	
Performed:	Sat Feb 06 11:43:09 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6061	GAPI/cps

Segmented Cement Bond Log Calibration Report
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Serial Number:	FW1302-002	
Tool Model:	P_RBT_2750	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	859.745	ft

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.009	0.466	0.800	81.196	176.059	-0.775
CAL	0.000	0.729				
5'	0.007	0.401	0.800	81.196	204.044	-0.527
SUM						
S1	0.009	0.490	0.000	100.000	208.189	-1.950
S2	0.009	0.497	0.000	100.000	204.956	-1.920
S3	0.009	0.498	0.000	100.000	204.654	-1.851
S4	0.009	0.484	0.000	100.000	210.635	-1.879
S5	0.009	0.466	0.000	100.000	218.691	-1.972
S6	0.009	0.458	0.000	100.000	222.658	-2.008
S7	0.009	0.454	0.000	100.000	224.816	-1.977
S8	0.009	0.465	0.000	100.000	219.361	-1.973

Internal Reference Calibration, performed Wed Sep 14 11:34:04 2016:						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.729	1.000	0.000

Air Zero Calibration, performed Tue Oct 11 07:22:47 2016:

	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



Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Stieber 12-24A
Field	Wattenberg
County	Weld
State	Colorado