



**Well Services**  
E-LINE

**RADIAL BOND TOOL  
GAMMA RAY  
CCL**

Company NOBLE ENERGY  
Well HP D 32-23D  
Field WATTENBERG  
County WELD  
State CO  
Country USA

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Location: API #: 05-123-34754  
NWSE  
LAT. 40.179920 LONG. -104.572950  
SEC 32 TWP 3N RGE 64W  
Permanent Datum GL Elevation 4854'  
Log Measured From KB 14'  
Drilling Measured From KB

Other Services  
Elevation  
K.B. 4868'  
D.F. 4867'  
G.L. 4854'

Date 6-2-2021  
Run Number ONE  
Depth Driller 7739'  
Depth Logger 2045'  
Bottom Logged Interval 2041'  
Top Log Interval SURFACE  
Open Hole Size 8.625"  
Type Fluid WATER  
Density / Viscosity NA  
Max. Recorded Temp. 118.5° F  
Estimated Cement Top 1690'  
Time Well Ready ON ARRIVAL  
Time Logger on Bottom NA  
Equipment Number 3813  
Location GREELEY, CO  
Recorded By J. KERR  
Witnessed By C. HOHNSTEIN

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To


Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8.625"	24#	SURFACE	815'
Prot. String				
Production String	4.5"	11.6#	SURFACE	7739'
Liner				

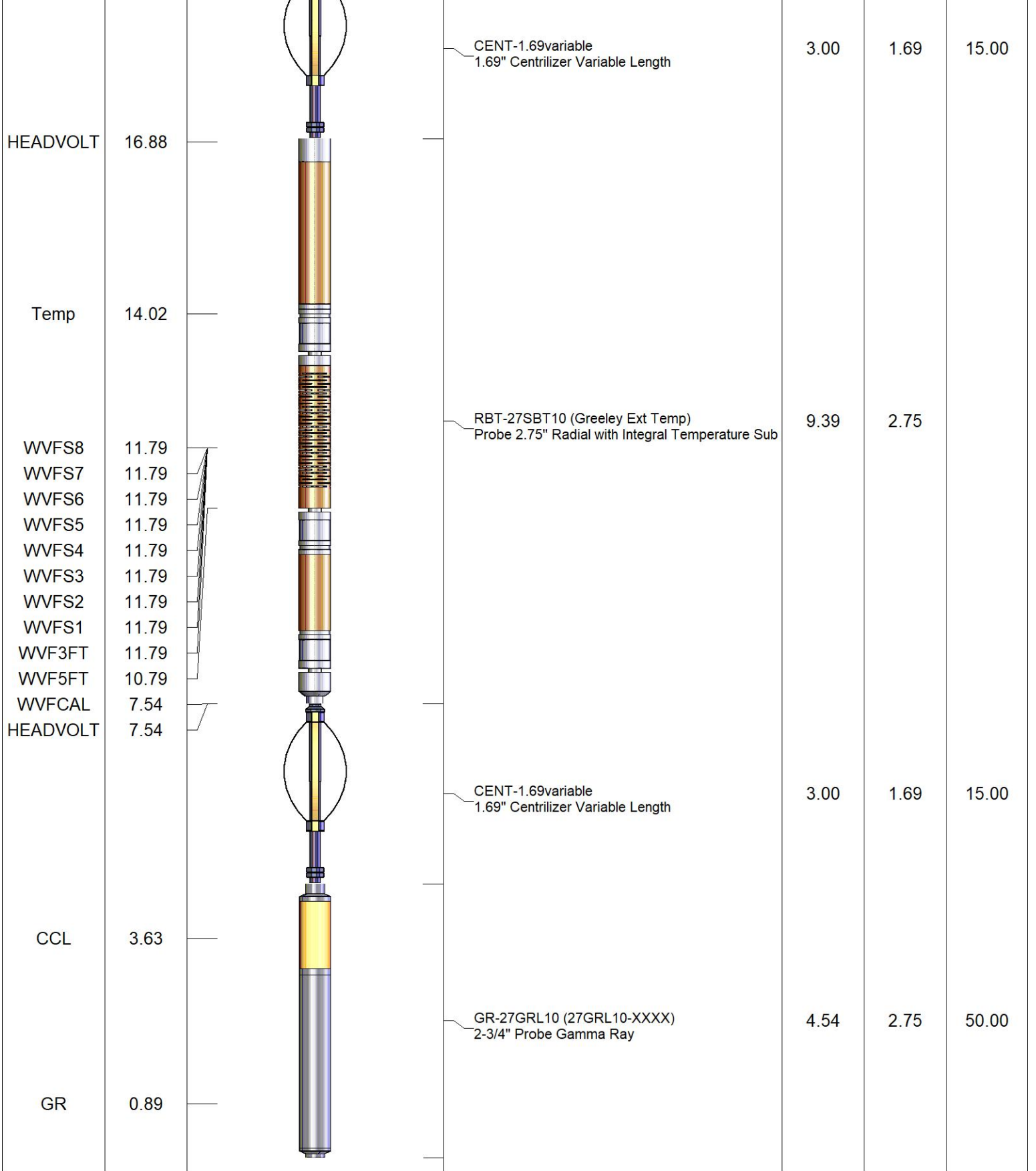
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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**

RAN CBL TO VERIFY CEMENT BOND  
WELL LOADED UPON ARRIVAL  
SOME RESIDUAL STRINGERS FROM TOC TO 1125'  
CORRELATED TO SUPERIOR CBL RAN ON MAY 3, 2012

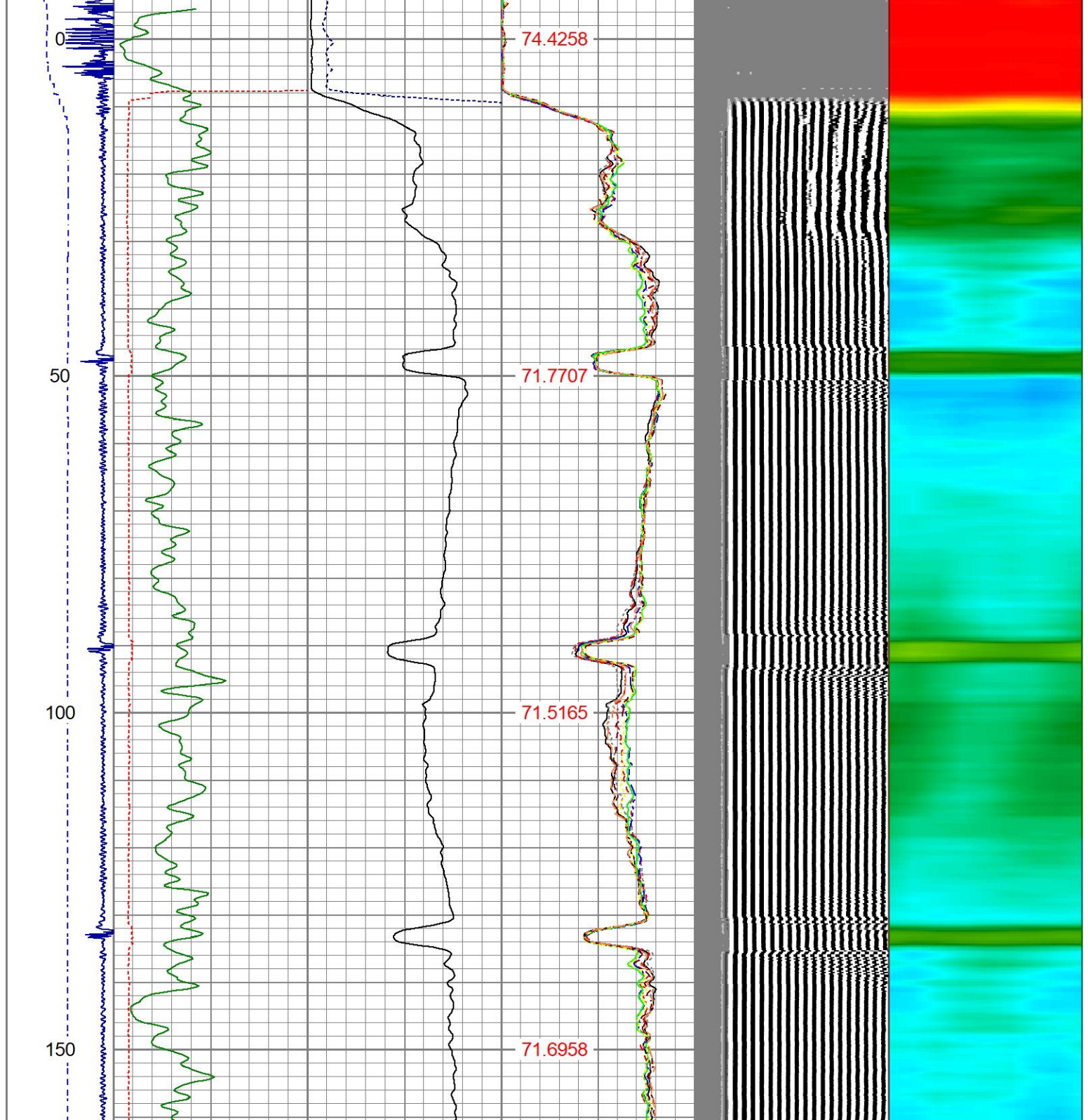
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-1_11/16_Cablehead 1 11/16 Cablehead	1.00	1.68	5.00

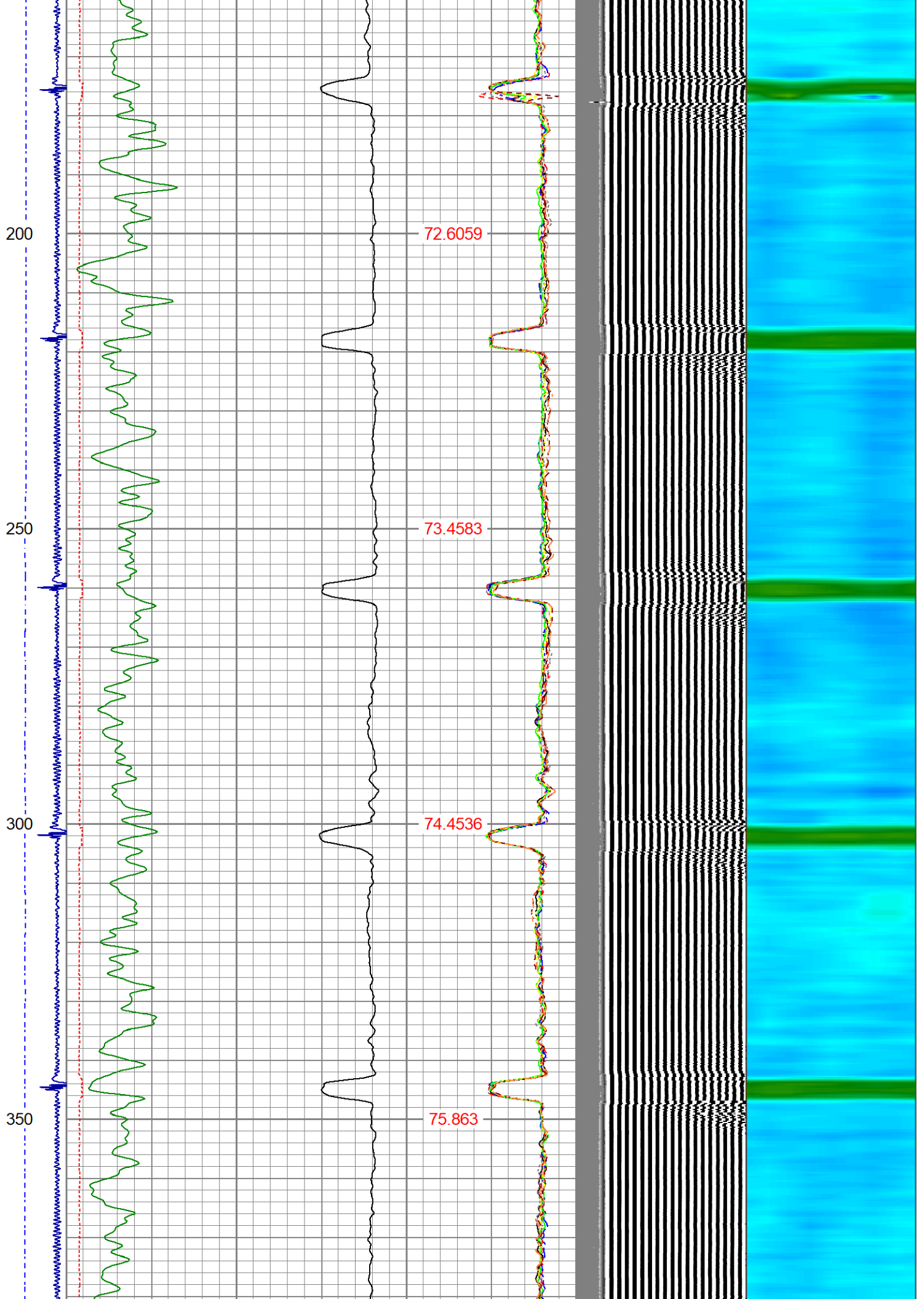


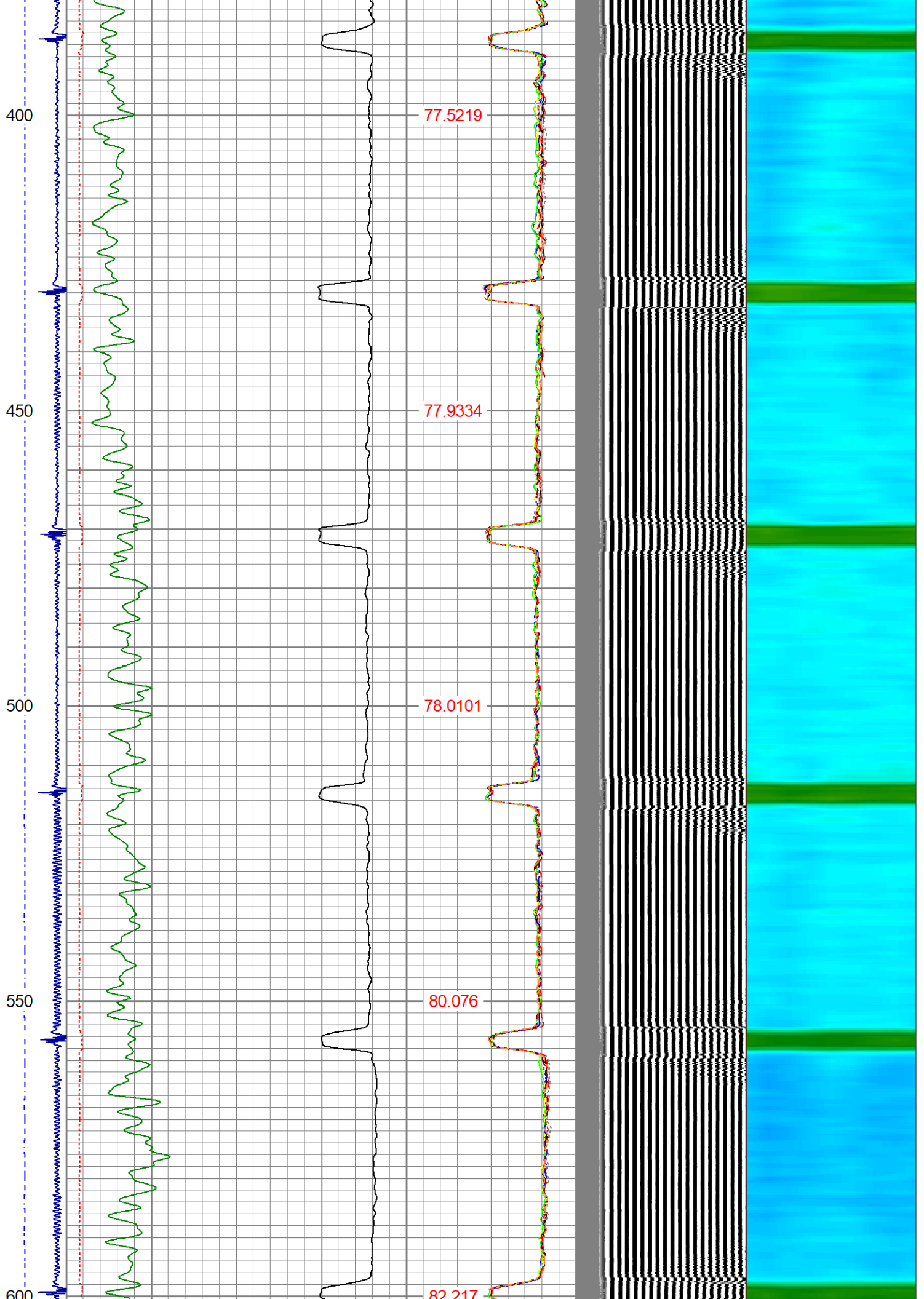
Dataset: hp d 32-23d.db: field/well/run4/pass9  
 Total length: 20.93 ft  
 Total weight: 85.00 lb  
 O.D.: 2.75 in

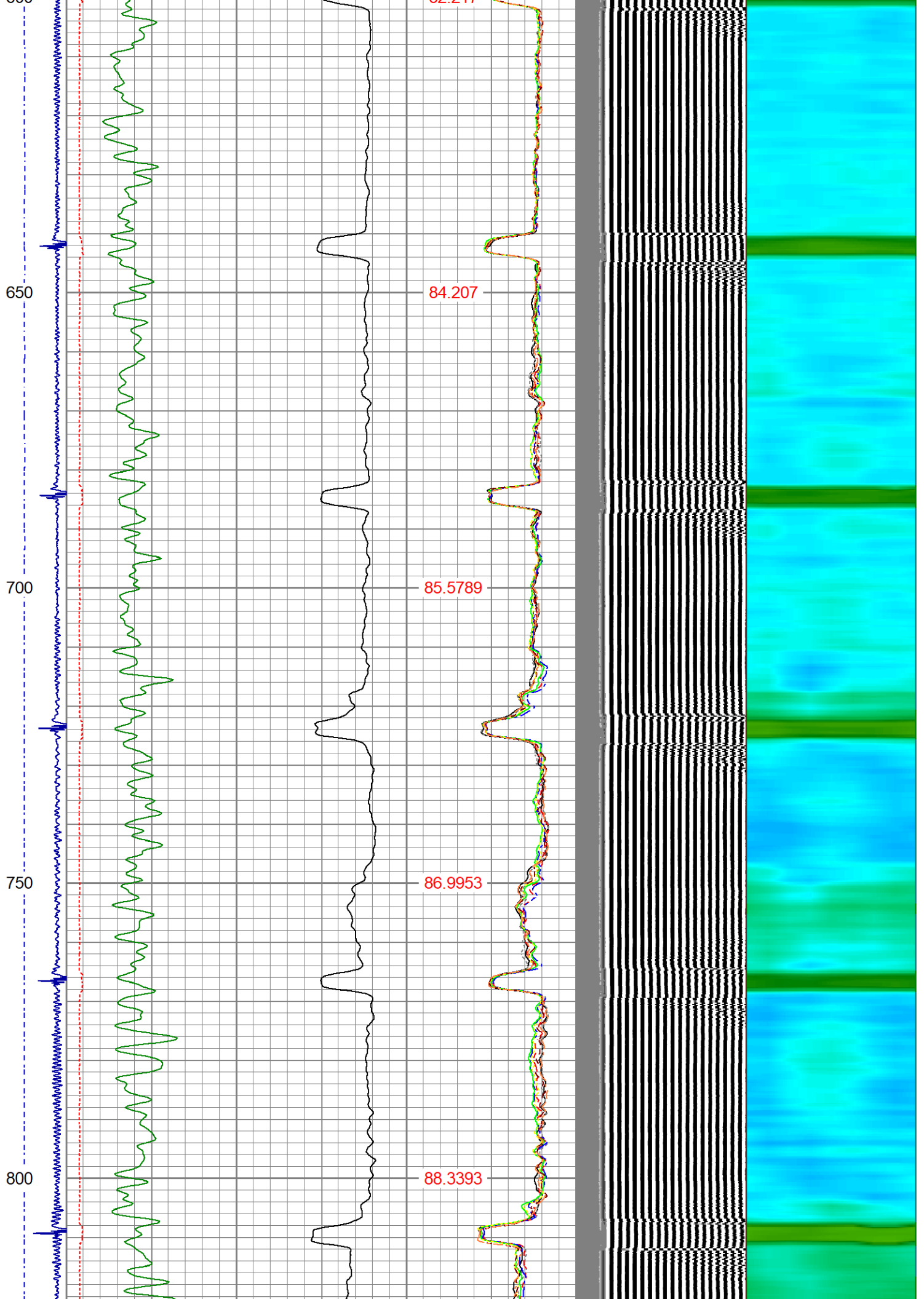
Database File hp d 32-23d.db  
 Dataset Pathname run4/pass9  
 Presentation Format ips\_rbtcolor  
 Dataset Creation Wed Jun 02 12:33:22 2021  
 Charted by Depth in Foot scaled 1:240

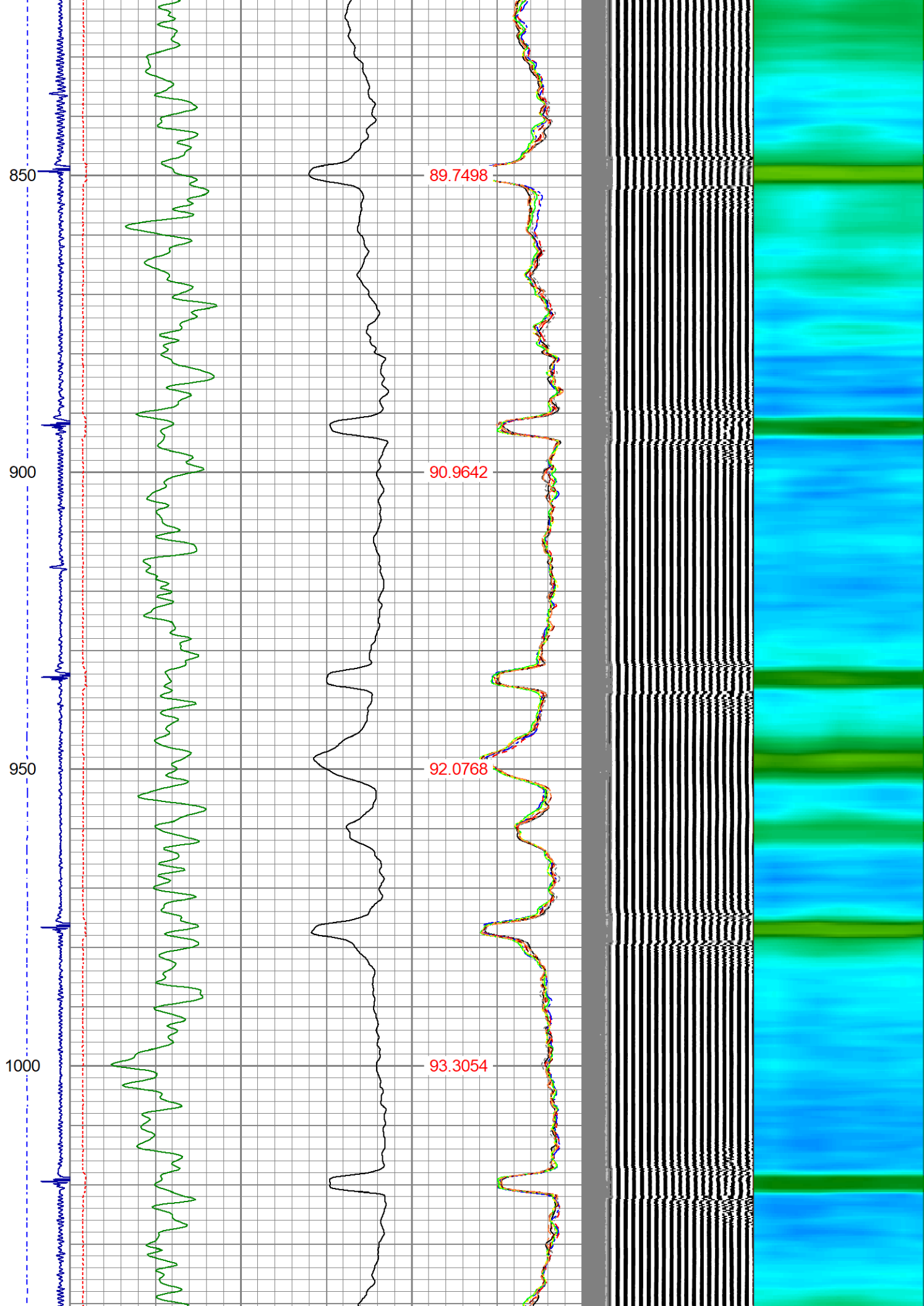
-9 CCL 1	200 TT (usec) 600	0 AMP (mV) 100	0 AMPS1 100	200 VDL (usec) 1200	1 Cement Map	8
LSPD	0 GR (GAPI) 200	0 AMPx5 (mV) 20	0 AMPS2 100			
(ft/min)	200 GR (GAPI) 400		0 AMPS3 100			
0 250			0 AMPS4 100			
			0 AMPS5 100			
			0 AMPS6 100			
			0 AMPS7 100			
			0 AMPS8 100			
		TEMP				
		(degF)				

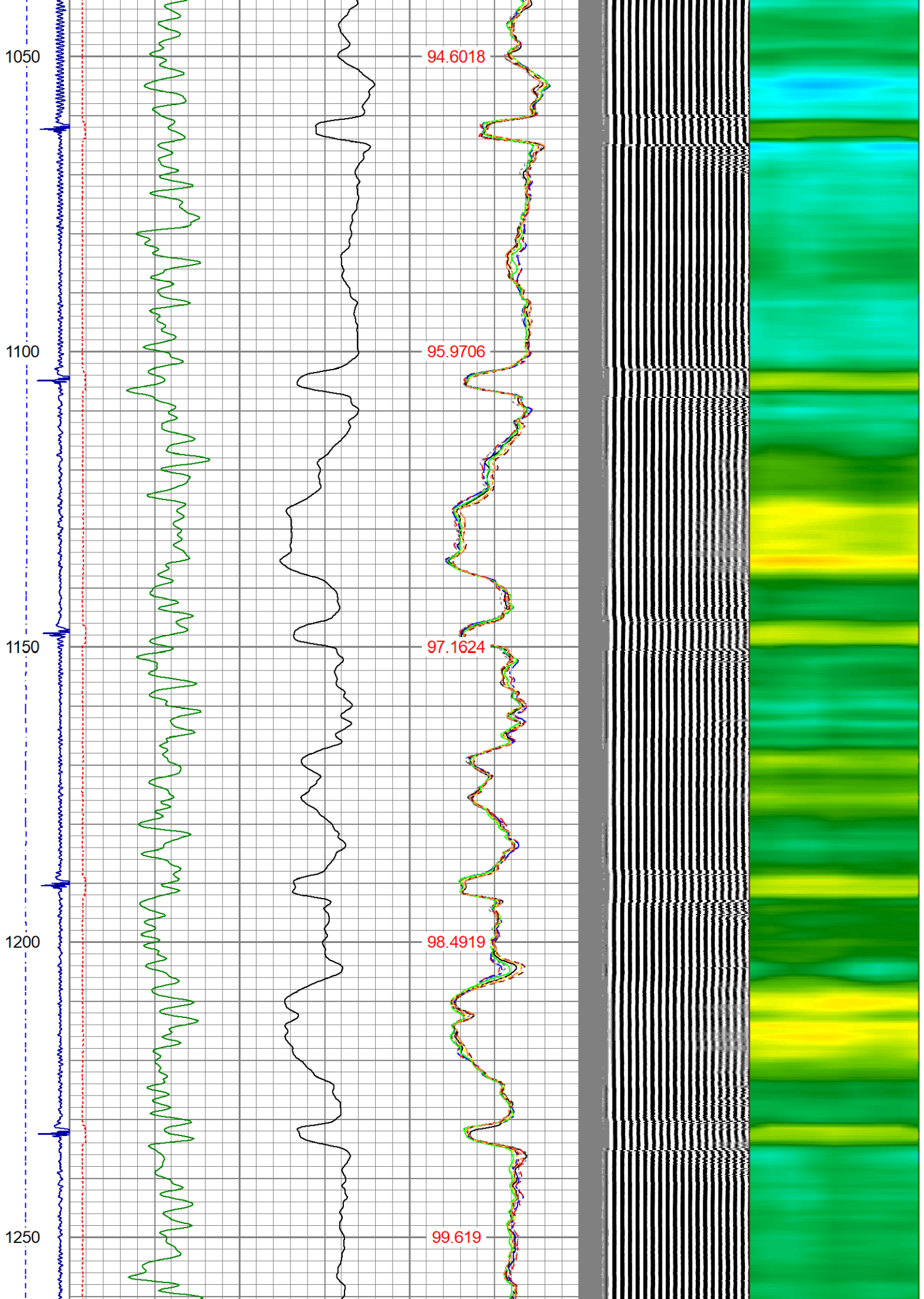


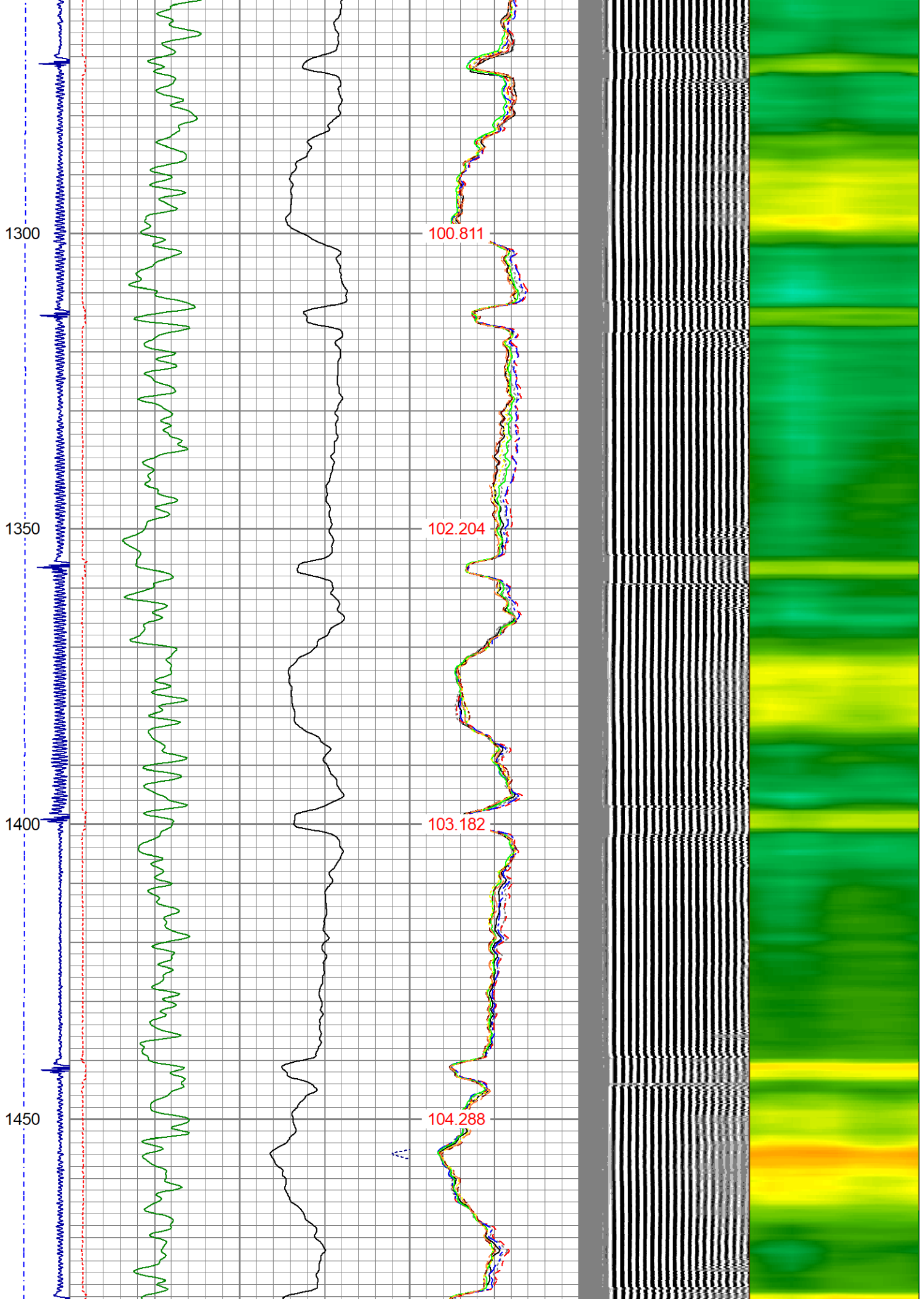


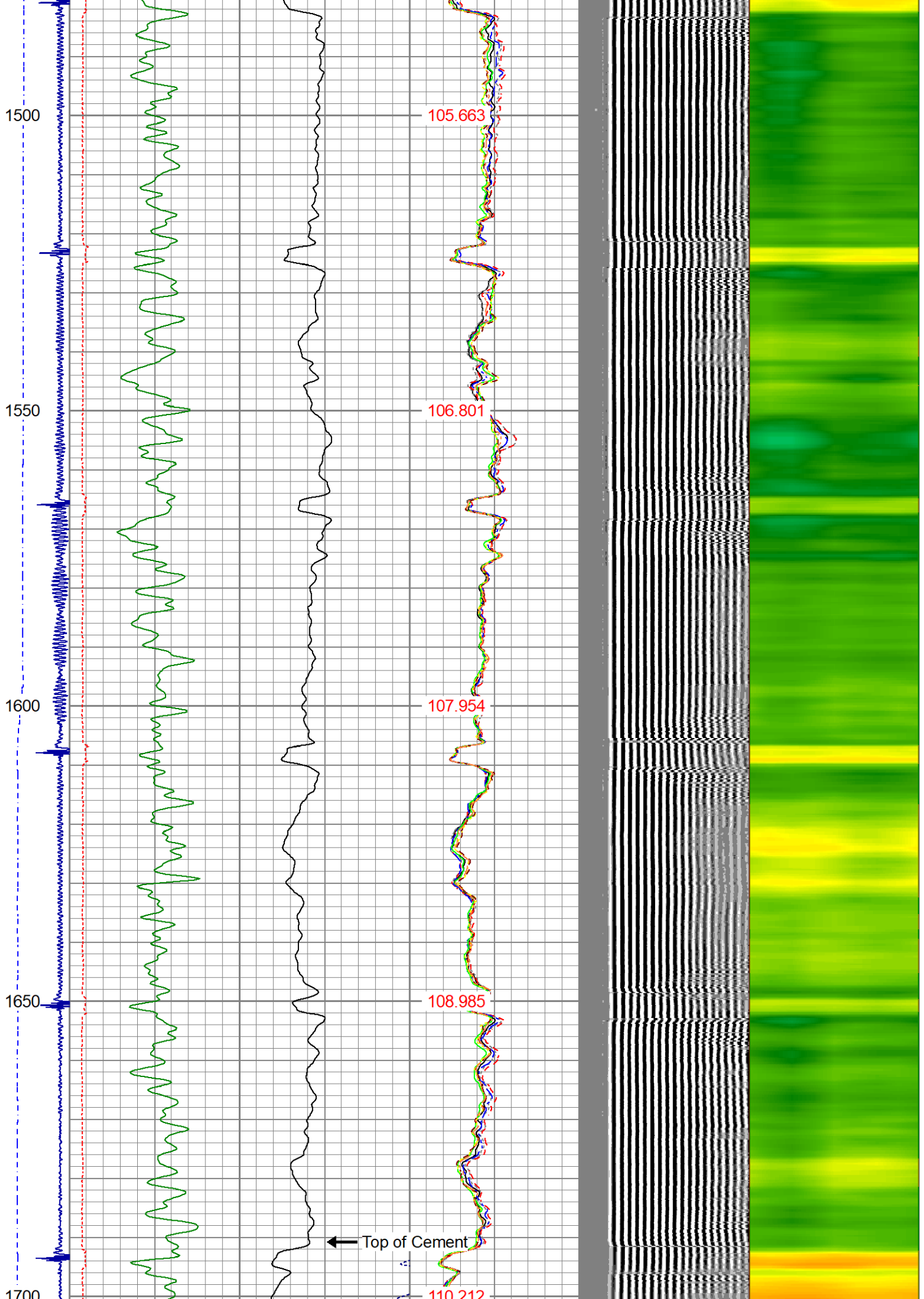


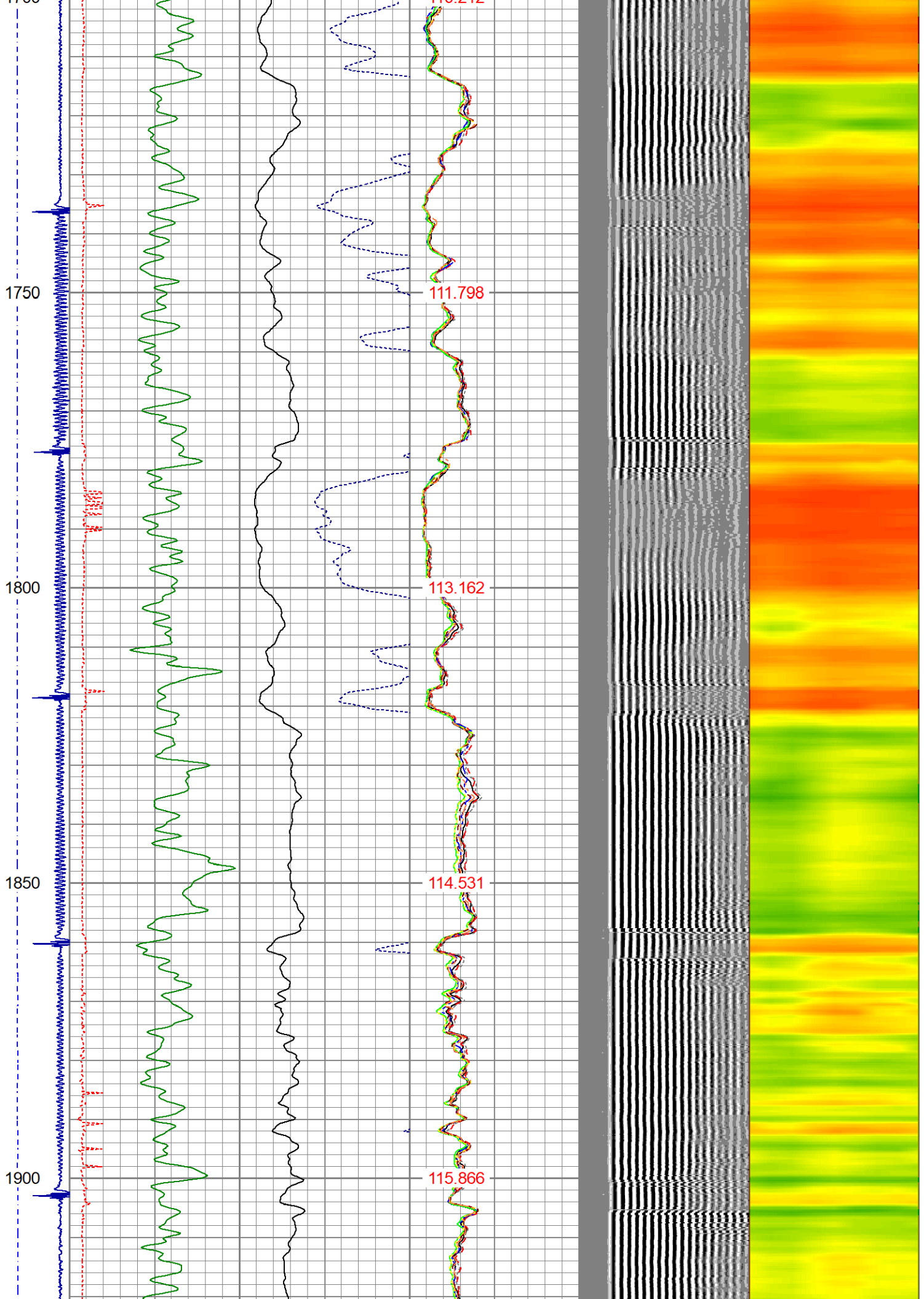














### Calibration Report

Database File hp d 32-23d.db  
 Dataset Pathname run4/pass9  
 Dataset Creation Wed Jun 02 12:33:22 2021

### Gamma Ray Calibration Report

Serial Number: 27GRL10-XXXX  
 Tool Model: 27GRL10  
 Performed: (Not Performed)

Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	Greeley Ext Temp	
Tool Model:	27SBT10	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	923.225	ft

Master Calibration, performed Wed Jun 2 12:28:52 2021:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	0.991	1.000	81.196	81.582	0.318
CAL	1.490	1.323				
5'	0.017	0.763	1.000	81.196	107.425	-0.789
SUM						
S1	0.009	0.980	0.000	81.196	83.609	-0.759
S2	0.015	0.976	0.000	81.196	84.431	-1.238
S3	0.016	0.974	0.000	81.196	84.774	-1.387
S4	0.015	0.966	0.000	81.196	85.408	-1.302
S5	0.011	0.965	0.000	81.196	85.123	-0.979
S6	0.009	0.966	0.000	81.196	84.812	-0.772
S7	0.008	0.959	0.000	81.196	85.346	-0.688
S8	0.008	0.969	0.000	81.196	84.510	-0.704

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.490	1.323	1.000	0.000

Air Zero Calibration, performed Wed Jun 2 12:19:03 2021:

	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 Services  
E - LINE

Field WATTENBERG

County WELD

State CO

Country USA