



**GAMMA RAY CCL  
CEMENT BOND VDL**

Company		EXTRACTION OIL & GAS			
Well		GRAEBER 31-33D			
Field		WATTENBERG			
County		WELD		State	
COLO					
Location:		API # : 05-123-23664		Other Services	
SESE					
SEC 33		TWP 1N		RGE 68W	
Permanent Datum		GL		Elevation	
Log Measured From		KB		5234	
Drilling Measured From		KB		Elevation	
				K.B. 5250	
				D.F. 5249	
				G.L. 5234	
Date		JULY-17-2019			
Run Number		ONE			
Depth Driller		8943			
Depth Logger		1414			
Bottom Logged Interval		1414			
Top Log Interval		SURFACE			
Open Hole Size		7 7/8			
Type Fluid		WATER			
Density / Viscosity		8.34 PPG			
Max. Recorded Temp.		NA			
Estimated Cement Top		SEE LOG			
Time Well Ready		ROA			
Time Logger on Bottom		11:30AM			
Equipment Number		72			
Location		STERLING			
Recorded By		ASHTON WILLIAMS			
Witnessed By		CRAIG EAST			
Borehole Record		Tubing Record			
Run Number		Bit		From	
		To		Size	
		Weight		From	
				To	
Casing Record		Size		Wgt/Ft	
Surface String		8 5/8		24	
Prot. String				Top	
Production String		4.5		11.6	
Liner				SURFACE	
				Bottom	
				1124	
				8933	

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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**

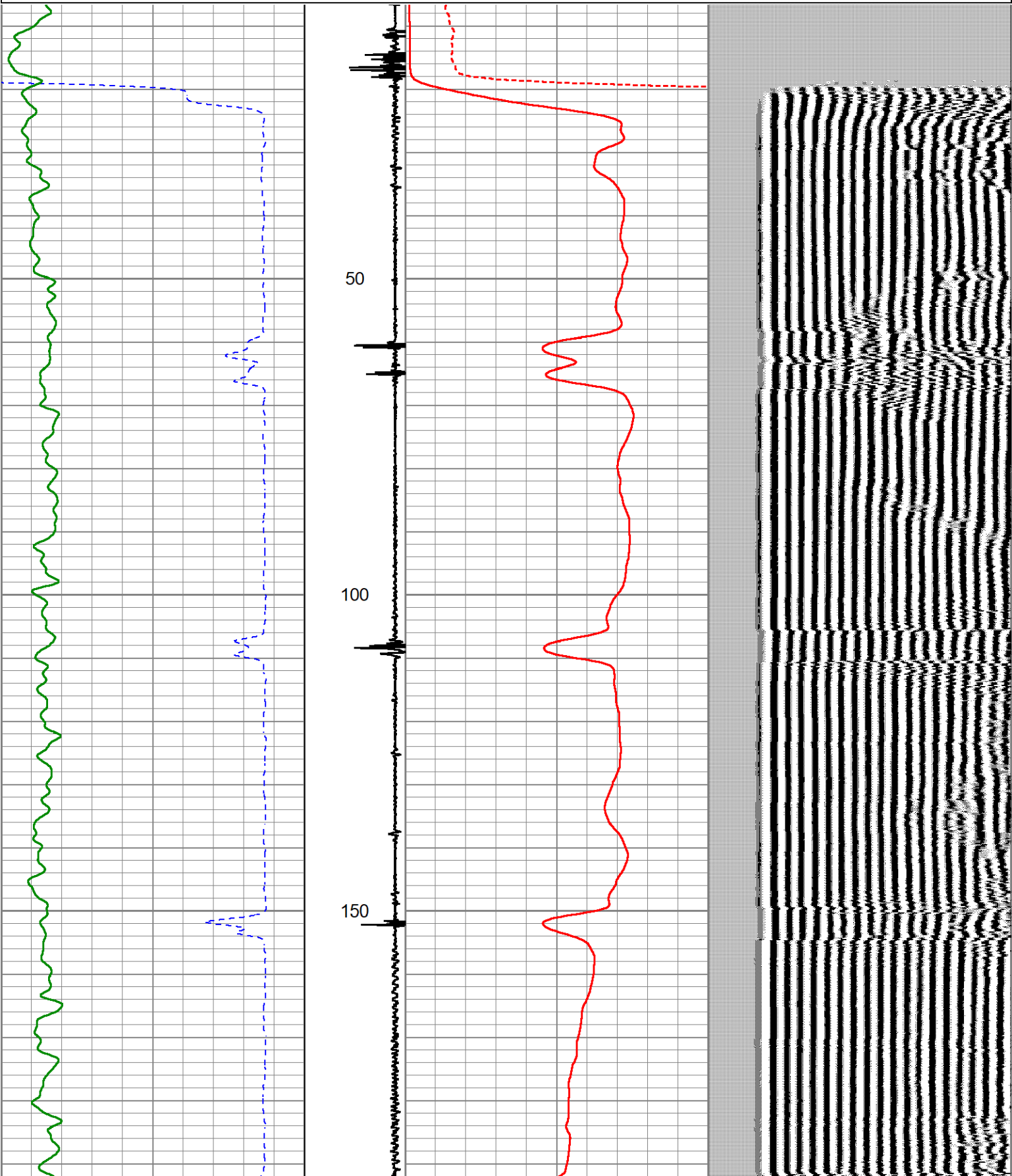
THANK YOU FOR USING KLX ENERGY SERVICES

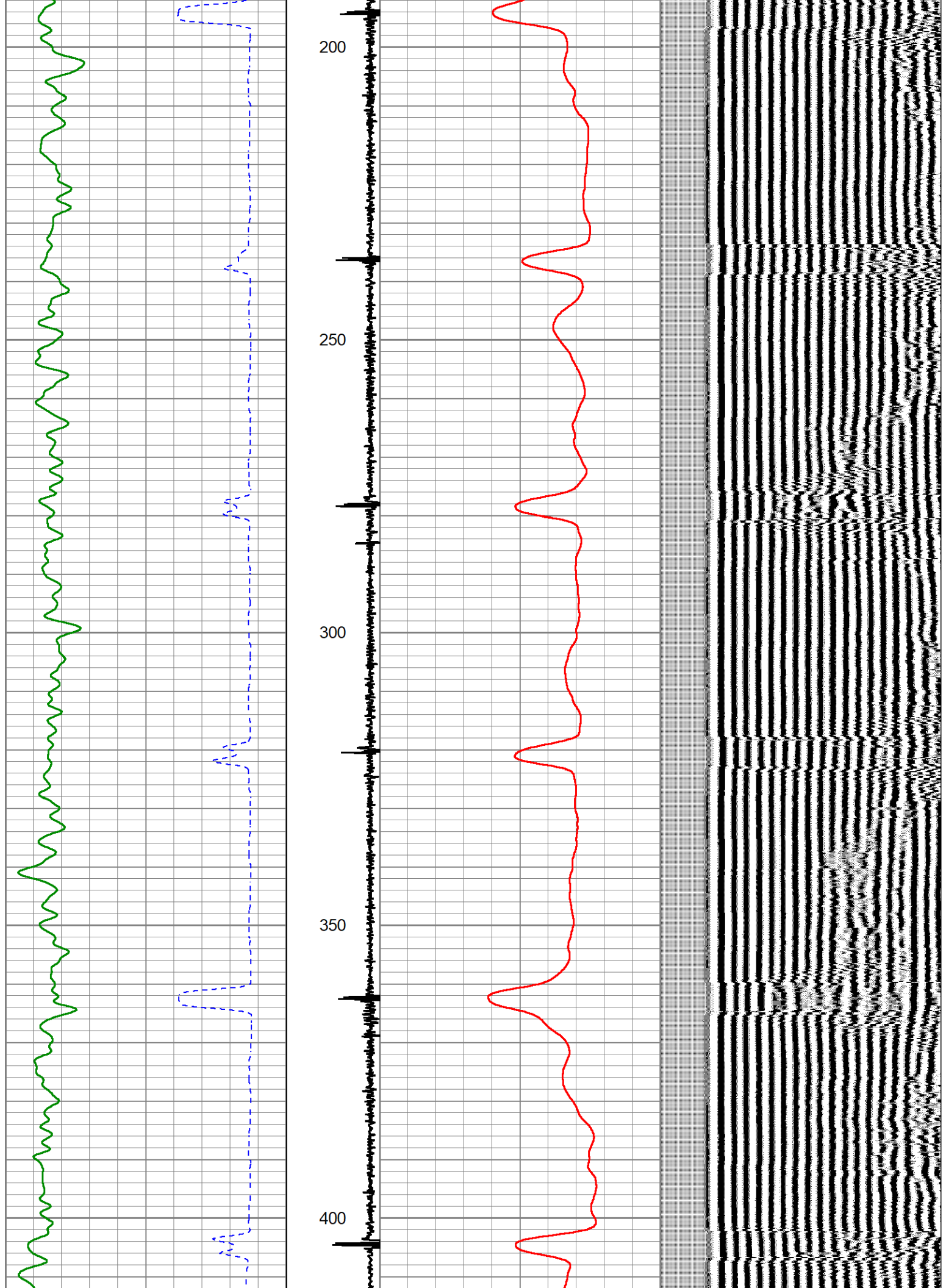


MAIN PASS 0 PSI

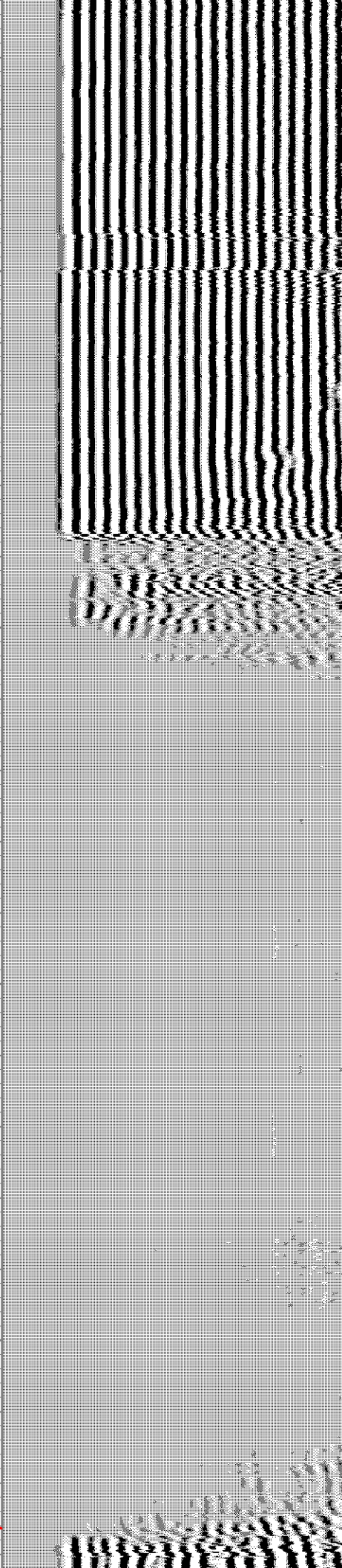
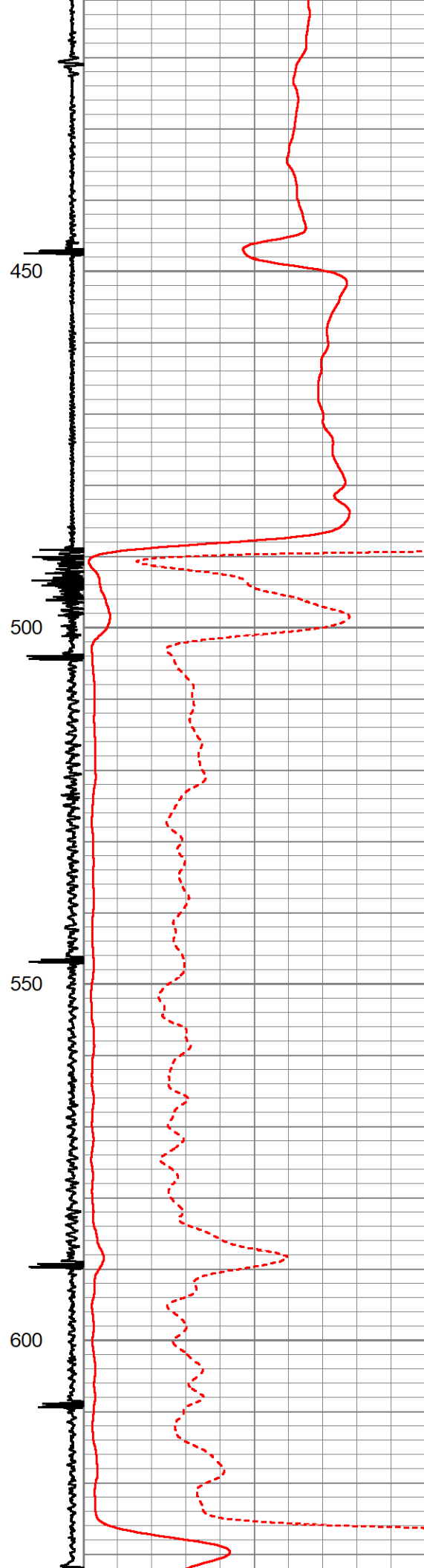
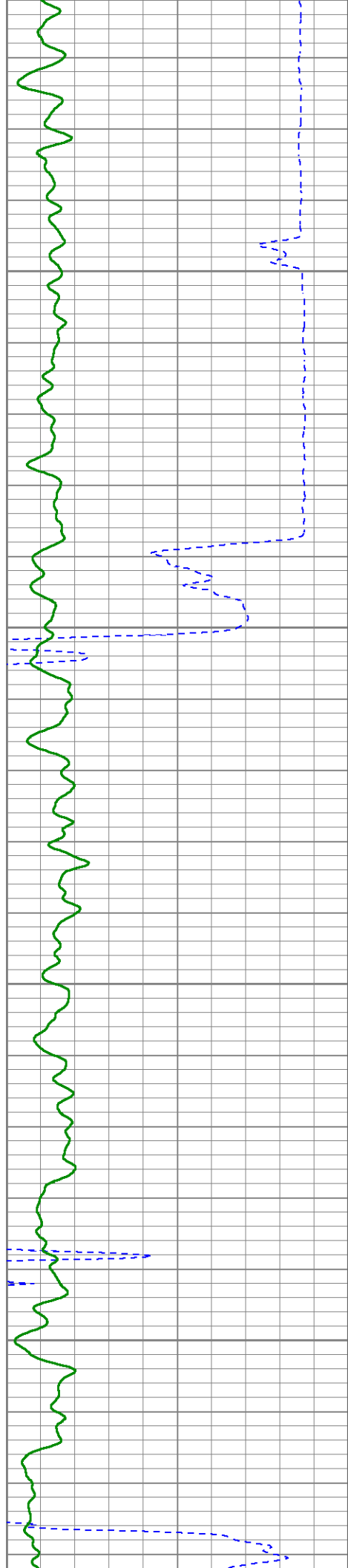
Database File	graeber 31-33d(2).db
Dataset Pathname	pass11
Presentation Format	cbl_kggw
Dataset Creation	Wed Jul 17 11:46:48 2019
Charted by	Depth in Feet scaled 1:240

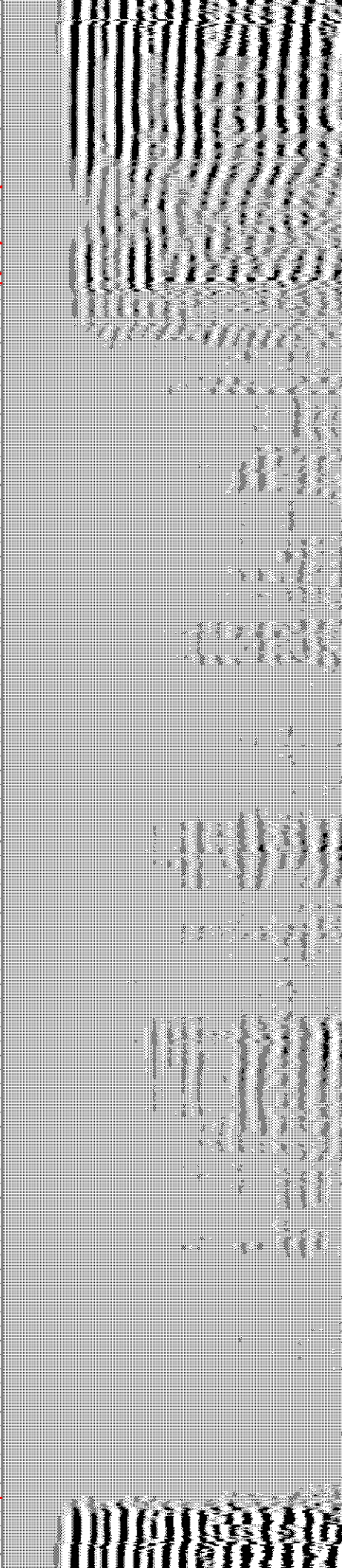
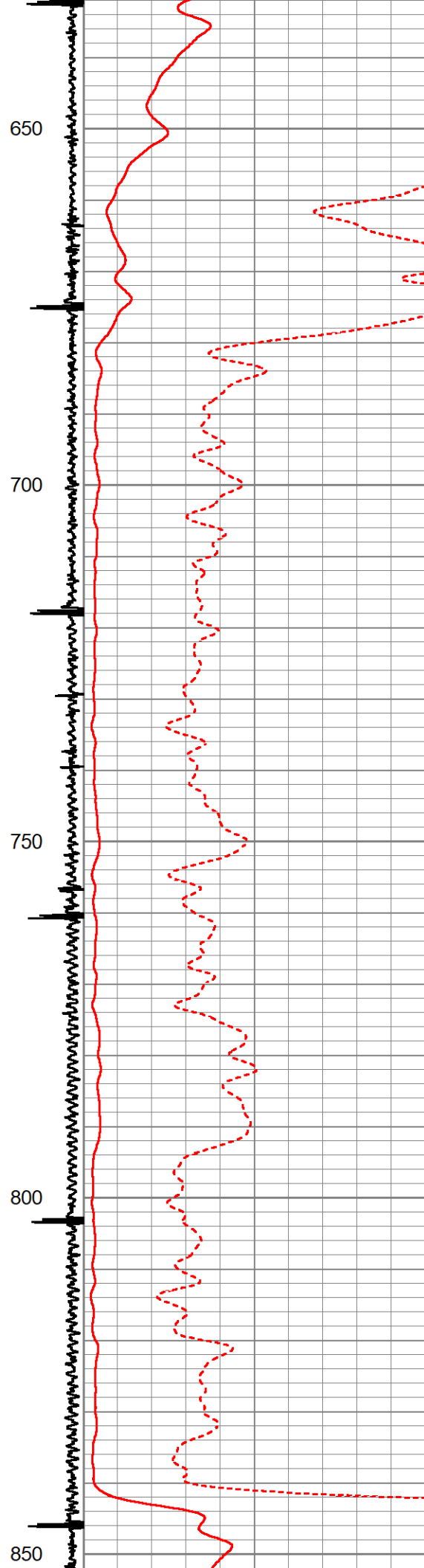
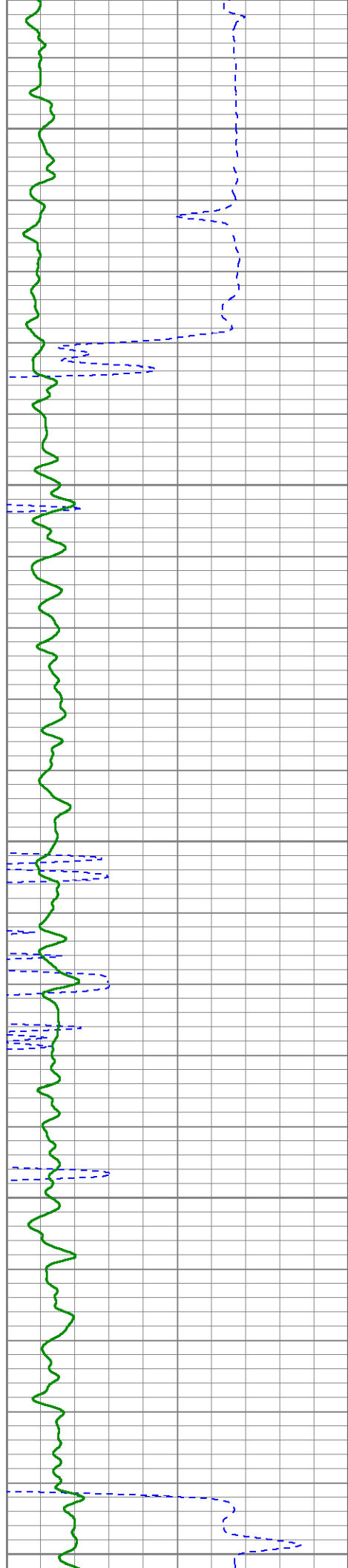
420	TRAVEL TIME (usec)	220	Collar Locato	0	AMP AMPLITUDE (mV)	10	200	VDL (usec)	1200
0	Gamma Ray (GAPI)	150	9	-1	0	AMPLITUDE (mV)	100		
0	Line Speed (ft/min)	100							

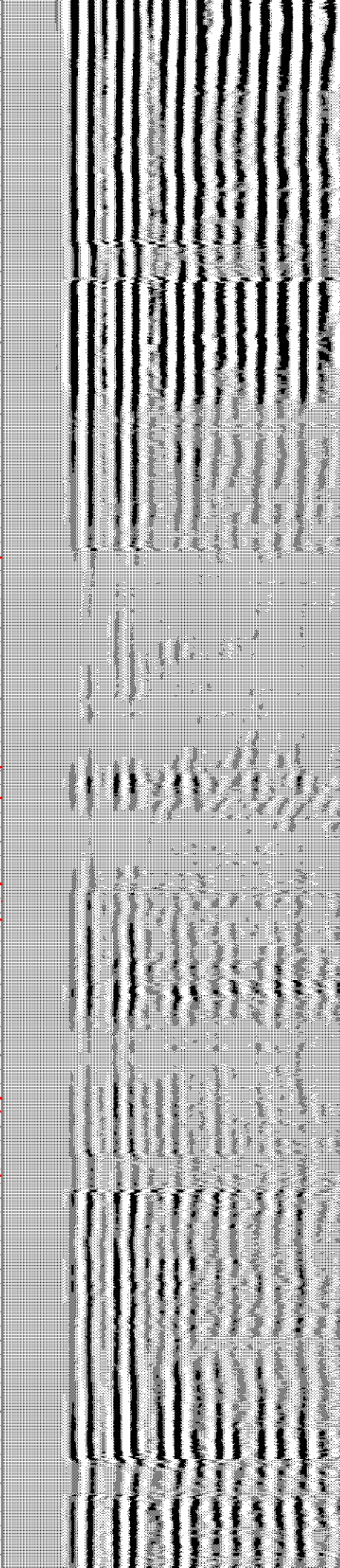
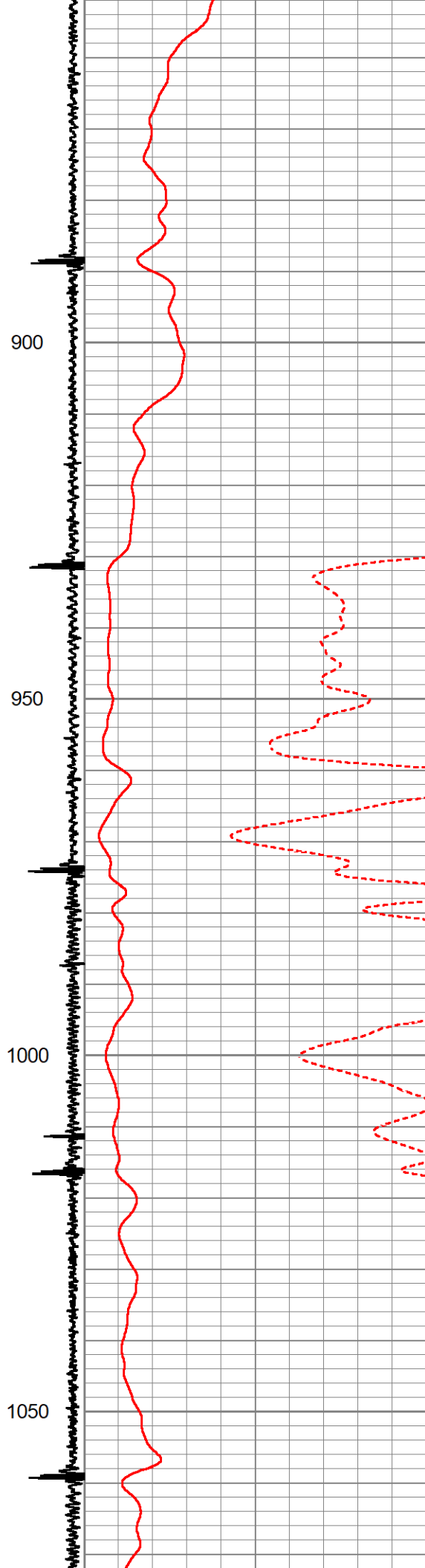
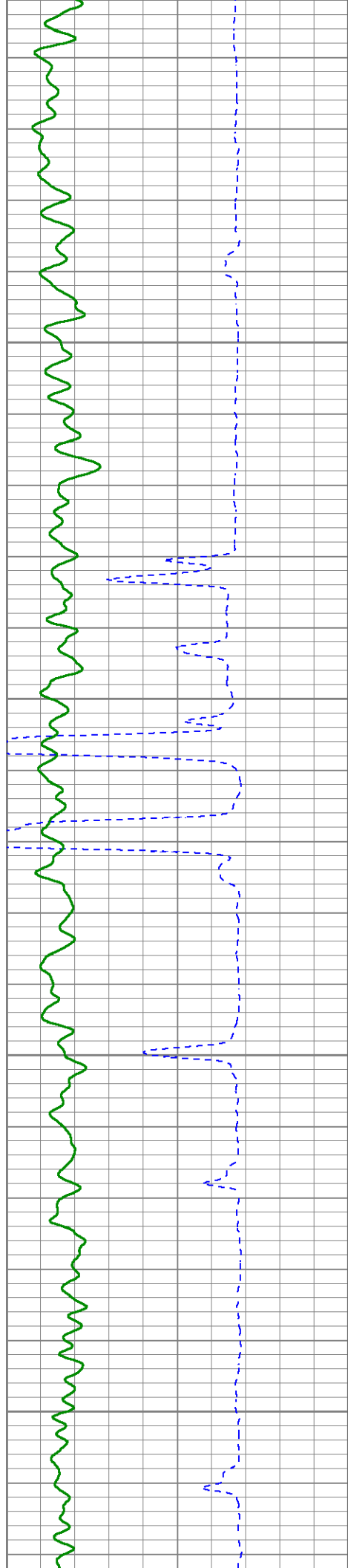




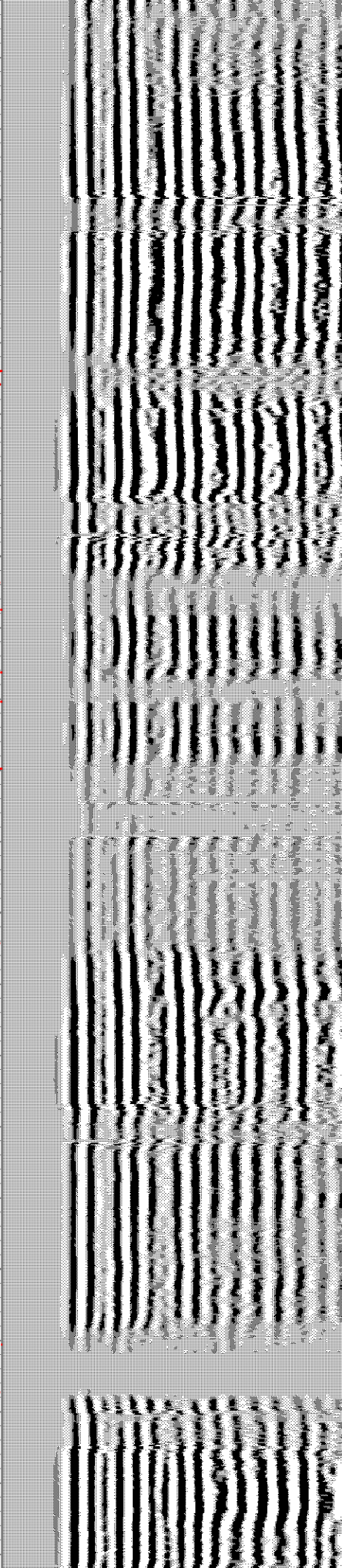
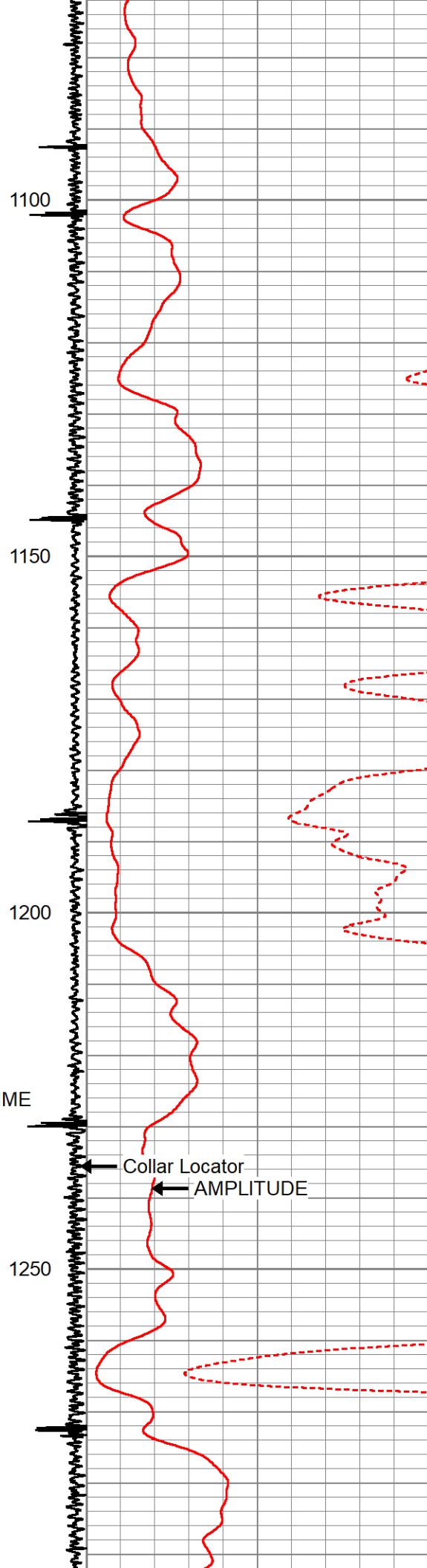
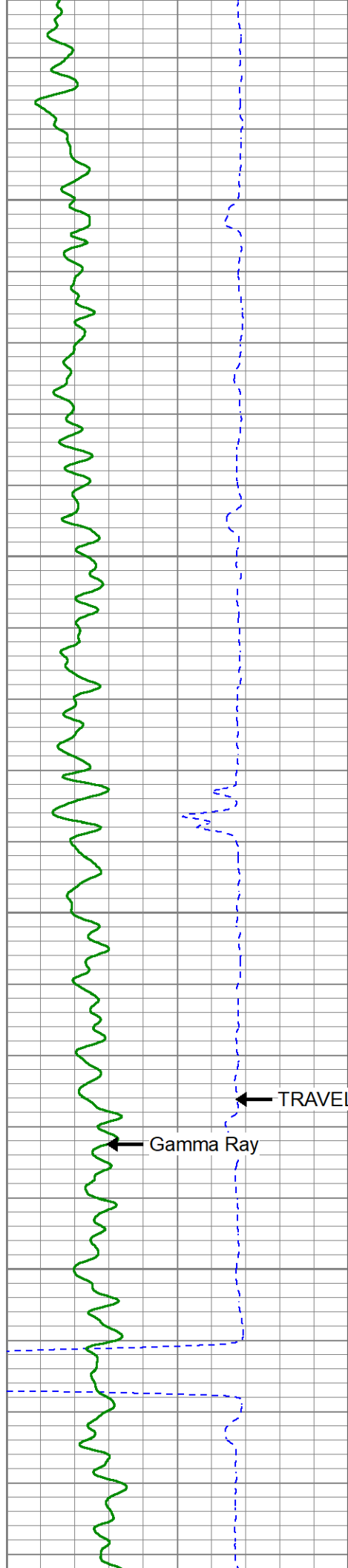


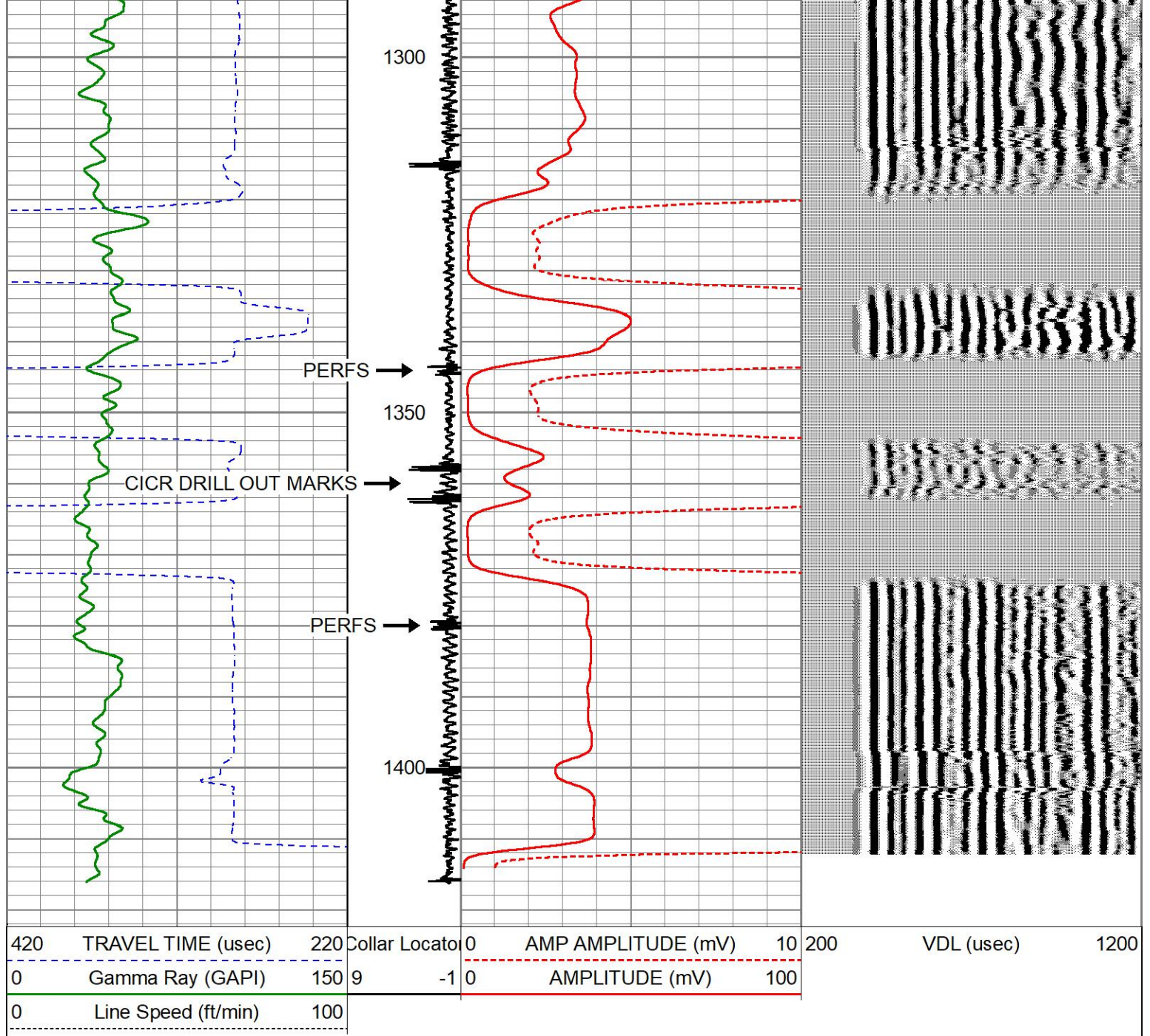








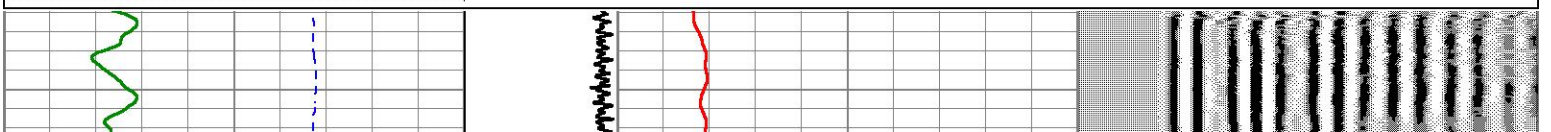




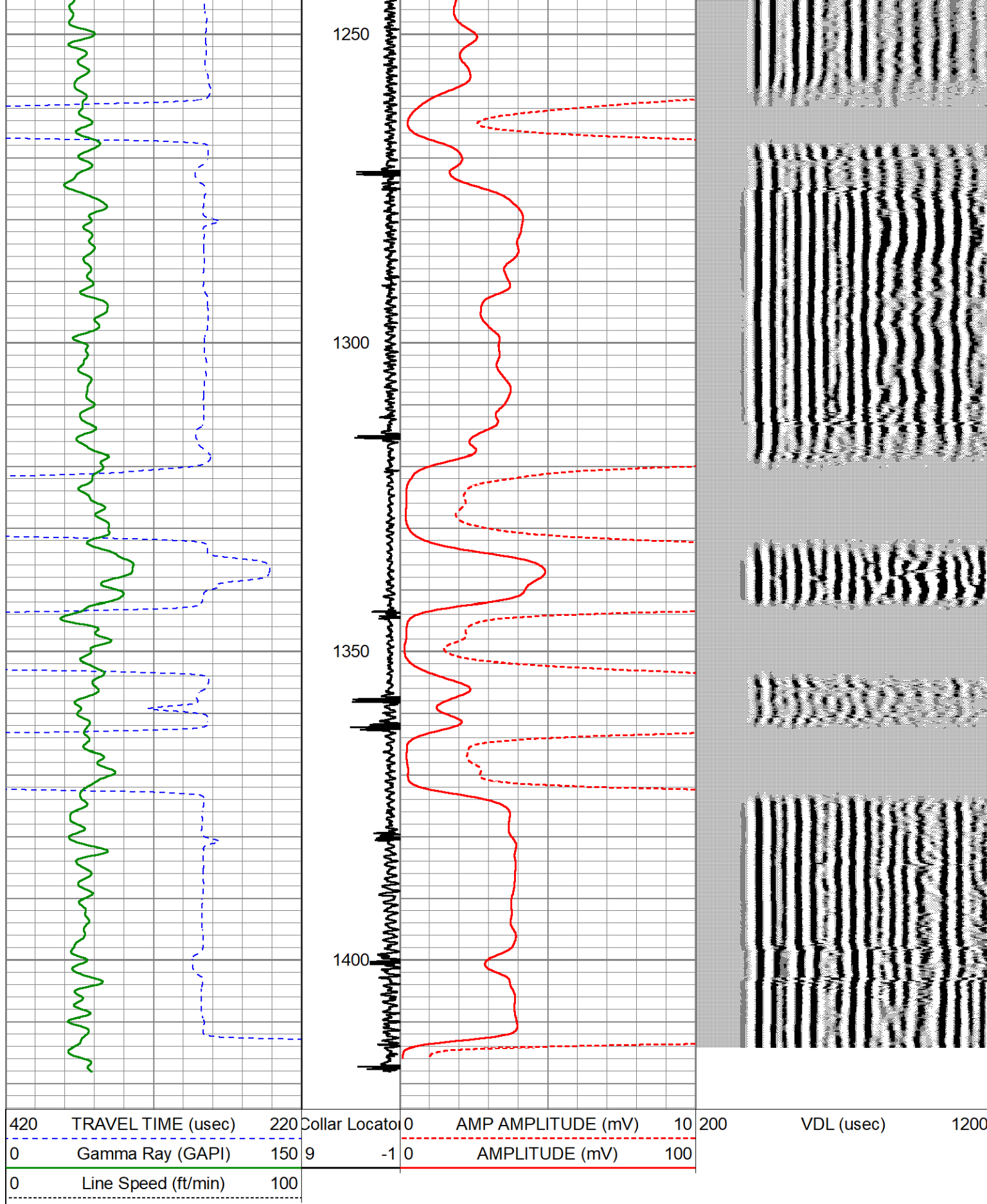
# REPEAT PASS 0 PSI

Database File graeber 31-33d(2).db  
 Dataset Pathname pass9  
 Presentation Format cbl\_kggw  
 Dataset Creation Wed Jul 17 11:42:05 2019  
 Charted by Depth in Feet scaled 1:240

420	TRAVEL TIME (usec)	220	Collar Location	0	AMP AMPLITUDE (mV)	10	200	VDL (usec)	1200
0	Gamma Ray (GAPI)	150	9	-1	0	100			
0	Line Speed (ft/min)	100							







### Calibration Report

Database File      graeber 31-33d(2).db  
 Dataset Pathname    pass11  
 Dataset Creation    Wed Jul 17 11:46:48 2019

Gamma Ray Calibration Report

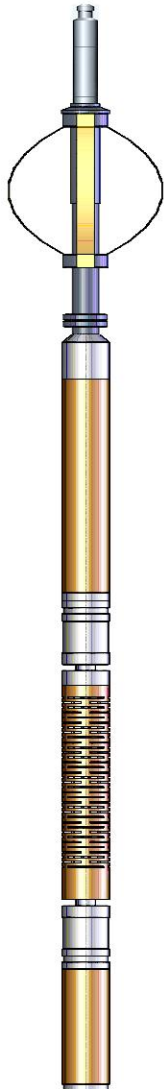
Serial Number:	FW1211-86	
Tool Model:	Probe	
Performed:	Mon Feb 03 13:18:32 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8000	GAPI/cps

Cement Bond Calibration Report

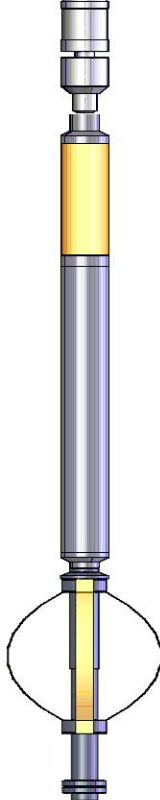
Serial Number:	080310	
Tool Model:	Probe275Digital	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	1424.133	ft

Master Calibration, performed Wed Jul 17 11:40:59 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.529	1.000	81.196	151.553	1.000
5'	0.000	0.461	1.000	81.196	174.008	1.000

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-Titan Titan 1 7/16" GO Cablehead	1.00	1.44	5.00
			CENT-Probe275 2.75" Centralizer	2.33	2.75	36.00
WVF3FT	11.17		CBL-Probe275Digital (080310) Digital 3' 5' CBL Move voltage to +/- 150 for cal mode	8.75	2.75	100.00
WVF5FT	10.17					



CCL	5.97		4.58	2.75	57.00
GR	3.23		2.33	2.75	36.00
Dataset: graeber 31-33d(2).db: field/well/run1/pass11 Total length: 19.00 ft Total weight: 234.00 lb O.D.: 2.75 in					