



CEMENT
BOND
LOG

Company Patterson Energy
Well Musenberg C #9
Field Stoltenberg
County Ellsworth State Kansas

Location: 430' FSL & 330' FWL
API #: 15 053 21372
Other Services
PERF
SEC 7 TWP 17S RGE 9W
Permanent Datum Ground Level Elevation 1779'
Log Measured From KB 11' AGL
Drilling Measured From KB
Elevation
K.B. 1790'
D.F. 1789'
G.L. 1779'

Date	9/21/20
Run Number	One
Depth Driller	3310'
Depth Logger	3264'
Bottom Logged Interval	3262'
Top Log Interval	2150'
Open Hole Size	7 7/8"
Type Fluid	WATER
Density / Viscosity	///
Max. Recorded Temp.	104degf
Estimated Cement Top	2370'
Time Well Ready	12:30 p.m
Time Logger on Bottom	11:00 p.m
Equipment Number	T-605
Location	Hays, KS.
Recorded By	Casey Patterson
Witnessed By	Mr. Zach Patterson

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8.5/8"	23#	0'	268'
Prot String	5.5"	15.5#	0'	3310'
Production String				
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

Holyrood,KS, North to T Ave
From Stop Sign of 5th Rd and Ave T 2mi east to 7th Rd
3/4 mi South, East Into Location

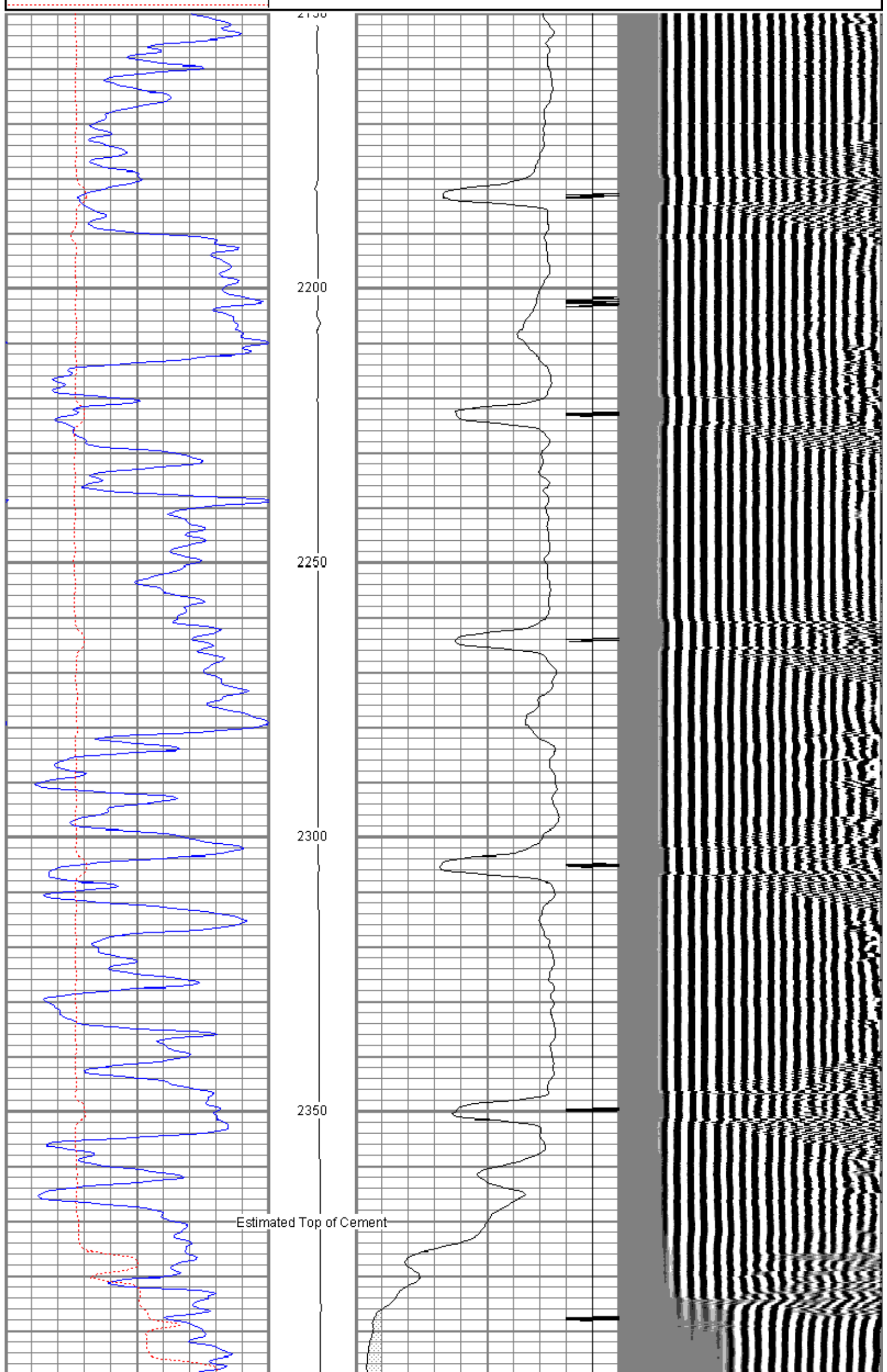
Thanks for using Gemini Wireline LLC
785-625-1182

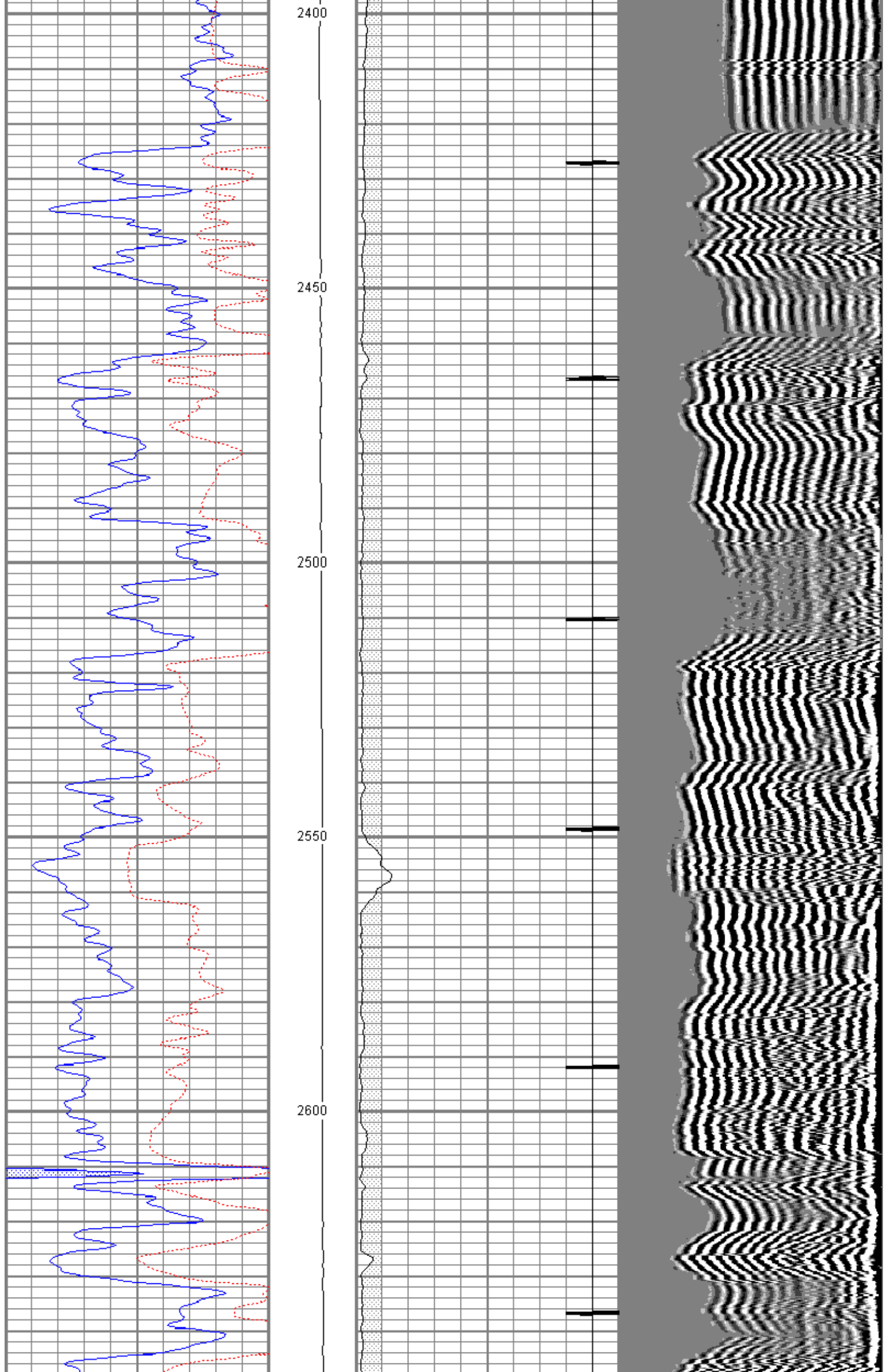


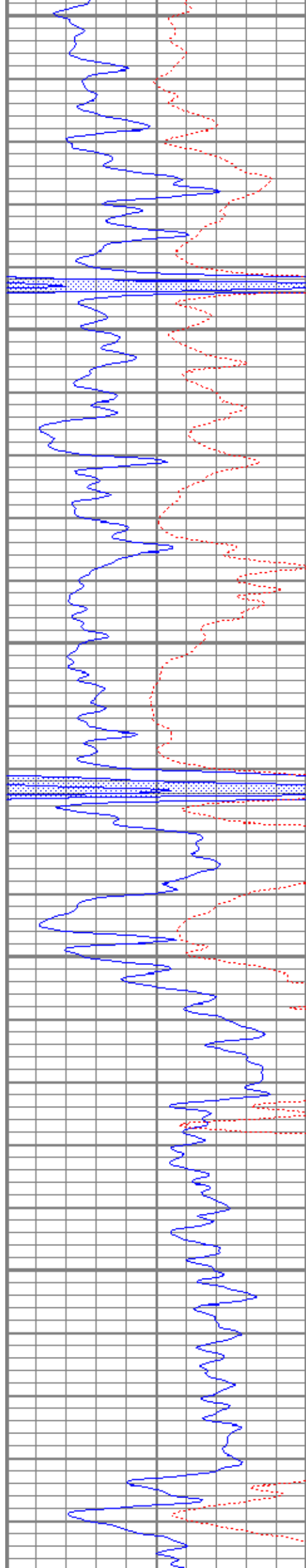
MAIN PASS

Database File pemusenbergc#9cbl.db
Dataset Pathname pass2.2
Presentation Format cbl
Dataset Creation Mon Sep 21 13:43:53 2020
Charted by Depth in Feet scaled 1:240

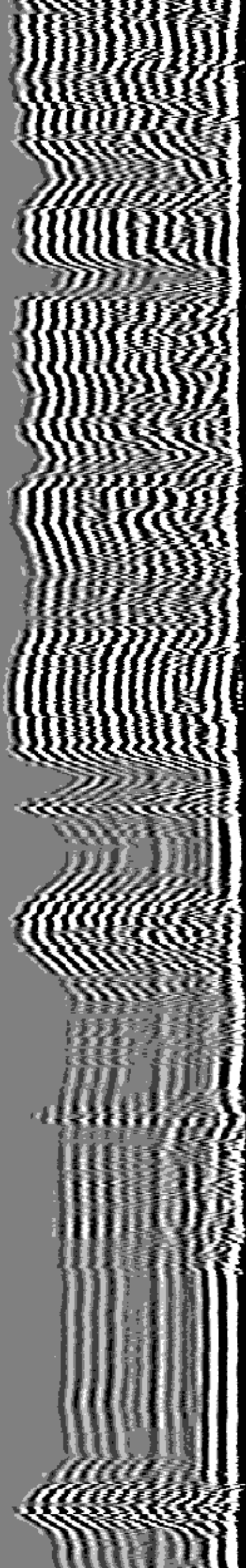
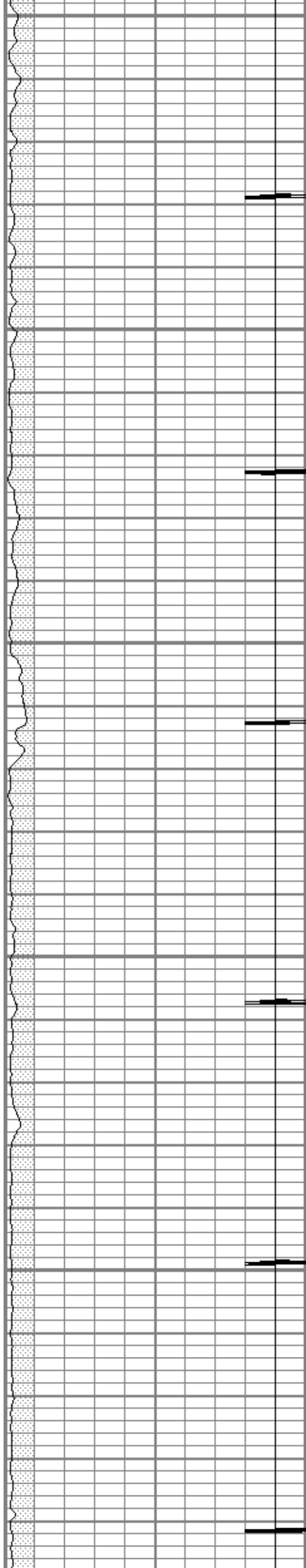
0	GR (GAPI)	150	LTEN	18	CCL	-2	200	VDL (usec)	1200
150	GR (GAPI)	300	0	(lb)1000	0	AMP3FT (mV)	100		
200	TT3FT (usec)	400							

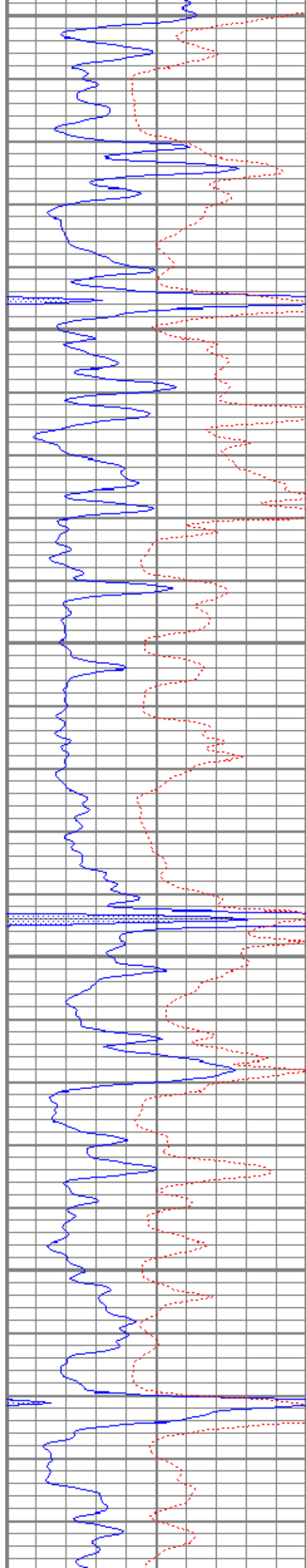




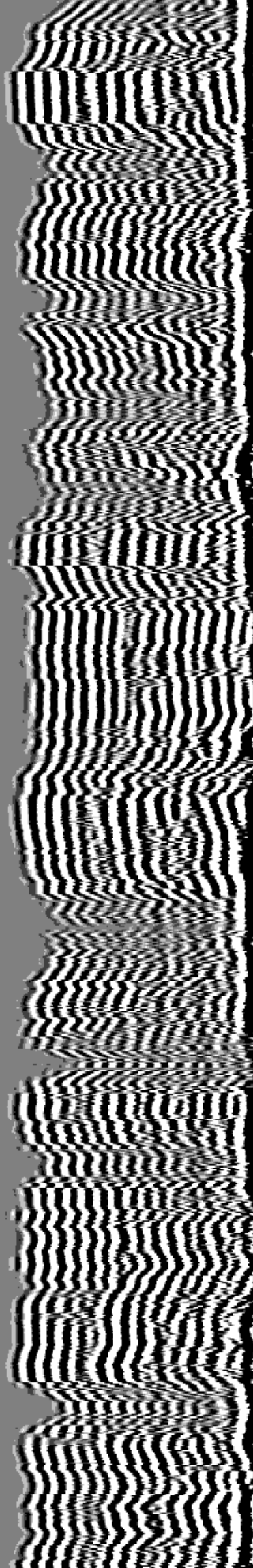
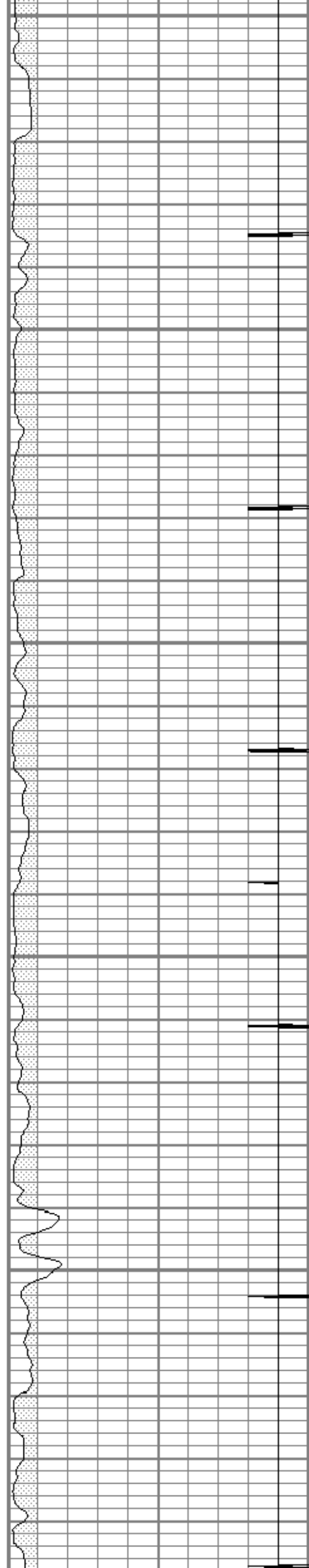


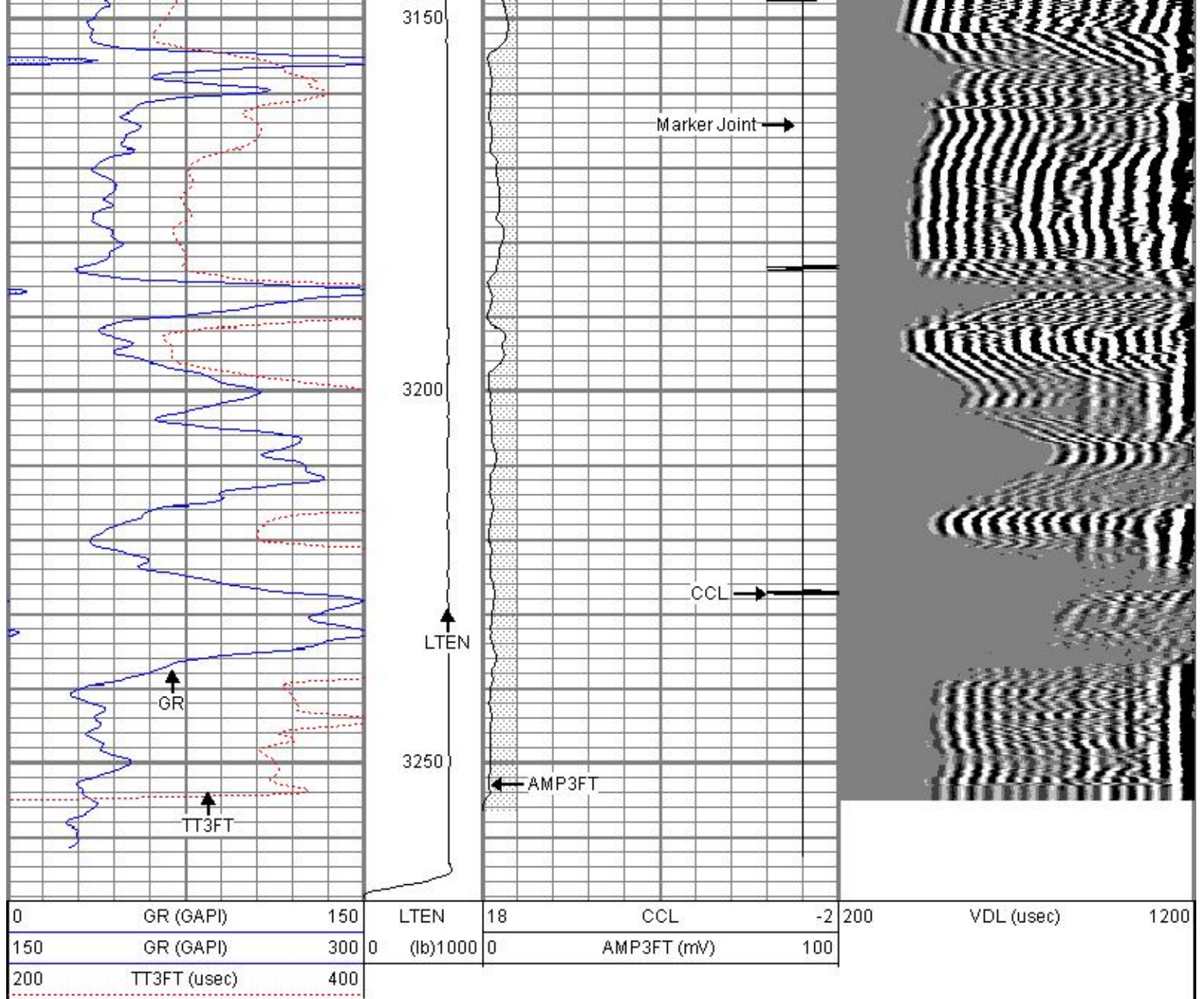
2650
2700
2750
2800
2850





2900
2950
3000
3050
3100

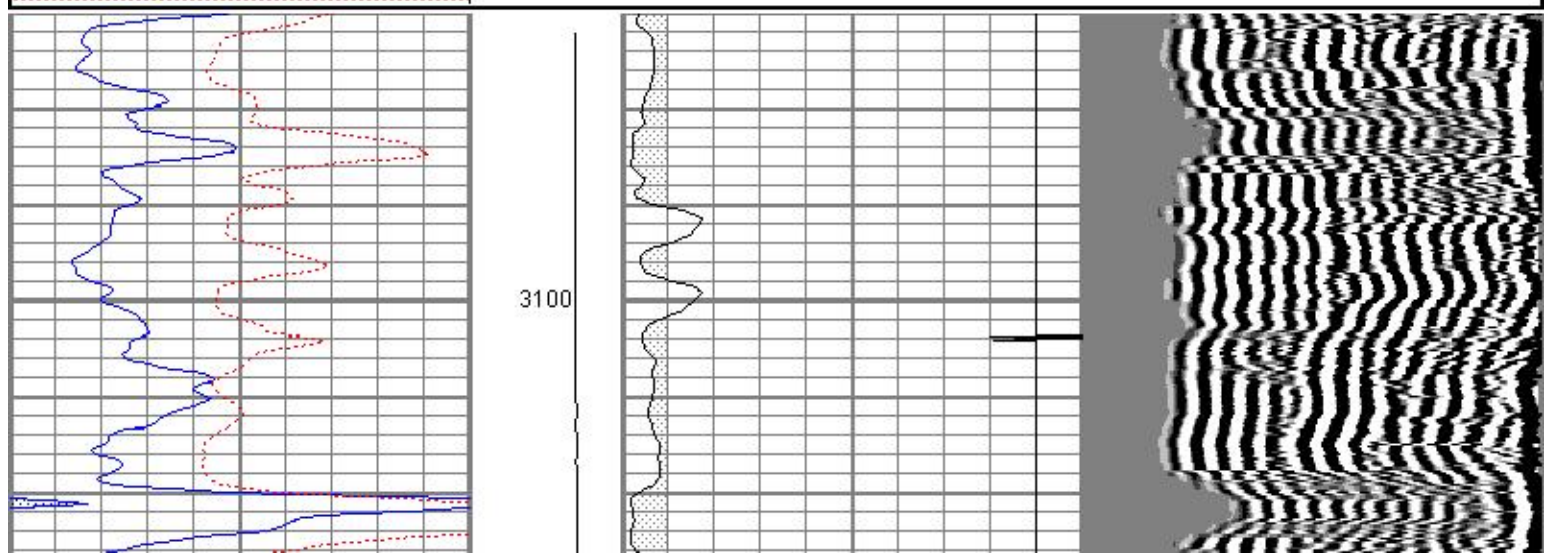


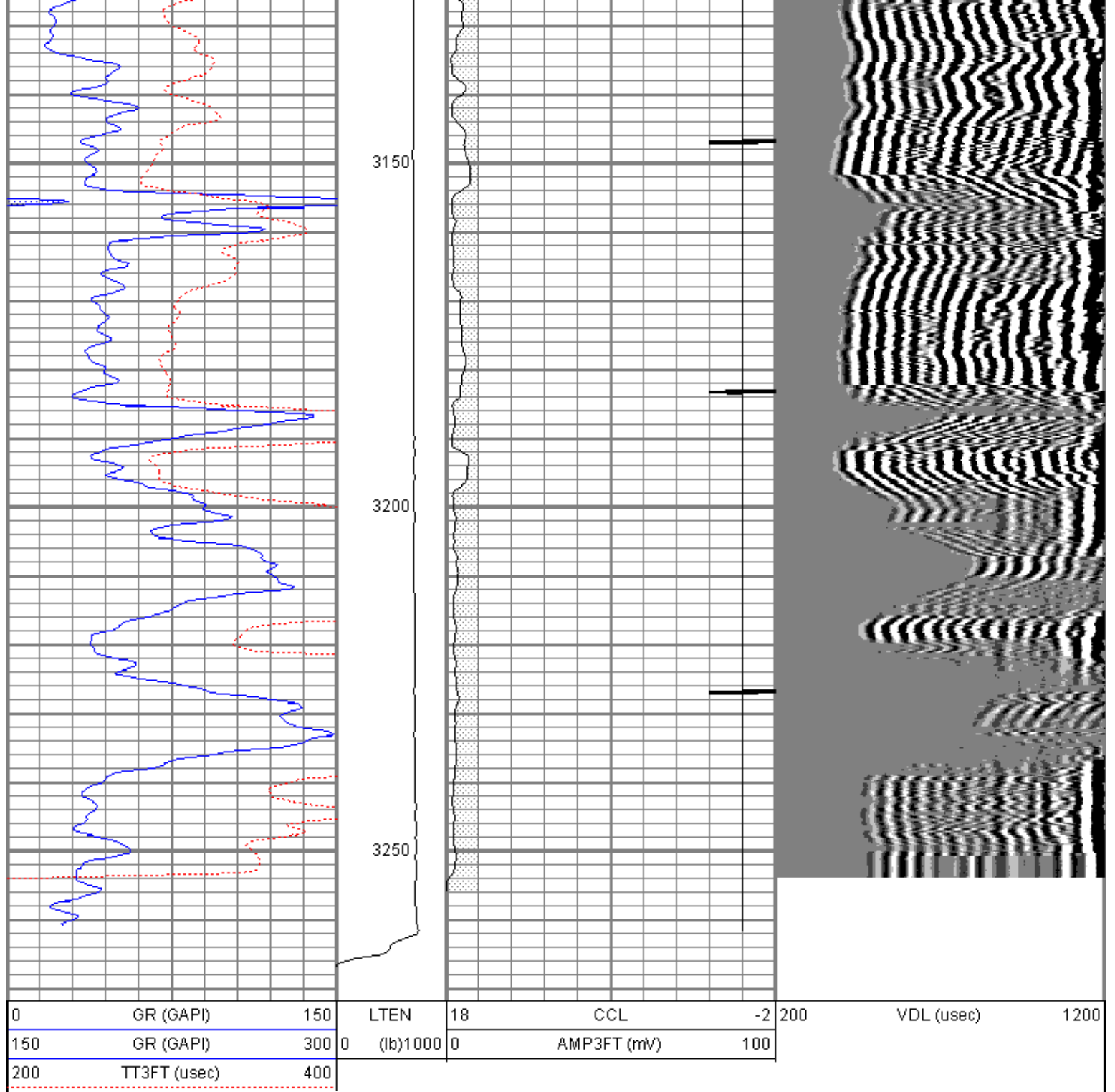


REPEAT SECTION

Database File pemusenbergc#9cbl.db
 Dataset Pathname pass1
 Presentation Format cbl
 Dataset Creation Mon Sep 21 12:42:56 2020
 Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150	LTEN	18	CCL	-2	200	VDL (usec)	1200
150	GR (GAPI)	300	0 (lb)1000	0	AMP3FT (mV)	100			
200	TT3FT (usec)	400							





Calibration Report		
Database File	pemusenbergc#9cbl.db	
Dataset Pathname	pass2	
Dataset Creation	Mon Sep 21 12:50:31 2020	
Gamma Ray Calibration Report		
Serial Number:	080224	
Tool Model:	Probe1	
Performed:	Thu Nov 09 12:41:19 2017	
Calibrator Value:	200.0	GAPI
Background Reading:	15.0	cps
Calibrator Reading:	222.7	cps
Sensitivity:	0.9629	GAPI/cps
Segmented Cement Bond Log Calibration Report		
Serial Number:	061007	
Tool Model:	DigitalCBL	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	1625.397	ft

Master Calibration, performed Mon Sep 21 12:35:51 2020:

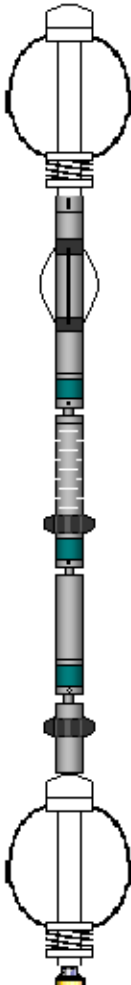
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.014	1.067	1.000	71.921	67.361	0.046
CAL						
5'	0.014	0.765	1.000	71.921	94.463	-0.330
SUM						
S1						
S2						
S3						
S4						
S5						
S6						
S7						
S8						

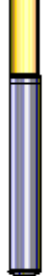
Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL						

Air Zero Calibration, performed Mon Sep 21 12:35:52 2020:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.015		0.000		-0.000	
5'	0.014		0.000		-0.000	
SUM						
S1						
S2						
S3						
S4						
S5						
S6						
S7						
S8						

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CENT	19.14		CENT-275 2 3/4" Centralizer	2.94	2.75	10.00
WVF5FT WVF3FT	11.69 11.69		Probedig-DigitalCBL (061007) 2 3/4" Bond Tool	8.77	2.75	92.00
CENT	7.44		CENT-275 2 3/4" Centralizer	2.94	2.75	10.00

CCL	3.67		CCL-Probe (080224)	1.42	2.75	20.00
GR	2.30		GR-Probe1 (080224)	3.08	2.75	40.00
Dataset: pemusenbergc#9 Total length: 19.14 ft Total weight: 172.00 lb O.D.: 2.75 in cbl.db: field/well/run1/pass2						