



**CEMENT BOND LOG  
WITH GAMMA RAY**

Comp. ENTRANSCO ENERGY LLC  
Well T. WIEBE #31-4  
Field HAZLETT  
Co. BUTLER  
State KANSAS

Company **ENTRANSCO ENERGY LLC**  
Well **T. WIEBE #31-4**  
Field **HAZLETT**  
County **BUTLER** State **KANSAS**

Location: 990' N & 1650' E  
API #: 15-015-24109-00-00  
SEC 31 TWP 23S RGE 5E  
Permanent Datum GL Elevation 1463'  
Log Measured From KB 6' Above Perm. Datum  
Drilling Measured From KB  
GRN  
Elevation  
K.B. 1469'  
D.F. N/A  
G.L. 1463'

Date of Service	10-23-2018		
Run Number	ONE		
Depth Driller or PBTD	2603'		
Depth Logger	2593'		
Bottom Log Interval	2586'		
Top Log Interval	1200'		
Open Hole Size	7.875"		
Type Fluid	WATER		
Fluid Level	FULL		
Fluid Density	N/A		
Max. Recorded Temperature	100 DEG. F.		
Max. Wellhead Pressure	00 PSI		
Wellhead Connection	N/A		
Estimated Cement Top	1400'		
Unit Number	106		
Wireline Size	.288"		
Location	HAYS, KS		
Recorded By	M. HISS		
Witnessed By	RAY GILBERT		
	Size	Wt/Ft	Top
Tubing Record			Bottom
Surface Casing	8.625"	23#	00'
Production Casing	5.5"	15.5#	00'
Liner Record			TD

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

**Comments**

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.  
NEWTON KANSAS  
WEST ON RD 150TH TO PURITY SPRINGS  
SOUTH 2 MILES, WEST 1/4 MILES  
SOUTH AND WEST INTO.

**THANK YOU FOR USING PIONEER ENERGY SERVICES!**

Your Pioneer Energy Services Crew Engineer: M. HISS Operator: K. PHANNENSTIEL Operator: Operator:	Tool Data - Services RBT-011	Serial Number
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# Log Variables

DatabaseC:\ProgramData\Warrior\Data\transco\_t\_wiebe#31\_4\_cbl\_grn.db  
Dataset field/well/run1/pass3/\_vars\_

## Top - Bottom


BOREID in 7.875	BOTTEMP degF 100	CASEOD in 5.5	CASETHCK in 0.275	CASEWGHT lb/ft 15.5	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.08
NPORSEL Limestone	NPORSHIFT 0	PERFS 0	PPT usec 0	SRFTEMP degF 70	TDEPTH ft 2600		

## Variable Description

BOREID : Borehole I.D.  
BOTTEMP : Bottom Hole Temperature  
CASEOD : Casing O.D.  
CASETHCK : Casing Thickness  
CASEWGHT : Casing Weight  
MAXAMPL : Maximum Amplitude  
MINAMPL : Minimum Amplitude

MINATTN : Minimum Attenuation  
NPORSEL : Neutron Porosity Curve Select  
NPORSHIFT : NPORSHIFT  
PERFS : Perforation Flag  
PPT : Predicted Pipe Time  
SRFTEMP : Surface Temperature  
TDEPTH : Total Depth

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
			Cable Head-Titan_144 1 7/16" Titan Cable Head	1.03	1.44	2.00	
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	
			PROBE-RBT-DIGITAL-RBL-D (080554) Probe 2 3/4" Radii Bond-Digital	8.75	2.75	100.00	
WVFS8	16.35						
WVFS7	16.35						
WVFS6	16.35						
WVFS5	16.35						
WVFS4	16.35						
WVFS3	16.35						
WVFS2	16.35						
WVFS1	16.35						
WVFCAL	16.35						
WVF3FT	16.35						
WVF5FT	15.35						
HEADVOLT	12.17		Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	
CCL	8.39						

GR	7.08		PROBE-GR/CCL-DIGITAL-275 Probe GR-4.54 (11102.75 Probe 2 3/4" Gamma Ray / CCL DIGITAL			60.00
NEU	1.08		NEU-PRNEU (ProbeNEU1)	4.75	1.88	

Dataset: entransco\_t\_wiebe#31\_4\_cbl\_grn.db: field/well/run1/pass3  
 Total length: 24.83 ft  
 Total weight: 192.00 lb  
 O.D.: 2.75 in

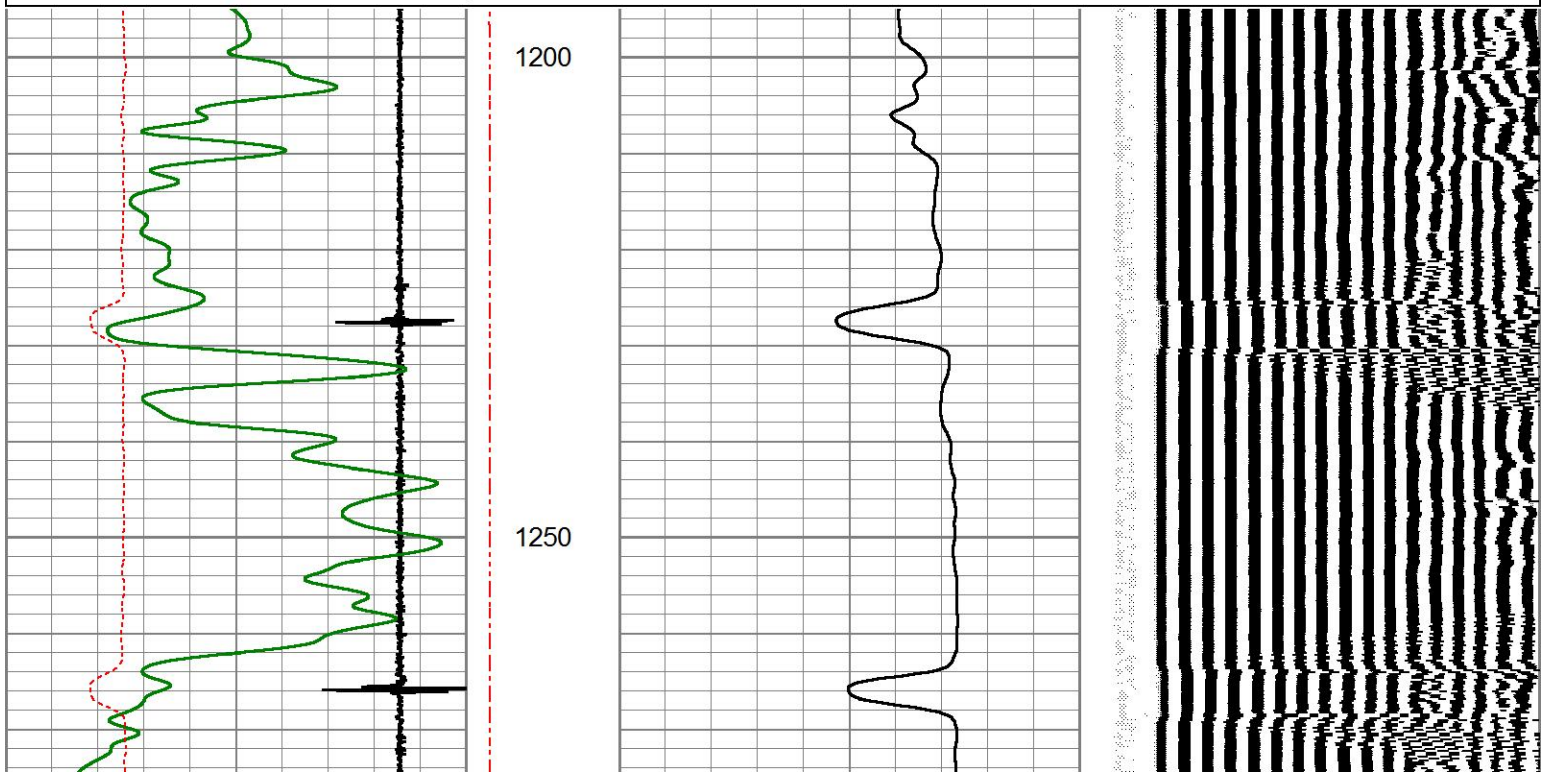


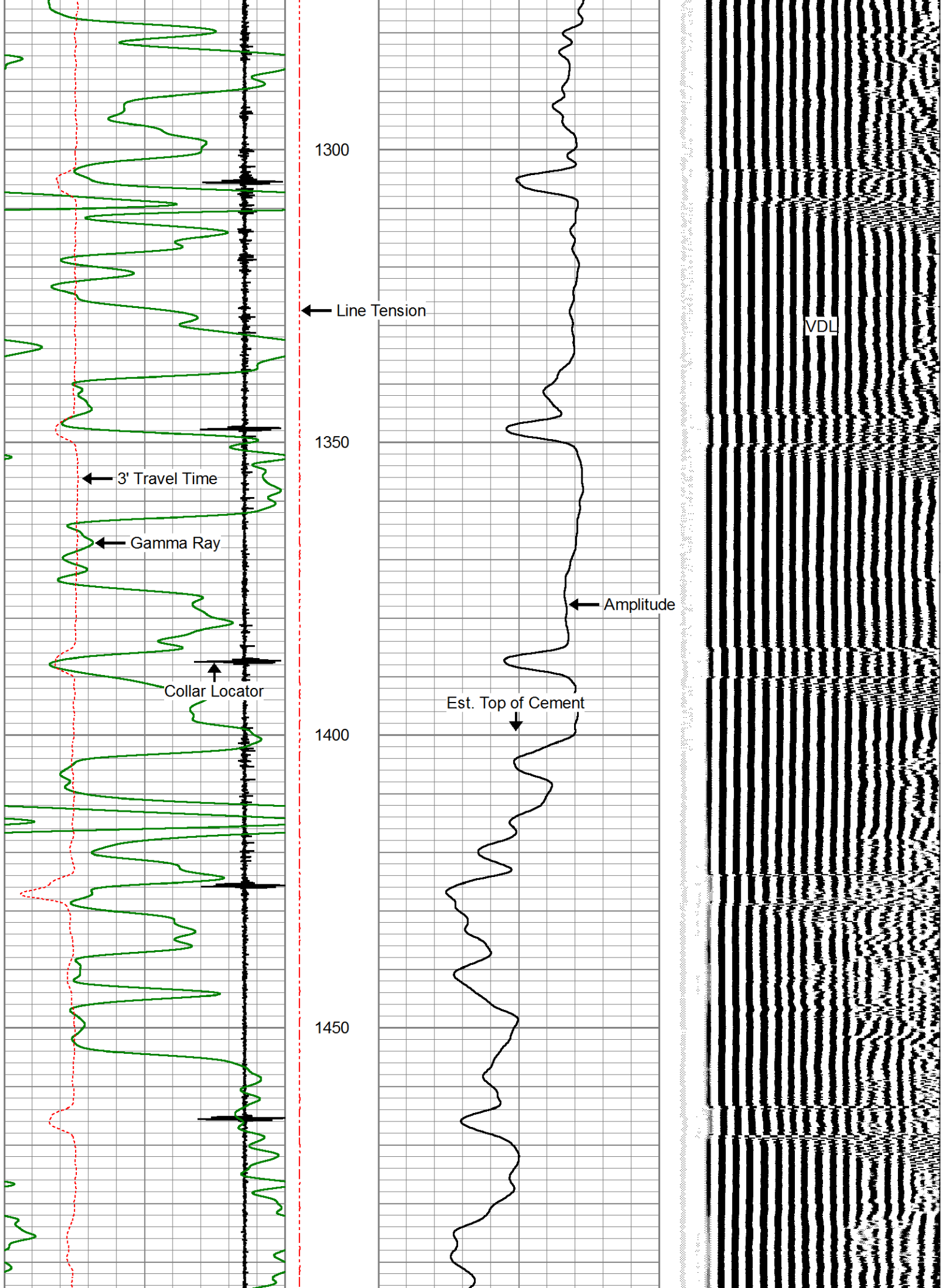
## MAIN LOG

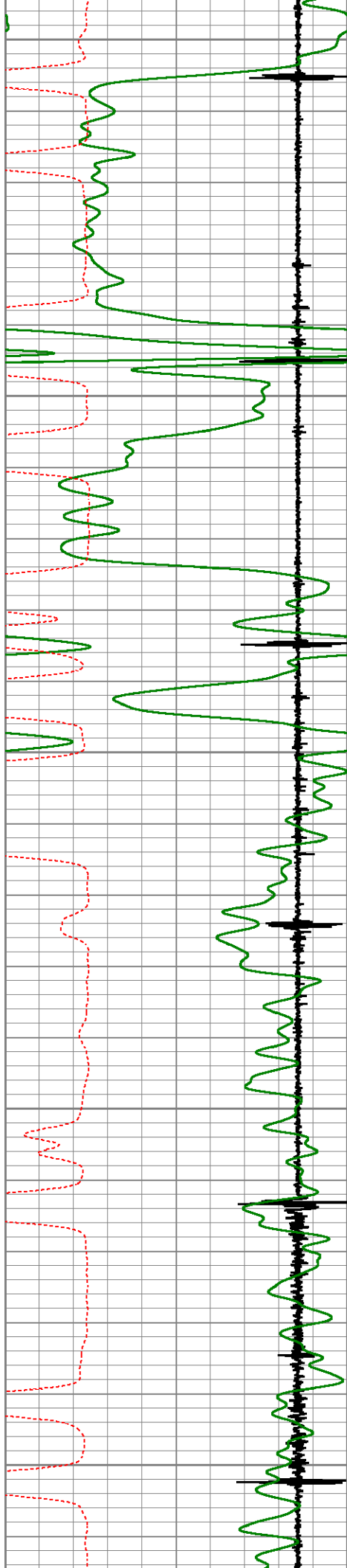
ZERO PSI APPLIED AT SURFACE

Database File entransco\_t\_wiebe#31\_4\_cbl\_grn.db  
 Dataset Pathname pass3  
 Presentation Format pinr\_cbl  
 Dataset Creation Tue Oct 23 11:24:46 2018  
 Charted by Depth in Feet scaled 1:240

-6	Collar Locator	1	Line Tension	0	Amplitude (mV)	100	200	Variable Density (usec)	1200
0	Gamma Ray (GAPI)	150	0	(lb2000)					
280	3' Travel Time (usec)	180							







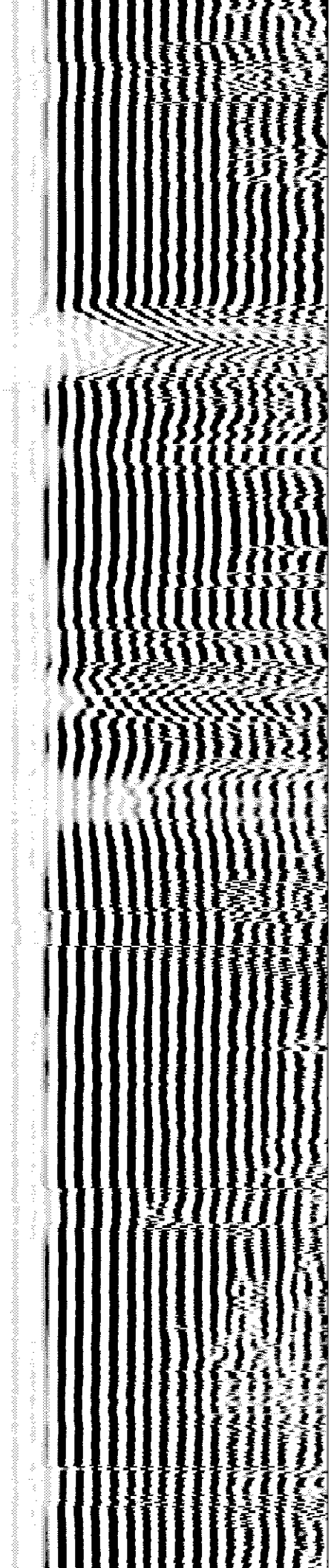
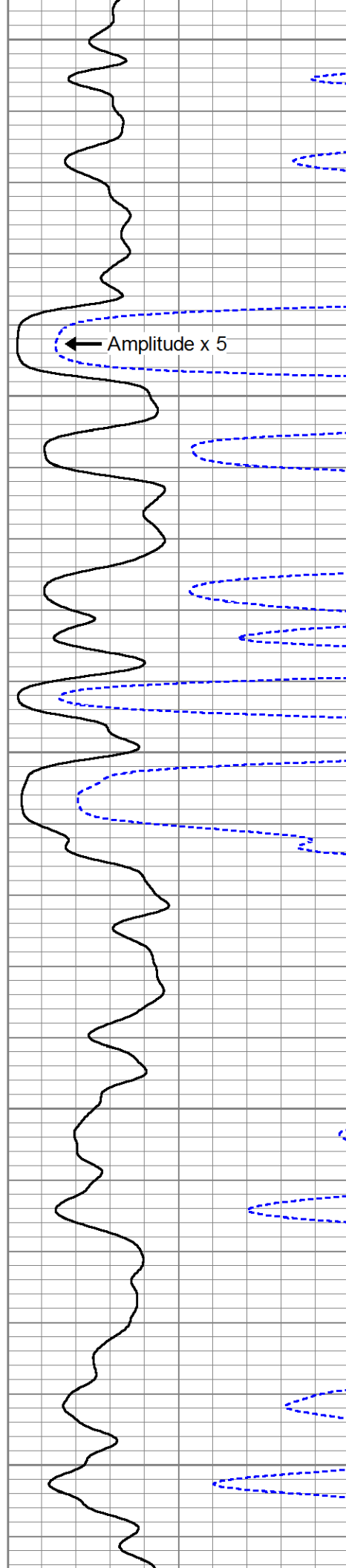
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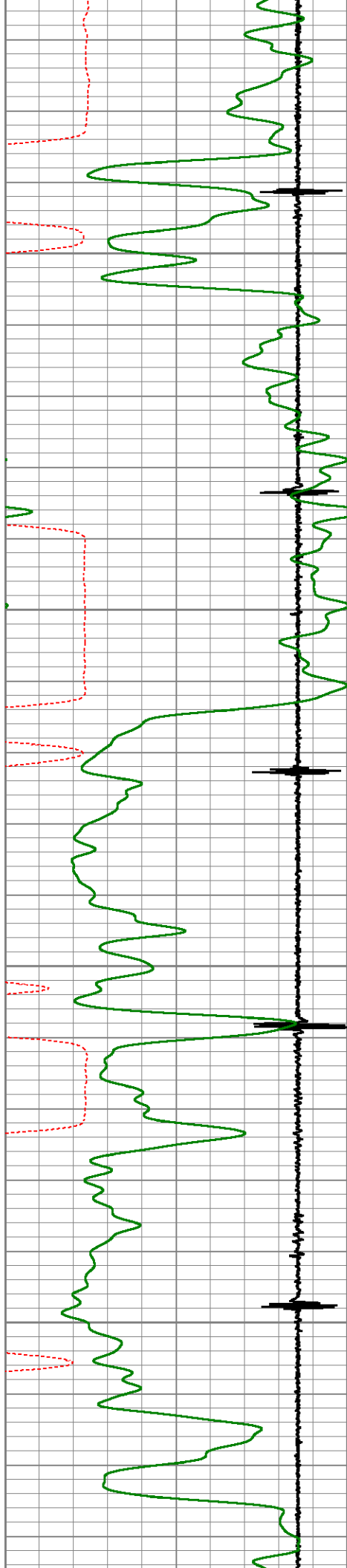
1550

1600

1650

1700



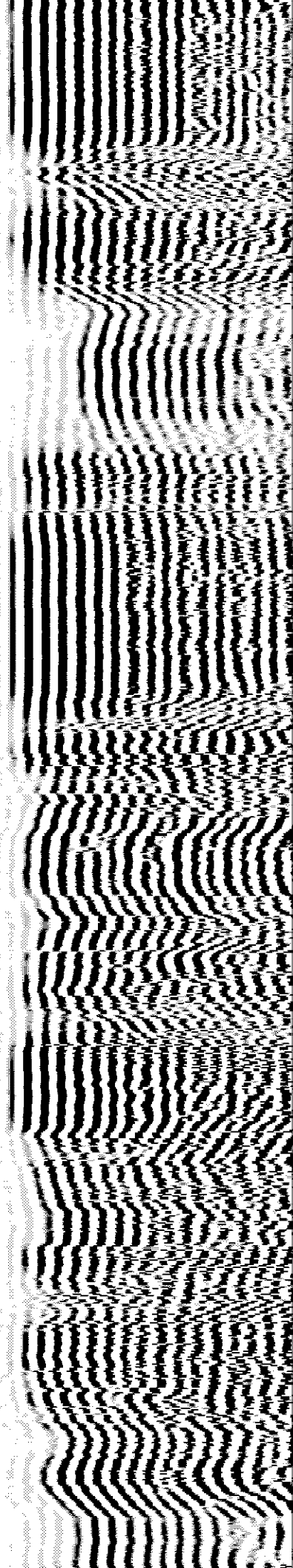
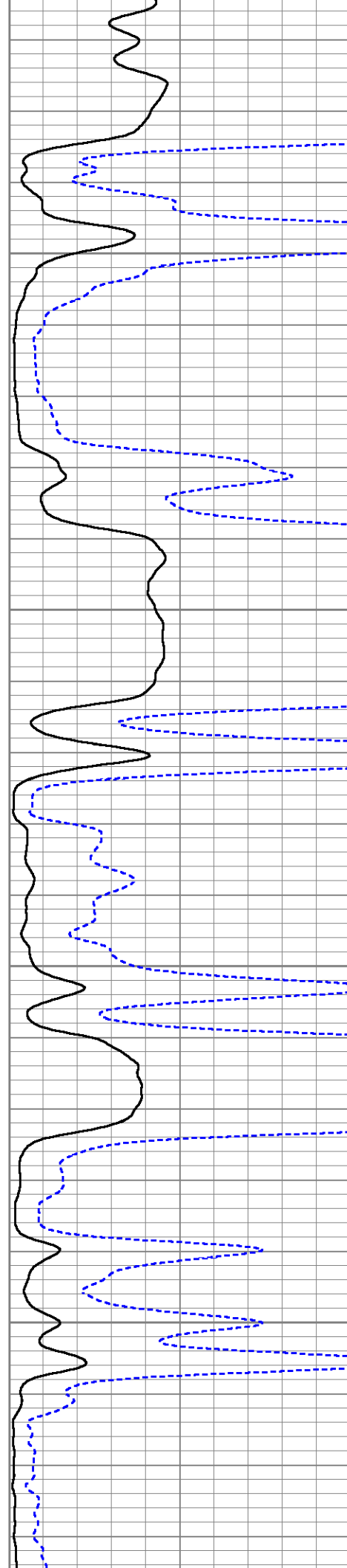


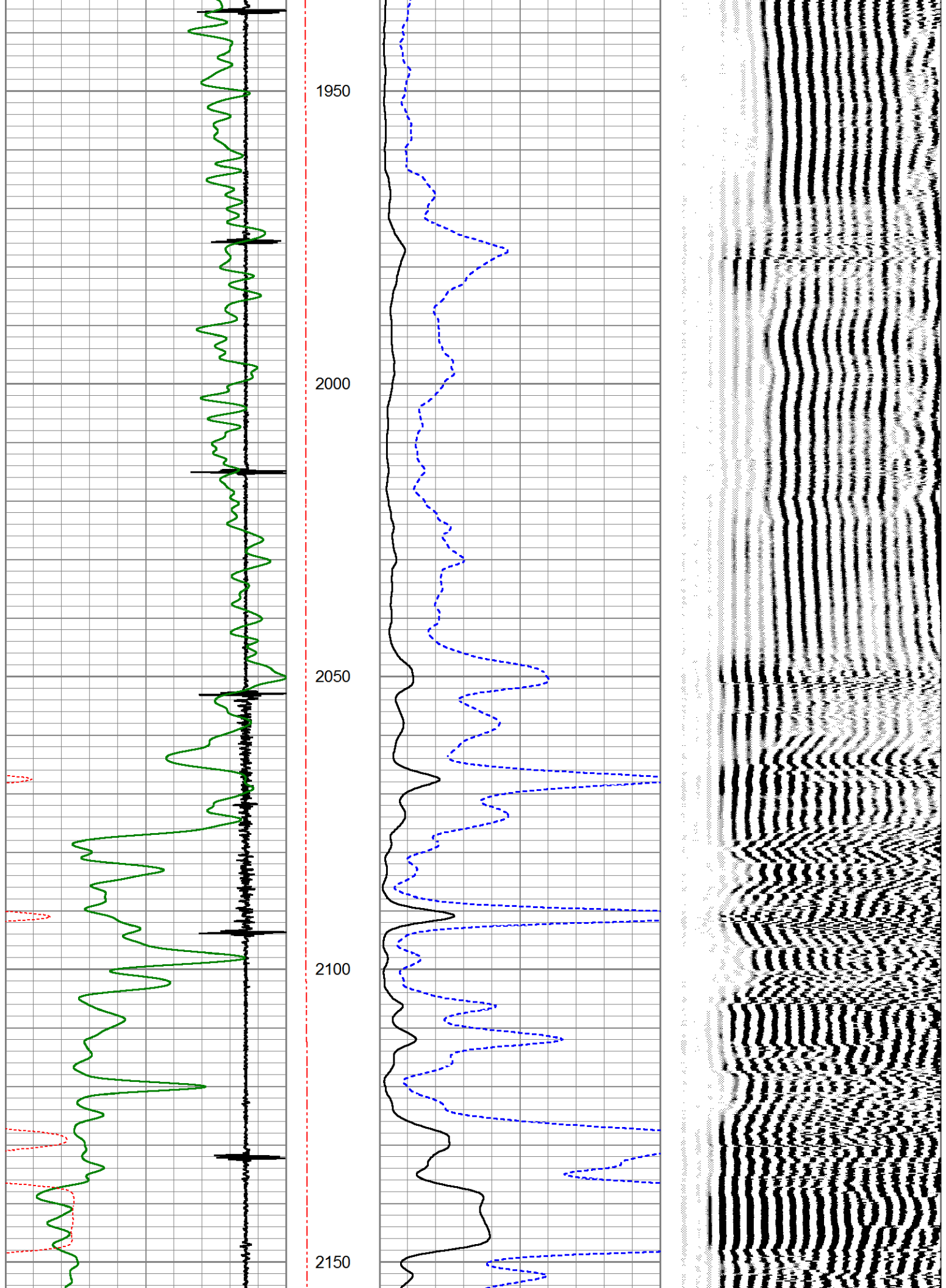
1750

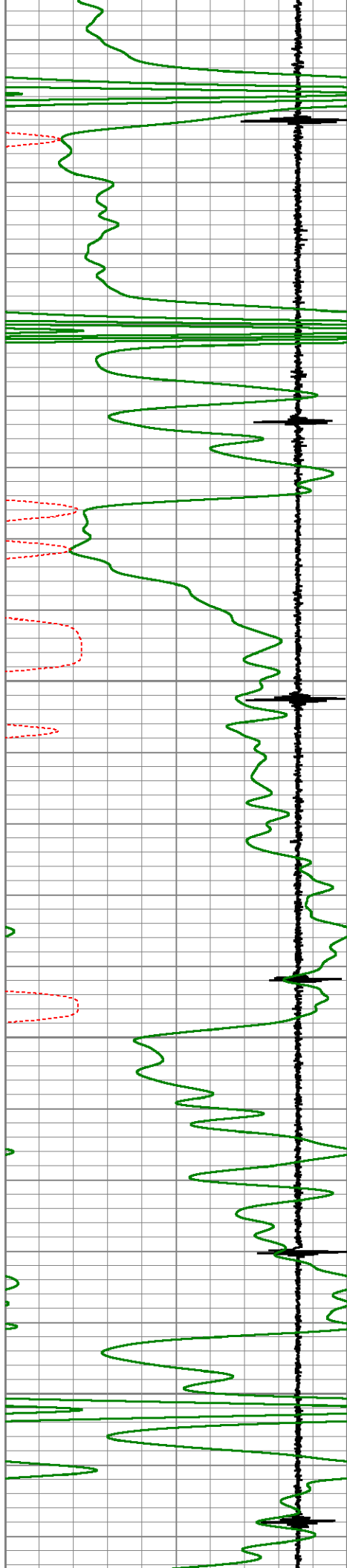
1800

1850

1900





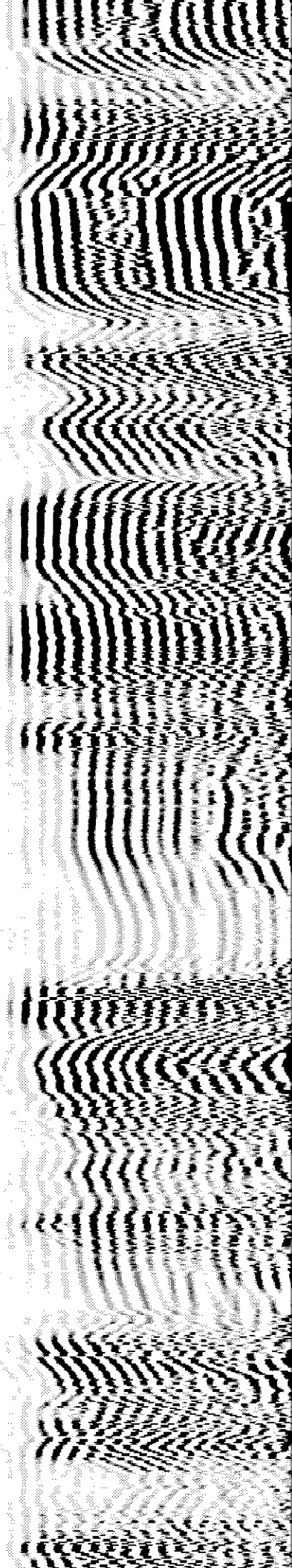
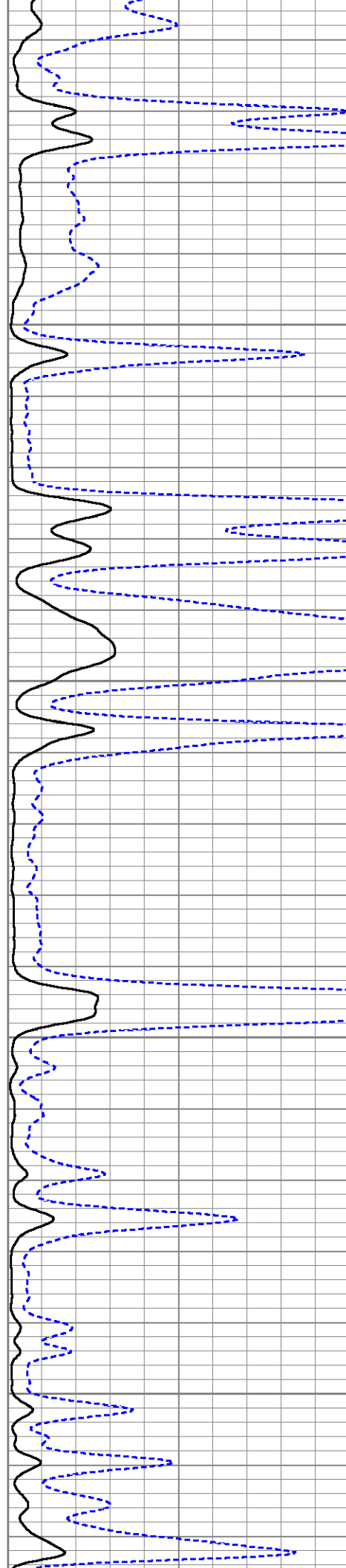


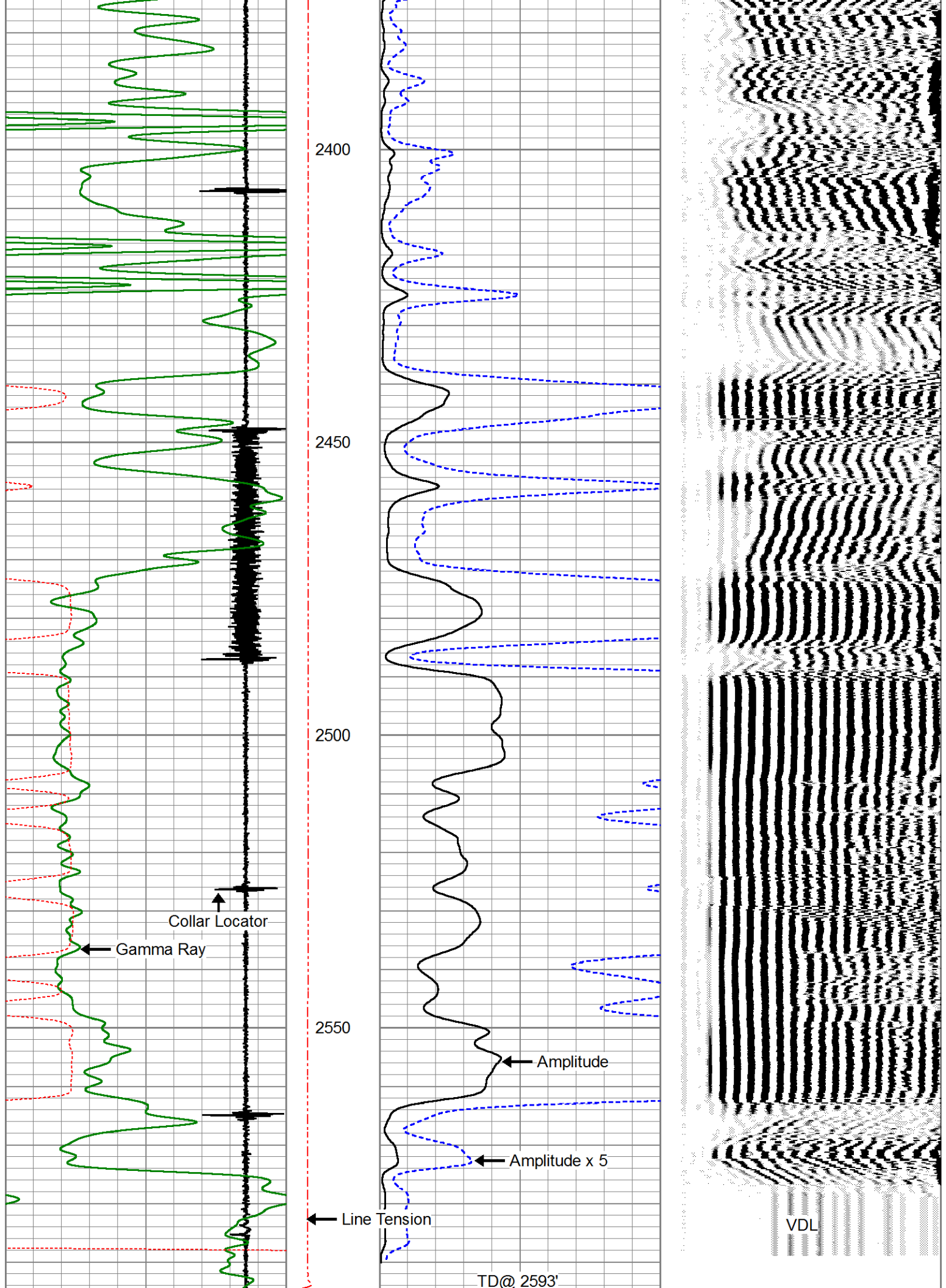
2200

2250


2300

2350





			2600				
-6	Collar Locator	1	Line Tension	0	Amplitude (mV)	100	200 Variable Density (usec) 1200
0	Gamma Ray (GAPI)	150	0 (lb2000)				
280	3' Travel Time (usec)	180					

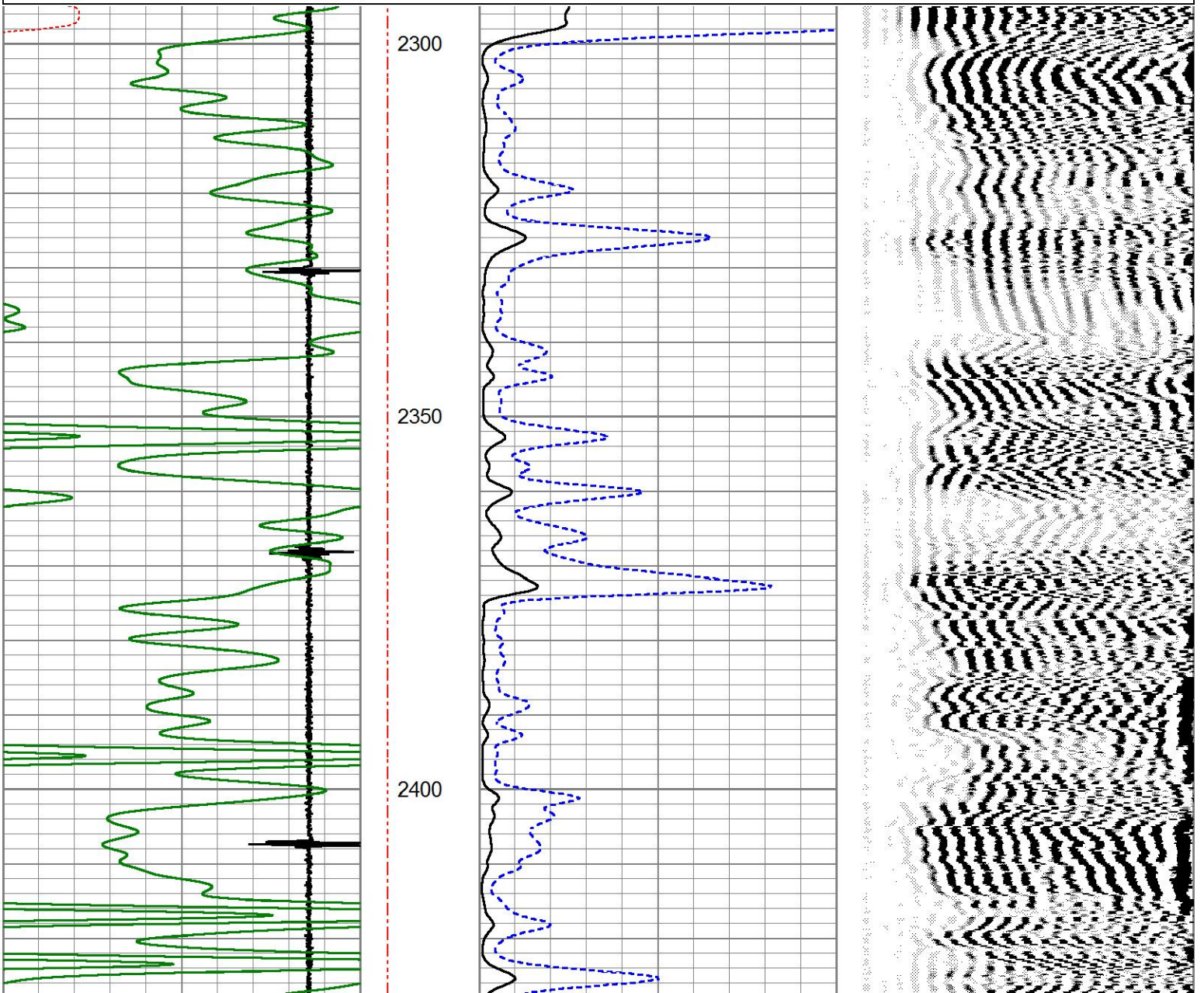


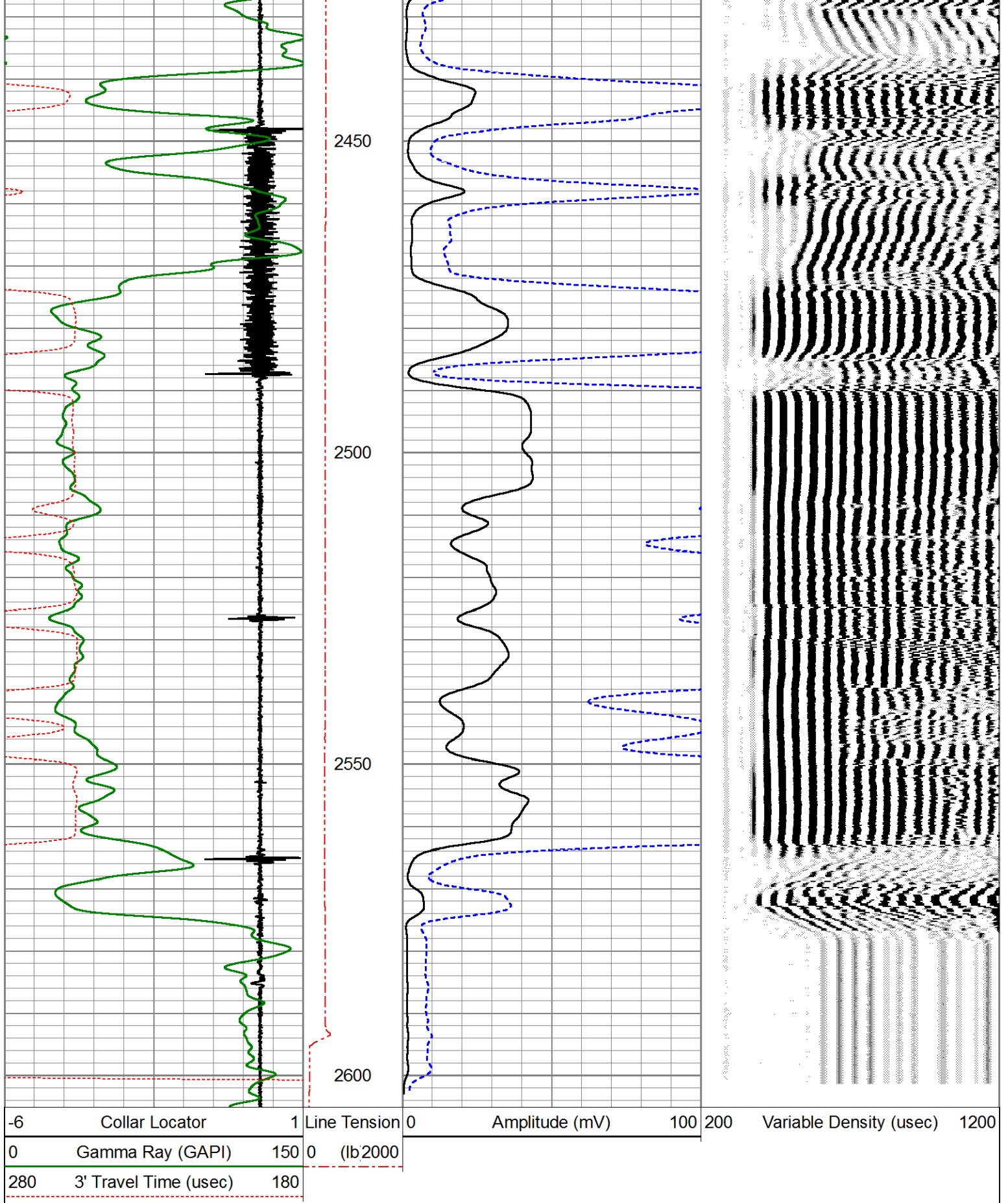
## REPEAT SECTION

### ZERO PSI APPLIED AT SURFACE

Database File      entransco\_t\_wiebe#31\_4\_cbl\_grn.db  
 Dataset Pathname    pass2  
 Presentation Format   pinr\_cbl  
 Dataset Creation    Tue Oct 23 11:16:06 2018  
 Charted by            Depth in Feet scaled 1:240

-6	Collar Locator	1	Line Tension	0	Amplitude (mV)	100	200 Variable Density (usec) 1200
0	Gamma Ray (GAPI)	150	0 (lb2000)				
280	3' Travel Time (usec)	180					





Calibration Report

Database File entransco\_t\_wiebe#31\_4\_cbl\_grn.db  
 Dataset Pathname pass3  
 Dataset Creation Tue Oct 23 11:24:46 2018

Serial Number: ProbeNEU1  
 Tool Model: PRNEU  
 Performed: (Not Performed)

Calibrator Value: 1 NAPI  
 Calibrator Reading: 1 cps  
 Sensitivity: 1 NAPI/cps

Gamma Ray Calibration Report

Serial Number: 111032  
 Tool Model: 275 Probe GR-CCL  
 Performed: Wed Sep 26 09:20:51 2018

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: 080554  
 Tool Model: RBL-D

Calibration Casing Diameter: 5.500 in  
 Calibration Depth: 1279.589 ft

Master Calibration, performed Tue Oct 23 08:26:33 2018:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	2.145	0.700	71.921	33.214	0.692
CAL	-0.004	2.370				
5'	-0.001	2.151	0.700	71.921	33.102	0.728
SUM						
S1	0.036	2.010	0.000	100.000	50.637	-1.801
S2	0.013	2.047	0.000	100.000	49.165	-0.619
S3	0.014	2.123	0.000	100.000	47.429	-0.681
S4	0.018	2.189	0.000	100.000	46.060	-0.838
S5	0.017	2.251	0.000	100.000	44.759	-0.742
S6	0.018	2.280	0.000	100.000	44.214	-0.797
S7	0.009	2.228	0.000	100.000	45.065	-0.422
S8	0.005	2.071	0.000	100.000	48.411	-0.255

Air Zero Calibration, performed Tue Oct 23 11:00:43 2018:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.006		0.000		-0.006	
5'	0.007		0.000		-0.008	
SUM						
S1	0.015		0.000		0.020	
S2	0.010		0.000		0.003	
S3	0.010		0.000		0.004	
S4	0.006		0.000		0.012	
S5	0.007		0.000		0.009	
S6	0.011		0.000		0.008	
S7	0.015		0.000		0.006	

S7  
S8

0.013  
0.013

0.000  
0.000

-0.000  
-0.008



**PIONEER**

Pioneer Energy Services

Company	ENTRANSCO ENERGY LLC
Well	T. WIEBE #31-4
Field	HAZLETT
County	BUTLER
State	KANSAS