



**CEMENT BOND LOG
WITH GAMMA RAY**

Comp. CHOLLA PRODUCTION, LLC
Well HOWAT #1
Field N/A
Co. TREGO
State KANSAS

Company **CHOLLA PRODUCTION, LLC**
Well **HOWAT #1**
Field **N/A**
County **TREGO** State **KANSAS**

Location: API # : 15-195-21962-00-01
335' FNL & 3630' FEL
SEC 12 TWP 11S RGE 23W
Permanent Datum GL Elevation 2245'
Log Measured From KB 7' Above Perm. Datum
Drilling Measured From KELLY BUSHING
GRN
MAST TRAILER
Elevation
K.B. 2252'
D.F. N/A
G.L. 2245'

Date of Service	7/18/2019	ONE		
Run Number	ONE			
Depth Driller or PBTD	1740'			
Depth Logger	1604'			
Bottom Log Interval	1599'			
Top Log Interval	SURFACE			
Open Hole Size	7.875"			
Type Fluid	WATER			
Fluid Level	FULL			
Fluid Density	N/A			
Max. Recorded Temperature	N/A			
Max. Wellhead Pressure	00 PSI			
Wellhead Connection	N/A			
Estimated Cement Top	SURFACE			
Unit Number	P-106			
Wireline Size	.288"			
Location	HAYS, KANSAS			
Recorded By	M. HISS			
Witnessed By	KELLY BRANUM			
	Size	W/Ft	Top	Bottom
Tubing Record				
Surface Casing	8.625"	23#	00'	219'
Production Casing	4.5"	11.5#	00'	TD
Liner Record				

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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.
WAKENNEY KS
NORTH TO RD B, EAST 2 1/4, SOUTH INTO

ZERO FREE PIPE

THANK YOU FOR USING PIONEER ENERGY SERVICES!

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: M. HISS Operator: K. PFANNENSTIEL Operator: Operator:		

Log Variables

DatabaseC:\ProgramData\Warrior\Data\cholla_patterson#3_12swd_cblgn.db
Dataset field/well/run1/pass3/_vars_

Top - Bottom

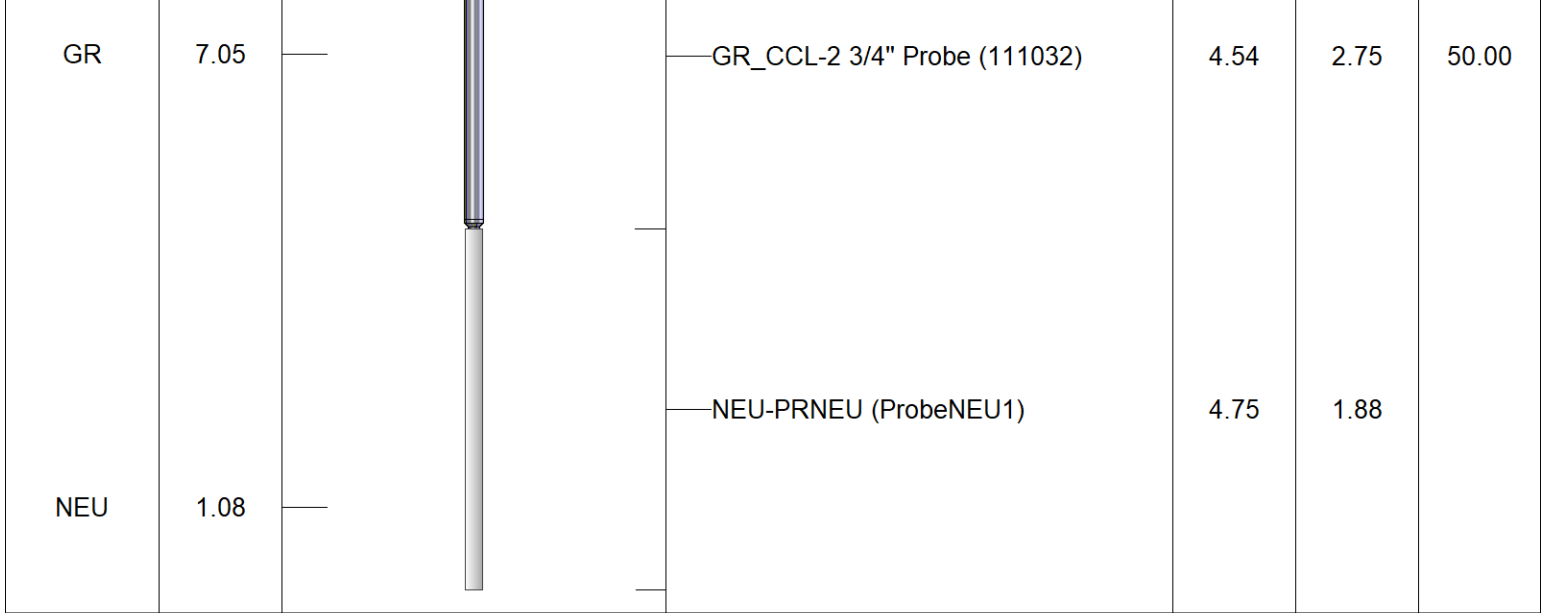
BOREID in 7.875	BOTTEMP degF 100	CASEOD in 4.5	CASETHCK in 0.27	CASEWGHT lb/ft 11.5	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.08
NPORSEL Limestone	NPORSHIFT 0	PERFS 0	PPT usec 0	SRFTEMP degF 70	TDEPTH ft 1604		

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

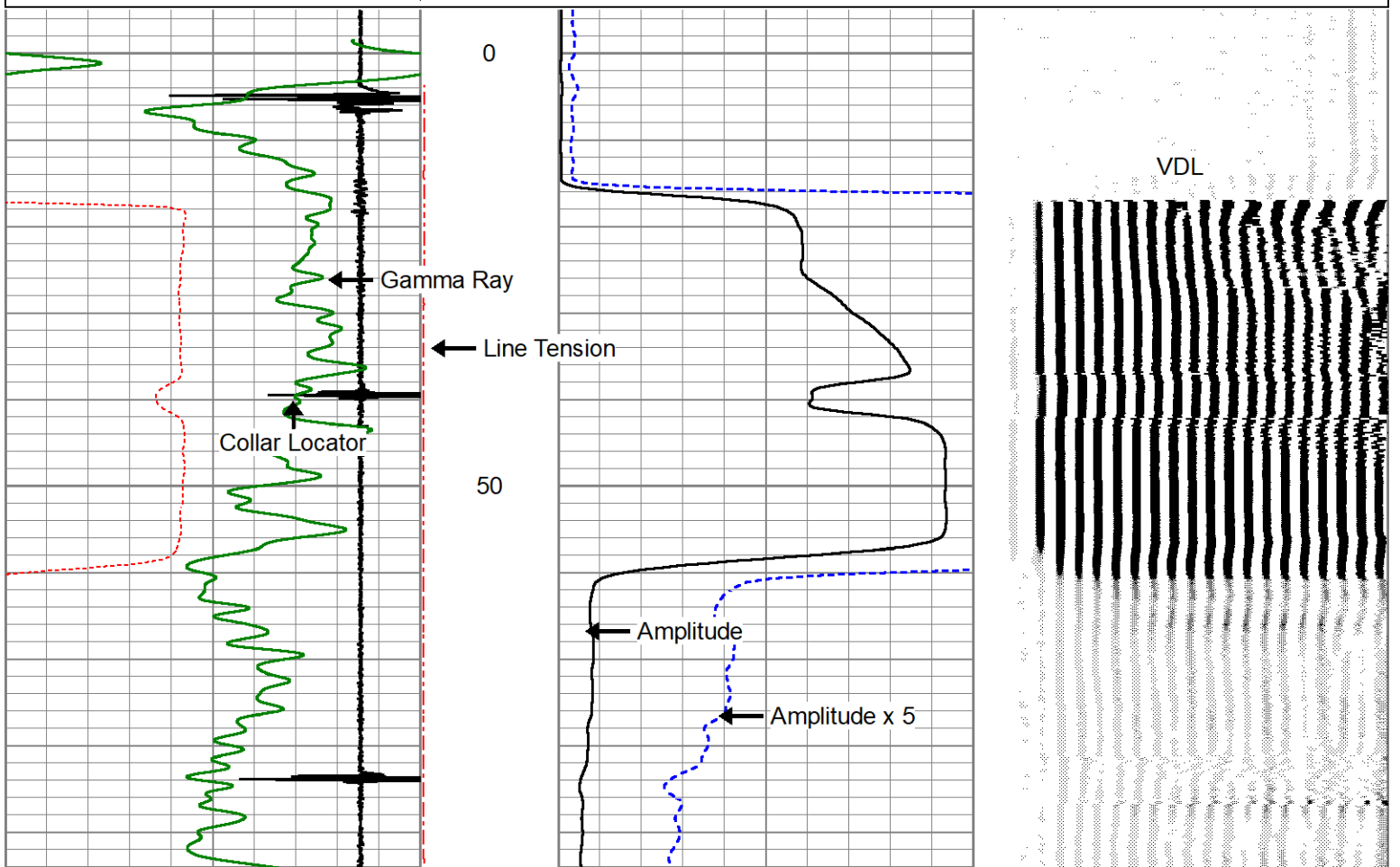
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Cable Head-Titan_144 1 7/16" Titan Cable Head	1.03	1.44	2.00
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00
WVFS8	16.36		PROBE-RBT-DIGITAL-RBL-D (080554) Probe 2 3/4" Radii Bond-Digital	8.75	2.75	100.00
WVFS7	16.36					
WVFS6	16.36					
WVFS5	16.36					
WVFS4	16.36					
WVFS3	16.36					
WVFS2	16.36					
WVFS1	16.36					
WVFCAL	16.36					
WV3FT	16.36					
WV5FT	15.36					
HEADVOLT	12.17	Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	
CCL	8.39					

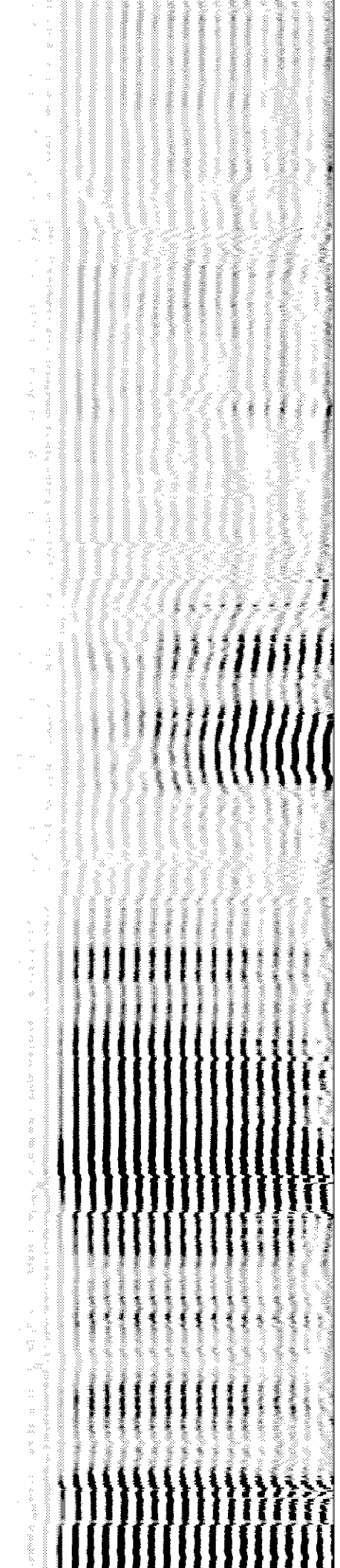
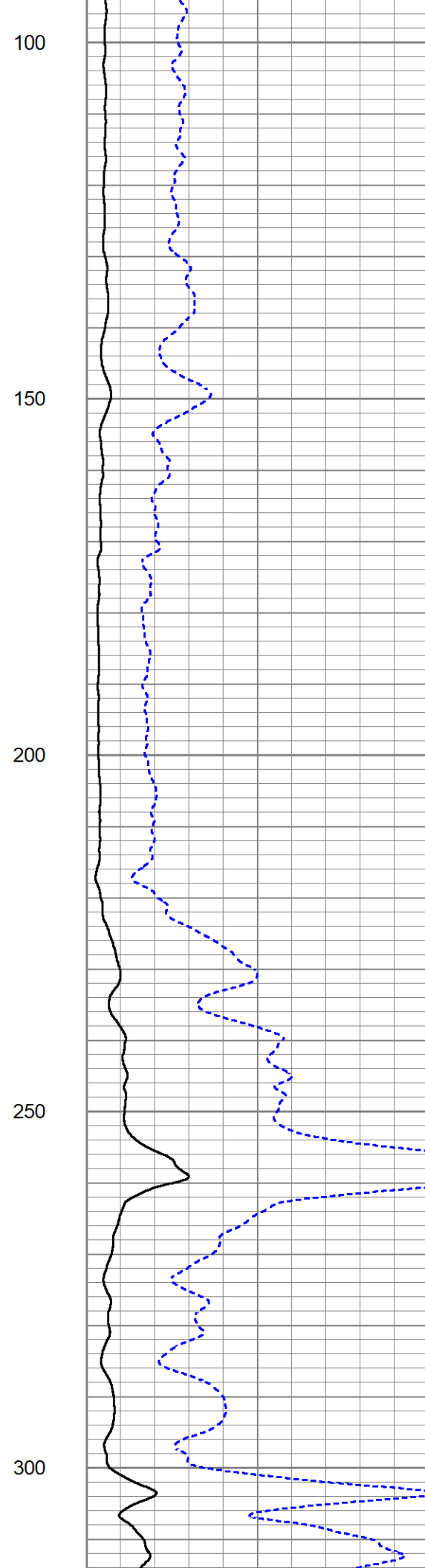
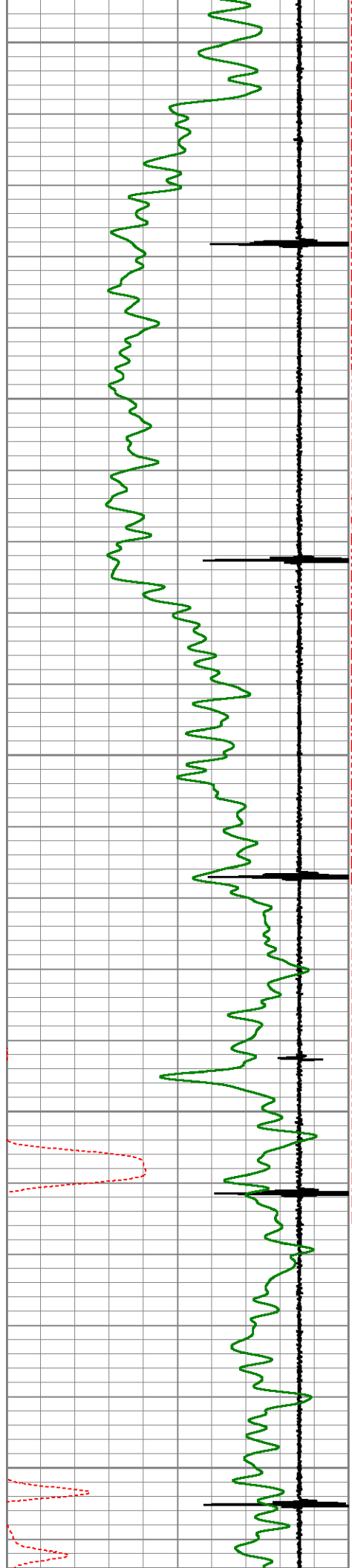


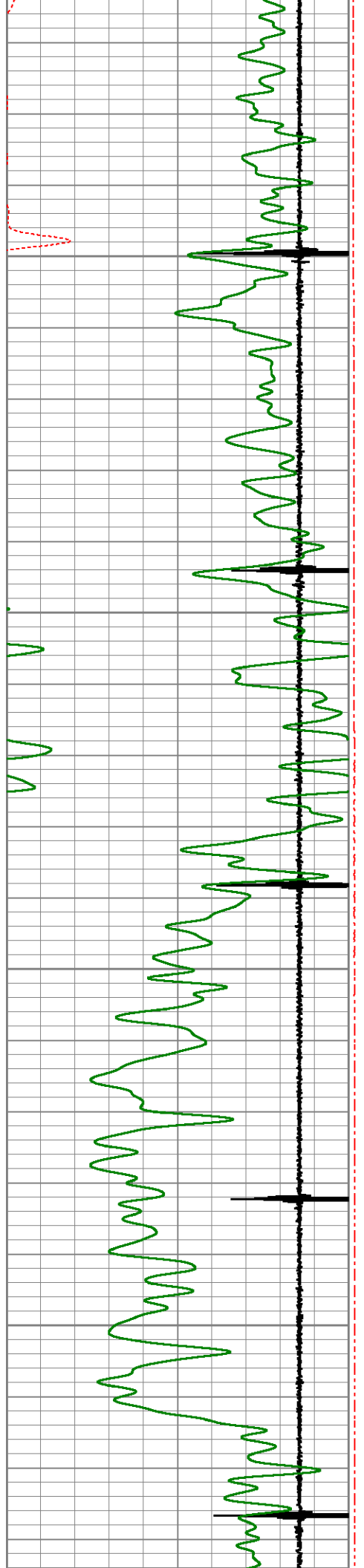
Dataset: cholla_patterson#3_12swd_cblgn.db: field/well/run1/pass3
 Total length: 24.83 ft
 Total weight: 182.00 lb
 O.D.: 2.75 in

Database File: cholla_patterson#3_12swd_cblgn.db
 Dataset Pathname: pass3
 Presentation Format: pinr_cbl
 Dataset Creation: Thu Jul 18 11:52:21 2019
 Charted by: Depth in Feet scaled 1:240

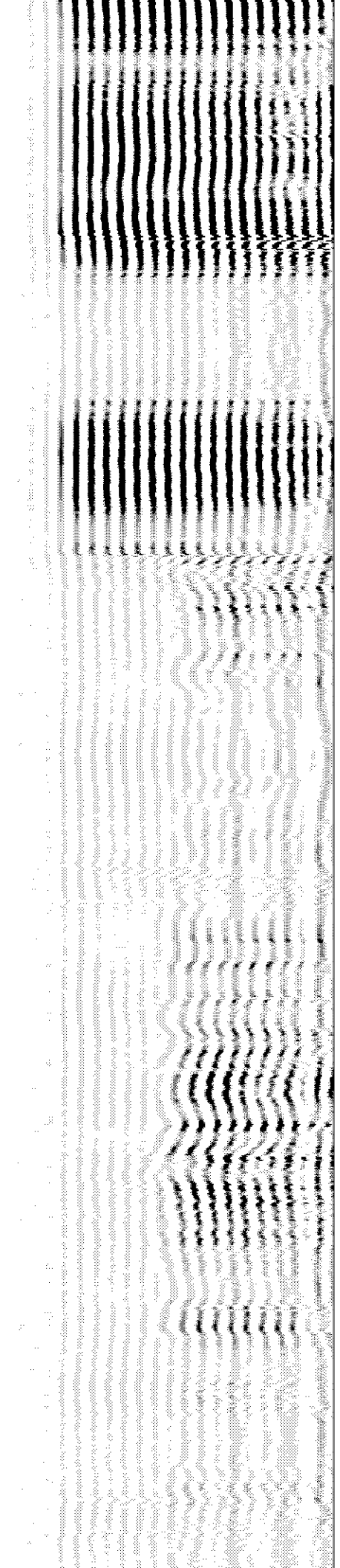
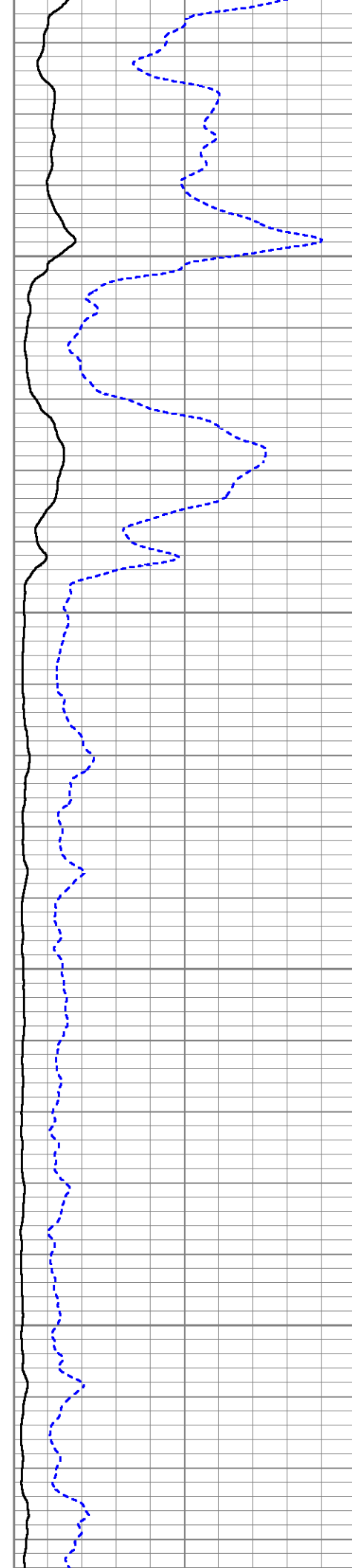
-6	Collar Locator	1	Line Tension	0	Amplitude (mV)	100	200	Variable Density (usec)	1200
0	Gamma Ray	150	0	(lb2000)					
280	3' Travel Time (usec)	180							

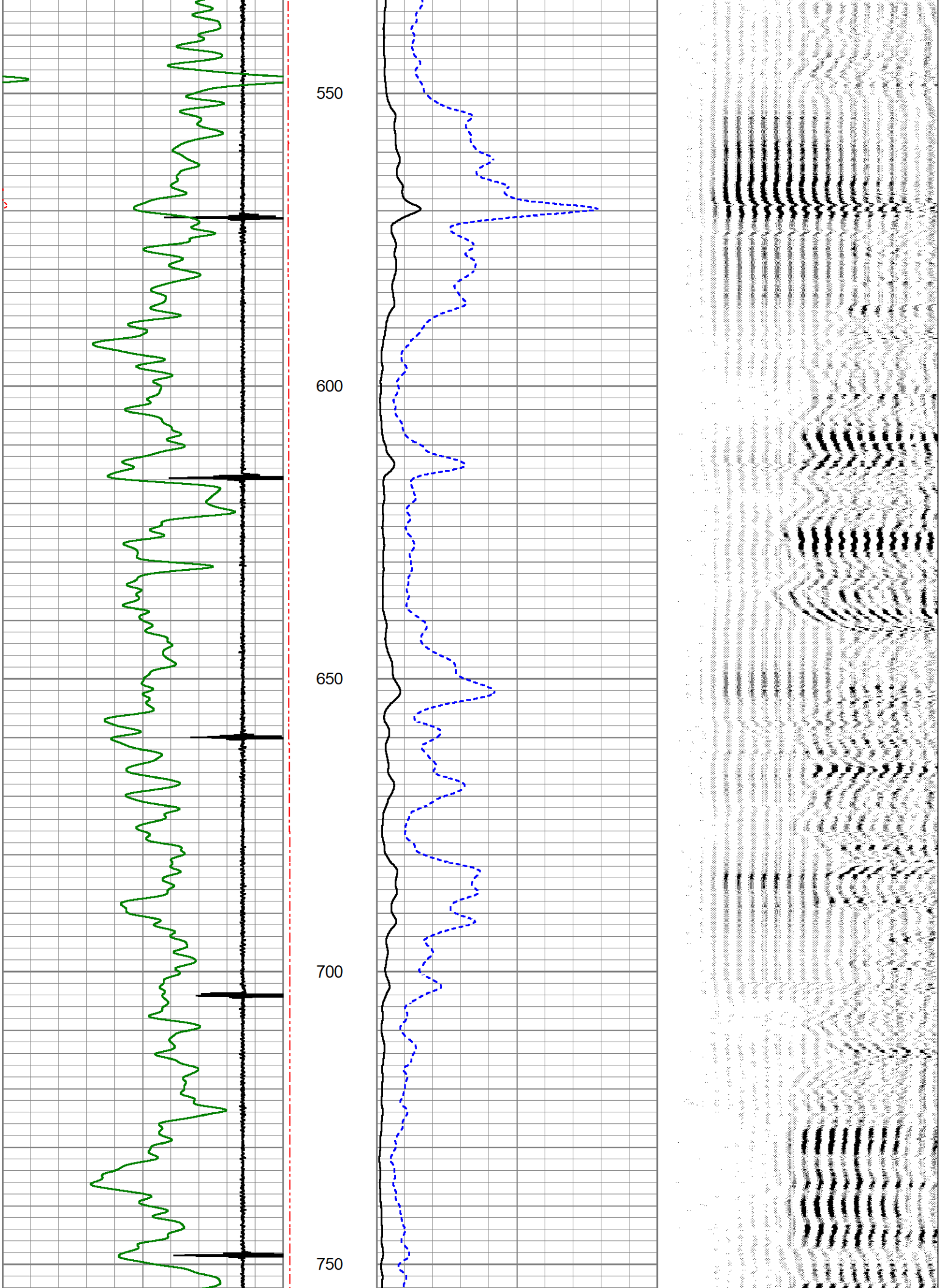


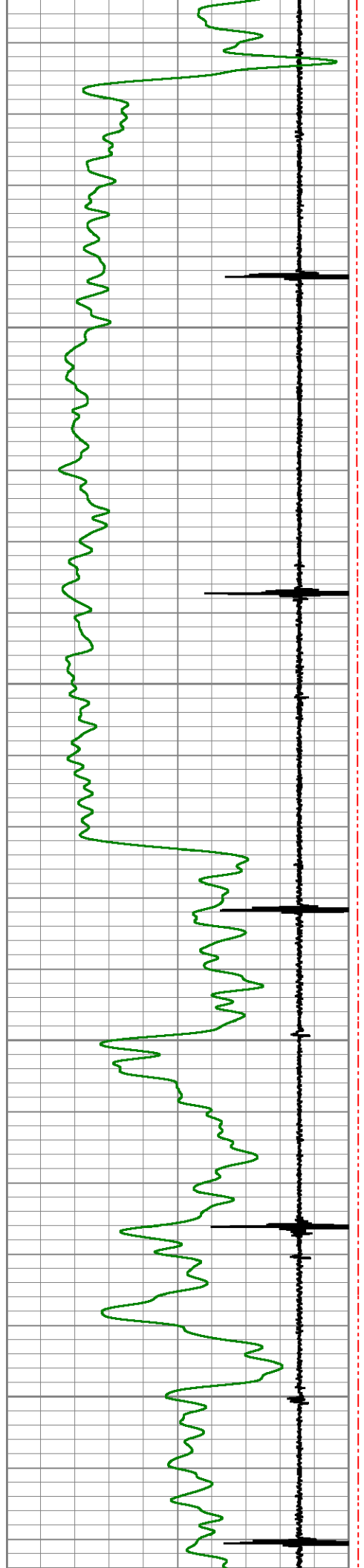




350
400
450
500





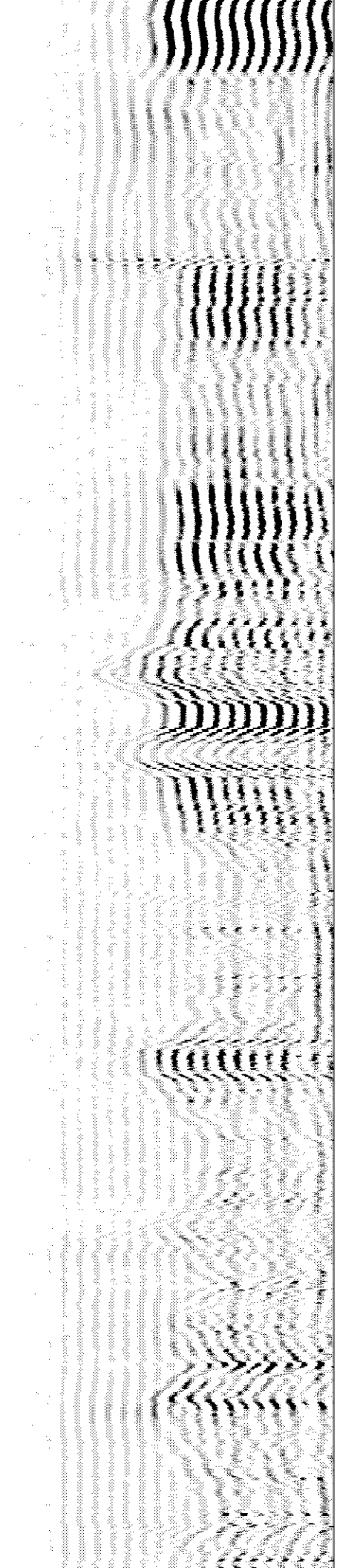
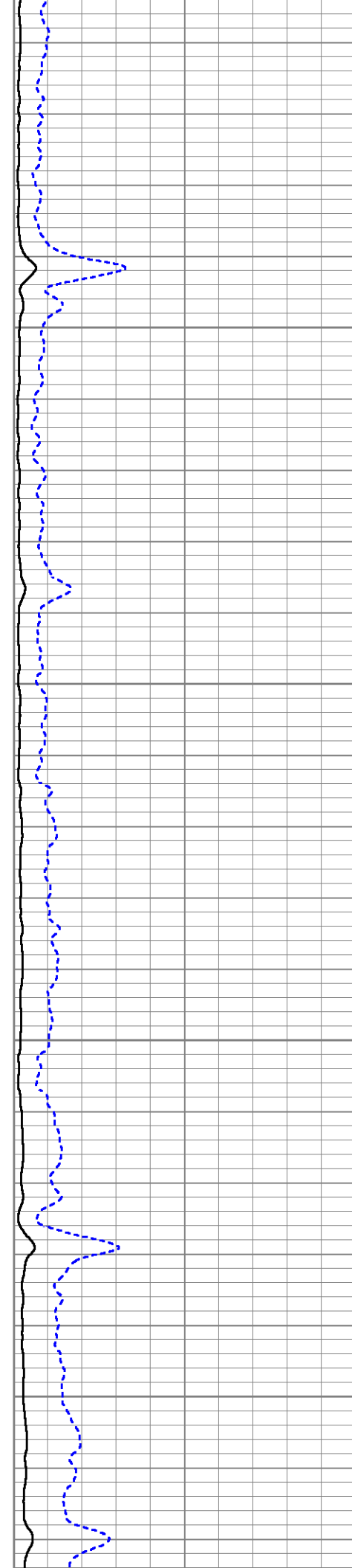


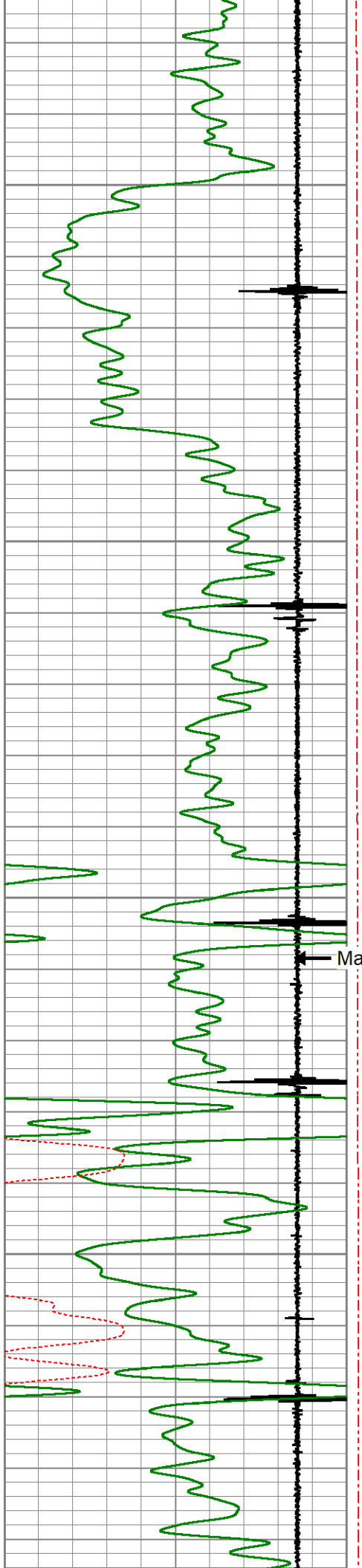
800

850

900

950





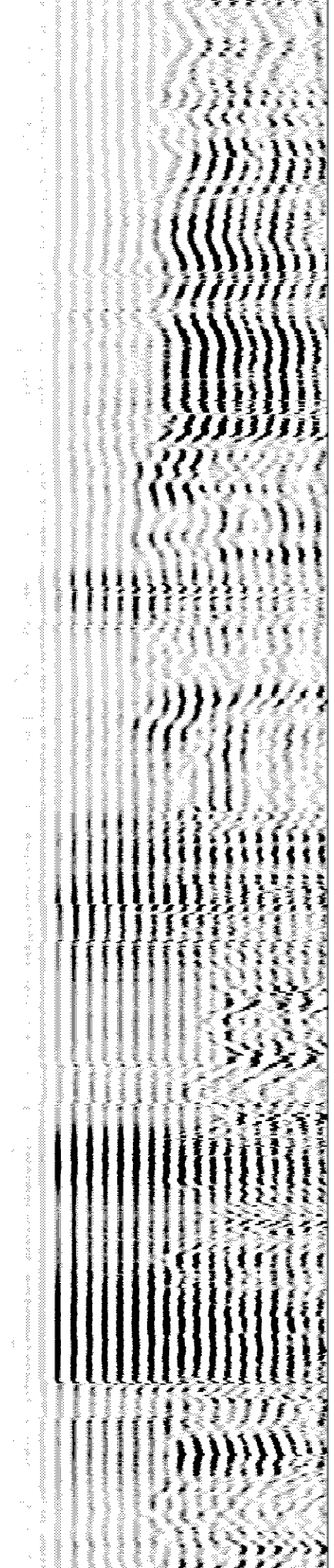
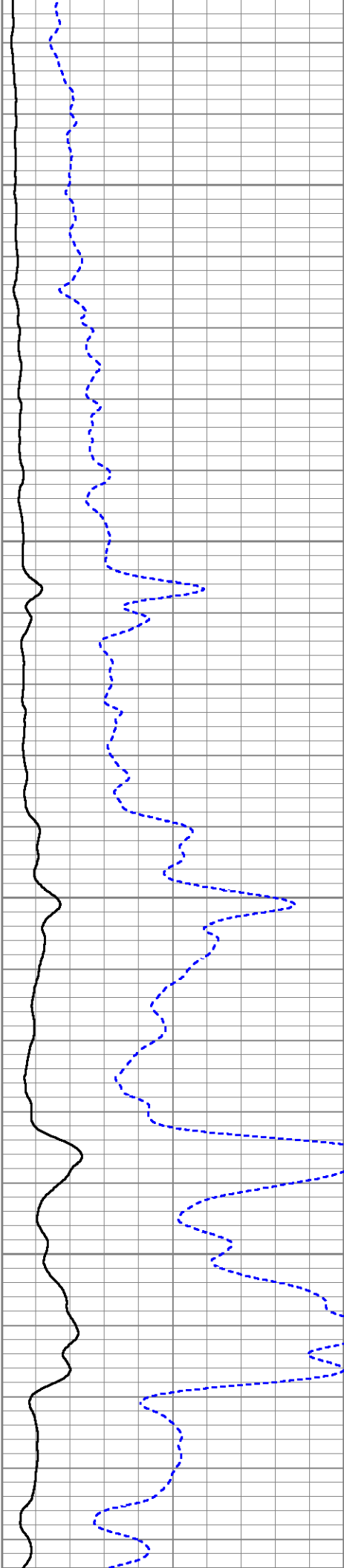
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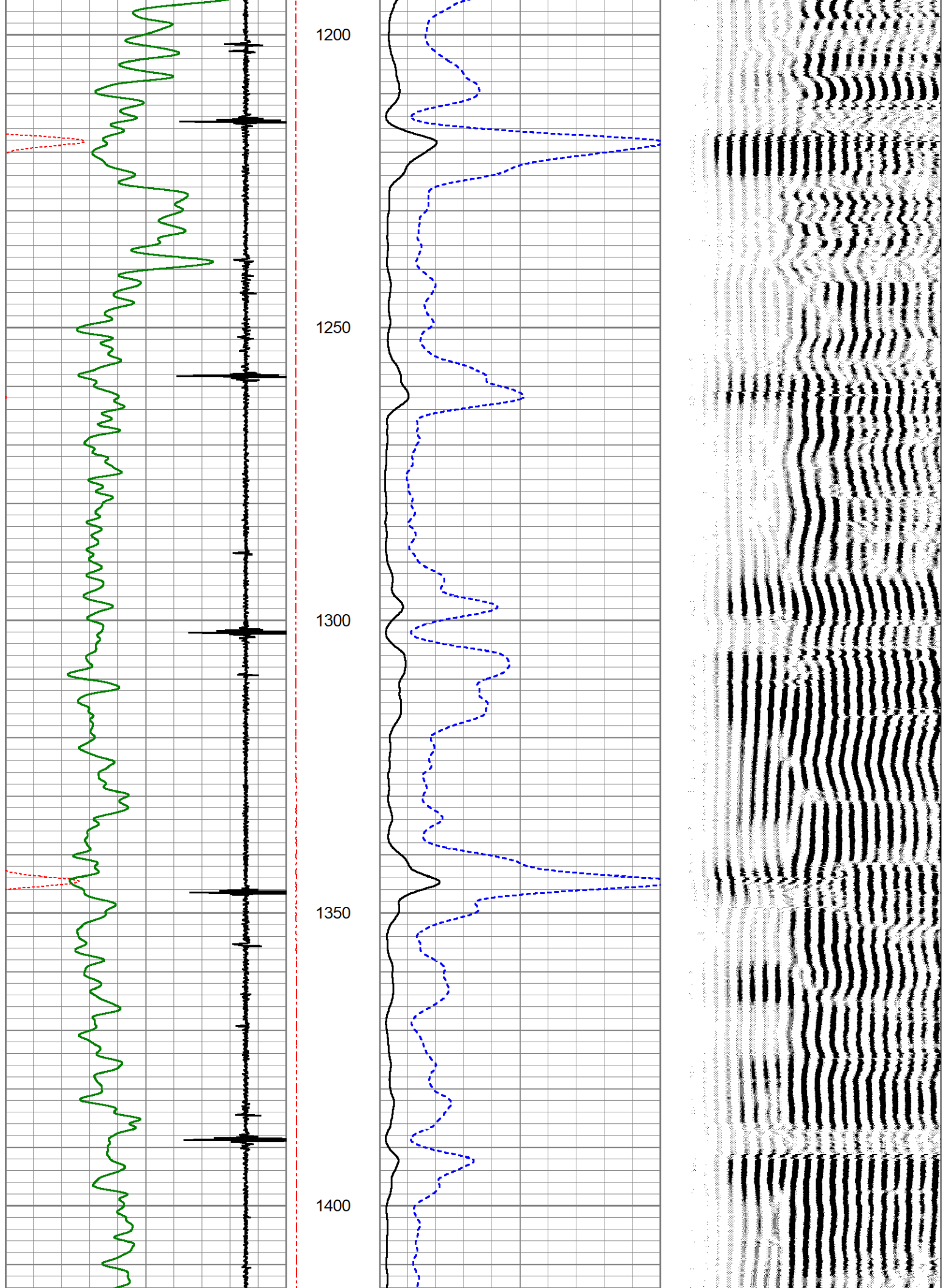
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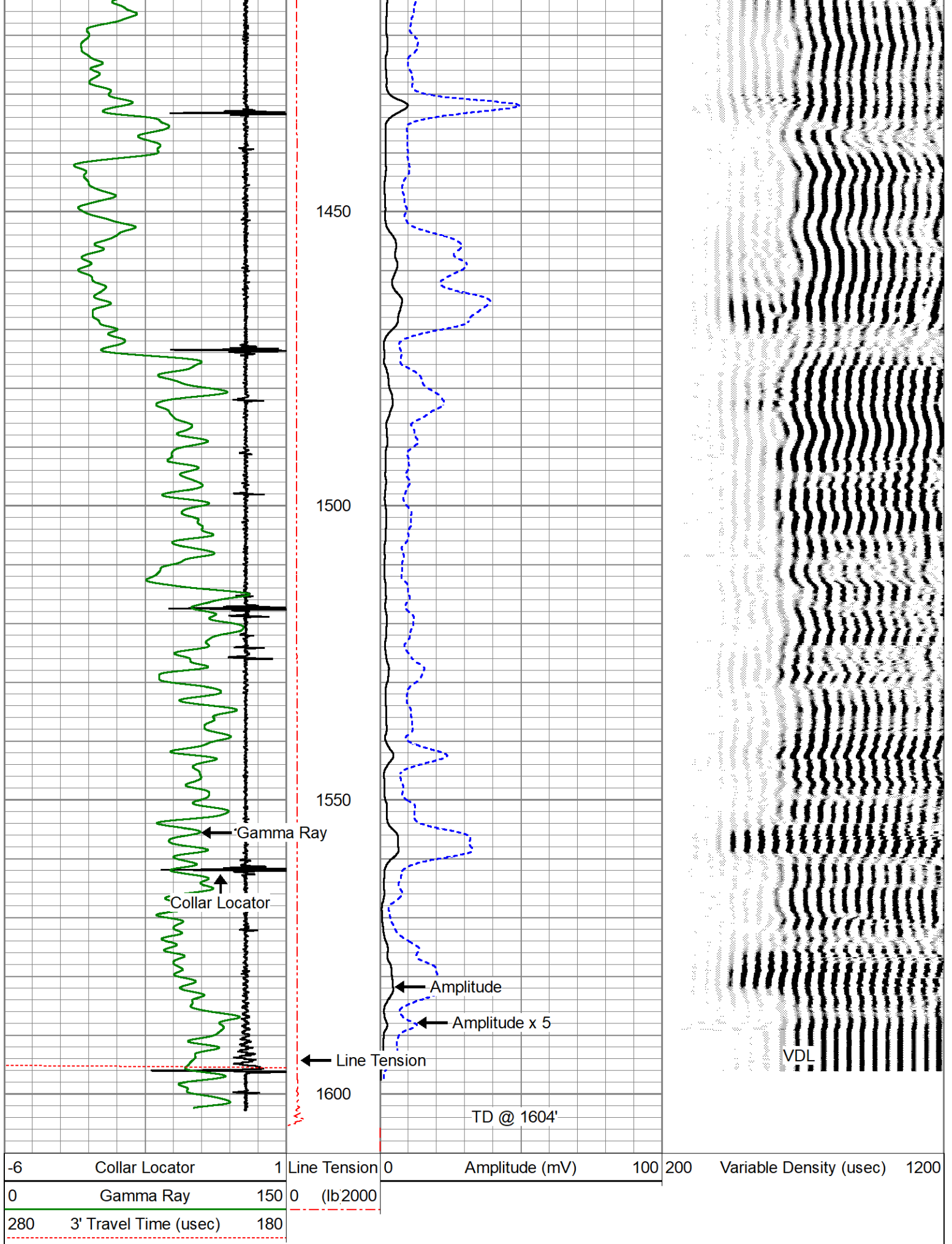
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1150

Marker Jt.

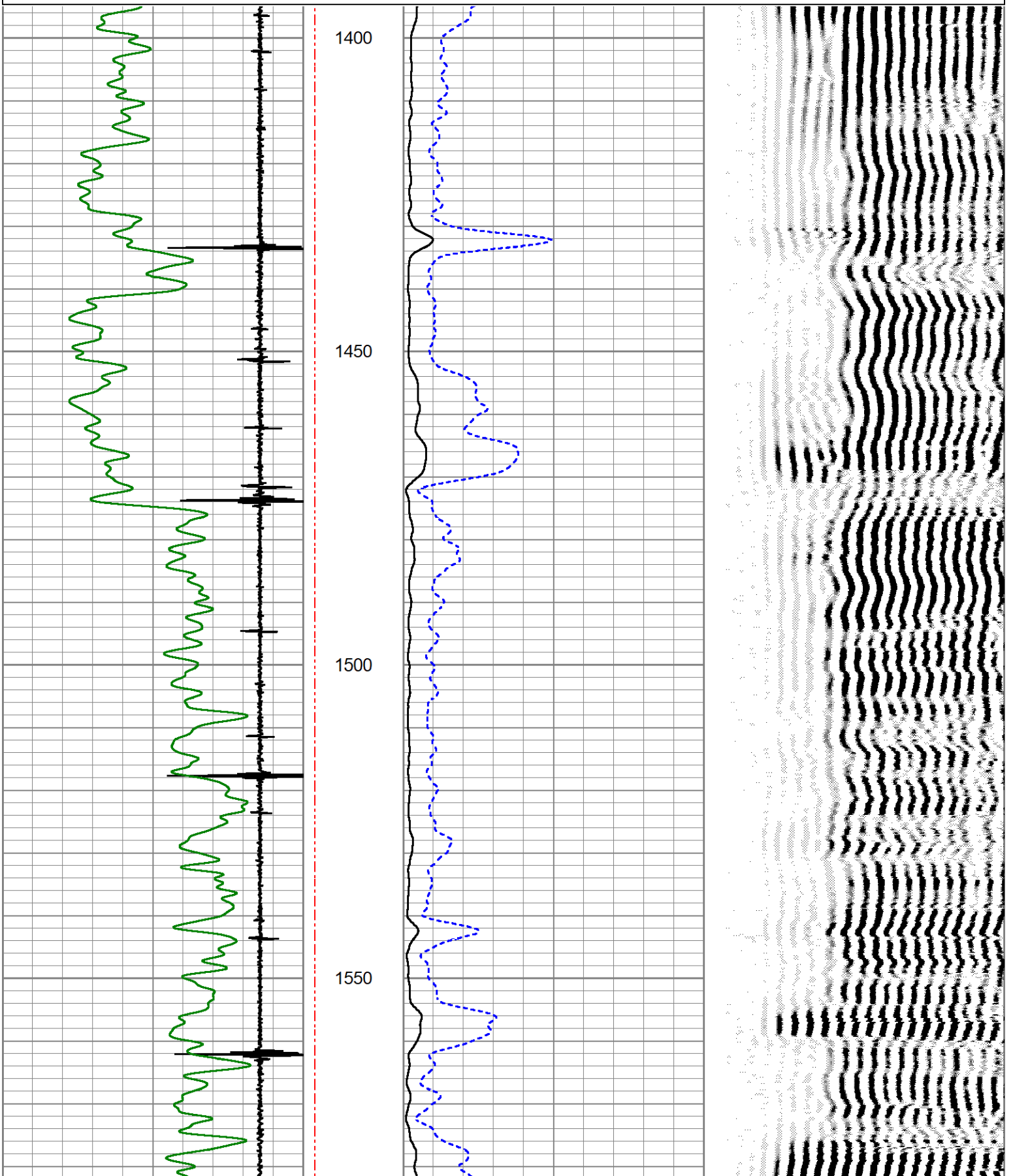


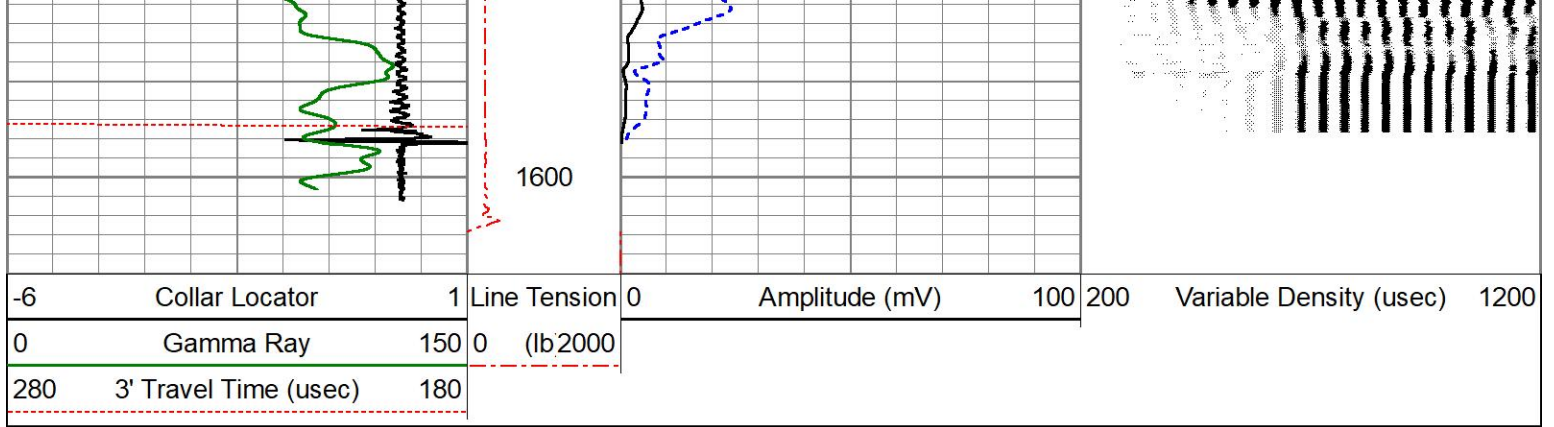




Database File cholla_patterson#3_12swd_cblgn.db
 Dataset Pathname pass2
 Presentation Format Unknown
 Dataset Creation Thu Jul 18 11:45:04 2019
 Charted by Depth in Feet scaled 1:240

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





Calibration Report

Database File cholla_patterson#3_12swd_cblgn.db
 Dataset Pathname pass3
 Dataset Creation Thu Jul 18 11:52:21 2019

Neutron Calibration Report

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: 2 3/4" Probe
 Performed: Tue Apr 03 09:45:00 2018
 Calibrator Value: 1.0
 Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps
 Sensitivity: 0.9000 /cps



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 Field N/A
 County TREGO
 State KANSAS