



DUAL COMPENSATED POROSITY / MICRO LOG

Company **Curts Oil Operations LLC**

Well 5-H #1

Field Beaver South

County Barton State Kansas

Location: API #: 15-009-26316-00-00

1993 FNL & 1840 FEL

SEC 29 TWP 16S RGE 12W

Log Measured From Kelly Bushing

Elevation	1907
K.B.	
D.F.	
G.L.	1899

Drilling Macedonia 11011 Kelly L

12/6/2021

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[illegible]

	34/4
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Elval

2	00
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[illegible]

[illegible]

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	D
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[illegible]

C

Vehicle Record

From

0	
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401

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<<< Fold Here >>>

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

Beaver Kansas
South Into Across from Elevator

Log Measured From: Kelly Bushing 8 Ft. Above Permanent Datum

THANK YOU FOR USING Midwest Wireline LLC
785-625-3858

Your Midwest Wireline Crew

Engineer: J. Henrickson
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Clayton Camozzi
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\curts_oil_5h_1.db
Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	111	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	1010	50	Off	3474



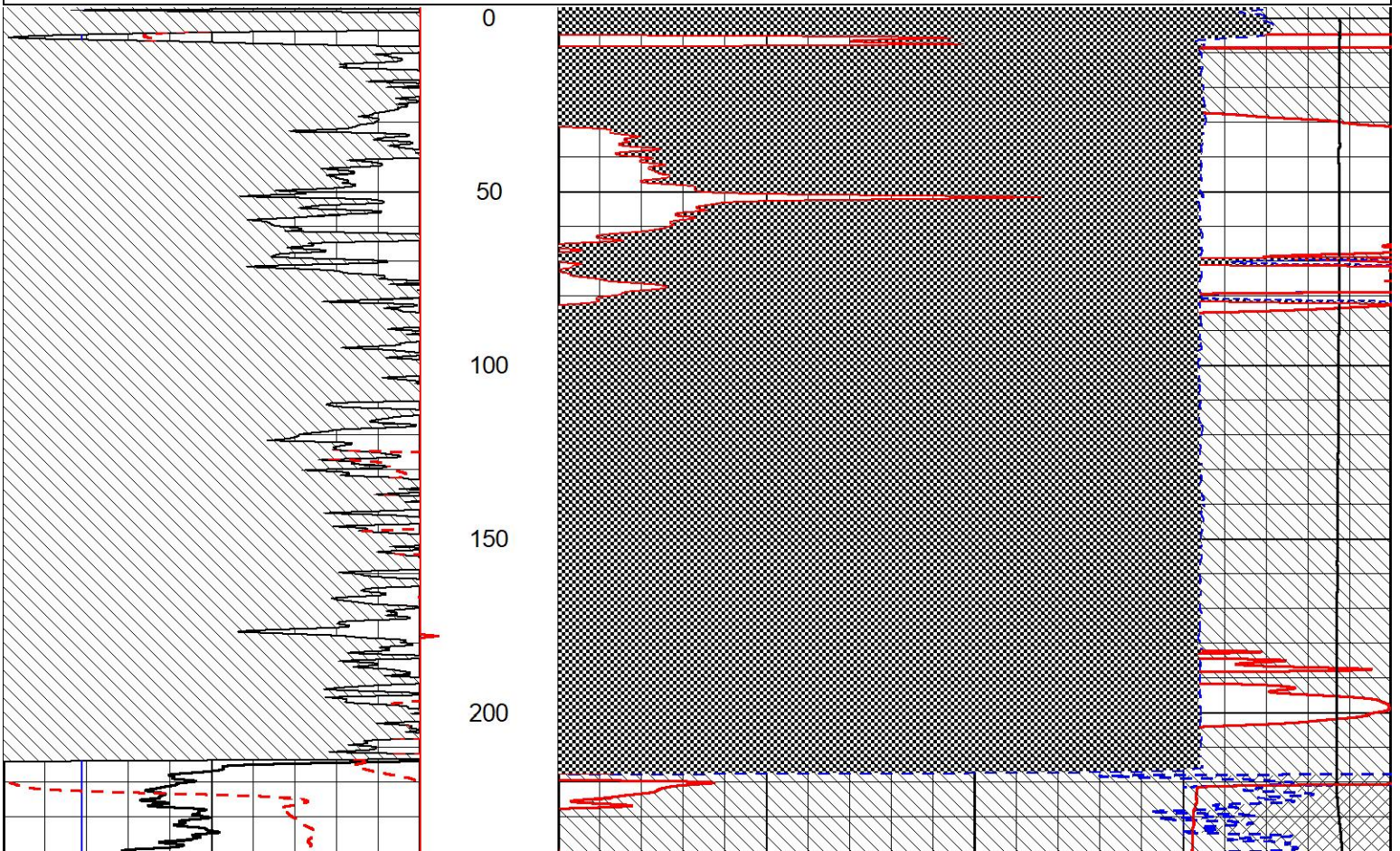
MIDWEST WIRELINE

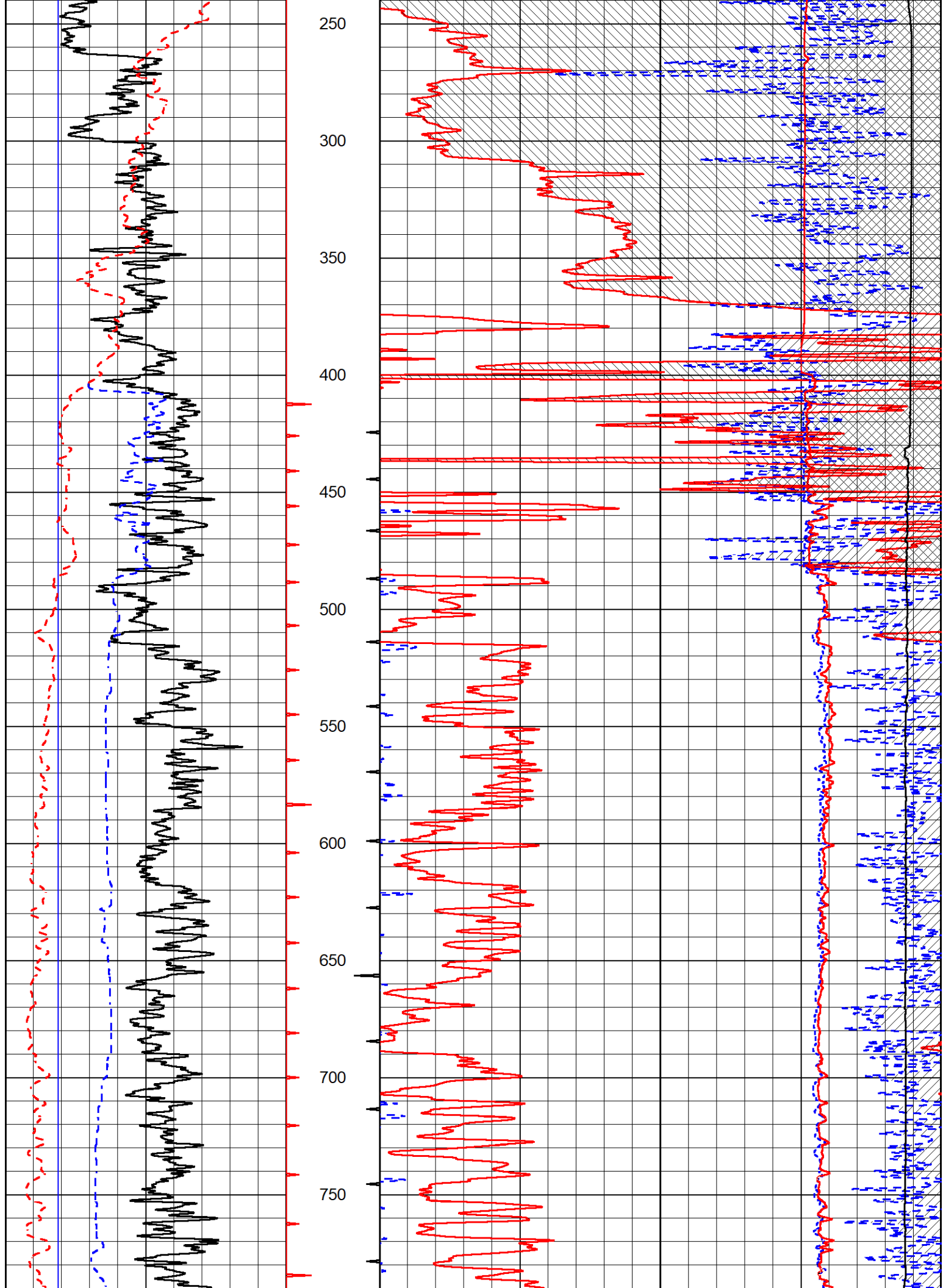
DETAIL SECTION

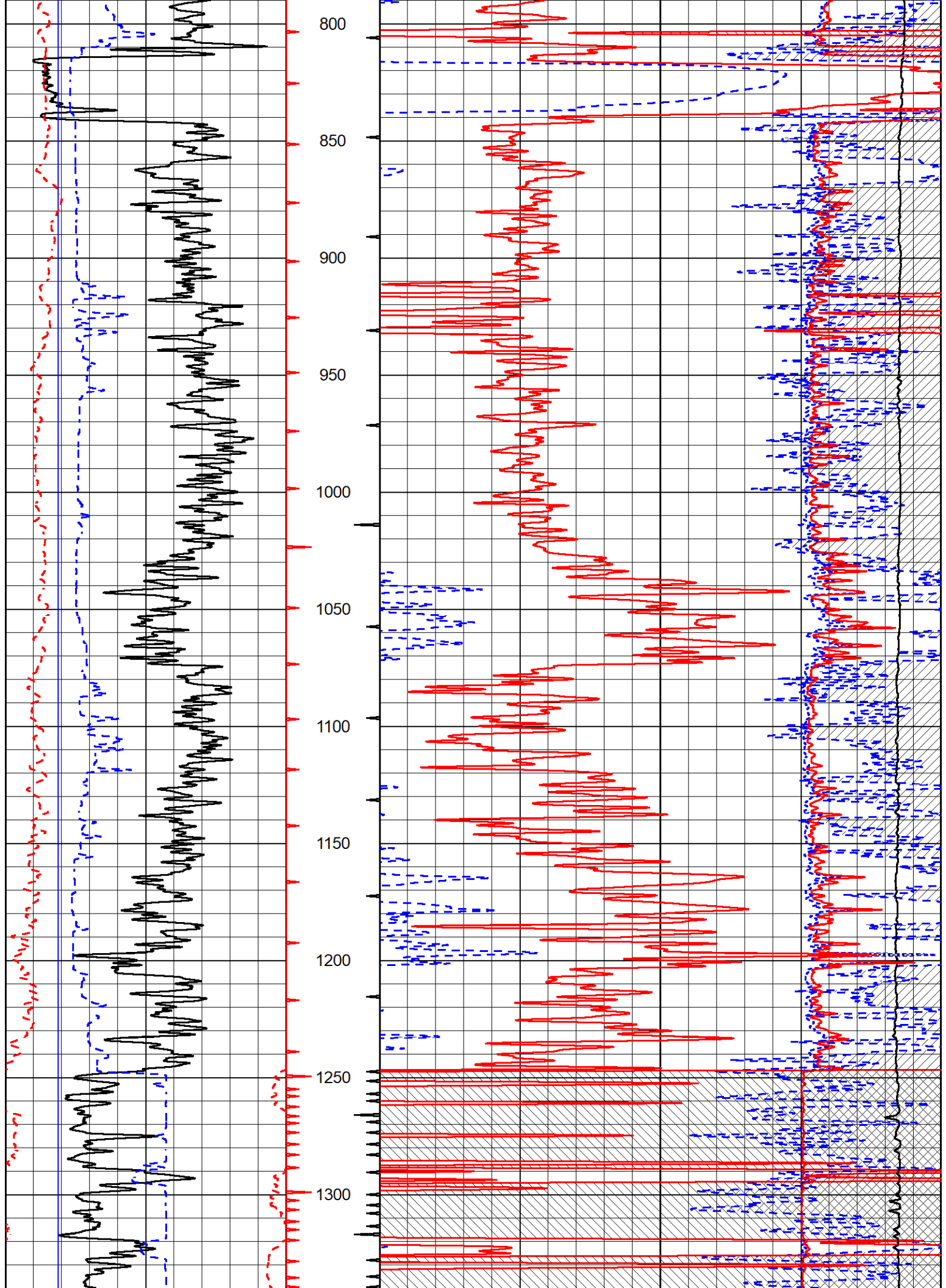
MAIN PASS

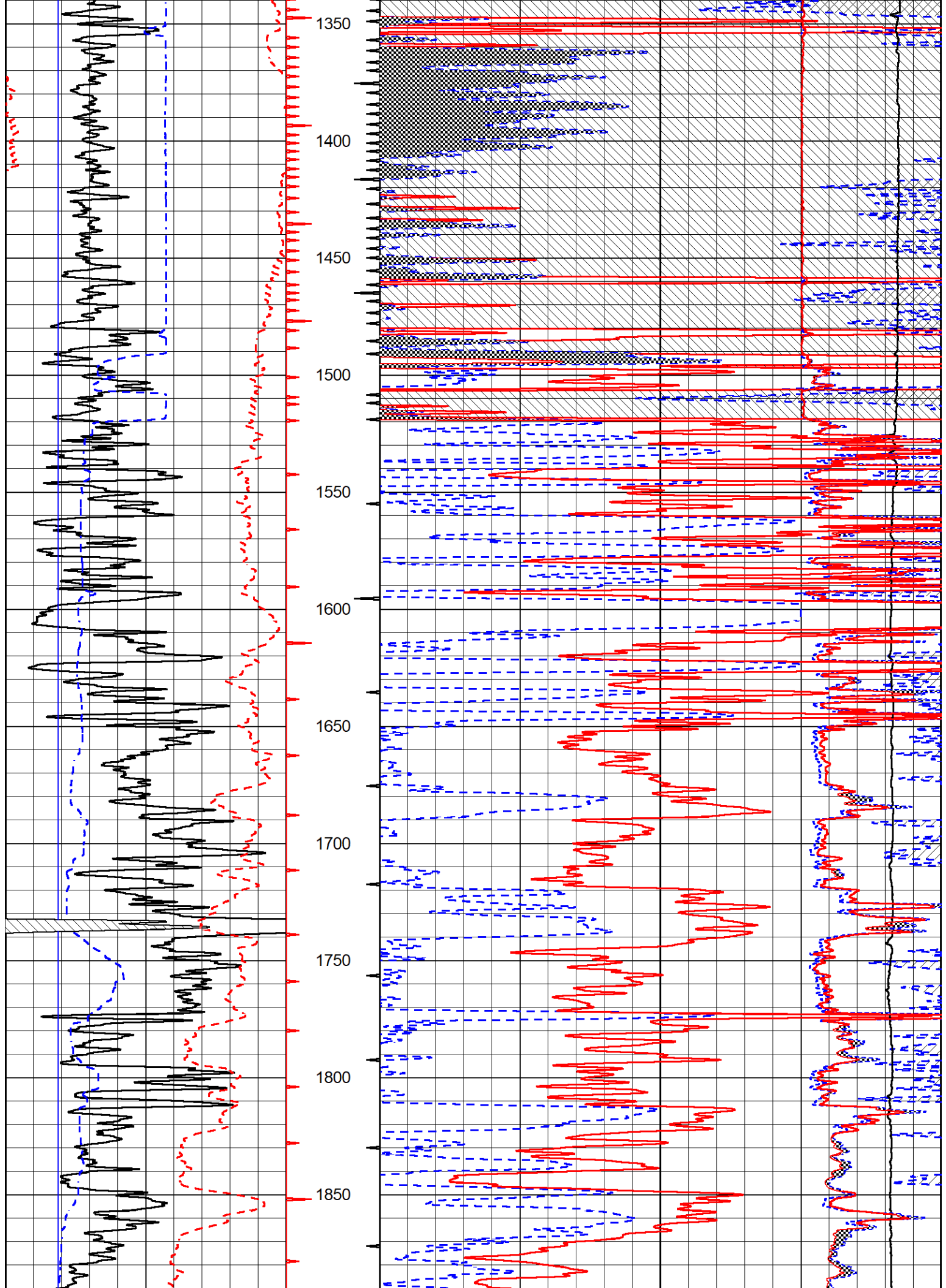
Database File curts_oil_5h_1.db
Dataset Pathname stackml/pass4.1
Presentation Format _CNDLS~2
Dataset Creation Mon Dec 06 16:42:05 2021
Charted by Depth in Feet scaled 1:600

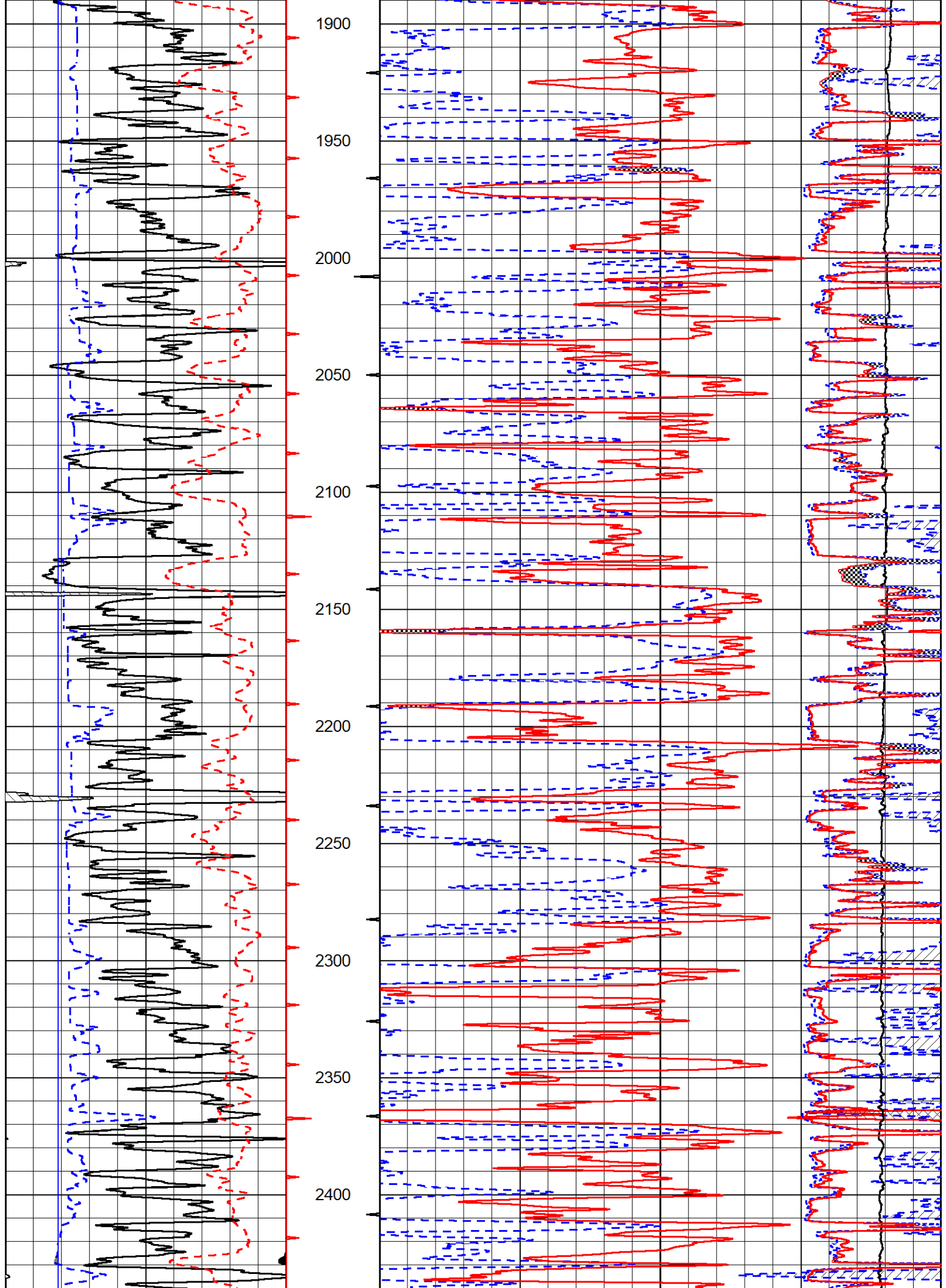
0	Gammy Ray (GAPI)	150	30	Compensated Neutron (pu)	-10
6	Caliper (in)	16	30	Compensated Density (pu)	-10
-200	SP (mV)	0	15000	Line Tension (lb)	0
				Micro Normal	
				0 (Ohm-m)	20
				Micro Inverse	
				0 (Ohm-m)	20

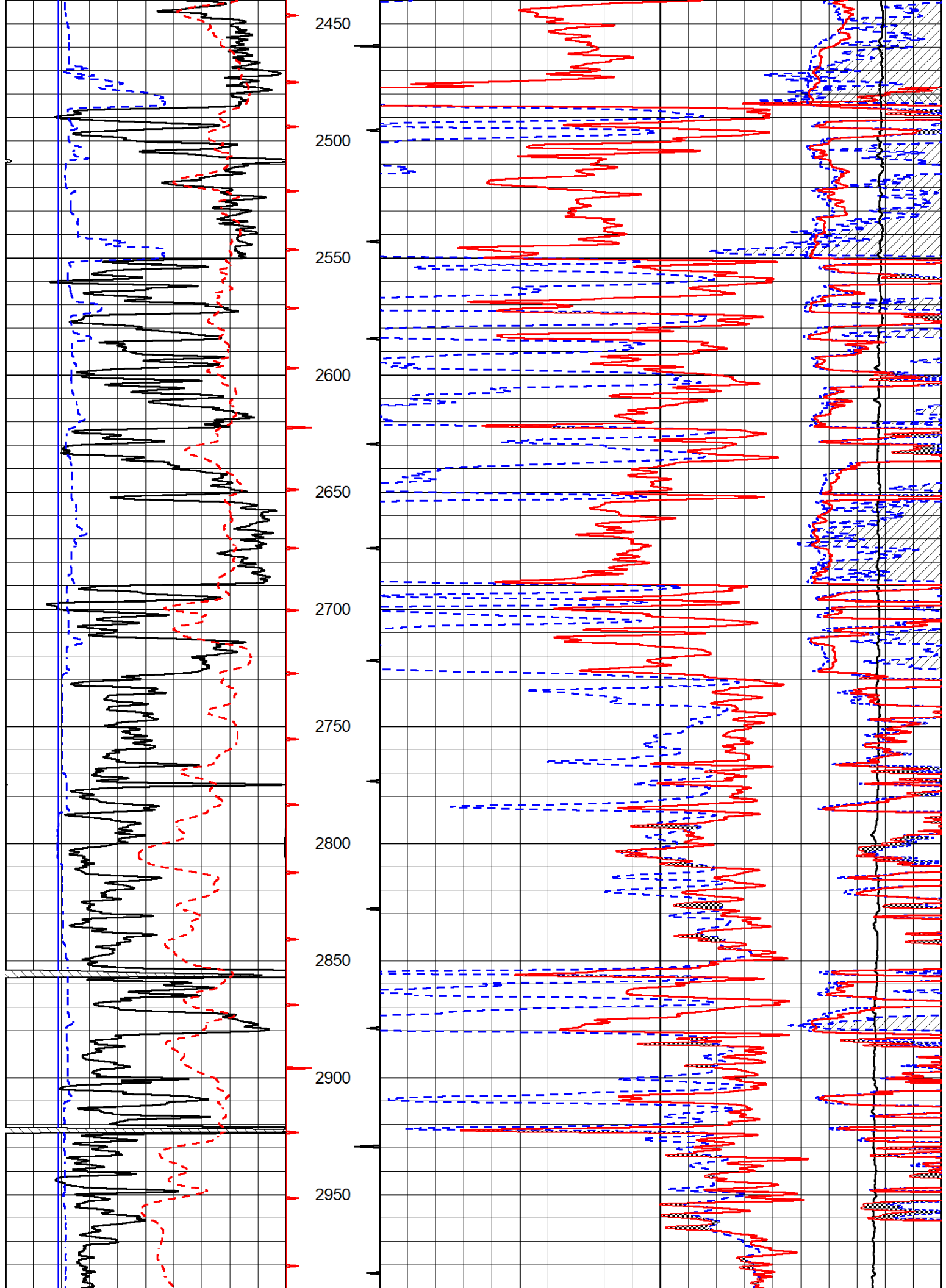


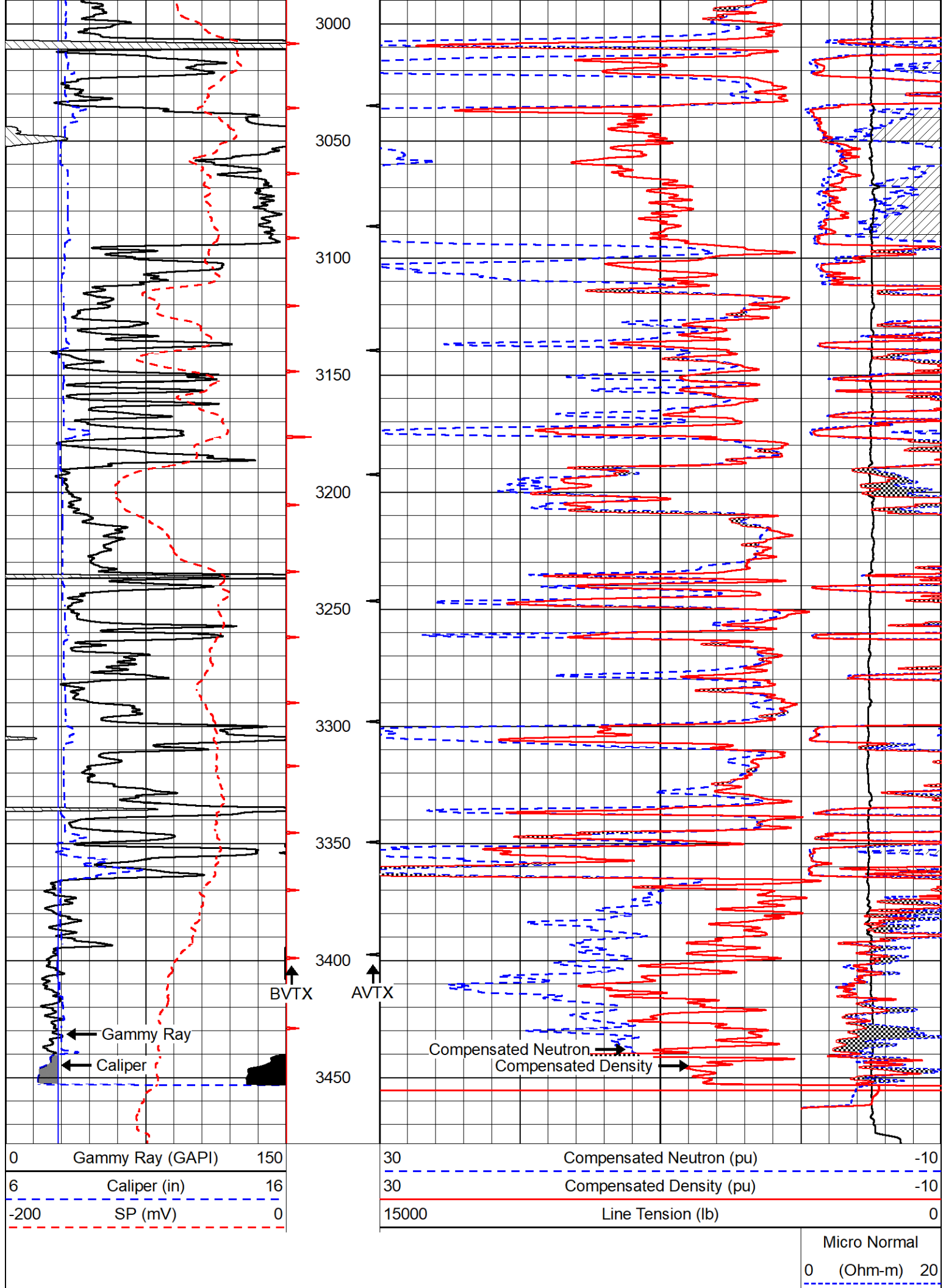














DETAIL SECTION

MAIN PASS

Database File

curts_oil_5h_1.db

Dataset Pathname

stackml/pass4.1

Presentation Format

_CNDLS~2

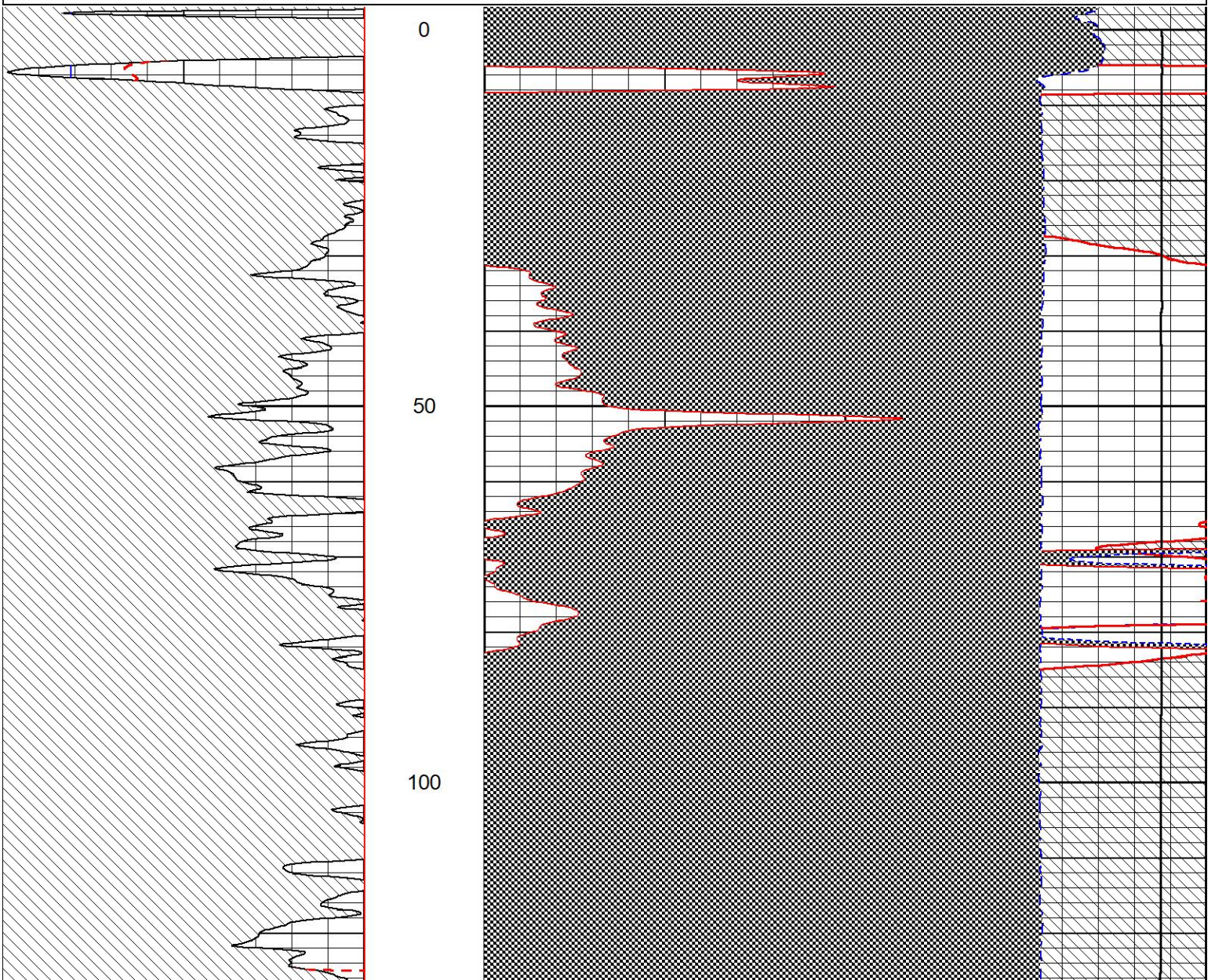
Dataset Creation

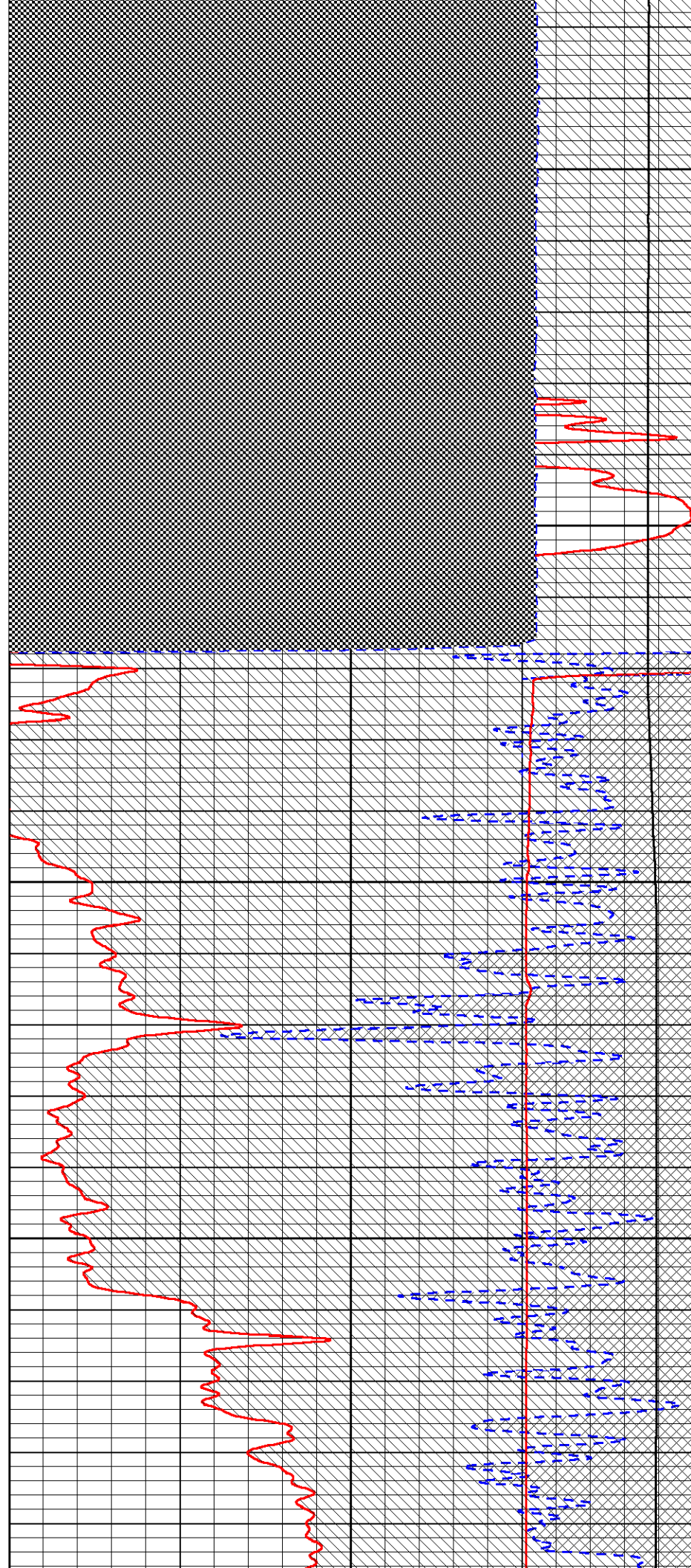
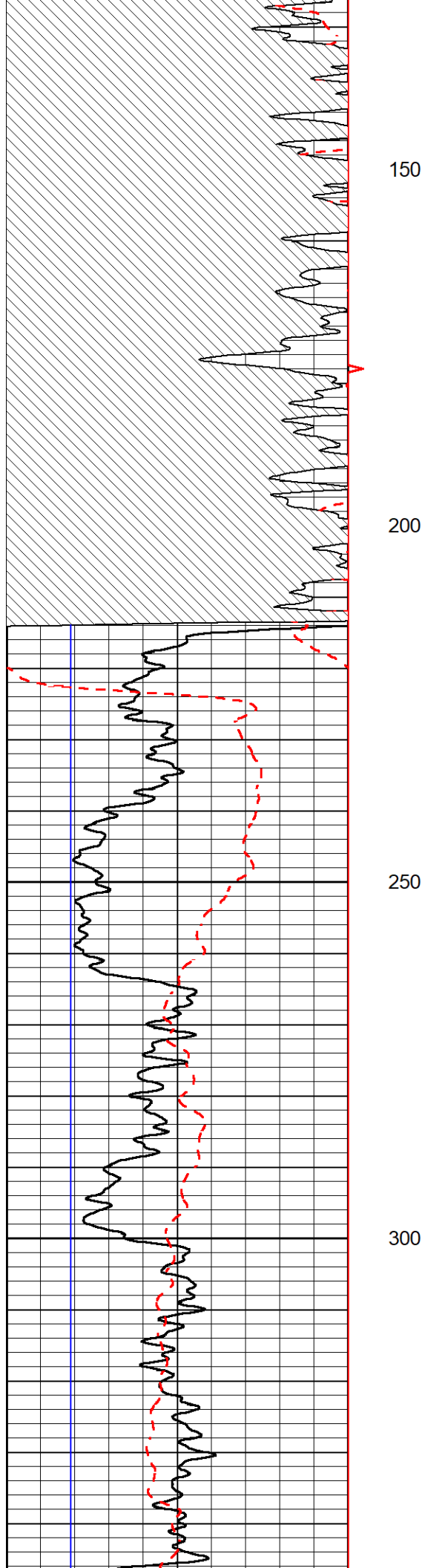
Mon Dec 06 16:42:05 2021

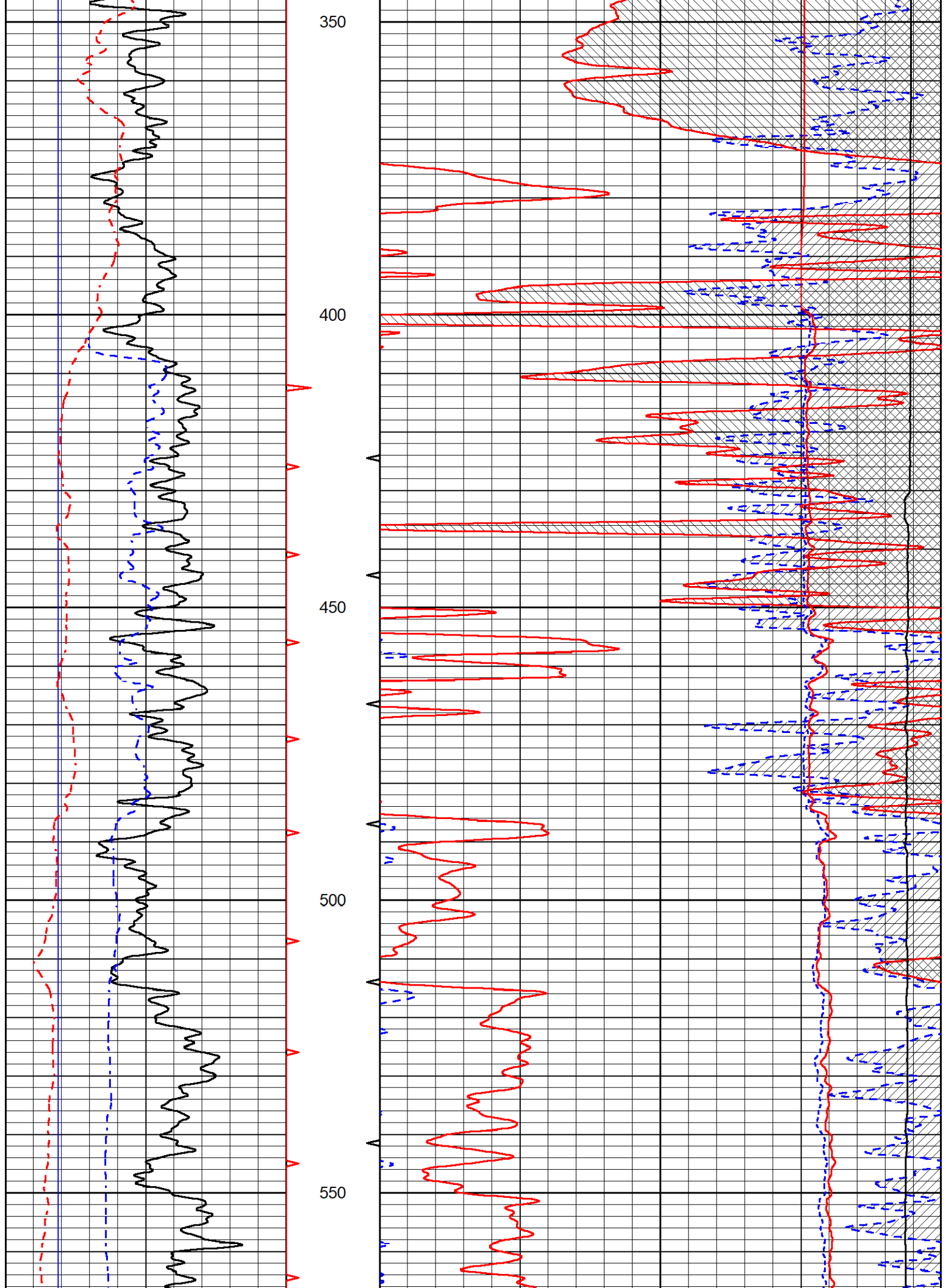
Charted by

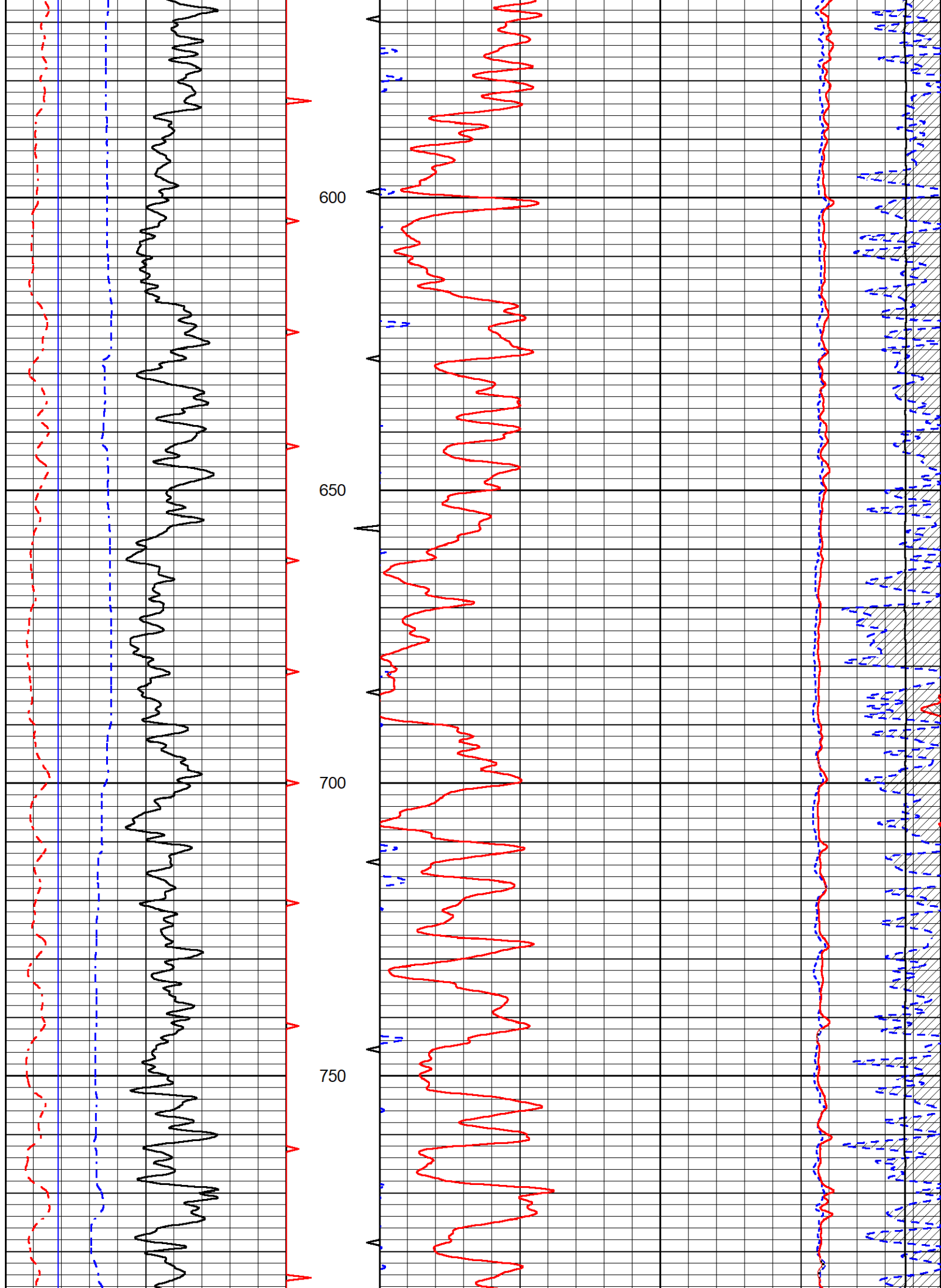
Depth in Feet scaled 1:240

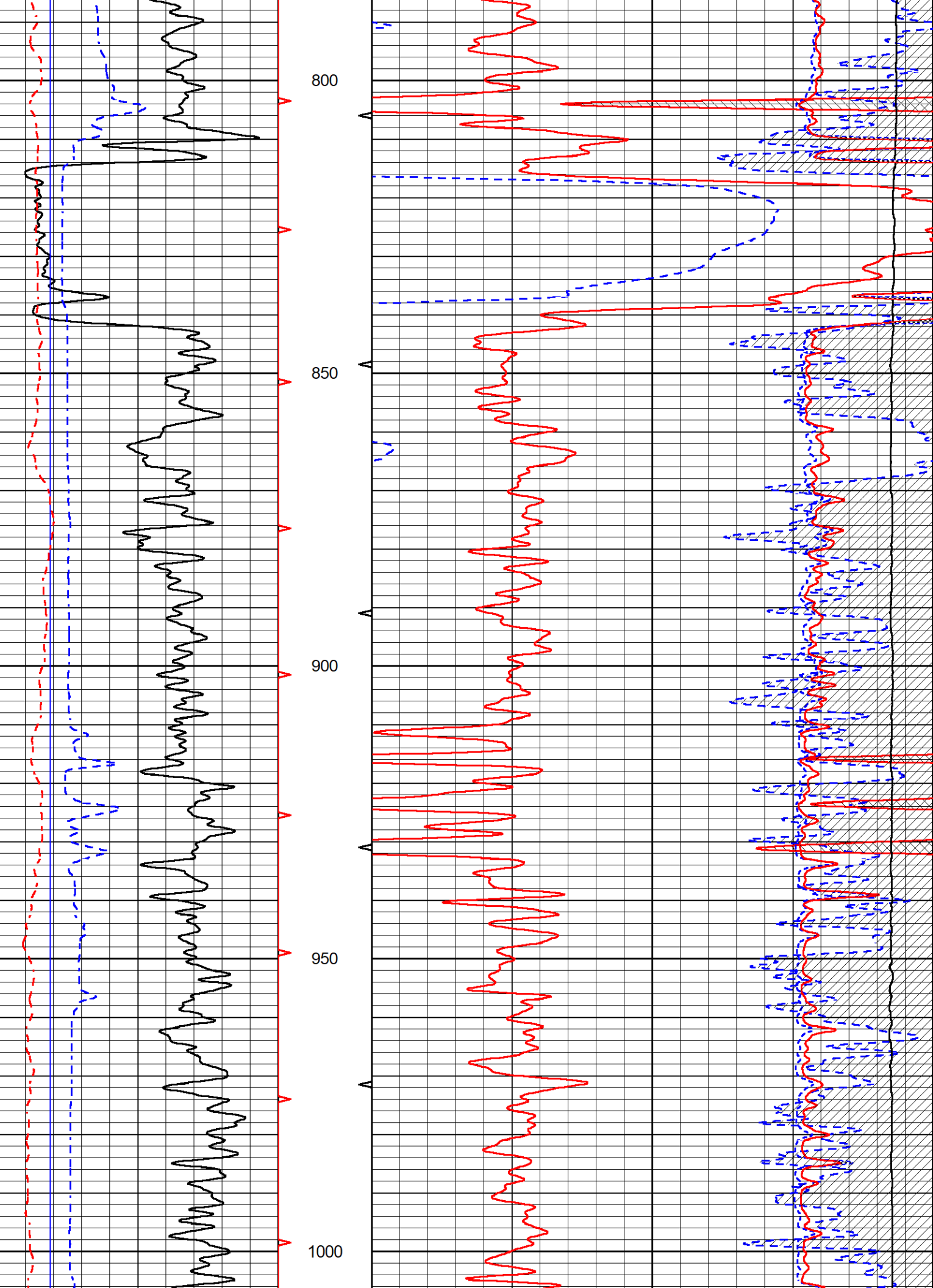
0	Gammy Ray (GAPI)	150	30	Compensated Neutron (pu)	-10
6	Caliper (in)	16	30	Compensated Density (pu)	-10
-200	SP (mV)	0	15000	Line Tension (lb)	0
					Micro Normal
					0 (Ohm-m) 20
					Micro Inverse
					0 (Ohm-m) 20

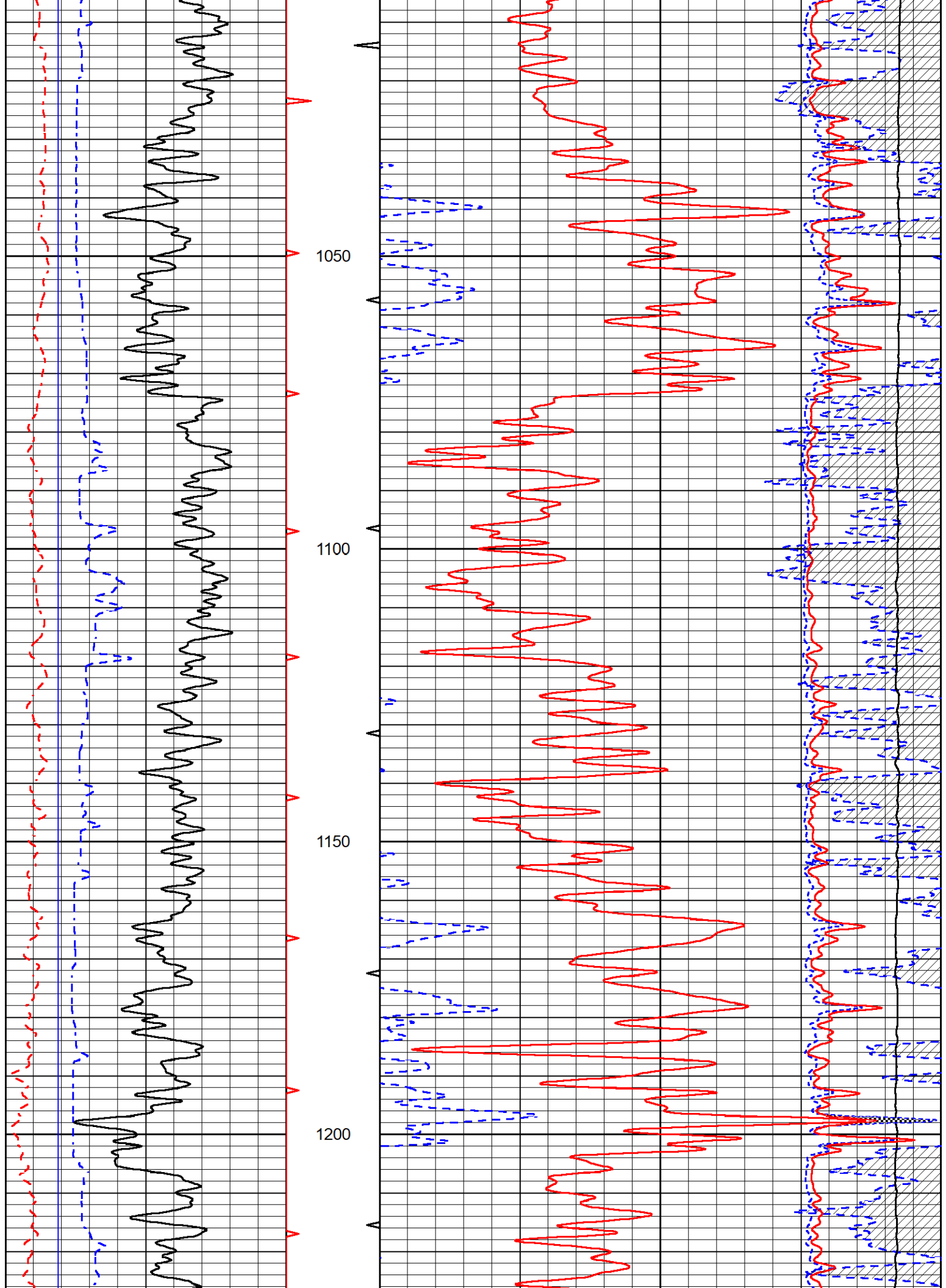


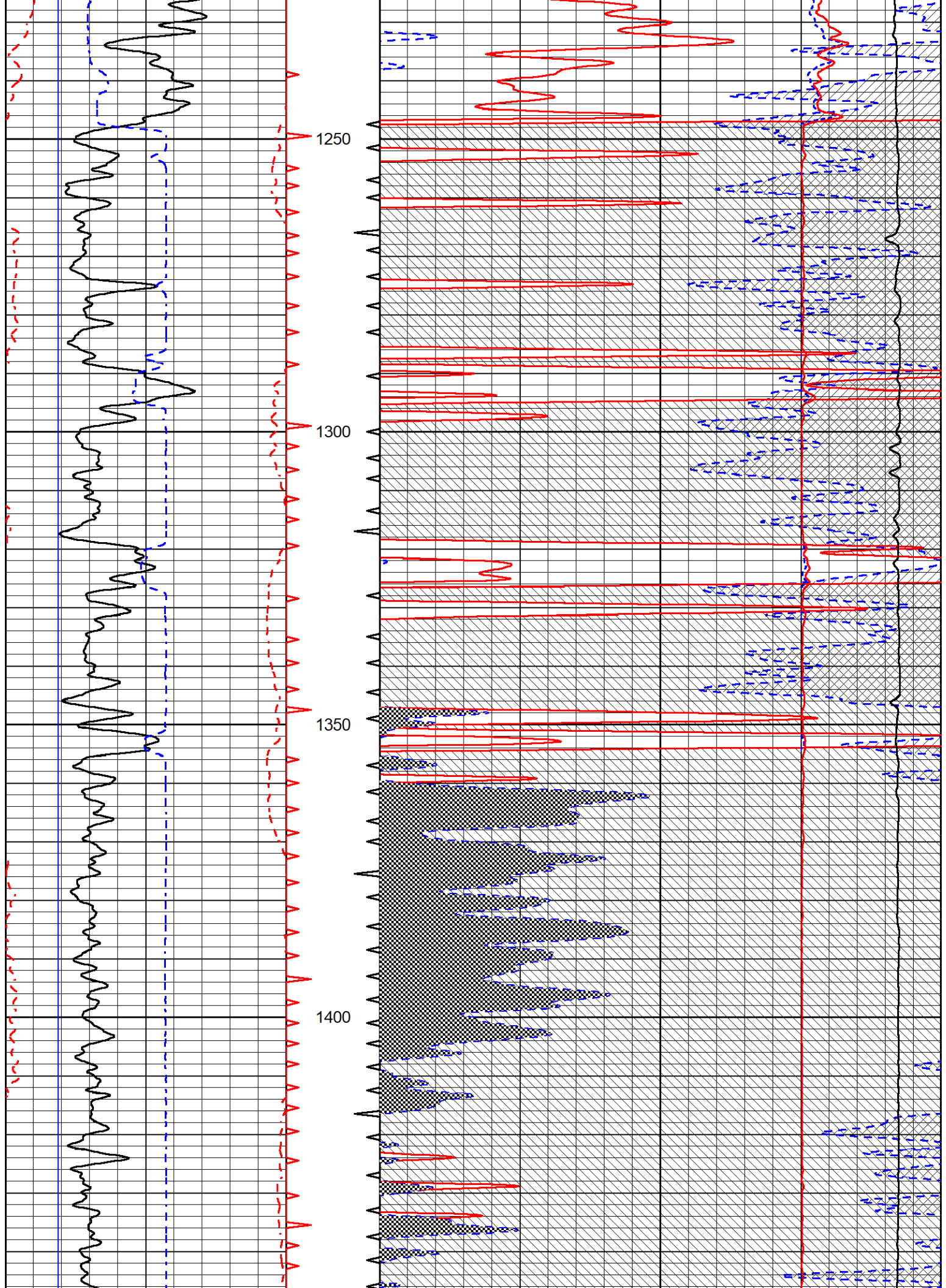


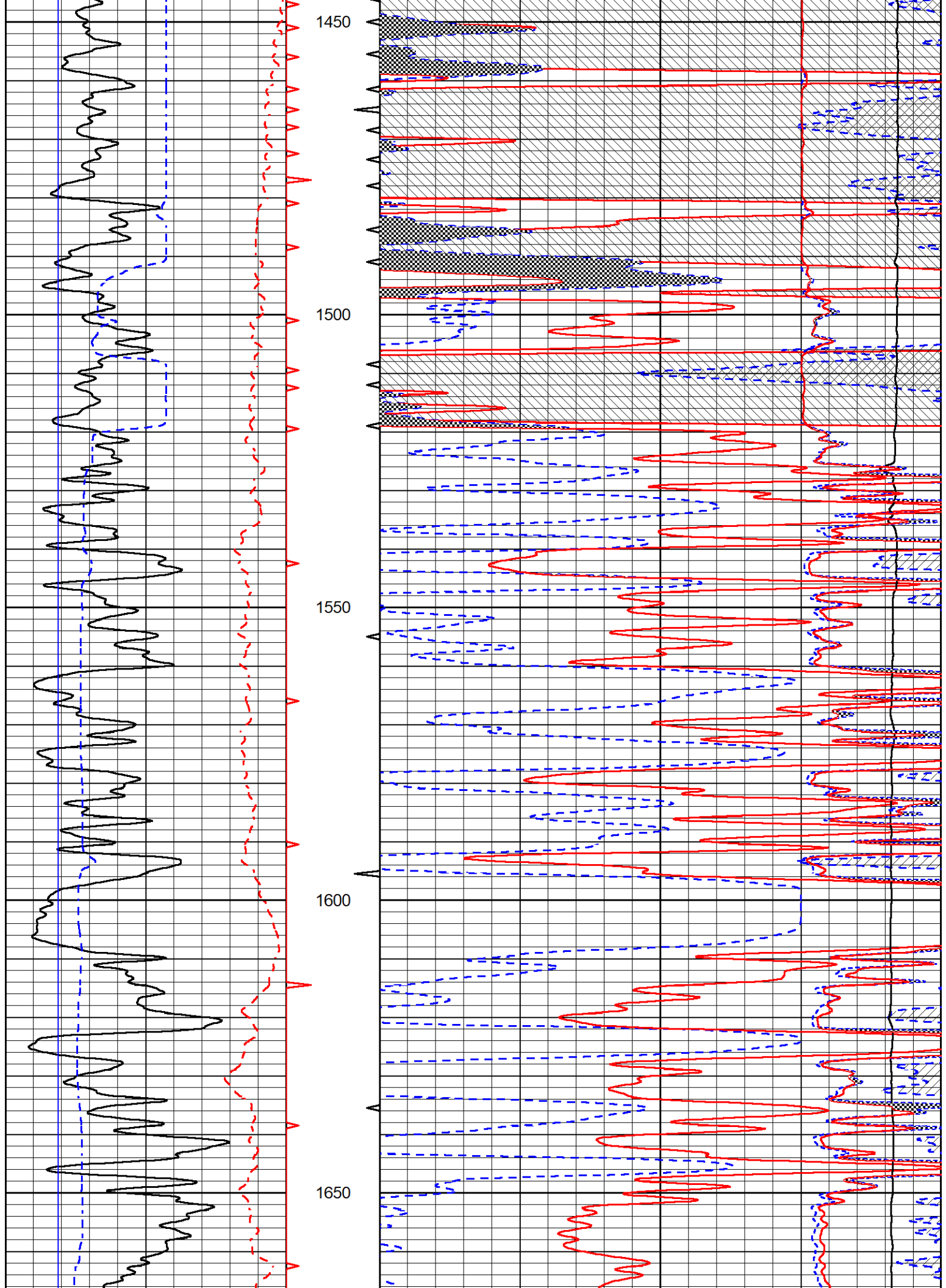


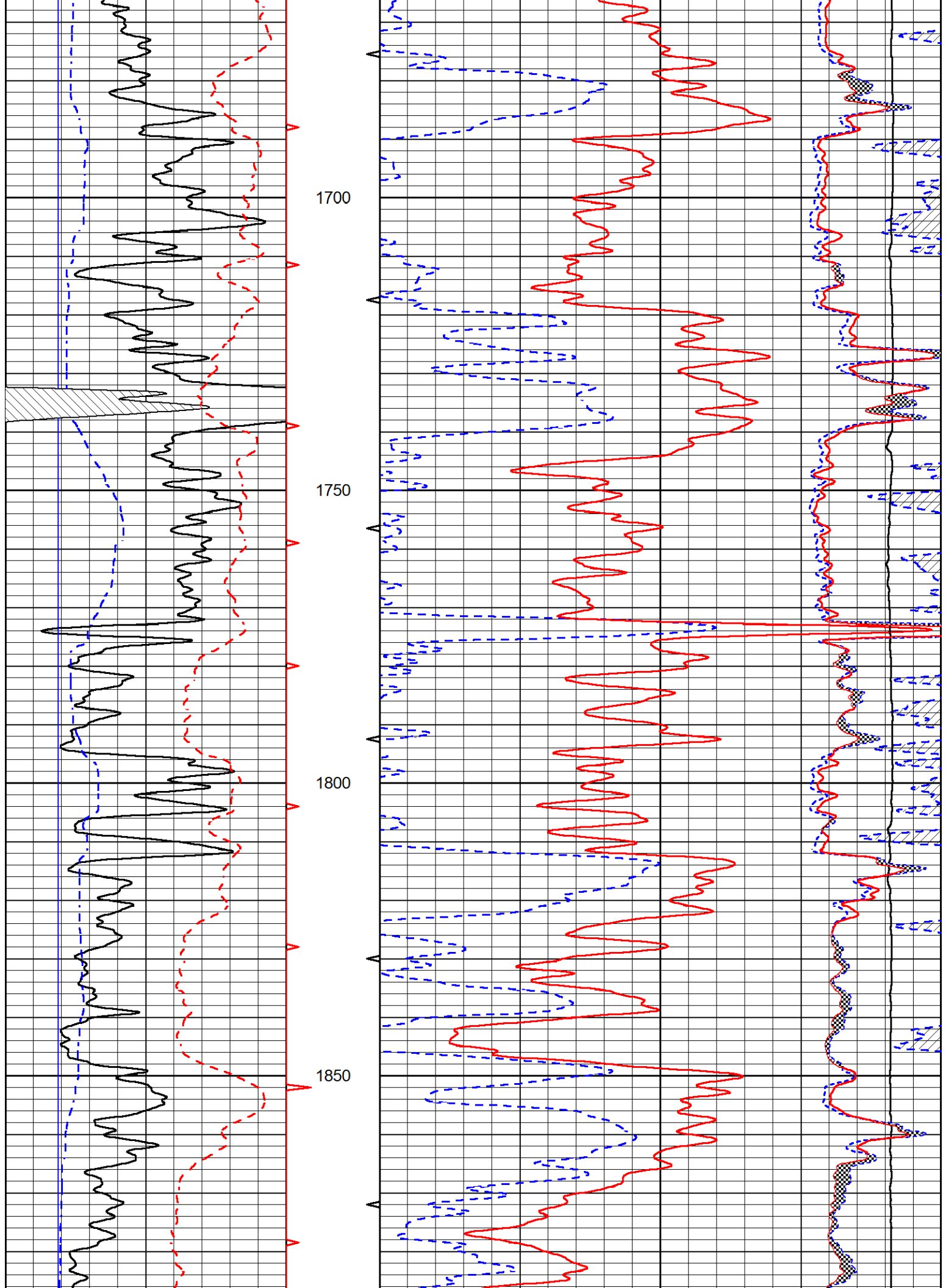


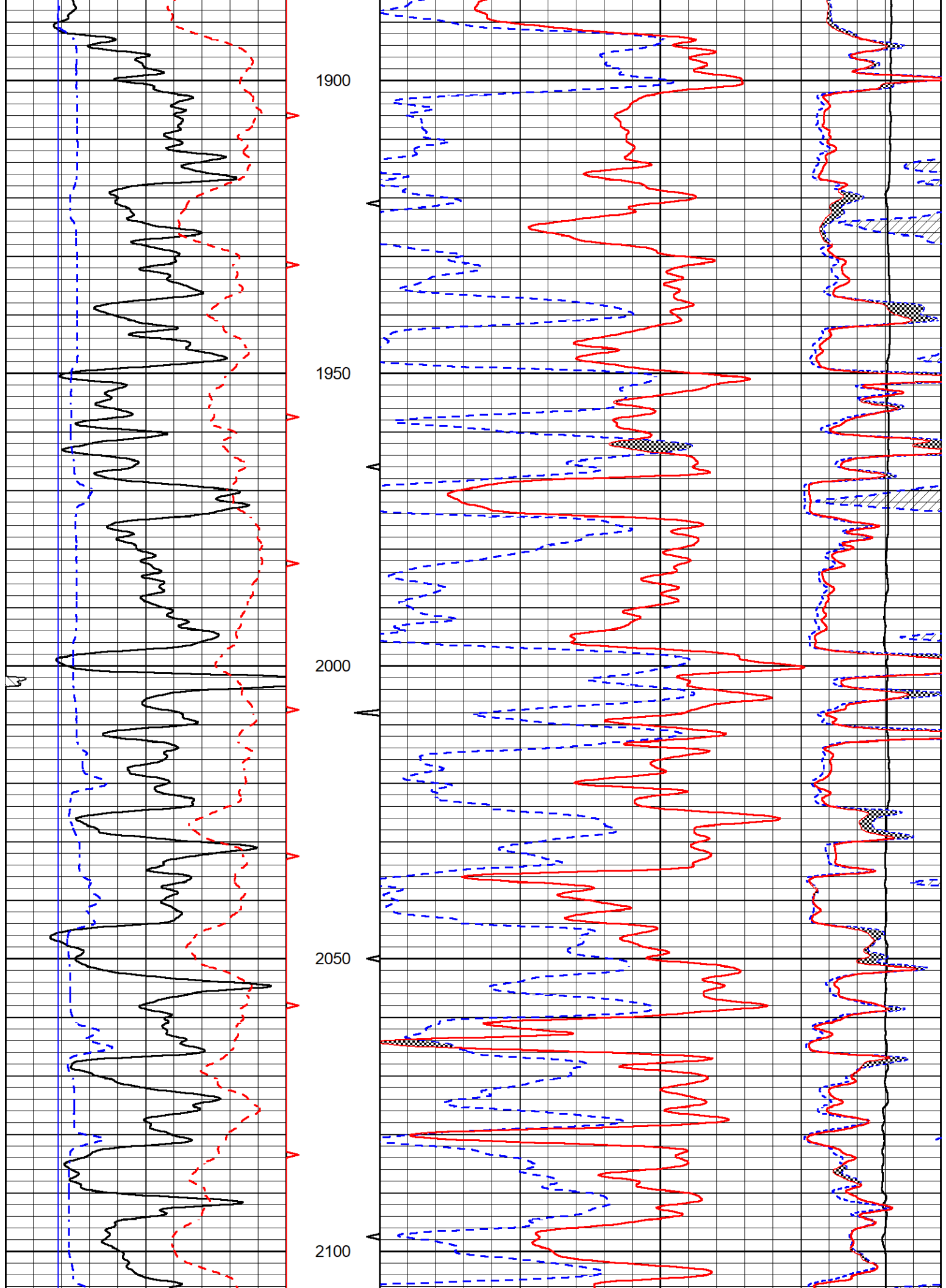


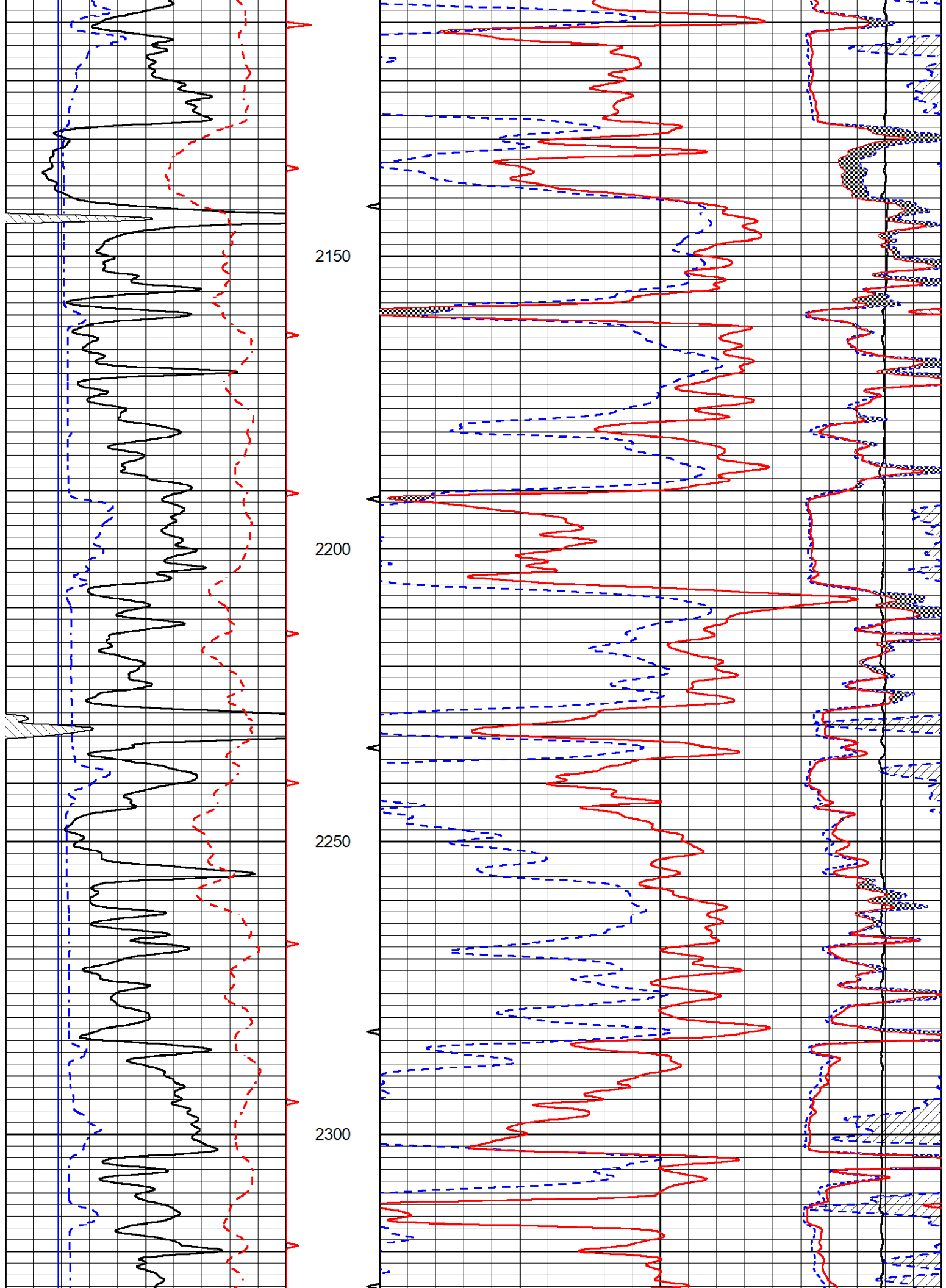


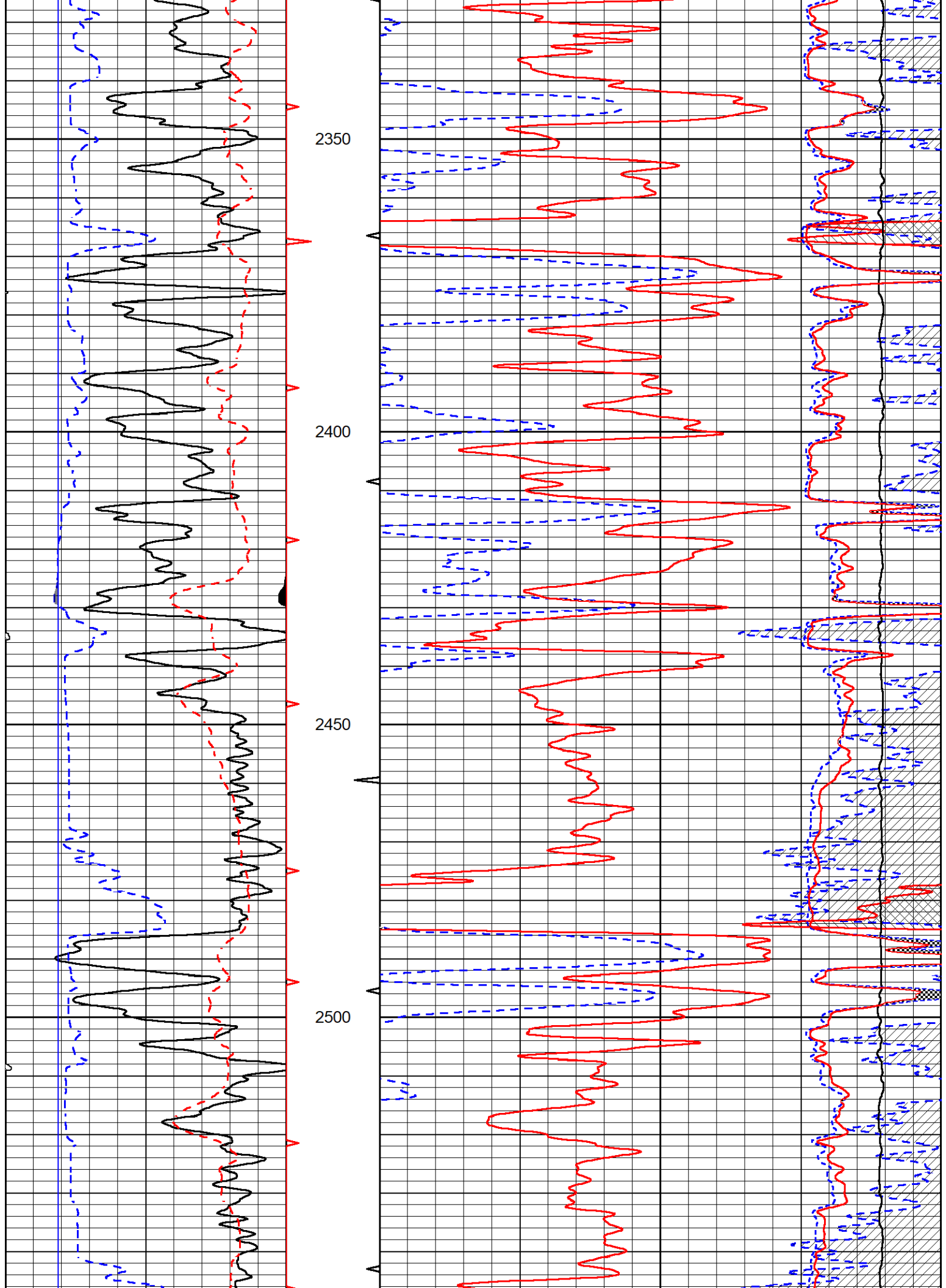


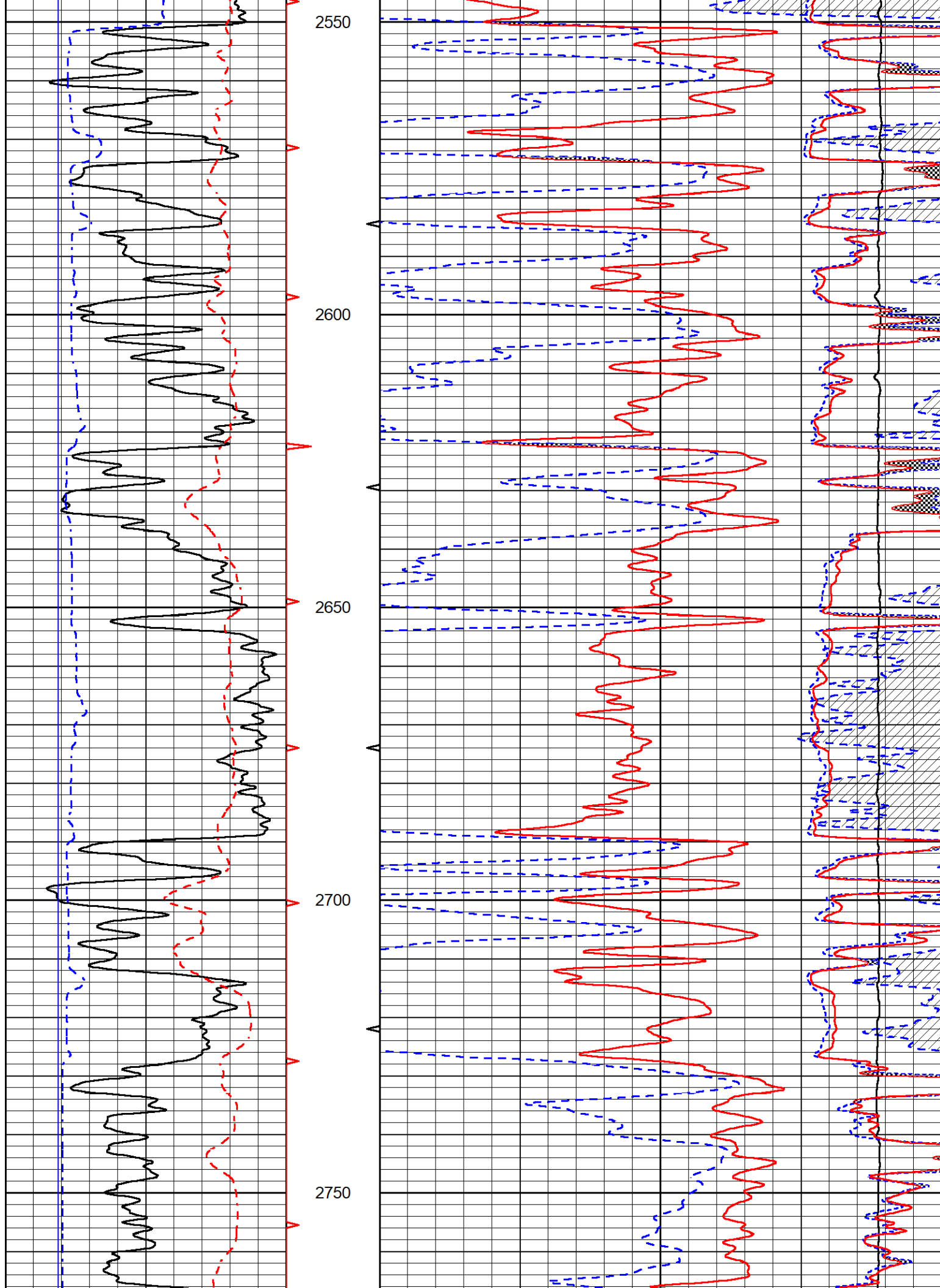


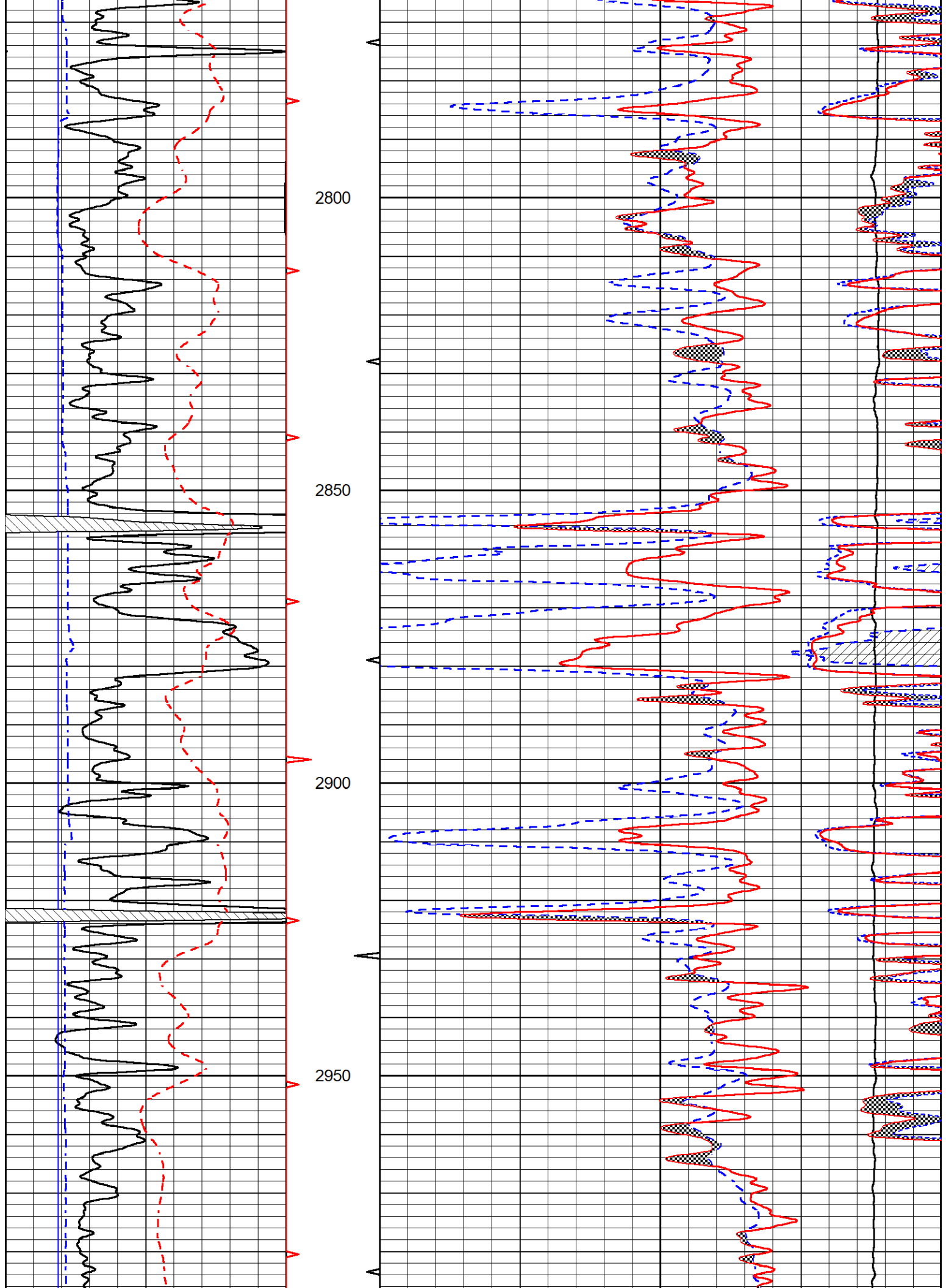


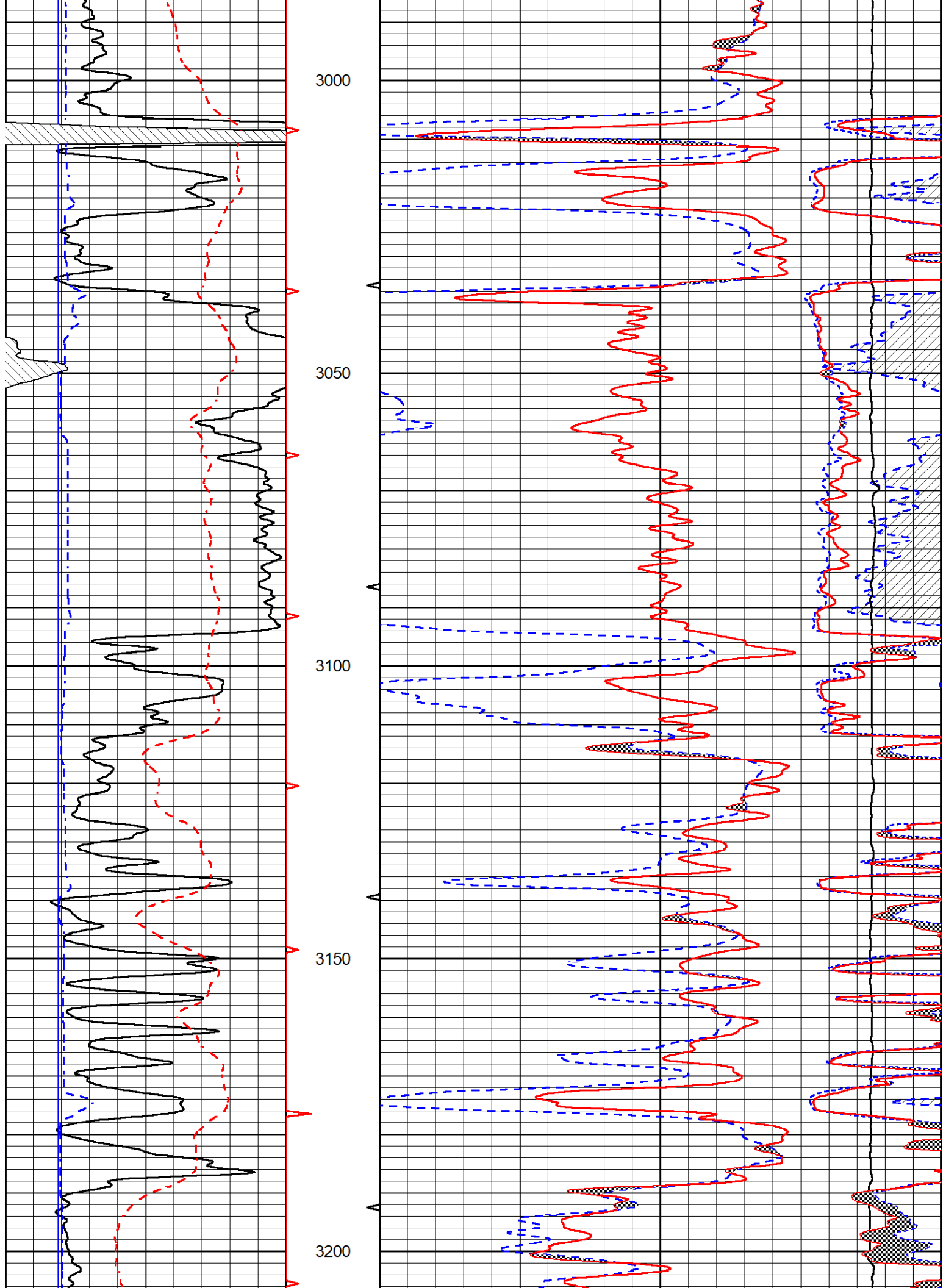


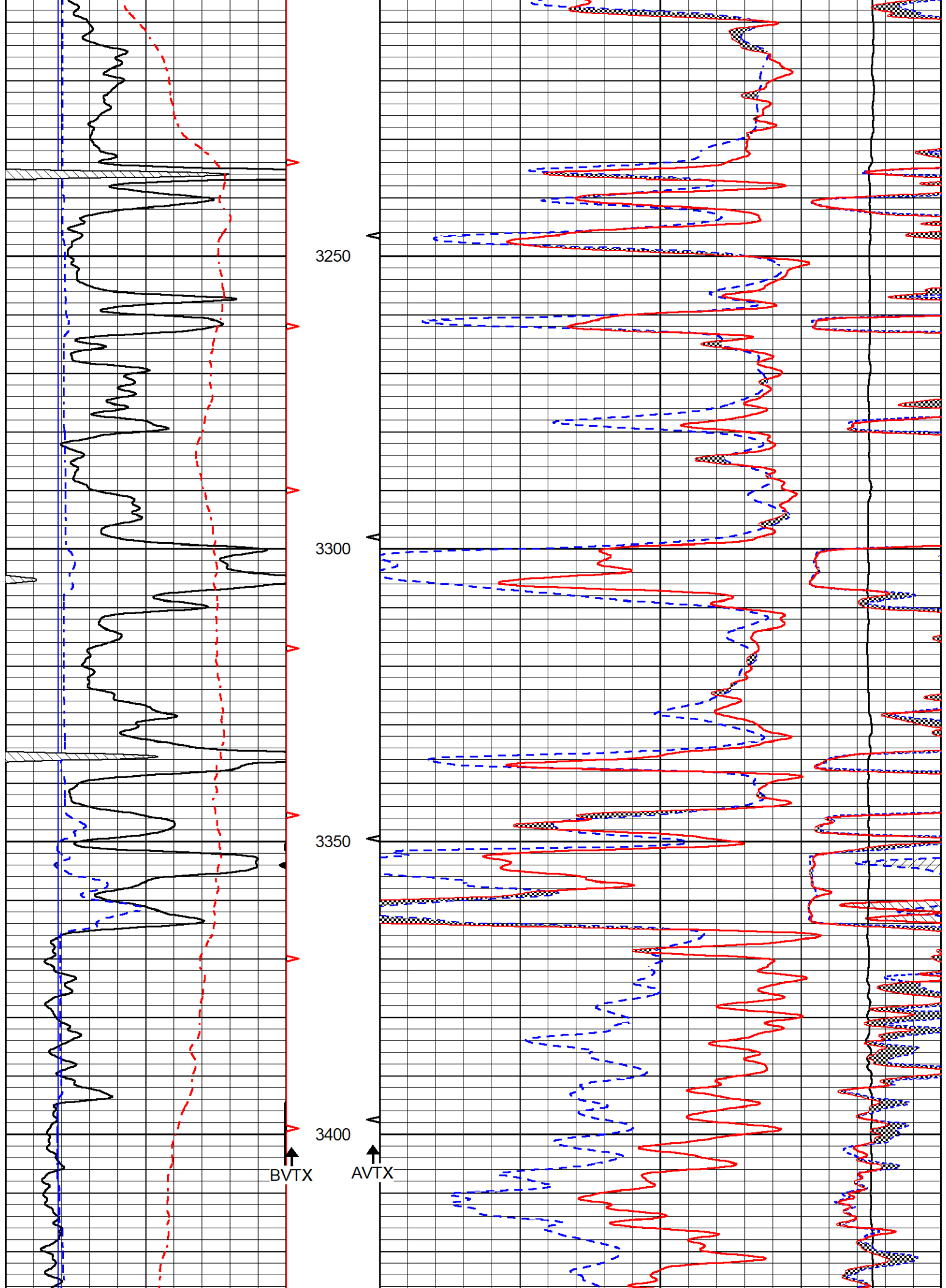


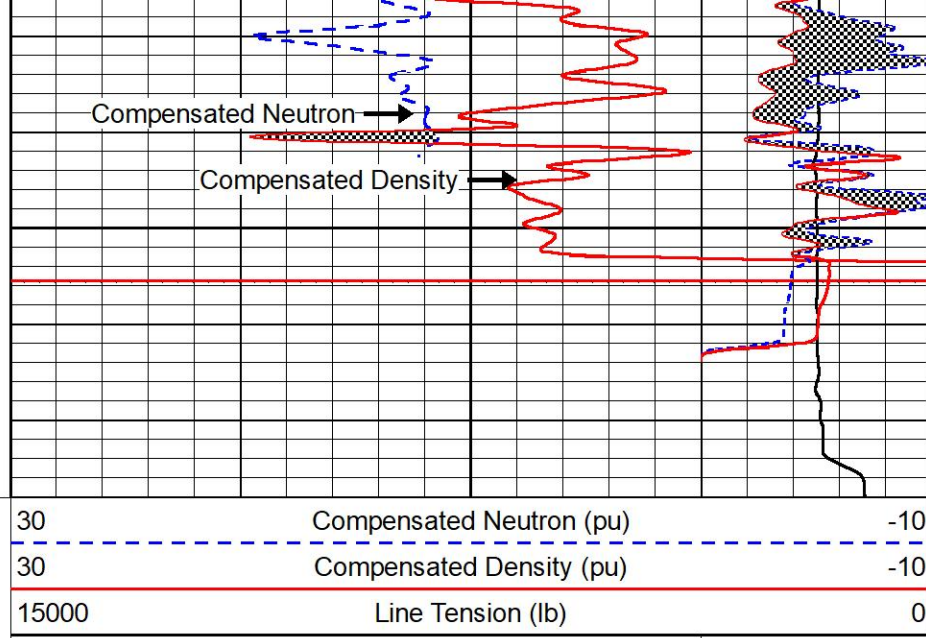
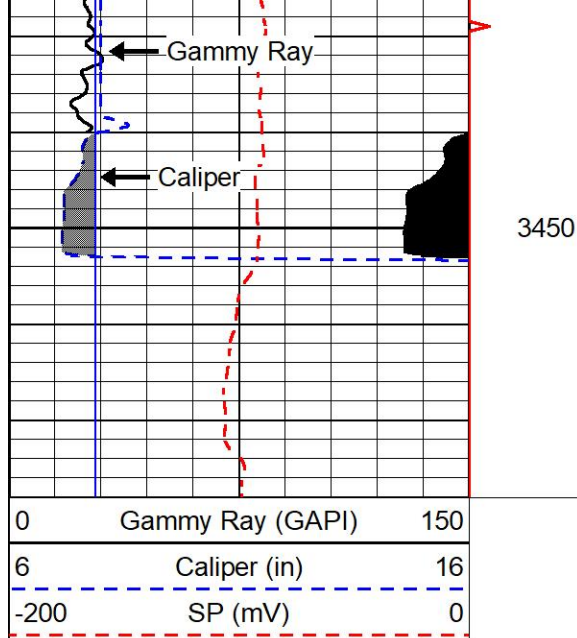












Micro Normal		
0	(Ohm-m)	20
Micro Inverse		
0	(Ohm-m)	20

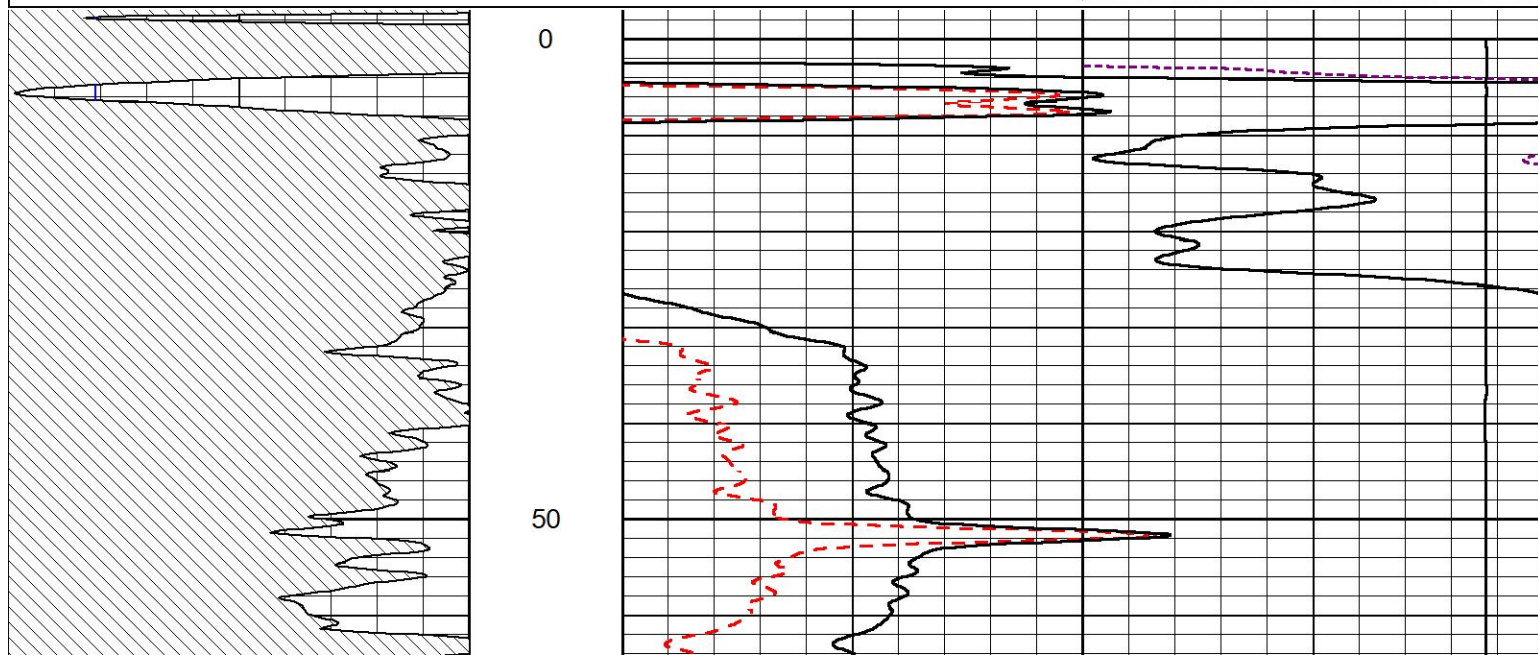
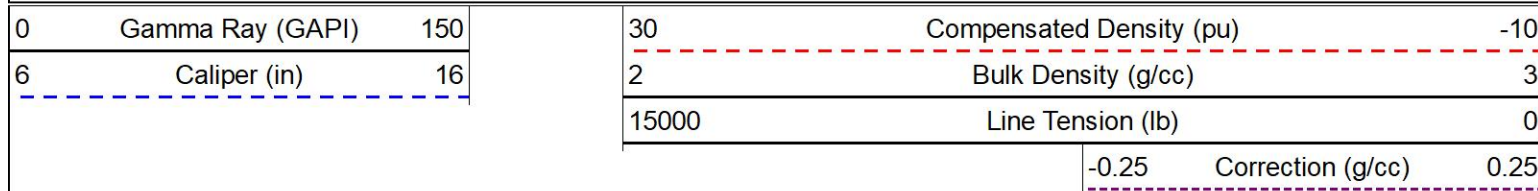


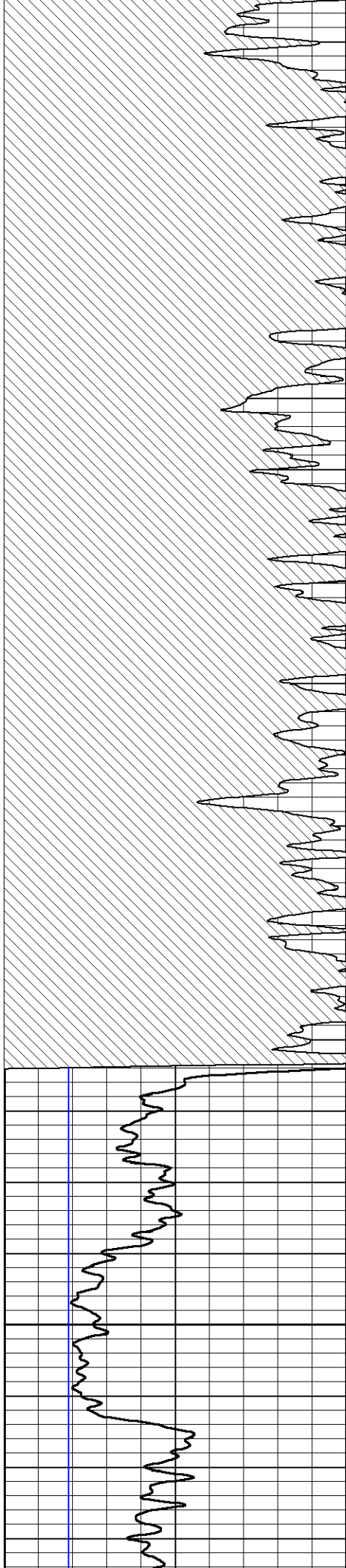
MIDWEST WIRELINE

2" Scale

Main Pass

Database File: curts_oil_5h_1.db
 Dataset Pathname: stackml/pass3.1
 Presentation Format: _cdl
 Dataset Creation: Mon Dec 06 16:40:31 2021
 Charted by: Depth in Feet scaled 1:240



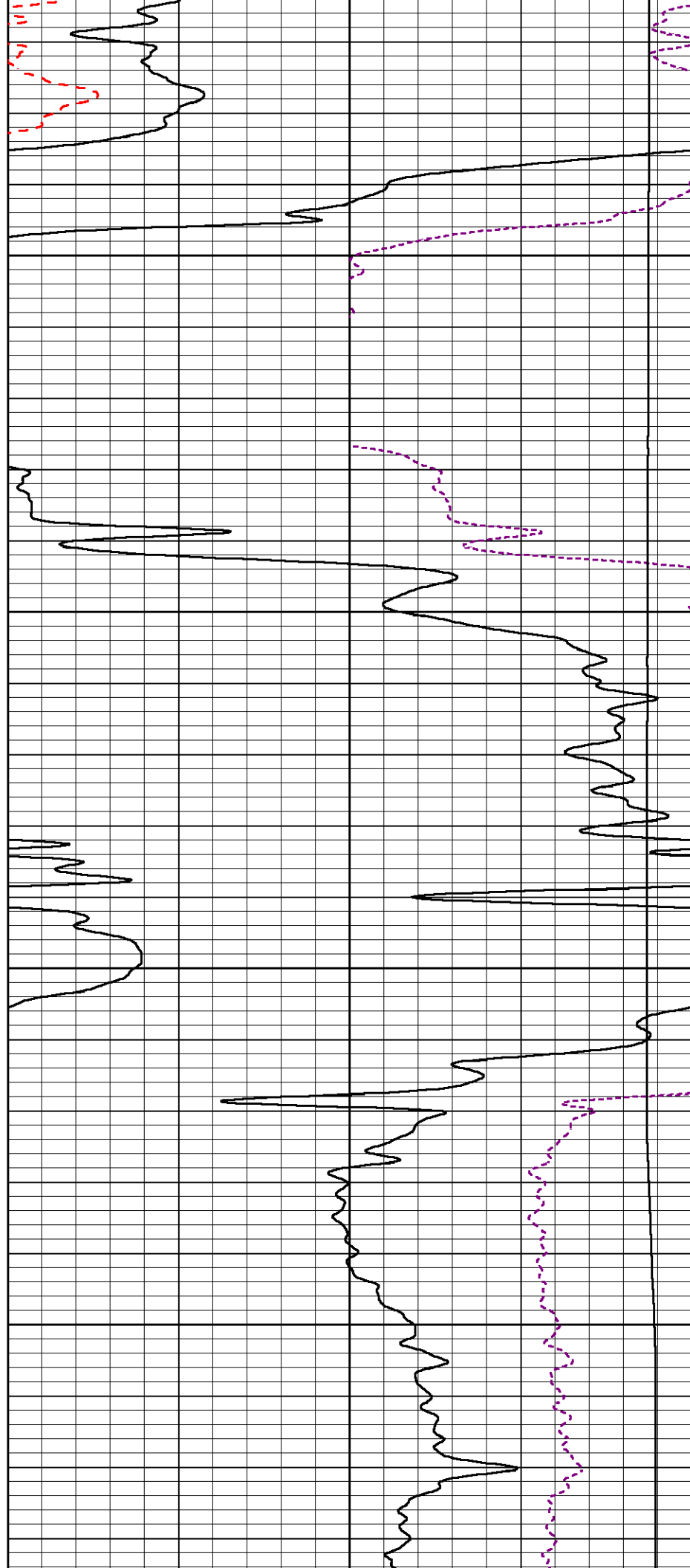


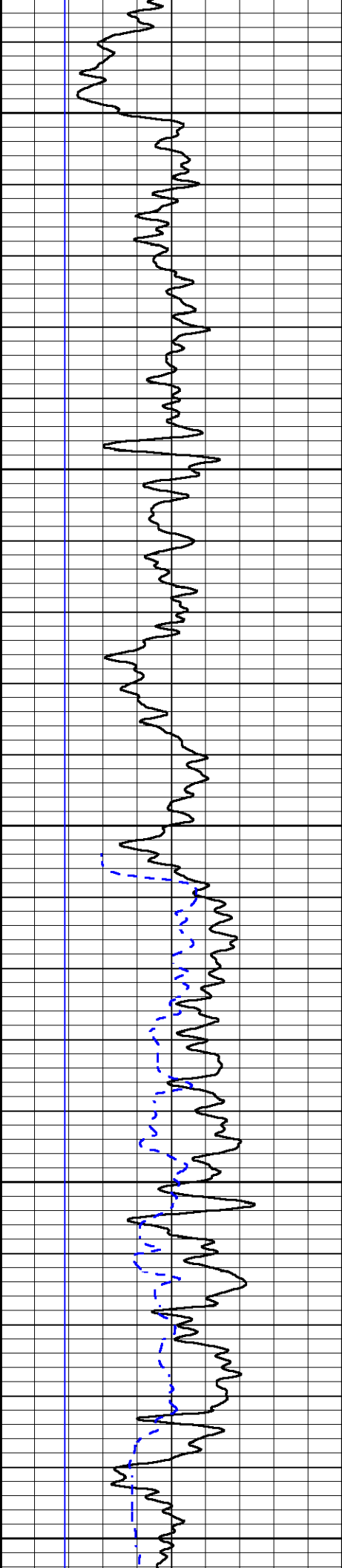
100

150

200

250





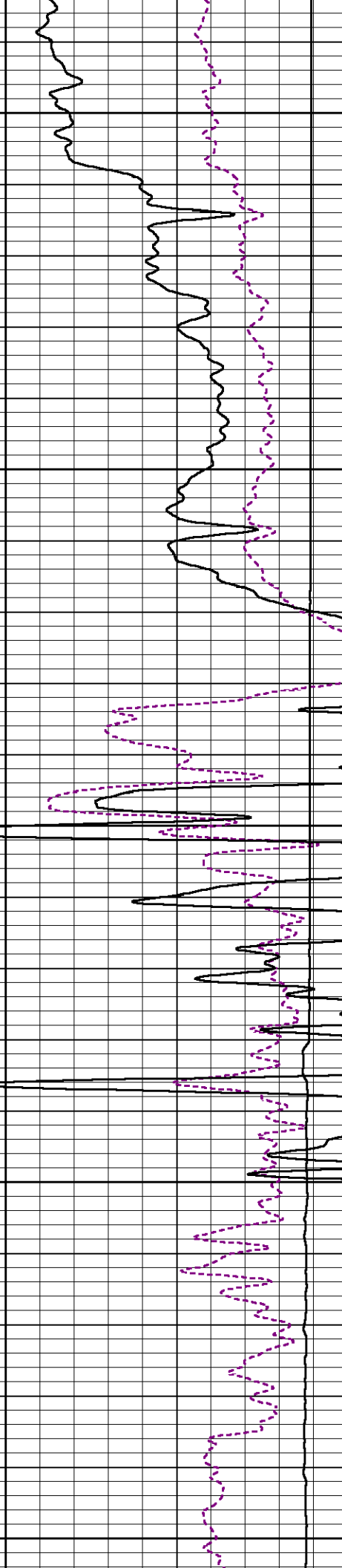
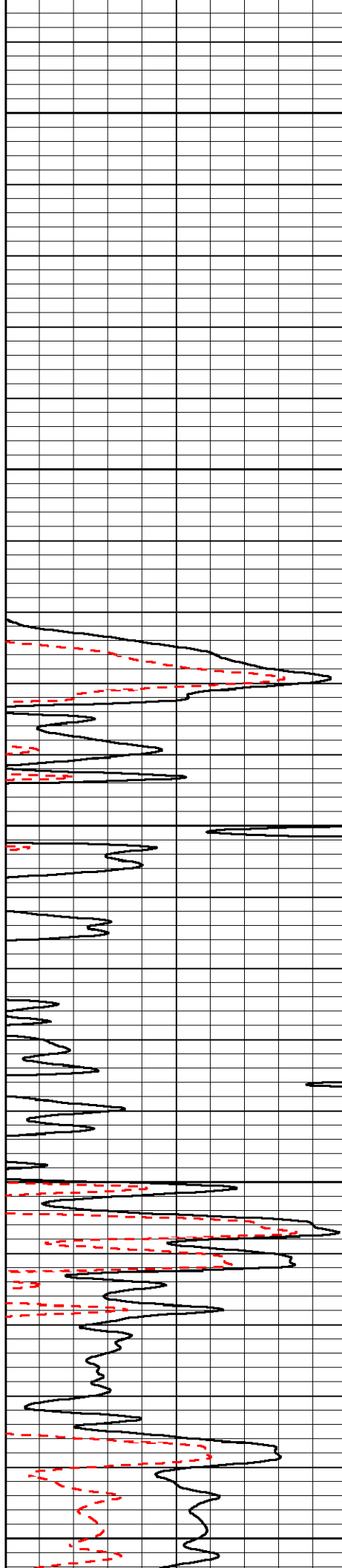
300

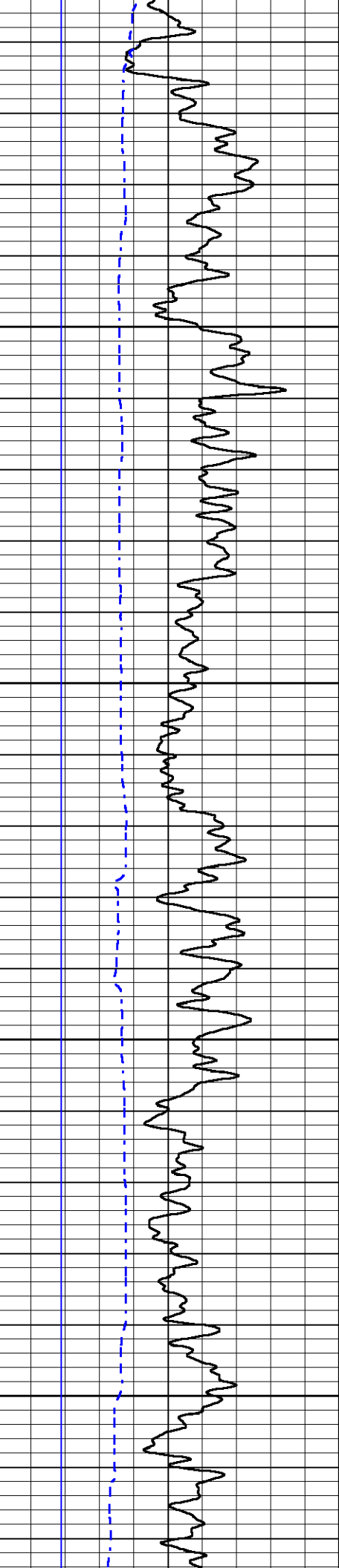
350

400

450

500



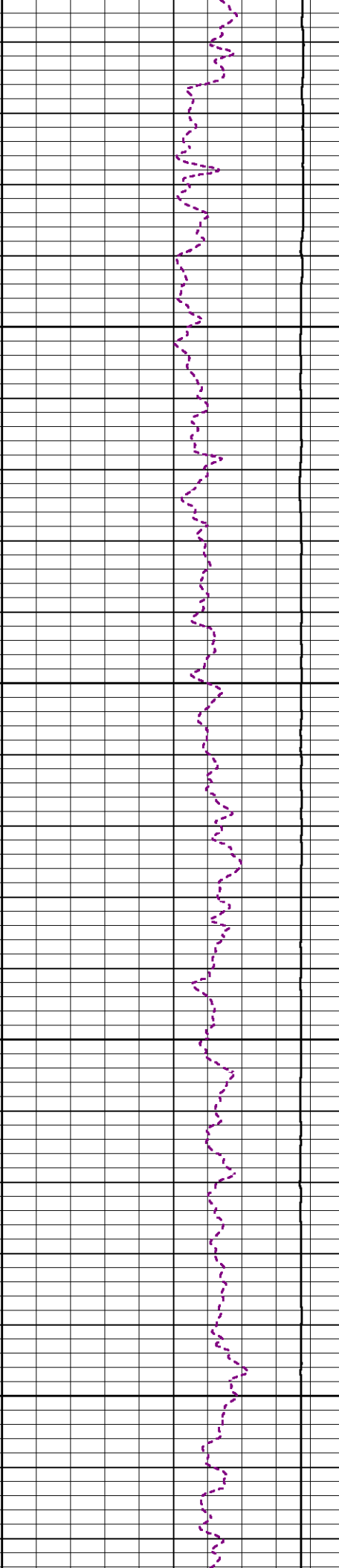
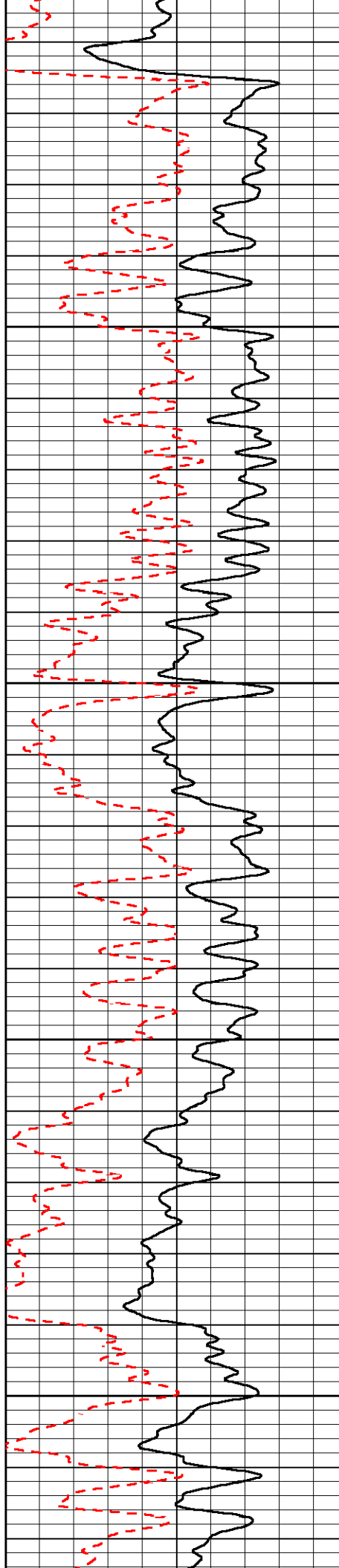


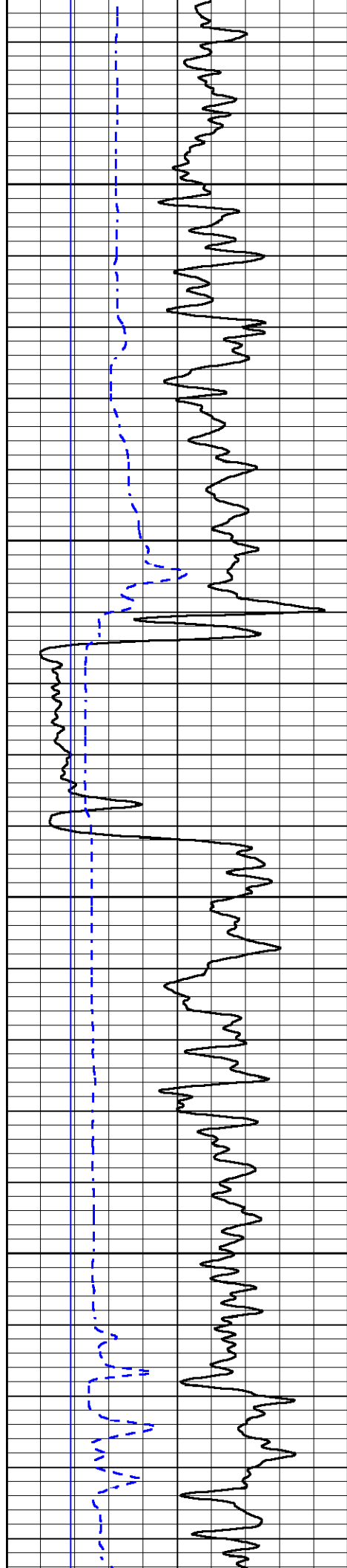
550

600

650

700



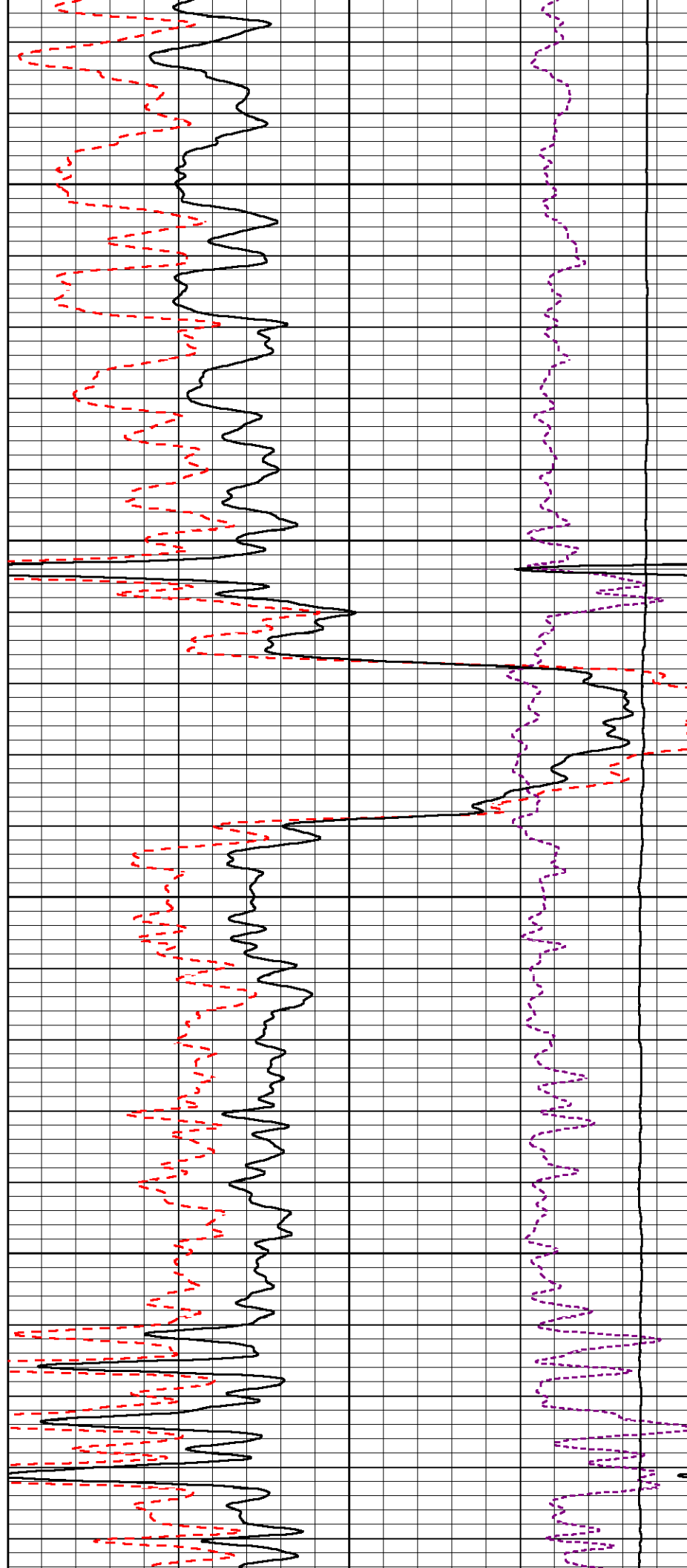


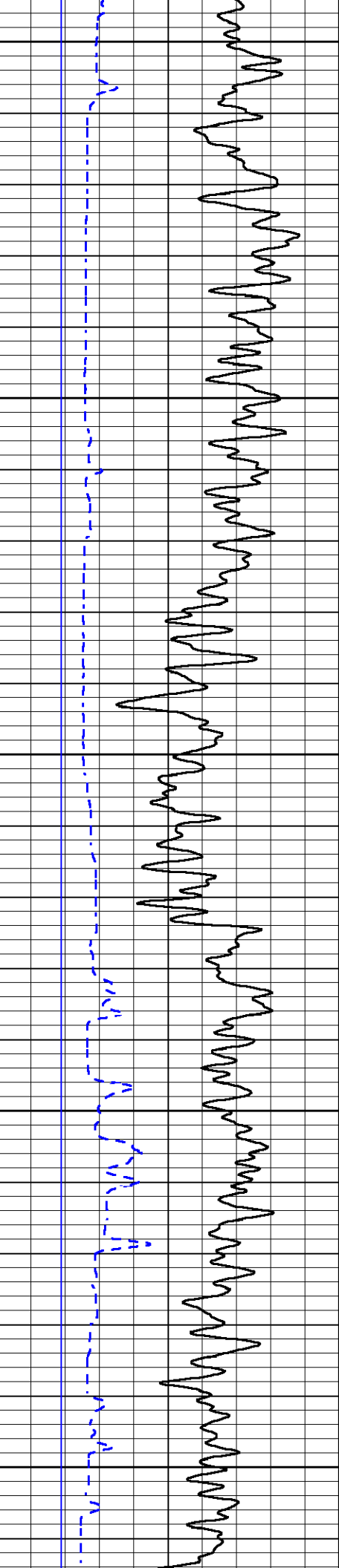
750

800

850

900





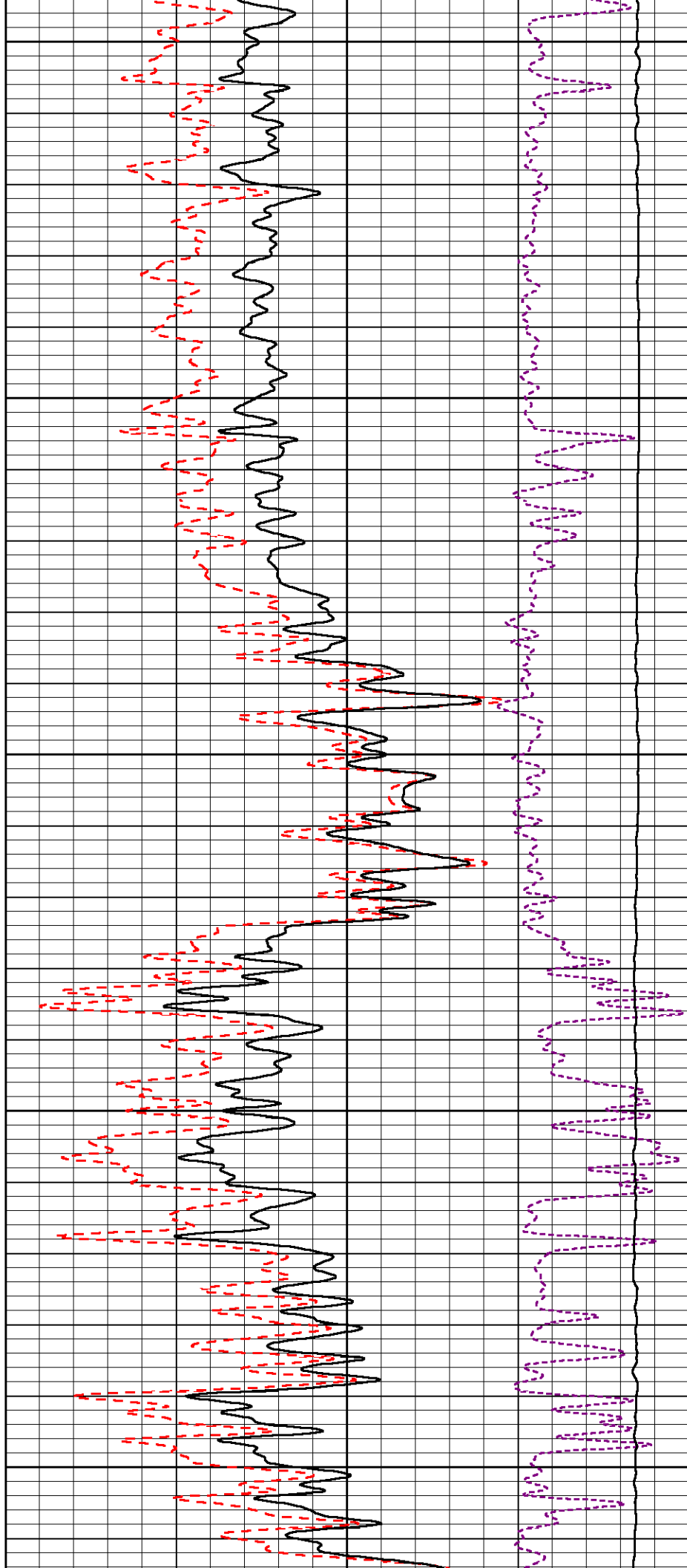
950

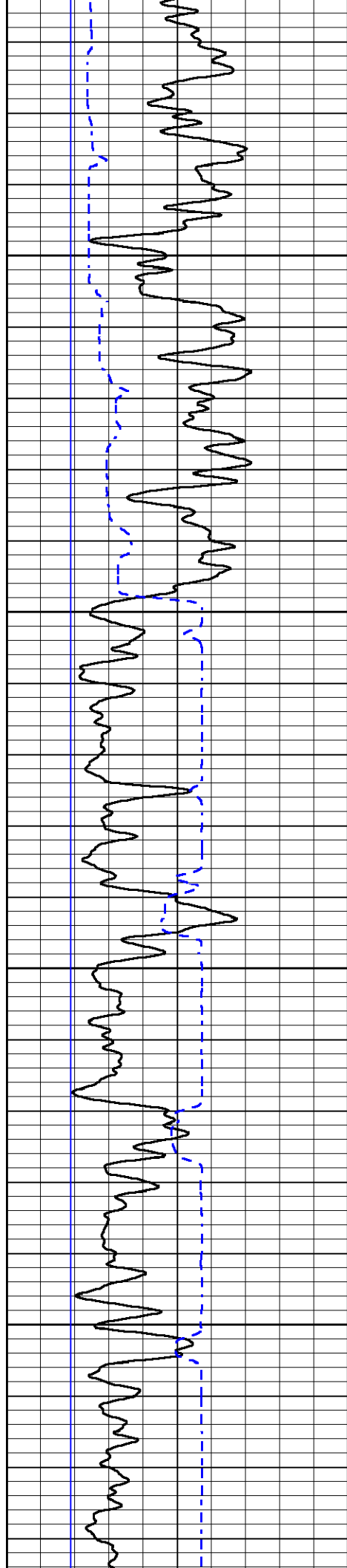
1000

1050

1100

1150



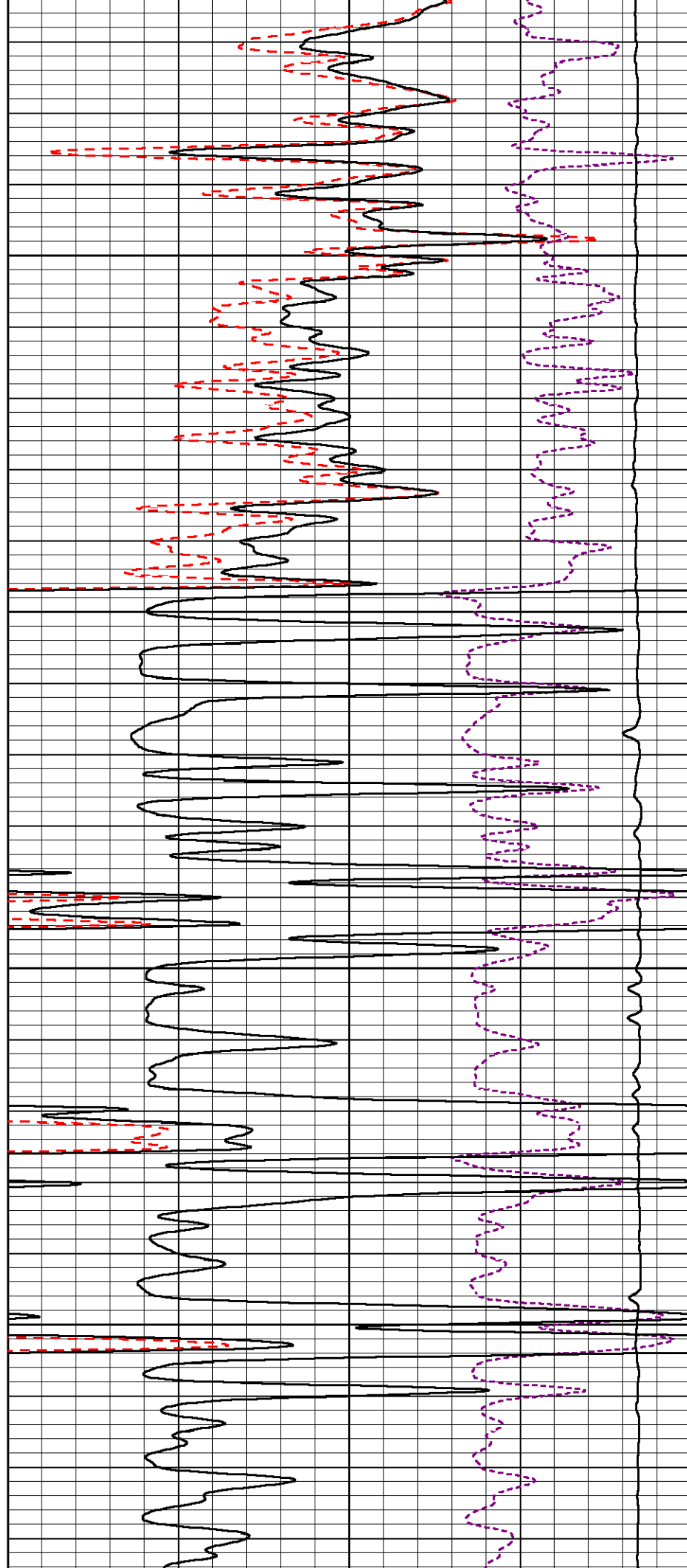


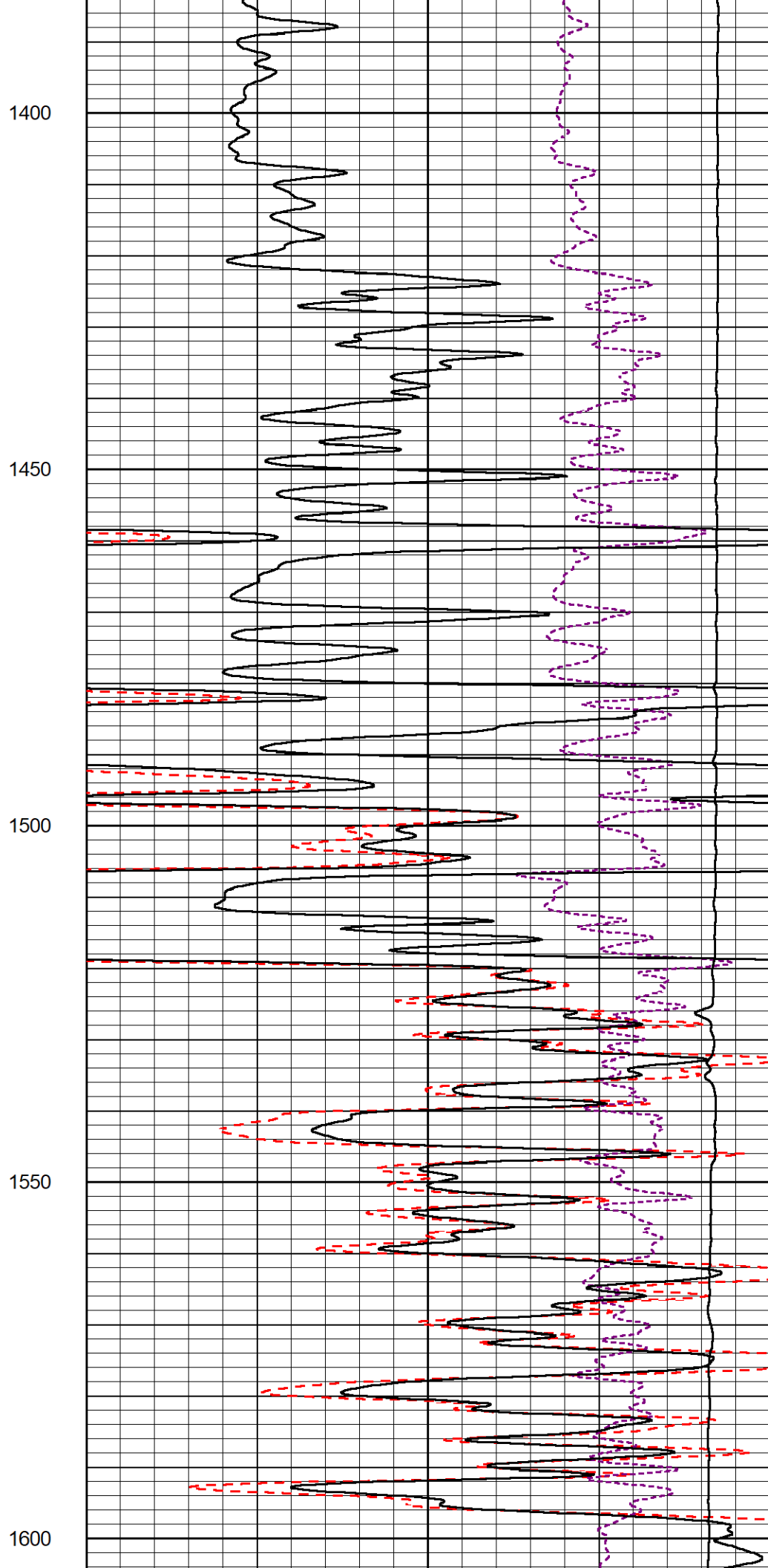
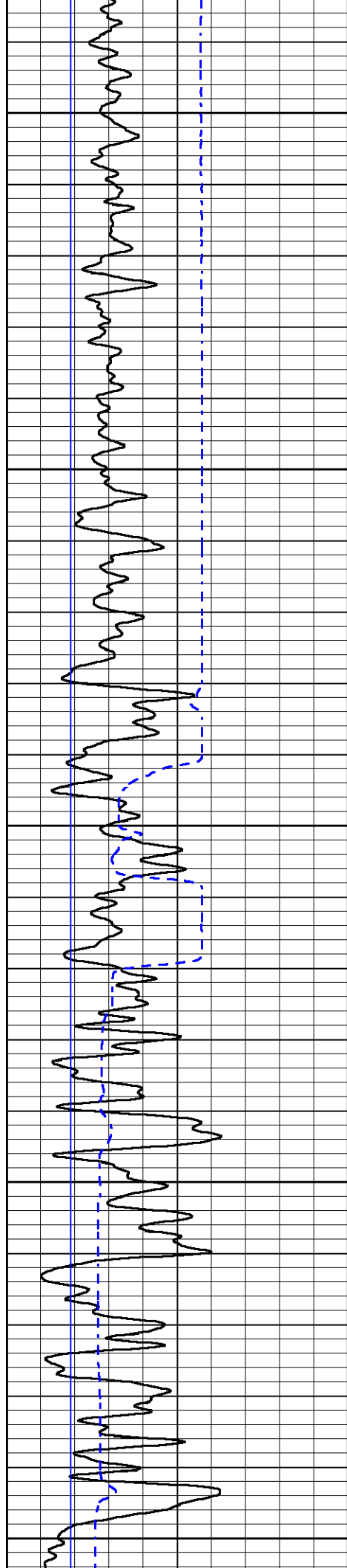
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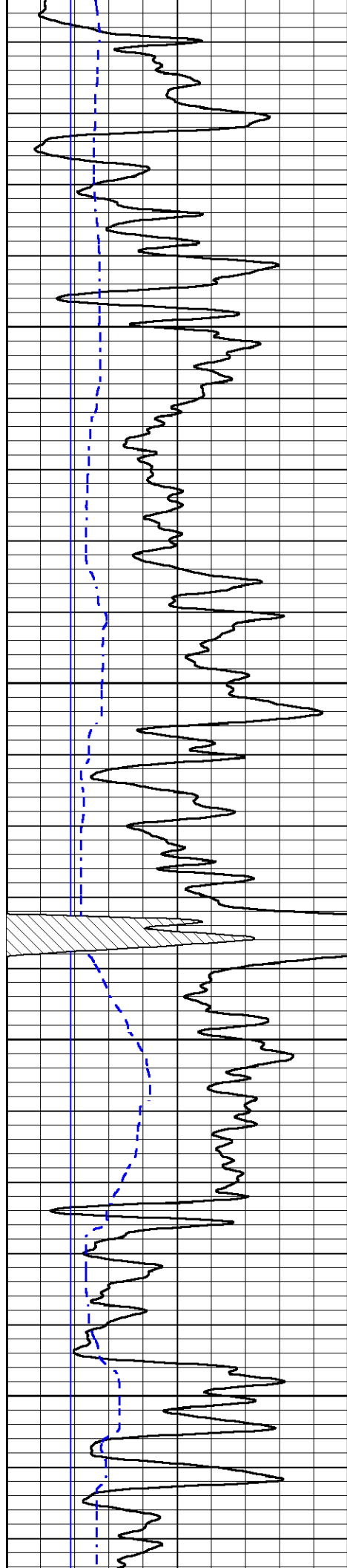
1250

1300

1350





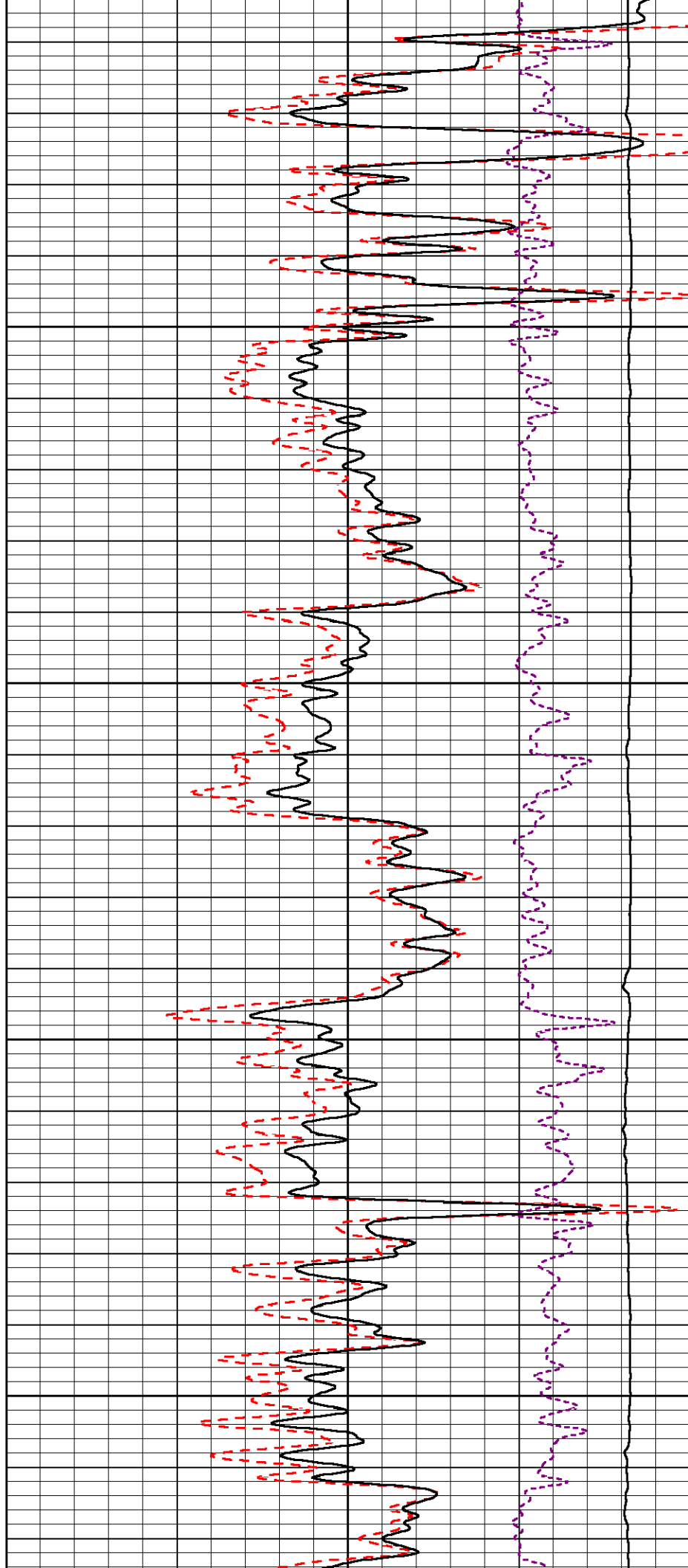


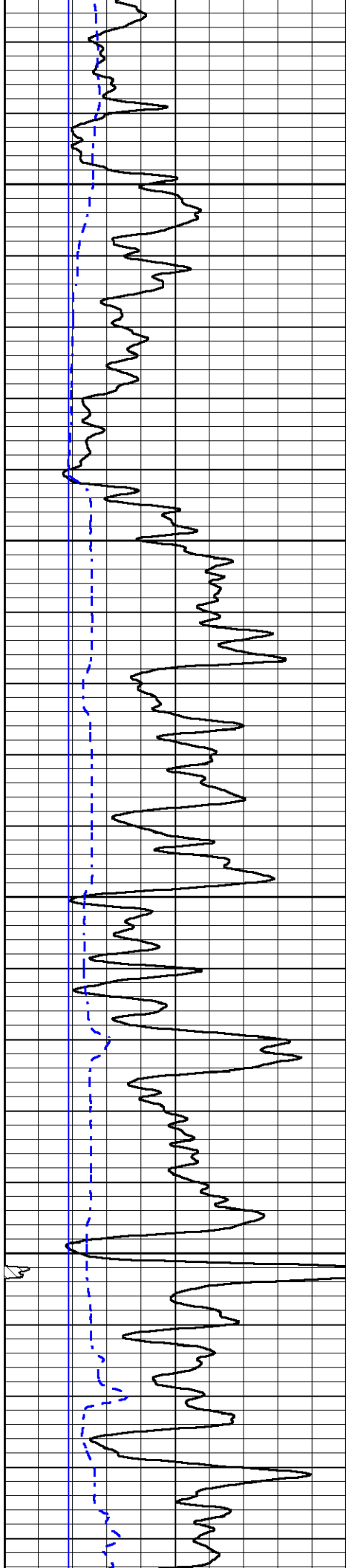
1650

1700

1750

1800



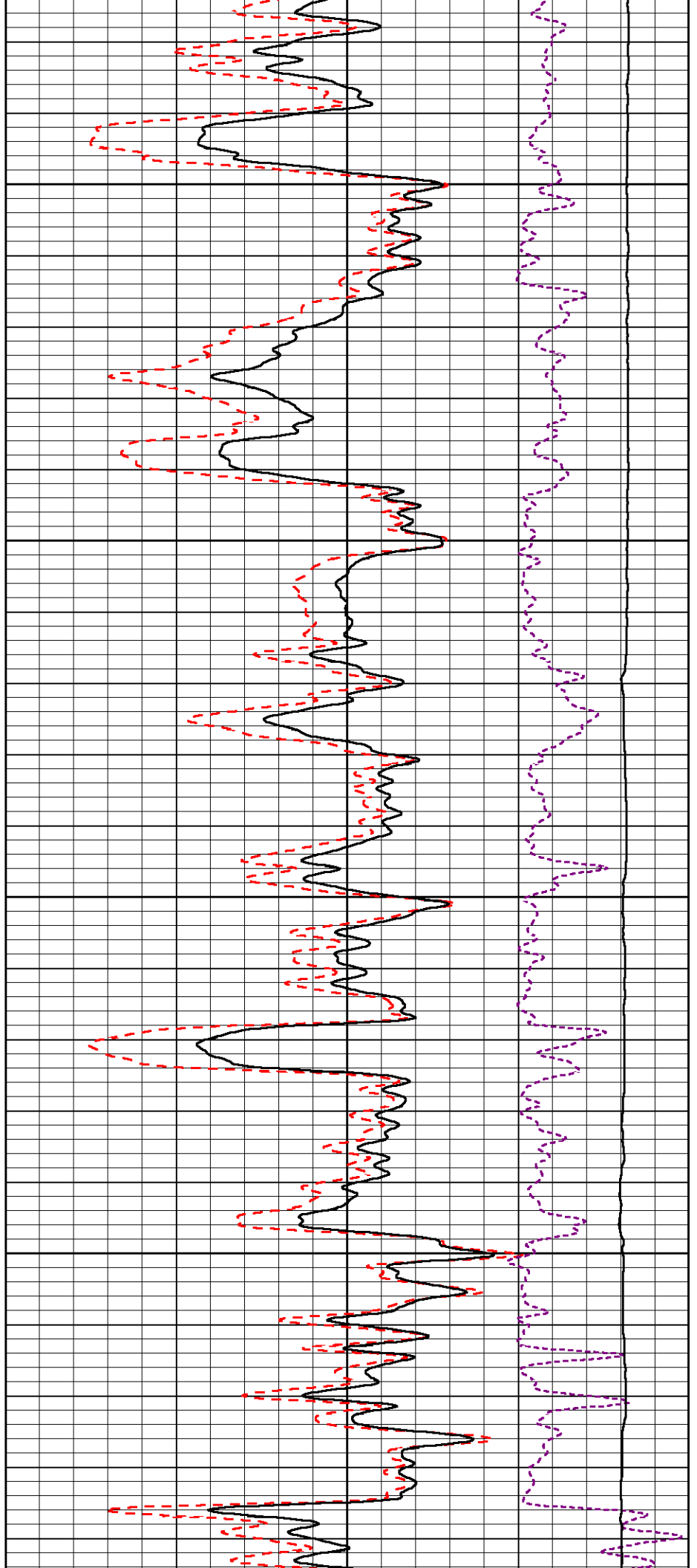


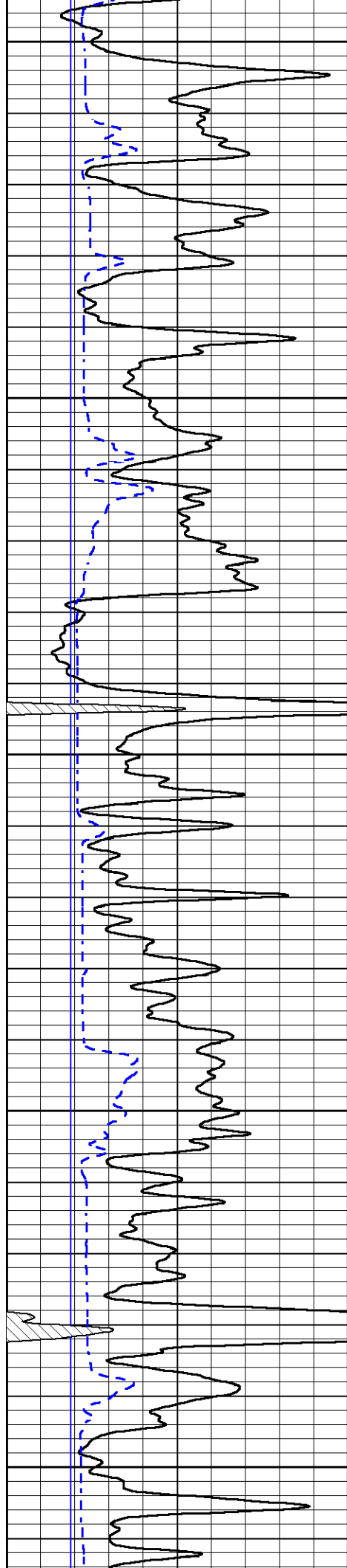
1850

1900

1950

2000





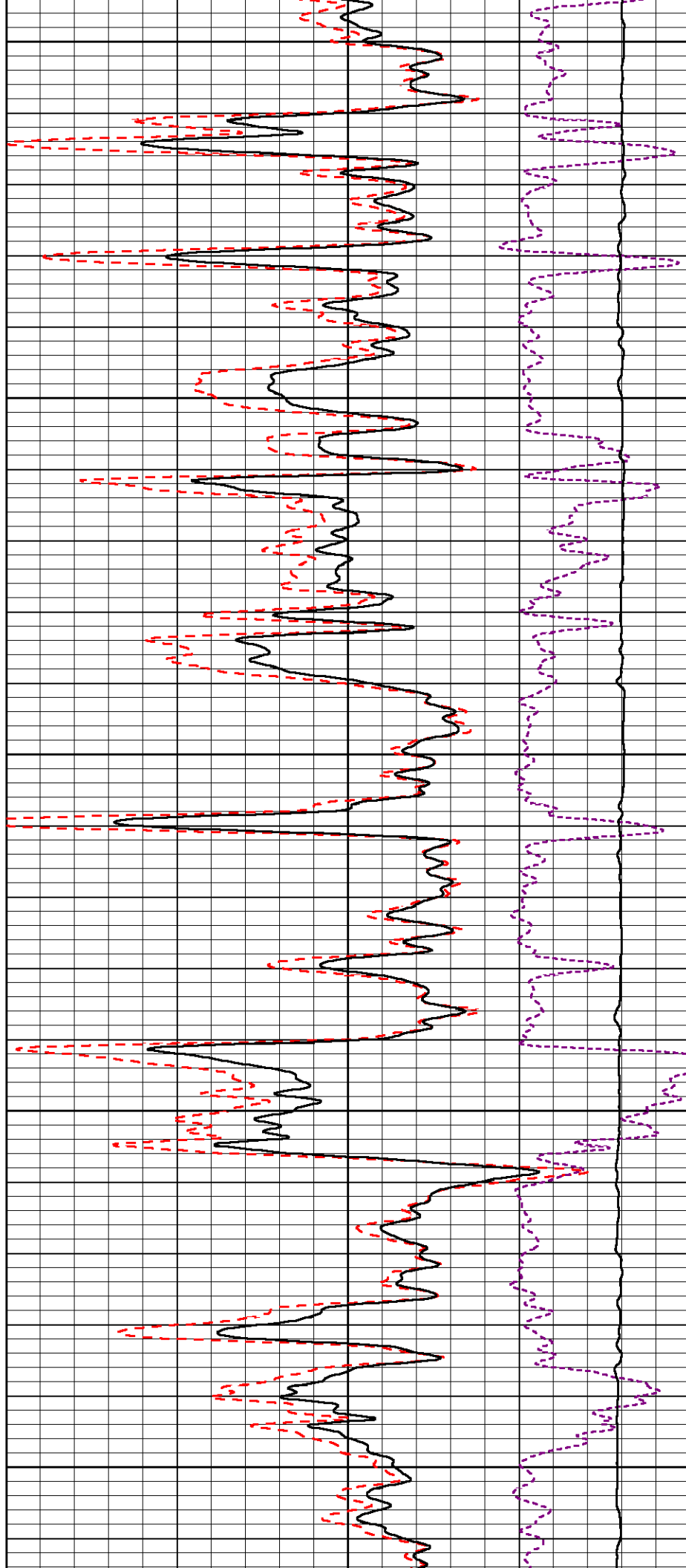
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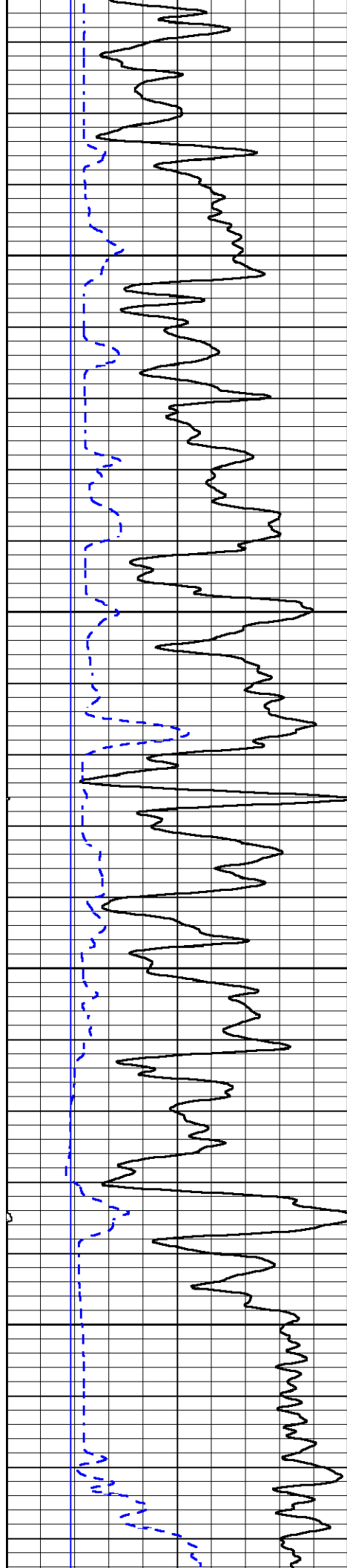
2100

2150

2200

2250



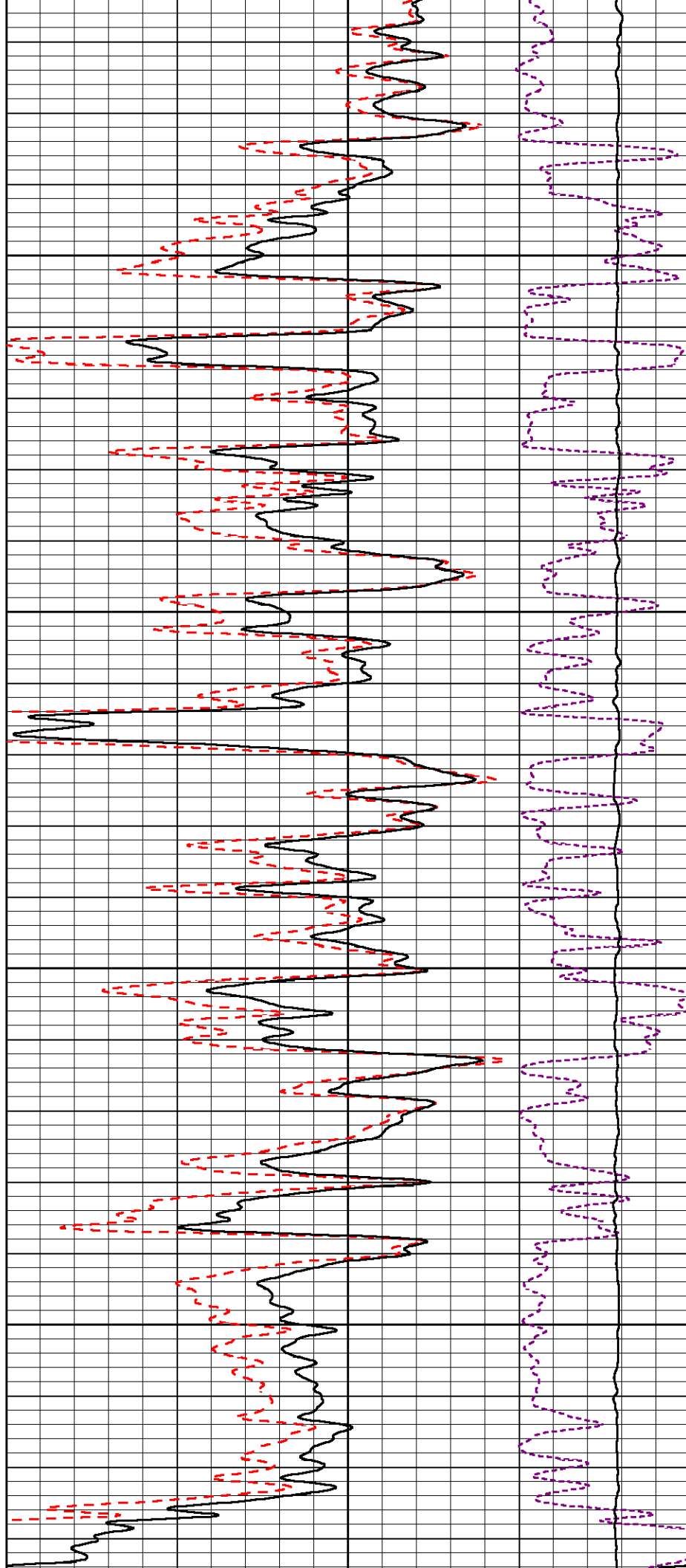


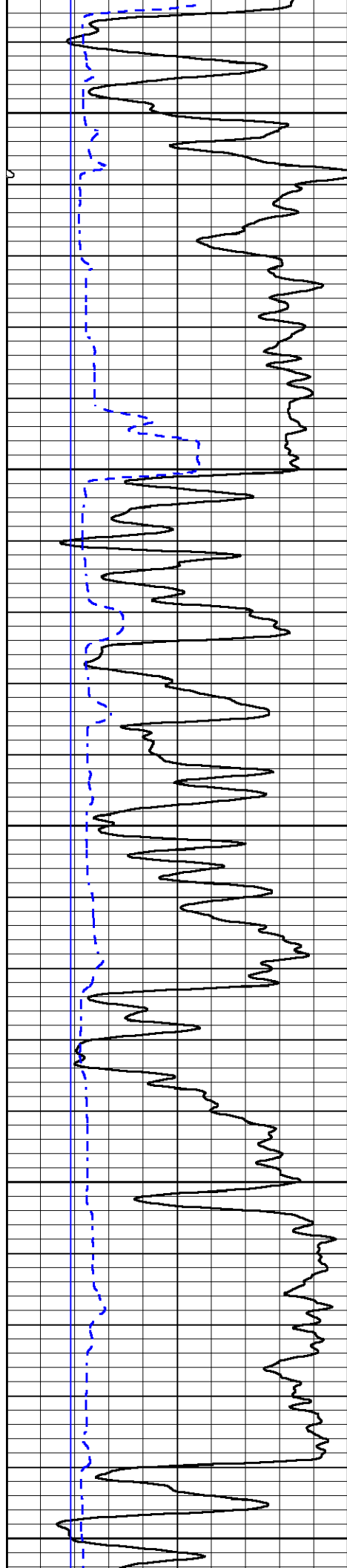
2300

2350

2400

2450





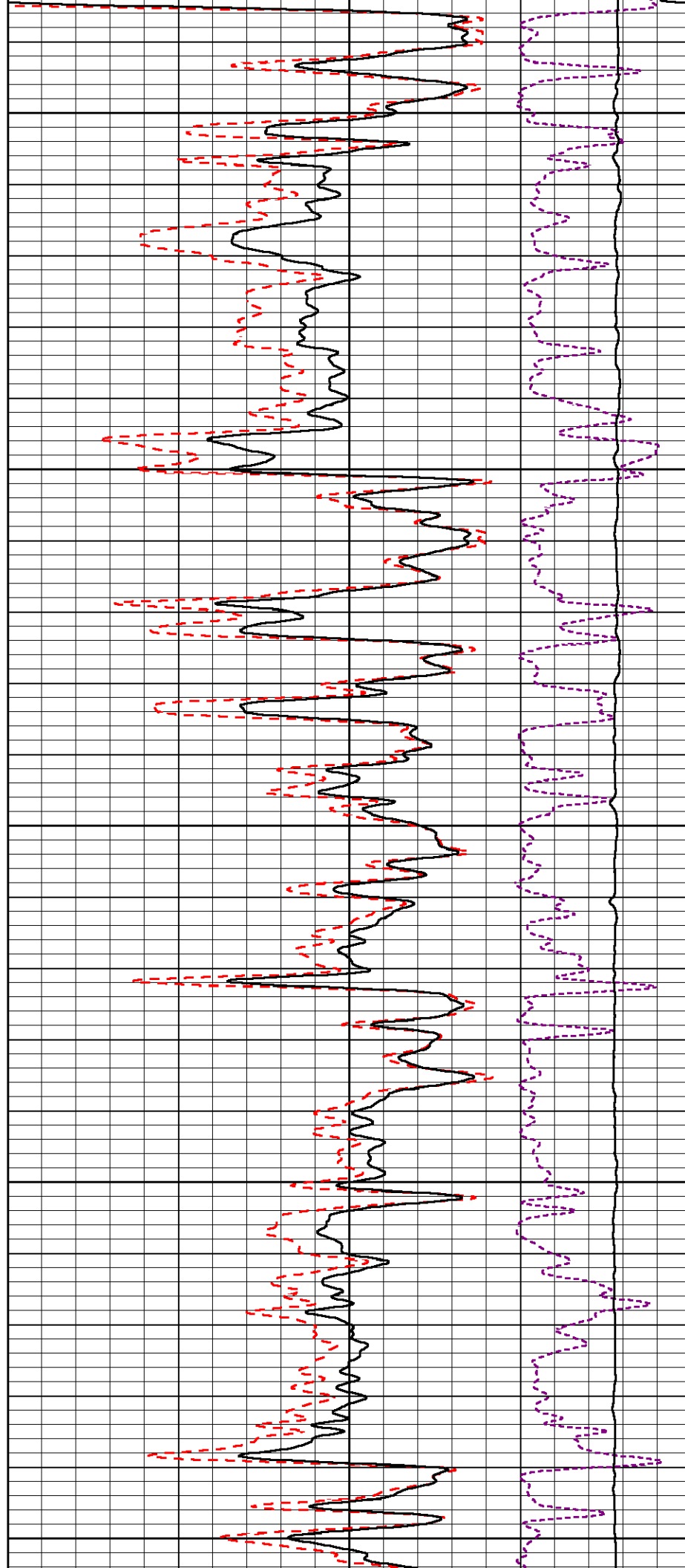
2500

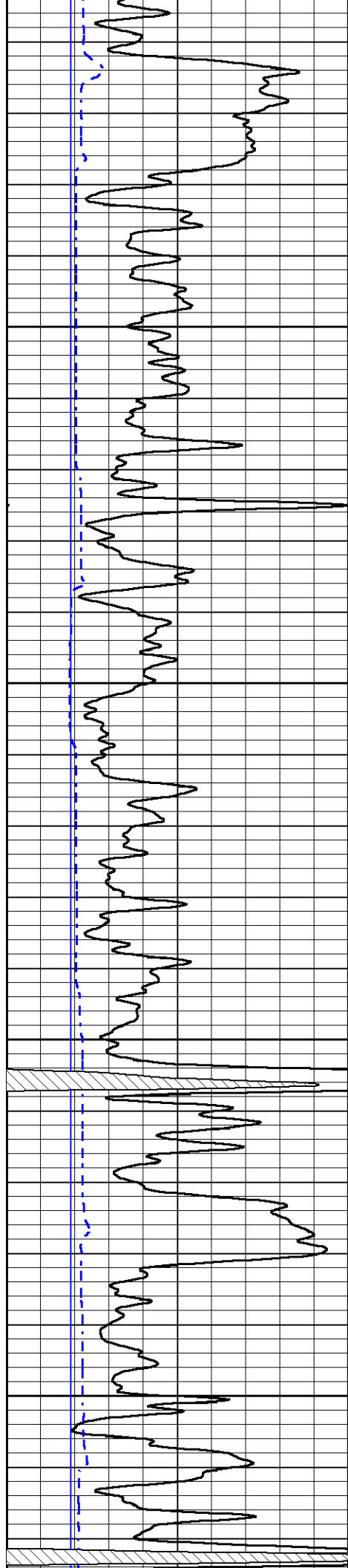
2550

2600

2650

2700



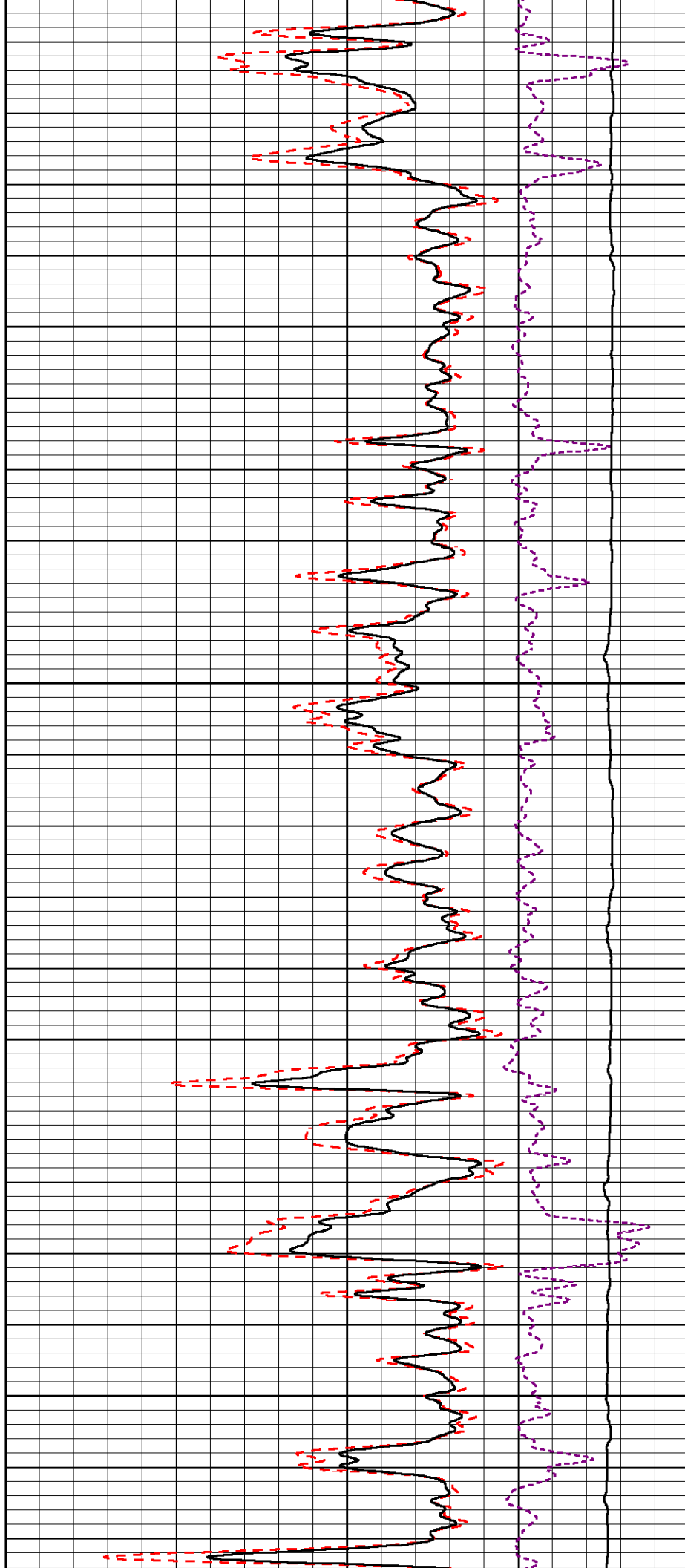


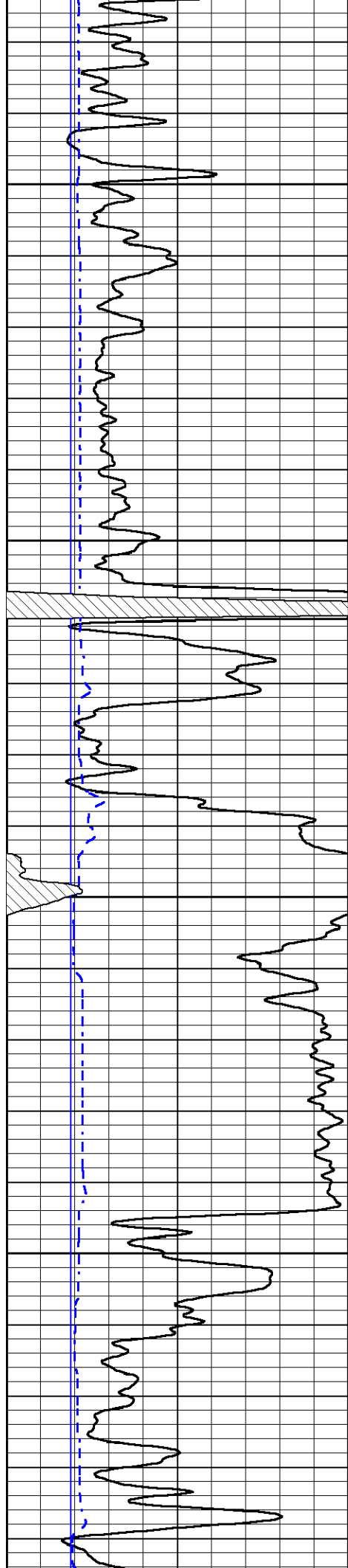
2750

2800

2850

2900



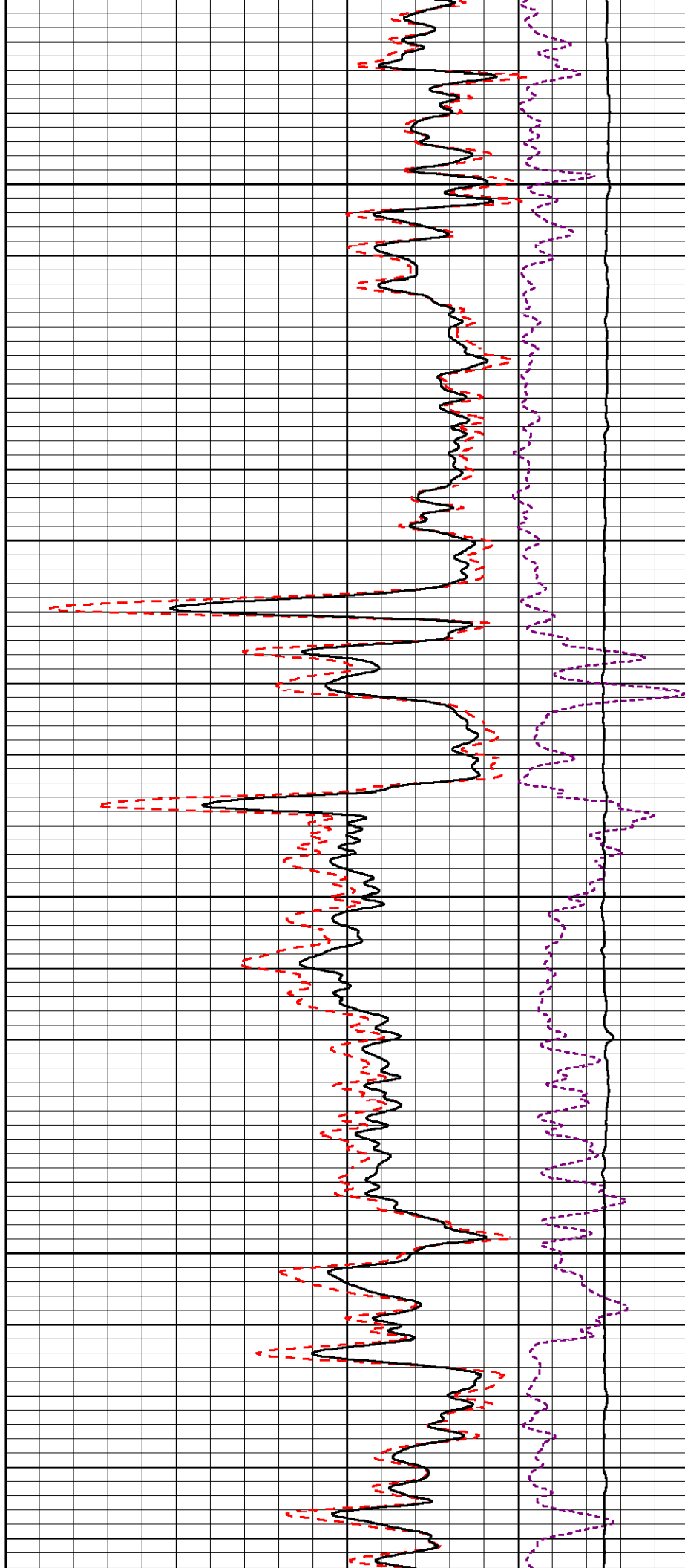


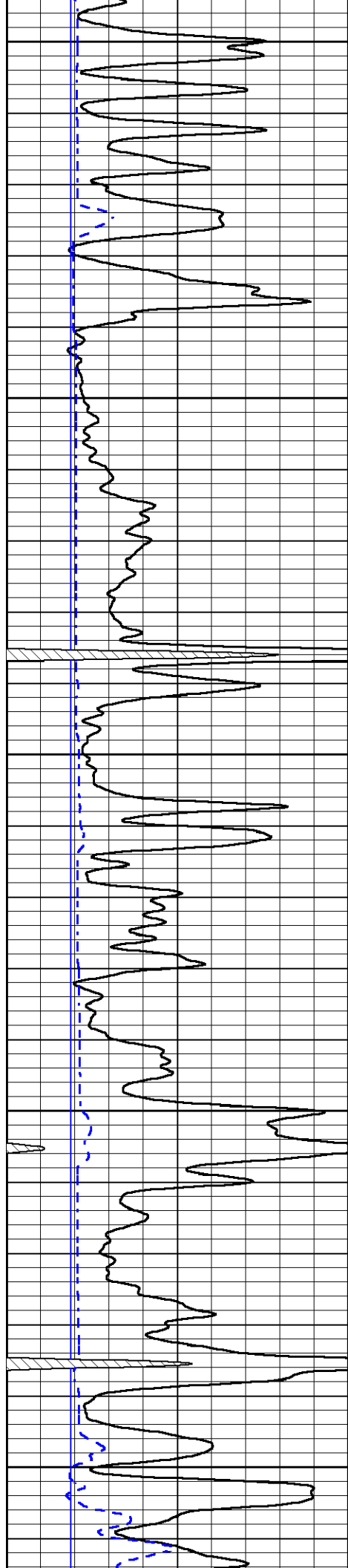
2950

3000

3050

3100





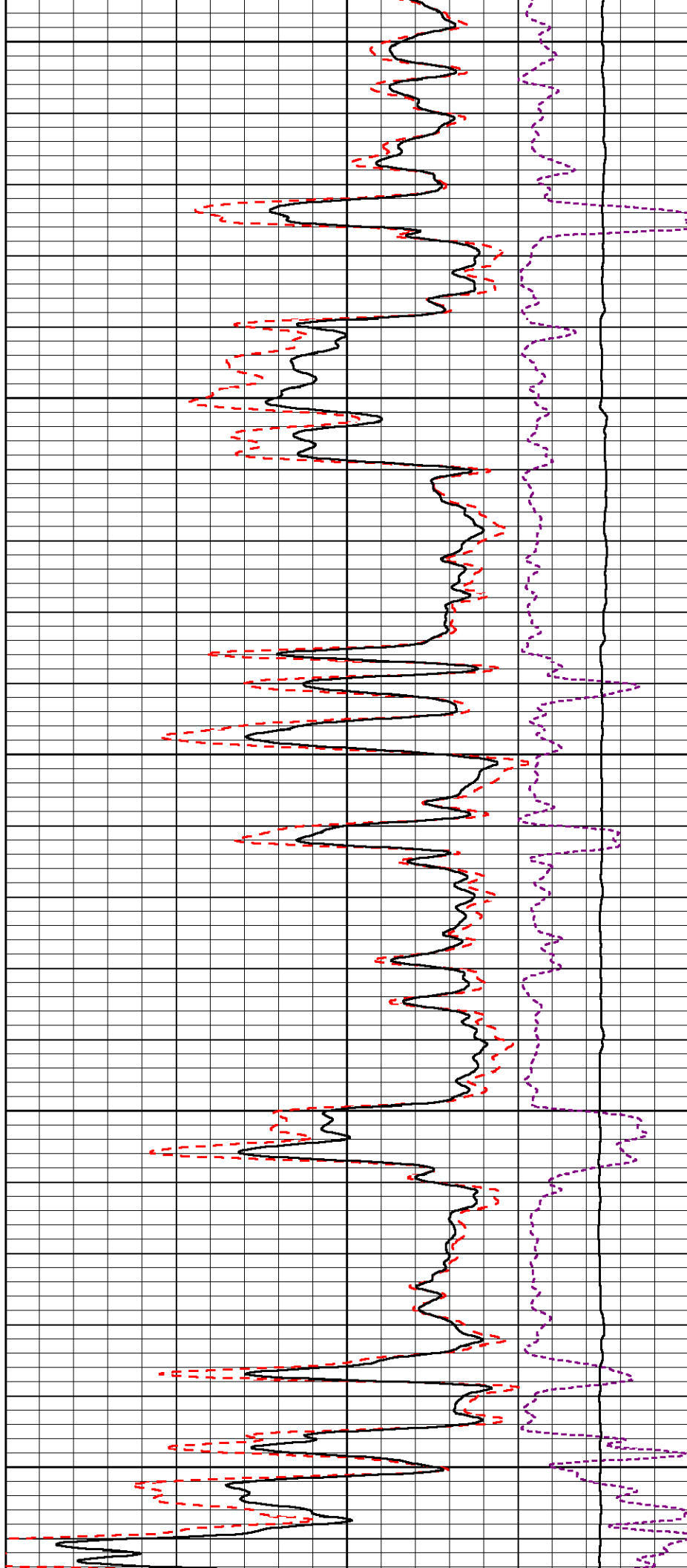
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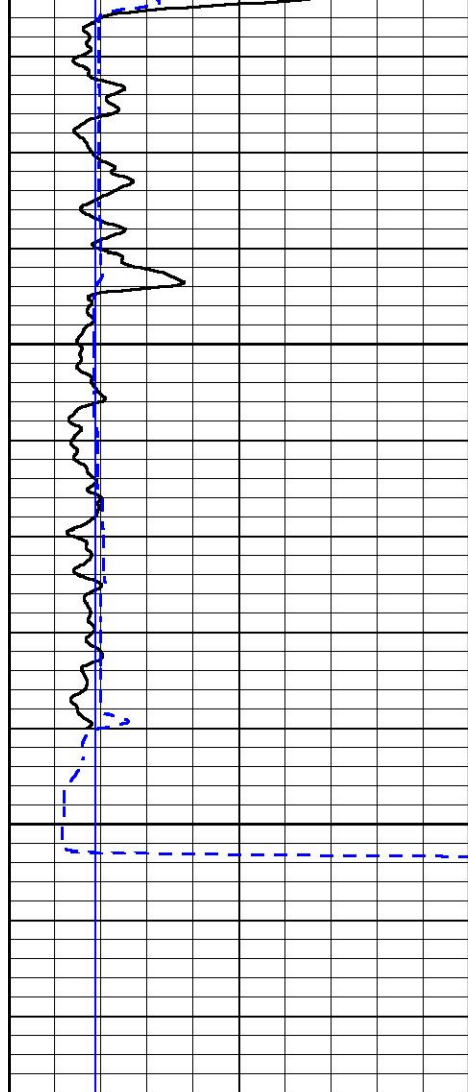
3200

3250

3300

3350

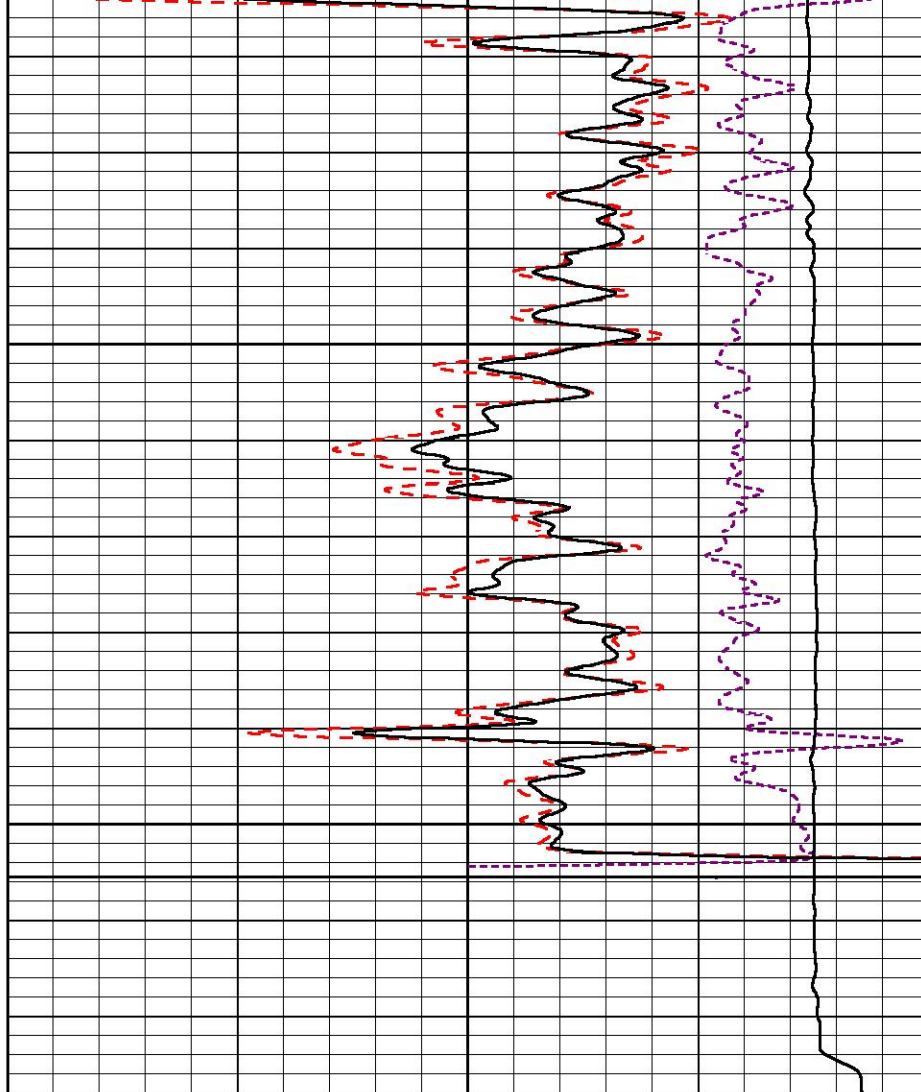




3400

3450

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16



30	Compensated Density (pu)	-10
2	Bulk Density (g/cc)	3
15000	Line Tension (lb)	0
-0.25	Correction (g/cc)	0.25



MIDWEST WIRELINE

REPEAT SECTION

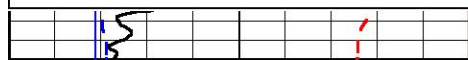
REPEAT PASS

Database File: curts_oil_5h_1.db
 Dataset Pathname: stackml/pass2.1
 Presentation Format: _cndlspml
 Dataset Creation: Mon Dec 06 16:08:19 2021
 Charted by: Depth in Feet scaled 1:240

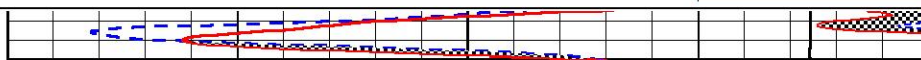
0	Gammy Ray (GAPI)	150
6	Caliper (in)	16
-200	SP (mV)	0

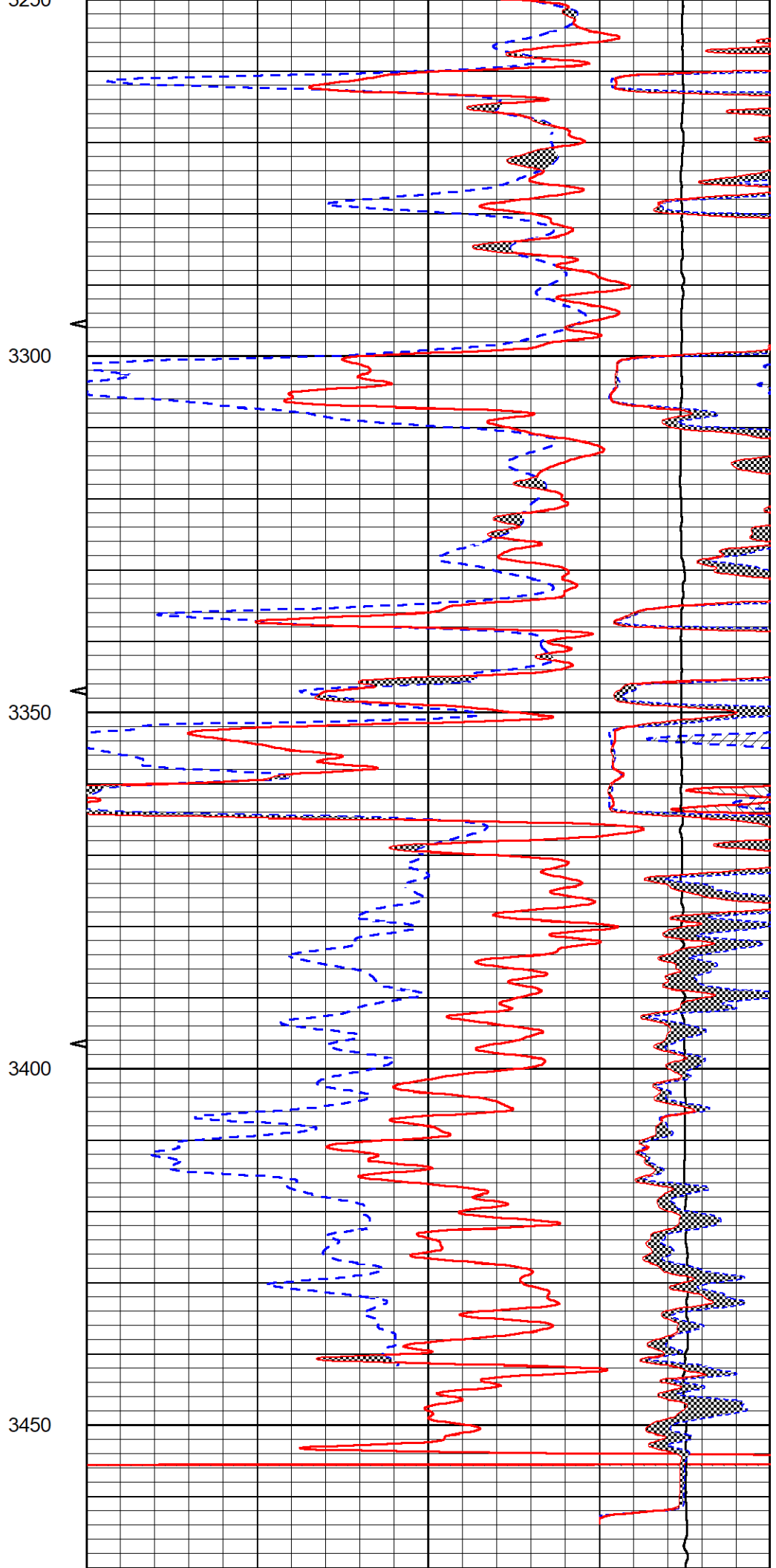
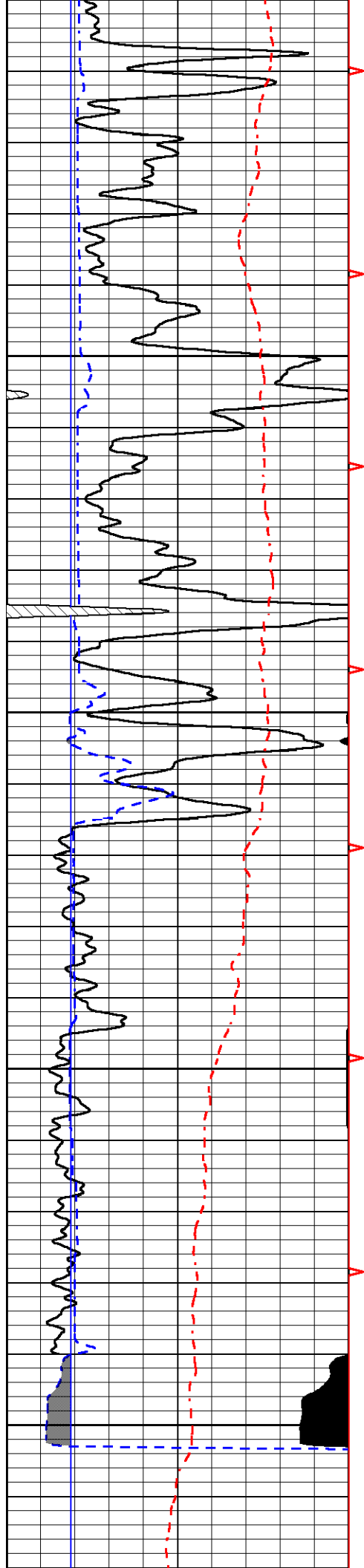
30	Compensated Neutron (pu)	-10
30	Compensated Density (pu)	-10
15000	Line Tension (lb)	0

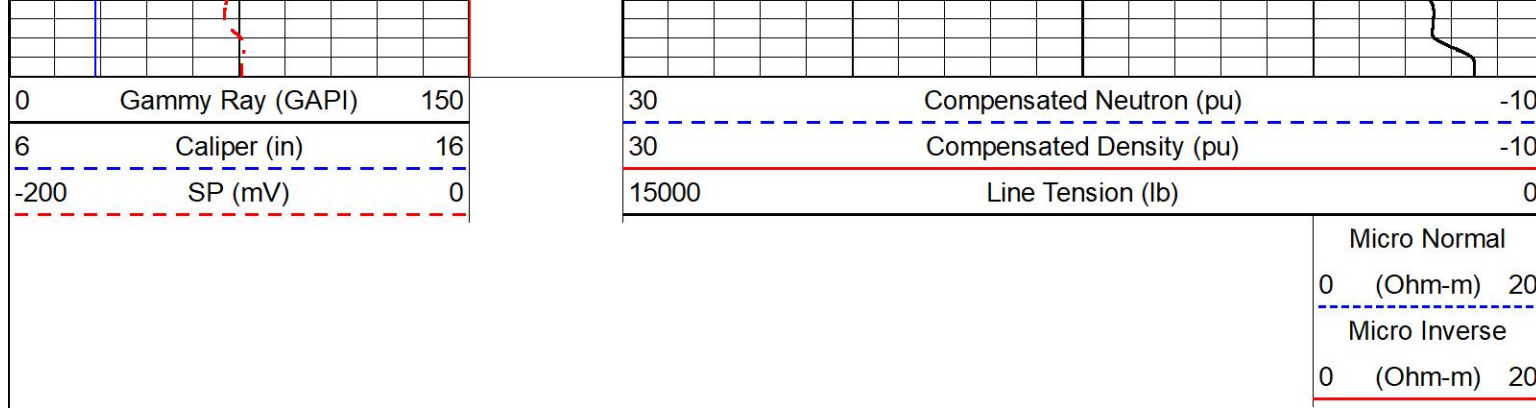
Micro Normal		
0	(Ohm-m)	20
Micro Inverse		
0	(Ohm-m)	20



3250





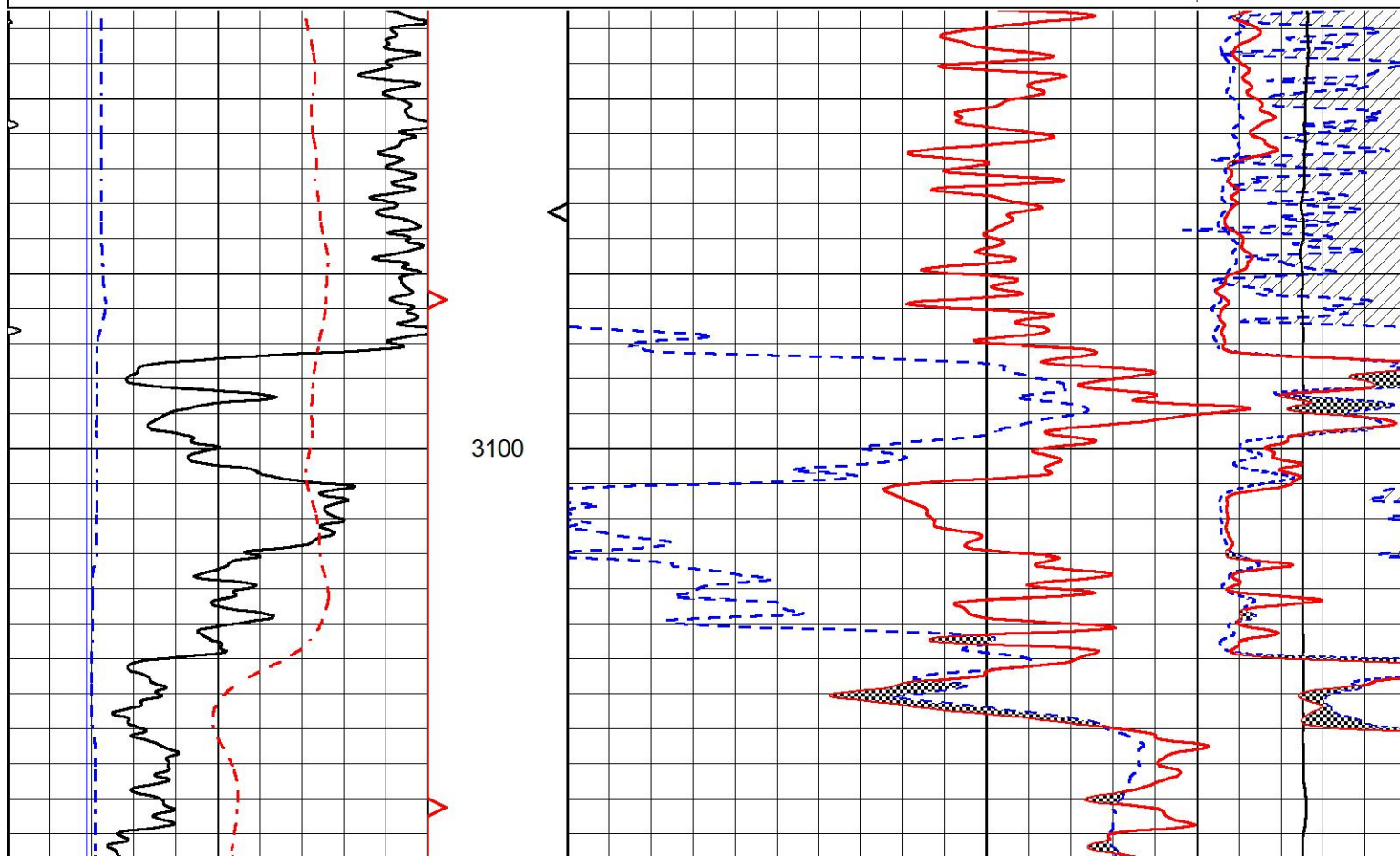
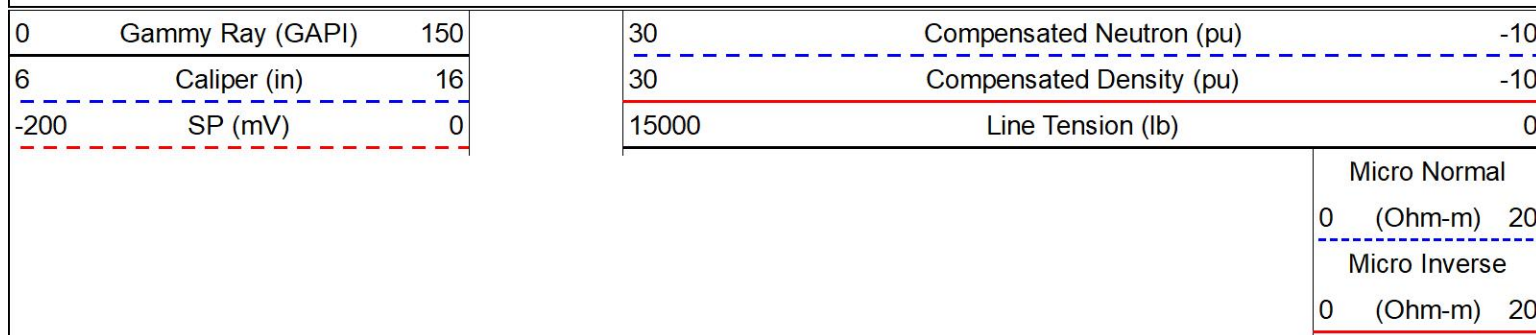


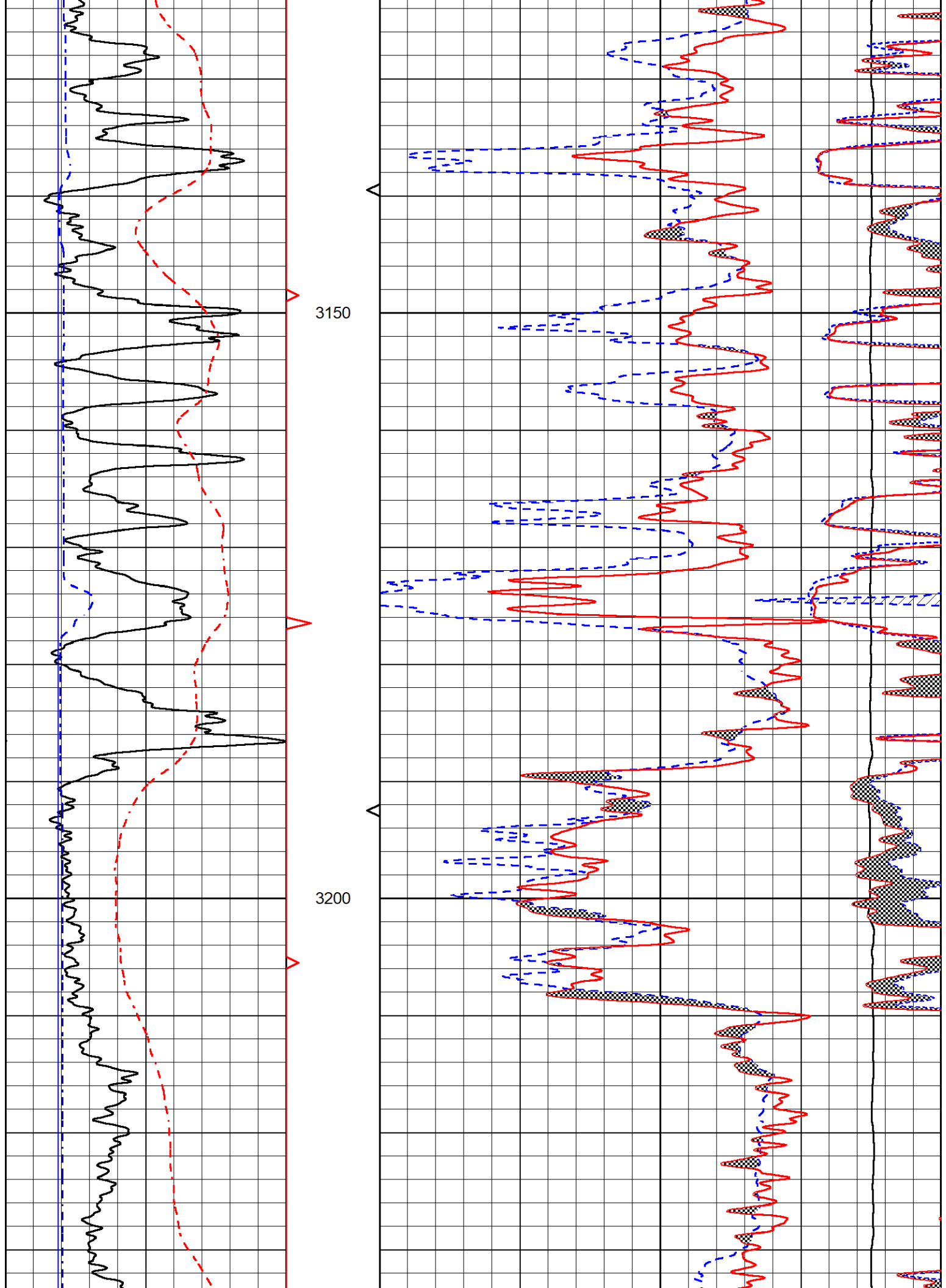
MIDWEST WIRELINE

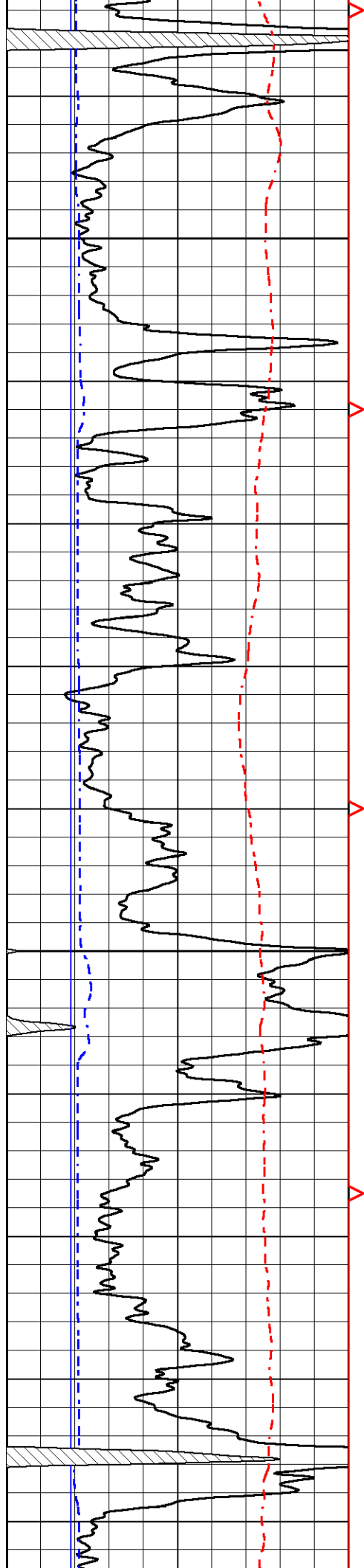
Hi Resolution

Main Pass

Database File curts_oil_5h_1.db
 Dataset Pathname stackml/pass10.1
 Presentation Format _CNDLS~2
 Dataset Creation Mon Dec 06 16:10:33 2021
 Charted by Depth in Feet scaled 1:120

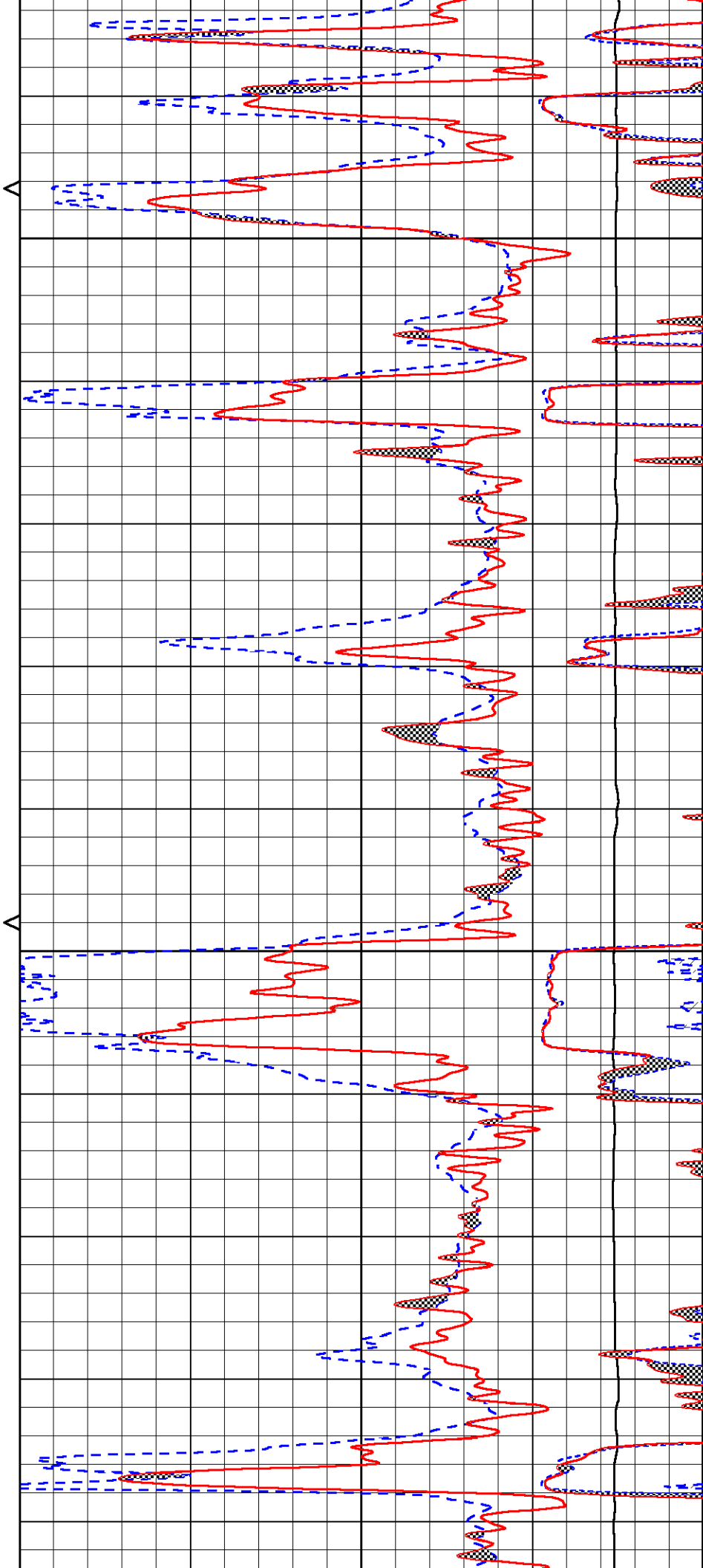


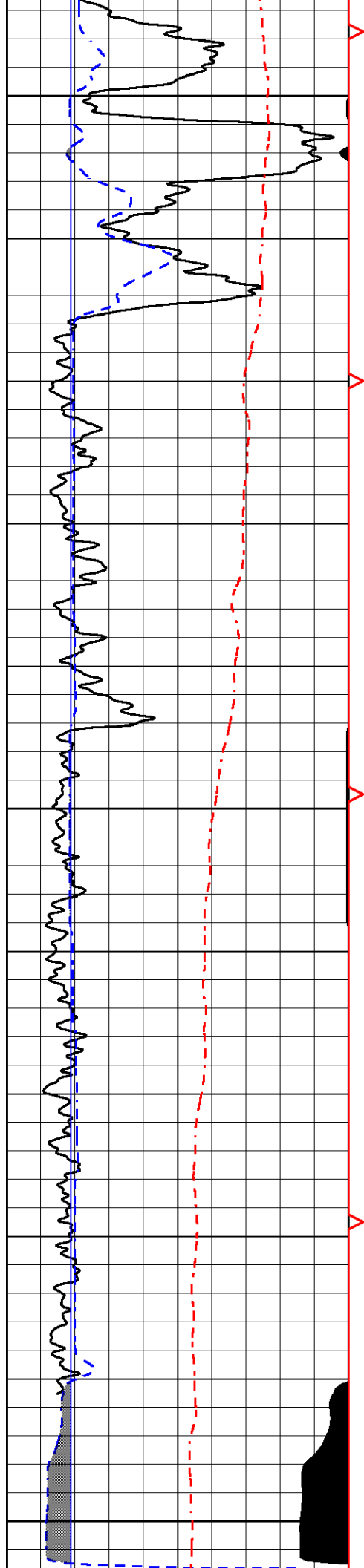




3250

3300

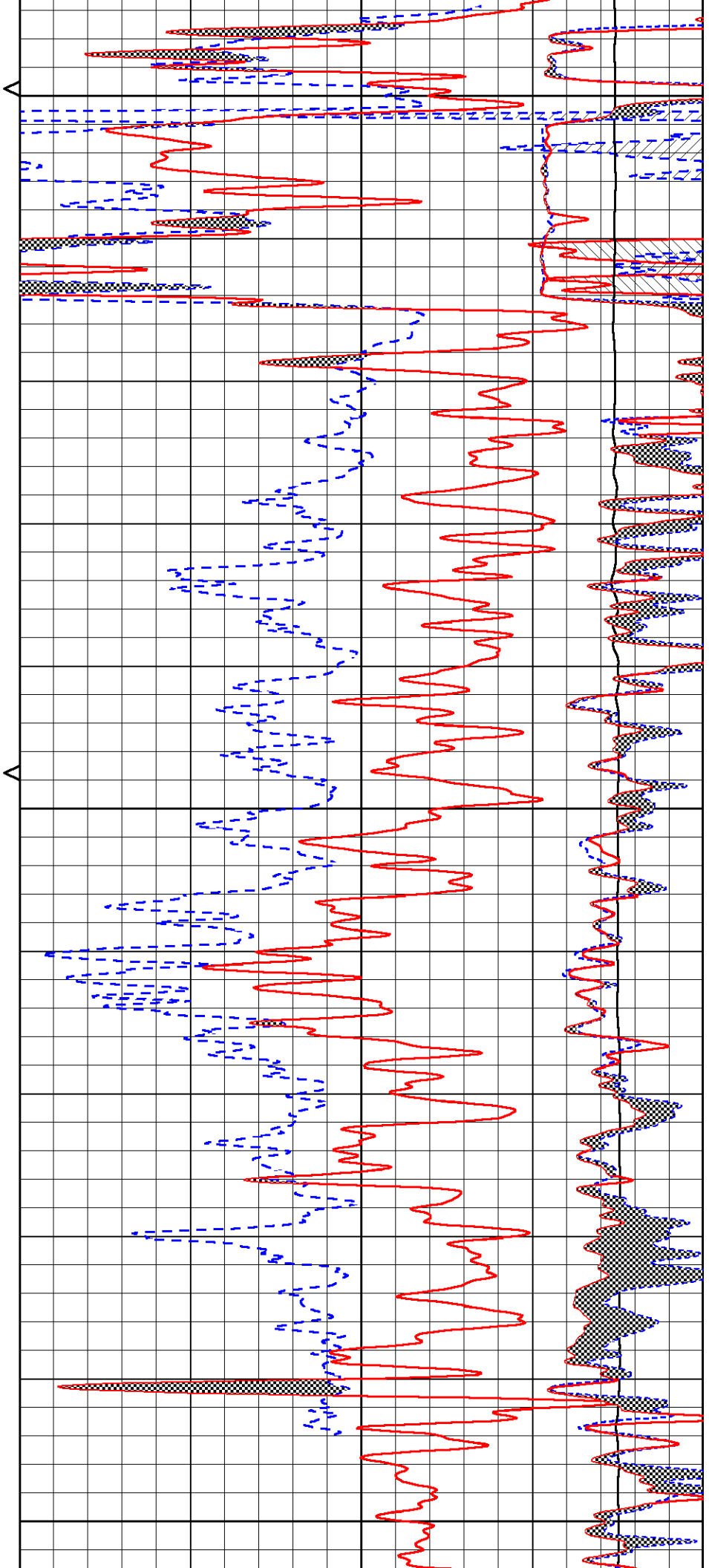


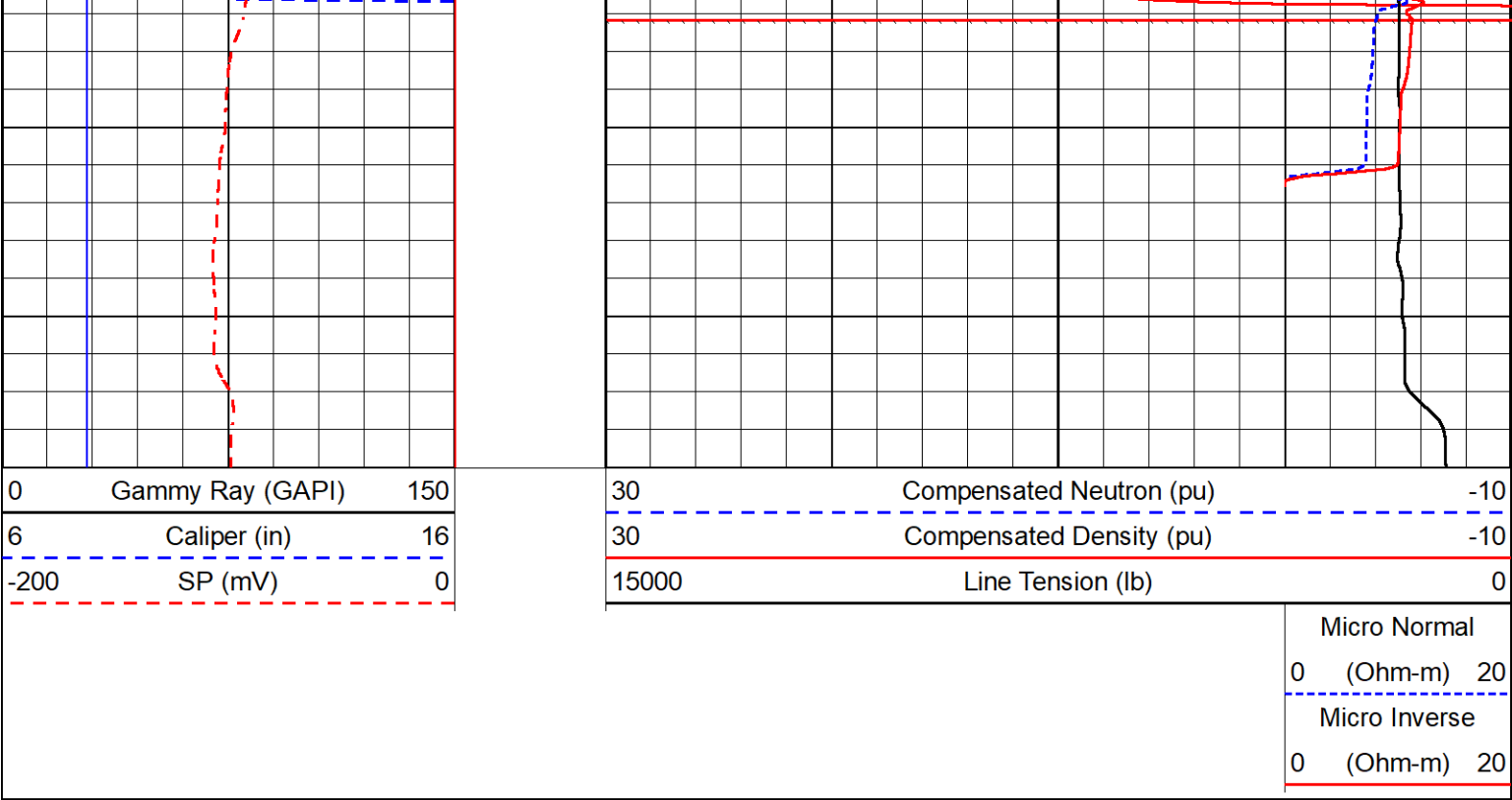


3350

3400

3450





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.33		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (tk10-MW)	5.00	3.50	100.00
CNSSC	36.48					
LSD	28.18		CDL-M&W (915-956)	8.50	4.00	250.00
DCAL	28.17					
SSD	27.68					
			ML-PSI STKBL ML (PSI-02)	7.58	4.00	65.00
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL 3E	15.50					

RLL3	15.50						
CILD	8.33			DIL-PSI HIGH TEMP (959-1032)	18.25	3.50	220.00
CILM	4.50						
SP	0.20						
Dataset: curts_oil_5h_1.db: field/well/stackml/pass3.1 Total length: 42.33 ft Total weight: 685.00 lb O.D.: 4.00 in							

Calibration Report							
Database File	curts_oil_5h_1.db						
Dataset Pathname	stackml/pass4.1						
Dataset Creation	Mon Dec 06 16:42:05 2021						
Dual Induction Calibration Report							
Serial-Model:				959-1032-PSI HIGH TEMP			
Surface Cal Performed:				Mon Oct 25 13:13:32 2021			
		Readings		References		Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	178.615	710.235	0.000	255.800	mmho/m	0.650	-19.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-45.500
Microlog Calibration Report							
Serial-Model:				PSI-02-PSI STKBL ML			
Performed:				Sat Apr 7 11:01:20 2018			
		Readings		References		Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	21000.0000	-0.7000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	22000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-134.8000
Compensated Density Calibration Report							
Serial-Model:				915-956-M&W			
Source #:				21170B			
Master Calibration Performed:				Fri Dec 3 11:22:35 2021			

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3668.53	4669.61	cps
Aluminum	2.675	g/cc	710.88	3056.05	cps
Spine Angle = 75.51			Density/Spine Ratio = 0.543		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.05		

Compensated Neutron Calibration Report

Serial-Model:	tk10-MW-M&W
Source #:	N-1238
Master Calibration Performed:	Fri Dec 3 09:16:24 2021

Master Calibration

Detector	Readings		Target	Normalization
Short Space	6240.00	cps	1000.00 cps	1.6025
Long Space	460.00	cps	1000.00 cps	1.9500

Gamma Ray Calibration Report

Serial Number:	89-M&W
Tool Model:	M&W
Performed:	Fri Dec 3 12:13:24 2021
Calibrator Value:	500.0 GAPI
Background Reading:	28.0 cps
Calibrator Reading:	986.0 cps
Sensitivity:	0.5700 GAPI/cps



Company	Curts Oil Operations LLC
Well	5-H #1
Field	Beaver South
County	Barton
State	Kansas