



DUAL COMP POROSITY LOG

MIDWEST WIRELINE

Company N-10 Oil & Gas, Inc.
Well Bertholf C-1
Field Spivey-Grabs-Basil
County Harper
State Kansas

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Location: API #: 15-077-22191-00-00

Other Services

SEC 24 TWP 31S RGE 9W
330 FNL & 2310 FEL

DIL/MEL

Permanent Datum Ground Level Elevation 1595
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

K.B. 1607
D.F.
G.L. 1595

Date 12/16/2022

Run Number One

Type Log CNL/CDL

Depth Driller 4600

Depth Logger 4596

Bottom Logged Interval 4567

Top Logged Interval 2000

Type Fluid In Hole Chemical

Salinity, PPM CL 5300

Density 8.5

Level Full

Max. Rec. Temp. F 122

Operating Rig Time 3 Hours

Equipment -- Location P-108 HAYS

Recorded By D. Schmidt

Witnessed By Tim Pierce

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	0	252	8.625	23	0	252
Two	7.875	252	TD				

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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.

Zenda,
5 South, 1 East, 2 South, 1/2 East,
South into

Log Measured From: Kelly Bushing

12 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew

Engineer: D. Schmidt
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Tim Pierce
Secondary Witness:
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.33			GR-M&W (103)	3.00	3.50	50.00
CNLSC CNSSC	37.23 36.48			CNT-M&W (210)	5.00	3.50	100.00
LSD DCAL SSD	28.18			CDL-M&W (303-03)	8.50	4.00	250.00
	28.17			ML-PSI STKBL ML (402)	7.58	4.00	65.00
	27.68						
MCAL MI MN	19.58						
	19.58						
	19.58						
RLL3F RLL3	15.50 15.50			DIL-M&W (505 HT)	18.25	3.50	220.00
CILD	8.33						
	4.50						
SP	0.20						
Dataset:				n-10_.db: field/well/stkml/pass3.15			
Total length:		42.33 ft					
Total weight:		685.00 lb					
O.D.:		4.00 in					

Log Variables

DatabaseC:\ProgramData\Warrior\Data\n-10_.db
Dataset field/well/stkml/pass3.15/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	122	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	No	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	295	30		4596

Variable Description

A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth



MIDWEST WIRELINE

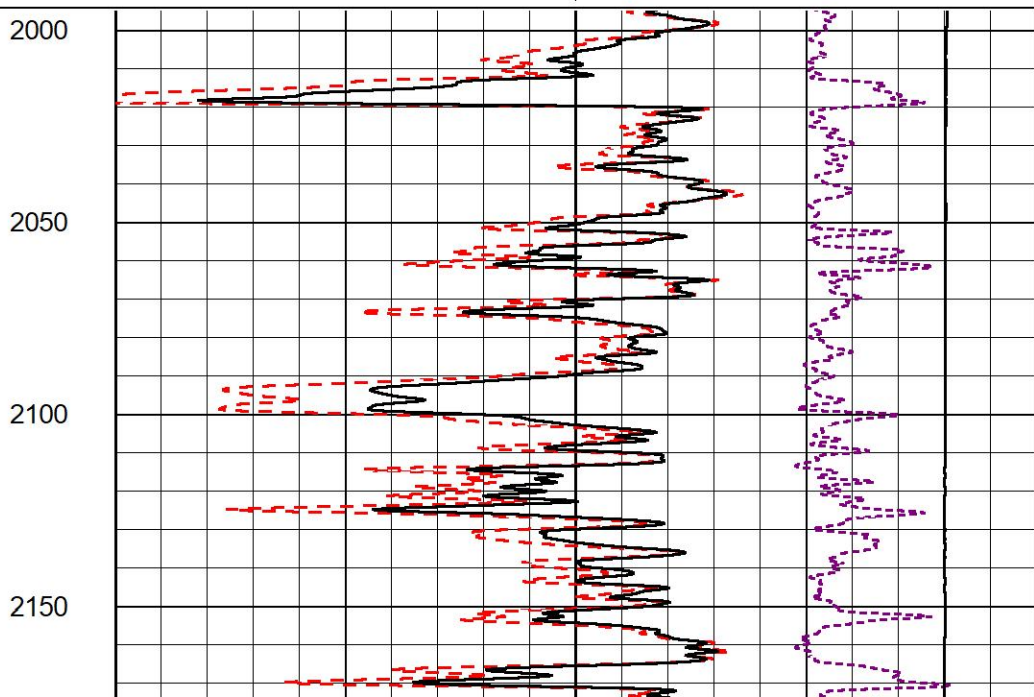
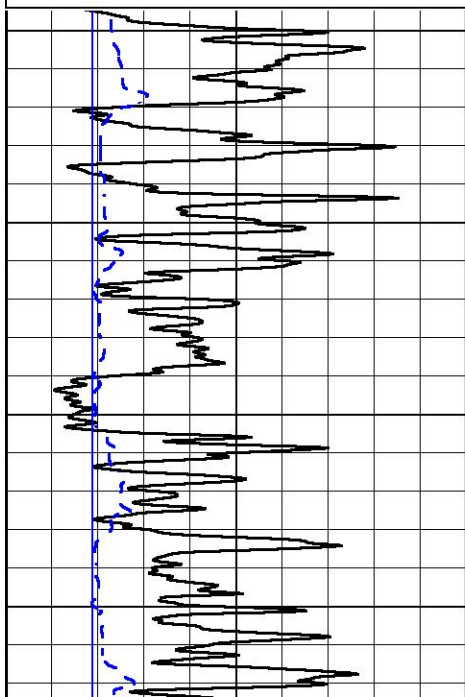
2" SCALE BULK DENSITY

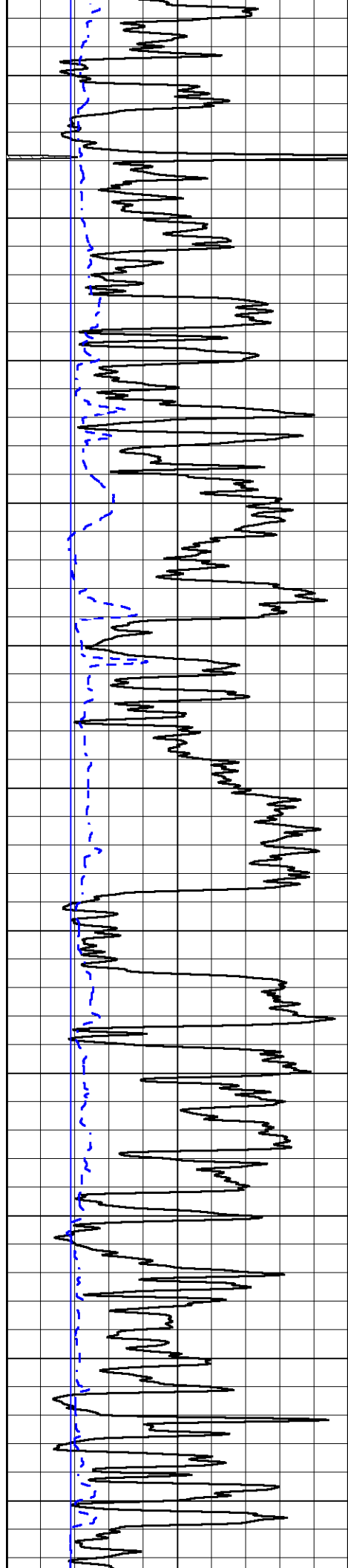
MAIN PASS

Database File n-10_.db
Dataset Pathname stkml/pass3.2
Presentation Format _cdl
Dataset Creation Fri Dec 16 07:37:27 2022
Charted by Depth in Feet scaled 1:600

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





2200

2250

2300

2350

2400

2450

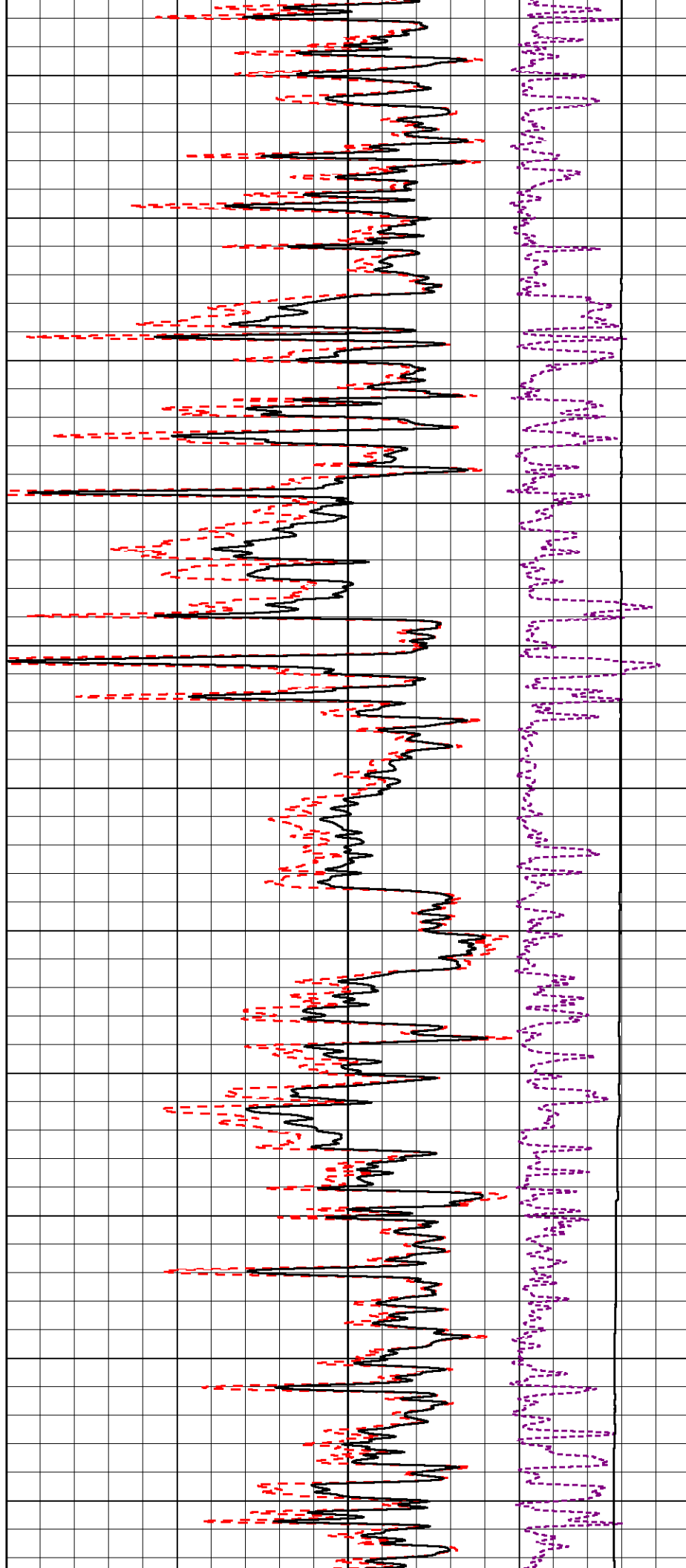
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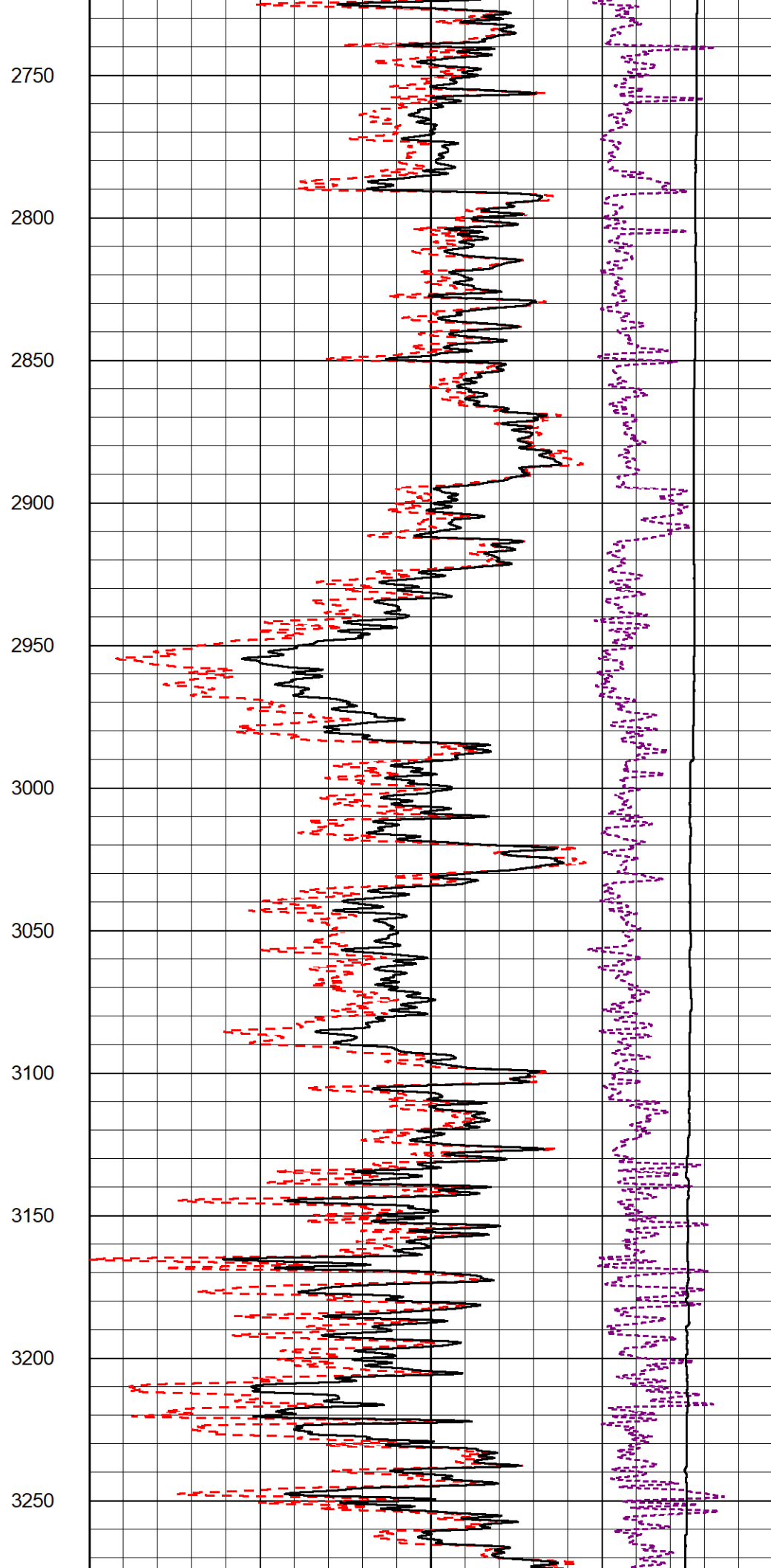
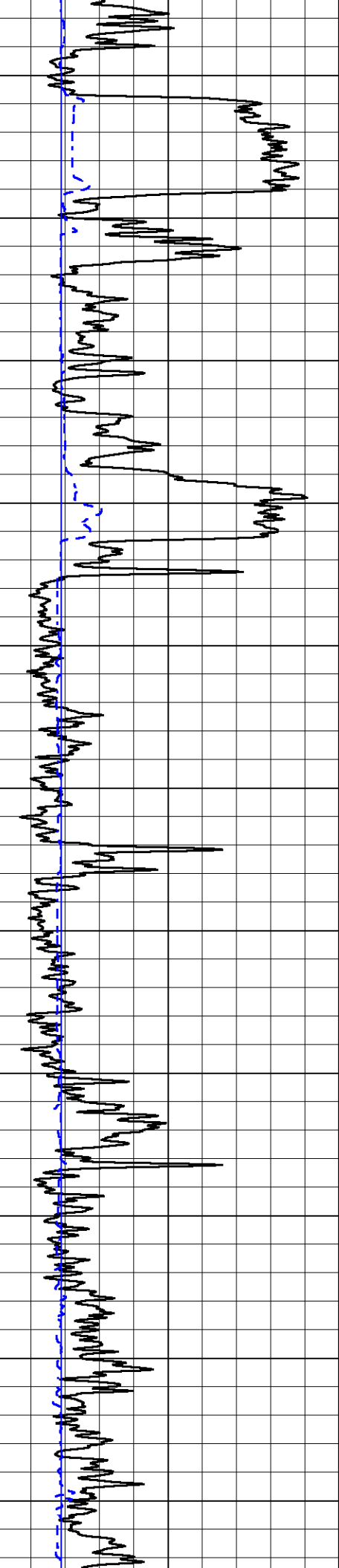
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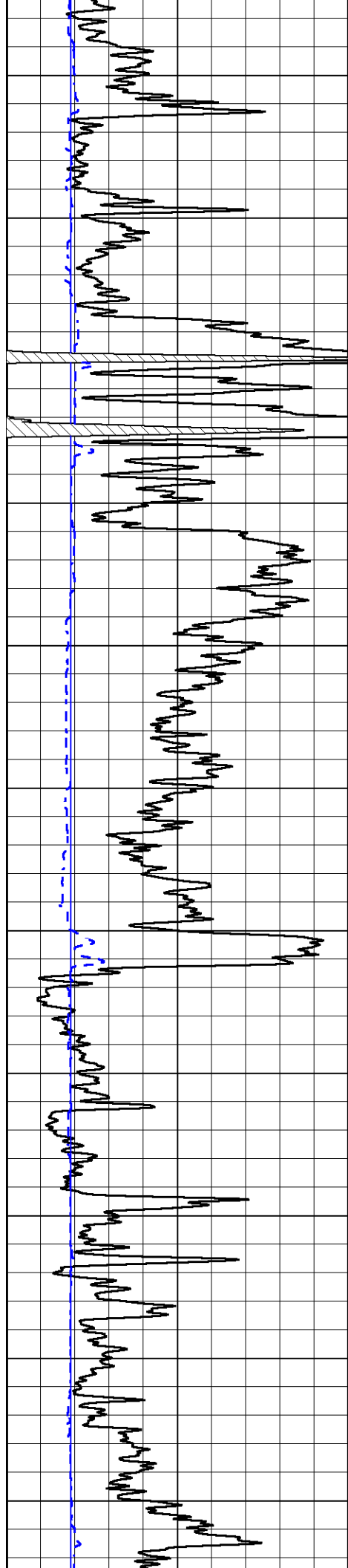
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2650

2700







3300

3350

3400

3450

3500

3550

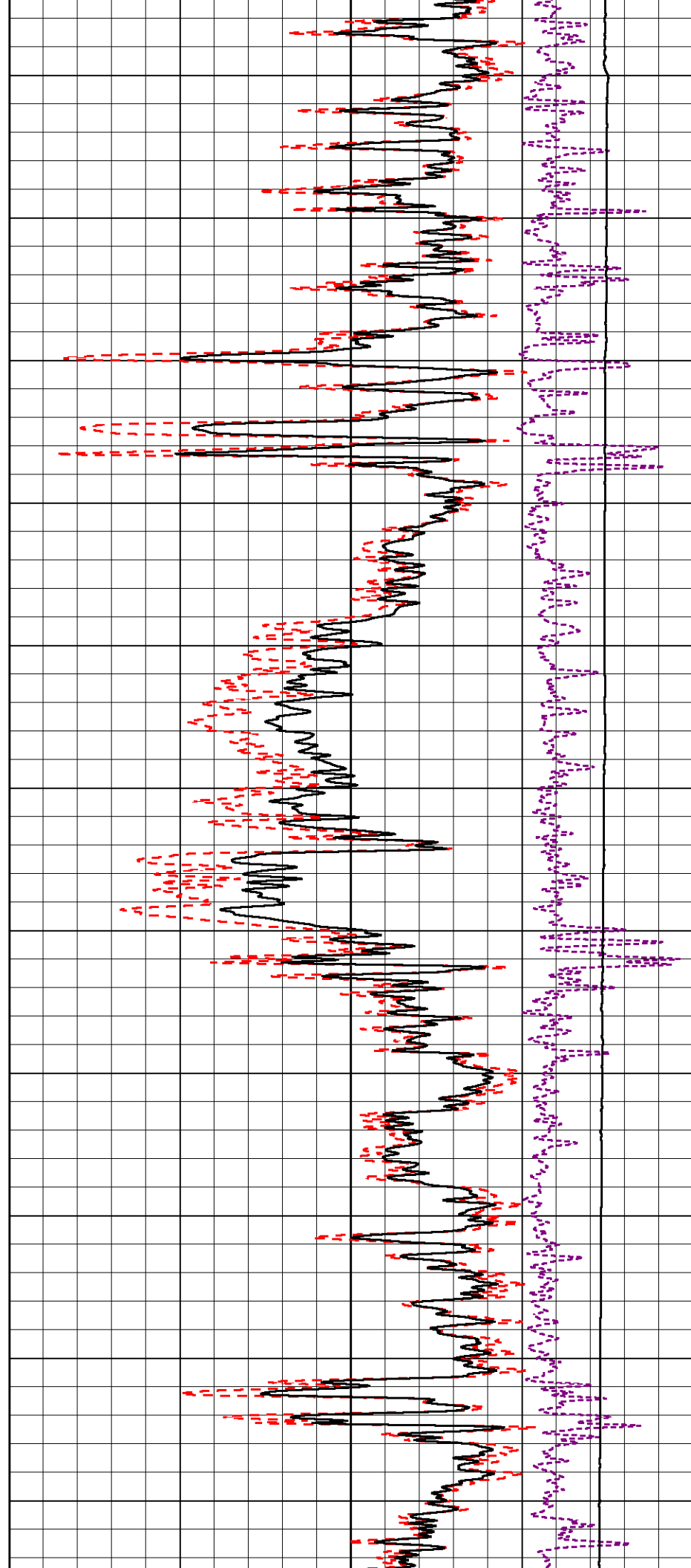
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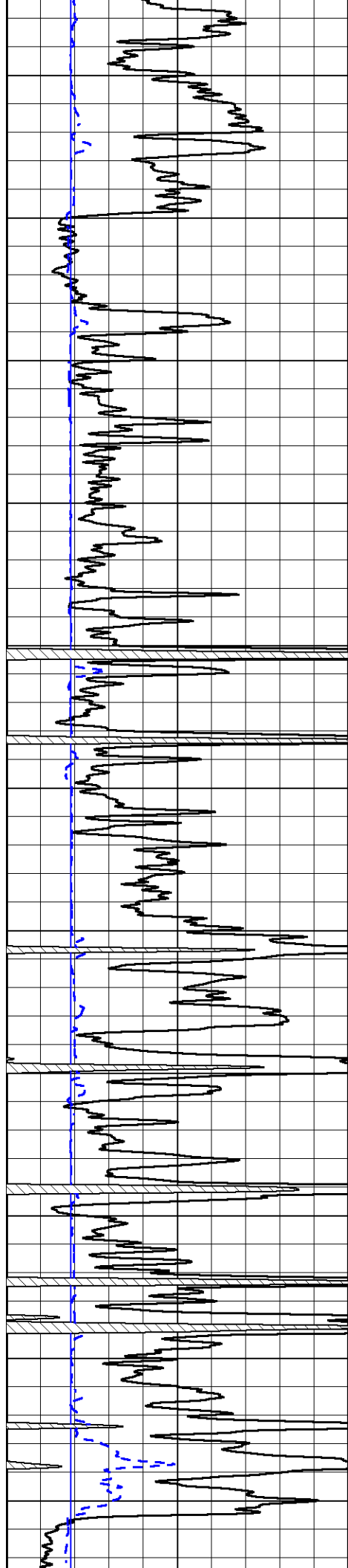
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3700

3750

3800





3850

3900

3950

4000

4050

4100

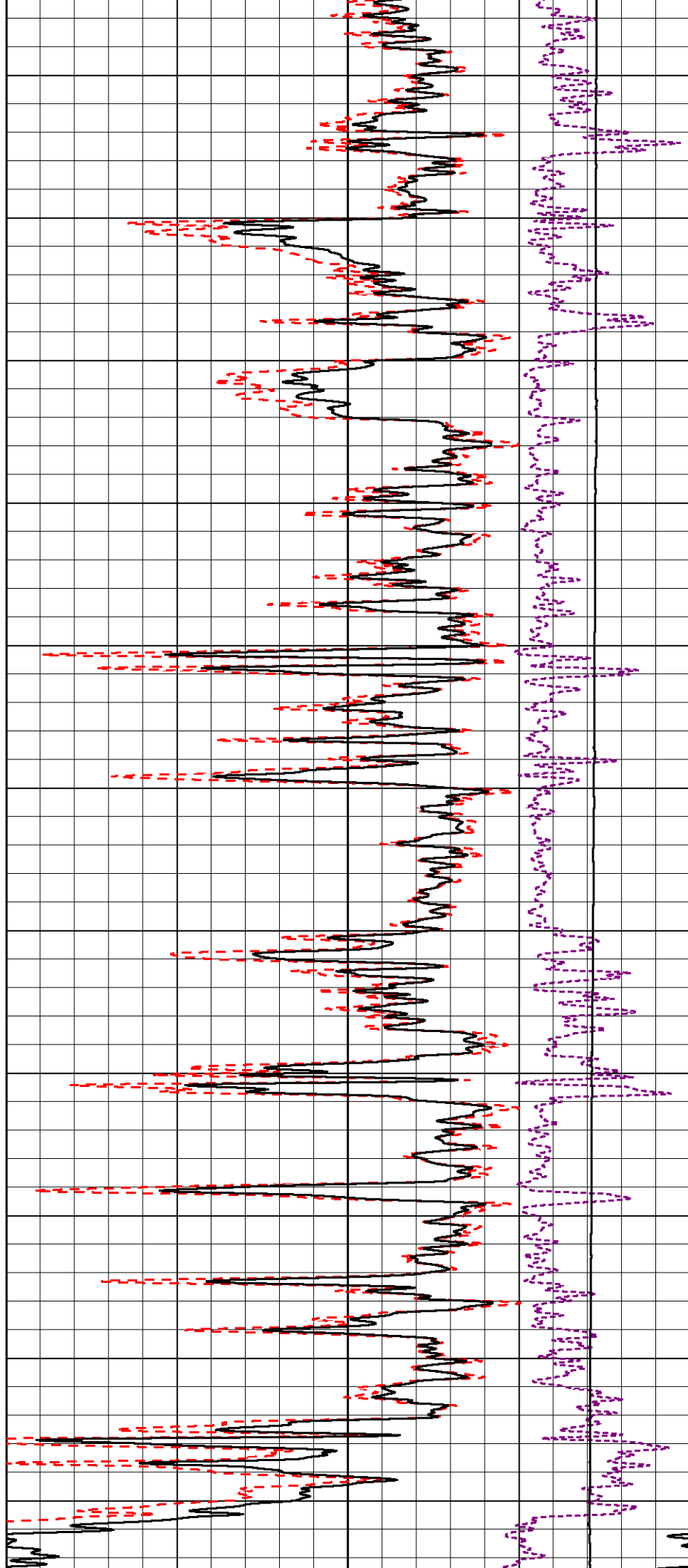
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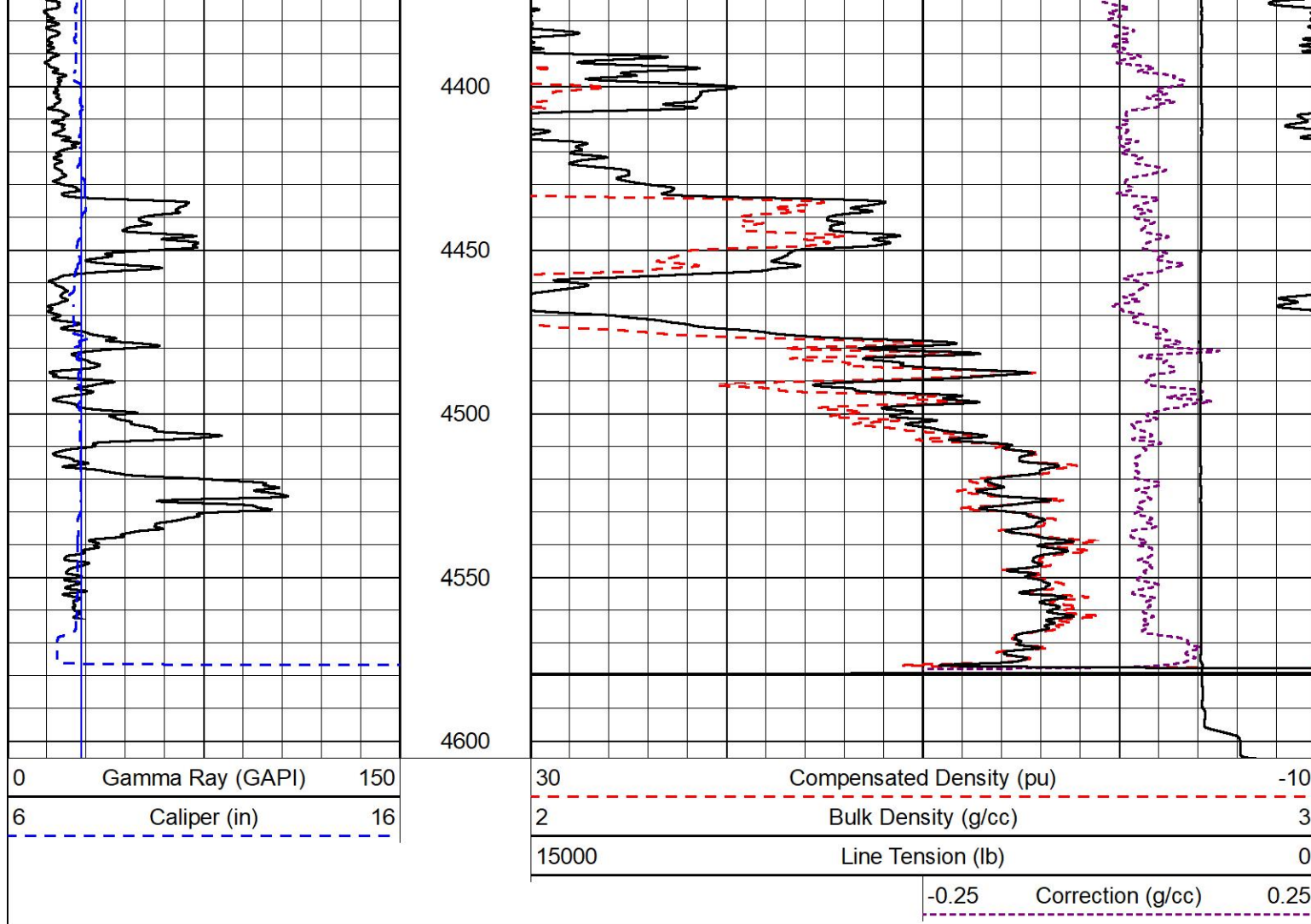
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4250

4300

4350



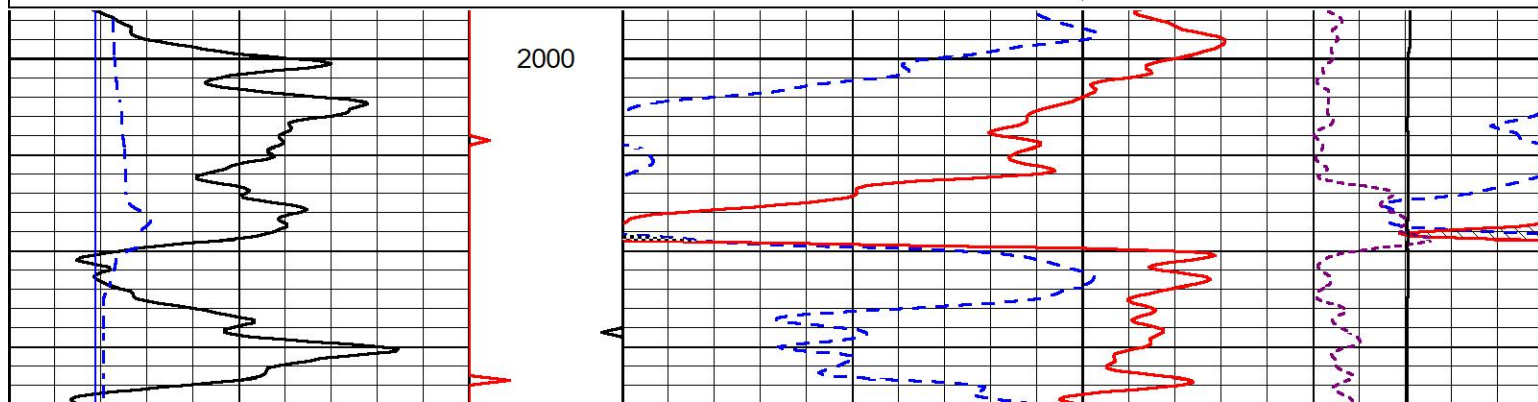
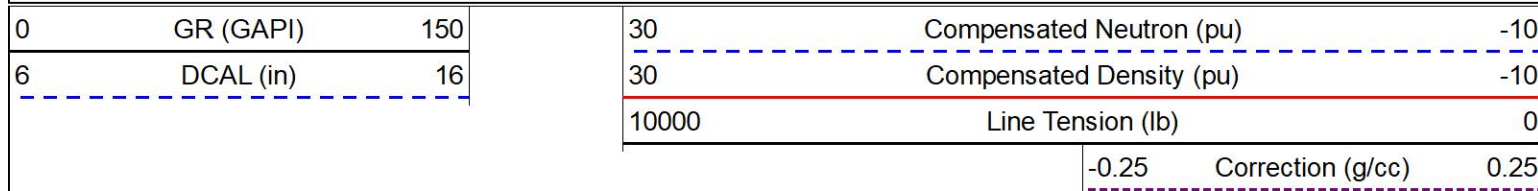


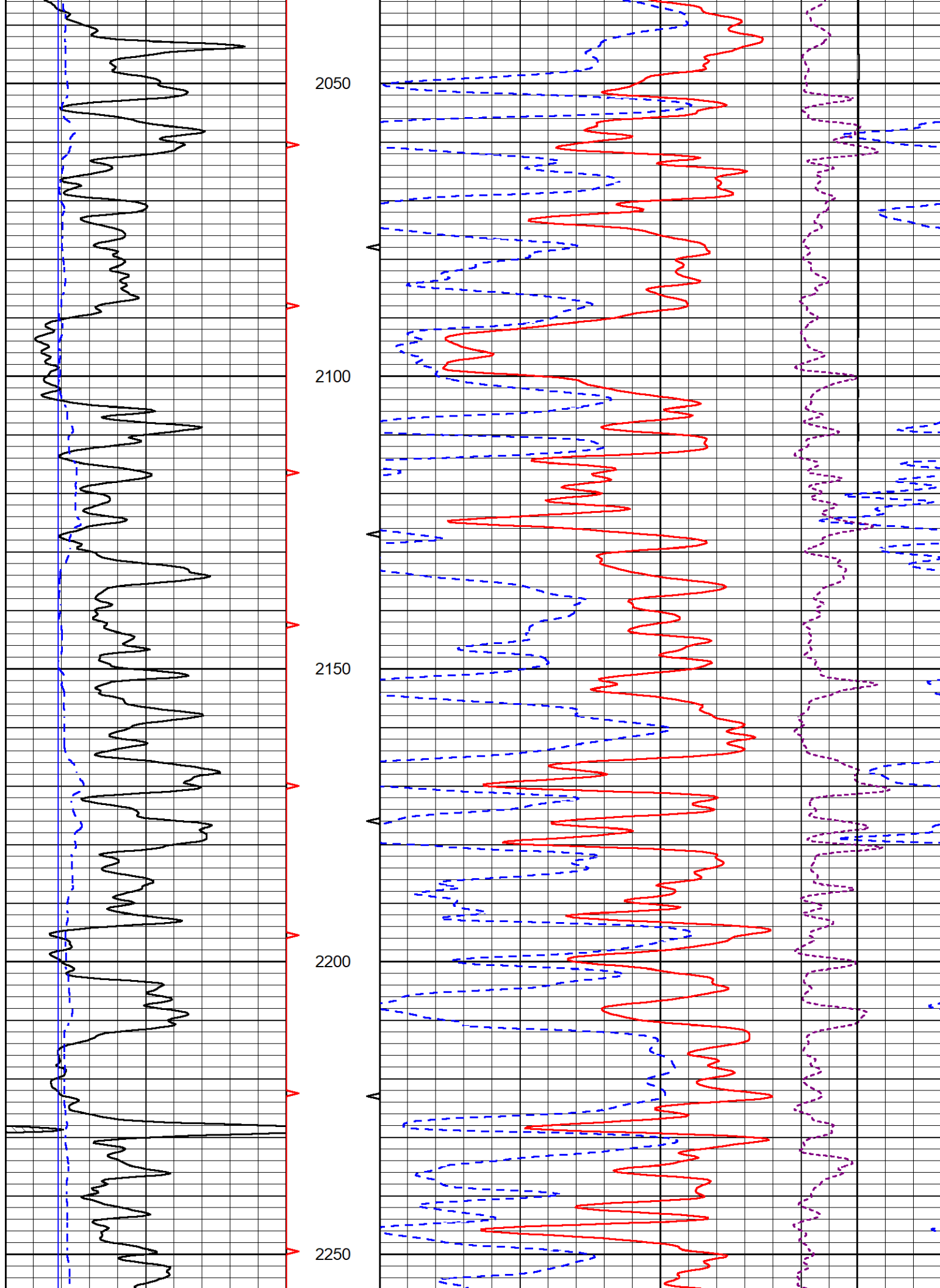
MIDWEST WIRELINE

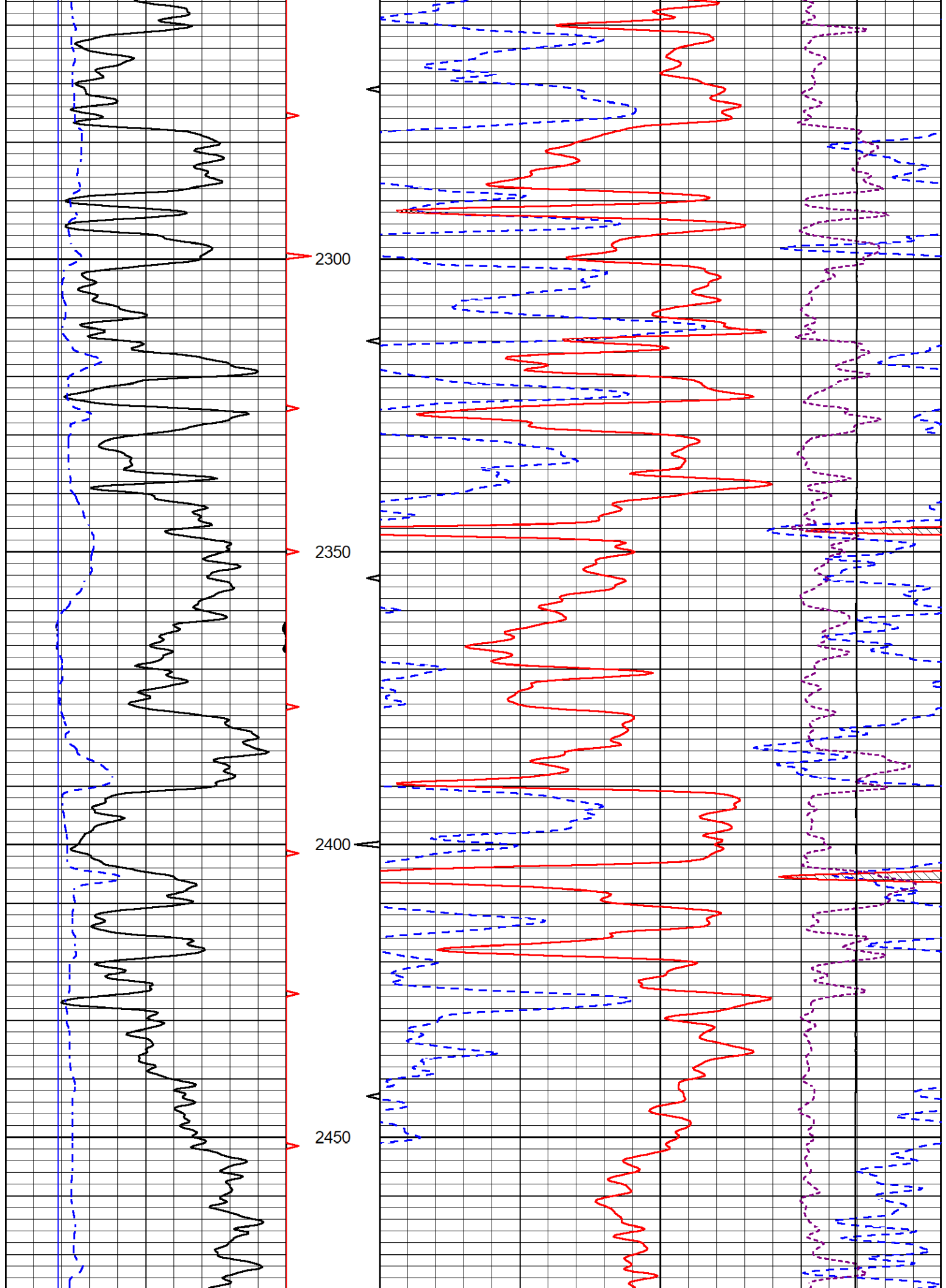
DETAIL SECTION

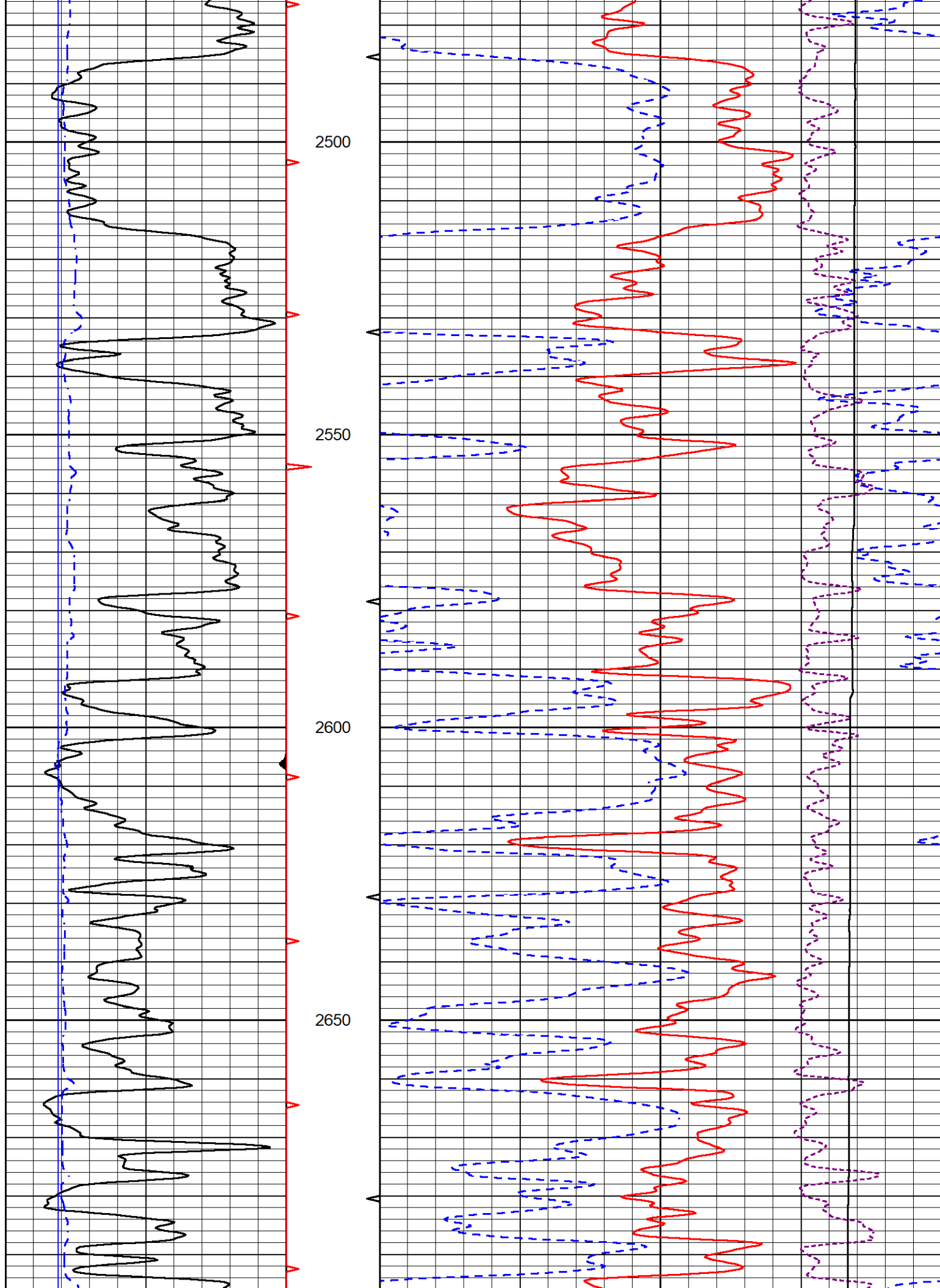
MAIN PASS

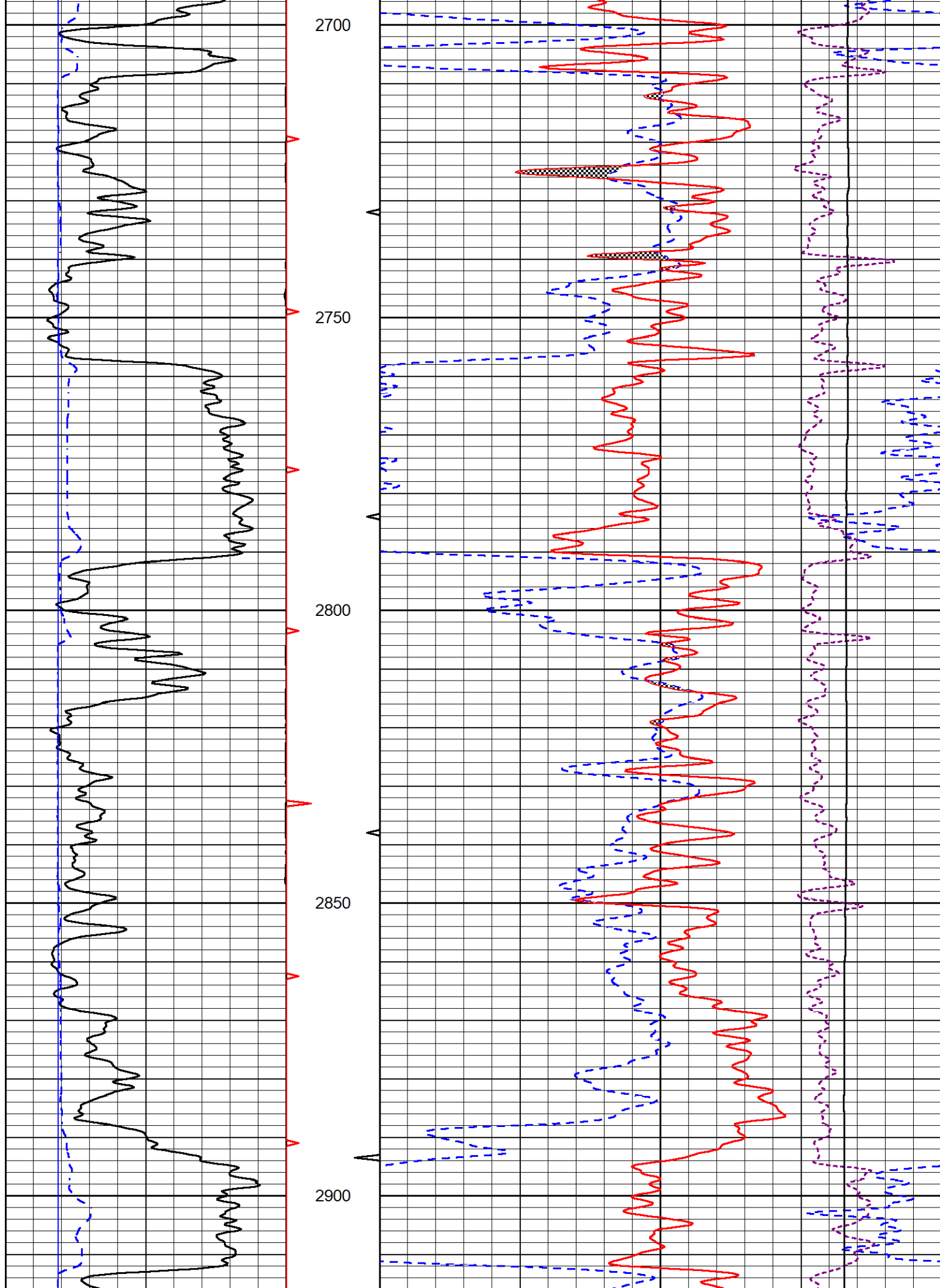
Database File n-10_.db
 Dataset Pathname stkml/pass3.5
 Presentation Format _CNDLS~1
 Dataset Creation Fri Dec 16 07:38:32 2022
 Charted by Depth in Feet scaled 1:240

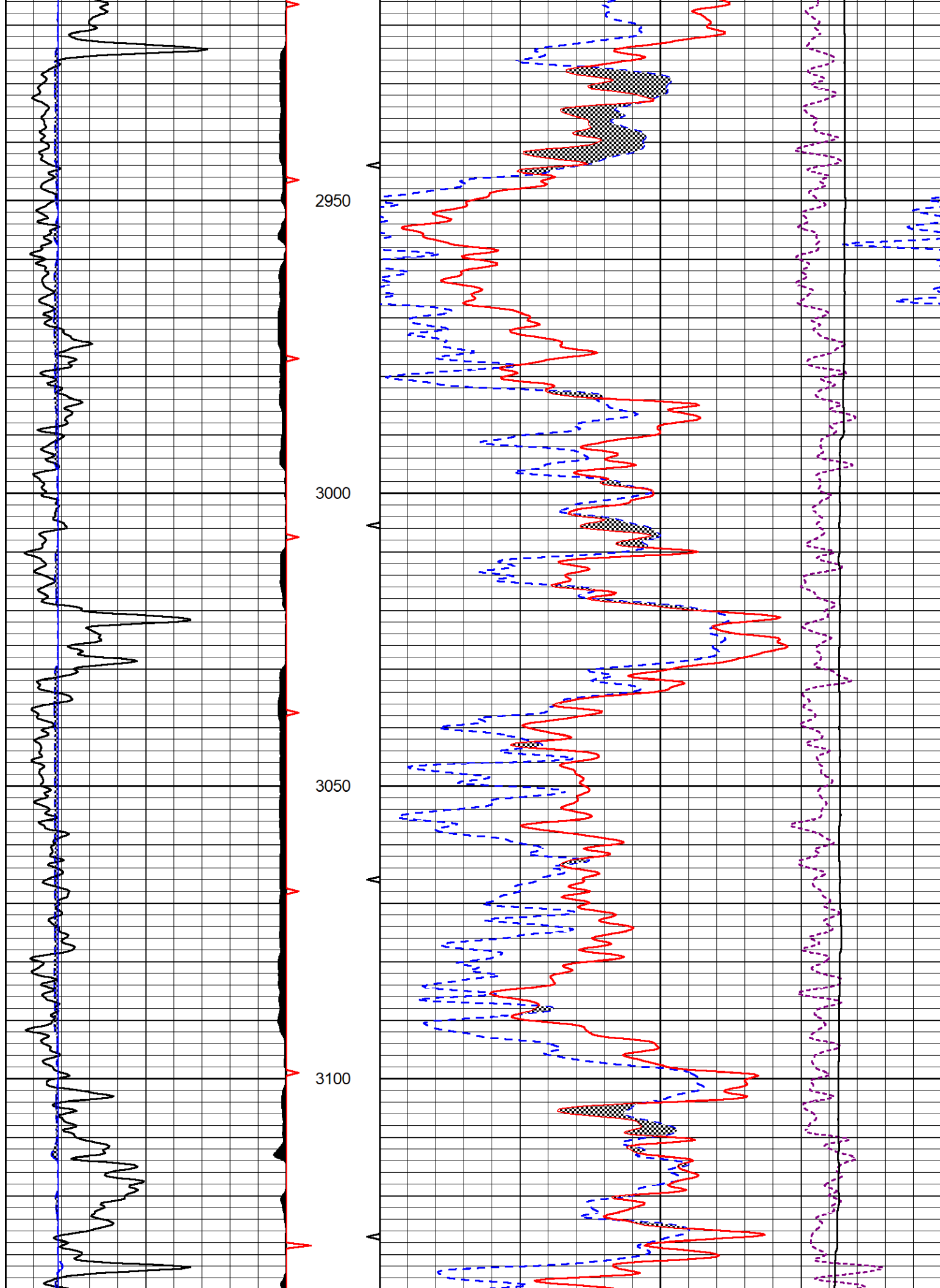


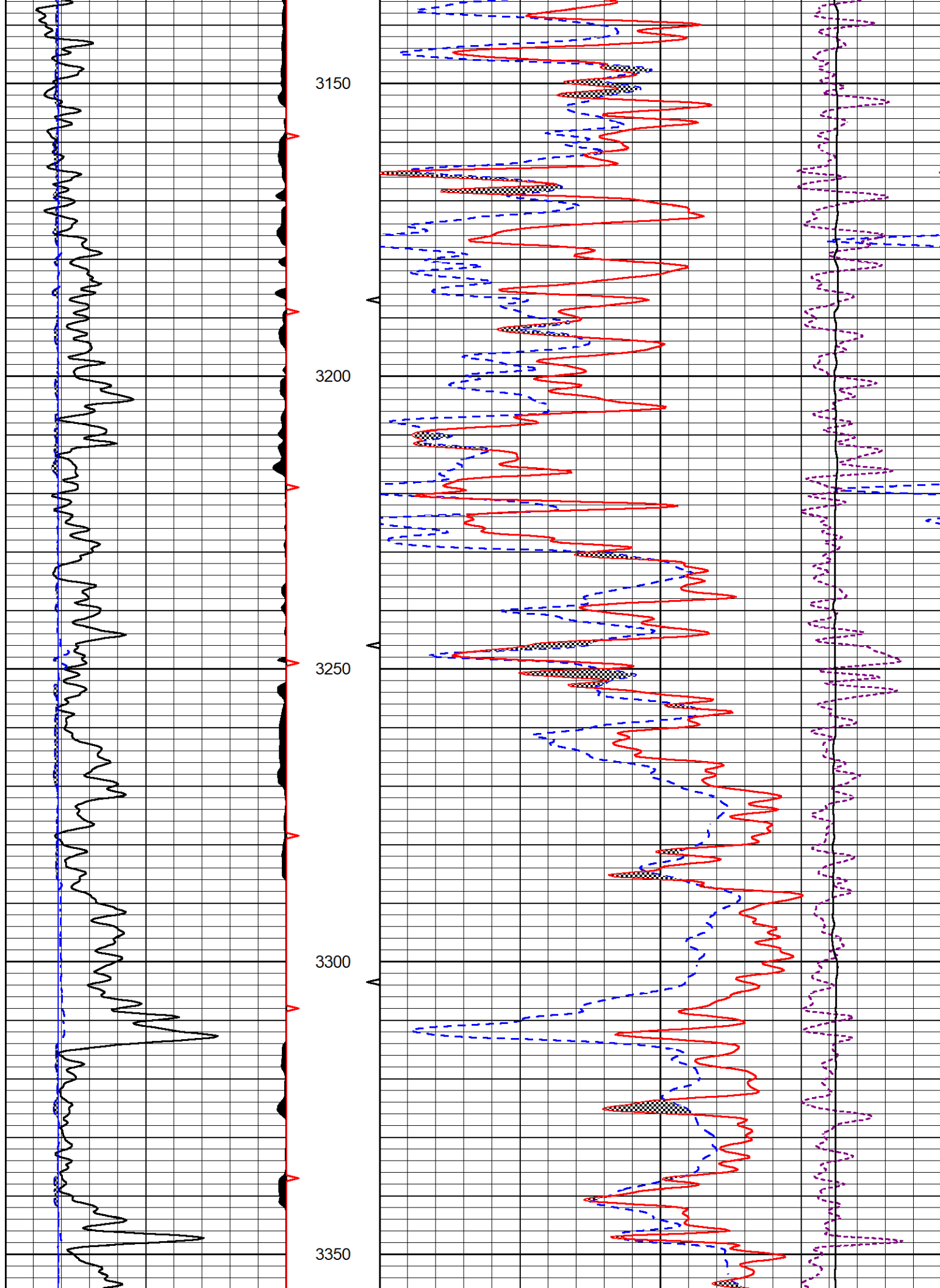


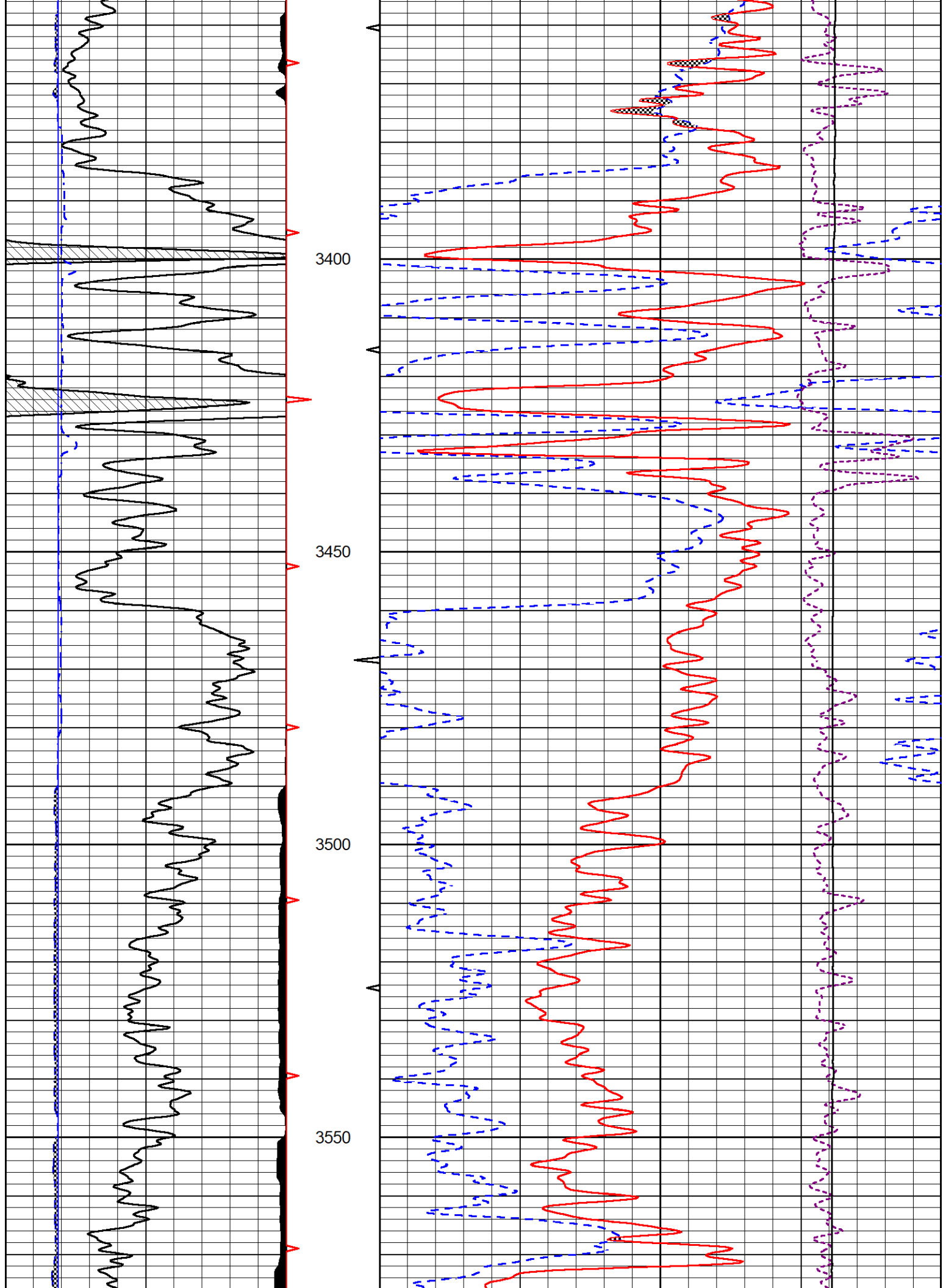


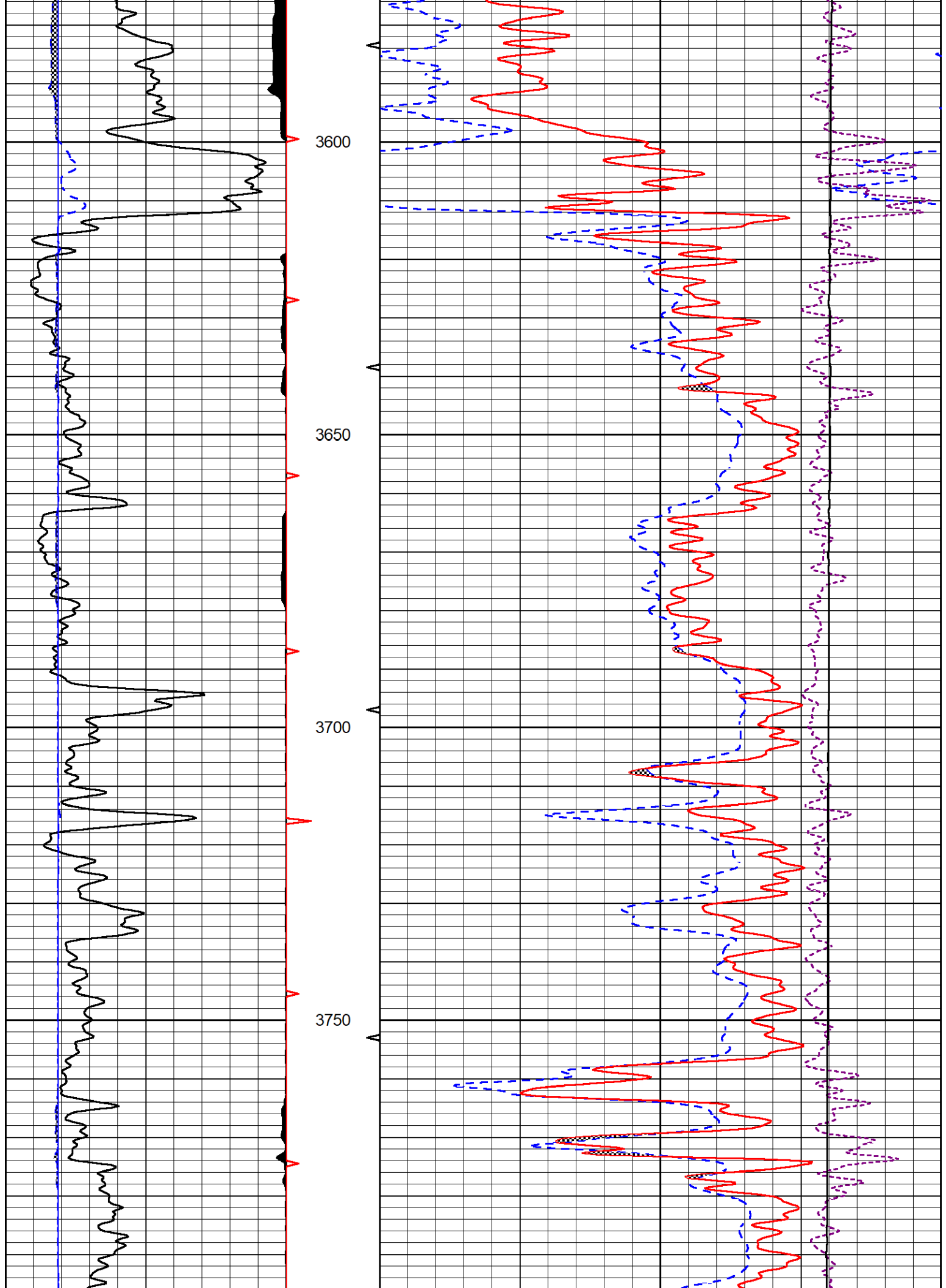


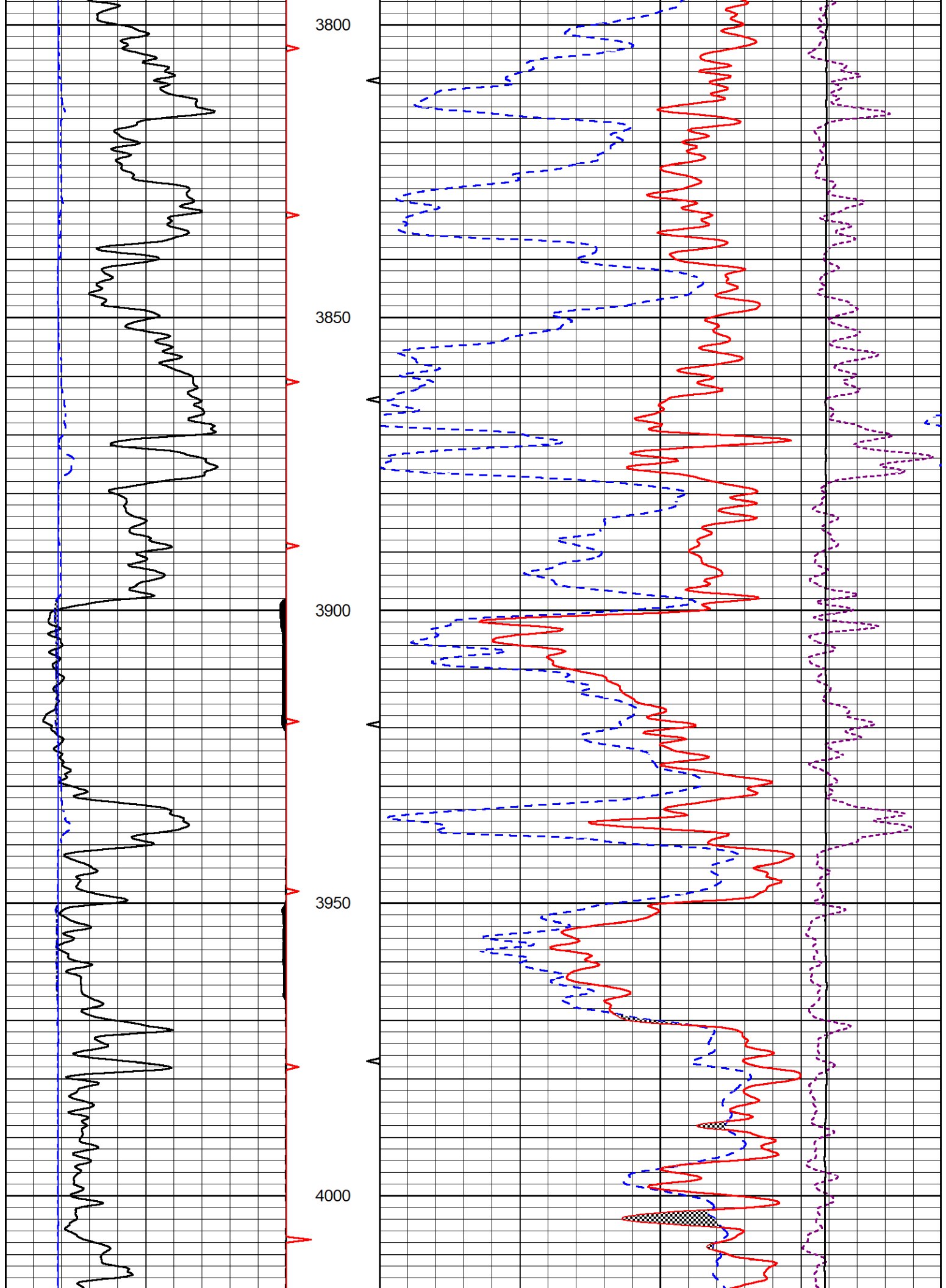


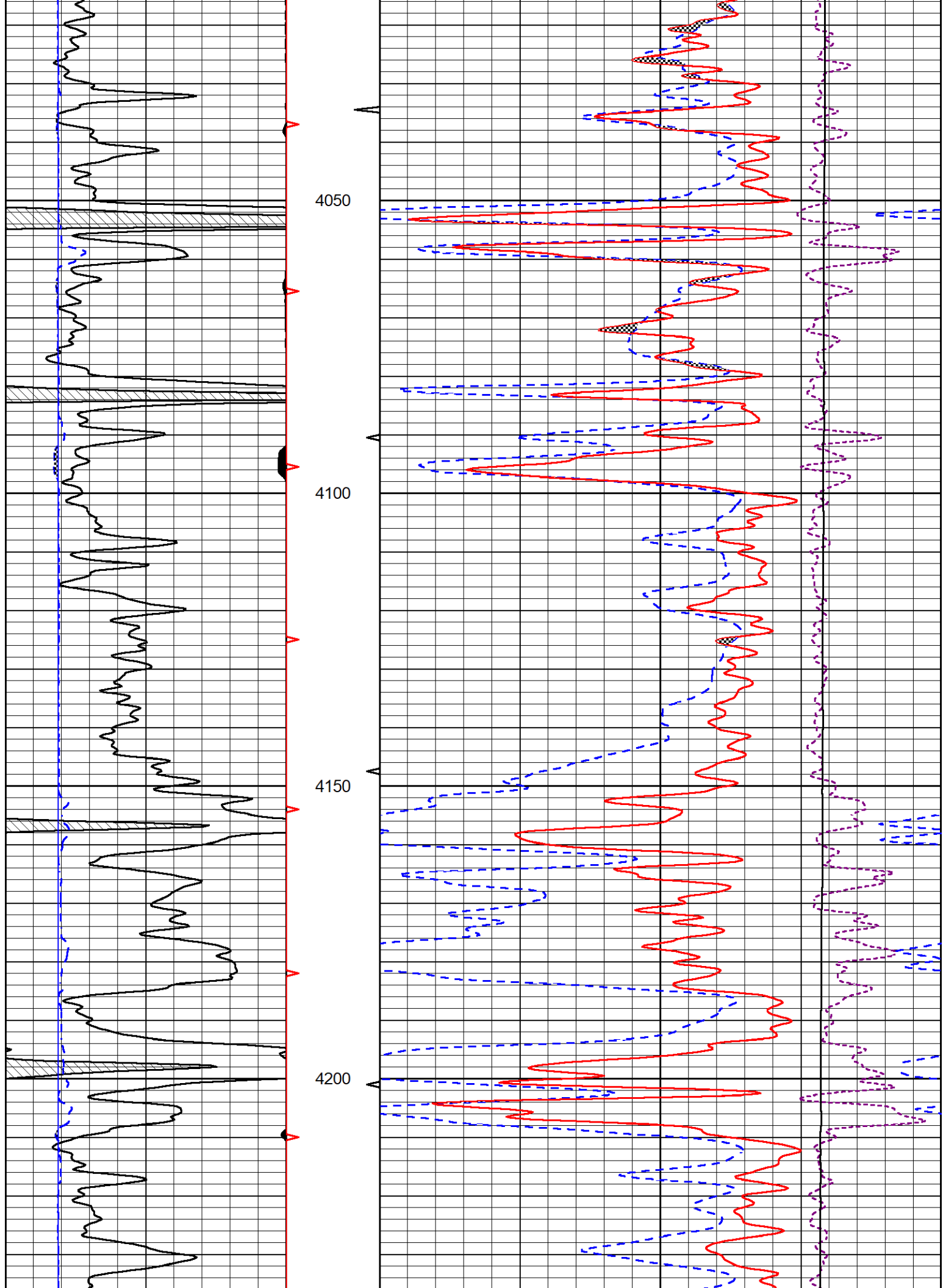


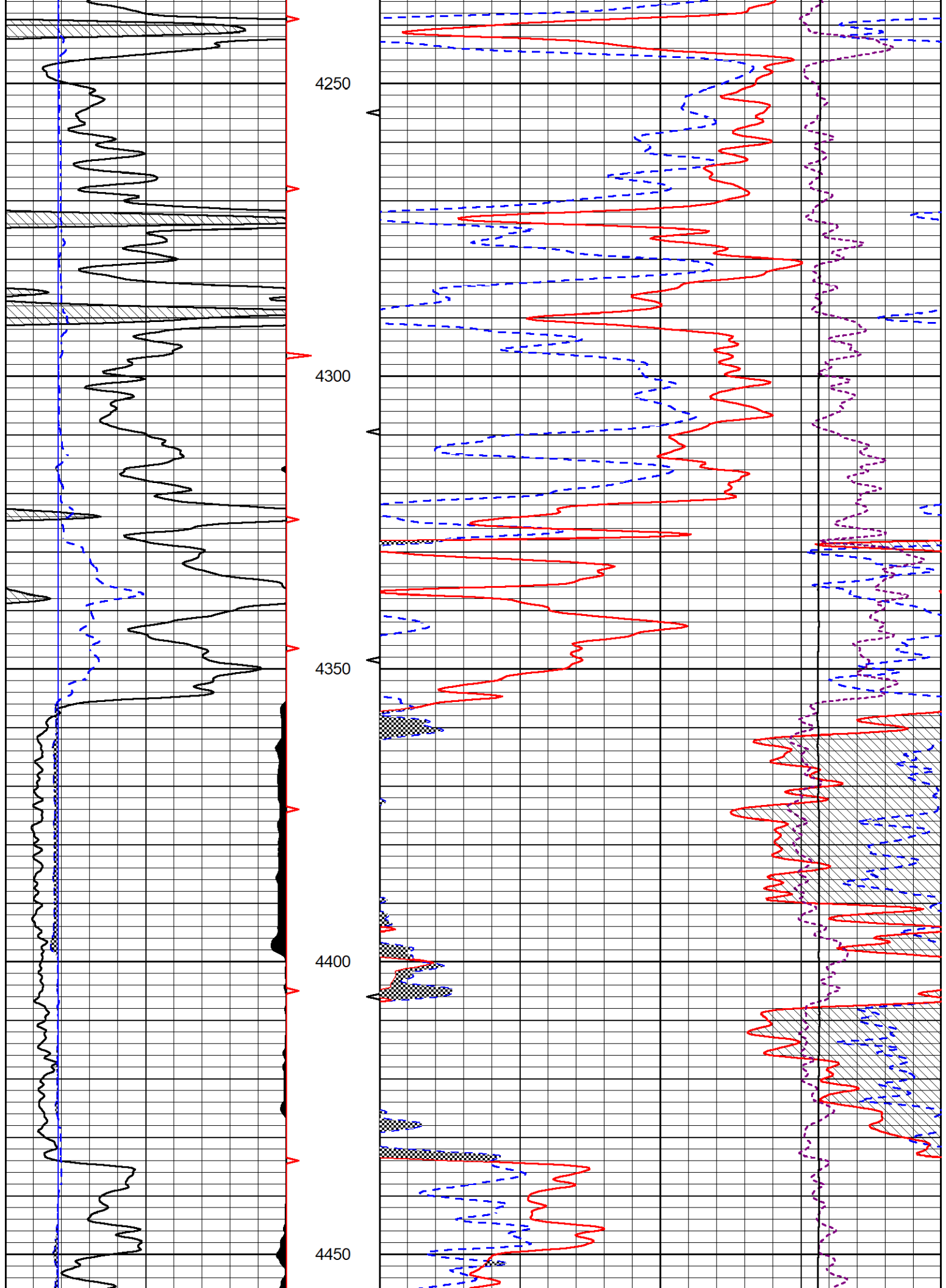


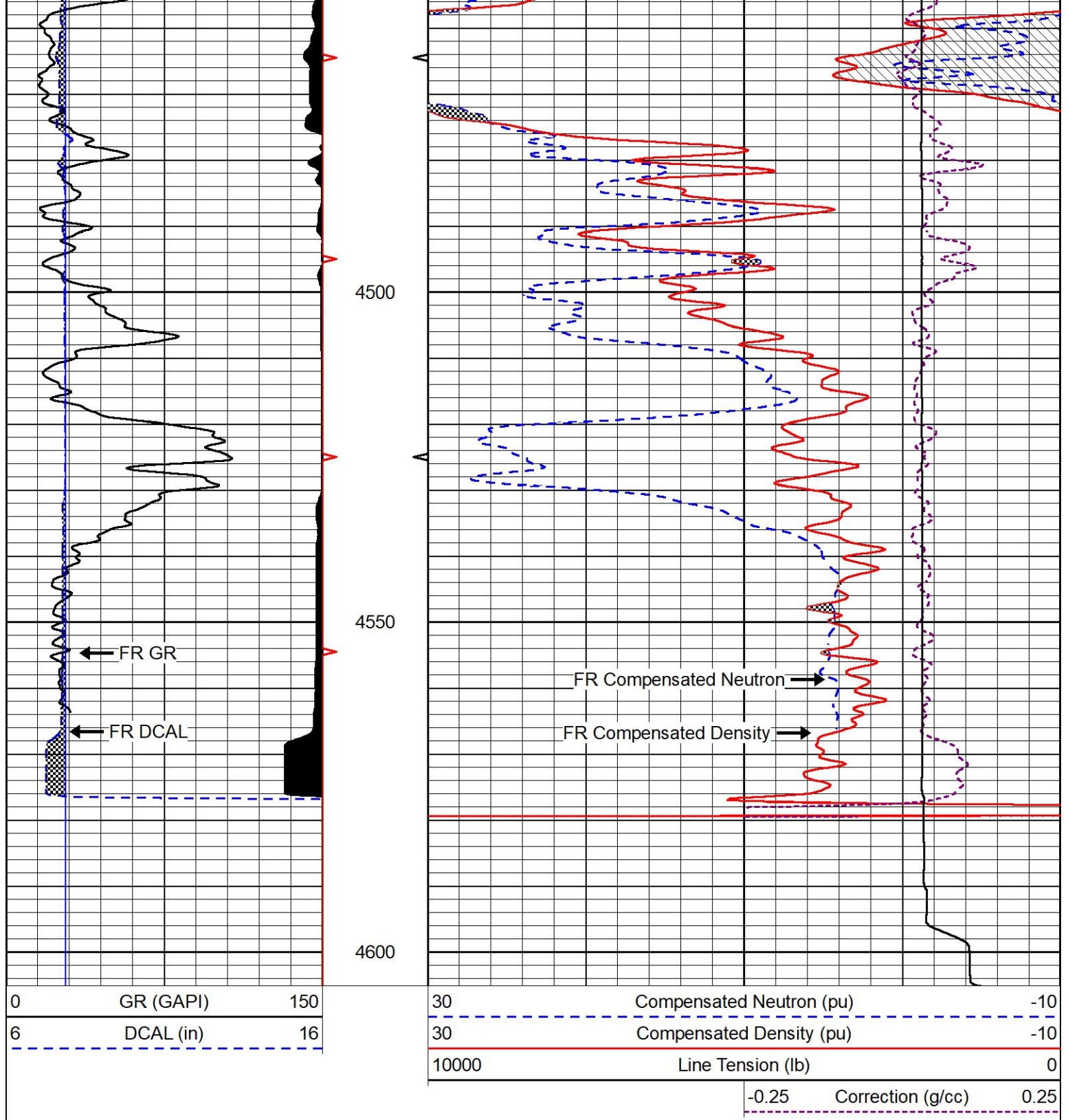












MIDWEST WIRELINE

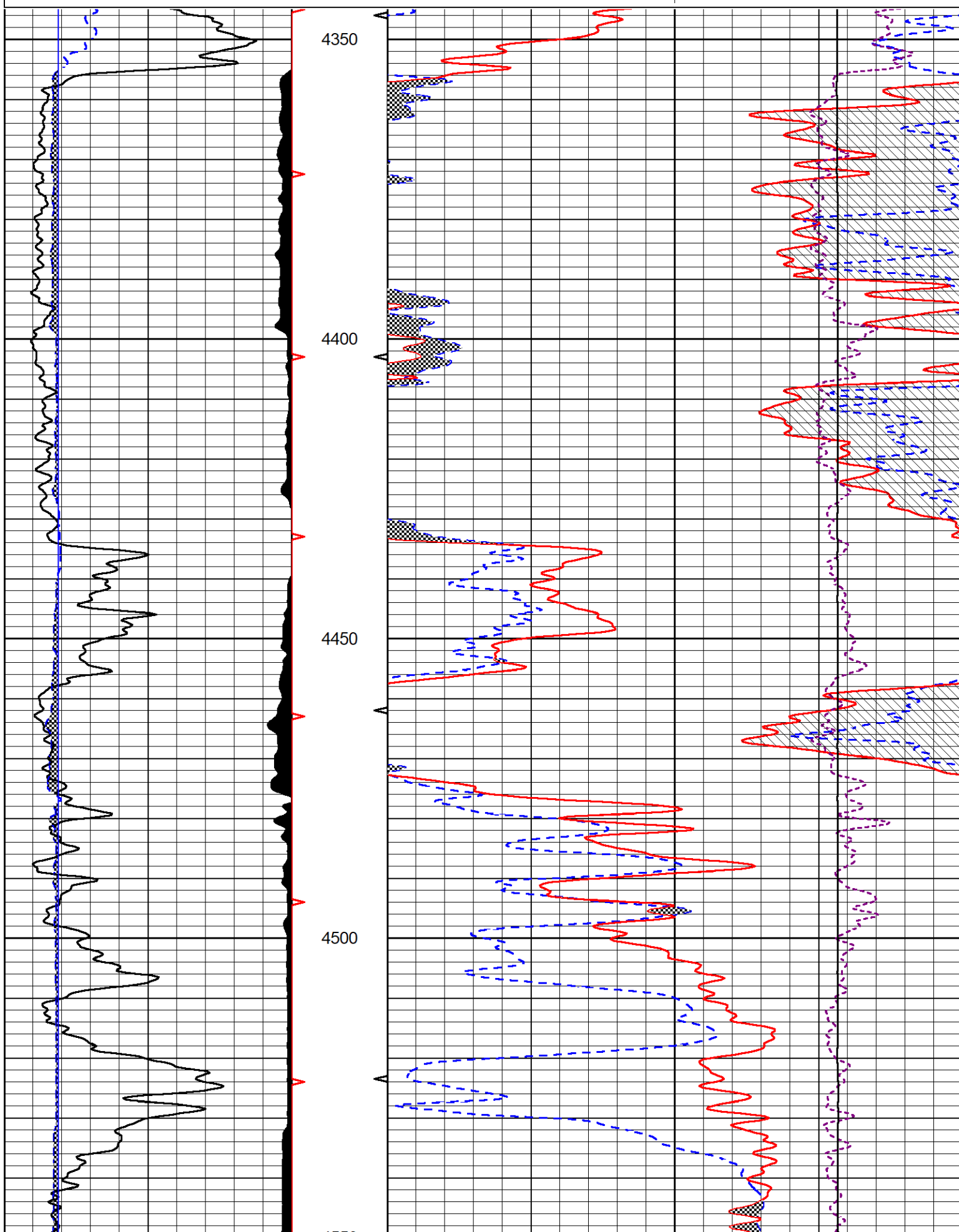
REPEAT SECTION

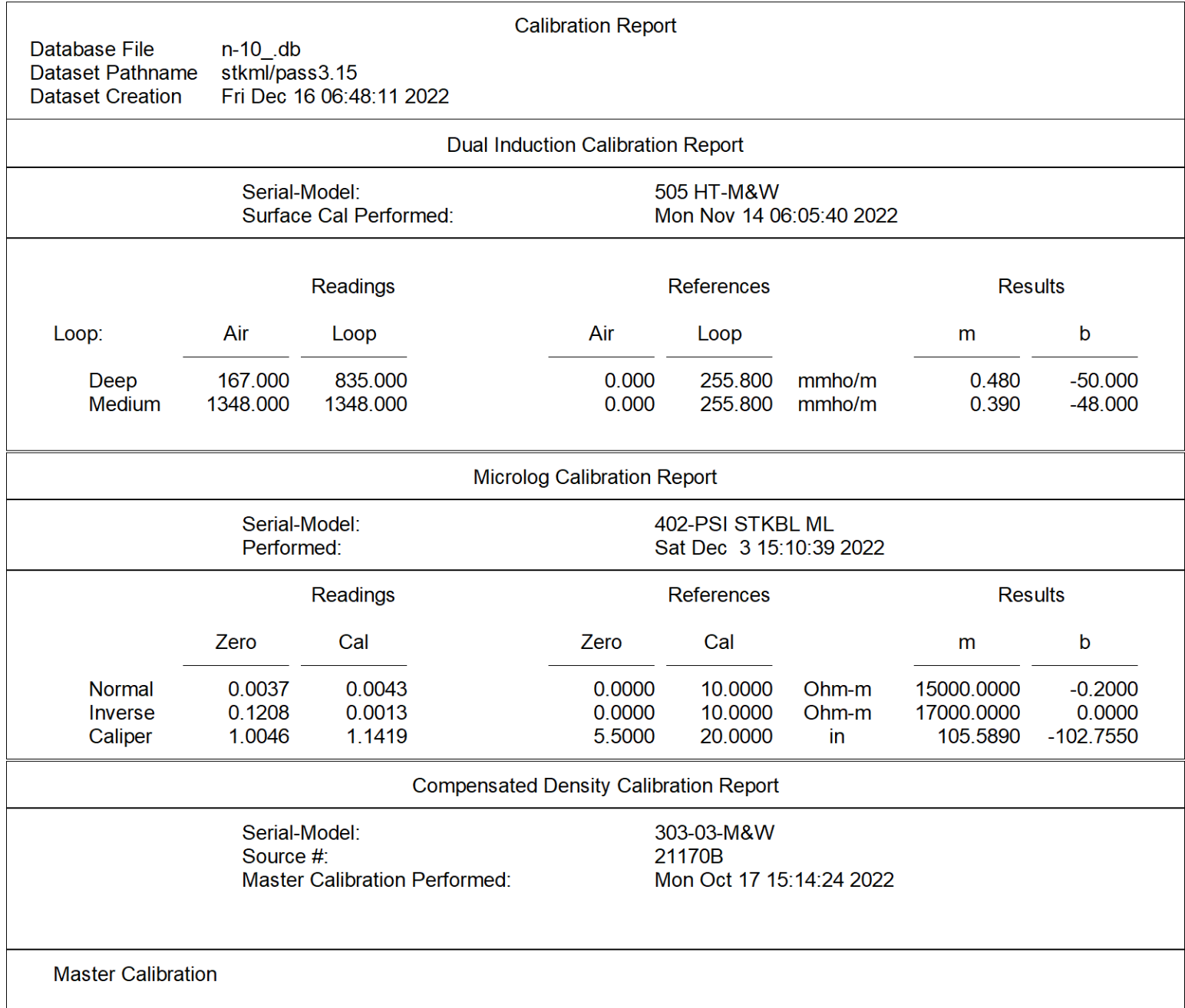
REPEAT PASS

Database File n-10_.db
Dataset Pathname stkml/pass2.1
Presentation Format _cndlspec
Dataset Creation Fri Dec 16 06:51:17 2022
Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150
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30	Compensated Neutron (pu)	-10
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	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.640	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.498		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.04		

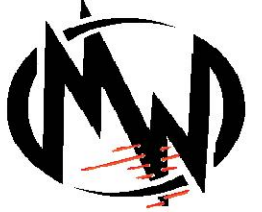
Compensated Neutron Calibration Report

Serial-Model:	210-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:	103	
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

 MIDWEST WIRELINE	Company	N-10 Oil & Gas, Inc.
	Well	Bertholf C-1
	Field	Spivey-Grabs-Basil
	County	Harper
	State	Kansas