



PIONEER

Pioneer Energy Services

DUAL COMP POROSITY LOG

Company MUSTANG ENERGY CORPORATION

Well GASKILL RANGE #1

Field WILDCAT

County LOGAN

State KANSAS

Company MUSTANG ENERGY CORPORATION

Well GASKILL RANGE #1

Field WILDCAT

County LOGAN State KANSAS

Location: API #: 15-109-21600-00-00

330' FSL & 2540' FEL

SEC 23 TWP 12S RGE 36W

Permanent Datum GROUND LEVEL Elevation 3196'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

D/MEL

Elevation
K.B. 3204'
D.F. N/A
G.L. 3196'

Date

11/6/2019

Run Number

ONE

Type Log

CNL/CDL

Depth Driller

4800'

Depth Logger

4799'

Bottom Logged Interval

4779'

Top Logged Interval

3500'

Type Fluid In Hole

CHEMICAL

Salinity, PPM CL

11000

Density

9.2

Level

FULL

Max. Rec. Temp. F

124

Operating Rig Time

3 HOURS

Equipment -- Location

P-24 HAYS

Recorded By

IAN MABB

Witnessed By

JASON T. ALM

Borehole Record

Casing Record

Run No.

ONE

Bit

12.25"

From

0'

To

306'

Size

8.625"

Wgt.

23#

From

0'

To

306'

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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.

WIONONA, KS.

WEST 1 MILE TO RD 220, SOUTH 3 MILES TO VISTA RD,
WEST 2 MILES, SOUTH INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

Engineer: IAN MABB
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: JASON T. ALM
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 124	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 4	mmho/m 5	mV 412	degF 0	Off	ft 4799

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00			GR-M&W (89)	3.00	3.50	50.00
CNLSC	29.90			CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	29.15						
LSD DCAL SSD	20.85			CDL-M&W (817-947)	8.50	4.00	250.00
	20.83						
	20.35						
RLL3F	15.80			DIL-PSI HIGH TEMP (952-828)	18.50	3.50	220.00
RLL3	15.80						
CILD	8.00						

CILM 4.70

SP 0.20

Dataset: mustang_gaskill_range_1.db: field/well/stack/pass3.1
Total length: 35.50 ft
Total weight: 620.00 lb
O.D.: 4.00 in



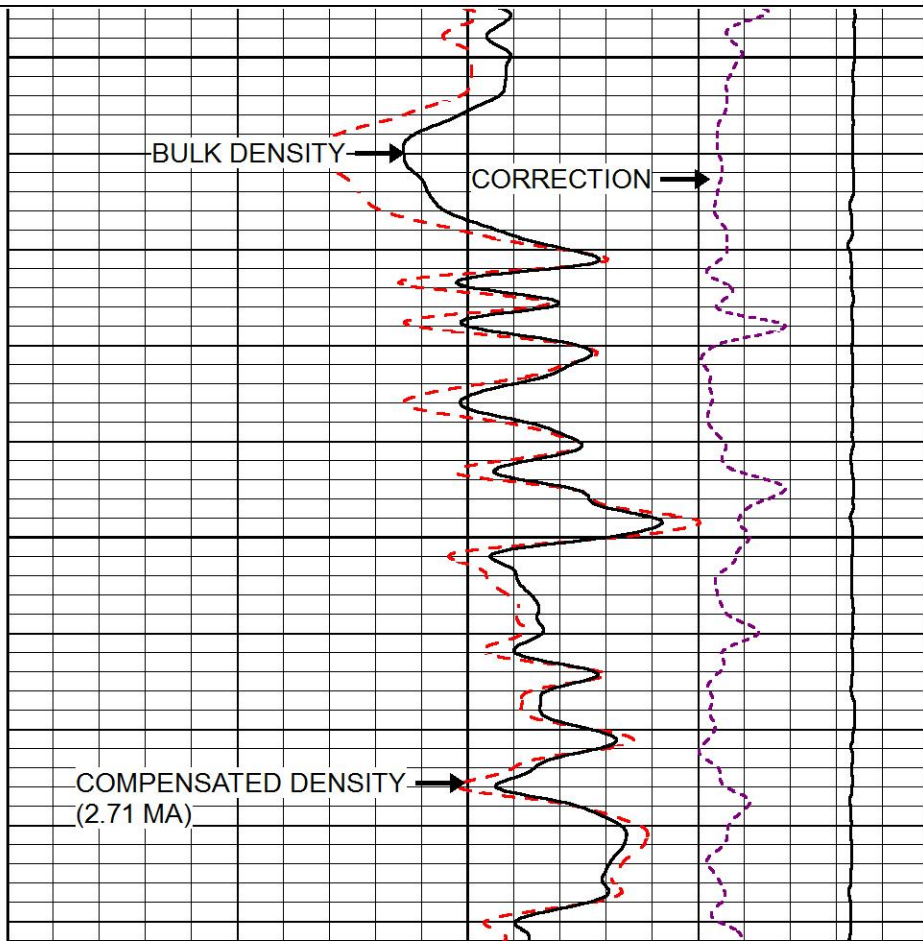
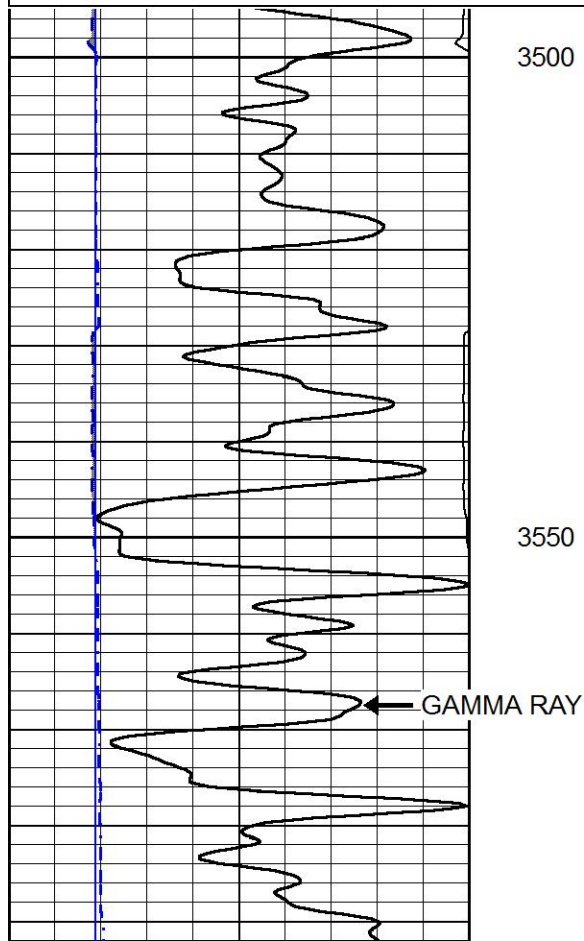
MAIN PASS

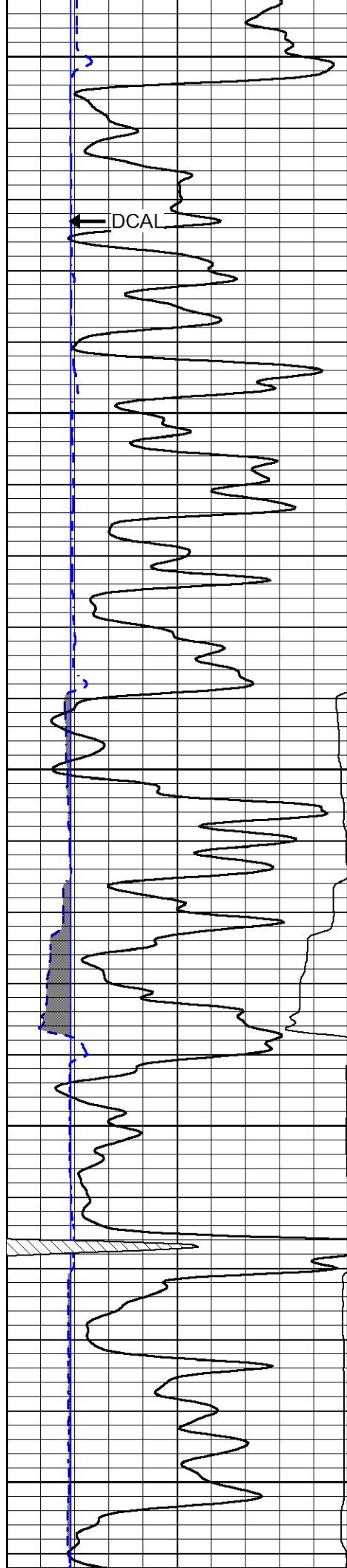
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Dataset Pathname stack/pass3.1
Presentation Format _cdl
Dataset Creation Wed Nov 06 13:13:57 2019
Charted by Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150
6 DCAL (in) 16

COMPENSATED DENSITY
(2.71 MA)

30 (pu) -10
2 BULK DENSITY (g/cc) 3
15000 LINE TENSION (lb) 0
-0.25 CORRECTION (g/cc) 0.25





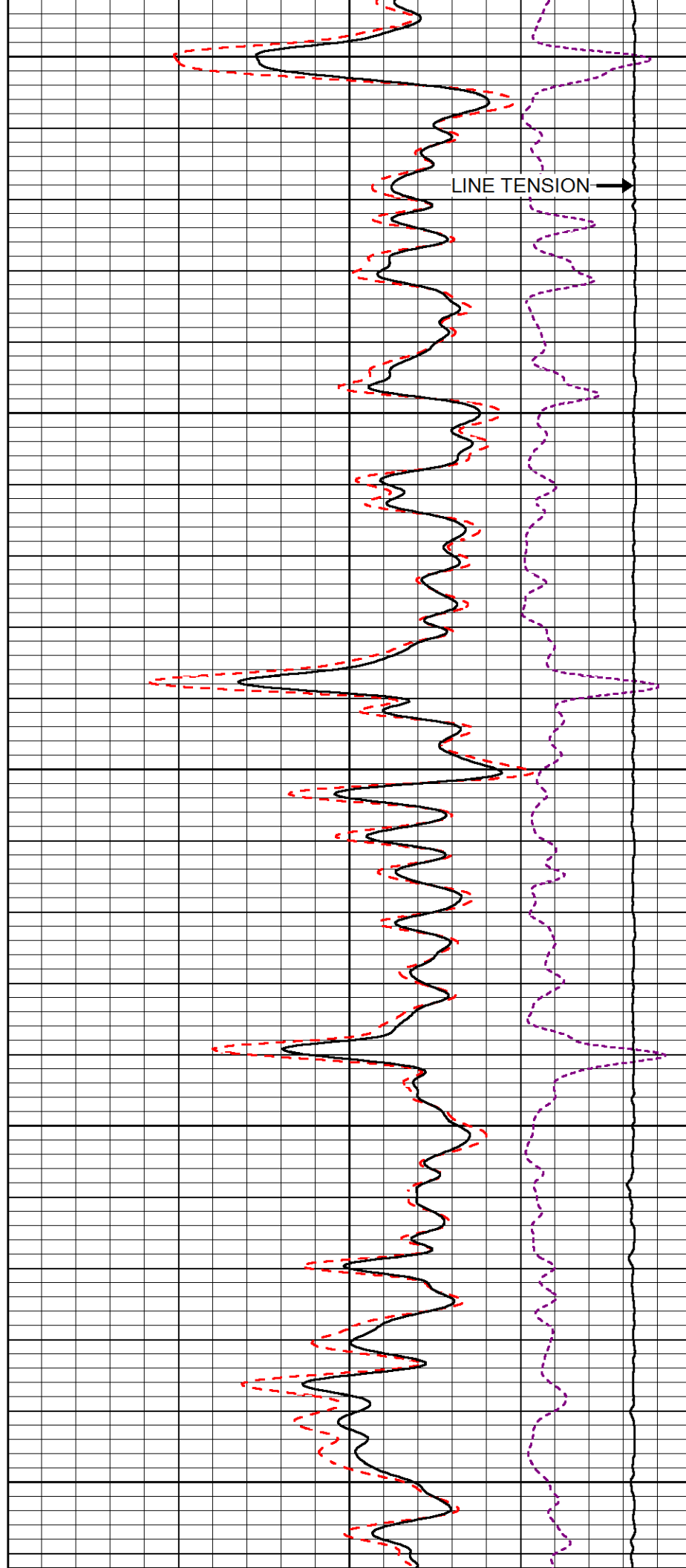
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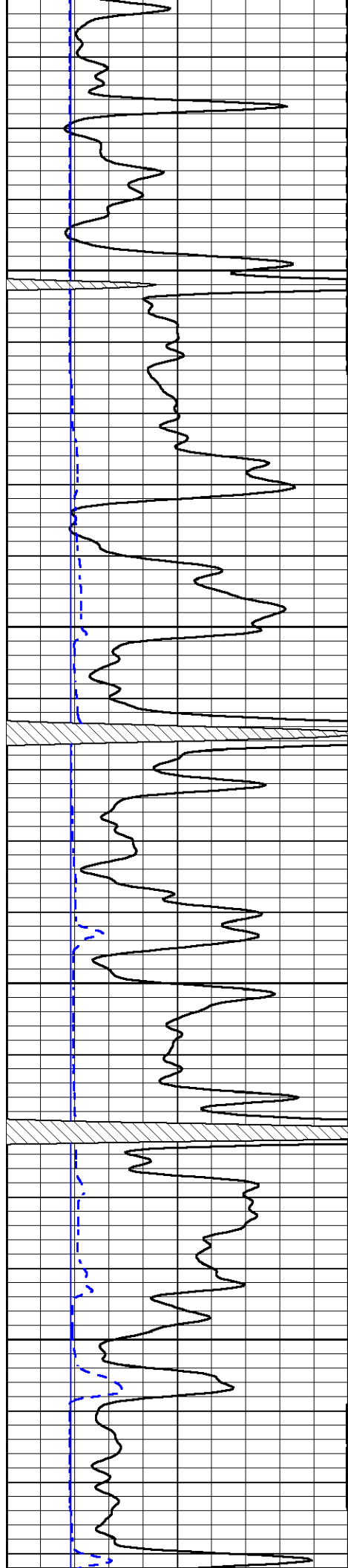
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3700

3750

3800



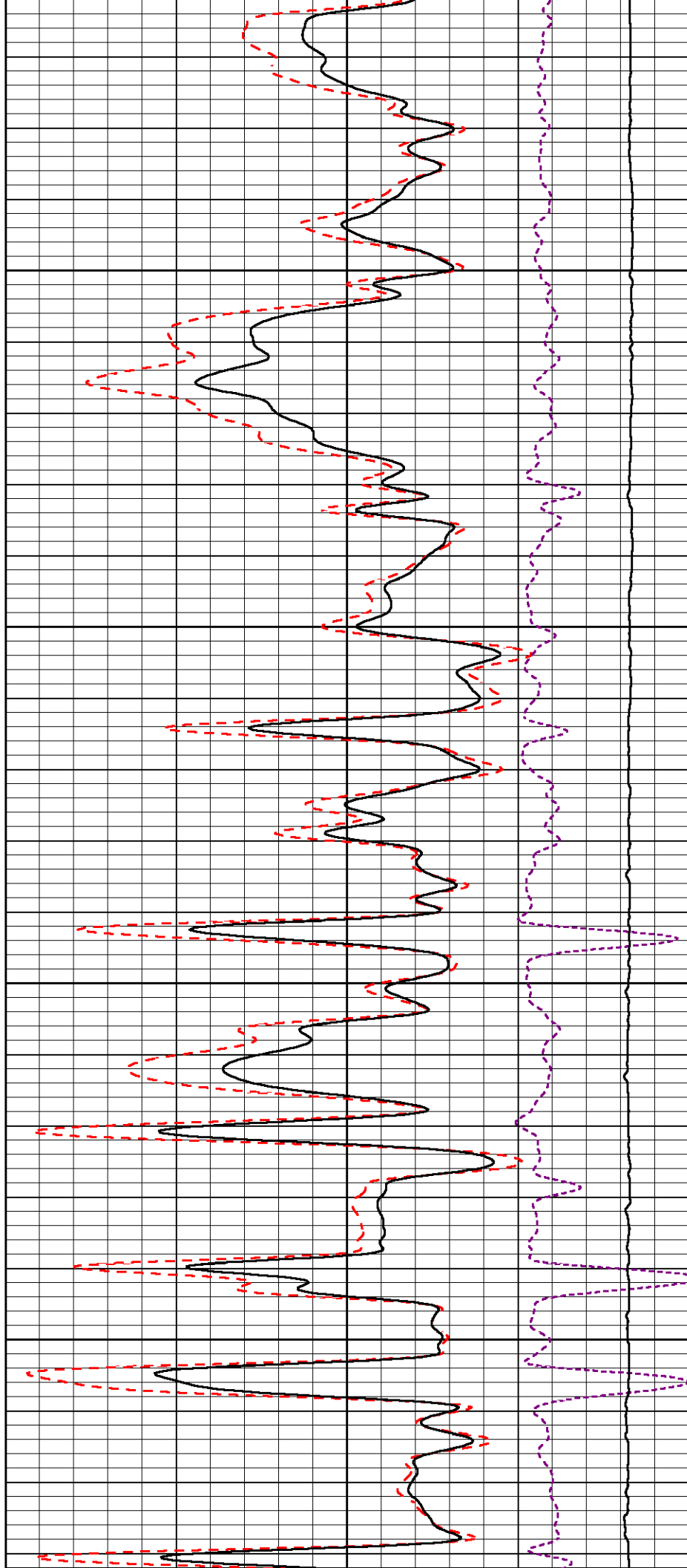


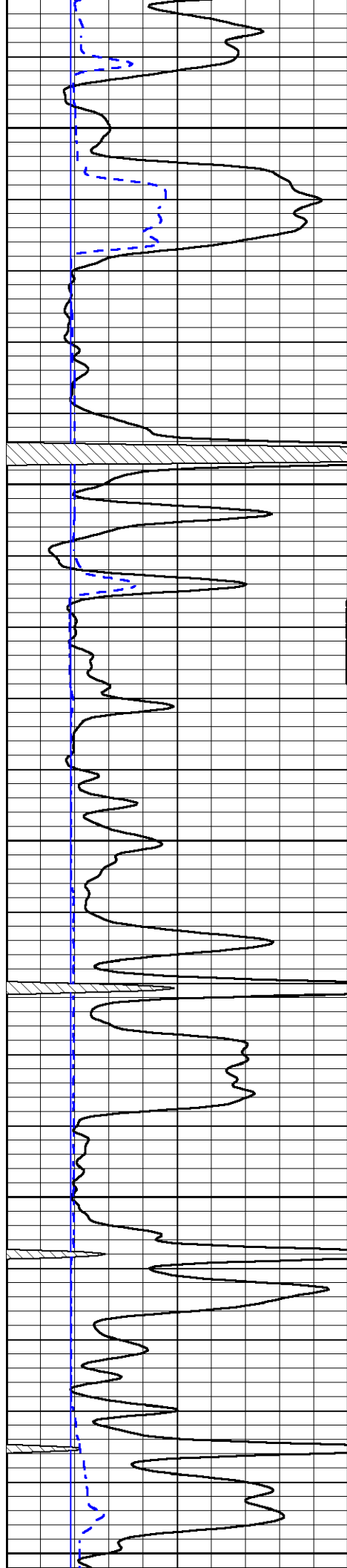
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3900

3950

4000





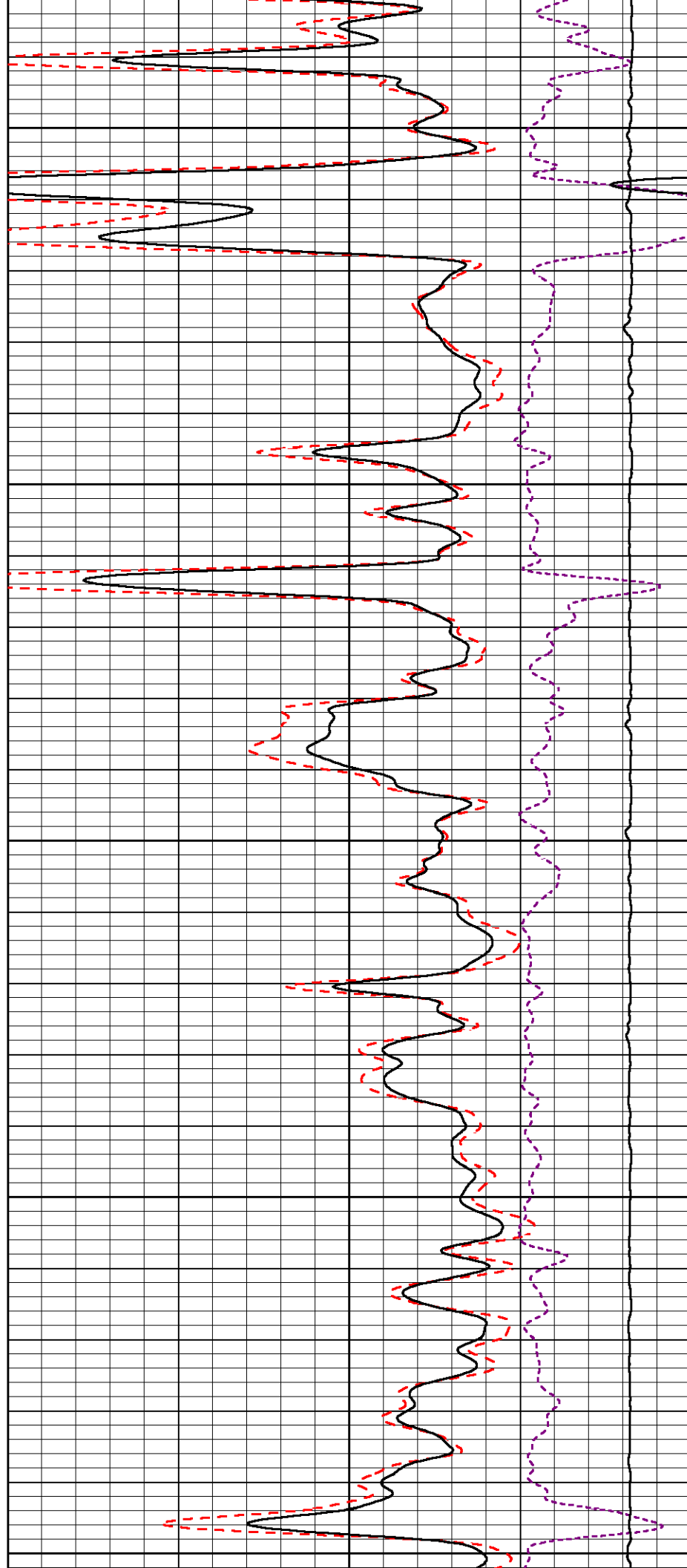
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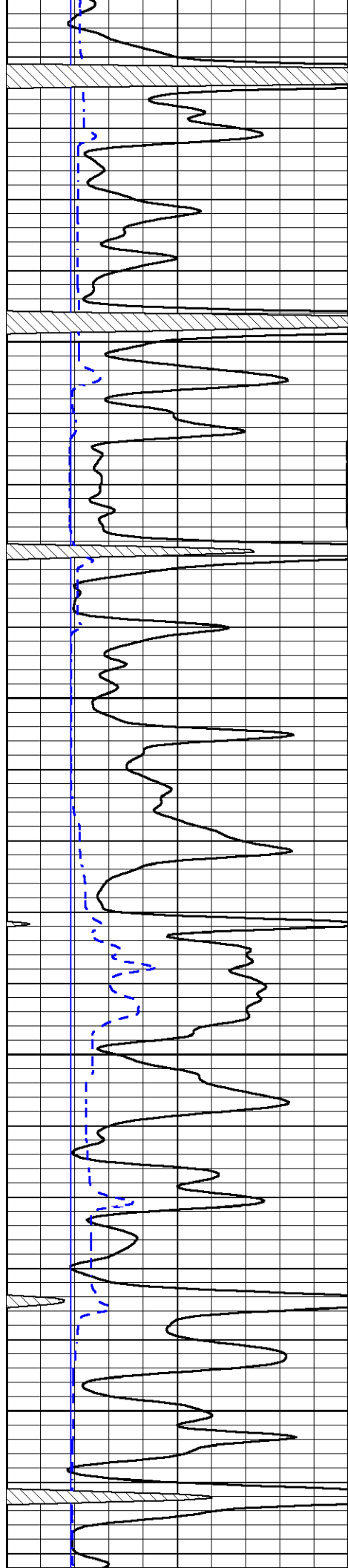
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4150

4200

4250



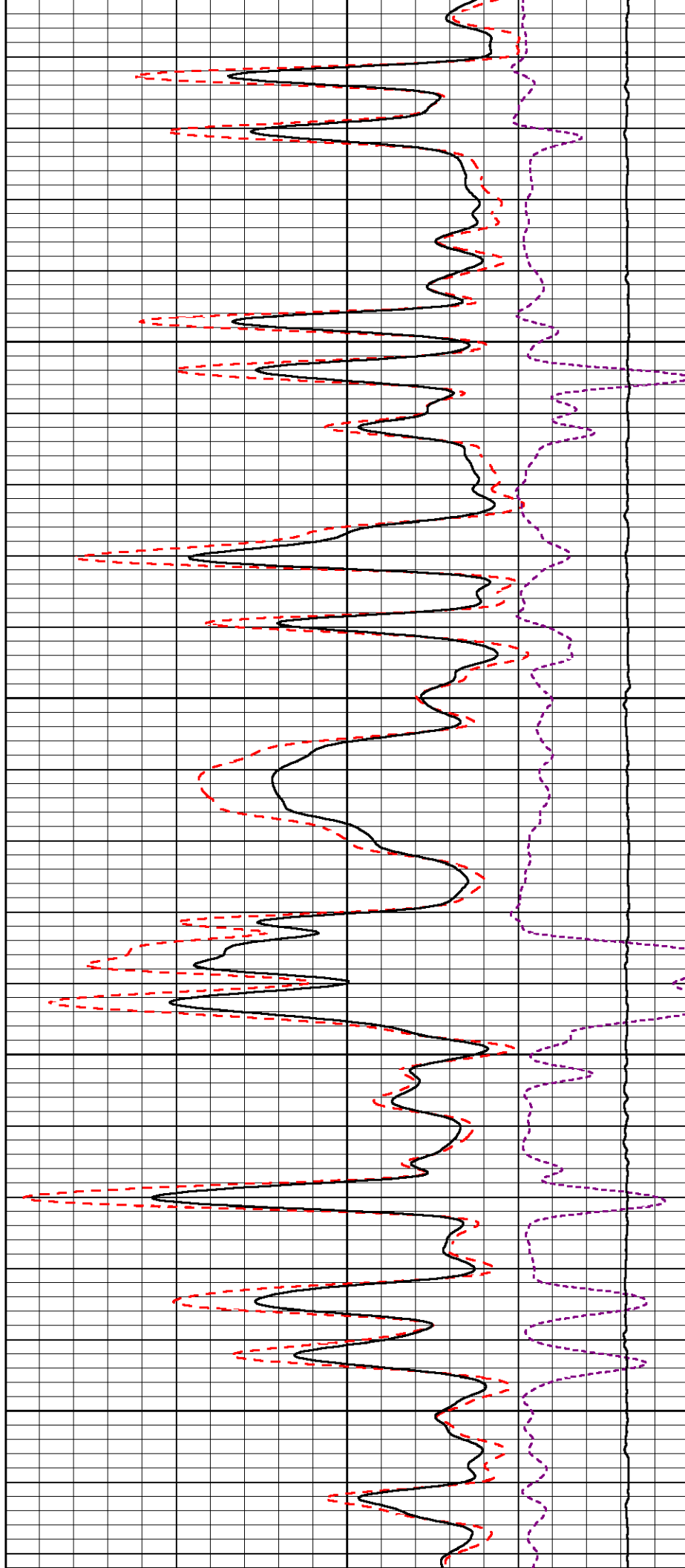


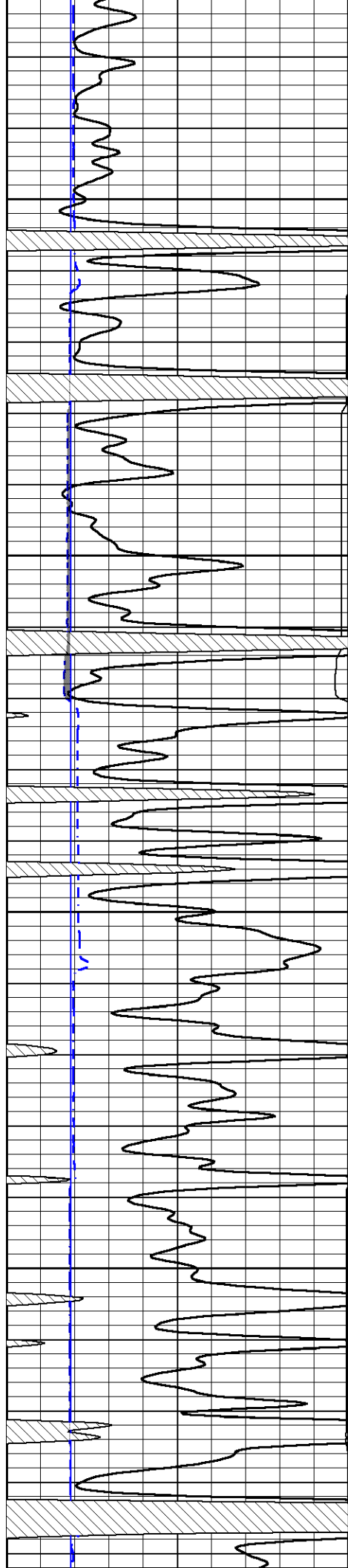
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4350

4400

4450



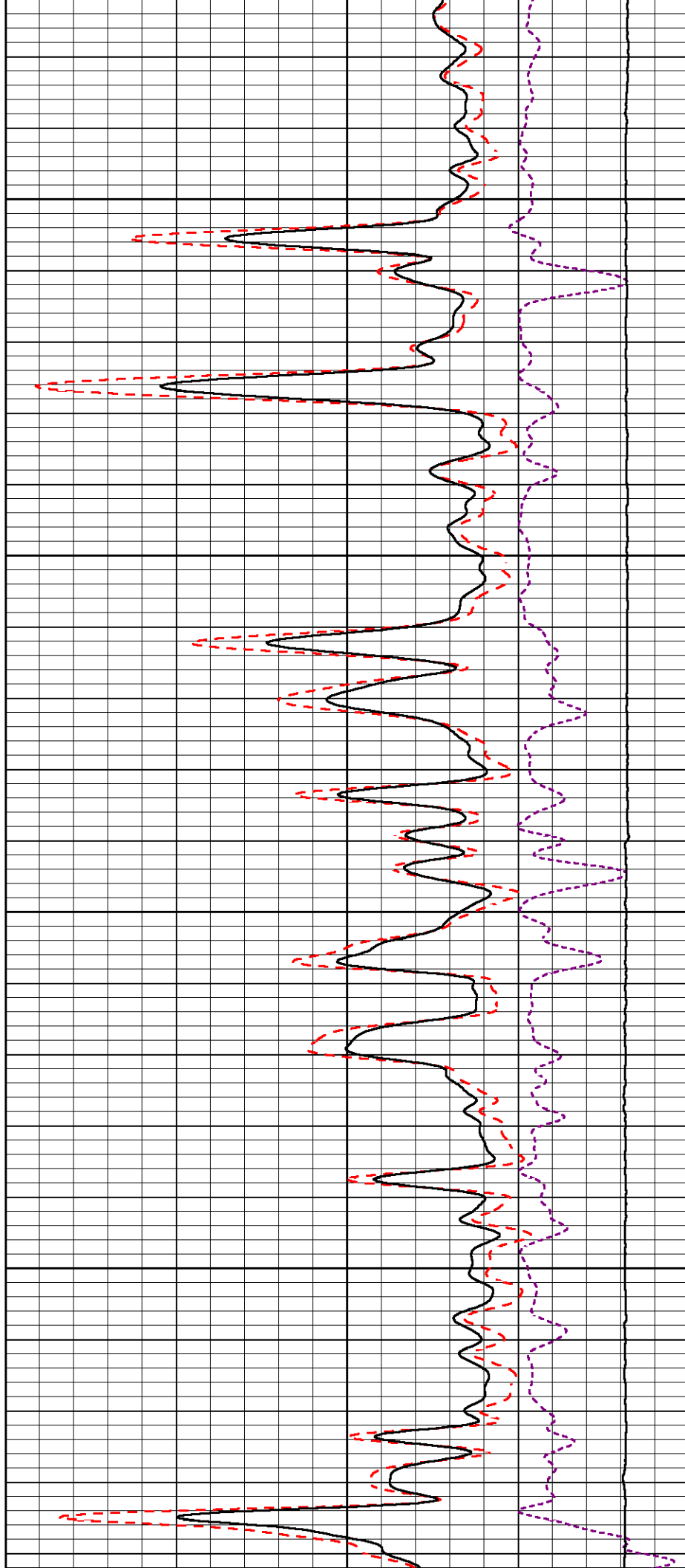


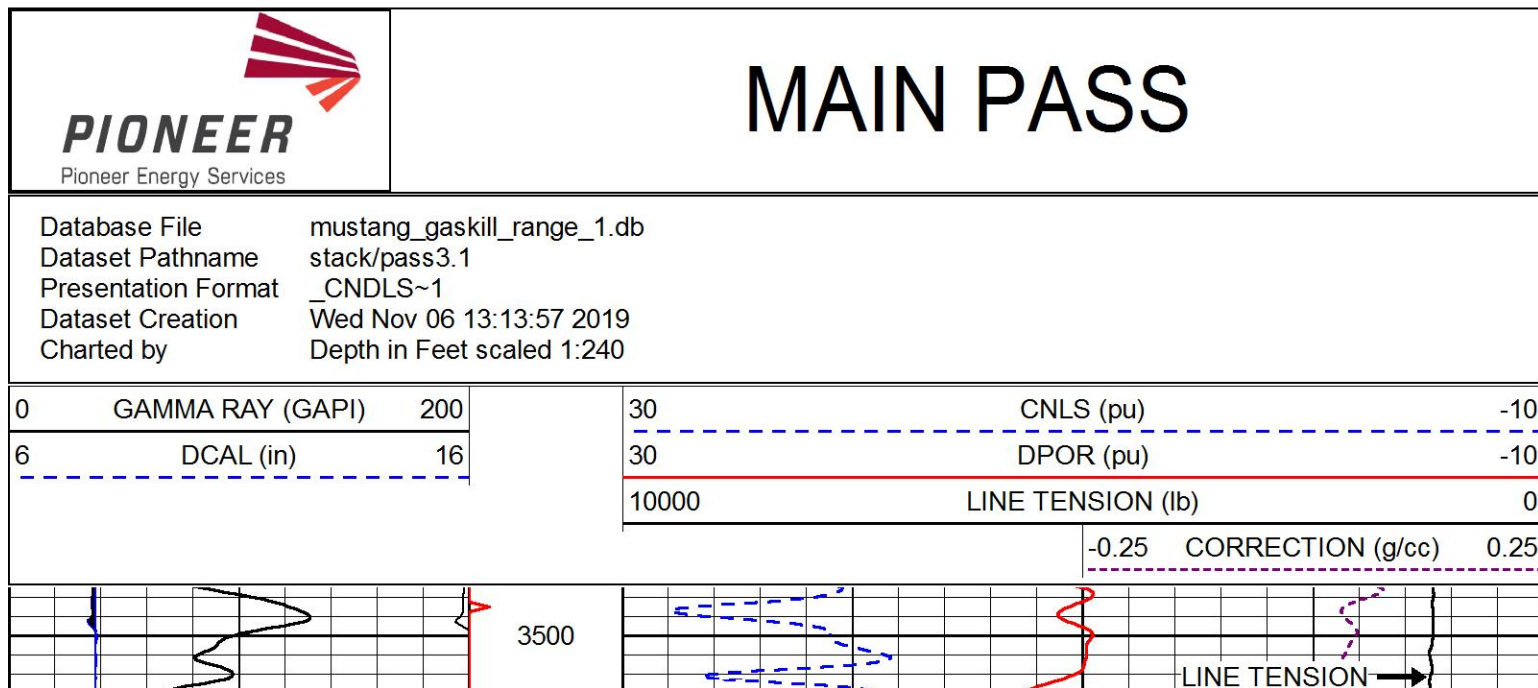
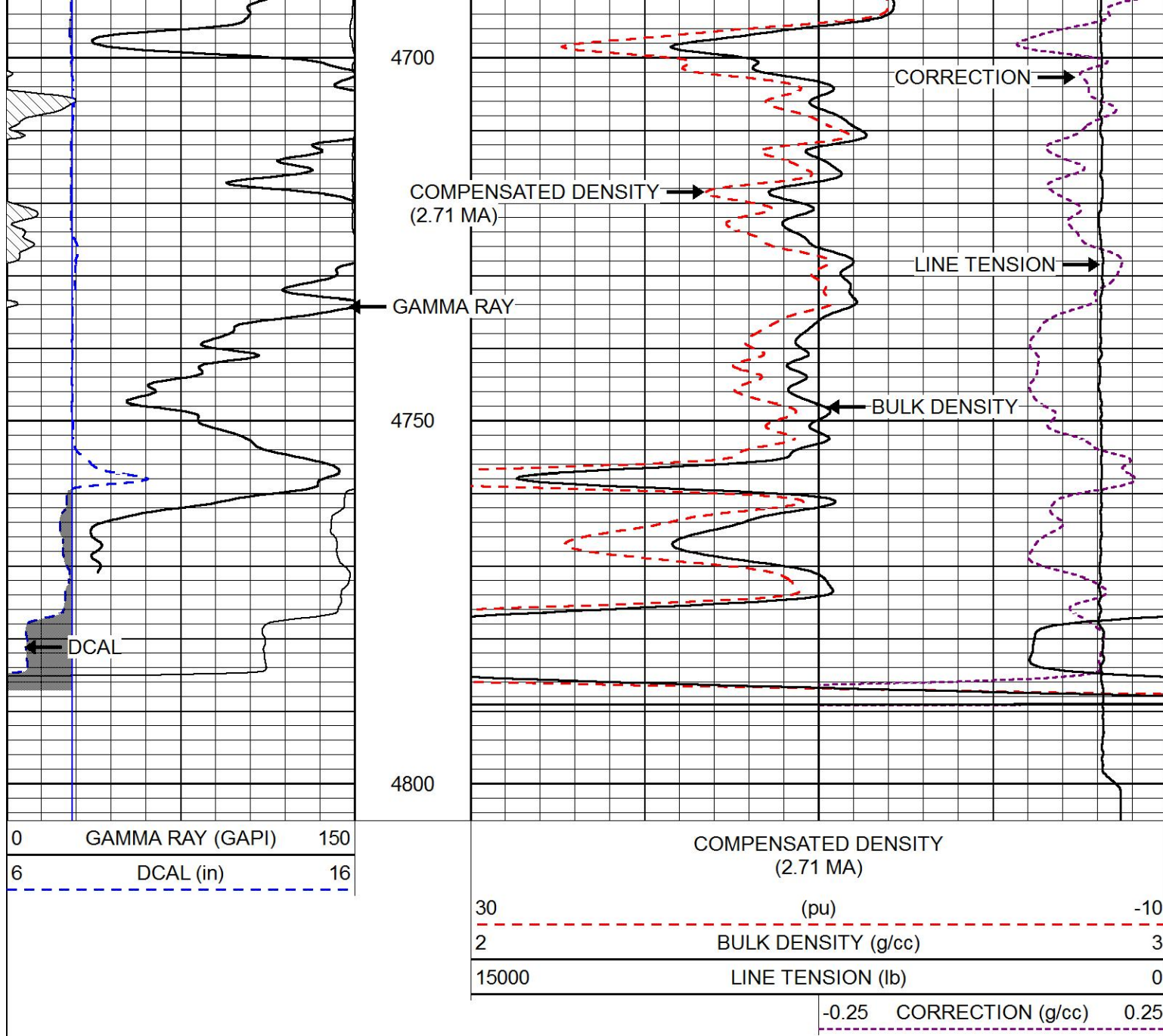
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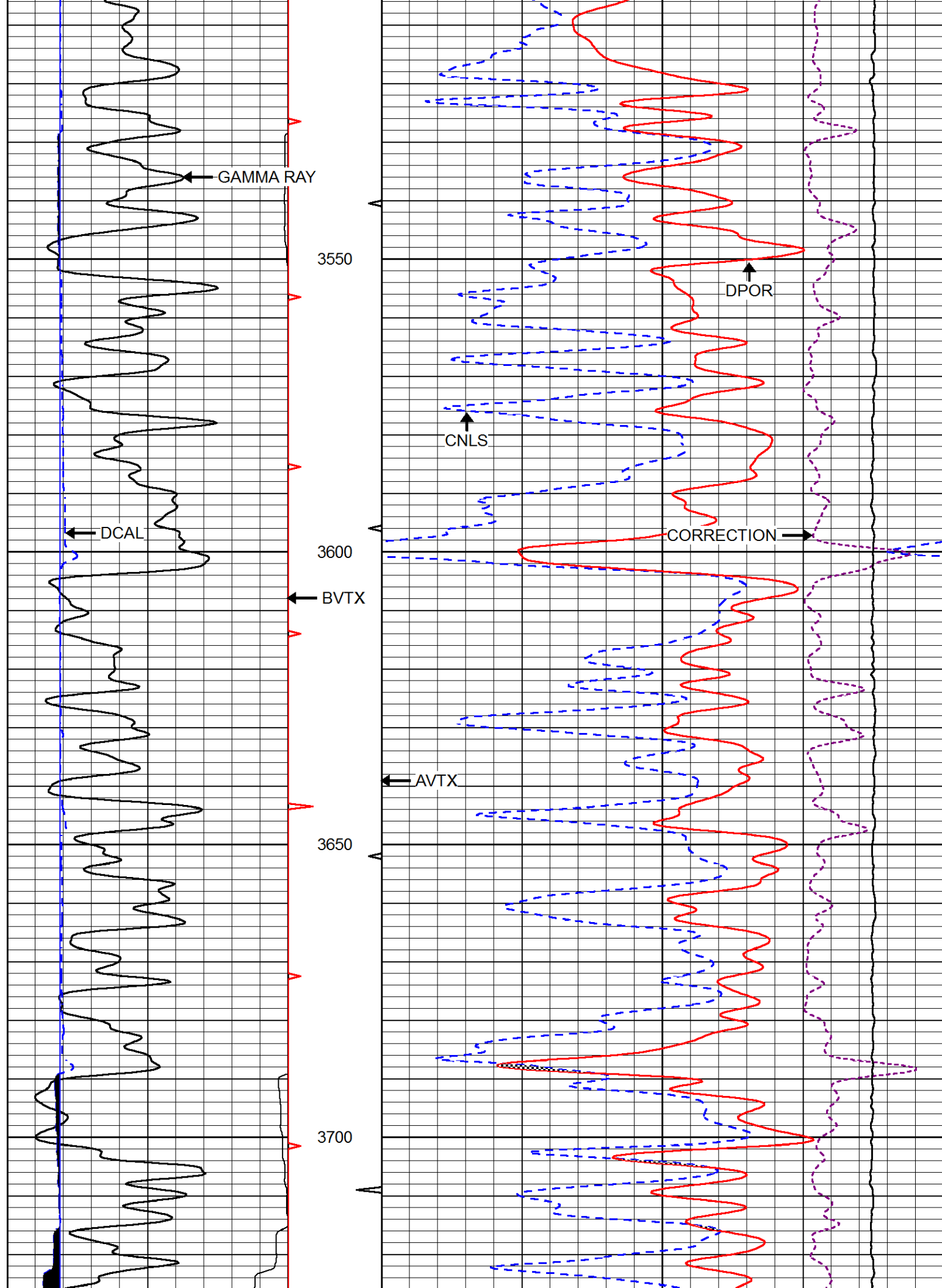
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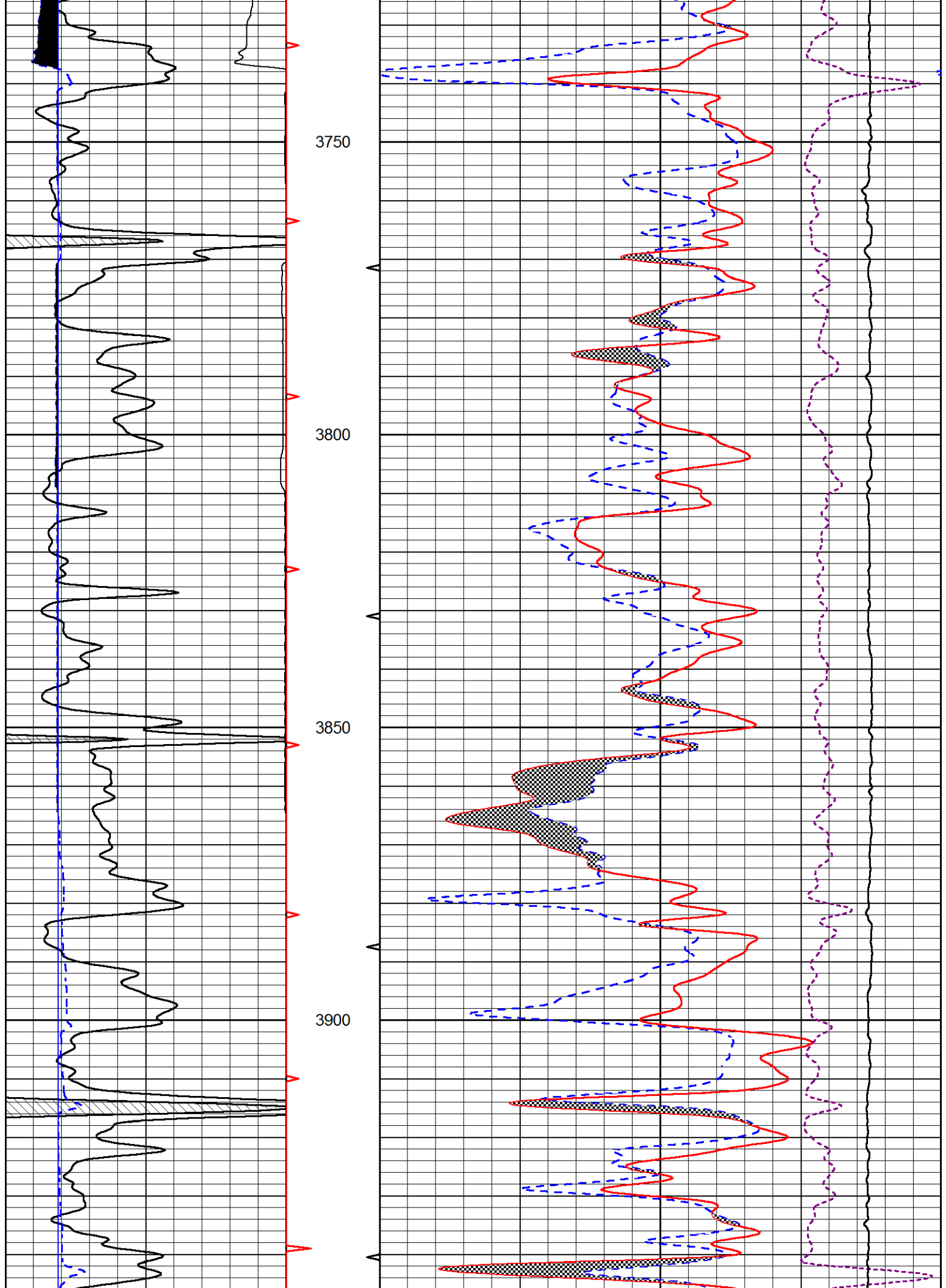
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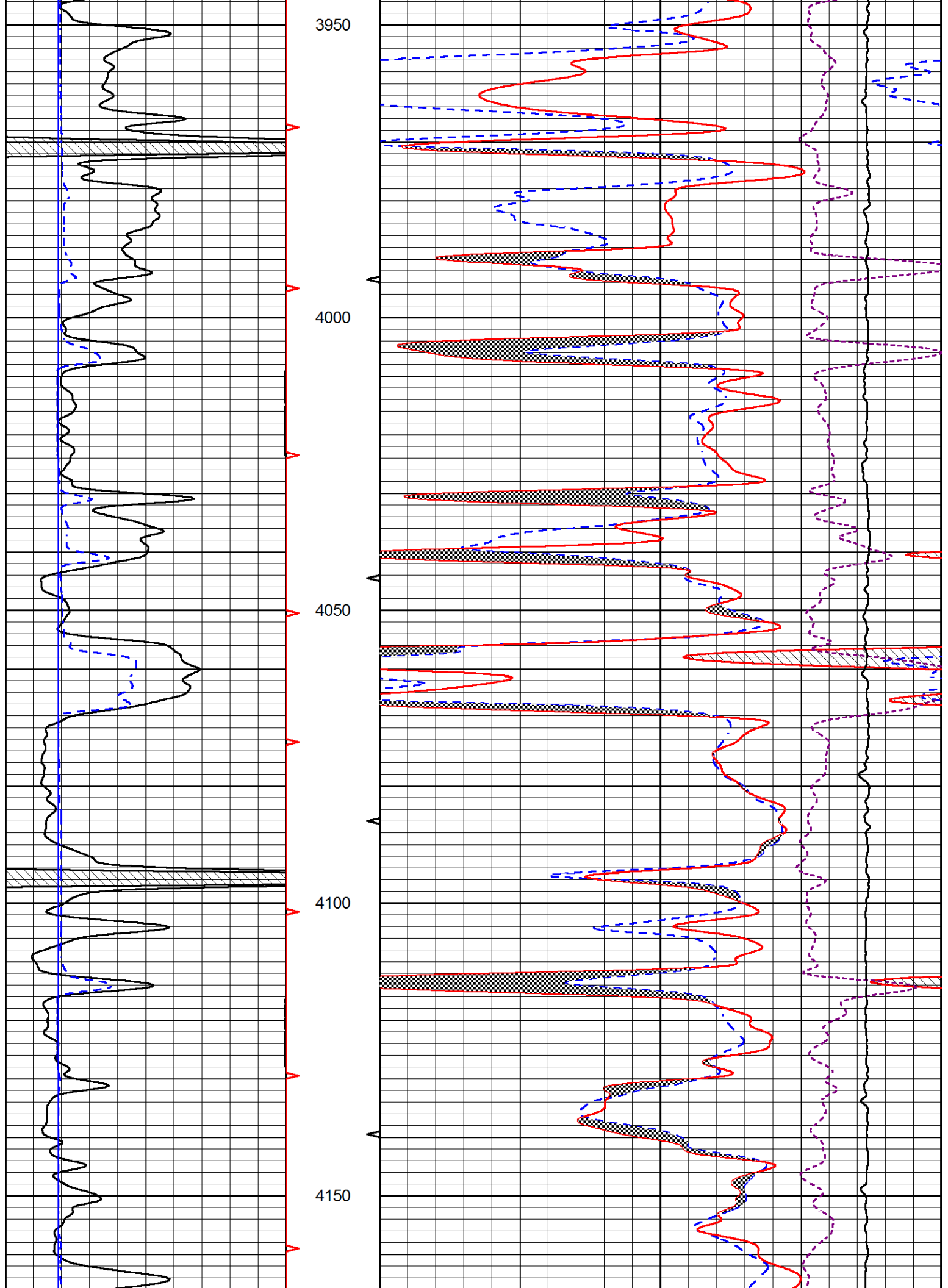
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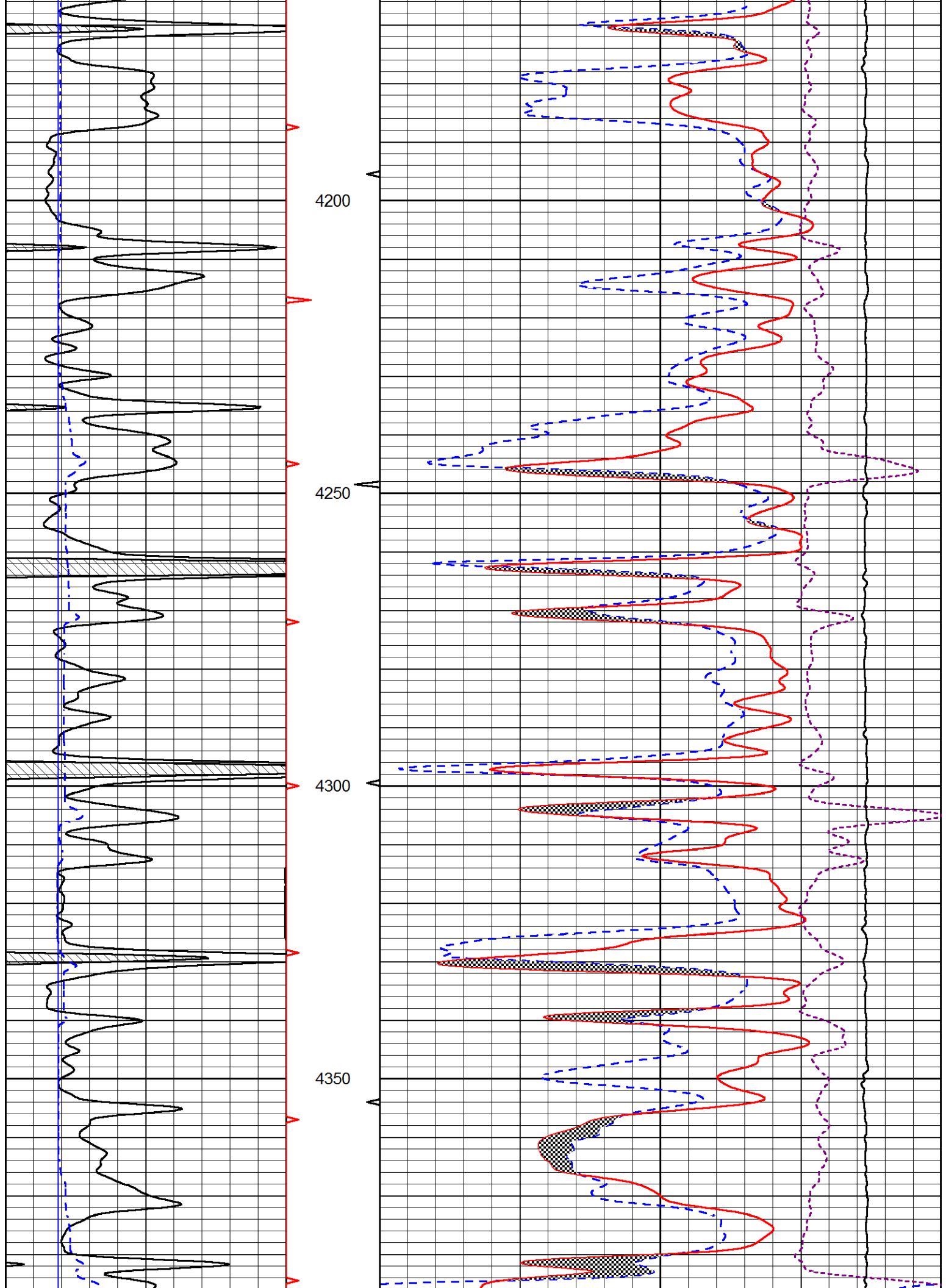


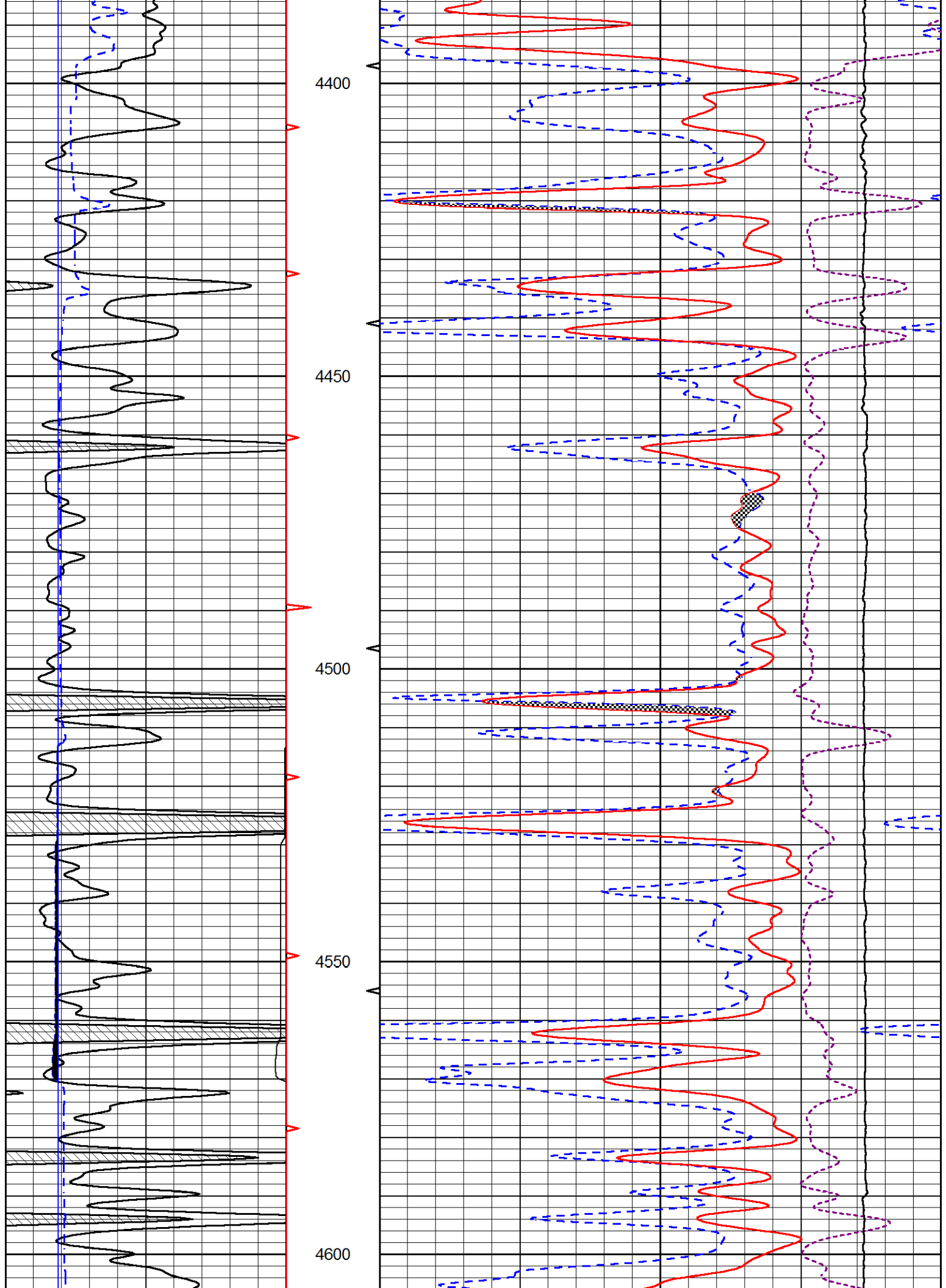


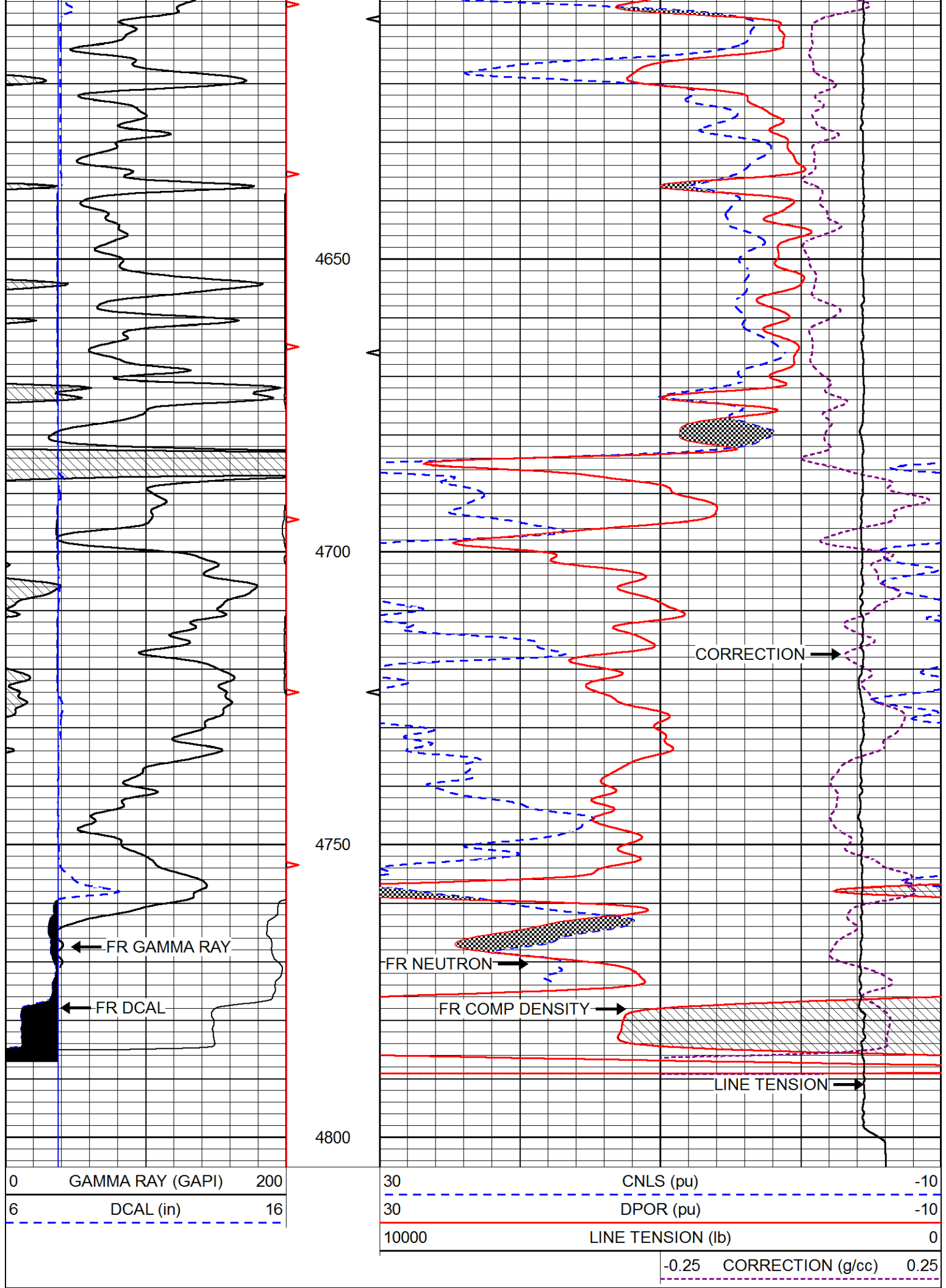










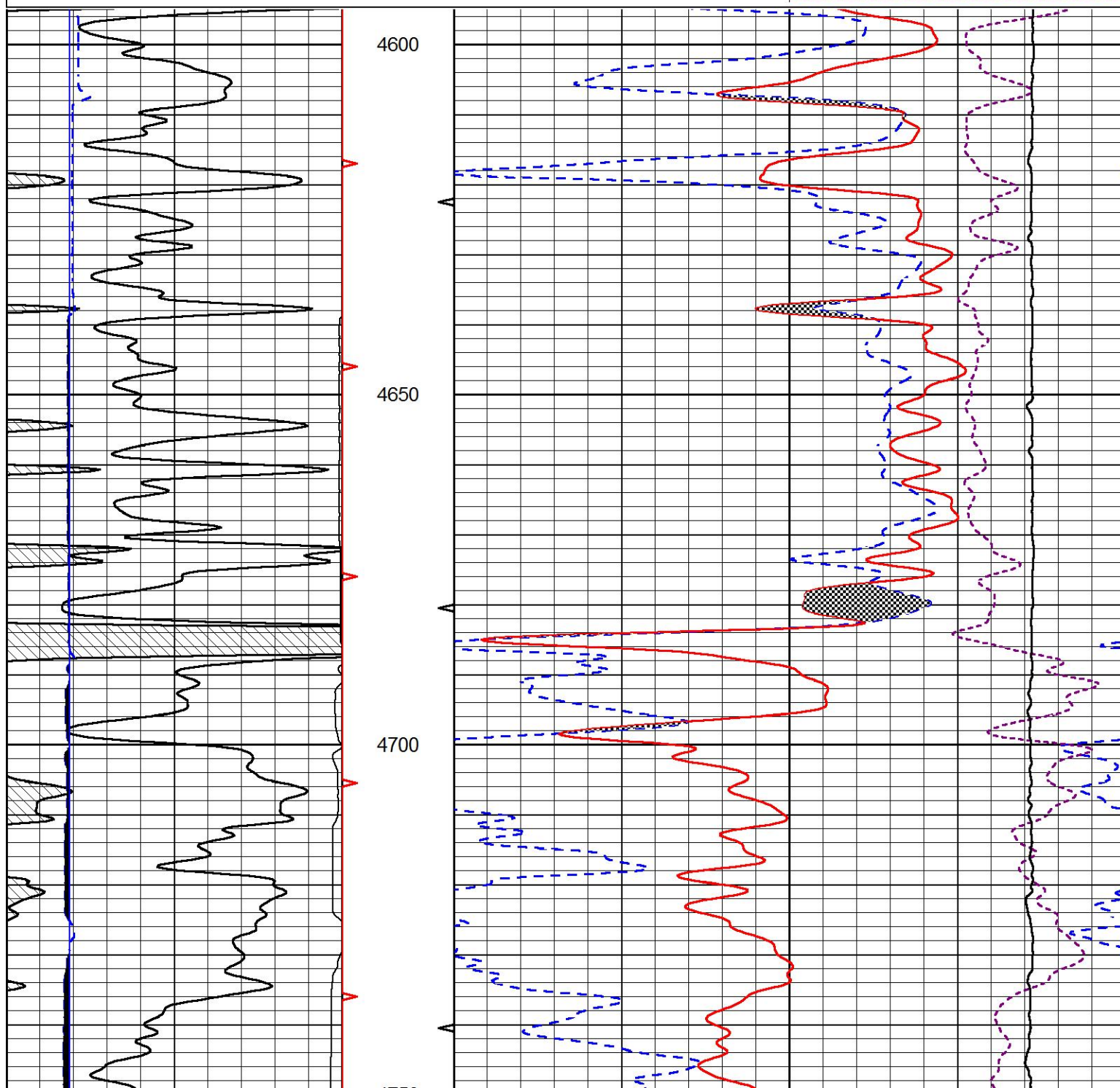


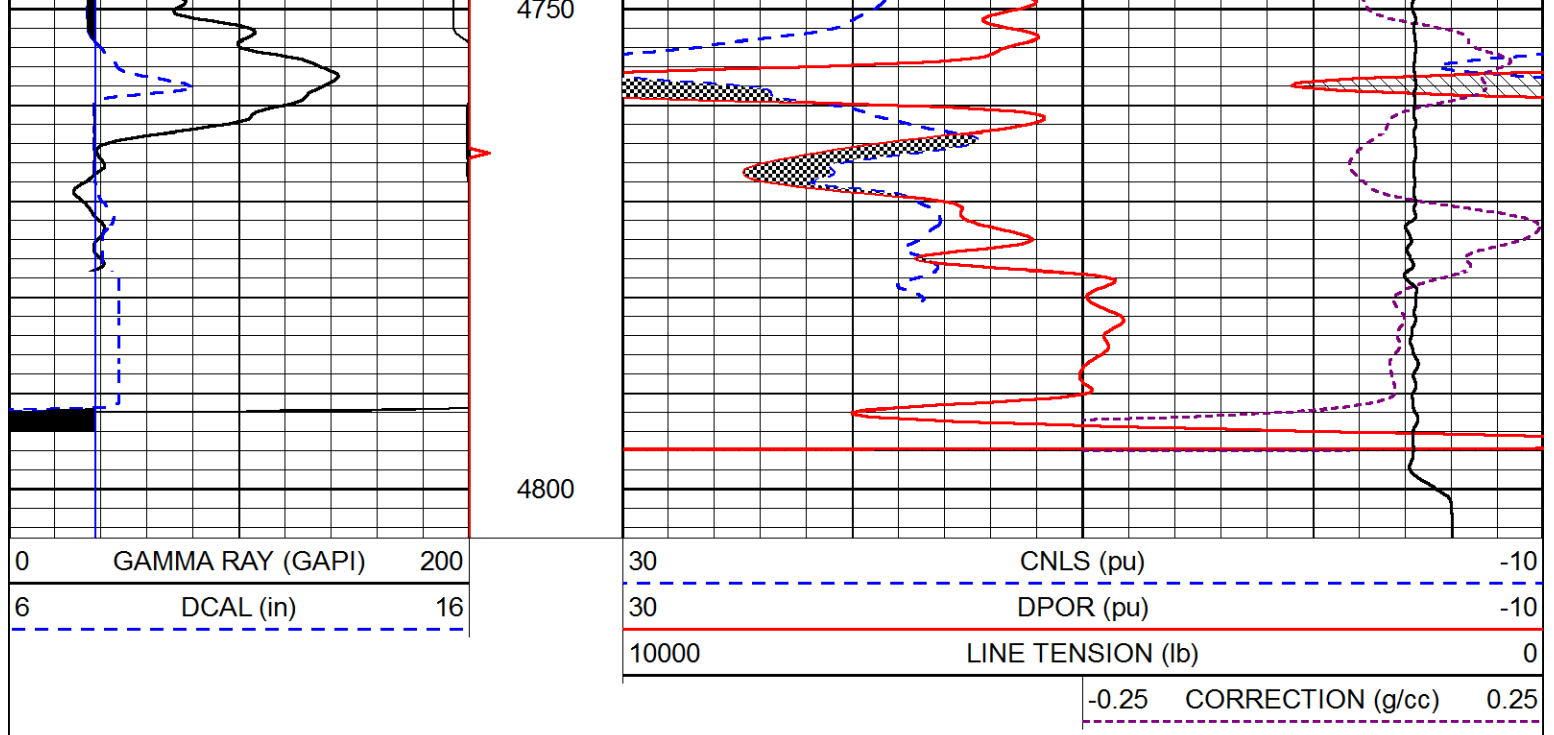
REPEAT SECTION

Database File mustang_gaskill_range_1.db
Dataset Pathname stack/pass2.1
Presentation Format _CNDLS~1
Dataset Creation Wed Nov 06 13:09:23 2019
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	200
6	DCAL (in)	16

30	CNLS (pu)	-10
30	DPOR (pu)	-10
10000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25





Calibration Report

Database File mustang_gaskill_range_1.db
 Dataset Pathname stack/pass3.1
 Dataset Creation Wed Nov 06 13:13:57 2019

Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP
 Calibration Performed: Wed Oct 09 13:38:53 2019

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.400	-27.500
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.275	-27.000

Compensated Density Calibration Report

Serial-Model: 817-947-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Tue Sep 24 21:18:50 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.690	g/cc	1141.85	3762.09	cps
Spine Angle = 74.89			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	15.00	in	1.34		

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: WED FEB 13 10:30:30 2019

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
Tool Model: M&W
Calibration Performed: Fri Aug 24 11:16:10 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps



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