



PIONEER

Pioneer Energy Services

DUAL COMP POROSITY LOG

Company **MURFIN DILLING CO., INC.**
Well **PLUMMER #1-25**
Field **DIETTERICH**
County **STANTON** State **KANSAS**

Location: API #: 15-187-21341-00-00

Other Services

SEC 25 TWP 28S RGE 41W
2100' FSL & 1925' FEL

DIL/MEL
BHCS

Permanent Datum GROUND LEVEL Elevation 3332'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 3343'
D.F. N/A
G.L. 3332'

Date 10/2/2018

Run Number ONE

Type Log CNL/CDL

Depth Driller 5795'

Depth Logger 5795'

Bottom Logged Interval 5774'

Top Logged Interval 3600'

Type Fluid In Hole CHEMICAL

Salinity, PPM CL 675

Density 9.4

Level FULL

Max. Rec. Temp. F 134

Operating Rig Time 5 HOURS

Equipment -- Location 91 HAYS

Recorded By IAN MABB

Witnessed By KEITH REAVIS

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0'	1777'	8.625"	23#	0'	1777'
TWO	7.875"	1777'	TD				

<<< Fold Here >>>

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.

JOHNSON CITY, KS.

BY THE CENEX TAKE THE FRONTAGE RD. ON THE NORTH SIDE,
AND NORTH INTO ON THE WEST SIDE OF
WESTERN SHELTER INS.

Log Measured From: KELLY BUSHING

11 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: KEITH REAVIS

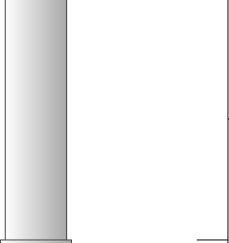
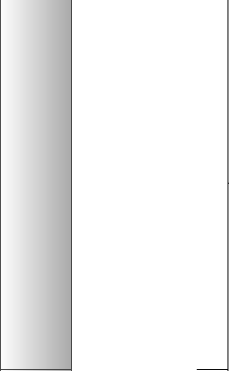
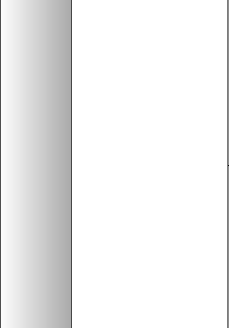
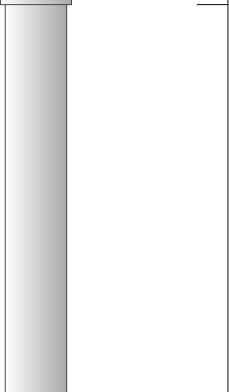
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Secondary Witness:

Secondary Witness:

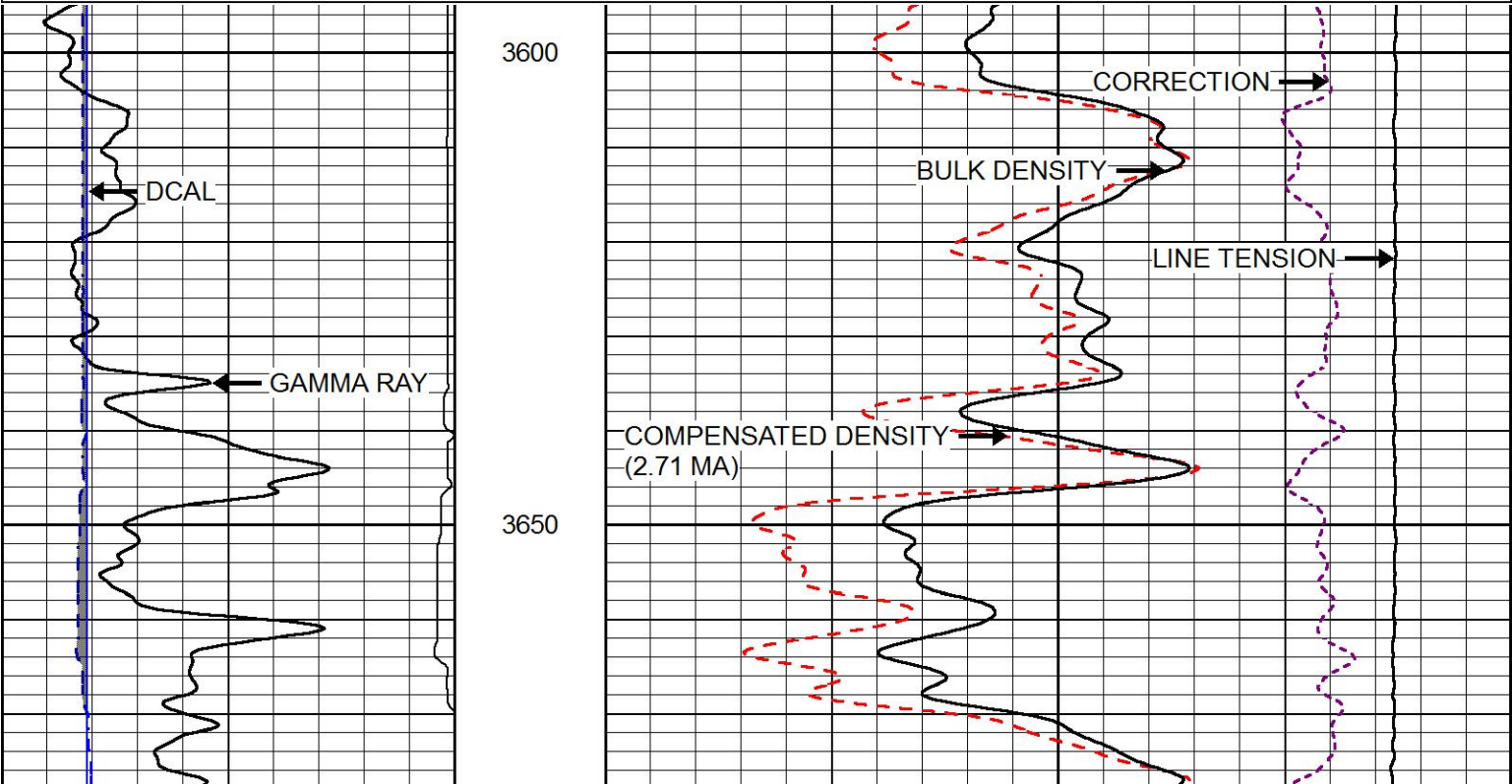
Top - Bottom

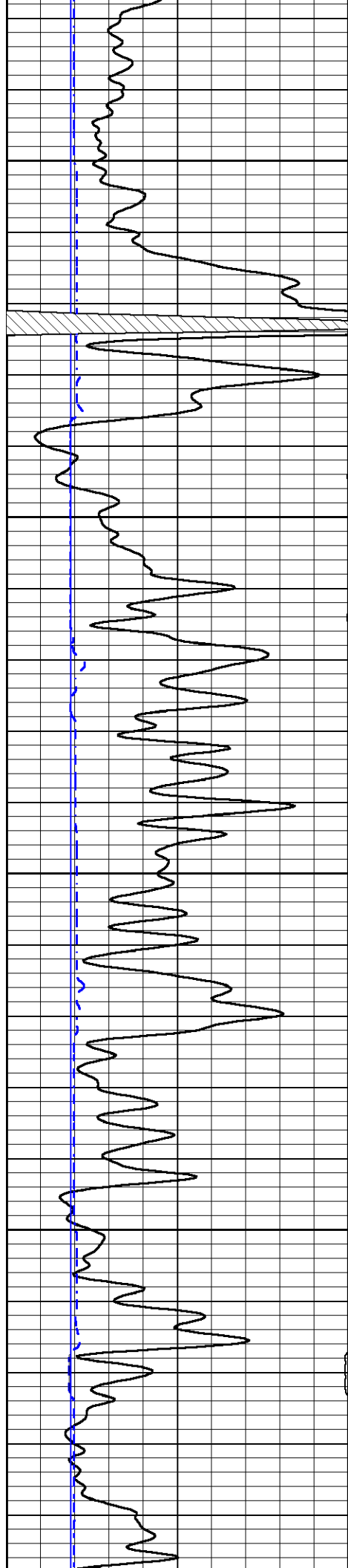
M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	54	3
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
7	0	0	5.5	0	5795	134	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (144-84)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					

				DIL-PSI HIGH TEMP (967 (HT))	18.50	3.50	220.00
CILD	8.00						
CILM	4.70						
SP	0.20						
Dataset: murfin_plummer_1_25.db: field/well/stackmel/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in							

 PIONEER Pioneer Energy Services			MAIN PASS		
Database File			murfin_plummer_1_25.db		
Dataset Pathname			stackmel/pass3.1		
Presentation Format			cdl		
Dataset Creation			Tue Oct 02 13:42:49 2018		
Charted by			Depth in Feet scaled 1:240		
0	GAMMA RAY (GAPI)	150	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		
6	DCAL (in)	16			



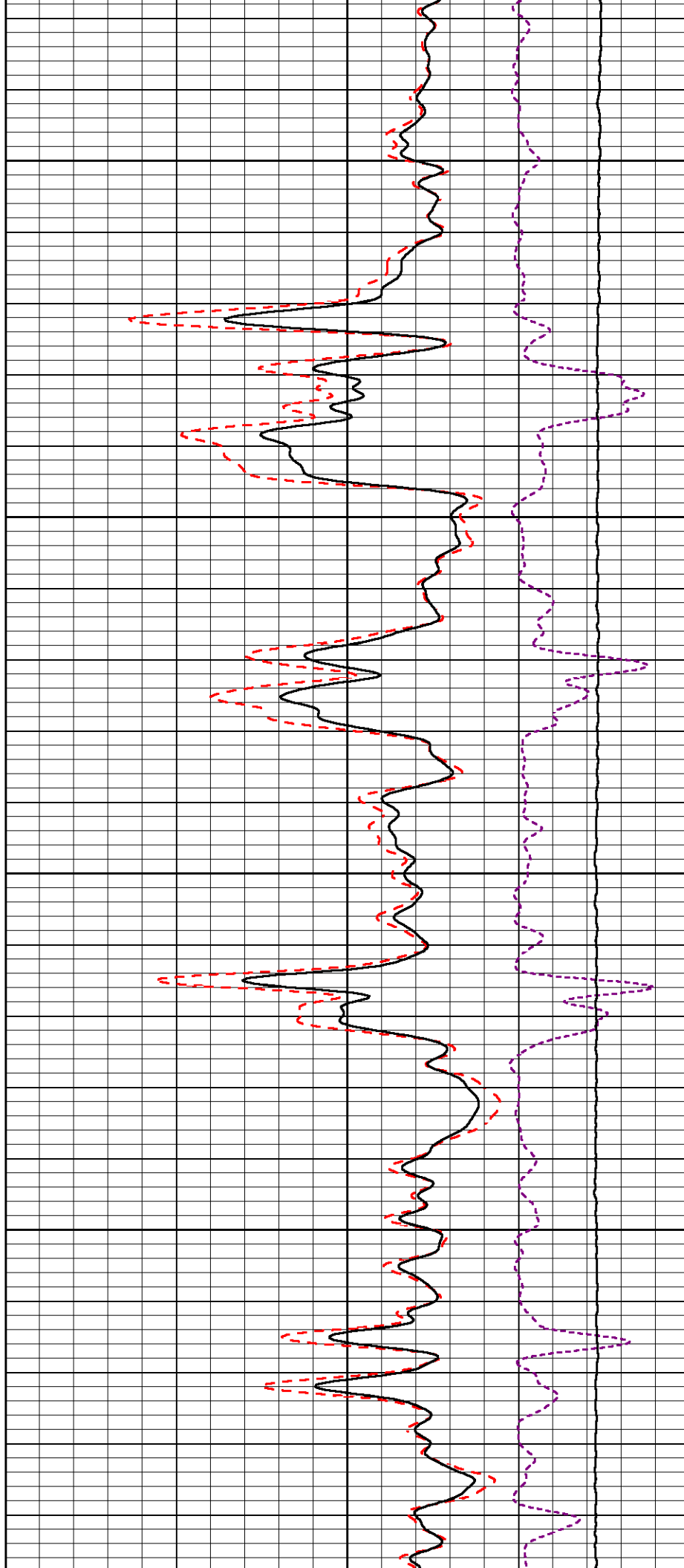


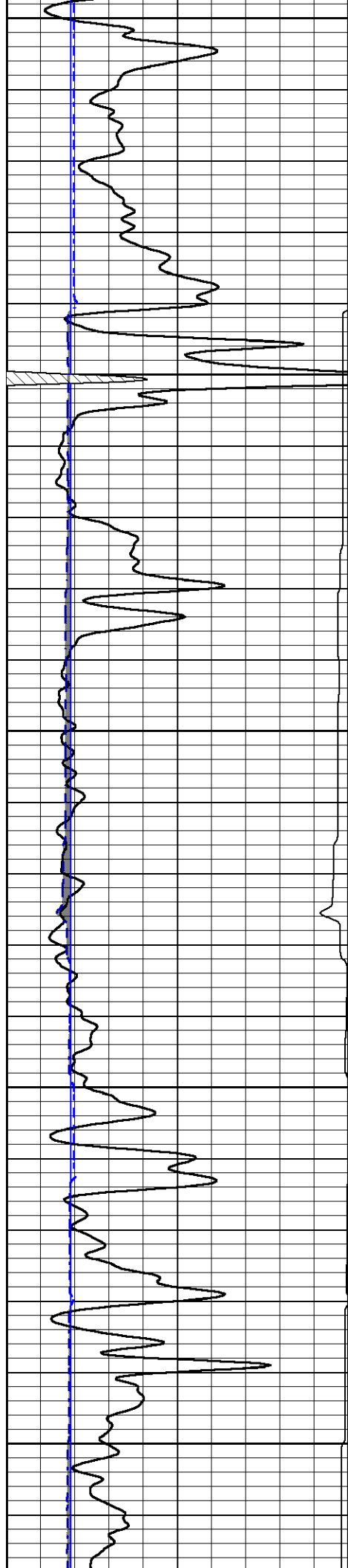
3700

3750

3800

3850





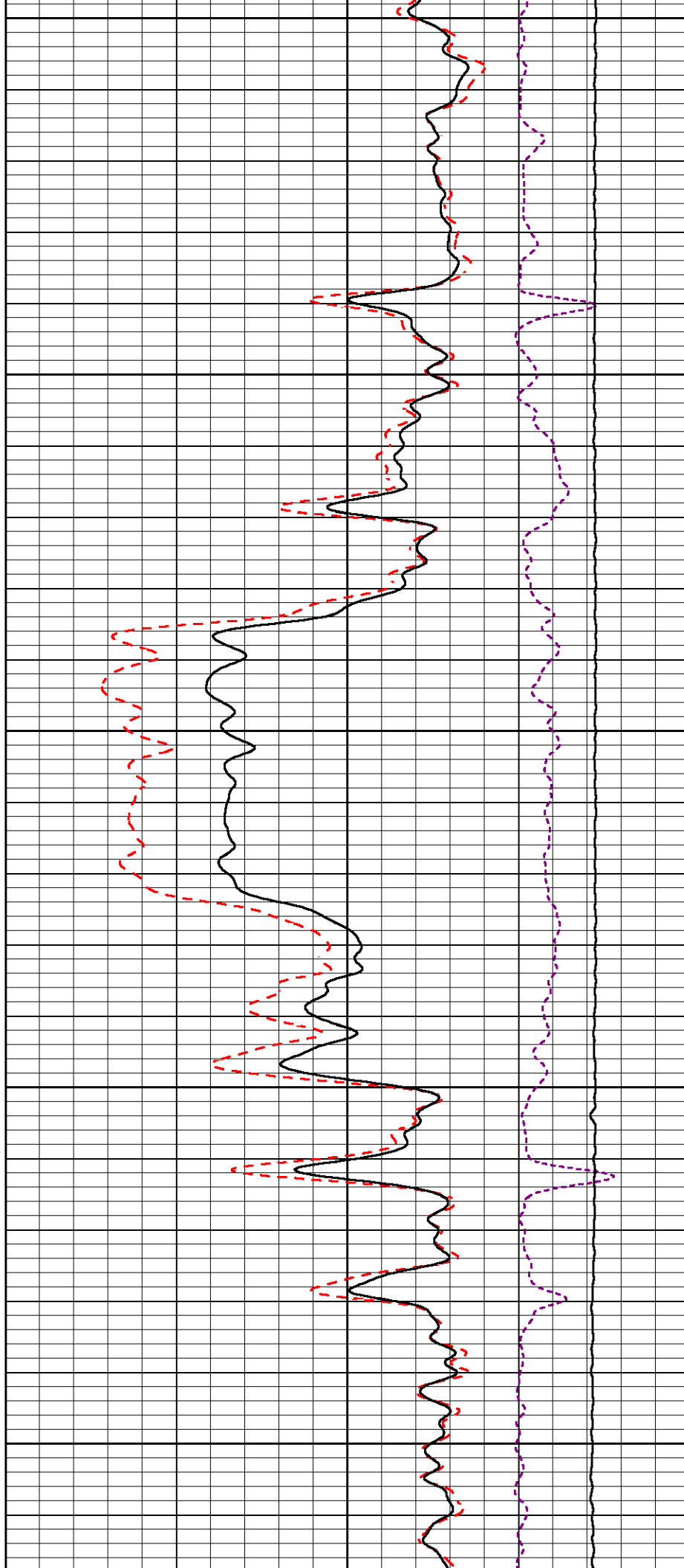
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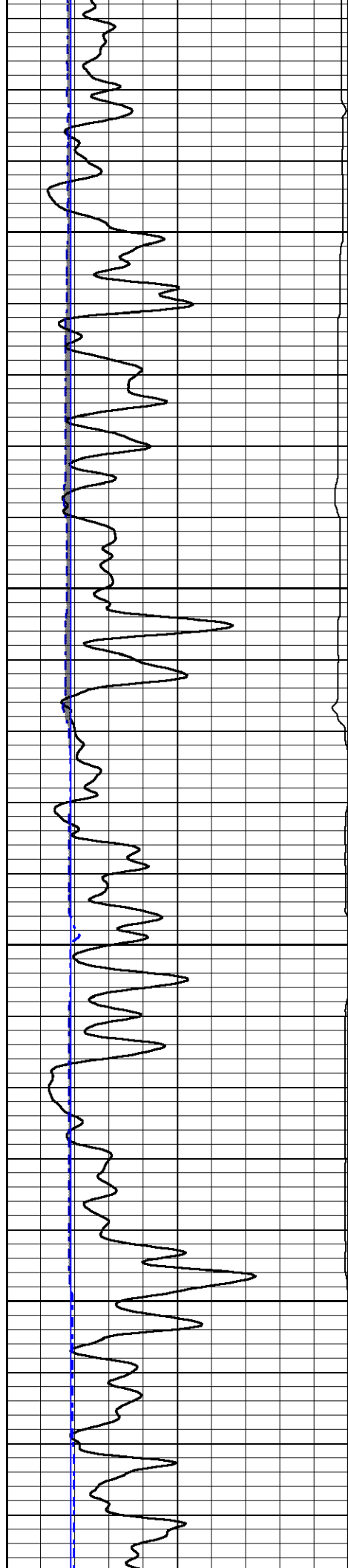
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4000

4050

4100



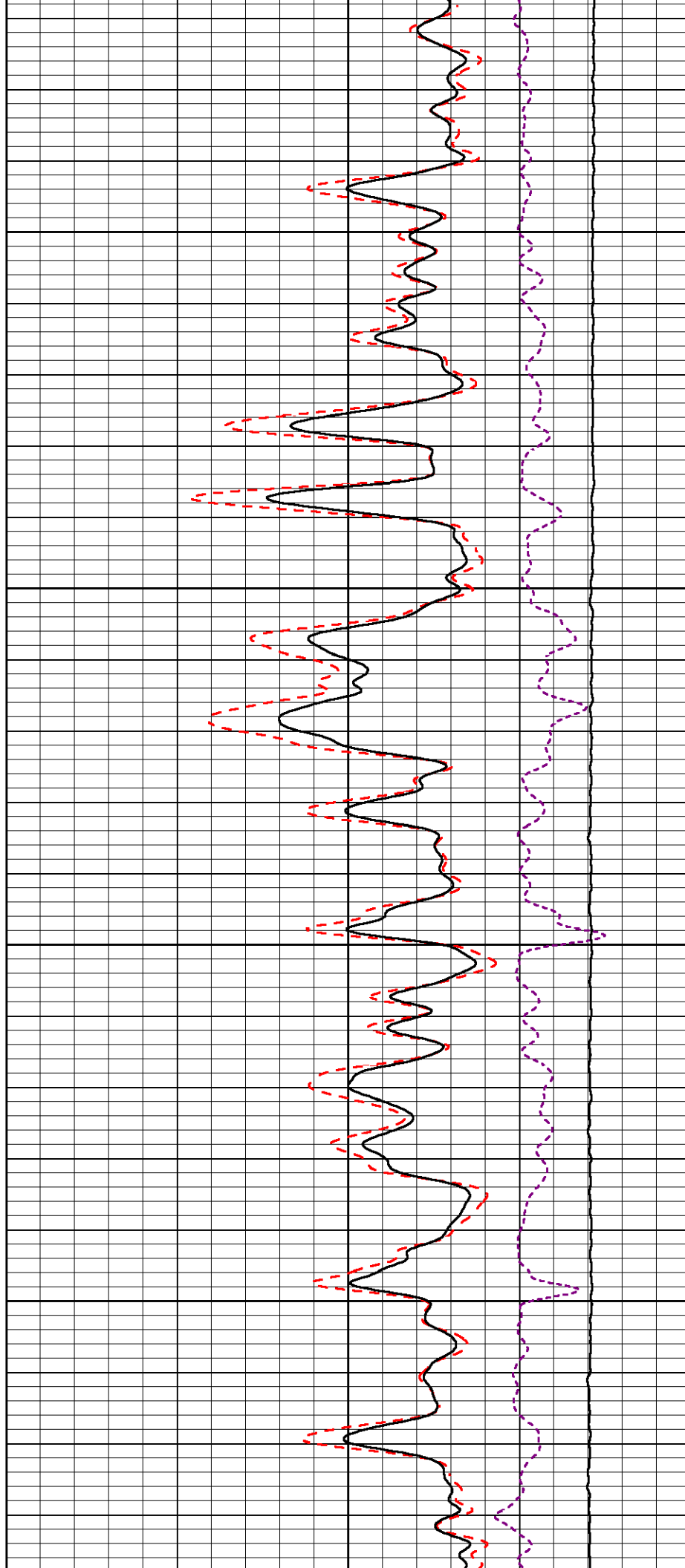


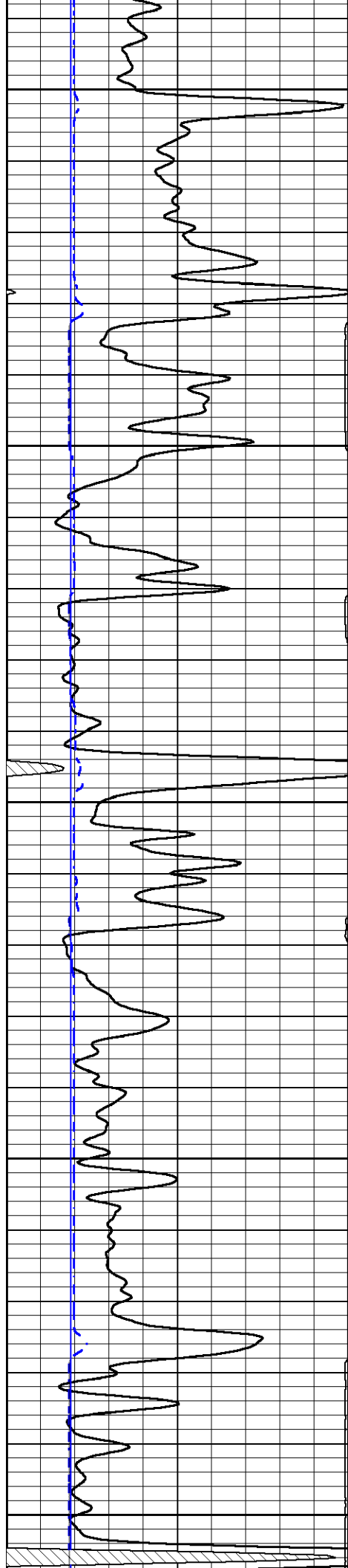
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4200

4250

4300





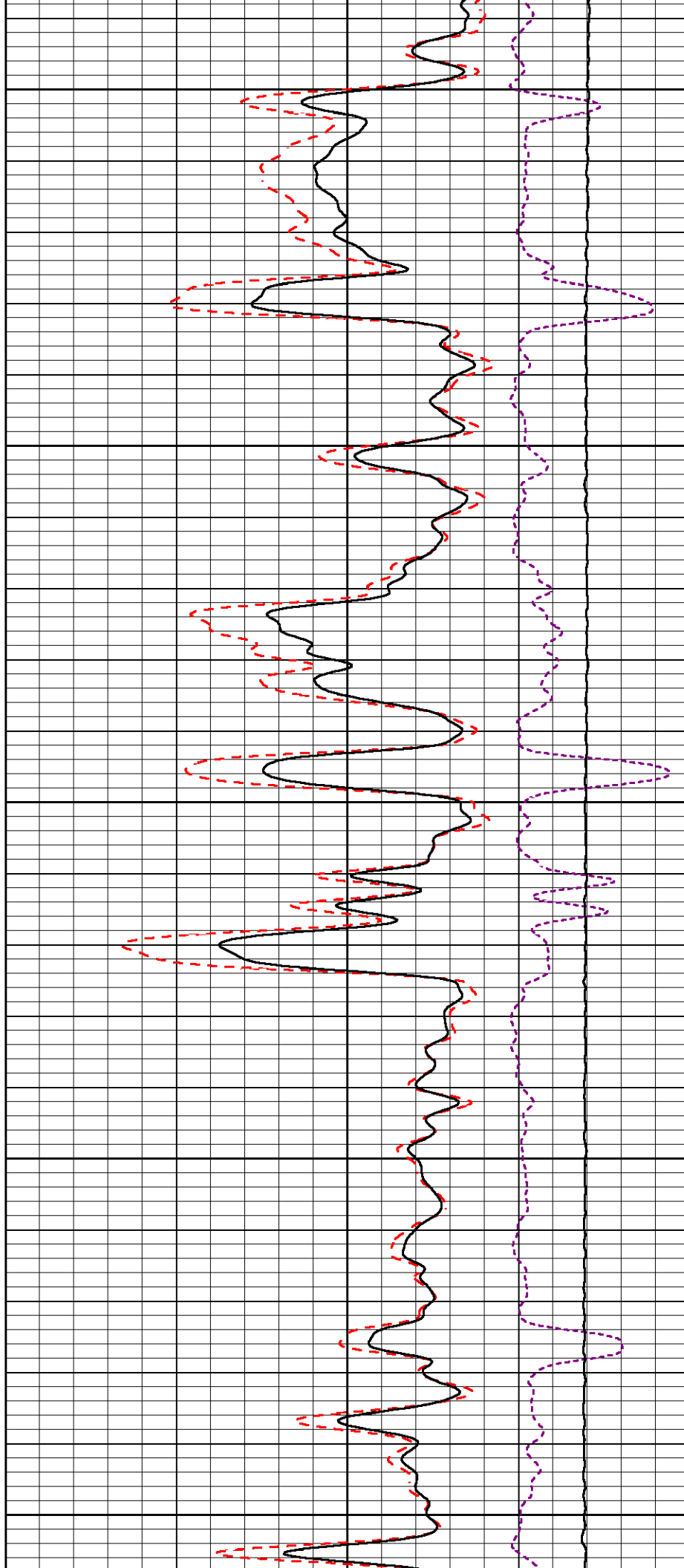
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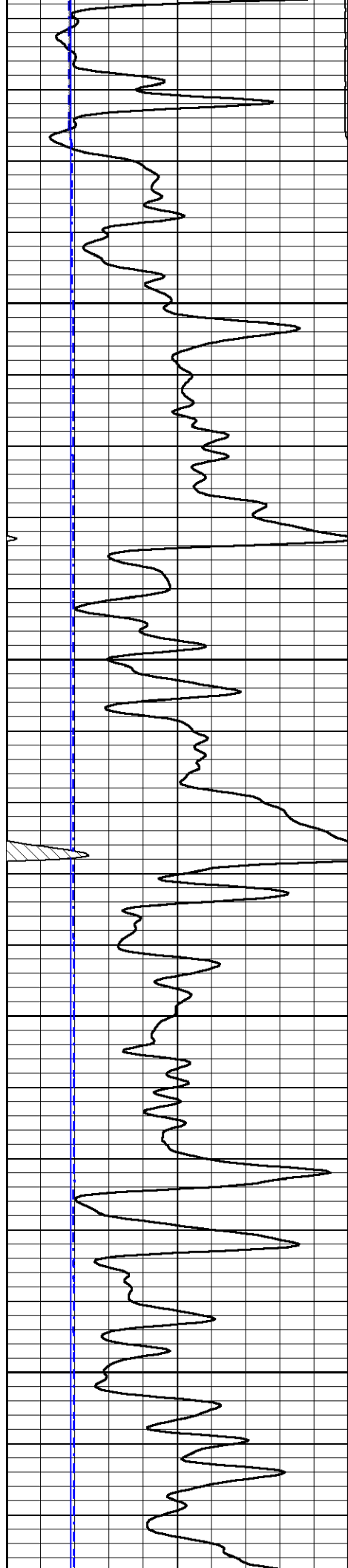
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4450

4500

4550



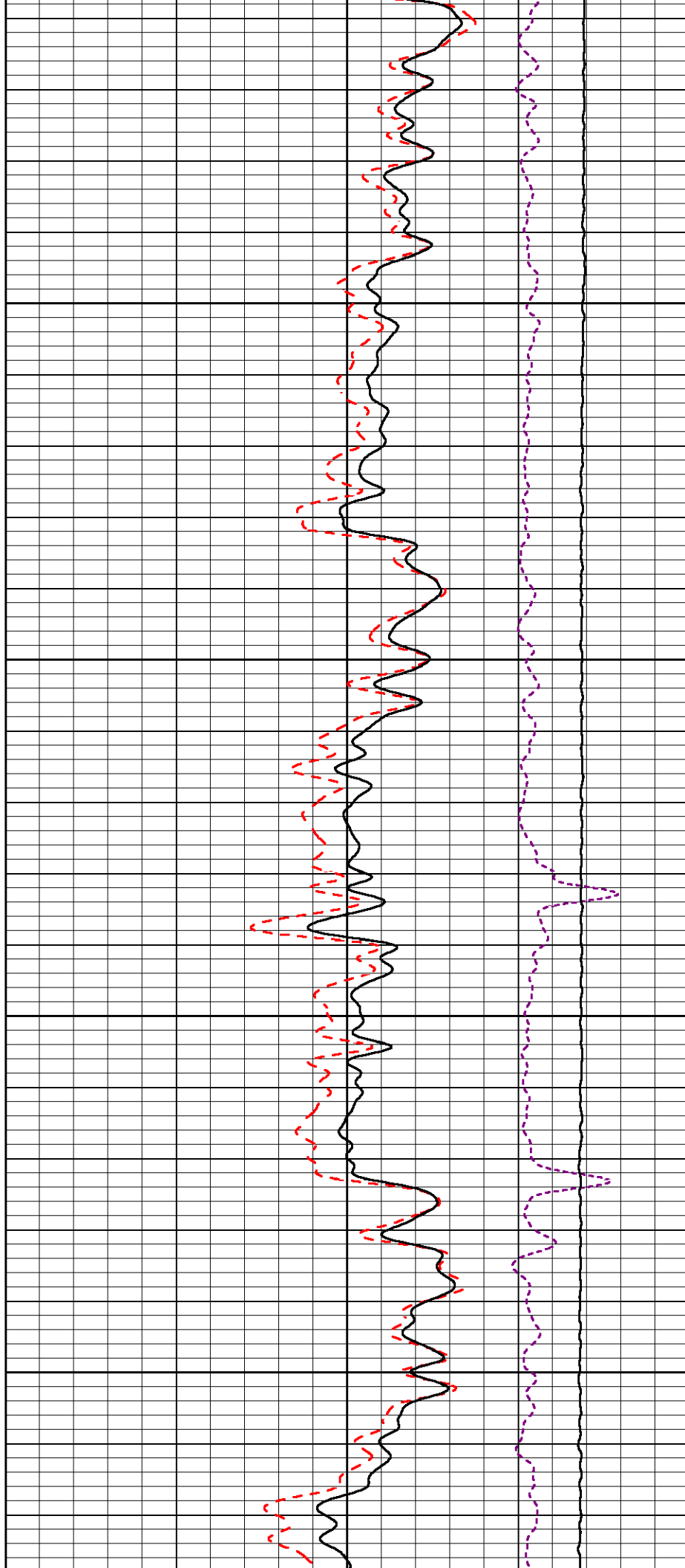


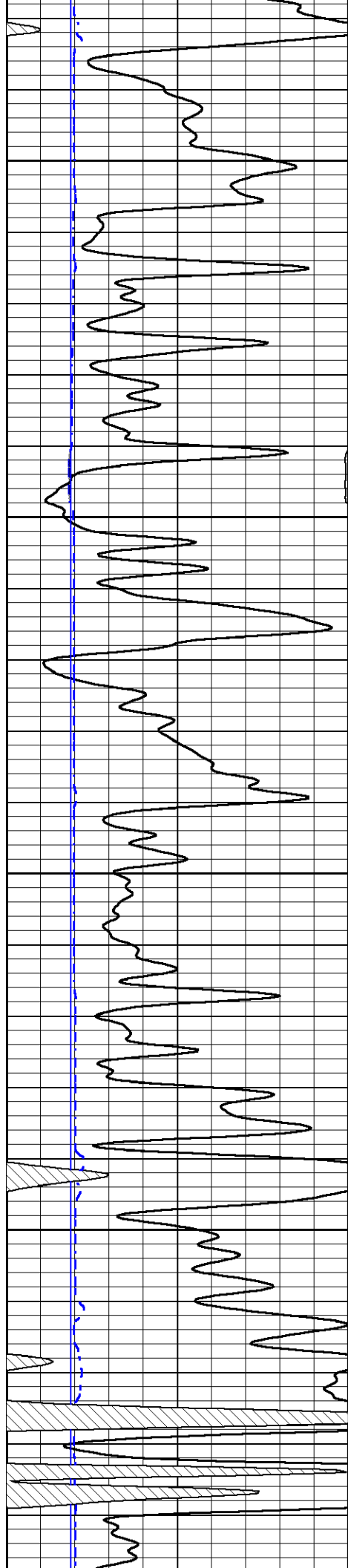
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4700

4750



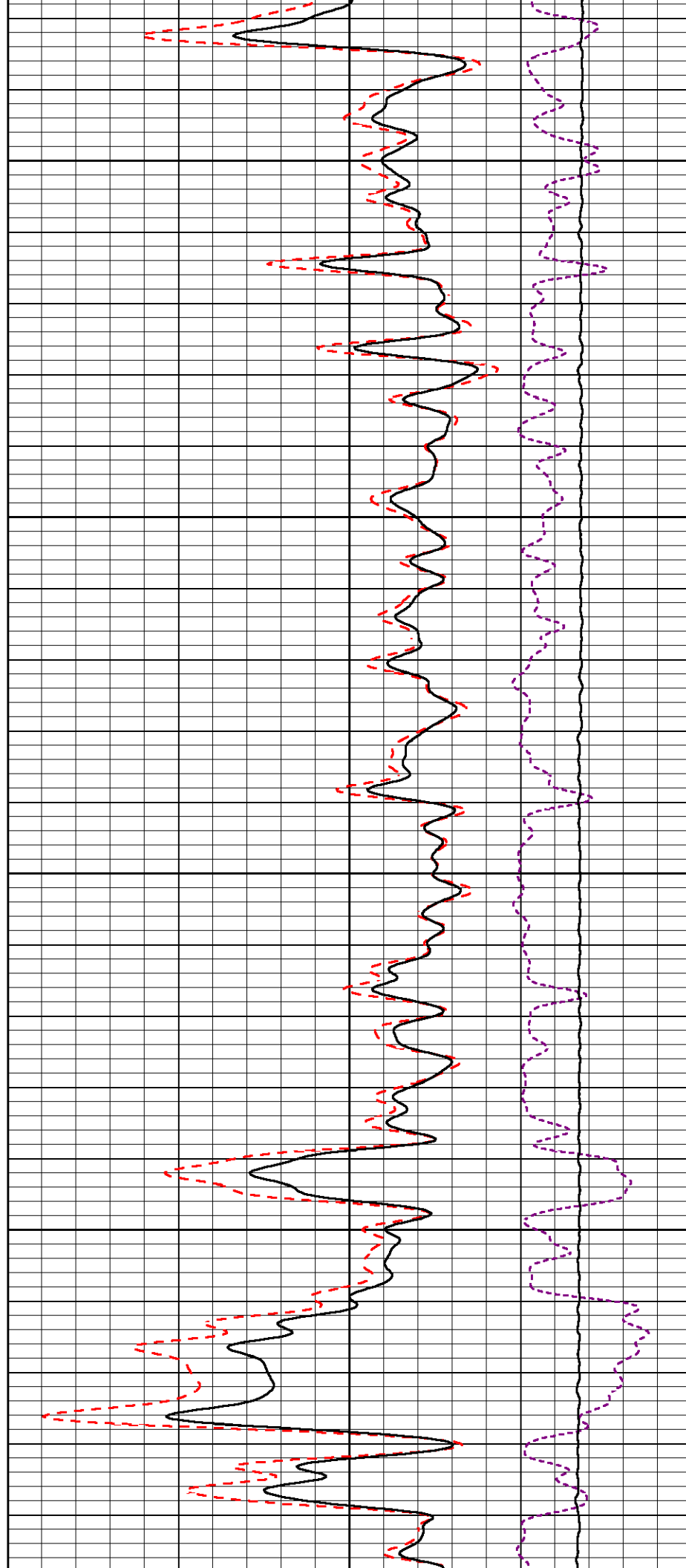


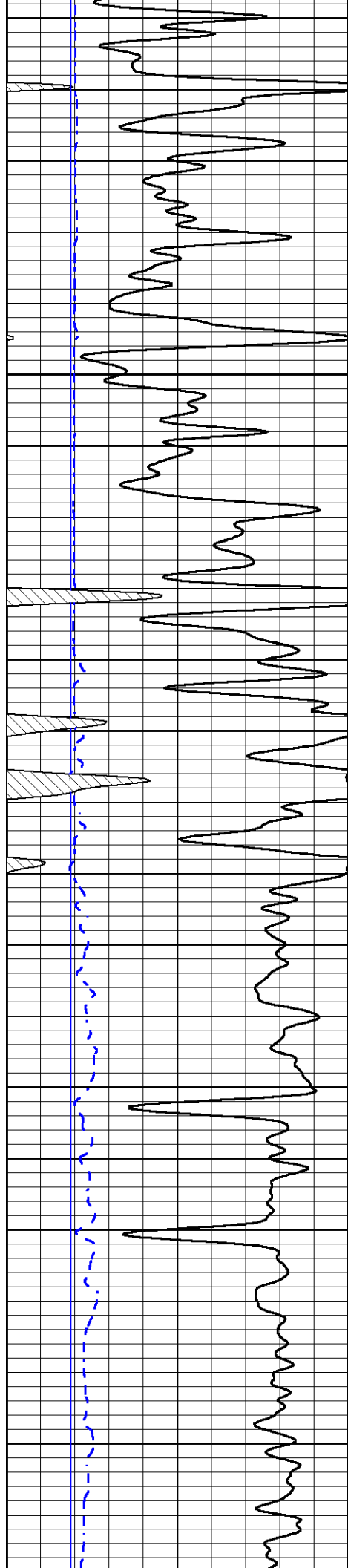
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4900

4950





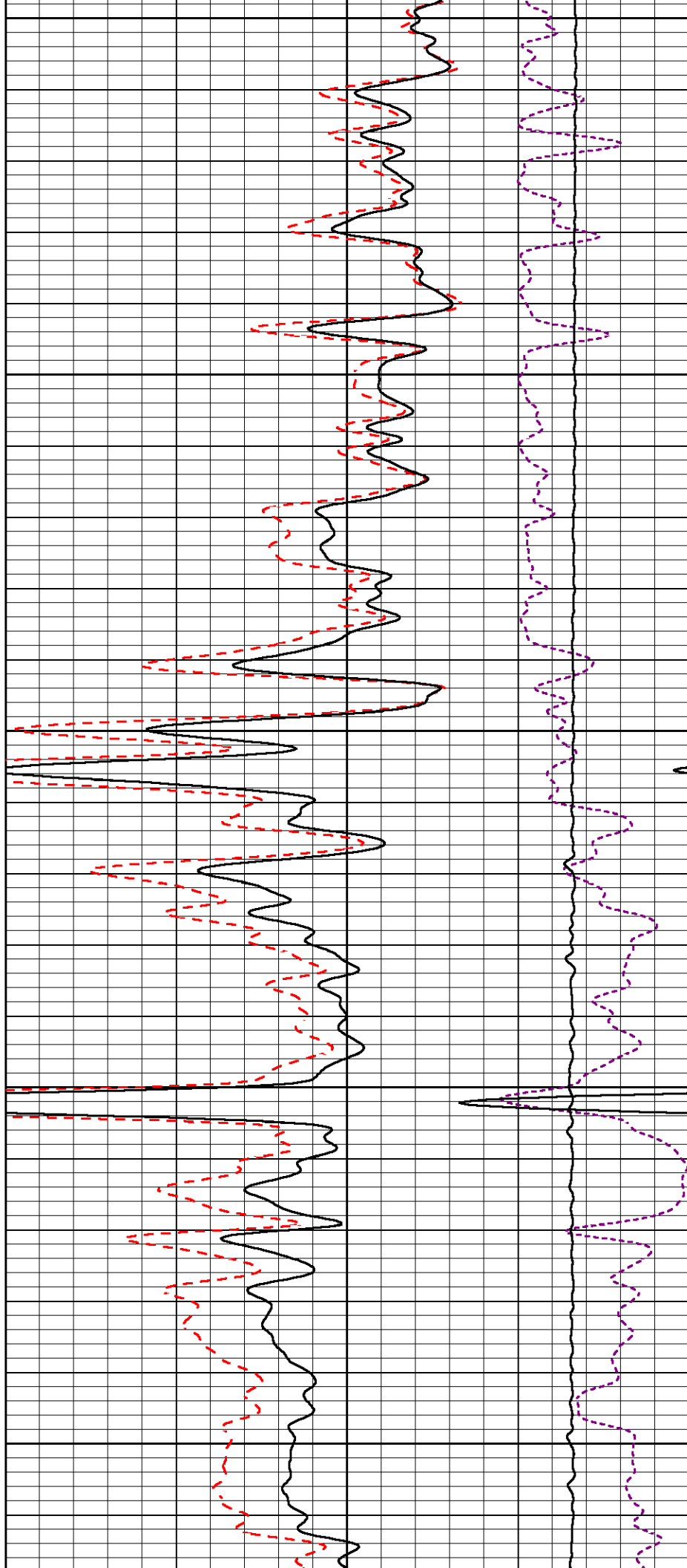
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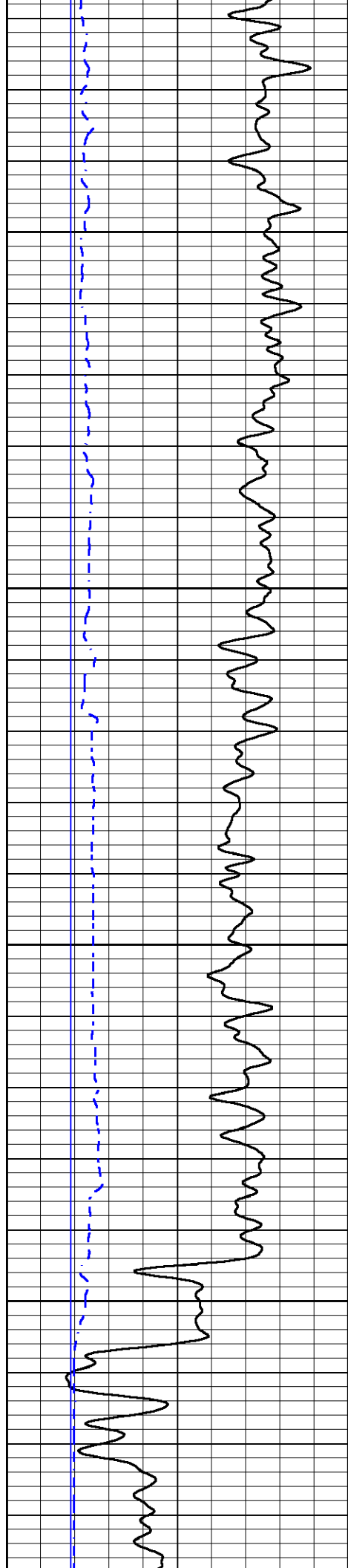
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5150

5200



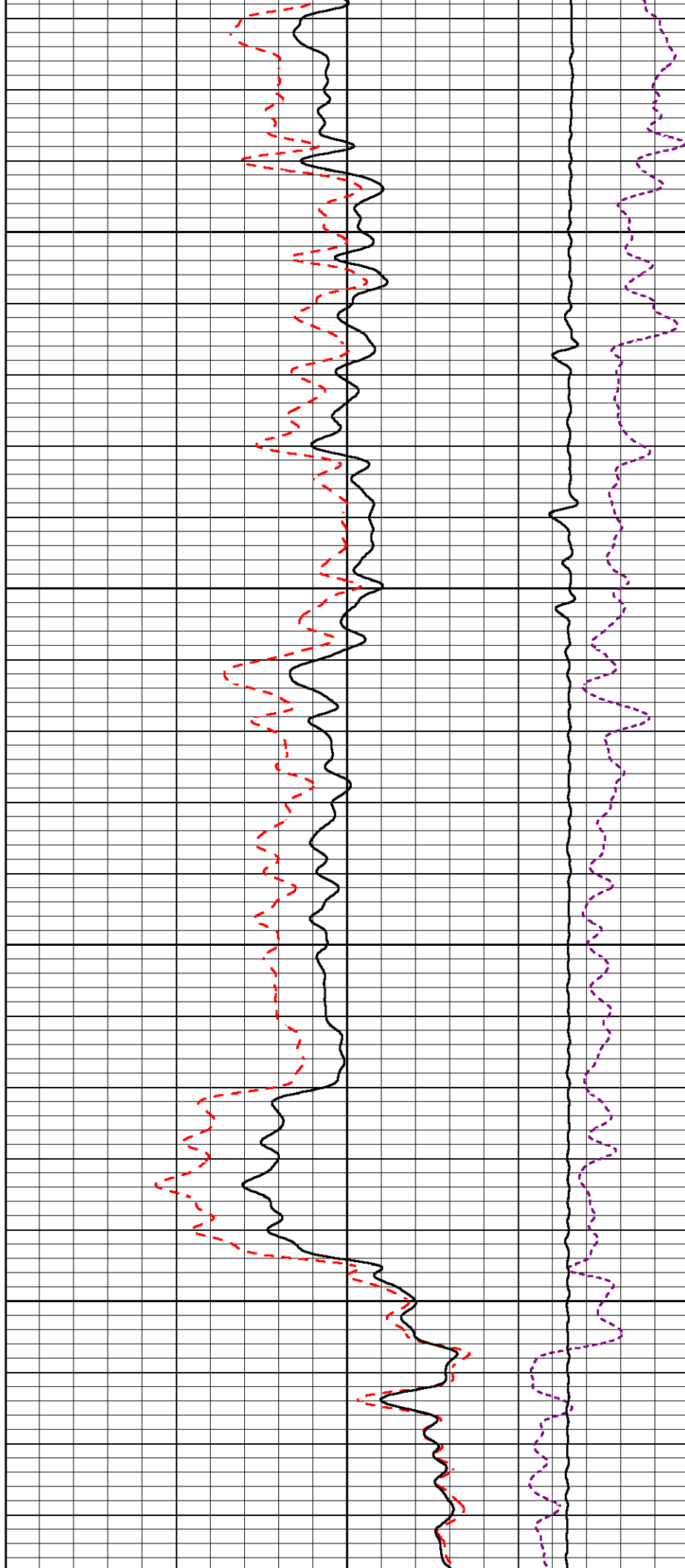


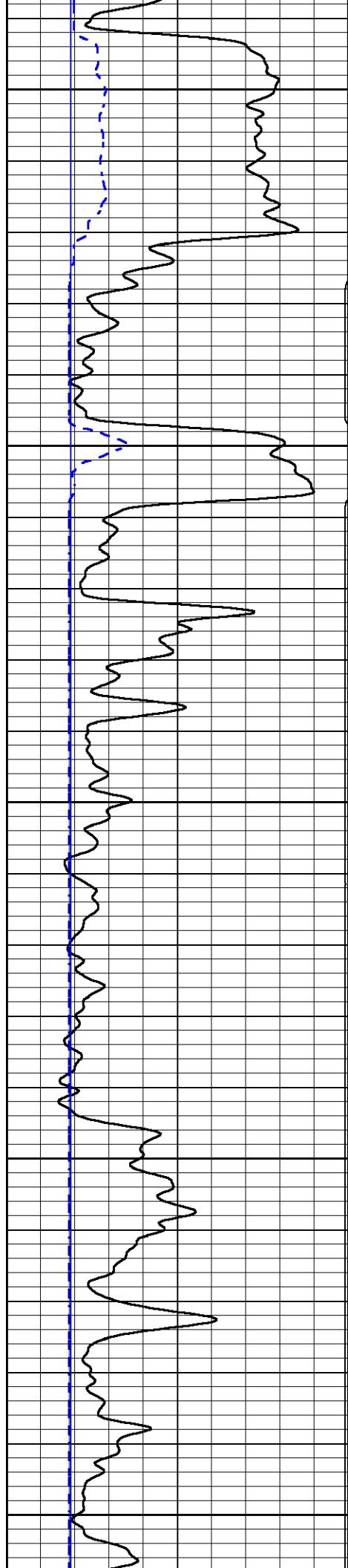
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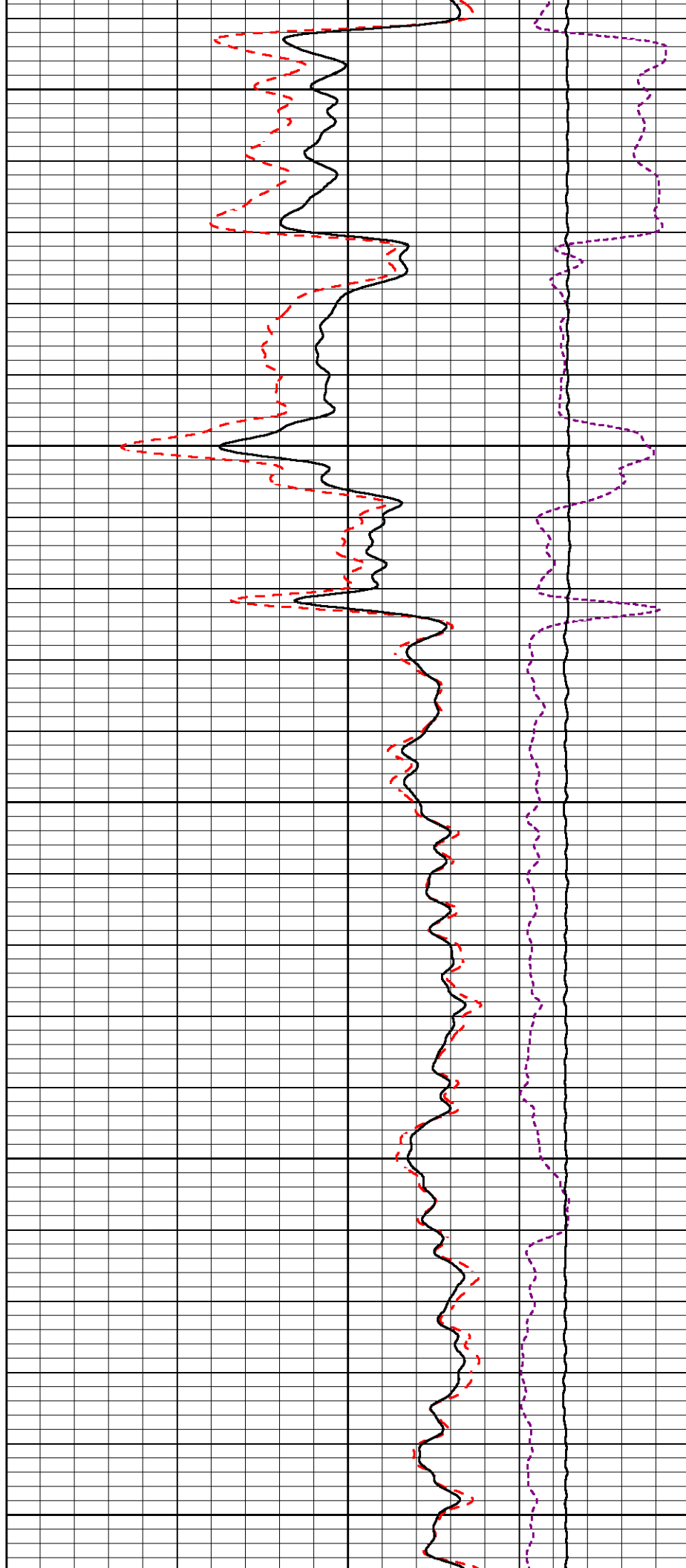
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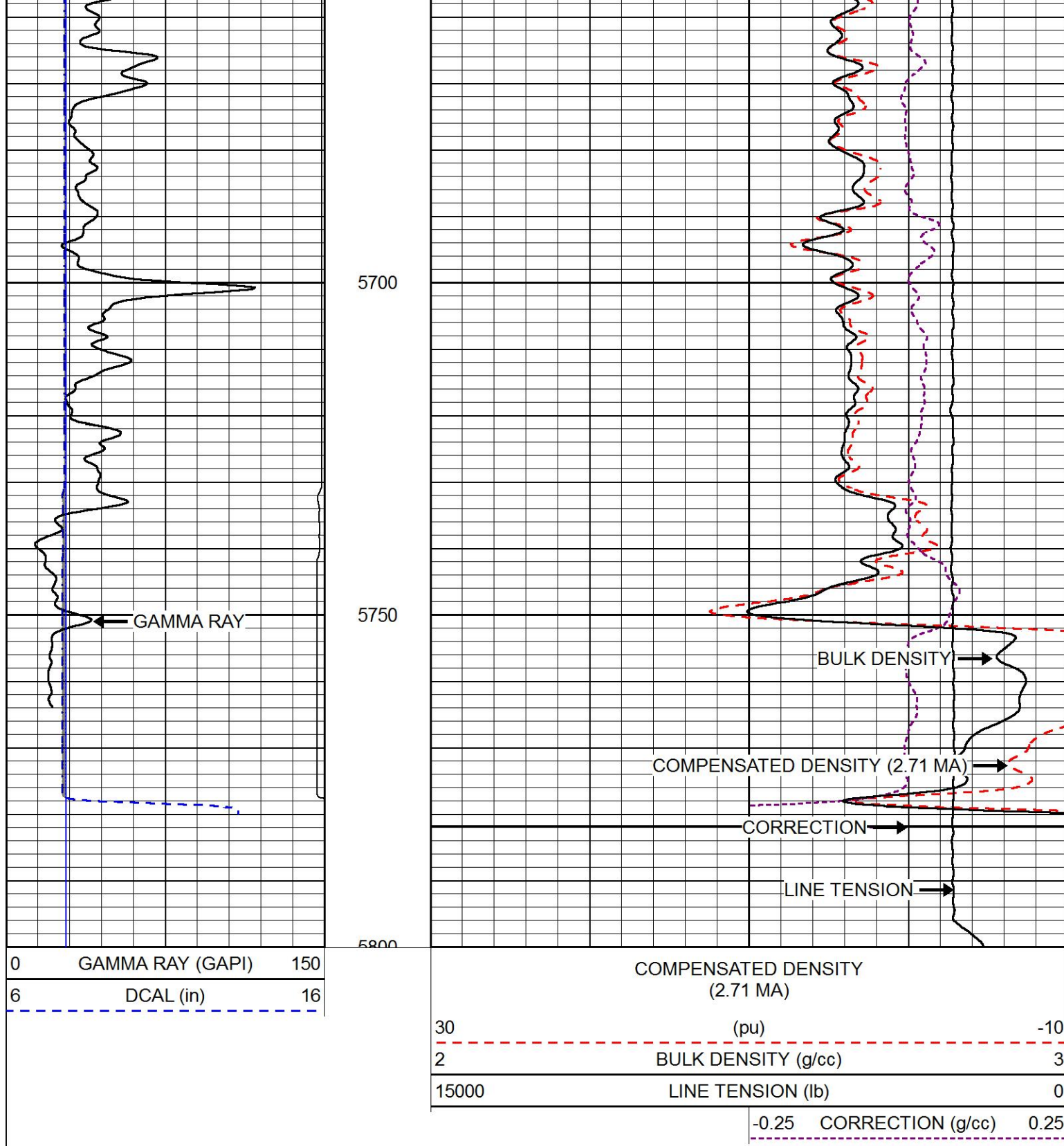
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5600

5650





MAIN PASS

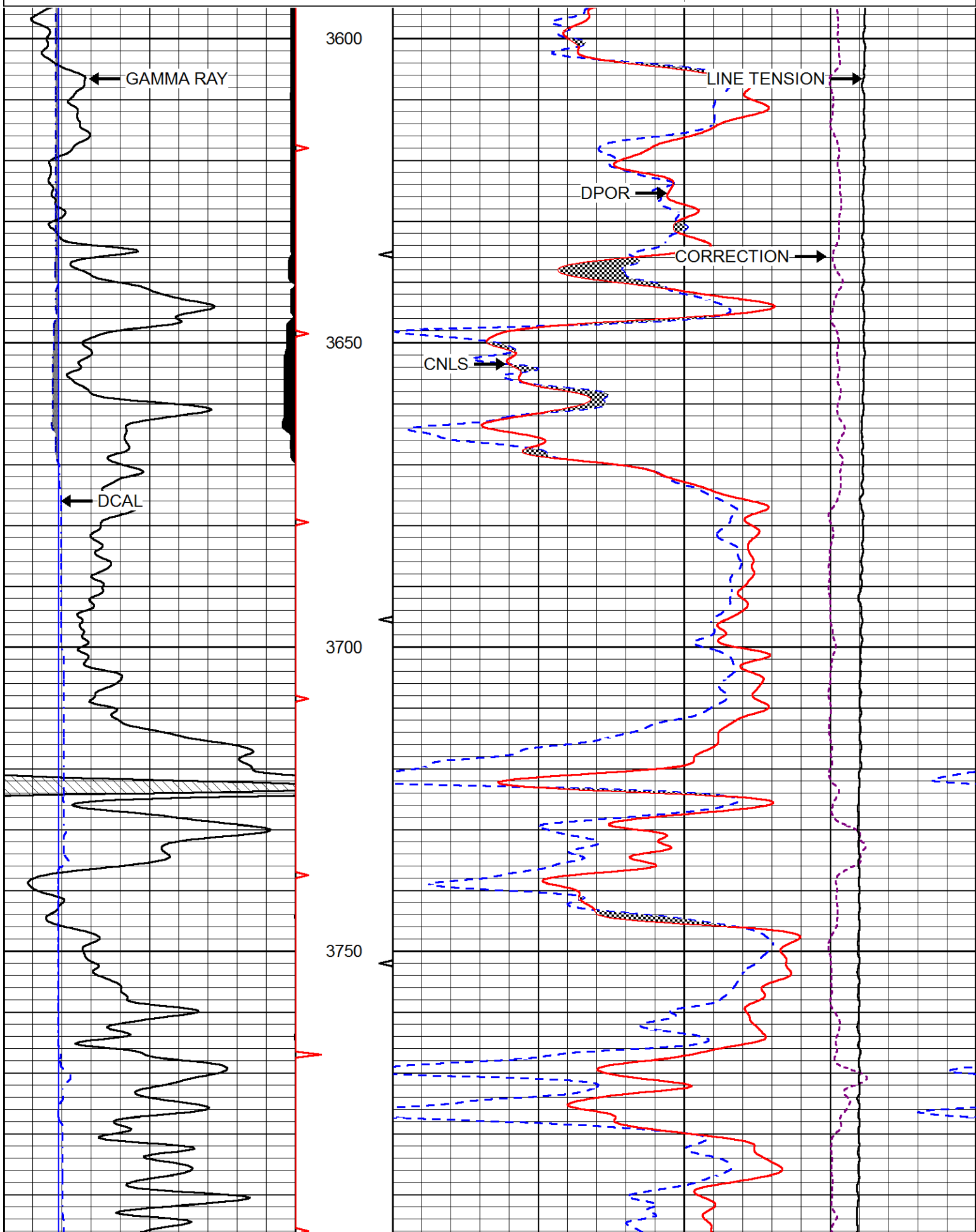
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 Dataset Pathname: stackmel/pass3.1
 Presentation Format: cndlspec
 Dataset Creation: Tue Oct 02 13:42:49 2018
 Charted by: Depth in Feet scaled 1:240

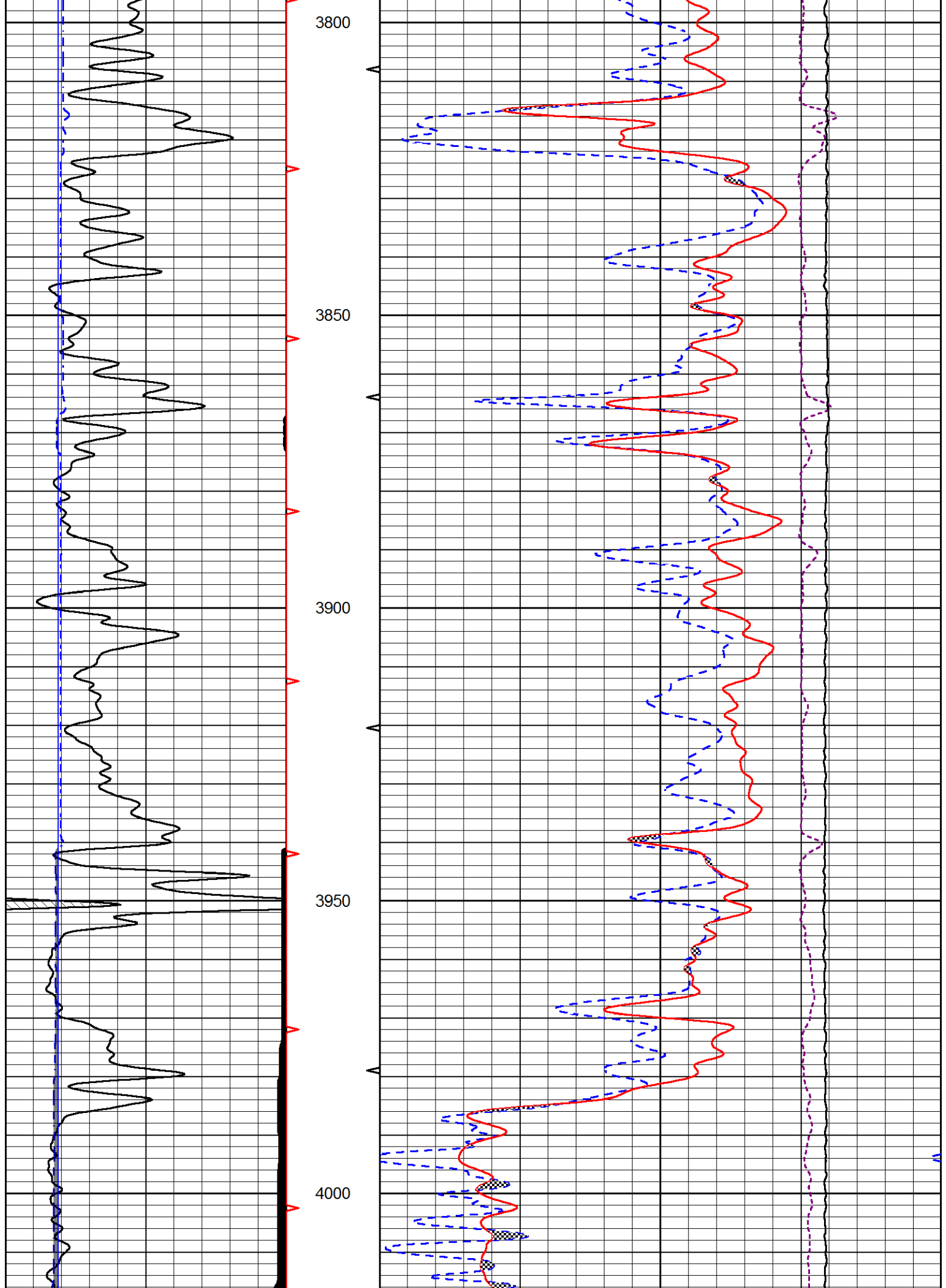


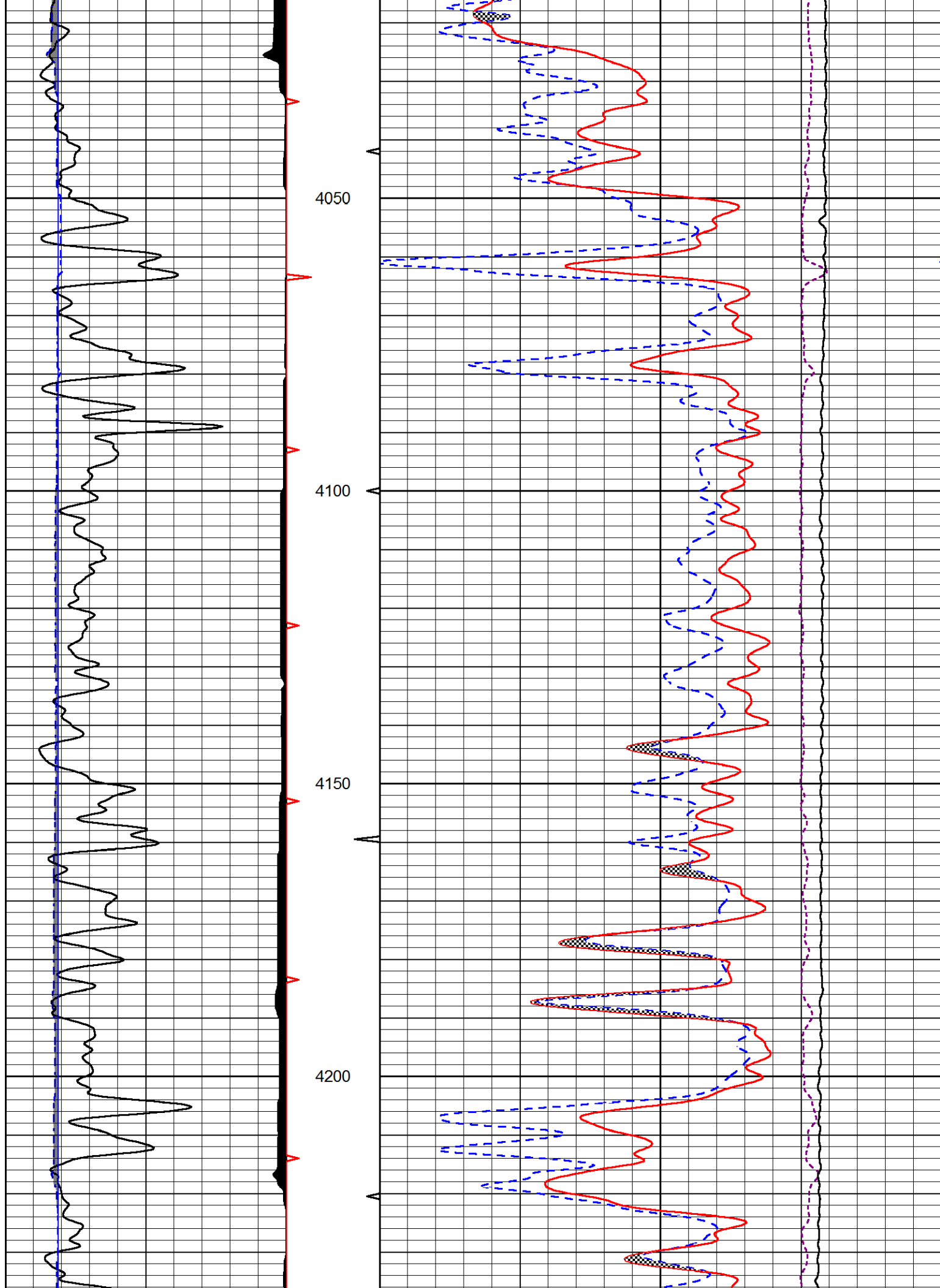
	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

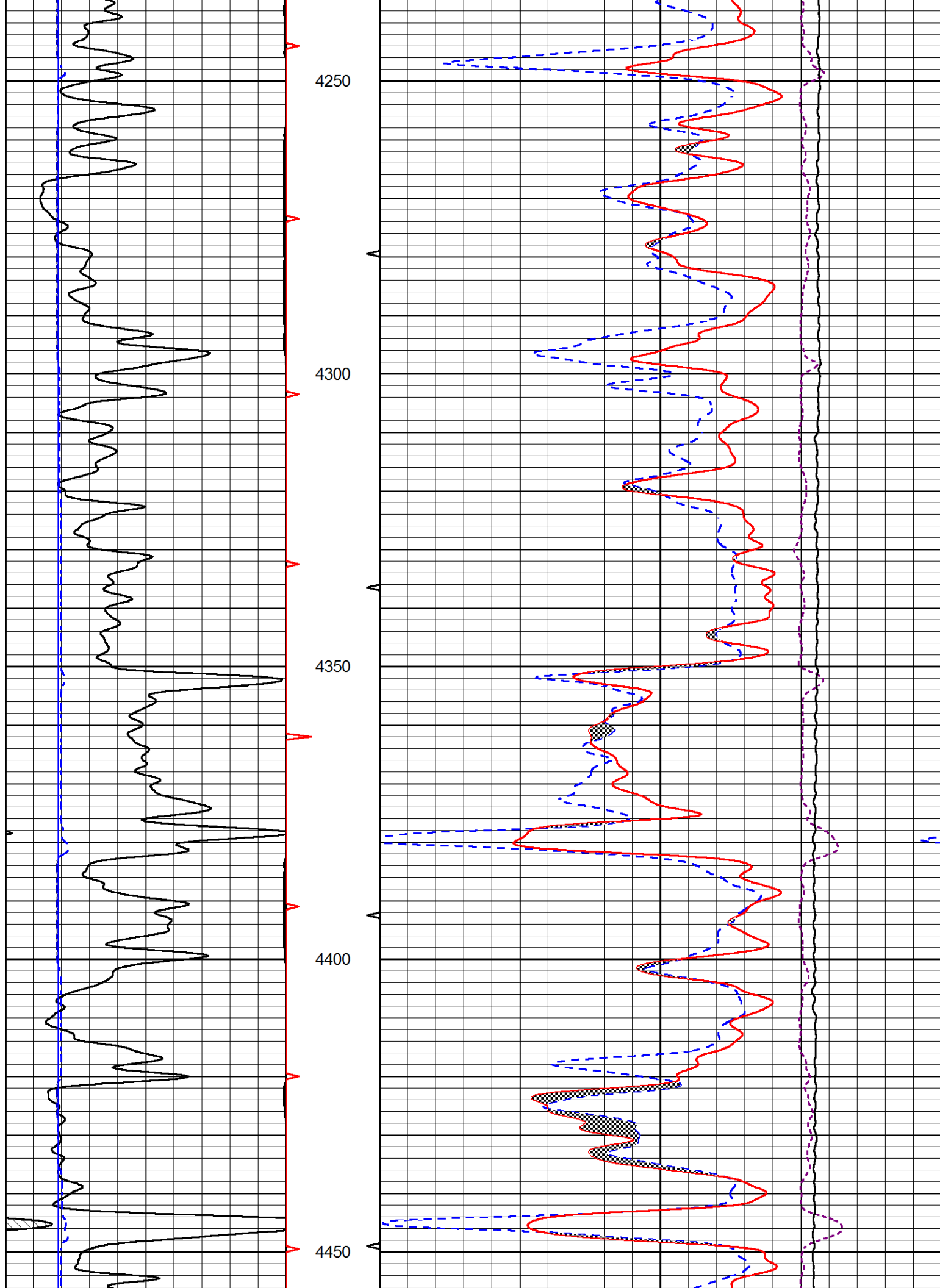
50	CNLS (pu)	-10
30	DPOR (pu)	-10
10000	LINE TENSION (lb)	0

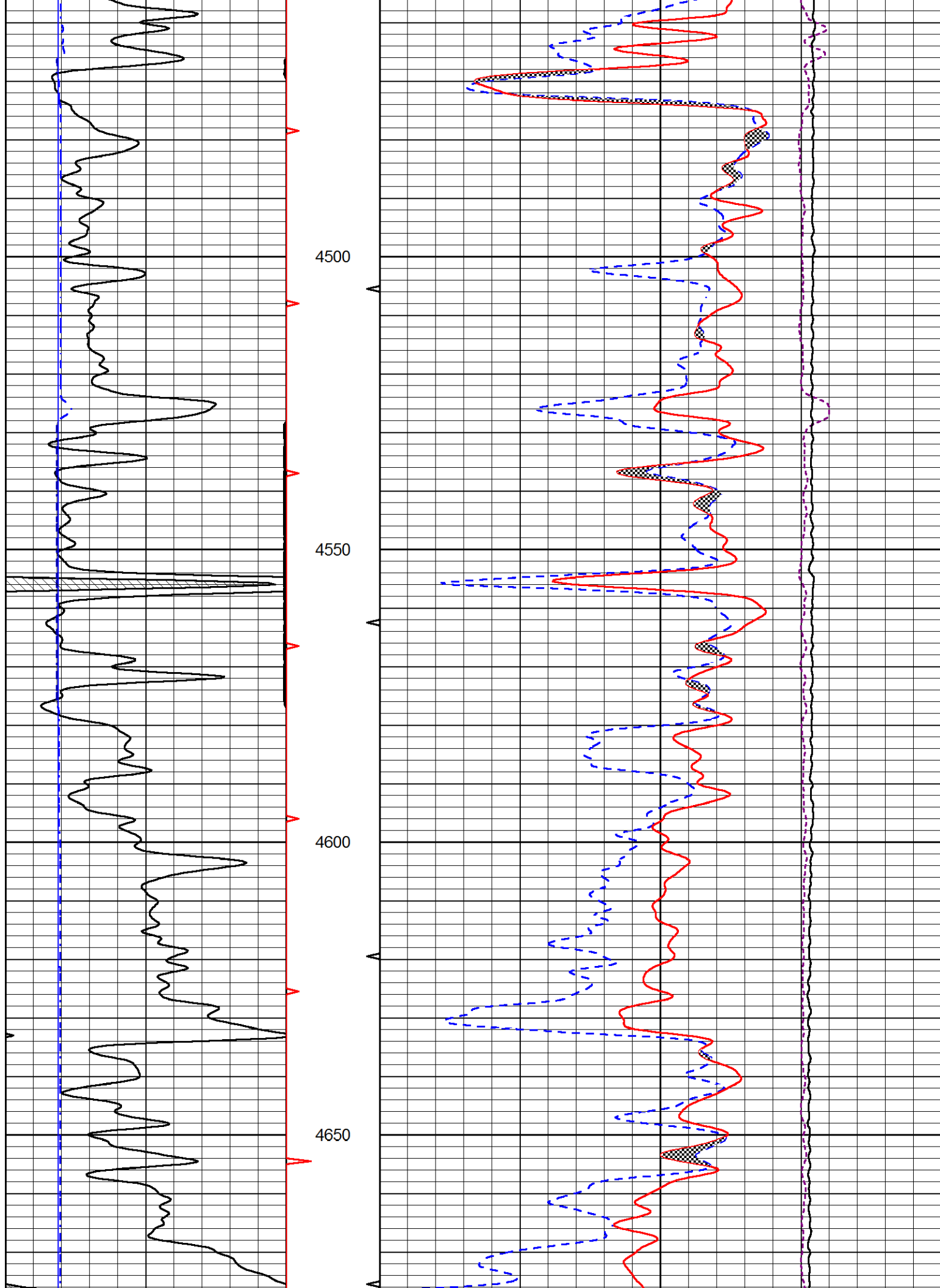
-0.75	CORRECTION (g/cc)	0.75
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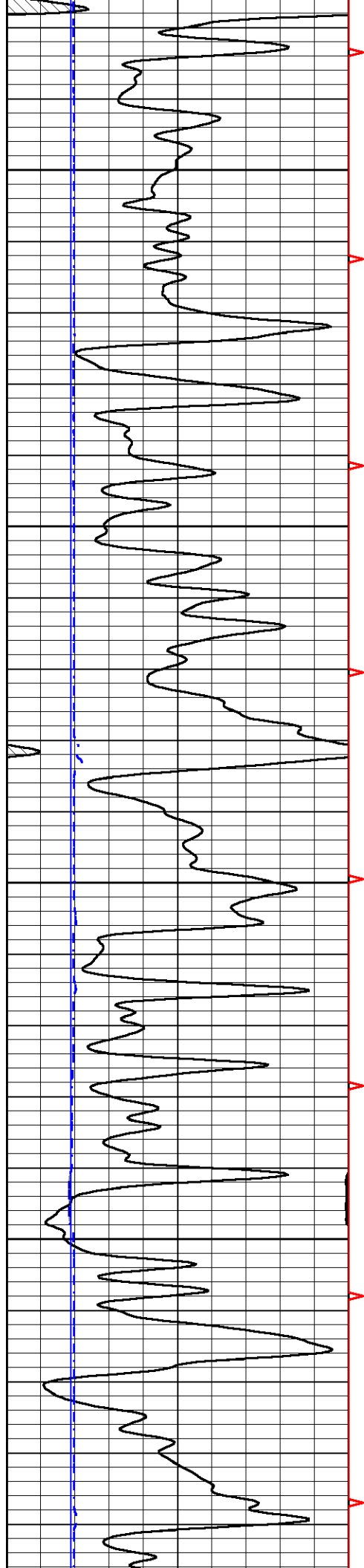










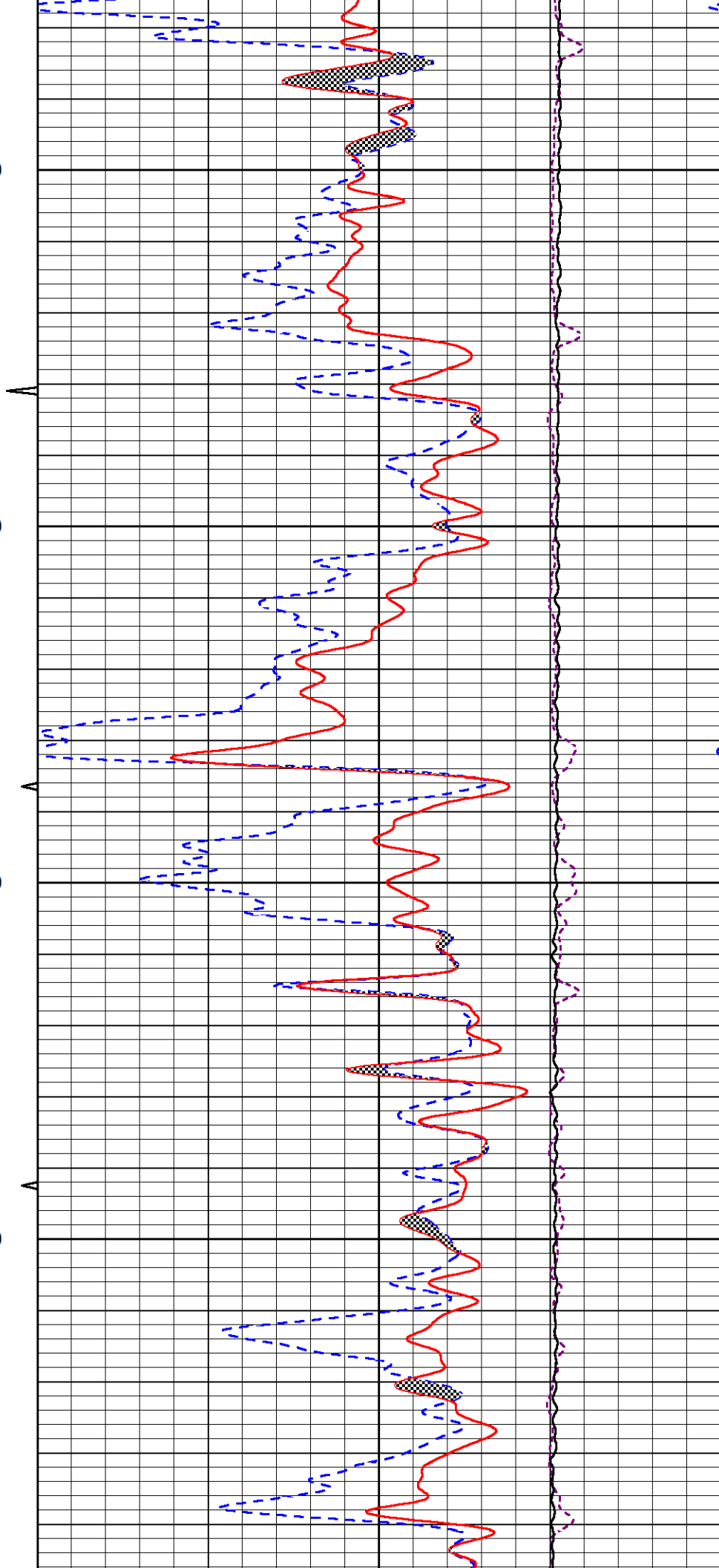


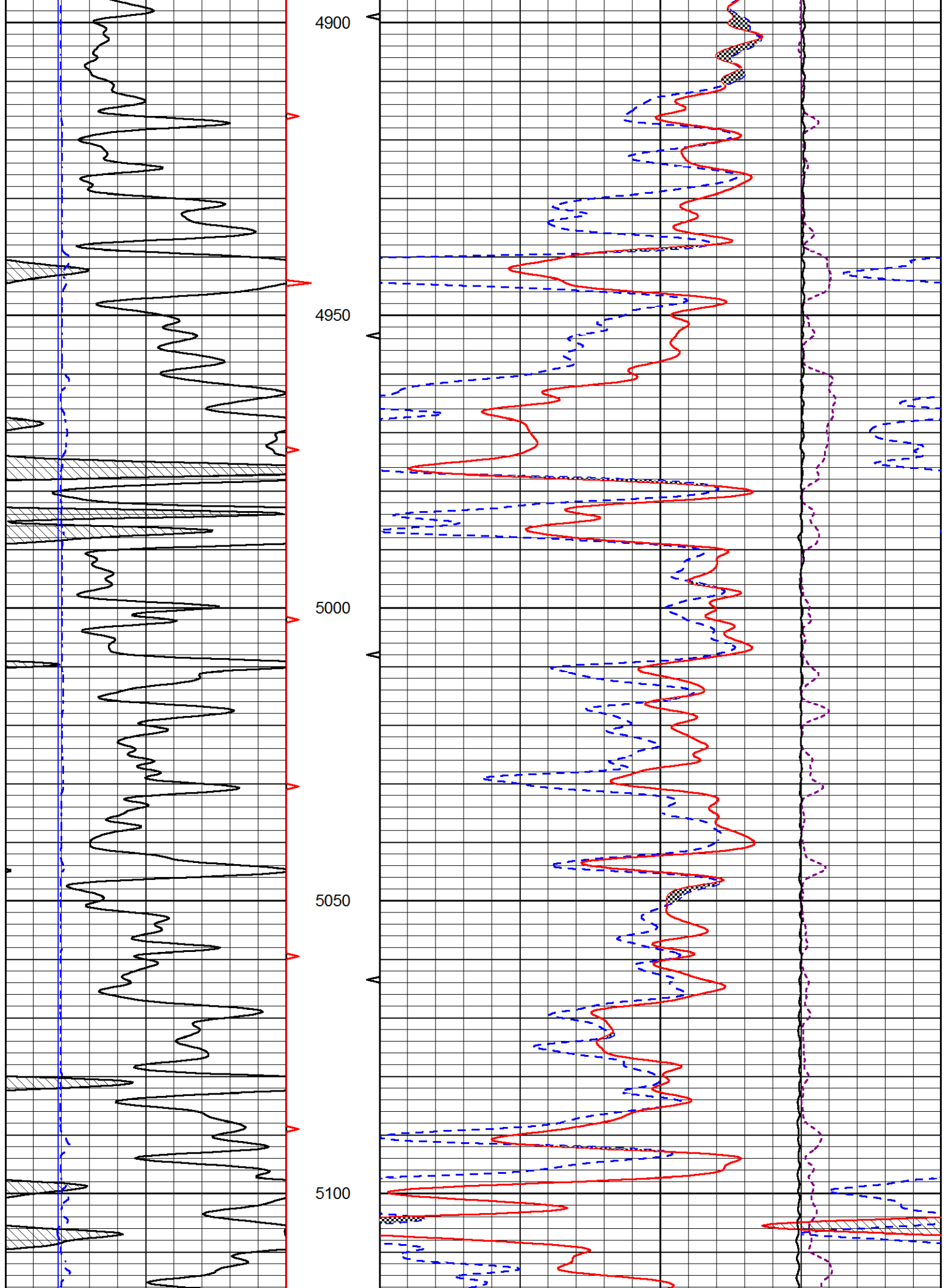
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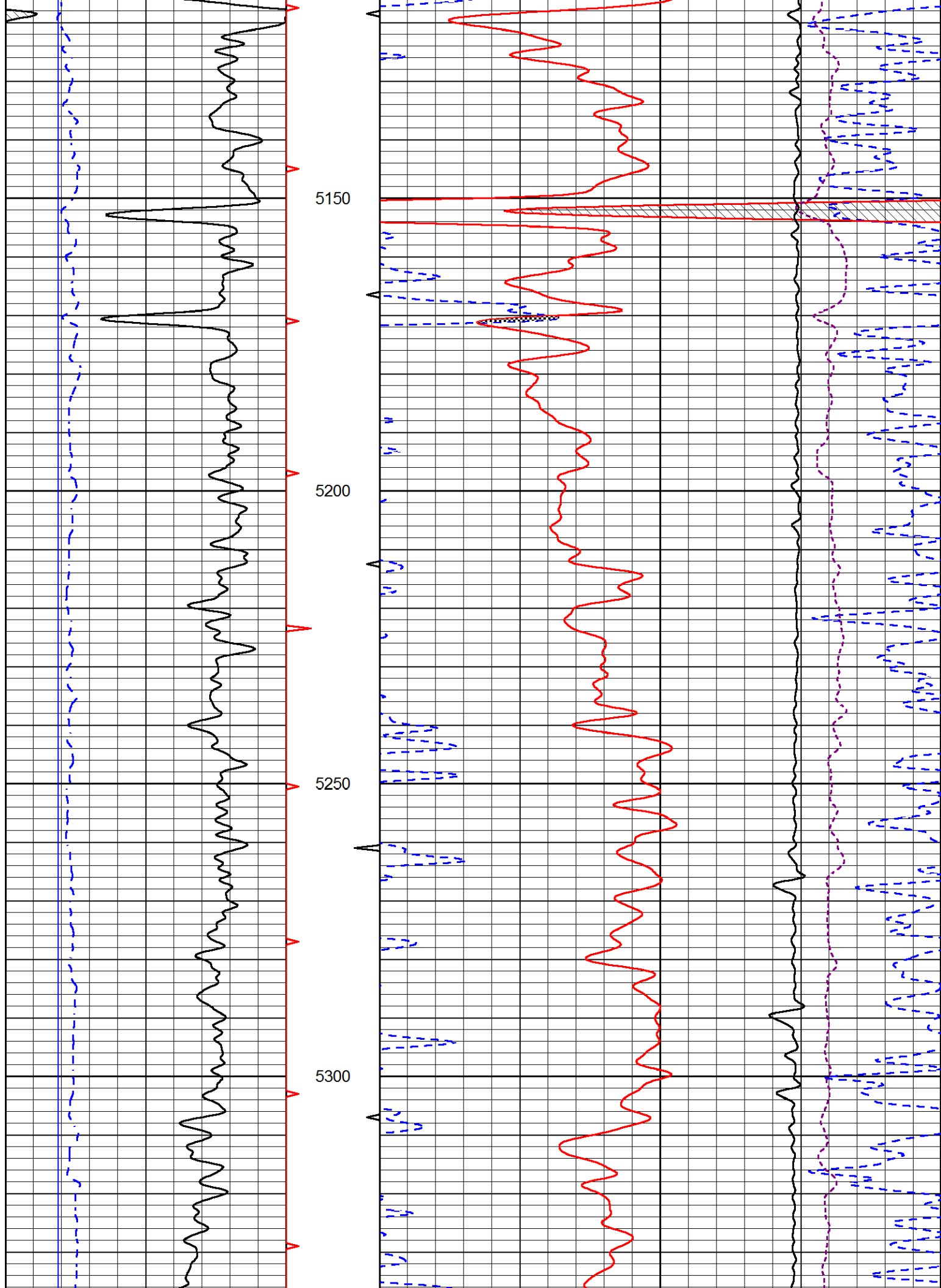
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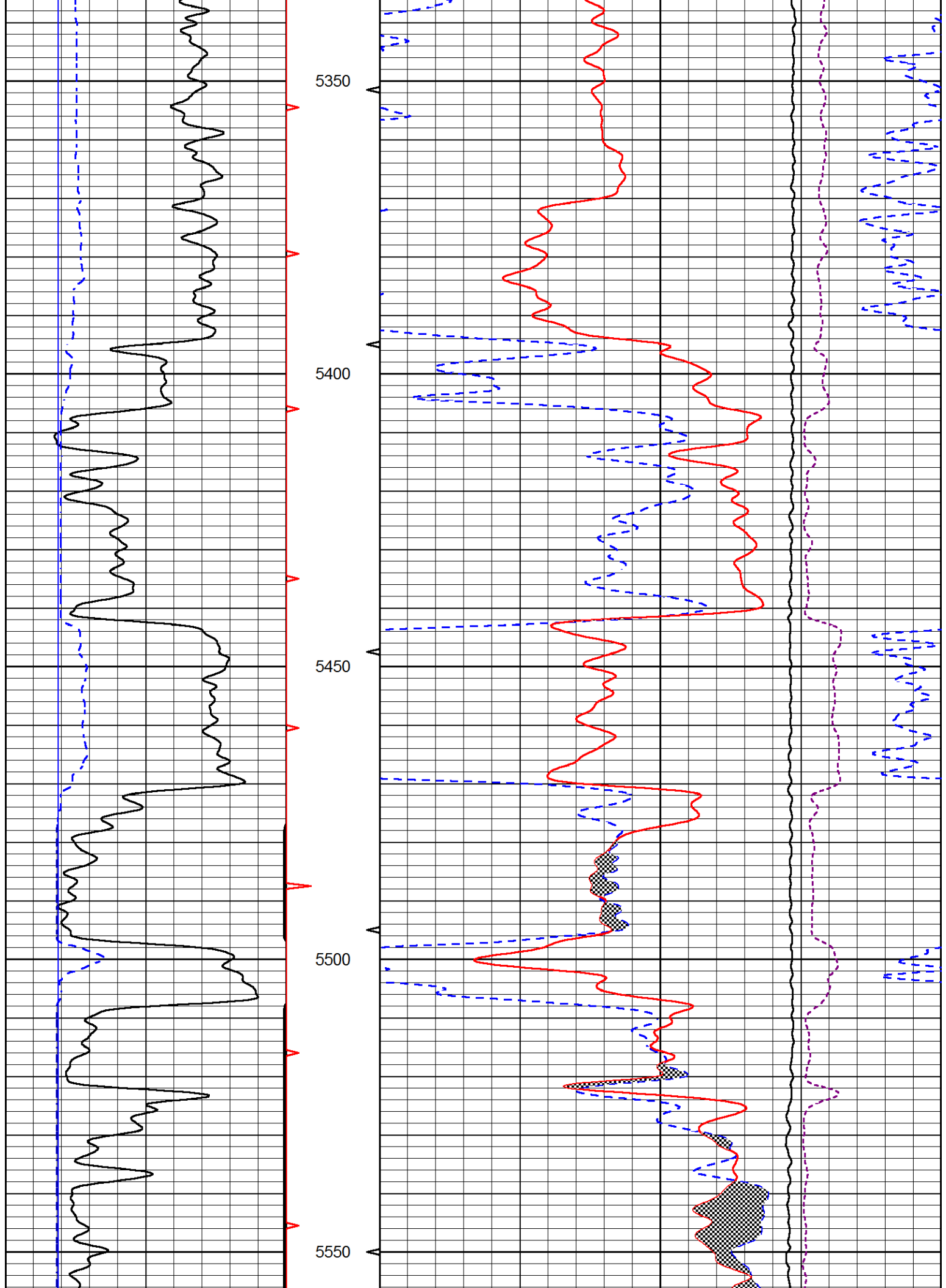
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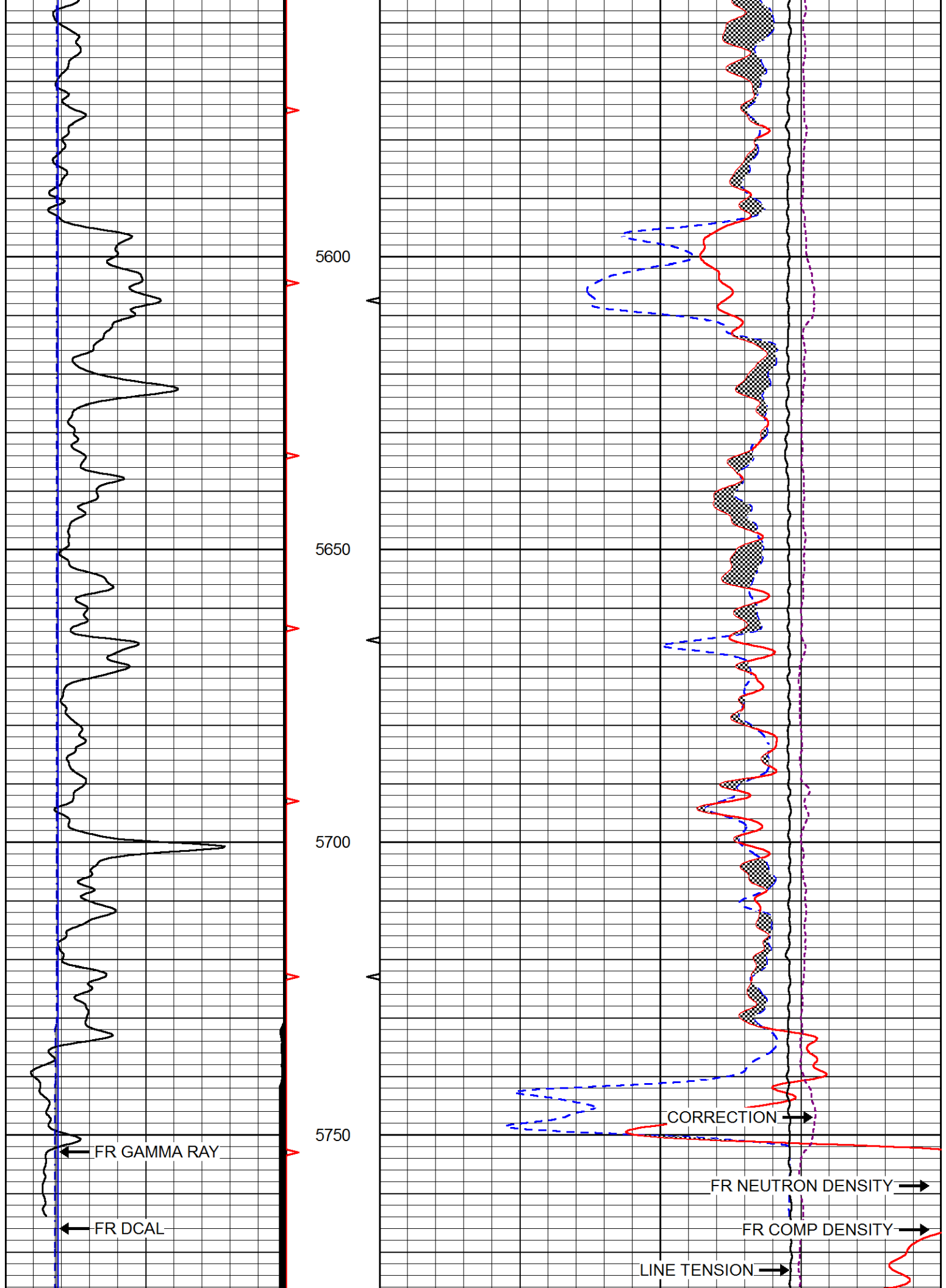
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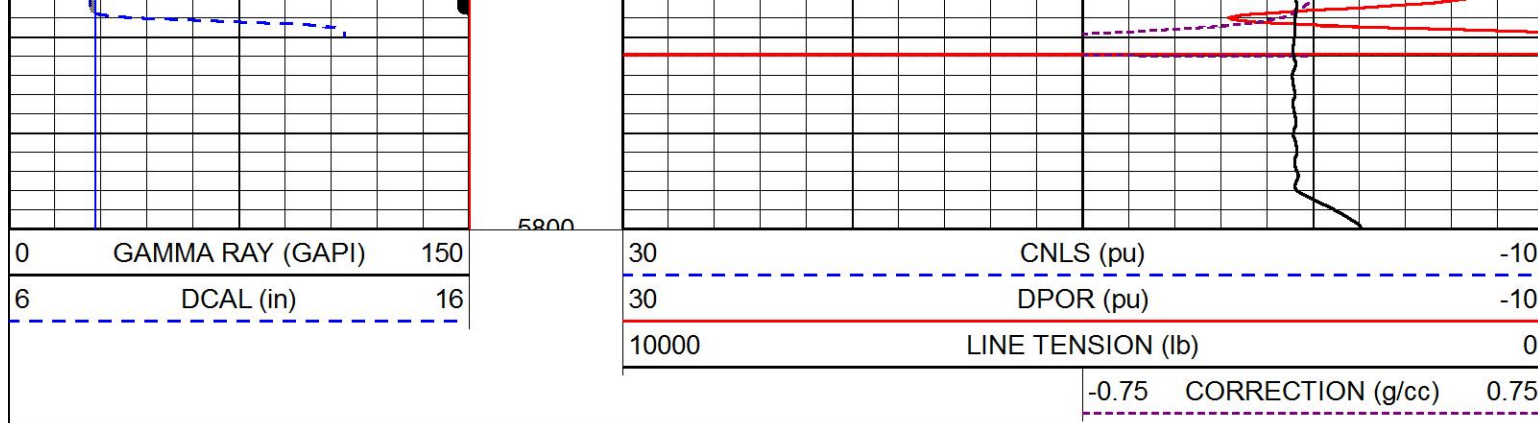






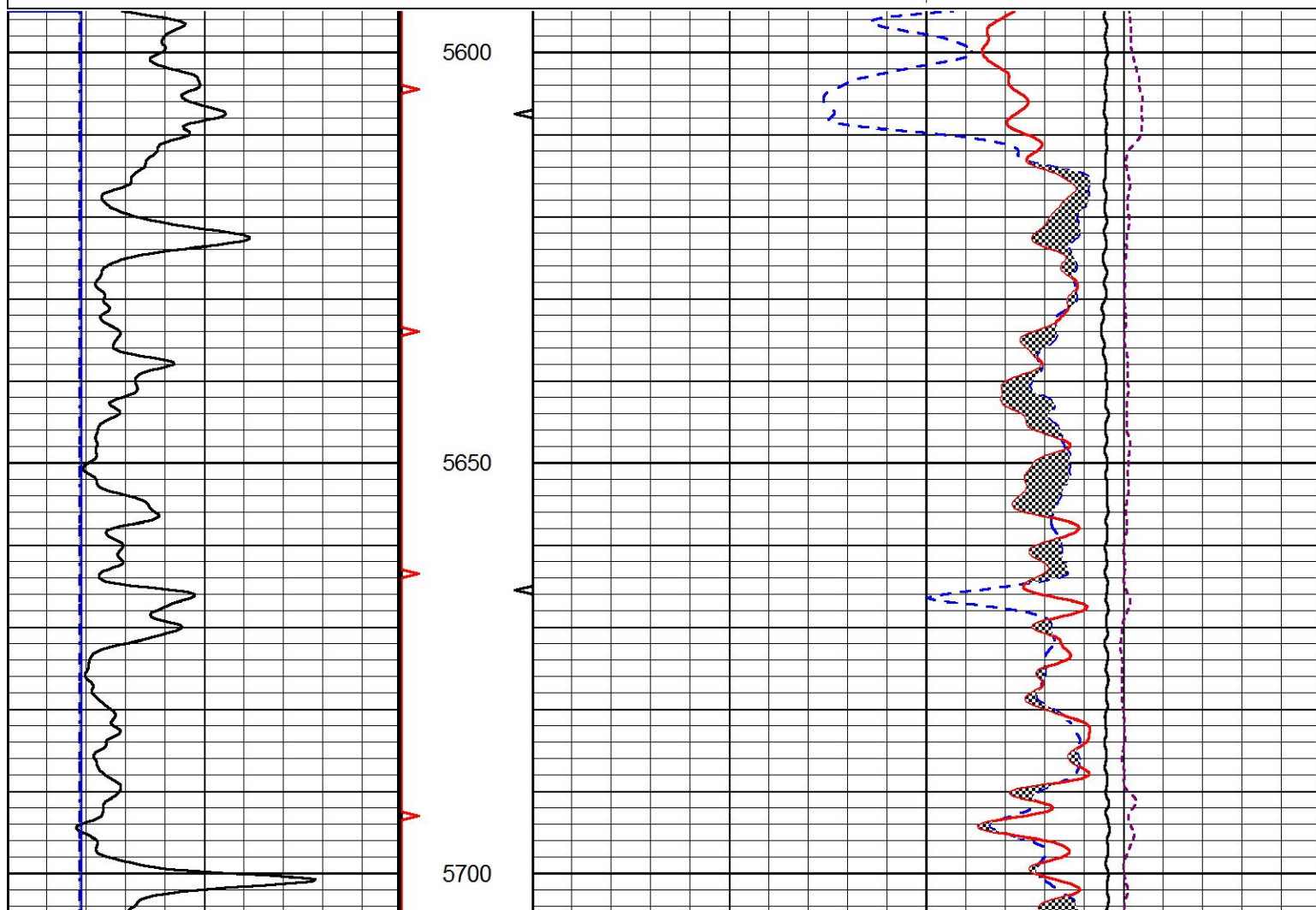
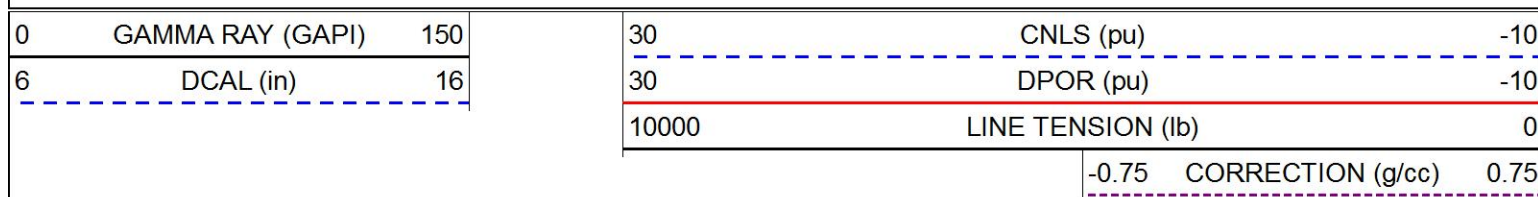


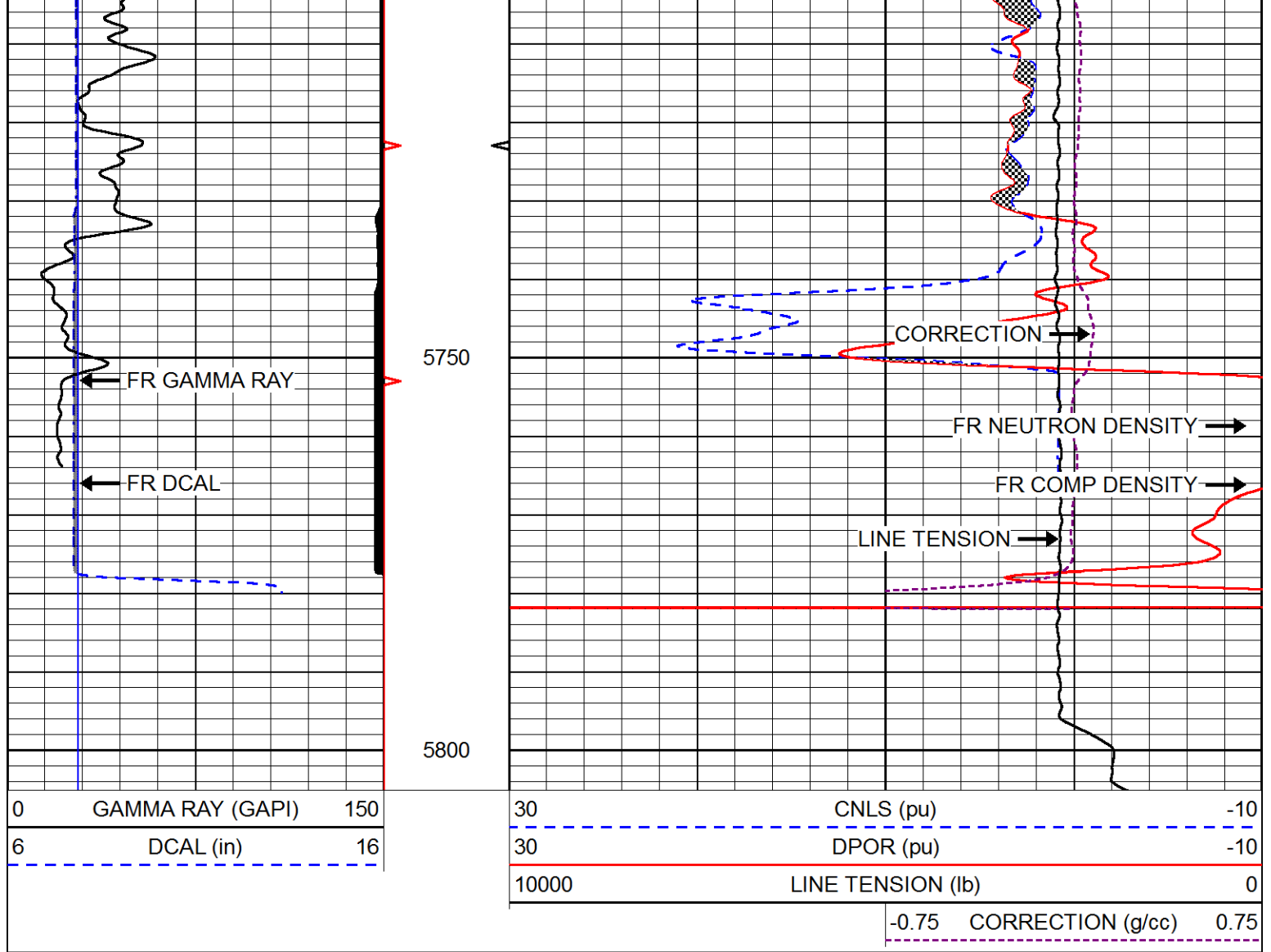




REPEAT SECTION

Database File murfin_plummer_1_25.db
 Dataset Pathname stackmel/pass2.1
 Presentation Format cndlspec
 Dataset Creation Tue Oct 02 13:48:56 2018
 Charted by Depth in Feet scaled 1:240





Calibration Report							
Database File	murfin_plummer_1_25.db						
Dataset Pathname	stackmel/pass3.1						
Dataset Creation	Tue Oct 02 13:42:49 2018						
Dual Induction Calibration Report							
Serial-Model:		967 (HT)-PSI HIGH TEMP					
Calibration Performed:		Sun Aug 26 00:41:13 2018					
Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
	Deep	167.000	835.000	0.000	255.800	mmho/m	0.565
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.390	-40.000
Microlog Calibration Report							
Serial-Model:		PSI-01-PSIML					
Performed:		Sat Sep 08 05:17:35 2018					
	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
	Normal	0.0000	1.0000	0.0000	1.0000	Ohm m	23000.0000

Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	23000.0000	-0.6000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	30000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.9500

Compensated Density Calibration Report

Serial-Model:	144-84-M&W
Source / Verifier:	16955B / 2ci
Master Calibration Performed:	Thu Aug 30 10:10:19 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4867.47	6031.92	cps
Aluminum	2.650	g/cc	906.23	3806.99	cps
Spine Angle = 74.69			Density/Spine Ratio = 0.514		
	Size		Reading		
Small Ring	5.00	in	0.70		
Large Ring	15.00	in	0.04		

Compensated Neutron Calibration Report

Serial Number:	207-MW
Tool Model:	M&W
Calibration Performed:	FRI AUG 24 10:30:30 2018

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



Company	MURFIN DILLING CO., INC.
Well	PLUMMER #1-25
Field	DIETTERICH
County	STANTON
State	KANSAS