



MIDWEST WIRELINE

DUAL COMP POROSITY LOG

Company Cobalt Energy LLC

Well Indiek #1-18

Field

County Hodgeman

State Kansas

Company Cobalt Energy LLC
 Well Indiek #1-18
 Field
 County Hodgeman
 State Kansas

Location: API #: 15-083-22000-00-00
 W2 NW NE SE
 2294 FSL & 1180 FEL
 SEC 18 TWP 23S RGE 22W
 Permanent Datum Ground Level Elevation 2271
 Log Measured From Kelly Bushing
 Drilling Measured From Kelly Bushing
 Other Services
 DIL/MEL
 K.B. 2278
 D.F.
 G.L. 2271

Date 3/2/2022

Run Number One

Type Log CNL/CDL

Depth Driller 4650

Depth Logger 4652

Bottom Logged Interval 4623

Top Logged Interval 3600

Type Fluid In Hole Chemical

Salinity, PPM CL 5600

Density 9.2

Level Full

Max. Rec. Temp. F 123

Operating Rig Time 2.5 Hours

Equipment -- Location P-108 HAYS

Recorded By T. Martin

Witnessed By Tim Pierce

Borehole Record				Casing Record			
Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	00	249	8.625	23	00	249
Two	7.875	249	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.

Hanston, 4 W on 156 to Rd 225,
 3 S, W into

Log Measured From: Kelly Bushing 7 Ft. Above Permanent Datum

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

Your Midwest Wireline Crew

Engineer: T. Martin
 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 28.17 27.68		CDL-M&W (303-03)	8.50	4.00	250.00
ML-PSI STKBL ML (402)			ML-PSI STKBL ML (402)	7.58	4.00	65.00
MCAL MI MN	19.58 19.58 19.58		DIL-M&W (504 HT)	18.25	3.50	220.00
RLL3F RLL3	15.50 15.50					
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: cobalt_indiek #1-18.db: field/well/StkMI/pass4.1
 Total length: 42.33 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\cobalt_indiek #1-18.db
 Dataset field/well/StkMI/pass4.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	123	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	615	50	Off	4652



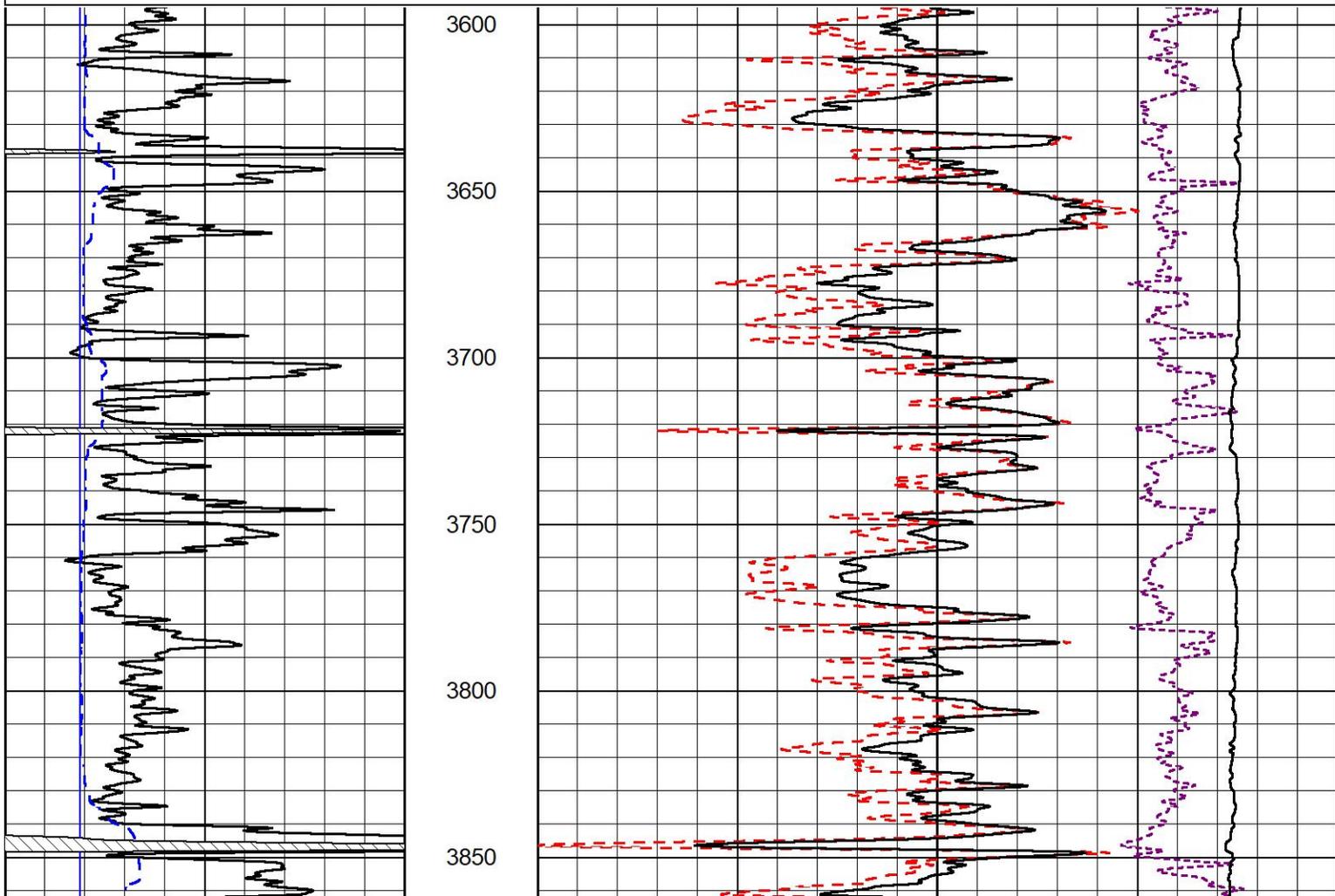
MIDWEST WIRELINE

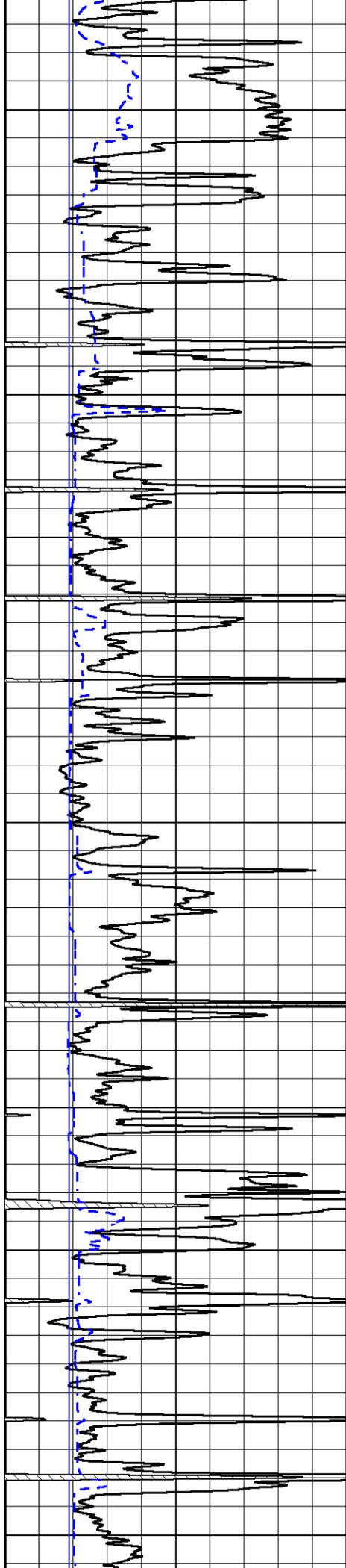
2" SCALE BULK DENSITY

MAIN PASS

Database File cobalt_indiek #1-18.db
 Dataset Pathname StkMI/pass4.3
 Presentation Format _cdl
 Dataset Creation Wed Mar 02 14:28:44 2022
 Charted by Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	30	Compensated Density (pu)	-10	
6	Caliper (in)	16	2	Bulk Density (g/cc)	3	
			15000	Line Tension (lb)	0	
				-0.25	Correction (g/cc)	0.25





3900

3950

4000

4050

4100

4150

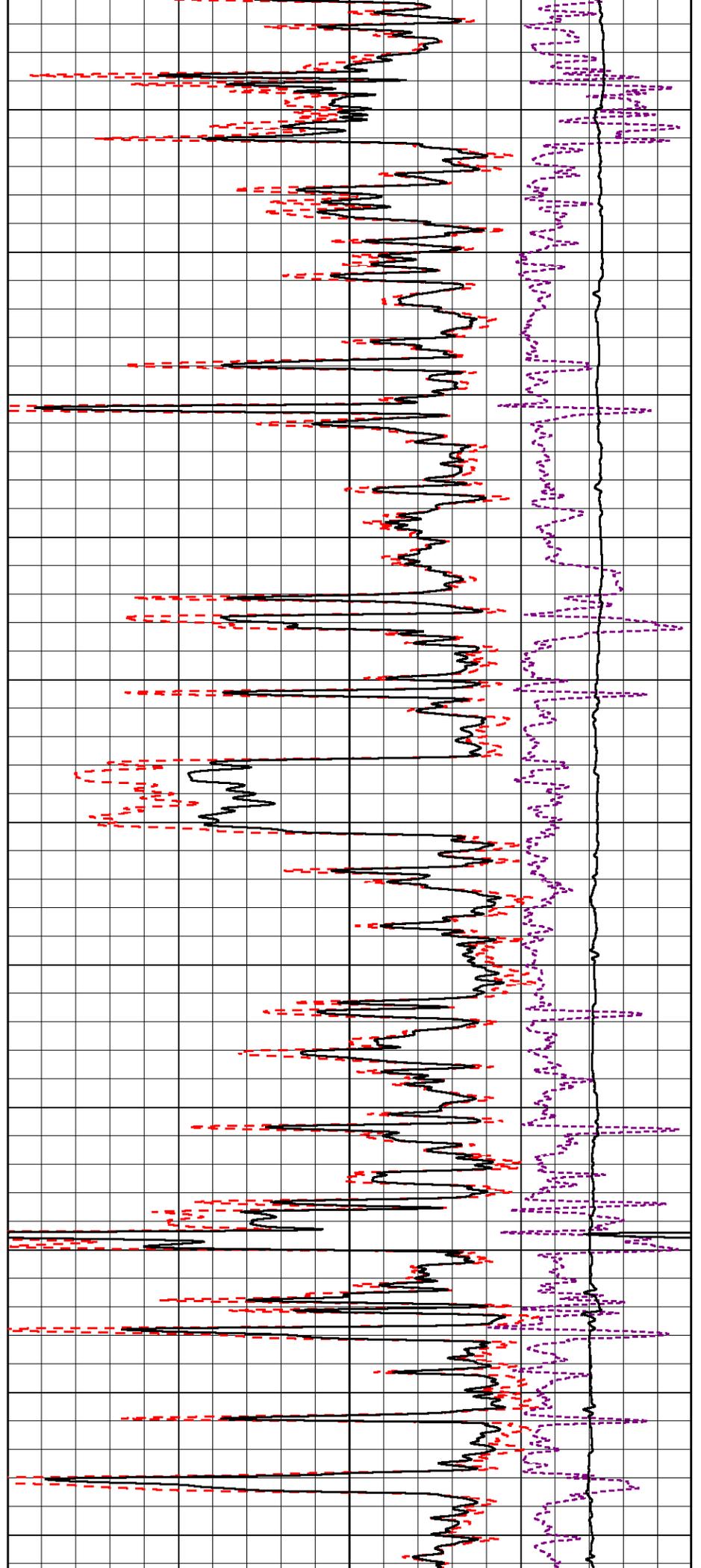
4200

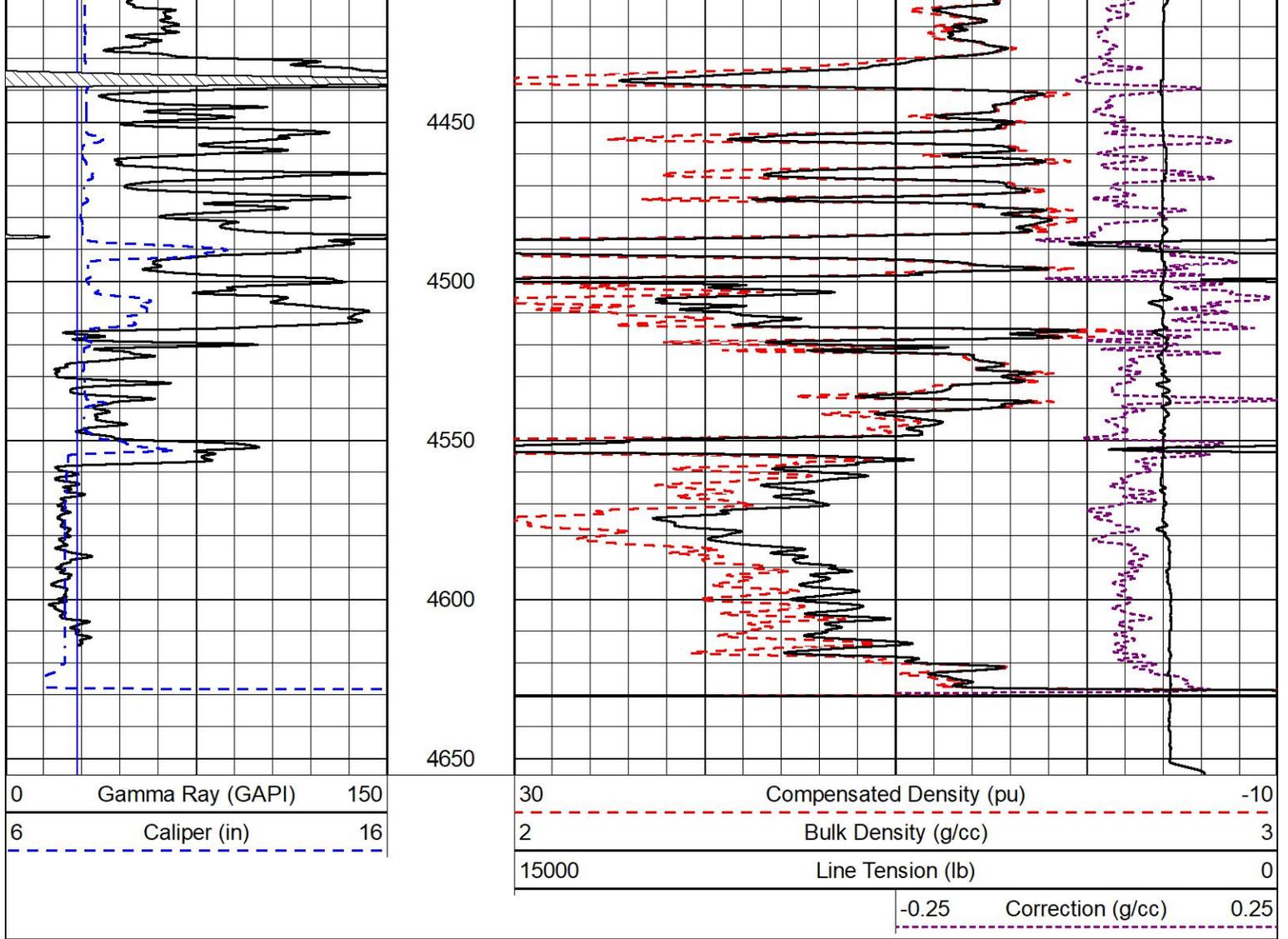
4250

4300

4350

4400

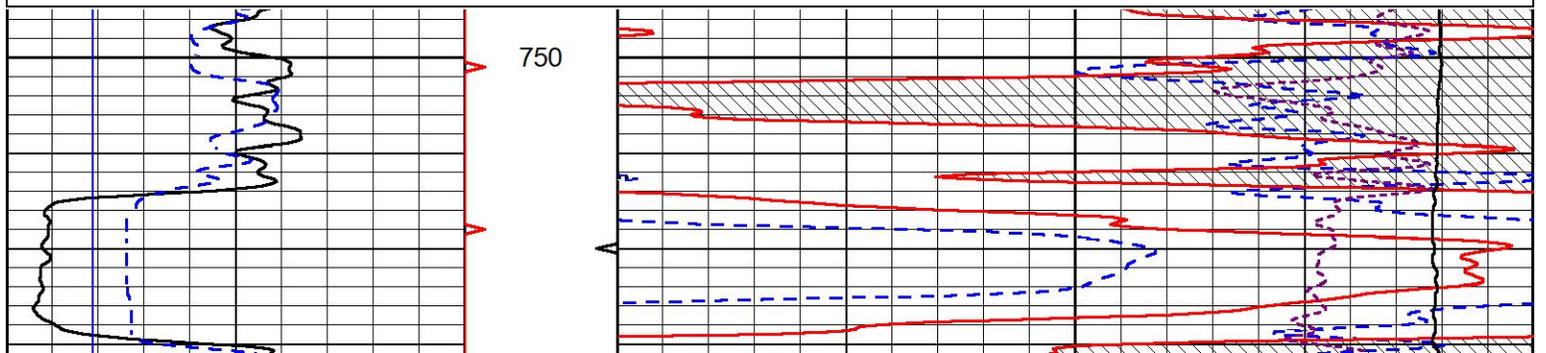
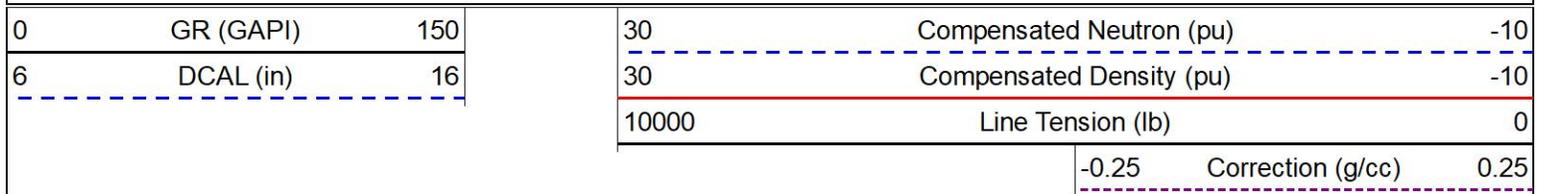


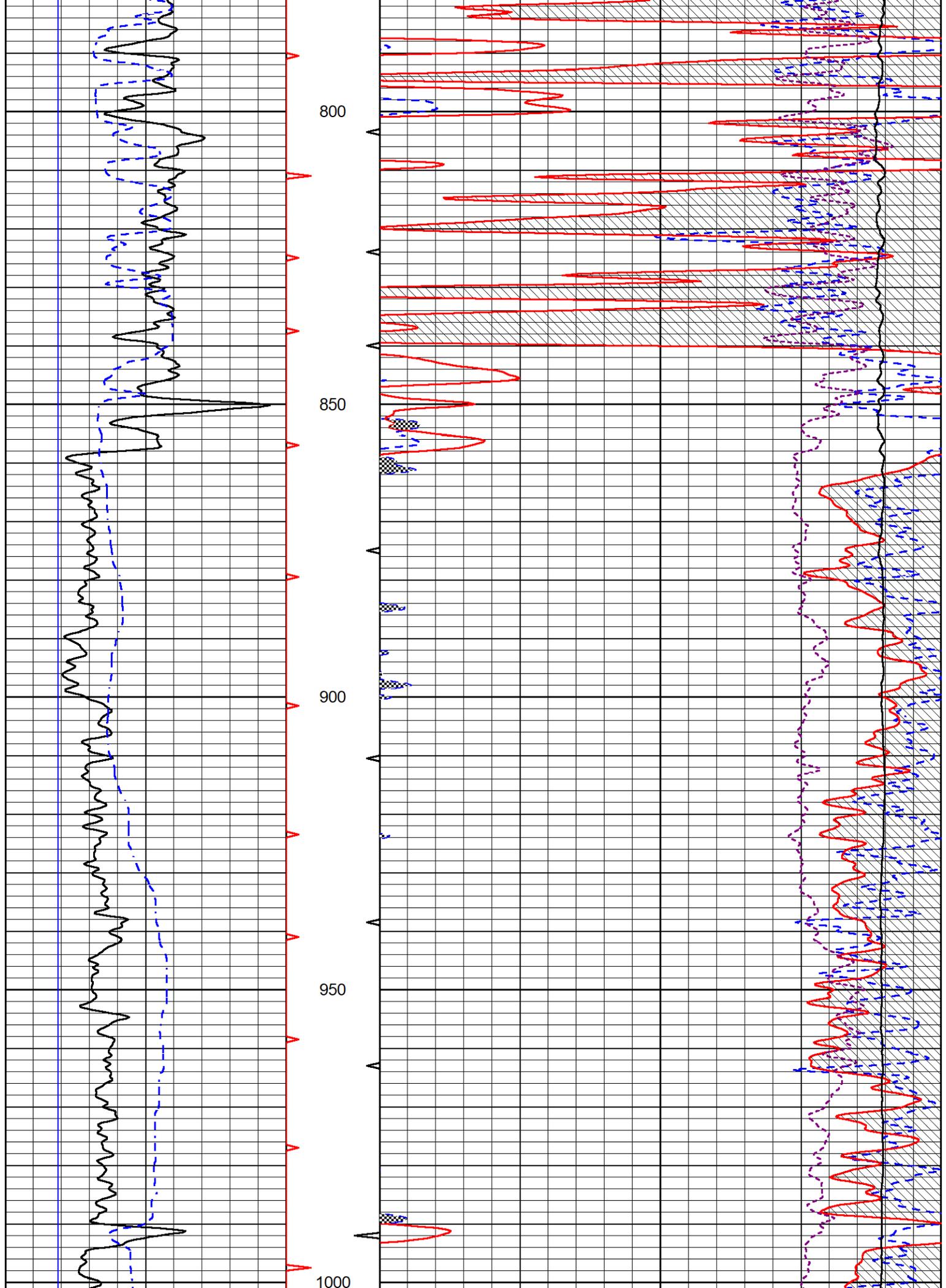


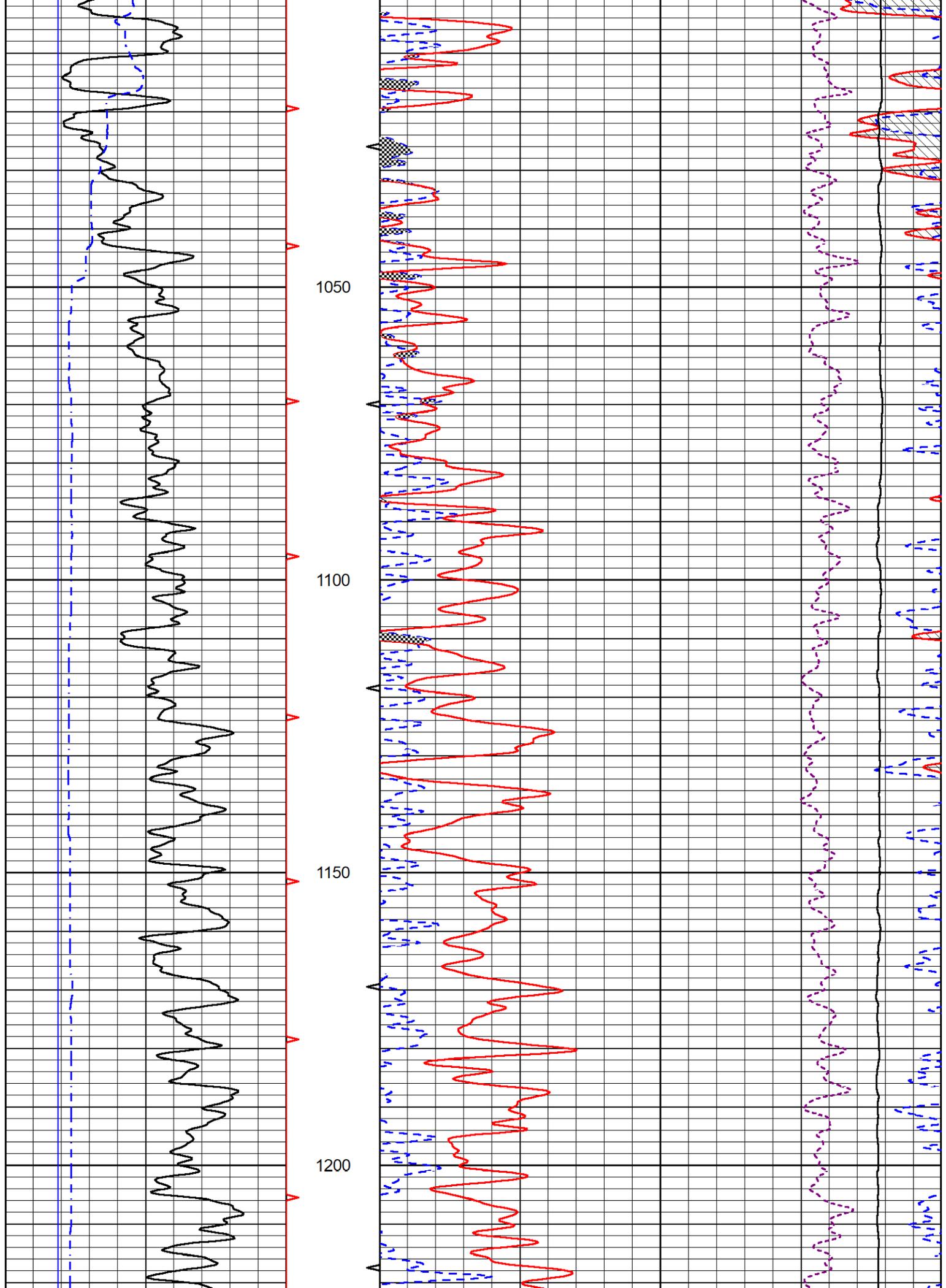
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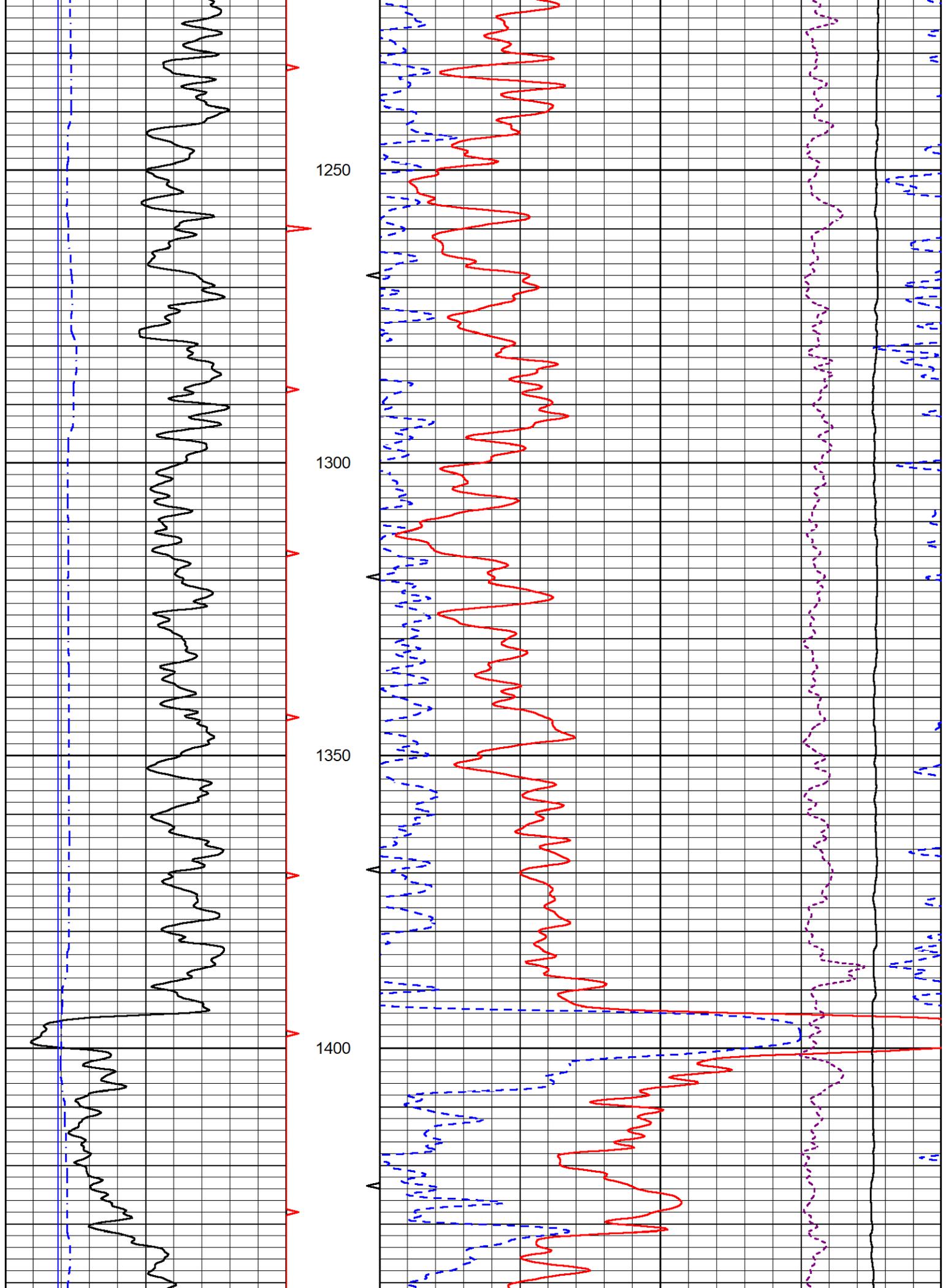
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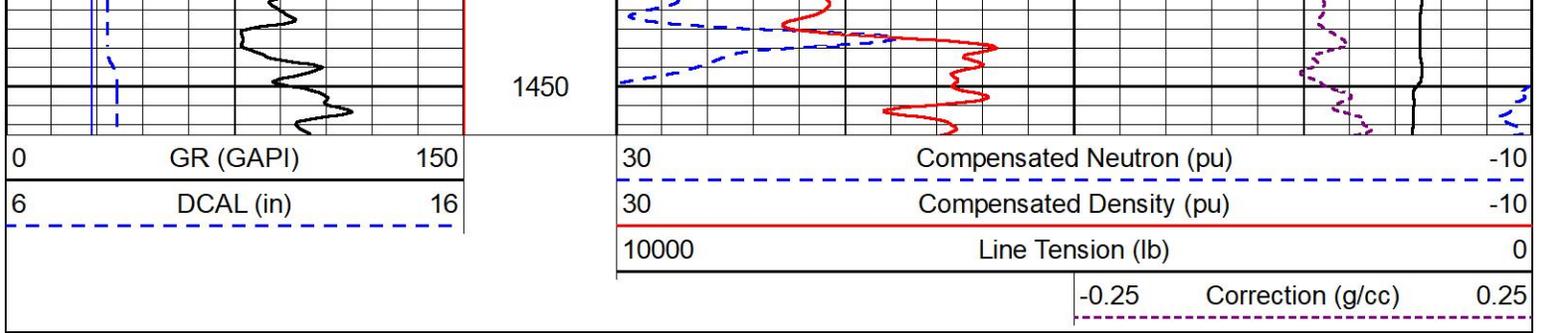
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 Dataset Pathname StkMI/pass4.1
 Presentation Format _CNDLS~1
 Dataset Creation Wed Mar 02 15:29:45 2022
 Charted by Depth in Feet scaled 1:240









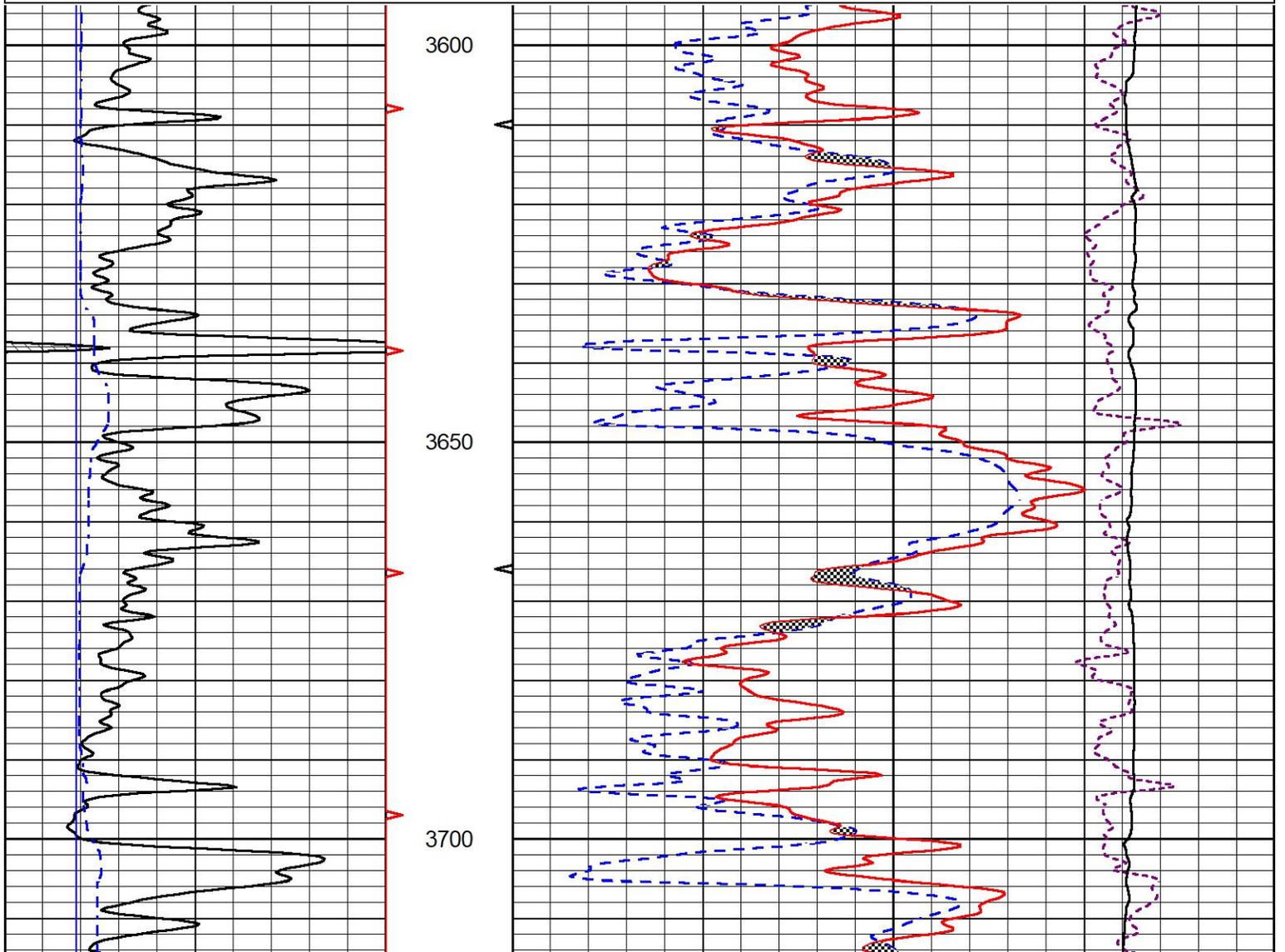
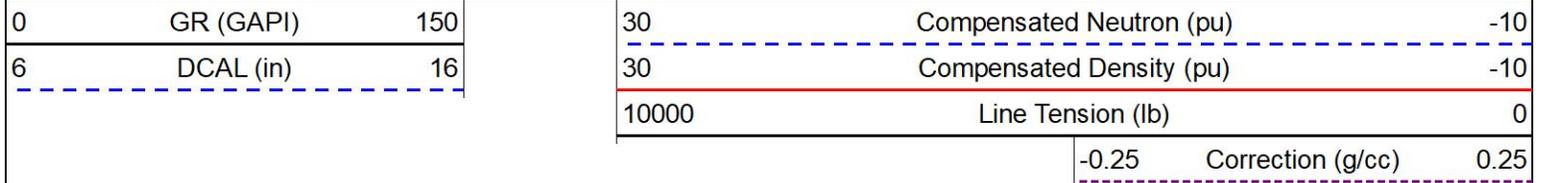


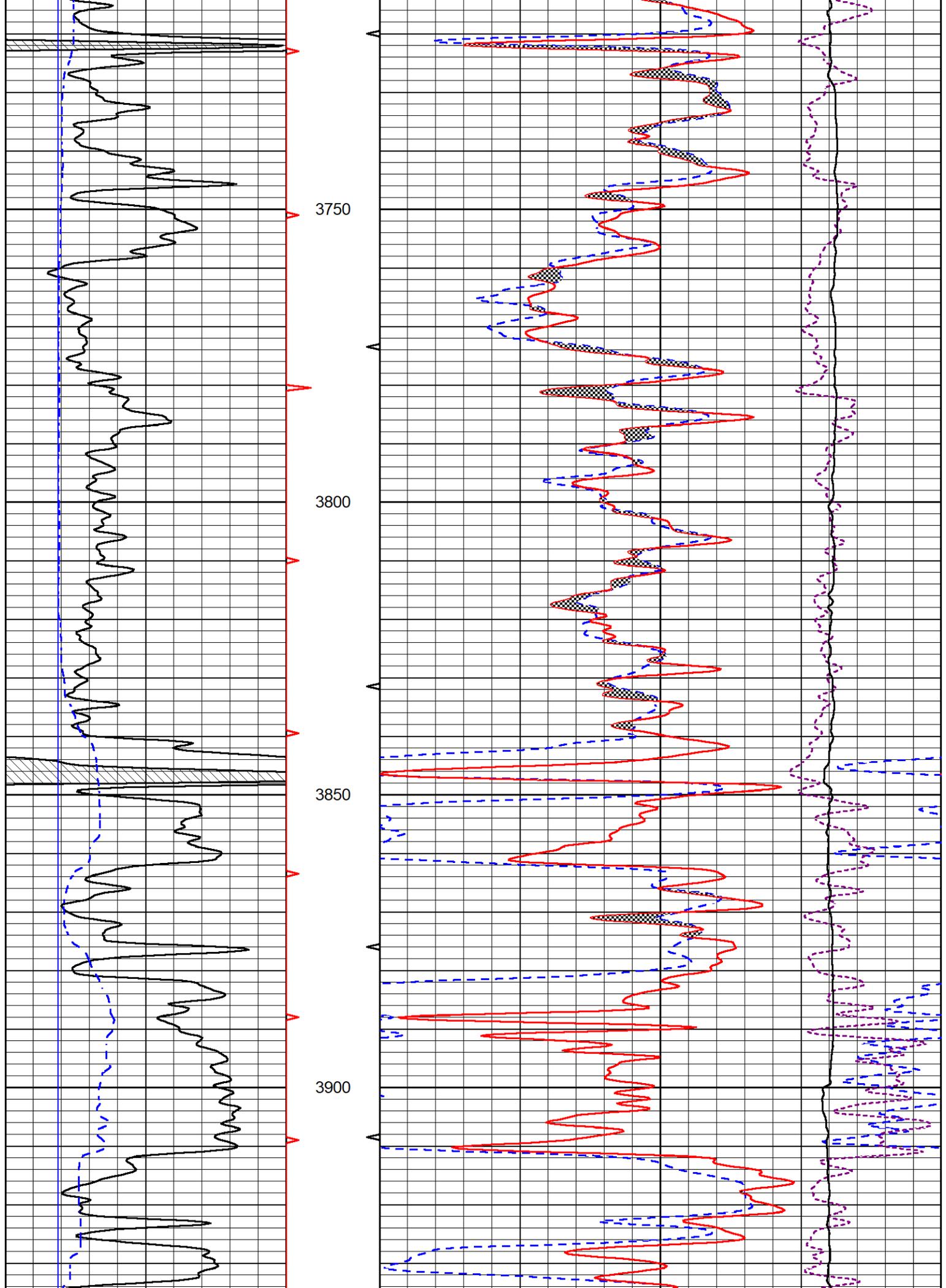
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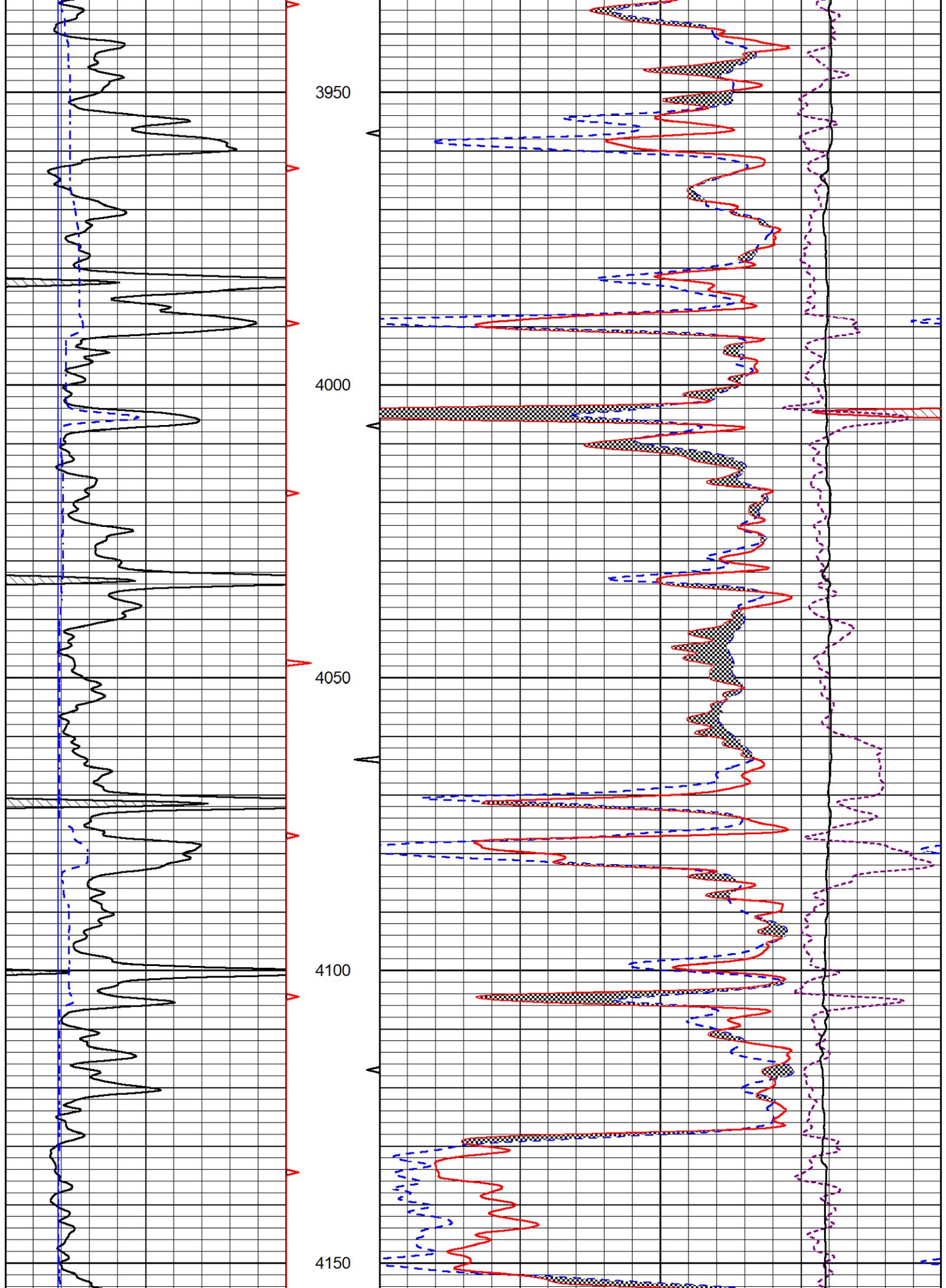
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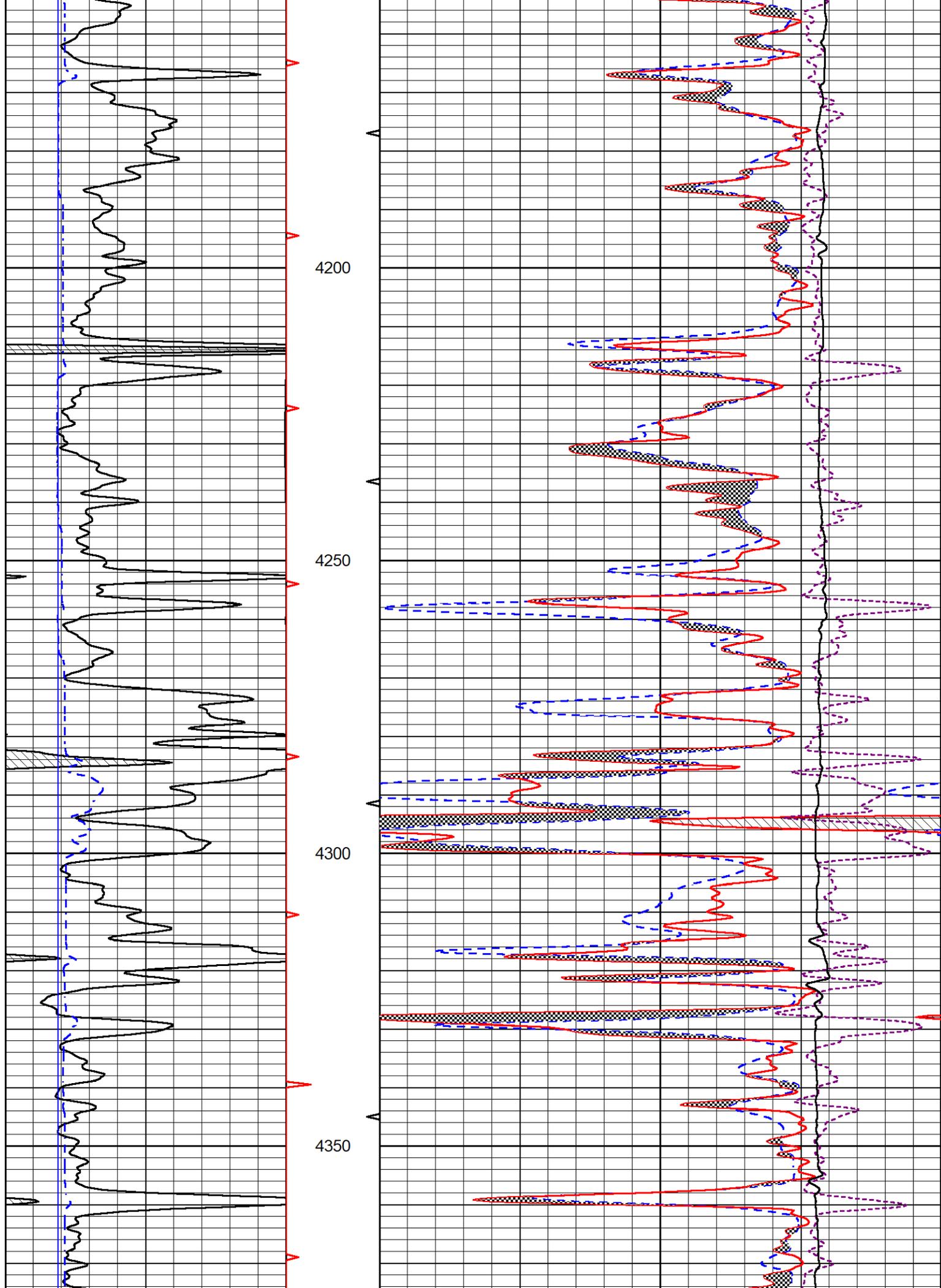
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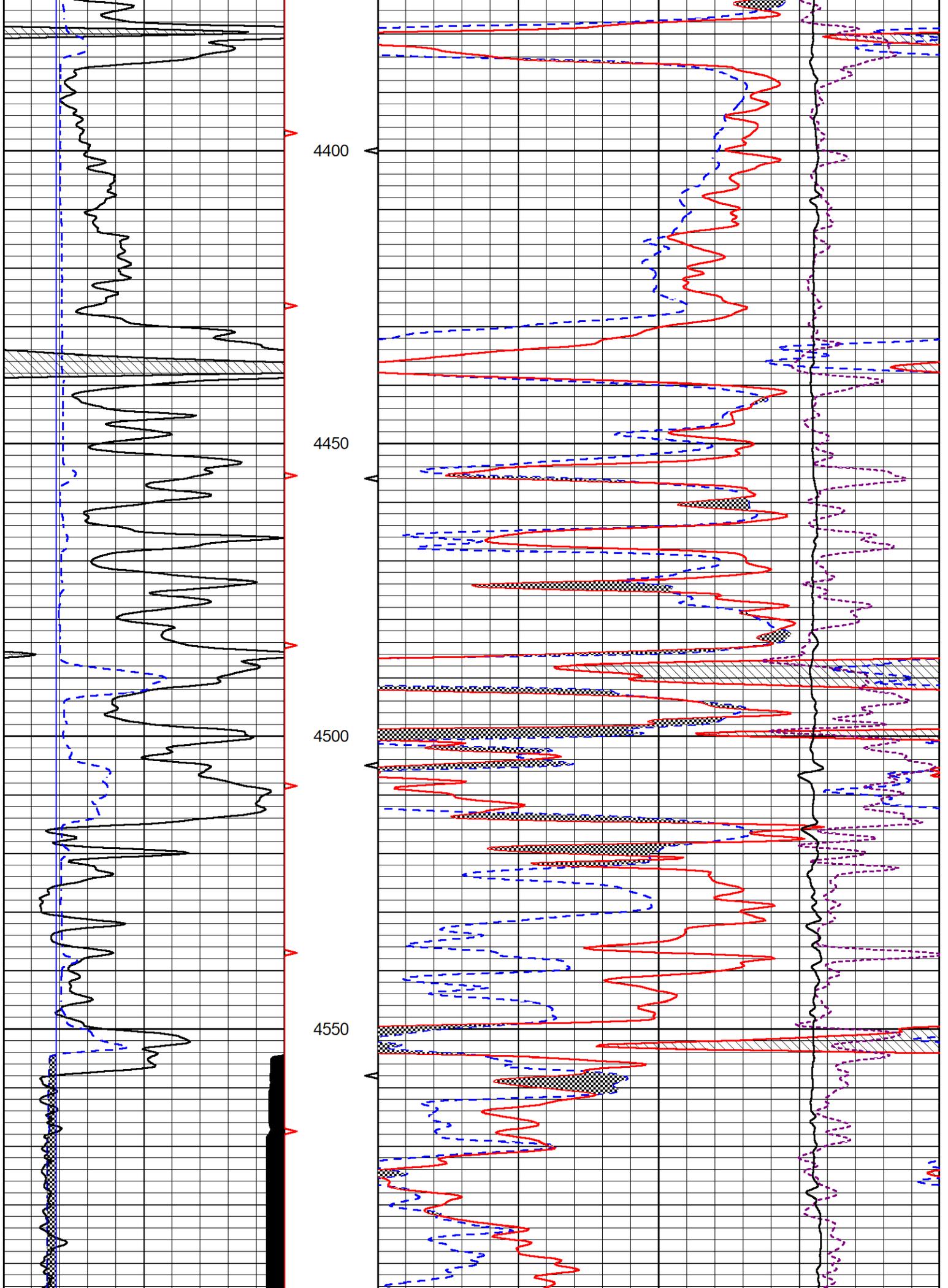
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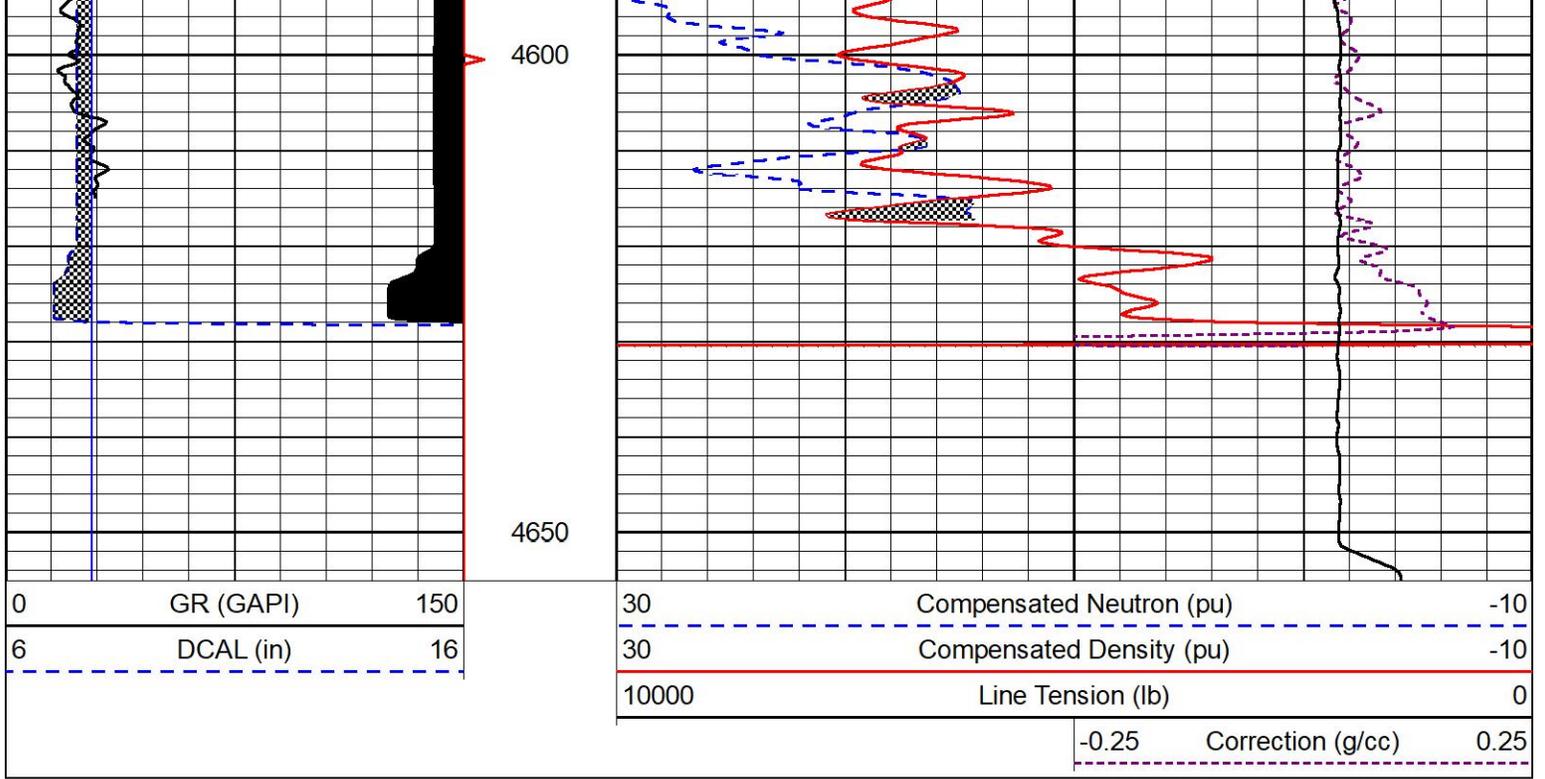










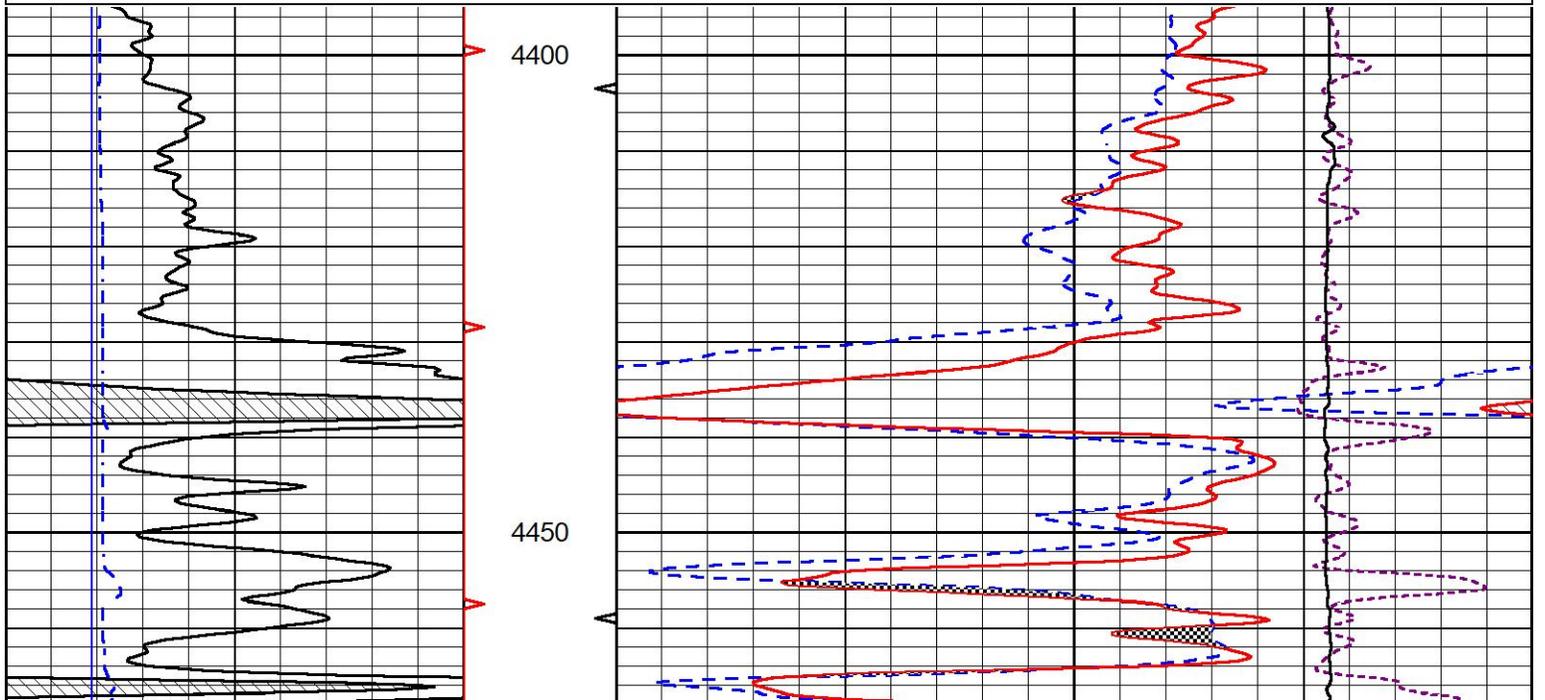
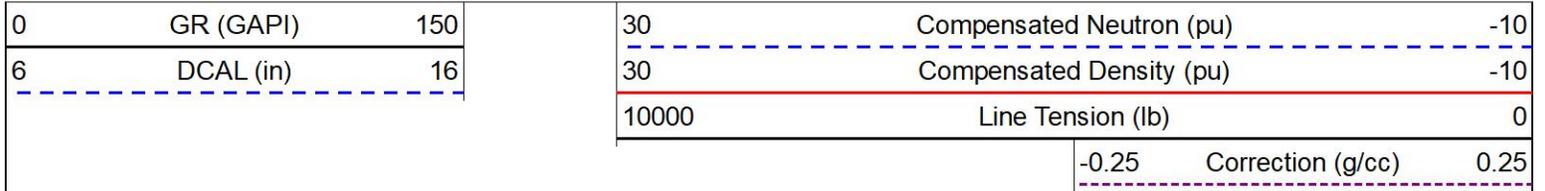


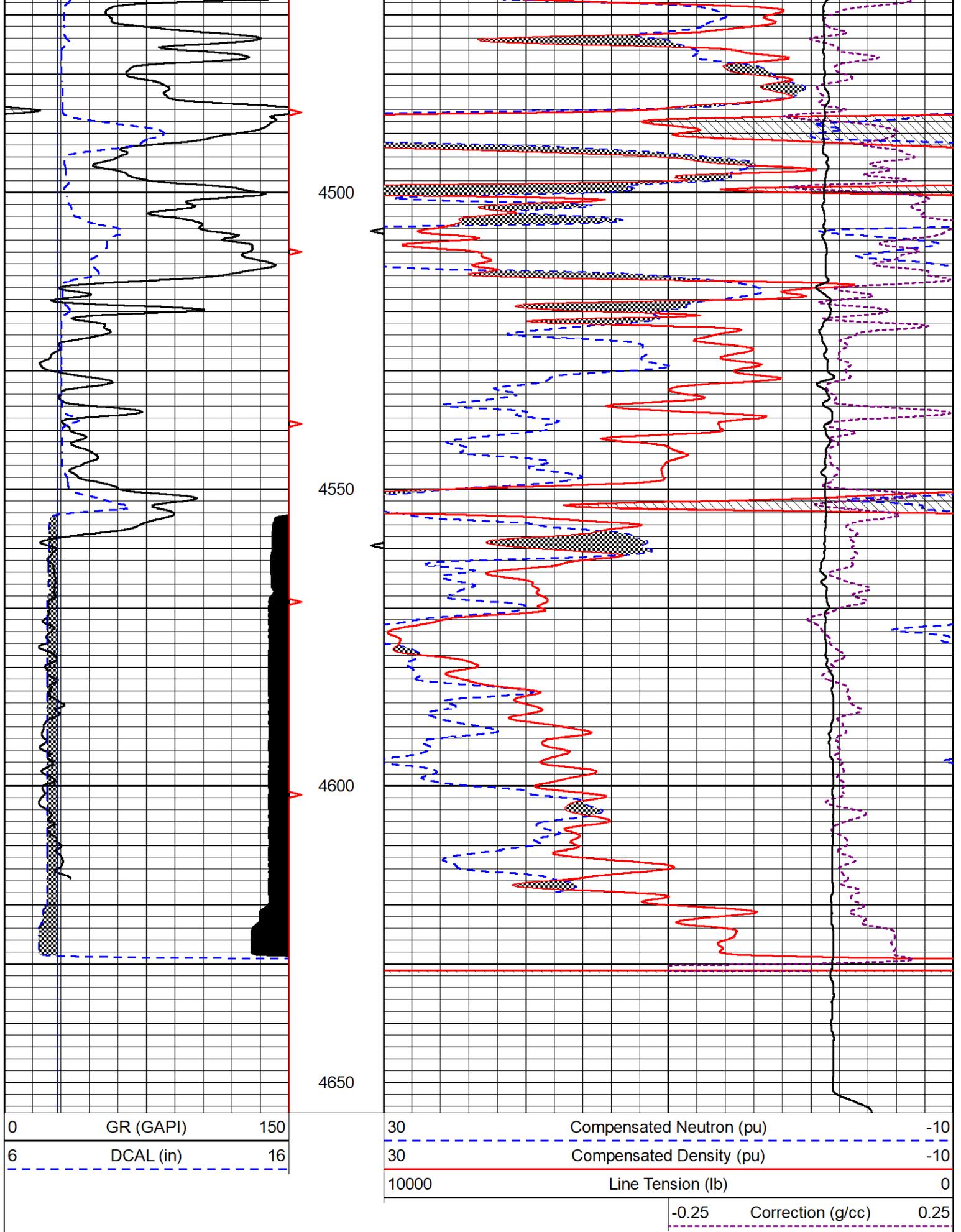
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REPEAT SECTION

REPEAT PASS

Database File cobalt_indiek #1-18.db
 Dataset Pathname StkMI/pass3.1
 Presentation Format _CNDLS~1
 Dataset Creation Wed Mar 02 14:22:27 2022
 Charted by Depth in Feet scaled 1:240





Calibration Report

Dual Induction Calibration Report

Serial-Model: 504 HT-M&W
 Surface Cal Performed: Thu Dec 16 22:32:49 2021

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	178.615	710.235	0.000	255.800	mmho/m	0.650	-17.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-51.000

Microlog Calibration Report

Serial-Model: 402-PSI STKBL ML
 Performed: Thu Dec 16 22:29:48 2021

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	18000.0000	-1.0000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	16500.0000	-0.6000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1520	-131.2300

Compensated Density Calibration Report

Serial-Model: 303-03-M&W
 Source #: 21170B
 Master Calibration Performed: Thu Dec 16 23:28:34 2021

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.670	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.515		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.05		

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



Company	Cobalt Energy LLC
Well	Indiek #1-18
Field	
County	Hodgeman
State	Kansas