



MIDWEST WIRELINE

DUAL COMP POROSITY LOG

Company American Warrior, Inc.
Well Ward Unit #1-10
Field
County Logan
State Kansas

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Field
County Logan State Kansas

Location: API #: 15-109-21649-00-00
1347 FNL & 2554 FWL
SEC 10 TWP 12S RGE 36W
Permanent Datum Ground Level Elevation 3246
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing
Other Services
DIL/MEL
BHCS
Elevation
K.B. 3257
D.F.
G.L. 3246

Date 7/25/2022

Run Number One
Type Log CNL/CDL
Depth Driller 4828
Depth Logger 4830
Bottom Logged Interval 4801
Top Logged Interval 3800
Type Fluid In Hole Chemical
Salinity, PPM CL 4400
Density 9.4
Level Full
Max. Rec. Temp. F 124
Operating Rig Time 5 Hours
Equipment -- Location P-108 HAYS
Recorded By D. Schmidt
Witnessed By Austin Garner

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	0	392	8.625	23	0	392
Two	7.875	392	TD				

<<< 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.

Winona,
4 West, North and East into

Log Measured From: Kelly Bushing 13 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: Austin Garner
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\american_warrior_ward unit 1-10.db
Dataset field/well/stkml/pass3.12/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	124	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	670	60		4830

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



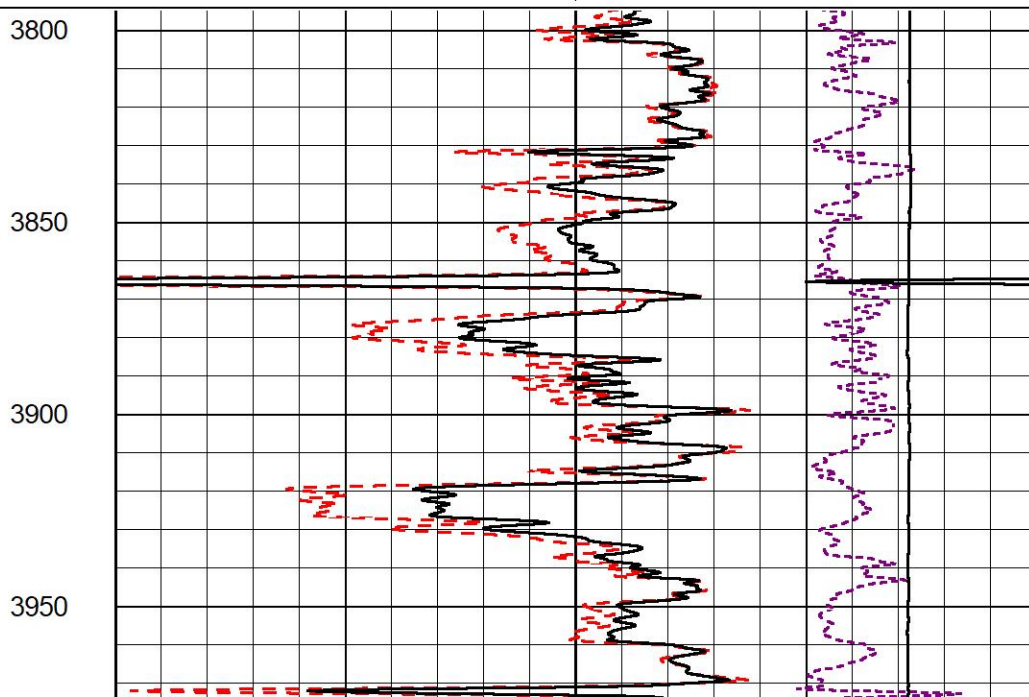
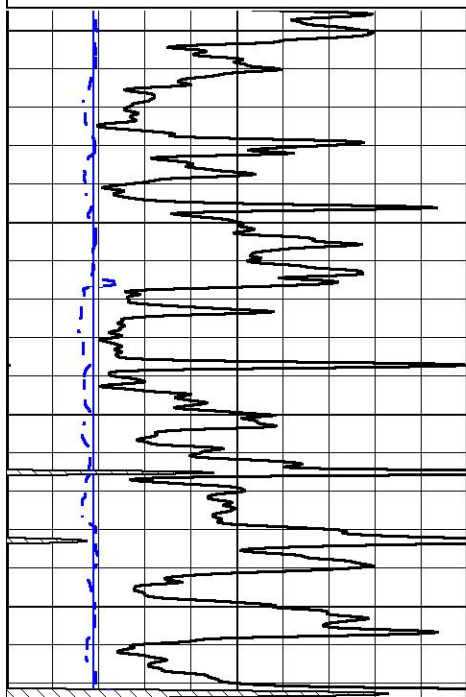
2" SCALE BULK DENSITY

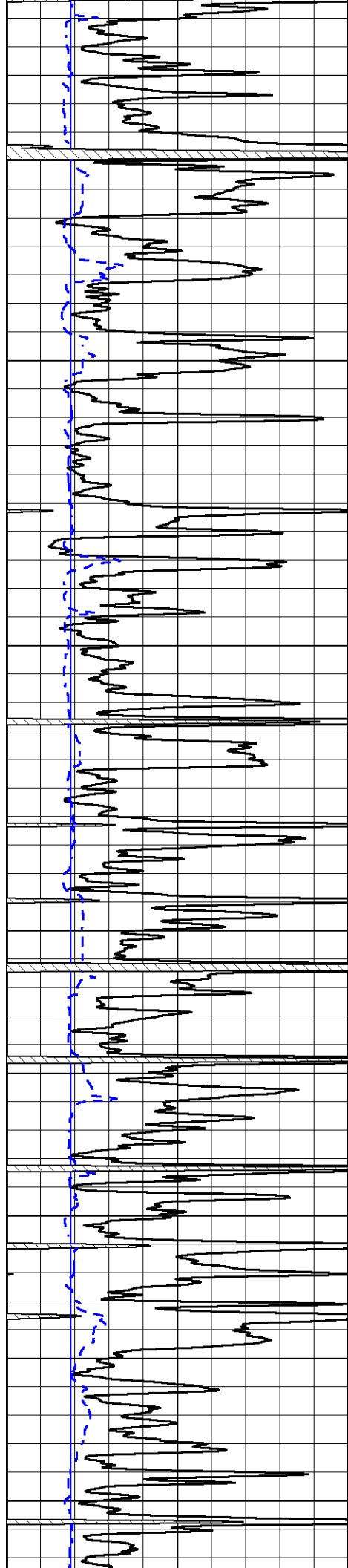
MAIN PASS

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Dataset Pathname stkml/pass3.2
Presentation Format _cdl
Dataset Creation Mon Jul 25 04:35:52 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





4000

4050

4100

4150

4200

4250

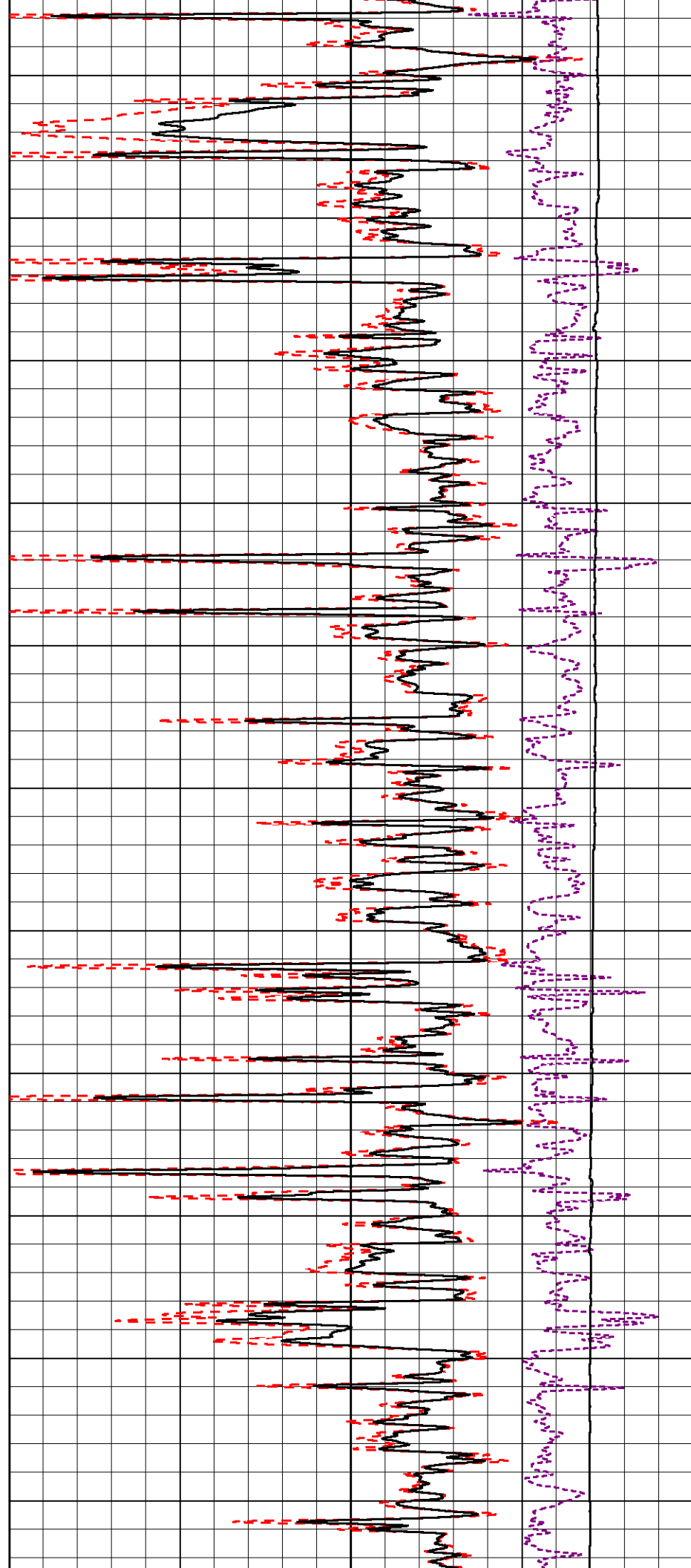
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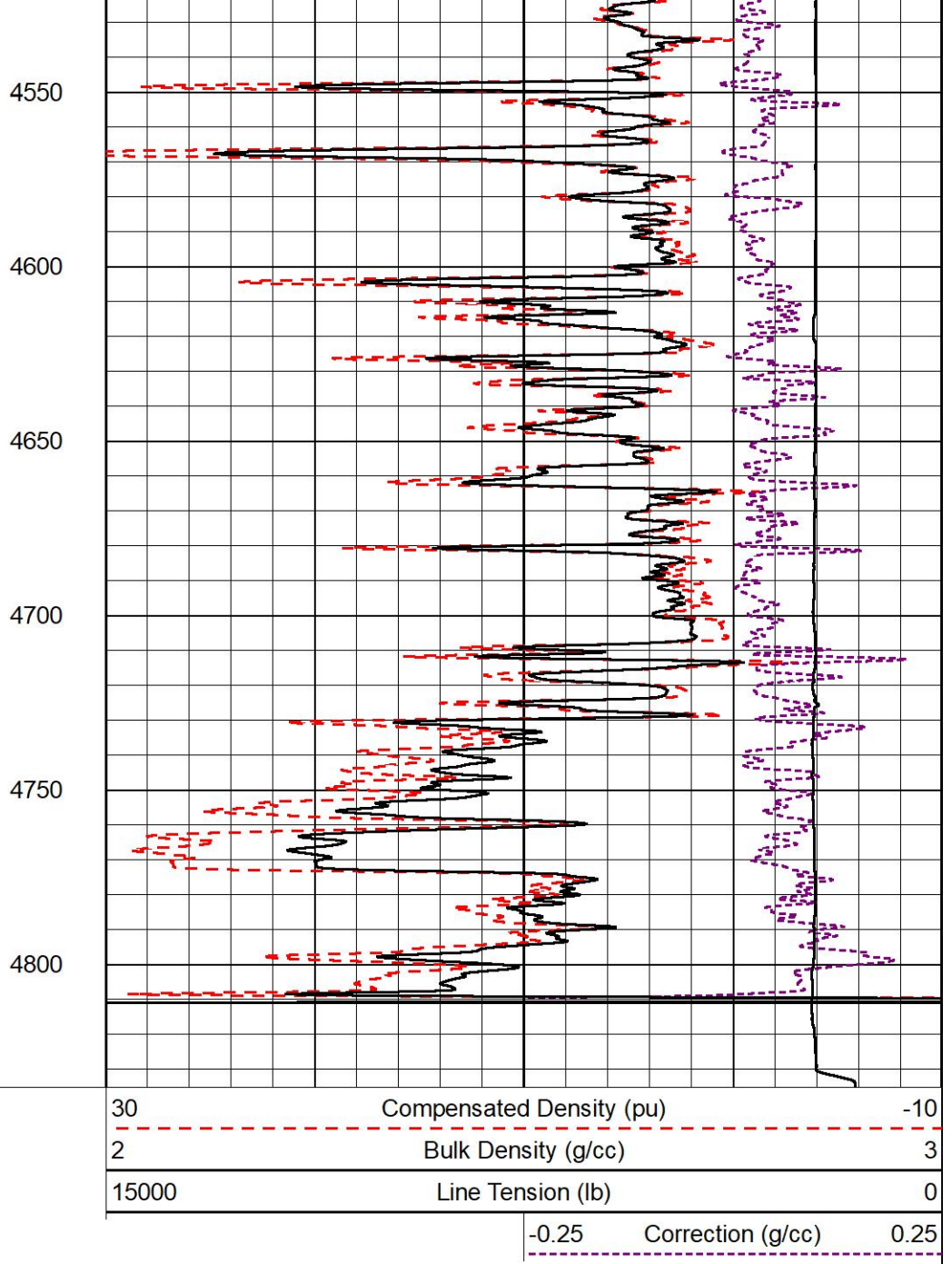
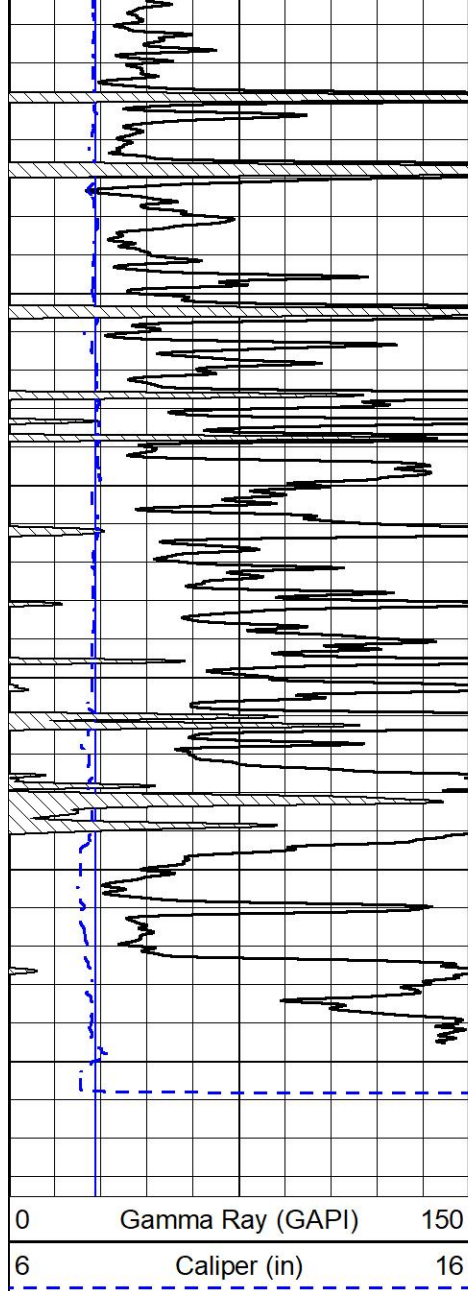
4350

4400

4450

4500

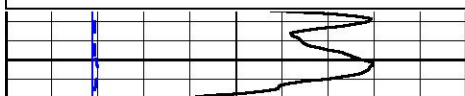
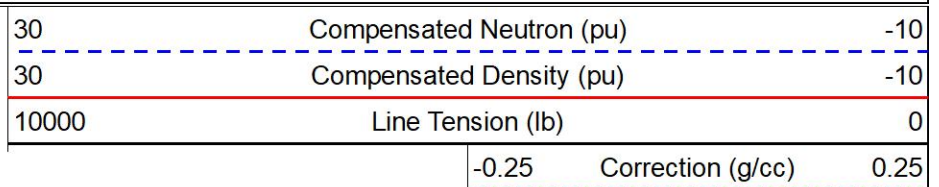
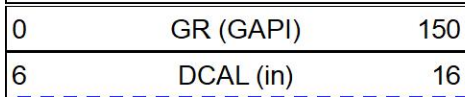




DETAIL SECTION

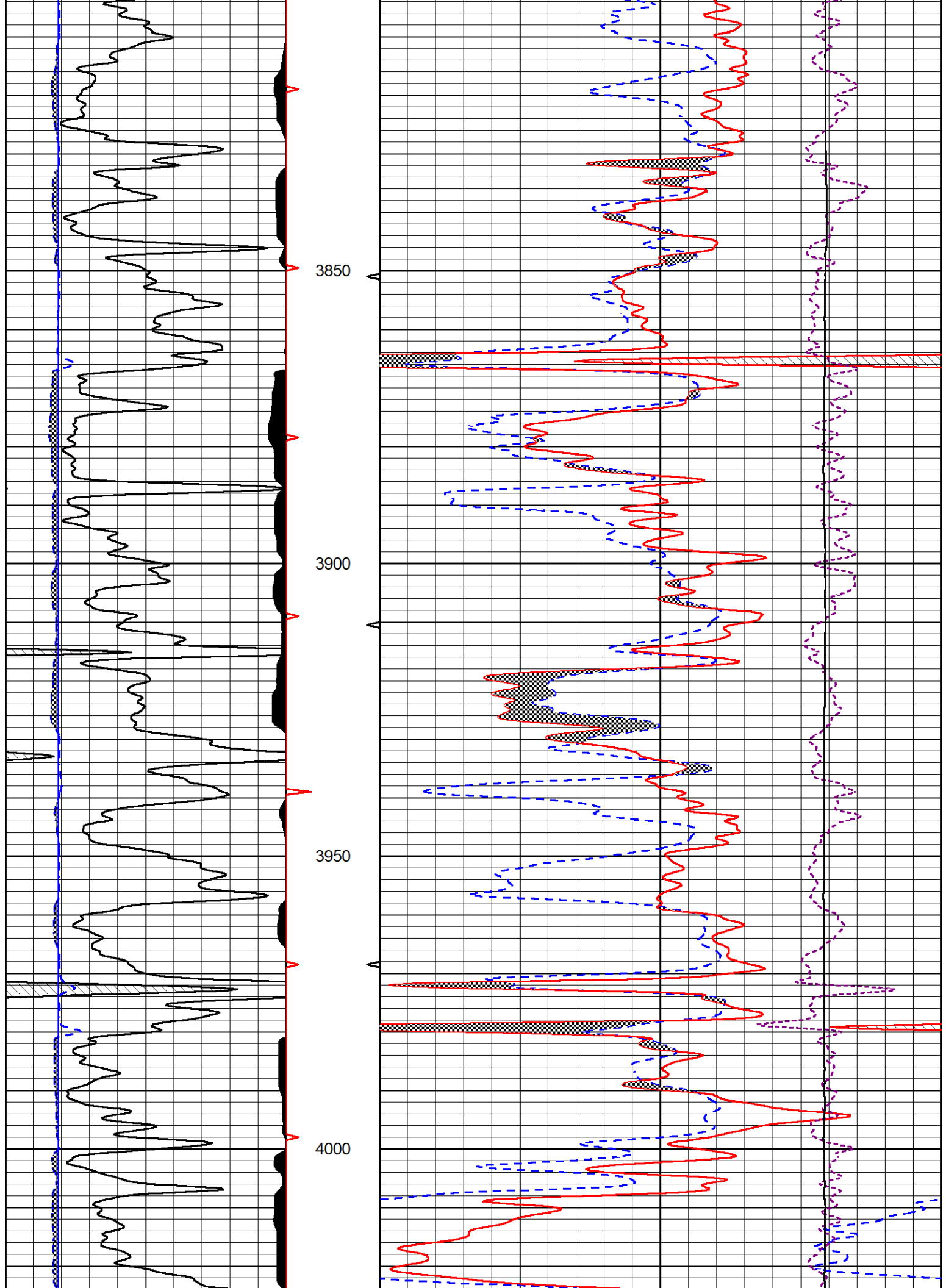
MAIN PASS

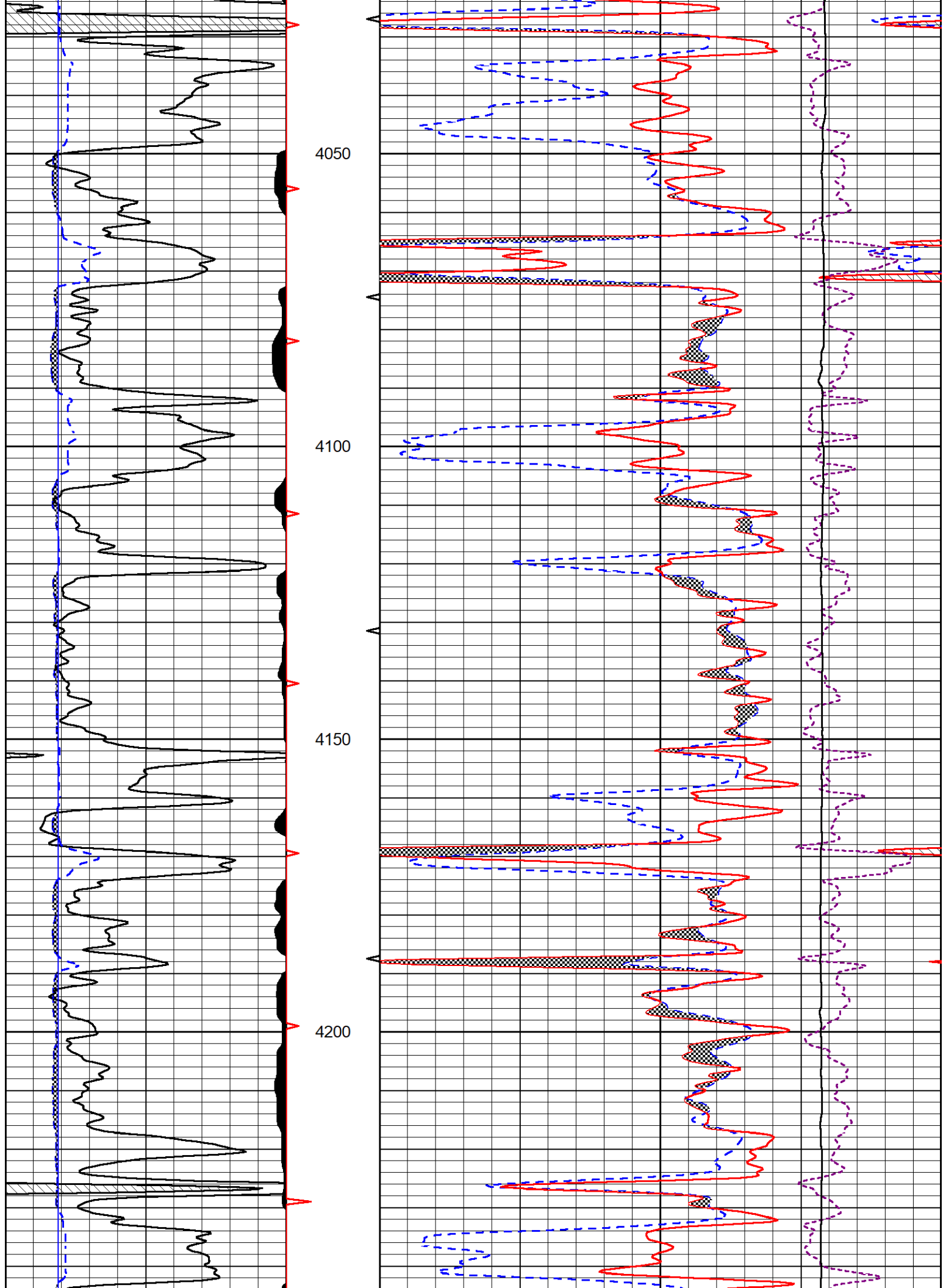
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 Dataset Pathname stkml/pass3.1
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 Dataset Creation Mon Jul 25 04:27:21 2022
 Charted by Depth in Feet scaled 1:240

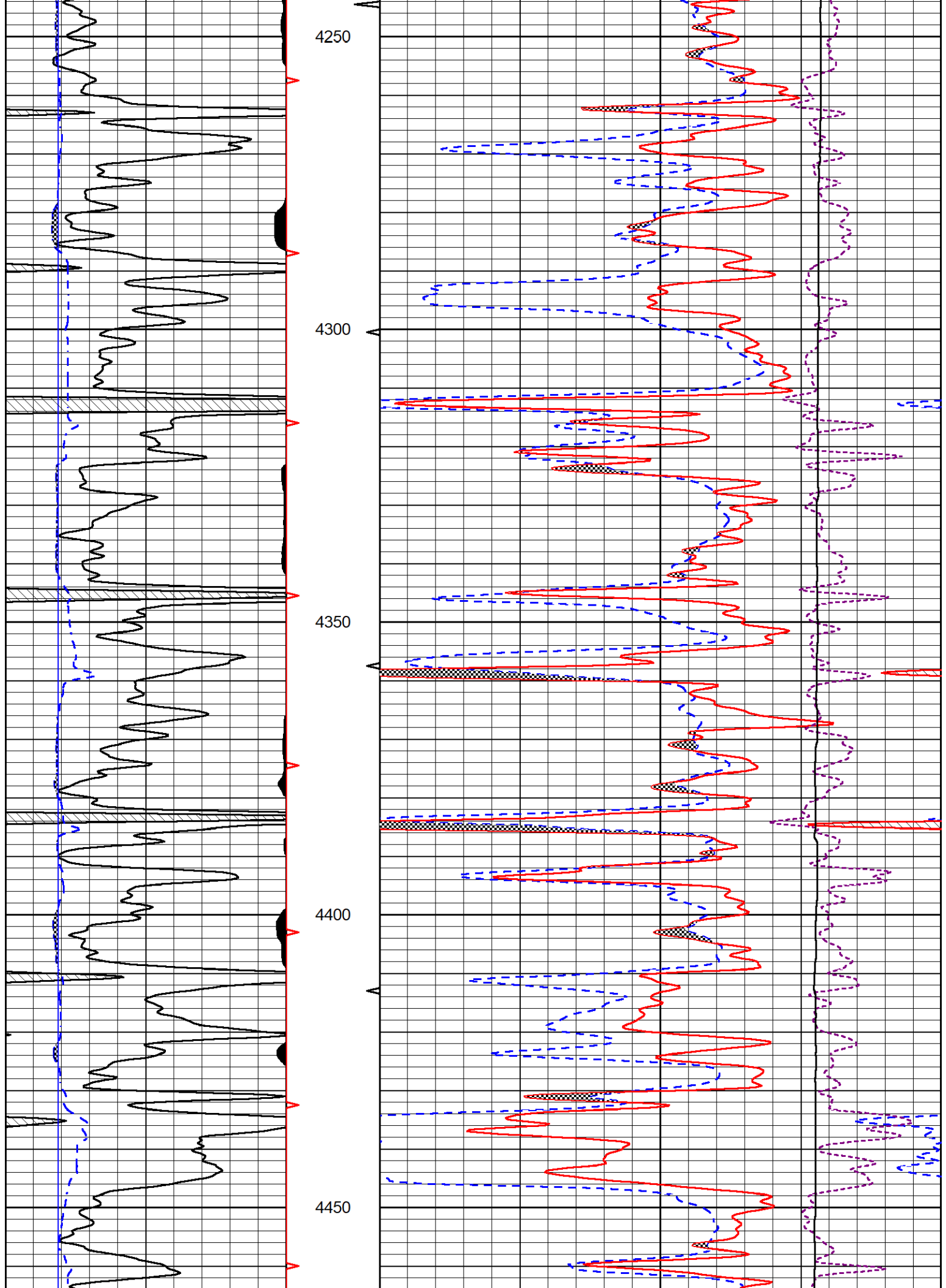


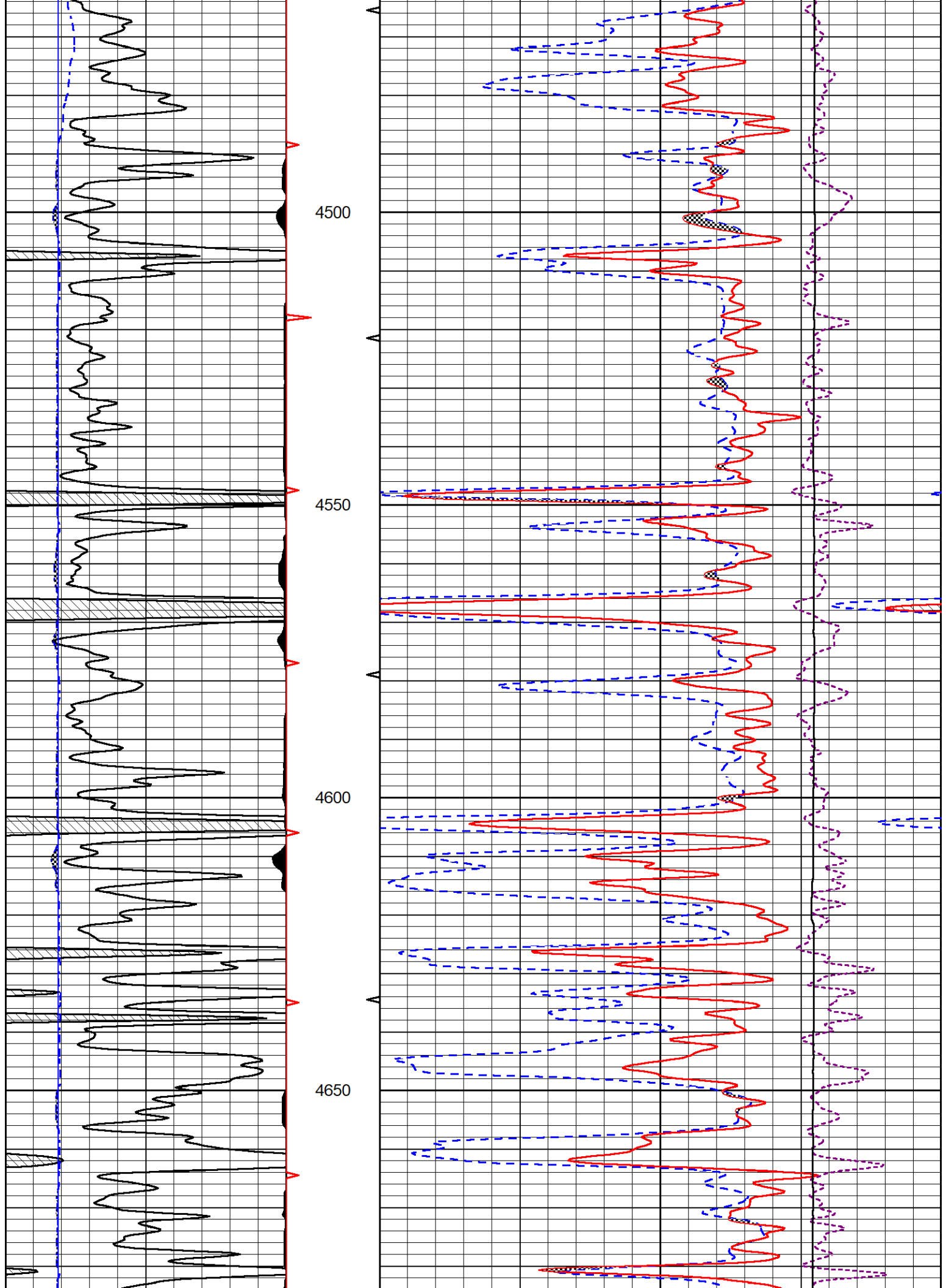
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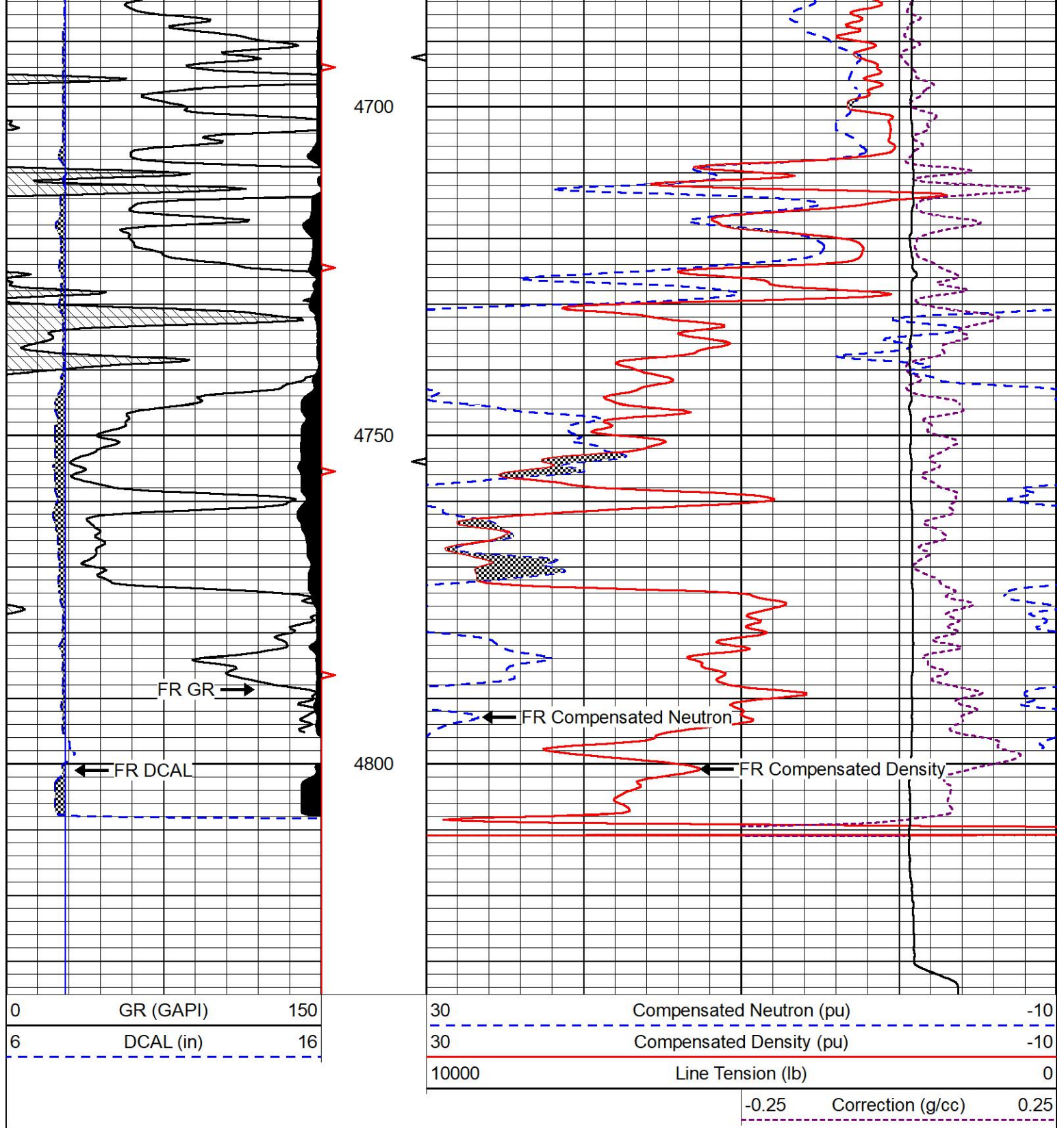












REPEAT SECTION

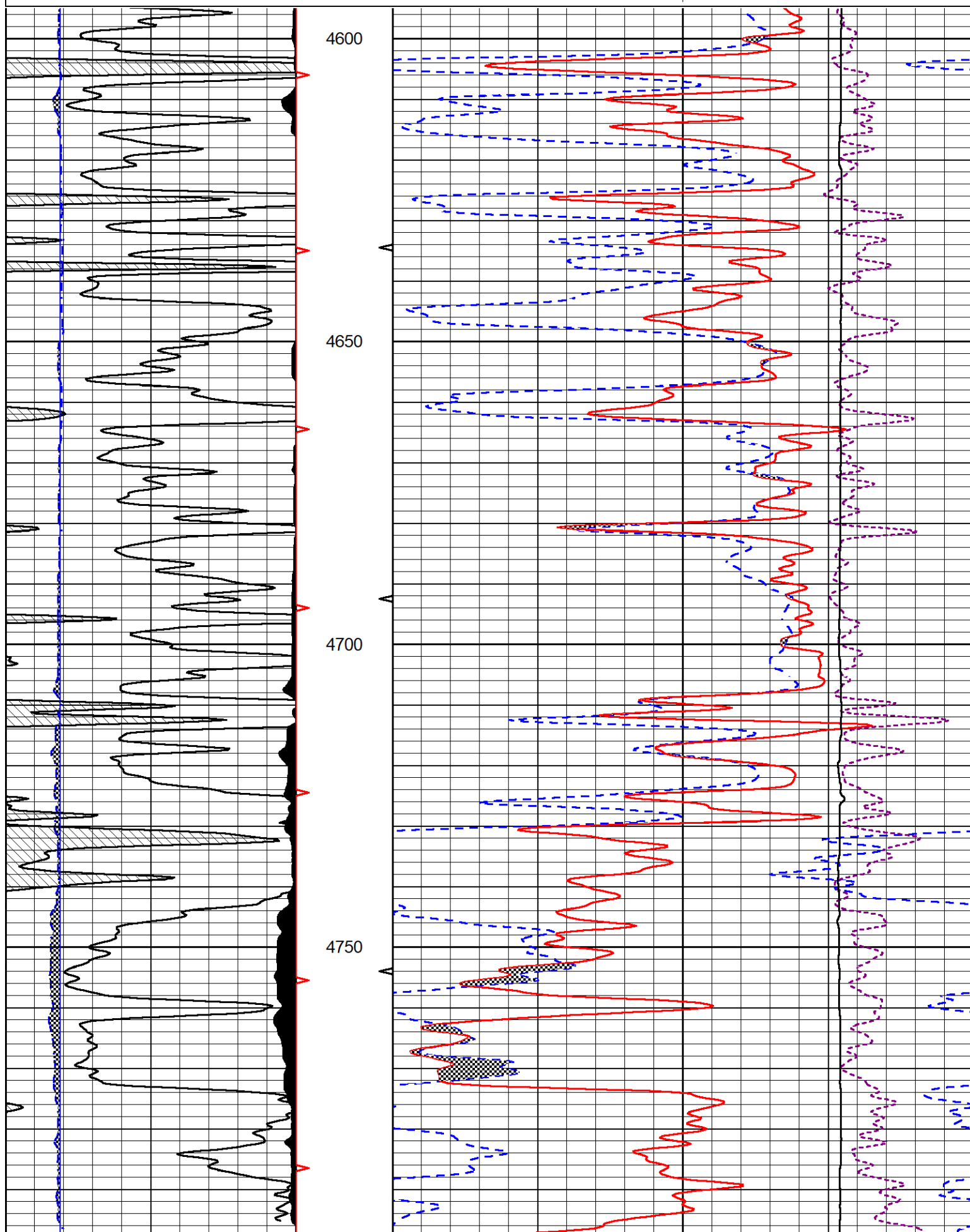
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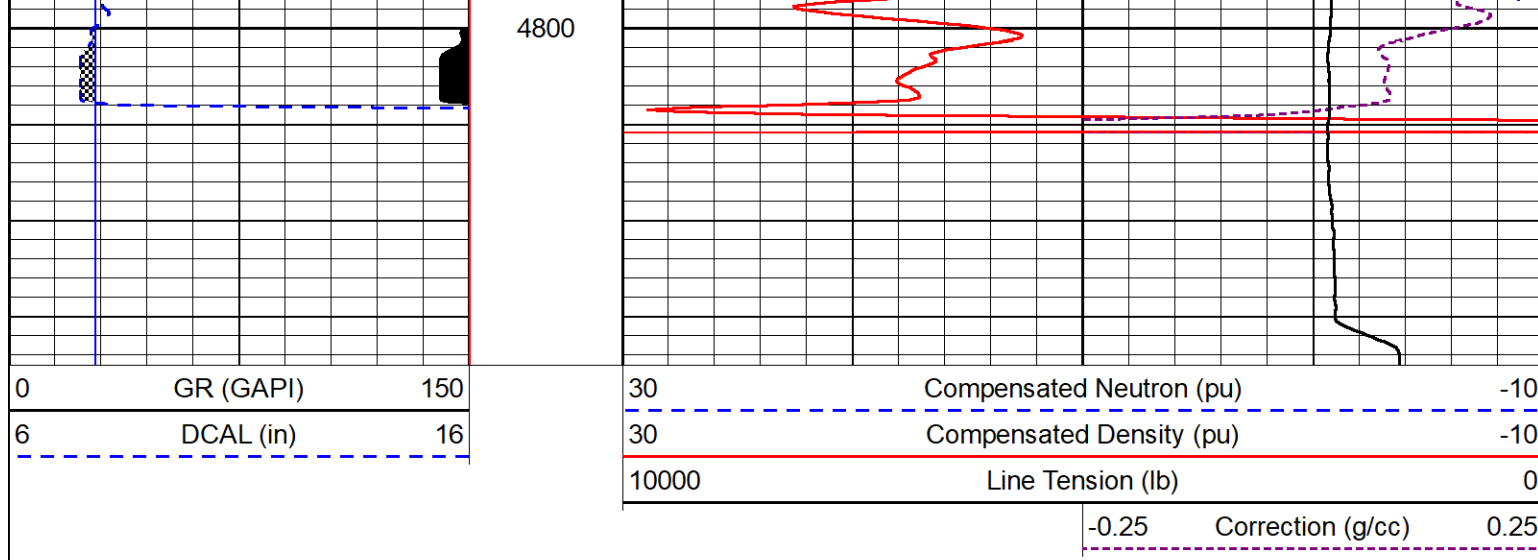
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 Dataset Pathname stkml/pass2.1
 Presentation Format _CNDLS~1
 Dataset Creation Mon Jul 25 03:47:31 2022
 Charted by Depth in Feet scaled 1:240



6 DCAL (in) 16

30 Compensated Neutron (pu) -10
10000 Line Tension (lb) 0
-0.25 Correction (g/cc) 0.25





Calibration Report	
Database File	american warrior_ward unit 1-10.db
Dataset Pathname	stkml/pass3.12
Dataset Creation	Mon Jul 25 03:46:45 2022

Dual Induction Calibration Report

Serial-Model:	504 HT-M&W
Surface Cal Performed:	Wed Jun 29 12:51:29 2022

Loop:	Readings		References			Results	
	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	-48.500

Microlog Calibration Report

Serial-Model:	401-PSI STKBL ML
Performed:	Sat Jul 16 16:13:48 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	26500.0000	-2.8000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	18700.0000	-1.2000
Caliper	1.0049	1.0846	5.5000	20.0000	in	90.0000	-84.7000

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	1.04

Compensated Neutron Calibration Report
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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	American Warrior, Inc.
	Well	Ward Unit #1-10
	Field	
	County	Logan
	State	Kansas