



DUAL COMP POROSITY LOG

MIDWEST WIRELINE

Company Russell Oil, Inc.
Well Hockersmith 'C' #15-1
Field Rumback
County Logan
State Kansas

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Location: API #: 15-109-21612-00-00

1675' FNL & 1150' FWL

SEC 15 TWP 11S RGE 32W

DIL/MEL

Permanent Datum Ground Level Elevation 3051'
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

K.B. 3056'
D.F. N/A
G.L. 3051'

Date 3/10/2021

Run Number One

Type Log CNL/CDL

Depth Driller 4694'

Depth Logger 4696'

Bottom Logged Interval 4667'

Top Logged Interval 3700'

Type Fluid In Hole Chemical

Salinity, PPM CL 3000

Density 9.4

Level Full

Max. Rec. Temp. F 123

Operating Rig Time 3 Hours

Equipment -- Location P-24 HAYS

Recorded By D. Schmidt

Witnessed By Kitt Noah

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25"	0'	305'	8.625"	23#	0'	305'
Two	7.875"	305'	TD				

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest 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.

Oakley,
Hwy 83 and Old 40, 1.2 South,
East into

Log Measured From: Kelly Bushing 5 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: Kitt Noah
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\russell_hockersmith c 15-1.db
Dataset field/well/stkml/pass3.3/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	100	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	403	0		4696

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

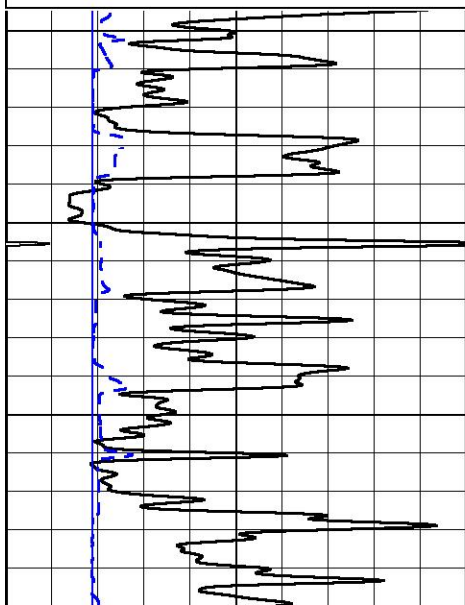
MAIN PASS

Database File russell_hockersmith c 15-1.db
Dataset Pathname stkml/pass3.1
Presentation Format _cdl
Dataset Creation Wed Mar 10 21:40:21 2021
Charted by Depth in Feet scaled 1:600

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

COMPENSATED DENSITY (2.65 MA)

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

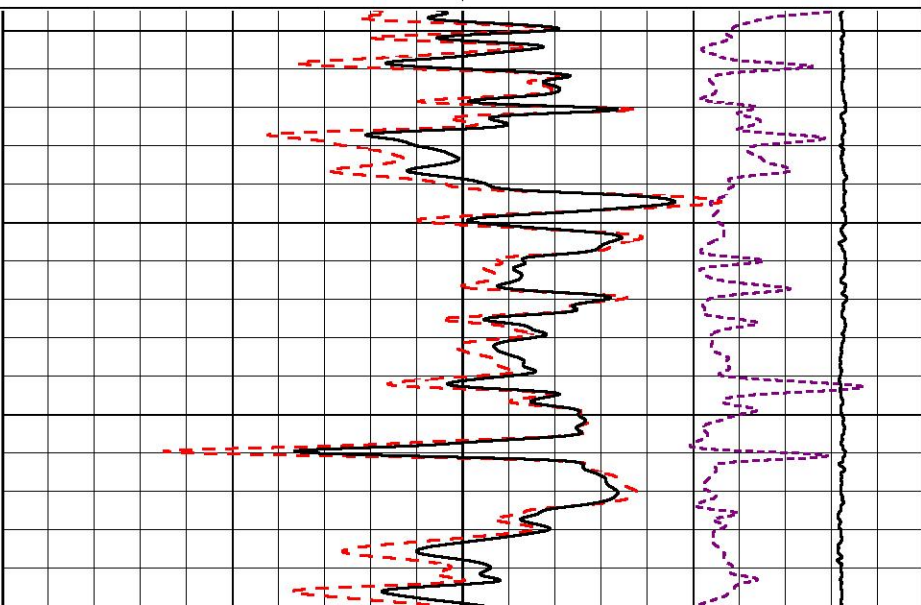


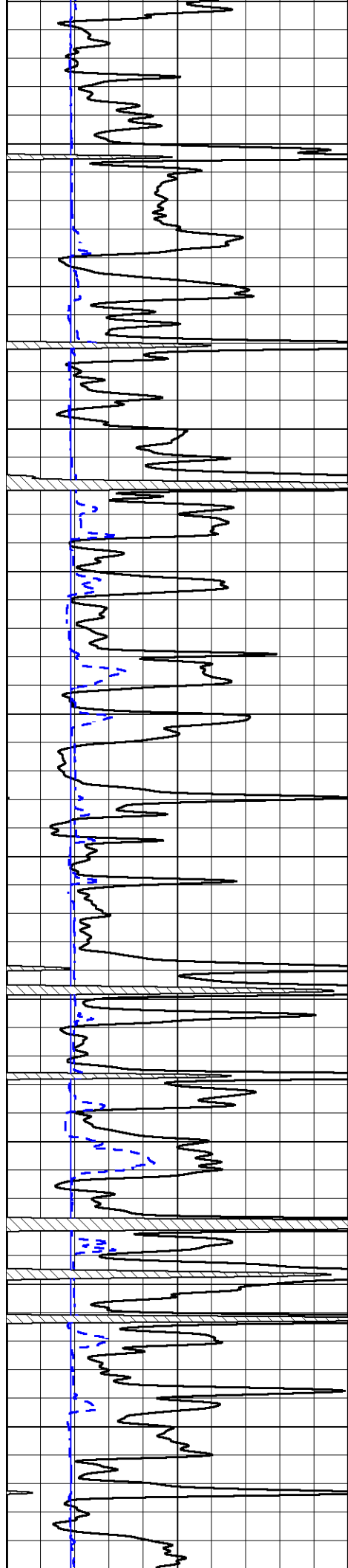
3700

3750

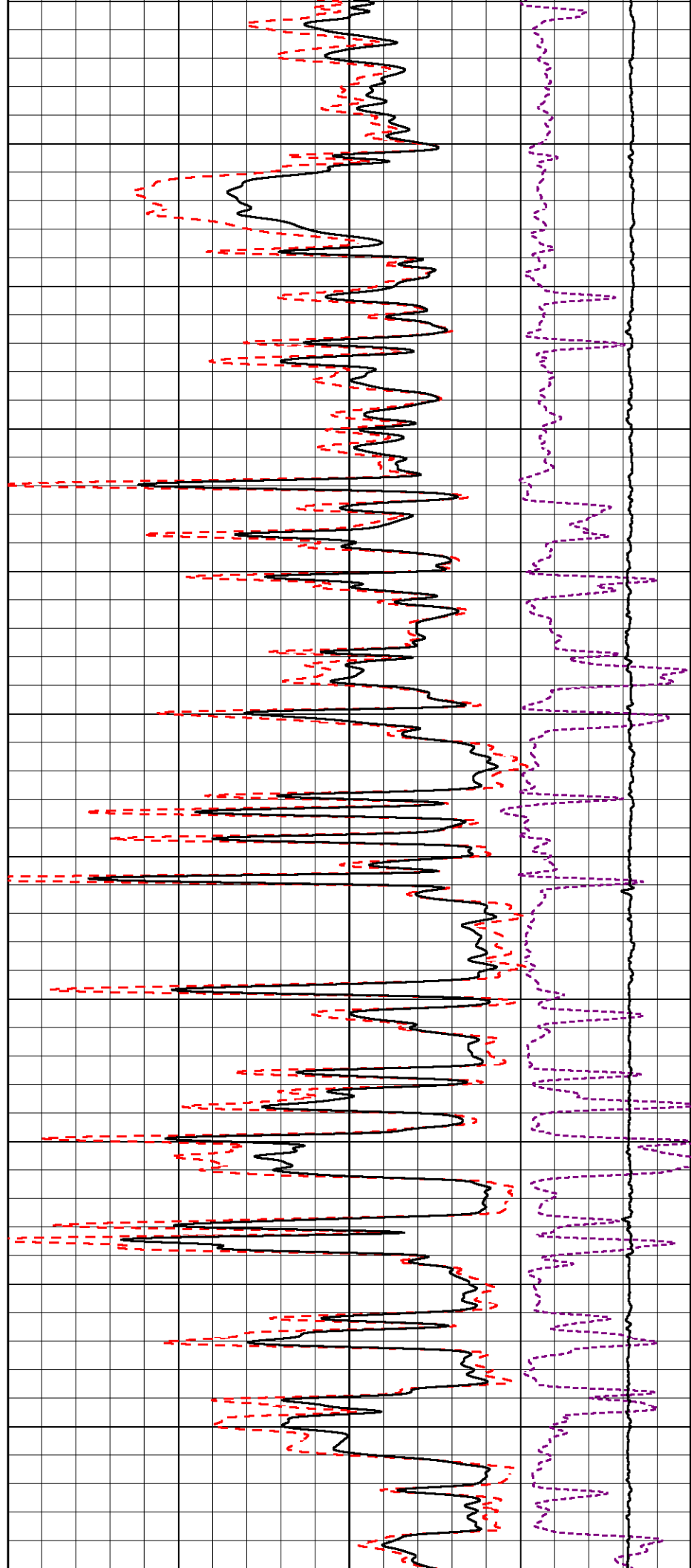
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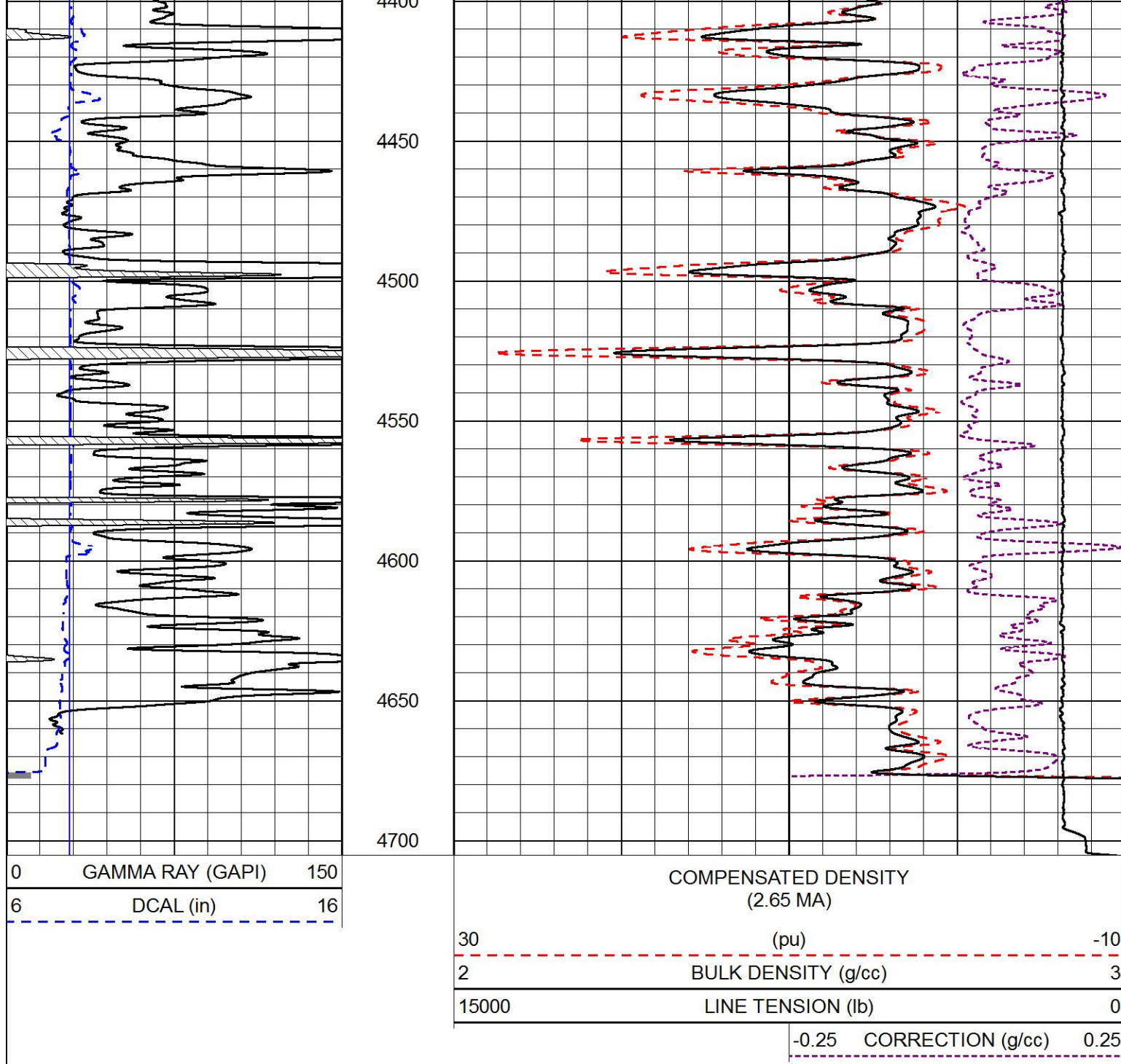
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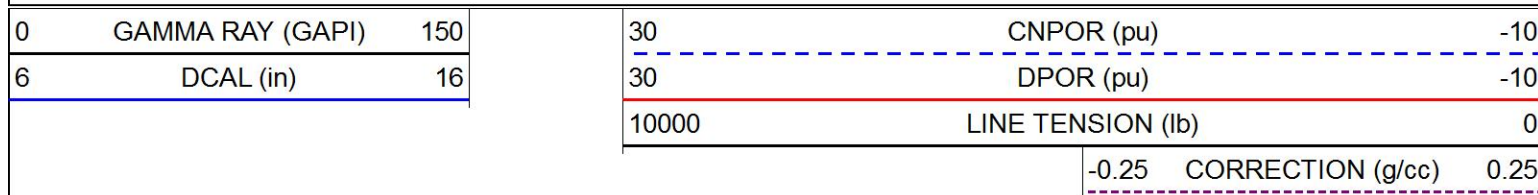
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4400

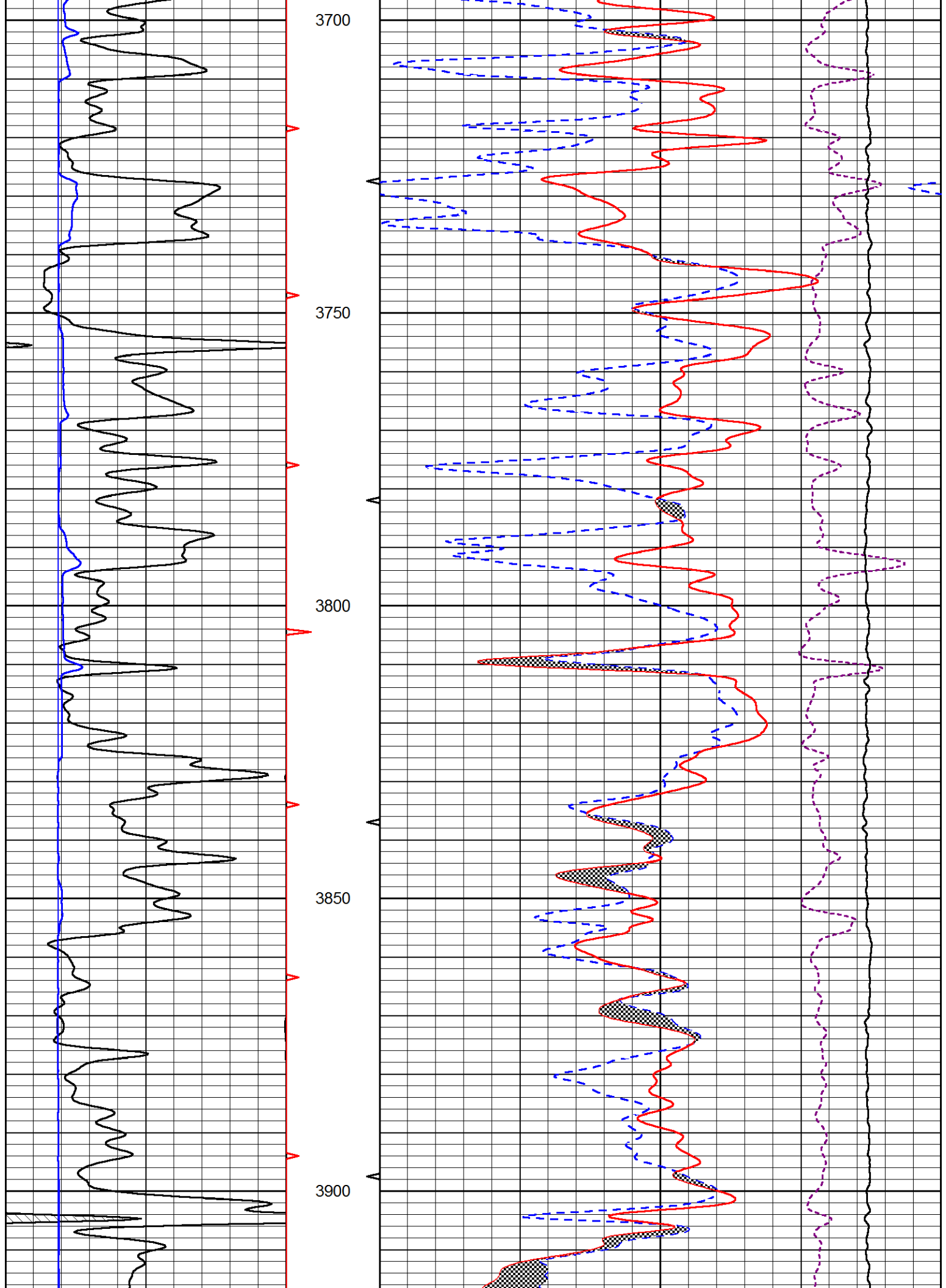


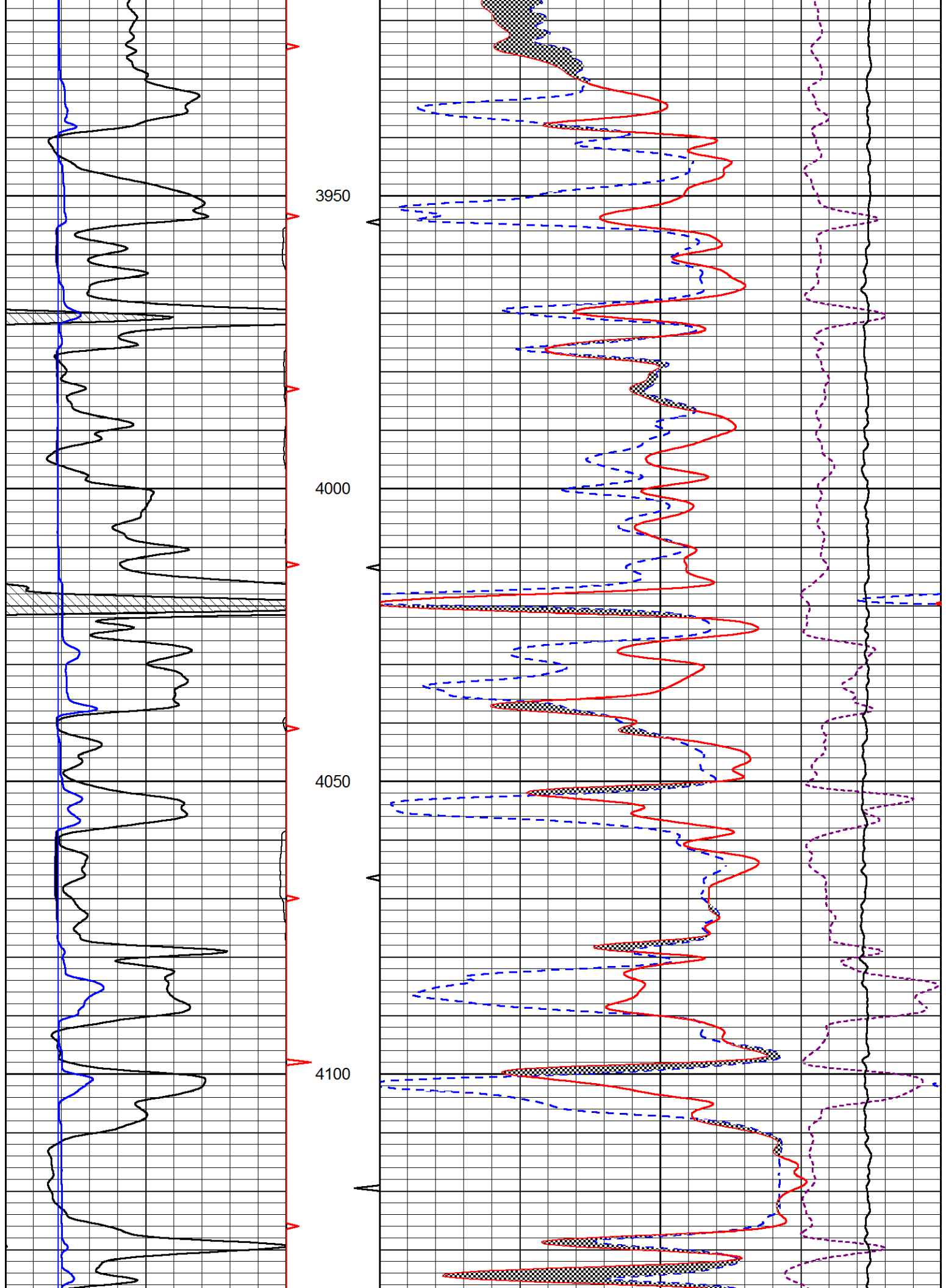


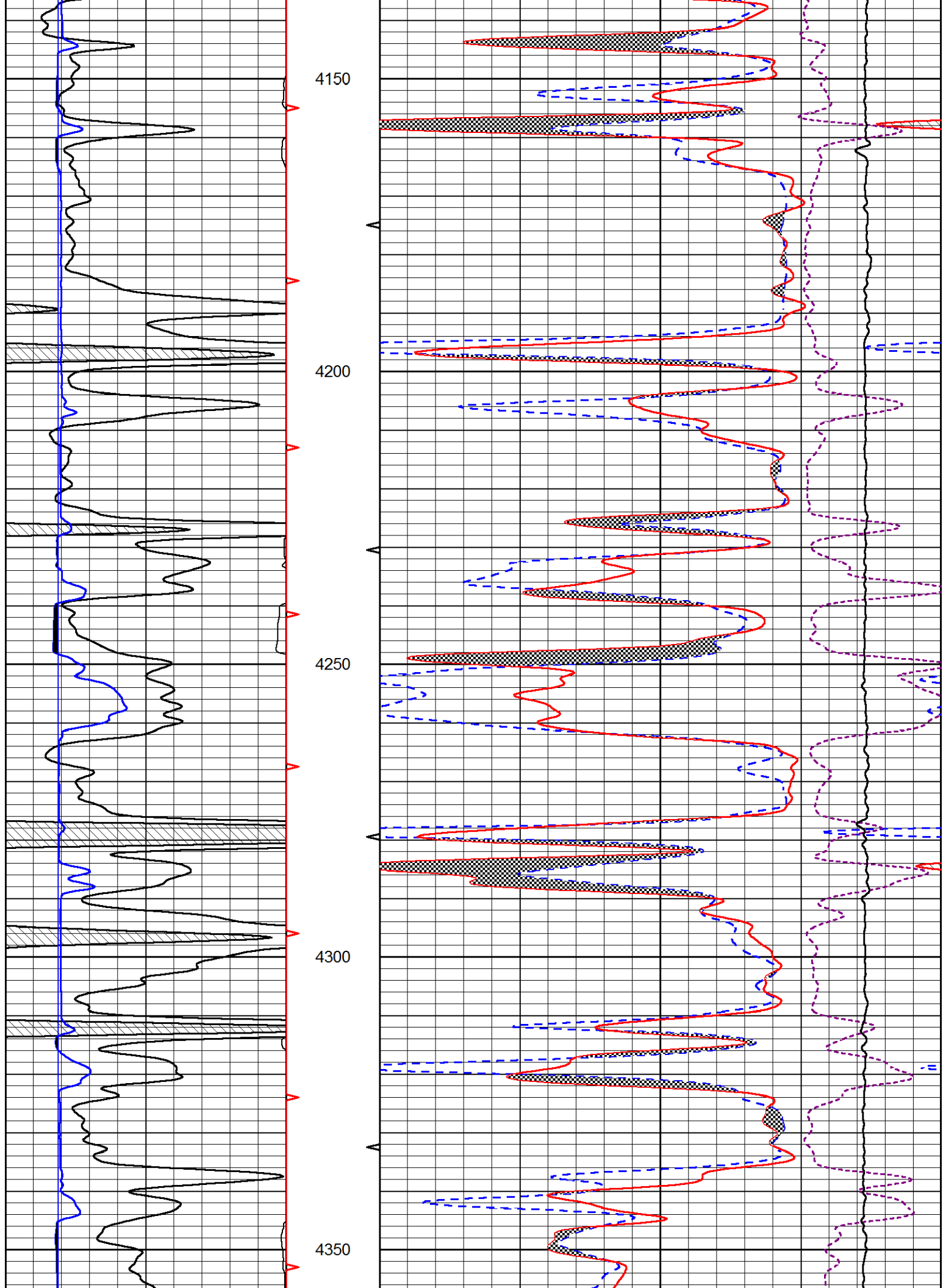
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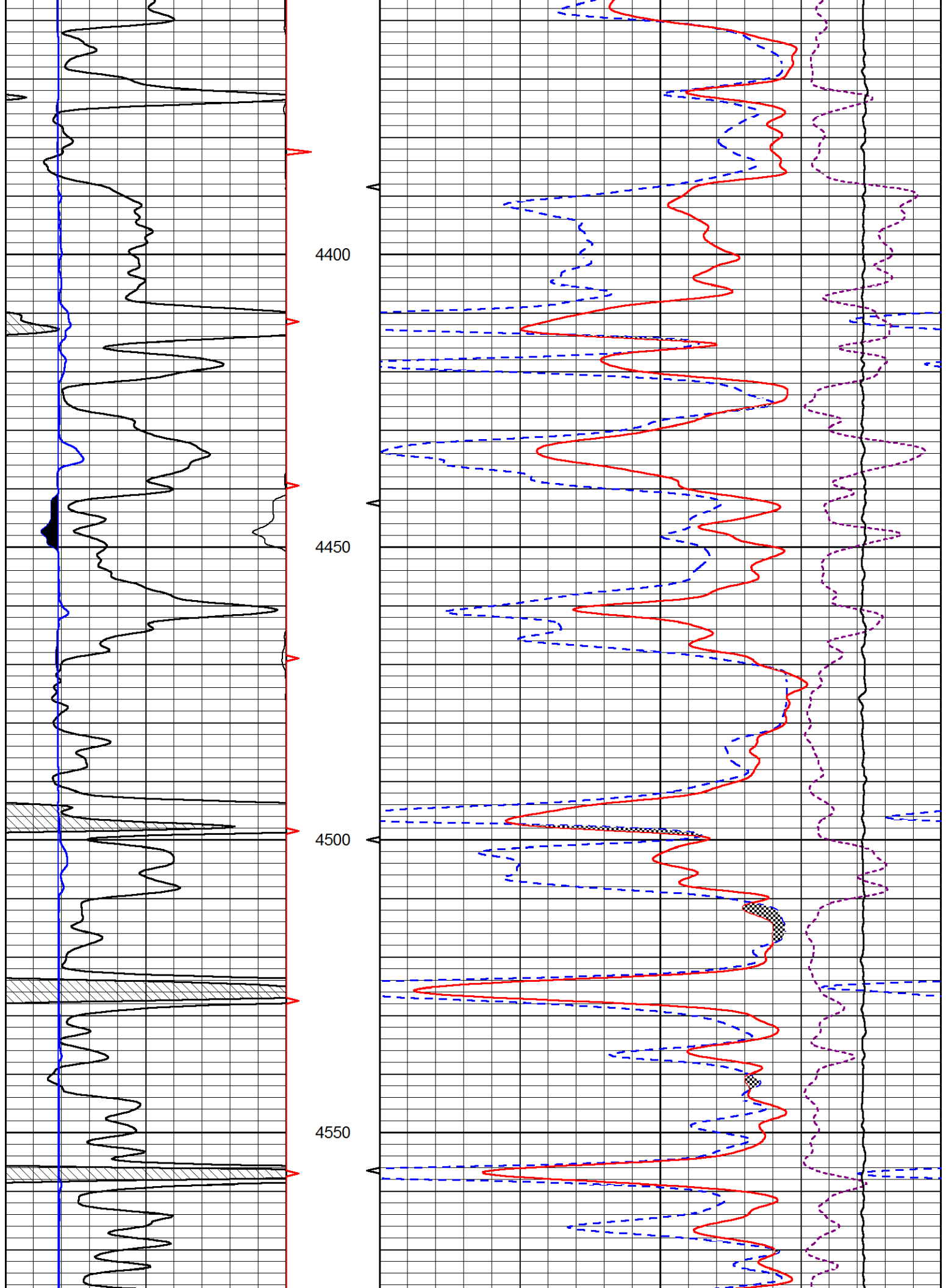
Database File russell_hockersmith c 15-1.db
 Dataset Pathname stkml/pass3.1
 Presentation Format _CNDLS~1
 Dataset Creation Wed Mar 10 21:40:21 2021
 Charted by Depth in Feet scaled 1:240

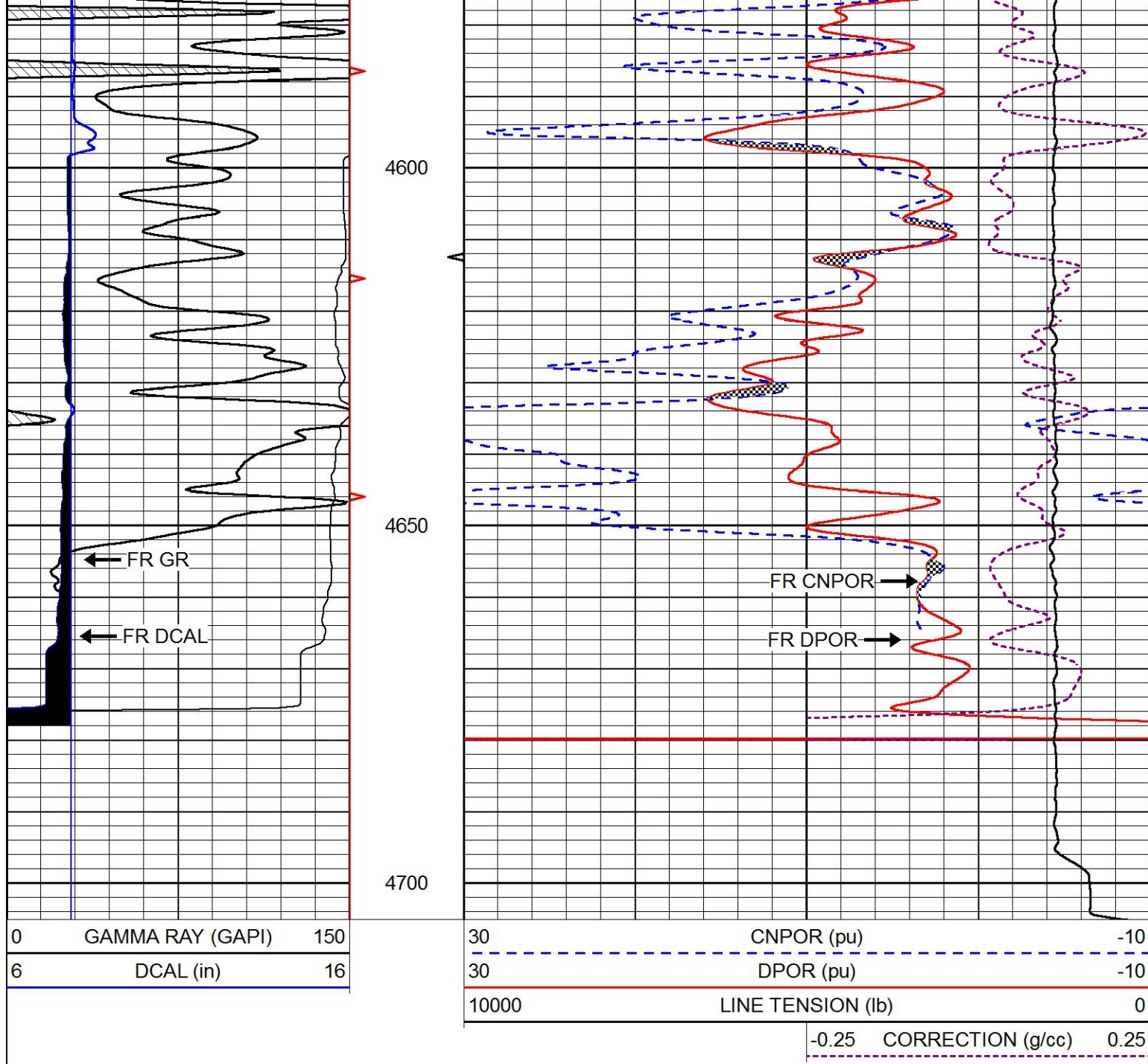








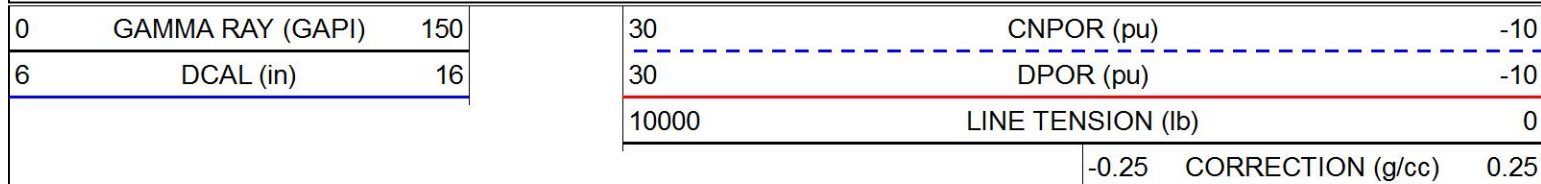


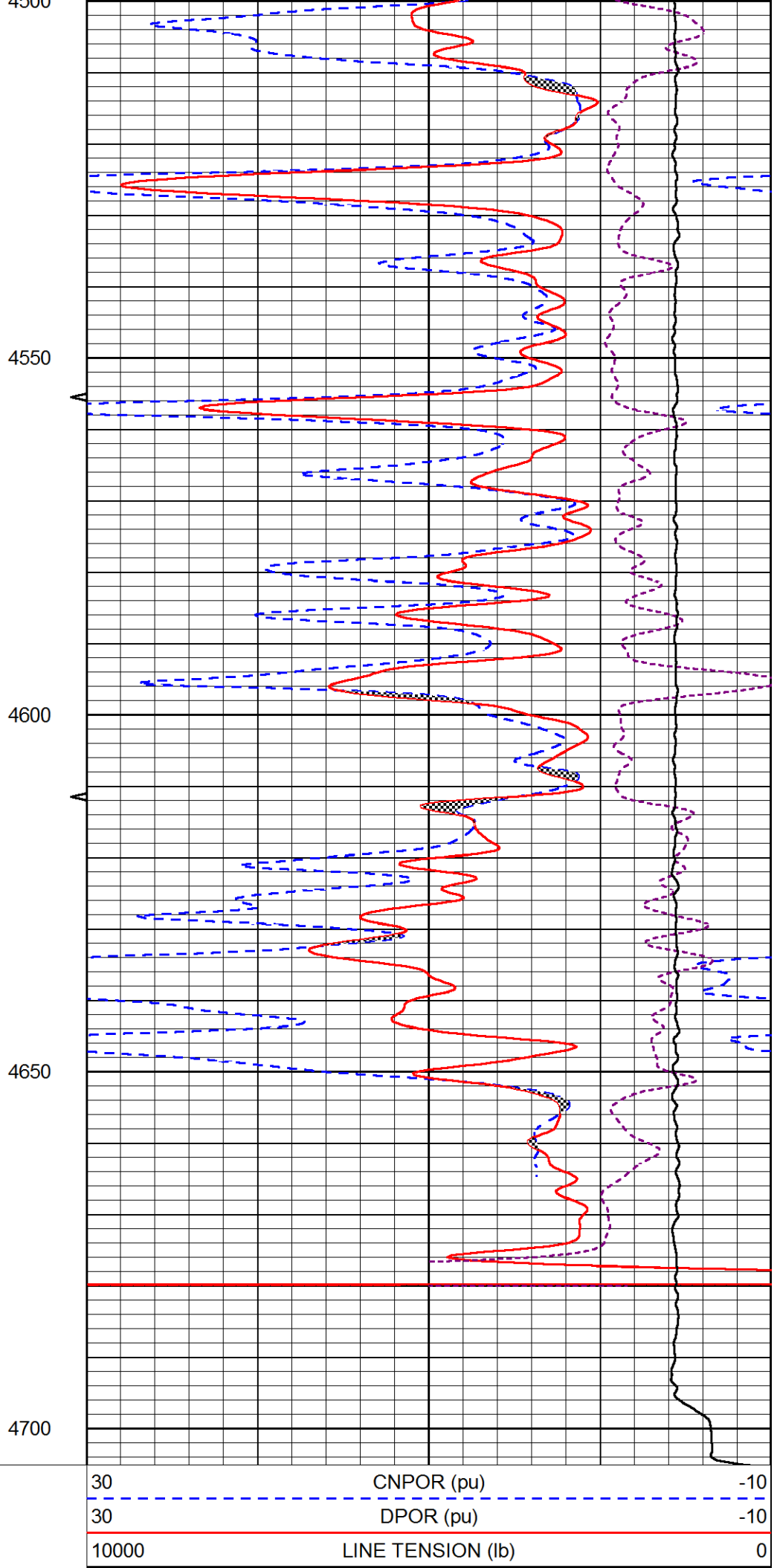
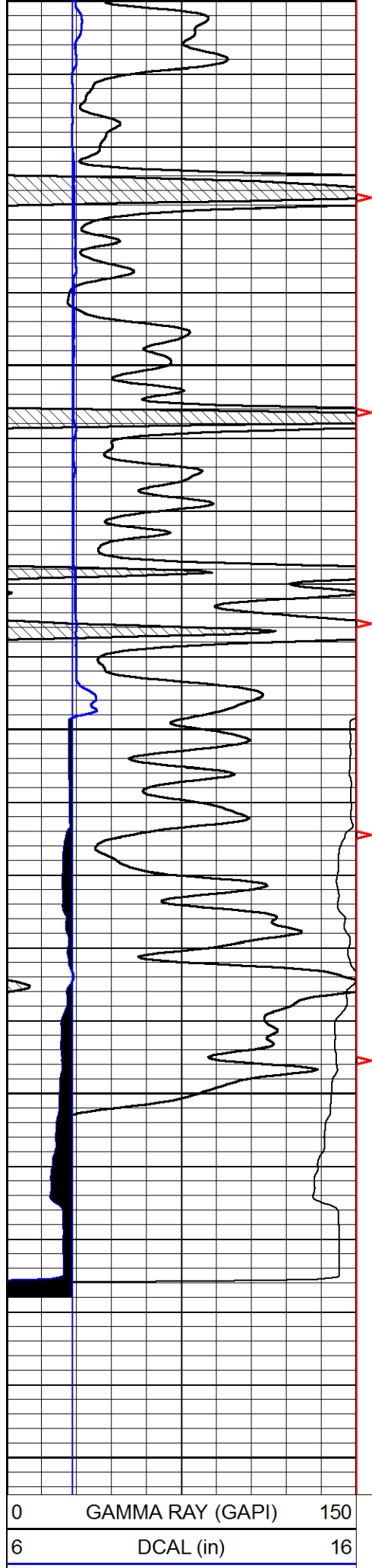


MIDWEST WIRELINE

REPEAT SECTION

Database File russell_hockersmith c 15-1.db
 Dataset Pathname stkml/pass2.1
 Presentation Format _CNDLS~1
 Dataset Creation Wed Mar 10 21:29:35 2021
 Charted by Depth in Feet scaled 1:240





Calibration Report	
Database File	russell_hockersmith c 15-1.db
Dataset Pathname	stkml/pass3.3
Dataset Creation	Wed Mar 10 21:25:37 2021

Dual Induction Calibration Report

Serial-Model:	952-828-PSI HIGH TEMP
Calibration Performed:	Wed Mar 10 20:07:20 2021

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.465	-34.500
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.325	-31.000

Microlog Calibration Report

Serial-Model:	PSI-01-PSIML
Performed:	Wed Mar 03 05:24:59 2021

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	14000.0000	-1.5000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	13000.0000	-0.5000
Caliper	1.0033	1.0841	5.0000	16.5000	in	142.3500	-138.6500

Compensated Density Calibration Report

Serial-Model:	817-947-M&W
Source / Verifier:	16955B / 2ci
Master Calibration Performed:	Wed Mar 03 05:25:05 2021

Master Calibration						
	Density		Far Detector		Near Detector	
	Magnesium	1.755 g/cc	6127.15	5922.31	cps	
	Aluminum	2.670 g/cc	1141.85	3762.09	cps	
Spine Angle = 74.89			Density/Spine Ratio = 0.526			
	Size		Reading			
	Small Ring	4.50 in	1.02			
	Large Ring	14.50 in	1.23			

Compensated Neutron Calibration Report

Serial Number:	207-MW
Tool Model:	M&W
Calibration Performed:	WED MAR 3 7:30:30 2021

Detector	Readings	Target	Normalization
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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:	233-M&W				
Tool Model:	M&W				
Calibration Performed:	Wed Mar 03 05:25:33 2021				
Calibrator Value:	1.0	GAPI			
Background Reading:	0.0	cps			
Calibrator Reading:	1.0	cps			
Sensitivity:	0.5500	GAPI/cps			