



DUAL COMP POROSITY LOG

MIDWEST WIRELINE

Company Ritchie Exploration, Inc.
Well Stucky-Dirks #1
Field Wildcat
County Lane
State Kansas

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Field Wildcat
County Lane State Kansas

Location: API #: 15-101-22657-00-00

Other Services

SEC 33 TWP 19S RGE 30W
290 FNL & 1502 FEL

DIL
MEL/BHCS

Permanent Datum Ground Level Elevation 2905
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

K.B. 2910
D.F.
G.L. 2905

Date 9/22/2021

Run Number One

Type Log CNL/CDL

Depth Driller 4740

Depth Logger 4730

Bottom Logged Interval 4701

Top Logged Interval 3450

Type Fluid In Hole Chemical

Salinity, PPM CL 3300

Density 8.8

Level Full

Max. Rec. Temp. F 123

Operating Rig Time 4 Hours

Equipment -- Location P-108 HAYS

Recorded By J. Henrickson

Witnessed By Max Lovely

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	0	255	8.625	24	0	255
Two	7.875"	255	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.

Amy Kansas

South on 250 to 70 Rd, 1 1/4 West, South 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: J. Henrickson

Operator:

Operator:

Operator:

This Log Record Was Witnessed By

Primary Witness: Max Lovely

Secondary Witness:

Secondary Witness:

Secondary Witness:

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DatabaseC:\ProgramData\Warrior\Data\ritchie_stucky_dirks_1.db
Dataset field/well/stackml/pass4.1/ vars
```

Top - Bottom

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73			CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93			CDL-M&W (915-956)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83			ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80						
CILD	8.00			DIL-PSI HIGH TEMP (959-1032)	18.50	3.50	220.00

CILM

4.70

SP

0.20

Dataset: ritchie_stucky_dirks_1.db: field/well/stackml/pass4.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in



MIDWEST WIRELINE

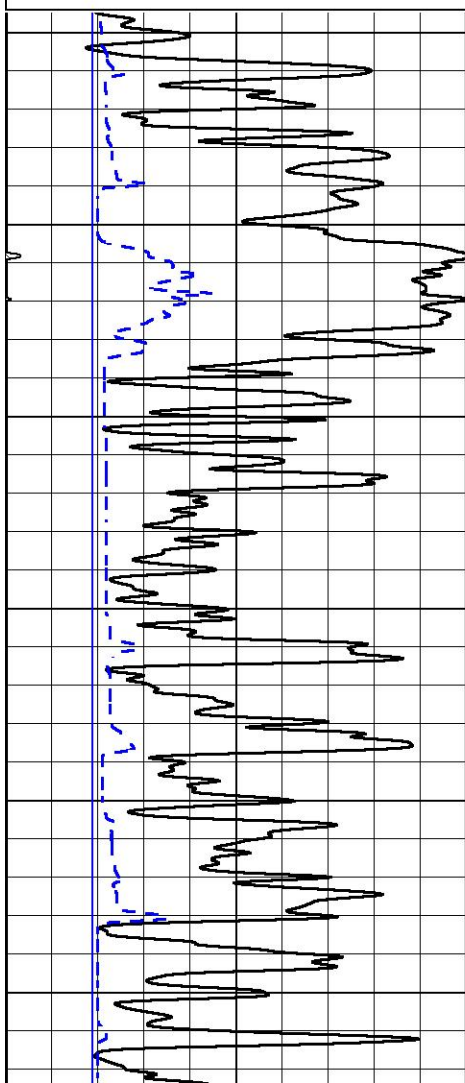
2" SCALE BULK DENSITY

MAIN PASS

Database File ritchie_stucky_dirks_1.db
Dataset Pathname stackml/pass4.1
Presentation Format cdl
Dataset Creation Wed Sep 22 14:10:29 2021
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



3450

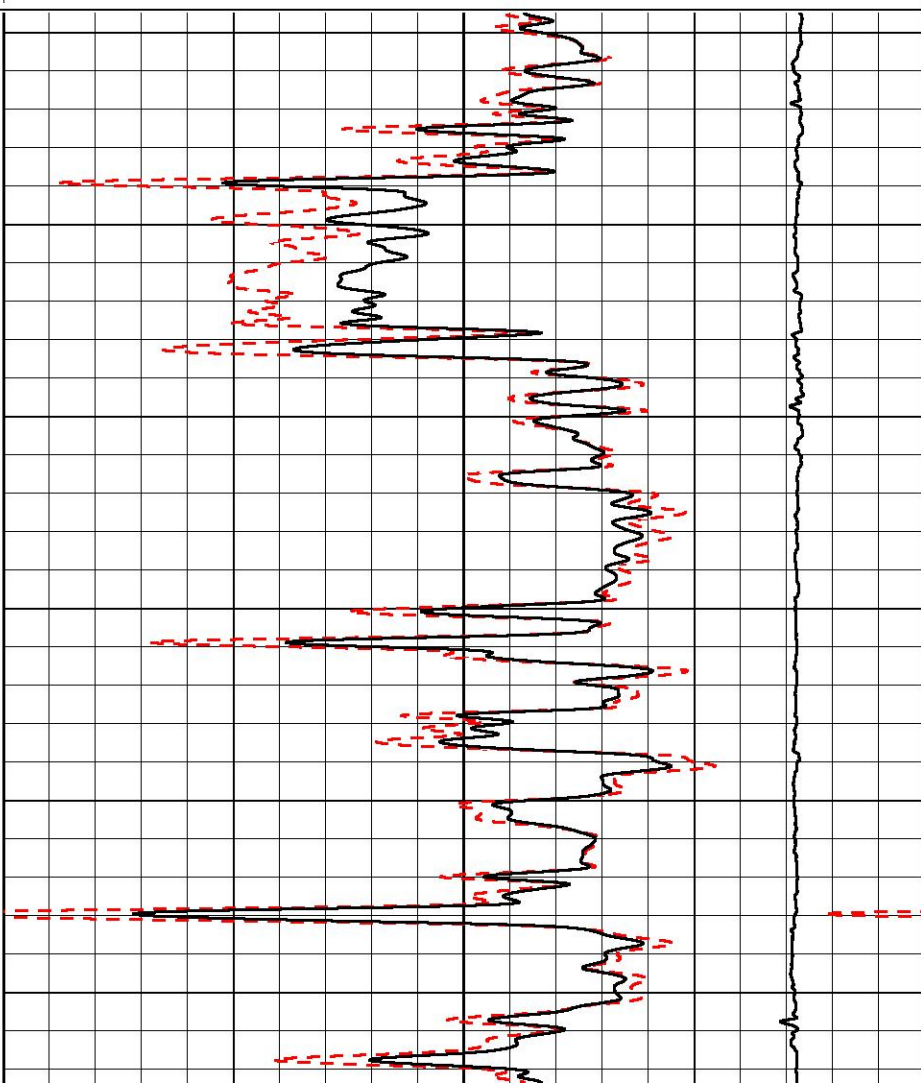
3500

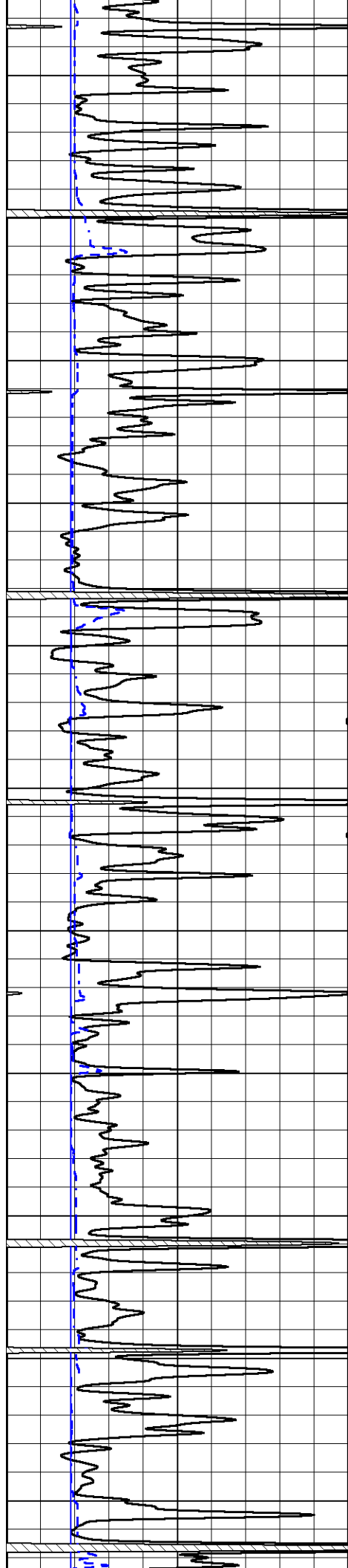
3550

3600

3650

3700





3750

3800

3850

3900

3950

4000

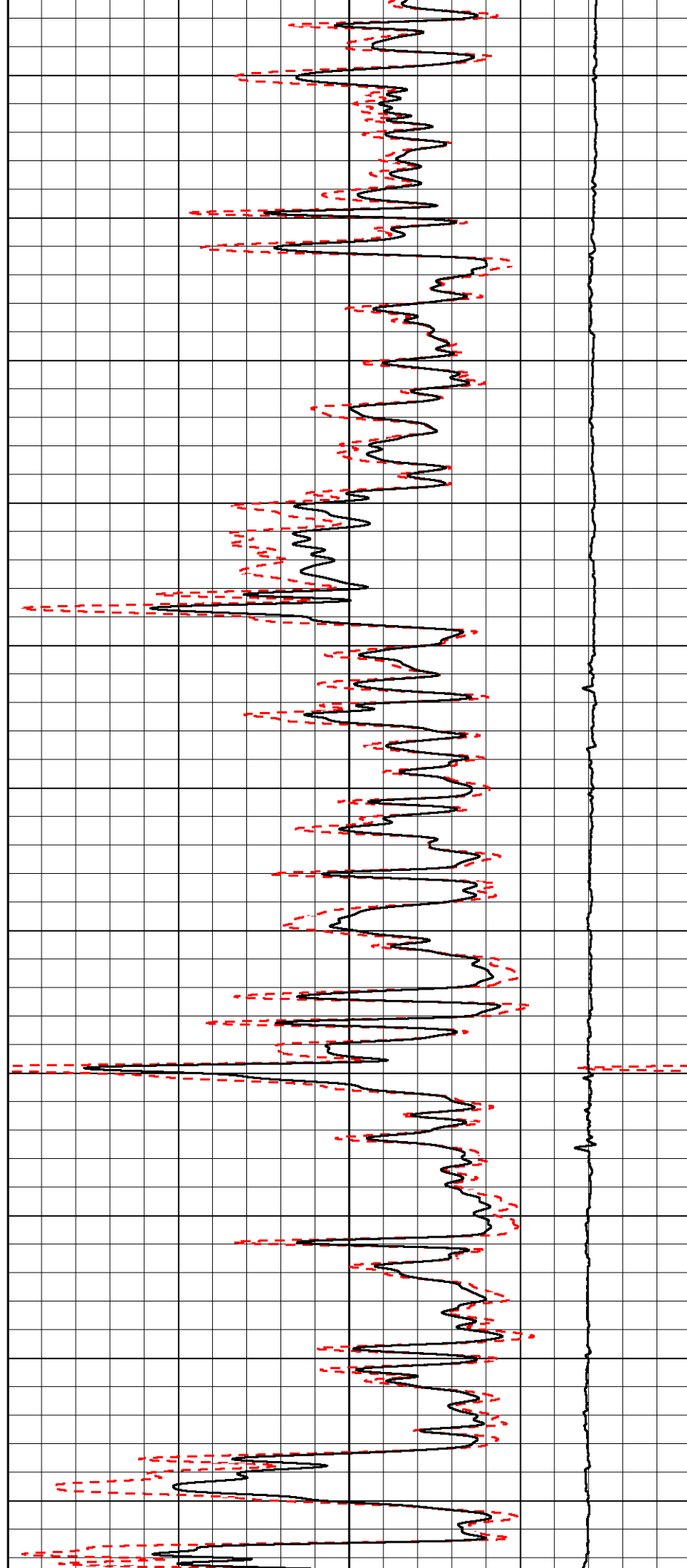
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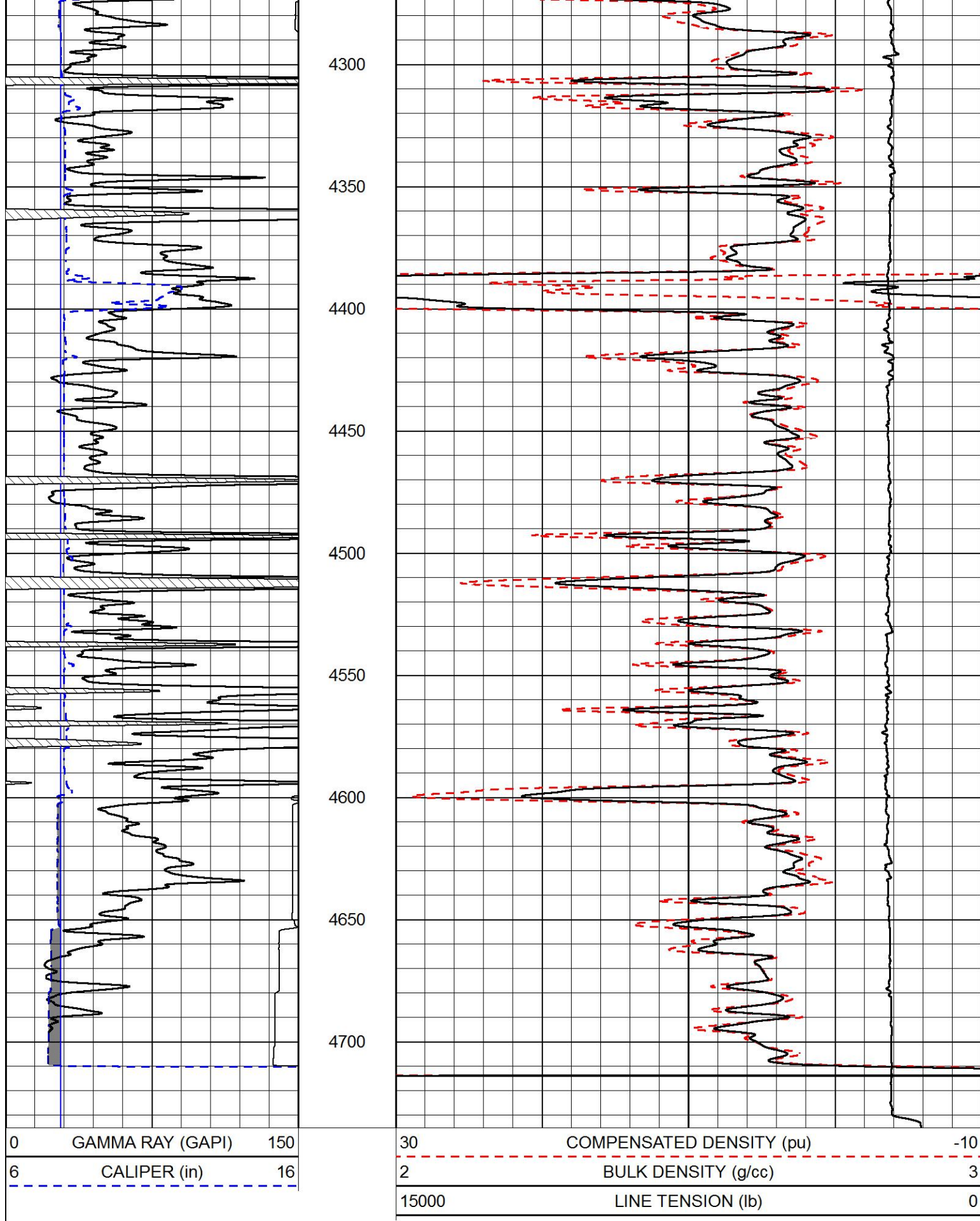
4100

4150

4200

4250





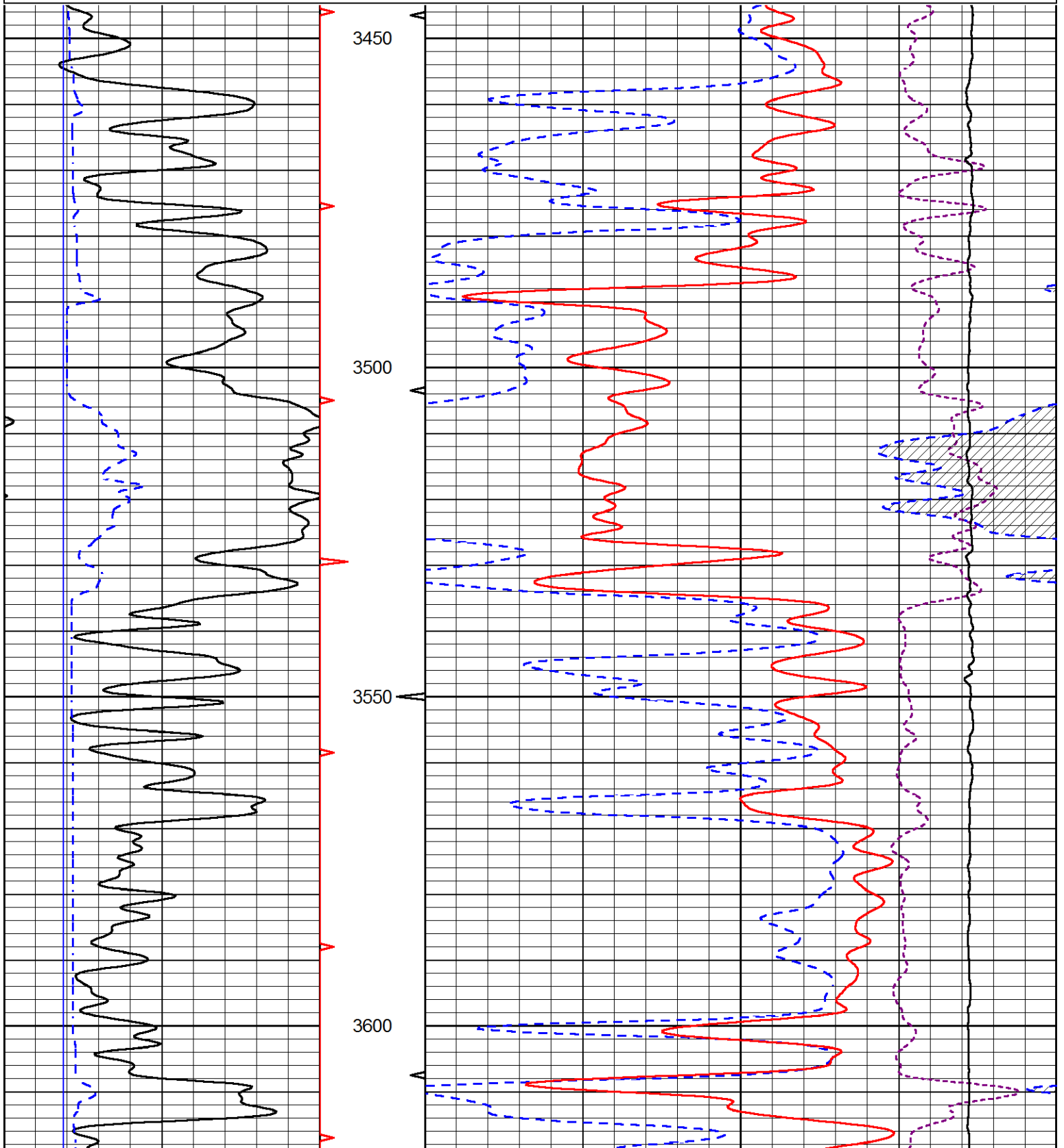
DETAIL SECTION

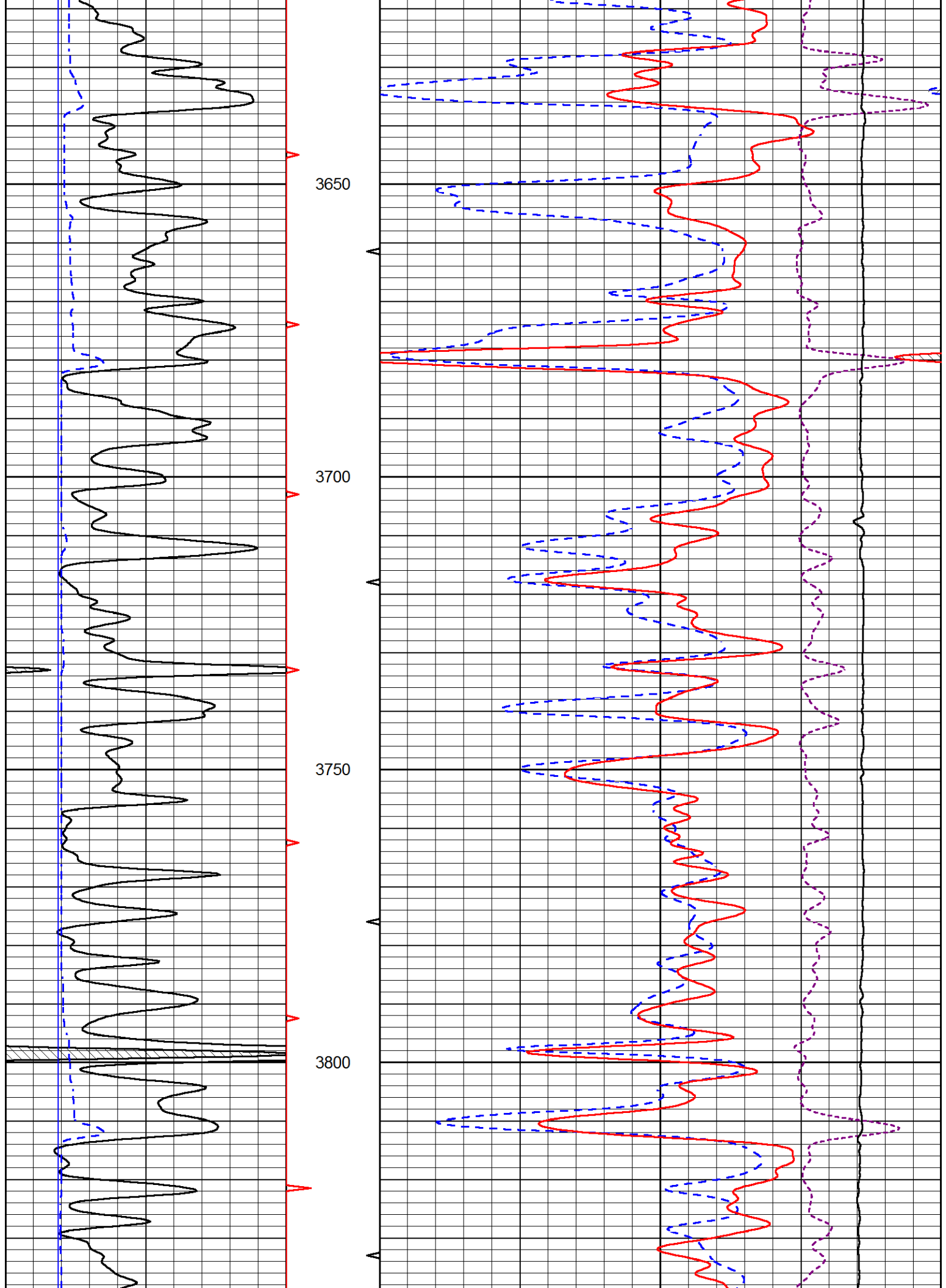
MAIN PASS

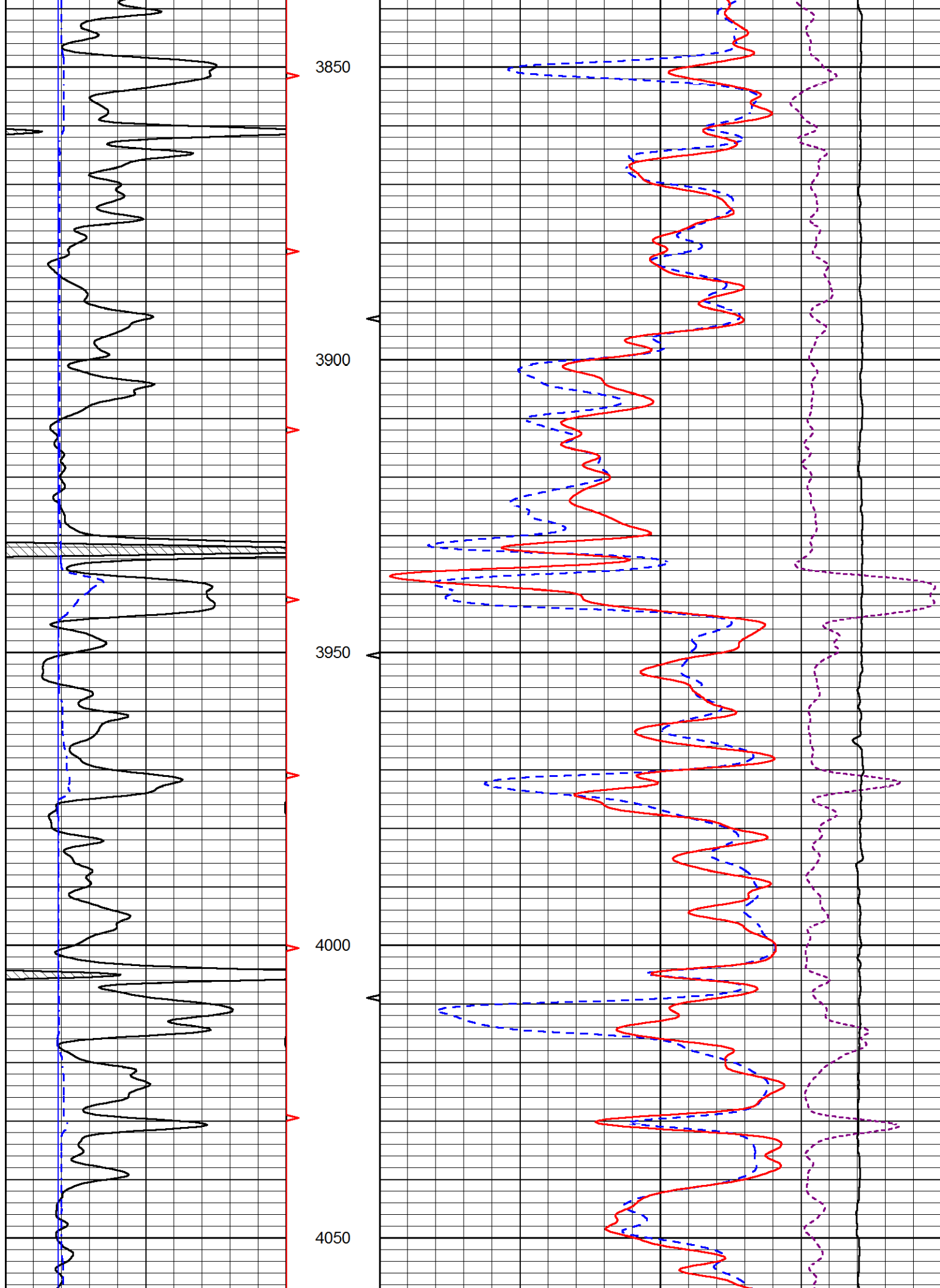
Database File ritchie_stucky_dirks_1.db
Dataset Pathname stackml/pass5.1
Presentation Format cndlspec
Dataset Creation Wed Sep 22 14:10:48 2021
Charted by Depth in Feet scaled 1:240

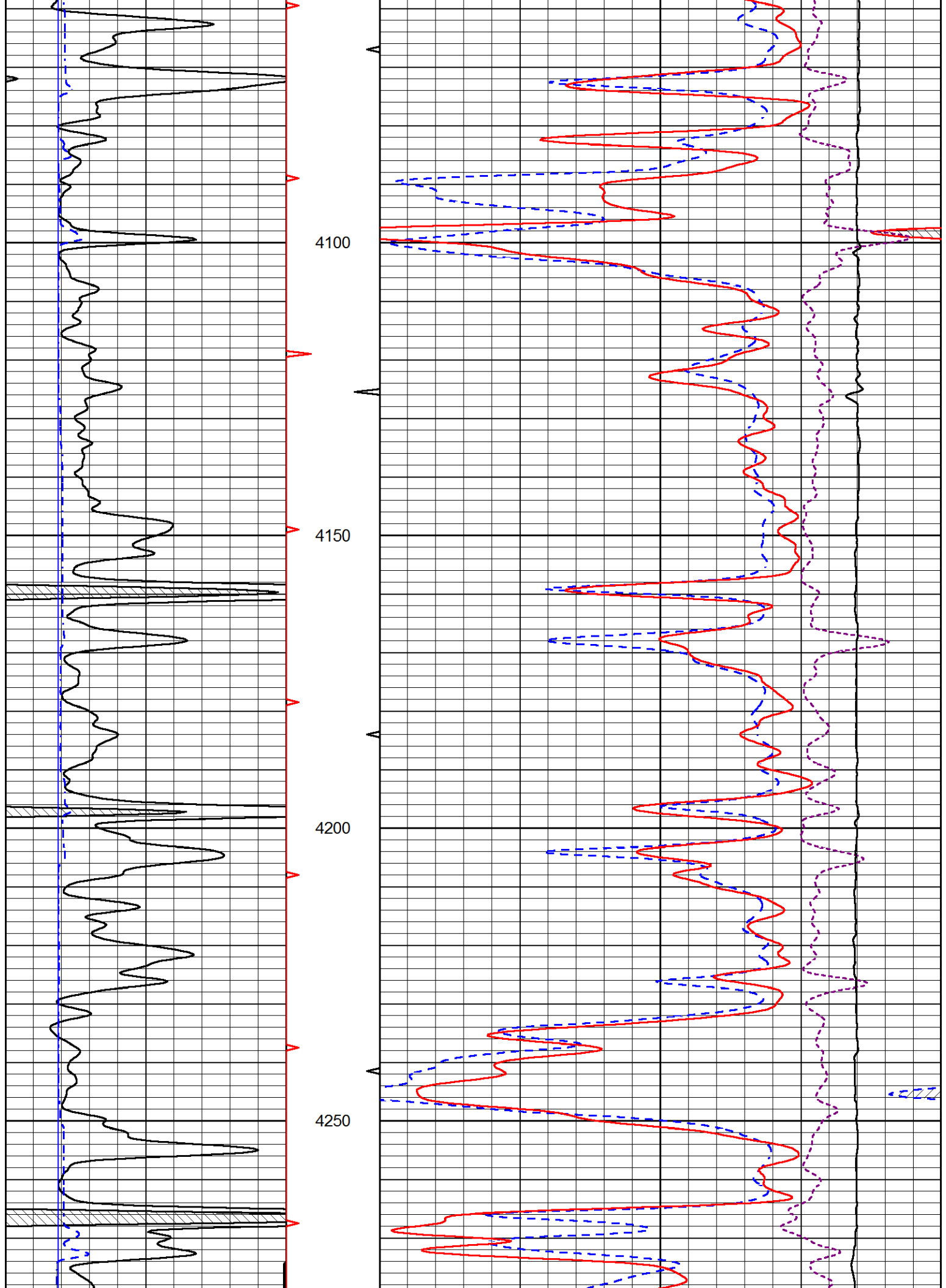
0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

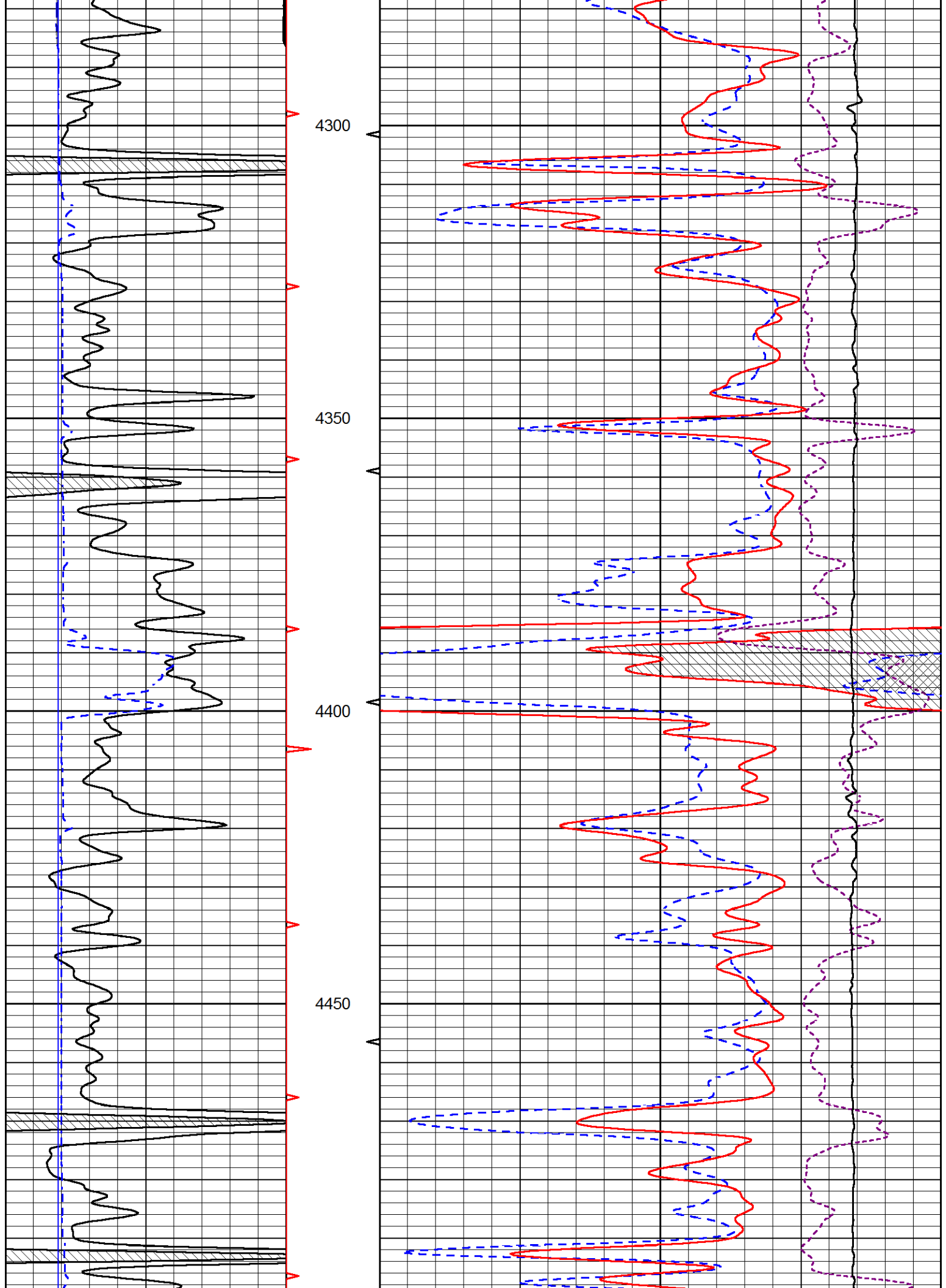
30	CNLS (pu)		-10
30	DPOR (pu)		-10
15000	LINE TENSION (lb)		0
	-0.25	RHOC (g/cc)	0.25

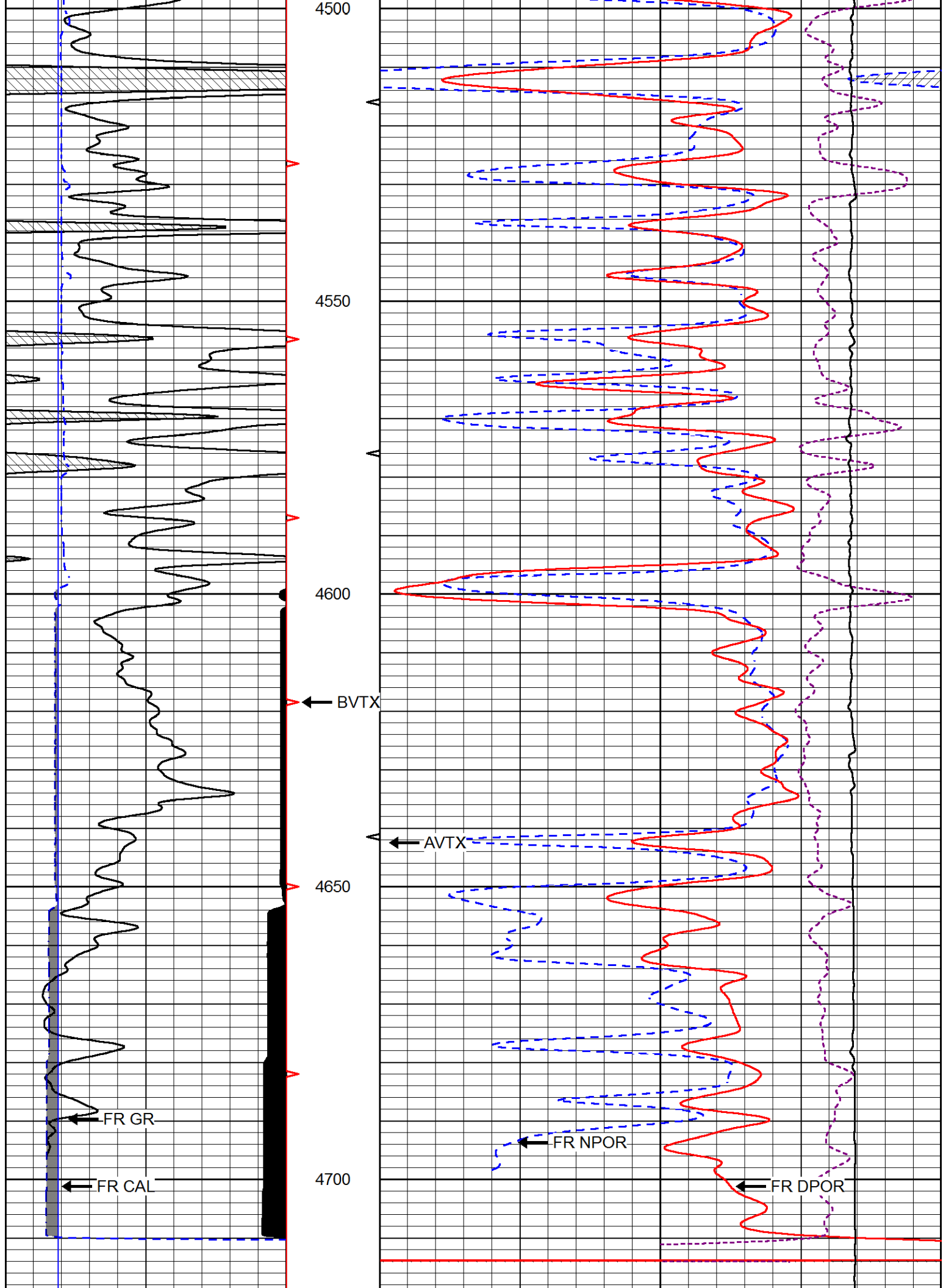












0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

30	CNLS (pu)		-10
30	DPOR (pu)		-10
15000	LINE TENSION (lb)		0
	-0.25	RHOC (g/cc)	0.25



MIDWEST WIRELINE

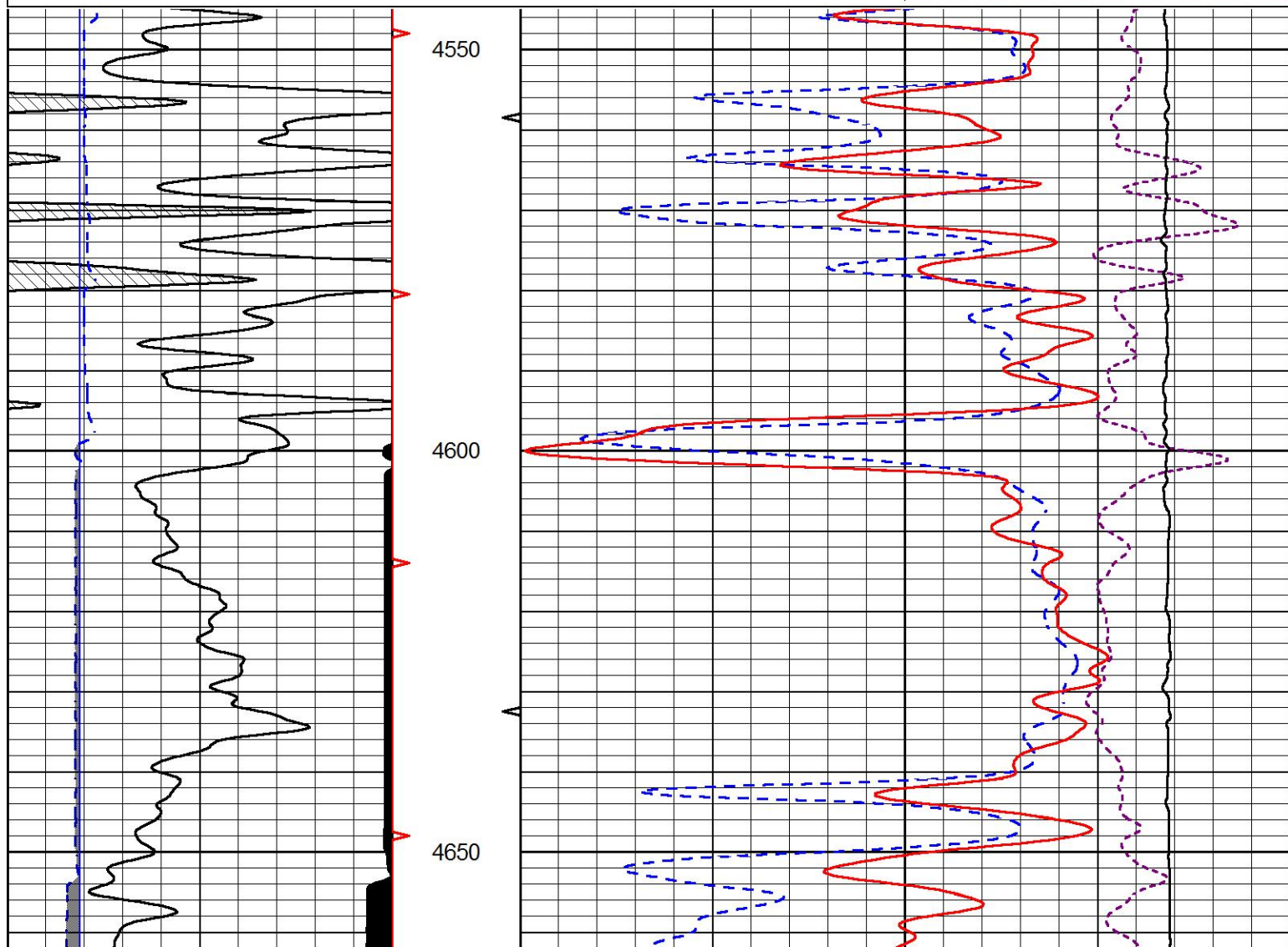
REPEAT SECTION

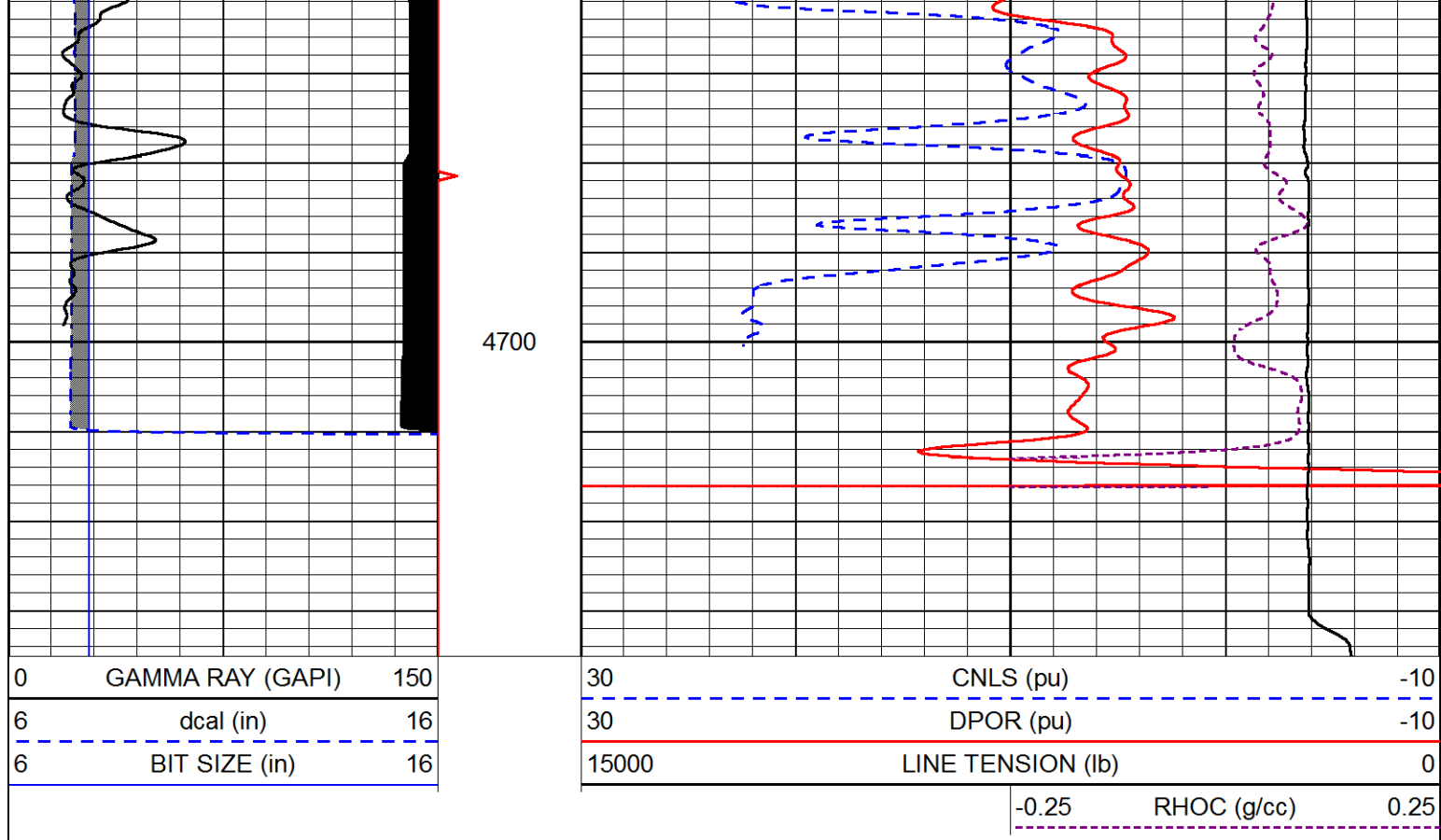
REPEAT PASS

Database File ritchie_stucky_dirks_1.db
Dataset Pathname stackml/pass3.1
Presentation Format cndlspec
Dataset Creation Wed Sep 22 13:59:08 2021
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

30	CNLS (pu)		-10
30	DPOR (pu)		-10
15000	LINE TENSION (lb)		0
	-0.25	RHOC (g/cc)	0.25





Calibration Report

Database File ritchie_stucky_dirks_1.db
 Dataset Pathname stackml/pass5.1
 Dataset Creation Wed Sep 22 14:10:48 2021

Dual Induction Calibration Report

Serial-Model: 959-1032-PSI HIGH TEMP
 Calibration Performed: Wed Jul 14 23:14:54 2021

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.630	-1.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-40.000

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
 Performed: Sat Apr 07 12:01:20 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	9000.0000	-1.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	10000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.3000

Compensated Density Calibration Report

Serial-Model: 915-956-M&W
 Source / Verifier: /

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3668.53	4669.61	cps
Aluminum	2.675	g/cc	710.88	3056.05	cps
Spine Angle = 75.51			Density/Spine Ratio = 0.543		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.05		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Wed Nov 16 11:21:36 2016

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-M&W
 Tool Model: M&W
 Calibration Performed: Mon May 10 06:44:25 2021

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps