



MIDWEST WIRELINE

**DUAL COMPENSATED
POROSITY /
MICRO LOG**

Company Murfin Drilling Company, Inc.
Well Rusco-Davis #4-1
Field Star Southwest
County Ellis
State Kansas

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Location: API #: 15-051-27025-00-00
1000 FNL & 2250 FWL
SEC 1 TWP 12S RGE 20W
Permanent Datum Ground Level Elevation 2045
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing
Other Services
DIL
BHCS
Elevation
K.B. 2050
D.F.
G.L. 2045

Date	2/13/2022						
Run Number	One						
Type Log	CNL / CDL / ML						
Depth Driller	3700						
Depth Logger	3700						
Bottom Logged Interval	3699						
Top Logged Interval	2900						
Type Fluid In Hole	Chemical						
Salinity, PPM CL	4500						
Density	9.3						
Level	Full						
Max. Rec. Temp. F	113						
Operating Rig Time	5 Hours						
Equipment -- Location	P-108 HAYS						
Recorded By	J. Henrickson						
Witnessed By	Jeff Lawler						
Borehole Record		Casing Record					
Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	0	262	8.625	24	0	262
Two	7.875	262	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.

Ellis Kansas
North to Homestead, 2 1/2 East,
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: Jeff Lawler
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\murfir_rusco_davis_4_1.db
 Dataset field/well/stackml/pass4.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	113	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	380	50	Off	3700

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	
MCAL MI MN	19.58 19.58 19.58		ML-PSI STKBL ML (402)	7.58	4.00	65.00	
RLL3F RLL3	15.50 15.50		DIL-M&W (504 HT)	18.25	3.50	220.00	
CILD	8.33						

CILM 4.50

SP 0.20

Dataset: murfin_rusco_davis_4_1.db: field/well/stackml/pass4.1
 Total length: 42.33 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in



MIDWEST WIRELINE

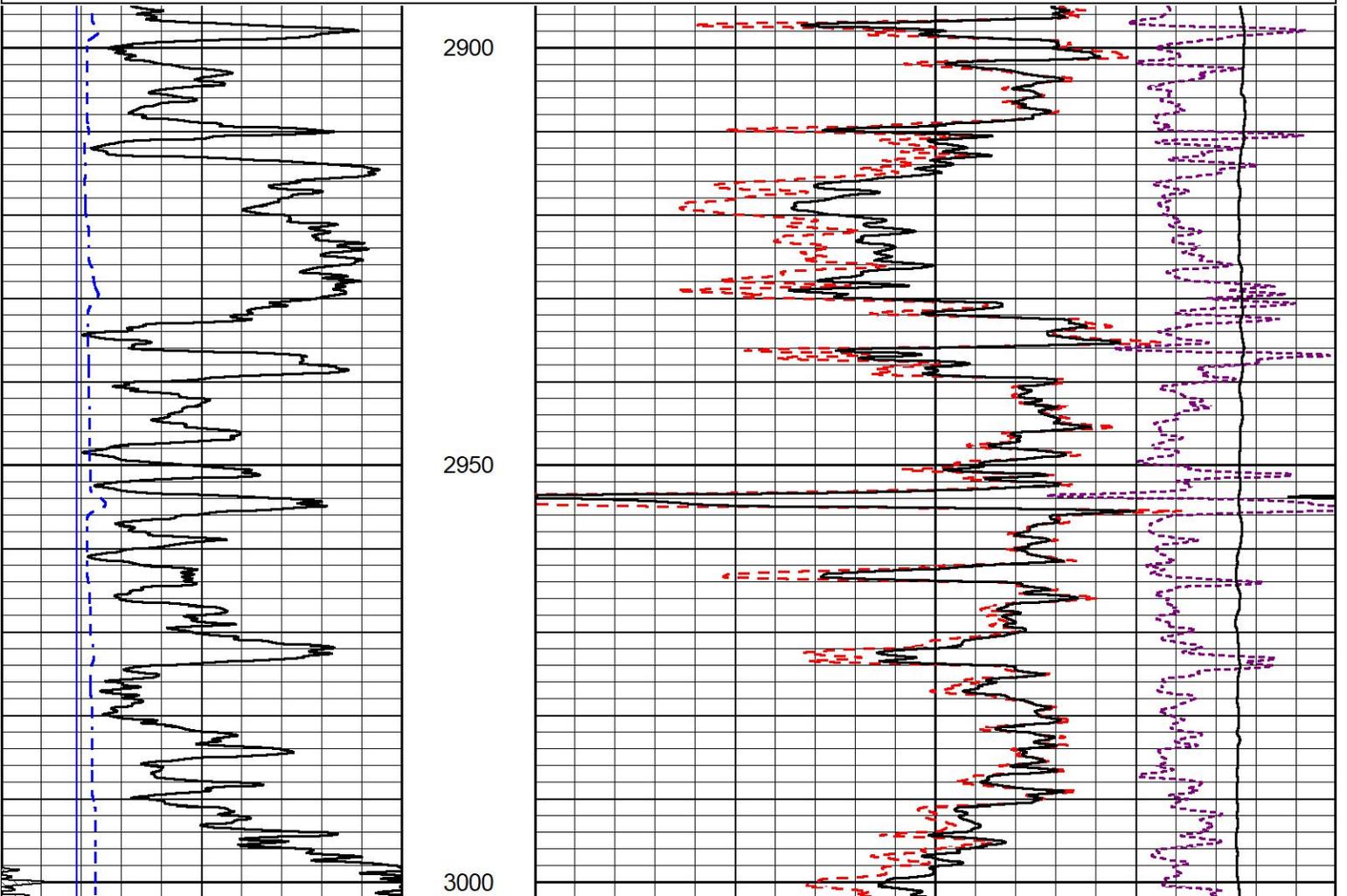
5" SCALE BULK DENSITY

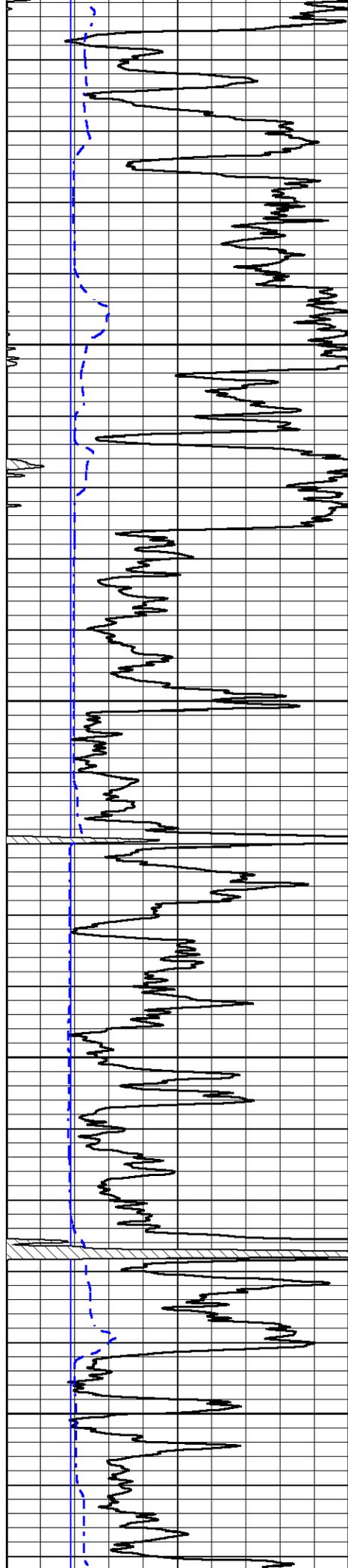
MAIN PASS

Database File murfin_rusco_davis_4_1.db
 Dataset Pathname stackml/pass3.1
 Presentation Format _cdl
 Dataset Creation Sun Feb 13 11:08:18 2022
 Charted by Depth in Feet scaled 1:240

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



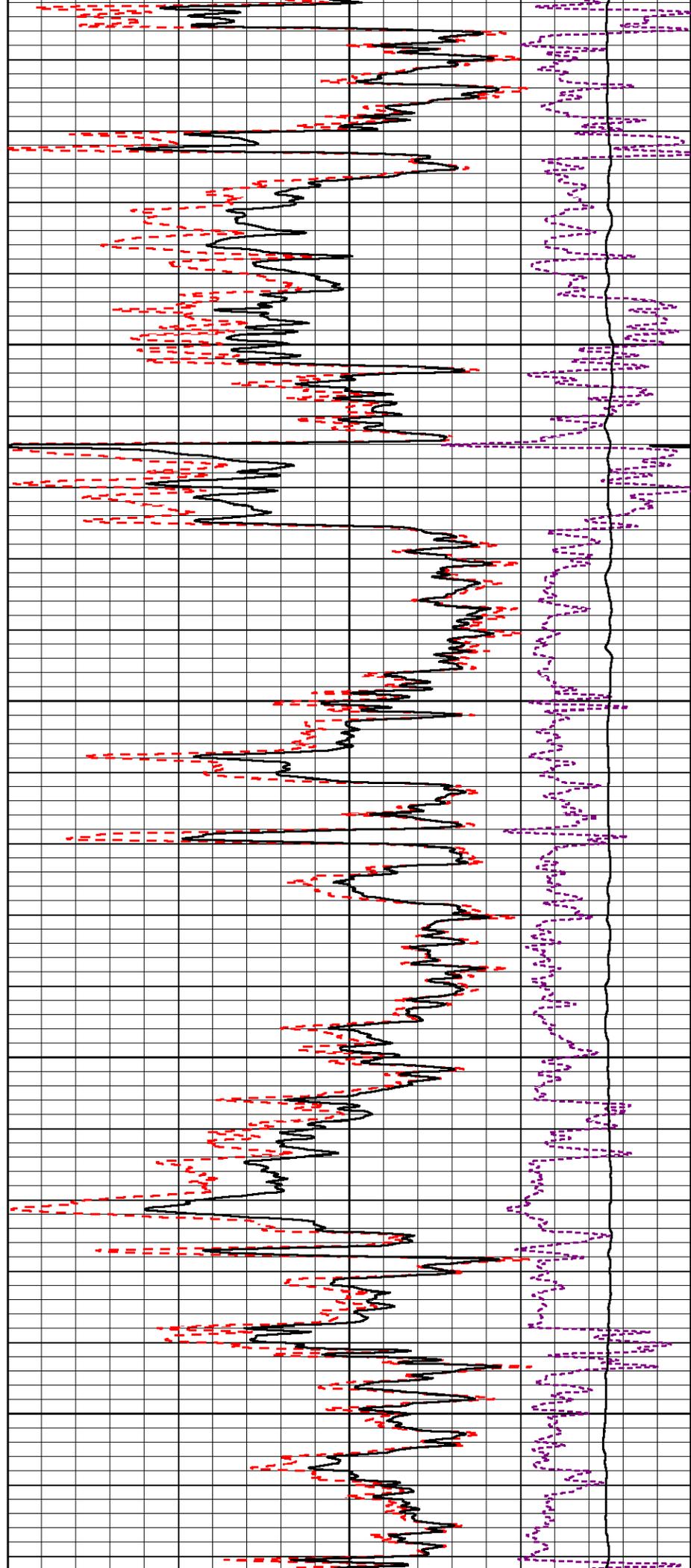


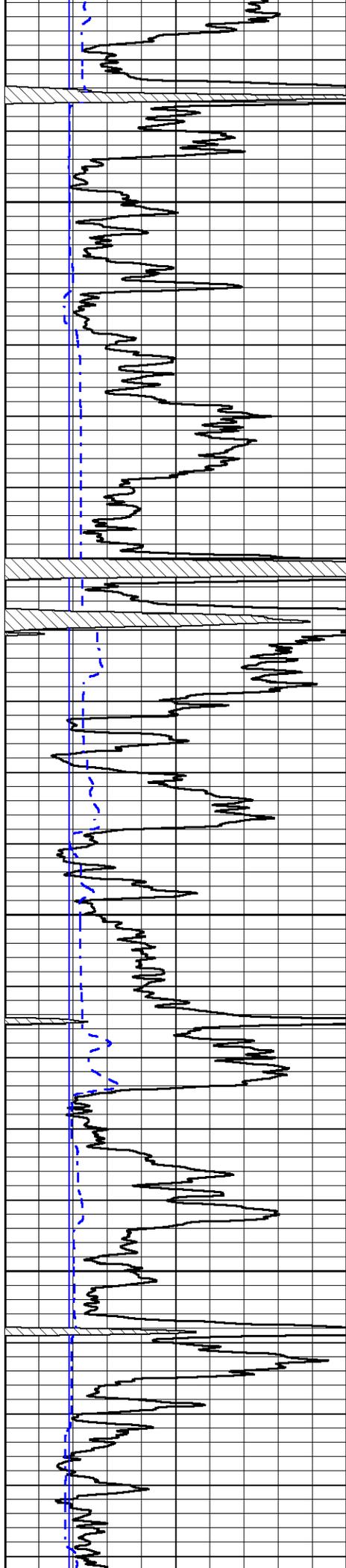
3050

3100

3150

3200



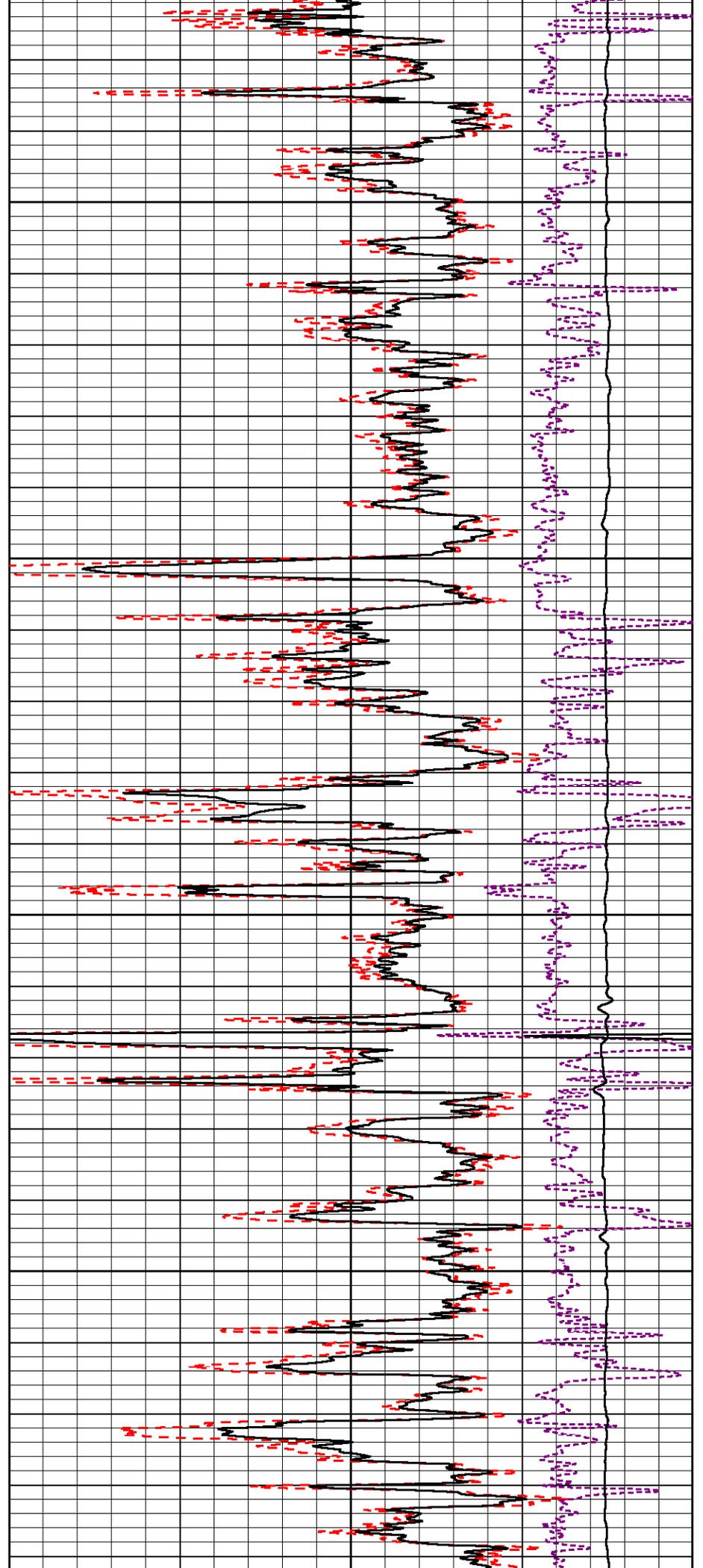


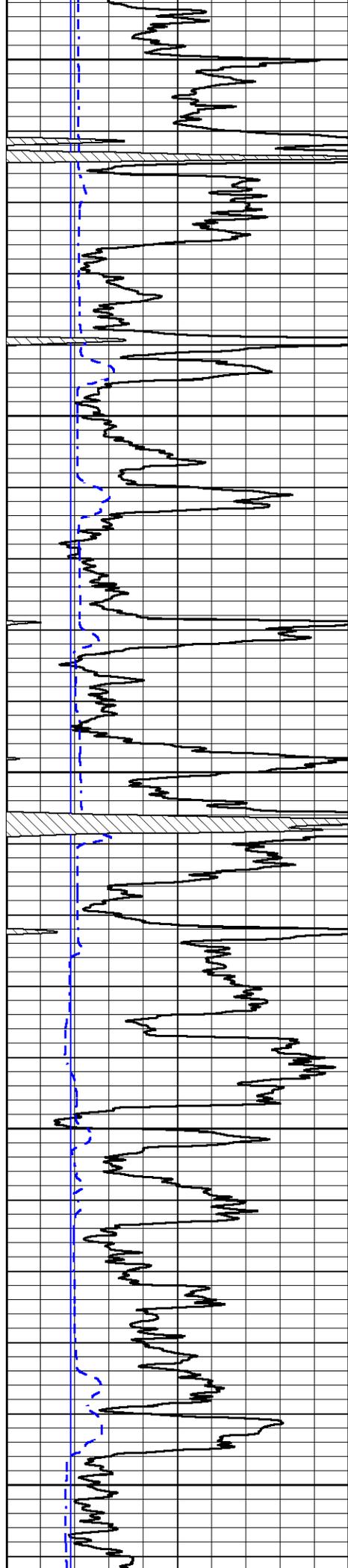
3250

3300

3350

3400





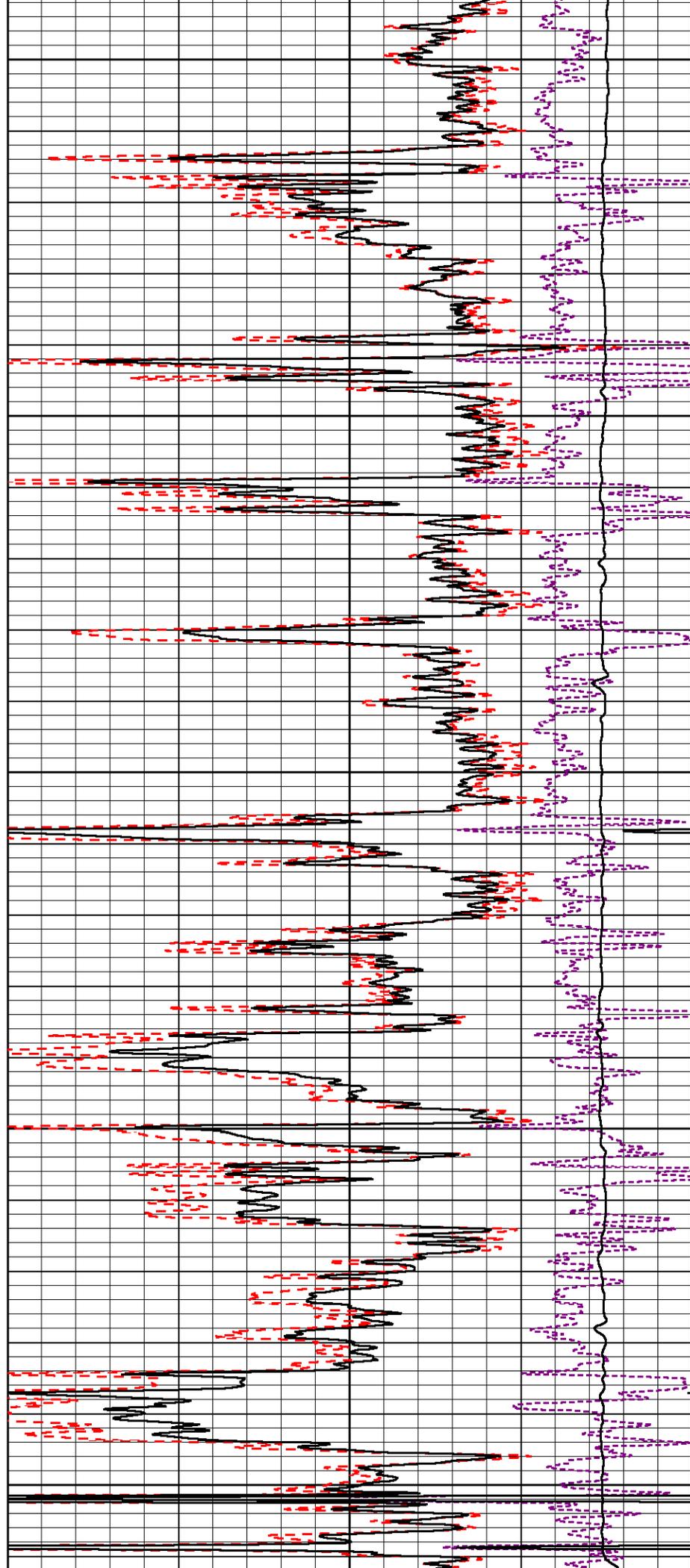
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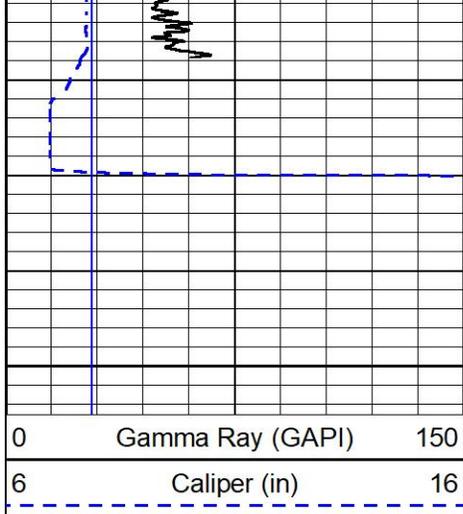
3500

3550

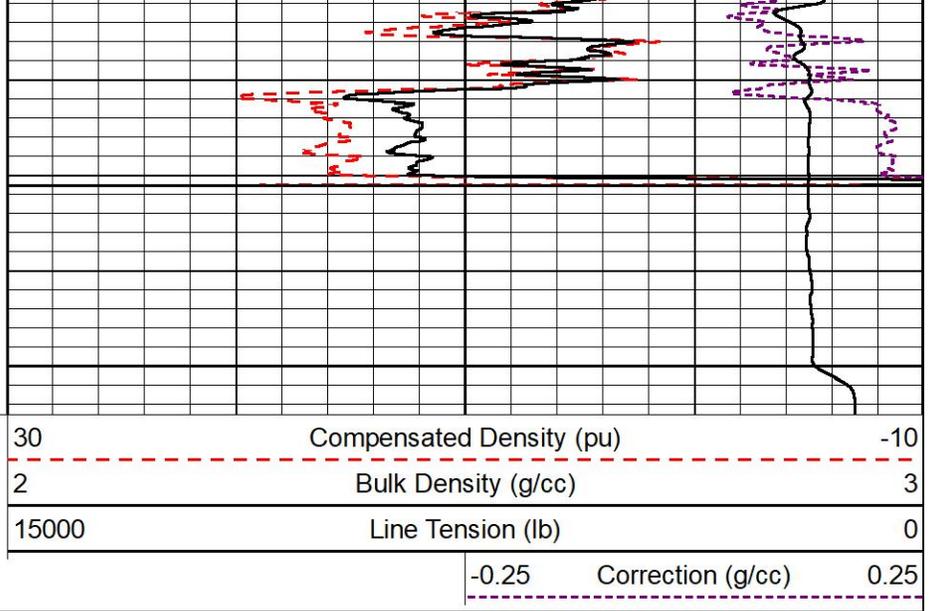
3600

3650





3700



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



MIDWEST WIRELINE

DETAIL SECTION

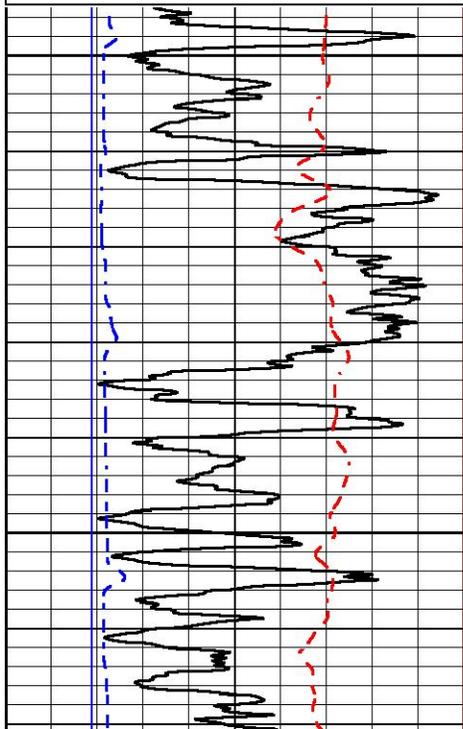
MAIN PASS

Database File murfin_rusco_davis_4_1.db
 Dataset Pathname stackml/pass4.1
 Presentation Format _CNDLS~2
 Dataset Creation Sun Feb 13 11:08:51 2022
 Charted by Depth in Feet scaled 1:240

0	Gammy Ray (GAPI)	150
6	Caliper (in)	16
-200	SP (mV)	0

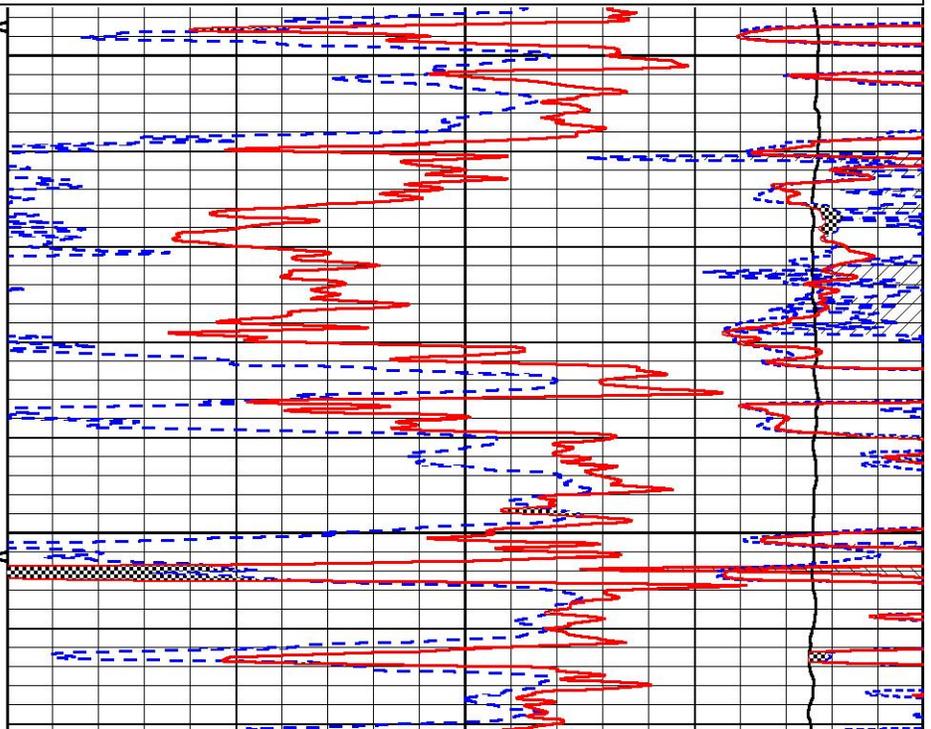
30	Compensated Neutron (pu)	-10
30	Compensated Density (pu)	-10
15000	Line Tension (lb)	0

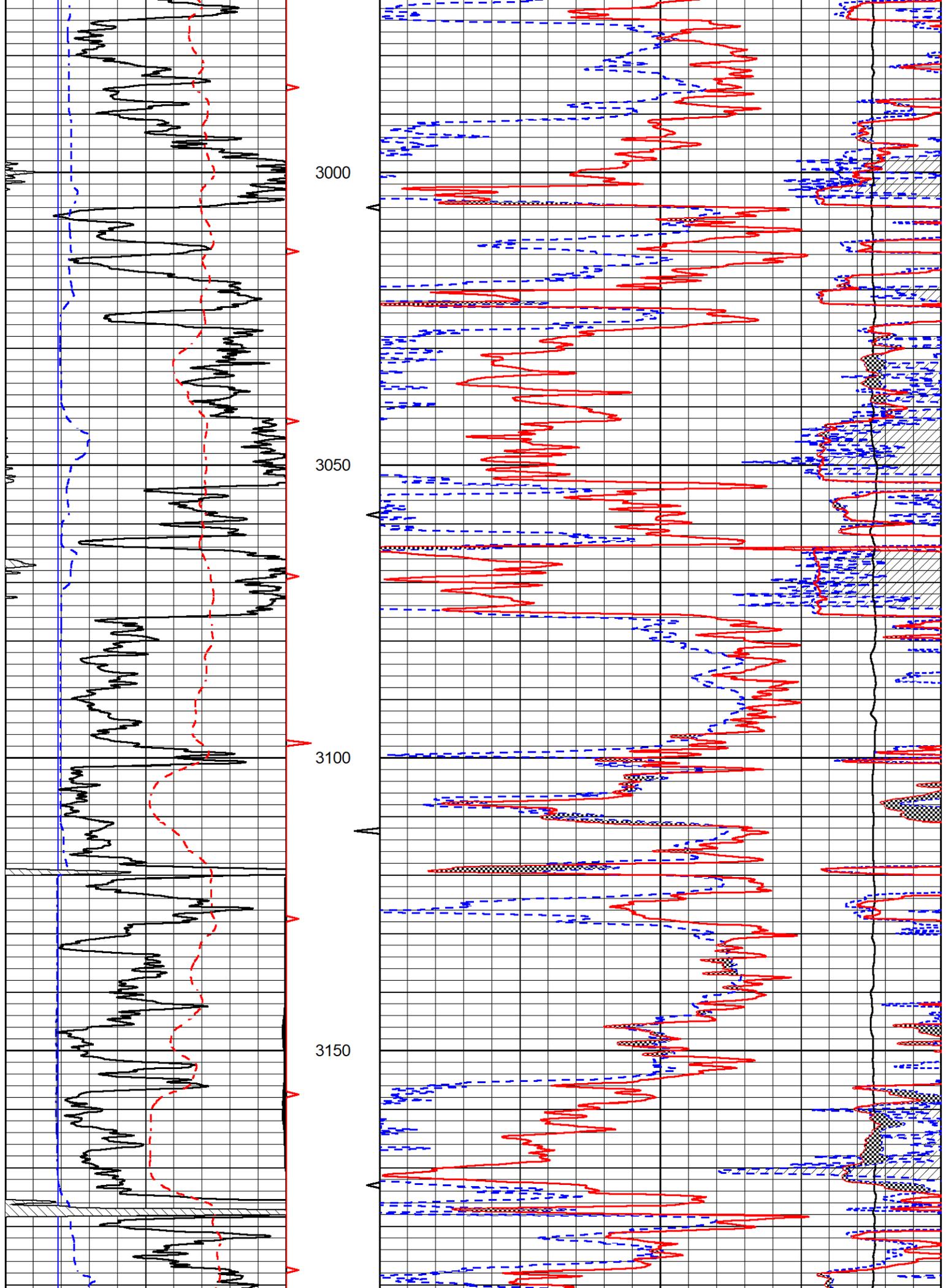
Micro Normal	
0	(Ohm-m) 20
Micro Inverse	
0	(Ohm-m) 20

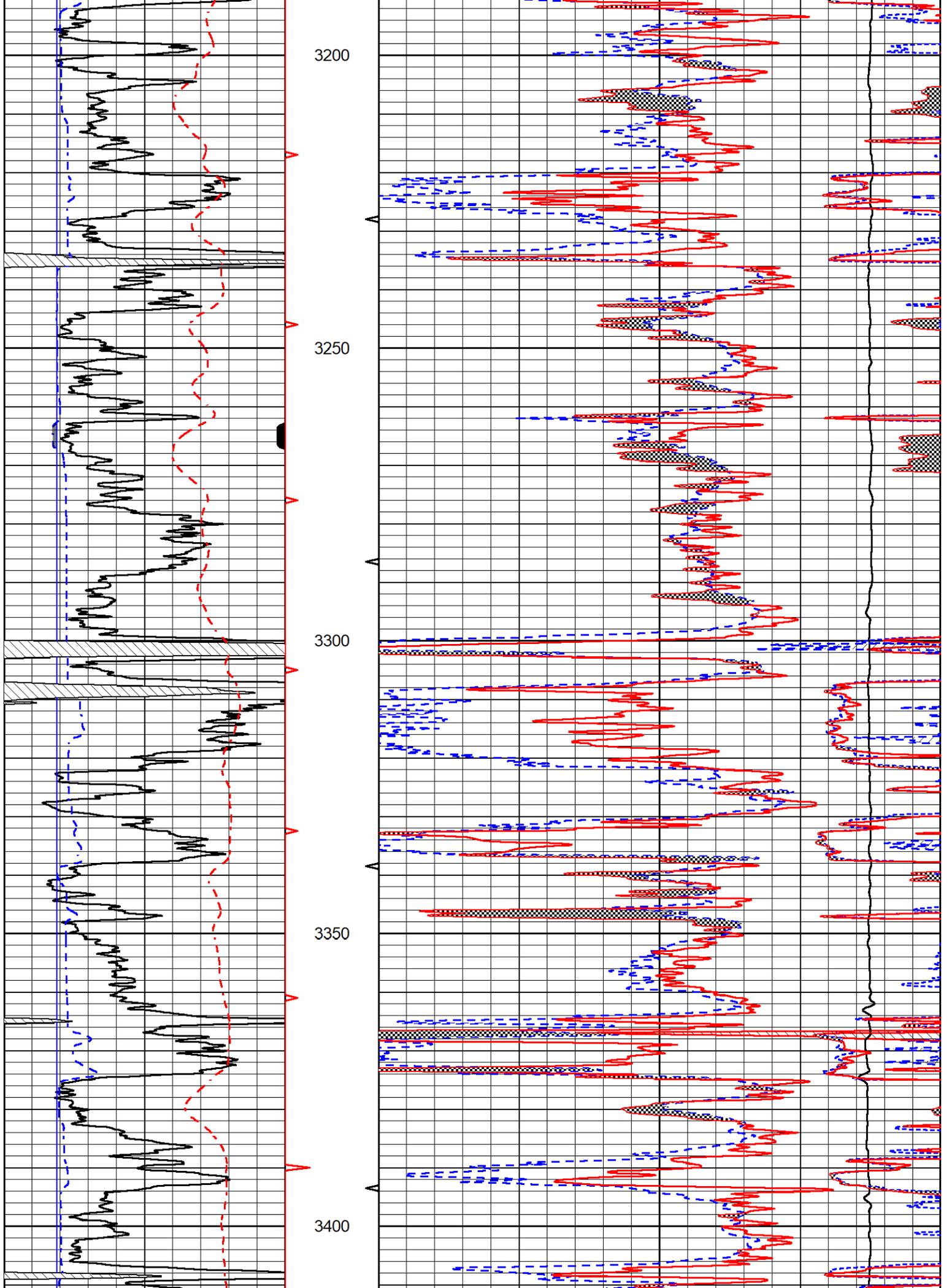


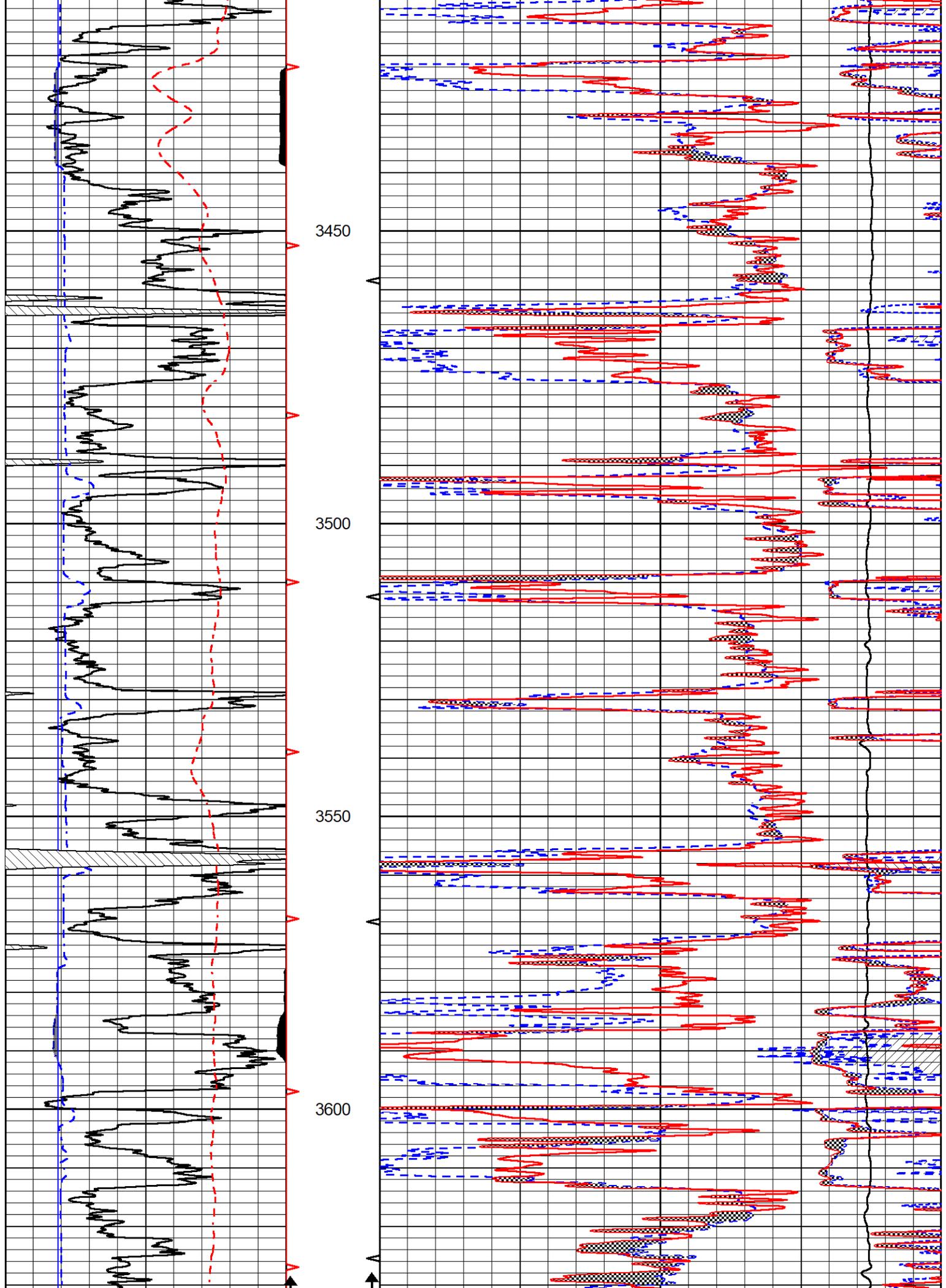
2900

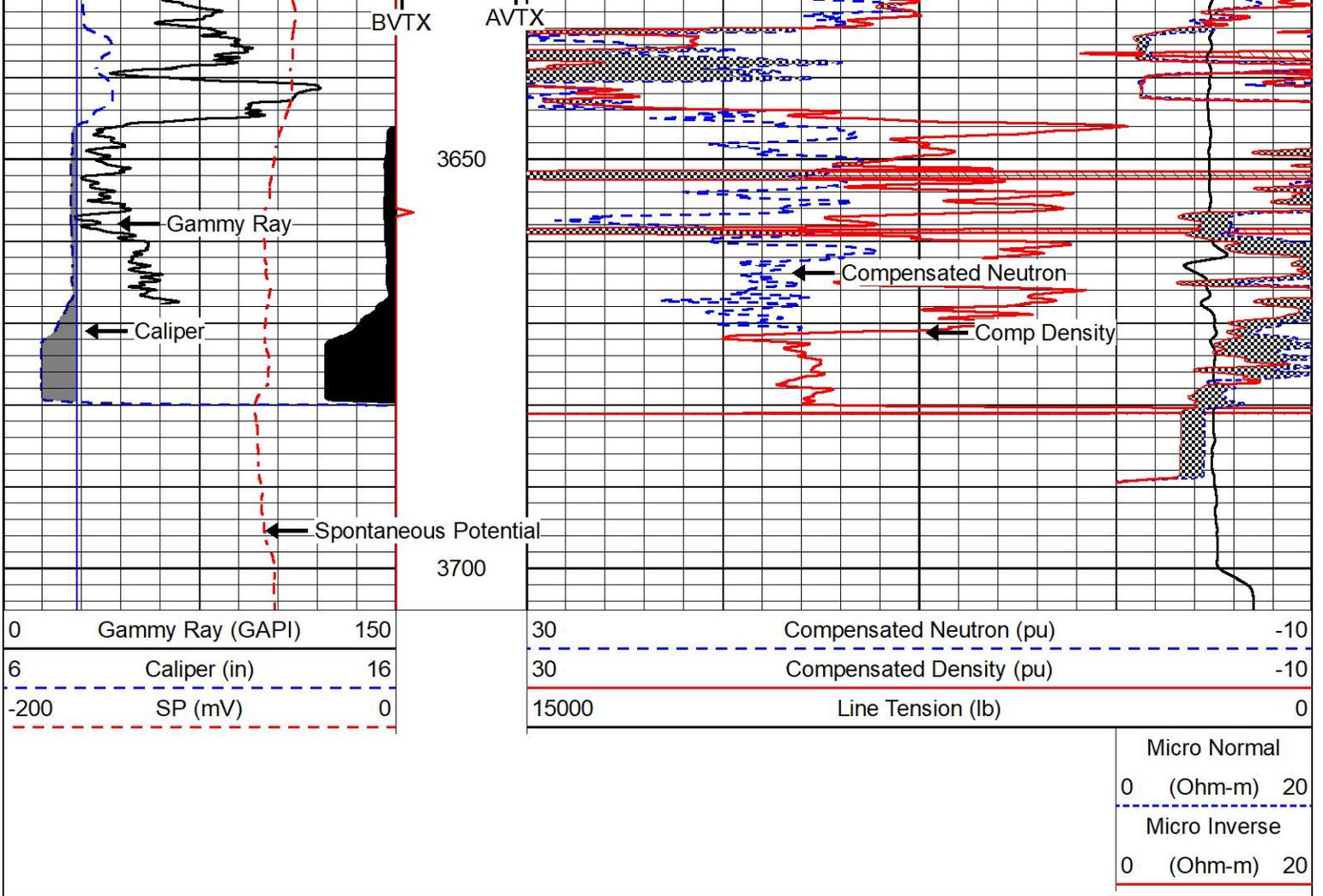
2950







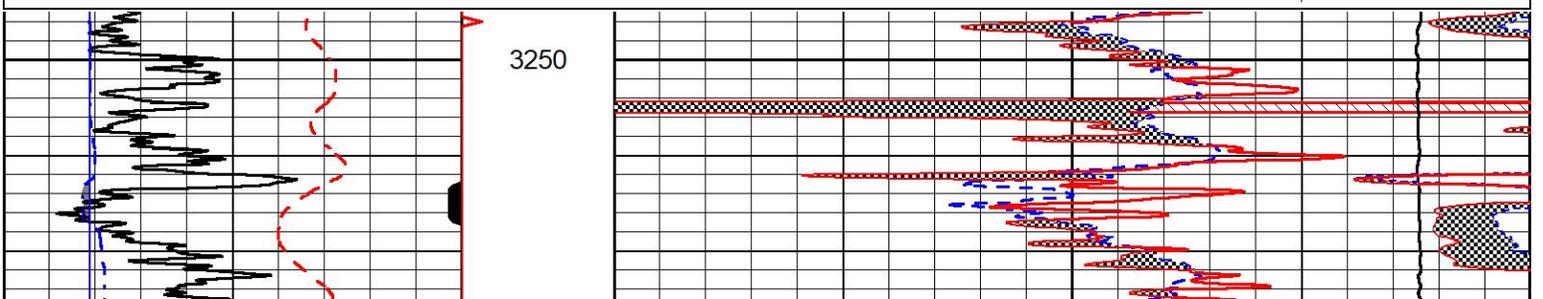
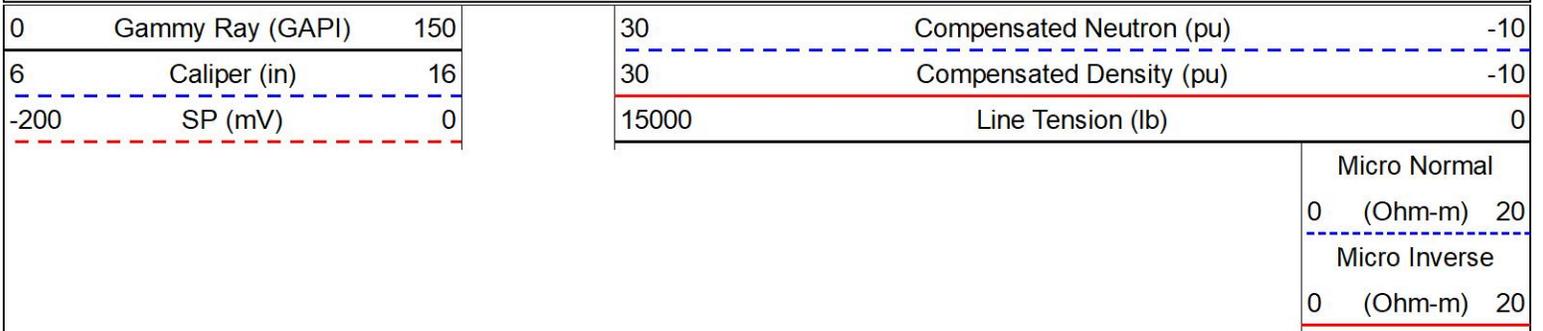


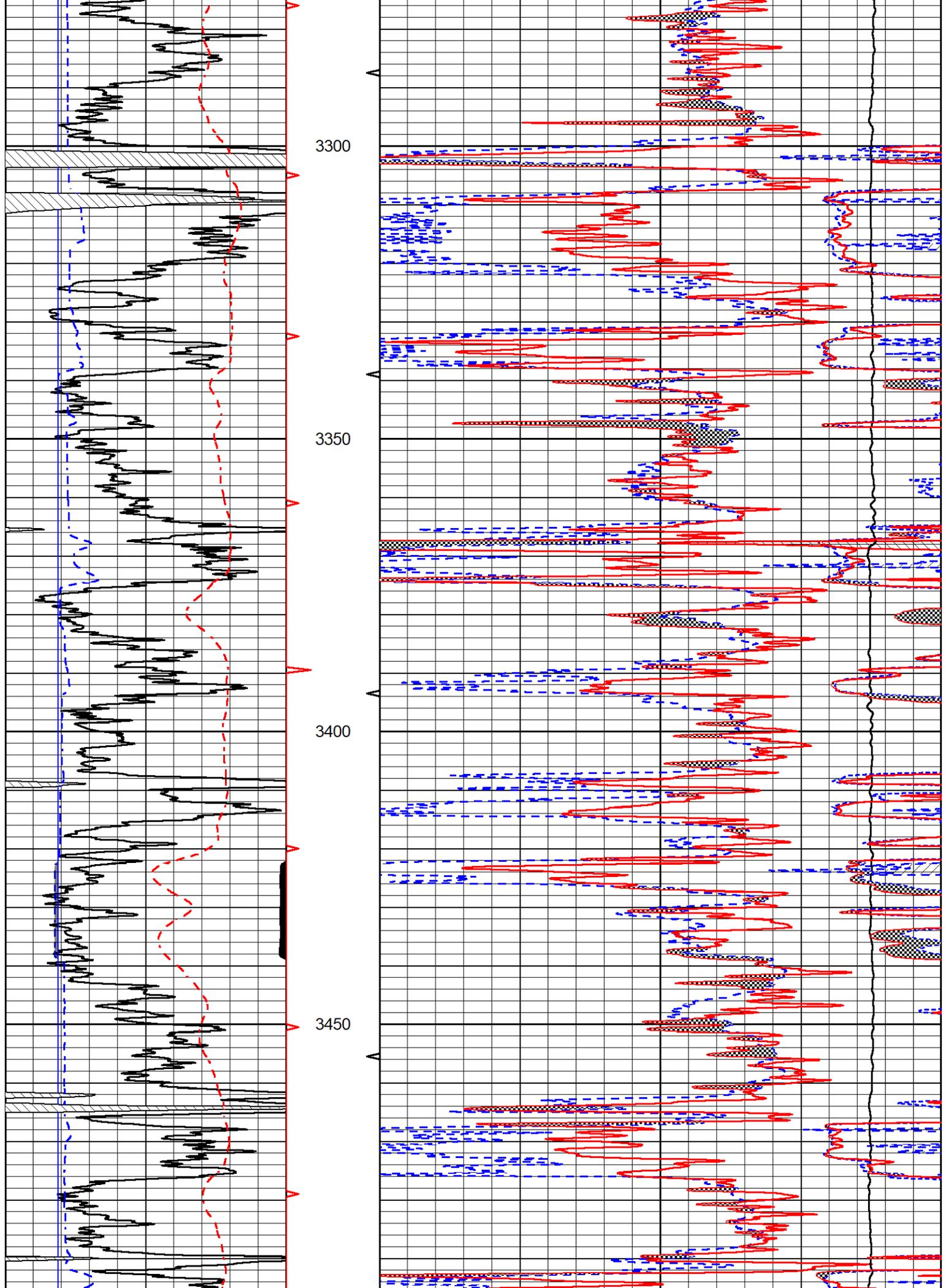


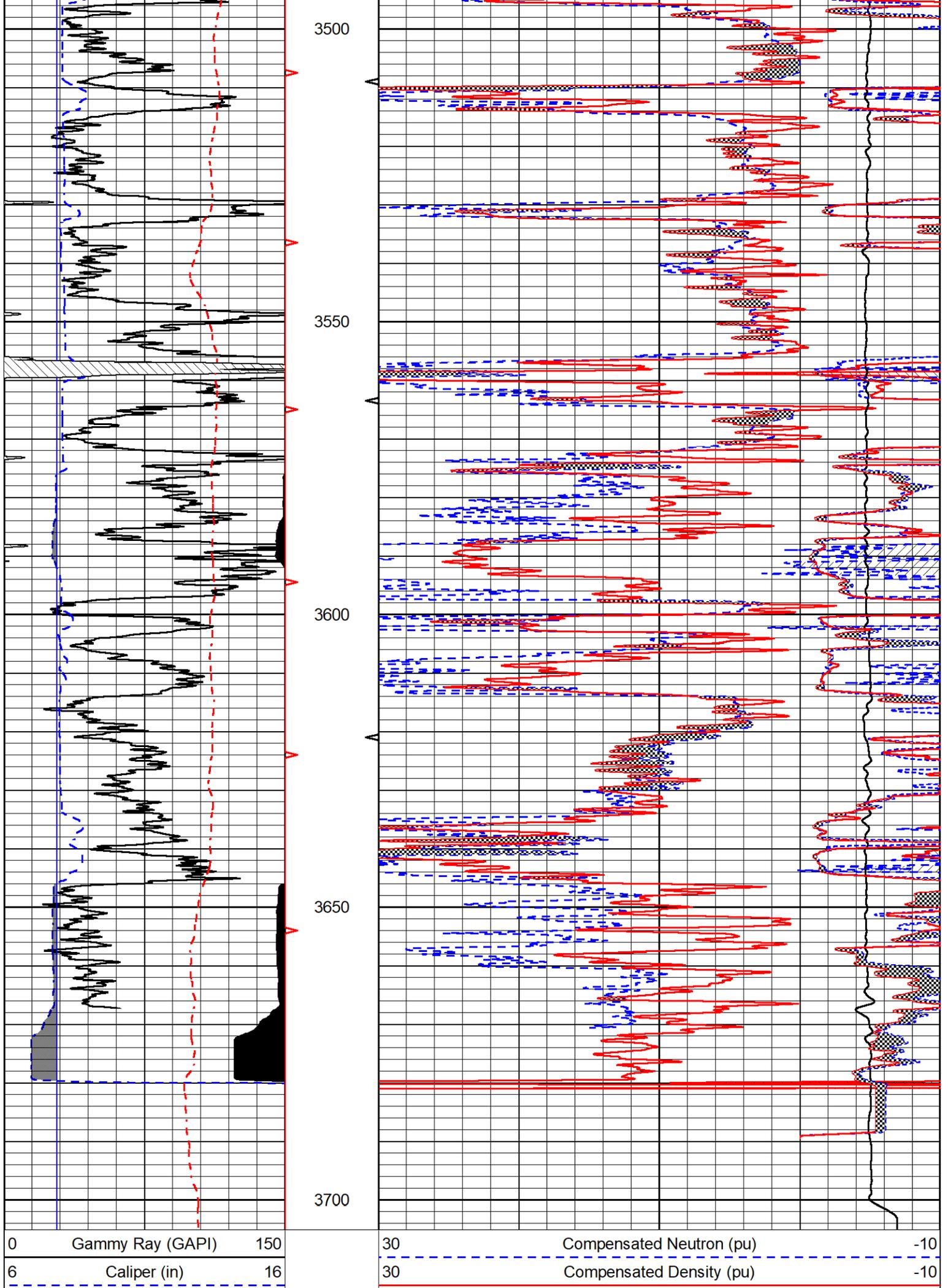
REPEAT SECTION

REPEAT PASS

Database File: murfin_rusco_davis_4_1.db
 Dataset Pathname: stackml/pass2.1
 Presentation Format: _CNDLS~2
 Dataset Creation: Sun Feb 13 10:34:34 2022
 Charted by: Depth in Feet scaled 1:240







-200	SP (mV)	0	15000	Line Tension (lb)	0
				Micro Normal	
				0 (Ohm-m)	20
				Micro Inverse	
				0 (Ohm-m)	20

Calibration Report	
Database File	murfin_rusco_davis_4_1.db
Dataset Pathname	stackml/pass4.1
Dataset Creation	Sun Feb 13 11:08:51 2022

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	-19.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-45.500

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	27000.0000	-1.0000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	20000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1520	-131.2000

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 #:	N14000

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	Murfin Drilling Company, Inc.
Well	Rusco-Davis #4-1
Field	Star Southwest
County	Ellis
State	Kansas