



DUAL COMP POROSITY LOG

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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.

39.761400775 100.286364585

Jennings Kansas

5 North, 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

This Log Record Was Witnessed By

Engineer: J. Henrickson

Primary Witness: Larry Nicholson

Operator:

Secondary Witness:

Operator:

Secondary Witness:

Operator:

Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 114	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV 780	degF 50	Off	ft 3828

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					
CILD	8.33		DIL-M&W (504 HT)	18.25	3.50	220.00

CILM

4.50

SP

0.20

Dataset: cobalt_heilman_trust_1_30.db: field/well/stackml/pass3.1
 Total length: 42.33 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in



MIDWEST WIRELINE

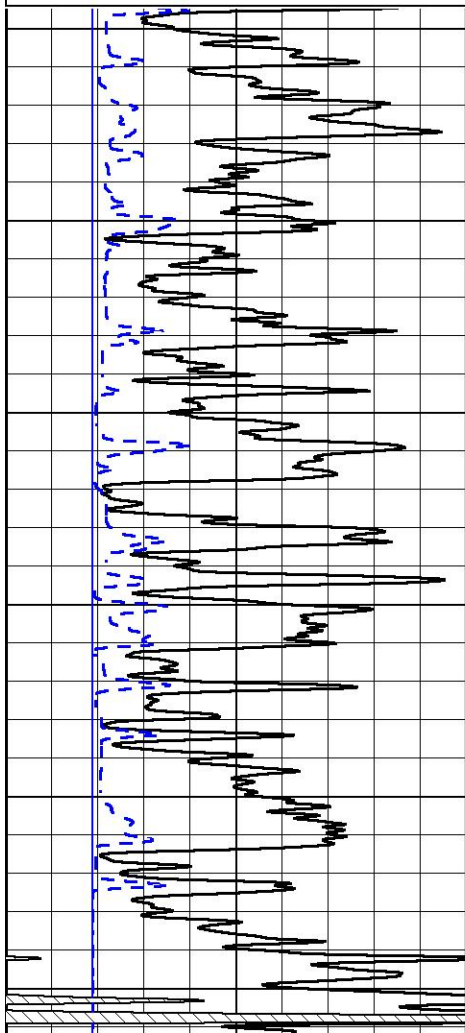
2" SCALE BULK DENSITY

MAIN PASS

Database File cobalt_heilman_trust_1_30.db
 Dataset Pathname stackml/pass3.1
 Presentation Format _cdl
 Dataset Creation Fri Jan 28 17:34:13 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



3200

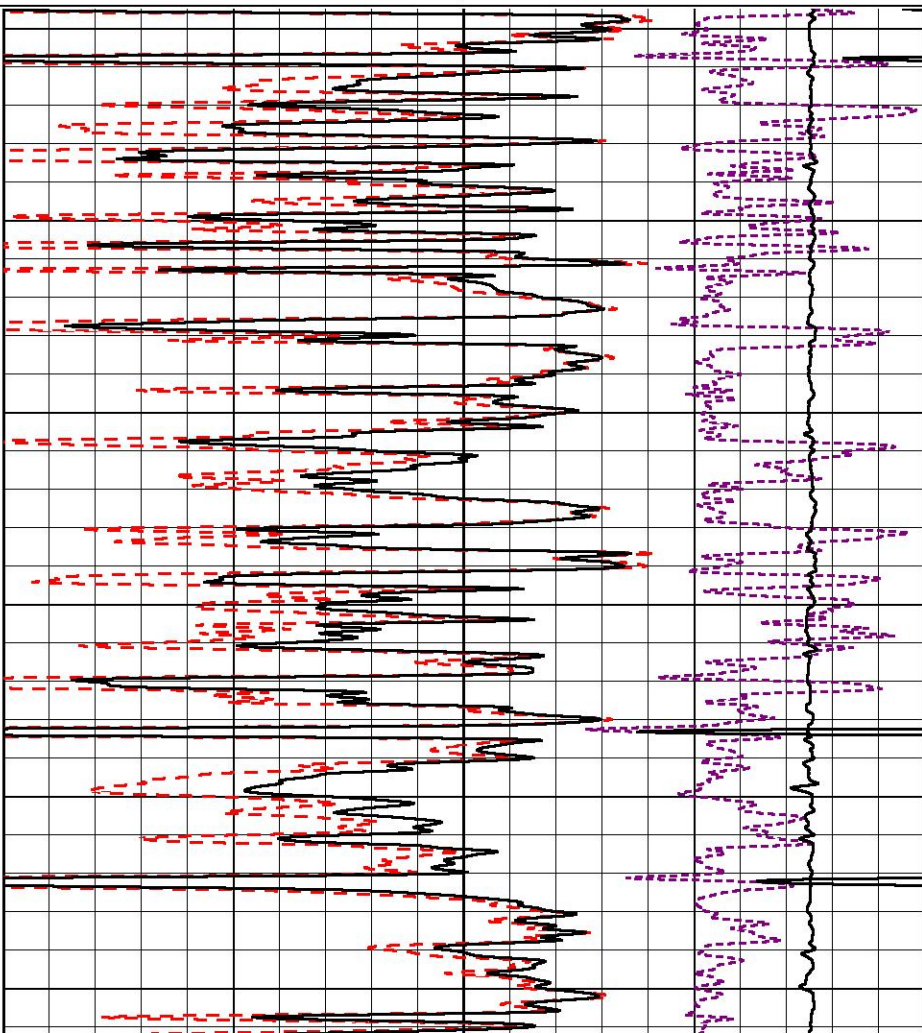
3250

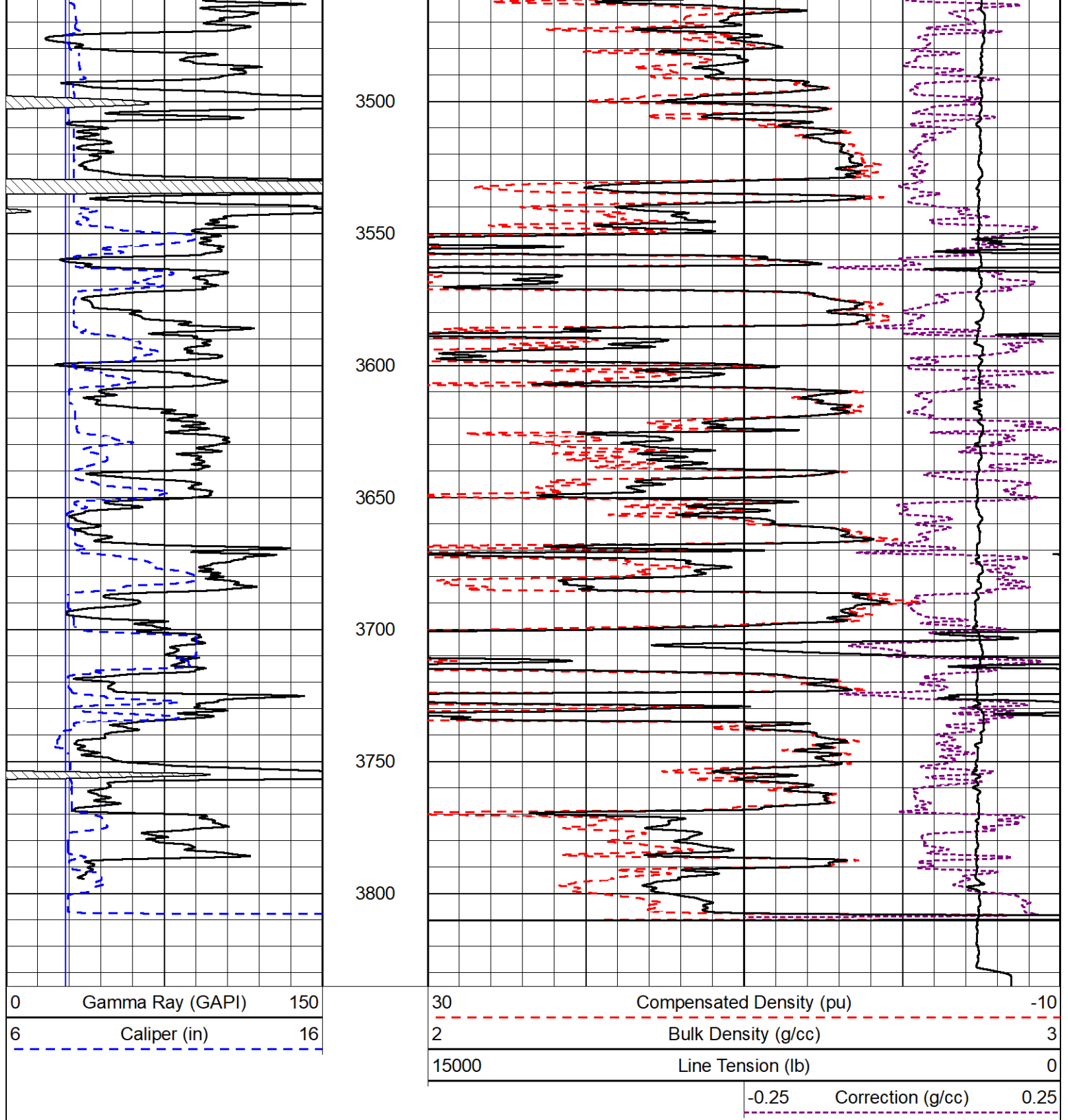
3300

3350

3400

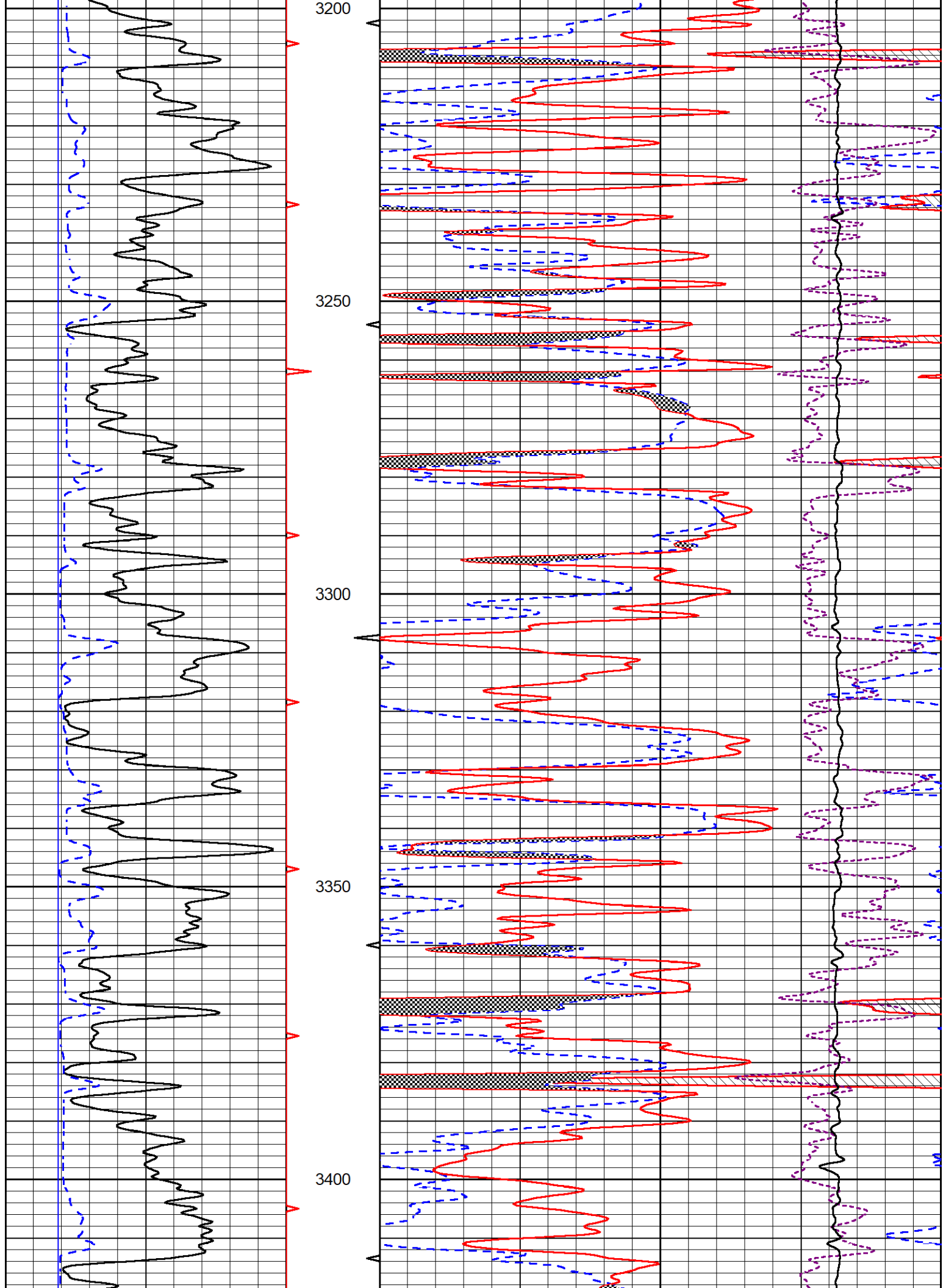
3450

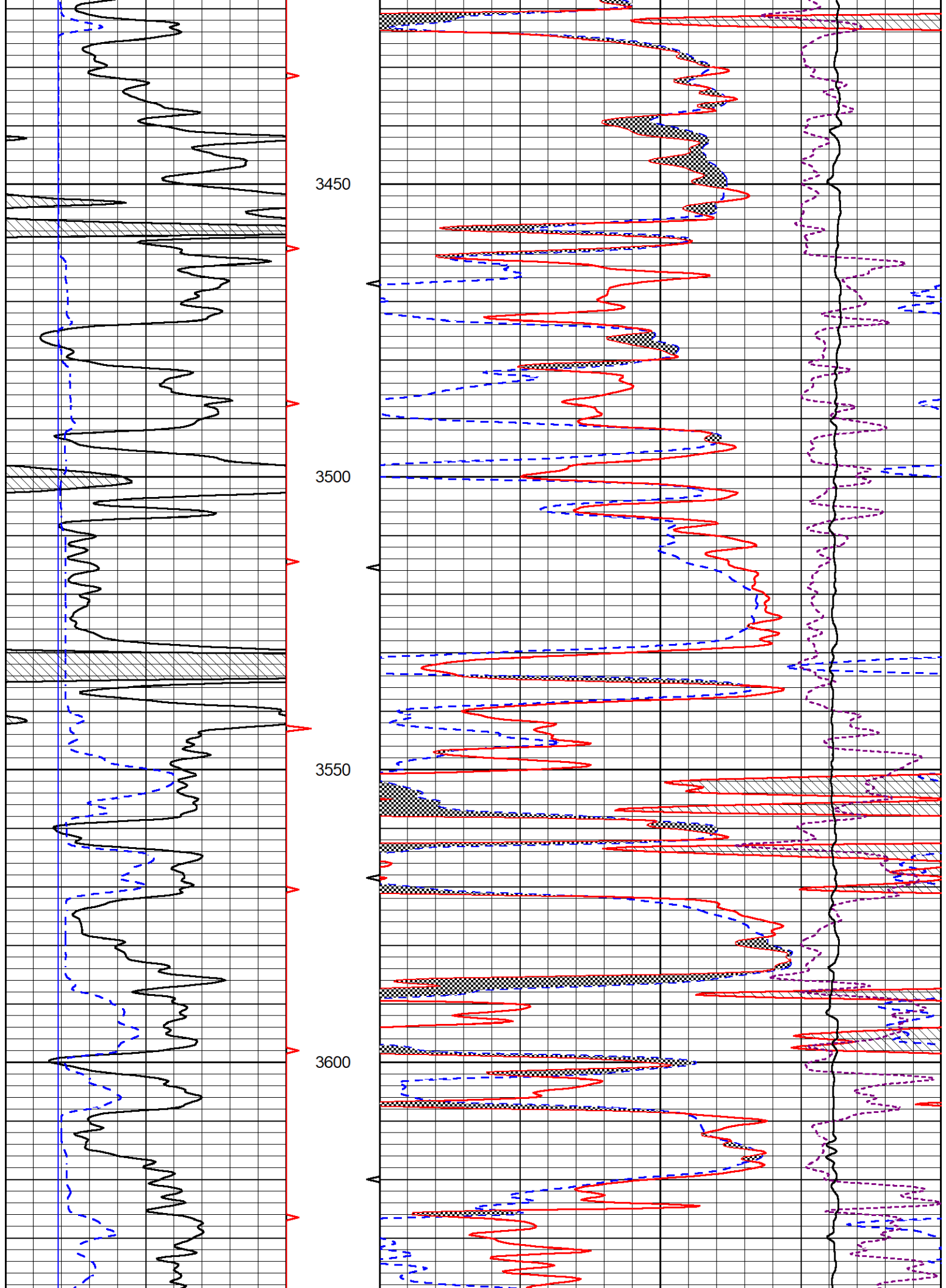


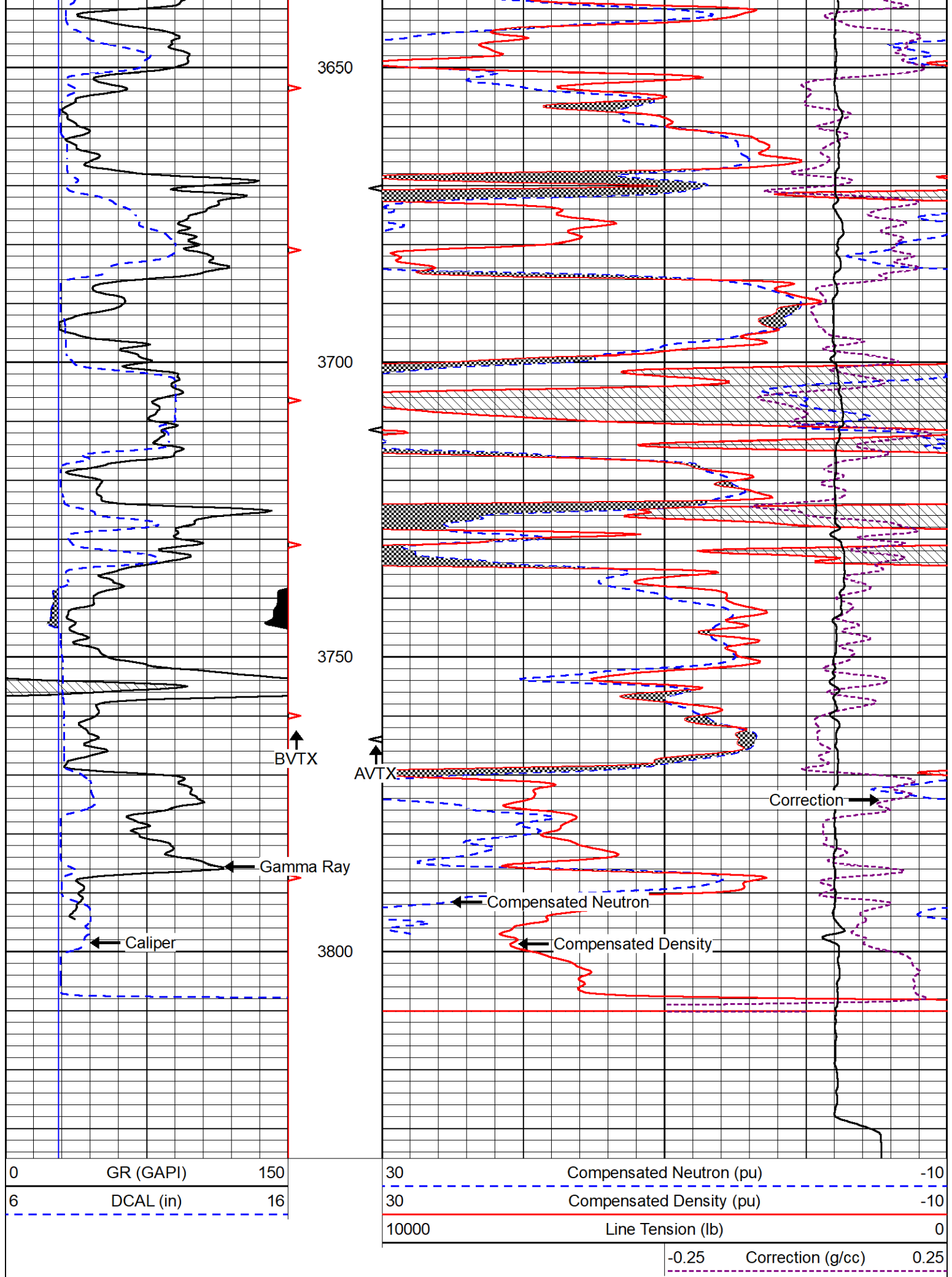


Database File	cobalt_heilman_trust_1_30.db				
Dataset Pathname	stackml/pass4.1				
Presentation Format	_CNDLS~1				
Dataset Creation	Fri Jan 28 17:35:58 2022				
Charted by	Depth in Feet scaled 1:240				

0	GR (GAPI)	150	30	Compensated Neutron (pu)	-10	
6	DCAL (in)	16	30	Compensated Density (pu)	-10	
			10000	Line Tension (lb)	0	
				-0.25	Correction (g/cc)	0.25









MIDWEST WIRELINE

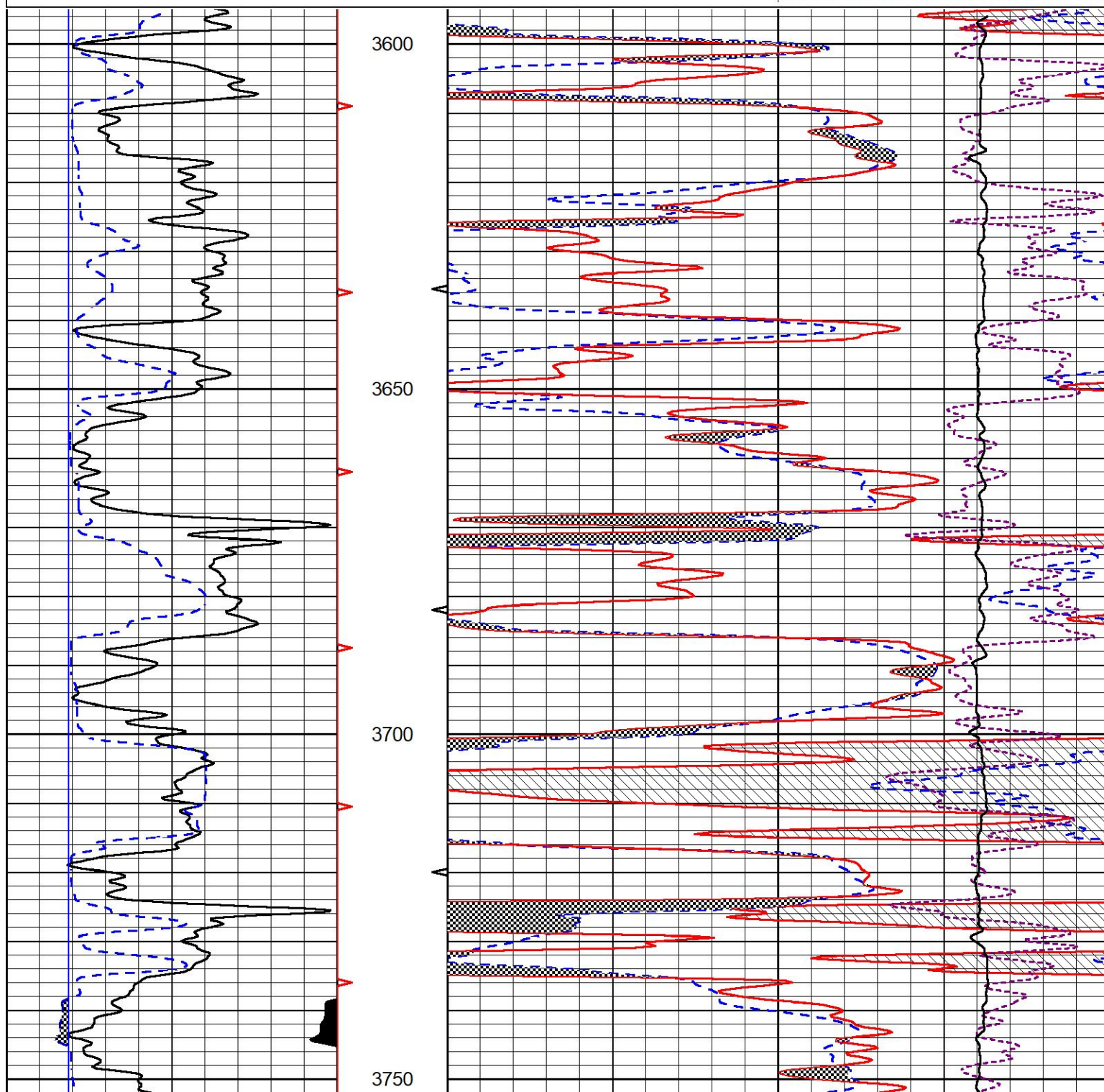
REPEAT SECTION

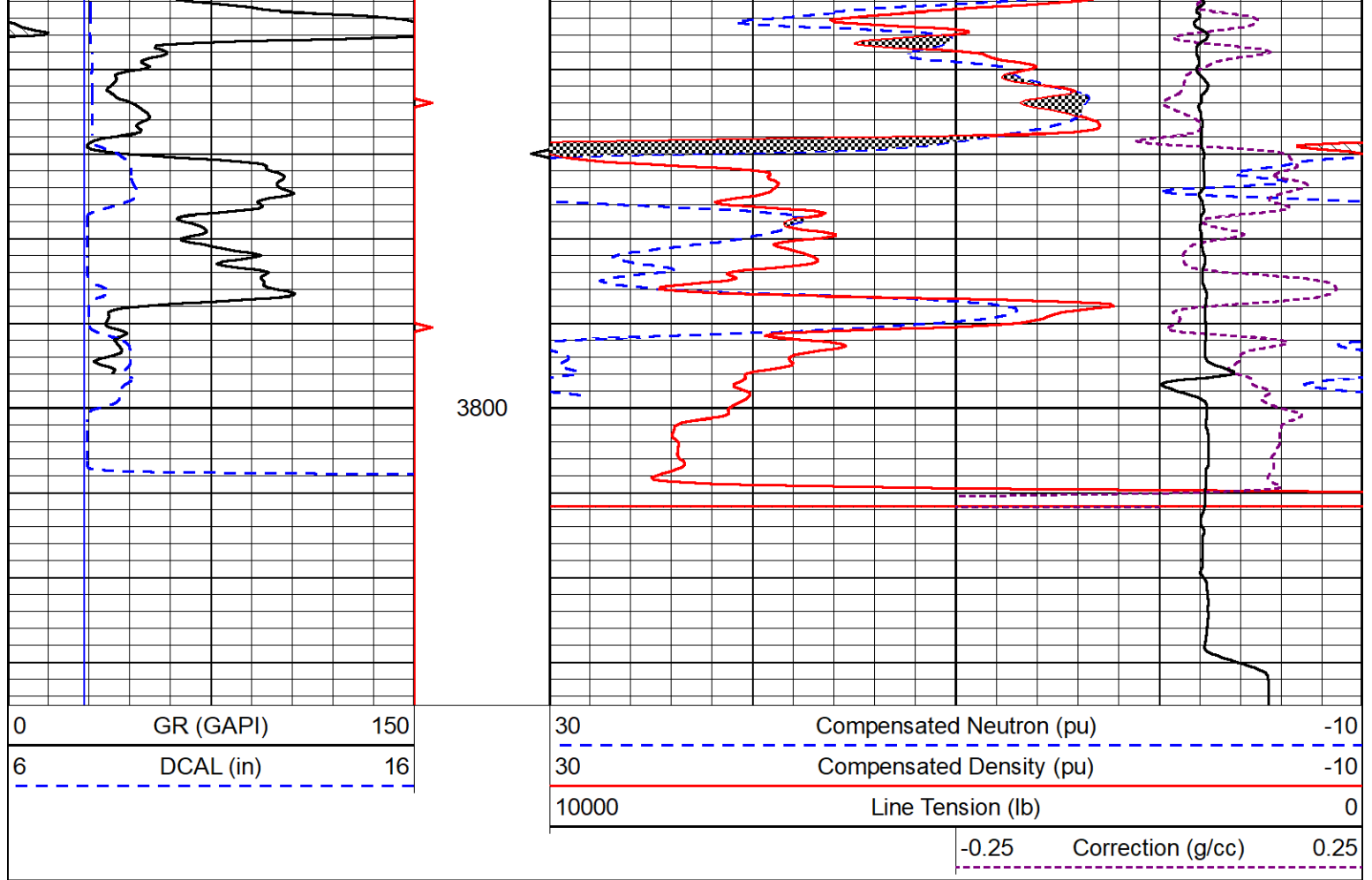
REPEAT PASS

Database File cobalt_heilman_trust_1_30.db
Dataset Pathname stackml/pass2.1
Presentation Format _CNDLS~1
Dataset Creation Fri Jan 28 17:35:12 2022
Charted by Depth in Feet scaled 1:240

0 GR (GAPI) 150
6 DCAL (in) 16

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





Calibration Report

Database File cobalt_heilman_trust_1_30.db
Dataset Pathname stackml/pass4.1
Dataset Creation Fri Jan 28 17:35:58 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	12000.0000	-1.0000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	10000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1520	-131.4000

Compensated Density Calibration Report

Serial-Model:
Source #:
Master Calibration Performed:

303-03-M&W
21170B
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:
Source #:
Master Calibration Performed:

210-M&W
N-1238
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 Heilman Trust #1-30
Field Wildcat
County Decatur
State Kansas