



PIONEER

Pioneer Energy Services

DUAL COMP POROSITY LOG

Company VAL ENERGY, INC.

Well KOUGH MATTSON UNIT #1-4

Field

County THOMAS

State KANSAS

Location: API #: 15-193-20981-00-00

Other Services

SE NE SE SW
893' FSL & 2517' FWL

SEC 4 TWP 8S RGE 35W

Permanent Datum GROUND LEVEL Elevation 3311'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 3316'
D.F. N/A
G.L. 3311'

Date 12/10/2016

Run Number ONE

Type Log CNL/CDL

Depth Driller 4870'

Depth Logger 4872'

Bottom Logged Interval 4851'

Top Logged Interval 3800'

Type Fluid In Hole CHEMICAL

Salinity, PPM CL 5500

Density 9.2

Level FULL

Max. Rec. Temp. F 125 DEG F

Operating Rig Time 4 1/2 HOURS

Equipment -- Location 108 COLBY

Recorded By T. MARTIN

Witnessed By TIM PRIEST

Borehole Record

Casing Record

Run No. Bit From To Size Wgt. From To

ONE 12.25" 00' 264' 8.625" 23# 00' 264'

TWO 7.875" 264' TD

<<< Fold Here >>>

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

LEVANT, KS, 1 1/2 W ON R RD,
CROSS RR AND STAY N INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

Engineer: T. MARTIN
Operator: C. SCHOENROGGE
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: TIM PRIEST
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\val_koughmattsonunit_#1-4.db
Dataset field/well/stack/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	125	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	-375	20		4872



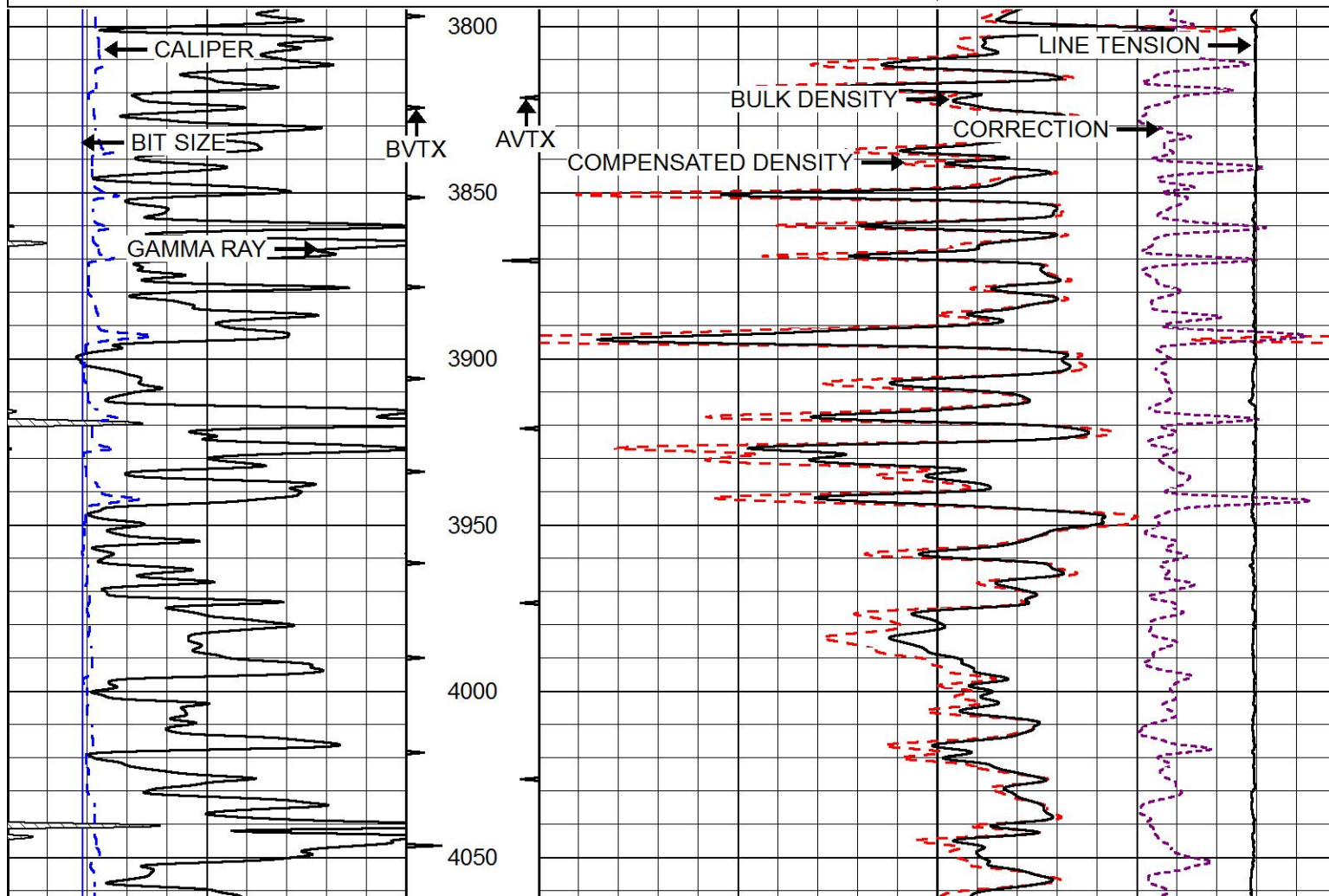
2" SCALE BULK DENSITY

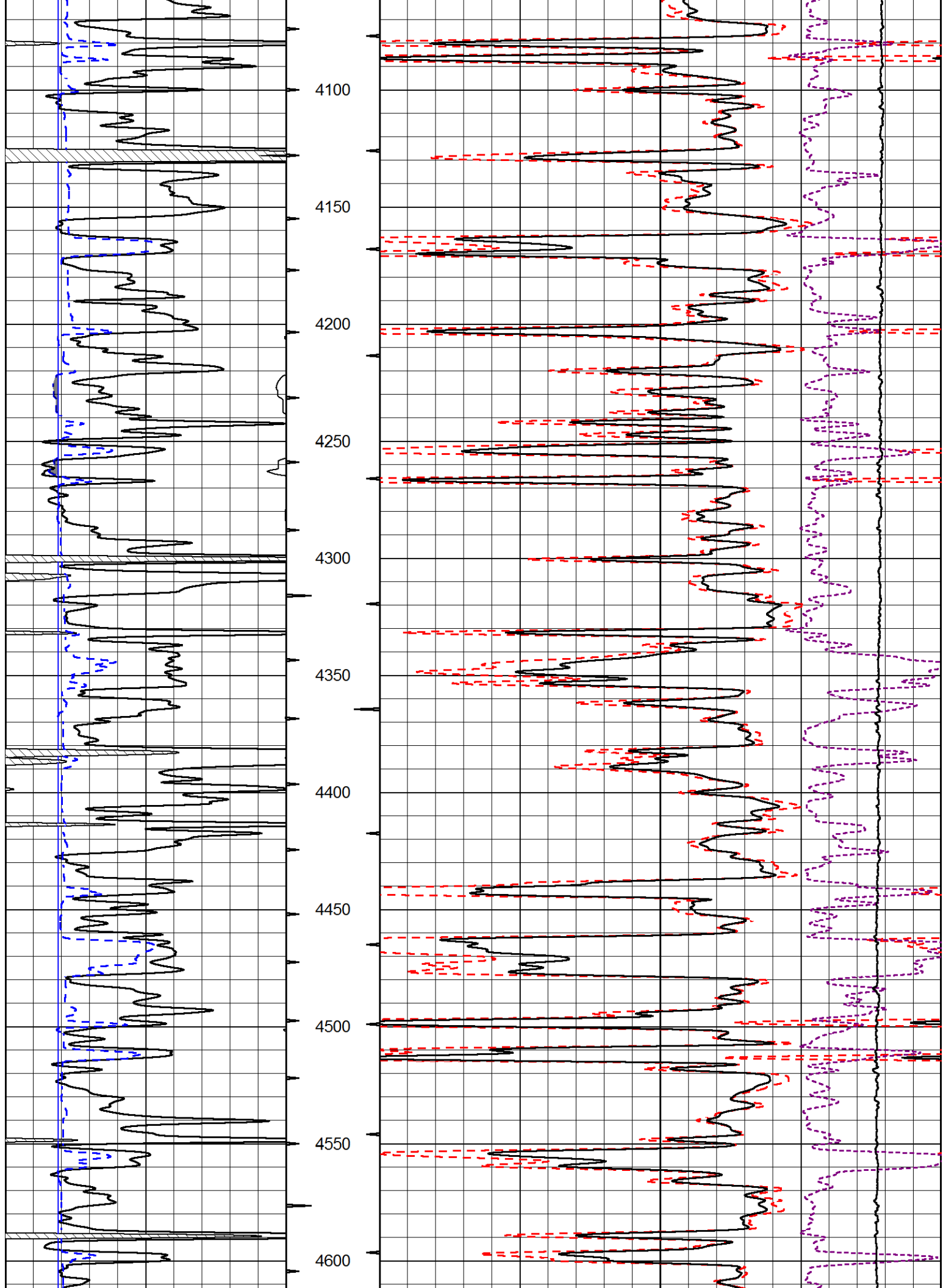
MAIN PASS

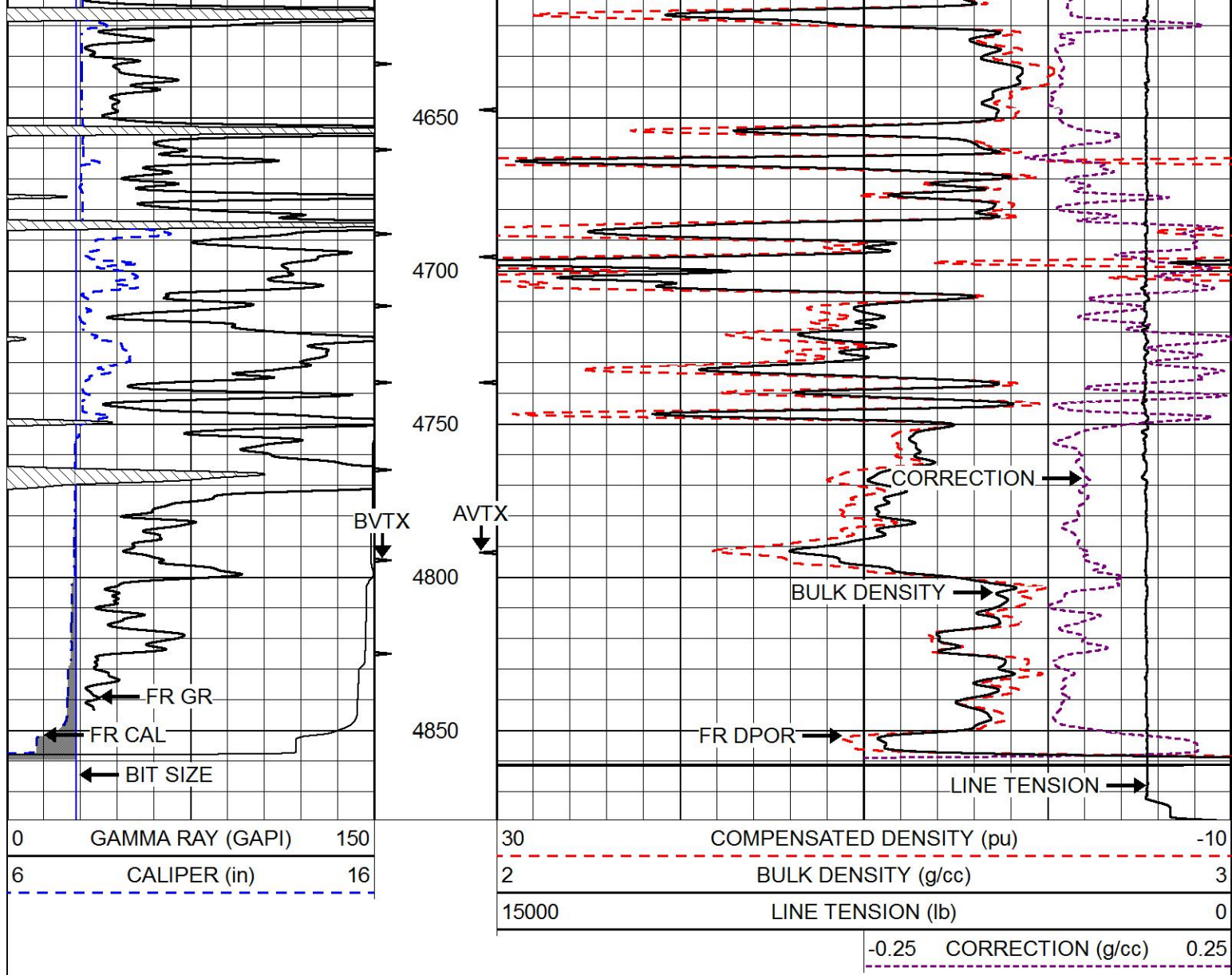
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Dataset Pathname stack/pass3.3
Presentation Format cdl
Dataset Creation Sat Dec 10 10:09:02 2016
Charted by Depth in Feet scaled 1:600

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



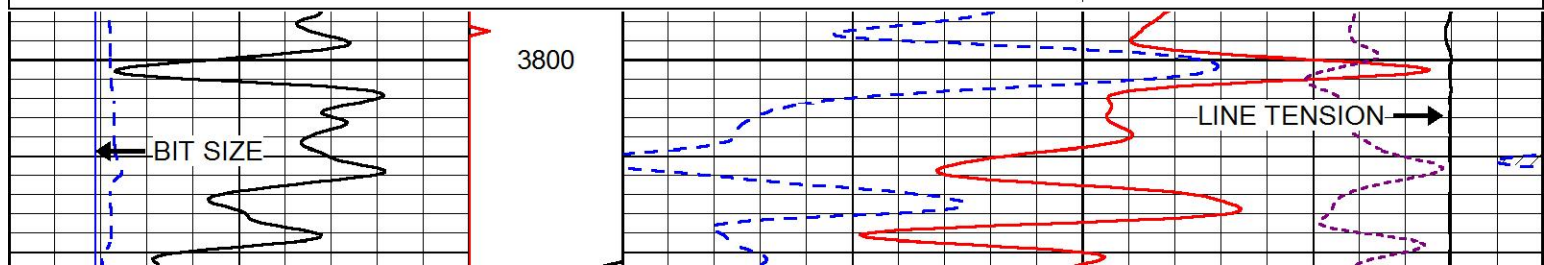


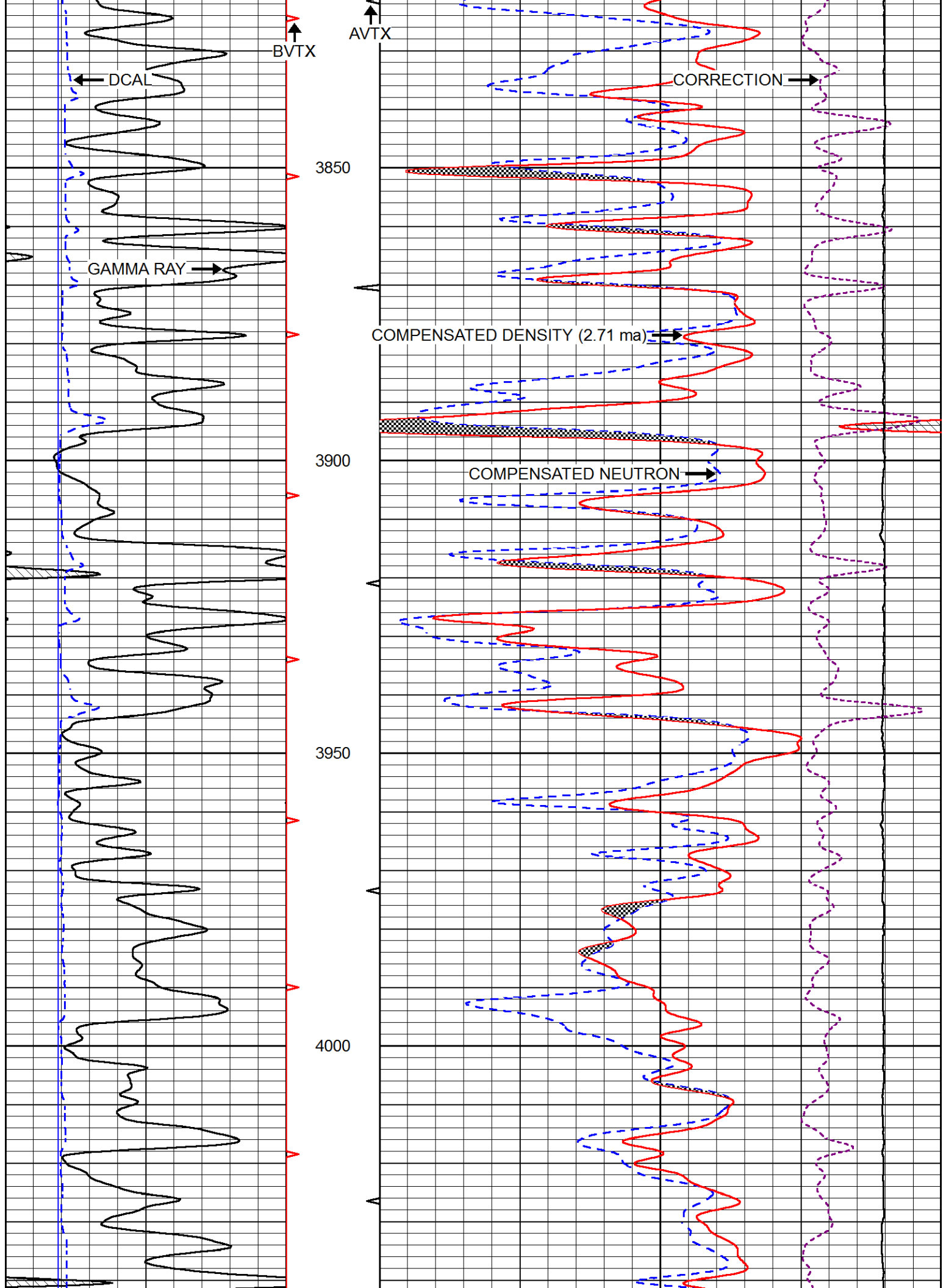


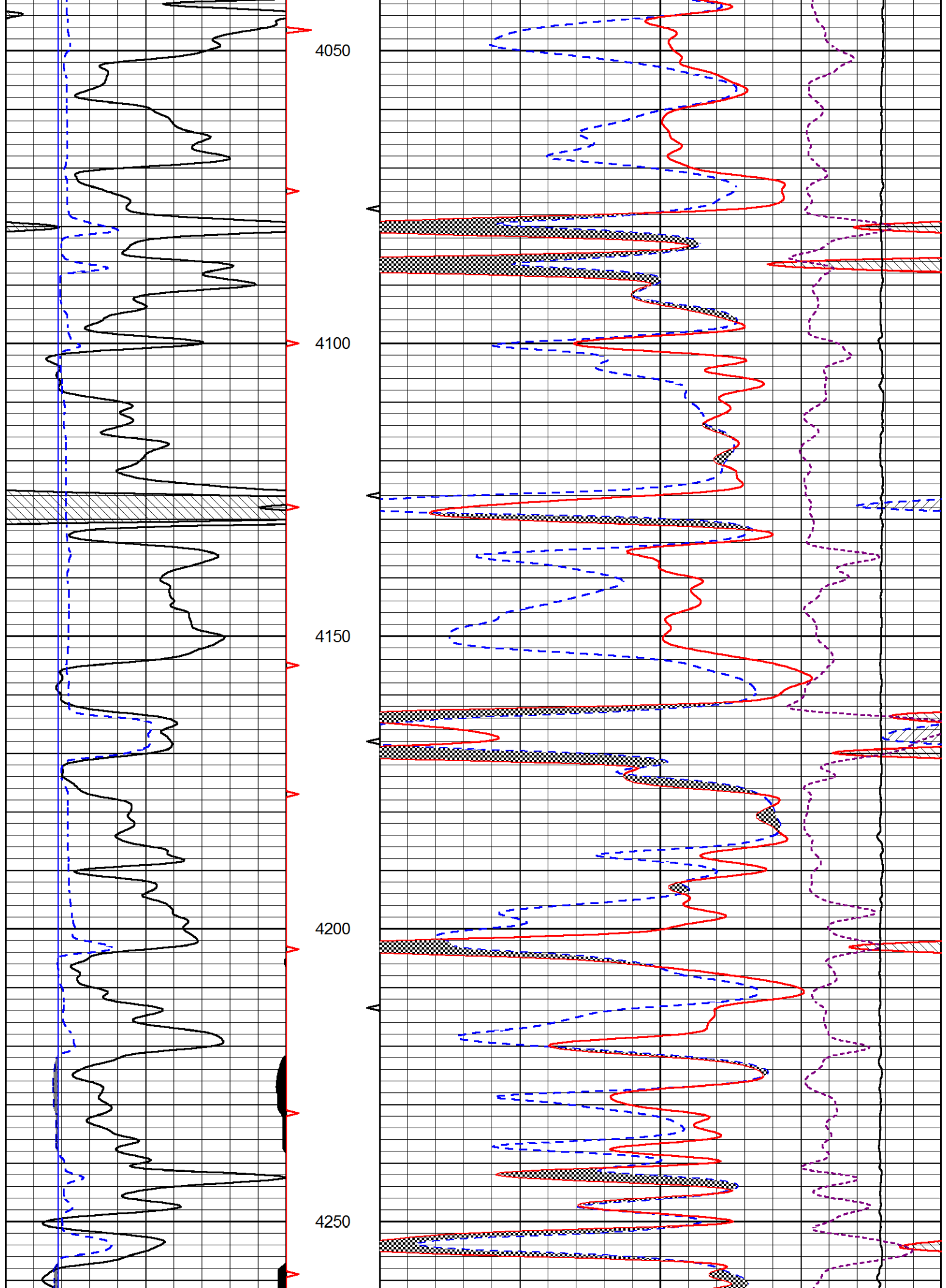
MAIN PASS

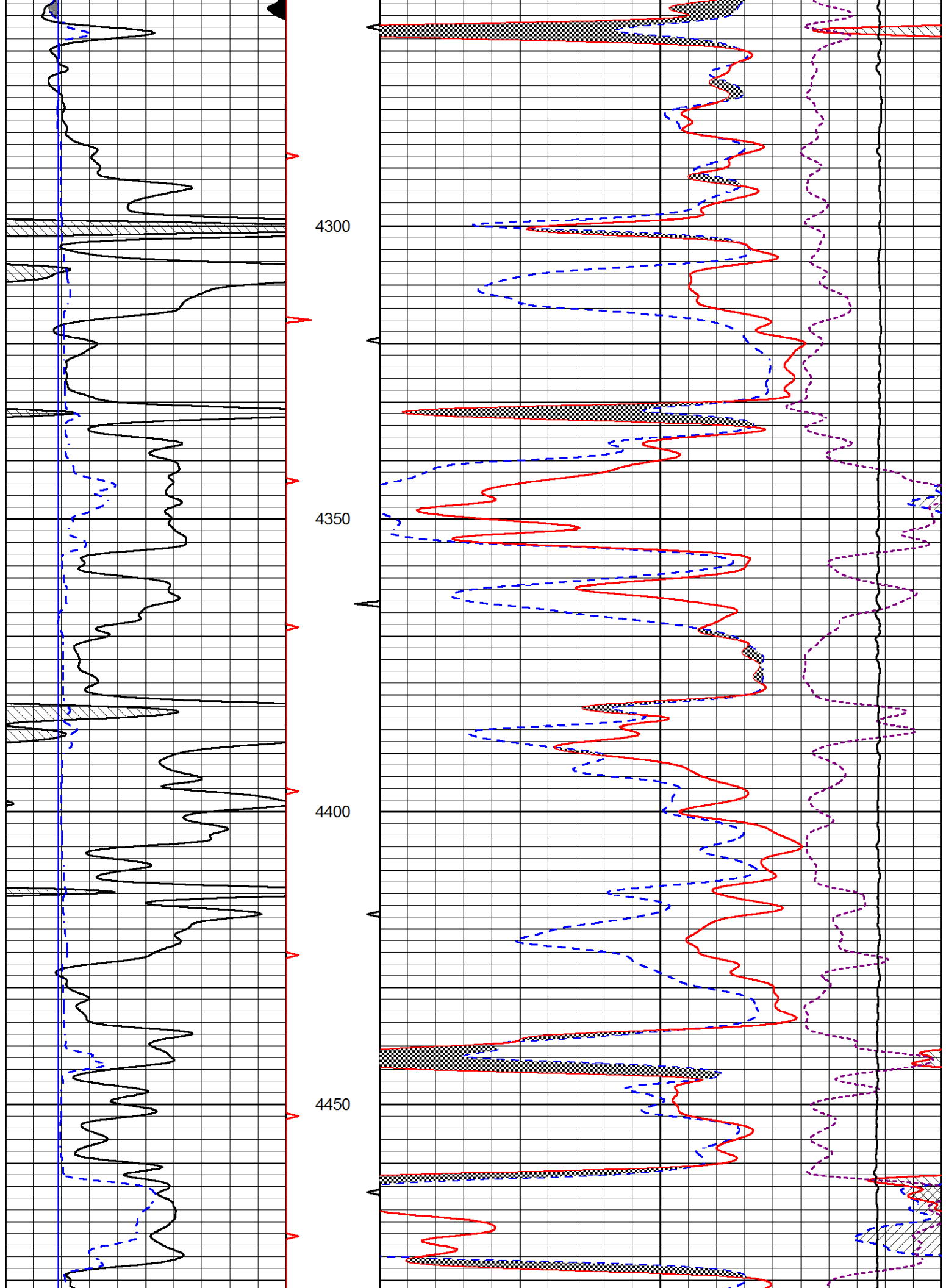
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Dataset Pathname	stack/pass3.1
Presentation Format	cnldspec
Dataset Creation	Sat Dec 10 10:54:21 2016
Charted by	Depth in Feet scaled 1:240

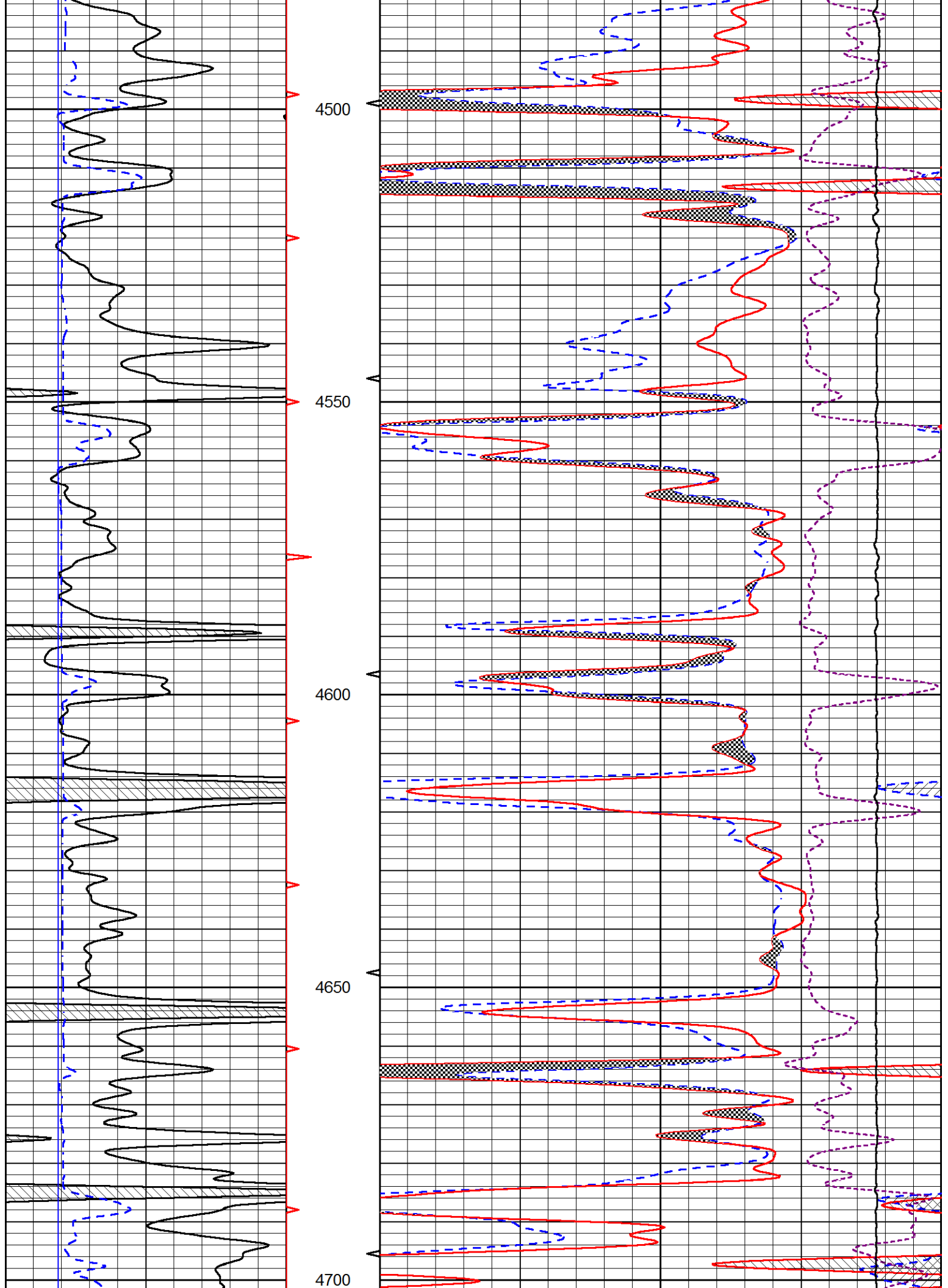
0 GAMMA RAY (GAPI) 150	30 COMPENSATED NEUTRON (pu) -10
6 dcal (in) 16	30 COMPENSATED DENSITY (2.71 ma) (pu) -10
6 BIT SIZE (in) 16	15000 LINE TENSION (lb) 0
	-0.25 CORRECTION (g/cc) 0.25

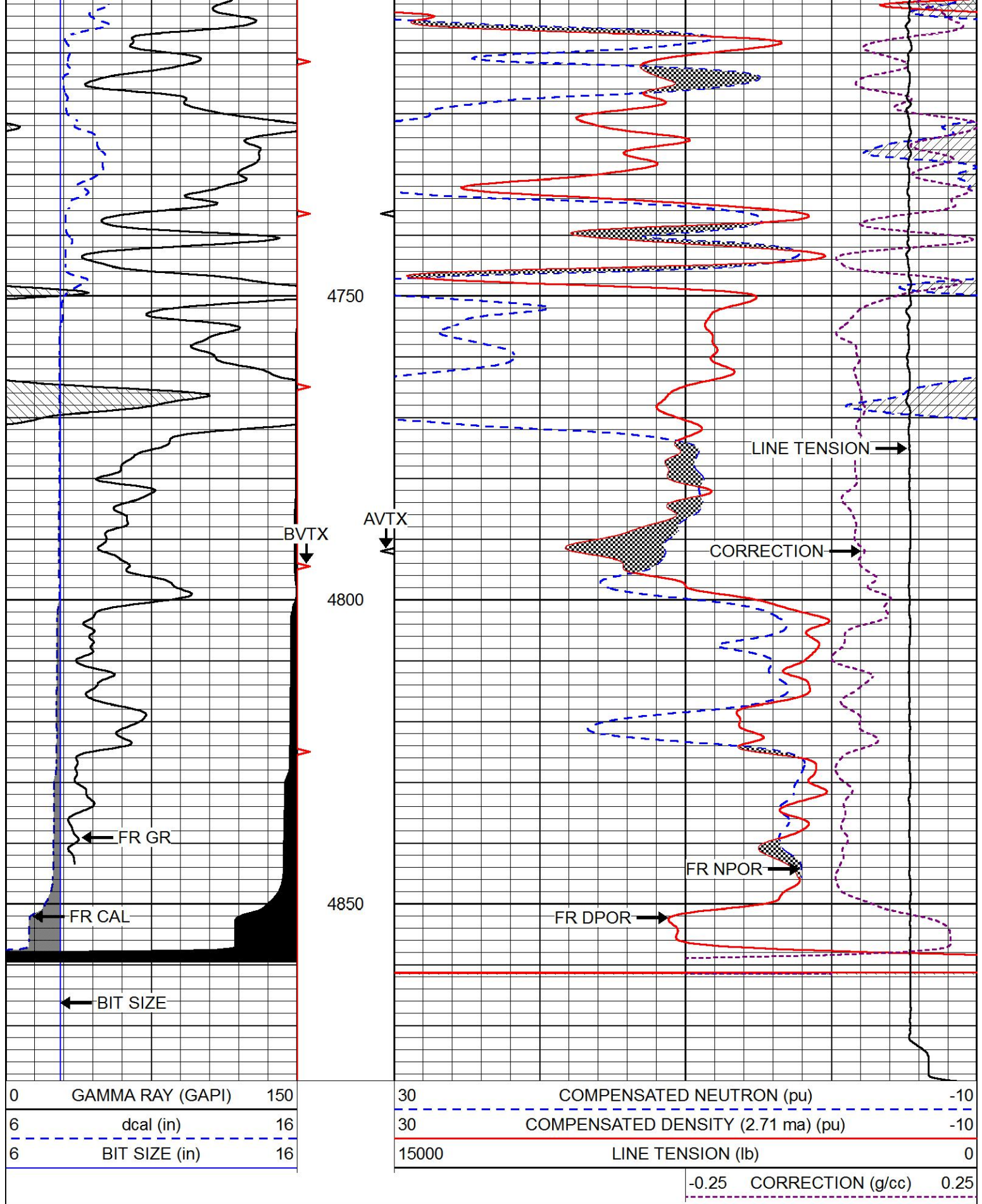












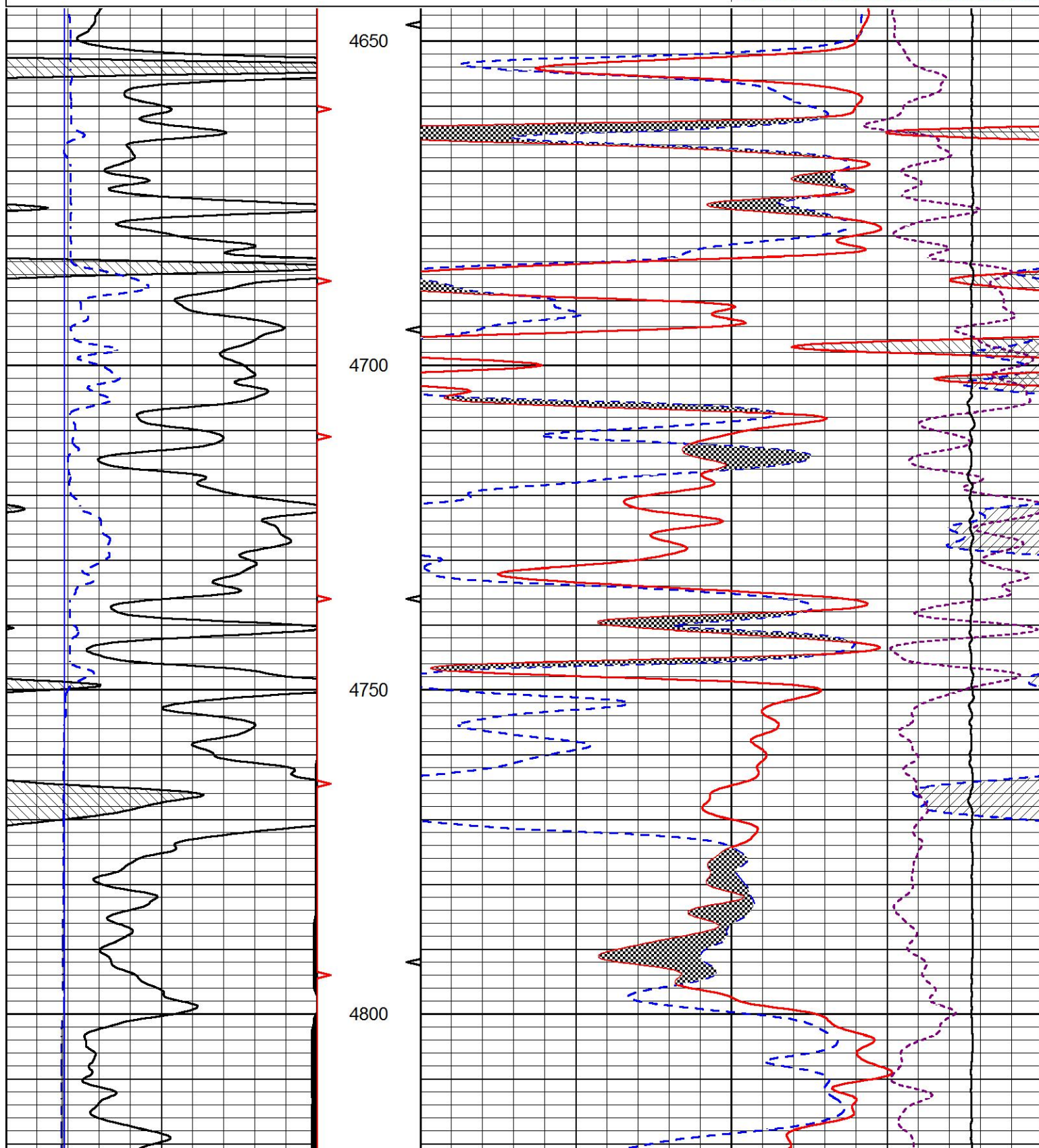
REPEAT SECTION

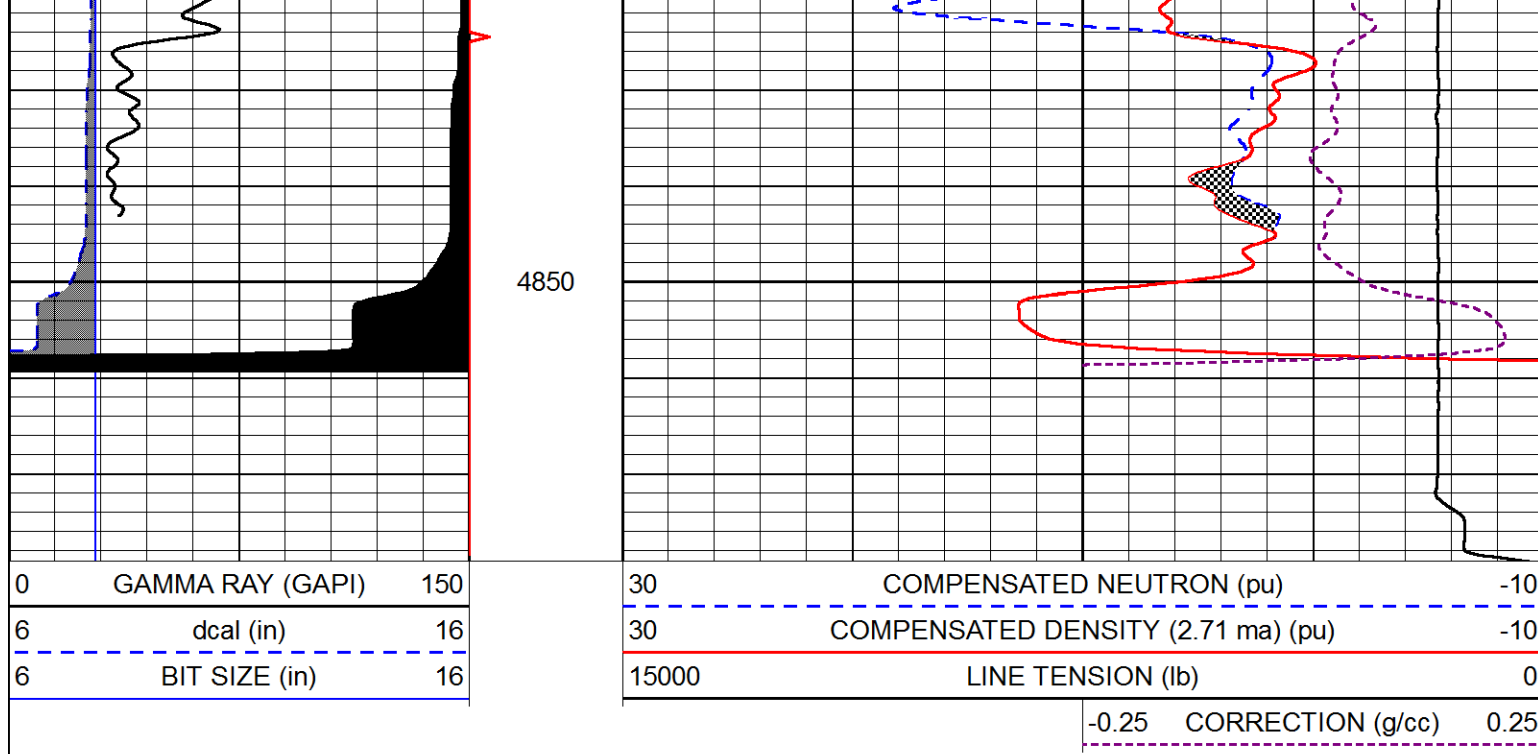
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Dataset Pathname	stack/pass2.1
Presentation Format	cnlds spec
Dataset Creation	Sat Dec 10 09:54:32 2016
Charted by	Depth in Feet scaled 1:240

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

30	COMPENSATED NEUTRON (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0

-0.25	CORRECTION (g/cc)	0.25
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Calibration Report

Database File val_koughmattsonunit_#1-4.db
 Dataset Pathname stack/pass3.1
 Dataset Creation Sat Dec 10 10:54:21 2016

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Thu Nov 17 20:52:56 2016

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	Gain	Offset
Deep	178.615	710.235	0.000	255.800 mmho/m	0.530	-38.500
Medium	161.982	1441.110	0.000	255.800 mmho/m	0.440	-116.000

Compensated Density Calibration Report

Serial-Model: 71-914-M&W
 Source / Verifier: /
 Master Calibration Performed: Thu Nov 17 21:42:33 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.675	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	14.00	in	1.57		

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: Thu Nov 17 21:13:32 2016

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



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Field
County THOMAS
State KANSAS