



PIONEER

Pioneer Energy Services

DUAL COMP POROSITY LOG

Company **MIKE KELSO OIL, INC.**

Well **HONAS A NO.2**

Field **WILDCAT**

County **TREGO** State **KANSAS**

Location: API #: 15-195-23028-00-00

1330' FNL & 700' FEL

SEC 21 TWP 14S RGE 22W

Permanent Datum **GROUND LEVEL** Elevation **2221'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Elevation
K.B. 2228'
D.F. N/A
G.L. 2221'

Company **MIKE KELSO OIL, INC.**
Well **HONAS A NO.2**
Field **WILDCAT**
County **TREGO**
State **KANSAS**

Date **8/27/2017**

Run Number **ONE**

Type Log **CNL/CDL**

Depth Driller **4225'**

Depth Logger **4220'**

Bottom Logged Interval **4191'**

Top Logged Interval **3300'**

Type Fluid In Hole **CHEMICAL**

Salinity, PPM CL **10,500**

Density **9.7**

Level **FULL**

Max. Rec. Temp. F **118 DEG/F**

Operating Rig Time **2 1/2 HOURS**

Equipment -- Location **108 HAYS**

Recorded By **J. HENRICKSON**

Witnessed By **PAT DEENIHAN**

MIKE KELSO

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0	250'	8.625"	23#	0	250'
TWO	7.875"	250'	TD				

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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.

OGALLAH EXIT I 70
SOUTH TO CURVE, 3 SOUTH, 1 WEST, SOUTH INTO
(ROAD TO COVE 1 AT CEDAR BLUFF)

Log Measured From: **KELLY BUSHING** 7 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

Engineer: **J. HENRICKSON**
Operator:
Operator:
Operator:

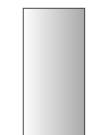
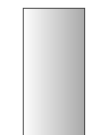
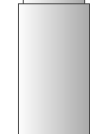
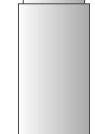
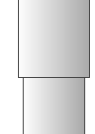
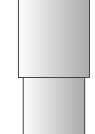
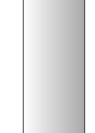
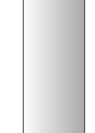
This Log Record Was Witnessed By

Primary Witness: **PAT DEENIHAN**
Secondary Witness: **MIKE KELSO**
Secondary Witness:
Secondary Witness:

DatabaseC:\ProgramData\Warrior\Data\kelso_honas_a_2.db
Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	118	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	-90	61	Off	4220

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 (168-986)	8.50	4.00	250.00
				ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
MCAL MI MN	19.83 19.83 19.83						
RLL3 RLL3F	15.80 15.79						
CILD	8.00			DIL-M&W (1987)	18.50	3.50	220.00

CILM

4.70

SP

0.20

Dataset: kelso_honas_a_2.db: field/well/stackml/pass3.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in

**PIONEER**

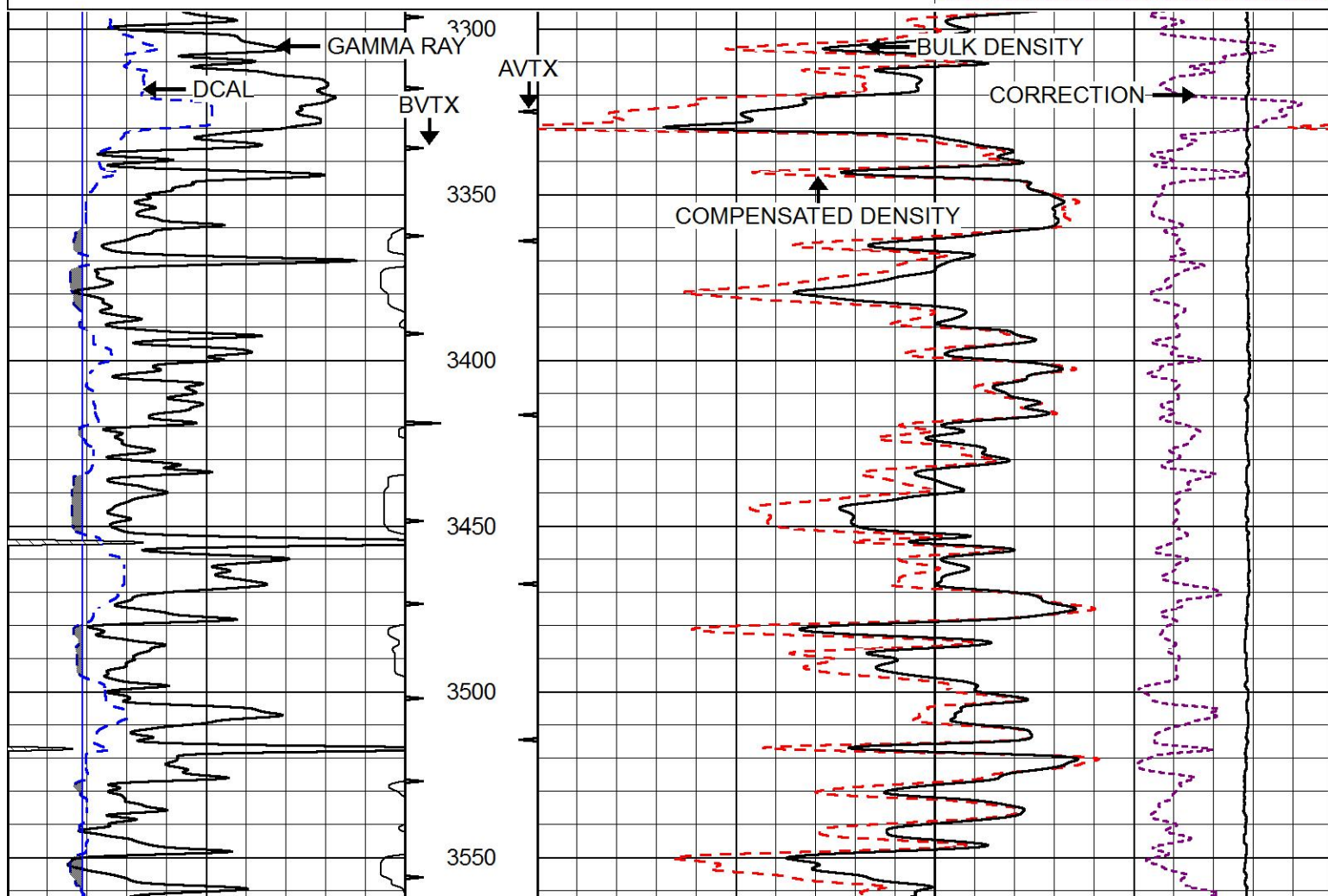
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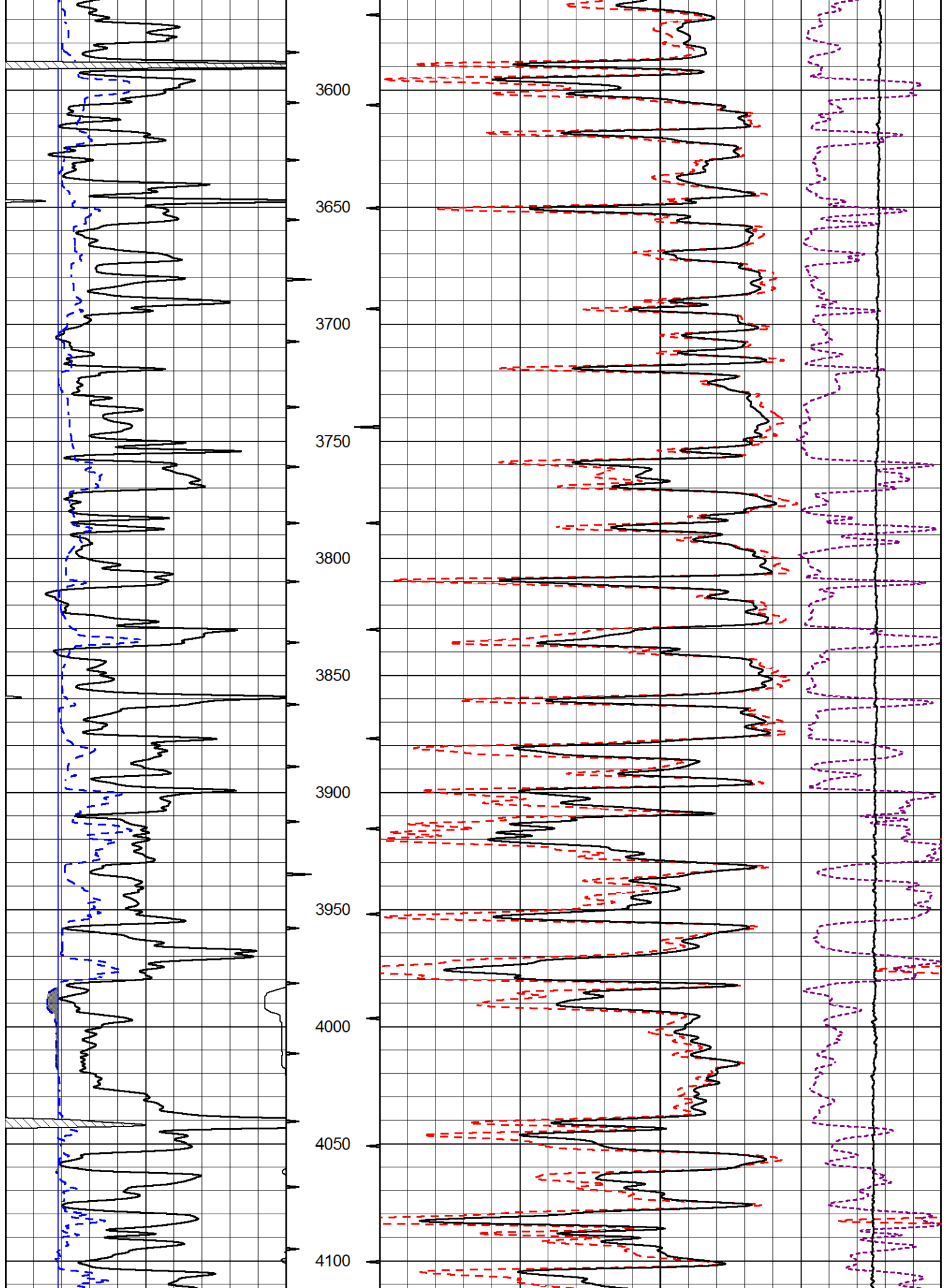
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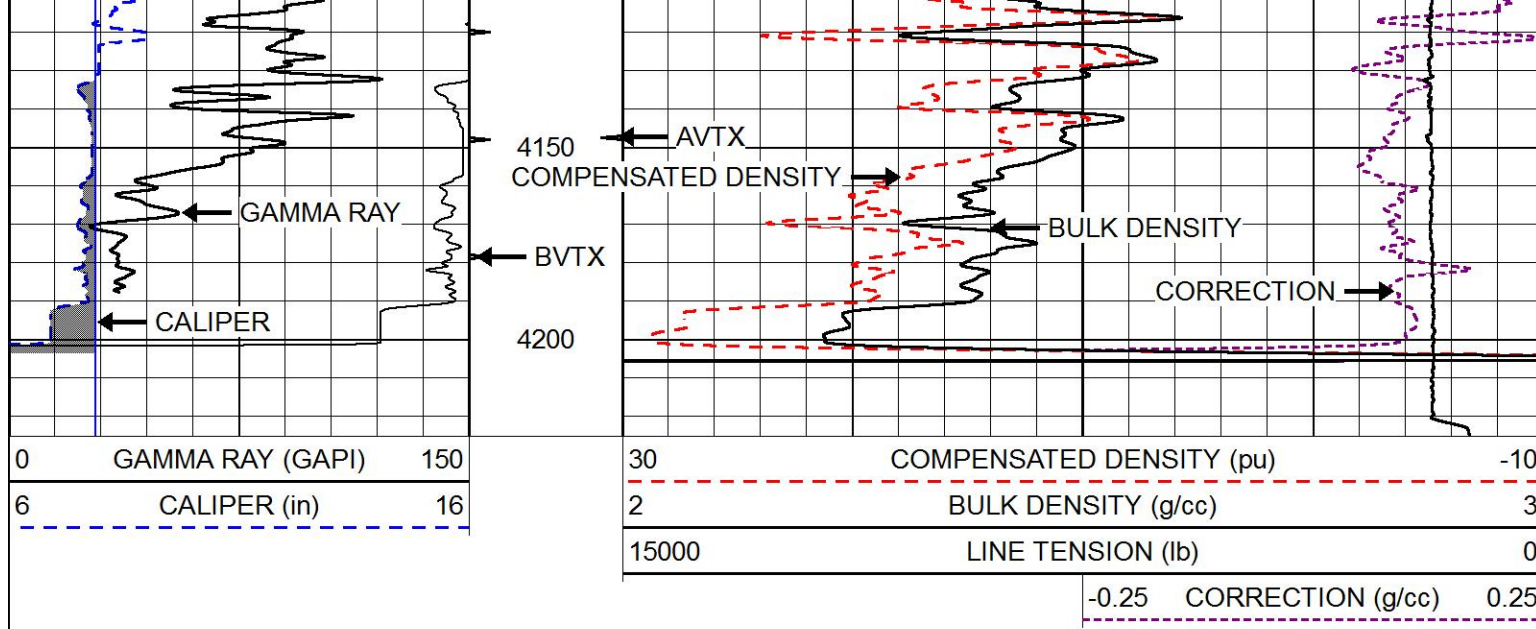
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Dataset Pathname stackml/pass3.1
Presentation Format cdl
Dataset Creation Sun Aug 27 05:56:23 2017
Charted by Depth in Feet scaled 1:600

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





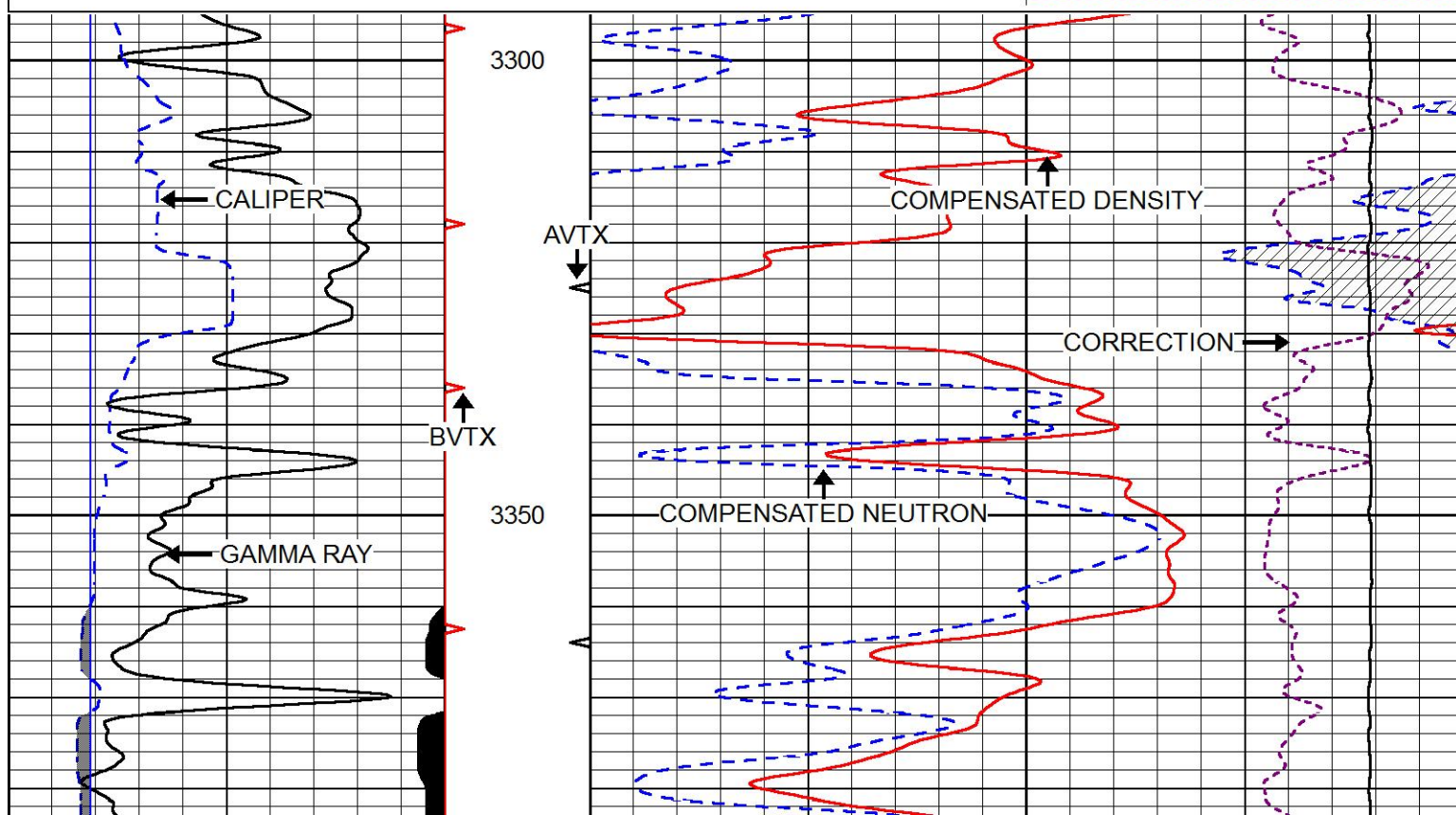


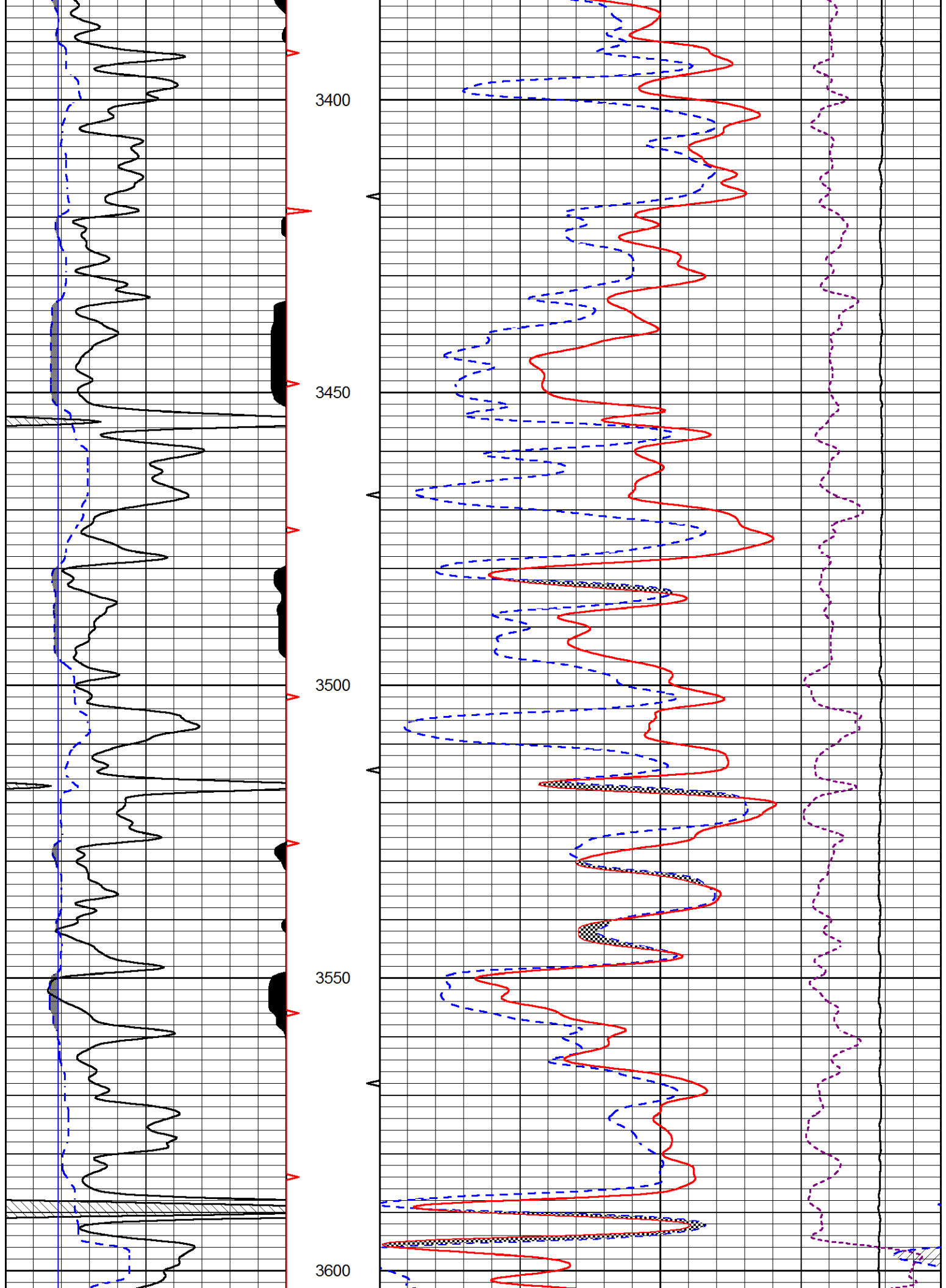
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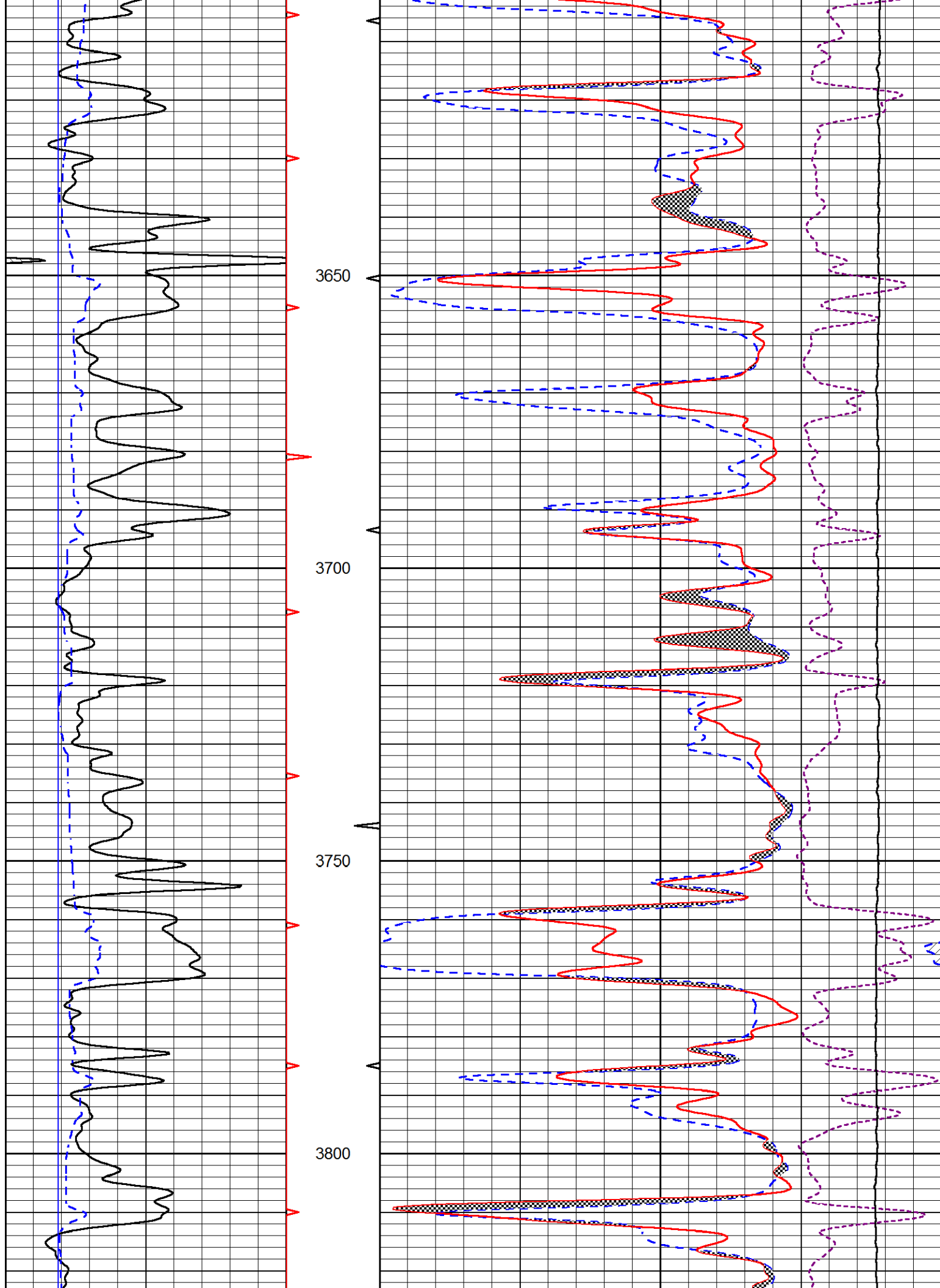
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 Dataset Pathname: stackml/pass3.1
 Presentation Format: cndlspec
 Dataset Creation: Sun Aug 27 05:56:23 2017
 Charted by: Depth in Feet scaled 1:240

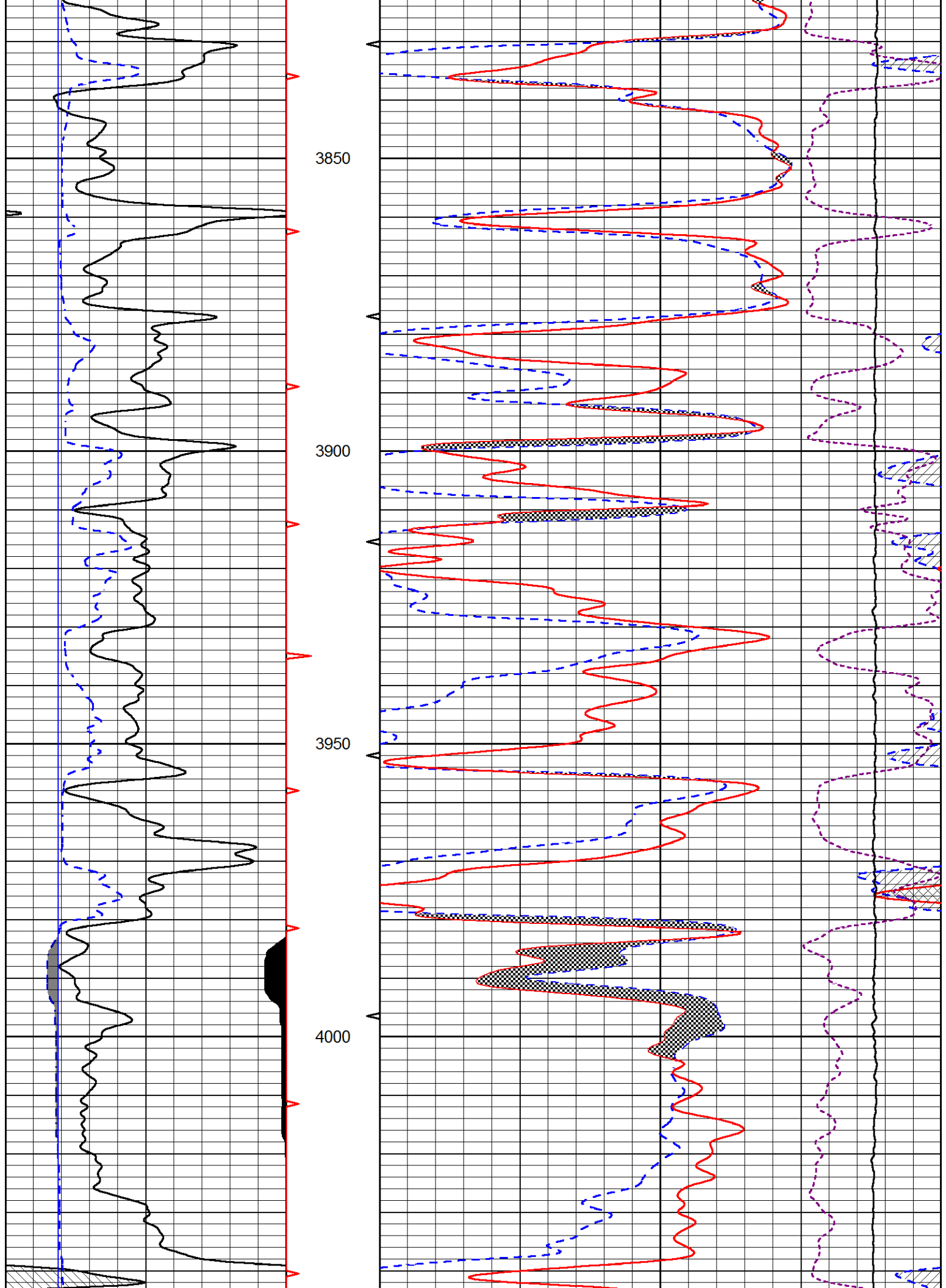
0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

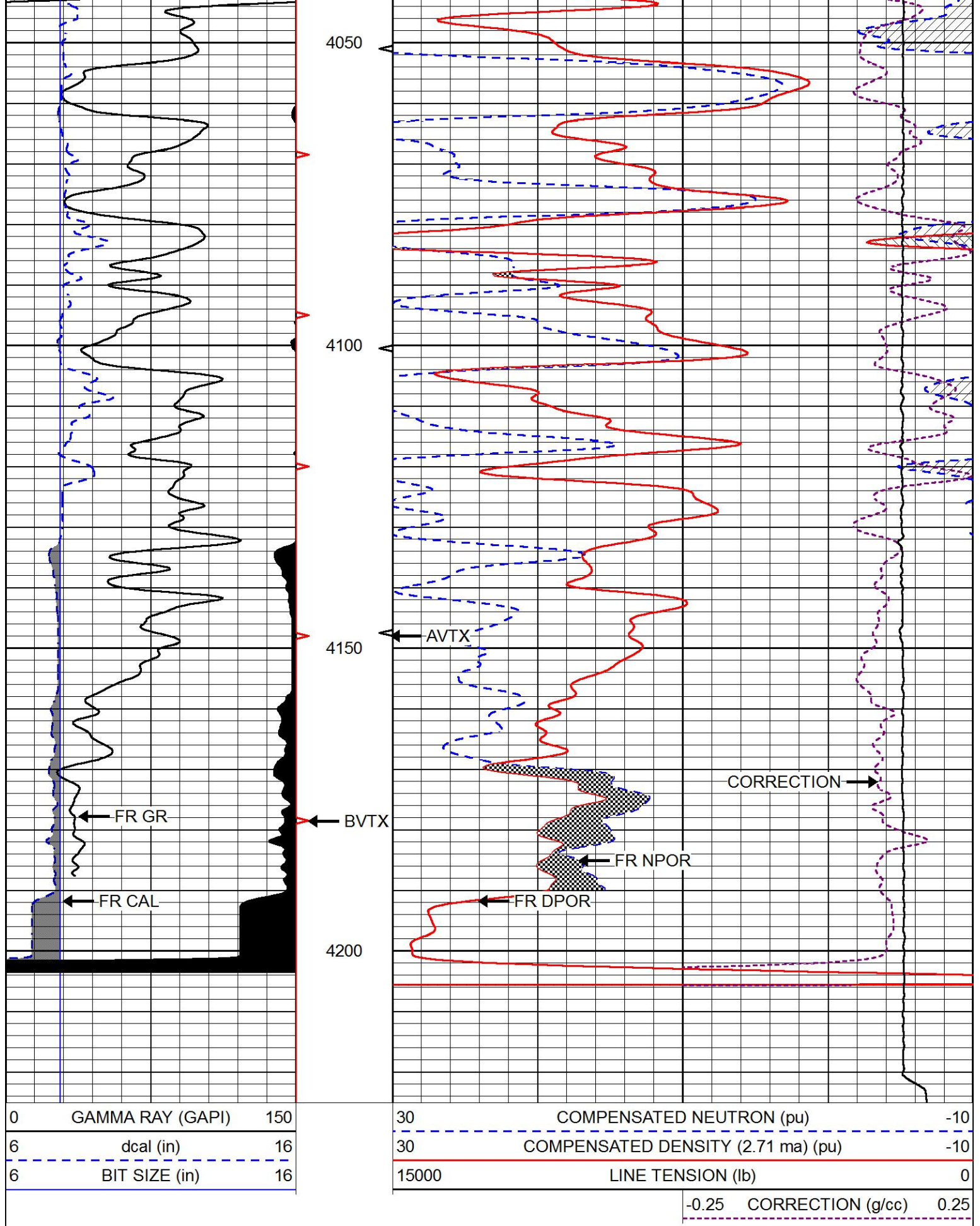
30	COMPENSATED NEUTRON (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25









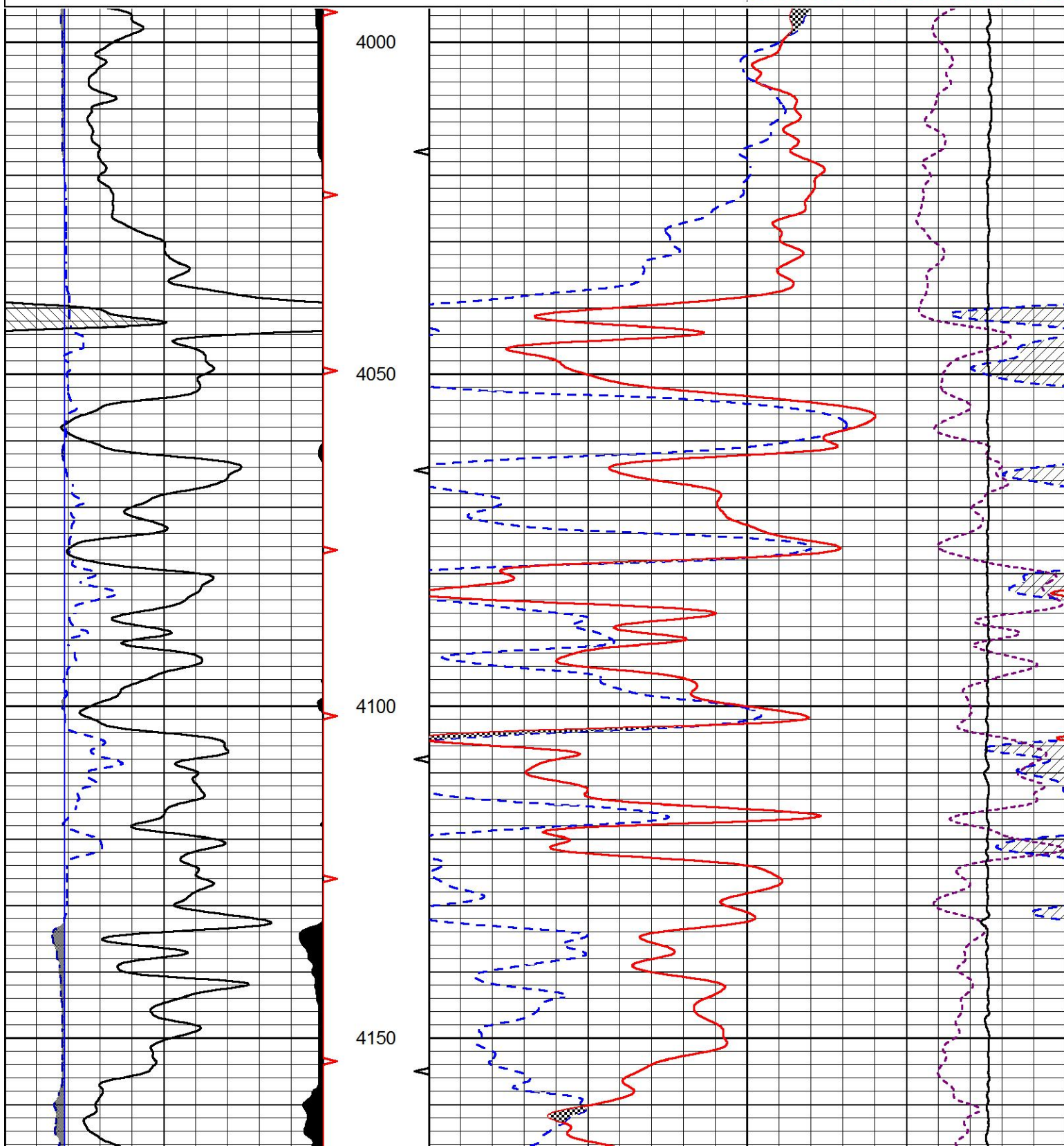


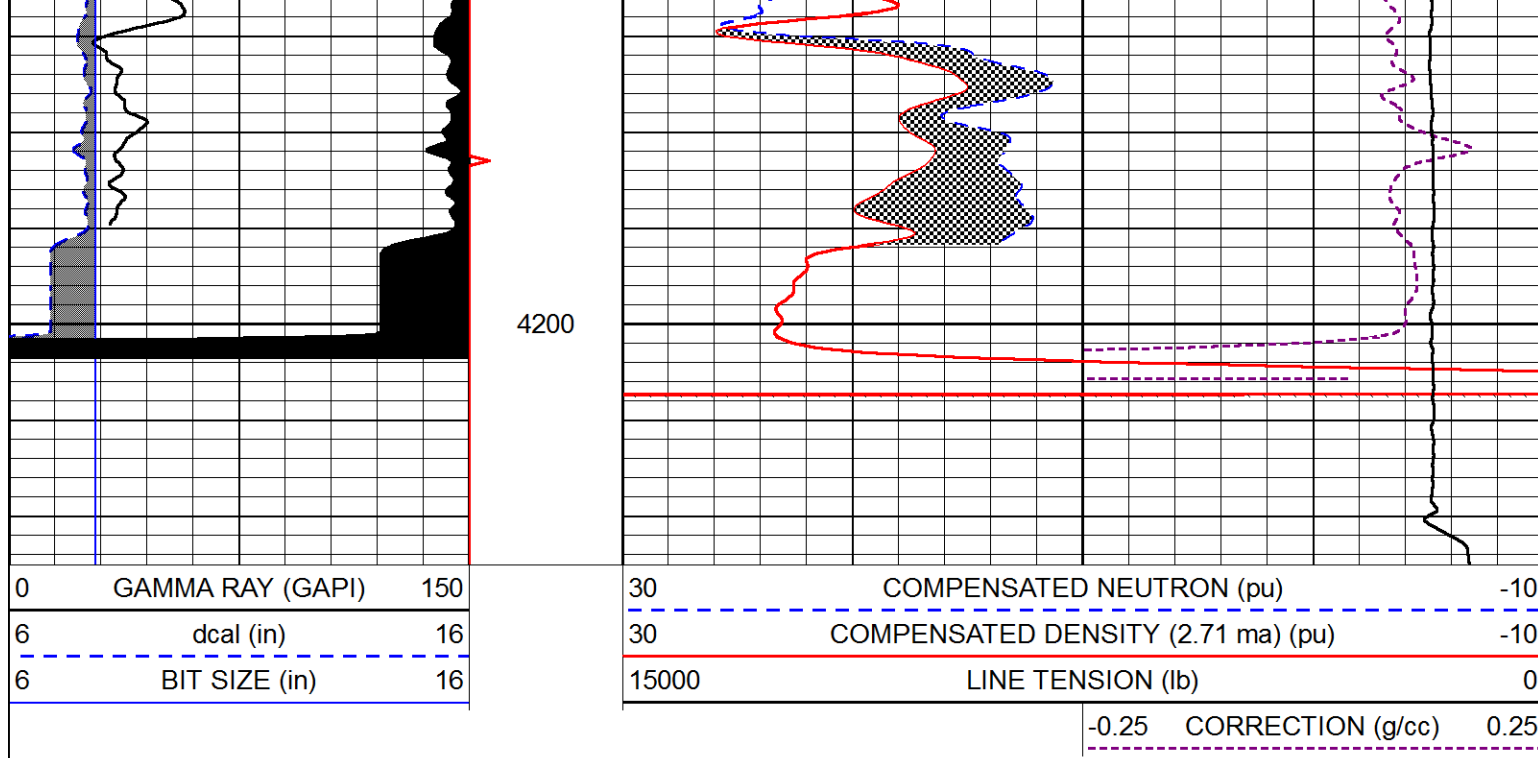
REPEAT SECTION

Database File kelso_honas_a_2.db
Dataset Pathname stackml/pass2.1
Presentation Format cndlspec
Dataset Creation Sun Aug 27 05:57:24 2017
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





Calibration Report								
Database File	kelso_honas_a_2.db							
Dataset Pathname	stackml/pass3.1							
Dataset Creation	Sun Aug 27 05:56:23 2017							
Dual Induction Calibration Report								
Serial-Model:		1987-M&W						
Calibration Performed:		Tue Apr 11 16:07:38 2017						
Loop:	Readings		References			Results		
	Air	Loop	Air	Loop		Gain	Offset	
	Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-36.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500	
Microlog Calibration Report								
Serial-Model:		PSI-02-PSI STKBL ML						
Performed:		Fri Jun 23 00:25:19 2017						
	Readings		References			Results		
	Zero	Cal	Zero	Cal		m	b	
	Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	18000.0000	0.0000
	Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	20000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.4500	
Compensated Density Calibration Report								
Serial-Model:		168-986-M&W						
Source / Verifier:		/						
Master Calibration Performed:		Tue Apr 11 16:07:47 2017						

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.675	g/cc	859.57	3020.22	cps
Spine Angle = 74.61			Density/Spine Ratio = 0.523		
	Size		Reading		
Small Ring	4.00	in	1.03		
Large Ring	14.00	in	1.23		

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: Tue Apr 11 16:08:01 2017

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps

 PIONEER Pioneer Energy Services	Company	MIKE KELSO OIL, INC.
	Well	HONAS A NO.2
	Field	WILDCAT
	County	TREGO
	State	KANSAS