



PIONEER

Pioneer Energy Services

DUAL COMP POROSITY LOG

Company THOMAS GARNER INC.

Well MARY #1

Field KACHELMAN

County STAFFORD State KANSAS

Location: API #: 15-185-24036-00-00

Other Services

SEC 18 TWP 25S RGE 13W

DIL/MEL
BHCS

Permanent Datum GROUND LEVEL Elevation 1952'

Log Measured From KELLY BUSHING

Elevation
K.B. 1963'
D.F. N/A
G.L. 1952'

Drilling Measured From KELLY BUSHING

Date 11/9/2018

Run Number ONE

Type Log CNL/CDL

Depth Driller 4360'

Depth Logger 4356'

Bottom Logged Interval 4354'

Top Logged Interval 3200'

Type Fluid In Hole CHEMICAL

Salinity, PPM CL 5400

Density 9.2

Level FULL

Max. Rec. Temp. F 120

Operating Rig Time 5 HOURS

Equipment -- Location 108 HAYS

Recorded By IAN MABB

Witnessed By TOM GARNER

Borehole Record

Casing Record

Run No.

Bit

From

To

Size

Wgt.

From

To

ONE 12.25" 0' 376' 8.625" 23# 0' 376"

TWO 7.875" 376' 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.

ST. JOHN KS.

SOUTH TO HWY 50, 7 MILE SOUTH, 2 MILE WEST, 1 1/2 NORTH,
WEST INTO

Log Measured From: KELLY BUSHING

11 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES

www.pioneerenergy.com

785-625-3858

Your Pioneer Energy Services Crew

Engineer: IAN MABB

Operator:

Operator:

Operator:

This Log Record Was Witnessed By

Primary Witness: TOM GARNER

Secondary Witness:

Secondary Witness:

Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 100	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 4	mmho/m -10	mV 140	degF 0	Off	ft 4356

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	29.90			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	29.15						
LSD DCAL SSD	20.85			CDL-M&W (817-947)	8.50	4.00	250.00
	20.83						
	20.35						
RLL3	15.80			DIL-M&W (1987)	18.50	3.50	220.00
RLL3F	15.79						
CILD	8.00						

CILM 4.70

SP 0.20

Dataset: thomas_garner_mary_1.db: field/well/stack/pass3.1
Total length: 35.50 ft
Total weight: 620.00 lb
O.D.: 4.00 in

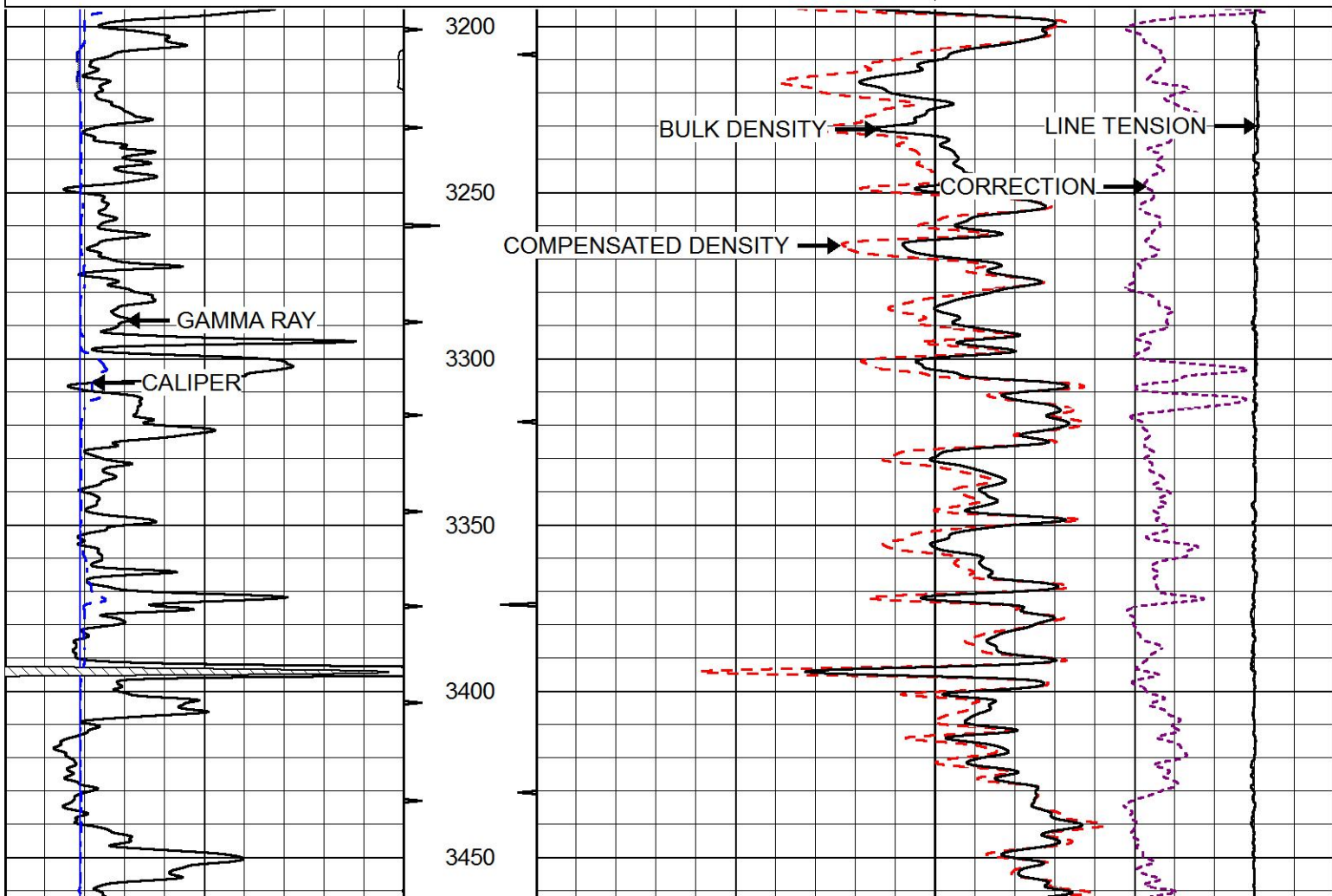


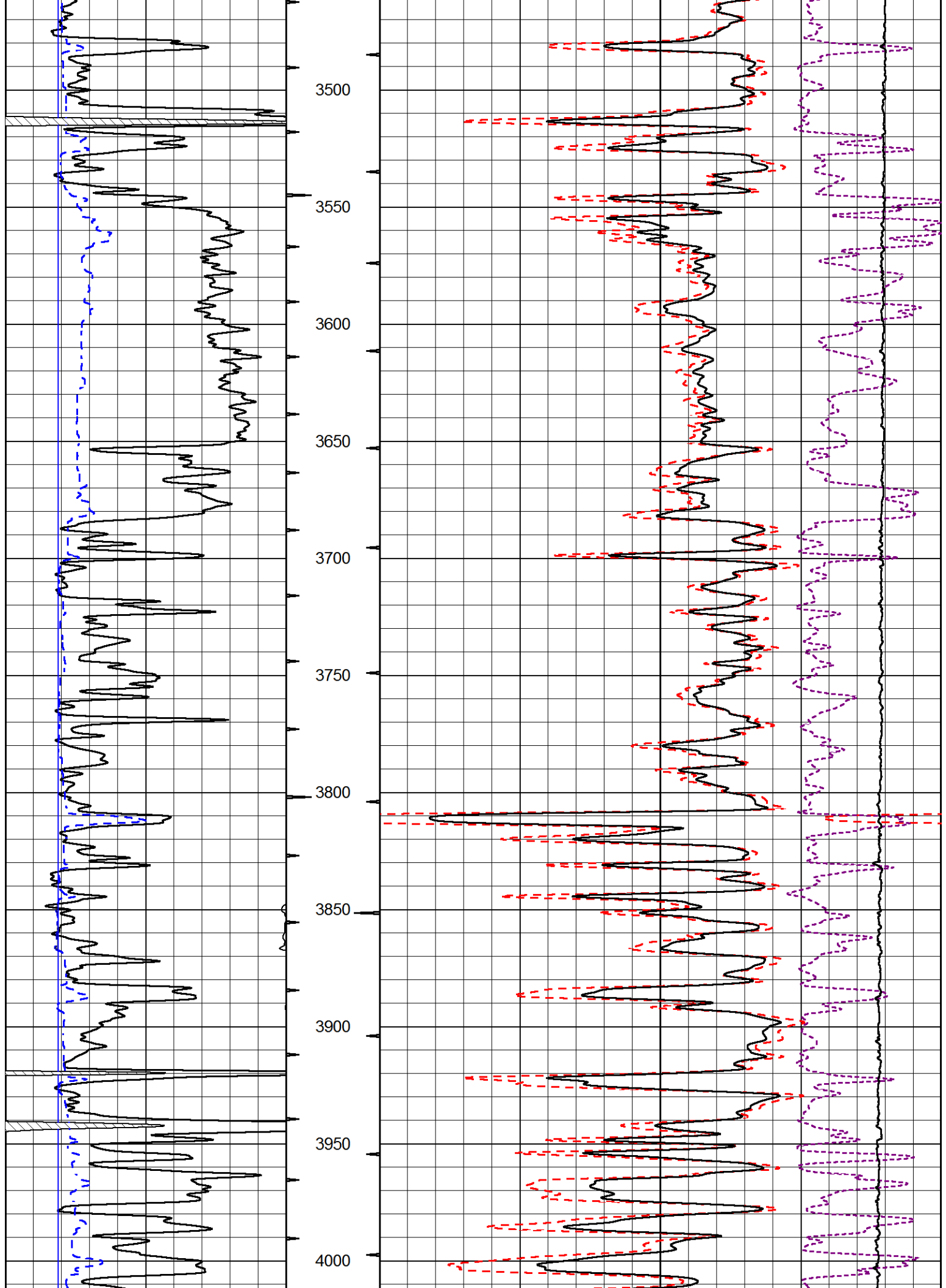
MAIN PASS

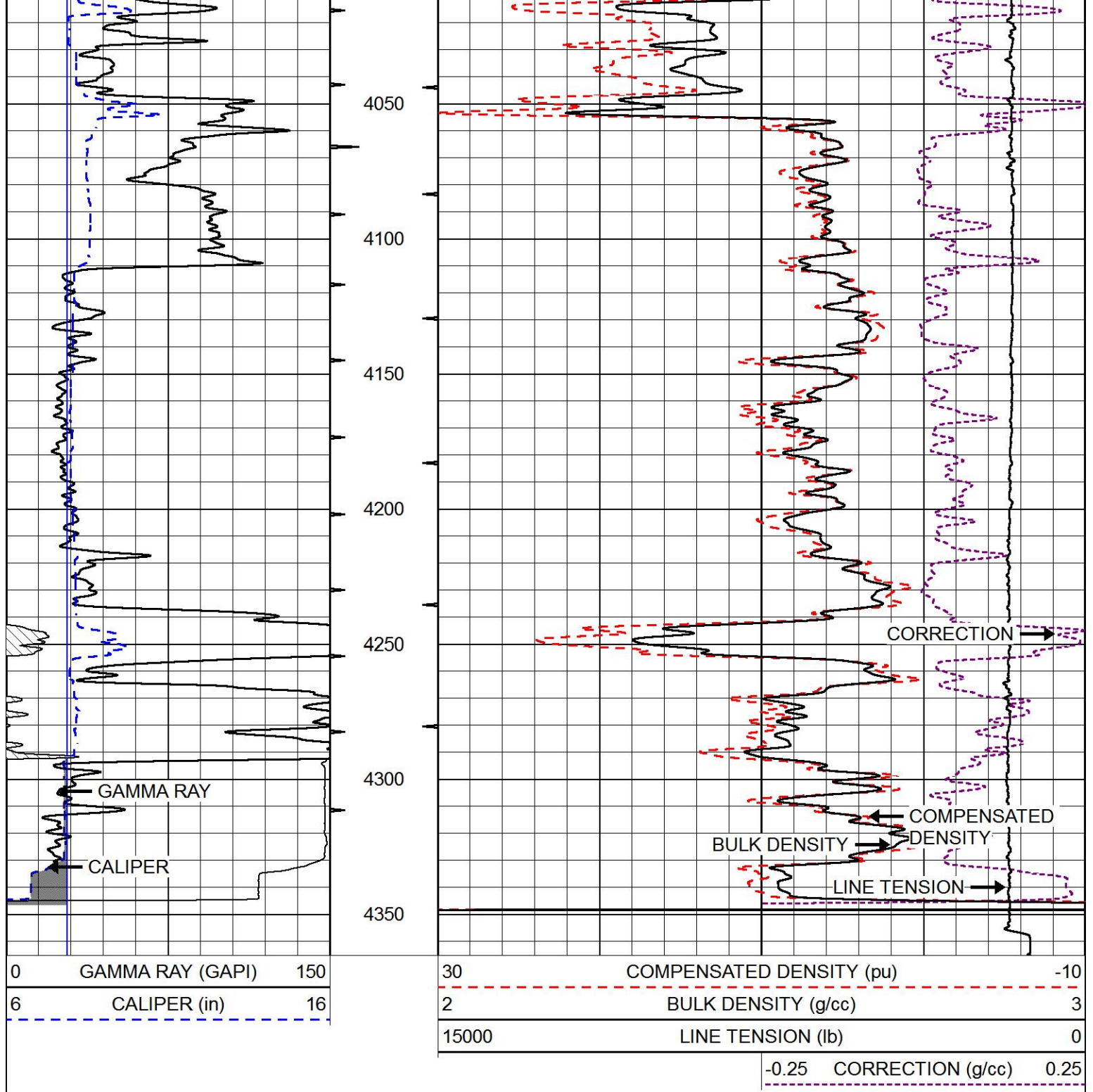
Database File thomas_garner_mary_1.db
Dataset Pathname stack/pass3.1
Presentation Format cdl
Dataset Creation Fri Nov 09 22:36:19 2018
Charted by Depth in Feet scaled 1:600

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







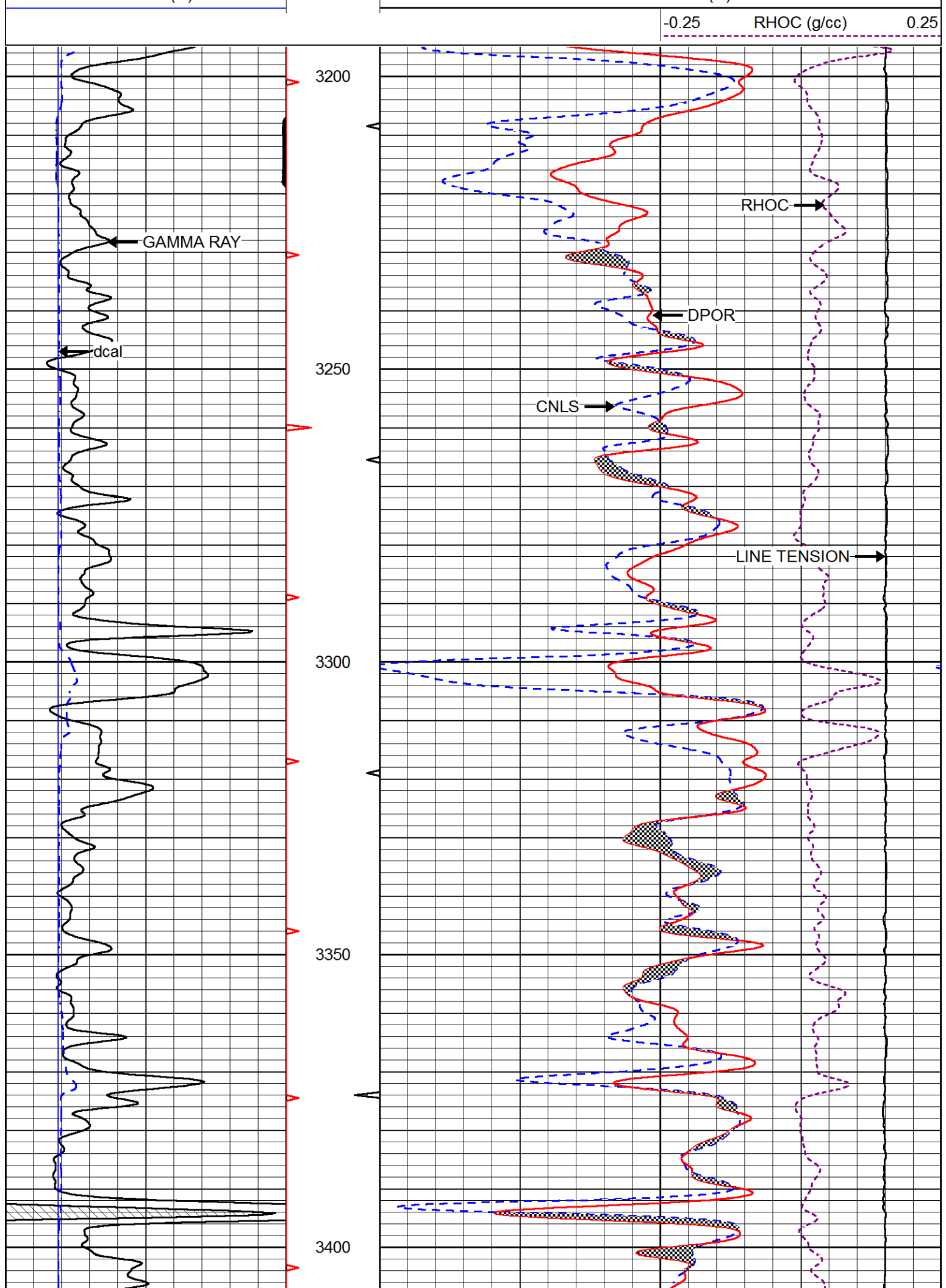


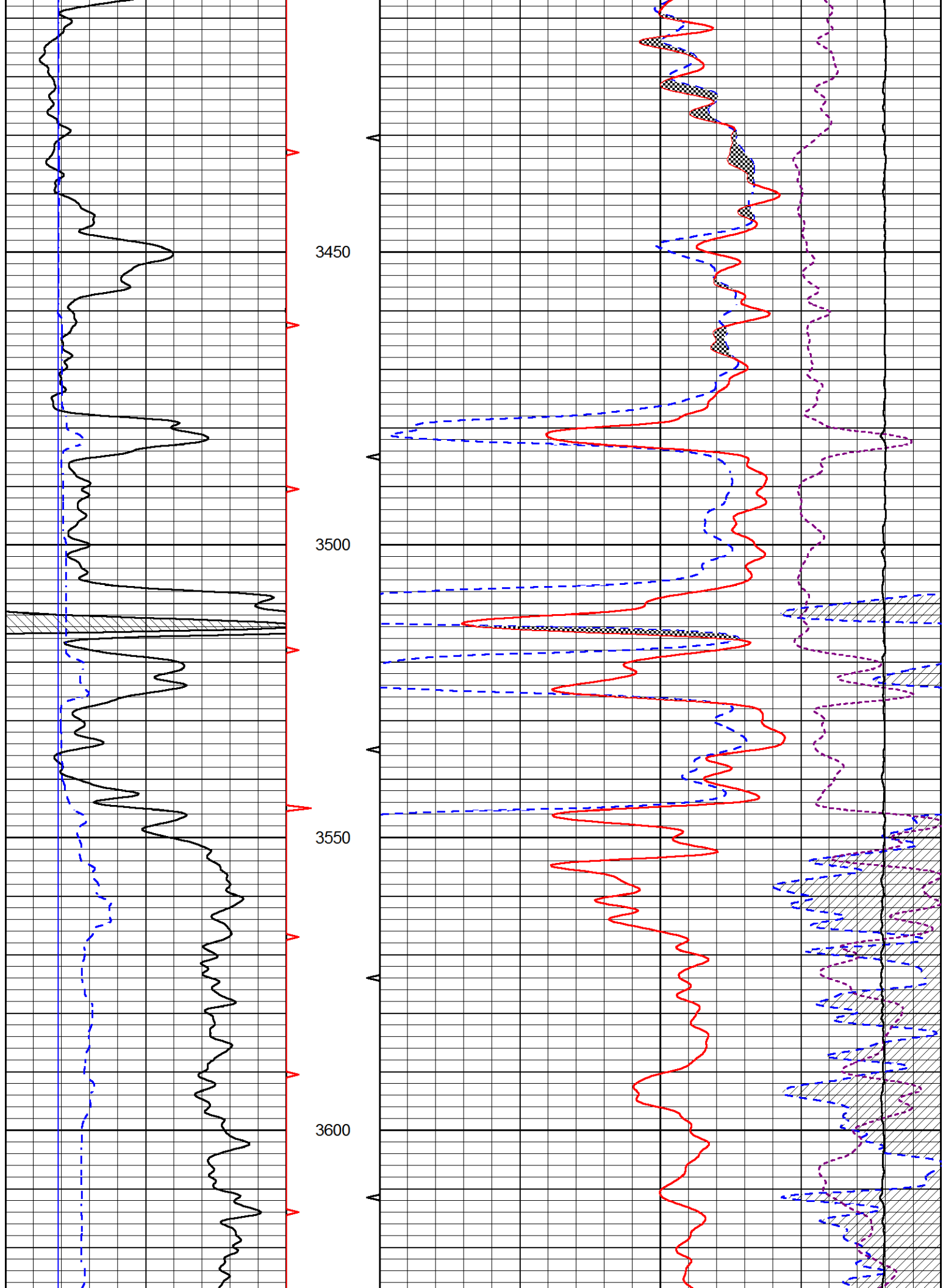
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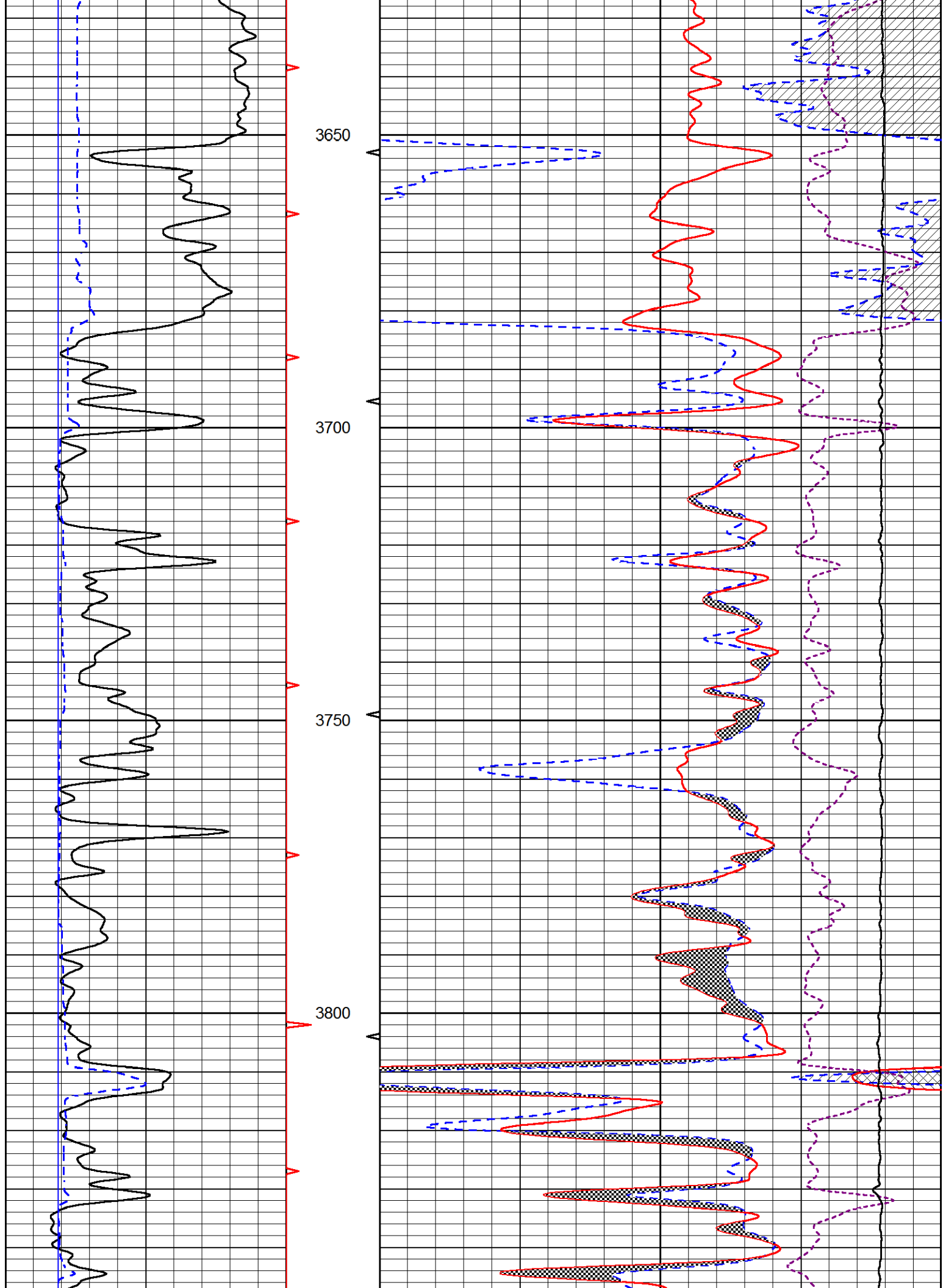
MAIN PASS

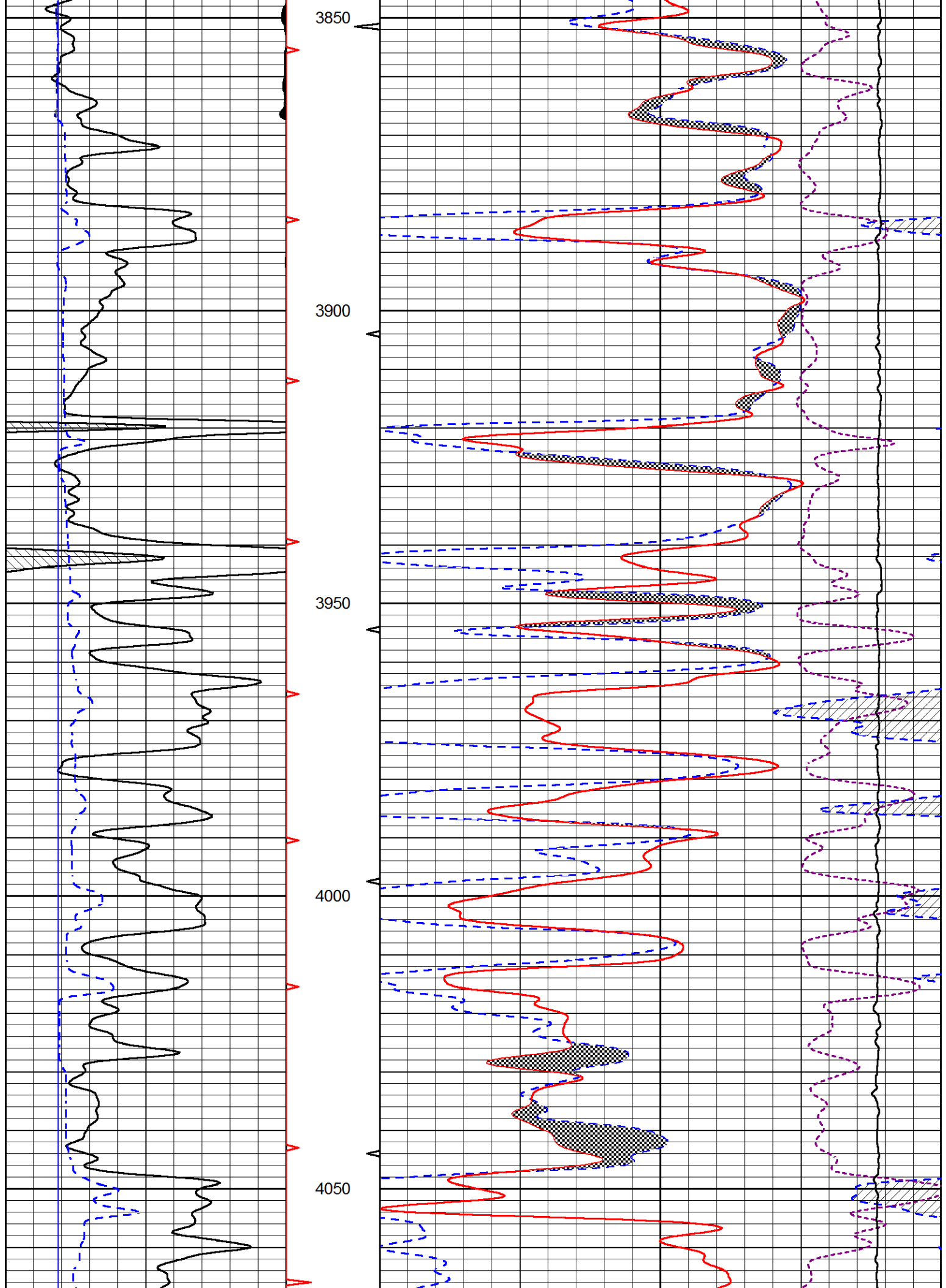
Database File		thomas_garner_mary_1.db	
Dataset Pathname		stack/pass3.1	
Presentation Format		cndlspec	
Dataset Creation		Fri Nov 09 22:36:19 2018	
Charted by		Depth in Feet scaled 1:240	

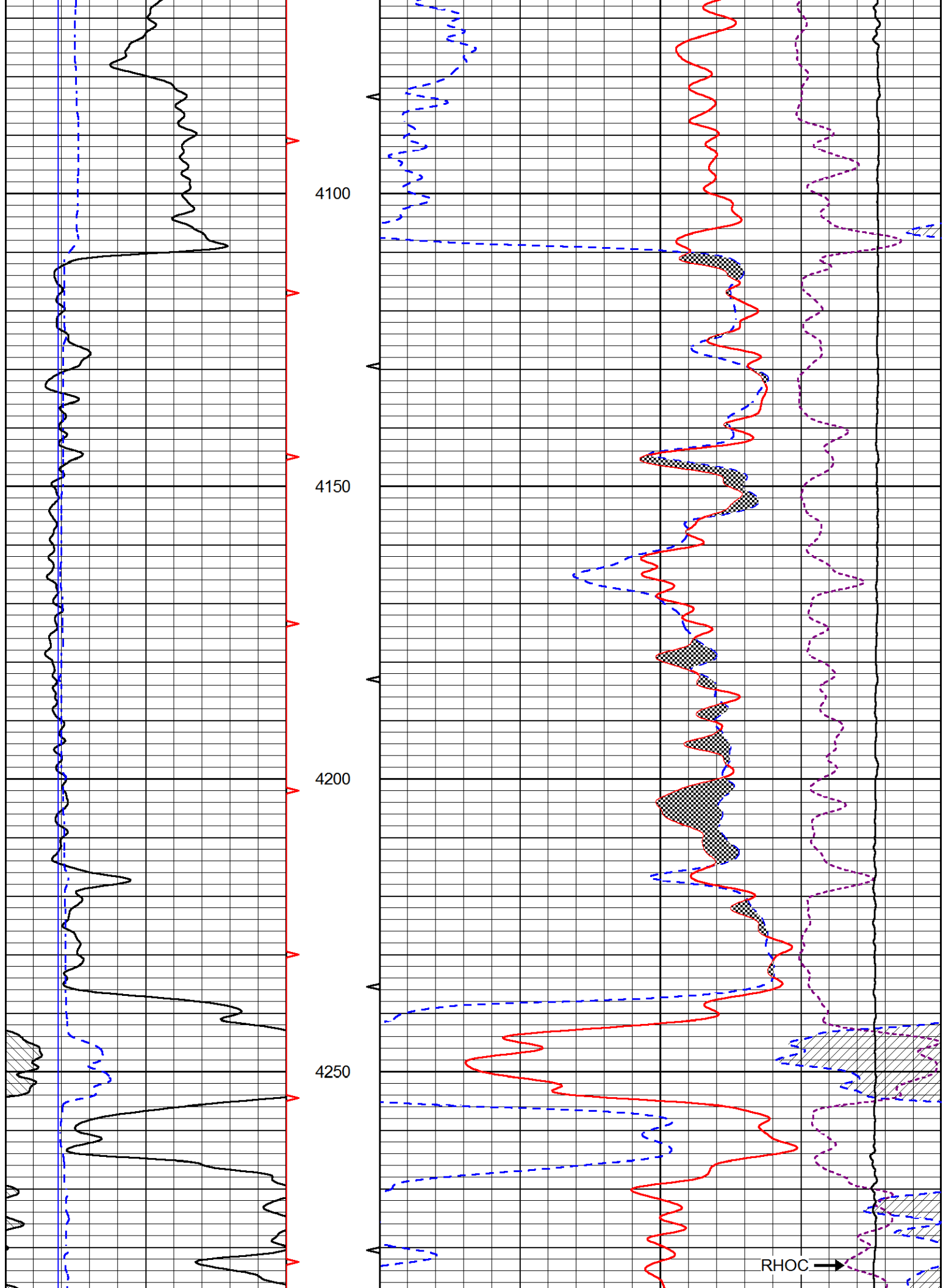
0	GAMMA RAY (GAPI)	150	30	CNLS (pu)	-10
6	dcal (in)	16	30	DPOR (pu)	-10
6	BIT SIZE (in)	16	15000	LINE TENSION (lb)	0

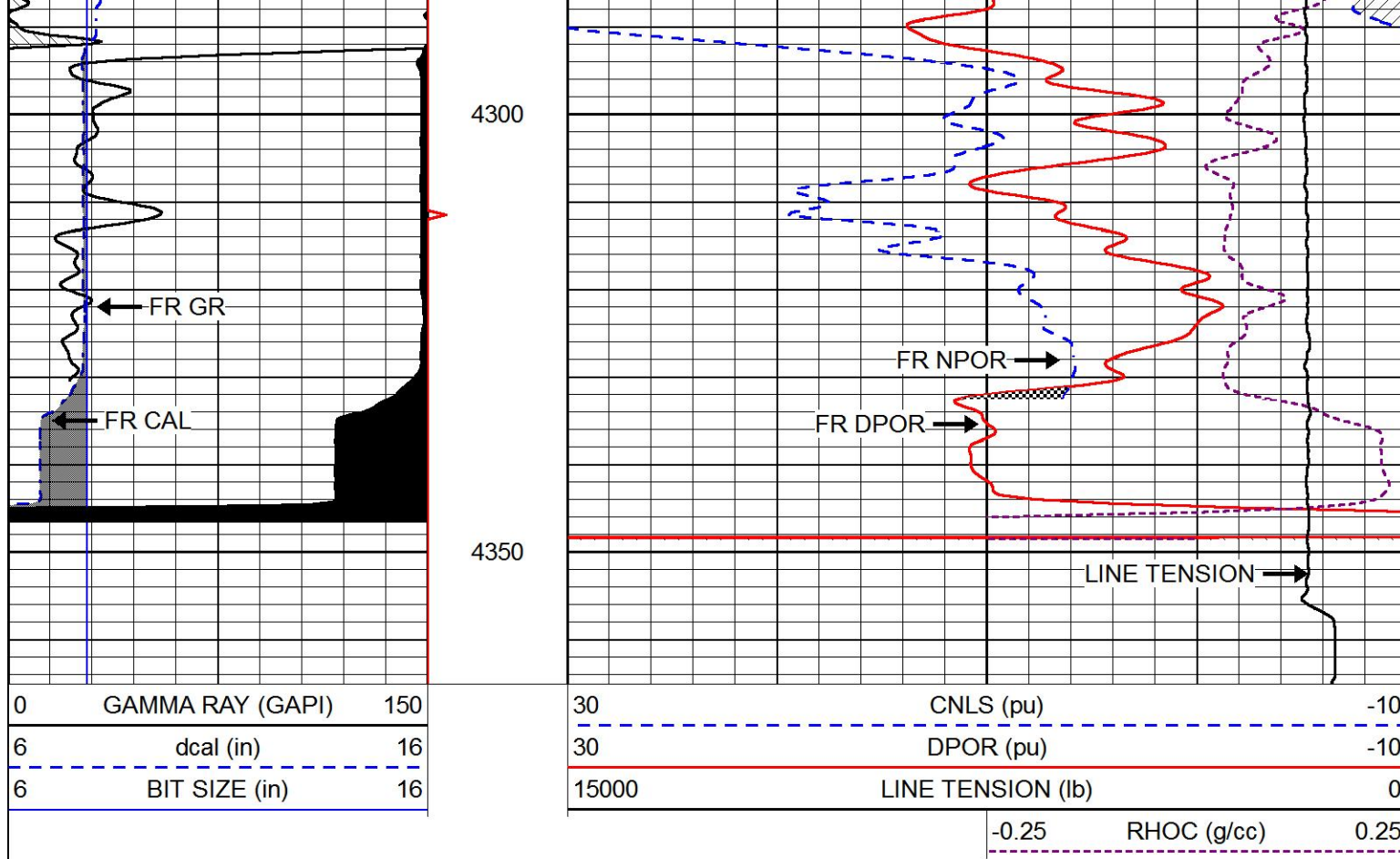






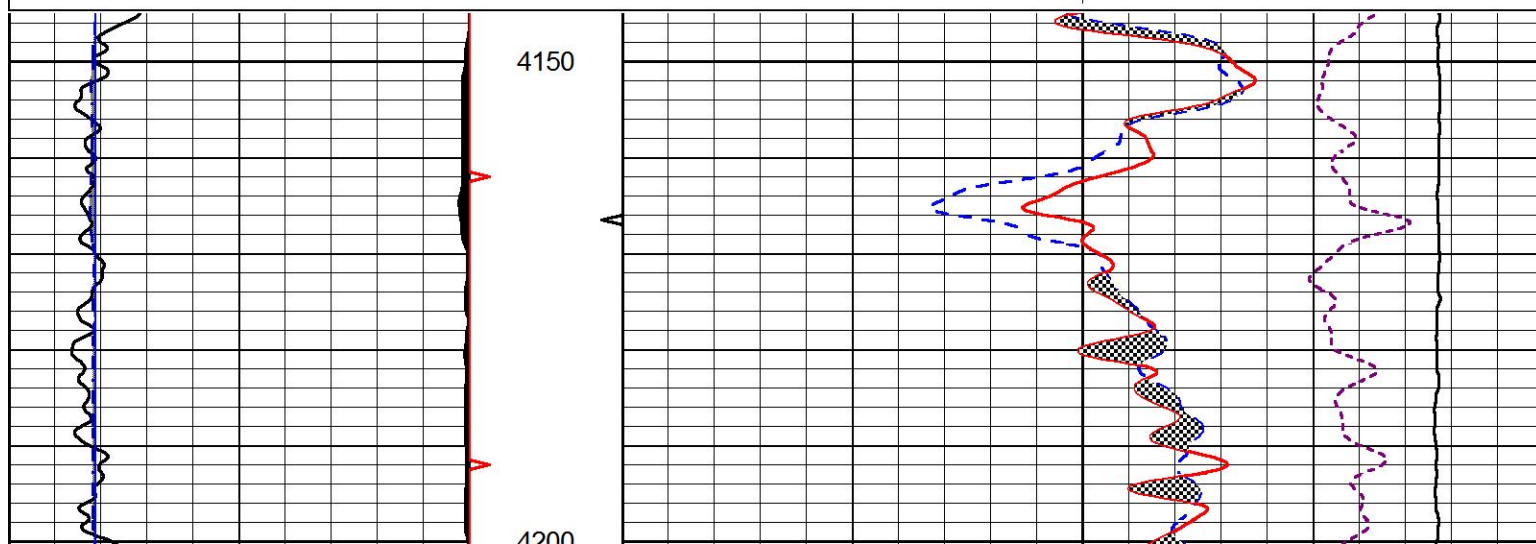
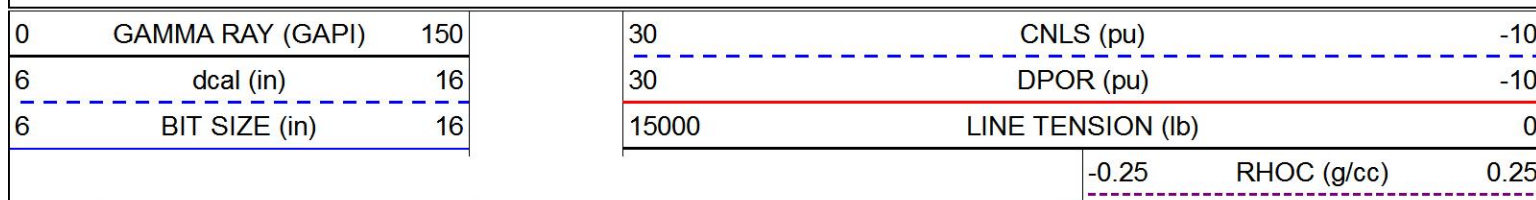


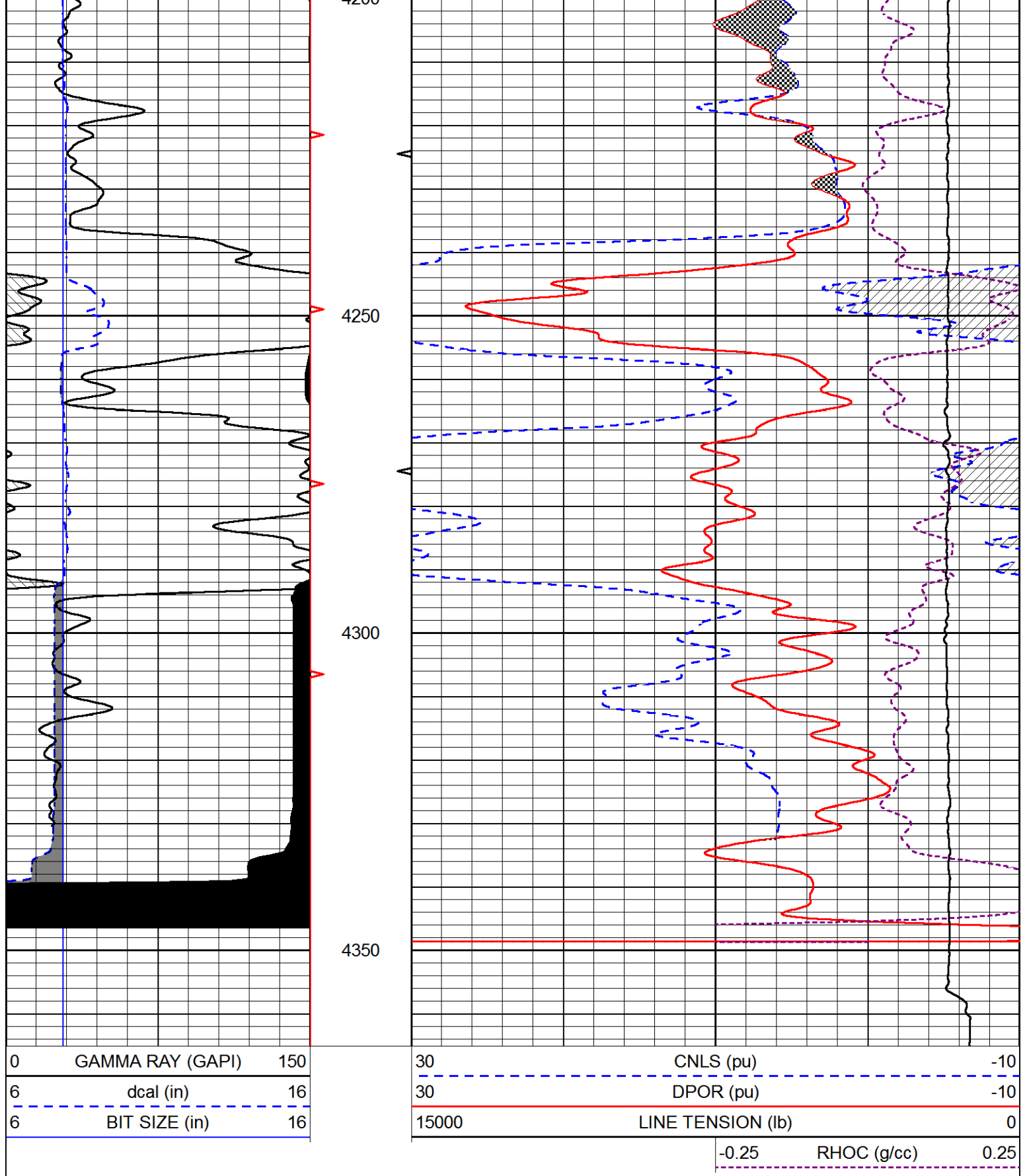




REPEAT SECTION

Database File: thomas_garner_mary_1.db
 Dataset Pathname: stack/pass2.1
 Presentation Format: cndlspec
 Dataset Creation: Fri Nov 09 22:35:03 2018
 Charted by: Depth in Feet scaled 1:240





Calibration Report

Database File thomas_garner_mary_1.db
Dataset Pathname stack/pass3.1
Dataset Creation Fri Nov 09 22:36:19 2018

Dual Induction Calibration Report

Serial-Model: 1987-M&W
Calibration Performed: Thu Aug 09 22:42:18 2018

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

Compensated Density Calibration Report

Serial-Model: 817-947-M&W
Source / Verifier: /
Master Calibration Performed: Thu Nov 08 10:59:41 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	5524.90	5328.23	cps
Aluminum	2.675	g/cc	1020.59	3369.54	cps
Spine Angle = 74.82			Density/Spine Ratio = 0.526		
	Size		Reading		
Small Ring	4.00	in	1.02		
Large Ring	14.00	in	1.15		

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 17:08:01 2017

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



Company THOMAS GARNER INC.
Well MARY #1
Field KACHELMAN
County STAFFORD
State KANSAS

