



DUAL COMP POROSITY LOG

Company RAMA OPERATING CO. INC.
 Well REWERTS #1-27
 Field BEDFORD
 County STAFFORD
 State KANSAS

Company RAMA OPERATING CO. INC.
 Well REWERTS #1-27
 Field BEDFORD
 County STAFFORD State KANSAS

Location: API #: 15-185-24041-00-00
 2185' FNL & 330' FWL
 SEC 27 TWP 23S RGE 12W
 Permanent Datum GROUND LEVEL Elevation 1859'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services DIL/MEL
 K.B. 1870'
 D.F. N/A
 G.L. 1859'

Date	12/1/2018
Run Number	ONE
Type Log	CNL/CDL
Depth Driller	3915'
Depth Logger	3913'
Bottom Logged Interval	3884'
Top Logged Interval	3100'
Type Fluid In Hole	CHEMICAL
Salinity, PPM CL	9100
Density	9.3
Level	FULL
Max. Rec. Temp. F	115
Operating Rig Time	4 HOURS
Equipment -- Location	108 HAYS
Recorded By	IAN MABB
Witnessed By	JOSH AUSTIN

Run No.	Bit	Borehole Record			Casing Record		
		From	To	Size	Wgt.	From	To
ONE	12.25"	0'	307'	8.625"	23#	0'	307'
TWO	7.875"	307'					

<<< 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.
 STAFFOR, KS.
 5 MILES NORTH, 2 MILES WEST, 1/2 SOUTH,
 EAST INTO

Log Measured From: KELLY BUSHING 11 Ft. Above Permanent Datum
 THANK YOU FOR USING PIONEER ENERGY SERVICES
 www.pioneerenergy.com 785-625-3858

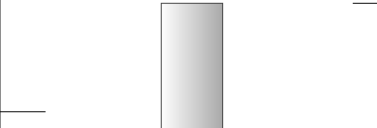
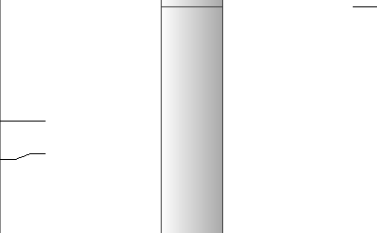
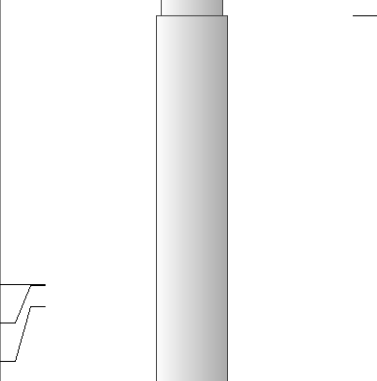
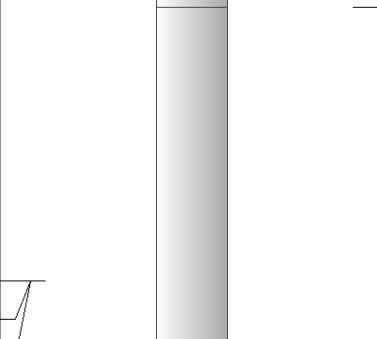
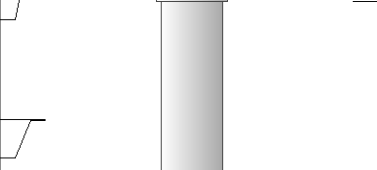
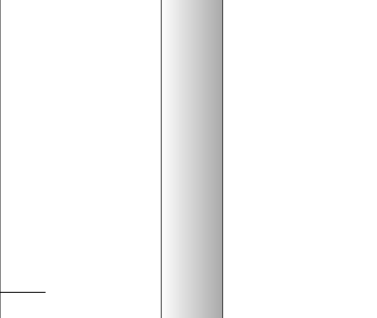
Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: IAN MABB	Primary Witness: JOSH AUSTIN
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\rama_reverts_1_27.db
Dataset field/well/stackmel/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	115	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	65	0	Off	3913

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 (934-5002)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-01) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (PSI 988)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: rama_reverts_1_27.db: field/well/stackmel/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

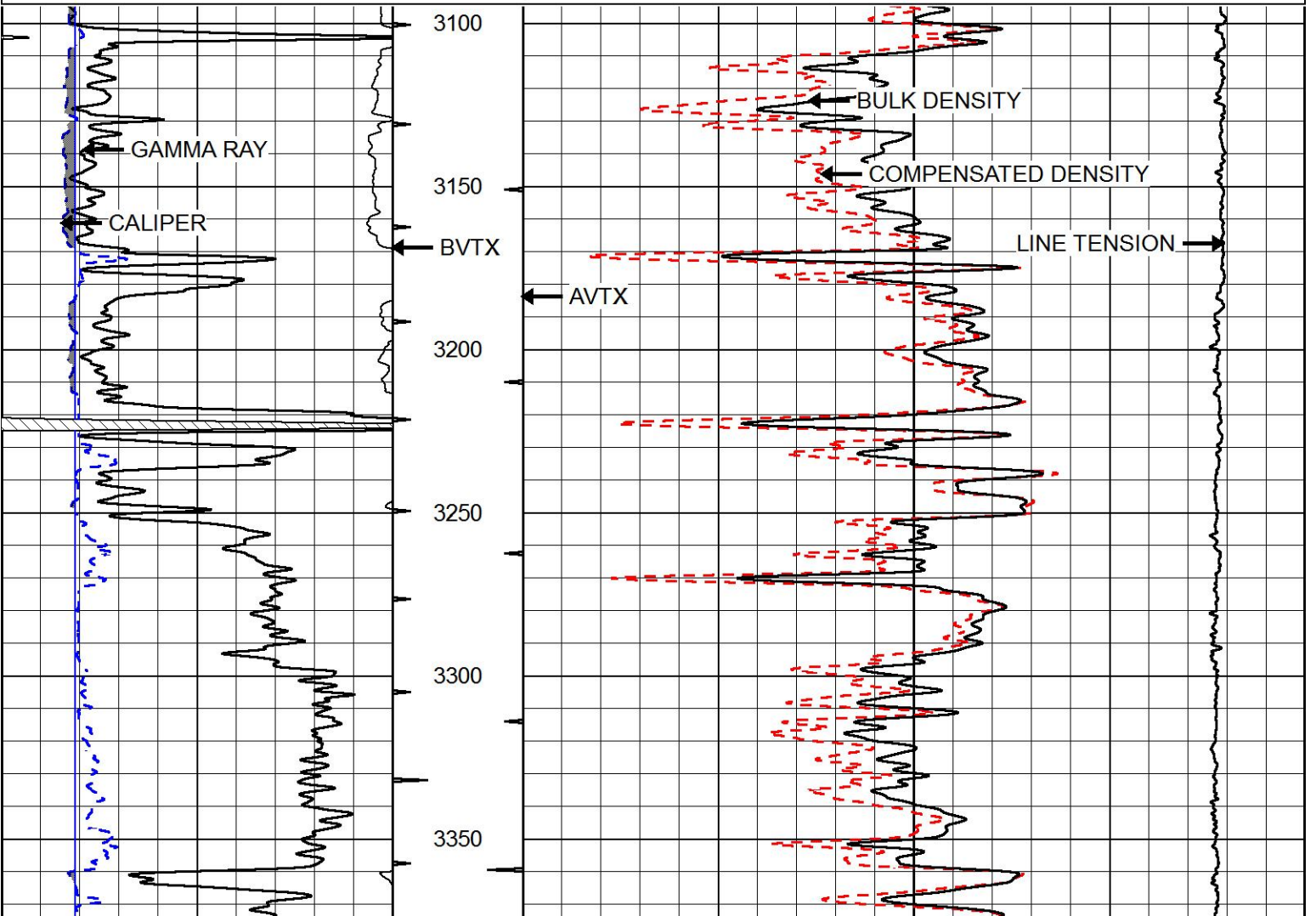


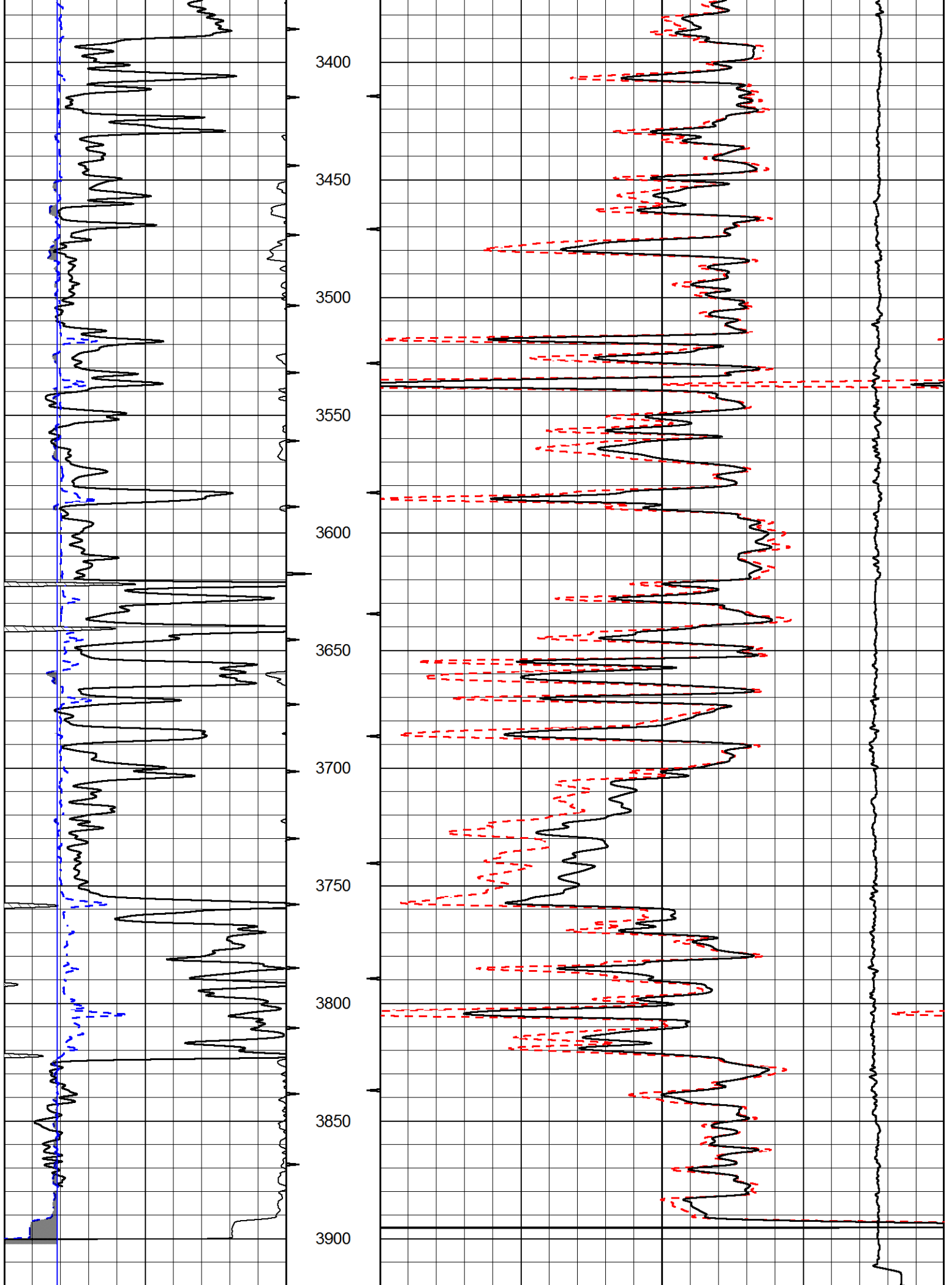
MAIN PASS

Database File rama_reverts_1_27.db
 Dataset Pathname stackmel/pass3.1
 Presentation Format cdl
 Dataset Creation Sat Dec 01 16:13:31 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	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16

30	COMPENSATED DENSITY (pu)	-10
2	BULK DENSITY (g/cc)	3
15000	LINE TENSION (lb)	0

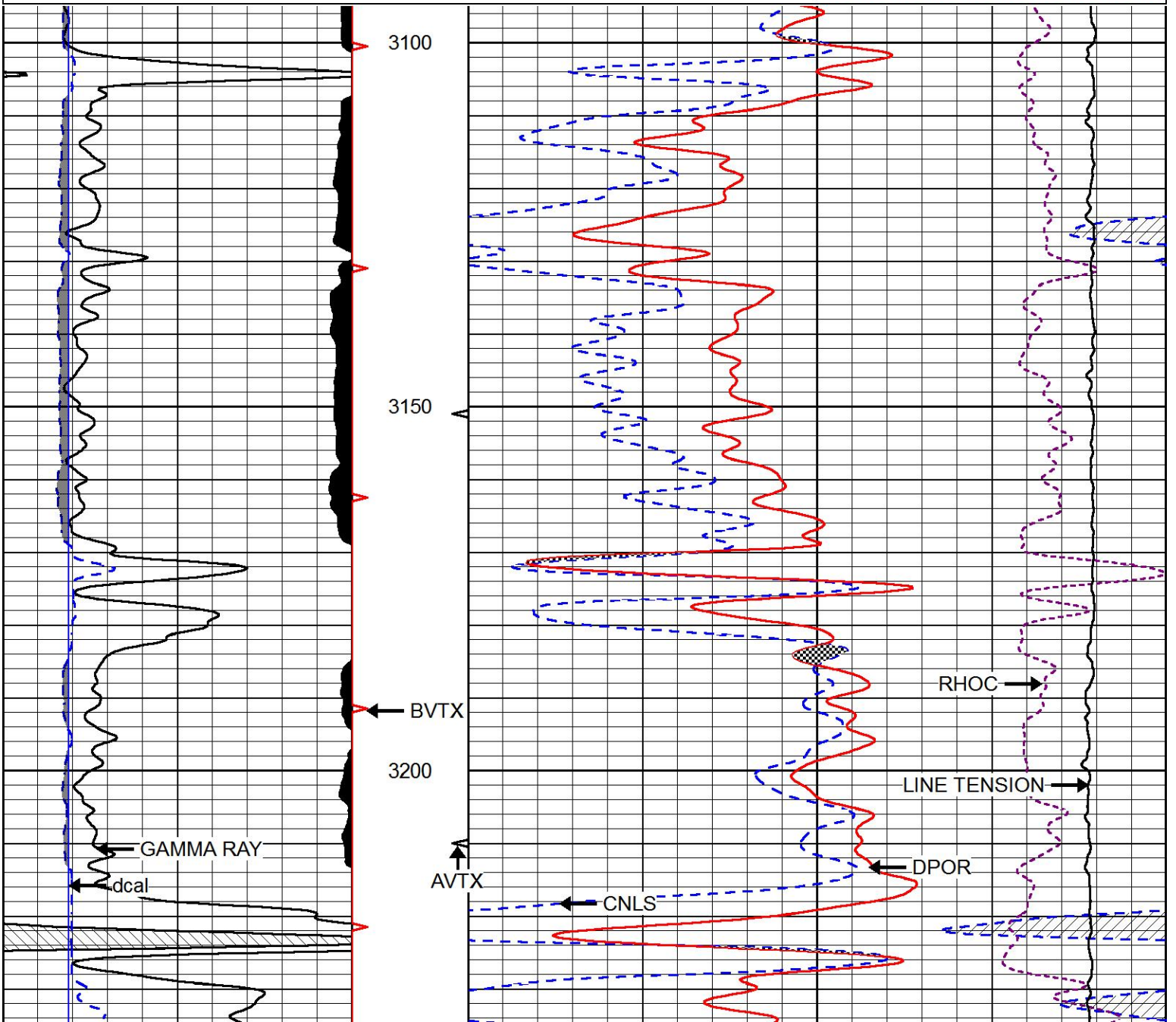


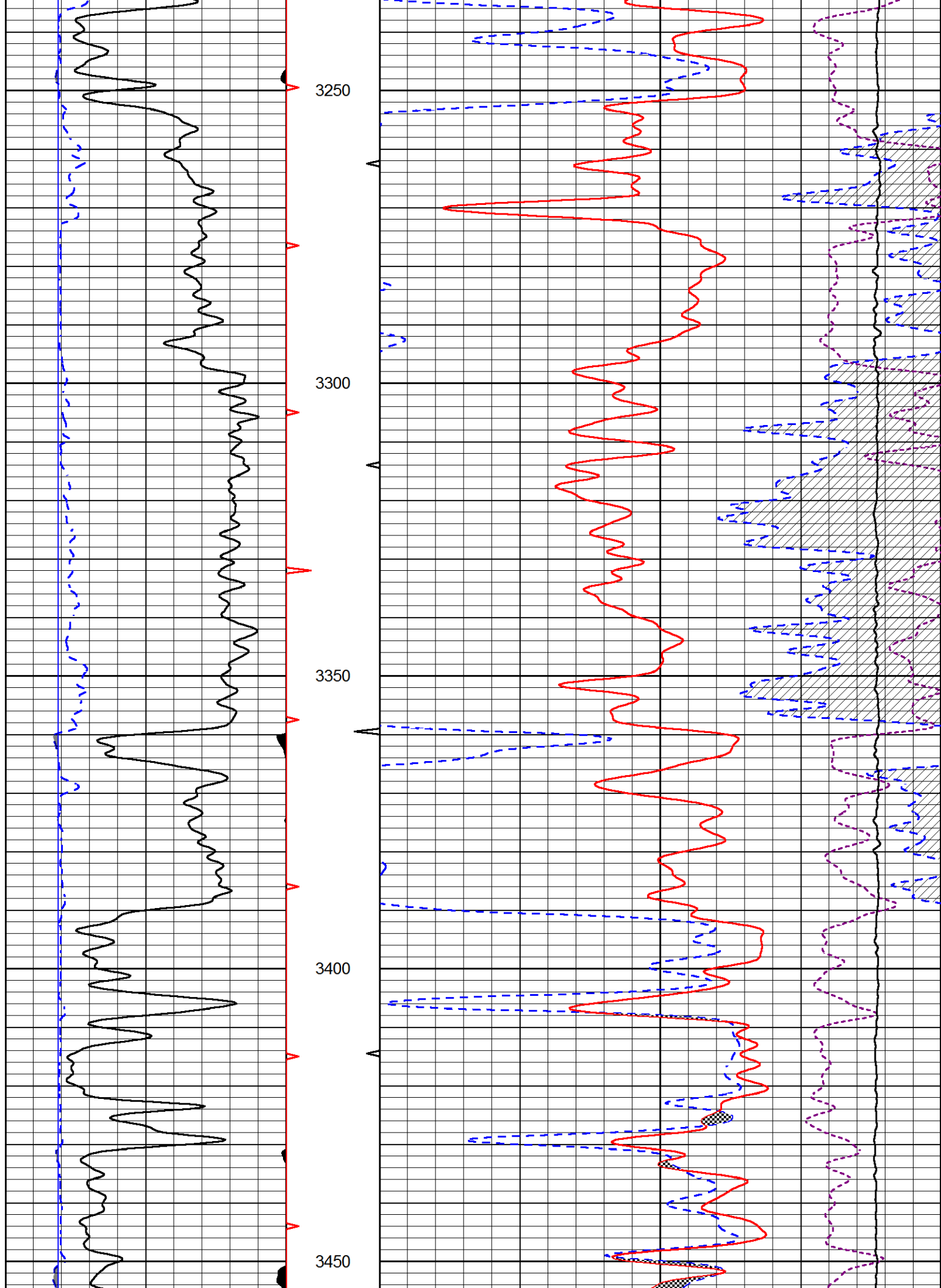
MAIN PASS

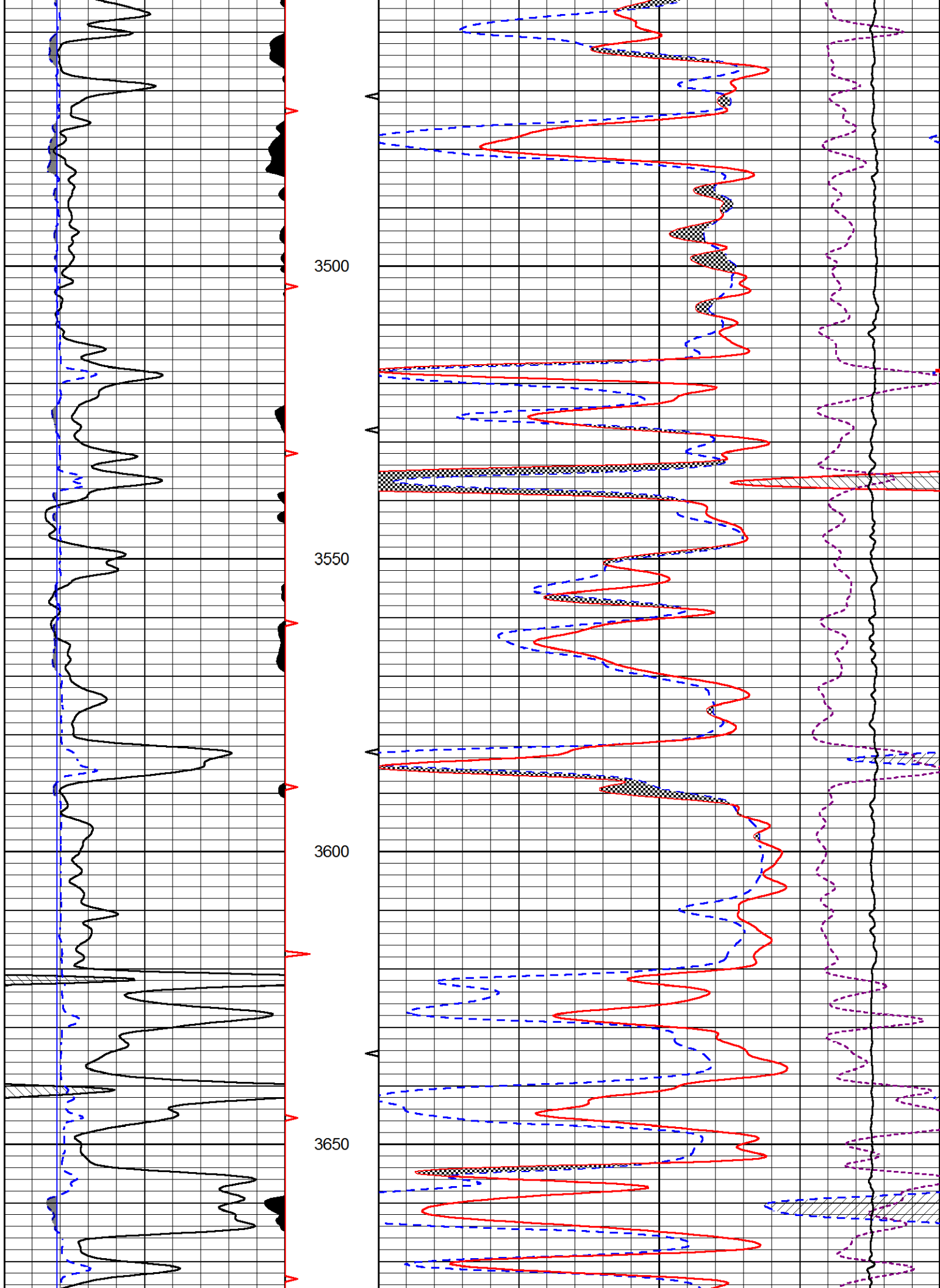
Database File rama_reverts_1_27.db
 Dataset Pathname stackmel/pass3.1
 Presentation Format cndlspec
 Dataset Creation Sat Dec 01 16:13:31 2018
 Charted by Depth in Feet scaled 1:240

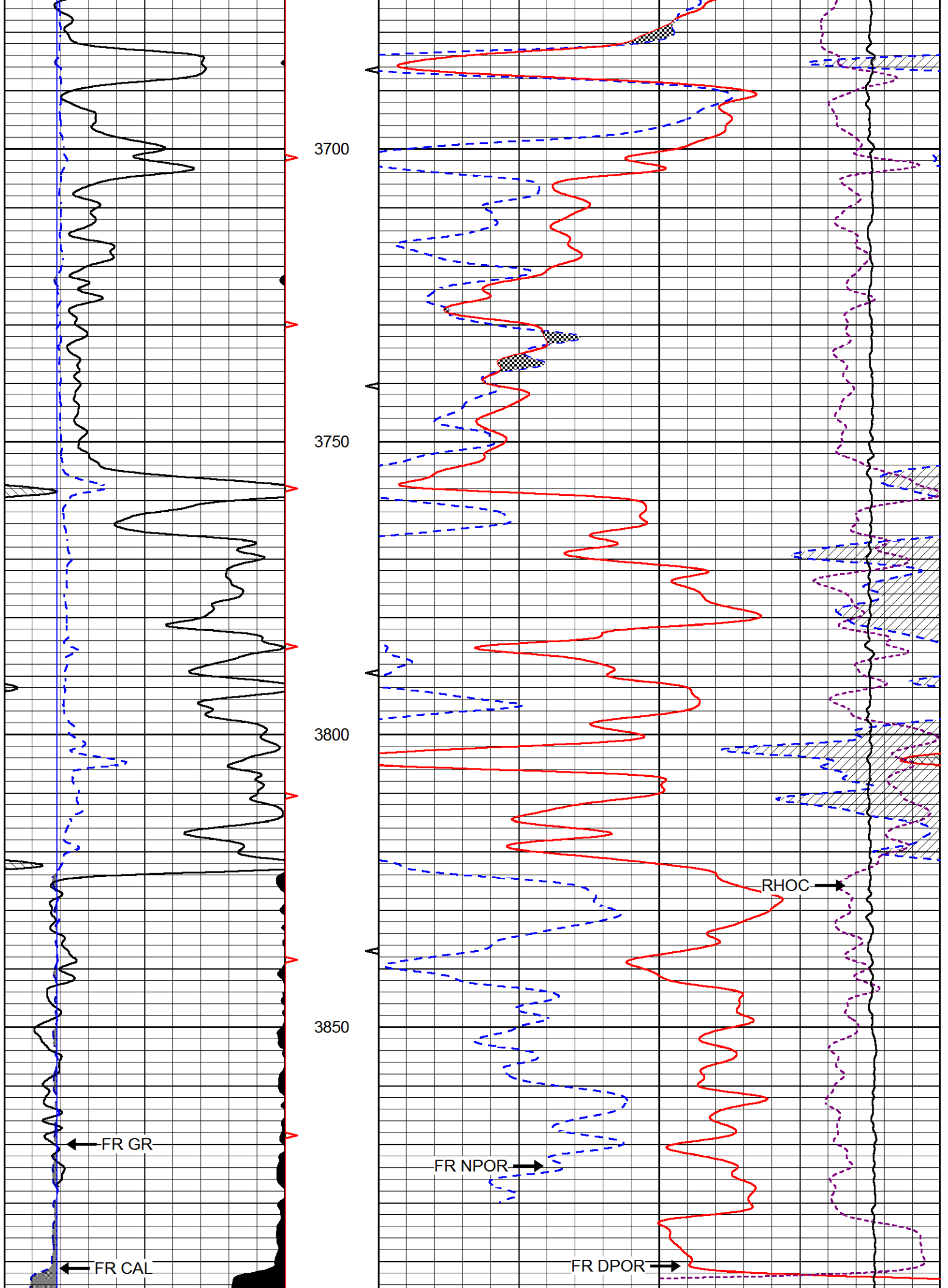
0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

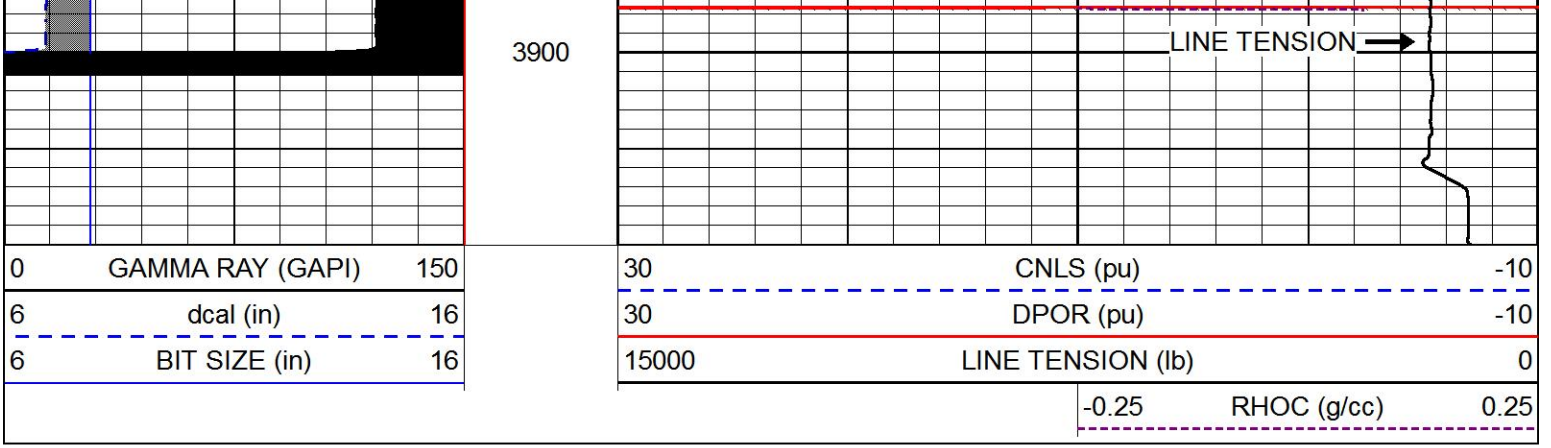
30	CNLS (pu)	-10
30	DPOR (pu)	-10
15000	LINE TENSION (lb)	0
	RHOC (g/cc)	0.25





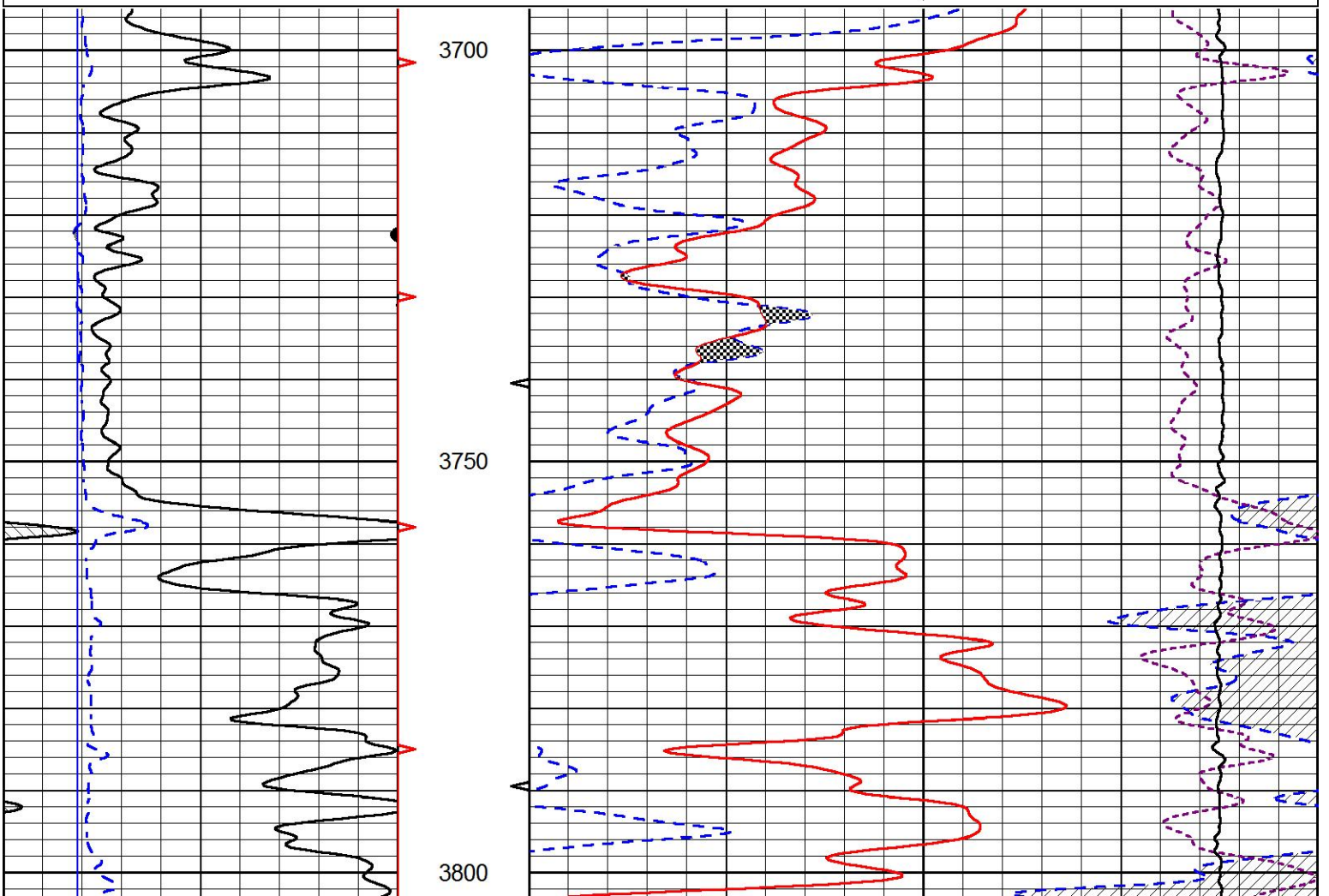
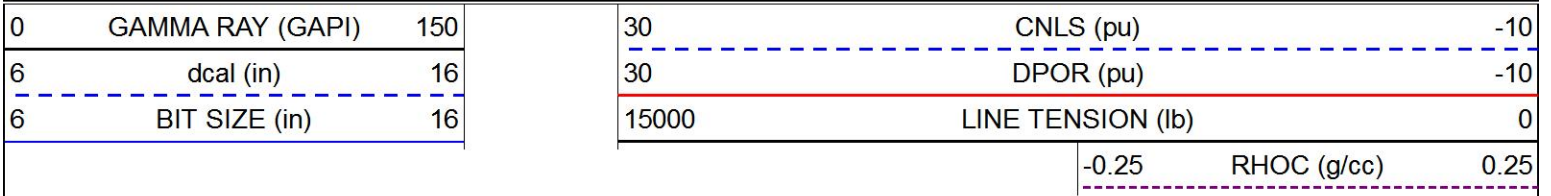


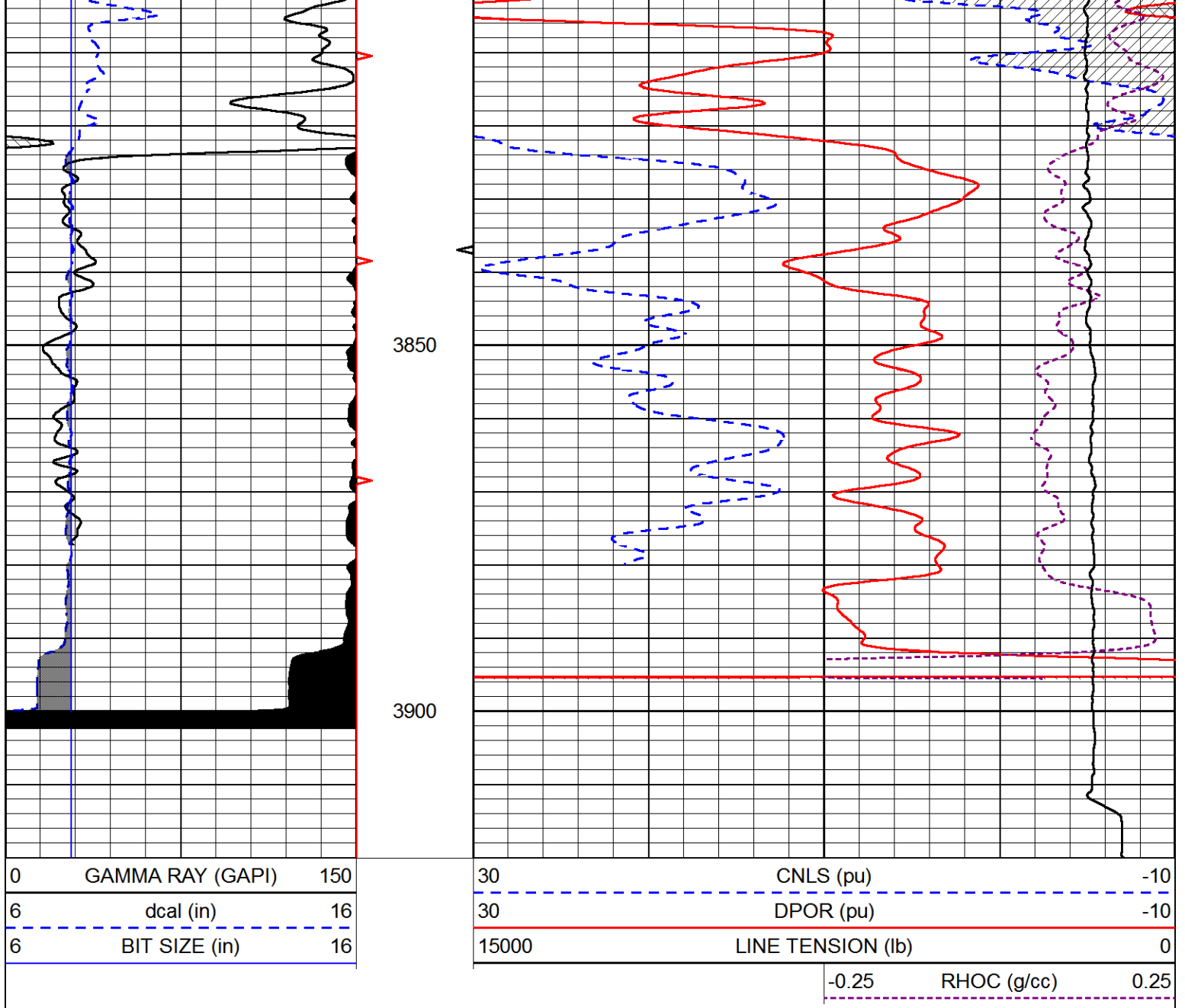




REPEAT SECTION

Database File rama_reverts_1_27.db
 Dataset Pathname stackmel/pass2.1
 Presentation Format cndlspec
 Dataset Creation Sat Dec 01 16:23:05 2018
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File rama_reverts_1_27.db
 Dataset Pathname stackmel/pass3.1
 Dataset Creation Sat Dec 01 16:13:31 2018

Dual Induction Calibration Report

Serial-Model: PSI 988-M&W
 Calibration Performed: Tue Nov 20 10:50:19 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.525	-44.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.380	-17.000

Microlog Calibration Report

Serial-Model: PSI-01-PSI STKBL ML
 Performed: Thu Mar 31 18:14:32 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	32500.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	39500.0000	-1.0000
Caliper	1.0001	1.1397	6.5000	18.5000	in	86.0000	-82.4800

Compensated Density Calibration Report

Serial-Model: 934-5002-M&W
Source / Verifier: /
Master Calibration Performed: Wed Aug 29 11:03:55 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3720.16	2661.79	cps
Aluminum	2.675	g/cc	696.57	1725.83	cps
Spine Angle = 75.50			Density/Spine Ratio = 0.532		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	16.00	in	1.01		

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 RAMA OPERATING CO. INC.
Well REWERTS #1-27
Field BEDFORD
County STAFFORD
State KANSAS