



DUAL COMP POROSITY LOG

Company JOHN O. FARMER, INC.
Well DENTON #1
Field HAGINS
County LYON
State KANSAS

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Location: API #: 15-111-20538-00-00
 500' FNL & 2345' FEL
 SEC 13 TWP 17S RGE 11E
 Permanent Datum GROUND LEVEL Elevation 1252'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING

Other Services
 DIL/MEL
 BHCS

Date	5/27/2018						
Run Number	ONE						
Type Log	CNL/CDL						
Depth Driller	2950'						
Depth Logger	2951'						
Bottom Logged Interval	2922'						
Top Logged Interval	2100'						
Type Fluid In Hole	CHEMICAL						
Salinity, PPM CL	1700						
Density	9.0						
Level	FULL						
Max. Rec. Temp. F	106						
Operating Rig Time	5 HOURS						
Equipment -- Location	91 HAYS						
Recorded By	D. SCHMIDT						
Witnessed By	AUSTIN KLAUS						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0'	220'	8.625"	23#	0'	220'
TWO	7.875"	220'	TD				
Casing Record							

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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.

ADMIRE (HWY 56 & 99),
 5 SOUTH TO 290 RD, 2 1/2 WEST,
 SOUTH INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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

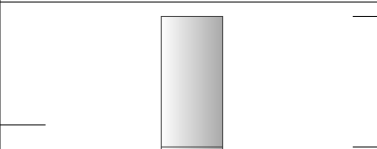
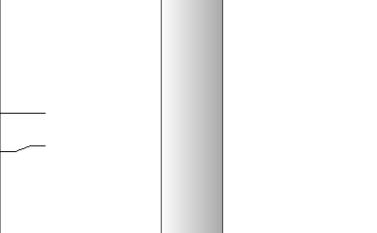
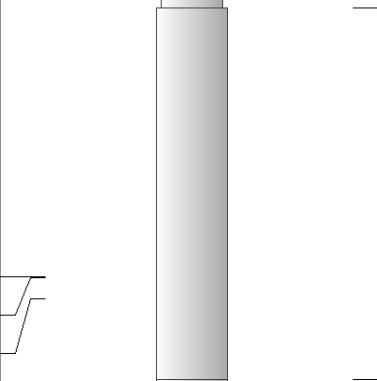
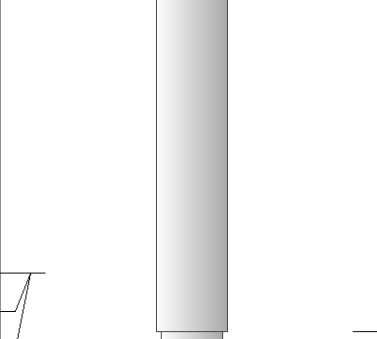
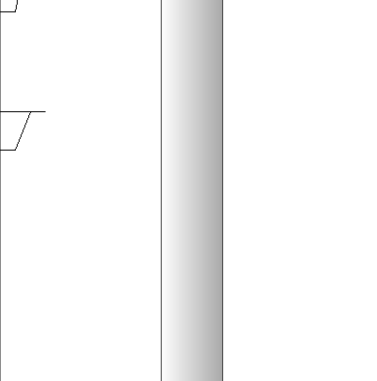
Your Pioneer Energy Services Crew		This Log Record Was Witnessed By	
Engineer: D. SCHMIDT	Operator:	Primary Witness: AUSTIN KLAUS	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Log Variables

Database: C:\ProgramData\Warrior\Data\john o farmer_denton 1.db
 Dataset: field/well/STKML/pass3.1/_vars_

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	96	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	90	0	5.5	0	2951	106	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (817-947)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					

DIL-PSI HIGH TEMP (PSI 971 HT)

18.50

3.50

220.00

CILD 8.00

CILM 4.70

SP 0.20

Dataset: john o farmer_denton 1.db: field/well/STKML/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

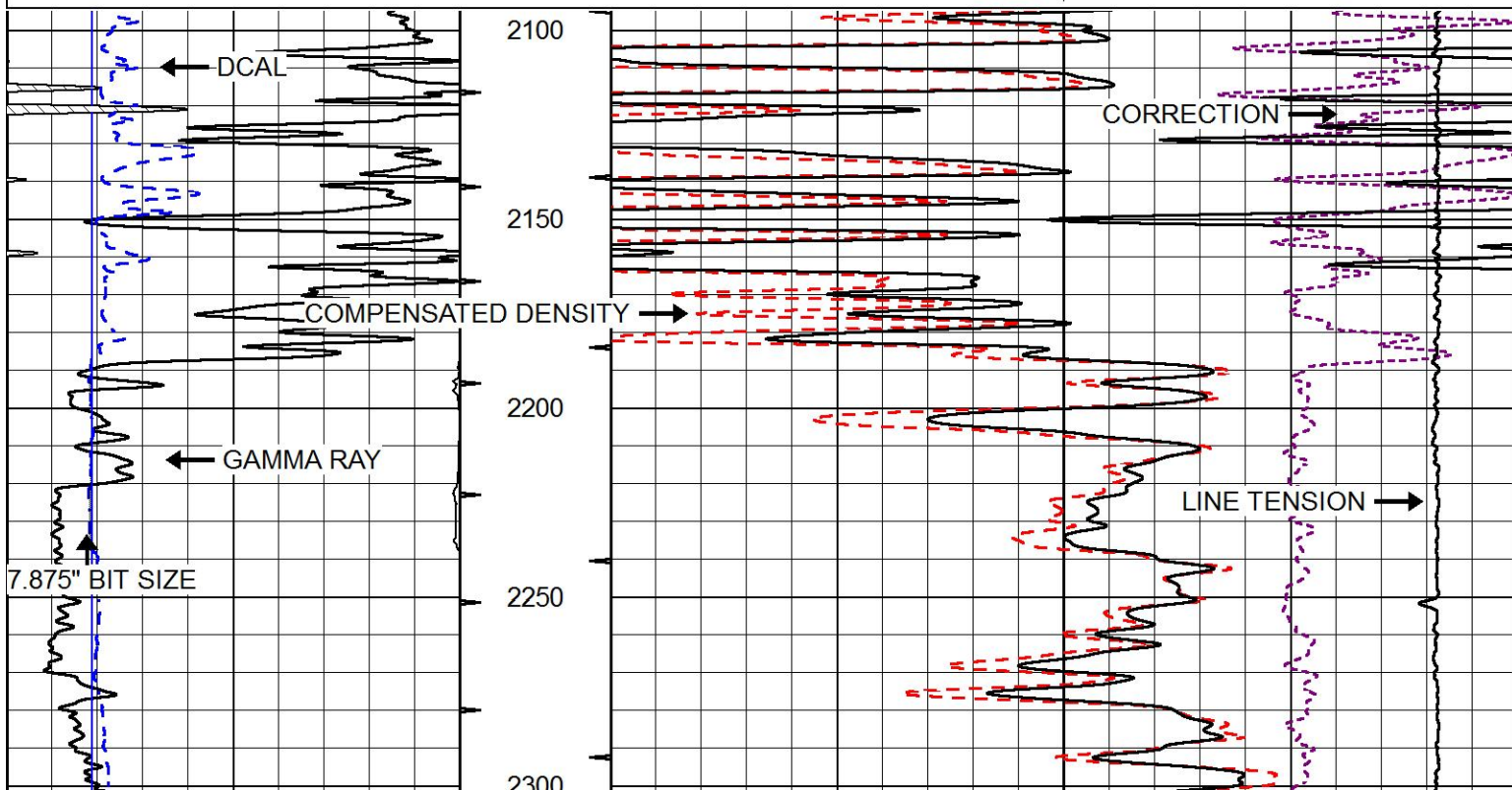


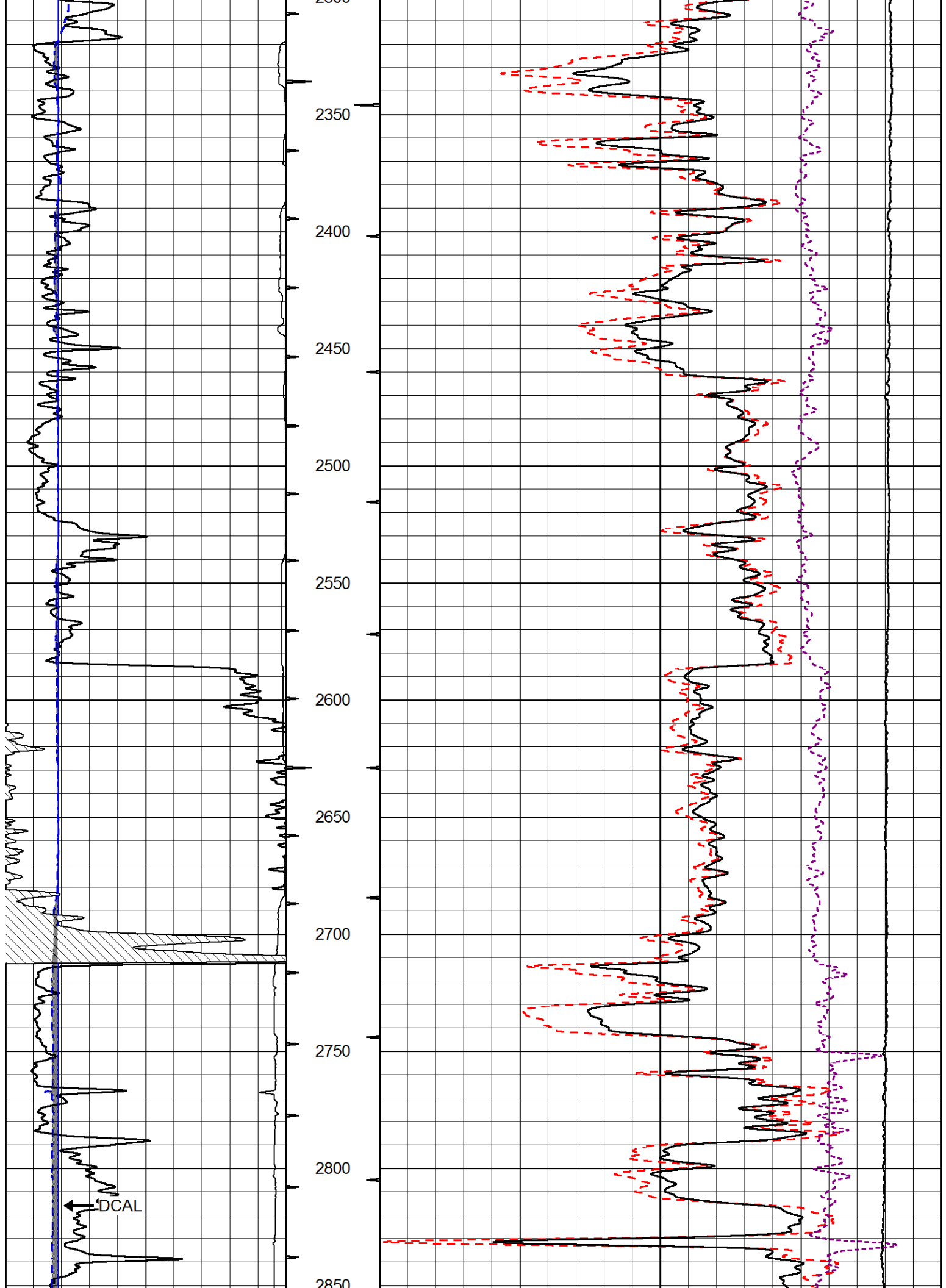
MAIN PASS

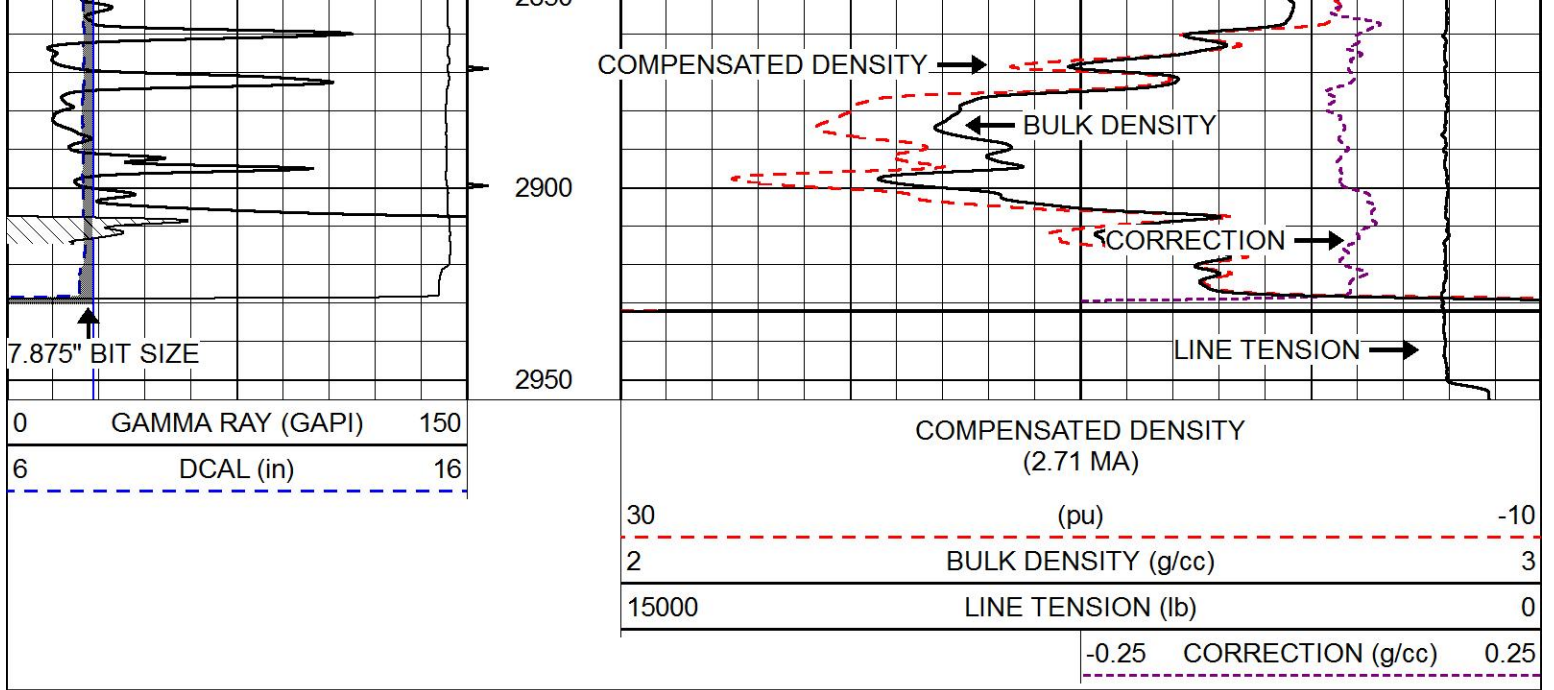
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 Dataset Pathname STKML/pass3.1
 Presentation Format cdl
 Dataset Creation Sun May 27 23:00:53 2018
 Charted by Depth in Feet scaled 1:600

0	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

30	COMPENSATED DENSITY (2.71 MA)	(pu)	-10
2	BULK DENSITY (g/cc)		3
15000	LINE TENSION (lb)		0
		-0.25 CORRECTION (g/cc)	0.25

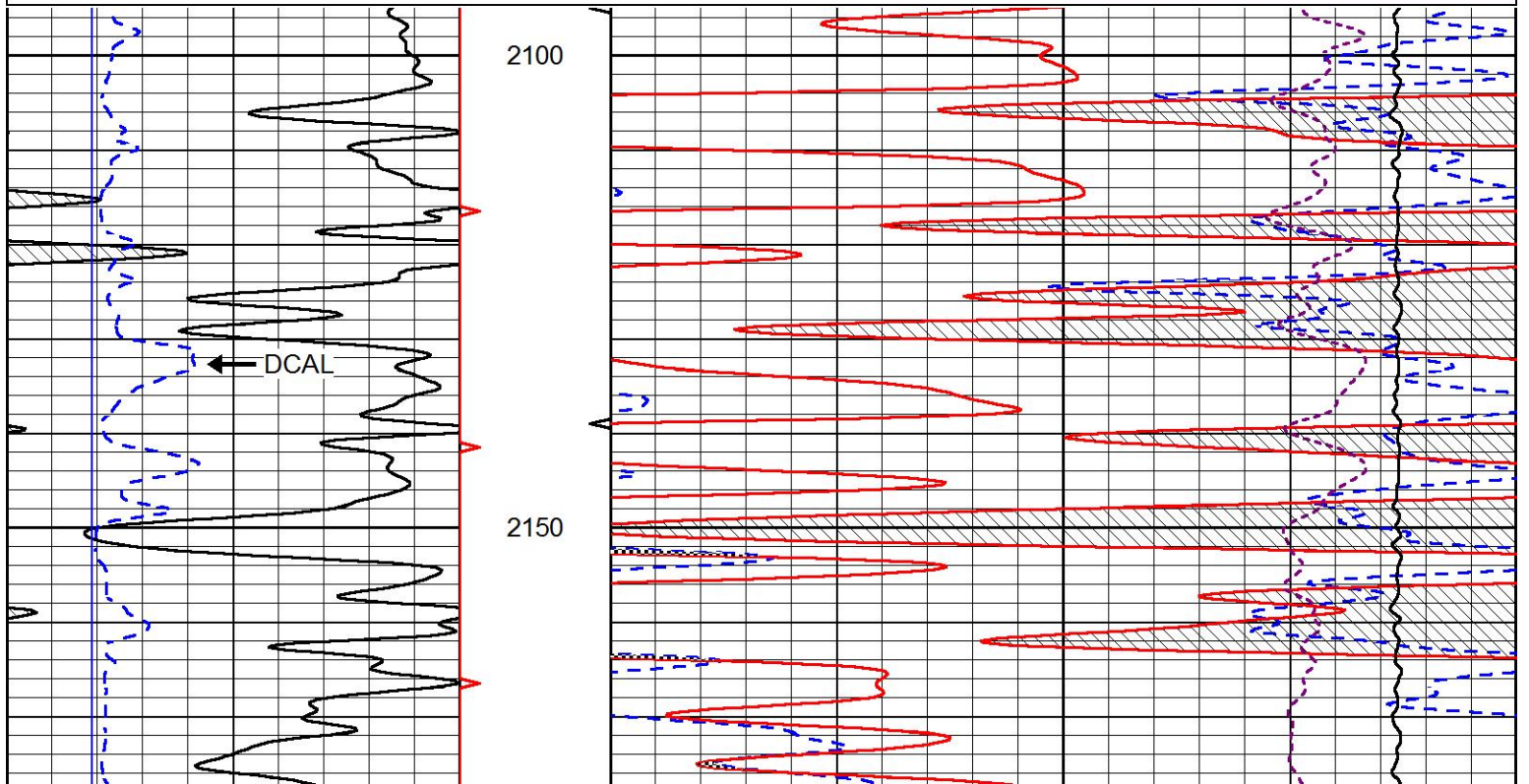
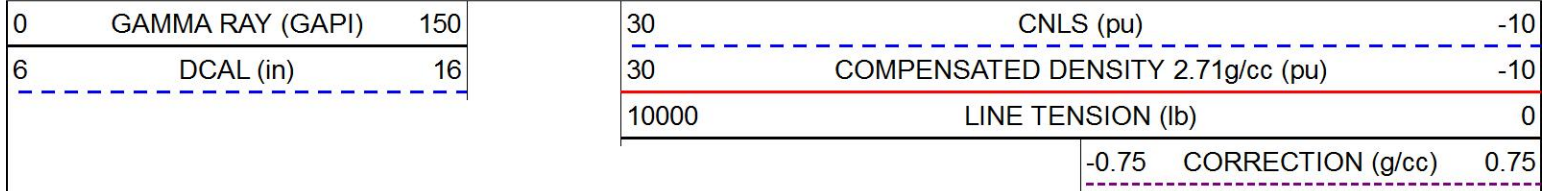


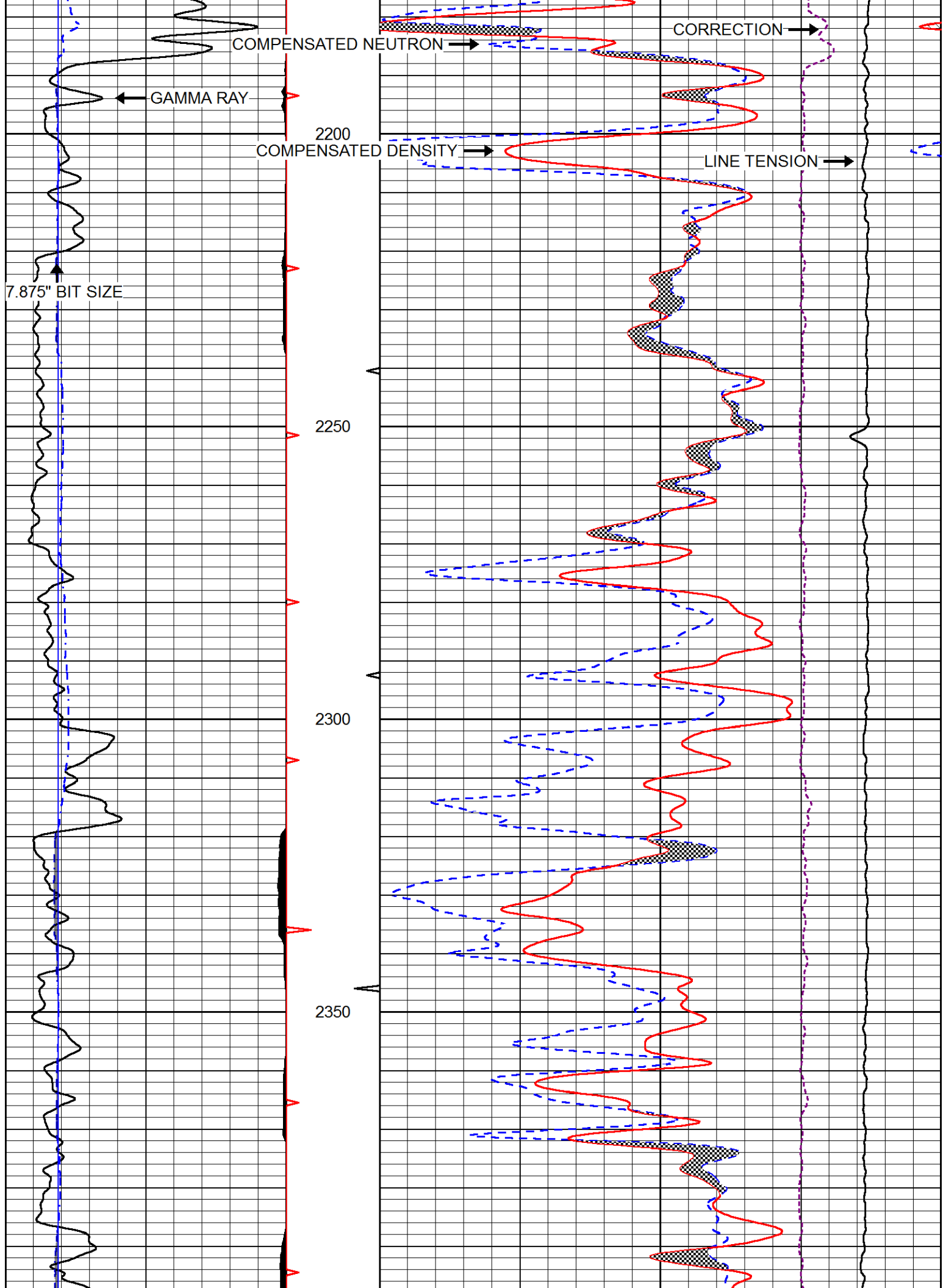


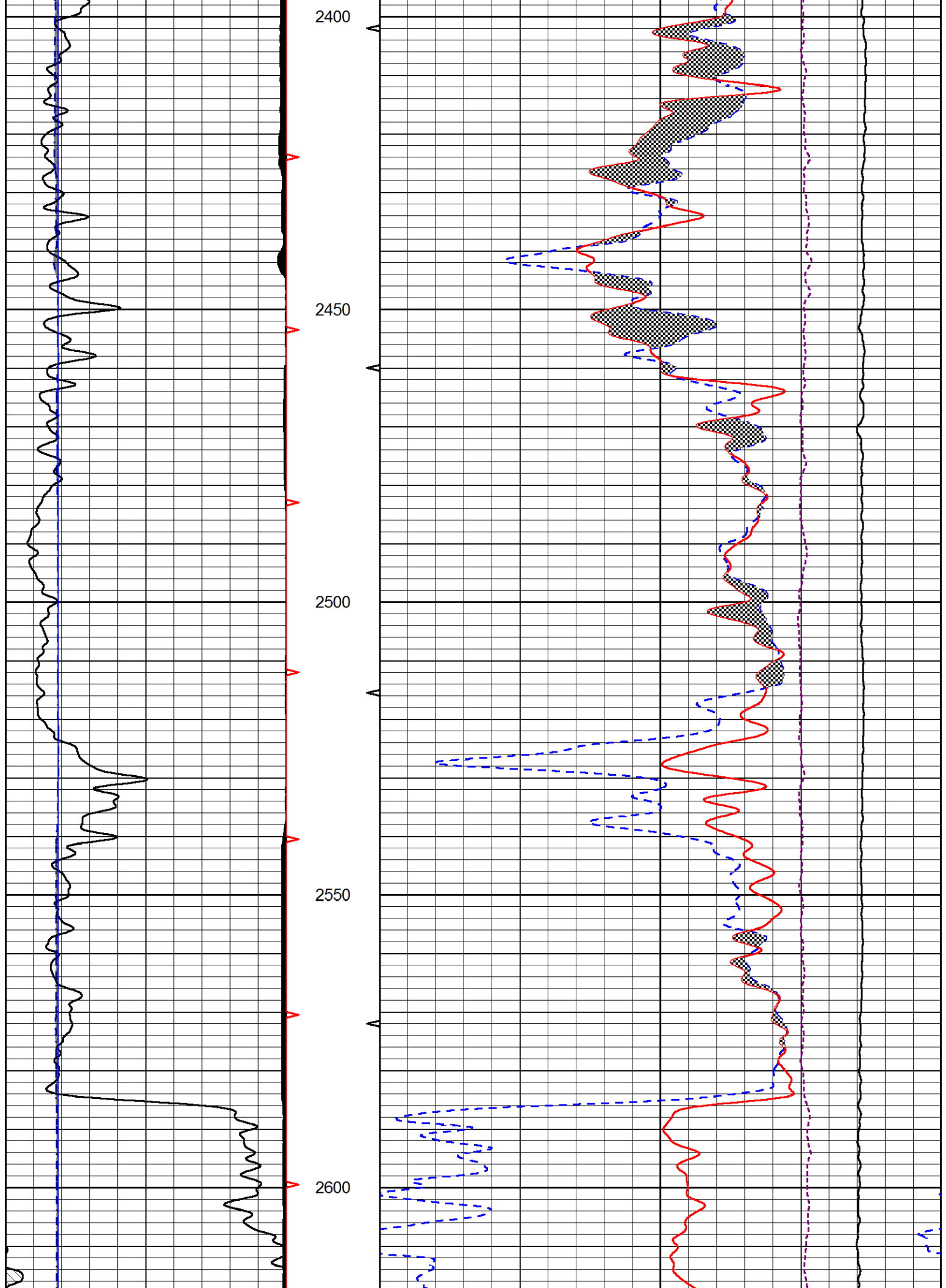


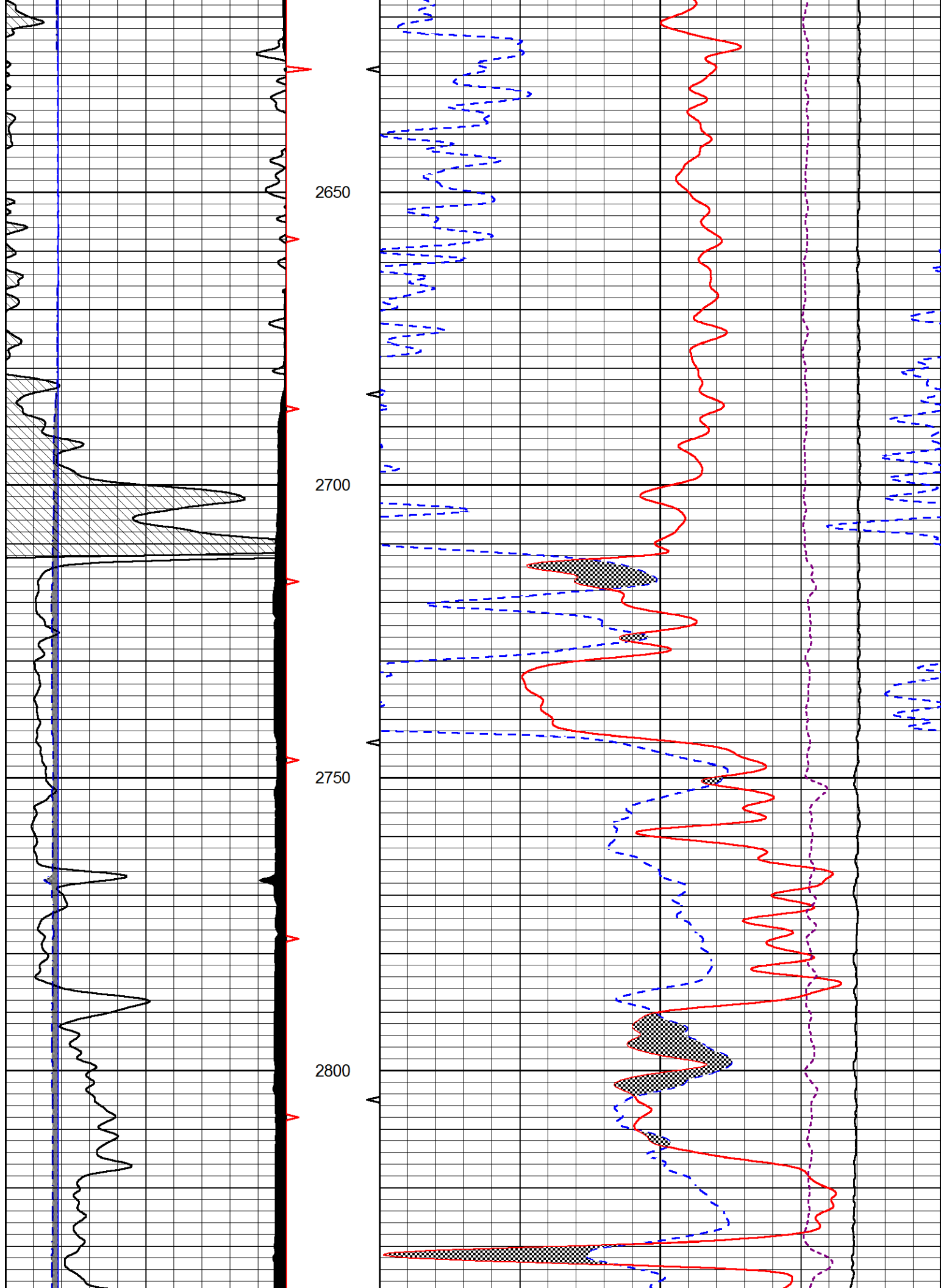
MAIN PASS

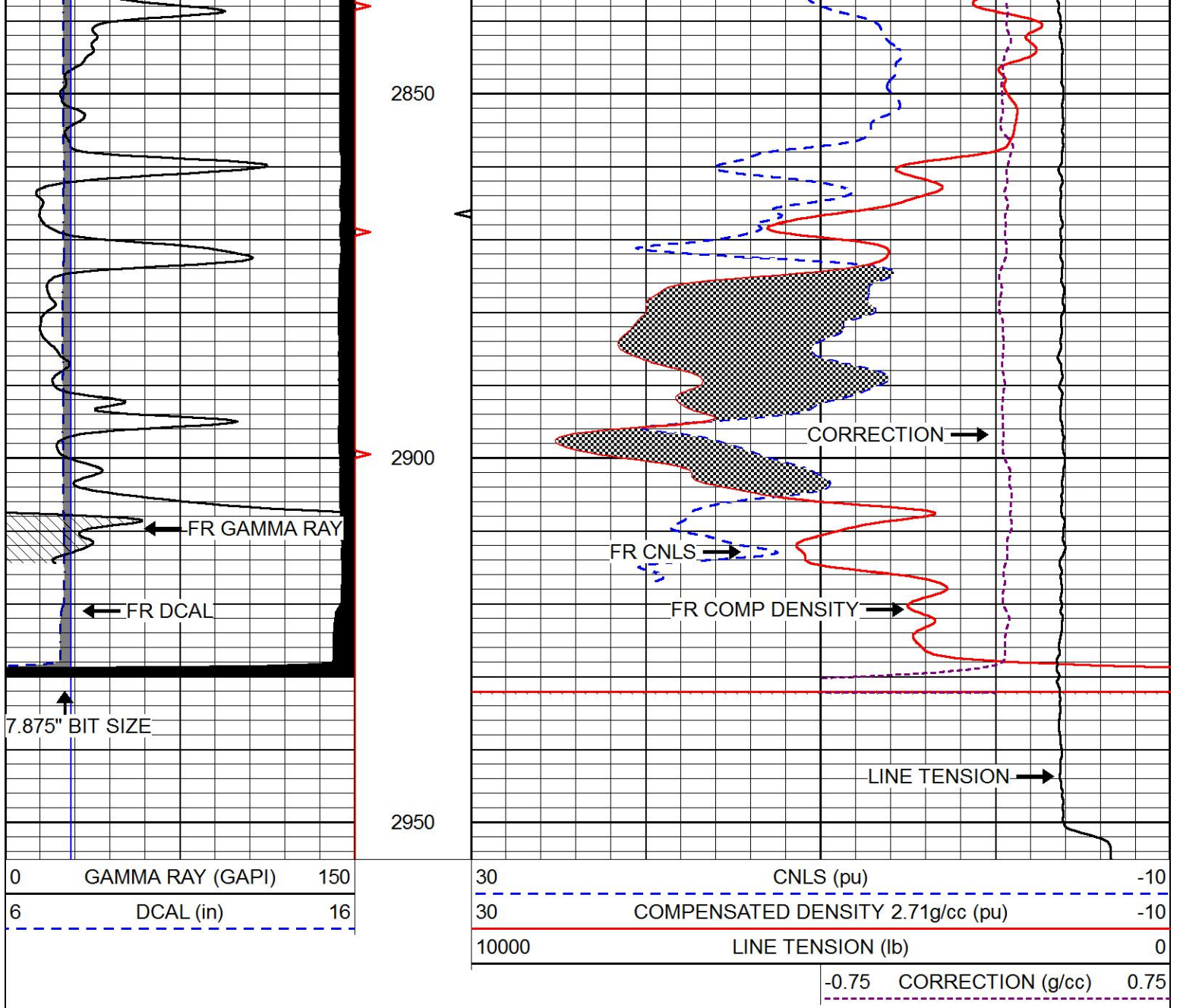
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 Dataset Pathname STKML/pass3.1
 Presentation Format cndlspec
 Dataset Creation Sun May 27 23:00:53 2018
 Charted by Depth in Feet scaled 1:240







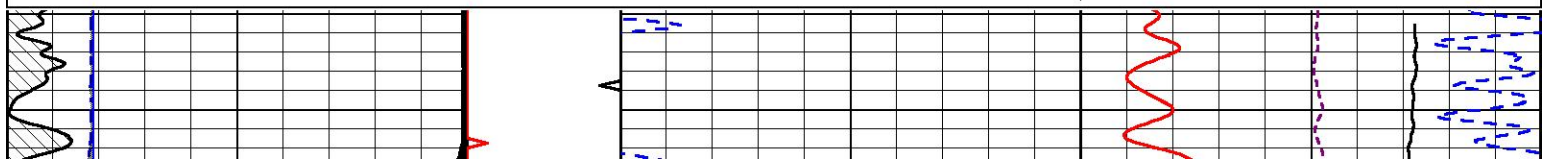


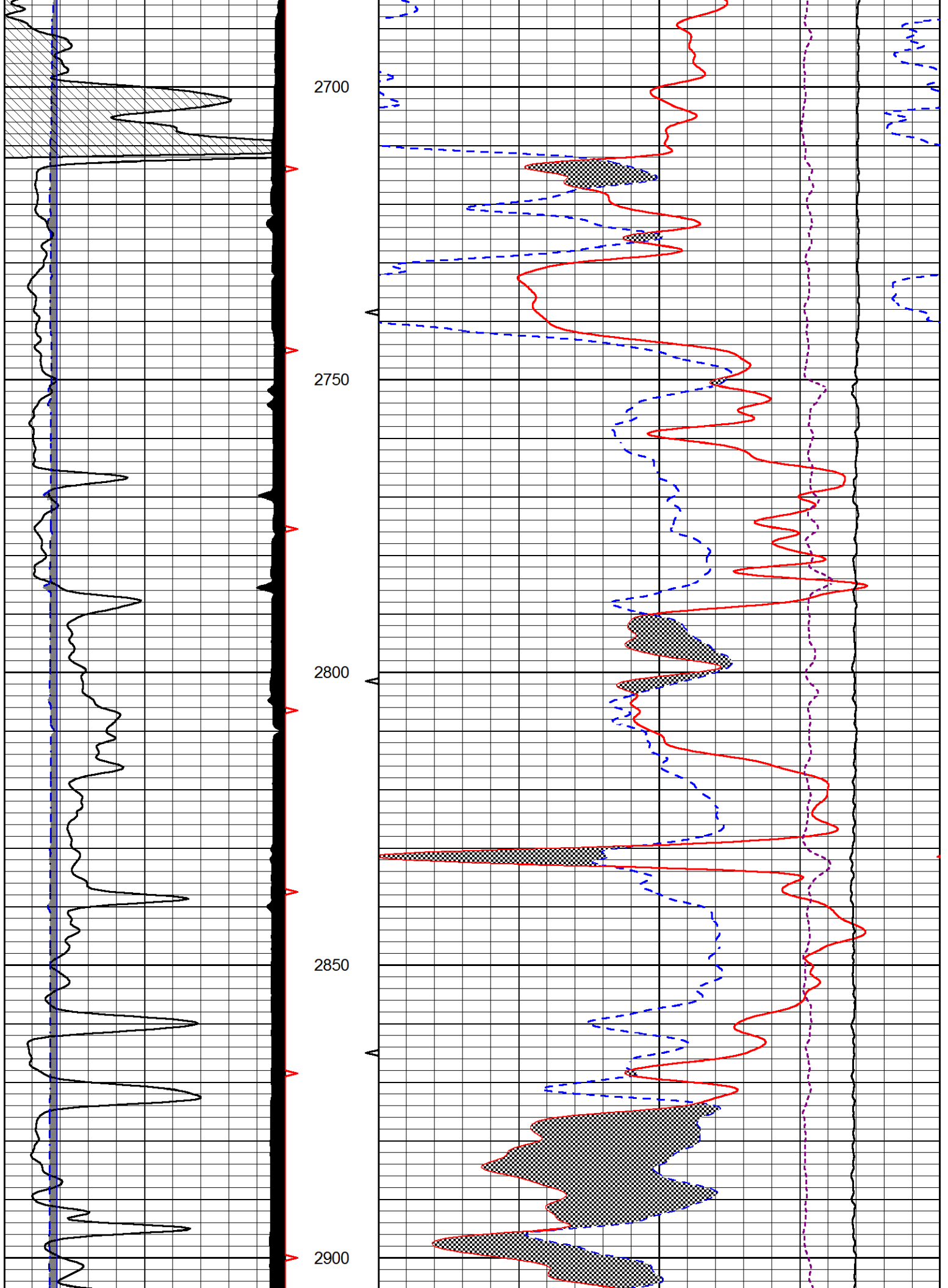


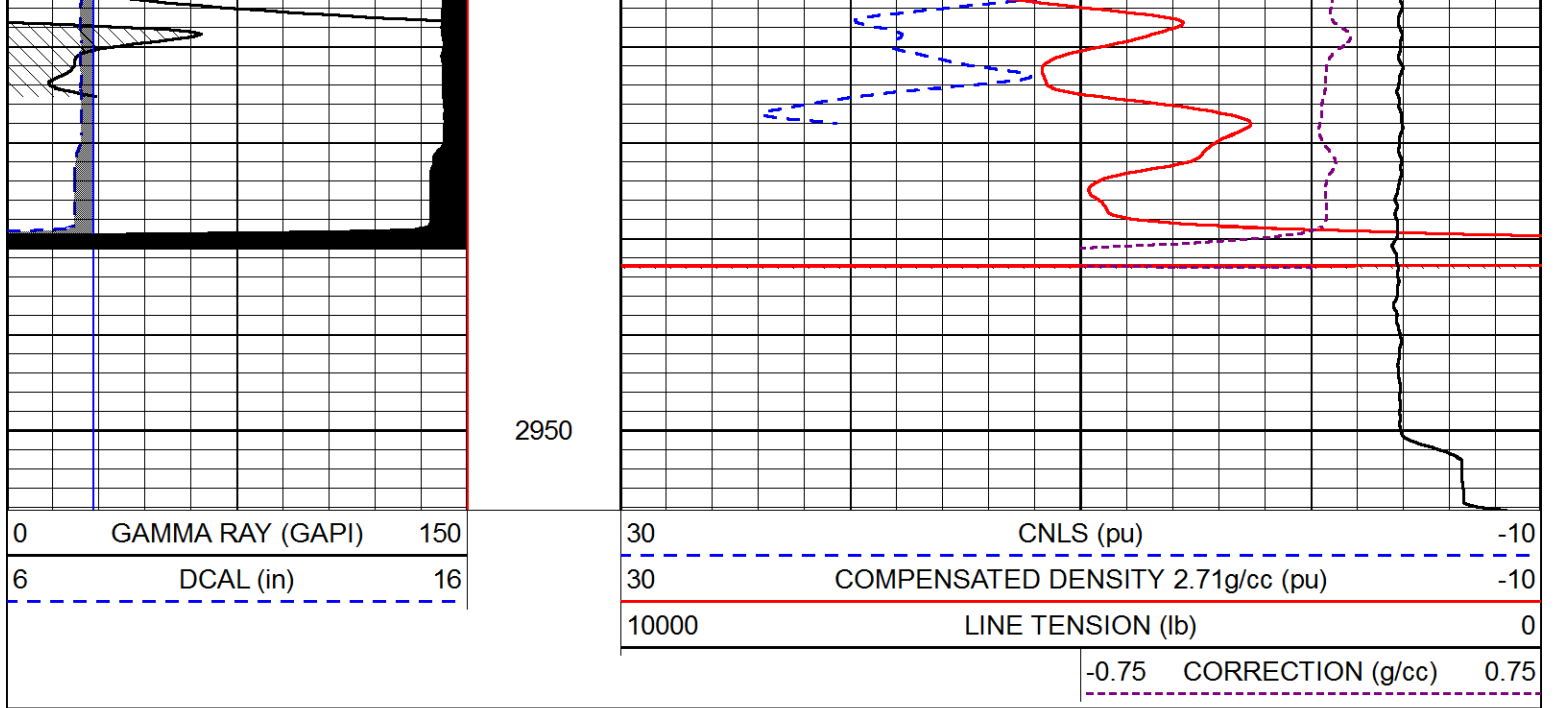
REPEAT SECTION

Database File john o farmer_denton 1.db
 Dataset Pathname STKML/pass2.1
 Presentation Format cndlspec
 Dataset Creation Sun May 27 23:08:00 2018
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	30	CNLS (pu)	-10
6	DCAL (in)	16	30	COMPENSATED DENSITY 2.71g/cc (pu)	-10
			10000	LINE TENSION (lb)	0
				-0.75 CORRECTION (g/cc)	0.75







Calibration Report

Database File john o farmer_denton 1.db
 Dataset Pathname STKML/pass3.1
 Dataset Creation Sun May 27 23:00:53 2018

Dual Induction Calibration Report

Serial-Model: PSI 971 HT-PSI HIGH TEMP
 Calibration Performed: Sun May 27 00:33:10 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.430	-30.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.375	-30.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Sun May 27 00:33:27 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	8500.0000	-0.3000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	11000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.7500

Compensated Density Calibration Report

Serial-Model: 817-947-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Tue May 01 14:00:17 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.660	g/cc	1141.85	3762.09	cps
Spine Angle = 74.89			Density/Spine Ratio = 0.520		
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	15.00	in	1.15		

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: MON APR 16 10:30:30 2018

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
 Tool Model: M&W
 Calibration Performed: Mon Jan 15 11:20:44 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps

 <p>PIONEER Pioneer Energy Services</p>	Company	JOHN O. FARMER, INC.
	Well	DENTON #1
	Field	HAGINS
	County	LYON
	State	KANSAS