



DUAL COMP POROSITY LOG

Company STRATAKAN EXPLORATION, LLC
 Well GASKILL RANGE-BERTRAND 5-1
 Field WILDCAT
 County LOGAN
 State KANSAS

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Location: API #: 15-109-21524-00-00
 56' FSL & 2048' FWL
 SEC 5 TWP 12S RGE 33W
 Permanent Datum GROUND LEVEL Elevation 3167'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services
 DIL/MEL
 BHCS
 Elevation
 K.B. 3172'
 D.F. N/A
 G.L. 3167'

Date	9/17/2017	
Run Number	ONE	
Type Log	CNL/CDL	
Depth Driller	4790'	
Depth Logger	4789'	
Bottom Logged Interval	4768'	
Top Logged Interval	3700'	
Type Fluid In Hole	CHEMICAL	
Salinity, PPM CL	5,000	
Density	9.2	
Level	FULL	
Max. Rec. Temp. F	124 DEG/F	
Operating Rig Time	4 HOURS	
Equipment -- Location	108 HAYS	
Recorded By	J. HENRICKSON	
Witnessed By	JASON ALM	

Run No.	Bit	Borehole Record		Casing Record	
		From	To	From	To
ONE	12.25"	0	260'	8.625"	23#
TWO	7.7875"	260'	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.
 MONUMENT KANSAS
 5 SOUTH, EAST INTO

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

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 www.pioneerenergy.com 785-625-3858


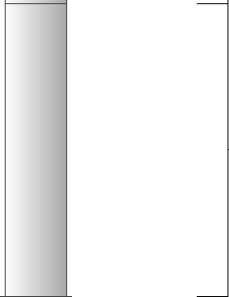
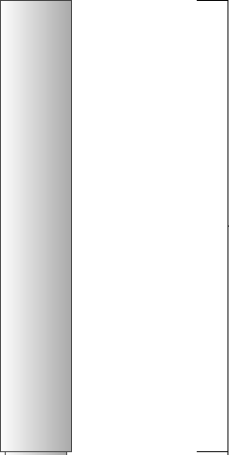

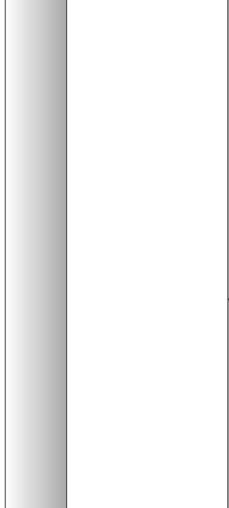
Your Pioneer Energy Services Crew Engineer: J. HENRICKSON Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: JASON ALM Secondary Witness: Secondary Witness: Secondary Witness:
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\stratakan_gaskill_range_bertrand_unit_5_1.db
 Dataset field/well/stack/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	124	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	-225	57	Off	4789

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 CNSSC	29.90 29.15		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	20.85 20.83 20.35		CDL-M&W (168-986)	8.50	4.00	250.00
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: stratakan_gaskill_range_bertrand_unit_5_1.db: field/well/stack/pass3.1
 Total length: 35.50 ft
 Total weight: 620.00 lb
 O.D.: 4.00 in

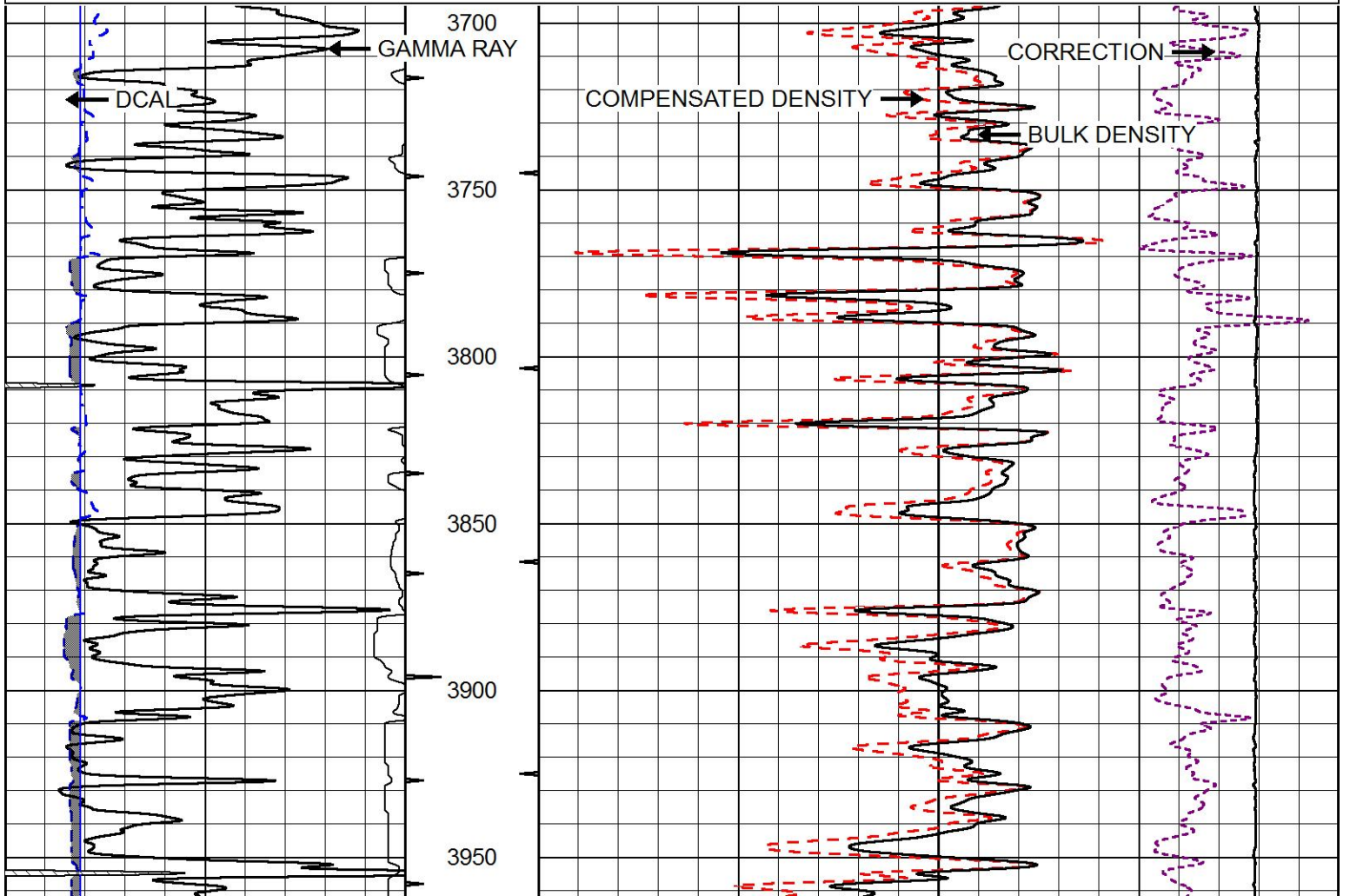


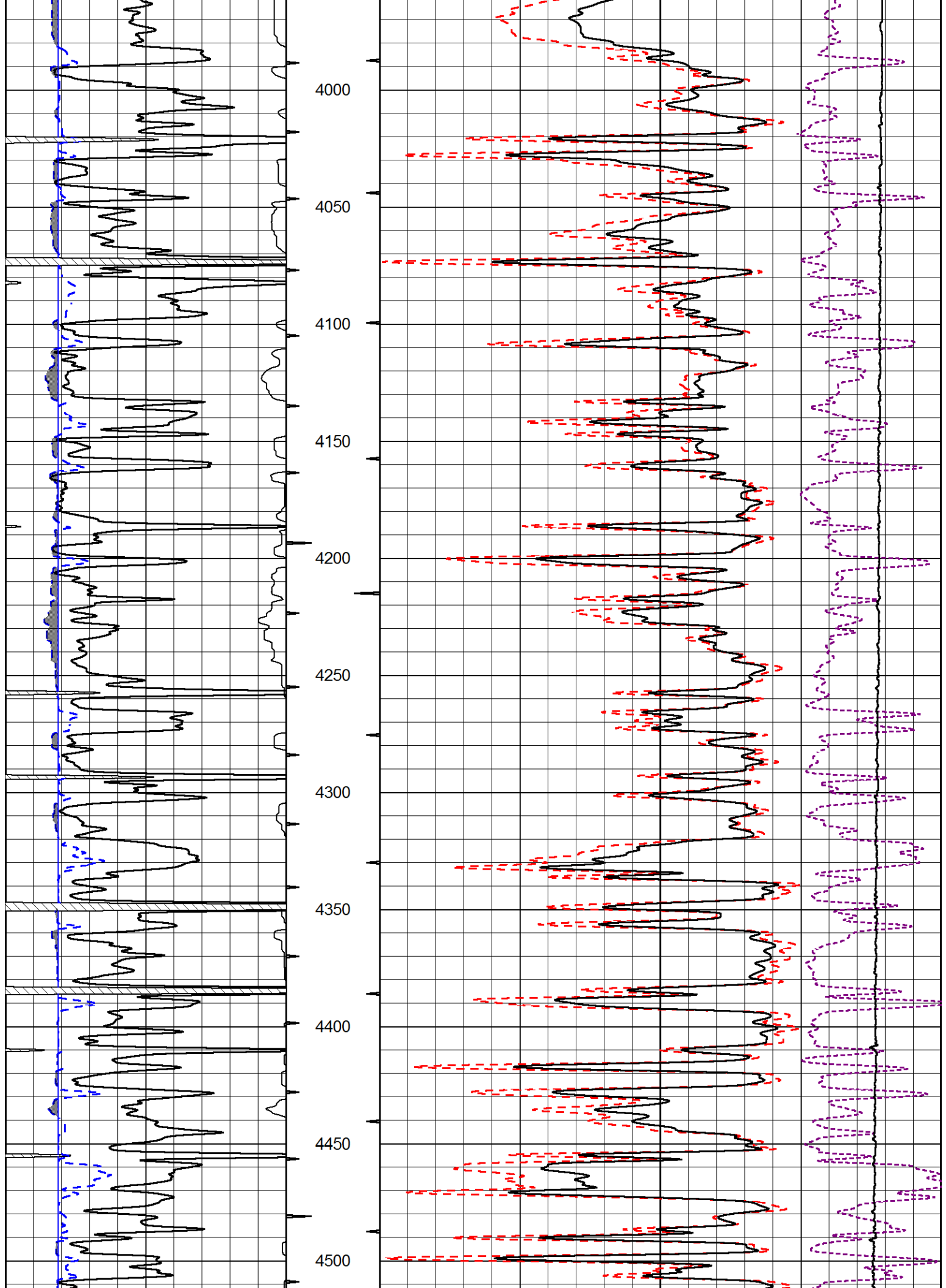
MAIN PASS

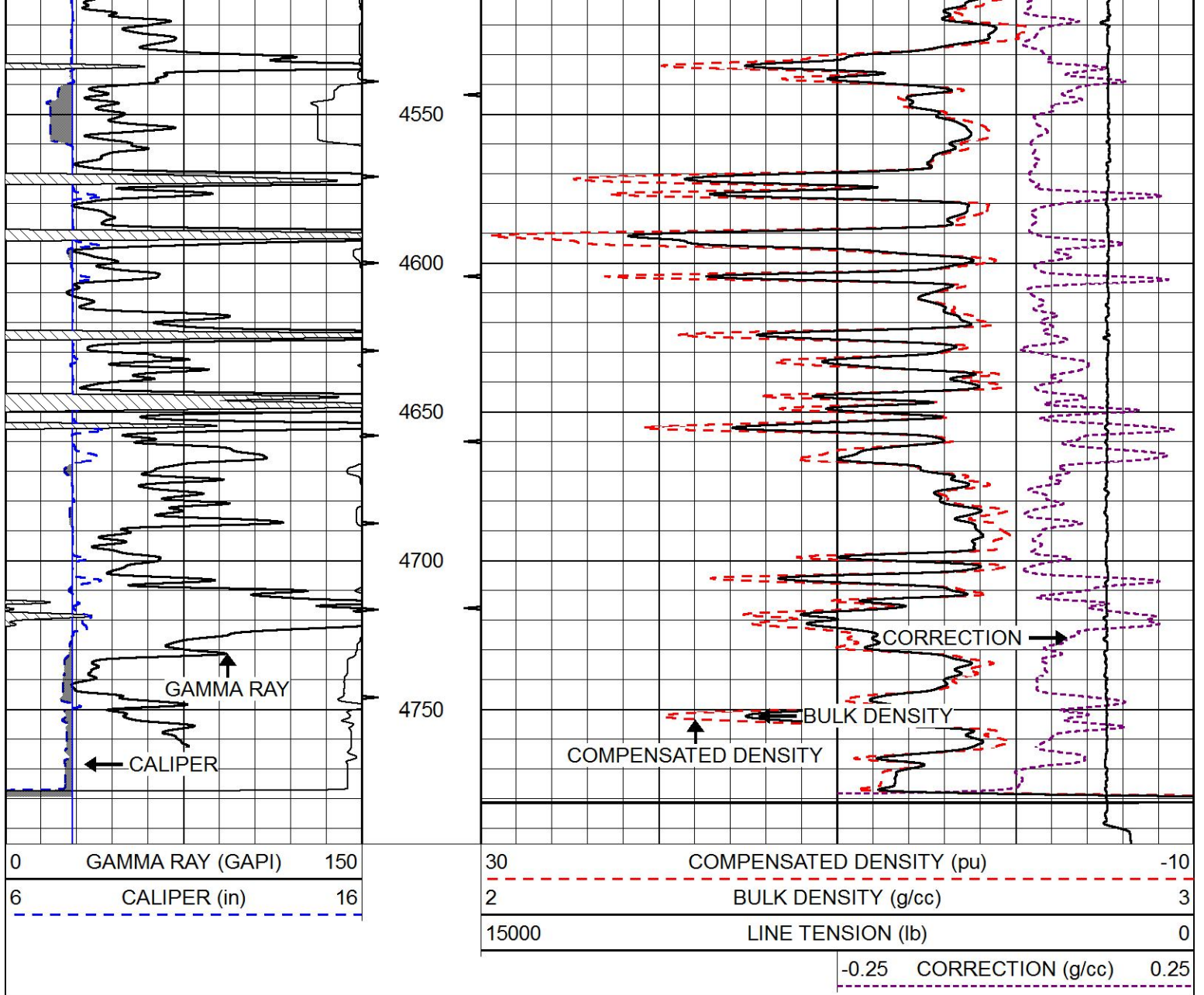
Database File stratakan_gaskill_range_bertrand_unit_5_1.db
 Dataset Pathname stack/pass3.1
 Presentation Format cdl
 Dataset Creation Sun Sep 17 17:17:20 2017
 Charted by Depth in Feet scaled 1:600

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

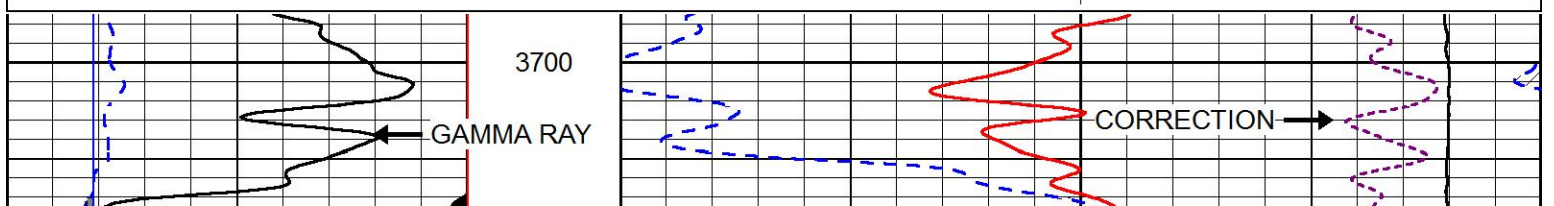
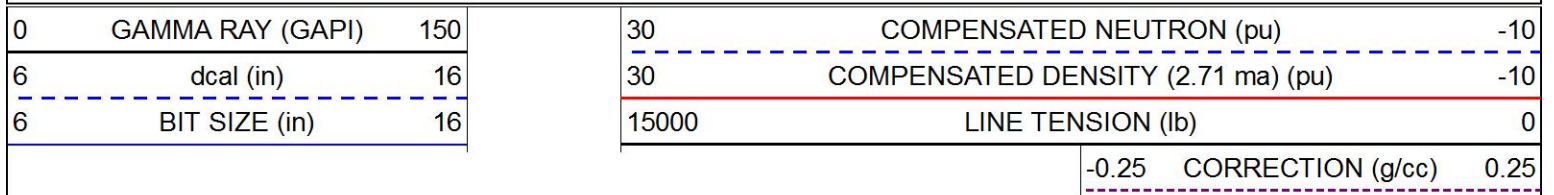


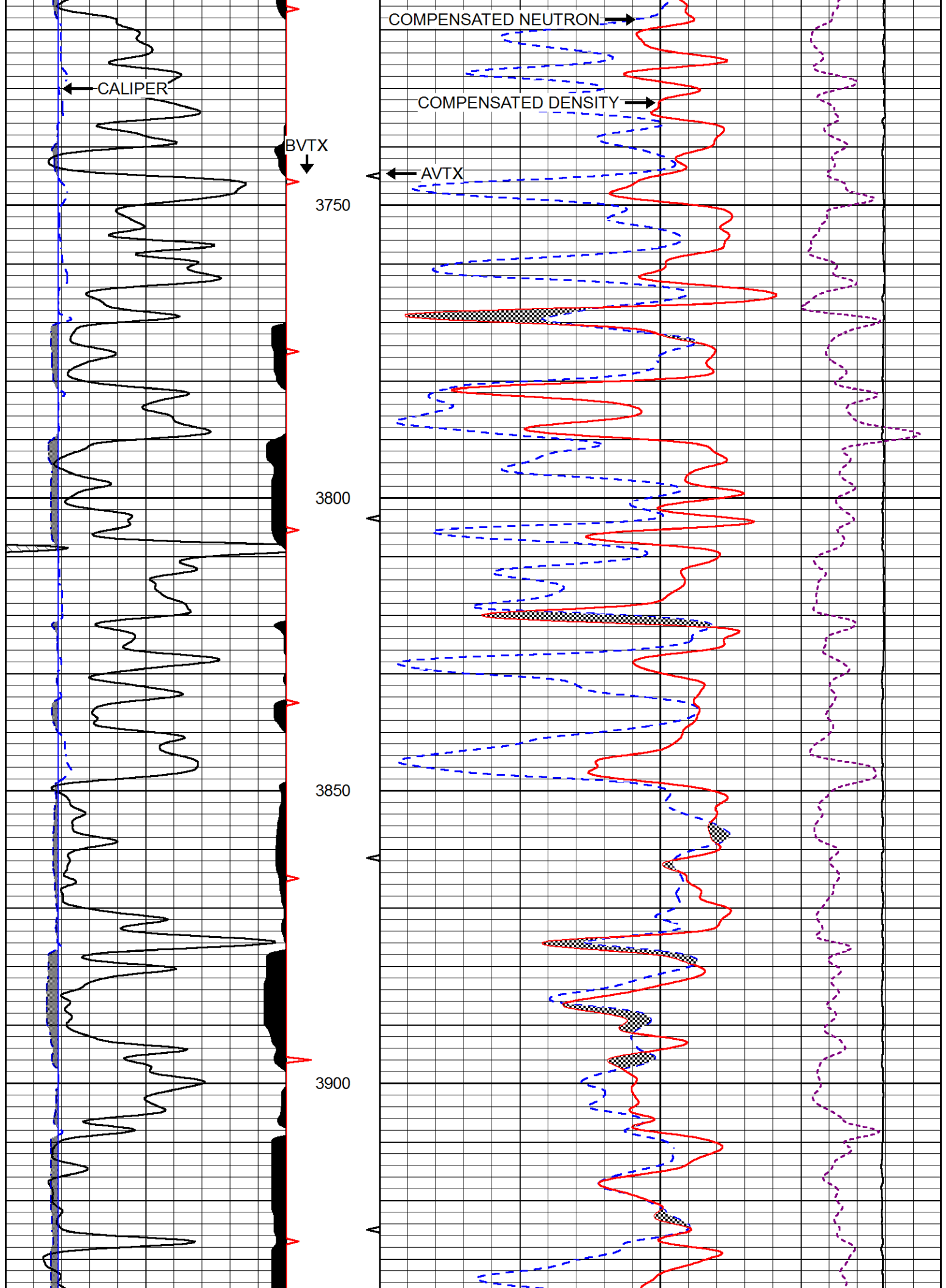


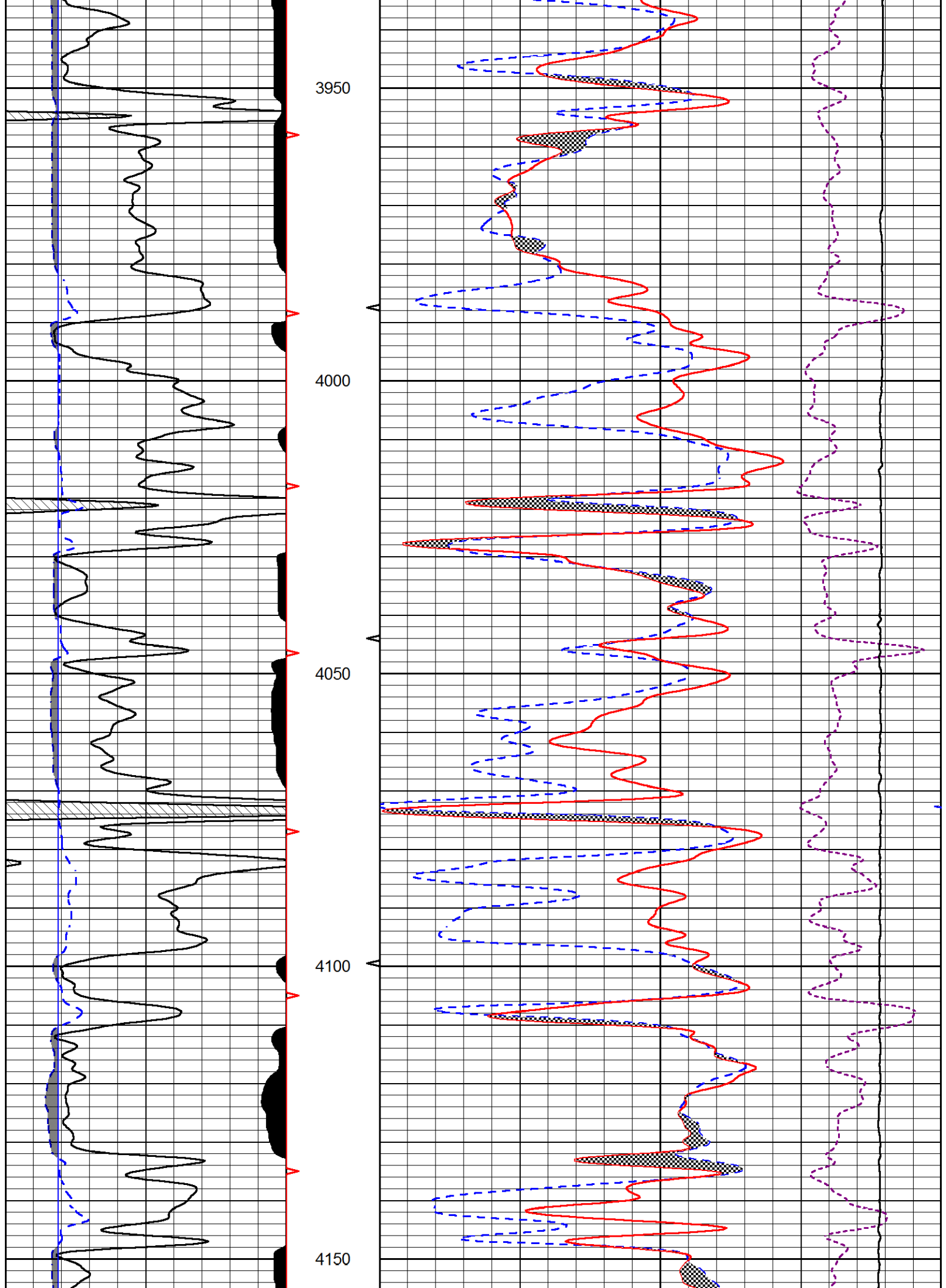


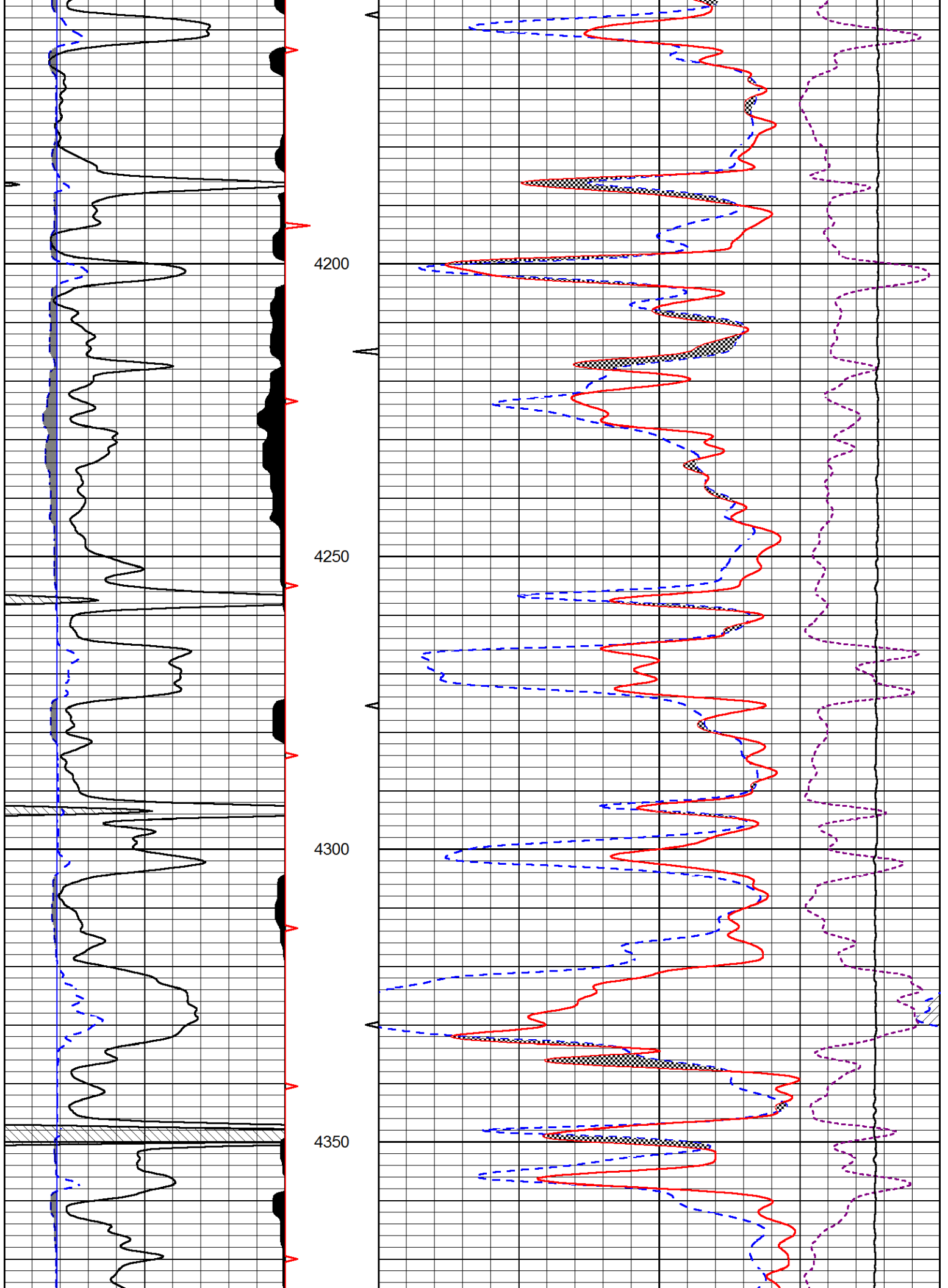
MAIN PASS

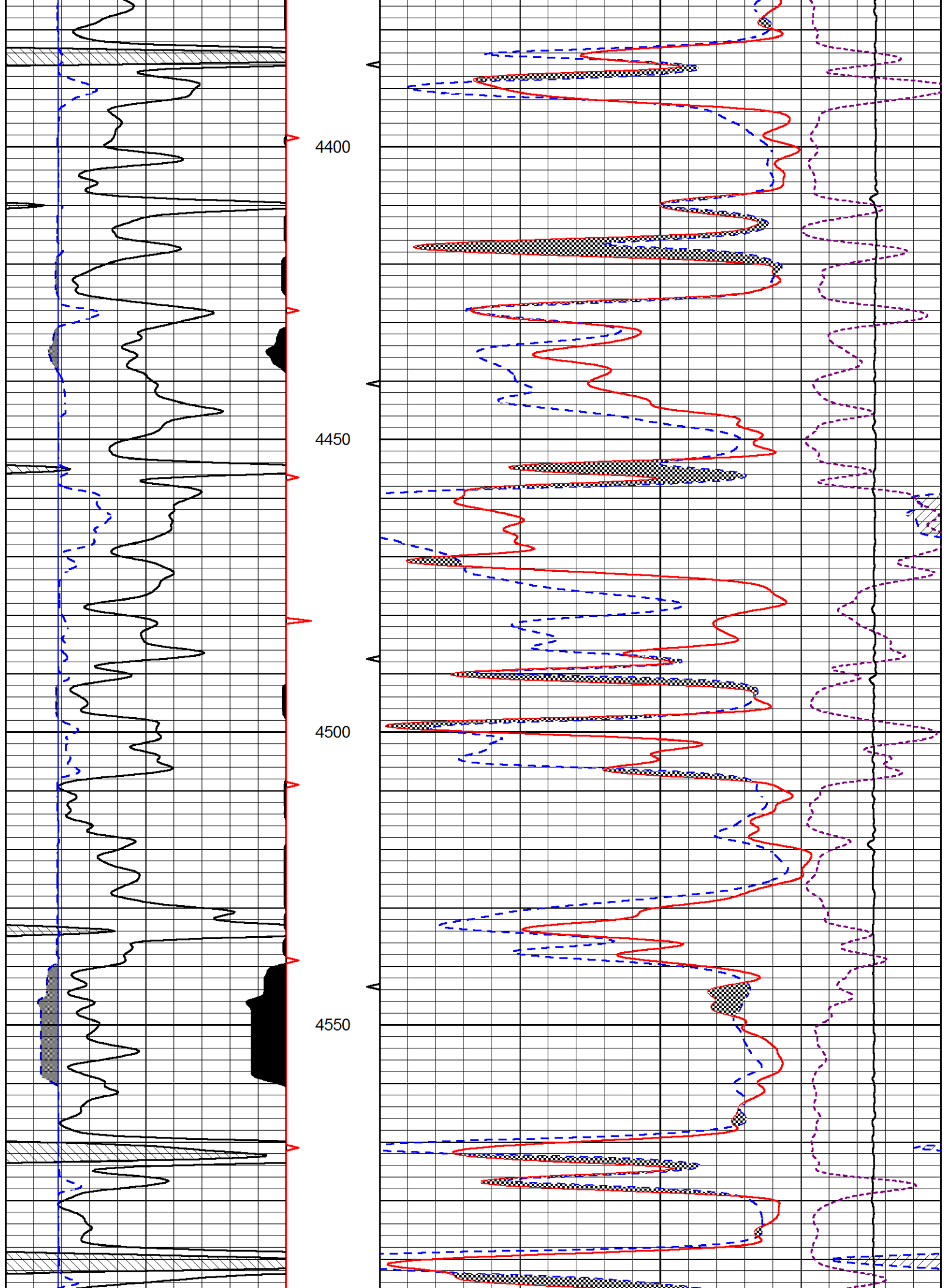
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 Dataset Pathname stack/pass3.1
 Presentation Format cndlspec
 Dataset Creation Sun Sep 17 17:17:20 2017
 Charted by Depth in Feet scaled 1:240

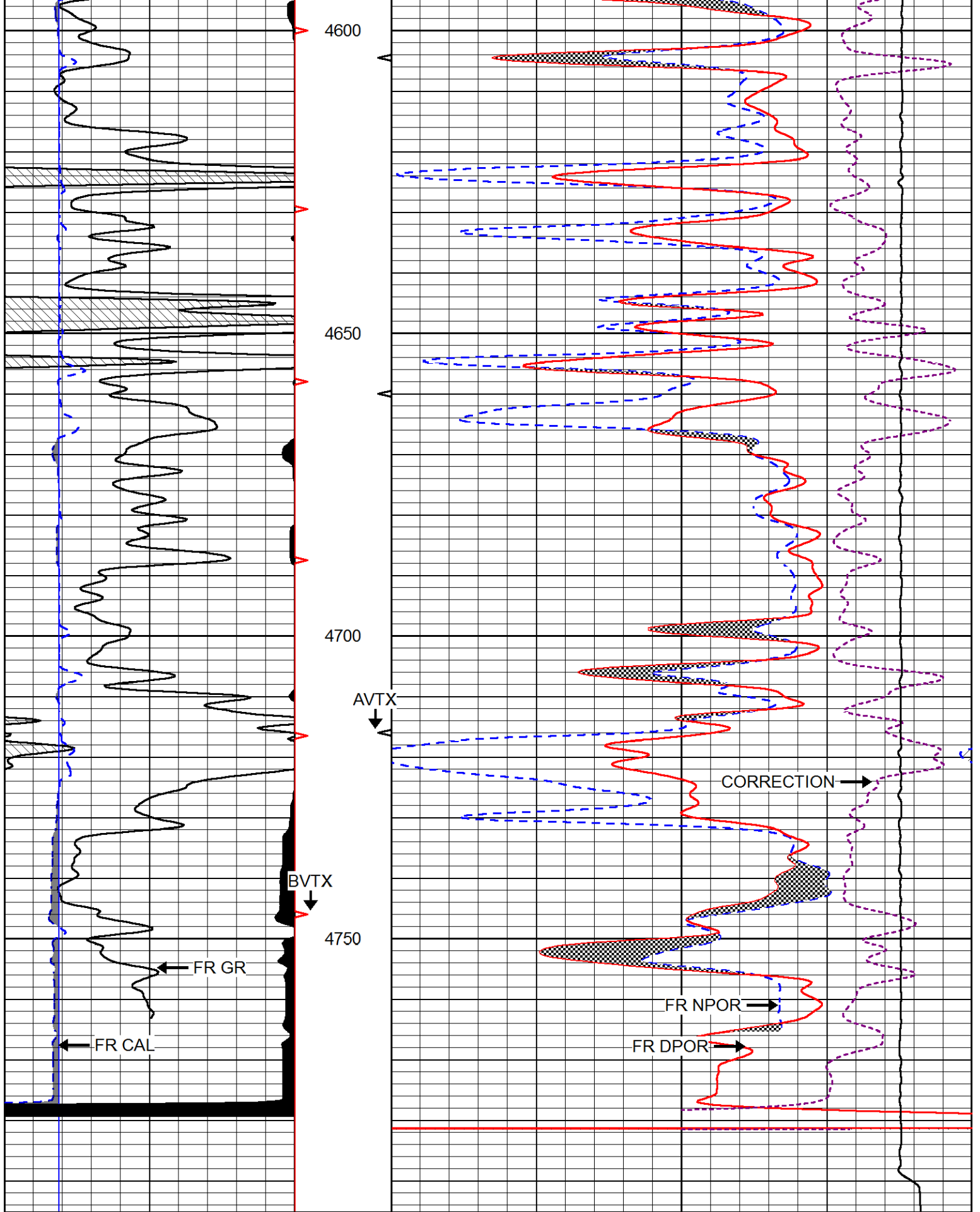












0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

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

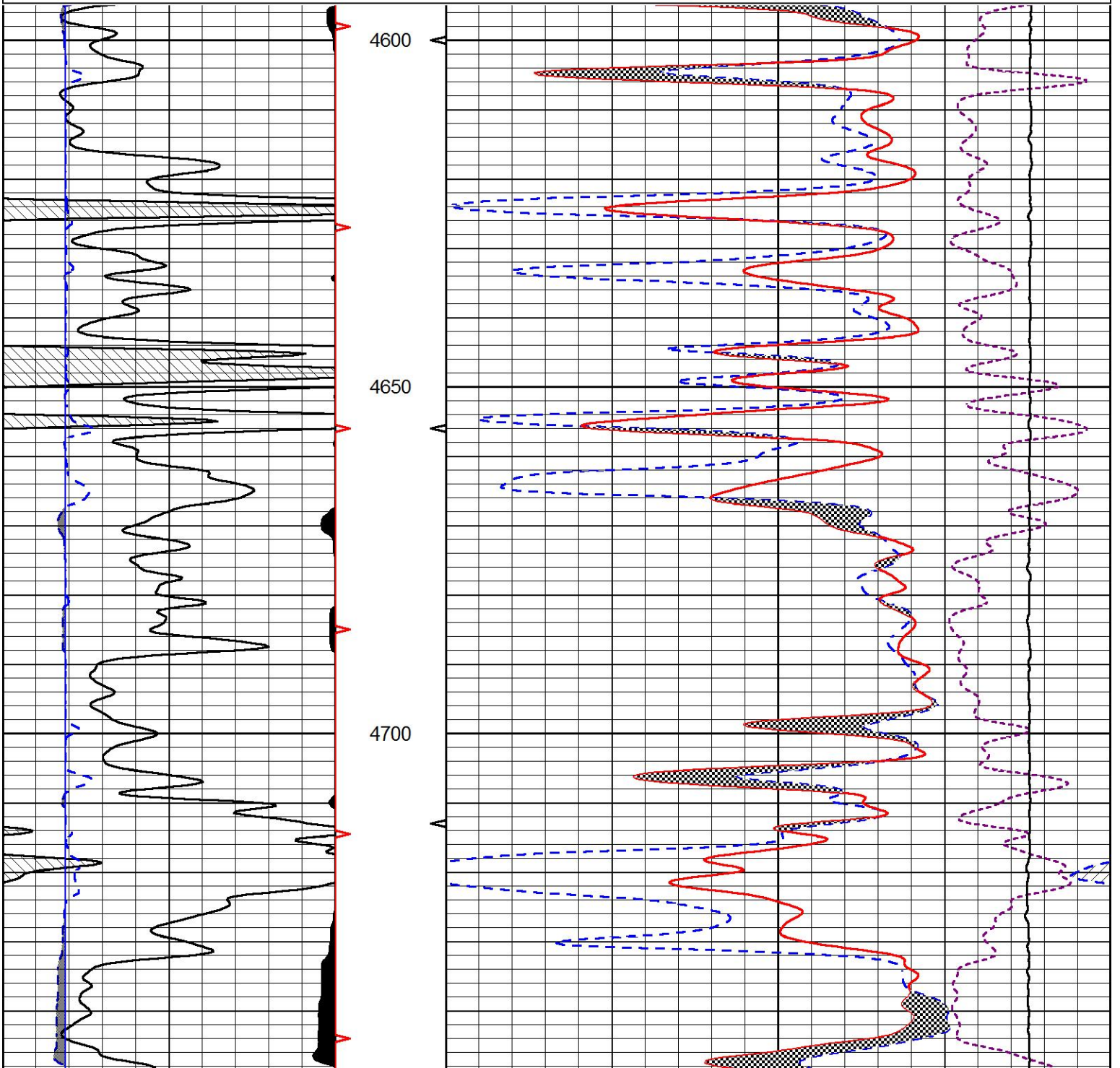
-0.25	CORRECTION (g/cc)	0.25
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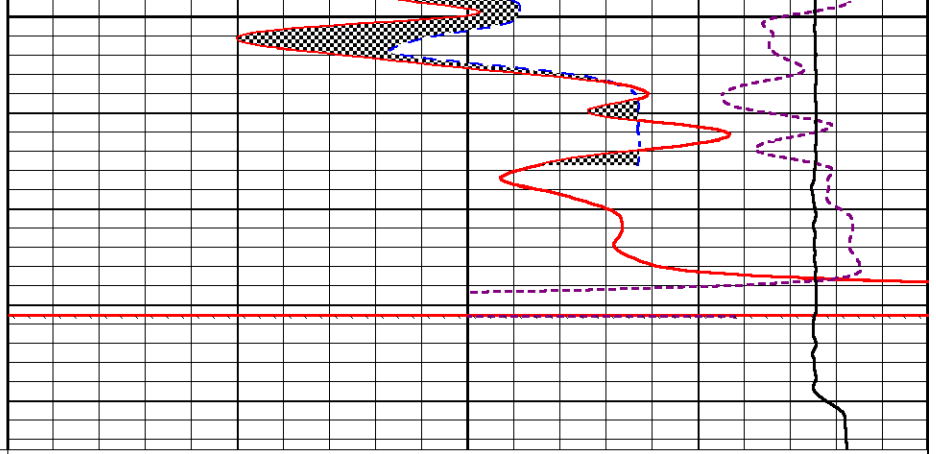
REPEAT SECTION

Database File stratakan_gaskill_range_bertrand_unit_5_1.db
 Dataset Pathname stack/pass2.1
 Presentation Format cndlspec
 Dataset Creation Sun Sep 17 16:32:22 2017
 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



4750



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 stratakan_gaskill_range_bertrand_unit_5_1.db
 Dataset Pathname stack/pass3.1
 Dataset Creation Sun Sep 17 17:17:20 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

Compensated Density Calibration Report

Serial-Model: 168-986-M&W
 Source / Verifier: /
 Master Calibration Performed: Tue Apr 11 16:07:47 2017

Master Calibration

	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



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Well	GASKILL RANGE-BERTRAND 5-1
Field	WILDCAT
County	LOGAN
State	KANSAS