



# DUAL COMP POROSITY LOG

Company STRATAKAN EXPLORATION, INC  
 Well ANDREWS B #22-1  
 Field KENILWORTH  
 County STAFFORD  
 State KANSAS

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Location: API #: 15-185-23967-00-00  
 950' FNL & 2050' FWL  
 SEC 22 TWP 22S RGE 13W  
 Permanent Datum GROUND LEVEL Elevation 1890'  
 Log Measured From KELLY BUSHING  
 Drilling Measured From KELLY BUSHING  
 Other Services DIL/MEL  
 K.B. 1895'  
 D.F. N/A  
 G.L. 1890'

Date	10/8/2016
Run Number	ONE
Type Log	CNL/CDL
Depth Driller	4010'
Depth Logger	4009'
Bottom Logged Interval	3980'
Top Logged Interval	2850'
Type Fluid In Hole	CHEMICAL
Salinity, PPM CL	7000
Density	9.1
Level	FULL
Max. Rec. Temp. F	116 DEG F
Operating Rig Time	2 1/2 HOURS
Equipment -- Location	108 COLBY
Recorded By	T. MARTIN
Witnessed By	JASON ALM

Borehole Record		Casing Record					
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	00'	692'	8.625"	23#	00'	692'
TWO	7.875"	692'					

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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.

GREAT BEND, S TO 120 RD,  
 1/2 E, S INTO

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

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

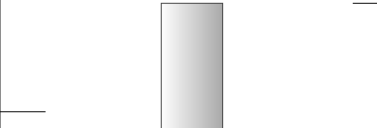
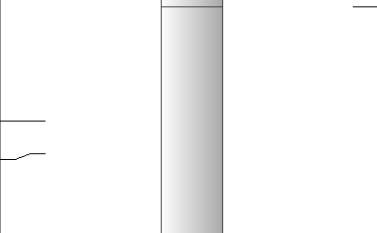
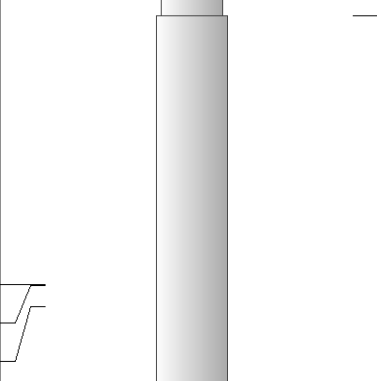
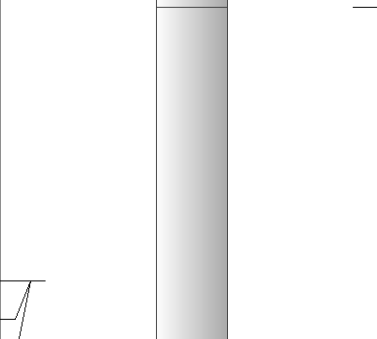
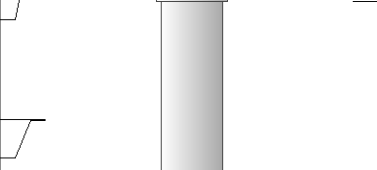
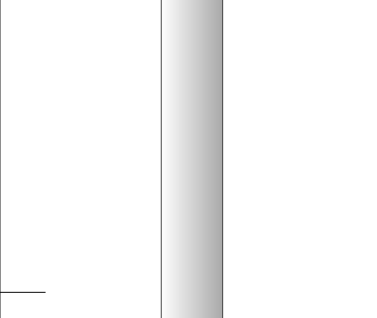
Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: T. MARTIN	Primary Witness: JASON ALM
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\stratakan\_andrews\_b\_#22-1.db  
Dataset field/well/stkml/pass3.1/\_vars\_

## Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	116	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	-320	50	Off	4009

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 (71-914)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
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\_andrews\_b\_#22-1.db: field/well/stkml/pass3.1  
 Total length: 43.08 ft  
 Total weight: 685.00 lb  
 O.D.: 4.00 in

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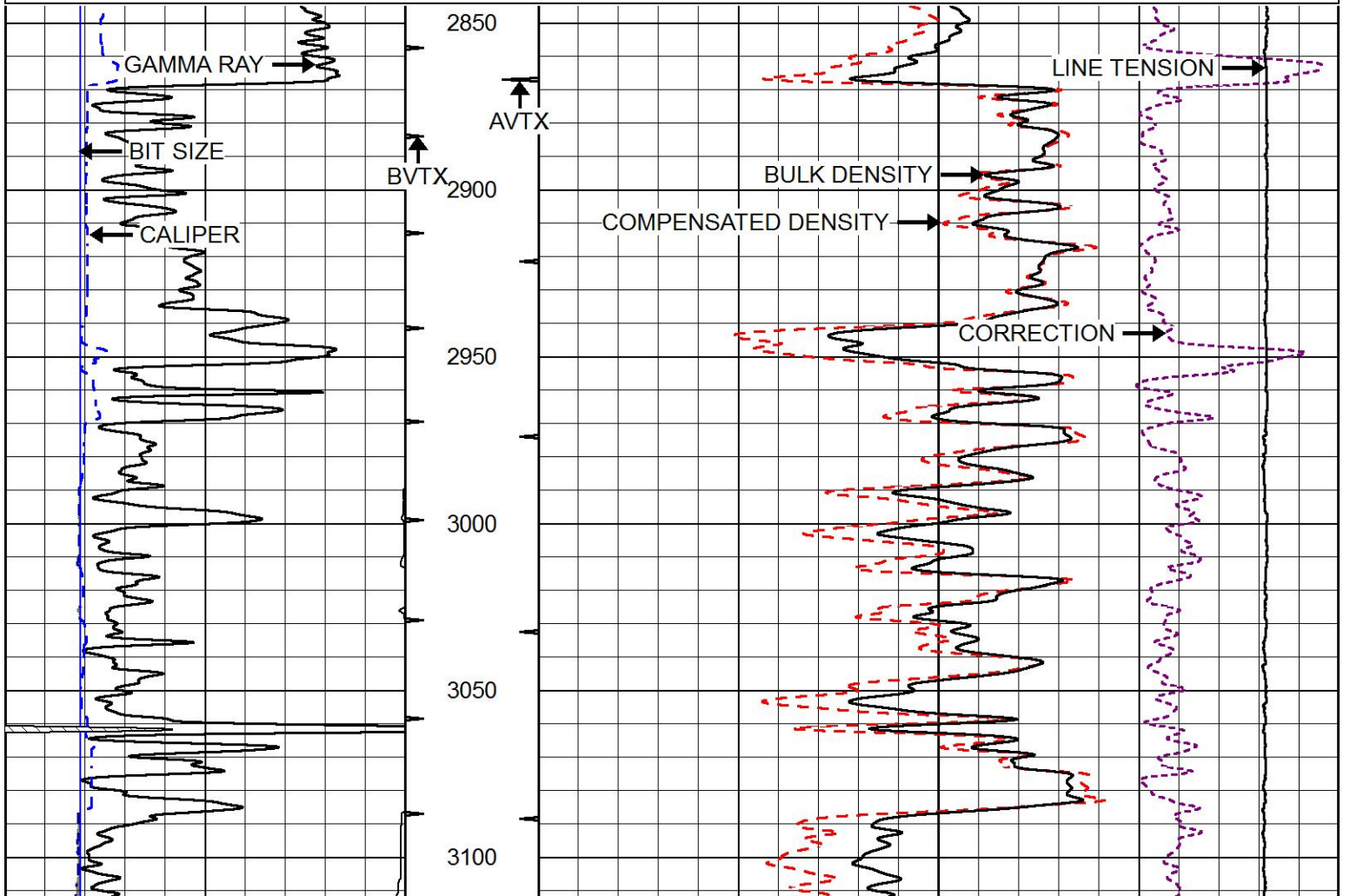
# 2" SCALE BULK DENSITY

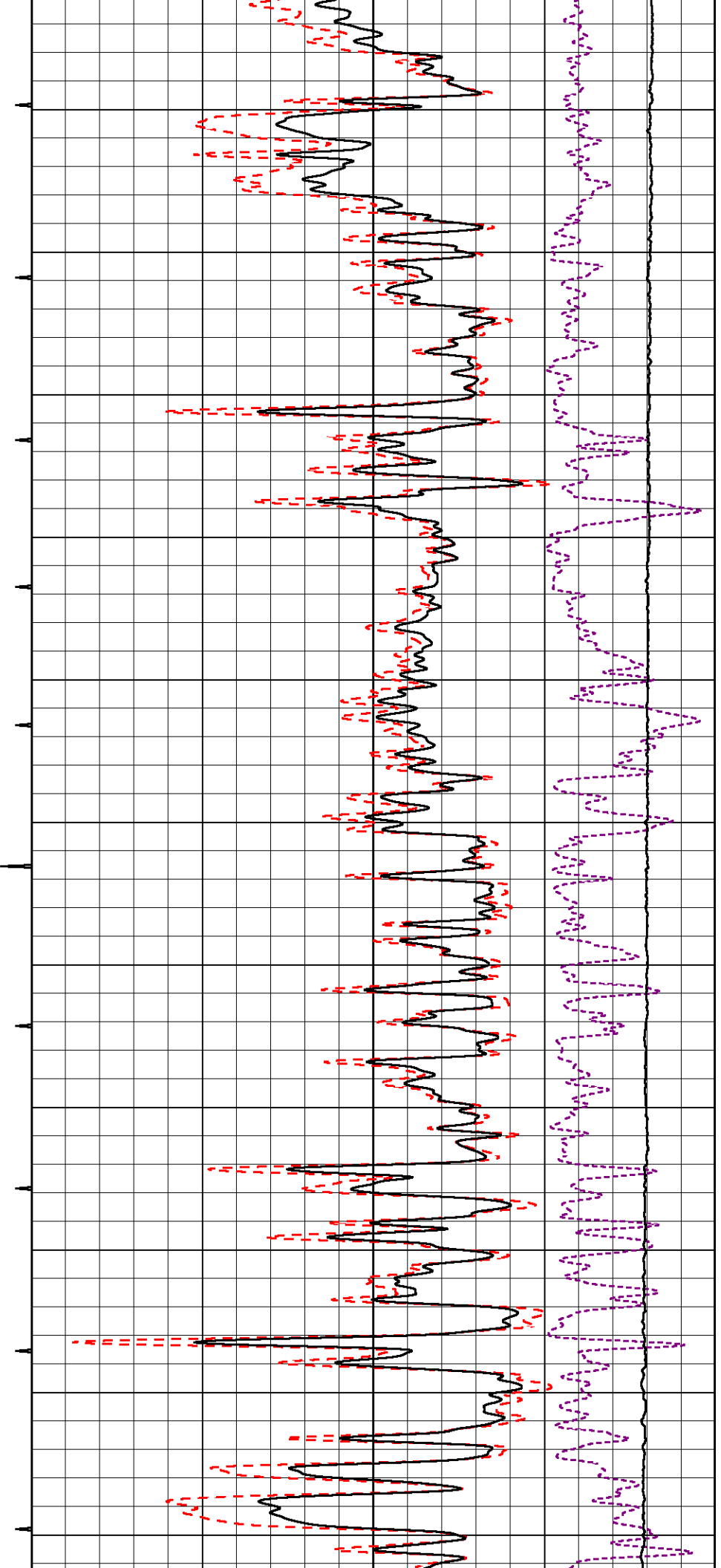
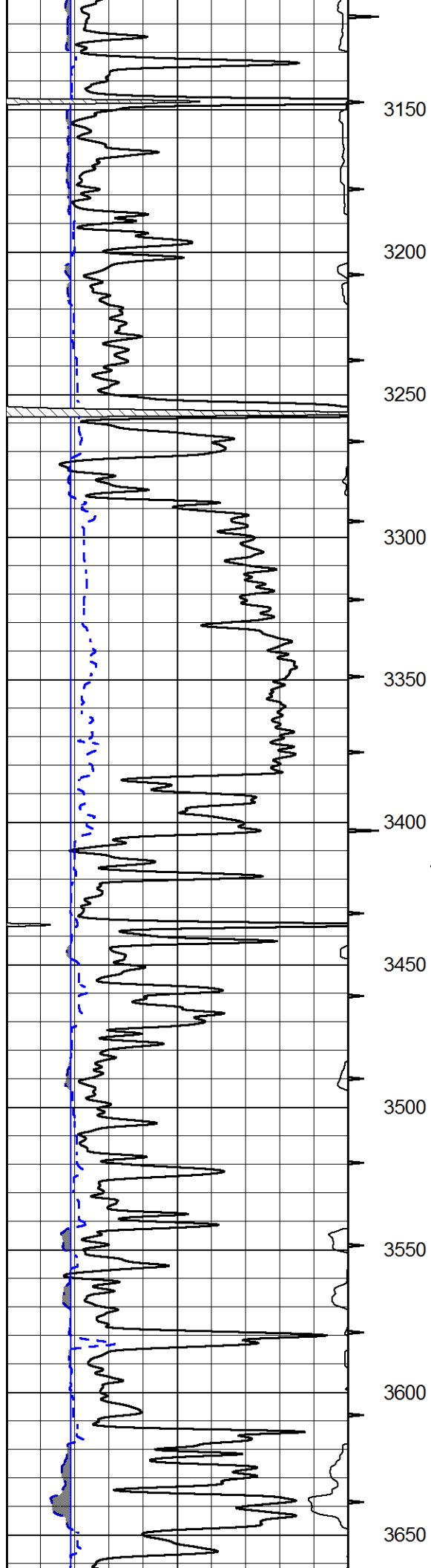
## MAIN PASS

Database File stratakan\_andrews\_b\_#22-1.db  
 Dataset Pathname stkml/pass3.3  
 Presentation Format cdl  
 Dataset Creation Sat Oct 08 02:03:13 2016  
 Charted by Depth in Feet scaled 1:600

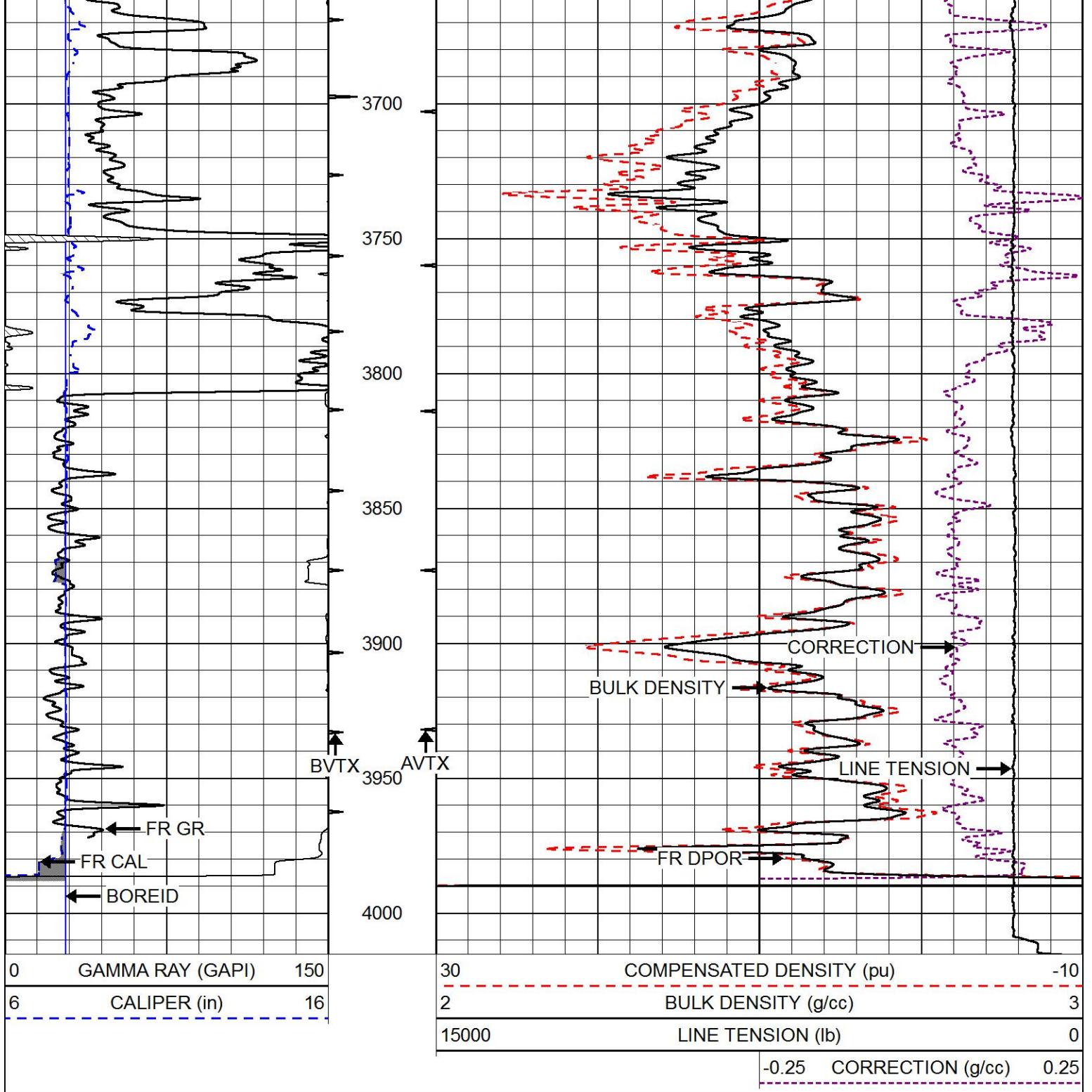
0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16

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



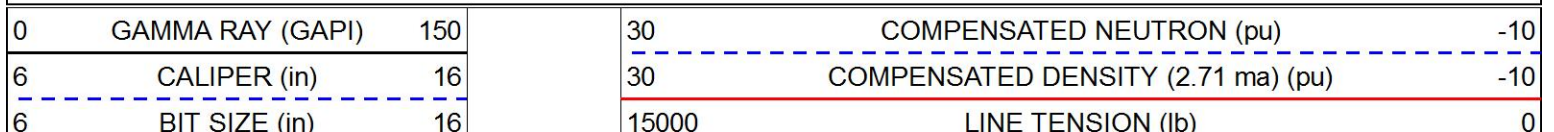


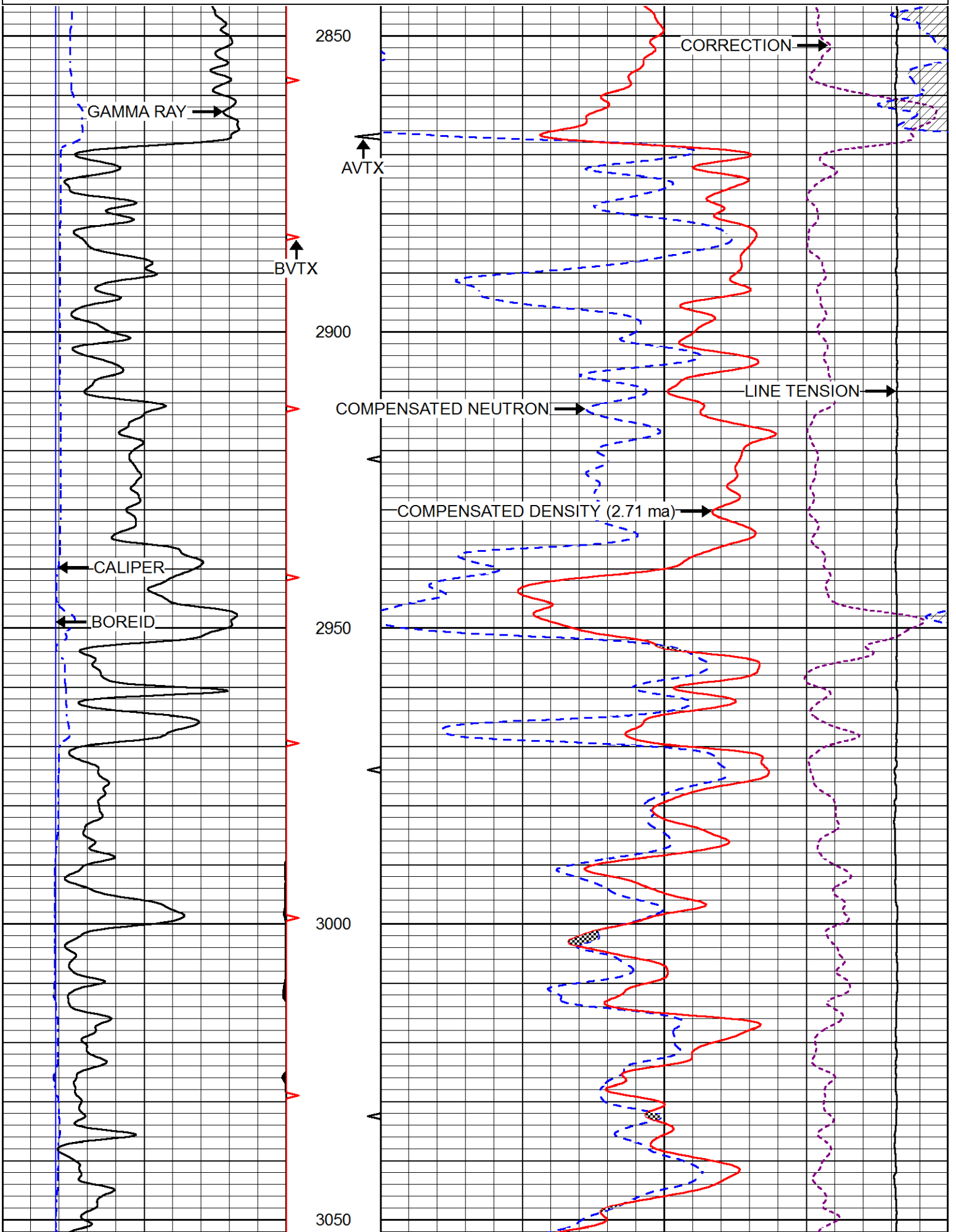


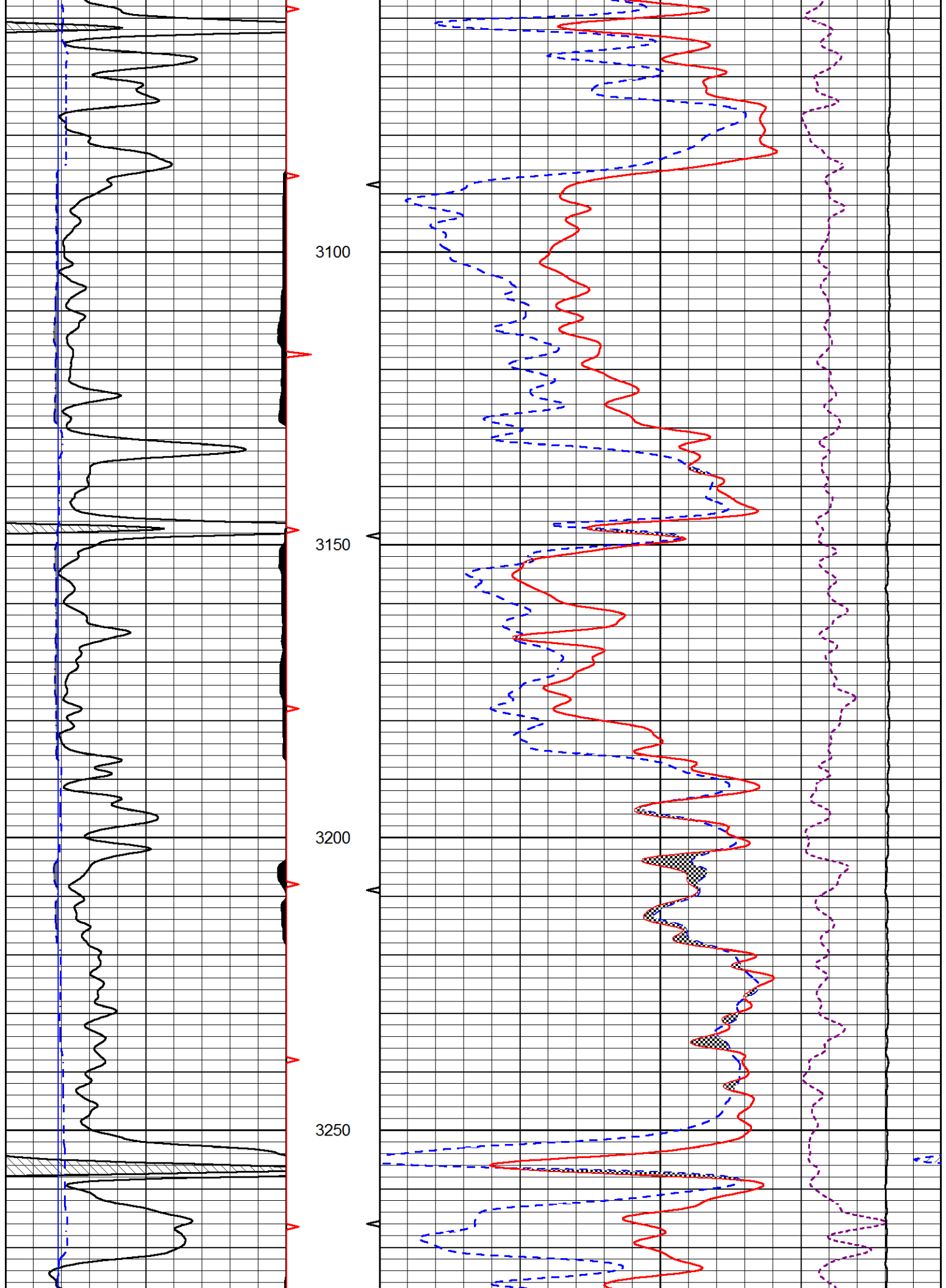


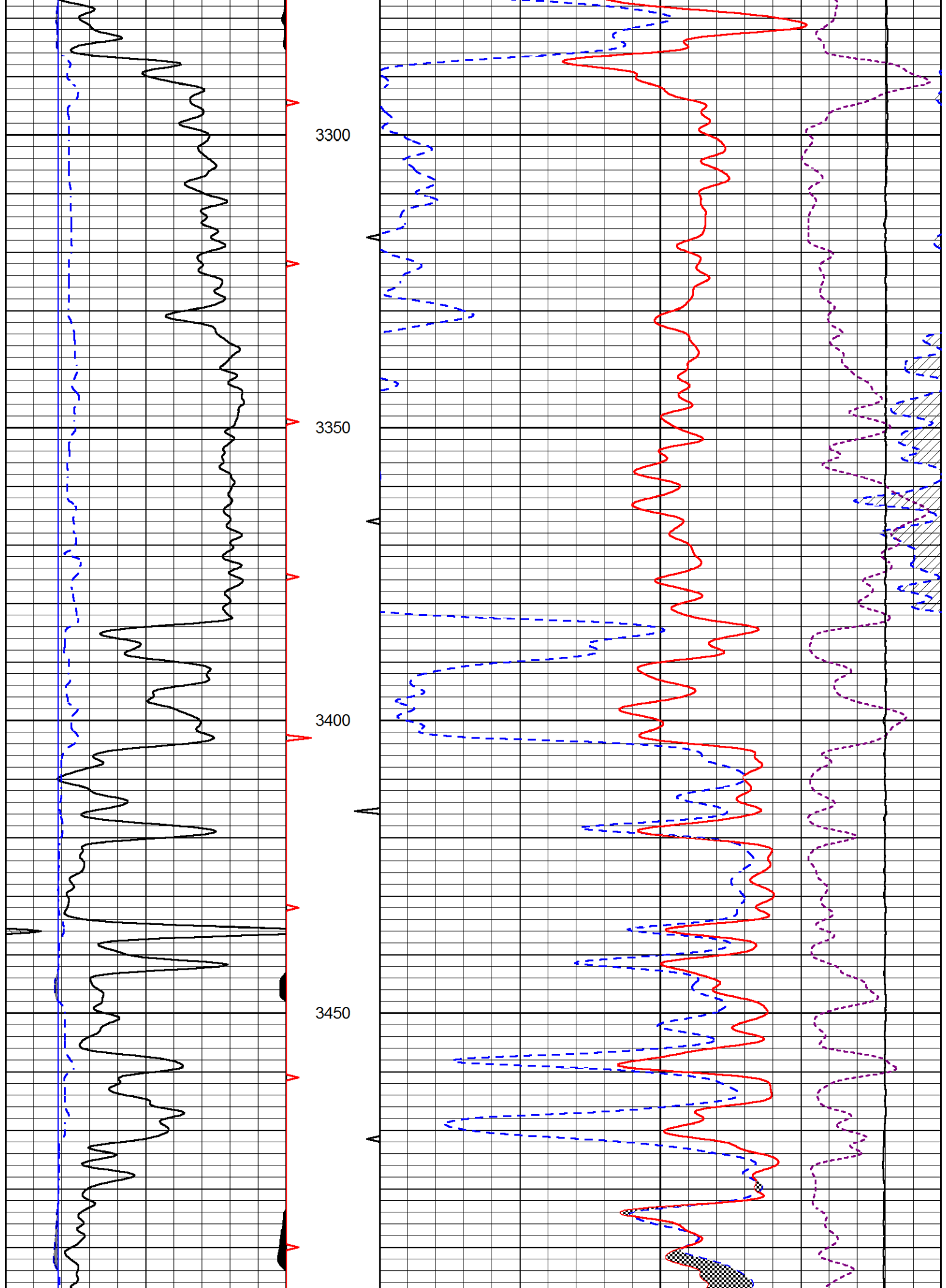
# MAIN PASS

Database File stratakan\_andrews\_b\_#22-1.db  
 Dataset Pathname stkml/pass3.1  
 Presentation Format cndlspec  
 Dataset Creation Sat Oct 08 02:32:42 2016  
 Charted by Depth in Feet scaled 1:240

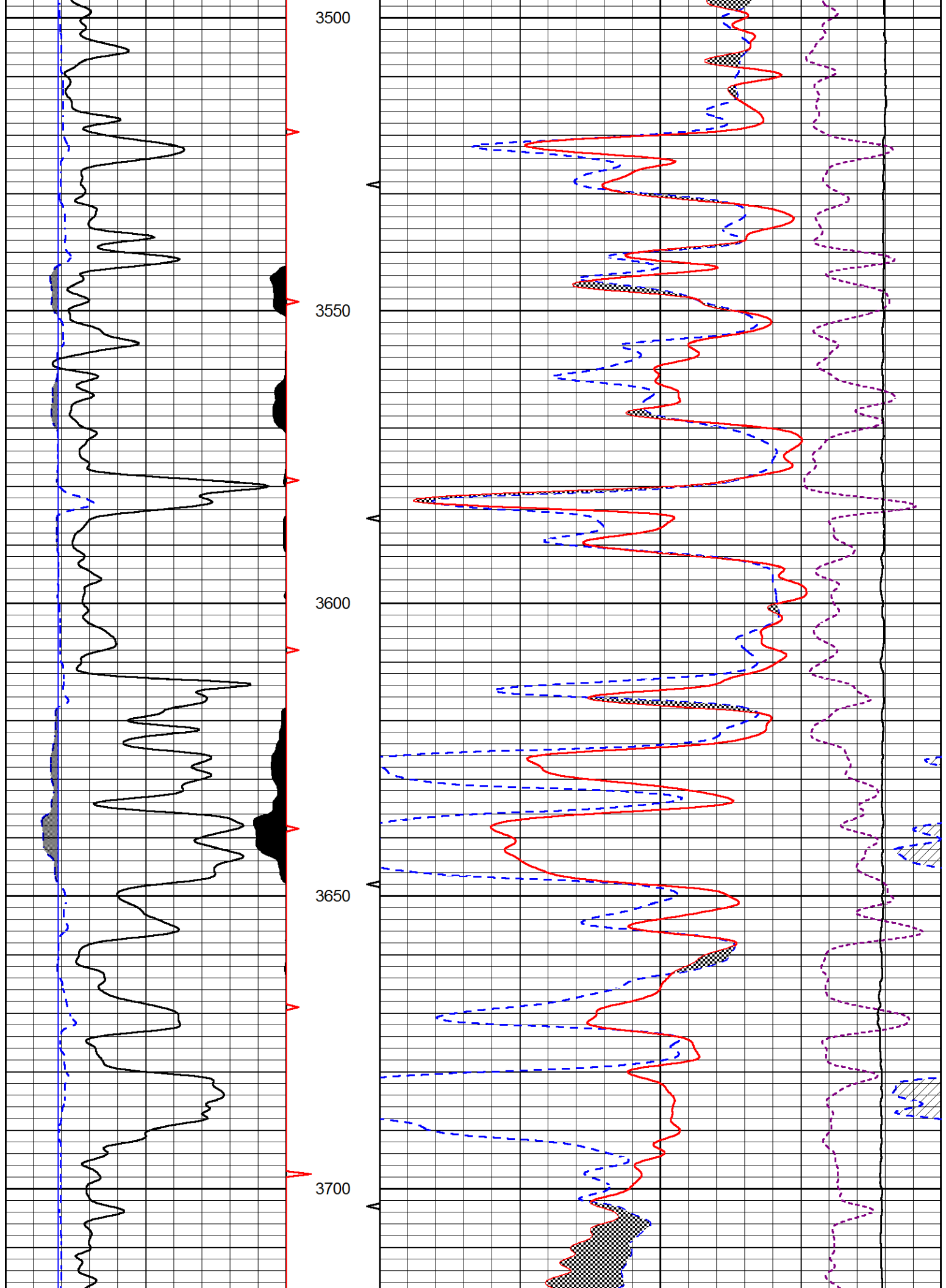




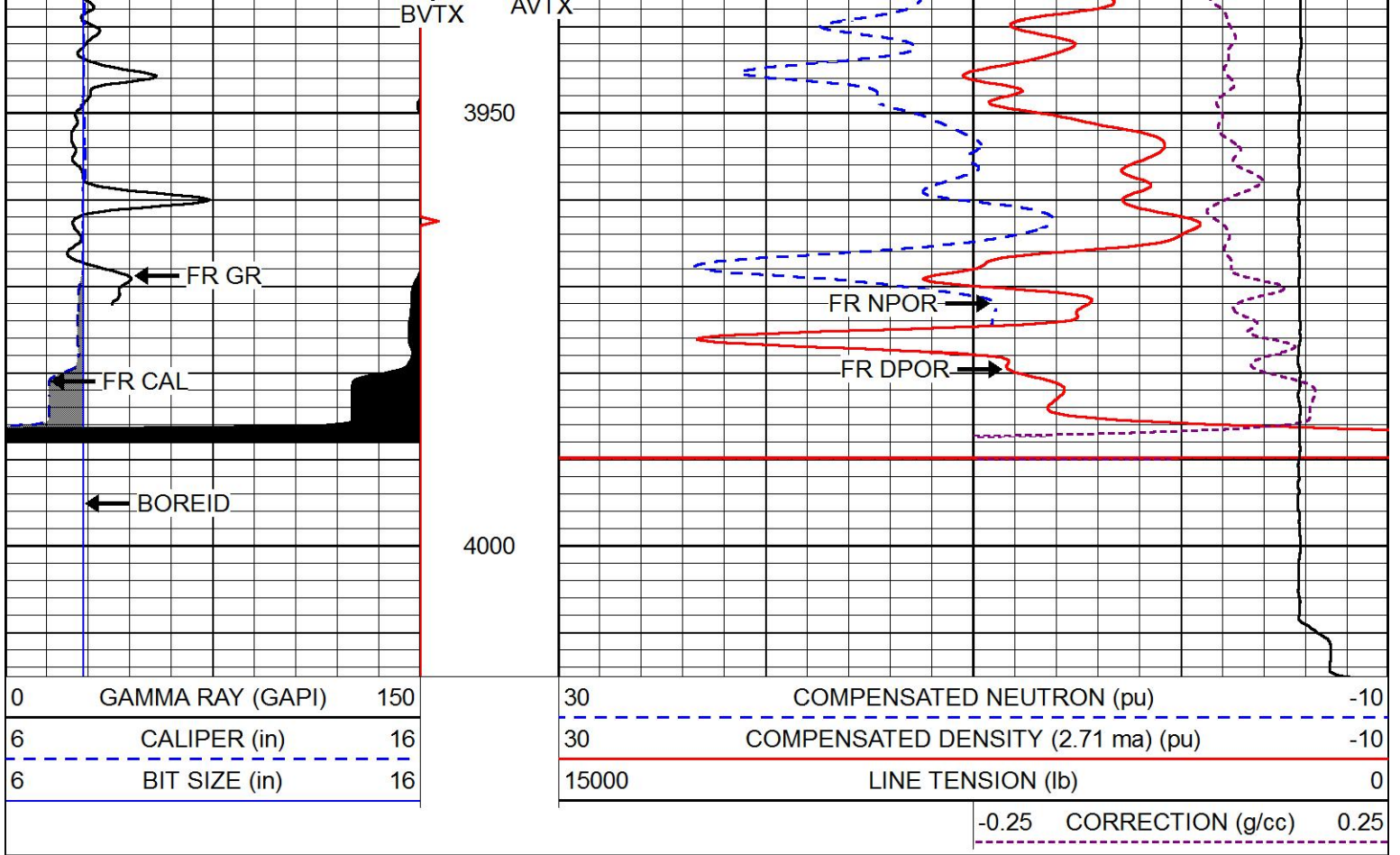






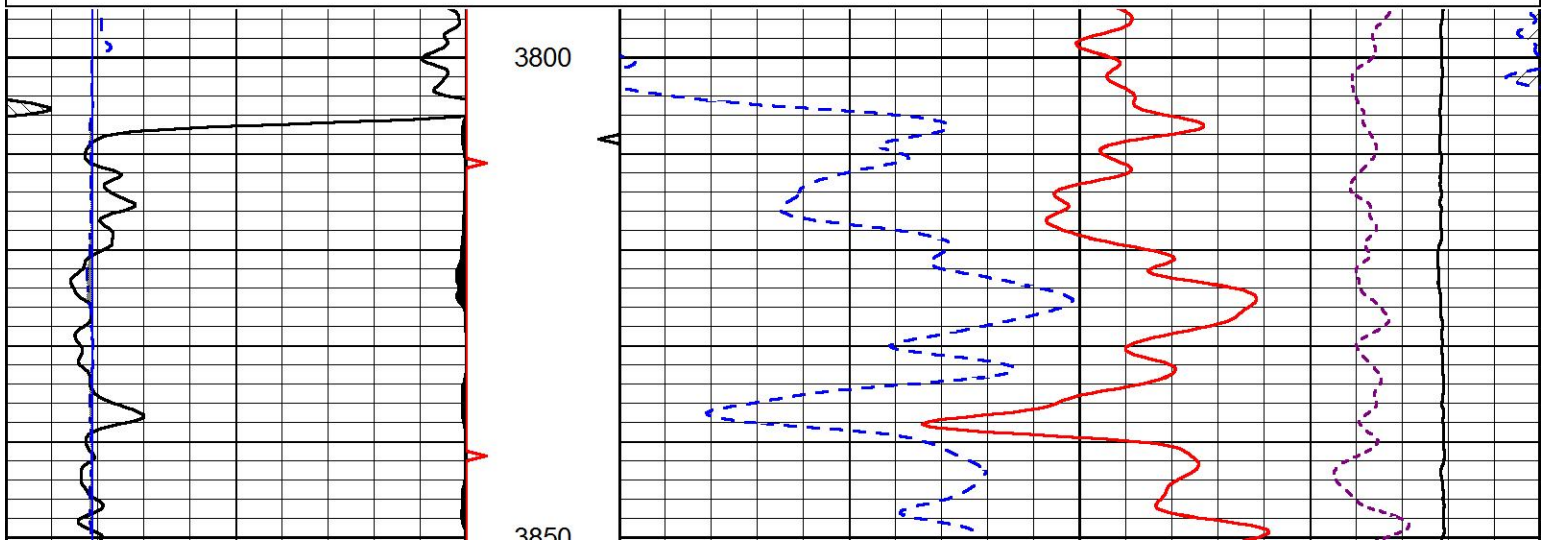
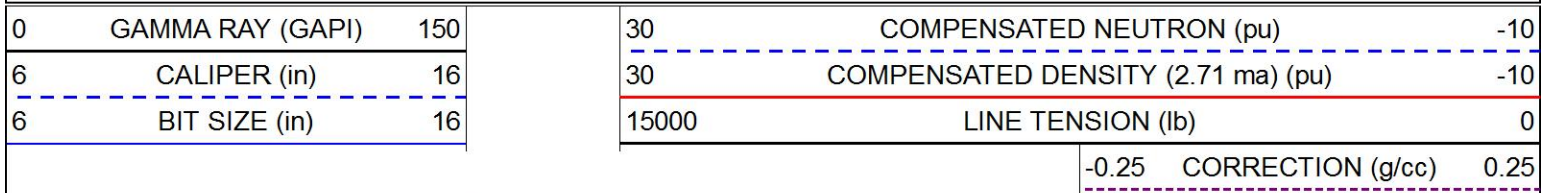


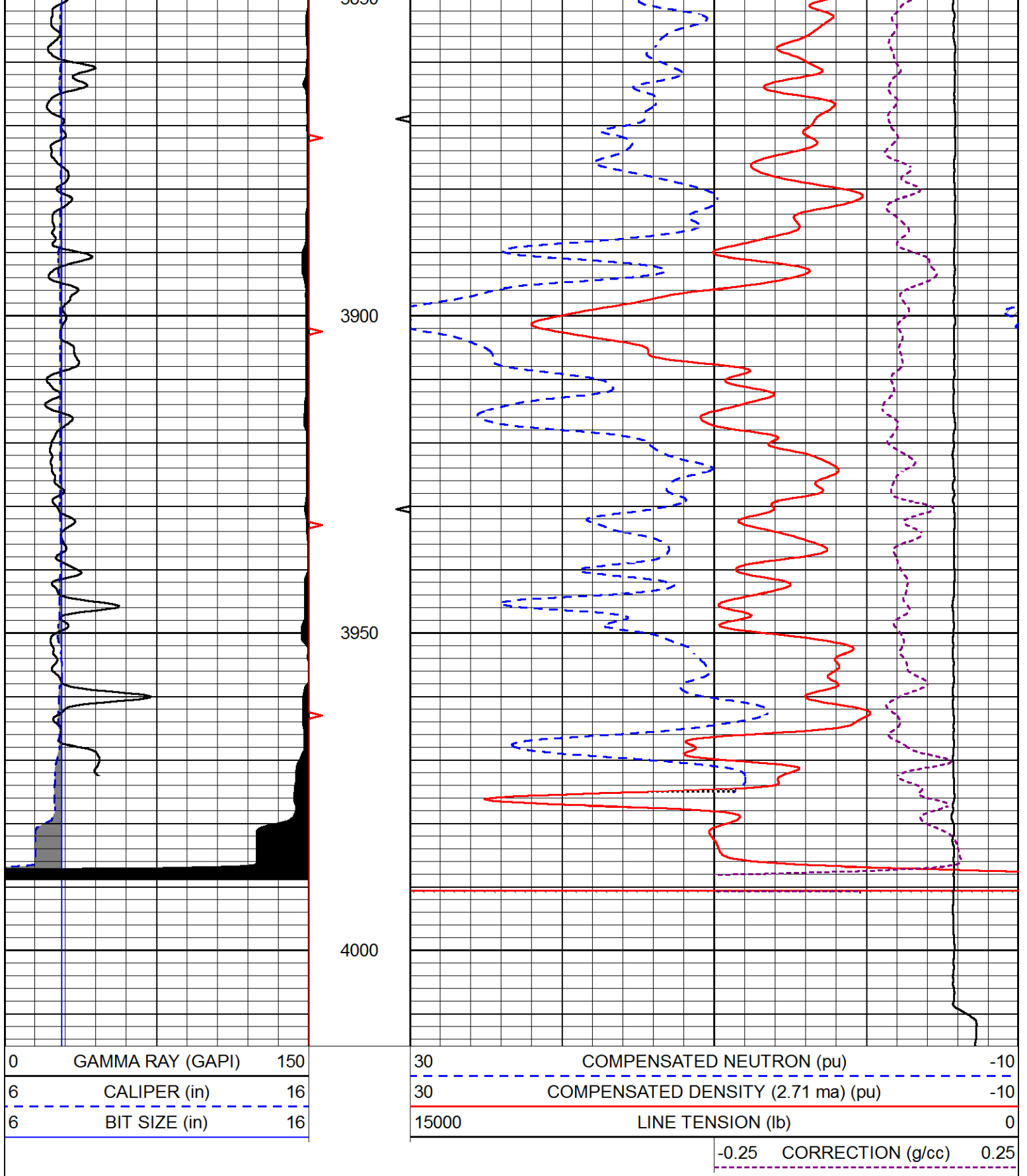




# REPEAT SECTION

Database File stratakan\_andrews\_b\_#22-1.db  
 Dataset Pathname stkml/pass2.1  
 Presentation Format cndlspec  
 Dataset Creation Sat Oct 08 01:57:10 2016  
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File stratakan\_andrews\_b\_#22-1.db  
 Dataset Pathname stkml/pass3.1  
 Dataset Creation Sat Oct 08 02:32:42 2016

Dual Induction Calibration Report

Serial-Model: 1987-M&W  
 Calibration Performed: Tue Aug 30 16:23:58 2016

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-40.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-109.000

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML  
 Performed: Thu Oct 06 17:34:17 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	24000.0000	-2.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	23575.0000	-1.5000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.3200

Compensated Density Calibration Report

Serial-Model: 71-914-M&W  
 Source / Verifier: /  
 Master Calibration Performed: Fri Oct 07 08:39:26 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.675	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	14.00	in	1.57		

Compensated Neutron Calibration Report

Serial Number: tk10-MW  
 Tool Model: M&W  
 Calibration Performed: Sat Oct 1 10:01:53 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: Fri Sep 30 22:06:47 2016

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps



Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



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