



PIONEER

Pioneer Energy Services

DUAL COMP POROSITY LOG

Company **CASTLE RESOURCES, INC.**
Well **STEINSHOUER #3**
Field **HOXIE WEST**
County **SHERIDAN** State **KANSAS**

Location: API #: 15-179-21437-00-00

Other Services

SE NE
1980' FNL & 660' FEL
SEC 34 TWP 8S RGE 29W

DIL/MEL

Permanent Datum **GROUND LEVEL** Elevation **2817'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Elevation
K.B. 2823'
D.F. N/A
G.L. 2817'

Date **9/30/2017**

Run Number **ONE**

Type Log **CNL/CDL**

Depth Driller **4525'**

Depth Logger **4523'**

Bottom Logged Interval **4495'**

Top Logged Interval **3400'**

Type Fluid In Hole **CHEMICAL**

Salinity, PPM CL **4000**

Density **9.6**

Level **FULL**

Max. Rec. Temp. F **121 DEG F**

Operating Rig Time **3 HOURS**

Equipment -- Location **108 HAYS**

Recorded By **T. MARTIN**

Witnessed By **JERRY GREEN**

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	00'	276'	8.625"	23#	00'	276'
TWO	7.875"	276'	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.

HOXIE, KS, 2 S TO 30S, 5 W, 1/4 S, W INTO

Log Measured From: KELLY BUSHING

Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES

www.pioneerenergy.com

785-625-3858

Your Pioneer Energy Services Crew

Engineer: T. MARTIN

Operator:

Operator:

Operator:

This Log Record Was Witnessed By

Primary Witness: JERRY GREEN

Secondary Witness:

Secondary Witness:

Secondary Witness:

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	37.48			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	36.73						
LSD DCAL SSD	28.43		CDL-M&W (168-986)	8.50	4.00	250.00	
	28.42						
	27.93						
ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools			ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00	
MCAL	19.83						
MI	19.83						
MN	19.83						
RLL3	15.80						
RLL3F	15.79						
DIL-M&W (1987)			DIL-M&W (1987)	18.50	3.50	220.00	
CILD	8.00						
CILM	4.70						
SP	0.20						
Dataset: castle_steinshouer_#3.db: field/well/stkml/pass3.1							
Total length: 43.08 ft							
Total weight: 685.00 lb							
O.D.: 4.00 in							

Log Variables

DatabaseC:\ProgramData\Warrior\Data\castle_steinshouer_#3.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	121	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	-160	60	Off	4523



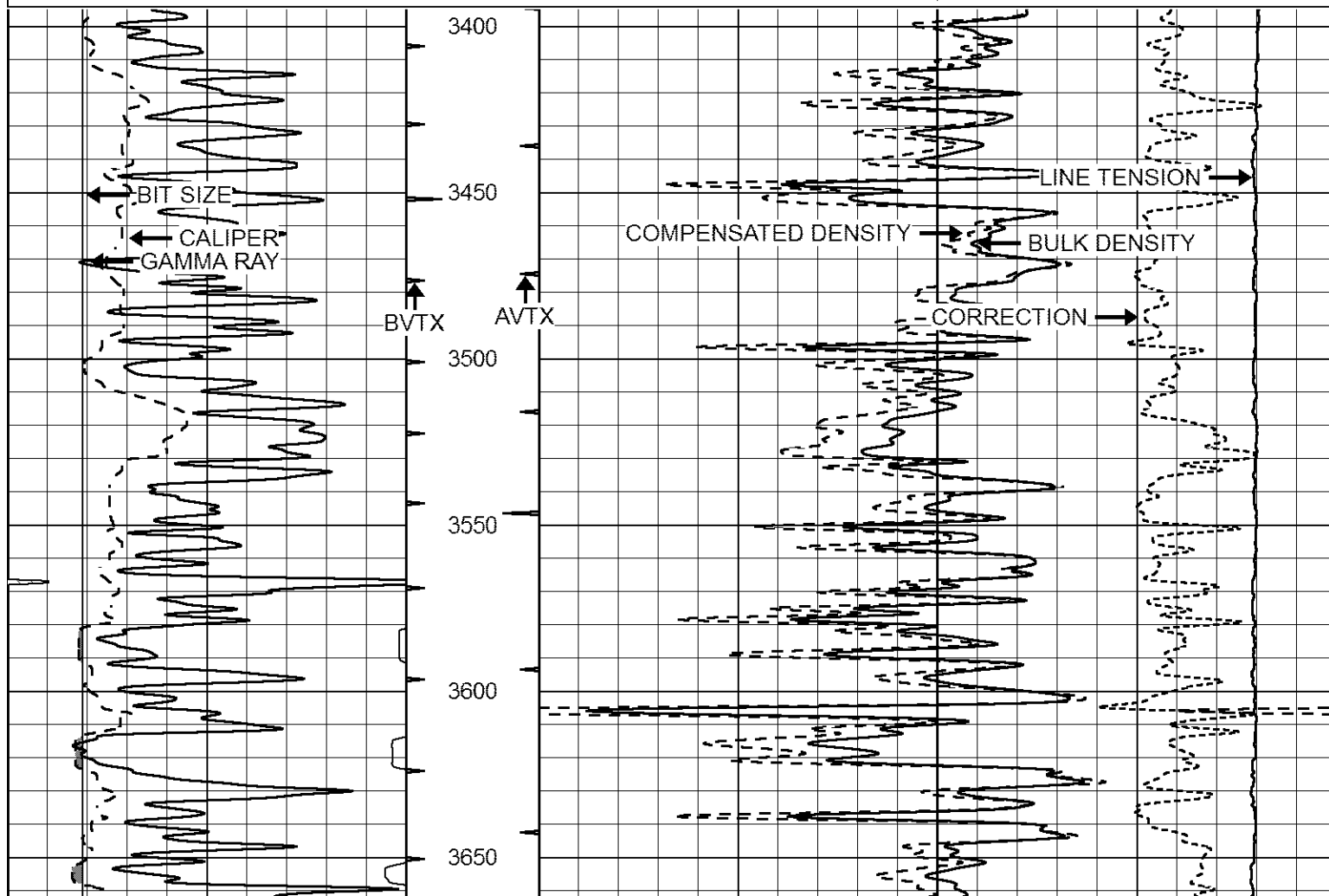
2" SCALE BULK DENSITY

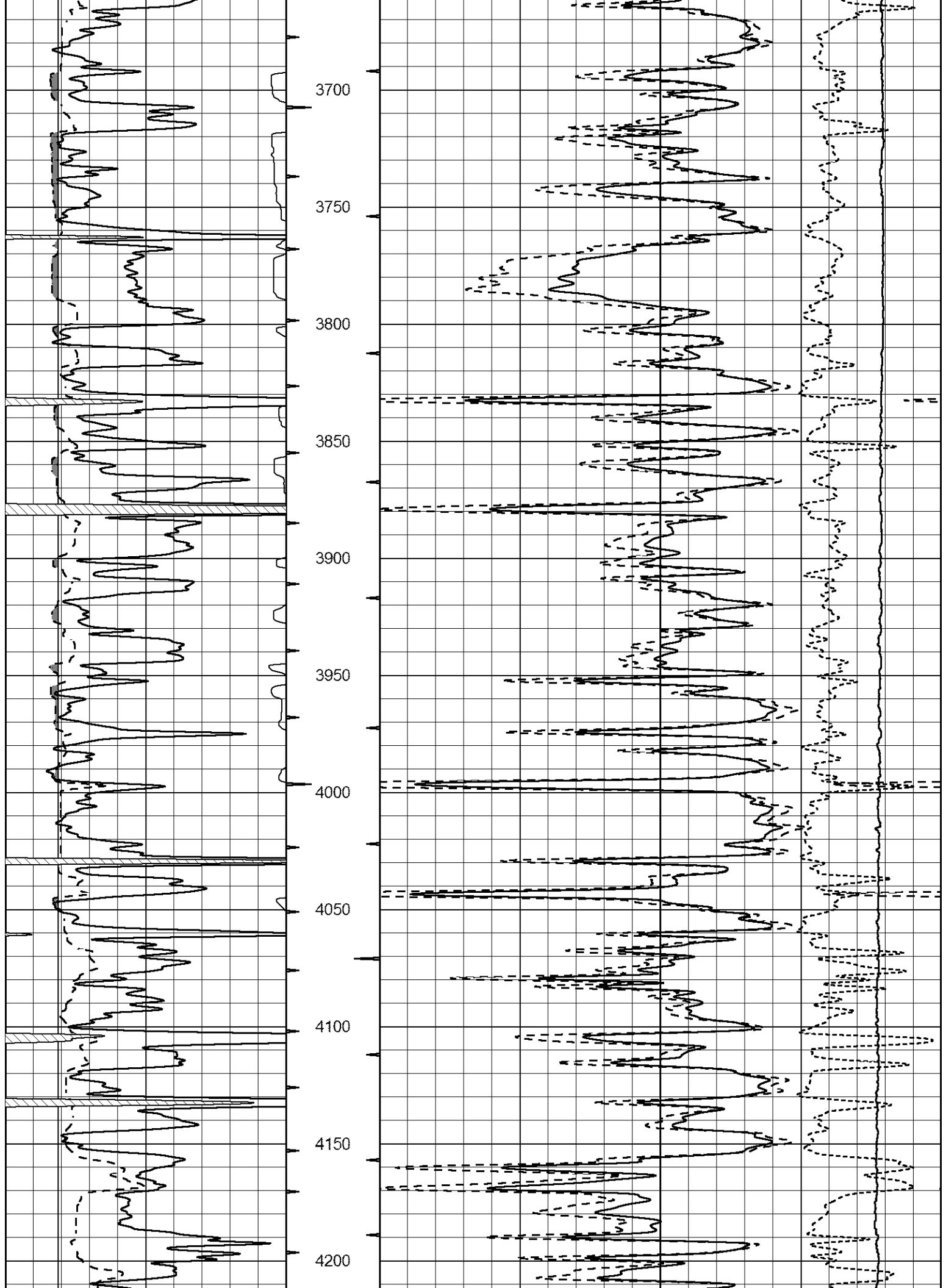
MAIN PASS

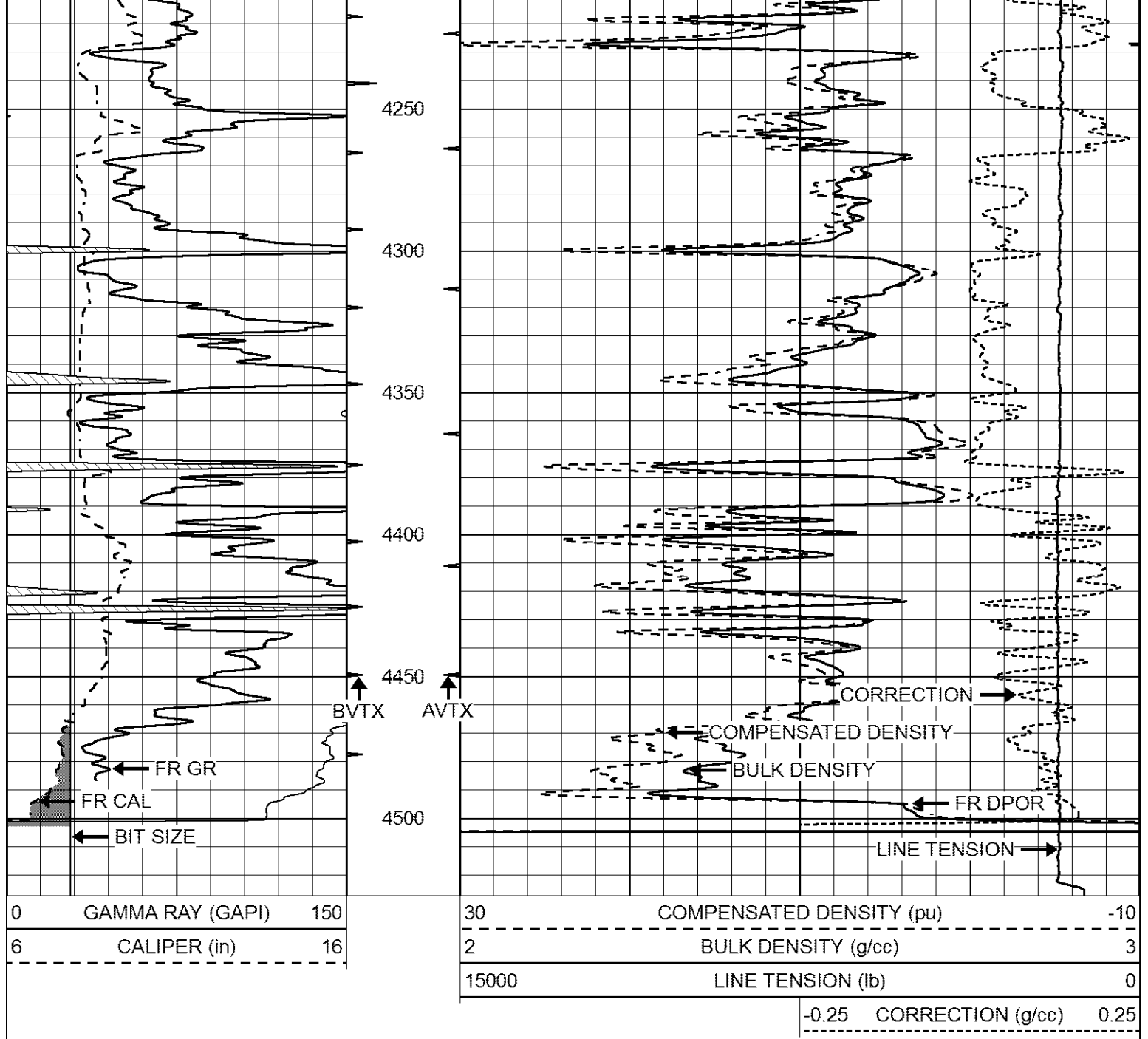
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Dataset Pathname stkml/pass3.3
Presentation Format cdl
Dataset Creation Sun Oct 01 01:11:36 2017
Charted by Depth in Feet scaled 1:600

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









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MAIN PASS

Database File: castle_steinshouer_#3.db

Dataset Pathname: stkml/pass3.1

Presentation Format: cndlspec

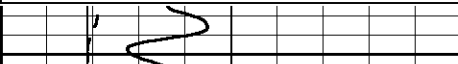
Dataset Creation: Sun Oct 01 01:50:00 2017

Charted by: Depth in Feet scaled 1:240

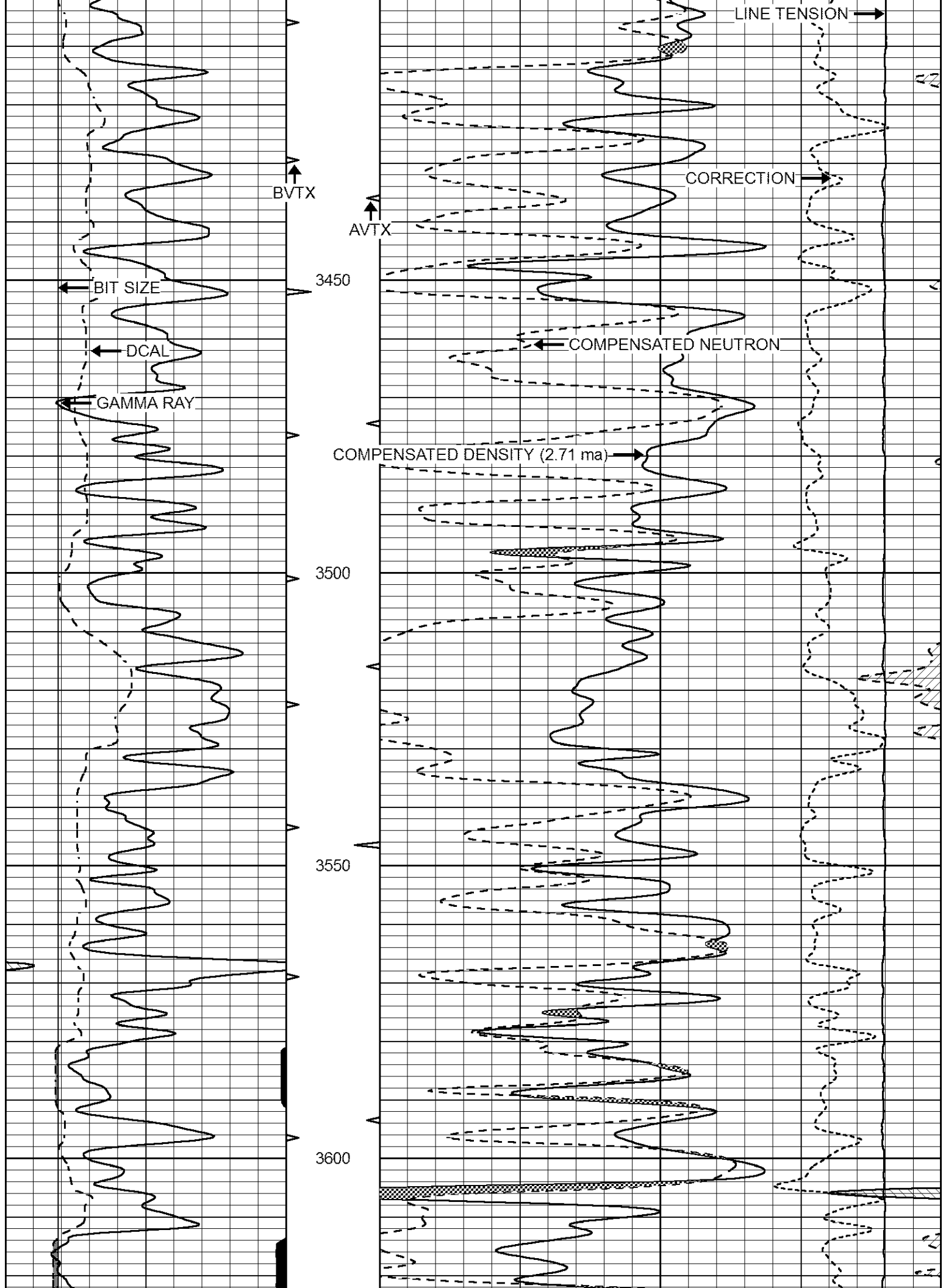
0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

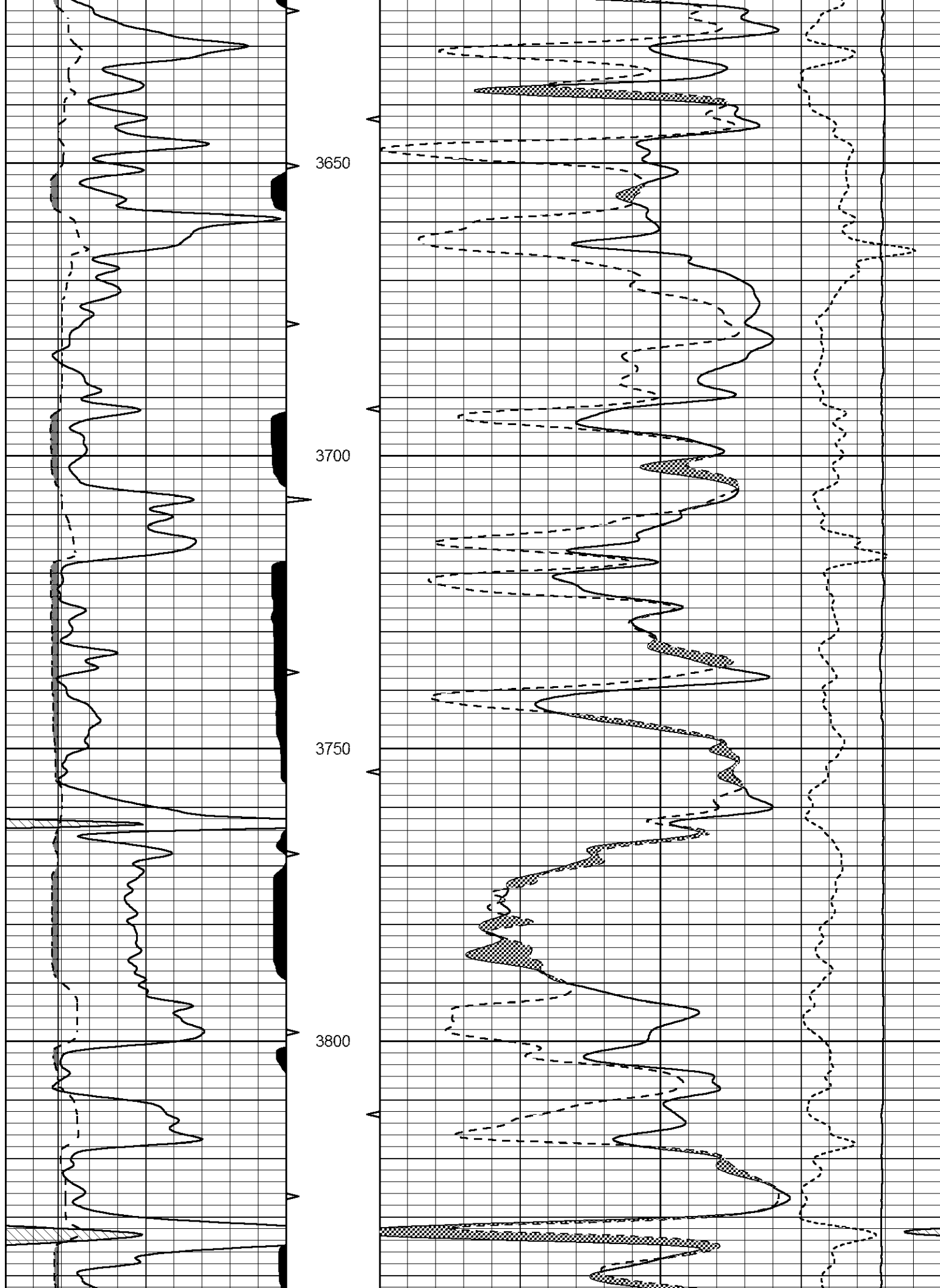
30	COMPENSATED NEUTRON (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0

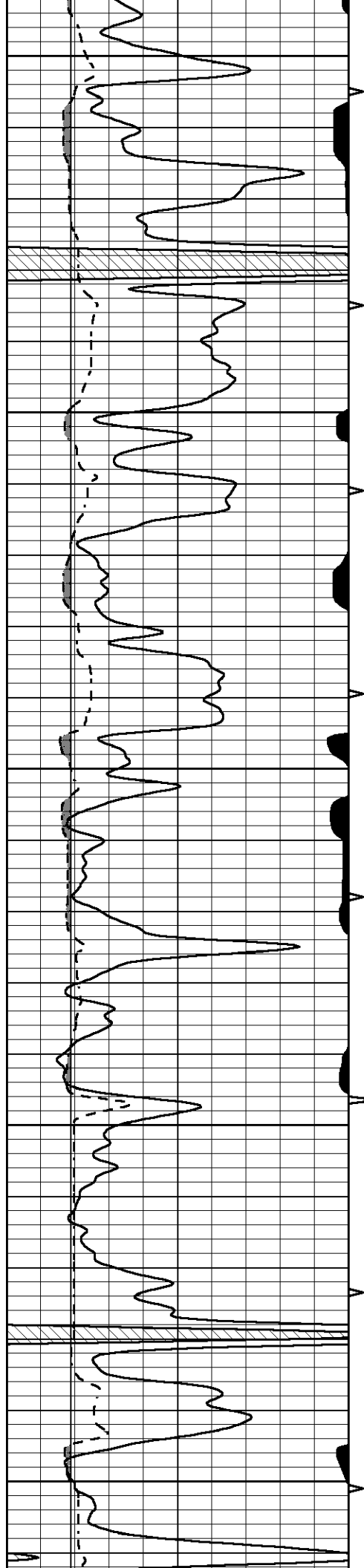
-0.25	CORRECTION (g/cc)	0.25
-0.25 CORRECTION (g/cc) 0.25		











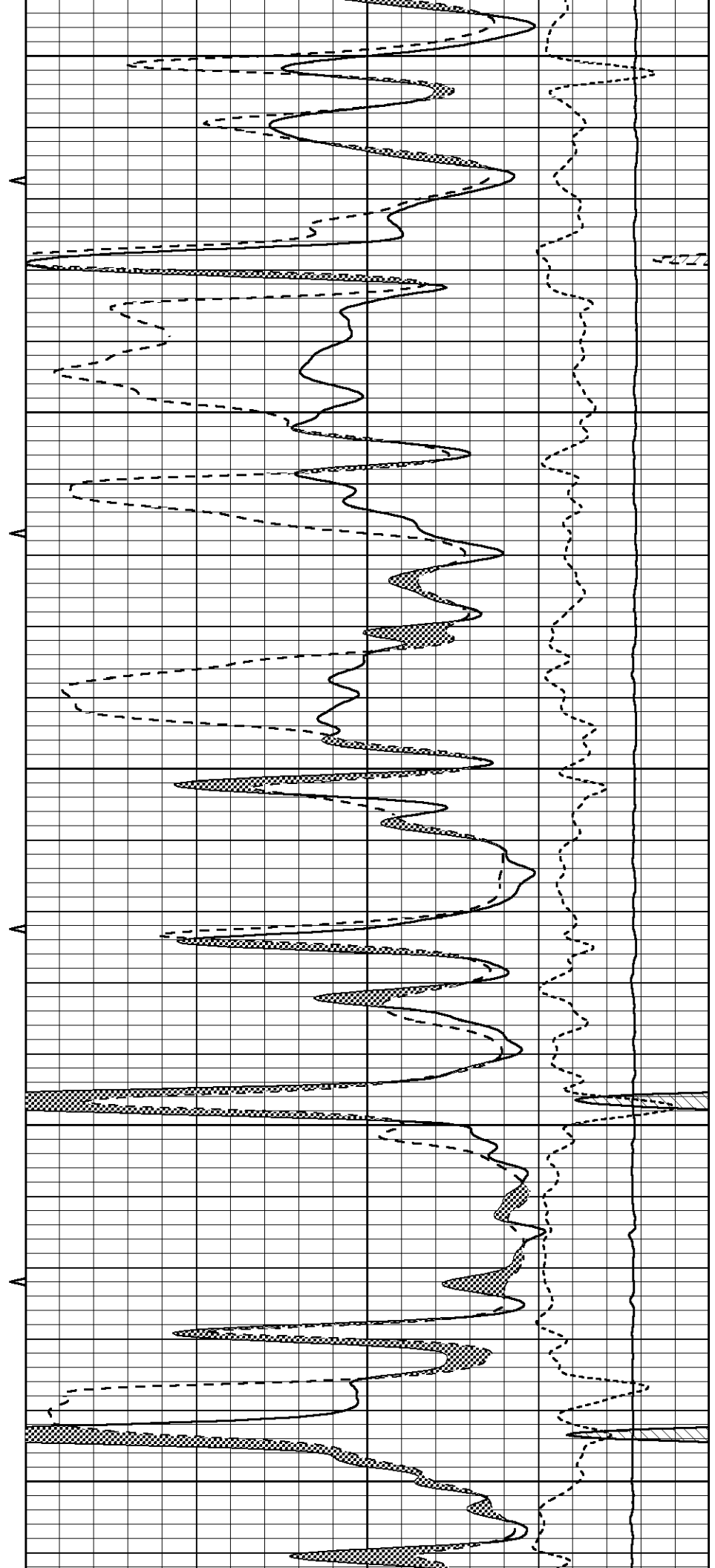
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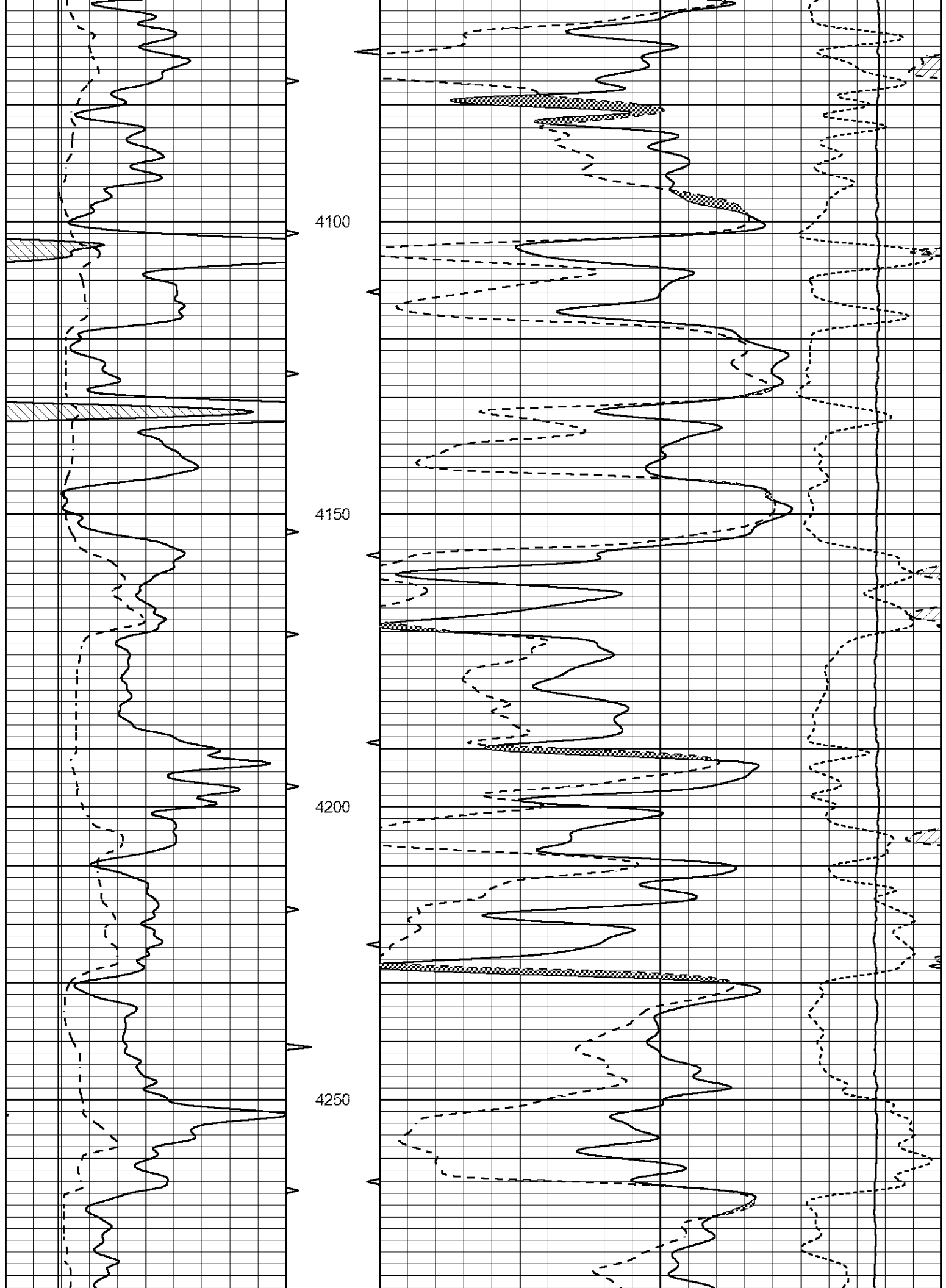
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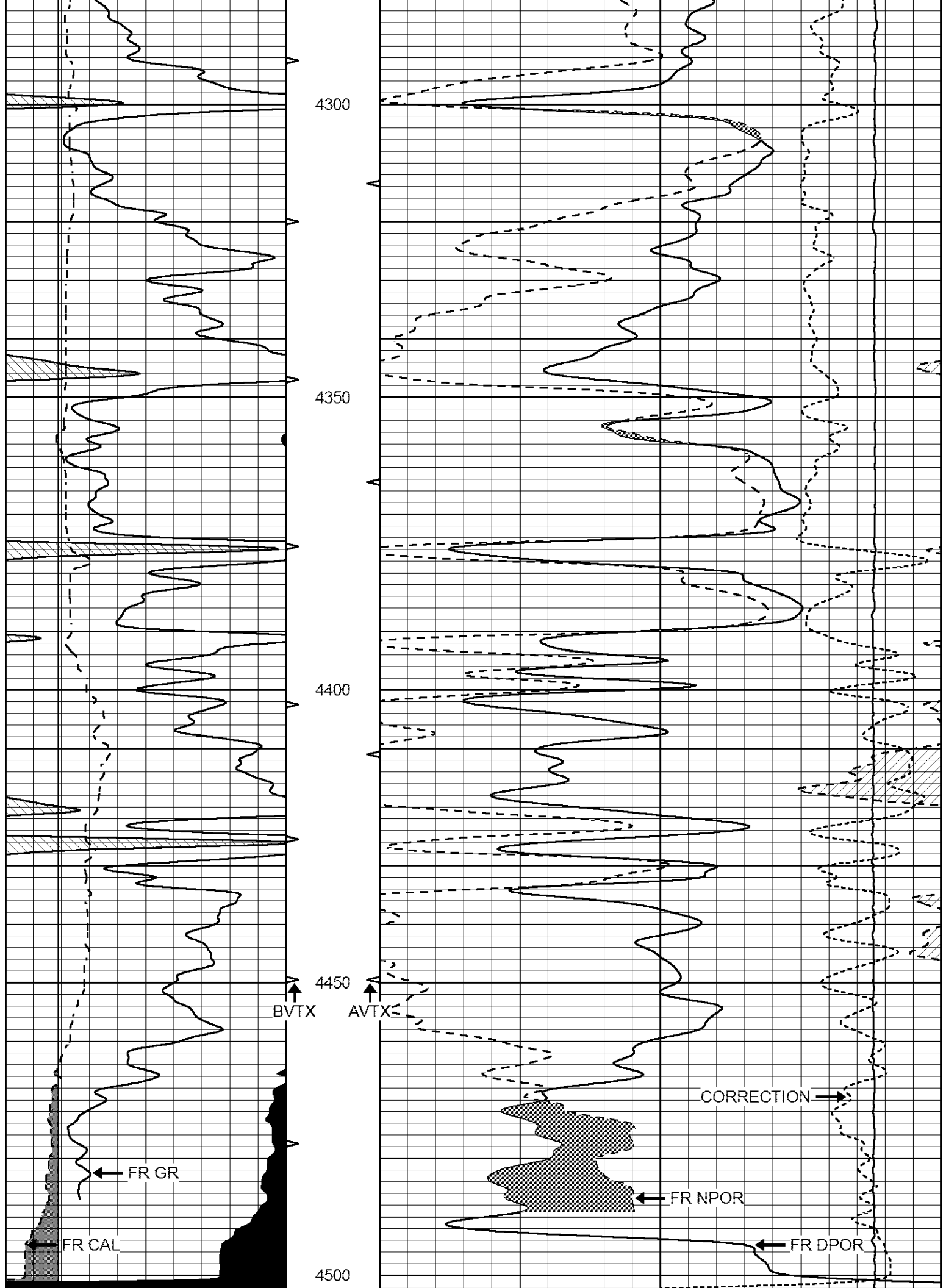
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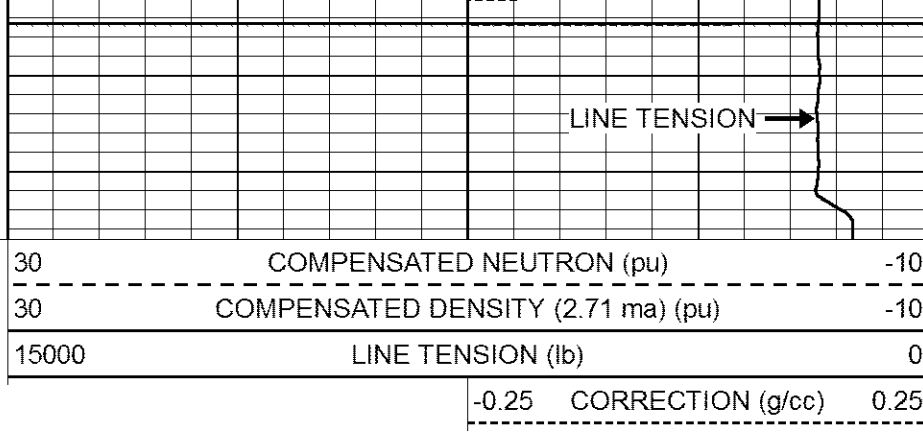
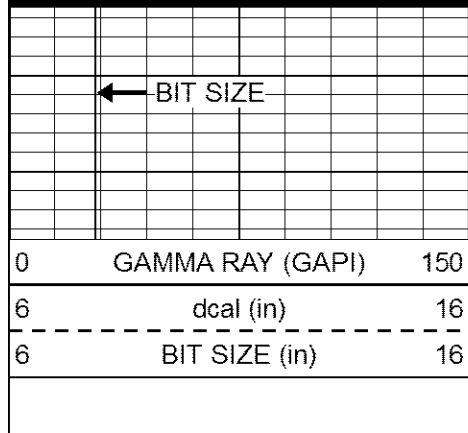
4000

4050



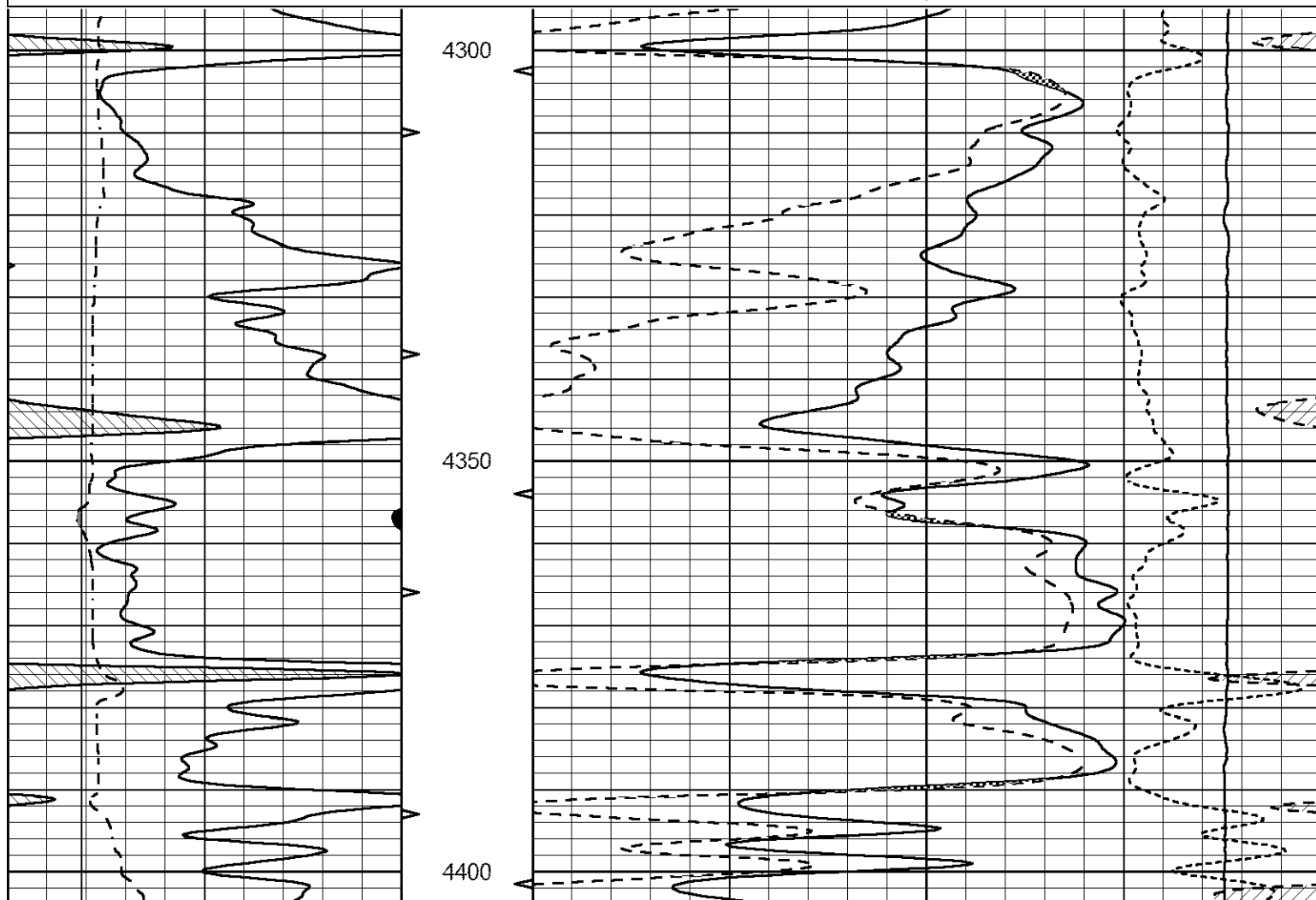
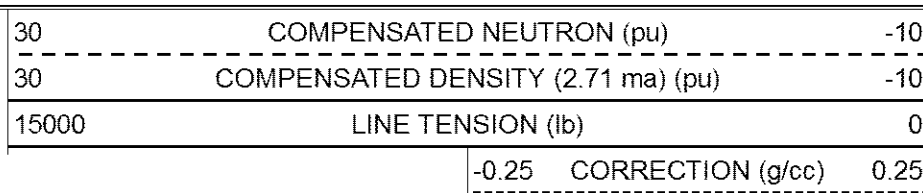
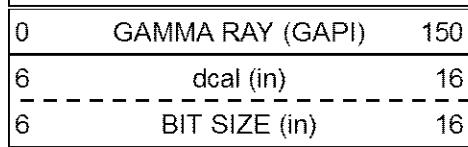


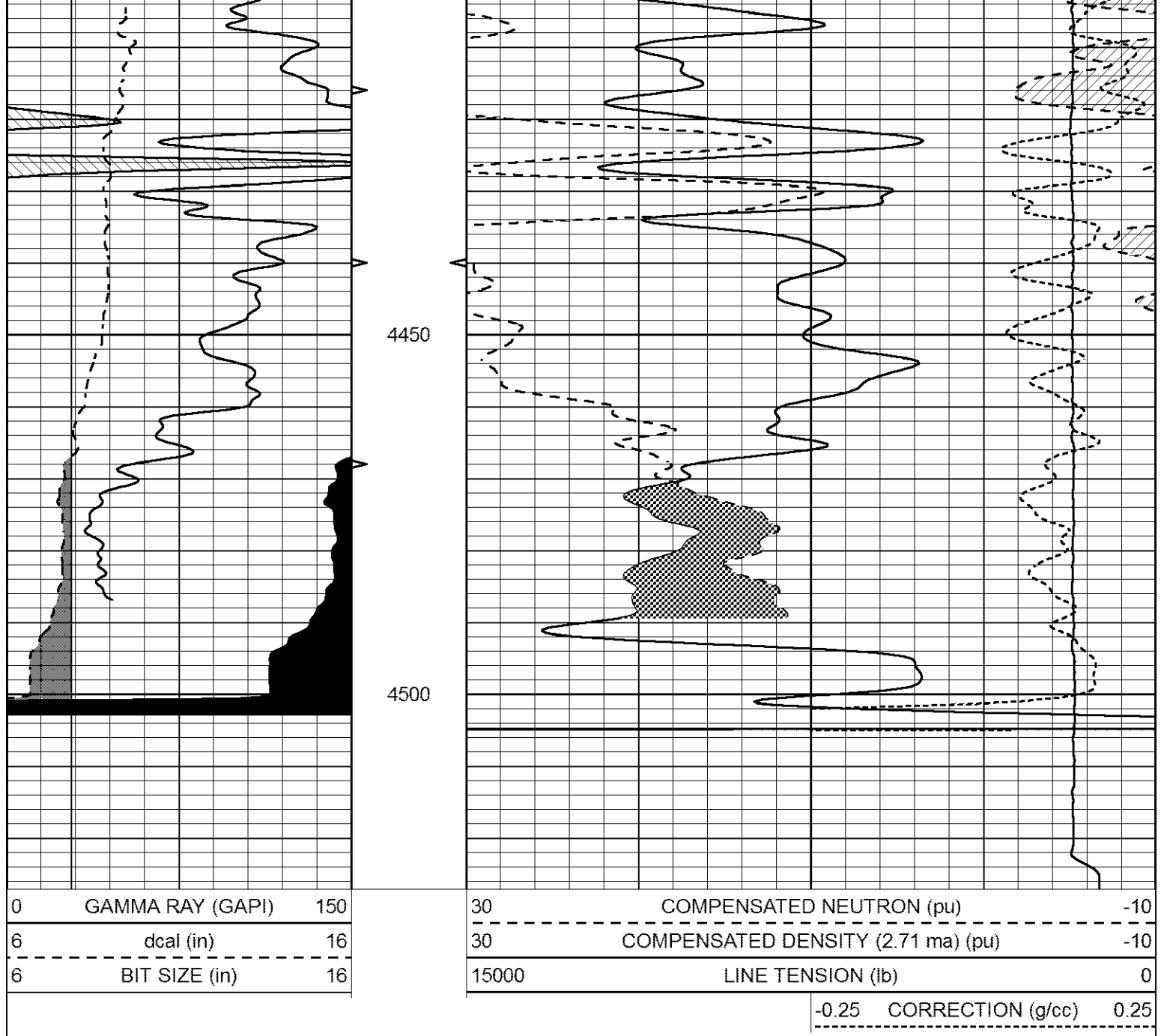




REPEAT SECTION

Database File castle_steinshouer_#3.db
 Dataset Pathname stkml/pass2.1
 Presentation Format cndispec
 Dataset Creation Sun Oct 01 01:25:56 2017
 Charted by Depth in Feet scaled 1:240





Calibration Report							
Database File	castle_steinshouer_#3.db						
Dataset Pathname	stkml/pass3.1						
Dataset Creation	Sun Oct 01 01:50:00 2017						
Dual Induction Calibration Report							
Serial-Model:				1987-M&W			
Calibration Performed:				Tue Apr 11 16:07:38 2017			
	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-38.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500
Microlog Calibration Report							

Serial-Model:
Performed:

PSI-02-PSI STKBL ML
Fri Jun 23 00:25:19 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	16000.0000	0.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	18000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.5000

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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