PIONEER
Pioneer Energy Services

DUAL COMP POROSITY LOG

Company MURFIN DRILLING COMPANY, INC.
Well HAMIT UNIT #2-20
Field WILDCAT
County ROOKS State KANSAS

Location: API #: 15-163-24349-00-00
330' FSL & 1330' FWL
SEC 20 TWP 6S RGE 19W

Other Services
DIL/MEL
BHCS

Elevation
K.B. 2130'
D.F. N/A
G.L. 2125'

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Other Services	DIL/MEL, BHCS
Elevation	K.B. 2130', D.F. N/A, G.L. 2125'

Permanent Datum	GROUND LEVEL	Elevation 2125'
Log Measured From	KELLY BUSHING	
Drilling Measured From	KELLY BUSHING	

| | | |

Log Variables

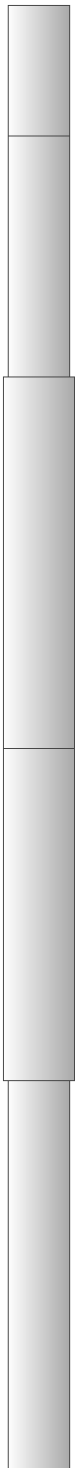
DatabaseC:\ProgramData\Warrior\Data\murfin_hamit_2-20.db
Dataset field/well/STACK/pass5.1/_vars_

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	327	0

SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	55	0	5.5	0	3687	113	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	37.48		CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	36.73					
			CDL-M&W (90-1031)	8.50	4.00	250.00
LSD	28.43					
DCAL	28.42					
SSD	27.93					
			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
MCAL	19.83					
MI	19.83					
MN	19.83					
RLL3F	15.80					
RLL3	15.80					



			DIL-M&W (PSI 91)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					

Dataset: murfin_hamit_2-20.db: field/well/STACK/pass9.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in

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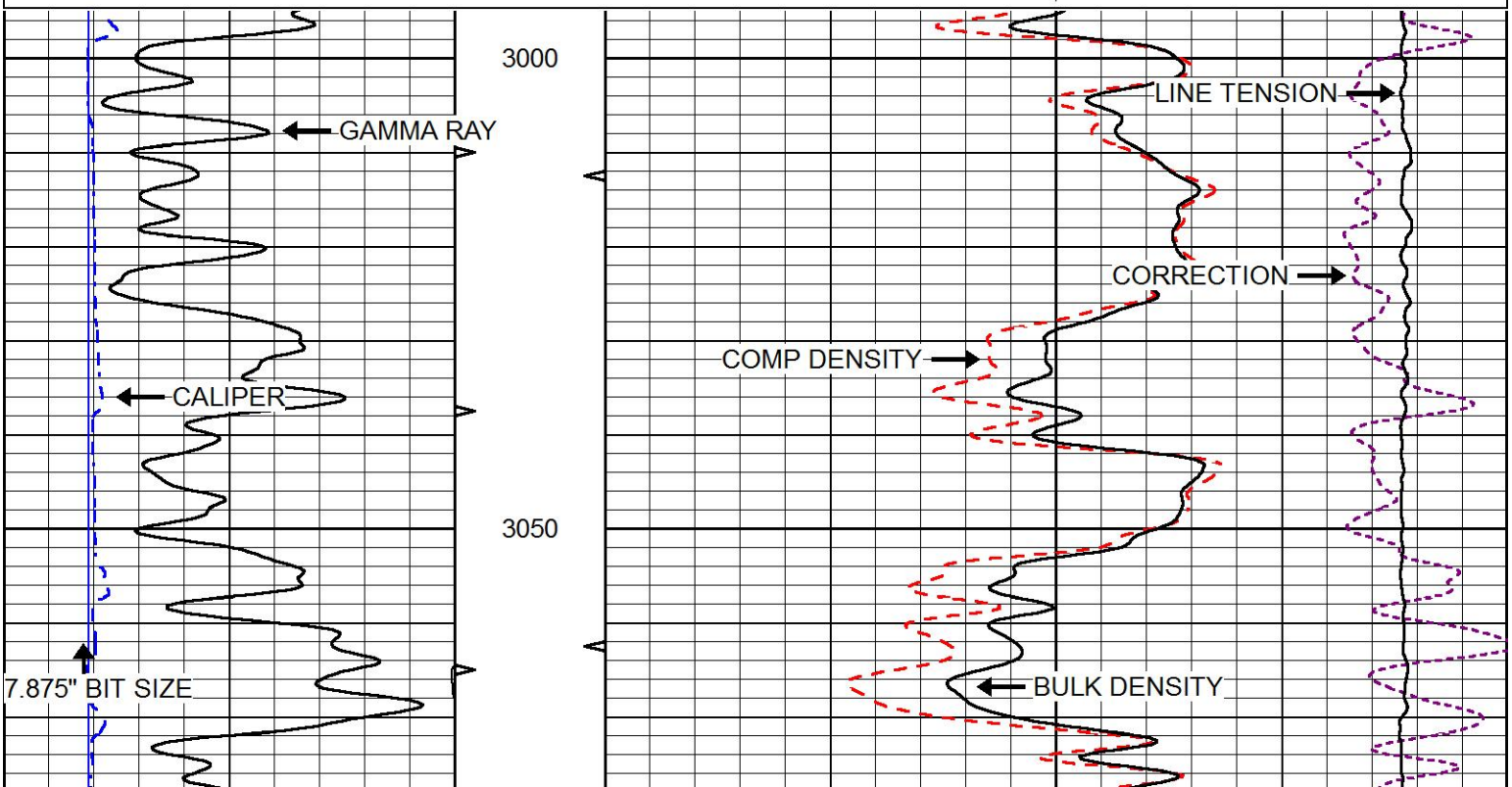
MAIN PASS

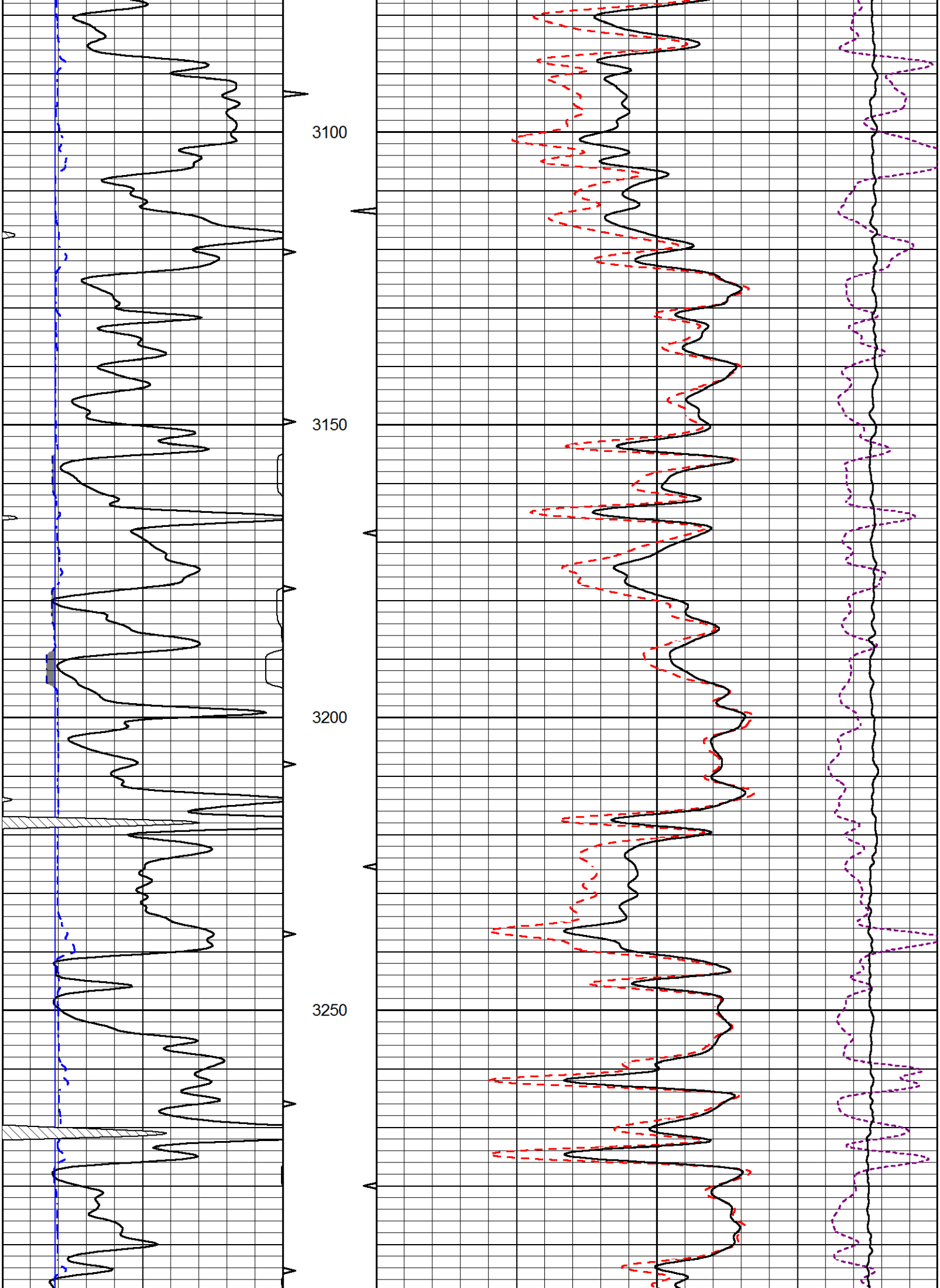
Database File	murfin_hamit_2-20.db
Dataset Pathname	STACK/pass9.1
Presentation Format	cdl
Dataset Creation	Tue Nov 14 07:27:01 2017
Charted by	Depth in Feet scaled 1:240

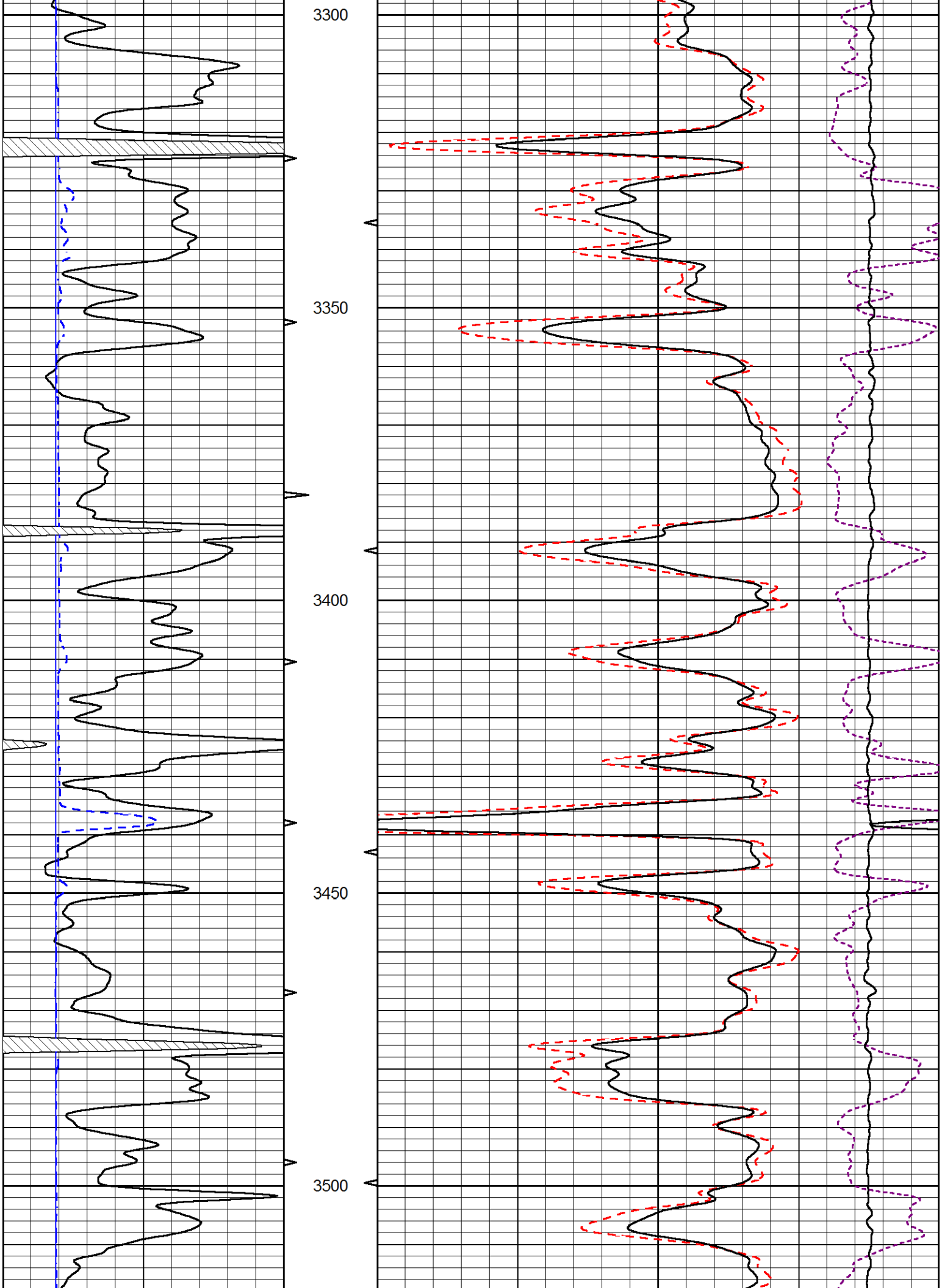
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

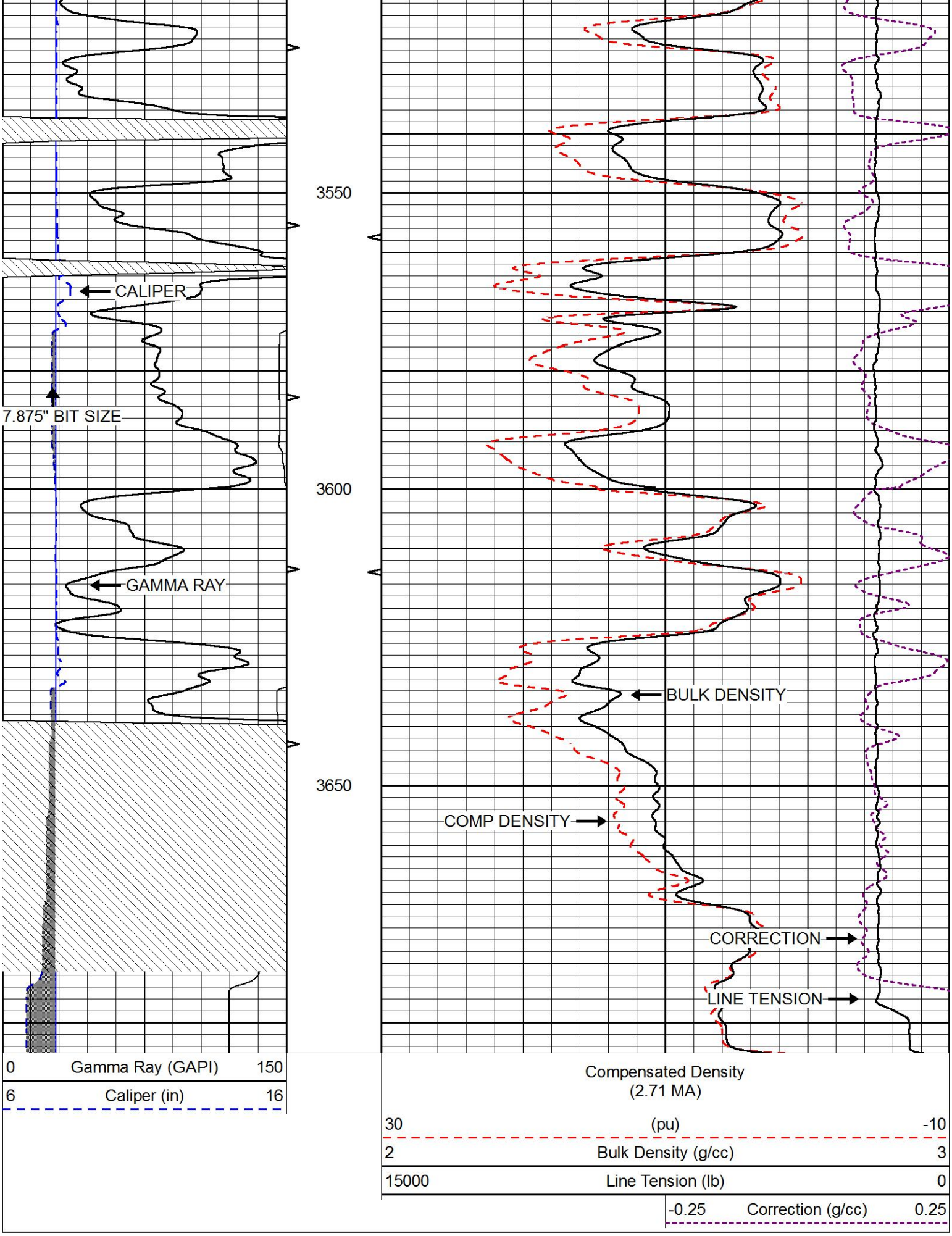
Compensated Density
(2.71 MA)

30	(pu)	-10
2	Bulk Density (g/cc)	3
15000	Line Tension (lb)	0
-0.25	Correction (g/cc)	0.25




3100
3150
3200
3250

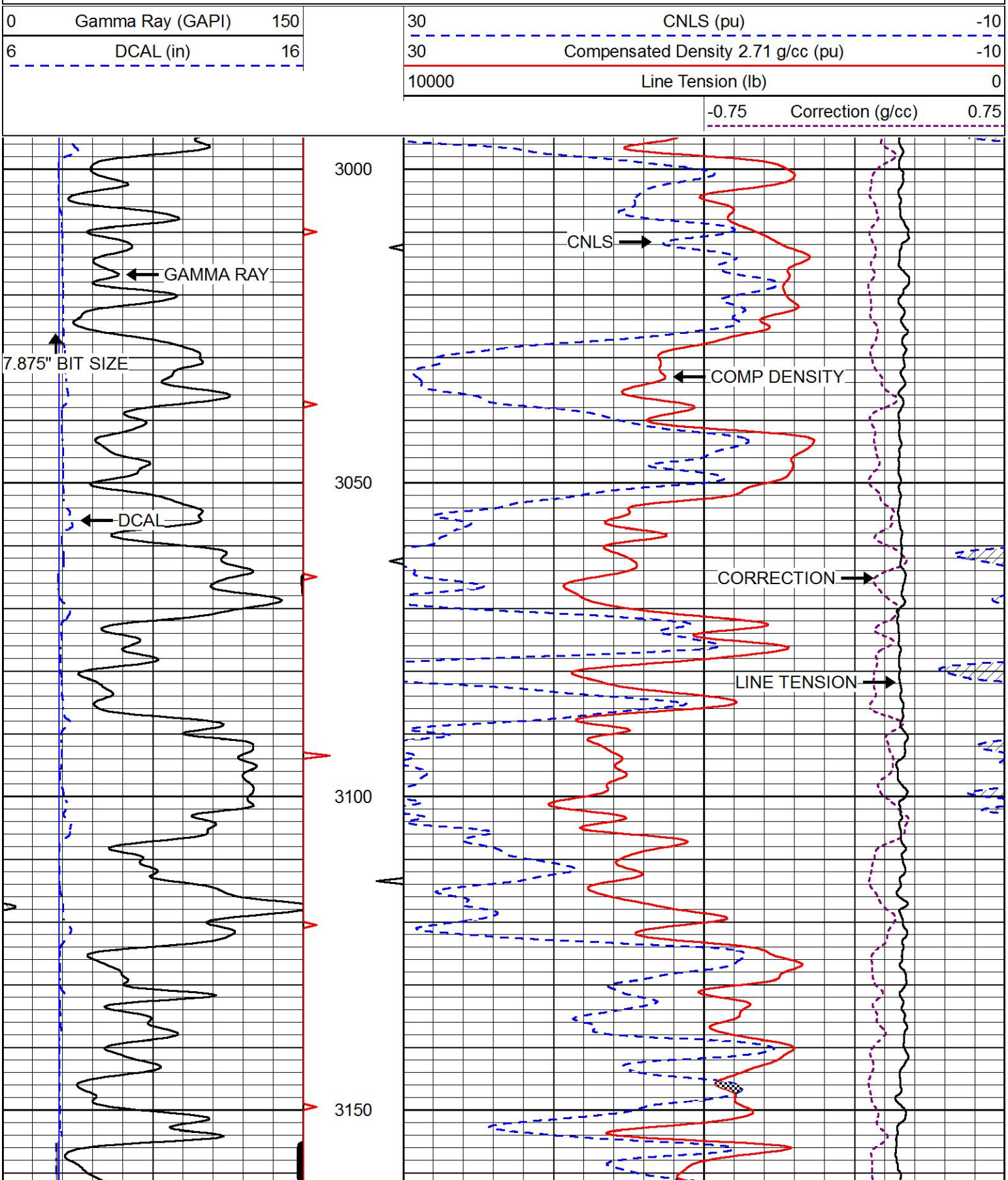

3300
3350
3400
3450
3500

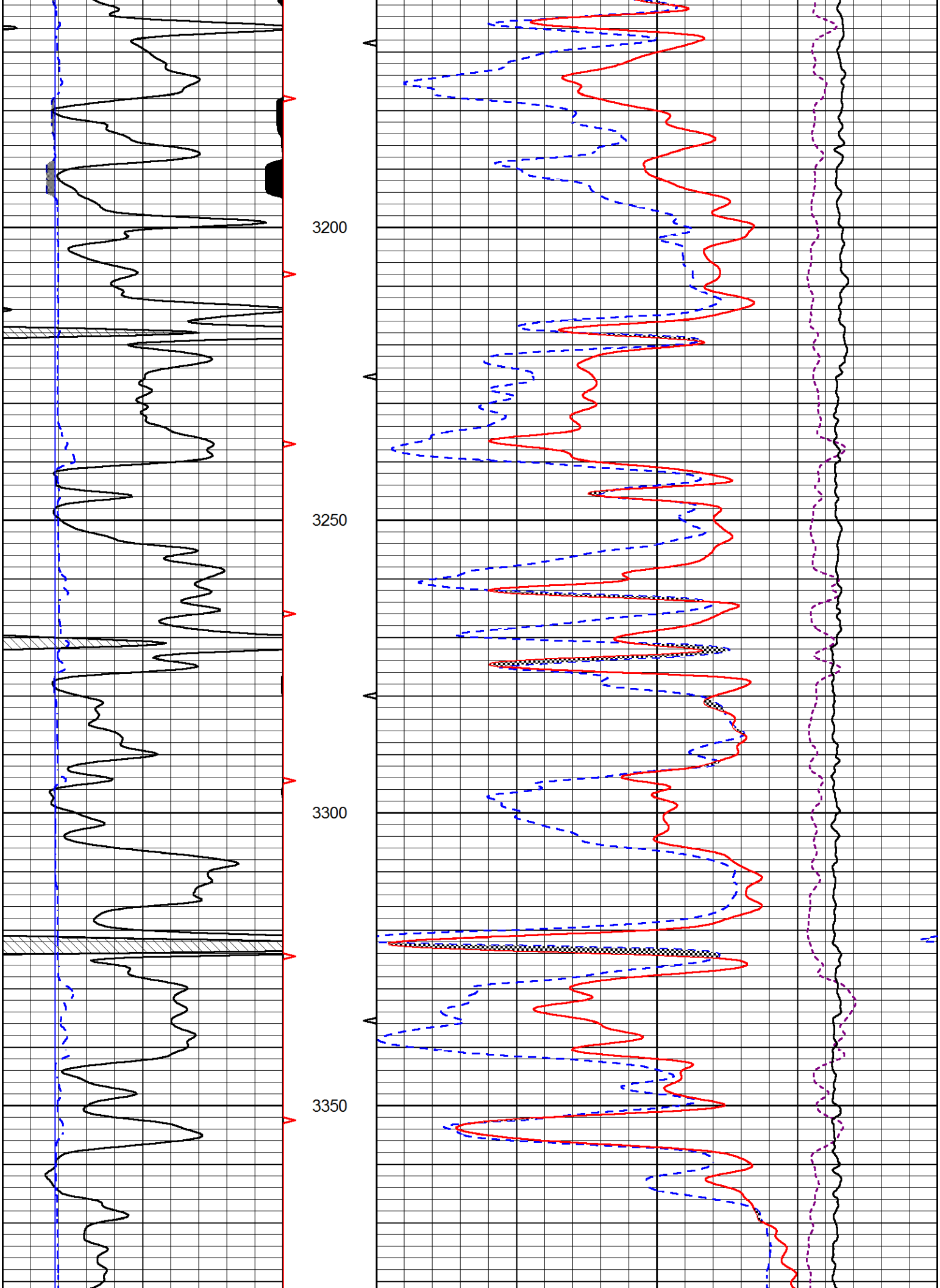

3550
3600
3650
CALIPER
7.875" BIT SIZE
GAMMA RAY
BULK DENSITY
COMP DENSITY
CORRECTION
LINE TENSION
0 Gamma Ray (GAPI) 150
6 Caliper (in) 16
Compensated Density
(2.71 MA)
30 (pu) -10
2 Bulk Density (g/cc) 3
15000 Line Tension (lb) 0
-0.25 Correction (g/cc) 0.25

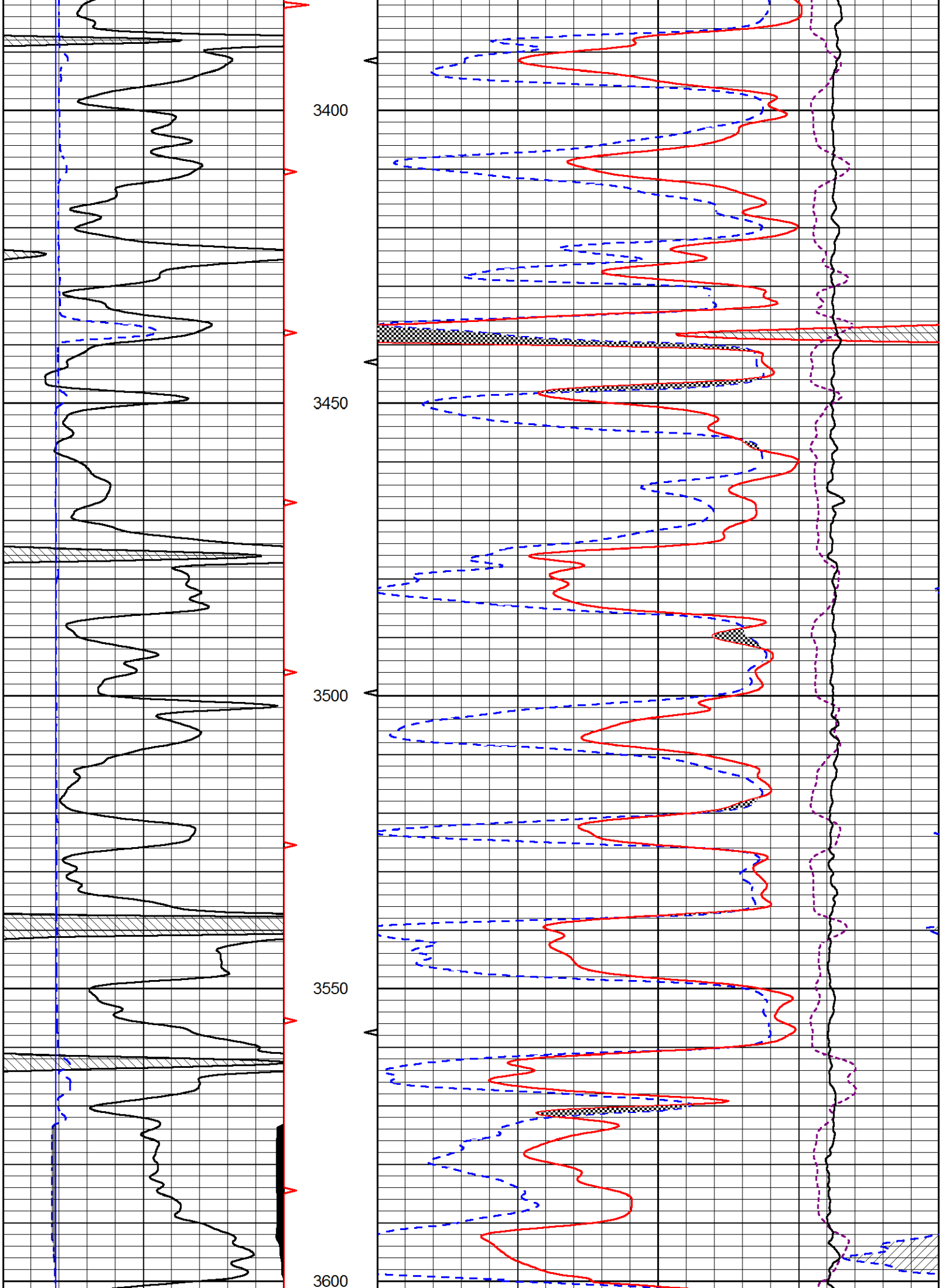
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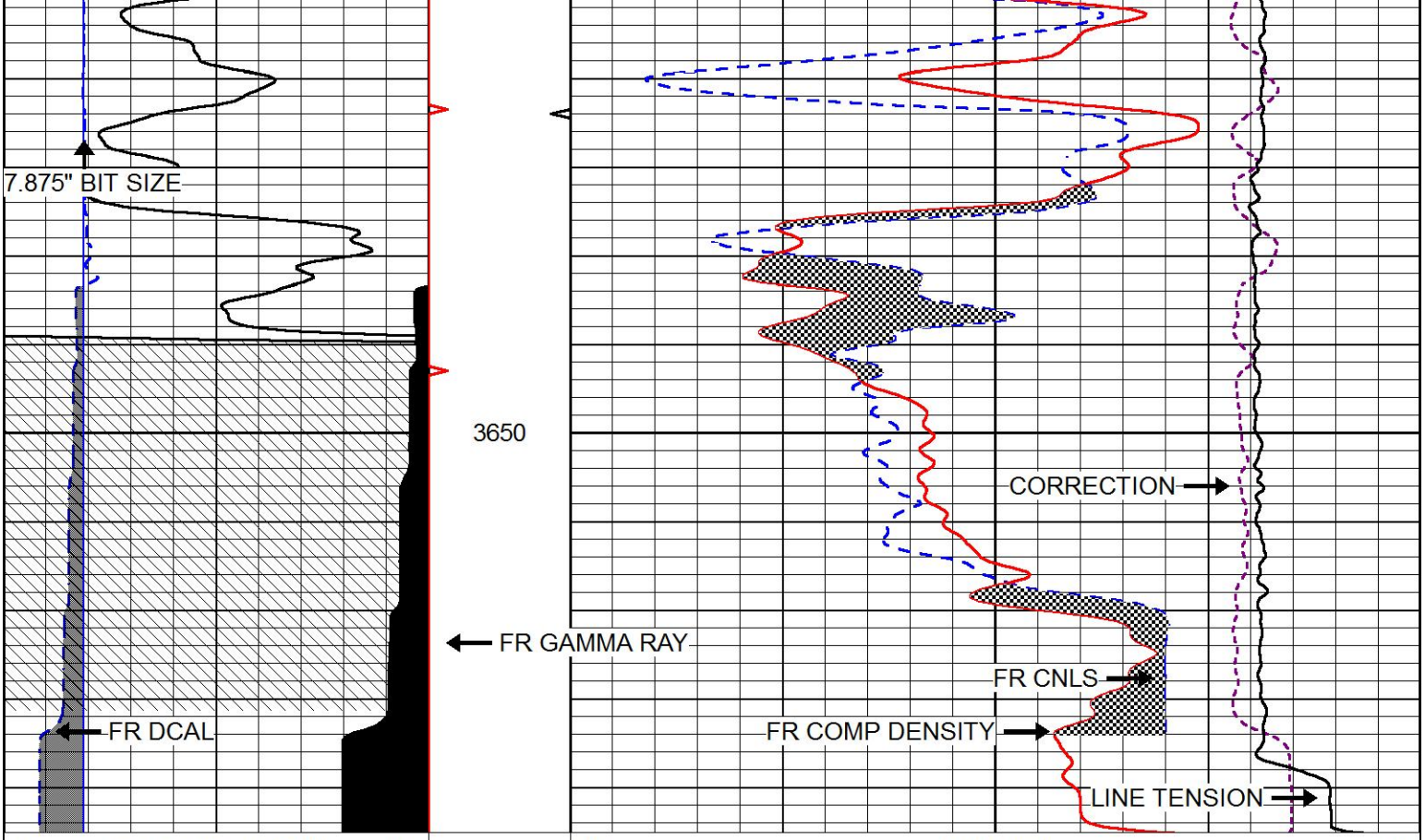
MAIN PASS

Database File	murfin_hamit_2-20.db
Dataset Pathname	STACK/pass9.1
Presentation Format	cndlspec
Dataset Creation	Tue Nov 14 07:27:01 2017
Charted by	Depth in Feet scaled 1:240




3200
3250
3300
3350


3400
3450
3500
3550
3600



0	Gamma Ray (GAPI)	150
6	DCAL (in)	16

30	CNLS (pu)	-10
30	Compensated Density 2.71 g/cc (pu)	-10
10000	Line Tension (lb)	0
-0.75	Correction (g/cc)	0.75

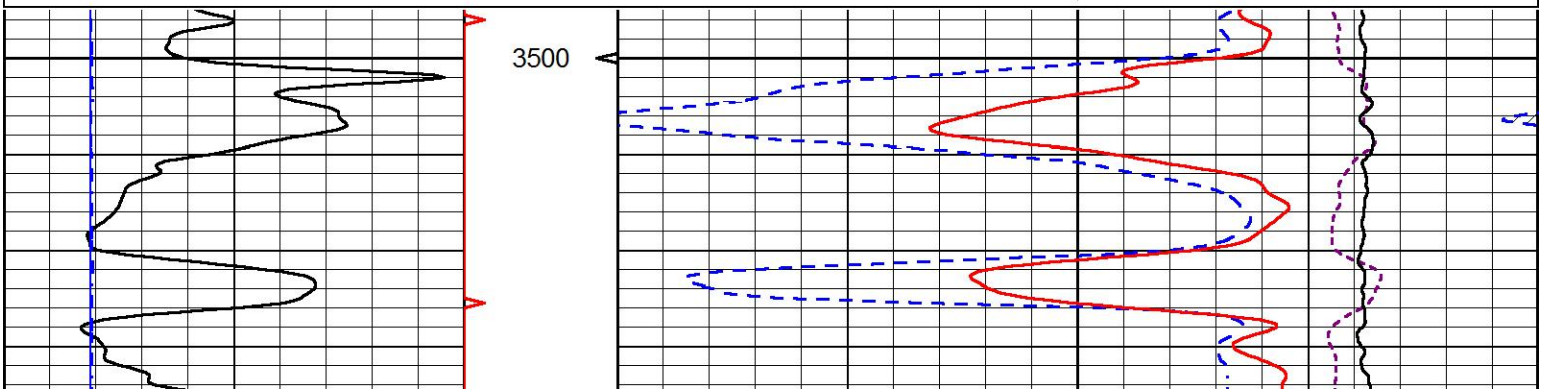
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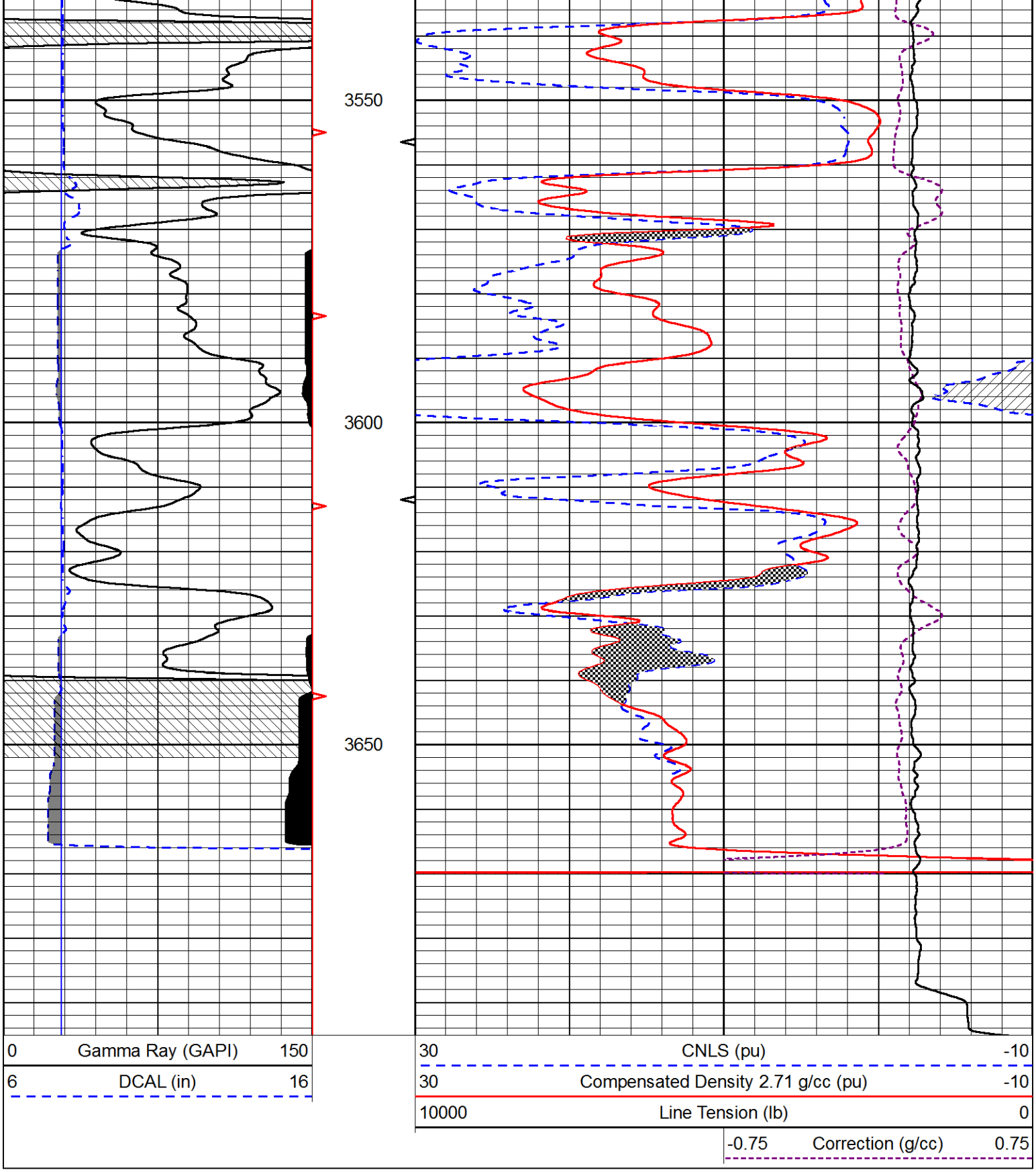
REPEAT SECTION

Database File	murfin_hamit_2-20.db
Dataset Pathname	STACK/pass3.1
Presentation Format	cndlspec
Dataset Creation	Tue Nov 14 07:34:22 2017
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	DCAL (in)	16

30	CNLS (pu)	-10
30	Compensated Density 2.71 g/cc (pu)	-10
10000	Line Tension (lb)	0
-0.75	Correction (g/cc)	0.75





Calibration Report

Database File	murfin_hamit_2-20.db
Dataset Pathname	STACK/pass9.1
Dataset Creation	Tue Nov 14 07:27:01 2017

Dual Induction Calibration Report

Serial-Model:	PSI 91-M&W
Calibration Performed:	Thu Nov 09 00:57:24 2017

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.430	-31.500
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.360	-31.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
Performed: Wed Nov 08 02:36:52 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	25000.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	31000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3500

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
Source / Verifier: 16955B / 2ci
Master Calibration Performed: Wed Nov 08 23:24:34 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4903.44	6153.79	cps
Aluminum	2.640	g/cc	934.50	4021.31	cps

Spine Angle = 75.61 Density/Spine Ratio = 0.517

	Size		Reading
Small Ring	8.00	in	1.84
Large Ring	22.00	in	1.46

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: WED SEP 6 10:30:30 2017

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: Wed Sep 06 19:51:14 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity:	0.6000	GAPI/cps

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