



MICRORESISTIVITY LOG

Company MURFIN DRILLING CO., INC.
 Well BANISTER A #2-22
 Field WILDCAT
 County CHEYENNE
 State KANSAS

Company MURFIN DRILLING CO., INC.
 Well BANISTER A #2-22
 Field WILDCAT
 County CHEYENNE State KANSAS

Location: API #: 15-023-21483-00-00
 2310 FSL & 1320 FWL
 SEC 22 TWP 2S RGE 37W
 Permanent Datum GROUND LEVEL Elevation 3409'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services
 CNL/CDL
 DIL/SON
 Elevation
 K.B. 3414'
 D.F. N/A
 G.L. 3409'

Date	5/20/2018
Run Number	TWO
Depth Driller	4934'
Depth Logger	4934'
Bottom Logged Interval	4933'
Top Log Interval	4000'
Casing Driller	8.625" @ 384'
Casing Logger	384'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	800
Density / Viscosity	9.2 57
pH / Fluid Loss	10.5 5.6
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.10 @ 57
Rmt @ Meas. Temp	0.83 @ 57
Rmc @ Meas. Temp	1.49 @ 57
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.49 @ 127
Operating Rig Time	5 HOURS
Max Rec. Temp. F	127
Equipment Number	108
Location	HAYS
Recorded By	IAN MABB
Witnessed By	SAMAN SHARIFAIE

<<< 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.
 BIRD CITY, KS.
 4 MILES EAST TO RD 32,
 8 MILES NORTH, EAST INTO

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

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

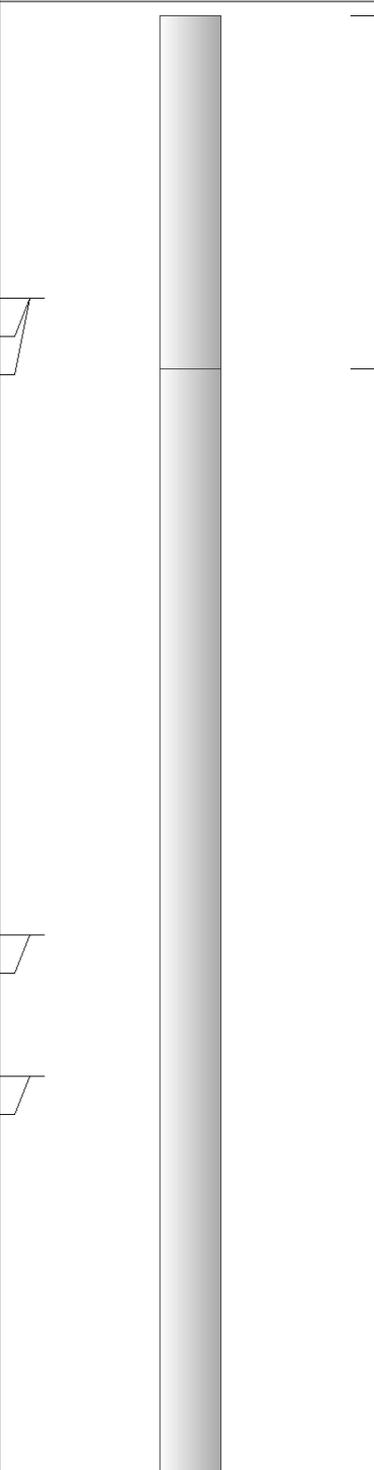
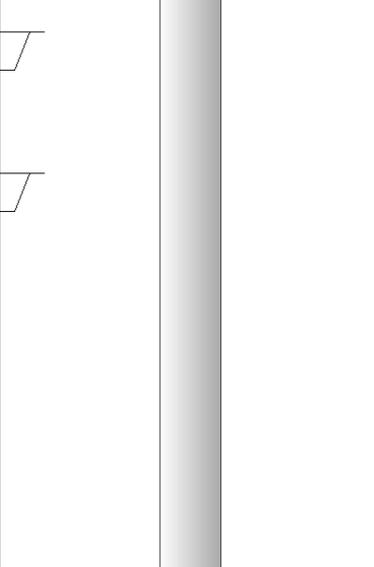
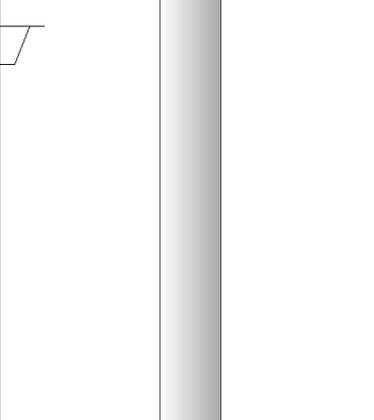
Your Pioneer Energy Services Crew Engineer: IAN MABB Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: SAMAN SHARIFAIE Secondary Witness: Secondary Witness: Secondary Witness:
--	--

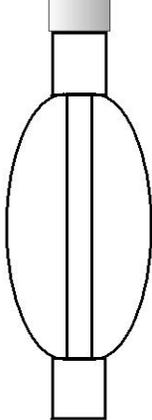
Log Variables

DatabaseC:\ProgramData\Warrior\Data\murfin_banister_a_2_22.db
 Dataset field/well/melson/pass2.15/_vars_

Top - Bottom

A 1	BOREID in 7.875	BOTTEMP degF 100	CASEOD in 5.5	CASETHCK in 0	COMPACT 1	FLUIDDEN g/cc 1	M 2
MATRXDEN g/cc 2.71	NPORSEL Limestone	PERFS 0	SNDERR mmho/m 5	SNDERRM mmho/m -3	SPSHIFT mV 0	SRFTEMP degF 0	SVFLUID usec/ft 189
SVMATRIX usec/ft 47.6	SZCOR Off	TDEPTH ft 0					

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
MCAL MI MN	22.50 22.50 22.50		ML-Armadillo (Armadillo-1) Pengo micro log tool mandrel with Armadillo Electronics	5.00	3.50	100.00
WVF4 WVF1	13.50 13.50		SLT-PENGO (0001)	16.00	3.50	300.00
WVF3 WVF2	11.50 11.50					



CENT-PENGO

5.50

3.00

70.00

Dataset: murfin_banister_a_2_22.db: field/well/melson/pass2.15
 Total length: 26.50 ft
 Total weight: 470.00 lb
 O.D.: 3.50 in

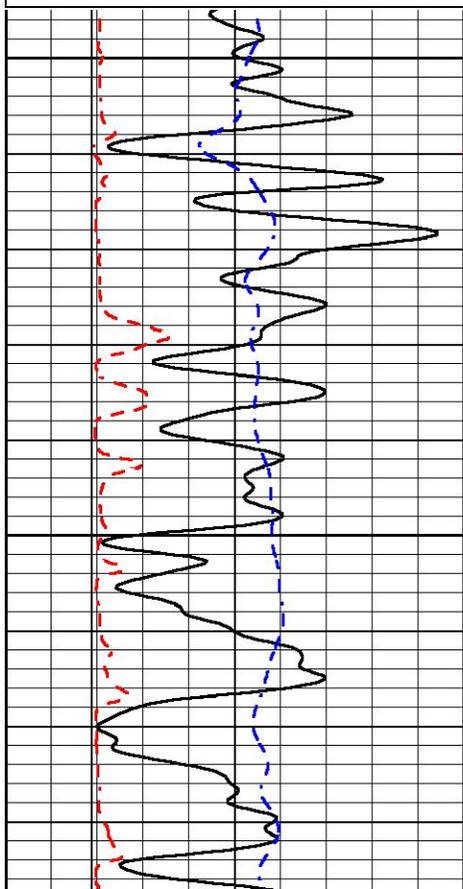


MAIN PASS

Database File murfin_banister_a_2_22.db
 Dataset Pathname stack/pass3.1
 Presentation Format micro
 Dataset Creation Sun May 20 12:11:09 2018
 Charted by Depth in Feet scaled 1:240

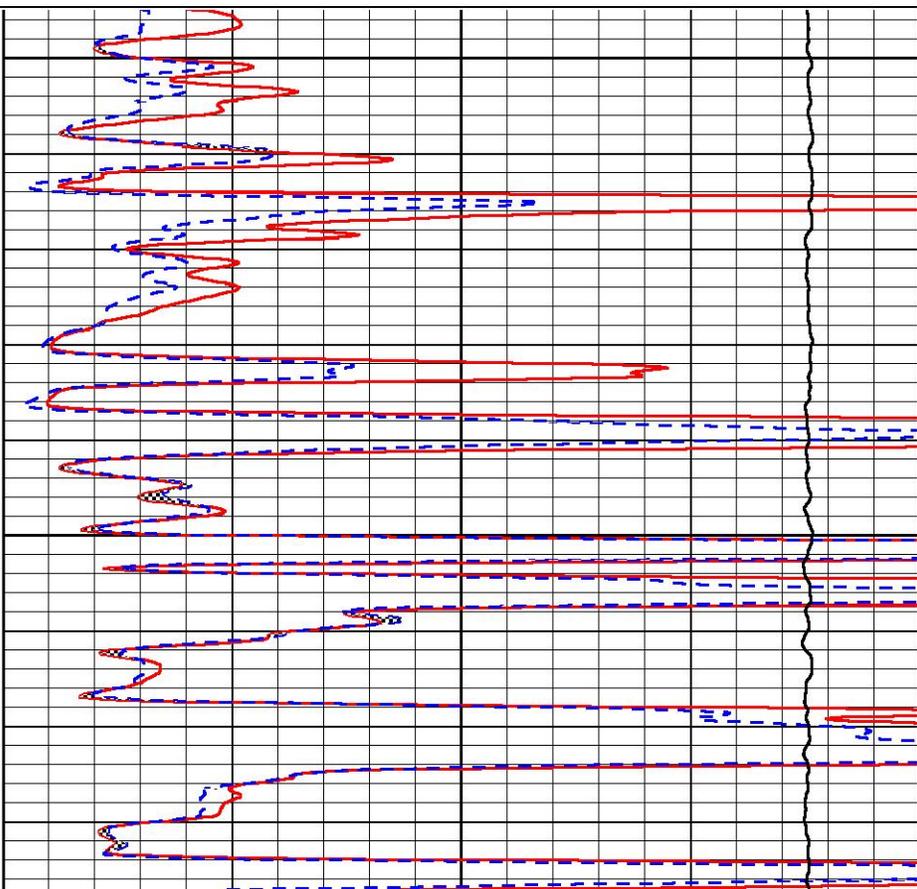
0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

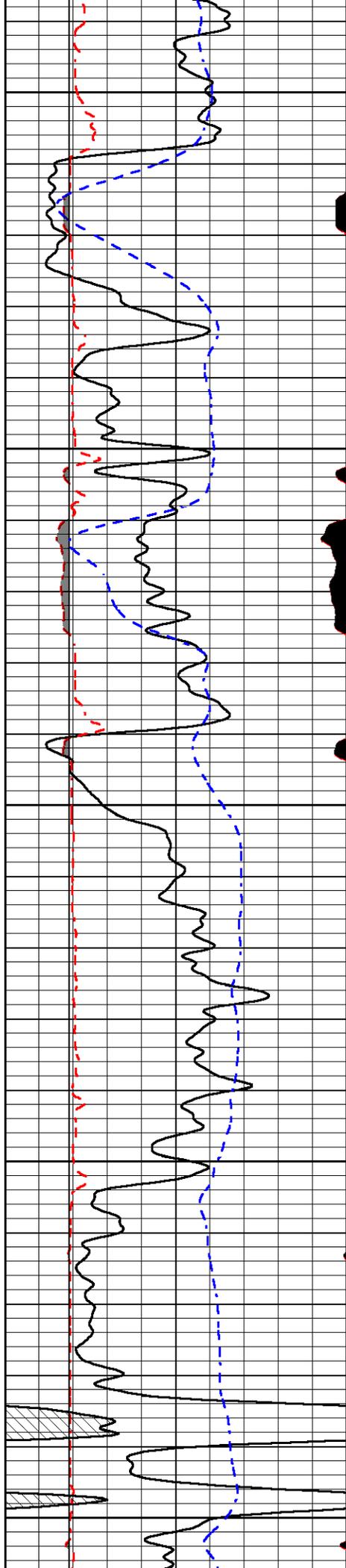
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0



4000

4050





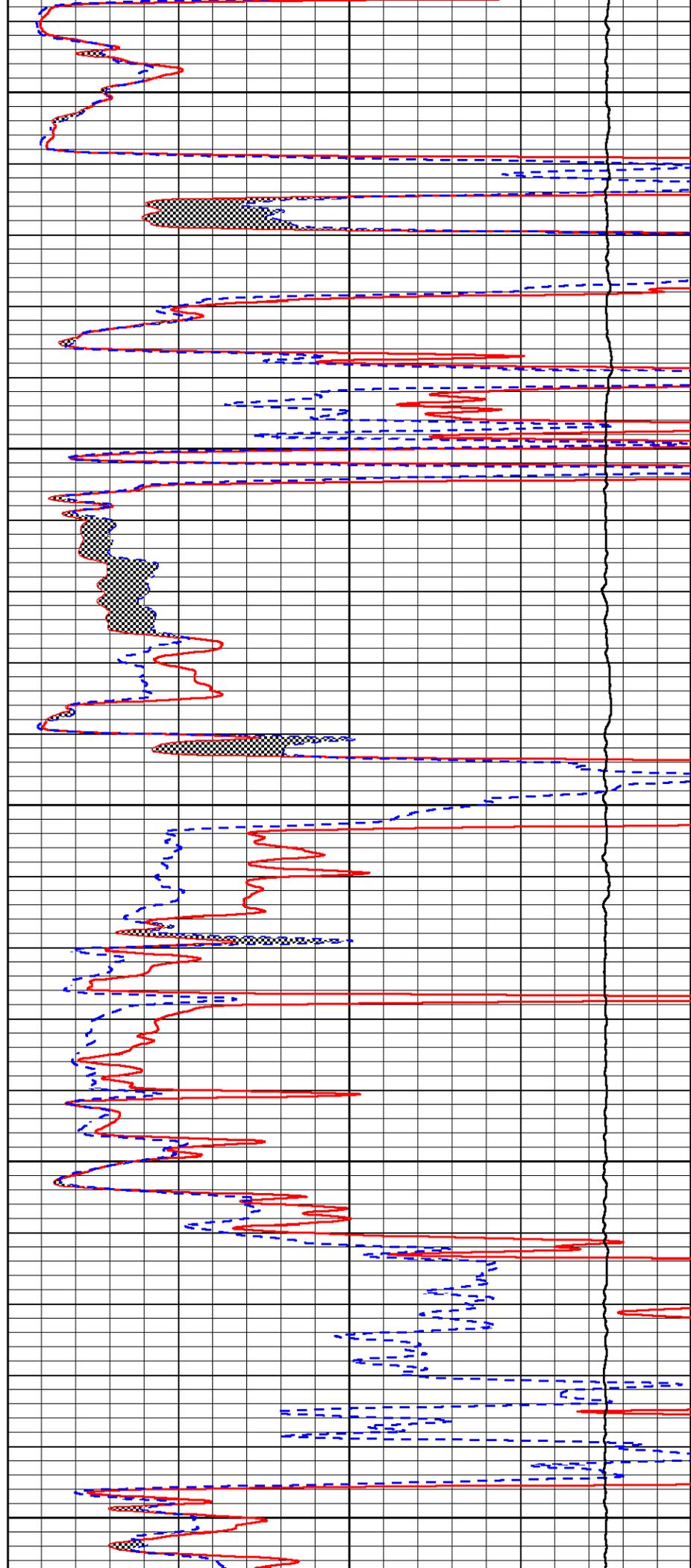
4100

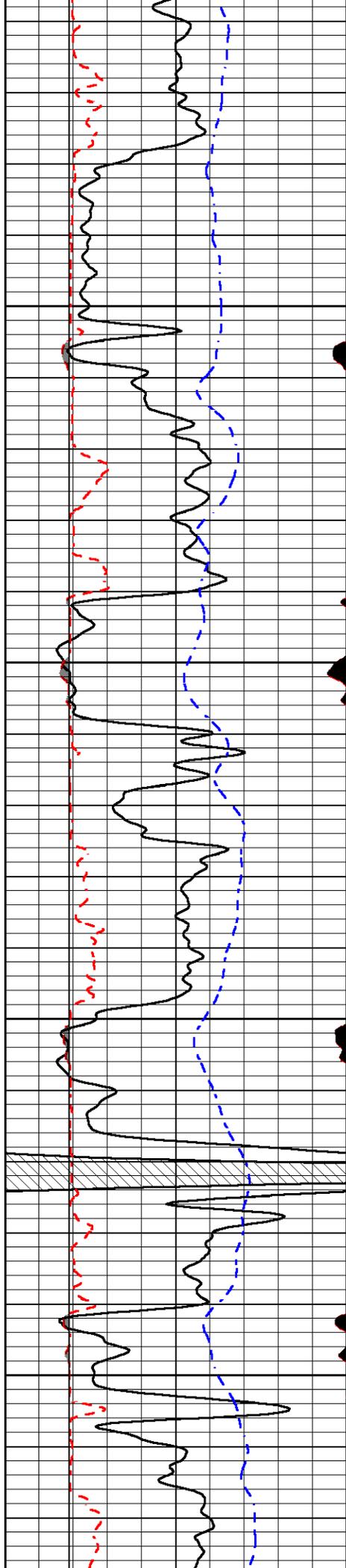
4150

4200

4250

4300



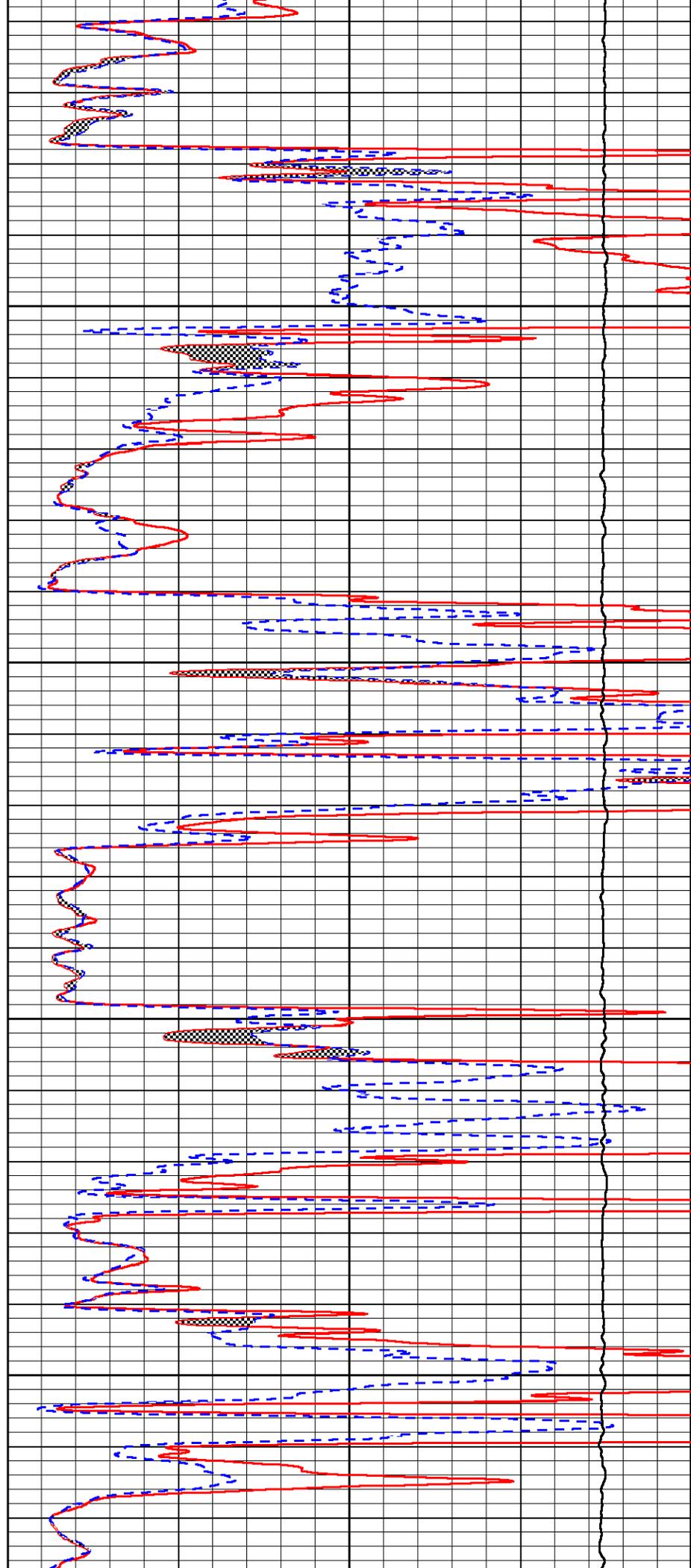


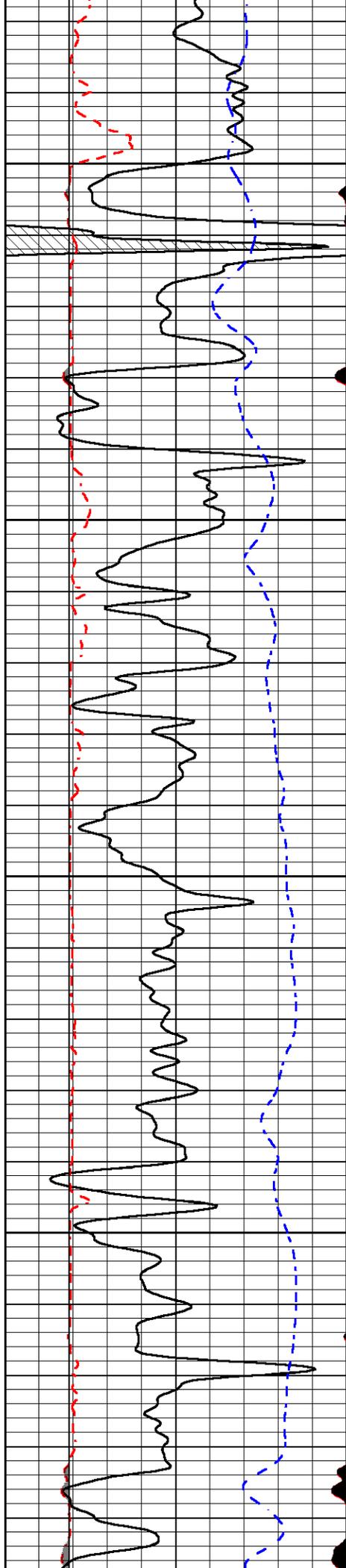
4350

4400

4450

4500



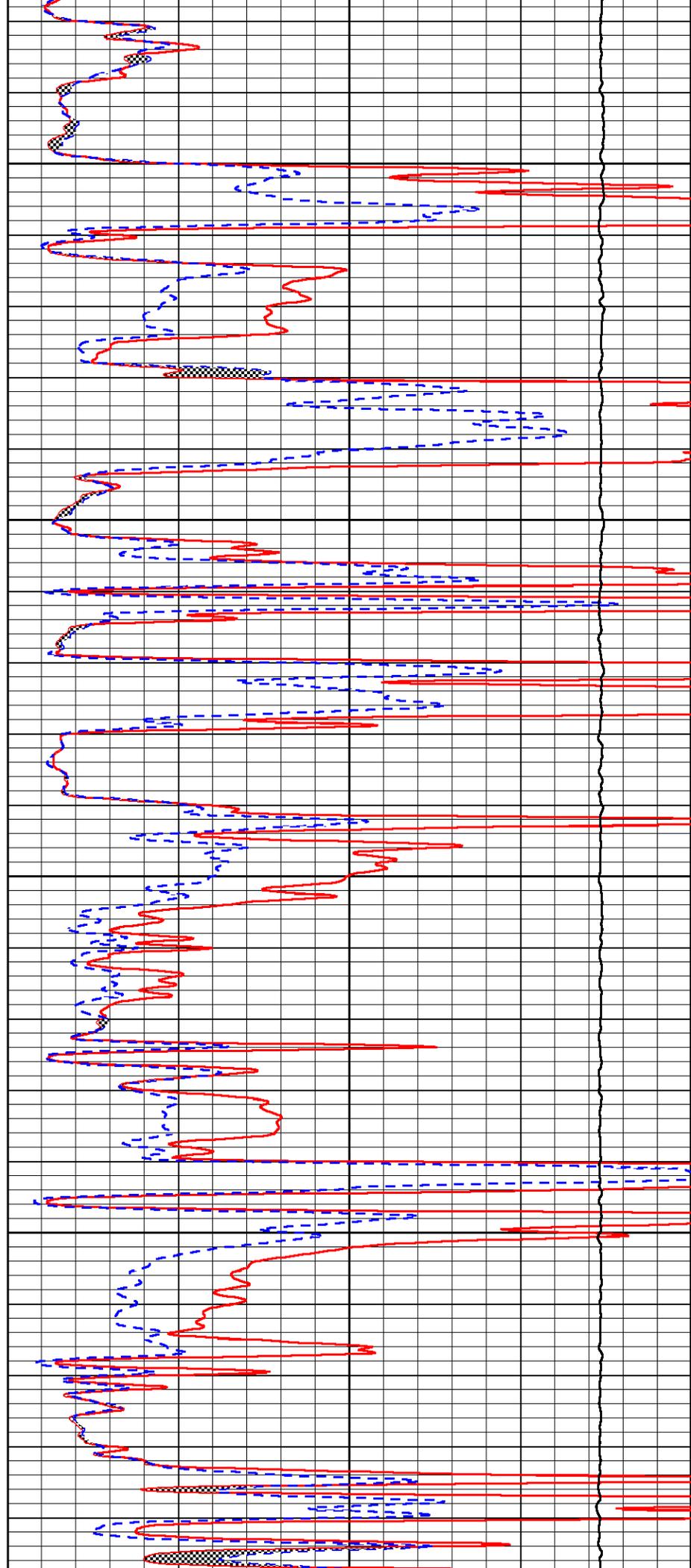


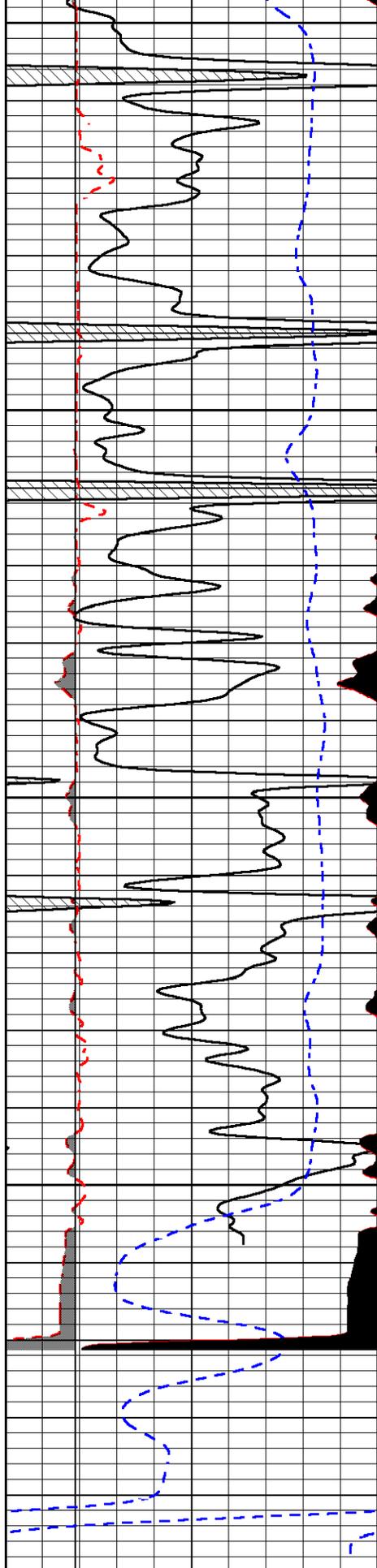
4550

4600

4650

4700





4750

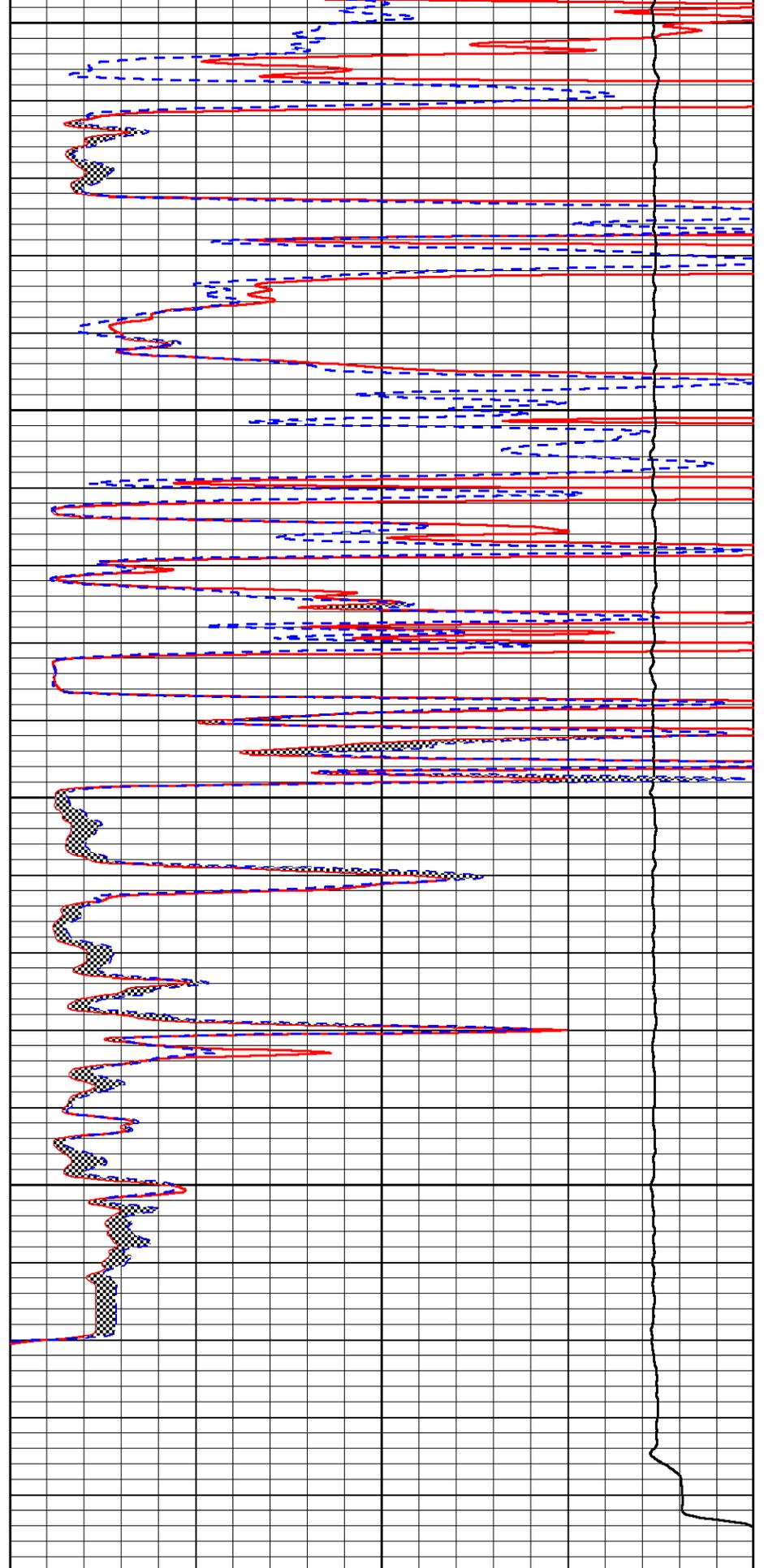
4800

4850

4900

4950

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
200	SP (mV)	0



0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0

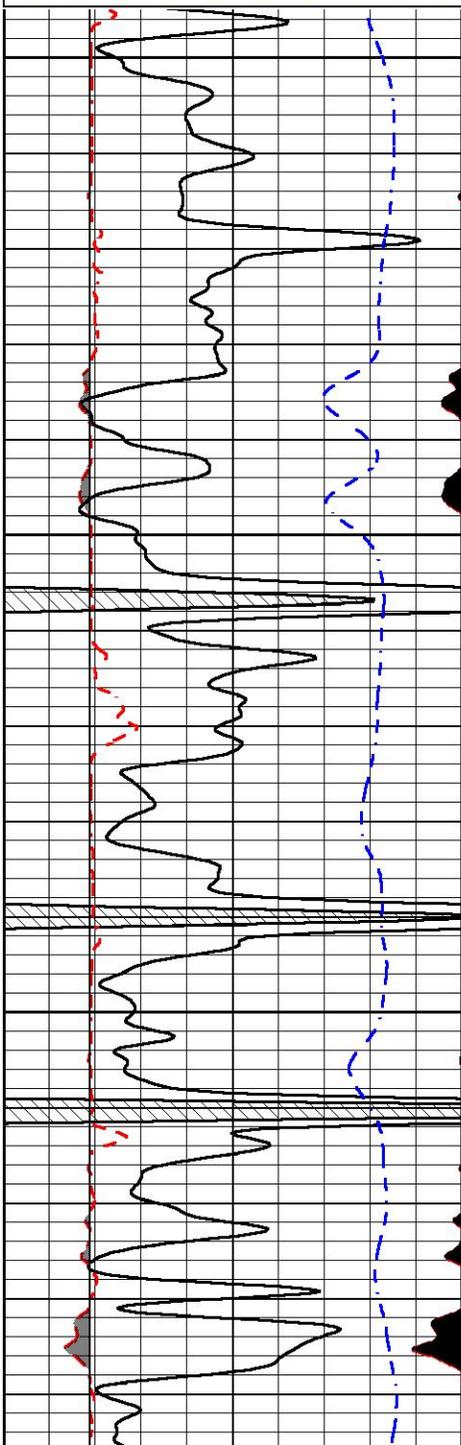


REPEAT SECTION

Database File murfin_banister_a_2_22.db
 Dataset Pathname stack/pass2.2
 Presentation Format micro
 Dataset Creation Sun May 20 12:29:55 2018
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

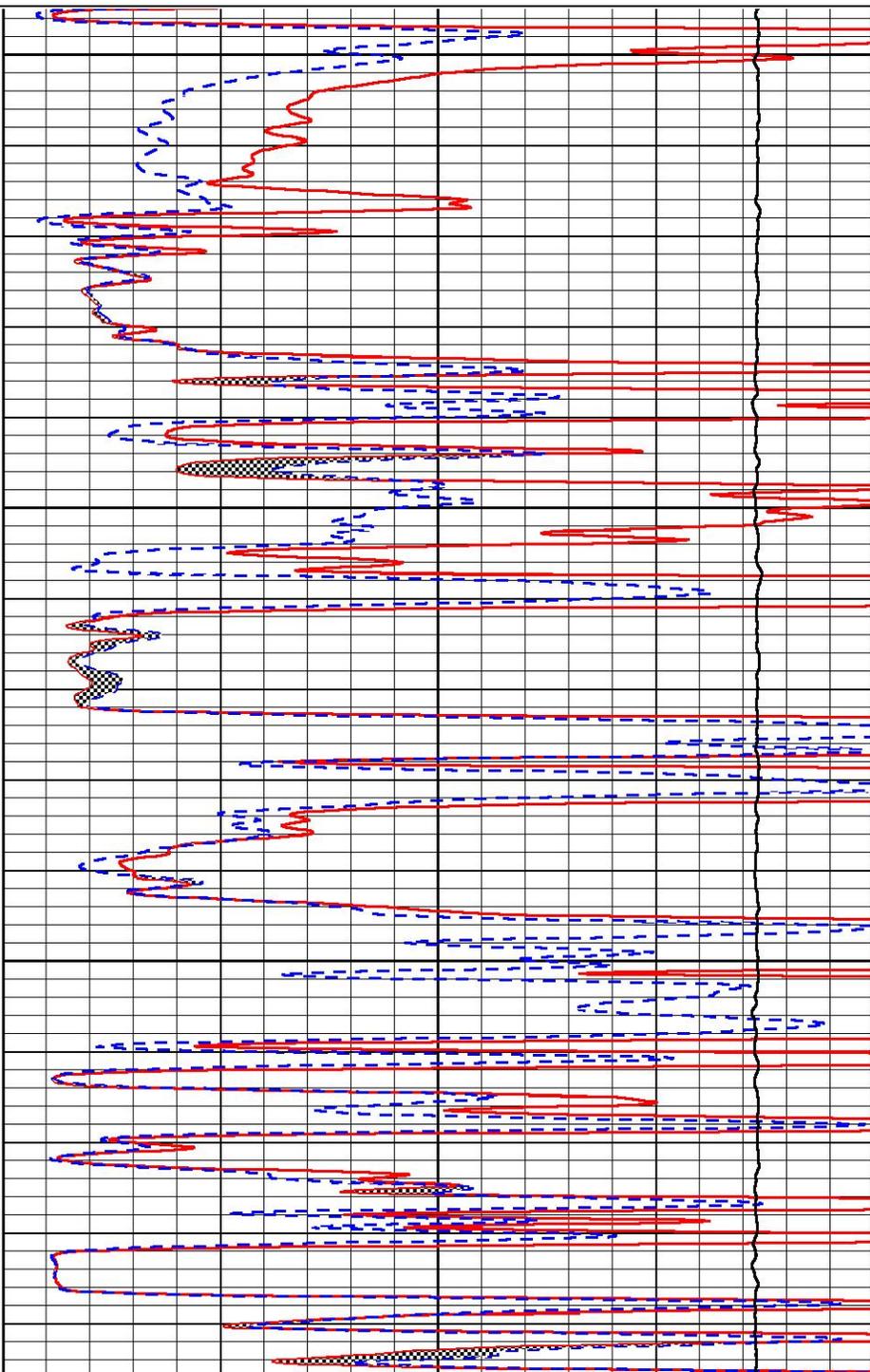
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0

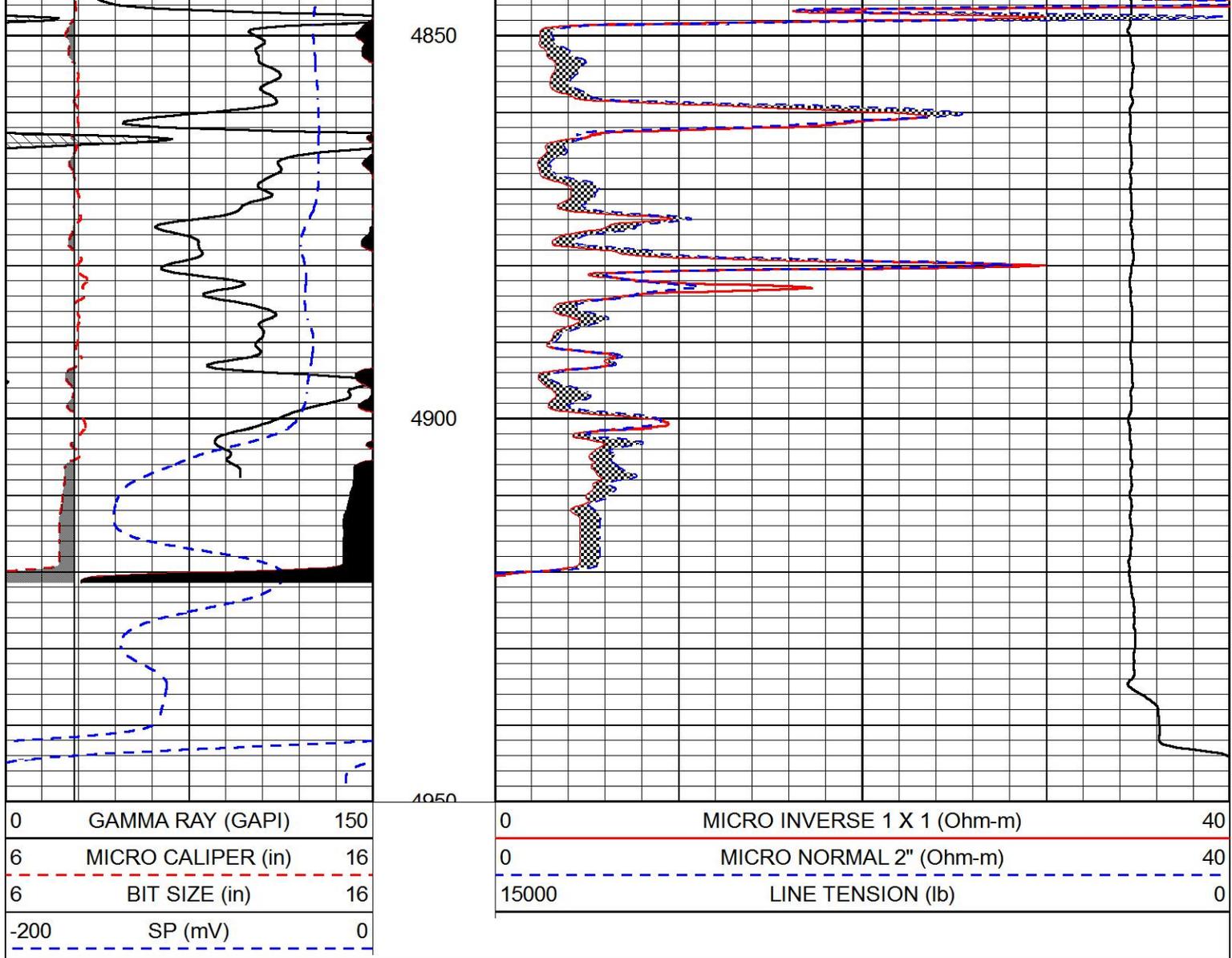


4700

4750

4800





Calibration Report

Database File murfin_banister_a_2_22.db
 Dataset Pathname melson/pass2.15
 Dataset Creation Sun May 20 13:08:55 2018

Microlog Calibration Report

Serial-Model: Armadillo-1-Armadillo
 Performed: Fri Nov 18 11:19:49 2016

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Normal	0.0122	1.0361	V	0.0000	10.0000	Ohm-m	41.0000	-2.0000
Inverse	-0.0037	0.9549	V	0.0000	10.0000	Ohm-m	15.0000	-0.4000
Caliper	1.1139	8.3644	V	5.0000	19.0000	in	1.9309	3.9000



Company MURFIN DRILLING CO., INC.
 Well BANISTER A #2-22
 Field WILDCAT
 County CHEYENNE

Pioneer Energy Services

State

KANSAS