



MICRORESISTIVITY LOG

PIONEER
Pioneer Energy Services

Company BRITO OIL COMPANY, INC.

Well WERTH #1-35

Field WILDCAT

County GOVE State KANSAS

Location: API #: 15-063-22326-00-00

SEC 35 TWP 12S RGE 26W

Permanent Datum GROUND LEVEL Elevation 2579'

Log Measured From KELLY BUSHING

Drilling Measured From KELLY BUSHING

Other Services

CNL/CDL
DIL/BHCS

Elevation
K.B. 2589'
D.F. N/A
G.L. 2579'

Date 3/9/2018

Run Number ONE

Depth Driller 4570'

Depth Logger 4568'

Bottom Logged Interval 4567'

Top Log Interval 3600'

Casing Driller 8.625" @ 224'

Casing Logger 222'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 3400

Density / Viscosity 9.3 54

pH / Fluid Loss 11.0 6.4

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.60 @ 50

Rmt @ Meas. Temp 0.45 @ 50

Rmc @ Meas. Temp 0.81 @ 50

Source of Rmt / Rmc CHARTS

Rm @ BHT 0.25 @ 122

Operating Rig Time 5 HOURS

Max Rec. Temp. F 122

Equipment Number 91

Location HAYS

Recorded By D. SCHMIDT

Witnessed By ROBERT HENDRIX

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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.

COLLYER,
SOUTH TO K RD, 1 WEST, 1 SOUTH, 2 WEST,
SOUTHWEST INTO

Log Measured From: KELLY BUSHING 10 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

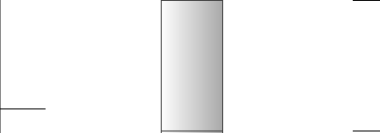
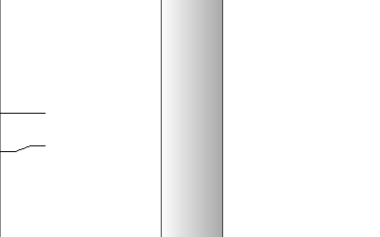
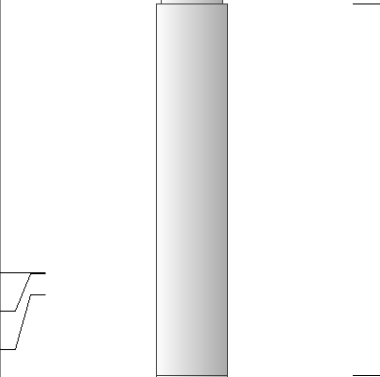
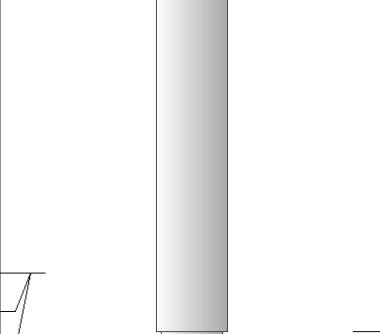
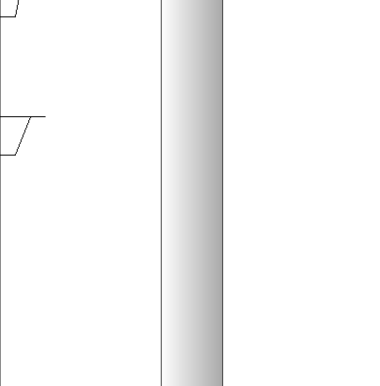
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: ROBERT HENDRIX
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	20	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	50	0	5.5	0	4568	122	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 CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (227-771)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					

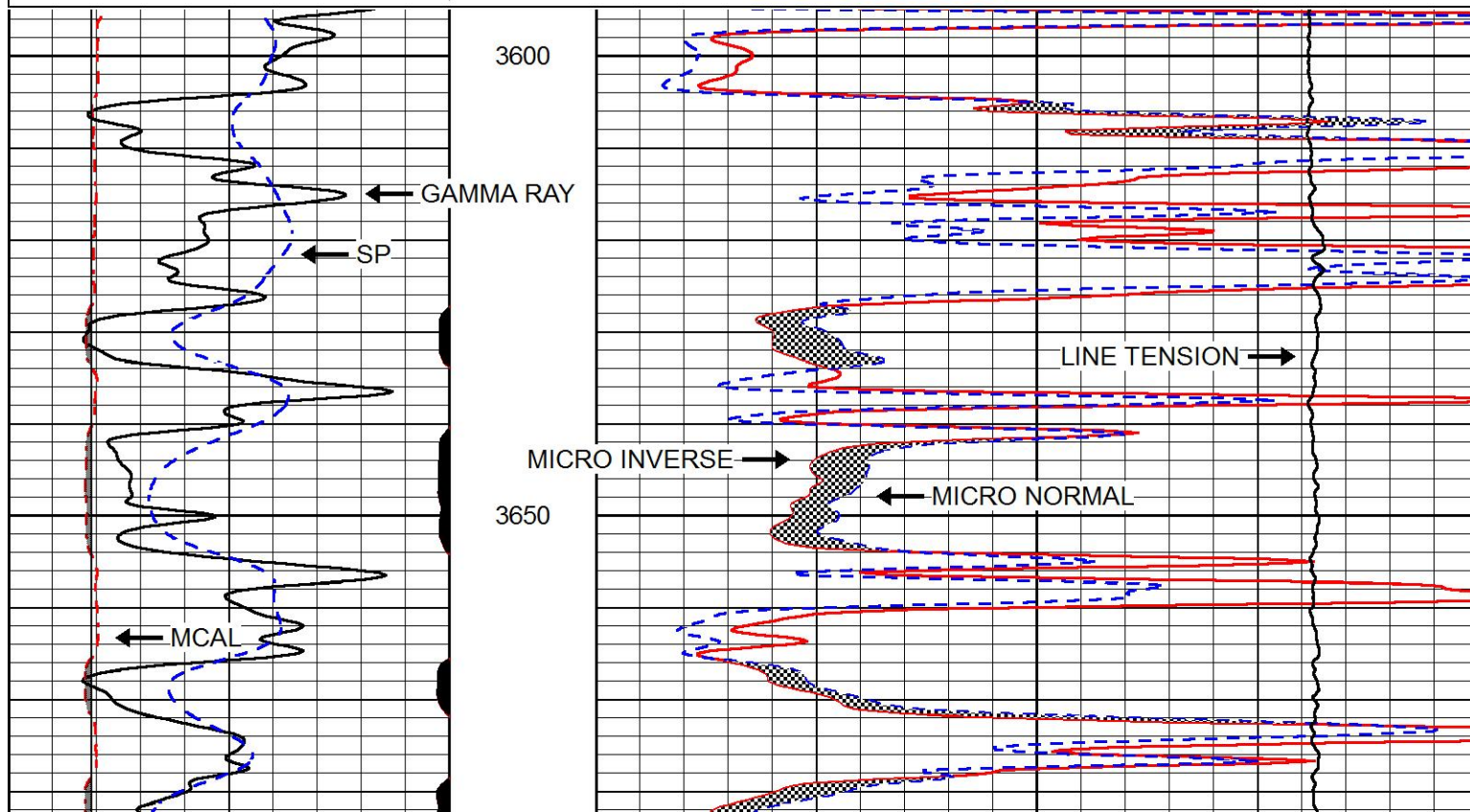
			DIL-PSI HIGH TEMP (967 (HT))	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: brito_werth 1-35.db: field/well/STKML/pass4.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

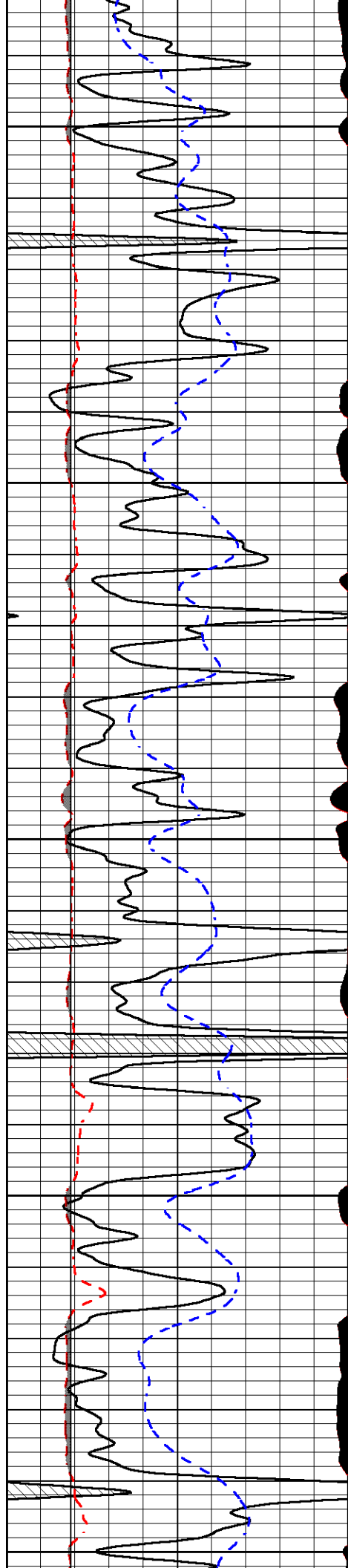


MAIN PASS

Database File	brito_werth 1-35.db
Dataset Pathname	STKML/pass4.1
Presentation Format	micro
Dataset Creation	Fri Mar 09 23:38:32 2018
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0	Micro Inverese 1 X 1 (Ohm-m)	40
6	MCAL (in)	16	0	Micro Normal 2" (Ohm-m)	40
2.875	mcals (in)	7.875	10000	Line Weight (lb)	0
6	Bit Size (in)	16			
-200	SP (mV)	0			





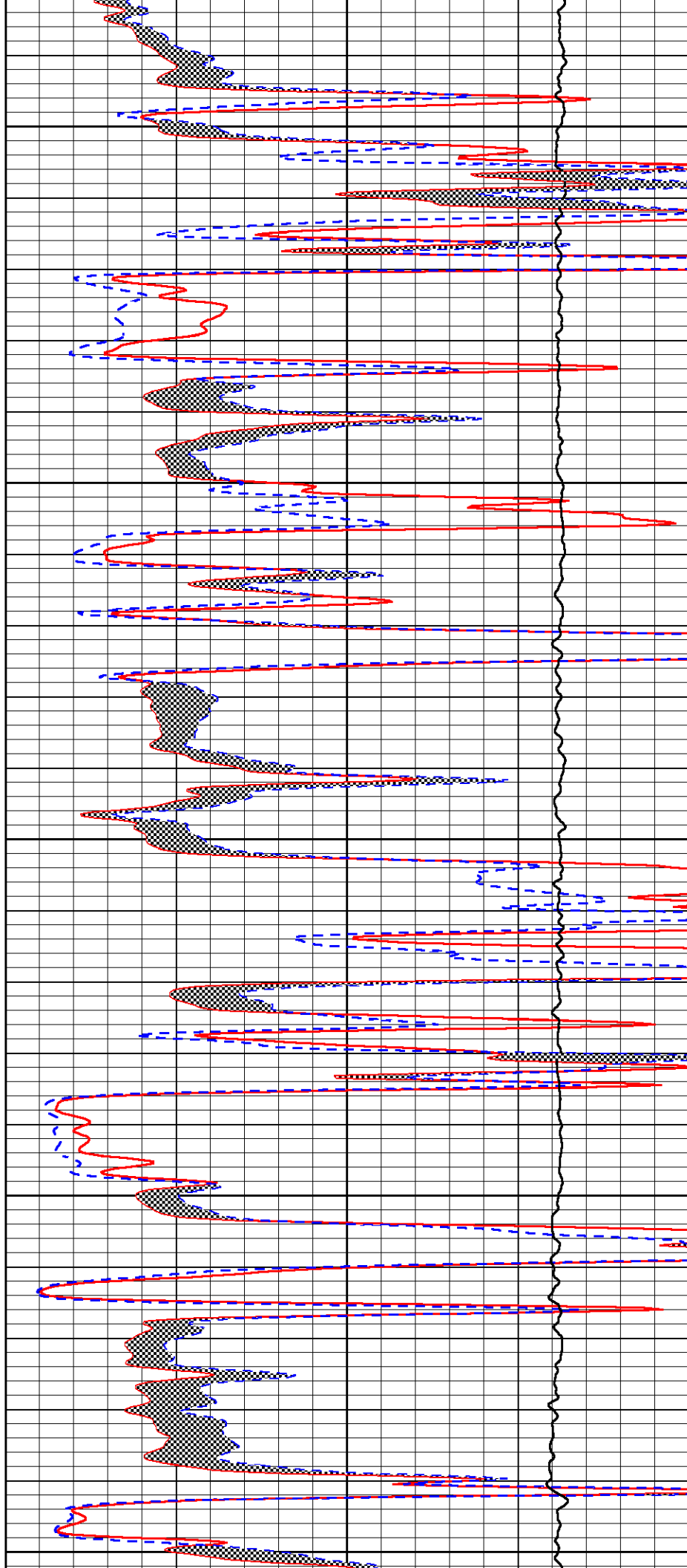
3700

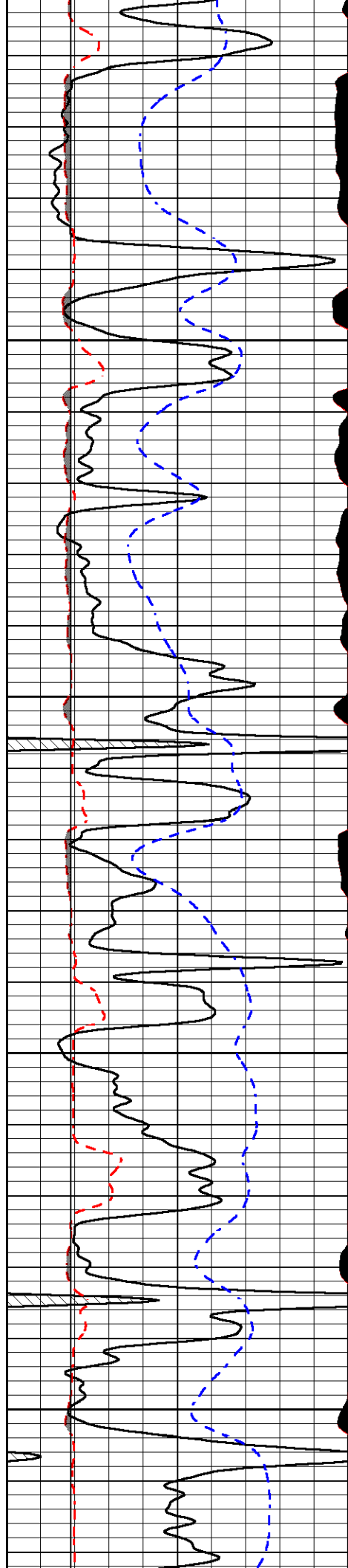
3750

3800

3850

3900



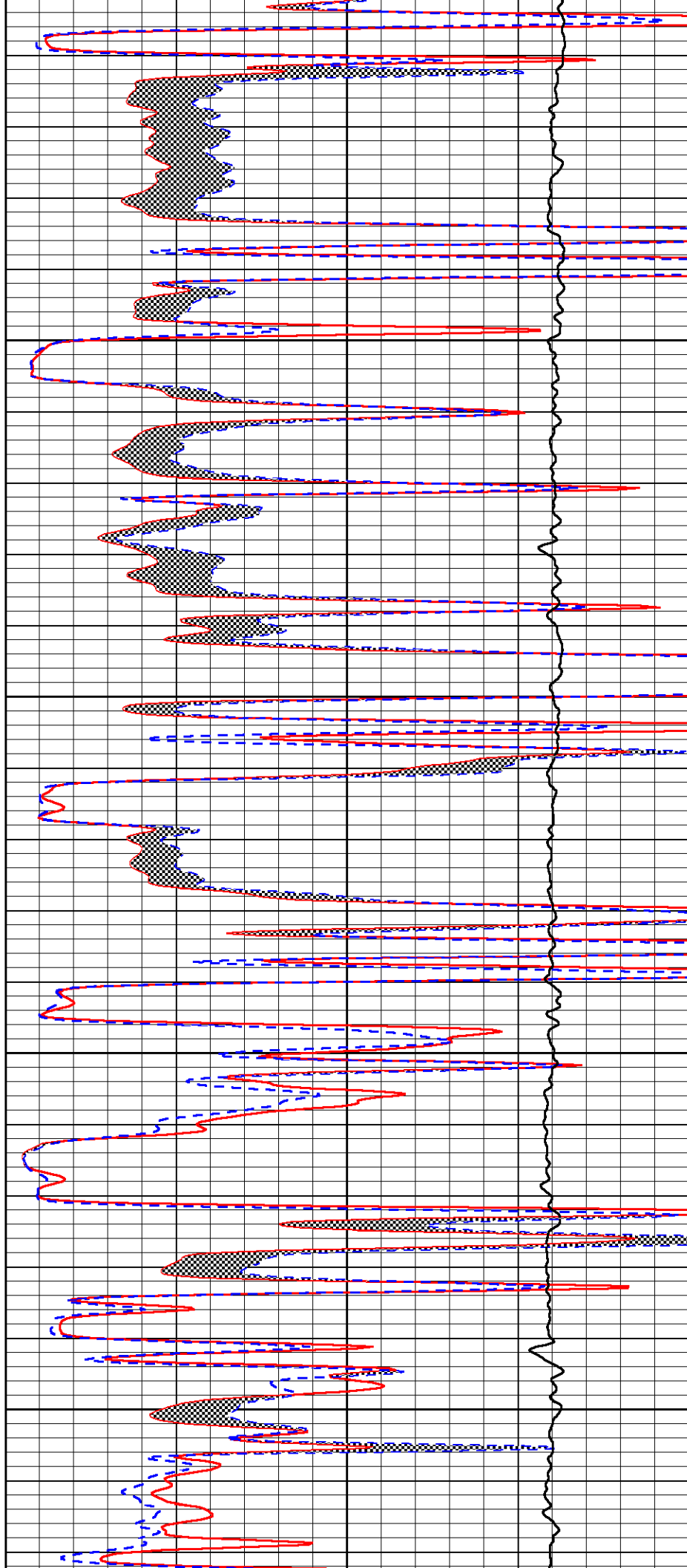


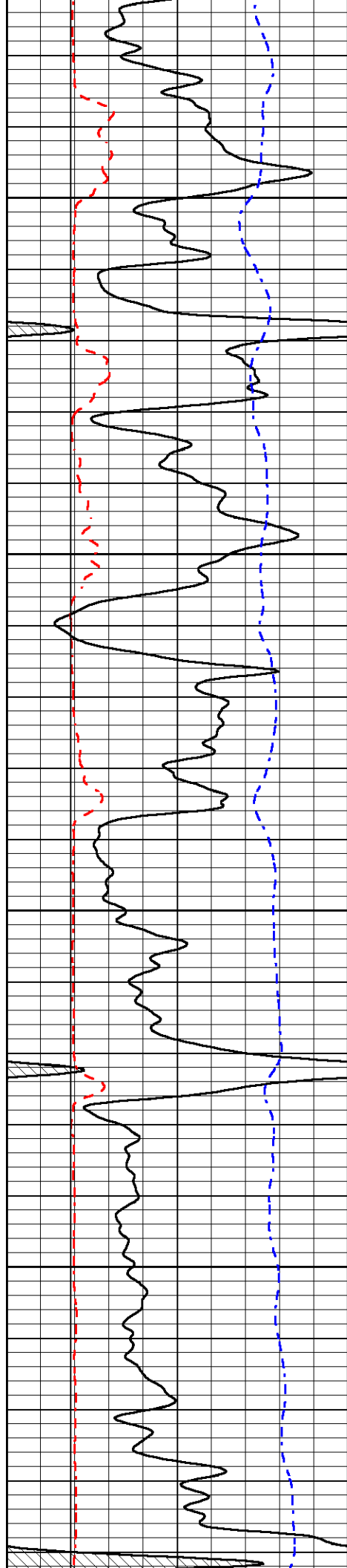
3950

4000

4050

4100



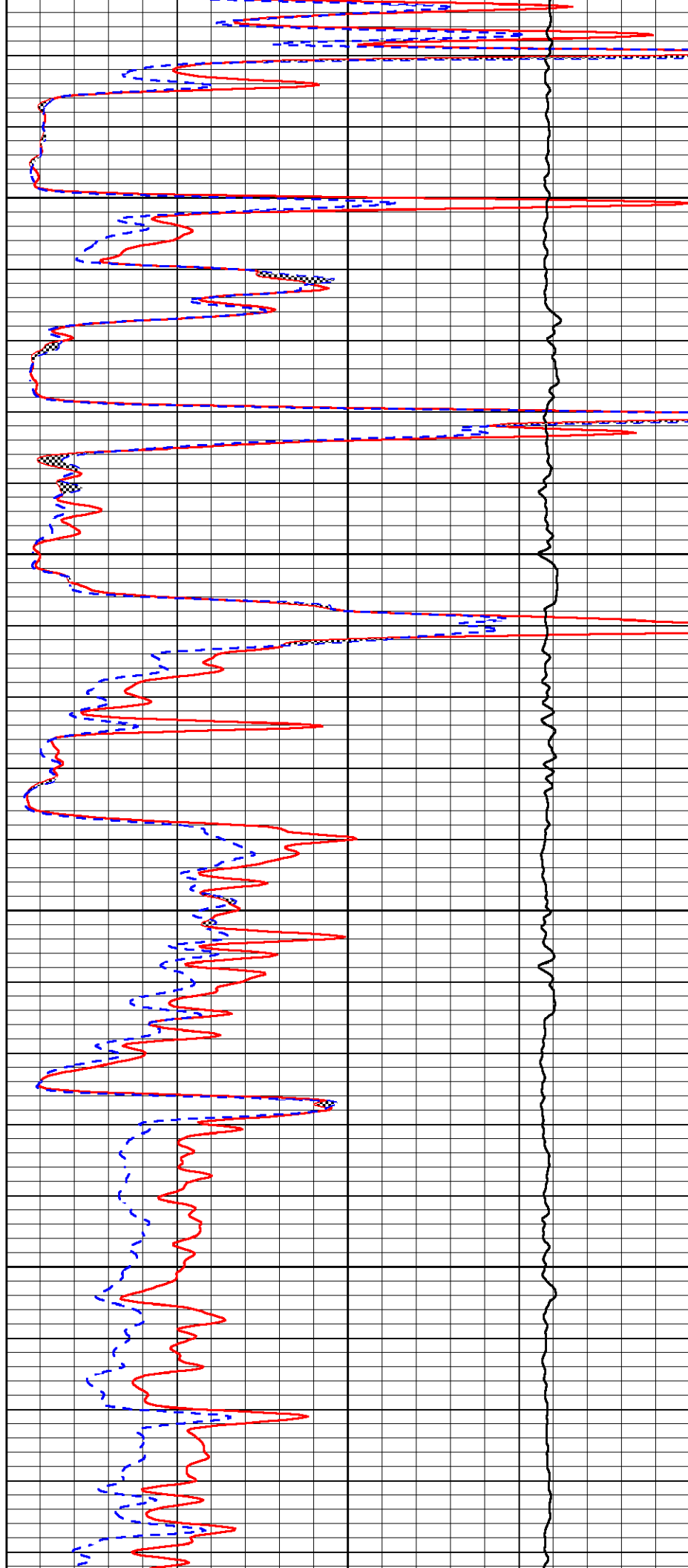


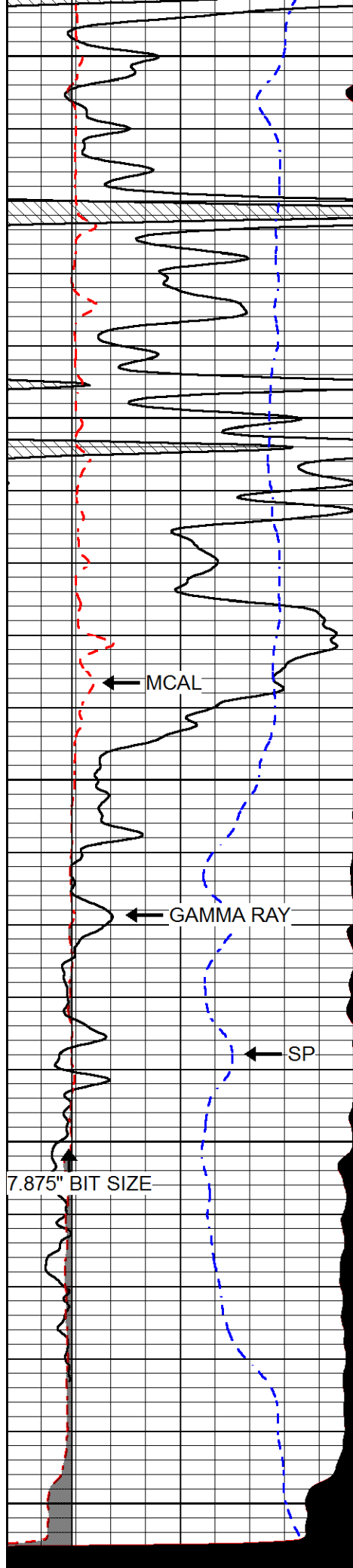
4150

4200

4250

4300





4350

4400

4450

4500

4550

MICRO INVERSE

MICRO NORMAL

LINE TENSION

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

0	Micro Inverese 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

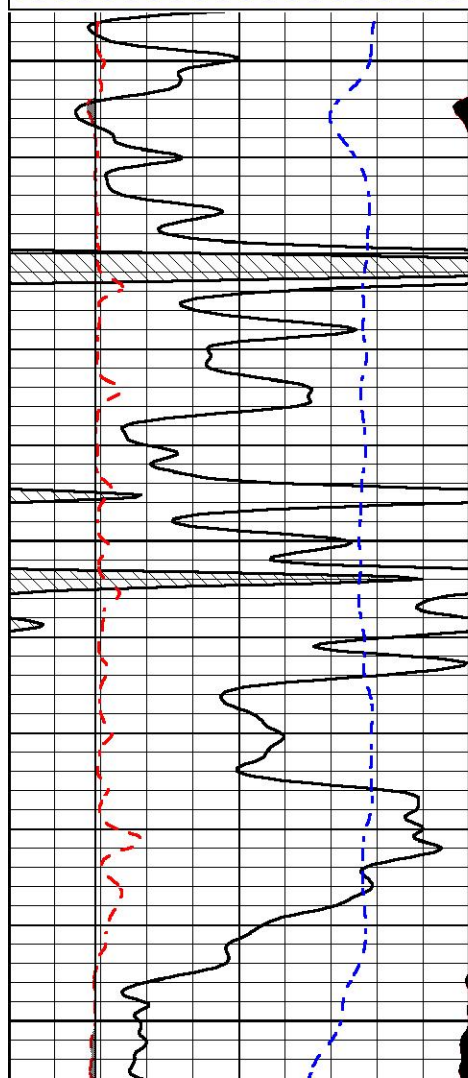


REPEAT SECTION

Database File brito_werth 1-35.db
Dataset Pathname STKML/pass3.1
Presentation Format micro
Dataset Creation Fri Mar 09 23:40:09 2018
Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

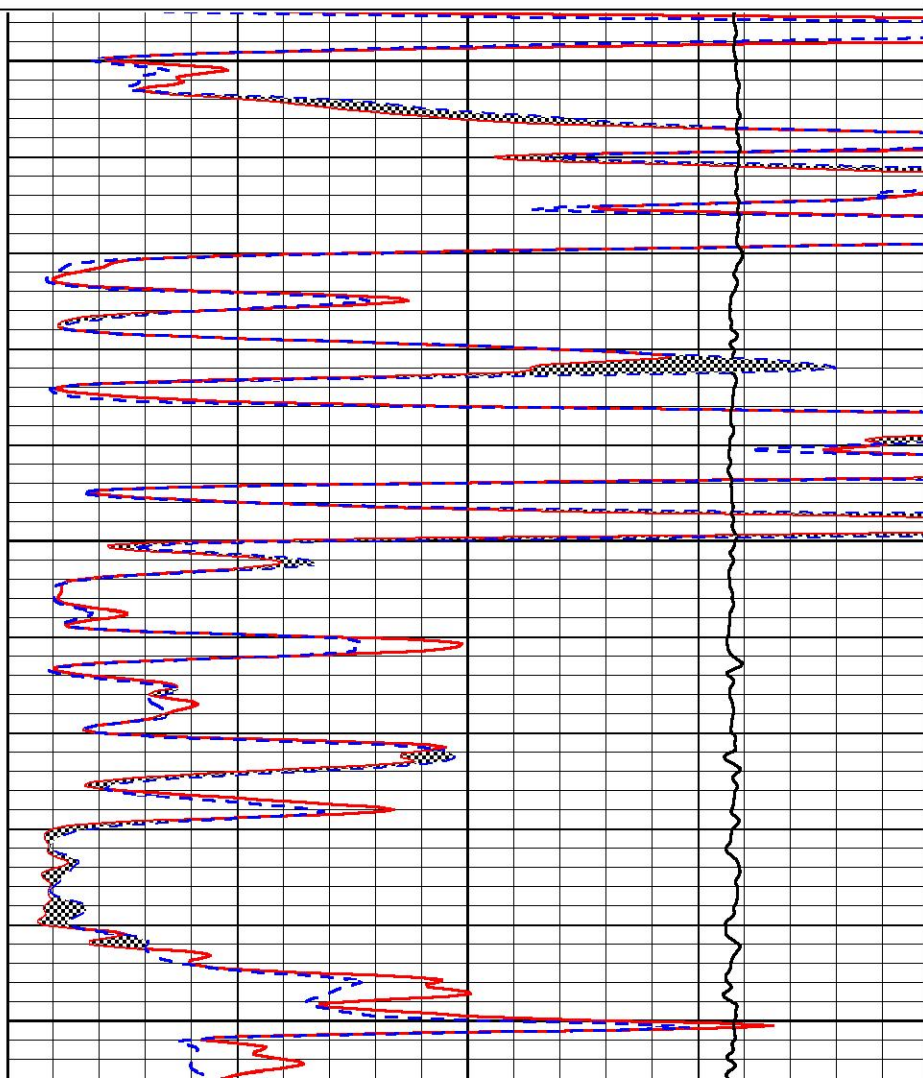
0	Micro Inverese 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

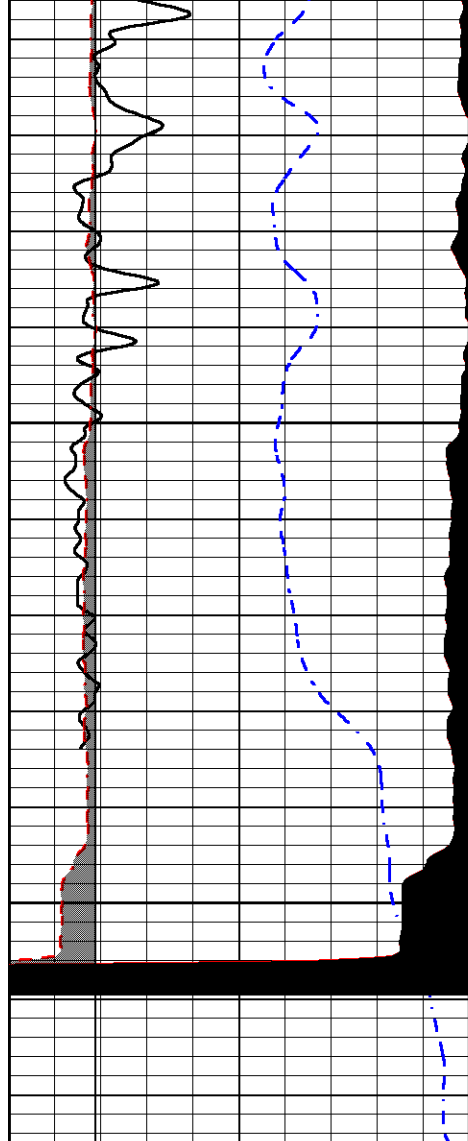


4350

4400

4450

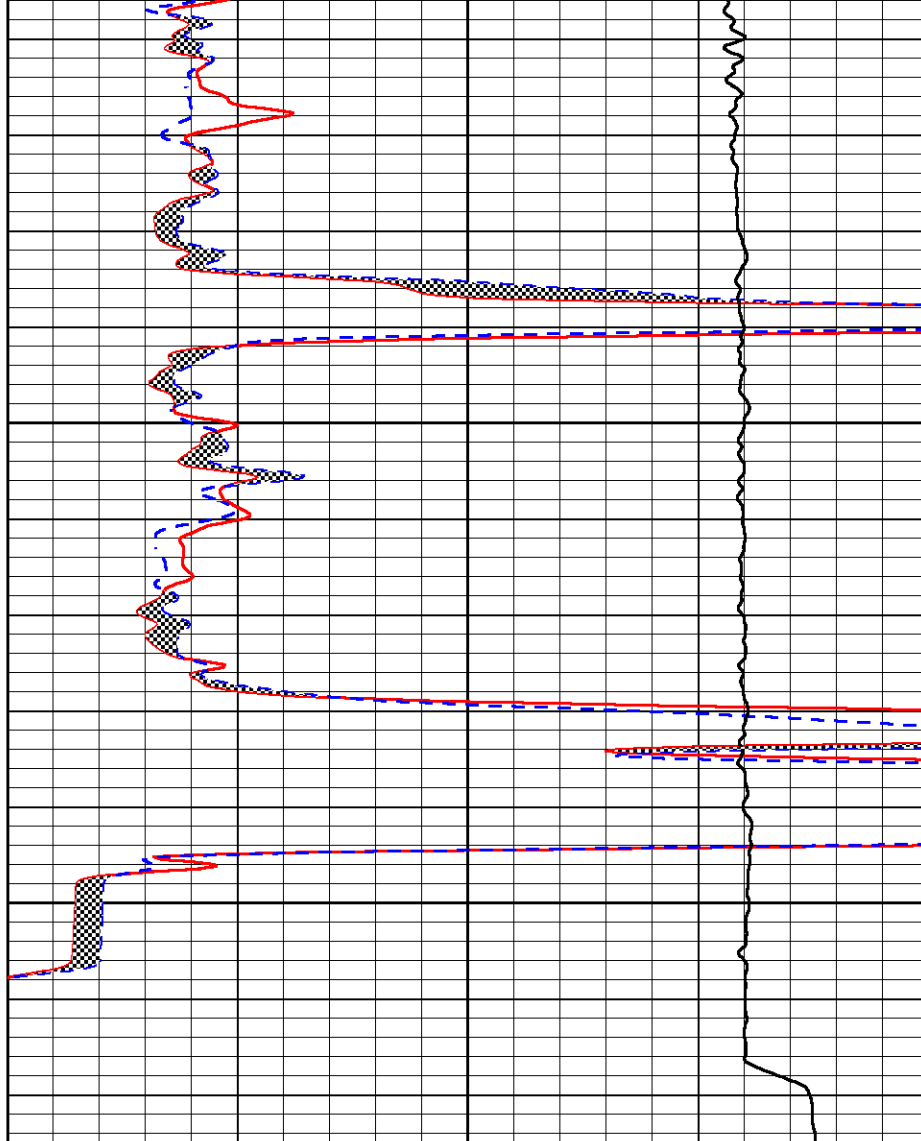




4500

4550

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
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
10000	Line Weight (lb)	0

Calibration Report

Database File brito_werth 1-35.db
Dataset Pathname STKML/pass4.1
Dataset Creation Fri Mar 09 23:38:32 2018

Dual Induction Calibration Report

Serial-Model: 967 (HT)-PSI HIGH TEMP
Calibration Performed: Fri Mar 09 21:20:21 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.565	-23.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.390	-40.000

Microlog Calibration Report

Serial-Model:
Performed:

PSI-01-PSIML
Fri Mar 09 21:13:49 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	23500.0000	-0.6000
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	70.0000	-65.8500

Compensated Density Calibration Report

Serial-Model: 227-771-M&W
Source / Verifier: 16955B / 2ci
Master Calibration Performed: Fri Mar 09 21:14:39 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4919.18	6345.34	cps
Aluminum	2.665	g/cc	911.94	4081.94	cps
Spine Angle = 75.33			Density/Spine Ratio = 0.522		
	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: FRI MAR 9 10:30:30 2018

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: Mon Jan 15 11:20:44 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps



Company BRITO OIL COMPANY, INC.
Well WERTH #1-35
Field WILDCAT
County GOVE

Pioneer Energy Services

State

KANSAS