



**PIONEER**  
Pioneer Energy Services

## MICRORESISTIVITY LOG

Company BRITO OIL COMPANY, INC.  
Well WYLIE NO. 1-31  
Field EAGLE RIDGE  
County GOVE  
State KANSAS

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County GOVE State KANSAS

Location: API #: 15-063-22353-00-00

2310' FSL & 2220' FEL

SEC 31 TWP 12S RGE 26W

Permanent Datum GROUND LEVEL Elevation 2630'  
Log Measured From KELLY BUSHING  
Drilling Measured From KELLY BUSHING

Elevation  
K.B. 2640'  
D.F. N/A  
G.L. 2630'

Date 4/15/2019

Run Number ONE

Depth Driller 4550'

Depth Logger 4547'

Bottom Logged Interval 4546'

Top Log Interval 3600'

Casing Driller 8.625" @ 213'

Casing Logger 212'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 2700

Density / Viscosity 9.2 65

pH / Fluid Loss 10.5 6.4

Source of Sample FLOWLINE

Rm @ Meas. Temp .85 @ 76

Rmt @ Meas. Temp .64 @ 76

Rmc @ Meas. Temp 1.15 @ 76

Source of Rmt / Rmc CHARTS

Rm @ BHT .53 @ 122

Operating Rig Time 2 HOURS

Max Rec. Temp. F 122 DEGF

Equipment Number P-108

Location HAYS

Recorded By J. HENRICKSON

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.

QUINTER KANSAS

6 SOUTH TO T ROAD, 1/2 WEST, SOUTH 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: J. HENRICKSON

Operator:

Operator:

Operator:

This Log Record Was Witnessed By

Primary Witness: ROBERT HENDRIX

Secondary Witness:

Secondary Witness:

Secondary Witness:

Top - Bottom

|           |             |             |             |          |            |       |              |
|-----------|-------------|-------------|-------------|----------|------------|-------|--------------|
| A         | BOREID      | BOTTEMP     | CASEOD      | CASETHCK | FLUIDDEN   | M     | MATRXDEN     |
| 1         | in<br>7.875 | degF<br>122 | in<br>5.5   | in<br>0  | g/cc<br>1  | 2     | g/cc<br>2.71 |
| NPORSEL   | PERFS       | SNDERR      | SNDERRM     | SPSHIFT  | SRFTEMP    | SZCOR | TDEPTH       |
| Limestone | 0           | mmho/m<br>0 | mmho/m<br>0 | mV<br>85 | degF<br>52 | Off   | ft<br>4547   |

| 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    | 28.43       |  |   | CDL-M&W (144-84)         | 8.50        | 4.00      | 250.00      |
|        |             |                                                                                     |                                                                                     |                          |             |           |             |
|        |             |                                                                                     |                                                                                     |                          |             |           |             |
| DCAL   | 28.42       |  |  | ML-PSI STKBL ML (PSI-01) | 7.58        | 4.00      | 65.00       |
| SSD    | 27.93       |  |                                                                                     | Stackable Microlog Tools |             |           |             |
| MCAL   | 19.83       |  |  |                          |             |           |             |
|        |             |                                                                                     |                                                                                     |                          |             |           |             |
|        |             |                                                                                     |                                                                                     |                          |             |           |             |
| MI     | 19.83       |  |  |                          |             |           |             |
| MN     | 19.83       |  |                                                                                     |                          |             |           |             |
| RLL3   | 15.80       |  |  |                          |             |           |             |
| RLL3F  | 15.79       |  |                                                                                     |                          |             |           |             |
| CILD   | 8.00        |  |  | DIL-M&W (PSI 988)        | 18.50       | 3.50      | 220.00      |
|        |             |                                                                                     |                                                                                     |                          |             |           |             |

CILM

4.70

SP

0.20

Dataset: brito\_wylie\_1\_31.db: field/well/stackml/pass5.1  
Total length: 43.08 ft  
Total weight: 685.00 lb  
O.D.: 4.00 in

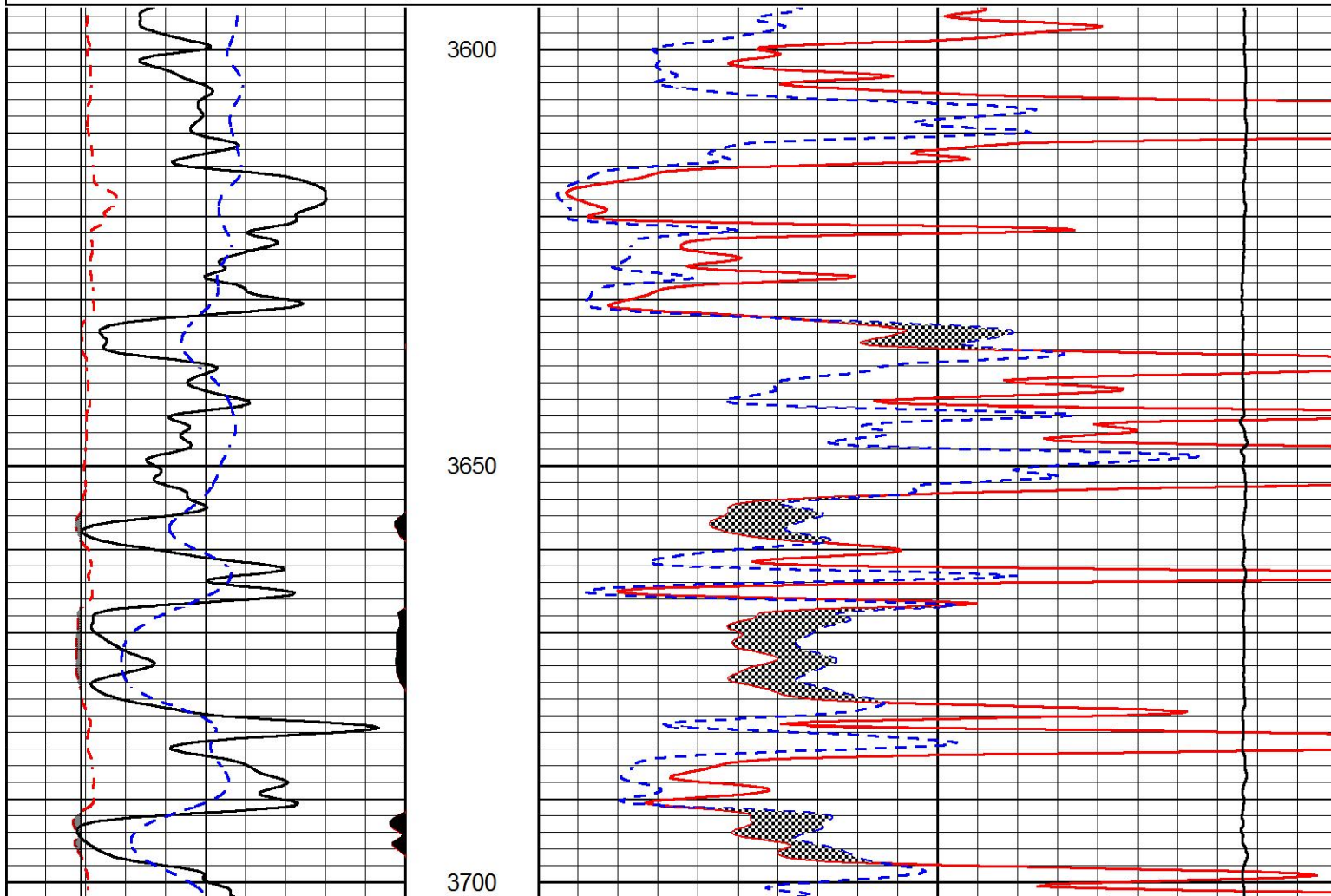


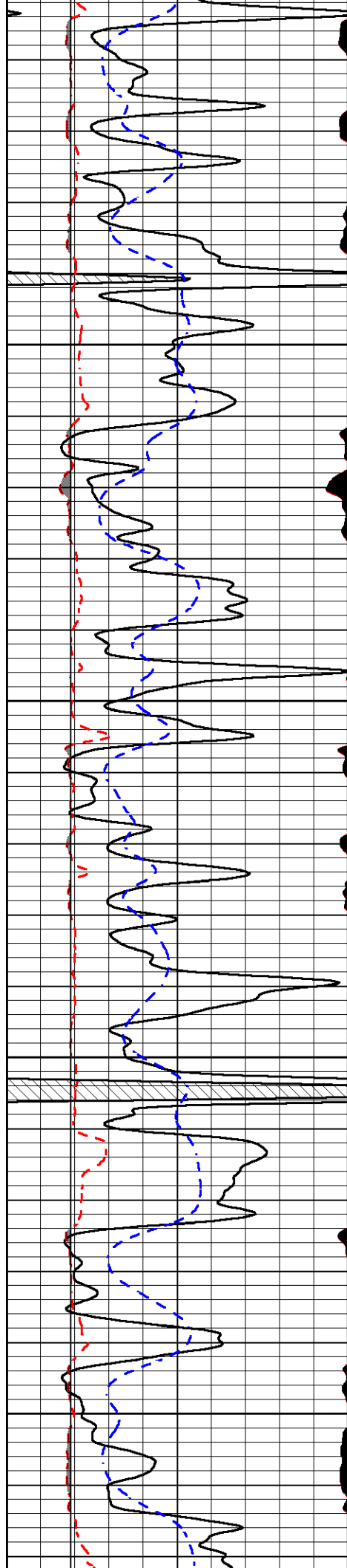
# MAIN PASS

Database File brito\_wylie\_1\_31.db  
Dataset Pathname stackml/pass5.1  
Presentation Format micro  
Dataset Creation Mon Apr 15 14:25:29 2019  
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  |



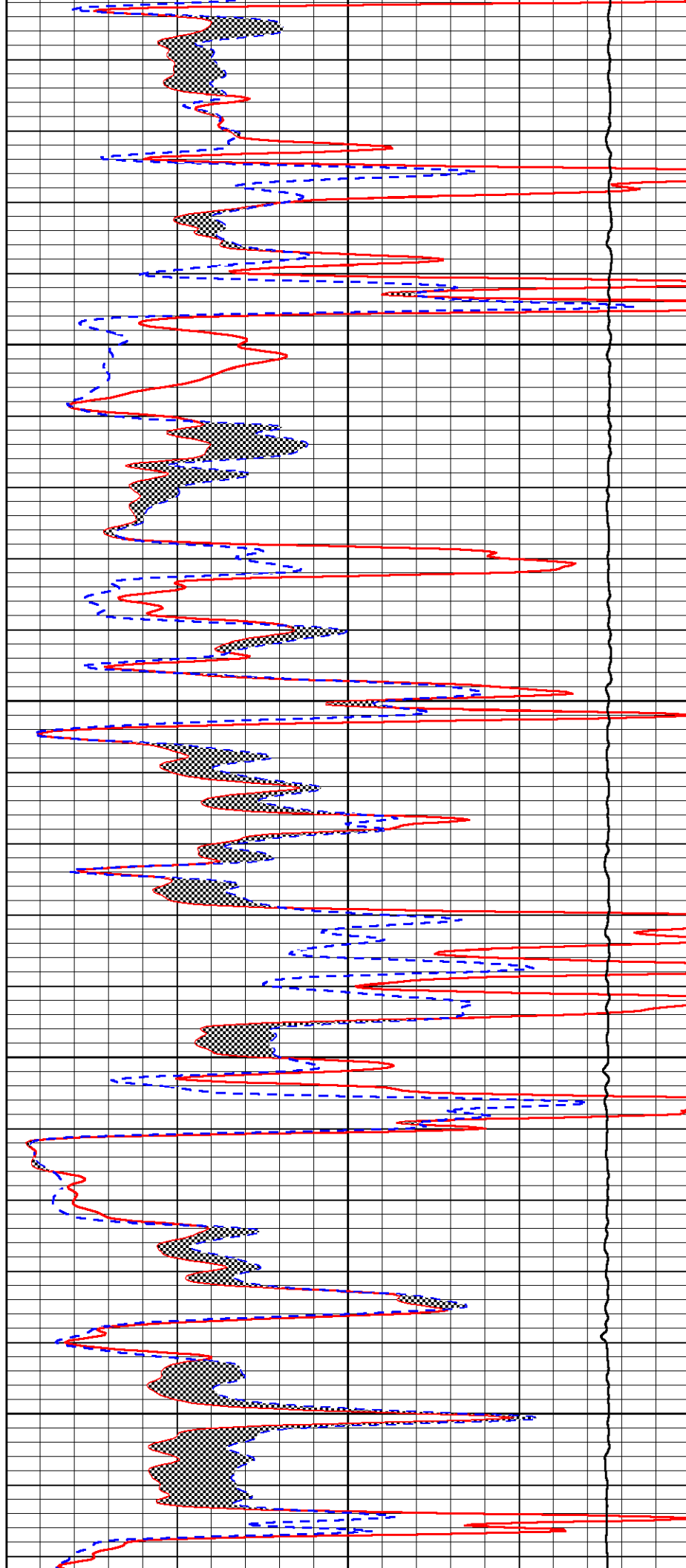


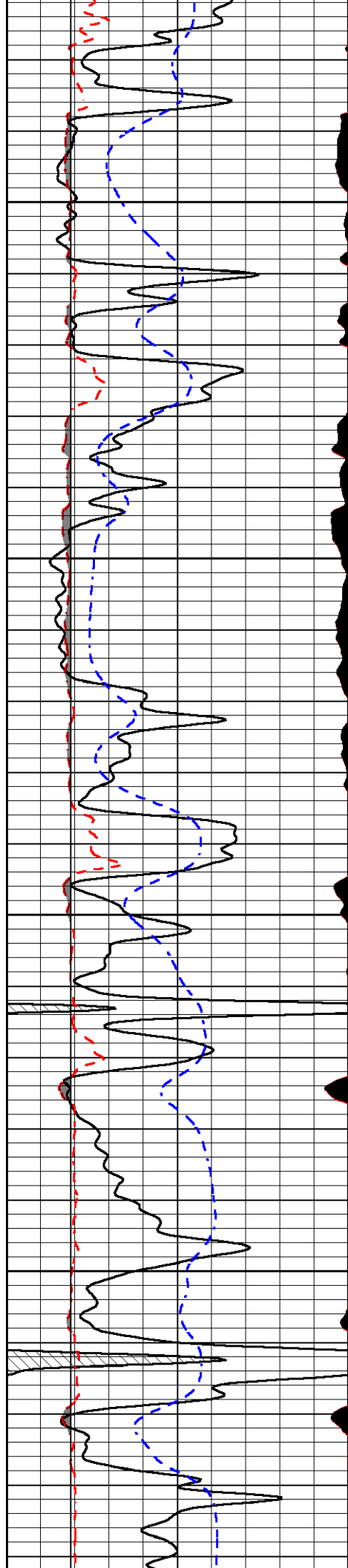
3750

3800

3850

3900



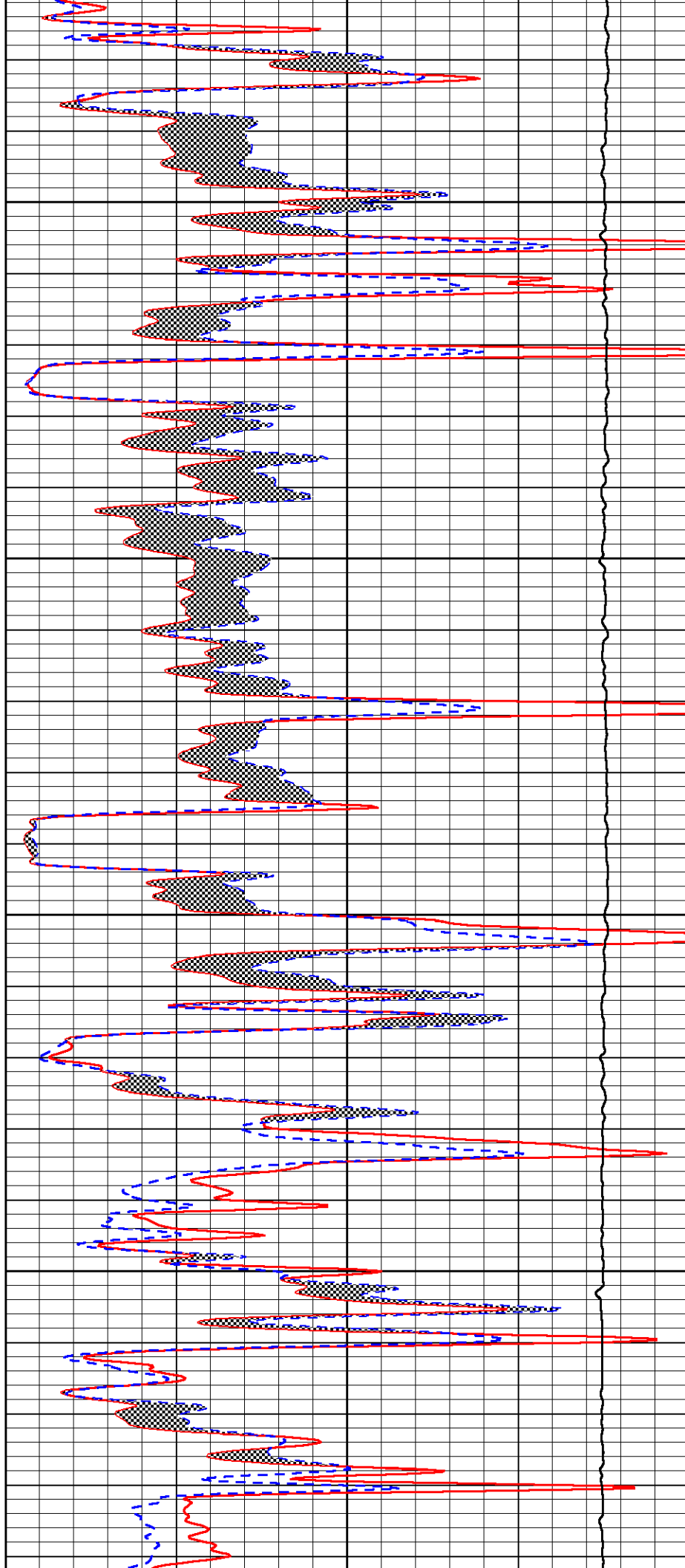


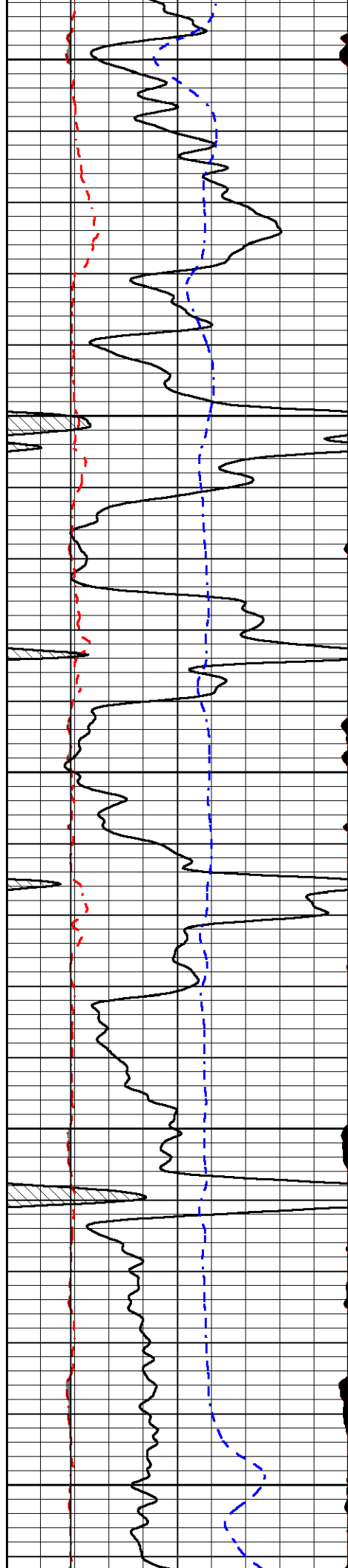
3950

4000

4050

4100





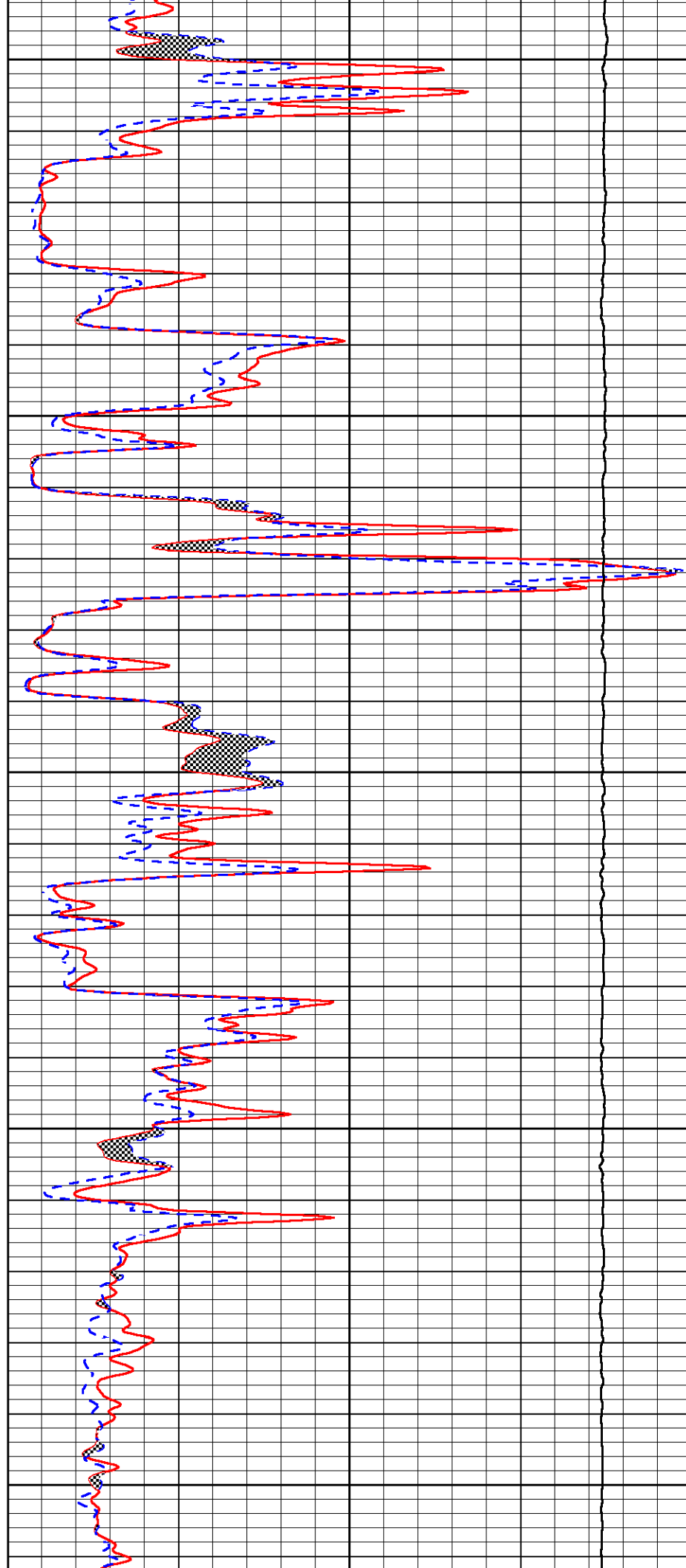
4150

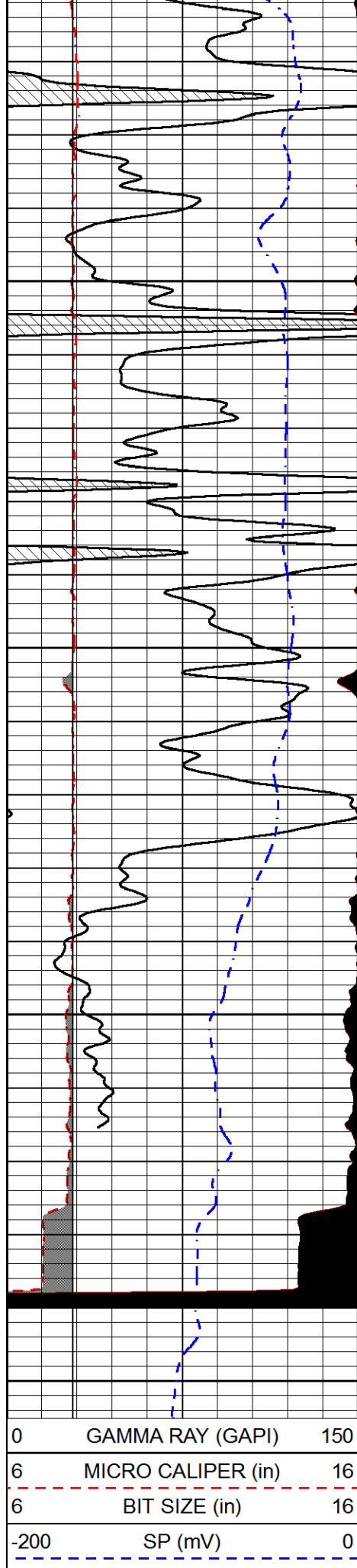
4200

4250

4300

4350



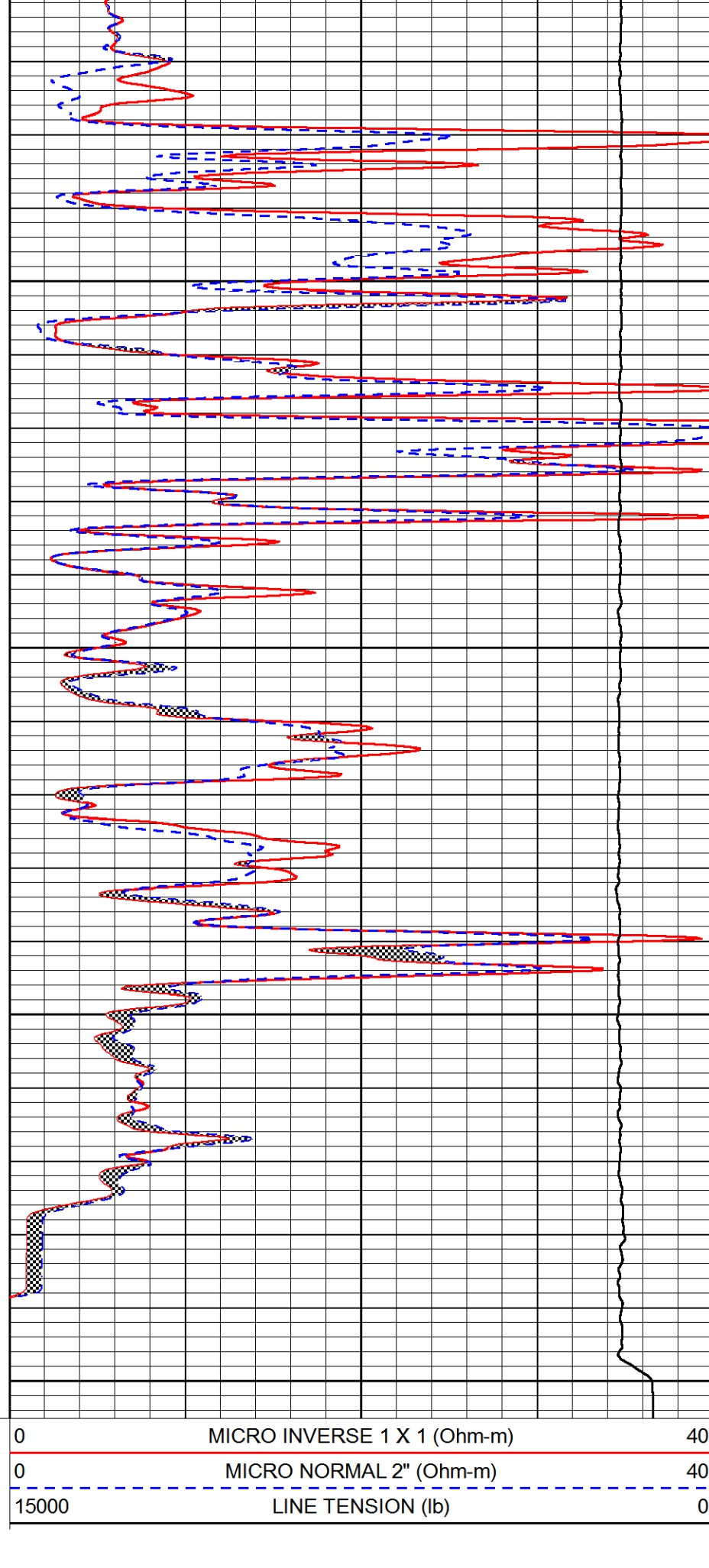


4400

4450

4500

4550



**PIONEER**

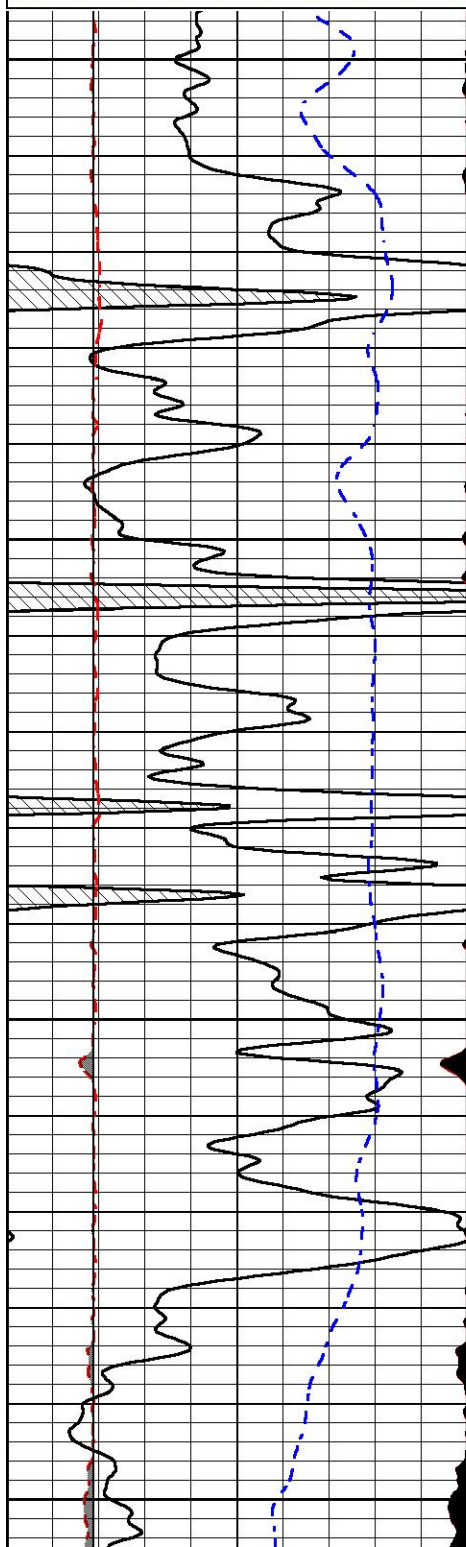
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# REPEAT SECTION

Database File      brito\_wylie\_1\_31.db  
Dataset Pathname    stackml/pass4.1  
Presentation Format   micro  
Dataset Creation     Mon Apr 15 14:01:51 2019  
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  |

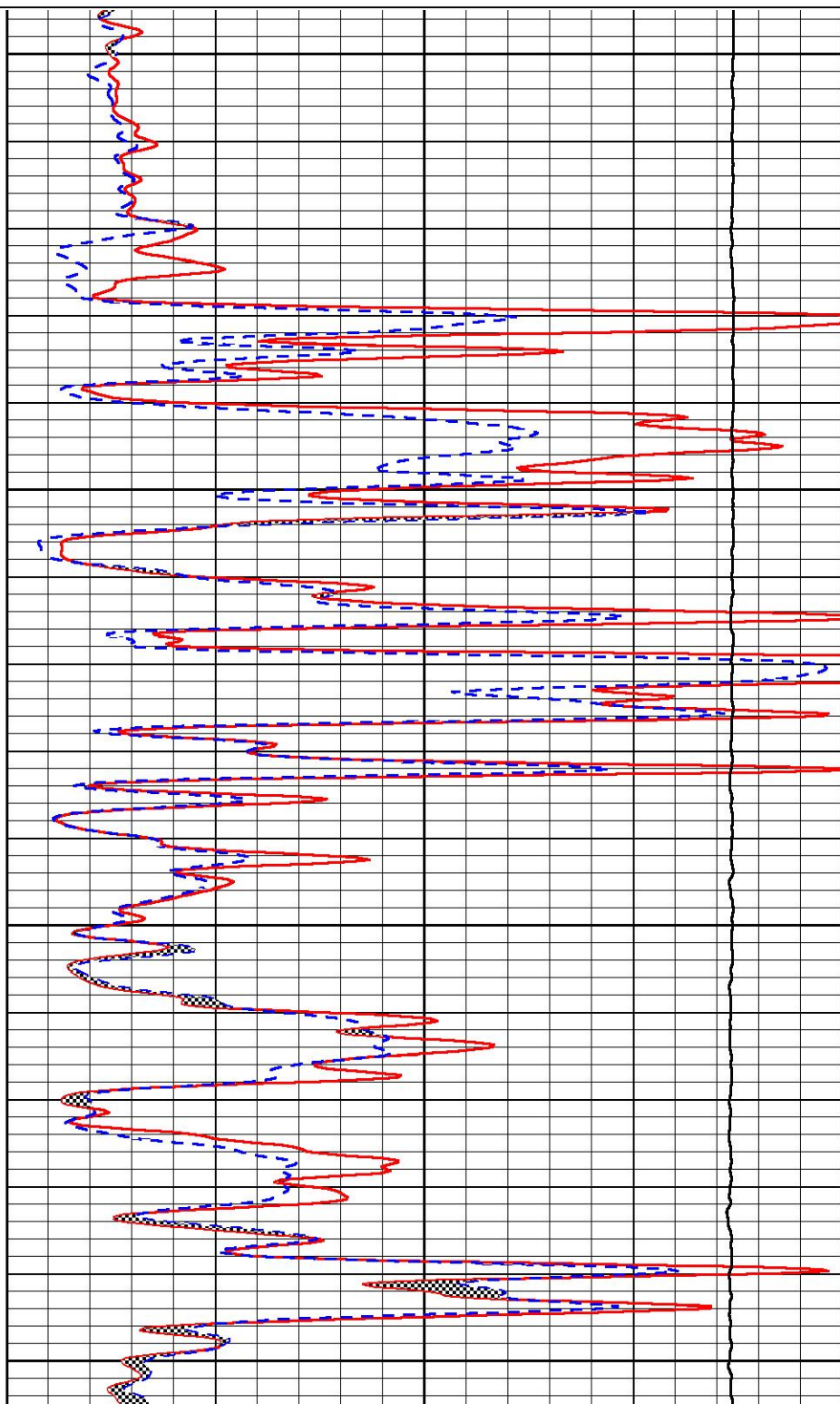


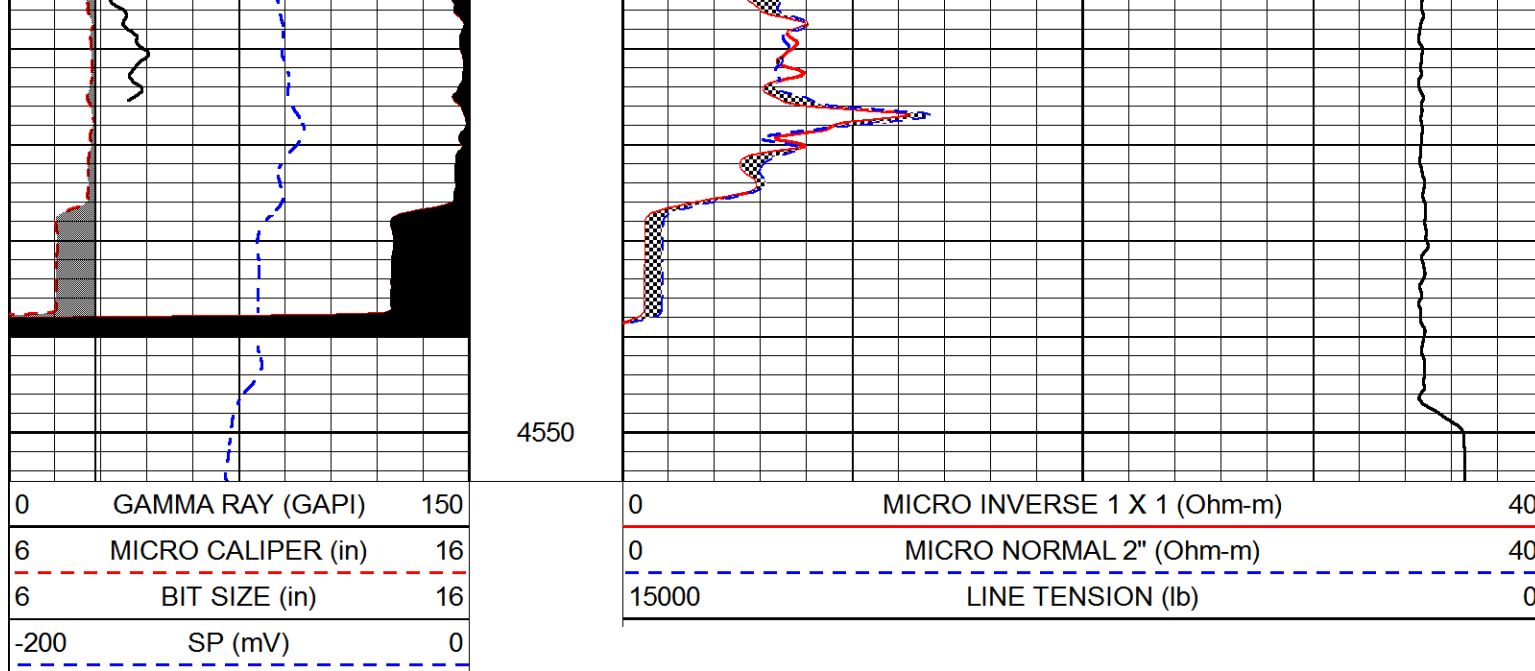
4350

4400

4450

4500





### Calibration Report

Database File brito\_wylie\_1\_31.db  
Dataset Pathname stackml/pass5.1  
Dataset Creation Mon Apr 15 14:25:29 2019

### Dual Induction Calibration Report

Serial-Model: PSI 988-M&W  
Calibration Performed: Tue Nov 20 10:50:19 2018

| Loop:  | Readings |          | References |         |        | Results |         |
|--------|----------|----------|------------|---------|--------|---------|---------|
|        | Air      | Loop     | Air        | Loop    |        | Gain    | Offset  |
| Deep   | 178.615  | 710.235  | 0.000      | 255.800 | mmho/m | 0.525   | -44.000 |
| Medium | 161.982  | 1441.110 | 0.000      | 255.800 | mmho/m | 0.380   | -17.000 |

### Microlog Calibration Report

Serial-Model: PSI-01-PSI STKBL ML  
Performed: Thu Mar 31 18:14:32 2016

|         | Readings |        | References |         |       | Results    |          |
|---------|----------|--------|------------|---------|-------|------------|----------|
|         | Zero     | Cal    | Zero       | Cal     |       | m          | b        |
| Normal  | 0.0000   | 1.0000 | 0.0000     | 1.0000  | Ohm-m | 32500.0000 | -1.7000  |
| Inverse | 0.0000   | 1.0000 | 0.0000     | 1.0000  | Ohm-m | 33500.0000 | -1.0000  |
| Caliper | 1.0001   | 1.1397 | 6.5000     | 18.5000 | in    | 86.0000    | -82.5500 |

### Compensated Density Calibration Report

Serial-Model: 144-84-M&W  
Source / Verifier: /  
Master Calibration Performed: Mon Jan 07 15:00:31 2019

### Master Calibration

Density

Far Detector

Near Detector

|           |       |      |         |         |     |
|-----------|-------|------|---------|---------|-----|
| Magnesium | 1.755 | g/cc | 4315.49 | 5309.89 | cps |
| Aluminum  | 2.675 | g/cc | 825.26  | 3443.46 | cps |

Spine Angle = 75.33

Density/Spine Ratio = 0.538

|            | Size  |    | Reading |
|------------|-------|----|---------|
| Small Ring | 4.00  | in | 0.69    |
| Large Ring | 14.00 | in | 0.04    |

### 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 17:08:01 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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