



PIONEER
Pioneer Energy Services

MICRORESISTIVITY LOG

Company **MIKE KELSO OIL, INC.**
Well **HONAS A NO.2**
Field **WILDCAT**
County **TREGO** State **KANSAS**

Location: API #: 15-195-23028-00-00

Other Services
CNL/CDL
DIL

SEC 21 TWP 14S RGE 22W
1330' FNL & 700' FEL

Permanent Datum GROUND LEVEL Elevation 2221'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2228'
D.F. N/A
G.L. 2221'

Date 8/27/2017

Run Number ONE

Depth Driller 4225'

Depth Logger 4220'

Bottom Logged Interval 4219'

Top Log Interval 3300'

Casing Driller 8.625" @ 250'

Casing Logger 248'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 10,500

Density / Viscosity 9.7 56

pH / Fluid Loss 9.0 8.8

Source of Sample FLOWLINE

Rm @ Meas. Temp .35 @ 62

Rmt @ Meas. Temp .26 @ 62

Rmc @ Meas. Temp .47 @ 62

Source of Rmt / Rmc CHARTS

Rm @ BHT .18 @ 118

Operating Rig Time 2 1/2 HOURS

Max Rec. Temp. F 118 DEGF

Equipment Number 108

Location HAYS

Recorded By J. HENRICKSON

Witnessed By PAT DEENIHAN

MIKE KELSO

<<< 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.

OGALLAH EXIT I 70
SOUTH TO CURVE, 3 SOUTH, 1 WEST, SOUTH INTO
(ROAD TO COVE 1 AT CEDAR BLUFF)

Log Measured From: KELLY BUSHING 7 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: PAT DEENIHAN
Secondary Witness: MIKE KELSO
Secondary Witness:
Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 118	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV -90	degF 61	Off	ft 4220

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 (168-986)	8.50	4.00	250.00
DCAL	28.42			ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
SSD	27.93						
MCAL	19.83						
MI	19.83						
MN	19.83						
RLL3	15.80						
RLL3F	15.79						
CILD	8.00			DIL-M&W (1987)	18.50	3.50	220.00

CILM

4.70

SP

0.20

Dataset: kelso_honas_a_2.db: field/well/stackml/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

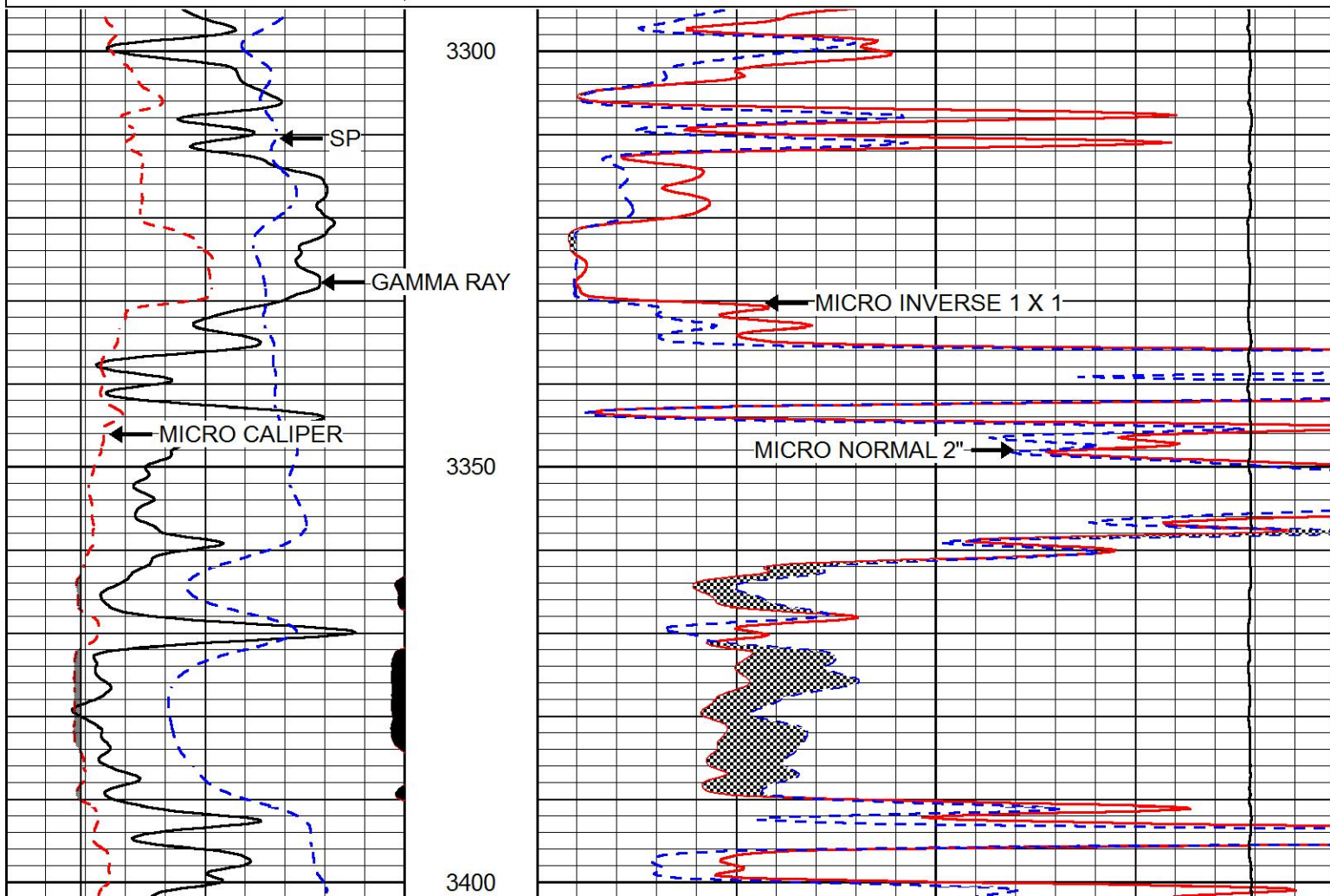


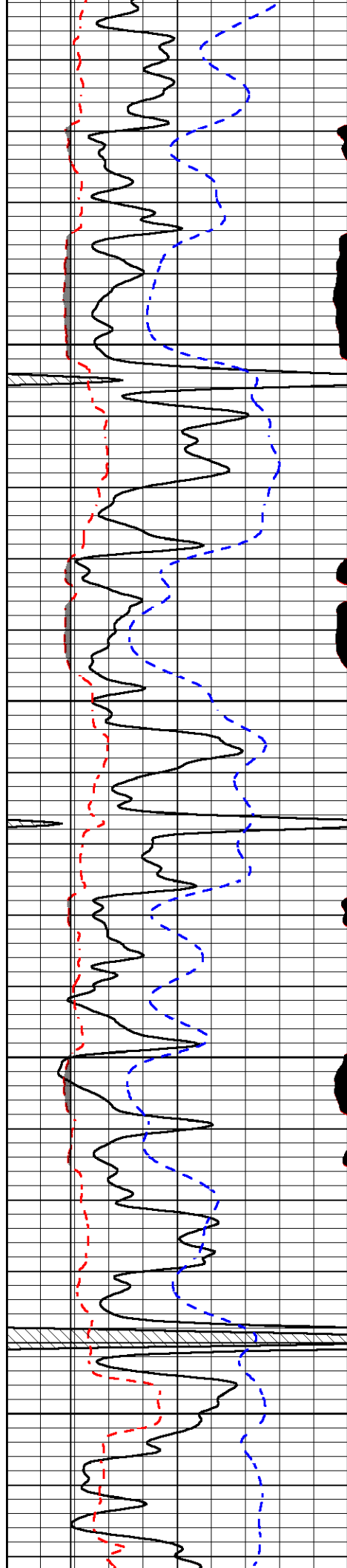
MAIN PASS

Database File kelso_honas_a_2.db
 Dataset Pathname stackml/pass3.1
 Presentation Format micro
 Dataset Creation Sun Aug 27 05:56:23 2017
 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



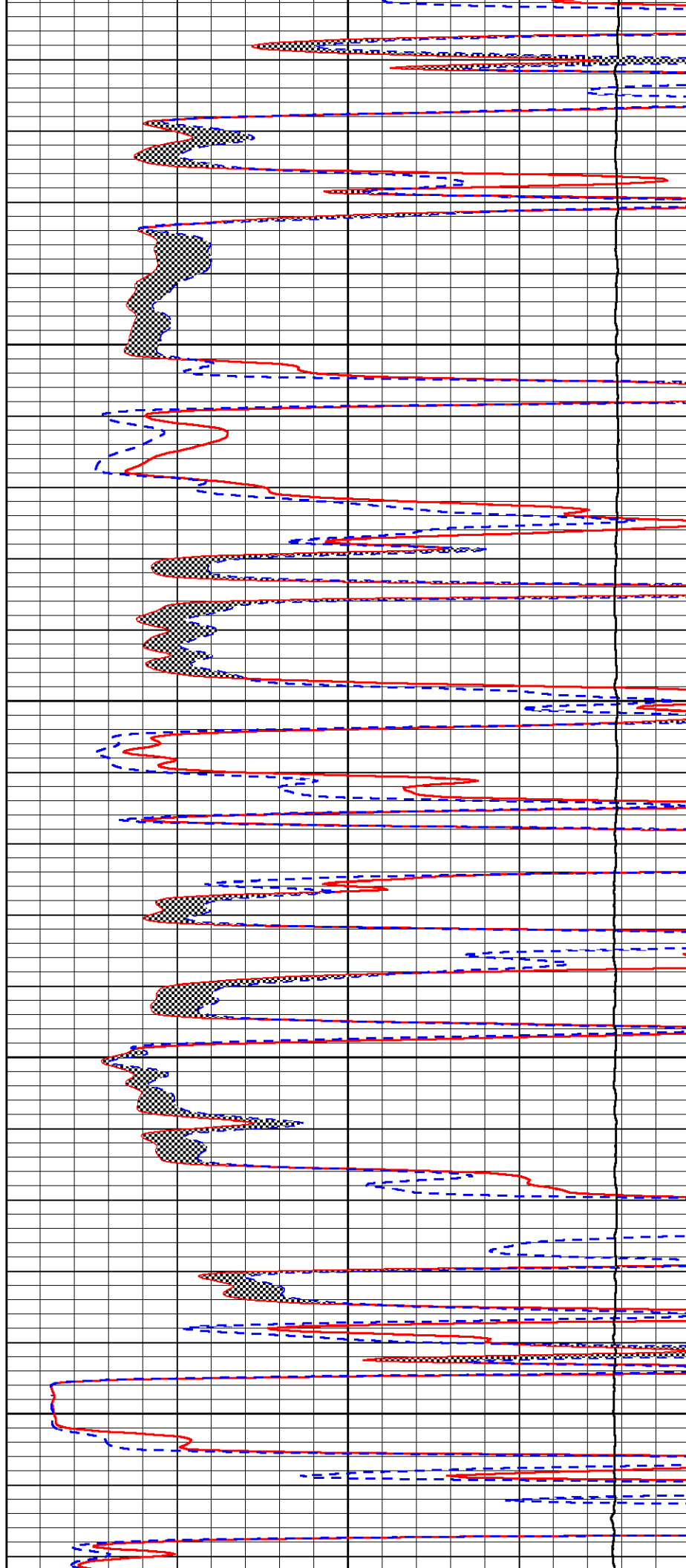


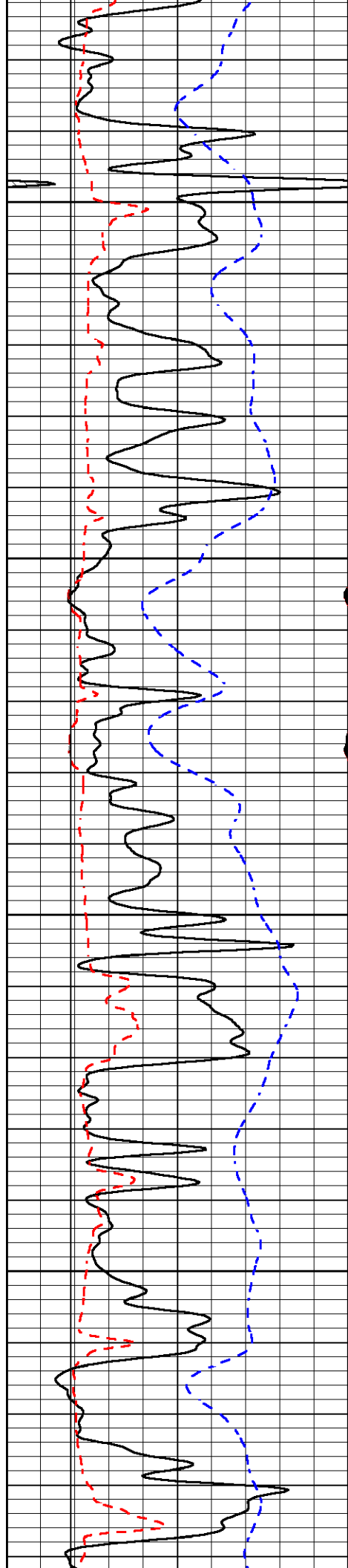
3450

3500

3550

3600



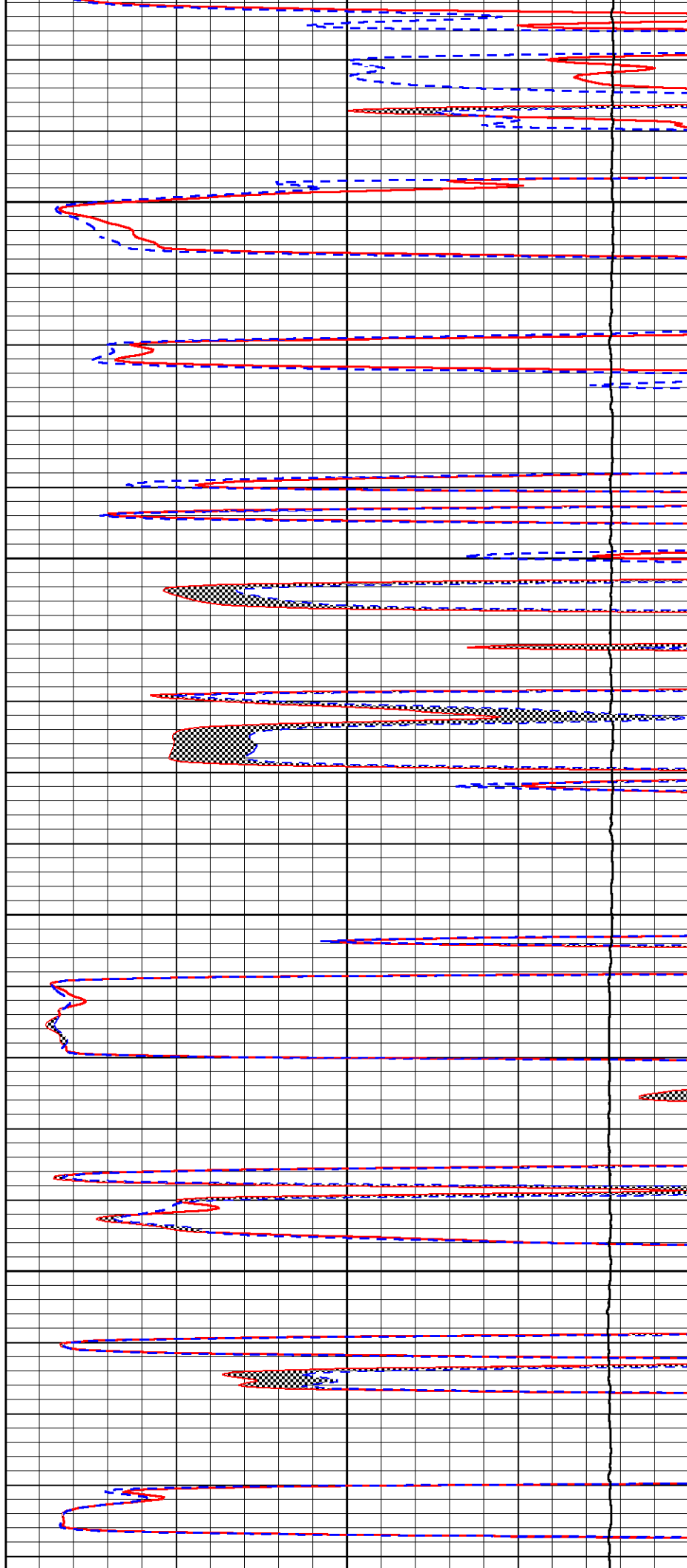


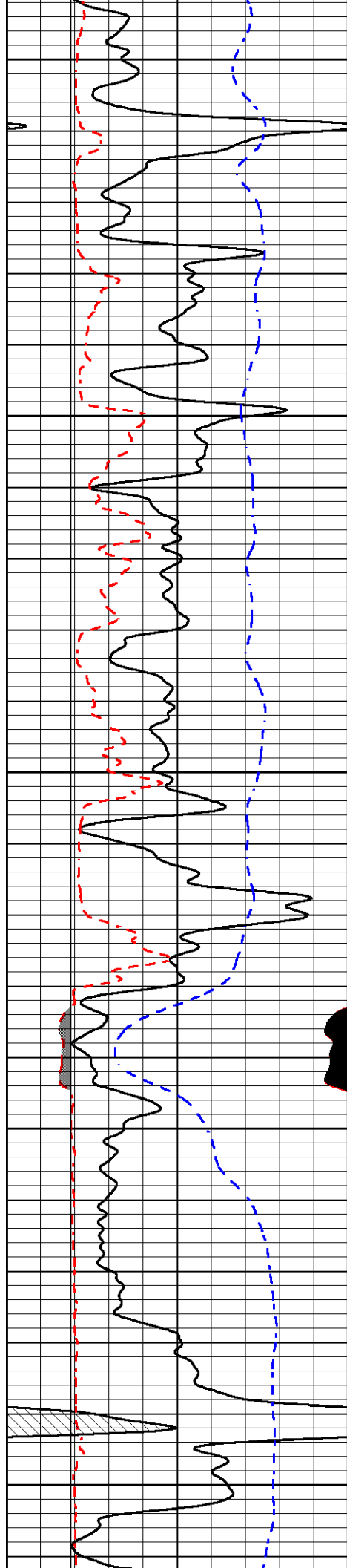
3650

3700

3750

3800





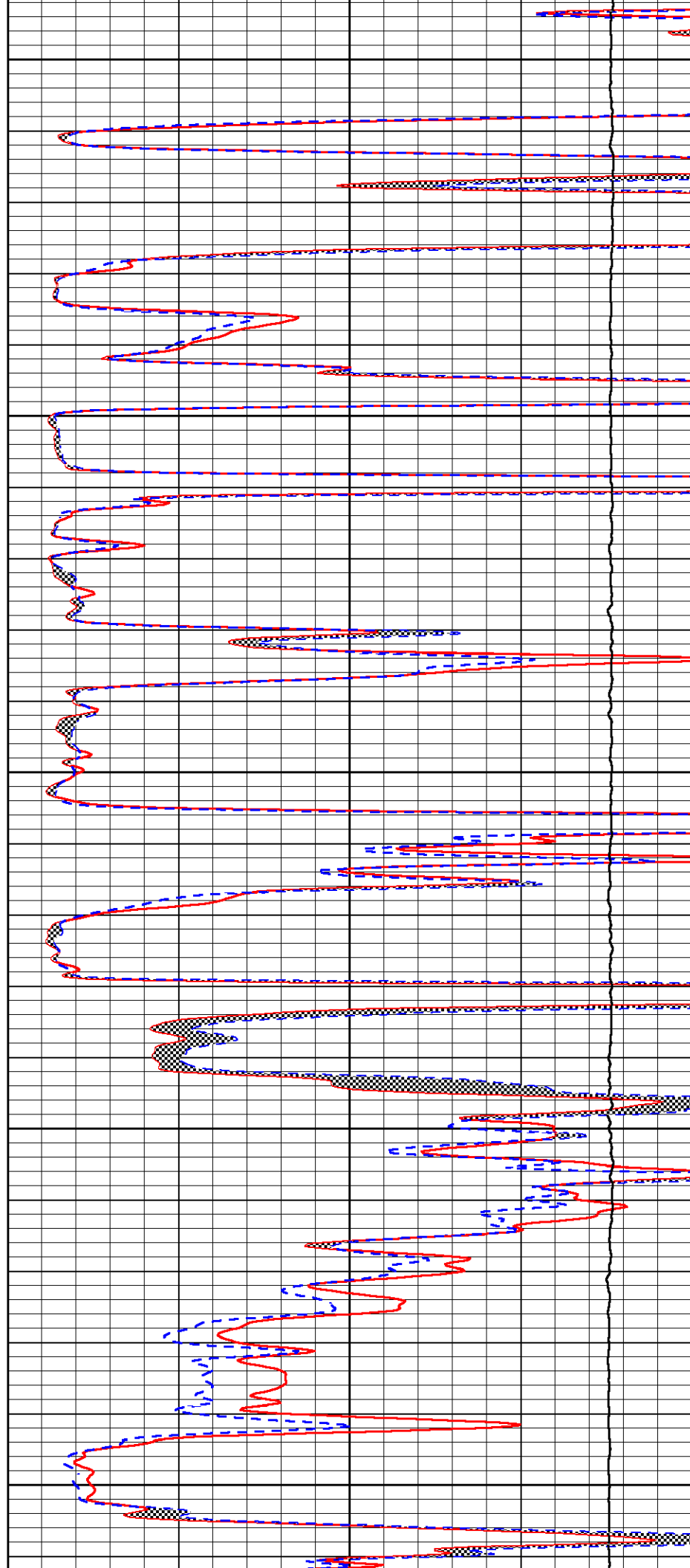
3850

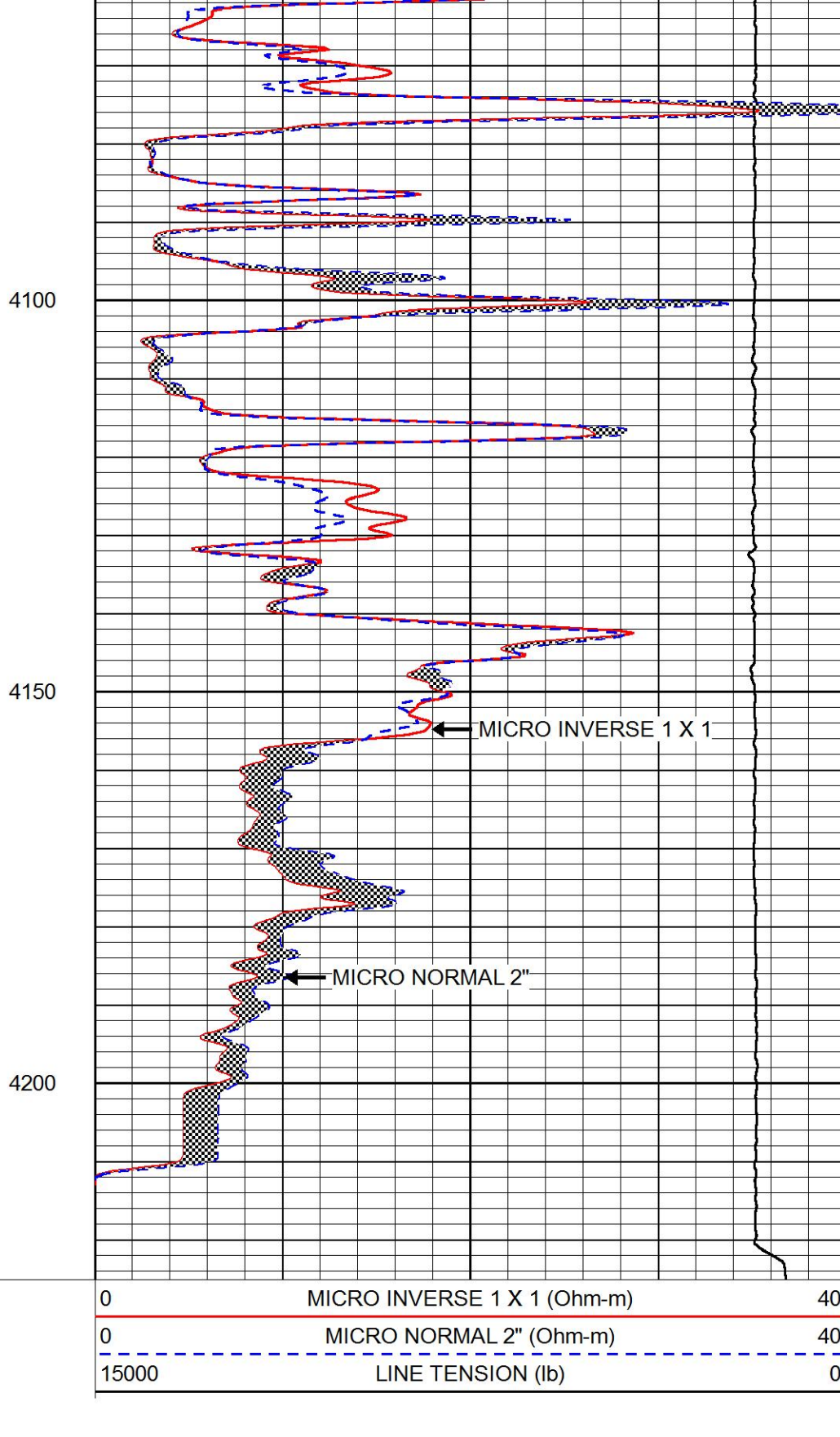
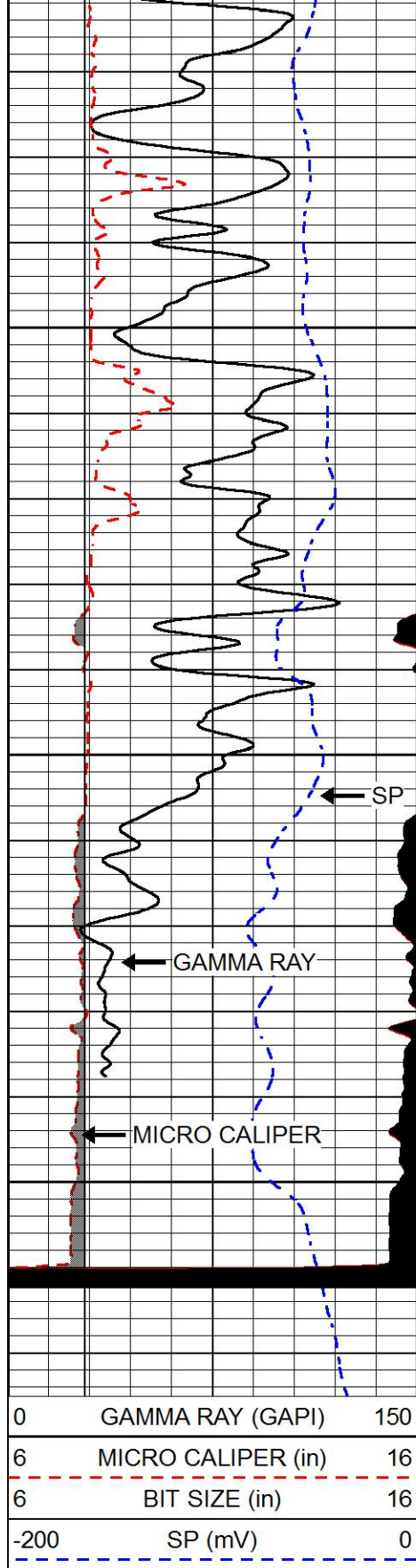
3900

3950

4000

4050



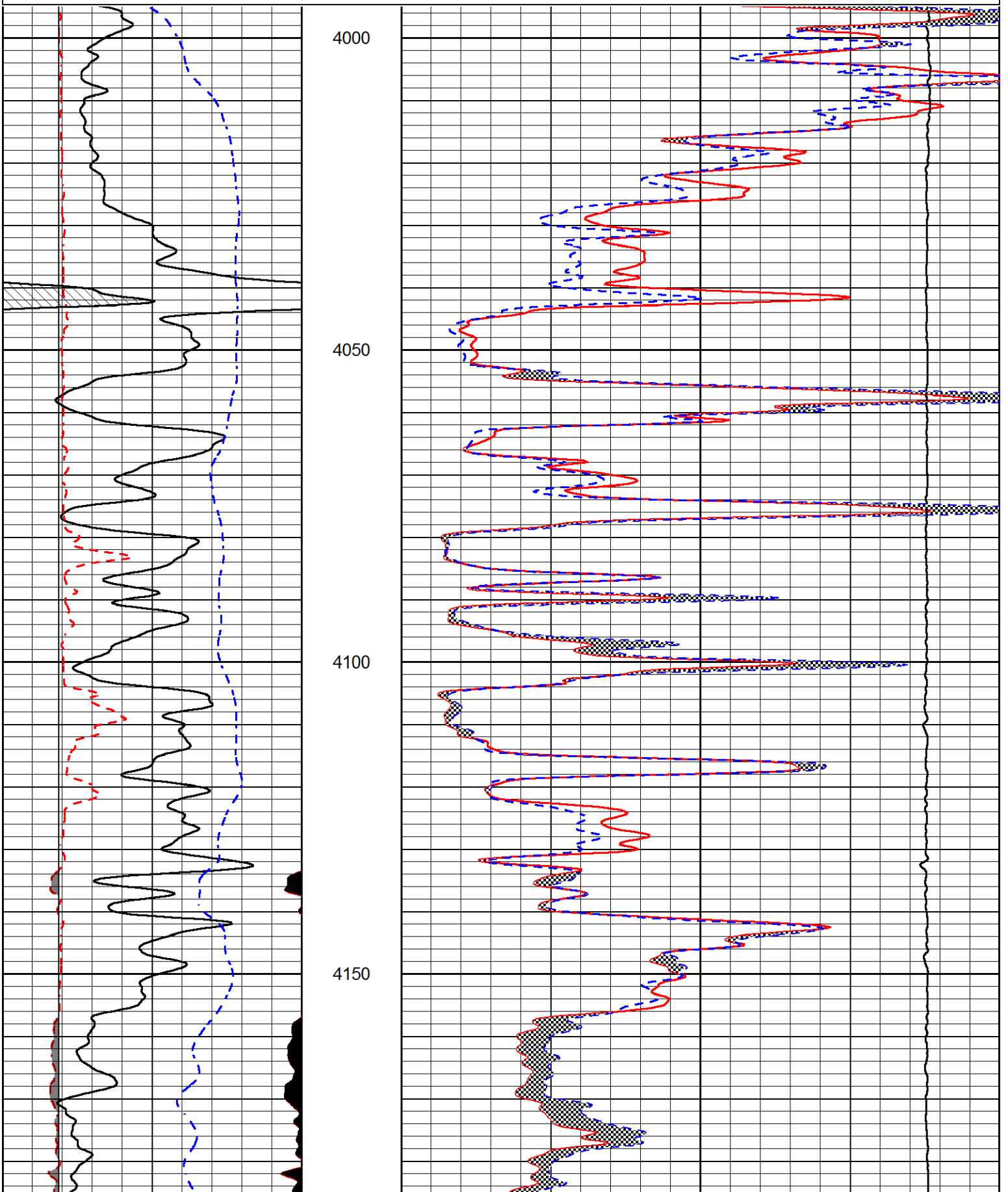


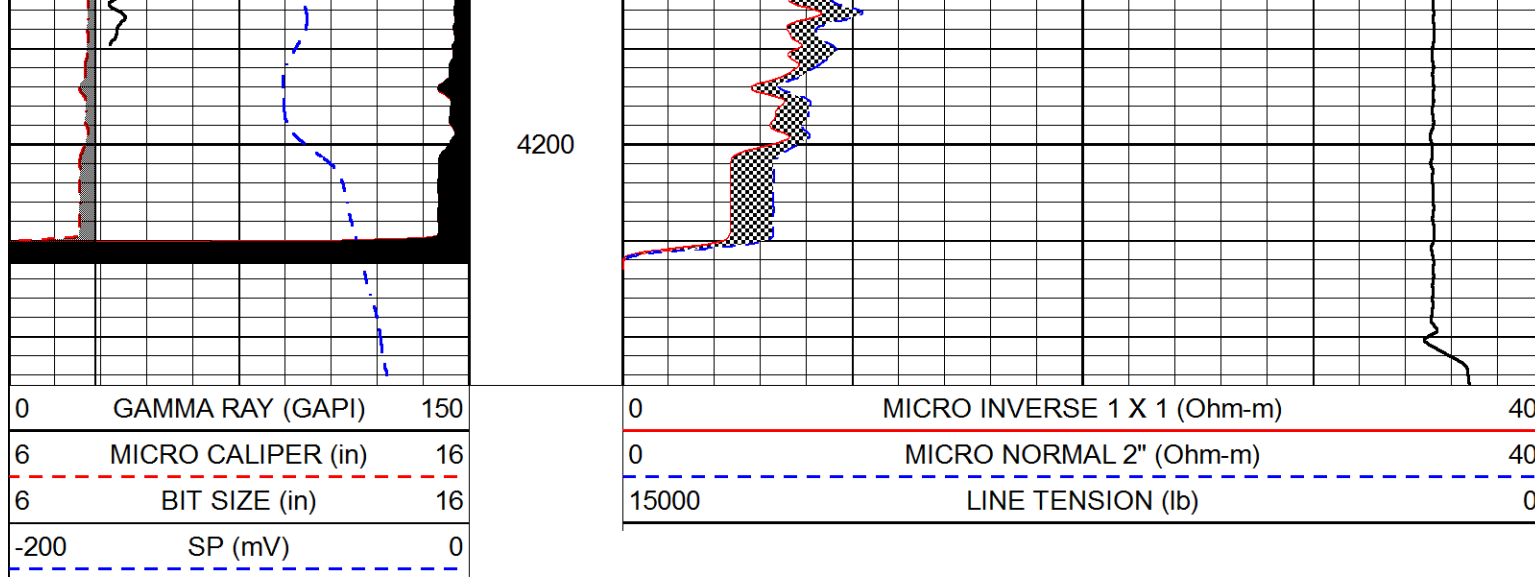
REPEAT SECTION

Database File kelso_honas_a_2.db
Dataset Pathname stackml/pass2.1
Presentation Format micro

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





Calibration Report

Database File: kelso_honas_a_2.db
 Dataset Pathname: stackml/pass3.1
 Dataset Creation: Sun Aug 27 05:56:23 2017

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Tue Apr 11 16:07:38 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-36.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
 Performed: 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	18000.0000	0.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	20000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.4500

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



Company MIKE KELSO OIL, INC.
Well HONAS A NO.2
Field WILDCAT
County TREGO
State KANSAS