



PIONEER
Pioneer Energy Services

MICRORESISTIVITY LOG

Company RITCHIE EXPLORATION, INC.
Well #1 BEATON 6D
Field WILDCAT
County LANE
State KANSAS

Company RITCHIE EXPLORATION, INC.
Well #1 BEATON 6D
Field WILDCAT
County LANE State KANSAS

Location: API #: 15-101-22598-0000

2225' FSL & 2035' FEL

SEC 6 TWP 20S RGE 30W

Permanent Datum GROUND LEVEL Elevation 2901'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
DIL
Elevation
K.B. 2909'
D.F. N/A
G.L. 2901'

Date	01/16/2018		
Run Number	ONE		
Depth Driller	4750'		
Depth Logger	4749'		
Bottom Logged Interval	4748'		
Top Log Interval	3400'		
Casing Driller	8.625" @ 222'		
Casing Logger	218'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	3500		
Density / Viscosity	9.2 50		
pH / Fluid Loss	9.5 7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.60 @ 40		
Rmt @ Meas. Temp	0.45 @ 40		
Rmc @ Meas. Temp	0.81 @ 40		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.19 @ 124		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	124		
Equipment Number	91		
Location	HAYS		
Recorded By	D. SCHMIDT		
Witnessed By	MAX LOVELY		

<<< 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.

DIGHTON,
WEST TO ARAPAHOE ROAD, 9 1/2 SOUTH,
WEST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

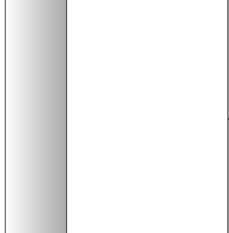
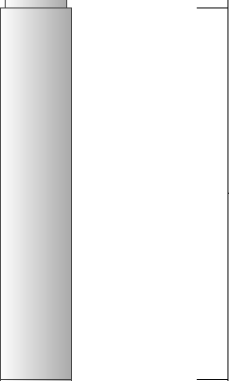
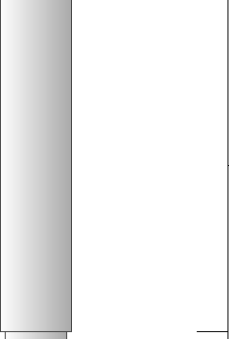
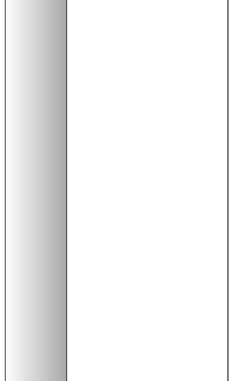
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: MAX LOVELY
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	250	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	1	0	5.5	0	4749	124	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 (90-1031)	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					

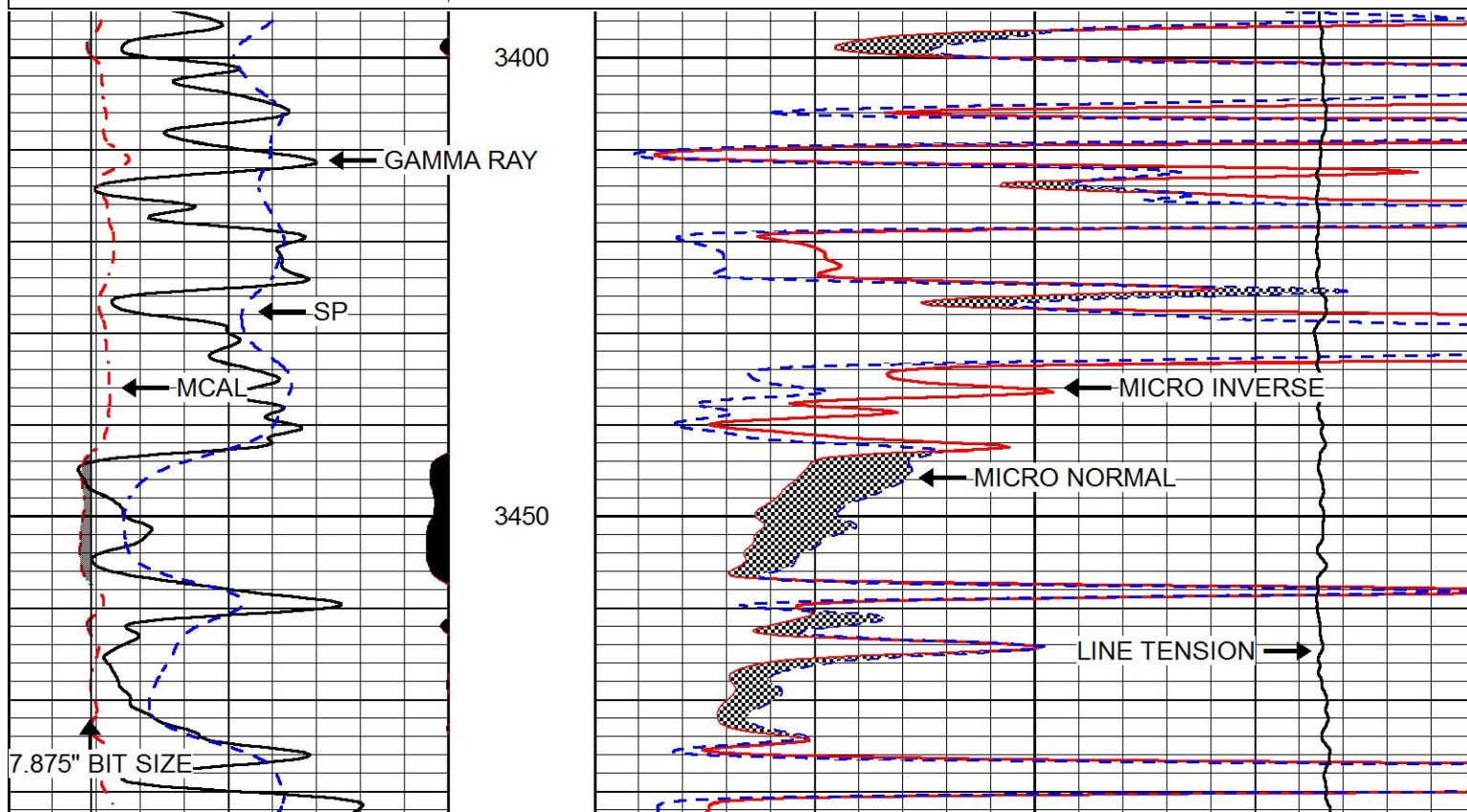
			DIL-M&W (PSI 91)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: ritchie_#1beaton6d.db: field/well/STKML/pass3.6 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

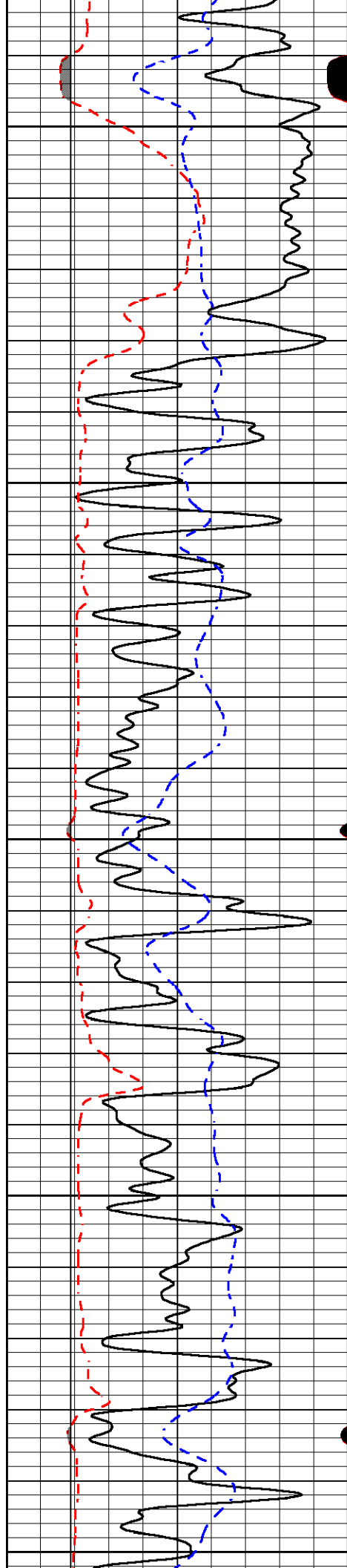


MAIN PASS

Database File	ritchie_#1beaton6d.db
Dataset Pathname	STKML/pass3.1
Presentation Format	micro
Dataset Creation	Tue Jan 16 04:49:43 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			





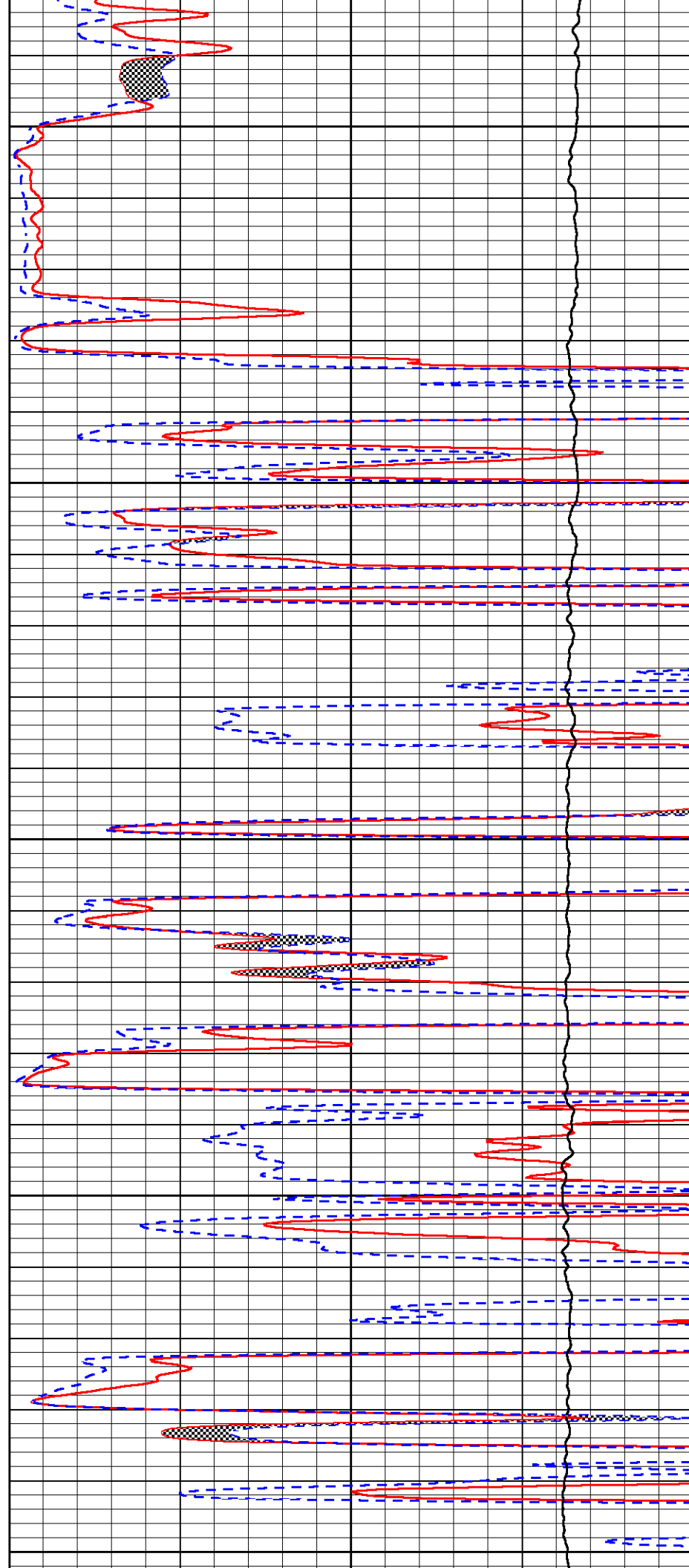
3500

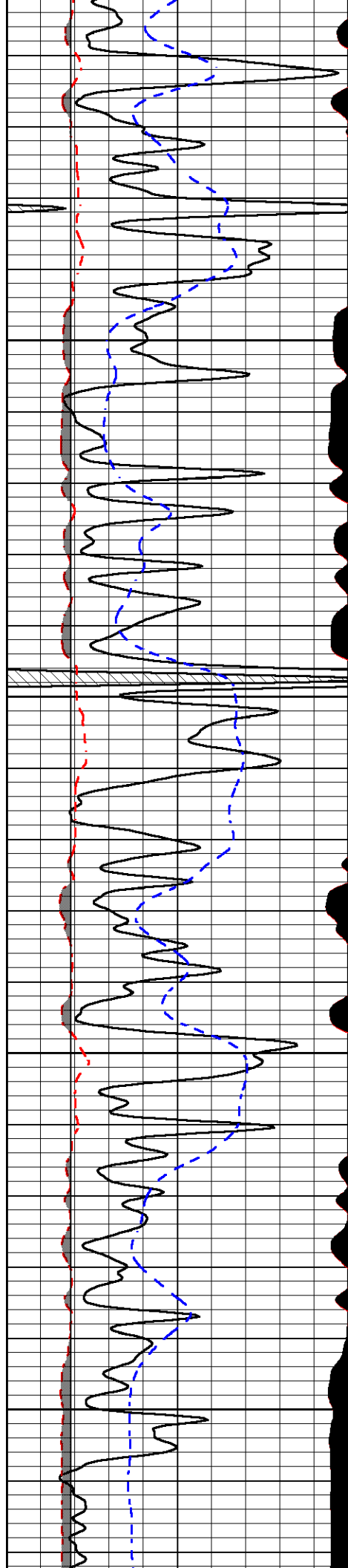
3550

3600

3650

3700



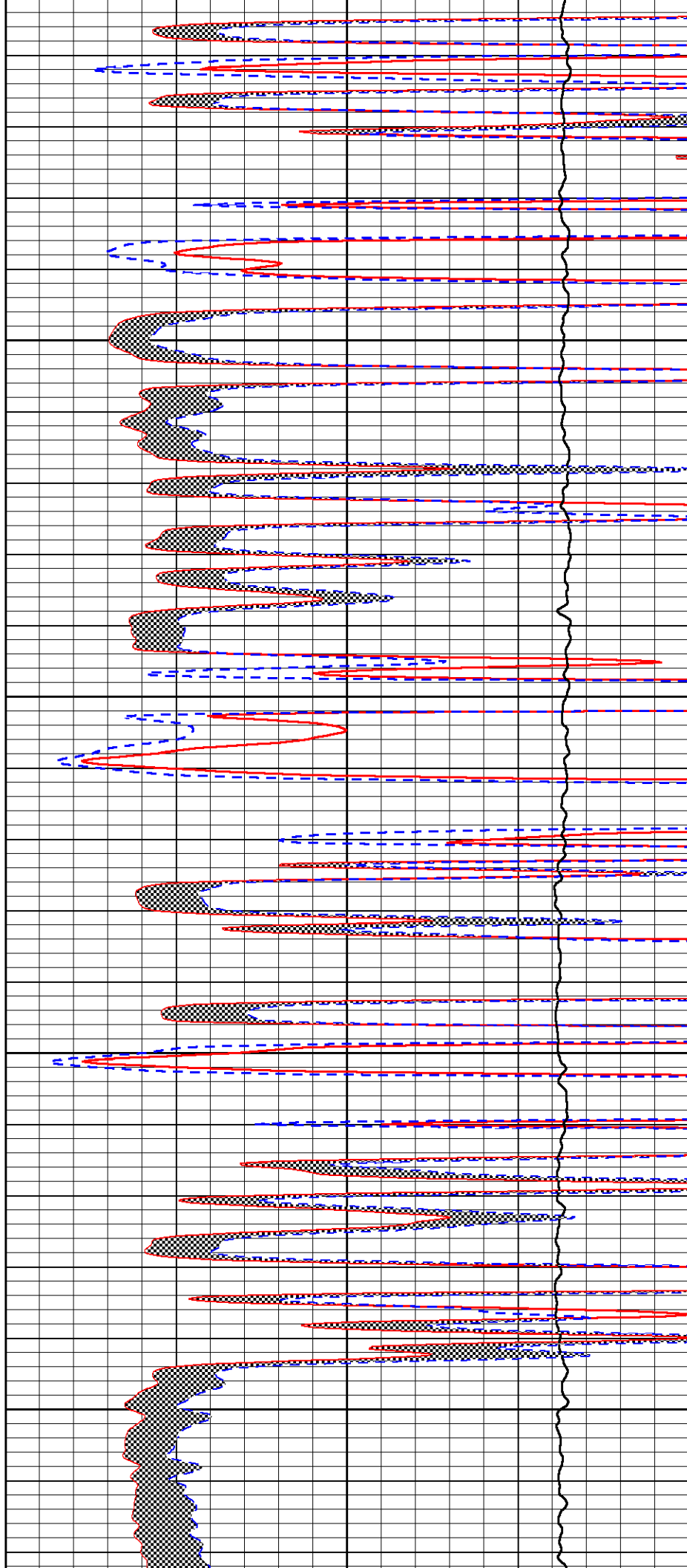


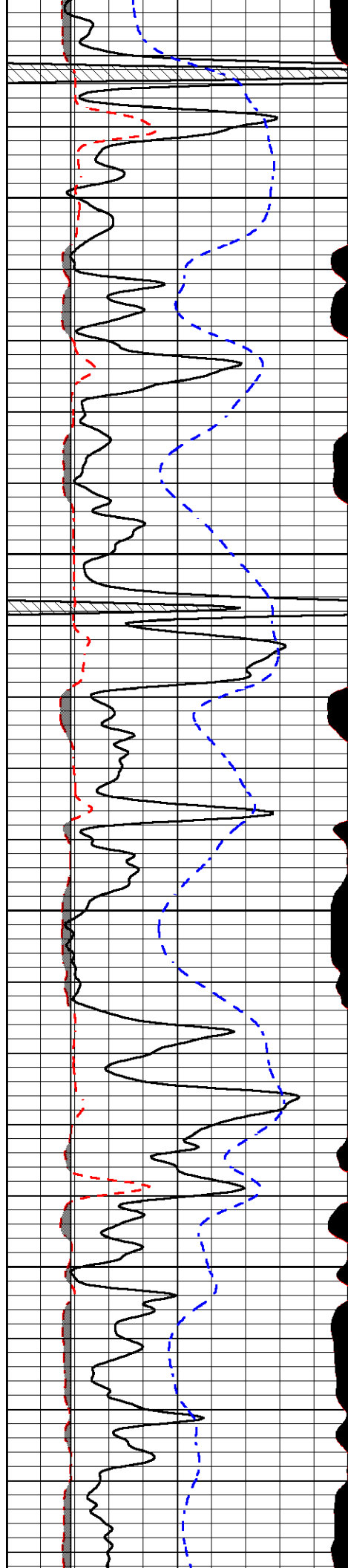
3750

3800

3850

3900



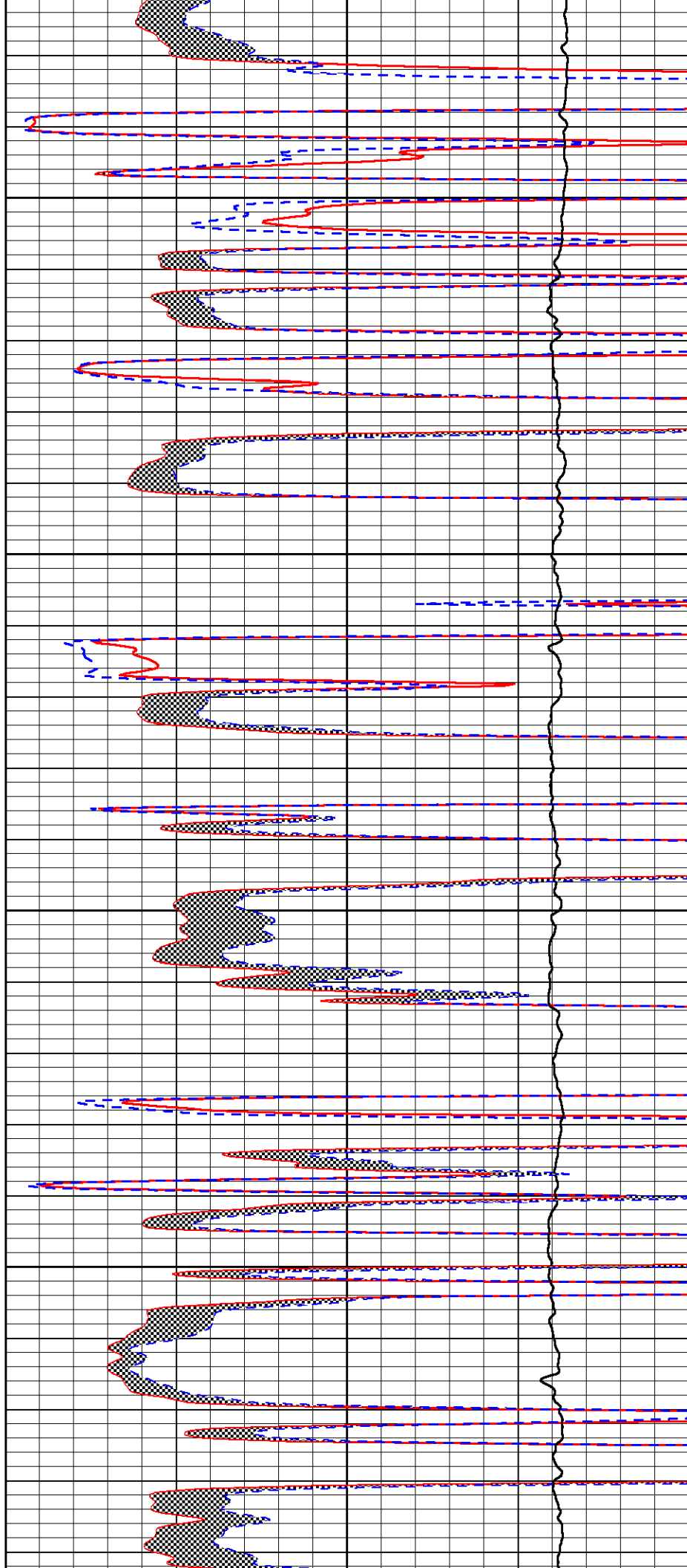


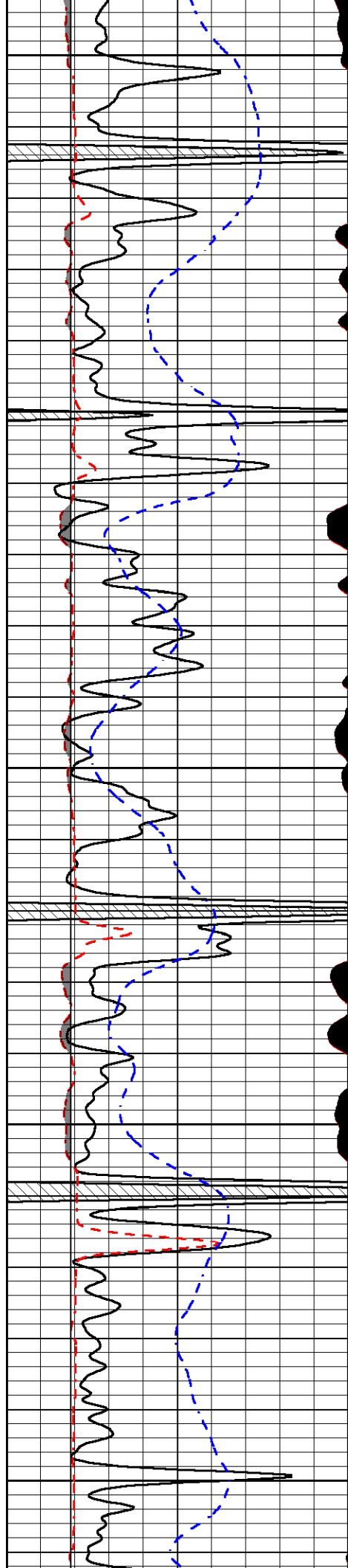
3950

4000

4050

4100





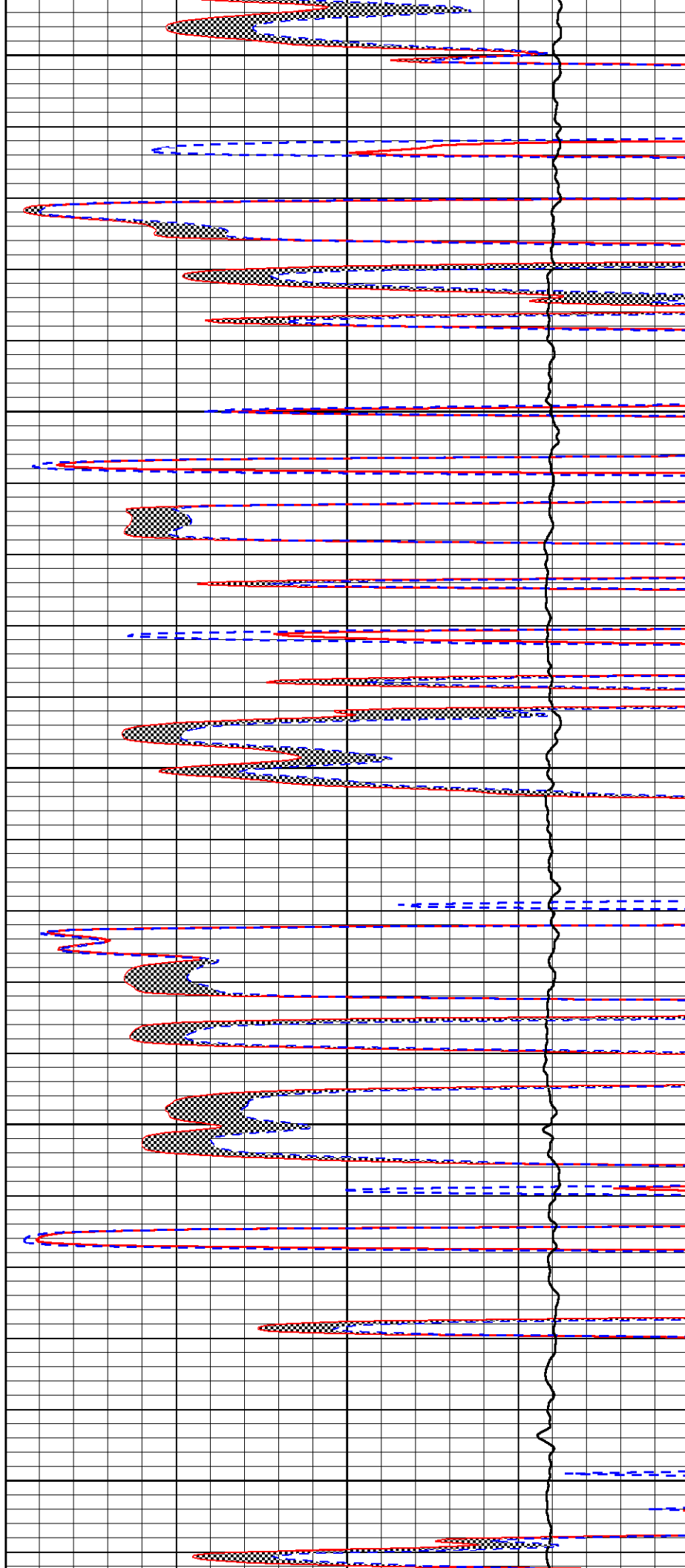
4150

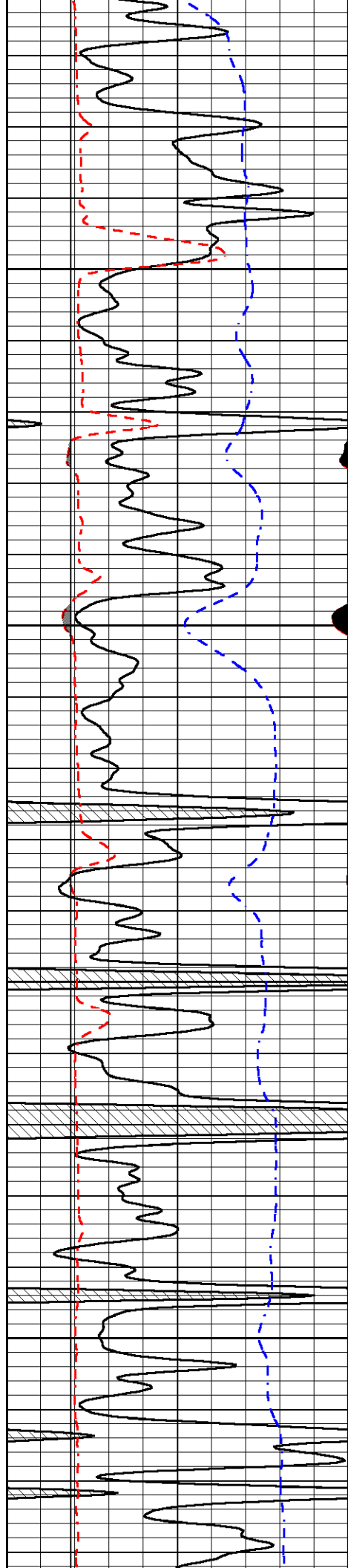
4200

4250

4300

4350



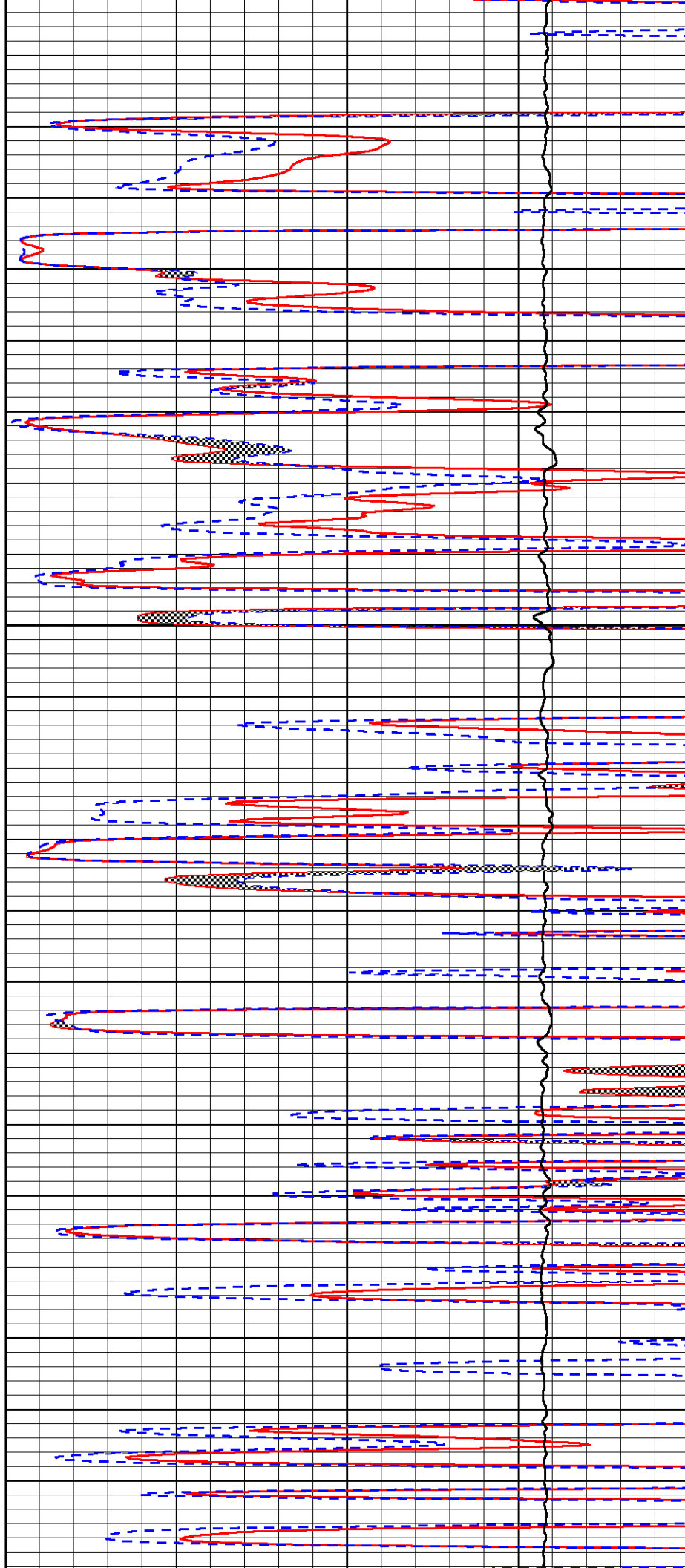


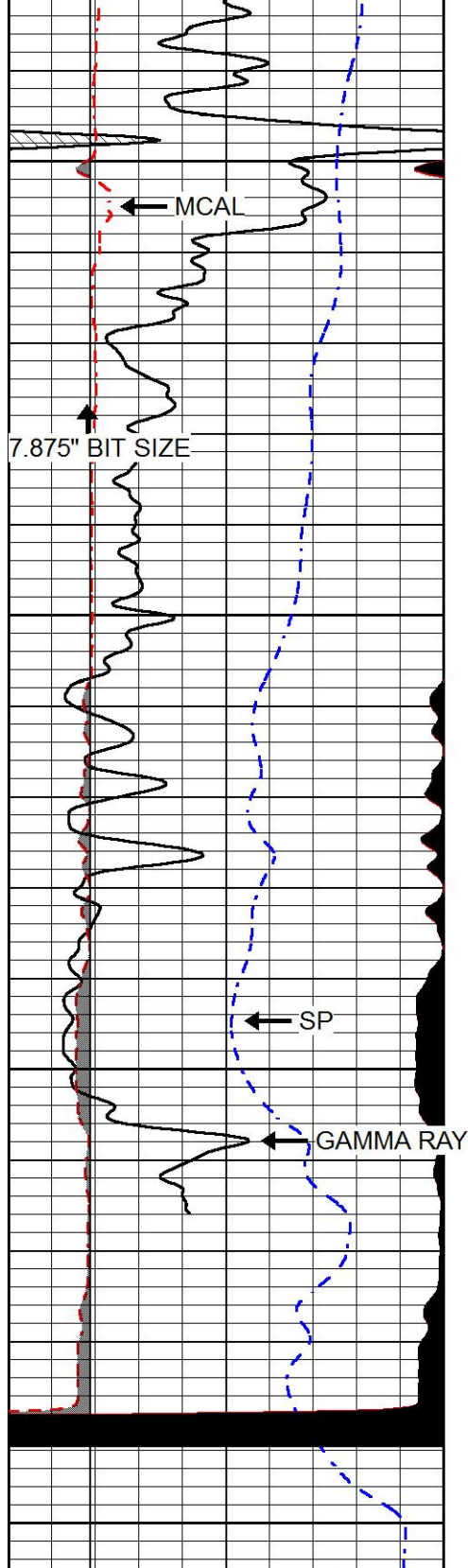
4400

4450

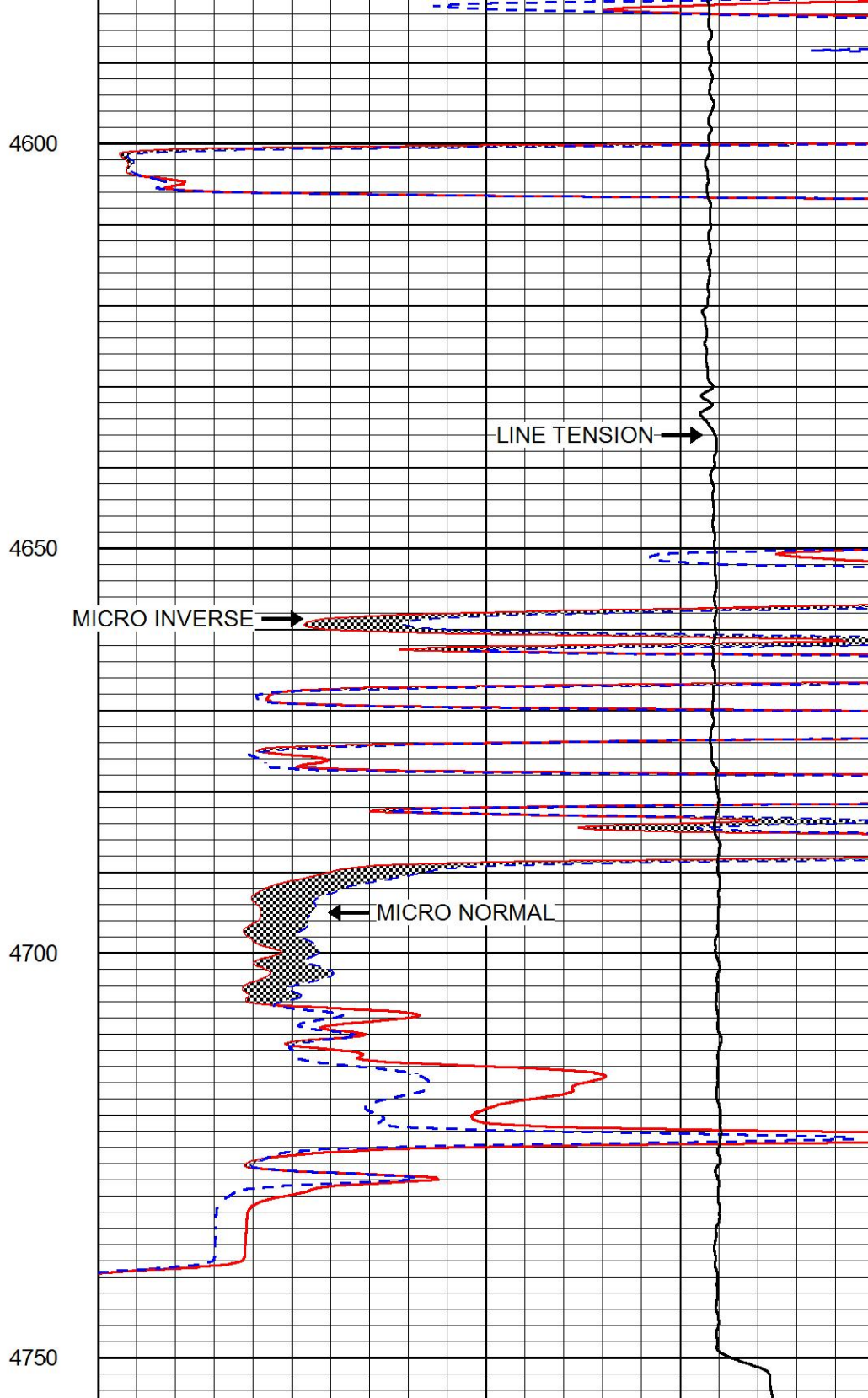
4500

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

Database File

ritchie_#1beaton6d.db

Dataset Pathname

STKML/pass2.4

Presentation Format

micro

Dataset Creation

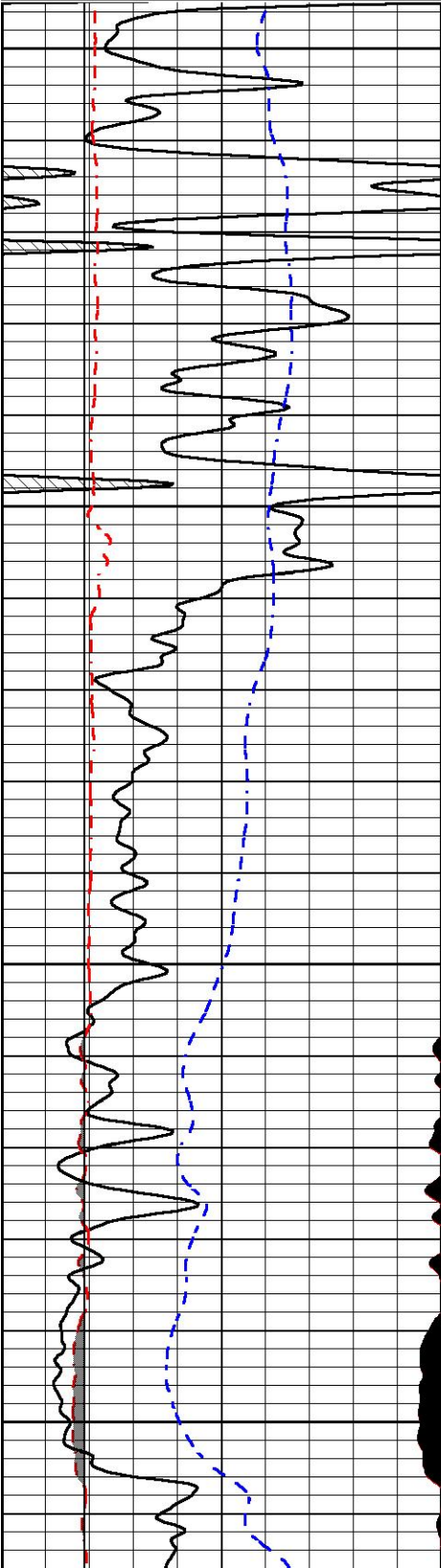
Tue Jan 16 04:13:32 2018

Charted by

Depth in Feet scaled 1:240

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

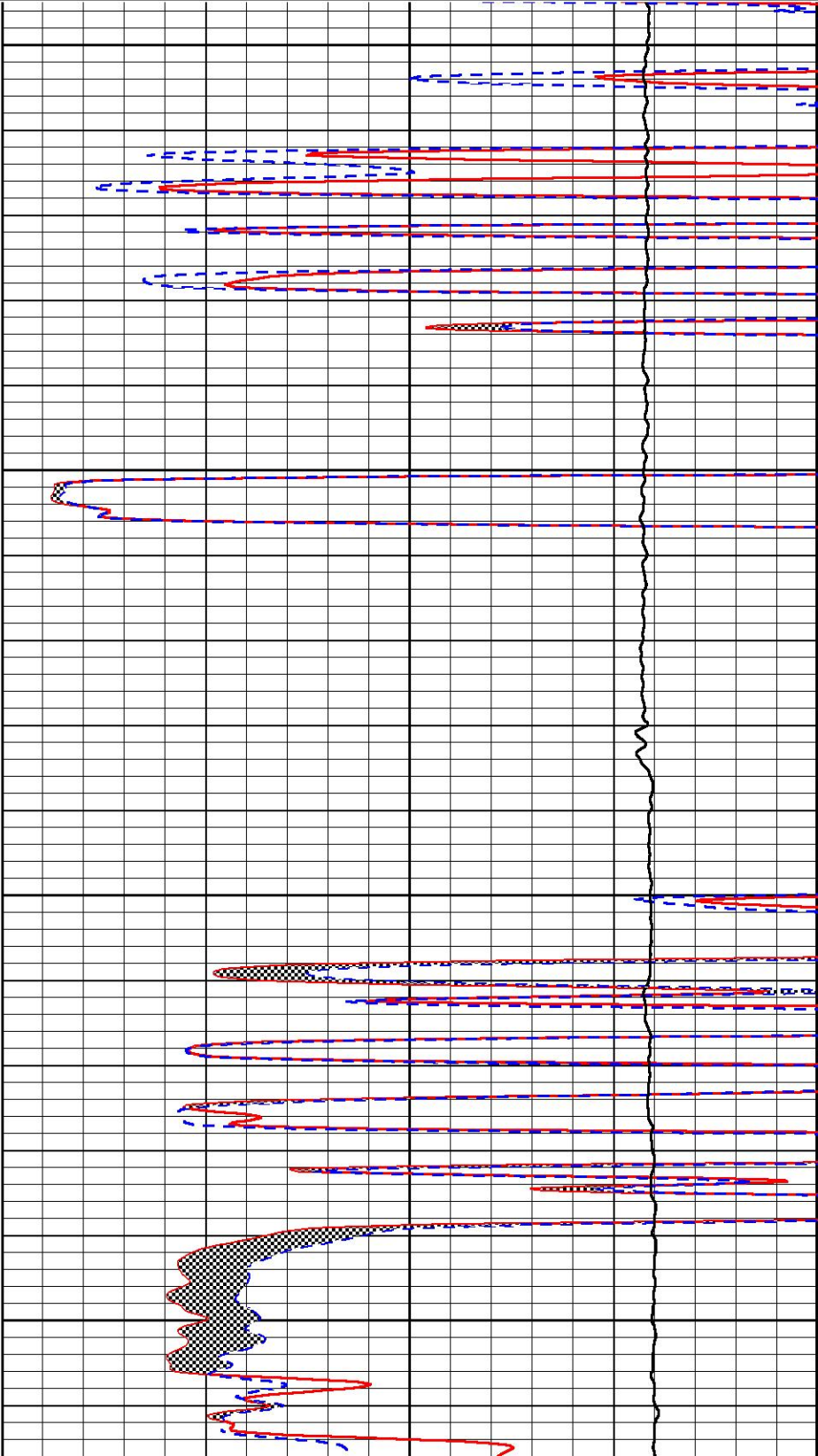


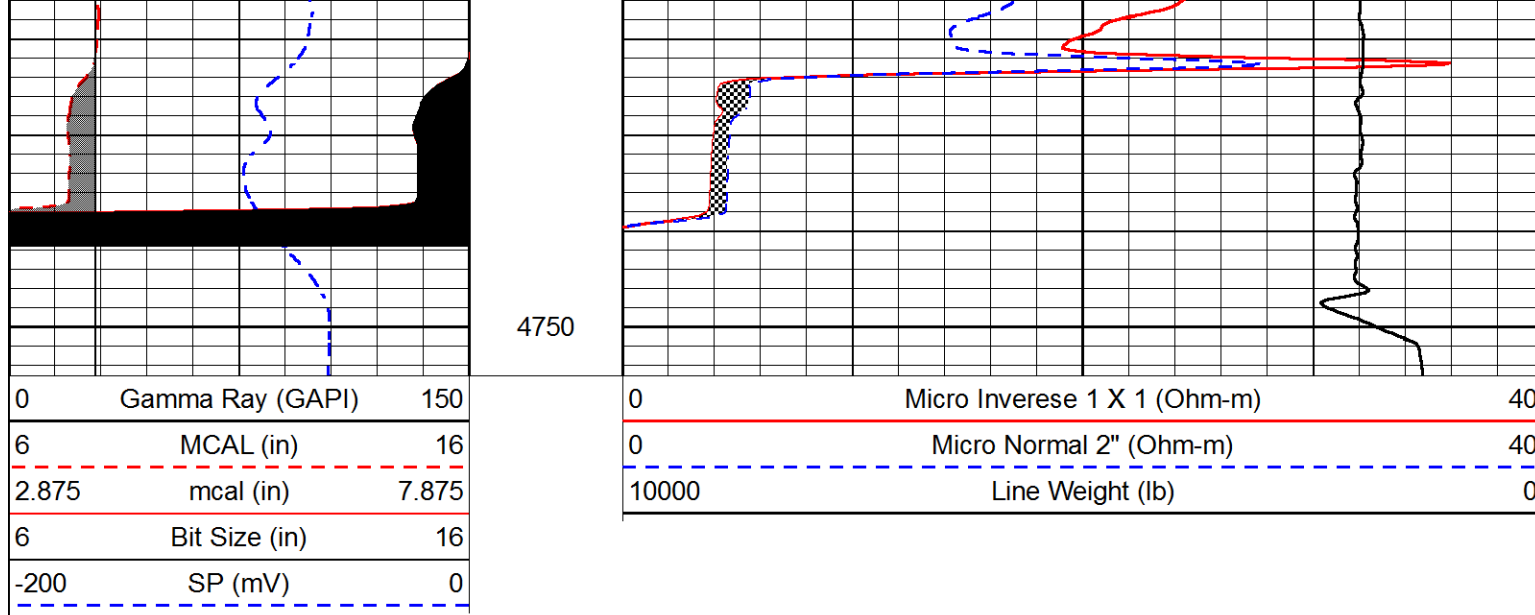
4550

4600

4650

4700





Calibration Report

Database File: ritchie_#1beaton6d.db
 Dataset Pathname: STKML/pass3.6
 Dataset Creation: Tue Jan 16 04:17:03 2018

Dual Induction Calibration Report

Serial-Model: PSI 91-M&W
 Calibration Performed: Mon Jan 15 11:19:44 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.565	-16.500
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.390	-39.500

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Mon Jan 15 11:19:55 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	25000.0000	-2.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	31000.0000	-1.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.5000

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Mon Jan 15 11:20:34 2018

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: MON JAN 15 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 RITCHIE EXPLORATION, INC.
Well #1 BEATON 6D
Field WILDCAT
County LANE
State KANSAS