



MICRORESISTIVITY LOG

PIONEER
Pioneer Energy Services

Company **SHAKESPEARE OIL CO., INC.**

Well **HOVEY #1-24**

Field **WILDCAT**

County **WICHITA**

State **KANSAS**

Location: API #: 15-203-20349-00-00

2120' FSL & 540' FWL

SEC 24 TWP 16S RGE 35W

Permanent Datum **GROUND LEVEL** Elevation **3177'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Elevation
K.B. 3187'
D.F. N/A
G.L. 3177'

Company **SHAKESPEARE OIL CO., INC.**
Well **HOVEY #1-24**
Field **WILDCAT**
County **WICHITA**
State **KANSAS**

Date **2/24/2019**

Run Number **ONE**

Depth Driller **4915'**

Depth Logger **4920'**

Bottom Logged Interval **4919'**

Top Log Interval **3800'**

Casing Driller **8.625" @ 265'**

Casing Logger **265'**

Bit Size **7.875"**

Type Fluid in Hole **CHEMICAL**

Salinity, ppm CL **5500**

Density / Viscosity **9.2 67**

pH / Fluid Loss **10.5 8.0**

Source of Sample **FLOWLINE**

Rm @ Meas. Temp **0.80 @ 67**

Rmf @ Meas. Temp **0.60 @ 67**

Rmc @ Meas. Temp **1.08 @ 67**

Source of Rmf / Rmc **CHARTS**

Rm @ BHT **0.43 @ 125**

Operating Rig Time **3 HOURS**

Max Rec. Temp. F **125**

Equipment Number **P-24**

Location **HAYS**

Recorded By **IAN MABB**

Witnessed By **TOBY ECK**

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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.

PENCE, KS.

4 MILES WEST, 1/2 SOUTH, EAST 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: IAN MABB

Operator:

Operator:

Operator:

This Log Record Was Witnessed By

Primary Witness: TOBY ECK

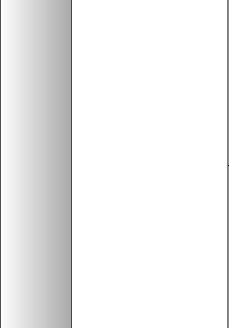
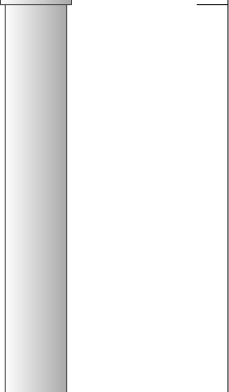
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Secondary Witness:

Secondary Witness:

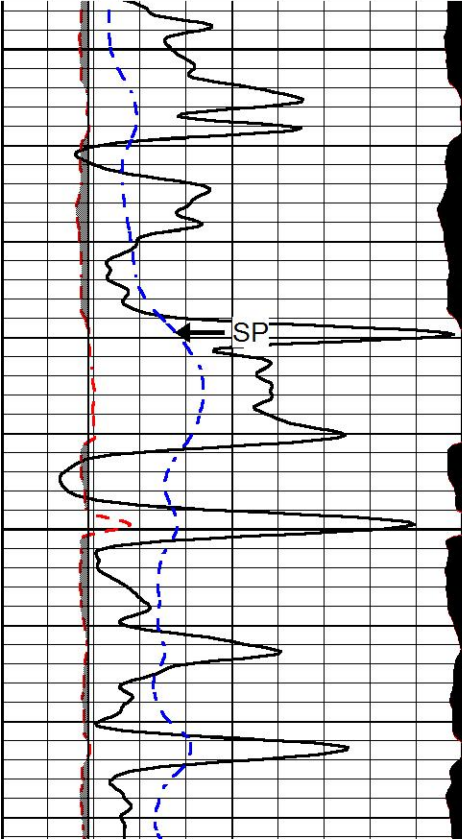
Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	-40	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
3	0	0	5.5	0	4920	125	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 (126-186)	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					

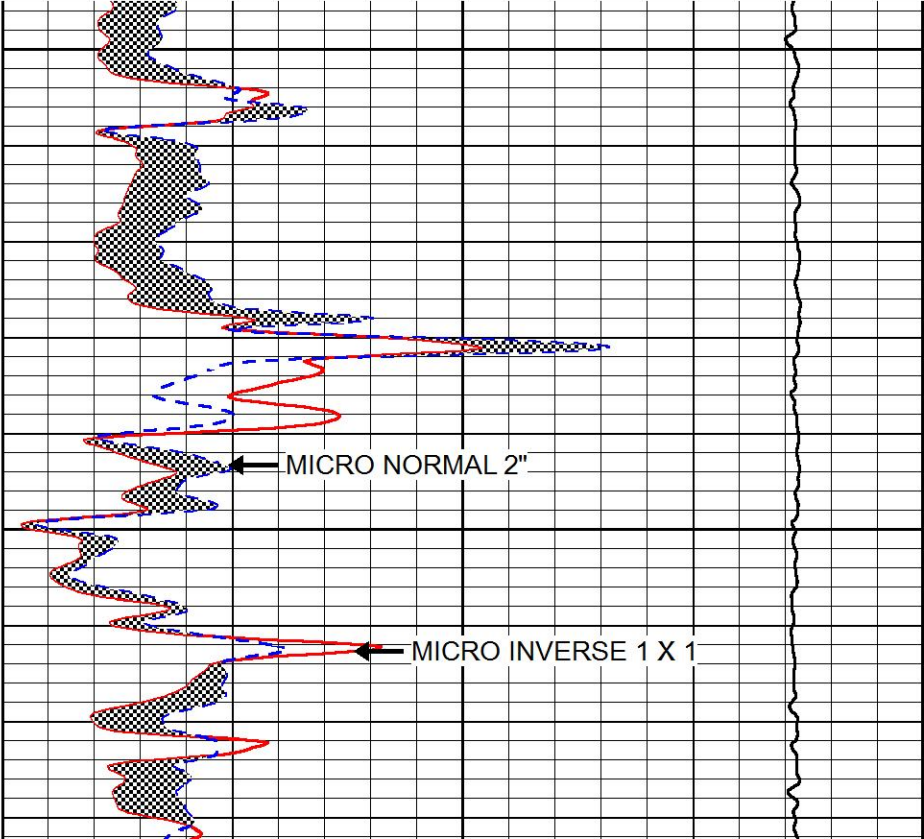
			DIL-PSI HIGH TEMP (967 (HT))	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: shakespear_hovey_1_24.db: field/well/stackmel/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

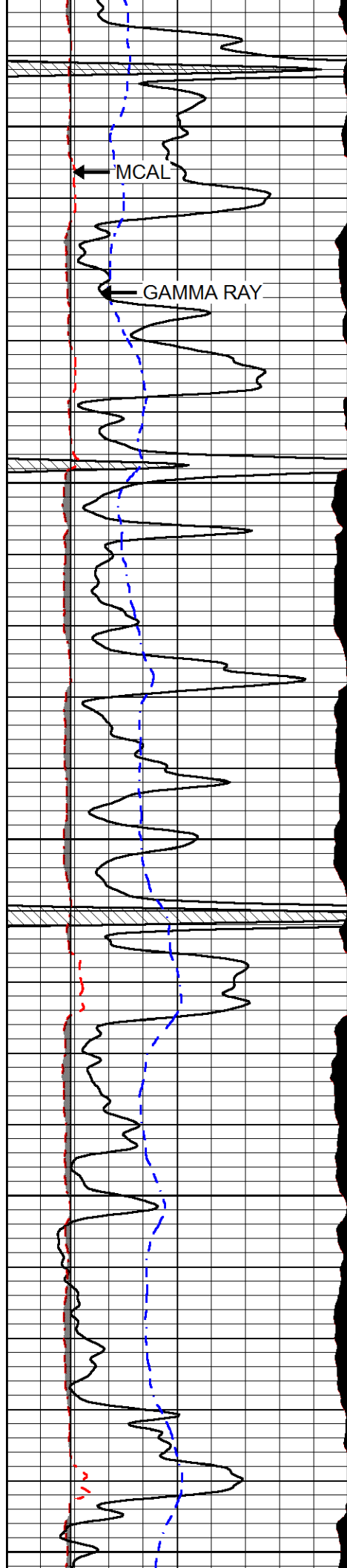
			MAIN PASS		
Database File	shakespear_hovey_1_24.db				
Dataset Pathname	stackmel/pass3.1				
Presentation Format	micro				
Dataset Creation	Sun Feb 24 11:09:12 2019				
Charted by	Depth in Feet scaled 1:240				
0	GAMMA RAY (GAPI)	150	0	MICRO INVERSE 1 X 1 (Ohm-m)	40
6	MCAL (in)	16	0	MICRO NORMAL 2" (Ohm-m)	40
2.875	mcals (in)	7.875	10000	Line Weight (lb)	0
6	Bit Size (in)	16			
-200	SP (mV)	0			



3800

3850





3900

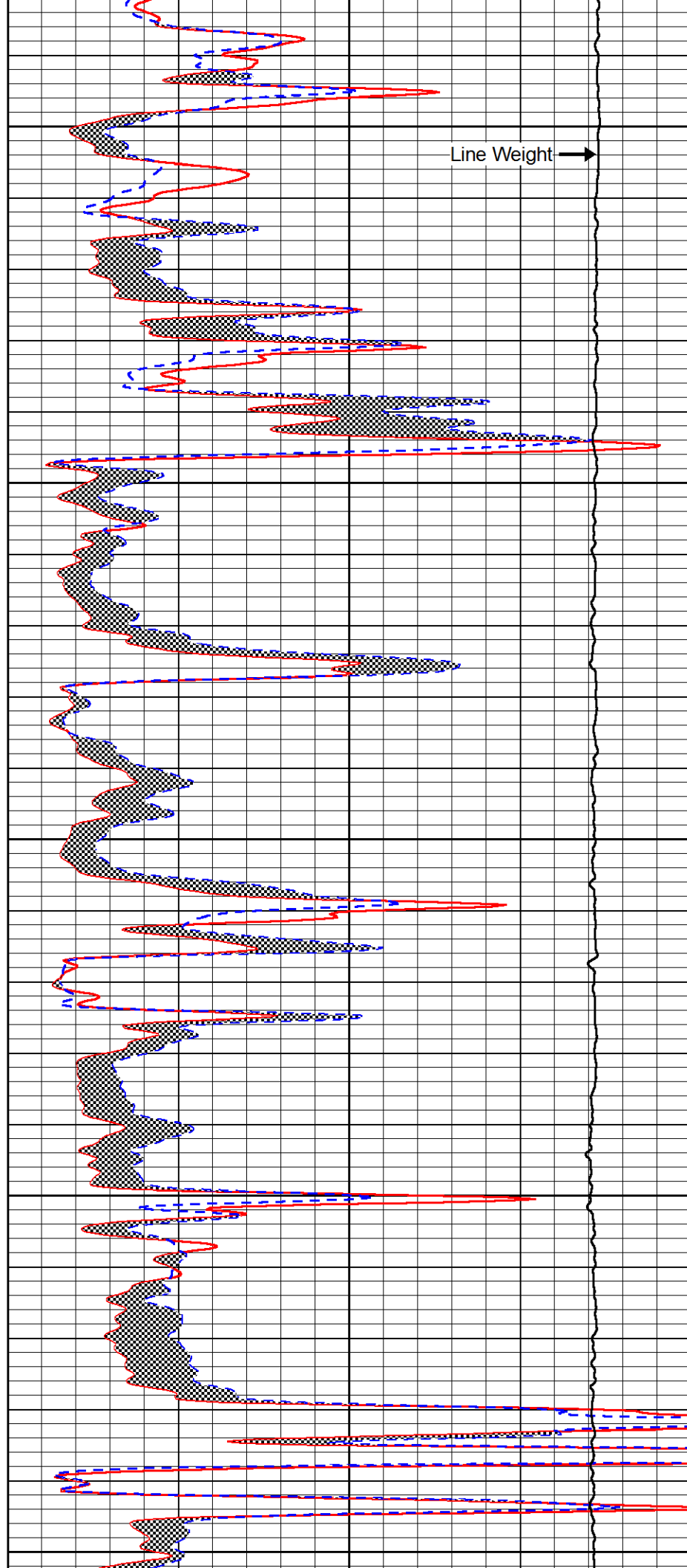
3950

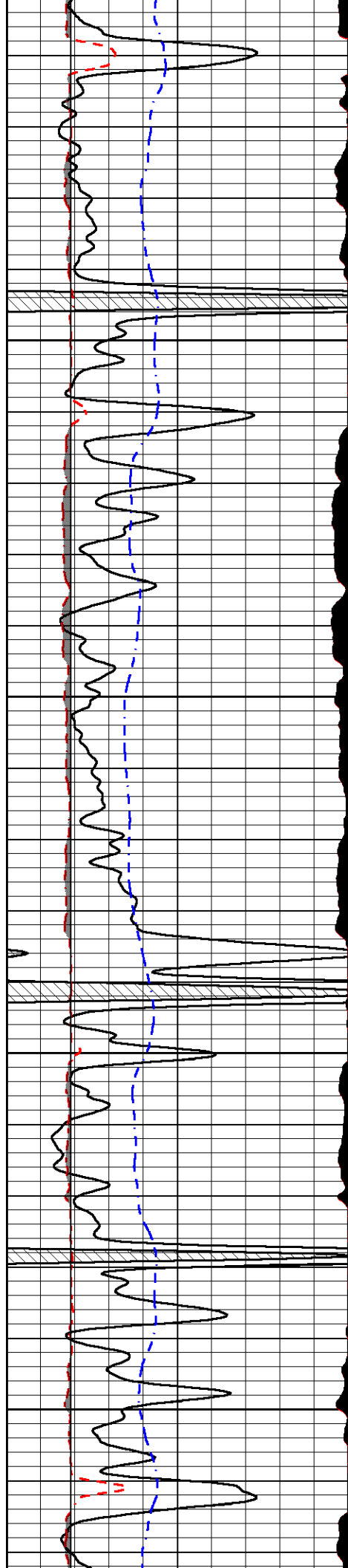
4000

4050

4100

Line Weight →



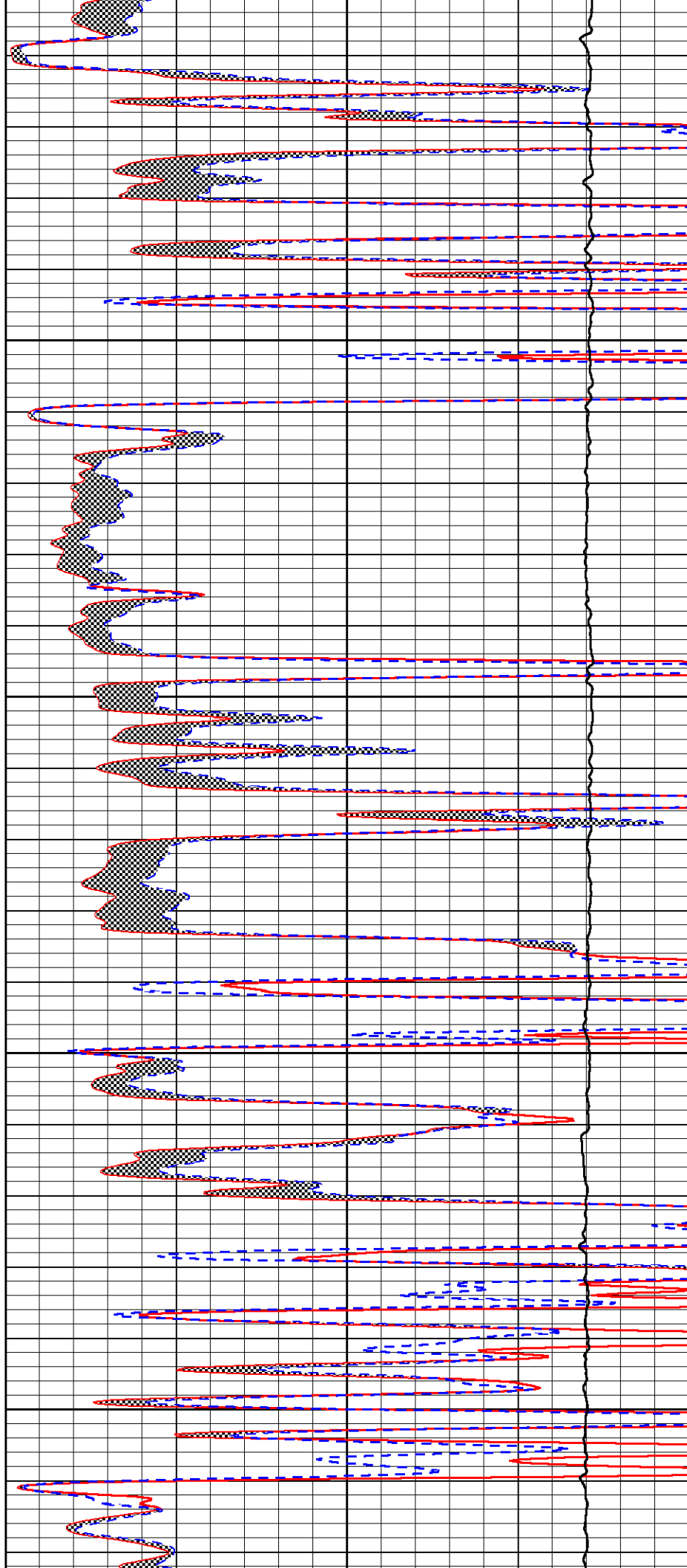


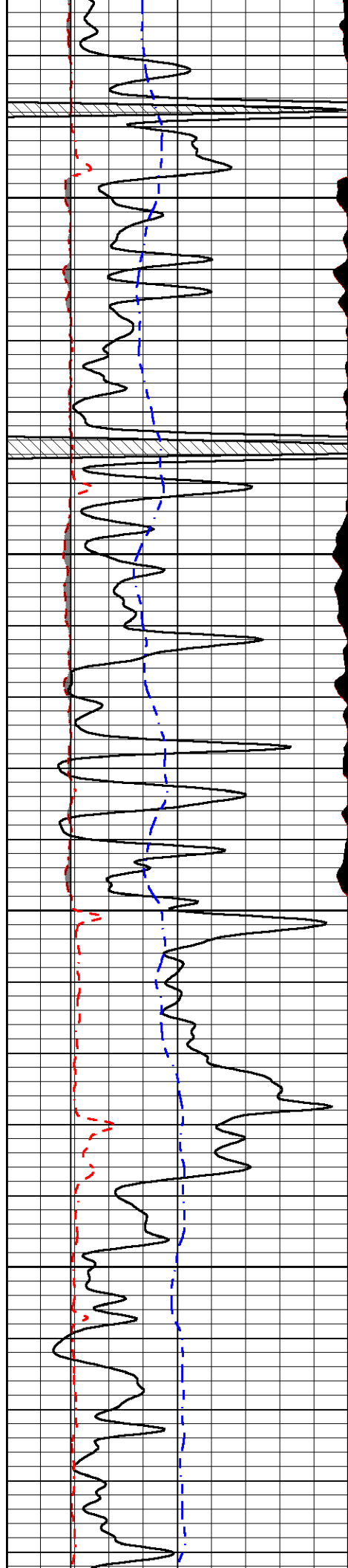
4150

4200

4250

4300



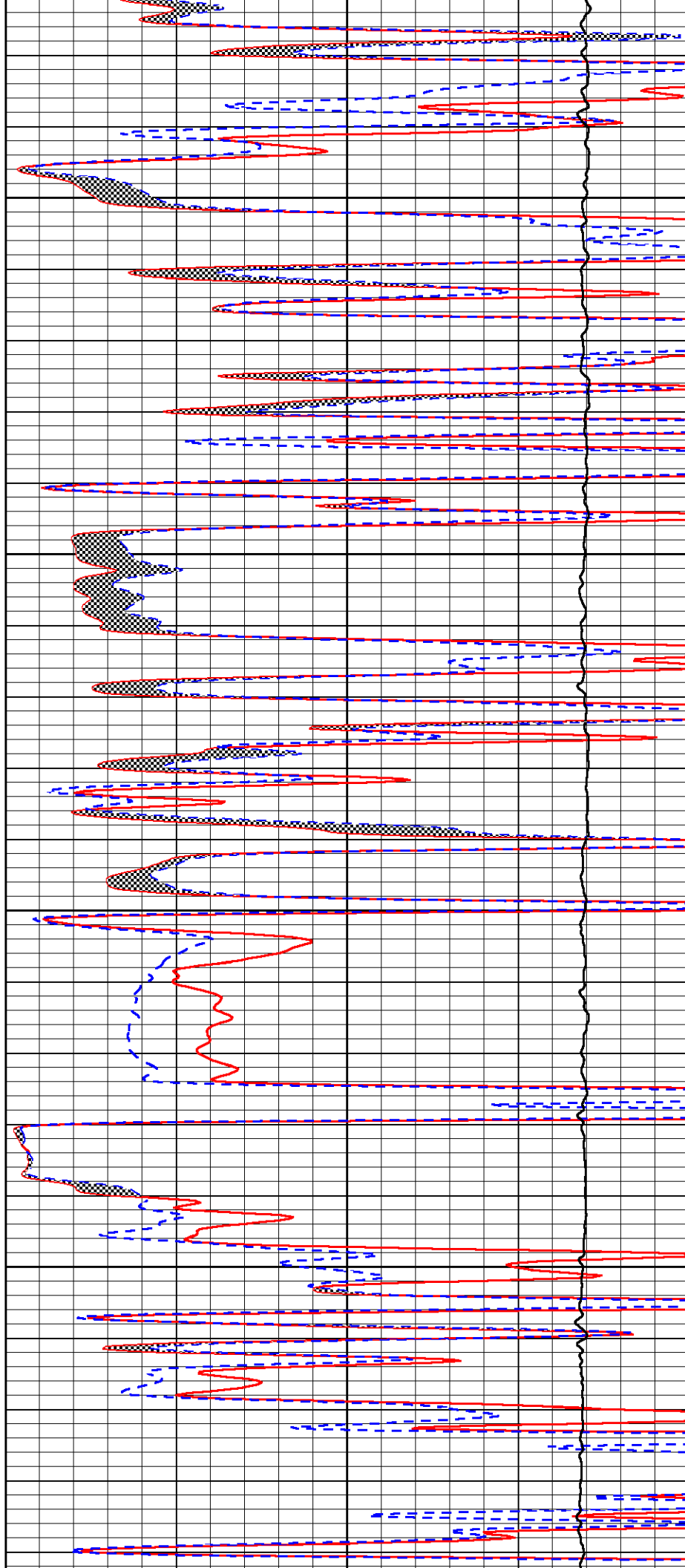


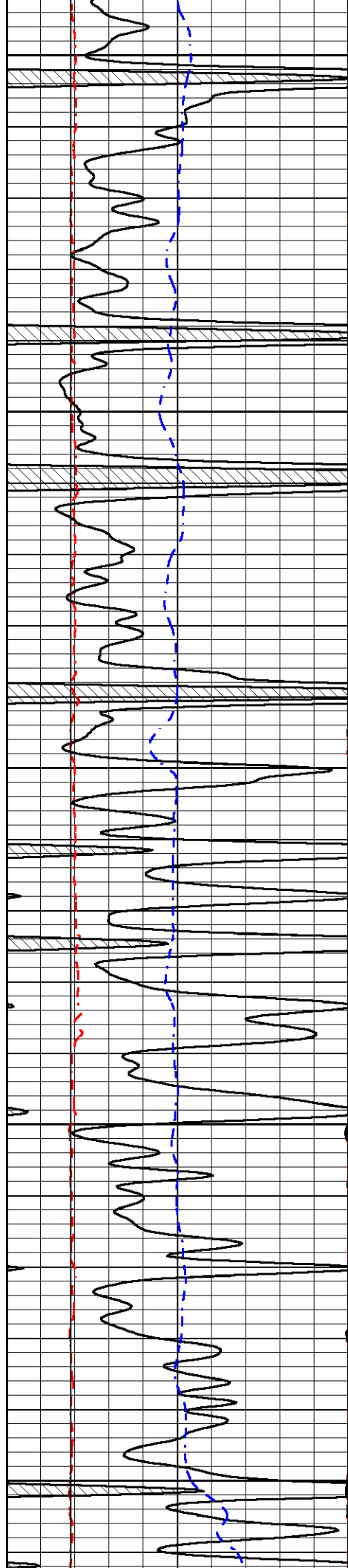
4350

4400

4450

4500





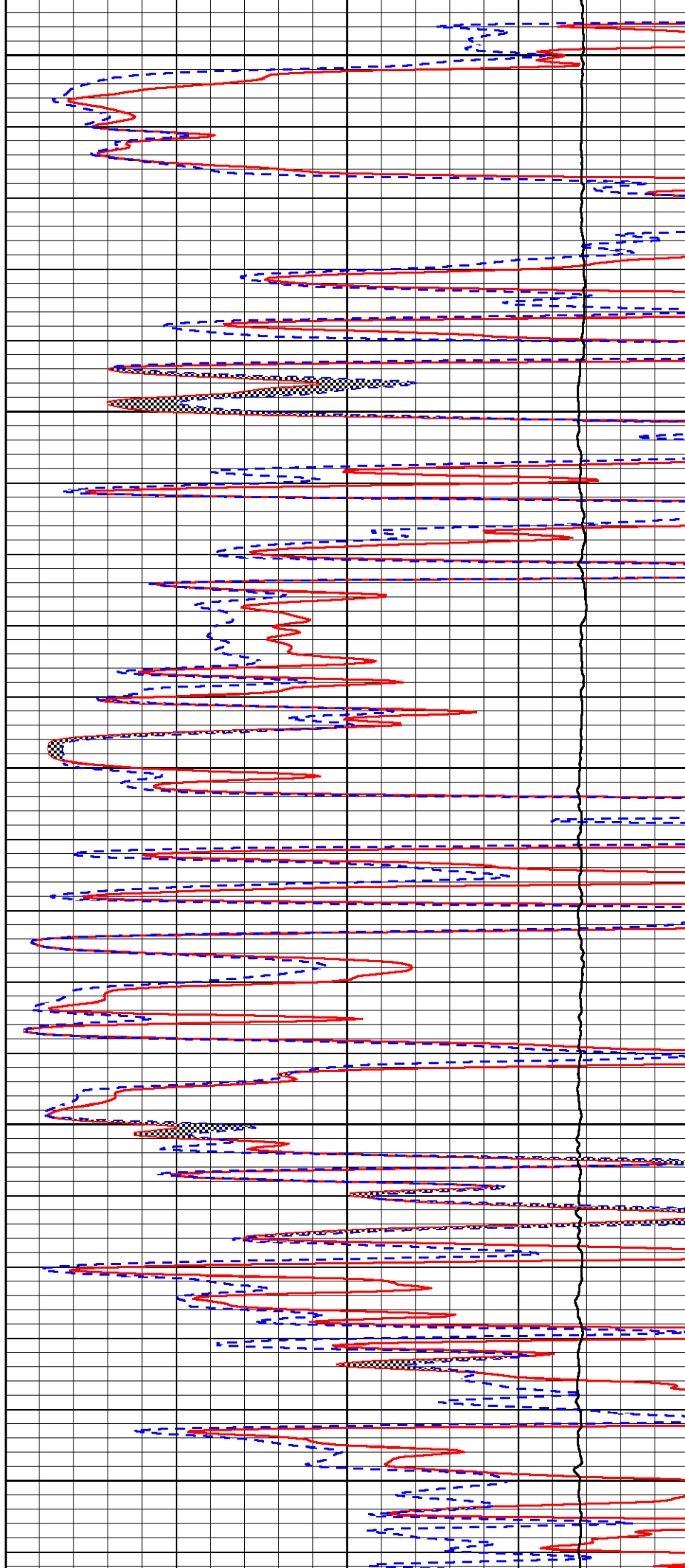
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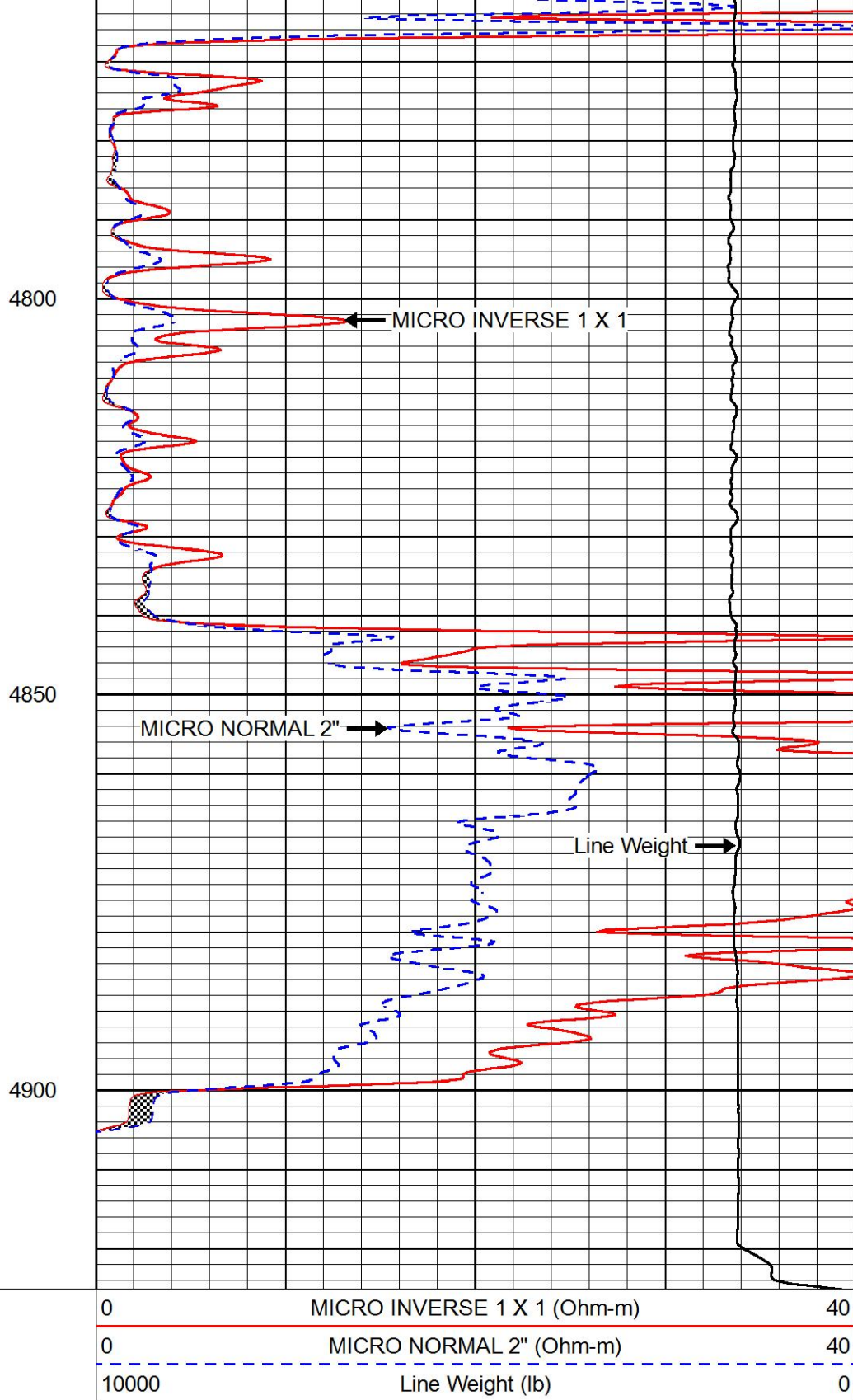
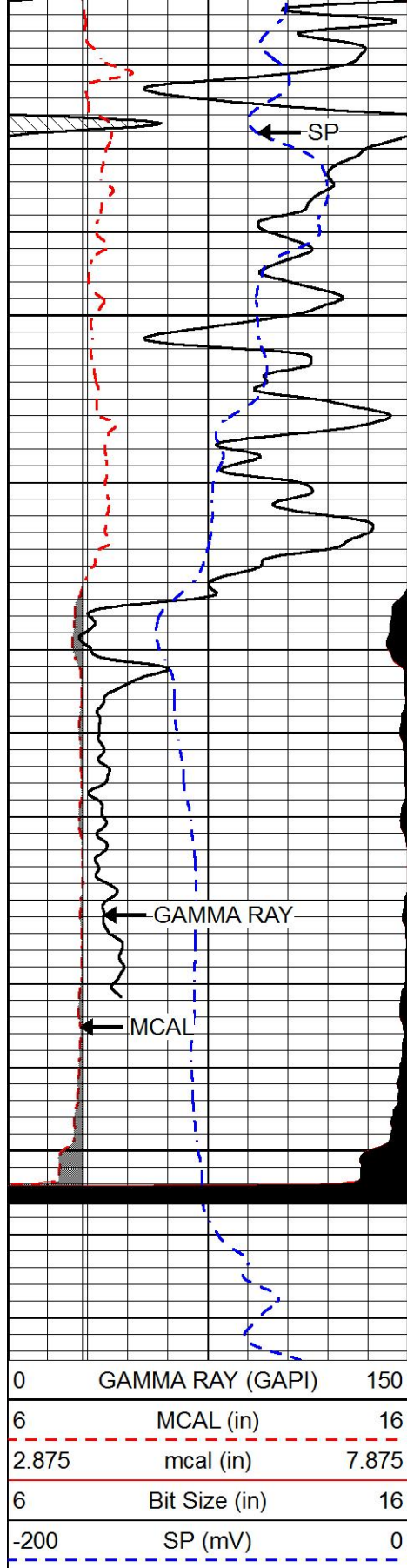
4600

4650

4700

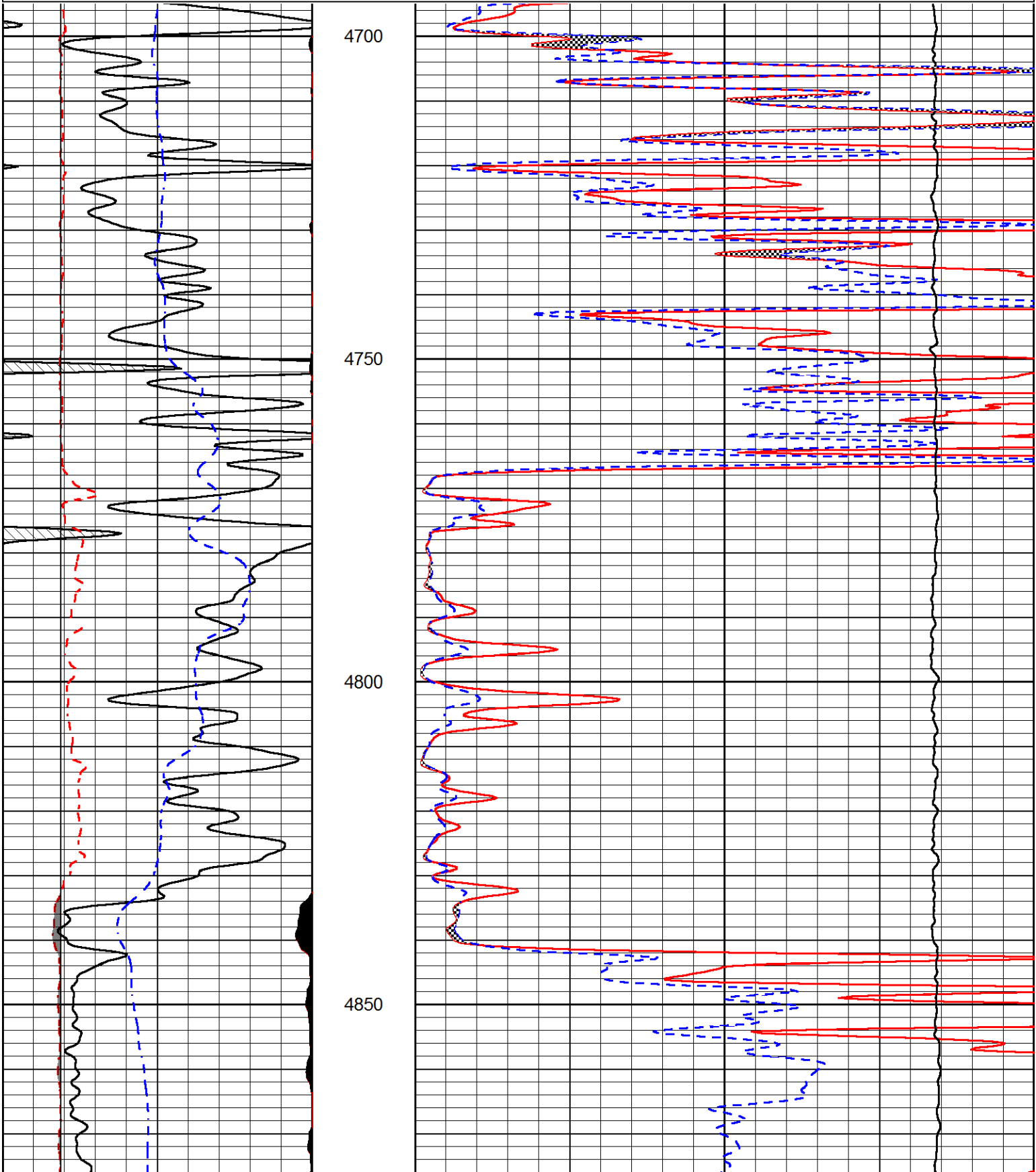
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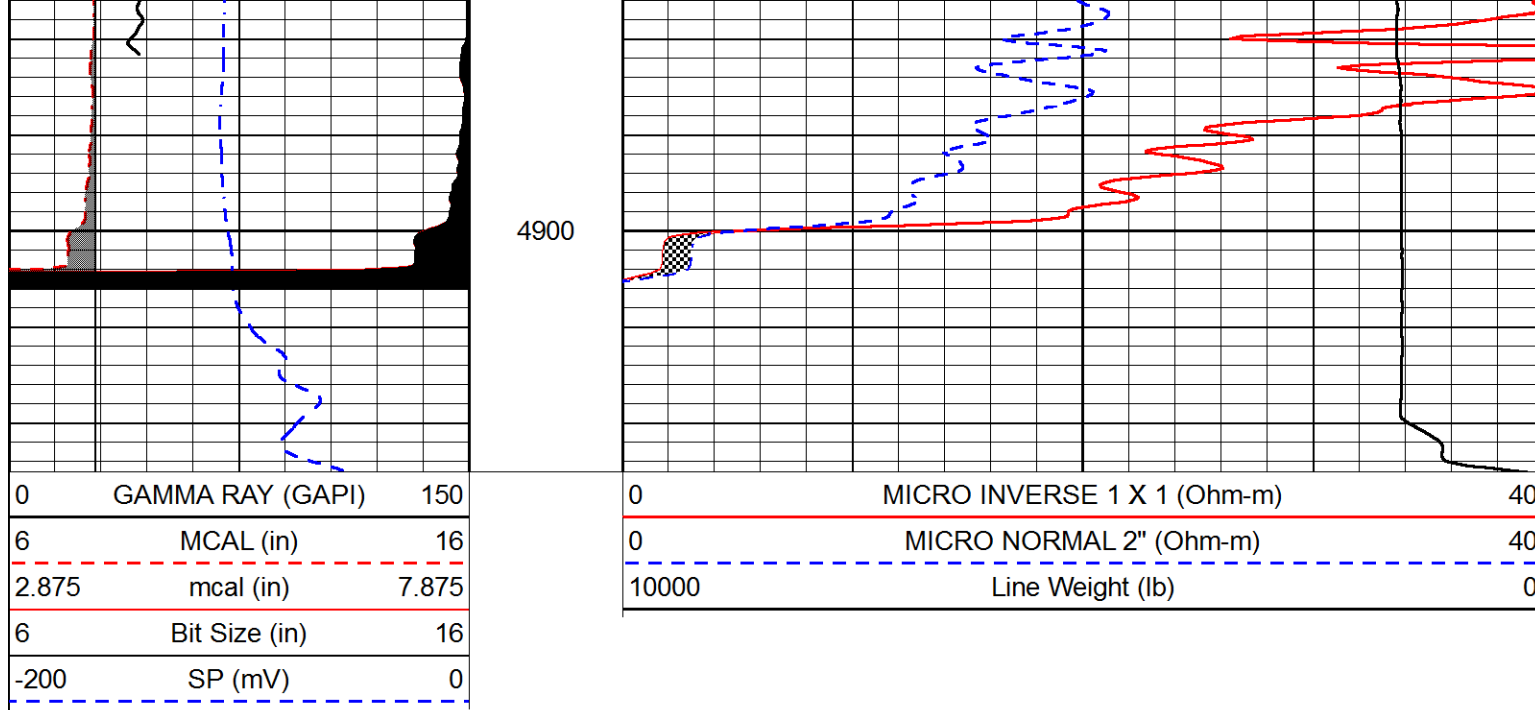




0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

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: shakespear_hovey_1_24.db
 Dataset Pathname: stackmel/pass3.1
 Dataset Creation: Sun Feb 24 11:09:12 2019

Dual Induction Calibration Report

Serial-Model: 967 (HT)-PSI HIGH TEMP
 Calibration Performed: Sun Oct 07 19:24:22 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.565	-17.500
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.390	-40.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Sat Sep 08 05:17:35 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	-0.7000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	30000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.6000

Compensated Density Calibration Report

Serial-Model: 126-186-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Tue Feb 12 14:50:39 2019

Master Calibration

	Density			Far Detector	Near Detector	
Magnesium	1.755	g/cc		4753.97	6898.87	cps
Aluminum	2.668	g/cc		896.28	4374.48	cps
Spine Angle = 74.73			Density/Spine Ratio = 0.528			
	Size			Reading		
Small Ring	4.00	in		2.58		
Large Ring	14.00	in		1.66		

Compensated Neutron Calibration Report
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Serial Number:	207-MW
Tool Model:	M&W
Calibration Performed:	WED FEB 13 10:30:30 2019

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:	Fri Aug 24 11:16:10 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

	Company	SHAKESPEARE OIL CO., INC.
	Well	HOVEY #1-24
	Field	WILDCAT
	County	WICHITA
	State	KANSAS