



PIONEER
Pioneer Energy Services

MICRORESISTIVITY LOG

Company **LEBSACK OIL PRODUCTION INC.**
Well **GARDEN CITY #10-12**
Field **TANKER**
County **FINNEY**
State **KANSAS**

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County **FINNEY** State **KANSAS**

Location: API #: 15-055-22494-00-00

440' FSL & 330' FEL

SEC 12 TWP 22S RGE 34W

Permanent Datum **GROUND LEVEL** Elevation **2906'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Elevation
K.B. 2919'
D.F. N/A
G.L. 2906'

Date **08/13/2018**

Run Number **ONE**

Depth Driller **4848'**

Depth Logger **4840'**

Bottom Logged Interval **4839'**

Top Log Interval **3600'**

Casing Driller **8.625" @ 435'**

Casing Logger **430'**

Bit Size **7.875"**

Type Fluid in Hole **CHEMICAL**

Salinity, ppm CL **2700**

Density / Viscosity **9.25 55**

pH / Fluid Loss **11.0 8.4**

Source of Sample **FLOWLINE**

Rm @ Meas. Temp **0.44 @ 91**

Rmf @ Meas. Temp **0.33 @ 91**

Rmc @ Meas. Temp **0.59 @ 91**

Source of Rmf / Rmc **CHARTS**

Rm @ BHT **0.32 @ 124**

Operating Rig Time **3 HOURS**

Max Rec. Temp. F **124**

Equipment Number **91**

Location **HAYS**

Recorded By **C. PFEIFER**

Witnessed By **JOSH AUSTIN**

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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.

SCOTT CITY, KANSAS
SOUTH TO TENNIS ROAD, 6 MILES WEST,
1 MILE SOUTH,
WEST INTO

Log Measured From: **KELLY BUSHING** 13 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

Engineer: **C. PFEIFER**
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: **JOSH AUSTIN**
Secondary Witness:
Secondary Witness:
Secondary Witness:

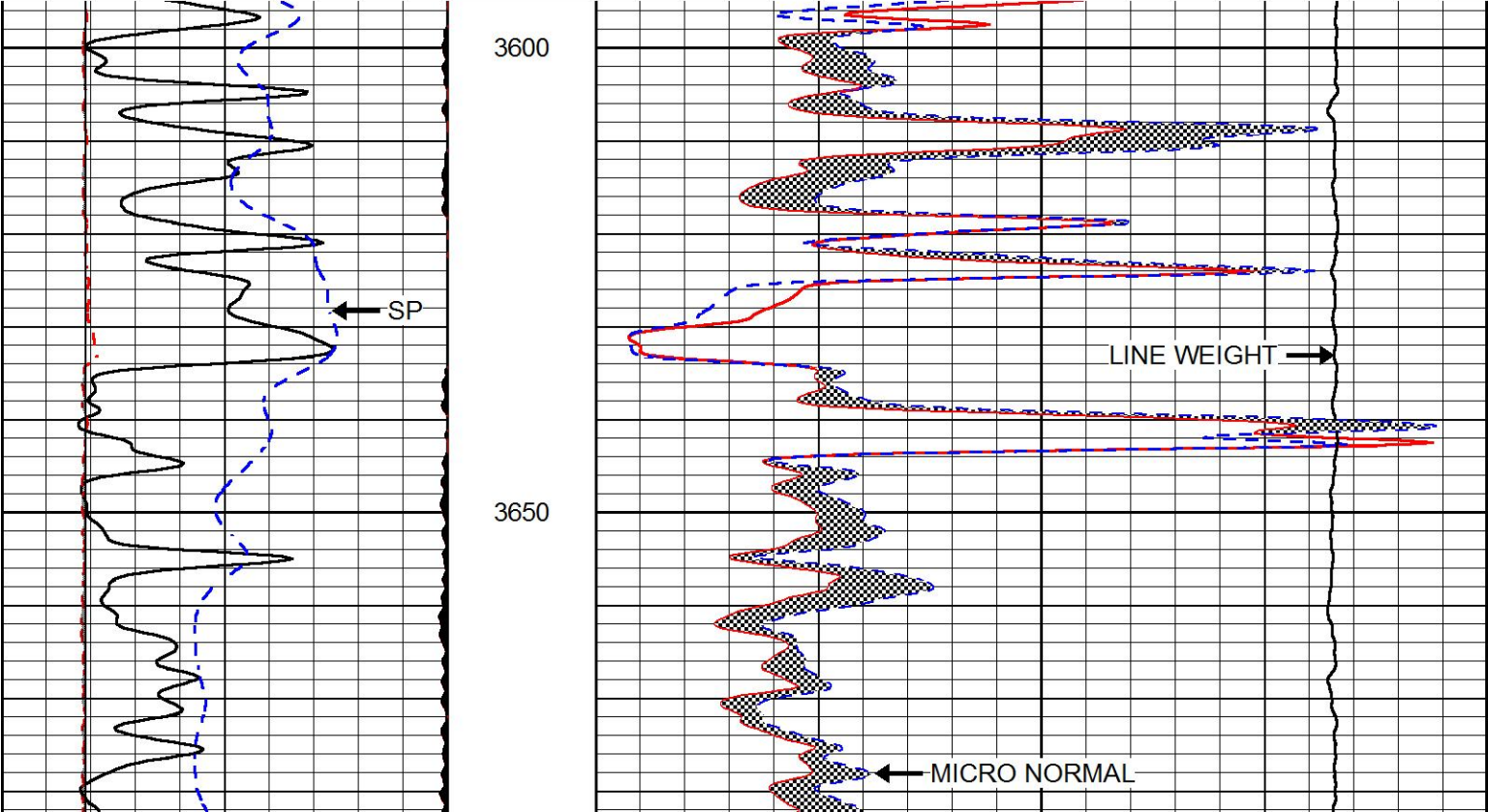
Top - Bottom

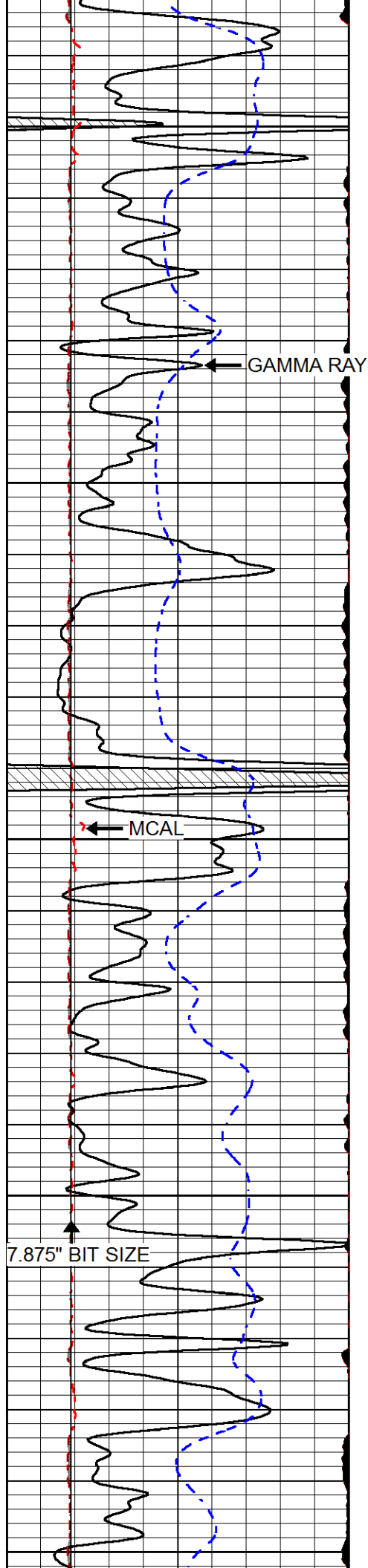
M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	448	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
11	71	0	5.5	0	4840	124	7.875

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 (797-152)	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: lebsack_gardencity_10_12.db: field/well/STKML/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in							

		MAIN PASS	
Database File	lebsack_gardencity_10_12.db		
Dataset Pathname	STKML/pass3.1		
Presentation Format	micro		
Dataset Creation	Mon Aug 13 08:40:52 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	





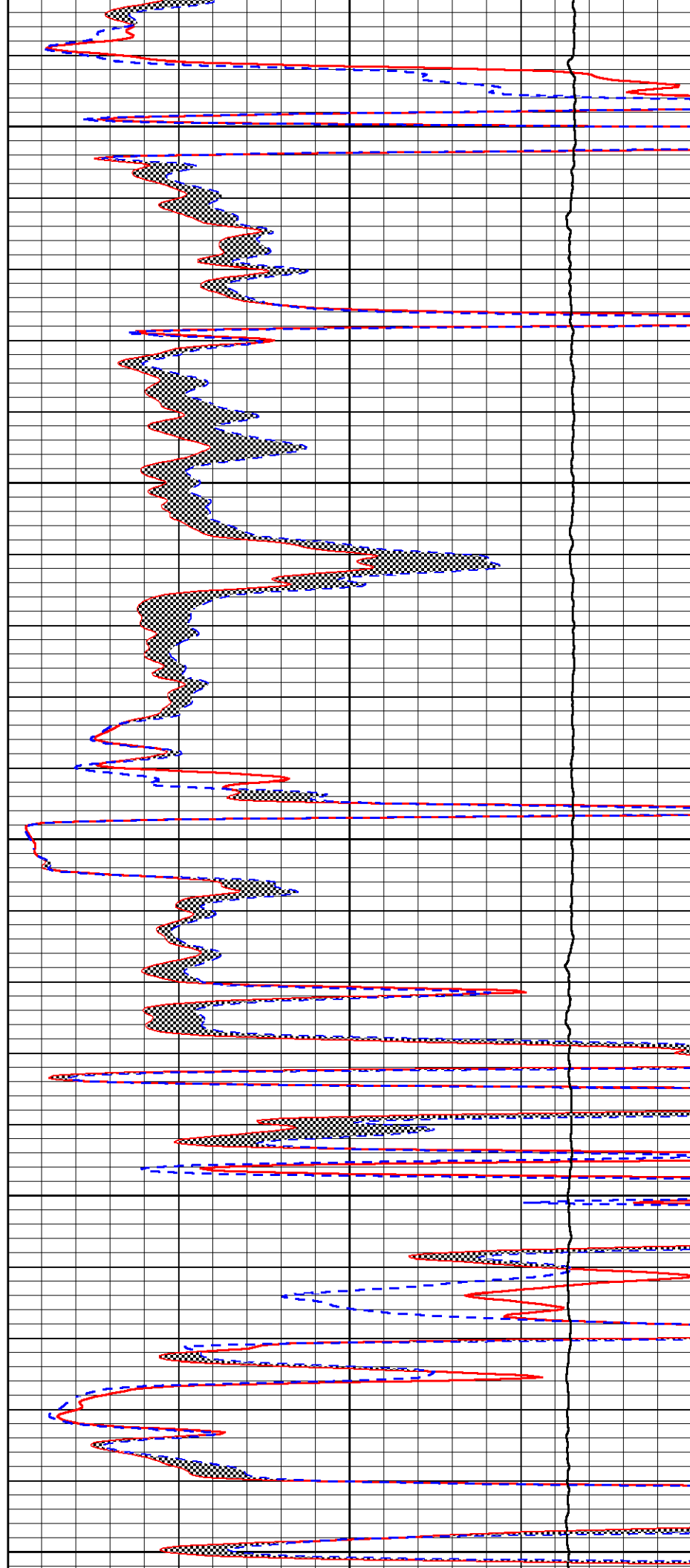
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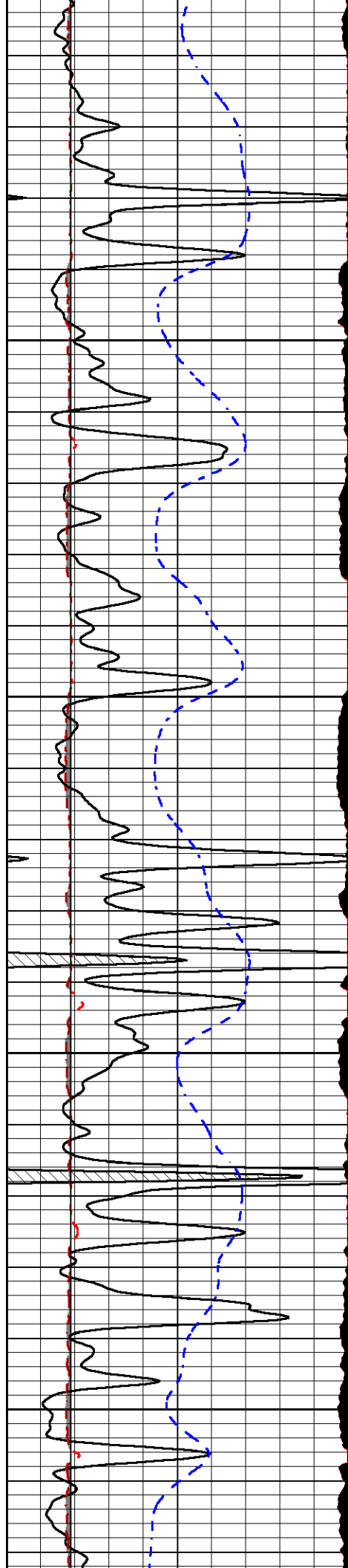
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3800

3850

3900



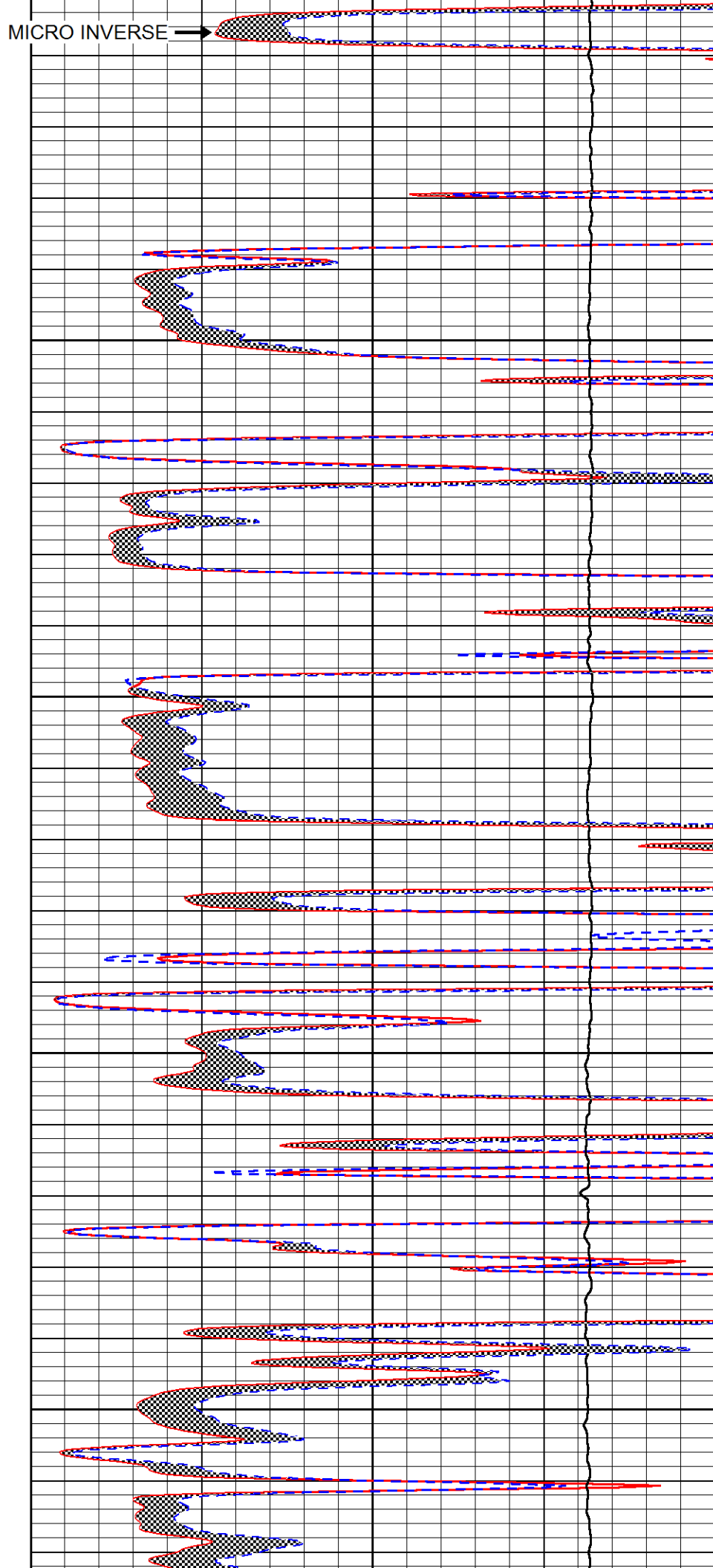


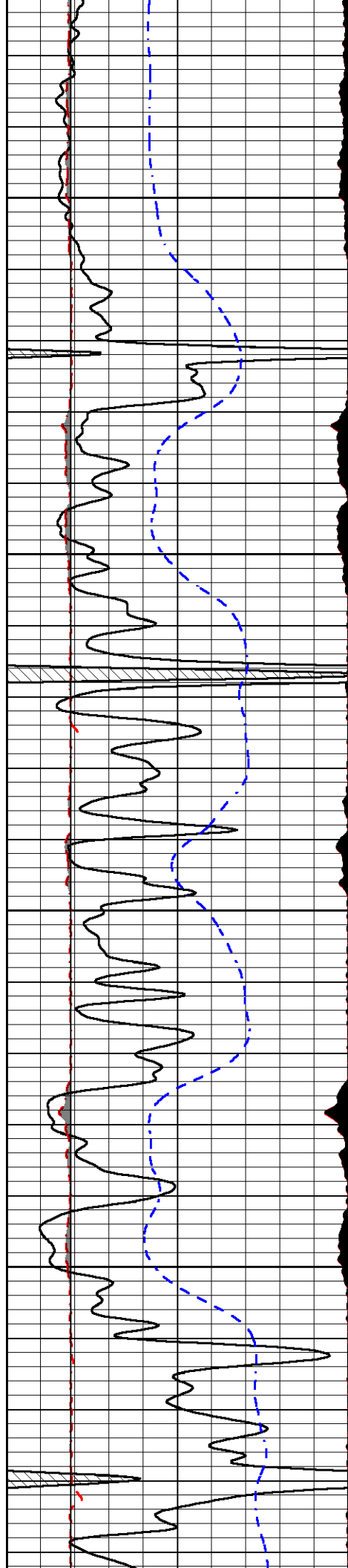
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4000

4050

4100



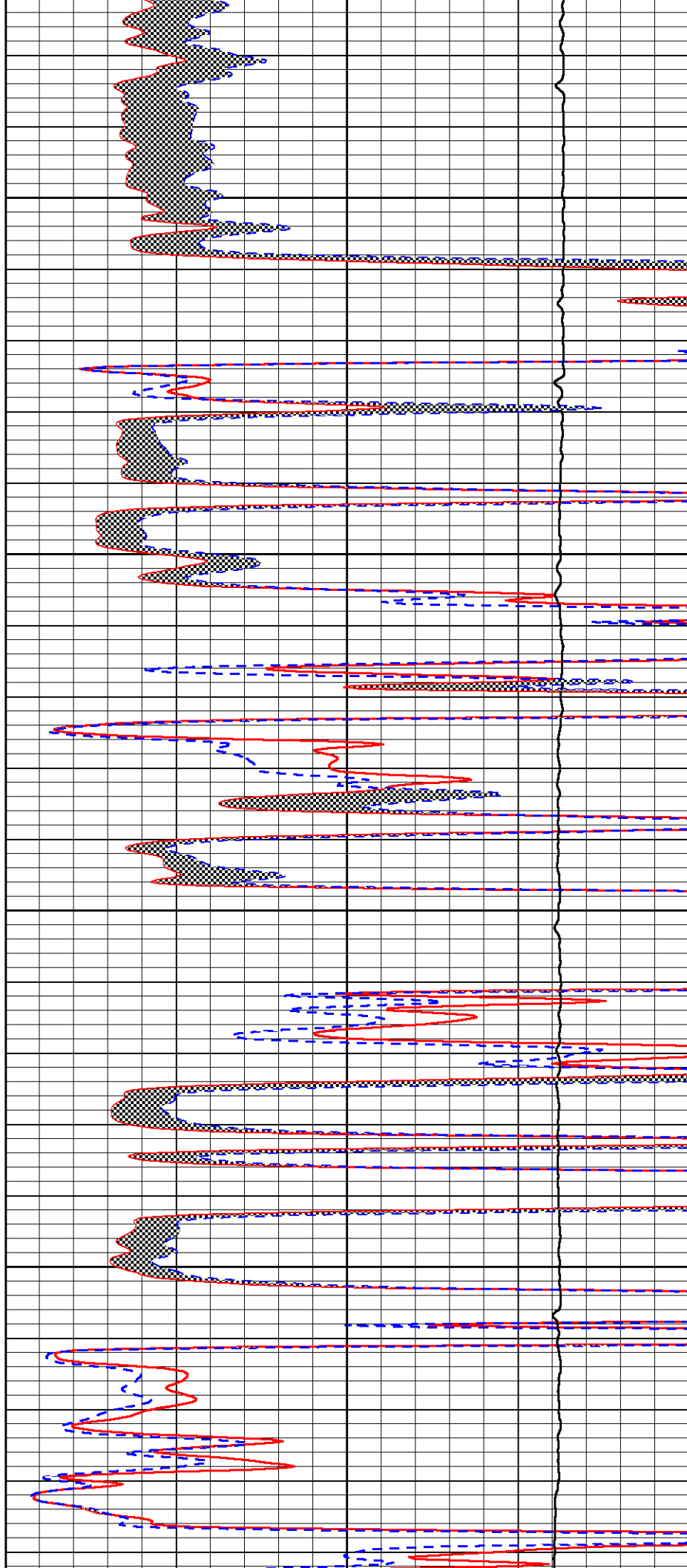


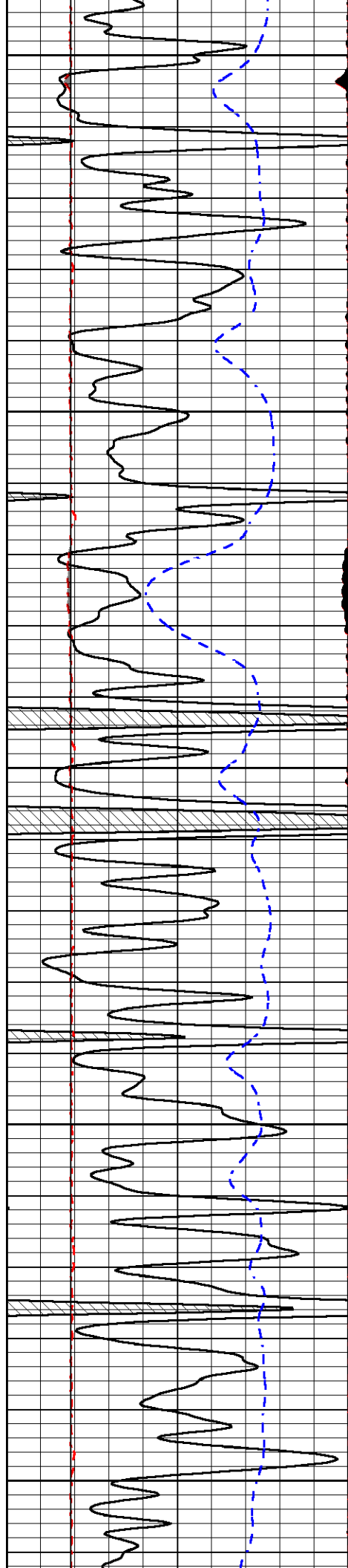
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4200

4250

4300





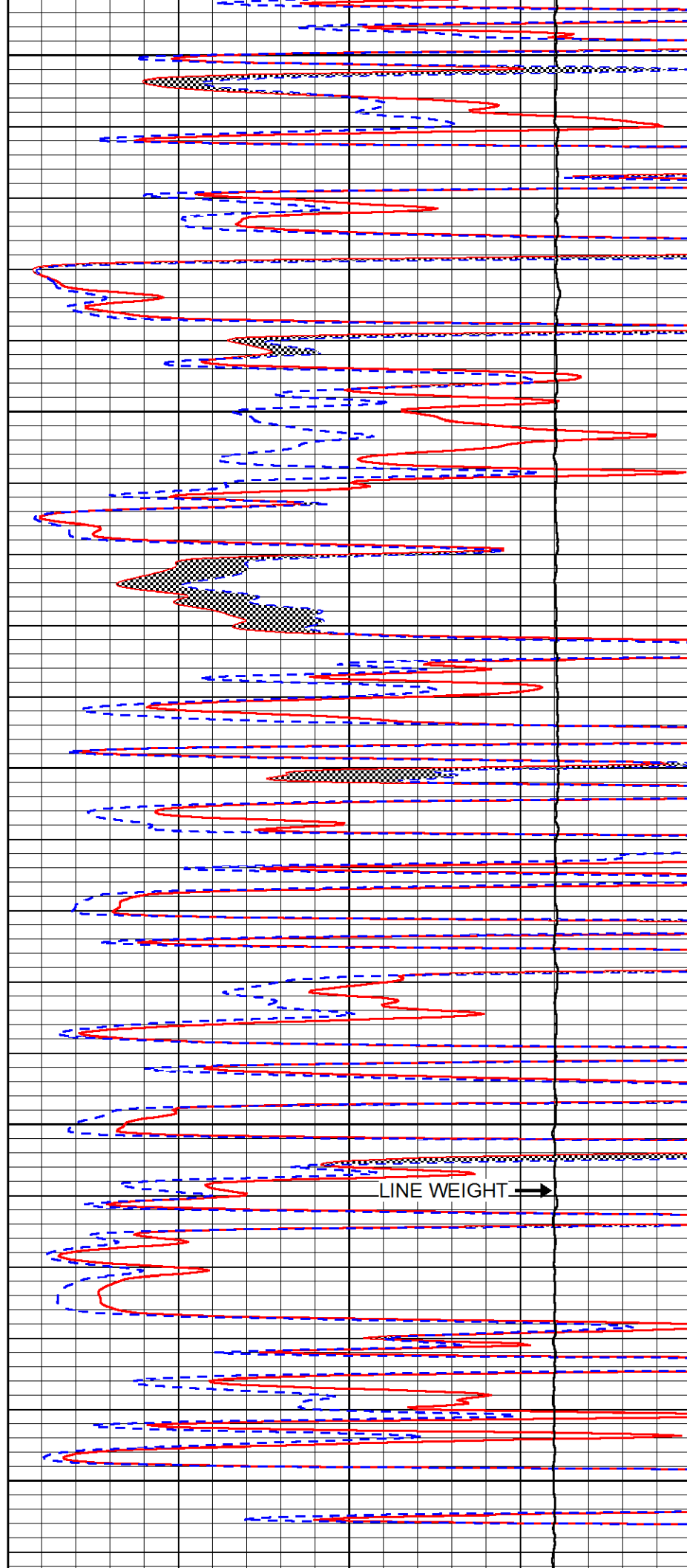
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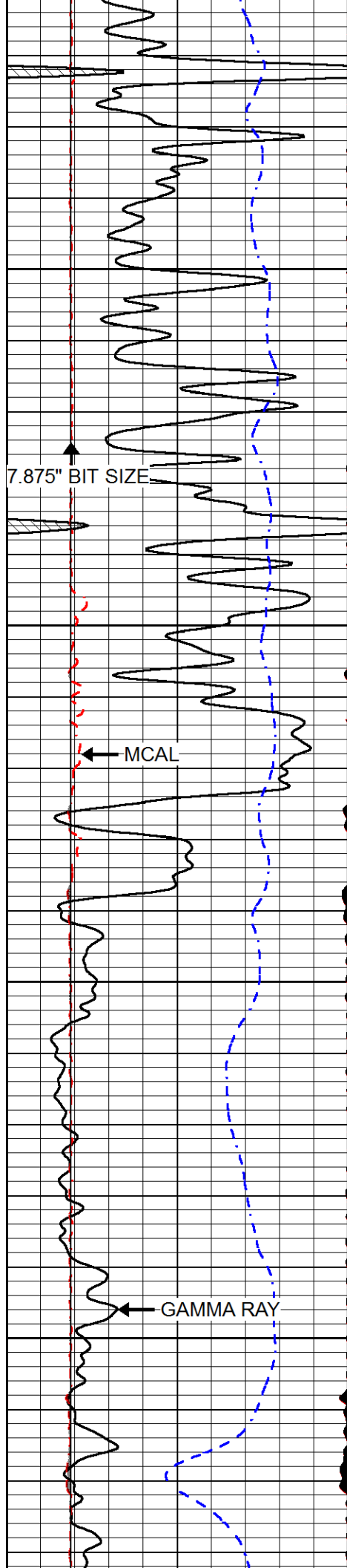
4400

4450

4500

4550





4600

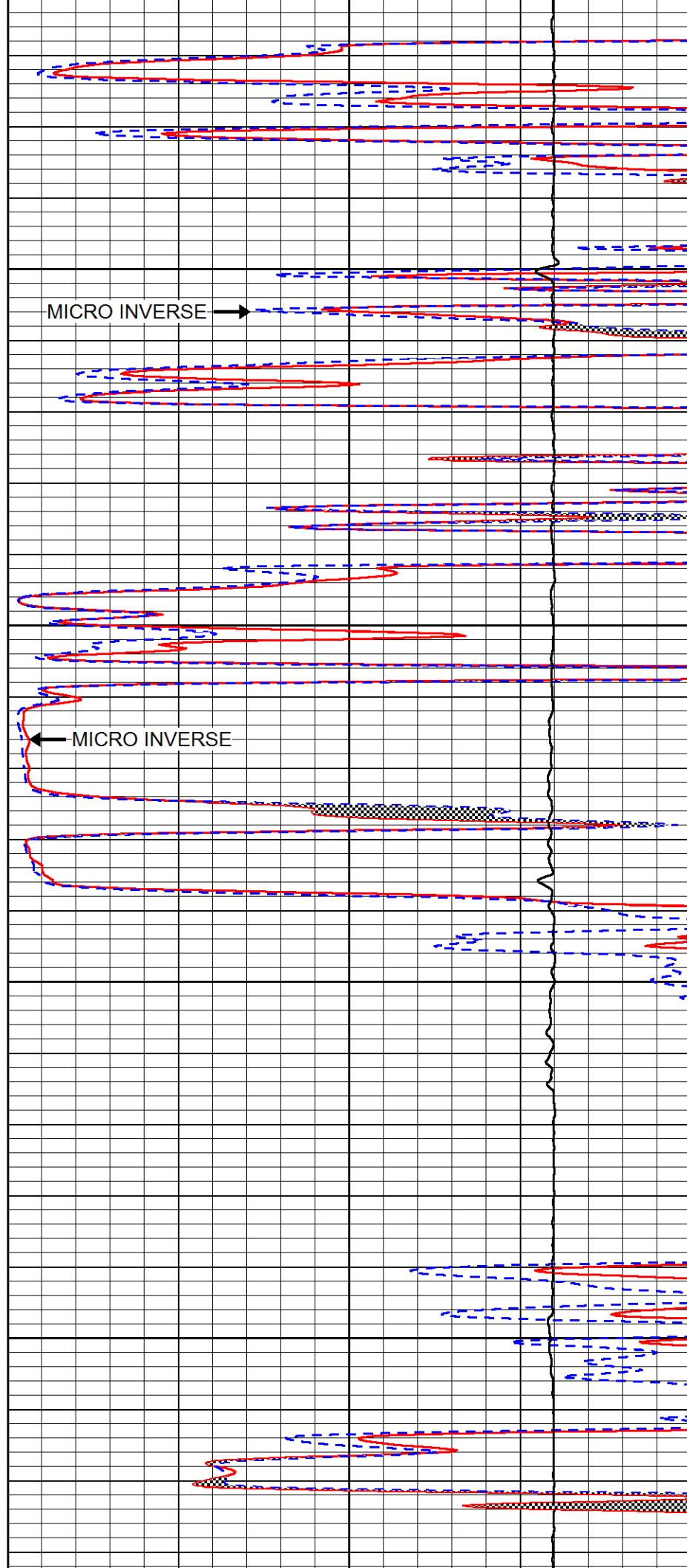
MICRO INVERSE →

4650

← MICRO INVERSE

4700

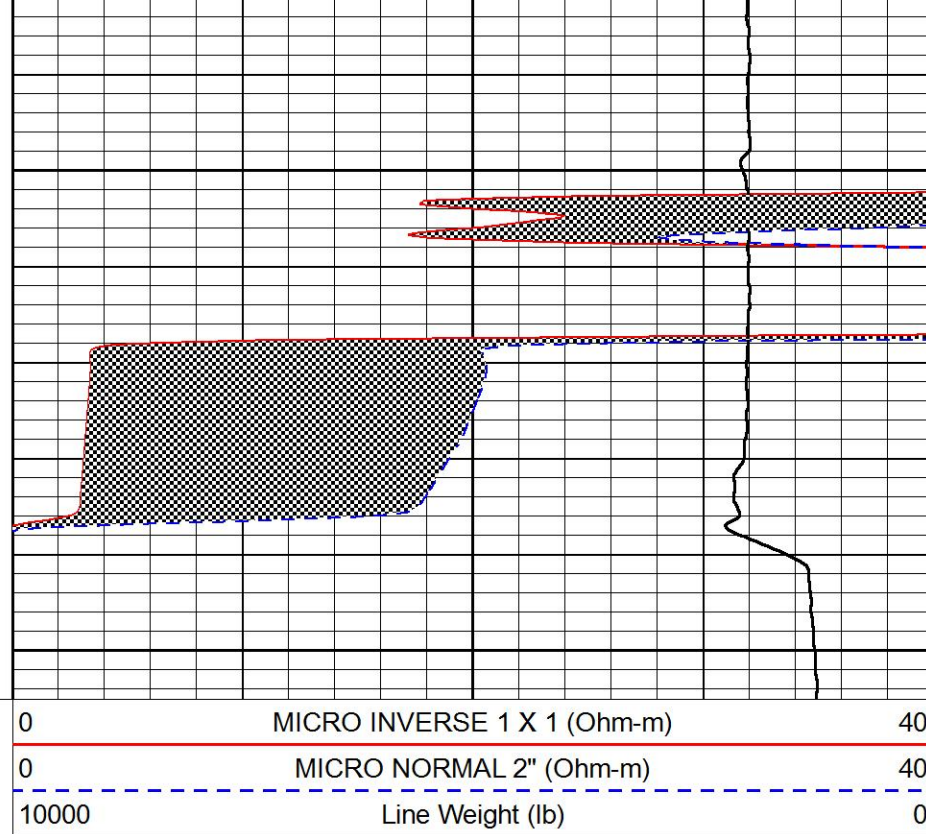
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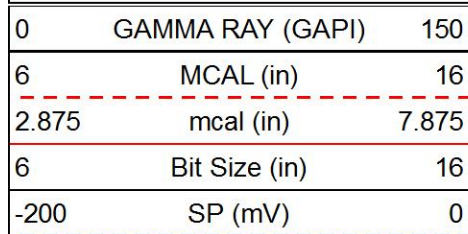
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4850

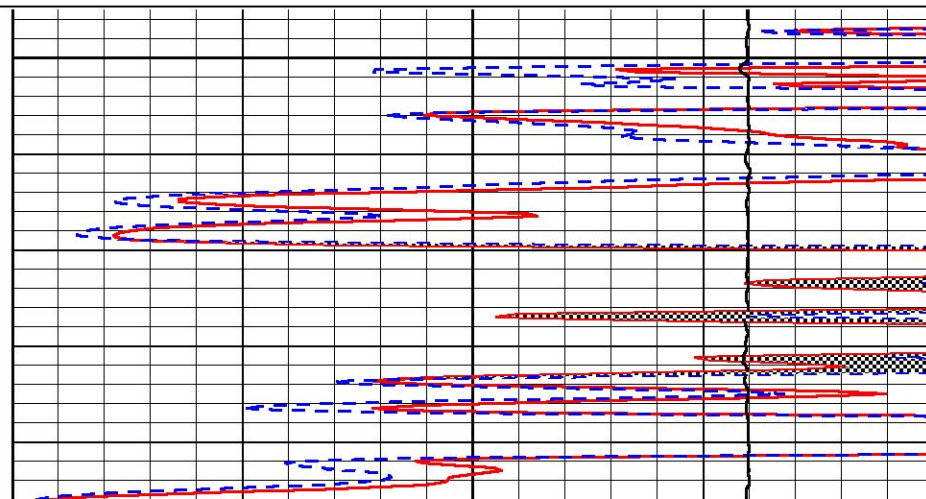
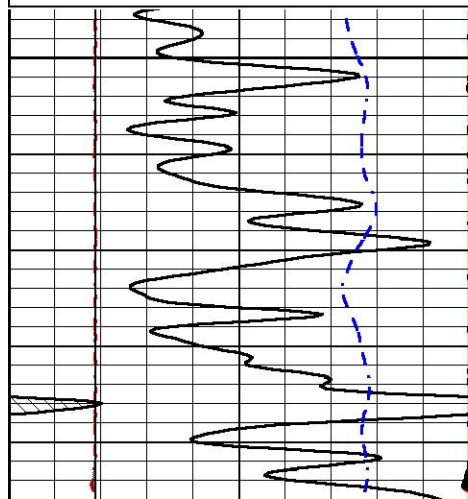
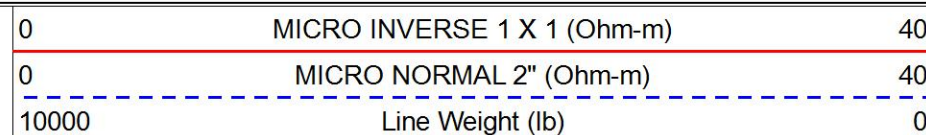


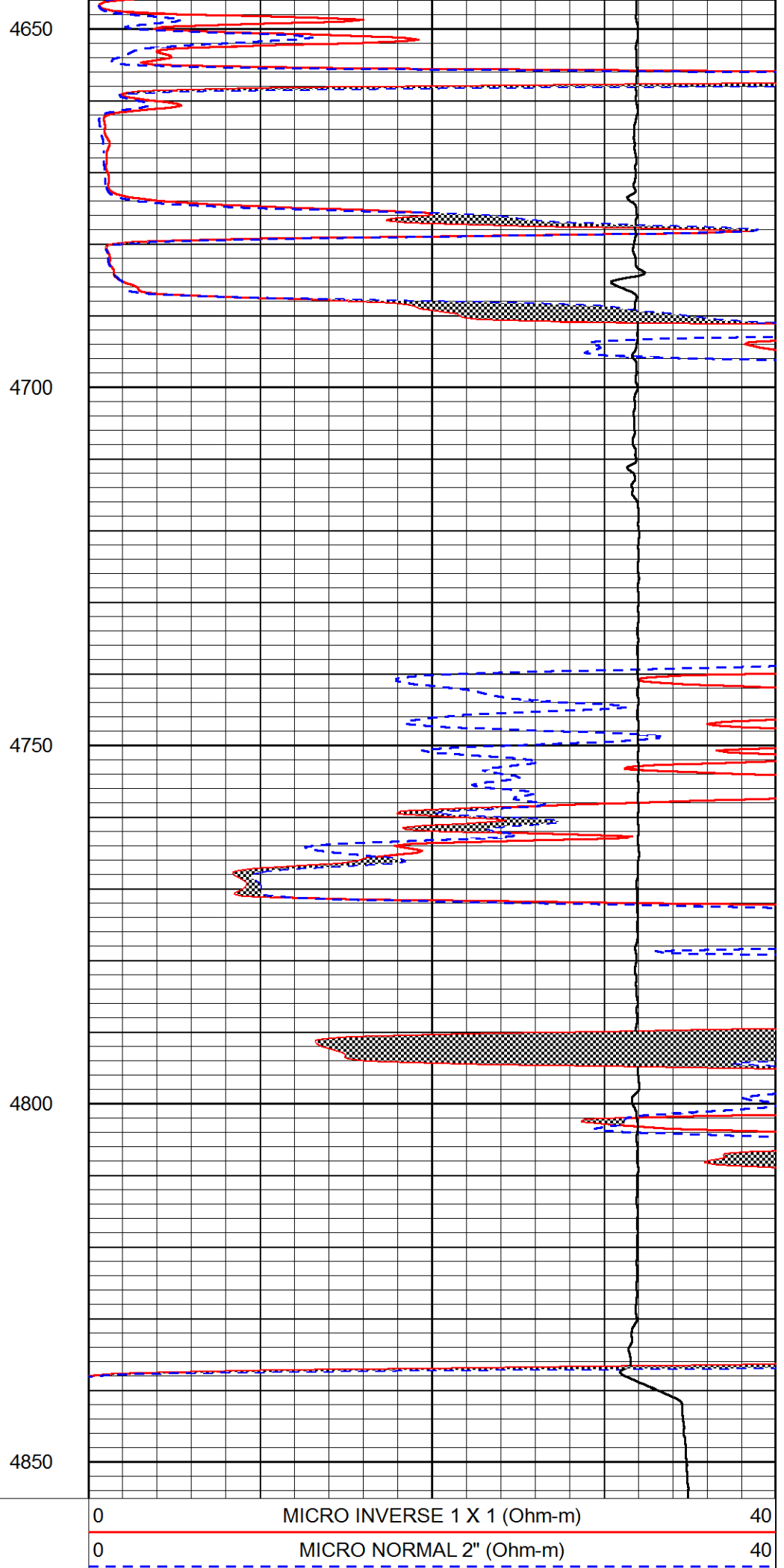
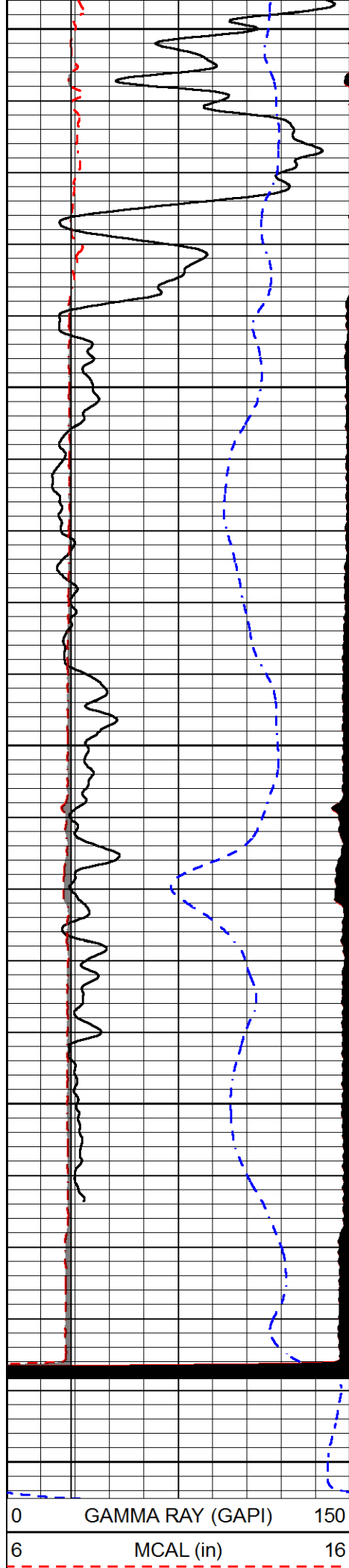
REPEAT SECTION

Database File lebsack_gardencity_10_12.db
 Dataset Pathname STKML/pass2.1
 Presentation Format micro
 Dataset Creation Mon Aug 13 08:58:02 2018
 Charted by Depth in Feet scaled 1:240



4600





2.875	mcAl (in)	7.875	10000	Line Weight (lb)	0
6	Bit Size (in)	16			
-200	SP (mV)	0			

Calibration Report					
Database File	lebsack_gardencity_10_12.db				
Dataset Pathname	STKML/pass3.1				
Dataset Creation	Mon Aug 13 08:40:52 2018				

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

		Readings		References			Results	
Loop:		Air	Loop	Air	Loop		Gain	Offset
Deep		167.000	835.000	0.000	255.800	mmho/m	0.565	-20.000
Medium		0.000	1348.000	142.000	255.800	mmho/m	0.390	-40.000

Microlog Calibration Report					
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Serial-Model:	PSI-01-PSIML				
Performed:	Sun Jul 15 07:40:28 2018				

		Readings		References			Results	
		Zero	Cal	Zero	Cal		m	b
Normal		0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	-0.8000
Inverse		0.0000	1.0000	0.0000	1.0000	Ohm-m	24000.0000	-0.6000
Caliper		1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.9600

Compensated Density Calibration Report					
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Serial-Model:	797-152-M&W				
Source / Verifier:	16955B / 2ci				
Master Calibration Performed:	Tue May 01 13:38:28 2018				

Master Calibration					
		Density		Far Detector	Near Detector
Magnesium		1.755	g/cc	4933.40	5500.86 cps
Aluminum		2.650	g/cc	928.80	3521.29 cps
Spine Angle = 75.04			Density/Spine Ratio = 0.518		
		Size		Reading	
Small Ring		5.00	in	1.09	
Large Ring		15.00	in	1.03	

Compensated Neutron Calibration Report					
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Serial Number:	207-MW				
Tool Model:	M&W				
Calibration Performed:	SUN JUL 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:	Sun Jul 15 05:37:08 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

 PIONEER Pioneer Energy Services	Company	LEBSACK OIL PRODUCTION INC.
	Well	GARDEN CITY #1012
	Field	TANKER
	County	FINNEY
	State	KANSAS