



MICRORESISTIVITY LOG

PIONEER
Pioneer Energy Services

Company **EVERGLOW ENERGY, LLC**
Well **HACKNEY #1-15**
Field **WILDCAT**
County **COMANCHE** State **KANSAS**

Location: API #: 15-033-21782-00-00

1980' FNL & 660' FWL

SEC 15 TWP 32S RGE 17W

Permanent Datum **GROUND LEVEL** Elevation **2105'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Other Services
CNL/CDL
DIL
Elevation
K.B. 2110'
D.F. N/A
G.L. 2105'

Date 1/28/2018

Run Number ONE

Depth Driller 5300'

Depth Logger 5300'

Bottom Logged Interval 5299'

Top Log Interval 4000'

Casing Driller 13.375" @ 240'

Casing Logger 242'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 9000

Density / Viscosity 9.3 60

pH / Fluid Loss 9.5 10.8

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.30 @ 45

Rmt @ Meas. Temp 0.23 @ 45

Rmc @ Meas. Temp 0.41 @ 45

Source of Rmt / Rmc CHARTS

Rm @ BHT 0.10 @ 129

Operating Rig Time 3 HOURS

Max Rec. Temp. F 129

Equipment Number 91

Location HAYS

Recorded By D. SCHMIDT

Witnessed By TOM CASTELLI

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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.

COLDWATER,
10 EAST, 1 1/2 SOUTH,
EAST INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

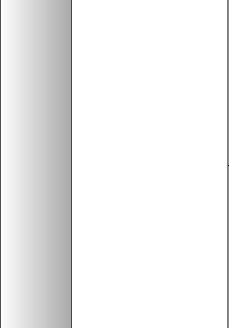
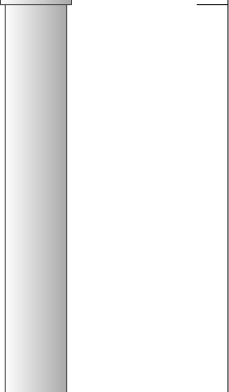
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: TOM CASTELLI
Secondary Witness:
Secondary Witness:
Secondary Witness:

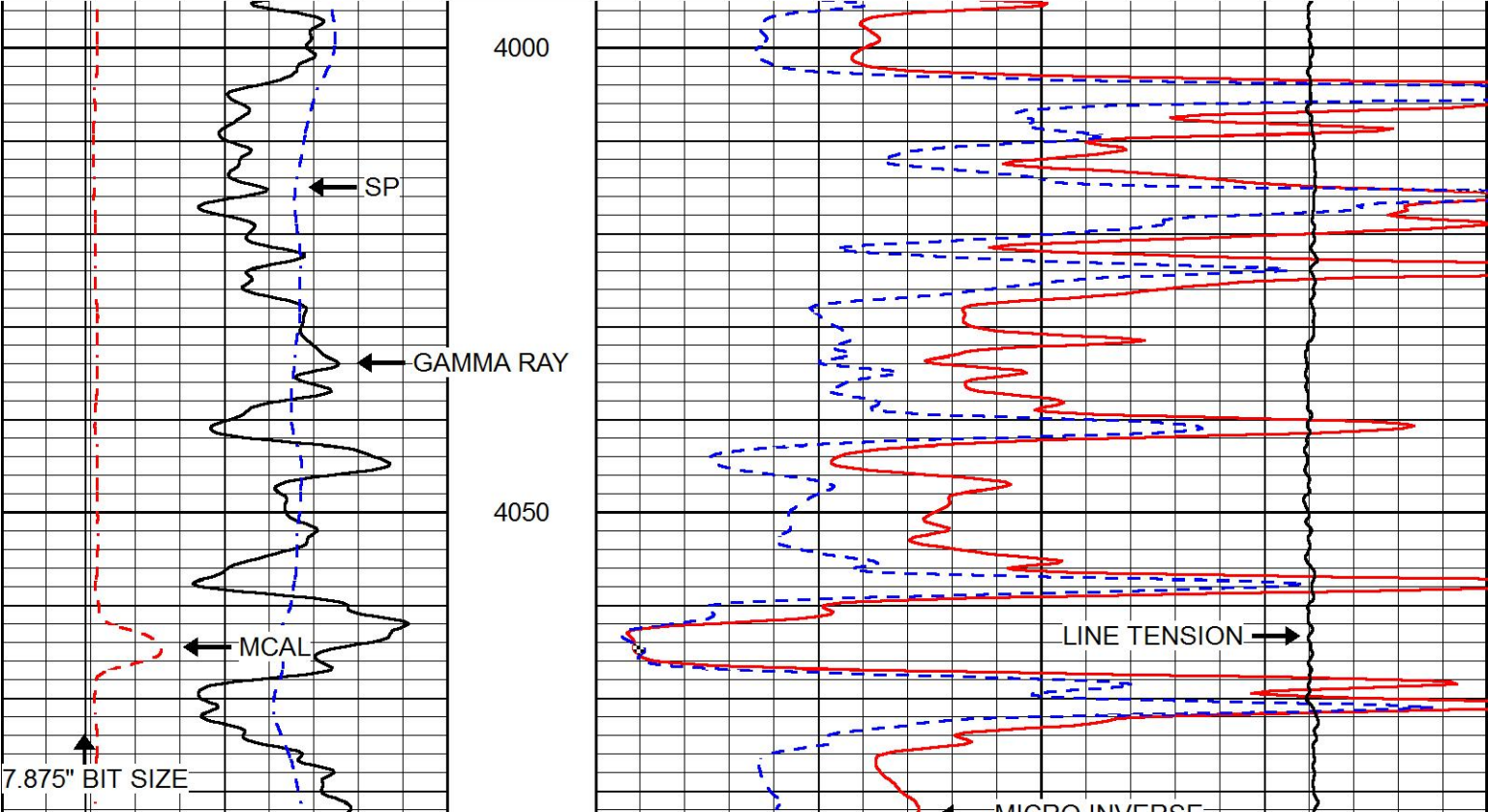
Top - Bottom

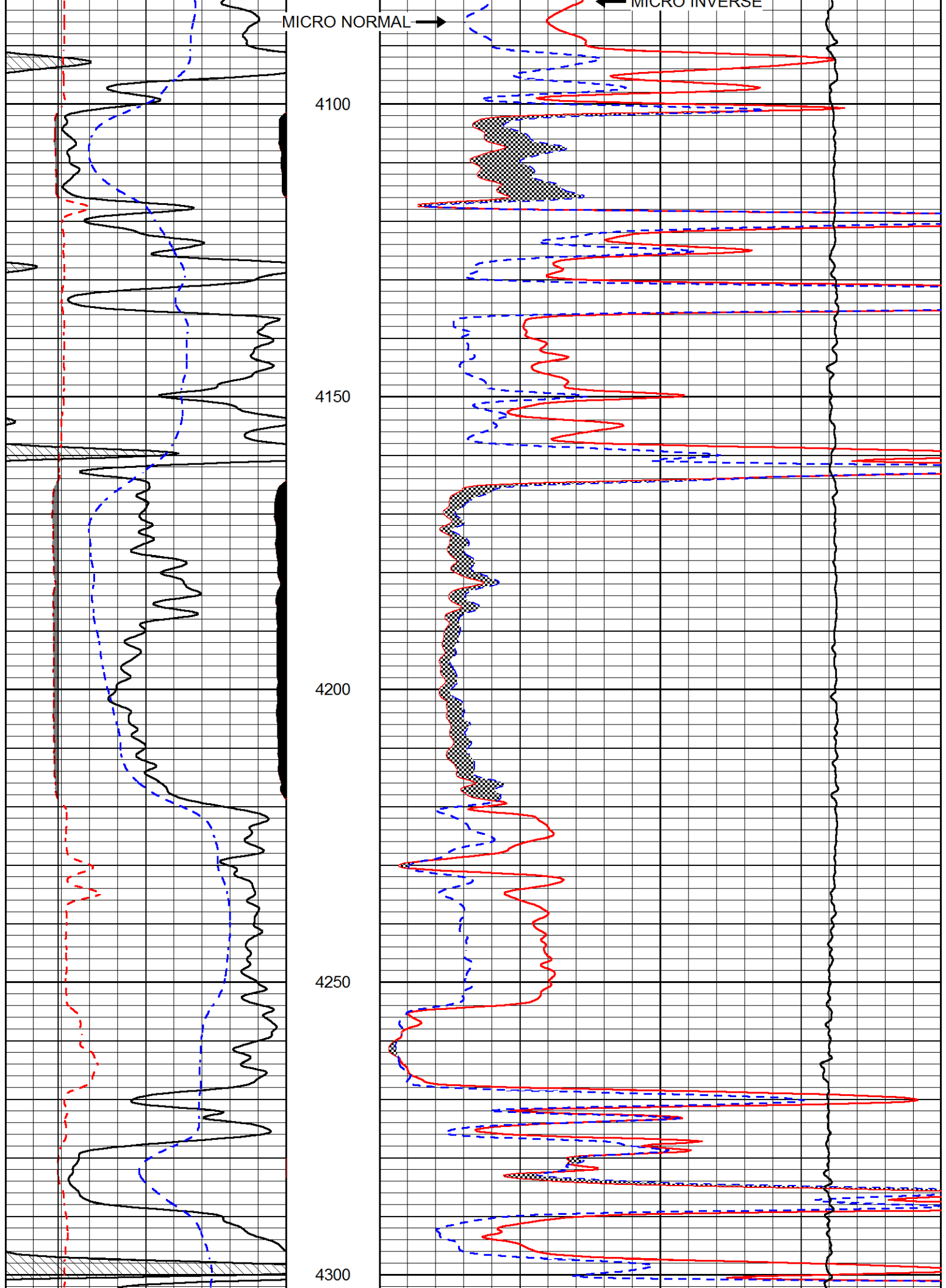
M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	-147	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	50	0	5.5	0	5300	129	7.875

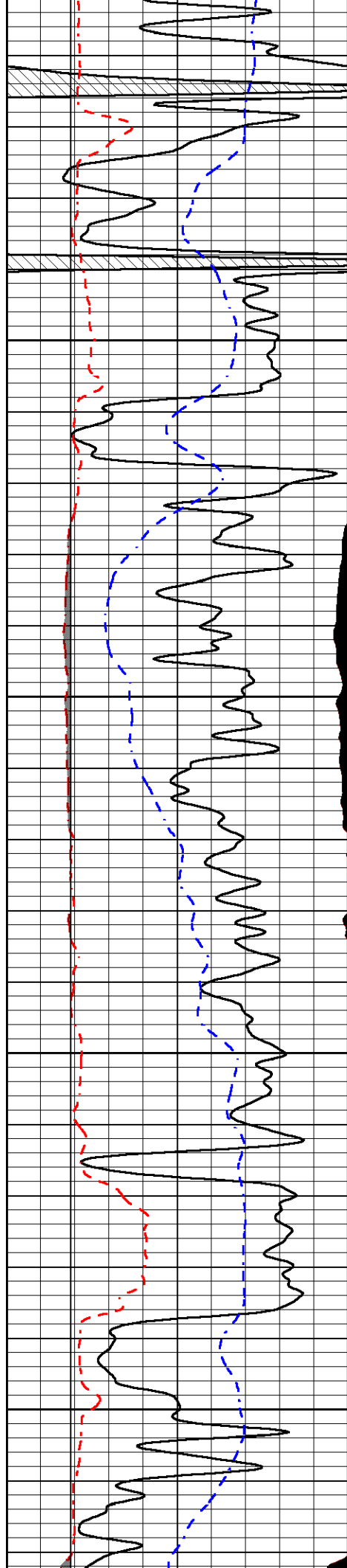
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (227-771)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					

				DIL-PSI HIGH TEMP (933 (HT))	18.50	3.50	220.00
CILD	8.00						
CILM	4.70						
SP	0.20						
Dataset: everglow_hackney 1-15.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	everglow_hackney 1-15.db		
Dataset Pathname	STKML/pass3.1		
Presentation Format	micro		
Dataset Creation	Sun Jan 28 19:26:36 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	





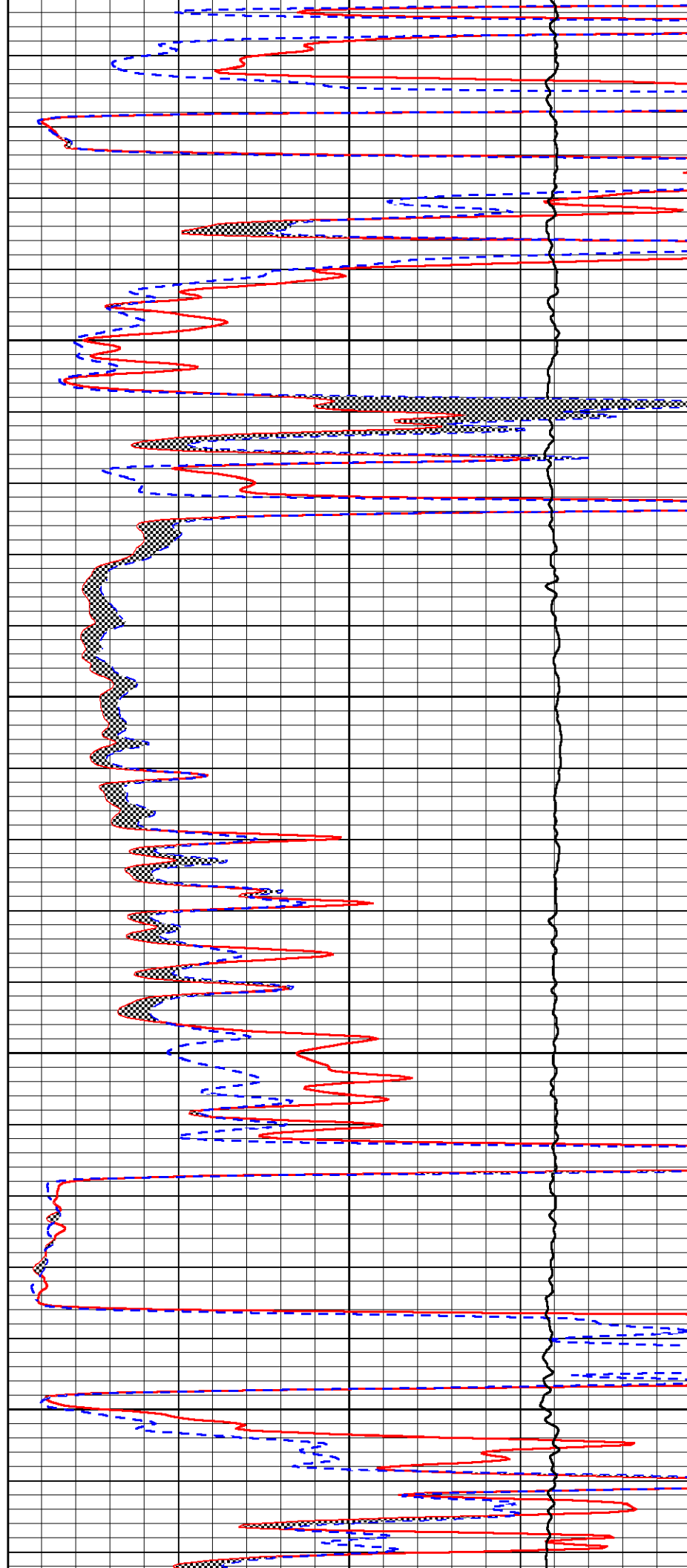


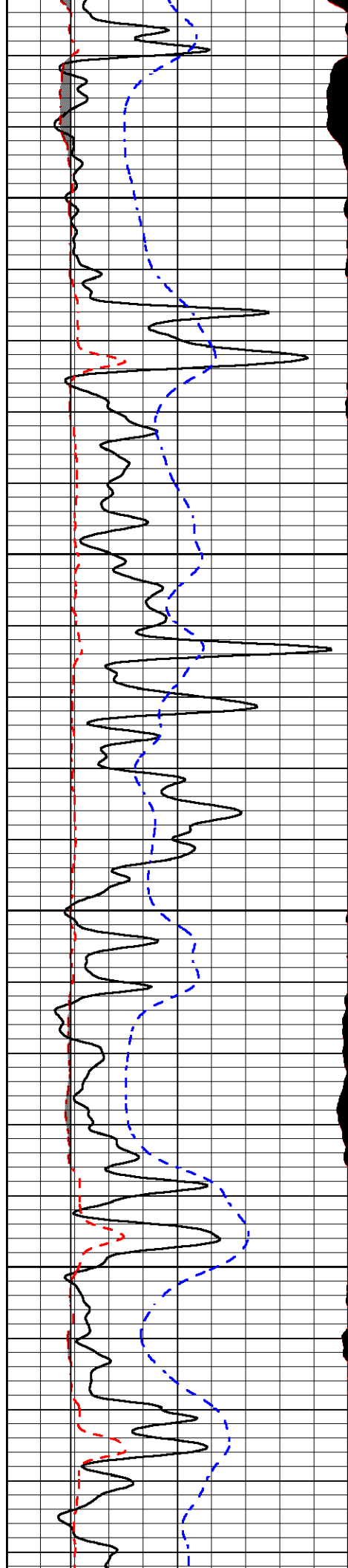
4350

4400

4450

4500



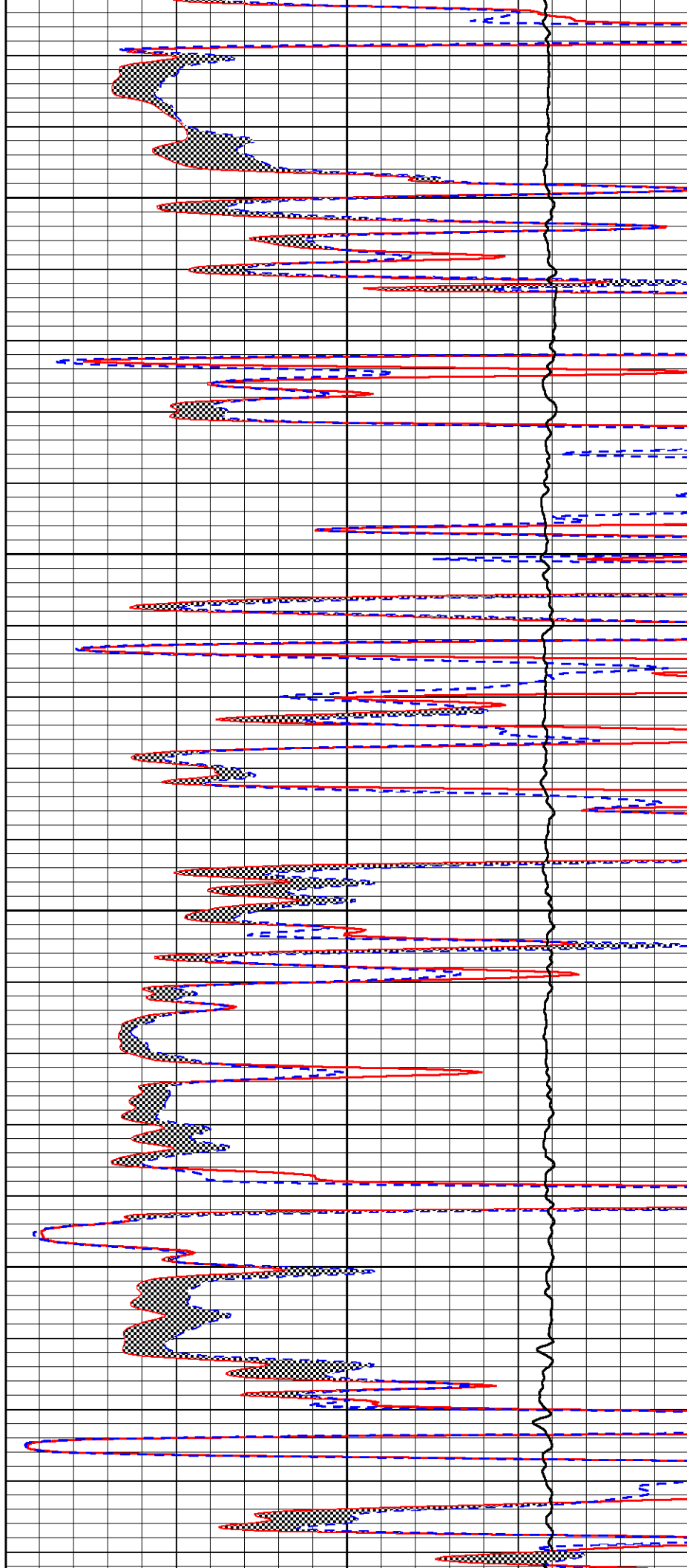


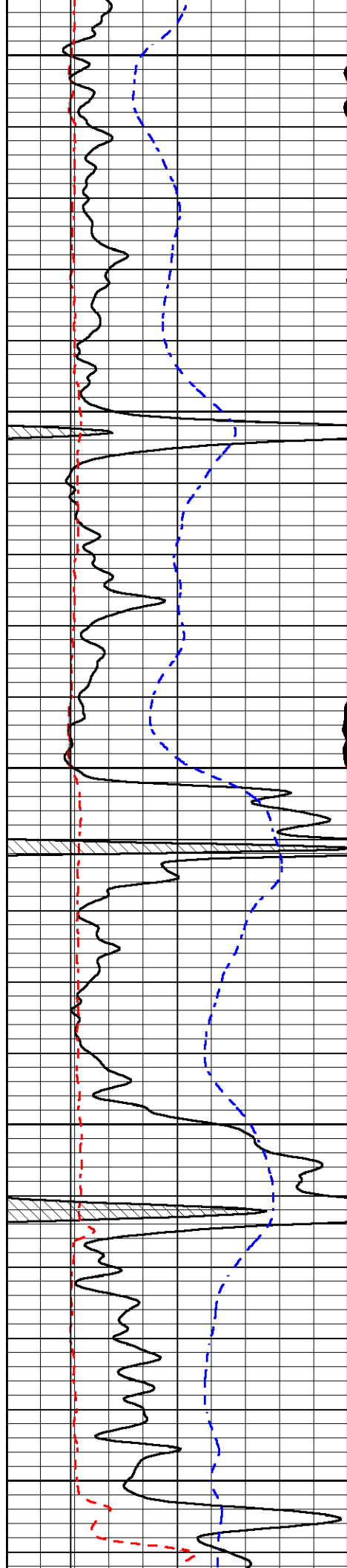
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4600

4650

4700





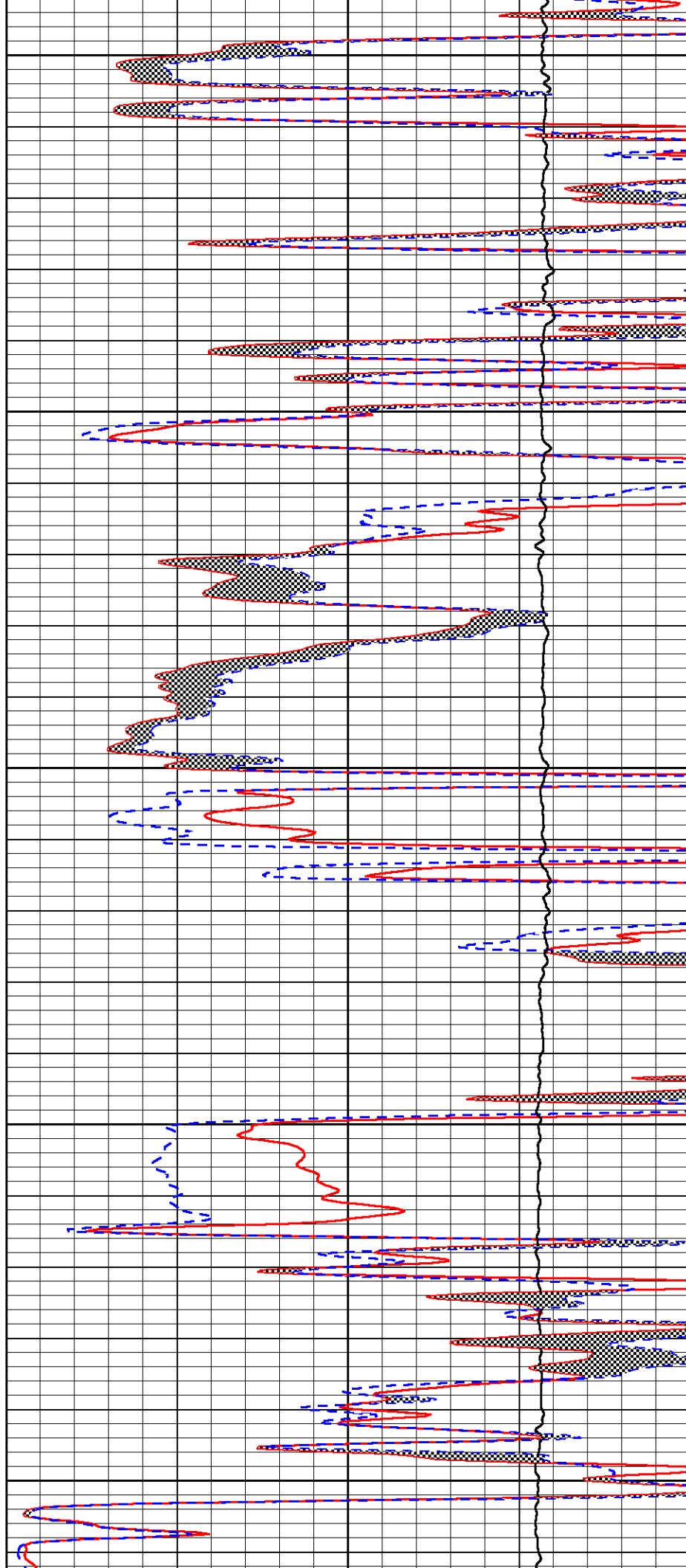
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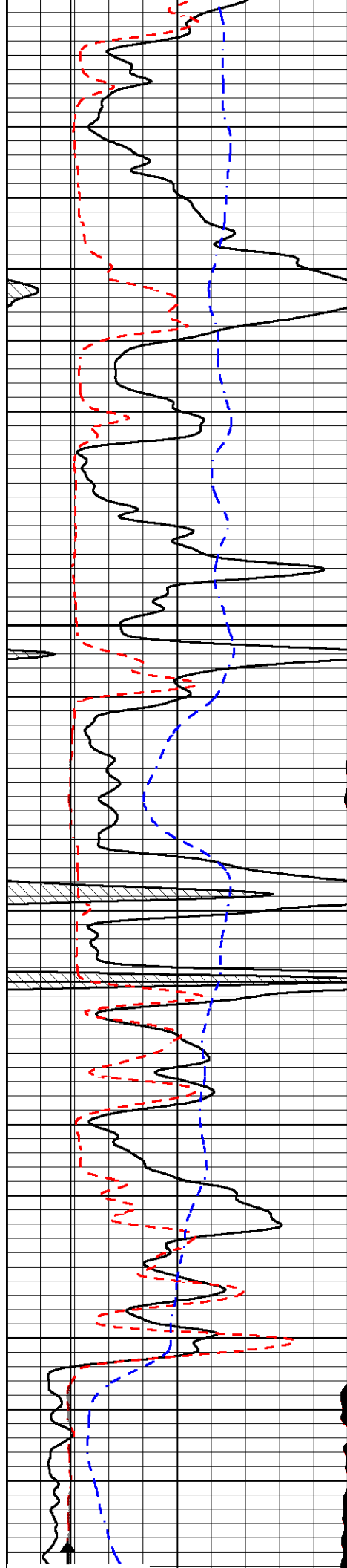
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4850

4900

4950



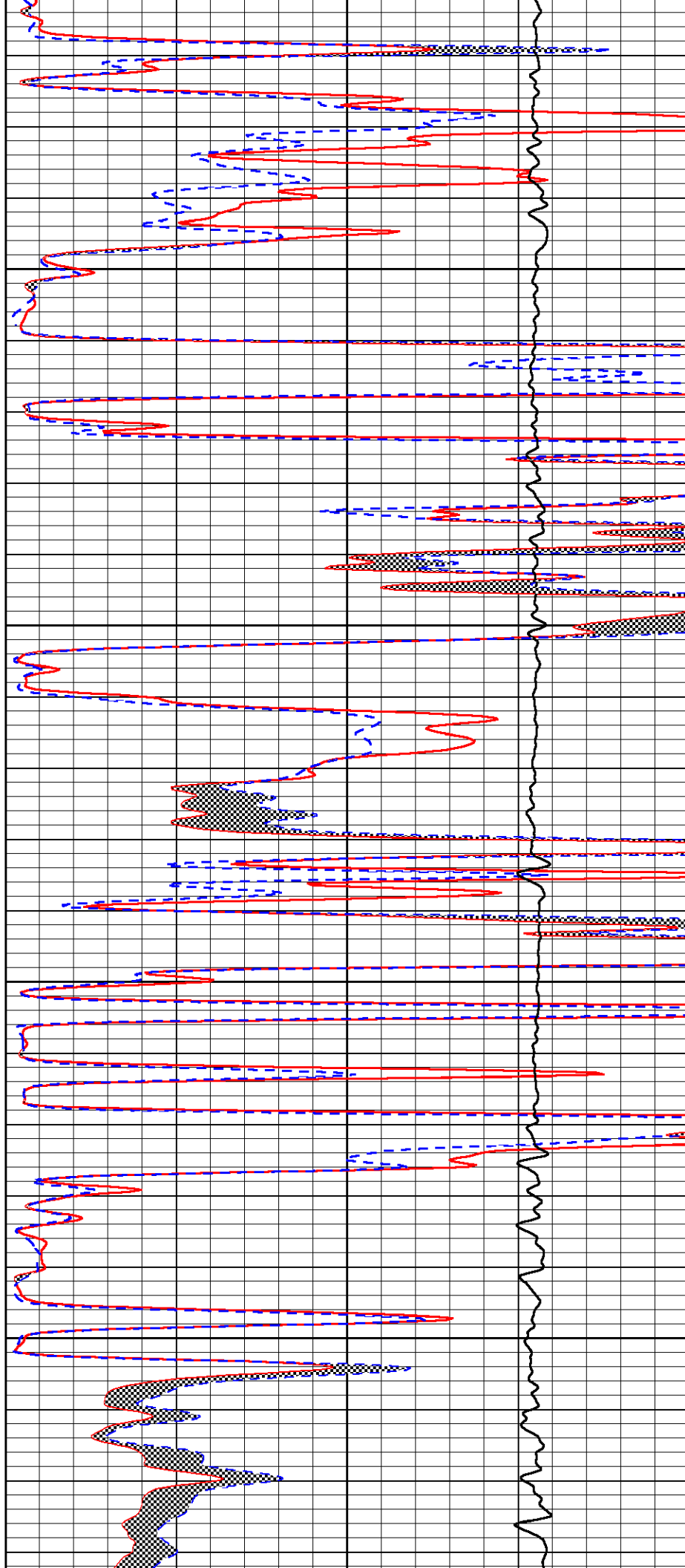


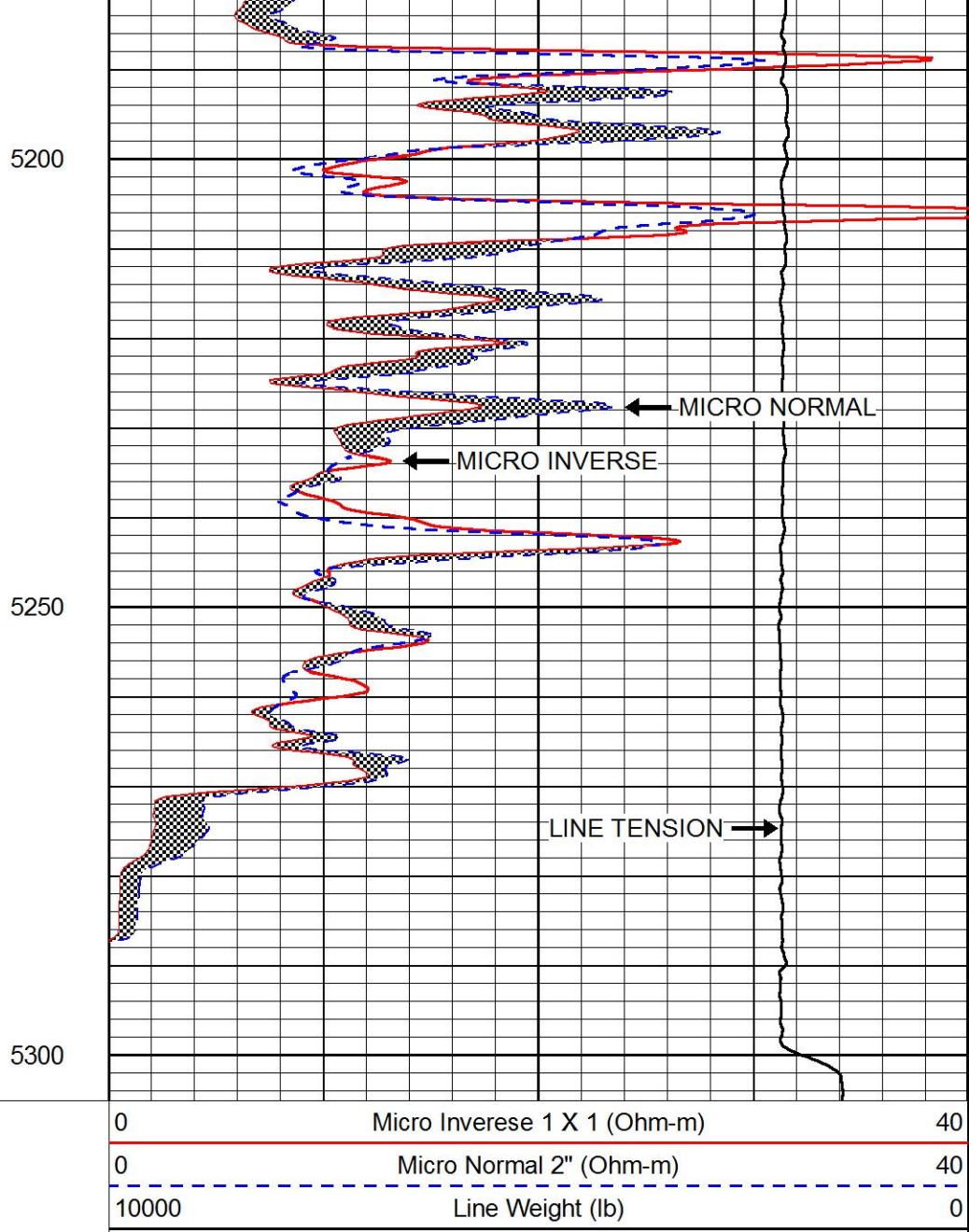
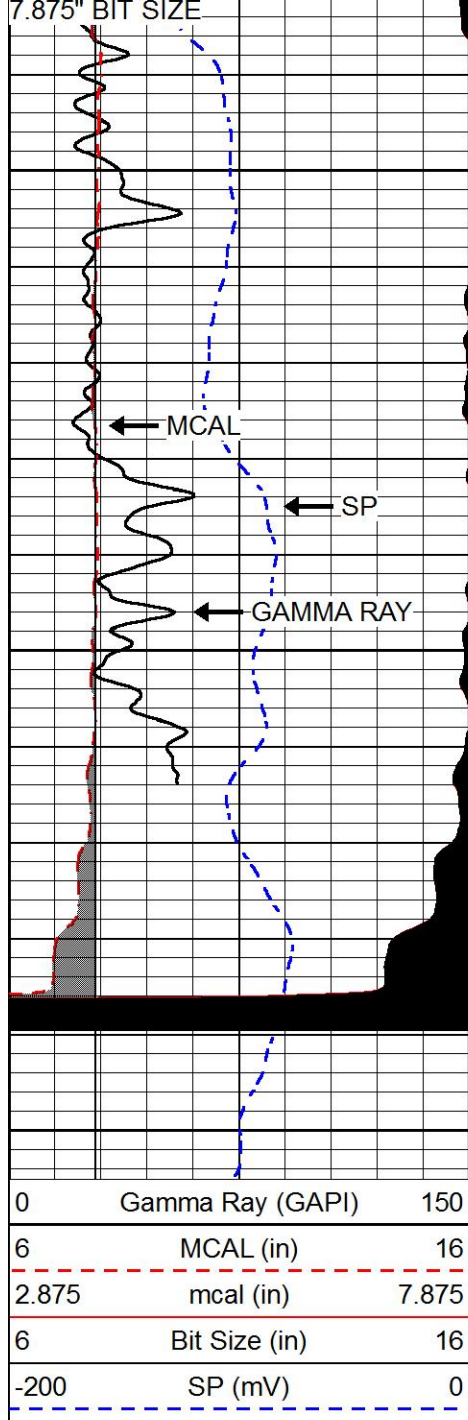
5000

5050

5100

5150



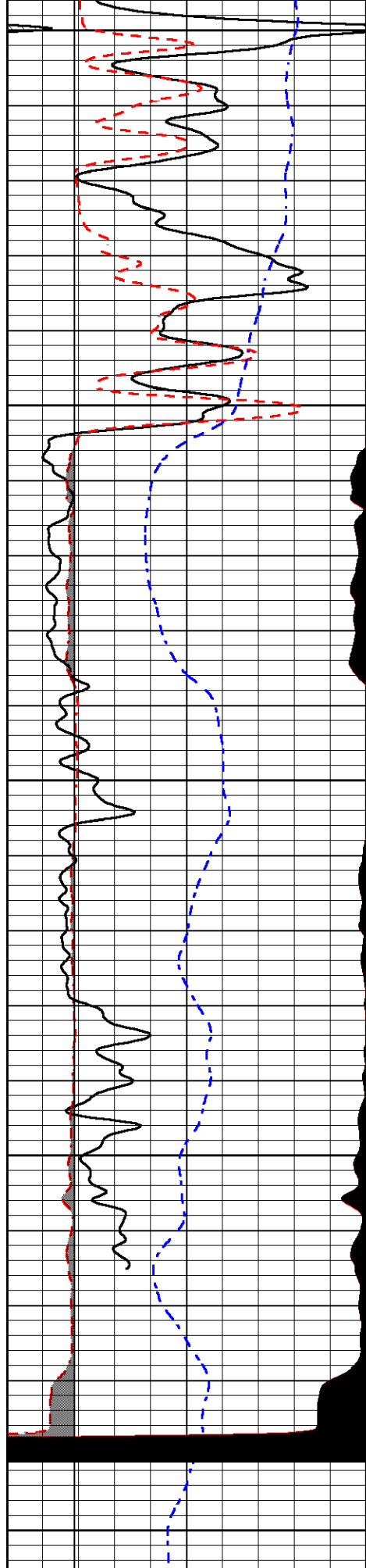


REPEAT SECTION

Database File everglow_hackney 1-15.db
 Dataset Pathname STKML/pass2.2
 Presentation Format micro
 Dataset Creation Sun Jan 28 18:20:08 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



0	Gamma Ray (GAPI)	150
6	MCAL (in)	16

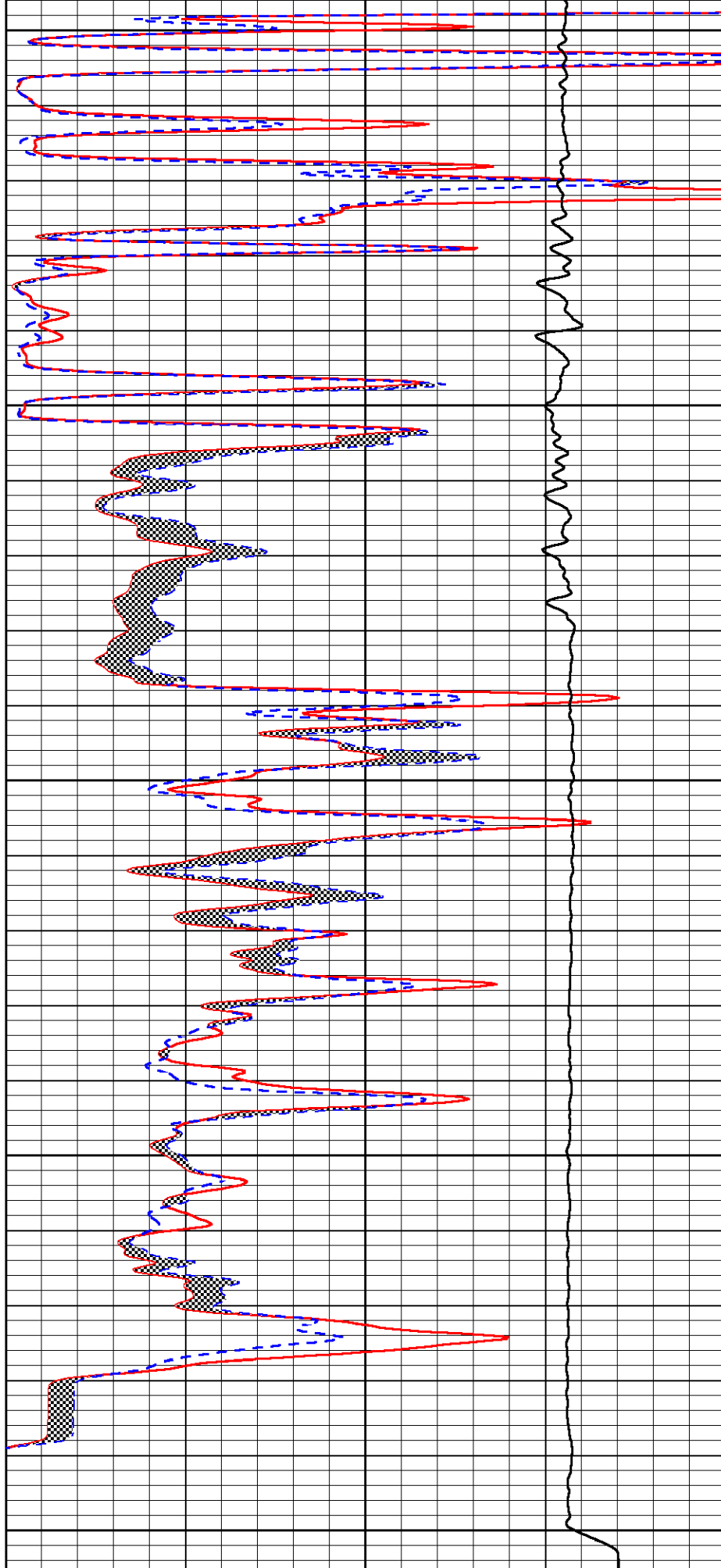
5100

5150

5200

5250

5300



0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40

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

Calibration Report					
Database File	everglow_hackney 1-15.db				
Dataset Pathname	STKML/pass3.1				
Dataset Creation	Sun Jan 28 19:26:36 2018				

Dual Induction Calibration Report					
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Serial-Model:	933 (HT)-PSI HIGH TEMP				
Calibration Performed:	Sun Jan 28 18:12:06 2018				

		Readings		References			Results	
Loop:		Air	Loop	Air	Loop		Gain	Offset
Deep		167.000	835.000	0.000	255.000	mmho/m	0.720	-21.000
Medium		142.000	1349.000	0.000	255.000	mmho/m	0.560	-60.500

Microlog Calibration Report					
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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	35000.0000	-1.0000
Inverse		0.0000	1.0000	0.0000	1.0000	Ohm-m	41000.0000	-0.6000
Caliper		1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3500

Compensated Density Calibration Report					
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Serial-Model:	227-771-M&W				
Source / Verifier:	16955B / 2ci				
Master Calibration Performed:	Sat Jan 27 18:11:20 2018				

Master Calibration					
		Density		Far Detector	Near Detector
Magnesium		1.755	g/cc	4919.18	6345.34 cps
Aluminum		2.665	g/cc	911.94	4081.94 cps
Spine Angle = 75.33			Density/Spine Ratio = 0.522		
		Size		Reading	
Small Ring		8.00	in	1.84	
Large Ring		22.00	in	1.46	

Compensated Neutron Calibration Report					
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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

 PIONEER Pioneer Energy Services	Company	EVERGLOW ENERGY, LLC
	Well	HACKNEY #1-15
	Field	WILDCAT
	County	COMANCHE
	State	KANSAS