



Pioneer Energy Services

PIONEER

MICRORESISTIVITY LOG

Company GEO SOUTHERN OPERATING II, LLC
Well CRESS #1-28
Field UNKNOWN
County SHERMAN
State KANSAS

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Field UNKNOWN
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Location: API #: 15-181-20628-00-00

1373' FSL & 2375' FEL

SEC 28 TWP 7S RGE 37W

Permanent Datum GROUND LEVEL Elevation 3425'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
DIL/BHCS
Elevation
K.B. 3430'
D.F. N/A
G.L. 3425'

Date 9/28/2019

Run Number TWO

Depth Driller 5000'

Depth Logger 5009'

Bottom Logged Interval 5008'

Top Log Interval 4000'

Casing Driller 8.625" @ 379'

Casing Logger 381'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 6000

Density / Viscosity 9.2 65

pH / Fluid Loss 10.0 8.8

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.40 @ 60

Rmf @ Meas. Temp 0.30 @ 60

Rmc @ Meas. Temp 0.54 @ 60

Source of Rmf / Rmc CHARTS

Rm @ BHT 0.19 @ 126

Operating Rig Time 5 HOURS

Max Rec. Temp. F 126

Equipment Number P-24

Location HAYS

Recorded By D. SCHMIDT

Witnessed By BEN LANDES

<<< 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.

BREWSTER,
WEST ON Q RD TO 33 RD, 3 NORTH,
WEST 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: BEN LANDES
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\geo southern_cress 1-28.db
Dataset field/well/STACK/pass5.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	100	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	255	0		0

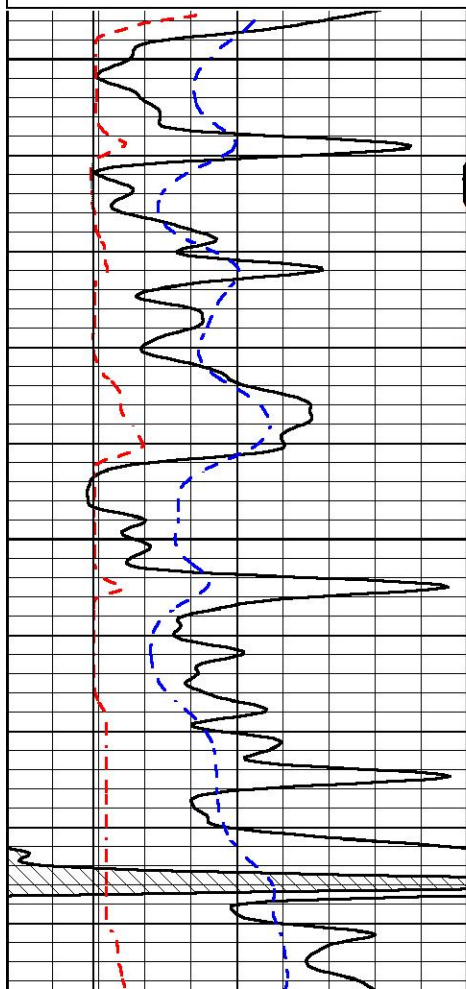


MAIN PASS

Database File geo southern_cress 1-28.db
Dataset Pathname STACK/pass5.1
Presentation Format _micro
Dataset Creation Sat Sep 28 23:11:09 2019
Charted by Depth in Feet scaled 1:240

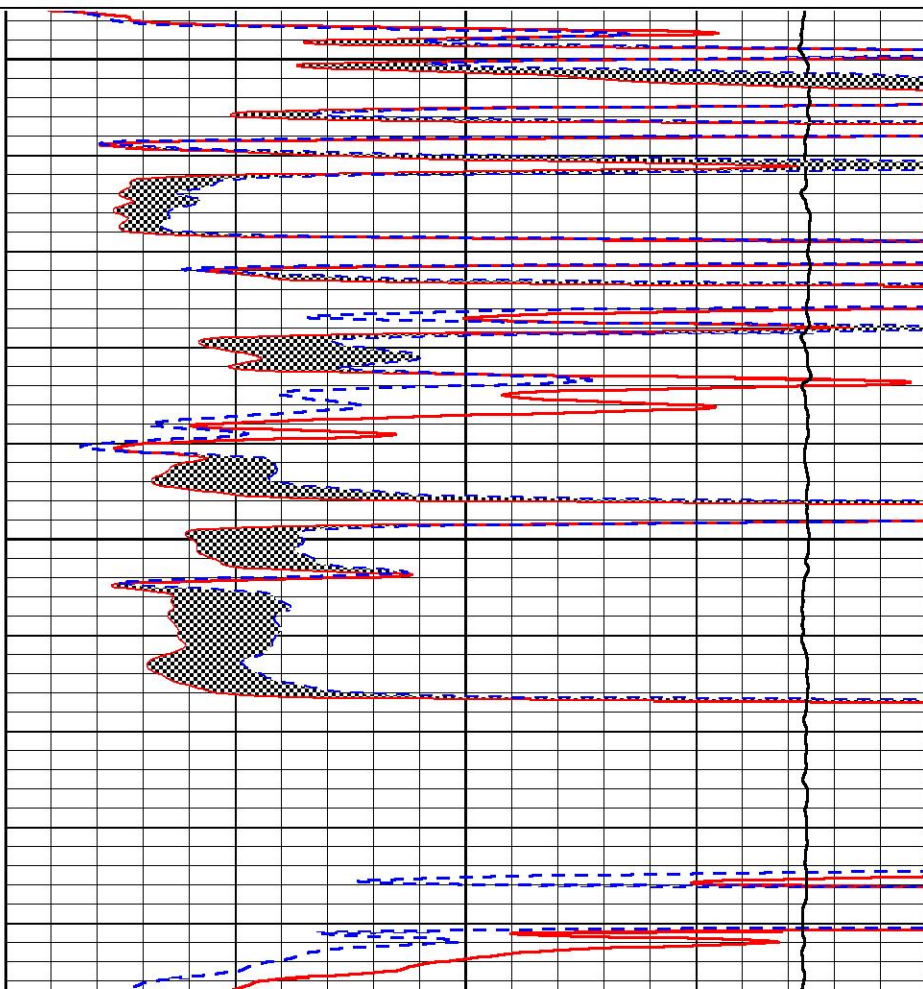
0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

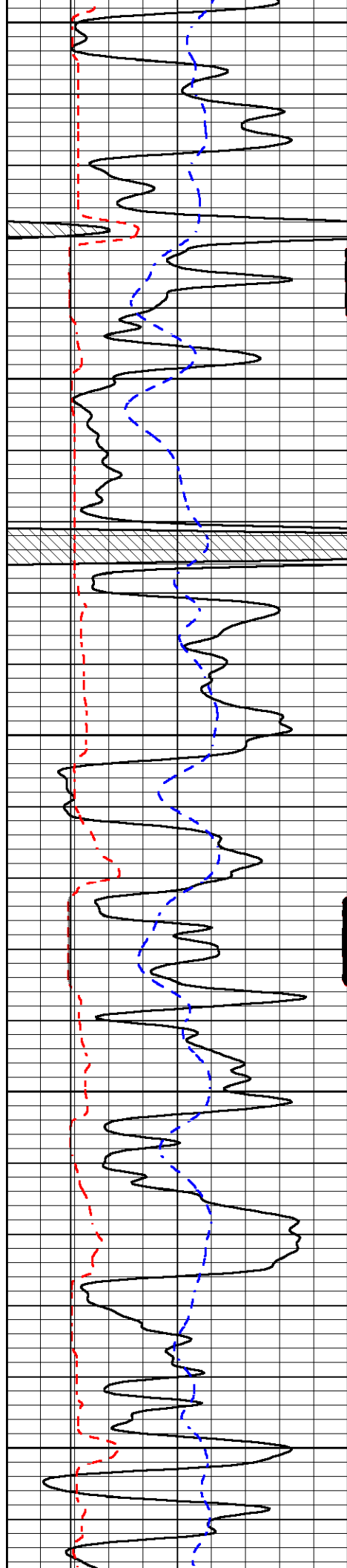
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
10000	Line Weight (lb)	0



4000

4050





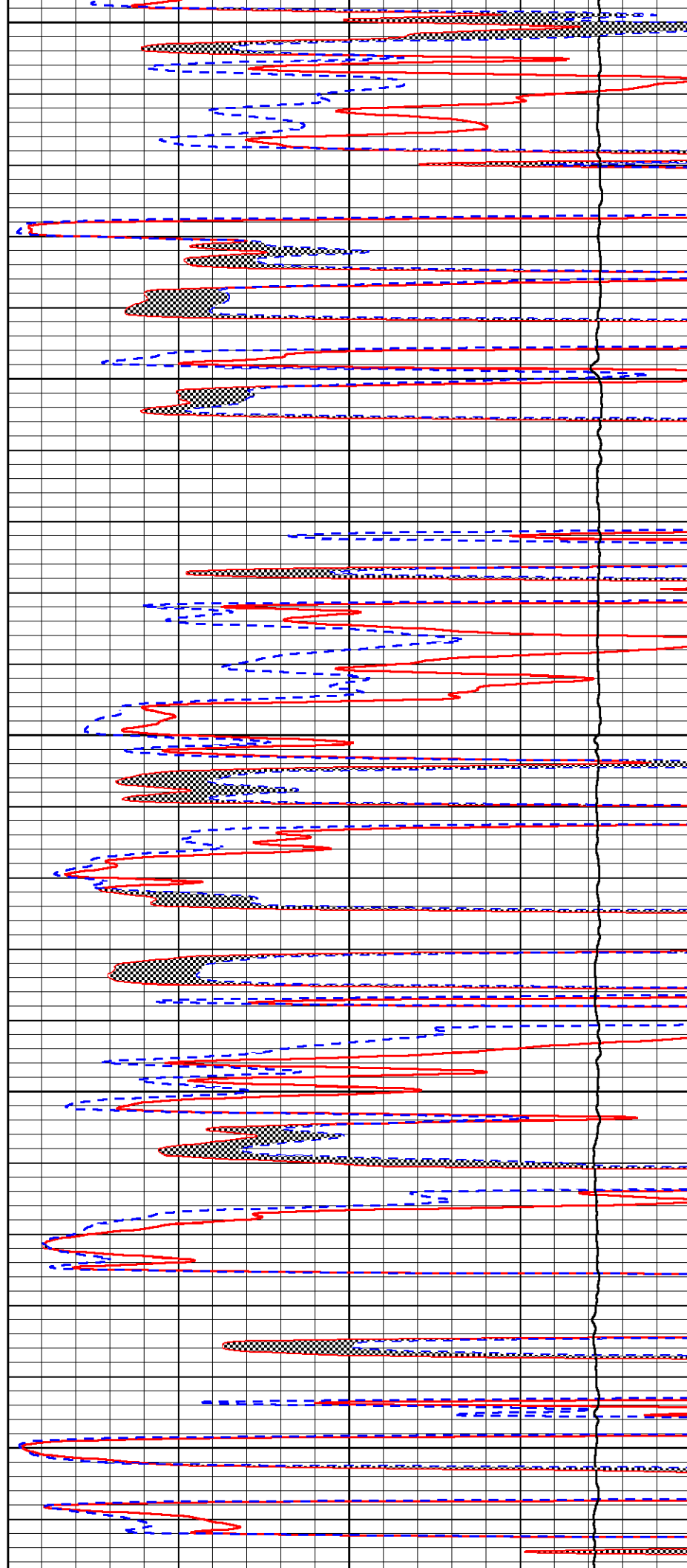
4100

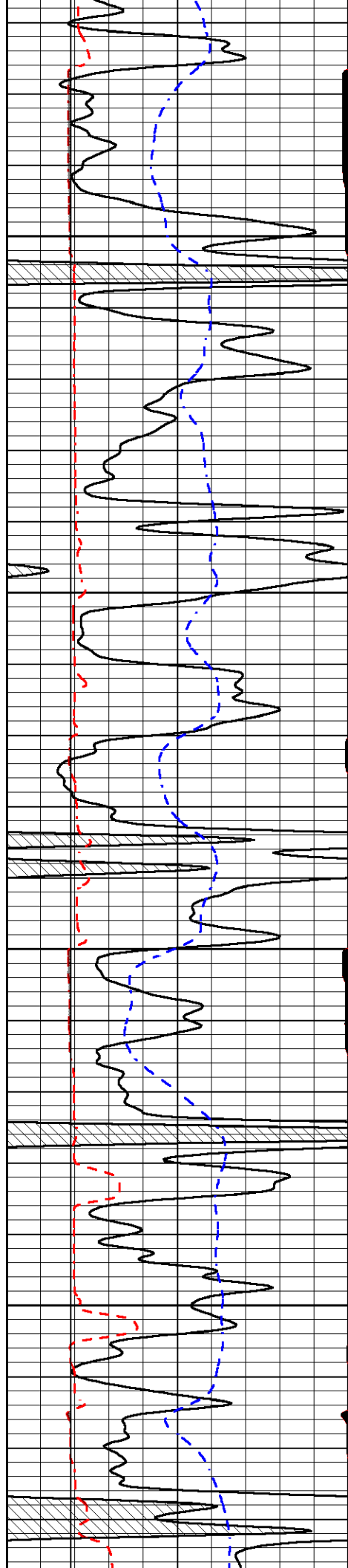
4150

4200

4250

4300



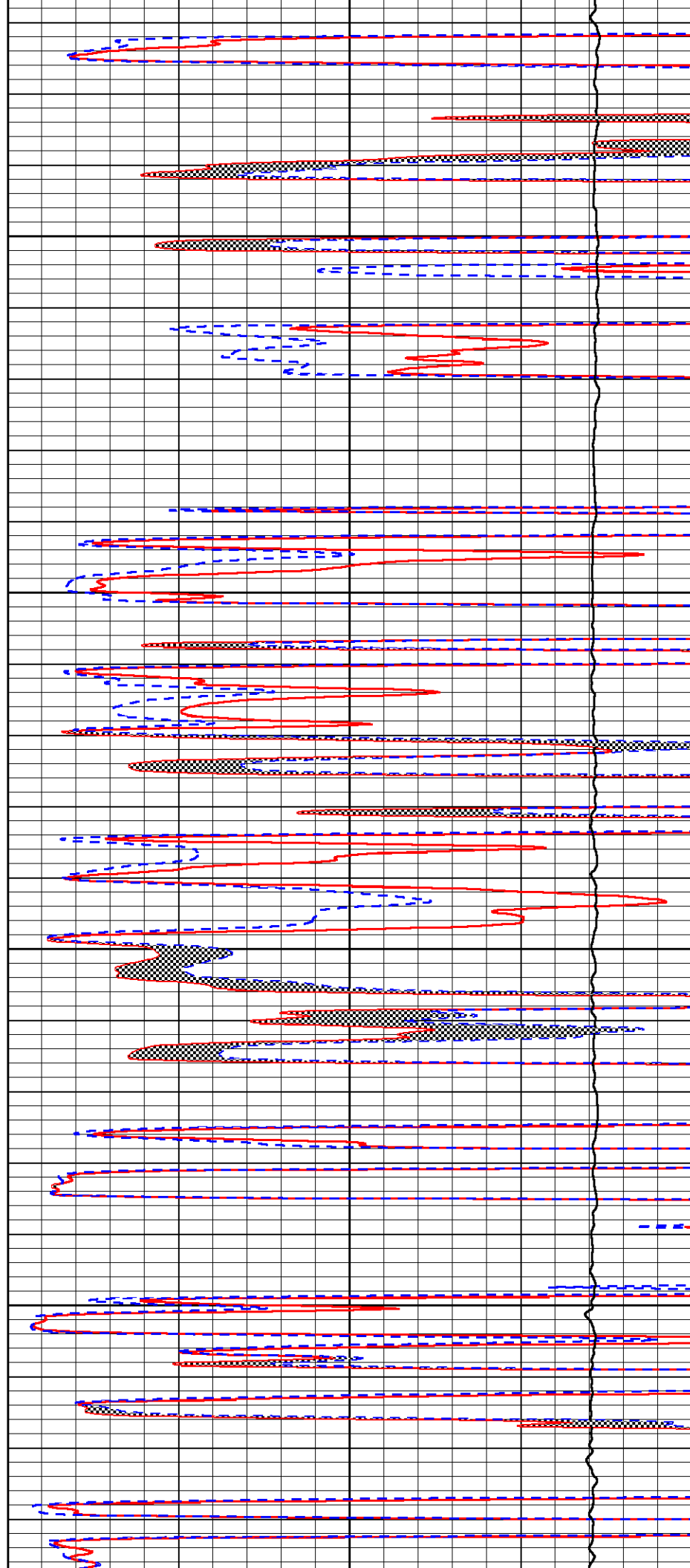


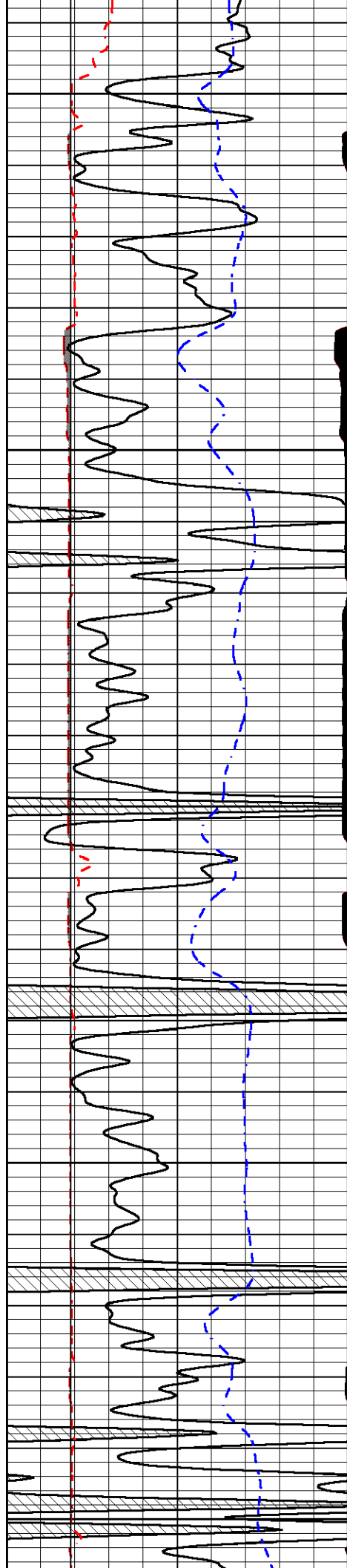
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4400

4450

4500





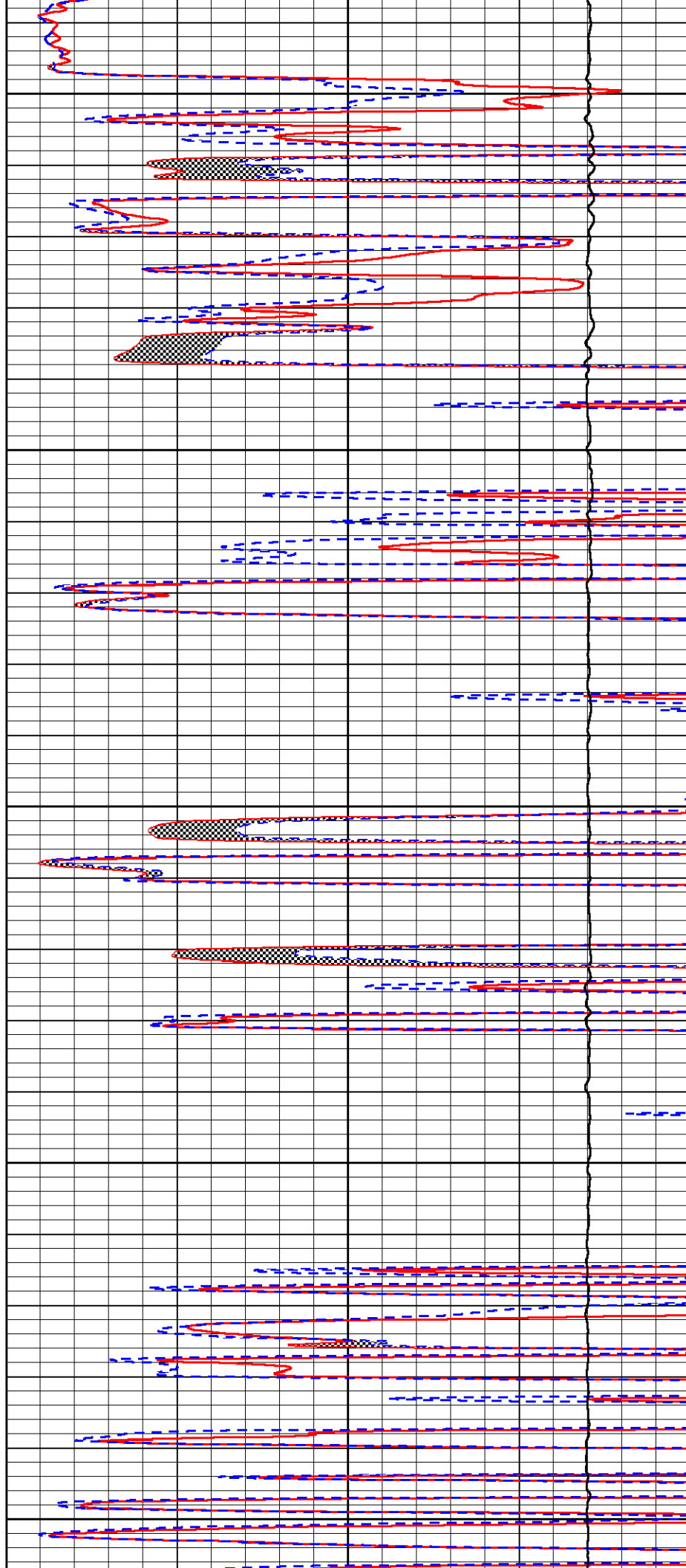
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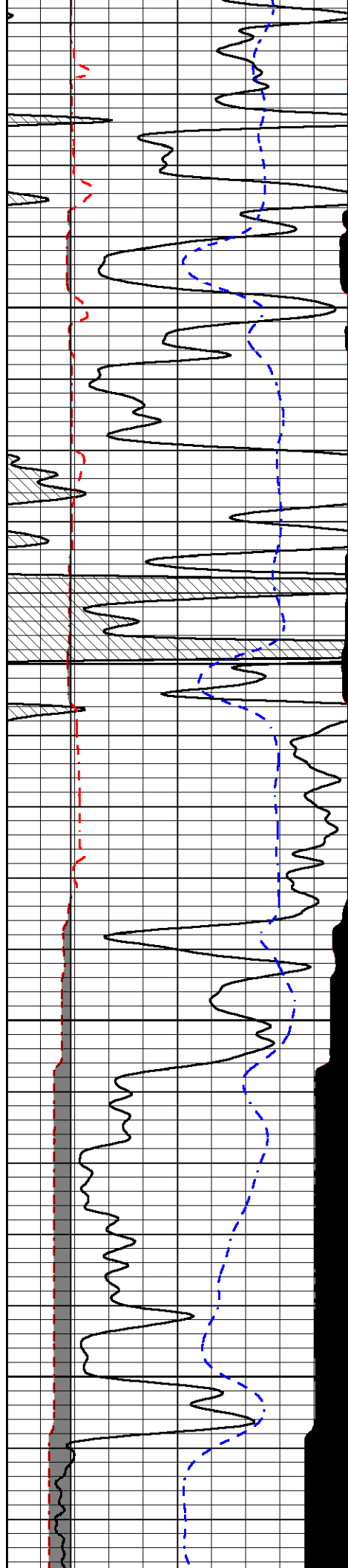
4600

4650

4700

4750



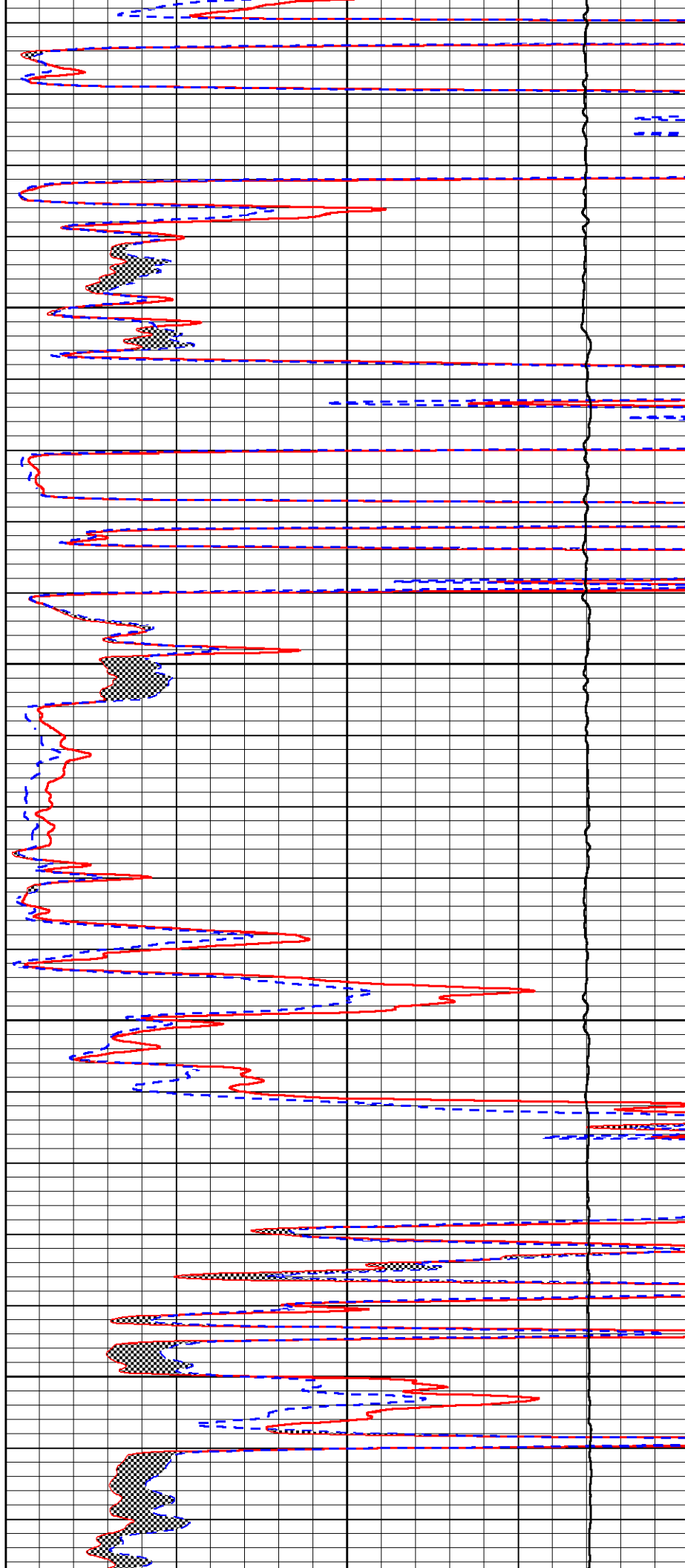


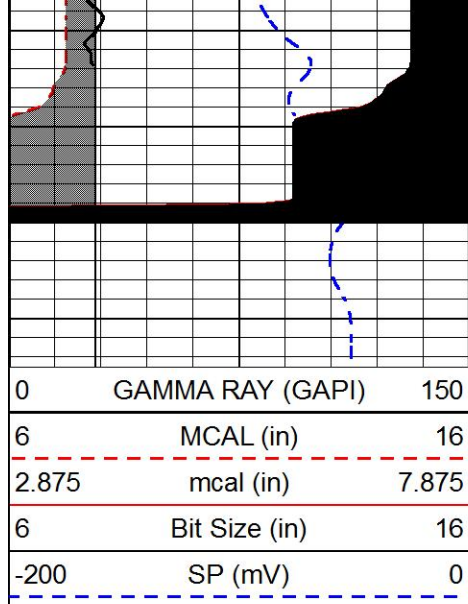
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4850

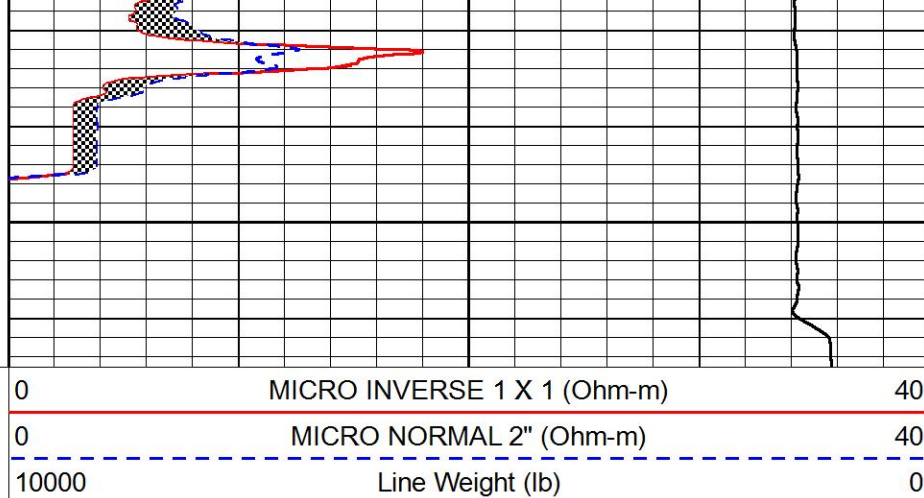
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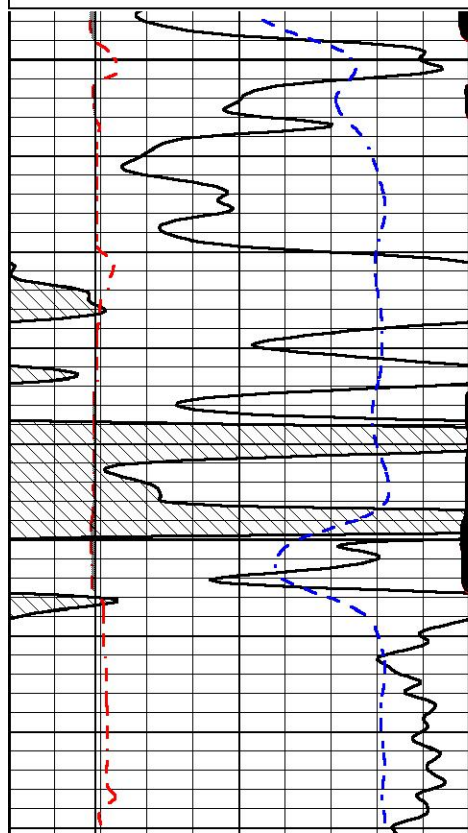
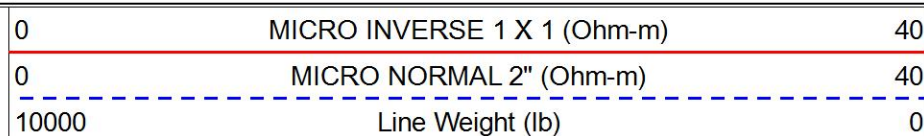
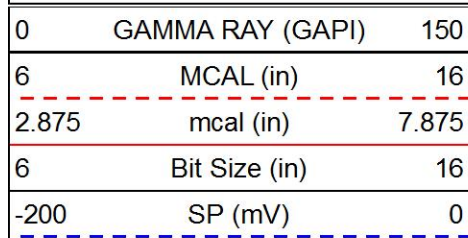


5000



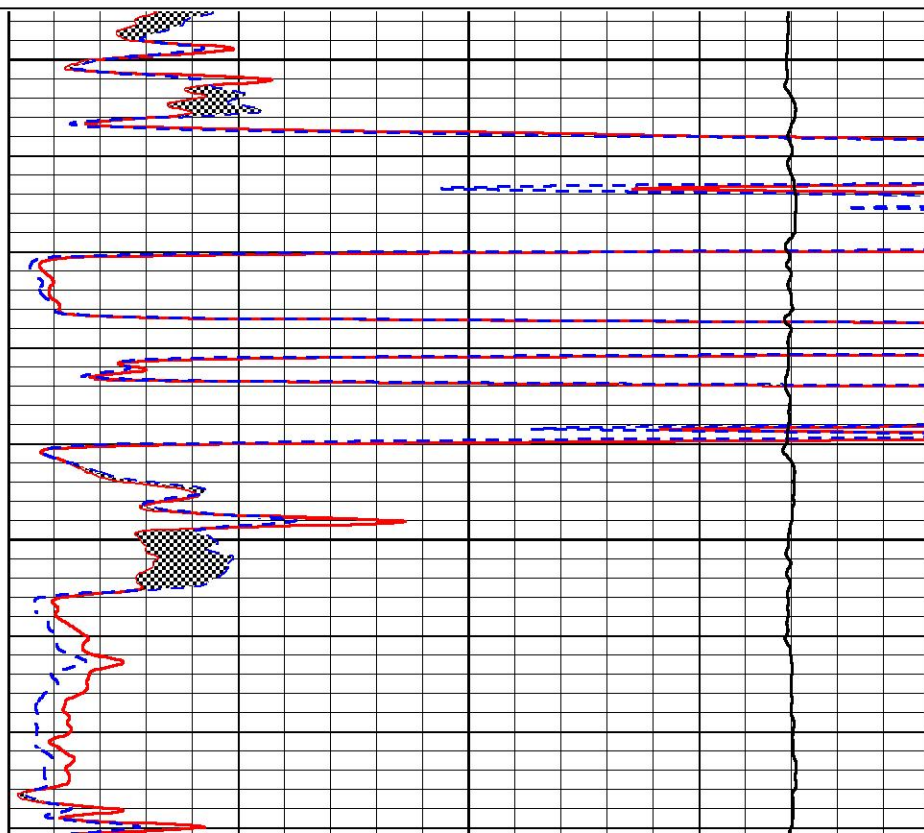
REPEAT SECTION

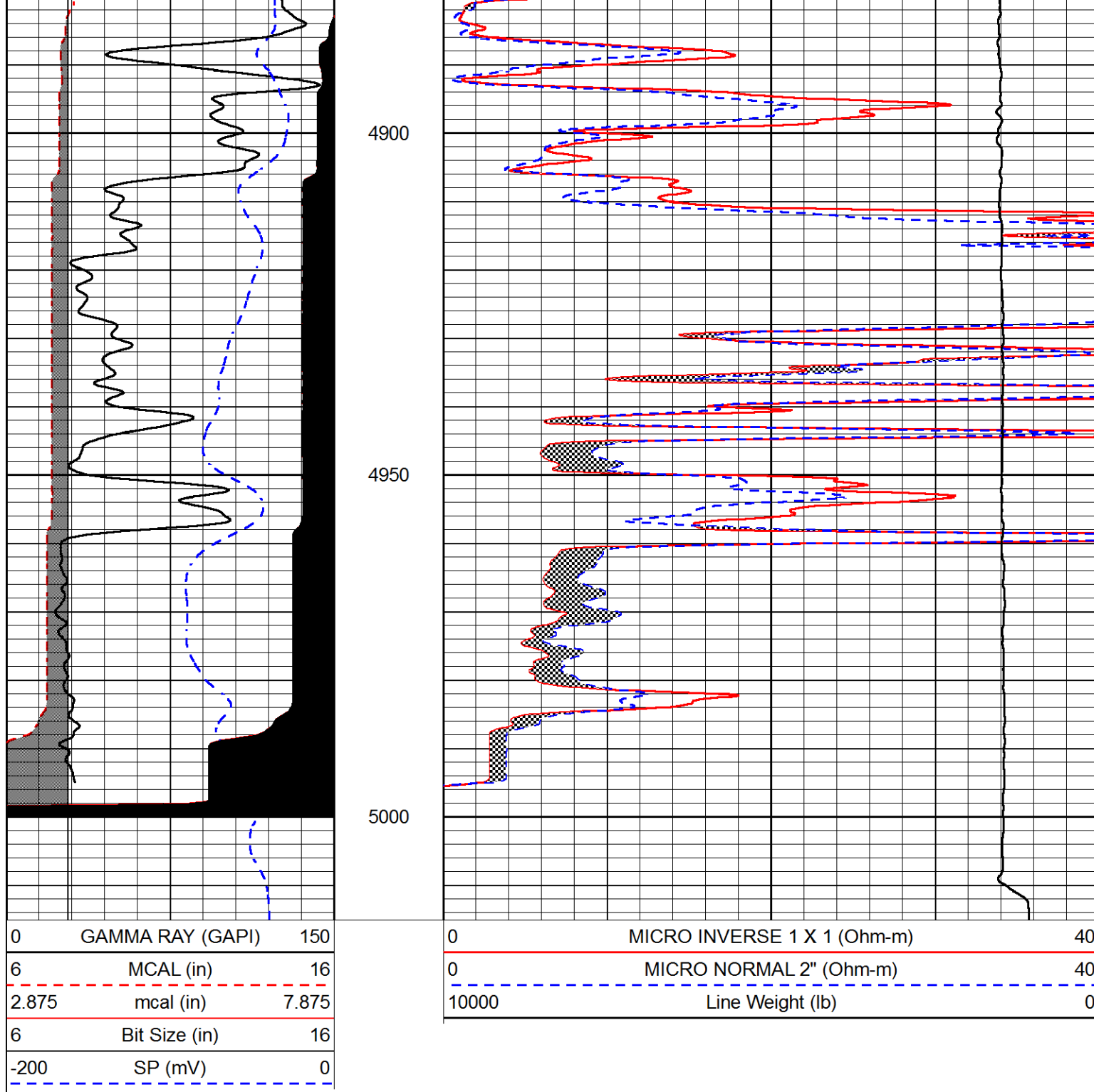
Database File geo_southern_cress 1-28.db
 Dataset Pathname STACK/pass4.1
 Presentation Format _micro
 Dataset Creation Sat Sep 28 22:03:15 2019
 Charted by Depth in Feet scaled 1:240



4800

4850





Calibration Report							
Database File	geo southern_cress 1-28.db						
Dataset Pathname	STACK/pass5.1						
Dataset Creation	Sat Sep 28 23:11:09 2019						
Dual Induction Calibration Report							
Serial-Model:				1039-PSI HIGH TEMP			
Calibration Performed:				Sat Sep 28 19:20:29 2019			
Readings		References			Results		
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.440	-52.000
Medium	0.000	1248.000	142.000	255.800	mmho/m	0.265	52.000

Compensated Density Calibration Report					
Serial-Model:		817-947-M&W			
Source / Verifier:		16955B / 2ci			
Master Calibration Performed:		Tue Sep 24 21:18:50 2019			
Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.685	g/cc	1141.85	3762.09	cps
Spine Angle = 74.89		Density/Spine Ratio = 0.534			
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	15.00	in	1.34		

Compensated Neutron Calibration Report					
		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		

Calibration Report								
Database File	geo southern_cress 1-28.db							
Dataset Pathname	SONMEL/pass2.10							
Dataset Creation	Sun Sep 29 00:02:09 2019							
Microlog Calibration Report								
Serial-Model:			ARM001-Armadillo					
Performed:			Sat Sep 28 23:01:51 2019					
Readings			References				Results	
	Zero	Cal		Zero	Cal		m	b
Normal	0.0127	0.6730	V	0.0000	10.0000	Ohm-m	62.0000	-5.4000
Inverse	0.0029	0.8729	V	0.0000	10.0000	Ohm-m	47.0000	-3.0000
Gain	0.0071	0.0000	V	0.0000	10.0000	Ohm-m	0.0000	0.0000

Caliper

5.4716

5.7447

V

6.0000

19.0000

in

2.0000

-2.9000



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Well	CRESS #1-28
Field	UNKNOWN
County	SHERMAN
State	KANSAS