



MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Pioneer Oil Company, Inc.
 Well Bretz Community Unit #1-4
 Field Freda
 County Sheridan State Kansas

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Location: API #: 15-179-21481-00-00
 265 FNL & 1496 FEL
 SEC 4 TWP 9S RGE 28W
 Permanent Datum Ground Level Elevation 2670
 Log Measured From Kelly Bushing
 Drilling Measured From Kelly Bushing
 Other Services
 CNL/CDL
 DIL/BHCS
 Elevation
 K.B. 2678
 D.F.
 G.L. 2670

Date	4/20/2022
Run Number	One
Depth Driller	4125
Depth Logger	4128
Bottom Logged Interval	4127
Top Log Interval	3200
Casing Driller	8:625 @ 225
Casing Logger	223
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	3000
Density / Viscosity	9.3 54
pH / Fluid Loss	10.0 8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.60 @ 75
Rmt @ Meas. Temp	0.45 @ 75
Rmc @ Meas. Temp	0.81 @ 75
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.38 @ 117
Operating Rig Time	4 Hours
Max Rec. Temp. F	117
Equipment Number	P-24
Location	Hays
Recorded By	D. Schmidt
Witnessed By	Jim Musgrove

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline 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.

Hoxie,
 3 South to 40 S Rd, 300' West,
 South and West to location

Log Measured From: Kelly Bushing 8 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
 785-625-3858

Your Midwest Wireline Crew		This Log Record Was Witnessed By	
Engineer: D. Schmidt	Operator:	Primary Witness: Jim Musgrove	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Operator	Offset (ft)	Substrate	Description	Length (ft)	C.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.33		GR-M&W (101)	3.00	3.50	50.00
CNLSC CNSSC	37.23 36.48		CNT-M&W (207-MW)	5.00	3.50	100.00
LSD DCAL SSD	28.18 28.17 27.68		CDL-M&W (305-05)	8.50	4.00	250.00
MCAL MI MN	19.58 19.58 19.58		ML-PSIML (402)	7.58	4.00	65.00
RLL3F RLL3	15.50 15.50					
CILD	8.33		DIL-M&W (502 HT)	18.25	3.50	220.00
CILM	4.50					
SP	0.20					

Dataset: pioneer oil_bretz community unit 1-4.db: field/well/stkml/pass5.17
 Total length: 42.33 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\pioneer oil_bretz community unit 1-4.db
 Dataset field/well/stkml/pass5.17/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	117	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	-270	70	Off	4128

Variable Description

A : Cement Factor (a)
 BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 FLUIDDEN : Fluid Density
 M : Cement Exp (m)
 MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
 PERFS : Perforation Flag
 SNDERR : Deep Sonde Error Correction
 SNDERRM : Medium Sonde Error Correction
 SPSHIFT : S.P. Baseline Offset
 SRFTEMP : Surface Temperature
 SZCOR : CN Size Cor. ?
 TDEPTH : Total Depth



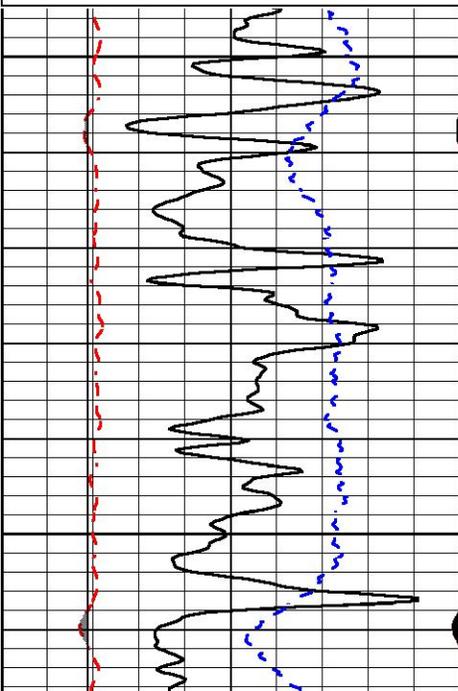
DETAIL SECTION

MAIN PASS

Database File pioneer oil_bretz community unit 1-4.db
 Dataset Pathname stkml/pass5.1
 Presentation Format _micro
 Dataset Creation Wed Apr 20 14:57:20 2022
 Charted by Depth in Feet scaled 1:240

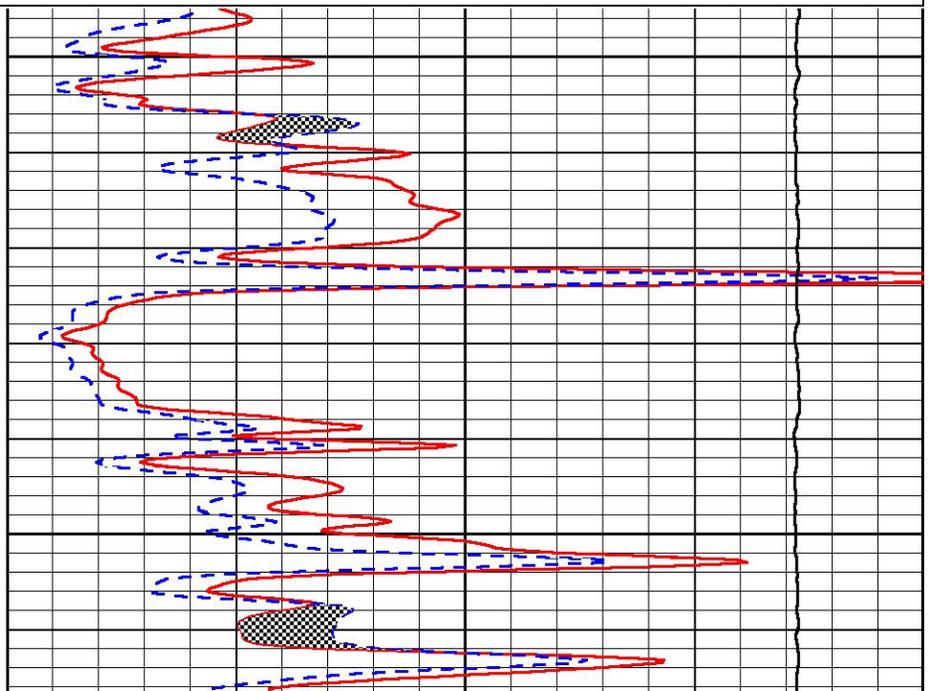
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
-2.875	mcal (in)	7.875
-200	SP (mV)	0

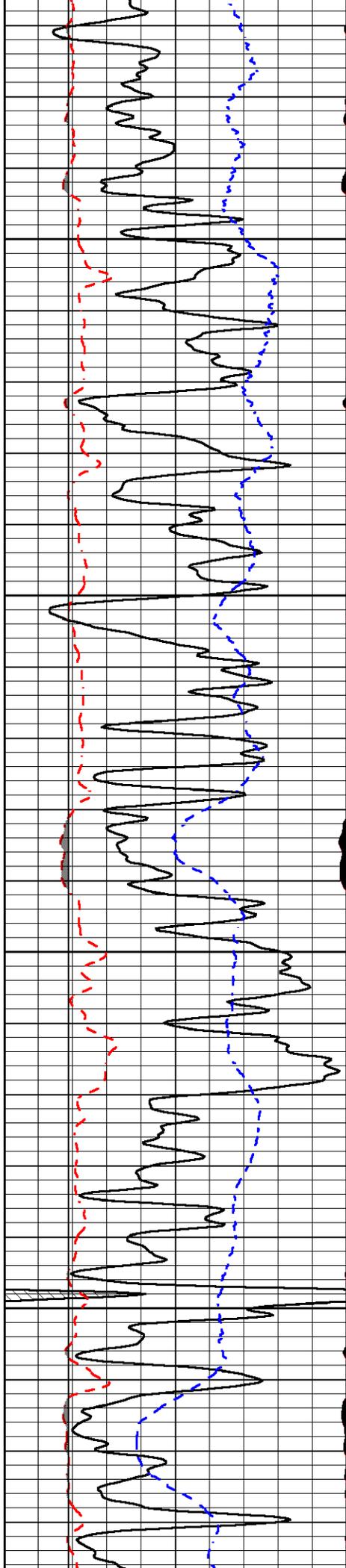
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3200

3250



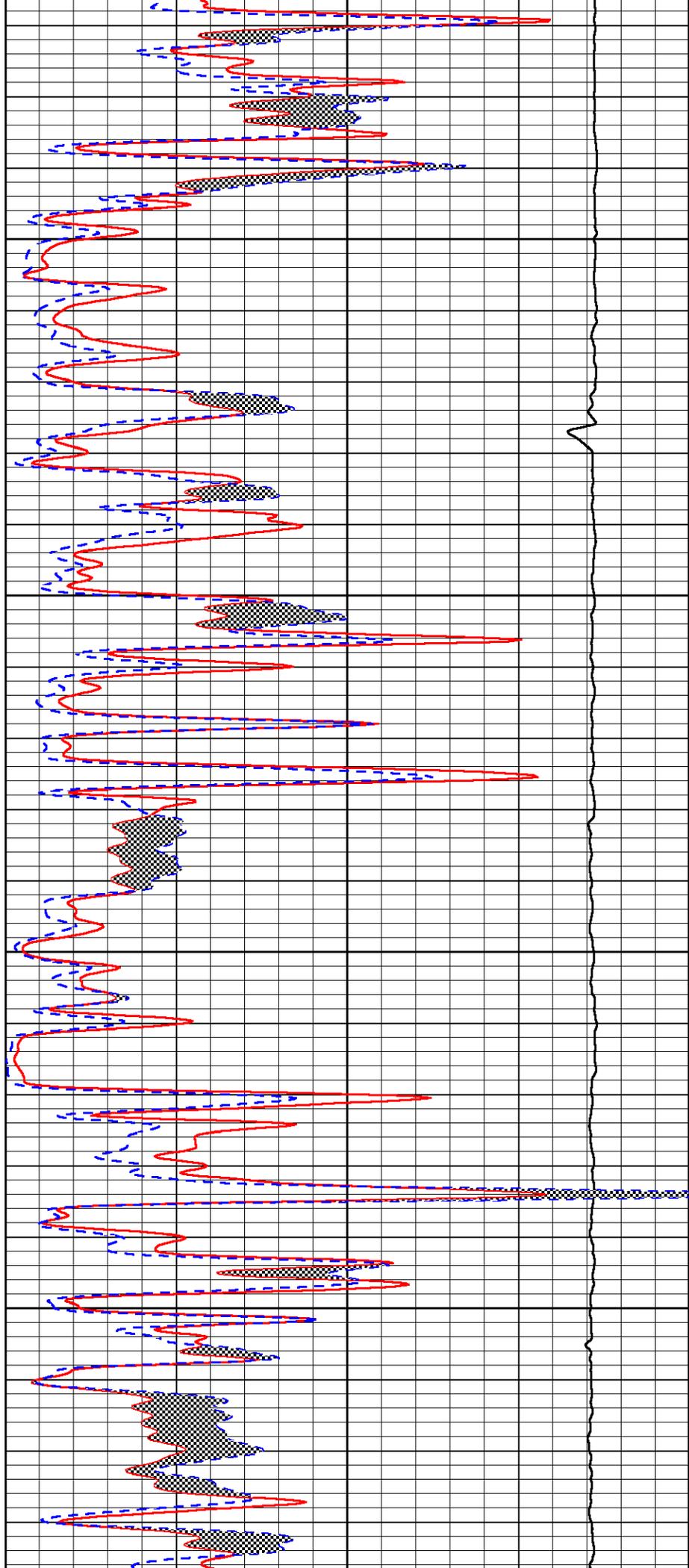


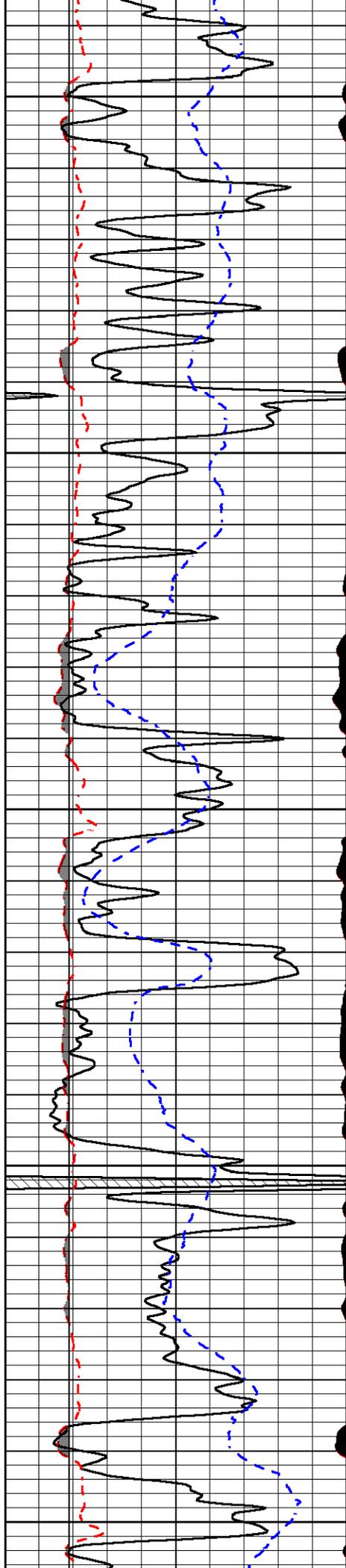
3300

3350

3400

3450





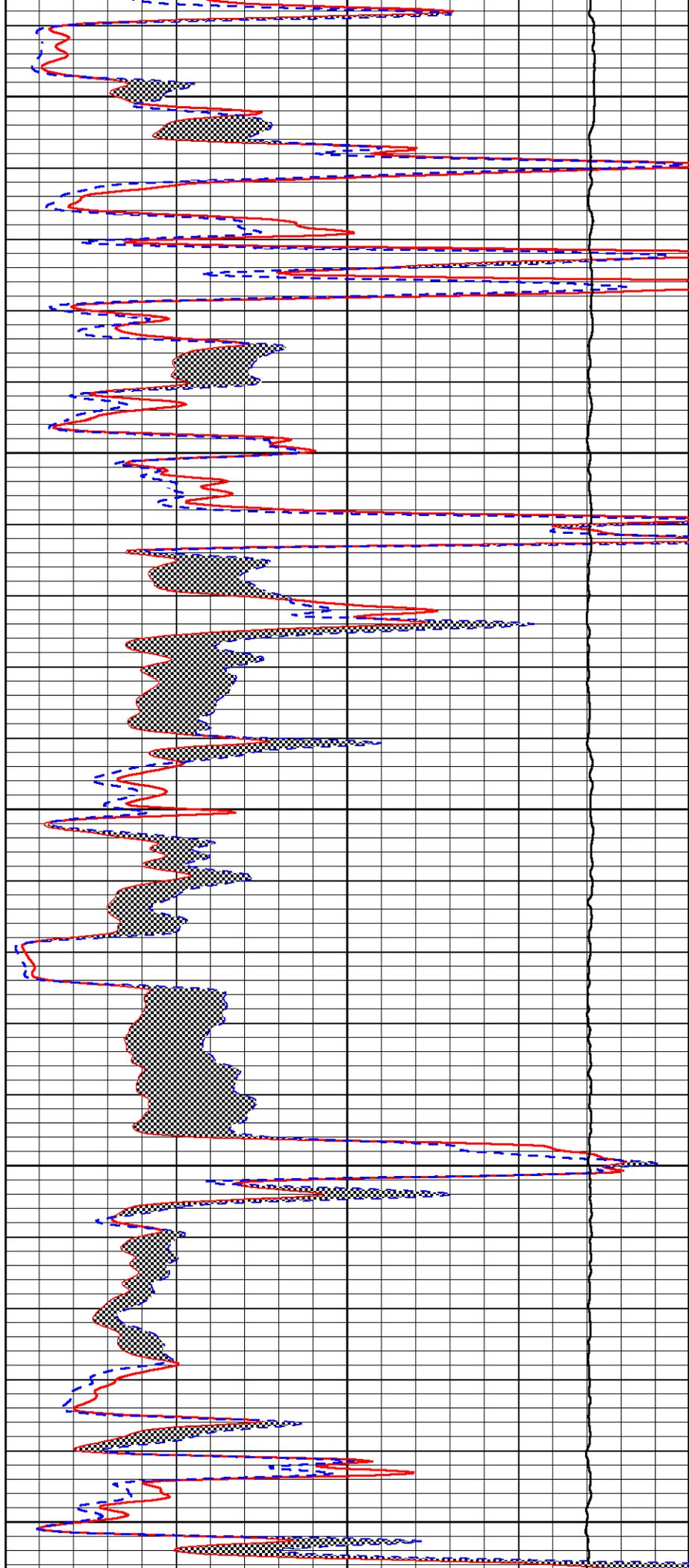
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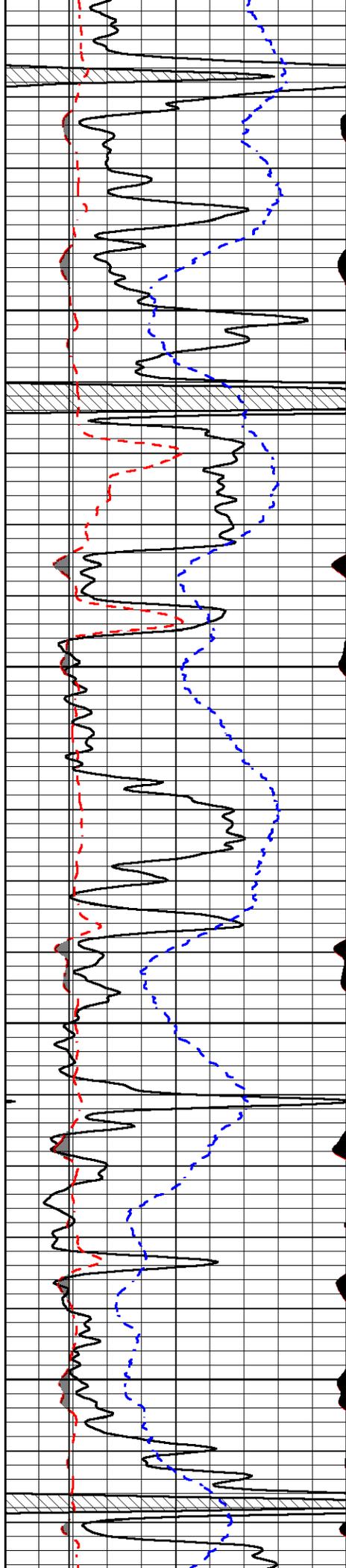
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3600

3650

3700



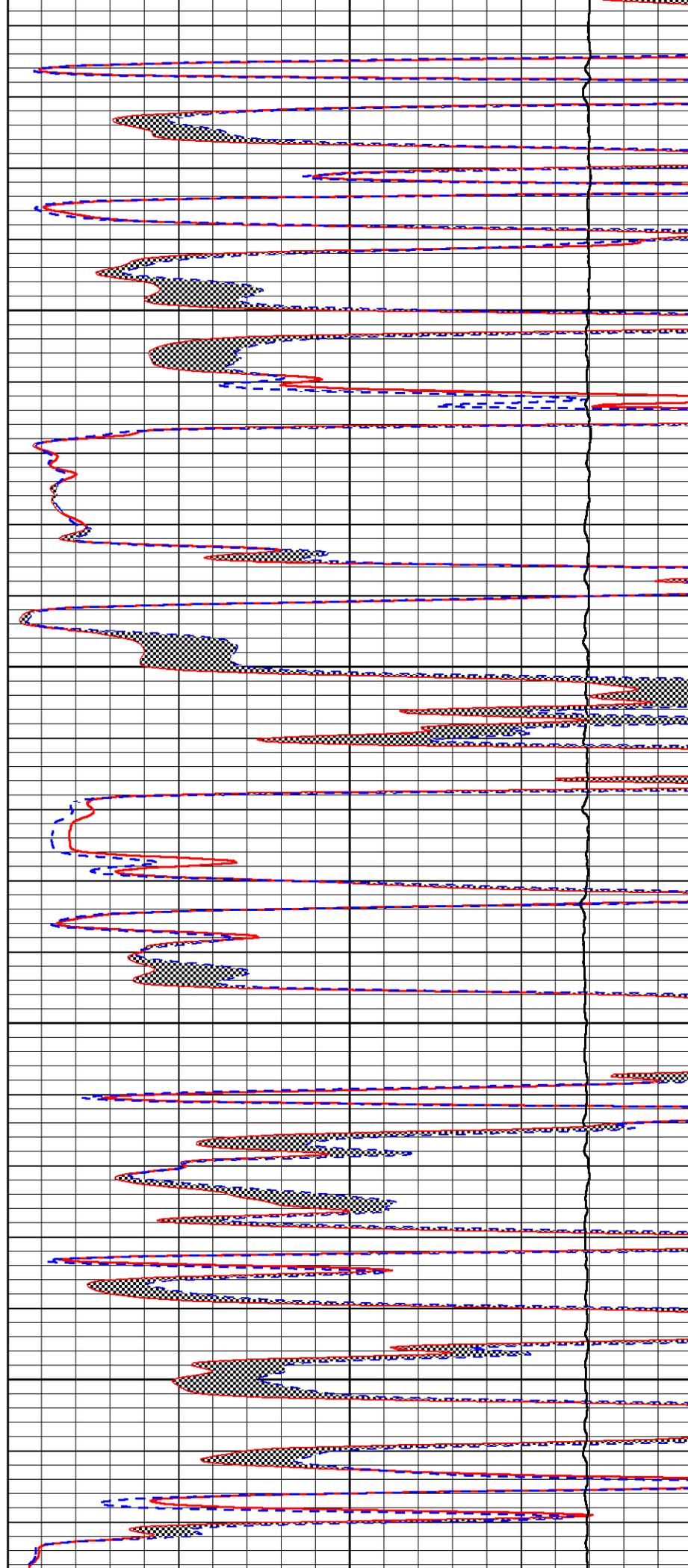


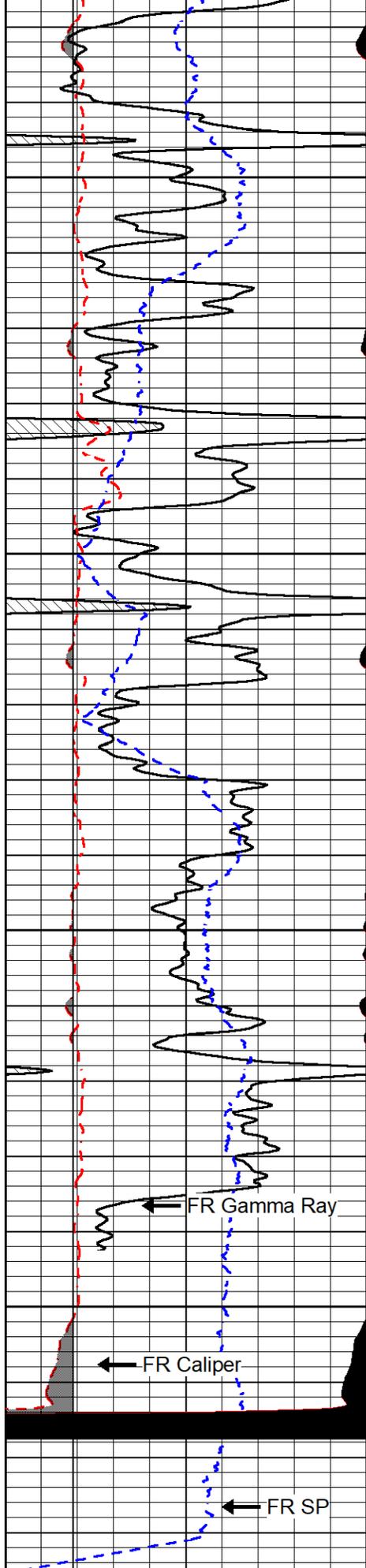
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3800

3850

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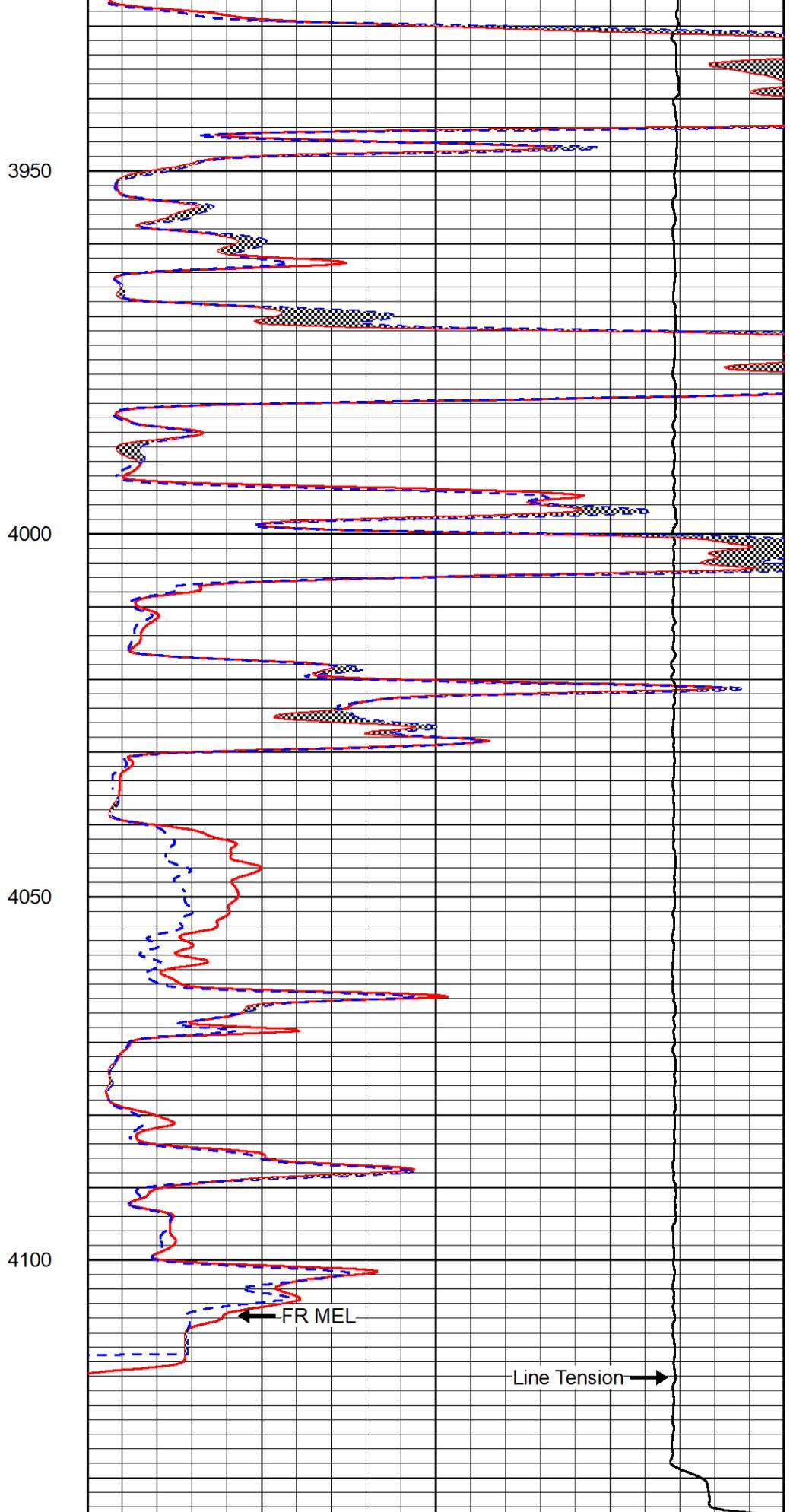




0 Gamma Ray (GAPI) 150

6 Caliper (in) 16

0.075 7.075



0 Micro Inverse 1 X 1 (Ohm-m) 40

0 Micro Normal 2" (Ohm-m) 40

10000 10000

-2.875	mcal (in)	7.875
-200	SP (mV)	0

10000 Line Weight (lb) 0



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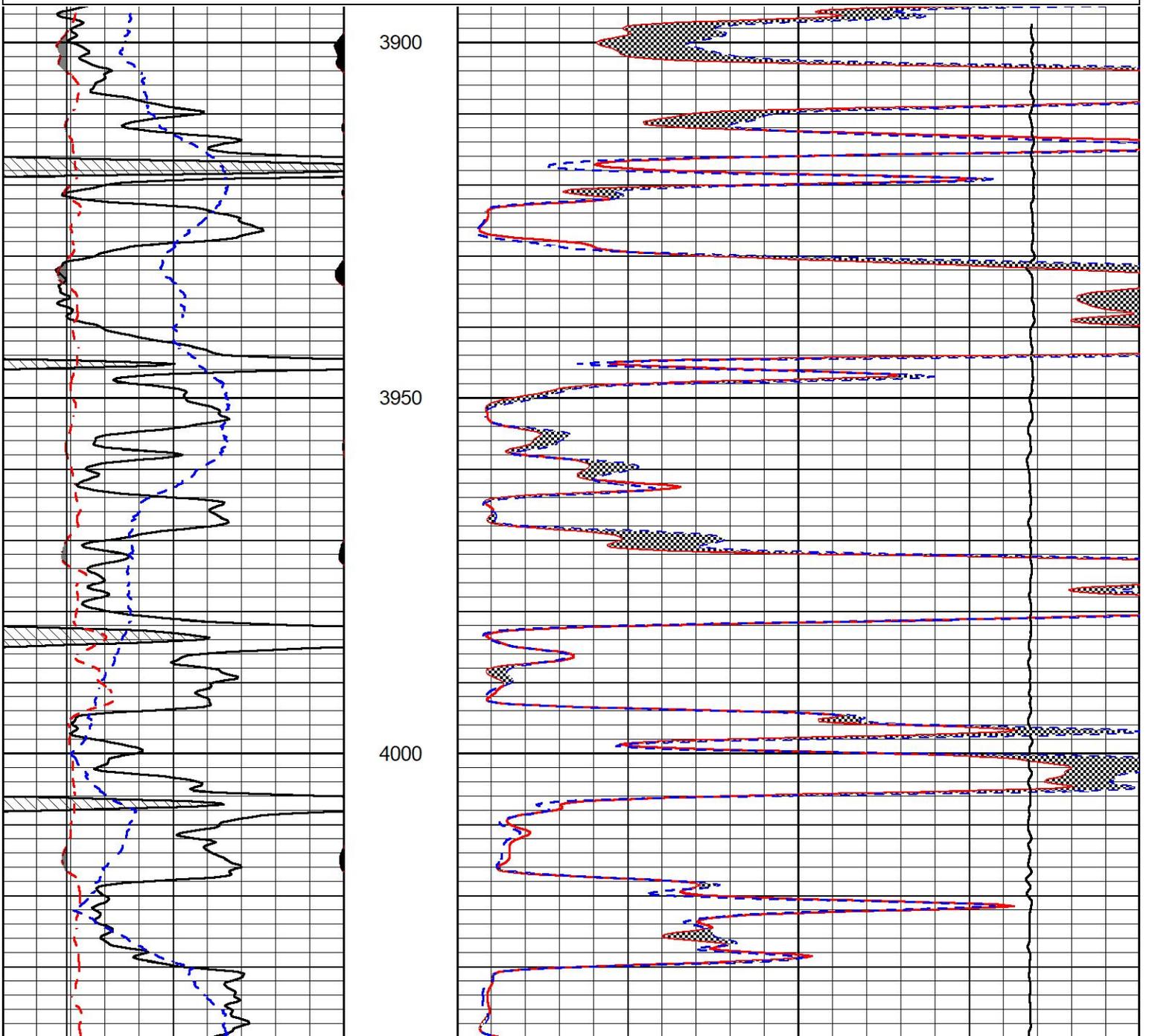
REPEAT SECTION

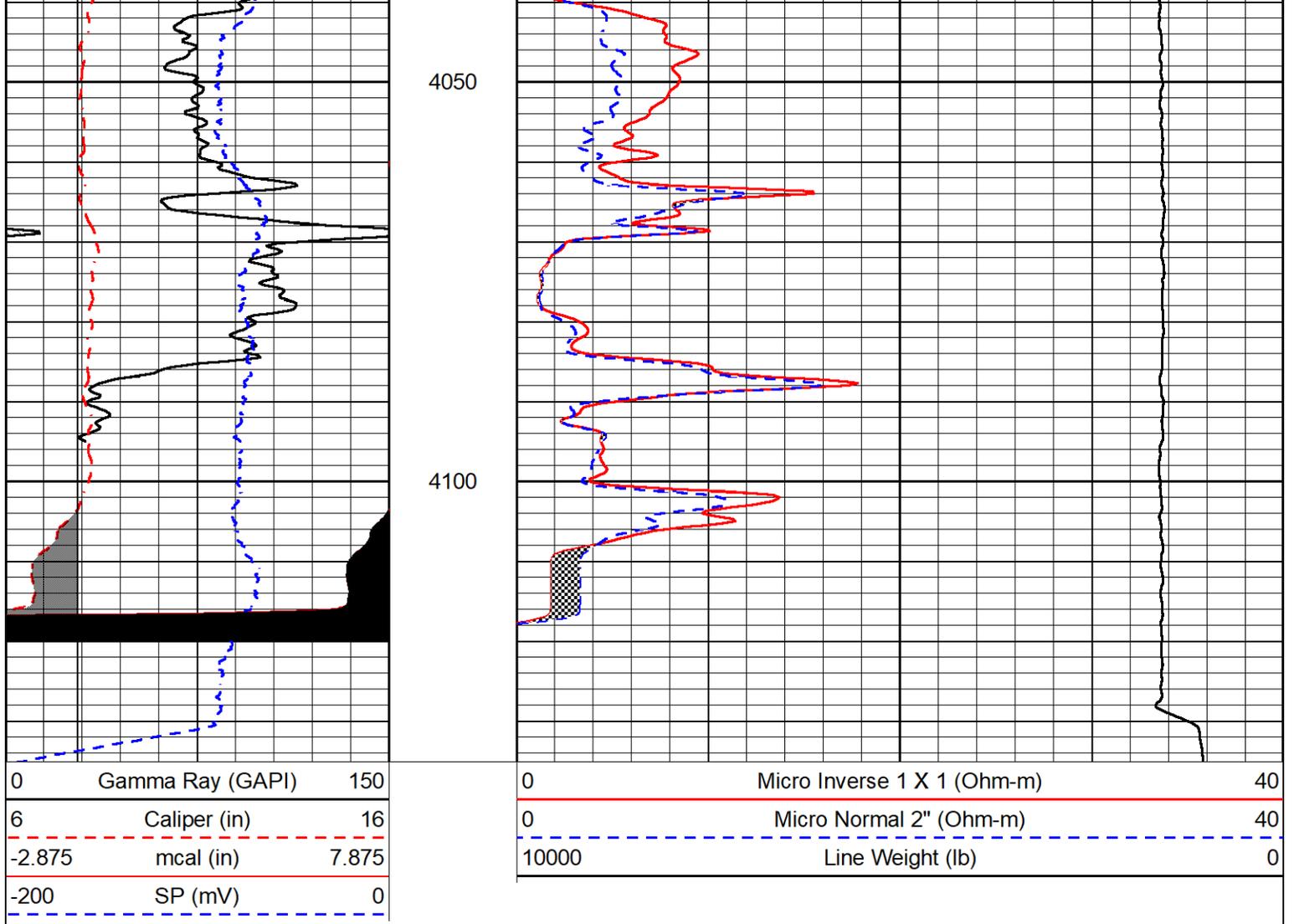
REPEAT PASS

Database File pioneer oil_bretz community unit 1-4.db
 Dataset Pathname stkml/pass4.1
 Presentation Format _micro
 Dataset Creation Wed Apr 20 14:31:00 2022
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
-2.875	mcal (in)	7.875
-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 pioneer oil_bretz community unit 1-4.db
 Dataset Pathname stkml/pass5.17
 Dataset Creation Wed Apr 20 14:18:54 2022

Dual Induction Calibration Report

Serial-Model: 502 HT-M&W
 Surface Cal Performed: Wed Feb 9 17:39:00 2022

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	83.639	487.104	0.000	183.000 mmho/m	0.454	-34.500
Medium	113.335	1585.690	0.000	442.000 mmho/m	0.350	-10.000

Microlog Calibration Report

Serial-Model: 402-PSIML
 Performed: Mon Jan 24 20:31:16 2022

	Readings		References		Results	
	Zero	Cal	Zero	Cal	m	b
Normal	0.0000	1.0000	0.0000	1.0000 Ohm-m	26500.0000	-1.5000
Inverse	0.0000	1.0000	0.0000	1.0000 Ohm-m	25000.0000	-1.0000

Compensated Density Calibration Report

Serial-Model: 305-05-M&W
 Source #: 20762B
 Master Calibration Performed: Mon Mar 28 23:57:02 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	8862.47	9339.96	cps
Aluminum	2.600	g/cc	1556.73	5707.29	cps
Spine Angle = 74.19			Density/Spine Ratio = 0.467		
	Size		Reading		
Small Ring	4.00	in	1.74		
Large Ring	14.00	in	1.38		

Compensated Neutron Calibration Report

Serial-Model: 207-MW-M&W
 Source #: 100046B
 Master Calibration Performed: Mon Nov 29 15:06:24 2021

Master Calibration

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: 101
 Tool Model: M&W
 Performed: Mon Jan 24 19:14:46 2022

Calibrator Value: 500.0 GAPI

Background Reading: 24.0 cps
 Calibrator Reading: 637.0 cps

Sensitivity: 0.5500 GAPI/cps



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