



MICRORESISTIVITY LOG

Company CHIZUM OIL, LLC
Well GERTRUDE NO. 2-36
Field UNKNOWN
County SHERMAN **State** KANSAS

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Field UNKNOWN
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Date	4/20/2018	Location:	2206' FNL & 1236' FEL SEC 36 TWP 7S RGE 37W	API #: 15-181-20611-00-00	Other Services
Run Number	ONE	Permanent Datum	GROUND LEVEL	Elevation	3441'
Depth Driller	5010'	Log Measured From	KELLY BUSHING	K.B.	3449'
Depth Logger	5010'	Drilling Measured From	KELLY BUSHING	D.F.	N/A
Bottom Logged Interval	5009'			G.L.	3441'
Top Log Interval	3900'				
Casing Driller	8.625" @ 373'				
Casing Logger	371'				
Bit Size	7.875"				
Type Fluid in Hole	CHEMICAL				
Salinity, ppm CL	6600				
Density / Viscosity	9.4				63
pH / Fluid Loss	9.5				8.8
Source of Sample	FLOWLINE				
Rm @ Meas. Temp	.65 @ 58				
Rmt @ Meas. Temp	.49 @ 58				
Rmc @ Meas. Temp	.88 @ 58				
Source of Rmf / Rmc	CHARTS				
Rm @ BHT	.30 @ 126				
Operating Rig Time	2 HOURS				
Max Rec. Temp. F	126 DEGF				
Equipment Number	108				
Location	HAYS				
Recorded By	J. HENRICKSON				
Witnessed By	RICK SMITH				

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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.
 BREWSTER KANSAS
 NORTH TO T ROAD, 1 WEST, 1/2 SOUTH, WEST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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www.pioneerenergy.com 785-625-3858

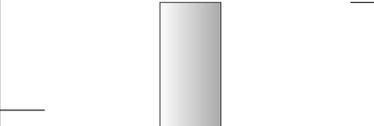
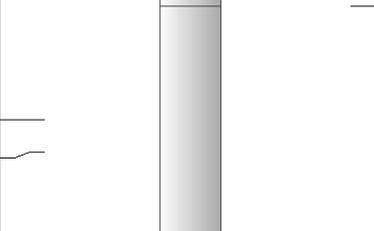
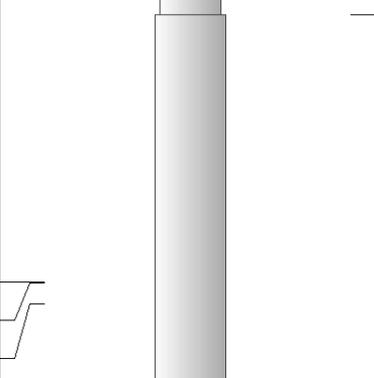
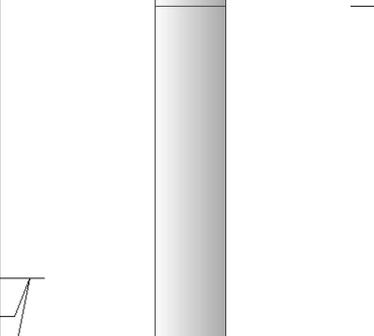
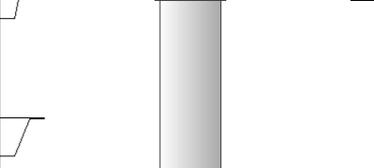
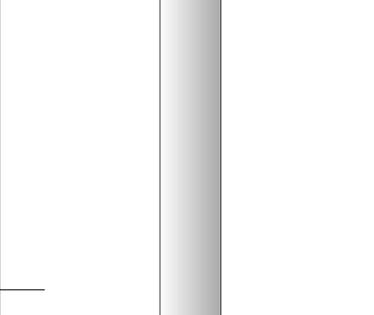
Your Pioneer Energy Services Crew Engineer: J. HENRICKSON Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: RICK SMITH Secondary Witness: Secondary Witness: Secondary Witness:
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\chizum_gertrude_2_36.db
 Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	126	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	2	3	-77	41	Off	5010

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (168-986)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (PSI 978)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: chizum_gertrude_2_36.db: field/well/stackml/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

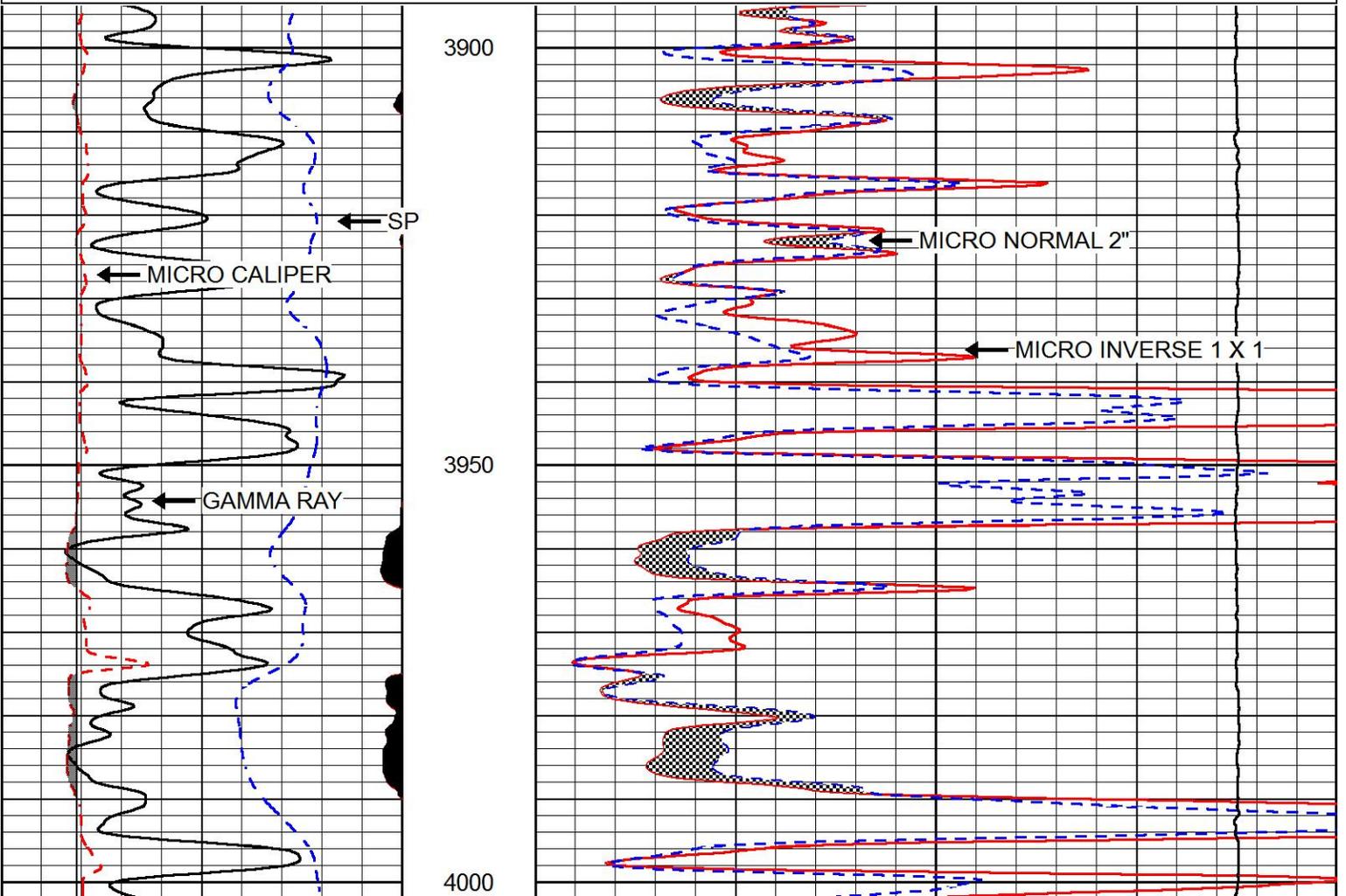


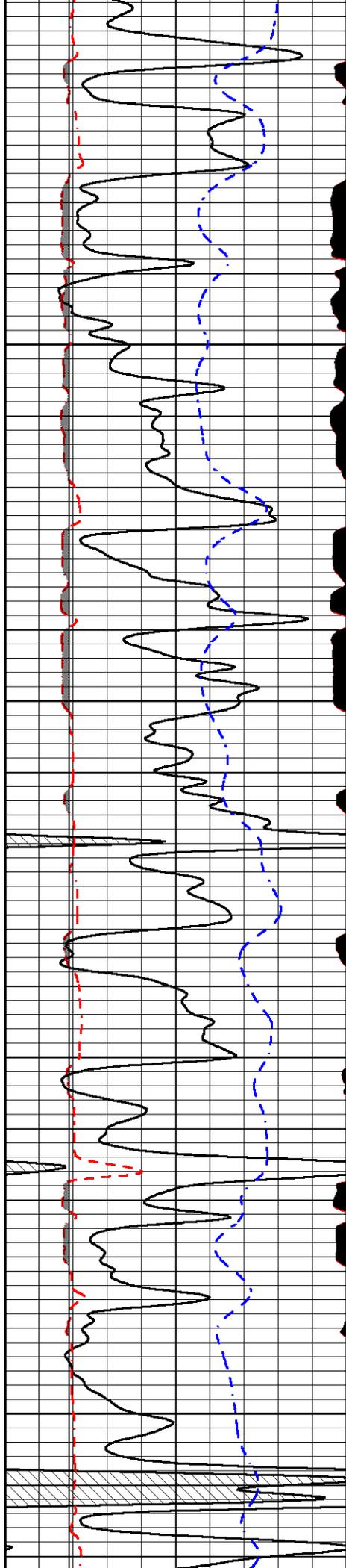
MAIN PASS

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 Dataset Pathname stackml/pass3.1
 Presentation Format micro
 Dataset Creation Fri Apr 20 03:48:48 2018
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
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
15000	LINE TENSION (lb)	0



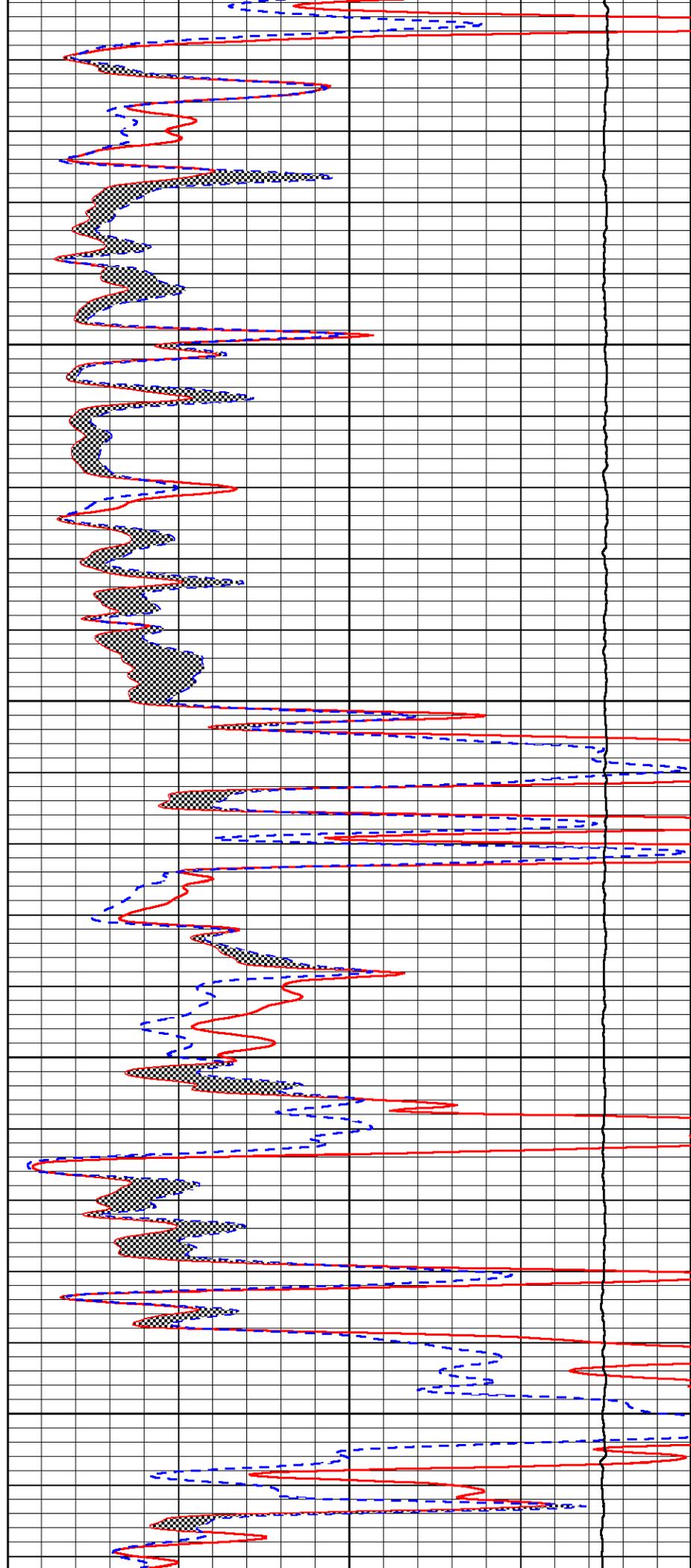


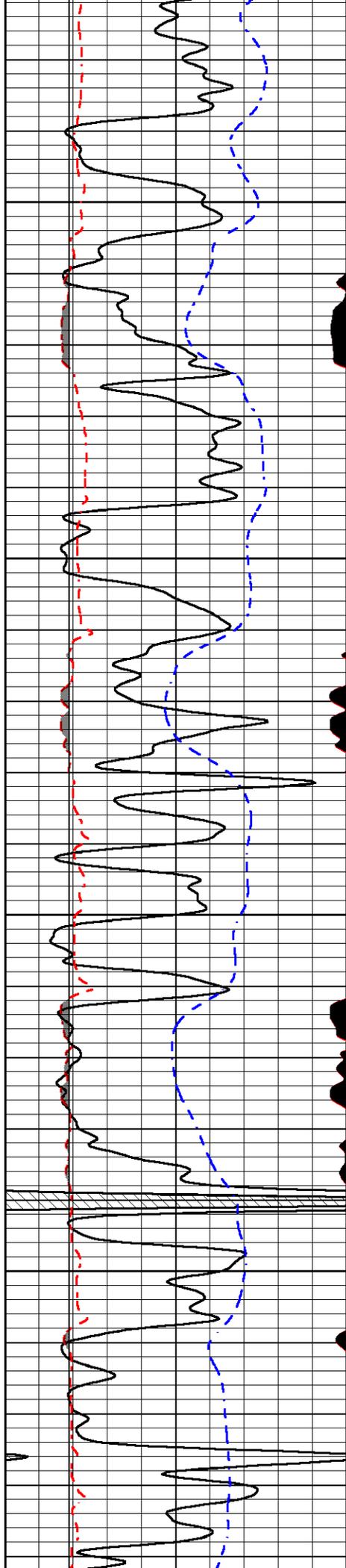
4050

4100

4150

4200



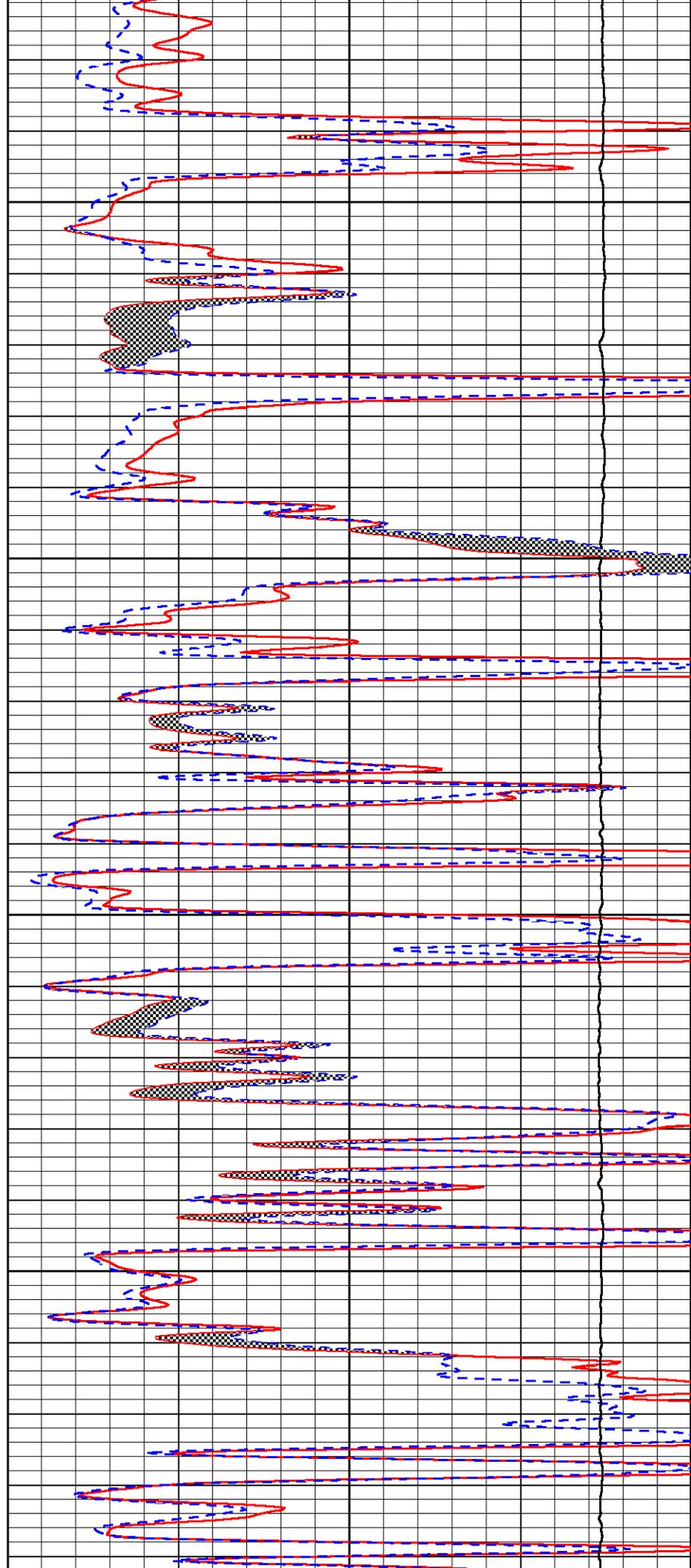


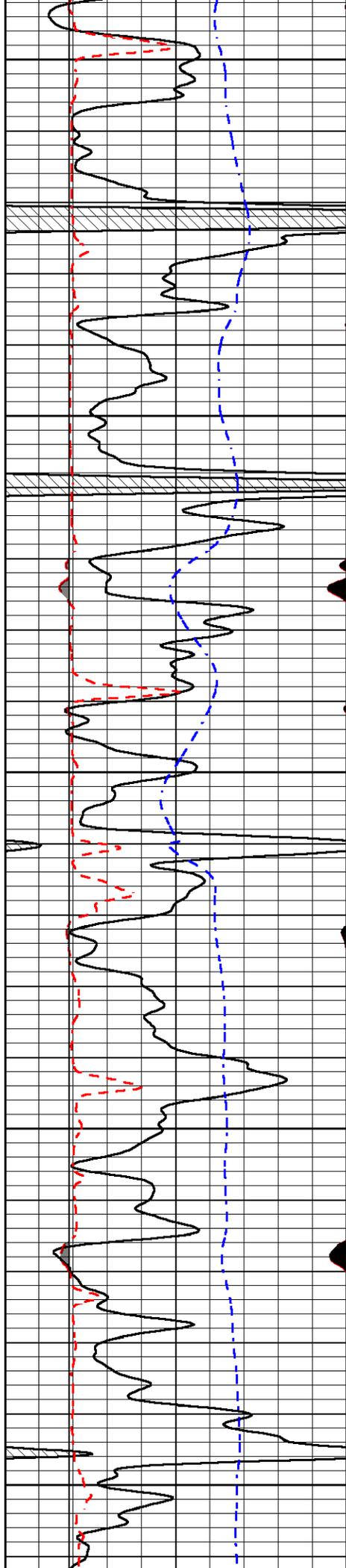
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4300

4350

4400





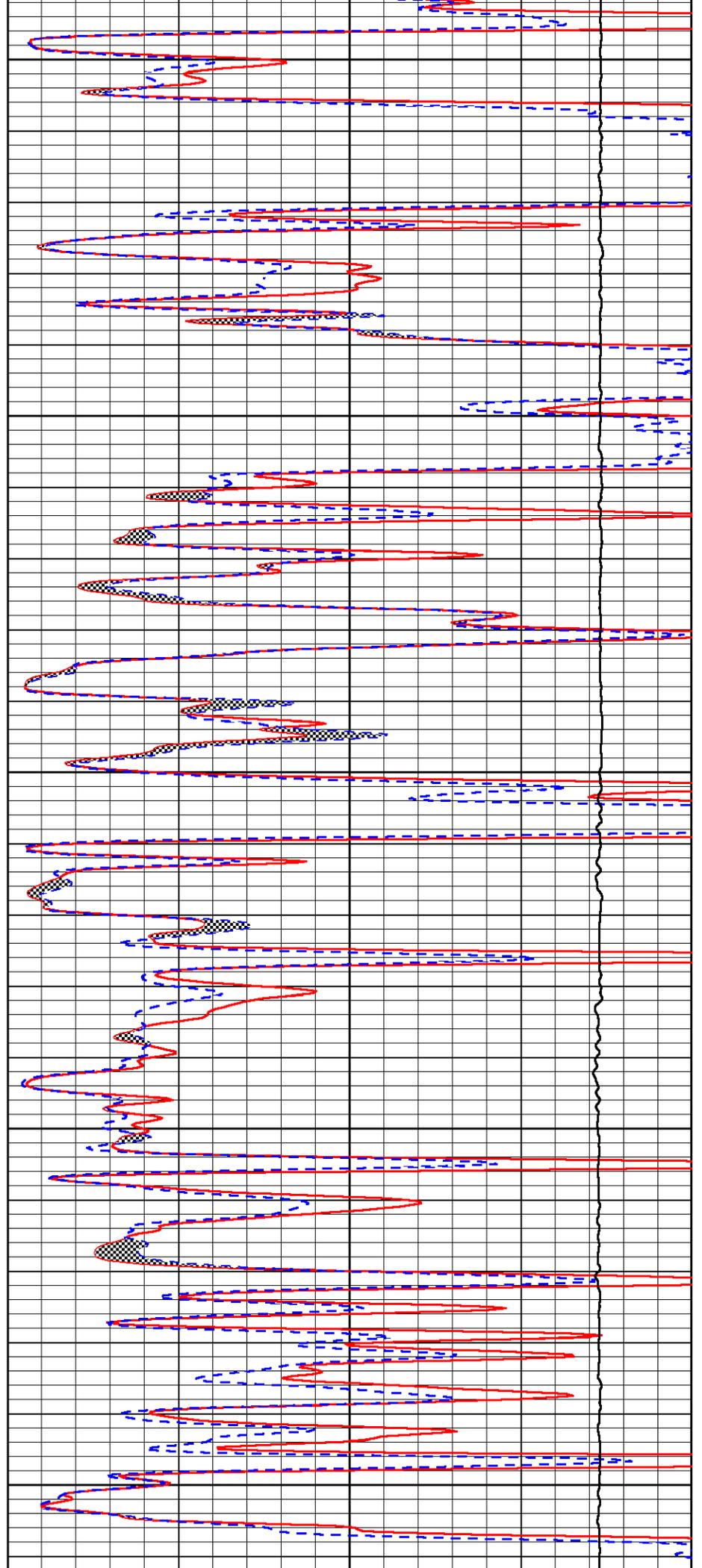
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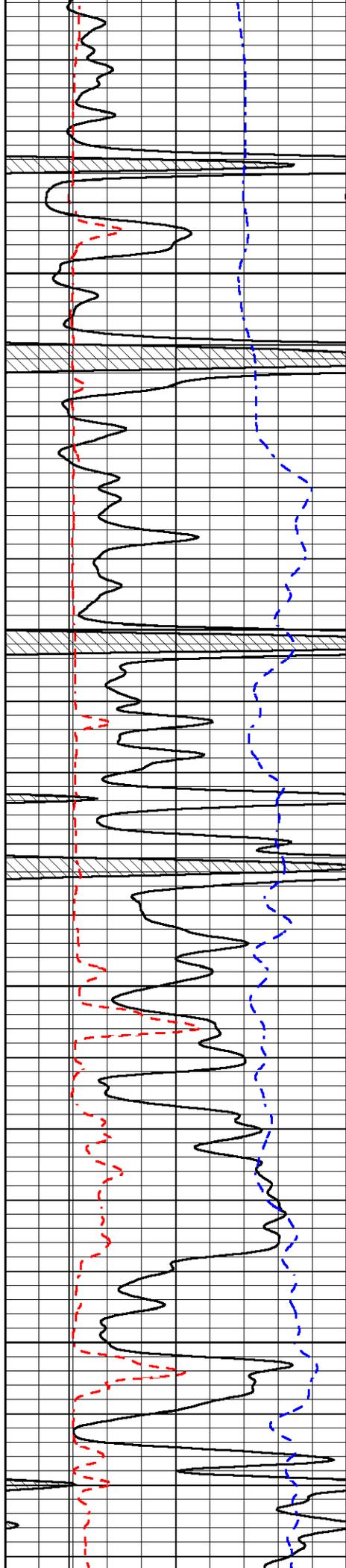
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4550

4600

4650



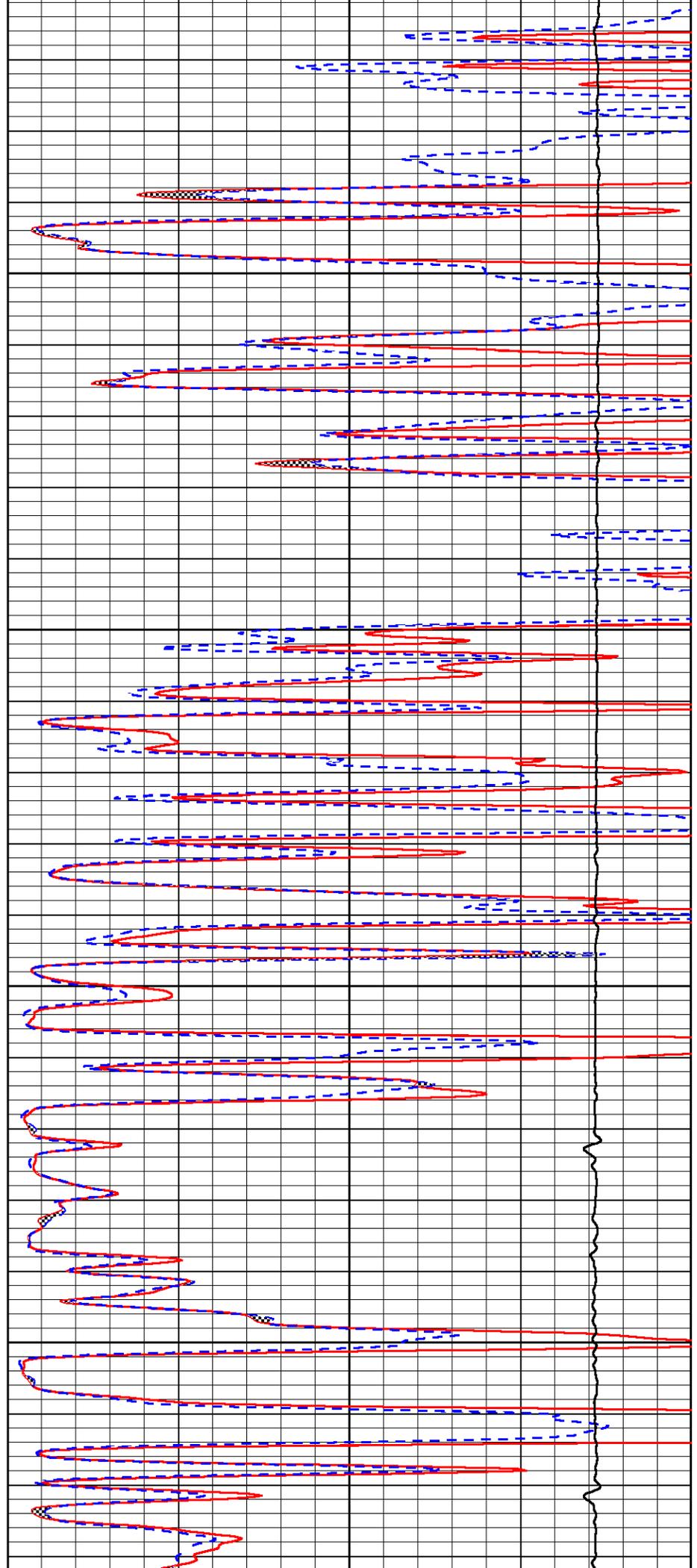


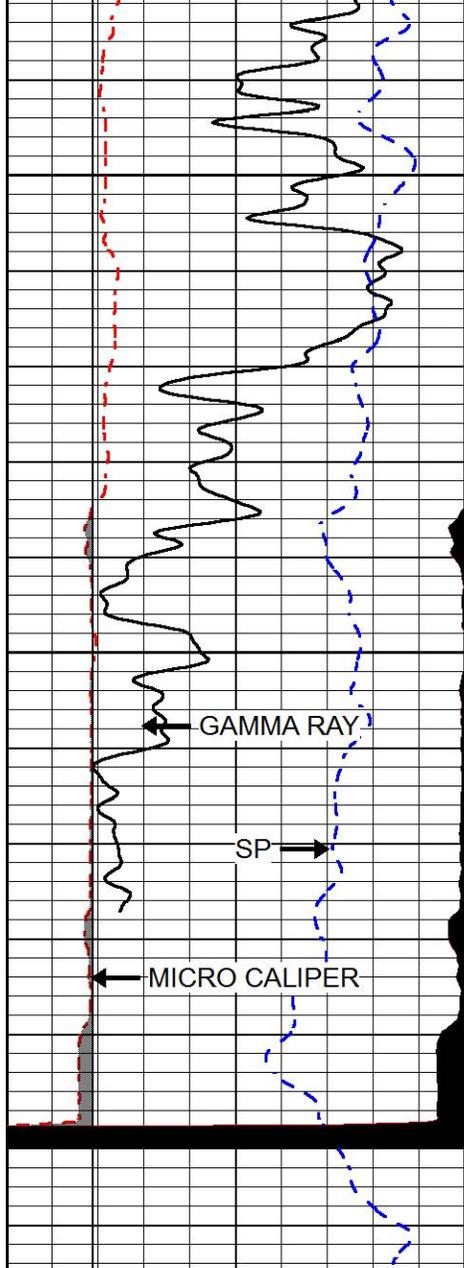
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4750

4800

4850





4900

4950

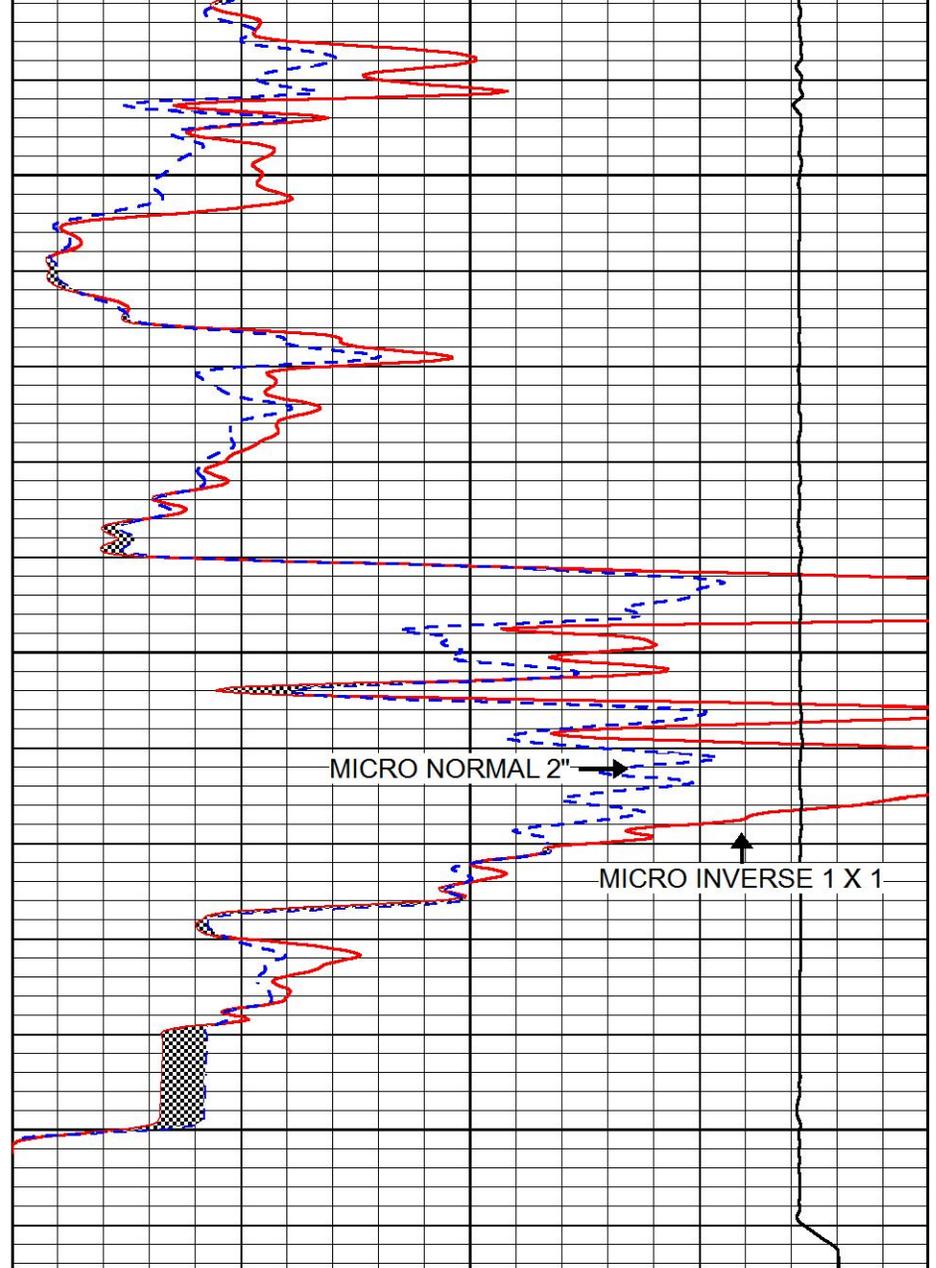
5000

GAMMA RAY

SP

MICRO CALIPER

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0



MICRO NORMAL 2"

MICRO INVERSE 1 X 1

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0

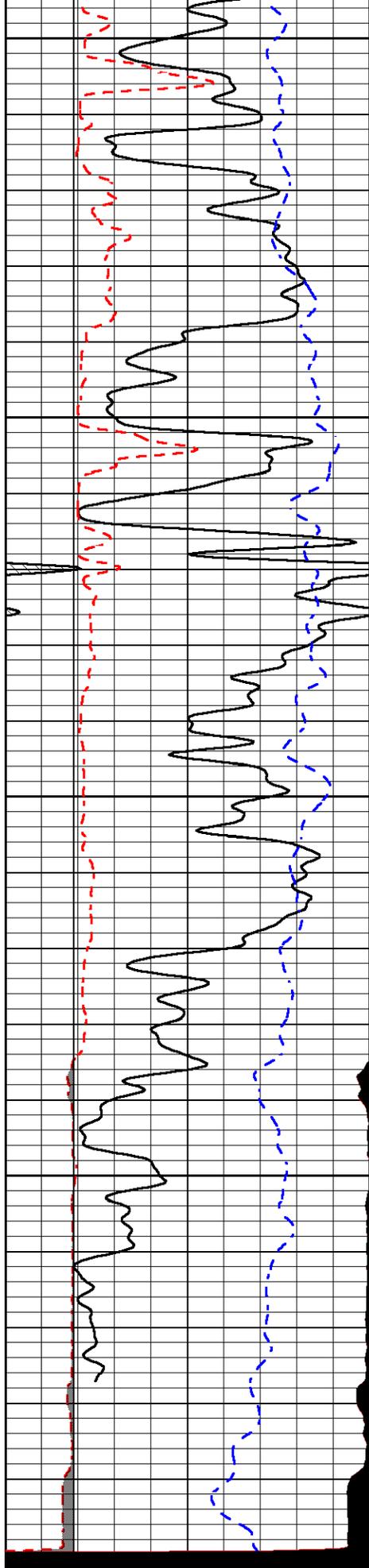


REPEAT SECTION

Database File chizum_gertrude_2_36.db
 Dataset Pathname stackml/pass2.1
 Presentation Format micro
 Dataset Creation Fri Apr 20 03:52:57 2018
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
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
15000	LINE TENSION (lb)	0



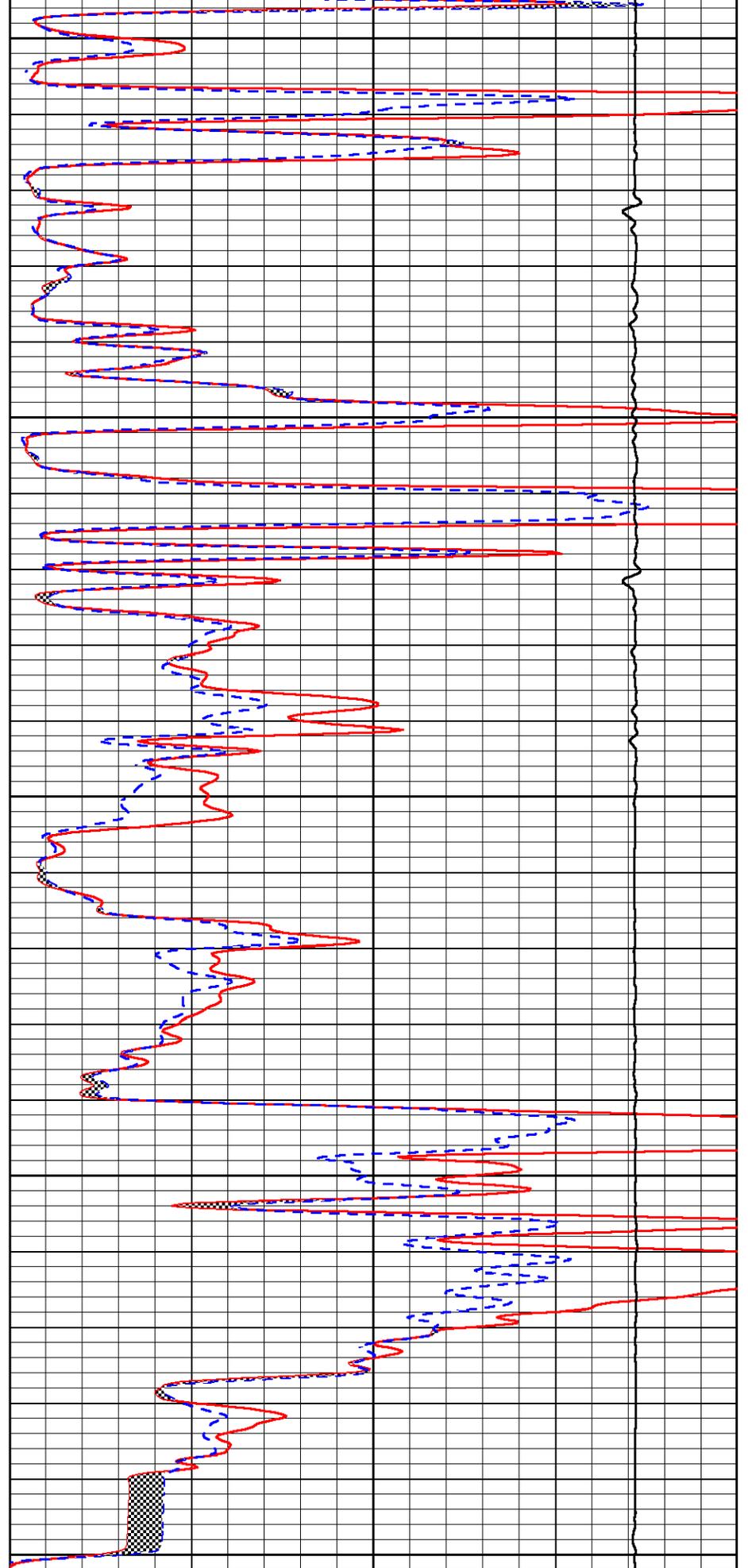
4800

4850

4900

4950

5000



0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
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
15000	LINE TENSION (lb)	0

Calibration Report

Database File chizum_gertrude_2_36.db
Dataset Pathname stackml/pass3.1
Dataset Creation Fri Apr 20 03:48:48 2018

Dual Induction Calibration Report

Serial-Model: PSI 978-M&W
Calibration Performed: Sun Feb 04 11:50:02 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.570	-40.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.400	-37.000

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
Performed: Sat Apr 07 12:01:20 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	26000.0000	-1.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	20000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.8000

Compensated Density Calibration Report

Serial-Model: 168-986-M&W
Source / Verifier: /
Master Calibration Performed: Tue Apr 11 17:07:47 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.675	g/cc	859.57	3020.22	cps
Spine Angle = 74.61			Density/Spine Ratio = 0.523		
	Size		Reading		
Small Ring	4.00	in	1.00		
Large Ring	14.00	in	1.20		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
Tool Model: M&W

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-M&W	
Tool Model:	M&W	
Calibration Performed:	Tue Apr 11 17:08:01 2017	
Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



PIONEER
 Pioneer Energy Services

Company	CHIZUM OIL, LLC
Well	GERTRUDE NO. 2-36
Field	UNKNOWN
County	SHERMAN
State	KANSAS