



MICRORESISTIVITY LOG

PIONEER
Pioneer Energy Services

Company BRITO OIL COMPANY, INC.
Well COOK NO. 1-10
Field WILDCAT
County THOMAS State KANSAS

Location: API #: 15-193-21001-00-00

1320' FNL & 330' FEL

SEC 10 TWP 16S RGE 35W

Permanent Datum GROUND LEVEL Elevation 3258'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
DIL
Elevation
K.B. 3263'
D.F. N/A
G.L. 3258'

Date 10/7/2017

Run Number ONE

Depth Driller 4800'

Depth Logger 4799'

Bottom Logged Interval 4798'

Top Log Interval 3700'

Casing Driller 8.625" @ 344'

Casing Logger 345'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 4.400

Density / Viscosity 9.1 63

pH / Fluid Loss 12.0 5.6

Source of Sample FLOWLINE

Rim @ Meas. Temp .75 @ 57

Rimf @ Meas. Temp .56 @ 57

Rmc @ Meas. Temp 1.01 @ 57

Source of Rimf / Rmc CHARTS

Rim @ BHT .34 @ 124

Operating Rig Time 3 HOURS

Max Rec. Temp. F 124 DEG/F

Equipment Number 108

Location HAYS

Recorded By J. HENRICKSON

Witnessed By SAMAN SHARIFAIE

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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.

LEVANT KANSAS
11 NORTH ON RD 11, 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

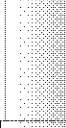
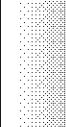
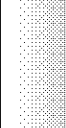
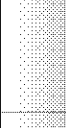
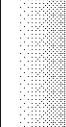
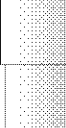
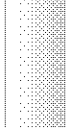
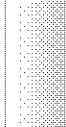
Engineer: J. HENRICKSON
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: SAMAN SHARIFAIE
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 124	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV -150	degF 45	Off	ft 4799

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	37.48			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	36.73						
LSD	28.43			CDL-M&W (168-986)	8.50	4.00	250.00
DCAL	28.42			ML-PSI STKBL ML (PSI-02)	7.58	4.00	65.00
SSD	27.93			Stackable Microlog Tools			
MCAL	19.83						
MI	19.83						
MN	19.83						
RLL3	15.80						
RLL3F	15.79						
CILD	8.00			DIL-M&W (1987)	18.50	3.50	220.00

CILM

4.70

SP

0.20

Dataset: brito_cook_1_10.db: field/well/stackml/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

PIONEER

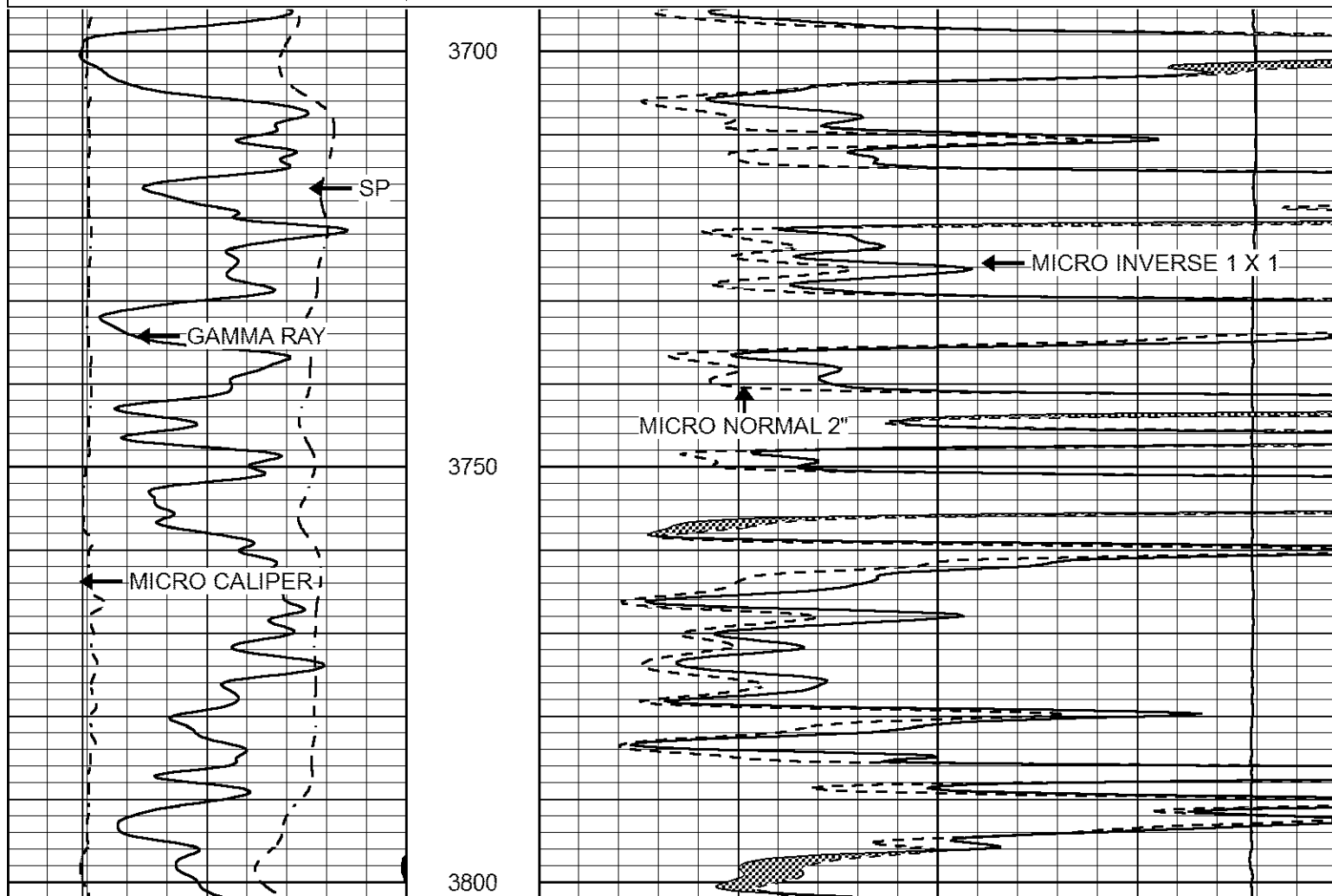
Pioneer Energy Services

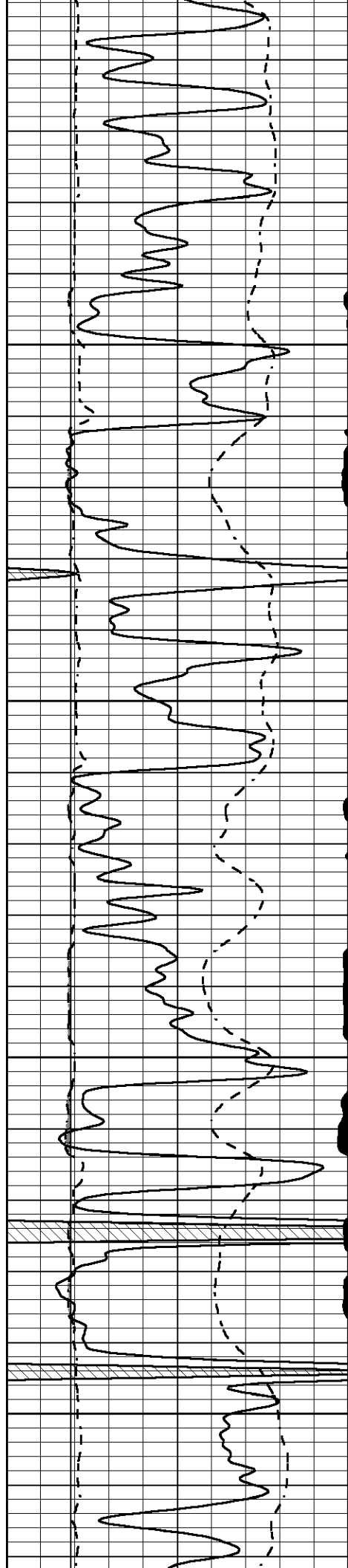
MAIN PASS

Database File brito_cook_1_10.db
 Dataset Pathname stackml/pass3.1
 Presentation Format micro
 Dataset Creation Sat Oct 07 10:31:36 2017
 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



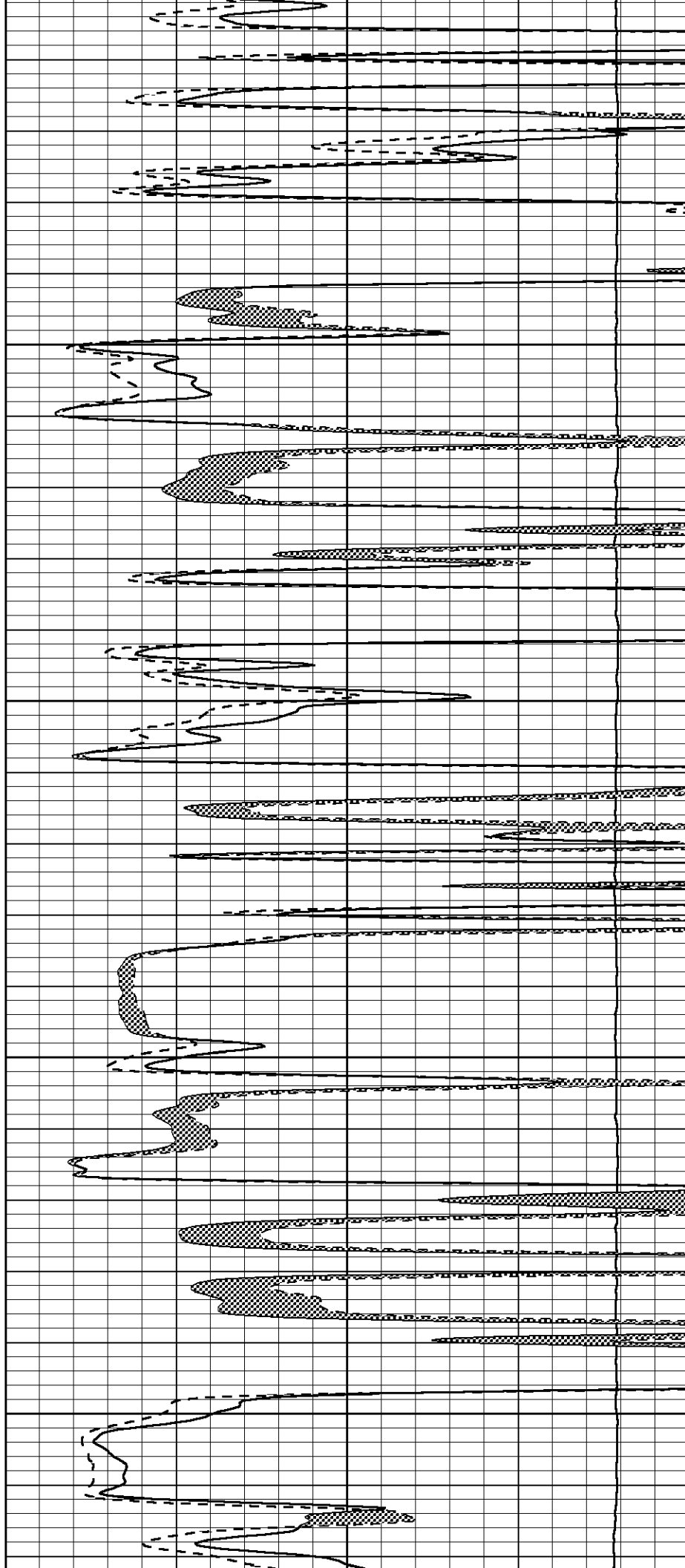


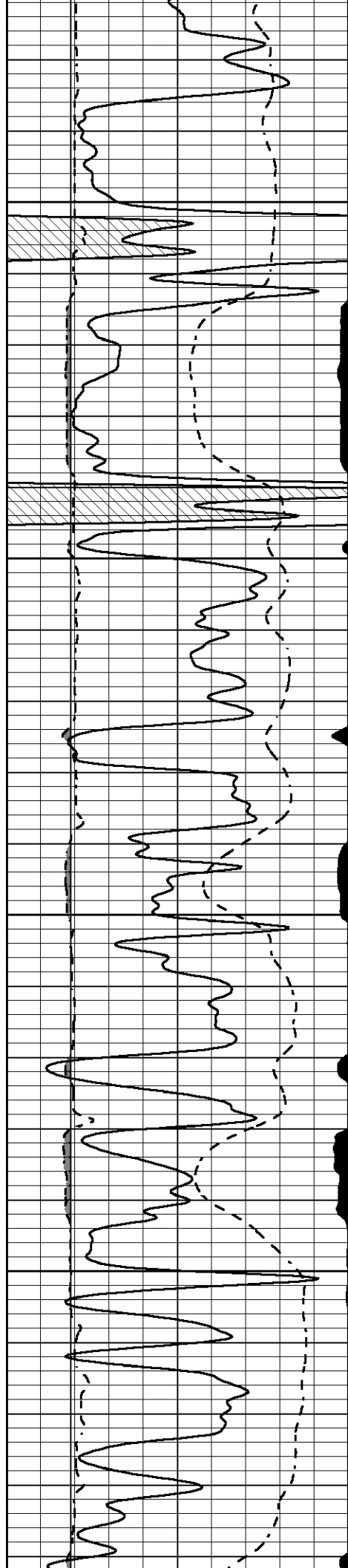
3850

3900

3950

4000



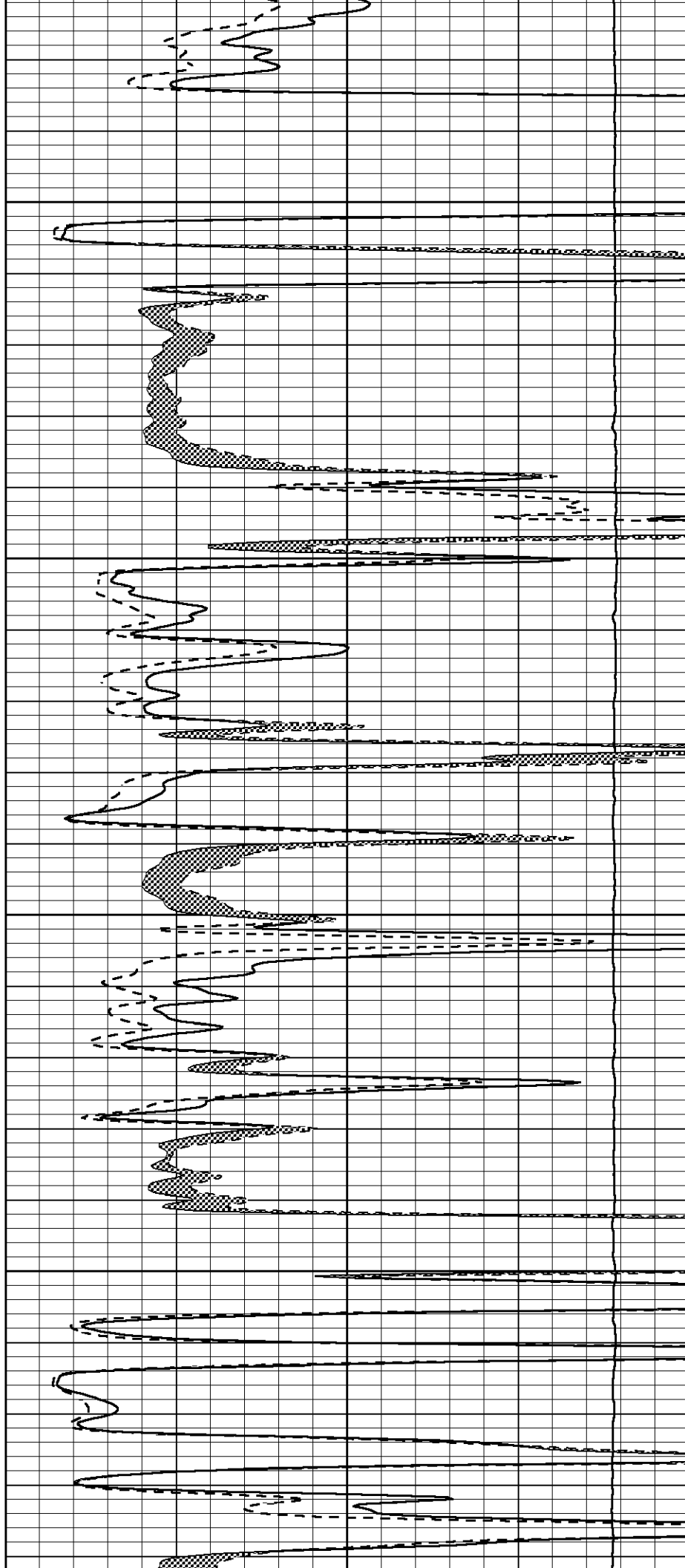


4050

4100

4150

4200





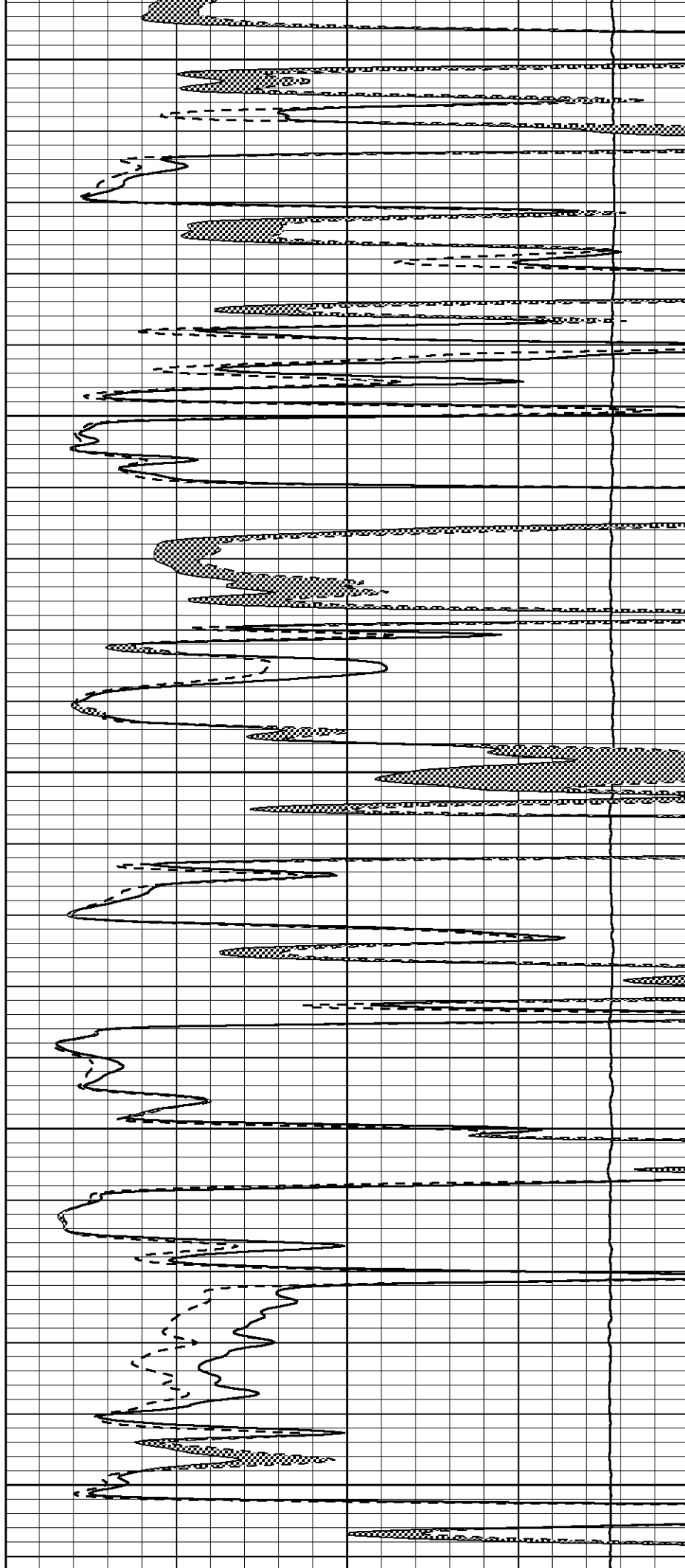
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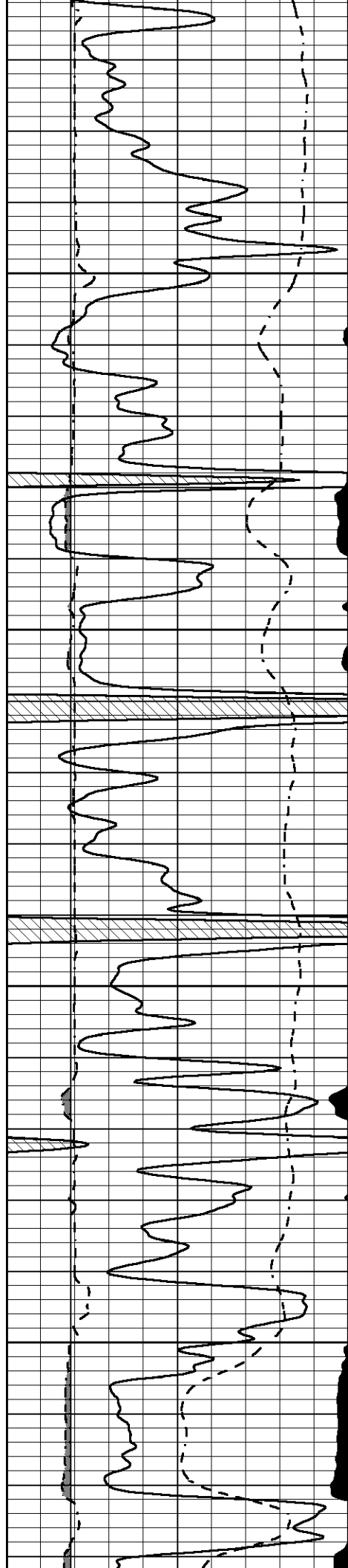
4300

4350

4400

4450



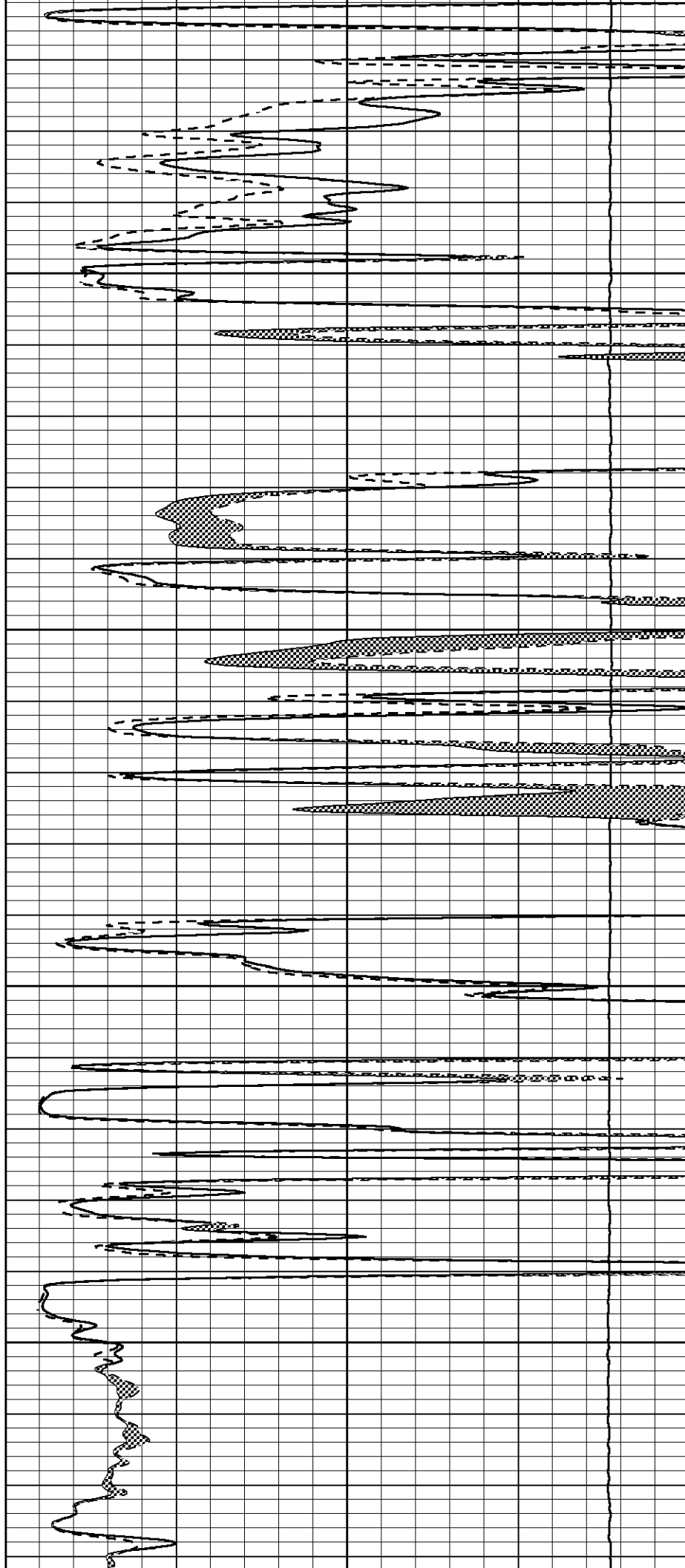


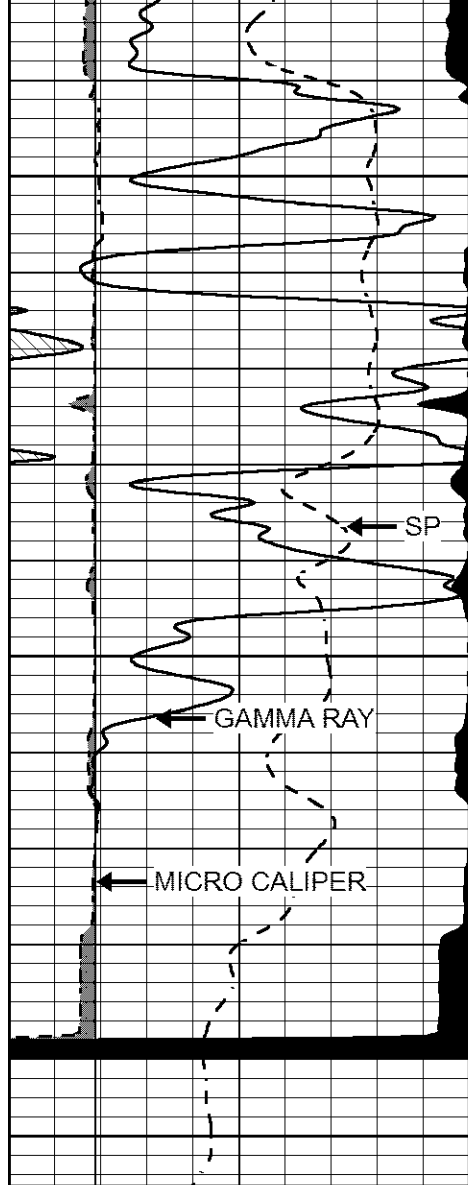
4500

4550

4600

4650



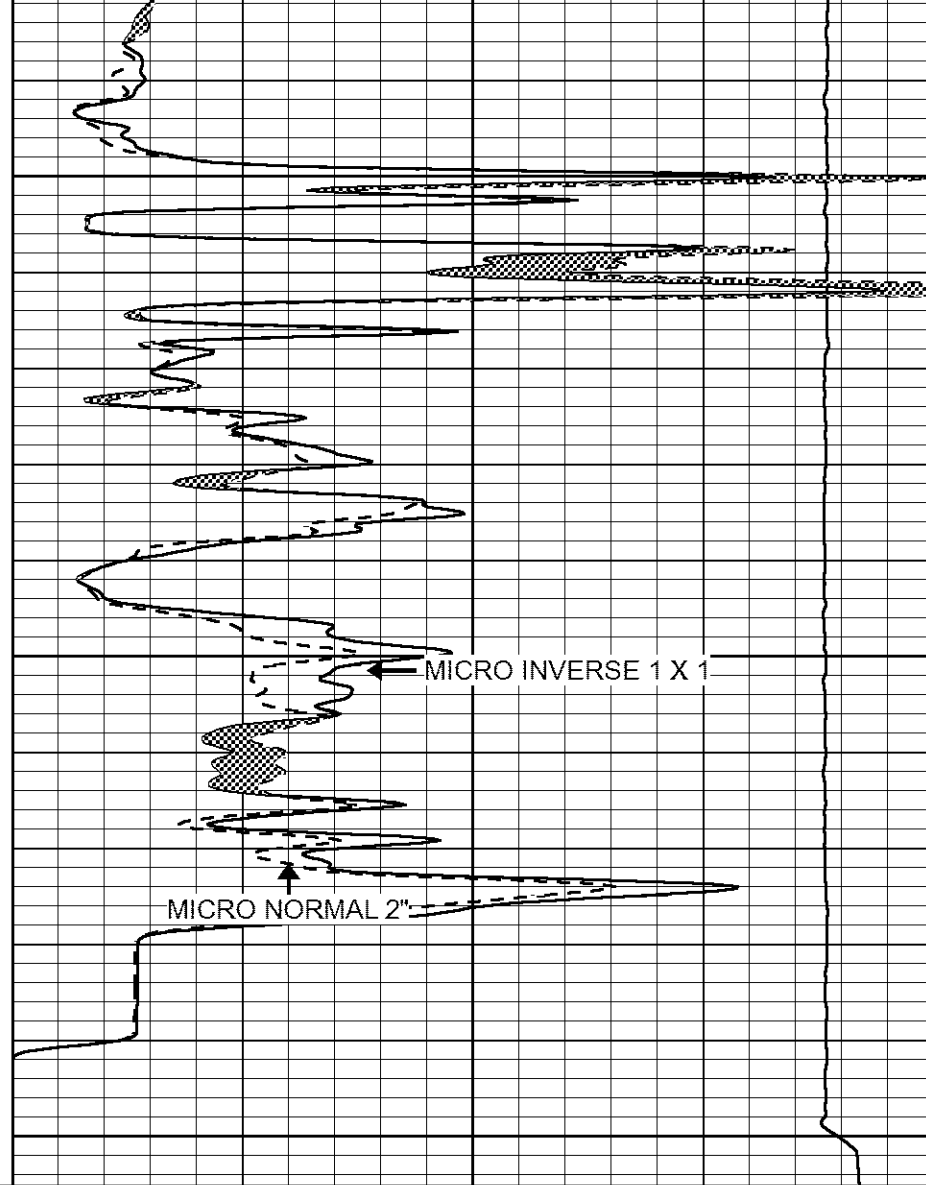


0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

4700

4750

4800



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 brito_cook_1_10.db
 Dataset Pathname stackml/pass2.1
 Presentation Format micro
 Dataset Creation Sat Oct 07 10:36:16 2017
 Charted by Depth in Feet scaled 1:240

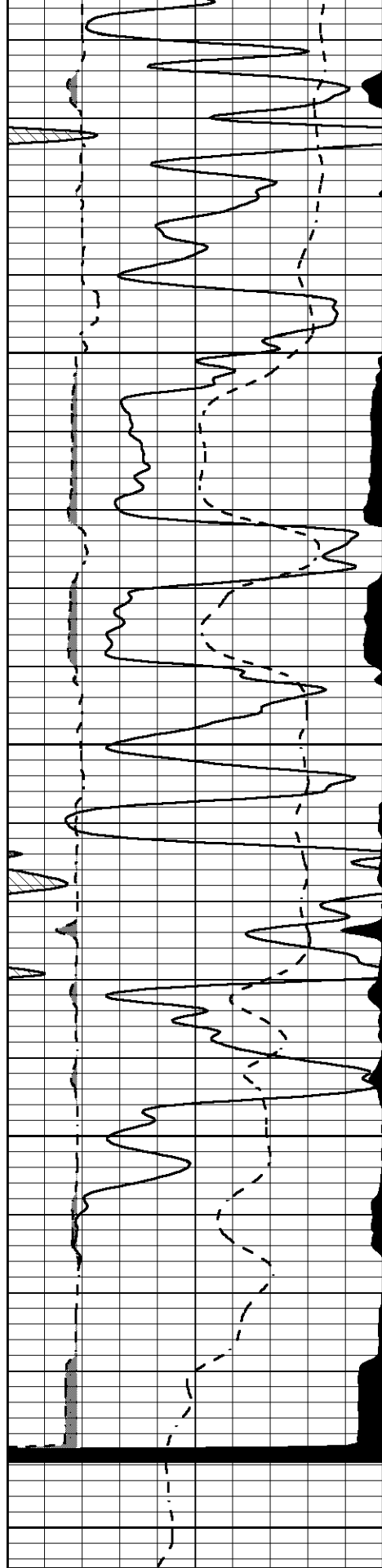
0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

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



4600





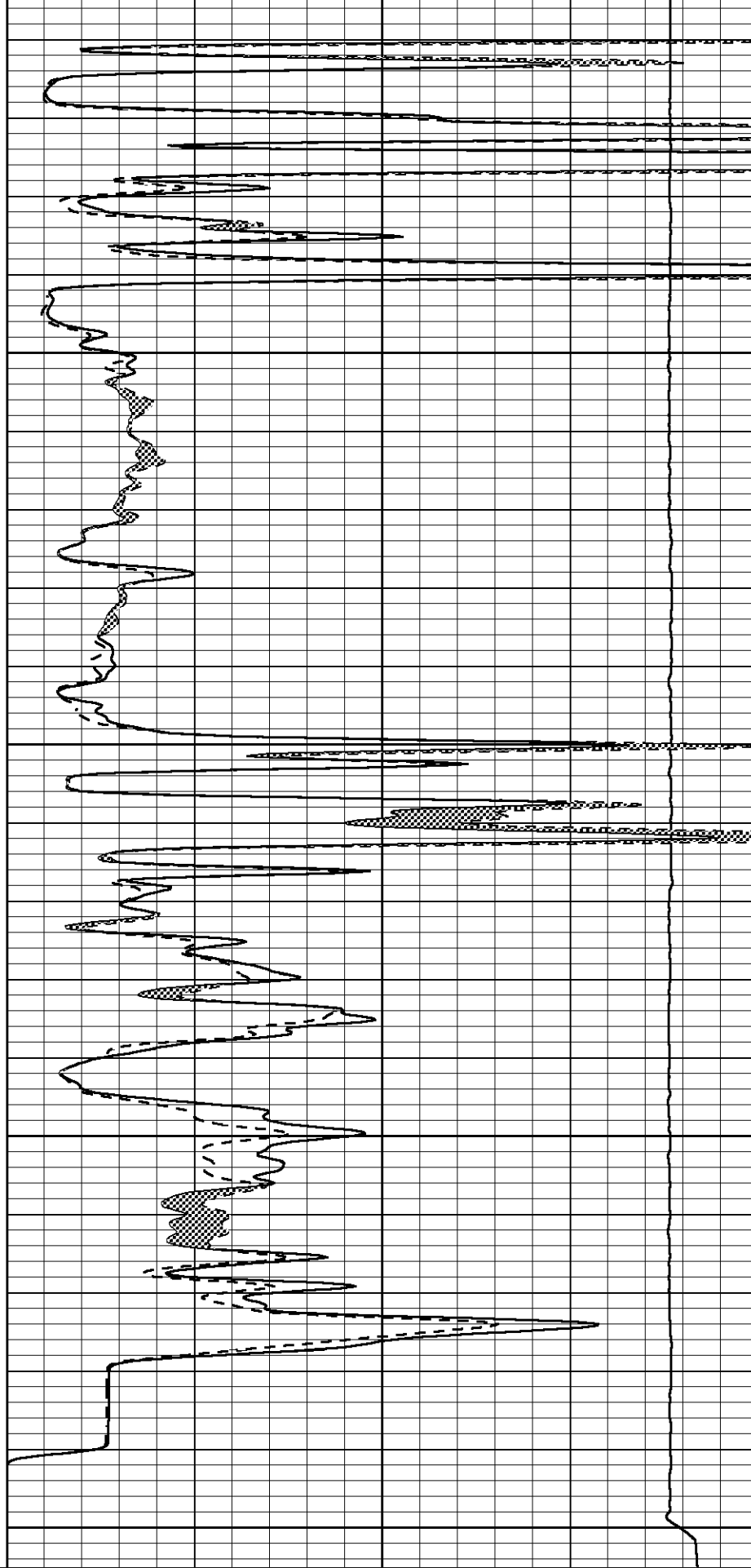
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6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

4650

4700

4750

4800



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	brito_cook_1_10.db	
Dataset Pathname	stackml/pass3.1	
Dataset Creation	Sat Oct 07 10:31:36 2017	

Dual Induction Calibration Report

Serial-Model:	1987-M&W
Calibration Performed:	Tue Apr 11 16:07:38 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-36.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Microlog Calibration Report

Serial-Model:	PSI-02-PSI STKBL ML
Performed:	Fri Jun 23 00:25:19 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	14000.0000	0.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	16000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.3500

Compensated Density Calibration Report

Serial-Model:	168-986-M&W
Source / Verifier:	/
Master Calibration Performed:	Tue Apr 11 16:07:47 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		1.03			
Large Ring	14.00	in		1.23			

Compensated Neutron Calibration Report

Serial Number:	tk10-MW
Tool Model:	M&W
Calibration Performed:	Wed Nov 16 11:21:36 2016

Detector	Readings	Target	Normalization
Short Space	6240.00 cps	1000.00 cps	1.6025

Long Space	460.00	cps	1000.00	cps	1.9500
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Gamma Ray Calibration Report

Serial Number:	89-M&W	
Tool Model:	M&W	
Calibration Performed:	Tue Apr 11 16:08:01 2017	
Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



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Company	BRITO OIL COMPANY, INC.
Well	COOK NO. 1-10
Field	WILDCAT
County	THOMAS
State	KANSAS