



MICRORESISTIVITY LOG

PIONEER
Pioneer Energy Services

Company RAMA OPERATING CO. INC.
Well REWERTS #1-27
Field BEDFORD
County STAFFORD
State KANSAS

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Location: API #: 15-185-24041-00-00

Other Services

SEC 27 TWP 23S RGE 12W
2185' FNL & 330' FWL

Permanent Datum GROUND LEVEL Elevation 1859'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1870'
D.F. N/A
G.L. 1859'

Date	12/1/2018		
Run Number	ONE		
Depth Driller	3915'		
Depth Logger	3913'		
Bottom Logged Interval	3912'		
Top Log Interval	3100'		
Casing Driller	8.625" @ 307'		
Casing Logger	307'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	9100		
Density / Viscosity	9.3 67		
pH / Fluid Loss	9.5 11.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.50 @ 71		
Rmf @ Meas. Temp	1.13 @ 71		
Rmc @ Meas. Temp	2.03 @ 71		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.92 @ 115		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	115		
Equipment Number	108		
Location	HAYS		
Recorded By	IAN MABB		
Witnessed By	JOSH AUSTIN		

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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.

STAFFOR, KS.

5 MILES NORTH, 2 MILES WEST, 1/2 SOUTH,
EAST INTO

Log Measured From: KELLY BUSHING

11 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES

www.pioneerenergy.com

785-625-3858

Your Pioneer Energy Services Crew

Engineer: IAN MABB

Operator:

Operator:

Operator:

This Log Record Was Witnessed By

Primary Witness: JOSH AUSTIN

Secondary Witness:

Secondary Witness:

Secondary Witness:

DatabaseC:\ProgramData\Warrior\Data\rama_reverts_1_27.db
Dataset field/well/stackmel/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	115	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	65	0	Off	3913

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 DCAL SSD	28.43		CDL-M&W (934-5002)	8.50	4.00	250.00
	28.42					
	27.93					
MCAL MI MN	19.83		ML-PSI STKBL ML (PSI-01) Stackable Microlog Tools	7.58	4.00	65.00
	19.83					
	19.83					
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (PSI 988)	18.50	3.50	220.00

CILM

4.70

SP

0.20

Dataset: rama_reverts_1_27.db: field/well/stackmel/pass3.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in

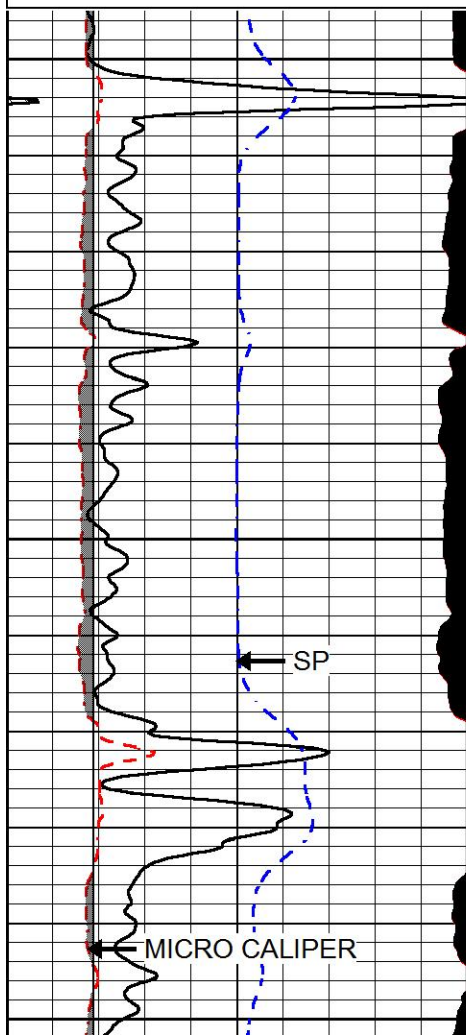


MAIN PASS

Database File rama_reverts_1_27.db
Dataset Pathname stackmel/pass3.1
Presentation Format micro
Dataset Creation Sat Dec 01 16:13:31 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

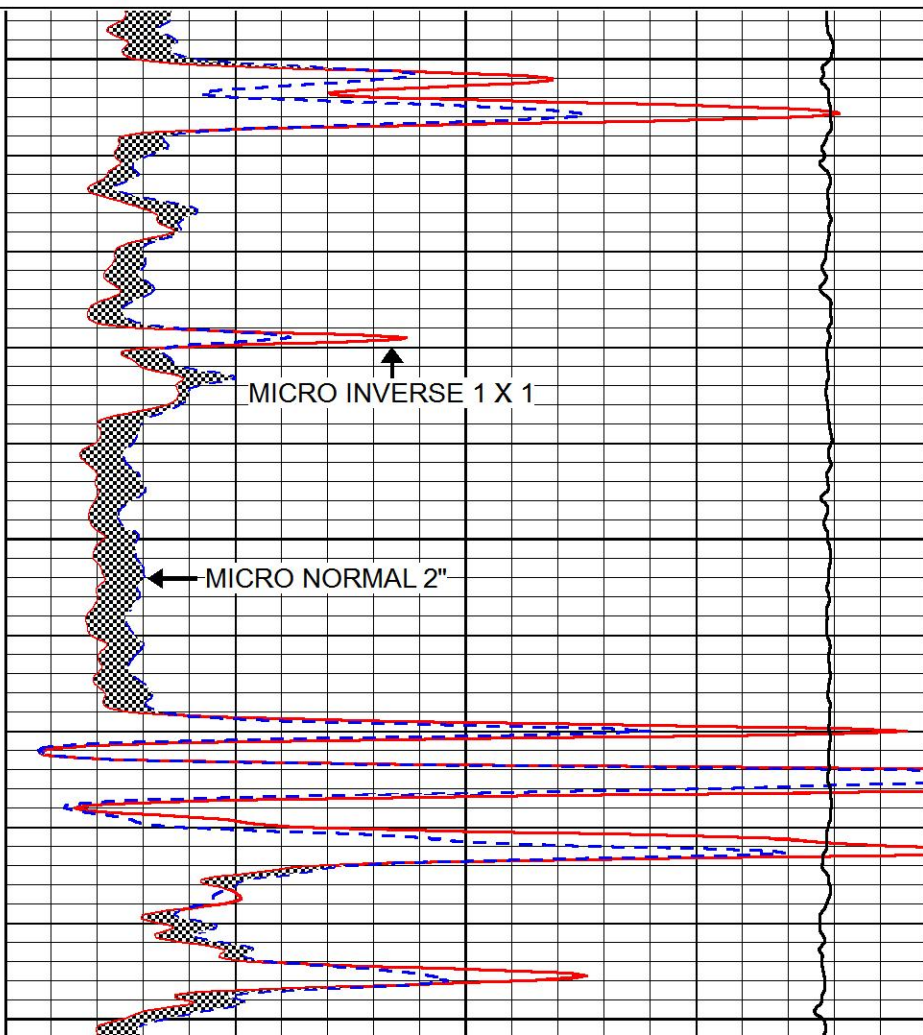
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0



3100

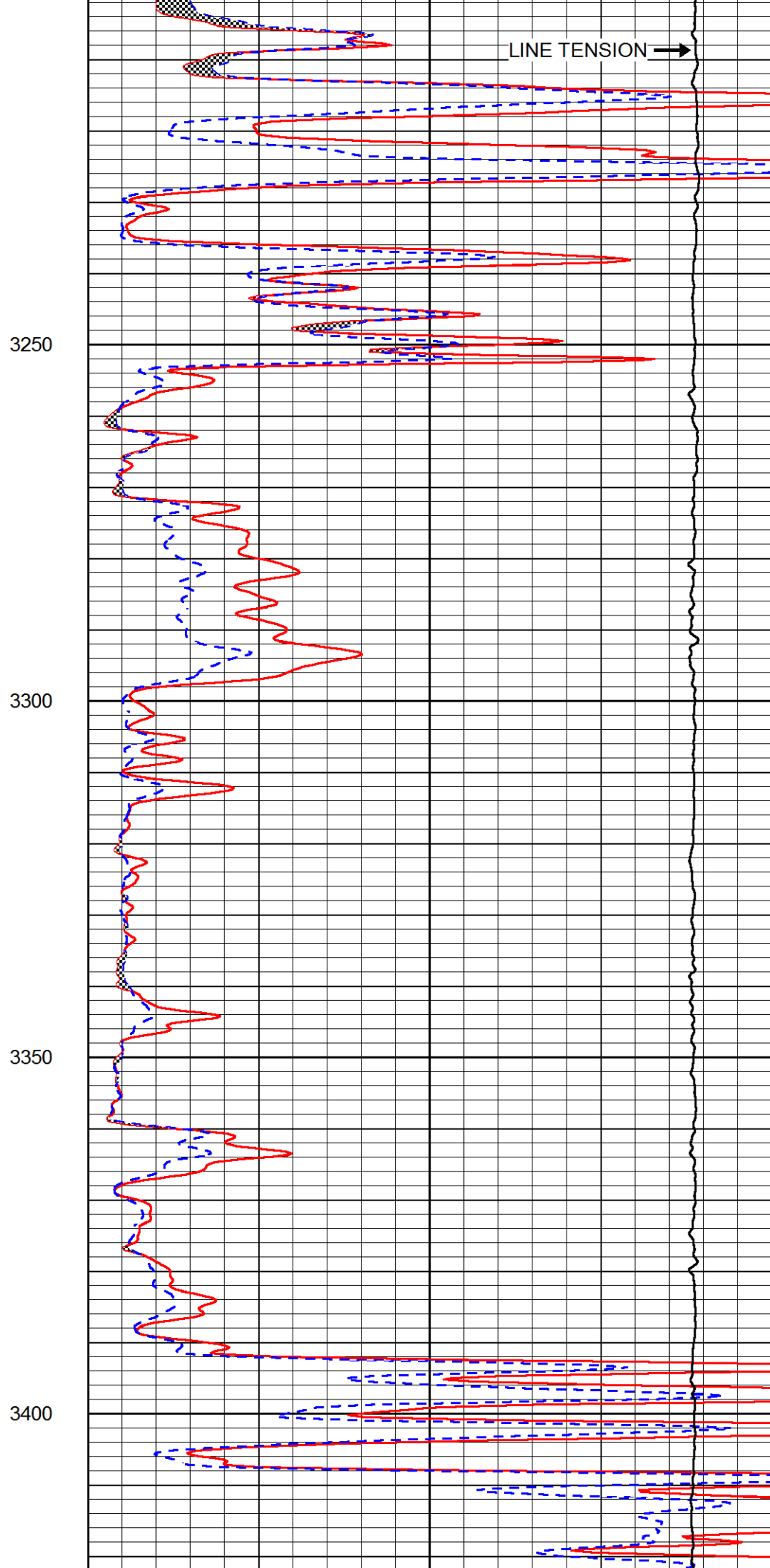
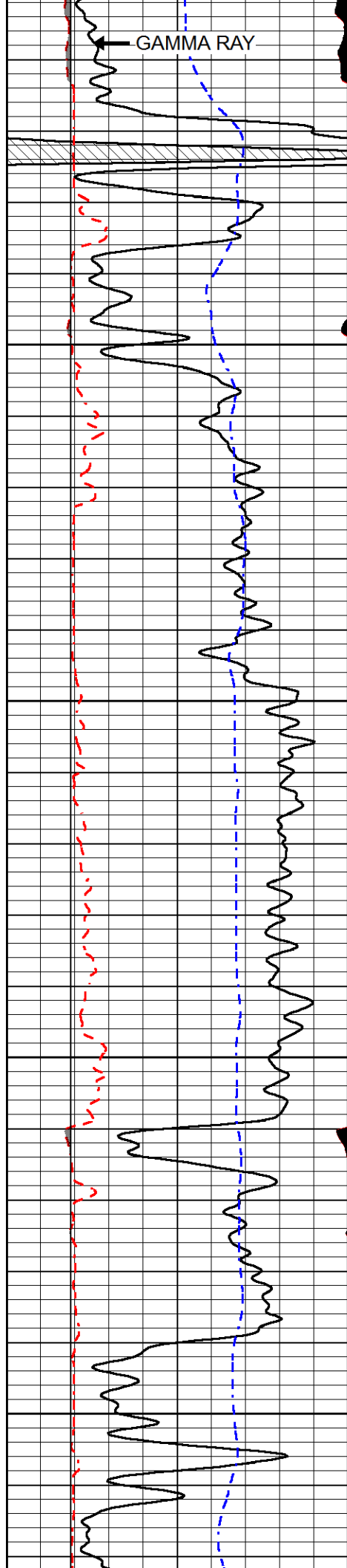
3150

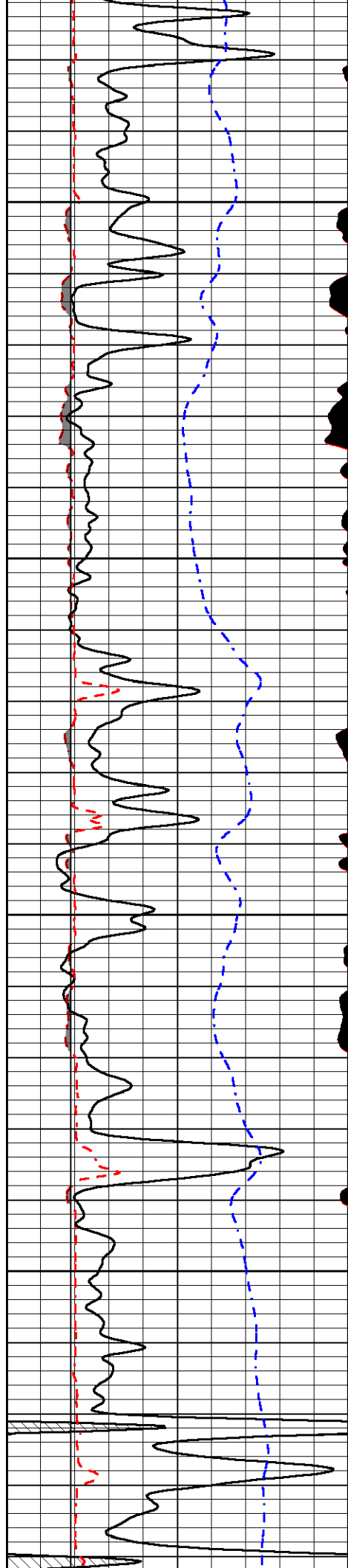
3200



MICRO INVERSE 1 X 1

MICRO NORMAL 2"



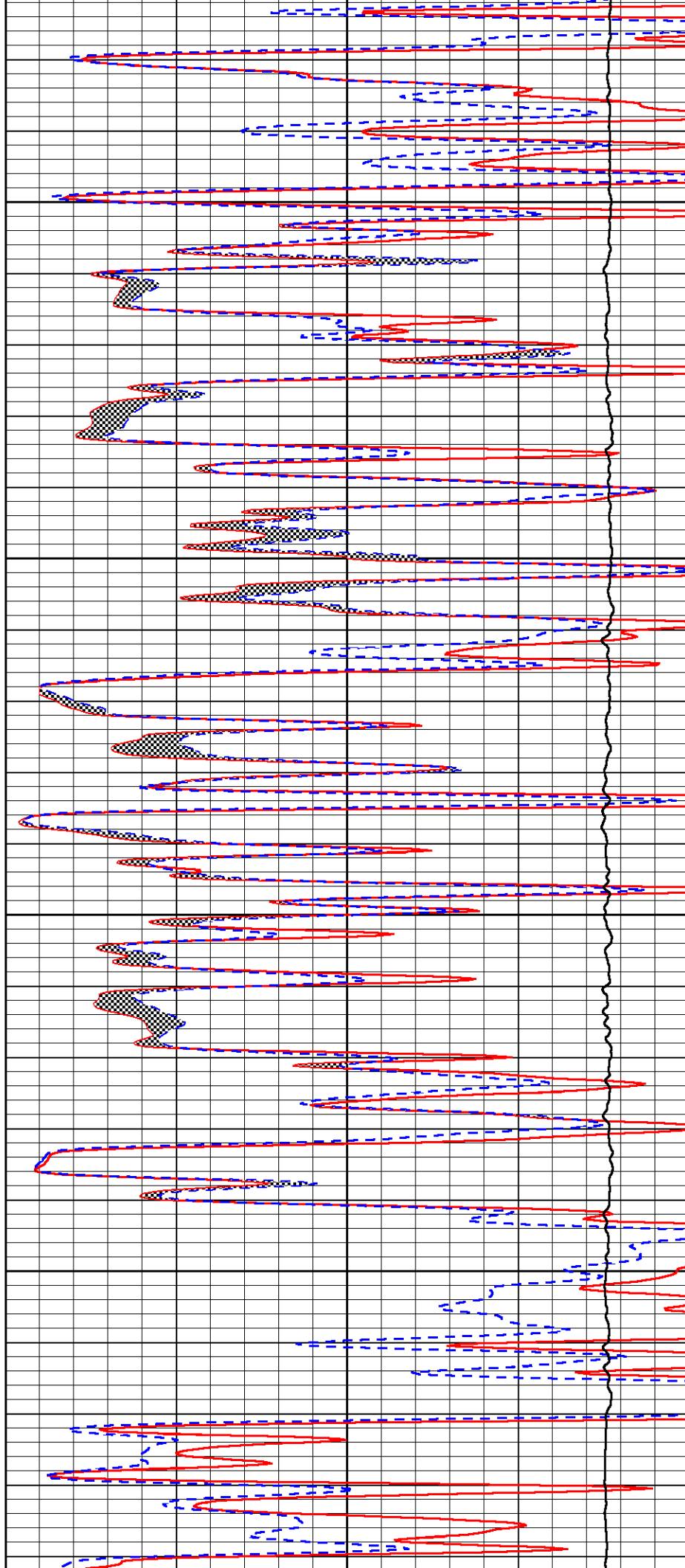


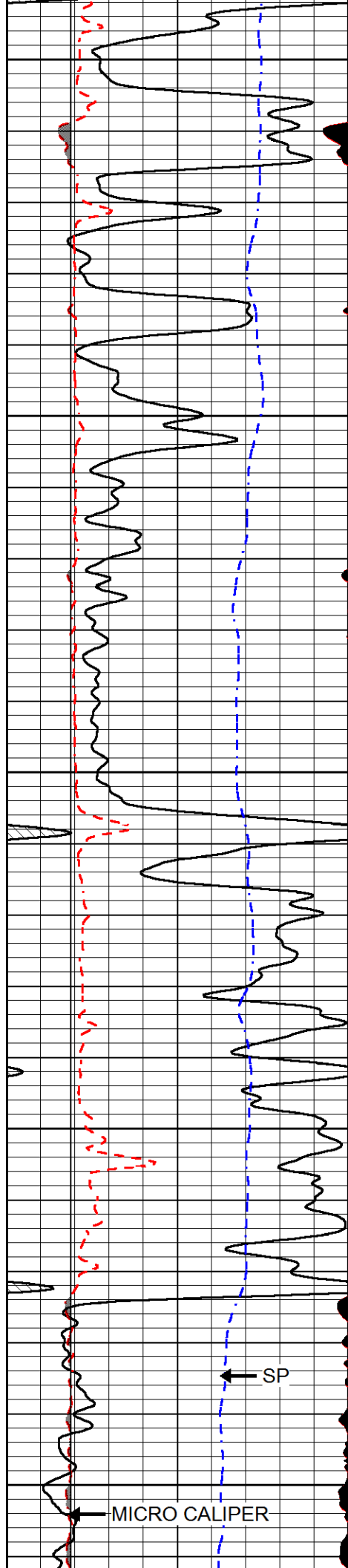
3450

3500

3550

3600





3650

3700

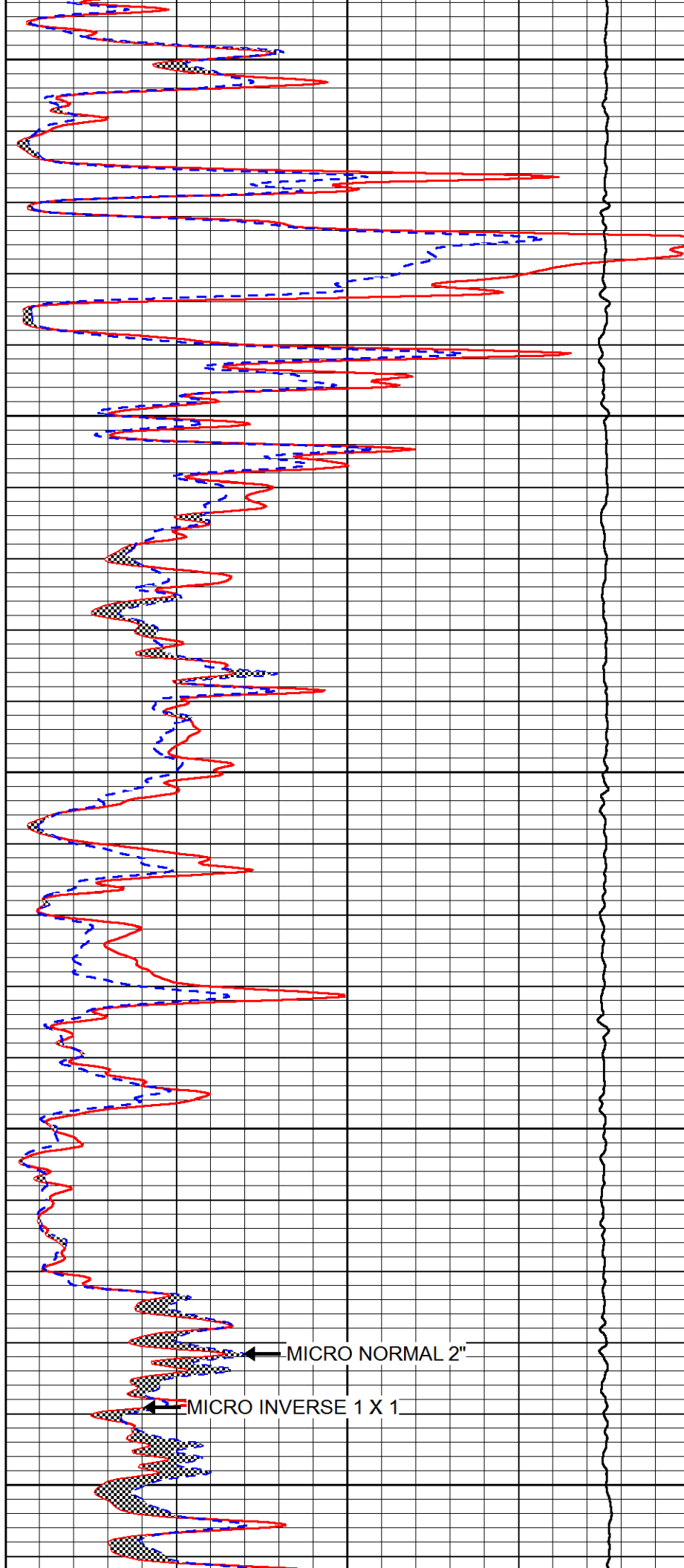
3750

3800

SP

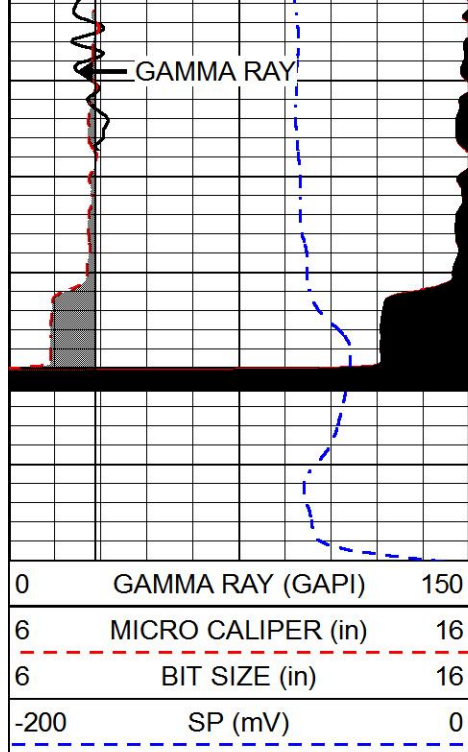
mcal
3850

MICRO CALIPER

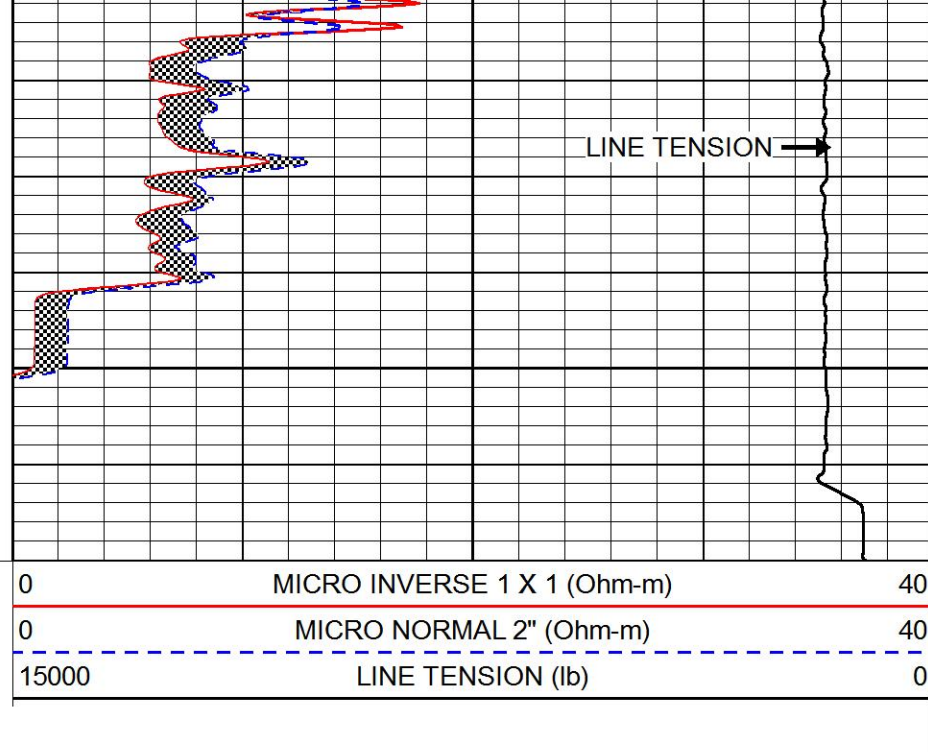


MICRO NORMAL 2"

MICRO INVERSE 1 X 1

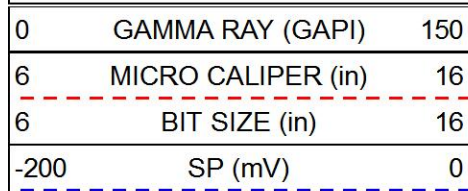


3900



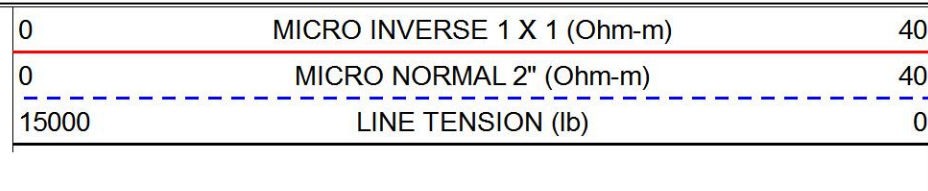
REPEAT SECTION

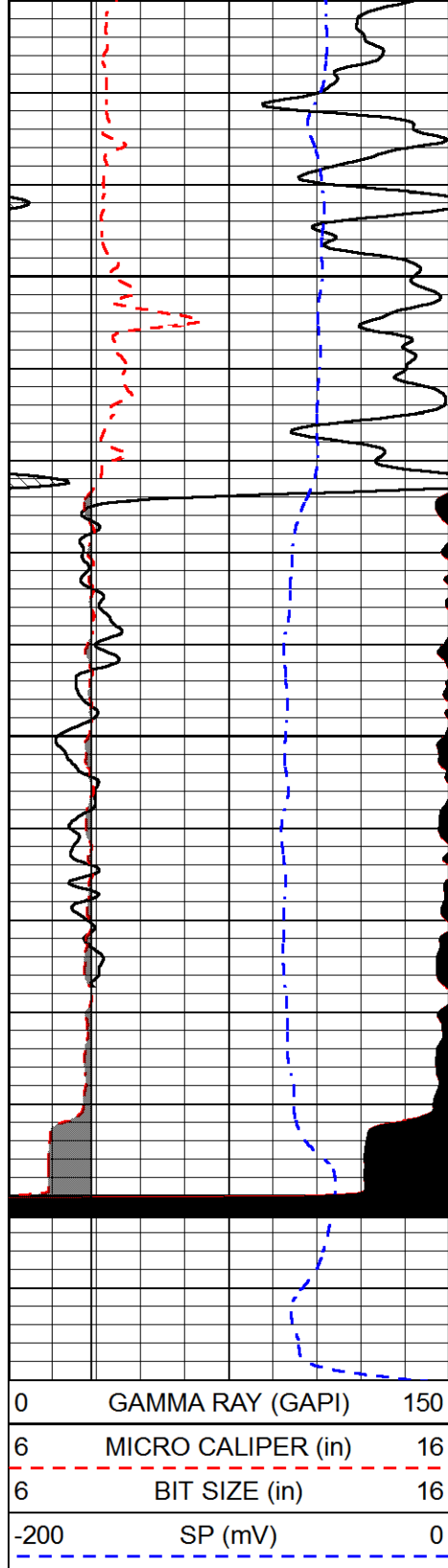
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Dataset Pathname stackmel/pass2.1
Presentation Format micro
Dataset Creation Sat Dec 01 16:23:05 2018
Charted by Depth in Feet scaled 1:240



3700

3750

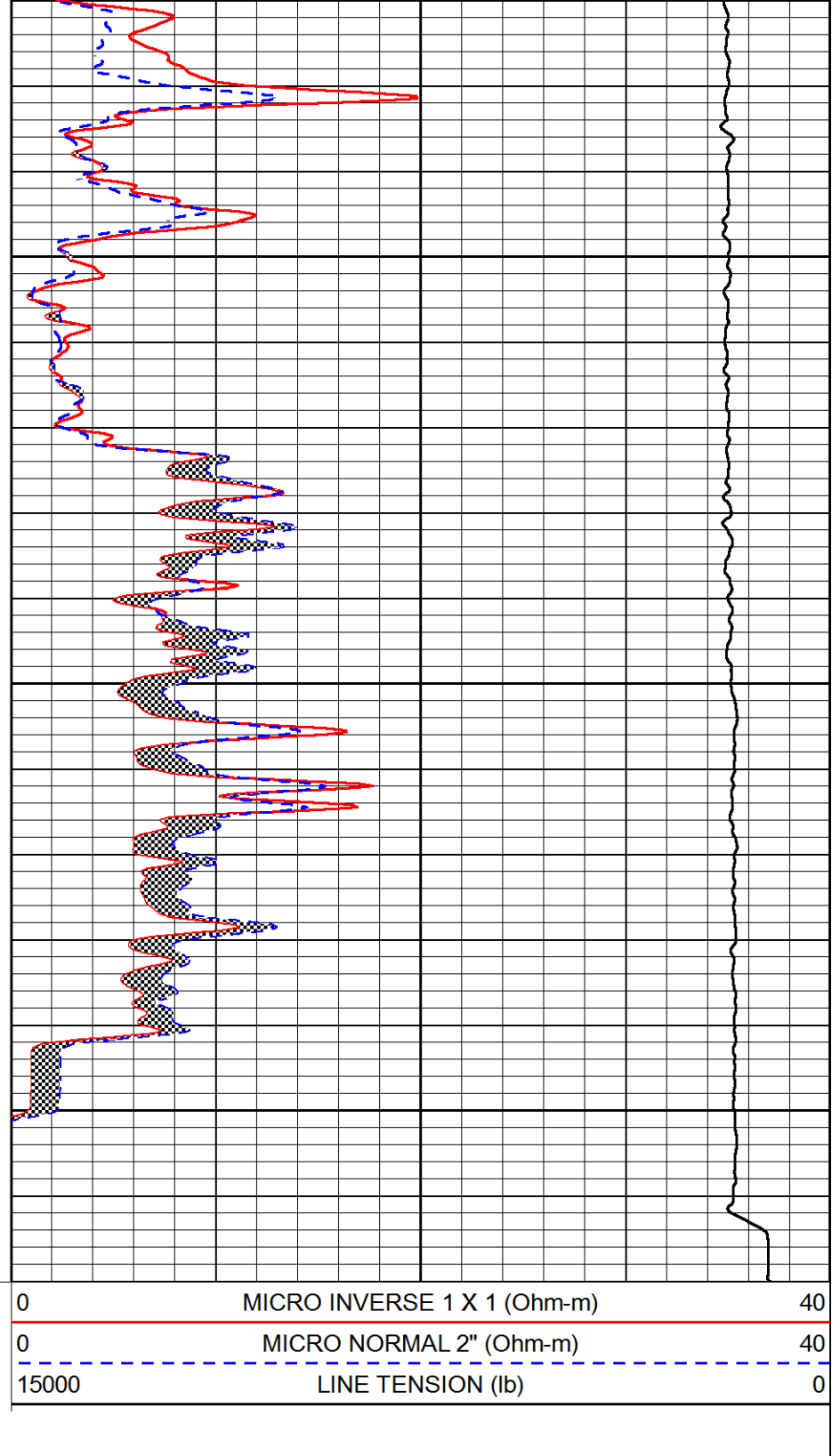




3800

3850

3900



Calibration Report

Database File rama_reverts_1_27.db
 Dataset Pathname stackmel/pass3.1
 Dataset Creation Sat Dec 01 16:13:31 2018

Dual Induction Calibration Report

Serial-Model: PSI 988-M&W
 Calibration Performed: Tue Nov 20 10:50:19 2018

Readings

References

Results

Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.525	-44.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.380	-17.000
Microlog Calibration Report							
Serial-Model: Performed:			PSI-01-PSI STKBL ML Thu Mar 31 18:14:32 2016				
Readings			References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	32500.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	39500.0000	-1.0000
Caliper	1.0001	1.1397	6.5000	18.5000	in	86.0000	-82.4800
Compensated Density Calibration Report							
Serial-Model: Source / Verifier: Master Calibration Performed:			934-5002-M&W / Wed Aug 29 11:03:55 2018				
Master Calibration							
	Density		Far Detector		Near Detector		
Magnesium	1.755	g/cc	3720.16	2661.79	cps		
Aluminum	2.675	g/cc	696.57	1725.83	cps		
Spine Angle = 75.50			Density/Spine Ratio = 0.532				
	Size		Reading				
Small Ring	4.00	in	1.16				
Large Ring	16.00	in	1.01				
Compensated Neutron Calibration Report							
Serial Number: Tool Model: Calibration Performed:			tk10-MW M&W 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		
Gamma Ray Calibration Report							
Serial Number: Tool Model: Calibration Performed:		89-M&W M&W 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				



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