



MIDWEST WIRELINE

MICRORESISTIVITY
LOG

Company TDI, Inc.		Company TDI, Inc.	
Well	Jerome #2	Well	Jerome #2
Field	Ruder	Field	Ruder
County	Ellis	County	Ellis
State	Kansas	State	Kansas
Location: API #: 15-051-27036-00-00		Other Services	
330 FSL & 1035 FEL		CNL/CDL DIL	
Permanent Datum	Ground Level	Elevation	2026
Log Measured From	Kelly Bushing	K.B.	2036
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2026
Date	10/4/2022		
Run Number	One		
Depth Driller	3730		
Depth Logger	3730		
Bottom Logged Interval	3729		
Top Log Interval	2900		
Casing Driller	8.625 @ 225		
Casing Logger	224		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	4600		
Density / Viscosity	9.2 58		
pH / Fluid Loss	11.0 5.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.50 @ 84		
Rmt @ Meas. Temp	0.38 @ 84		
Rmc @ Meas. Temp	0.68 @ 84		
Source of Rmt / Rmc	Charts		
Rm @ BHT	0.37 @ 113		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	113		
Equipment Number	P-24		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Tom Denning	Herb Deines	

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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.

Hays,
South to Norfolk Rd, 1 1/8 West,
North into

Log Measured From: Kelly Bushing 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		Primary Witness: Tom Denning	
Operator:		Secondary Witness: Herb Deines	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.33			GR-M&W (106)	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 (307-11)	8.50	4.00	250.00
MCAL MI MN	19.58 19.58 19.58			ML-PSIML (401)	7.58	4.00	65.00
RLL3F RLL3	15.50 15.50						
CILD	8.33			DIL-M&W (501 HT)	18.25	3.50	220.00
CILM	4.50						
SP	0.20						
				Dataset:	tdi_jerome 2.db: field/well/stkml/pass3.15		
		Total length:	42.33 ft				
		Total weight:	685.00 lb				
		O.D.:	4.00 in				

Log Variables

DatabaseC:\ProgramData\Warrior\Data\tdi_jerome 2.db
Dataset field/well/stkml/pass3.15/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	113	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	173	70		3730

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



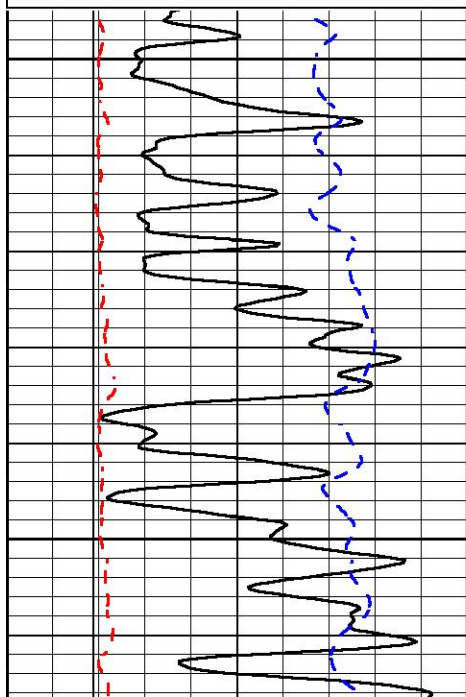
DETAIL SECTION

MAIN PASS

Database File tdi_jerome 2.db
Dataset Pathname stkml/pass3.1
Presentation Format _micro
Dataset Creation Tue Oct 04 22:43:31 2022
Charted by Depth in Feet scaled 1:240

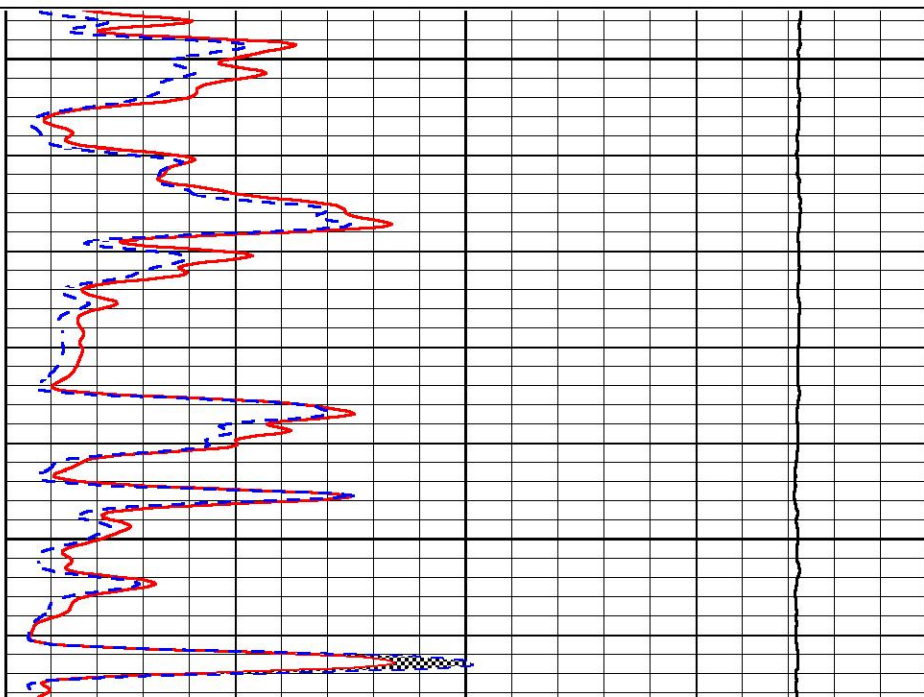
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6	Caliper (in)	16
2.875	mccl (in)	7.875
-200	sp (mV)	0

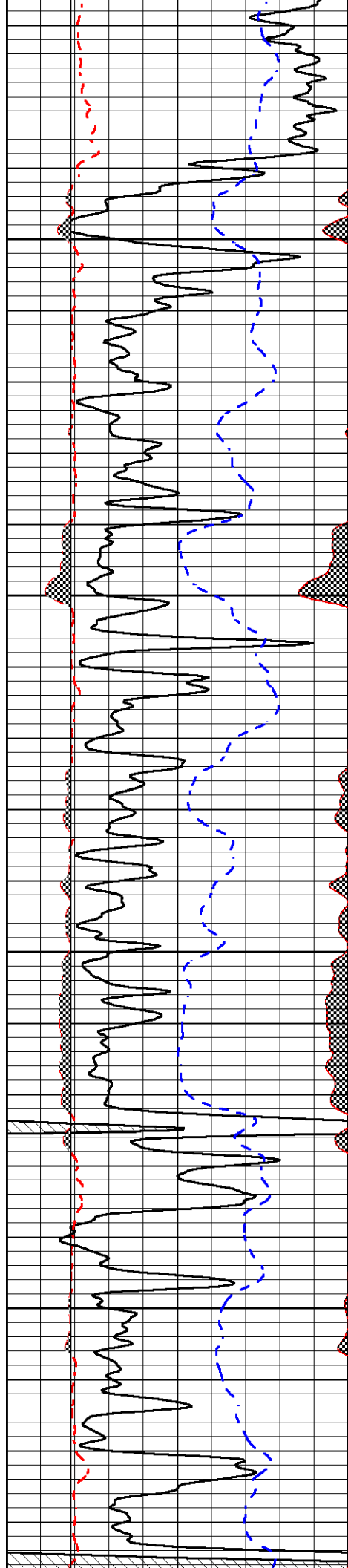
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



2900

2950



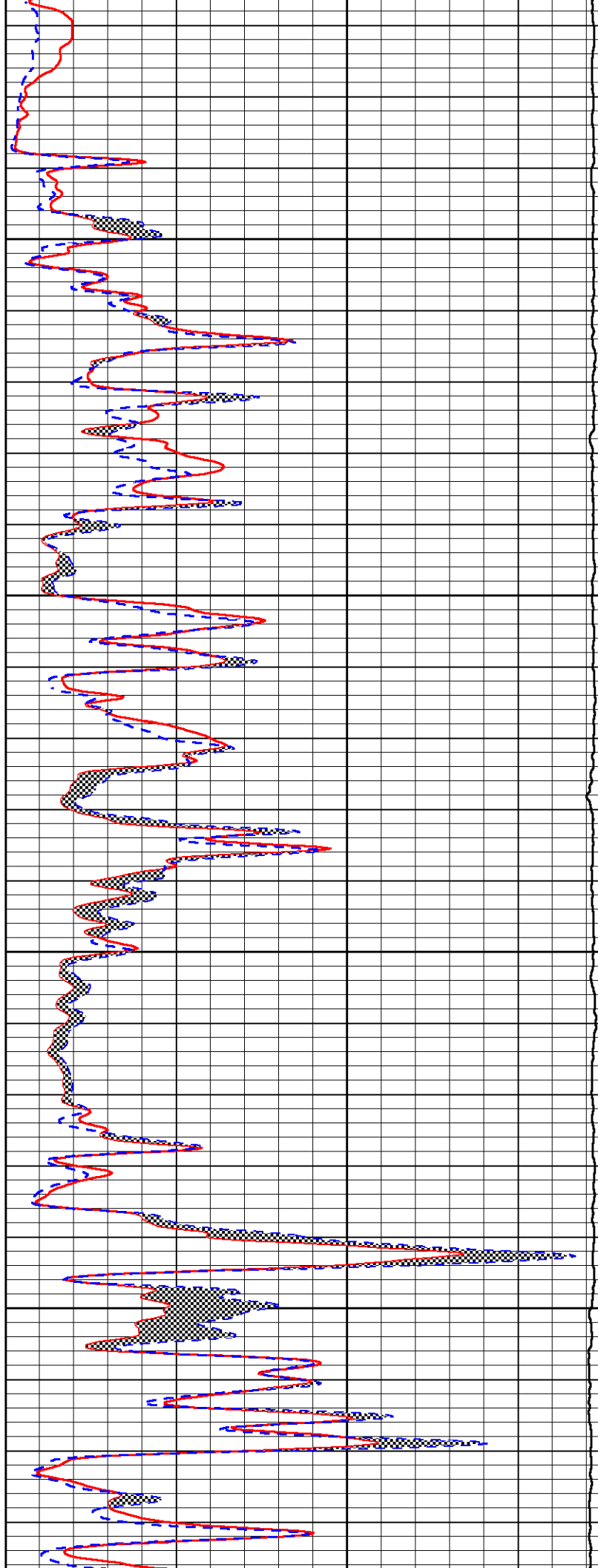


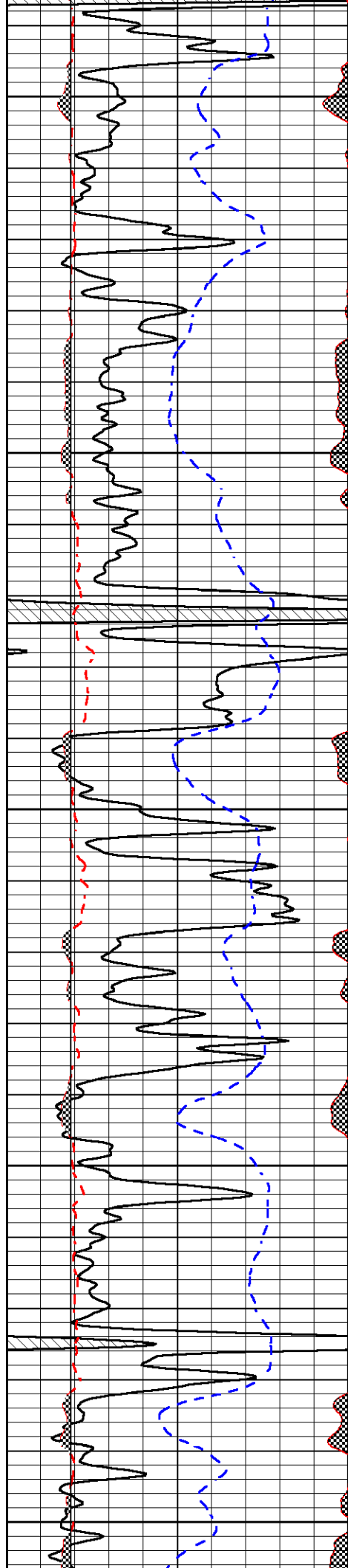
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3050

3100

3150





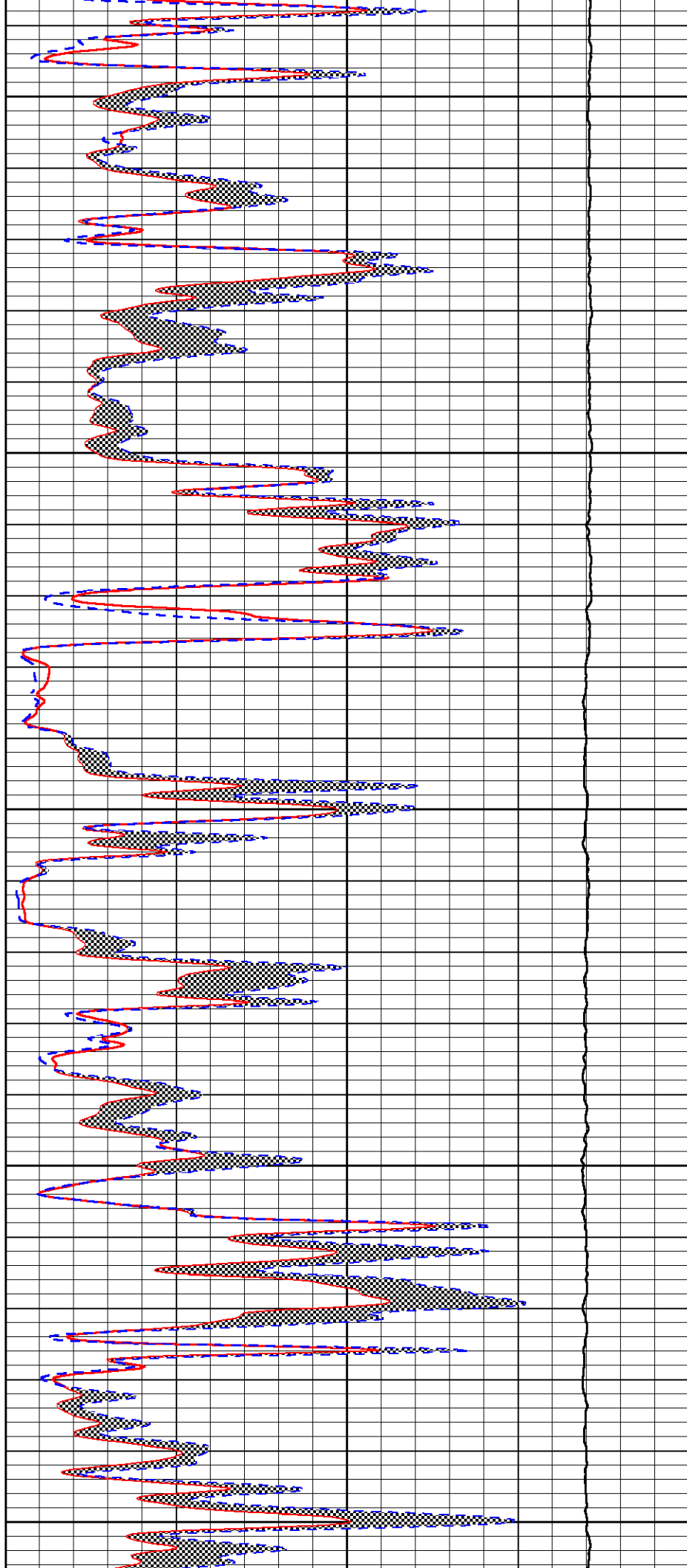
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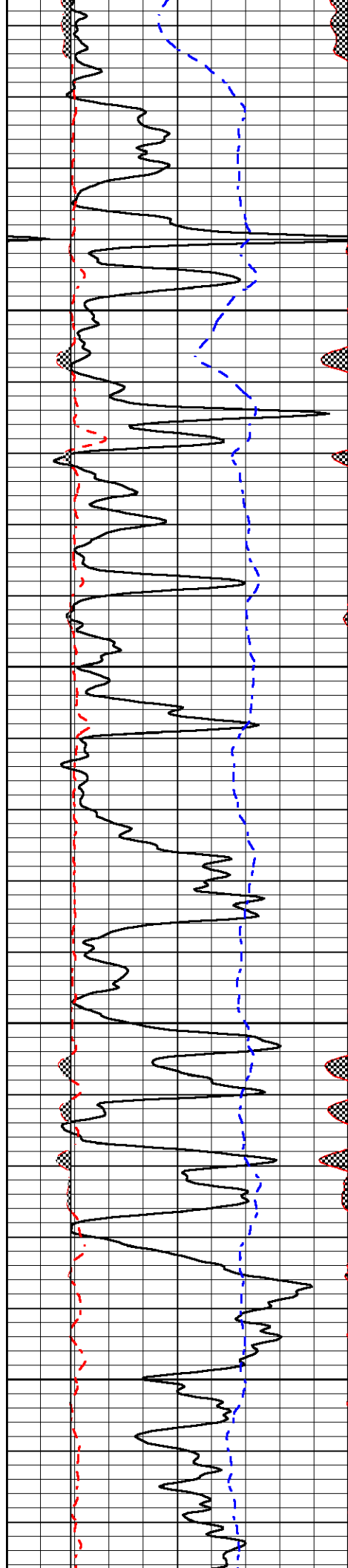
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3300

3350

3400



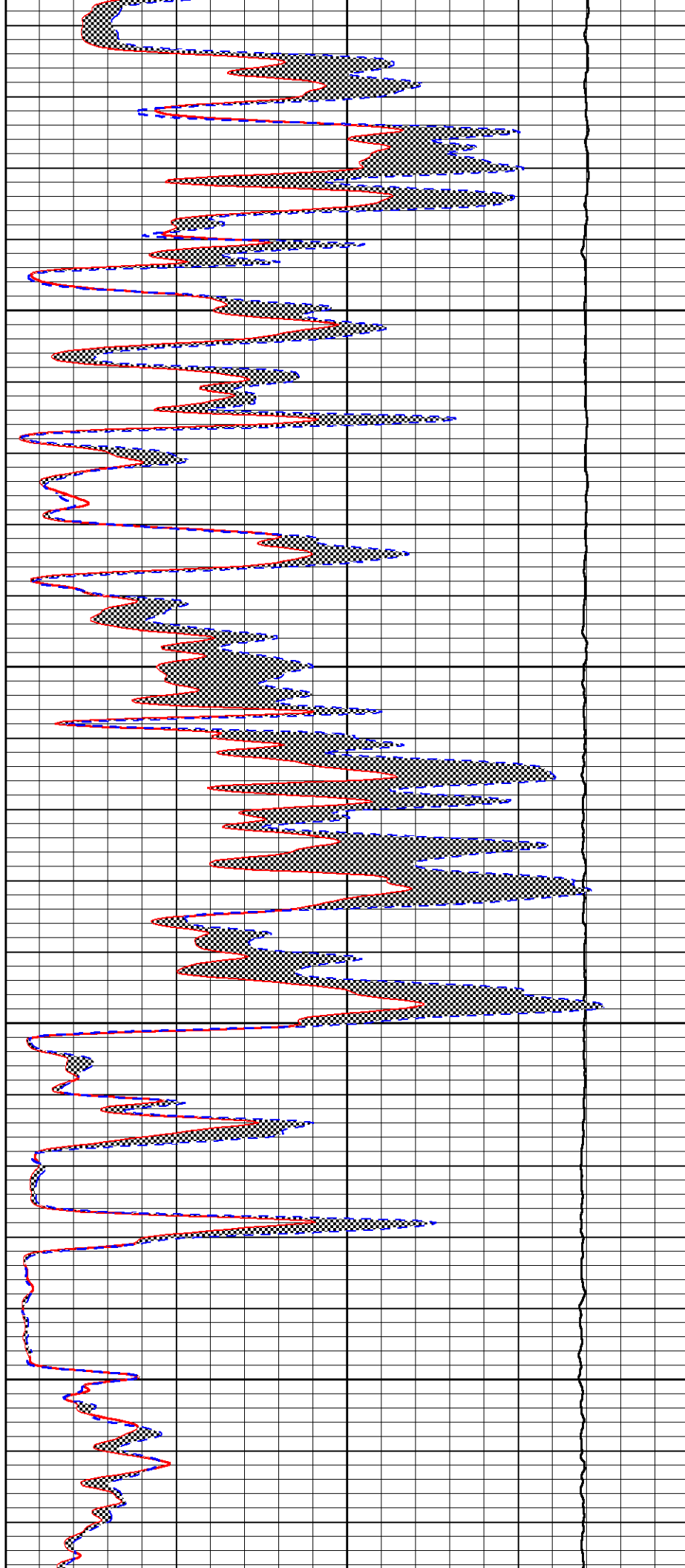


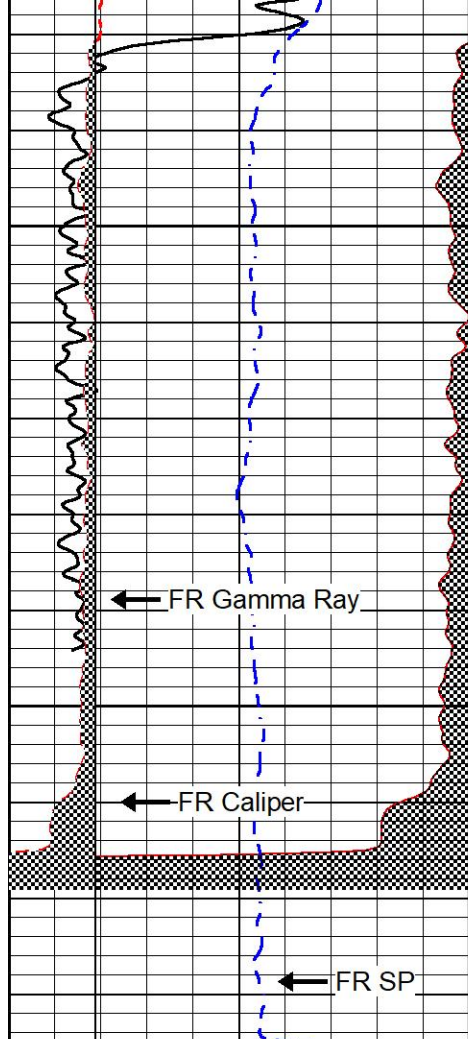
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3500

3550

3600





3650

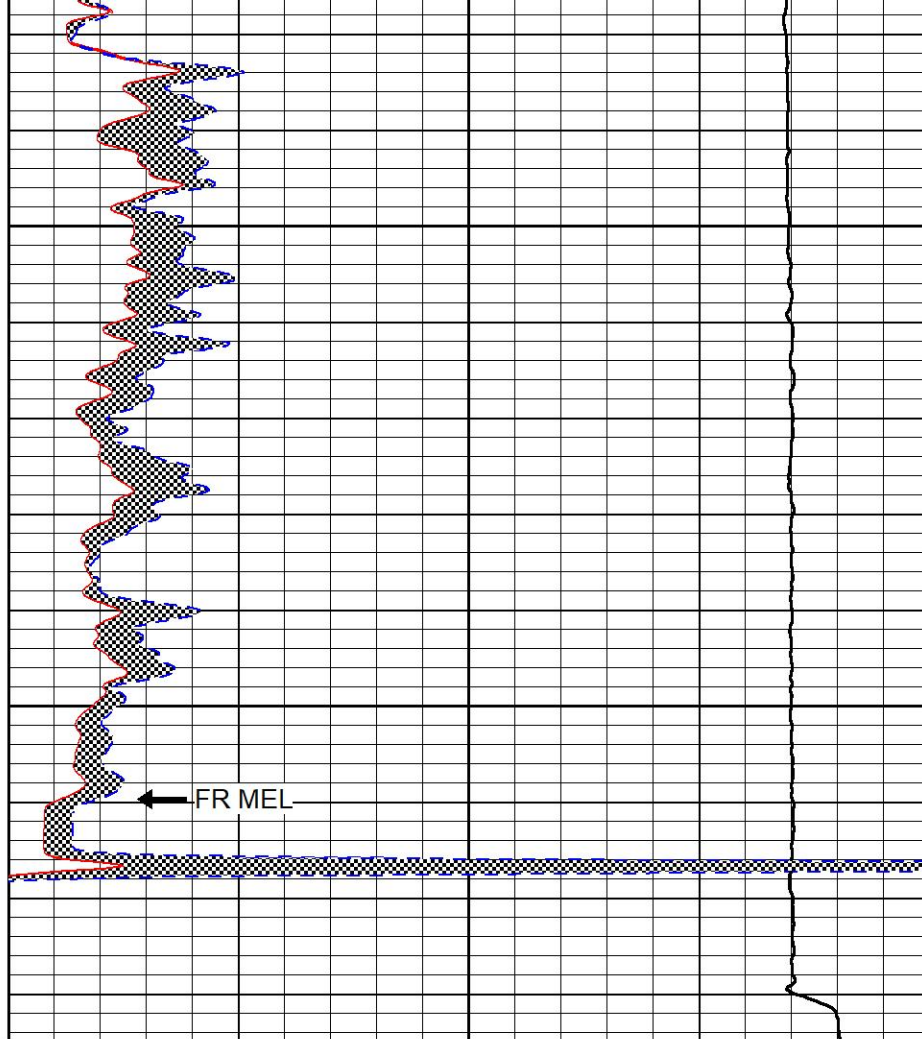
3700

← FR Gamma Ray

← FR Caliper

← FR SP

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



MIDWEST WIRELINE

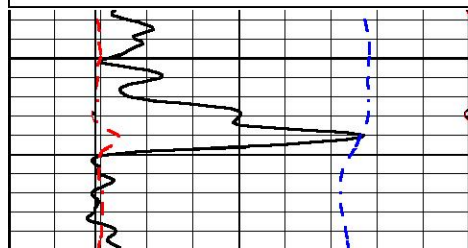
REPEAT SECTION

REPEAT PASS

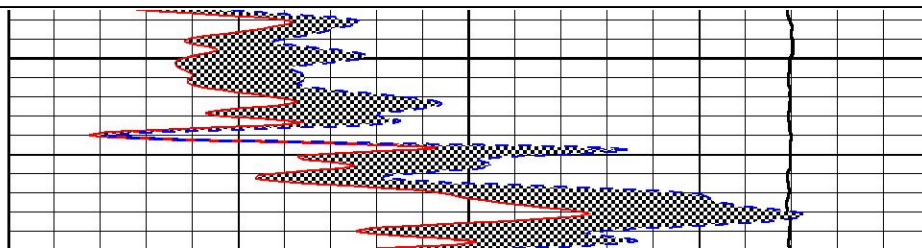
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 Dataset Pathname stkml/pass2.13
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 Dataset Creation Tue Oct 04 22:10:09 2022
 Charted by Depth in Feet scaled 1:240

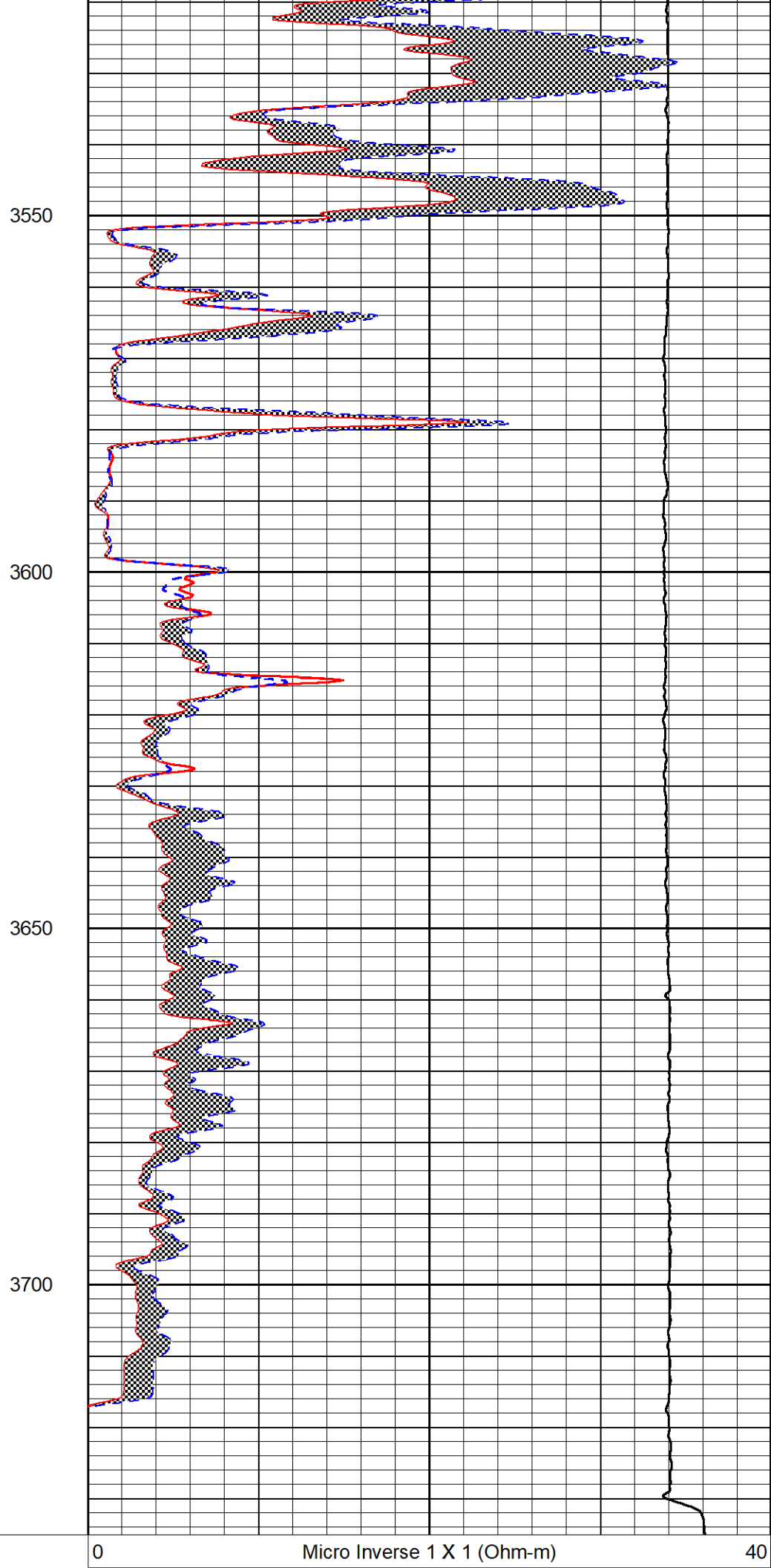
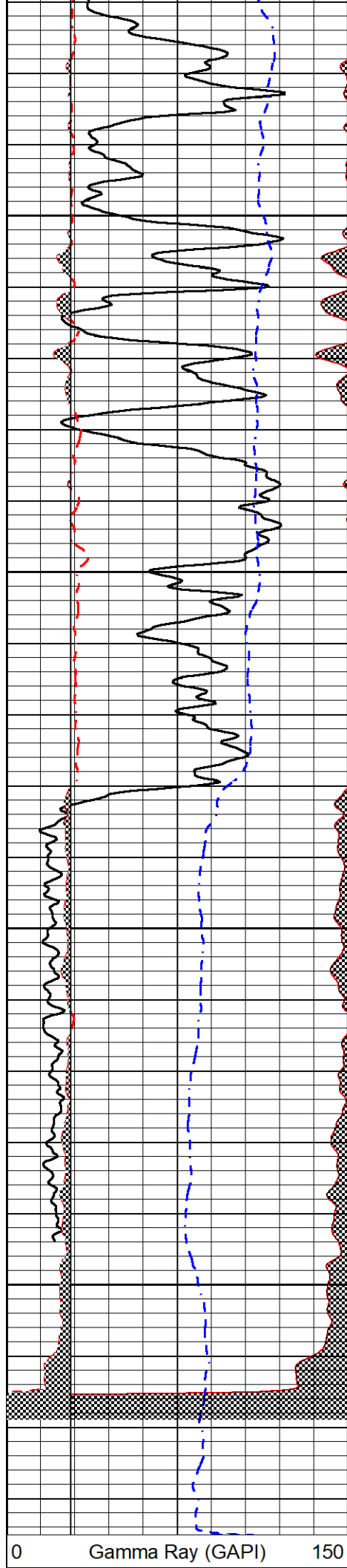
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

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



3500





6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

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

Database File	tdi_jerome 2.db
Dataset Pathname	stkml/pass3.15
Dataset Creation	Tue Oct 04 22:08:41 2022

Serial-Model: 501 HT-M&W
Surface Cal Performed: Thu Sep 22 17:20:27 2022

		Readings		References		Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-37.000
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.305	-32.000

Serial-Model: 401-PSIML
Performed: Mon Jun 27 17:53:09 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	17000.0000	-0.6500
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	21000.0000	-0.5000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-141.4000

Serial-Model: 307-11-M&W
Source #: 20762B
Master Calibration Performed: Sat Aug 27 10:20:16 2022

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3600.52	4768.22	cps
Aluminum	2.670	g/cc	693.98	3106.20	cps
Spine Angle = 75.41			Density/Spine Ratio = 0.538		
	Size		Reading		
Small Ring	6.00	in	1.16		
Large Ring	18.00	in	1.01		

Serial Number: 207-MW
Tool Model: M&W

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

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	
3)	Short Space	cps		
	Long Space	cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 106
 Tool Model: M&W
 Performed: Fri Dec 3 15:10:46 2021

 Calibrator Value: 500.0 GAPI

 Background Reading: 24.0 cps
 Calibrator Reading: 637.0 cps

 Sensitivity: 0.5500 GAPI/cps



Company TDI, Inc.
 Well Jerome #2
 Field Ruder
 County Ellis
 State Kansas