

MICRORESISTIVITY LOG

MIDWEST WIRELINE

Company Eternity Exploration LLC		Company Eternity Exploration LLC	
Well Harold Jr & Lous Werth #1		Well Harold Jr & Lous Werth #1	
Field Custer Northwest		Field Custer Northwest	
County Sheridan		County Sheridan	
State Kansas		State Kansas	
Location: API #: 15-179-2397-00-01		Other Services	
SEC 2 TWP 10S RGE 26W		CNL/CDL DIL	
Permanent Datum	Ground Level	Elevation	2584
Log Measured From	Kelly Bushing	K.B.	2589
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2584
Date	3/17/2022		
Run Number	One		
Depth Driller	4150		
Depth Logger	4151		
Bottom Logged Interval	4150		
Top Log Interval	3600		
Casing Driller	8.625 @ 153		
Casing Logger	154		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	4400		
Density / Viscosity	9.0 55		
pH / Fluid Loss	10.5 7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.9 @ 62		
Rmf @ Meas. Temp	0.68 @ 62		
Rmc @ Meas. Temp	1.22 @ 62		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.47 @ 118		
Operating Rig Time	2.5		
Max Rec. Temp. F	118		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Kim Shoemaker		

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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.

Collyer, KS, 4 W on 40 to Rd 78,
10.5 N, W into

Log Measured From: Kelly Bushing 5 Ft. Above Permanent Datum

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

Your Midwest Wireline Crew

Engineer: T. Martin
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Kim Shoemaker
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\eternity_harld jr lous werth #1.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - 2350.00 ft

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	100	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	-195	0	Off	0

2350.00 ft - Bottom

BOTTEMP degF	SPSHIFT mV	SRFTEMP degF	TDEPTH ft
118	-210	50	4151

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



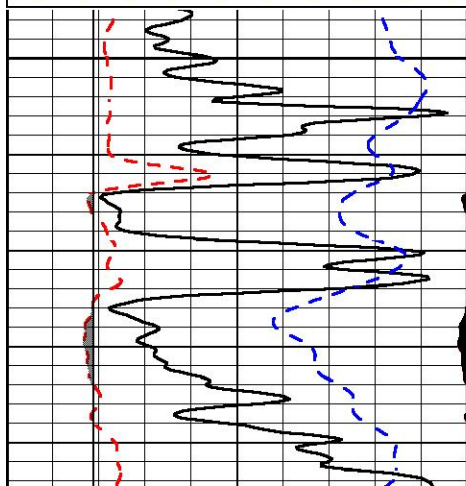
DETAIL SECTION

MAIN PASS

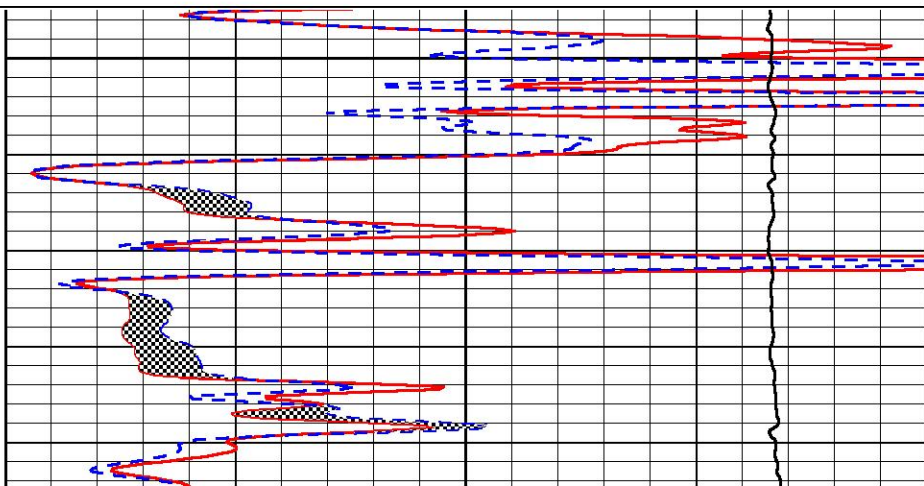
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Dataset Pathname StkMI/pass3.1
Presentation Format _micro
Dataset Creation Thu Mar 17 23:19:56 2022
Charted by Depth in Feet scaled 1:240

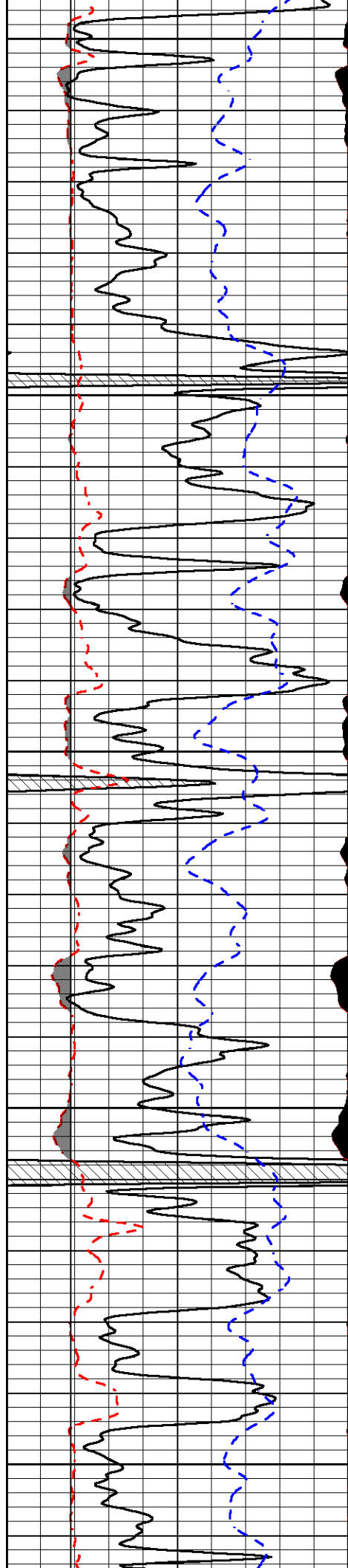
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
-2.875	mcal (in)	7.875
-200	SP (mV)	0

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



3600





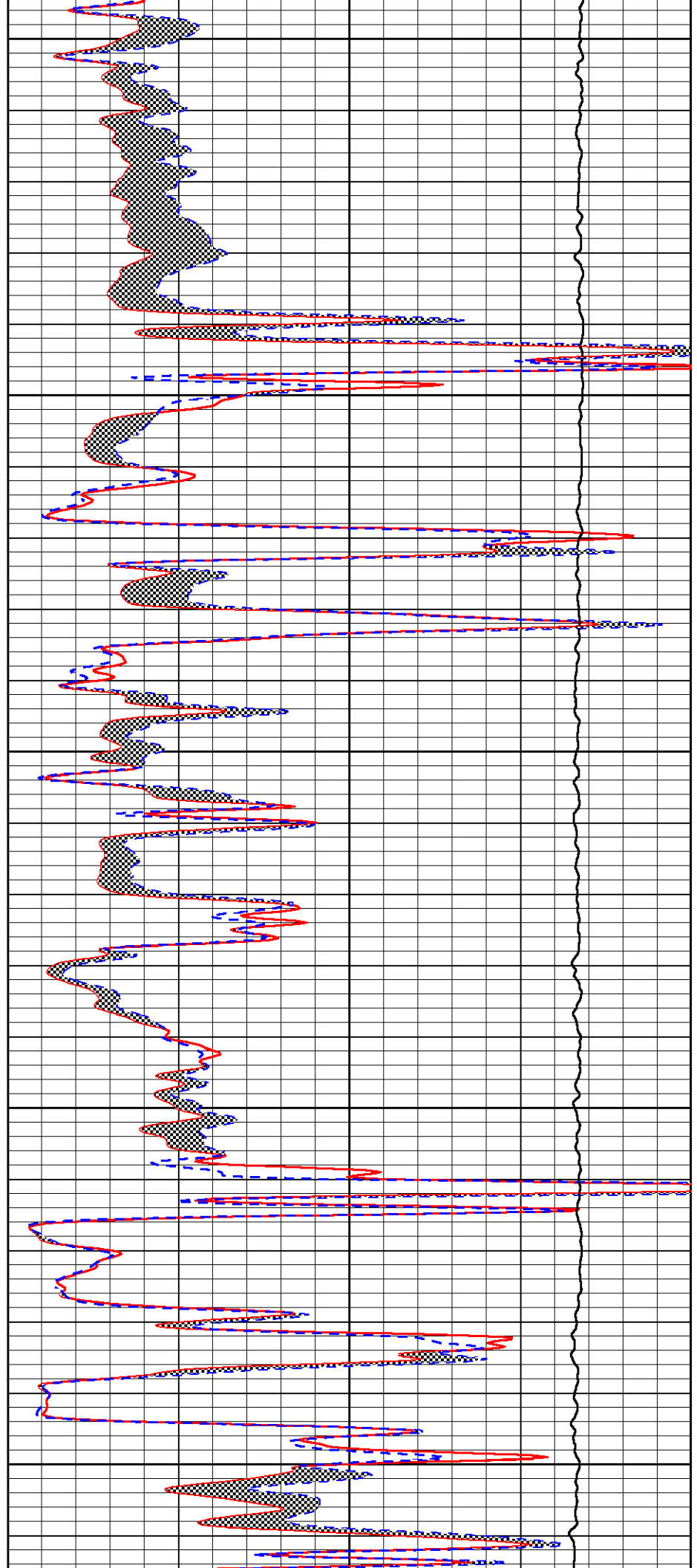
3650

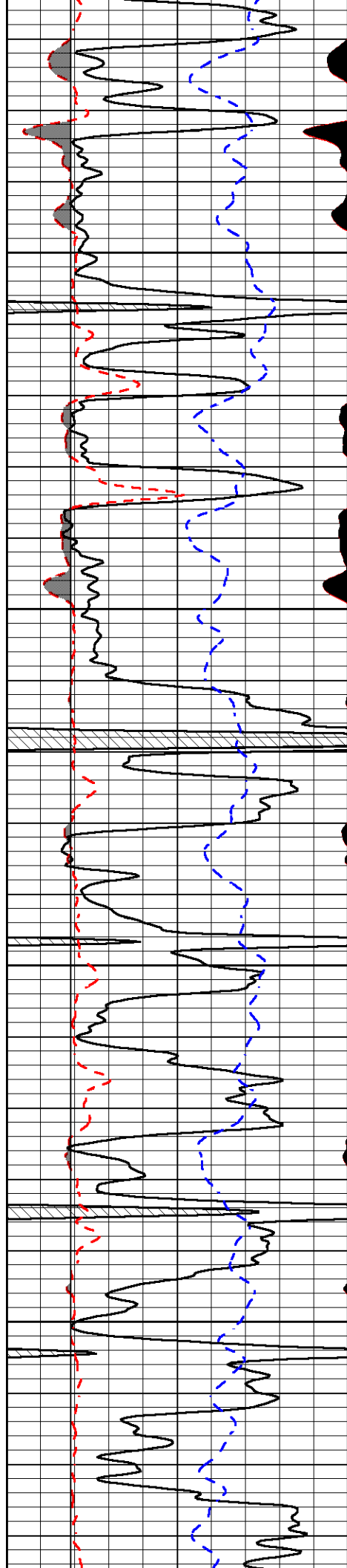
3700

3750

3800

3850



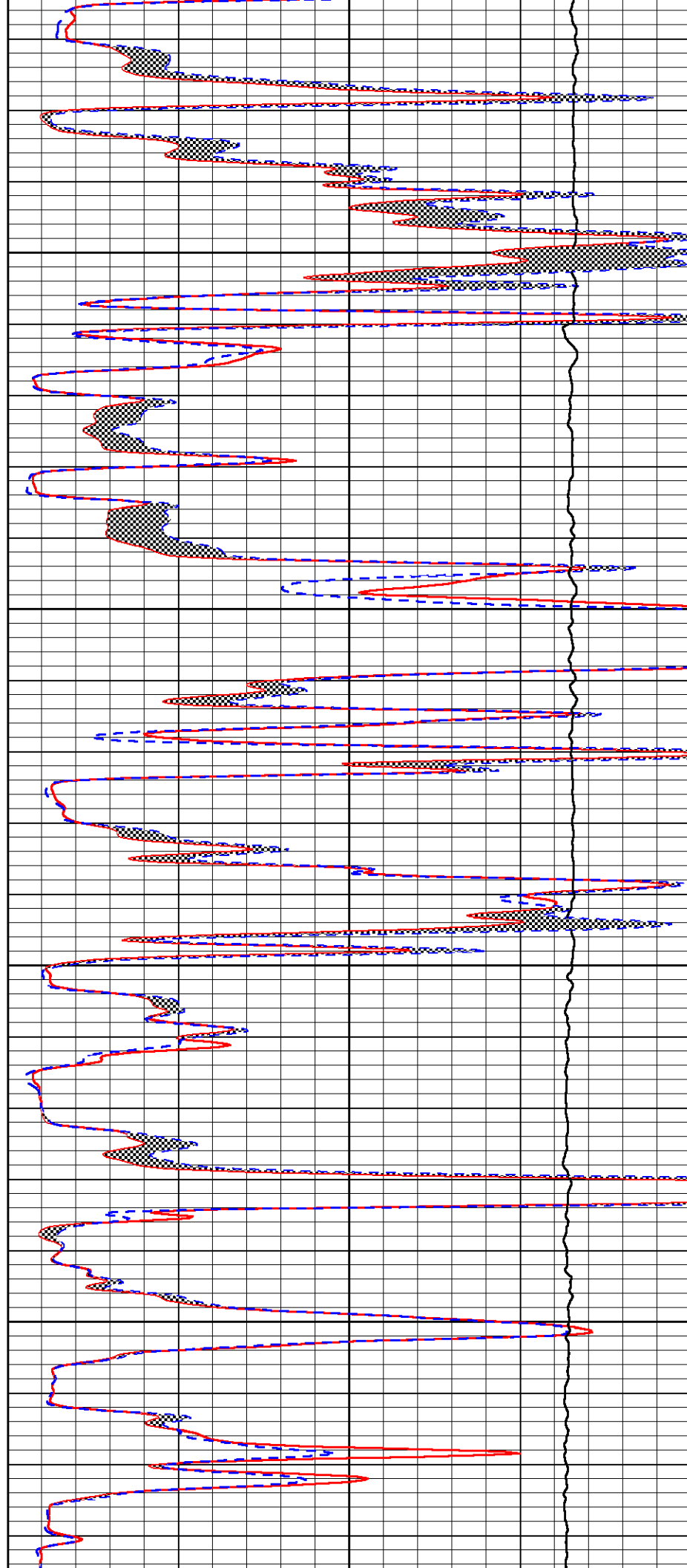


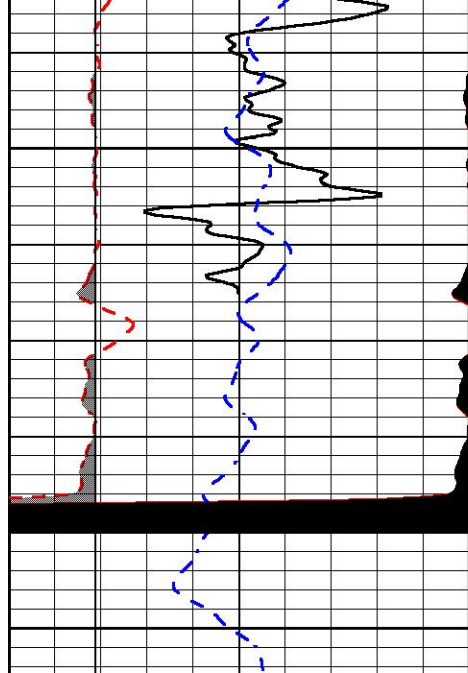
3900

3950

4000

4050

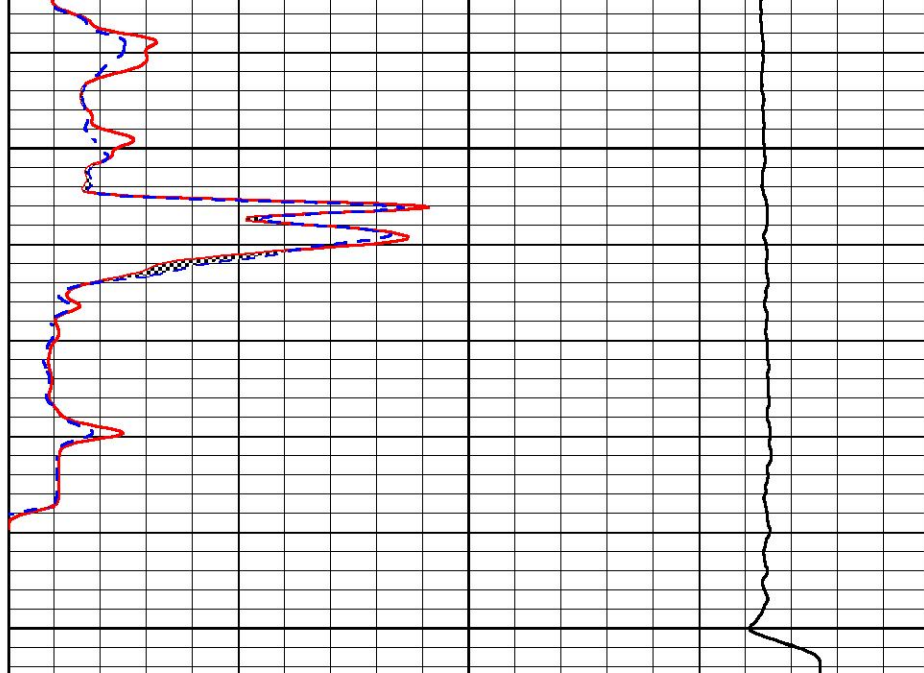




0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
-2.875	mcal (in)	7.875
-200	SP (mV)	0

4100

4150



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



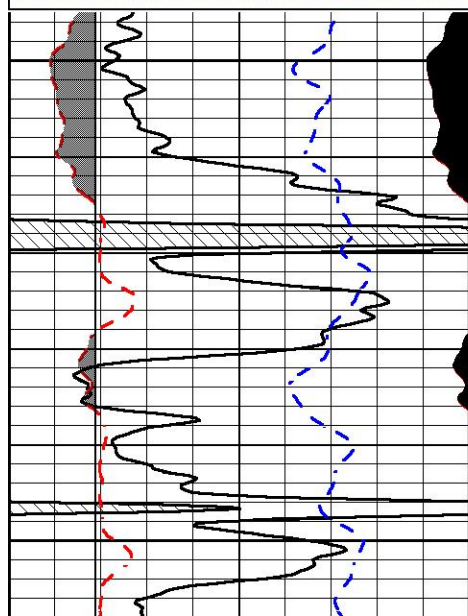
MIDWEST WIRELINE

REPEAT SECTION

REPEAT PASS

Database File eternity_harld jr lous werth #1.db
 Dataset Pathname StkMI/pass2.1
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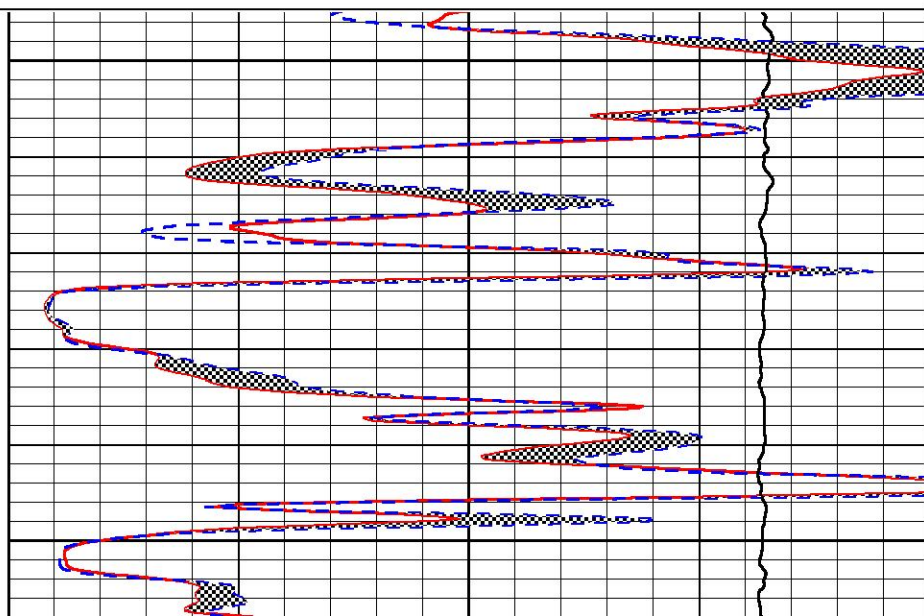
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6	Caliper (in)	16
-2.875	mcal (in)	7.875
-200	SP (mV)	0

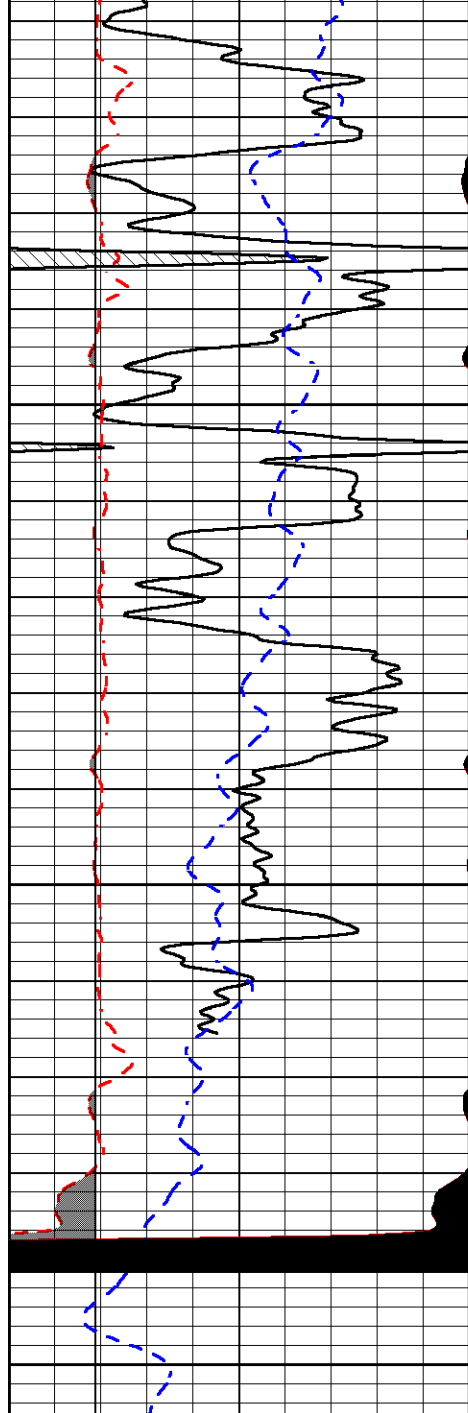


3950

4000

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



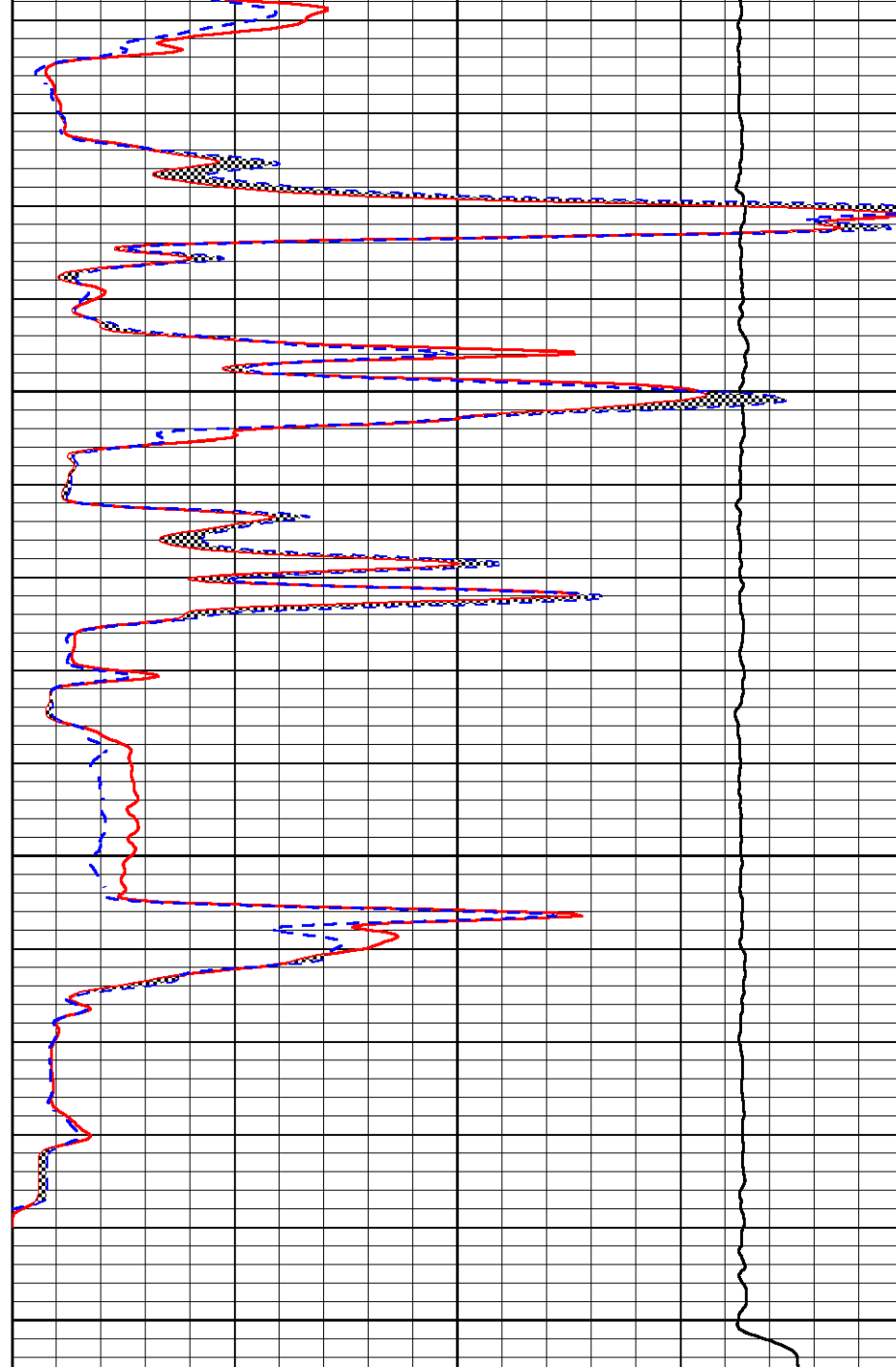


0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
-2.875	mcal (in)	7.875
-200	SP (mV)	0

4050

4100

4150



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 eternity_harld jr lous werth #1.db
 Dataset Pathname StkMI/pass3.3
 Dataset Creation Thu Mar 17 22:33:37 2022

Dual Induction Calibration Report

Serial-Model: 501 HT-M&W
 Surface Cal Performed: Wed Feb 23 19:44:50 2022

Readings

References

Results

Loop:	Air	Loop	Air	Loop	m	b
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Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-36.500
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.320	-32.500
Microlog Calibration Report							
Serial-Model: Performed:				402-PSIML 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	33000.0000	-0.8000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	27500.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	125.0000	-122.0000
Compensated Density Calibration Report							
Serial-Model: Source #: Master Calibration Performed:				305-05-M&W 20762B Sat Mar 12 21:07:42 2022			
Master Calibration							
	Density		Far Detector		Near Detector		
Magnesium	1.755	g/cc	8862.47	9339.96	cps		
Aluminum	2.620	g/cc	1556.73	5707.29	cps		
Spine Angle = 74.19			Density/Spine Ratio = 0.479				
	Size		Reading				
Small Ring	4.00	in	1.75				
Large Ring	14.00	in	1.38				
Compensated Neutron Calibration Report							
Serial-Model: Source #: Master Calibration Performed:				207-MW-M&W 100046B 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:		0.6000		GAPI/cps			



Company	Eternity Exploration LLC
Well	Harold Jr & Lous Werth #1
Field	Custer Northwest
County	Sheridan
State	Kansas