



MICRORESISTIVITY LOG

MIDWEST WIRELINE

Company Chris Batchman Inc		Company Chris Batchman Inc	
Well	MS 1	Well	MS 1
Field		Field	
County	Barton	County	Barton
State	Kansas	State	Kansas
Location: API #: 15-009-26423-00-00		Other Services	
2310 FSL & 2170 FEL		CNL/CDL DIL/BHCS	
Permanent Datum	Ground Level	Elevation	1802
Log Measured From	Kelly Bushing		
Drilling Measured From	Kelly Bushing		
SEC 14 TWP 20S RGE 12W			
Date	7/8/2024		
Run Number	One		
Depth Driller	3460		
Depth Logger	3460		
Bottom Logged Interval	3459		
Top Log Interval	2600		
Casing Driller	8.625 @ 264		
Casing Logger	262		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	4050		
Density / Viscosity	9.5 53		
pH / Fluid Loss	11.0 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.65 @ 71		
Rmt @ Meas. Temp	.49 @ 71		
Rmc @ Meas. Temp	.88 @ 71		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	.42 @ 111		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	111		
Equipment Number	110		
Location	HAYS		
Recorded By	J. Henrickson		
Witnessed By	Jim Musgrove		

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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.

Ellinwood Kansas
South to 40th, 1 1/2 West, North Into

Log Measured From: Kelly Bushing 10 Ft. Above Permanent Datum

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

Your Midwest Wireline Crew

Engineer: J. Henrickson
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Jim Musgrove
Secondary Witness:
Secondary Witness:
Secondary Witness:

DatabaseC:\ProgramData\Warrior\Data\batchman_ms_1.db
Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

Variable Description

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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.23		GR-M&W (105)	3.00	3.50	50.00
CNLSC	37.13		CNT-M&W (210)	5.00	3.50	100.00
CNSSC	36.38					
LCAL	28.21		MWLith-STEP LITHO Short (703-03)	8.40	5.00	250.00
LLW8N	28.21					
LLW7N	28.21					
LLW6N	28.21					
LLW5N	28.21					
LLW4N	28.21					
LLW3N	28.21					
LLW2N	28.21					
LLW1N	28.21					
LSLOCK	27.96					
LLLOCK	27.96		ML-PSI STKBL ML (402)	7.58	4.00	65.00
PELTMPR	27.96					
LSHVNG	27.96					
LLHVNG	27.96					
LSW8N	27.71					
LSW7N	27.71					
LSW6N	27.71					

LSW5N	27.71		DIL-M&W (506)	18.25	3.50	220.00				
LSW4N	27.71									
LSW3N	27.71									
LSW2N	27.71									
LSW1N	27.71									
MCAL	19.58									
MI	19.58									
MN	19.58									
RLL3F	15.50									
RLL3	15.50									
CILD	8.33									
CILM	4.50									
SP	0.20									
Dataset: batchman_ms_1.db: field/well/stackml/pass3.1 Total length: 42.23 ft Total weight: 685.00 lb O.D.: 5.00 in										



MIDWEST WIRELINE

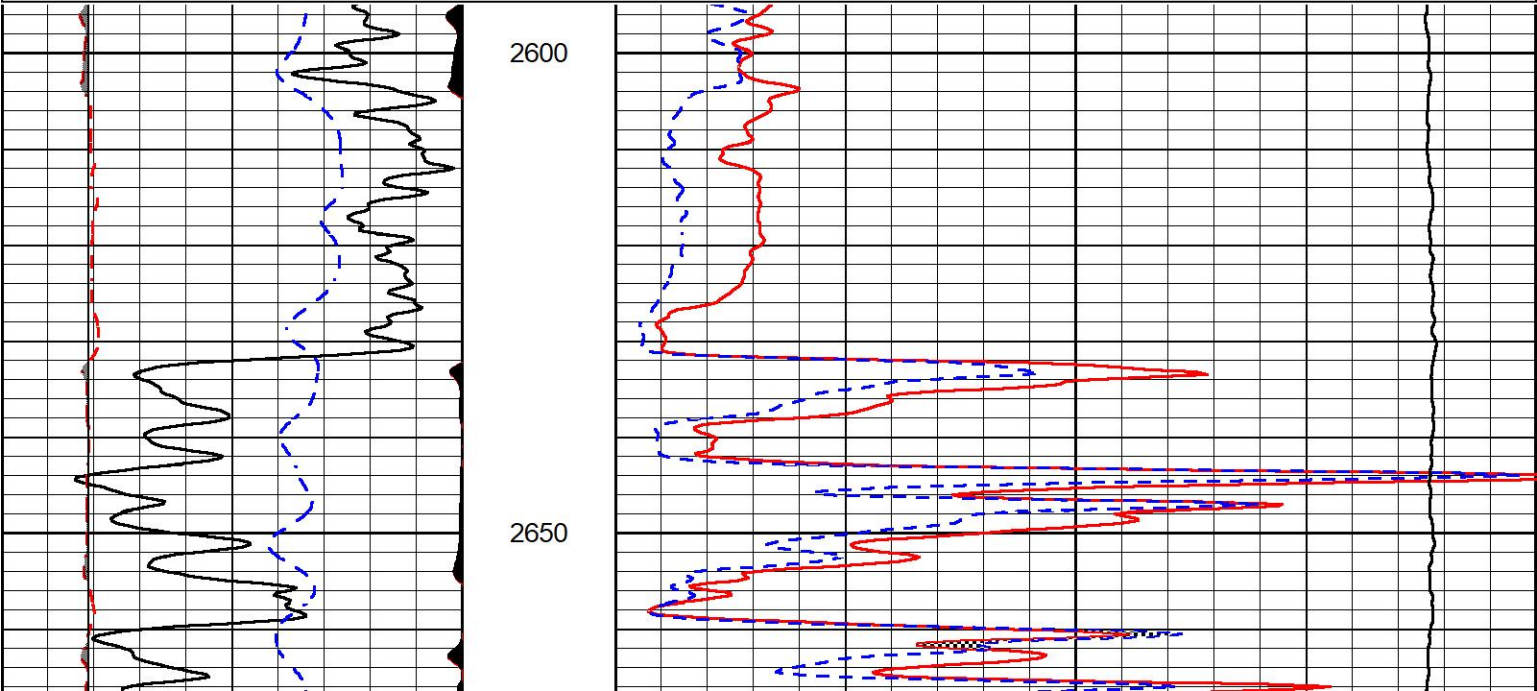
DETAIL SECTION

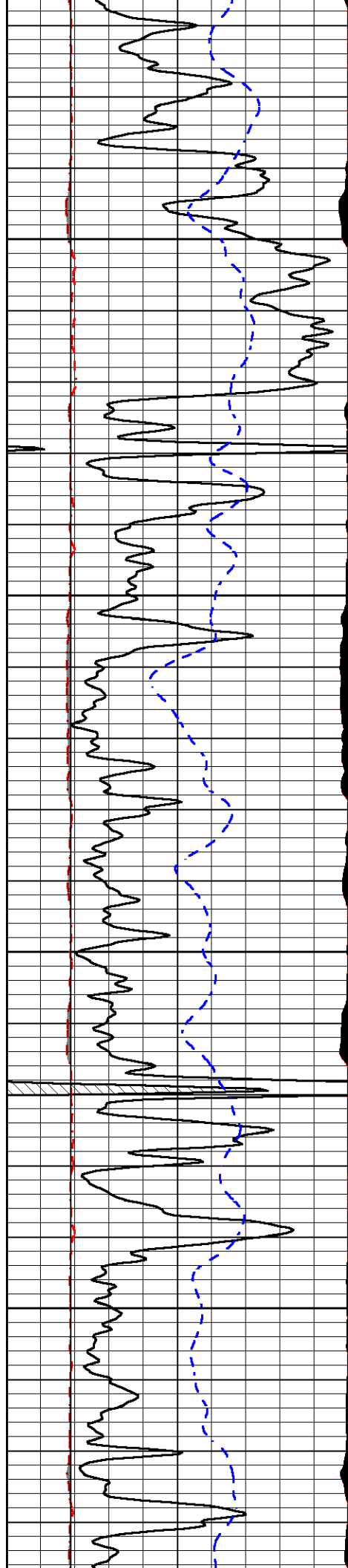
MAIN PASS

Database Filebatchman_ms_1.dbDataset Pathnamestackml/pass3.1Presentation Format_microDataset CreationMon Jul 08 09:46:20 2024Charted byDepth in Feet scaled 1:240

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

0	Micro Inverse 1 X 1 (Ohm-m)	20
0	Micro Normal 2" (Ohm-m)	20
10000	Line Weight (lb)	0



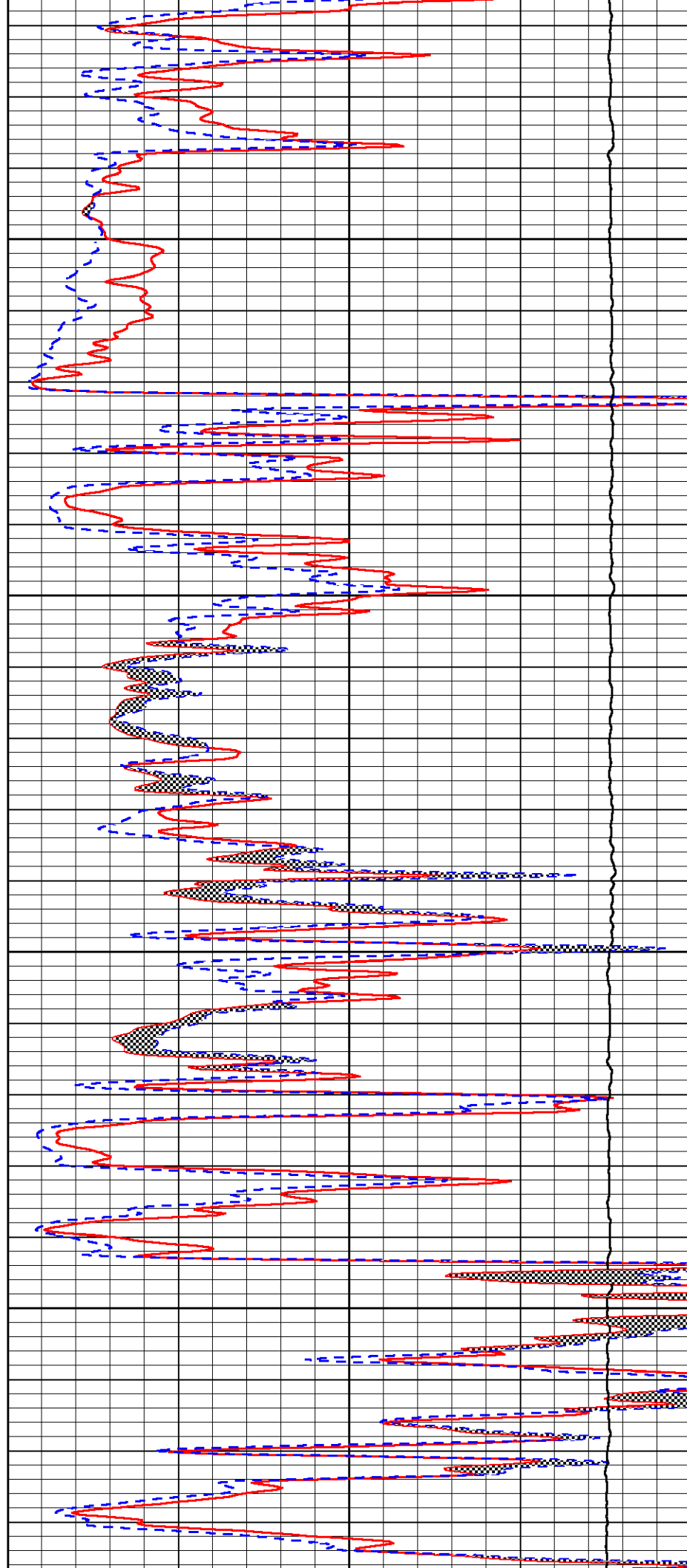


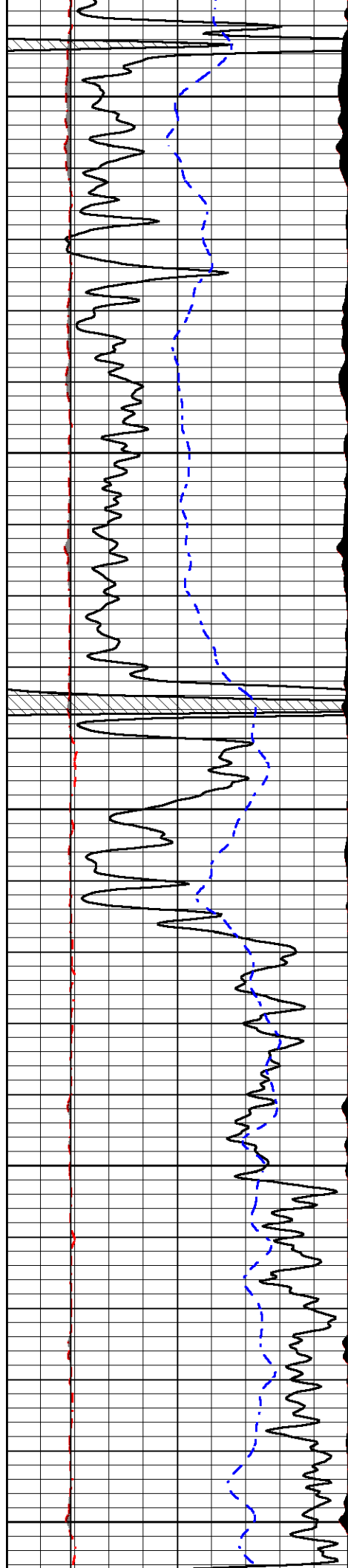
2700

2750

2800

2850





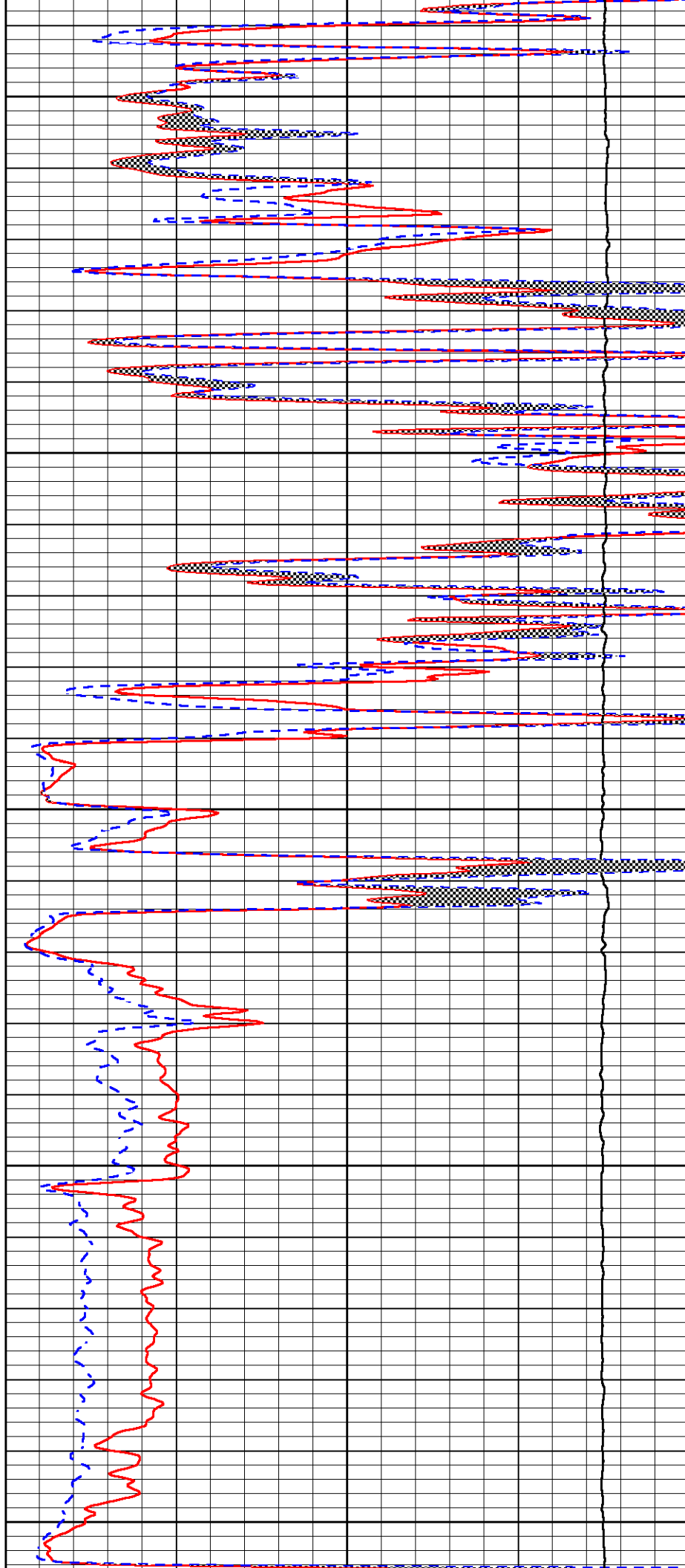
2900

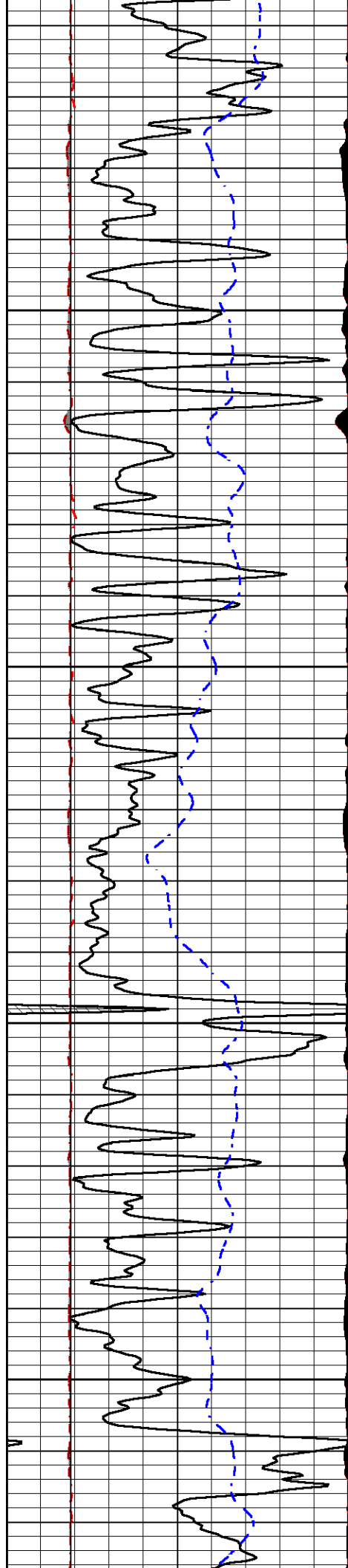
2950

3000

3050

3100



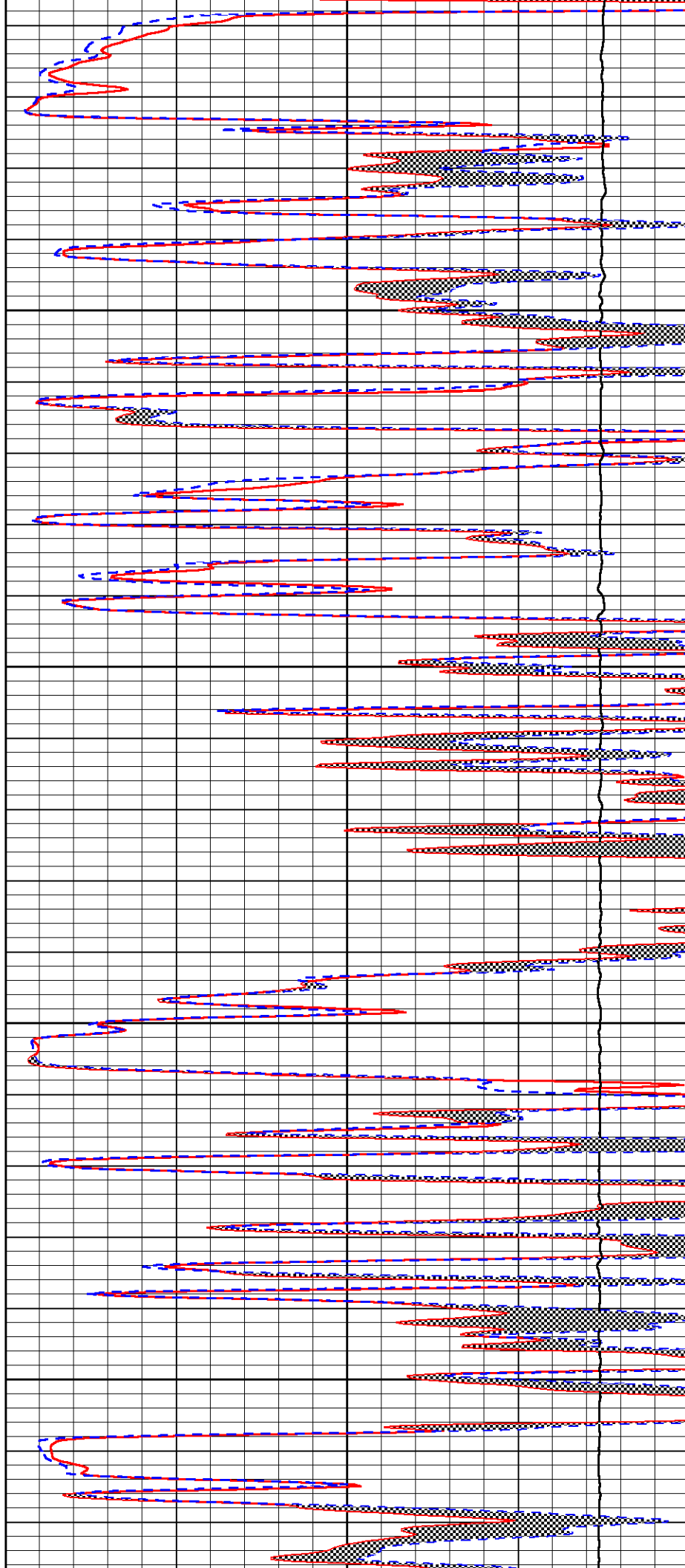


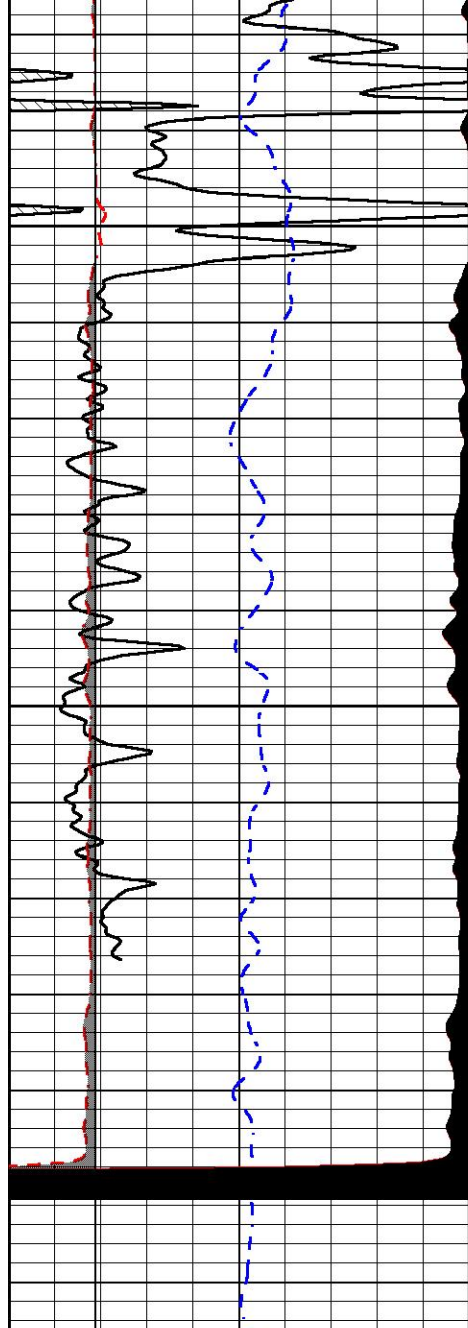
3150

3200

3250

3300



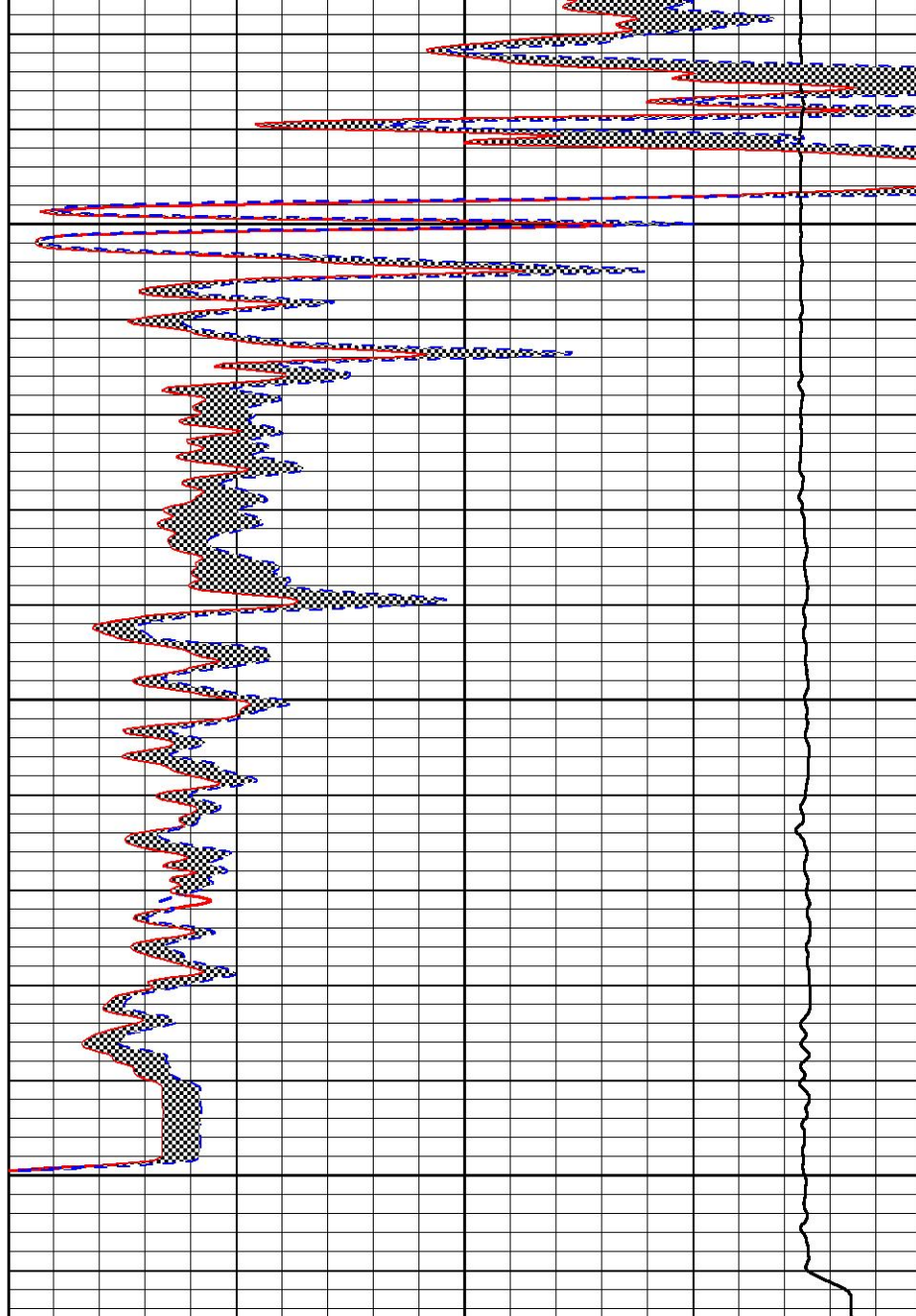


3350

3400

3450

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



0	Micro Inverse 1 X 1 (Ohm-m)	20
0	Micro Normal 2" (Ohm-m)	20
10000	Line Weight (lb)	0



MIDWEST WIRELINE

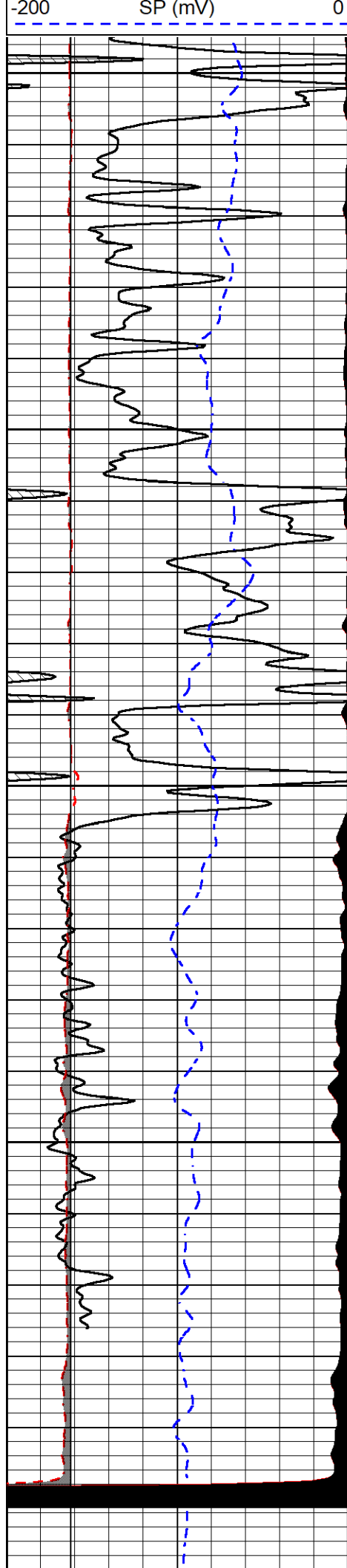
REPEAT SECTION

REPEAT PASS

Database File batchman_ms_1.db
 Dataset Pathname stackml/pass2.1
 Presentation Format _micro
 Dataset Creation Mon Jul 08 09:19:27 2024
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Micro Caliper (in)	16
2.875	mcal (in)	7.875

0	Micro Inverse 1 X 1 (Ohm-m)	20
0	Micro Normal 2" (Ohm-m)	20
10000	Line Weight (lb)	0



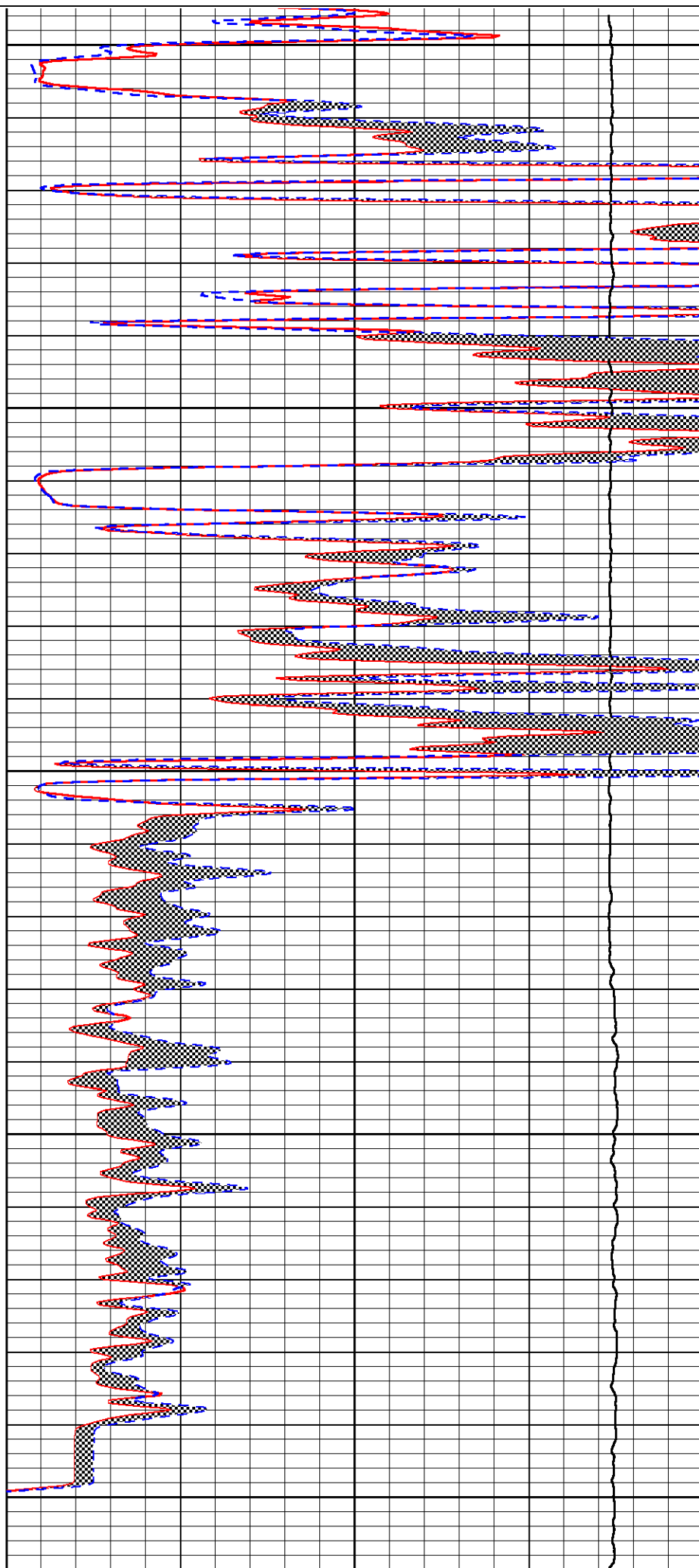
3250

3300

3350

3400

3450



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

Database File		batchman_ms_1.db	Calibration Report
Dataset Pathname		stackml/pass3.1	
Dataset Creation		Mon Jul 08 09:46:20 2024	

Dual Induction Calibration Report

Serial-Model:	506-M&W
Surface Cal Performed:	Sun Jun 30 20:32:27 2024

		Readings		References		Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	84.211	428.152	0.000	255.800	mmho/m	0.465	-28.000
Medium	141.000	670.654	0.000	255.800	mmho/m	0.390	-10.000

Microlog Calibration Report

Serial-Model:	402-PSI STKBL ML
Performed:	Thu May 30 05:58:00 2024

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	13000.0000	-0.4000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	20500.0000	-0.5000
Caliper	1.0046	1.1419	5.5000	20.0000	in	50.0000	-44.6250

LITHODENSITY Calibration Report

Serial Number:	703-03							
Tool Model:	STEP LITHO Short							
Performed:	Fri May 31 13:59:15 2024							
Source:								
	Win1	Win2	Win3	Win4	Win5	Win6	Win7	Win8
Background:								
SS:	56	59	223	276	25	75	46	1 cps
LS:	83	90	344	441	51	132	90	3 cps
Aluminum:								
SS:	1063	1260	2893	2631	48	80	48	3 cps
LS:	1179	2084	3854	1823	62	133	86	5 cps
Magnesium:								
SS:	1756	2035	4740	3894	55	79	49	4 cps
LS:	4981	8390	15059	6054	115	127	85	14 cps
Aluminum+Iron:								
SS:	676	887	2426	2310	45	79	52	2 cps
LS:	700	1495	3280	1630	60	131	90	5 cps
	Density				PE			

	Actual	Calibrated		Actual	Calibrated	Quality
Background:						
SS:						0.236
LS:						0.189
Aluminum:						
SS:	2.6000	2.6000	g/cc			0.249
LS:	2.6000	2.6000	g/cc			0.216
Magnesium:						
SS:	1.6800	1.6800	g/cc	2.5700	2.5700	0.232
LS:	1.6800	1.6800	g/cc	2.5700	2.5700	0.198
Aluminum+Iron:						
SS:					6.1800	0.208
LS:					6.1800	0.188

Caliper:	Reference:	Reading:
Small Ring:	6.0 in	1.0
Large Ring:	14.0 in	1.0
Gain:	12.300	
Offset:	2.050	

Compensated Neutron Calibration Report
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Serial Number:	210
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

Gamma Ray Calibration Report

Serial Number:	105	
Tool Model:	M&W	
Performed:	Sat Oct 21 23:48:19 2023	
Calibrator Value:	500.0	GAPI
Background Reading:	24.0	cps
Calibrator Reading:	637.0	cps
Sensitivity:	0.6000	GAPI/cps

 MIDWEST WIRELINE	Company	Chris Batchman Inc
	Well	MS 1
	Field	
	County	Barton
	State	Kansas