



# MICRORESISTIVITY LOG

Company HOWELL OIL CO., INC.  
 Well SABIN B #14  
 Field BURRTON  
 County RENO  
 State KANSAS

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 Well SABIN B #14  
 Field BURRTON  
 County RENO State KANSAS

Location: API #: 15-155-21757-00-00  
 S/2 NE/4 NE/4  
 990' FNL & 660' FEL  
 SEC 13 TWP 23S RGE 4W  
 Permanent Datum GROUND LEVEL Elevation 1470'  
 Log Measured From KELLY BUSHING  
 Drilling Measured From KELLY BUSHING  
 Other Services  
 CNL/CDL  
 DIL  
 Elevation  
 K.B. 1482'  
 D.F. N/A  
 G.L. 1470'

Date	9/10/2018
Run Number	ONE
Depth Driller	3500'
Depth Logger	3498'
Bottom Logged Interval	3497'
Top Log Interval	2400'
Casing Driller	8.625" @ 311'
Casing Logger	310'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	1000
Density / Viscosity	9.15 62
pH / Fluid Loss	11.5 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.90 @ 80
Rmt @ Meas. Temp	0.68 @ 80
Rmc @ Meas. Temp	1.22 @ 80
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.65 @ 111
Operating Rig Time	3 HOURS
Max Rec. Temp. F	111
Equipment Number	91
Location	HAYS
Recorded By	D. SCHMIDT
Witnessed By	TERRY MCLEOD

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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.

BURRTON,  
 2 WEST, 2 NORTH, 1/8 WEST,  
 SOUTH INTO

Log Measured From: KELLY BUSHING 12 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES  
[www.pioneerenergy.com](http://www.pioneerenergy.com) 785-625-3858

Your Pioneer Energy Services Crew		This Log Record Was Witnessed By	
Engineer: D. SCHMIDT	Operator:	Primary Witness: TERRY MCLEOD	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Company	Offset (ft)	Schematic	Description	Length (ft)	C.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (96-916)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80		DIL-PSI HIGH TEMP (967 (HT))	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					

Dataset: howell\_sabin b 14.db: field/well/STKML/pass2.4  
 Total length: 43.08 ft  
 Total weight: 685.00 lb  
 O.D.: 4.00 in

# Log Variables

Database: C:\ProgramData\Warrior\Data\howell\_sabin b 14.db

Dataset: field/well/STKML/pass2.4/\_vars\_

## Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	40	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	80	0	5.5	0	3498	111	7.875

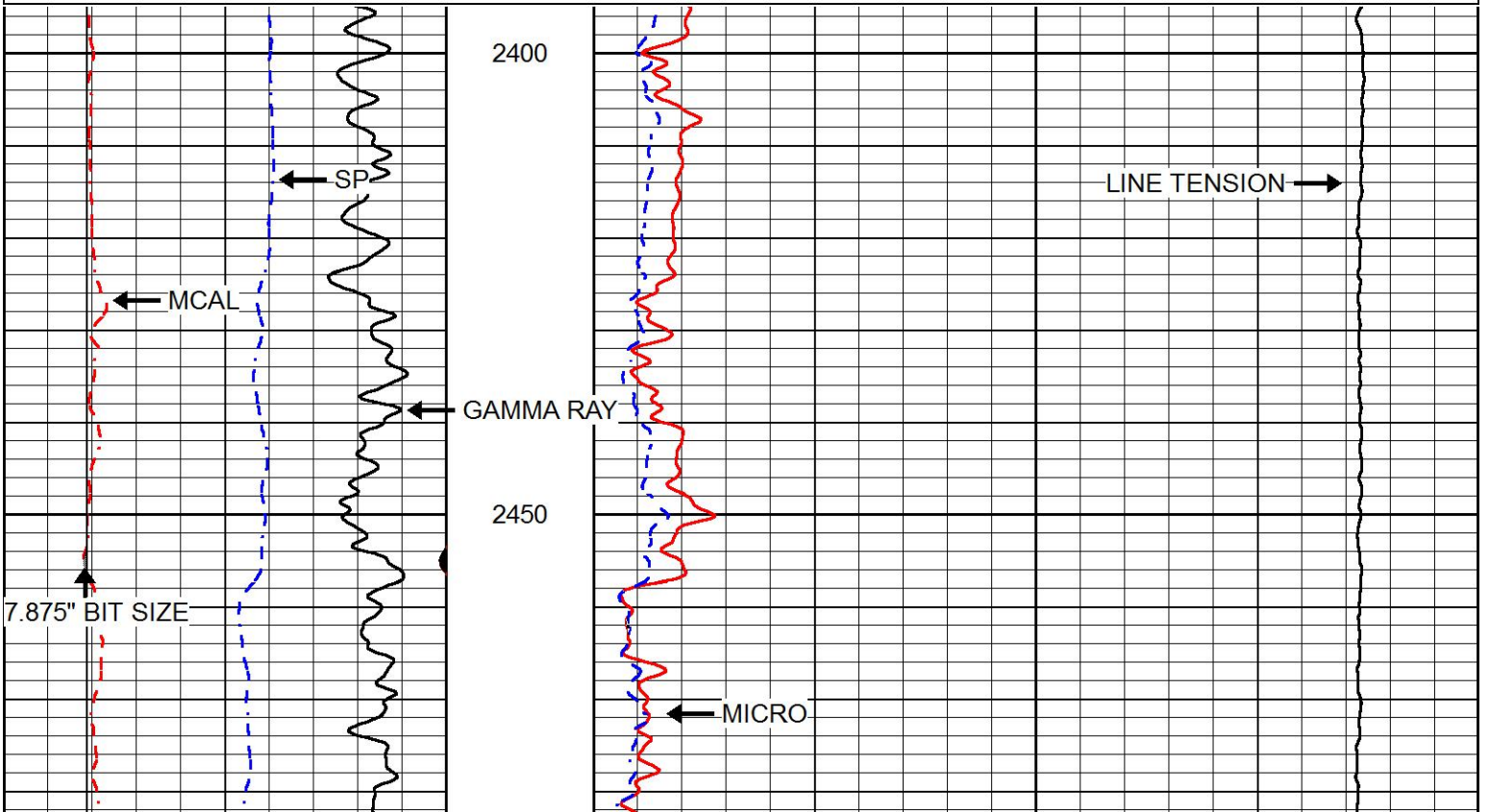


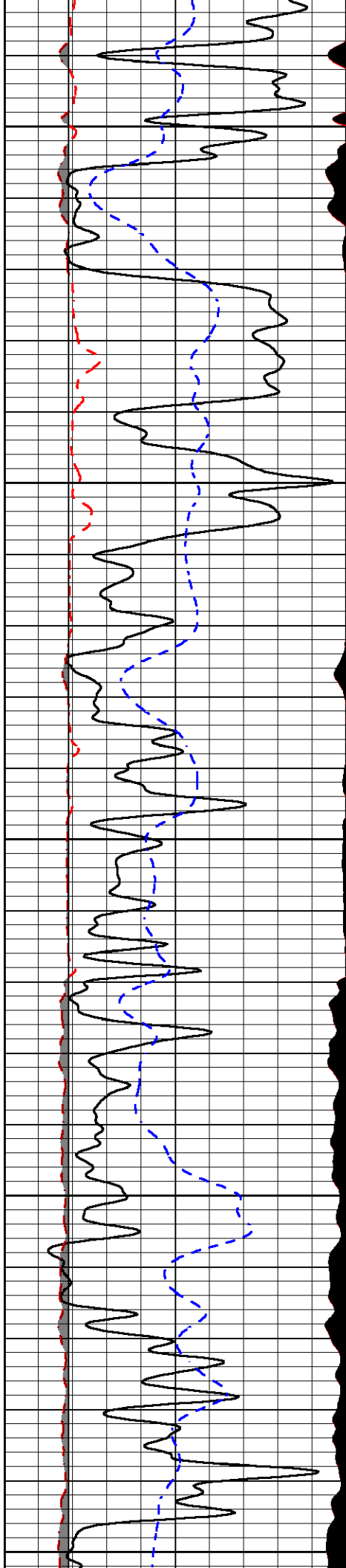
# MAIN PASS

Database File: howell\_sabin b 14.db  
 Dataset Pathname: STKML/pass3.1  
 Presentation Format: micro  
 Dataset Creation: Mon Sep 10 14:47:40 2018  
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
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
10000	Line Weight (lb)	0





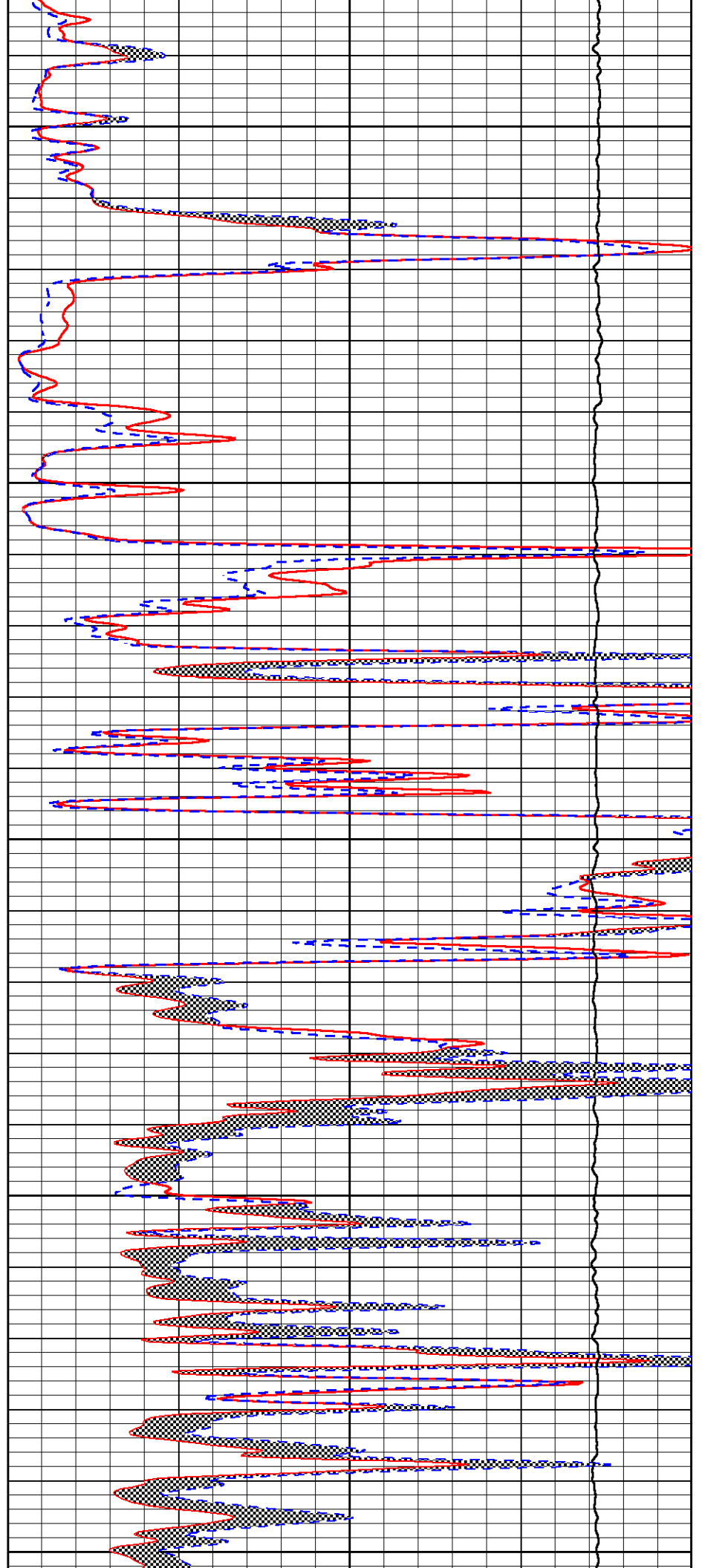
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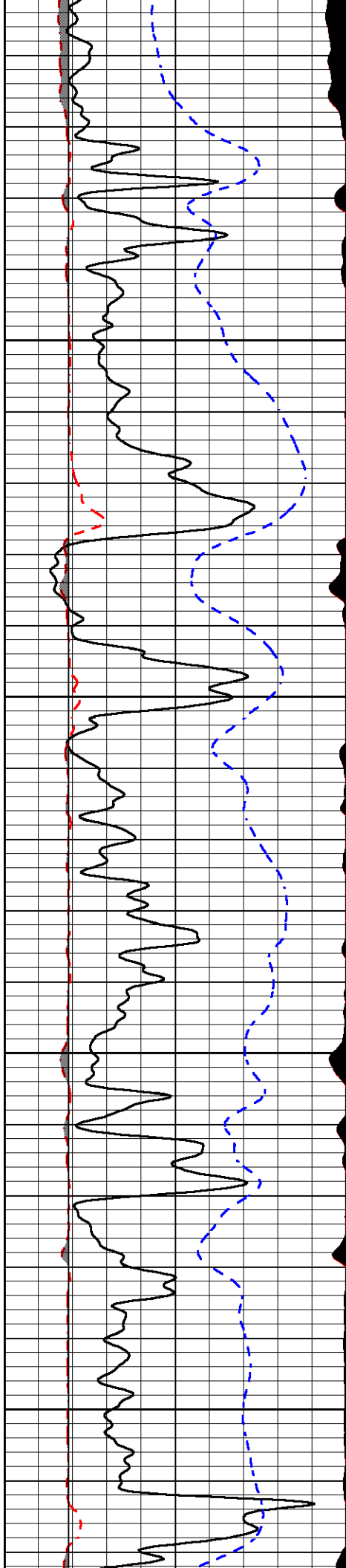
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2600

2650

2700



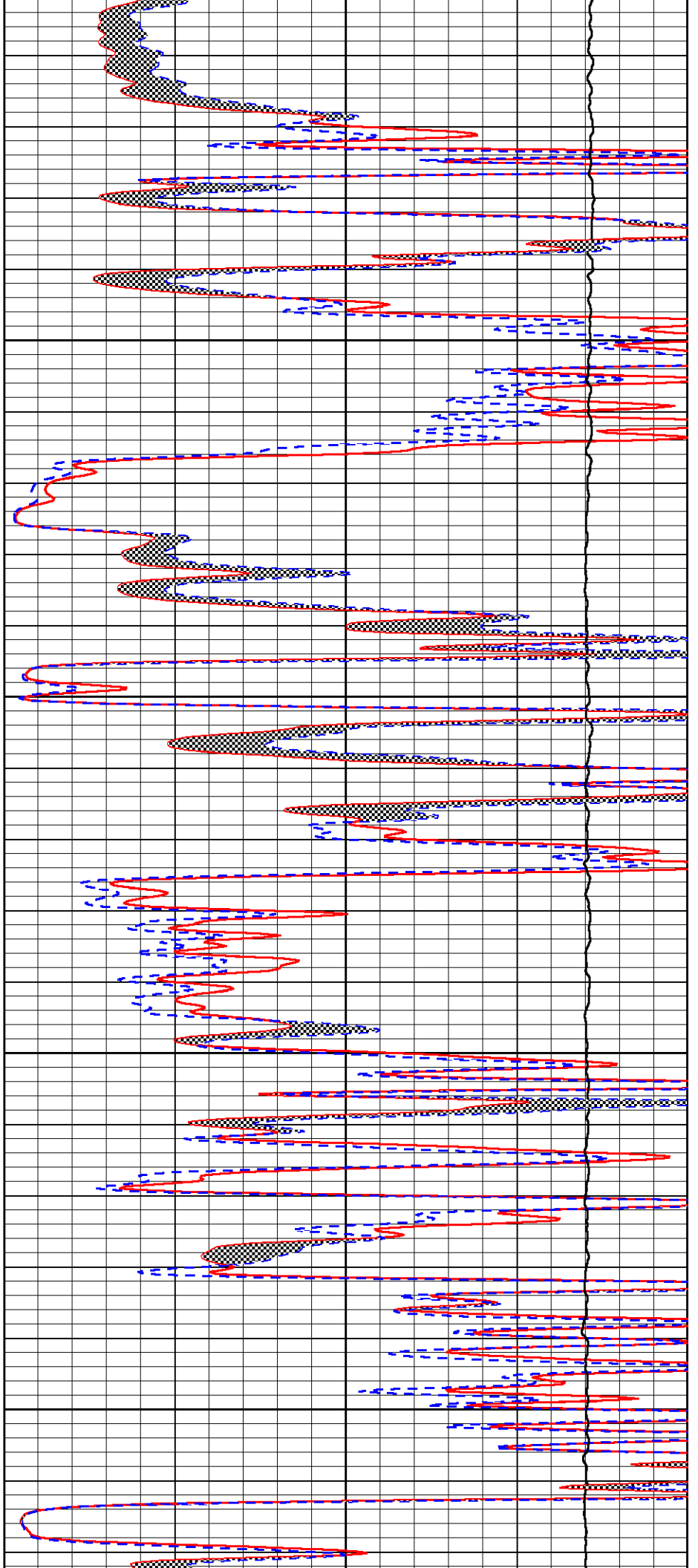


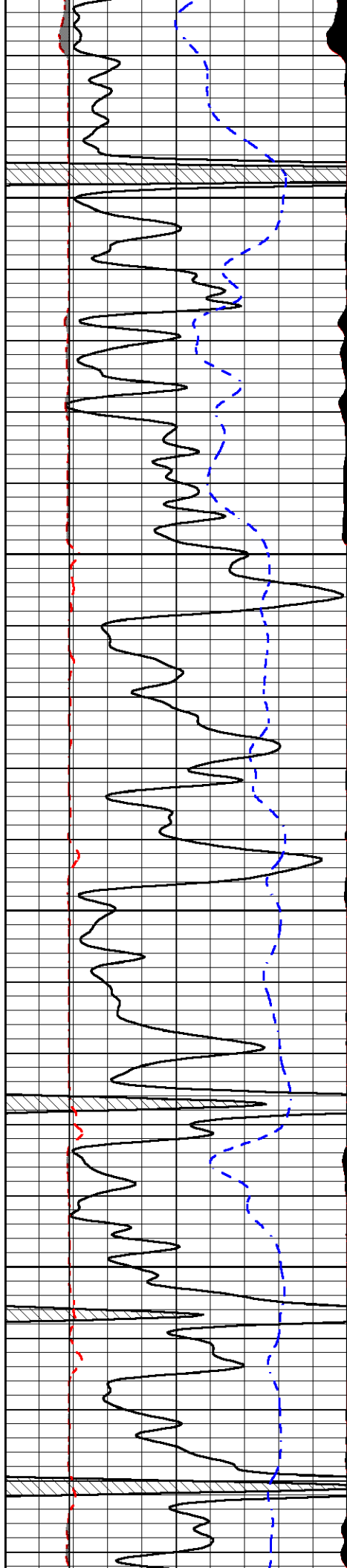
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2800

2850

2900



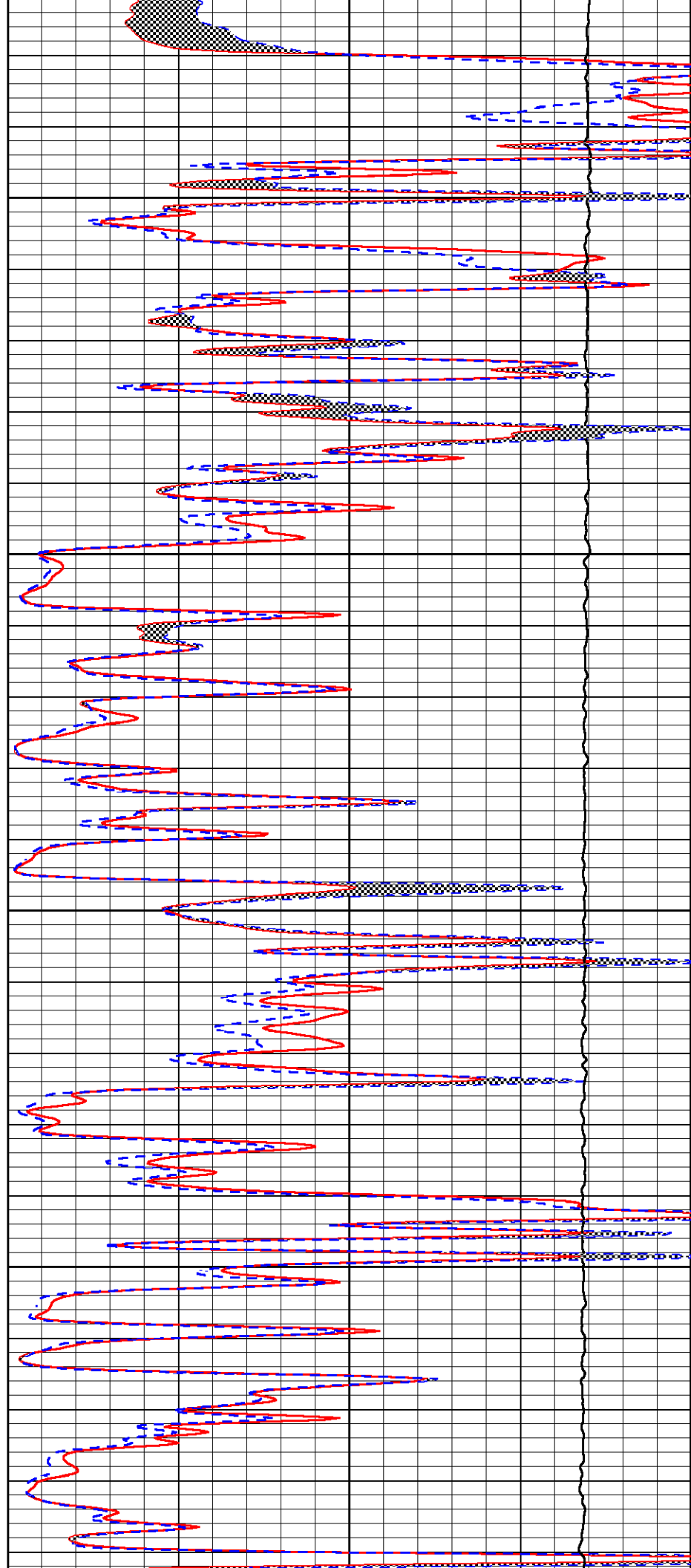


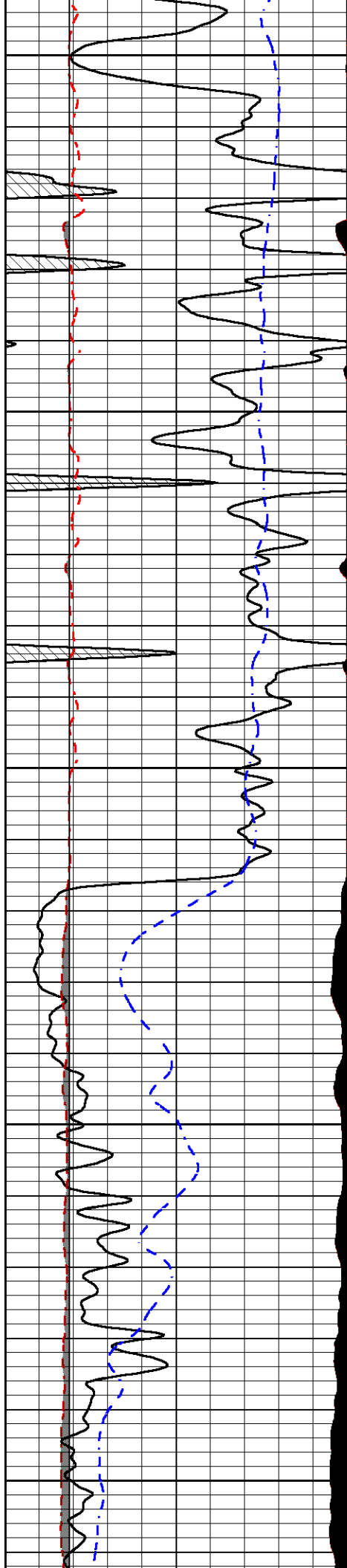
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3000

3050

3100





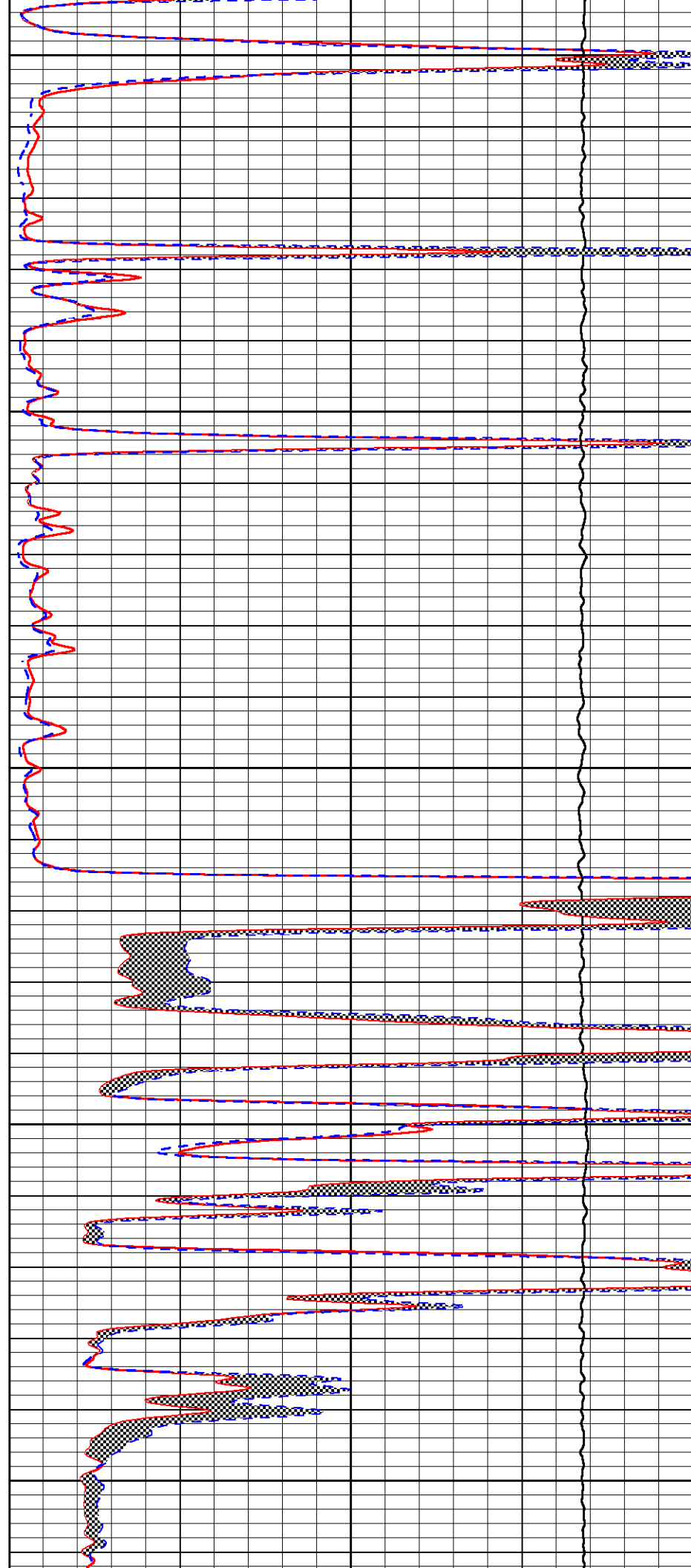
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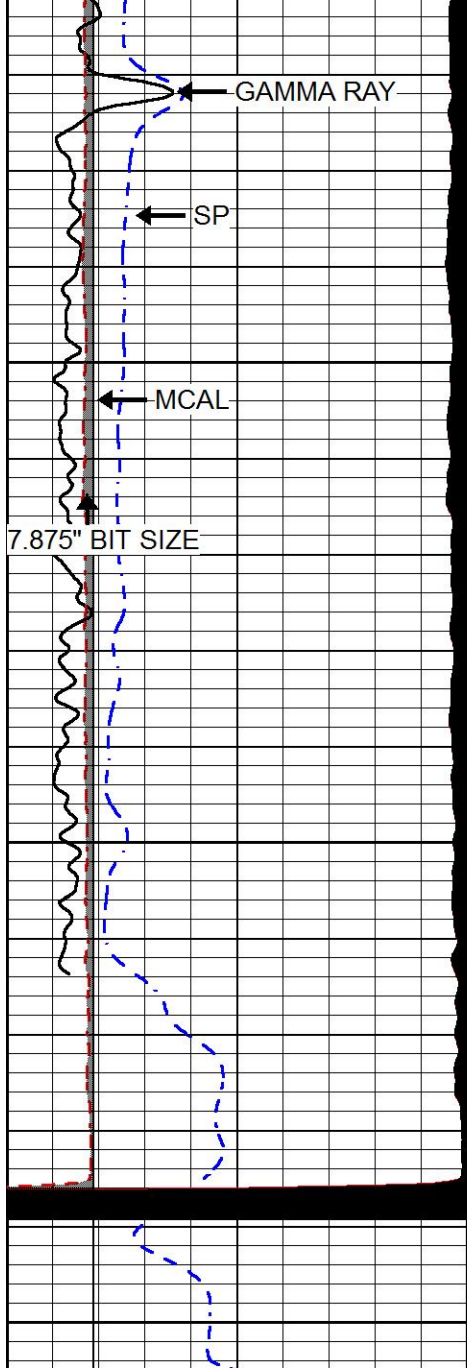
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3250

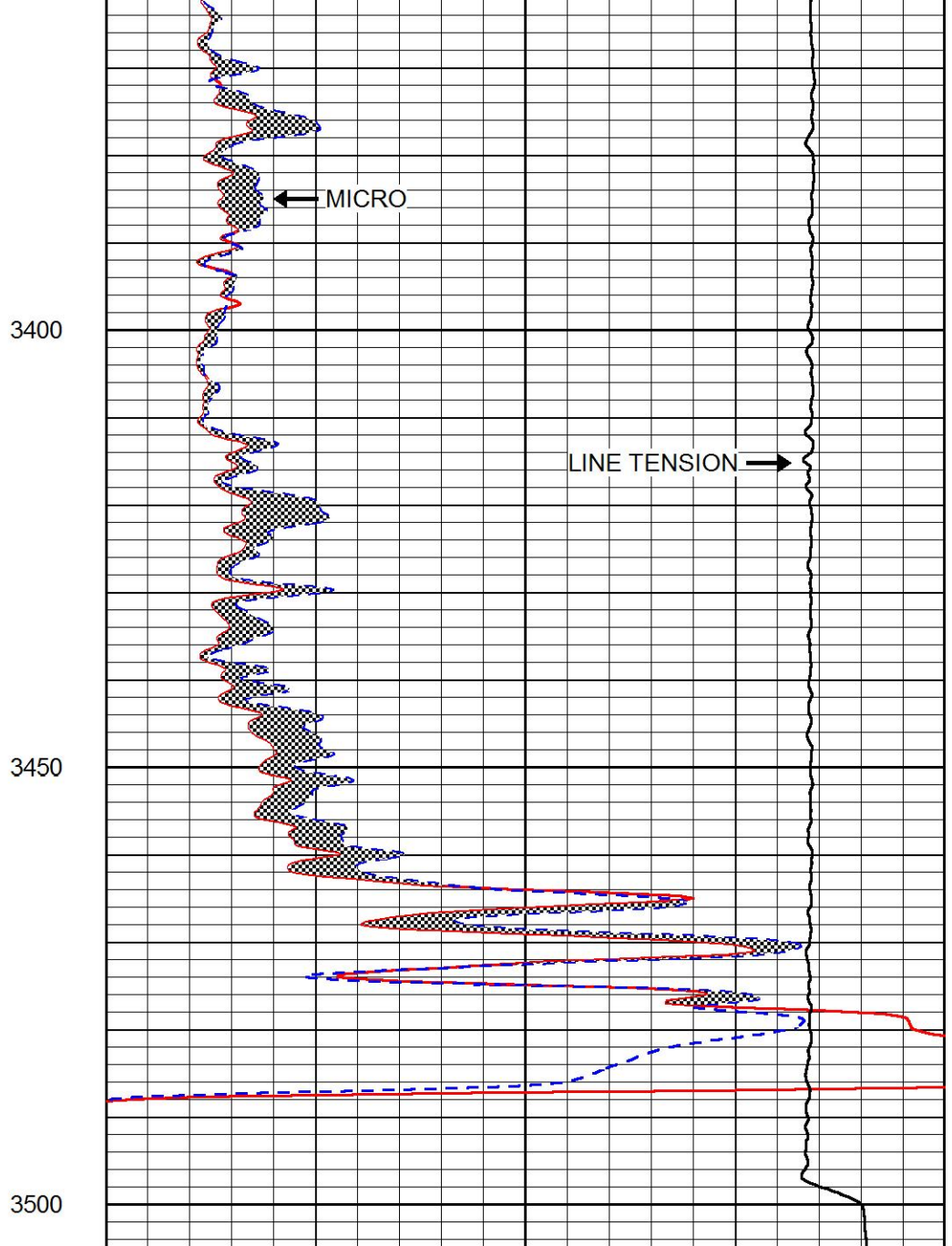
3300

3350





0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
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
10000	Line Weight (lb)	0



# REPEAT SECTION

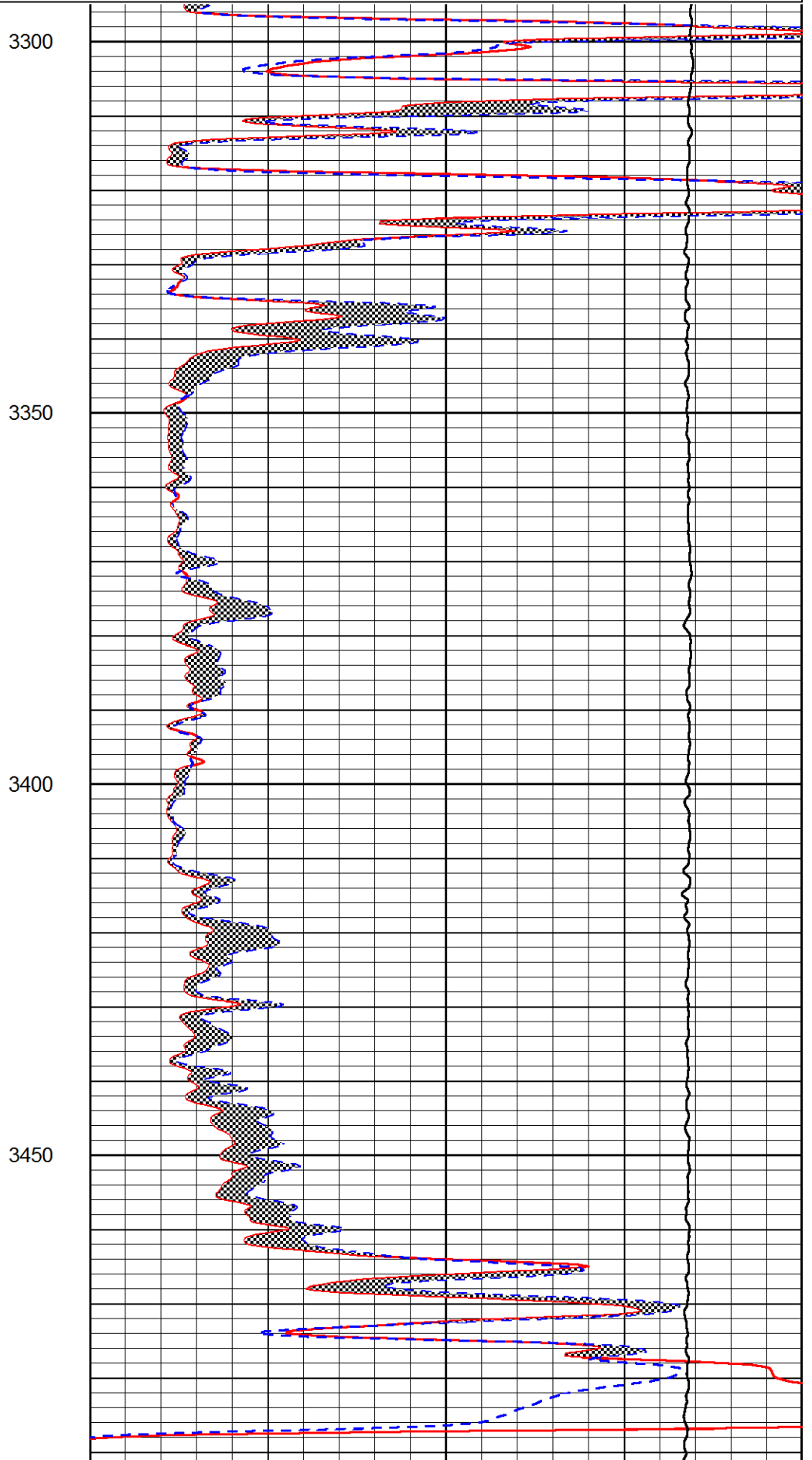
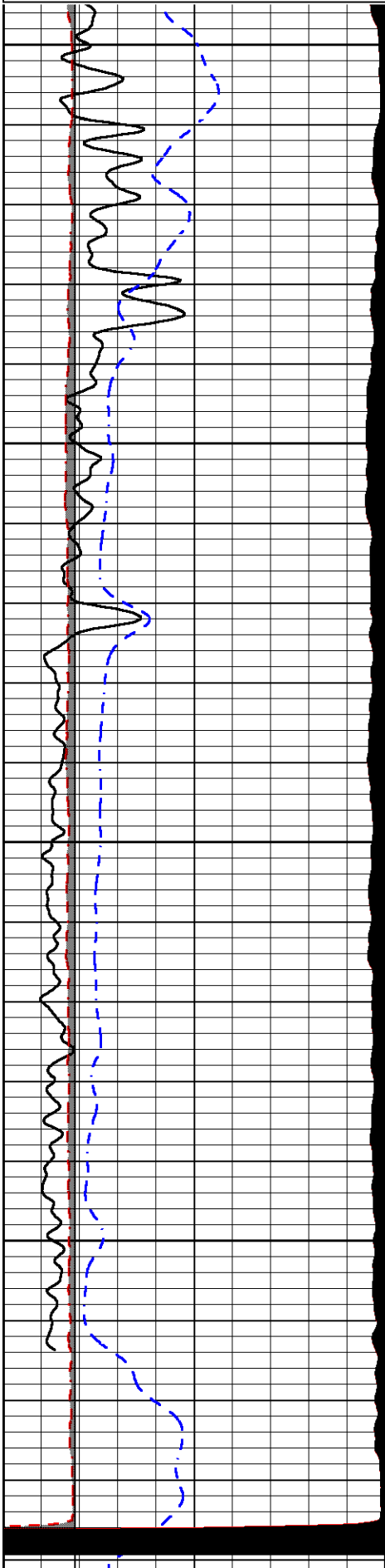
Database File	howell_sabin b 14.db
Dataset Pathname	STKML/pass2.1
Presentation Format	micro
Dataset Creation	Mon Sep 10 14:33:23 2018
Charted by	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40

6	MCAL (in)	16
2.875	mcal (in)	7.875
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-200	SP (mV)	0

0	MICRO NORMAL 2' (Onm-m)	40
10000	Line Weight (lb)	0





**Compensated Neutron Calibration Report**

Serial Number: 207-MW  
 Tool Model: M&W  
 Calibration Performed: FRI AUG 24 10:30:30 2018

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: 89  
 Tool Model: M&W  
 Calibration Performed: Fri Aug 24 11:16:10 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps



**PIONEER**  
 Pioneer Energy Services

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