



PIONEER
Pioneer Energy Services

MICRORESISTIVITY LOG

Company **JOHN O FARMER**
Well **ULRICH B #1**
Field **WILDCAT**
County **RUSSELL** State **KANSAS**

Location: API #: 15-167-24079-00-00

430' FSL & 990' FEL

SEC 25 TWP 11S RGE 13W

Permanent Datum **GROUND LEVEL** Elevation **1731'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Elevation
K.B. 1738'
D.F. N/A
G.L. 1731'

Date	11/27/2017		
Run Number	ONE		
Depth Driller	3340'		
Depth Logger	3338'		
Bottom Logged Interval	3337'		
Top Log Interval	2600'		
Casing Driller	8.625" @ 261'		
Casing Logger	261'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	11500		
Density / Viscosity	9.2 42		
pH / Fluid Loss	9.5 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.40 @ 50		
Rmf @ Meas. Temp	0.30 @ 50		
Rmc @ Meas. Temp	0.54 @ 50		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.18 @ 109		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	109		
Equipment Number	108		
Location	HAYS		
Recorded By	D. SCHMIDT		
Witnessed By	AUSTIN KLAUS		

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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.

BUNKER HILL,
NORTH TO AMHERST RD, 1/2 EAST,
NORTH INTO

Log Measured From: KELLY BUSHING 7 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: AUSTIN KLAUS
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

Database C:\ProgramData\Warrior\Data\john o farmer_ulrich b1.db
Dataset field/well/STKML/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	100	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	-85	0		0

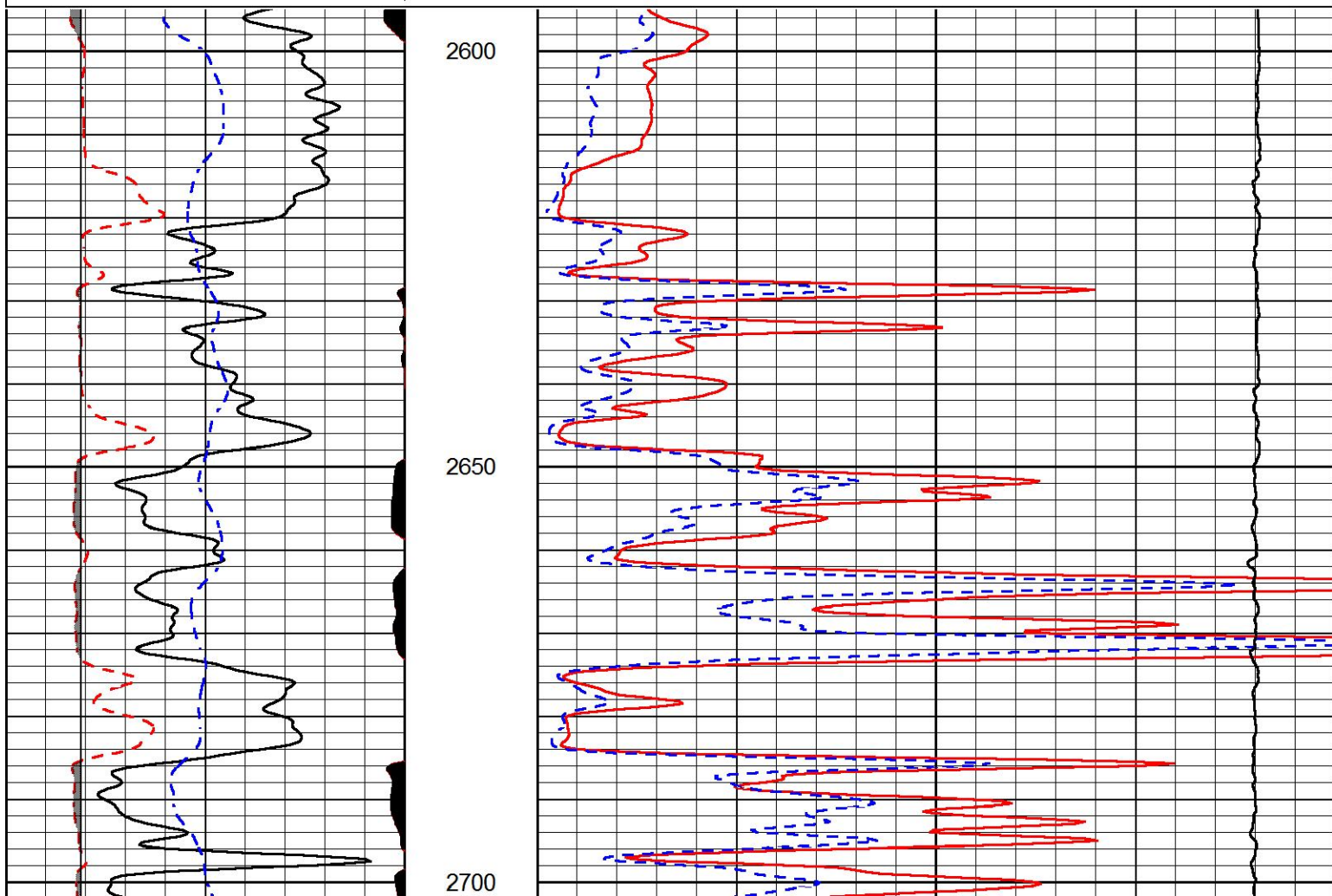


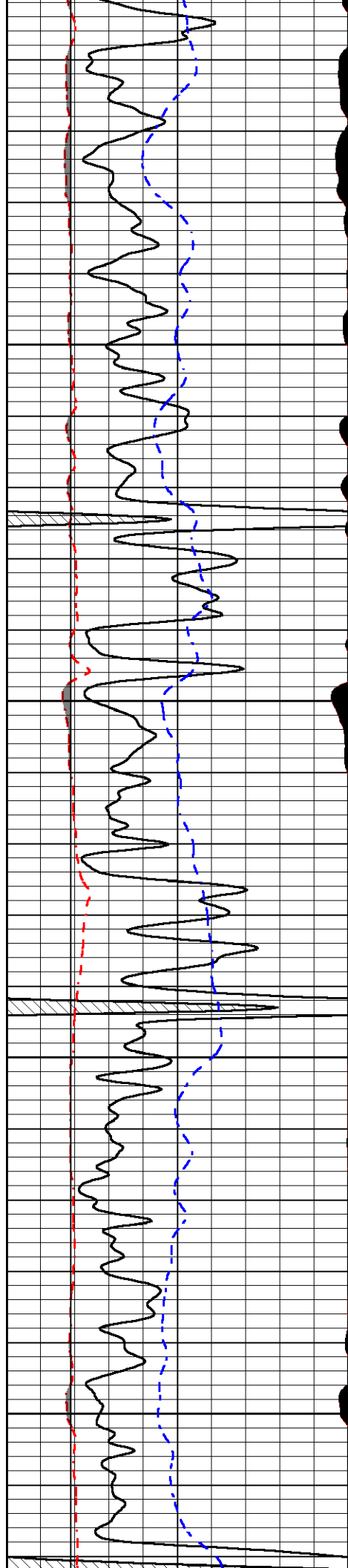
MAIN PASS

Database File john o farmer_ulrich b1.db
Dataset Pathname STKML/pass3.1
Presentation Format micro
Dataset Creation Tue Nov 27 13:02:12 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



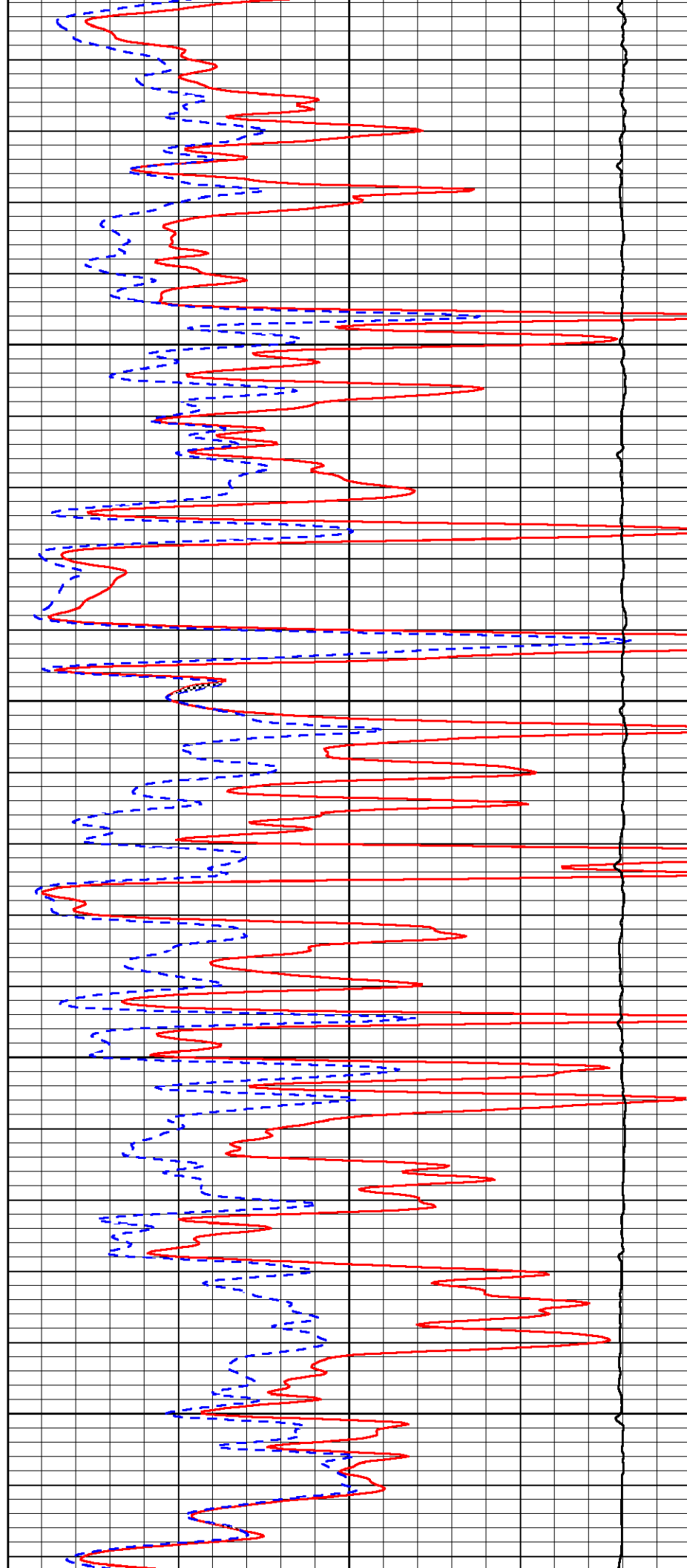


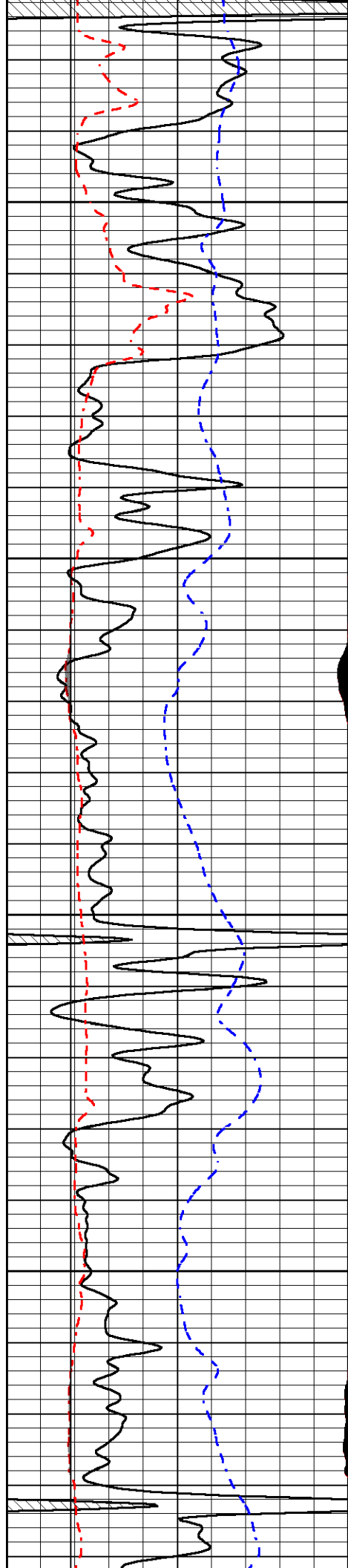
2750

2800

2850

2900



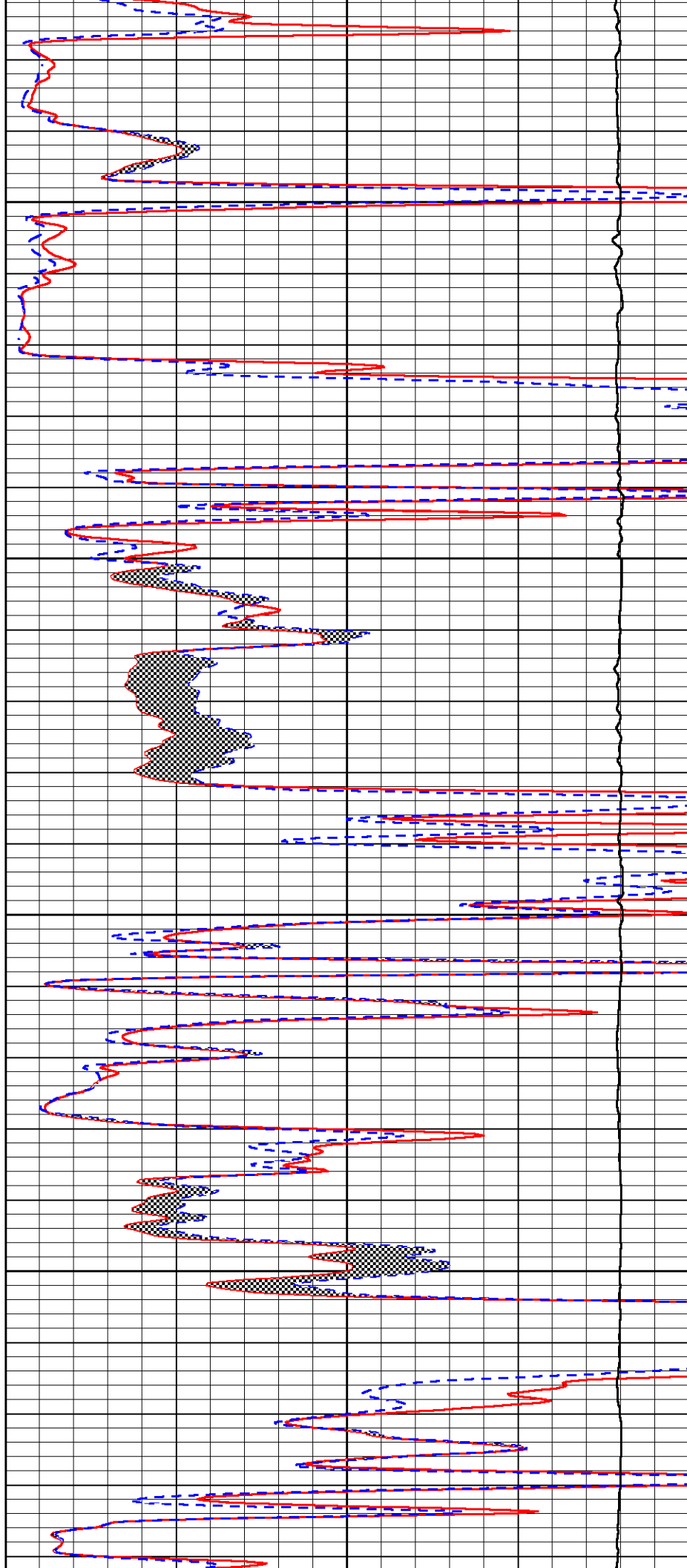


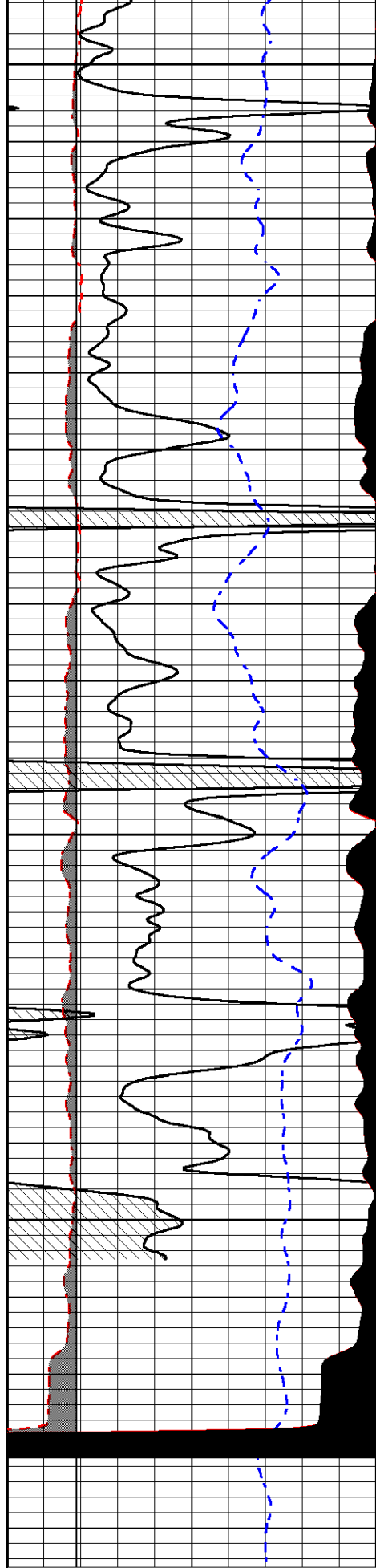
2950

3000

3050

3100





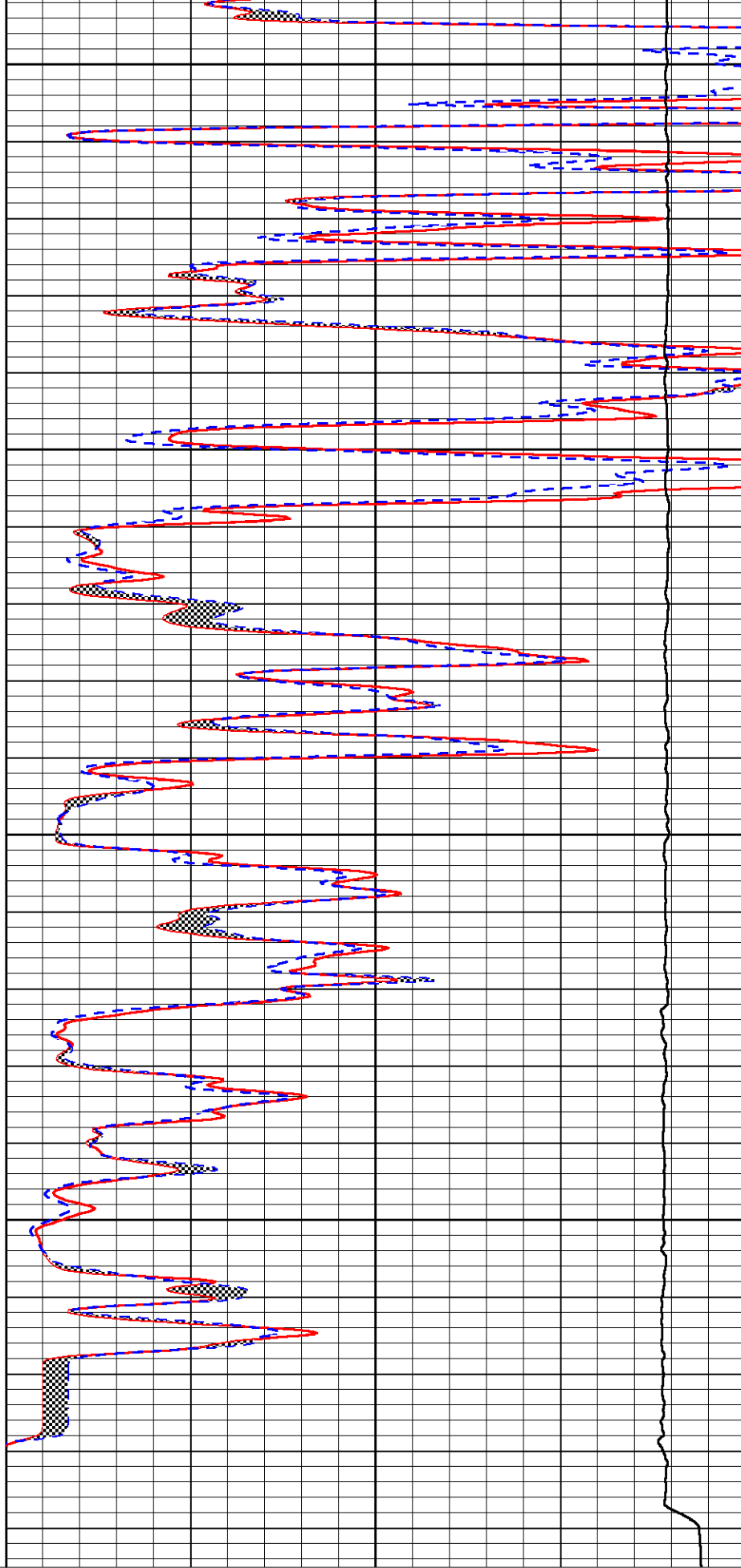
3150

3200

3250

3300

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

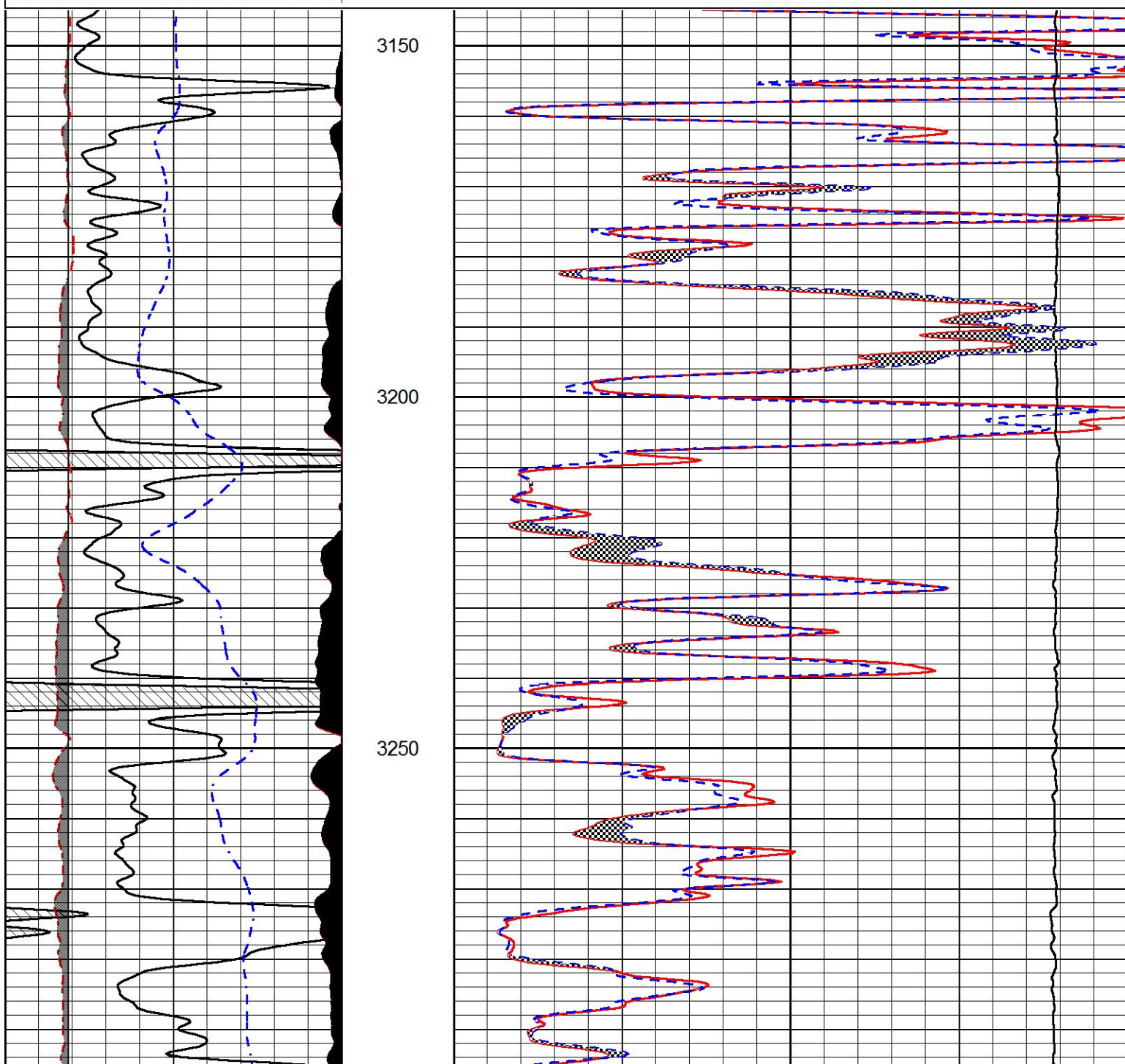


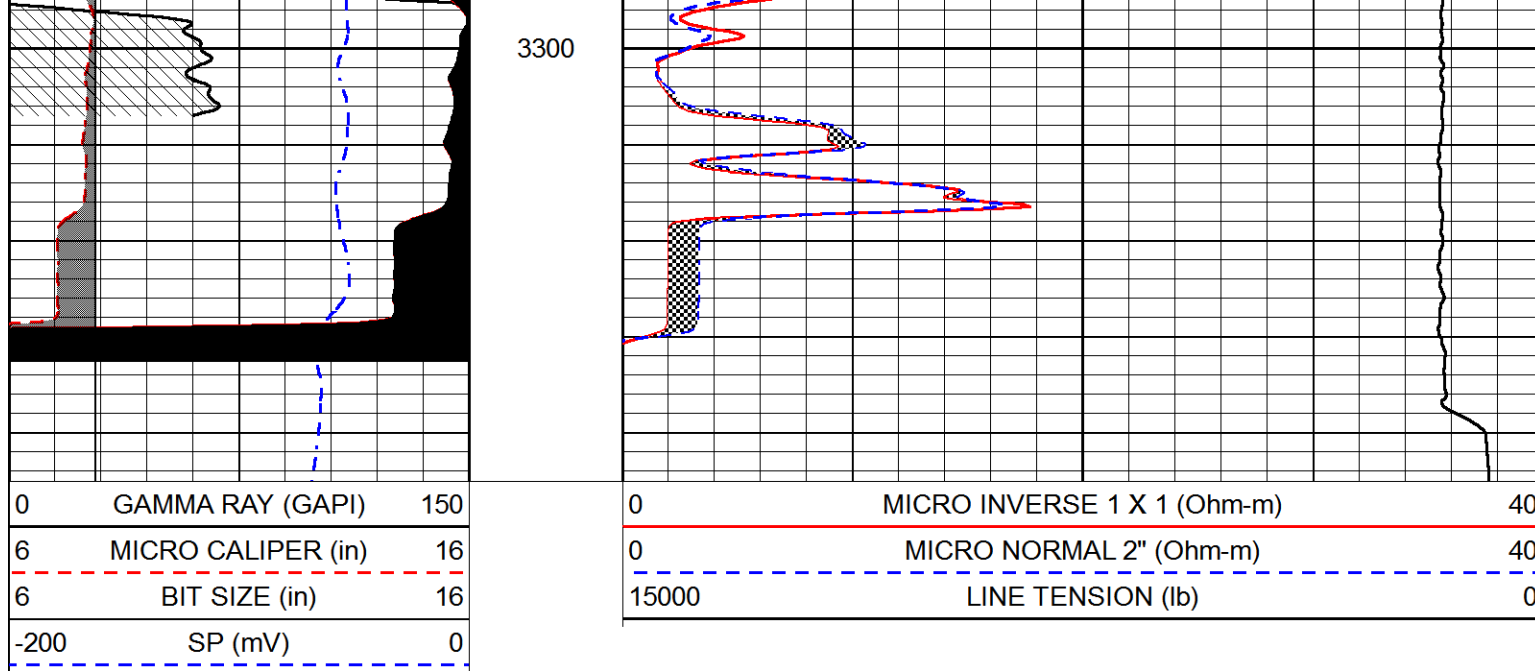
REPEAT SECTION

Database File john o farmer_ulrich b1.db
Dataset Pathname STKML/pass2.5
Presentation Format micro
Dataset Creation Tue Nov 27 12:48:56 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





Calibration Report

Database File john o farmer_ulrich b1.db
 Dataset Pathname STKML/pass3.1
 Dataset Creation Tue Nov 27 13:02:12 2018

Dual Induction Calibration Report

Serial-Model: 976-M&W
 Calibration Performed: Thu Nov 15 20:52:51 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.450	-35.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.340	-12.500

Microlog Calibration Report

Serial-Model: PSI-01-PSI STKBL ML
 Performed: 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	35500.0000	-1.1000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	29500.0000	-0.2000
Caliper	1.0001	1.1397	6.5000	18.5000	in	86.0000	-82.7500

Compensated Density Calibration Report

Serial-Model: 934-5002-M&W
 Source / Verifier: /
 Master Calibration Performed: 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	2.685	g/cc	696.57	1725.83	cps
Spine Angle = 75.50			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	16.00	in	1.01		

Compensated Neutron Calibration Report
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Serial Number:	tk10-MW
Tool Model:	M&W
Calibration Performed:	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:	89-M&W	
Tool Model:	M&W	
Calibration Performed:	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

	Company	JOHN O FARMER
	Well	ULRICH B #1
	Field	WILDCAT
	County	RUSSELL
	State	KANSAS