



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company **BLAKE EXPLORATION, LLC**
Well **SCHMITT NO.1**
Field **OAKLEY**
County **LOGAN** State **KANSAS**

Location: API #: 15-109-21556-00-00

Other Services

SEC 11 TWP 11S RGE 32W
1320' FSL & 330' FWL

CNL/CDL
MEL

Permanent Datum GROUND LEVEL Elevation 3053'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 3060'
D.F. N/A
G.L. 3053'

Date 7/13/2018

Run Number	ONE		
Depth Driller	4650'		
Depth Logger	4644'		
Bottom Logged Interval	4643'		
Top Log Interval	250'		
Casing Driller	8.625" @ 262'		
Casing Logger	260'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	3200		
Density / Viscosity	9.3 75		
pH / Fluid Loss	10.5 7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.80 @ 74		
Rmt @ Meas. Temp	.60 @ 74		
Rmc @ Meas. Temp	1.08 @ 74		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	.48 @ 123		
Operating Rig Time	2 HOURS		
Max Rec. Temp. F	123 DEGF		
Equipment Number	108		
Location	HAYS		
Recorded By	J. HENRICKSON		
Witnessed By	MIKE DAVIGNON		

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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.

OAKLEY KANSAS
3/4 SOUTH ON HWY 83, EAST 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: J. HENRICKSON
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: MIKE DAVIGNON
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 123	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV -260	degF 94	Off	ft 4644

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	37.48			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	36.73						
LSD	28.43			CDL-M&W (979-229)	8.50	4.00	250.00
DCAL	28.42						
SSD	27.93						
MCAL	19.83			ML-PSI STKBL ML (PSI-01)	7.58	4.00	65.00
				Stackable Microlog Tools			
MI	19.83						
MN	19.83						
RLL3	15.80						
RLL3F	15.79						
CILD	8.00			DIL-M&W (1987)	18.50	3.50	220.00

CILM

4.70

SP

0.20

Dataset: blake_schmitt_1.db: field/well/stackml/pass3.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in



PIONEER
Pioneer Energy Services

MAIN PASS

Database File blake_schmitt_1.db
Dataset Pathname stackml/pass3.1
Presentation Format dil2in
Dataset Creation Fri Jul 13 14:12:44 2018
Charted by Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 150

2000 CONDUCTIVITY (mmho/m) 0

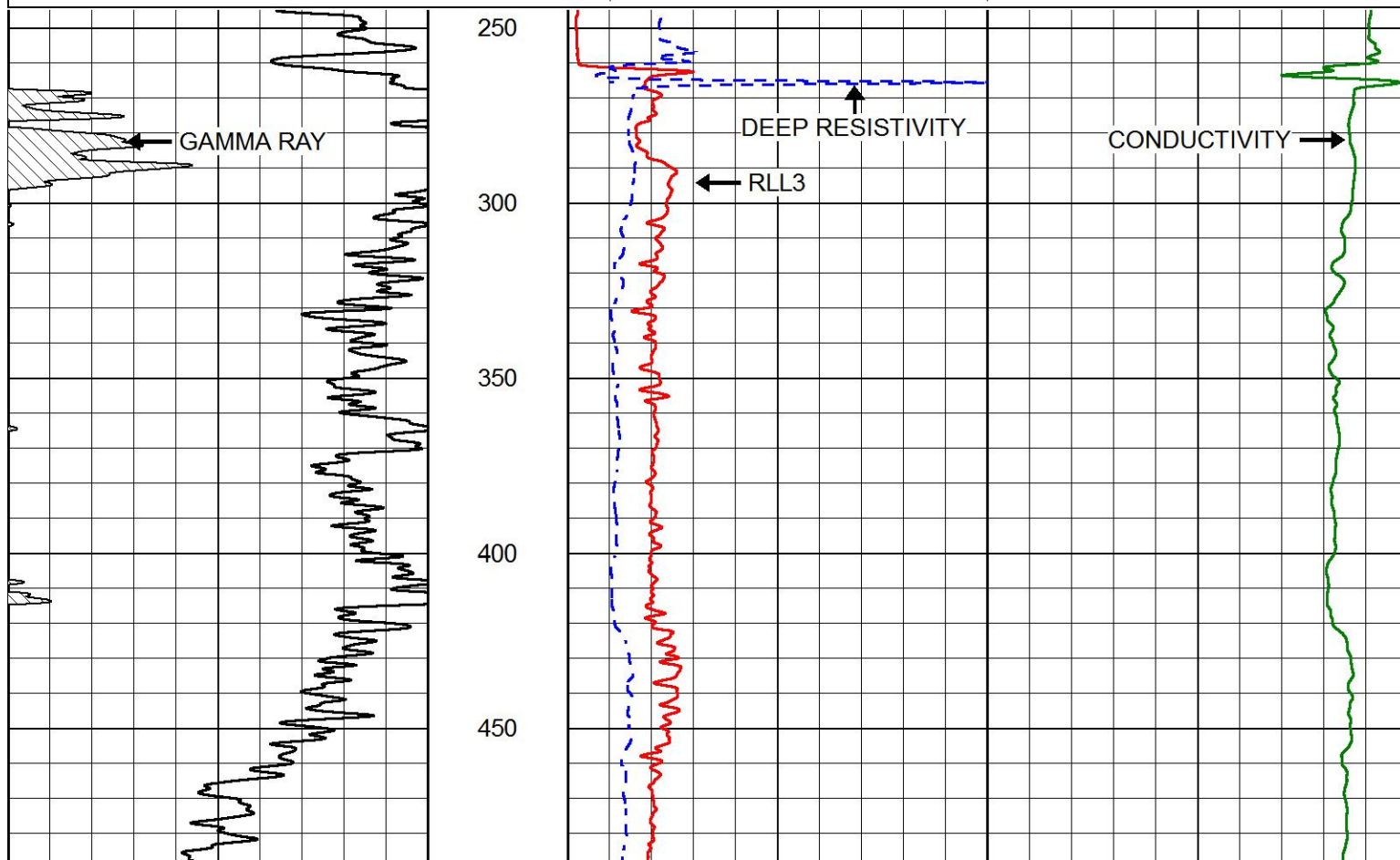
0 RLL3 (Ohm-m) 50

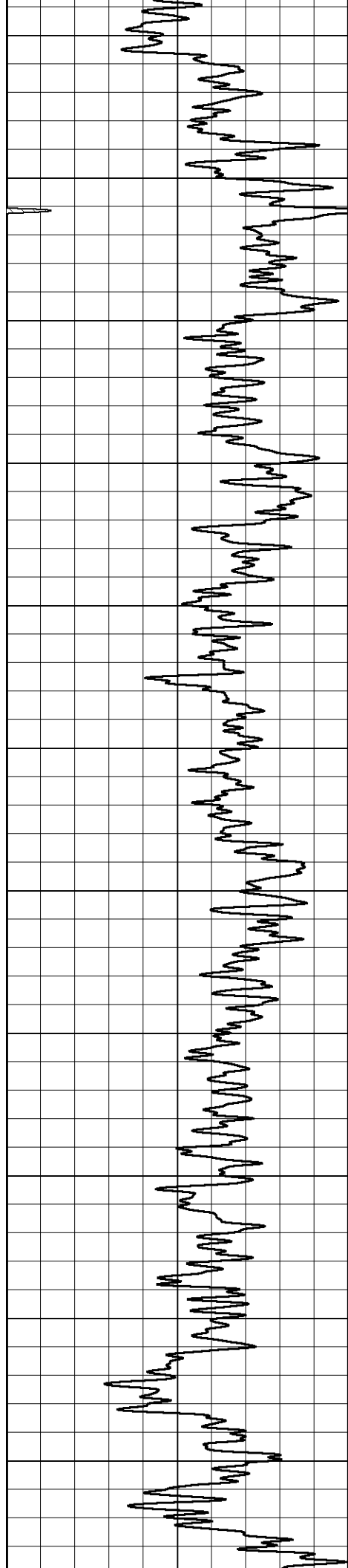
0 DEEP RESISTIVITY (Ohm-m) 50

50 RLL3 (Ohm-m) 500

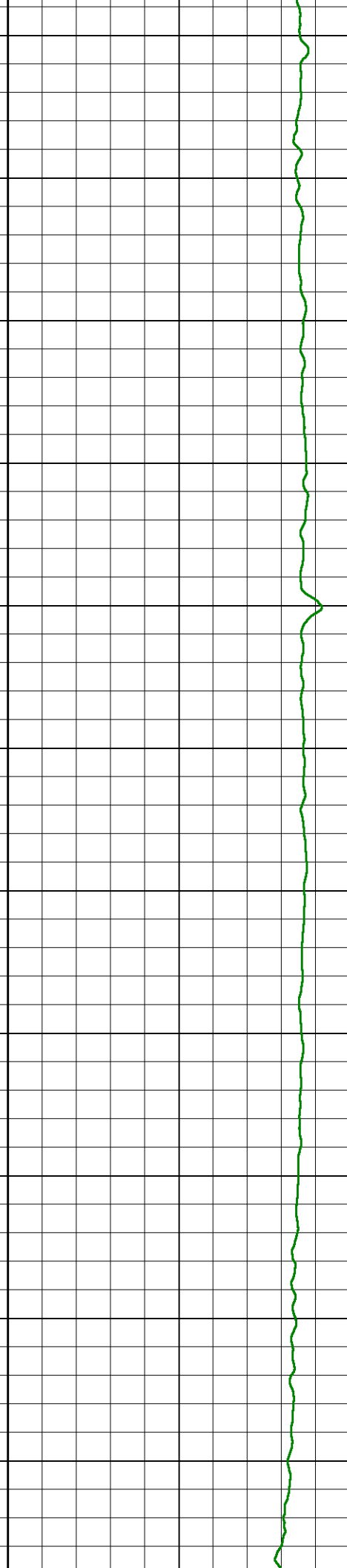
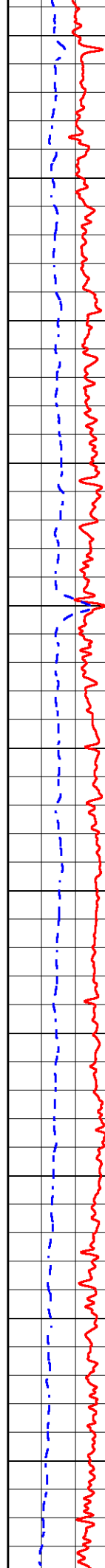
DEEP RESISTIVITY

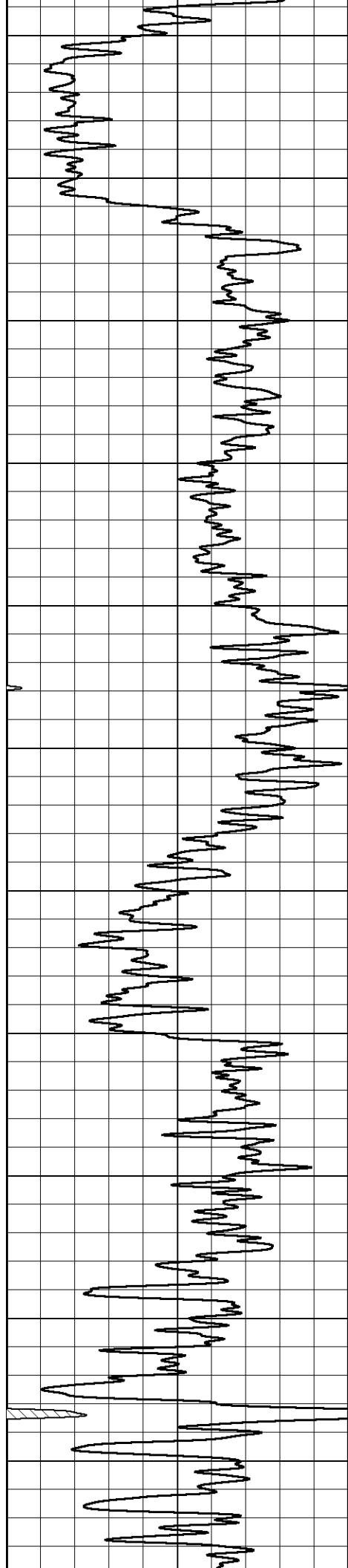
50 (Ohm-m) 500





500
550
600
650
700
750
800
850
900
950
1000





1050

1100

1150

1200

1250

1300

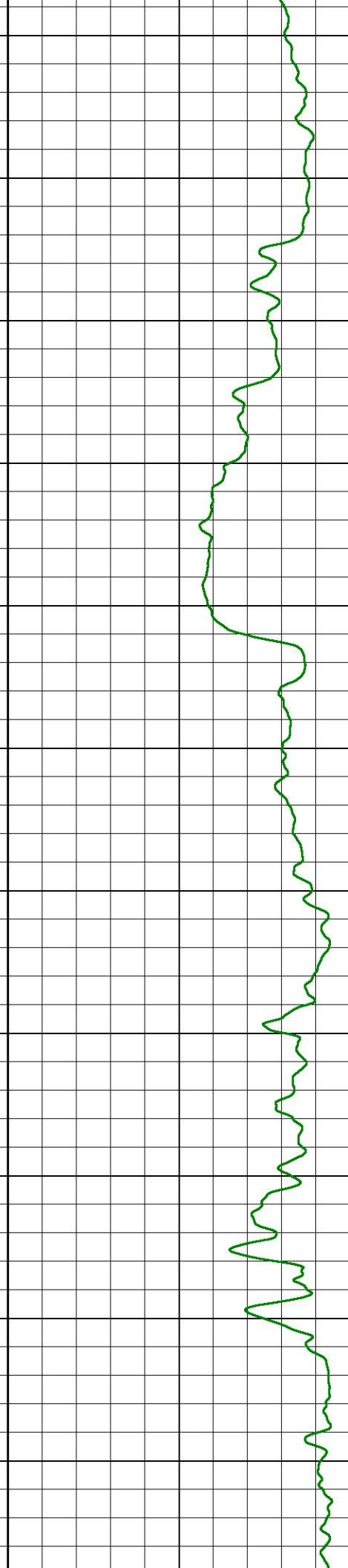
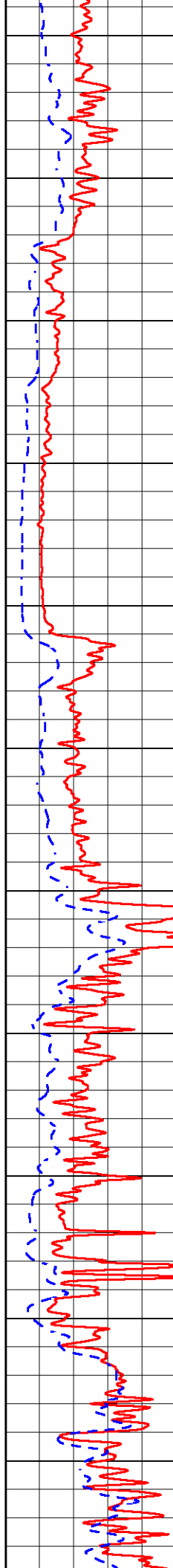
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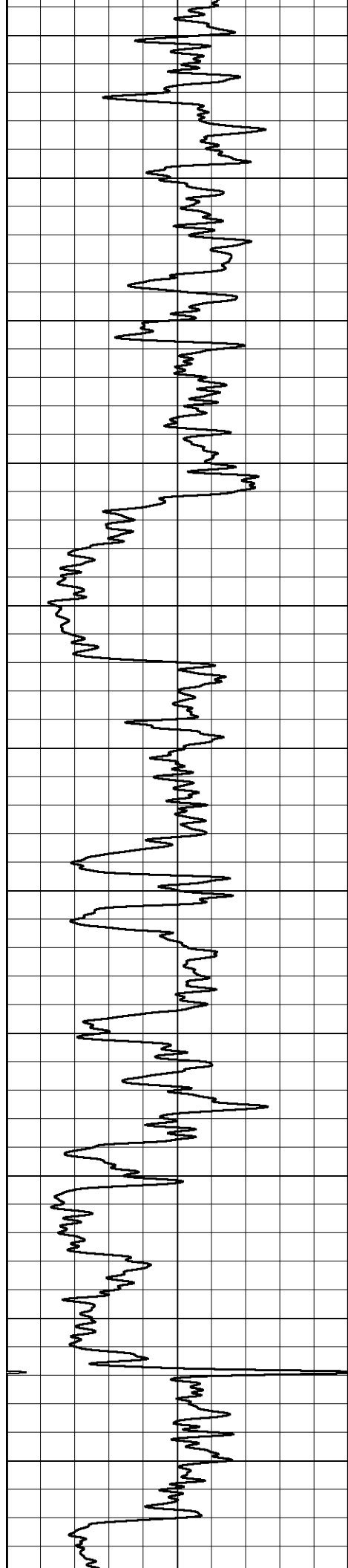
1400

1450

1500

1550





1600

1650

1700

1750

1800

1850

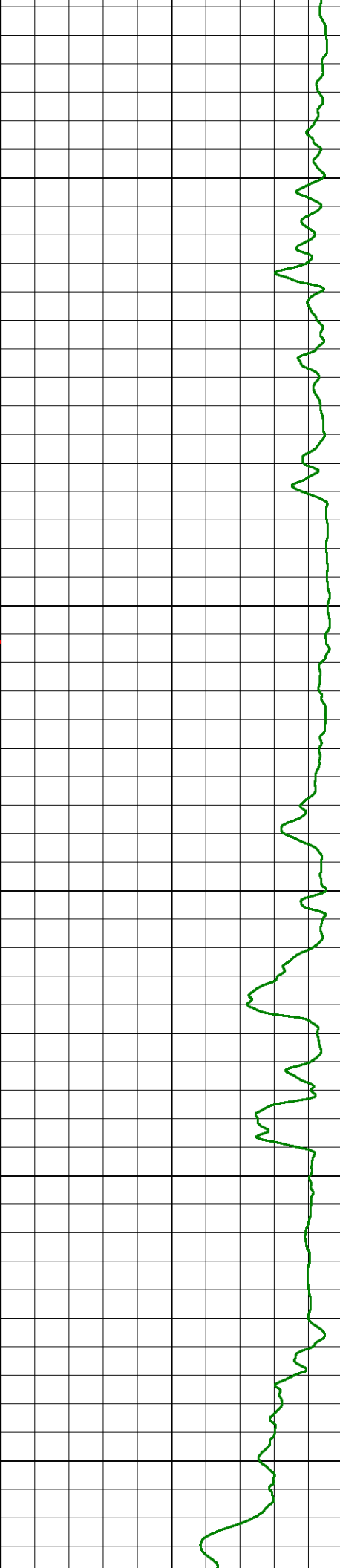
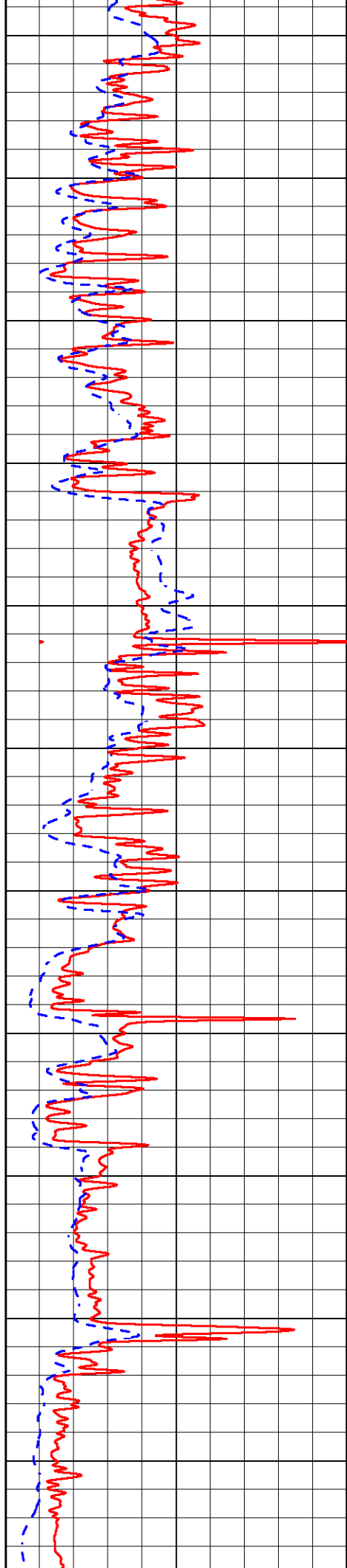
1900

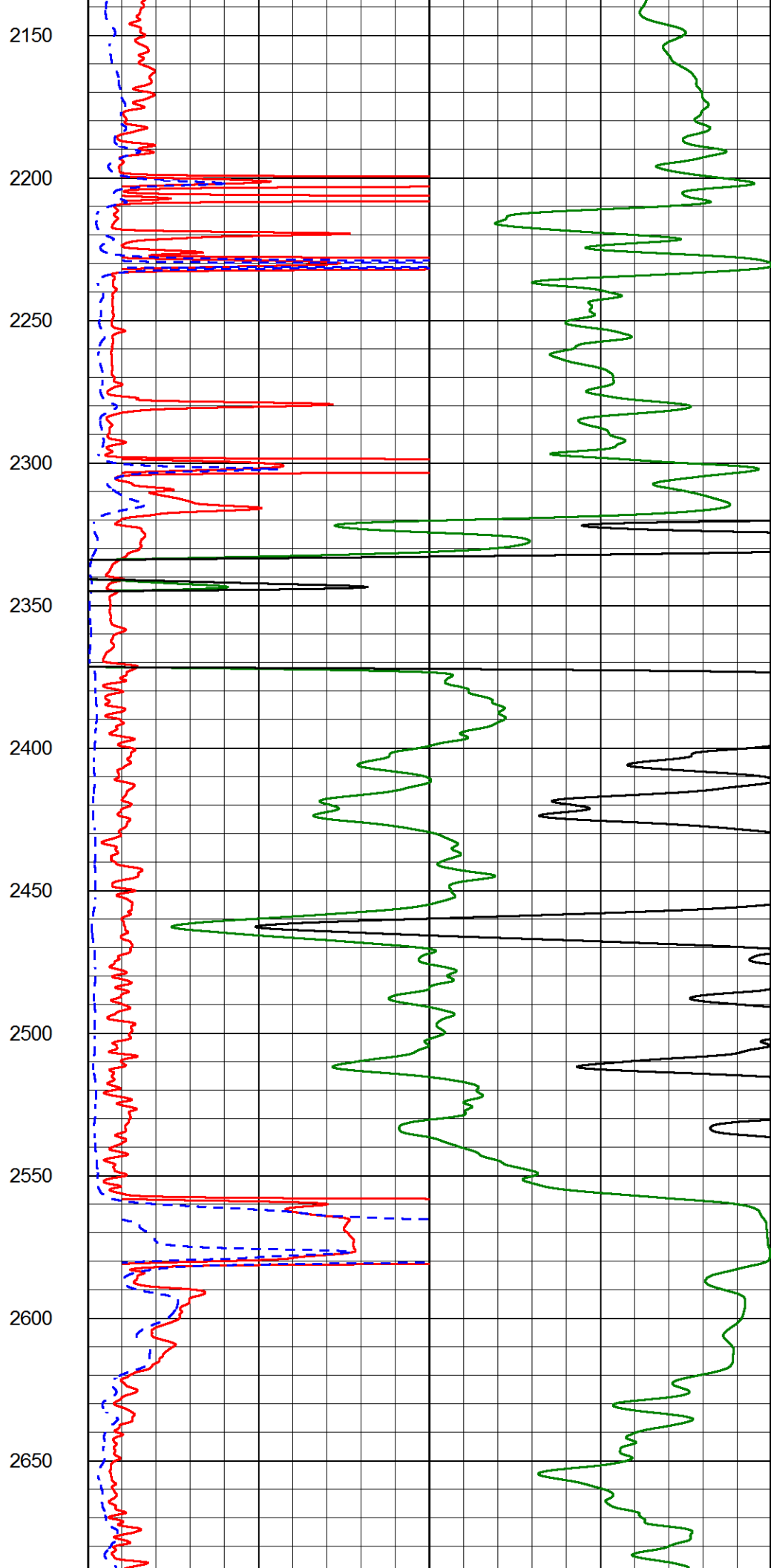
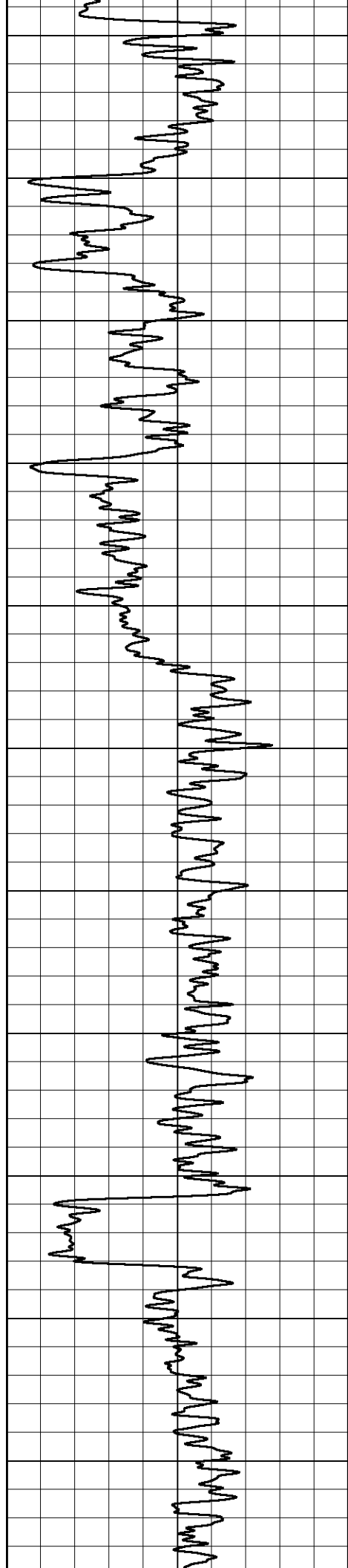
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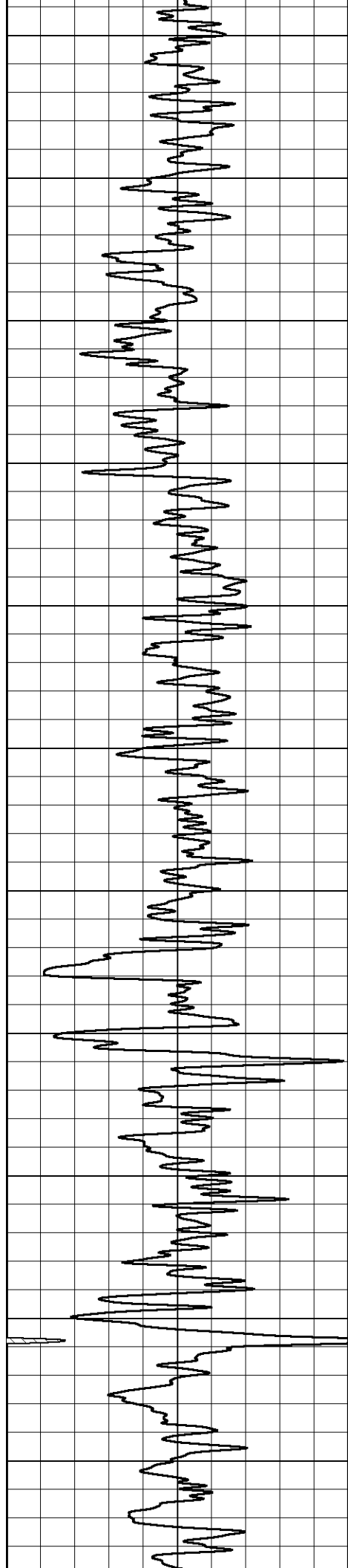
2000

2050

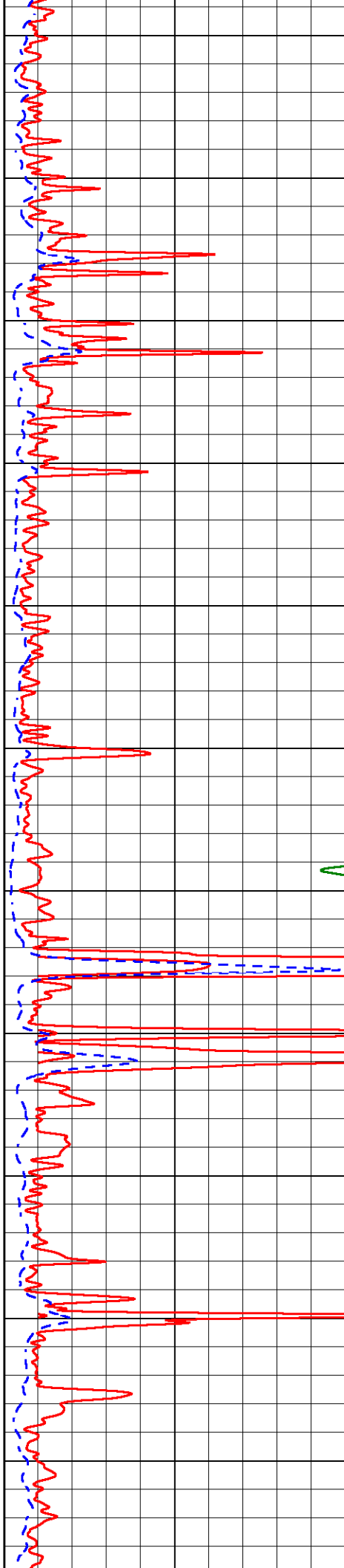
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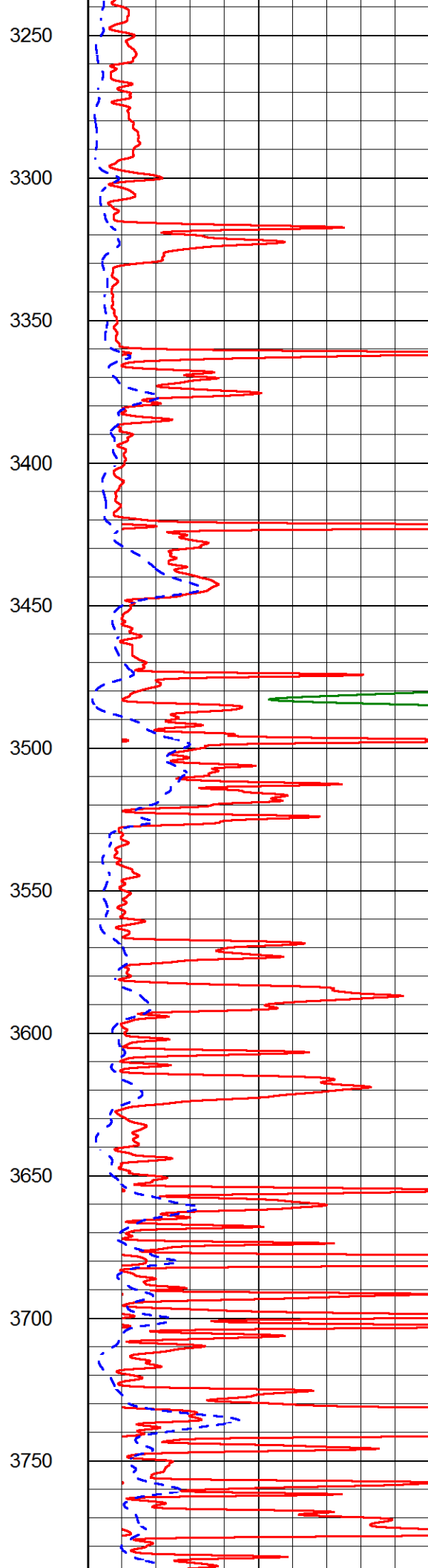
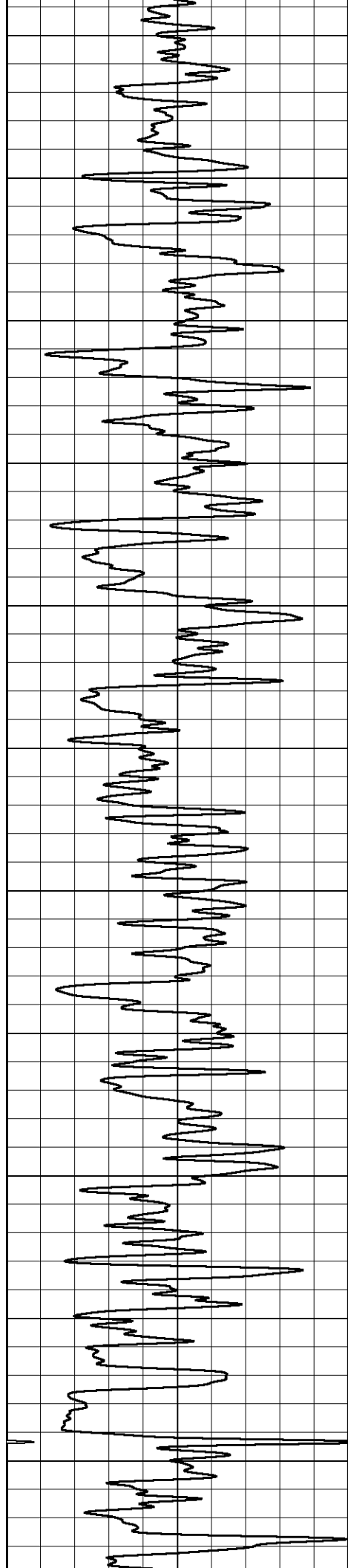


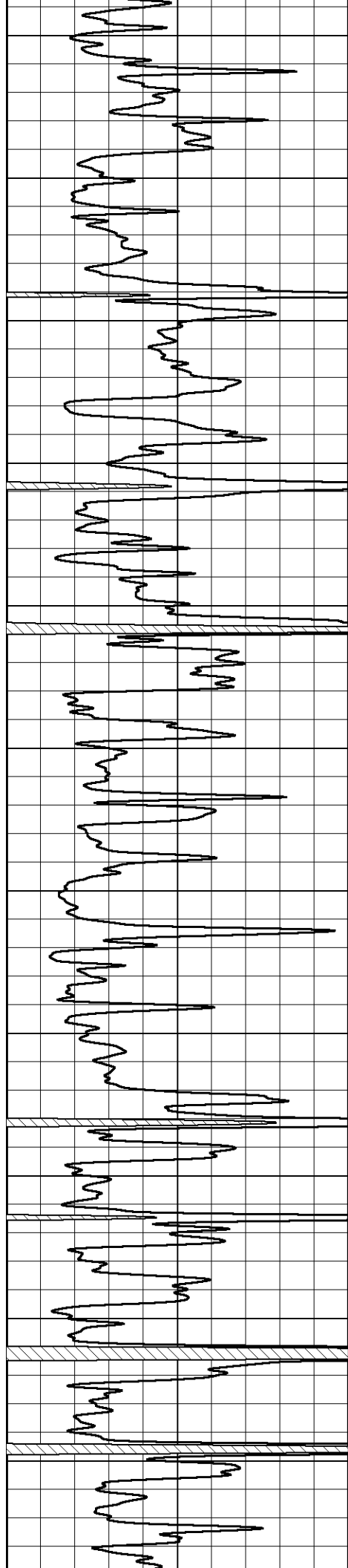




2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200







3800

3850

3900

3950

4000

4050

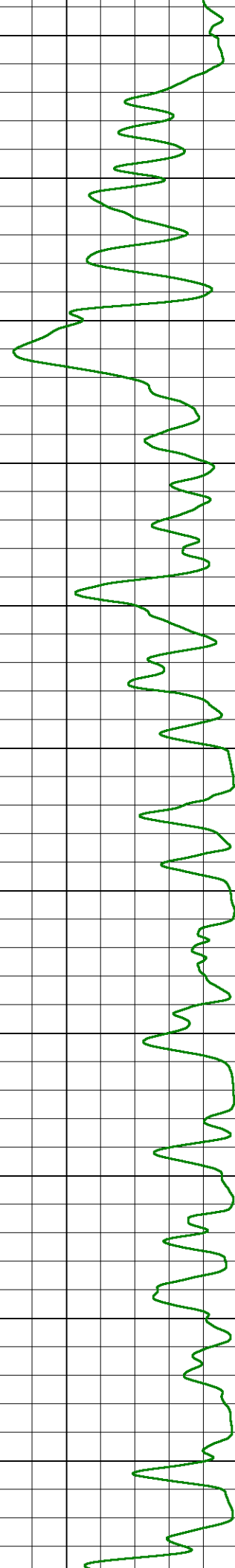
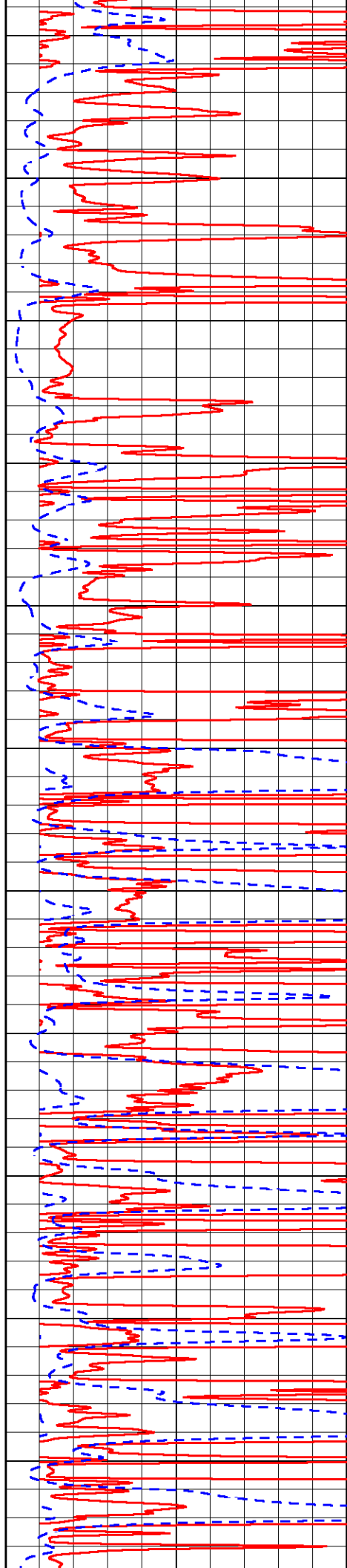
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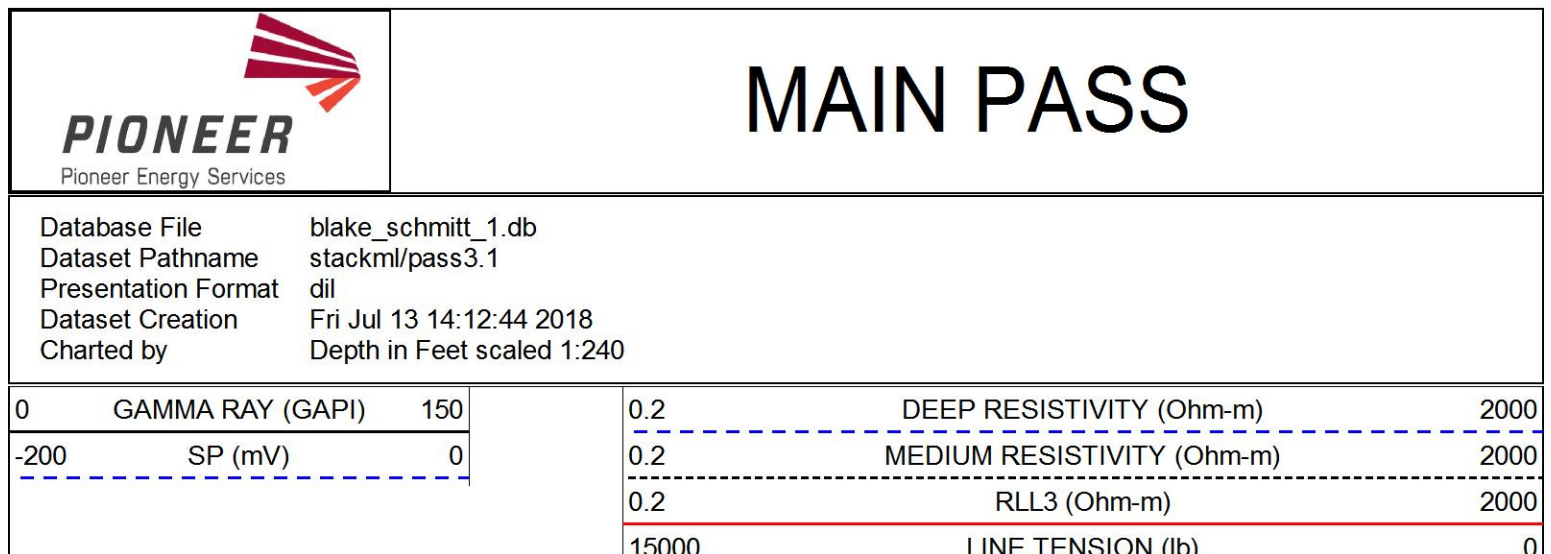
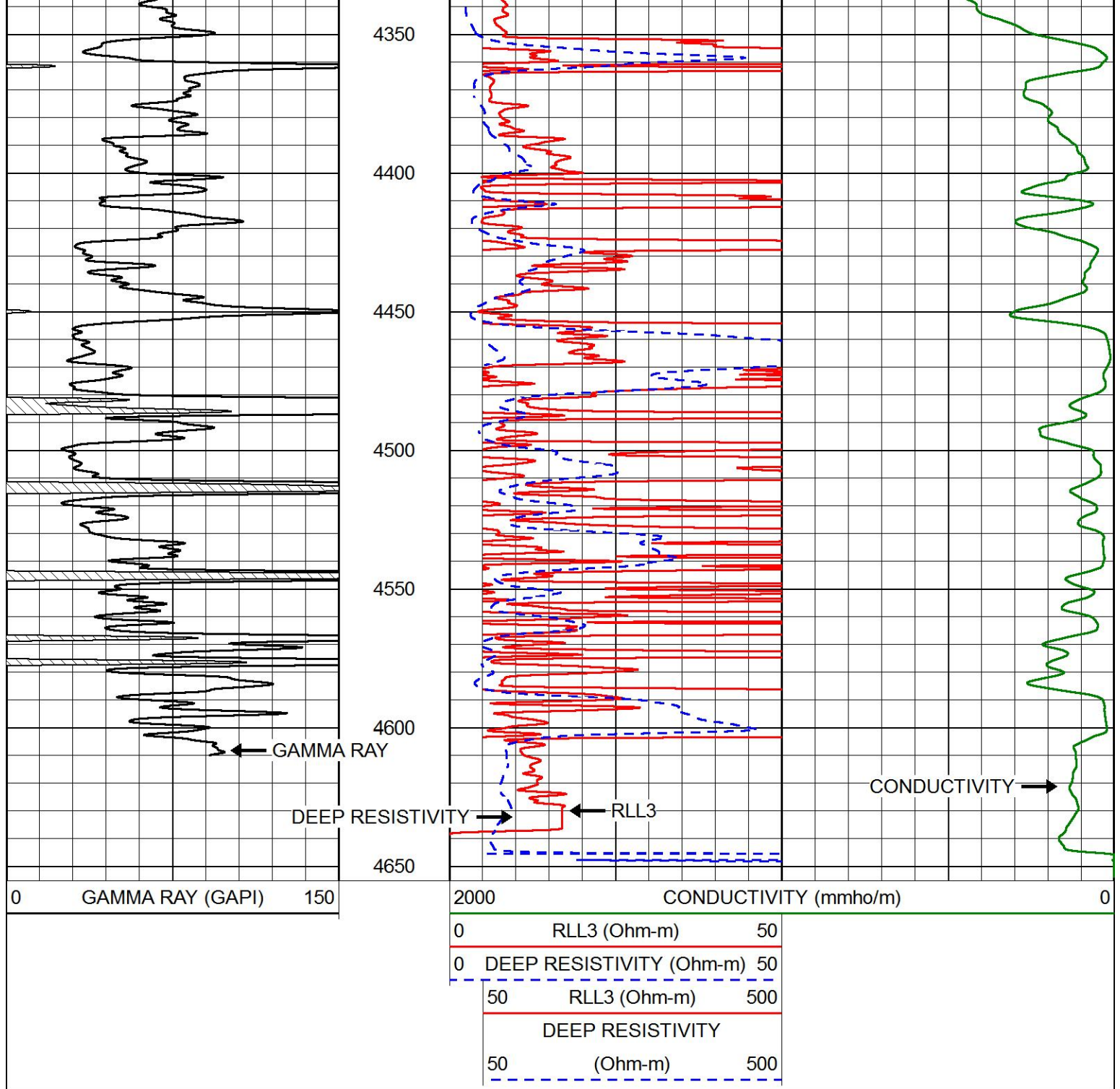
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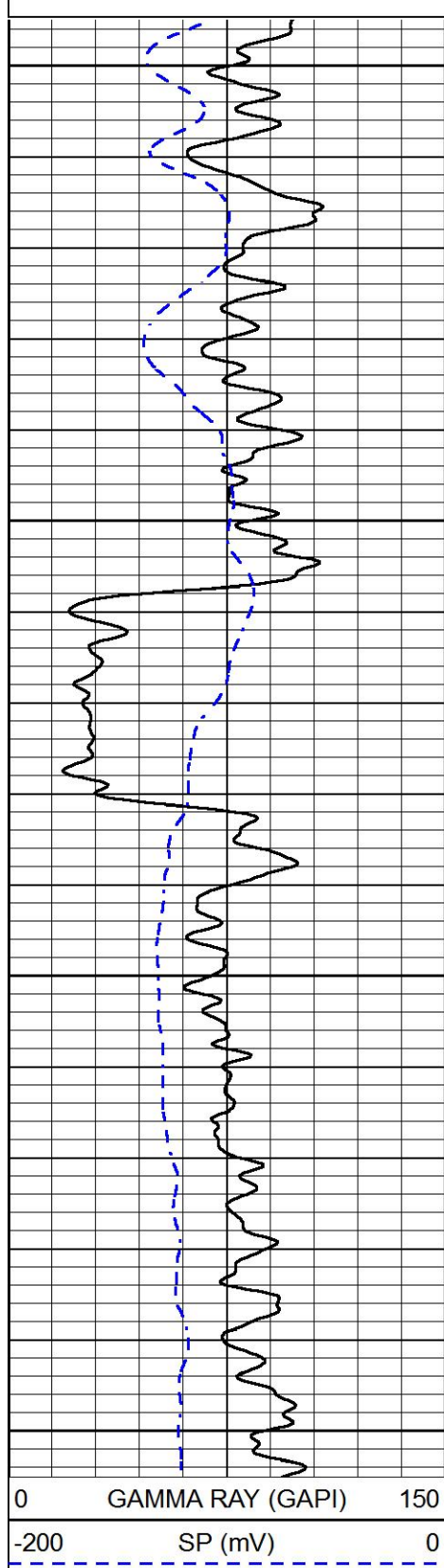
4200

4250

4300







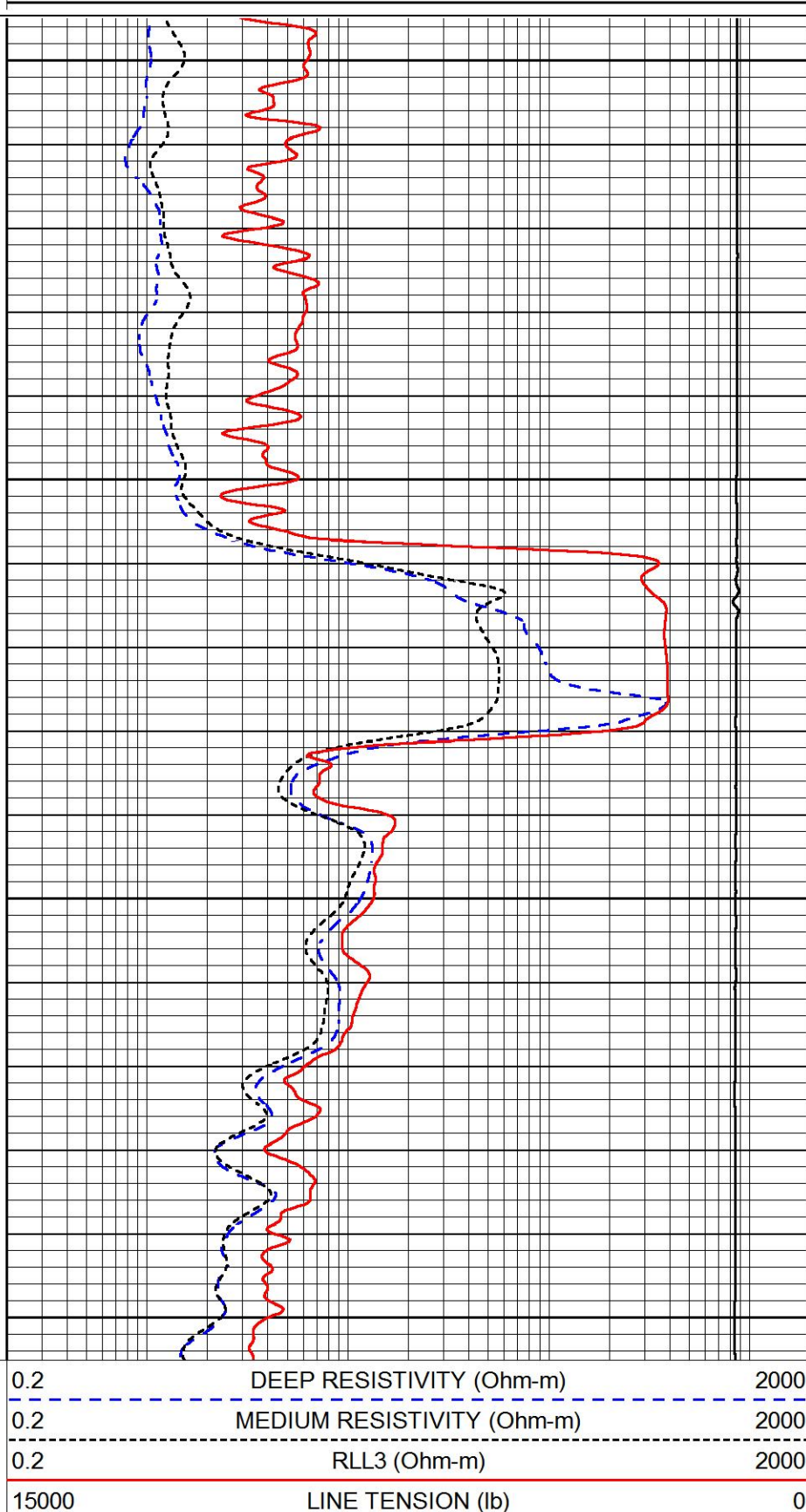
2500

2550

2600

2650

0 GAMMA RAY (GAPI) 150
-200 SP (mV) 0



0.2 DEEP RESISTIVITY (Ohm-m) 2000
0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000
15000 LINE TENSION (lb) 0

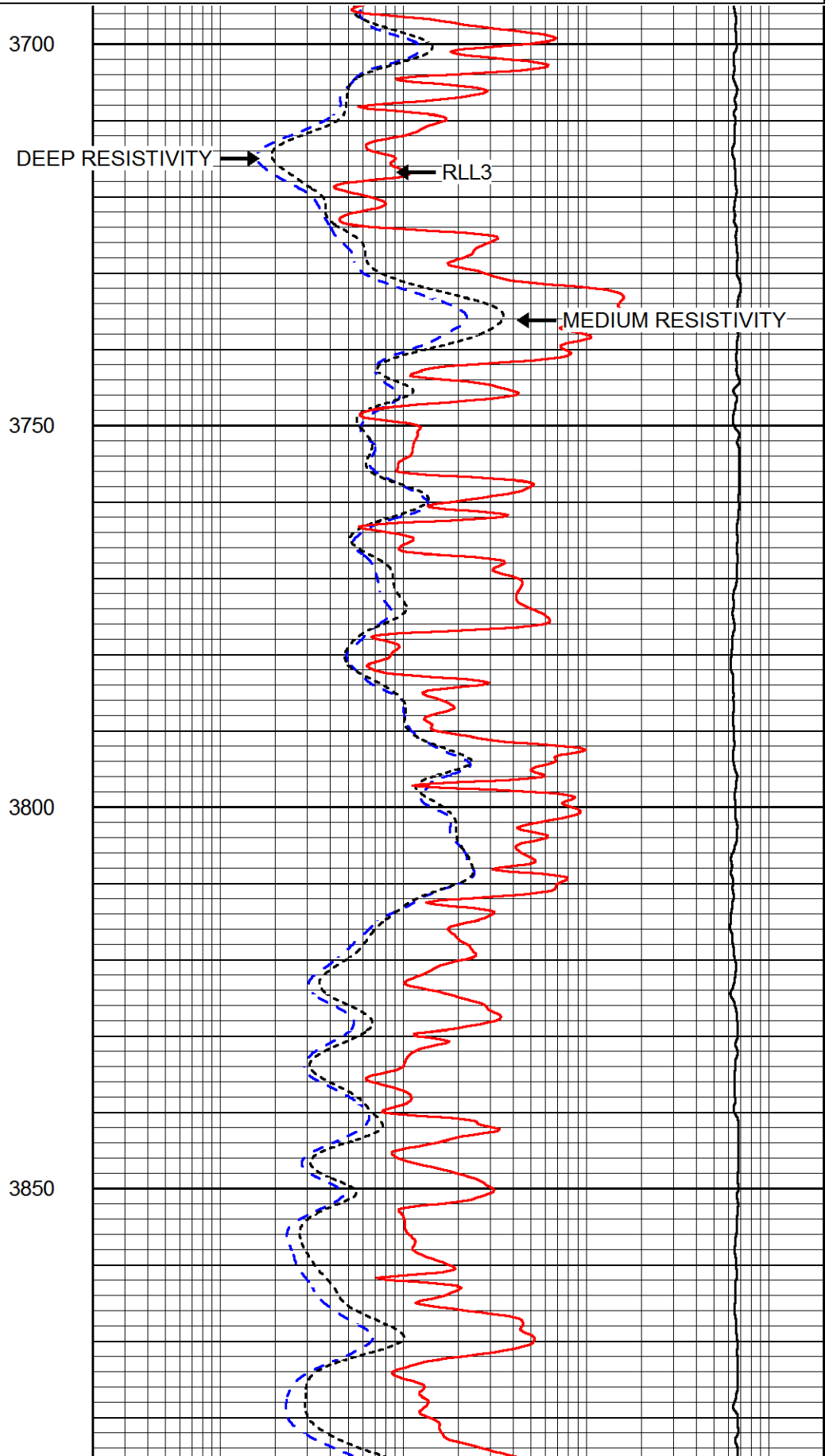
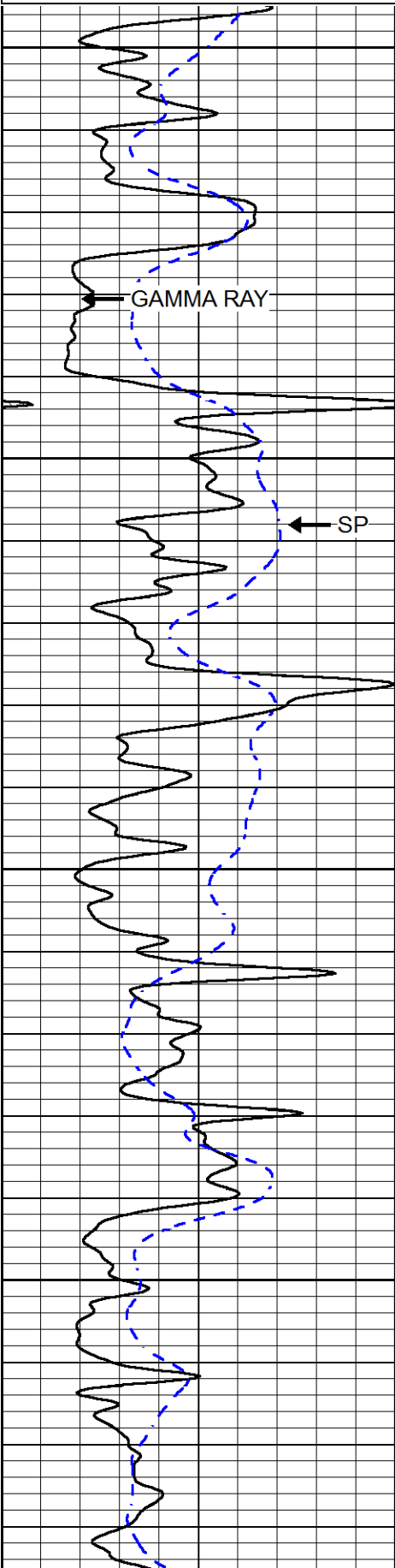


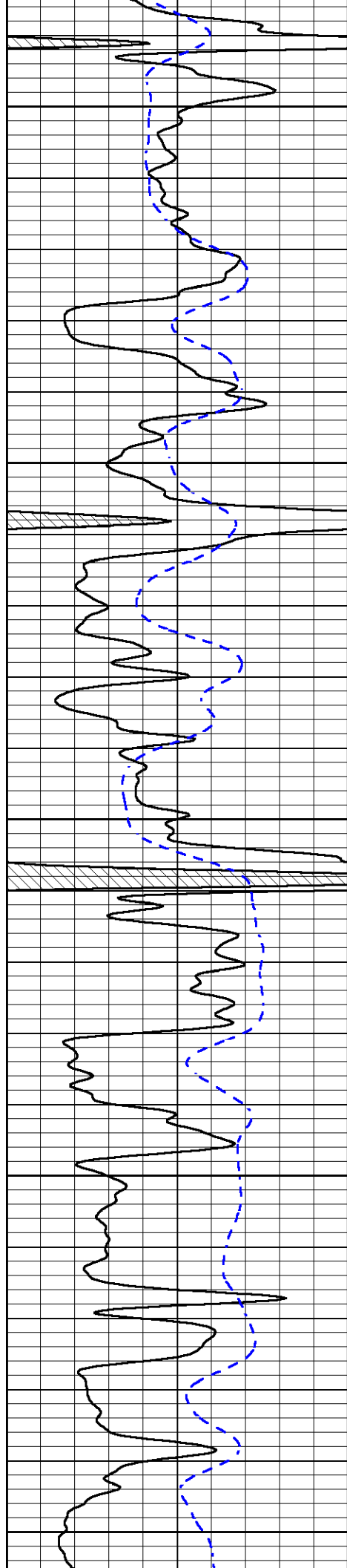
MAIN PASS

Database File blake_schmitt_1.db
Dataset Pathname stackml/pass3.1
Presentation Format dil

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0





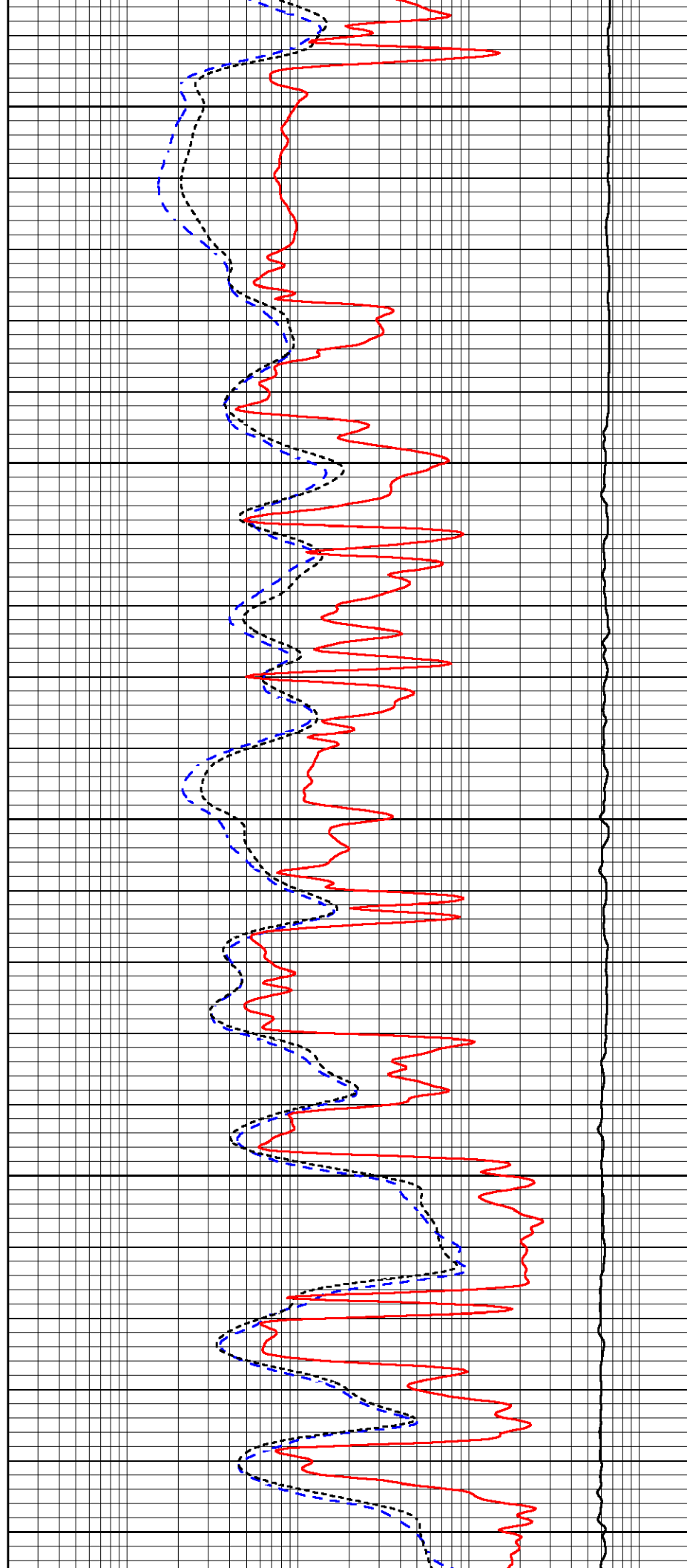
3900

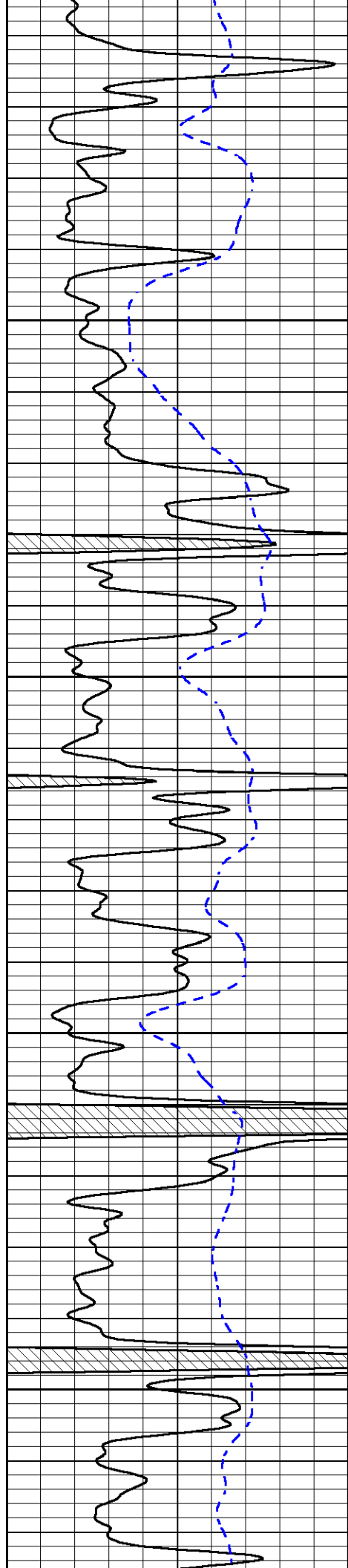
3950

4000

4050

4100



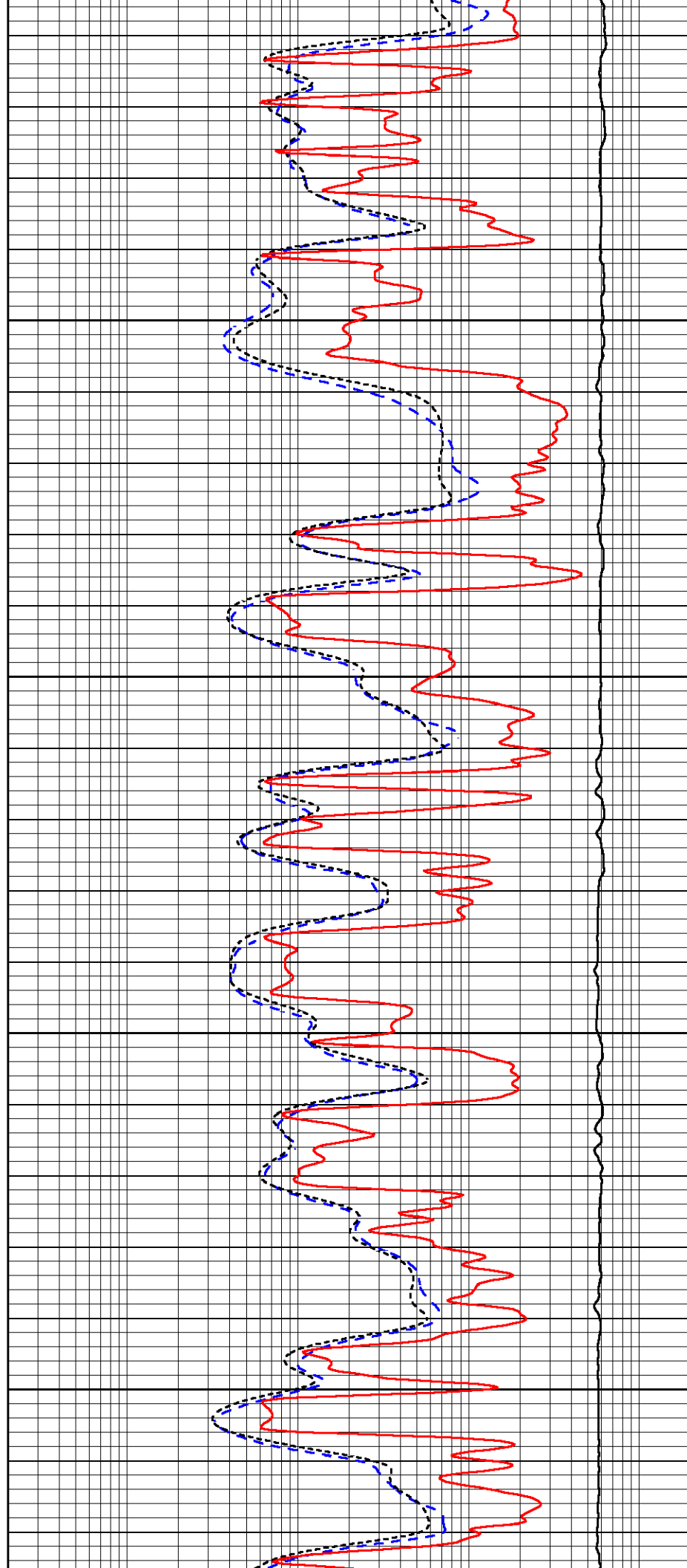


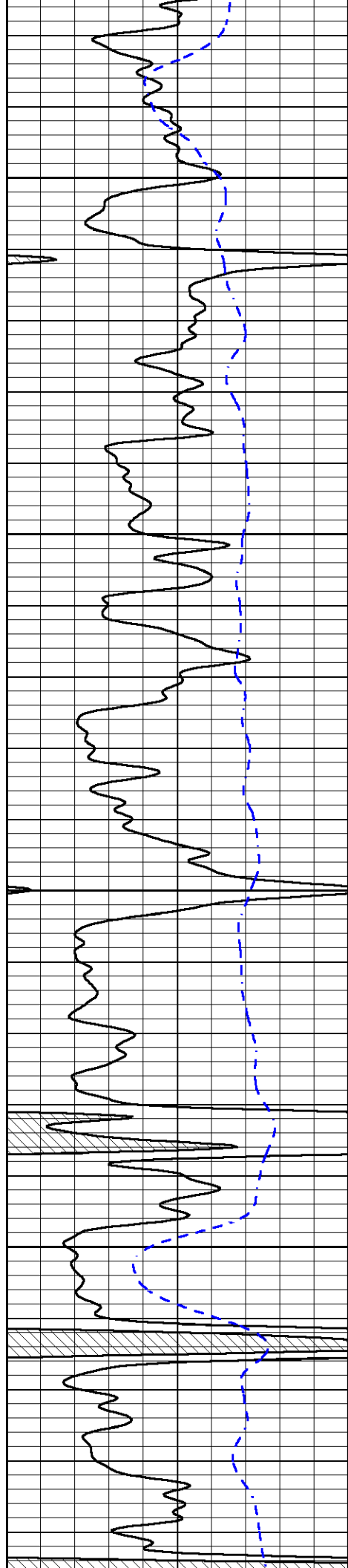
4150

4200

4250

4300



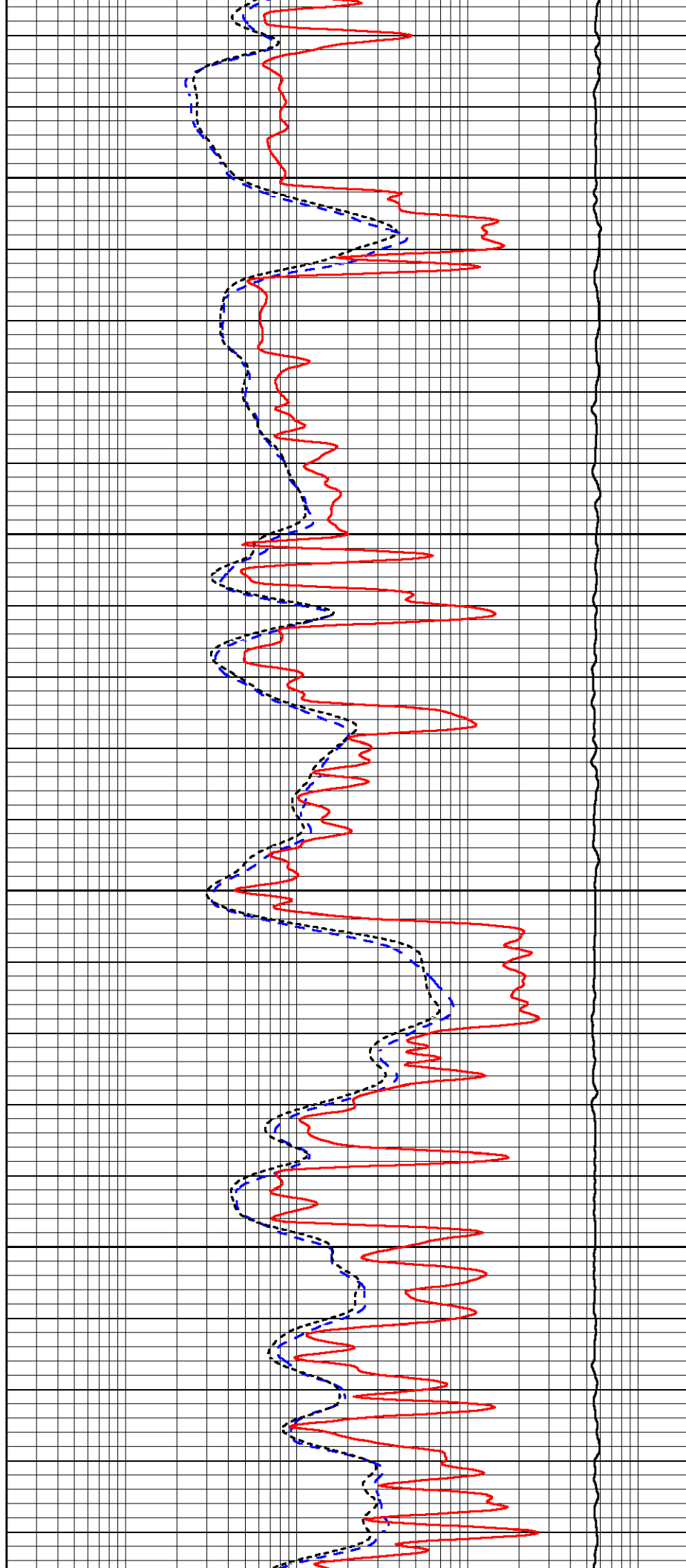


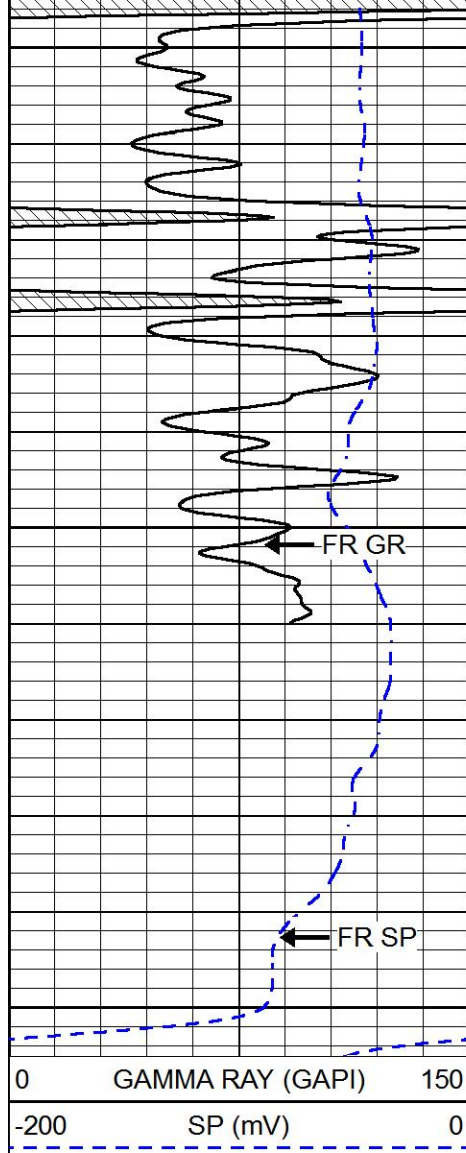
4350

4400

4450

4500

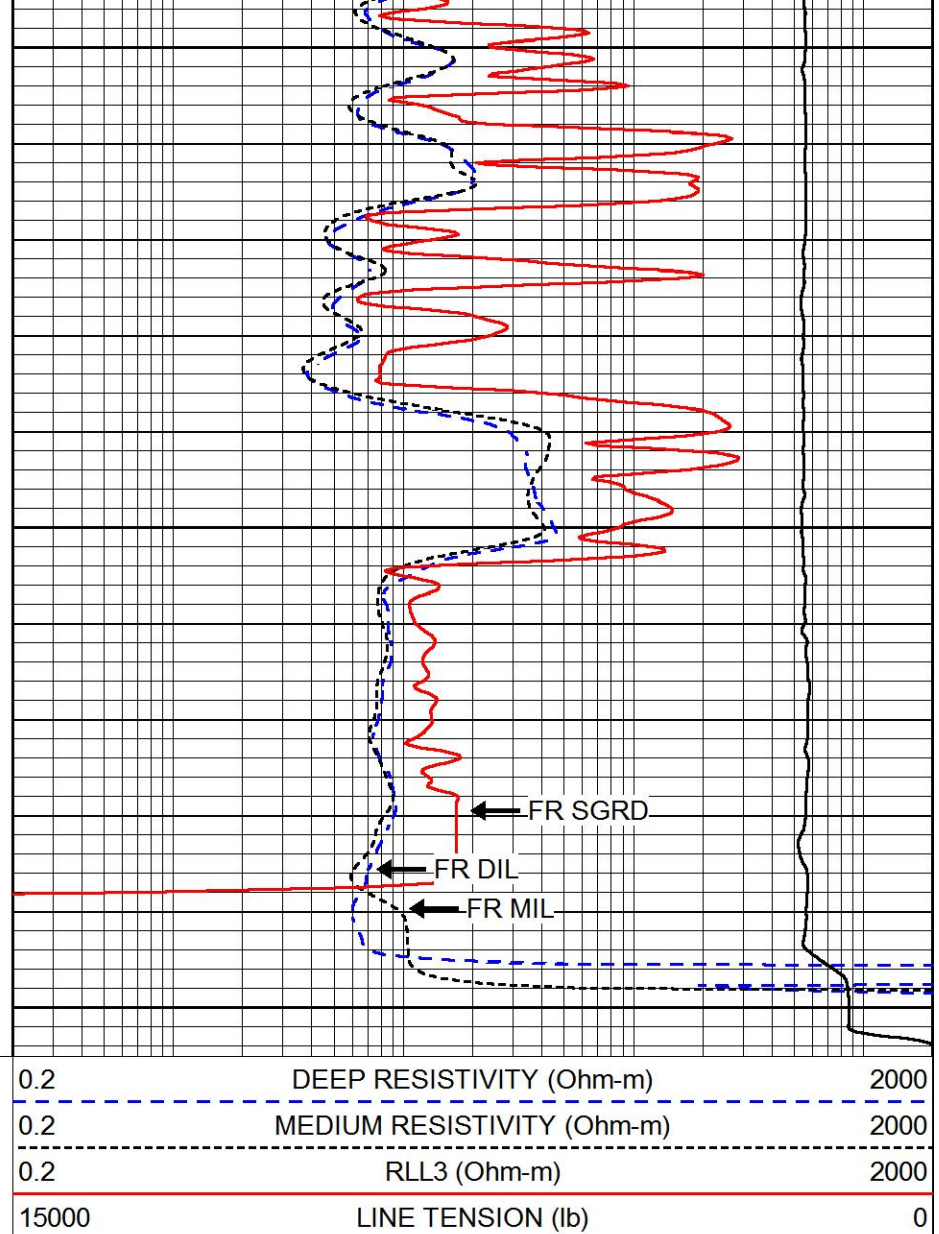




4550

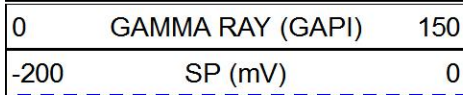
4600

4650

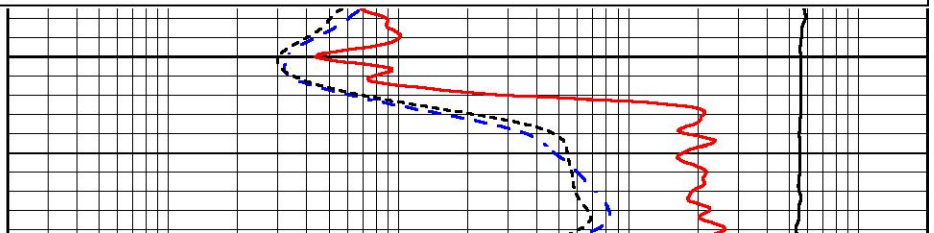
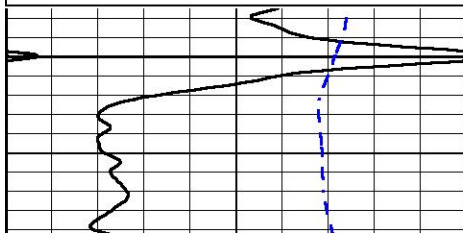
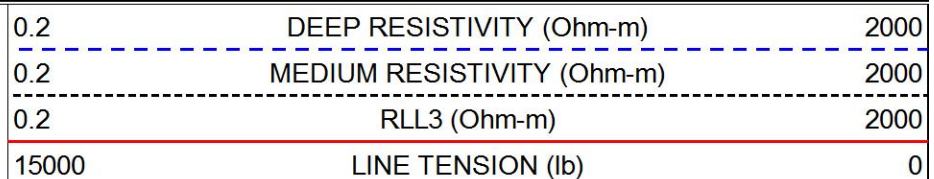


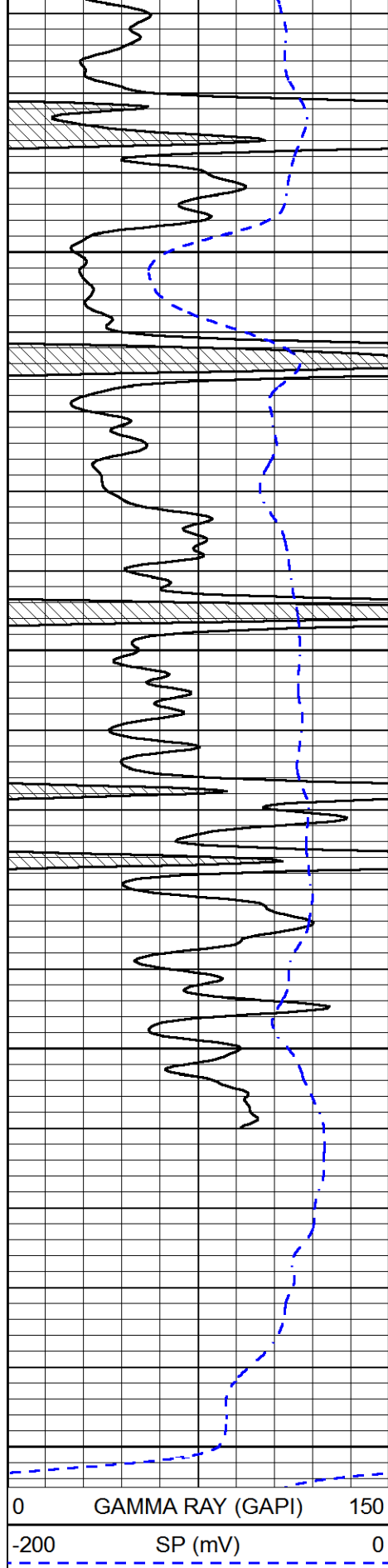
REPEAT SECTION

Database File blake_schmitt_1.db
 Dataset Pathname stackml/pass2.1
 Presentation Format dil
 Dataset Creation Fri Jul 13 14:12:57 2018
 Charted by Depth in Feet scaled 1:240



4450





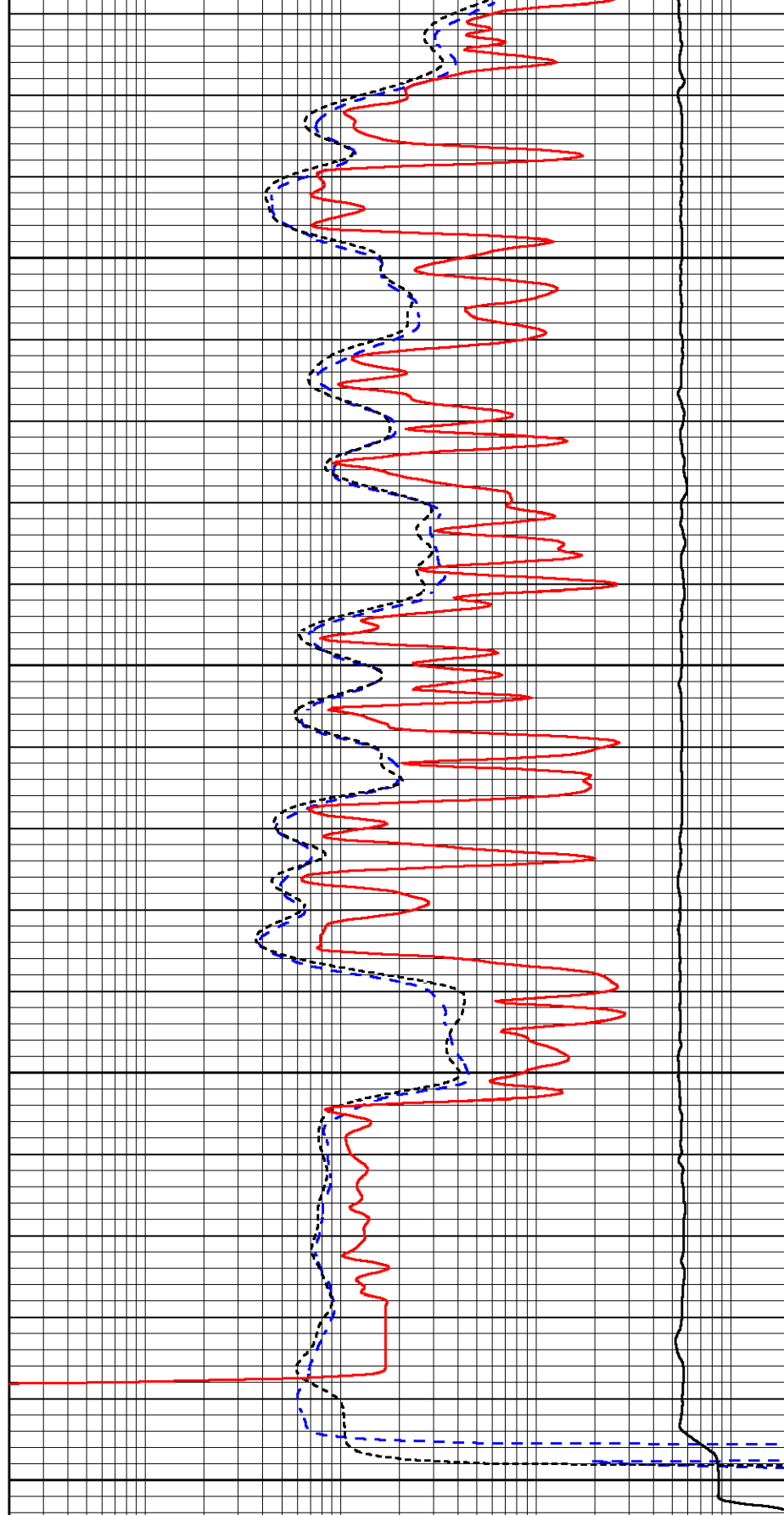
4500

4550

4600

4650

0 GAMMA RAY (GAPI) 150
-200 SP (mV) 0



0.2 DEEP RESISTIVITY (Ohm-m) 2000
0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000
15000 LINE TENSION (lb) 0

Calibration Report

Dual Induction Calibration Report

Serial-Model: 1987-M&W
Calibration Performed: Tue Apr 11 17:07:38 2017

		Readings		References		Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-36.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

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	27500.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	31500.0000	-1.0000
Caliper	1.0001	1.1397	6.5000	18.5000	in	86.0000	-82.7000

Compensated Density Calibration Report

Serial-Model: 979-229-M&W
Source / Verifier: 21170B /
Master Calibration Performed: Tue Jun 26 07:59:32 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	7726.98	9910.47	cps
Aluminum	2.680	g/cc	1442.93	6391.03	cps
Spine Angle = 75.35			Density/Spine Ratio = 0.533		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	16.00	in	1.03		

Compensated Neutron Calibration Report

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	BLAKE EXPLORATION, LLC
Well	SCHMITT NO.1
Field	OAKLEY
County	LOGAN
State	KANSAS