



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company BRITO OIL COMPANY, INC.

Well WERTH #1-35

Field WILDCAT

County GOVE State KANSAS

Location: API #: 15-063-22326-00-00

920' FNL & 990' FEL

SEC 35 TWP 12S RGE 26W

Permanent Datum GROUND LEVEL Elevation 2579'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
MEL/BHCS
Elevation
K.B. 2589'
D.F. N/A
G.L. 2579'

Date 3/9/2018

Run Number ONE

Depth Driller 4570'

Depth Logger 4568'

Bottom Logged Interval 4567'

Top Log Interval 200'

Casing Driller 8.625" @ 224'

Casing Logger 222'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 3400

Density / Viscosity 9.3 54

pH / Fluid Loss 11.0 6.4

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.60 @ 50

Rmt @ Meas. Temp 0.45 @ 50

Rmc @ Meas. Temp 0.81 @ 50

Source of Rmt / Rmc CHARTS

Rm @ BHT 0.25 @ 122

Operating Rig Time 5 HOURS

Max Rec. Temp. F 122

Equipment Number 91

Location HAYS

Recorded By D. SCHMIDT

Witnessed By ROBERT HENDRIX

<<< Fold Here >>>

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.

COLLYER,
SOUTH TO K RD, 1 WEST, 1 SOUTH, 2 WEST,
SOUTHWEST INTO

Log Measured From: KELLY BUSHING 10 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

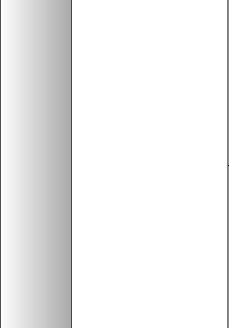
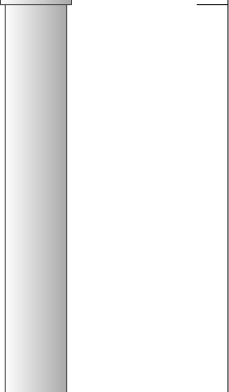
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: ROBERT HENDRIX
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	20	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	50	0	5.5	0	4568	122	7.875

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 (227-771)	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					

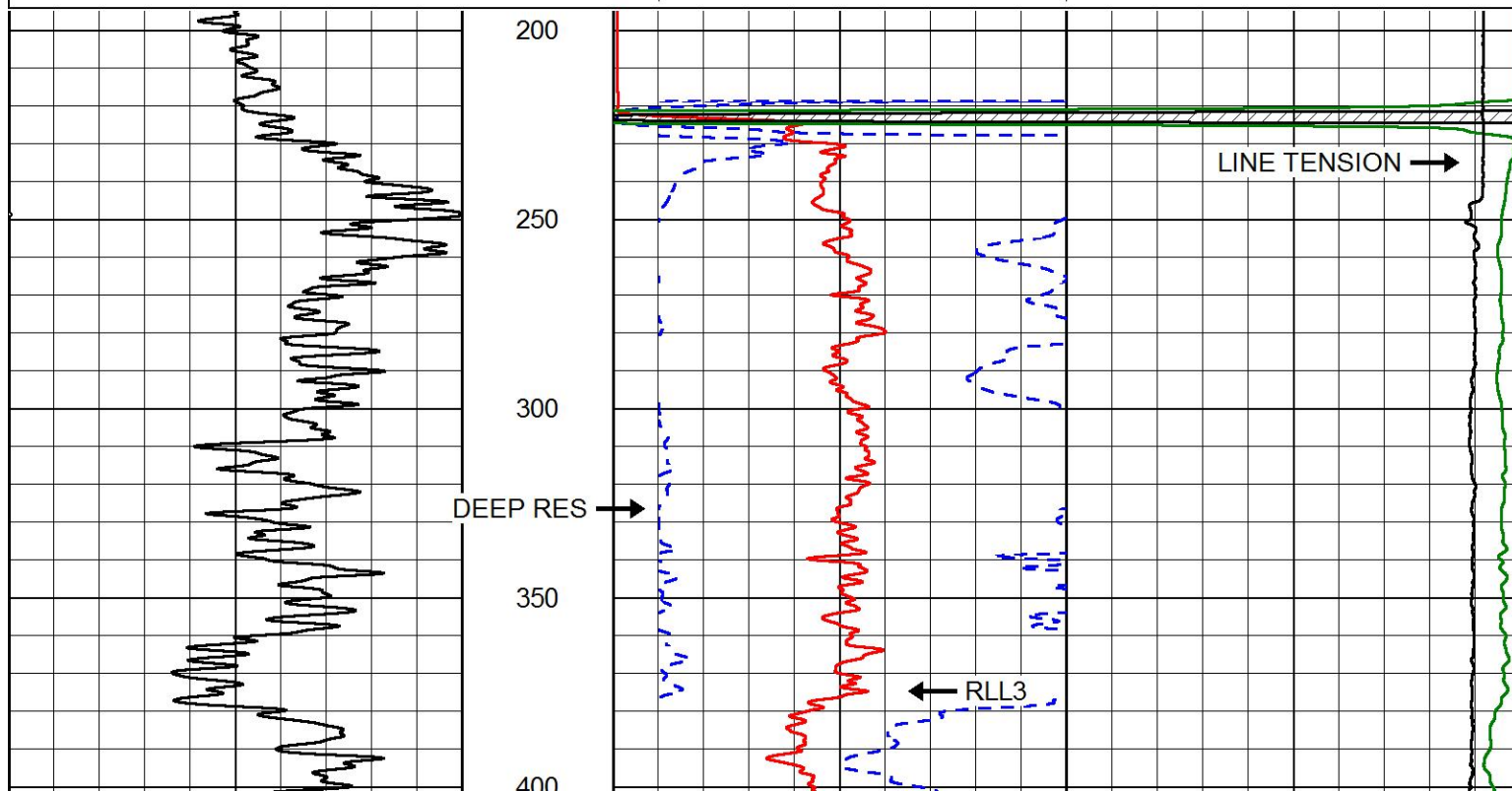
			DIL-PSI HIGH TEMP (967 (HT))	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: brito_werth 1-35.db: field/well/STKML/pass4.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

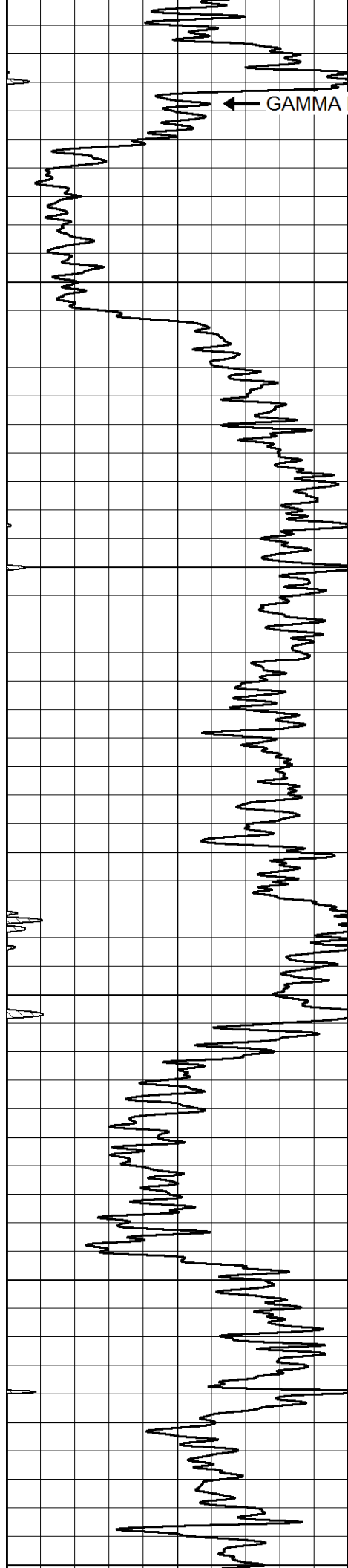


MAIN PASS

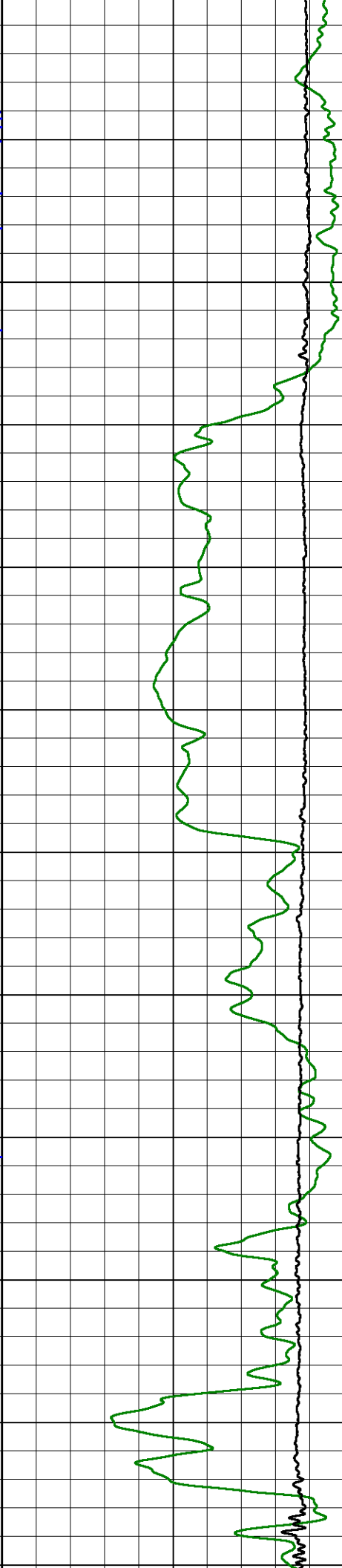
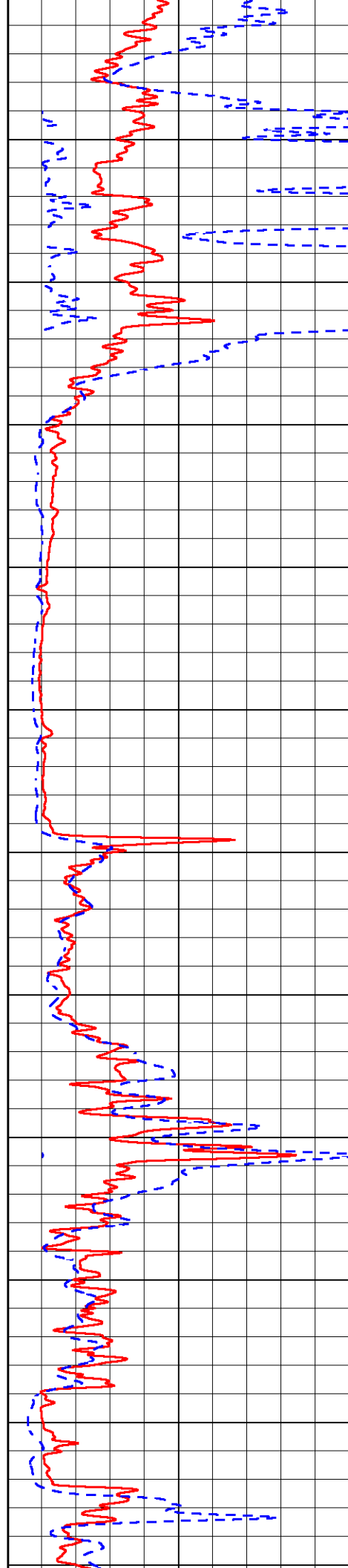
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Dataset Pathname	STKML/pass5.1
Presentation Format	dil2in
Dataset Creation	Sat Mar 10 00:04:42 2018
Charted by	Depth in Feet scaled 1:600

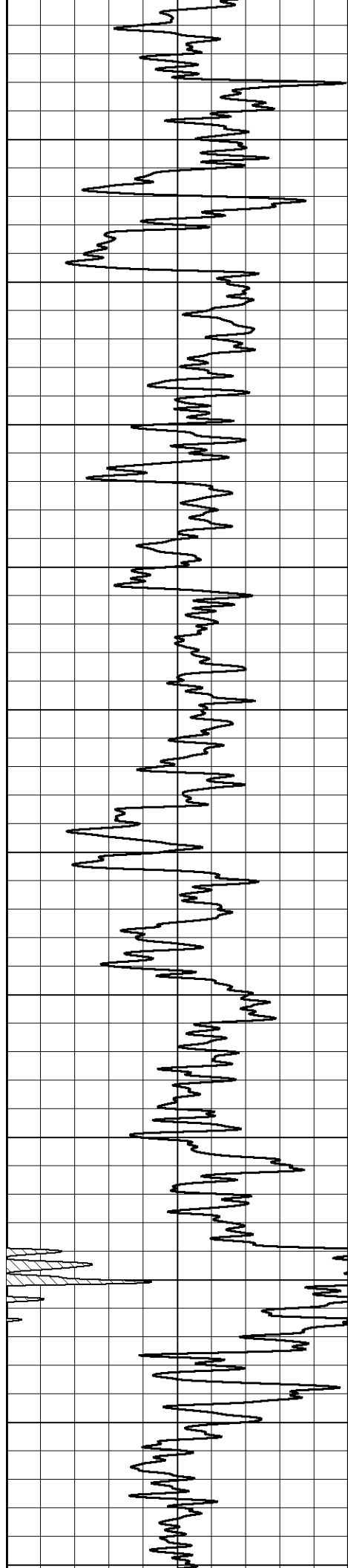
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			15000	Line Tension (lb)	0
			0	RLL3 (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			50	RLL3 (Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500



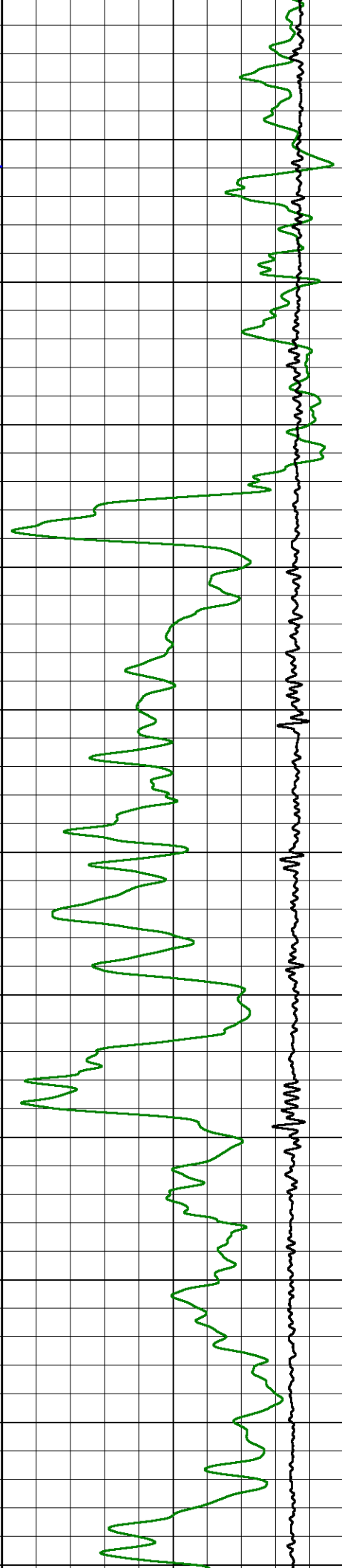
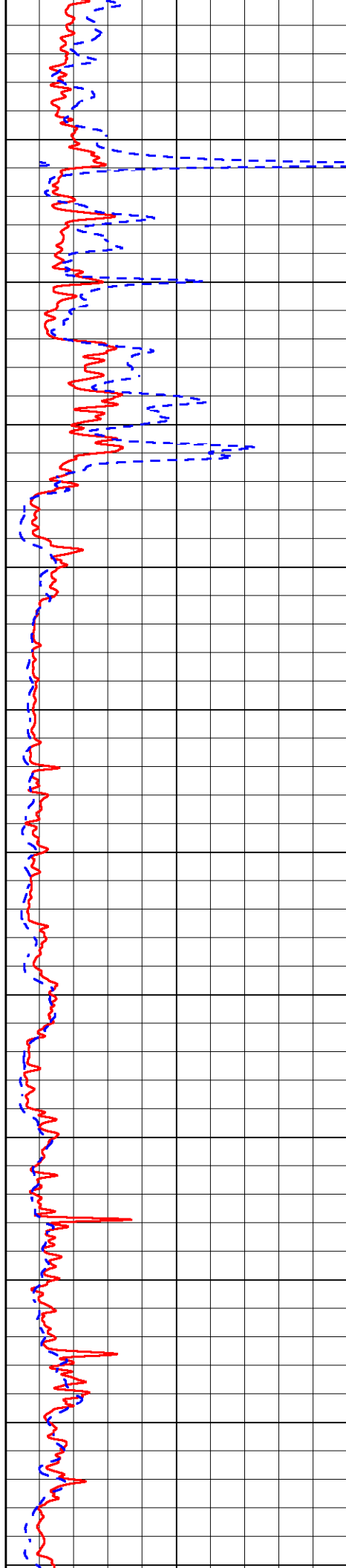


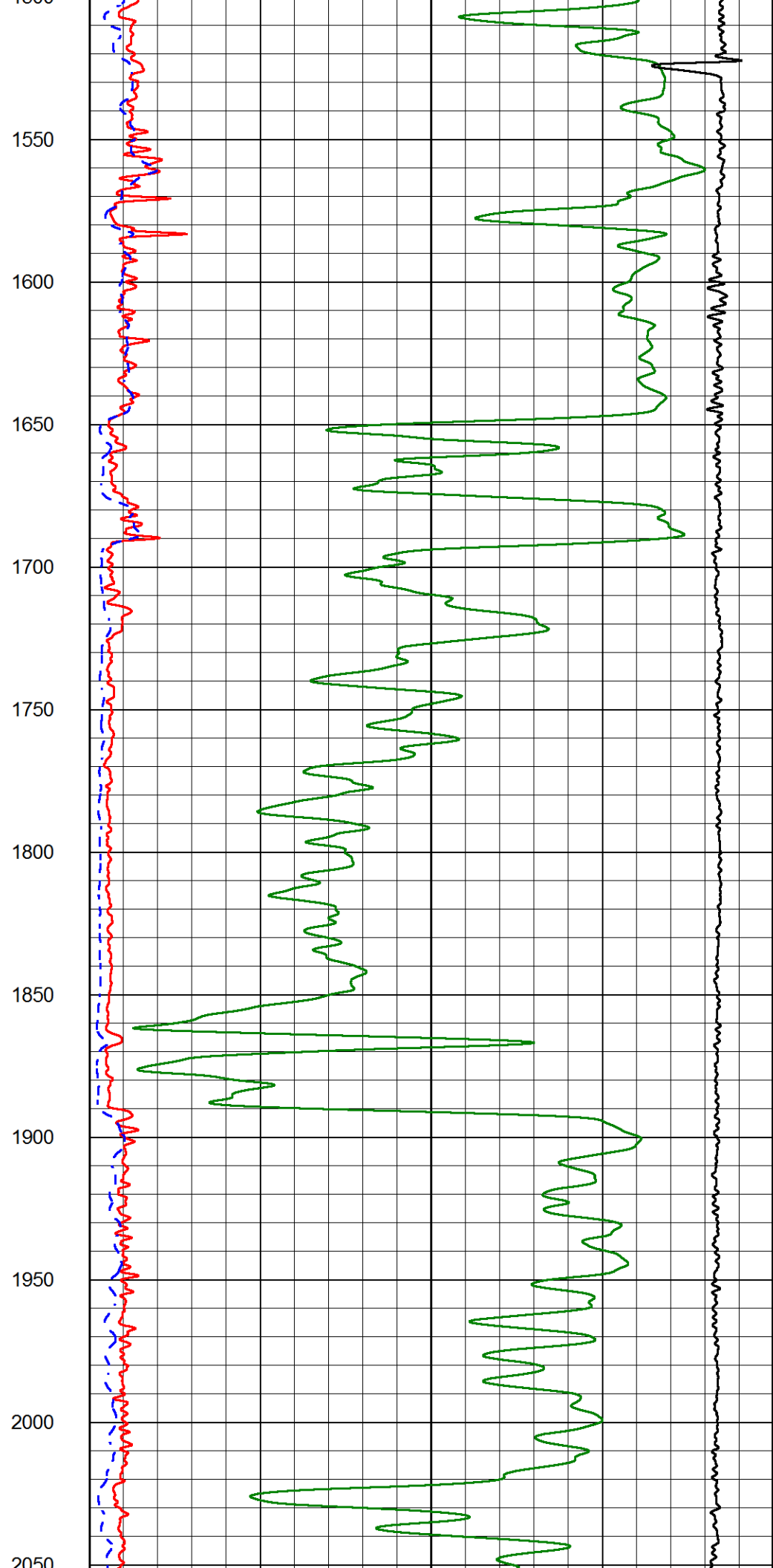
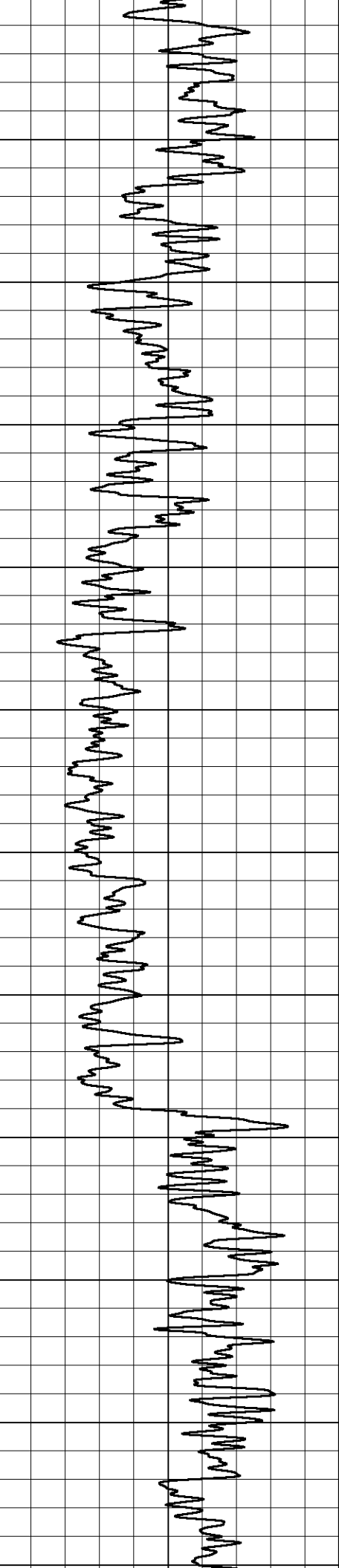
100
450
500
550
600
650
700
750
800
850
900
950

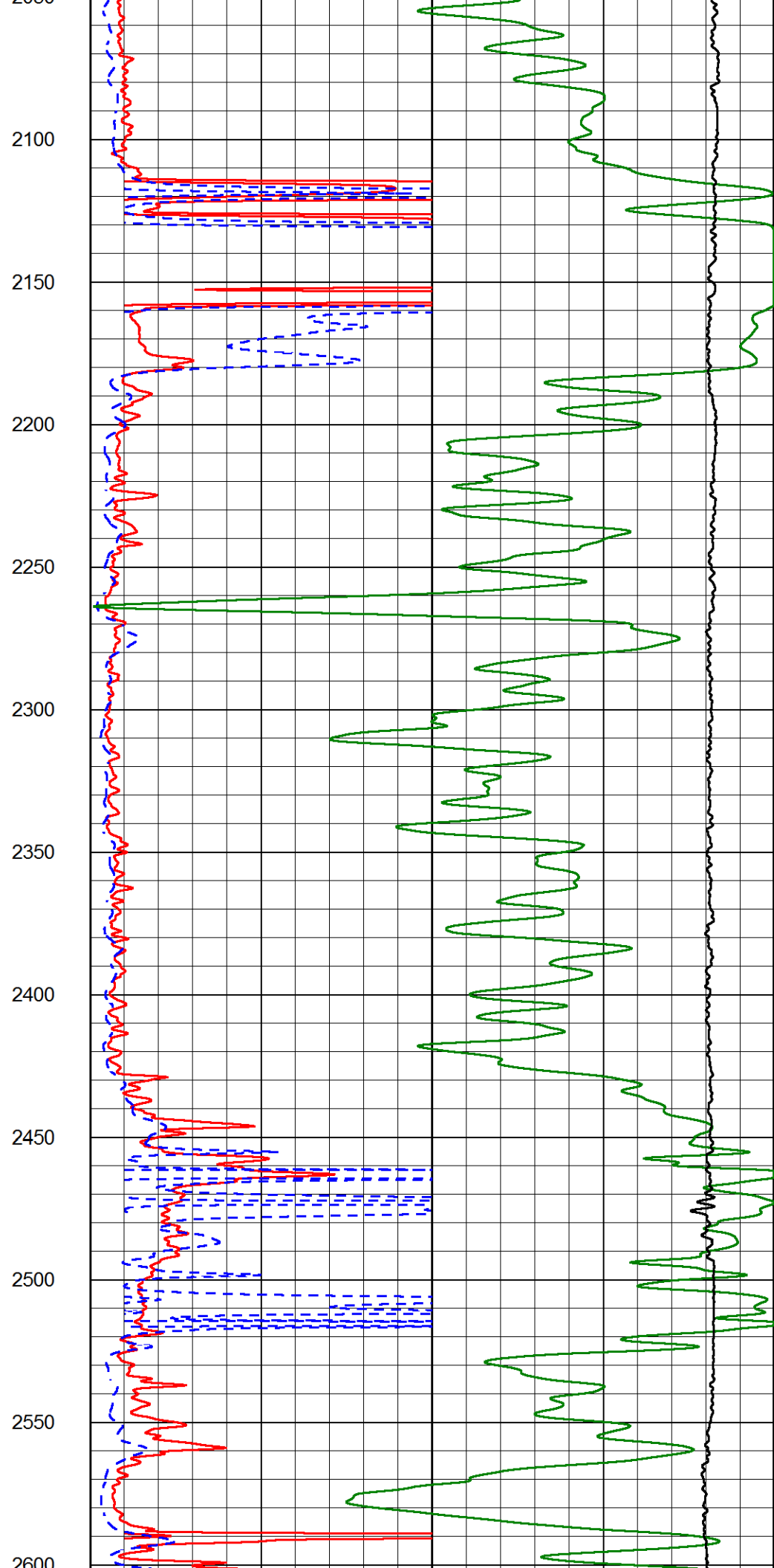
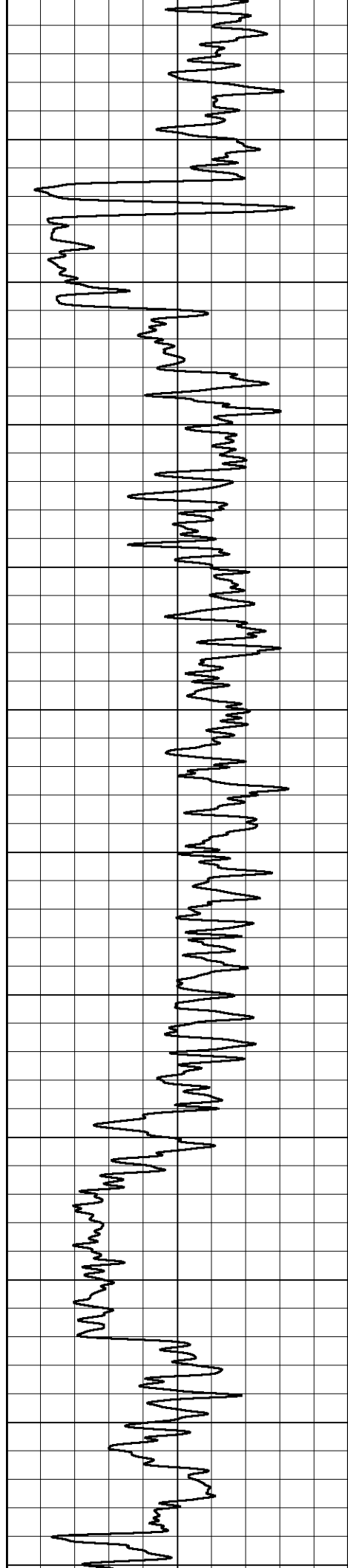


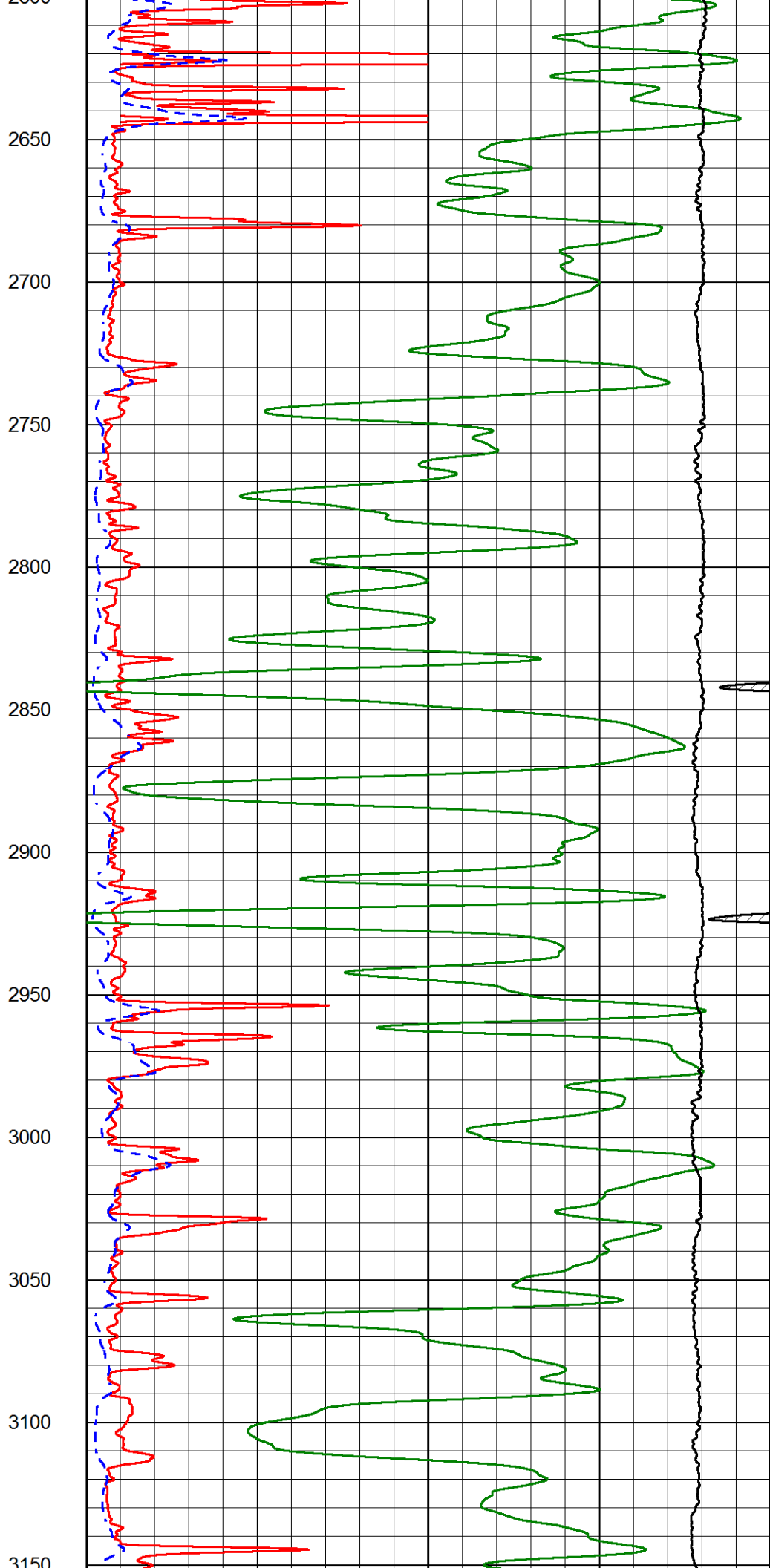
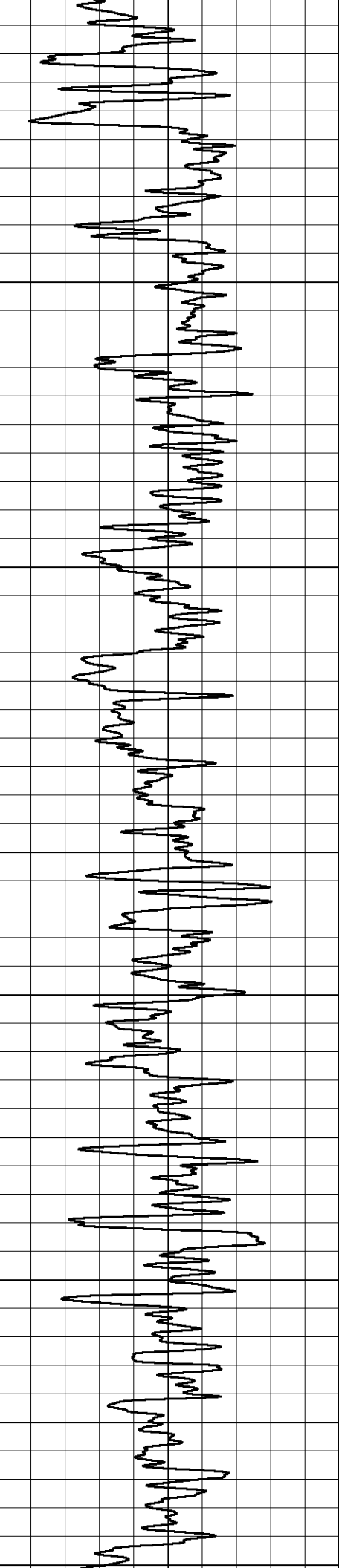


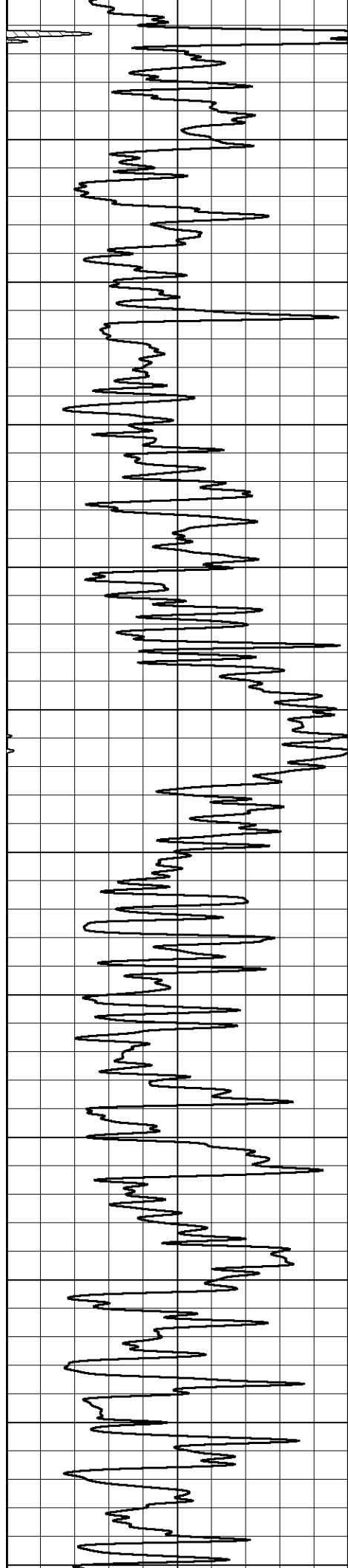
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1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500



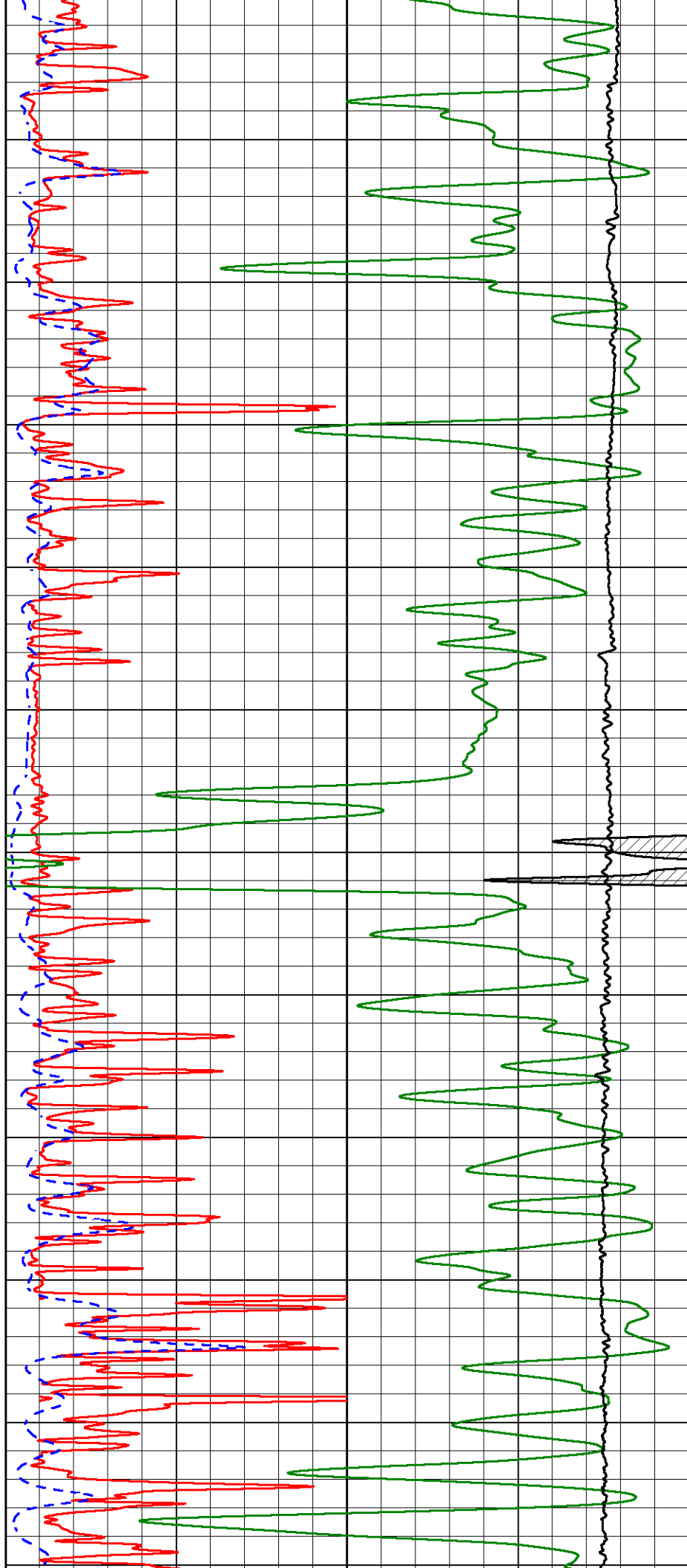


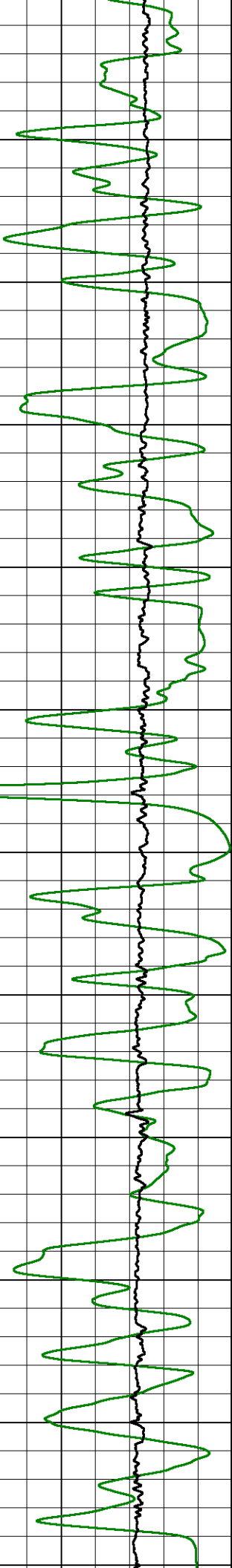
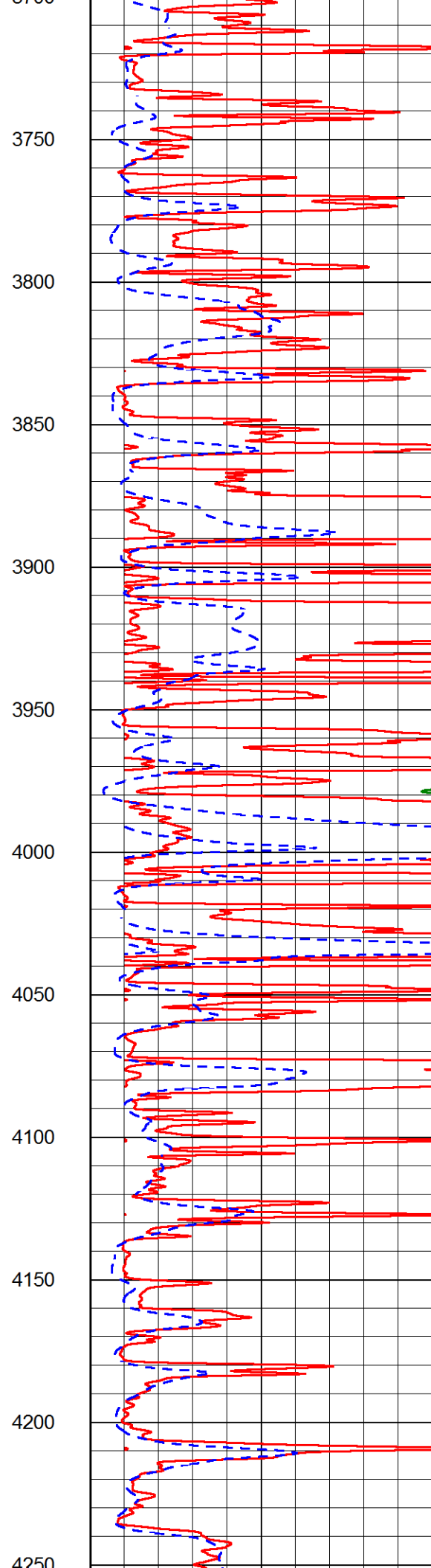
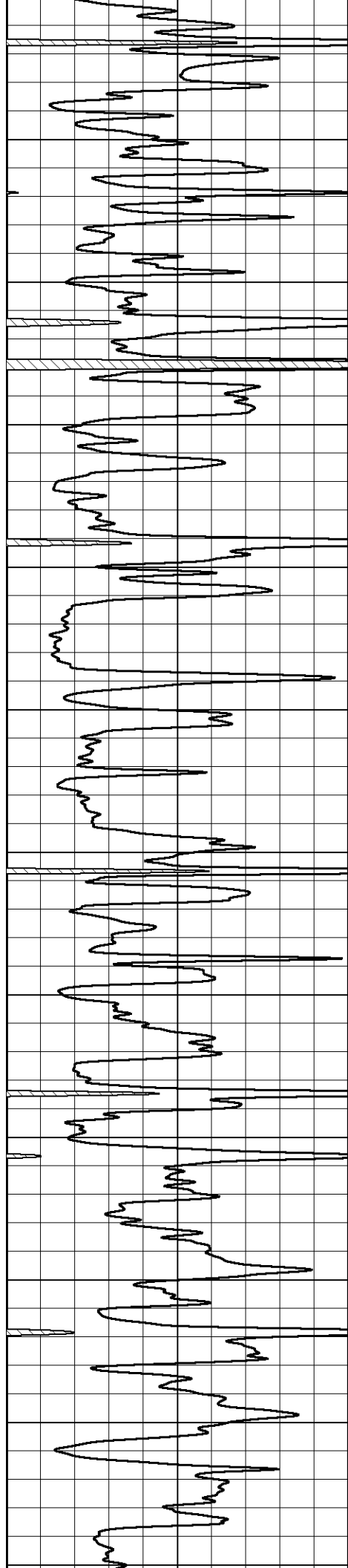


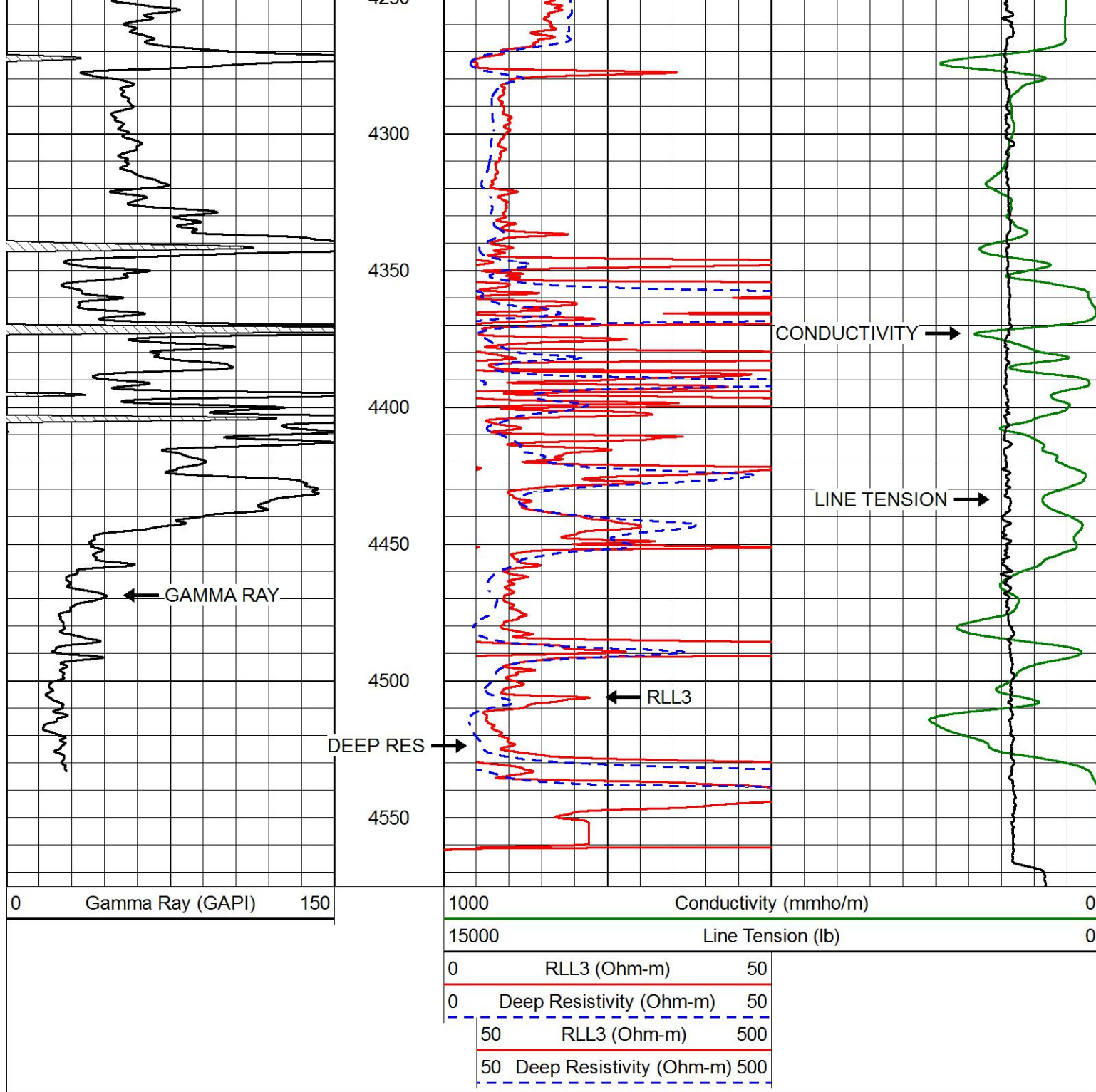




3100
3200
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700





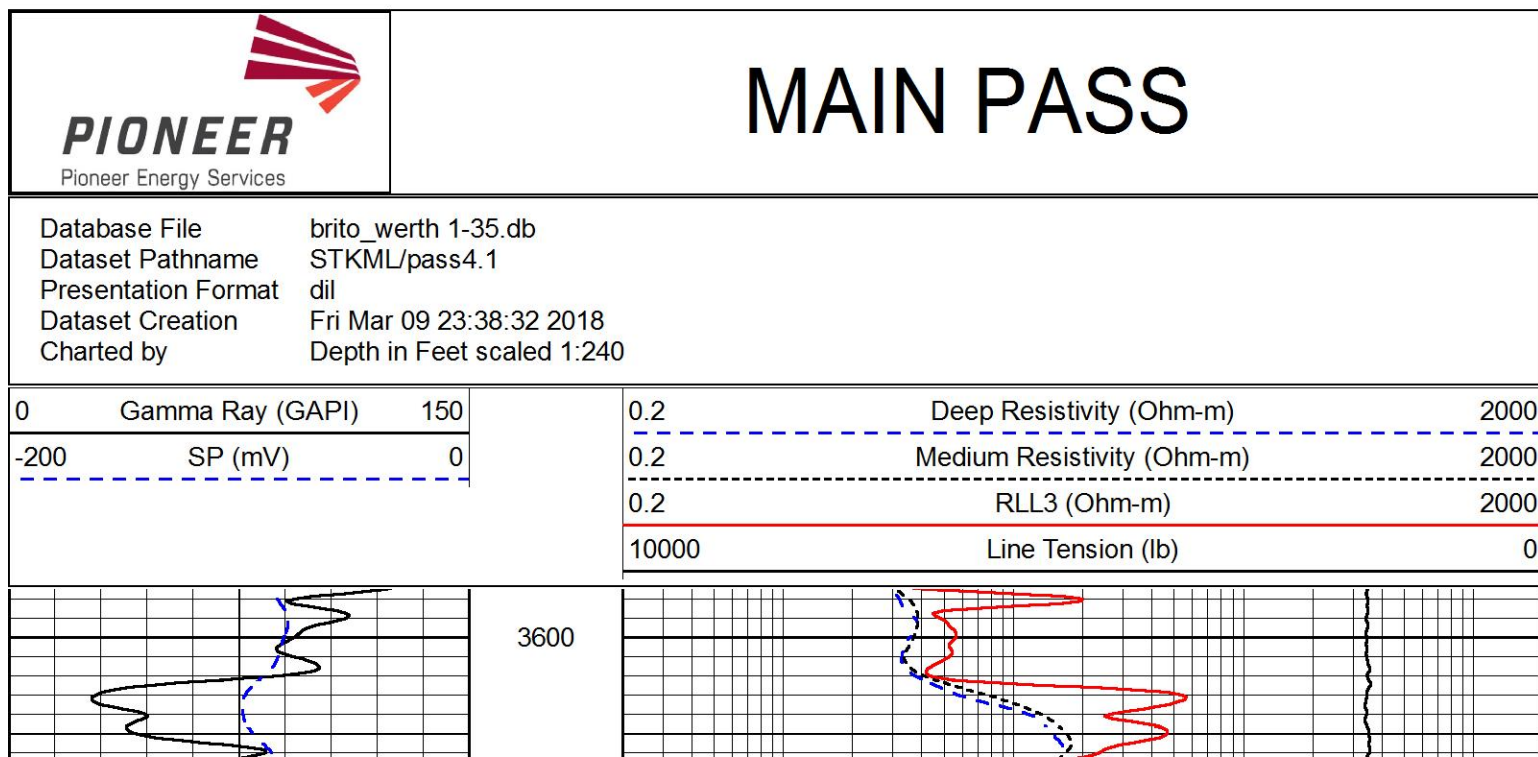
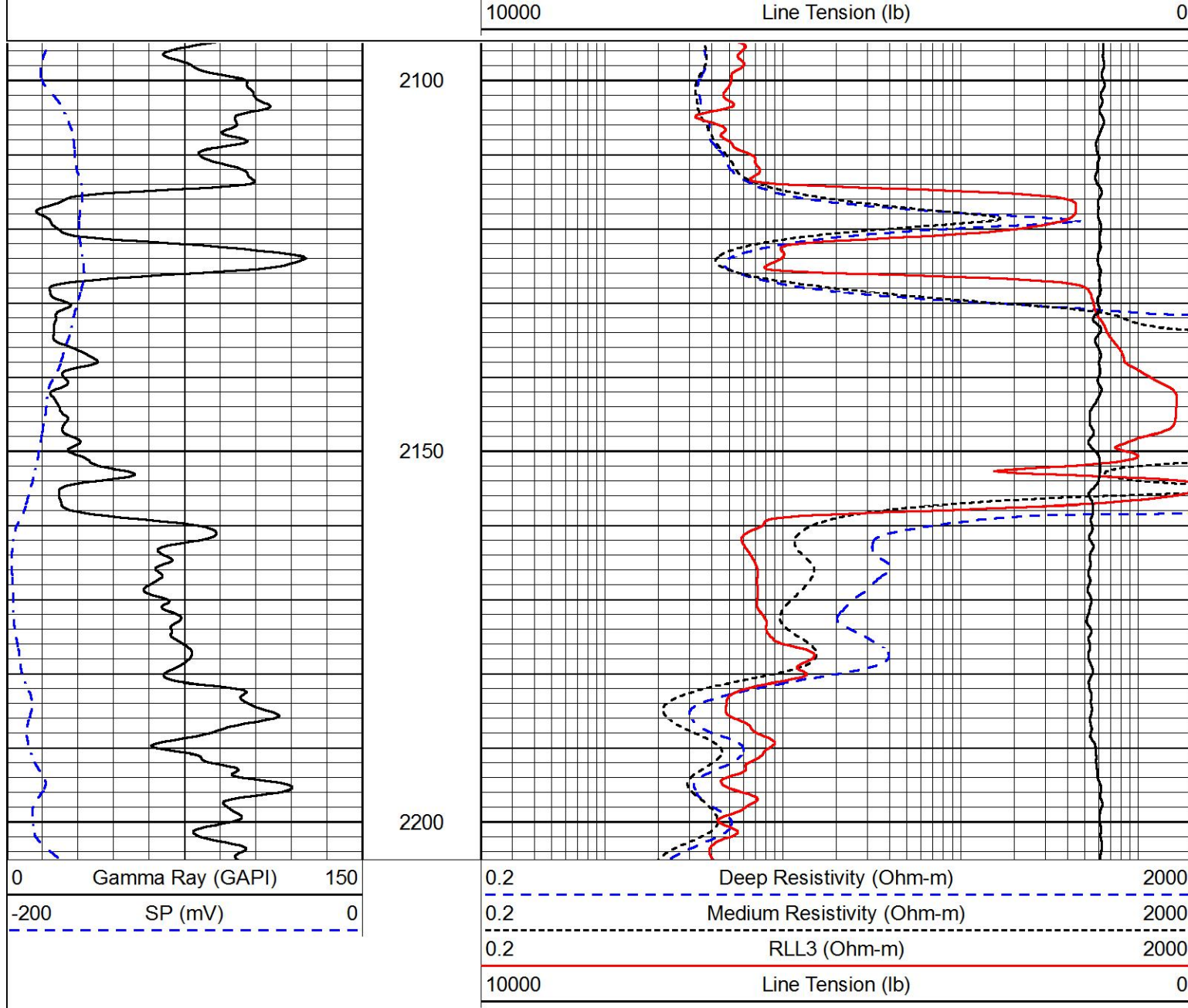


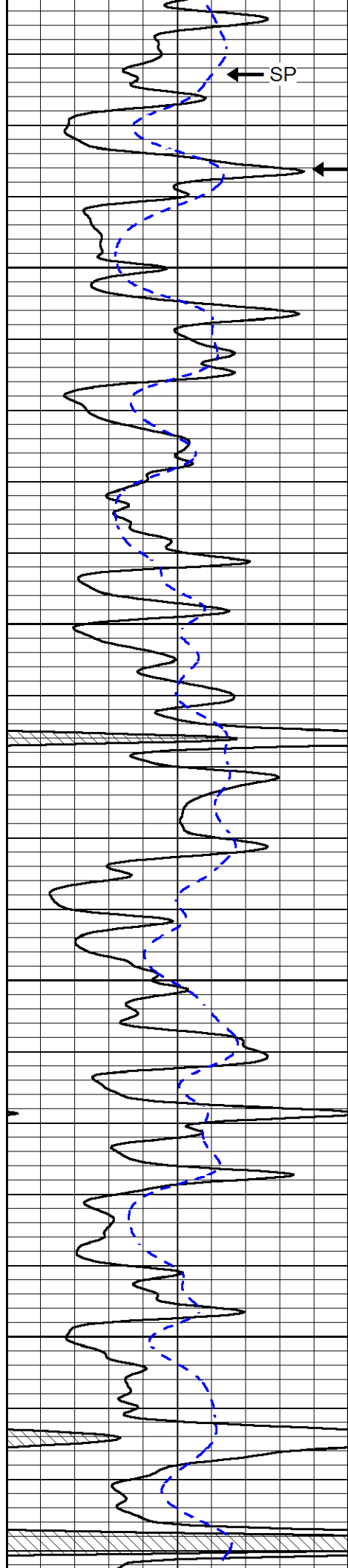
MAIN PASS

Database File brito_werth 1-35.db
 Dataset Pathname STKML/pass5.1
 Presentation Format dil
 Dataset Creation Sat Mar 10 00:04:42 2018
 Charted by Depth in Feet scaled 1:240

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





GAMMA RAY

SP

3650

3700

3750

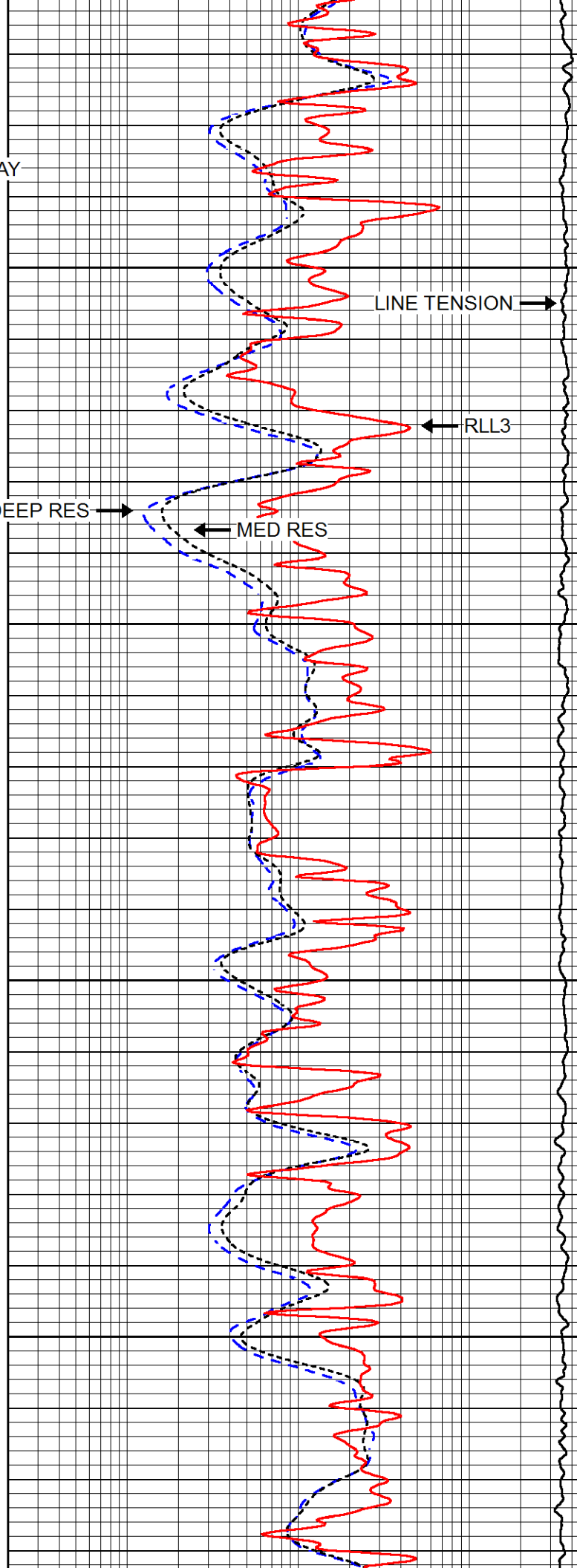
3800

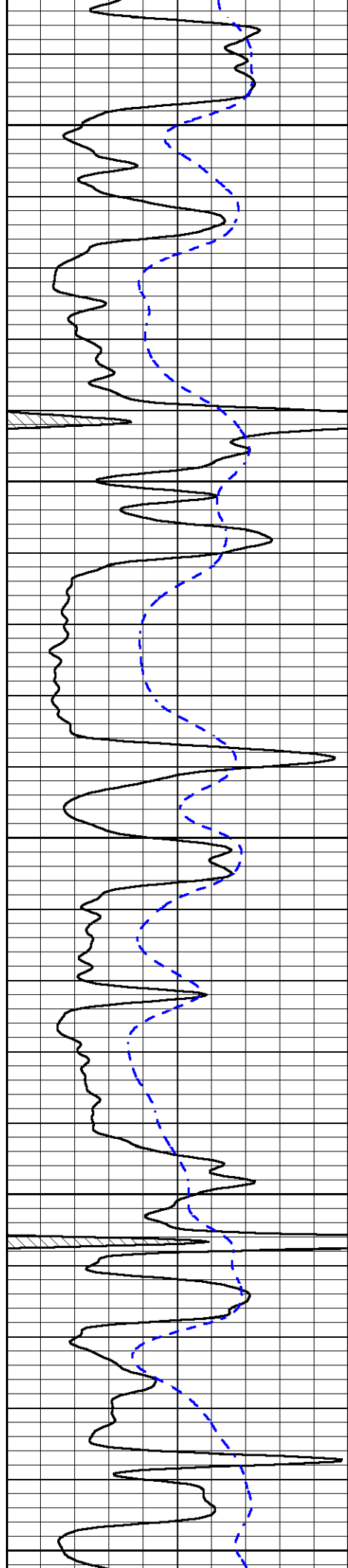
DEEP RES

MED RES

LINE TENSION

RLL3





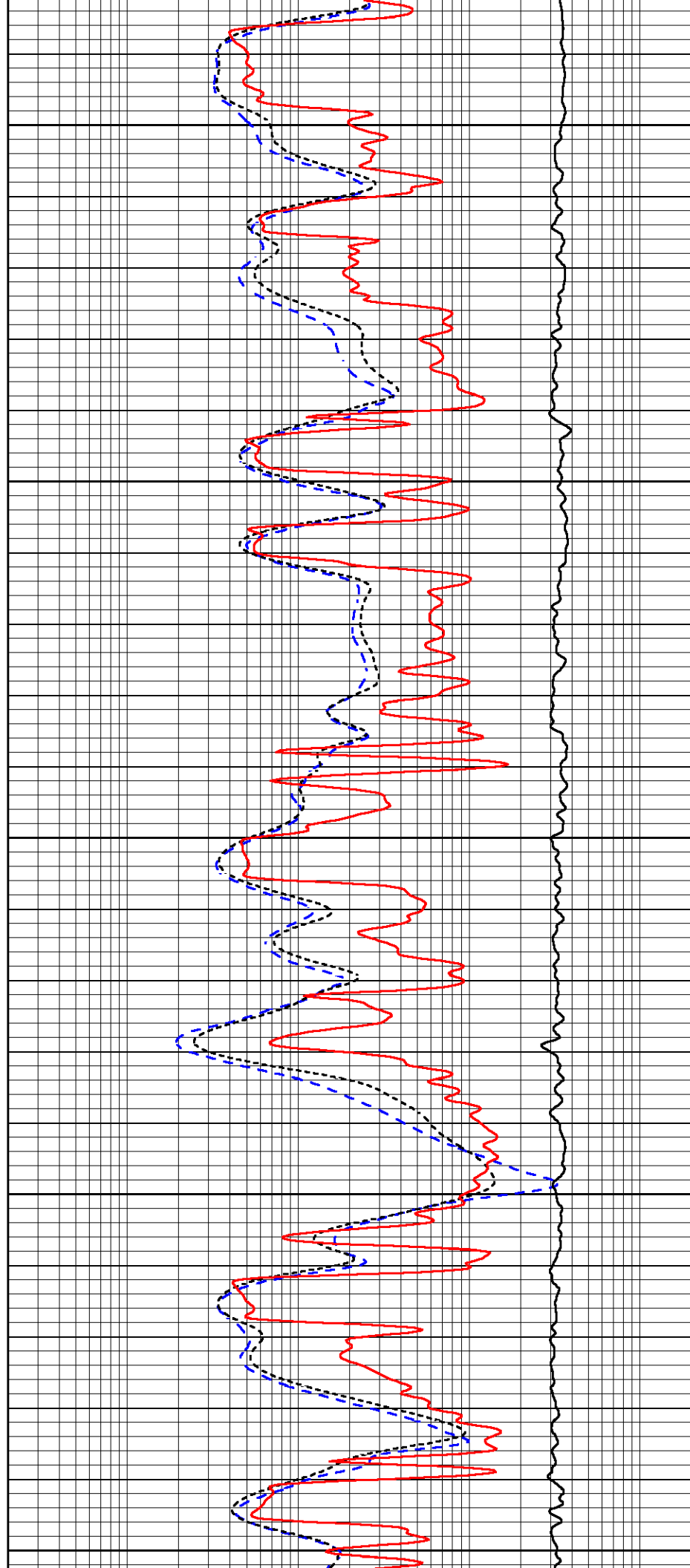
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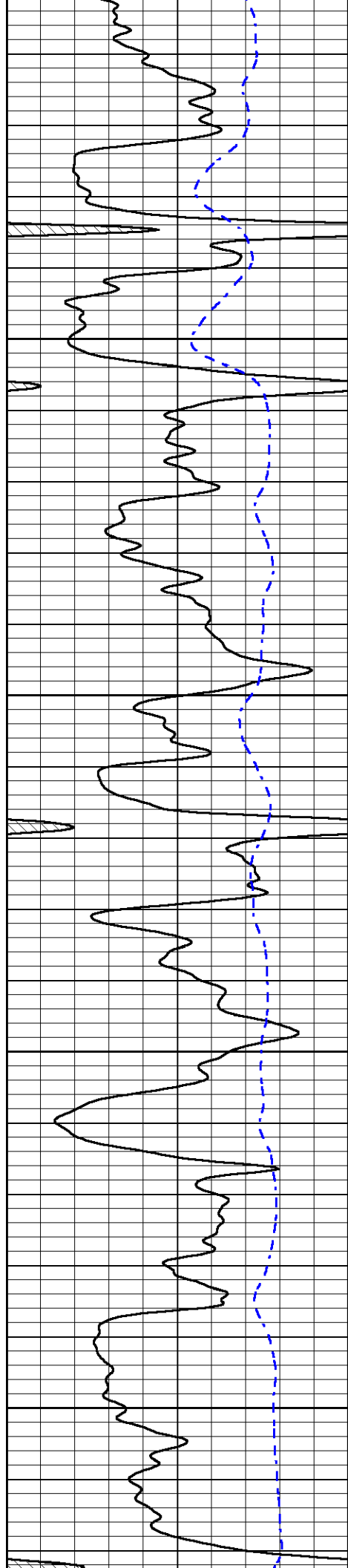
3900

3950

4000

4050



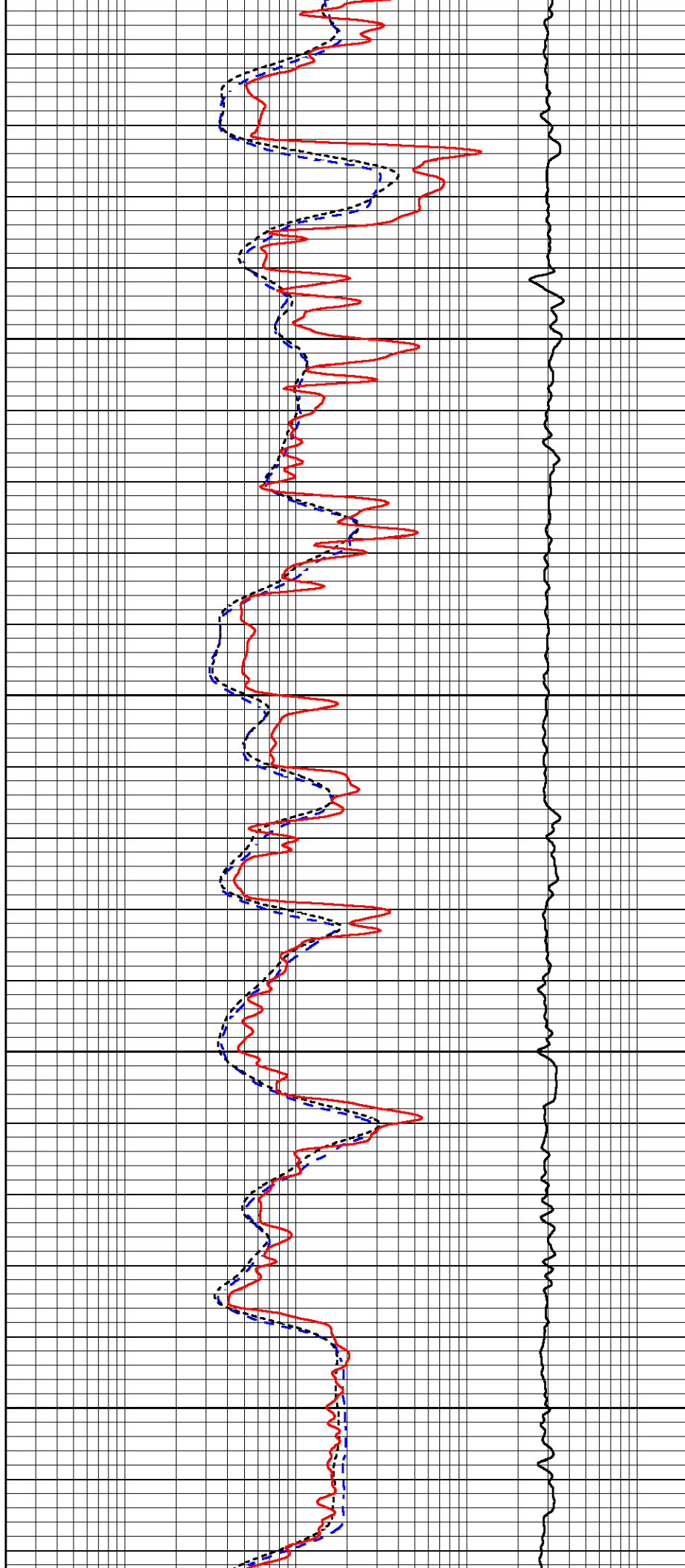


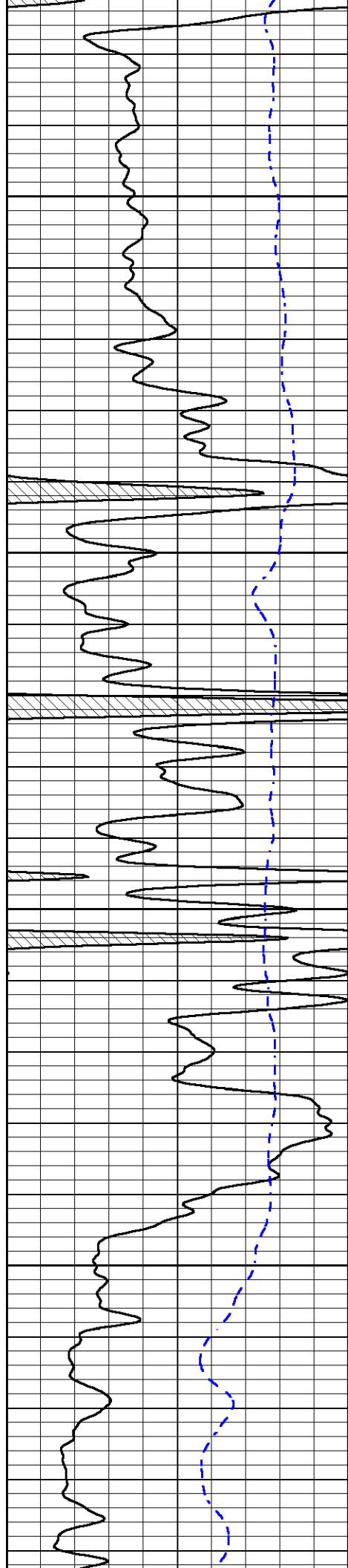
4100

4150

4200

4250



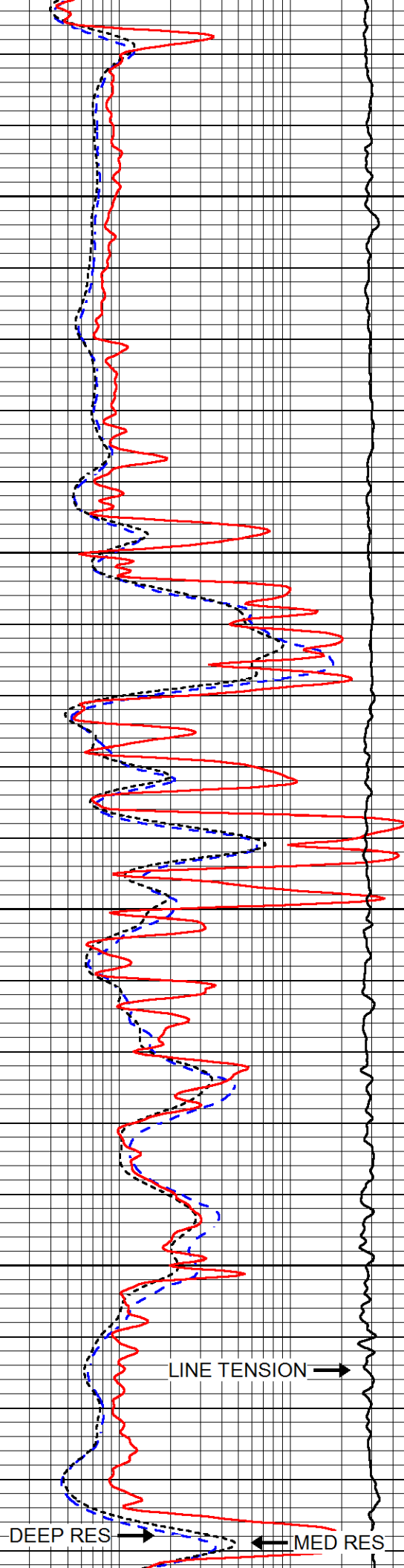


4300

4350

4400

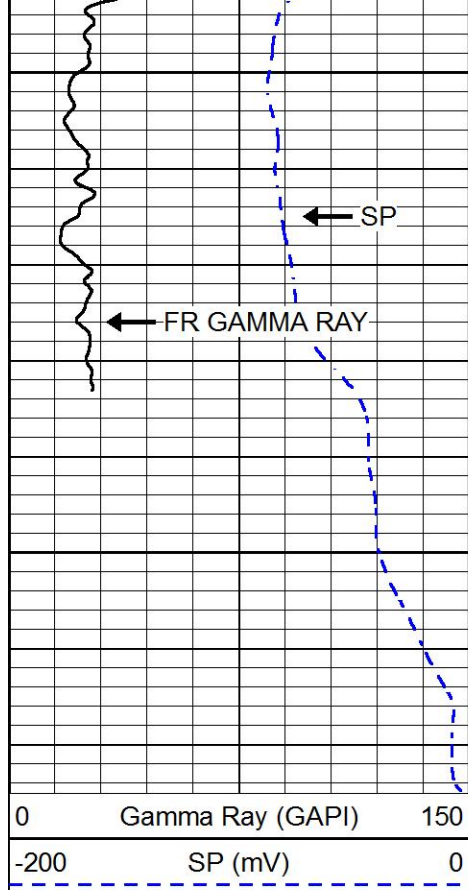
4450



LINE TENSION →

DEEP RES →

← MED RES



4500

4550

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
10000 Line Tension (lb) 0

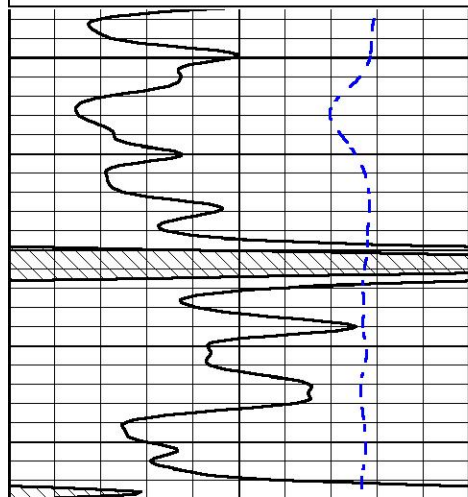


REPEAT SECTION

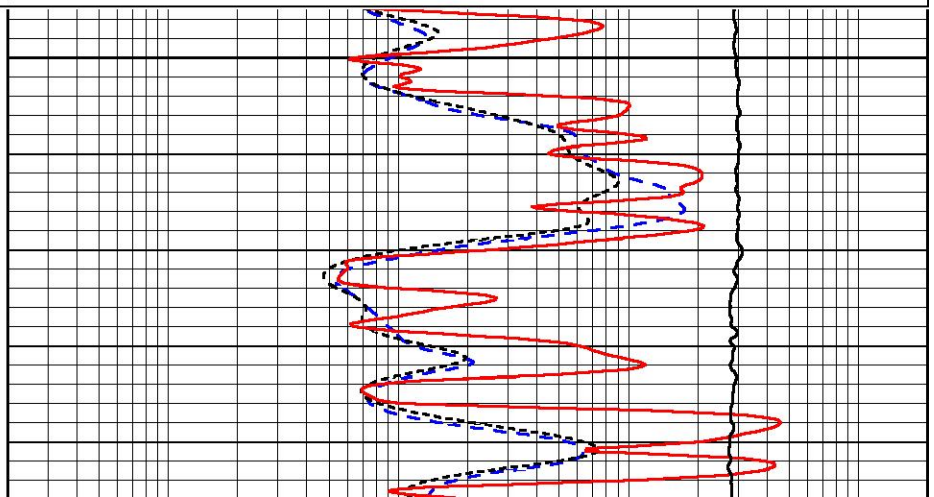
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Dataset Pathname STKML/pass3.1
Presentation Format dil
Dataset Creation Fri Mar 09 23:40:09 2018
Charted by Depth in Feet scaled 1:240

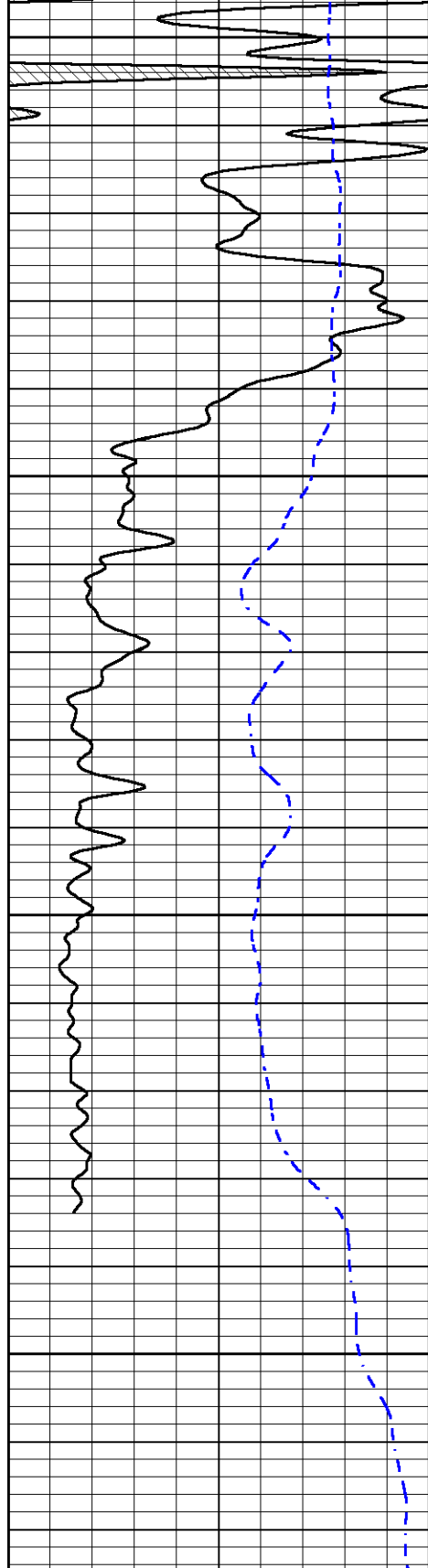
0 Gamma Ray (GAPI) 150
-200 SP (mV) 0

0.2 Deep Resistivity (Ohm-m) 2000
0.2 Medium Resistivity (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000
10000 Line Tension (lb) 0



4350





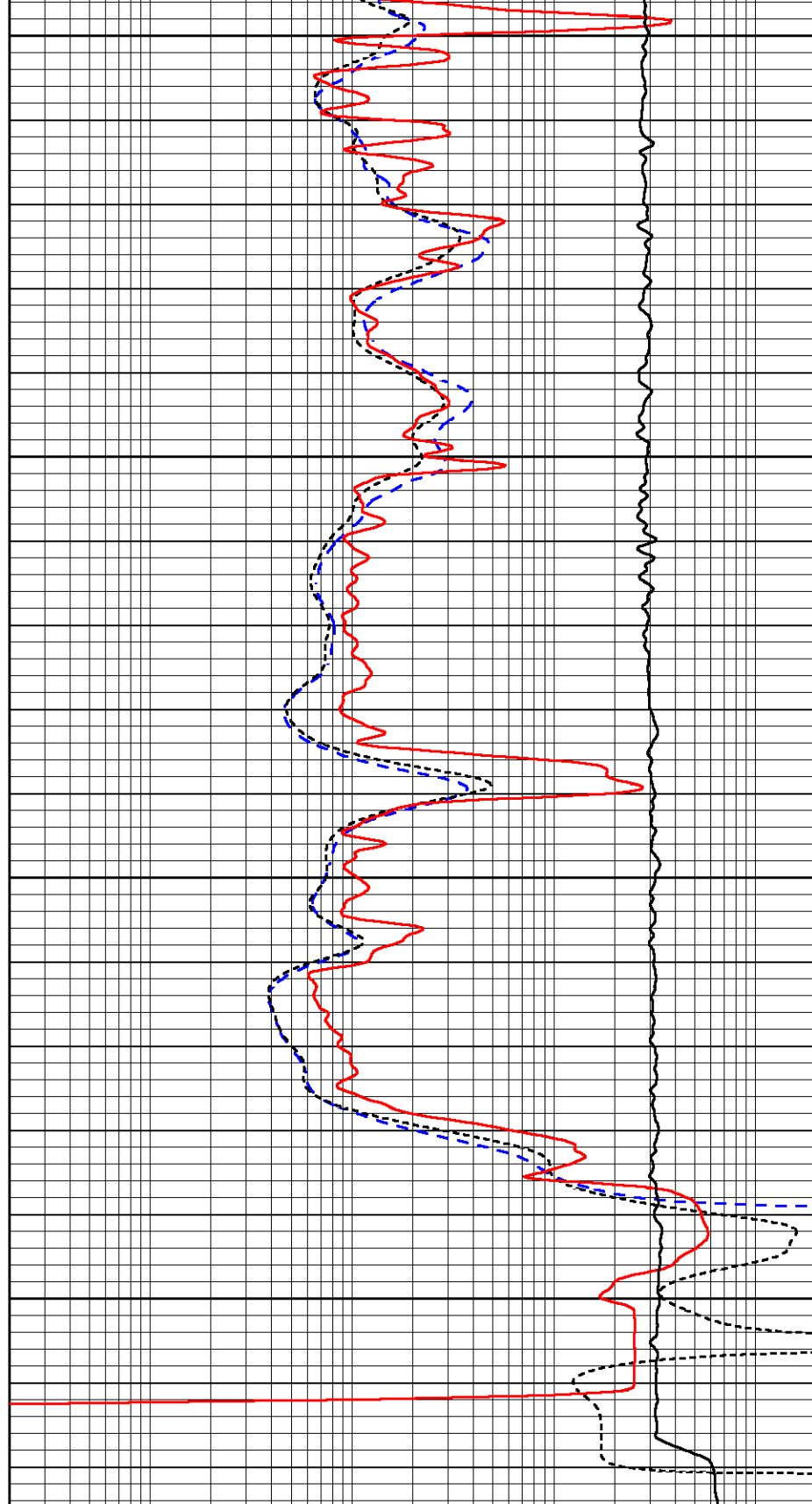
4400

4450

4500

4550

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
10000 Line Tension (lb) 0

Calibration Report

Database File brito_werth 1-35.db
Dataset Pathname STKML/pass4.1
Dataset Creation Fri Mar 09 23:38:32 2018

Dual Induction Calibration Report							
Serial-Model:		967 (HT)-PSI HIGH TEMP					
Calibration Performed:		Fri Mar 09 21:20:21 2018					
Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.565	-23.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.390	-40.000

Microlog Calibration Report							
Serial-Model:		PSI-01-PSIML					
Performed:		Fri Mar 09 21:13:49 2018					
	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	23500.0000	-0.6000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	31000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.8500

Compensated Density Calibration Report							
Serial-Model:		227-771-M&W					
Source / Verifier:		16955B / 2ci					
Master Calibration Performed:		Fri Mar 09 21:14:39 2018					

Master Calibration							
	Density		Far Detector		Near Detector		
Magnesium	1.755	g/cc	4919.18		6345.34	cps	
Aluminum	2.665	g/cc	911.94		4081.94	cps	
Spine Angle = 75.33			Density/Spine Ratio = 0.522				
	Size		Reading				
Small Ring	8.00	in	1.84				
Large Ring	22.00	in	1.46				

Compensated Neutron Calibration Report							
Serial Number:		207-MW					
Tool Model:		M&W					
Calibration Performed:		FRI MAR 9 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:		Mon Mar 15 11:00:44 2018					

Calibration Performed:	Mon Jan 15 11:20:44 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps



Company	BRITO OIL COMPANY, INC.
Well	WERTH #1-35
Field	WILDCAT
County	GOVE
State	KANSAS