

DUAL INDUCTION LOG

Company		RAYMOND OIL COMPANY, INC.	
Well		FRUSHER-LEWIS TRUS UNIT #1	
Field		WILDCAT	
County		HODGEMAN	
State		KANSAS	
Location:		API # : 15-083-21980-0000	
Permanent Datum		GROUND LEVEL Elevation 2299	
Log Measured From		KELLY BUSHING 5' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 4 TWP 21S RGE 23W		Elevation K.B. 2304 D.F. 2302 G.L. 2299	
1109' FSL & 2526' FWL		Other Services DIL ML/SO	
Date		05/05/21	
Run Number		ONE	
Depth Driller		4598	
Depth Logger		4598	
Bottom Logged Interval		4597	
Top Log Interval		00	
Casing Driller		8 5/8" @ 260	
Casing Logger		260	
Bit Size		7 7/8"	
Type Fluid in Hole		CHEMICAL MUD	
Density / Viscosity		9.3/46	
pH / Fluid Loss		10.0/6.8	
Source of Sample		FLOWLINE	
Rm @ Meas. Temp		.6@ 70F	
Rmf @ Meas. Temp		.45@ 70F	
Rmc @ Meas. Temp		.72 @ 70F	
Source of Rmf / Rmc		MEASURED	
Rm @ BHT		.35@ 121F	
Time Circulation Stopped		2 HOURS	
Time Logger on Bottom		////	
Maximum Recorded Temperature		121F	
Equipment Number		1523	
Location		HAYS, KANSAS	
Recorded By		GUS PFANENSTIEL	
Witnessed By		KIM SHOEMAKER	

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395

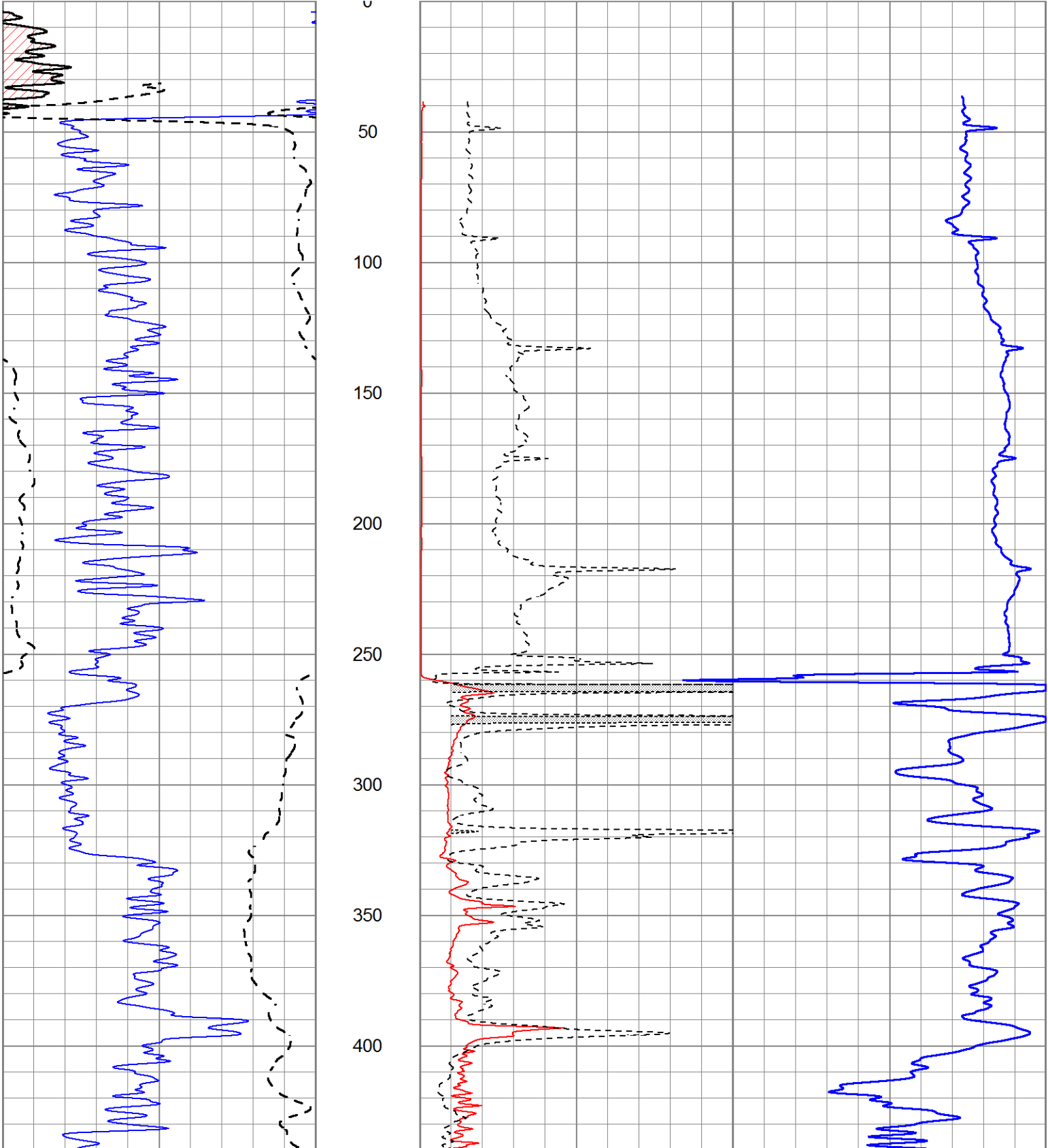
DIRECTIONS: NESS CITY SOUTH TO COUNTY LINE TO X RD.
2 EAST, NORTH INTO.

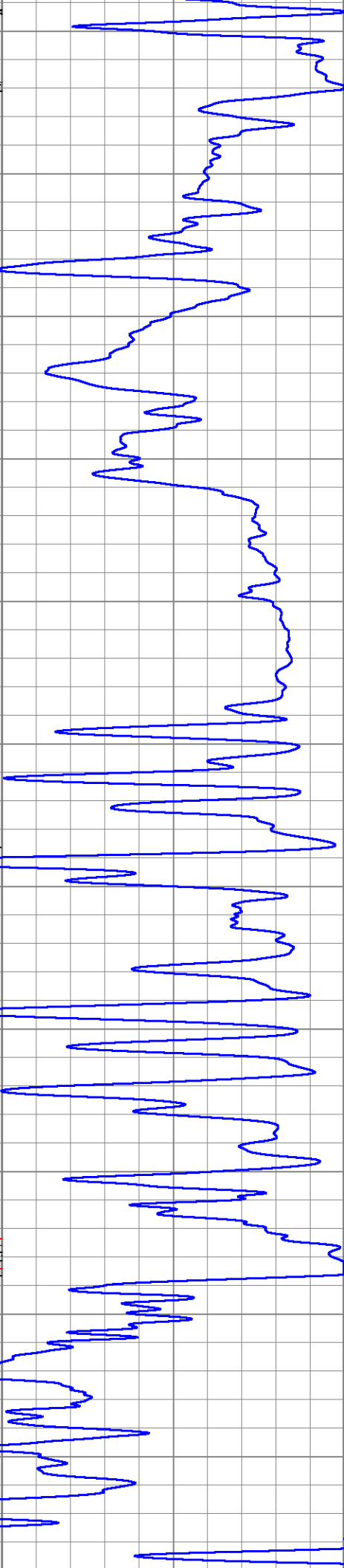
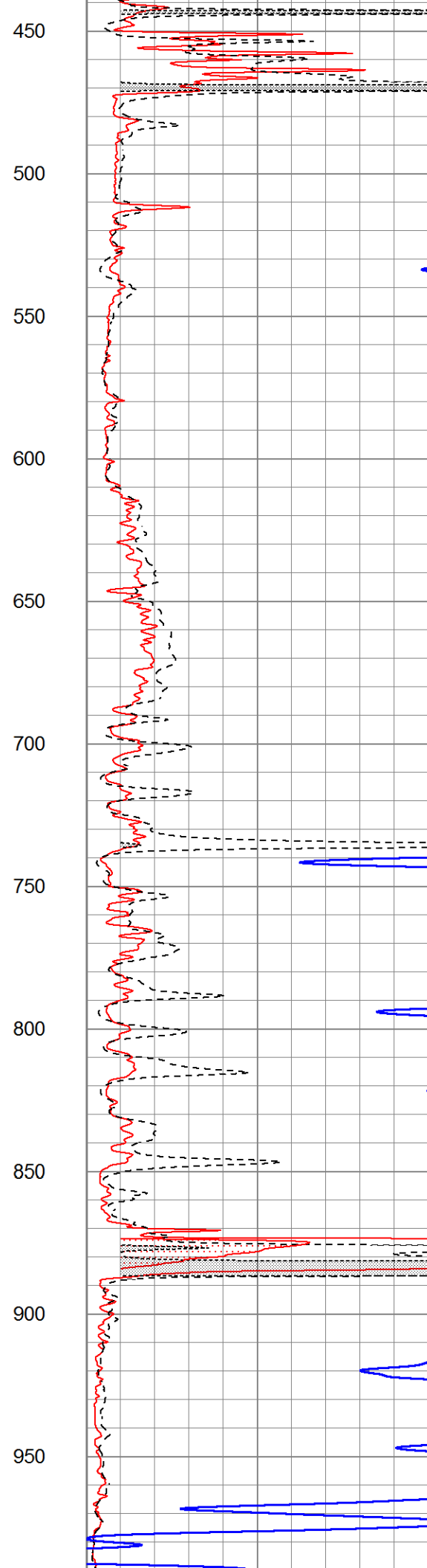
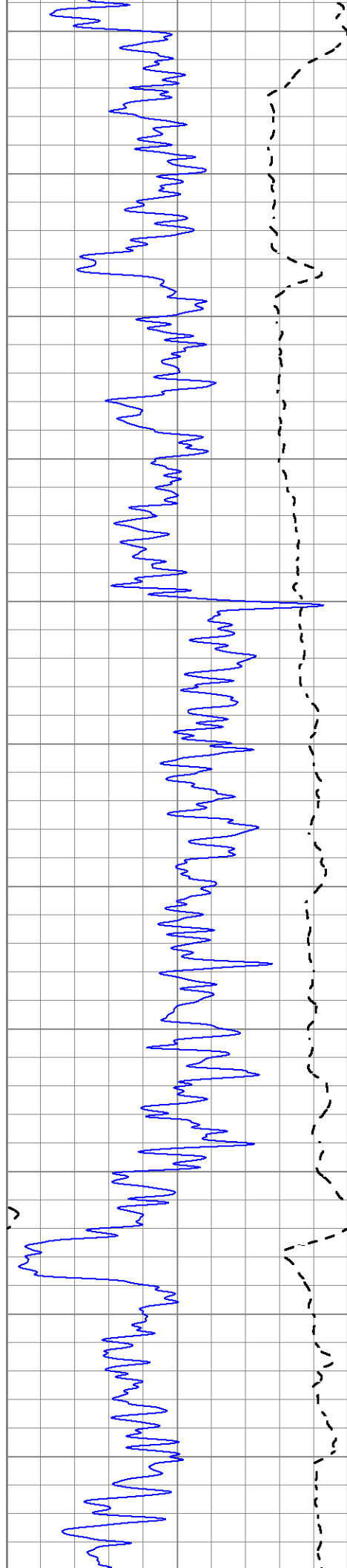


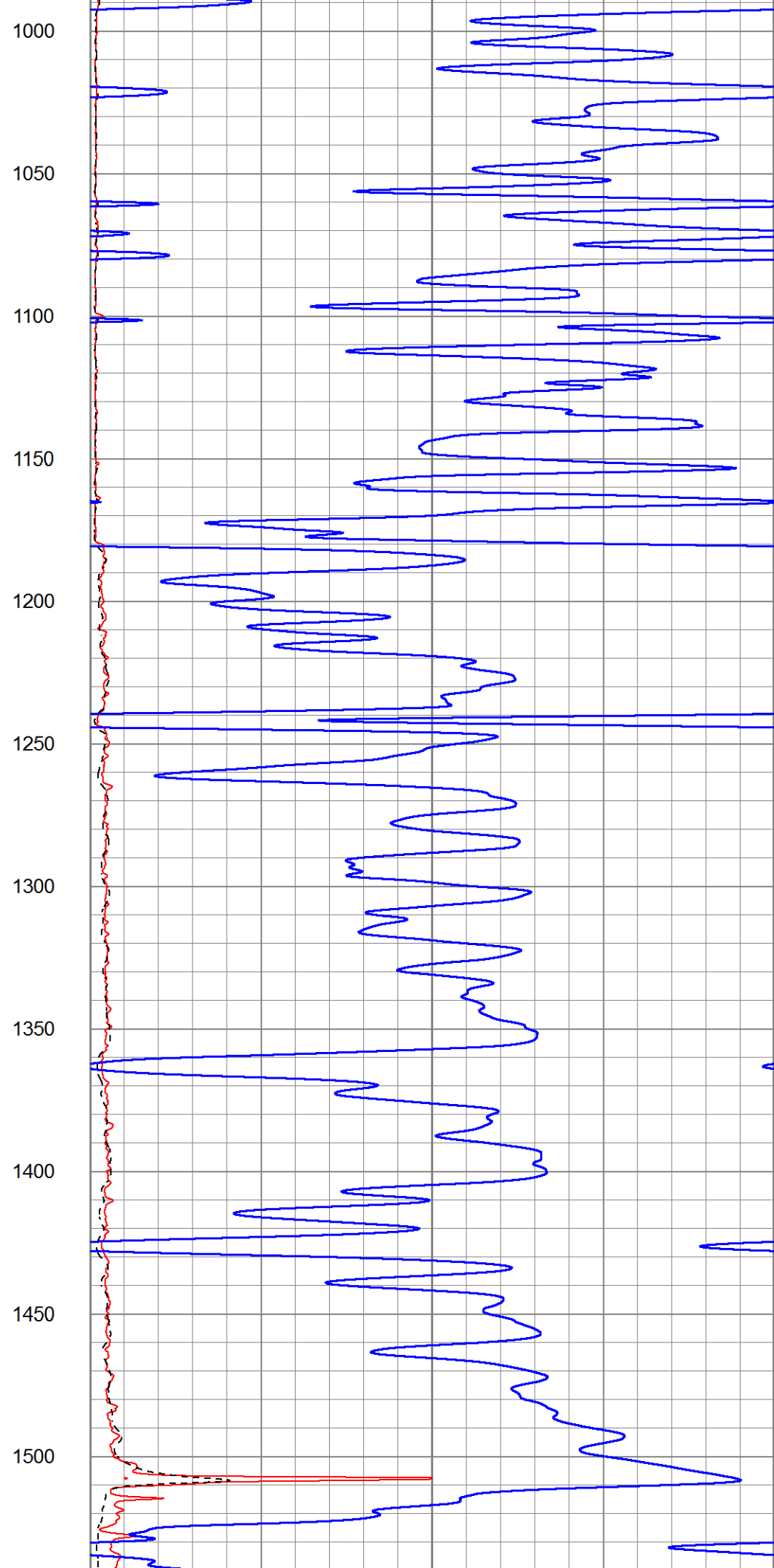
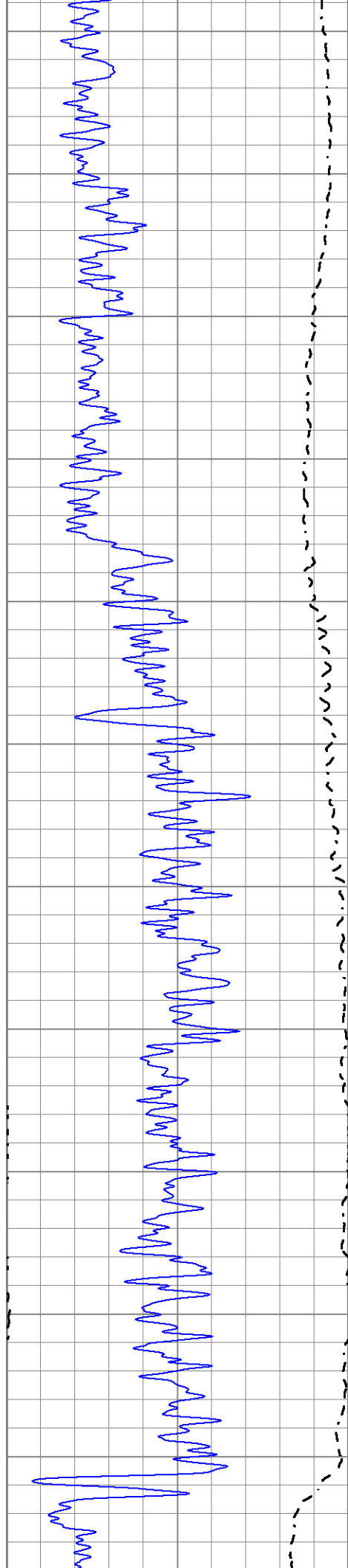
MAIN PASS

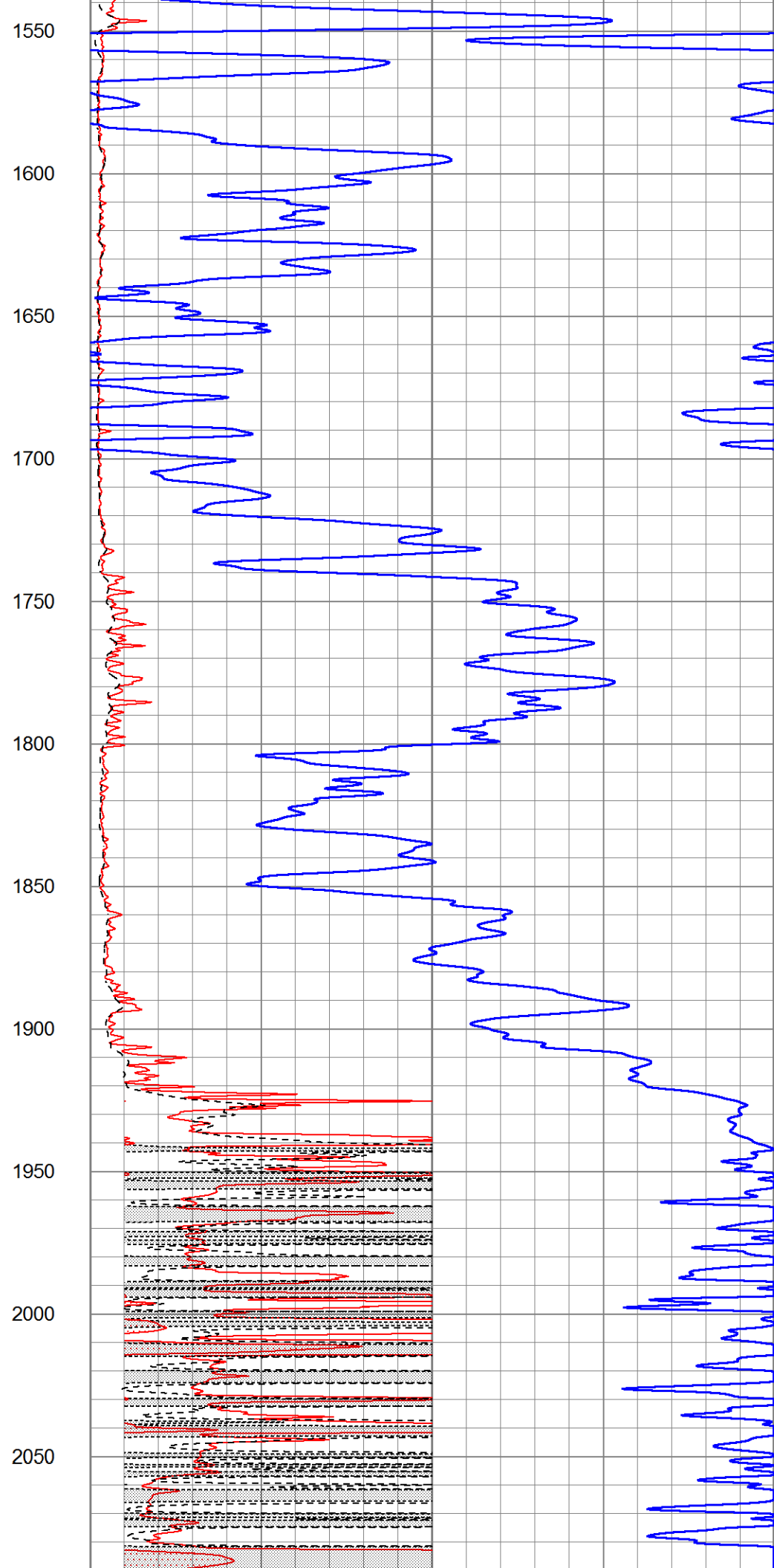
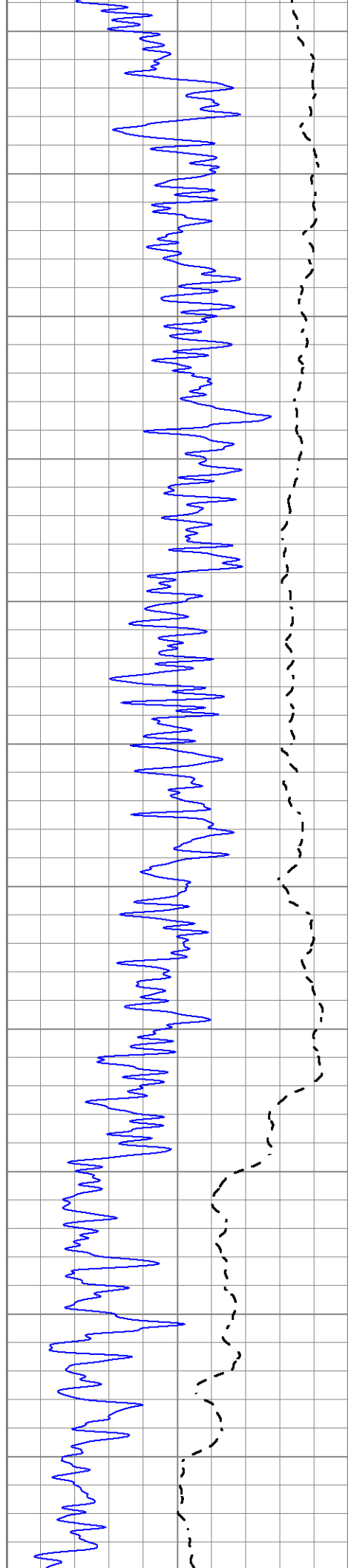
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Dataset Pathname	pass3.1
Presentation Format	_dil2
Dataset Creation	Wed May 05 15:48:09 2021
Charted by	Depth in Feet scaled 1:600

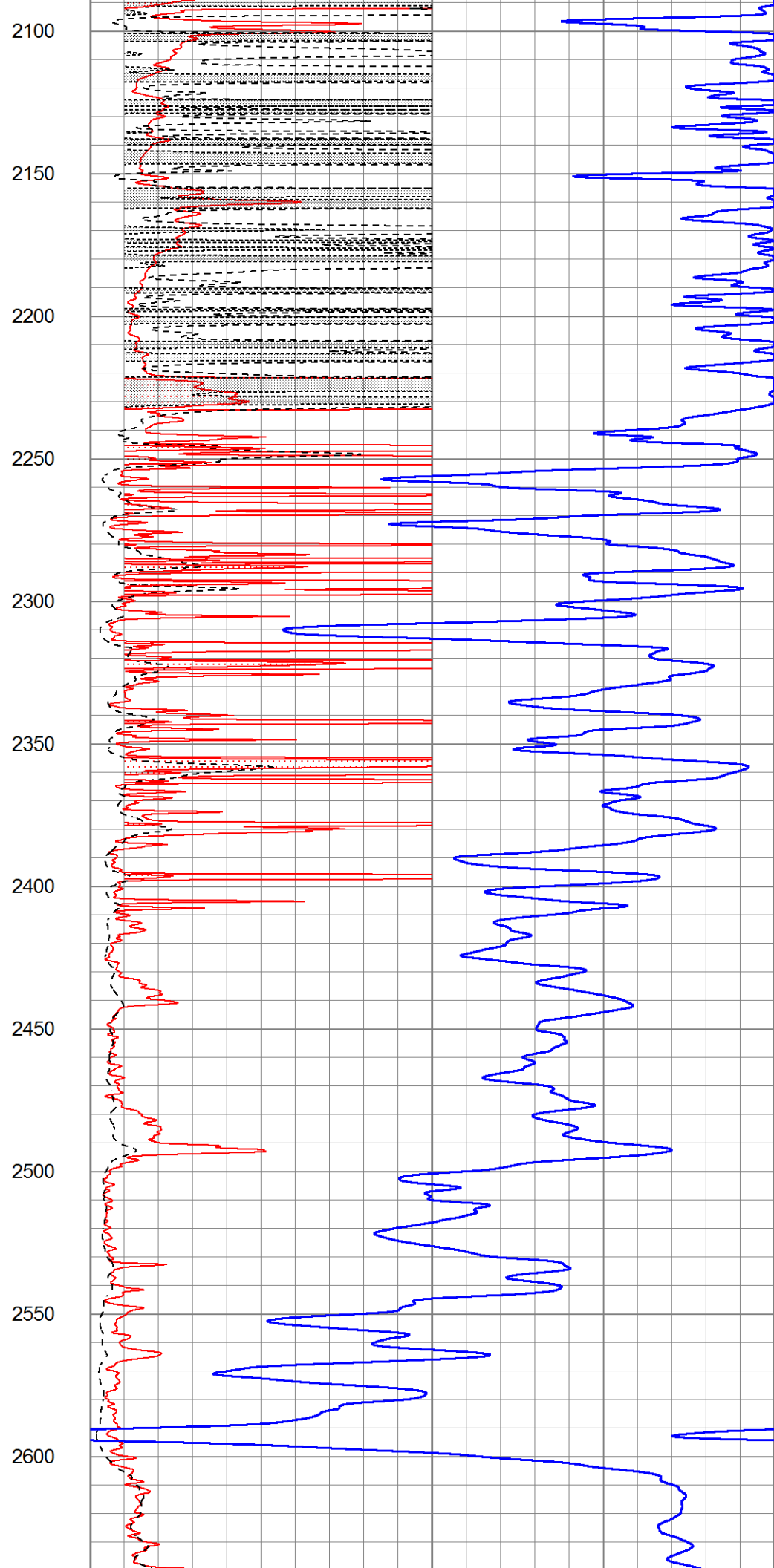
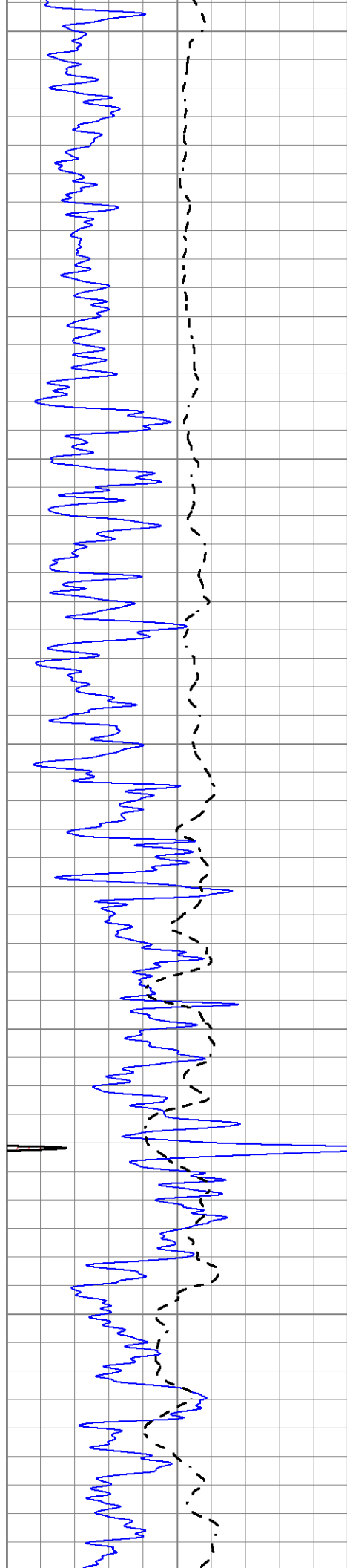
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-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
-----			0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

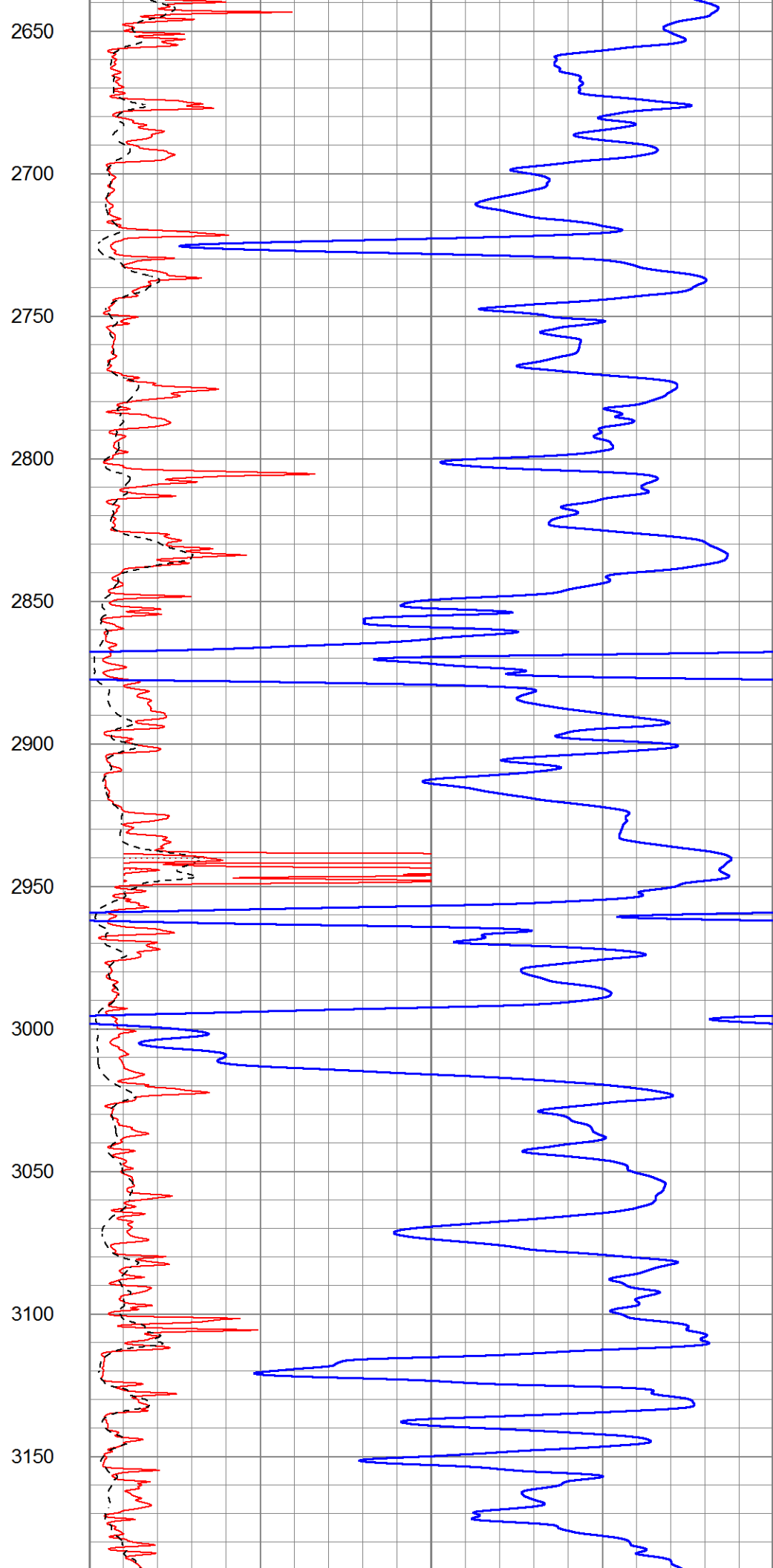
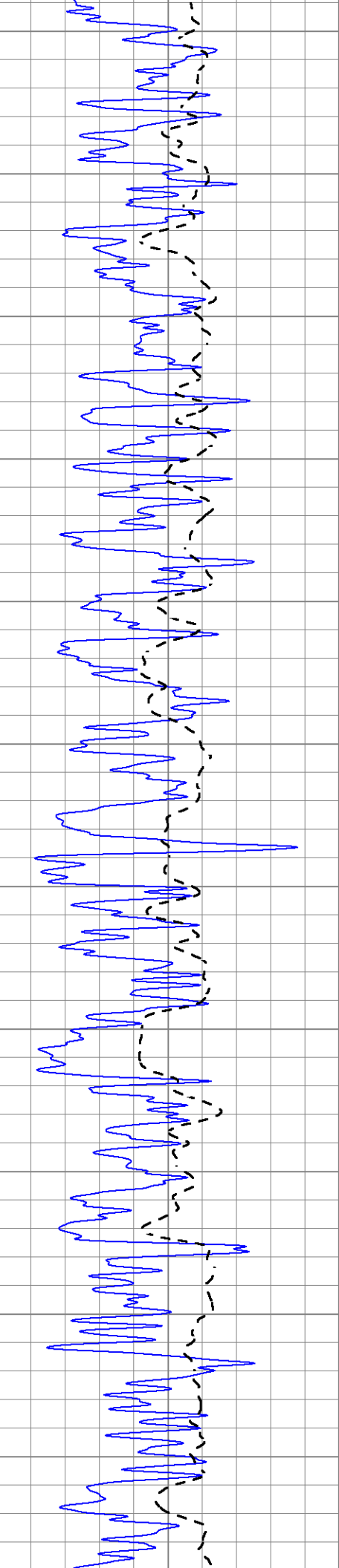


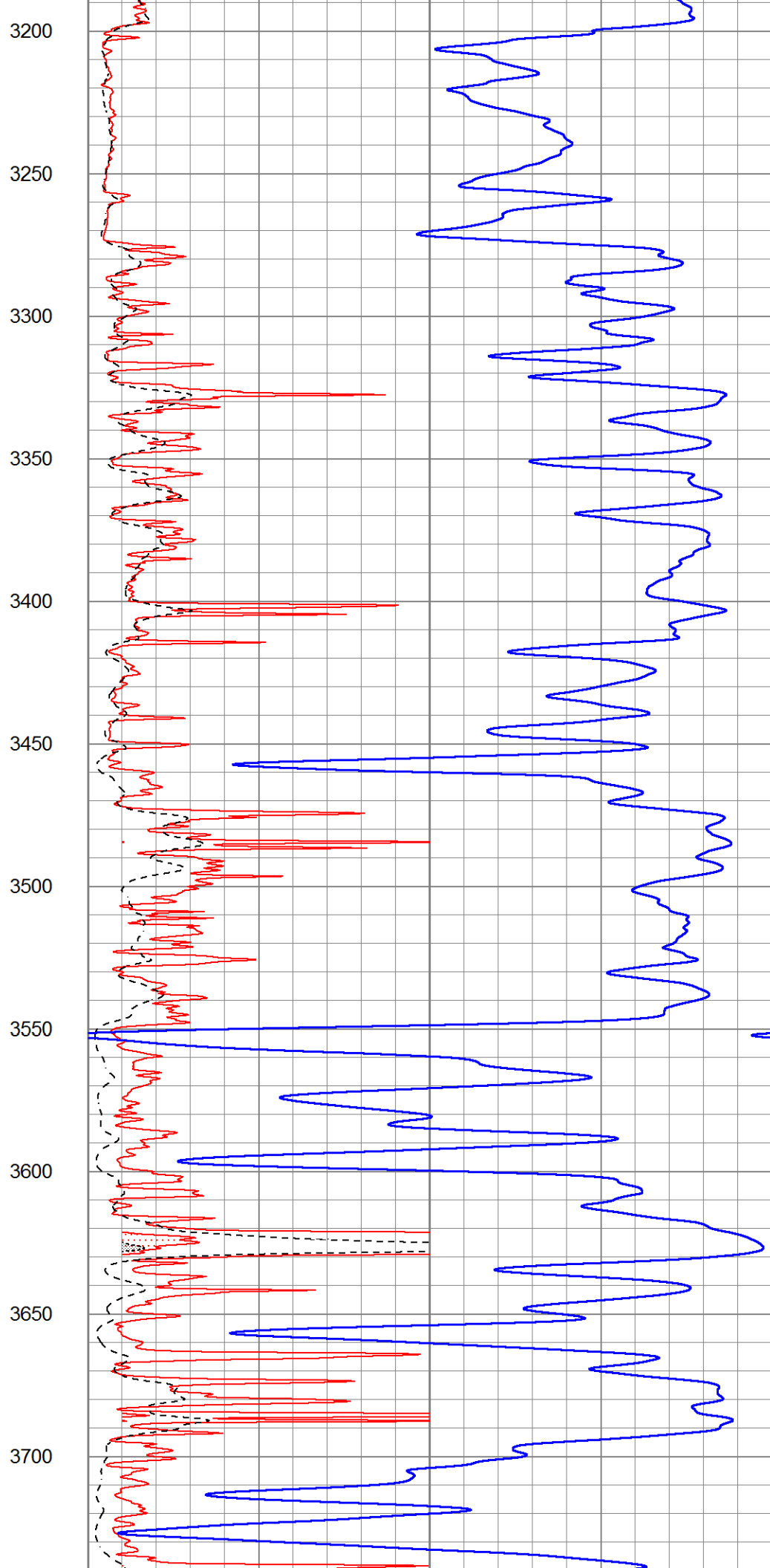
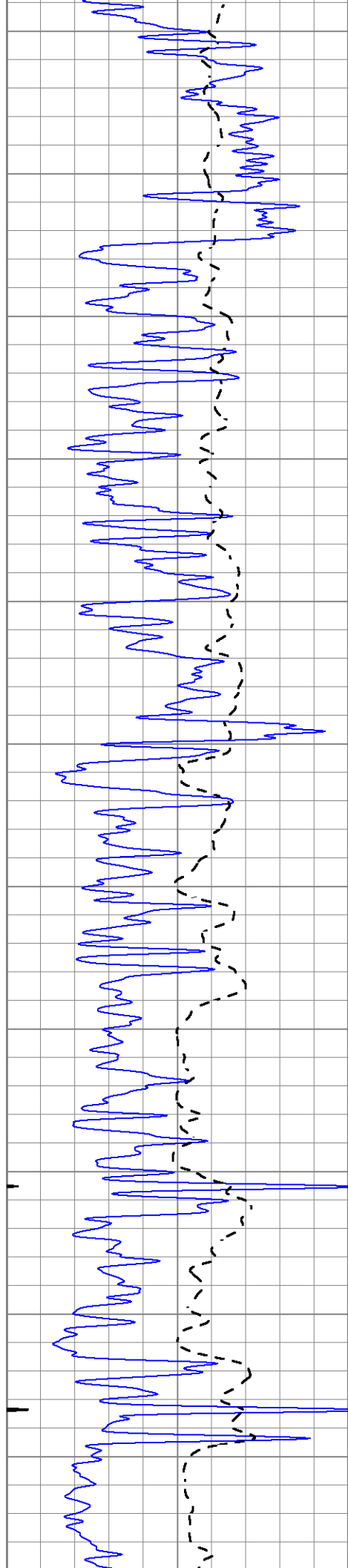


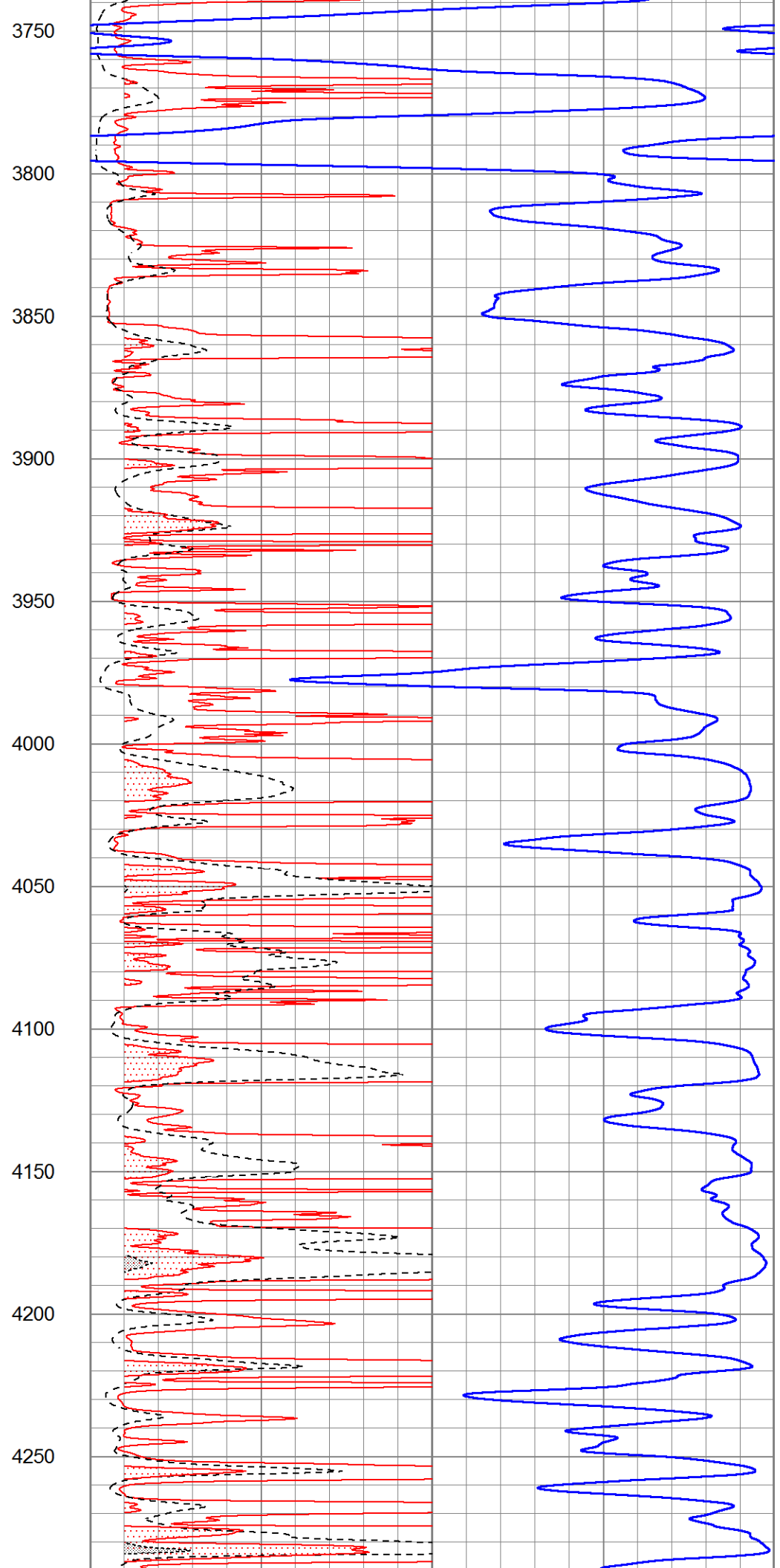
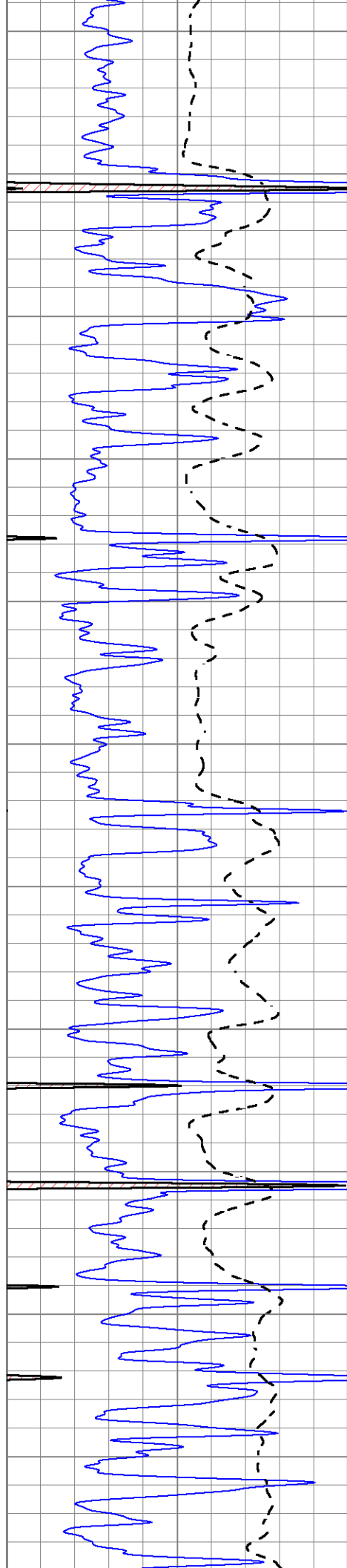


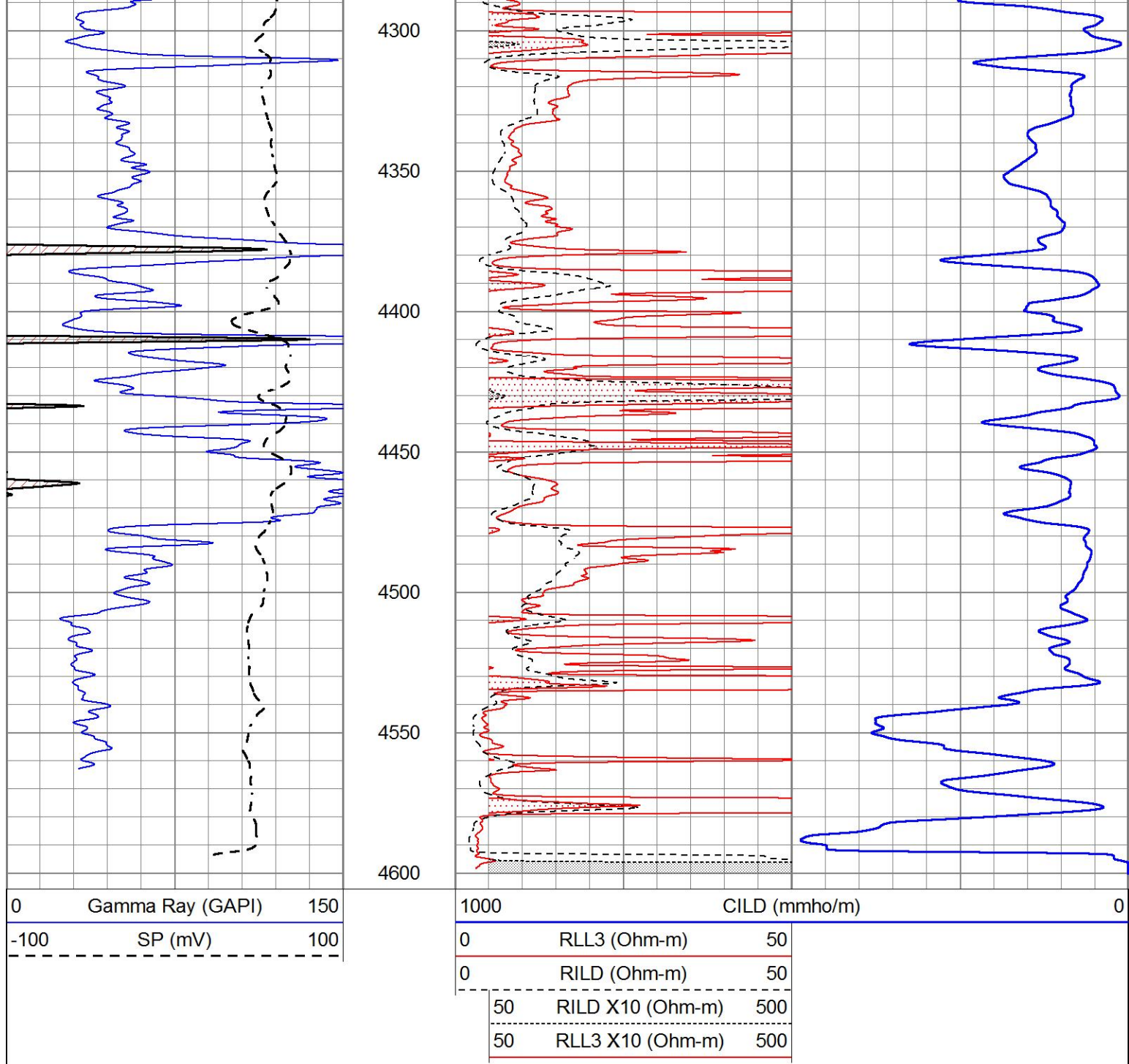








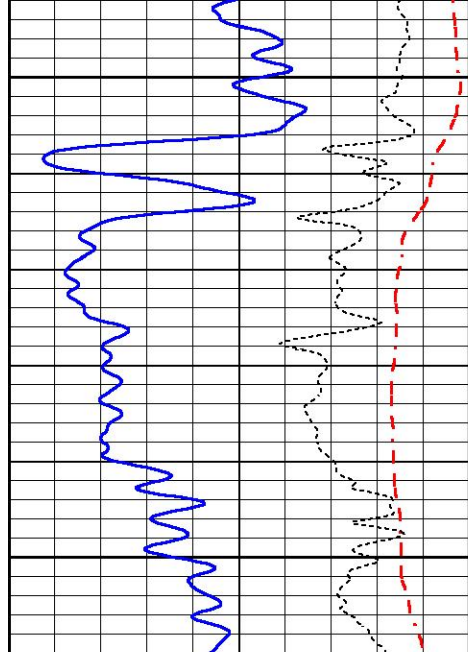




MAIN PASS

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 Dataset Pathname pass3.1
 Presentation Format _dil
 Dataset Creation Wed May 05 15:48:09 2021
 Charted by Depth in Feet scaled 1:240

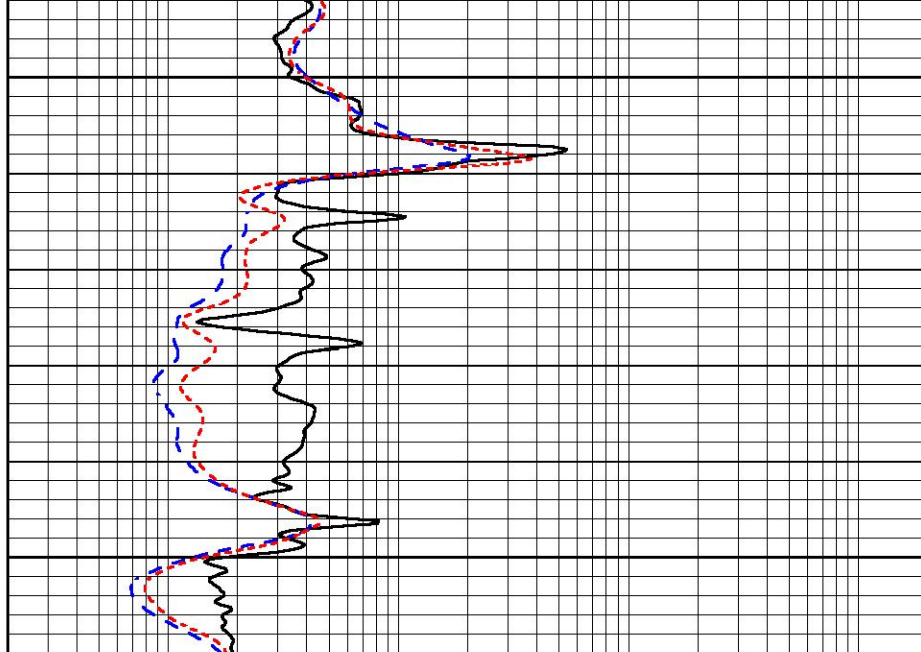
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

1500

1550



0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

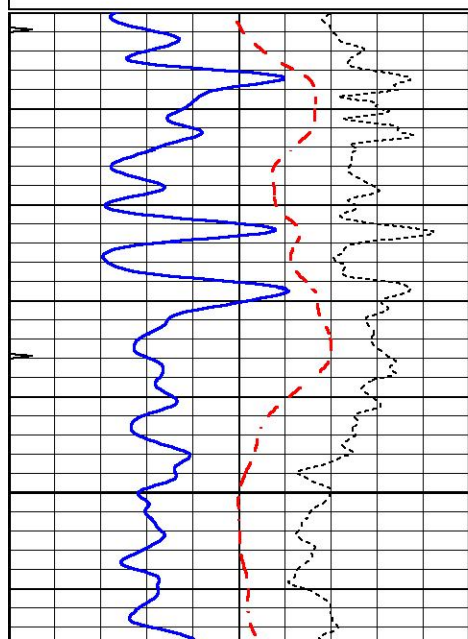


MAIN PASS

Database File 5433ddn.db
 Dataset Pathname pass3.1
 Presentation Format _dil
 Dataset Creation Wed May 05 15:48:09 2021
 Charted by Depth in Feet scaled 1:240

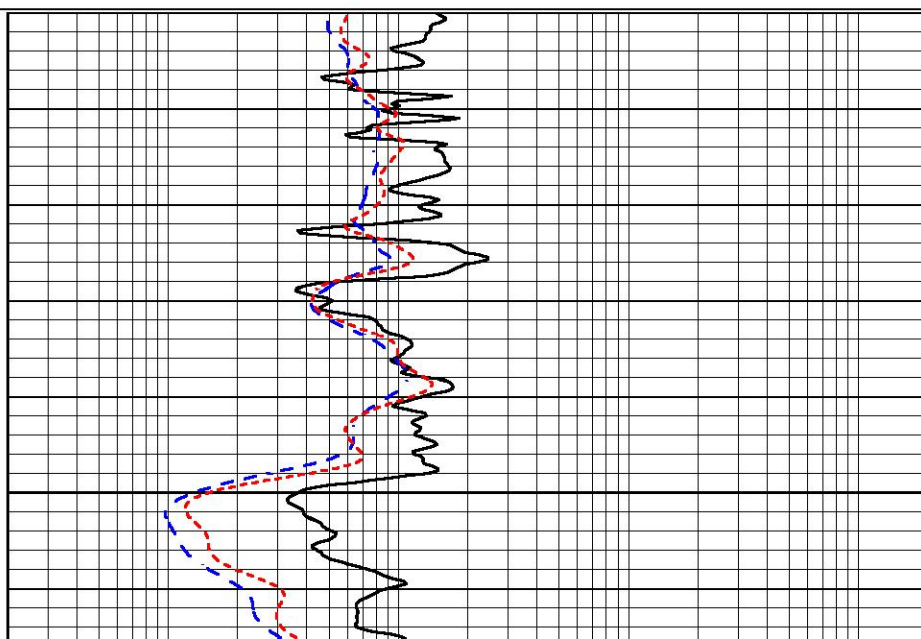
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

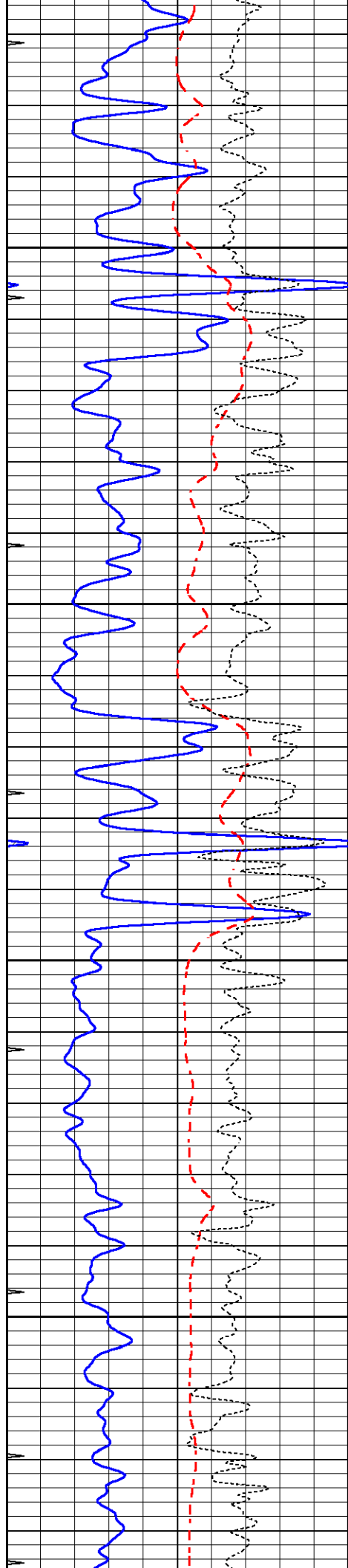
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3500

3550



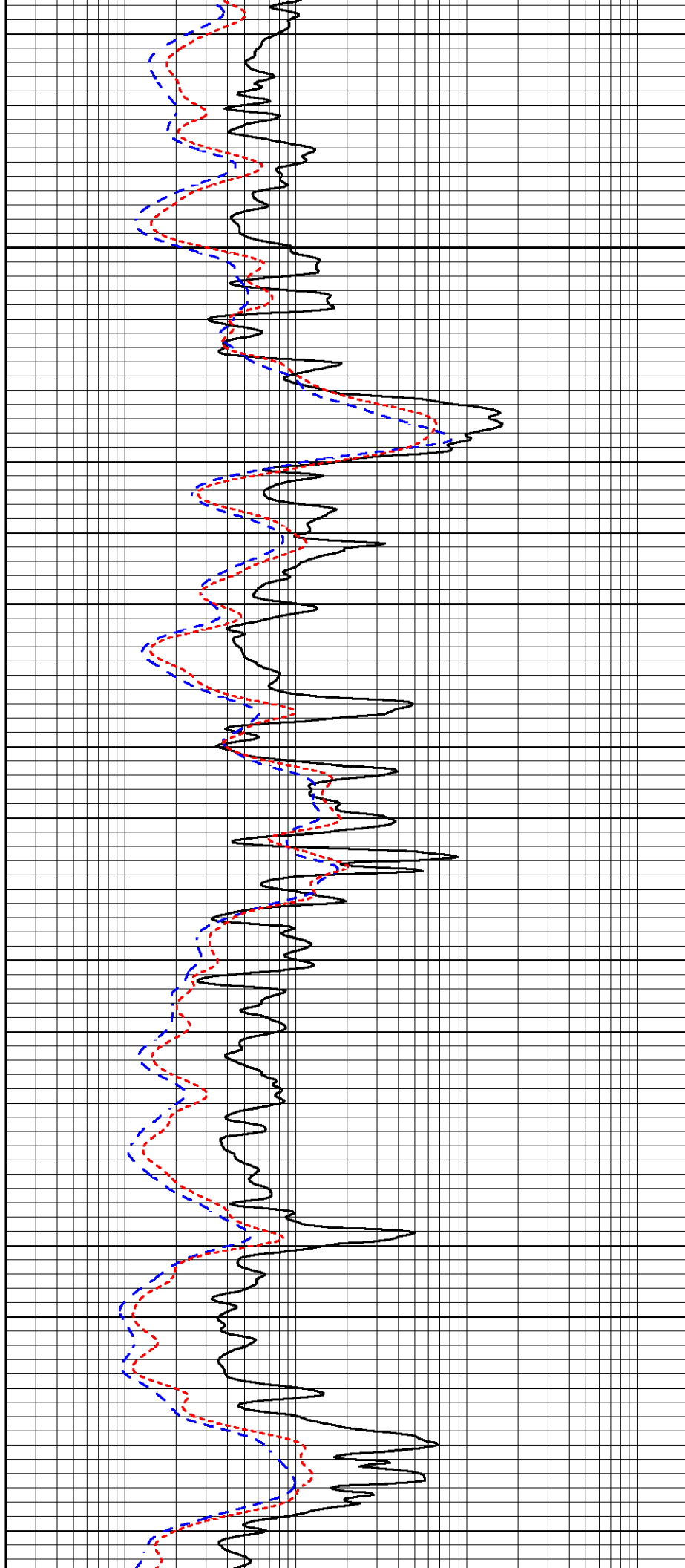


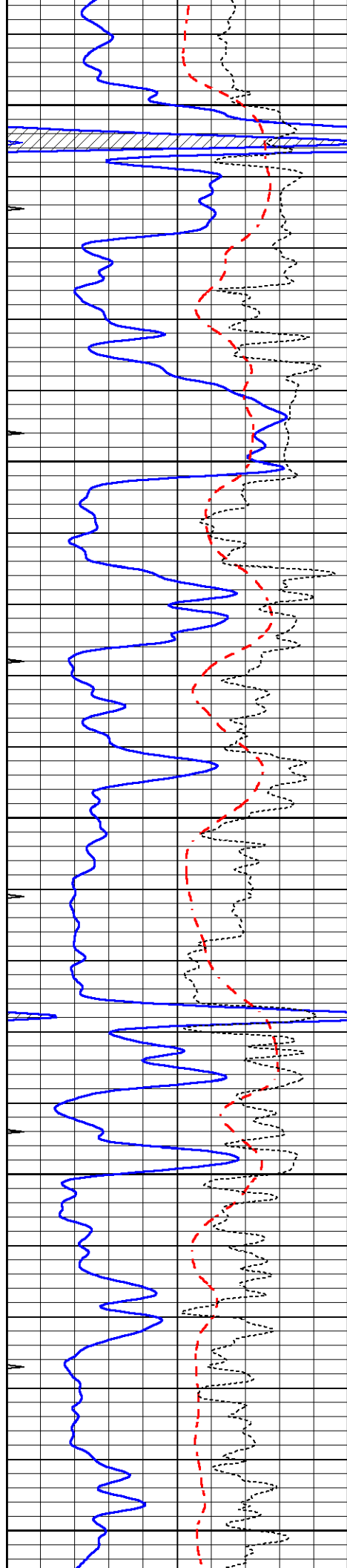
3600

3650

3700

3750





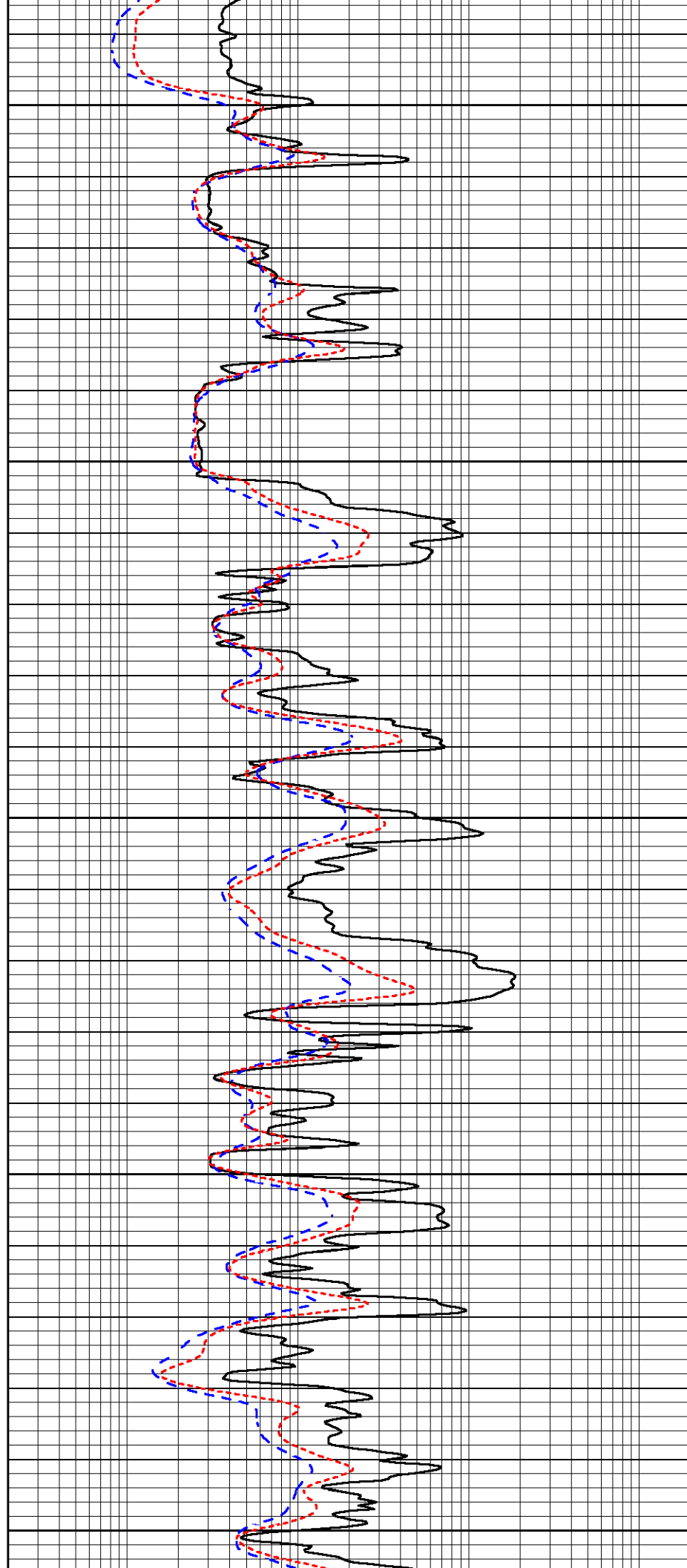
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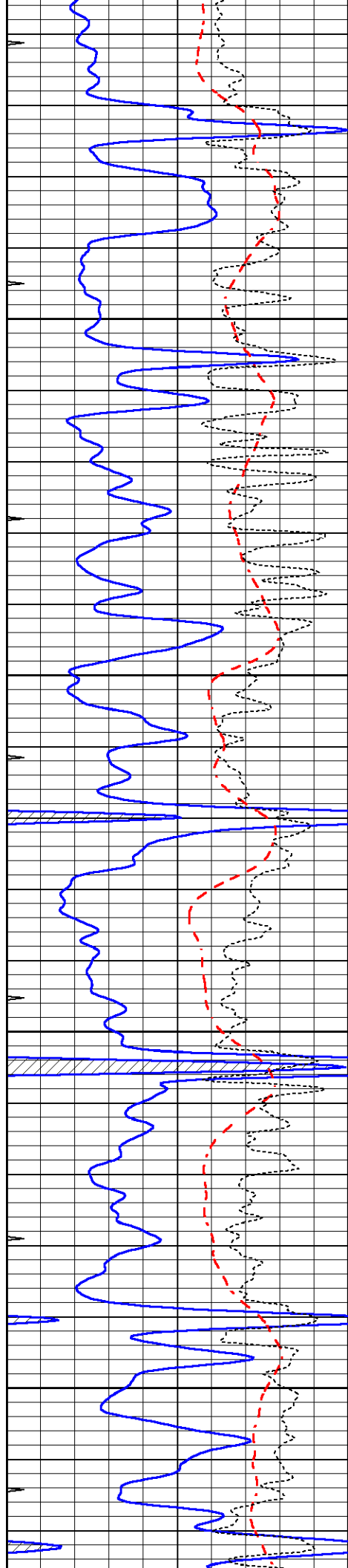
3850

3900

3950

4000



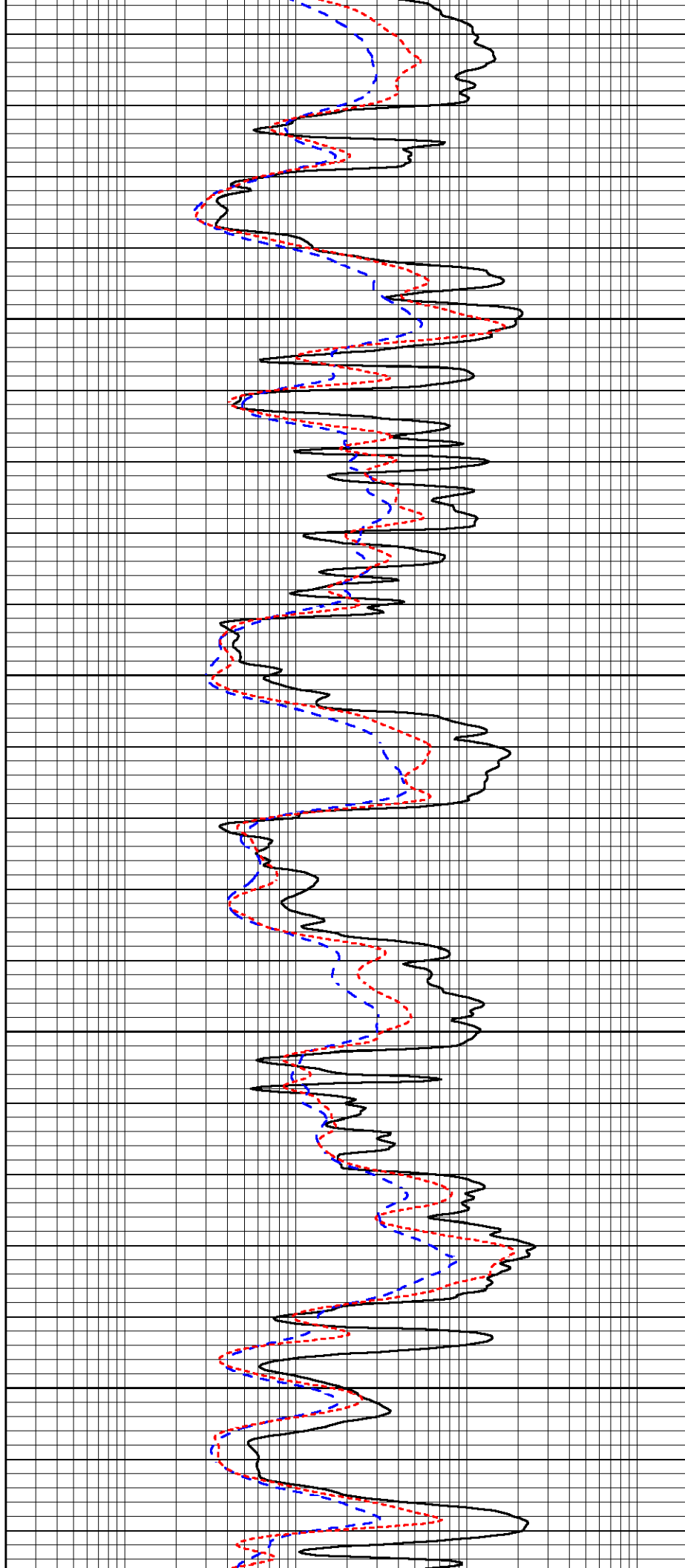


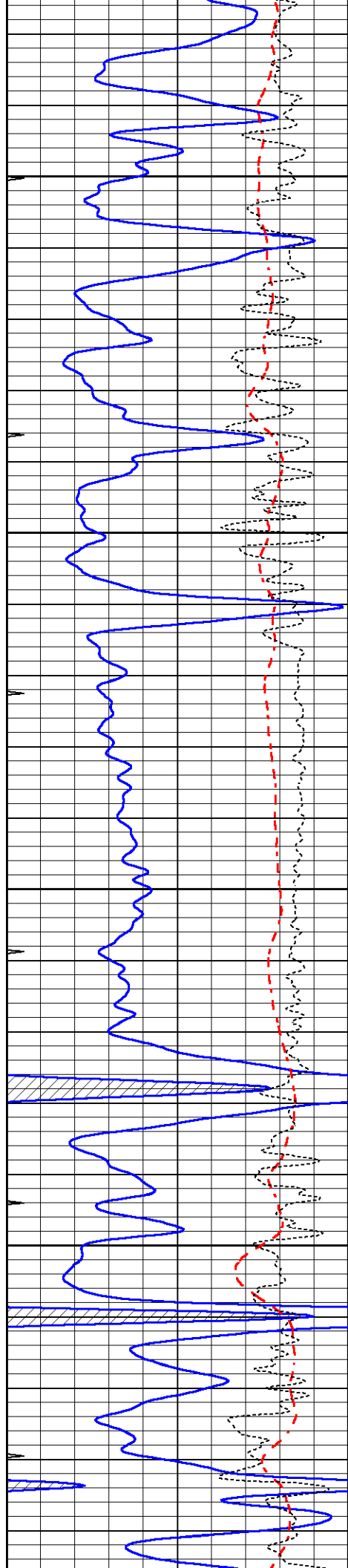
4050

4100

4150

4200



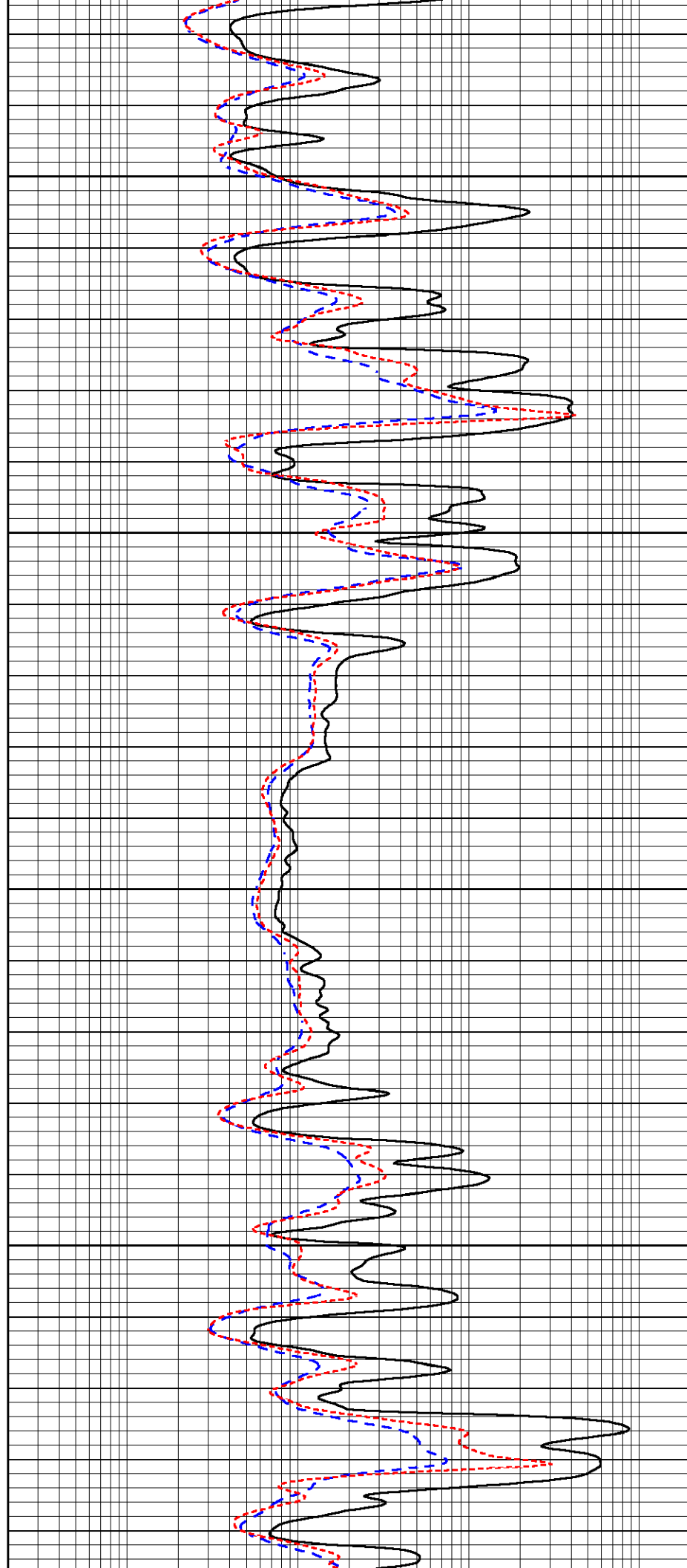


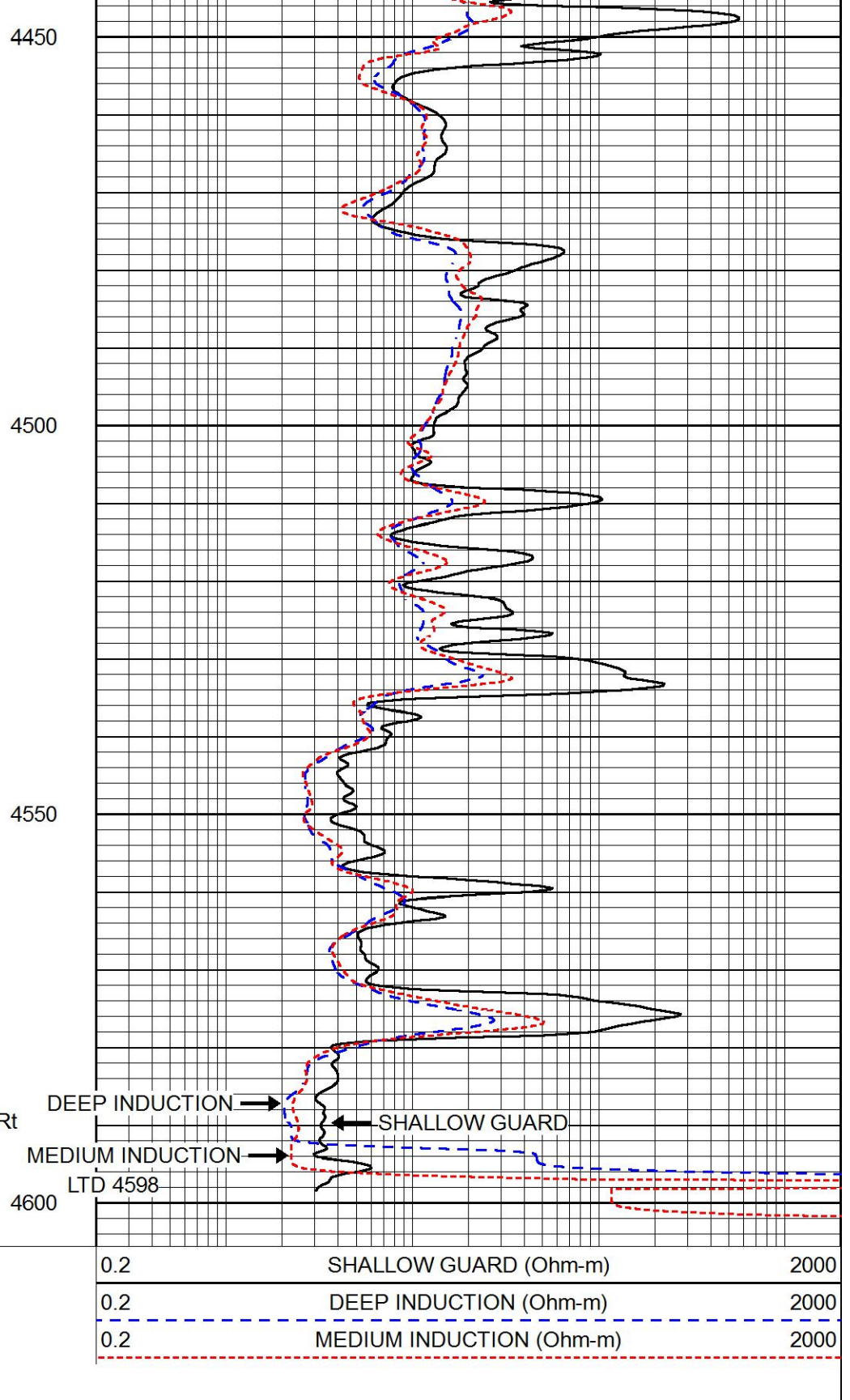
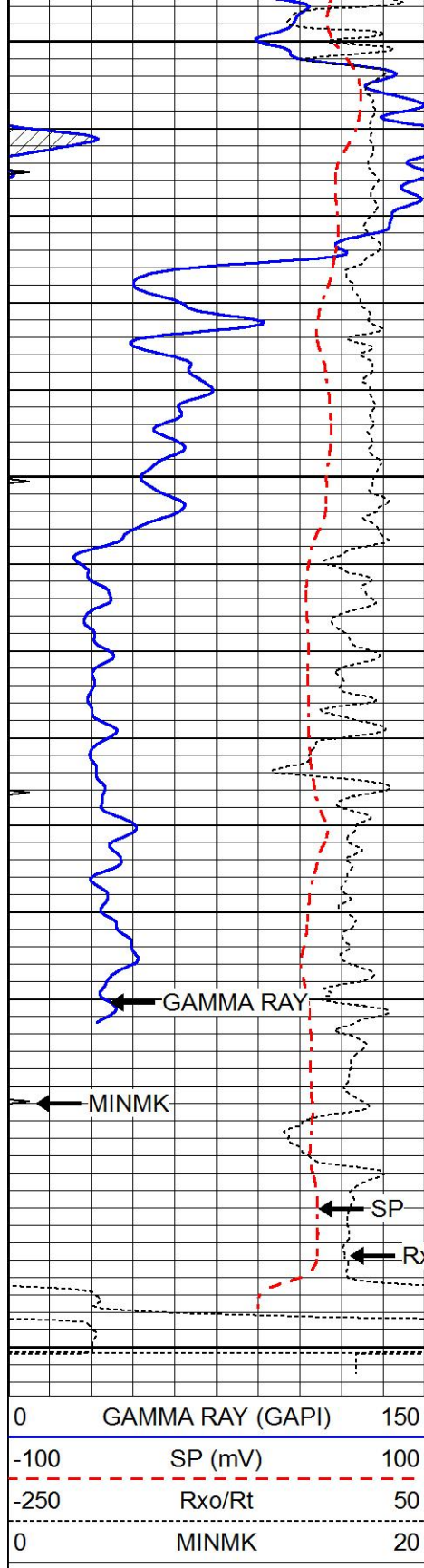
4250

4300

4350

4400

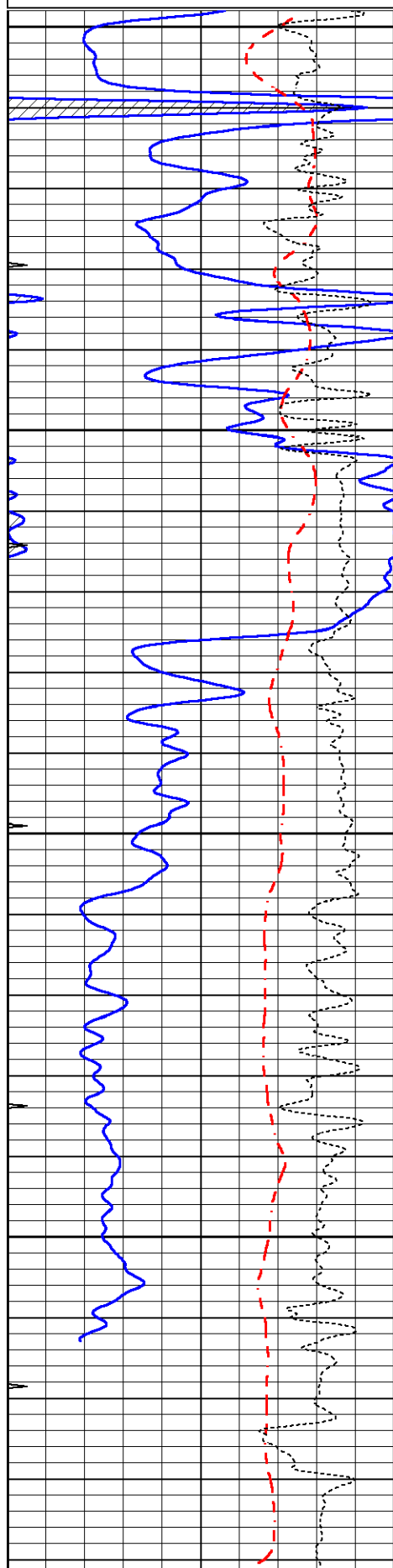




REPEAT SECTION

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

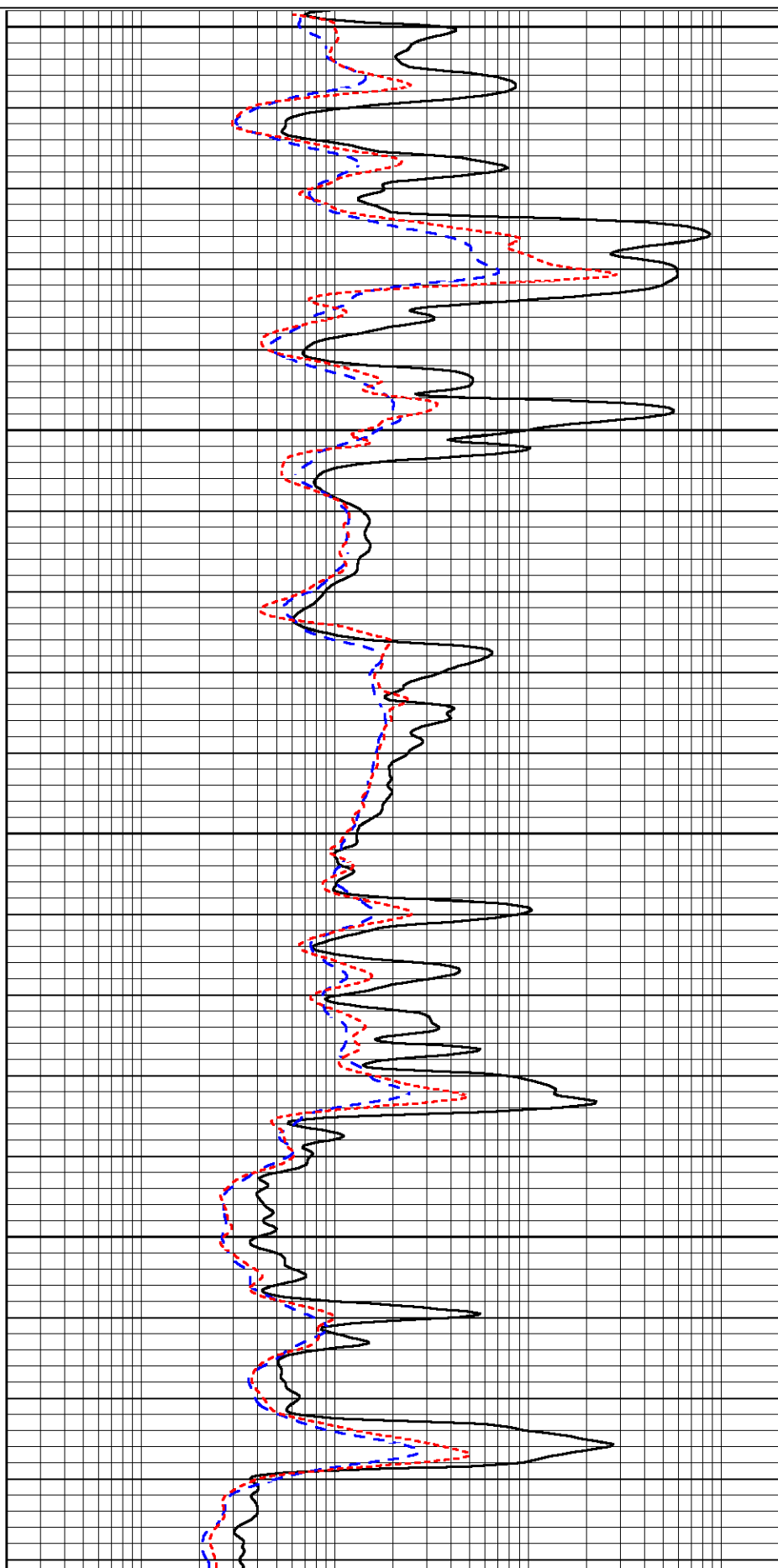


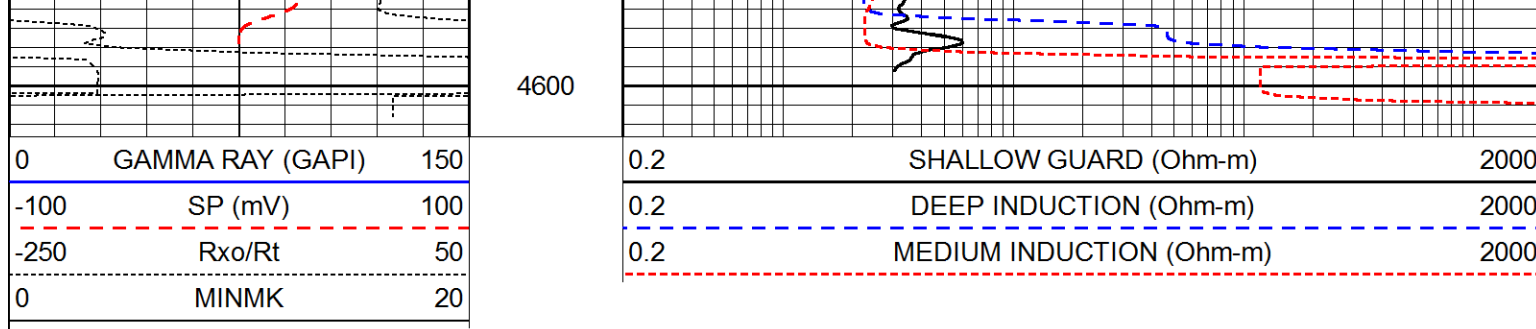
4400

4450

4500

4550





Calibration Report	
Database File	5433ddn.db
Dataset Pathname	pass2.1
Dataset Creation	Wed May 05 15:57:02 2021

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Mon Sep 10 14:28:35 2018
Downhole Cal Performed:	Mon Sep 10 14:28:38 2018
After Survey Verification Performed:	Mon Sep 10 14:28:40 2018

Surface Calibration		Readings		References		Results	
Loop:	Air	Loop		Air	Loop	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000
Internal:	Zero	Cal		Zero	Cal	m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992

Downhole Calibration		Readings		References		Results	
	Zero	Cal		Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000
LL3		7.500	V		1500.000	Ohm-m	
		0.000	V		20.000	Ohm-m	
		-7.200	V		3800.000	mmho-m	

After Survey Verification		Readings		Targets		Results	
	Zero	Cal		Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m	
		0.000	Ohm-m		0.000	Ohm-m	
		1.000	mmho-m		1.000	mmho-m	

Litho Density Calibration Report

Serial: 001N Model: PRB

Master Calibration

Performed Thu Mar 19 11:30:16 2020

	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1572.2	7510.8	2837.3	2643.1	cps
Window 2	1446.2	6522.0	2552.8	2400.0	cps

Window 2	1440.2	6523.9	2552.8	2409.9	cps
Window 3	1060.9	3611.4	1731.5	1684.8	cps
Window 4	145.5	363.4	363.2	368.1	cps
Long Space	0.0	5077.7	1106.6	963.7	cps
Short Space	3.1	1709.3	1103.4	916.9	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	
Rib Angle	: 44.0	Rib Slope	: 0.965	Density/Spine Ratio	: 0.555
Spine Angle	: 74.0	Spine Slope	: 3.481	Spine Intercept	: -17.4

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

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Compensated Neutron Calibration Report

Serial Number:	6I
Tool Model:	G

CALIBRATION						
	Detector	Readings		Target		Normalization
	Short Space	1.00	cps	1.00	cps	1.0000
	Long Space	1.00	cps	1.00	cps	1.0000

PRE-SURVEY VERIFICATION						
	Detector	Readings		Measured		Target
1)	Short Space		cps			
	Long Space		cps	pu		pu
2)	Short Space		cps			
	Long Space		cps	pu		
3)	Short Space		cps			
	Long Space		cps	pu		

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Thu Jul 30 20:04:35 2020	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.7500	GAPI/cps