

DUAL INDUCTION LOG

Company DOWNING-NELSON OIL CO., INC.

Well KRAMER-SCOTT UNIT #1-16

Field WILDCAT

County RAWLINS State KANSAS

Location: API #: 15-153-21258-0000

1640' FNL & 285' FWL

SEC 16 TWP 5S RGE 36W

Permanent Datum GROUND LEVEL Elevation 3282

Log Measured From KELLY BUSHING 12' A.G.L.

Drilling Measured From KELLY BUSHING

Other Services
CDL/CNL
ML/SO
Elevation
K.B. 3294
D.F. 3292
G.L. 3282

Date	5/13/21
Run Number	ONE
Depth Driller	4870
Depth Logger	4870
Bottom Logged Interval	4868
Top Log Interval	00
Casing Driller	8 5/8" @ 480
Casing Logger	480
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.1/63
pH / Fluid Loss	10.0/8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.5@ 70F
Rmf @ Meas. Temp	1.13@ 70F
Rmc @ Meas. Temp	1.8 @ 70F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.85@ 124F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	////
Maximum Recorded Temperature	124F
Equipment Number	1523
Location	HAYS, KANSAS
Recorded By	GUS PFANENSTIEL
Witnessed By	MARC DOWNING

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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: BREWSTER NORTH HALF MILE SOUTH OF RD. G
EAST INTO.

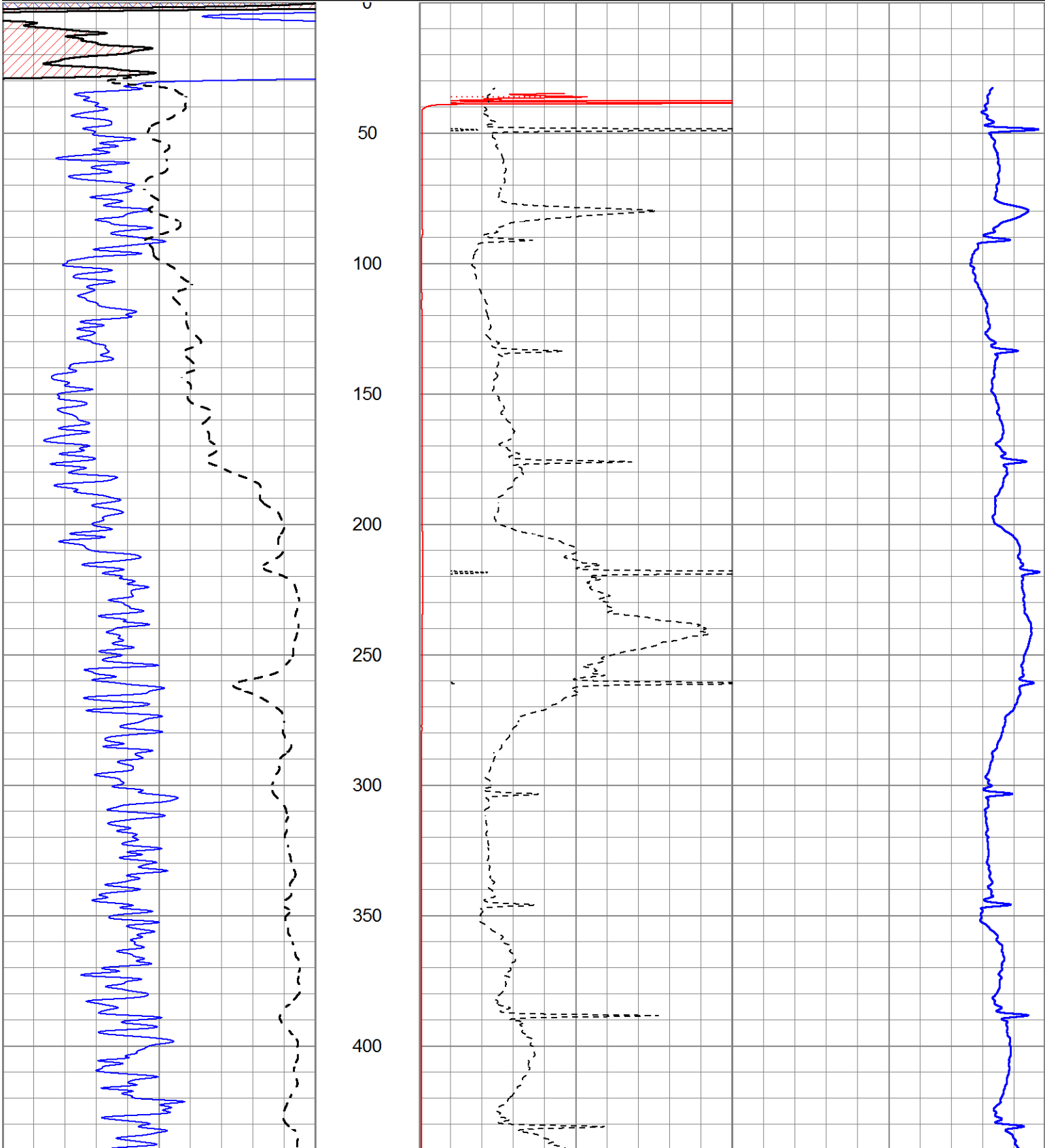


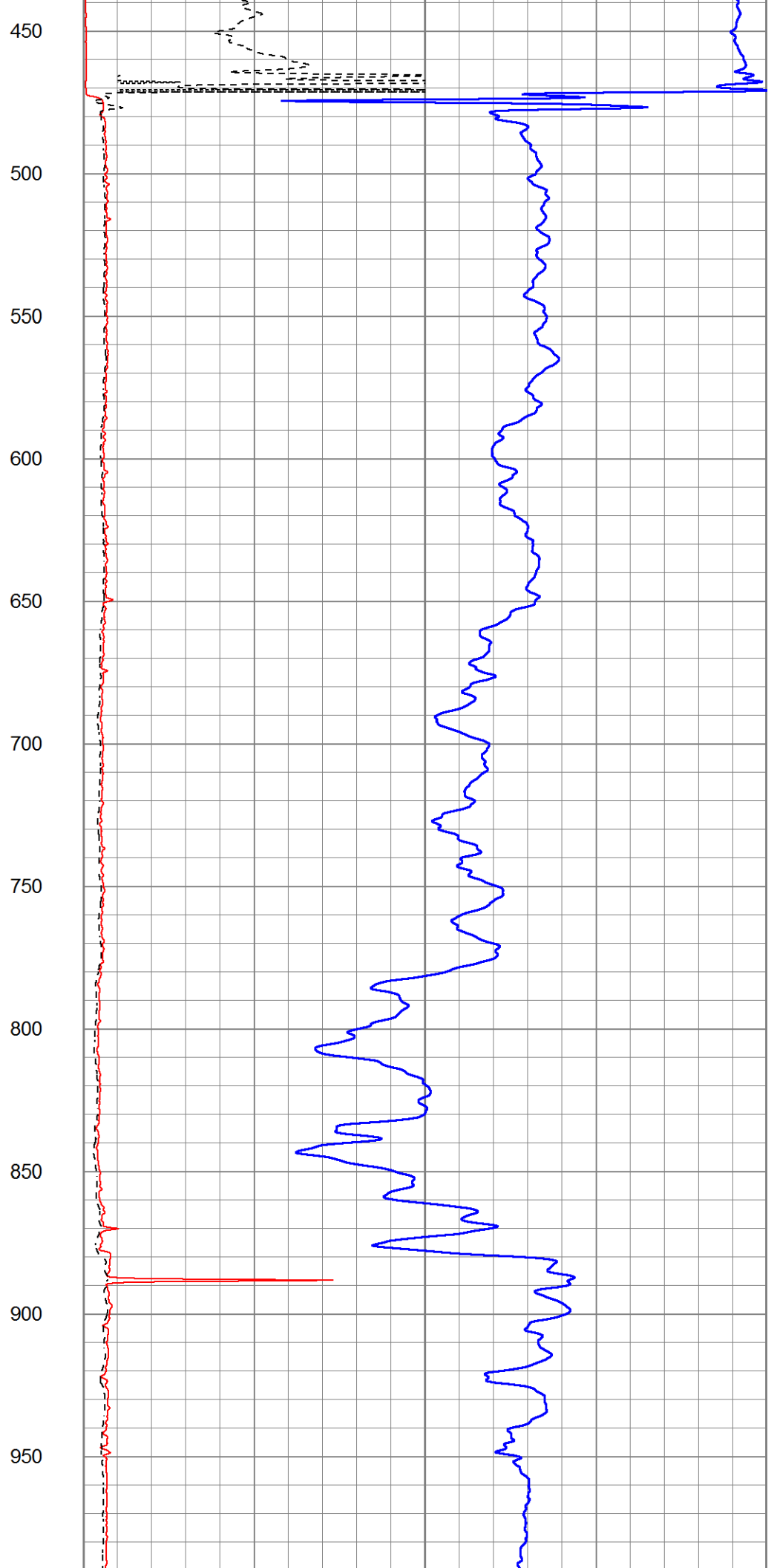
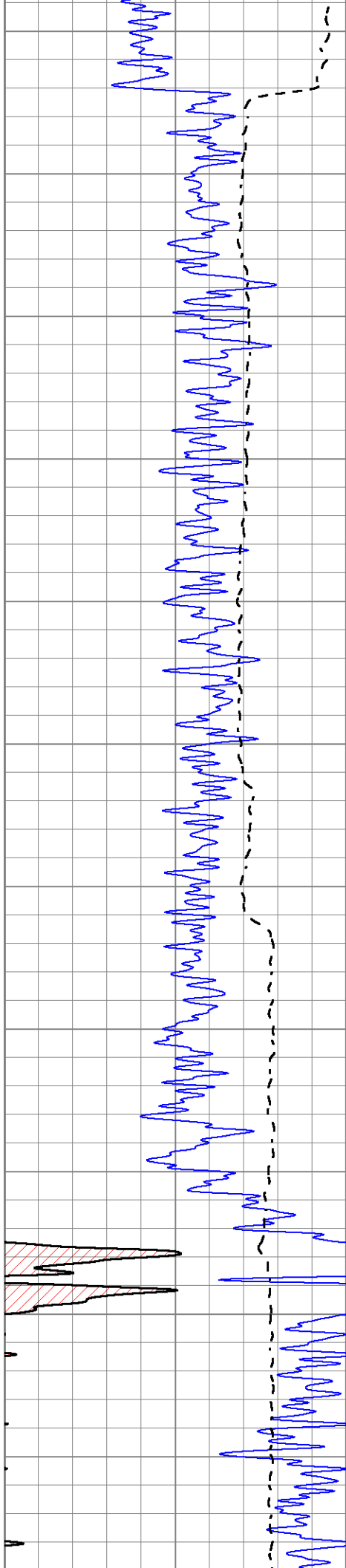
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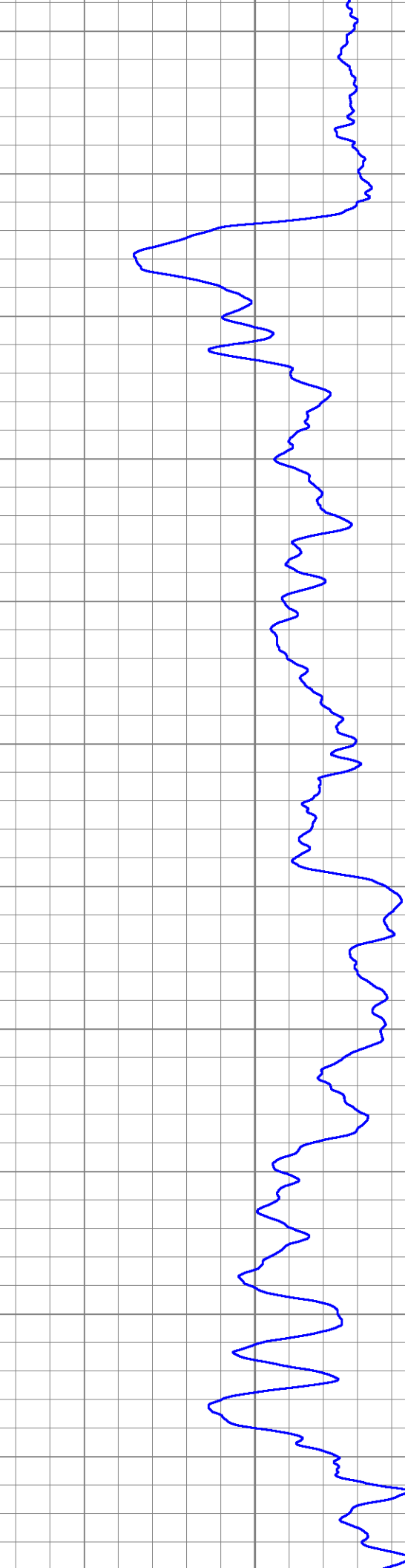
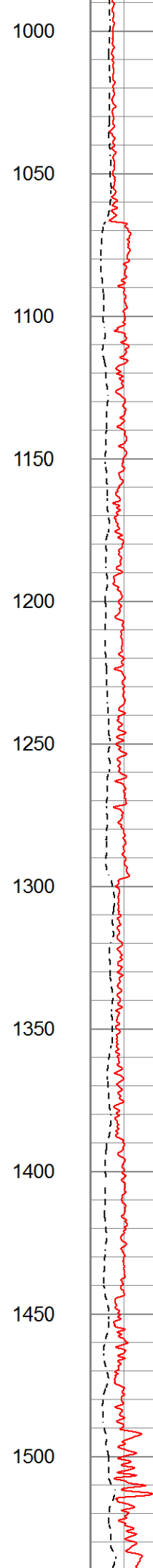
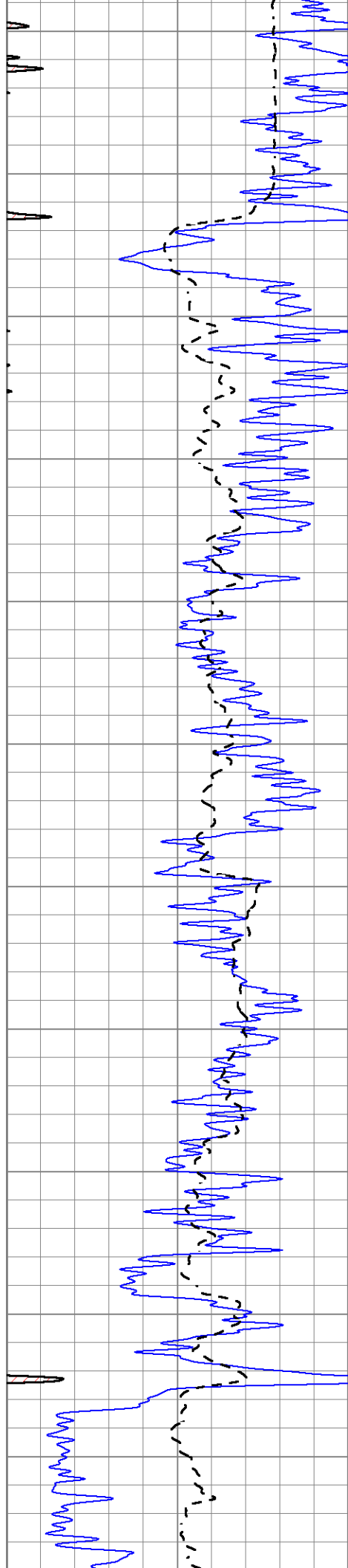
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 Dataset Pathname pass3.1
 Presentation Format _dil2
 Dataset Creation Thu May 13 06:20:53 2021
 Charted by Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

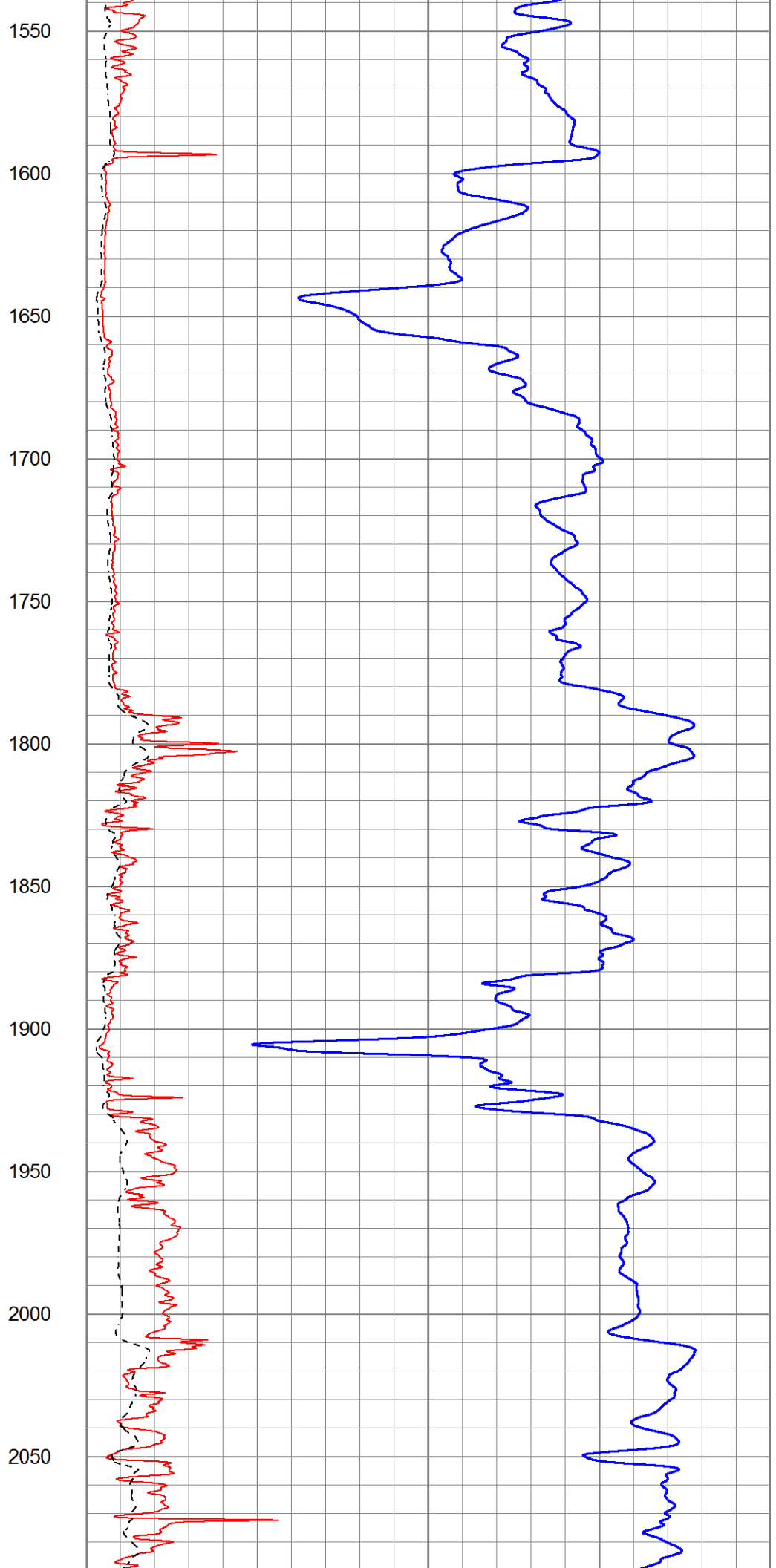
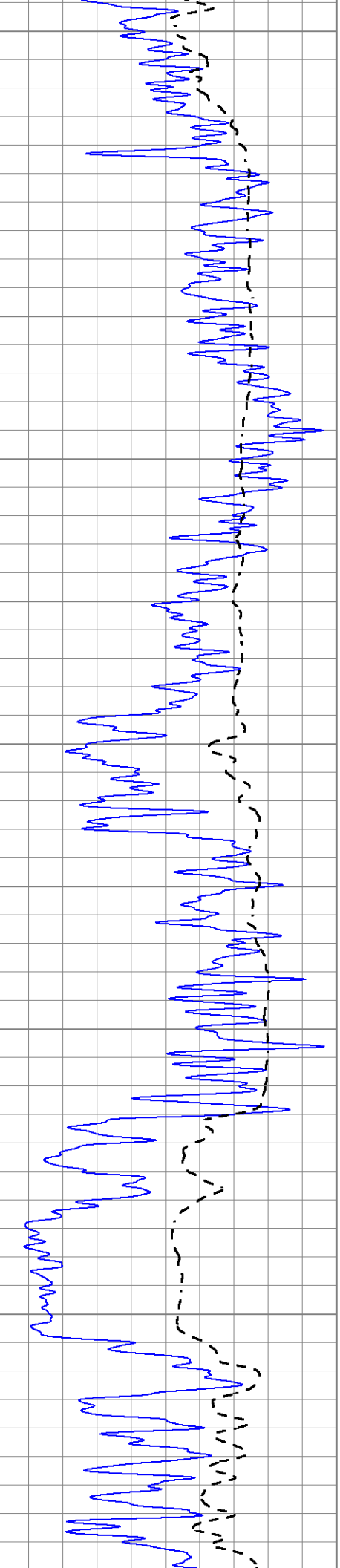
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

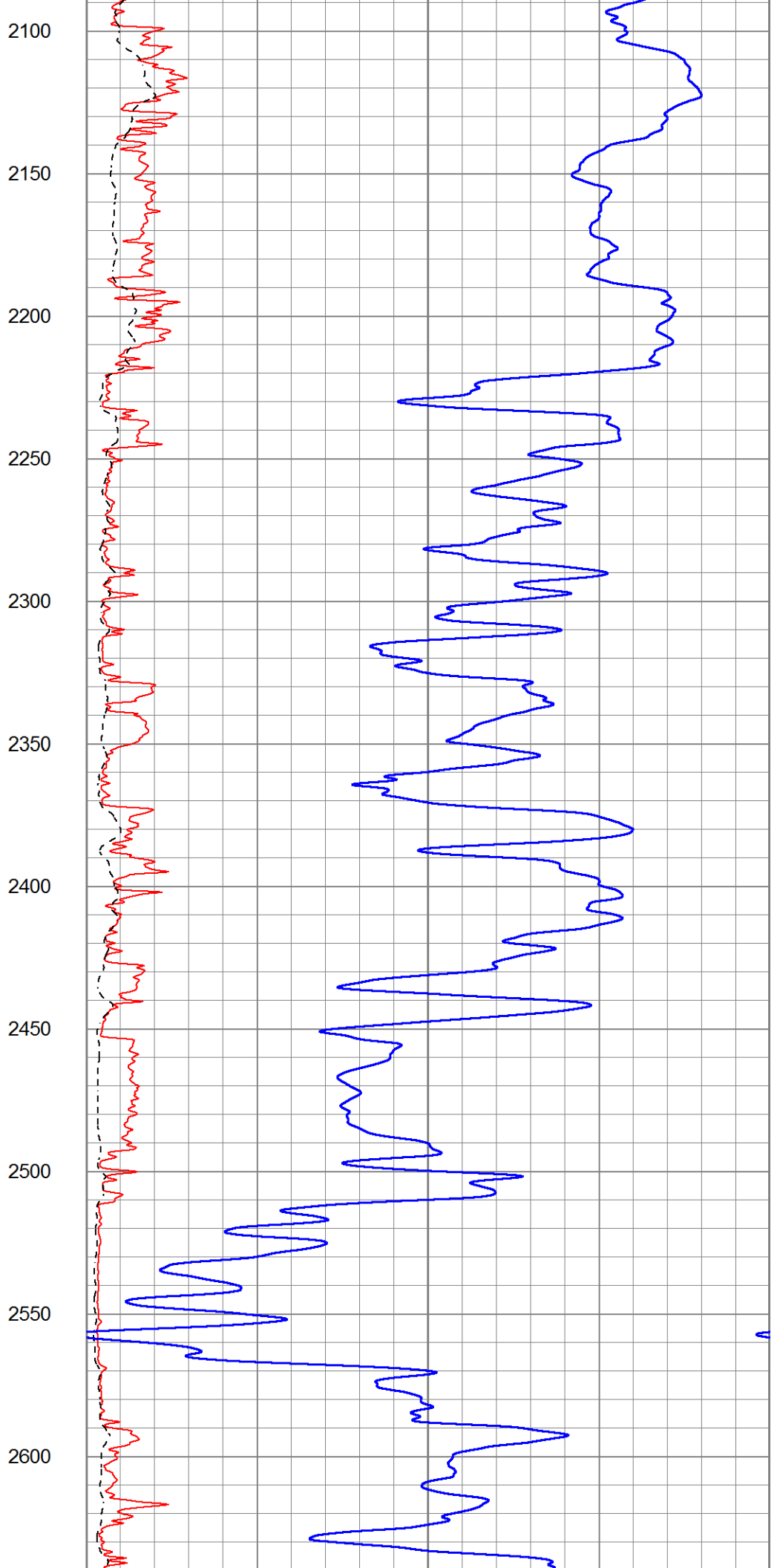
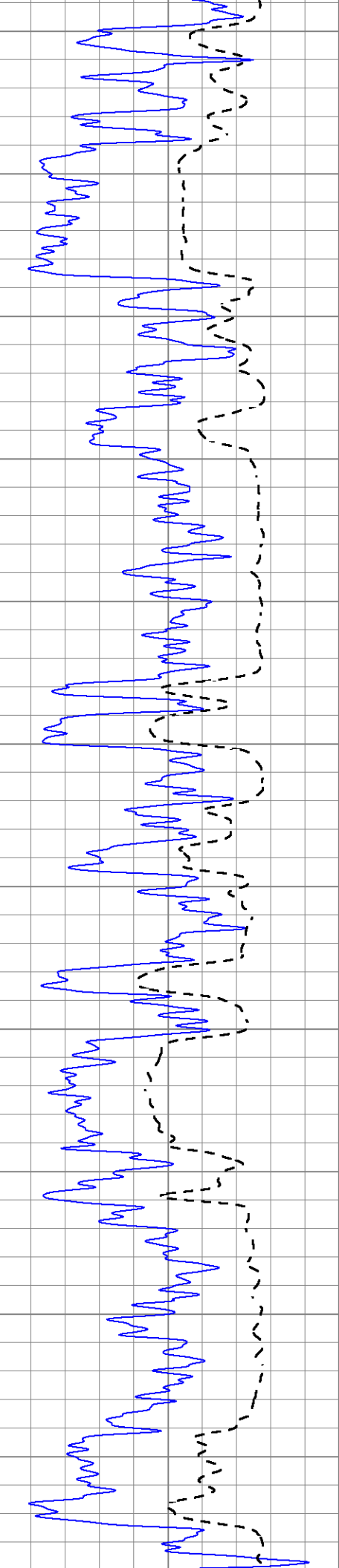


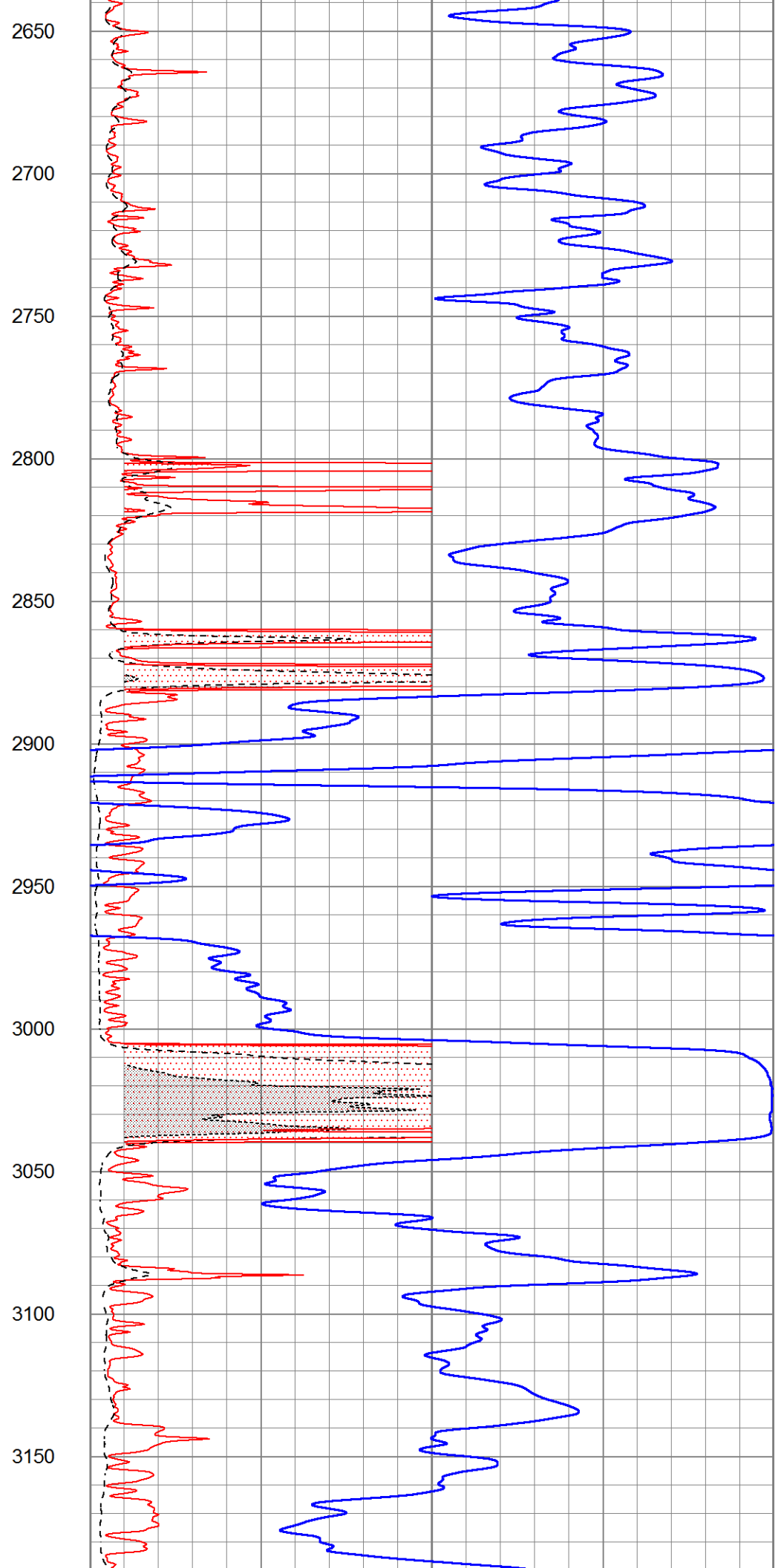
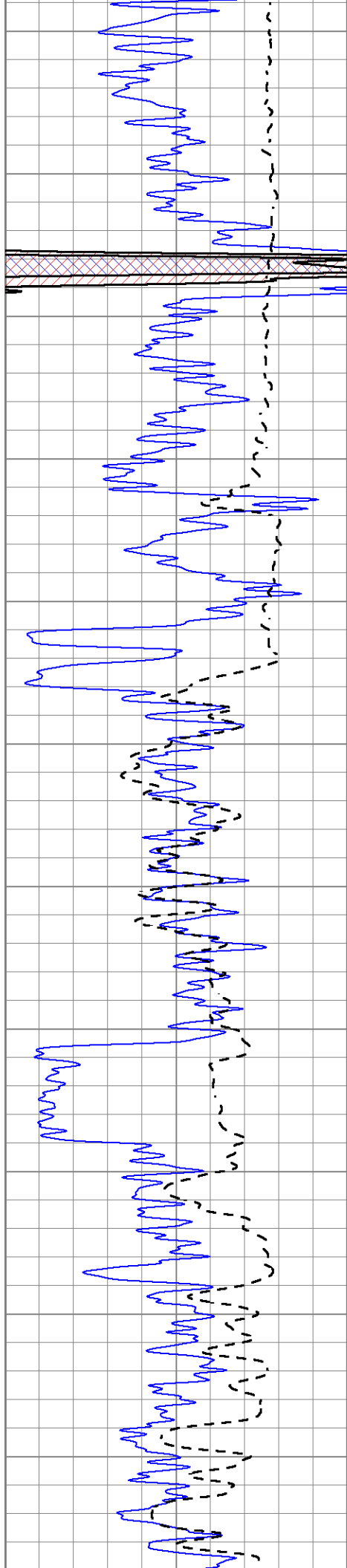


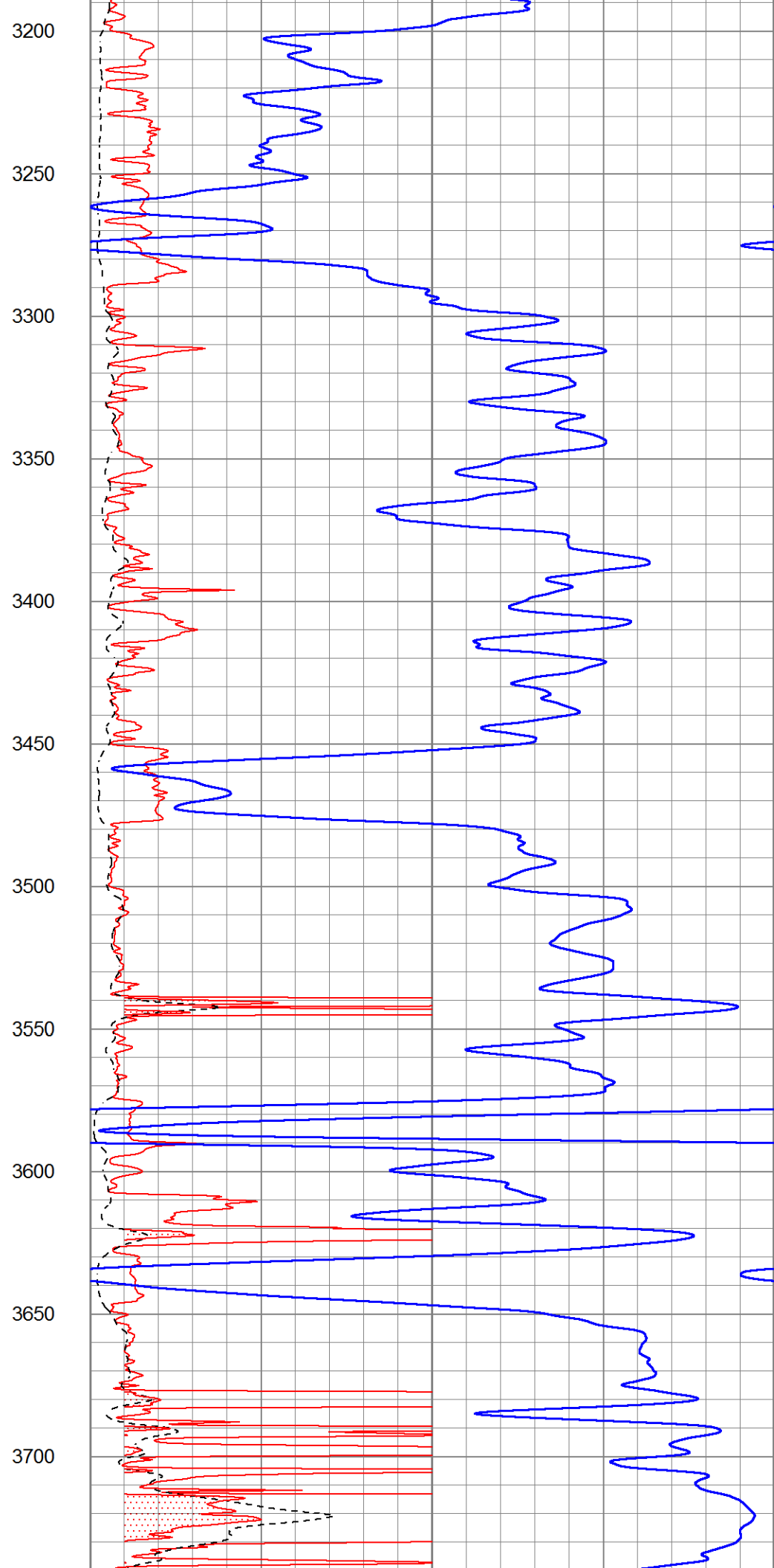
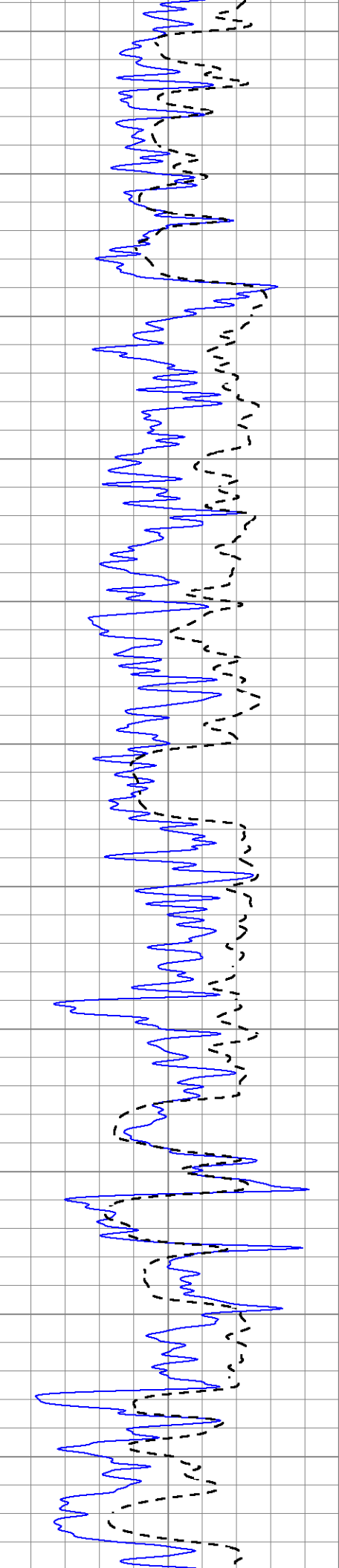


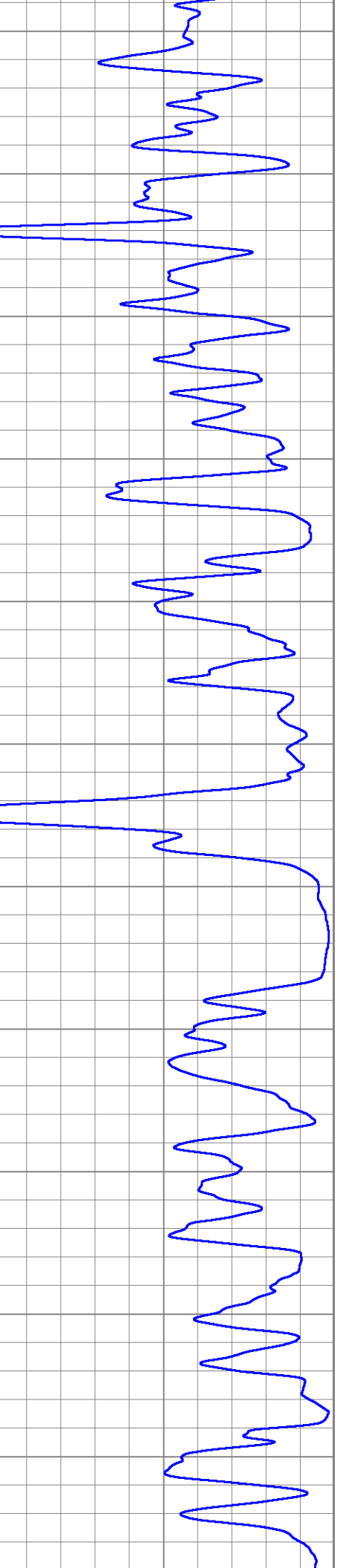
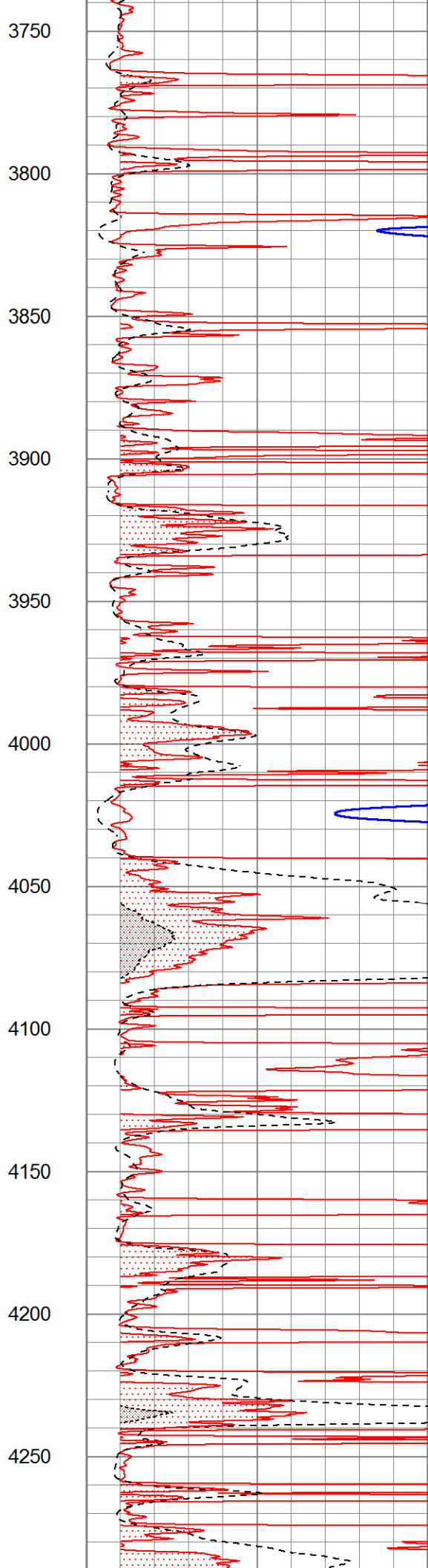
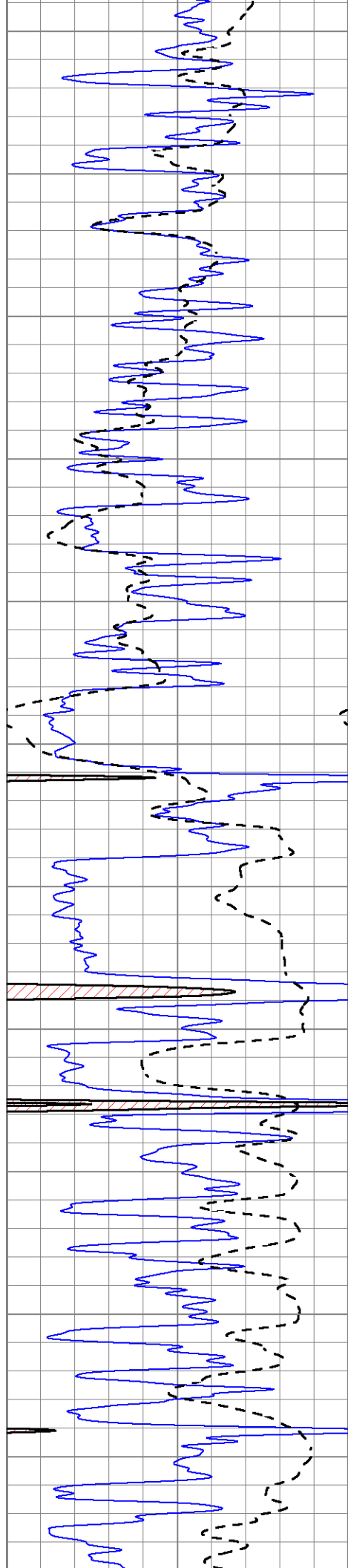
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050

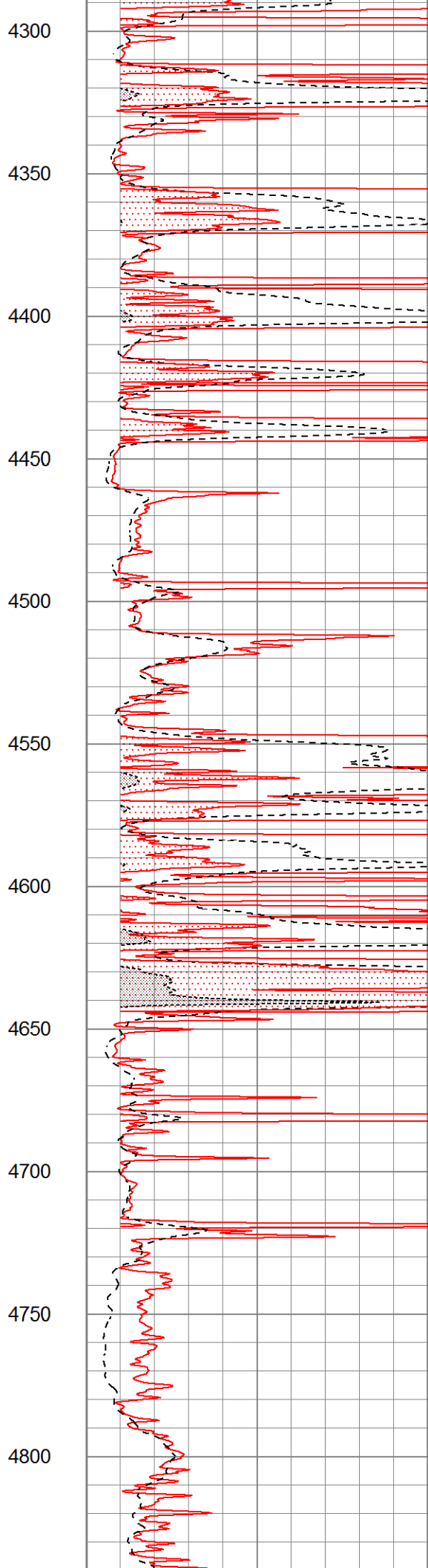
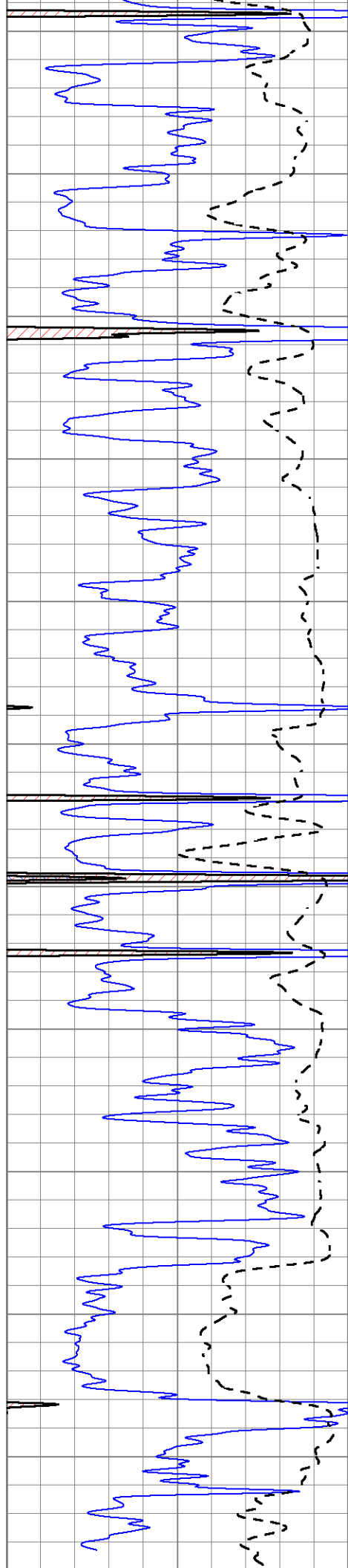


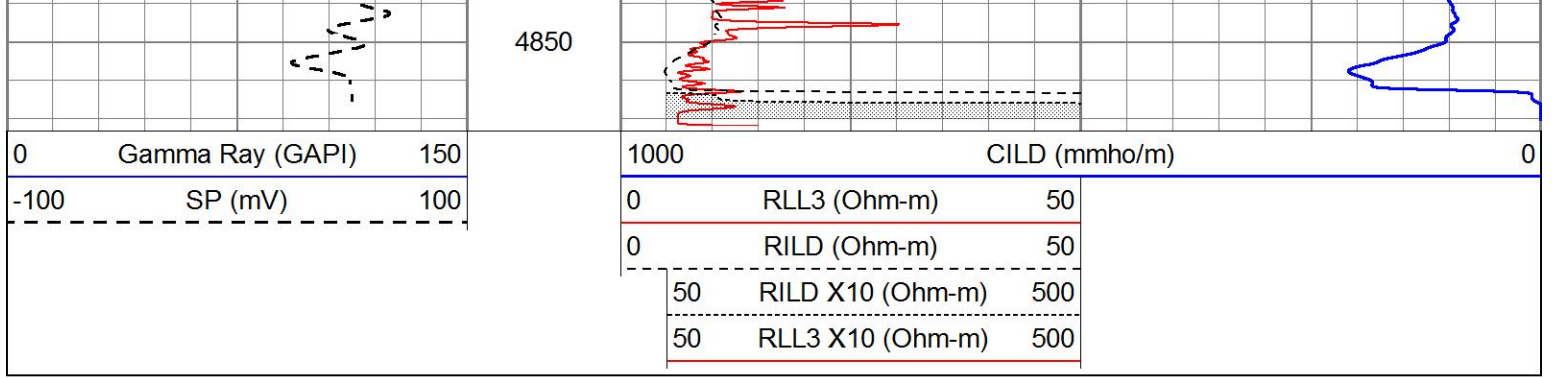






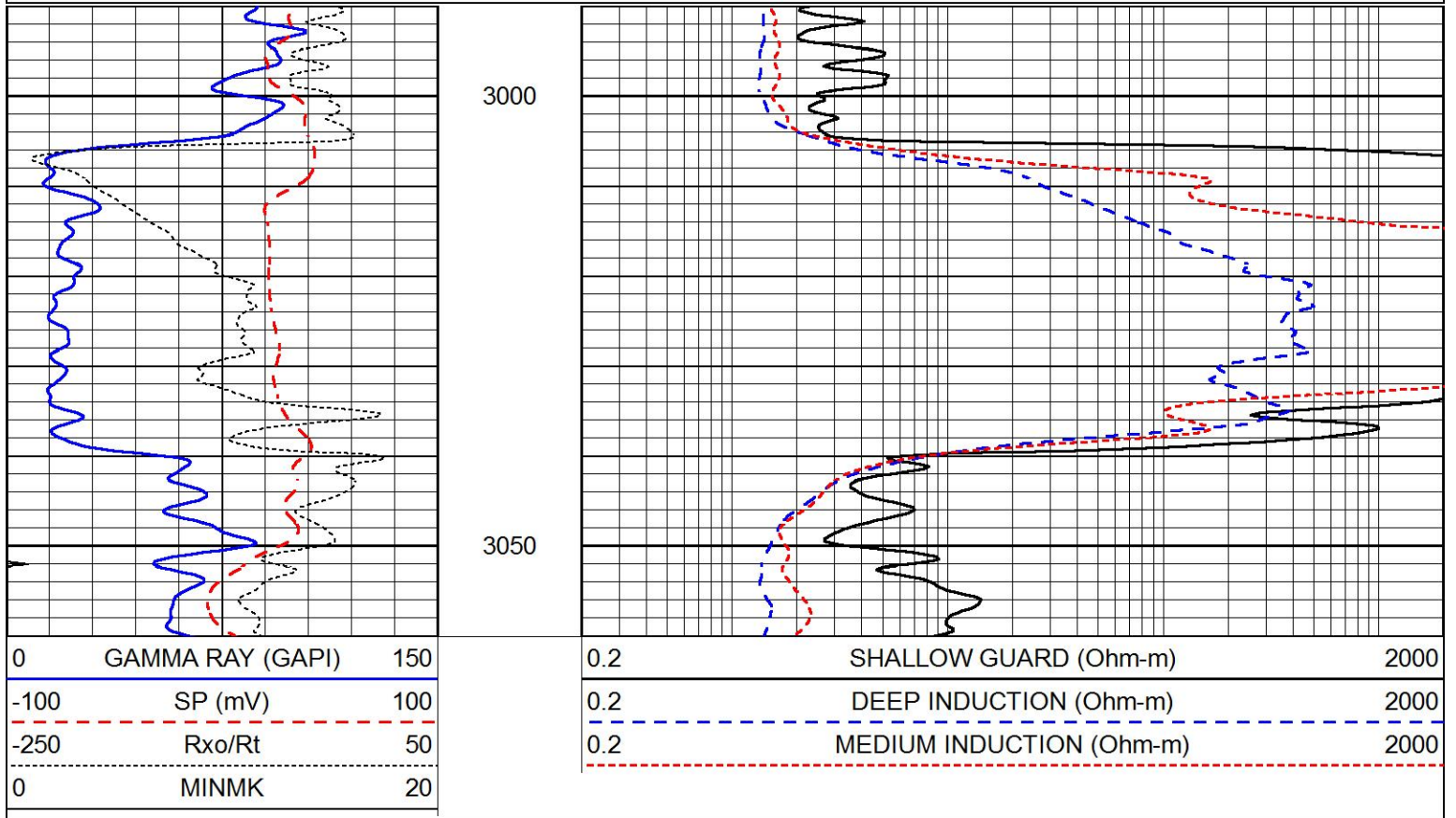






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 Dataset Pathname pass3.1
 Presentation Format _dil
 Dataset Creation Thu May 13 06:20:53 2021
 Charted by Depth in Feet scaled 1:240

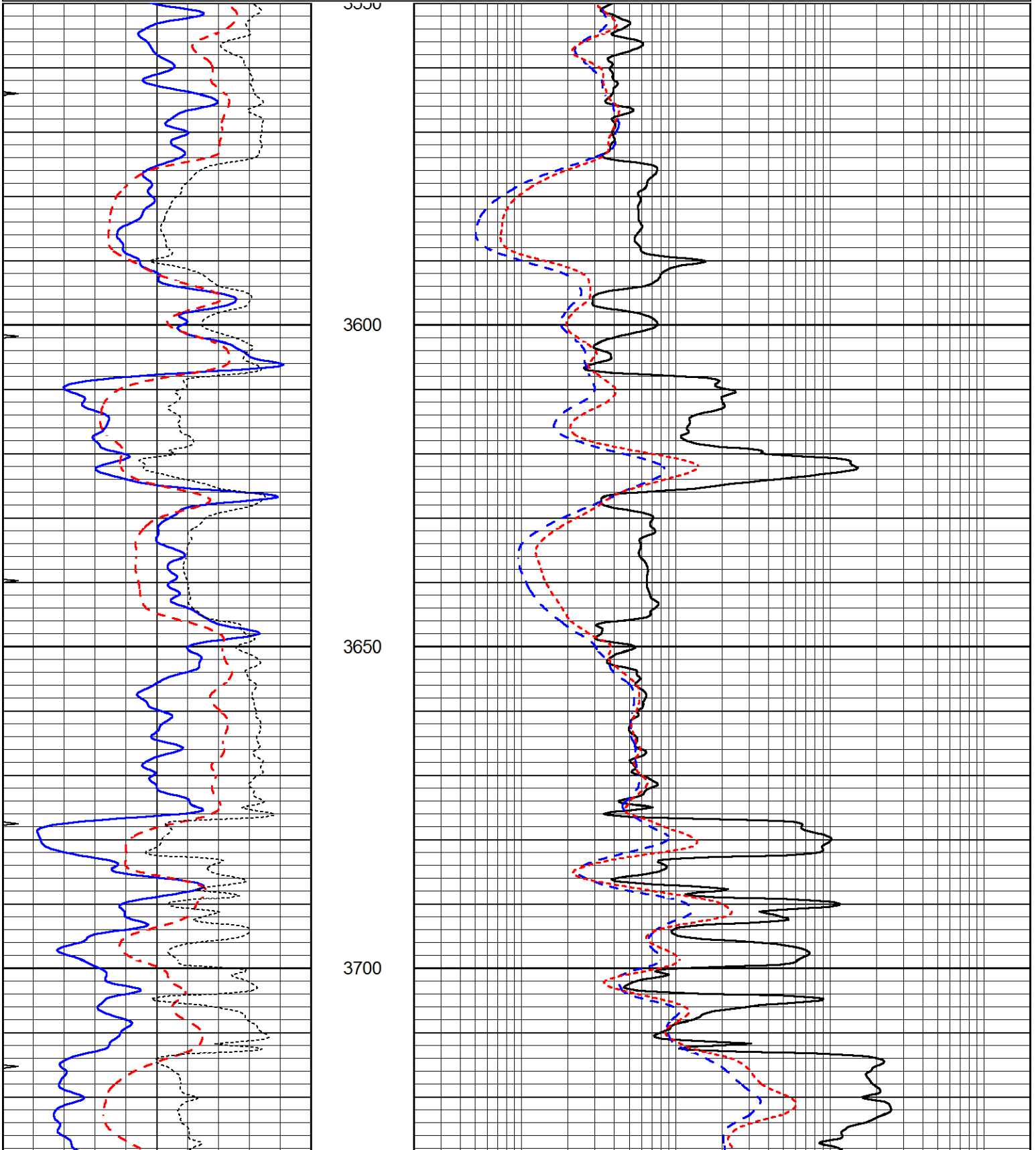


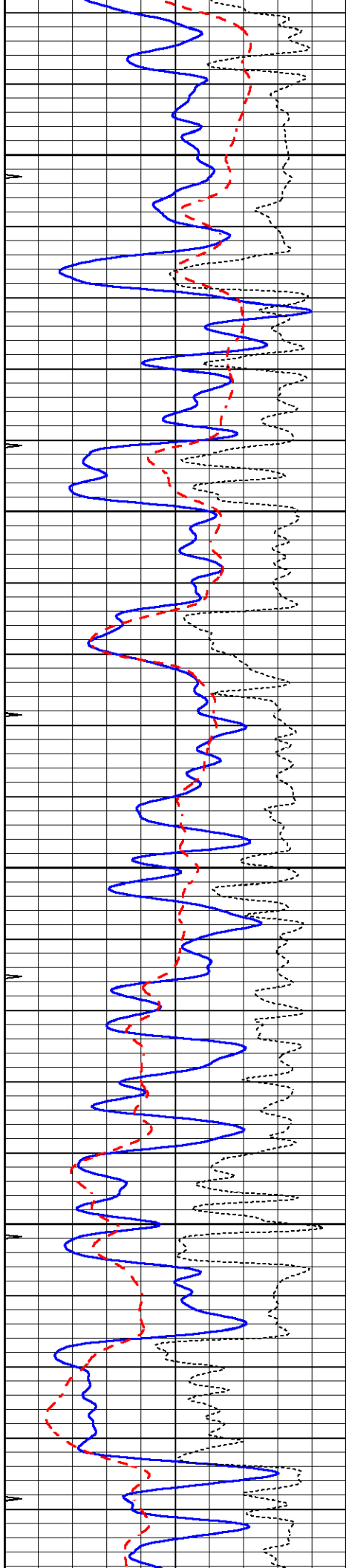
MAIN PASS

Database File 5435ddn.db
 Dataset Pathname pass3.1
 Presentation Format _dil
 Dataset Creation Thu May 13 06:20:53 2021
 Charted by Depth in Feet scaled 1:240

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



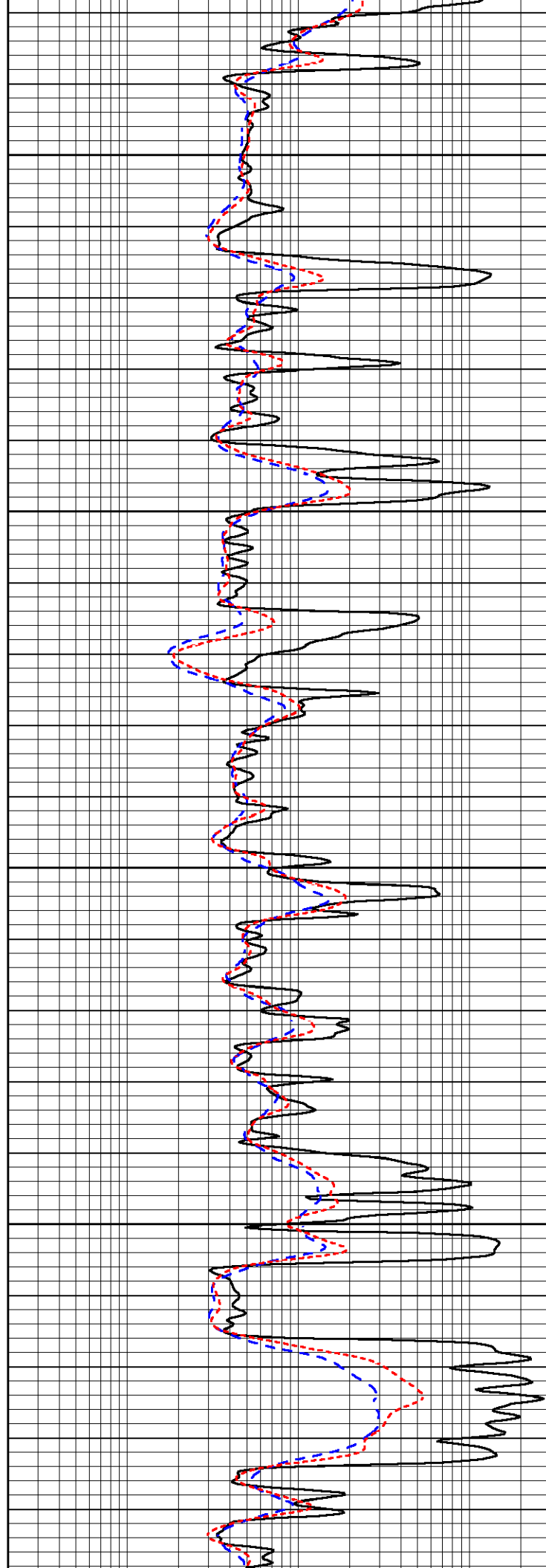


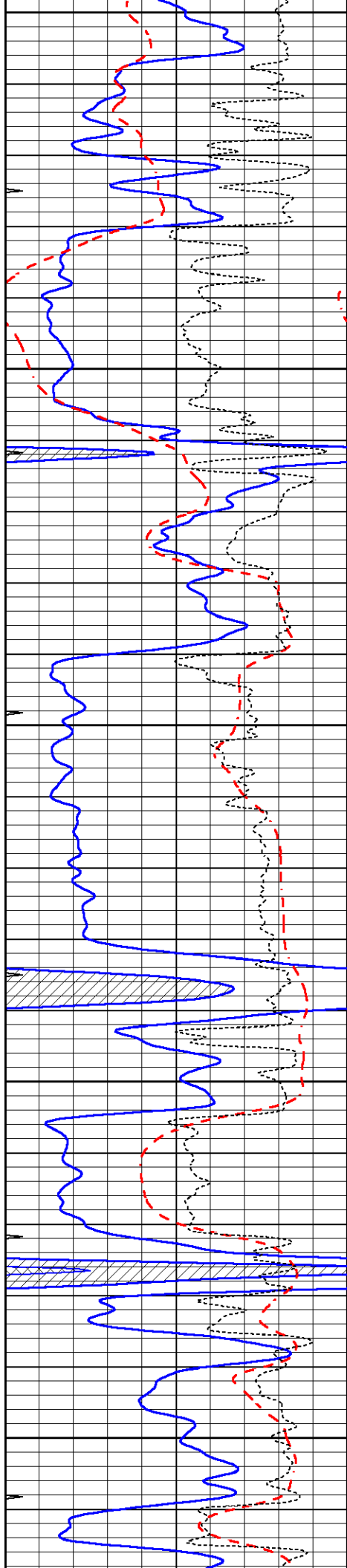
3750

3800

3850

3900





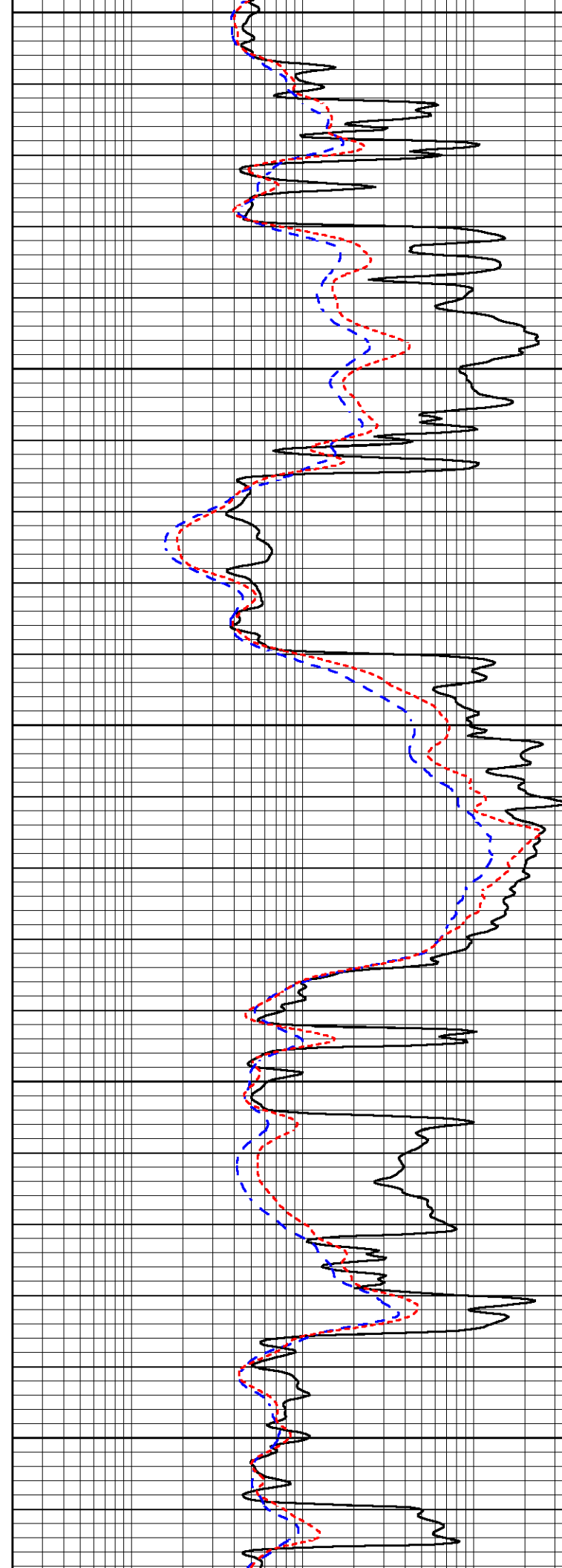
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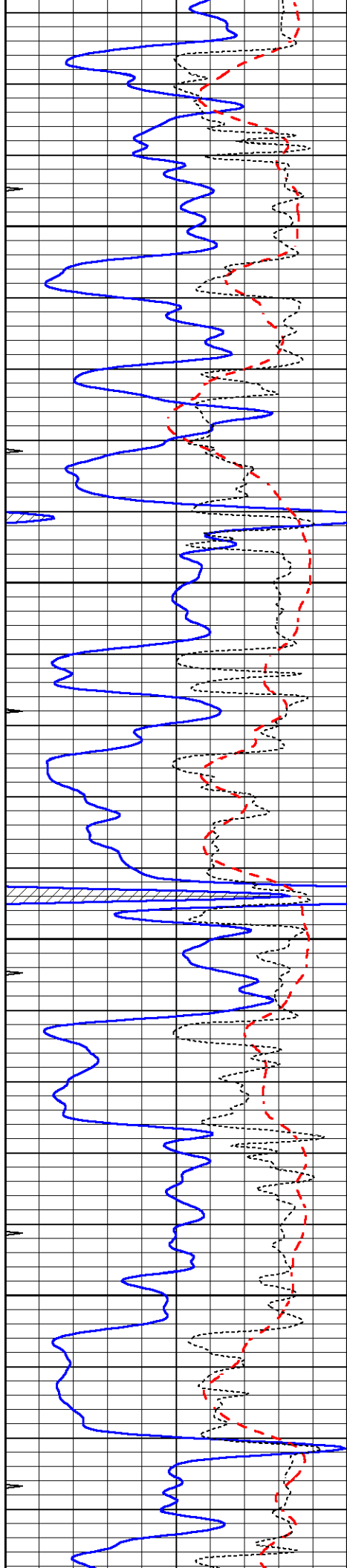
4000

4050

4100

4150



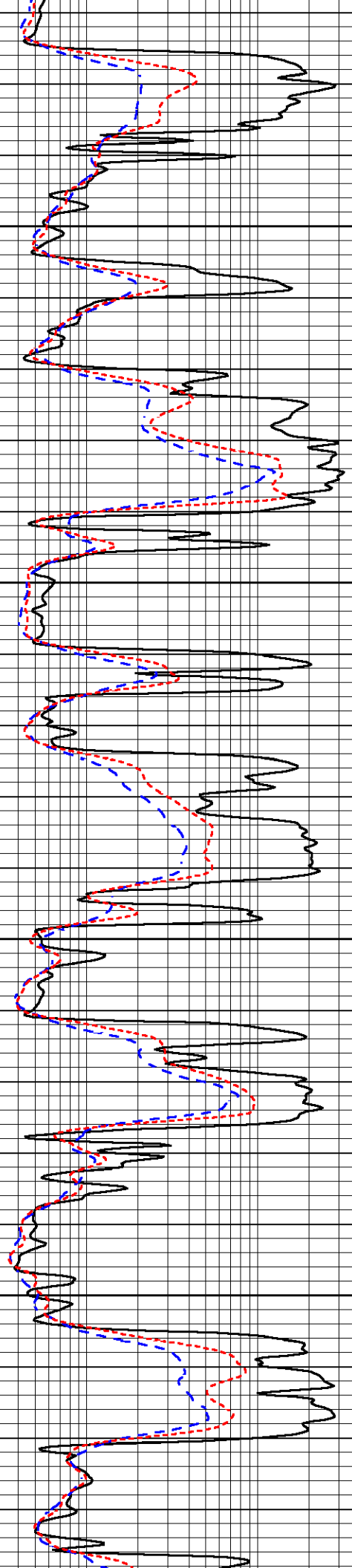


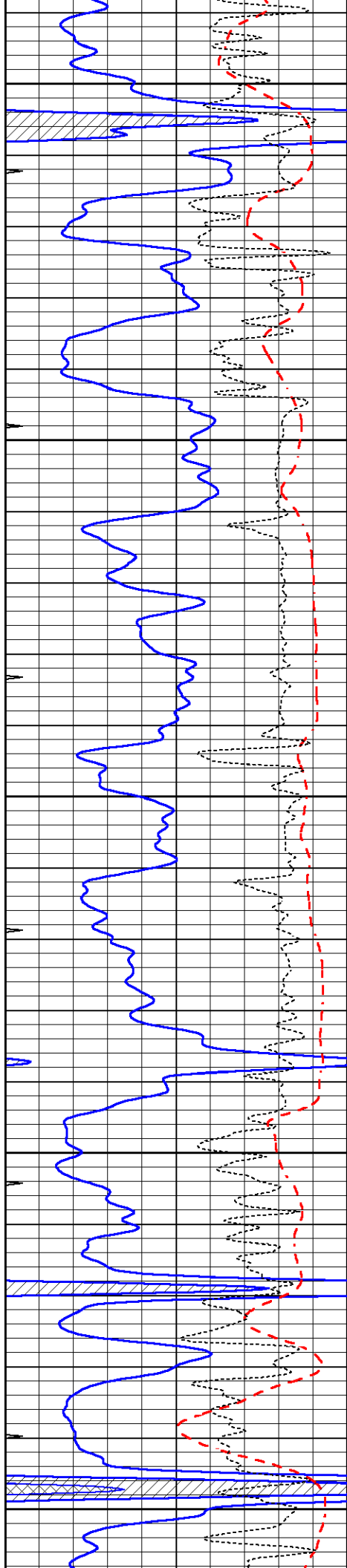
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4250

4300

4350





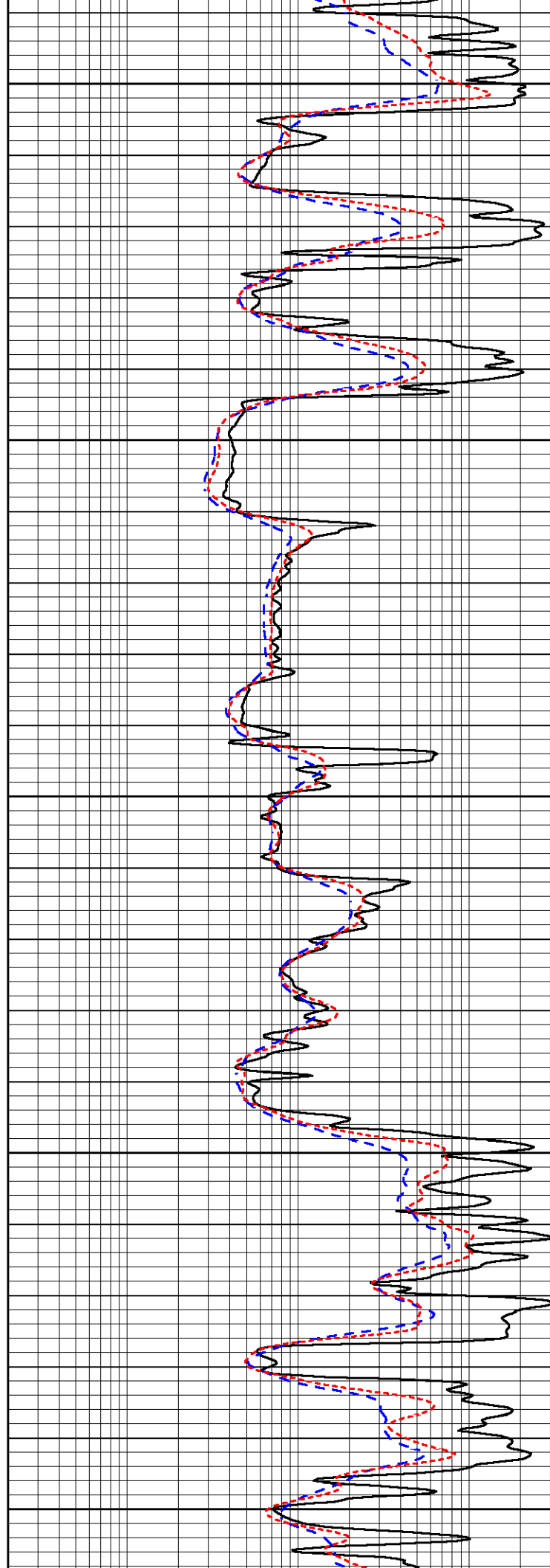
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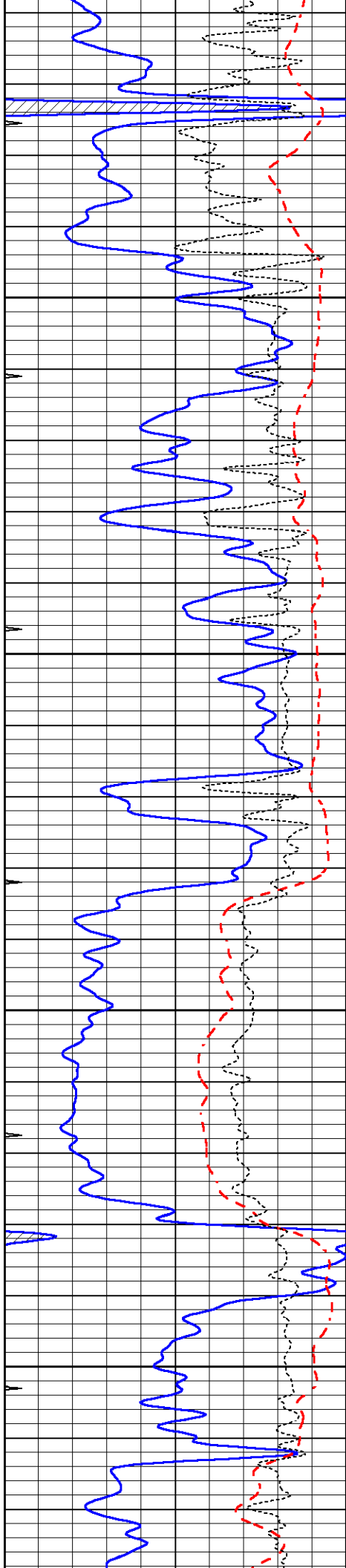
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4500

4550

4600



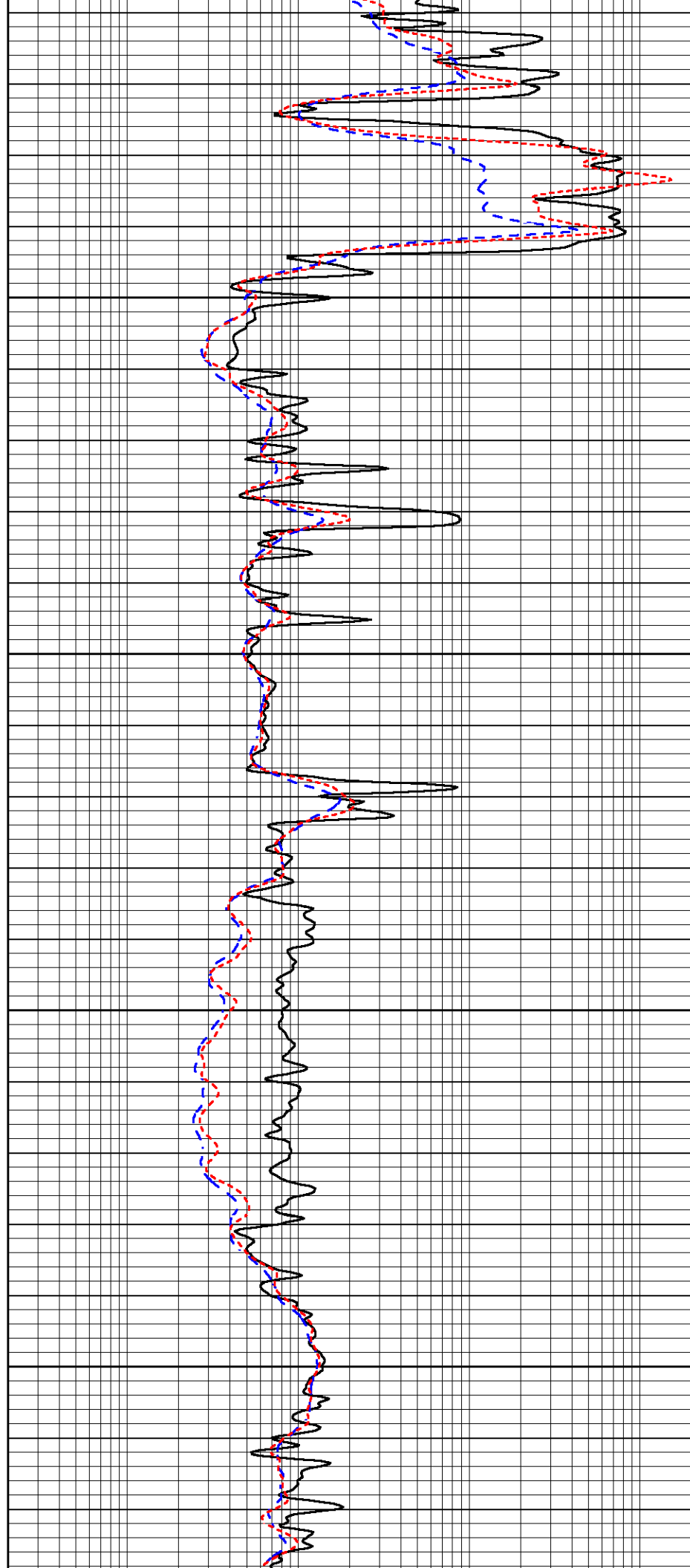


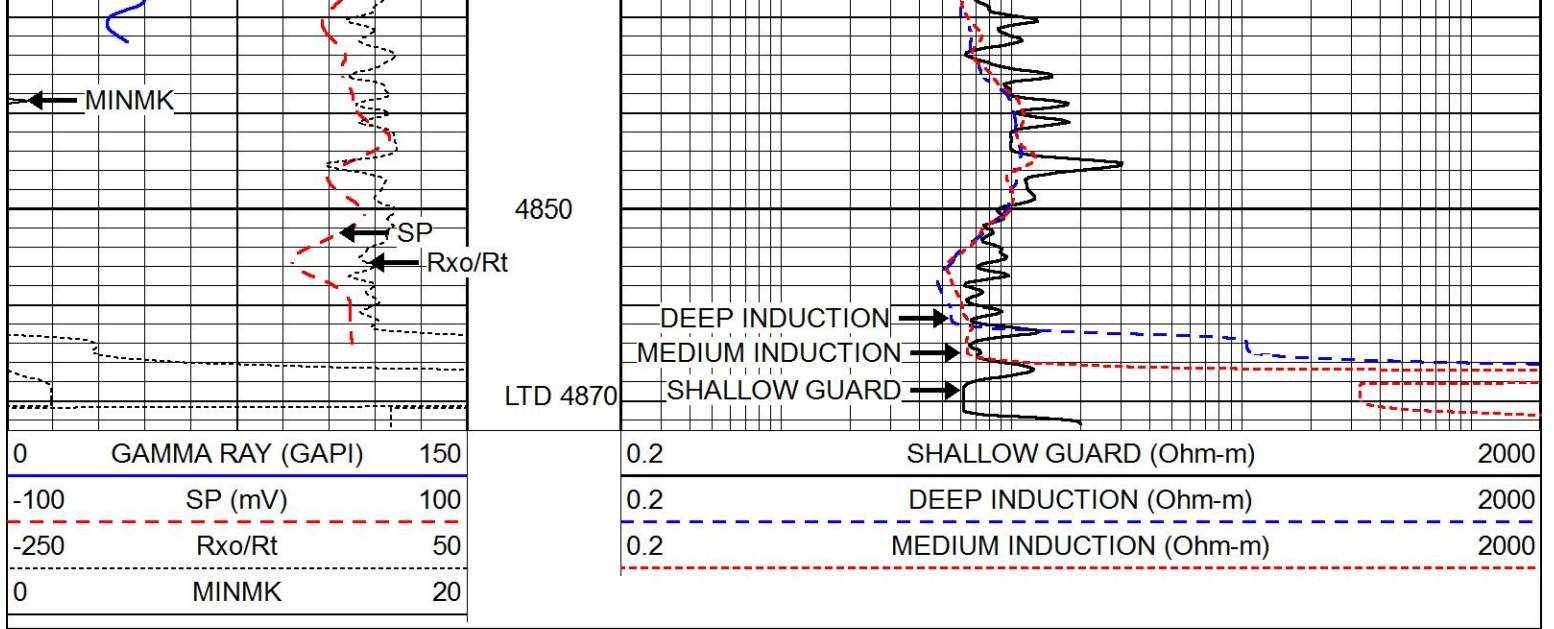
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4700

4750

4800

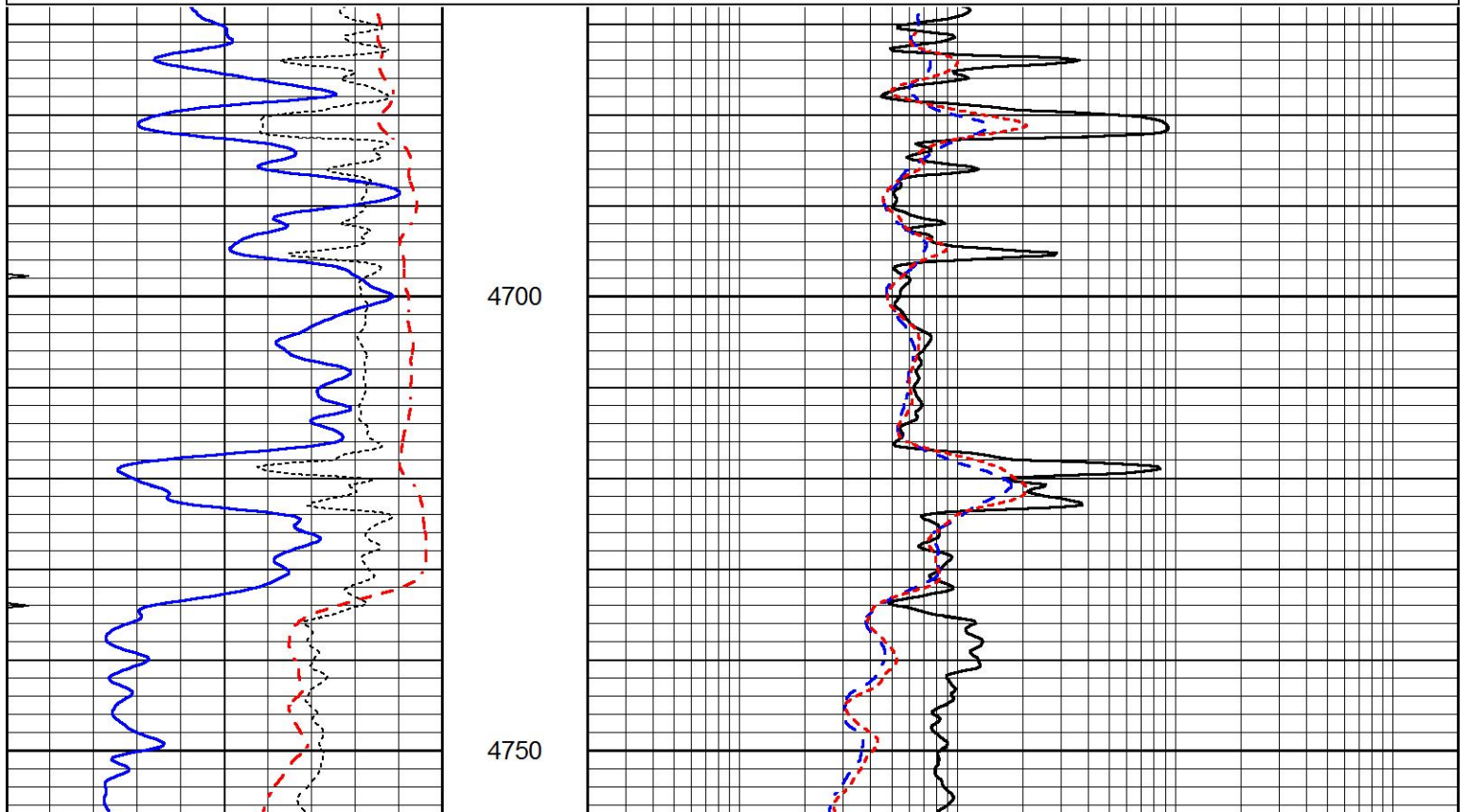


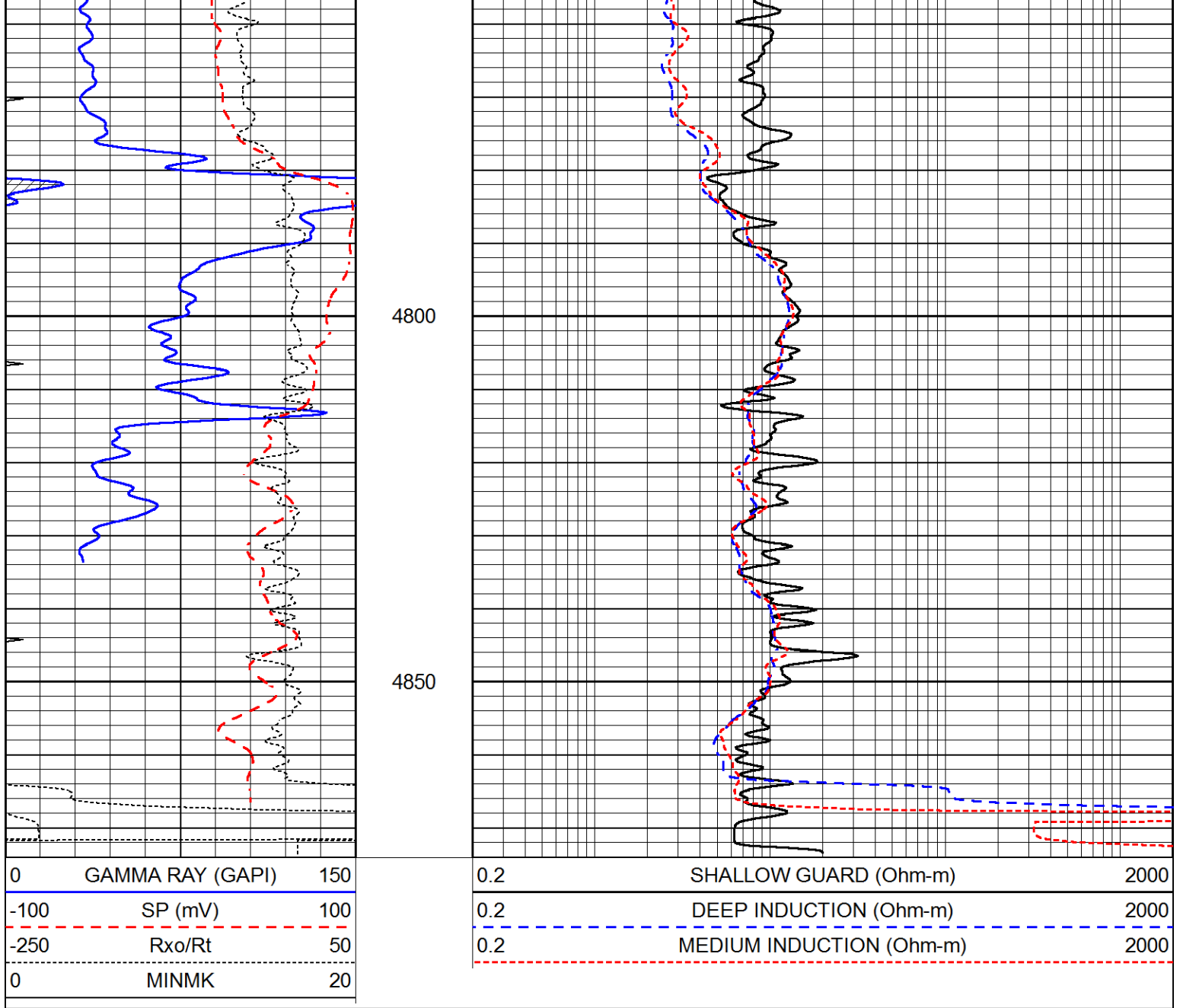


REPEAT SECTION

Database File 5435ddn.db
 Dataset Pathname pass2.1
 Presentation Format _dil
 Dataset Creation Thu May 13 06:23:42 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			





Calibration Report

Database File 5435ddn.db
 Dataset Pathname pass2.1
 Dataset Creation Thu May 13 06:23:42 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

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.032	0.757	V	0.000	464.000	mmho/m	625.000	0.700

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	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
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	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	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	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	

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	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	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