



DUAL INDUCTION LOG

Company MULL DRILLING COMPANY, INC.

Well FUNK #1-7

Field LANGER

County NESS State KANSAS

Location: API #: 15-135-26173-0000

307' FSL & 1606' FWL
SW - SE - SW

SEC 7 TWP 18S RGE 22W

Permanent Datum GROUND LEVEL Elevation 2227
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
CDL/CNL/PE
MEL/SONIC

Elevation

K.B. 2235
D.F. 2233
G.L. 2227

Date	5/25/22		
Run Number	ONE		
Depth Driller	4330		
Depth Logger	4326		
Bottom Logged Interval	4324		
Top Log Interval	00		
Casing Driller	8 5/8"@266'		
Casing Logger	266		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES: 1,800 PPM	
Density / Viscosity	9.3/51		
pH / Fluid Loss	11.0/6.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.20@70F		
Rmf @ Meas. Temp	.900@70F		
Rmc @ Meas. Temp	1.44@70F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.706@119F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	2:00 P.M.		
Maximum Recorded Temperature	119F		
Equipment Number	8916		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	PHIL ASKEY		

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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:
BAZINE, KS., 6W. ON HWY 96 TO "RD. X", 3 1/2N. TO TANK BATTERY, 1/2E. ON LEASE RD., THEN
BACK S. PAST PUMPING UNIT

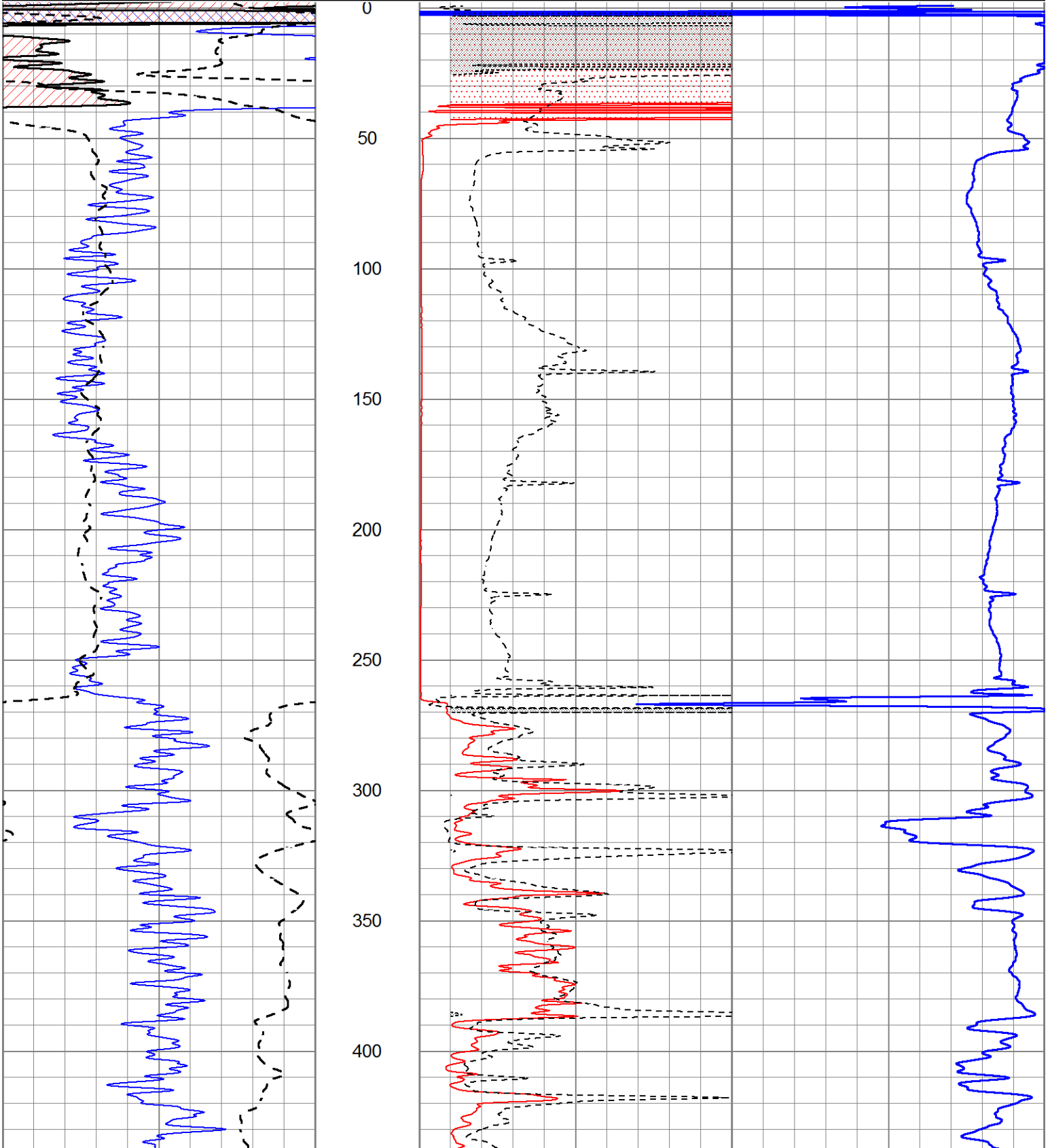


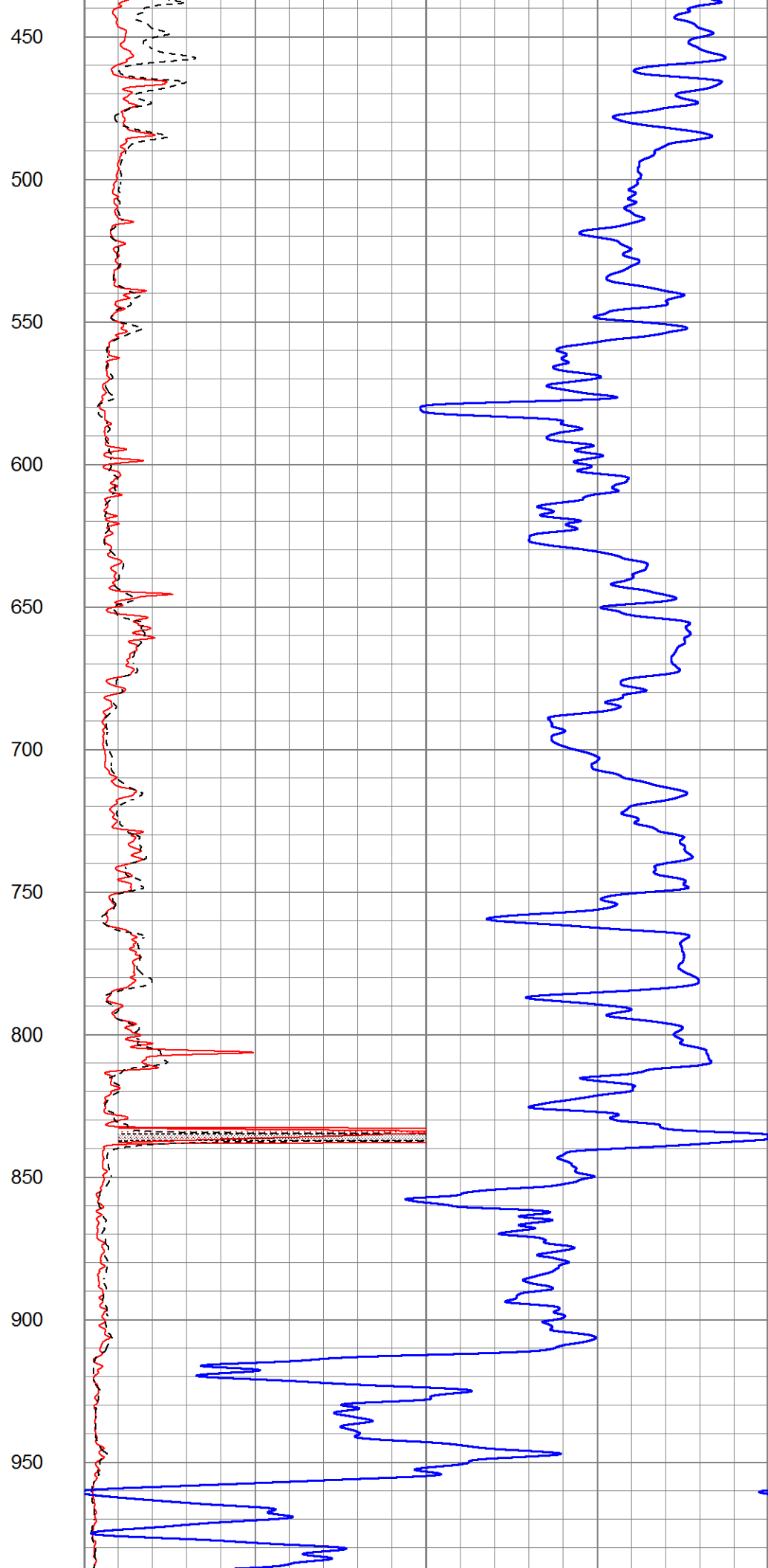
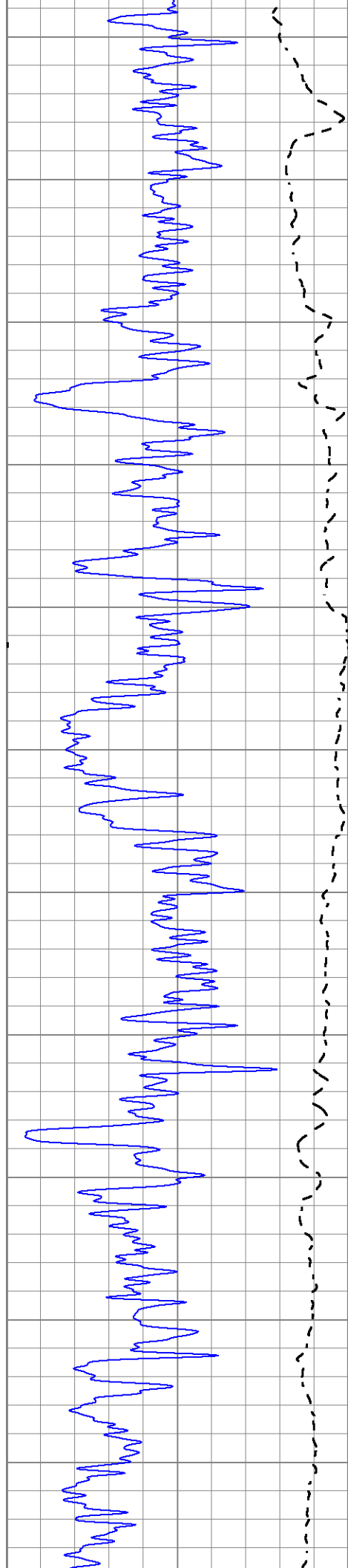
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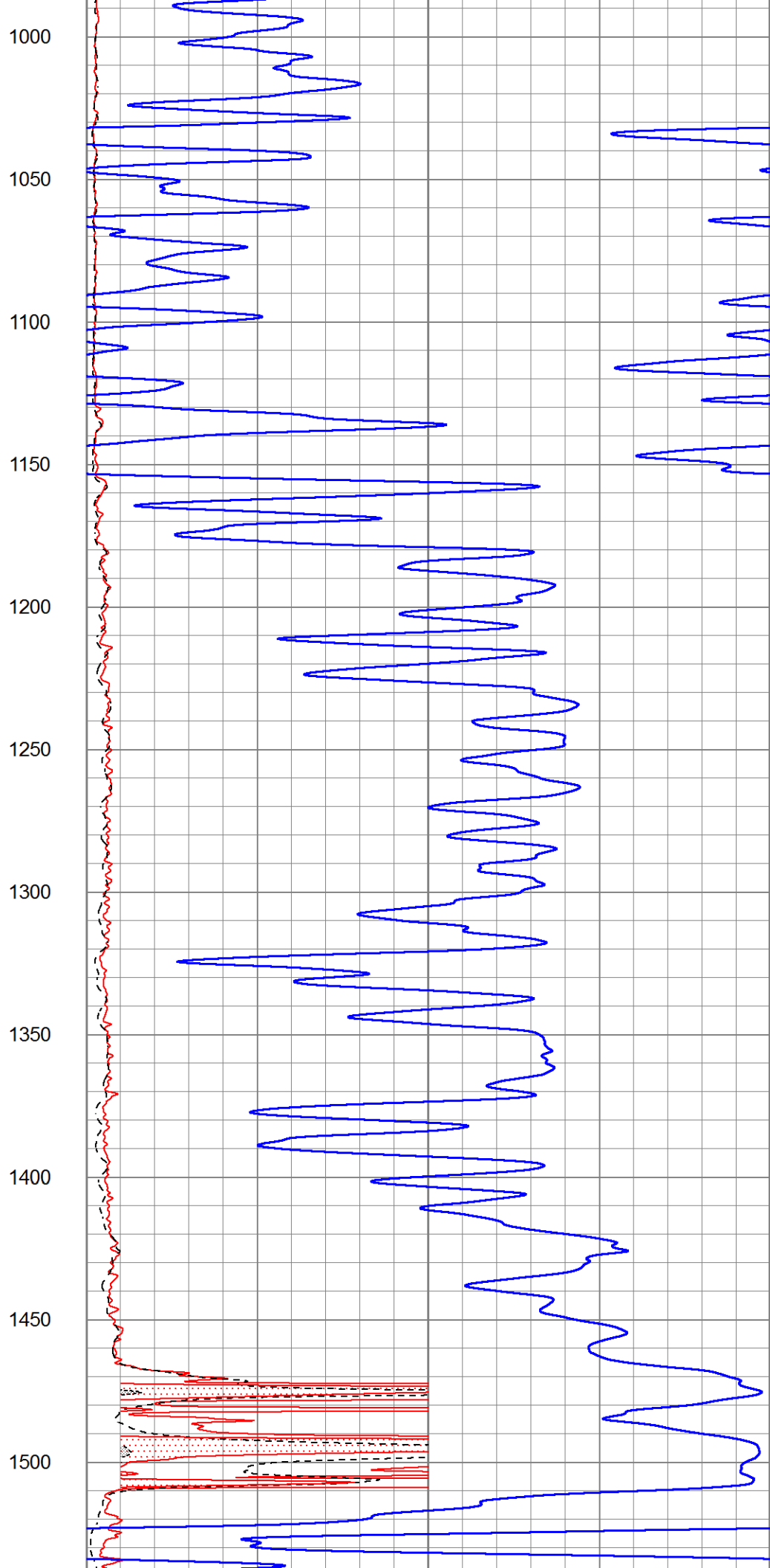
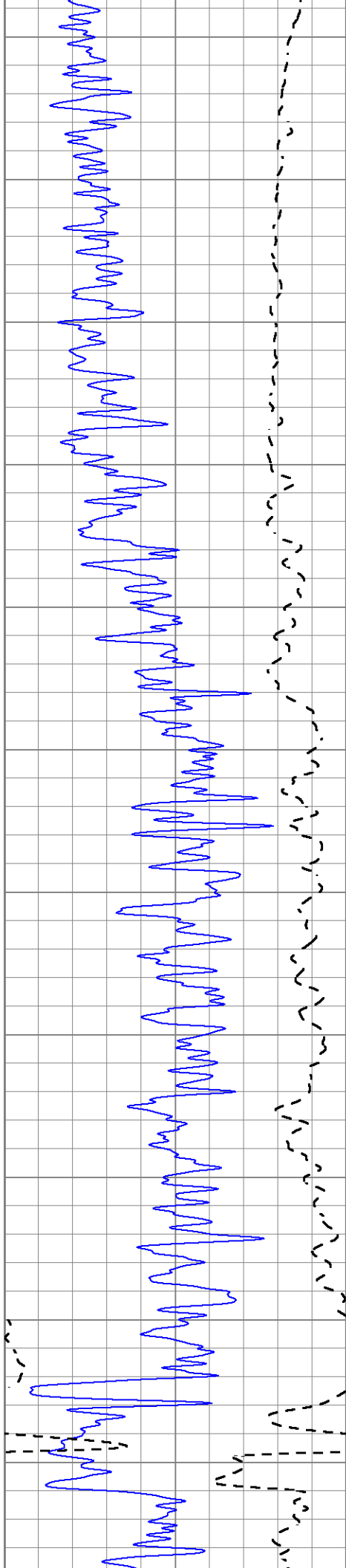
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 Charted by Depth in Feet scaled 1:600

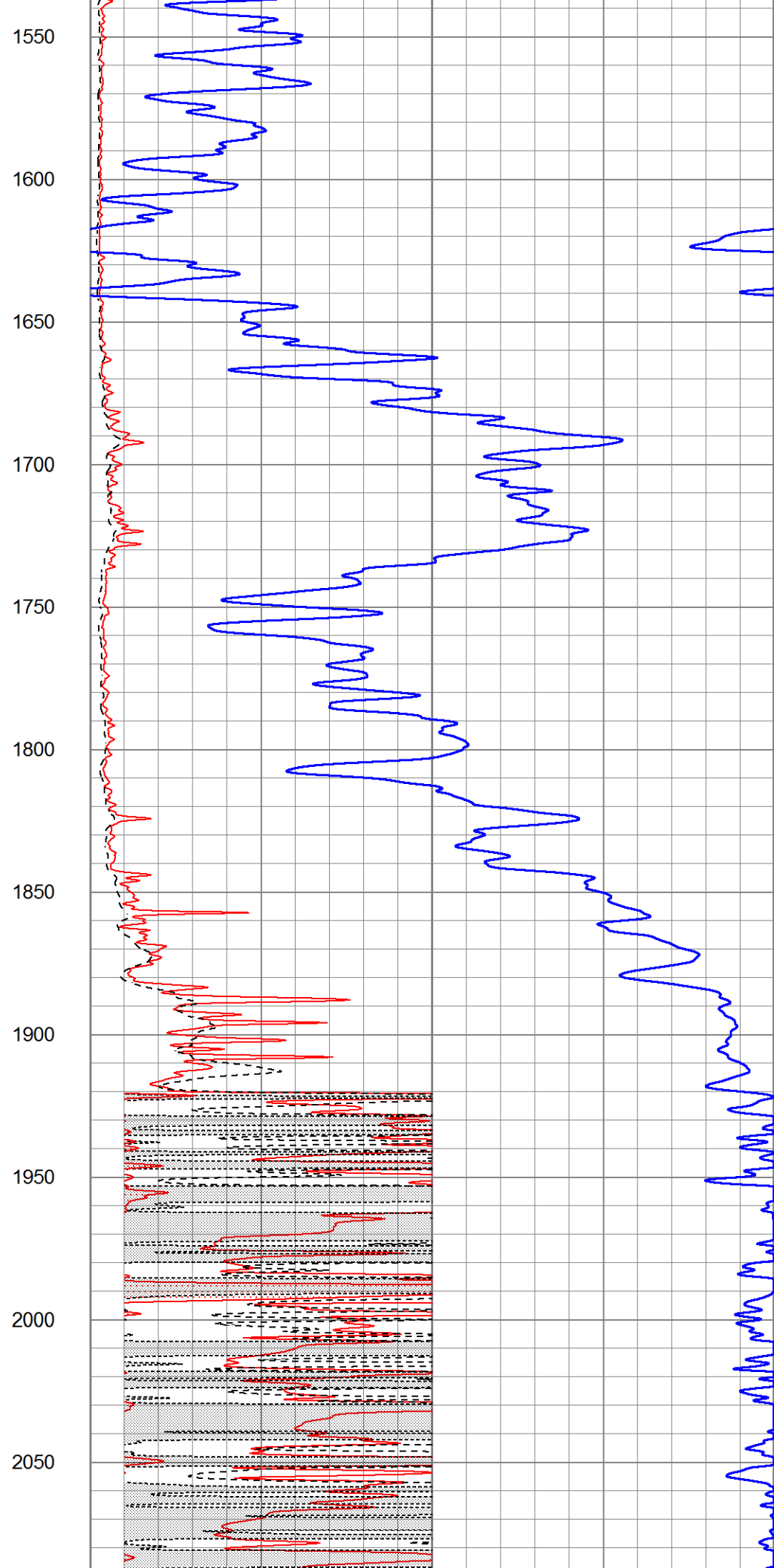
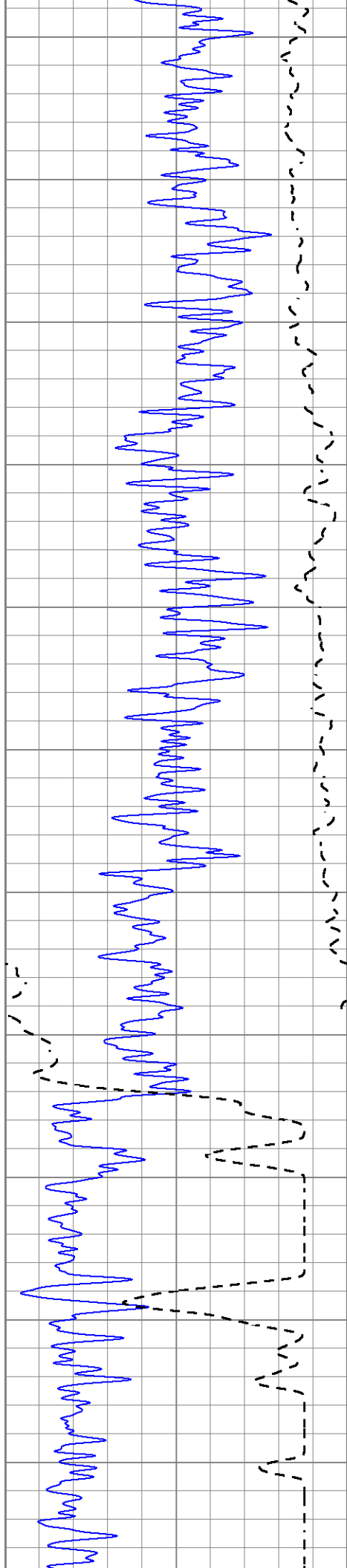
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-100	SP (mV)	100

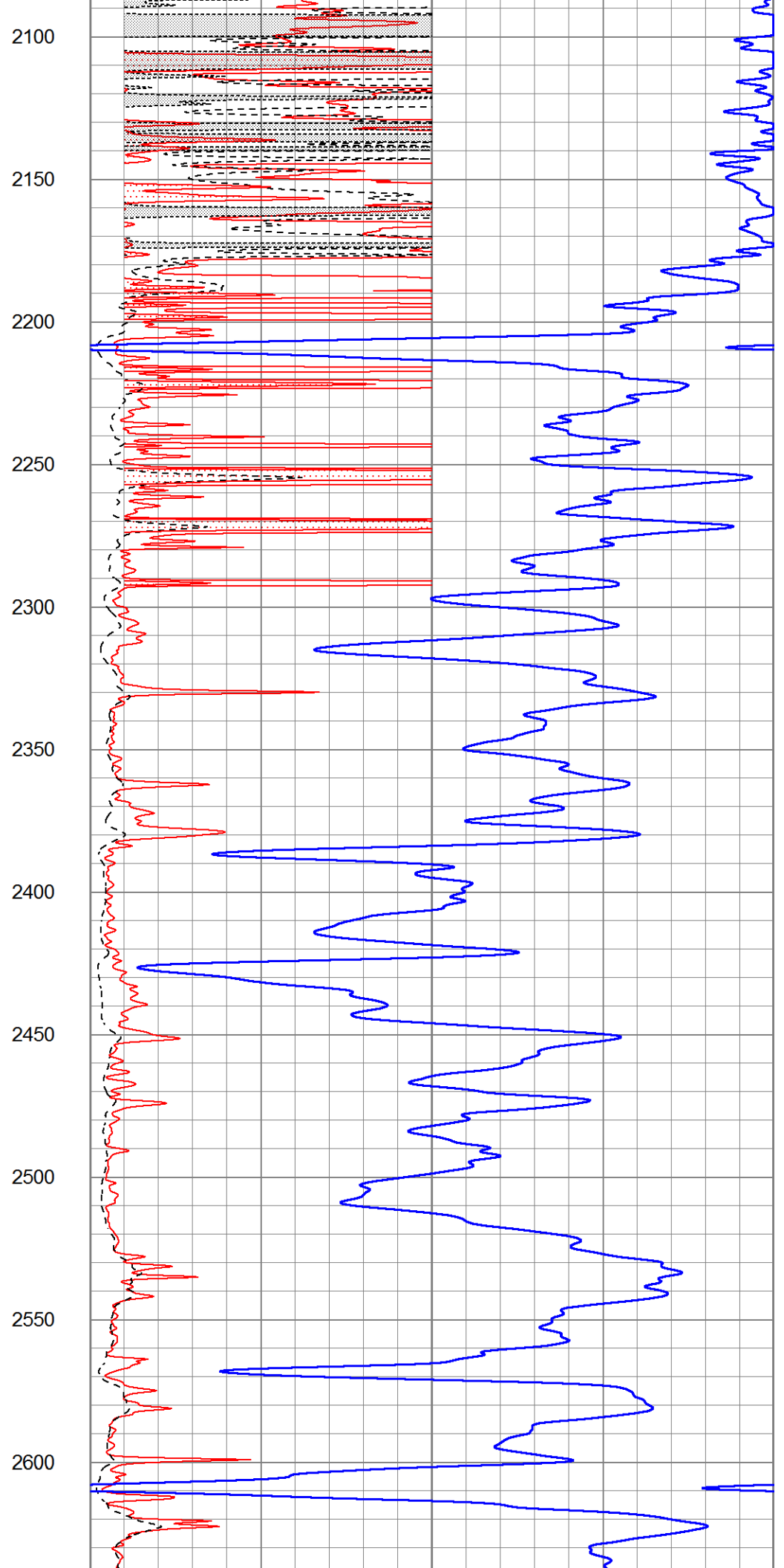
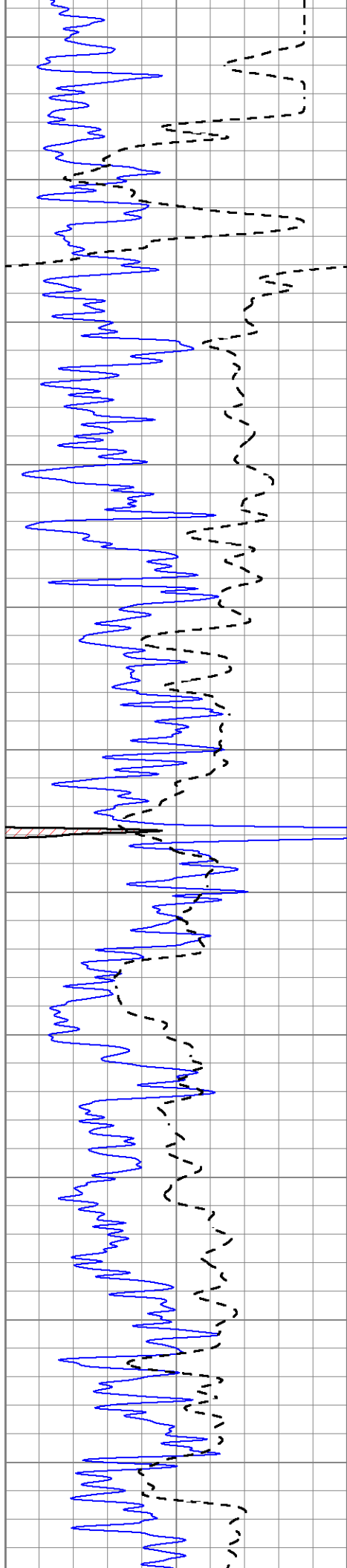
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

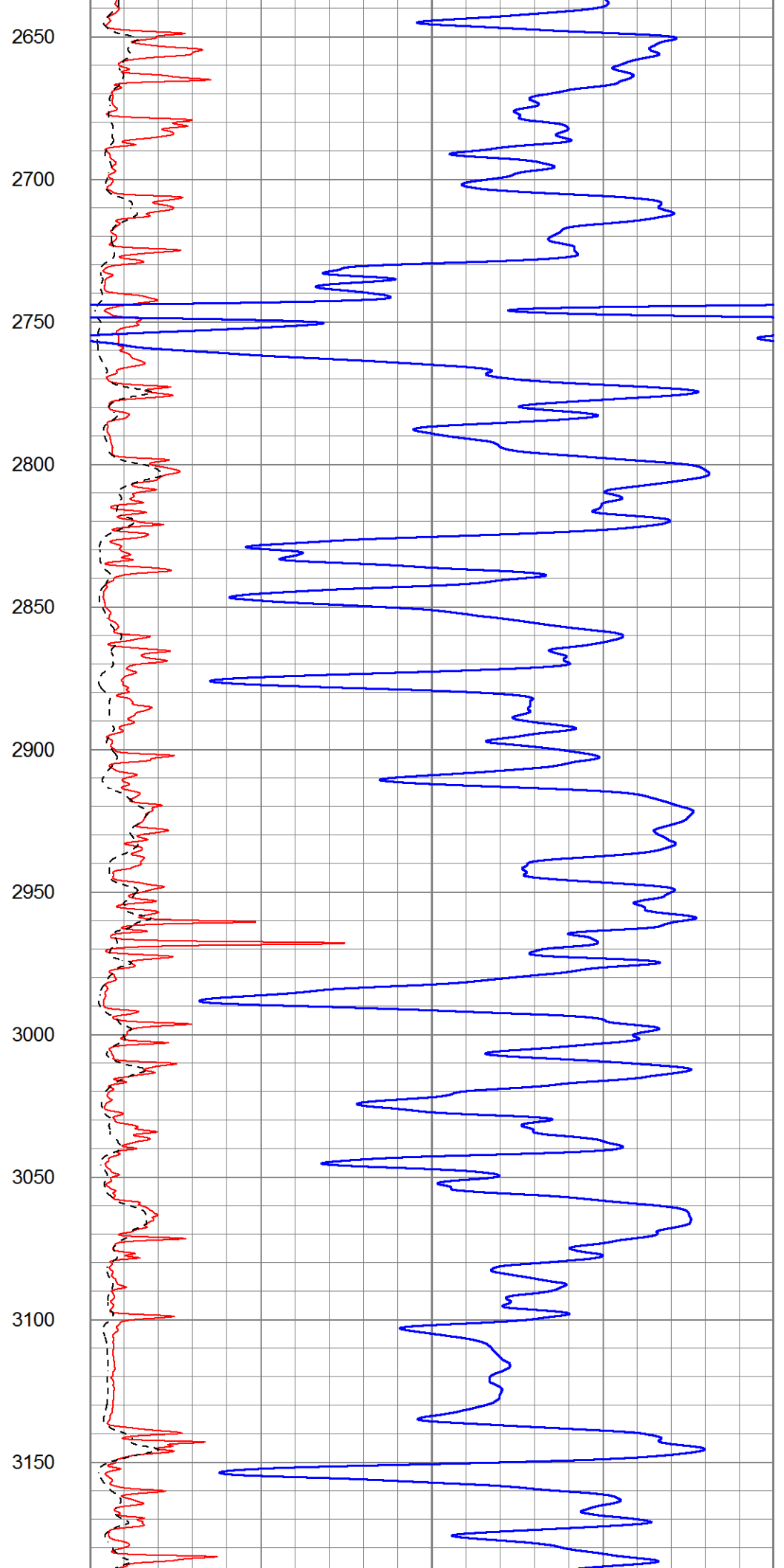
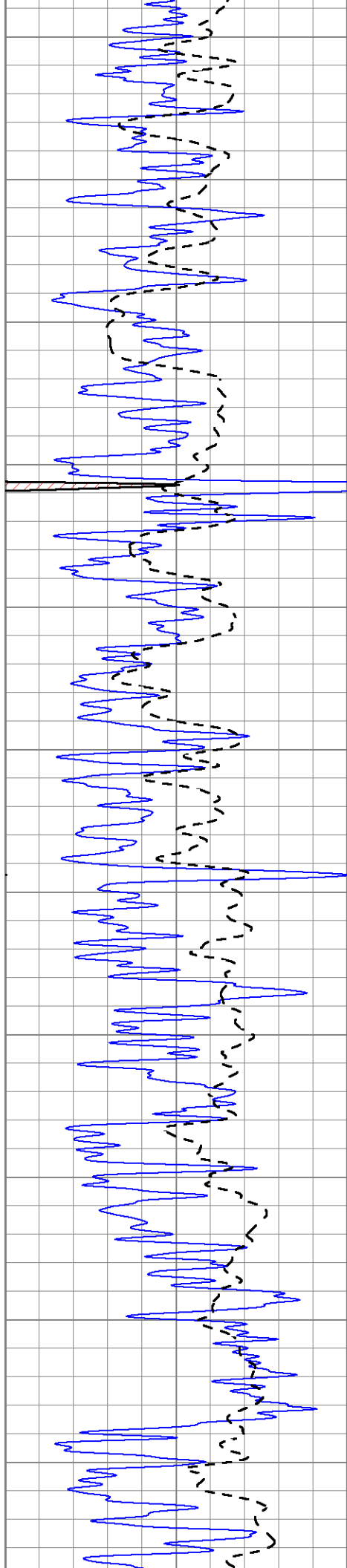


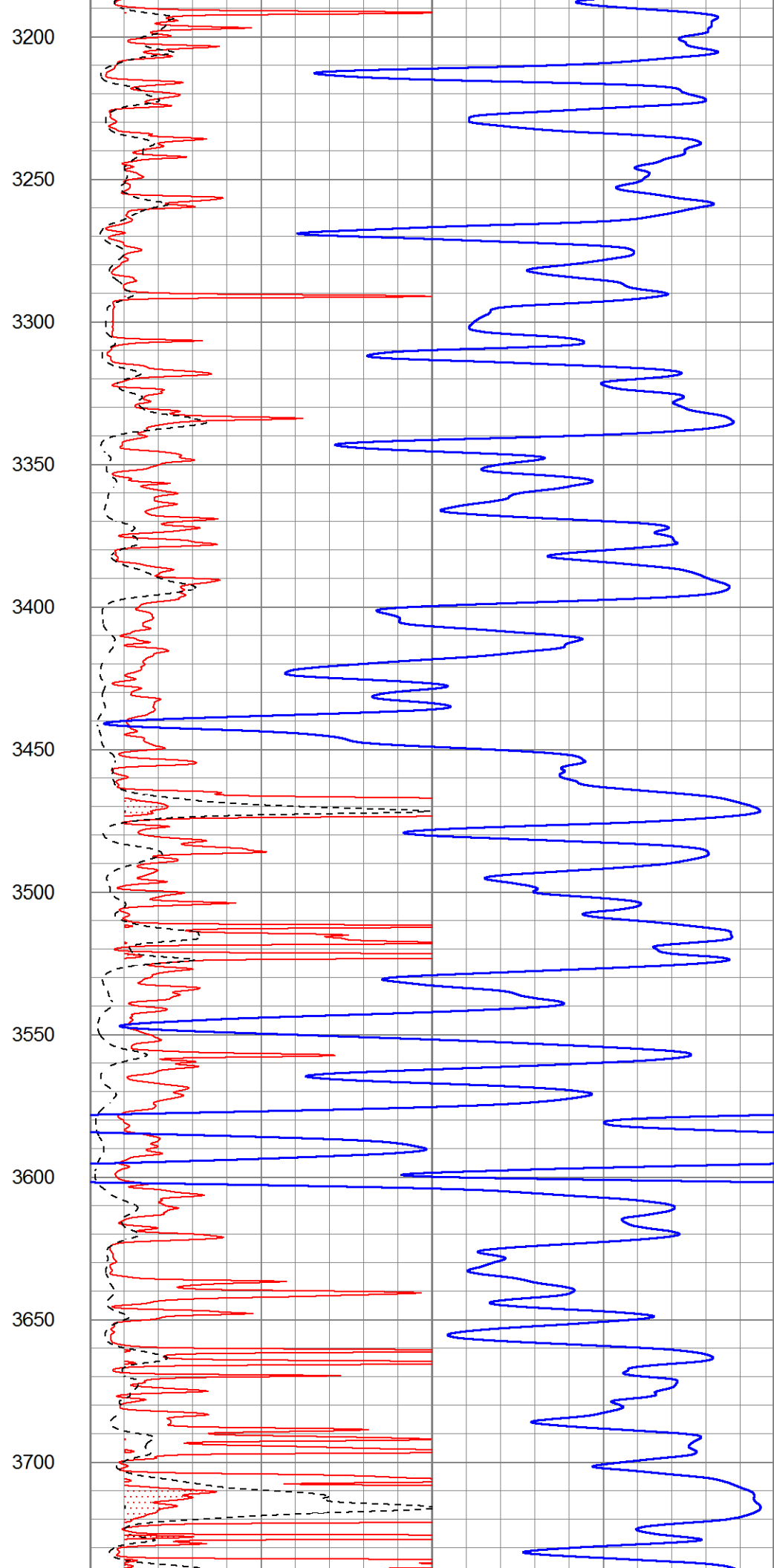
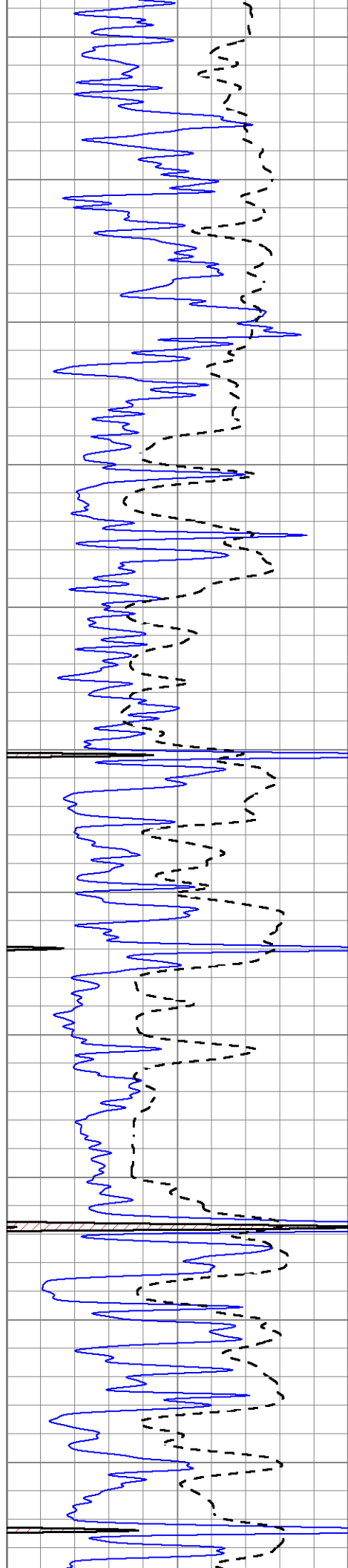


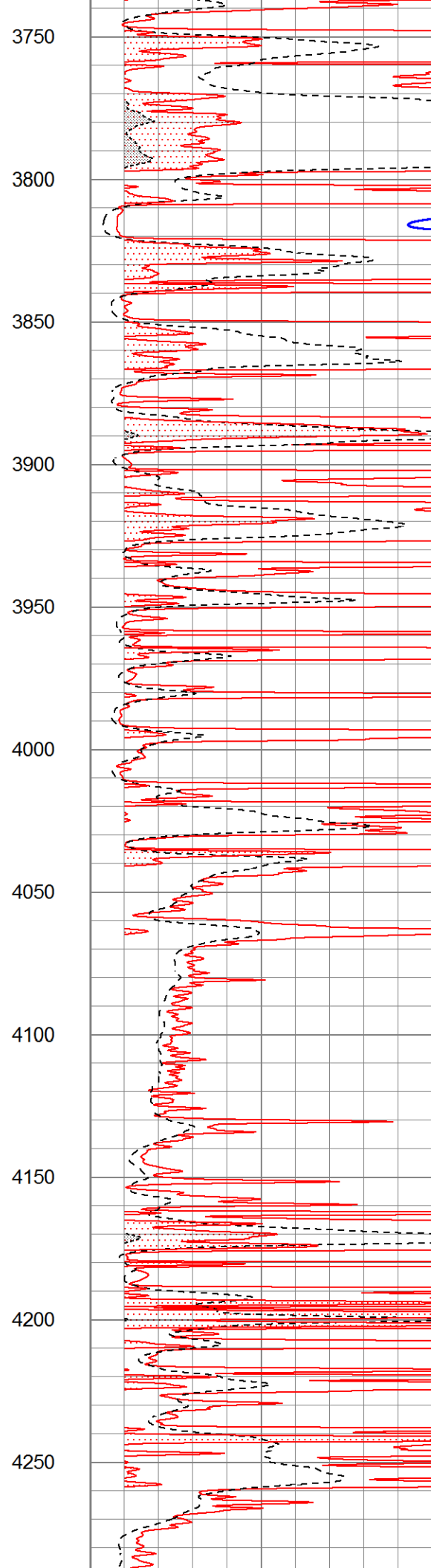
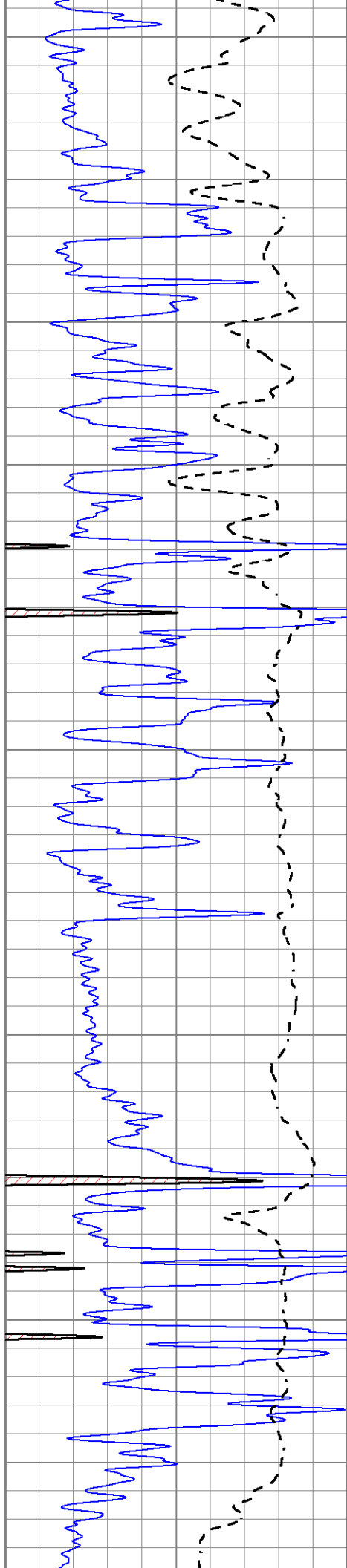


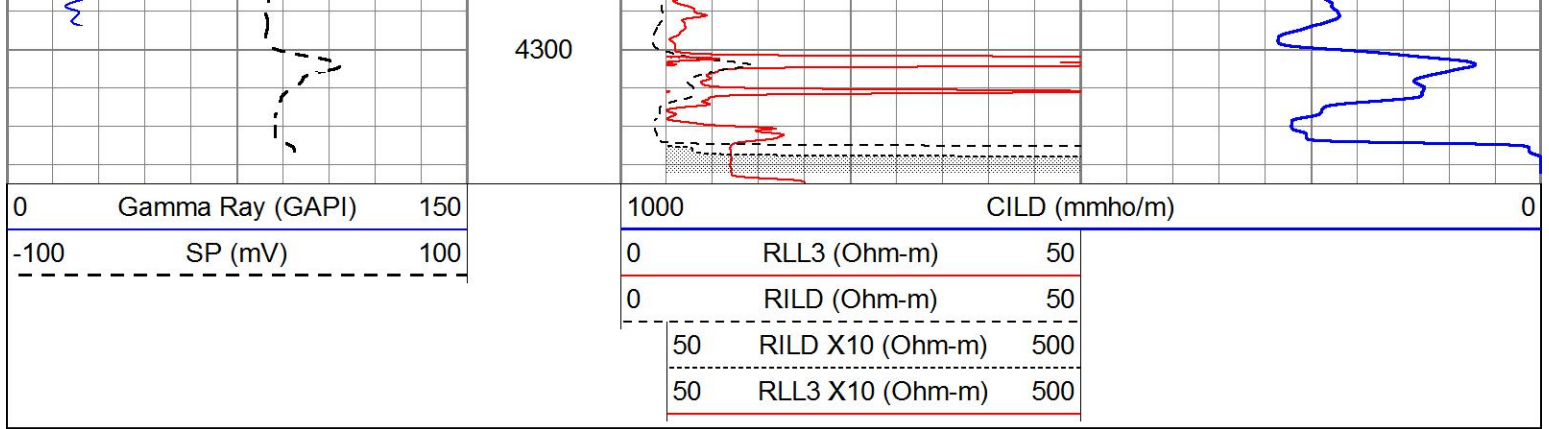






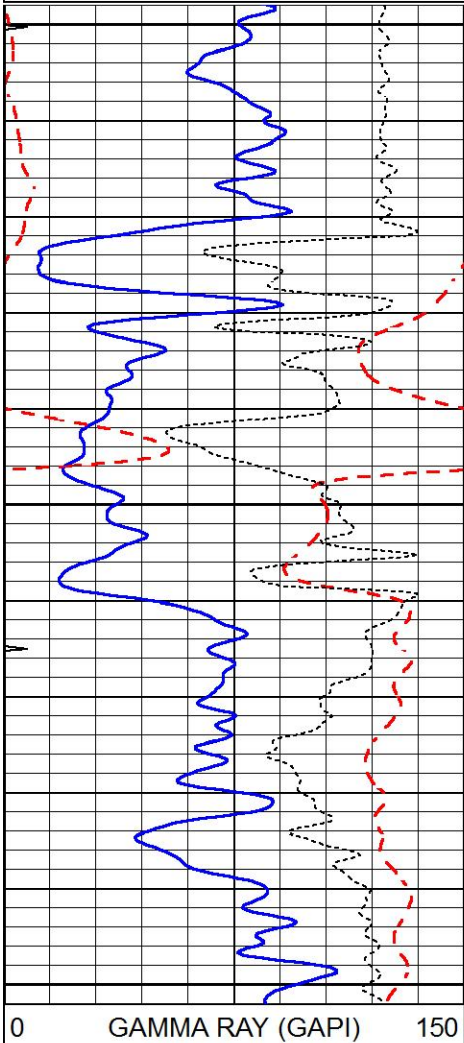
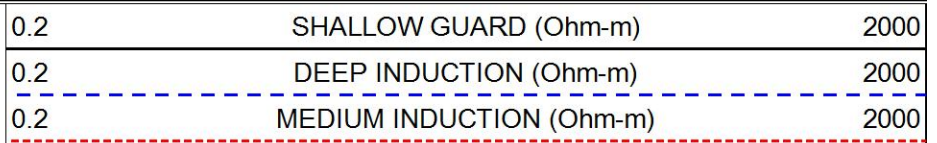
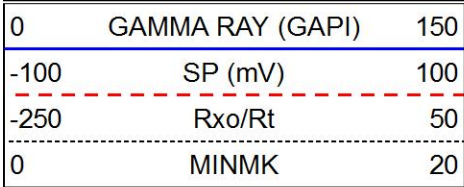






ANHYDRITE

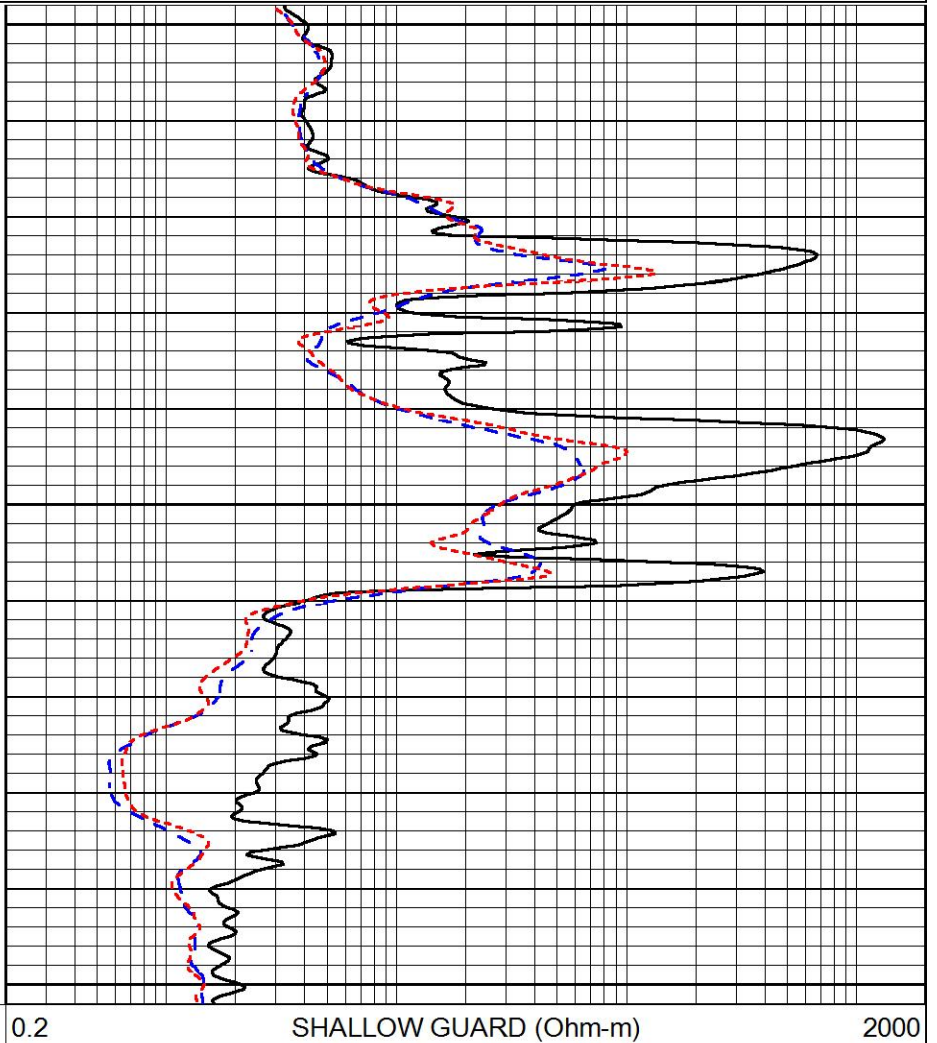
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 Charted by Depth in Feet scaled 1:240



1450

1500

1550



0.2

SHALLOW GUARD (Ohm-m)

2000

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

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

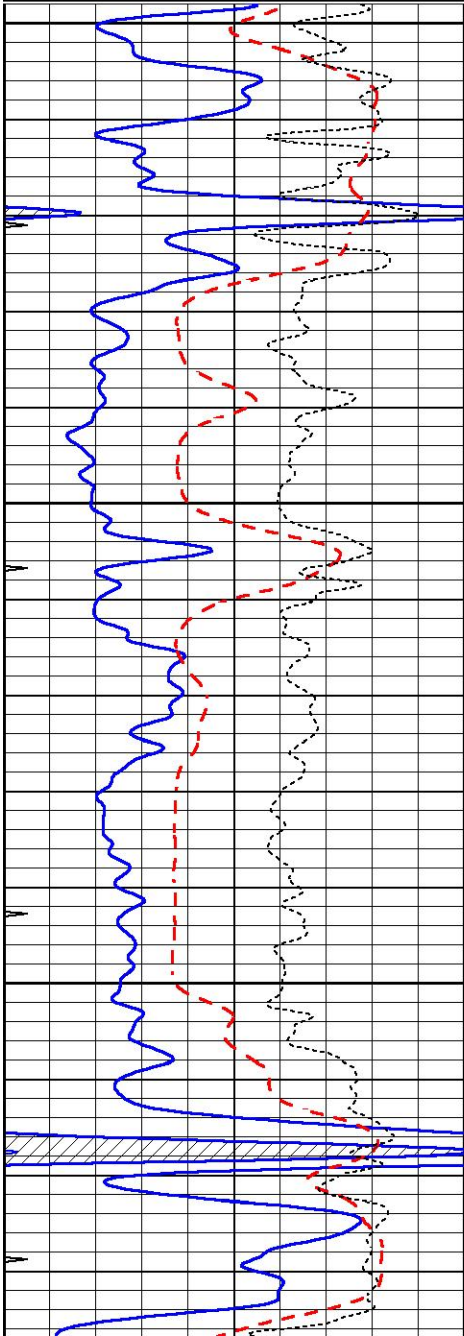


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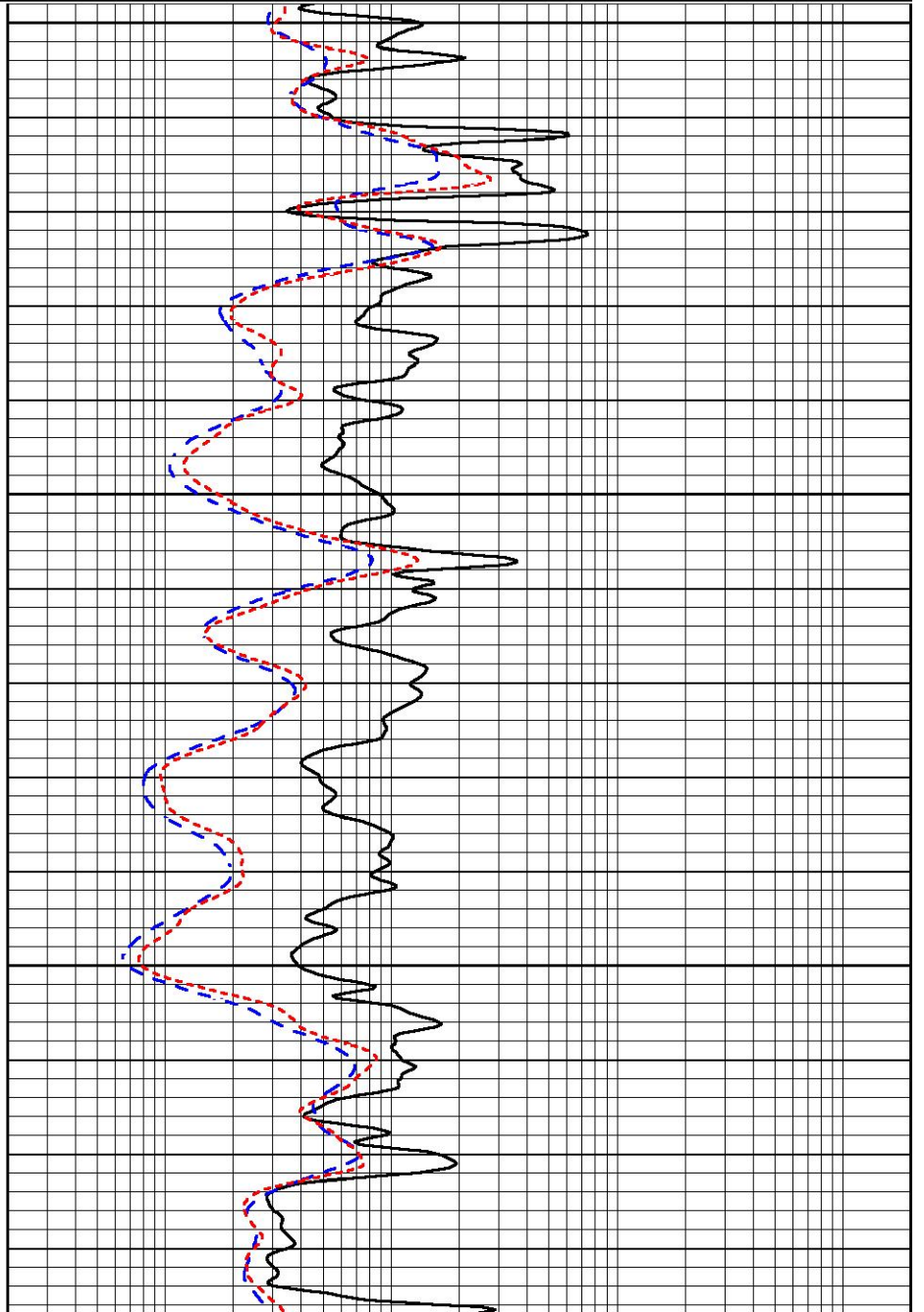
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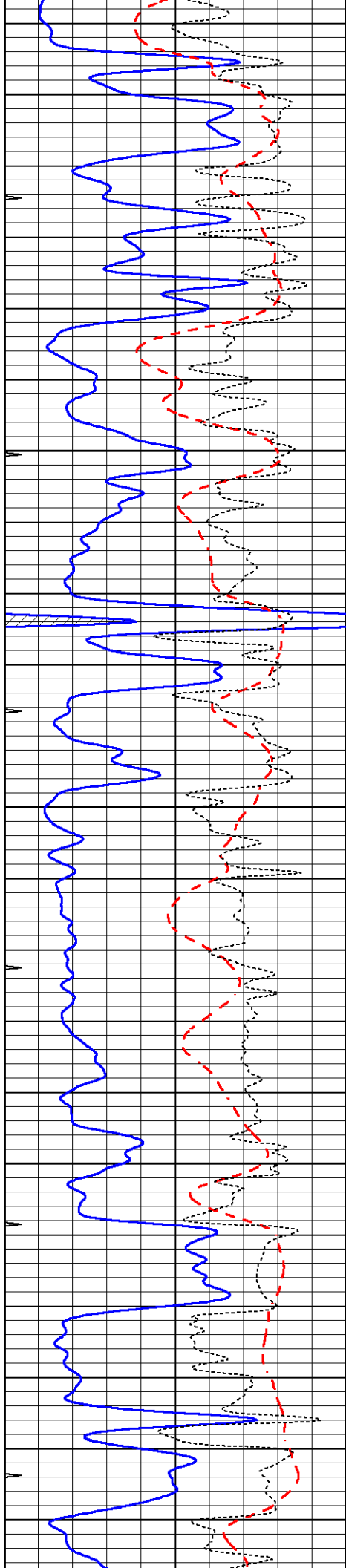
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



3500
3550
3600





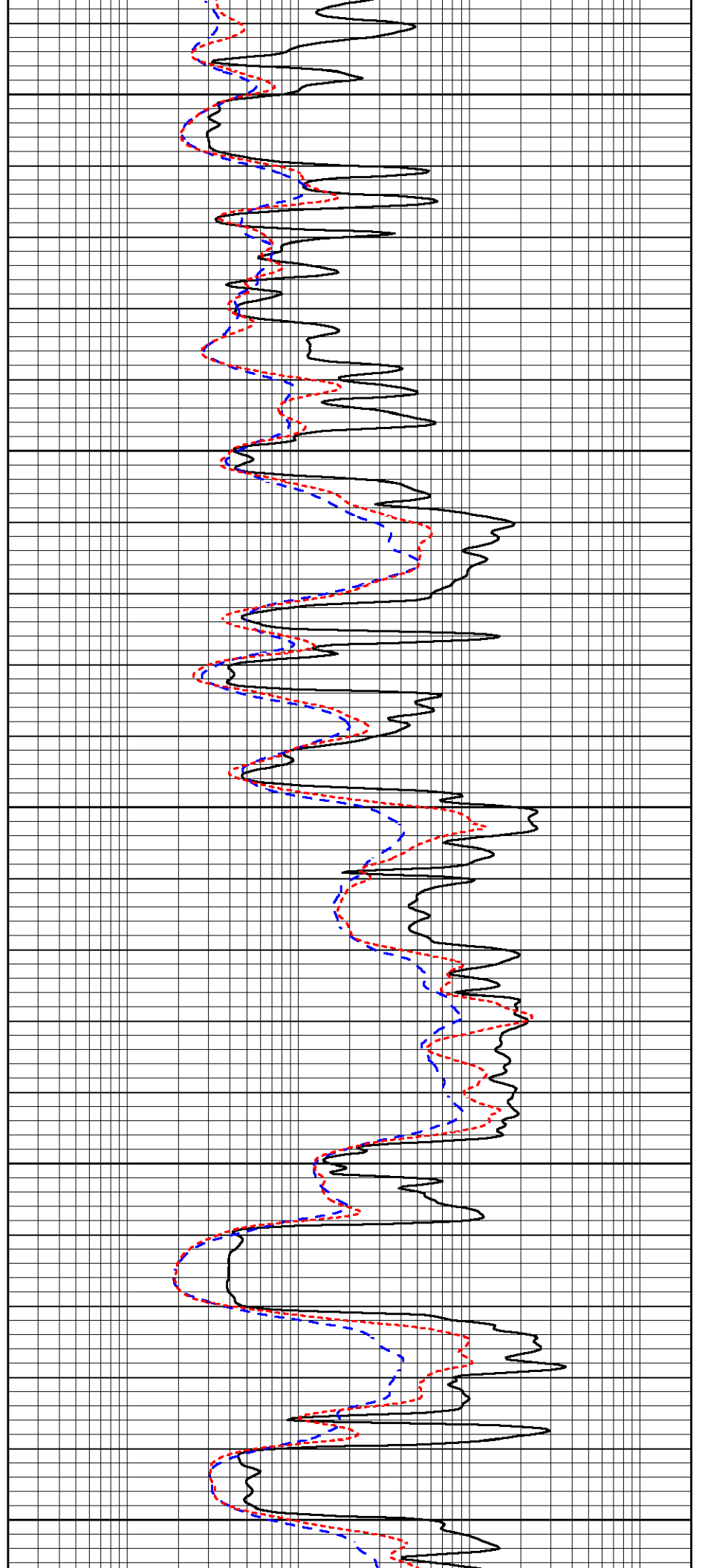
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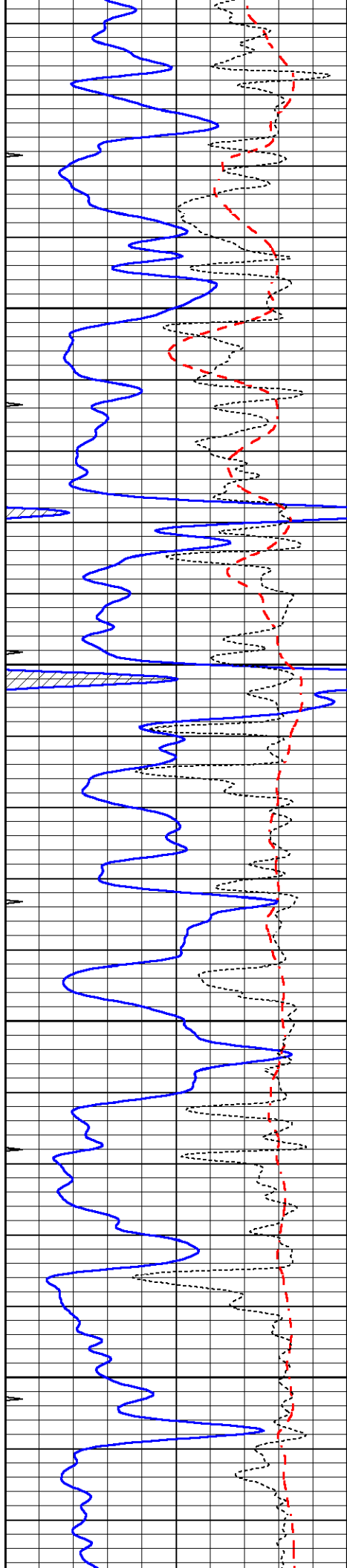
3700

3750

3800

3850



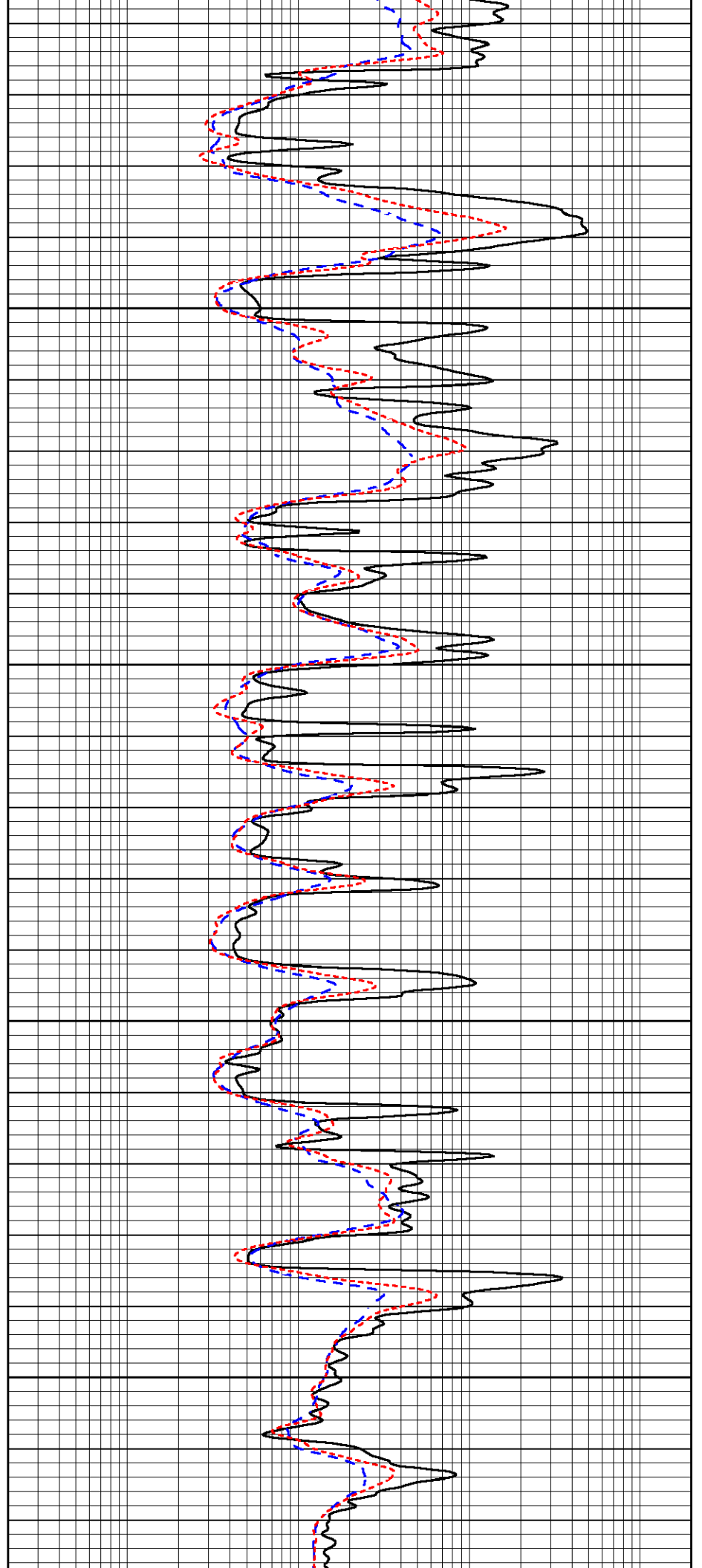


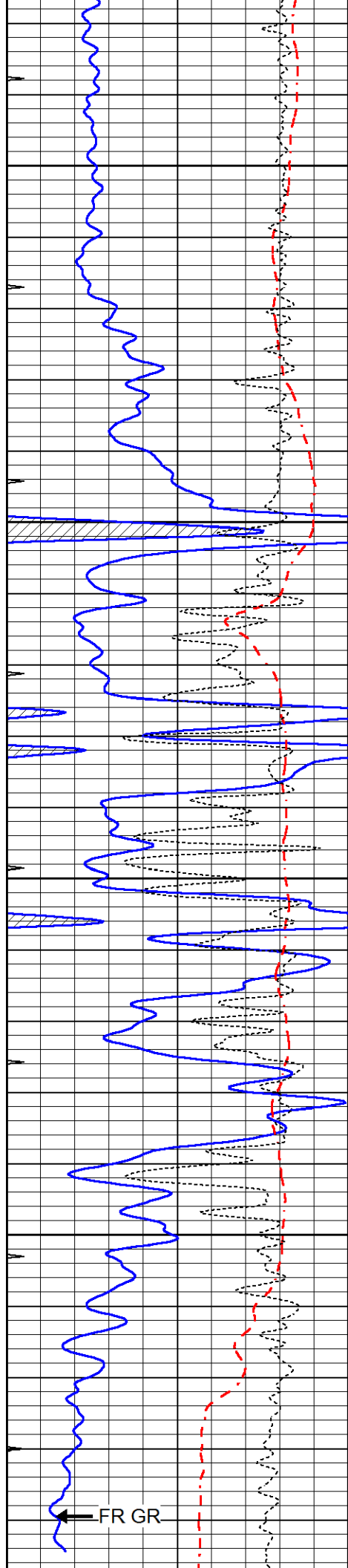
3900

3950

4000

4050





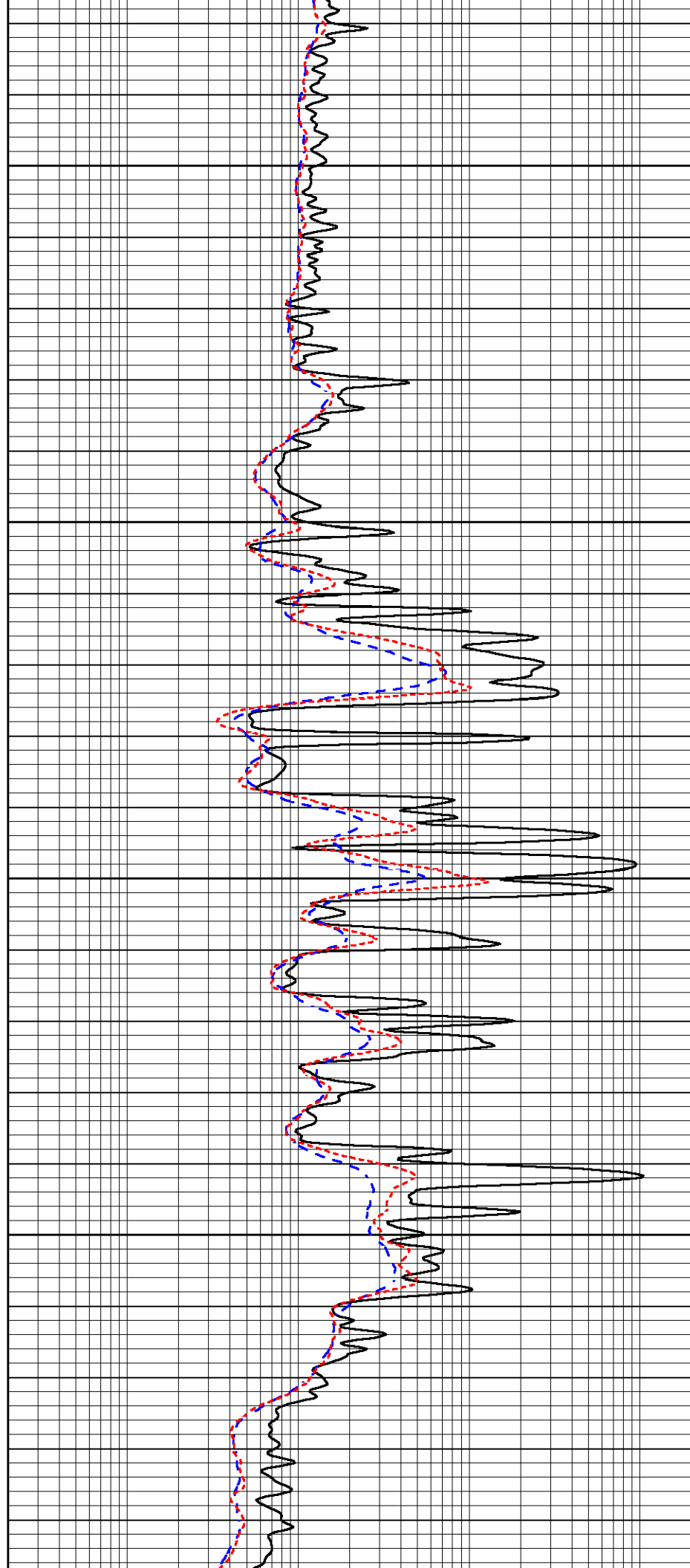
4100

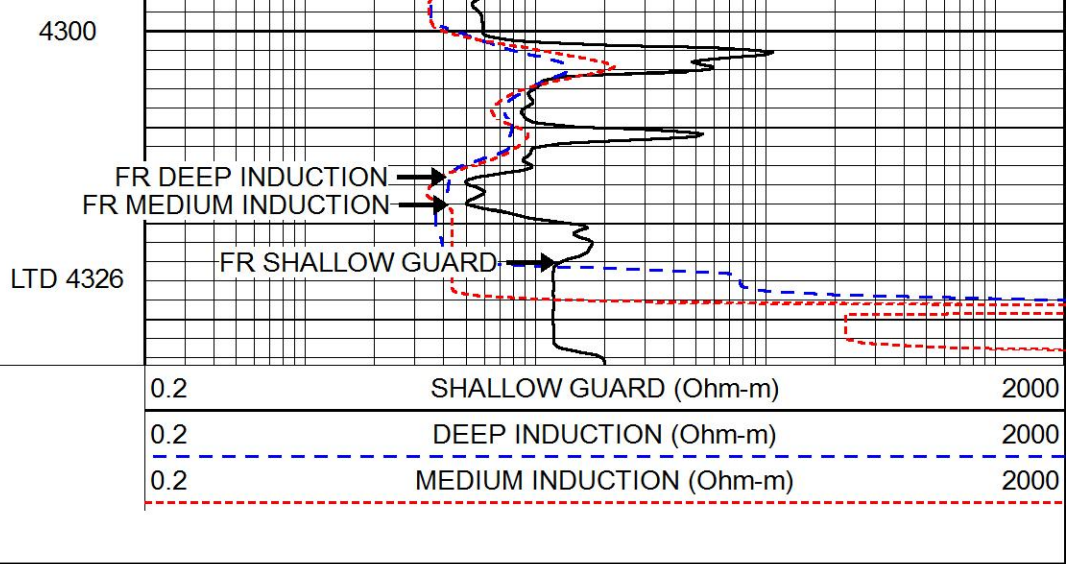
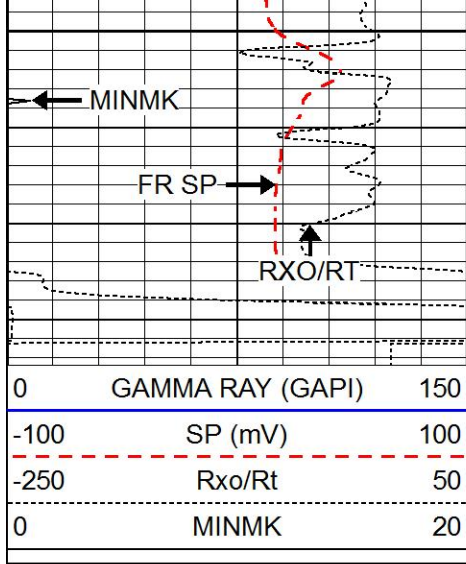
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4200

4250

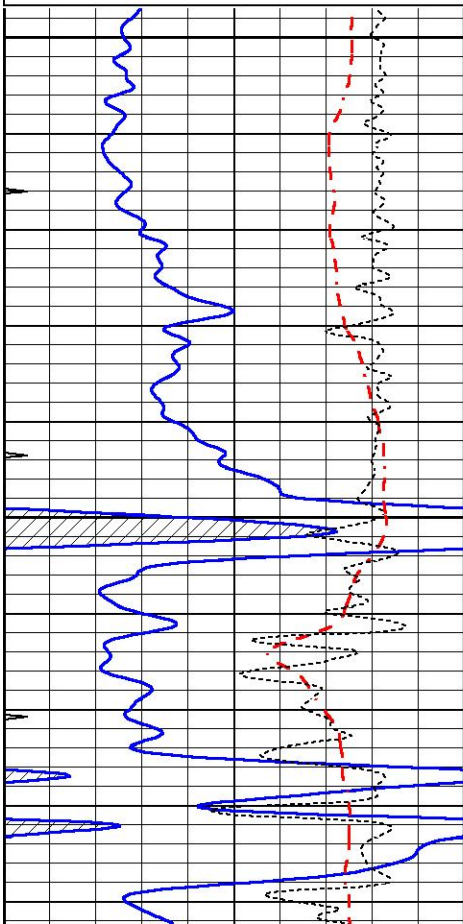
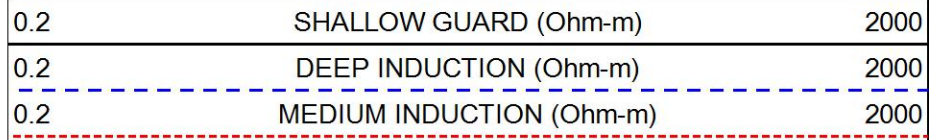
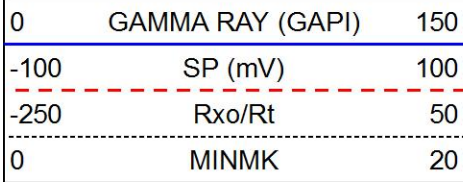
← FR GR





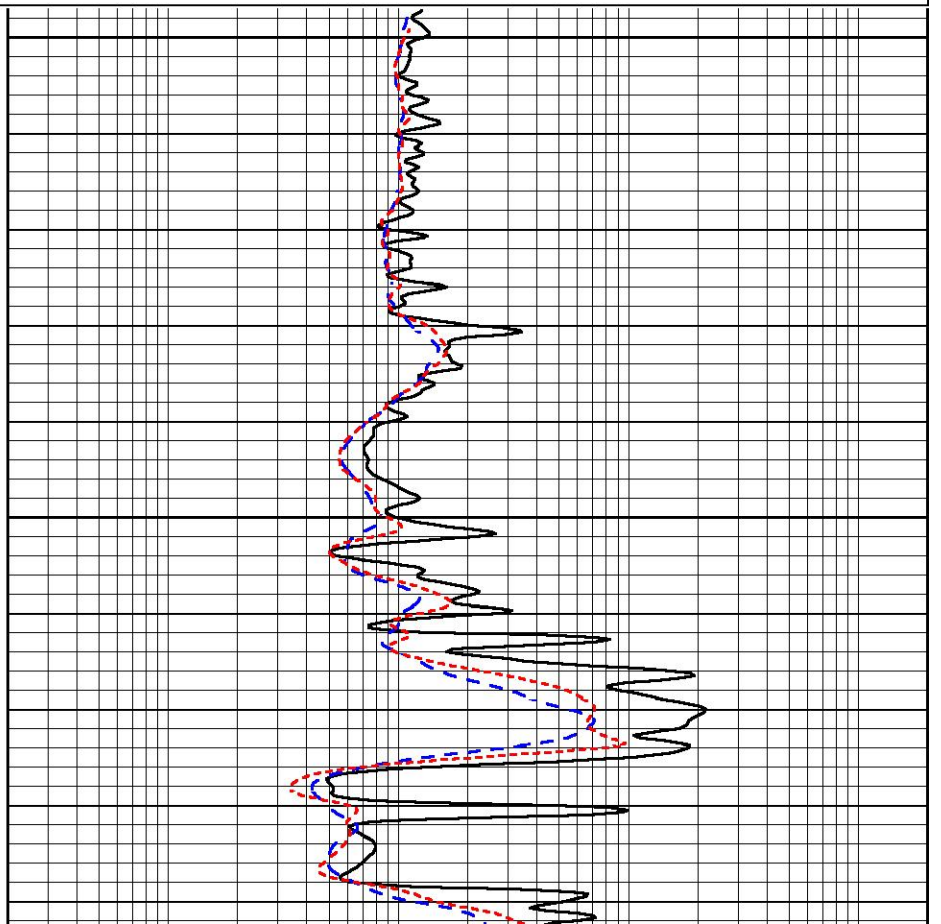
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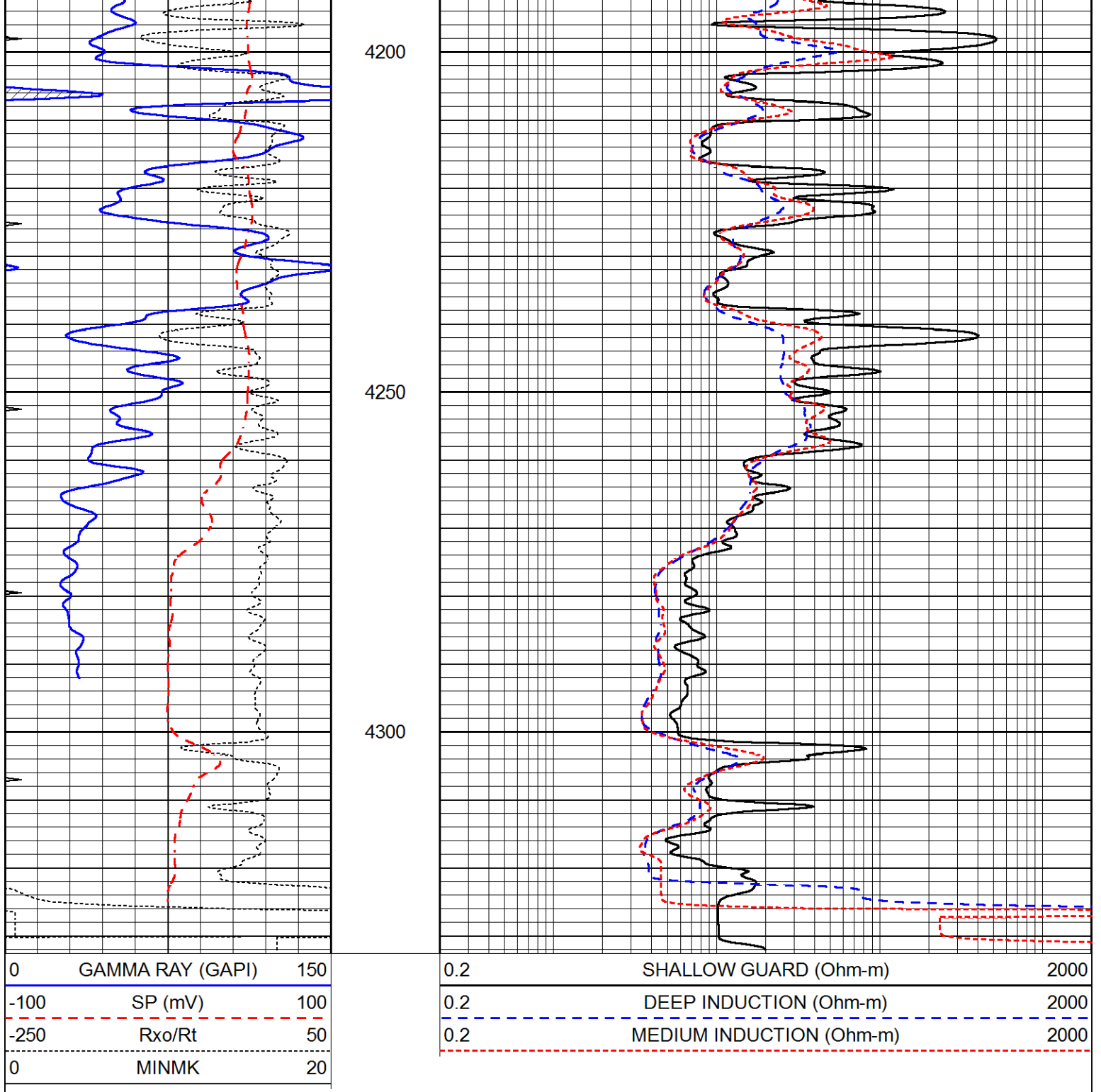
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 Charted by Depth in Feet scaled 1:240



4100

4150





Calibration Report

Database File 6556pe.db
 Dataset Pathname pass4.1M
 Dataset Creation Wed May 25 15:55:26 2022

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Tue May 24 16:04:16 2022
 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	600.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-14.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

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: 004 Model: PRB

Master Calibration		Performed Mon May 23 11:44:16 2022						
	Background	Magnesium	Aluminum	Aluminum+Fe				
Window 1	1148.7	7216.0	2498.2	2291.5			cps	
Window 2	1052.1	6193.6	2181.7	2034.2			cps	
Window 3	896.0	3827.3	1530.0	1472.6			cps	
Window 4	252.1	258.7	255.1	254.3			cps	
Long Space	0.0	5141.5	1129.6	982.1			cps	
Short Space	3.4	1390.2	903.9	792.3			cps	
Rho		1.7100	2.5900	0.0000			g/cc	
Pe		2.0000	2.7500	5.7900				
Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio			: 0.559	
Spine Angle	: 74.1	Spine Slope	: 3.520	Spine Intercept			: -16.9	

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						
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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: Wed May 25 15:13:08 2022

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity: 0.8000 GAPI/cps