



DUAL INDUCTION LOG

Company	MAI OIL OPERATIONS, INC.	Location:	API # : 15-163-24414-0000	Other Services CDL/CNL ML/SO
Well	HOLMES #4	SEC 5	TWP 9S	RGE 18W
Field	BARRY EAST	SE-NW-NW-NW	390' FNL & 410' FWL	
County	ROOKS	State	KANSAS	
Permanent Datum	GROUND LEVEL	Elevation	2062	
Log Measured From	KELLY BUSHING 9' A.G.L.	Elevation	K.B. 2071 D.F. 2069 G.L. 2062	
Drilling Measured From	KELLY BUSHING			
Date	09/22/20			
Run Number	ONE			
Depth Driller	3596			
Depth Logger	3596			
Bottom Logged Interval	3595			
Top Log Interval	00			
Casing Driller	8 5/8" @ 215			
Casing Logger	215			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD			
Density / Viscosity	9.4/48			
pH / Fluid Loss	8.0/9.6			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	.95 @ 72F			
Rmf @ Meas. Temp	.71 @ 72F			
Rmc @ Meas. Temp	1.14 @ 72F			
Source of Rmf / Rmc	MEASURED			
Rm @ BHT	.61 @ 112F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom	////			
Maximum Recorded Temperature	112F			
Equipment Number	1523			
Location	HAYS, KANSAS			
Recorded By	GUS PFANENSTIEL			
Witnessed By	JAMES MUSGROVE			

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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

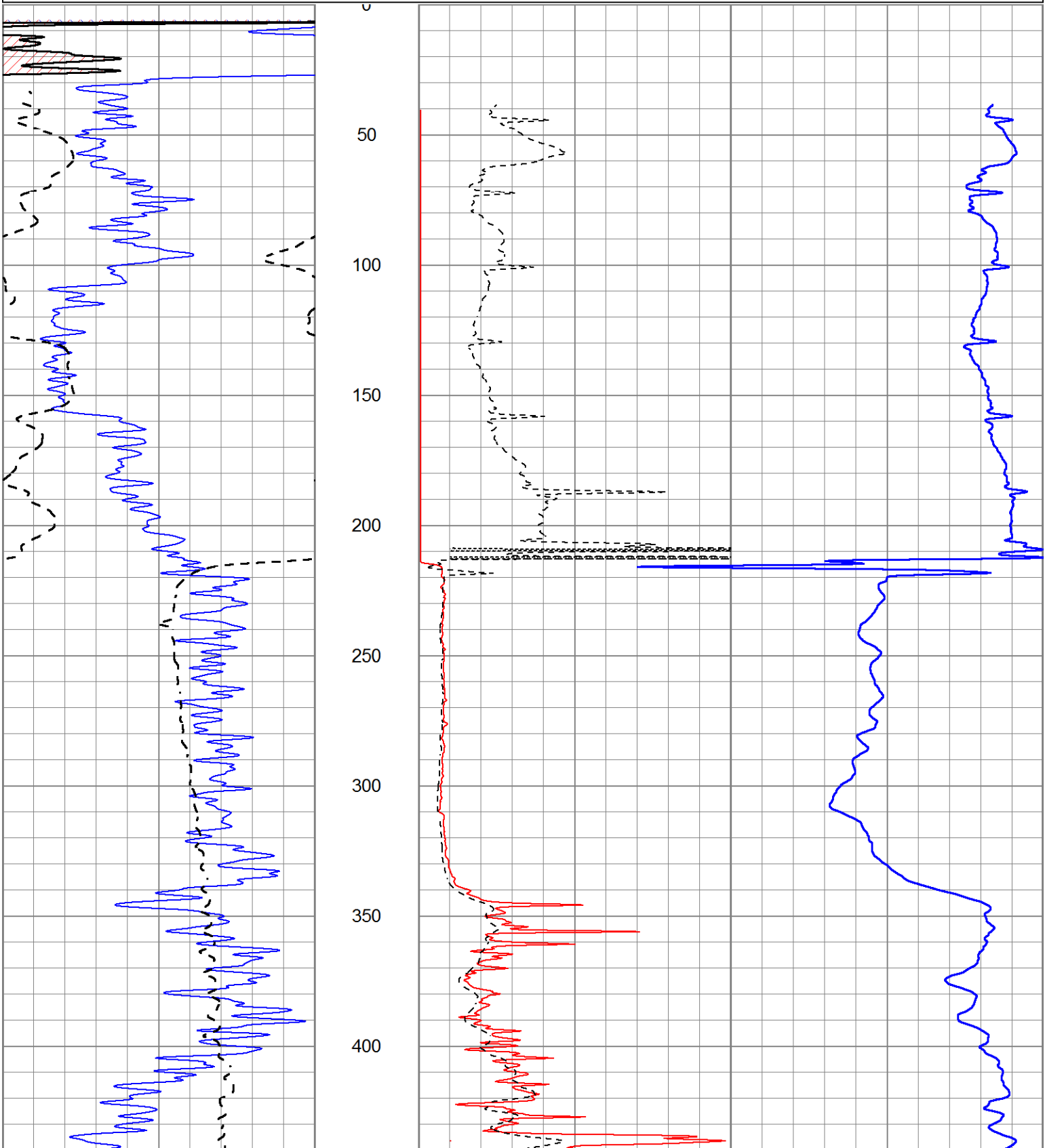
DIRECTIONS: PLAINVILLE NORTH TO S RD., WEST TO 14 RD.,
1/4 SOUTH, EAST INTO.

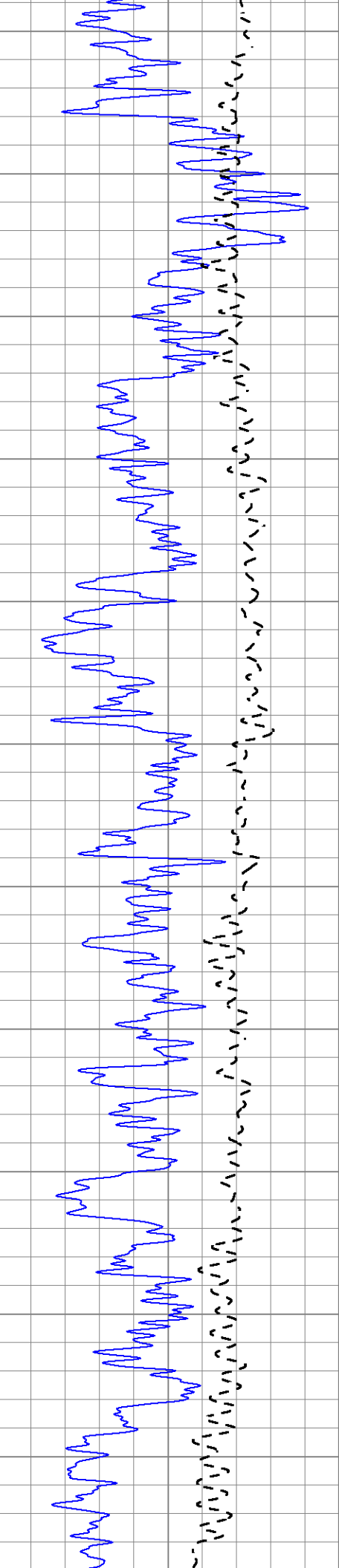
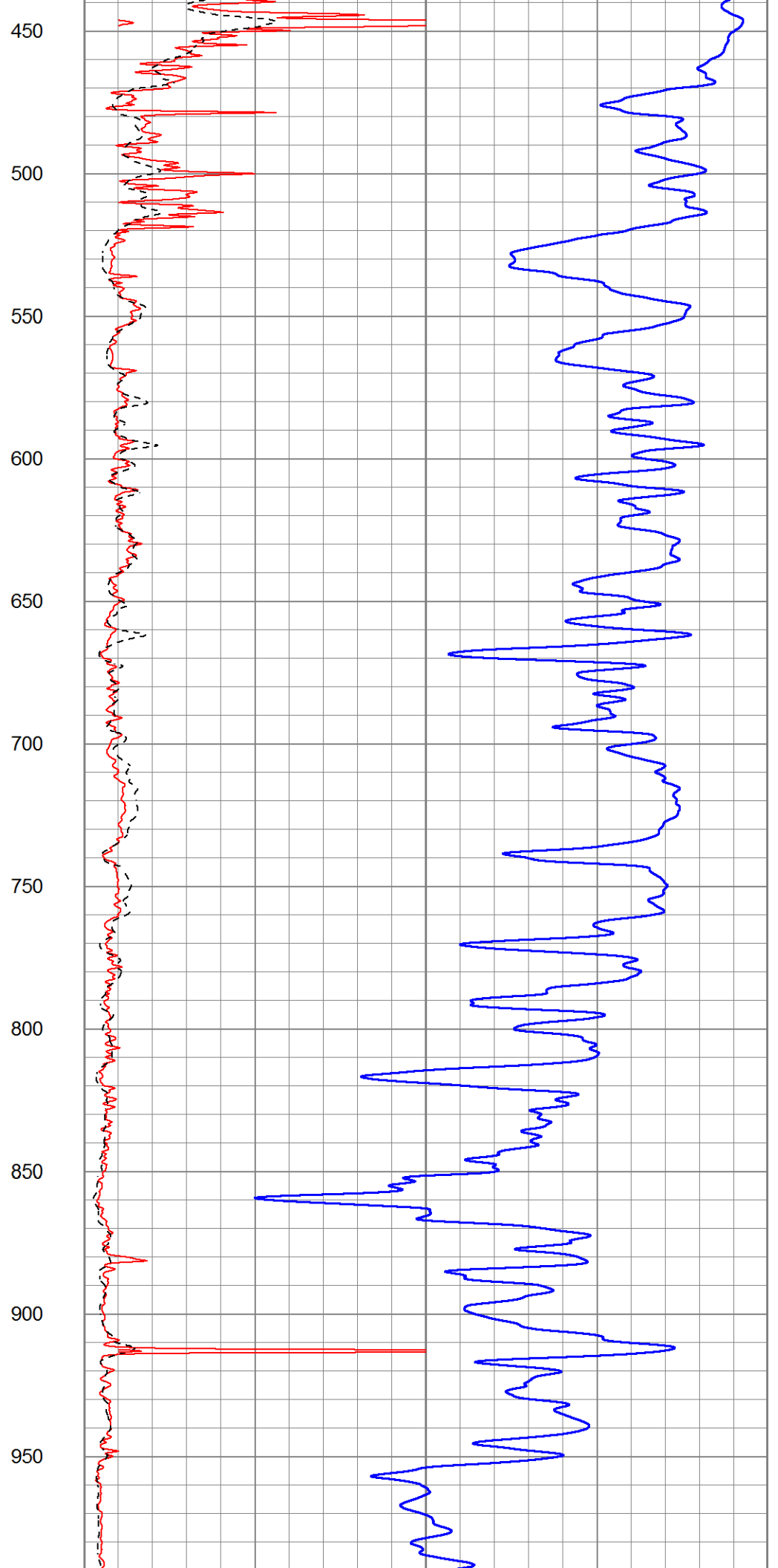


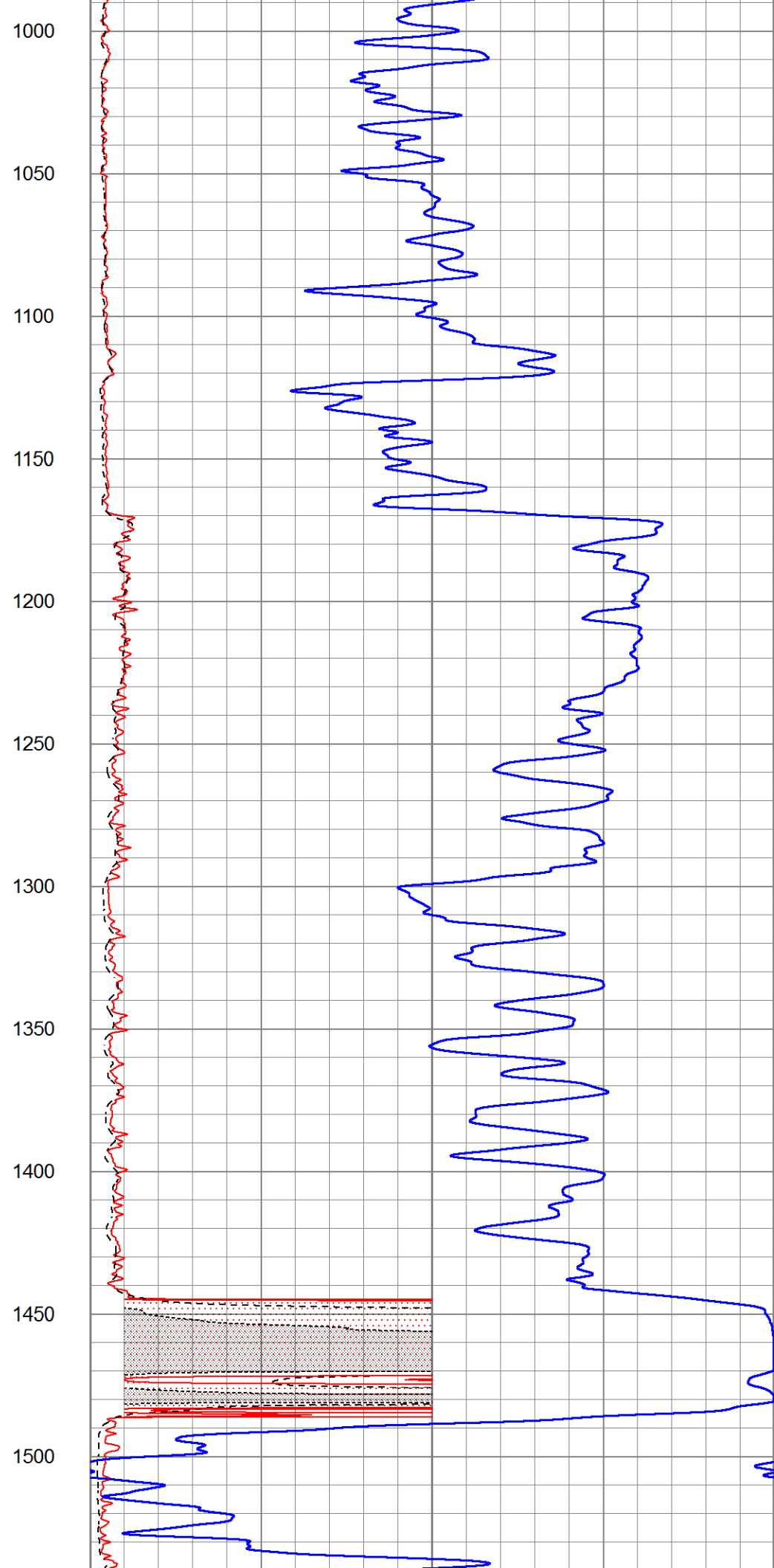
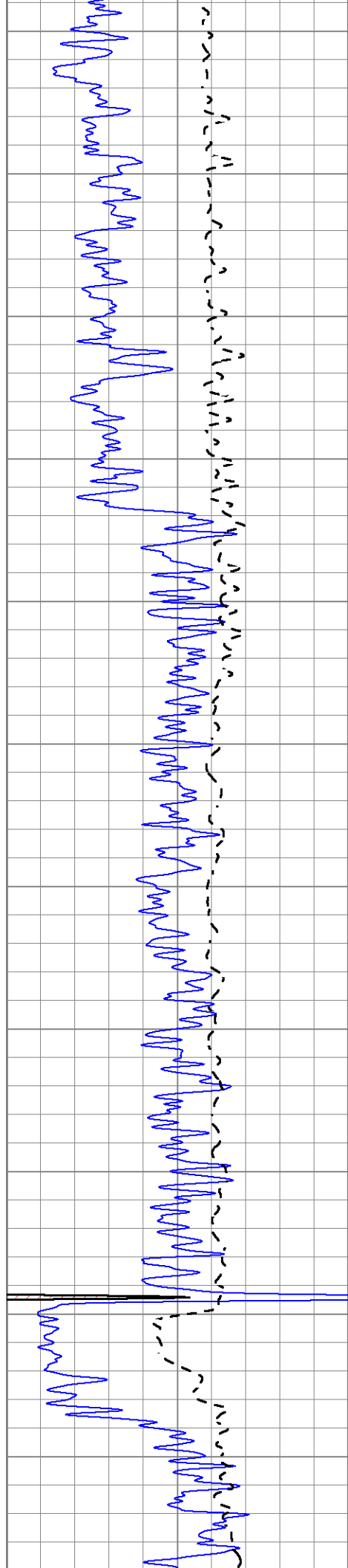
MAIN PASS

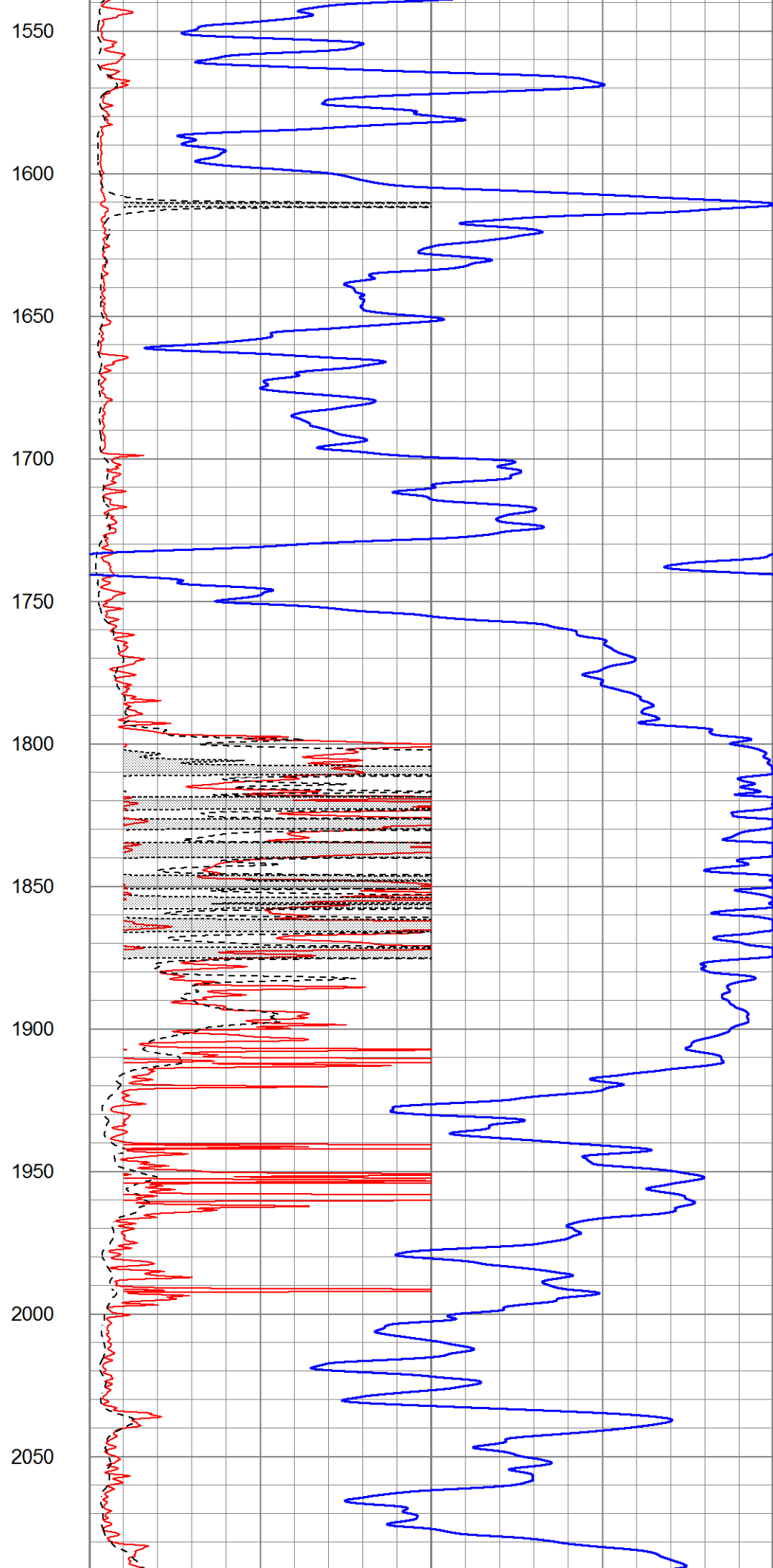
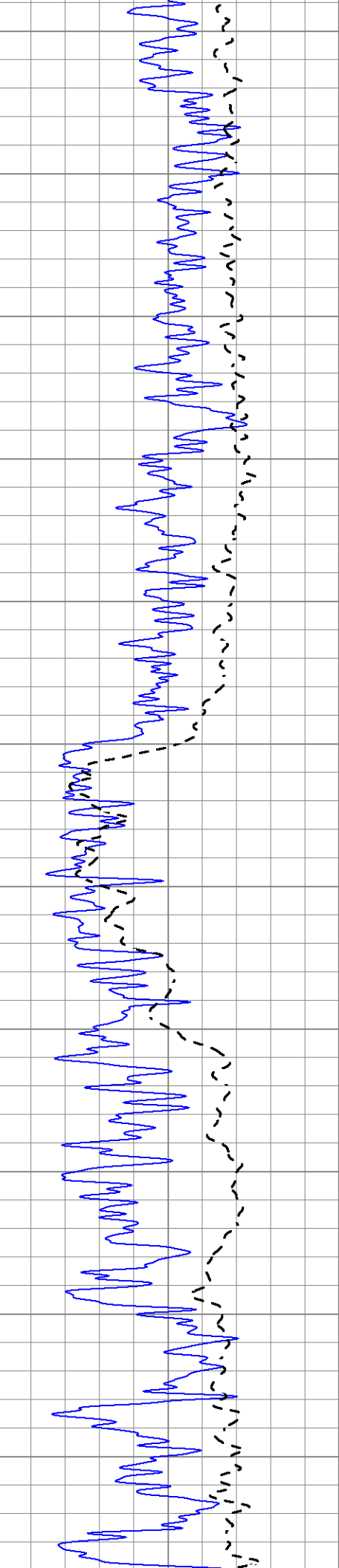
Database File	5028ddn.db
Dataset Pathname	pass3.1
Presentation Format	_dil2
Dataset Creation	Tue Sep 22 08:32:16 2020
Charted by	Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	1000	CILD (mmho/m)	0
-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









2100

2150

2200

2250

2300

2350

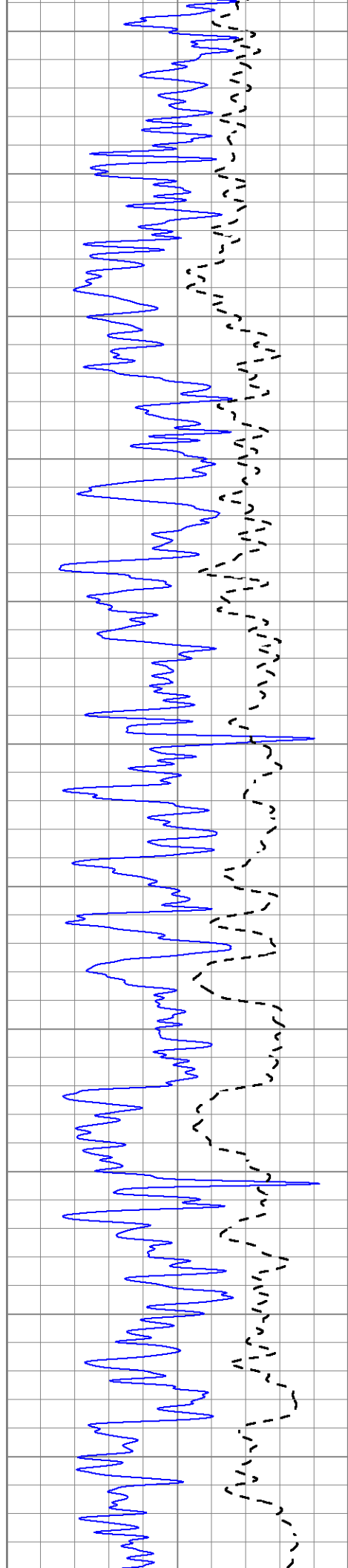
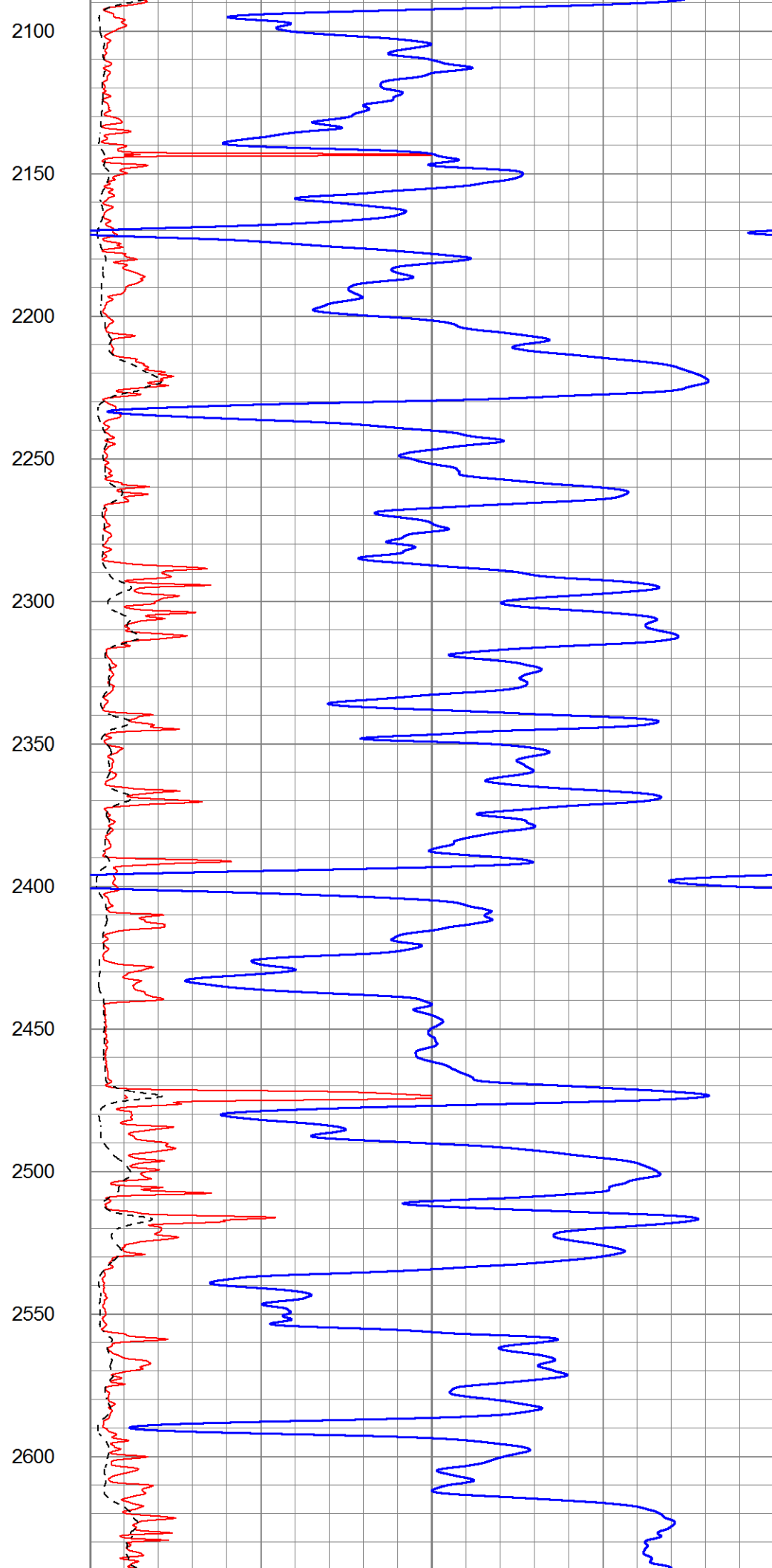
2400

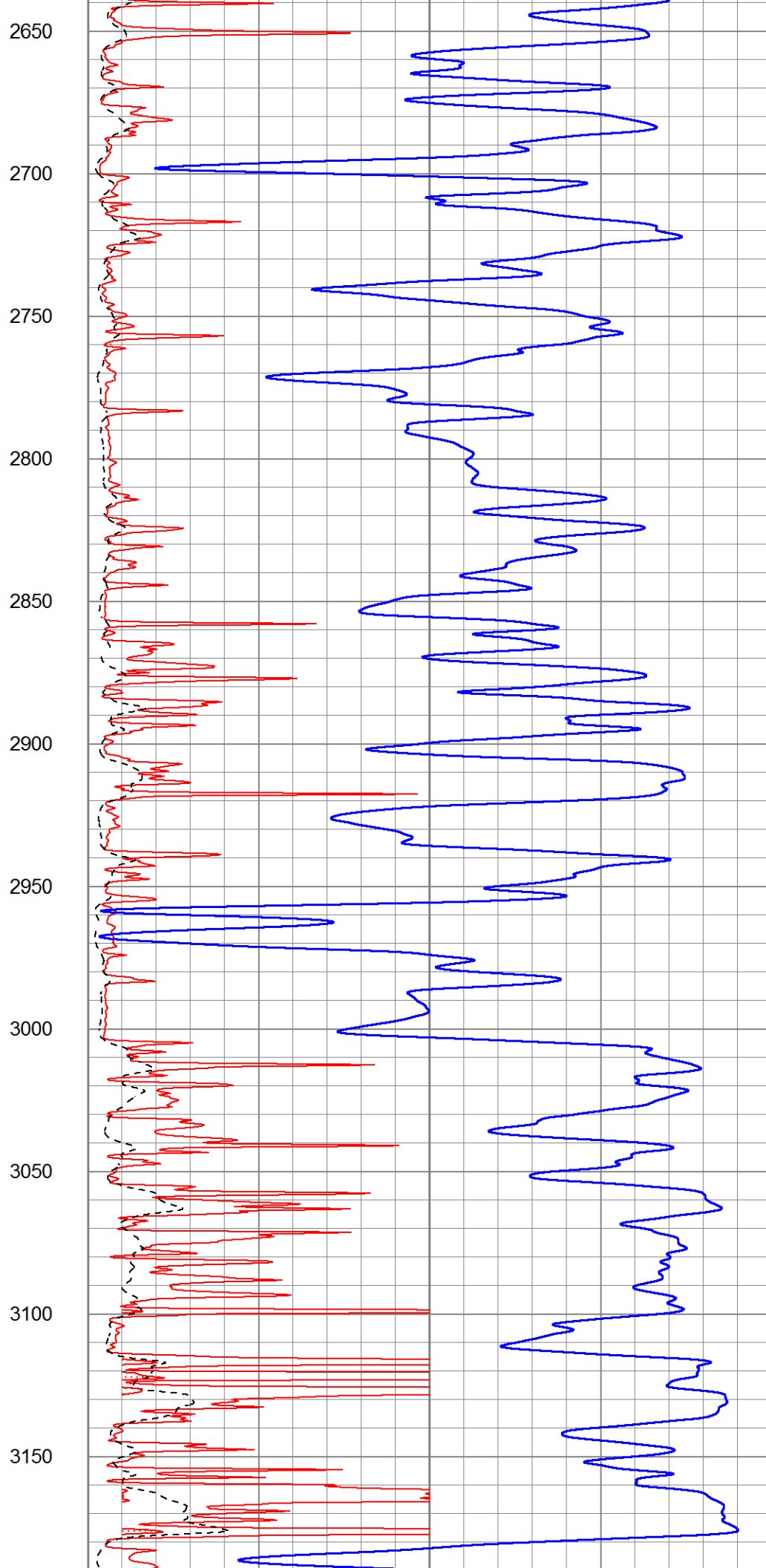
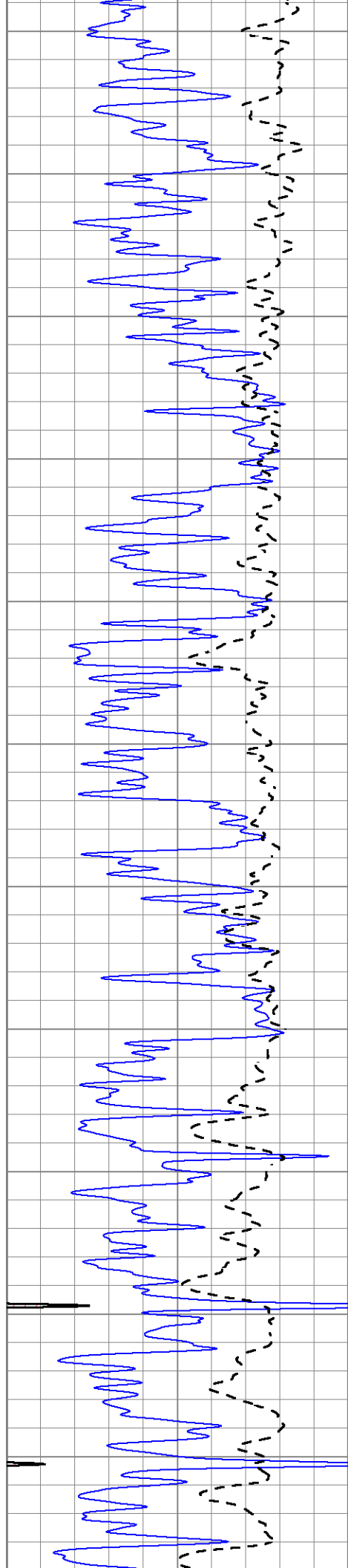
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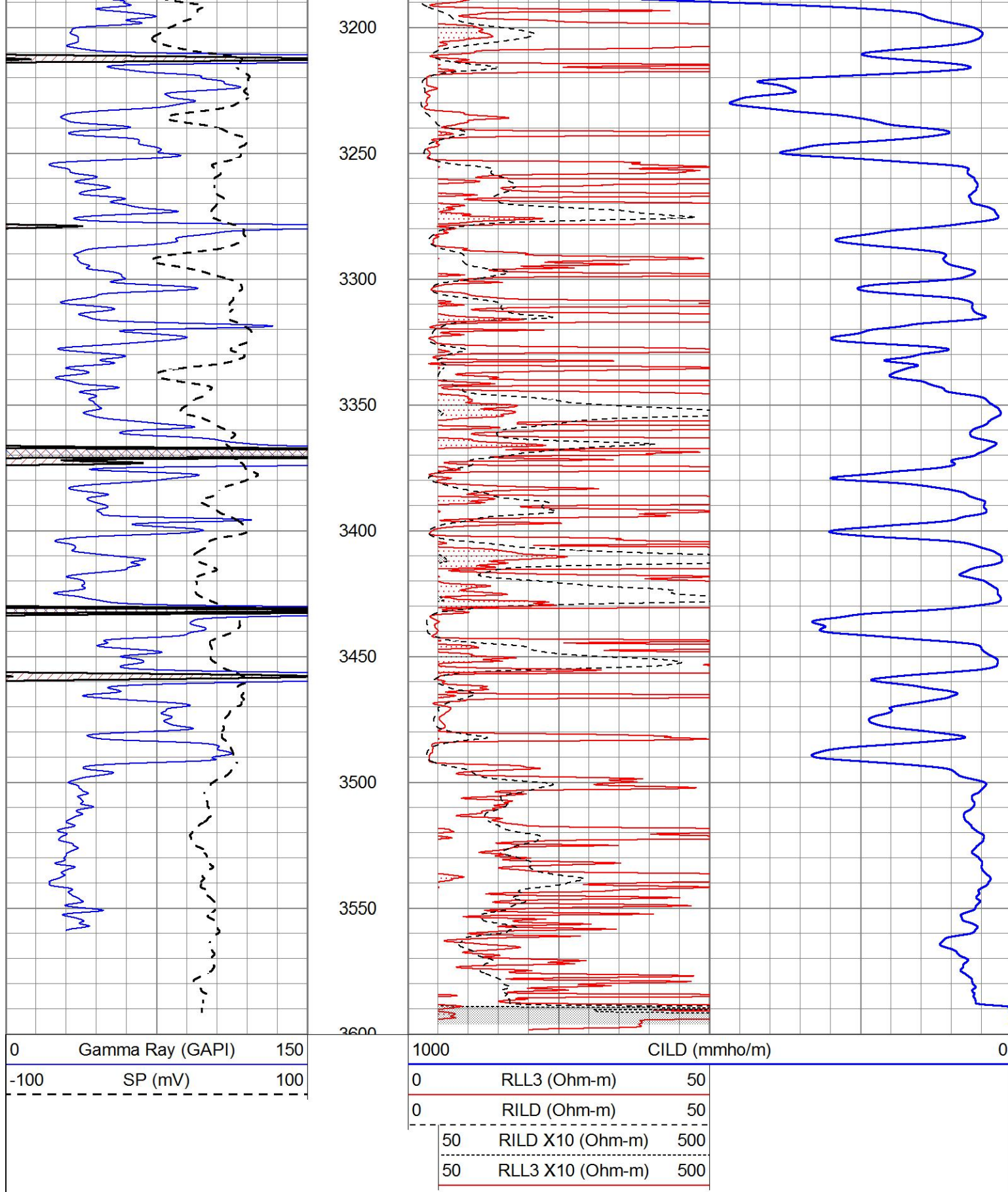
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2550

2600



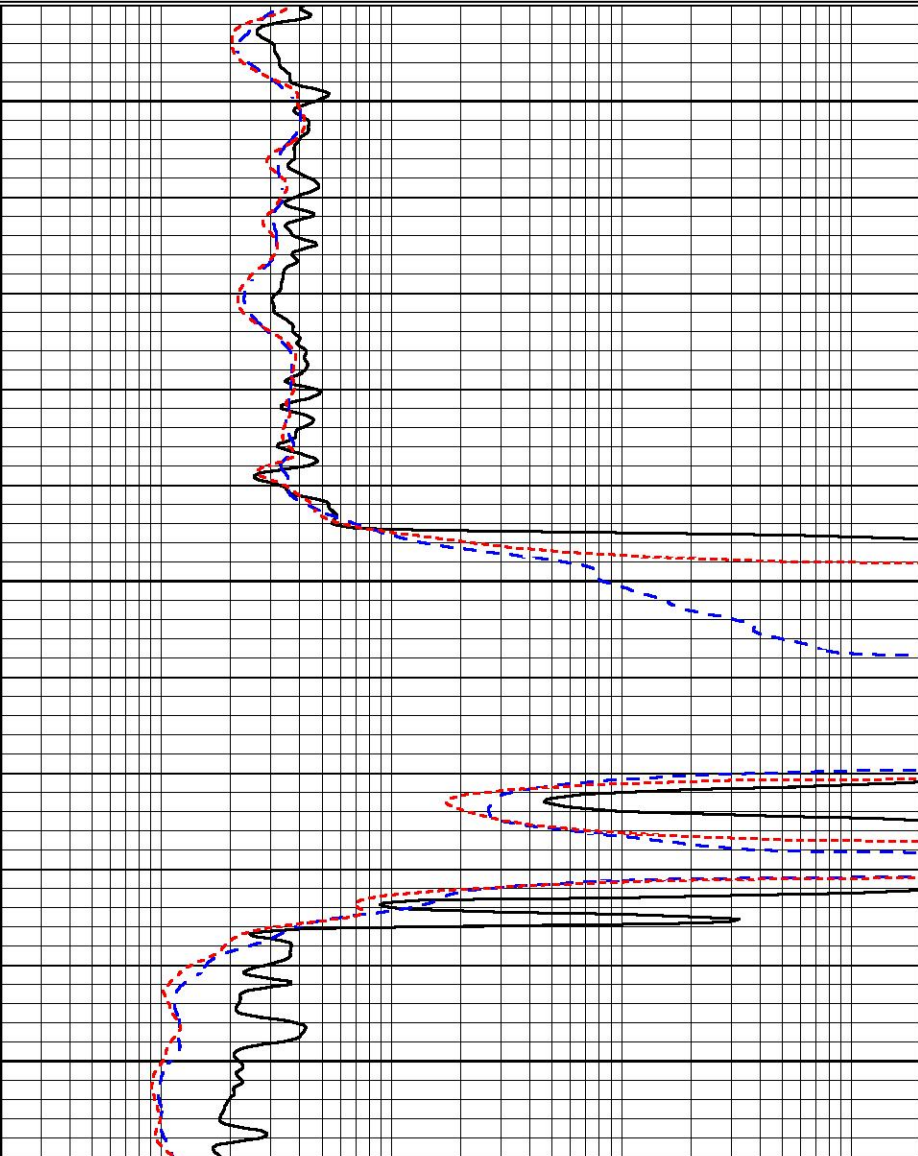
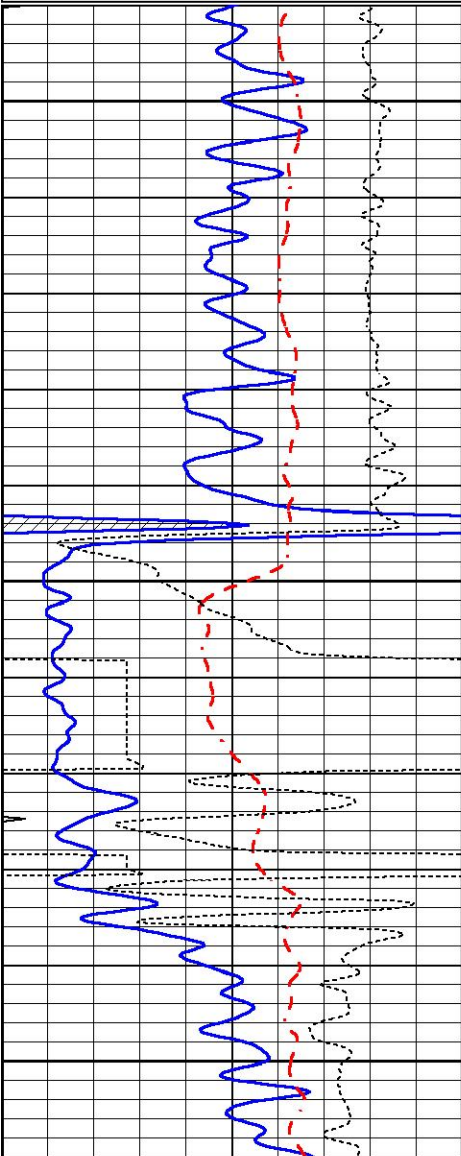




MAIN PASS

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



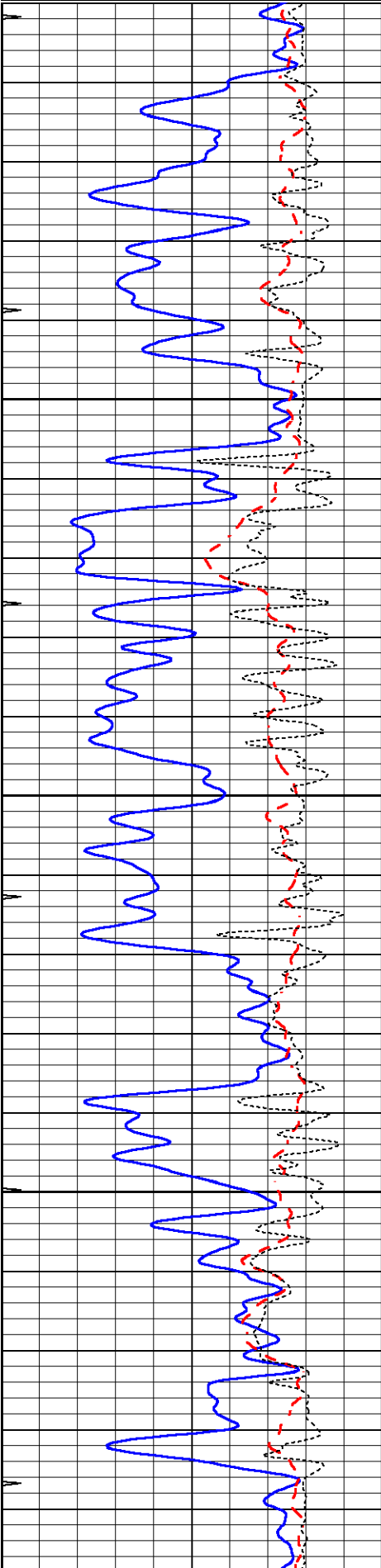
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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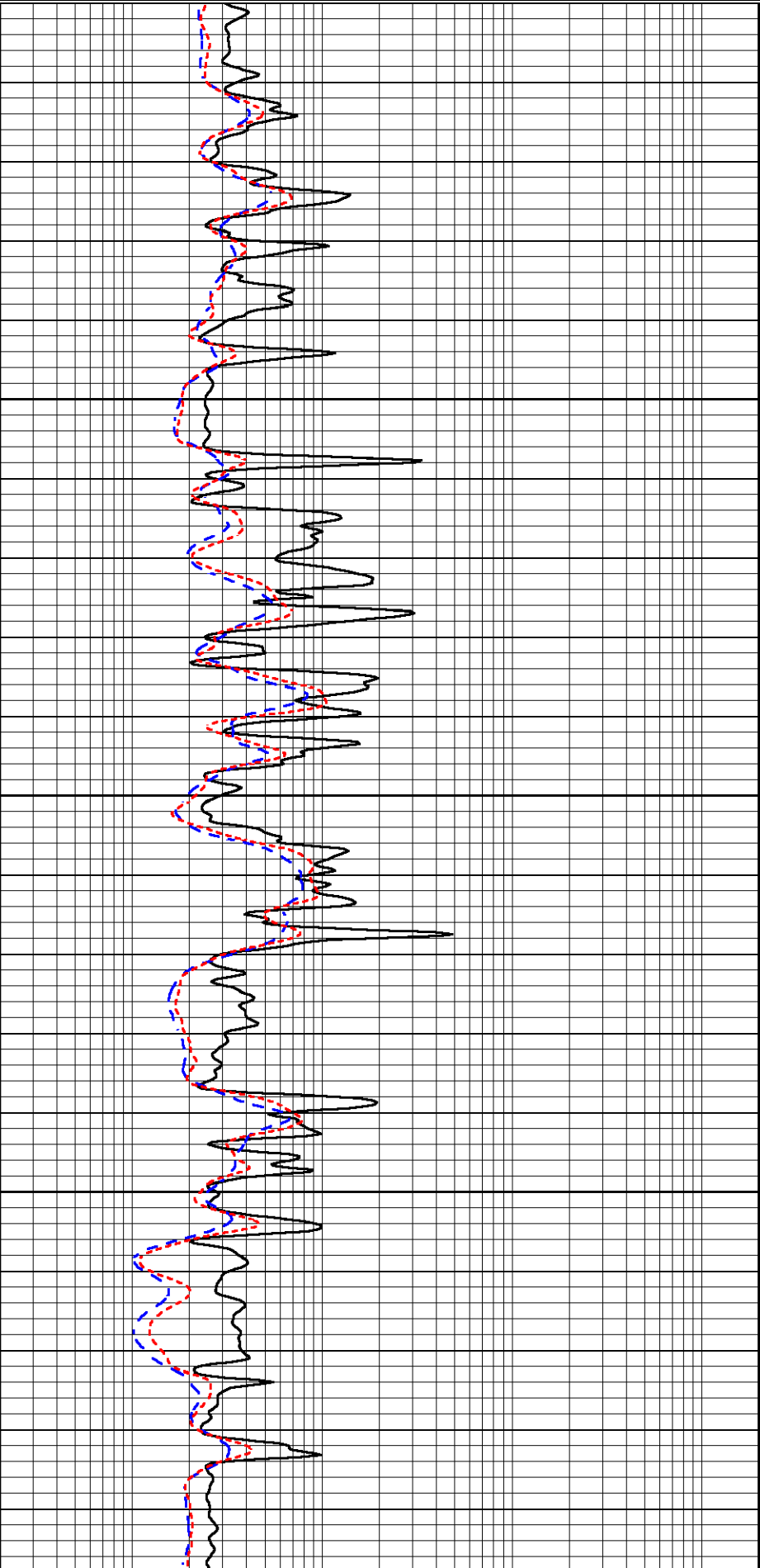


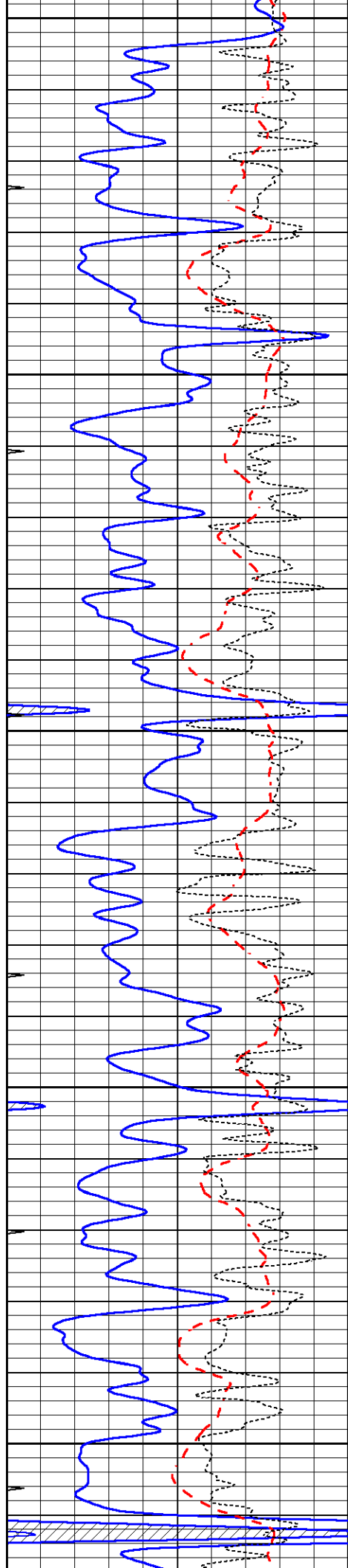
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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





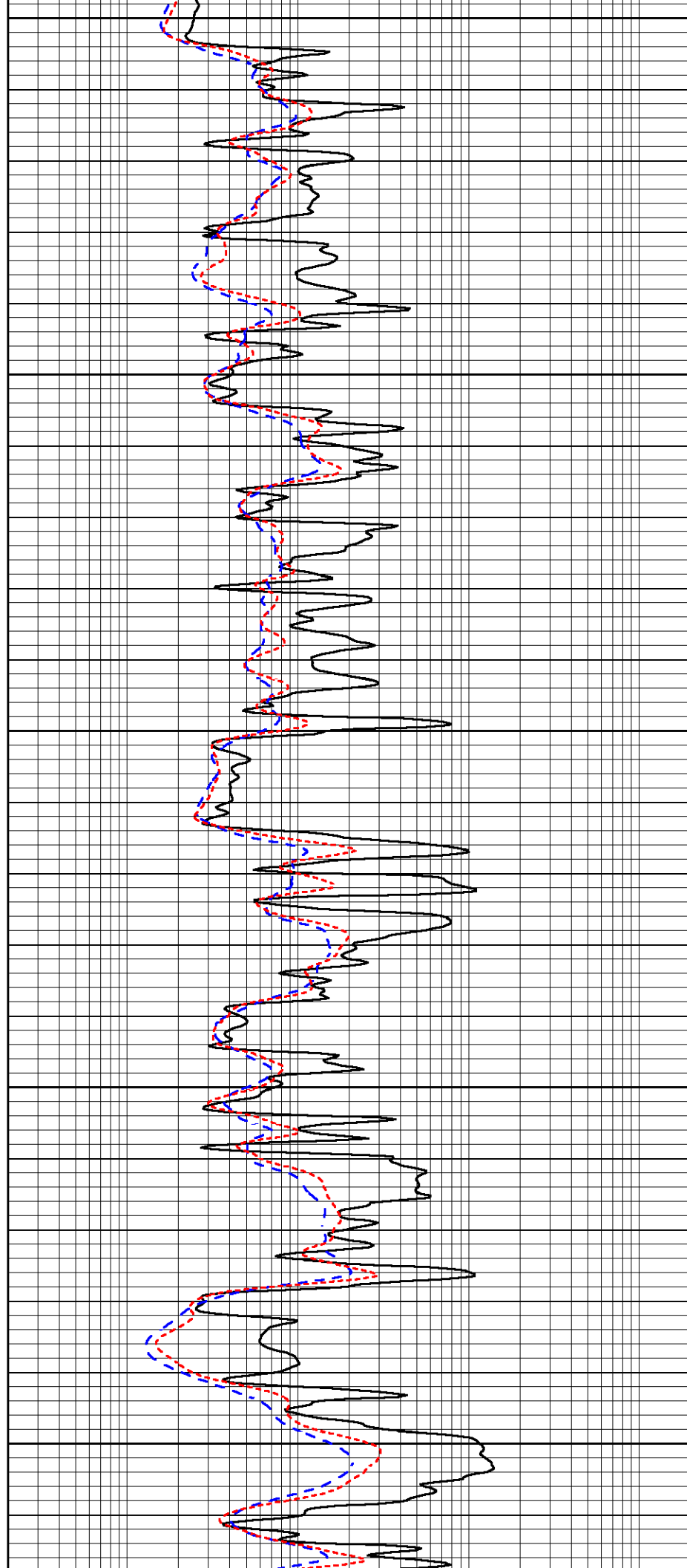
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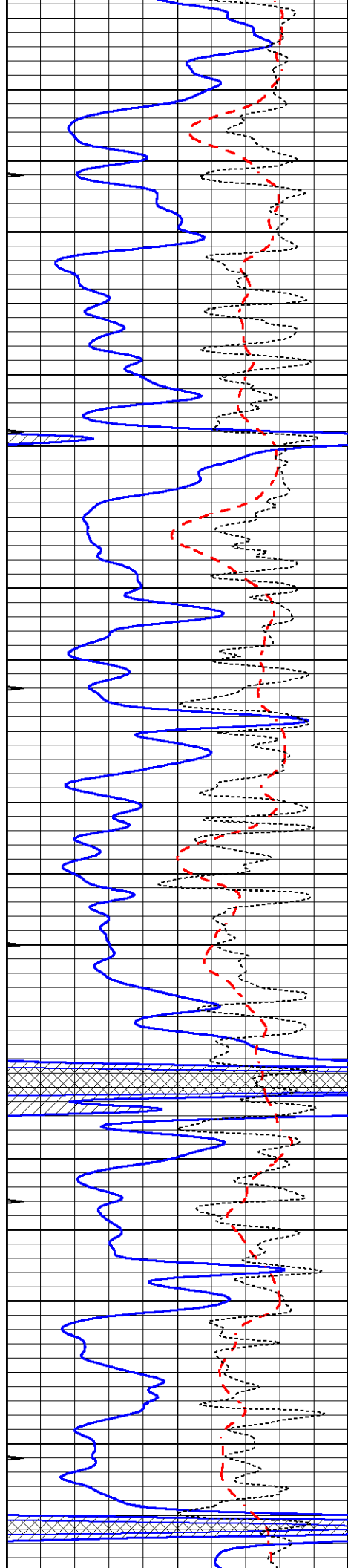
3050

3100

3150

3200



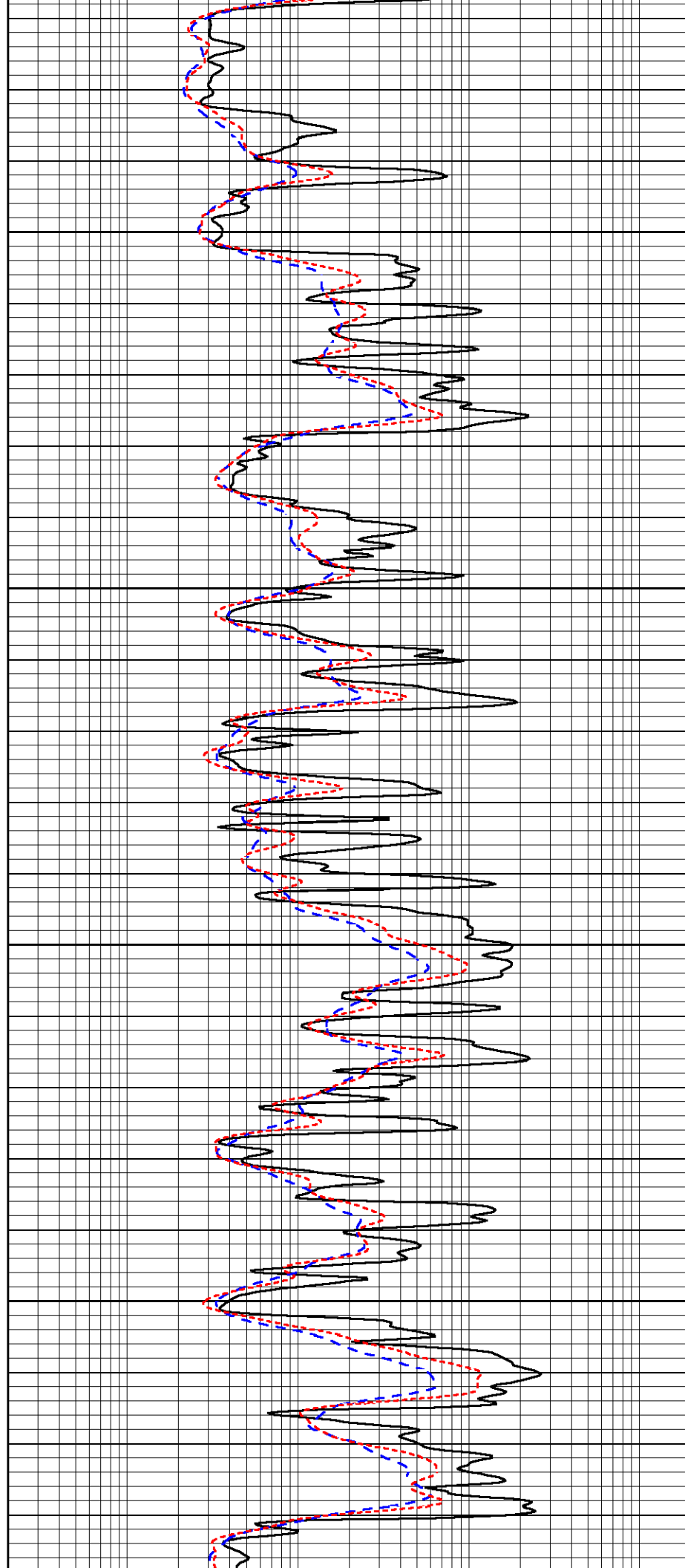


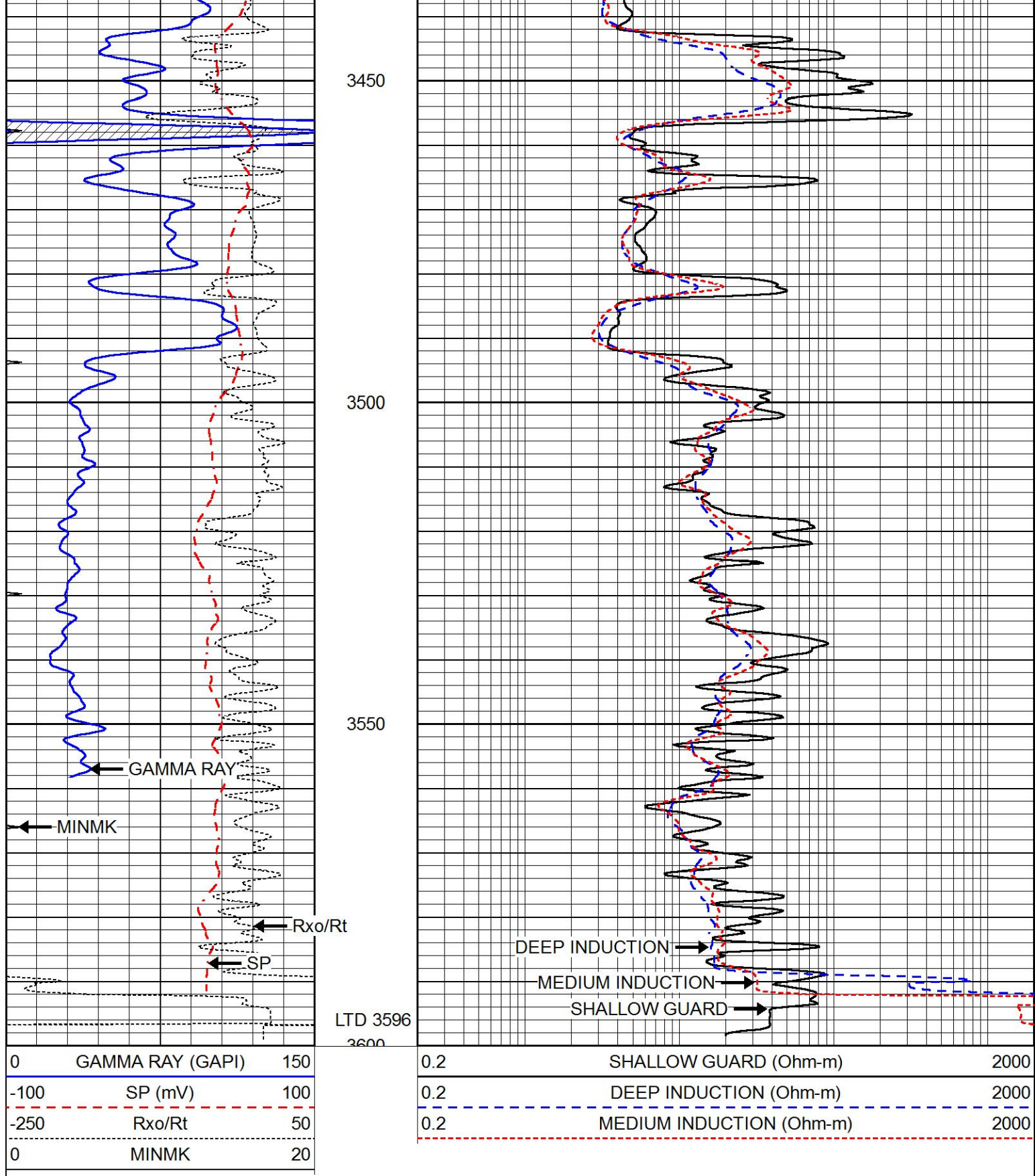
3250

3300

3350

3400

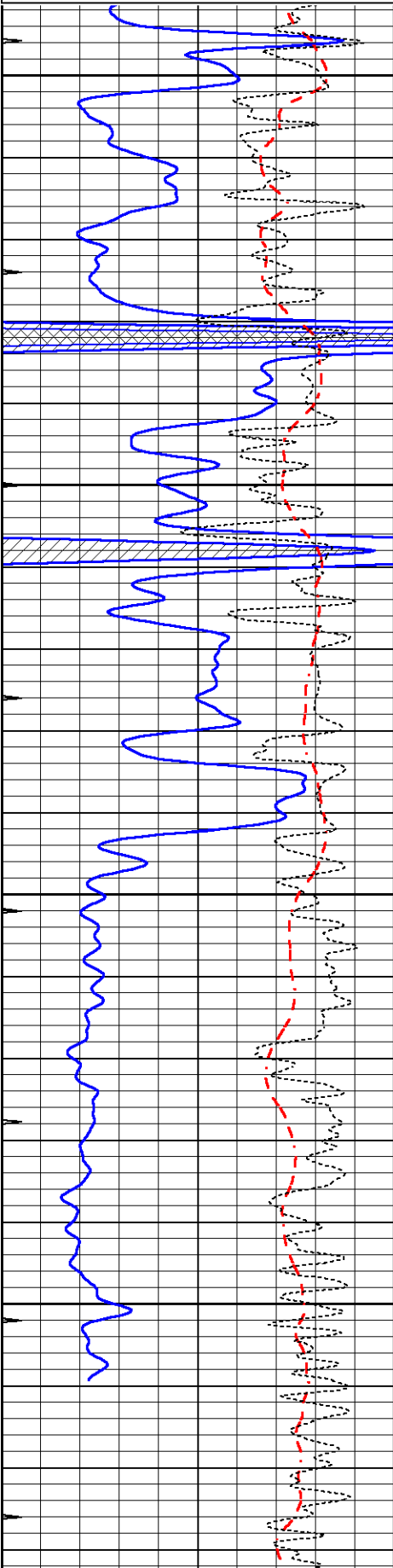




REPEAT SECTION

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

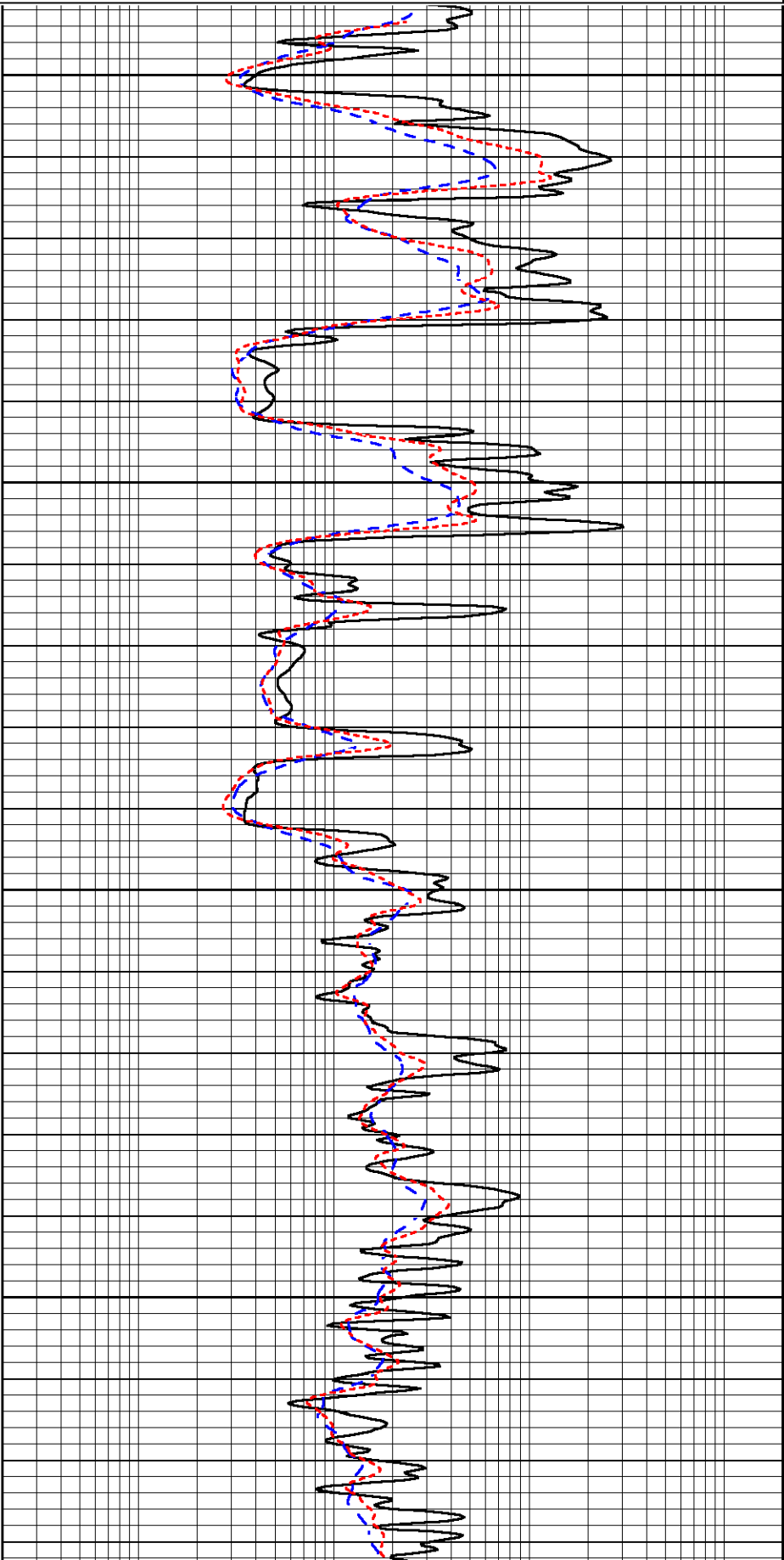


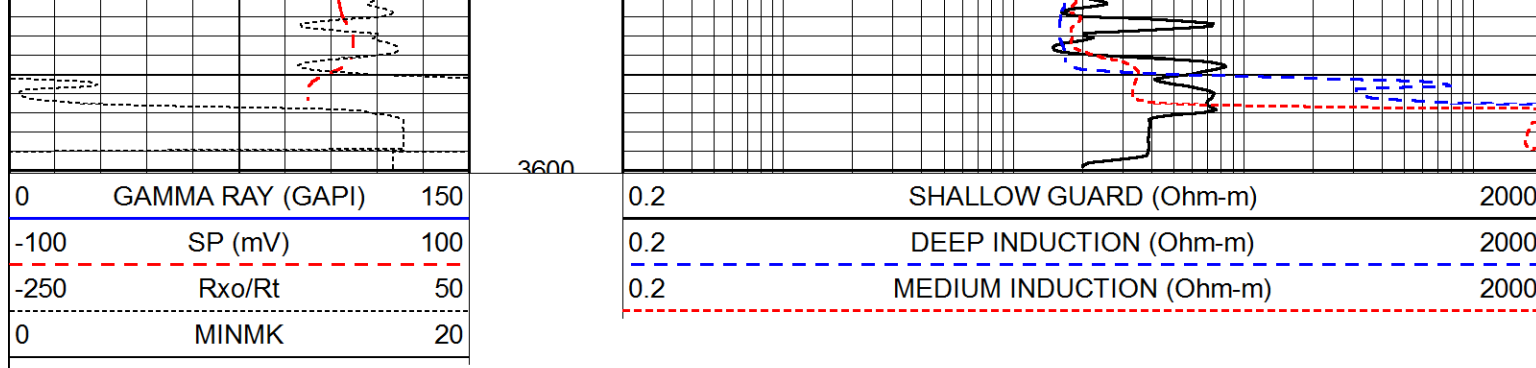
3400

3450

3500

3550





Calibration Report	
Database File	5028ddn.db
Dataset Pathname	pass2.1
Dataset Creation	Tue Sep 22 07:25:09 2020

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	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	590.000	-12.000
Internal:	Zero	Cal		Zero	Cal	m	b
Deep	0.017	0.657	V	0.000	400.000	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	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	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	1.000	0.000
LL3		7.500	V		1500.000		
		0.000	V		20.000		
		-7.200	V		3800.000		

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

Litho Density Calibration Report

Serial: 002N Model: PRB

Master Calibration Performed Tue Mar 10 15:08:00 2020

Background	Magnesium	Aluminum	Aluminum+Fe
700.4	2001.0	2000.0	1071.0

Window 1	780.1	6981.9	2088.6	1871.2	cps
Window 2	718.6	5898.2	1813.8	1664.1	cps
Window 3	580.0	2989.5	1088.0	1039.1	cps
Window 4	172.8	175.7	175.3	173.5	cps
Long Space	0.0	5179.6	1095.2	945.5	cps
Short Space	1.1	1228.6	821.2	690.4	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	
Rib Angle	: 45.5	Rib Slope	: 1.016	Density/Spine Ratio	: 0.548
Spine Angle	: 75.5	Spine Slope	: 3.857	Spine Intercept	: -18.9

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		
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