

DUAL INDUCTION LOG

Company	L. D. DRILLING, INC.	Company	L. D. DRILLING, INC.
Well	#1-6 JETMORE	Well	#1-6 JETMORE
Field	WILDCAT	Field	WILDCAT
County	HODGEMAN	County	HODGEMAN
State	KANSAS	State	KANSAS
Location:	API # : 15-083-21978-0000 330' FNL & 330' FEL NE - NE - NE	Other Services CDL/CNL MEL	
Permanent Datum	GROUND LEVEL	Elevation	2450
Log Measured From	KELLY BUSHING 5' A.G.L.	K.B. 2455 D.F. 2453 G.L. 2450	
Drilling Measured From	KELLY BUSHING		
Date	4/30/20		
Run Number	ONE		
Depth Driller	4850		
Depth Logger	4850		
Bottom Logged Interval	4848		
Top Log Interval	00		
Casing Driller	8 5/8"@248'		
Casing Logger	248		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,800 PPM	
Density / Viscosity	9.7774		
pH / Fluid Loss	9.0/10.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.680@82F		
Rmf @ Meas. Temp	.510@82F		
Rmc @ Meas. Temp	.816@82F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.450@124F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	1:30 P.M.		
Maximum Recorded Temperature	124F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
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.

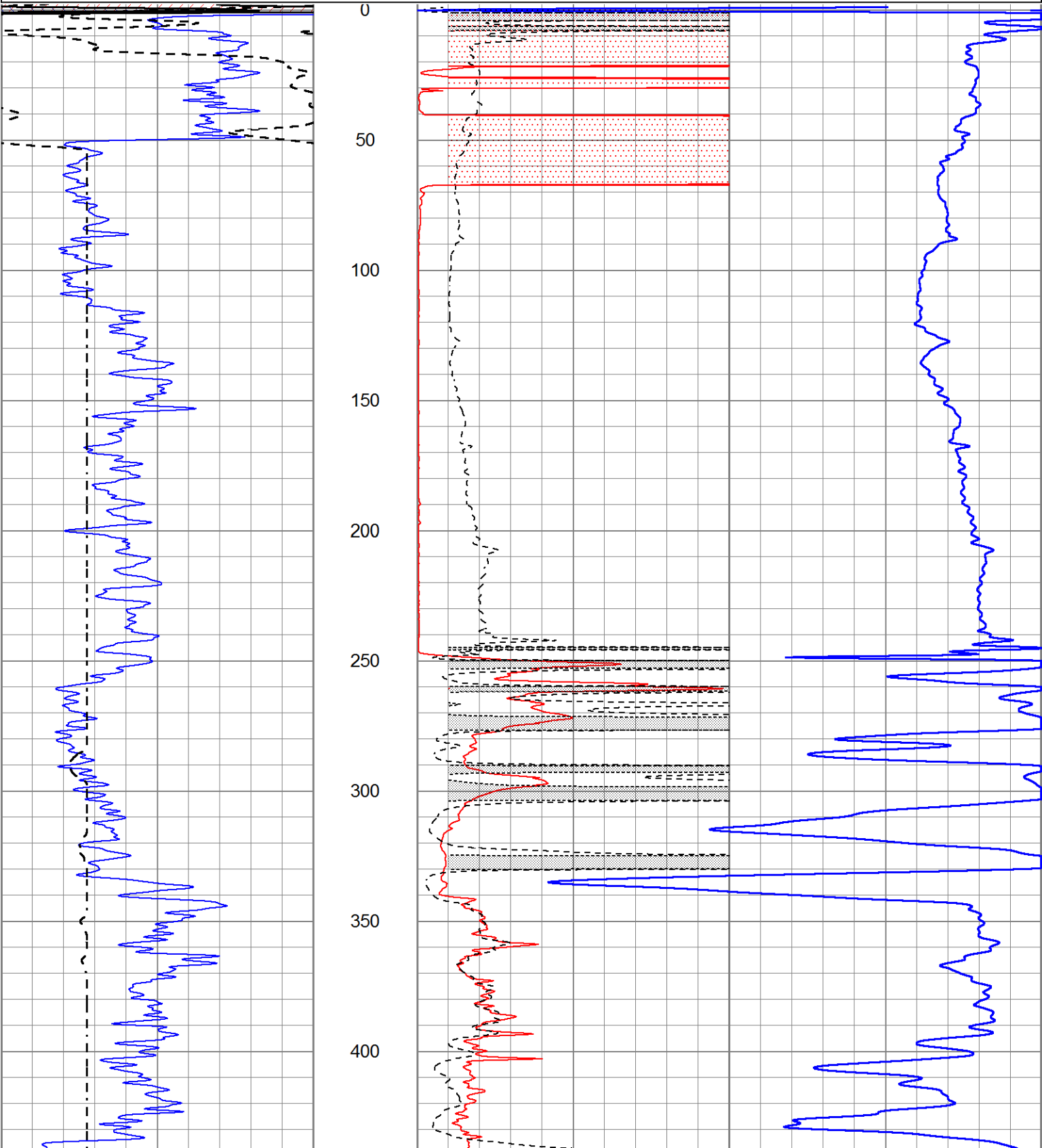
Comments

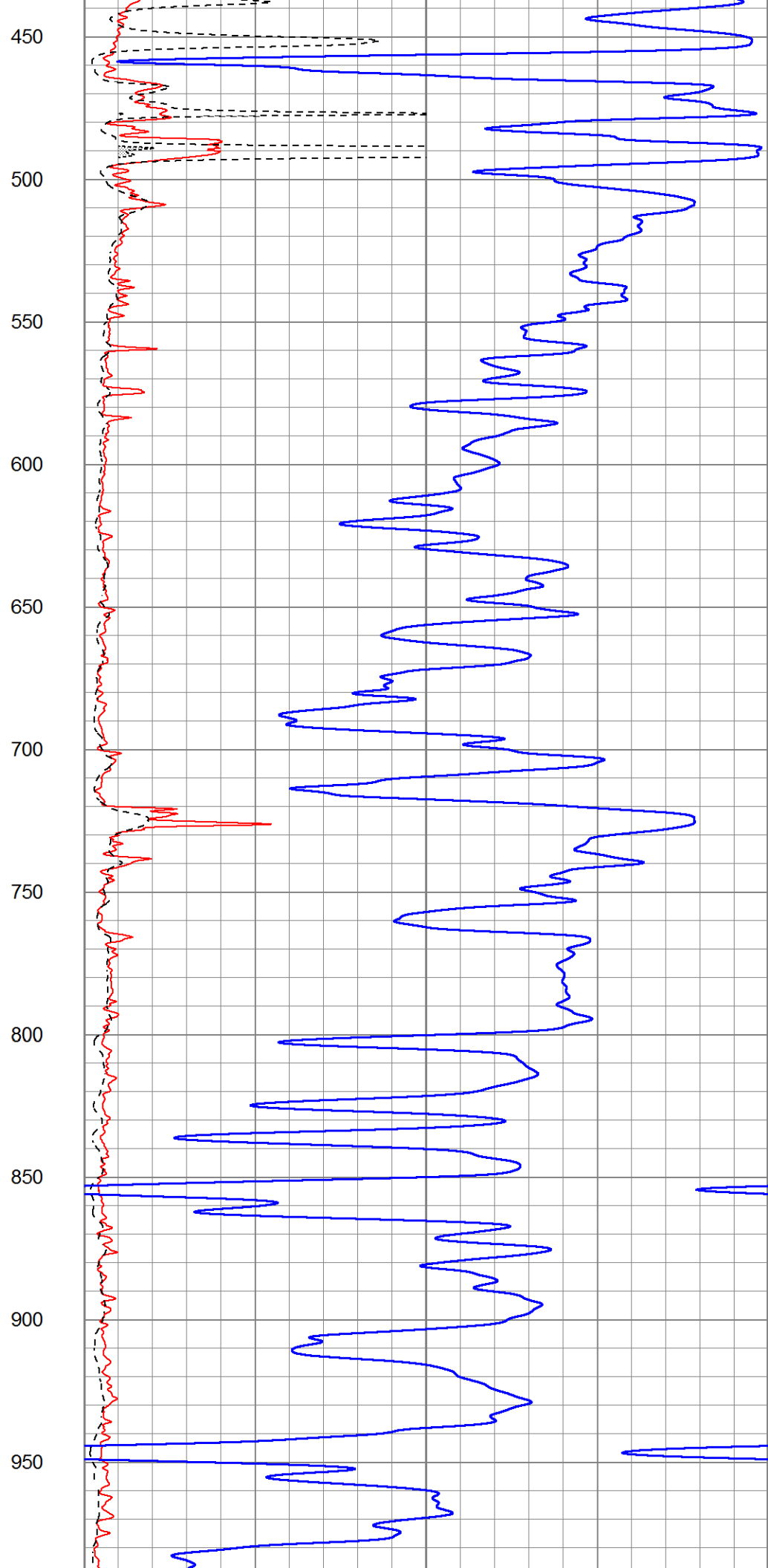
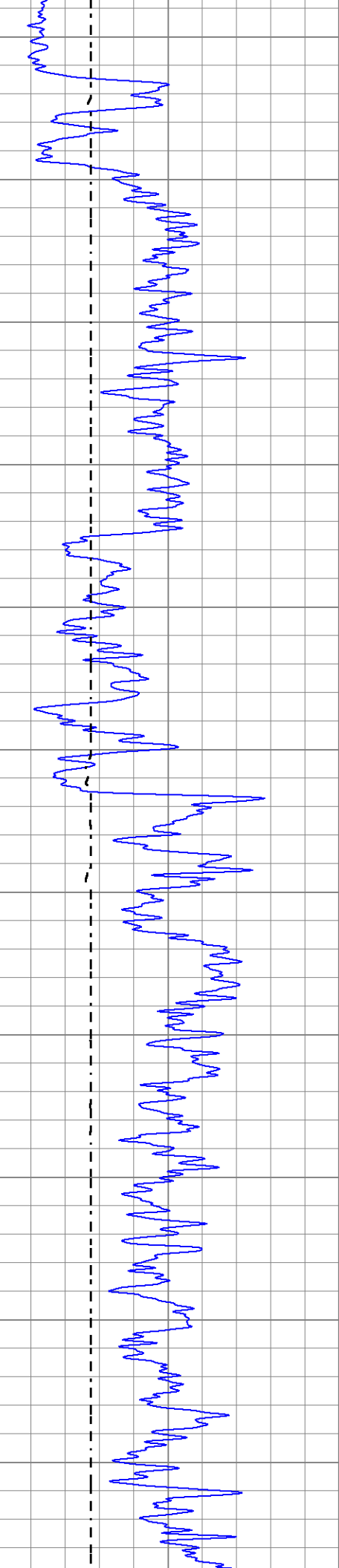
THANK YOU FOR USING E.L.I. WIRELINE SERVICES HAYS, KANSAS (785)628-6395
DIRECTIONS
JETMORE, KS., 6S. ON HWY 283 TO "RD. G", 1E., S. INTO

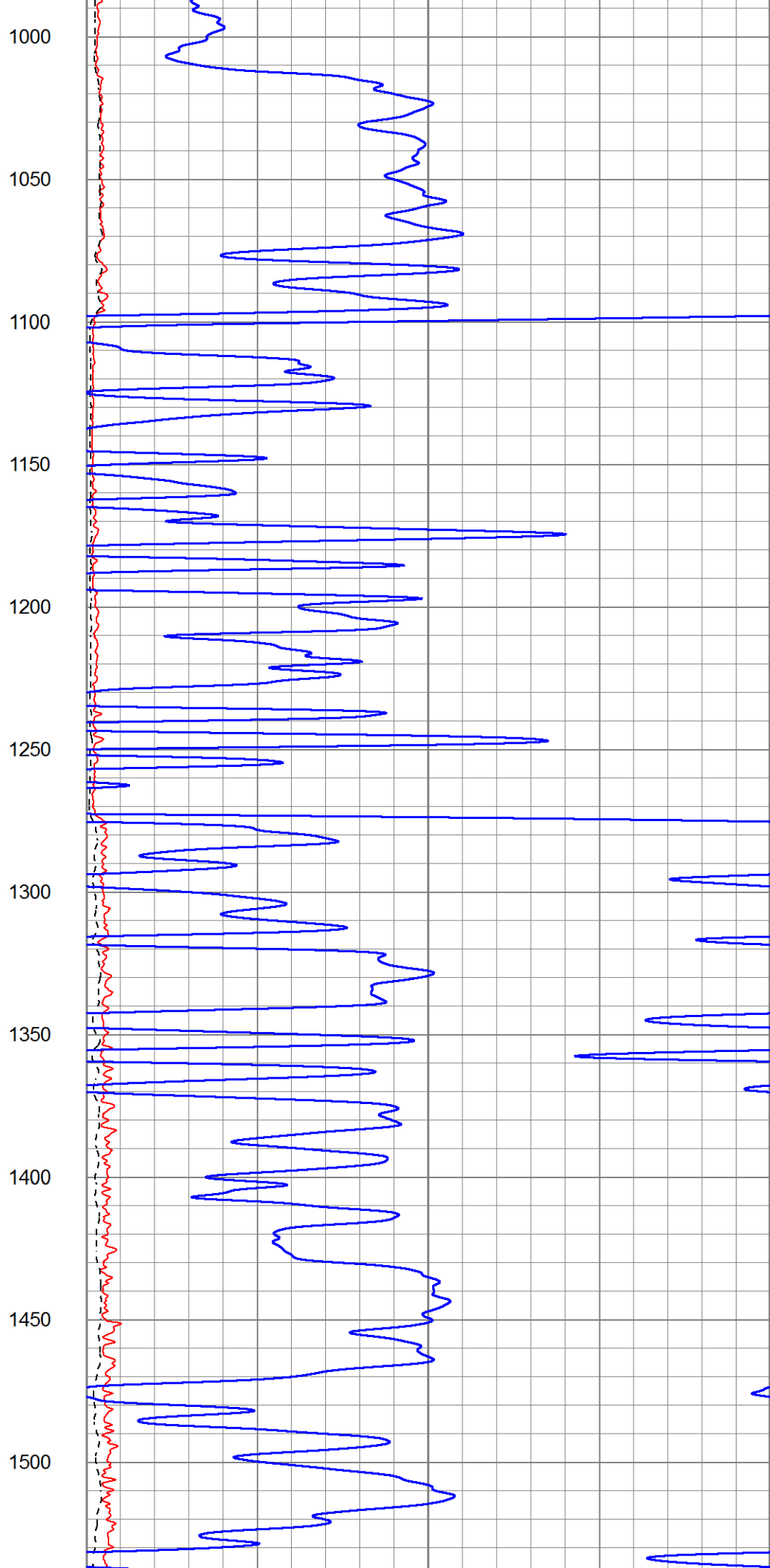
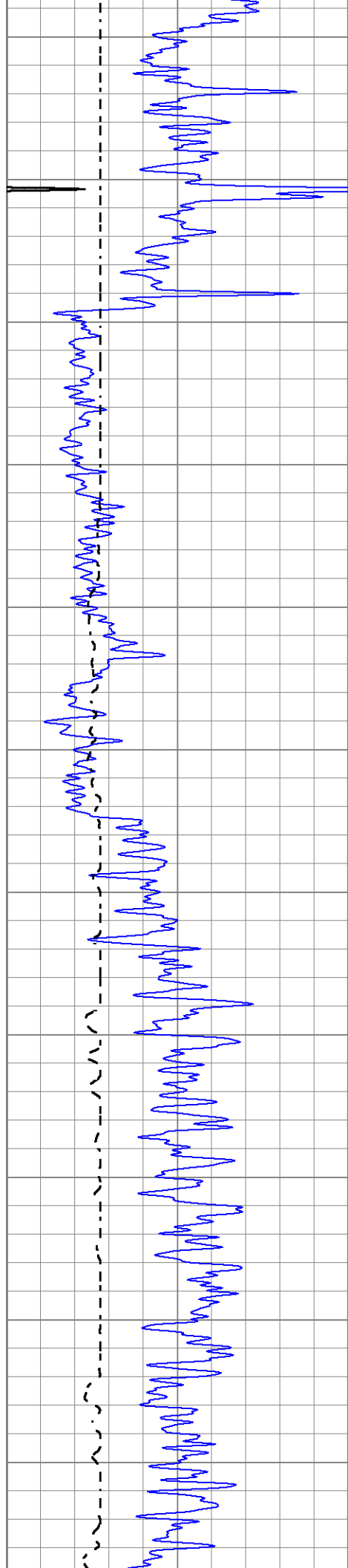


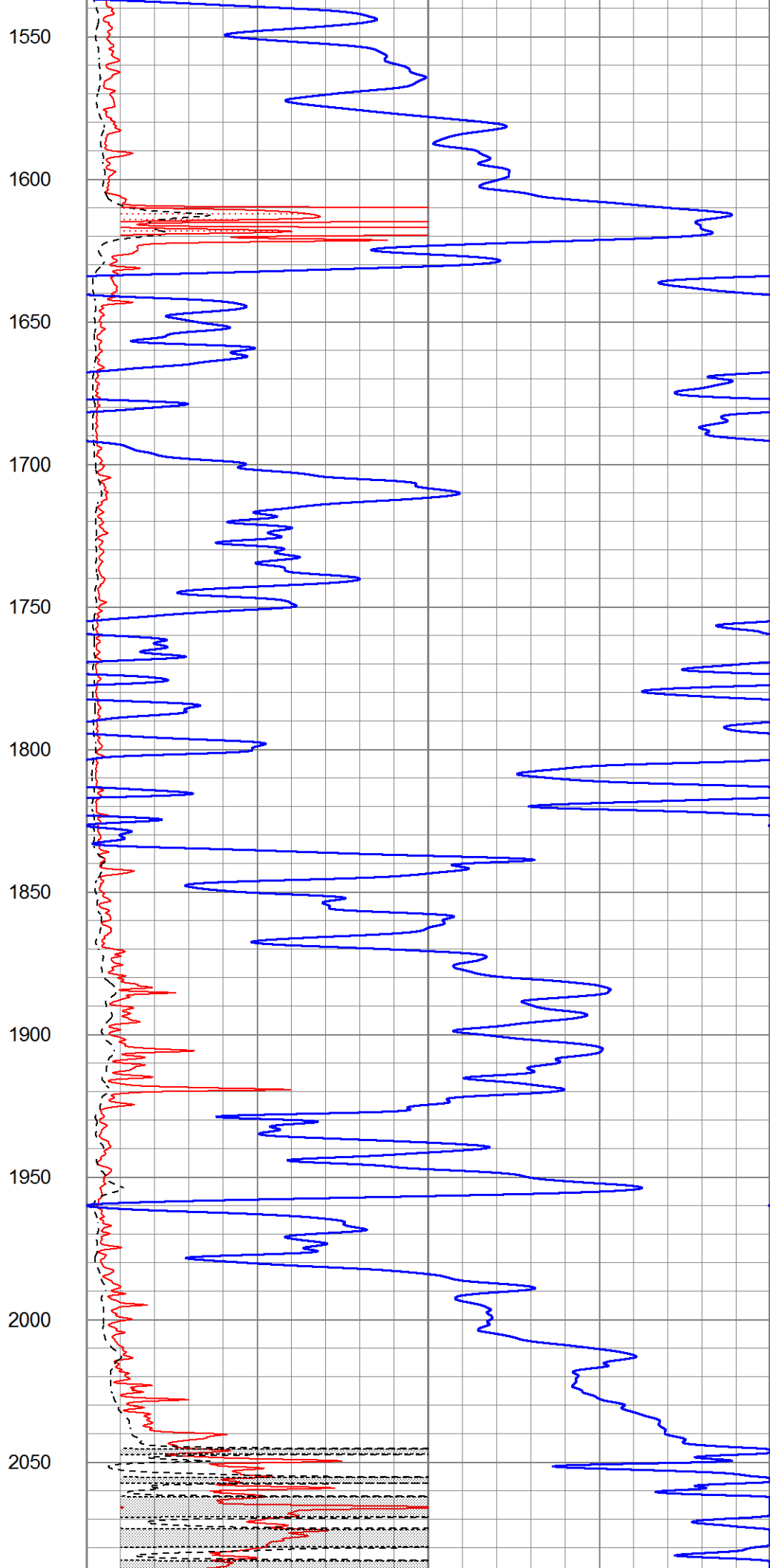
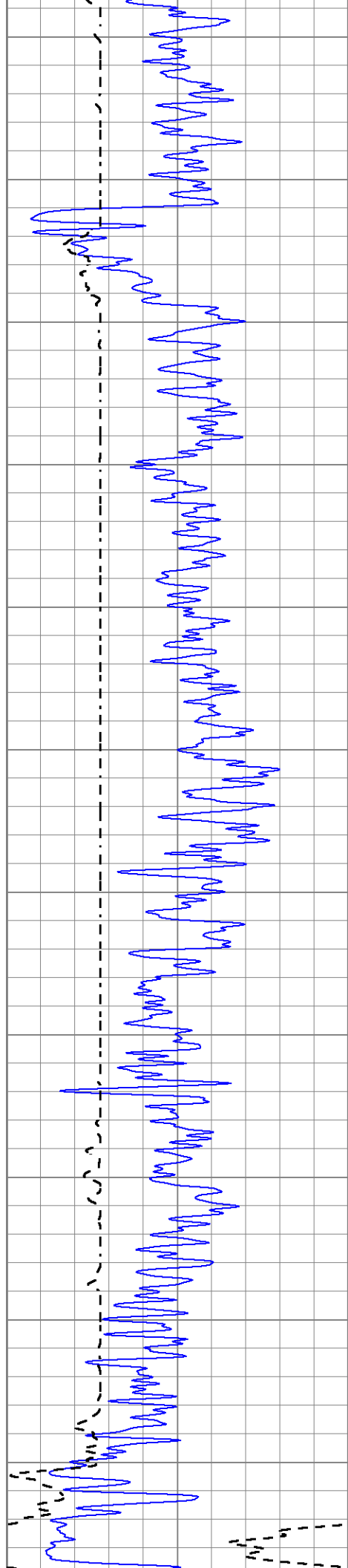
MAIN SECTION

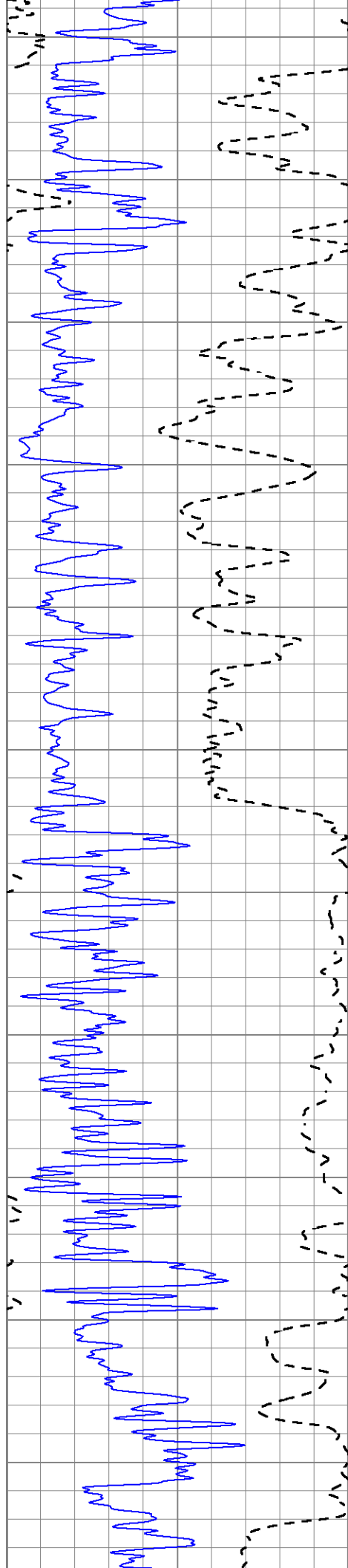
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-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
-----			0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500











2100

2150

2200

2250

2300

2350

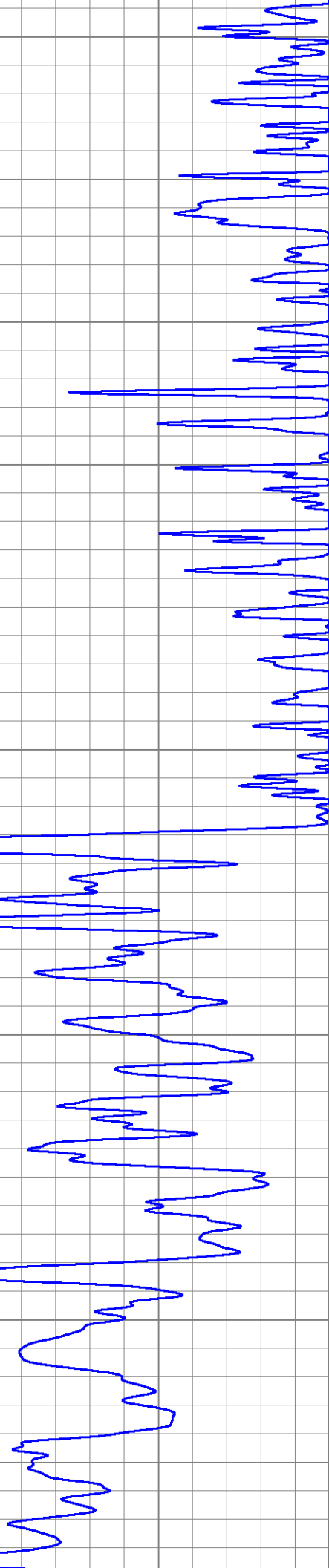
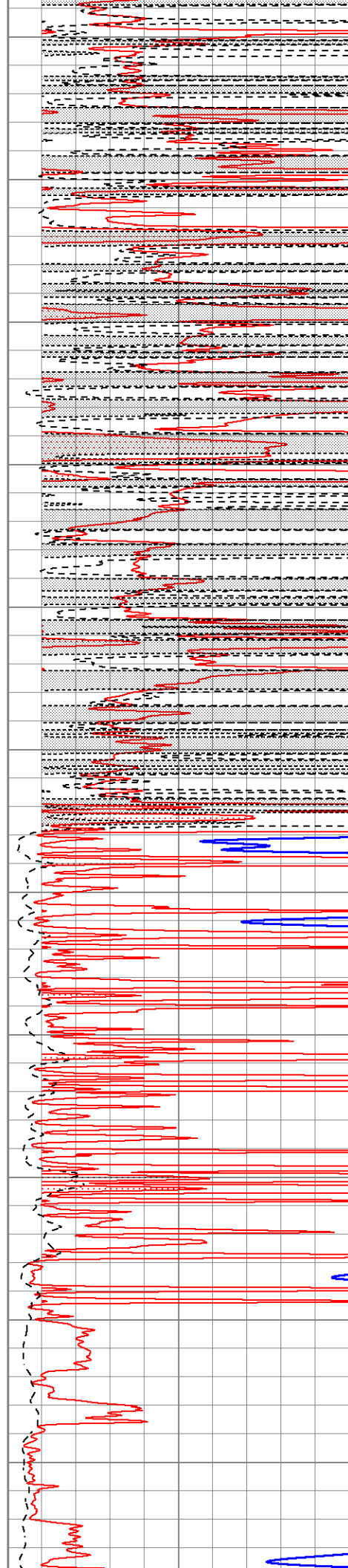
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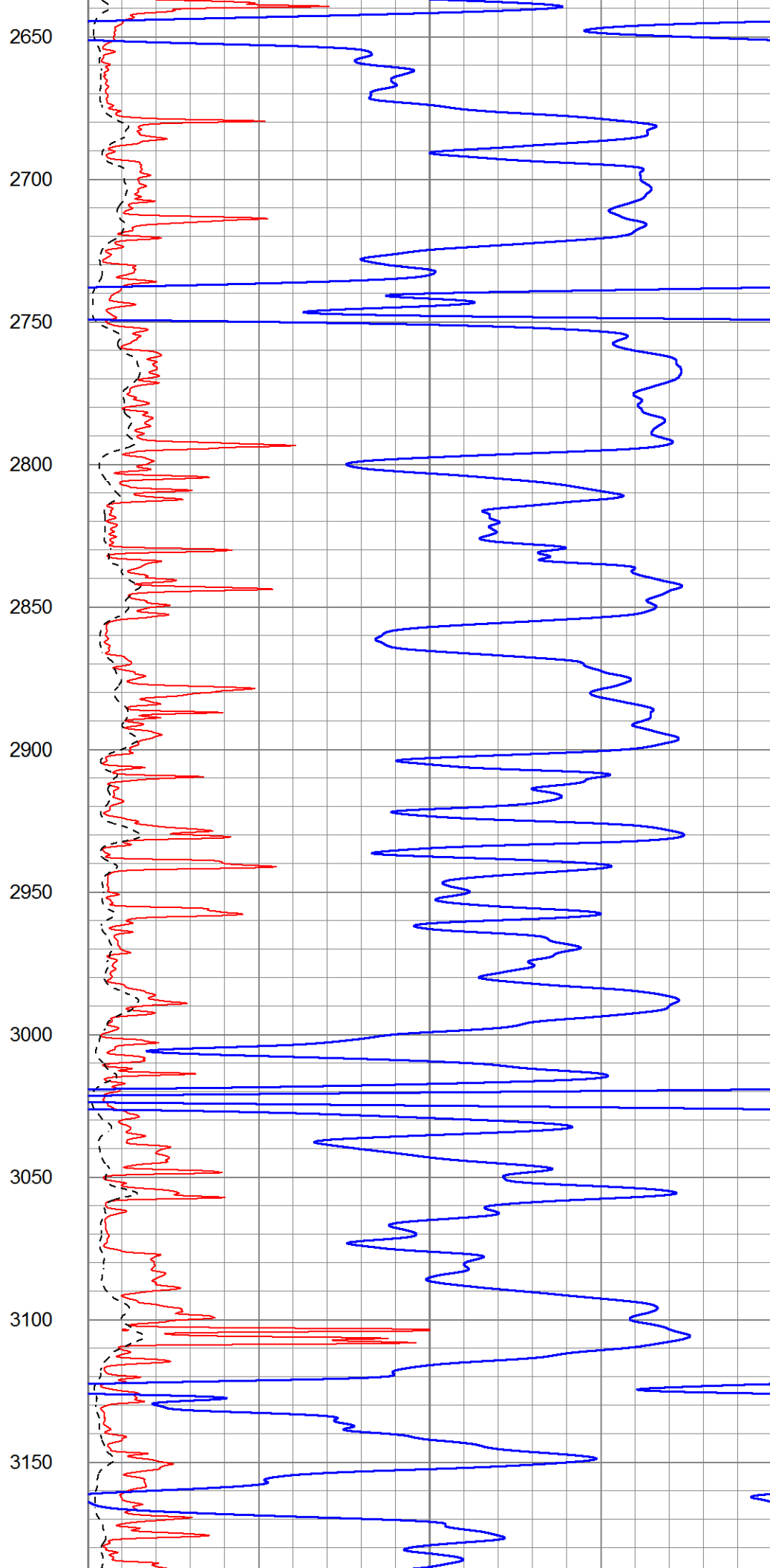
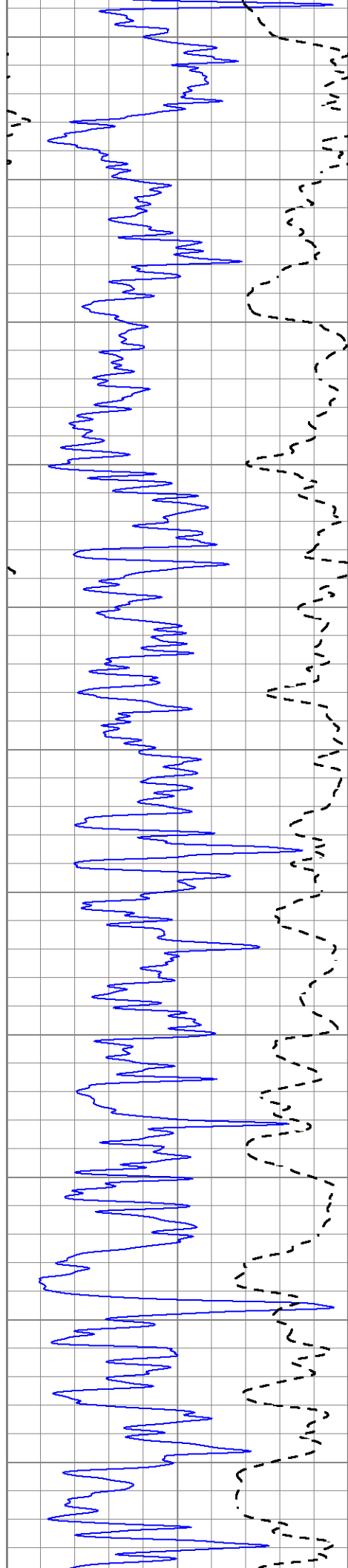
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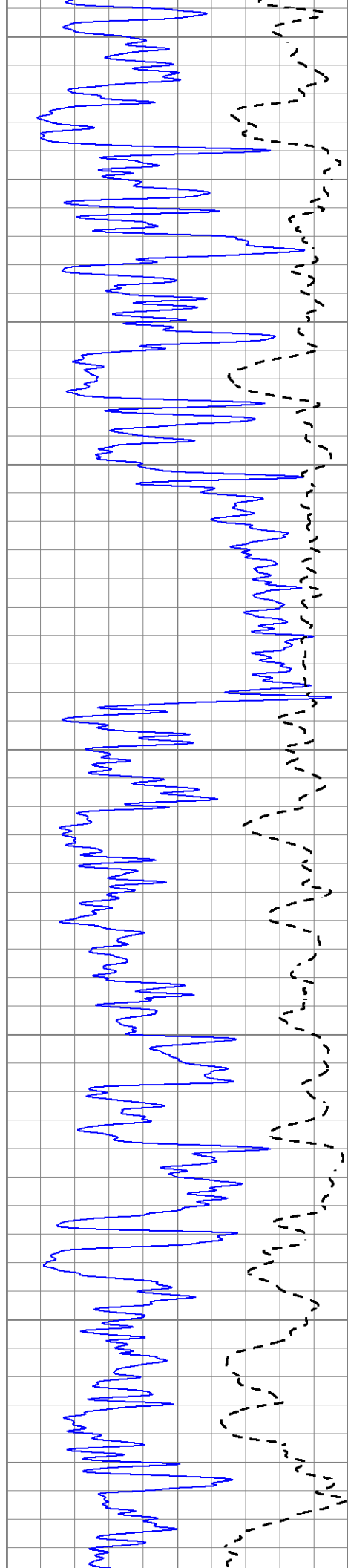
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2550

2600







3200

3250

3300

3350

3400

3450

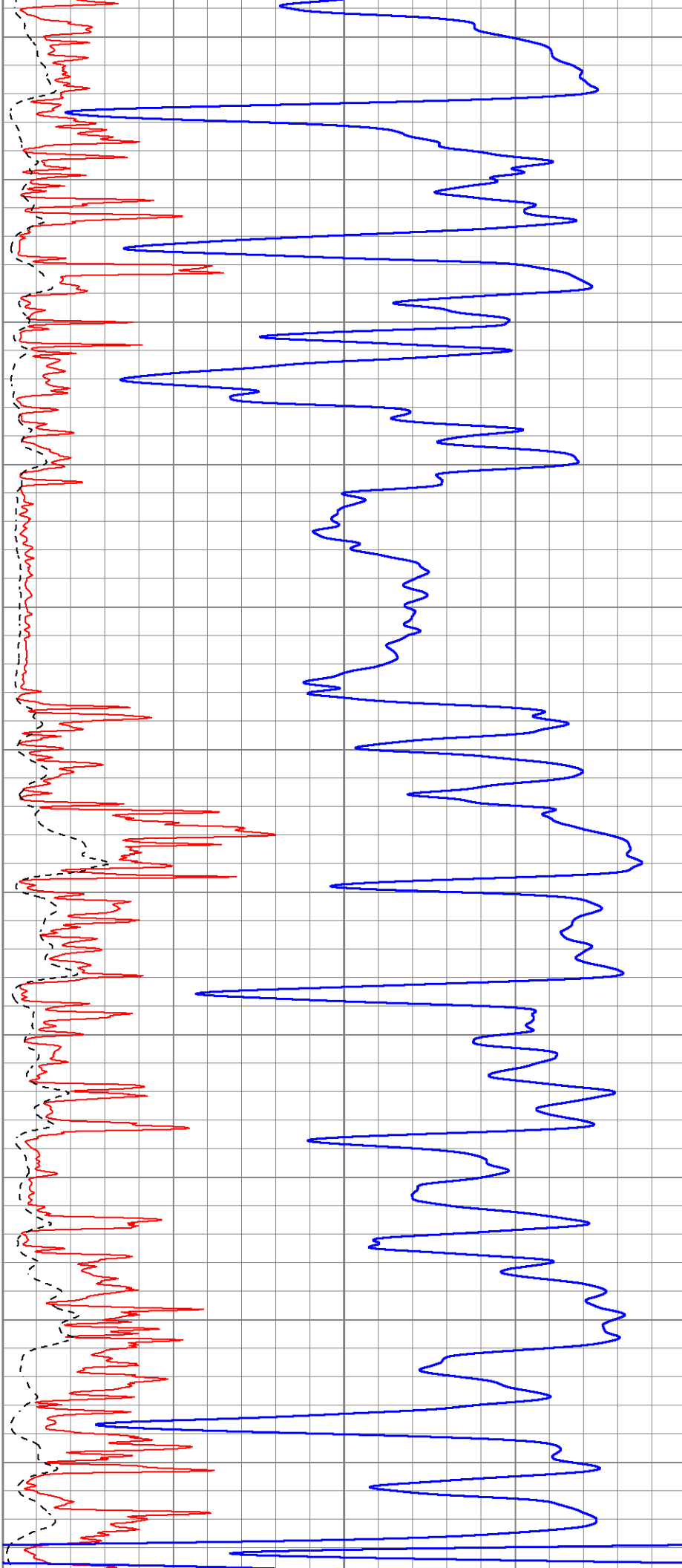
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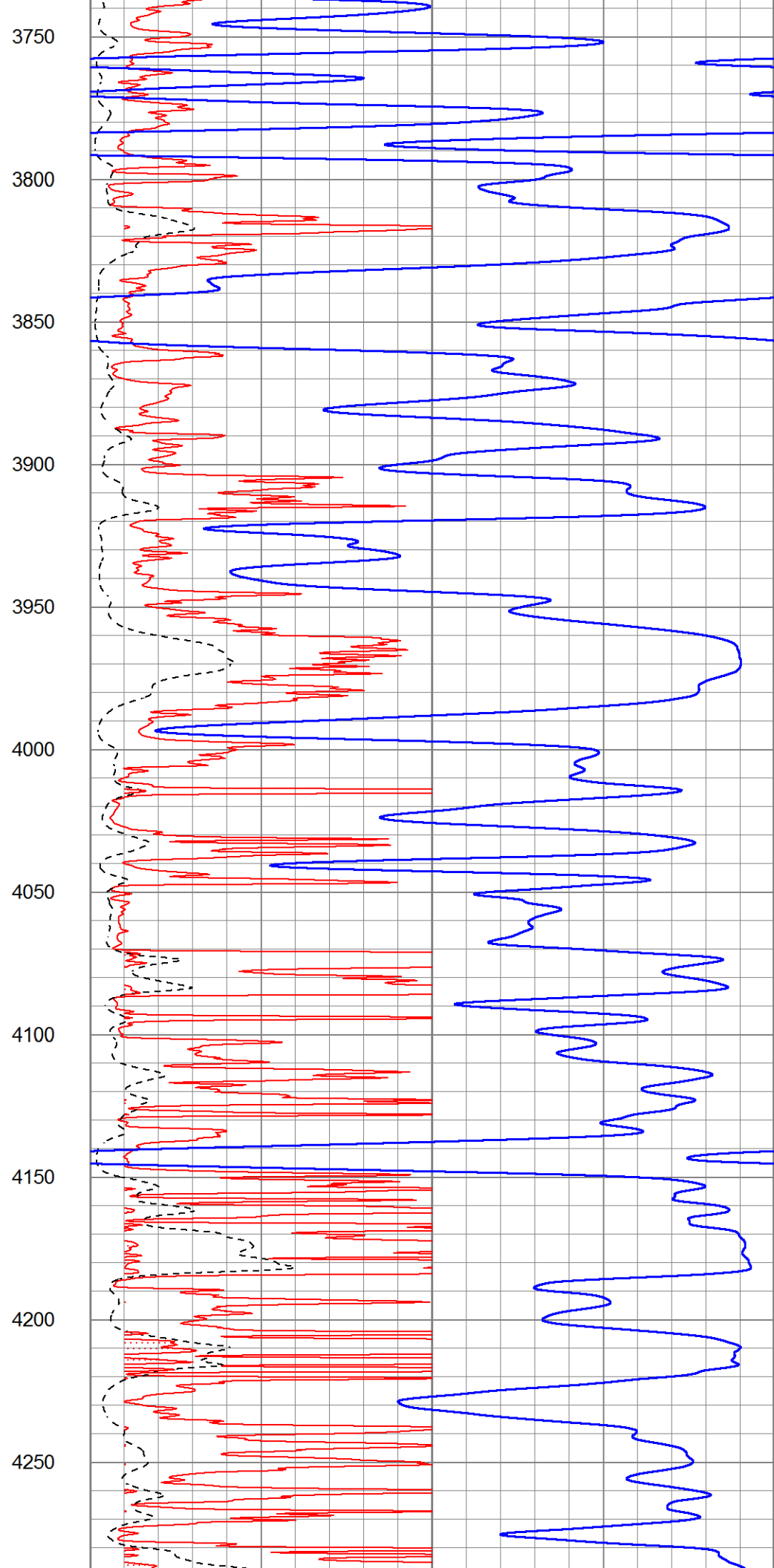
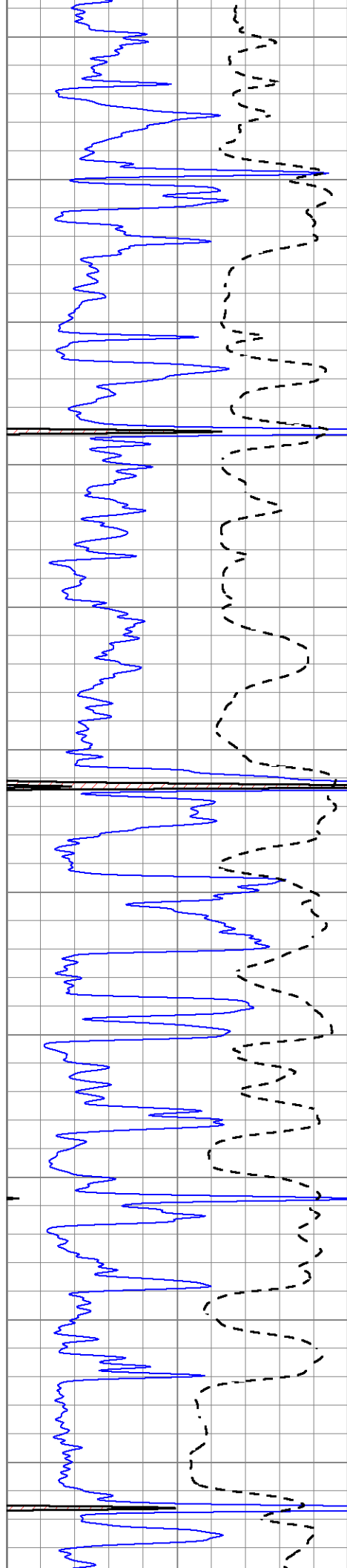
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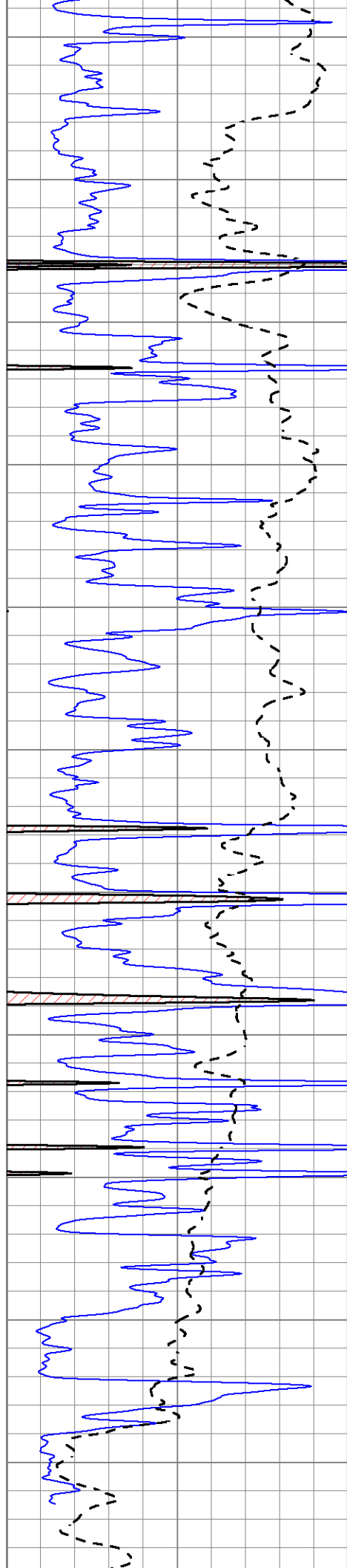
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3650

3700







4300

4350

4400

4450

4500

4550

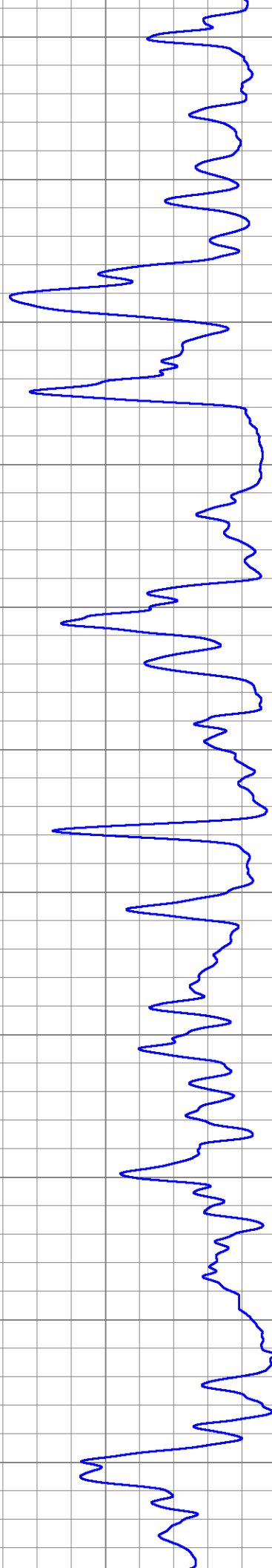
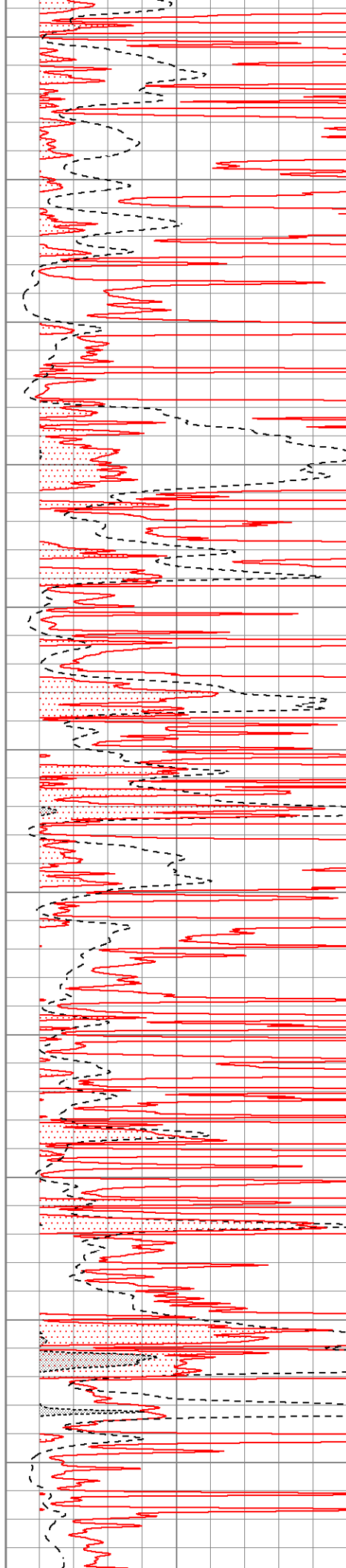
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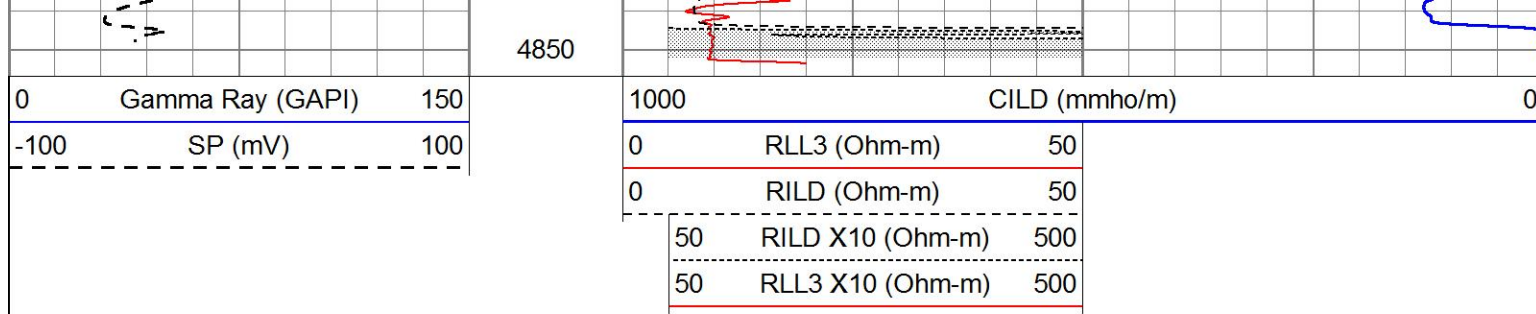
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4750

4800

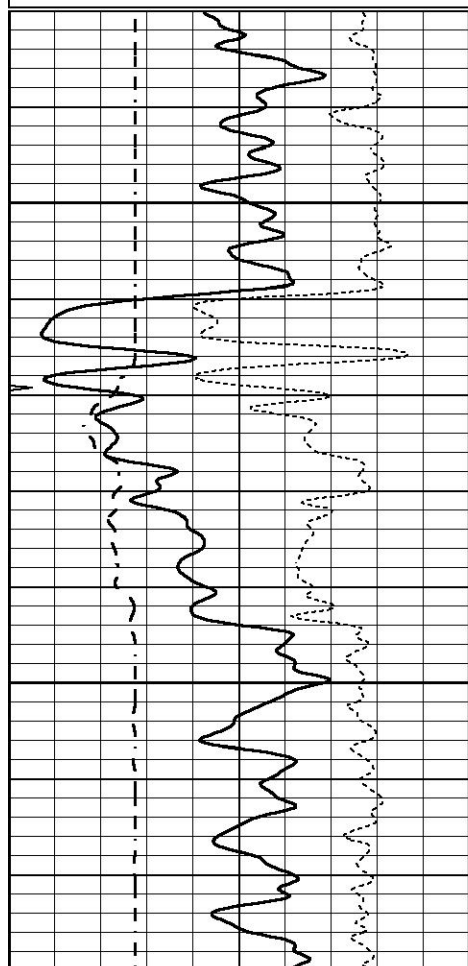




ANHYDRITE

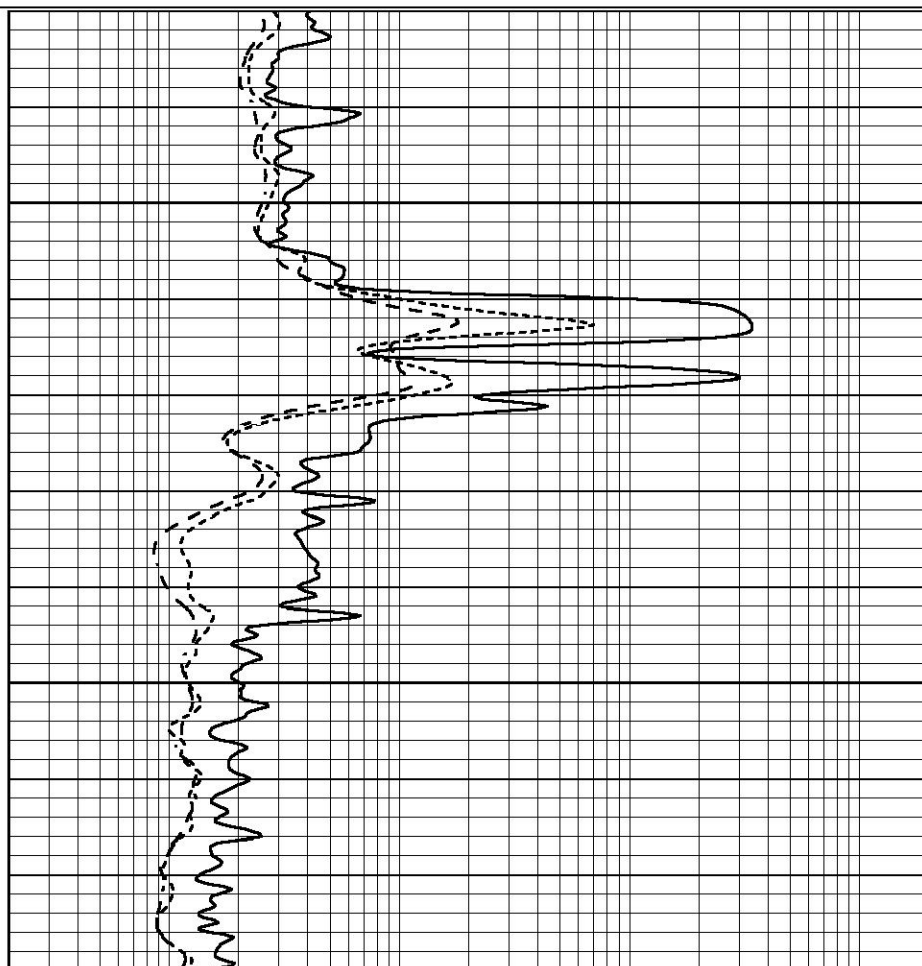
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 Presentation Format _dil
 Dataset Creation Thu Apr 30 16:47:47 2020
 Charted by Depth in Feet scaled 1:240

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			



1600

1650



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			

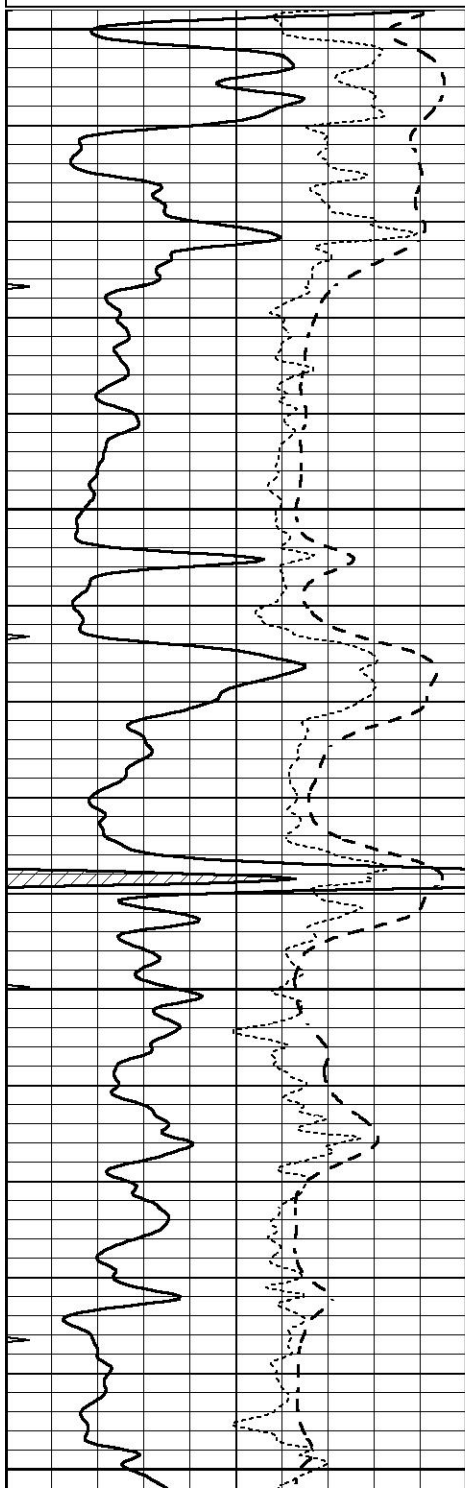


MAIN SECTION

Database File 4541ddn.db
Dataset Pathname pass3.3M
Presentation Format _dil
Dataset Creation Thu Apr 30 16:46:57 2020
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

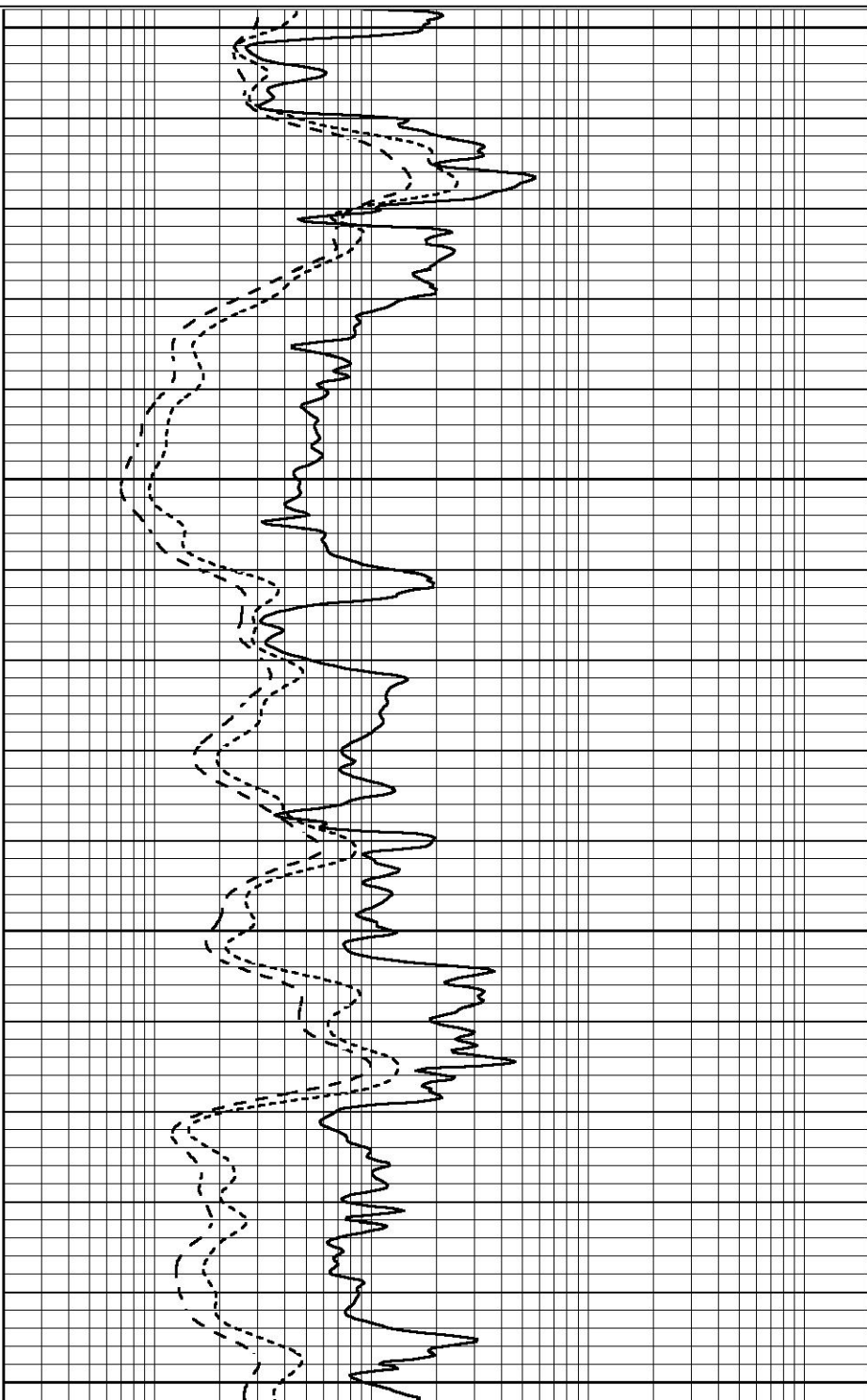


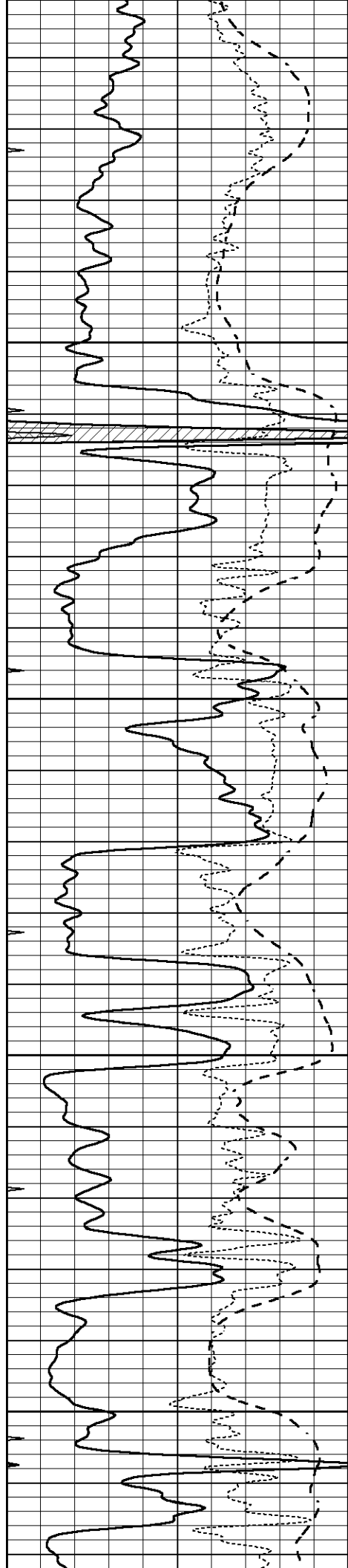
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3850

3900

3950



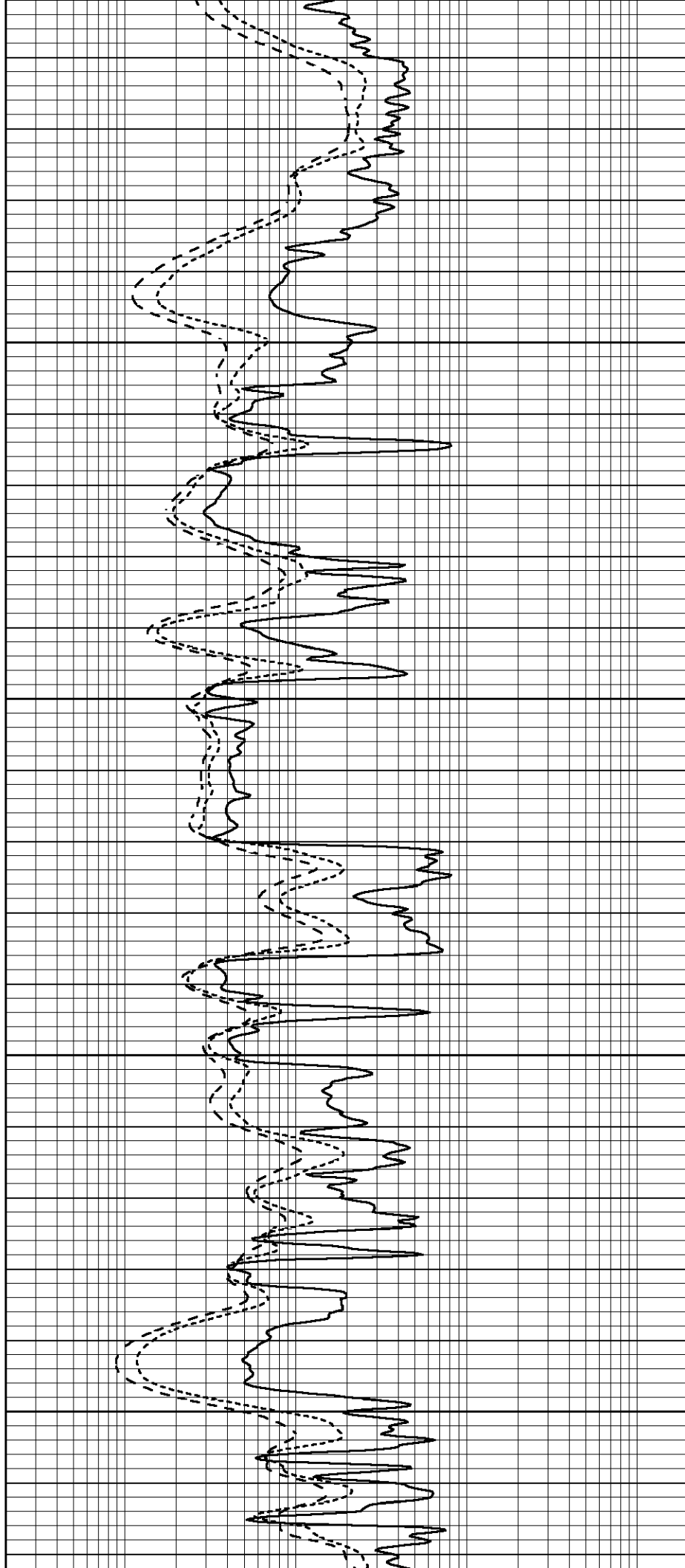


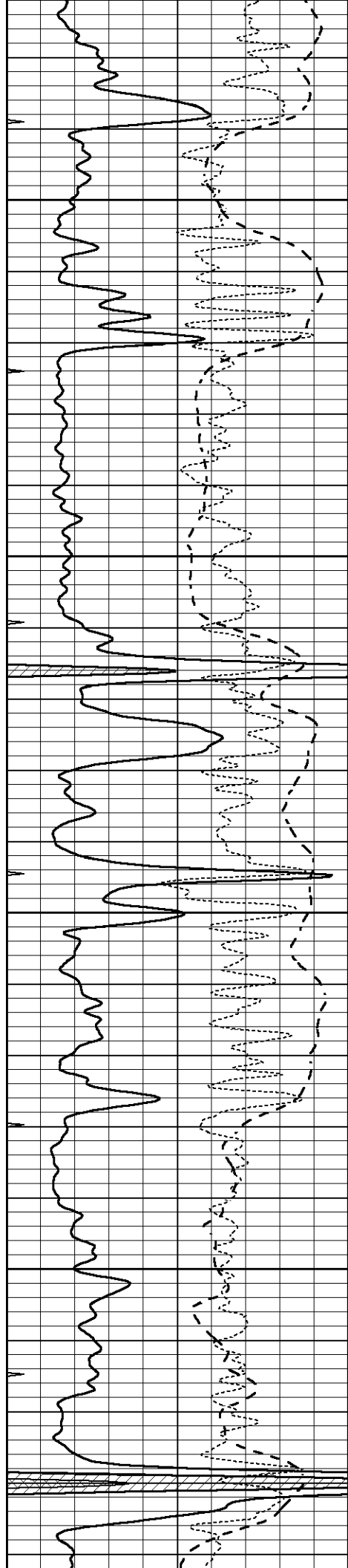
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4050

4100

4150



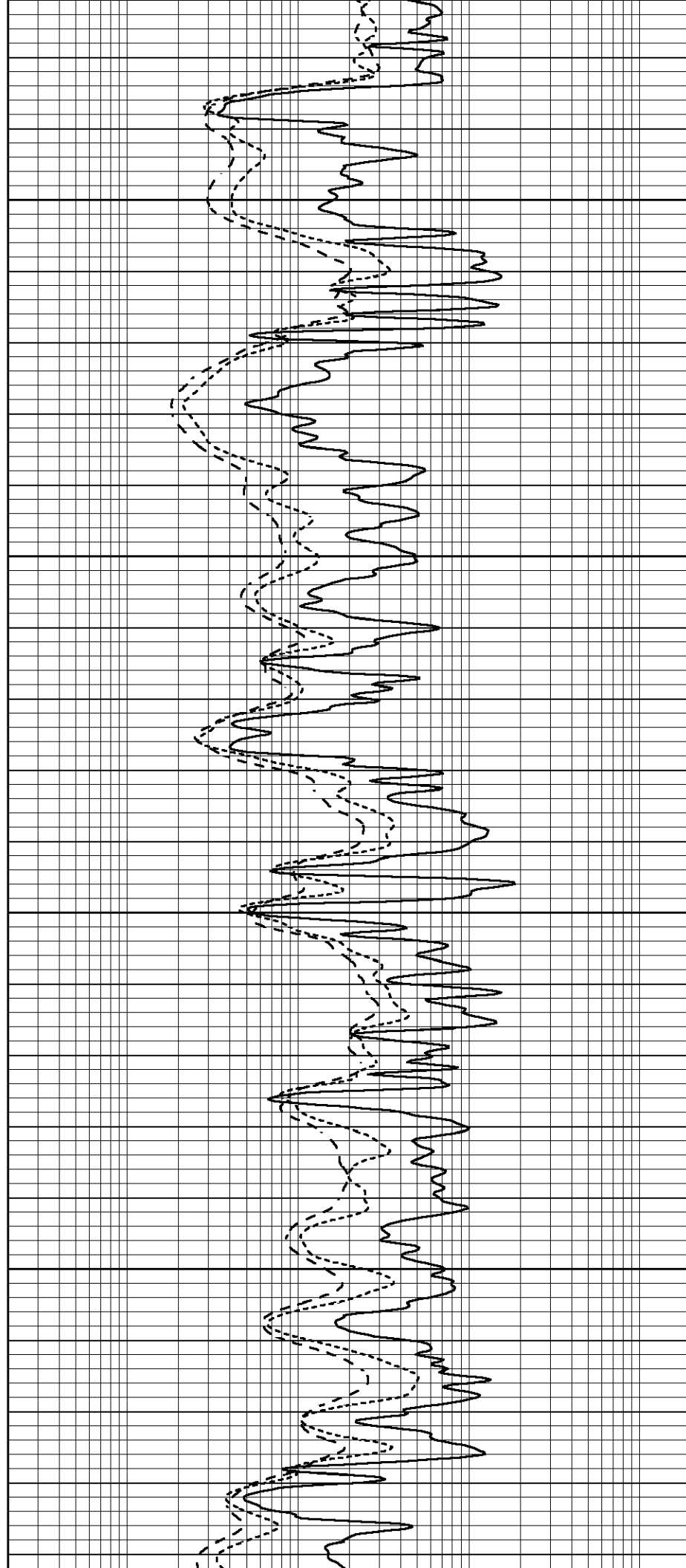


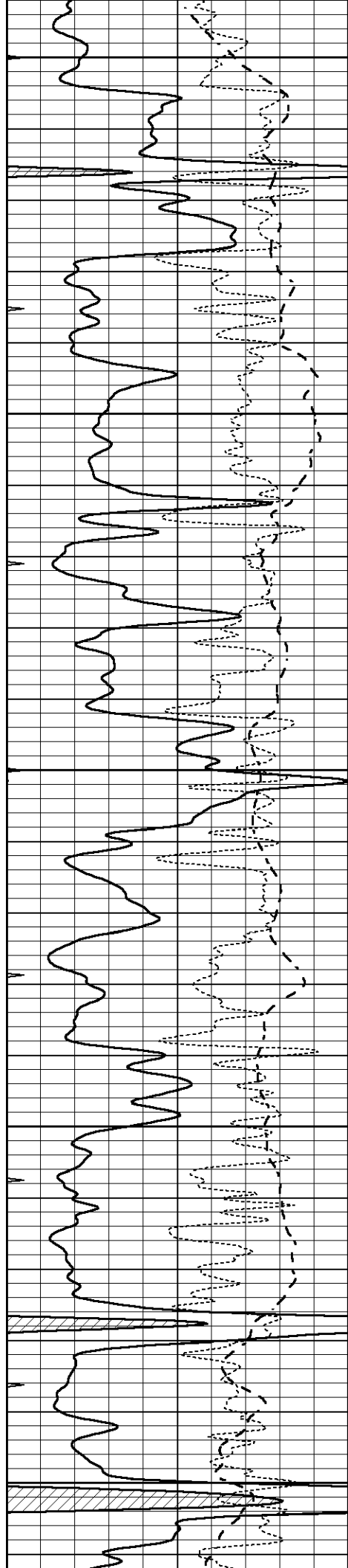
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4250

4300

4350





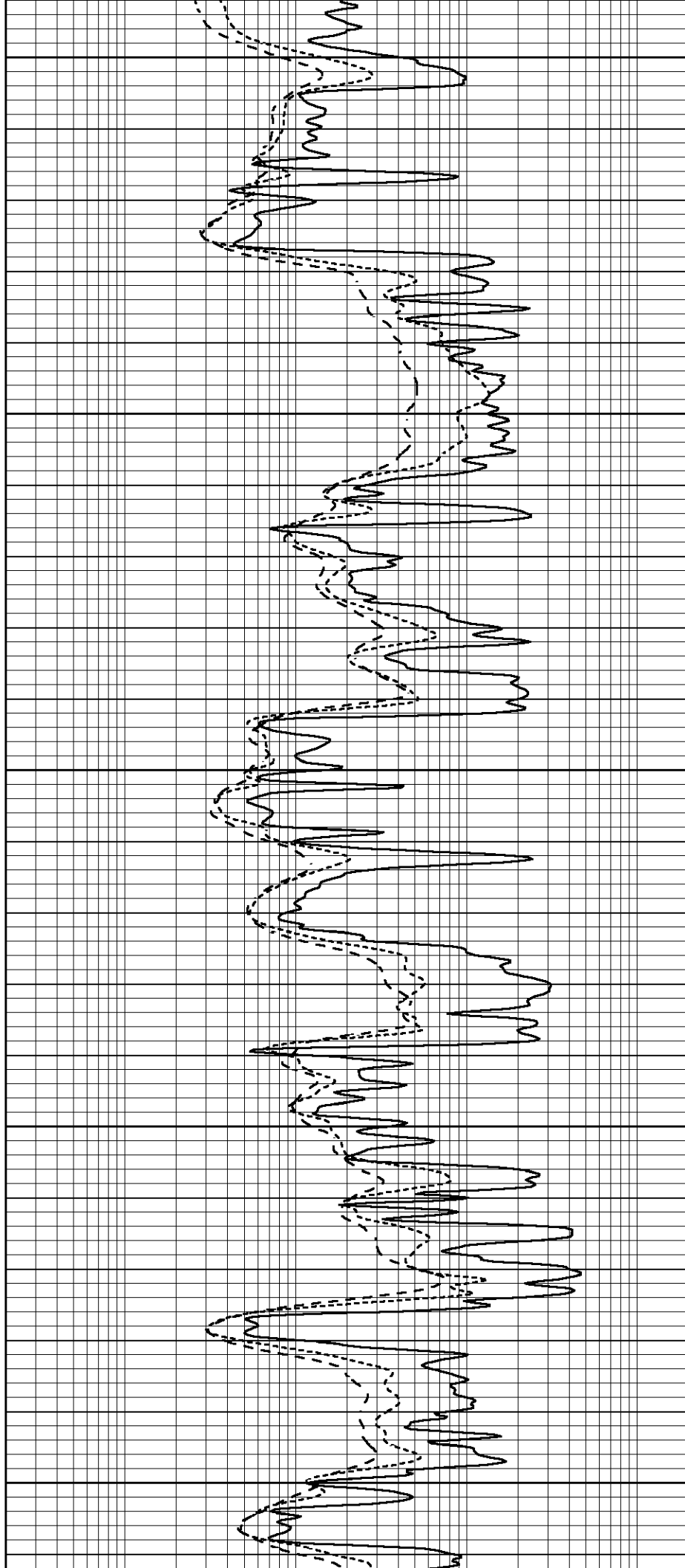
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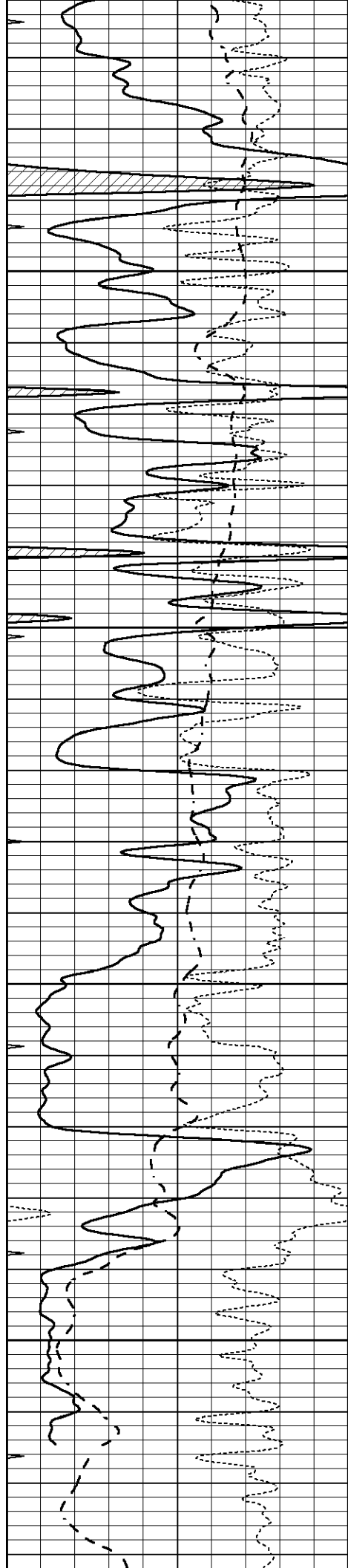
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4550

4600



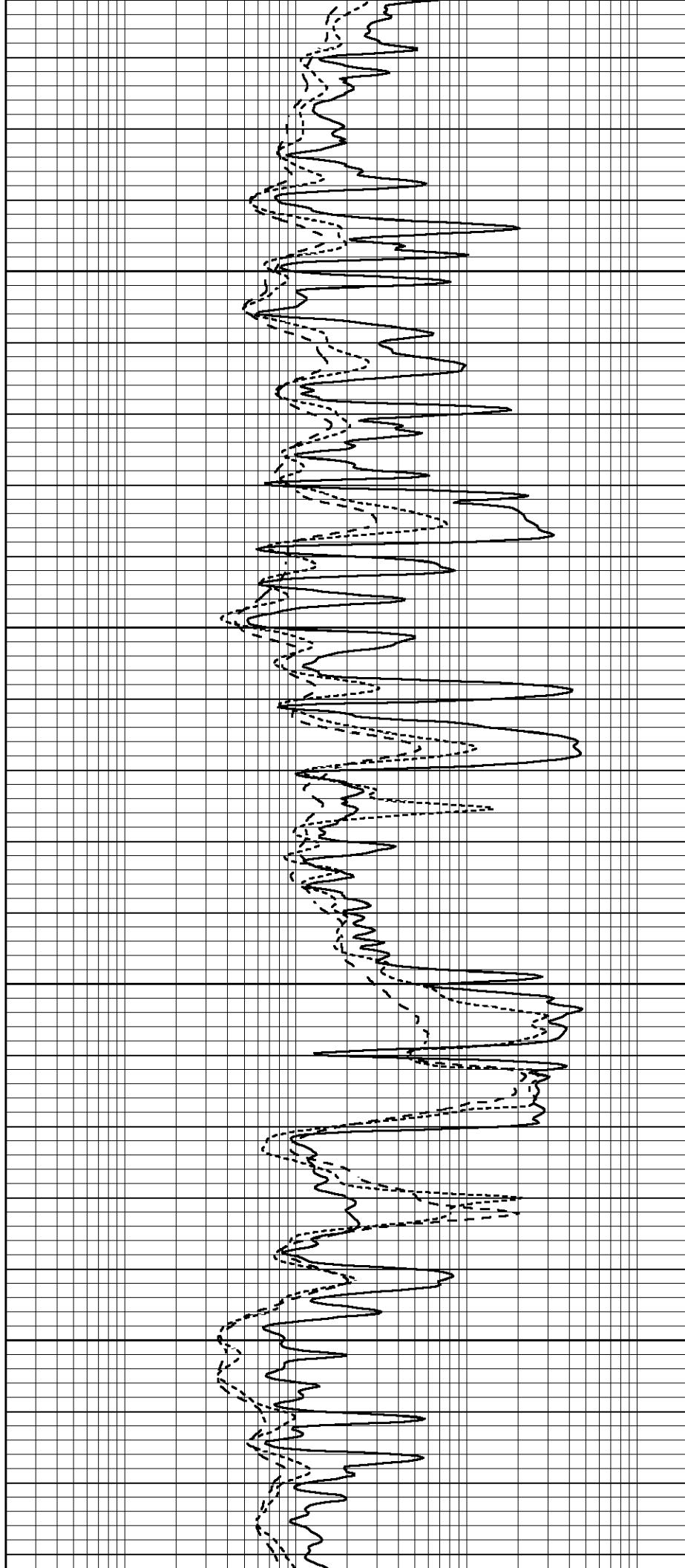


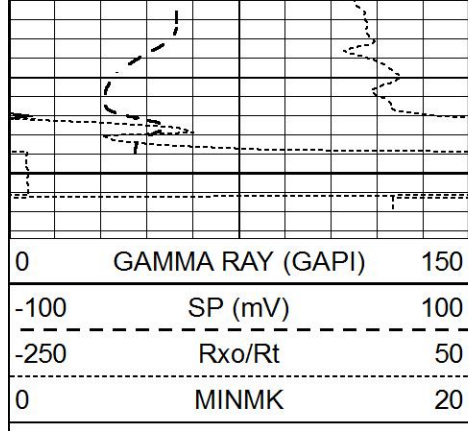
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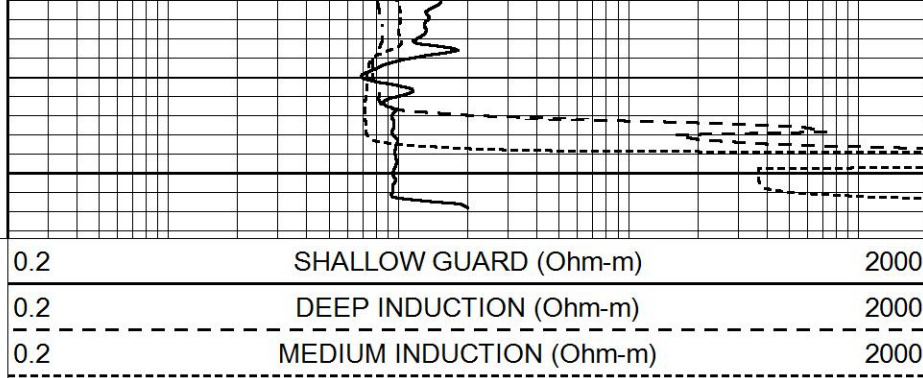
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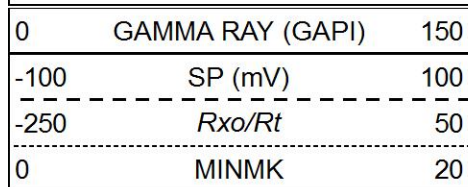


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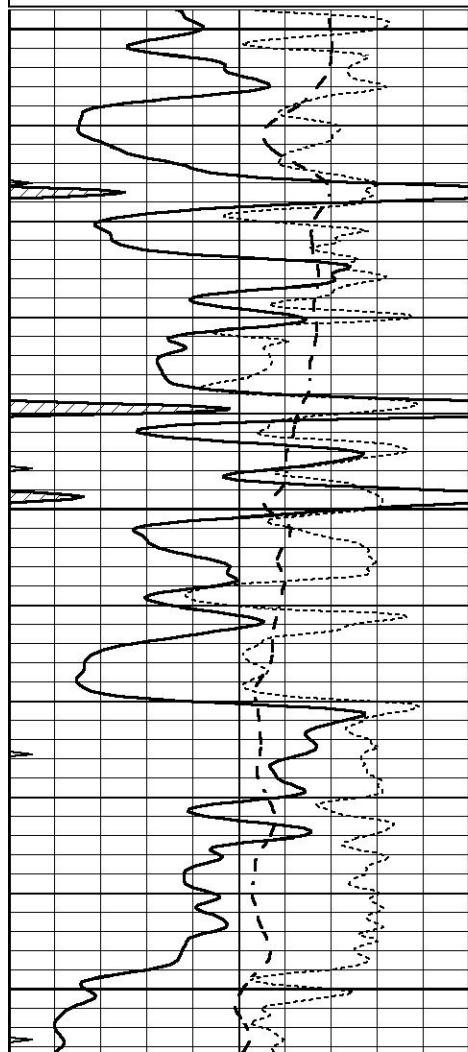
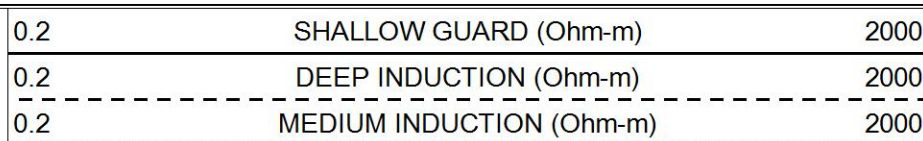


REPEAT SECTION

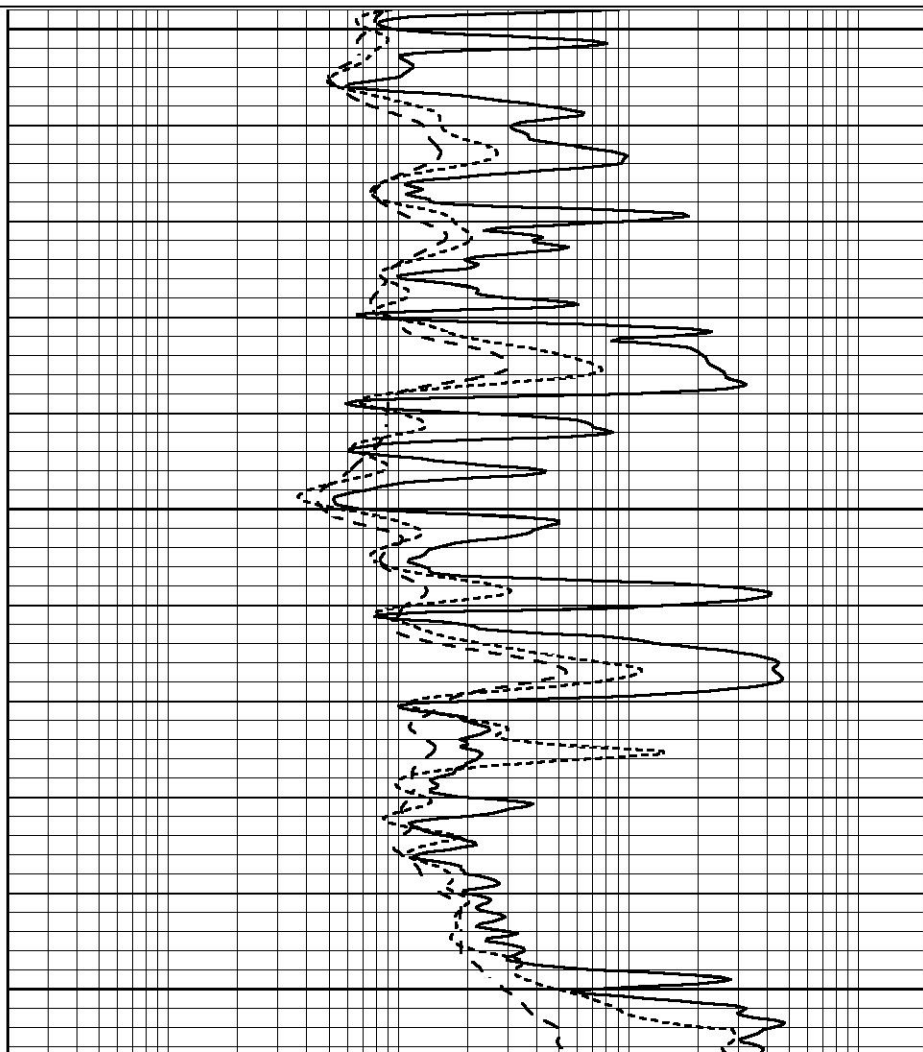
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 Presentation Format _dil
 Dataset Creation Thu Apr 30 16:21:06 2020
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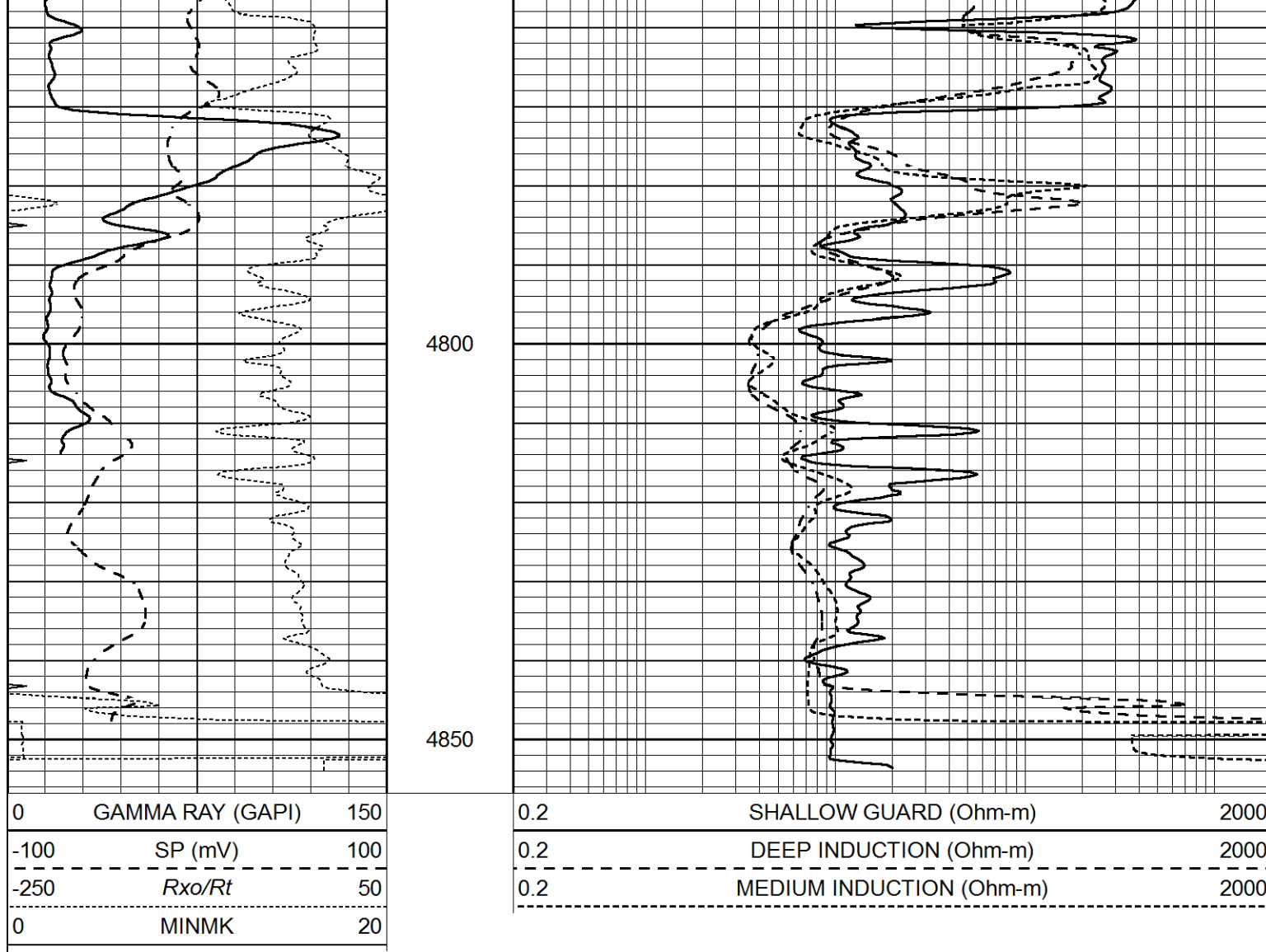
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4700



4750



Calibration Report									
Database File	4541ddn.db								
Dataset Pathname	pass3.2M								
Dataset Creation	Thu Apr 30 14:57:02 2020								
Dual Induction Calibration Report									
Serial-Model:				PROBE7-DILG					
Surface Cal Performed:				Thu Apr 30 13:23:51 2020					
Downhole Cal Performed:				Thu Mar 12 11:45:10 2020					
After Survey Verification Performed:				Thu Mar 12 11:45:00 2020					
Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop			Air	Loop		m	b
Deep	-0.014	0.629	V		0.000	400.000	mmho/m	620.000	18.000
Medium	0.039	0.728	V		0.000	464.000	mmho/m	675.000	-54.000
Internal:	Zero	Cal			Zero	Cal		m	b
Deep	0.011	0.610	V		0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V		0.000	464.000	mmho/m	655.677	-3.102
Downhole Calibration									
		Readings			References			Results	
	Zero	Cal			Zero	Cal		m'	b'

	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	0.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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		
		0.000	mmho-m		4000.000	mmho-m		
Litho Density Calibration Report								
Serial: 003N Model: PRB								
Master Calibration								
Performed Fri Apr 17 11:04:10 2020								
	Background	Magnesium		Aluminum	Aluminum+Fe			
Window 1	6100.1	15023.8		8001.7	7641.4		cps	
Window 2	5954.3	13051.6		7471.5	7231.6		cps	
Window 3	1285.0	5856.8		2235.7	2101.7		cps	
Window 4	365.8	363.4		360.2	365.0		cps	
Long Space	0.0	7097.3		1517.2	1277.3		cps	
Short Space	2.2	2894.8		1837.2	1525.1		cps	
Rho		1.7100		2.5900	0.0000		g/cc	
Pe		2.0000		2.7500	5.7900			
Rib Angle	: 43.6	Rib Slope	: 0.952	Density/Spine Ratio			: 0.547	
Spine Angle	: 73.6	Spine Slope	: 3.393	Spine Intercept			: -18.2	
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:		070808PMC	
Tool Model:		NABORS	
PRE-SURVEY VERIFICATION			
Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu
POST-SURVEY VERIFICATION			
Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu
Gamma Ray Calibration Report			
Serial Number:	070558		
Tool Model:	OPEN_GR		
Performed:	Wed Jul 03 10:25:53 2019		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.3000	GAPI/cps	