



**DUAL
INDUCTION
LOG**

Company PATTERSON ENERGY
 Well R.P. DEVINE #10
 Field SOLOMON
 County ELLIS
 State KANSAS

Company PATTERSON ENERGY
 Well R.P. DEVINE #10
 Field SOLOMON
 County ELLIS State KANSAS

Location: API #: 15 051 27106
 2537' FSL & 2310' FEL
 SEC 23 TWP 11S RGE 19W
 Permanent Datum Ground Level Elevation 1971
 Log Measured From KB 8' AGL
 Drilling Measured From KB
 Other Services
 ML
 CDNL
 Elevation
 K.B. 1979
 D.F. 1977
 G.L. 1971

Date	03/09/24
Run Number	One
Depth Driller	3580
Depth Logger	3580
Bottom Logged Interval	3578
Top Log Interval	00
Casing Driller	8 5/8"@1280'
Casing Logger	1280
Bit Size	7 7/8"
Type Fluid in Hole	Chemical
Density / Viscosity	9.2/56
pH / Fluid Loss	10.0/8.8
Source of Sample	Pit
Rm @ Meas. Temp	1.2@60degf
Rmf @ Meas. Temp	.90@60degf
Rmc @ Meas. Temp	1.44@60degf
Source of Rmf / Rmc	Calculated
Rm @ BHT	0.67@107degf
Time Circulation Stopped	10:00 AM
Time Logger on Bottom	12:30 PM
Maximum Recorded Temperature	107degf
Equipment Number	T-605
Location	Hays, KS.
Recorded By	GUS PFANENSTIEL
Witnessed By	AUSTIN KLAUS

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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

YOCEMENTO NORTH TO RIVERVIEW RD, EAST 1 .25 MILES, SOUTH INTO.

Thanks for using Gemini Wireline LLC
785-625-1182

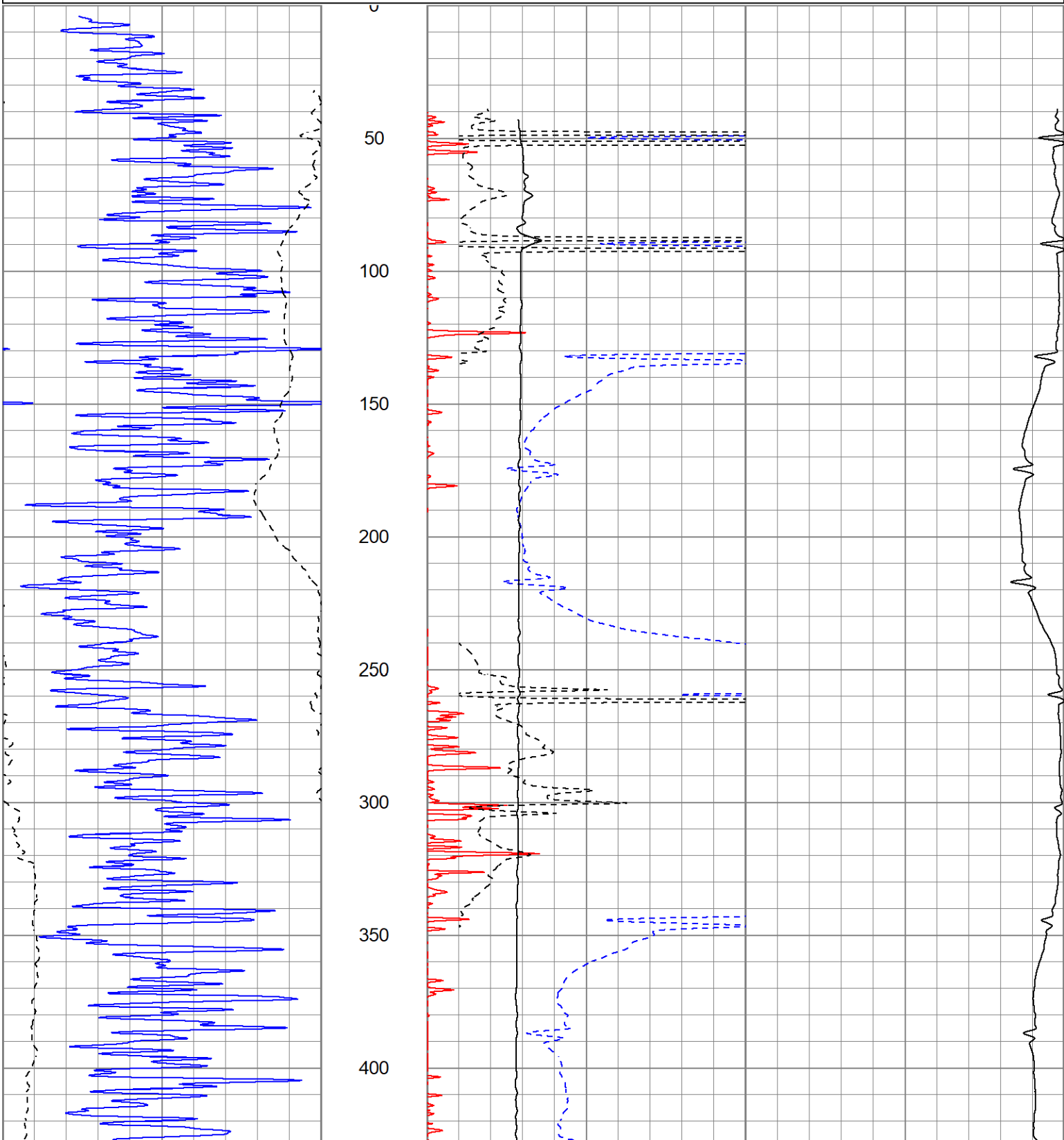


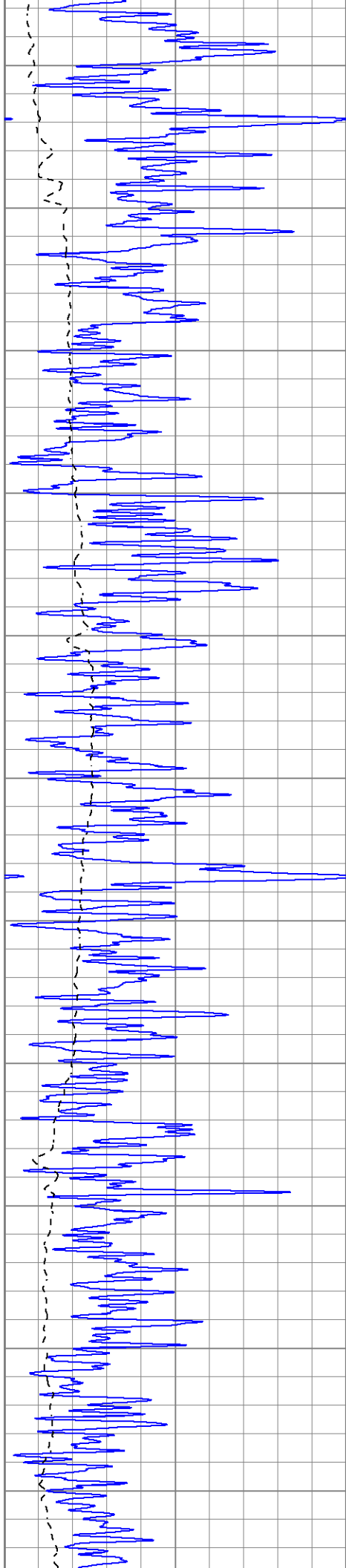
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 Dataset Pathname pass4.1
 Presentation Format kdiillinn
 Dataset Creation Sat Mar 09 13:38:13 2024
 Charted by Depth in Feet scaled 1:600

0	GR (GAPI)	150
-100	SP (mV)	100

1000	CILD (mmho/m)	0
10000	LTEN (lb)	0
0	RILD (Ohm-m)	50
0	RLL3 (Ohm-m)	50
50	RILD x 10 (Ohm-m)	500
50	RLL3 x 10 (Ohm-m)	500





450

500

550

600

650

700

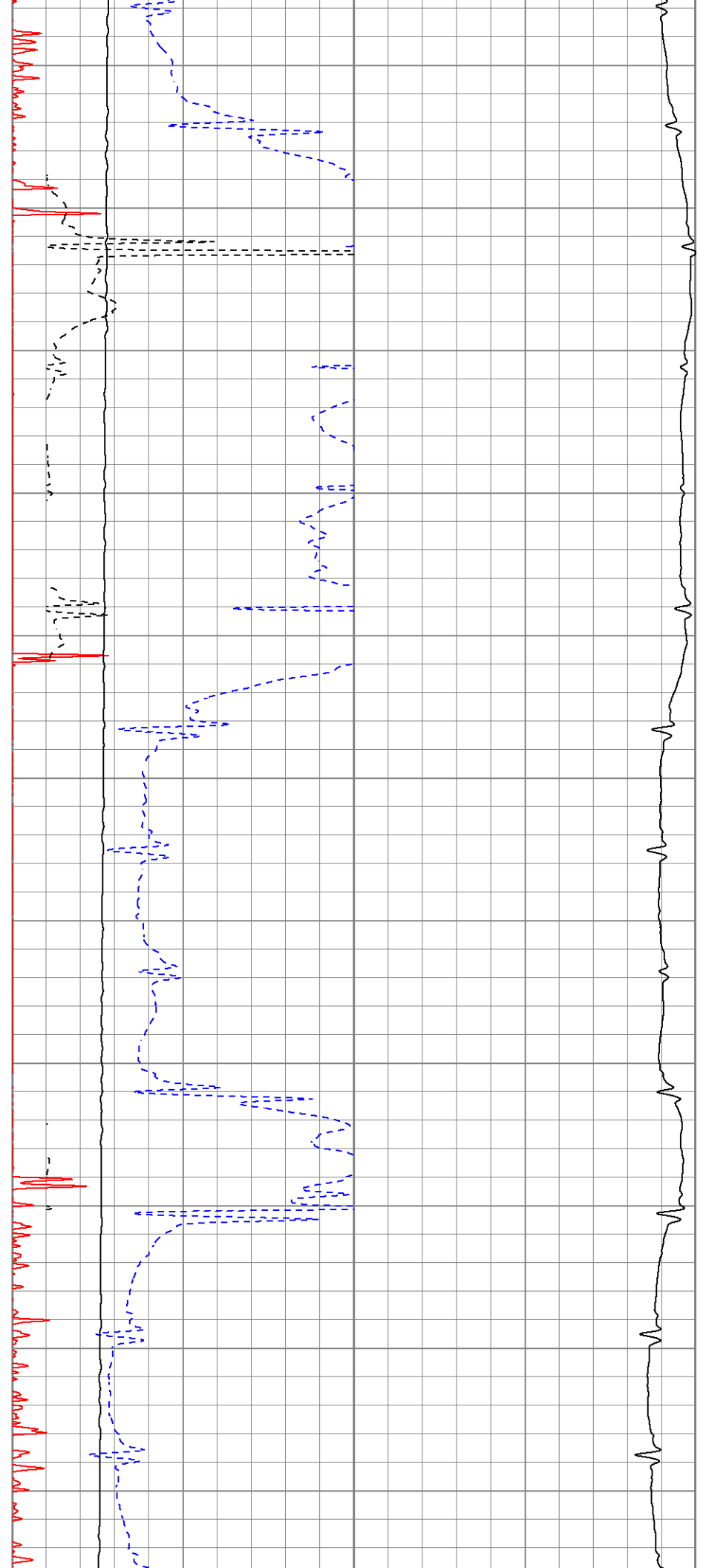
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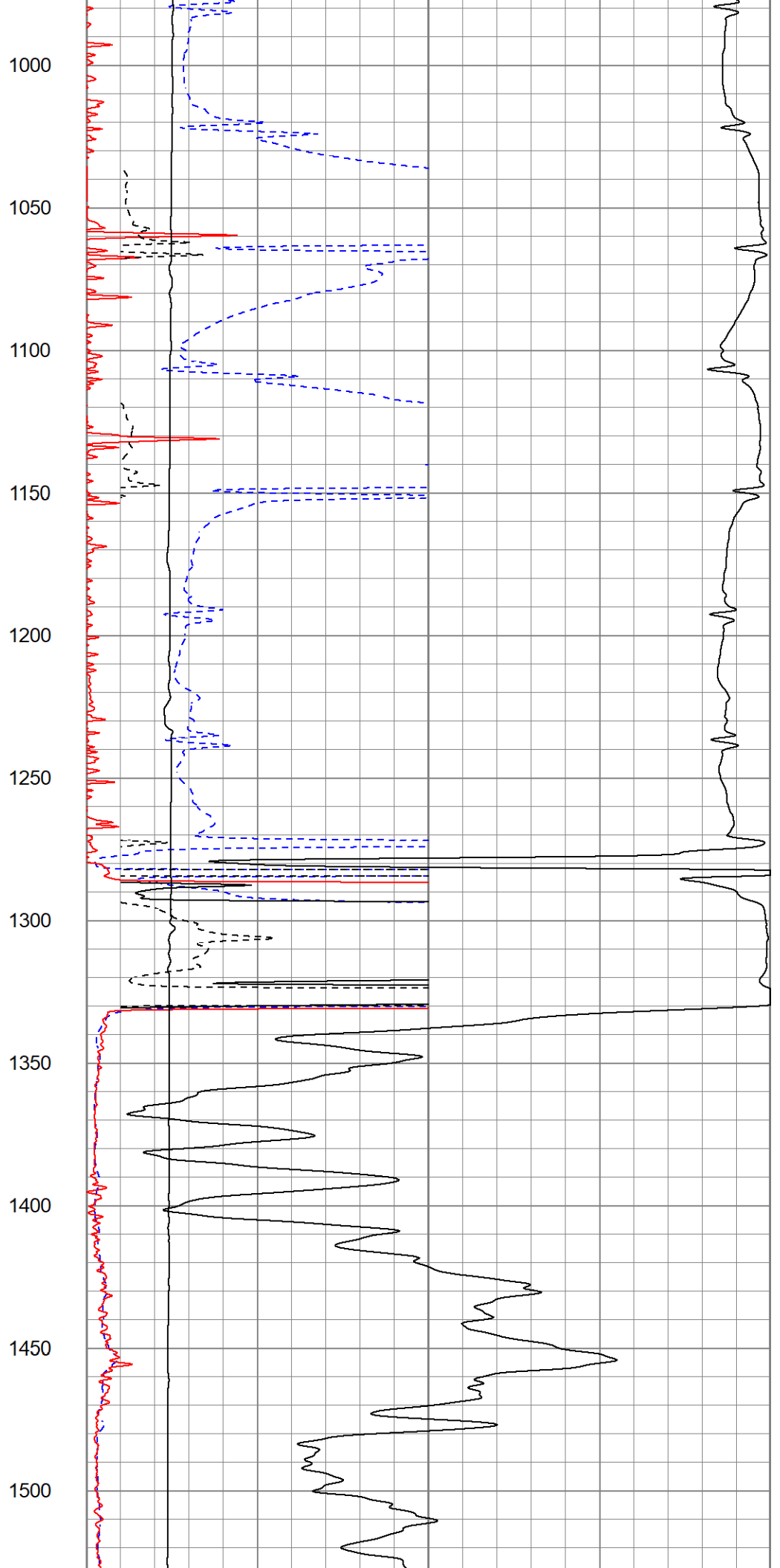
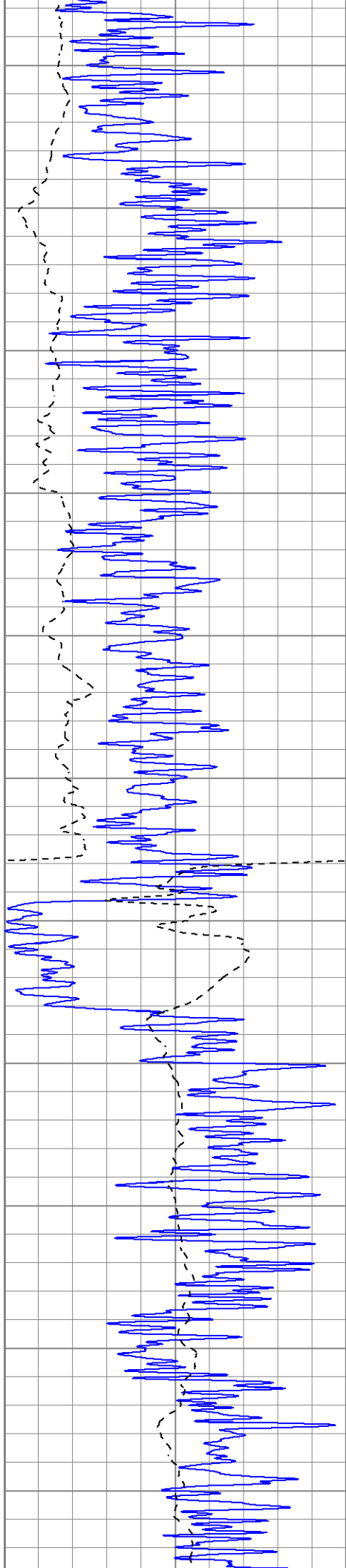
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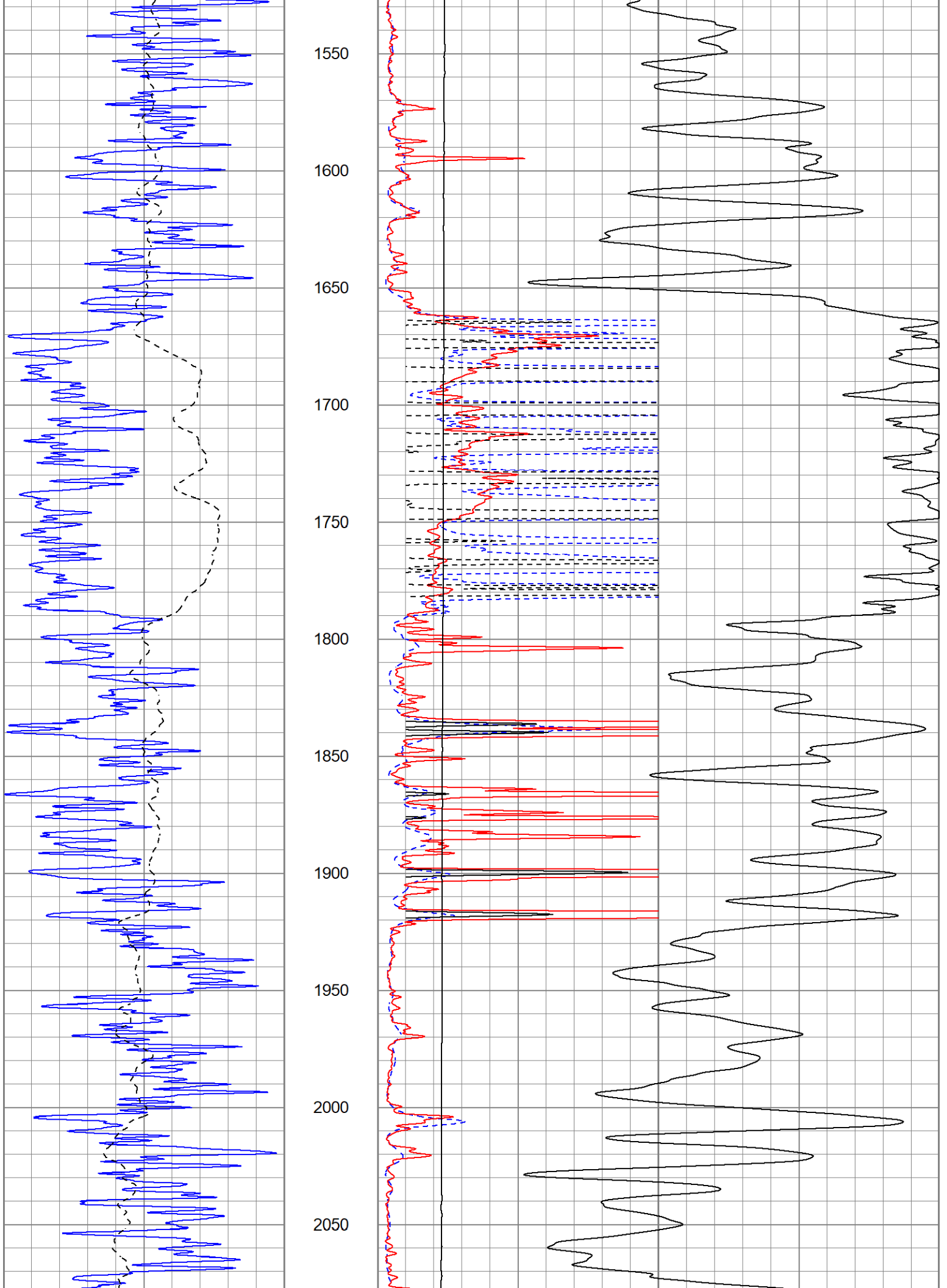
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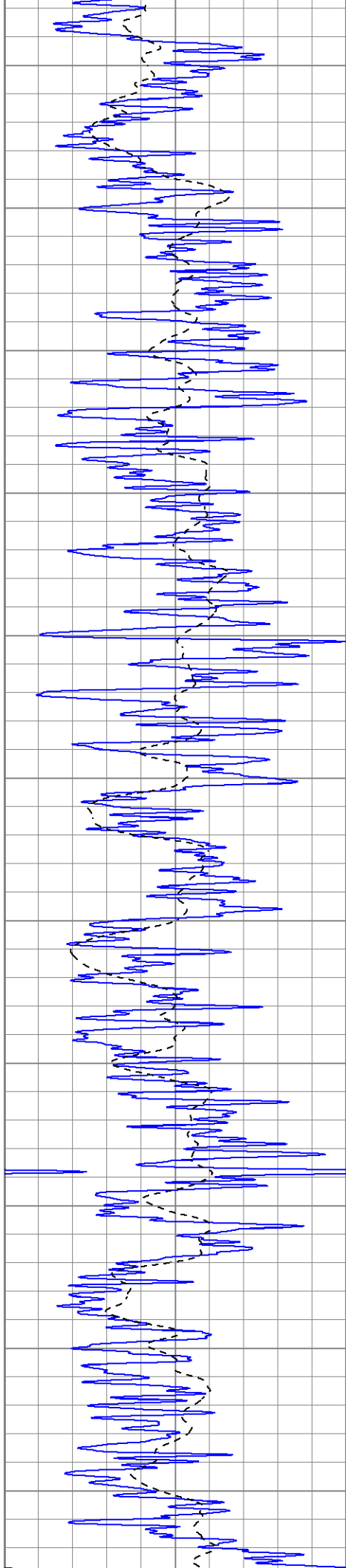
900

950









2100

2150

2200

2250

2300

2350

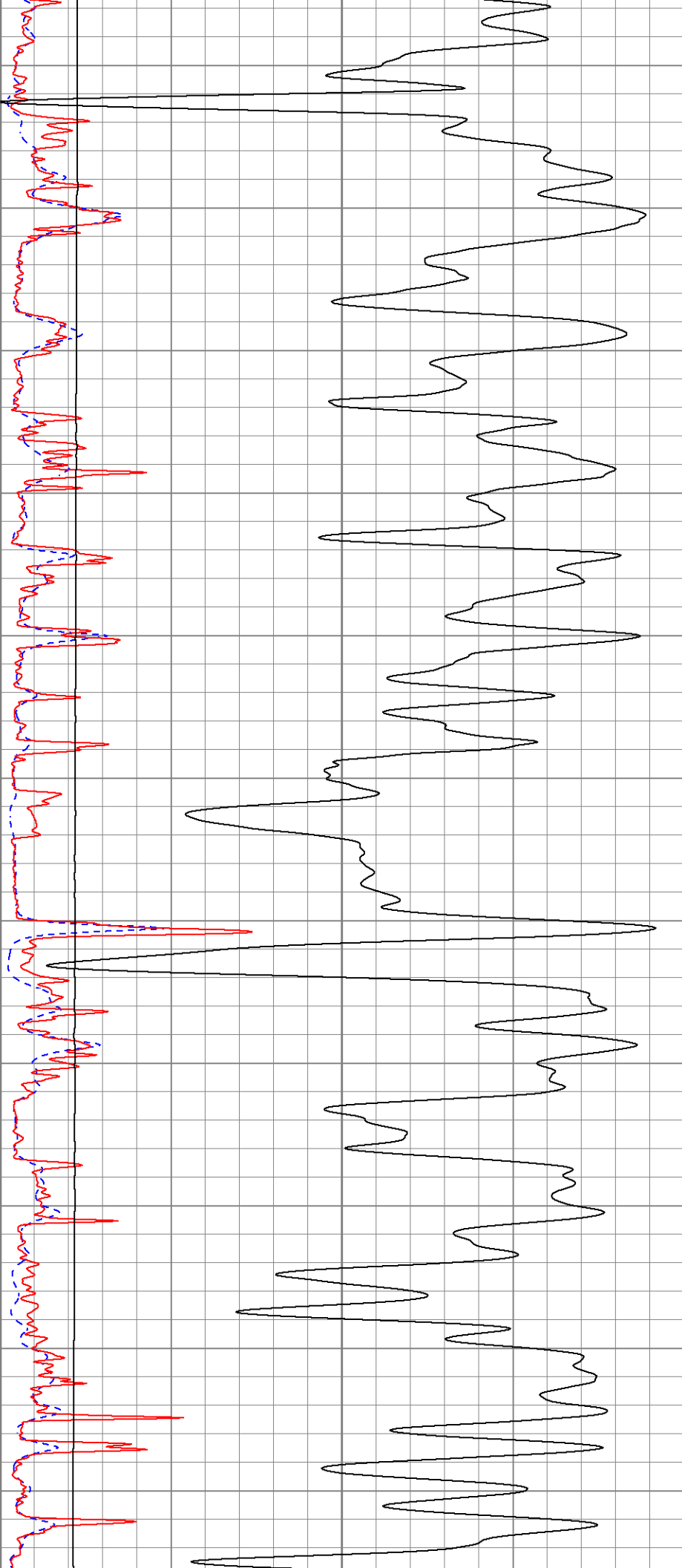
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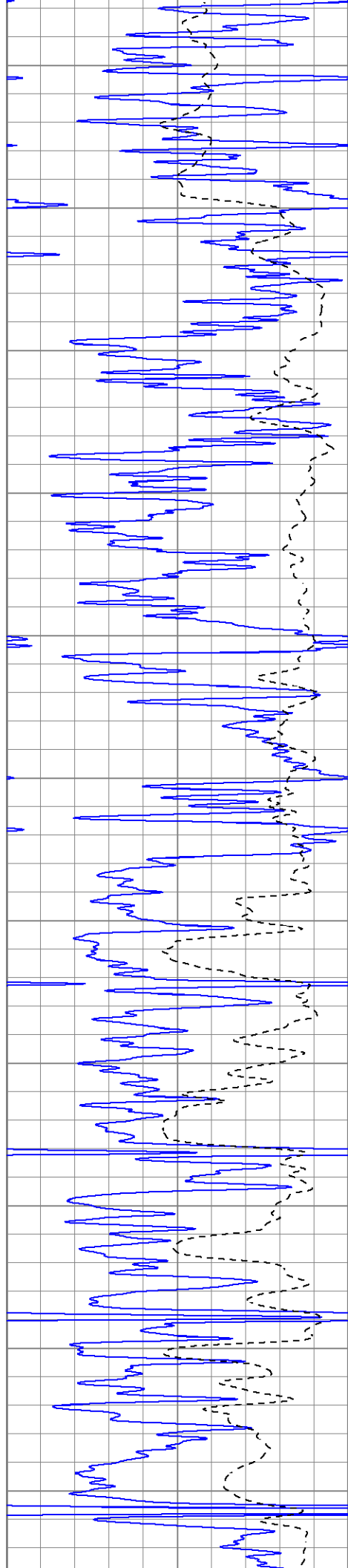
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2500

2550

2600





2650

2700

2750

2800

2850

2900

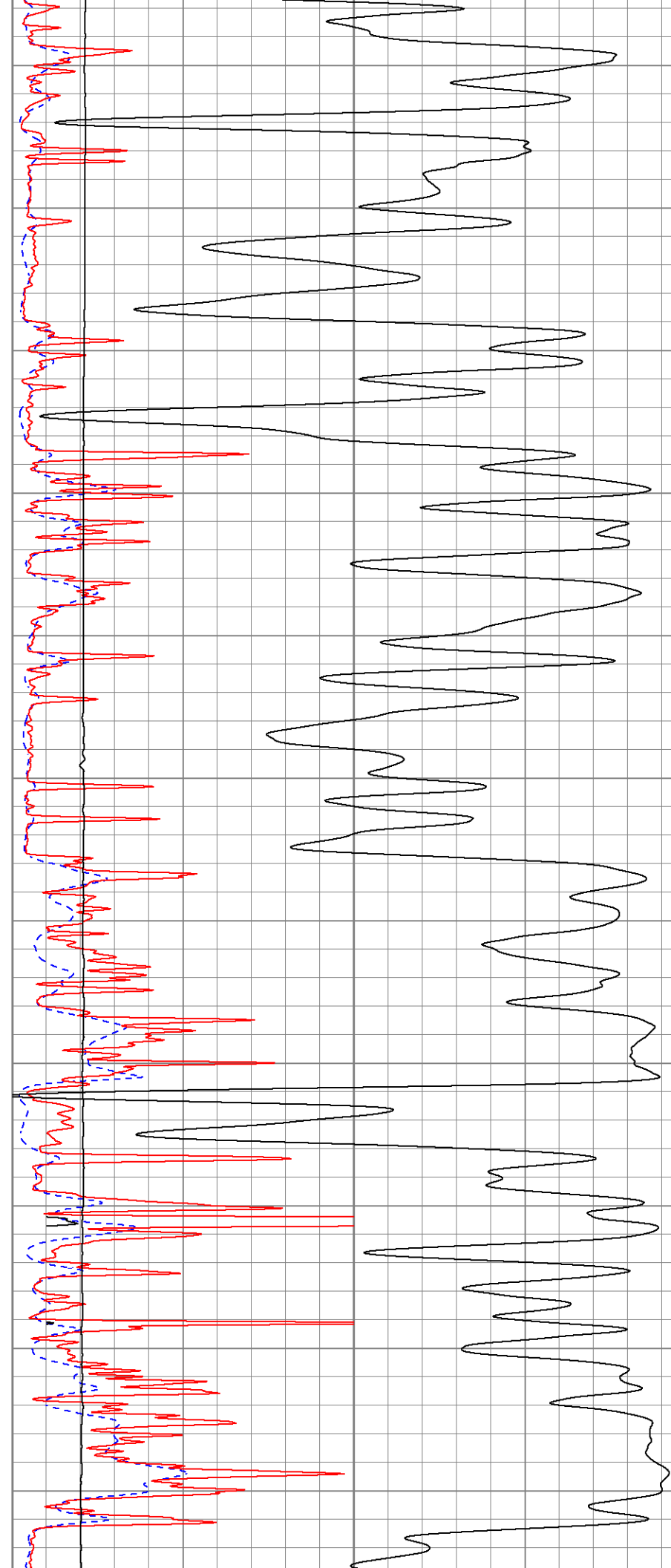
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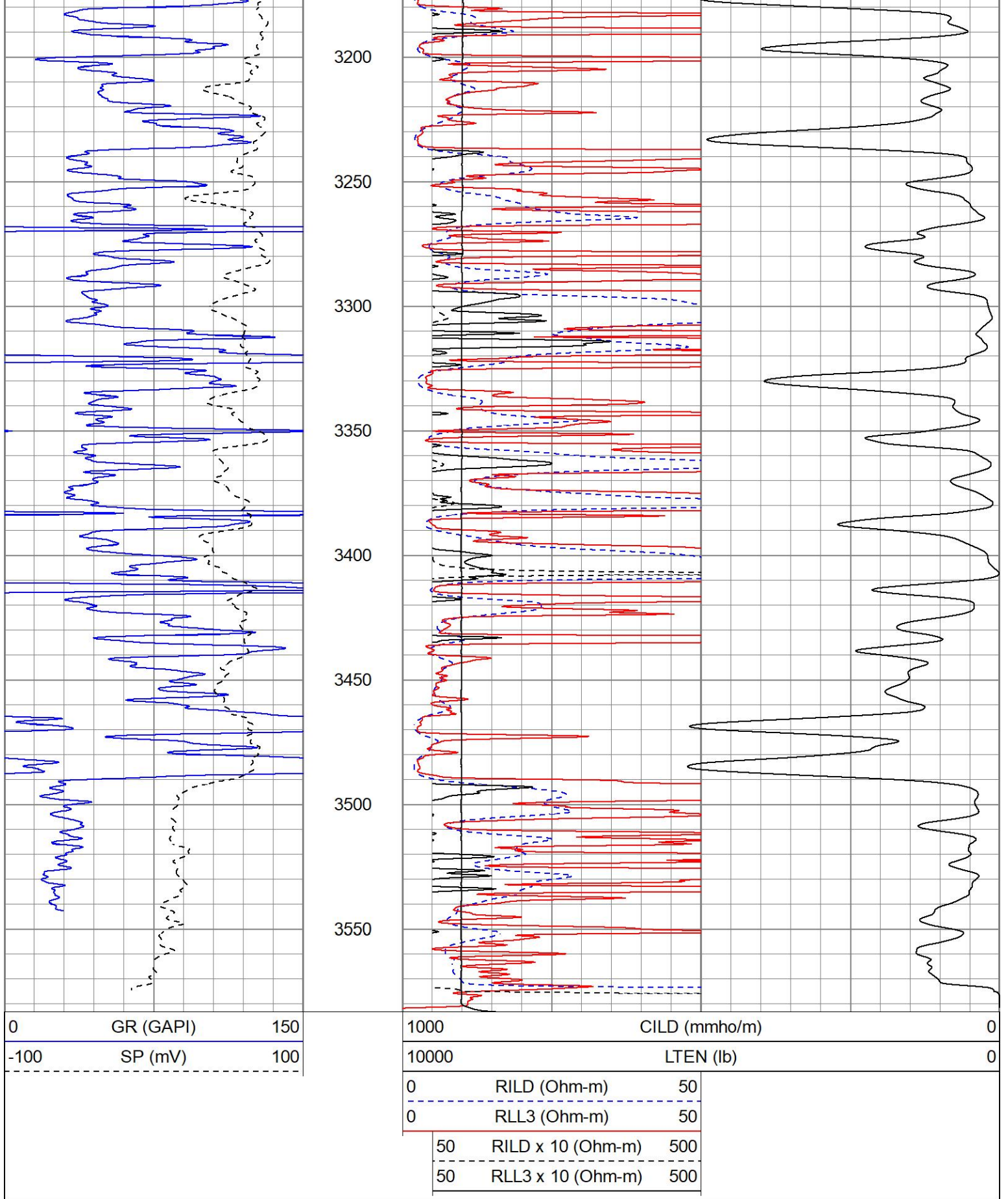
3000

3050

3100

3150



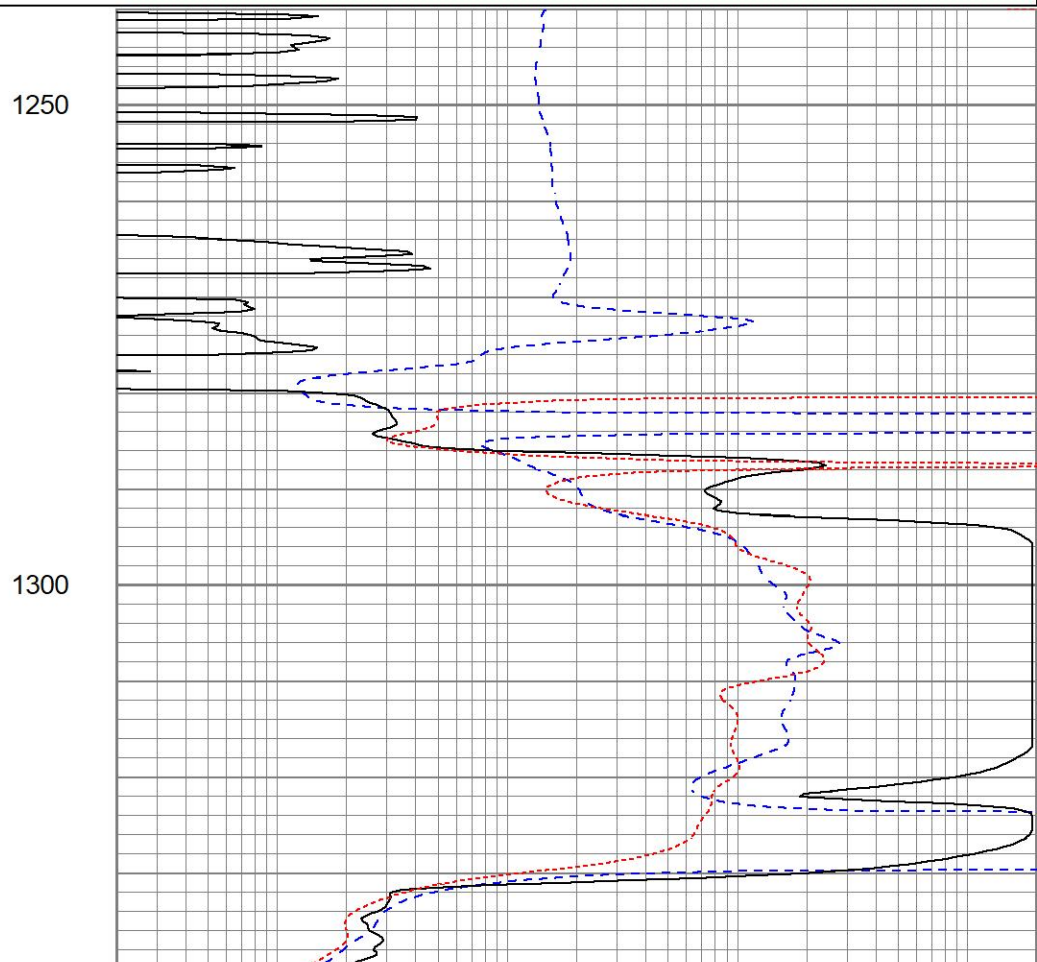
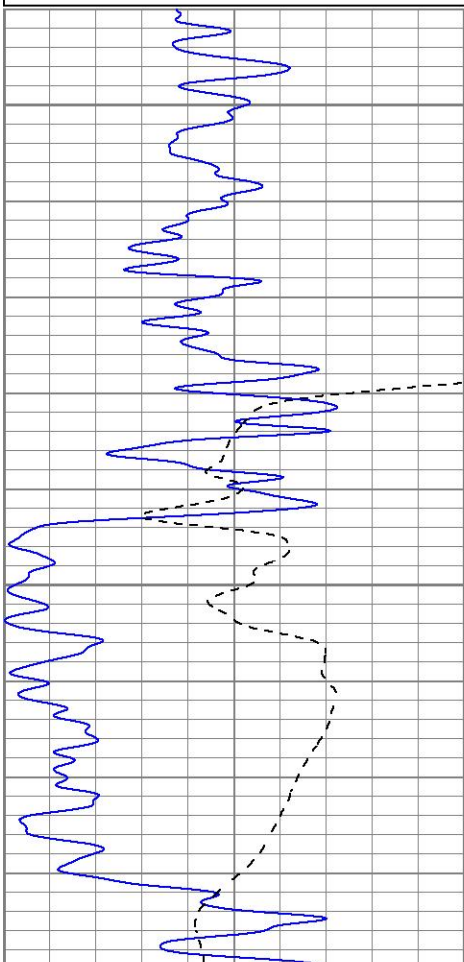


MAIN PASS

Database File perpdevine#10oh.db
 Dataset Pathname pass4.1
 Presentation Format kdil
 Dataset Creation Sat Mar 09 13:38:13 2024
 Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150
-100	SP (mV)	100

0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000



0	GR (GAPI)	150
-100	SP (mV)	100

0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000

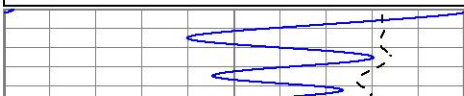


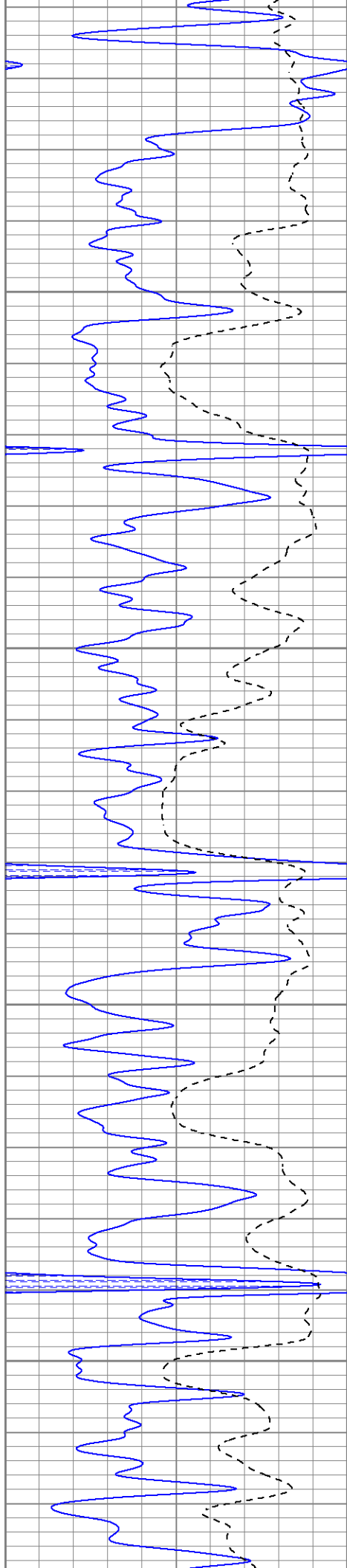
MAIN PASS

Database File perpdevine#10oh.db
 Dataset Pathname pass4.1
 Presentation Format kdil
 Dataset Creation Sat Mar 09 13:38:13 2024
 Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150
-100	SP (mV)	100

0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000





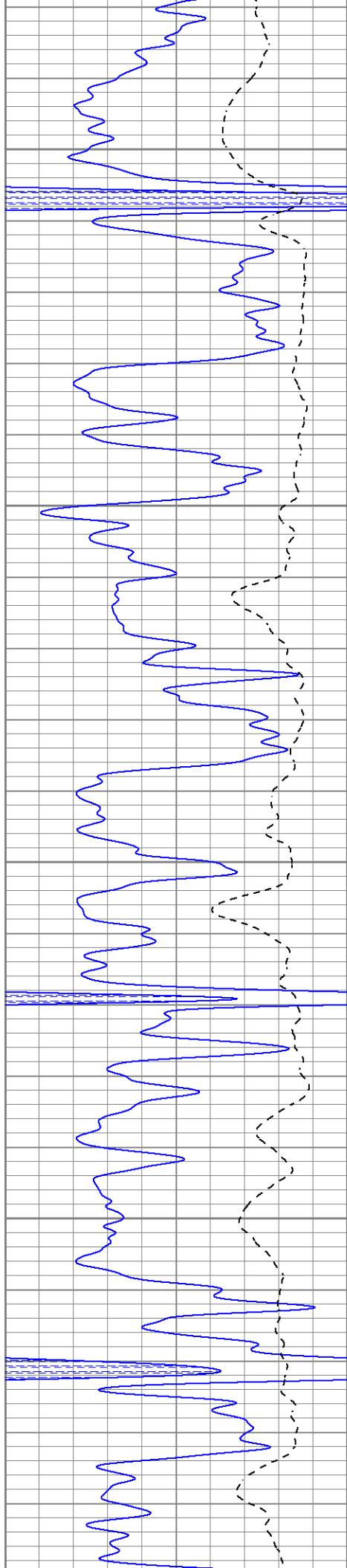
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3000

3050

3100





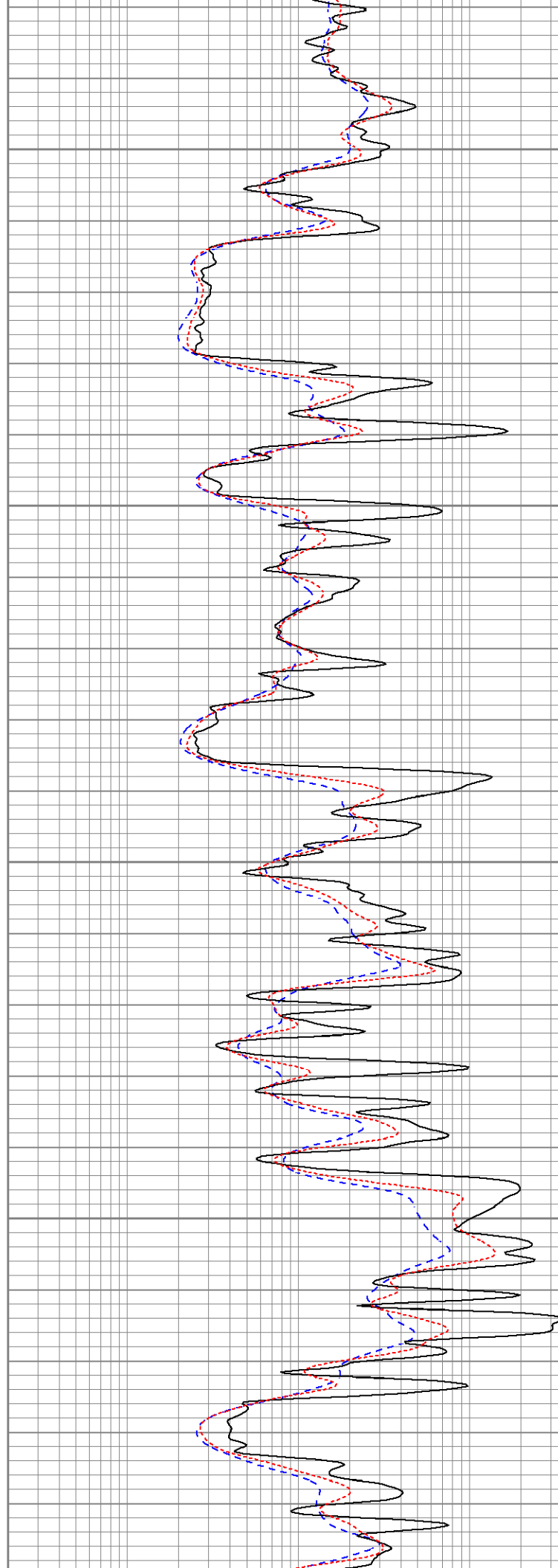
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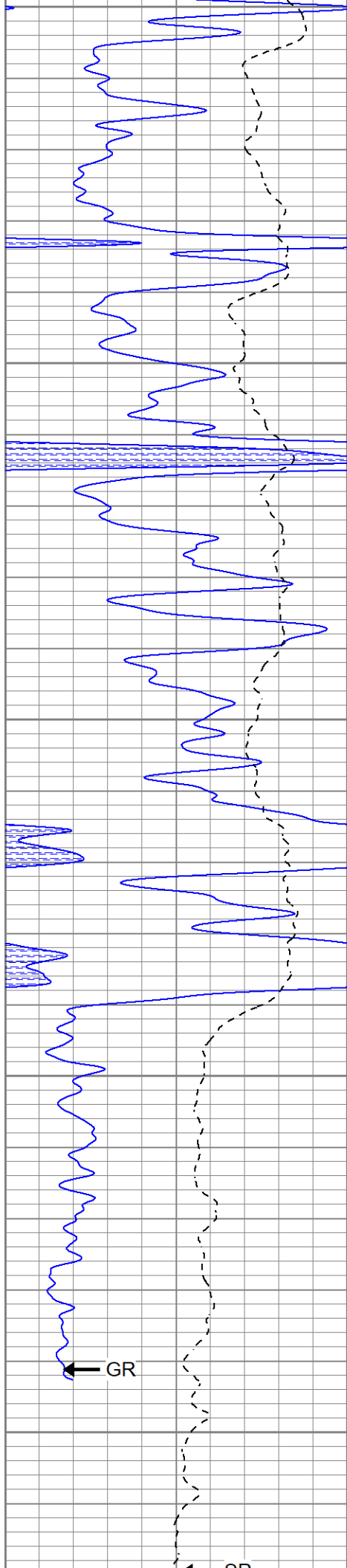
3200

3250

3300

3350





3350

3400

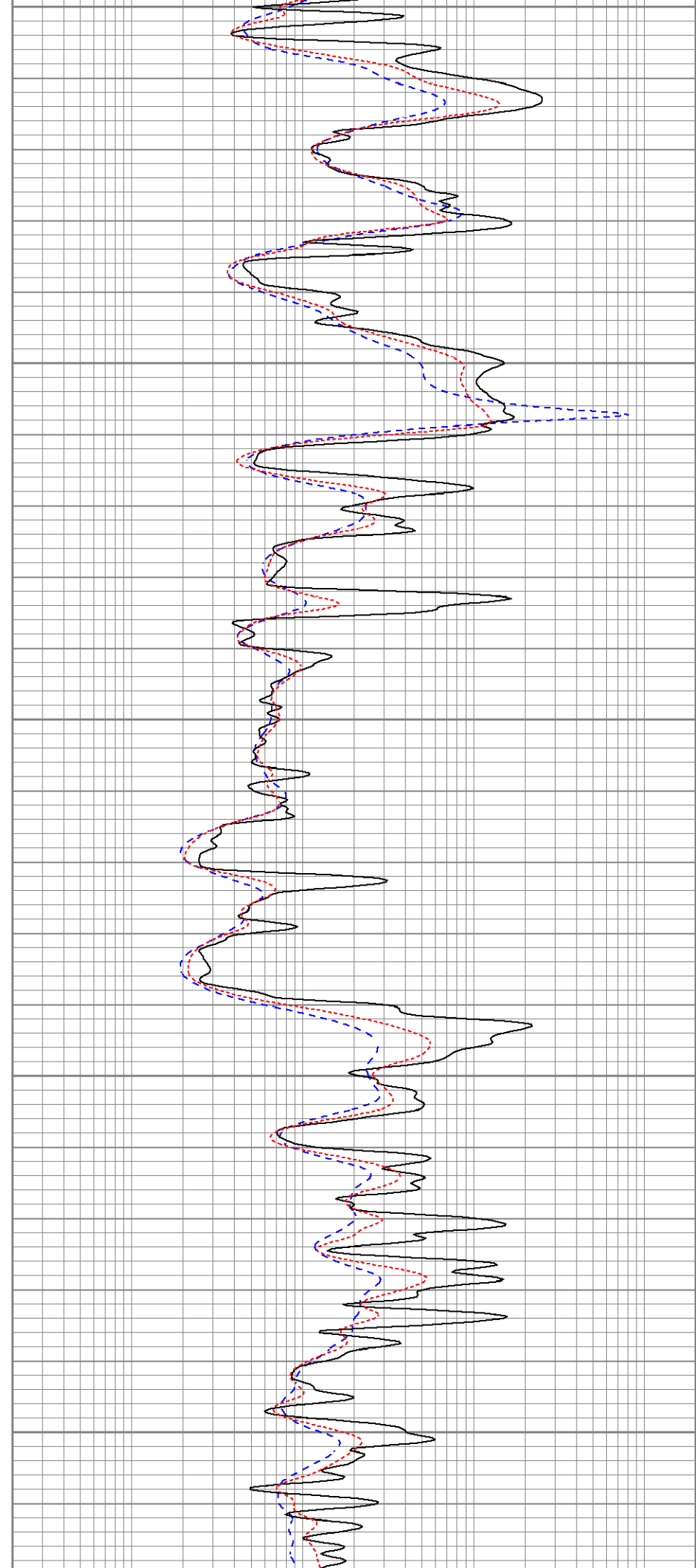
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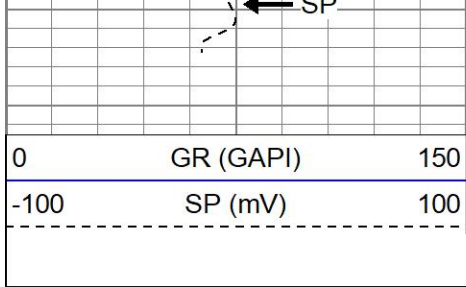
3500

3550

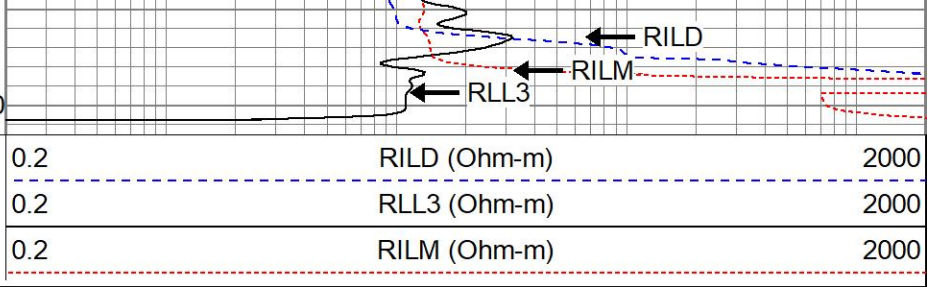
GR

22





LTD 3580



0	GR (GAPI)	150
-100	SP (mV)	100

0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000

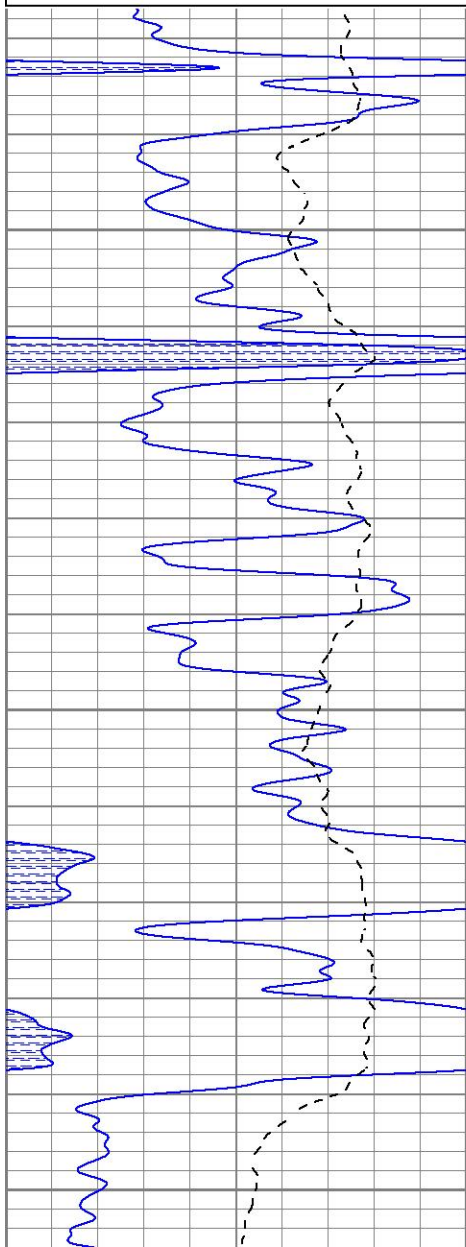


REPEAT SECTION

Database File perpdevine#10oh.db
 Dataset Pathname pass3.1
 Presentation Format kdil
 Dataset Creation Sat Mar 09 13:41:24 2024
 Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150
-100	SP (mV)	100

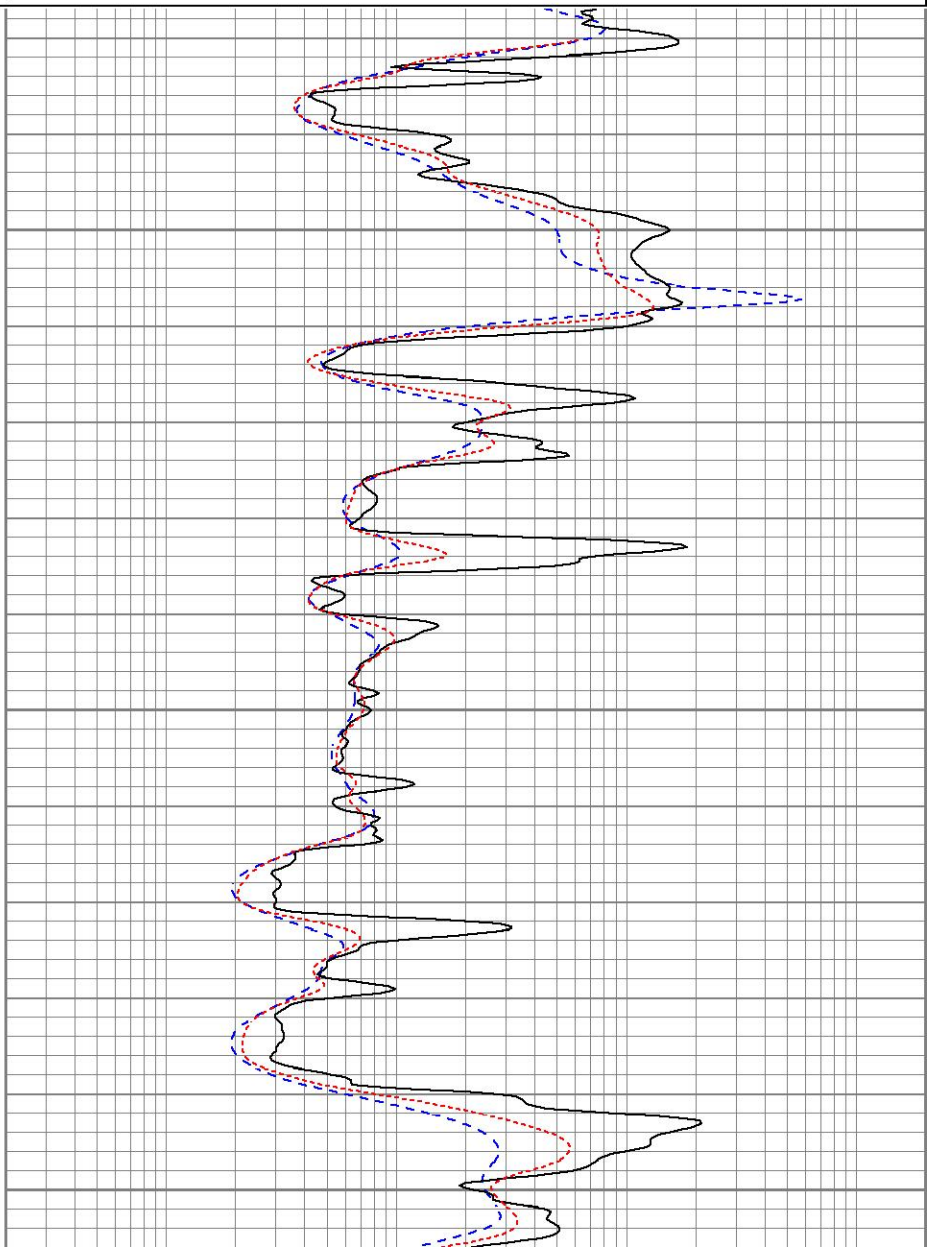
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000

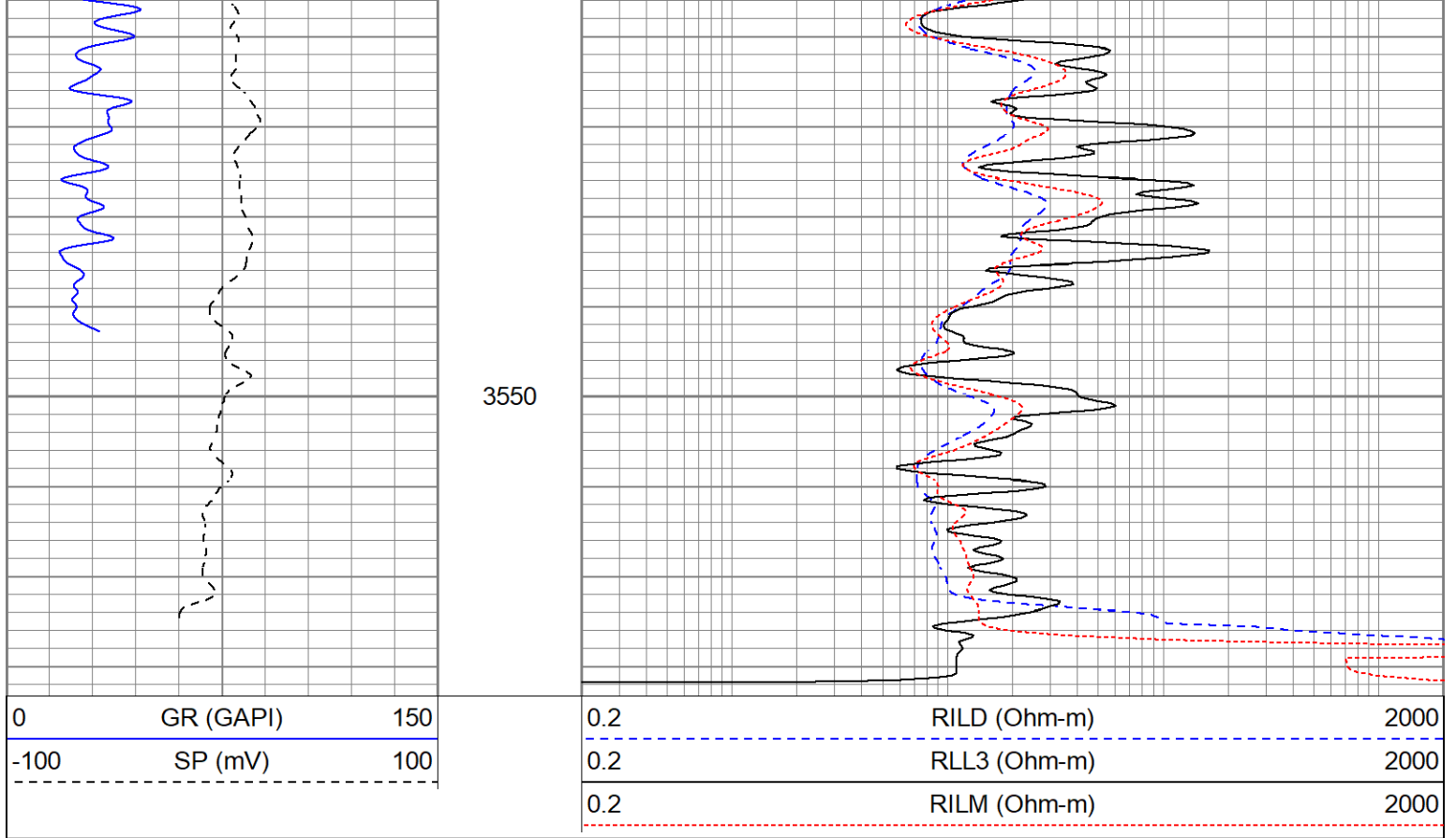


3400

3450

3500





Calibration Report

Database File perpdevine#10oh.db
 Dataset Pathname pass3.1
 Dataset Creation Sat Mar 09 13:41:24 2024

Dual Induction Calibration Report

Serial-Model: 1842-ADM
 Surface Cal Performed: Mon Sep 20 22:00:42 2021
 Downhole Cal Performed: Thu Sep 14 13:06:48 2023
 After Survey Verification Performed: Thu Sep 14 13:02:29 2023

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.018	0.672	V	0.000	350.000	mmho/m	535.475	-9.896
Medium	0.003	0.769	V	0.000	400.000	mmho/m	522.607	-1.745
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.018	0.672	V	0.000	350.000	mmho/m	535.240	-9.549
Medium	0.003	0.768	V	0.000	550.000	mmho/m	718.637	-2.088

Downhole Calibration

Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	-0.210	349.810	mmho/m	-0.343	349.810	mmho/m	1.000	-0.133
Medium	6.952	396.760	mmho/m	-0.226	399.745	mmho/m	1.026	-7.360
Shallow	2.495	0.026	V	500.000	2.000	Ohm-m	185.711	-3.319

After Survey Verification

Internal:	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	32.030	5.643	mmho/m	1.000	-0.133
Medium	0.000	0.000	mmho/m	6.952	396.760	mmho/m	1.026	-7.360
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Admyr Lithodensity Calibration Report

Serial-Model: 1C-C
Source: Blue2
Master Calibration Performed: Tue Aug 30 10:20:37 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.670	g/cc	6362.49	3546.71	cps
Aluminium	2.640	g/cc	1733.54	2362.69	cps
Aluminium+Sleeve	2.617	g/cc	1657.01	2197.69	cps
Spine Angle = 72.65			Density/Spine Ratio = 0.712		
	PE		NLITH	NHARD	
Magnesium	2.000	barn	2520.00	1620.00	cps
Aluminium	3.000	barn	1926.00	1699.00	cps
Aluminium+Sleeve	5.000	barn	915.00	1230.00	cps
M = 0.370			B = -0.079	R = 0.999	
	Size		Reading		
Small Ring	8.00	in	8.61	V	
Large Ring	14.30	in	12.40	V	

Neutron Calibration Report

Serial Number: AD5139
Tool Model: ADMY5139
Performed: (Not Performed)

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps

Temperature Calibration Report

Serial Number: WithMC
Tool Model: WMC
Performed: Fri Apr 19 12:15:04 2019

	Reference	Reading
Low Reference:	0.00 degF	0.00 degF
High Reference:	1.00 degF	1.00 degF

Gain: 1.00
Offset: 0.00
Delta Spacing: 1

Inclinometer Calibration Report

Performed: Wed May 5 19:20:48 2021

Performed:

Wed May 3 16:20:18 2023

	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	205.00	1843.00	-1.00	1.00	gee
Y Accelerometer	205.00	1843.00	-1.00	1.00	gee
Z Accelerometer					gee

Gamma Ray Calibration Report

Serial Number: WithMC
Tool Model: WMC
Performed: Sat Nov 11 16:49:39 2023

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.1000 GAPI/cps