



**DUAL  
INDUCTION  
LOG**

Company Palomino Petroleum  
 Well Nichol #3  
 Field Rosemary Southeast  
 County Trego  
 State Kansas

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 Well Nichol #3  
 Field Rosemary Southeast  
 County Trego State Kansas

Location: API #: 15 195 23080  
 2040' FSL & 2230' FEL  
 SEC 21 TWP 14S RGE 25W  
 Permanent Datum Ground Level Elevation 2359'  
 Log Measured From KB 8' AGL  
 Drilling Measured From KB  
 Other Services  
 CDNL  
 ML  
 Elevation  
 K.B. 2367'  
 D.F. 2366'  
 G.L. 2359'

Date	12-20-18
Run Number	One
Depth Driller	4333'
Depth Logger	4334'
Bottom Logged Interval	4332'
Top Log Interval	200'
Casing Driller	8 5/8" @ 218'
Casing Logger	218'
Bit Size	7 7/8"
Type Fluid in Hole	Chemical Mud
Density / Viscosity	9.3/57
PH / Fluid Loss	9.5/8.8
Source of Sample	Pit
Rm @ Meas. Temp	1.2@76degf
Rmf @ Meas. Temp	0.9@76degf
Rmc @ Meas. Temp	1.44@76degf
Source of Rmf / Rmc	Calculated
Rm @ BHT	0.84@109degf
Time Circulation Stopped	1:15 p.m.
Time Logger on Bottom	3:40 p.m.
Maximum Recorded Temperature	109degf
Equipment Number	T127
Location	Hays, KS
Recorded By	C.Patterson
Witnessed By	Mr. Ryan Seib

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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**

Collyer,KS Exit115 Banner Road Exit ,  
 Then go South on KS-198(130 ave or Co Rd.523) for 14 mi.,  
 Tank Batteries on east and west side of road  
 East into Location on south side of tank batteries

Thanks for using Gemini Wireline LLC  
 785-625-1182



**MAIN PASS**

Database File ppnichol#3oh.db  
 Dataset Pathname pass2.1  
 Presentation Format kdillinn  
 Dataset Creation Thu Dec 20 17:05:40 2018  
 Charted by Depth in Feet scaled 1:600

0 GR (GAPI) 150

1000 CILD (mmho/m) 0

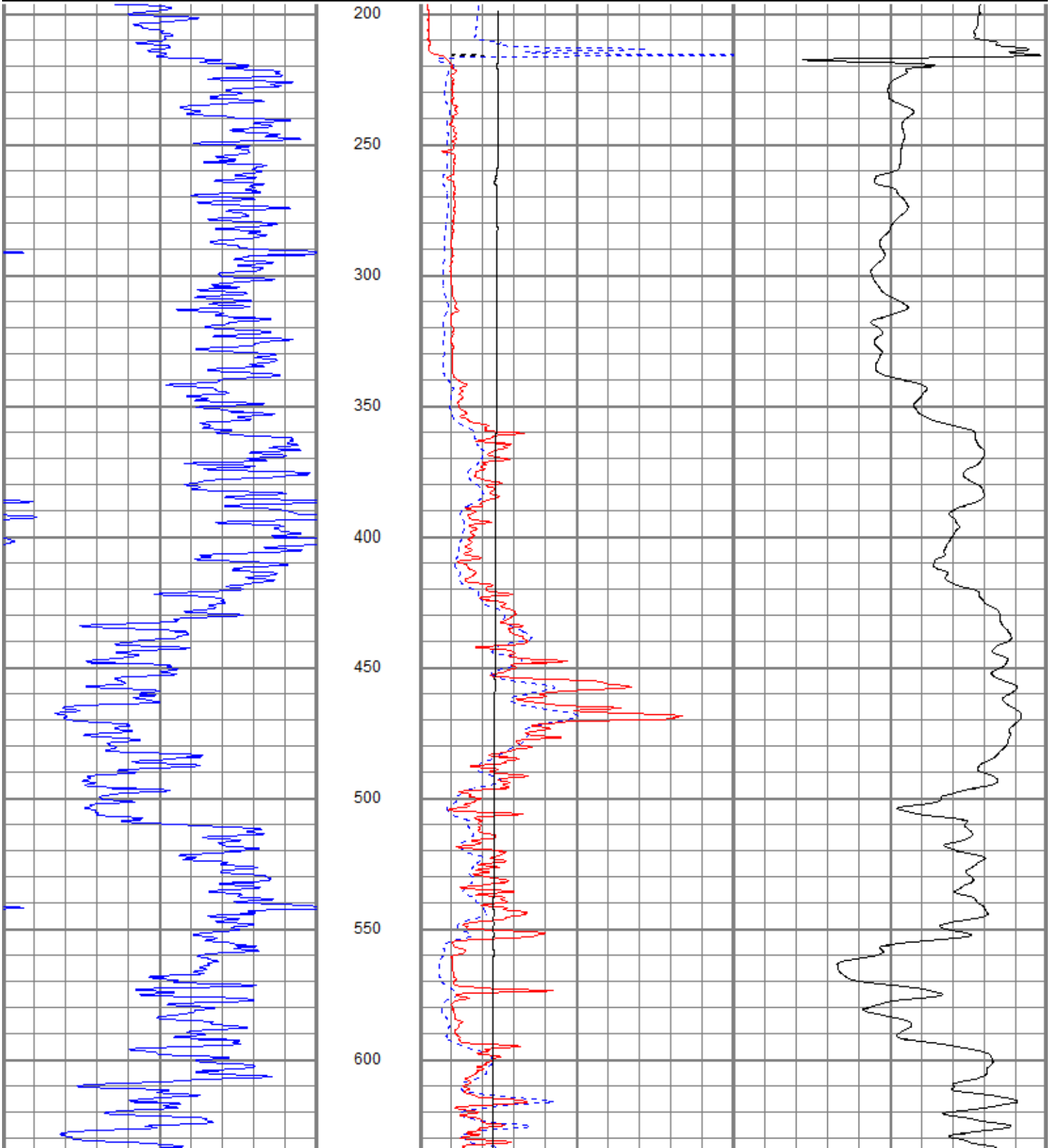
10000 LTEN (lb) 0

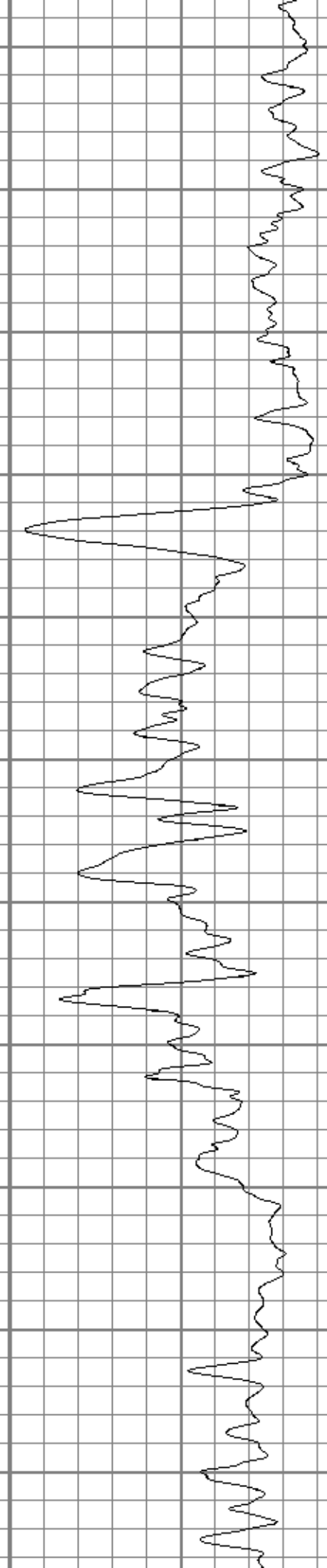
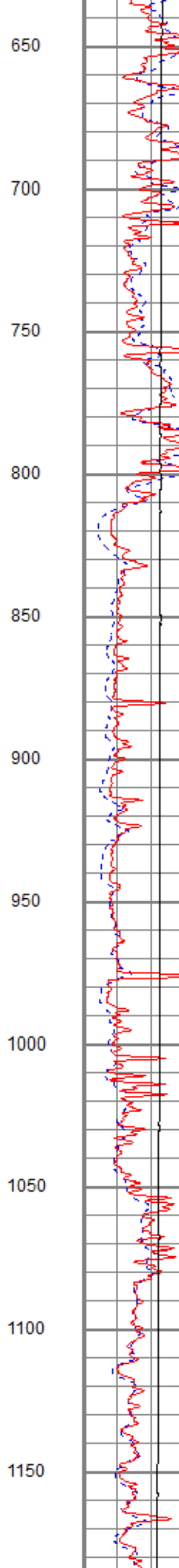
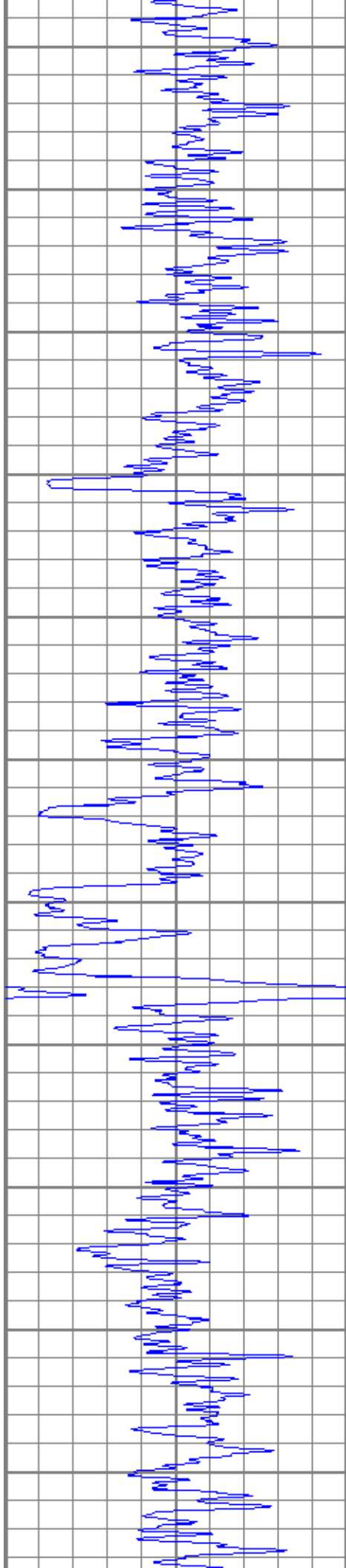
0 RILD (Ohm-m) 50

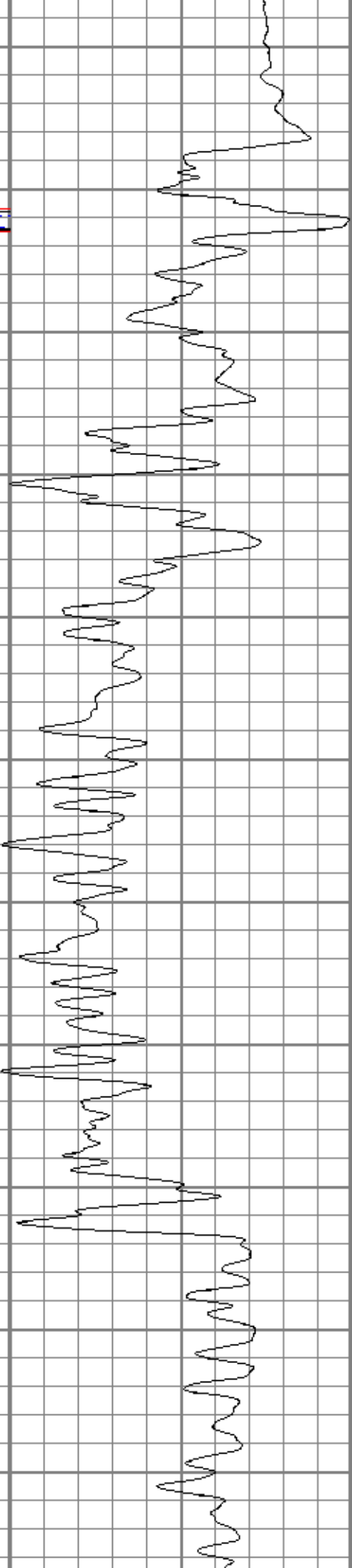
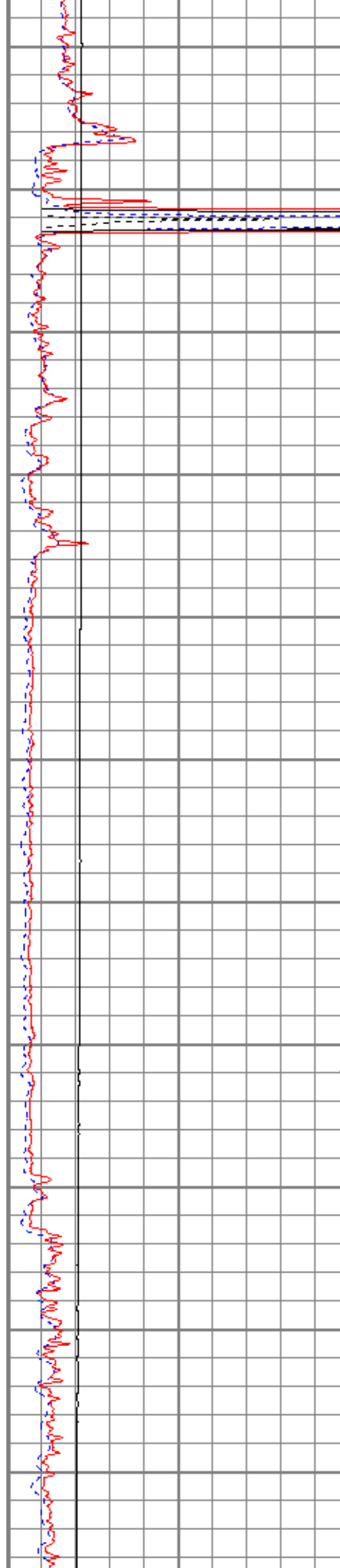
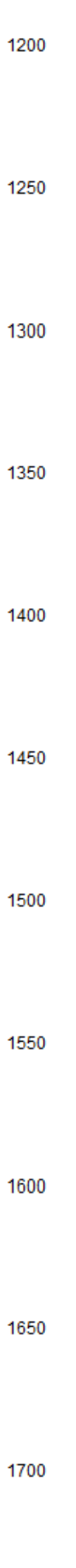
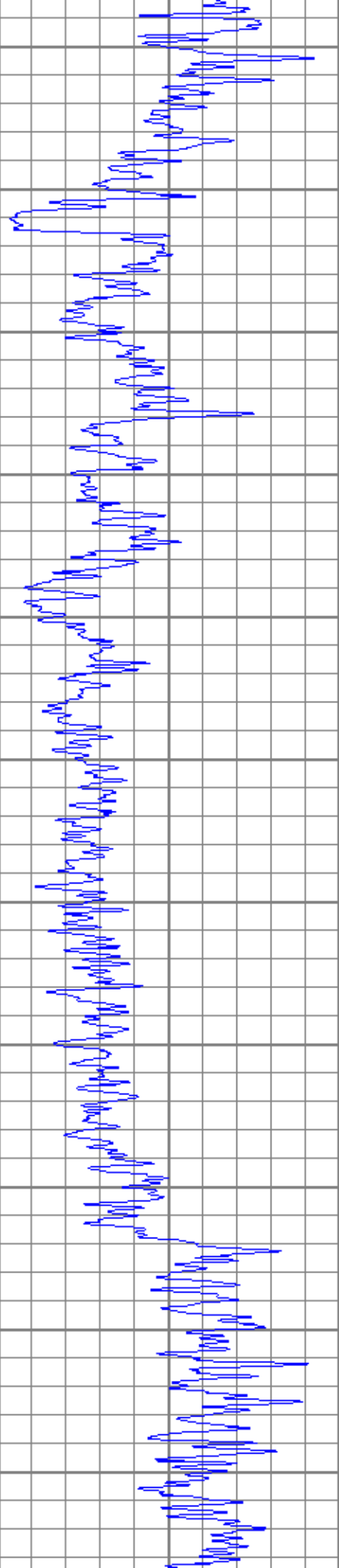
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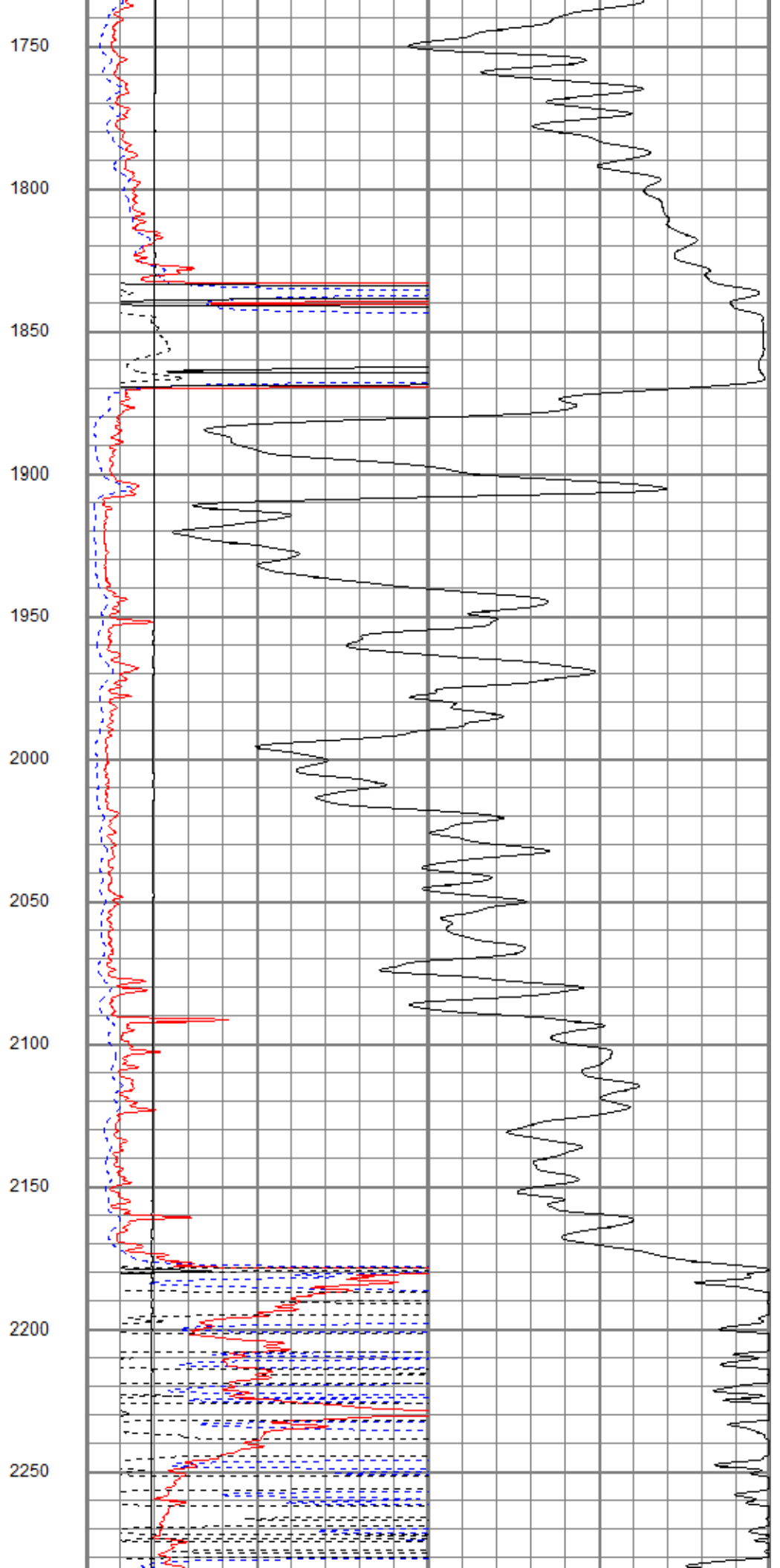
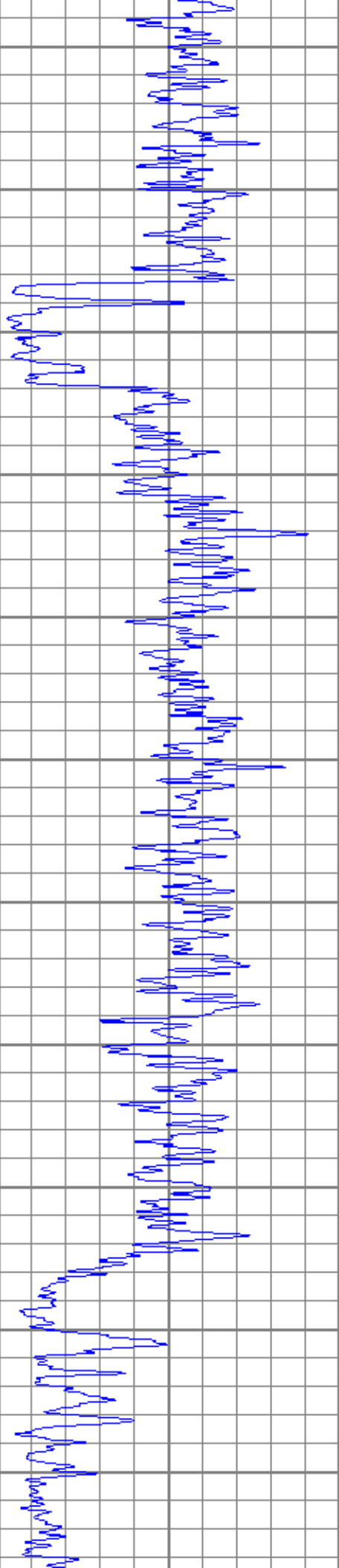
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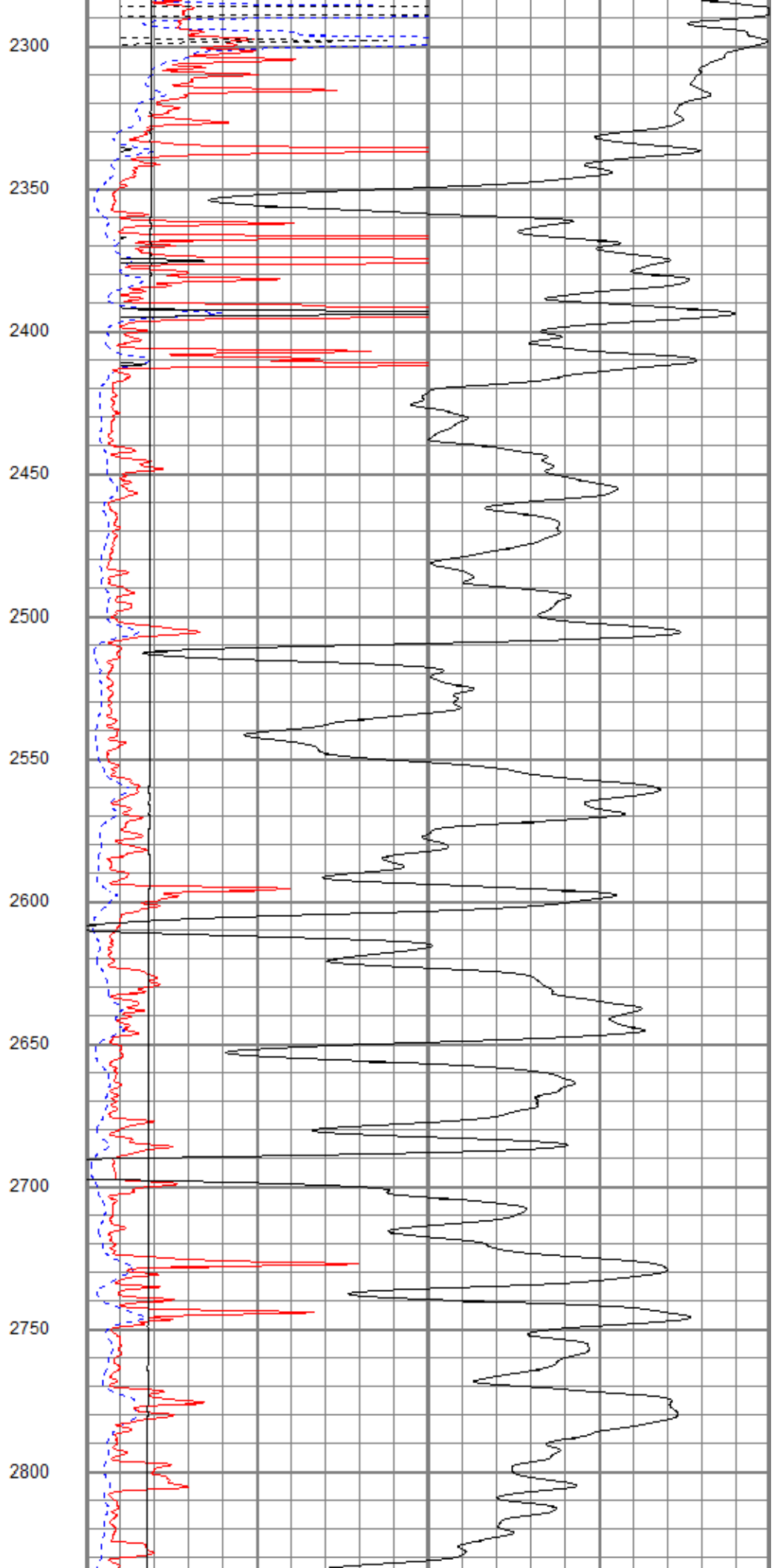
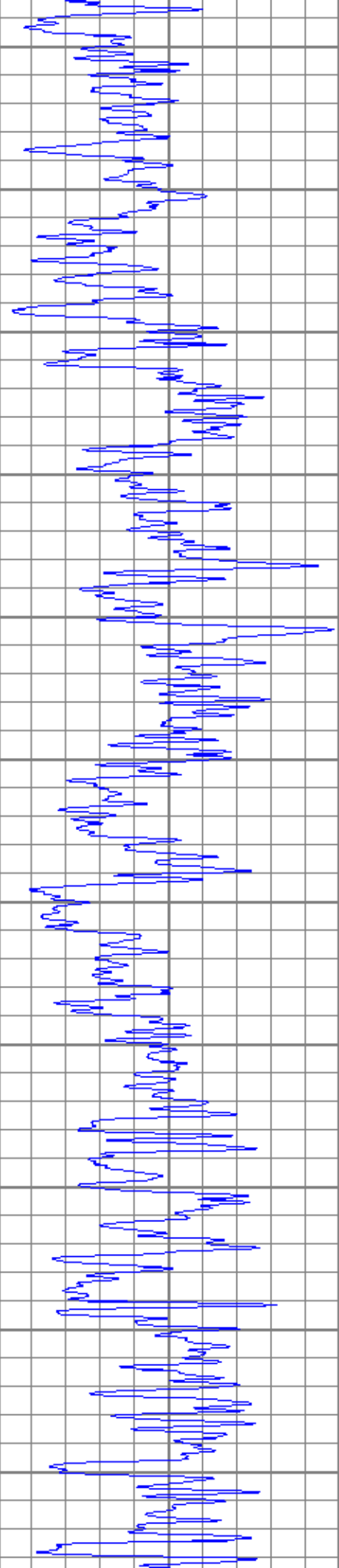
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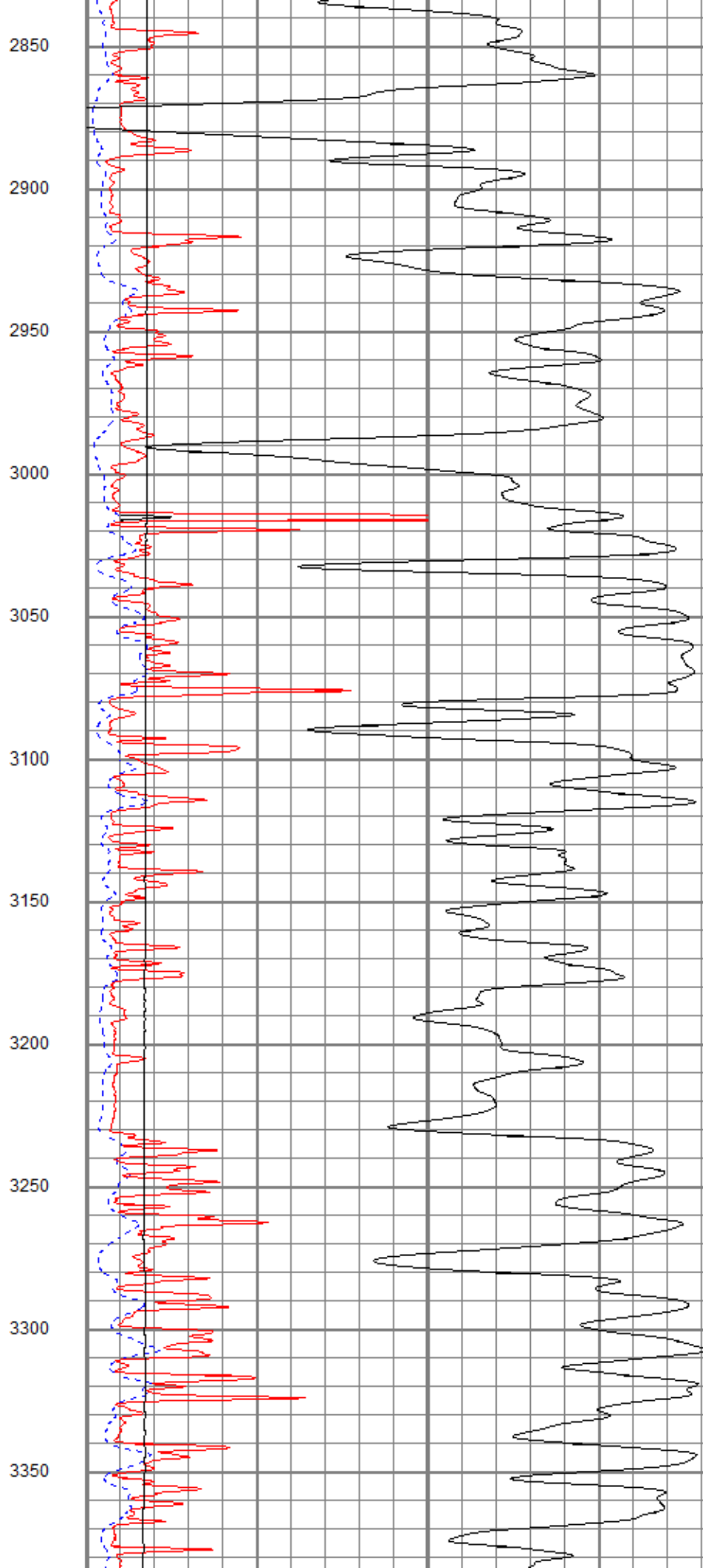
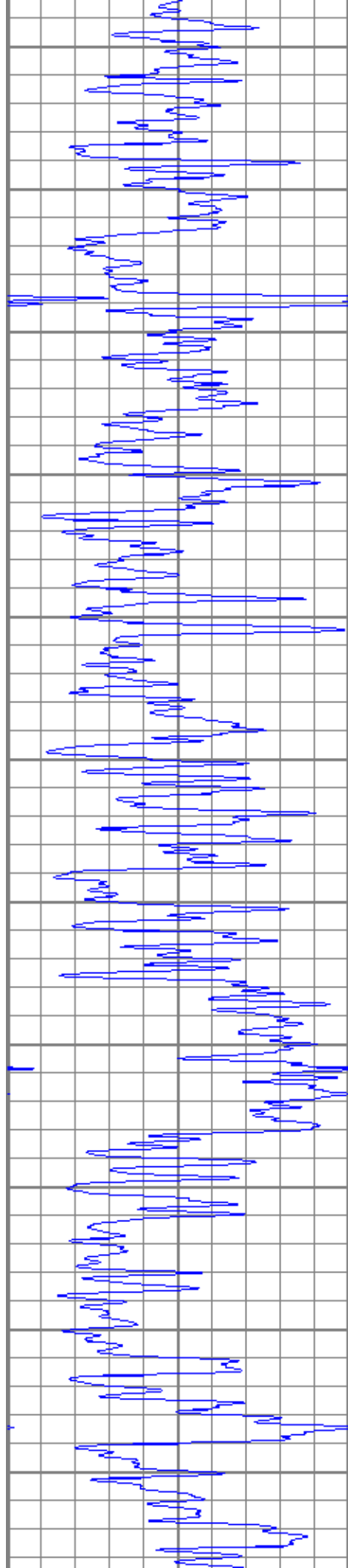


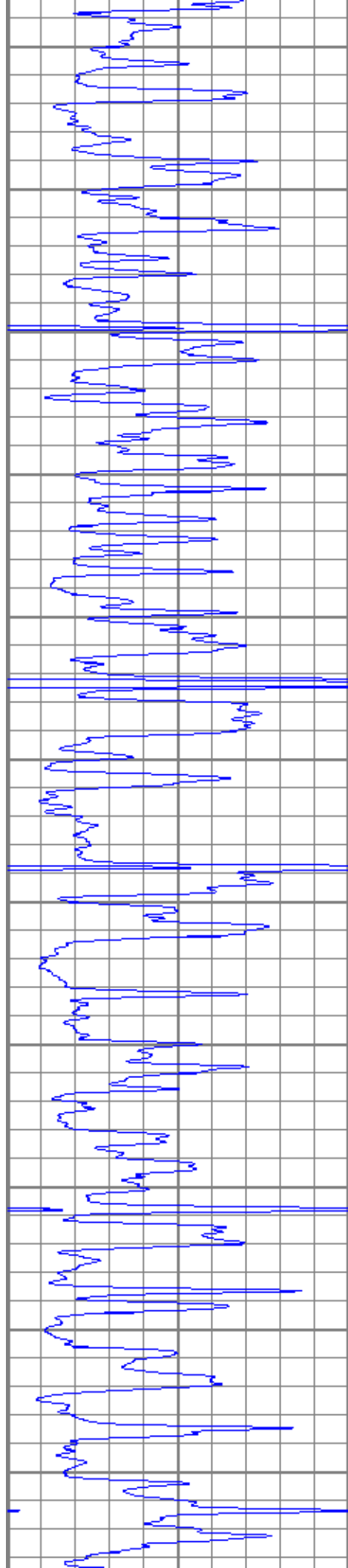












3400

3450

3500

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3650

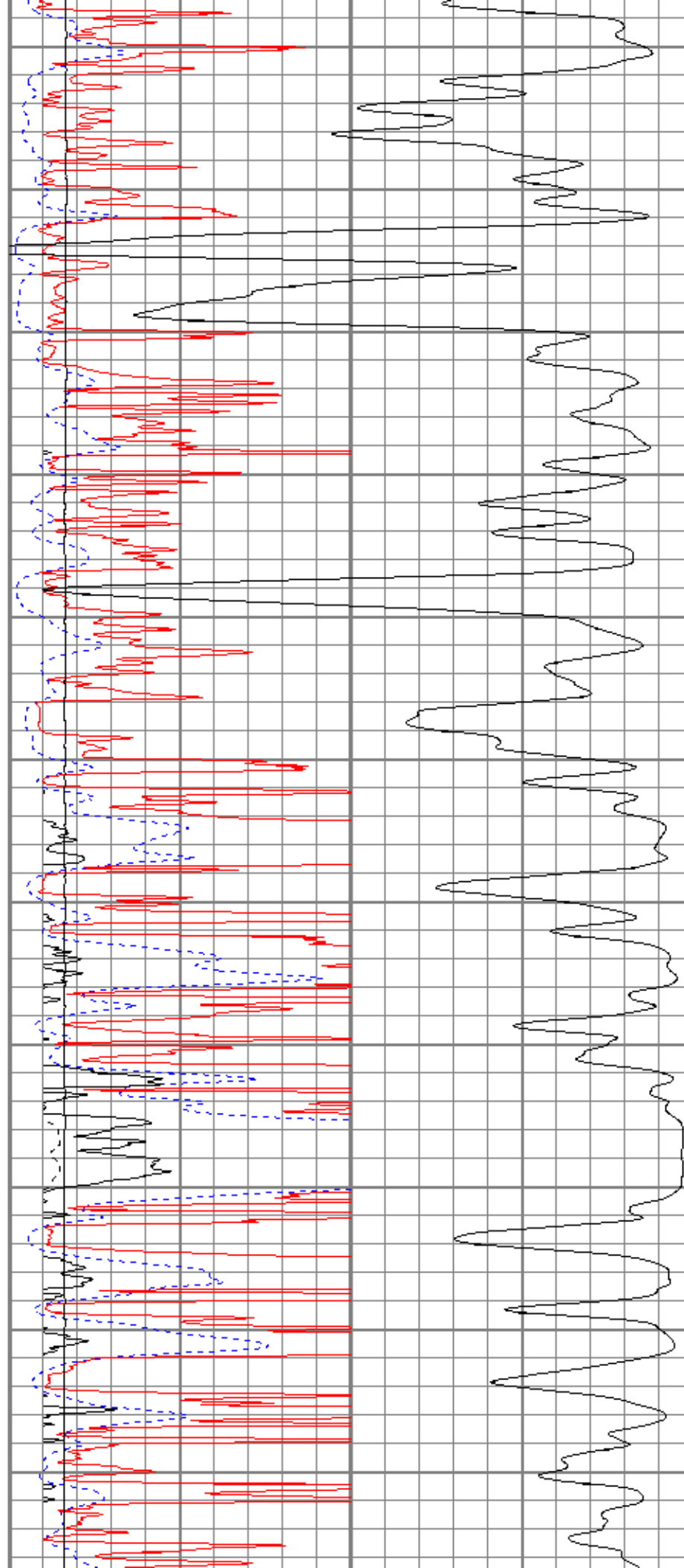
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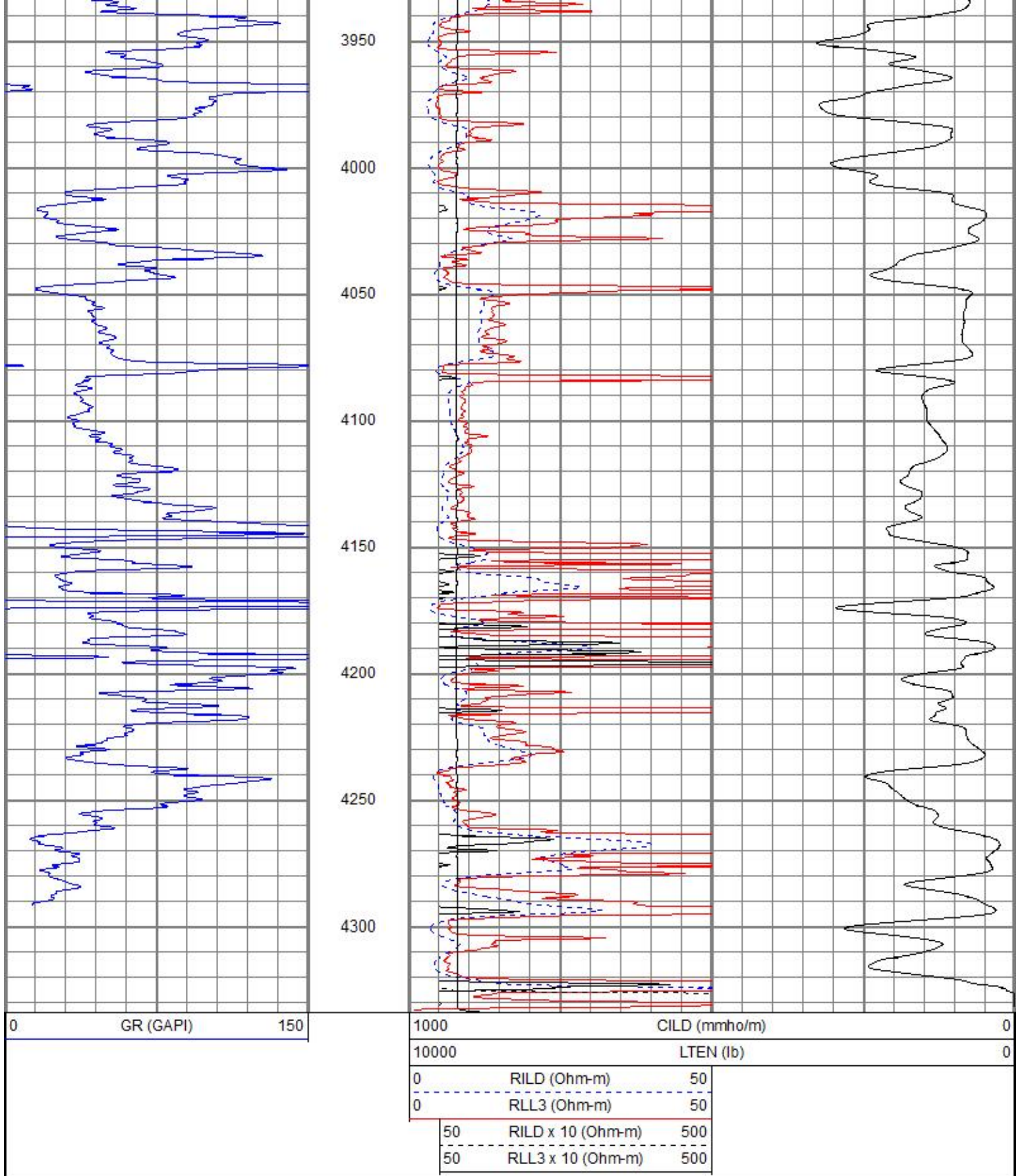
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3800

3850

3900

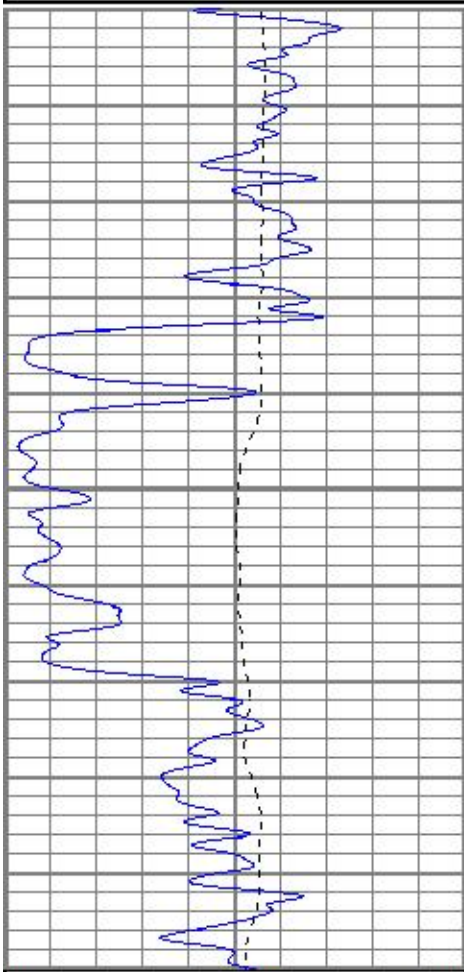




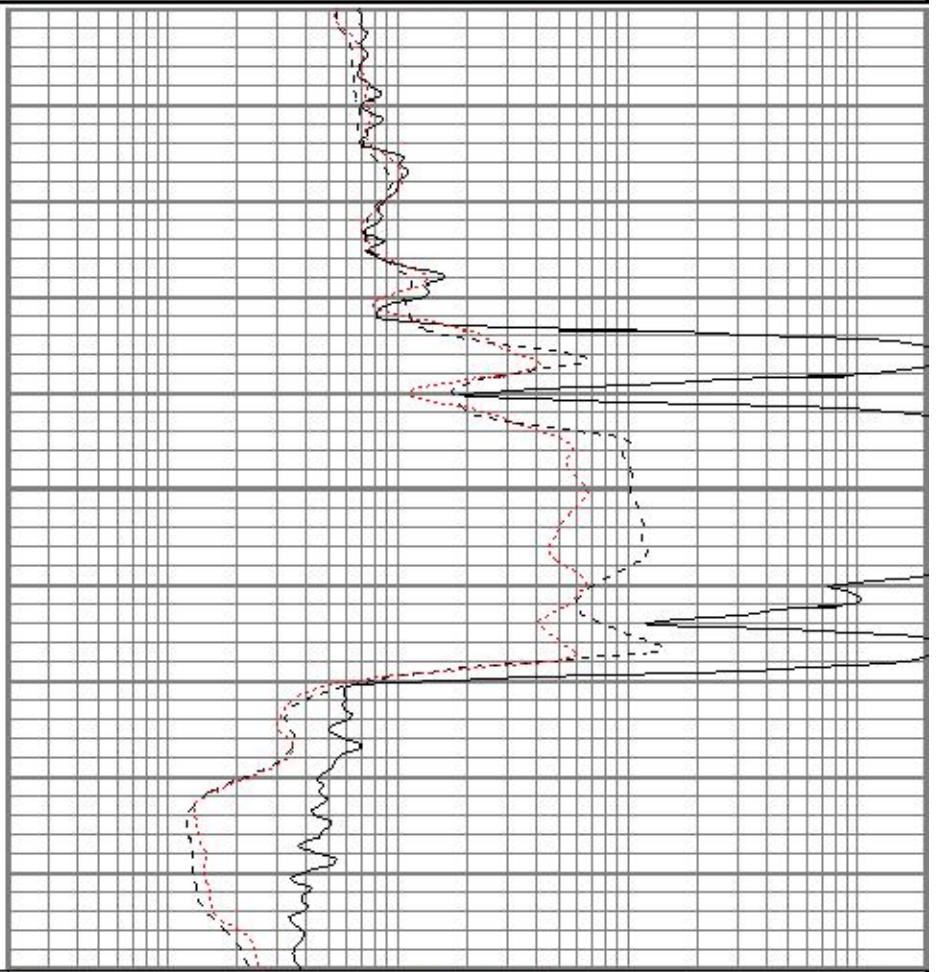
# MAIN PASS

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



1000  
1850  
1900



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

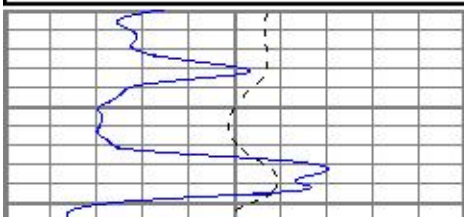
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000



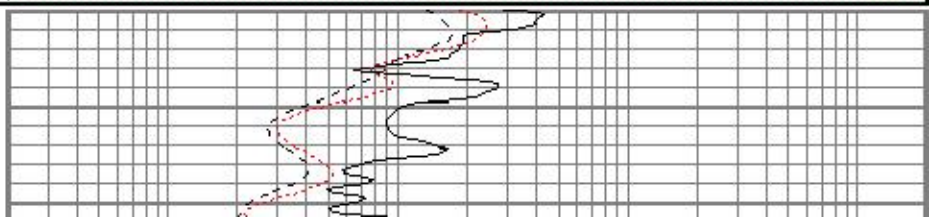
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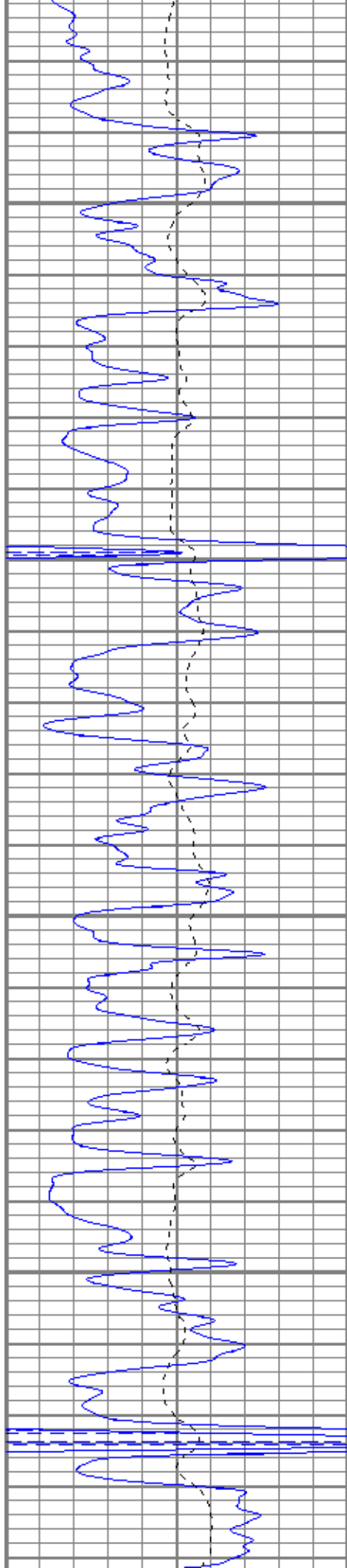
0	GR (GAPI)	150
-100	SP (mV)	100

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



3400



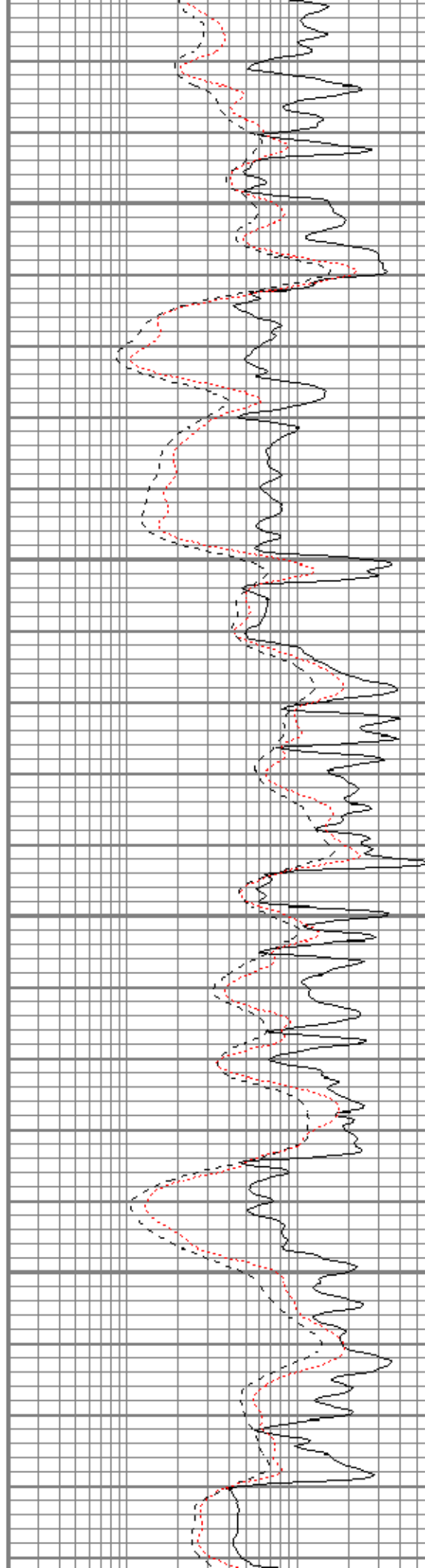


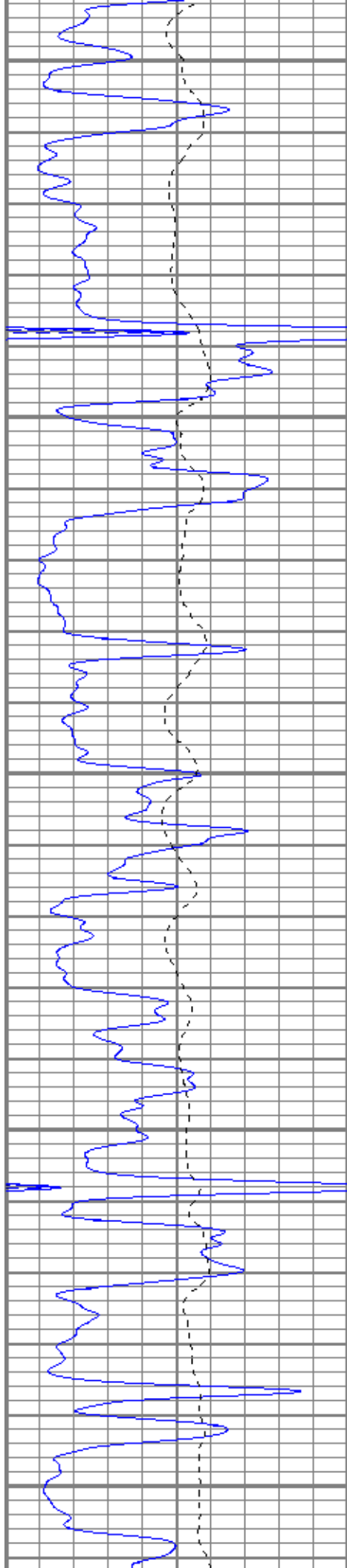
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3500

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3600





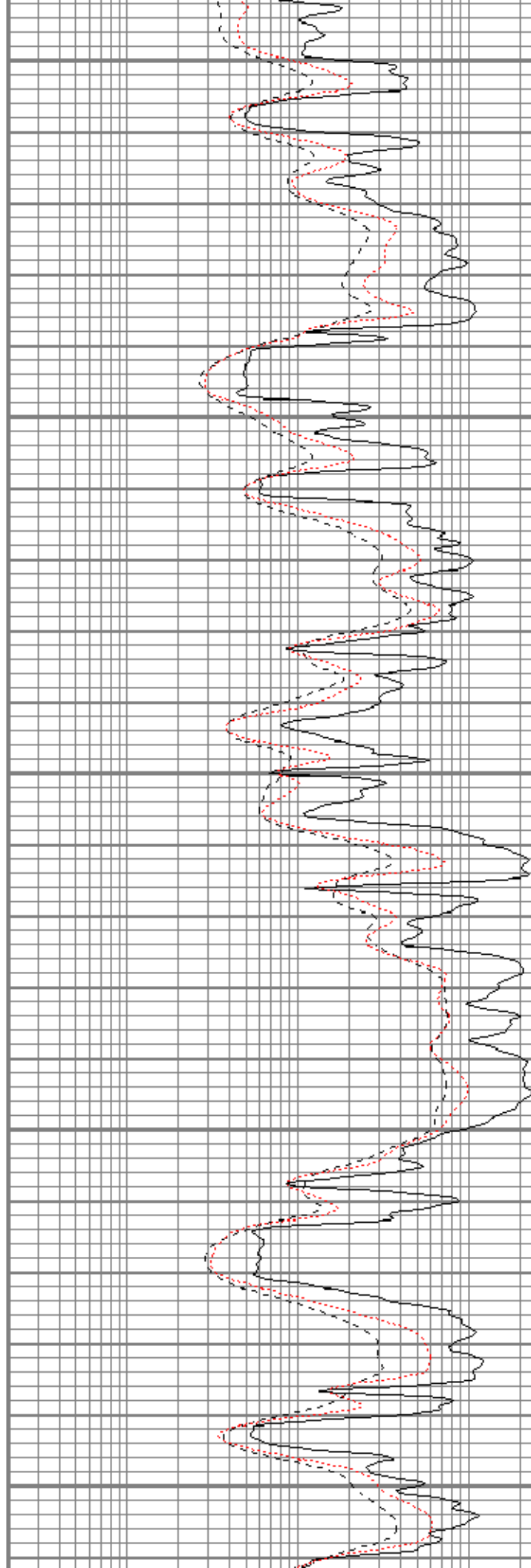
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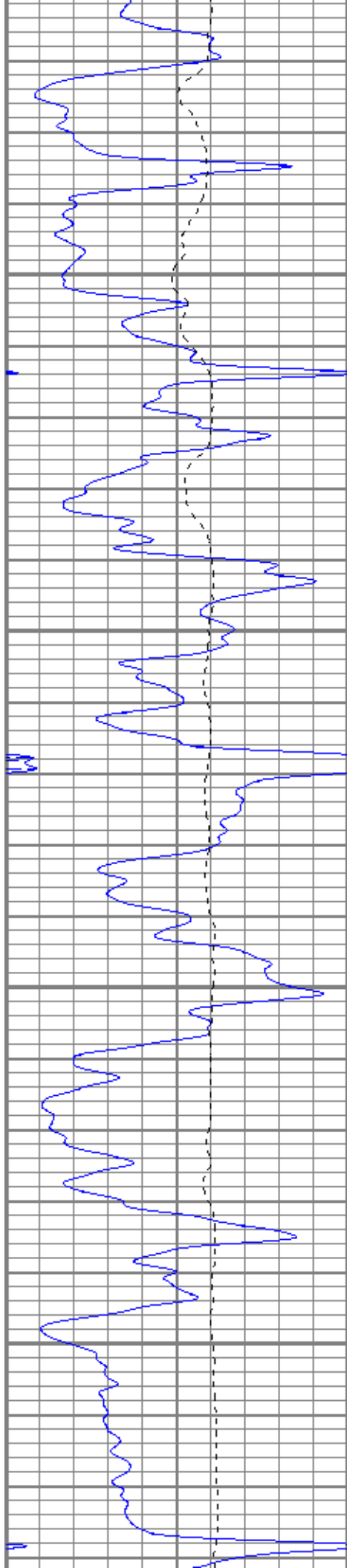
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3750

3800

3850



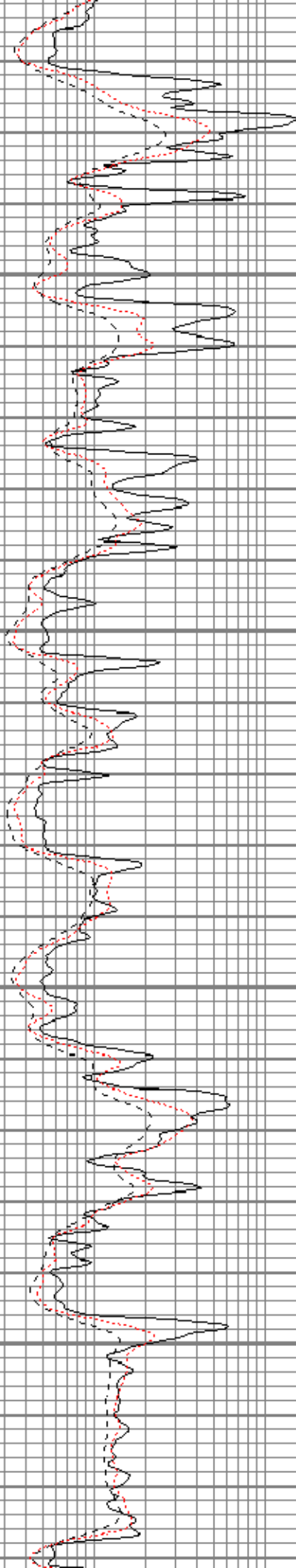


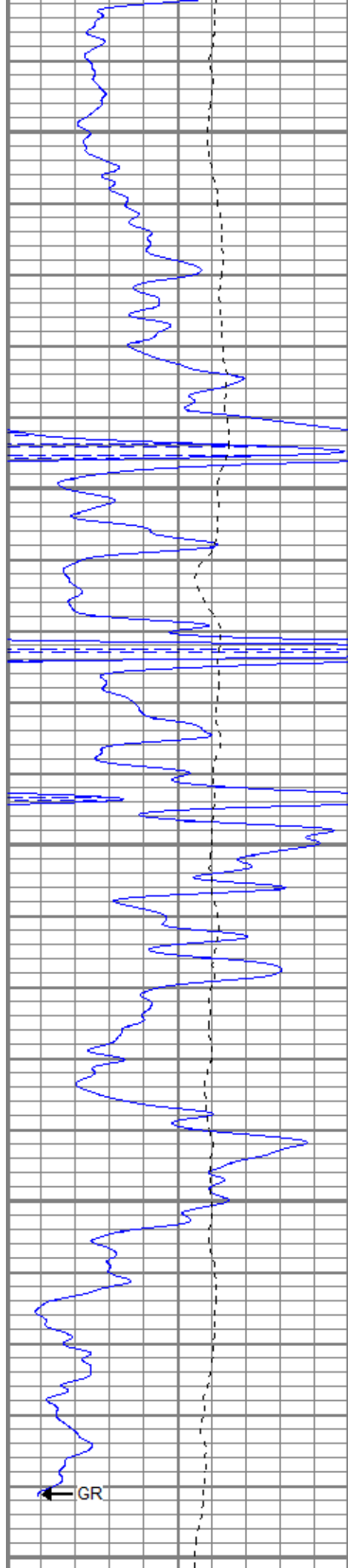
3900

3950

4000

4050





4100

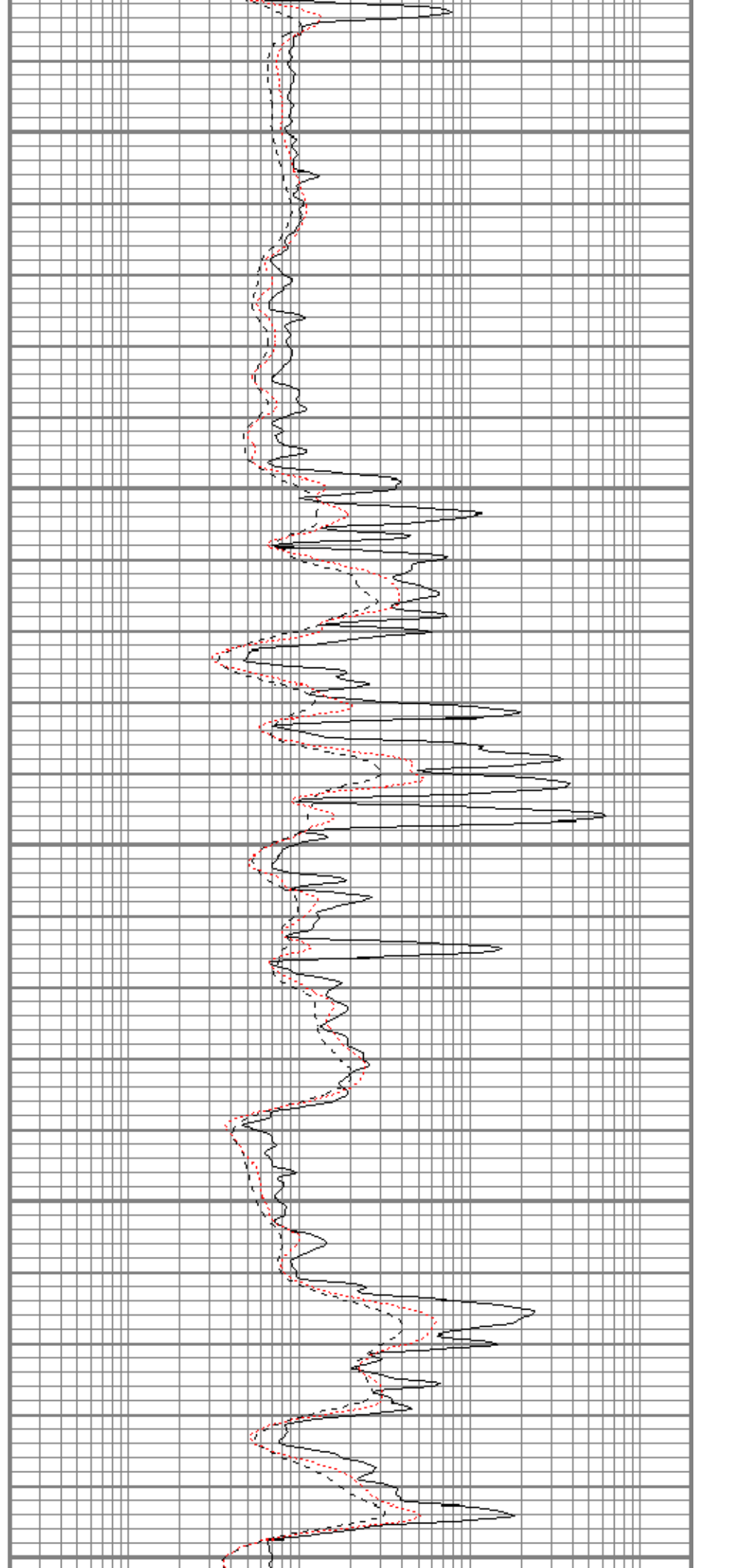
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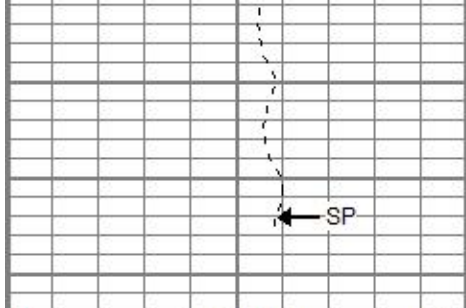
4200

4250

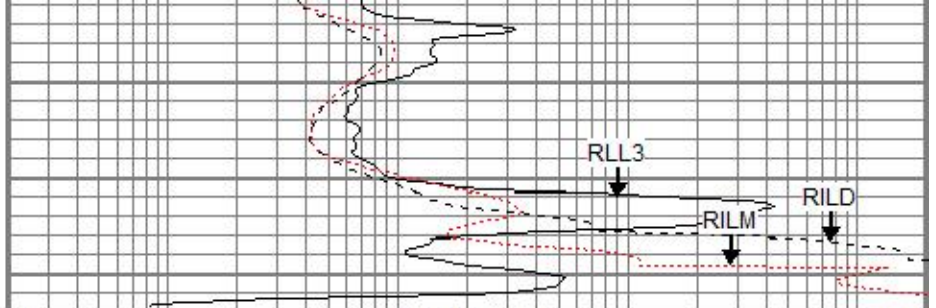
4300

← GR





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

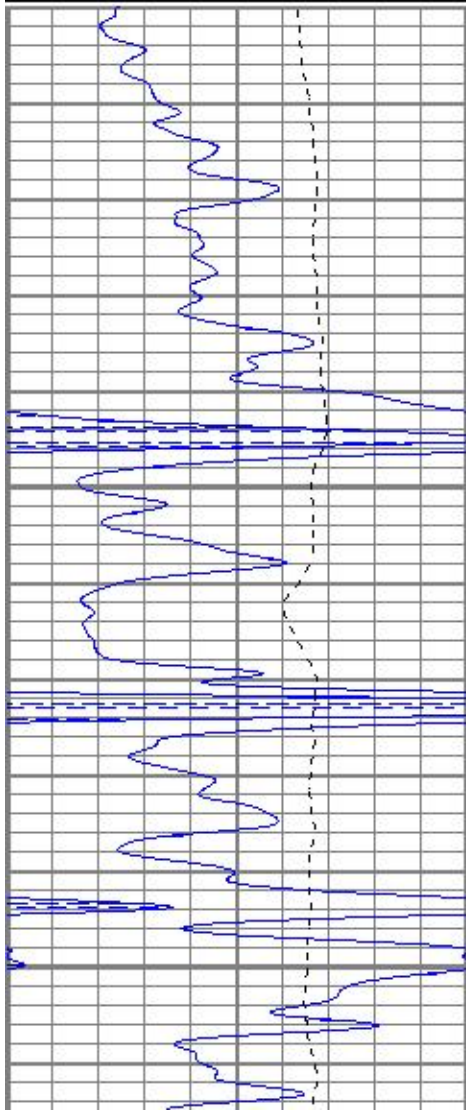


# REPEAT SECTION

Database File ppnichol#3oh.db  
 Dataset Pathname pass1.1  
 Presentation Format kdil  
 Dataset Creation Thu Dec 20 16:37:41 2018  
 Charted by Depth in Feet scaled 1:240

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

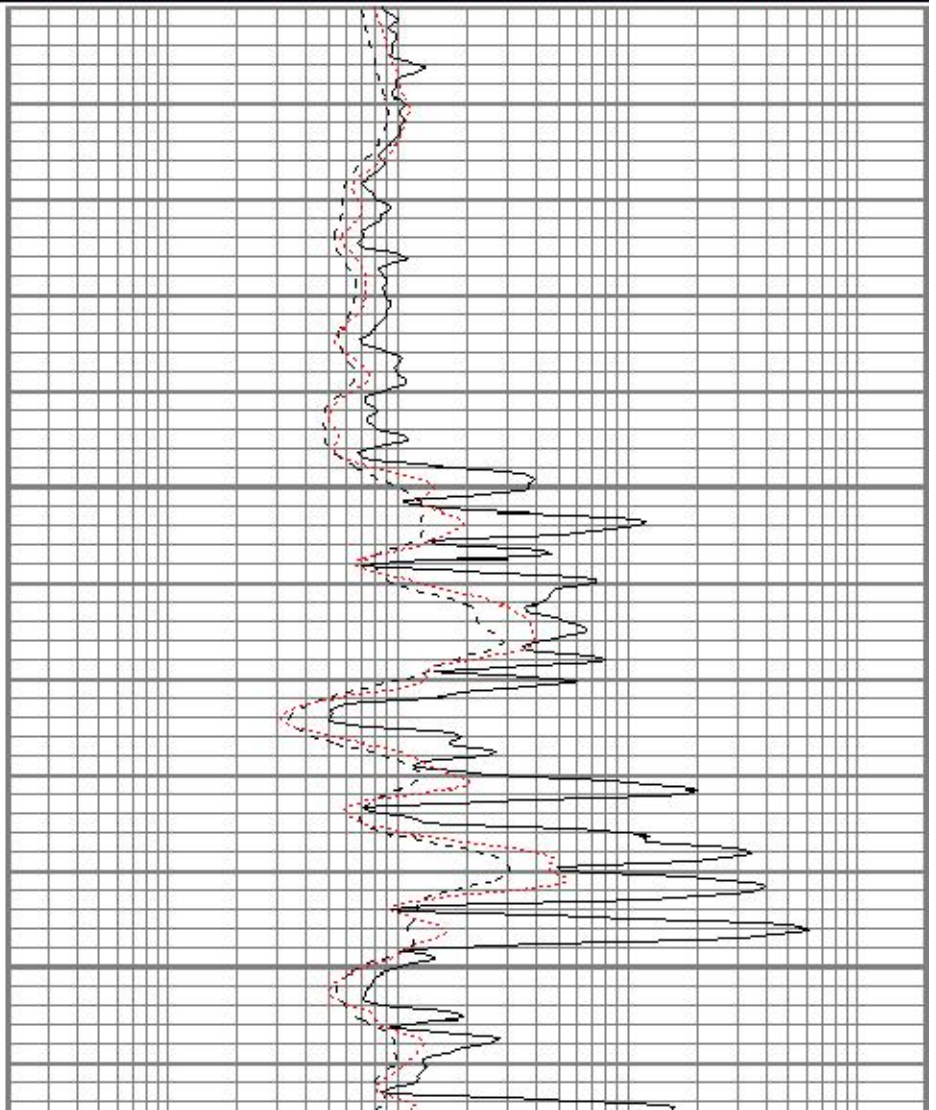
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000

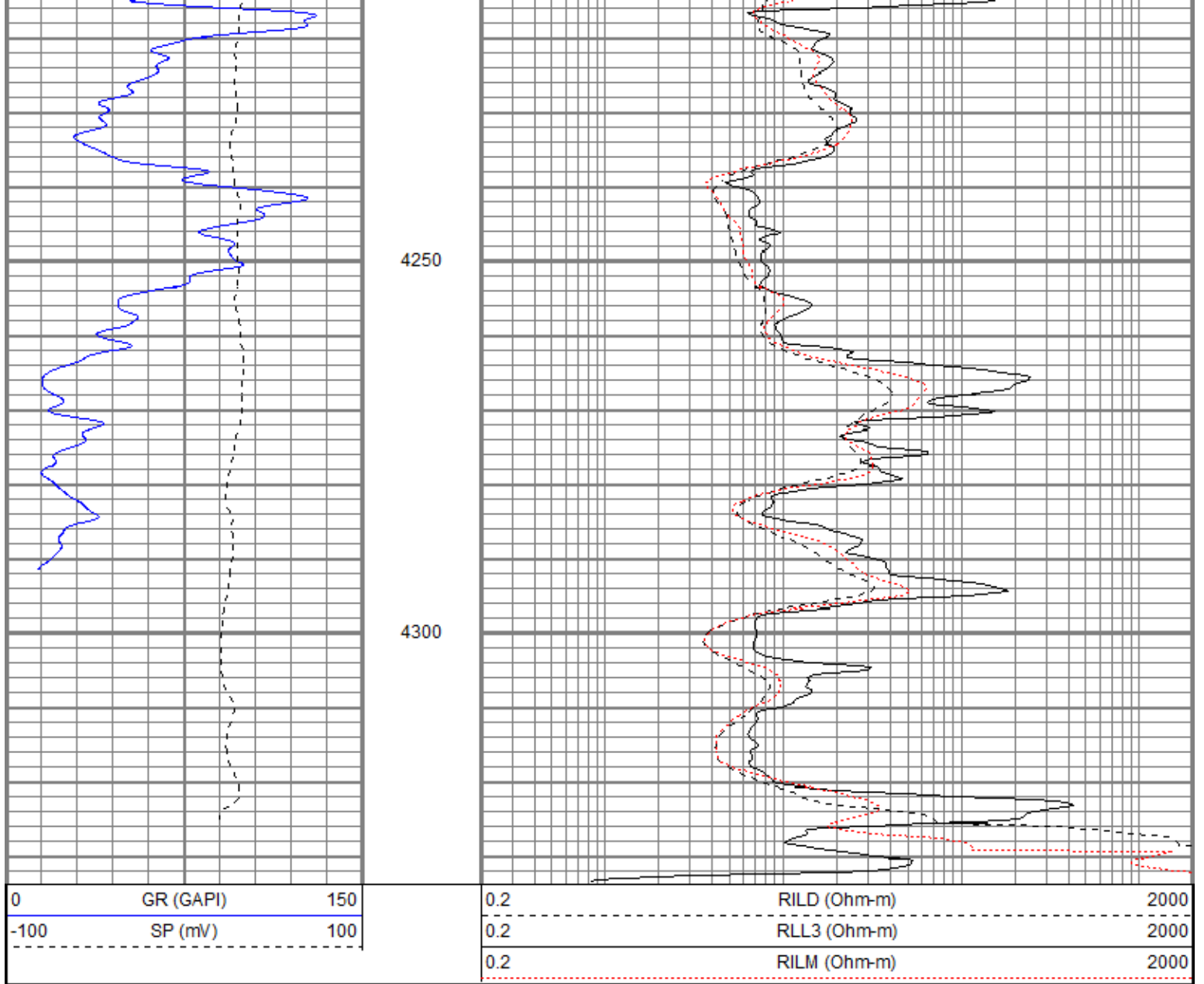


4100

4150

4200





### Calibration Report

Database File ppnichol#3oh.db  
 Dataset Pathname pass2.1  
 Dataset Creation Thu Dec 20 17:05:40 2018

### Dual Induction Calibration Report

Serial-Model: 5375-G  
 Surface Cal Performed: Sat Oct 10 08:33:18 2015  
 Downhole Cal Performed: Wed Dec 05 05:00:18 2018  
 After Survey Verification Performed: Sat Oct 10 08:33:27 2015

#### Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.007	0.642	V	0.000	350.000	mmho/m	551.294	-3.816
Medium	0.010	0.728	V	0.000	400.000	mmho/m	556.531	-5.391
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.642	V	0.000	350.000	mmho/m	550.717	-3.768
Medium	0.010	0.729	V	0.000	550.000	mmho/m	764.510	-7.354

#### Downhole Calibration

Downhole Calibration

Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	0.145	350.239	mmho/m	-0.044	350.323	mmho/m	1.001	-0.189
Medium	0.435	400.472	mmho/m	-0.037	400.340	mmho/m	1.001	-0.473
Shallow	2.440	0.018	V	500.000	2.000	Ohm-m	205.554	0.825

After Survey Verification

Internal:	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.145	350.239	mmho/m	1.001	-0.189
Medium	0.000	0.000	mmho/m	0.435	400.472	mmho/m	1.001	-0.473
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

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:	Wed Dec 05 04:54:01 2018			
	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 Dec 05 04:53:48 2018				
	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:	Wed Dec 05 04:58:30 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps

Calibrator Reading:

1.0

cps

Sensitivity:

1.0000

GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.07		CHD-STD	0.50	1.69	1.00
ACCY	38.91		ADT-WMC (WithMC) Admyr Telemetry With Mudcell	4.58	3.50	120.00
ACCX	38.91					
SSTAT	38.49		NEU-ADMY5139 (AD5139) Admyer NEU DIGITAL	5.65	3.50	50.00
PSTAT	37.66					
ASTAT	37.66		ADT1LITH-A (1) Admyr Litho Density Tool	9.29	3.50	240.00
GRD	36.82					
TEMP	36.82					
NEU	32.76					
LStat	24.30					
LS8	23.64					
LS7	23.64					
LS6	23.64					
LS5	23.64					
LS4	23.64					
LS3	23.64		DIL-G (5375) Gearhart	21.47	4.00	345.00
LS2	23.64					
LS1	23.64					
LSV	23.64					
LSD	23.62					
SSV	23.43					
SS8	23.43					
SS7	23.43					
SS6	23.43					
SS5	23.43					
SS4	23.43					
SS3	23.43					
SS2	23.43					
SS1	23.43					
DCAL	23.37					
SSD	23.04					
SP	10.60					
CILD	10.60					
CILM	6.89					
RLL3	1.70	Dataset: ppnichol#3oh.db: field/well/run1/pass2.1 Total length: 41.49 ft Total weight: 756.00 lb O.D.: 4.00 in				
TR_Mon	0.00					