



DUAL INDUCTION LOG

Company	PATTERSON ENERGY	Company	PATTERSON ENERGY
Well	BITTER #2	Well	BITTER #2
Field	TRAPP	Field	TRAPP
County	BARTON	County	BARTON
State	KANSAS	State	KANSAS
Location:	API # : 15 009 26393 1310' FSL & 1760' FEL	Other Services	ML CDNL
Permanent Datum	SEC 6 TWP 16S RGE 13W	Elevation	
Log Measured From	Ground Level	Elevation	1919
Drilling Measured From	KB 8' AGL	K.B. 1927 D.F. 1925 G.L. 1919	
Date	04/30/23		
Run Number	One		
Depth Driller	3450		
Depth Logger	3451		
Bottom Logged Interval	3449		
Top Log Interval	00		
Casing Driller	8 5/8"@460'		
Casing Logger	460'		
Bit Size	7 7/8"		
Type Fluid in Hole	Chemical		
Density / Viscosity	9.0/48		
pH / Fluid Loss	9.5/9.2		
Source of Sample	Pit		
Rm @ Meas. Temp	1.4@60degf		
Rmf @ Meas. Temp	1.05@60degf		
Rmc @ Meas. Temp	1.68@60degf		
Source of Rmf / Rmc	Calculated		
Rm @ BHT	.88@96degf		
Time Circulation Stopped	3:00 AM		
Time Logger on Bottom	6:00 AM		
Maximum Recorded Temperature	96degf		
Equipment Number	T-605		
Location	Hays, KS.		
Recorded By	COLBY DREILING		
Witnessed By	AUSTIN KLAUS		

<<< Fold Here >>>

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

RUSSELL SOUTH 13 MILES TO NW220 RD, EAST 2.75 MILES
NORTH INTO.

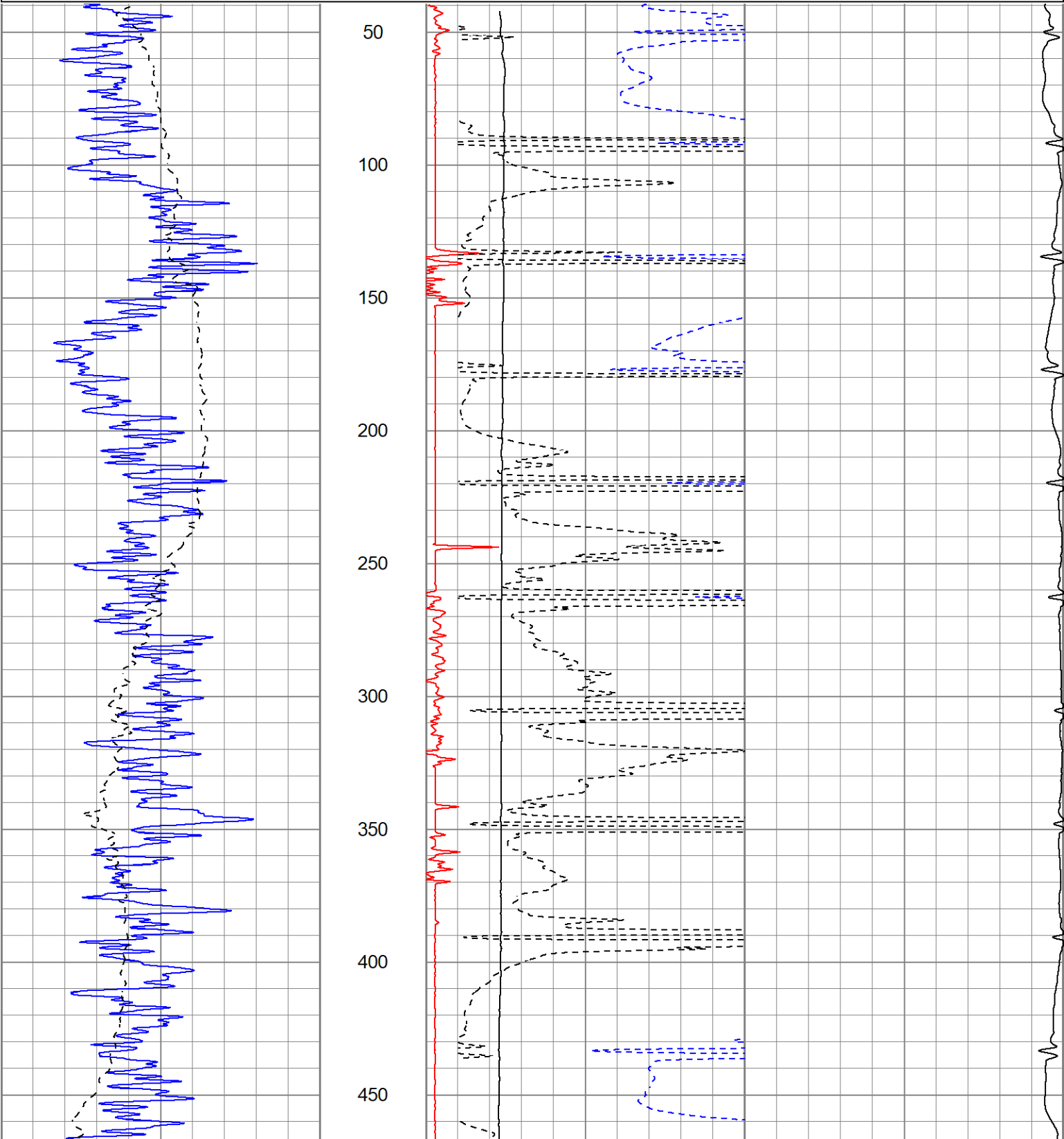
Thanks for using Gemini Wireline LLC
785-625-1182

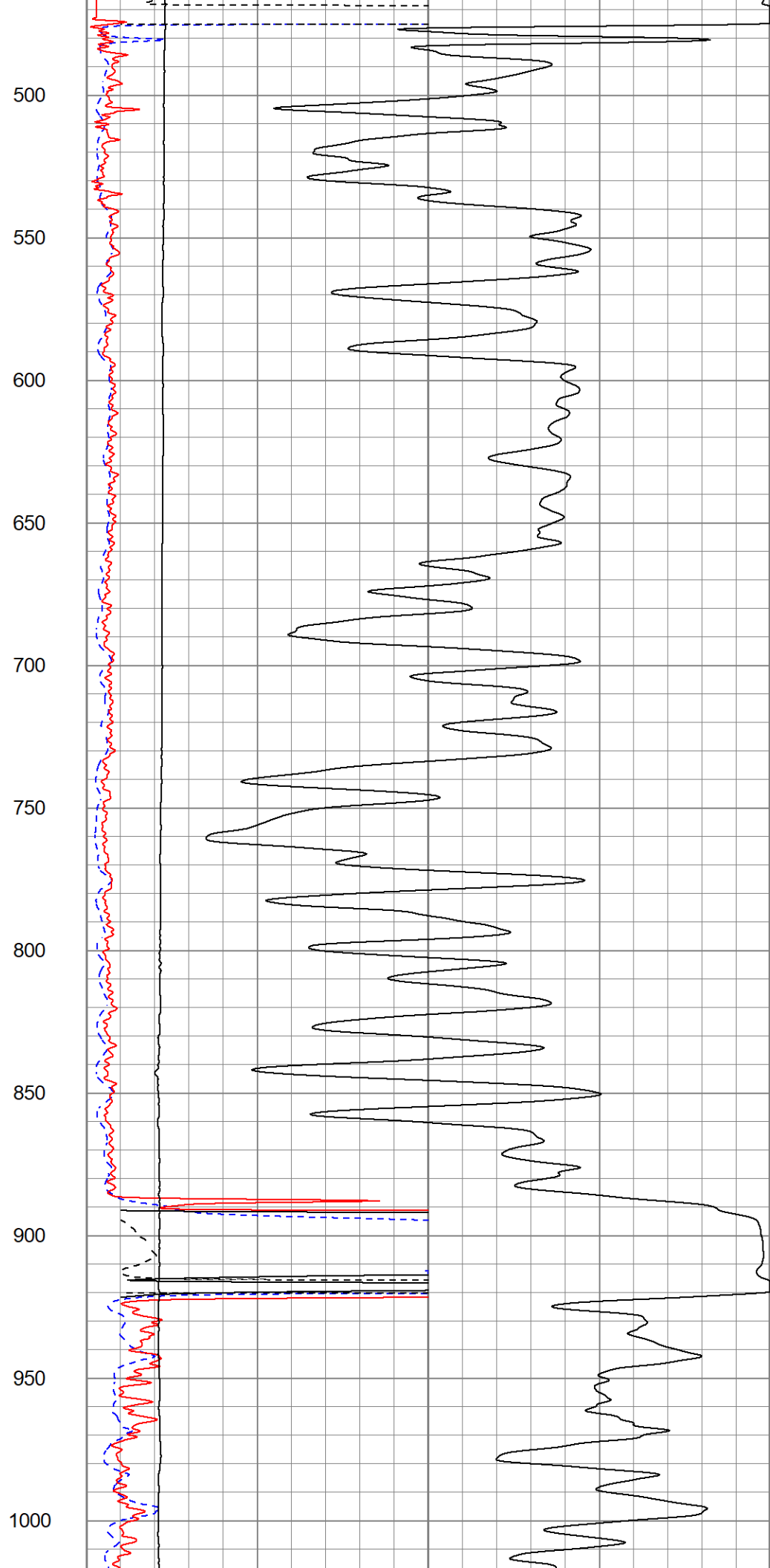
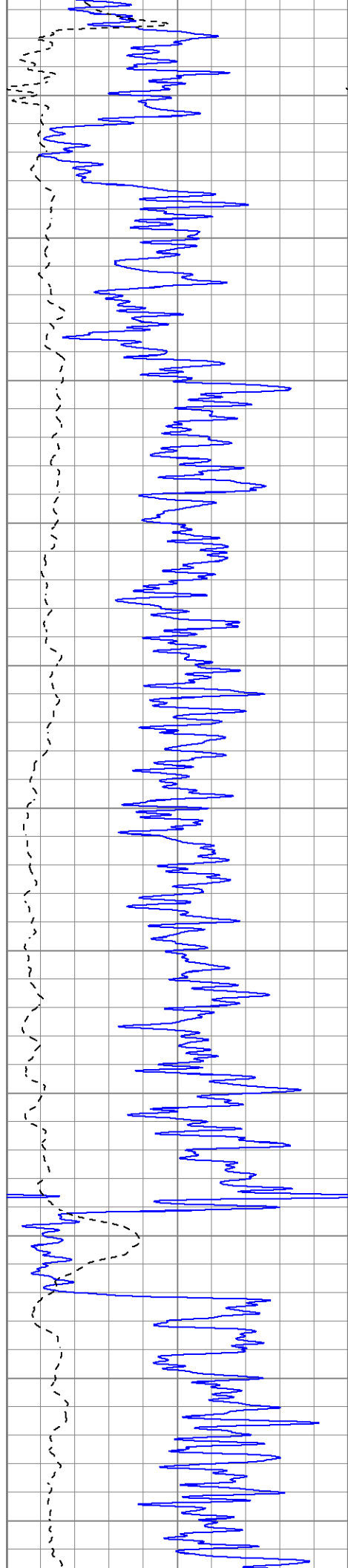


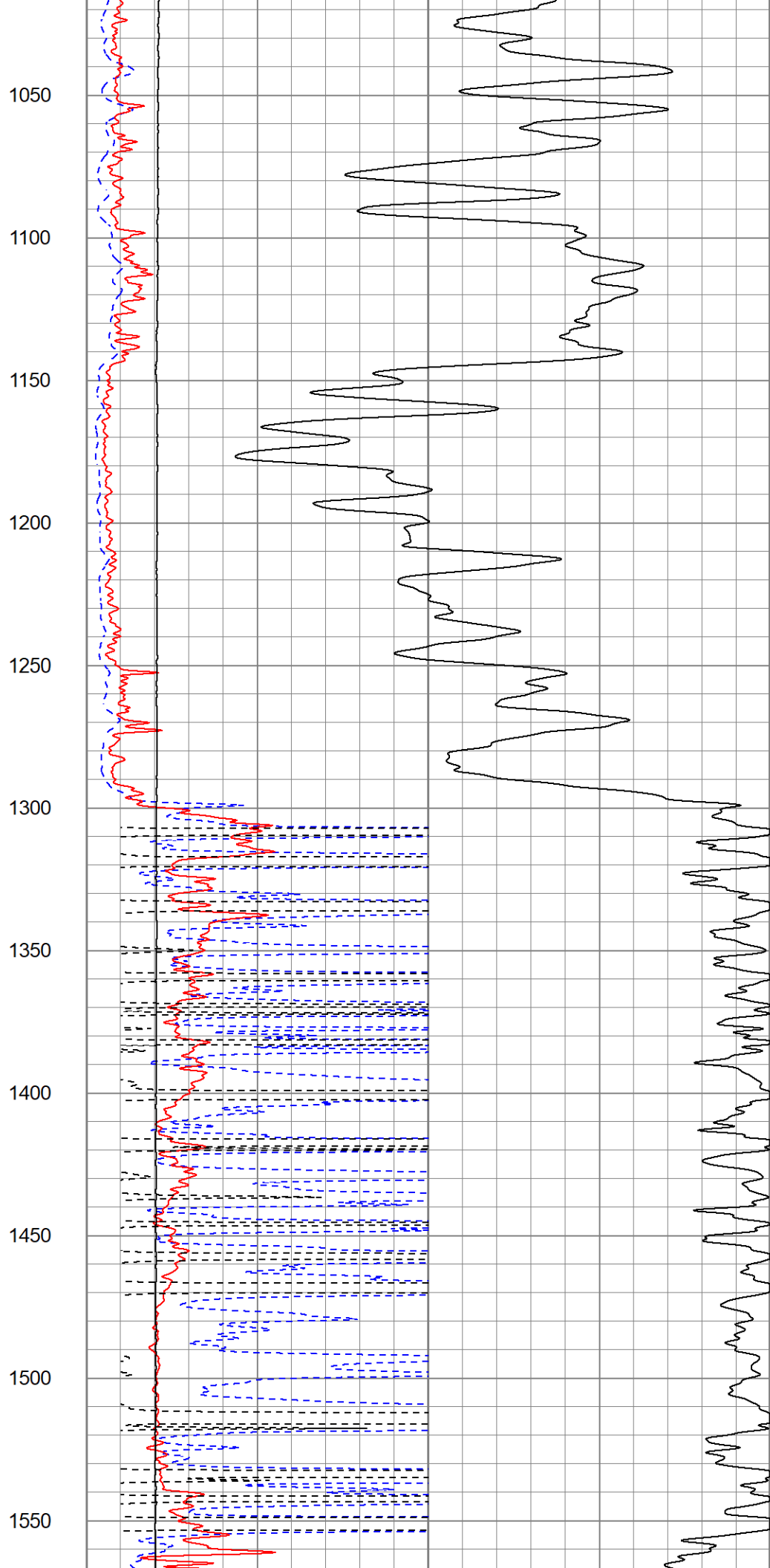
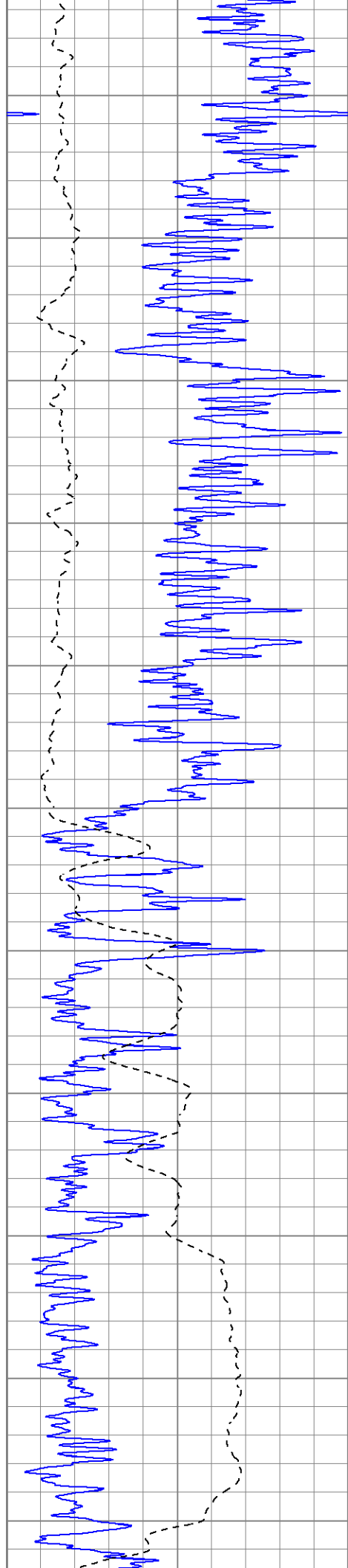
MAIN PASS

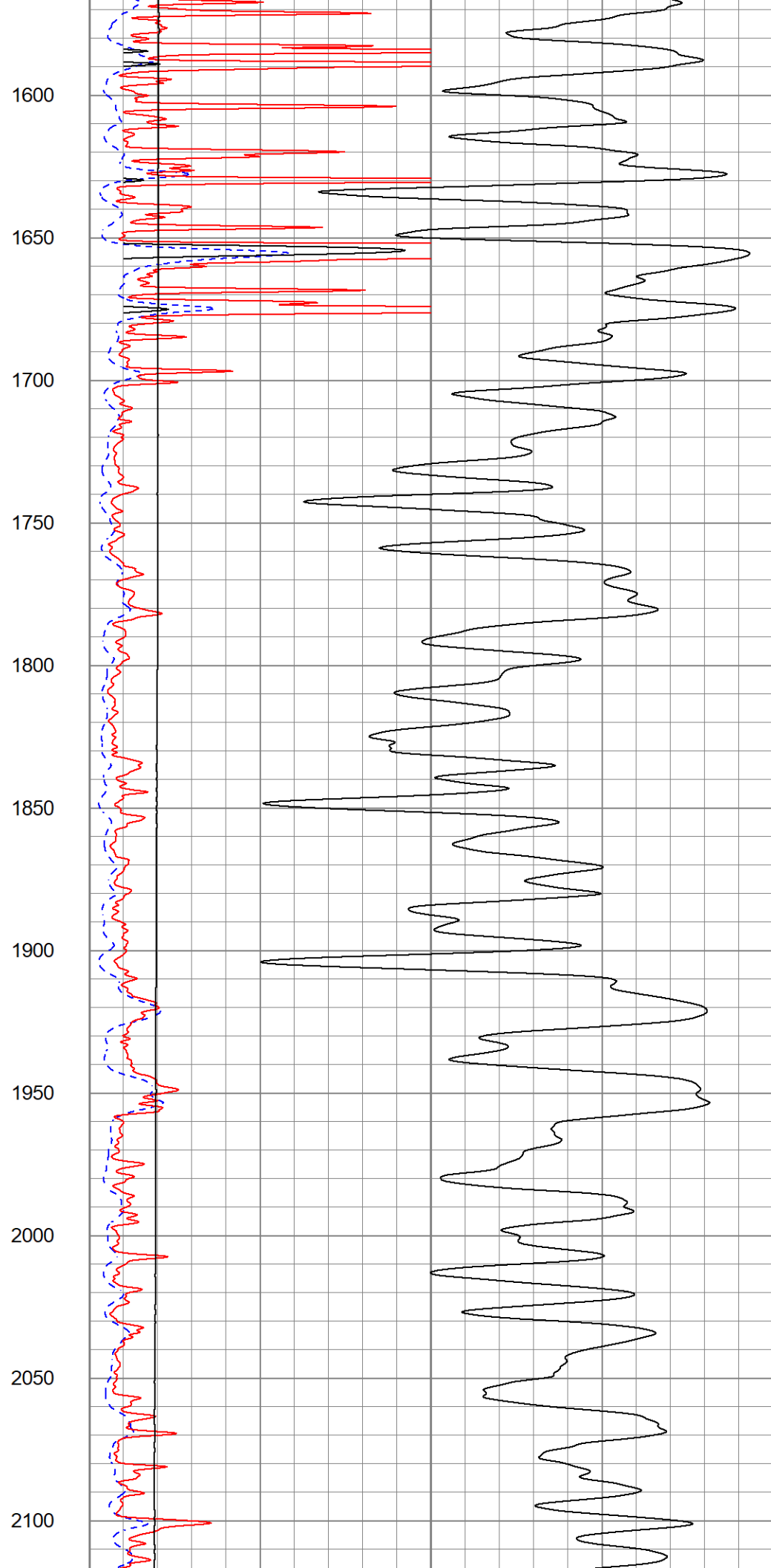
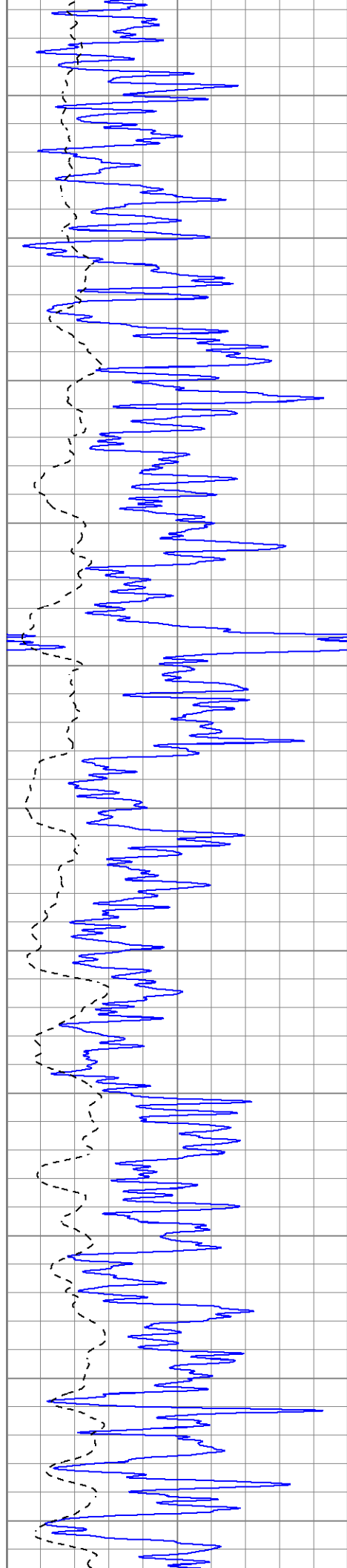
Database File	pebitter#2oh.db
Dataset Pathname	pass4
Presentation Format	kdillinn
Dataset Creation	Sun Apr 30 06:06:26 2023
Charted by	Depth in Feet scaled 1:600

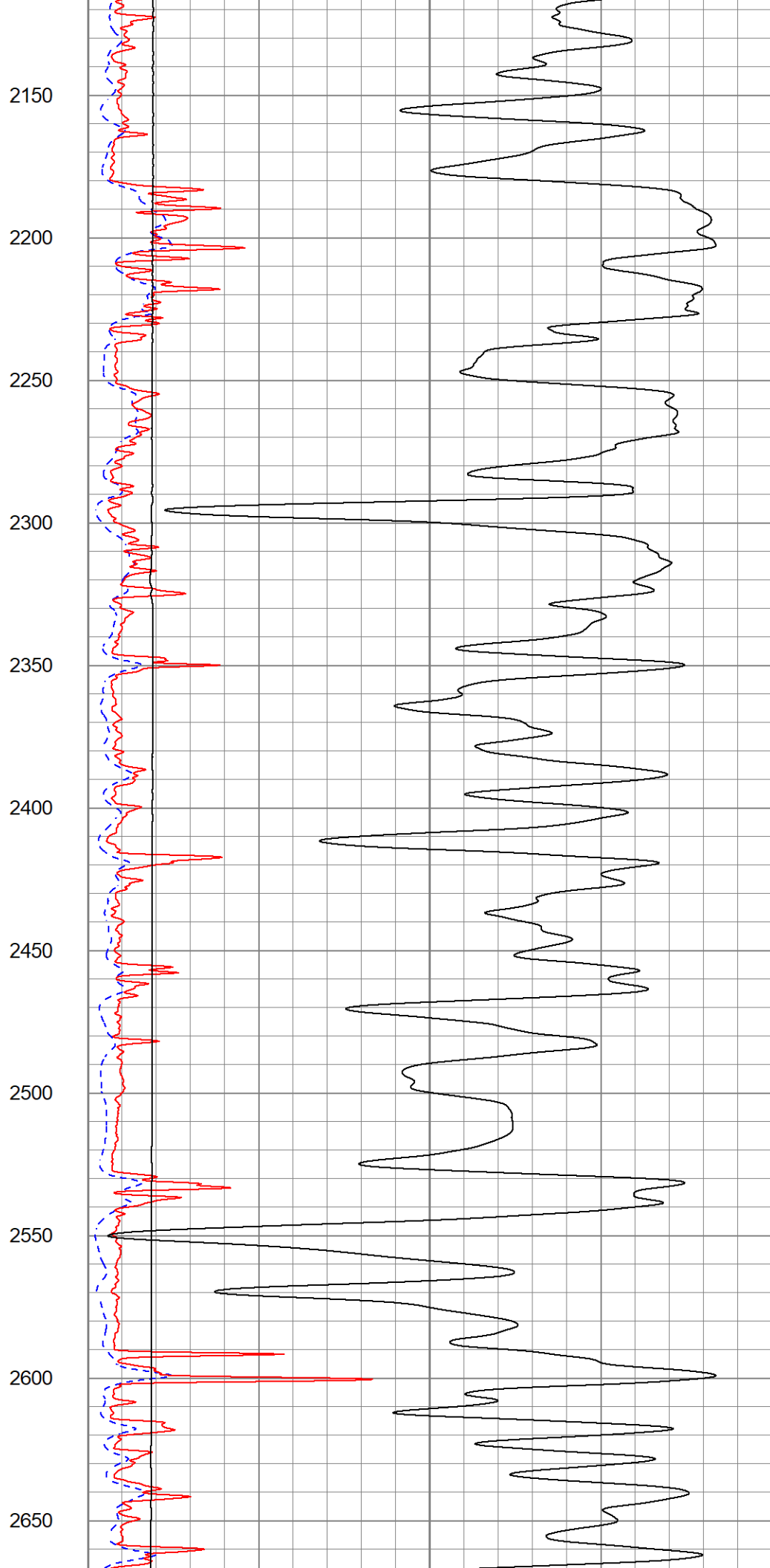
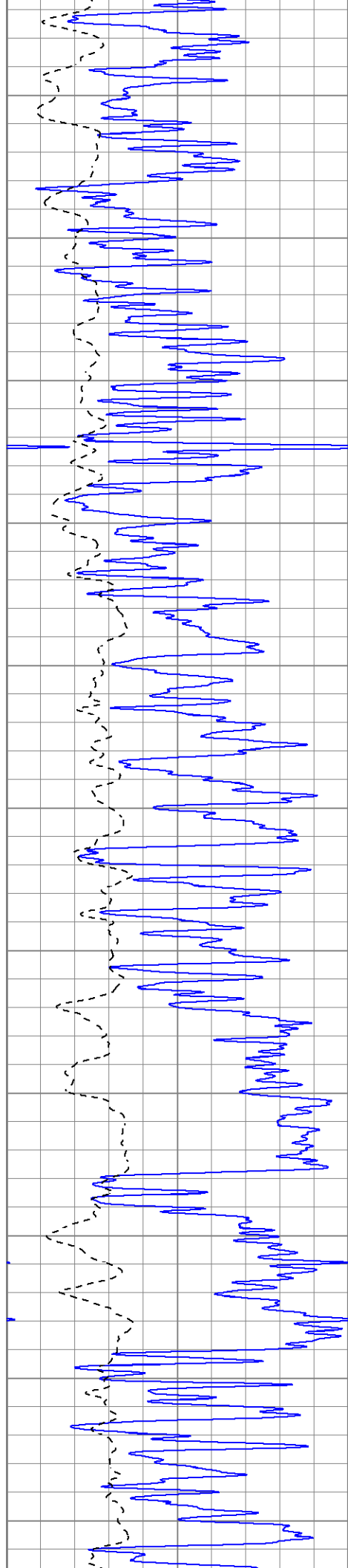
0	GR (GAPI)	150	1000	CILD (mmho/m)	0
-100	SP (mV)	100	10000	LTEN (lb)	0
			0	RILD (Ohm-m)	50
			0	RLL3 (Ohm-m)	50
			50	RILD x 10 (Ohm-m)	500
			50	RLL3 x 10 (Ohm-m)	500

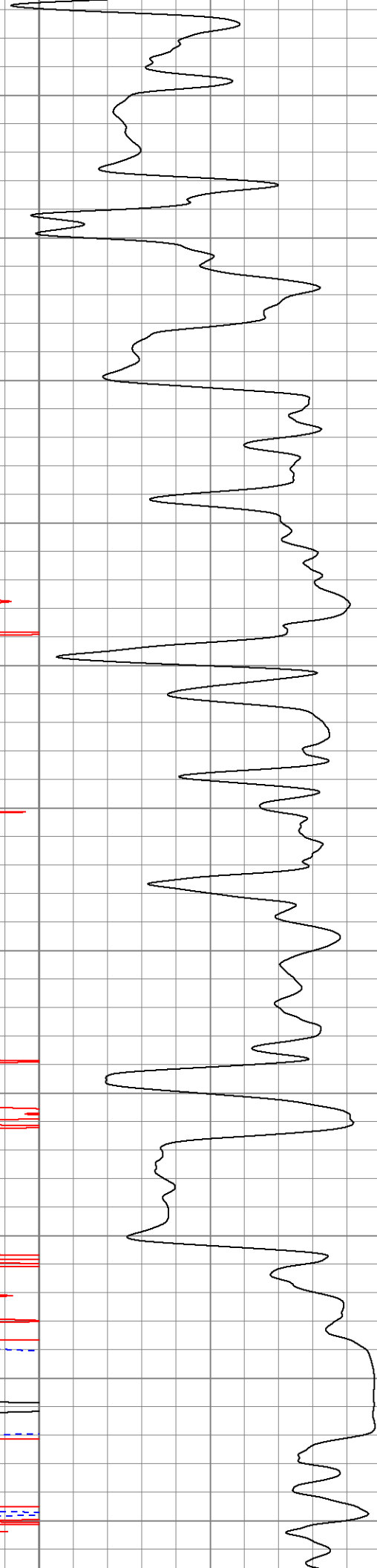
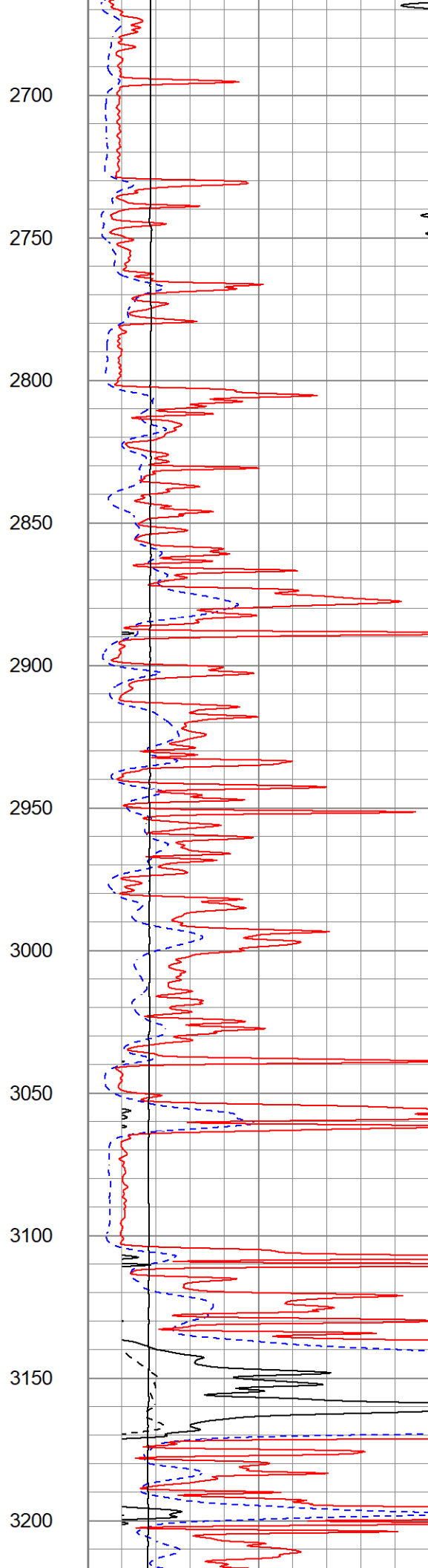
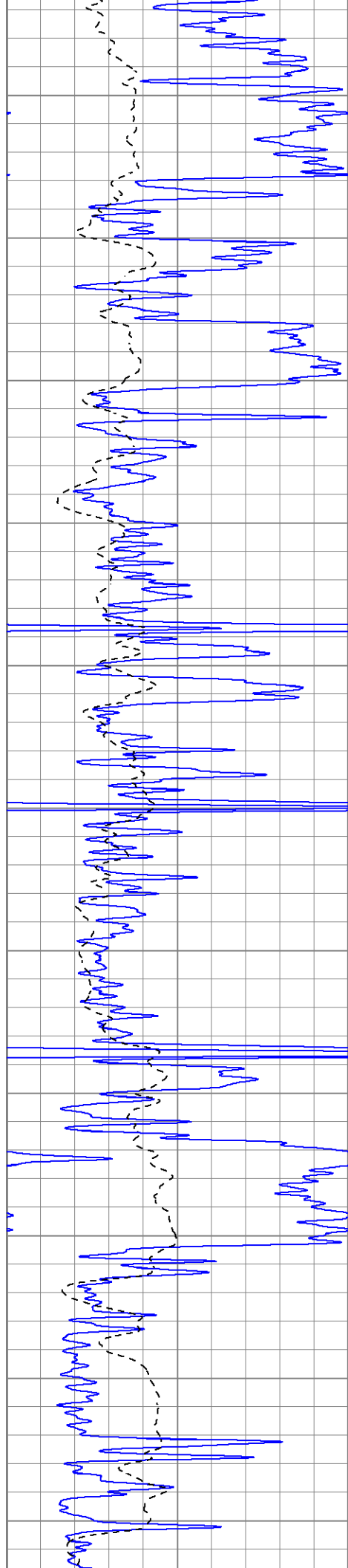


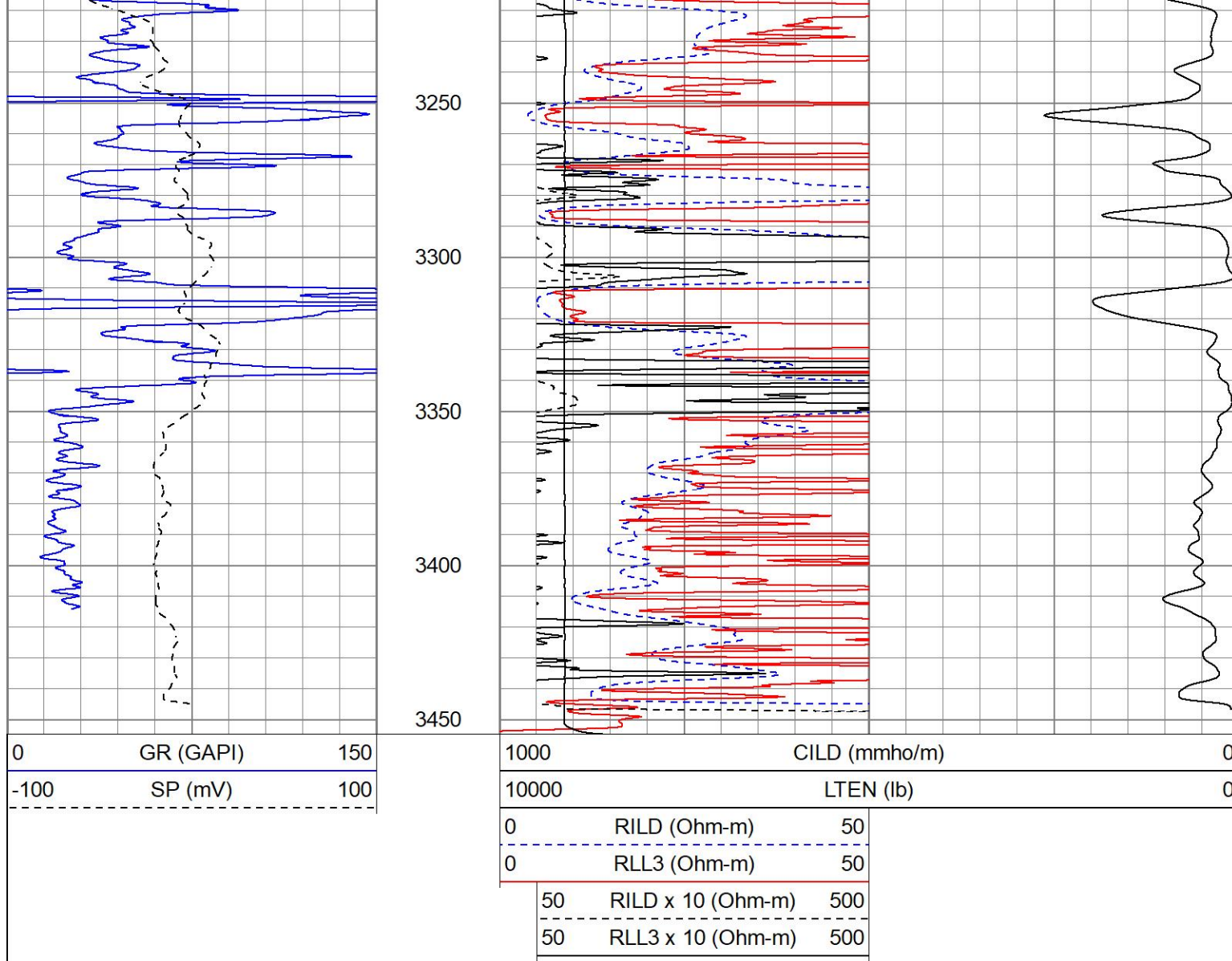








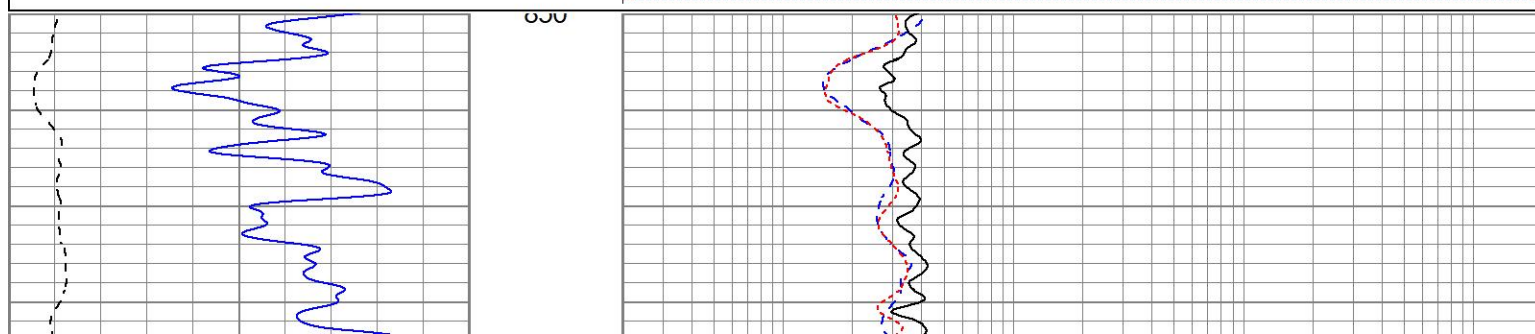


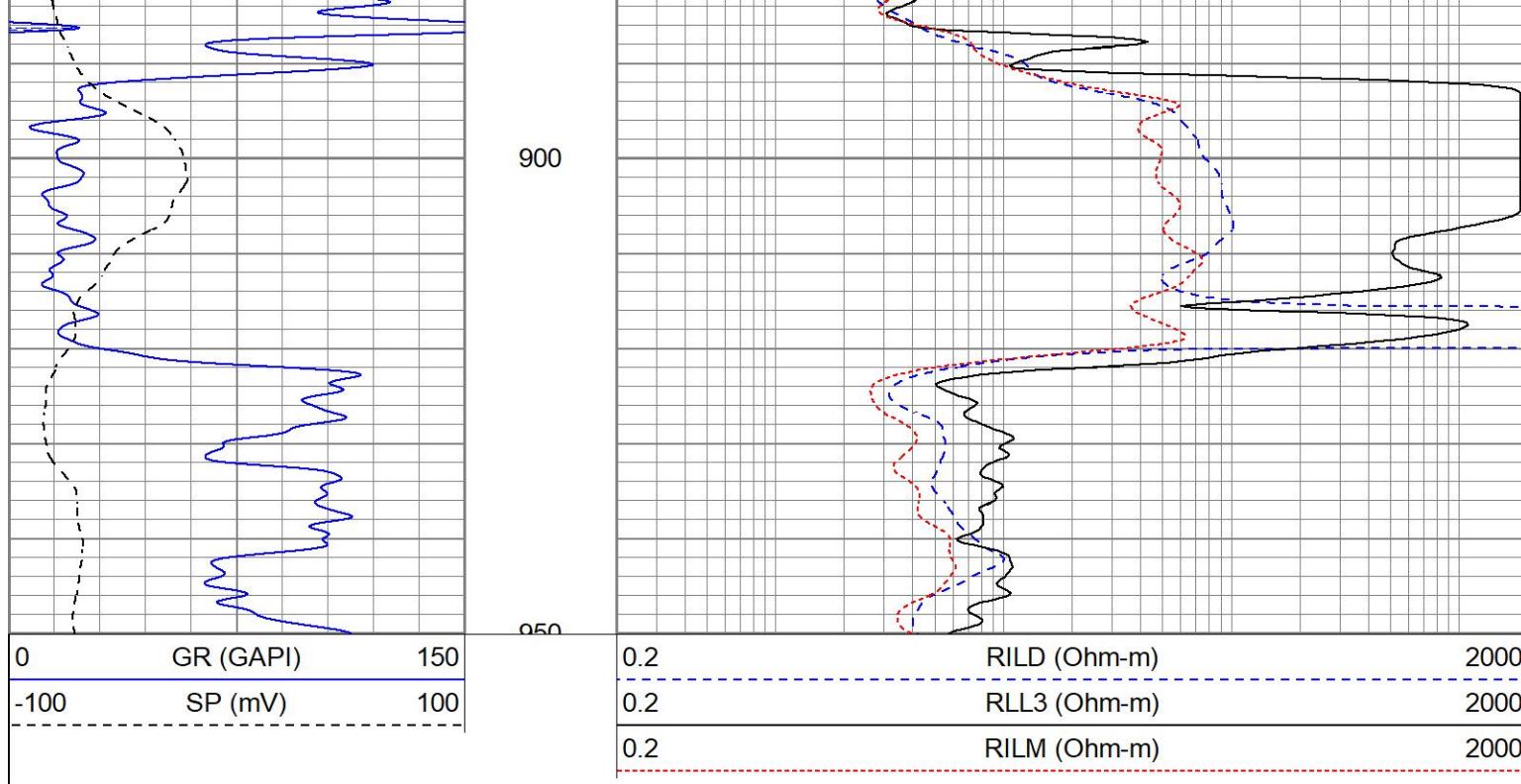


MAIN PASS

Database File pebitter#2oh.db
 Dataset Pathname pass4
 Presentation Format kdil
 Dataset Creation Sun Apr 30 06:06:26 2023
 Charted by Depth in Feet scaled 1:240

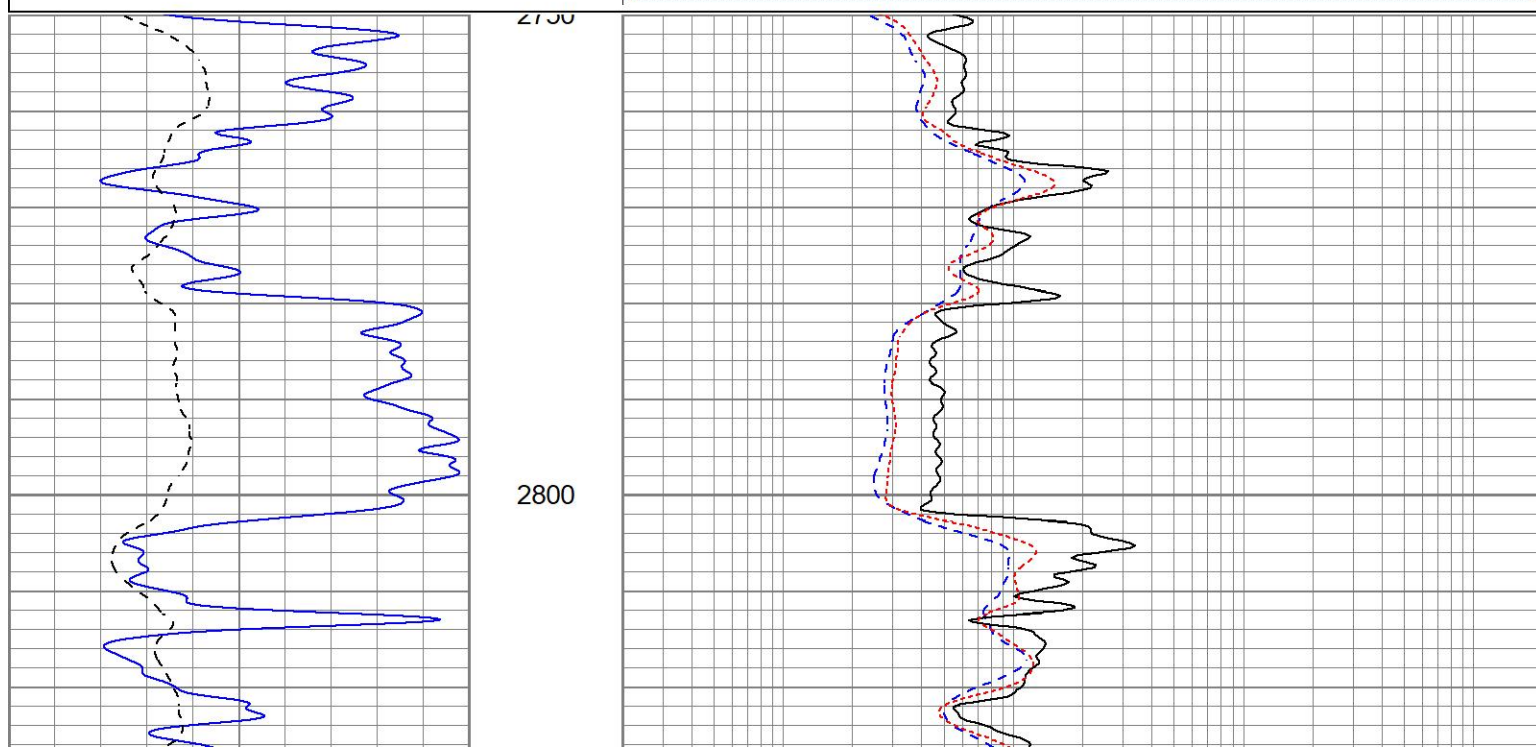
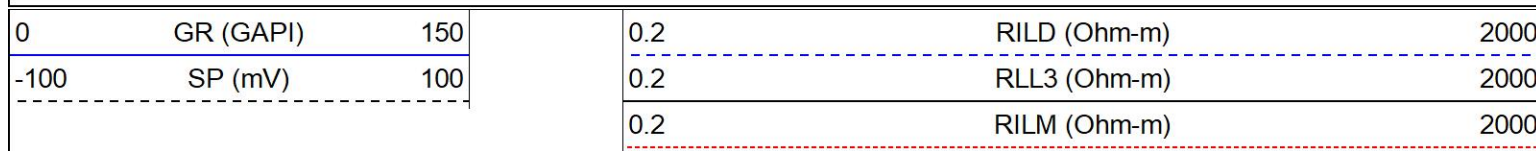
0	GR (GAPI)	150	0.2	RILD (Ohm-m)	2000
-100	SP (mV)	100	0.2	RLL3 (Ohm-m)	2000
			0.2	RILM (Ohm-m)	2000

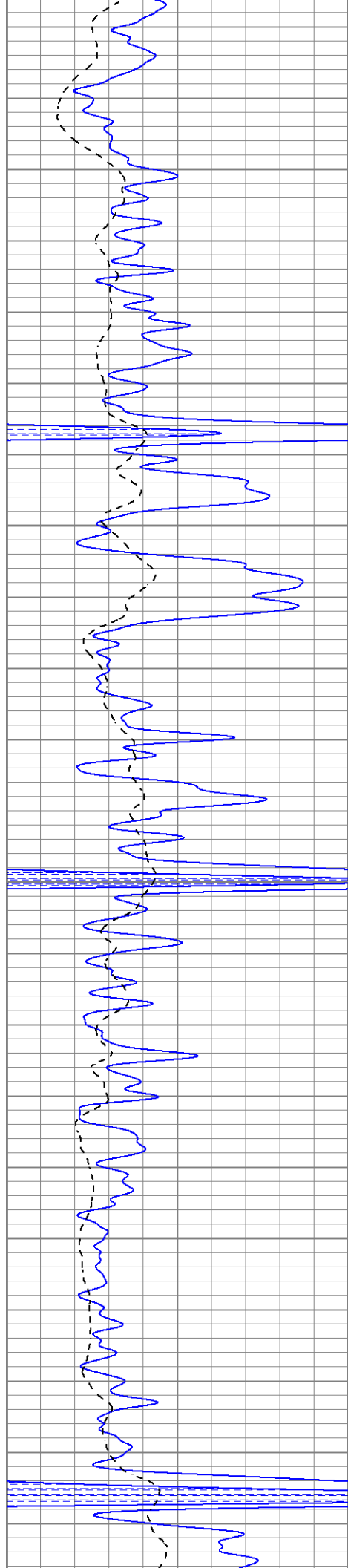




MAIN PASS

Database File pebitter#2oh.db
 Dataset Pathname pass4
 Presentation Format kdil
 Dataset Creation Sun Apr 30 06:06:26 2023
 Charted by Depth in Feet scaled 1:240



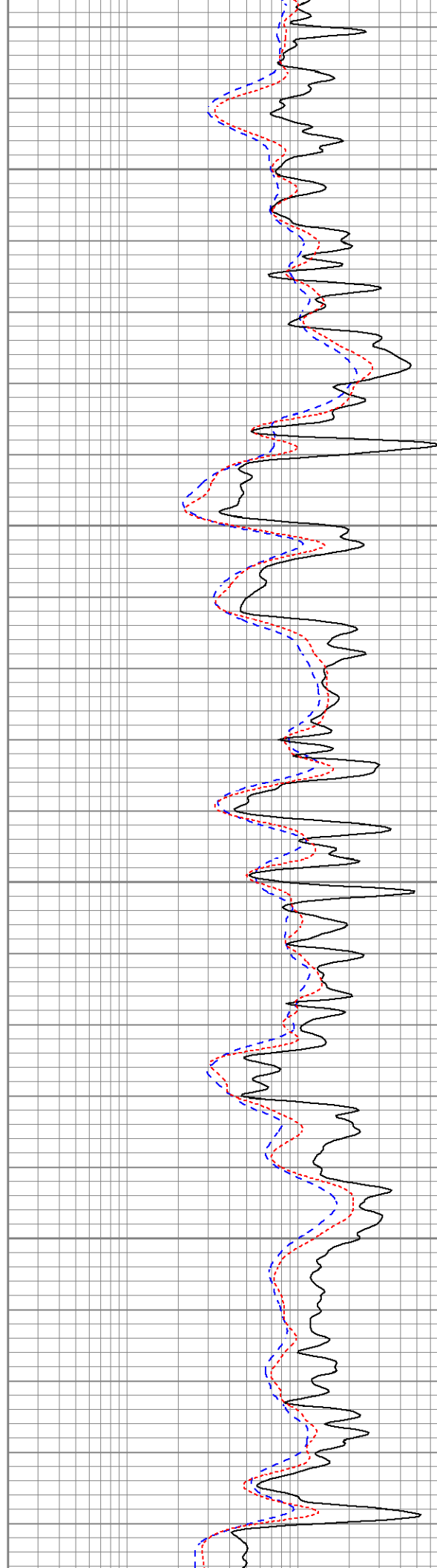


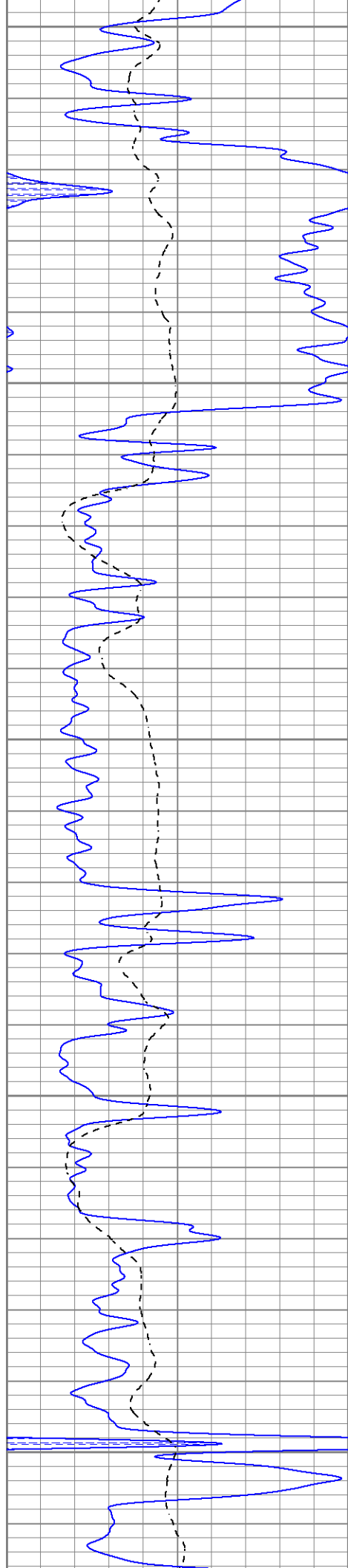
2850

2900

2950

3000





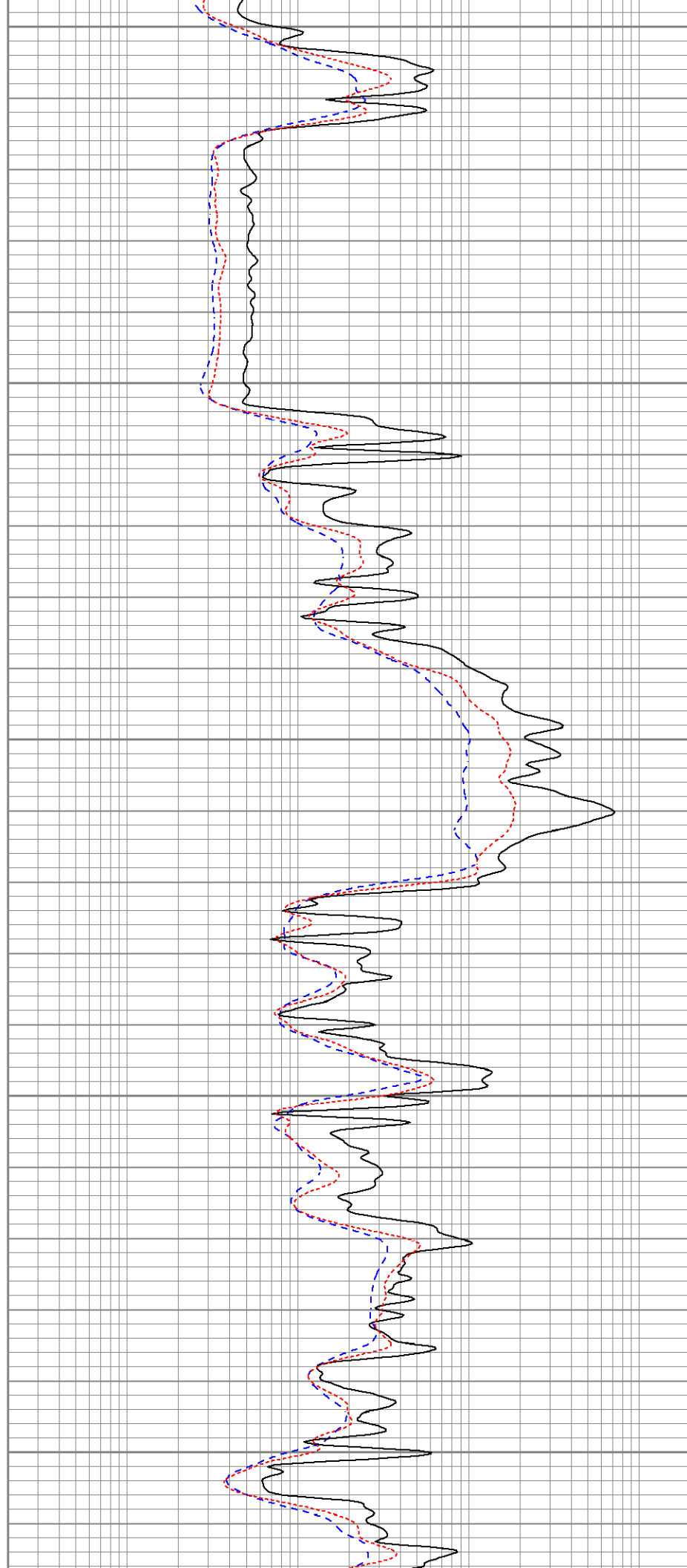
3050

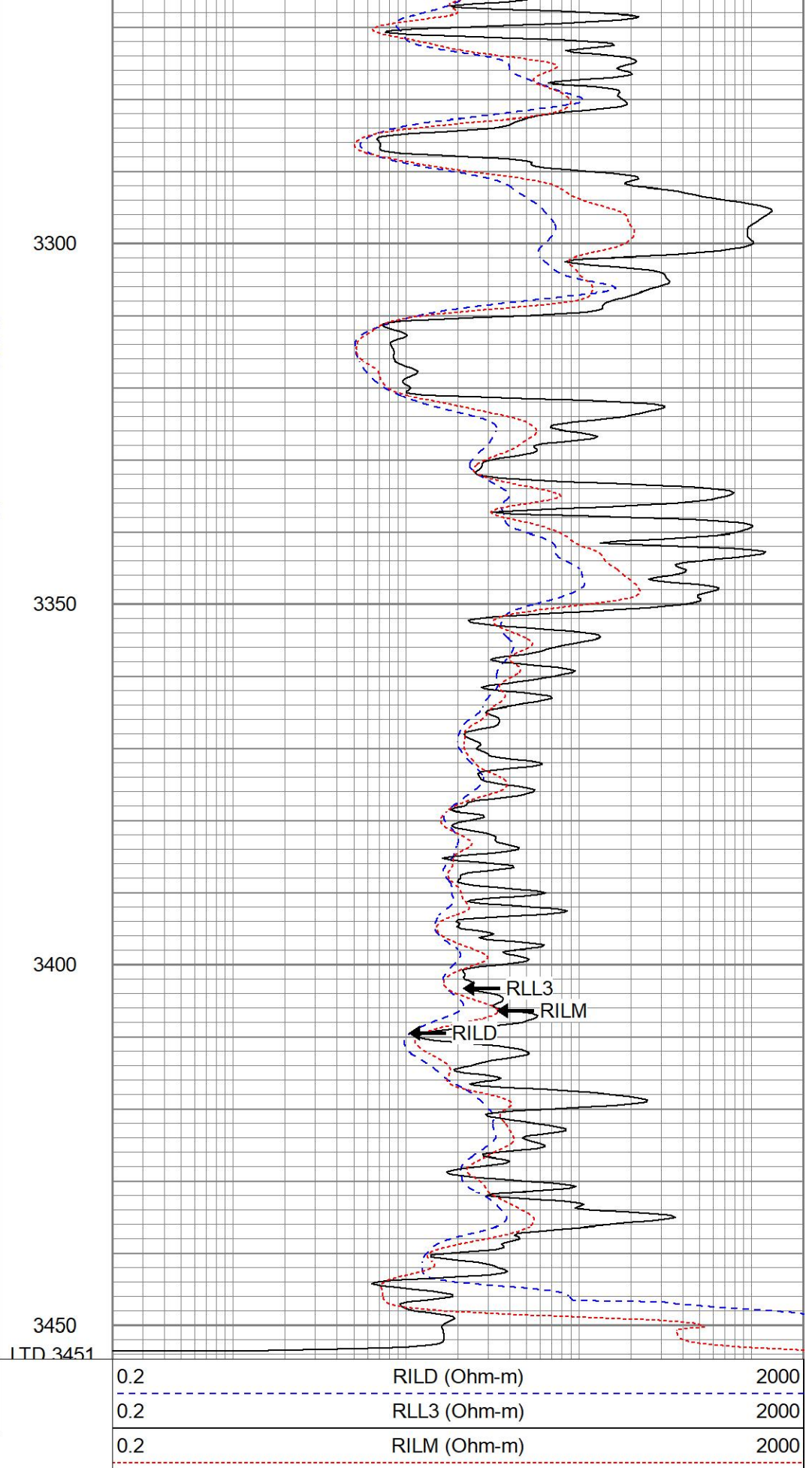
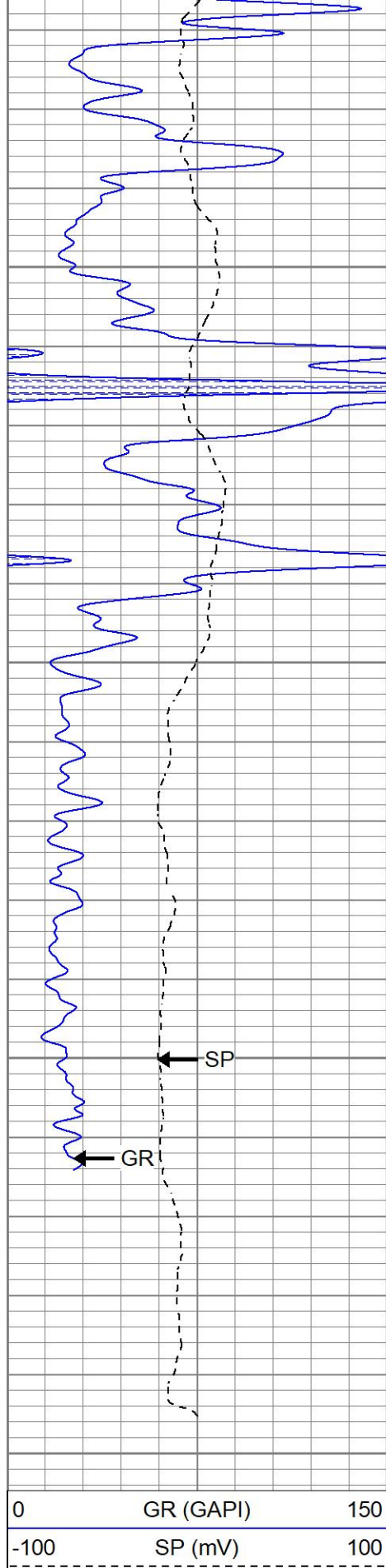
3100

3150

3200

3250





REPEAT SECTION

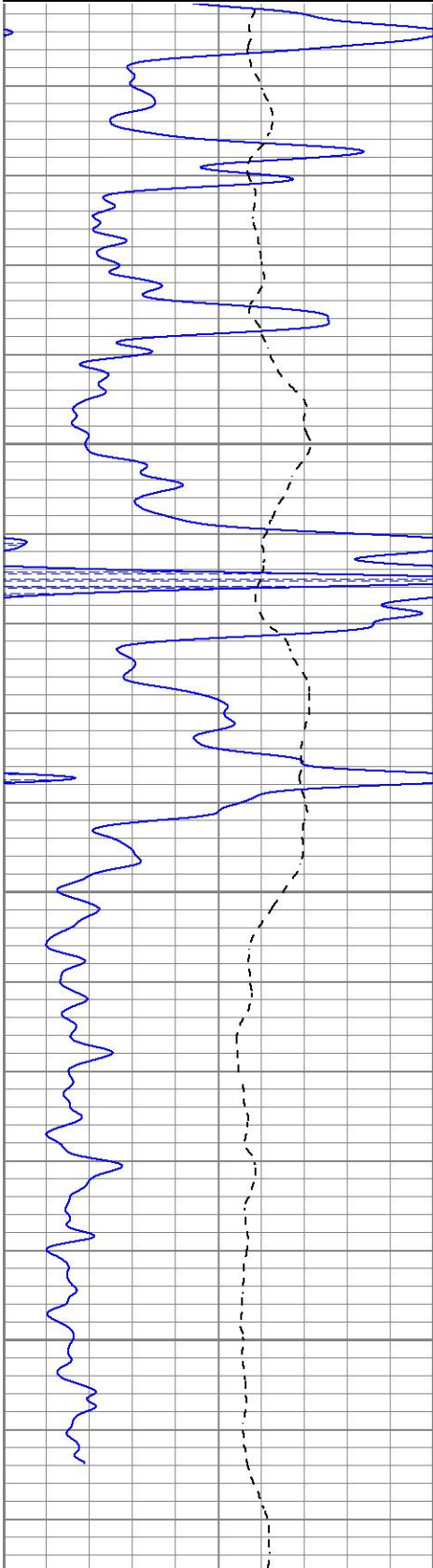


RELAY SECTION

Database File pebitter#2oh.db
Dataset Pathname pass3
Presentation Format kdil
Dataset Creation Sun Apr 30 05:57:10 2023
Charted by Depth in Feet scaled 1:240

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

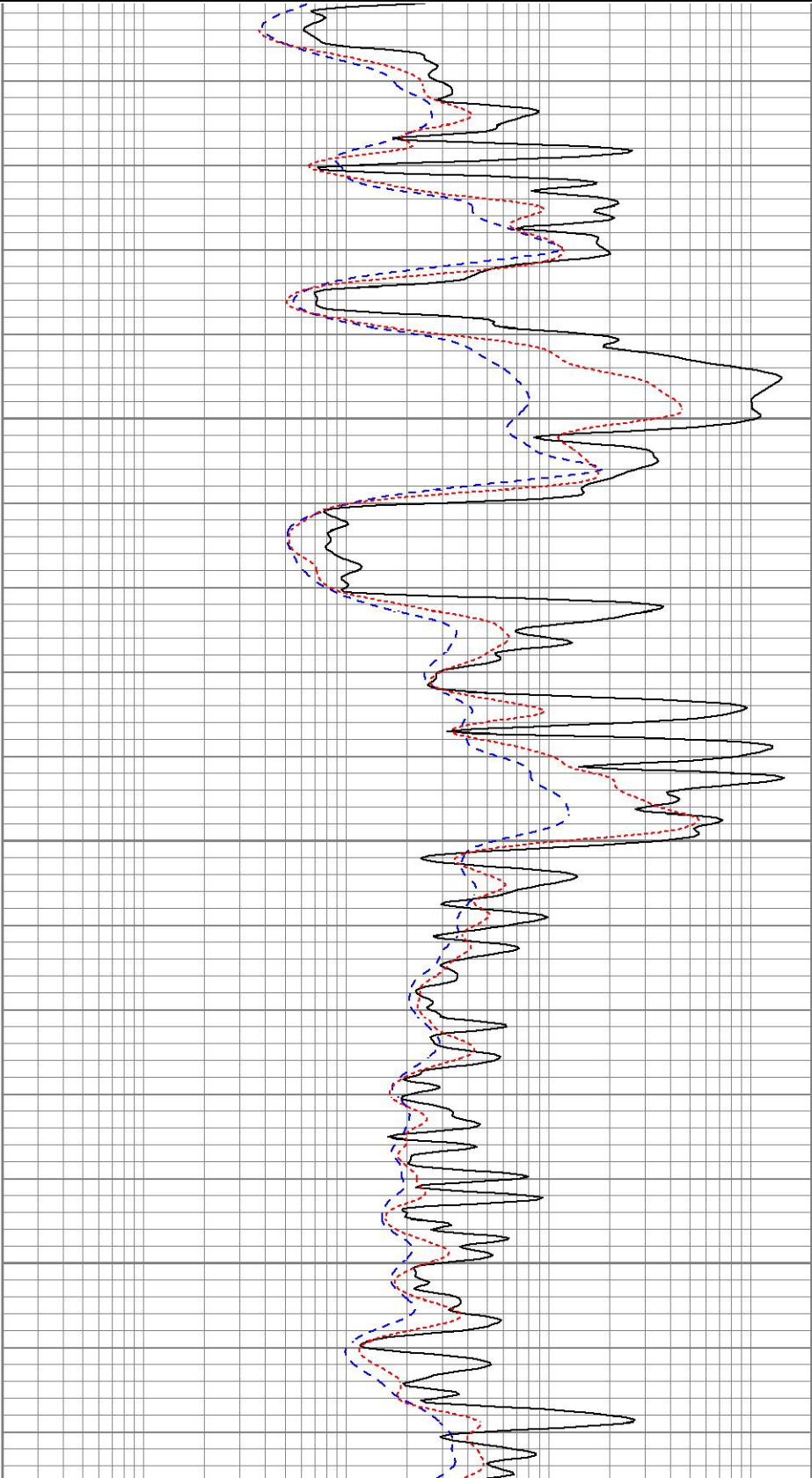
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000

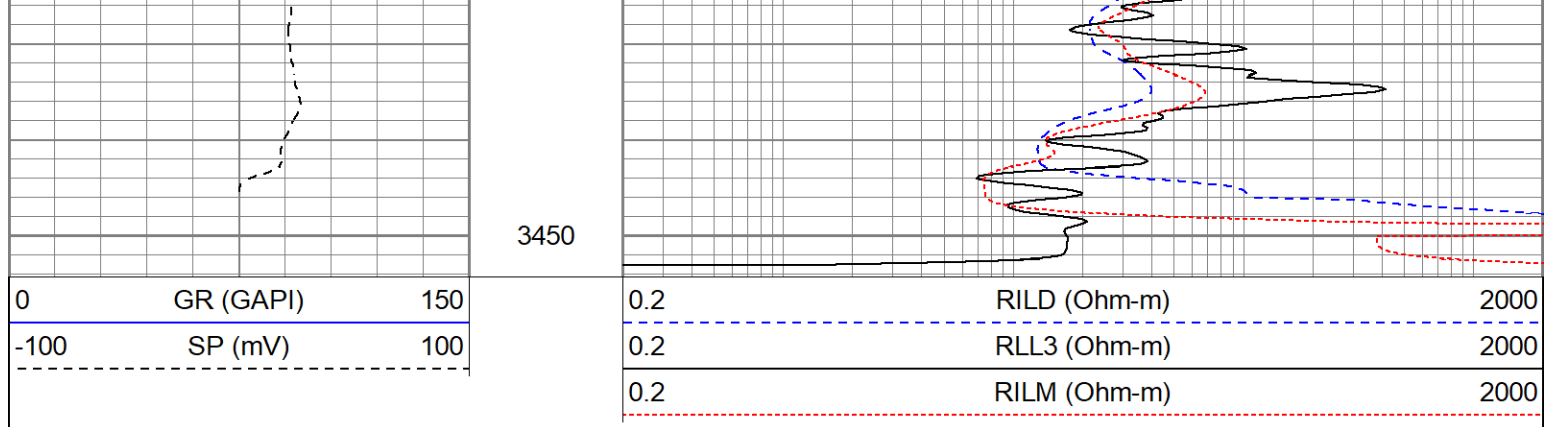


3300

3350

3400





Calibration Report

Database File	pebitter#2oh.db
Dataset Pathname	pass3
Dataset Creation	Sun Apr 30 05:57:10 2023

Dual Induction Calibration Report

Serial-Model:	1842-ADM
Surface Cal Performed:	Mon Sep 20 22:00:42 2021
Downhole Cal Performed:	Mon Sep 20 22:00:24 2021
After Survey Verification Performed:	Mon Sep 20 22:05:52 2021

Surface Calibration

Readings				References			Results	
Loop:	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

Readings				References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.219	349.905	mmho/m	-0.343	349.810	mmho/m	1.000	-3.124
Medium	-0.118	399.722	mmho/m	-0.226	399.745	mmho/m	1.000	-3.108
Shallow	2.536	0.025	V	500.000	2.000	Ohm-m	180.330	-1.504

After Survey Verification

Readings				Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.219	349.905	mmho/m	1.000	-3.124
Medium	0.000	0.000	mmho/m	-0.118	399.722	mmho/m	1.000	-3.108
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

Meter 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

	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 Jun 15 11:53:49 2022

Calibrator Value:	1.0	GAPI
-------------------	-----	------

Background Reading:	0.0	cps
---------------------	-----	-----

Calibrator Reading:	1.0	cps
---------------------	-----	-----

Sensitivity:	1.1000	GAPI/cps
--------------	--------	----------