



DUAL INDUCTION LOG

Company	EDISON OPERATING COMPANY, LLC.		
Well	KUHN #1-17		
Field	FT. ZARAH NORTH		
County	BARTON		
State	KANSAS		
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Well	KUHN #1-17		
Field	FT. ZARAH NORTH		
County	BARTON		
State	KANSAS		
Location:	API # : 15-009-26277-0000		Other Services CDL/CNL/PE MEL/SON
Permanent Datum	SEC 17 TWP 19S RGE 12W		Elevation
Log Measured From	GROUND LEVEL Elevation		K.B. 1884
Drilling Measured From	KELLY BUSHING 10' A.G.L		D.F. 1882
	KELLY BUSHING		G.L. 1874
Date	11/5/19		
Run Number	ONE		
Depth Driller	3575		
Depth Logger	3575		
Bottom Logged Interval	3573		
Top Log Interval	00		
Casing Driller	8 5/8" @ 392'		
Casing Logger	392'		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.4/50		
pH / Fluid Loss	10.5/14.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.30 @ 70F		
Rmf @ Meas. Temp	.22 @ 70F		
Rmc @ Meas. Temp	.36 @ 70F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.18 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	112F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	ADAM KENNEDY		

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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.

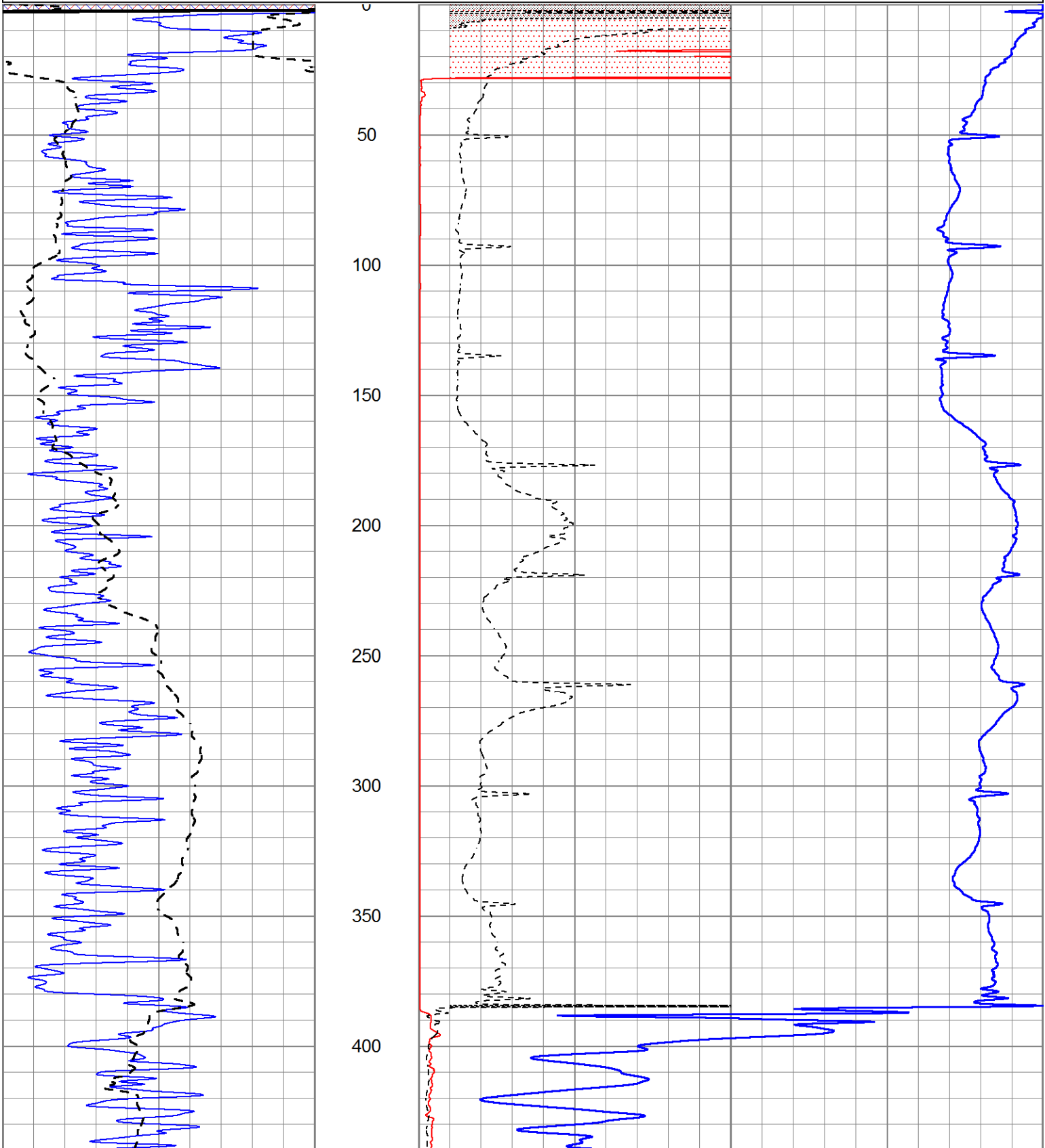
Comments

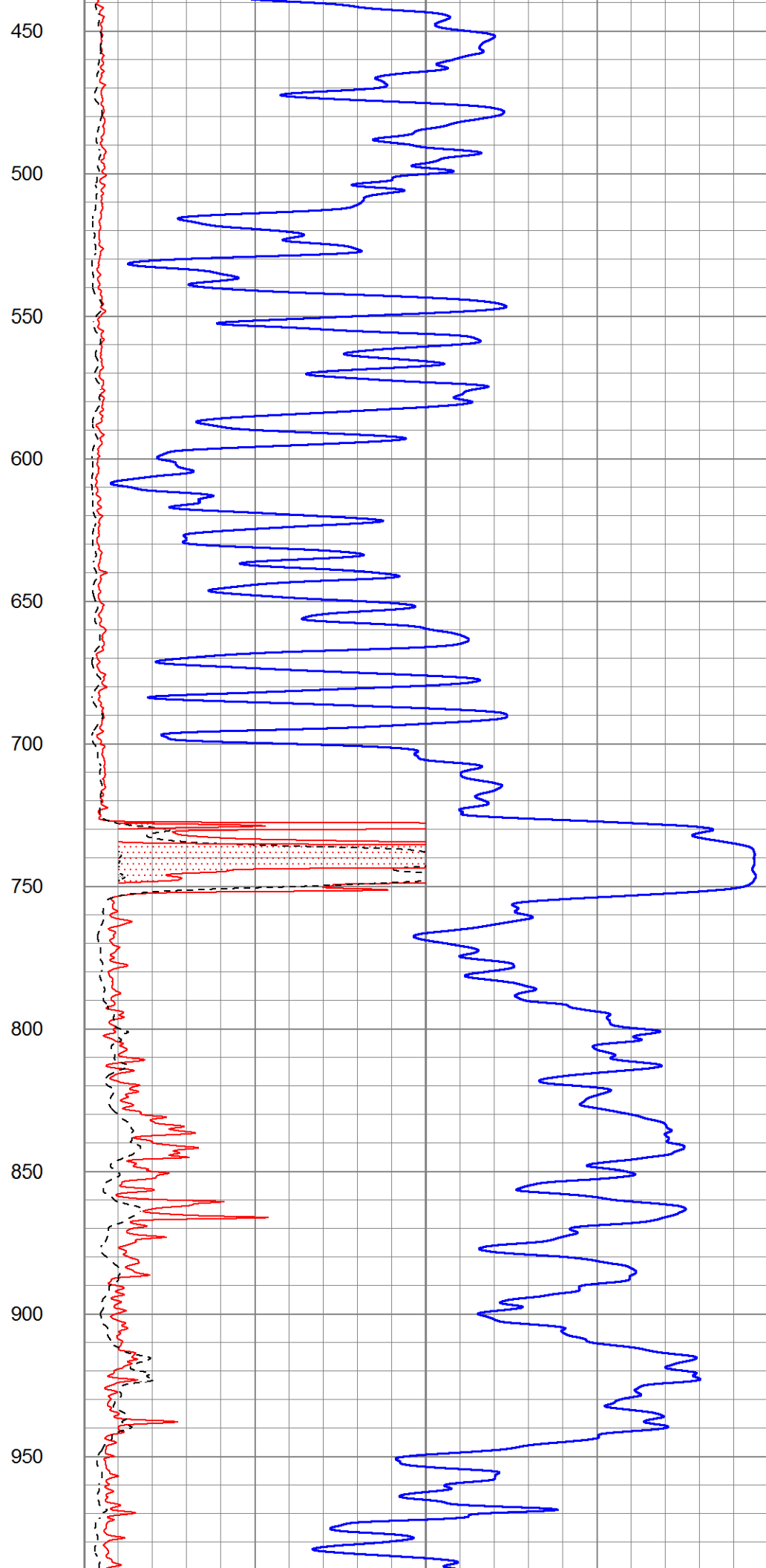
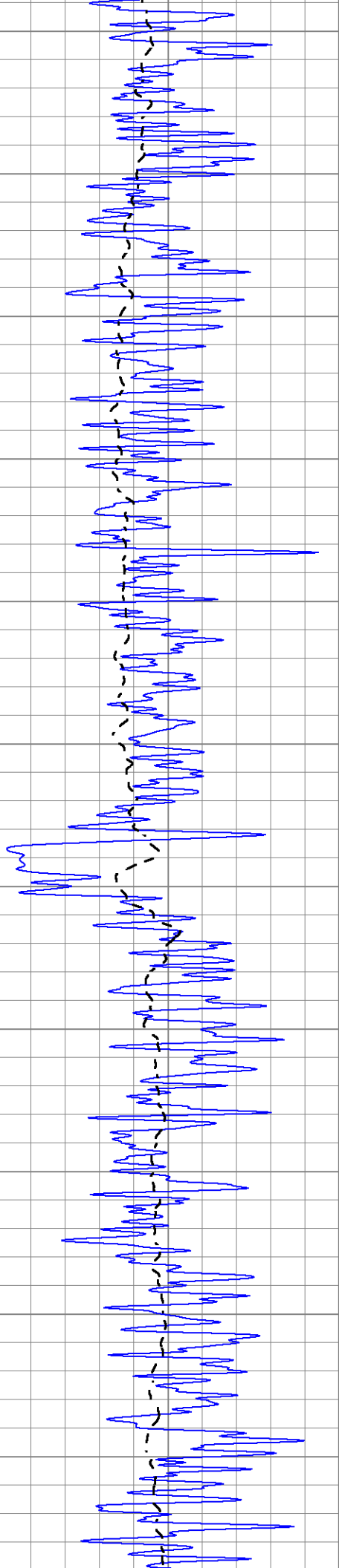
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
GREAT BEND, KS. - 2 NORTH ON HWY 156 - EAST INTO

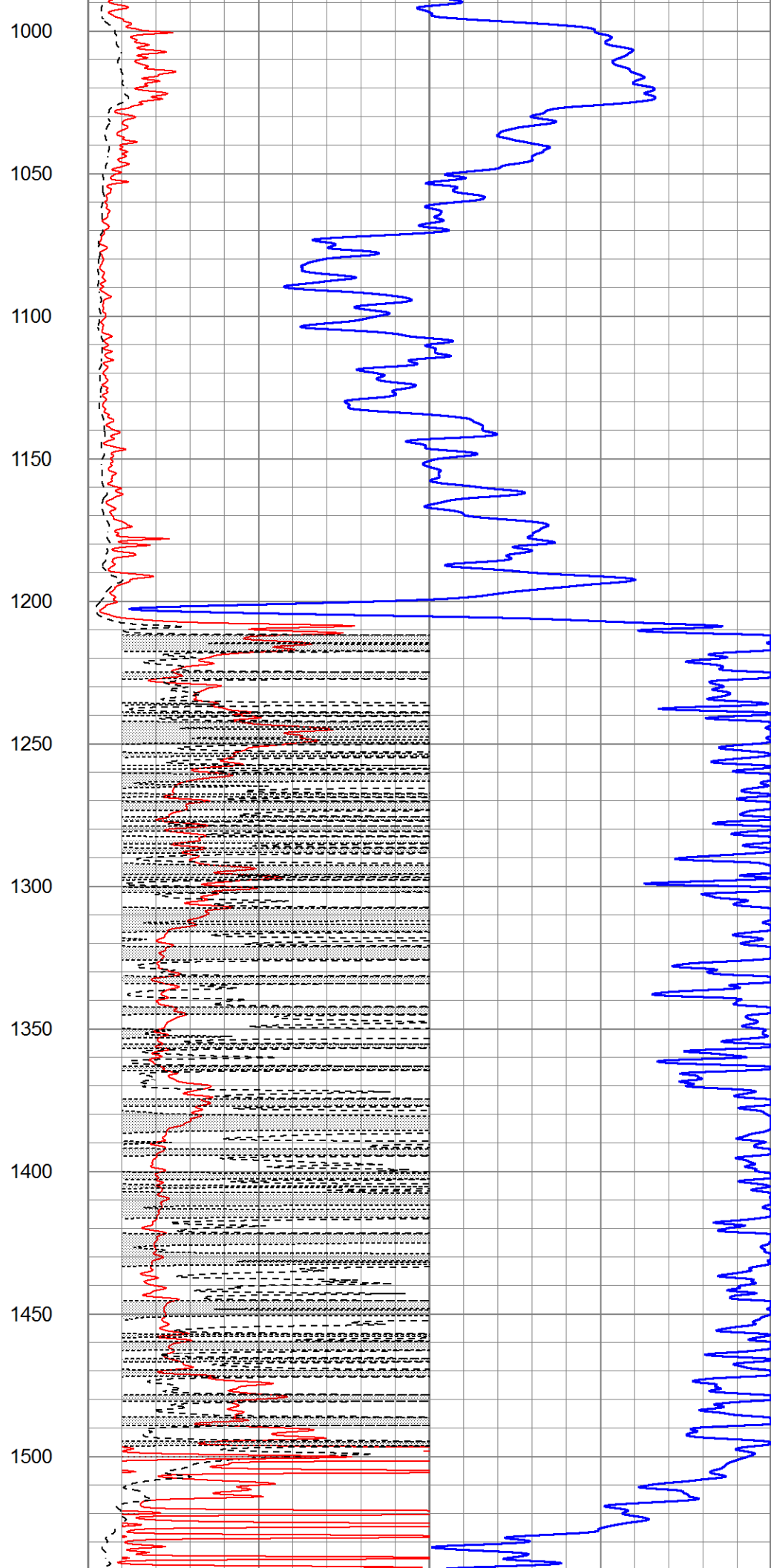
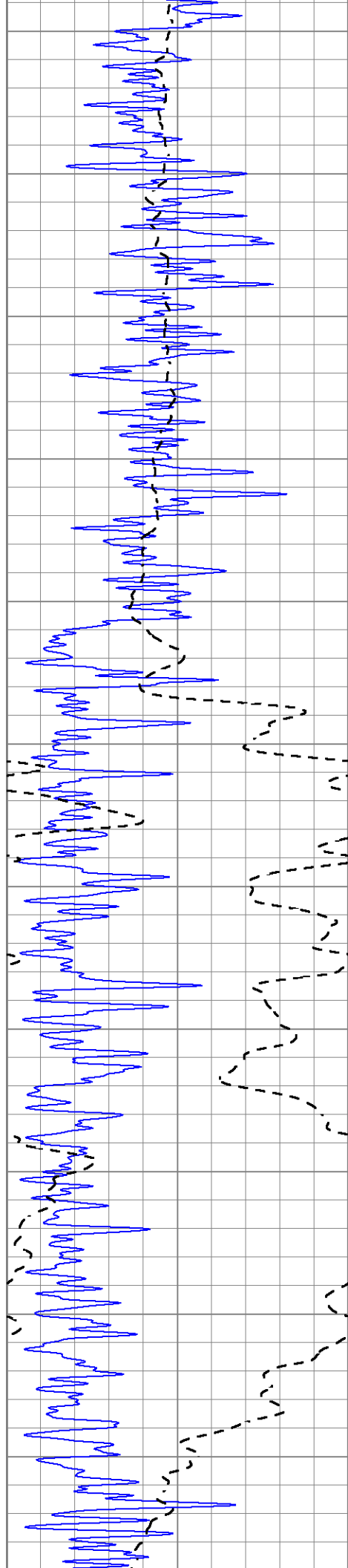


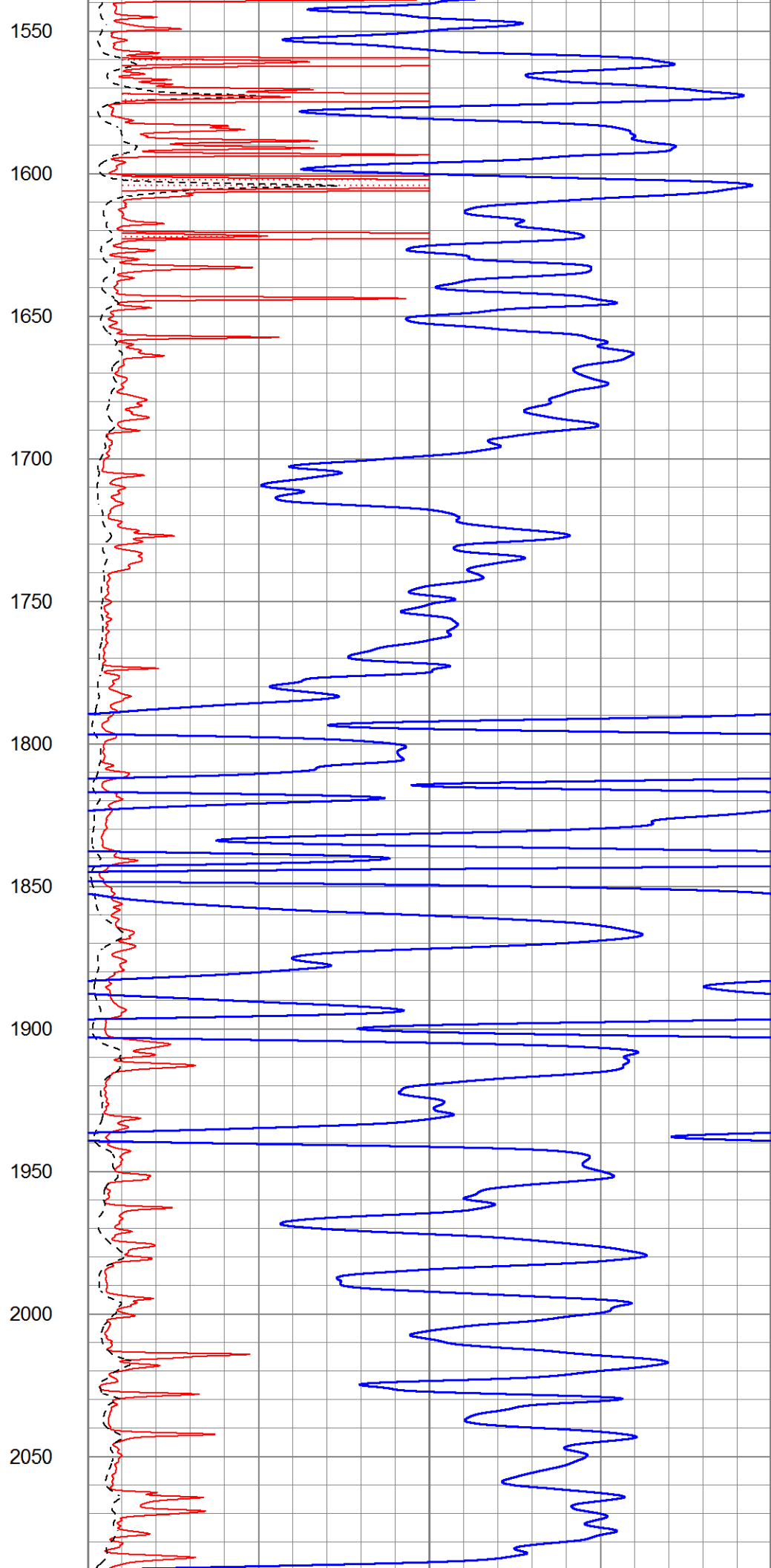
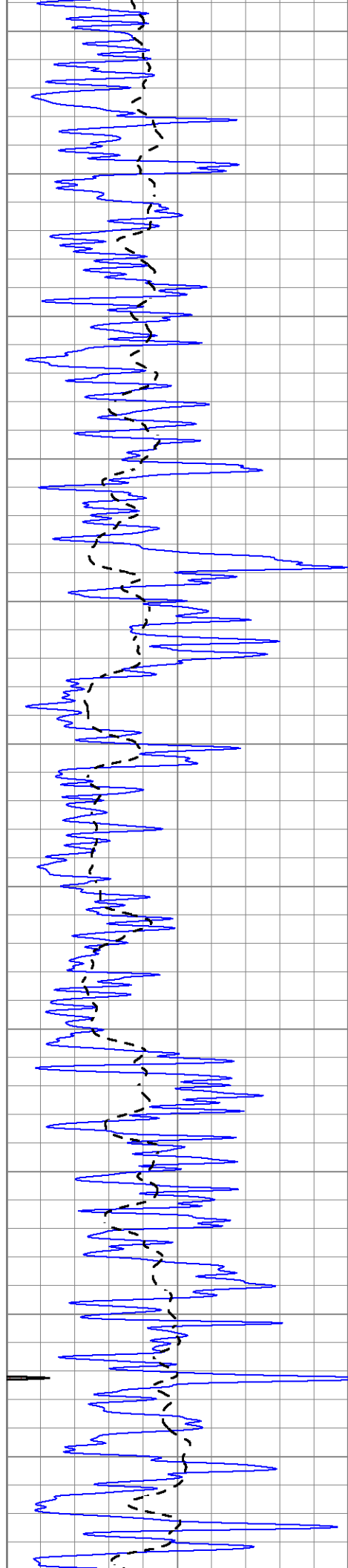
MAIN SECTION

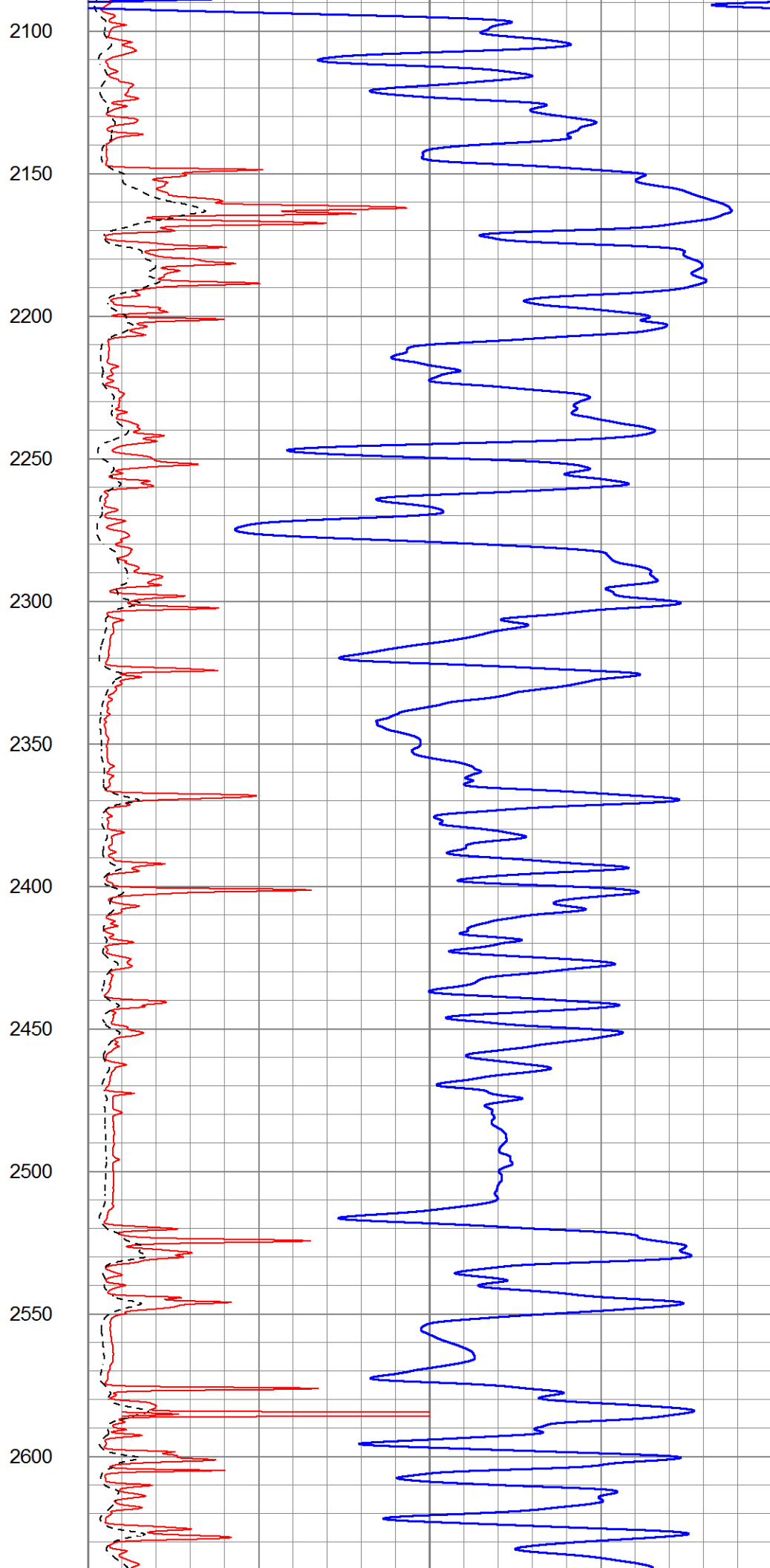
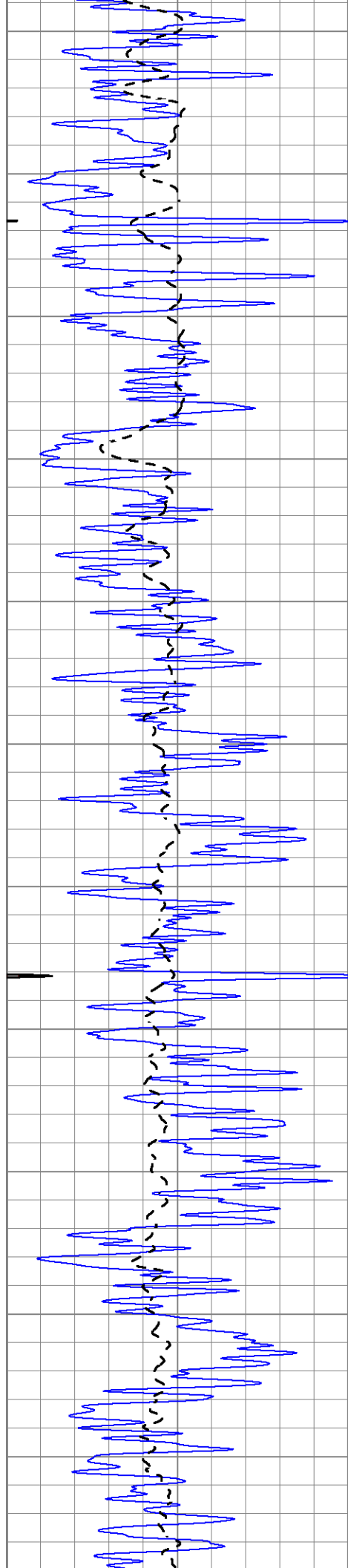
0	Gamma Ray (GAPI)	150	1000	CILD (mmho/m)	0
-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
-----			0	Deep Induction (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

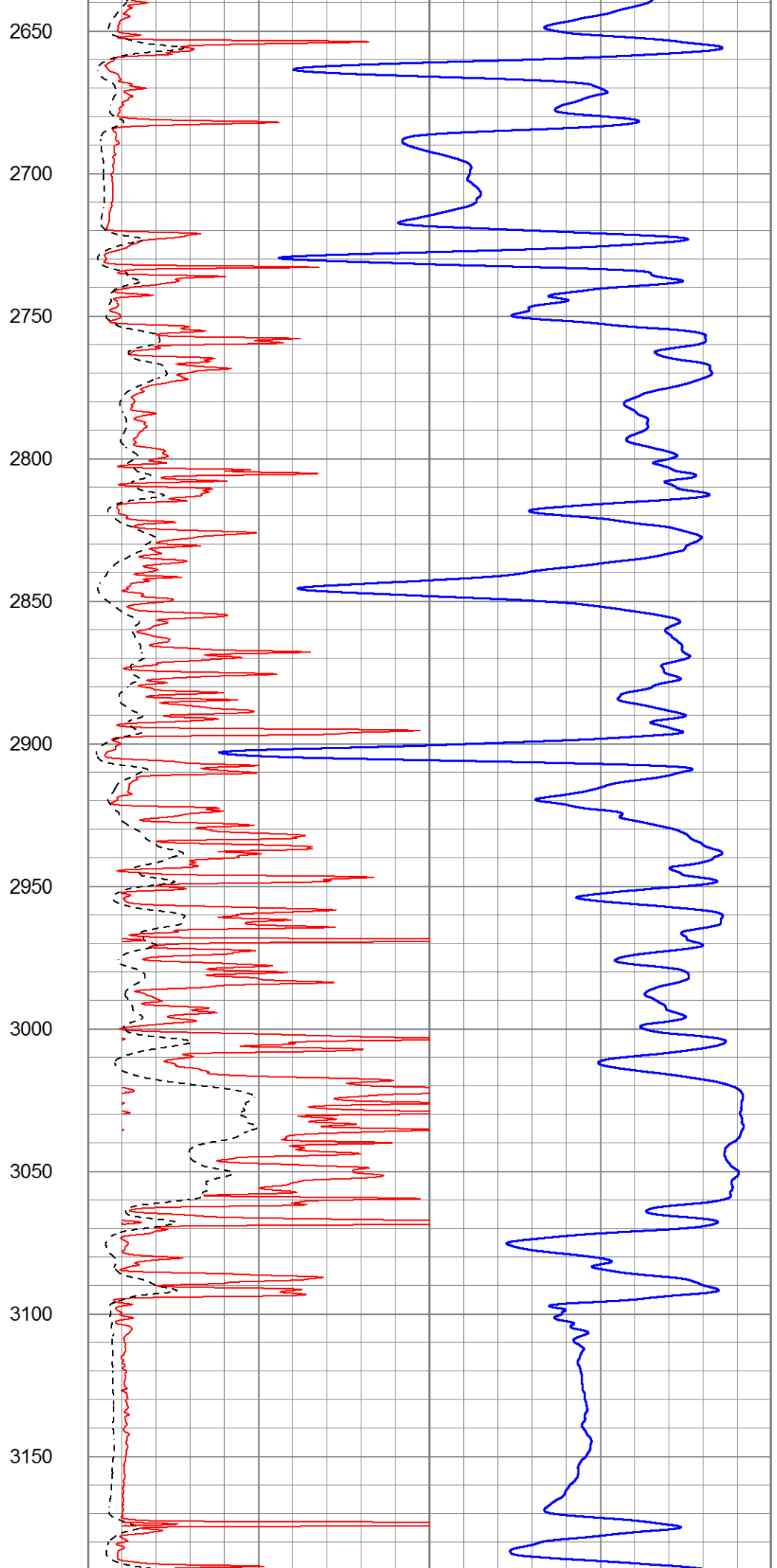
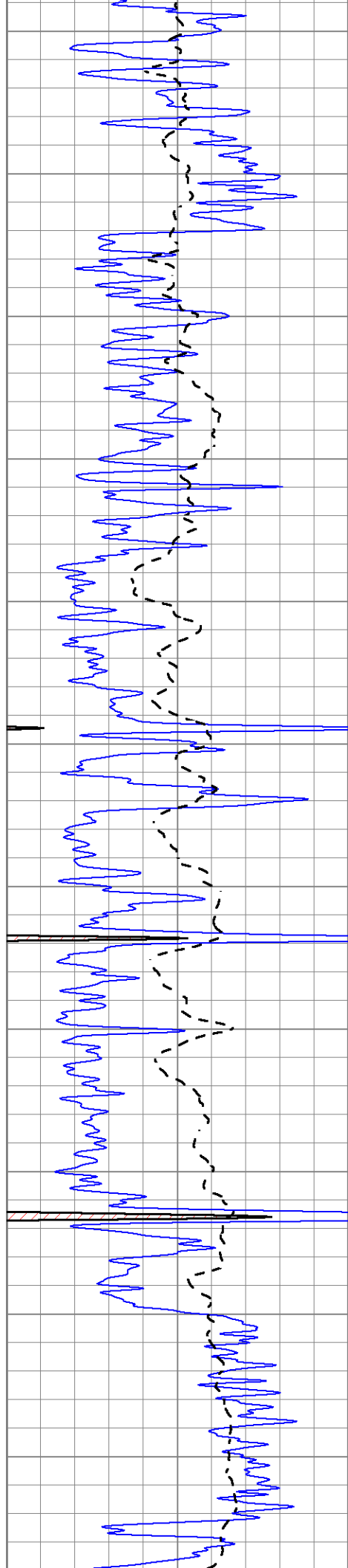


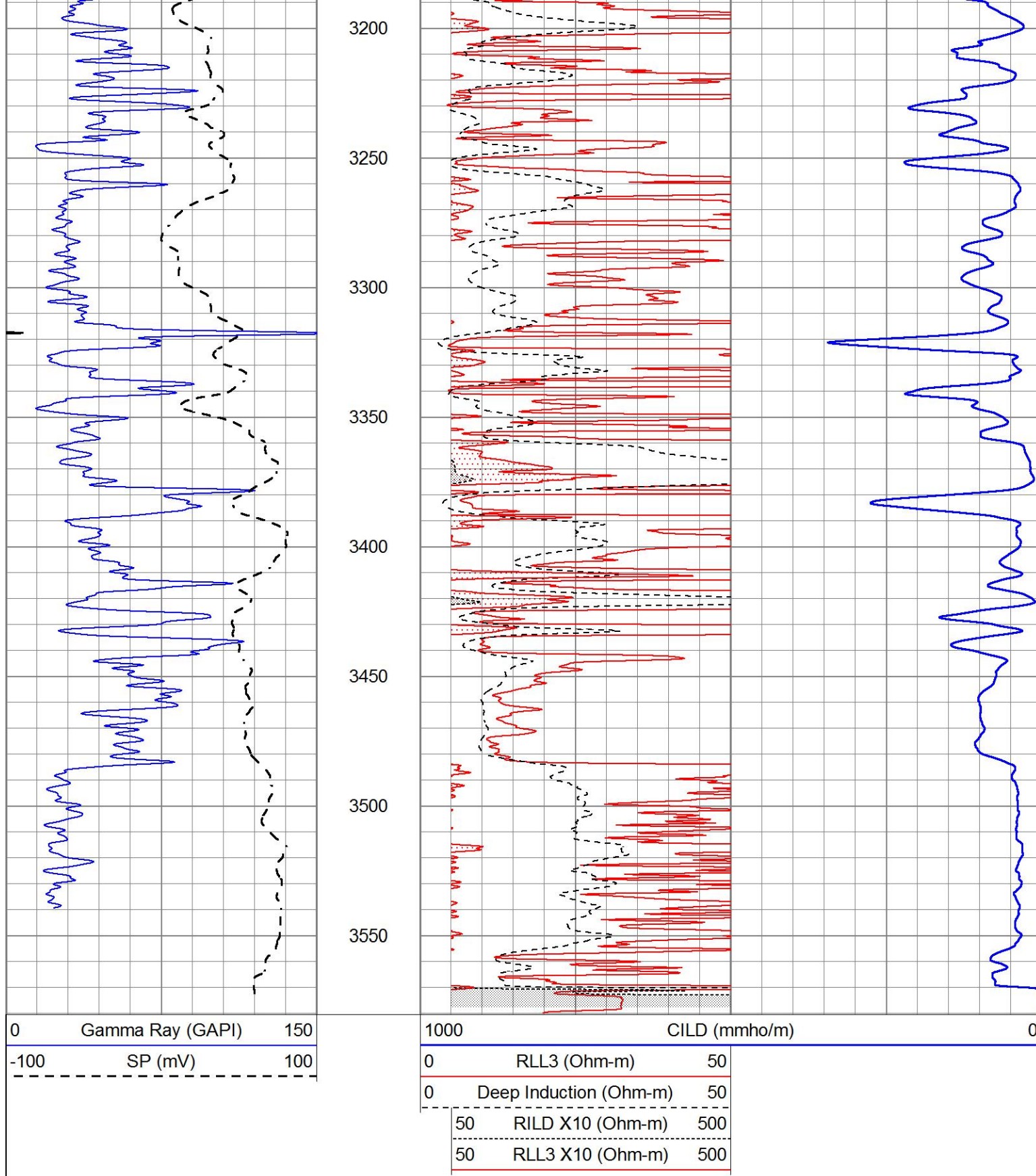






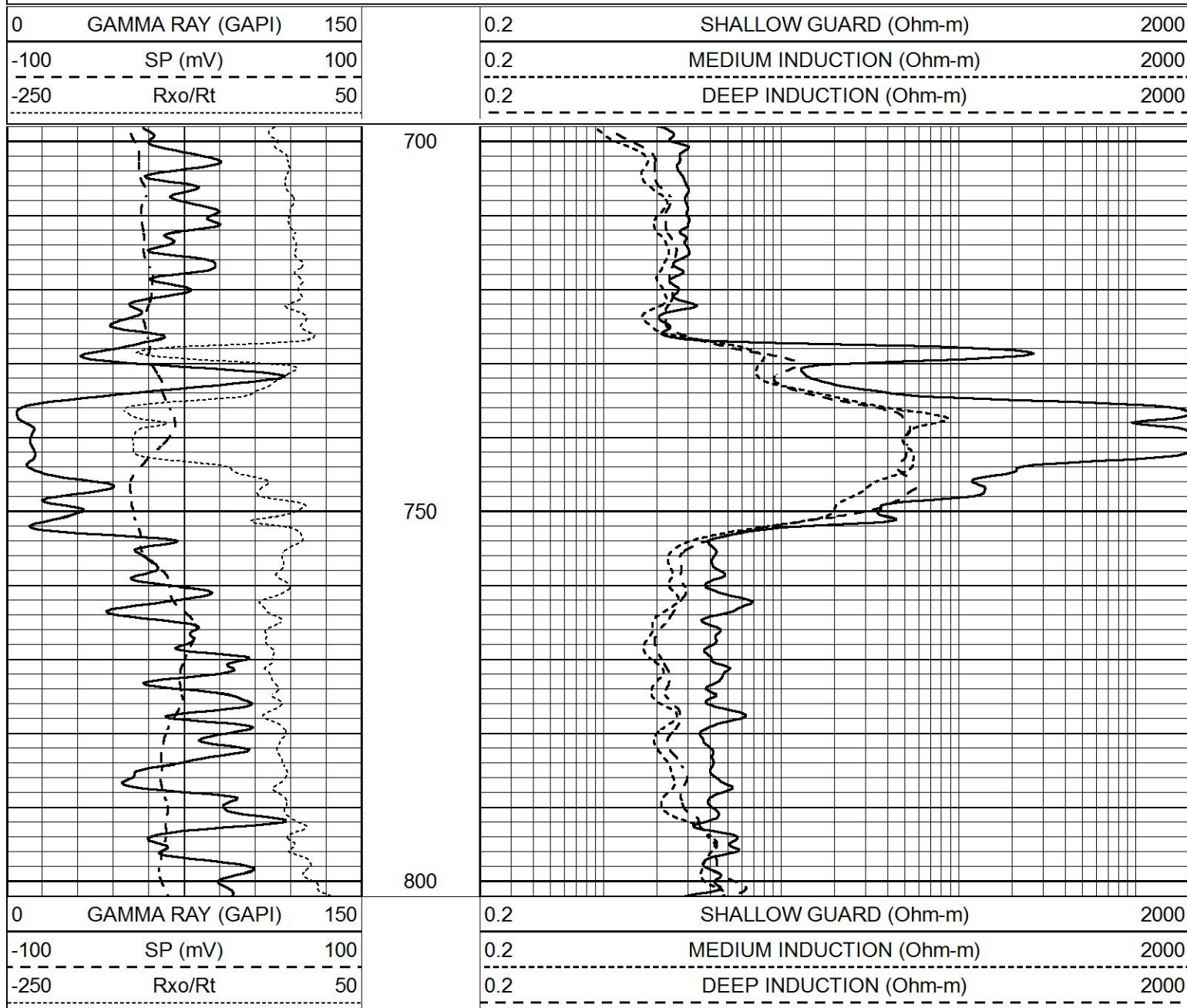






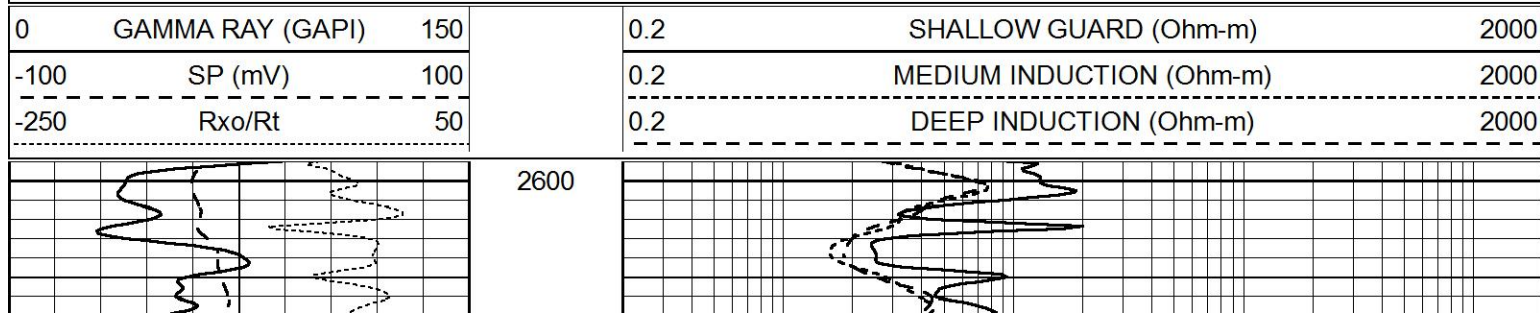
ANHYDRITE

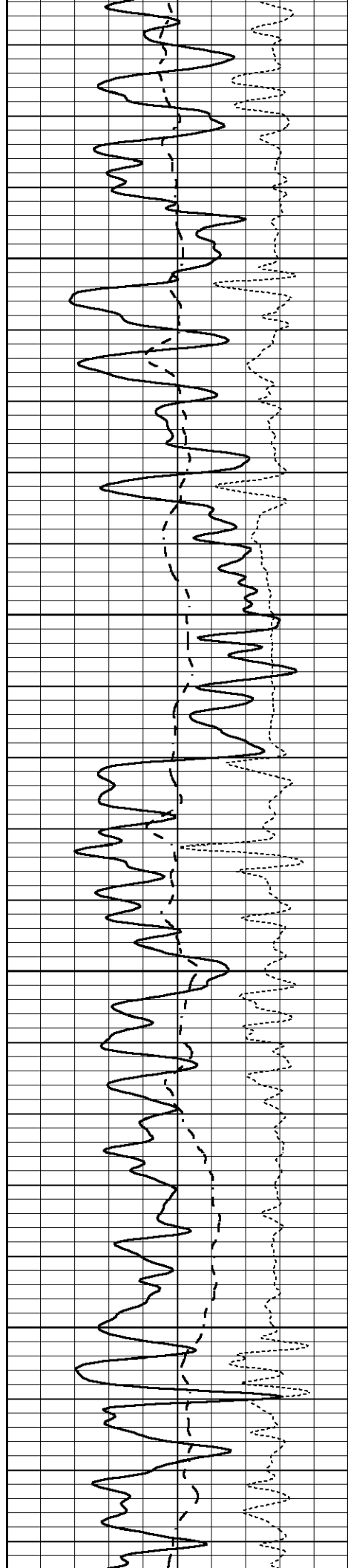
Database File 4429pe.db
 Dataset Pathname pass3.2
 Presentation Format _dil
 Dataset Creation Tue Nov 05 15:14:36 2019



MAIN SECTION

Database File 4429pe.db
 Dataset Pathname pass3.1
 Presentation Format _dil
 Dataset Creation Tue Nov 05 14:58:28 2019
 Charted by Depth in Feet scaled 1:240



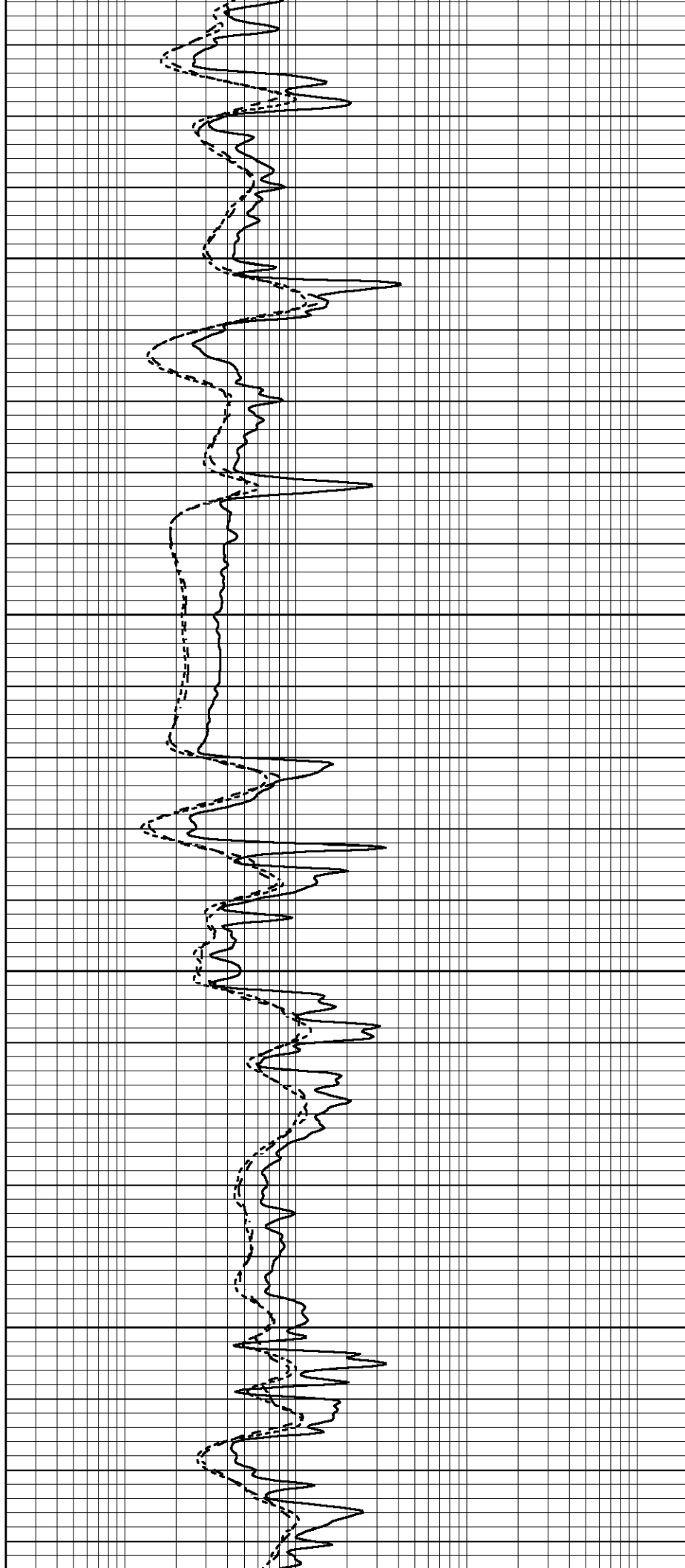


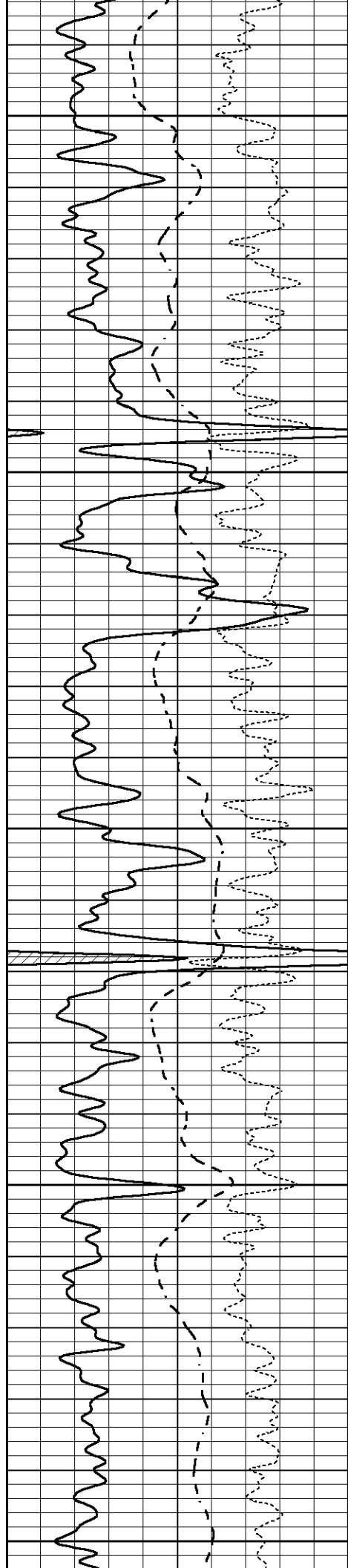
2650

2700

2750

2800





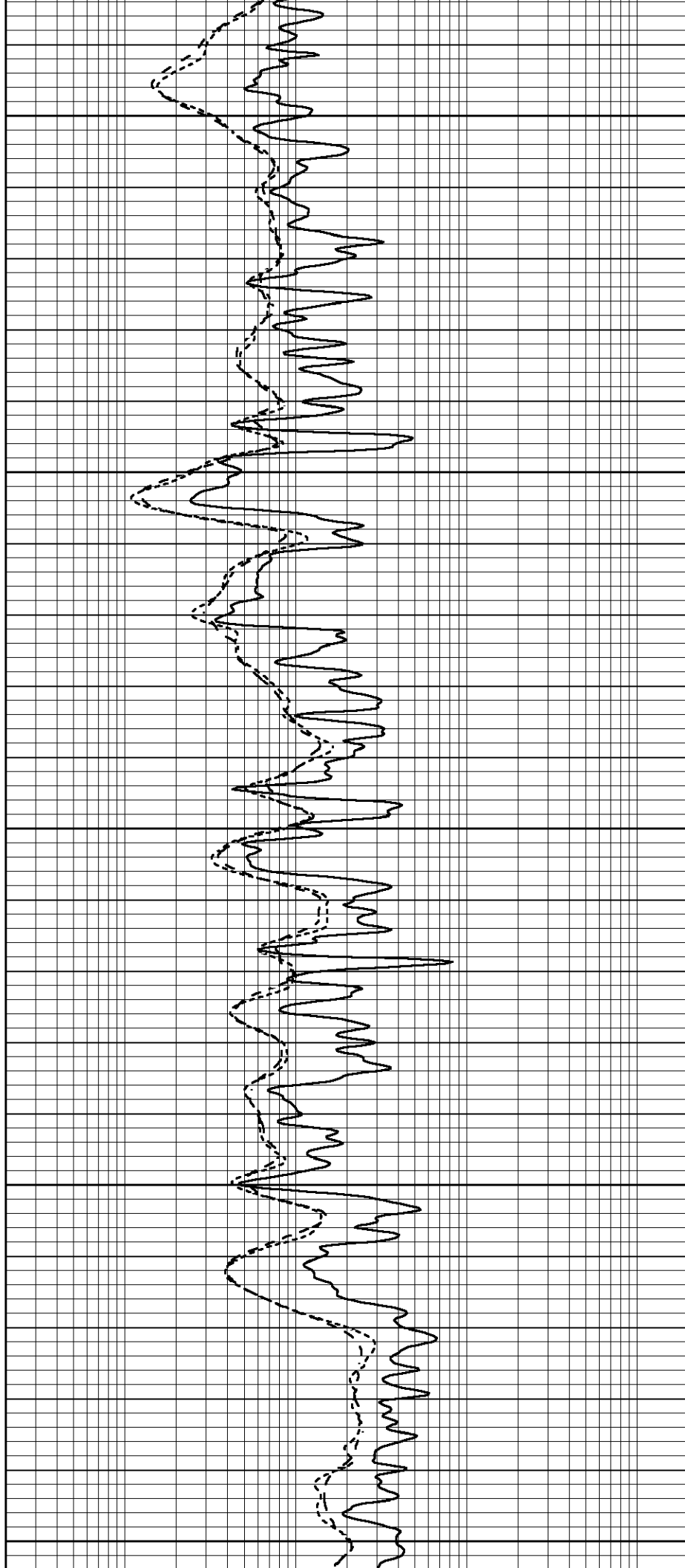
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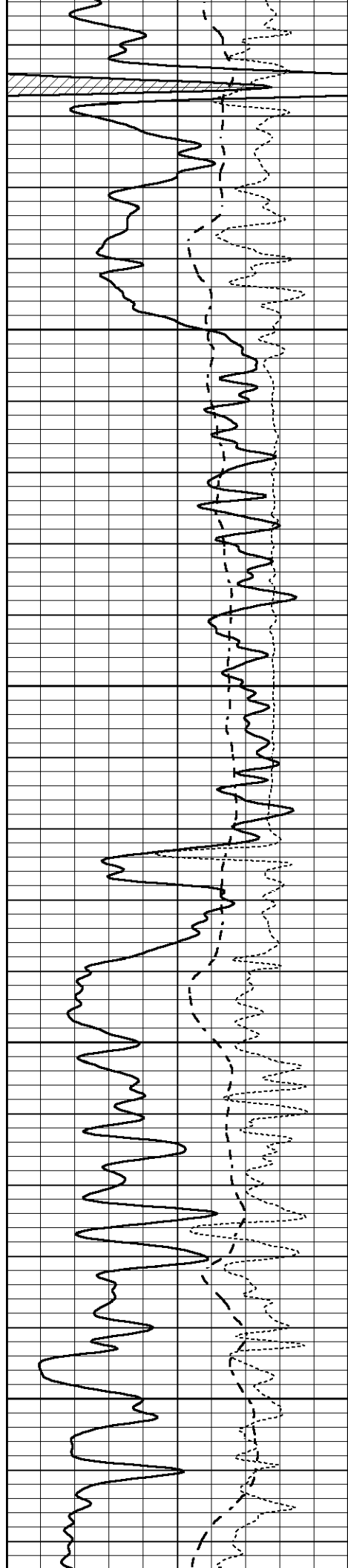
2900

2950

3000

3050



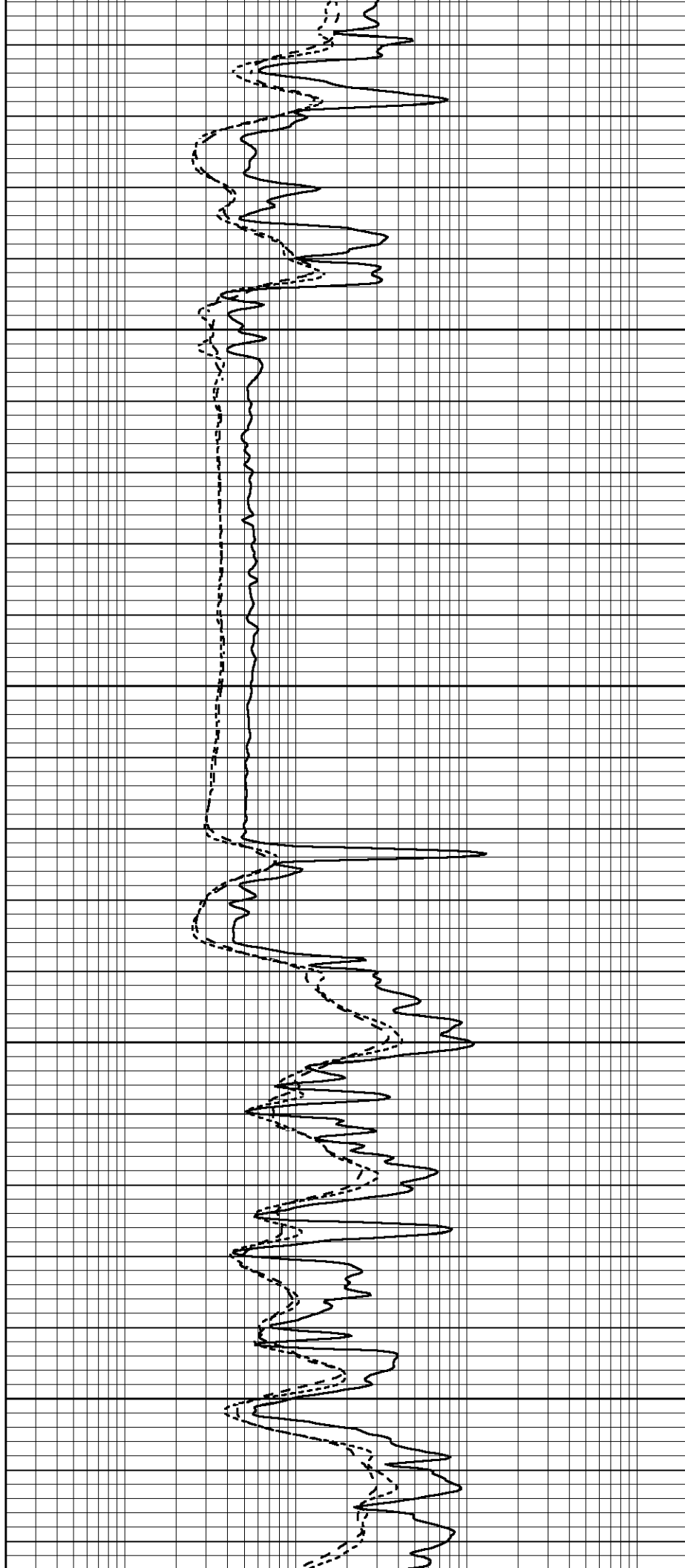


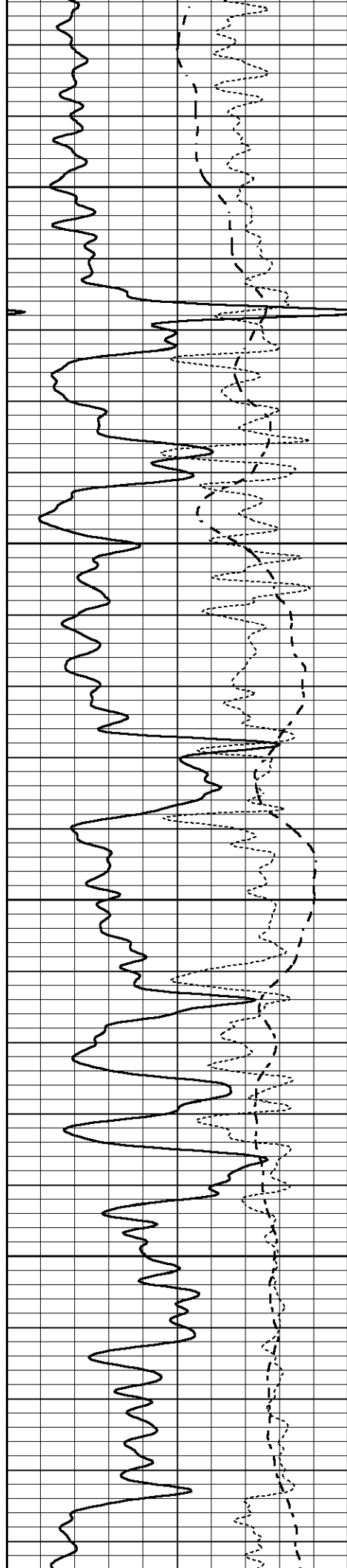
3100

3150

3200

3250



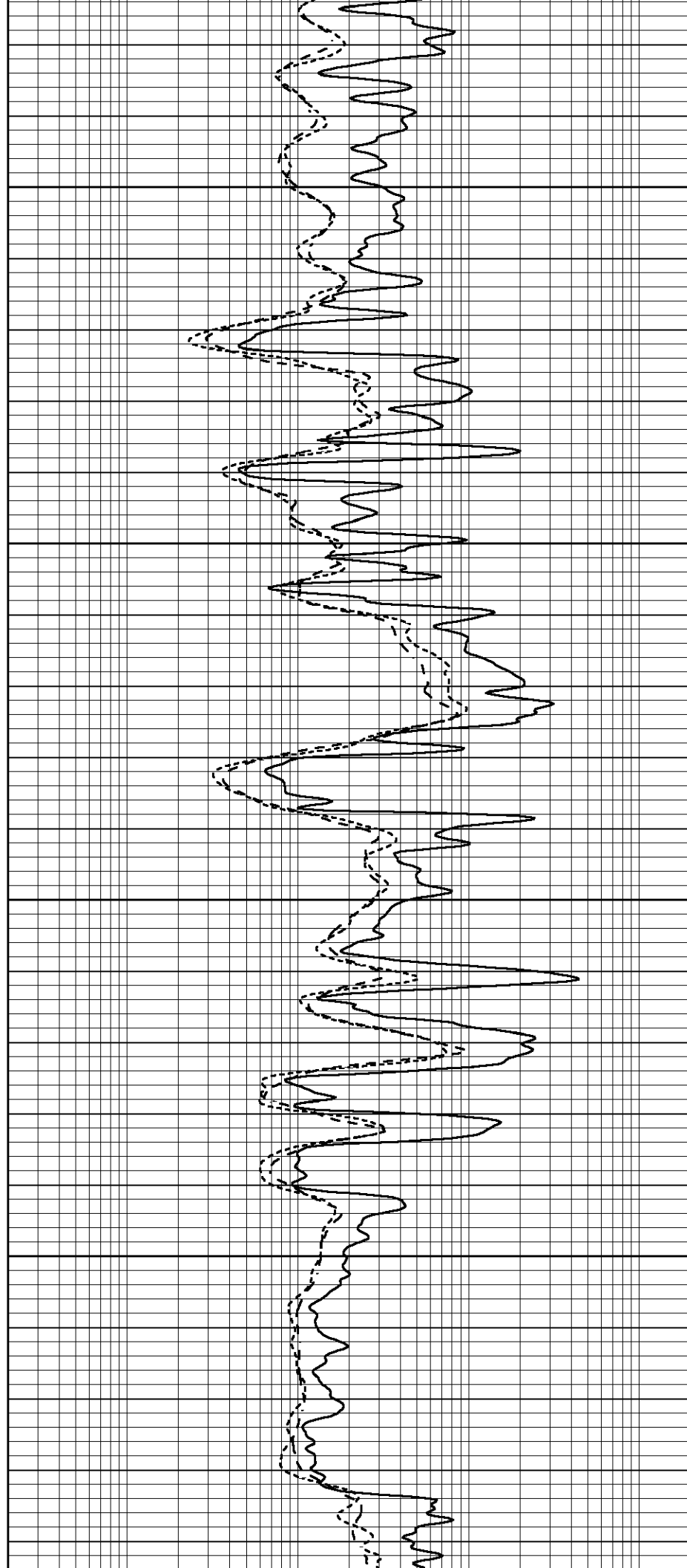


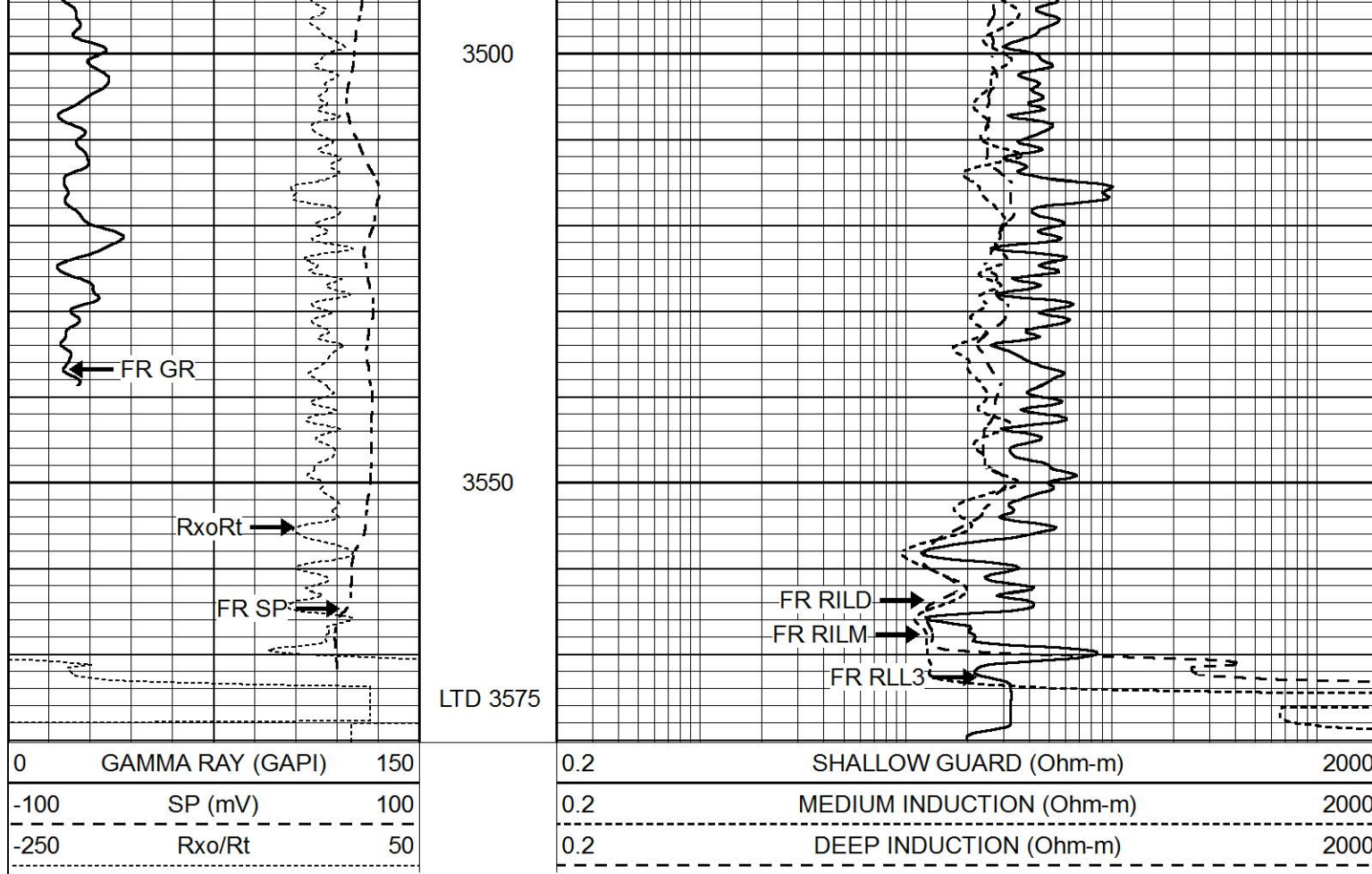
3300

3350

3400

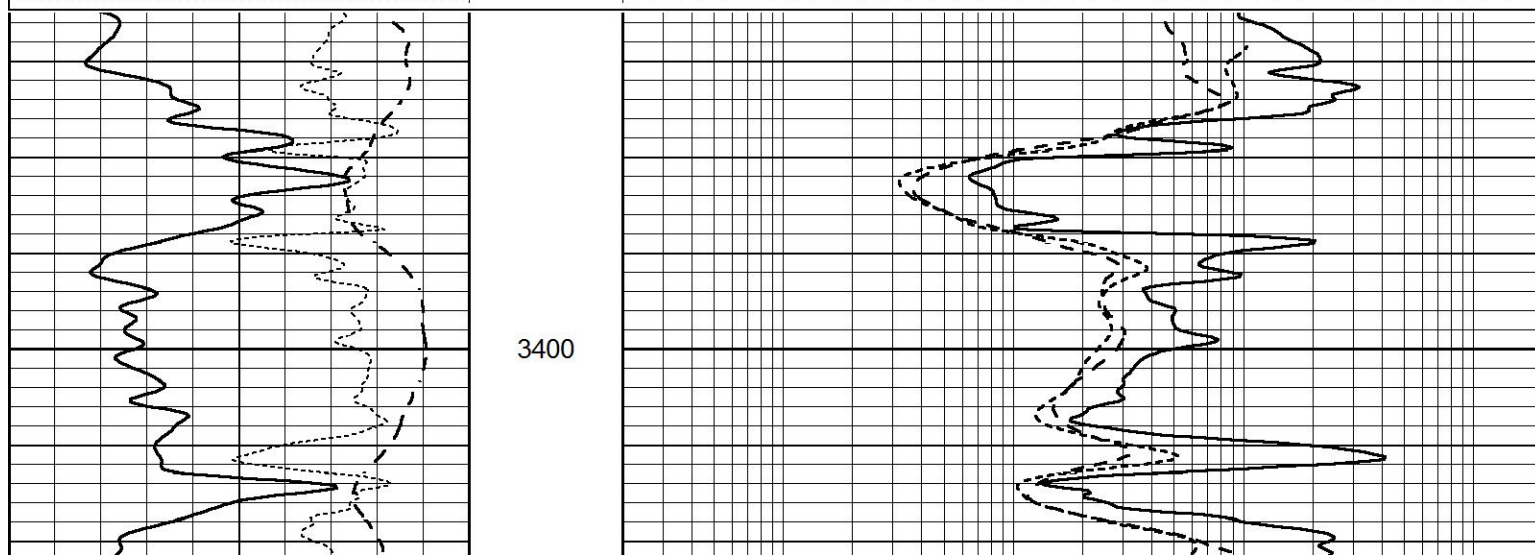
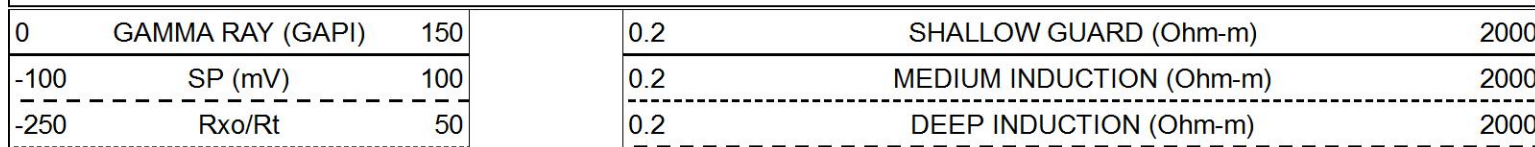
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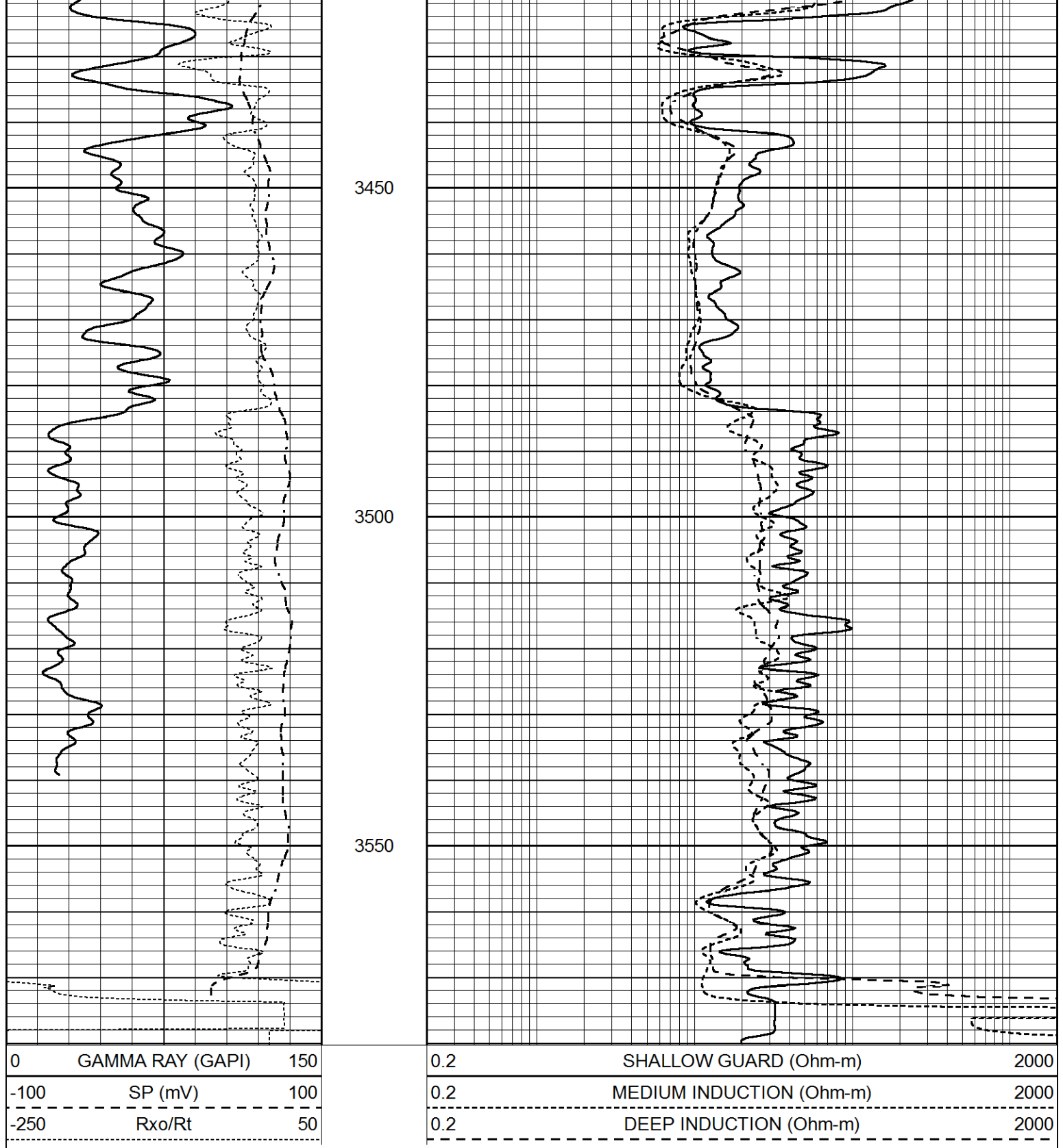




REPEAT SECTION

Database File 4429pe.db
 Dataset Pathname pass2.1
 Presentation Format _dil
 Dataset Creation Tue Nov 05 15:00:12 2019
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File 4429pe.db
Dataset Pathname pass2.1
Dataset Creation Tue Nov 05 15:00:12 2019

Dual Induction Calibration Report

Serial-Model:	FW1410-55-Probe
Surface Cal Performed:	Tue Feb 19 11:44:18 2019
Downhole Cal Performed:	Tue Feb 19 11:44:24 2019
After Survey Verification Performed:	Tue Feb 19 11:44:27 2019

Surface Calibration			Readings		References		Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	618.595	-5.524
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	632.856	1.197
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.649	V	0.000	400.000	mmho/m	623.784	-4.595
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251
Downhole Calibration			Readings		References		Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		
After Survey Verification			Readings		Targets		Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		
Compensated Neutron Calibration Report								
			Serial Number:		080621PMC			
			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:			7					
Tool Model:			Probe1					
Performed:			Tue Feb 19 11:45:10 2019					
Calibrator Value:			1.0		GAPI			
Background Reading:			0.0		cps			
Calibrator Reading:			1.0		cps			
Sensitivity:			0.4300		GAPI/cps			