

Company King Oil Operations		Company King Oil Operations	
Well Landauer #1	Well Landauer #1		
Field Ellis	Field Ellis		
County Ellis	County Ellis		
State Kansas	State Kansas		
Location: API #: 15 051 26872		Other Services	
620' FNL & 1775' FEL		ML CDNL	
SEC 30 TWP 13S RGE 20W	Ground Level Elevation 2217'	Elevation	
Permanent Datum Log Measured From KB 5' AGL	Drilling Measured From KB	K.B. 2222' D.F. 2221' G.L. 2217'	
Date 9-21-12	Run Number One		
Depth Driller 3943'	Depth Logger 3945'		
Bottom Logged Interval 3943'	Top Log Interval 200'		
Casing Driller 217'	Casing Logger 217'		
Bit Size 7 7/8"	Type Fluid in Hole Chemical		
Density / Viscosity 9.3/56	pH / Fluid Loss 10.5/7.8		
Source of Sample Pit	Rm @ Meas. Temp 1@74deg		
Rmf @ Meas. Temp .75@74deg	Rmc @ Meas. Temp 1.2@74deg		
Source of Rmf / Rmc Calculated	Rm @ BHT .66@110deg		
Time Circulation Stopped 11:30 a.m.	Time Logger on Bottom 1:30 p.m.		
Maximum Recorded Temperature 112degf	Equipment Number T045		
Location Hays	Recorded By Gus Pfannenstiel		
Witnessed By Mr. Cliff Ottaway			

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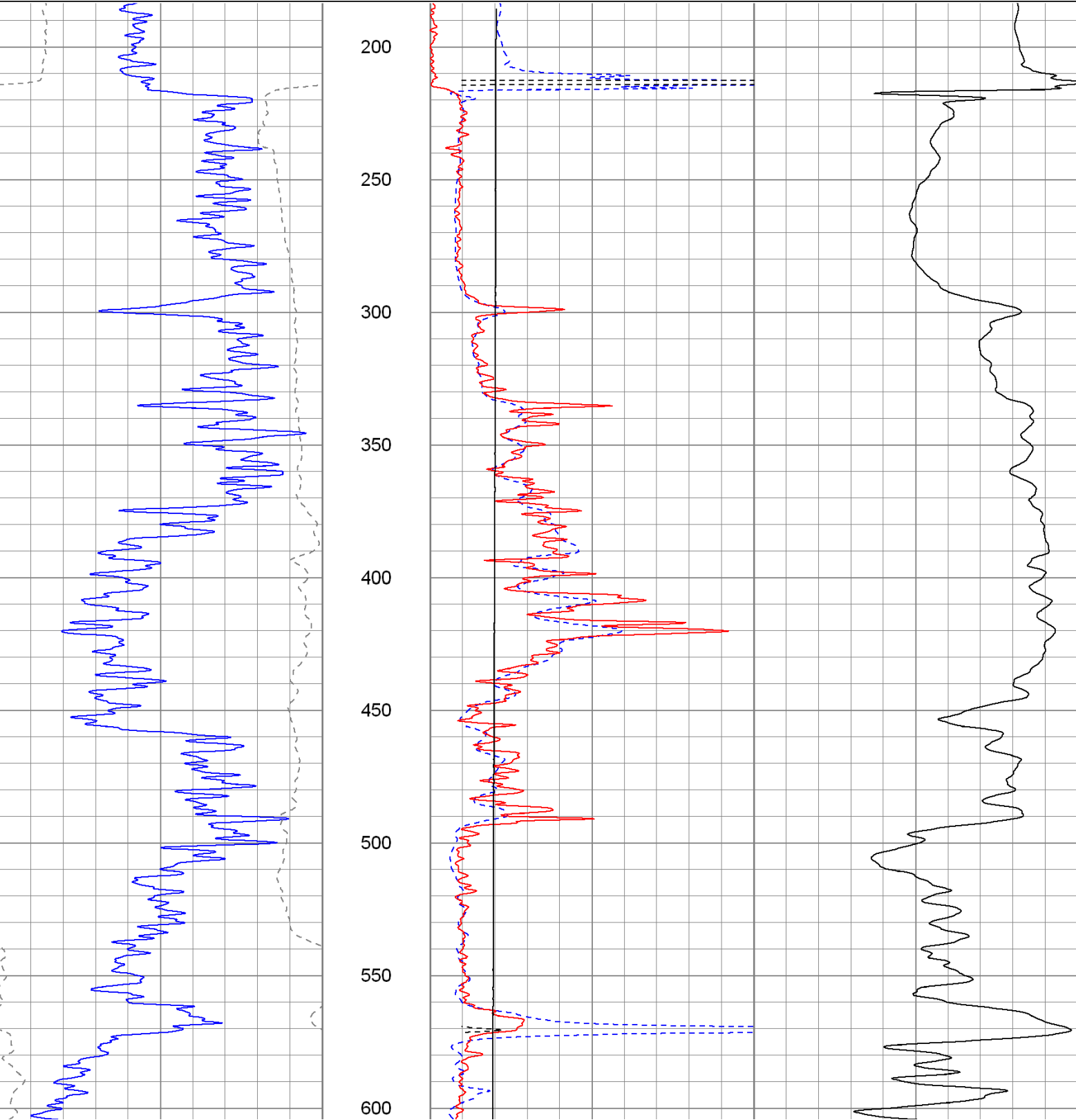
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

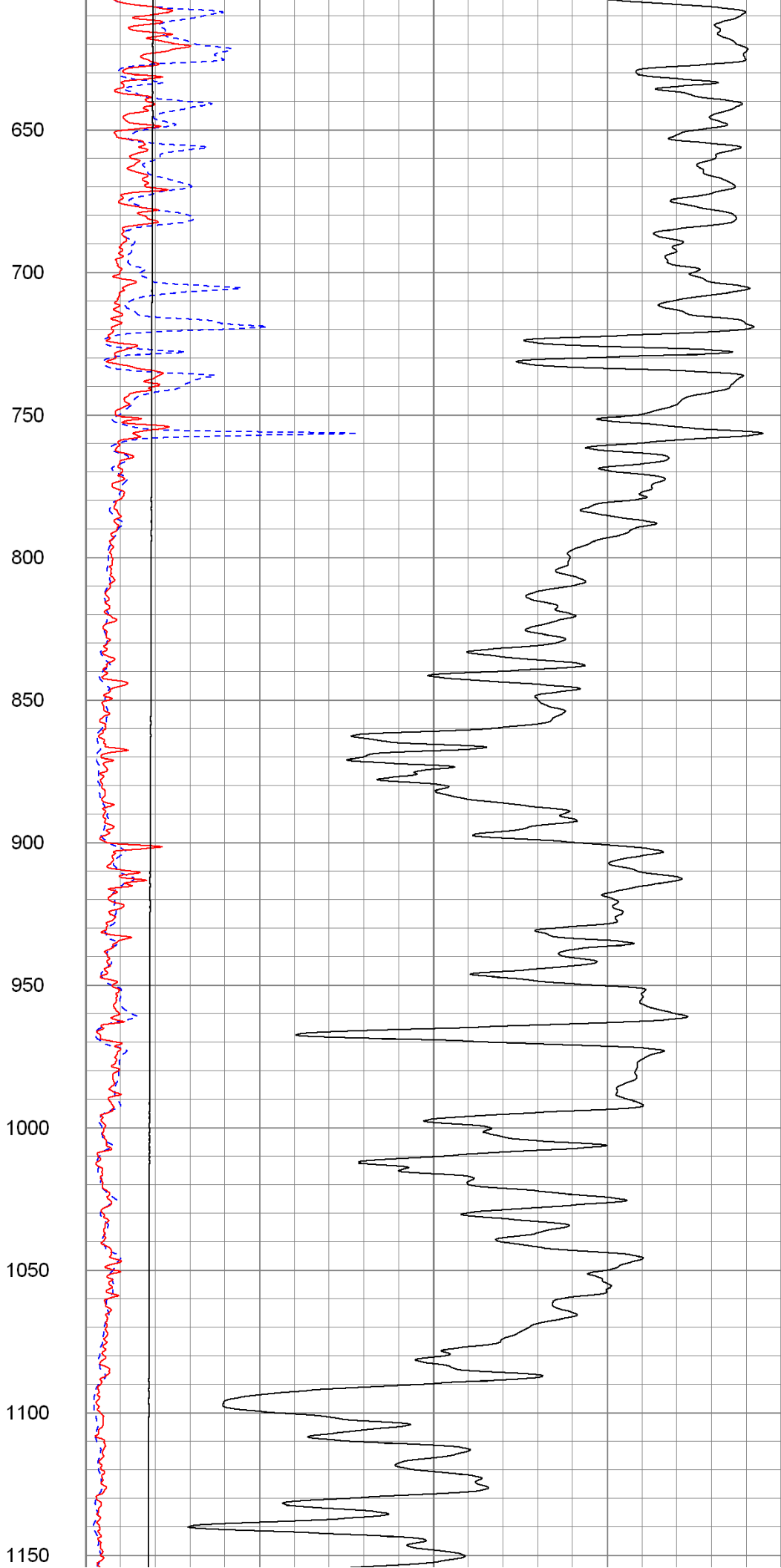
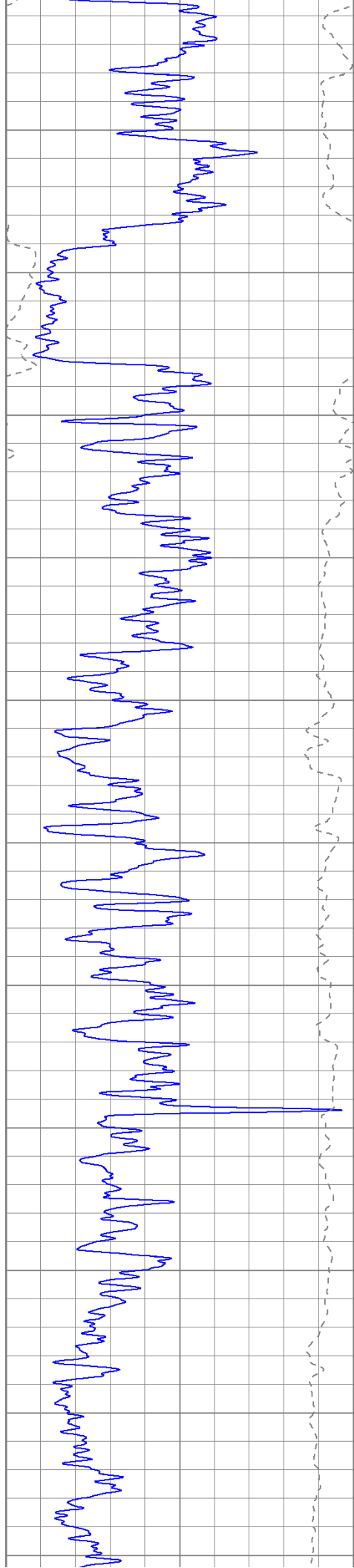
Comments

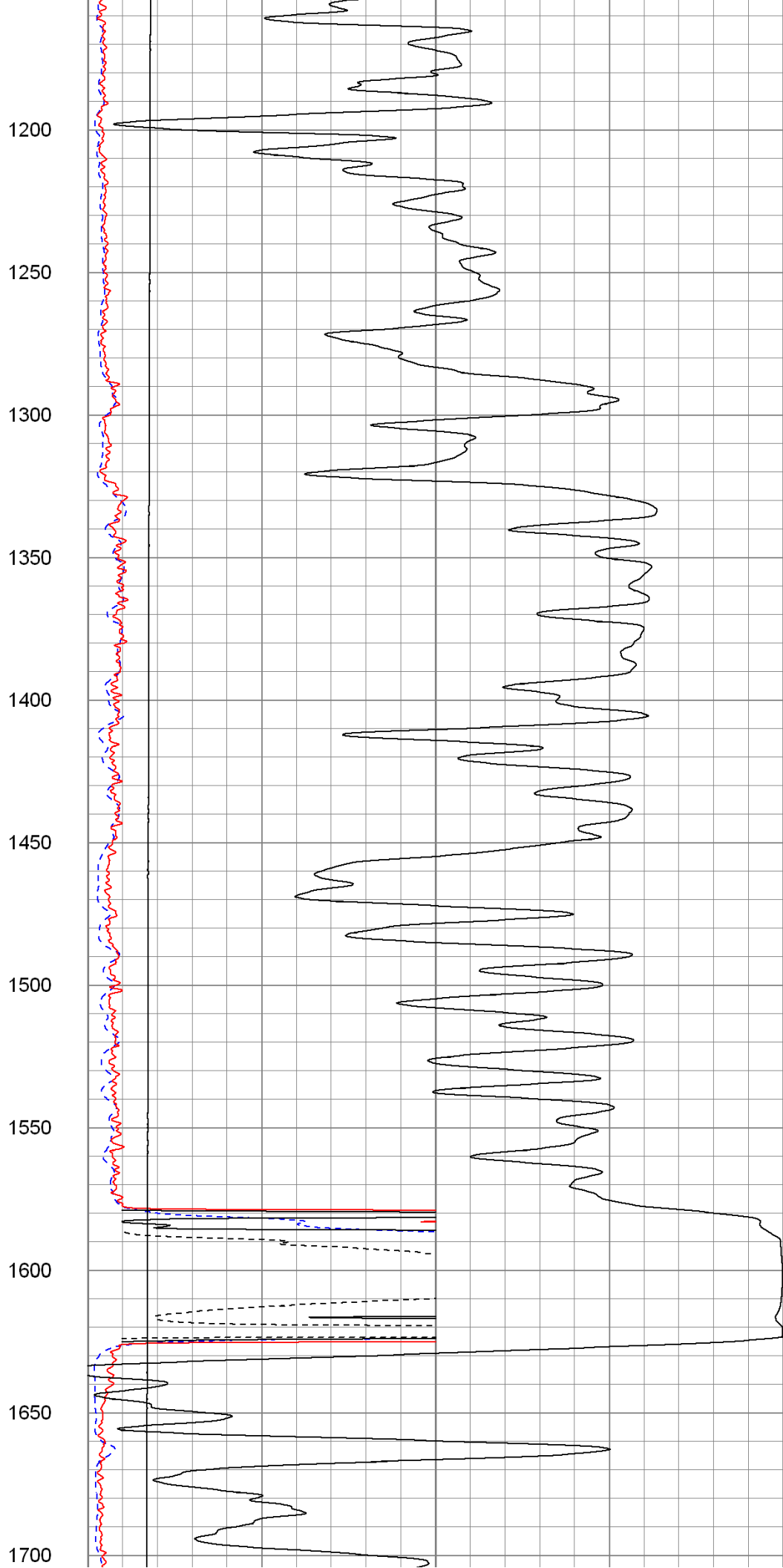
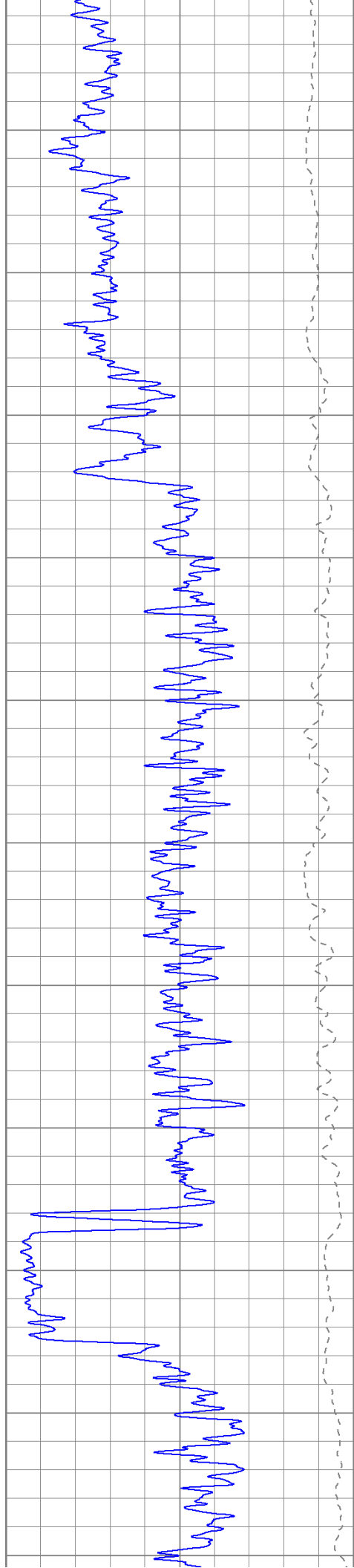
Thank you for using The Perforators LLC
Hays, KS 785-621-4604

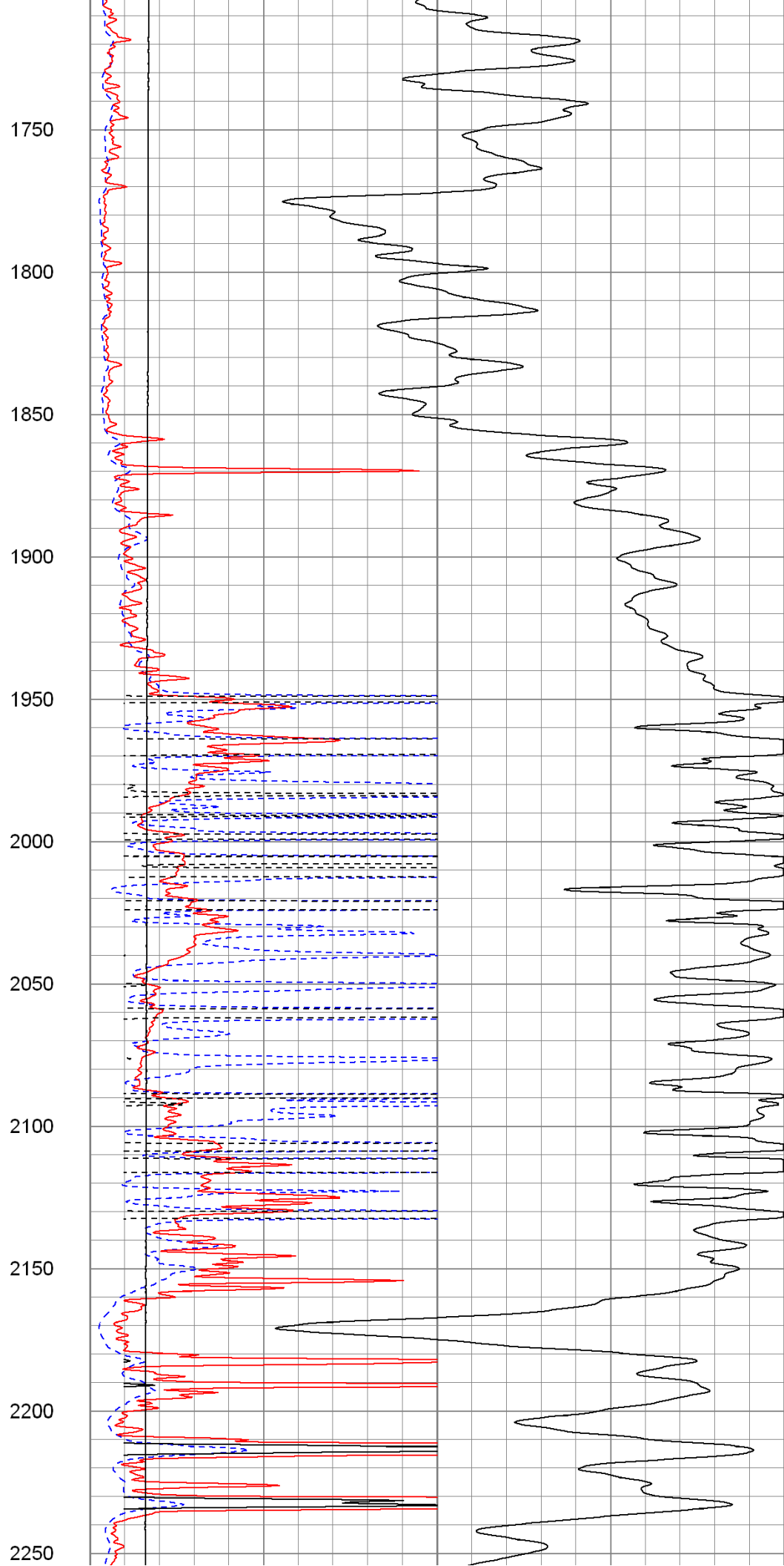
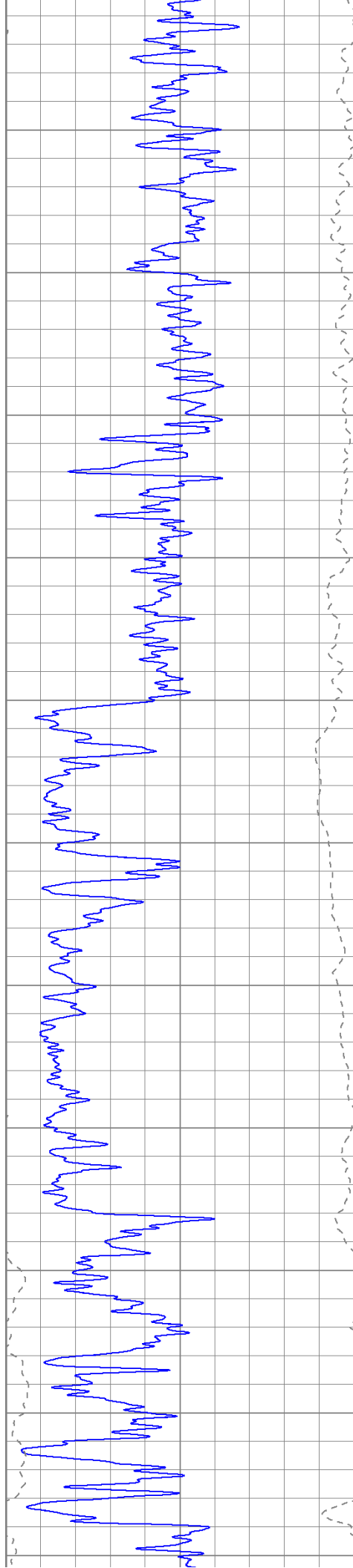
Database File: kolandauer#1oh.db
Dataset Pathname: pass2
Presentation Format: kdrillin2
Dataset Creation: Fri Sep 21 13:30:29 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:600

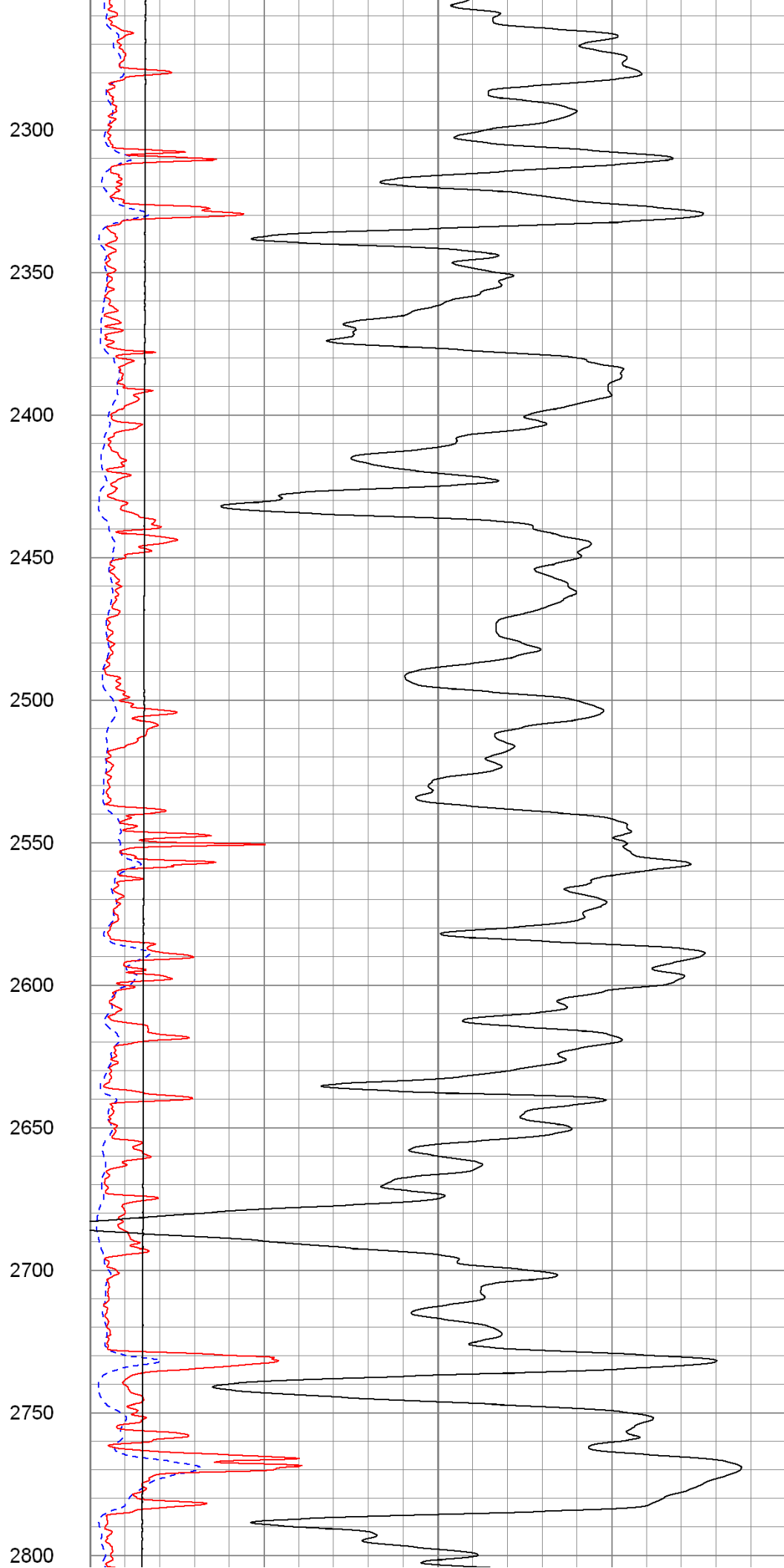
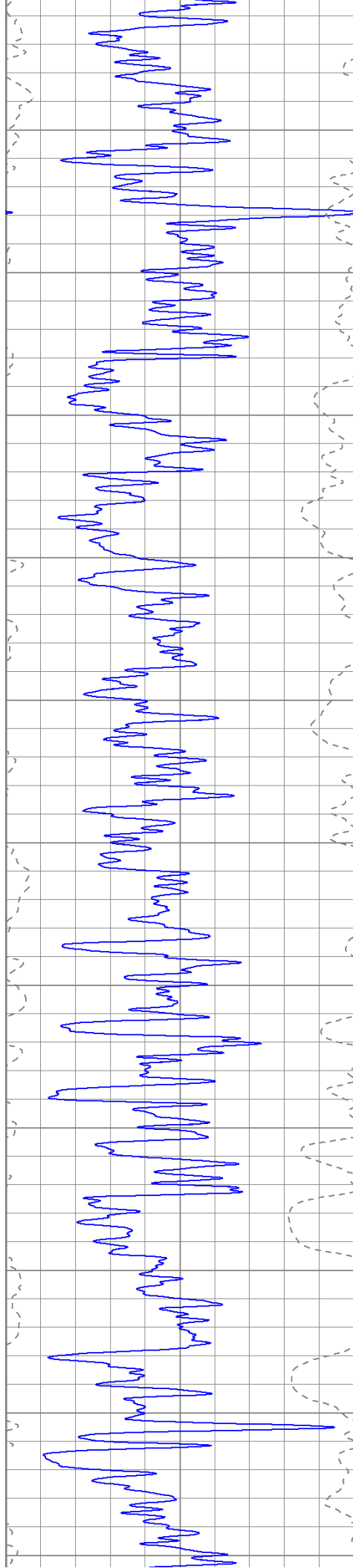
0	GR (GAPI)	150	0	RILD (Ohm-m)	50
-200	SP (mV)	0	0	RLL3 (Ohm-m)	50
			1000	CILD (mmho/m)	0
			10000	LTEN (lb)	0
			50	RILD x 10 (Ohm-m)	500
			50	RLL3 x 10 (Ohm-m)	500

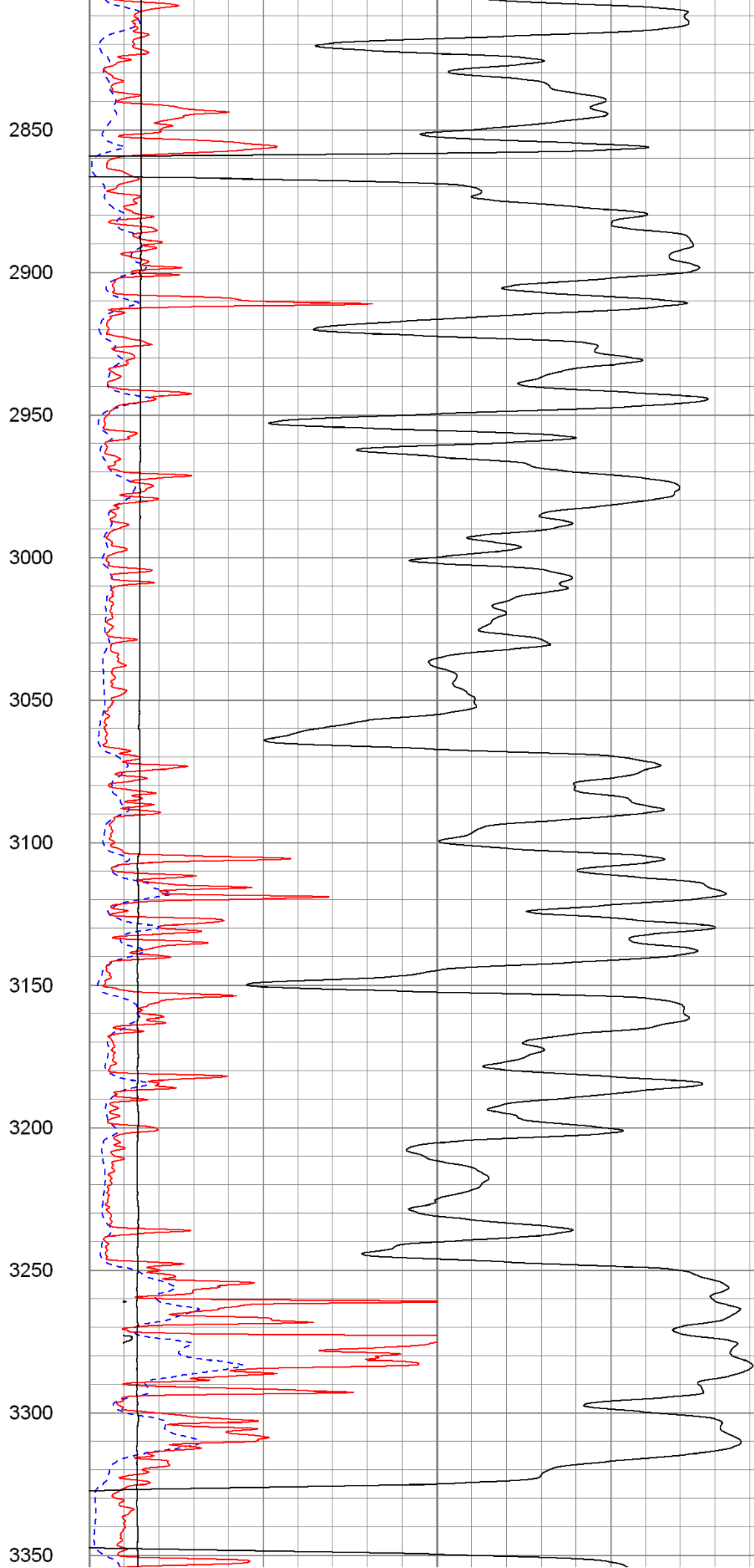
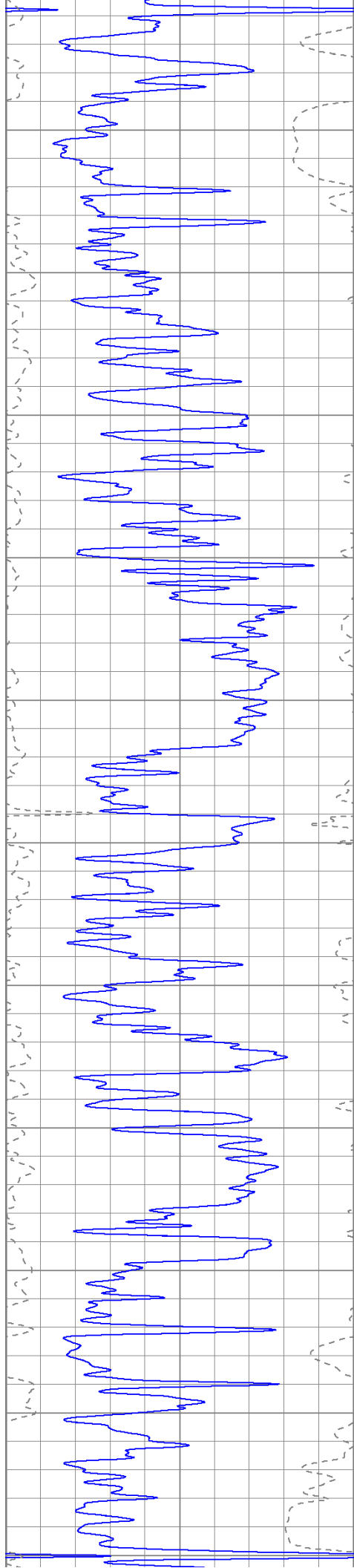


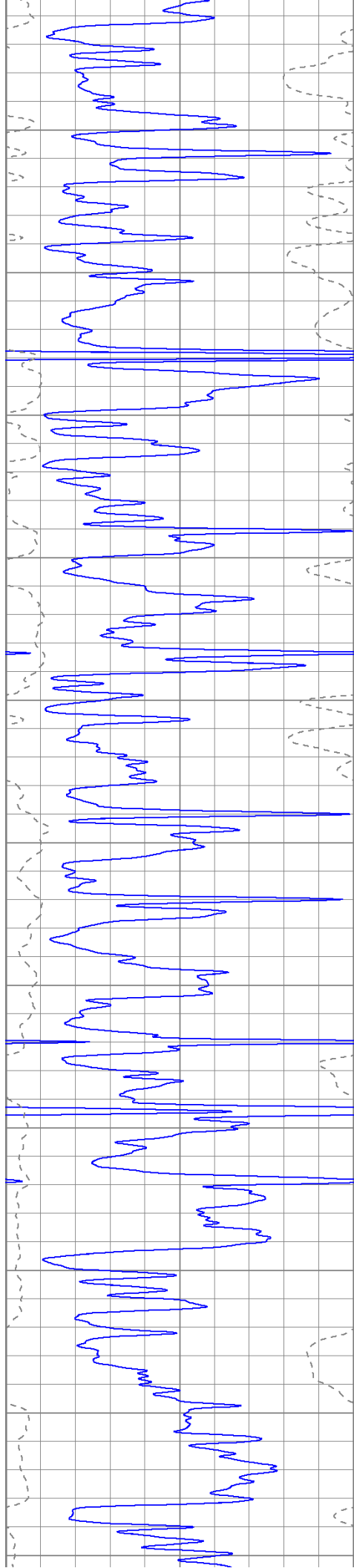












3400

3450

3500

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3600

3650

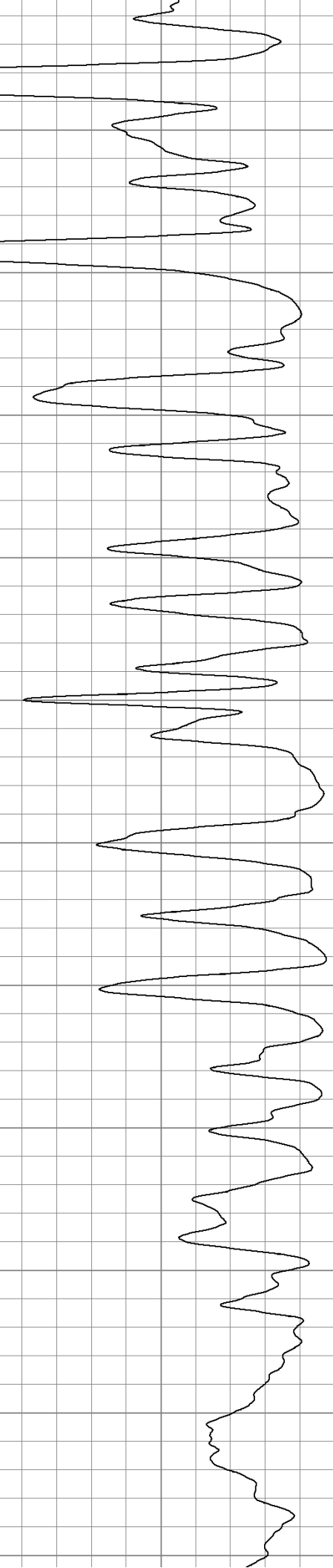
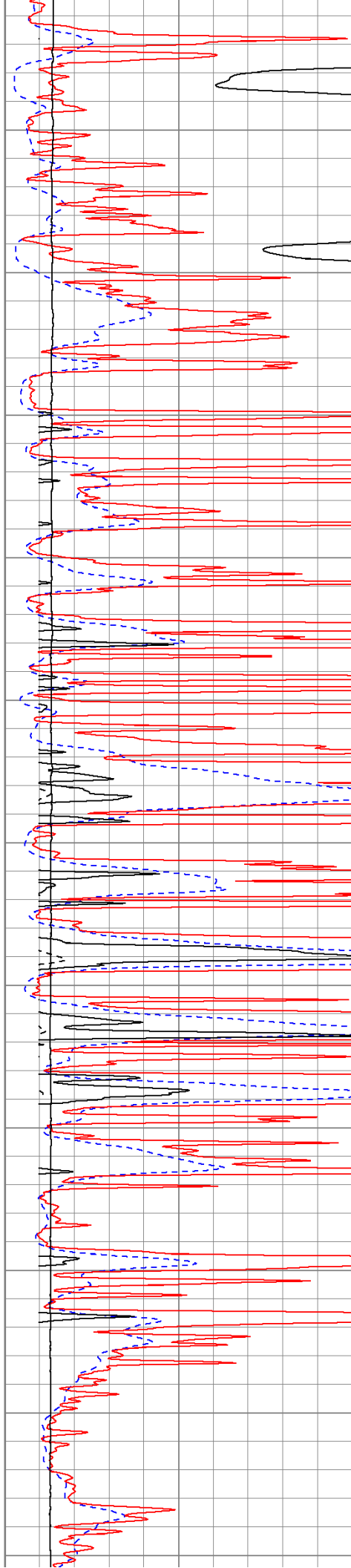
3700

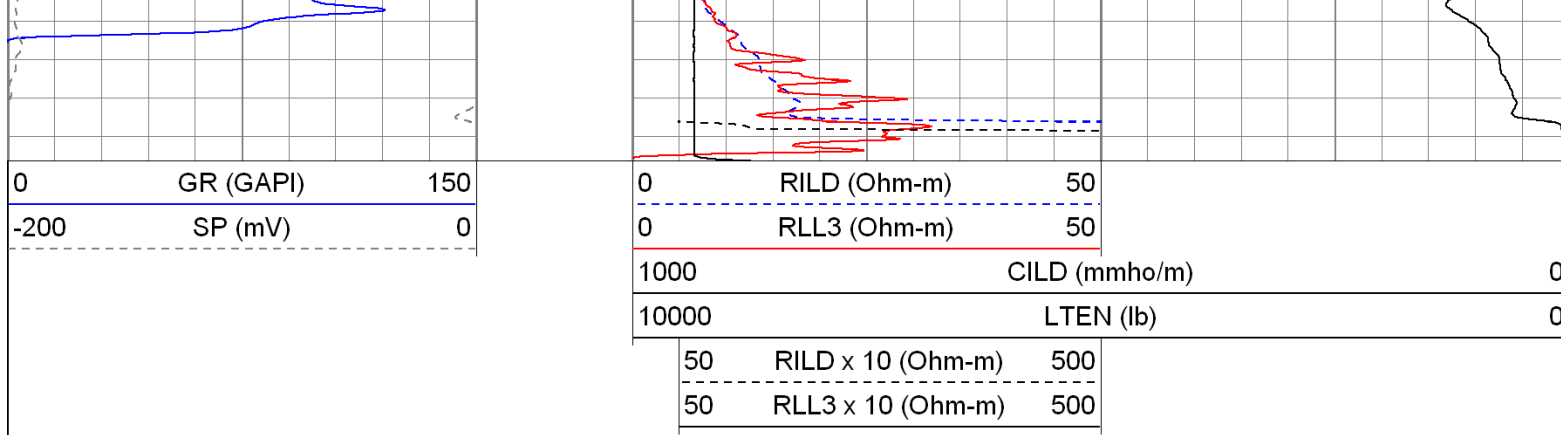
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3800

3850

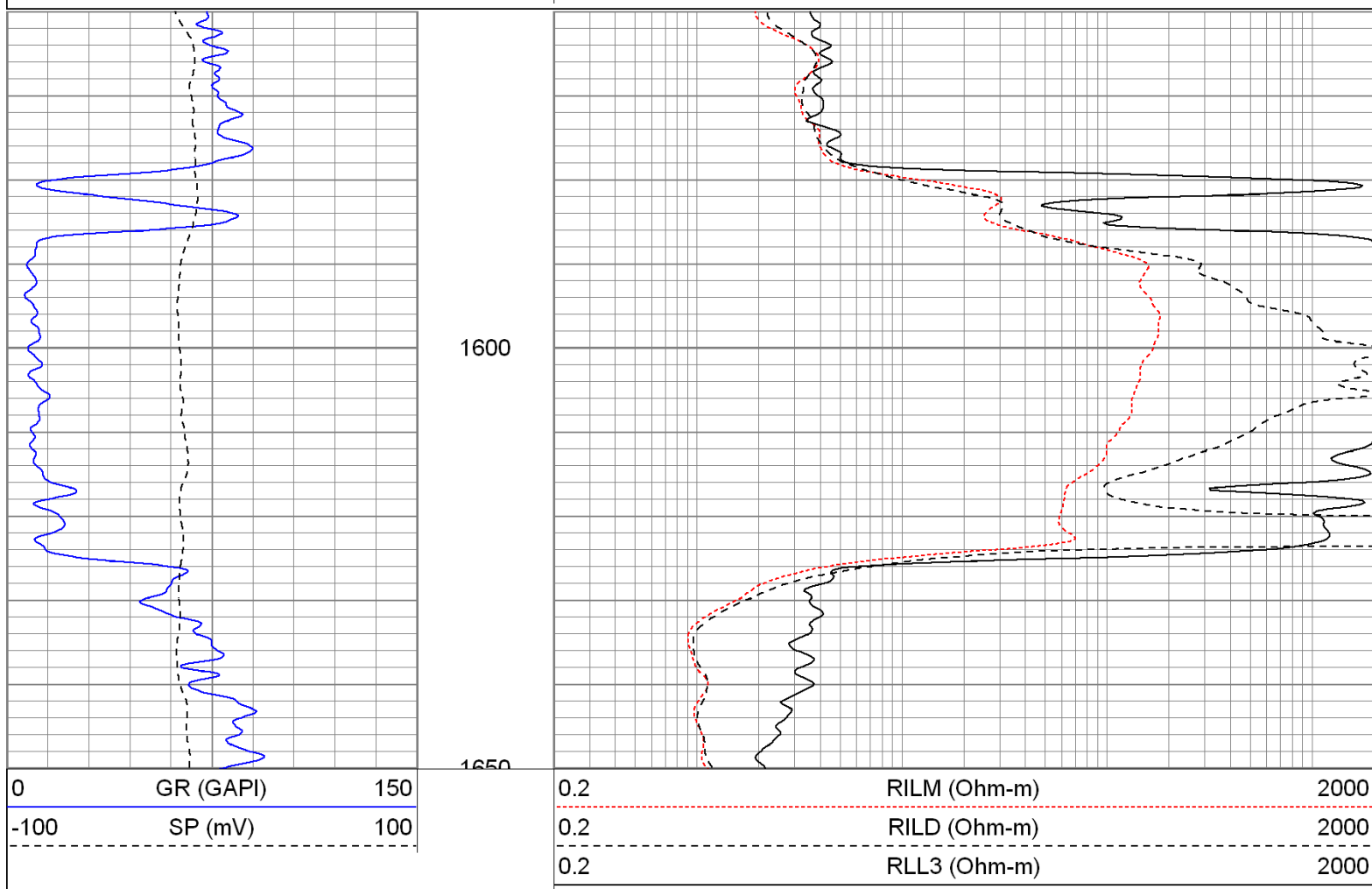
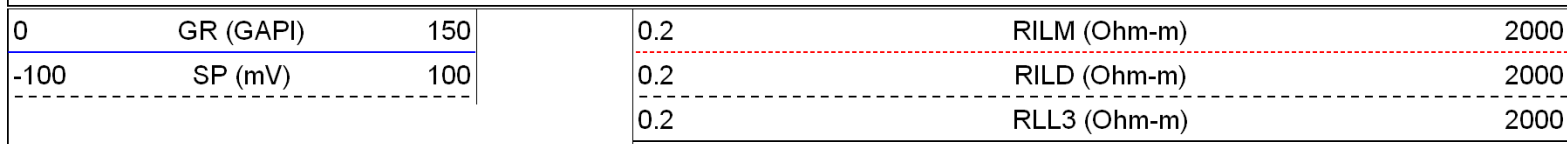
3900





Main Pass

Database File: kolandauer#1oh.db
 Dataset Pathname: pass2
 Presentation Format: kdil
 Dataset Creation: Fri Sep 21 13:30:29 2012 by Log Open-Cased 100827
 Charted by: Depth in Feet scaled 1:240

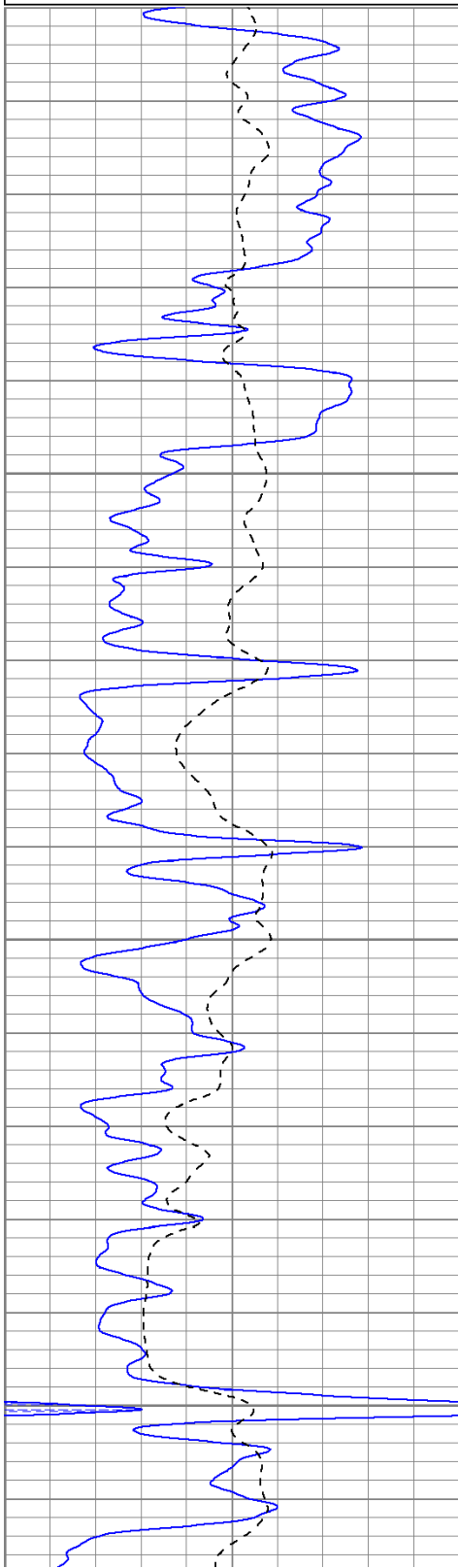


Main Pass

Database File: kolandauer#1oh.db
 Dataset Pathname: pass2
 Presentation Format: kdil
 Dataset Creation: Fri Sep 21 13:30:29 2012 by Log Open-Cased 100827
 Charted by: Depth in Feet scaled 1:240

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

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

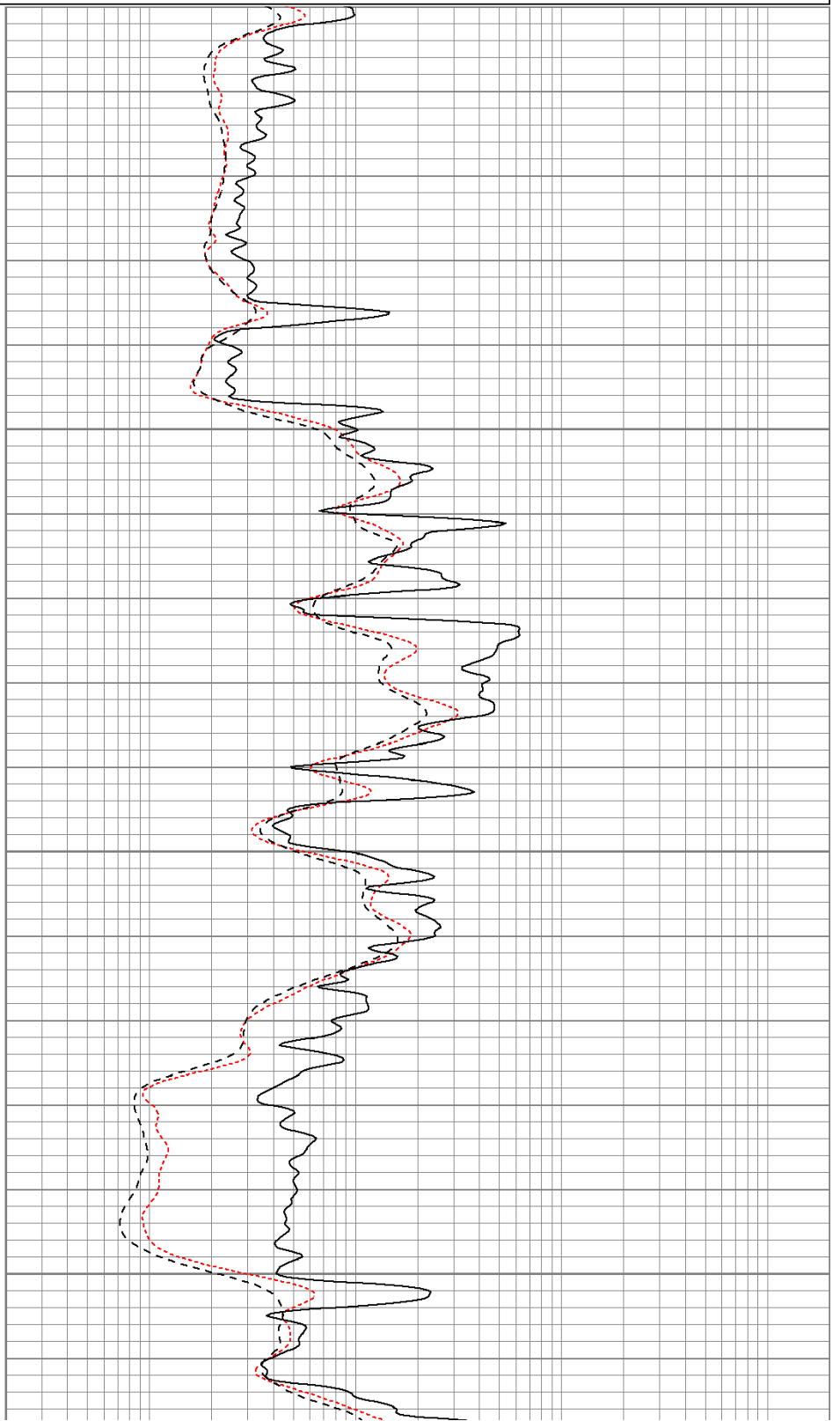


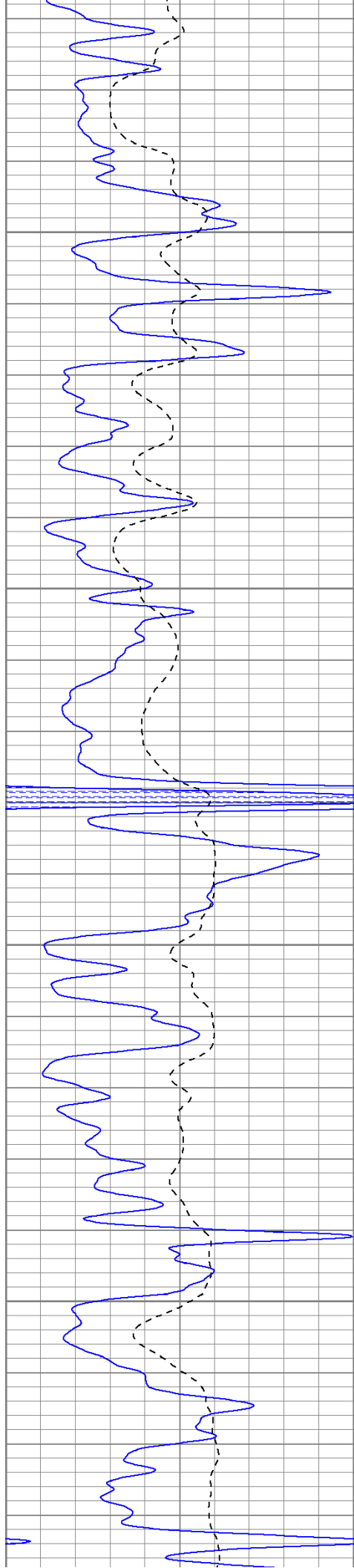
3200

3250

3300

3350



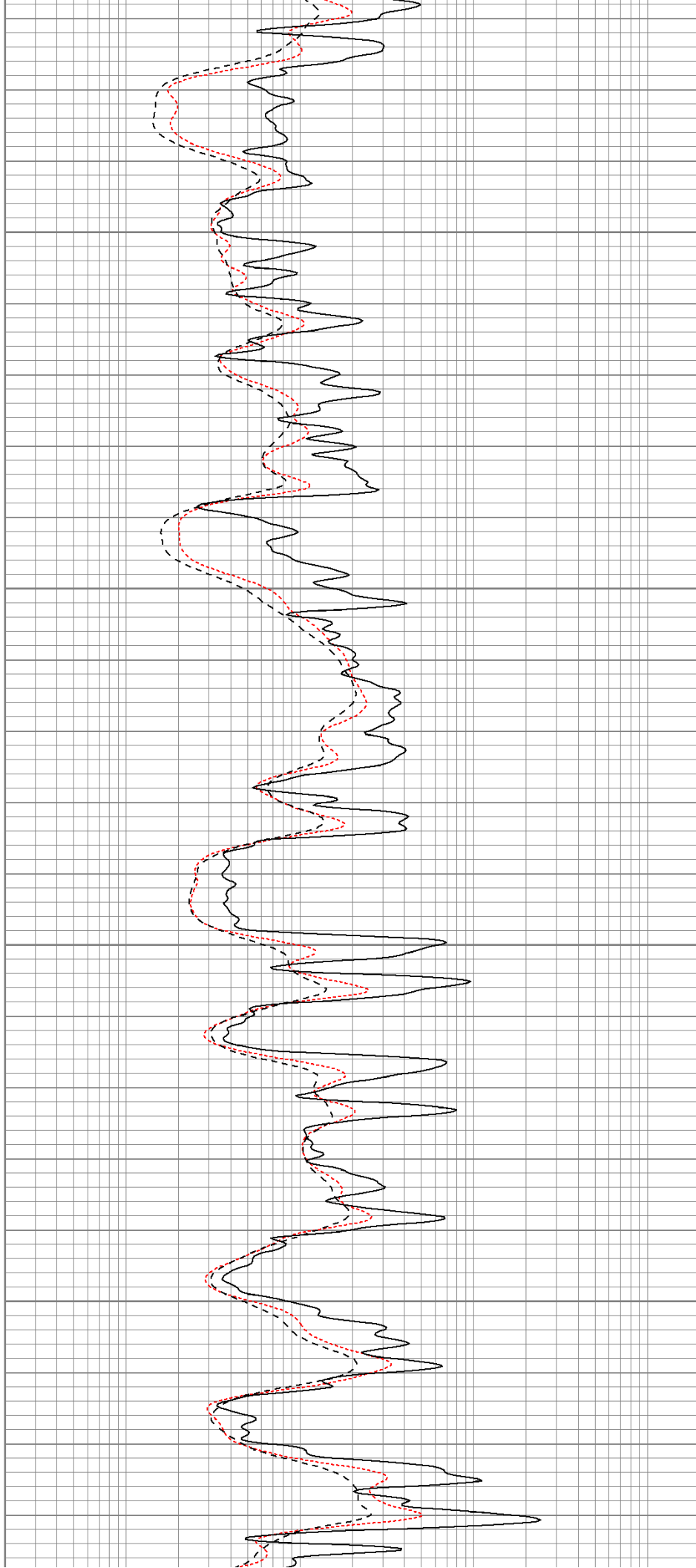


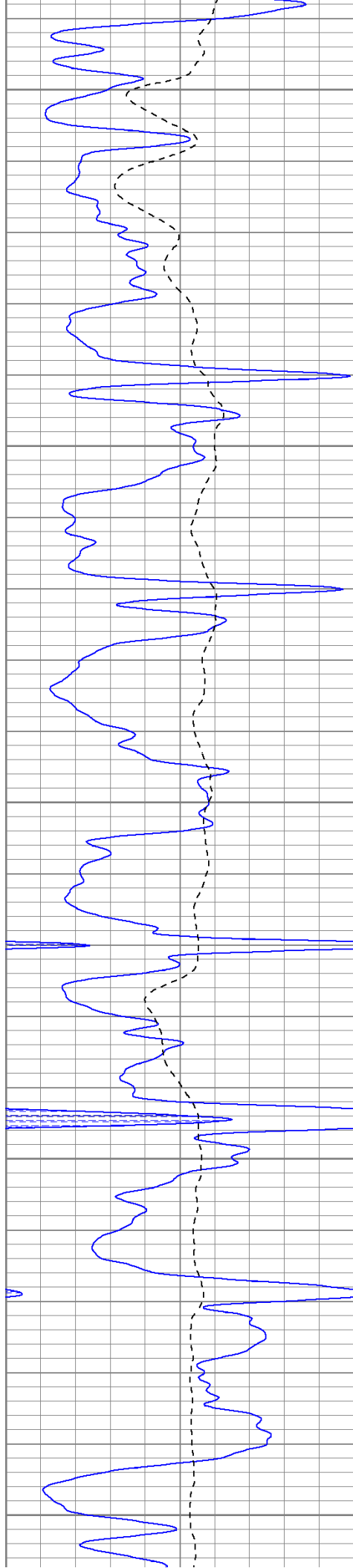
3400

3450

3500

3550





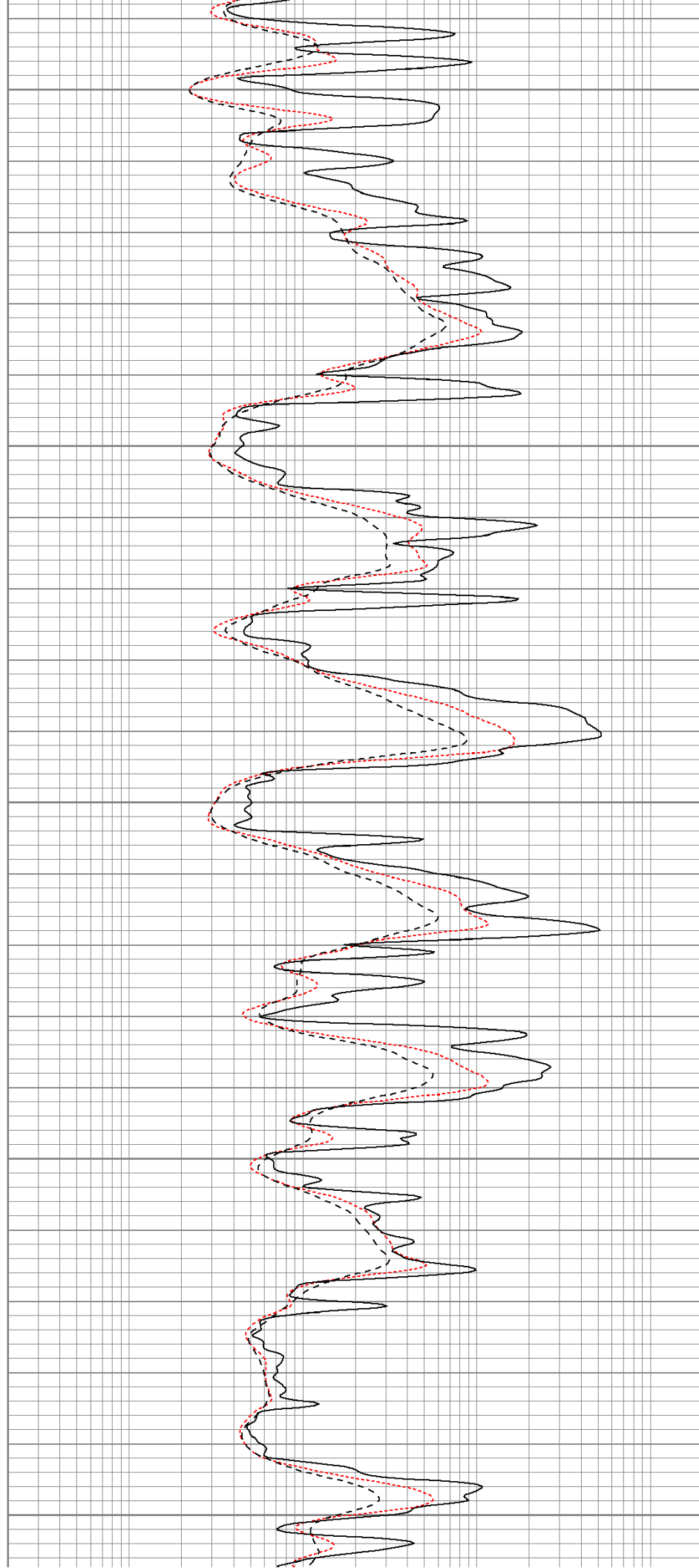
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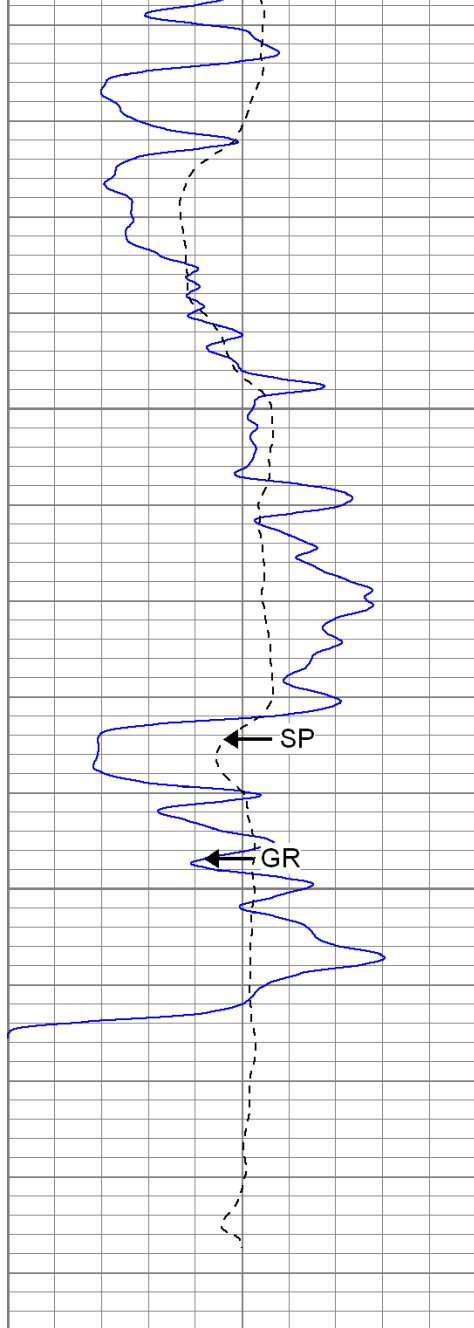
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3700

3750

3800

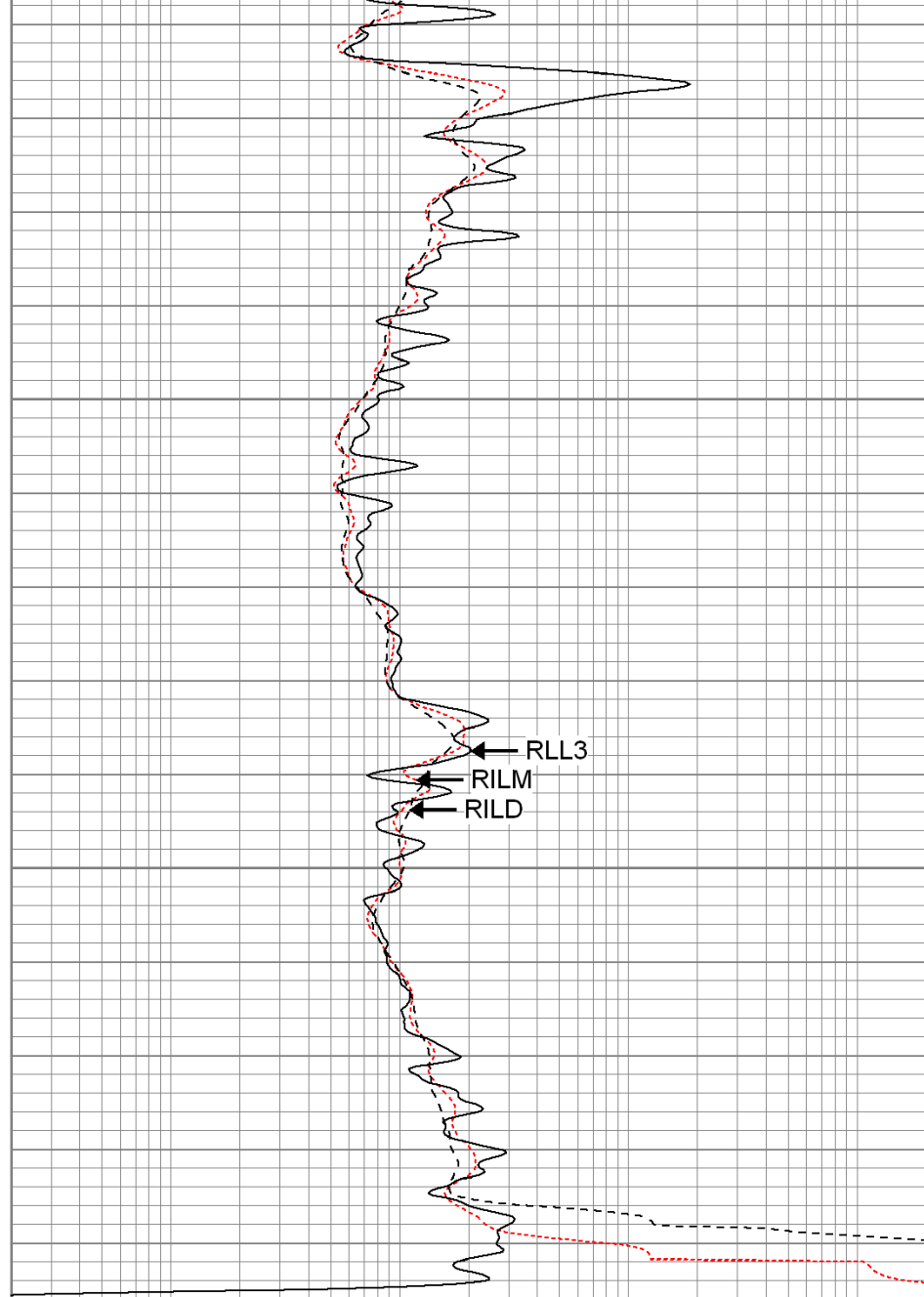




0	GR (GAPI)	150
-100	SP (mV)	100

3850

3900



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

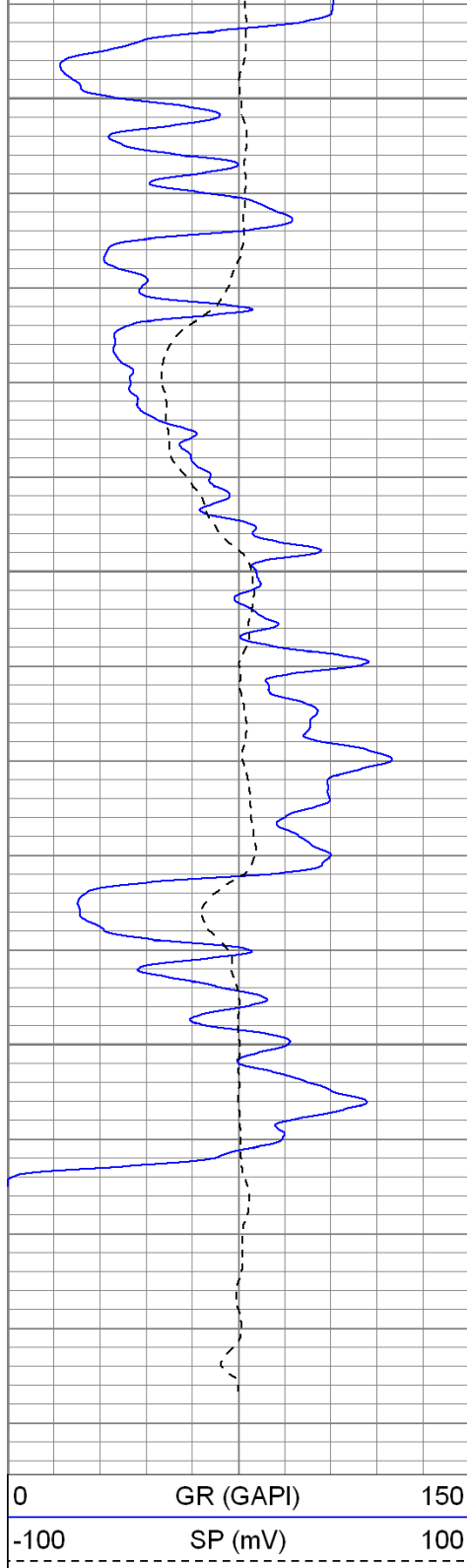


Repeat Pass

Database File: kolandauer#1oh.db
 Dataset Pathname: pass1
 Presentation Format: kdil
 Dataset Creation: Fri Sep 21 13:20:24 2012 by Log Open-Cased 100827
 Charted by: Depth in Feet scaled 1:240

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

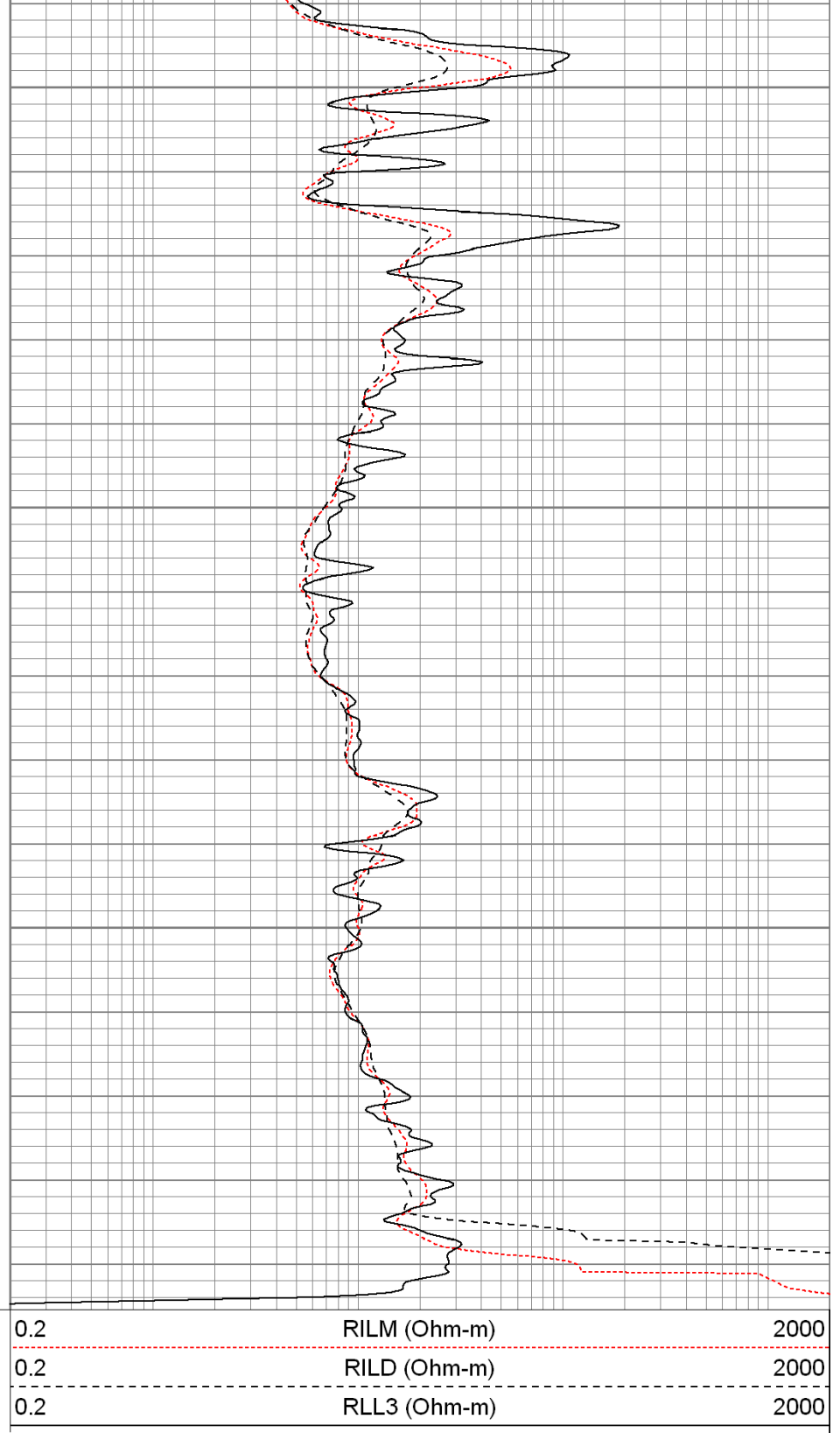
0.2	RILM (Ohm-m)	2000
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000



3800

3850

3900



Calibration Report

Database File: kolandauer#1oh.db
 Dataset Pathname: pass1
 Dataset Creation: Fri Sep 21 13:20:24 2012 by Log Open-Cased 100827

Dual Induction Calibration Report

Serial-Model: 5375-G
 Surface Cal Performed: Thu Sep 13 16:02:51 2012
 Downhole Cal Performed: Thu Sep 13 16:03:26 2012

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.002	0.640	V	0.000	350.000	mmho/m	548.531	-1.045
Medium	0.005	0.742	V	0.000	400.000	mmho/m	542.602	-2.696
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.001	0.640	V	0.000	350.000	mmho/m	547.641	-0.739
Medium	0.005	0.742	V	0.000	550.000	mmho/m	745.701	-3.500
Downhole Calibration								
Readings				References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.094	350.007	mmho/m	-0.305	350.264	mmho/m	1.002	-0.399
Medium	0.252	399.957	mmho/m	-0.149	400.053	mmho/m	1.001	-0.401
Shallow	2.471	0.009	V	500.000	2.000	Ohm-m	202.280	0.097
Compensated Density Calibration Report								
Serial-Model:				2388DHT-DHT				
Source / Verifier:				/				
Master Calibration Performed:				Thu Sep 13 16:04:57 2012				
Master Calibration								
		Density		Far Detector		Near Detector		
Magnesium	1.750	g/cc		717.11	305.57	cps		
Aluminum	2.620	g/cc		140.63	205.93	cps		
Spine Angle = 76.38				Density/Spine Ratio = 0.519				
		Size		Reading				
Small Ring	8.25	in		5771.32				
Large Ring	14.00	in		10165.20				
Gamma Ray Calibration Report								
Serial Number:			2001					
Tool Model:			OH					
Performed:			Wed Aug 29 08:26:23 2012					
Calibrator Value:			1.0		GAPI			
Background Reading:			0.0		cps			
Calibrator Reading:			1.0		cps			
Sensitivity:			0.2300		GAPI/cps			
Neutron Calibration Report								
Serial Number:			5108					
Tool Model:			PROBE					
Performed:			Mon Sep 03 08:08:04 2012					
Calibrator Value:			1		NAPI			
Calibrator Reading:			1		cps			
Sensitivity:			1		NAPI/cps			

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
NEU	37.85		None	0.75	1.50	5.00
			NEU-PROBE (5108) Probe	4.92	3.63	85.00
GR	32.32		GR-OH (2001) 2001	3.56	3.25	40.00
LSD DCAL SSD HEADVOLT	23.78		CDL-DHT (2388DHT) Digital High Temp CDL Tool	9.69	4.00	201.00
	23.49					
	23.24					
	21.47					
CILD SP	10.60 10.60		DIL-G (5375) Gearhart	21.47	4.00	345.00
CILM	6.89					
RLL3	1.70					
Dataset: kolandauer#1oh.db: field/well/run1/pass1 Total Length: 40.39 ft Total Weight: 676.00 lb O.D. 4.00 in						