



**SUPERIOR**  
Black Lick, Pa.  
Mercer, Pa.  
Wooster, Oh.  
Cleveland, Ok.  
Trinidad, Co.

## DUAL INDUCTION LOG

Company XTO Energy Inc.  
Well Apache Canyon 04-02  
Field Purgatoire River  
County Las Animas State Colorado

Location: API # : 05 071 09634 00

1305' FNL & 2444' FEL

SEC 04 TWP 34S RGE 67W

Permanent Datum Ground Level Elevation 7323'  
Log Measured From Ground Level  
Drilling Measured From Ground Level

Other Services  
cdl  
neu  
Elevation  
K.B. -----  
D.F. -----  
G.L. 7323'

Date 8-16-08

Run Number One

Depth Driller 1925'

Depth Logger 1926'

Bottom Logged Interval 1924'

Top Log Interval Surface Casing

Casing Driller 8 5/8" @ 500'

Casing Logger 500'

Bit Size 7 7/8"

Type Fluid in Hole Water

Density / Viscosity ///

pH / Fluid Loss ///

Source of Sample ///

Rm @ Meas. Temp ///

Rmf @ Meas. Temp ///

Rmc @ Meas. Temp ///

Source of Rmf / Rmc ///

Rm @ BHT ///

Time Circulation Stopped 3:00 P.M.

Time Logger on Bottom 6:15 P.M.

Maximum Recorded Temperature 110 DEG F

Equipment Number T0701

Location Trinidad

Recorded By L.Smith

Witnessed By Mr. Don Johnson

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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

Well Directions:  
First Bosque Entrance, turn right up Alamacito Canyon,first right.



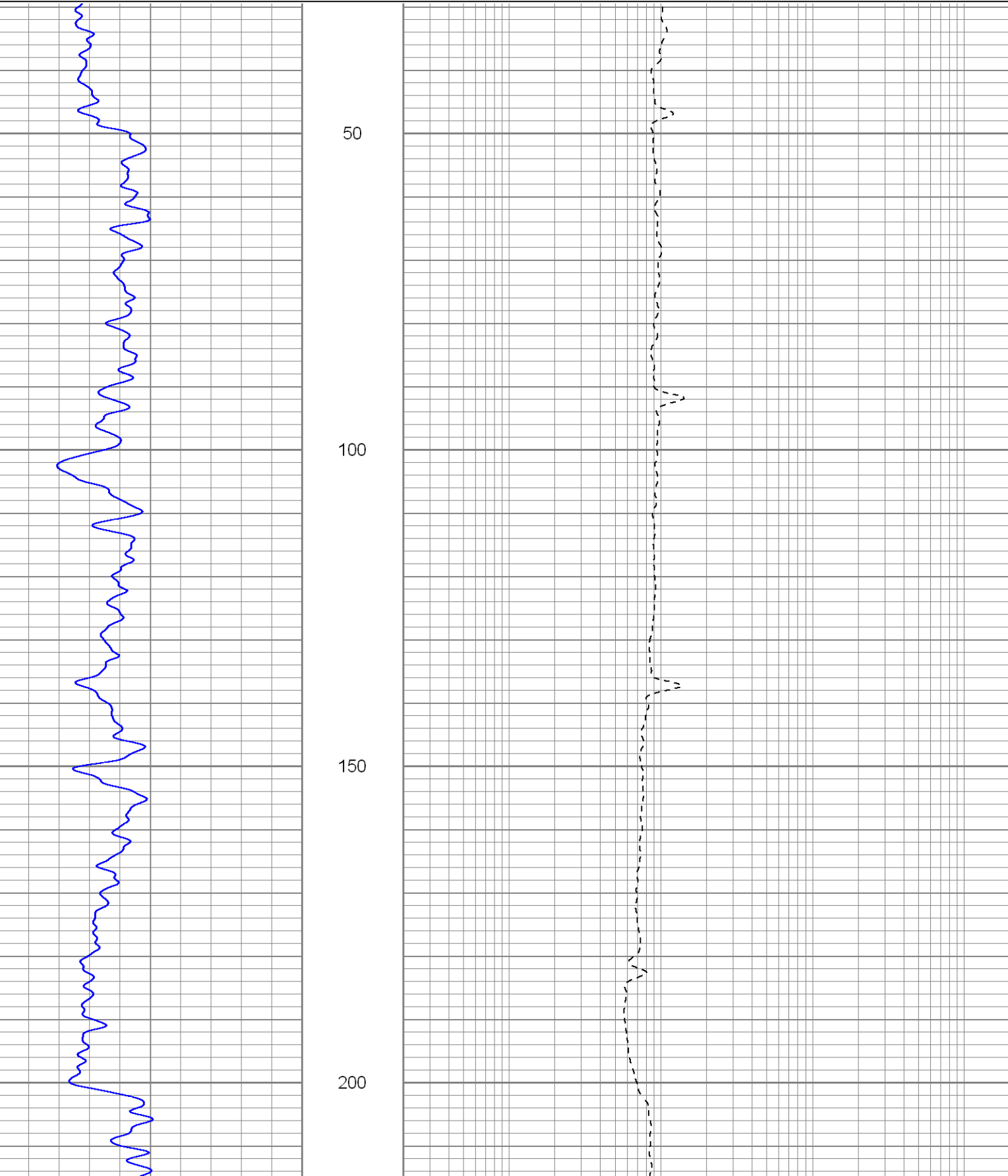
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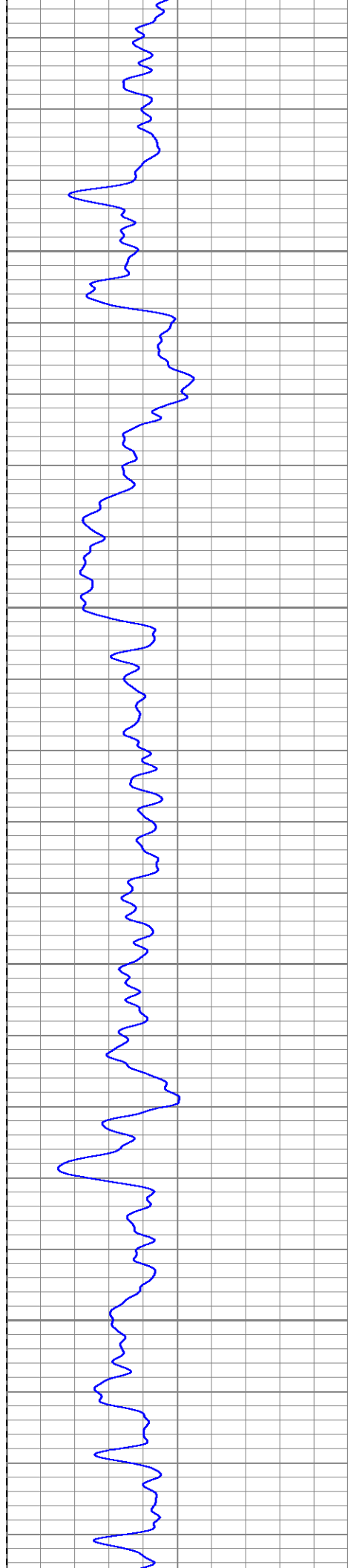
# Main Pass

Database File: xtoac0402.db  
Dataset Pathname: pass2.1  
Presentation Format: dil  
Dataset Creation: Sat Aug 16 19:55:40 2008 by Calc Open-Cased 070814  
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
-200	SP (mV)	0
<hr/>		

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



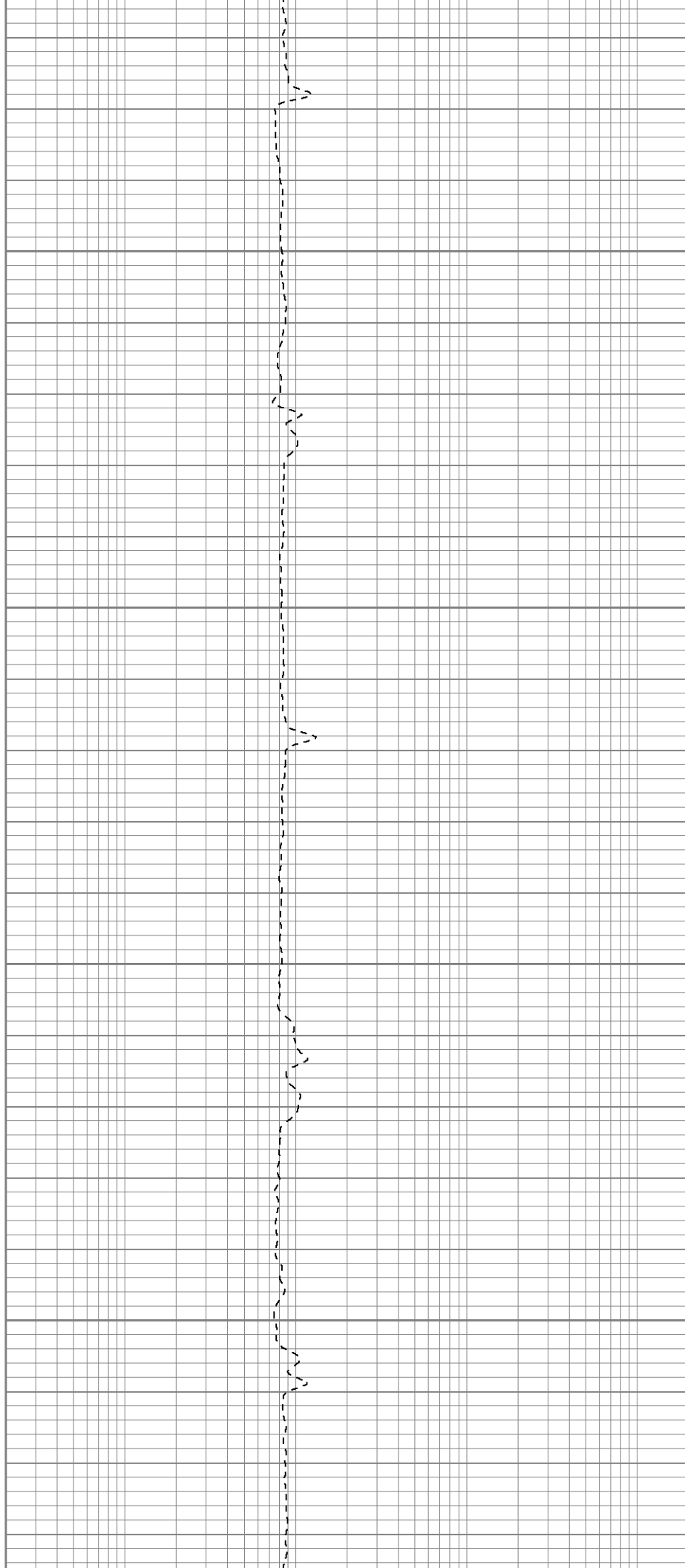


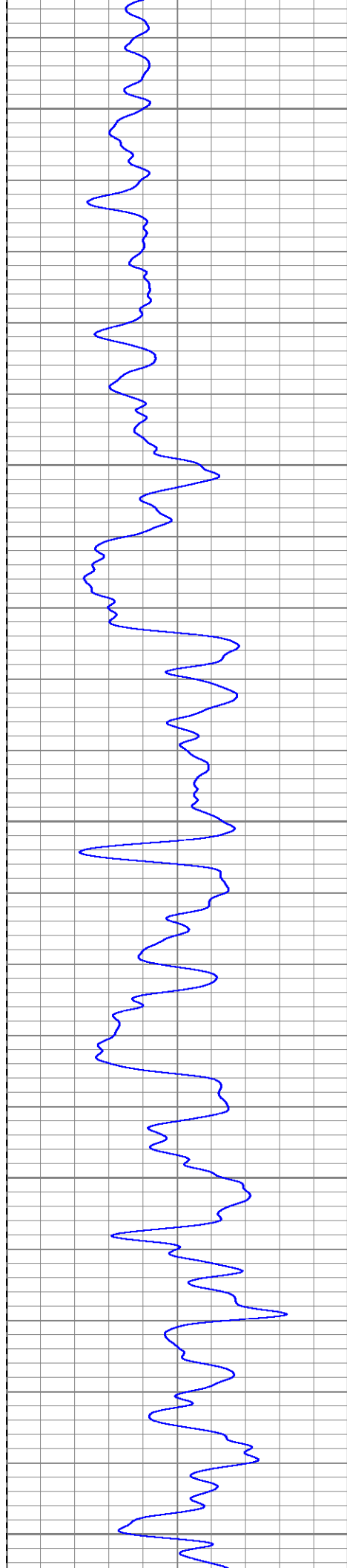
250

300

350

400





450

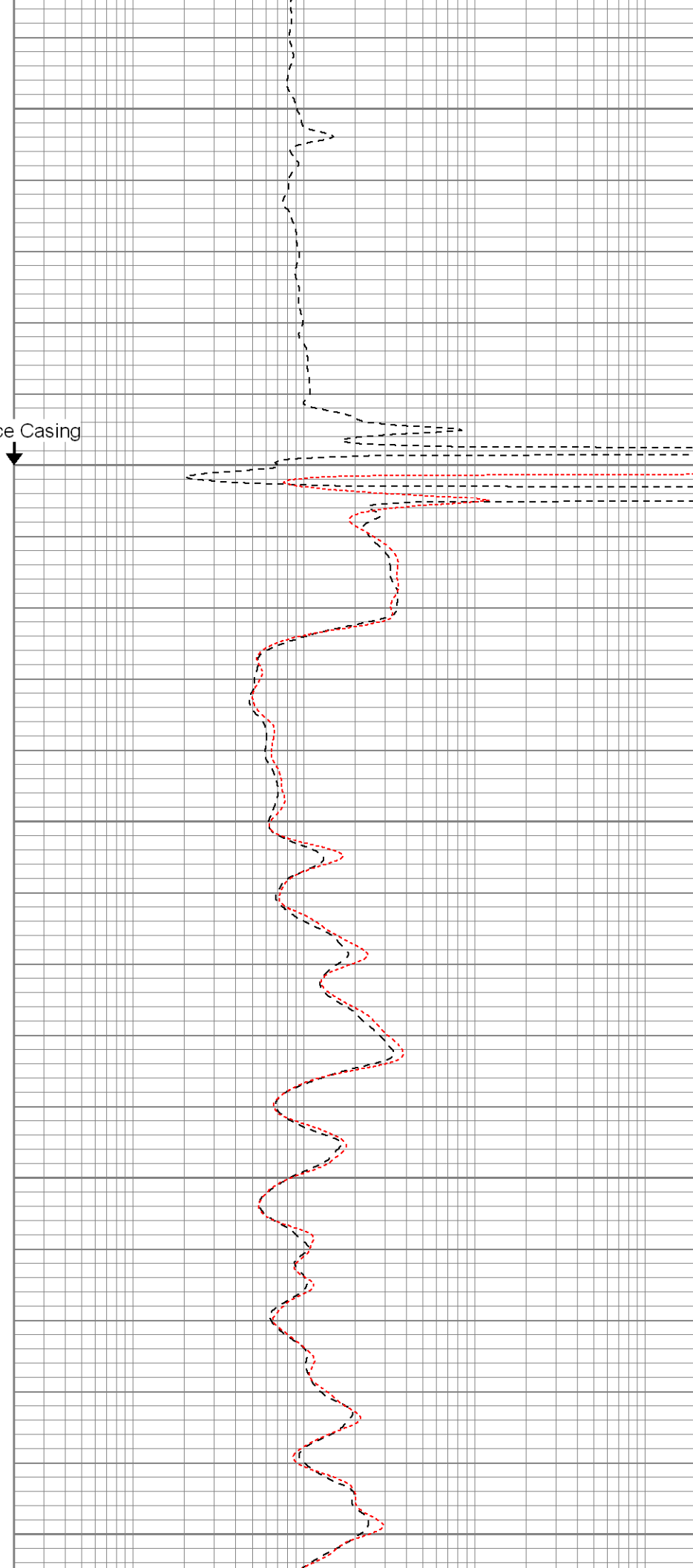
Surface Casing

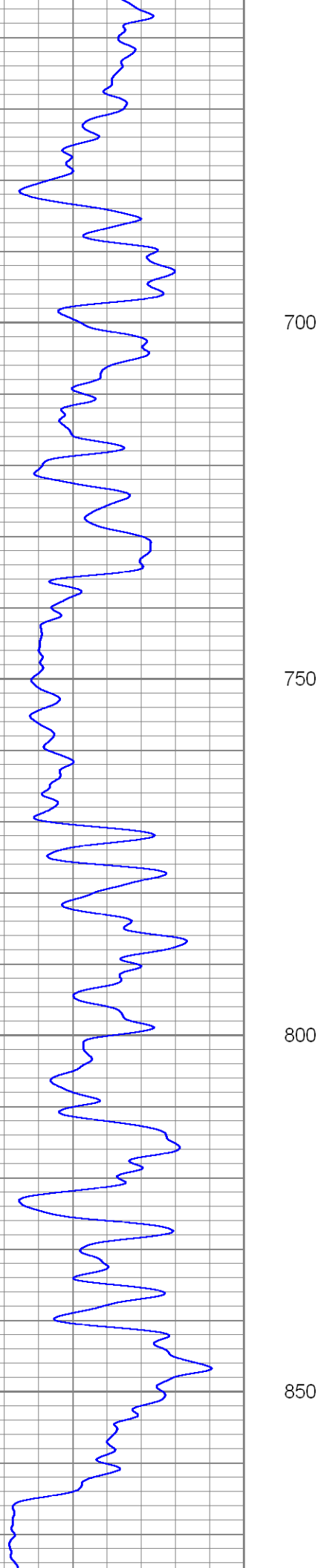
500

550

600

650



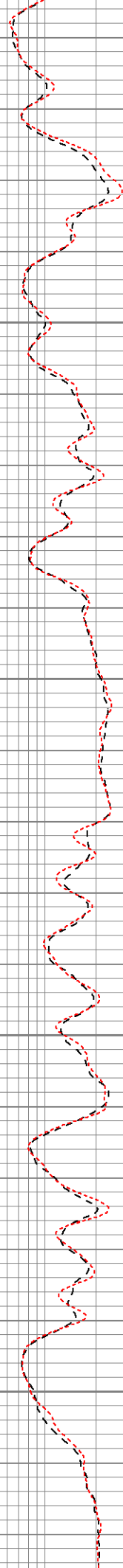


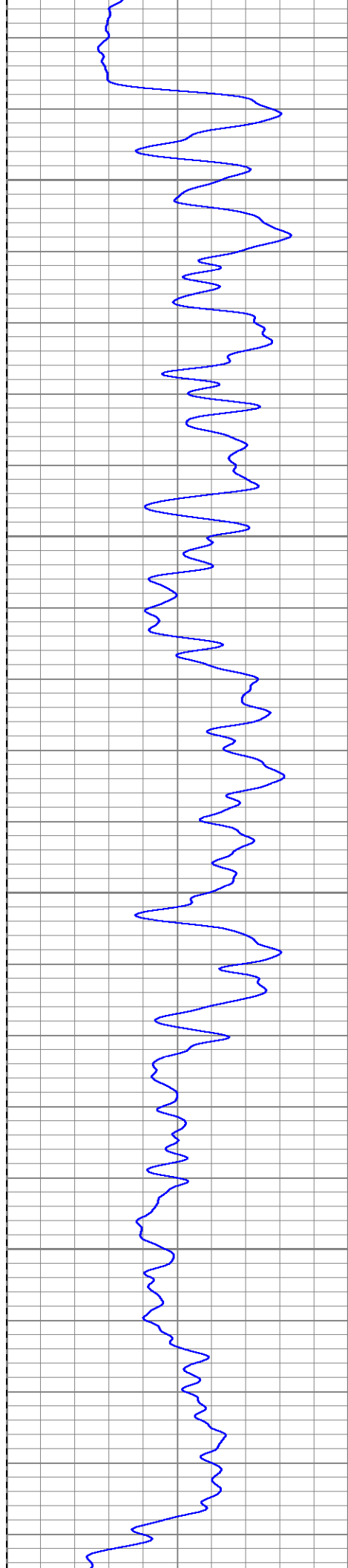
700

750

800

850



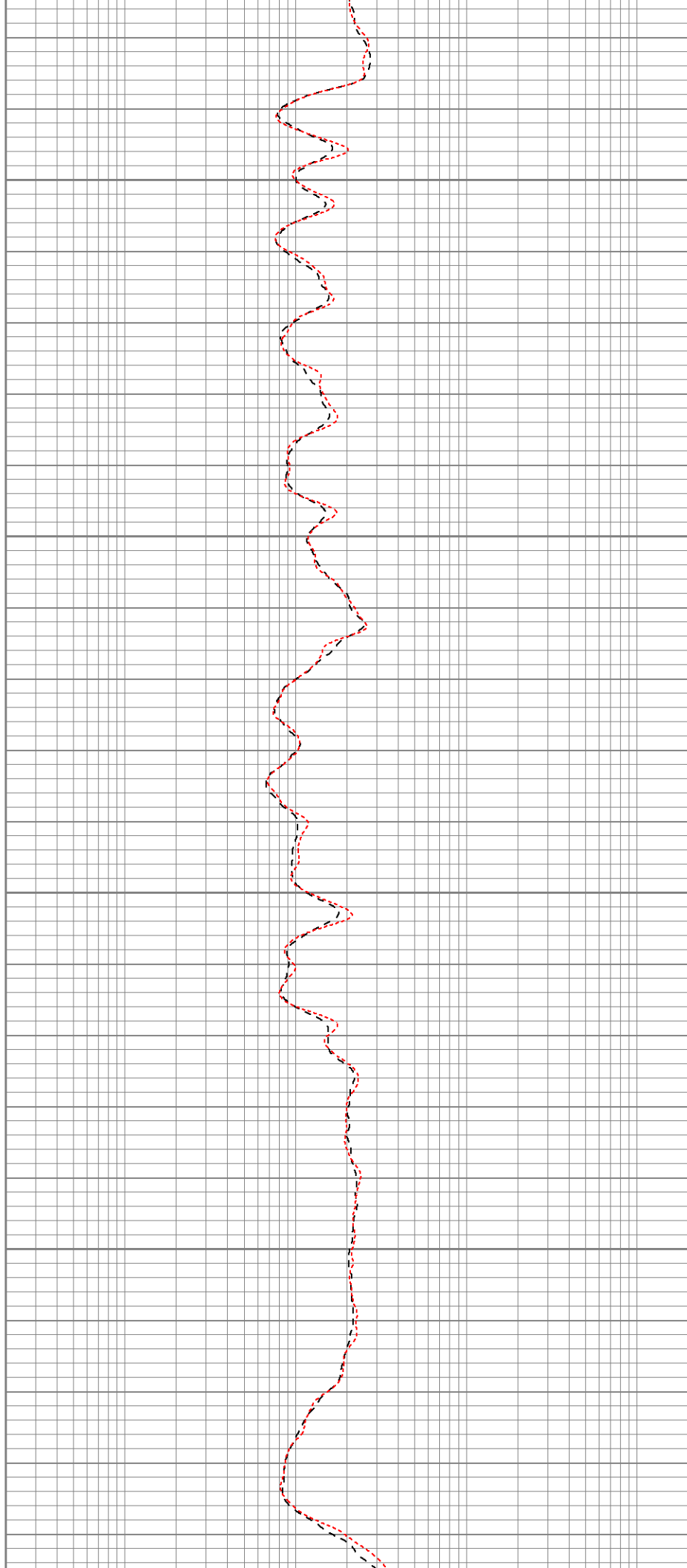


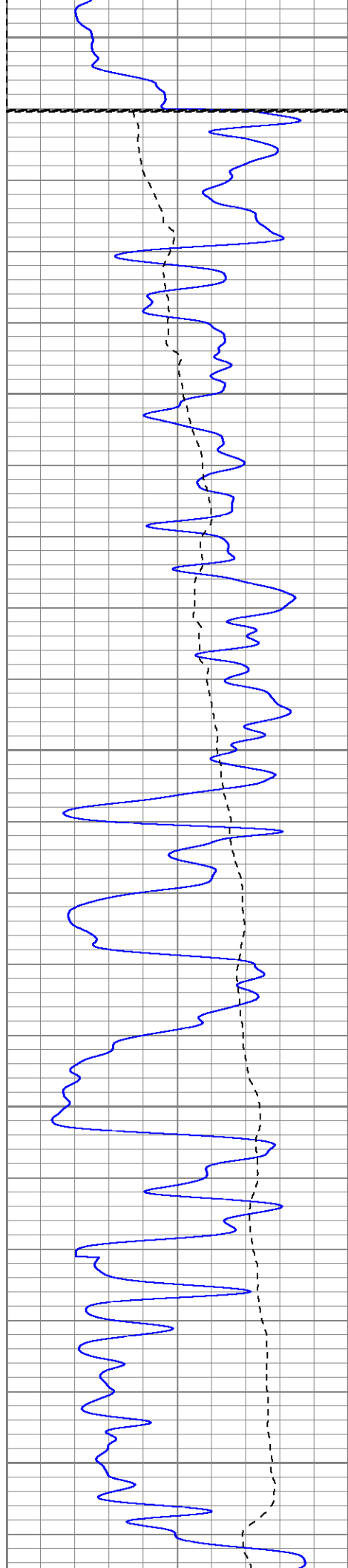
900

950

1000

1050





1100

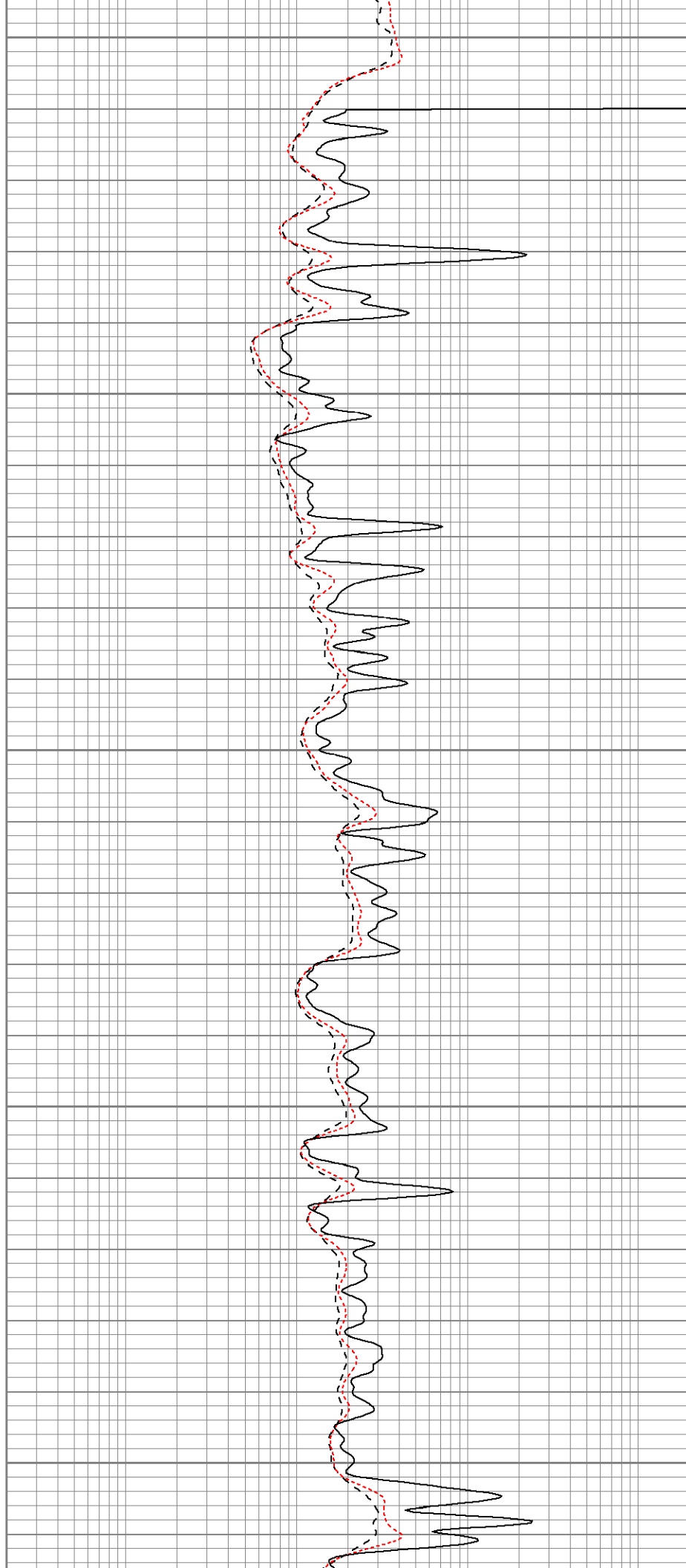
Fluid Level

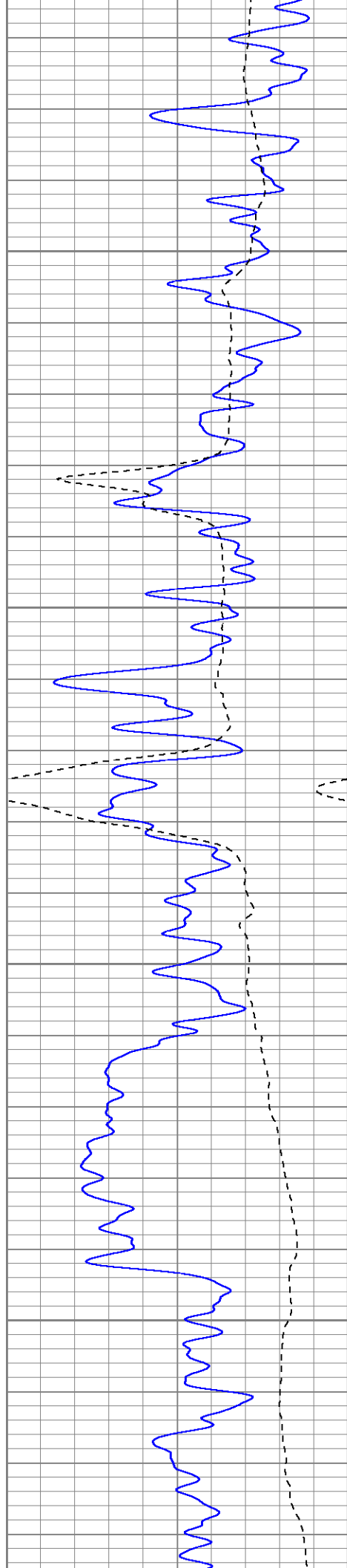
1150

1200

1250

1300



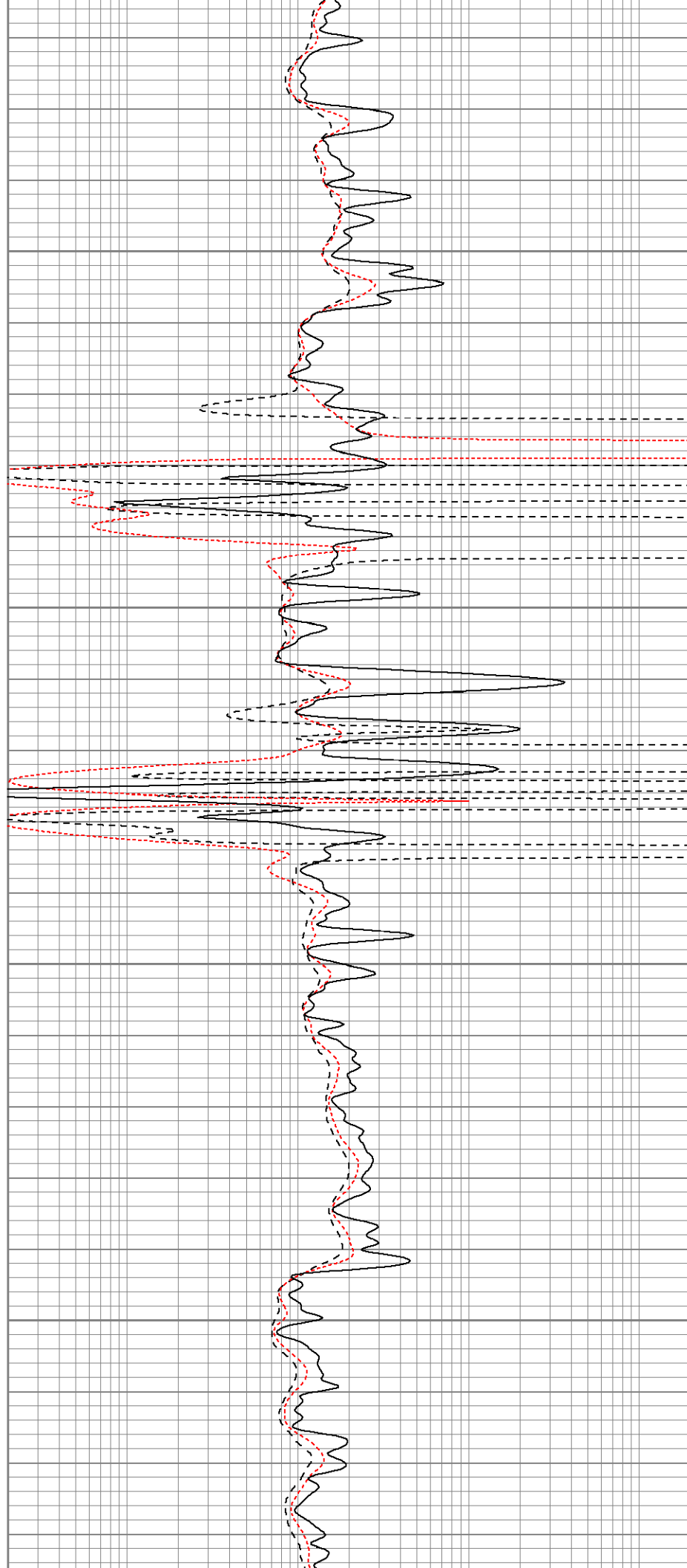


1350

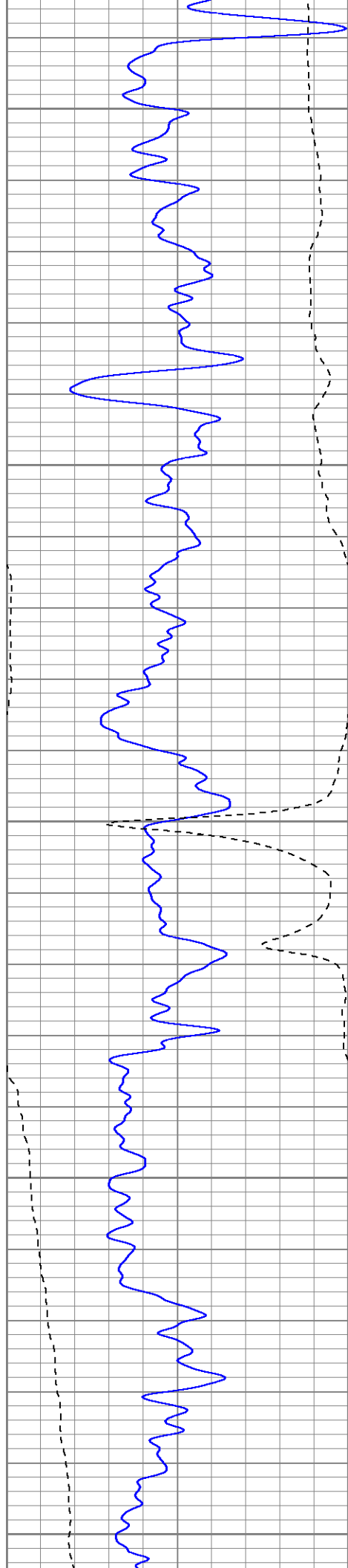
1400

1450

1500







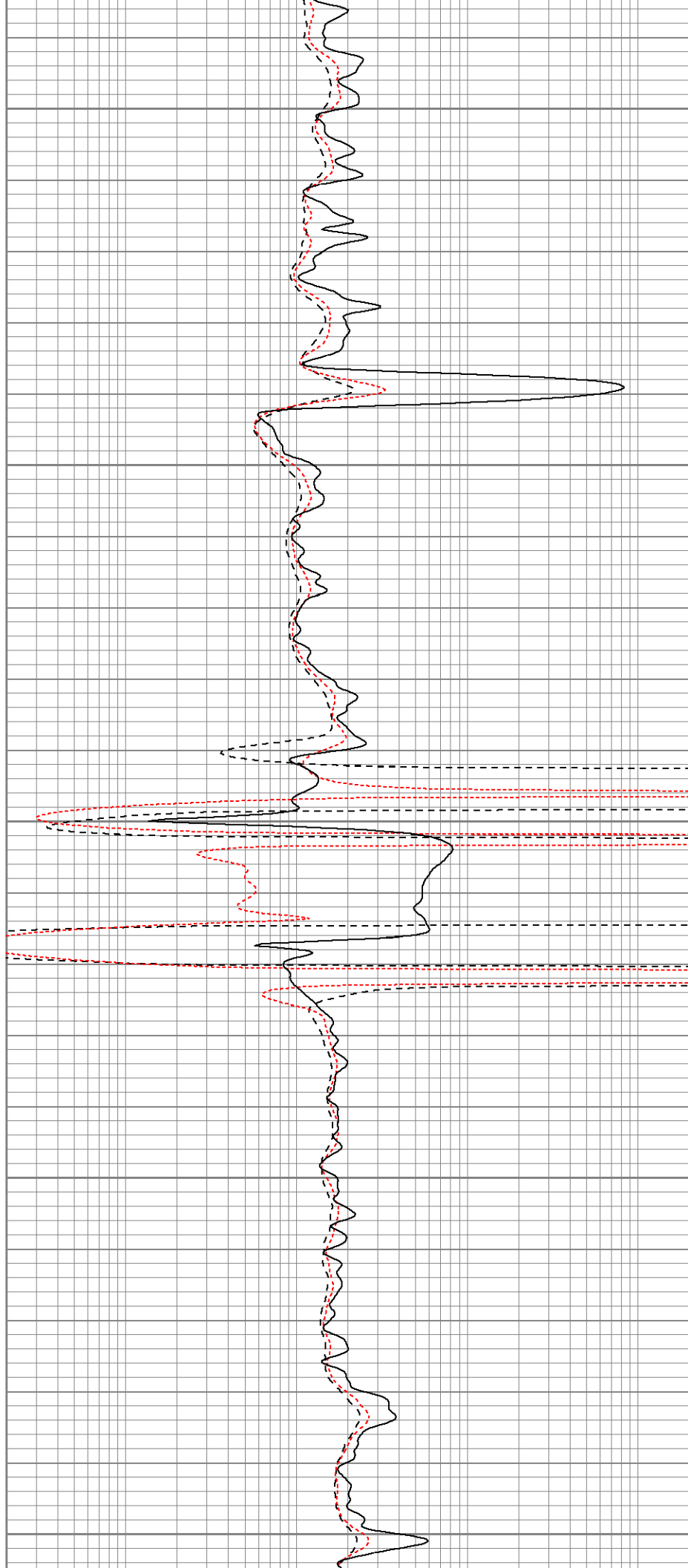
1550

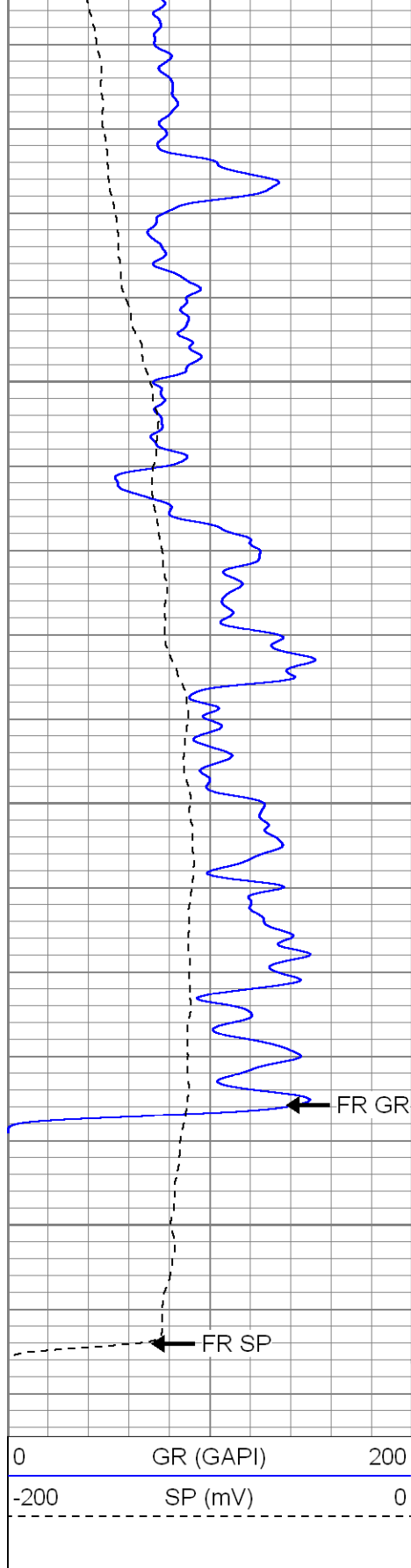
1600

1650

1700

1750

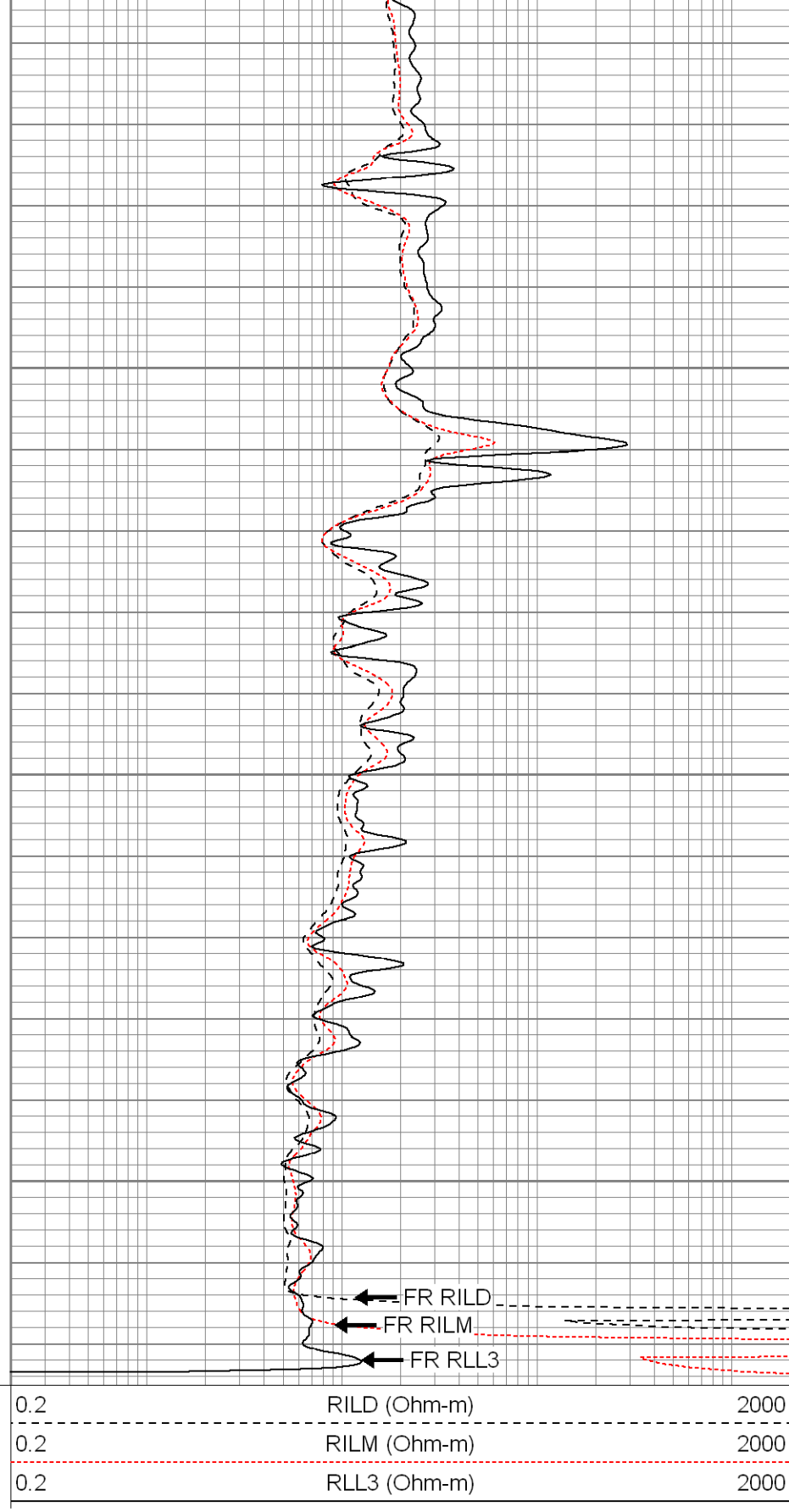




1800

1850

1900



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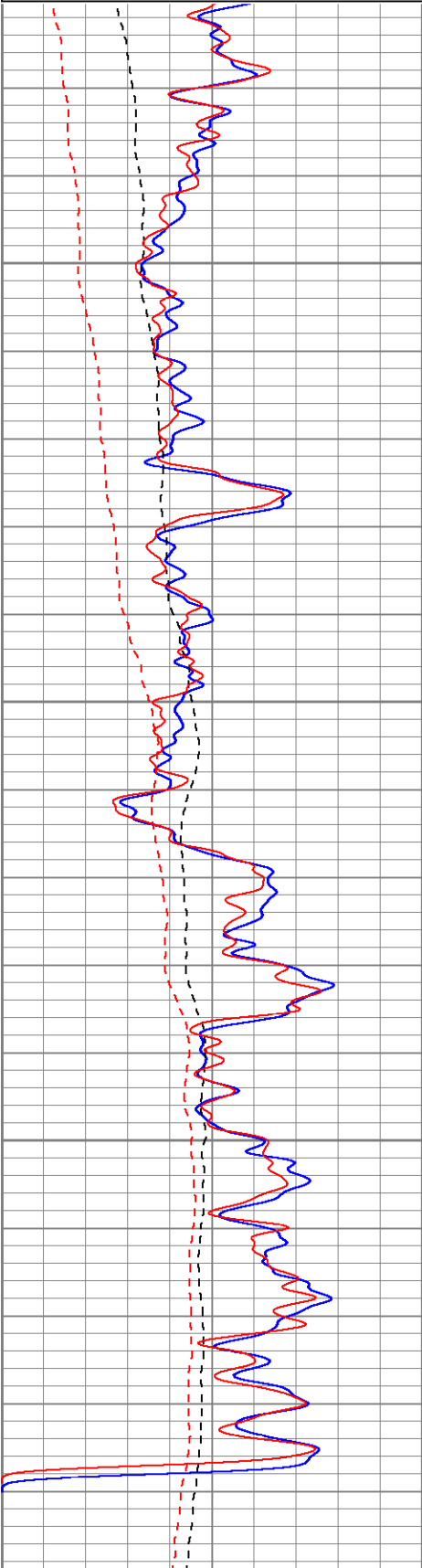
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# Repeat Pass

Database File: xtoac0402.db  
Dataset Pathname: pass1.1

0	GR (GAPI)	200
-200	SP (mV)	0
0	GR-repeat (GAPI)	200
-200	SP-repeat (mV)	0

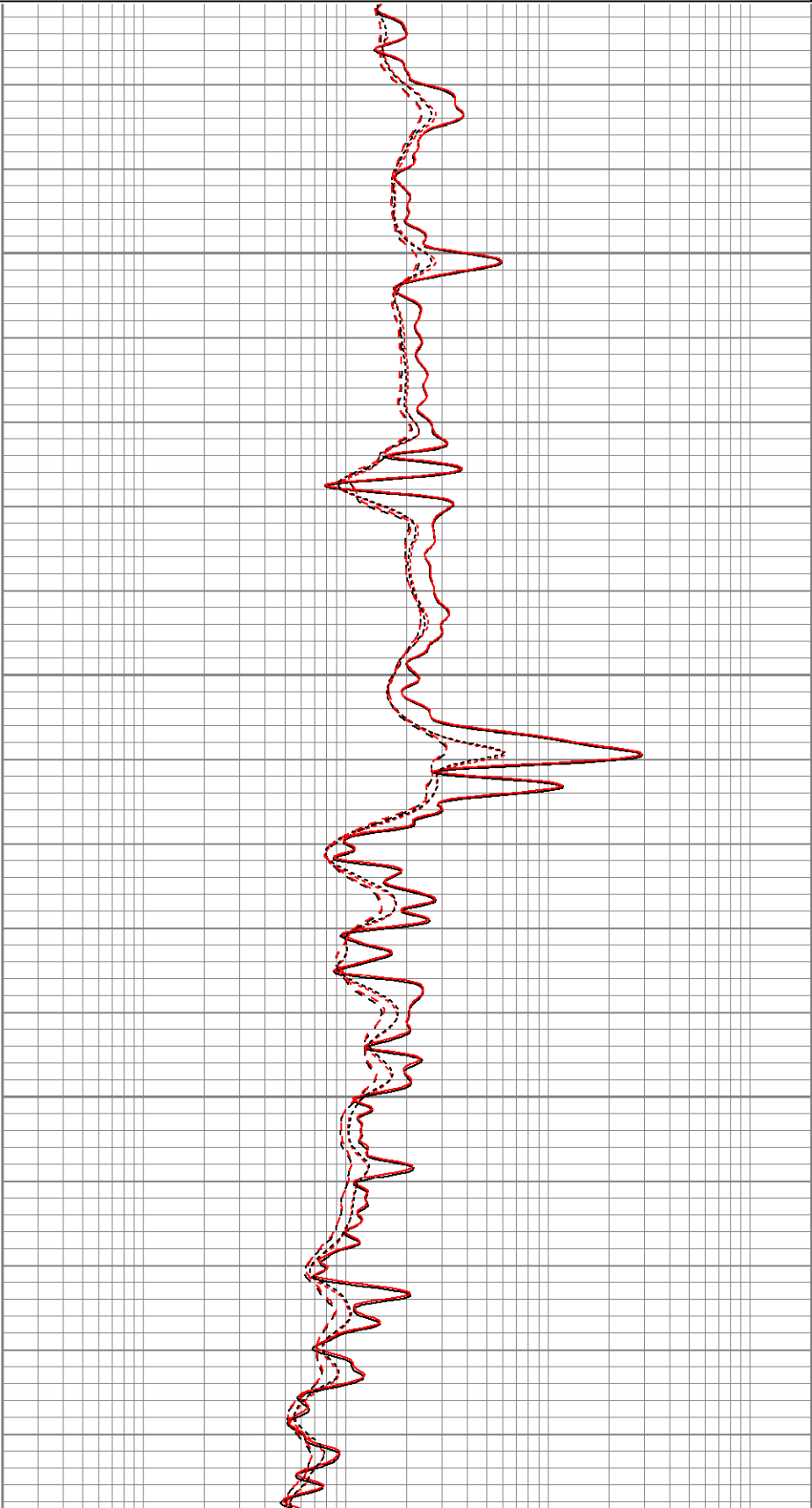
0.2	RILD (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RLL3-repeat (Ohm-m)	2000
0.2	RILM-repeat (Ohm-m)	2000
0.2	RILD-repeat (Ohm-m)	2000

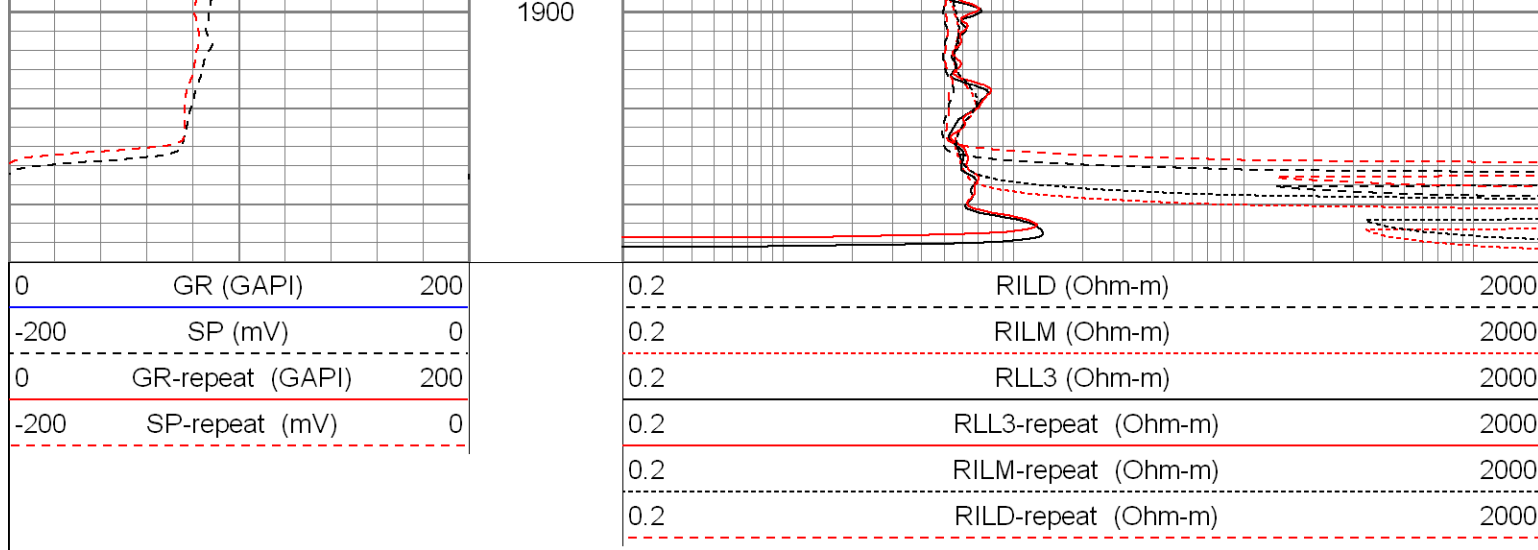


1750

1800

1850





Calibration Report		
Database File:	xtoac0402.db	
Dataset Pathname:	pass1	
Dataset Creation:	Sat Aug 16 18:22:41 2008 by Log Open-Cased 070814	

### Dual Induction Calibration Report

Serial-Model:	5375-G
Surface Cal Performed:	Sat Aug 16 17:58:22 2008
Downhole Cal Performed:	Sat Aug 16 17:58:59 2008

Surface Calibration									
Loop:	Readings			References			Results		
	Air	Loop		Air	Loop		m	b	
Deep	0.007	0.626	V	0.000	500.000	mmho-m	808.272	-6.019	
Medium	0.009	0.750	V	0.000	550.000	mmho-m	742.800	-6.787	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.007	0.627	V	0.000	500.000	mmho-m	807.324	-5.997	
Medium	0.009	0.750	V	0.000	550.000	mmho-m	742.396	-6.883	

Downhole Calibration									
Internal:	Readings			References			Results		
	Zero	Cal		Zero	Cal		m	b	
Deep	-0.020	500.730	mmho-m	-0.015	500.572	mmho-m	1.000	0.005	
Medium	0.231	550.032	mmho-m	0.100	550.399	mmho-m	1.001	-0.132	
Shallow	2.510	0.016	V	500.000	2.000	Ohm-m	159.679	-7.400	

### Compensated Density Calibration Report

Serial-Model:	901-2.75POH
Source / Verifier:	/
Master Calibration Performed:	Sat Aug 16 17:41:42 2008

Master Calibration					
	Density			Far Detector	Near Detector
Magnesium	1.710	g/cc		1044.92	534.39
Aluminum	2.500	g/cc		100.07	260.70

Aluminum 2.590 g/cc 190.27 268.70 cps

Spine Angle = 68.02

Density/Spine Ratio = 0.479

Size

Reading

Small Ring  
Large Ring

8.00 in  
17.00 in

2.48 V  
4.28 V

### Neutron Calibration Report

Serial Number: 803  
Tool Model: 2.75POH  
Performed: Sun Aug 10 17:42:42 2008

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps



### Gamma Ray Calibration Report

Serial Number: 801  
Tool Model: 2.75POH  
Performed: Wed Aug 13 17:42:21 2008

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.8000 GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)	
GR	37.81		None	0.75	1.50	5.00	
			GR-2.75POH (801) Probe	3.73	2.75	43.00	
NEU	32.27		NEU-2.75POH (803) Probe Epithermal	4.75	2.75	58.00	
			CDL-2.75POH (901) Probe	8.43	2.75	106.00	
LSD	24.44			Probe	0.89	3.50	20.00
DCAL	24.16						
SSD	23.91						

