

Company	Pioneer Natural Resources	Company	Pioneer Natural Resources
Well	Cave Canyon 23-4 Tr	Well	Cave Canyon 23-4 Tr
Field	Purgatoire River	Field	Purgatoire River
County	Las Animas	County	Las Animas
State	Colorado	State	Colorado
Location:	APL # : 05 071 09665 00	Other Services	CDNL
SEC 4 TWP 33S RGE 67W	1792' FSL & 2216' FWL		
Permanent Datum	Ground Level	Elevation	7710'
Log Measured From	Kelly Bushing 4' AGL		
Drilling Measured From	Kelly Bushing		
Date	6-14-11		
Run Number	One		
Depth Driller	1820'		
Depth Logger	1814'		
Bottom Logged Interval	1812'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 829'		
Casing Logger	828'		
Bit Size	7 7/8"		
Type Fluid in Hole	Airated 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	2:00 P.M.		
Time Logger on Bottom	5:45 P.M.		
Maximum Recorded Temperature	91 DEG F		
Equipment Number	T590		
Location	Trinidad		
Recorded By	C. Sisneros		
Witnessed By	Mr. Derrick Berry		

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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.

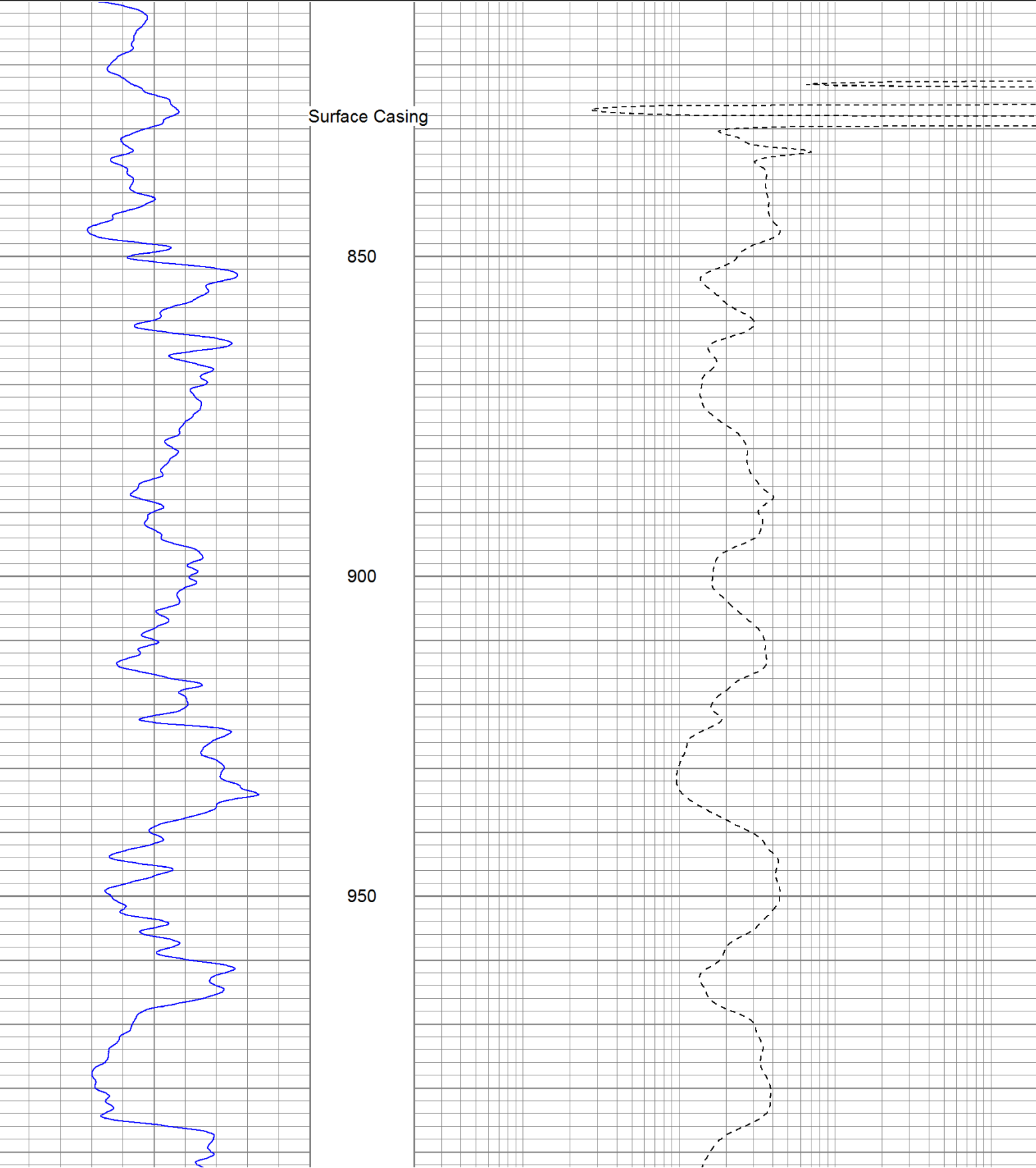
Comments

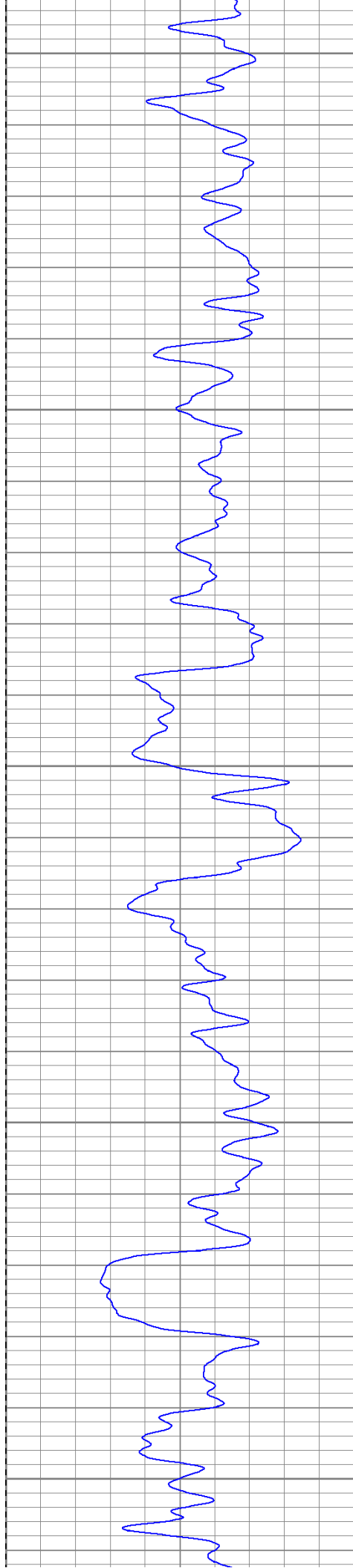
Directions:
Wet Canyon, turn left up Cougar Ridge, at y go right,
stay straight around horse corrals and next left to location.

Database File: cavecanyontr.db
Dataset Pathname: pass3.1
Presentation Format: iel
Dataset Creation: Fri Jun 17 16:01:46 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

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

0.2	DIR (Ohm-m)	2000
0.2	SN (Ohm-m)	2000





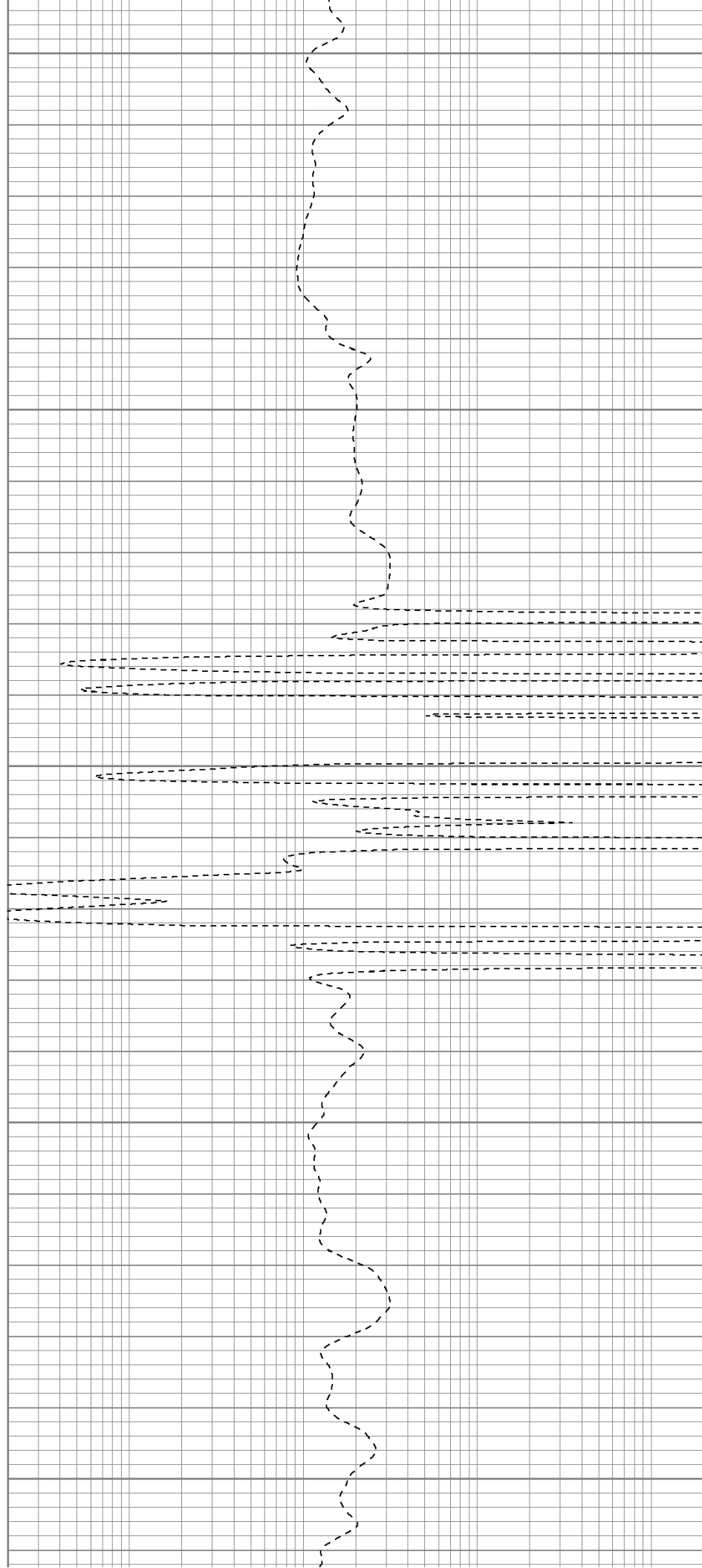
1000

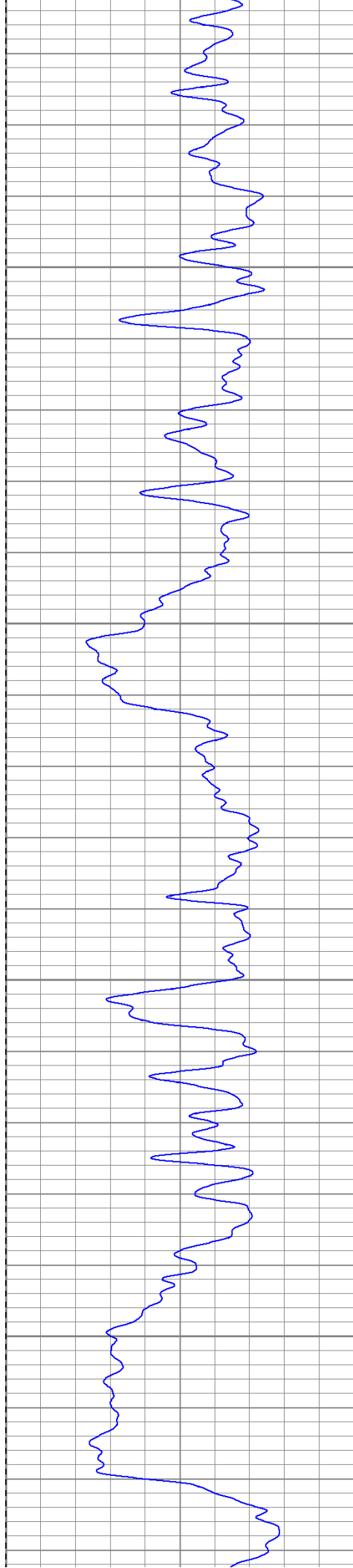
1050

1100

1150

1200



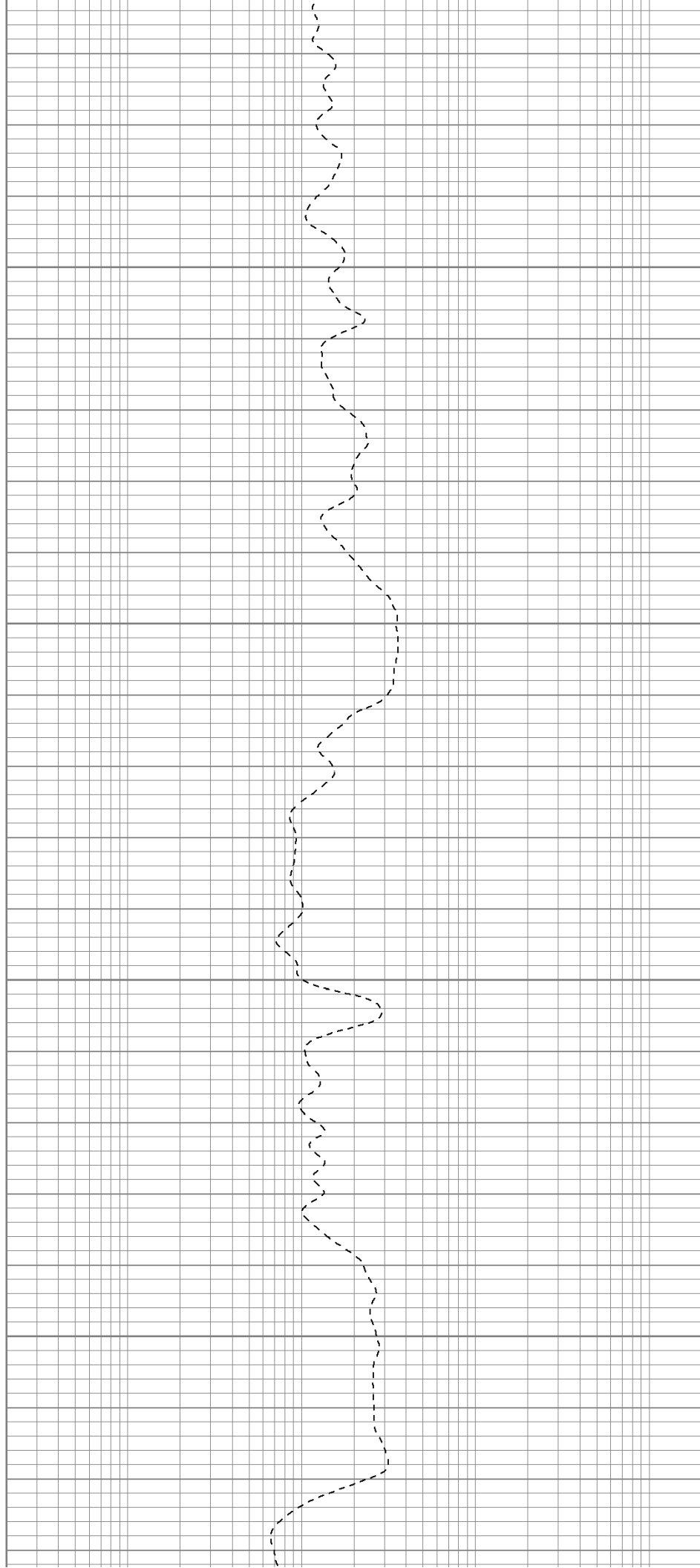


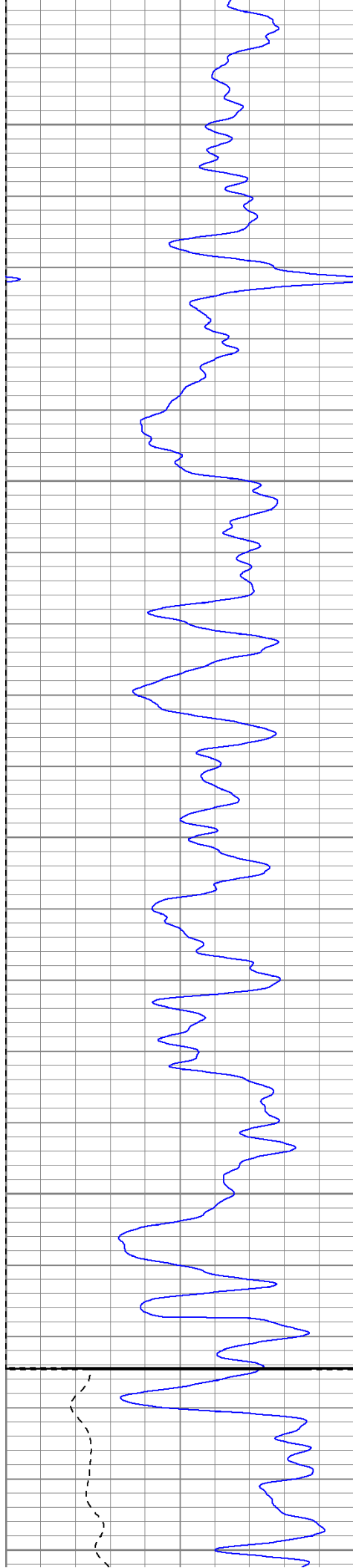
1250

1300

1350

1400





1450

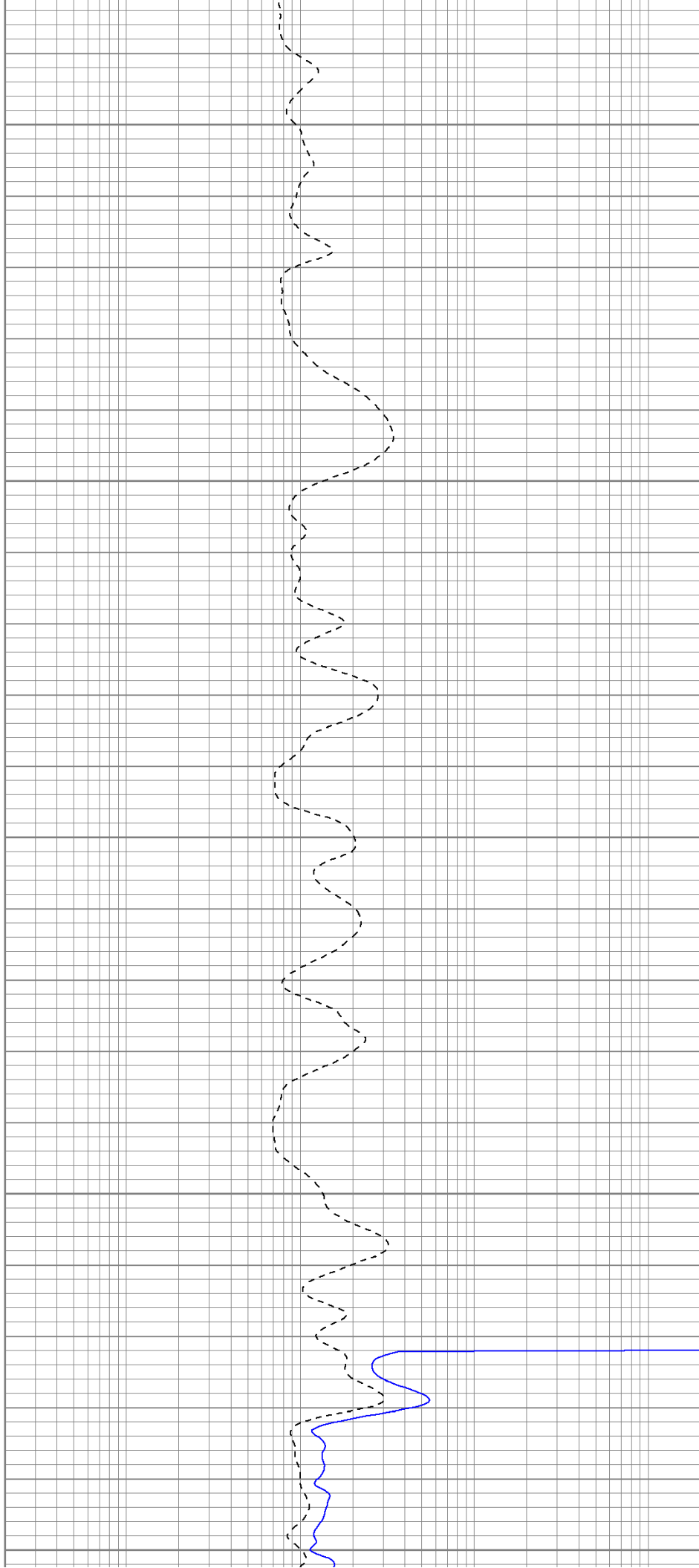
1500

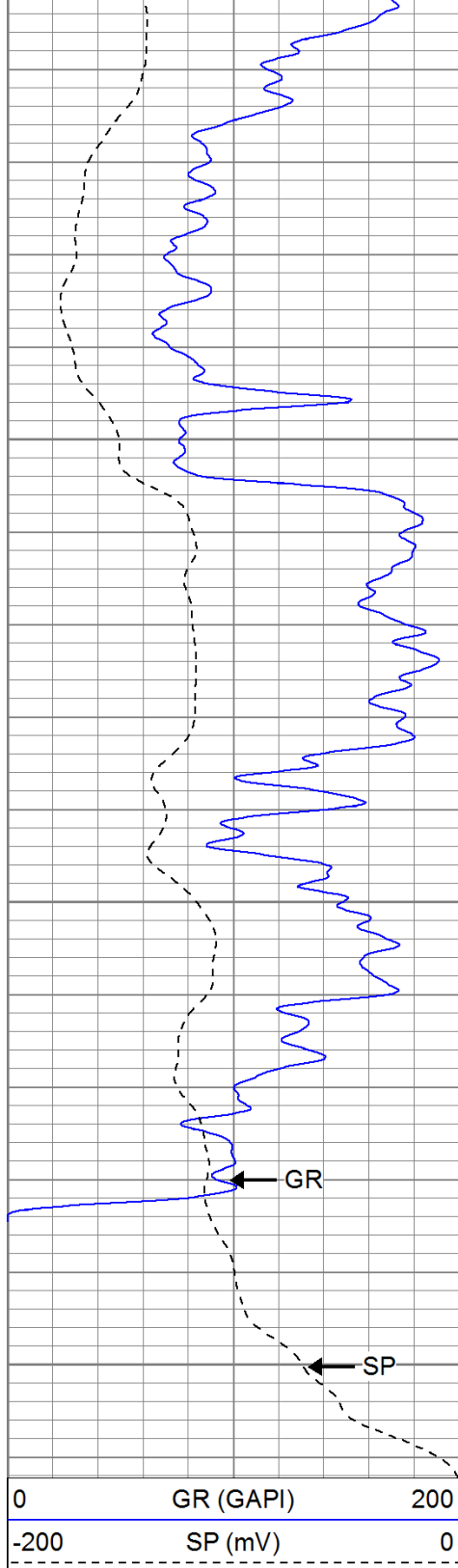
1550

1600

Fluid Level

1650

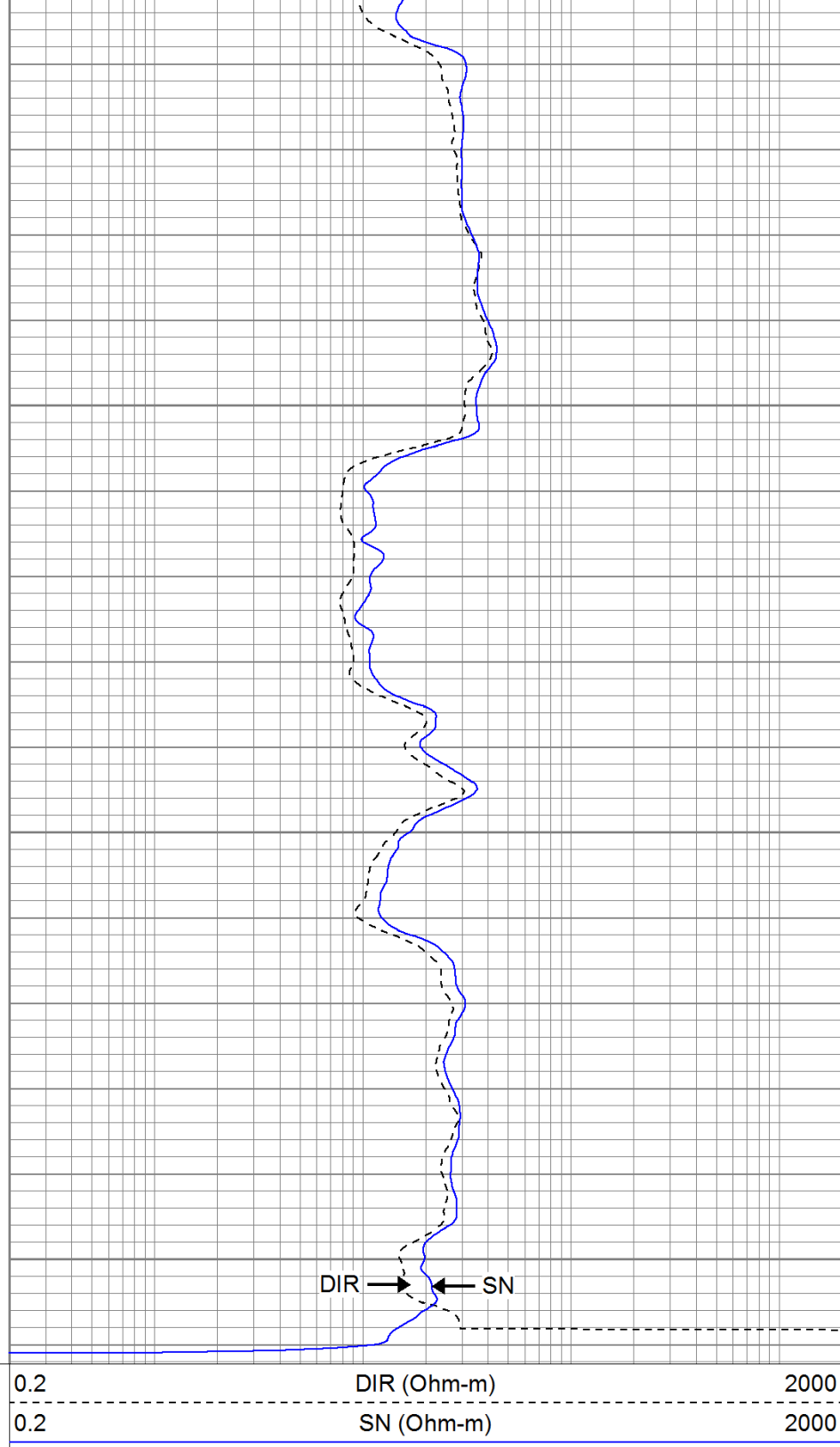




1700

1750

1800

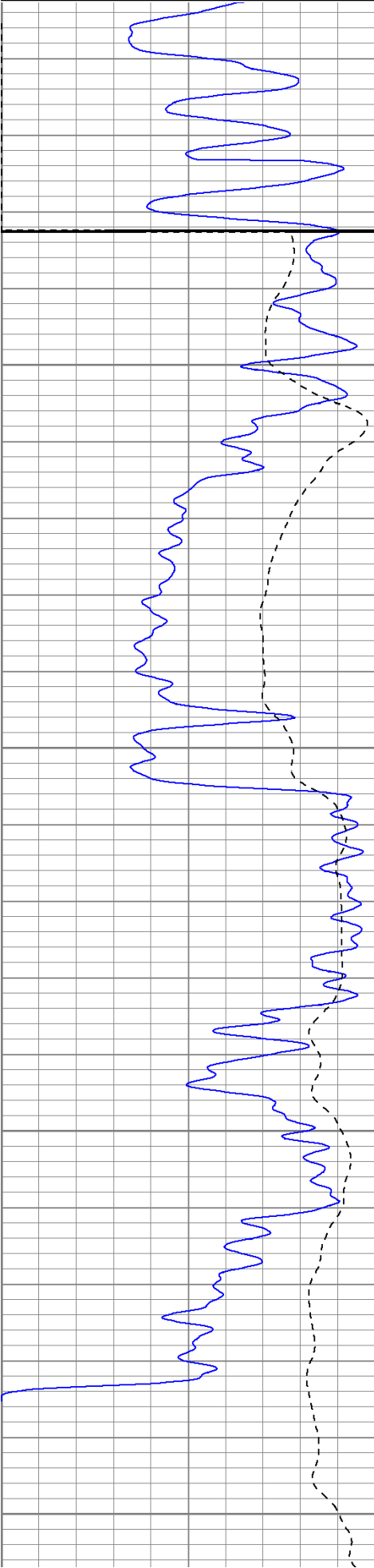


Repeat Pass

Database File: cavecanyontr.db
 Dataset Pathname: pass2.1
 Presentation Format: iel
 Dataset Creation: Fri Jun 17 16:07:41 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

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

0.2	DIR (Ohm-m)	2000
0.2	SN (Ohm-m)	2000

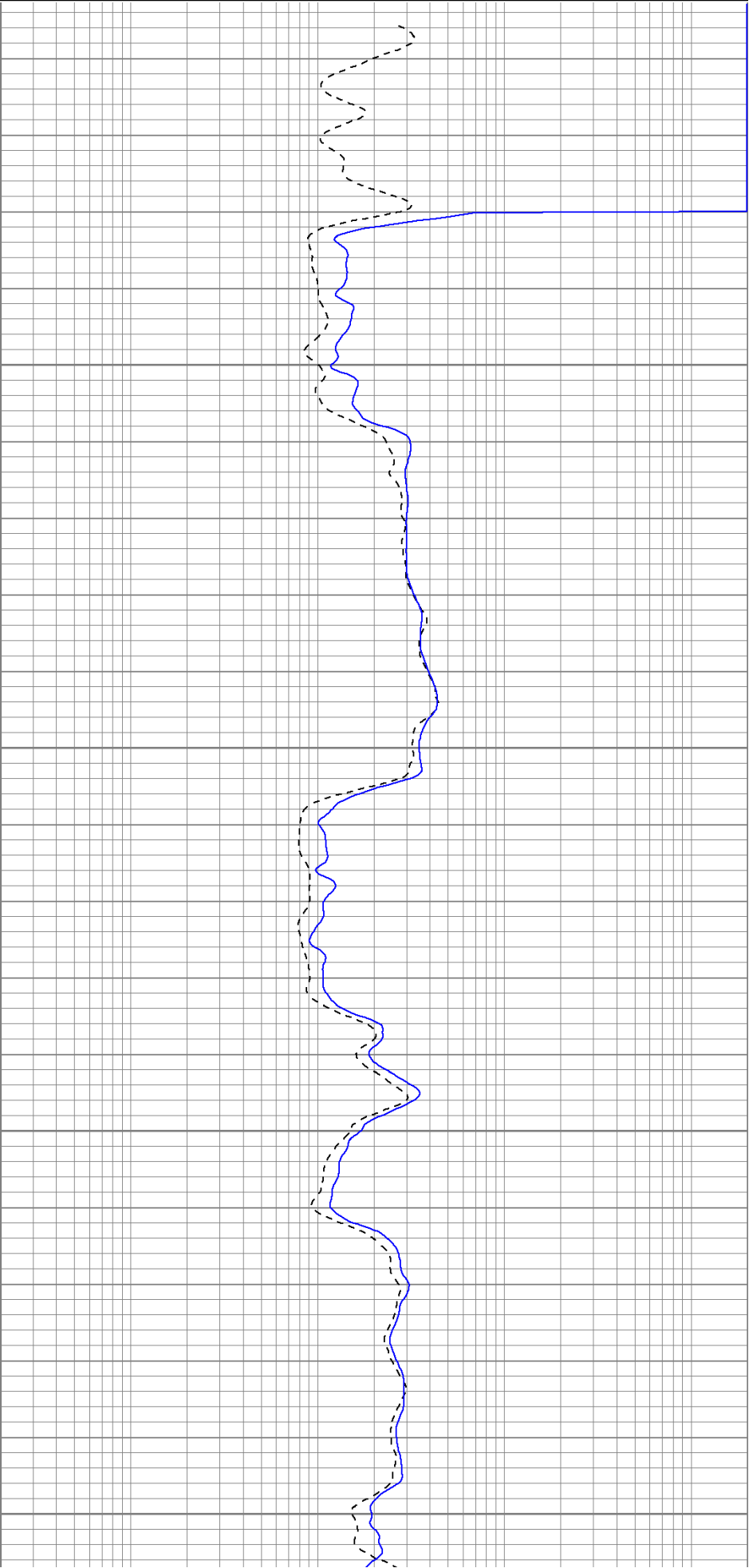


1650

1700

1750

1800



0	GR (GAPI)	200	0.2	DIR (Ohm-m)	2000
-200	SP (mV)	0	0.2	SN (Ohm-m)	2000

Calibration Report					
Database File:	cavecanyontr.db				
Dataset Pathname:	pass2				
Dataset Creation:	Tue Jun 14 18:11:16 2011 by Log Open-Cased 110302				

Induction Tool Calibration Report					
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Serial Number:	903				
Tool Model:	Probe				
Downhole Cal Performed:	Wed Apr 13 02:24:40 2011				
Surface Cal Performed:	Mon Jan 17 12:47:16 2011				
After Survey Verification Performed:					

Surface Calibration:	Air	Loop	
Conductivity Reference:	0.000	500.000	mmho
Conductivity Reading:	-0.045	0.642	V
Internal Reference:	Zero	Cal	
Conductivity Reference:	0.000	500.000	mmho
Conductivity Reading:	0.006	0.641	V

Downhole Calibration:	Internal Zero	Internal Cal	
Conductivity Reference:	-0.702	499.904	mmho
Conductivity Reading:	-0.082	503.319	V
Short Normal Reference:	0.000	20.000	Ohm-m
Short Normal Reading:	0.006	0.233	V

Results:	Gain	Offset
Loop Conductivity:	728.211	32.770
Downhole Correction:	0.994	-0.621
Short Normal Resistivity:	88.245	-0.569

After Survey Verification	Internal Zero	Internal Cal	
Conductivity Reading:	0.000	0.000	V
Conductivity Result:	0.000	0.000	mmho
Short Normal Reading:	0.000	0.000	V
Short Normal Result:	0.000	0.000	Ohm-m

Compensated Density Calibration Report					
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Serial-Model:	901-2.75POH				
Source / Verifier:	/				
Master Calibration Performed:	Wed Jun 08 09:11:26 2011				
Before Survey Verification Performed:					
After Survey Verification Performed:					

Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1001.79	578.48	cps
Aluminum	2.590	g/cc	180.36	300.39	cps
Spine Angle = 69.08			Density/Spine Ratio = 0.479		
	Size		Reading		
Small Ring	8.00	in	2.50	V	
Large Ring	16.00	in	4.57	V	

Before Survey Verification					
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Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc
After Survey Verification			
Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc
Neutron Calibration Report			
Serial Number:	803		
Tool Model:	2.75POH		
Performed:	Wed Jun 08 13:12:55 2011		
Calibrator Value:	1	NAPI	
Calibrator Reading:	1	cps	
Sensitivity:	1	NAPI/cps	
Gamma Ray Calibration Report			
Serial Number:	804		
Tool Model:	2.75POH		
Performed:	Tue Jun 14 18:09:29 2011		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.6000	GAPI/cps	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	29.58		None	0.75	1.50	5.00
			GR-2.75POH (804) Probe 2.75" Probe Open Hole Gamma Ray	3.73	2.75	43.00
NEU	24.04		NEU-2.75POH (803) Probe Epithermal	4.75	2.75	58.00
			CDL-2.75POH (901) Probe	8.43	2.75	106.00
LSD	16.21					
DCAL	15.94					
SSD	15.69					

