The Perforators LLC

SINGLE INDUCTION LOG

Company	Pioneer Natural Resources
Well	Bilbo Federal 11-24
Field	Purgatoire River
County	Las Animas
State	Colorado

Company Pioneer Natural Resources

Well Bilbo Federal 11-24

Field Purgatoire River

County Las Animas State Colorado

Location: API # : 05 071 09804 00

592' FNL & 264' FWL

SEC 24 TWP 32S RGE 66W

Permanent Datum	Ground Level	Elevation	7570'
Log Measured From	Kelly Bushing 9' AGL		
Drilling Measured From	Kelly Bushing		

Other Services: CDNL

Elevation: K.B. 7579' D.F. ----- G.L. 7570'

Date	12-8-11			
Run Number	One			
Depth Driller	2390'			
Depth Logger	2389'			
Bottom Logged Interval	2387'			
Top Log Interval	Surface Casing			
Casing Driller	8 5/8" @ 922'			
Casing Logger	921'			
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	10:15P.M.			
Time Logger on Bottom	3:15 A.M.			
Maximum Recorded Temperature	///			
Equipment Number	T590			
Location	Trinidad			
Recorded By	C. Sisneros			
Witnessed By	Mr. Ramon Gonzales			

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Comments

Directions:

Bon Carbo, right at post office, left at Polly WD, at T go right, go thru gate, go to top of hill, at y go right, next Y go right, drive thru right side of location, follow rd dead end on location.

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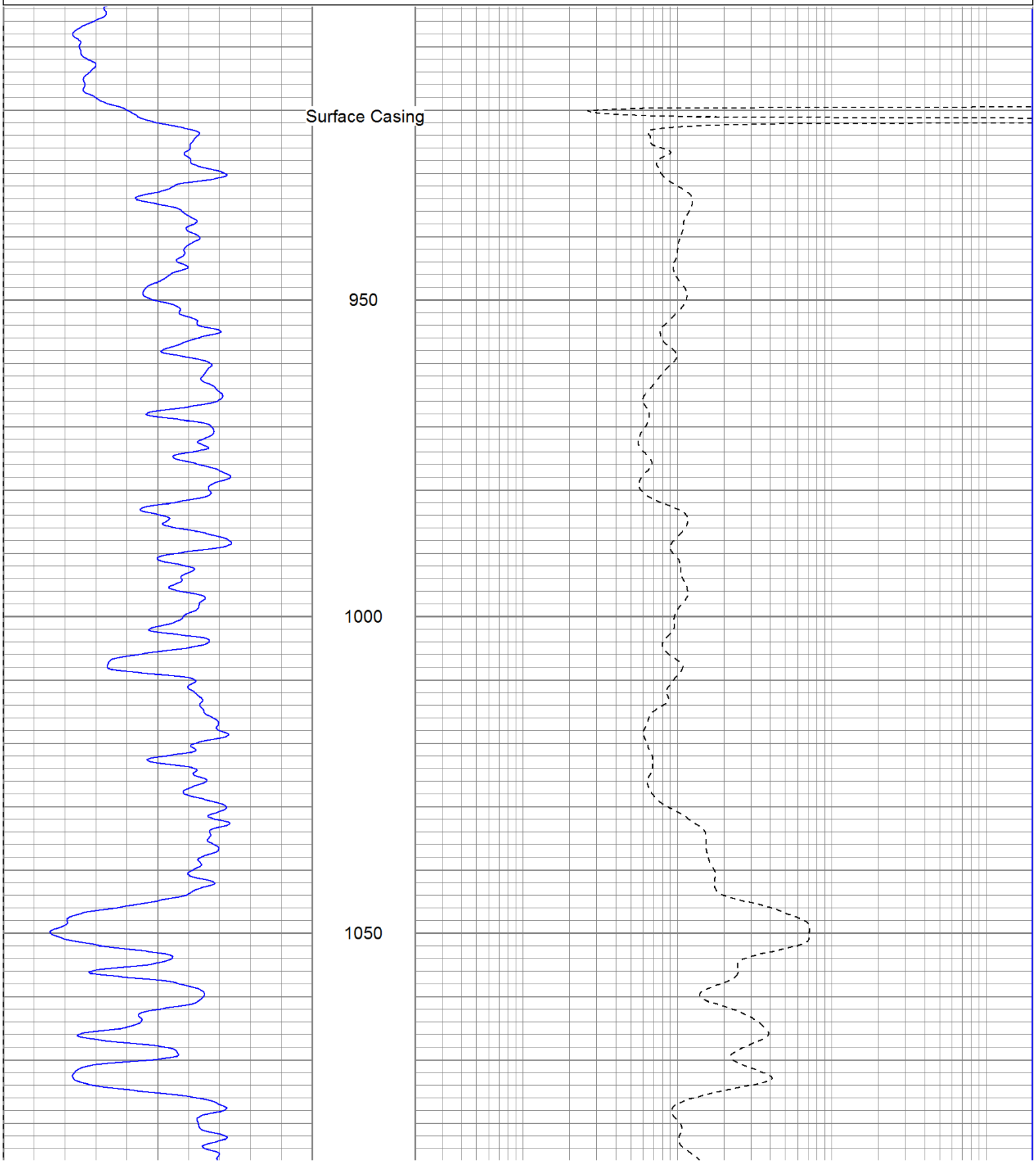
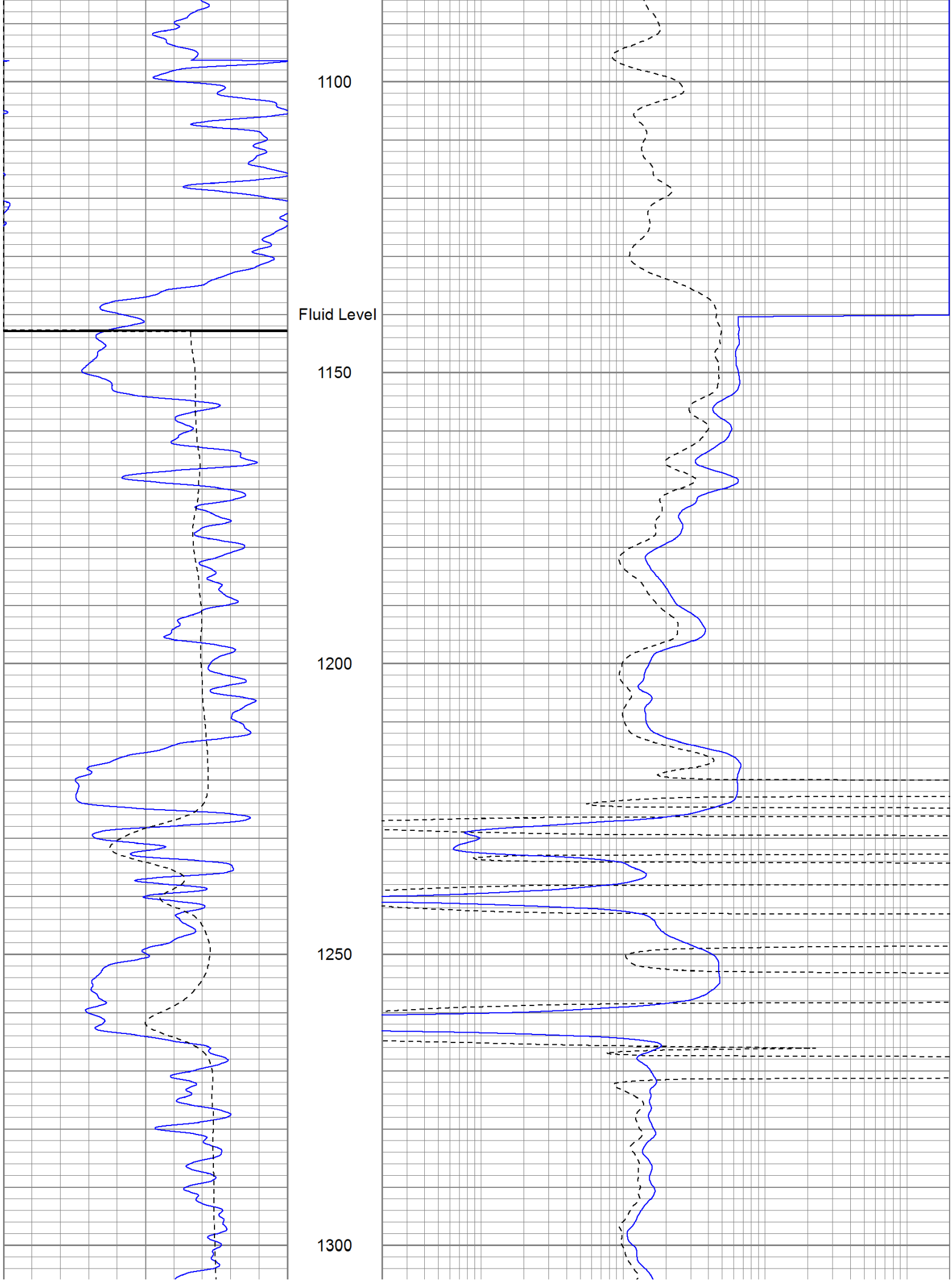
Main Pass

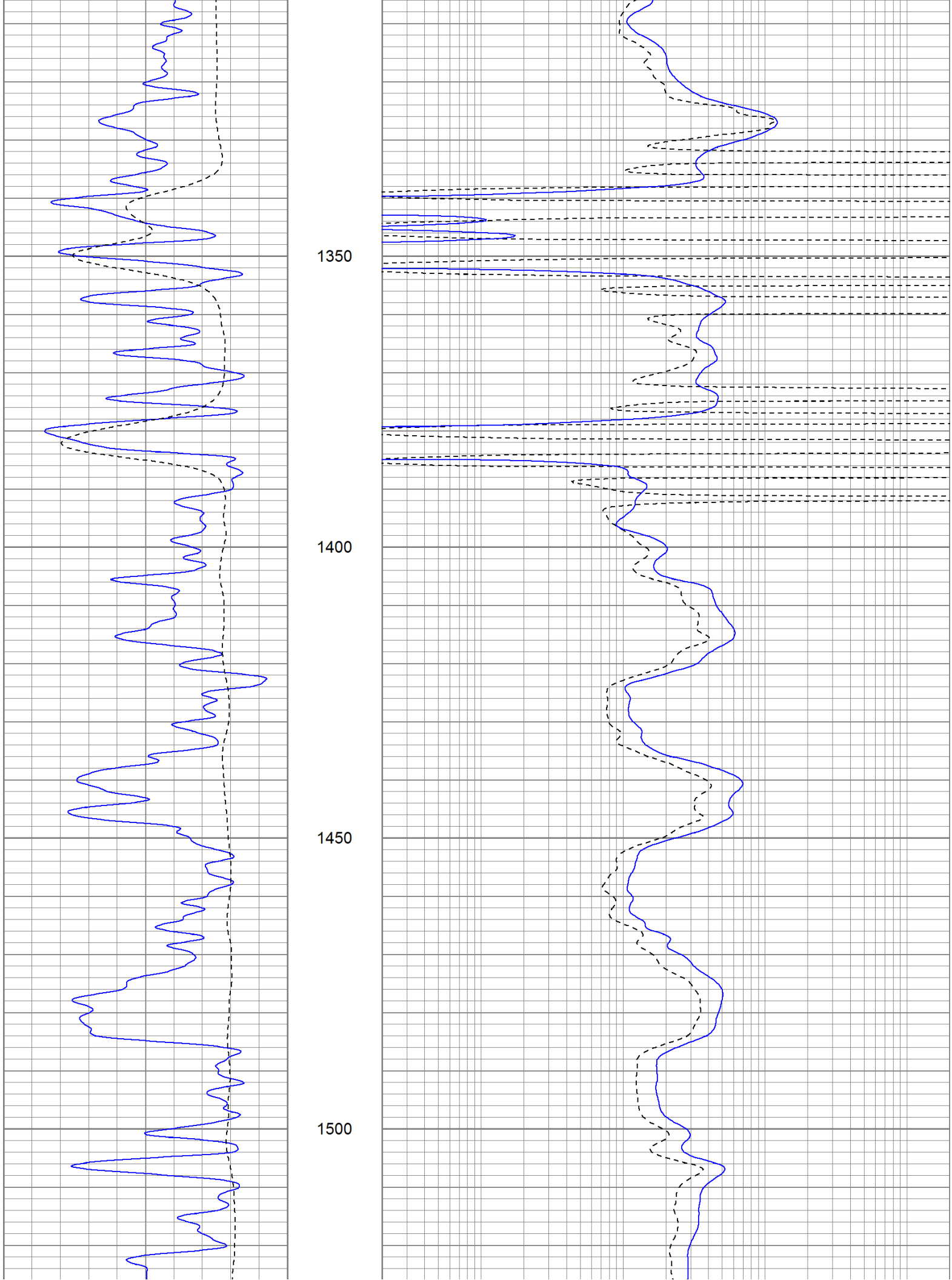
Database File:	bilbofederal.db
Dataset Pathname:	pass3.1
Presentation Format:	iel
Dataset Creation:	Thu Dec 08 04:40:38 2011 by Calc SOC 111108
Charted by:	Depth in Feet scaled 1:240

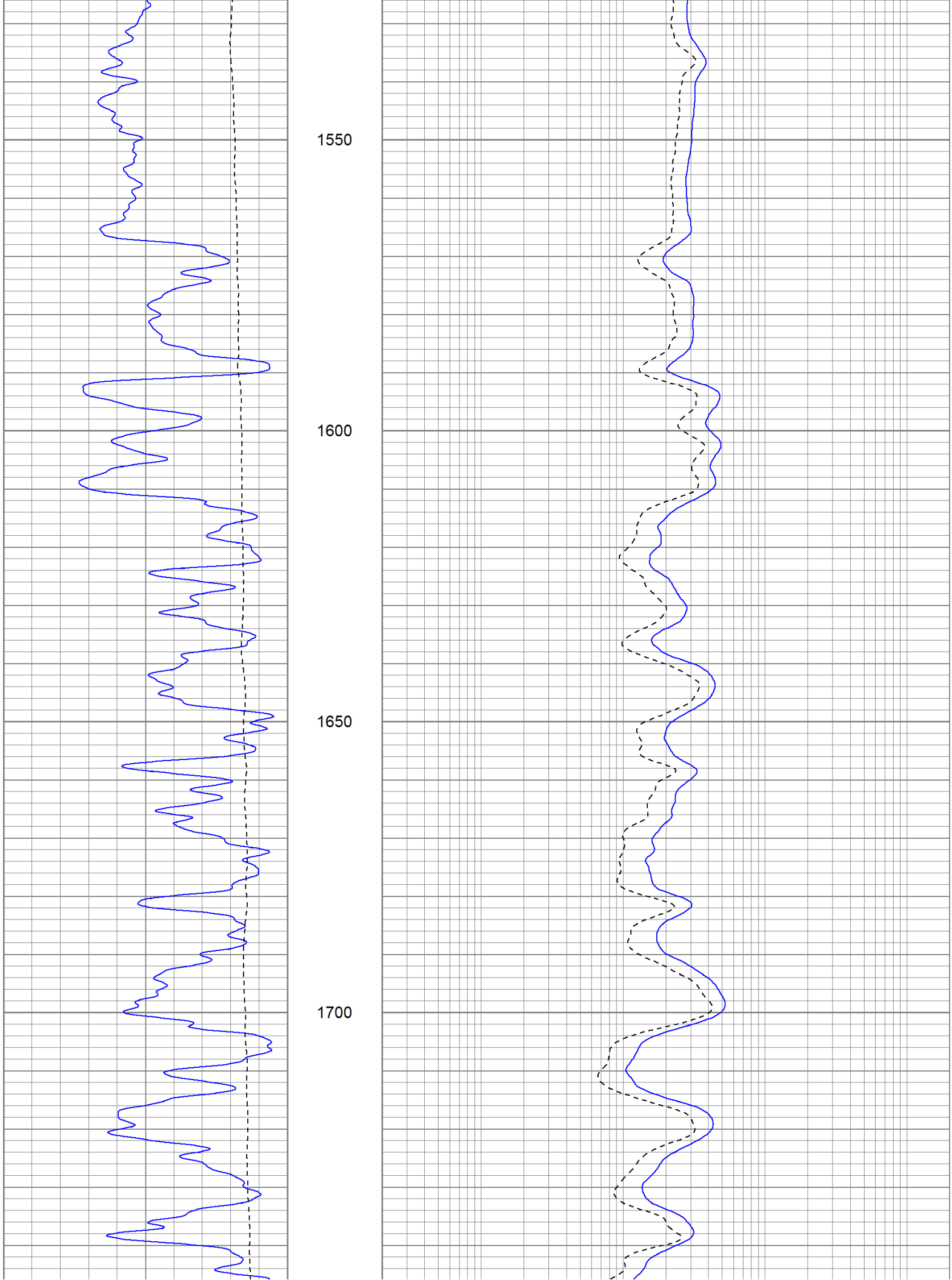
0	GR (GAPI)	200
-200	SP (mV)	0

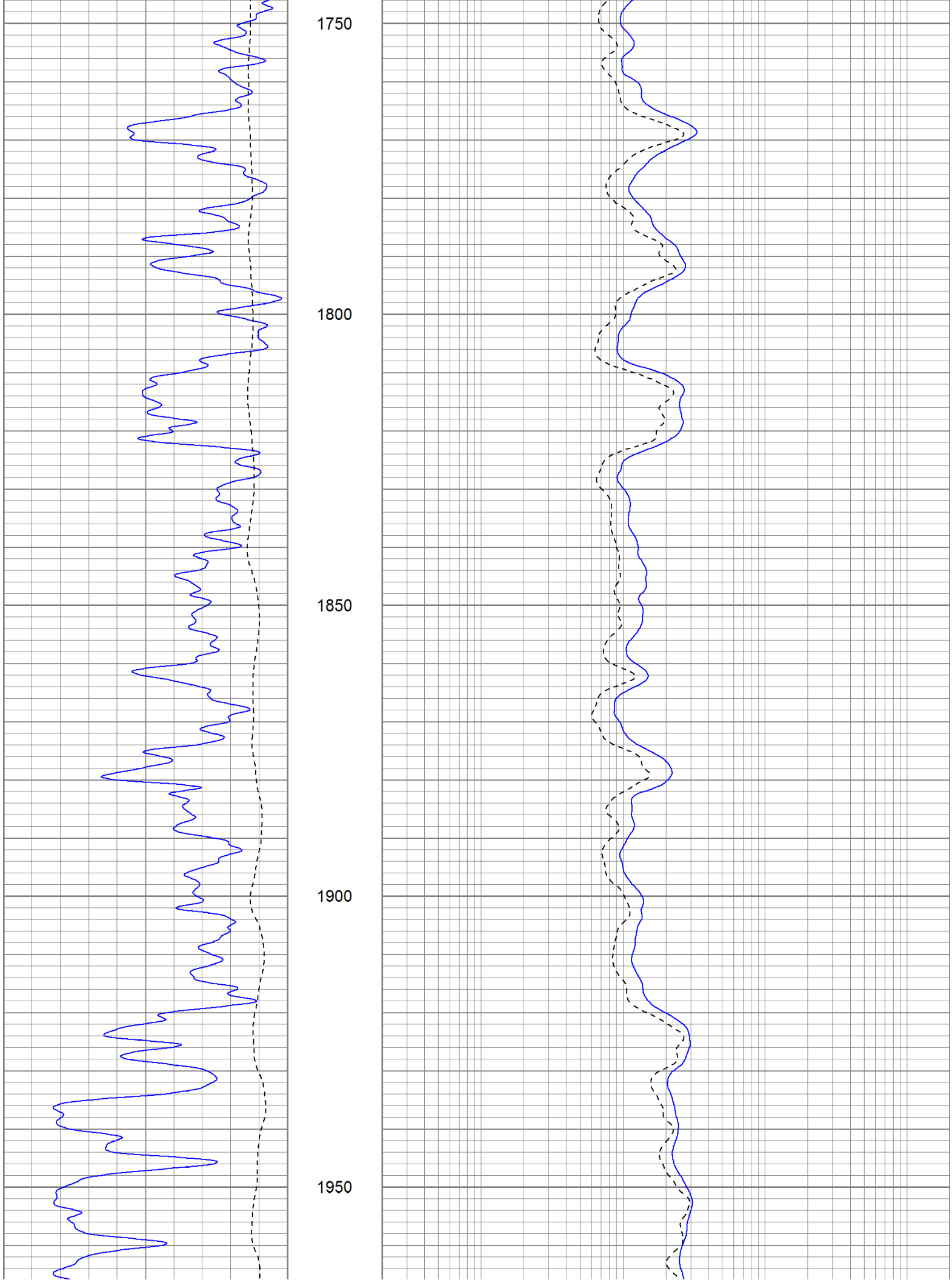
0.2	DIR (Ohm-m)	2000
0.2	SN (Ohm-m)	2000

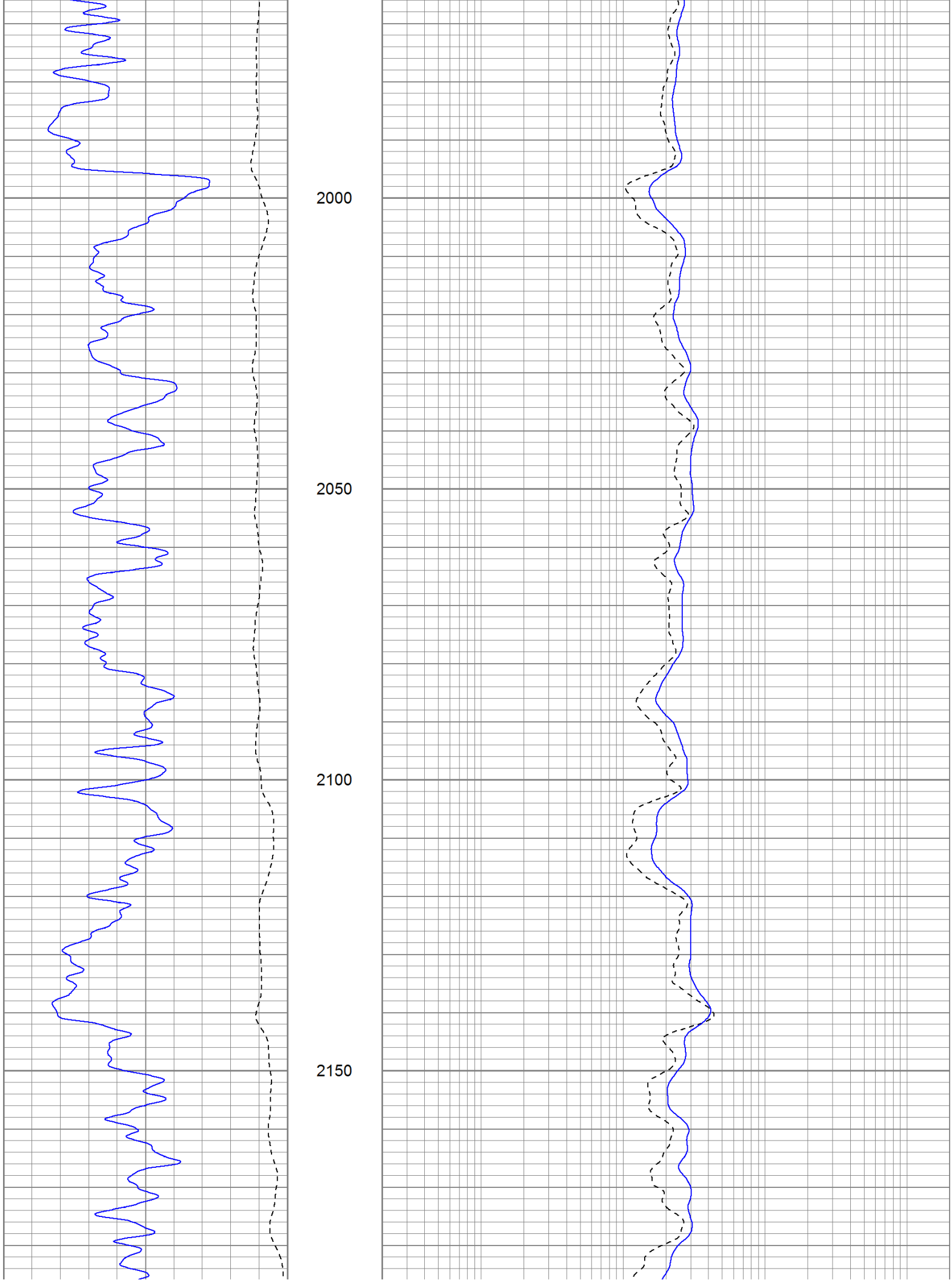


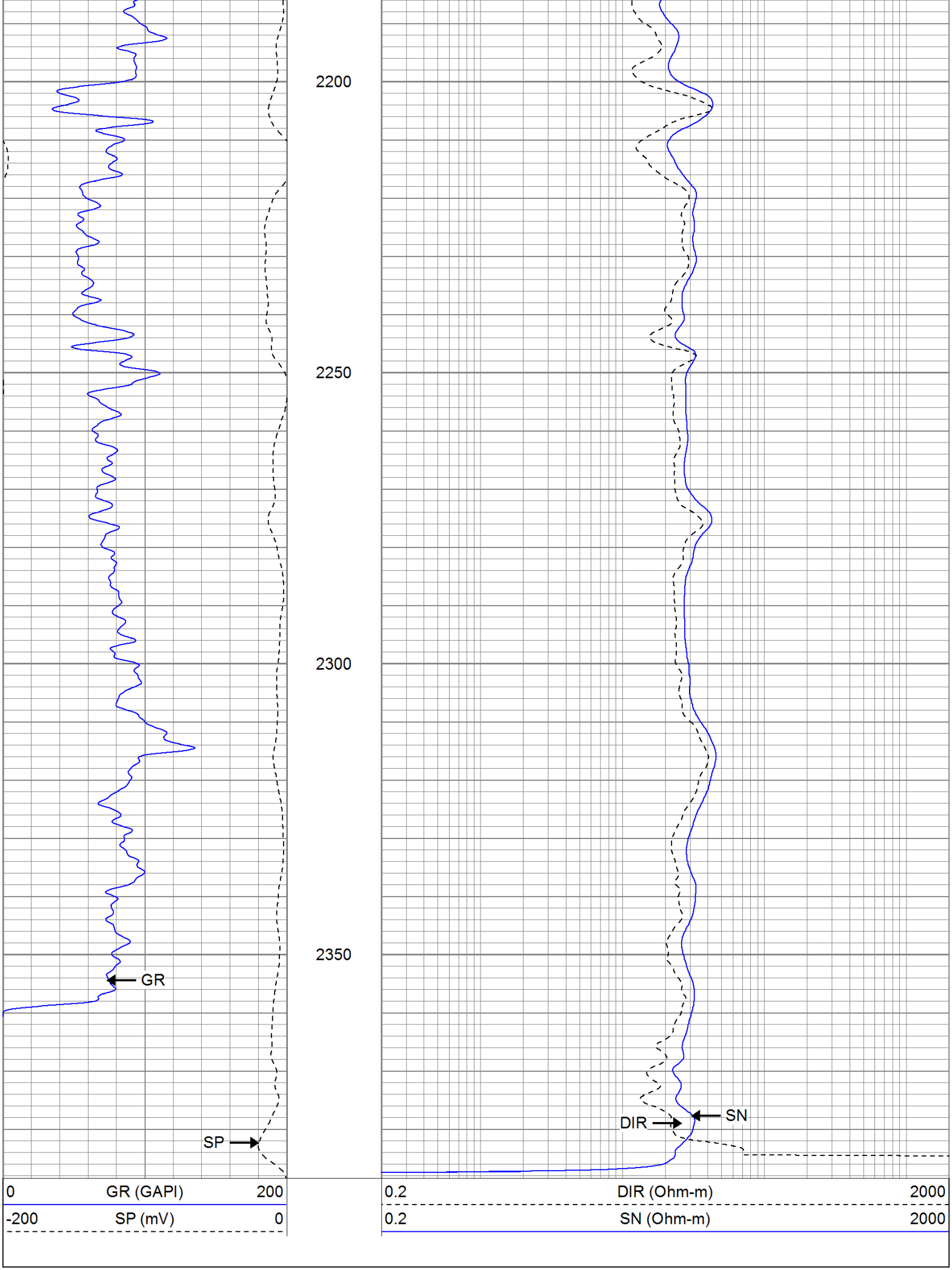

1100
Fluid Level
1150
1200
1250
1300


1350
1400
1450
1500


1550
1600
1650
1700


1750
1800
1850
1900
1950


2000
2050
2100
2150


2200
2250
2300
2350
GR
SP
DIR
SN
0
GR (GAPI)
200
-200
SP (mV)
0
0.2
DIR (Ohm-m)
2000
0.2
SN (Ohm-m)
2000

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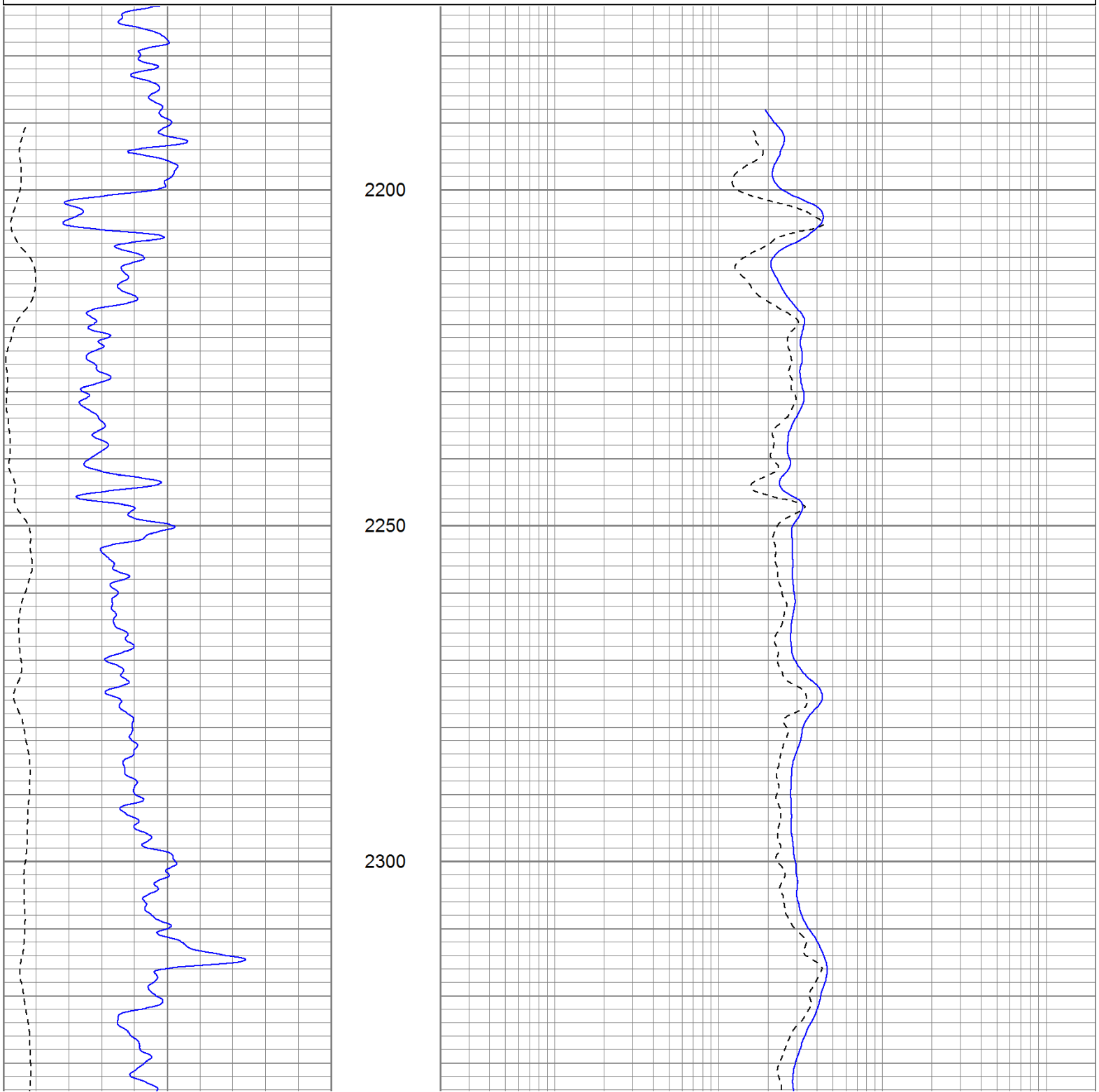
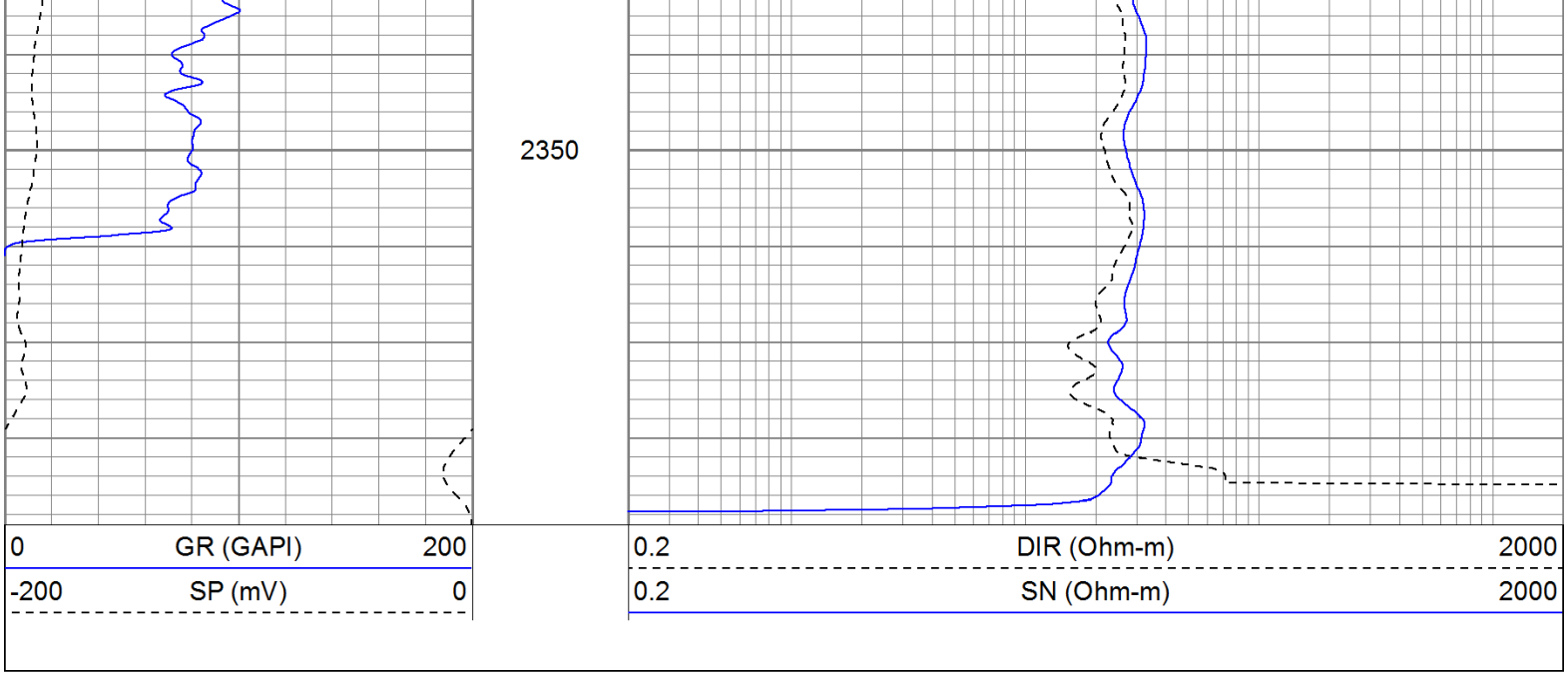
Repeat Pass

Database File:	bilbofederal.db
Dataset Pathname:	pass2.1
Presentation Format:	iel
Dataset Creation:	Thu Dec 08 04:45:10 2011 by Calc SOC 111108
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





Calibration Report

Database File: bilbofederal.db
Dataset Pathname: pass1
Dataset Creation: Thu Dec 08 03:20:38 2011 by Log SOC 111108

Induction Tool Calibration Report

Serial Number:	701
Tool Model:	Probe
Downhole Cal Performed:	Wed Jun 08 22:14:25 2011
Surface Cal Performed:	Wed Jun 08 22:14:40 2011
After Survey Verification Performed:	

Surface Calibration:	Air	Loop	
Conductivity Reference:	0.000	500.000	mmho
Conductivity Reading:	0.006	0.644	V
Internal Reference:	Zero	Cal	
Conductivity Reference:	0.000	500.000	mmho
Conductivity Reading:	0.007	0.643	V

Downhole Calibration:	Internal Zero	Internal Cal	
Conductivity Reference:	0.703	499.163	mmho
Conductivity Reading:	0.000	0.000	V
Short Normal Reference:	0.000	20.000	Ohm-m
Short Normal Reading:	0.005	0.214	V

Results:	Gain	Offset
Loop Conductivity:	783.886	-4.674
Downhole Correction:	1.000	0.000
Short Normal Resistivity:	95.281	-2.000

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

Serial-Model:	901-2.75POH
Source / Verifier:	/
Master Calibration Performed:	Mon Oct 10 09:20:39 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

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

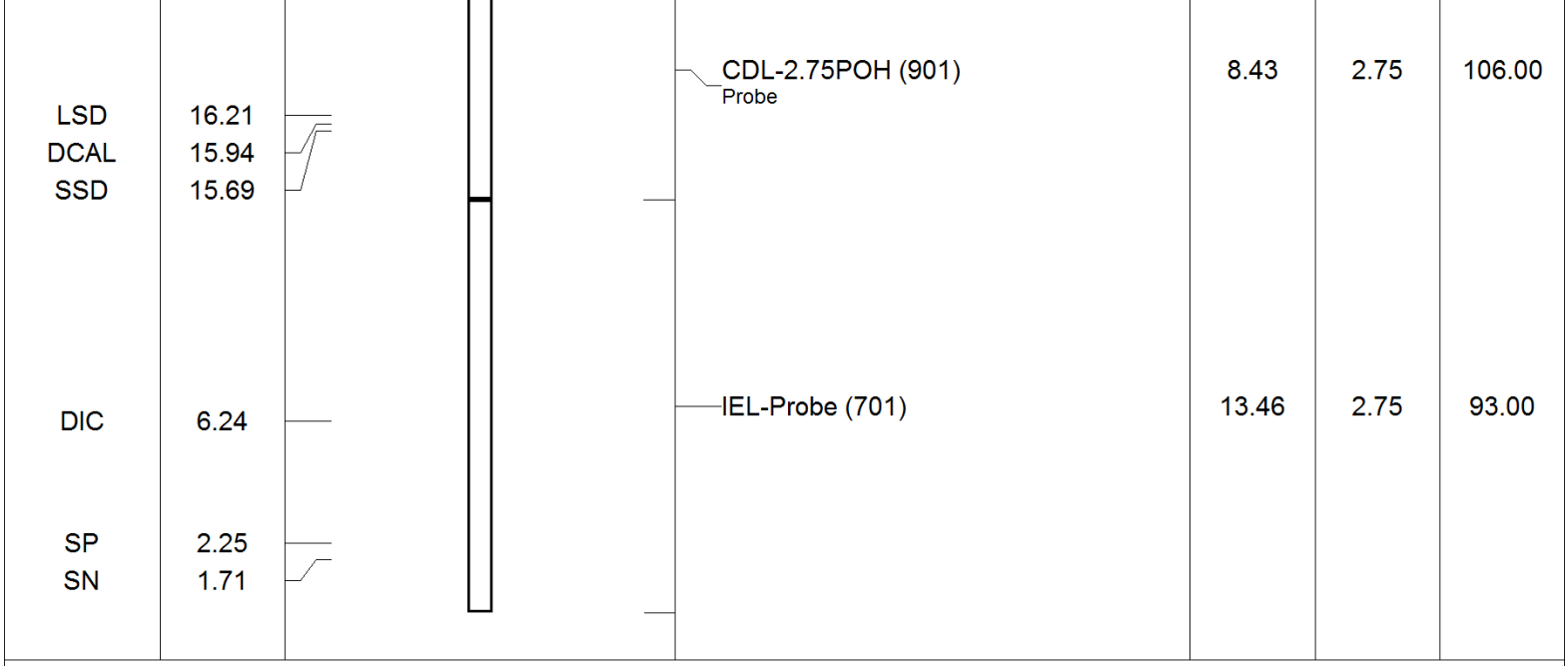
Neutron Calibration Report

Serial Number:	803	
Tool Model:	2.75POH	
Performed:	Mon Oct 10 09:27:42 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:	Mon Oct 10 09:53:04 2011	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6500	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			None	0.75	1.50	5.00
GR	29.58		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



Dataset:	bilbofederal.db: field/well/run1/pass1
Total Length:	31.11 ft
Total Weight:	305.00 lb
O.D.	2.75 in