



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	CHARTER ENERGY, INC.	Company	CHARTER ENERGY, INC.
Well	CONCEPT #1	Well	CONCEPT #1
Field	WOOD NORTHWEST	Field	WOOD NORTHWEST
County	STAFFORD	County	STAFFORD
State	KANSAS	State	KANSAS
Location:	API # : 15-185-23838-00-00 2,310' FNL & 2,293' FEL E2 - SW - SW - NE	Other Services CNL/CDL MEL	
Permanent Datum Log Measured From Drilling Measured From	GROUND LEVEL KELLY BUSHING 6' A.G.L. KELLY BUSHING	Elevation K.B. 1963 D.F. 1961 G.L. 1957	
Date	12/2/13		
Run Number	ONE		
Depth Driller	4095		
Depth Logger	4096		
Bottom Logged Interval	4094		
Top Log Interval	00		
Casing Driller	8 5/8 @ 462		
Casing Logger	462		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.3 / 28		
pH / Fluid Loss	7.0 / N/A		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.51 @ 53F		
Rmf @ Meas. Temp	0.38 @ 53F		
Rmc @ Meas. Temp	0.61 @ 53F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	0.23 @ 117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	117F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	KURT TALBOTT		

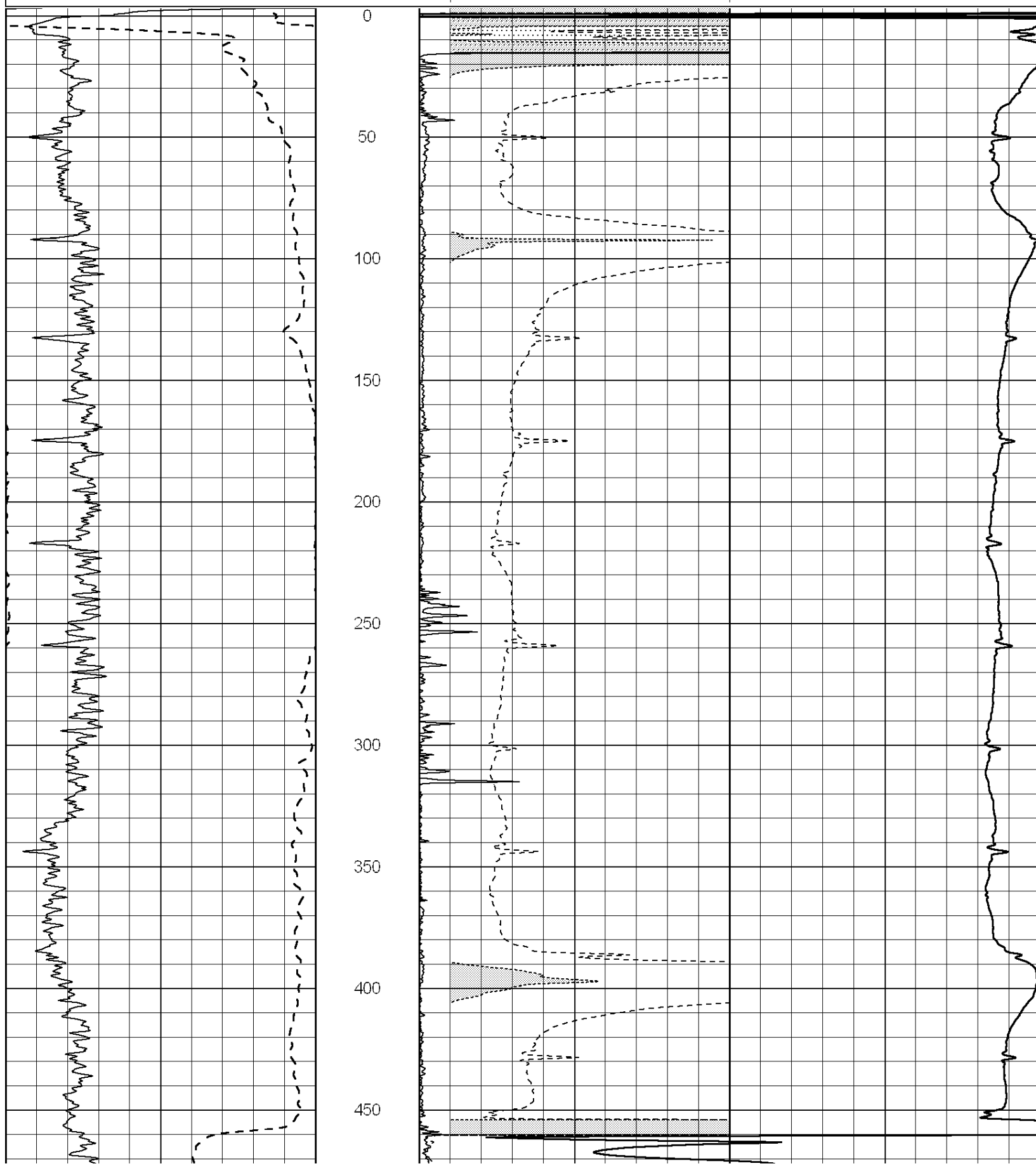
<<< Fold Here >>>

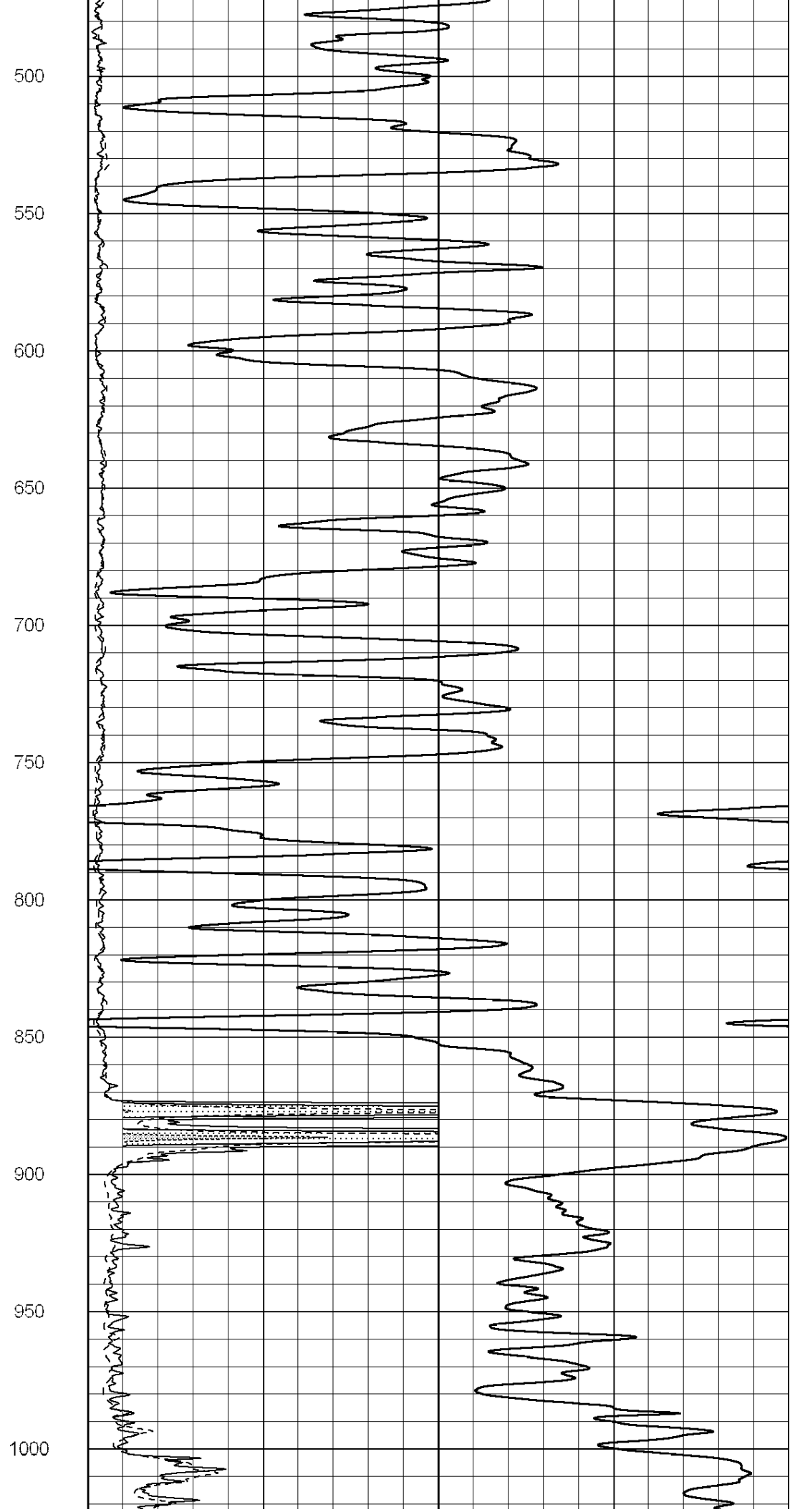
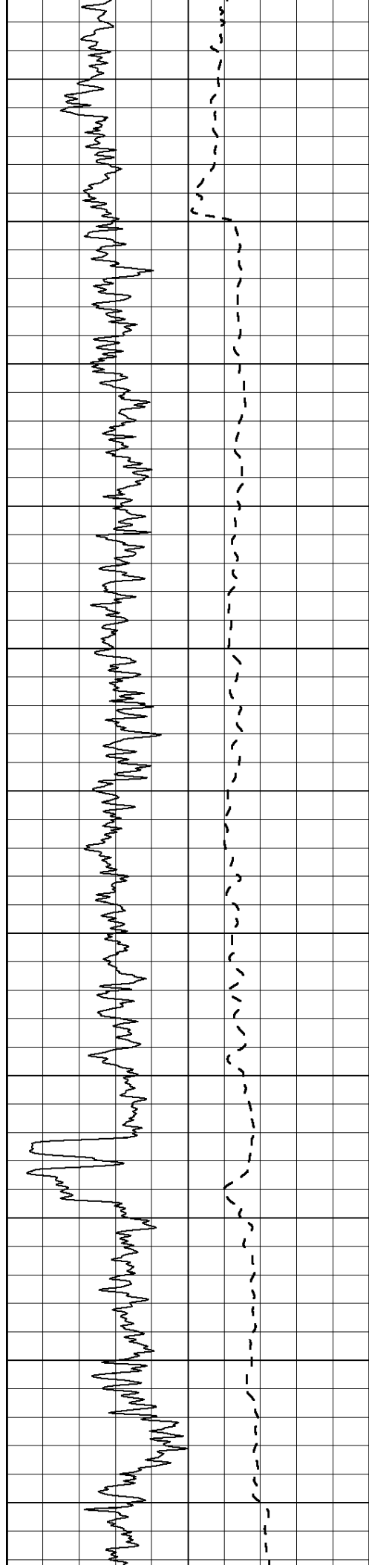
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

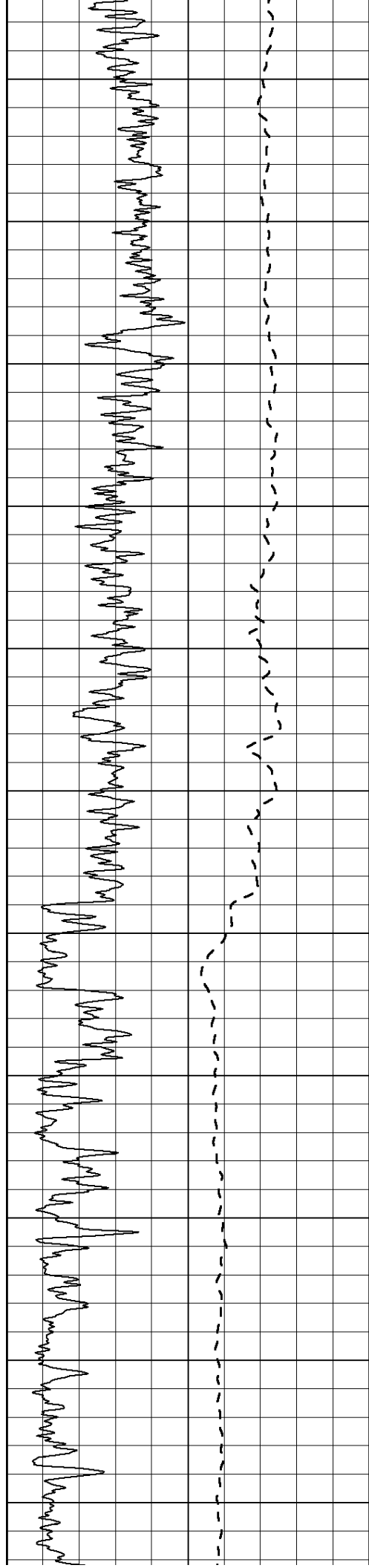
Comments

NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: HWY 19 & RADIUM RD - 3 SOUTH - 1 EAST - 1 1/2 SOUTH - WEST INTO

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







1050

1100

1150

1200

1250

1300

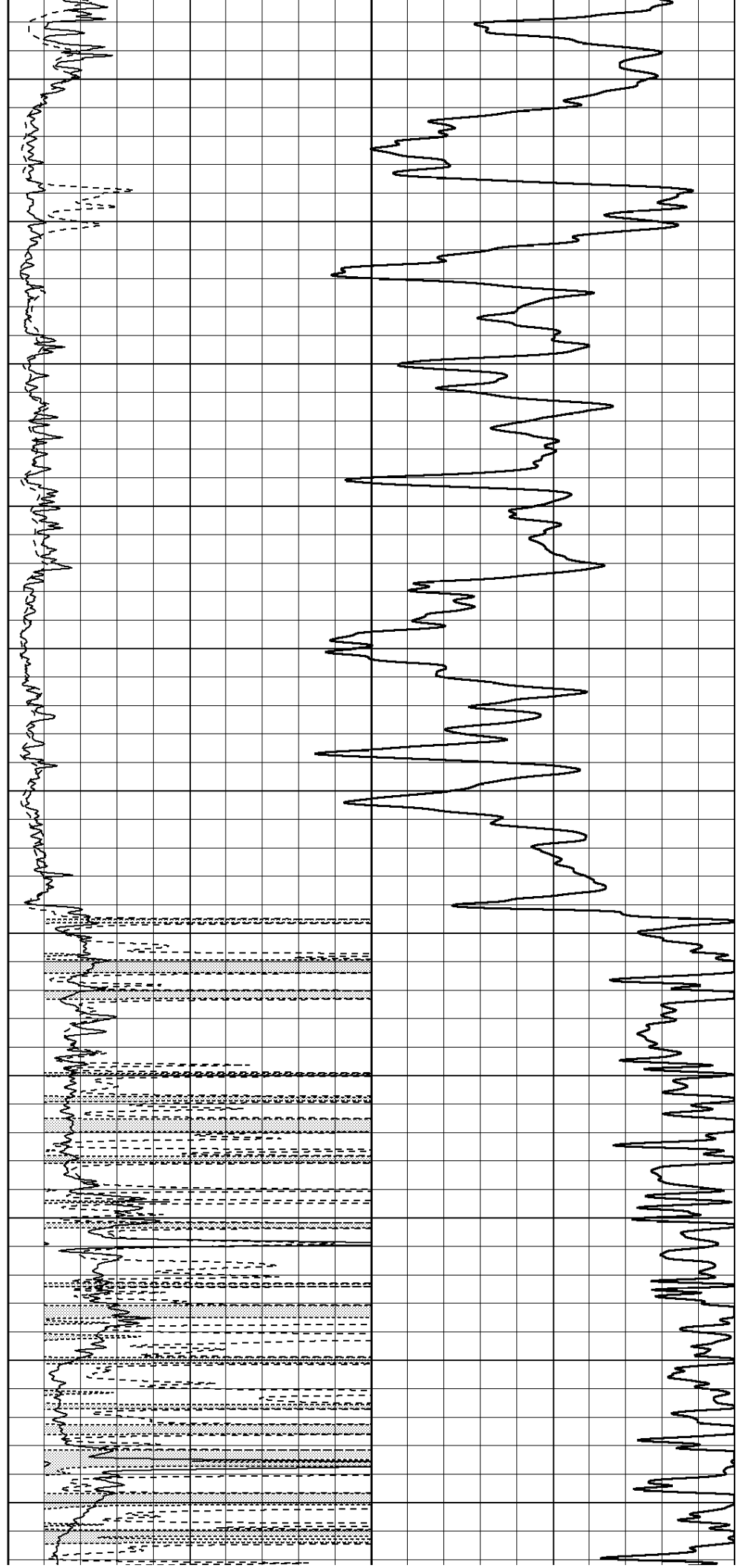
1350

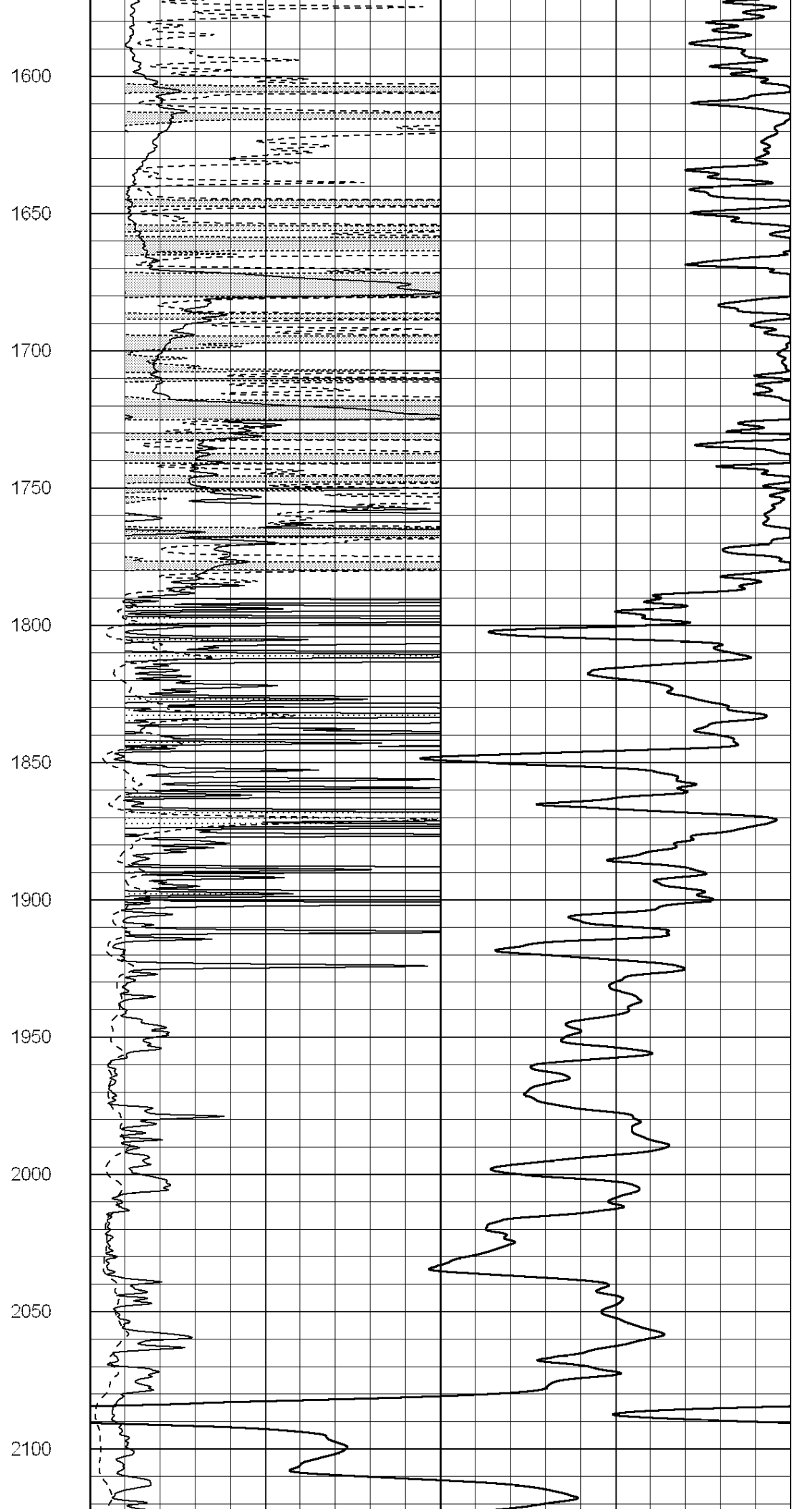
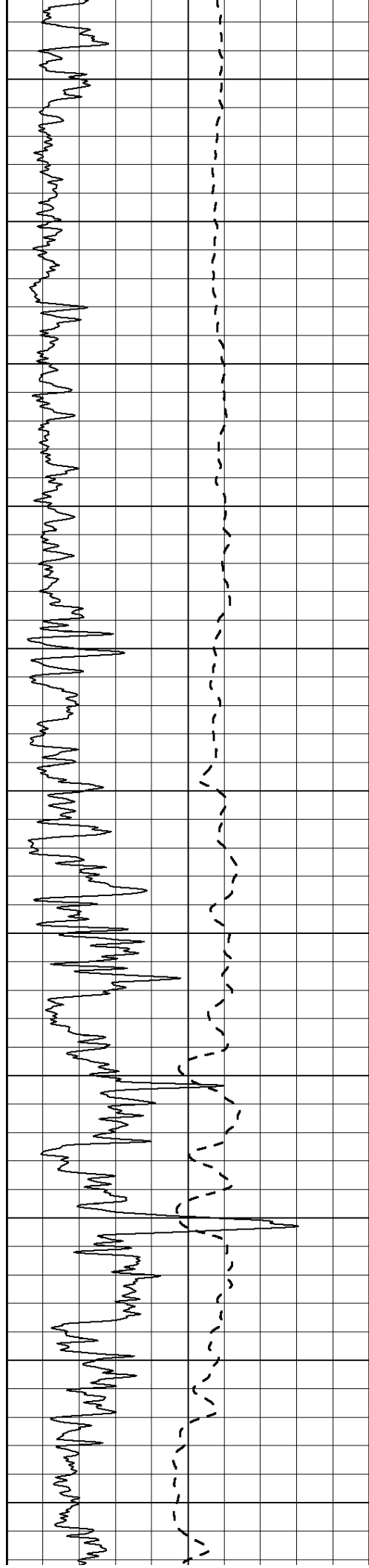
1400

1450

1500

1550





2150

2200

2250

2300

2350

2400

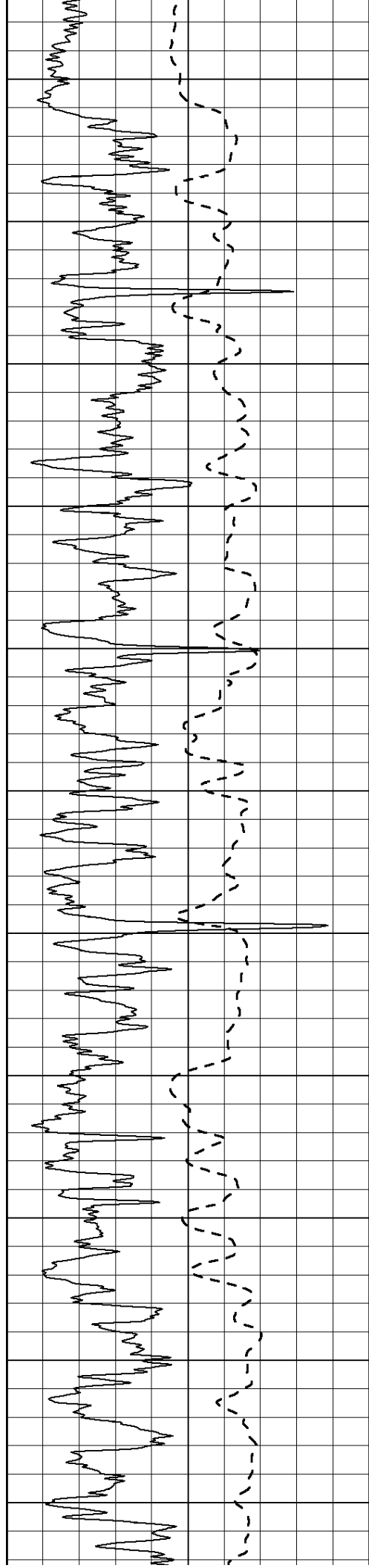
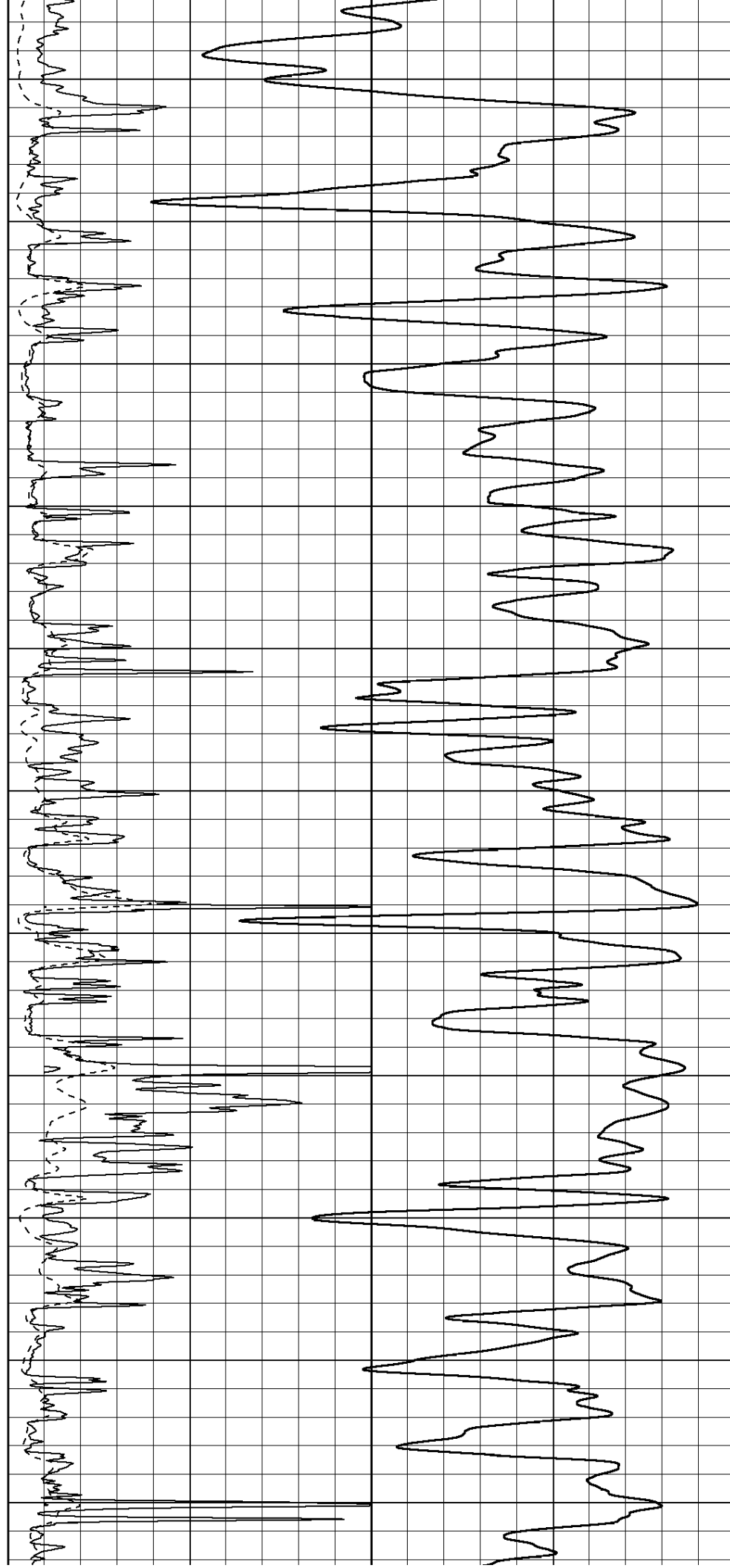
2450

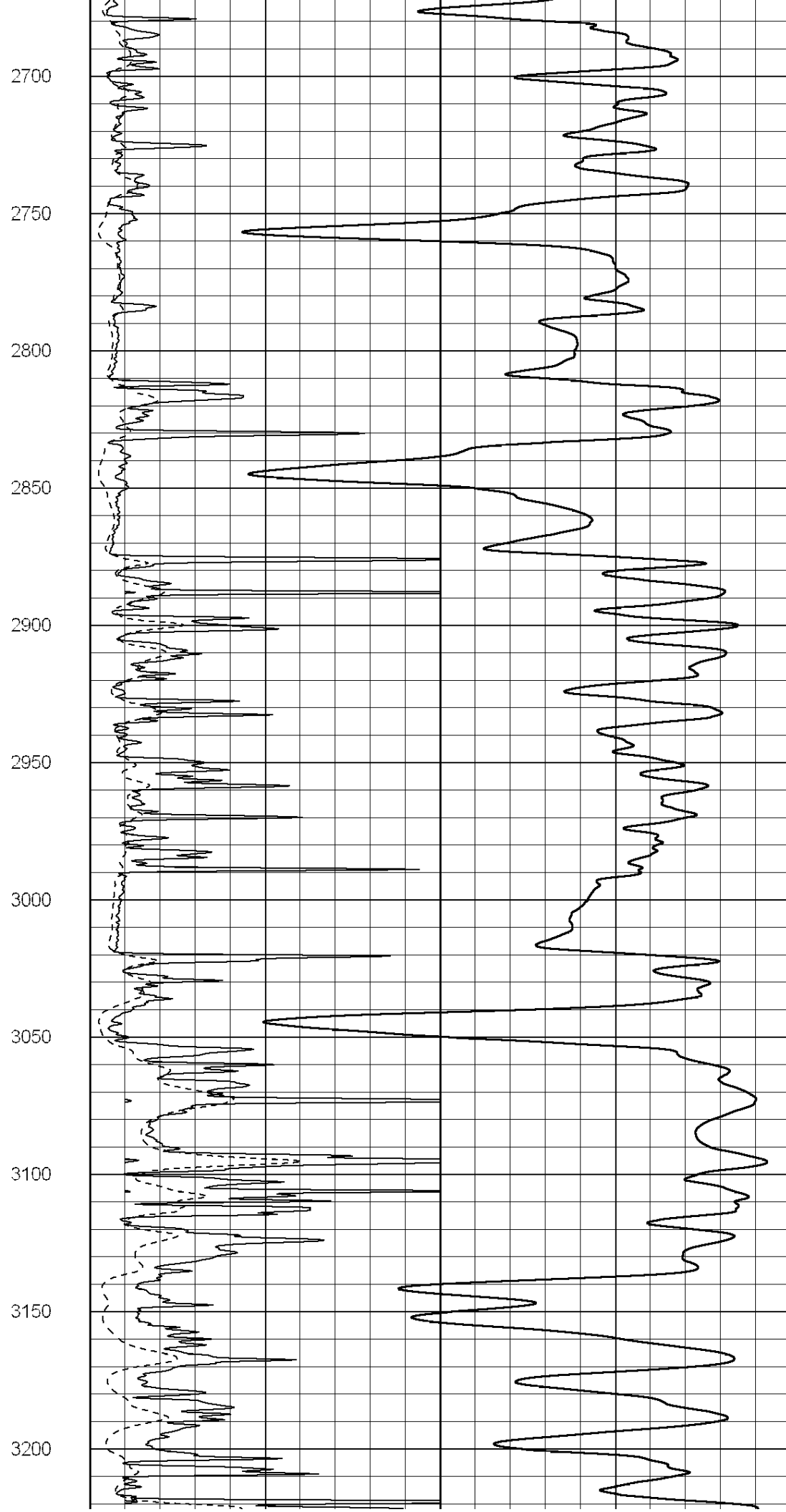
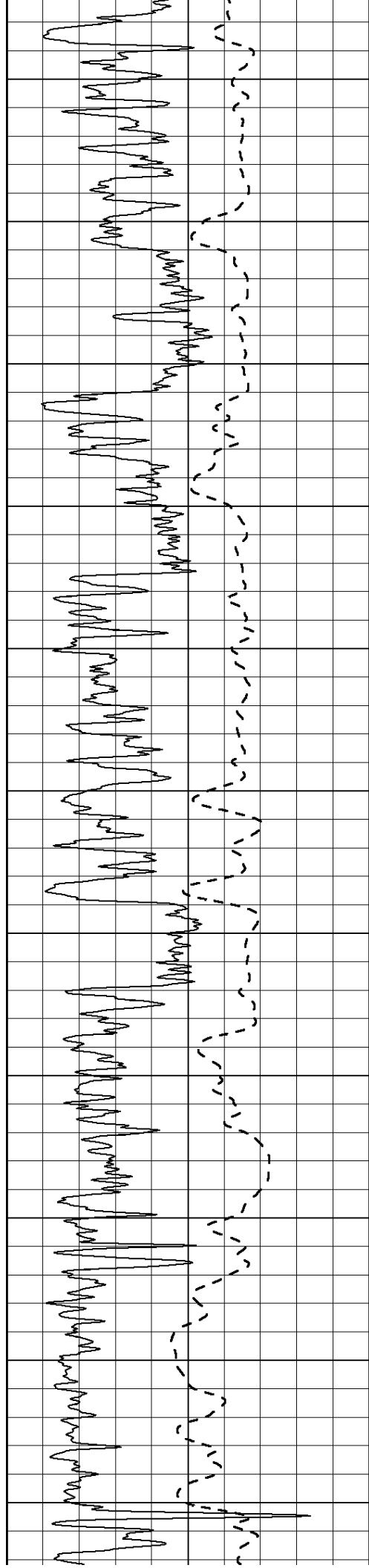
2500

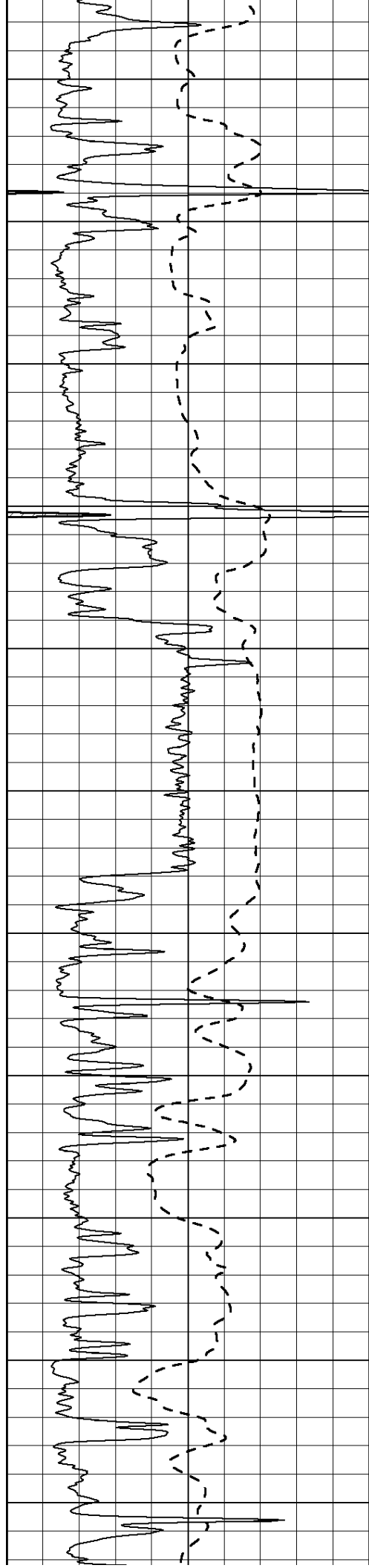
2550

2600

2650







3250

3300

3350

3400

3450

3500

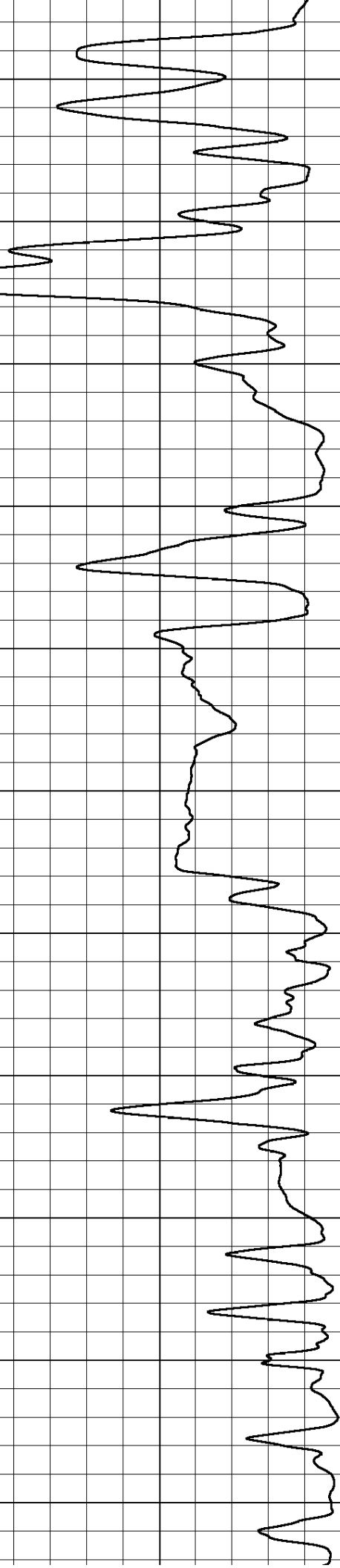
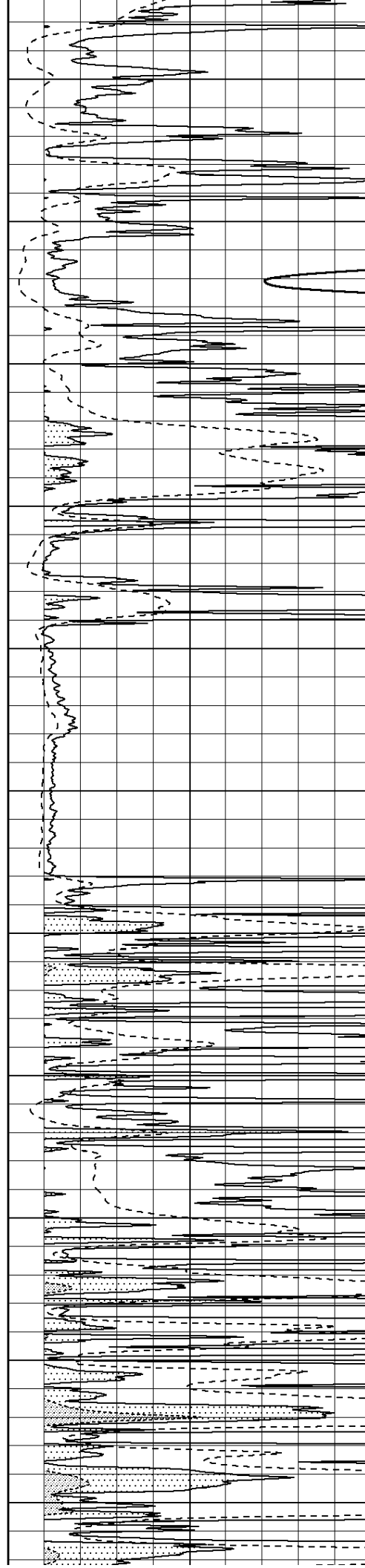
3550

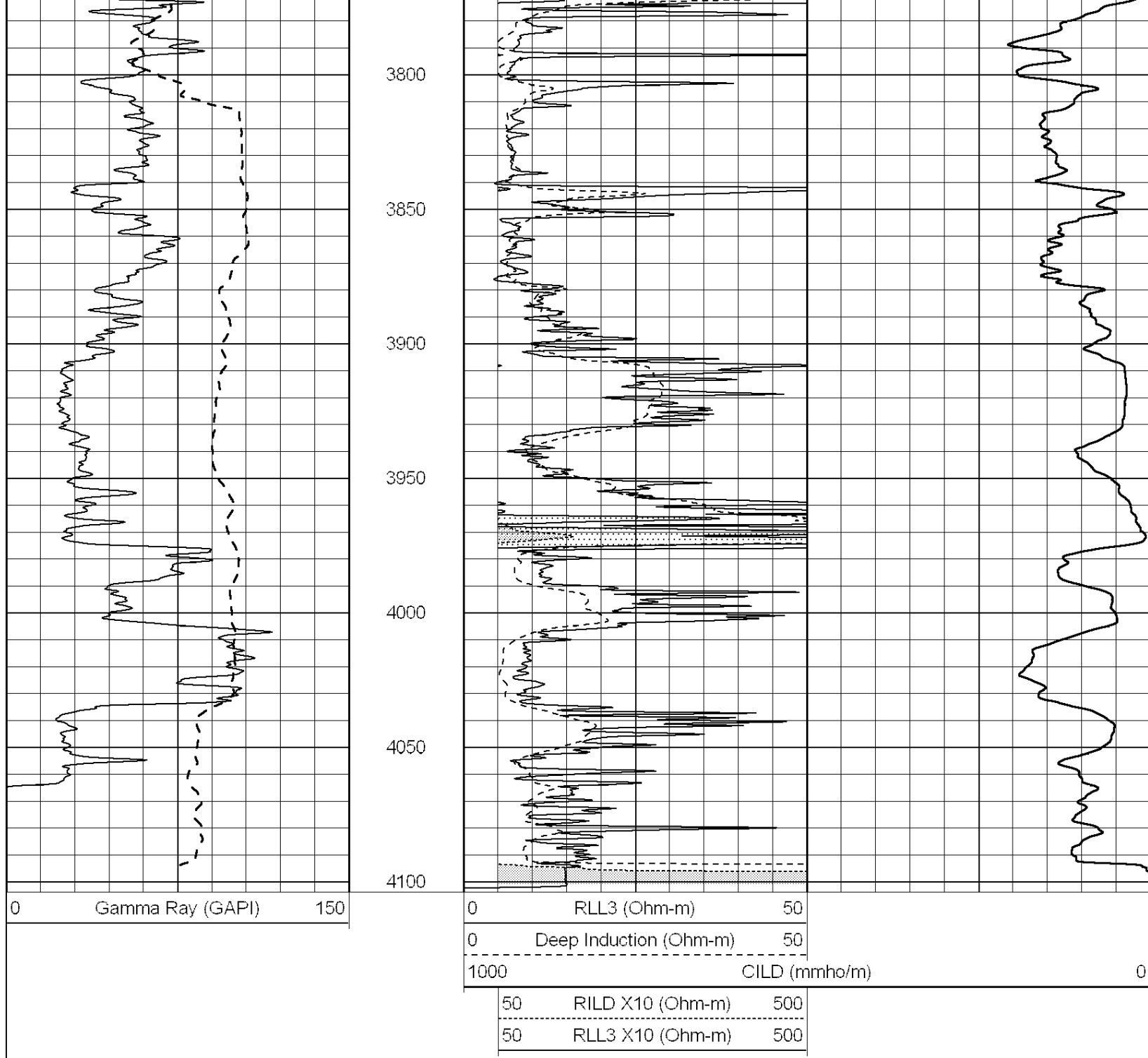
3600

3650

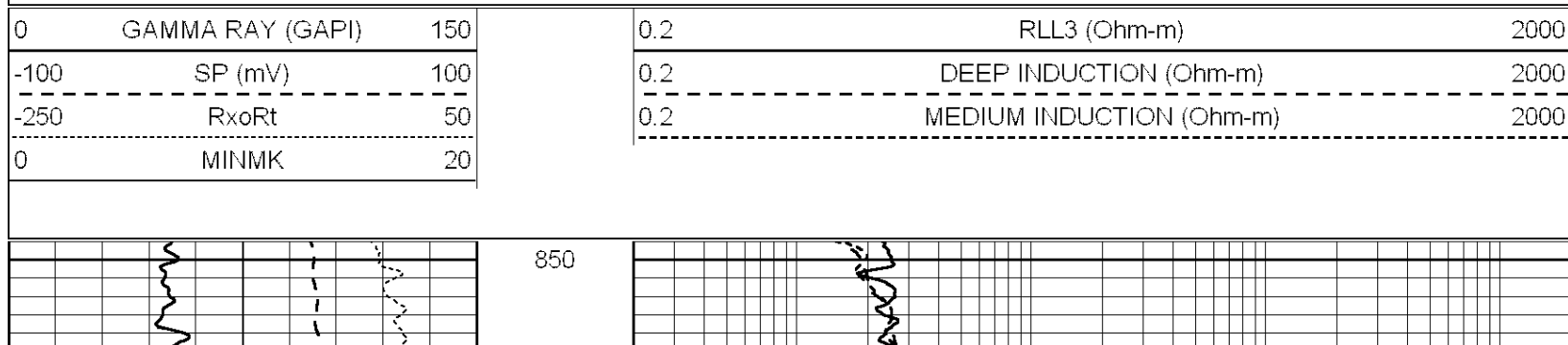
3700

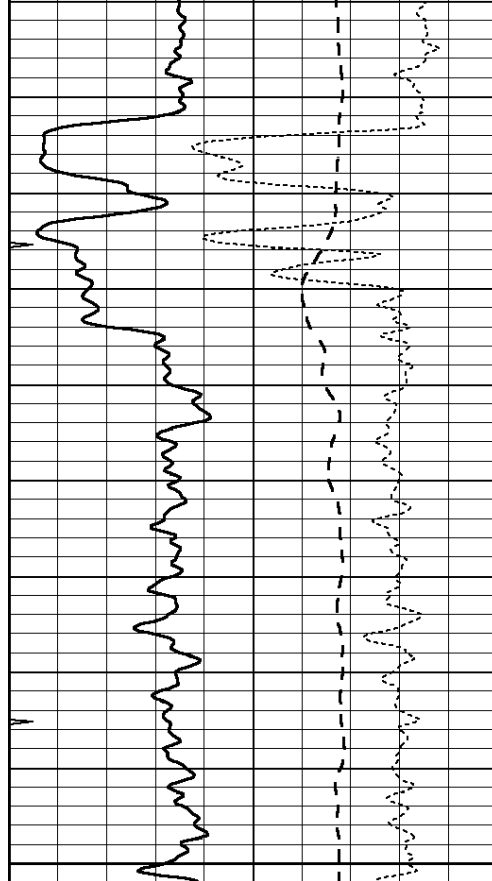
3750





Database File: 012049ddn.db
 Dataset Pathname: pass4.3
 Presentation Format: _dil
 Dataset Creation: Mon Dec 02 09:29:45 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

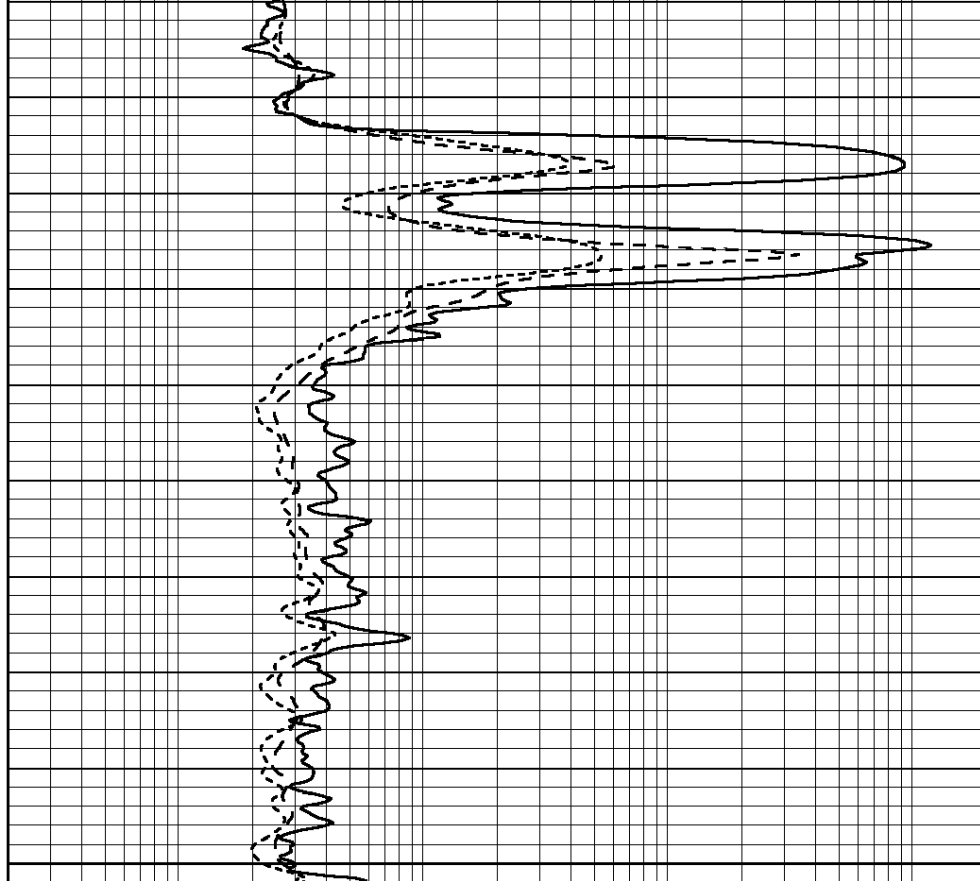




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

900

950

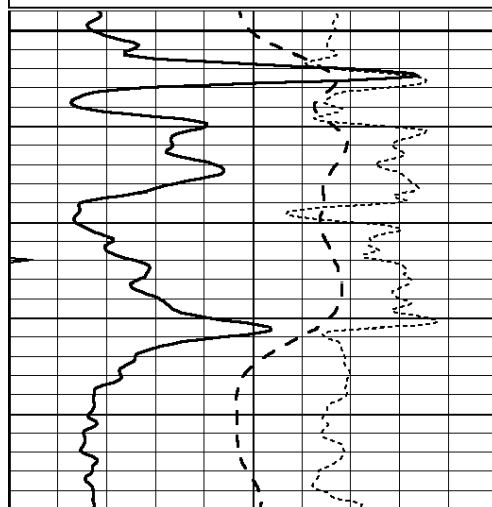


0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Database File: 012049ddn.db
Dataset Pathname: pass4.3
Presentation Format: _dil
Dataset Creation: Mon Dec 02 09:29:45 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

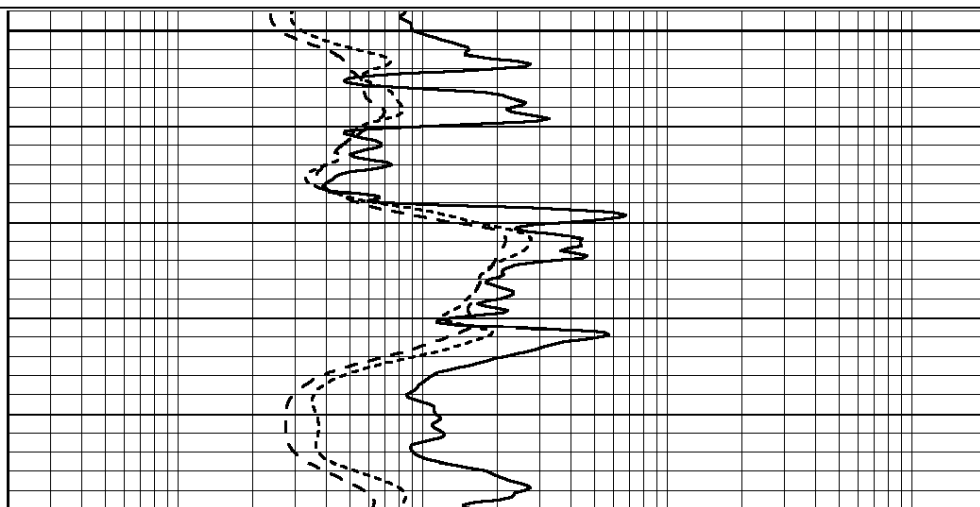
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

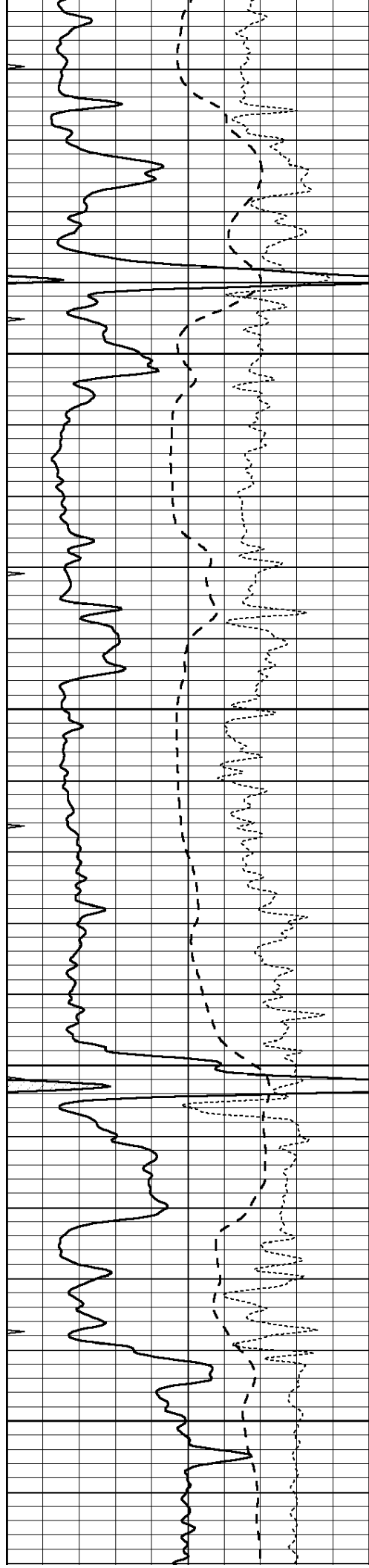
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3200

3250





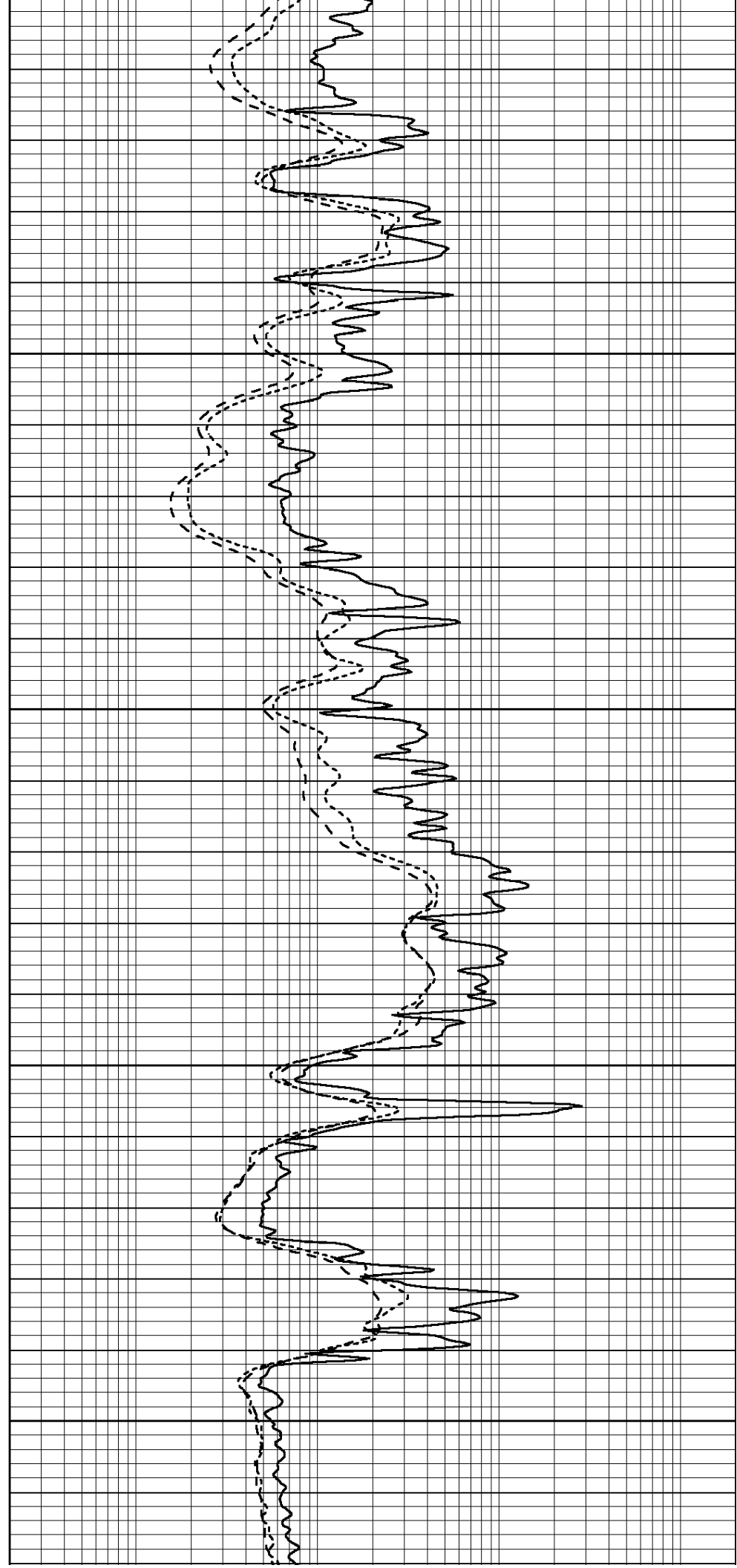
3250

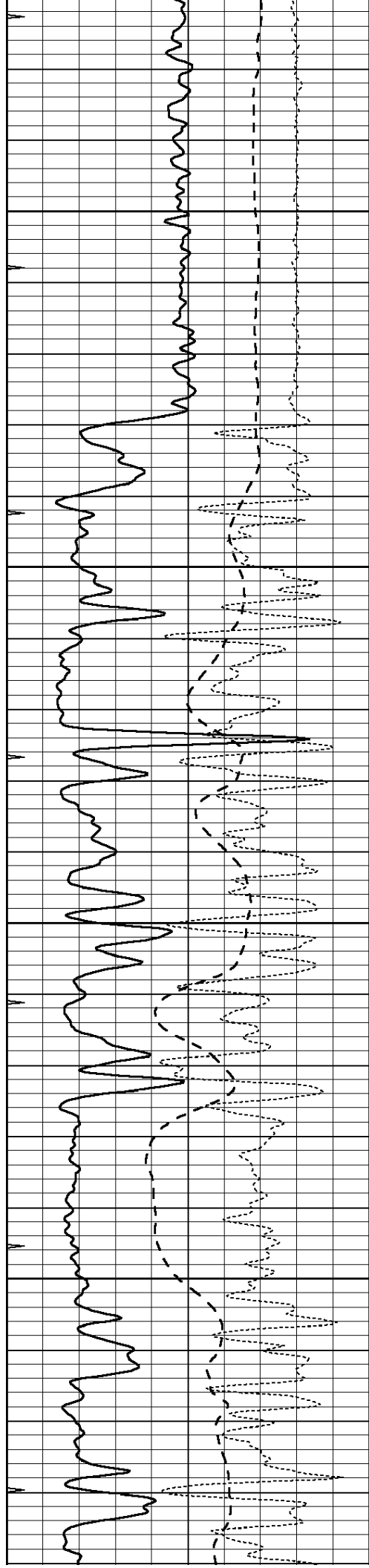
3300

3350

3400

3450



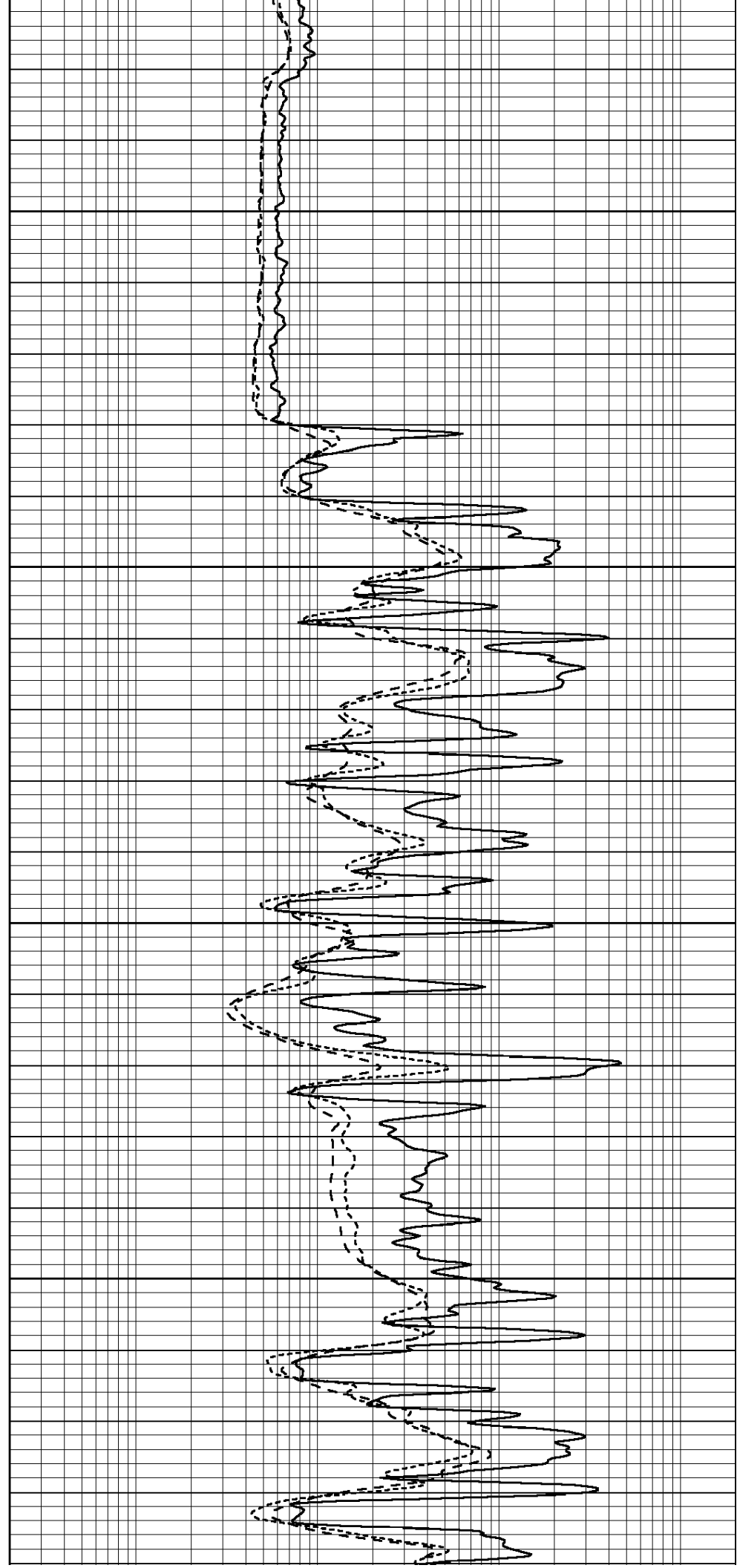


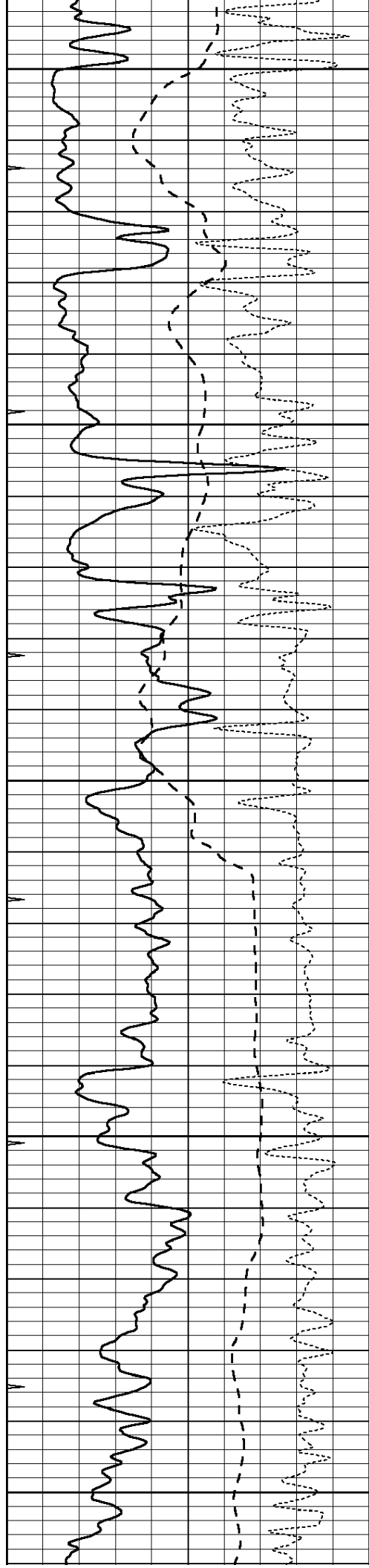
3500

3550

3600

3650





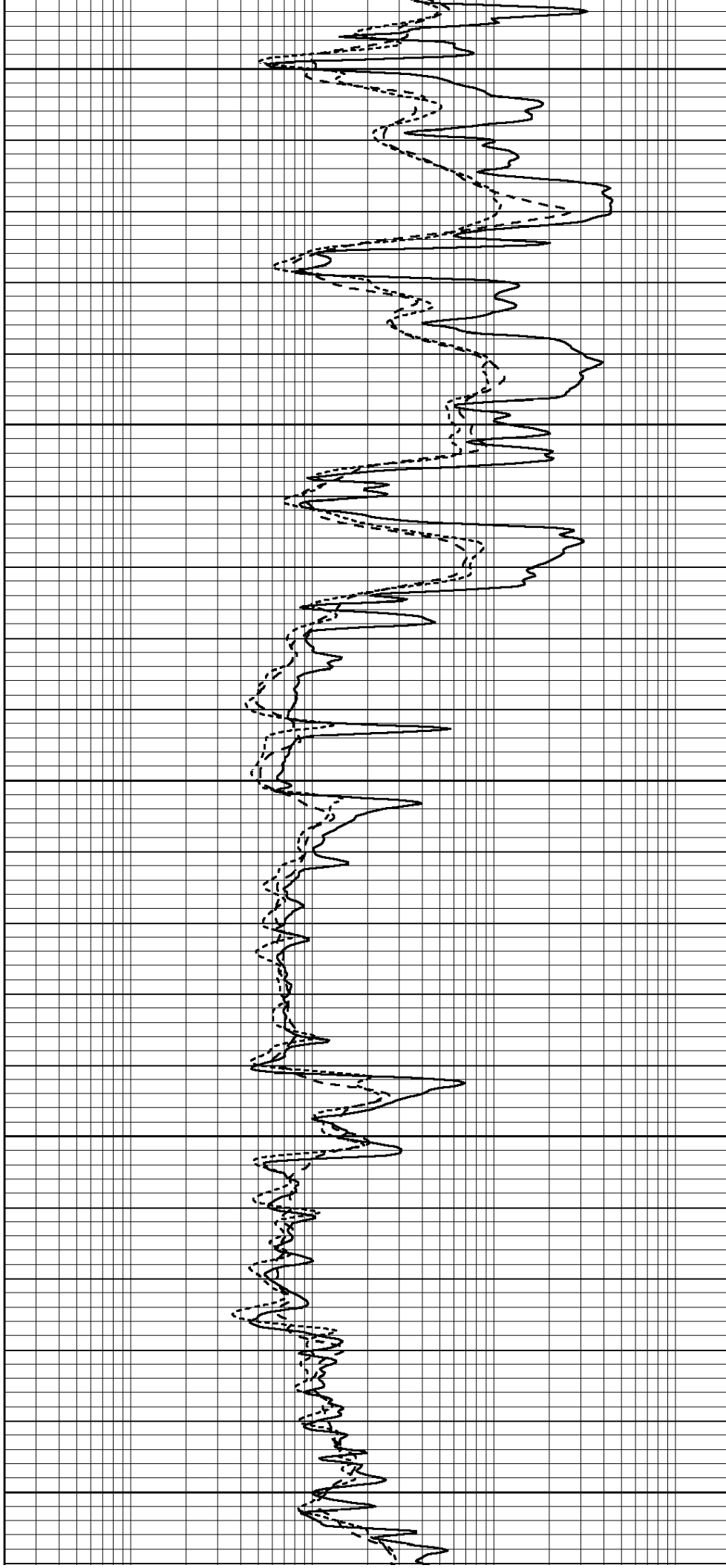
3700

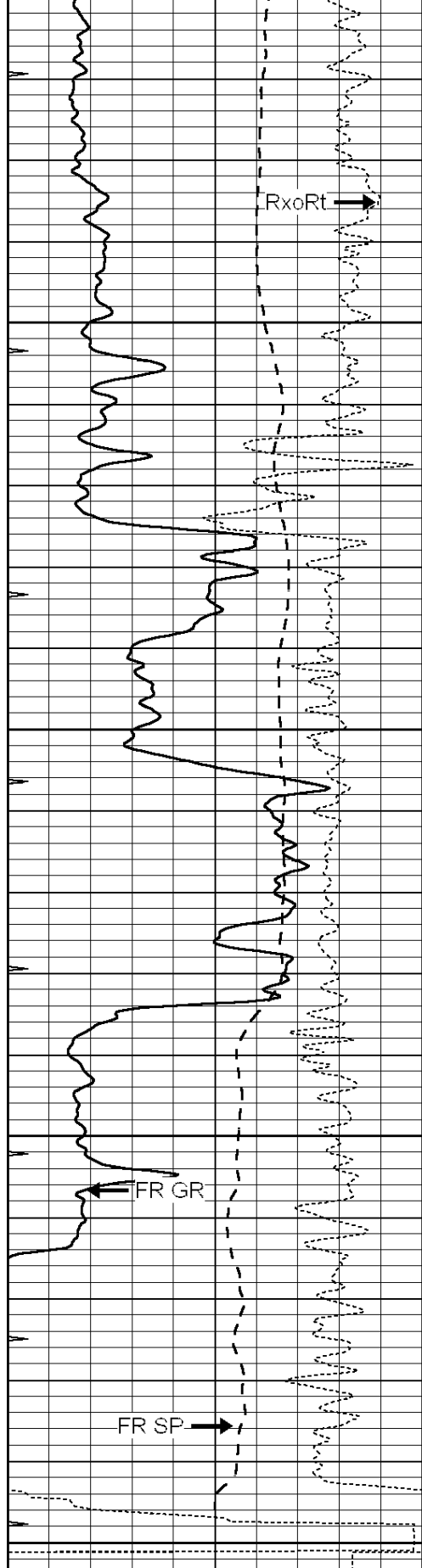
3750

3800

3850

3900





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

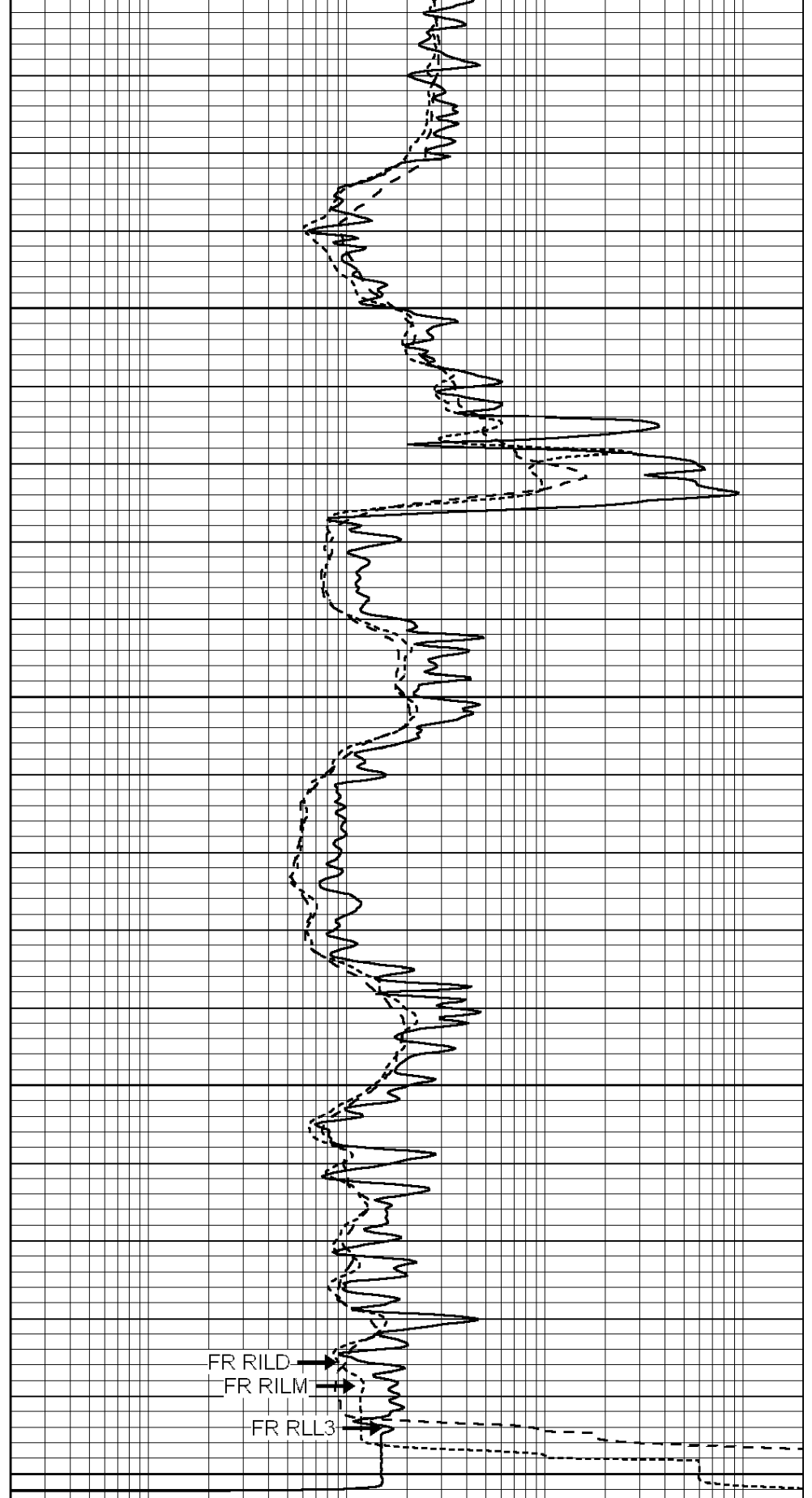
3950

4000

4050

LTD 4096

4100



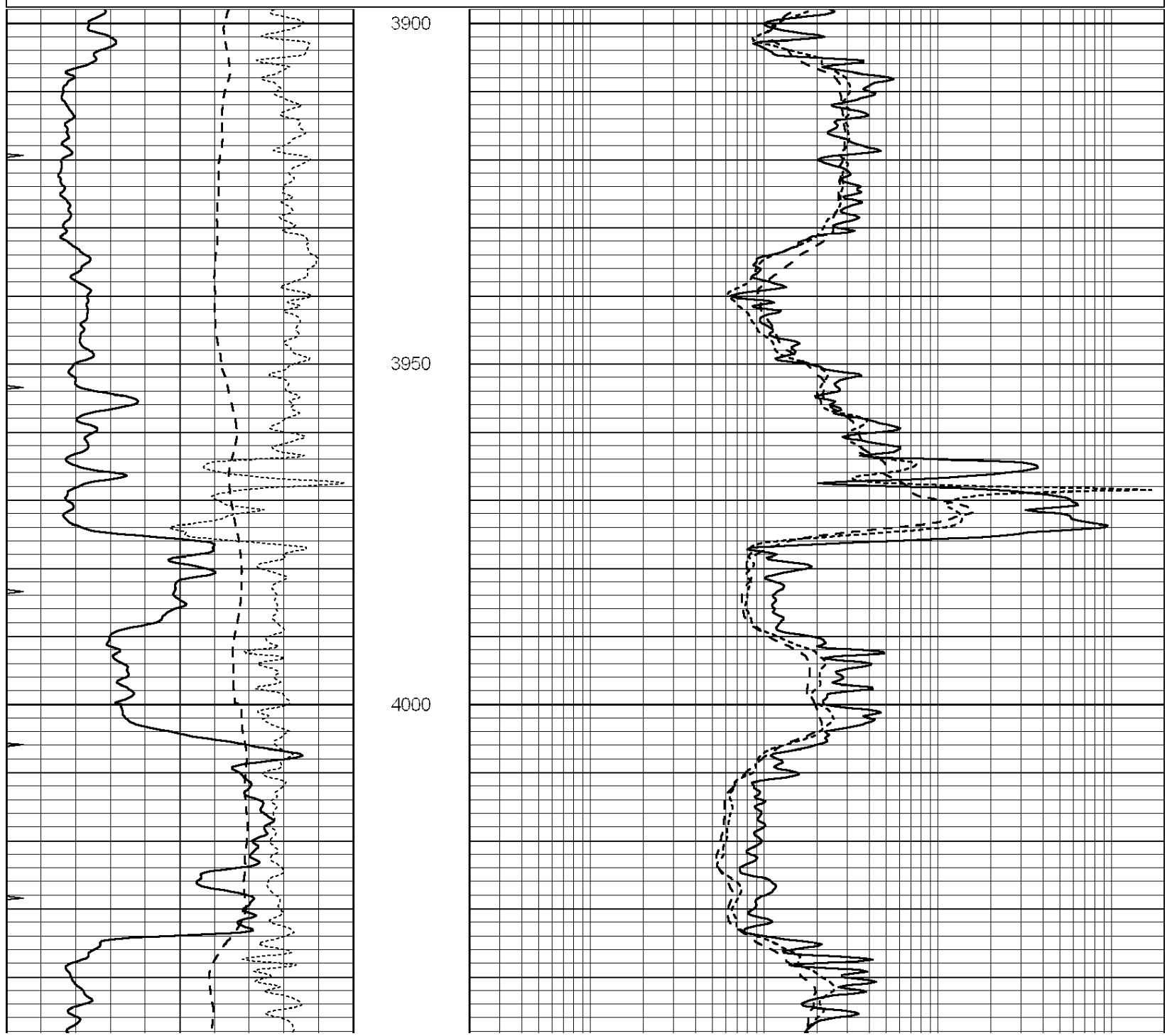
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

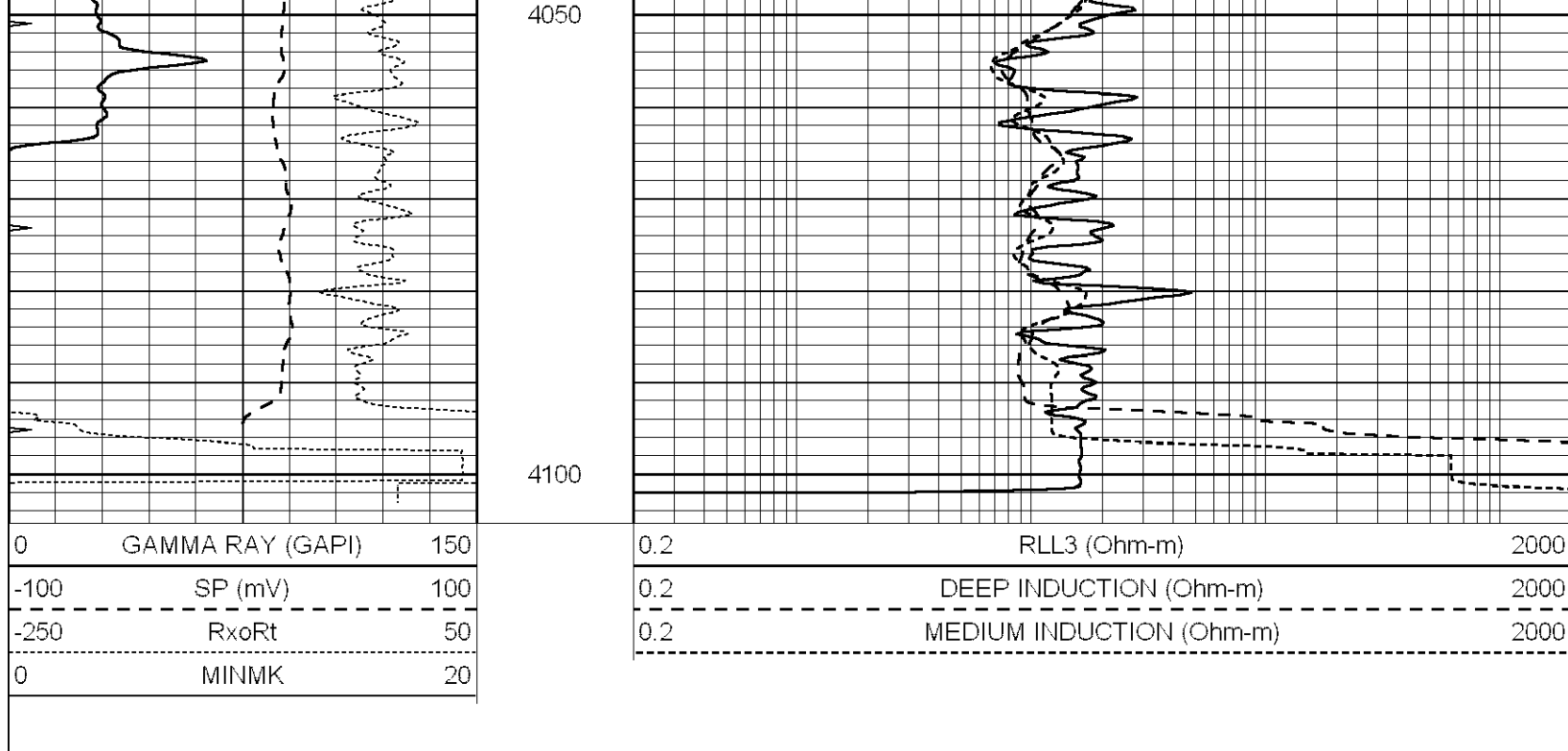
REPEAT SECTION

Database File: 012049ddn.db
Dataset Pathname: pass3.2
Presentation Format: _dil
Dataset Creation: Mon Dec 02 09:04:08 2013
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





Calibration Report

Database File: 012049ddn.db
 Dataset Pathname: pass4.3
 Dataset Creation: Mon Dec 02 09:29:45 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Sun Nov 24 23:25:37 2013

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	580.000	5.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
 Source / Verifier: 147 / 147
 Master Calibration Performed: Sun Nov 24 21:22:19 2013

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1205.77	610.74	cps
Aluminum	2.580	g/cc	271.21	419.72	cps
Spine Angle = 75.89			Density/Spine Ratio = 0.566		
	Size		Reading		
Small Ring	8.20	in	4.83	V	
Large Ring	14.00	in	7.01	V	

Compensated Neutron Calibration Report			
Serial Number:		080620	
Tool Model:		Probe	
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:	Sat Nov 30 20:21:01 2013		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.3000	GAPI/cps	