



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company PIONEER RESOURCES
Well YOST #3
Field COOPER
County GRAHAM State KANSAS

Company PIONEER RESOURCES
Well YOST #3
Field COOPER
County GRAHAM
State KANSAS

Location: API #: 15-065-24060-00-00
1624' FSL & 2000' FWL
SW - SE - NE - SW
SEC 32 TWP 9S RGE 21W
Permanent Datum GROUND LEVEL Elevation 2288
Log Measured From KELLY BUSHING 7' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CNL/CDL
MEL
Elevation
K.B. 2295
D.F. 2293
G.L. 2288

Date	9/28/14		
Run Number	ONE		
Depth Driller	3930		
Depth Logger	3929		
Bottom Logged Interval	3927		
Top Log Interval	00		
Casing Driller	8 5/8" @ 220		
Casing Logger	222		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,300 PPM	
Density / Viscosity	9.3/50		
pH / Fluid Loss	10.5/7.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.80 @ 85F		
Rmf @ Meas. Temp	.60 @ 85F		
Rmc @ Meas. Temp	.96 @ 85F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.54 @ 125F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	125F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	CLIFF OTTAWAY		

<<< 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

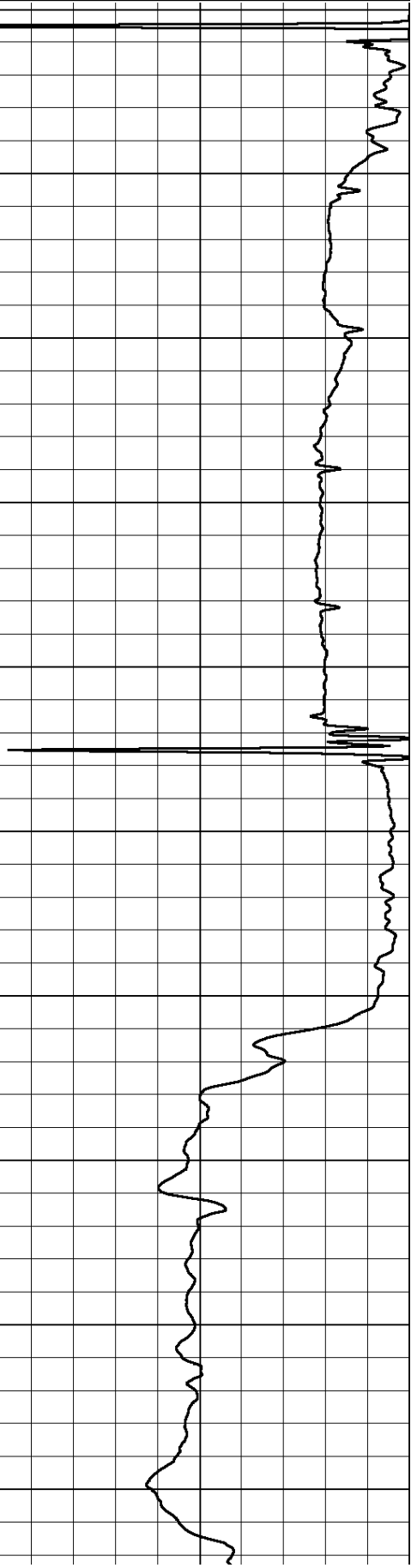
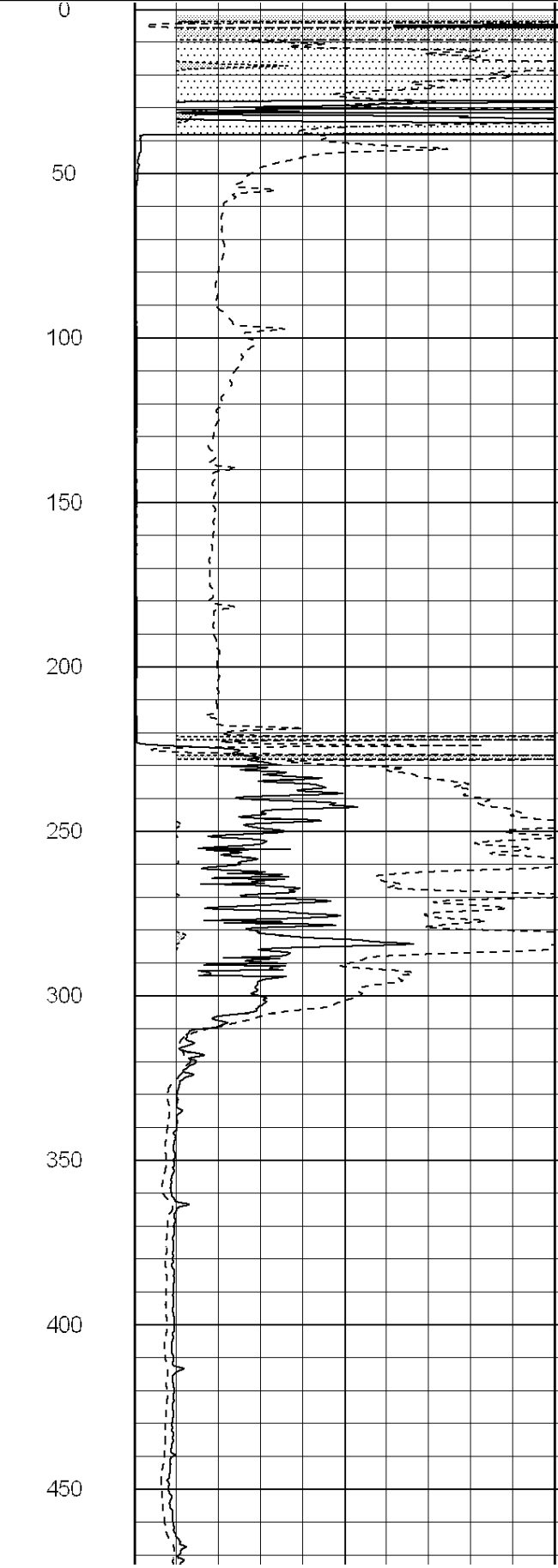
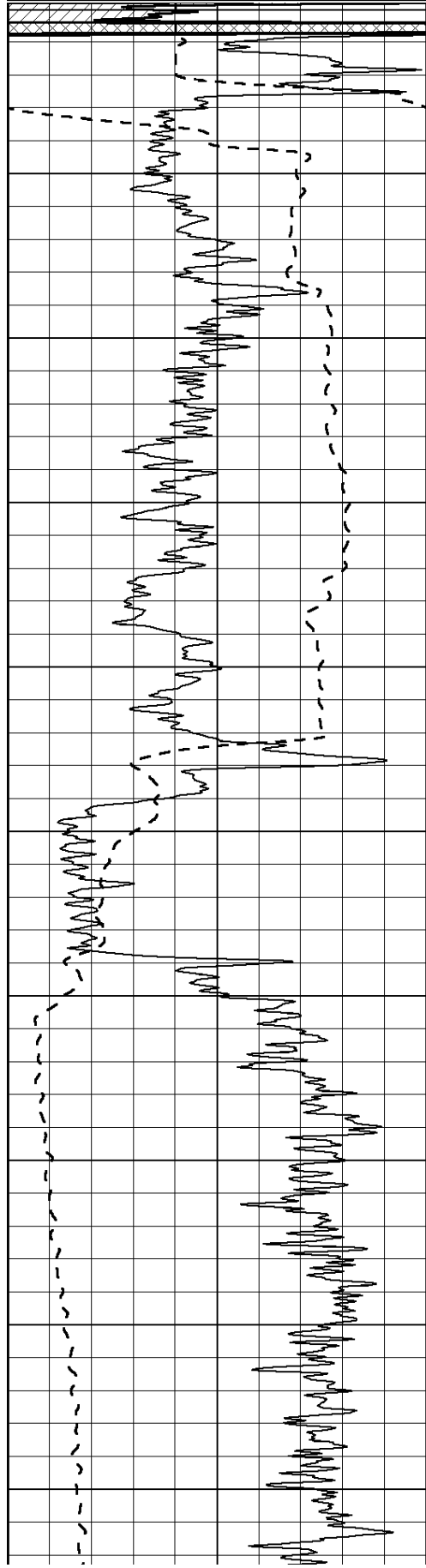
THANK YOU FOR USING NABORS COMPLETION & PRODUCTION SVCS. (785) 628-6395

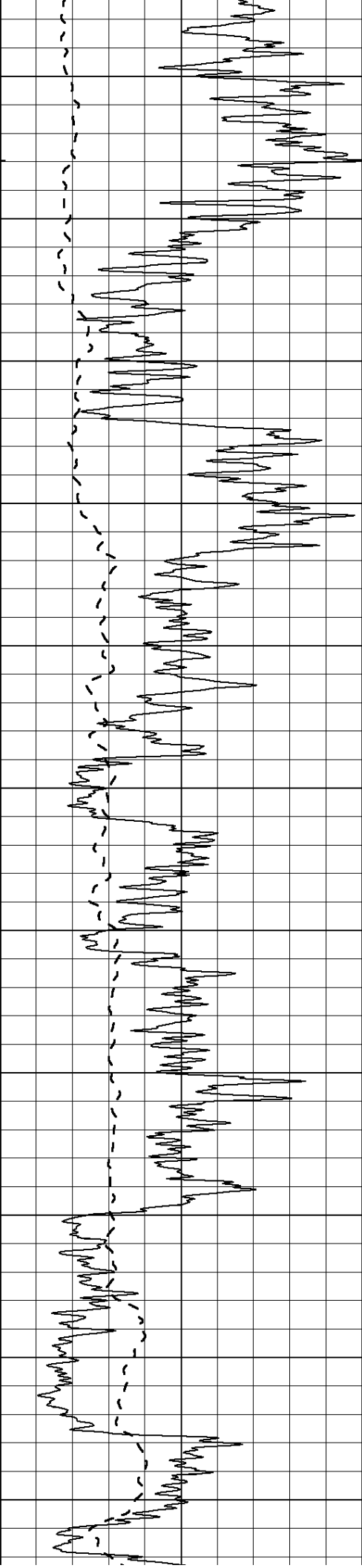
DIRECTIONS: I-70 & RIGA RD - NORTH TO GRAHAM CO. LINE - JOG EAST 1/2 MILE - NORTH 6 MILES TO RD G - WEST 2 1/2 MILES NORTH INTO

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

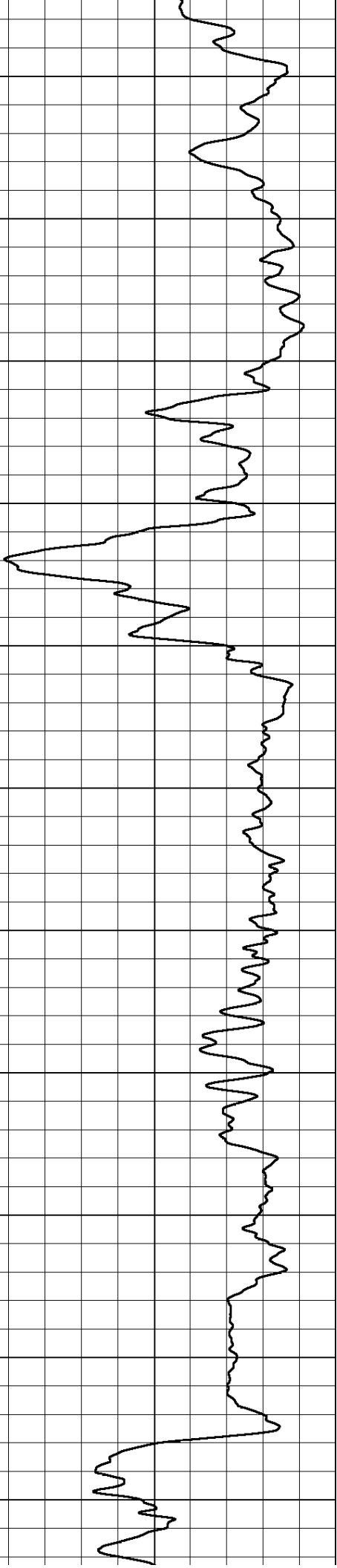
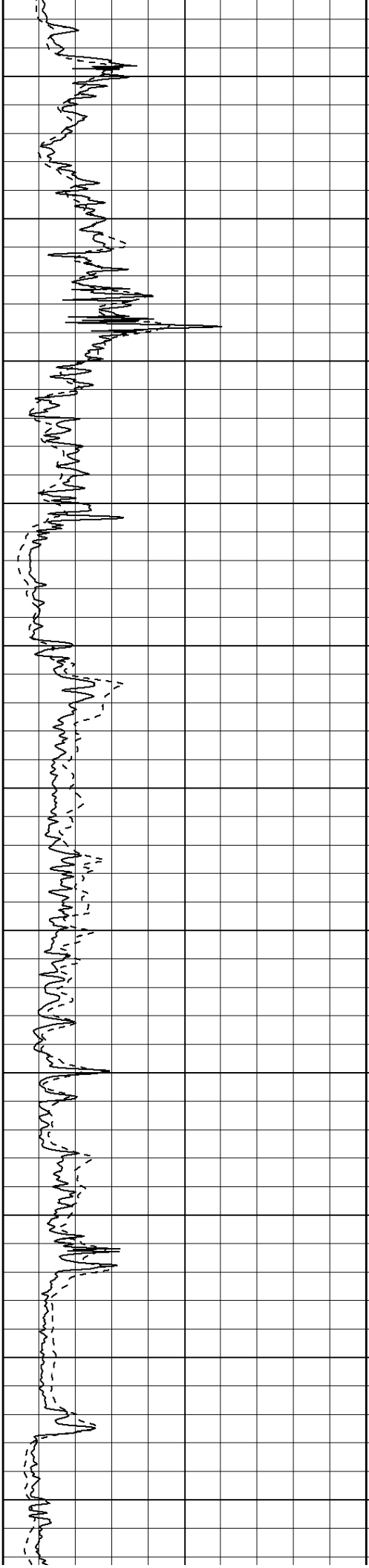
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50

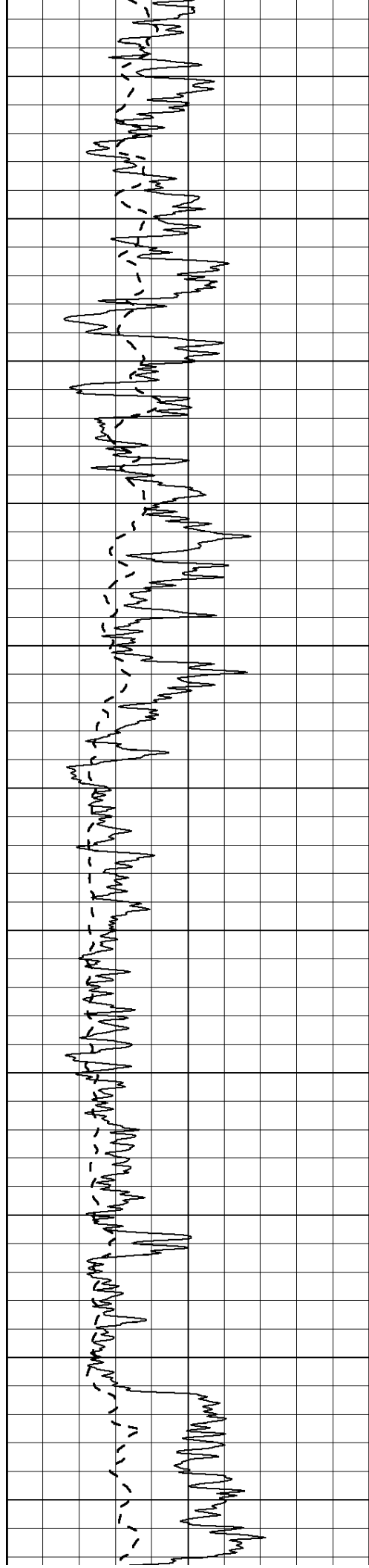
1000	CILD (mmho/m)	0
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



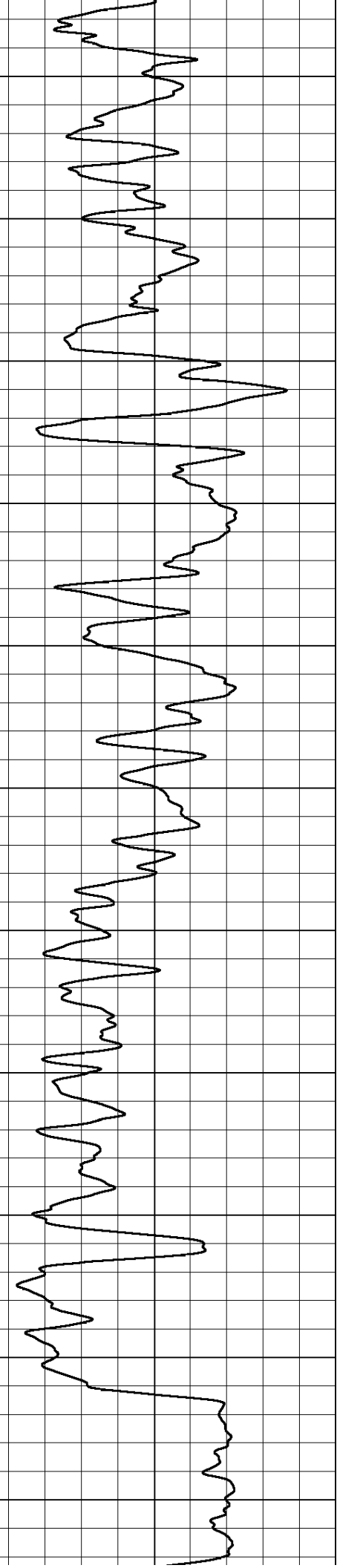
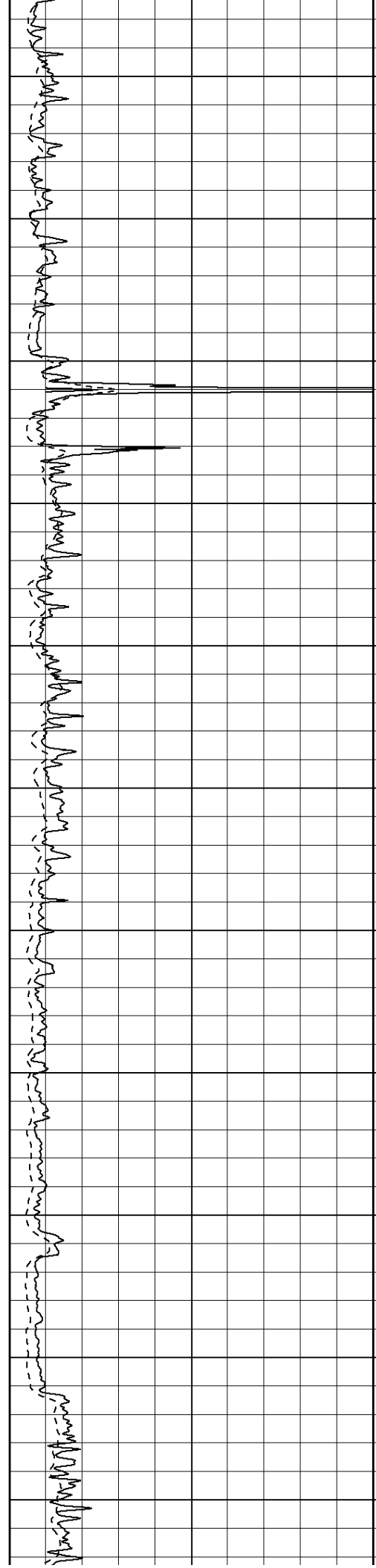


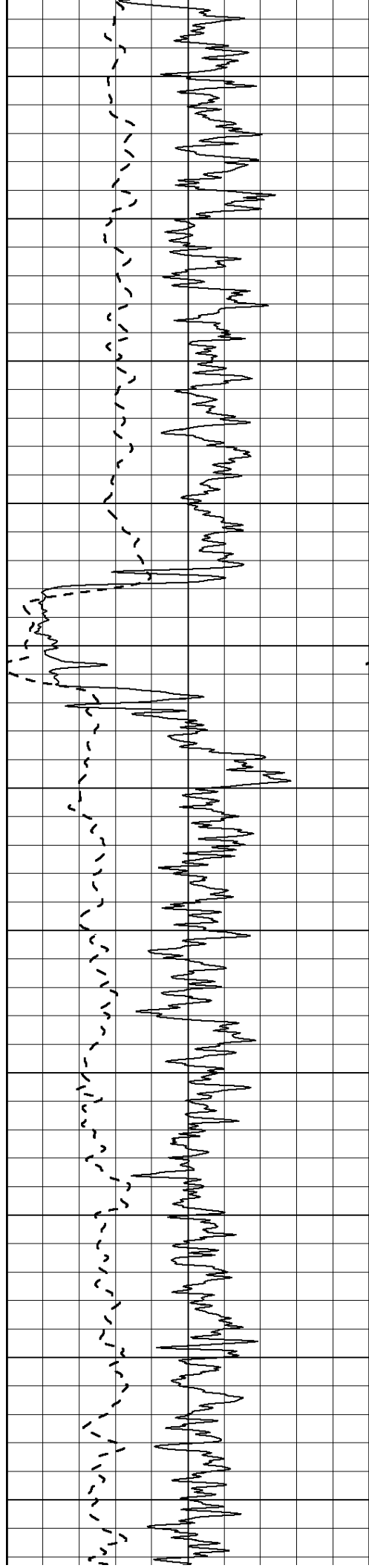
500
550
600
650
700
750
800
850
900
950
1000



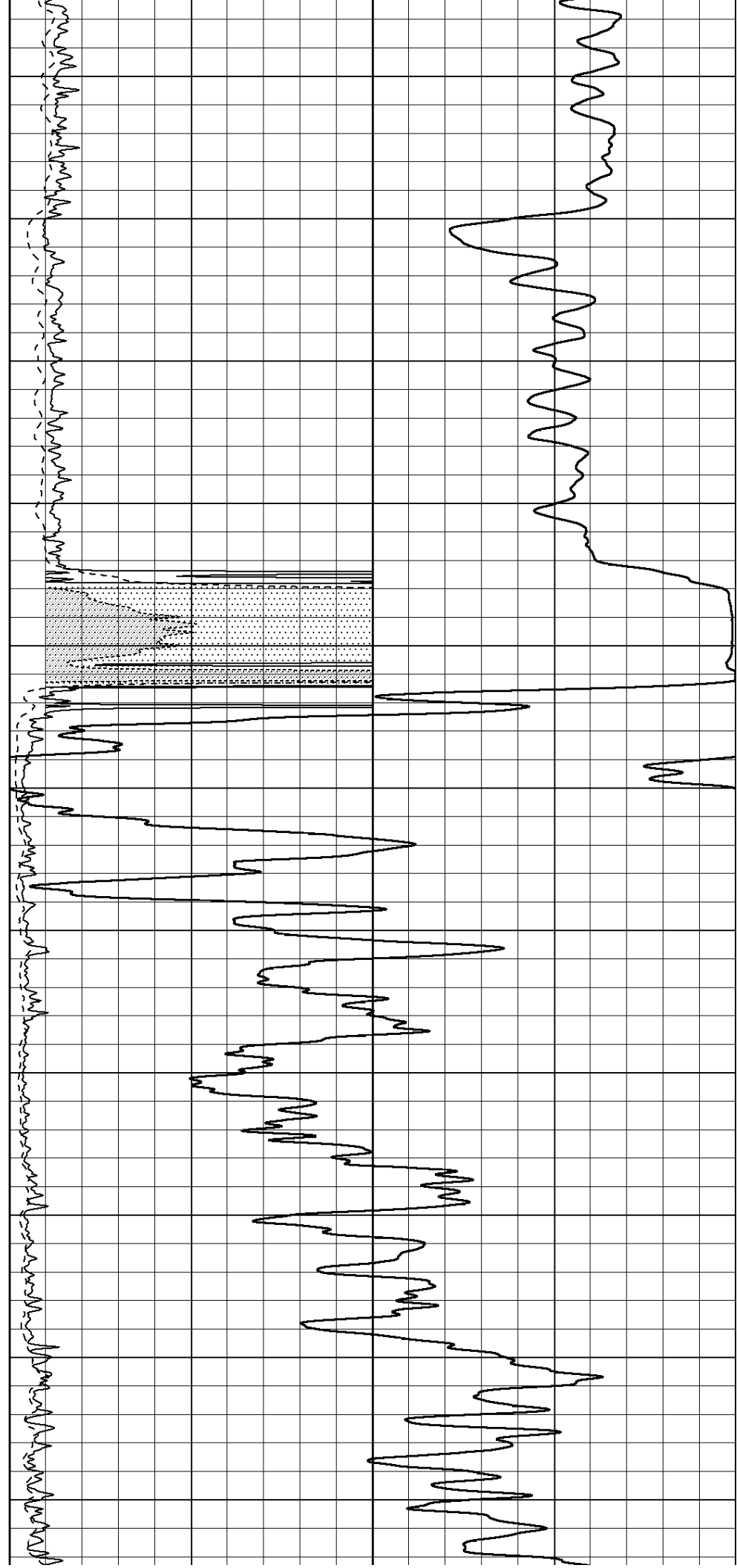


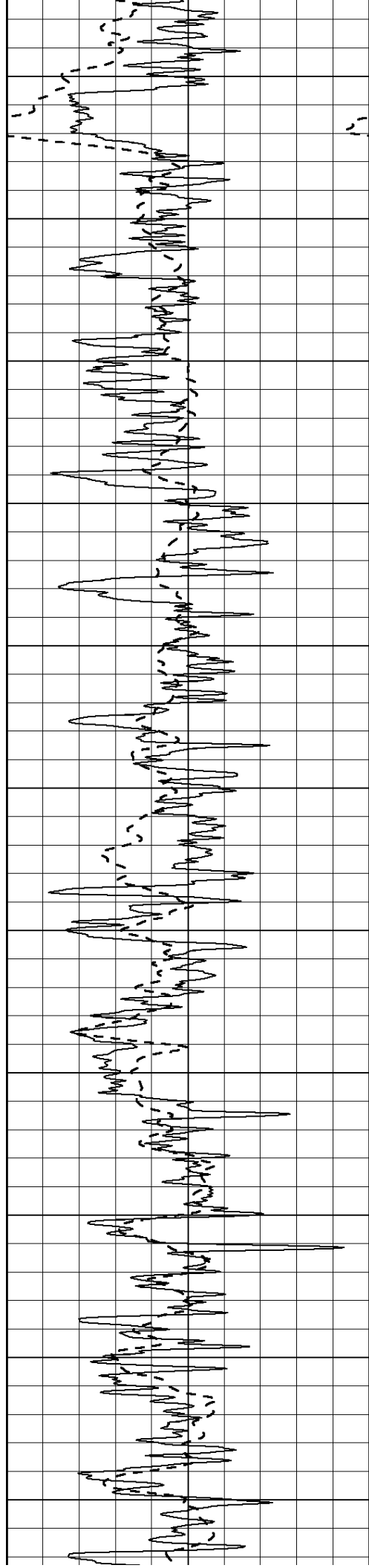
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550





1600
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100





2150

2200

2250

2300

2350

2400

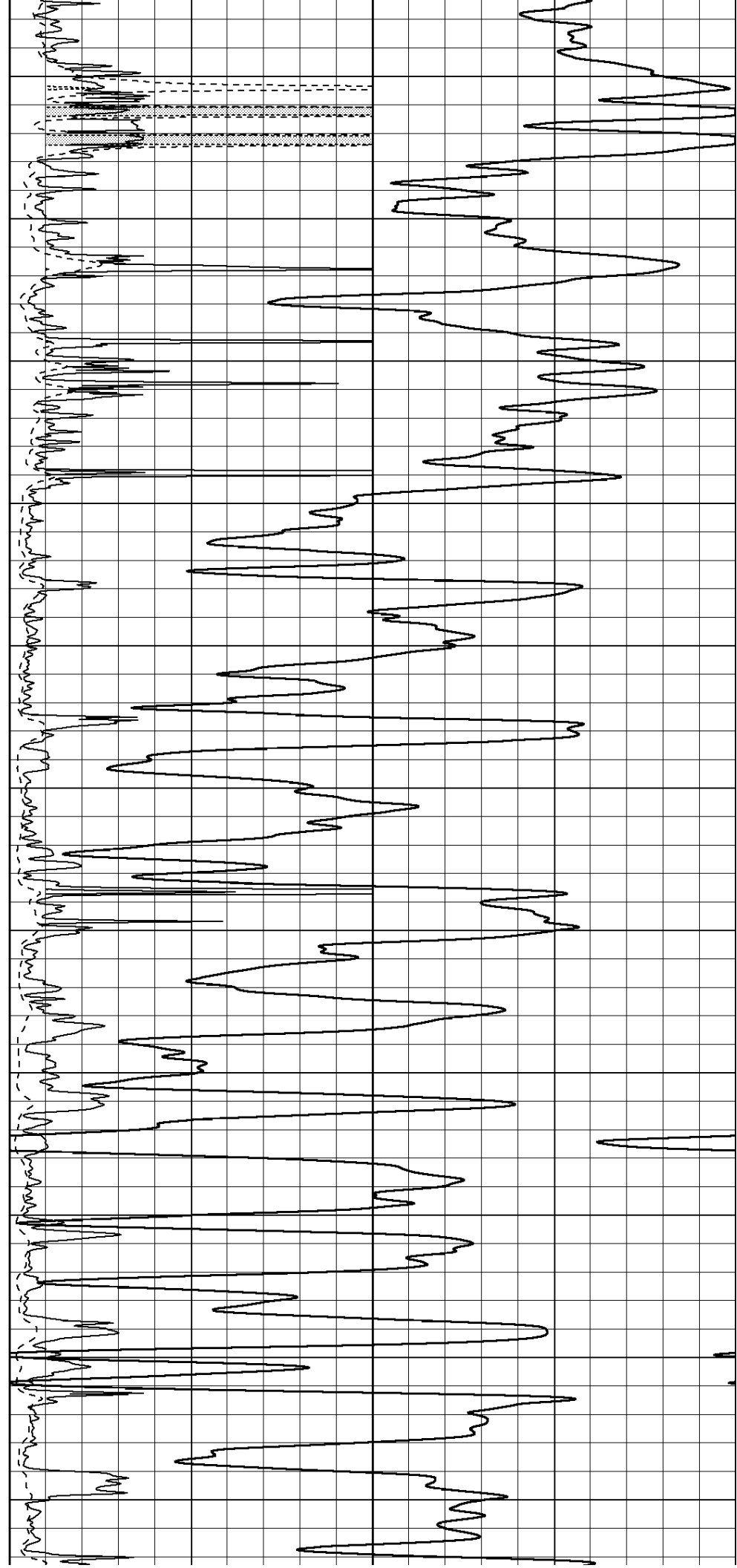
2450

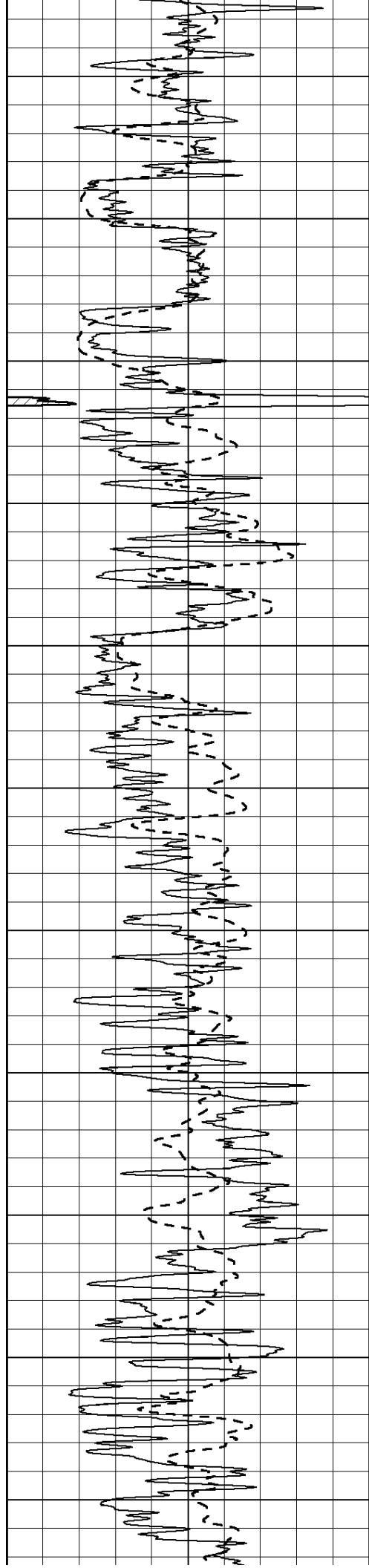
2500

2550

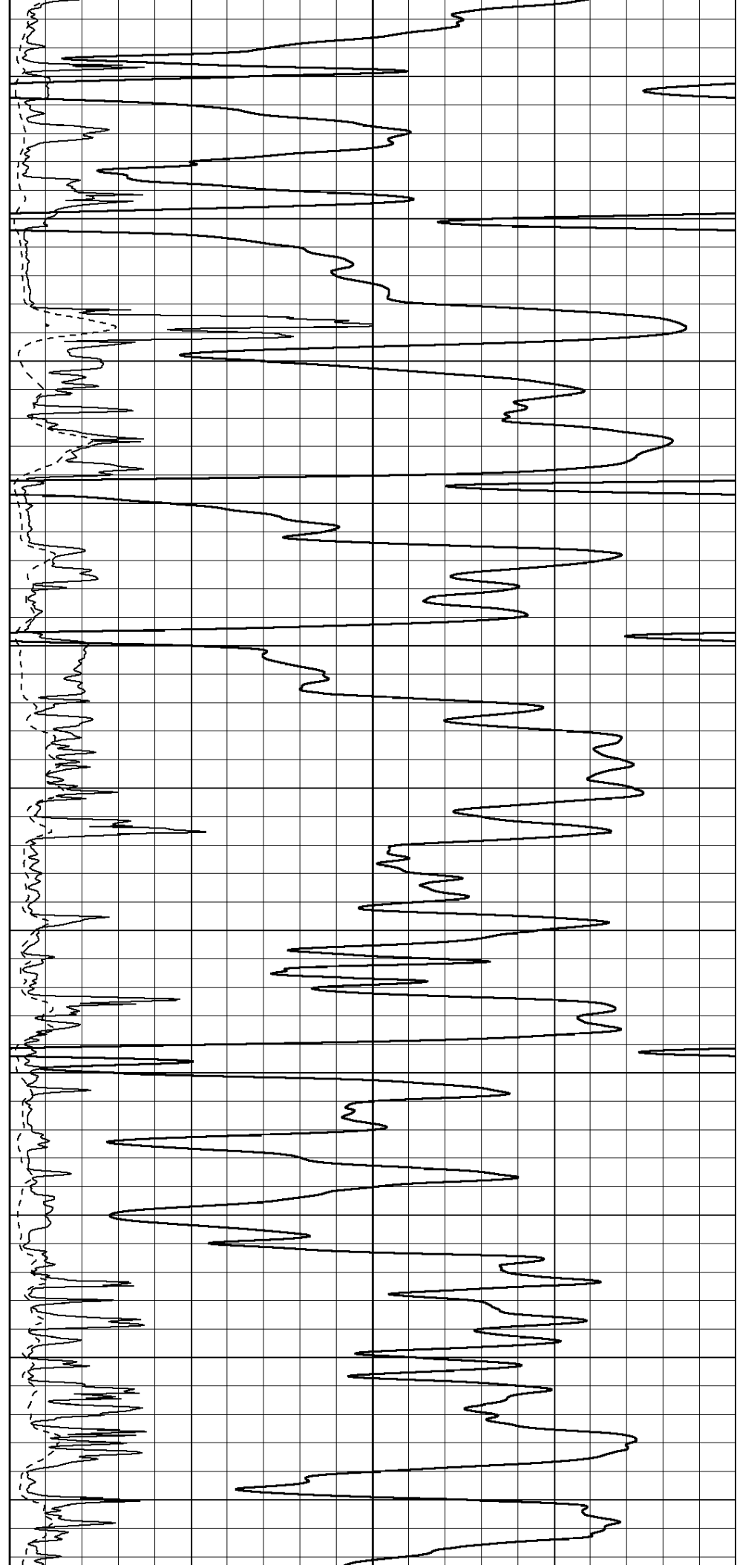
2600

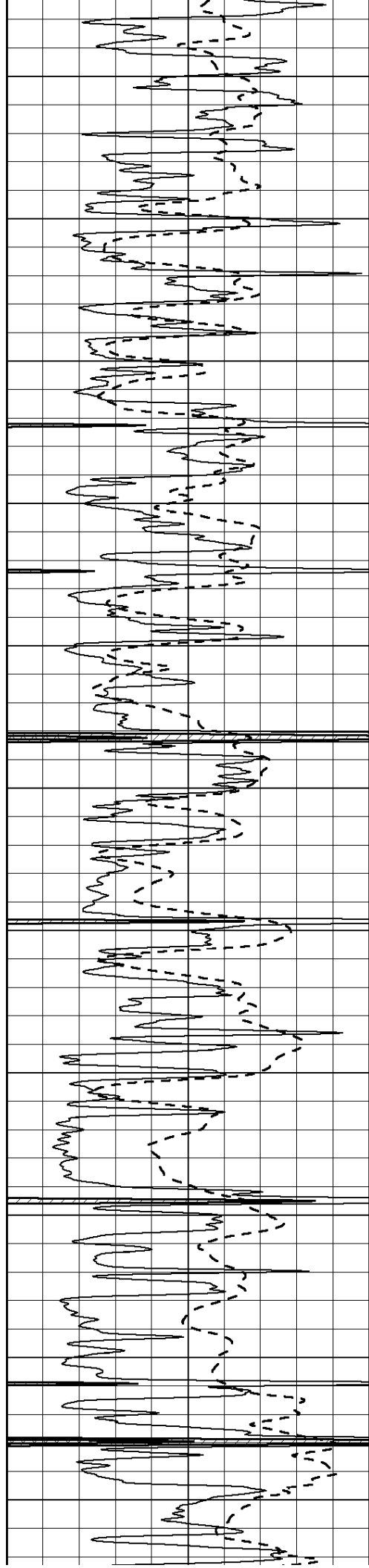
2650





2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200





3250

3300

3350

3400

3450

3500

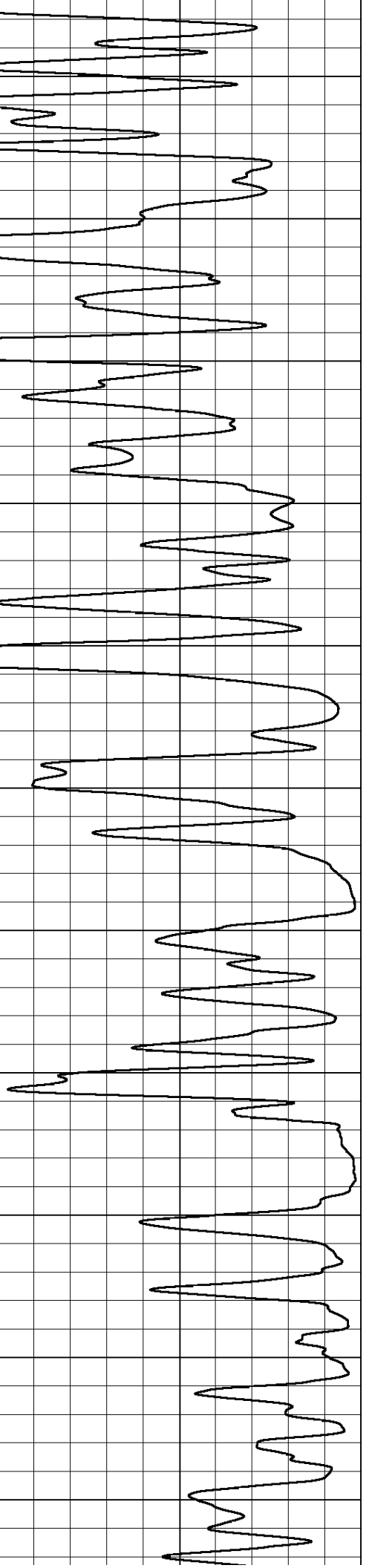
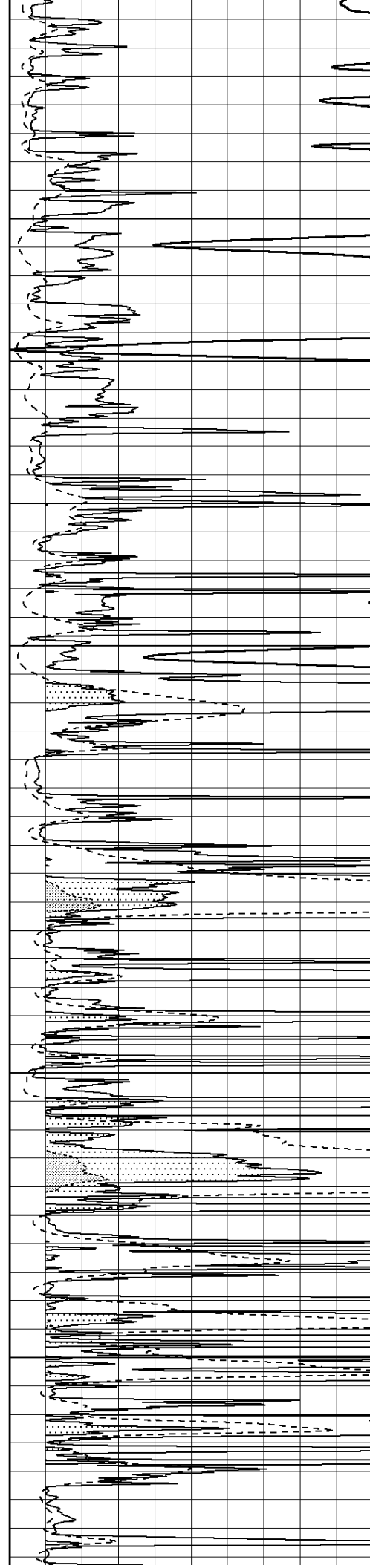
3550

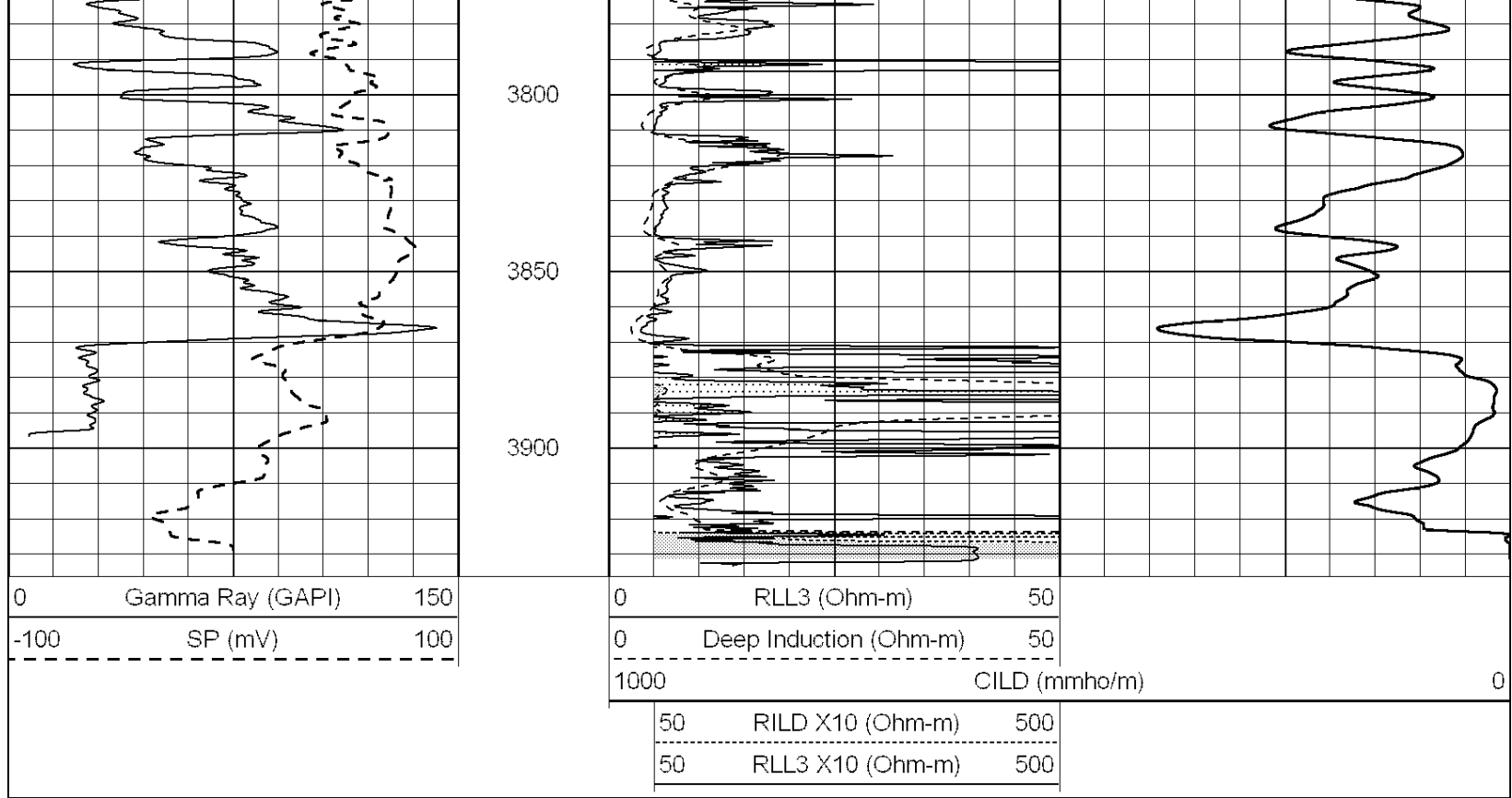
3600

3650

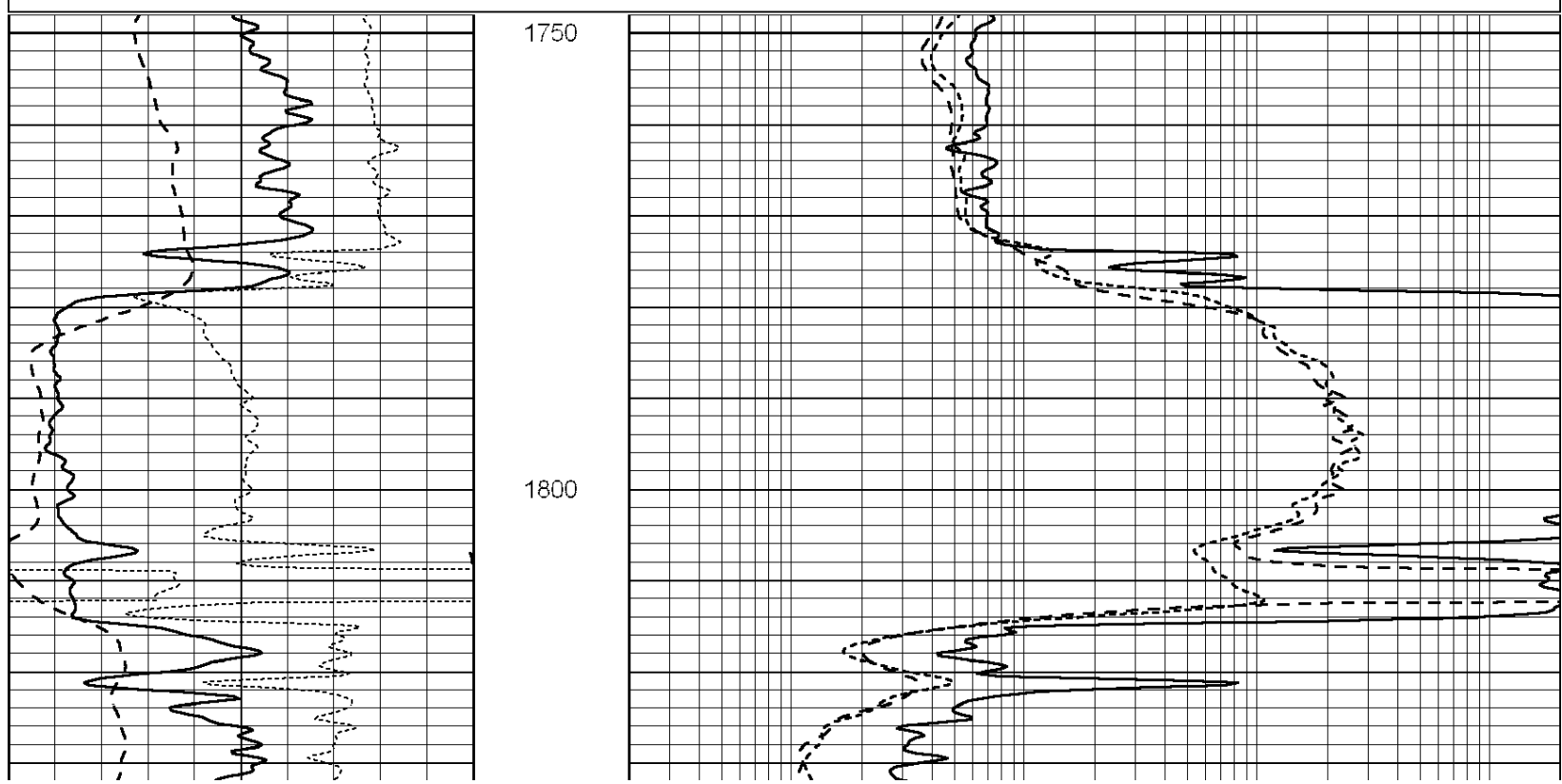
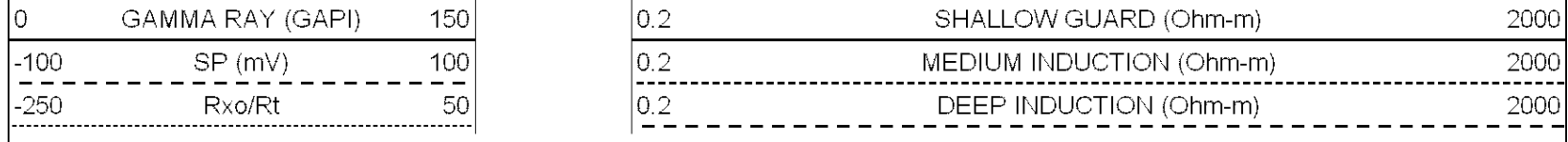
3700

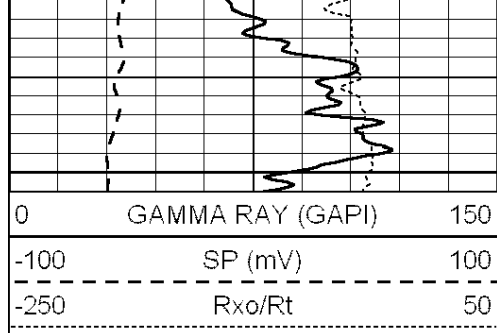
3750



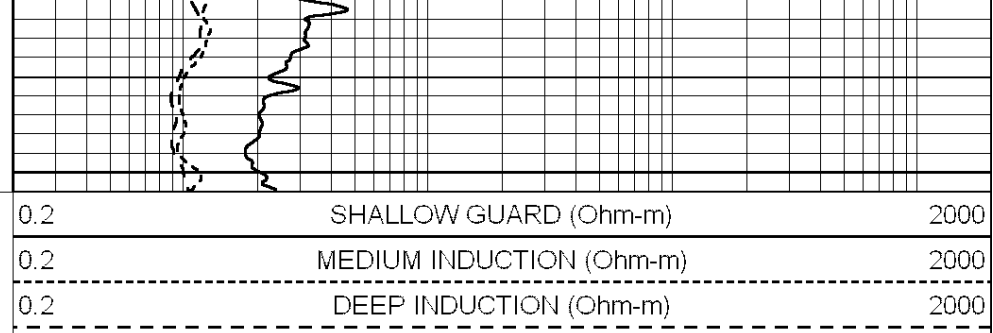


Database File: 26226ddn.db
 Dataset Pathname: pass3.4
 Presentation Format: _dil
 Dataset Creation: Sun Sep 28 16:57:15 2014
 Charted by: Depth in Feet scaled 1:240

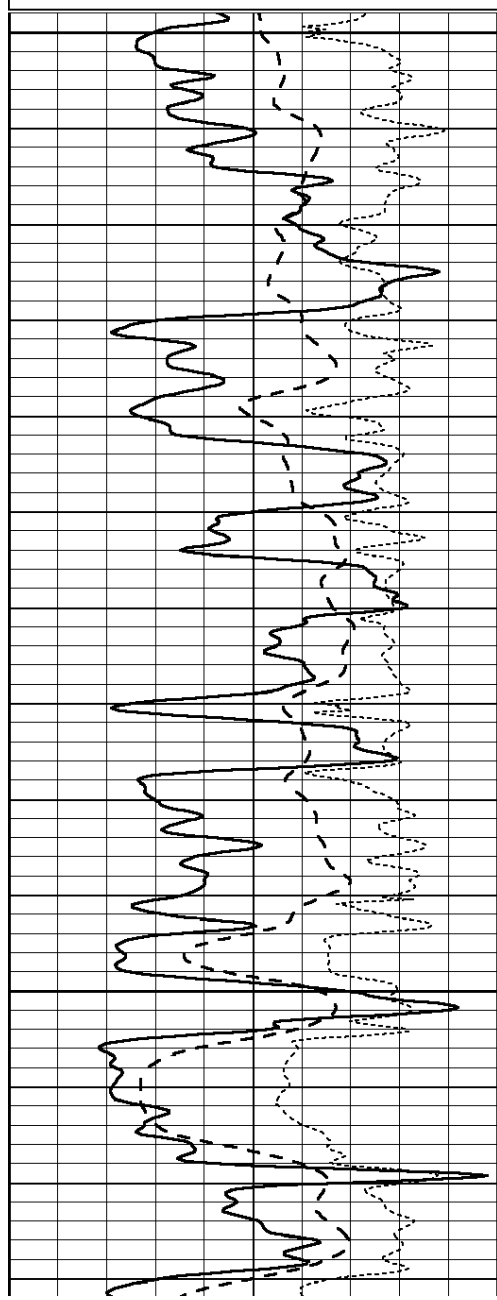
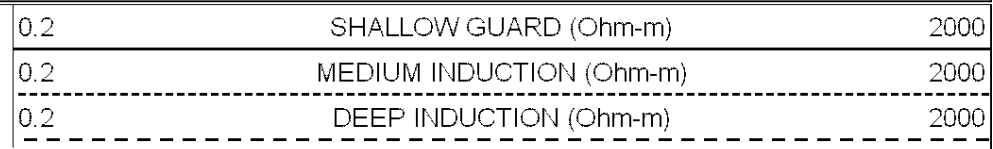
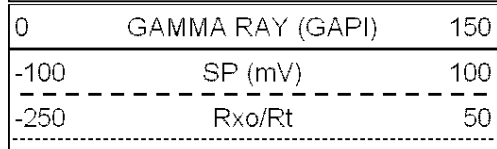




1850



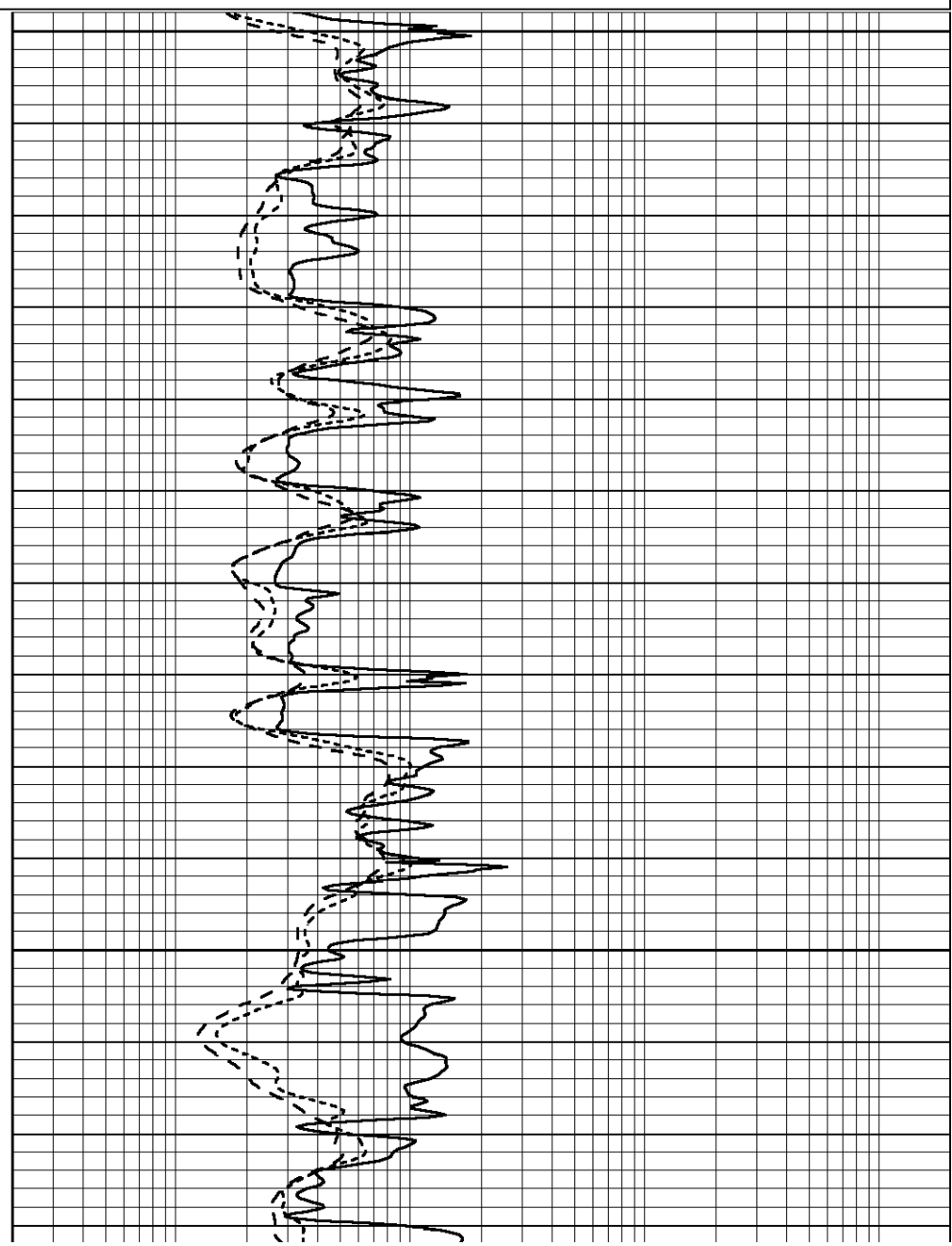
Database File: 26226ddn.db
 Dataset Pathname: pass3.4
 Presentation Format: _dil
 Dataset Creation: Sun Sep 28 16:57:15 2014
 Charted by: Depth in Feet scaled 1:240

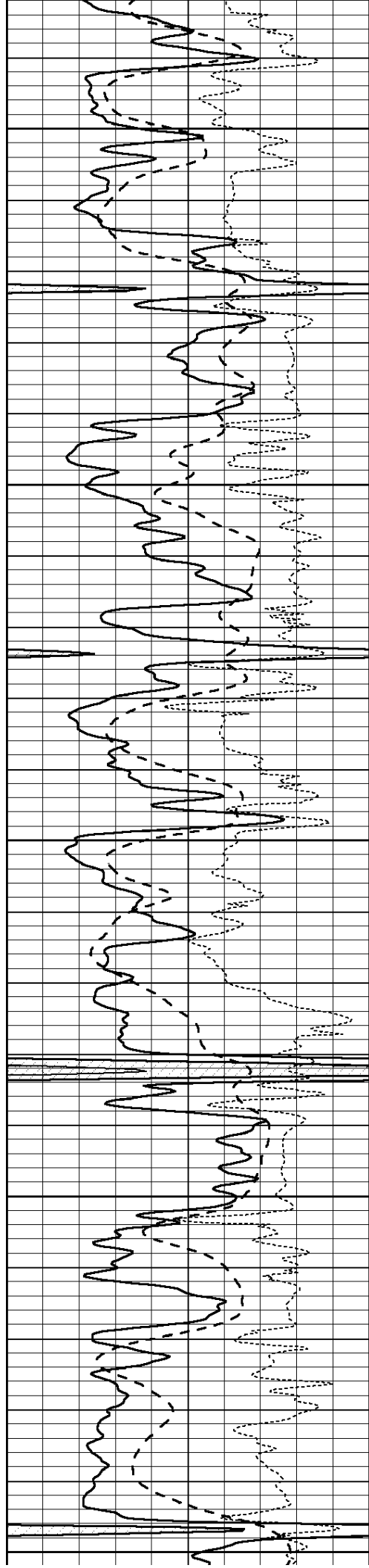


3200

3250

3300





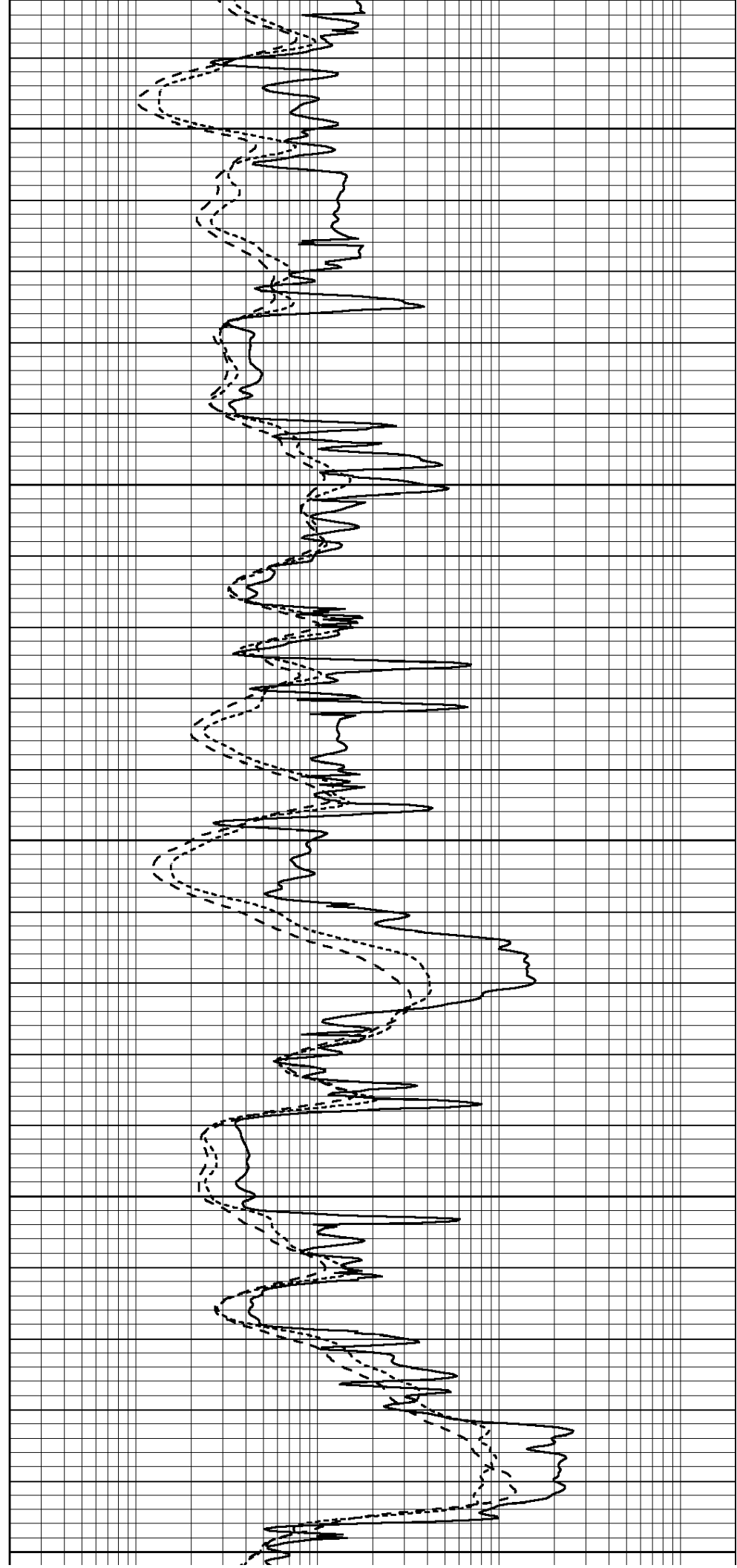
3350

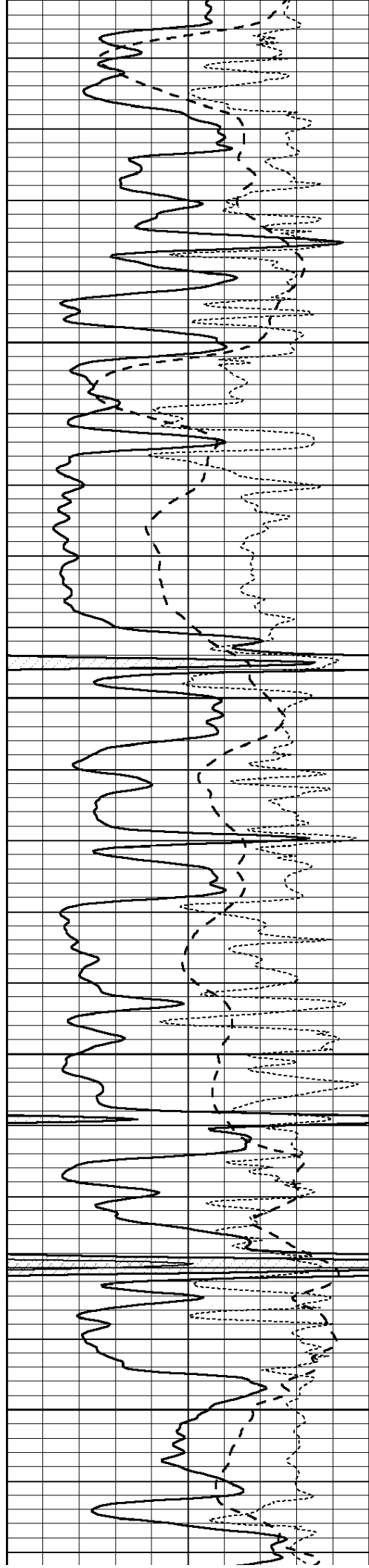
3400

3450

3500

3550



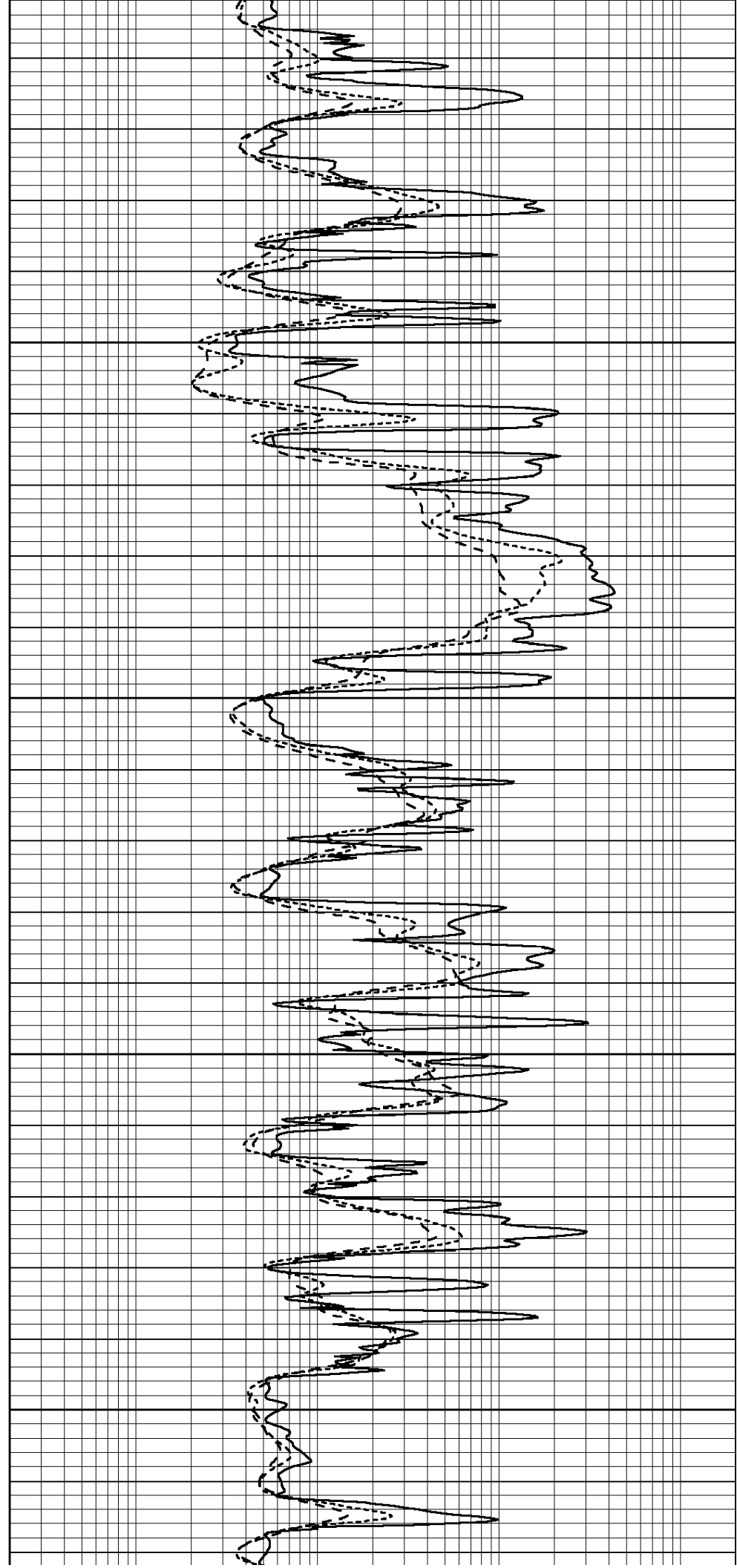


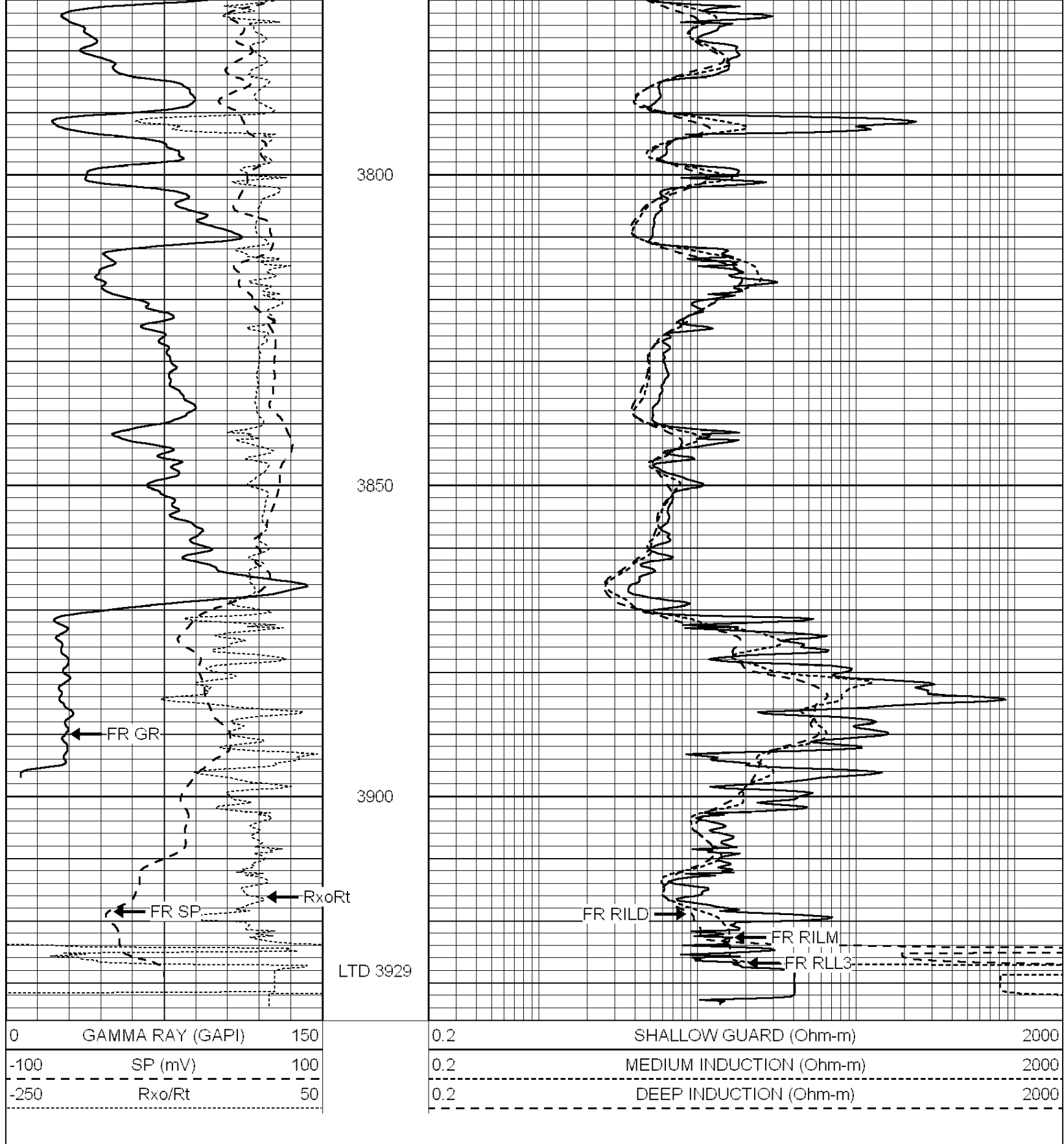
3600

3650

3700

3750



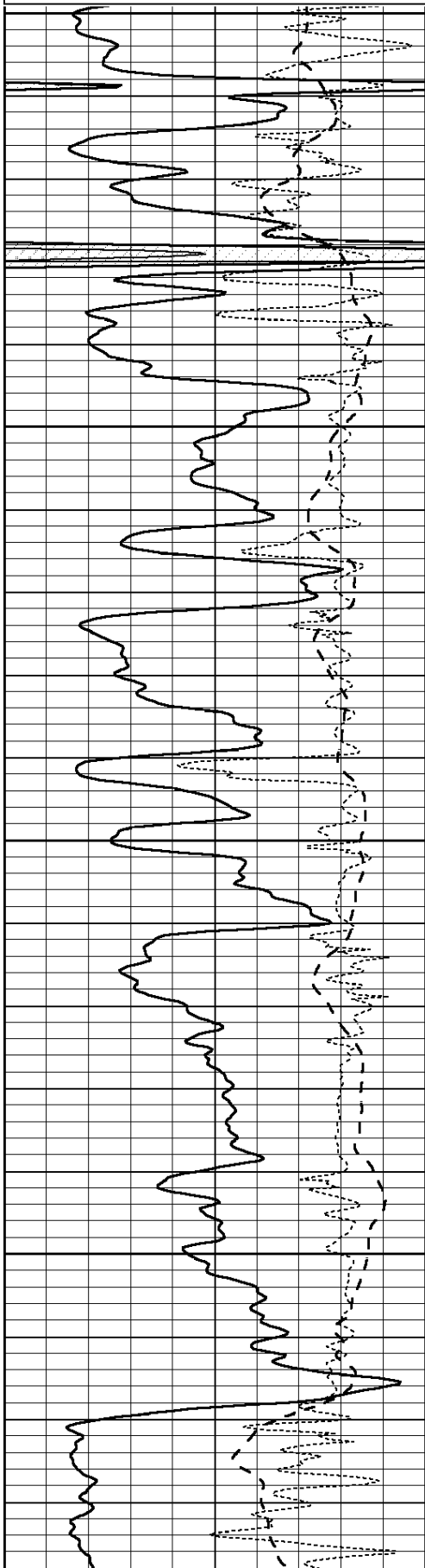


REPEAT SECTION

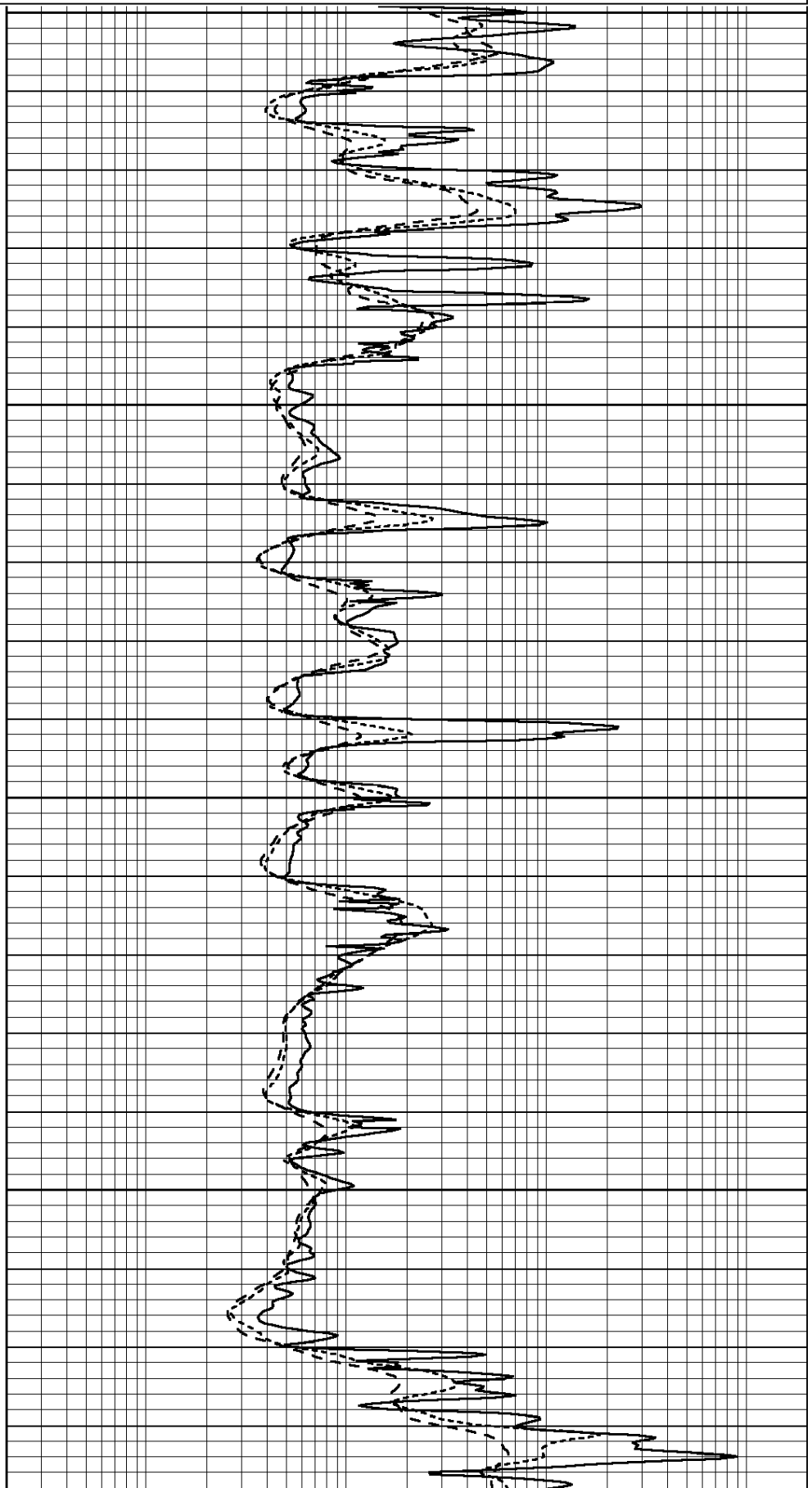
Database File: 26226ddn.db
 Dataset Pathname: pass2.1

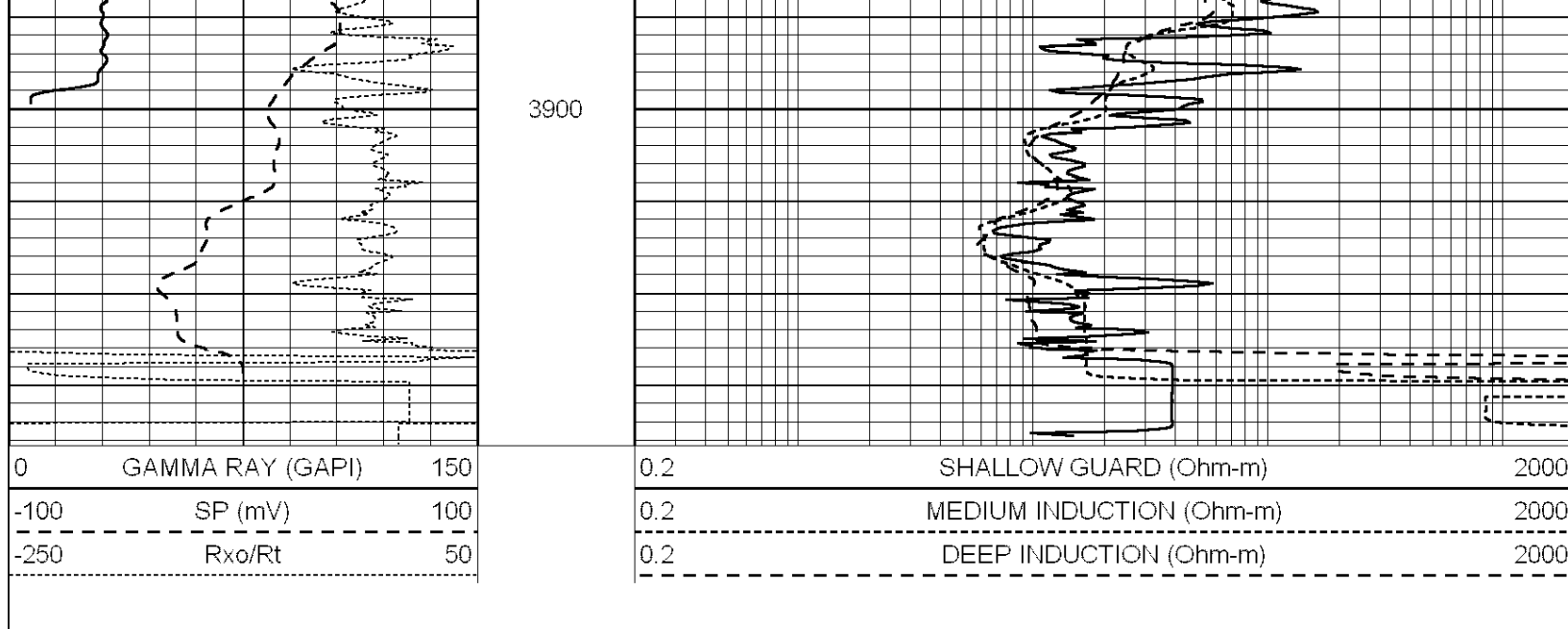
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



3700
 3750
 3800
 3850





Calibration Report

Database File: 26226ddn.db
 Dataset Pathname: pass3.4
 Dataset Creation: Sun Sep 28 16:57:15 2014

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Tue Sep 02 02:19:29 2014
 Downhole Cal Performed: Tue Sep 02 01:11:23 2014
 After Survey Verification Performed: Tue Sep 02 01:28:35 2014

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.593	0.593	V	0.000	400.000	mmho/m	620.000	-7.000
Medium	0.668	0.668	V	0.000	464.000	mmho/m	630.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.030	0.644	V	0.000	400.000	mmho/m	651.380	-19.739
Medium	0.027	0.815	V	0.000	464.000	mmho/m	588.755	-16.048

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	3353890.000	-304691.000	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	16235500.000	-3735510.000	mmho/m	1.000	0.000
LL3		2.500	V		1400.000	Ohm-m		
		0.022	V		20.000	Ohm-m		
		-7.278	V		4000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: GEAR5-GEARHART
 Source / Verifier: 147 / 147
 Master Calibration Performed: Tue Sep 02 02:18:22 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	943.83	576.01	cps
Aluminum	2.600	g/cc	212.01	399.19	cps
	Spine Angle = 76.20		Density/Spine Ratio = 0.579		
	Size		Reading		
Small Ring	8.00	in	1.77	V	
Large Ring	14.00	in	2.90	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: 46001
 Tool Model: Probe1
 Performed: Tue Sep 02 02:32:49 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.2600 GAPI/cps