



**DUAL  
INDUCTION  
LOG**

Company L.D. DRILLING, INC.  
Well #1-16 DEBRA  
Field WILDCAT  
County THOMAS  
State KANSAS

Company L.D. DRILLING, INC.  
Well #1-16 DEBRA  
Field WILDCAT  
County THOMAS  
State KANSAS

Location: API #: 15-193-21099-0000  
1639' FNL & 458' FWL  
SEC 16 TWP 8S RGE 34W  
Permanent Datum GROUND LEVEL Elevation 3228  
Log Measured From KELLY BUSHING 5' A.G.L.  
Drilling Measured From KELLY BUSHING  
Elevation  
K.B. 3233  
D.F. 3231  
G.L. 3228

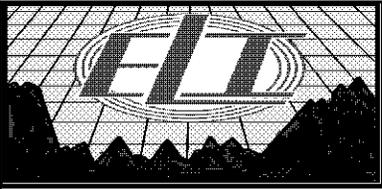
Date	2/17/22		
Run Number	ONE		
Depth Driller	4780		
Depth Logger	4780		
Bottom Logged Interval	4778		
Top Log Interval	00		
Casing Driller	8 5/8" @ 370'		
Casing Logger	370'		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4600 PPM	
Density / Viscosity	9.4/58		
PH / Fluid Loss	10.0/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.95@52F		
Rmt @ Meas. Temp	.71@52F		
Rmc @ Meas. Temp	1.14@52F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.40@123F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	123F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI	TJ DREILING	
Witnessed By	KIM SHOEMAKER		

<<< 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 ELI WIRELINE SERVICES, HAYS, KS. ( 785 ) 628-6395  
DIRECTIONS  
COLBY KANSAS, -1/2 MILE SOUTH ON HIGHWAY 25 TO ROAD "P"  
- 4 MILES WEST TO YIELD SIGN, -3/4 MILE NORTH,  
-EAST INTO JUST PAST THE FEED YARD

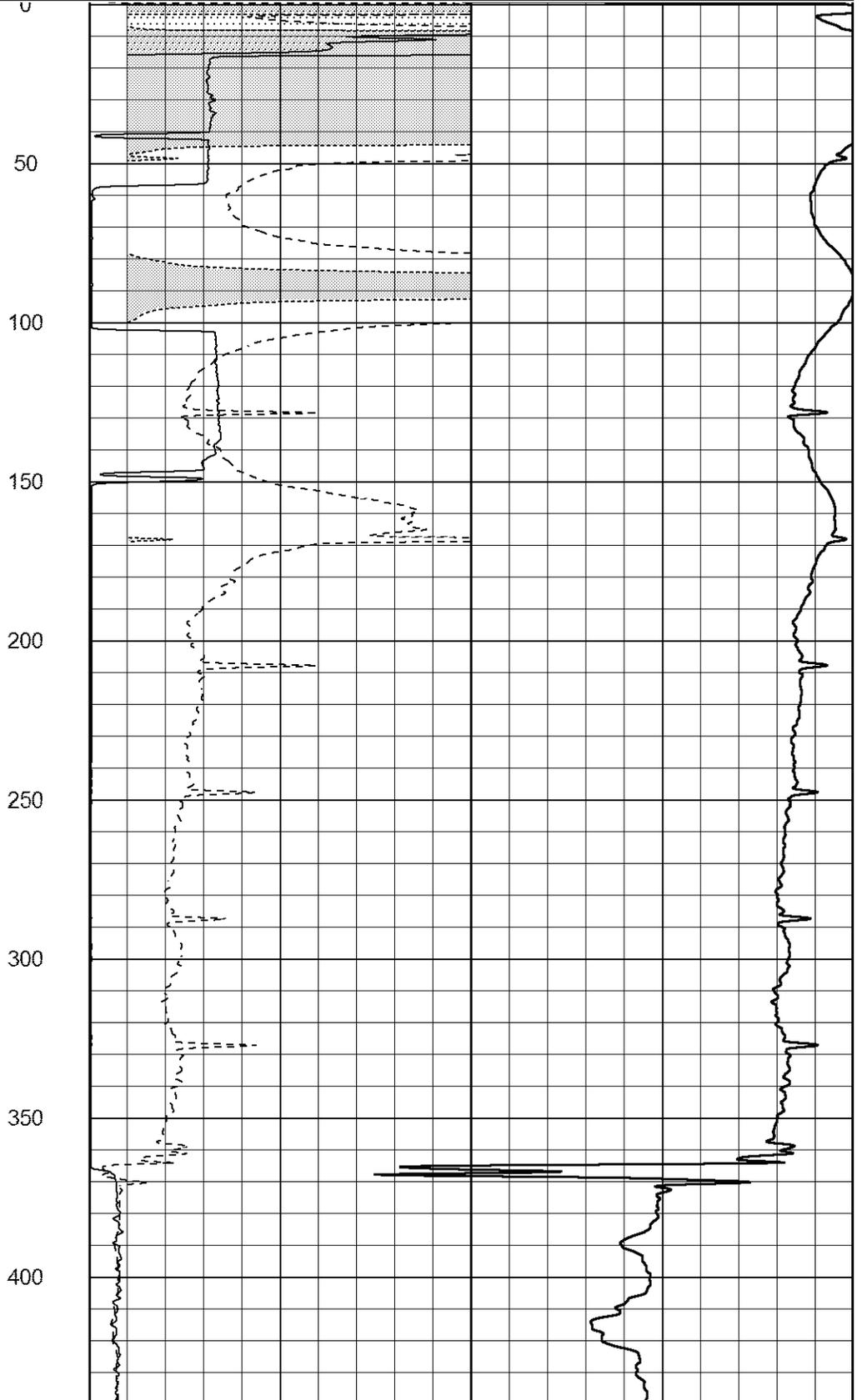
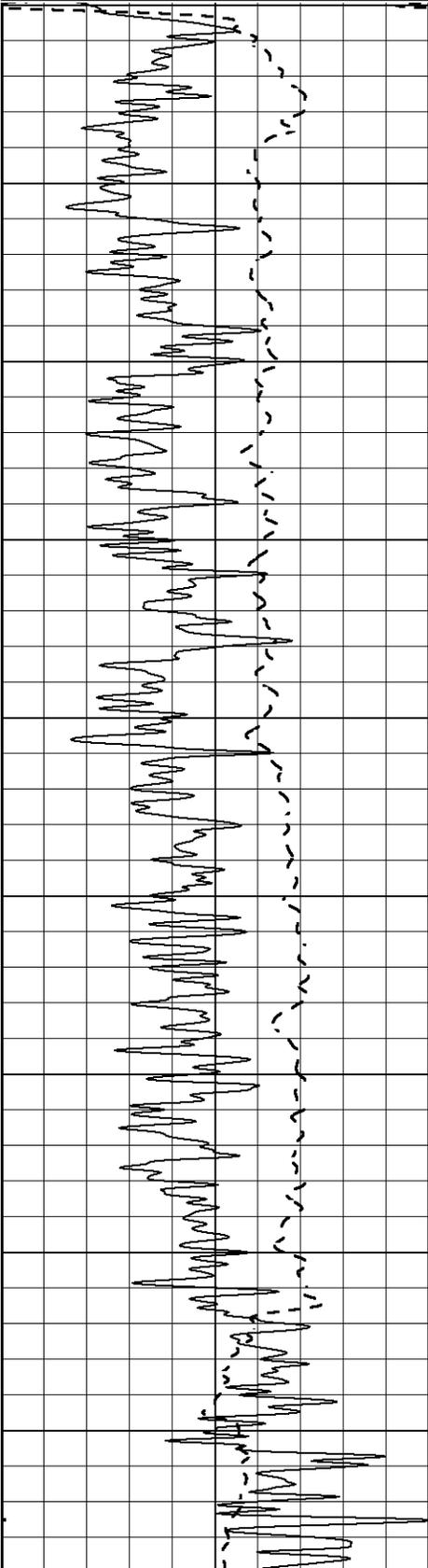


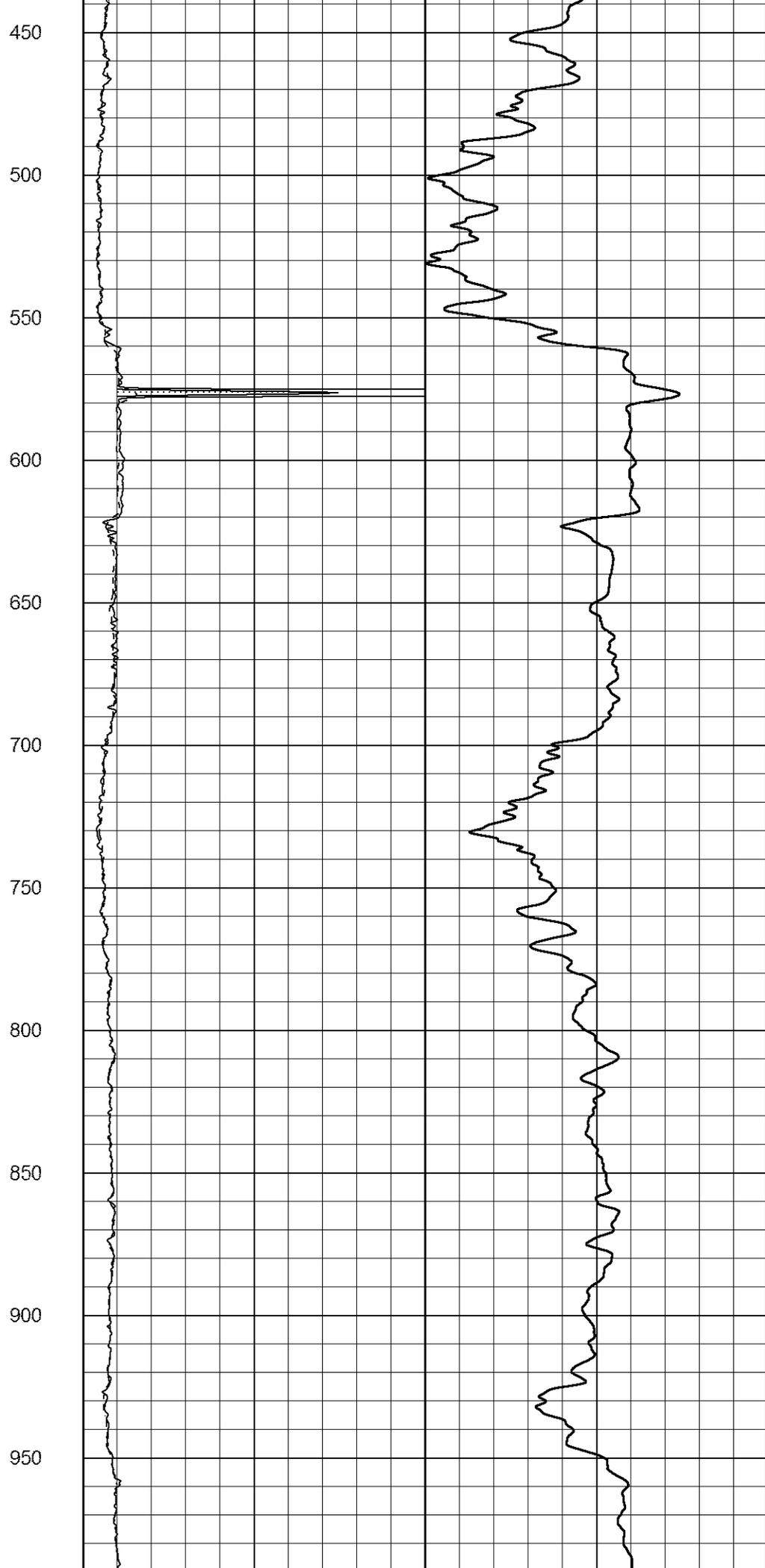
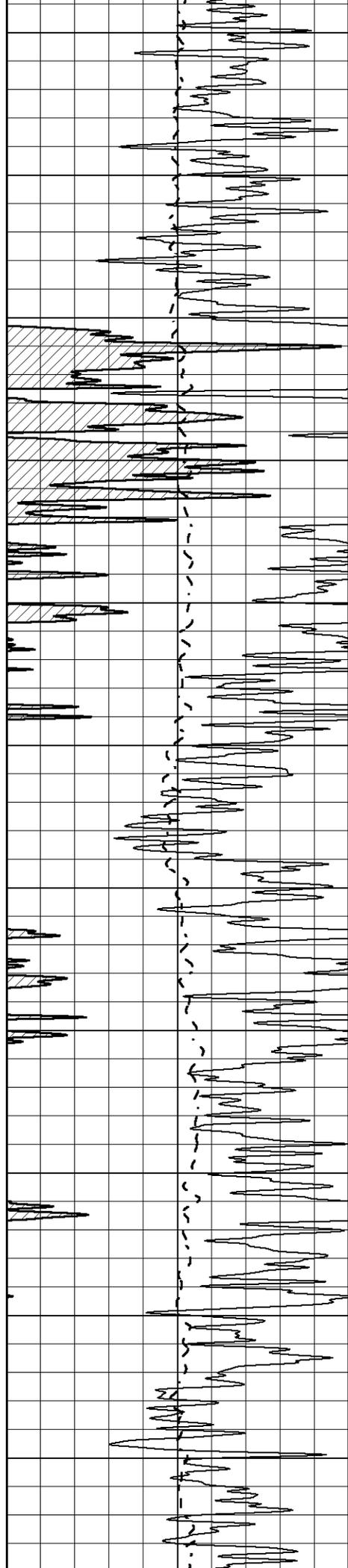
**MAIN SECTION**

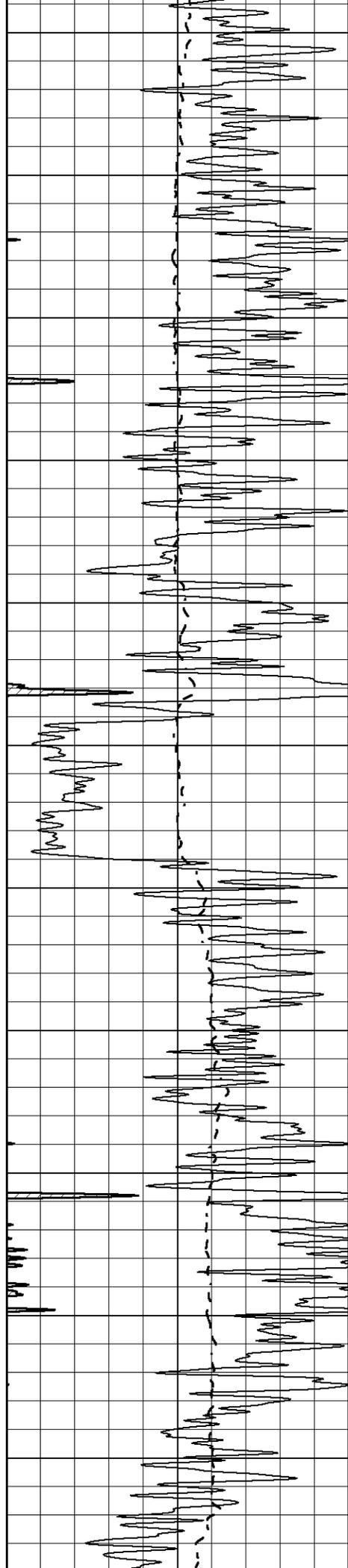
Database File 6241ddn.db  
 Dataset Pathname pass3.3  
 Presentation Format \_dil2  
 Dataset Creation Thu Feb 17 13:12:10 2022  
 Charted by Depth in Feet scaled 1:600

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

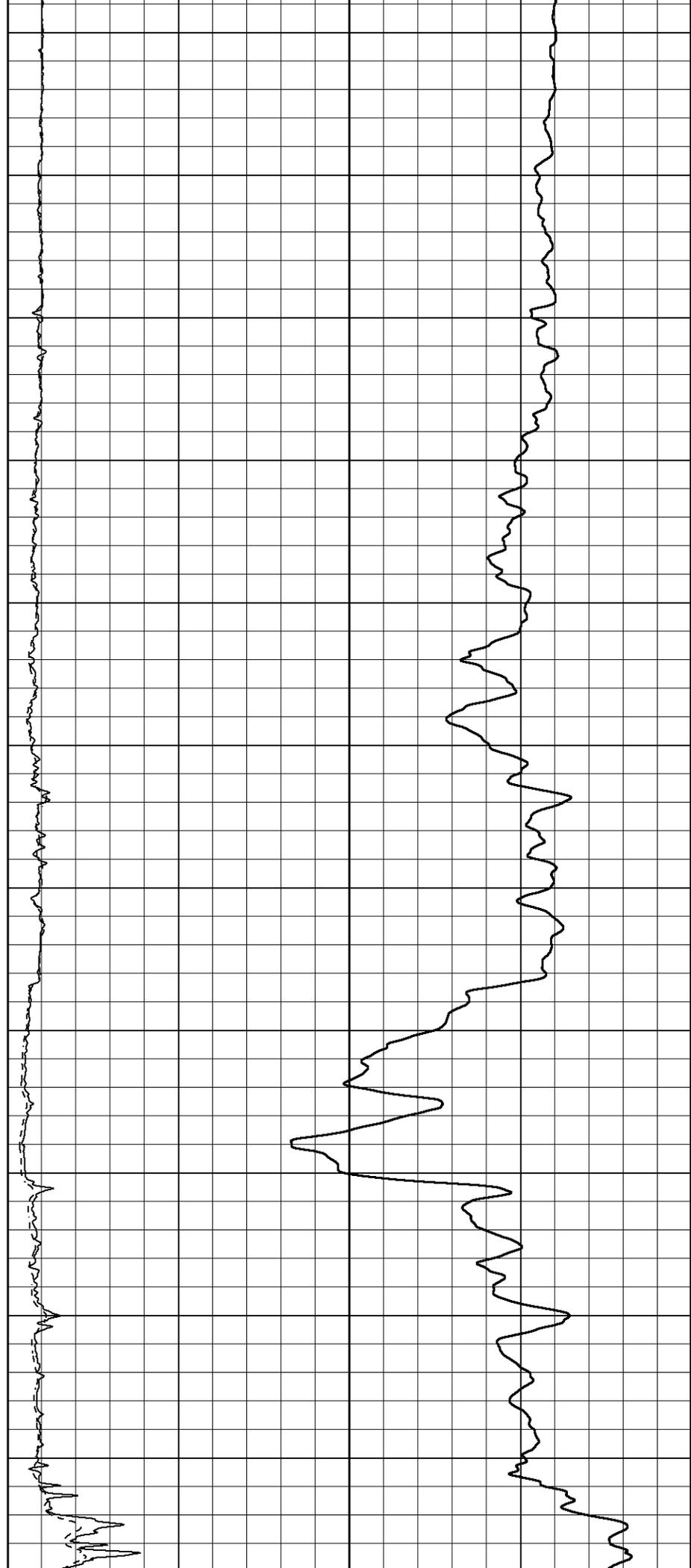
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

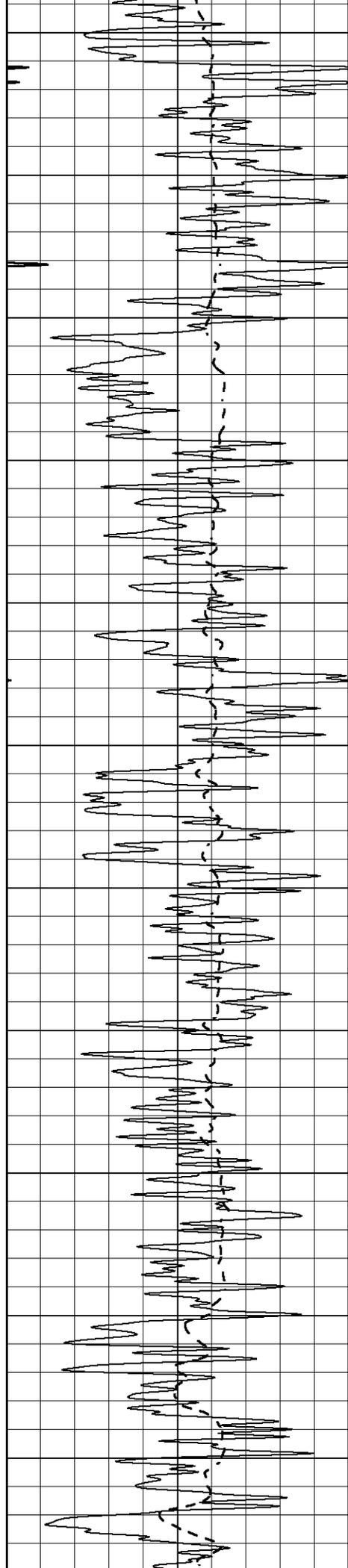




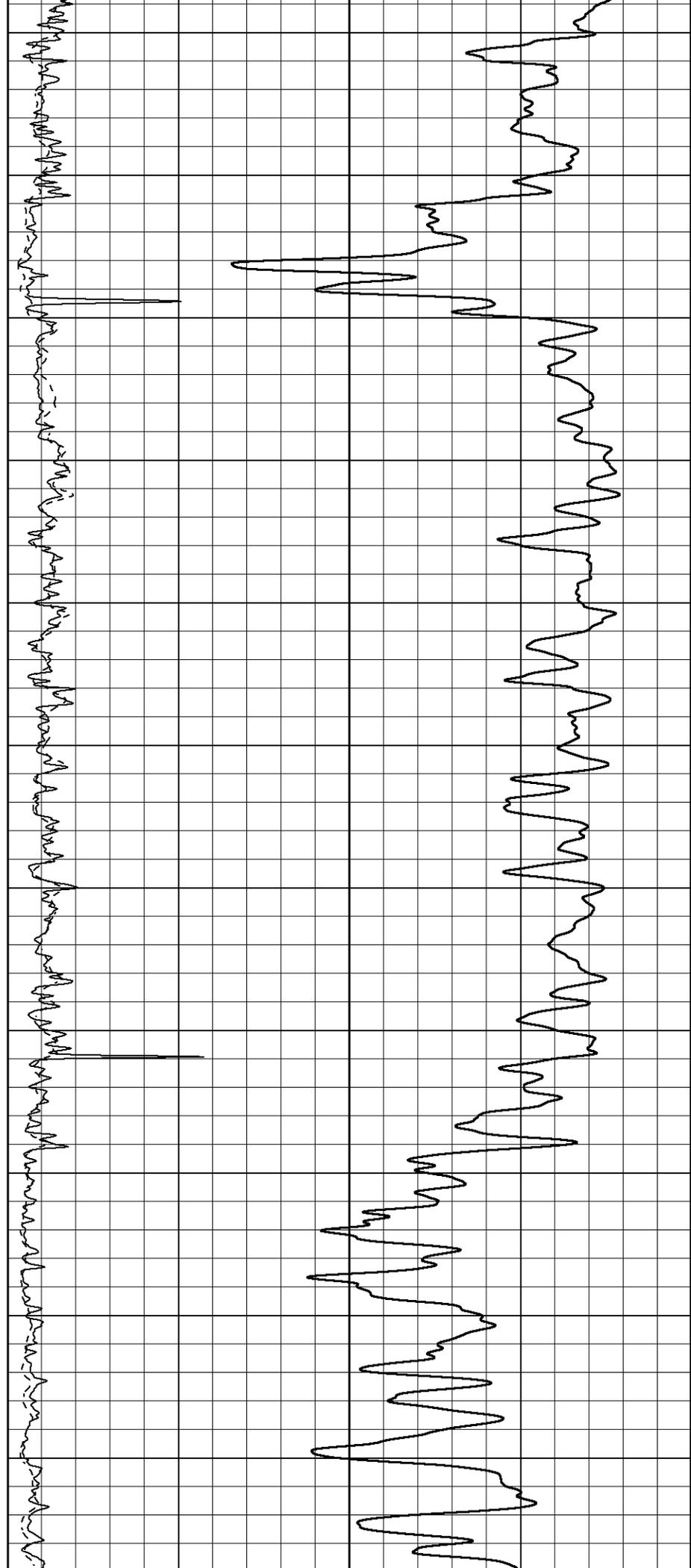


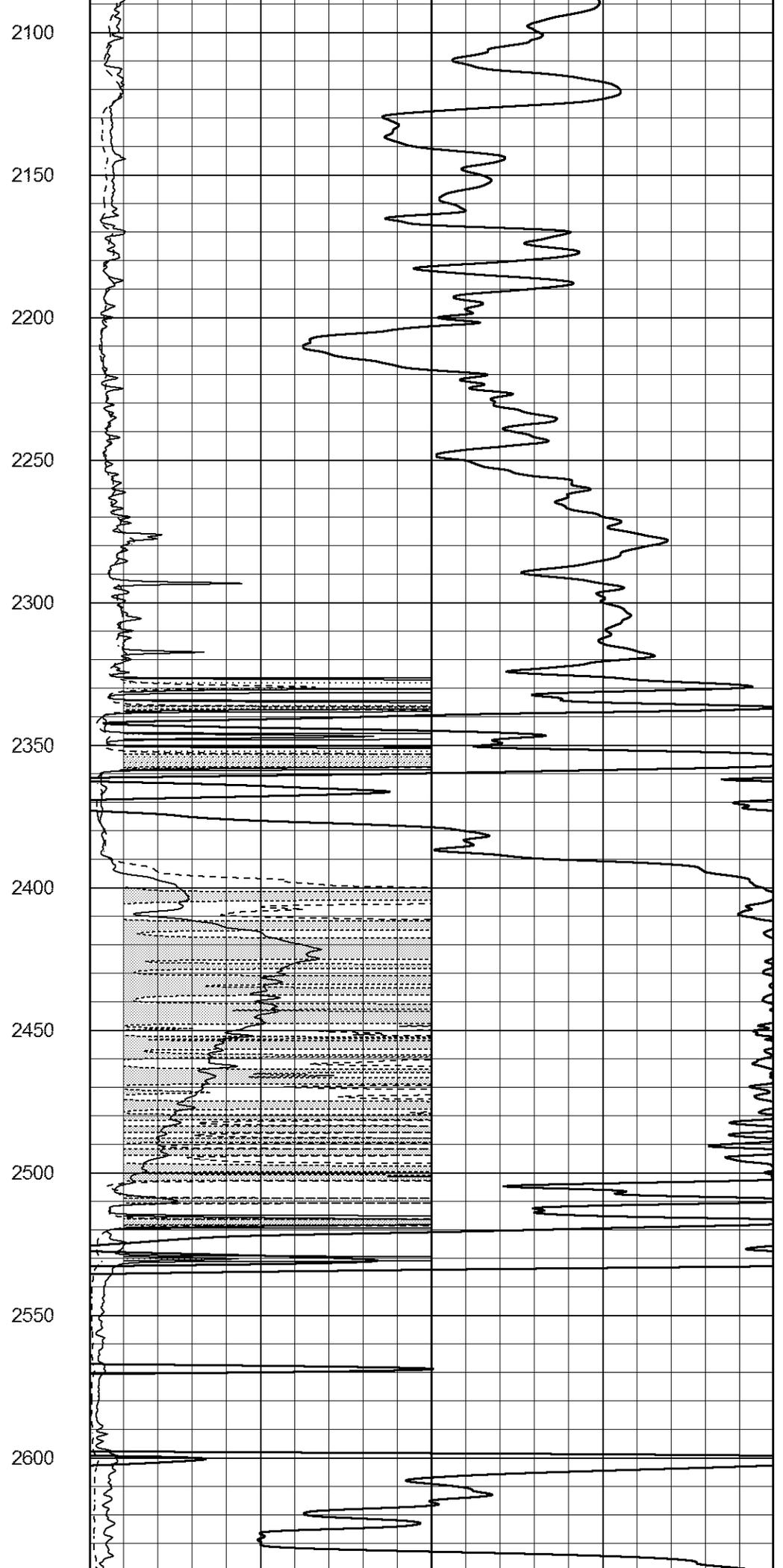
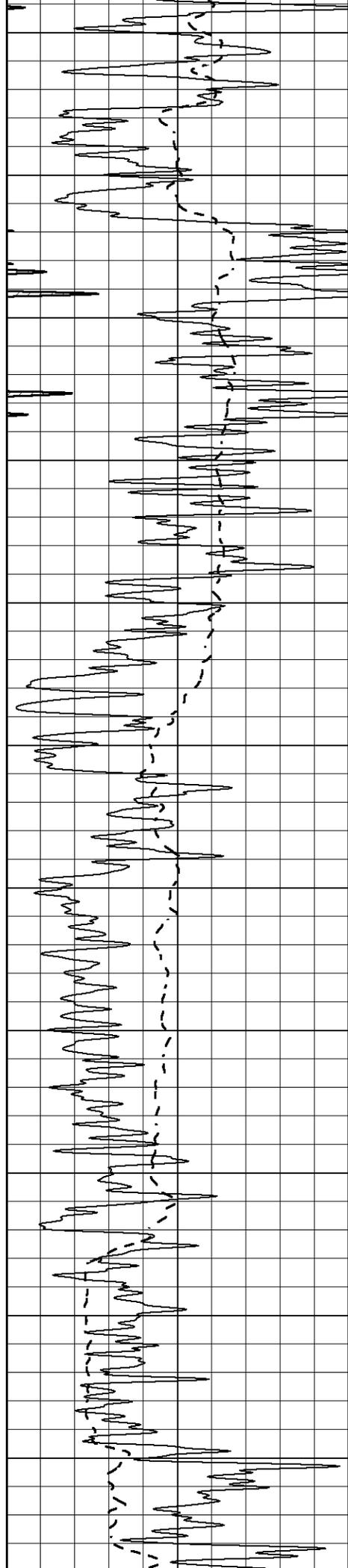
1000  
1050  
1100  
1150  
1200  
1250  
1300  
1350  
1400  
1450  
1500

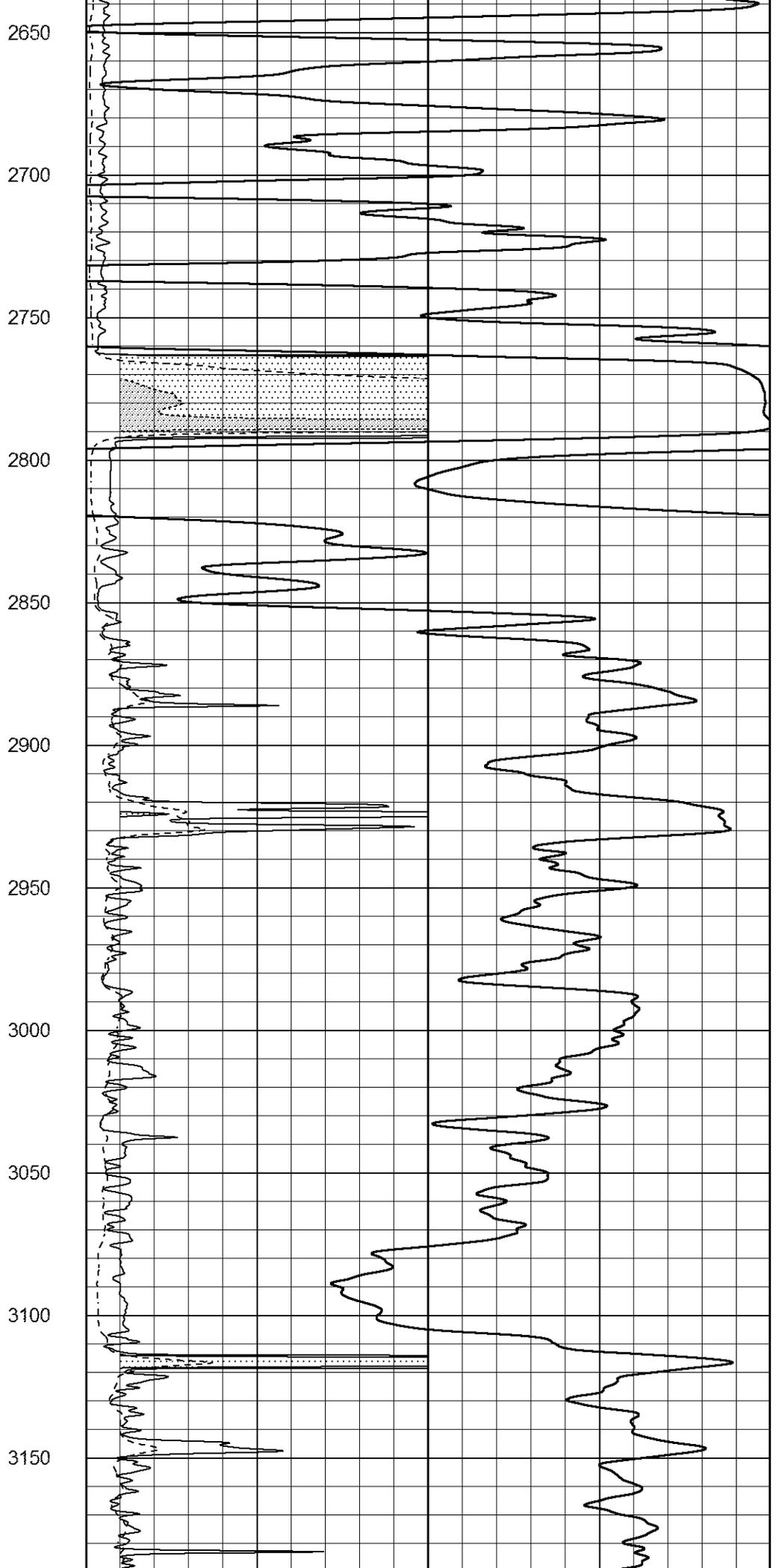
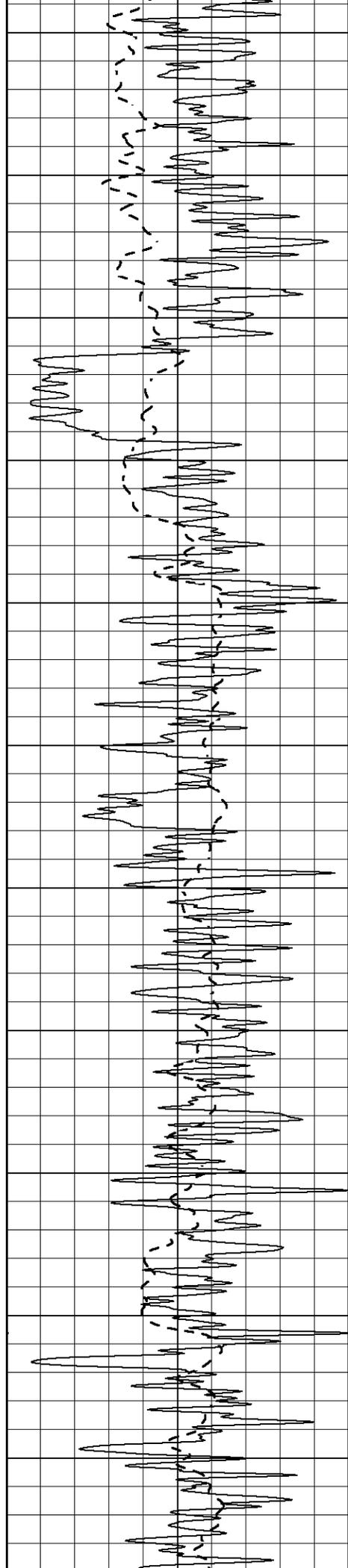


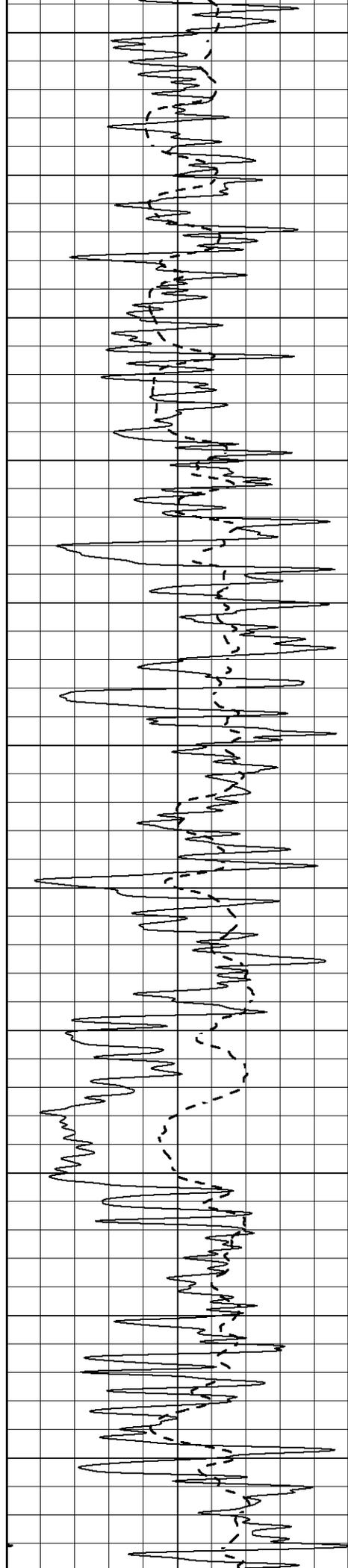


1550  
1600  
1650  
1700  
1750  
1800  
1850  
1900  
1950  
2000  
2050

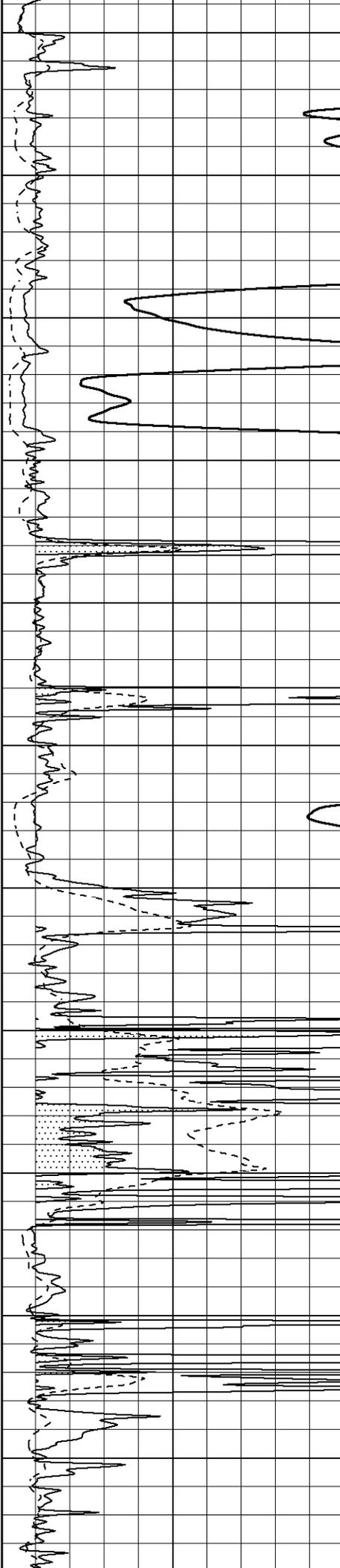


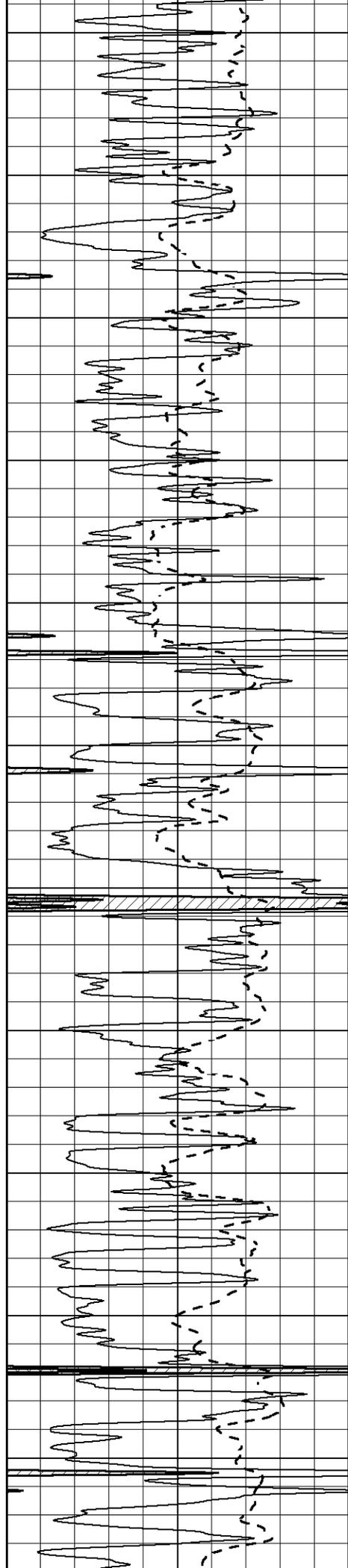




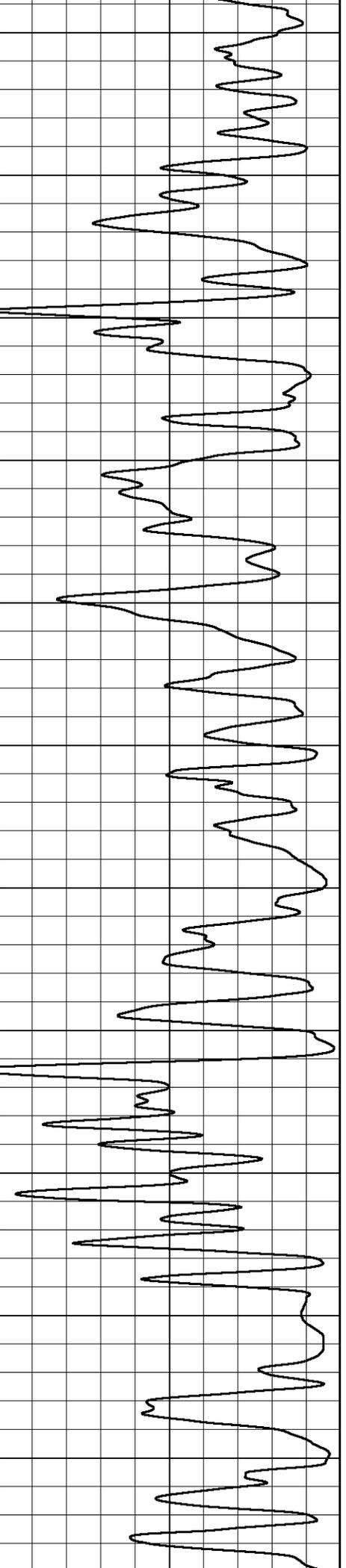
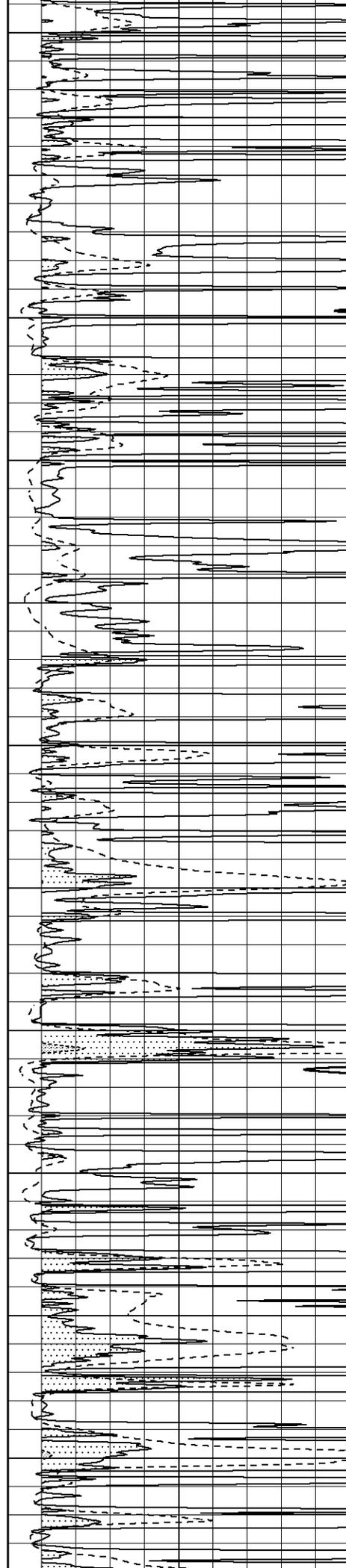


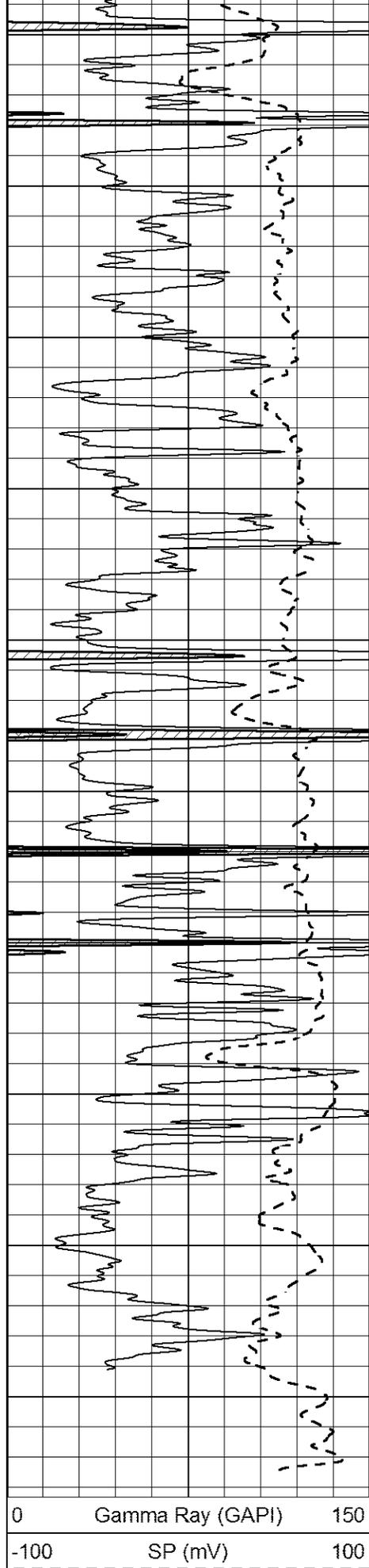
3200  
3250  
3300  
3350  
3400  
3450  
3500  
3550  
3600  
3650  
3700



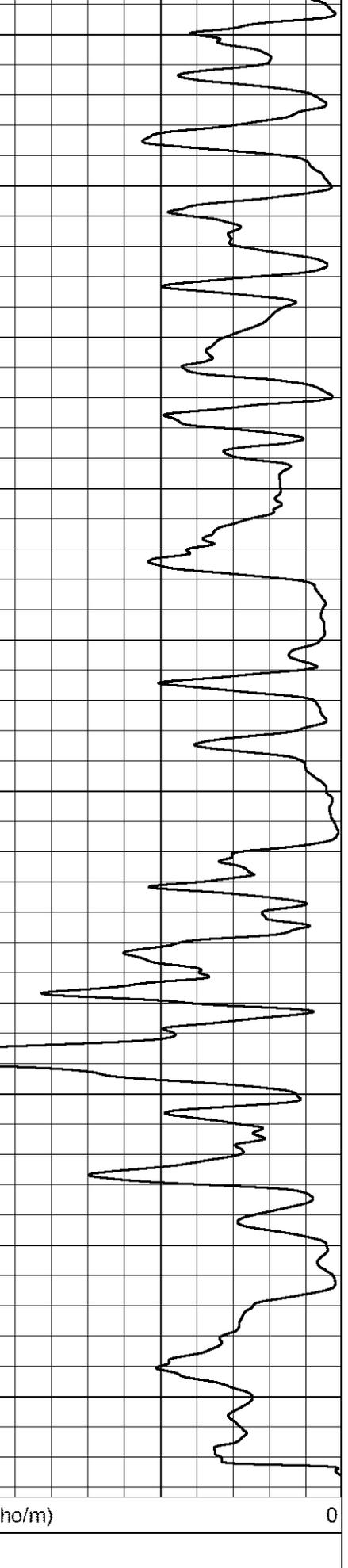
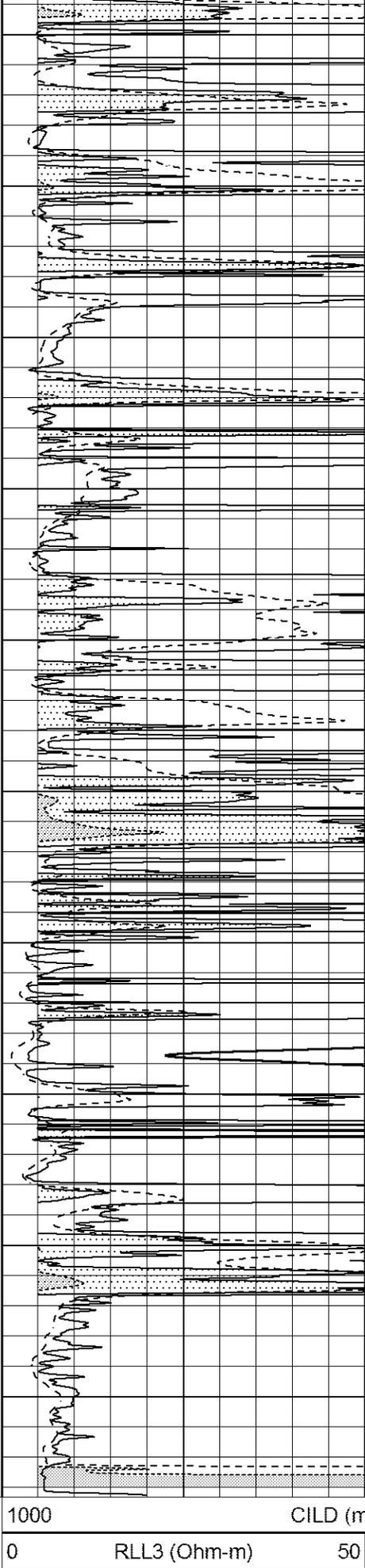


3750  
3800  
3850  
3900  
3950  
4000  
4050  
4100  
4150  
4200  
4250





4300  
4350  
4400  
4450  
4500  
4550  
4600  
4650  
4700  
4750



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

1000 CILD (mmho/m) 0

0 RLL3 (Ohm-m) 50

0 Deep Induction (Ohm-m) 50

50 RILD X10 (Ohm-m) 500

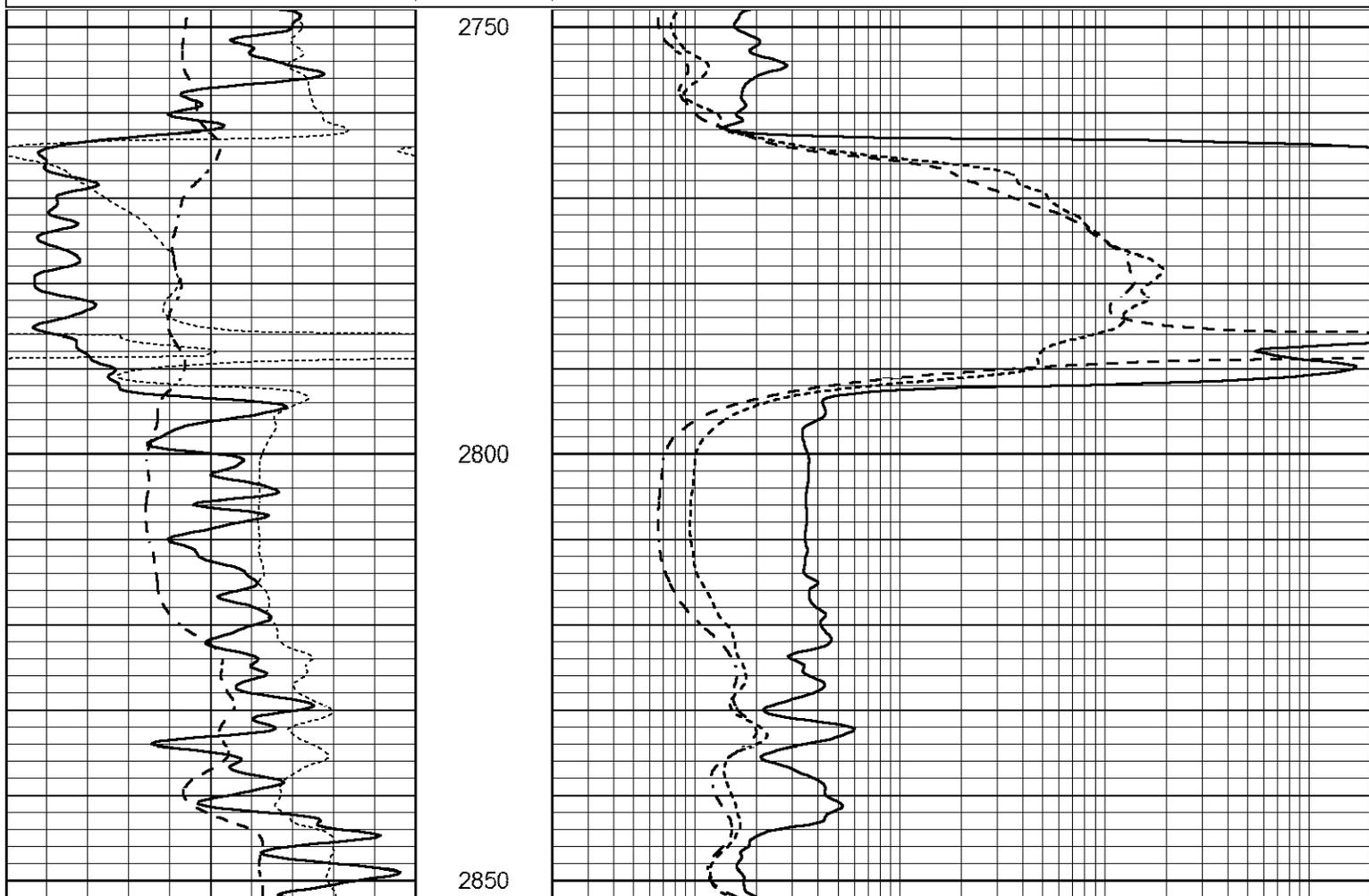
50 RIL3 X10 (Ohm-m) 500



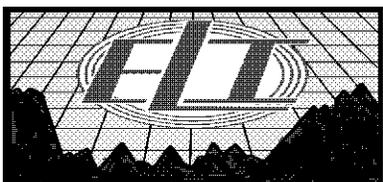
# ANHYDRITE

Database File 6241ddn.db  
 Dataset Pathname pass3.2  
 Presentation Format \_dil  
 Dataset Creation Thu Feb 17 12:41:22 2022  
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000



0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000

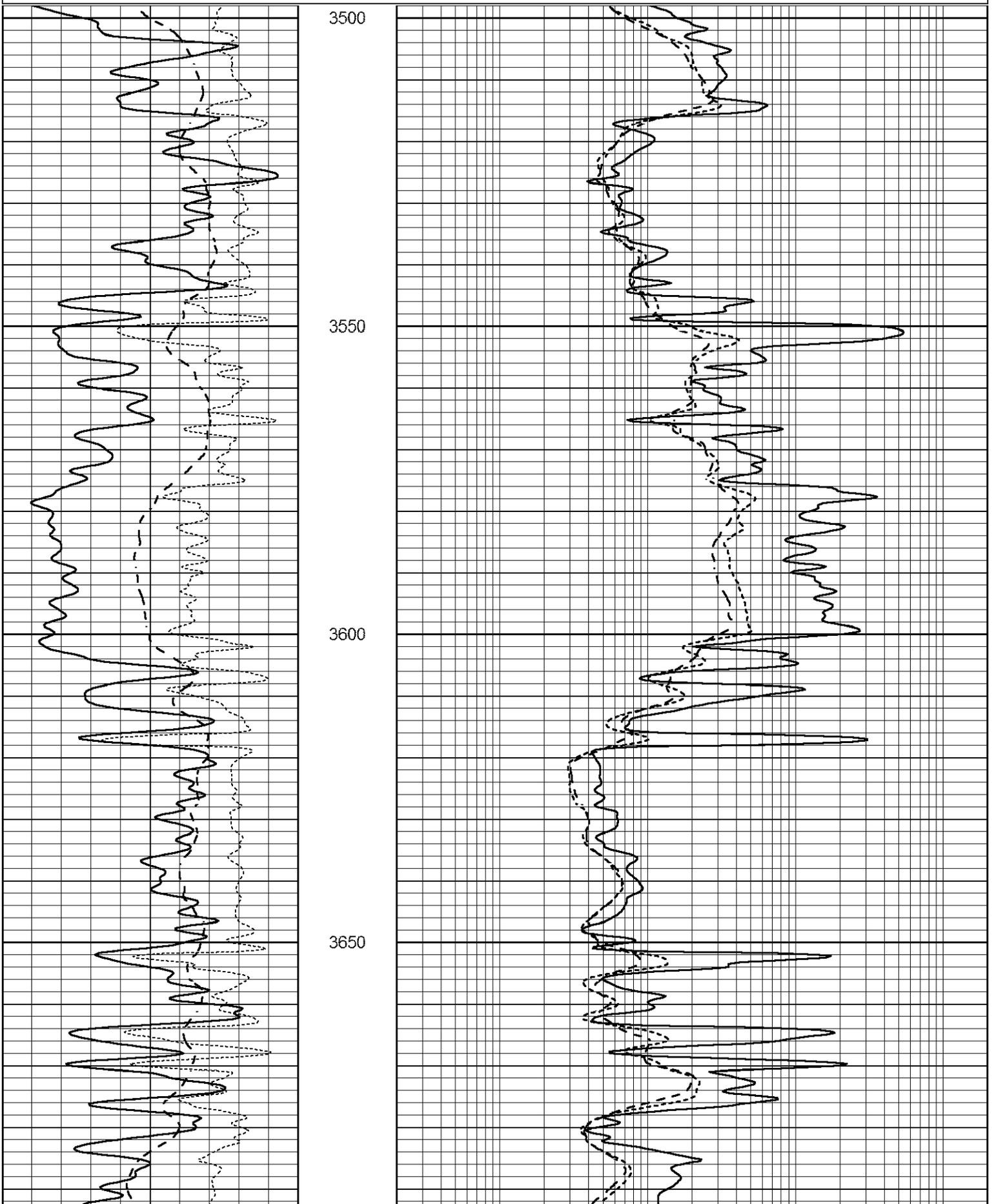


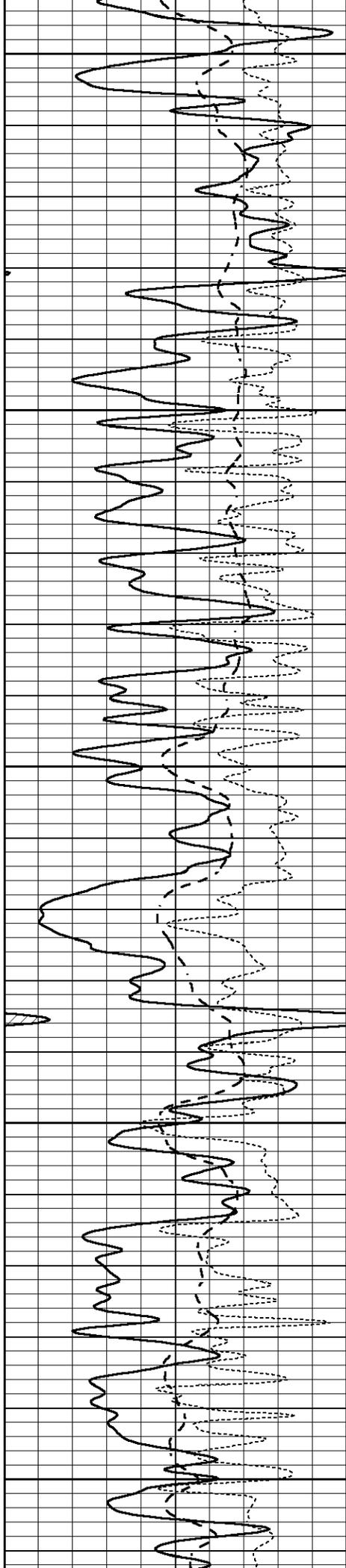
# MAIN SECTION

Database File 6241ddn.db  
 Dataset Pathname pass3.1  
 Presentation Format dil

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





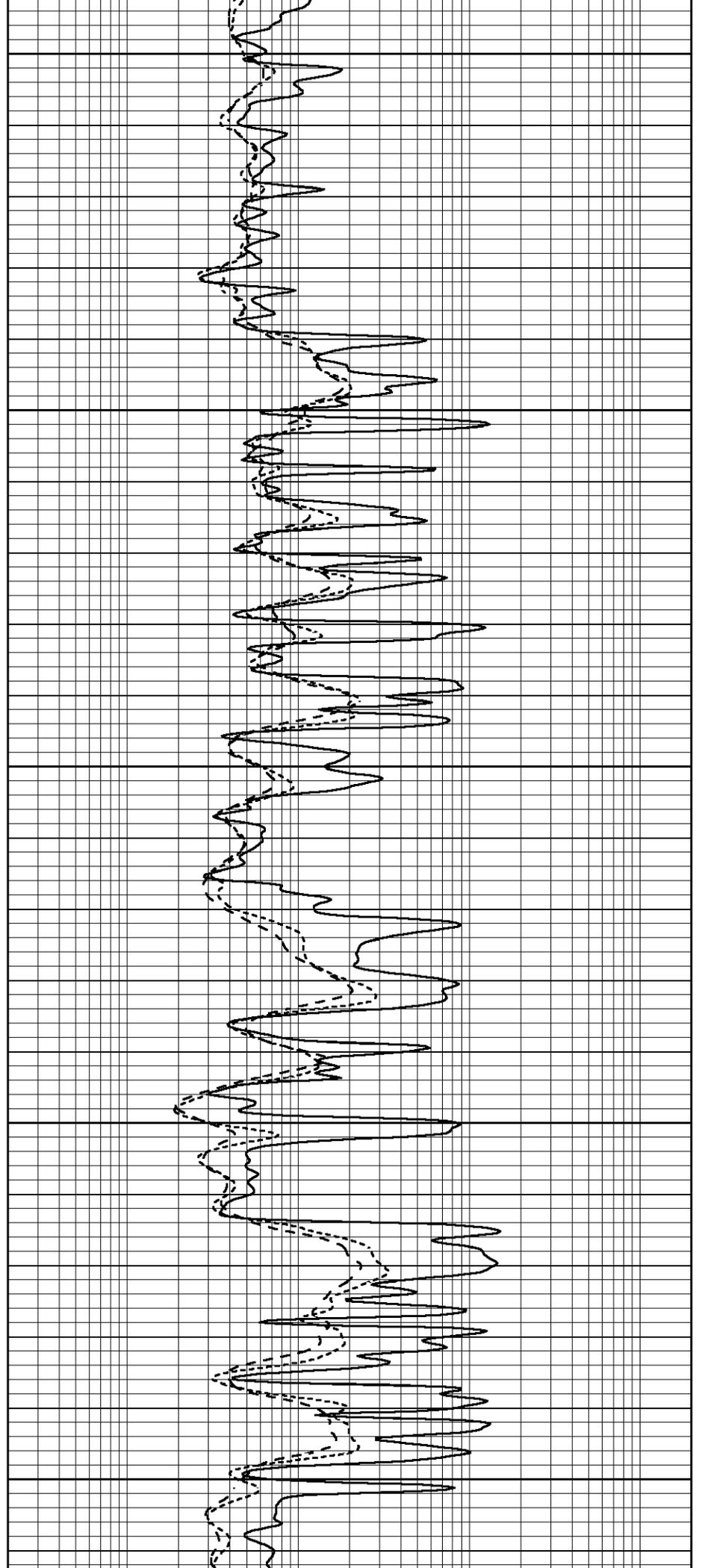
3700

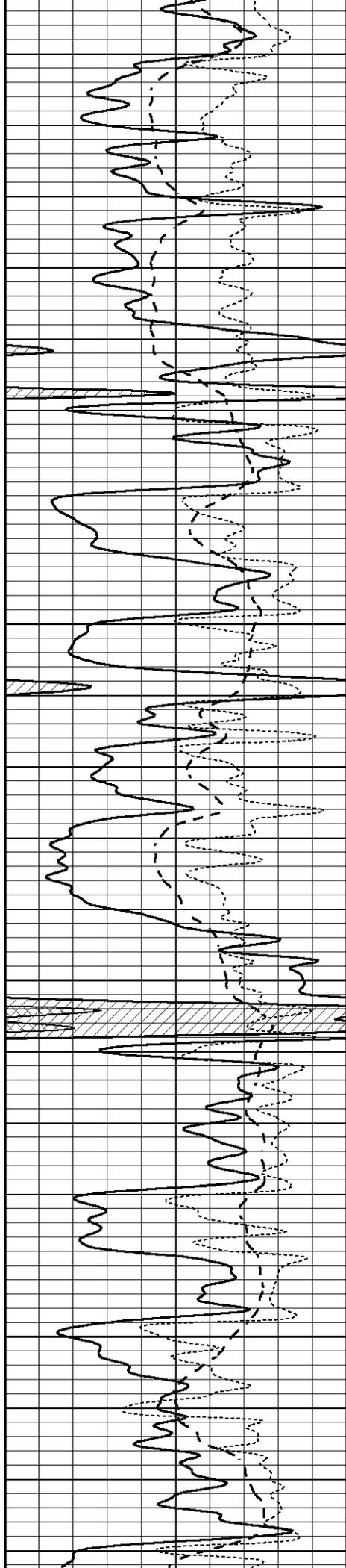
3750

3800

3850

3900



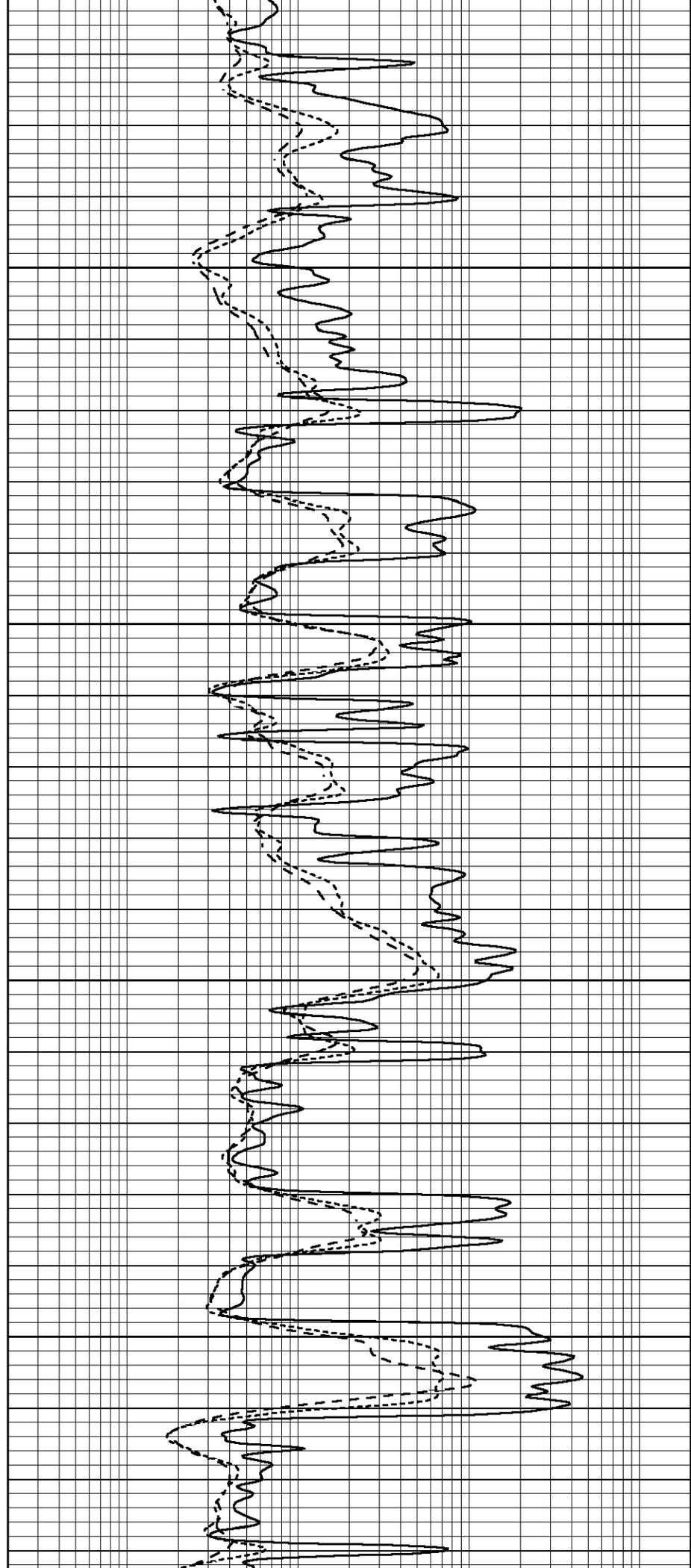


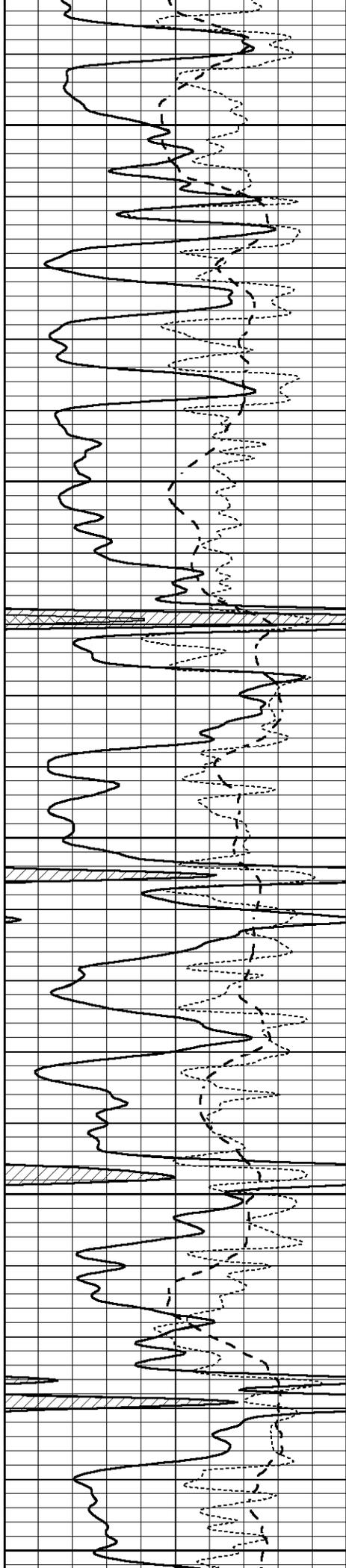
3950

4000

4050

4100





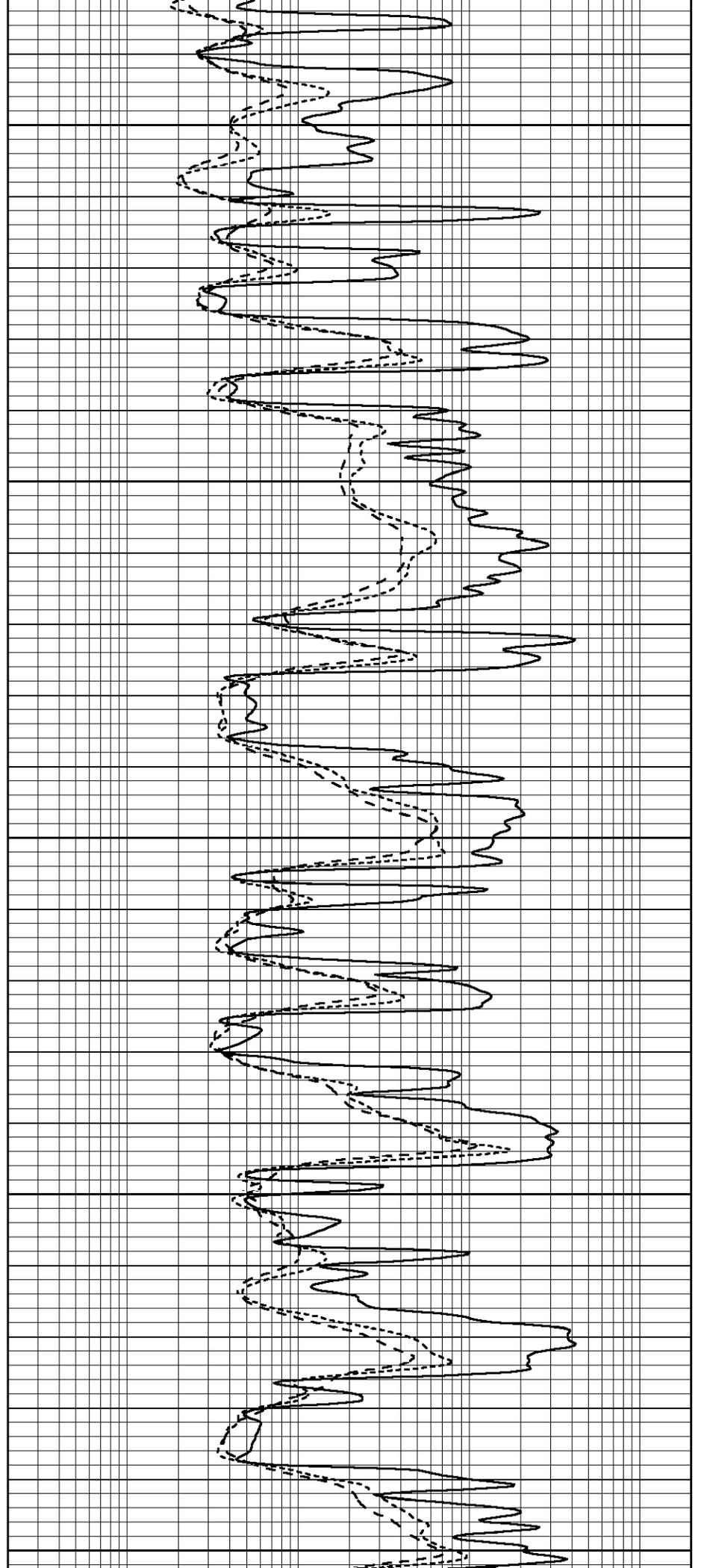
4150

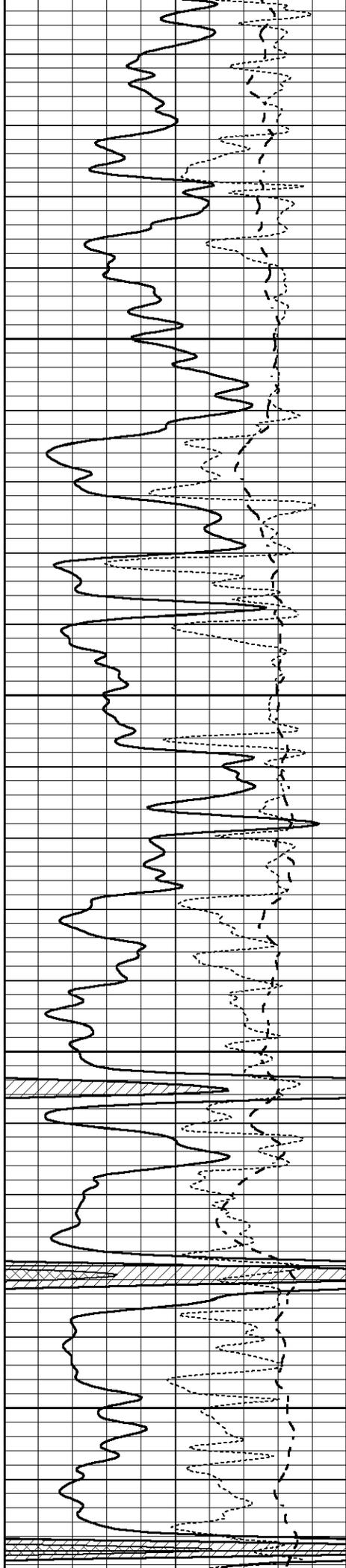
4200

4250

4300

4350



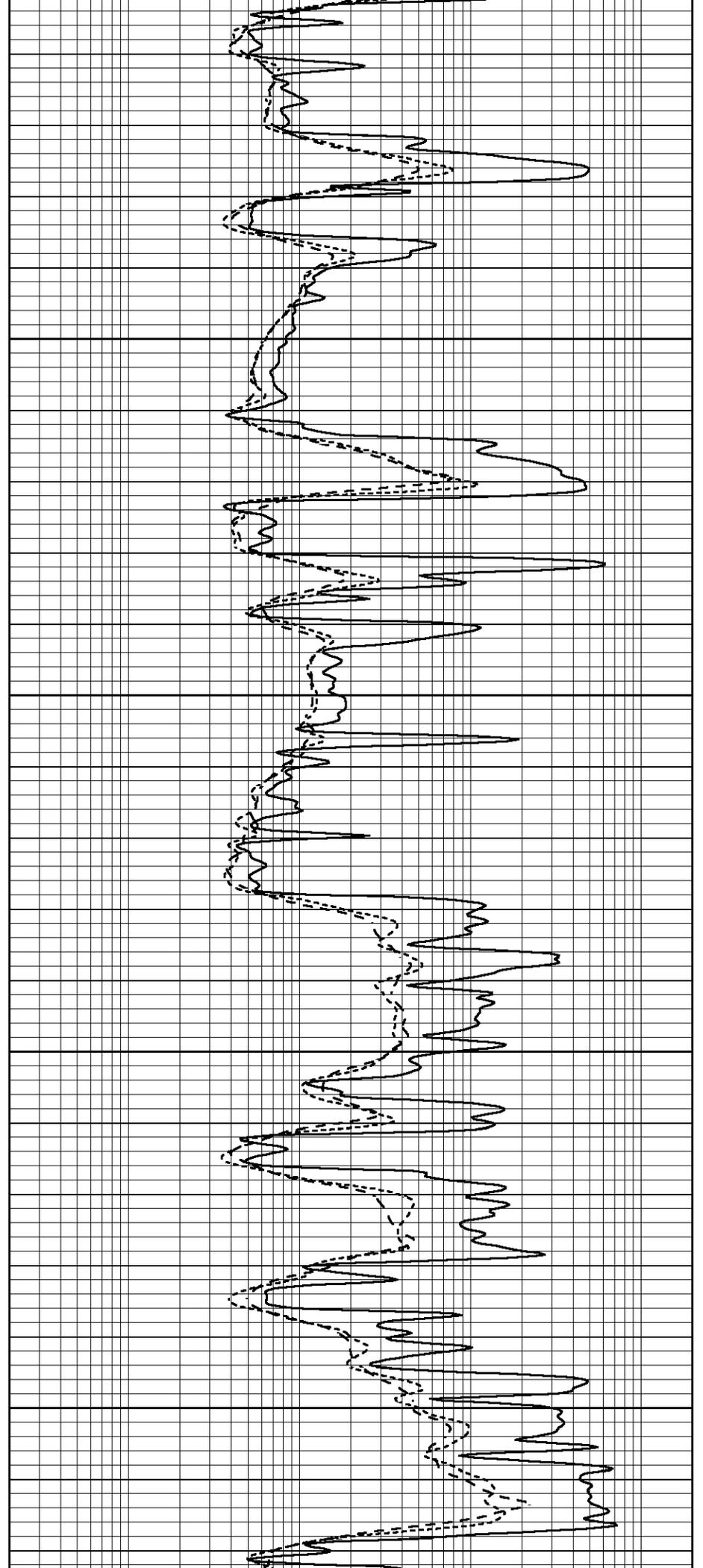


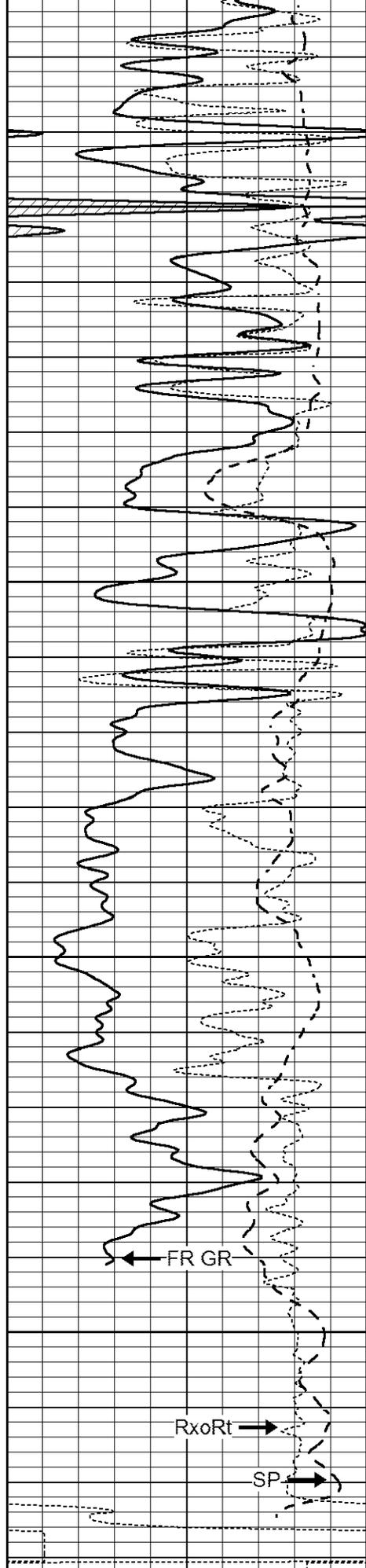
4400

4450

4500

4550





4600

4650

4700

4750

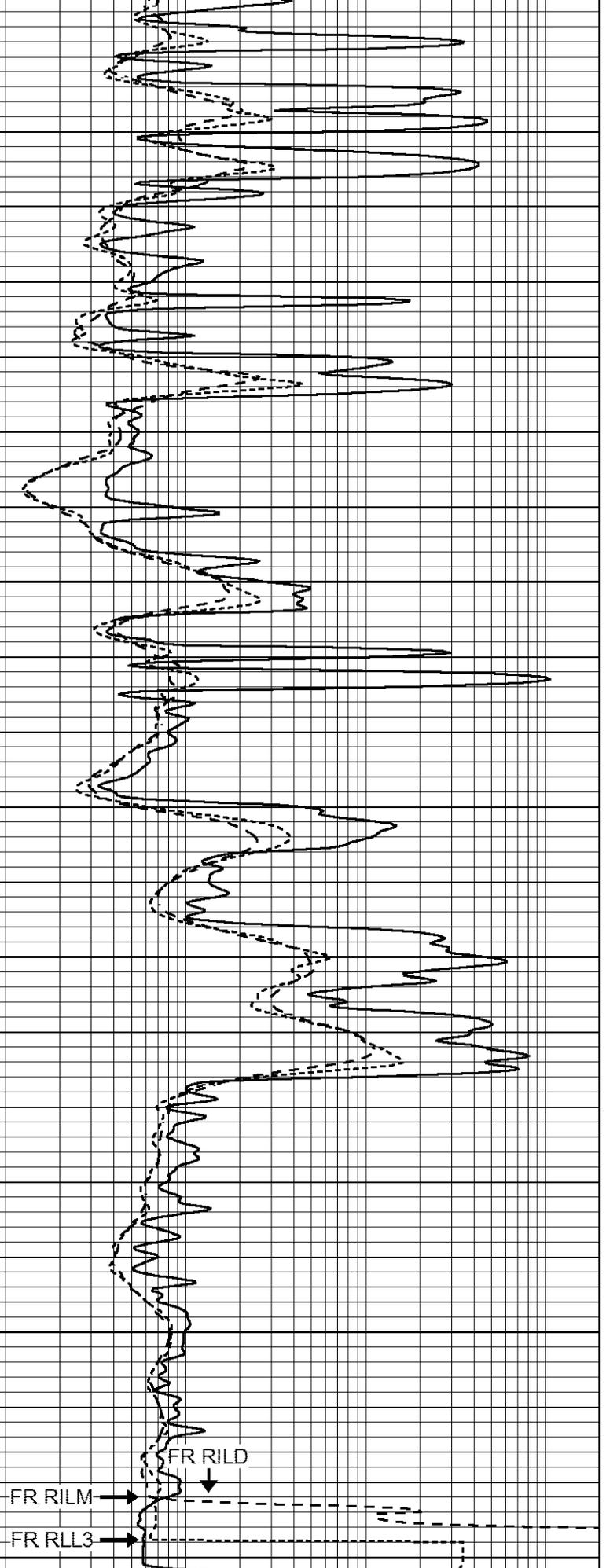
LTD 4780

0 GAMMA RAY (GAPI) 150  
 -100 SP (mV) 100

FR GR

RxoRt

SP



FR RILM

FR RLL3

FR RILD

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

LTD 4780

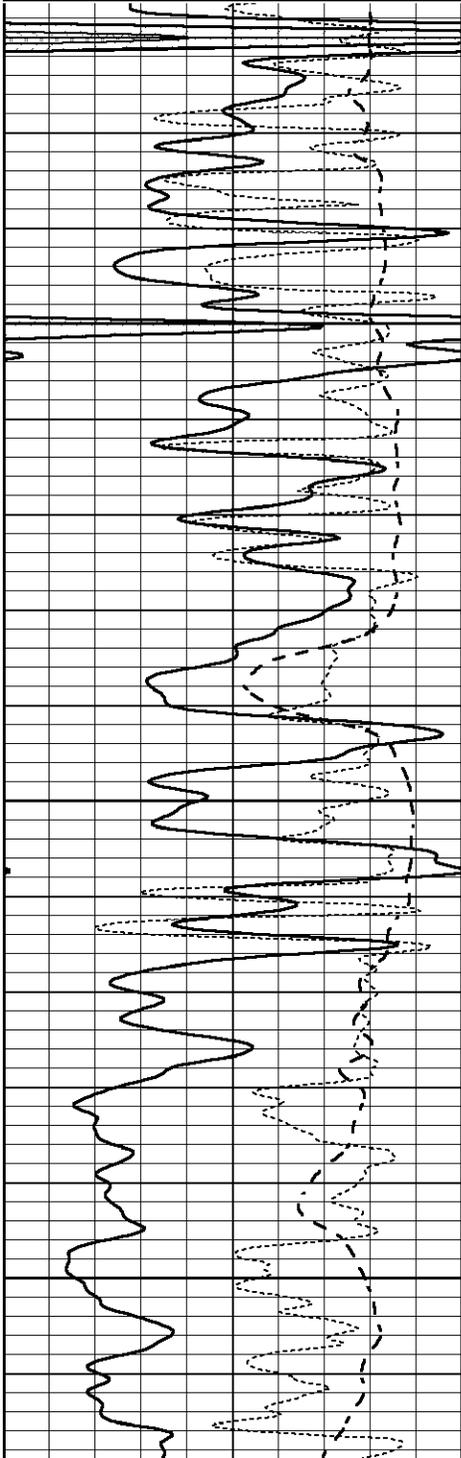


# REPEAT SECTION

Database File 6241ddn.db  
 Dataset Pathname pass2.1  
 Presentation Format \_dil  
 Dataset Creation Thu Feb 17 12:13:09 2022  
 Charted by Depth in Feet scaled 1:240

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

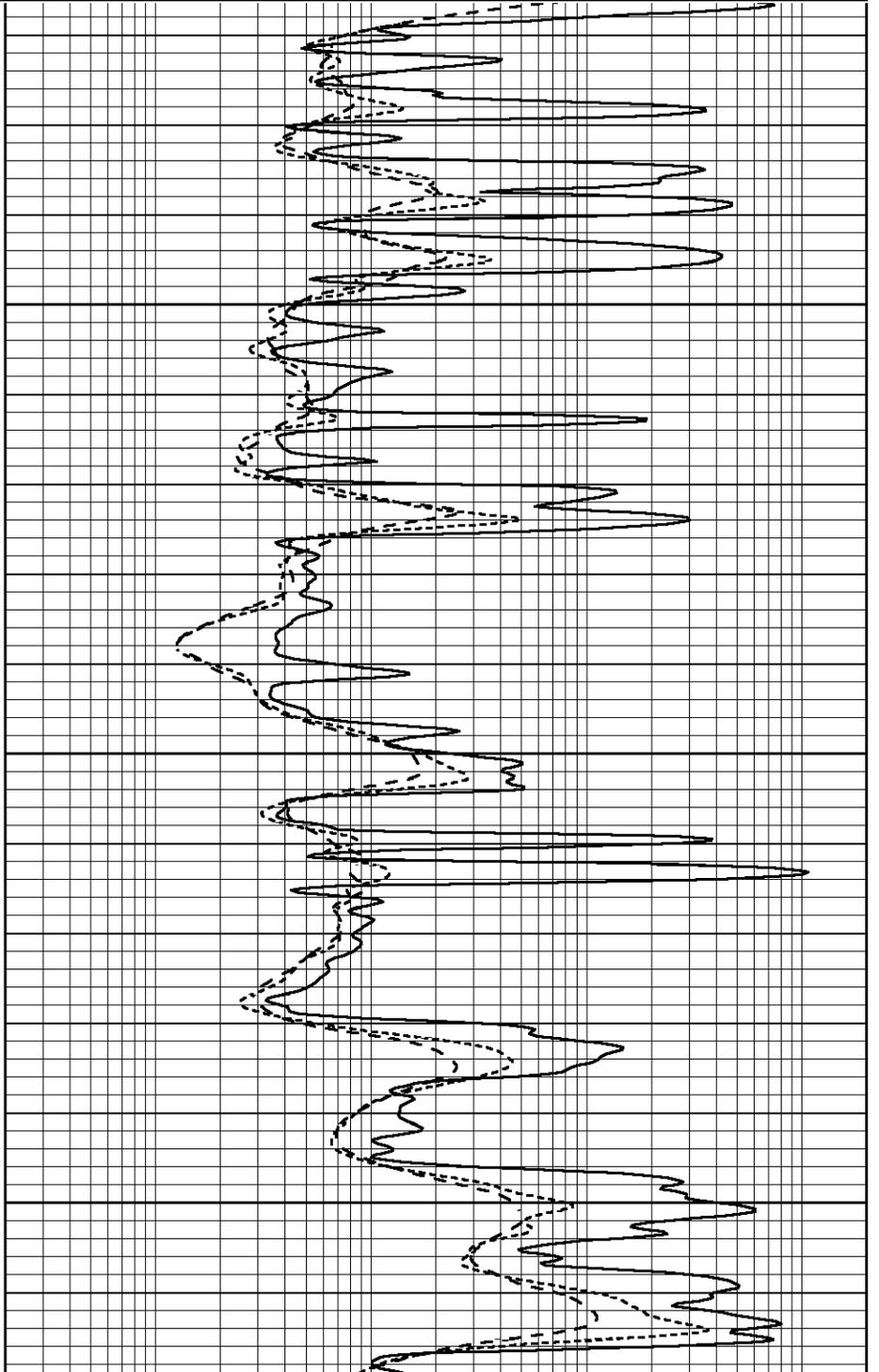
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

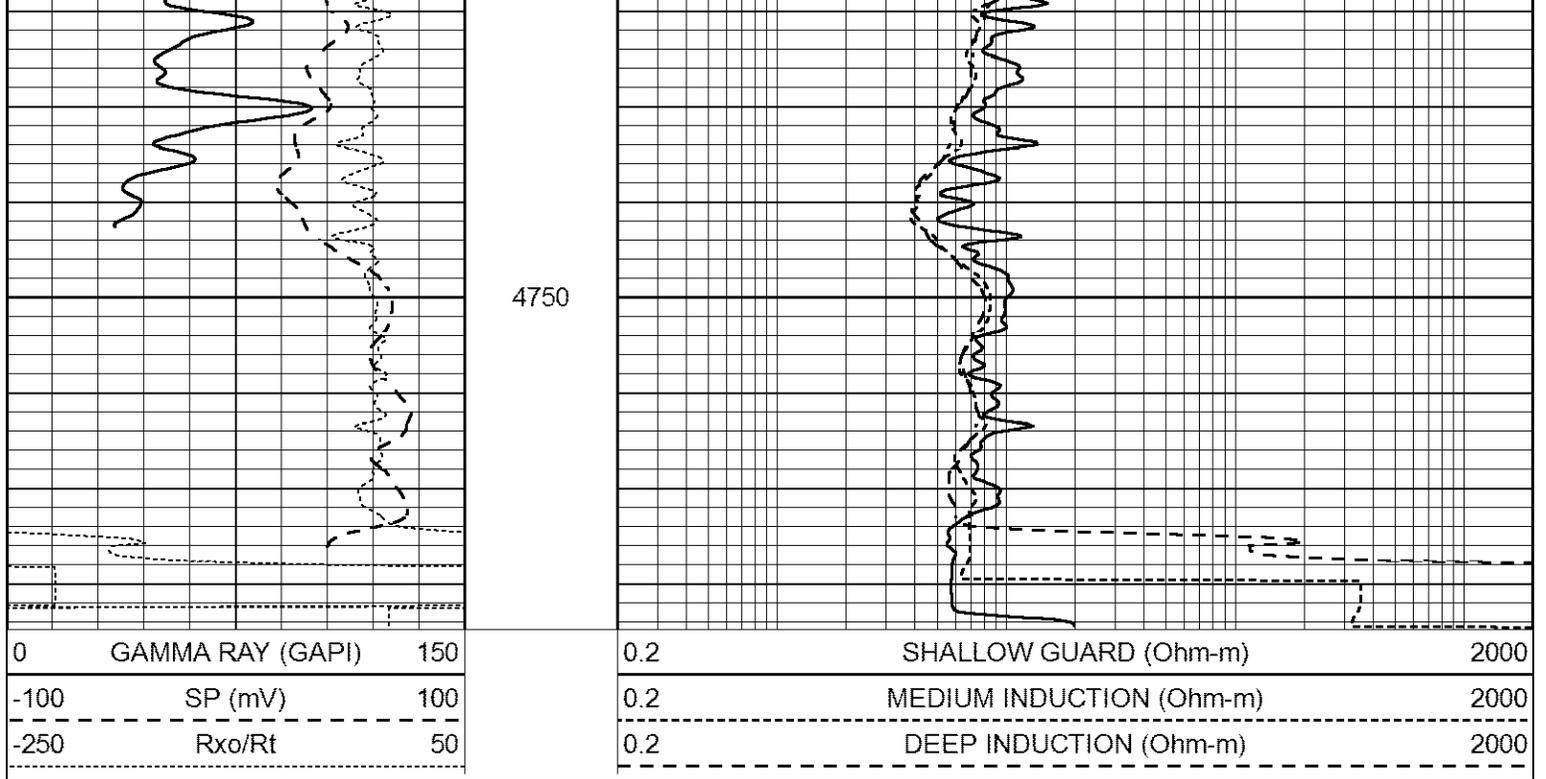


4600

4650

4700





### Calibration Report

Database File 6241ddn.db  
 Dataset Pathname pass3.2  
 Dataset Creation Thu Feb 17 12:41:22 2022

### Dual Induction Calibration Report

Serial-Model: FW1410-56-Probe  
 Surface Cal Performed: Mon Jun 15 22:52:02 2020  
 Downhole Cal Performed: Tue Jul 25 12:15:37 2017  
 After Survey Verification Performed: Tue Jul 25 12:15:38 2017

#### Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.008	0.765	V	1.000	400.000	mmho/m	400.061	-3.201
Medium	-0.056	0.761	V	1.000	464.000	mmho/m	425.187	32.510
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.005	0.624	V	0.000	400.000	mmho/m	645.611	-3.034
Medium	0.012	0.721	V	0.000	464.000	mmho/m	653.591	-7.532

#### Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.647	301.329	mmho/m	-0.780	336.378	mmho/m	1.117	-0.058
Medium	38.256	411.013	mmho/m	39.046	441.706	mmho/m	1.080	-2.280
LL3		7.471	V		2500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.085	V		4000.000	mmho-m		

#### After Survey Verification

	Readings		Targets		Results	
	Zero	Cal	Zero	Cal	m'	b'

Deep	0.000	0.000	mmho/m	-0.647	301.329	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	38.256	411.013	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Compensated Neutron Calibration Report

Serial Number: 080621PMC  
Tool Model: NABORS

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: Tue Jan 19 17:50:08 2021

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.5300 GAPI/cps