

DUAL INDUCTION LOG

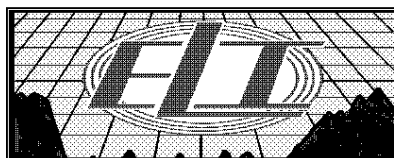
Company	ANDERSON ENERGY, INC.		
Well	DUGAN #1-11		
Field	O.S.A.		
County	SEDGWICK	State	KANSAS
Location:	APL # : 15-173-21057-0000 990' FSL & 1650' FWL		Other Services CDL/CNL/PE MEL/SONIC
Permanent Datum	GROUND LEVEL	Elevation	1288
Log Measured From	KELLY BUSHING 9' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	4/7/78		
Run Number	ONE		
Depth Driller	3060		
Depth Logger	3052		
Bottom Logged Interval	3050		
Top Log Interval	00		
Casing Driller	8 5/8"@390'		
Casing Logger	390		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,500 PPM	
Density / Viscosity	9.0/57		
pH / Fluid Loss	11.0/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.950@70F		
Rmf @ Meas. Temp	.713@70F		
Rmc @ Meas. Temp	1.14@70-F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.616@108F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	3:45 A.M.		
Maximum Recorded Temperature	108F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KEN LeBLANC		

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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

THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
HAYSVILLE, KS., 2S. ON "MERIDIAN" TO "87TH ST.", 2W. TO "HOOVER ST.", 1/2N., W. INTO



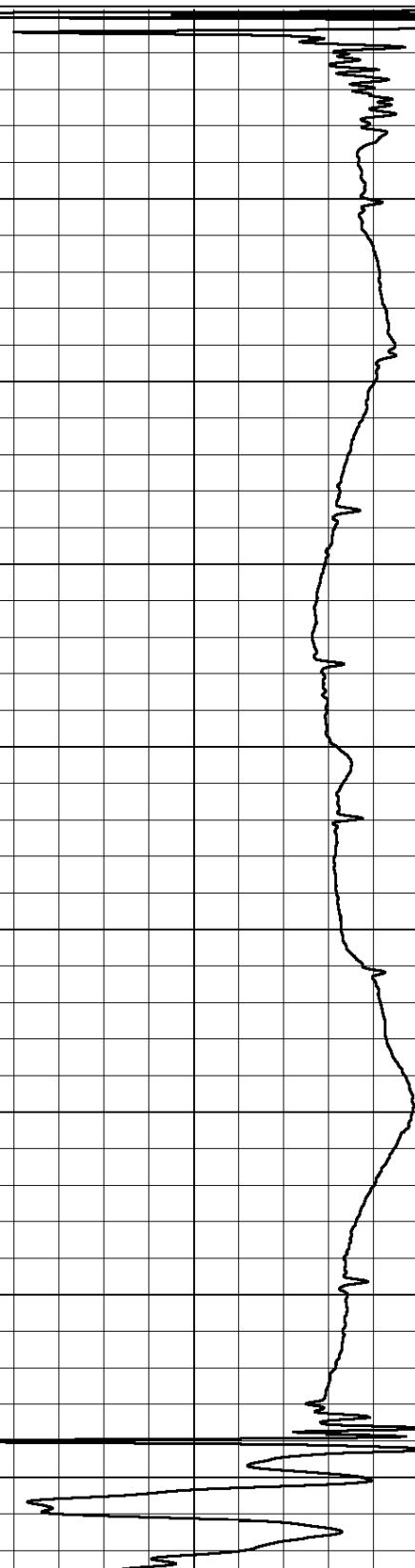
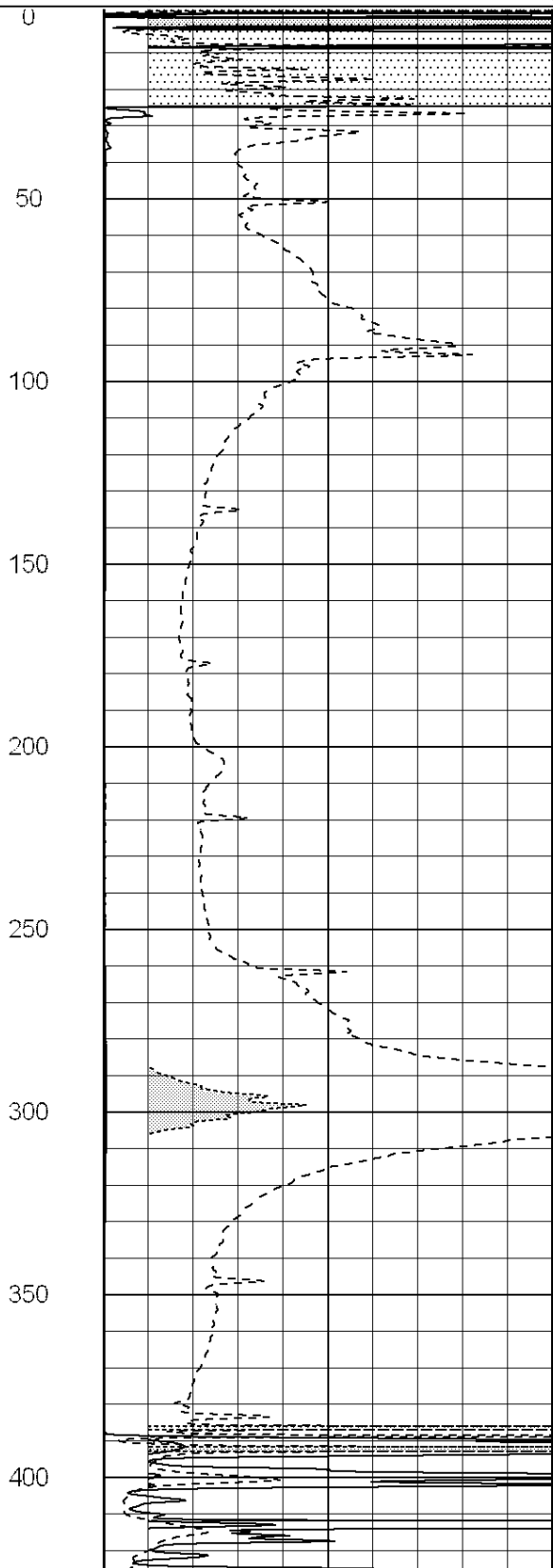
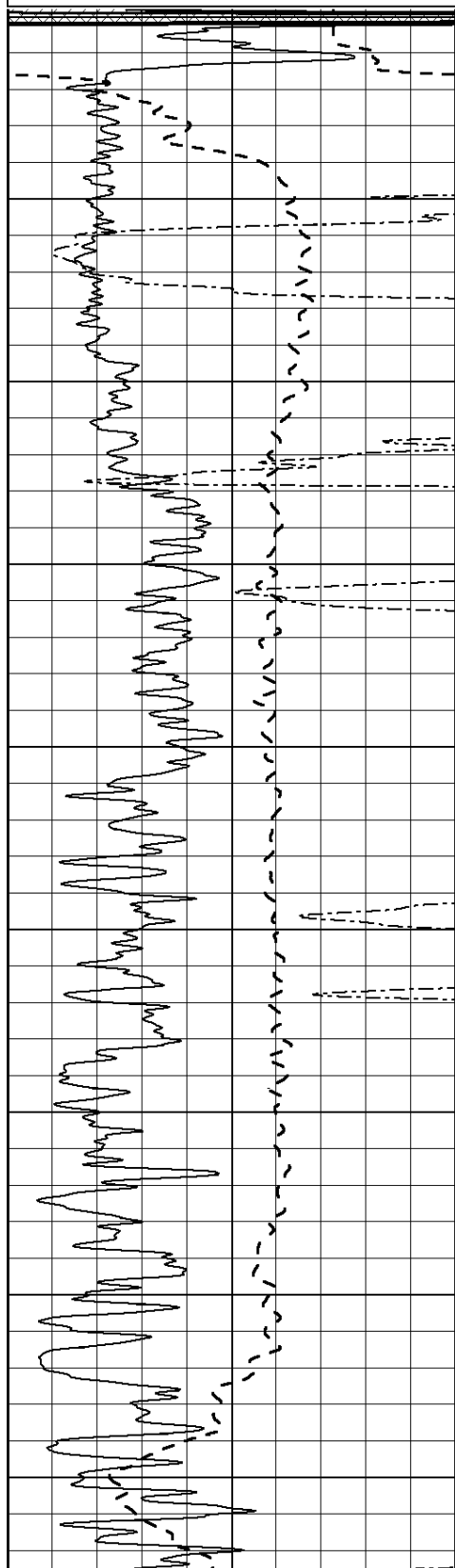
MAIN SECTION

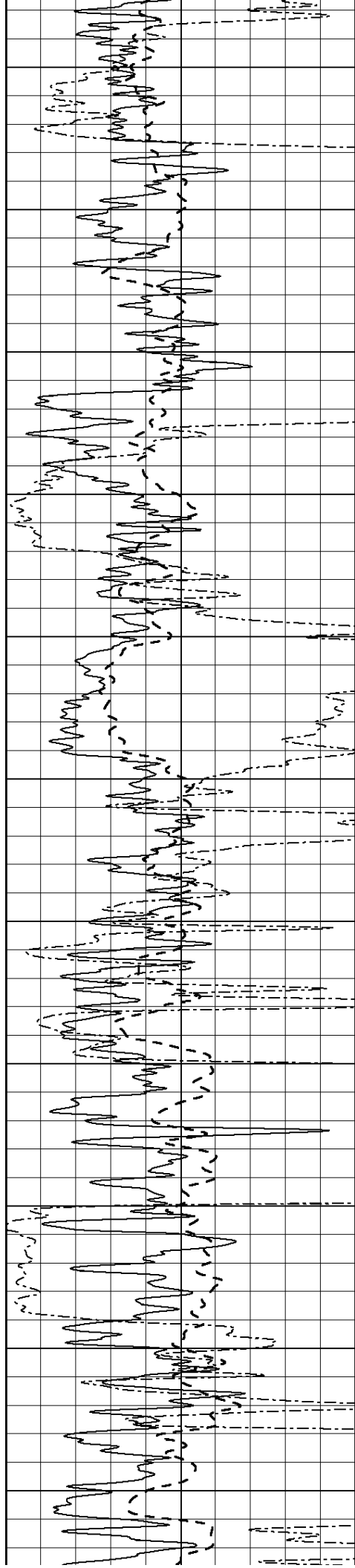
Database File: 2482pe.db
 Dataset Pathname: pass3.5
 Presentation Format: dil2
 Dataset Creation: Tue Apr 17 17:10:06 2018 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

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

50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500





450

500

550

600

650

700

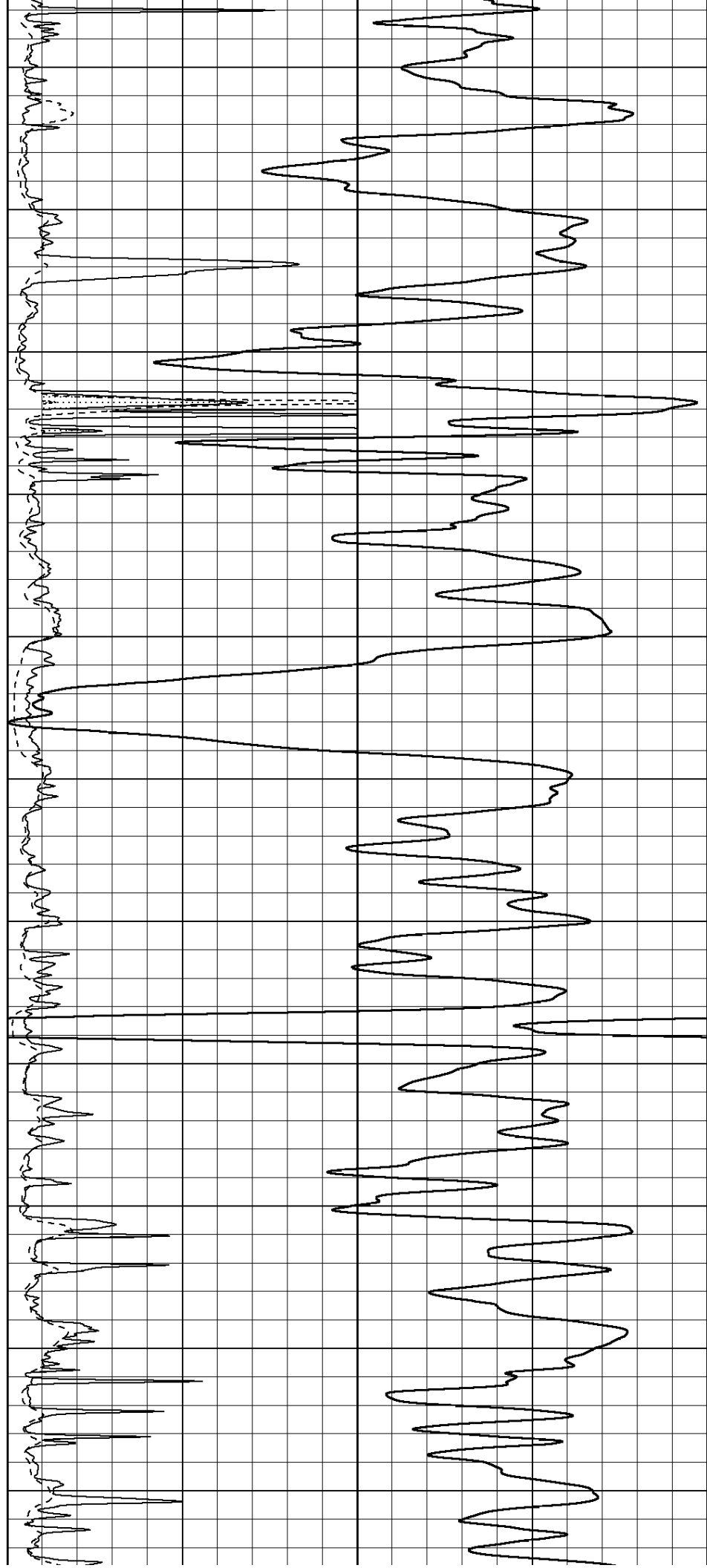
750

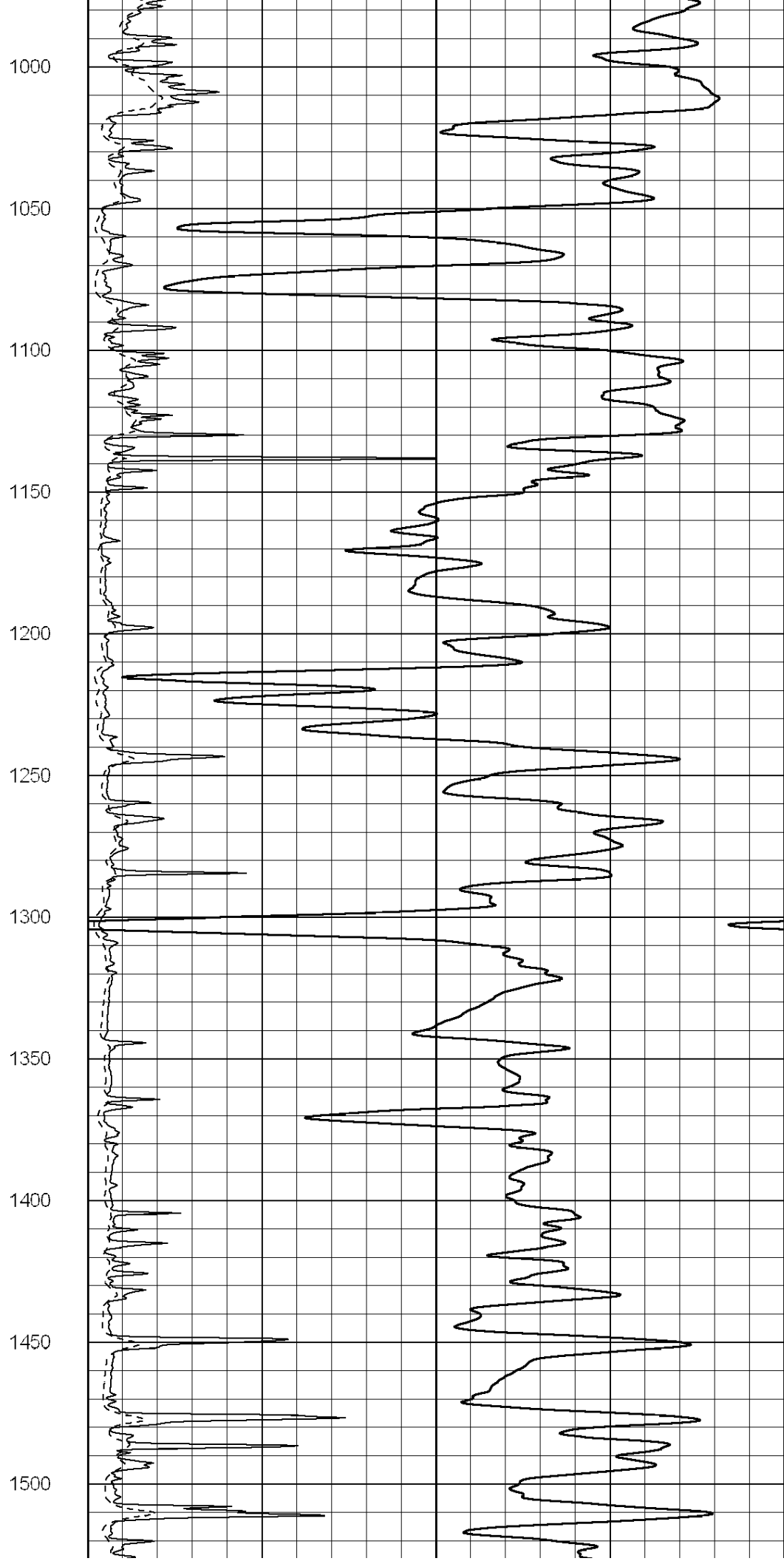
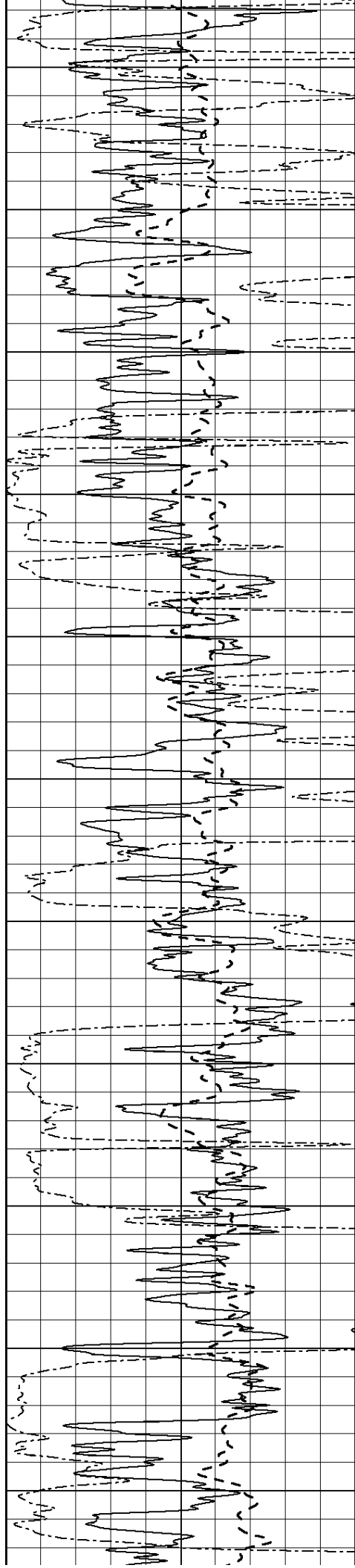
800

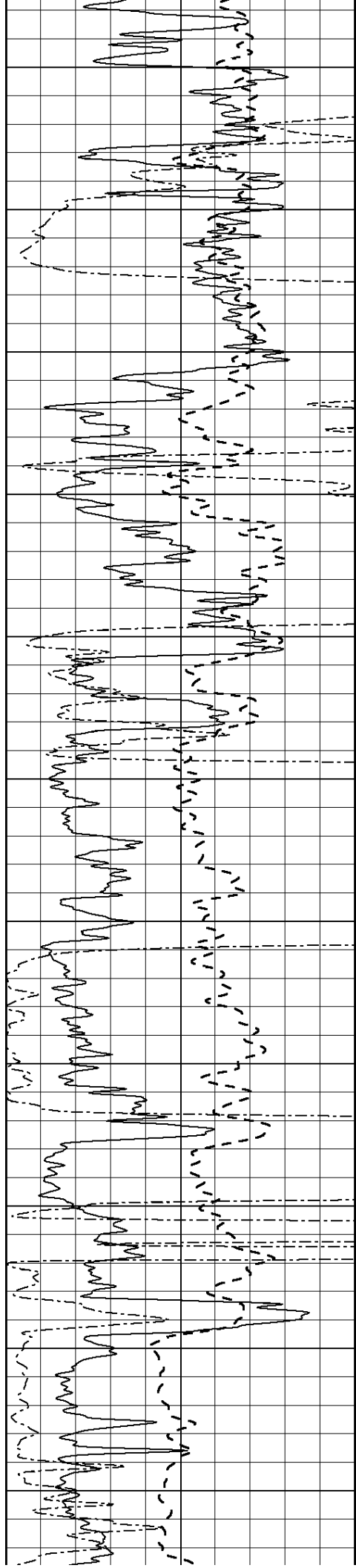
850

900

950







1550

1600

1650

1700

1750

1800

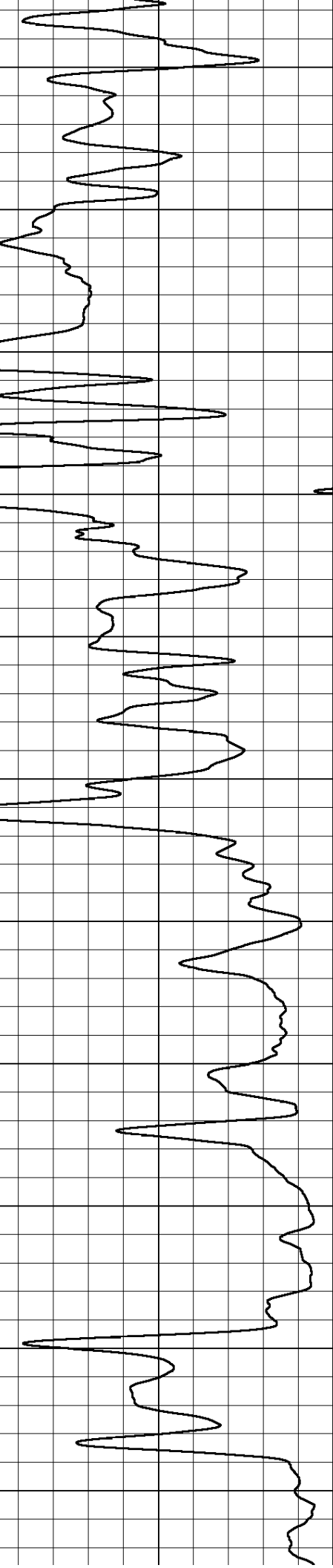
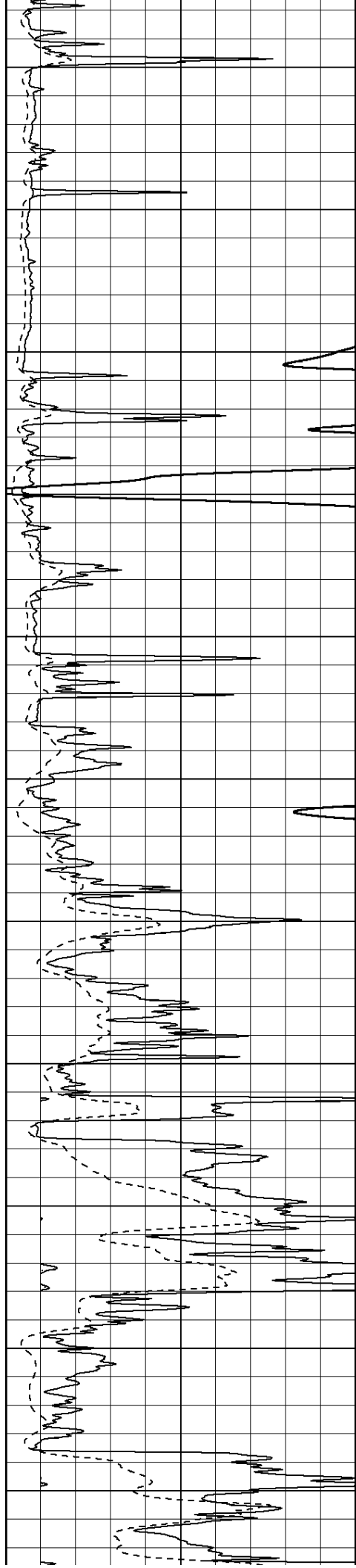
1850

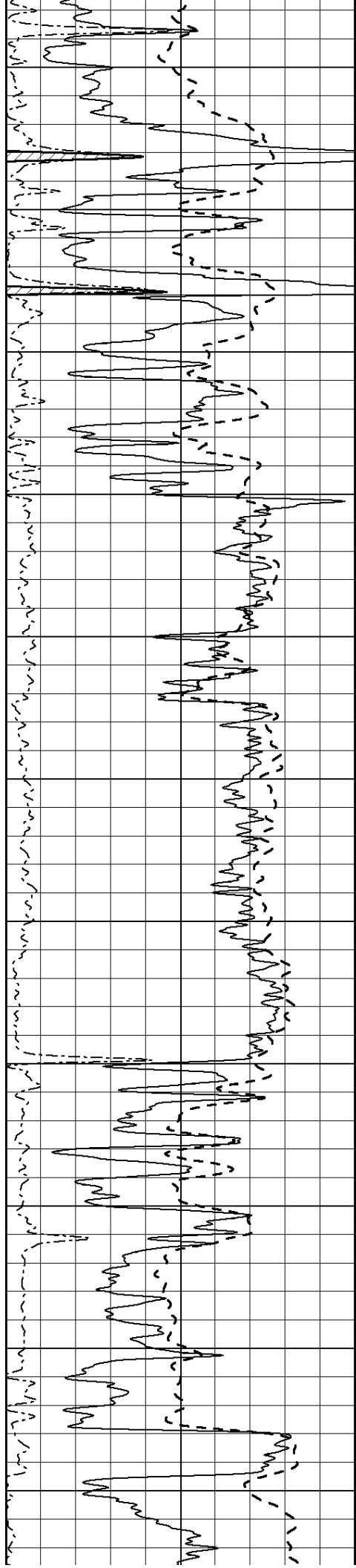
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

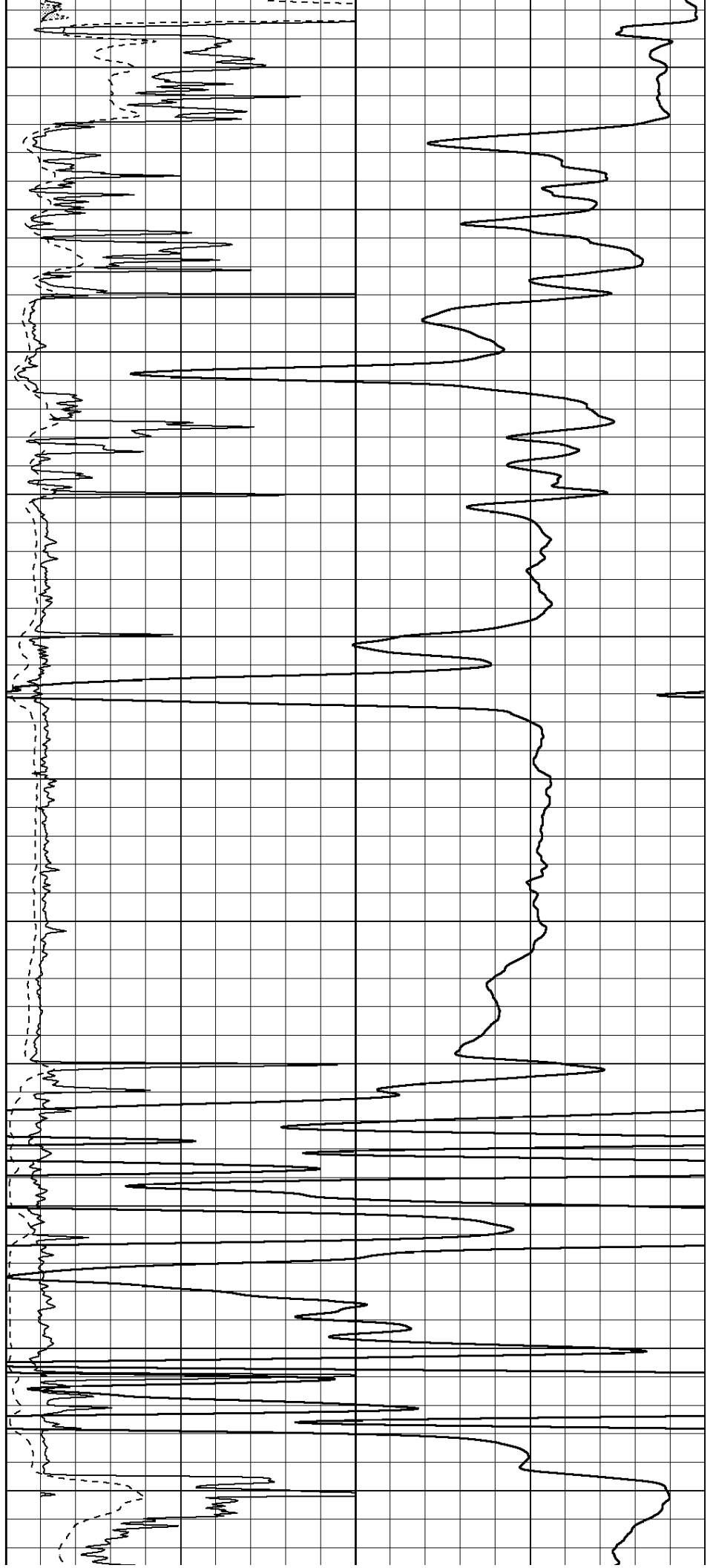
2400

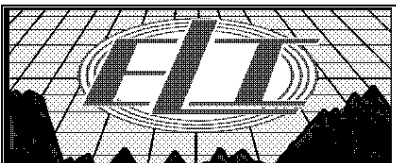
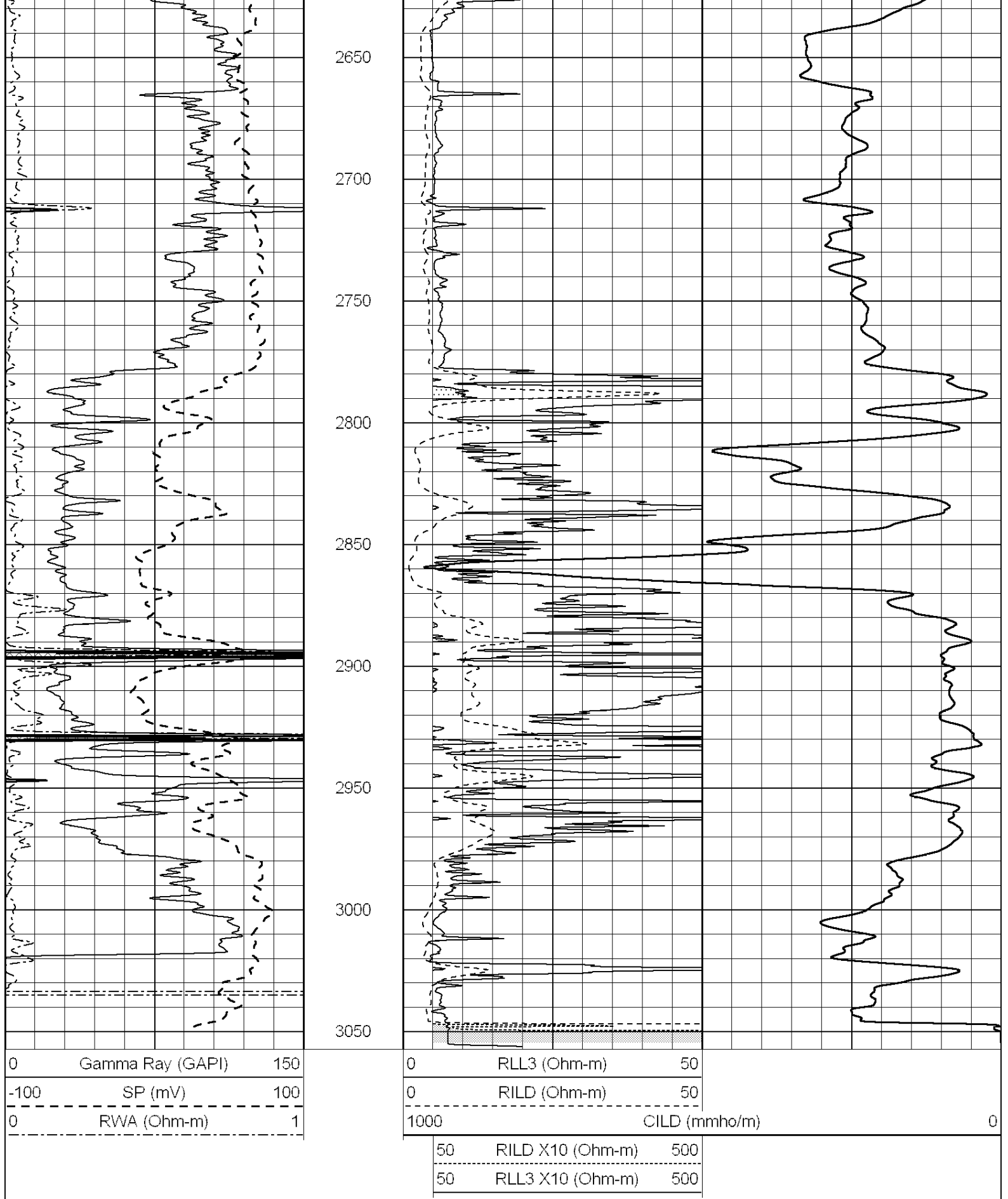
2450

2500

2550

2600



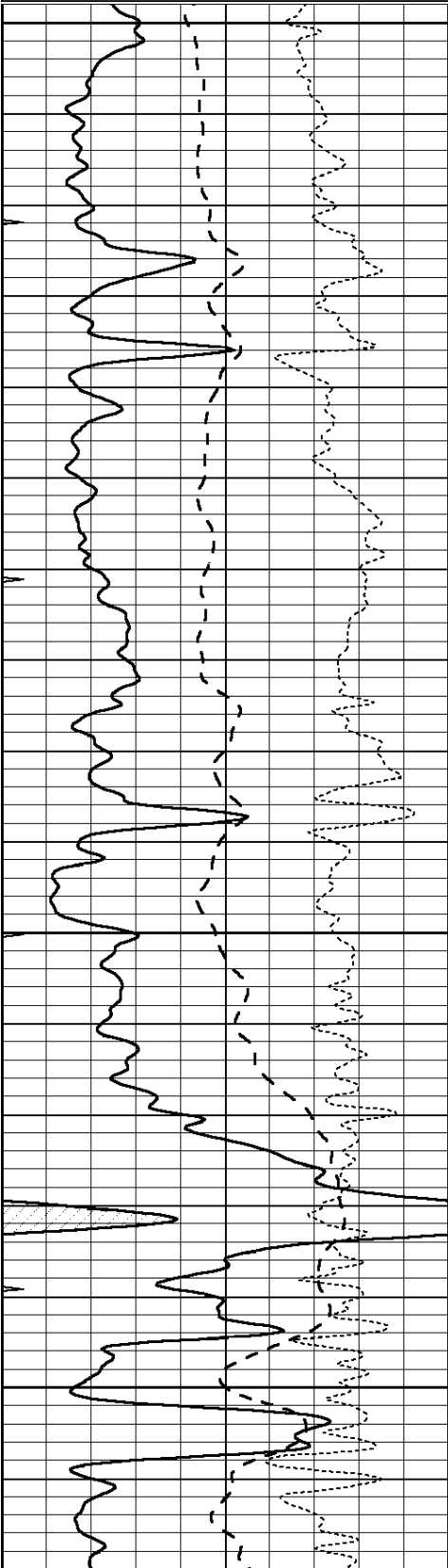


MAIN SECTION

Database File: 2482pe.db
Dataset Pathname: pass3.5
Presentation Format: _dil
Dataset Creation: Tue Apr 17 17:10:06 2018 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

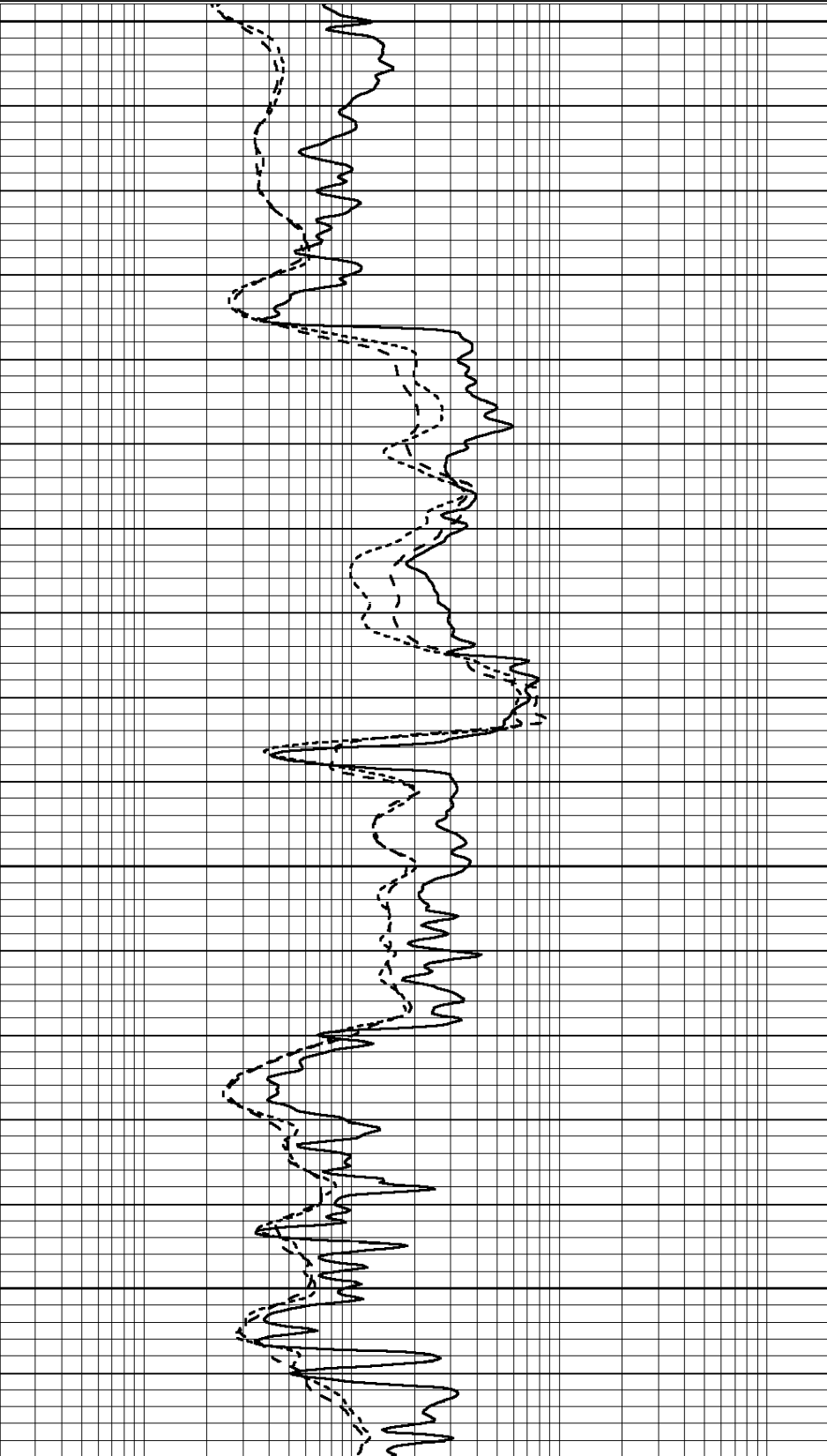


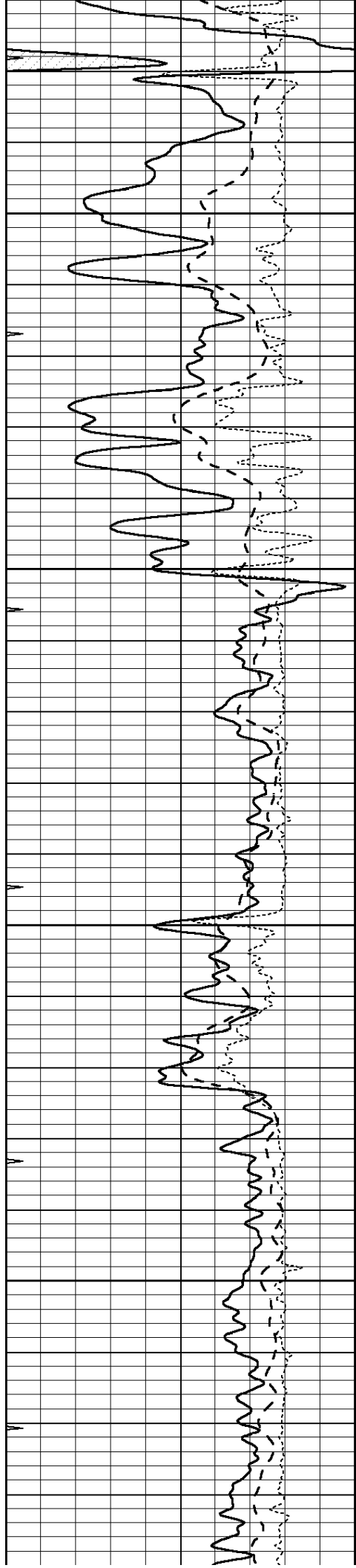
2000

2050

2100

2150



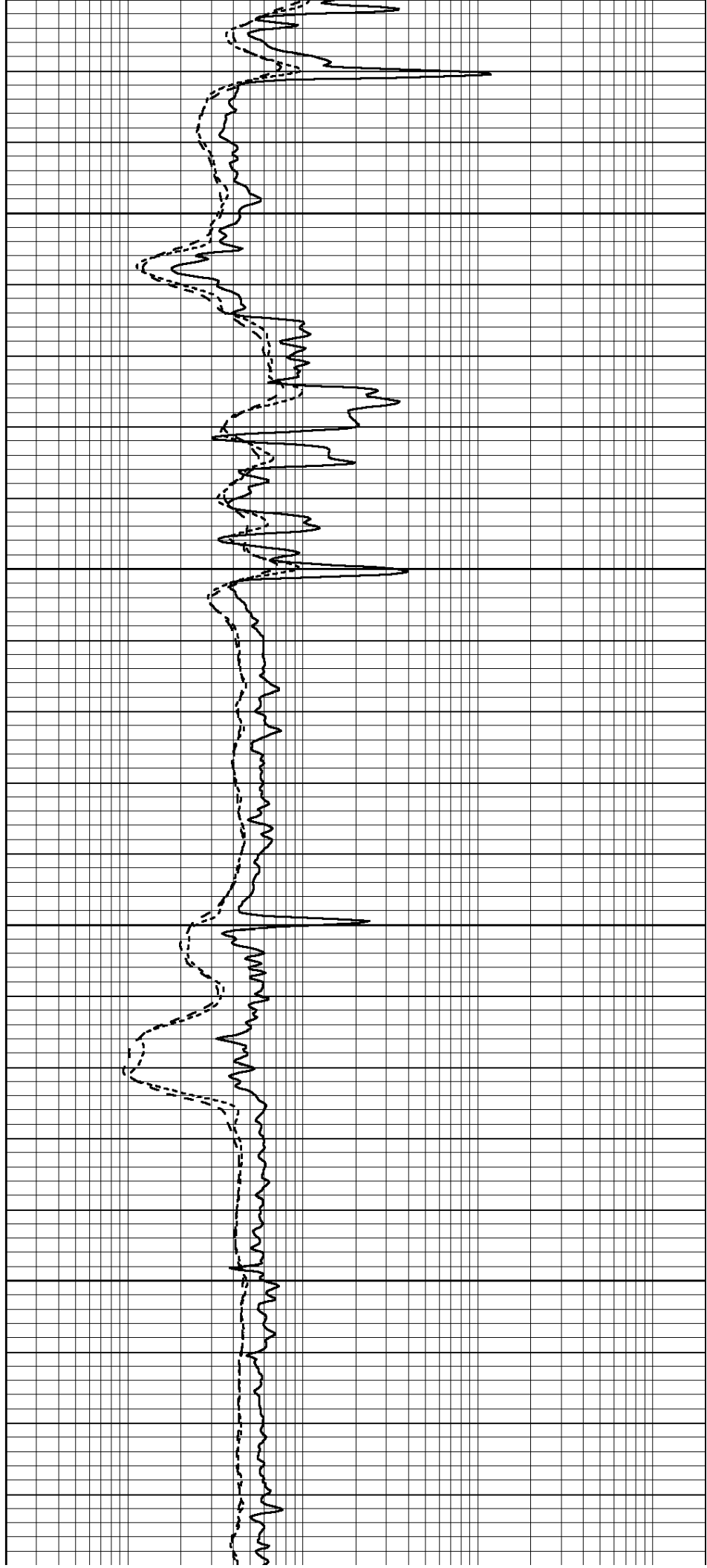


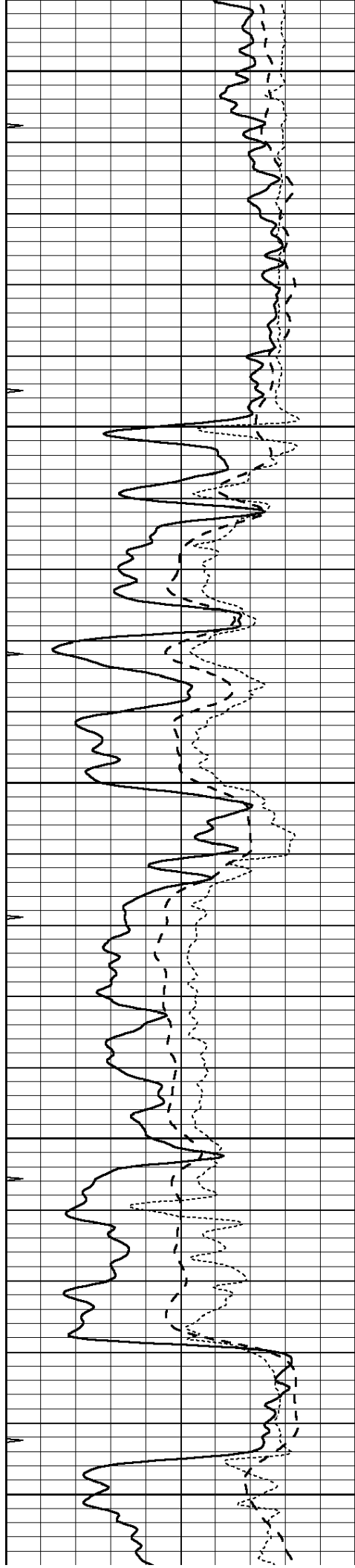
2200

2250

2300

2350





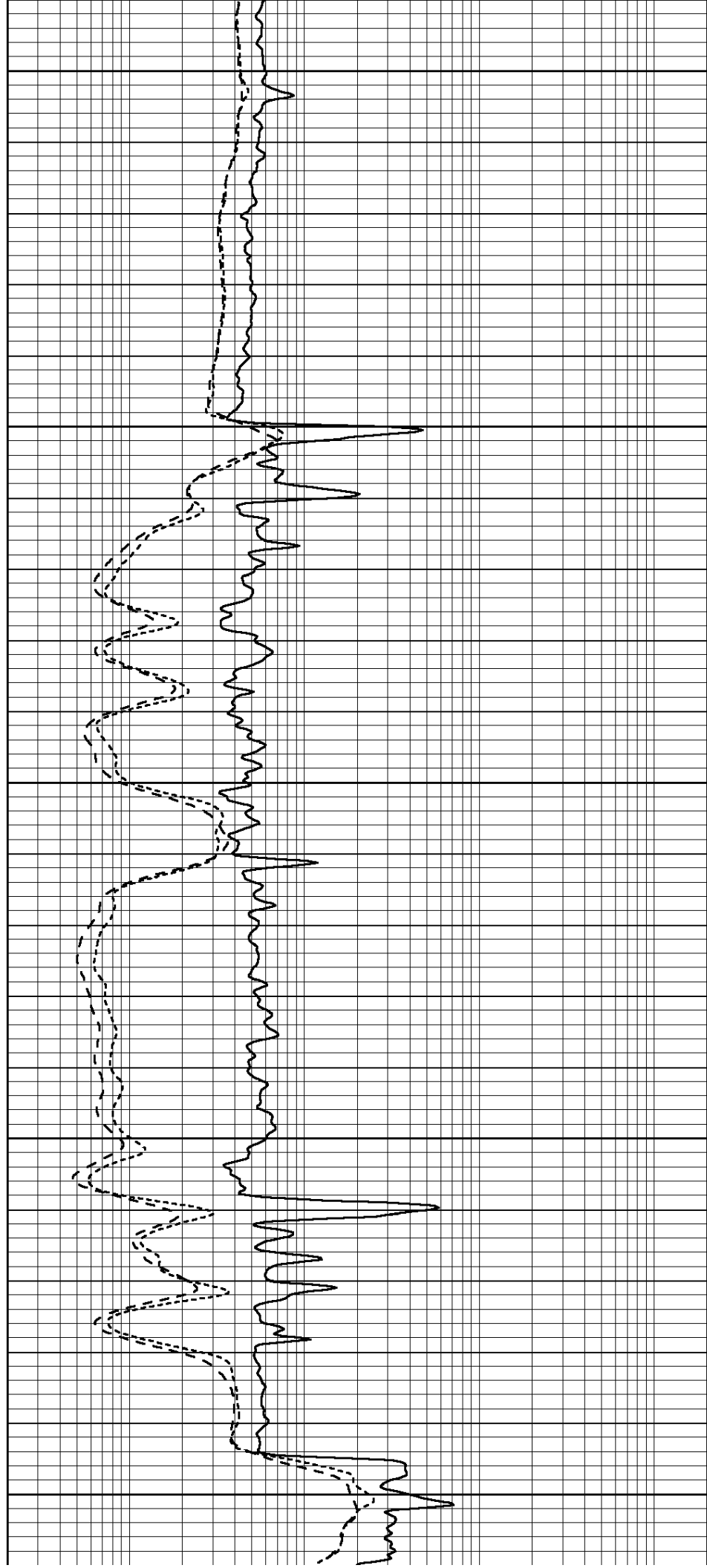
2400

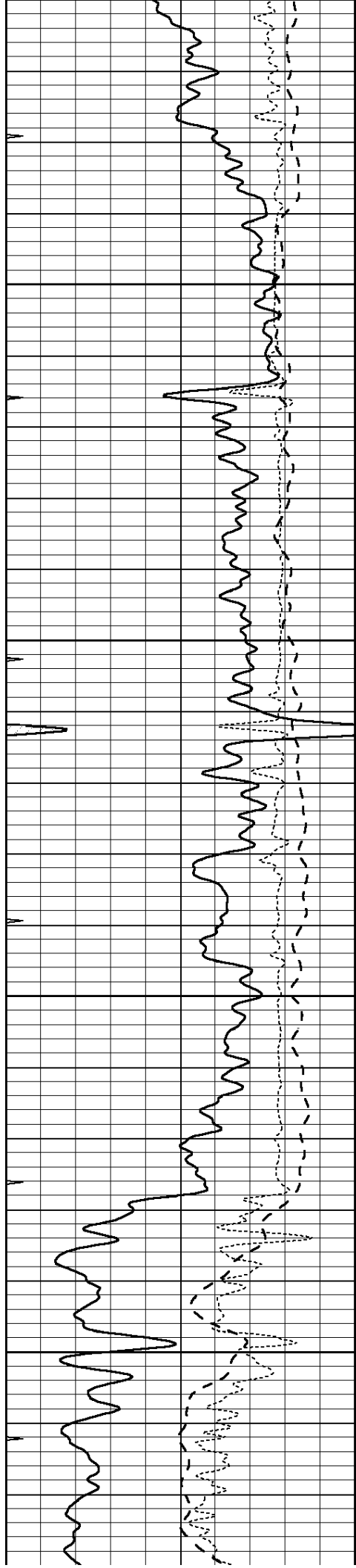
2450

2500

2550

2600



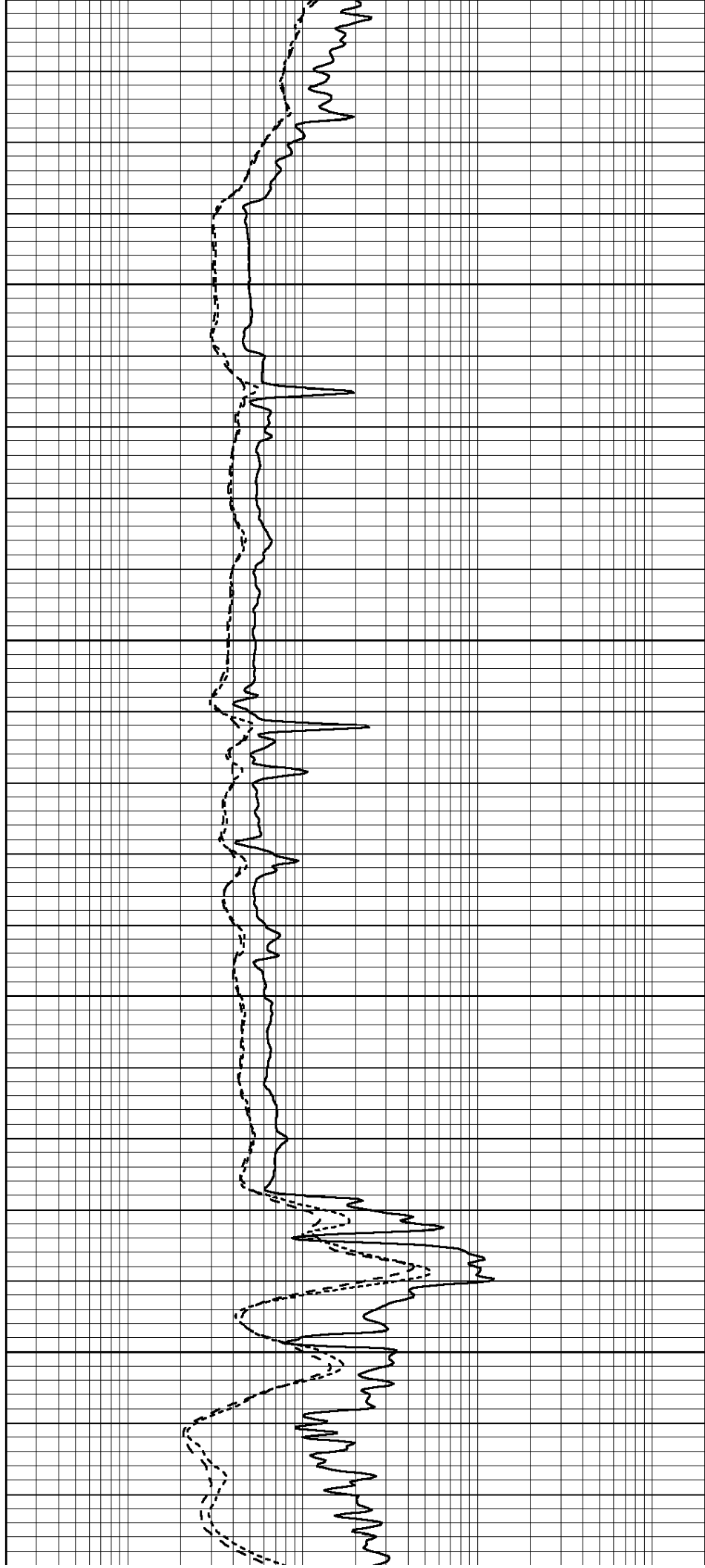


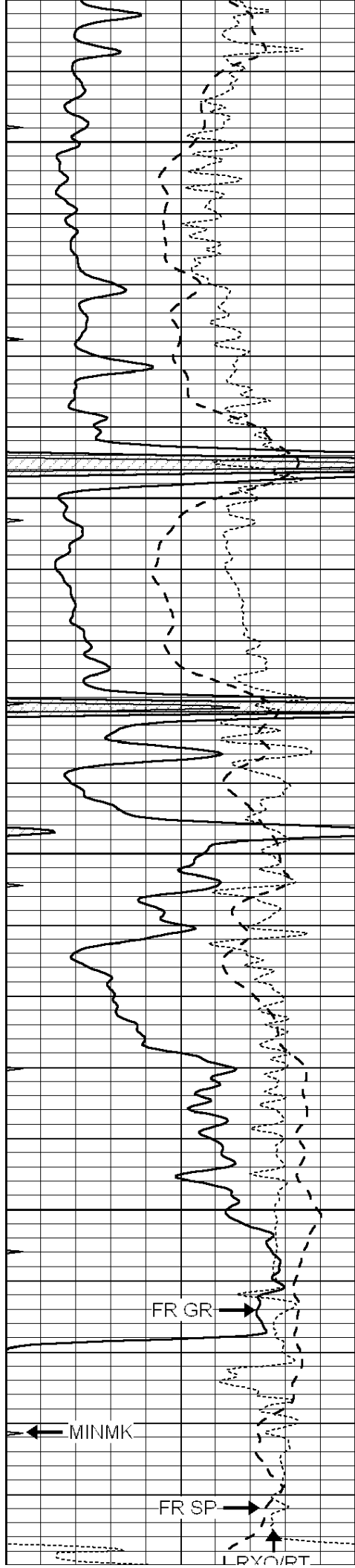
2650

2700

2750

2800





2850

2900

2950

3000

FR GR

MINMK

FR SP

LPXOPT

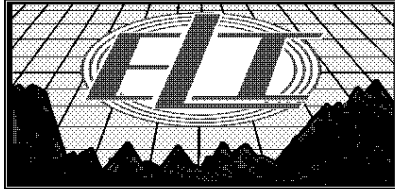
3050

FR DEEP INDUCTION
FR MEDIUM INDUCTION

FR SHALLOW GUARD

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

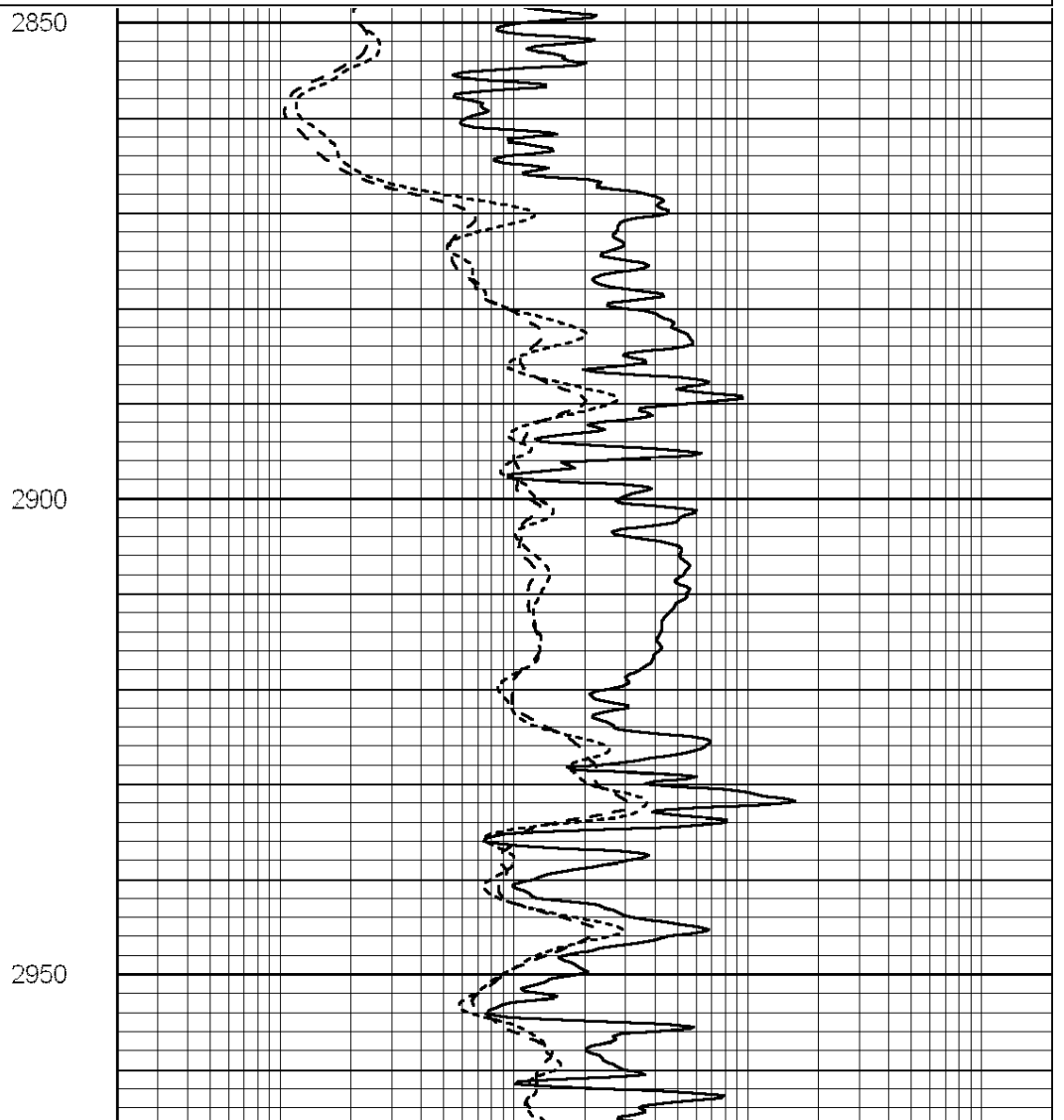
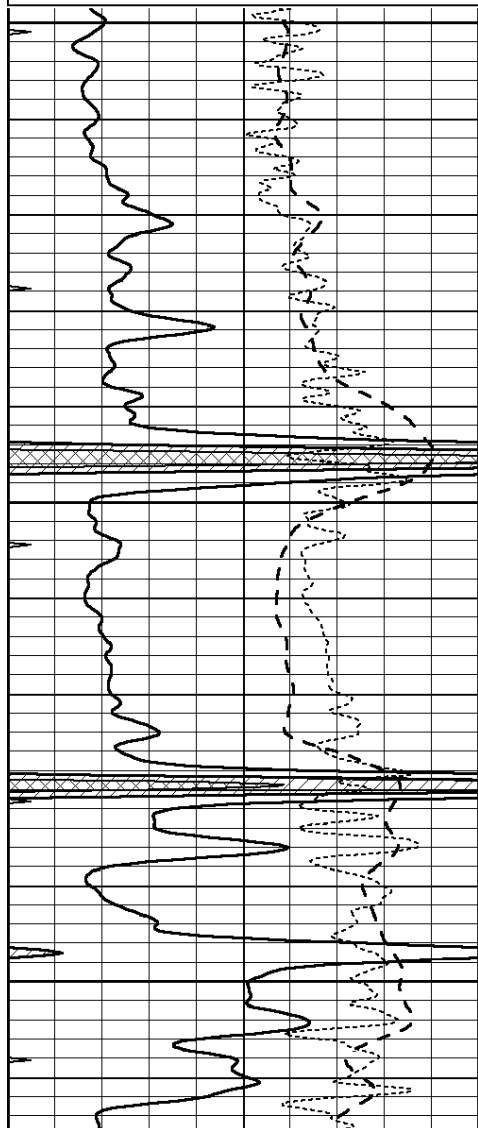


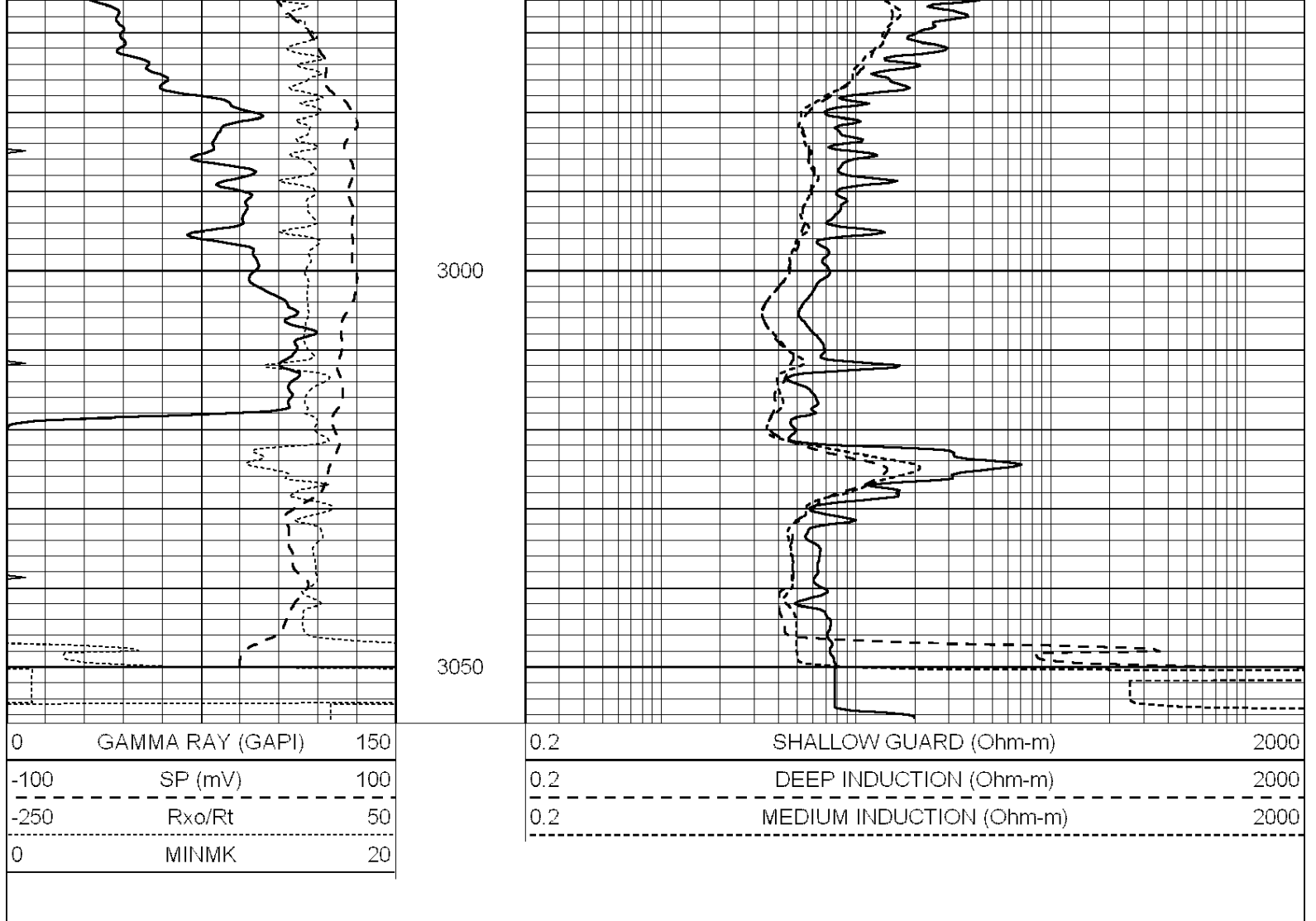
REPEAT SECTION

Database File: 2482pe.db
 Dataset Pathname: pass2.3
 Presentation Format: _dil
 Dataset Creation: Tue Apr 17 16:56:56 2018 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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





Calibration Report								
Database File:	1598ddn.db							
Dataset Pathname:	pass4							
Dataset Creation:	Wed Aug 30 02:13:00 2017 by Log SOC 120430							
Dual Induction Calibration Report								
Serial-Model:			PROBE7-DILG					
Surface Cal Performed:			Wed Aug 30 00:06:33 2017					
Downhole Cal Performed:			Mon Jul 28 12:02:56 2008					
After Survey Verification Performed:			Mon Jul 28 12:02:56 2008					
Surface Calibration								
		Readings		References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102
Downhole Calibration								
		Readings		References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000

		Serial Number:	070808
		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:		070558	
Tool Model:		OPEN_GR	
Performed:		Wed May 31 00:09:32 2017	
Calibrator Value:		1.0	GAPI
Background Reading:		0.0	cps
Calibrator Reading:		1.0	cps
Sensitivity:		0.2800	GAPI/cps