



DUAL INDUCTION LOG

Company	MULL DRILLING COMPANY, INC.
Well	#1-27 BENNETT
Field	WILDCAT
County	PAWNEE
State	KANSAS
Company	MULL DRILLING COMPANY, INC.
Well	#1-27 BENNETT
Field	WILDCAT
County	PAWNEE
State	KANSAS
Location:	API # : 15-145-21824-0000 2310' FSL & 961' FWL W/2 - NE - NW - SW
Permanent Datum	GROUND LEVEL
Log Measured From	KELLY BUSHING
Drilling Measured From	KELLY BUSHING
Elevation	2064
Other Services	CDL/CNL MEL/SON
Date	5/13/77
Run Number	ONE
Depth Driller	3975
Depth Logger	3980
Bottom Logged Interval	3978
Top Log Interval	00
Casing Driller	8 5/8" @ 1154'
Casing Logger	1154
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/54
pH / Fluid Loss	10.0/7.2
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.600 @ 90F
Rmf @ Meas. Temp	.450 @ 90F
Rmc @ Meas. Temp	.720 @ 90F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.466 @ 116F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	5:00 P.M.
Maximum Recorded Temperature	116F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	KEVIN KESSLER

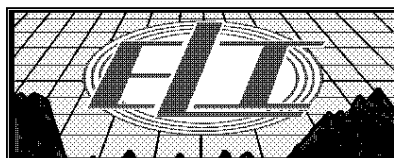
<<< Fold Here >>>

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 HAYS, KANSAS (785) 628-6395
DIRECTIONS

LARNED, KS., 5W. ON HWY 156 TO "RD. 150", 6N. TO "RD. U", 1 1/2W. TO "RD. 170", 1/2N., E. INTO



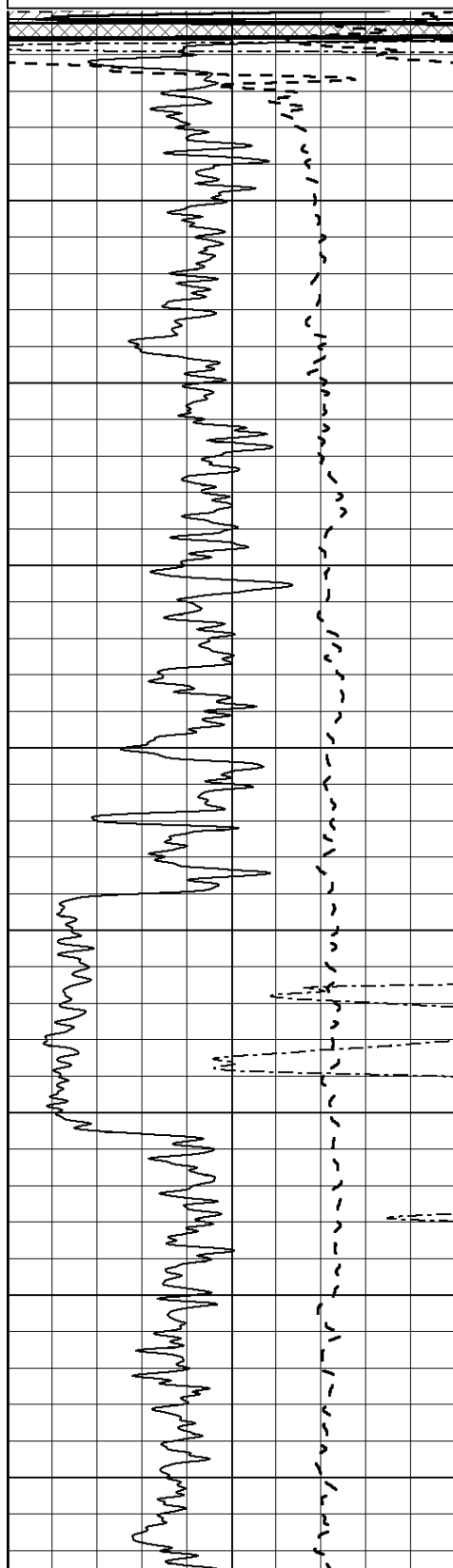
MAIN SECTION

Database File: 1419ddn.db
Dataset Pathname: pass3.7
Presentation Format: dil2
Dataset Creation: Sat May 13 18:04:09 2017
Charted by: Depth in Feet scaled 1:600

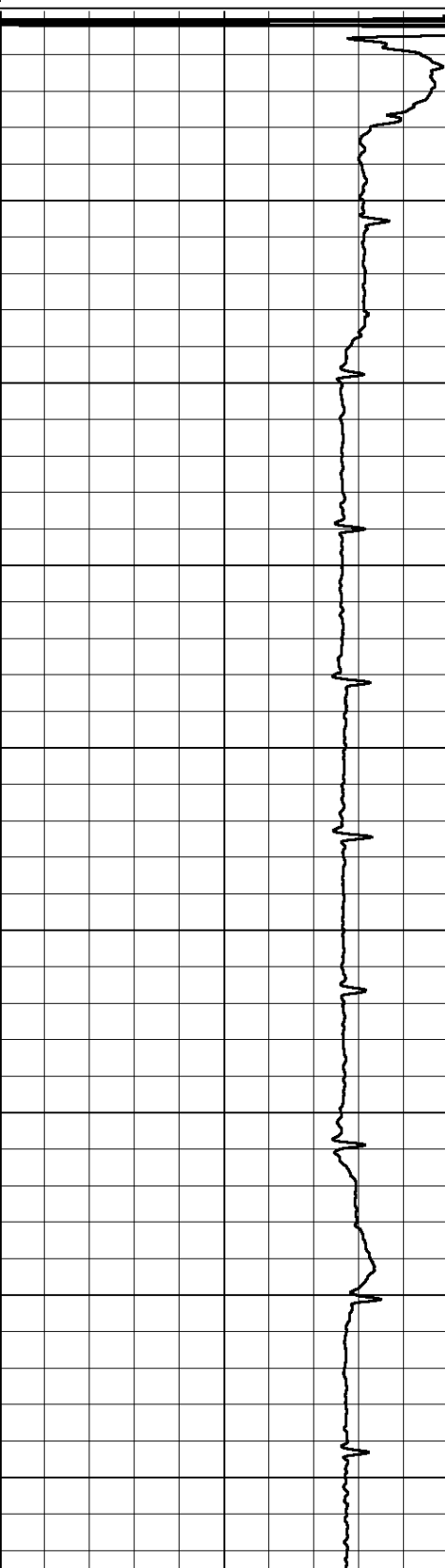
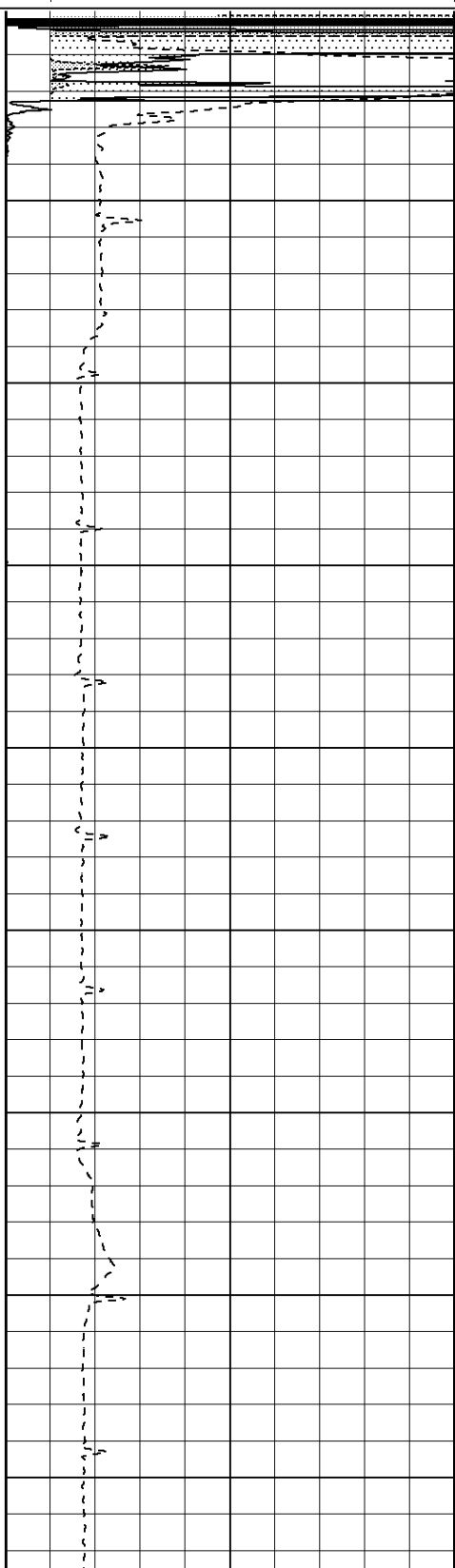
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

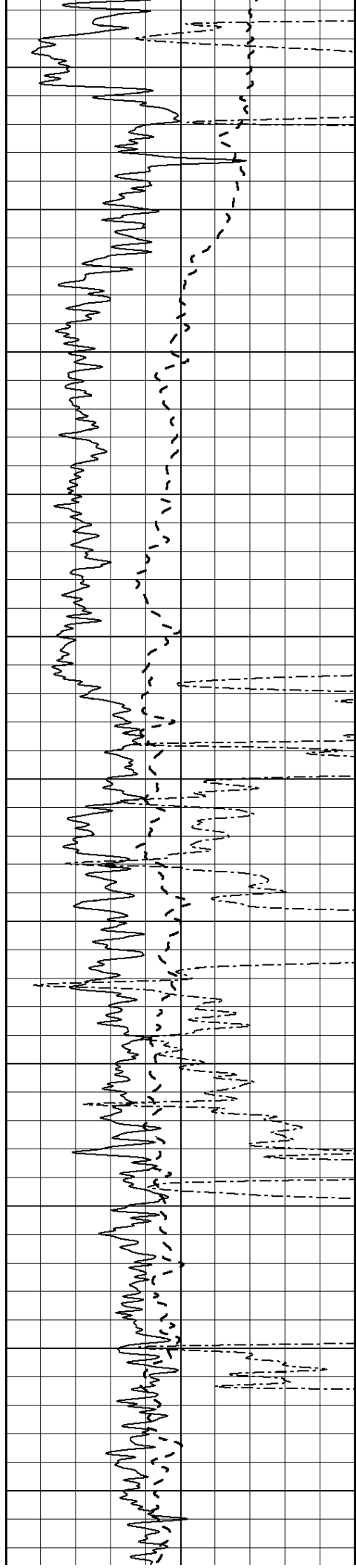
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0

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



0
50
100
150
200
250
300
350
400





450

500

550

600

650

700

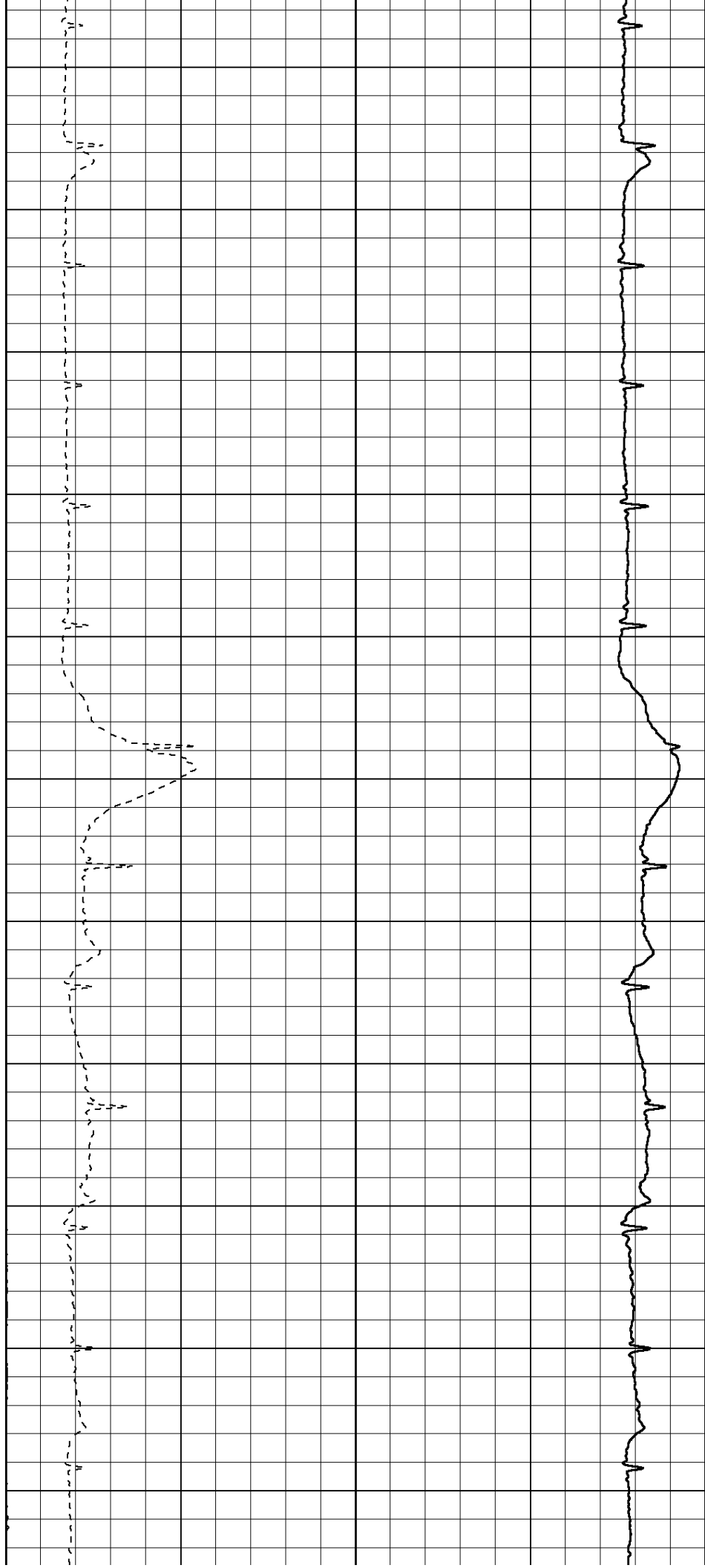
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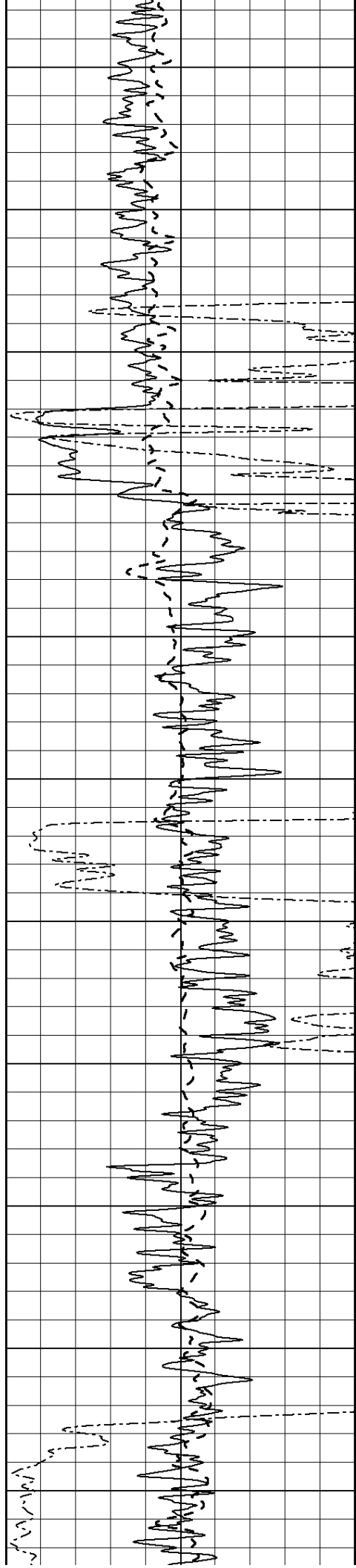
800

850

900

950





1000

1050

1100

1150

1200

1250

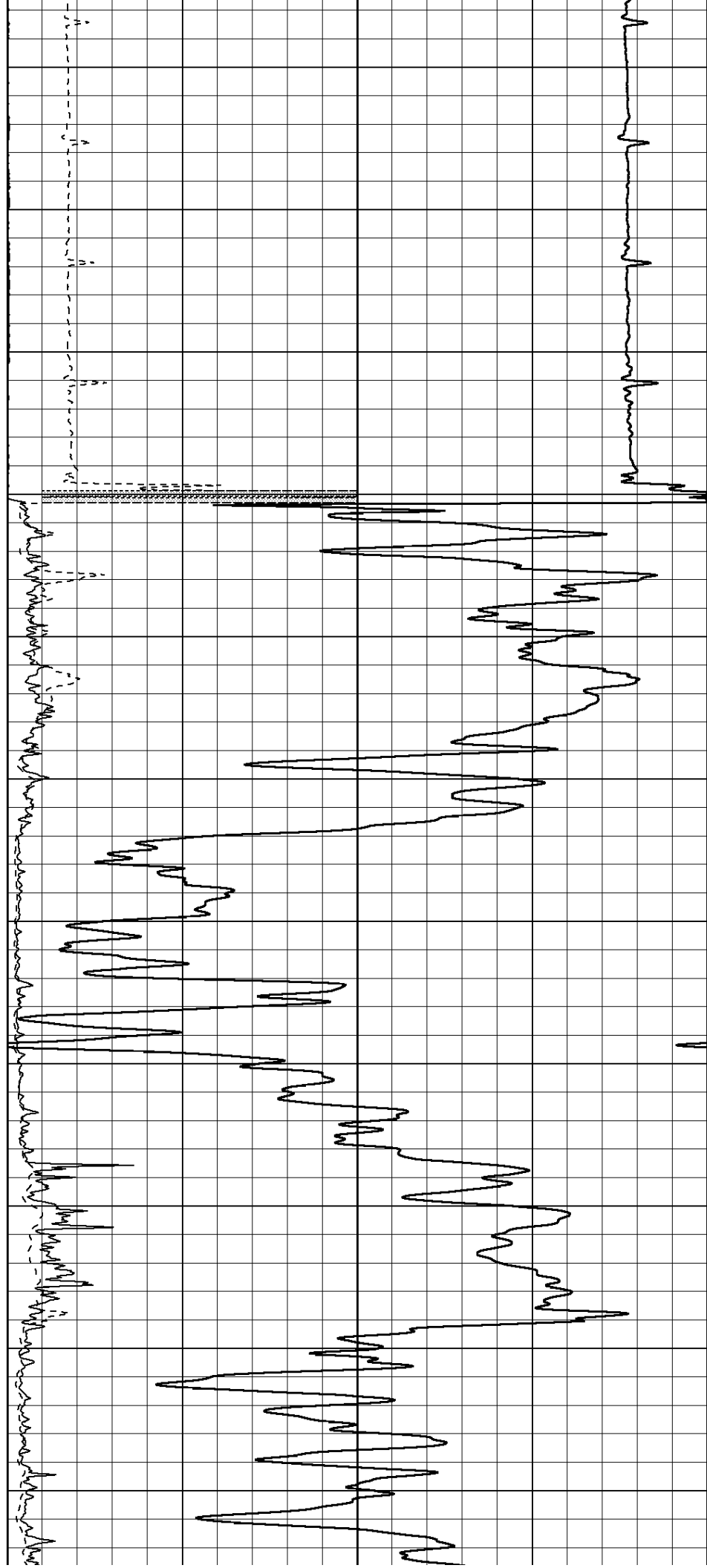
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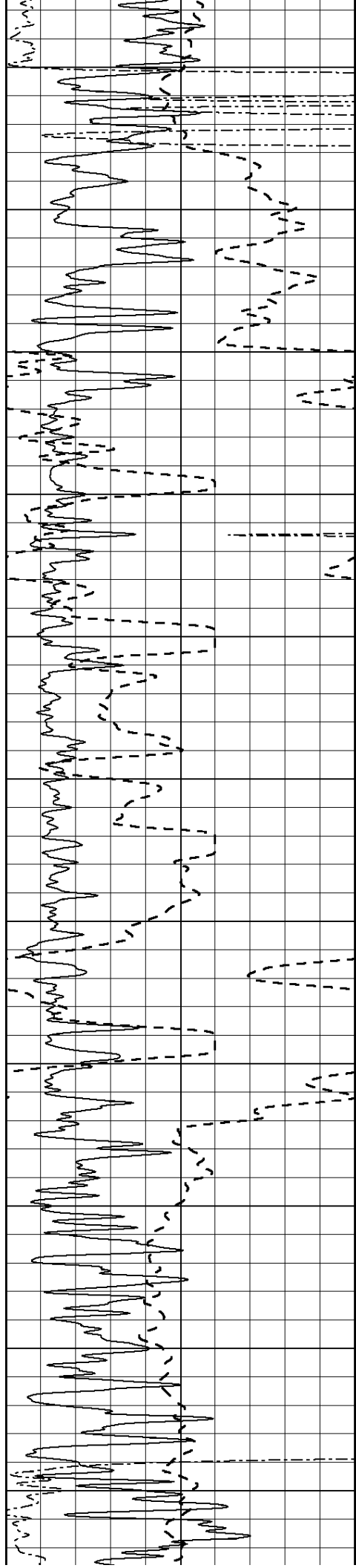
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1400

1450

1500





1550

1600

1650

1700

1750

1800

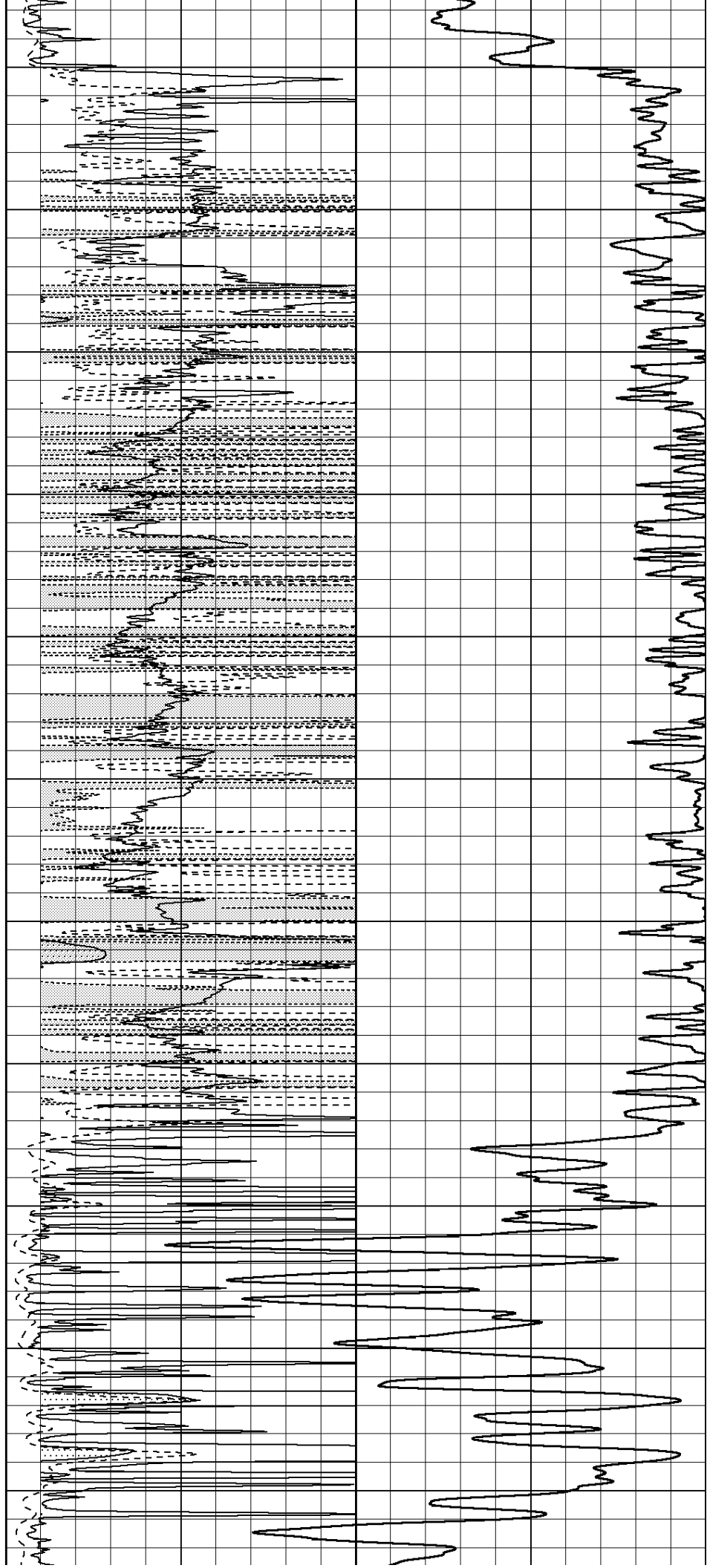
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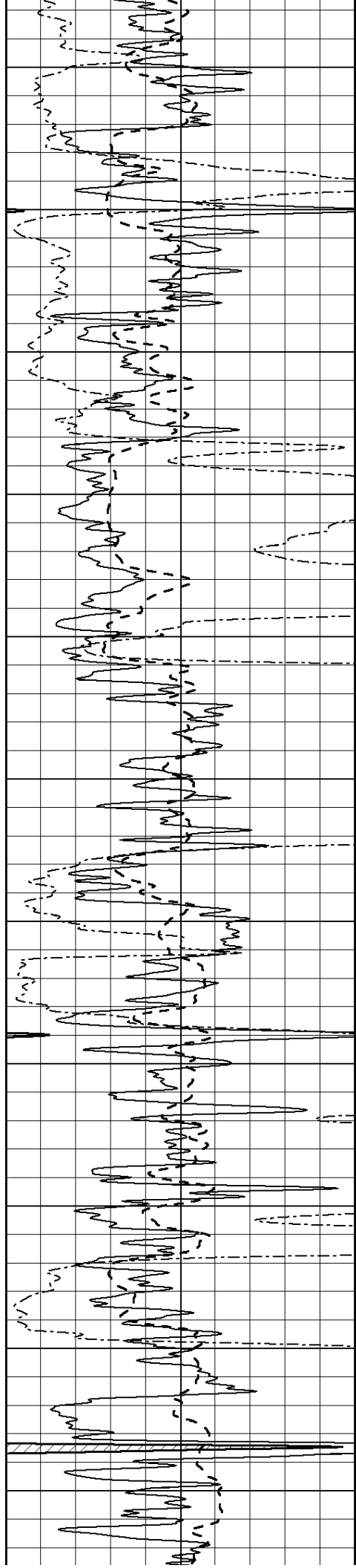
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1950

2000

2050





2100

2150

2200

2250

2300

2350

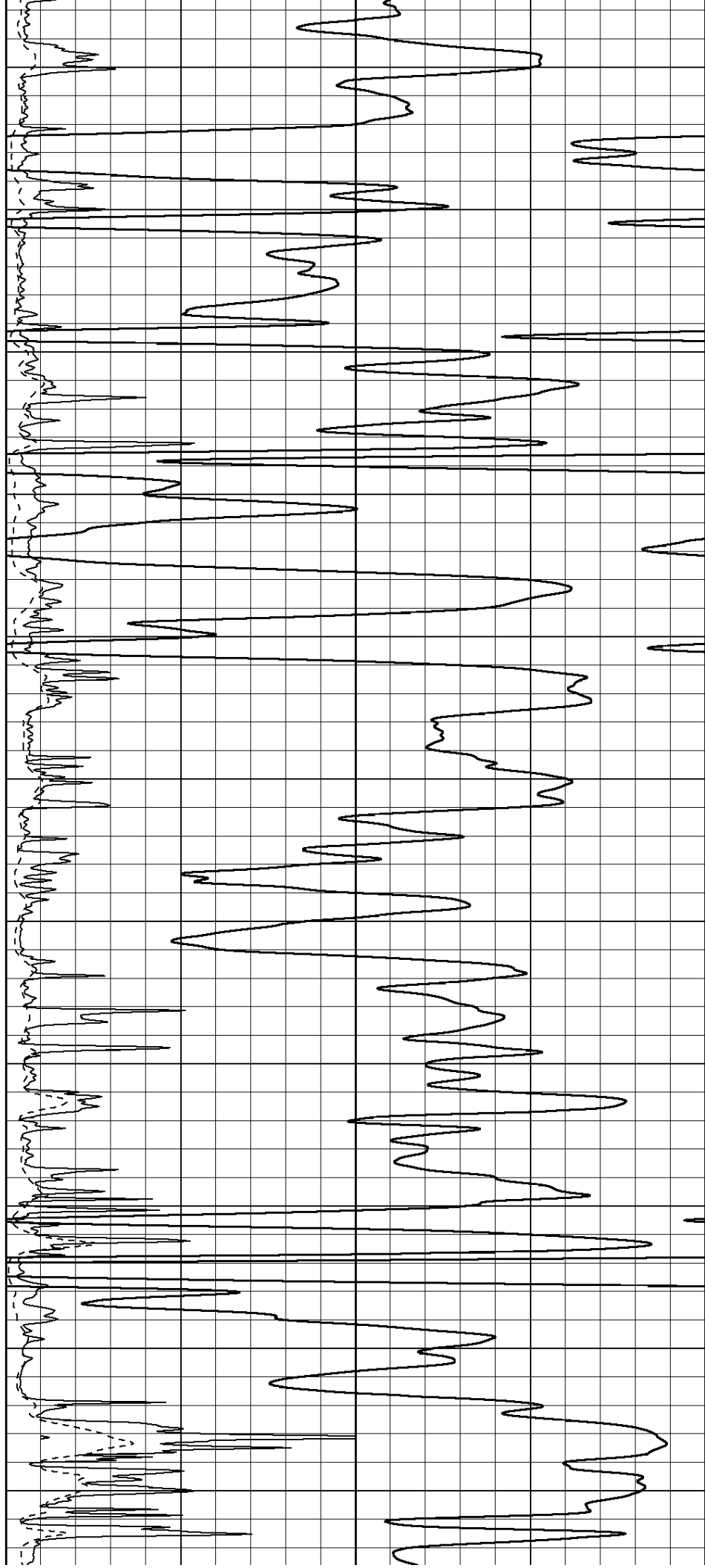
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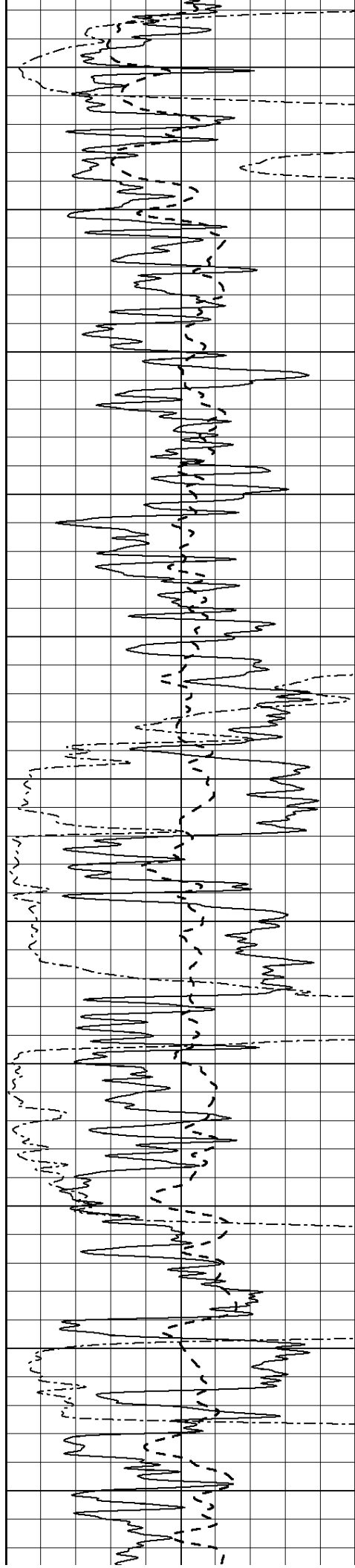
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2500

2550

2600





2650

2700

2750

2800

2850

2900

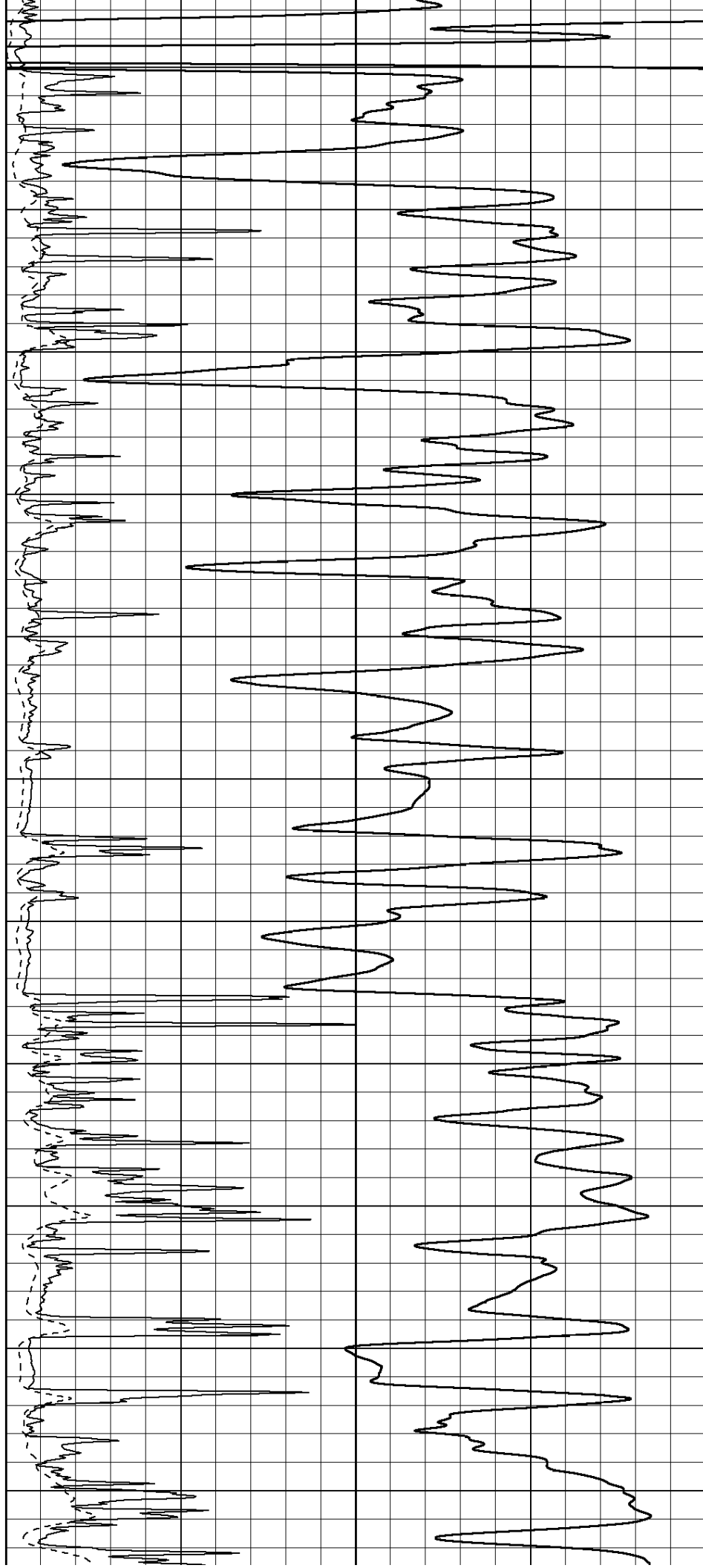
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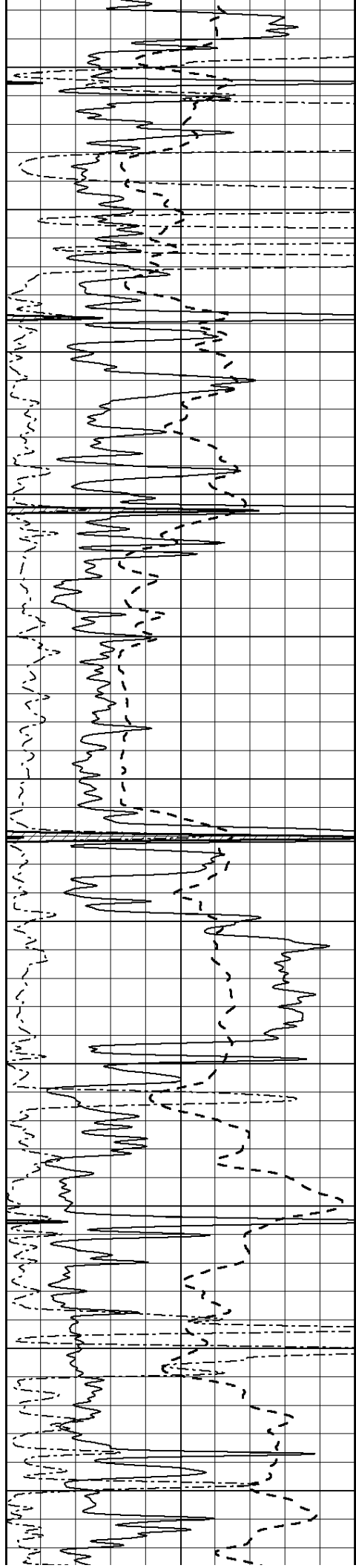
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3050

3100

3150





3200

3250

3300

3350

3400

3450

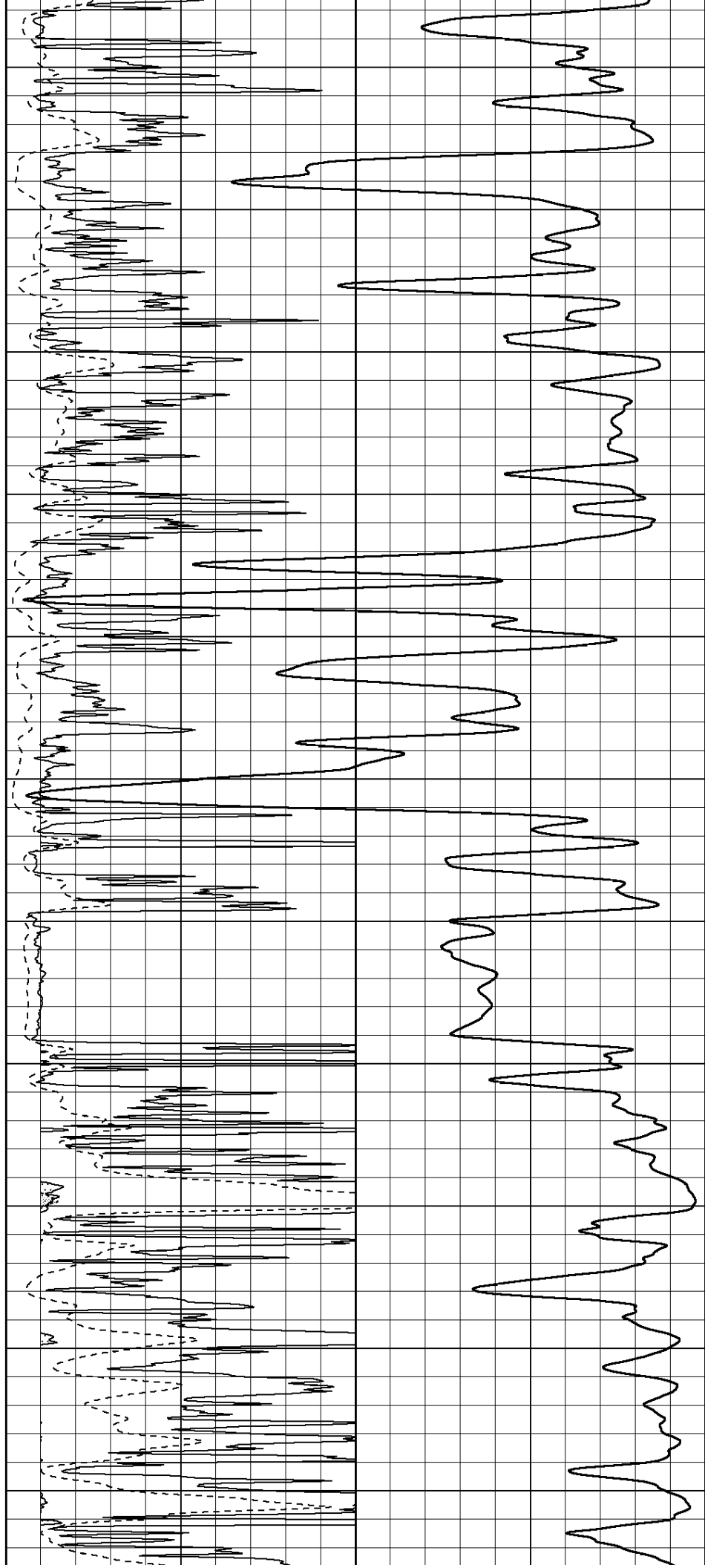
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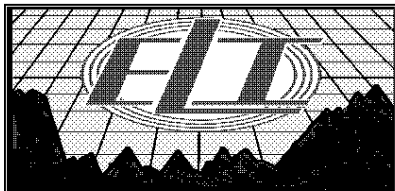
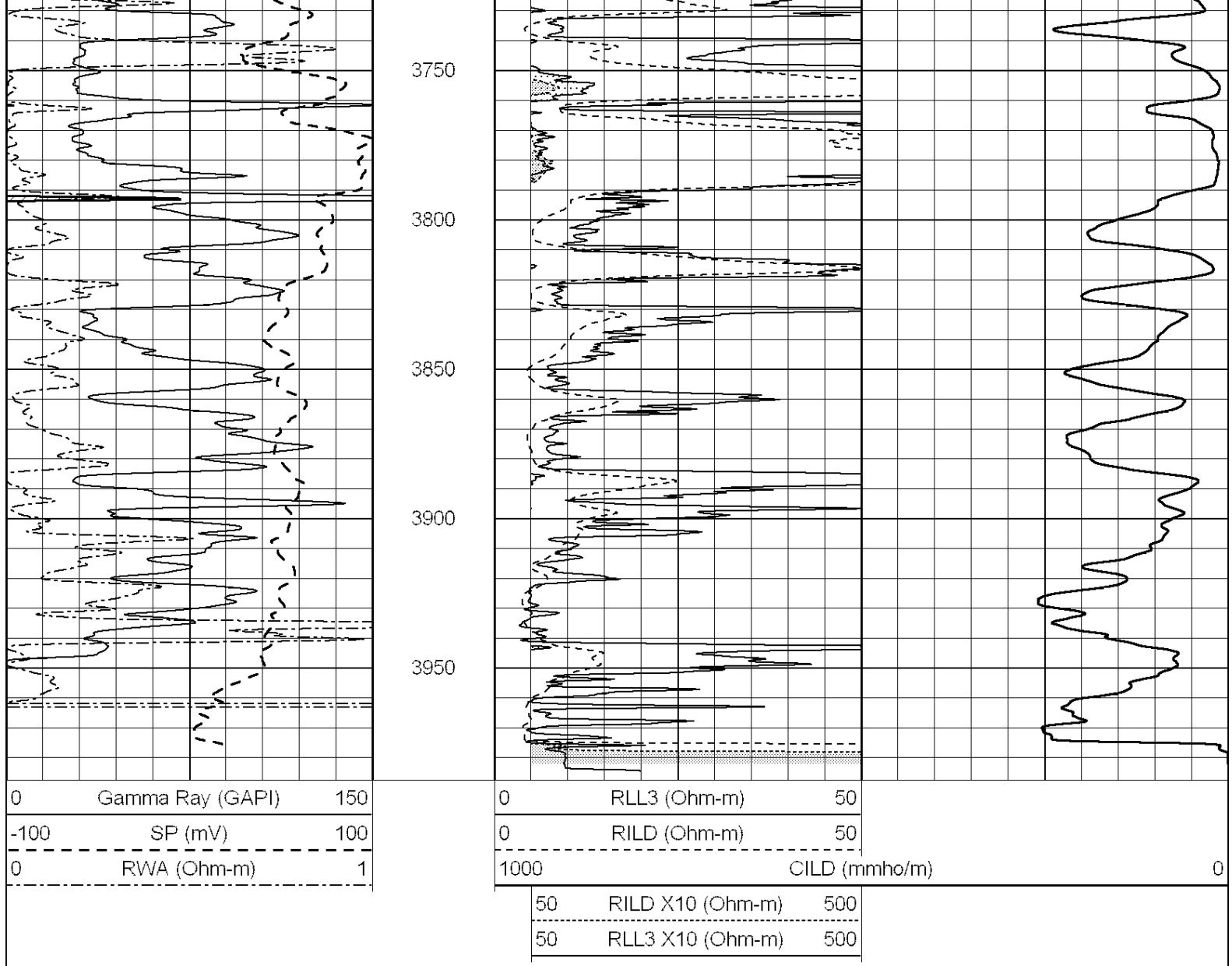
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3600

3650

3700

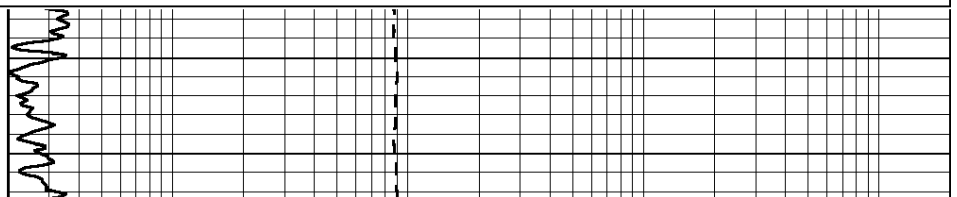
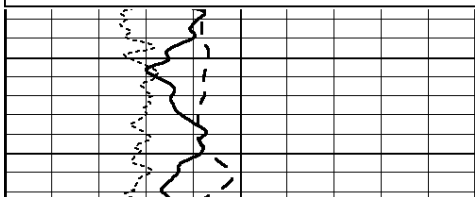


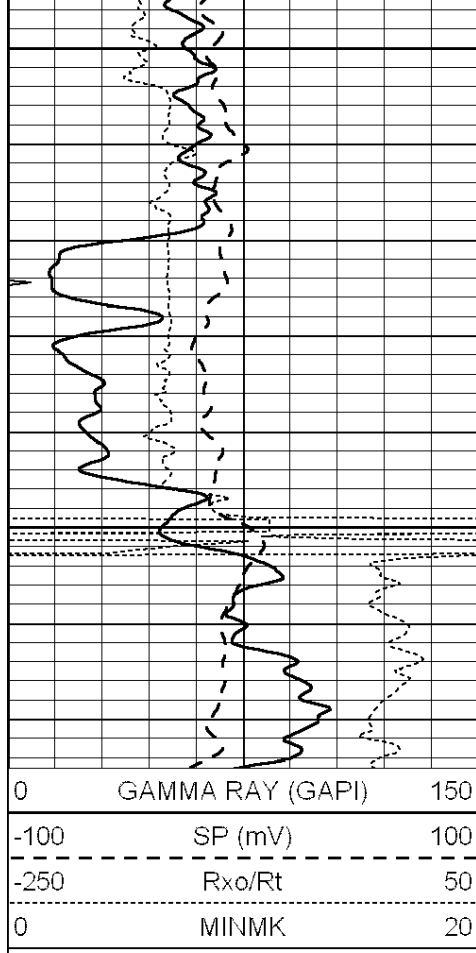


ANHYDRITE

Database File: 1419ddn.db
 Dataset Pathname: pass3.8
 Presentation Format: _dil
 Dataset Creation: Sat May 13 18:04:24 2017
 Charted by: Depth in Feet scaled 1:240

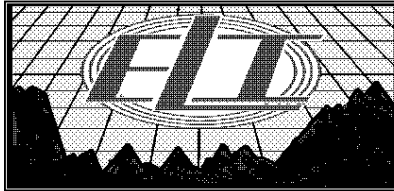
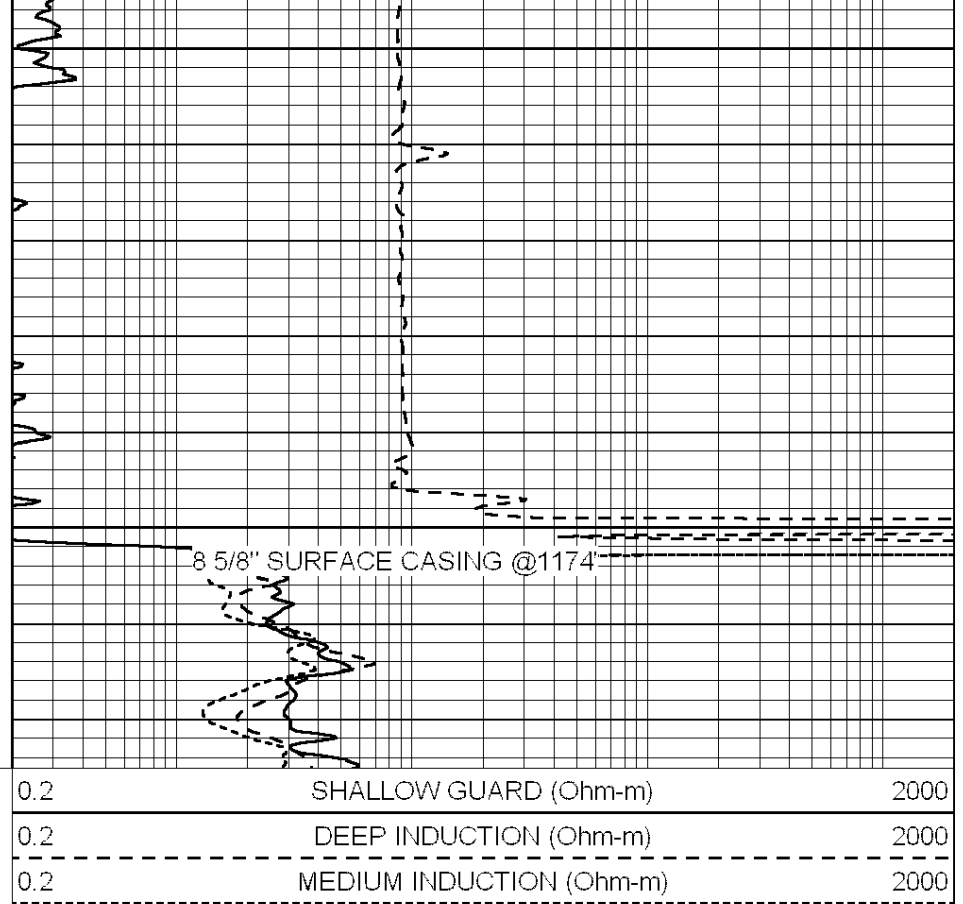
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





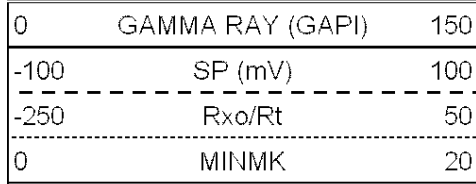
1100

1150

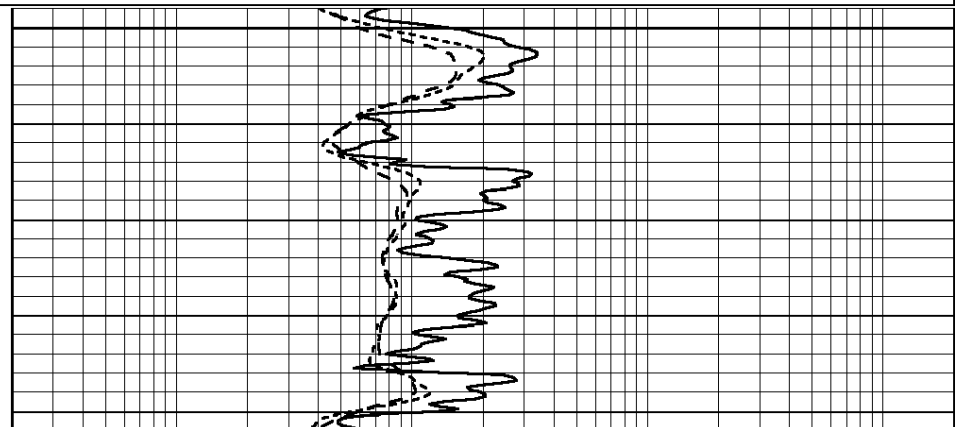
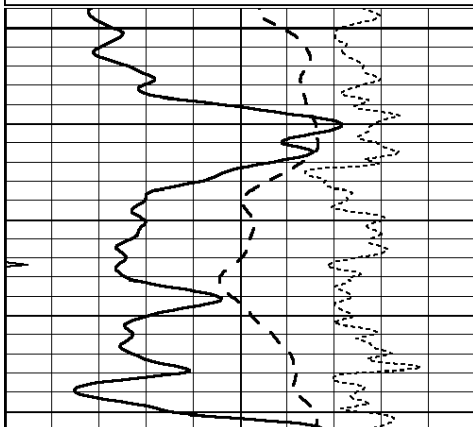
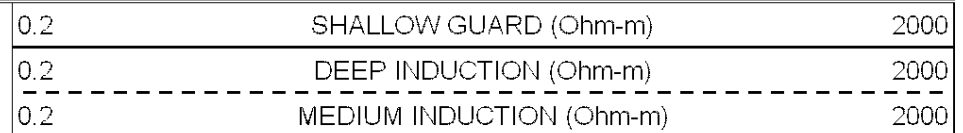


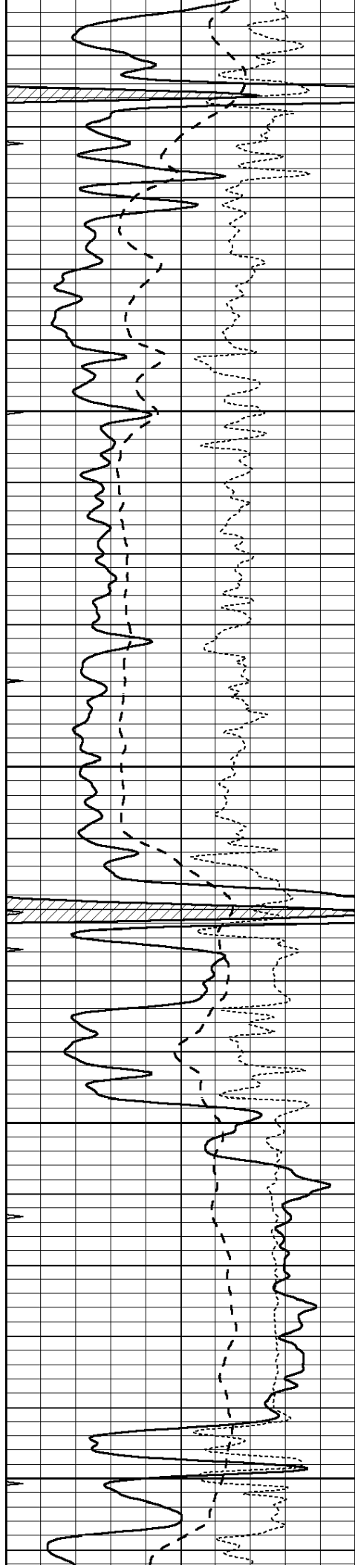
MAIN SECTION

Database File: 1419ddn.dlb
 Dataset Pathname: pass3.7
 Presentation Format: _dil
 Dataset Creation: Sat May 13 18:04:09 2017
 Charted by: Depth in Feet scaled 1:240



3300





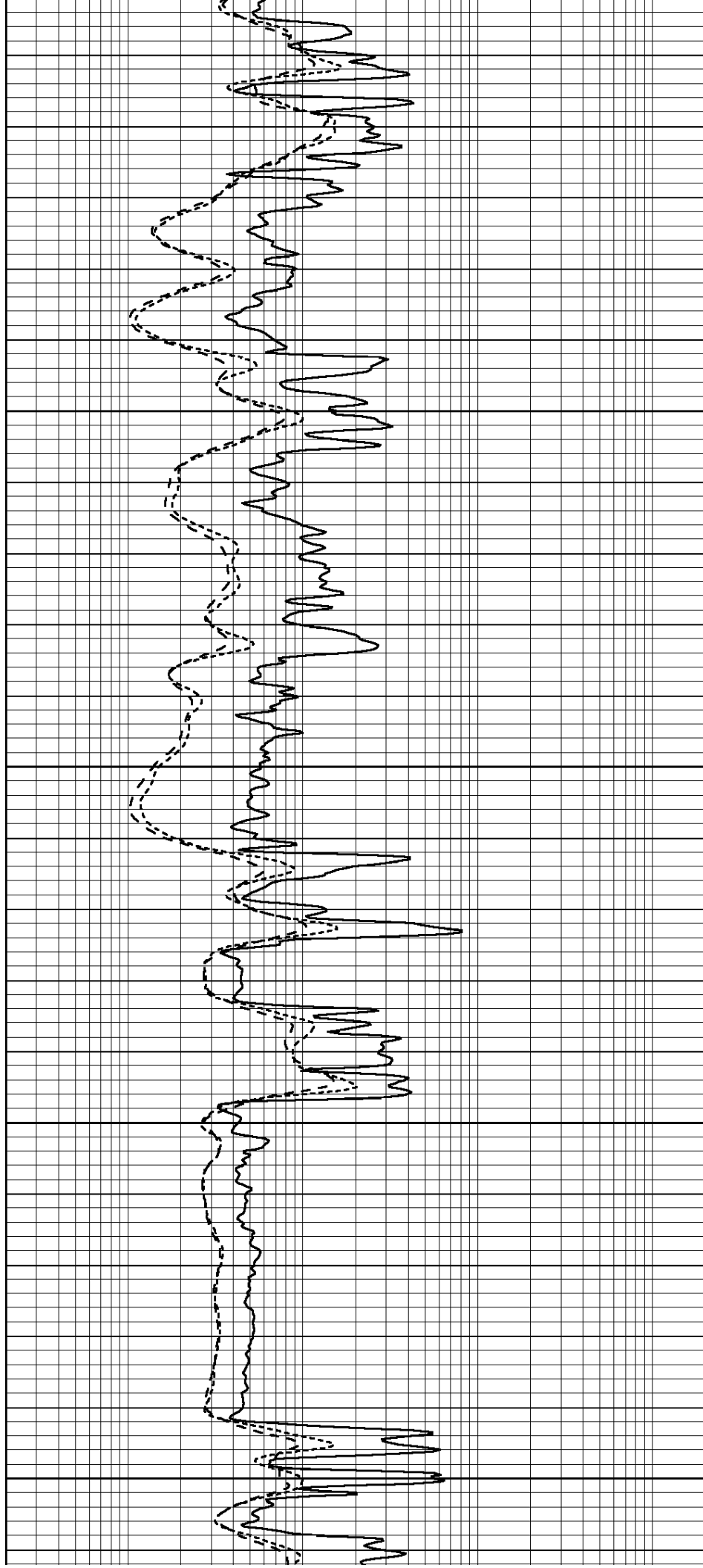
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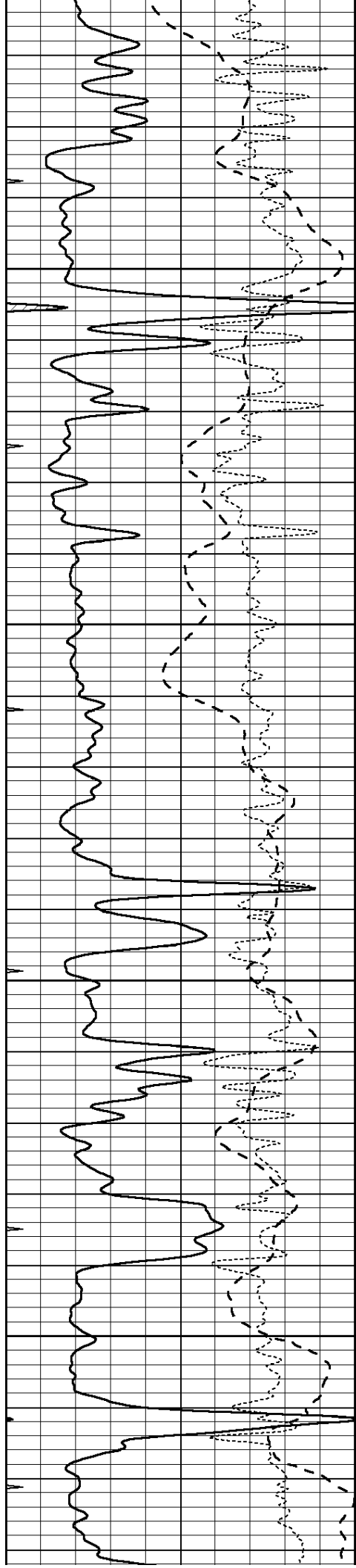
3400

3450

3500

3550



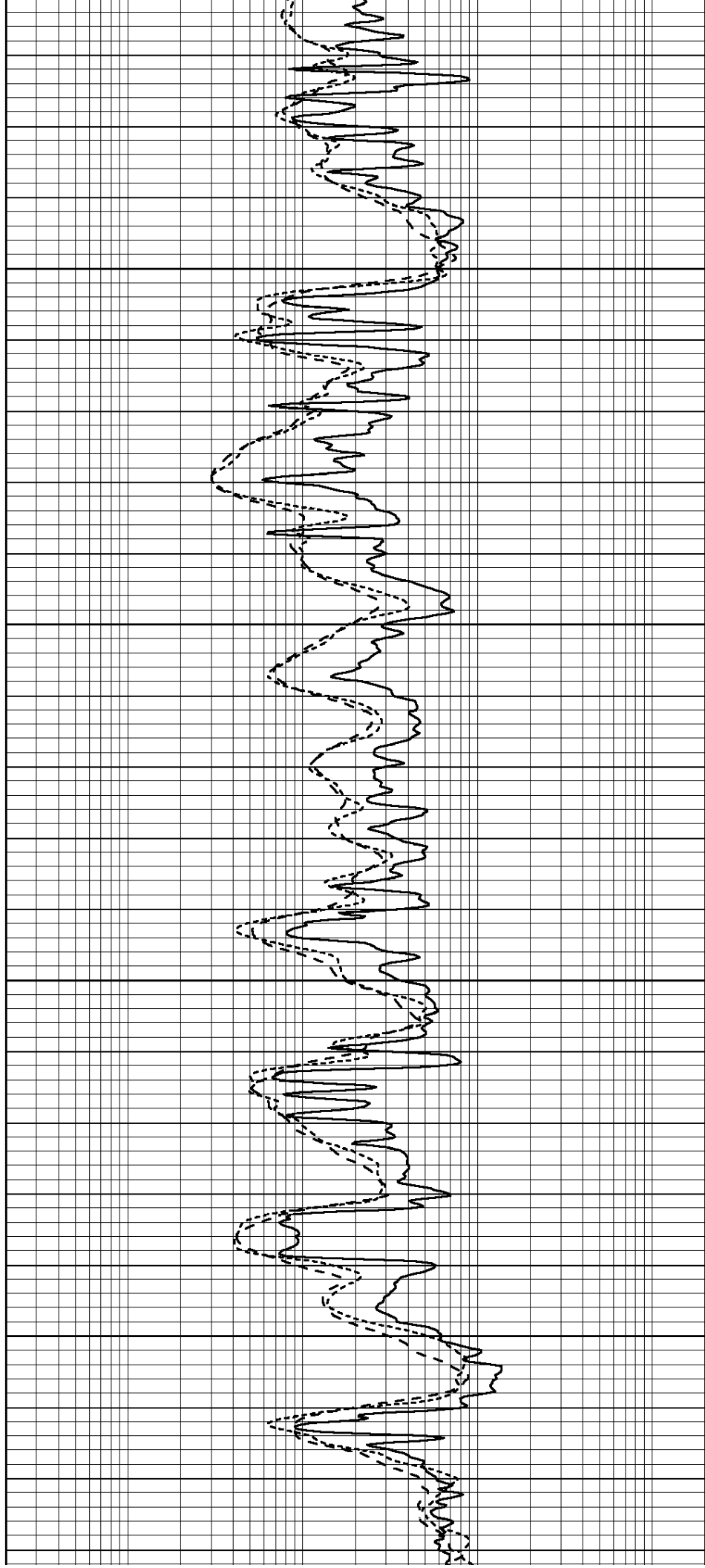


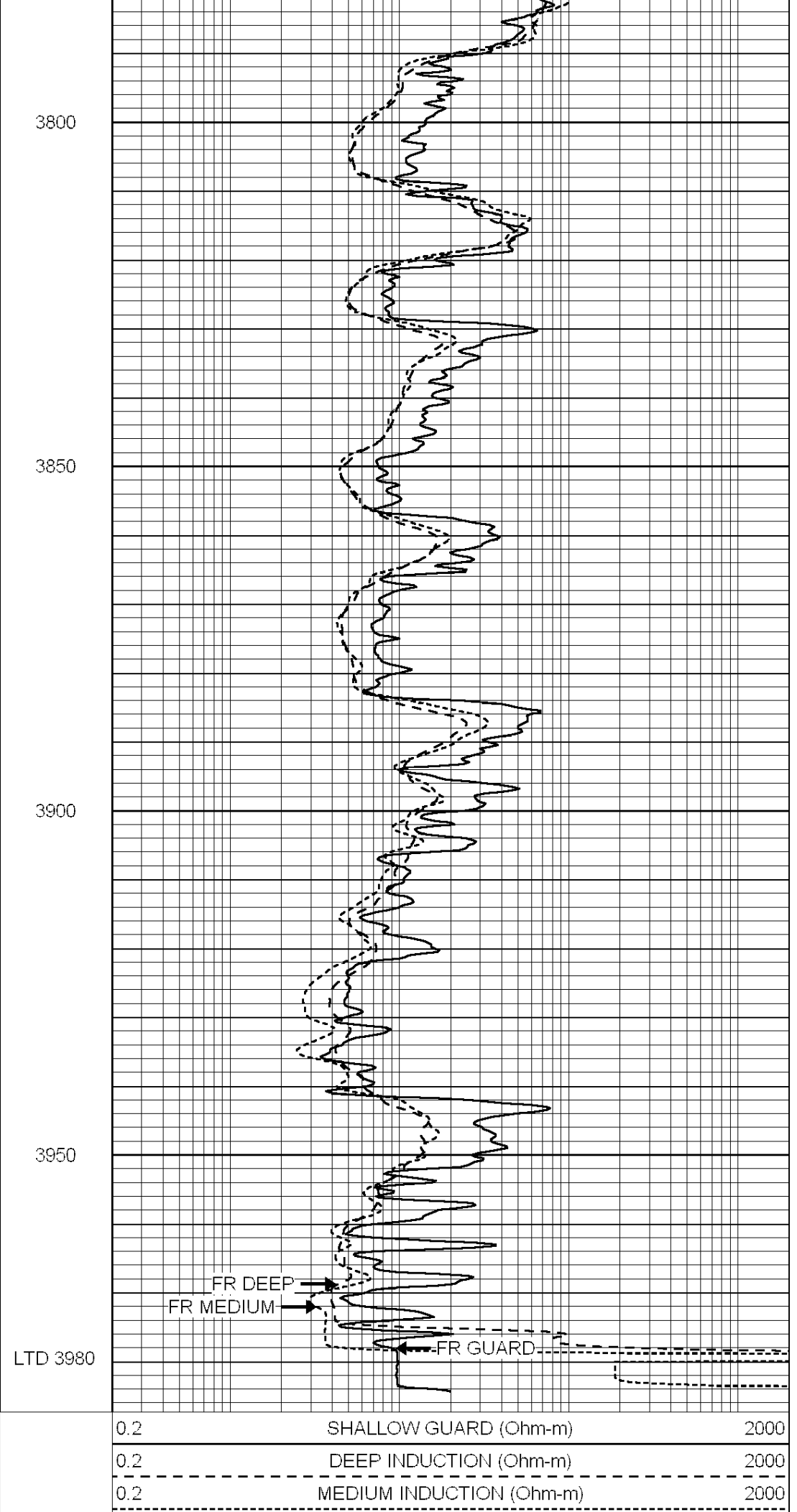
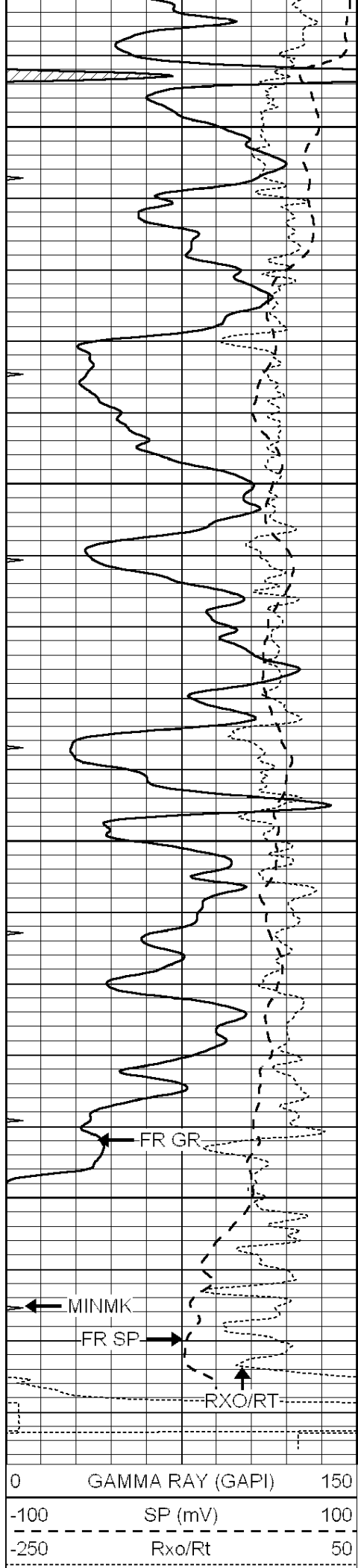
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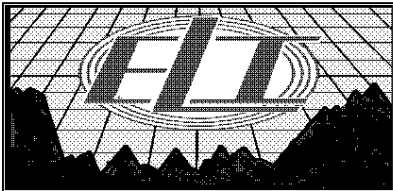
3650

3700

3750





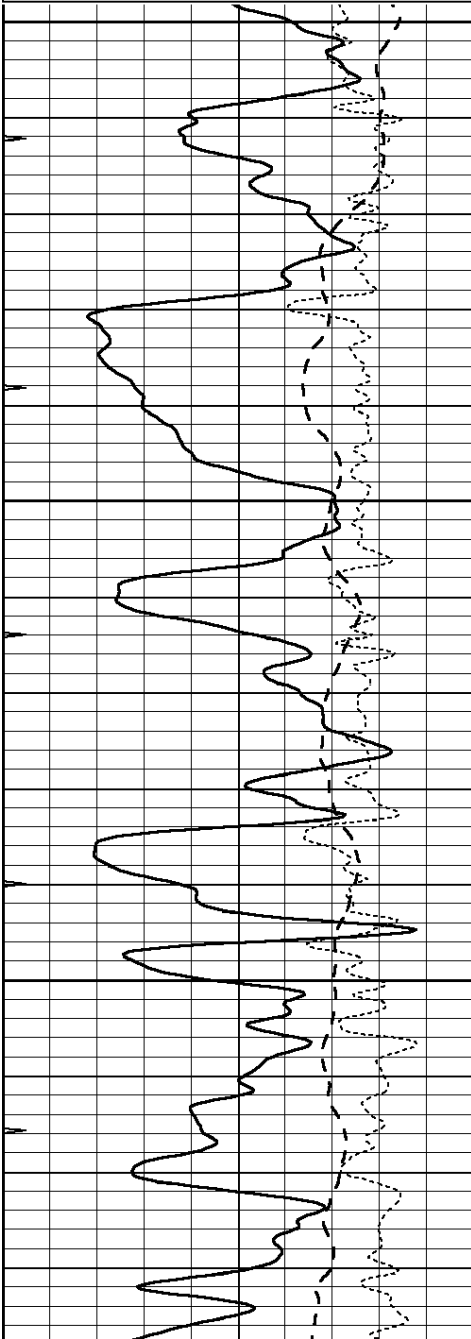


REPEAT SECTION

Database File:	1419ddn.db
Dataset Pathname:	pass2.3
Presentation Format:	_dil
Dataset Creation:	Sat May 13 18:17:03 2017 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

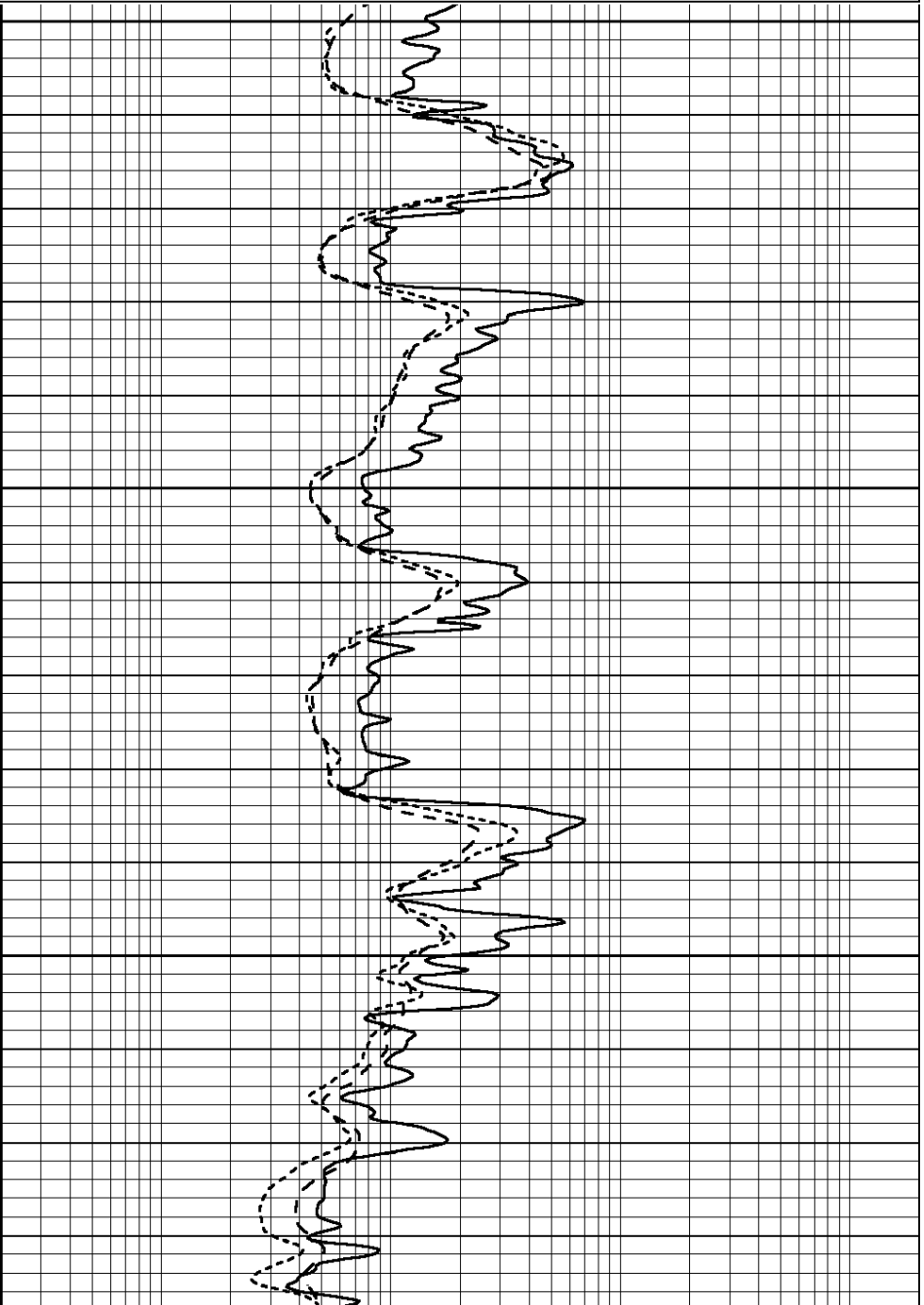
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

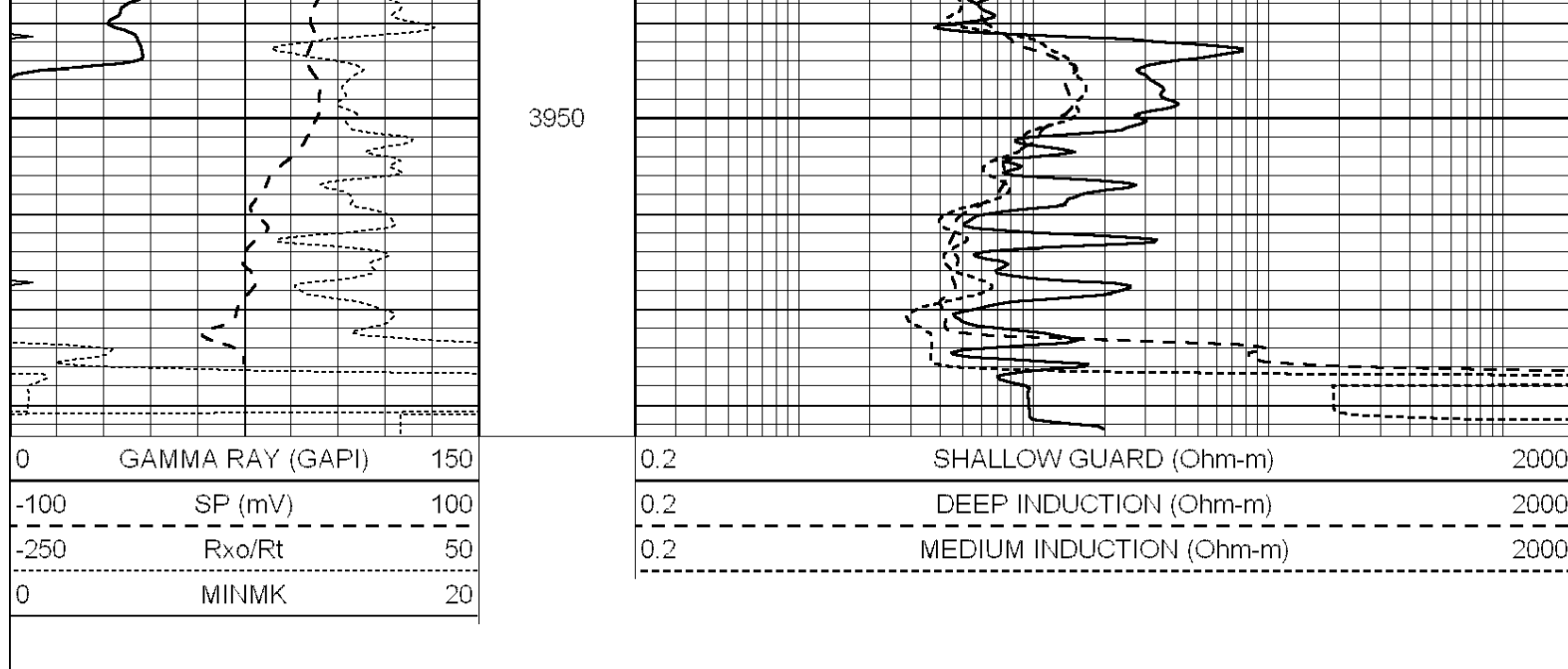


3800

3850

3900





Calibration Report	
Database File:	1419ddn.db
Dataset Pathname:	pass3.7
Dataset Creation:	Sat May 13 18:04:09 2017

Dual Induction Calibration Report

Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Sat May 13 16:54:07 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	-2.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-48.000
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
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	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		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		

1.000 mmho-m

1.000 mmho-m

Litho Density Calibration Report

Serial: 004N Model: PRB

Master Calibration

Performed Fri May 30 11:01:00 2014

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1378.8	10804.6	3492.0	12453.4	cps
Window 2	1262.4	9313.5	3076.7	10594.7	cps
Window 3	1077.6	5668.7	2076.0	6314.8	cps
Window 4	306.4	313.0	306.4	315.6	cps
Long Space	0.0	8051.0	1814.3	9332.3	cps
Short Space	1.9	1706.1	1146.0	1707.6	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 45.0	Rib Slope	: 1.002	Density/Spine Ratio	: 0.571
Spine Angle	: 75.0	Spine Slope	: 3.745	Spine Intercept	: -18.9

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

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		

Short Space	cps	pu	pu
Long Space	cps		
Gamma Ray Calibration Report			
Serial Number:	070558		
Tool Model:	OPEN_GR		
Performed:	Fri May 05 12:55:28 2017		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2800	GAPI/cps	