



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL INDUCTION
LOG**

Company MULL DRILLING COMPANY, INC.
Well #1-2 FRANCE
Field WILDCAT
County SCOTT
State KANSAS

Company MULL DRILLING COMPANY, INC.
Well #1-2 FRANCE
Field WILDCAT
County SCOTT State KANSAS

Location: API # : 15-171-21001-0000
2492' FNL & 2651' FWL
SEC 2 TWP 17S RGE 32W
Permanent Datum GROUND LEVEL Elevation 2976
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL/PE
MEL/SONIC
Elevation
K.B. 2981
D.F. 2879
G.L. 2976

Date	12/5/13
Run Number	ONE
Depth Driller	4700
Depth Logger	4704
Bottom Logged Interval	4702
Top Log Interval	00
Casing Driller	8 5/8"@245'
Casing Logger	245
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/56
pH / Fluid Loss	8.5/6.2
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.950@70F
Rmf @ Meas. Temp	.713@70F
Rmc @ Meas. Temp	1.14@70F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.545@122F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	2:30 A.M.
Maximum Recorded Temperature	122F
Equipment Number	4854
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	KEVIN KESSLER

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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 "NABORS" HAYS, KANSAS 785-628-6395
DIRECTIONS
HEALY, KS. 12W. ON HWY 4 TO "PAWNEE RD.", 1/2N., 1/2E. INTO



MAIN SECTION

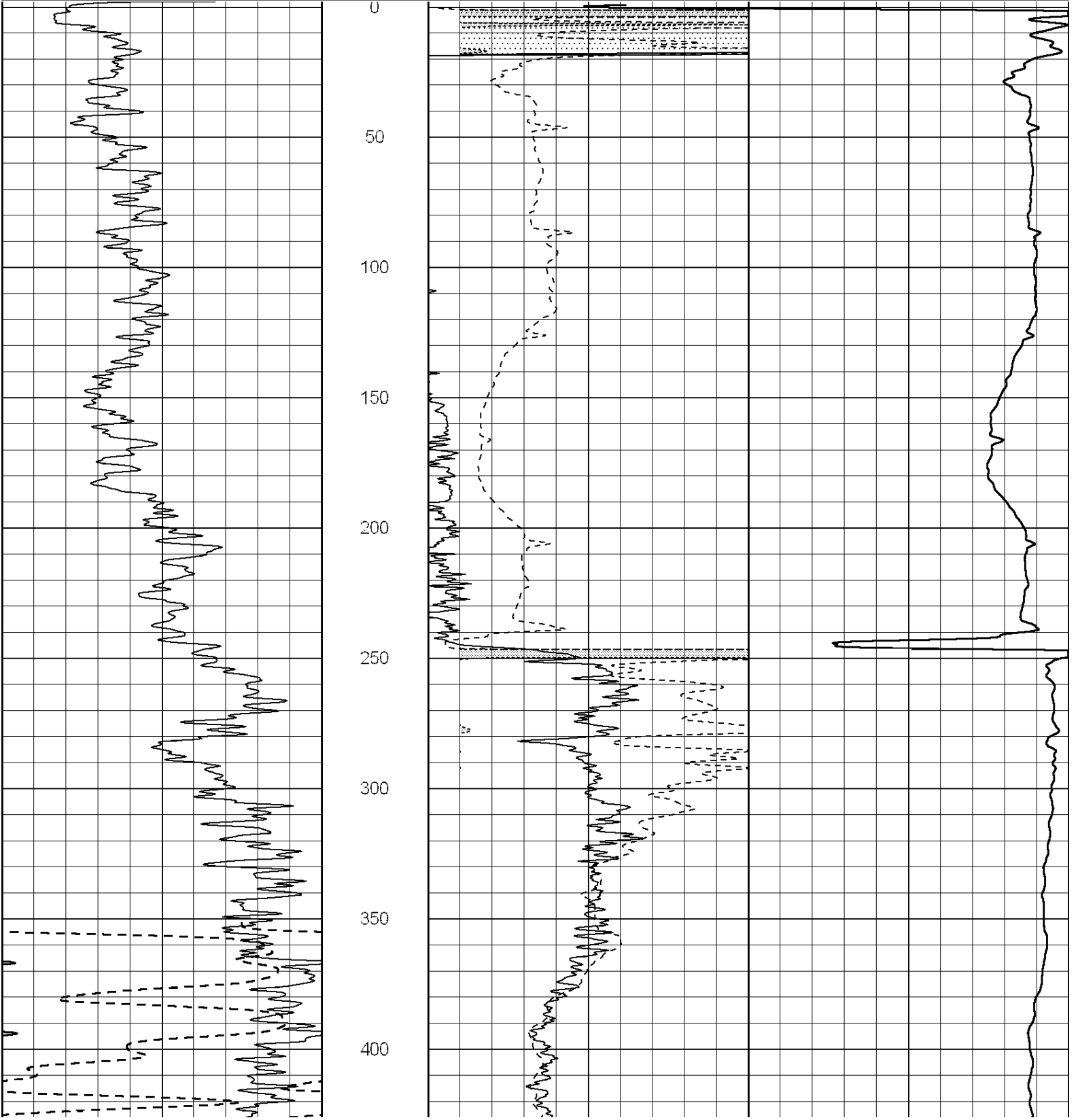
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 Dataset Pathname: pass3.7
 Presentation Format: dil2
 Dataset Creation: Fri Dec 06 04:03:29 2013
 Charted by: Depth in Feet scaled 1:600

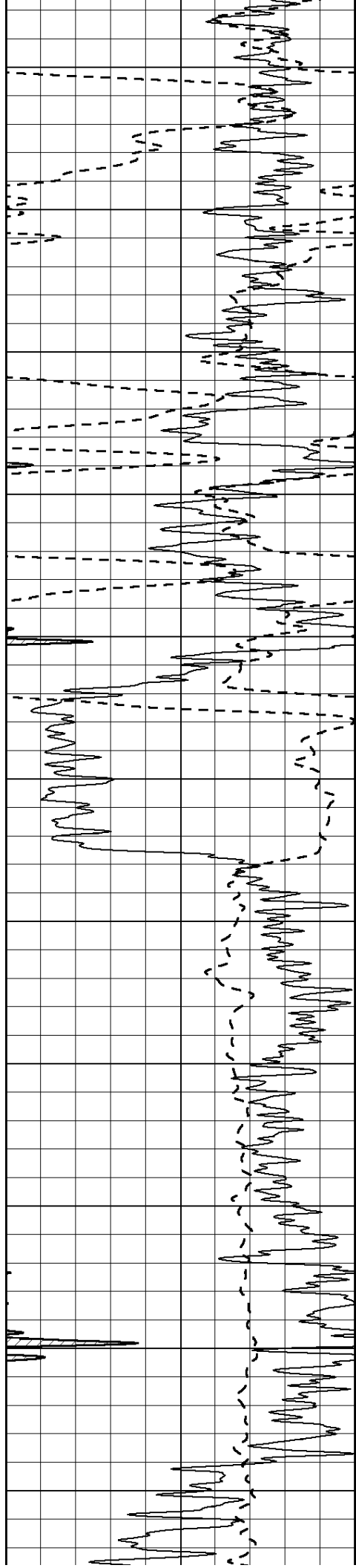
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 -100 SP (mV) 100

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

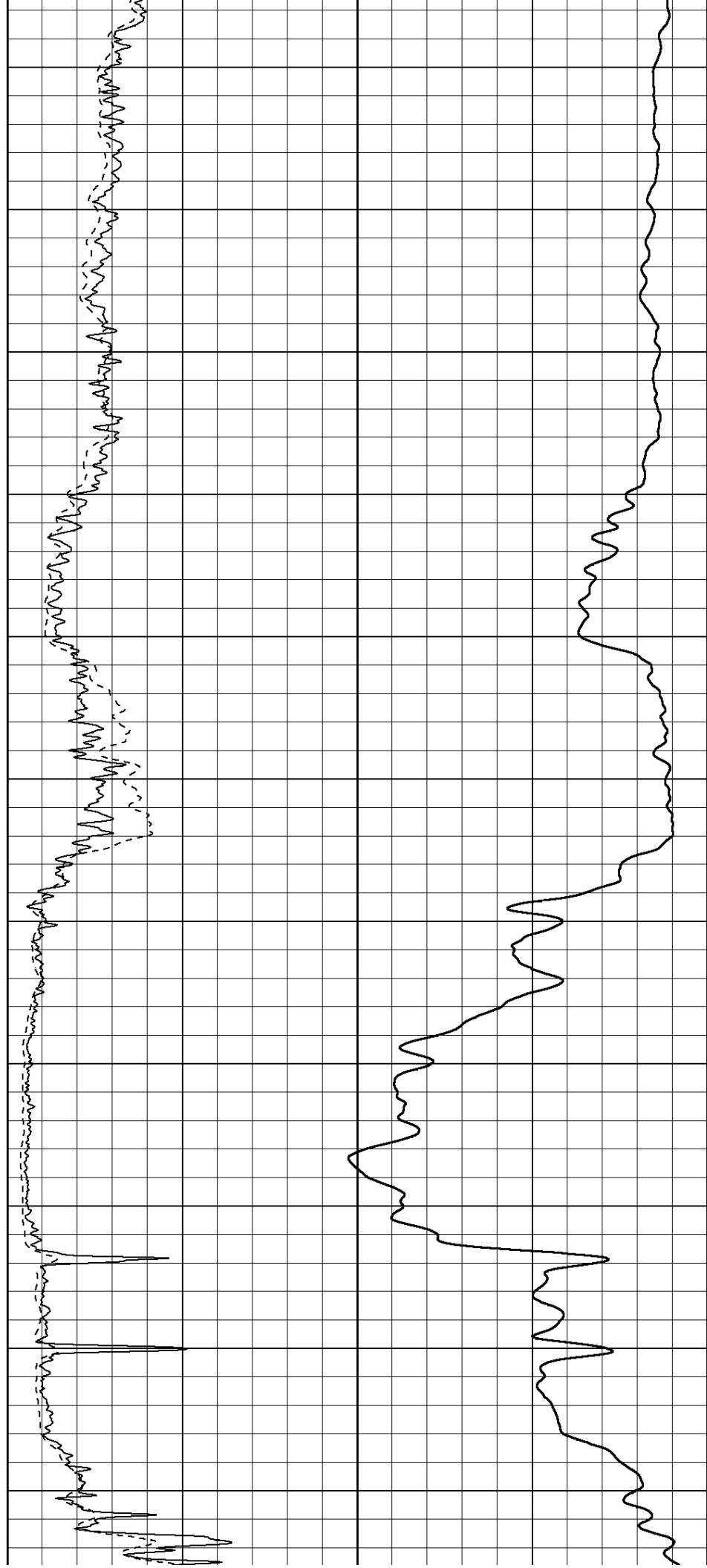
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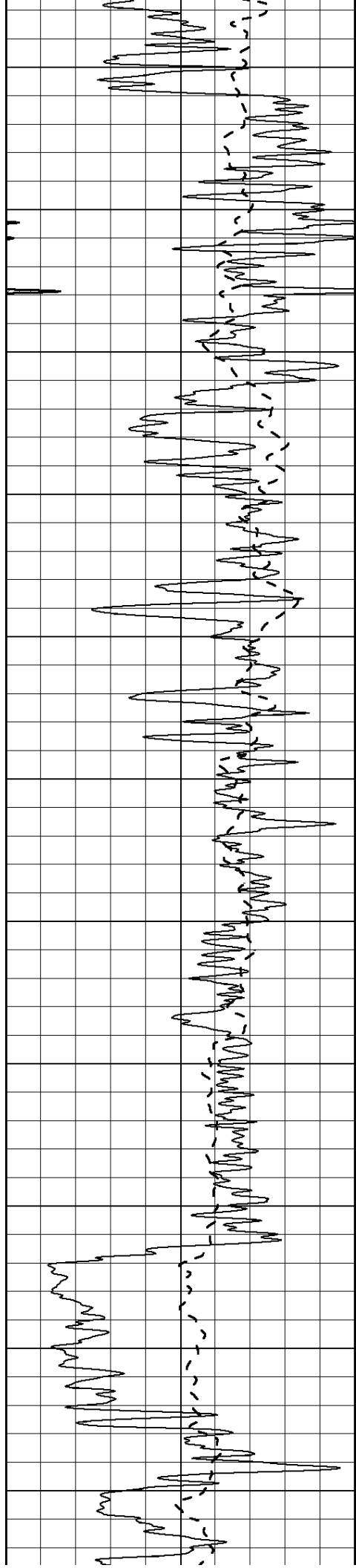
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850

900

950





1000

1050

1100

1150

1200

1250

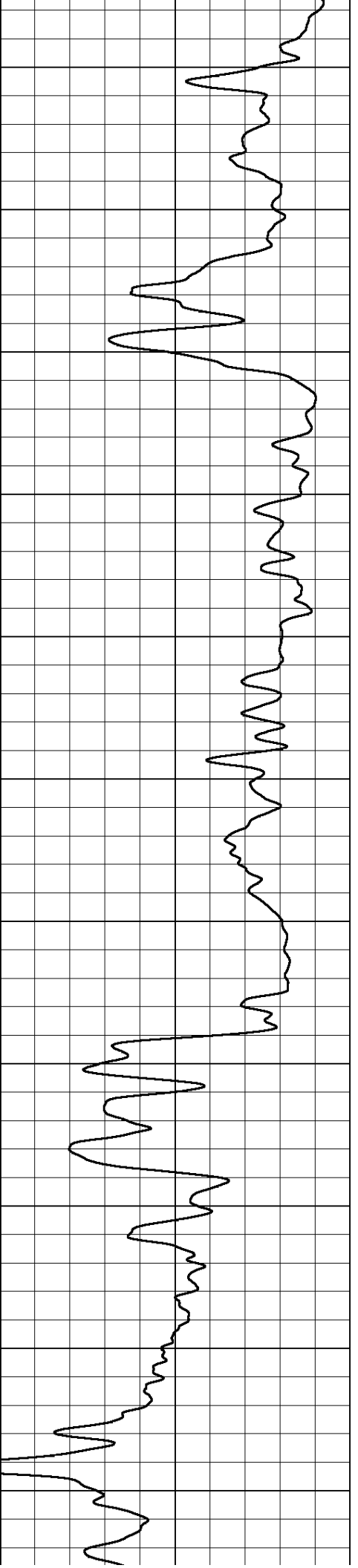
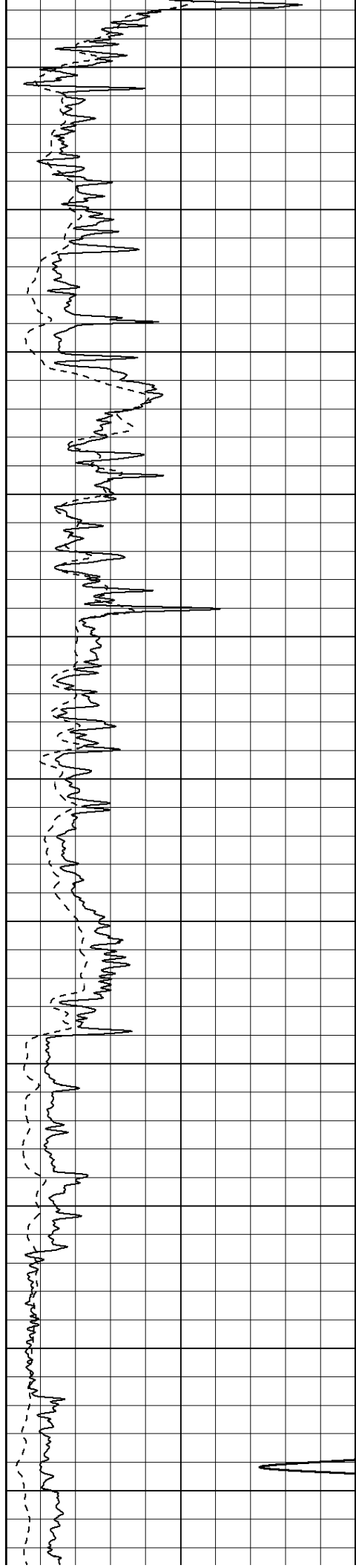
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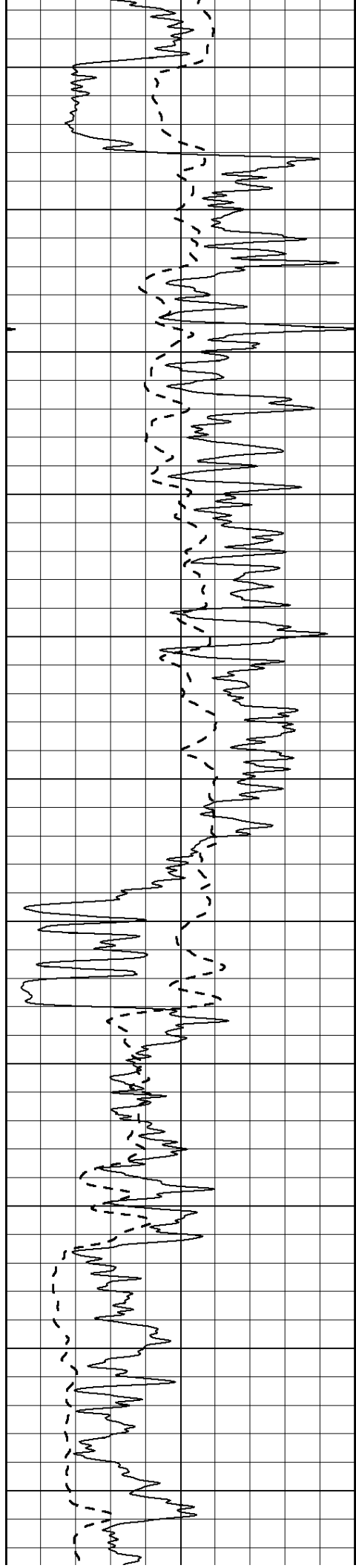
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1400

1450

1500





1550

1600

1650

1700

1750

1800

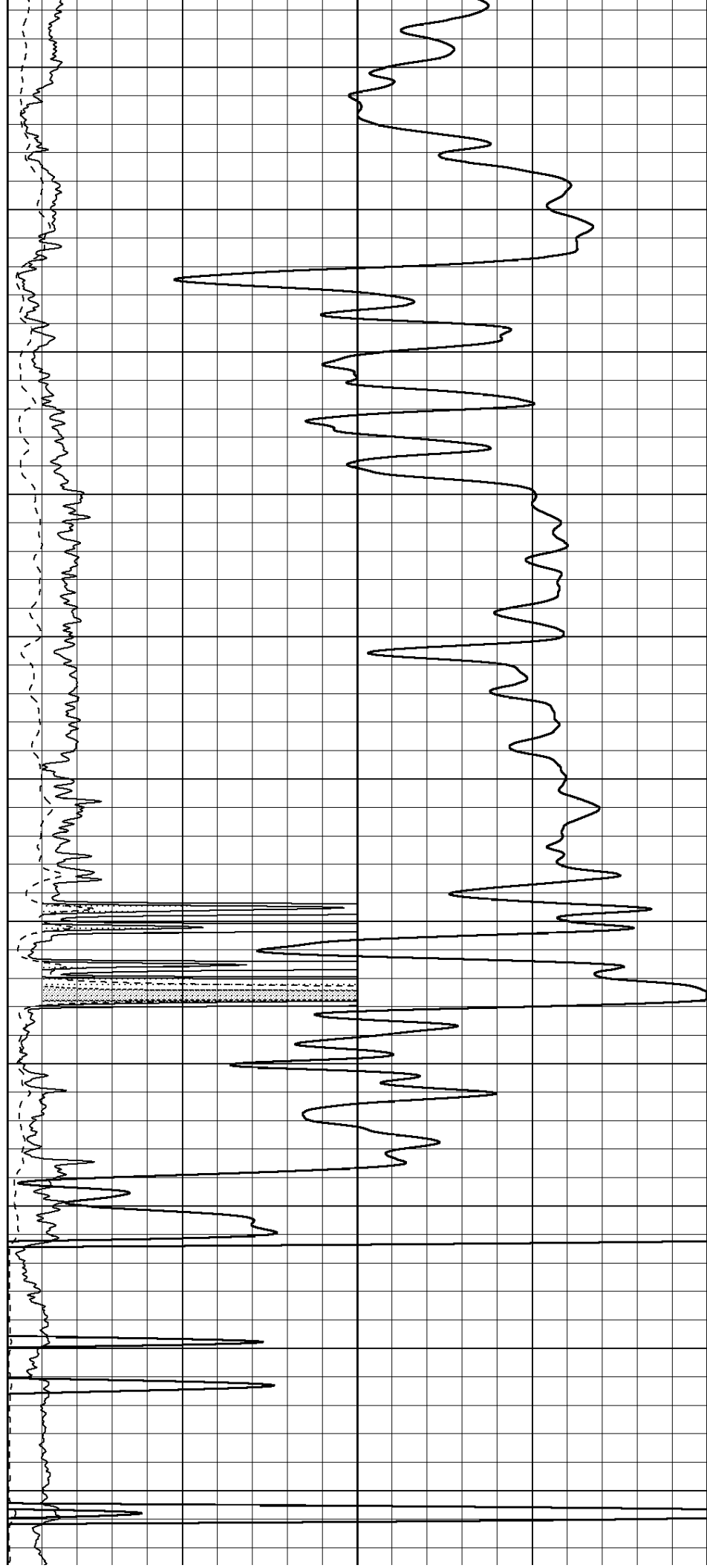
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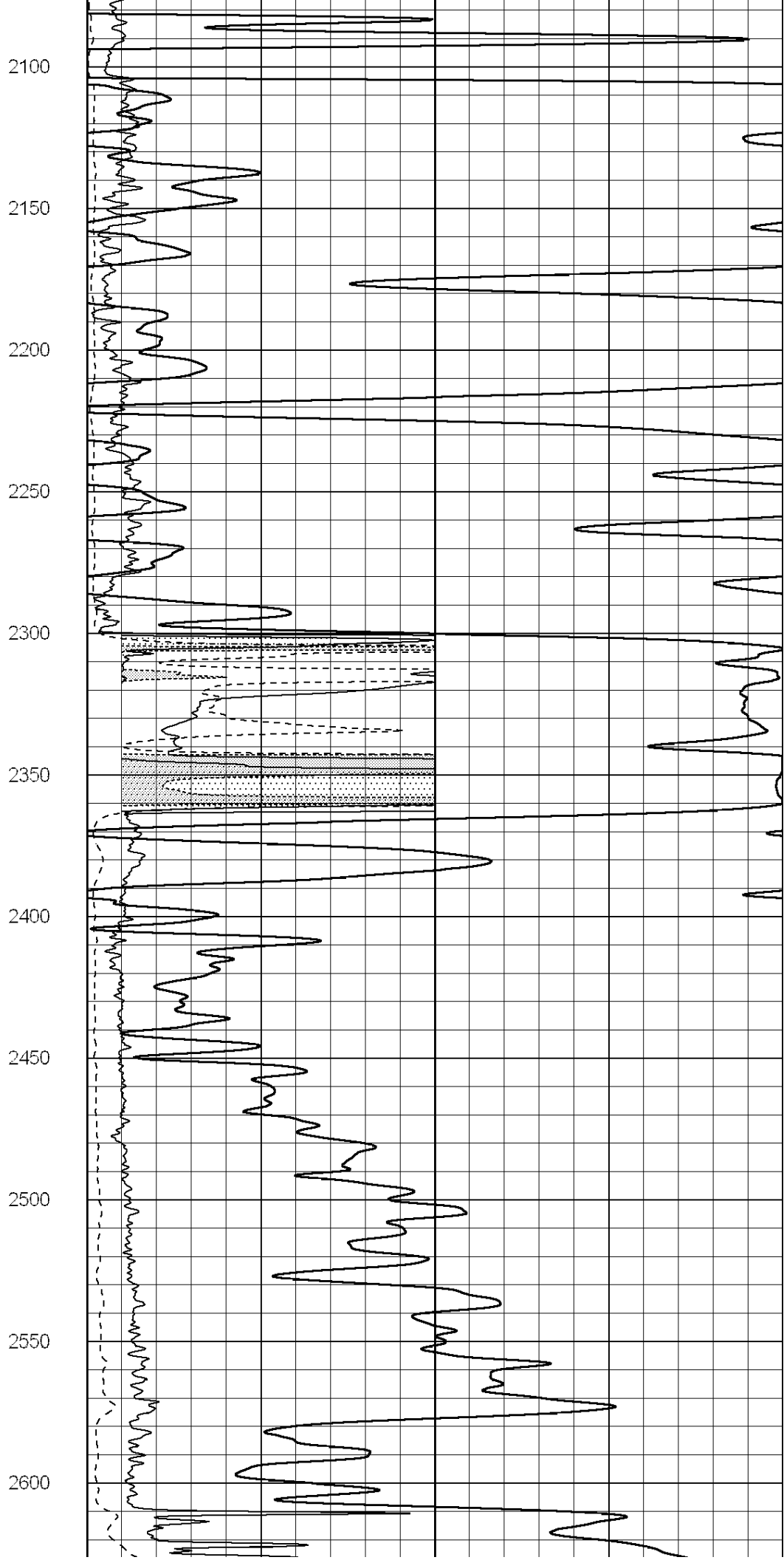
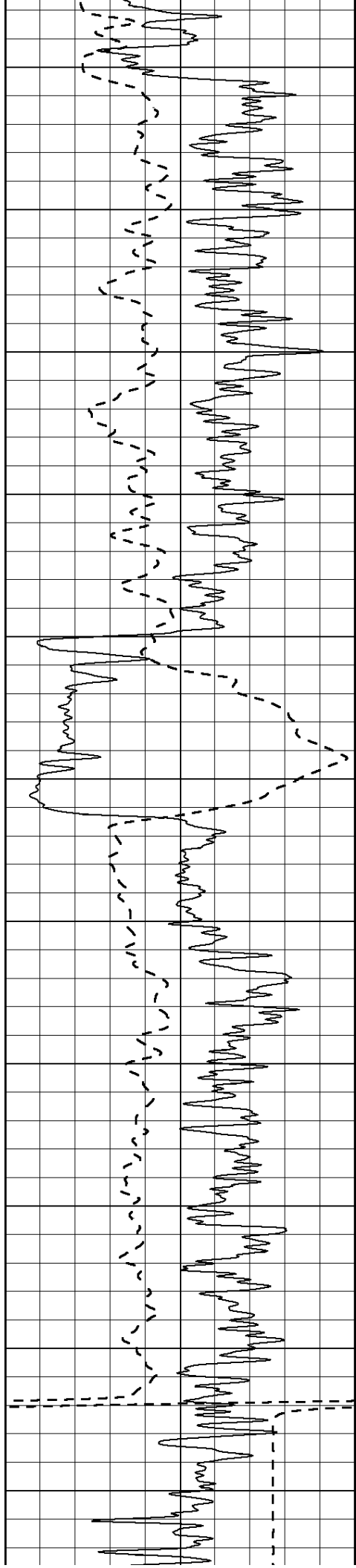
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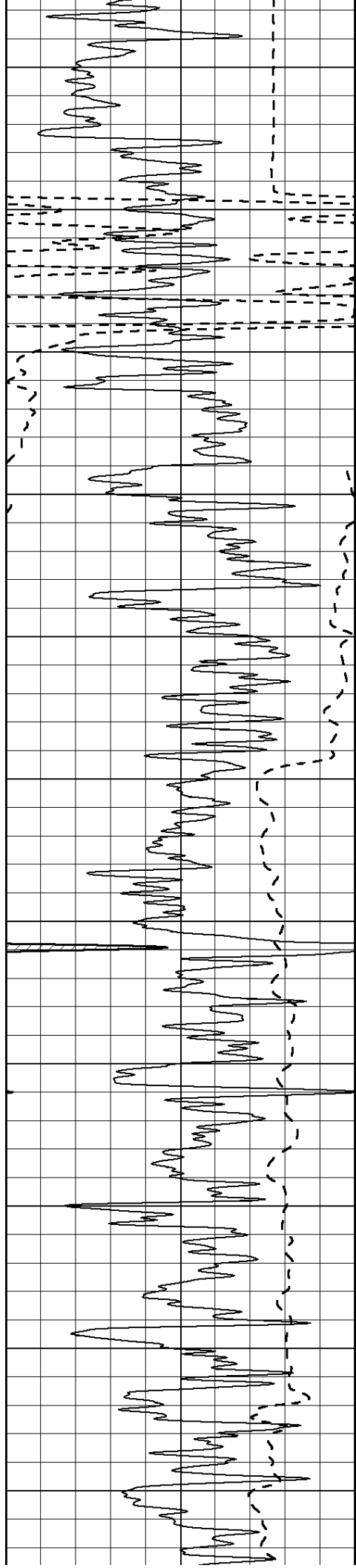
1950

2000

2050







2650

2700

2750

2800

2850

2900

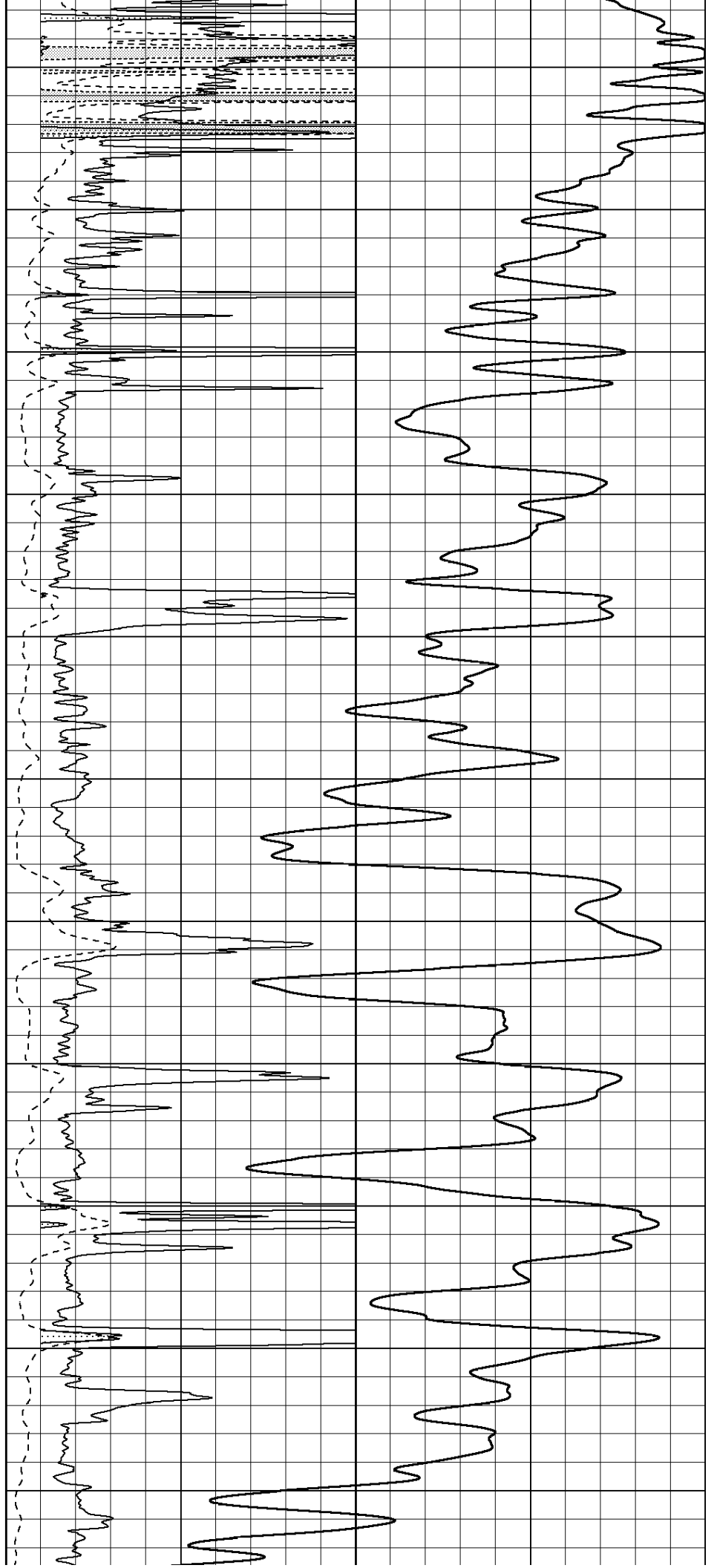
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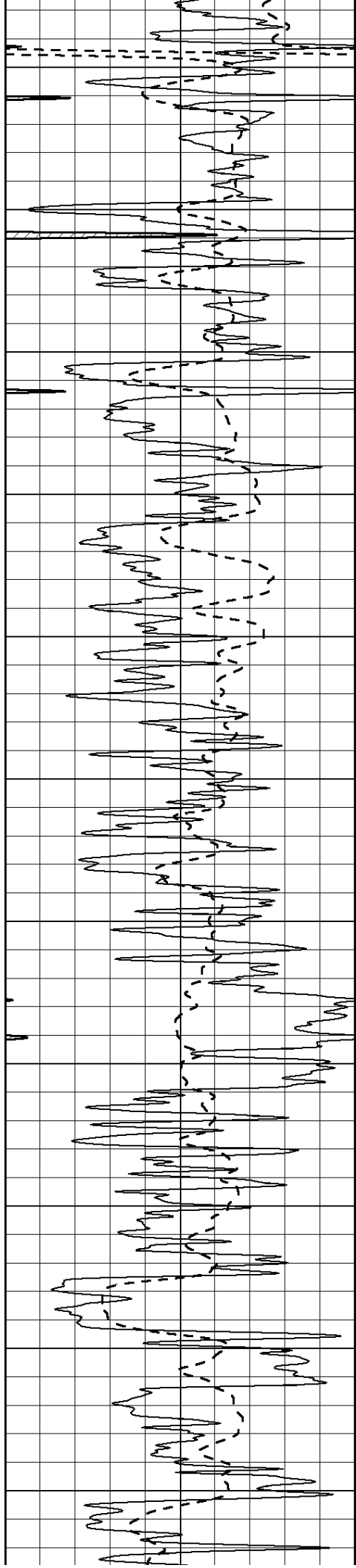
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3050

3100

3150





3200

3250

3300

3350

3400

3450

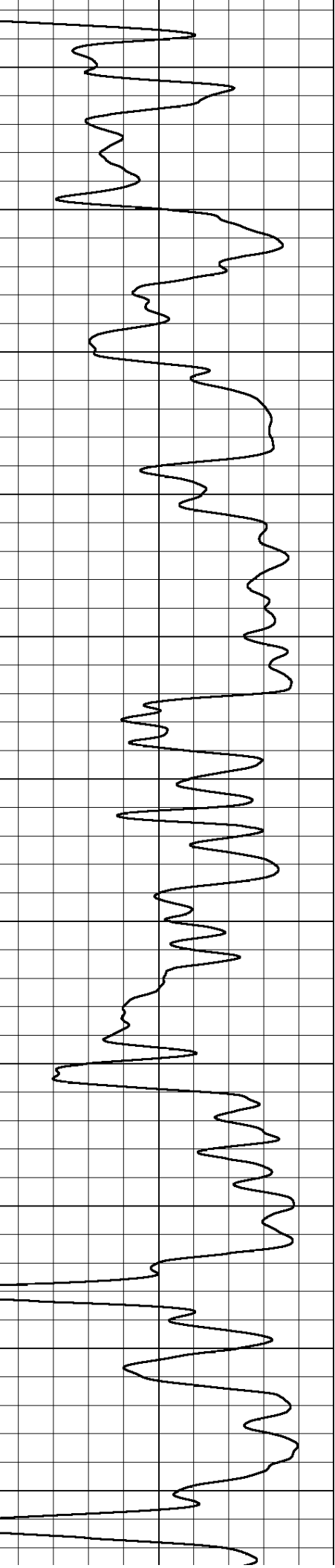
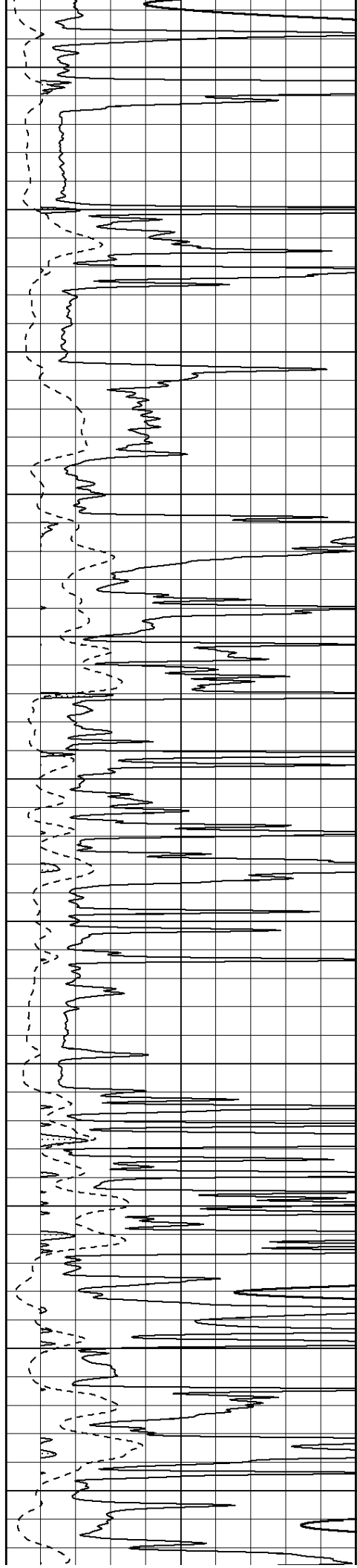
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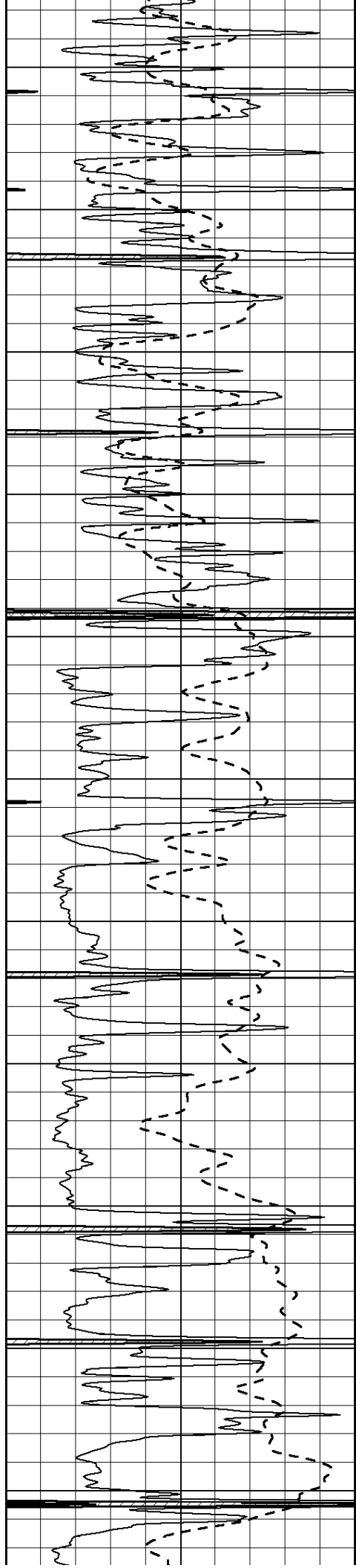
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3600

3650

3700





3750

3800

3850

3900

3950

4000

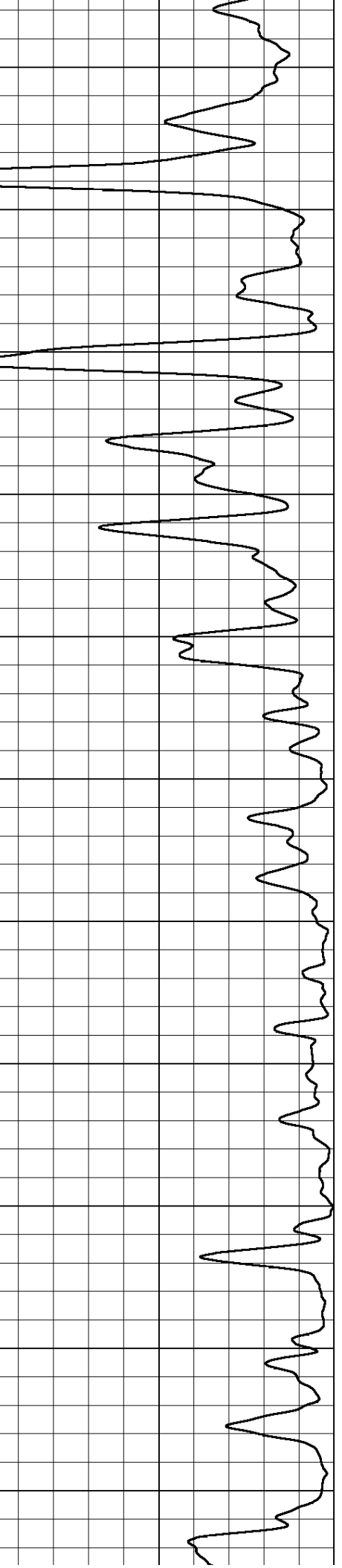
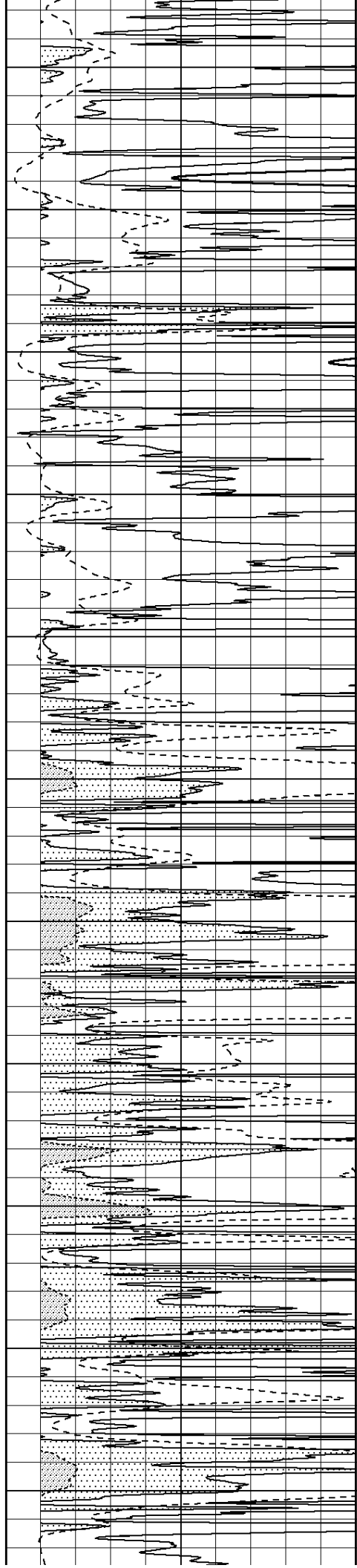
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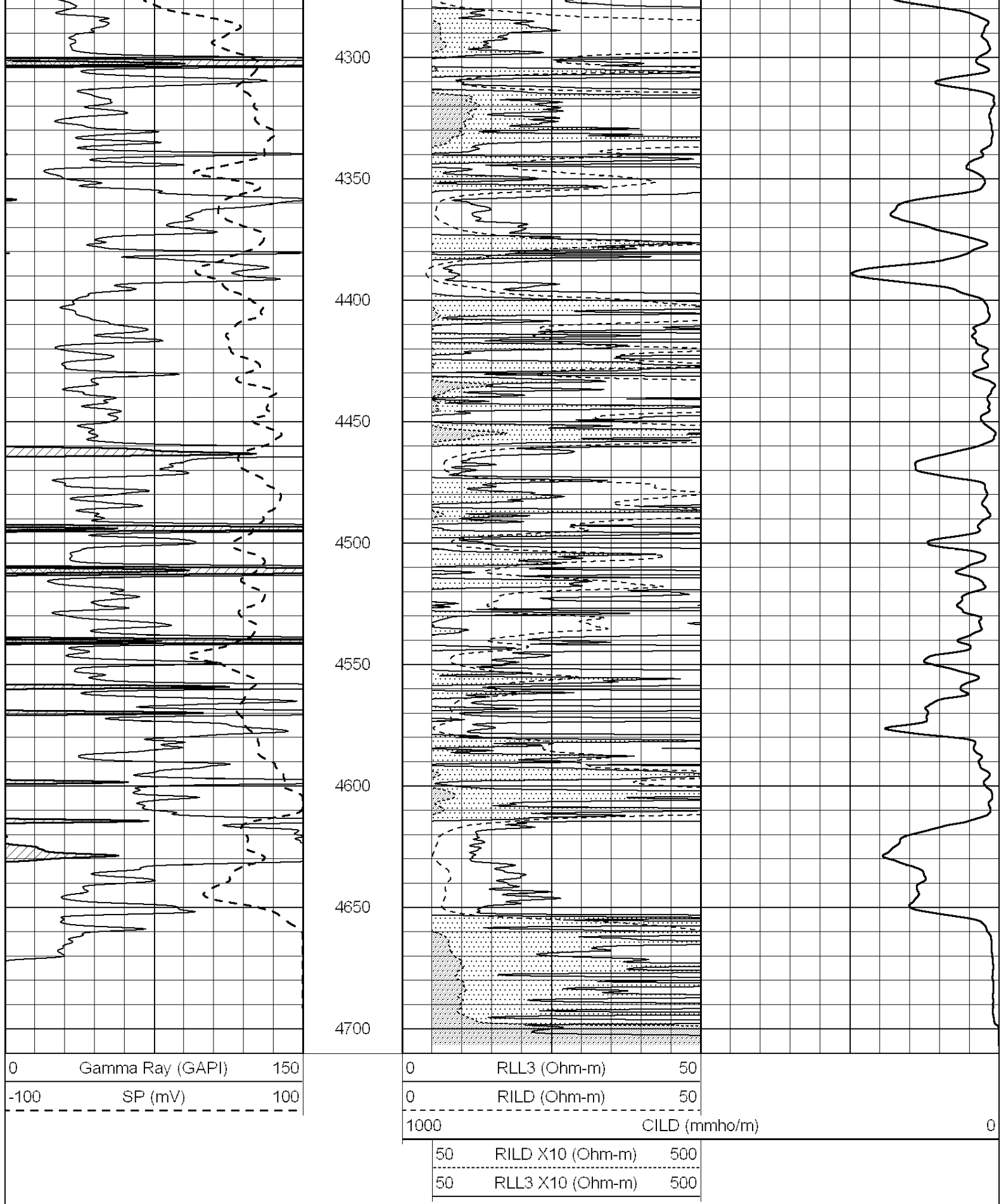
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4150

4200

4250



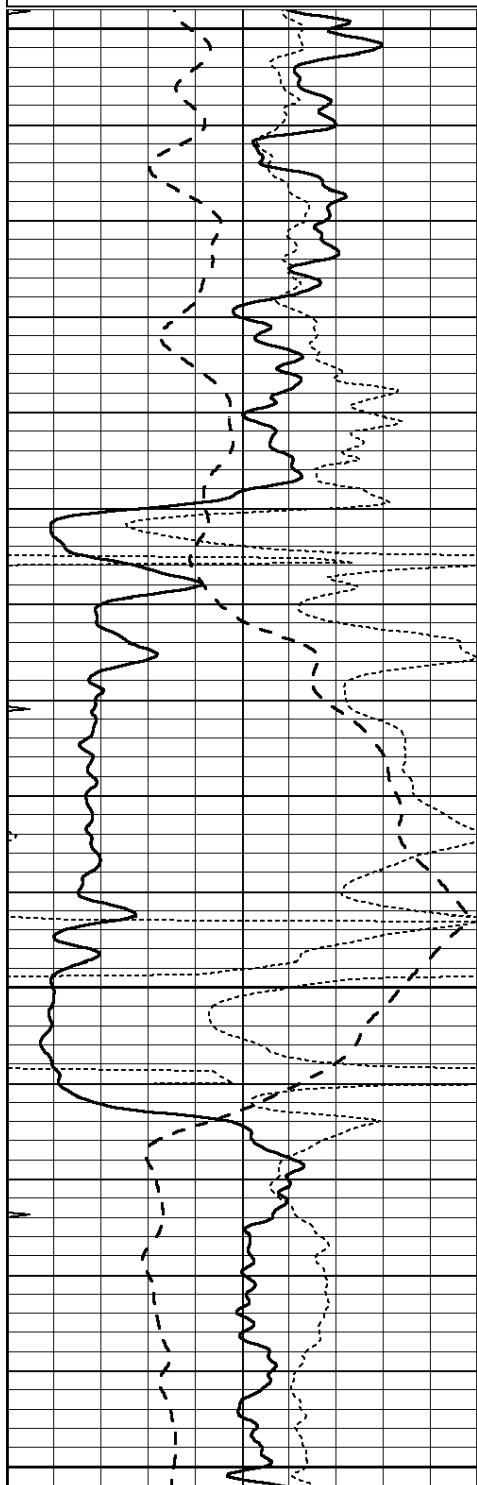


SERVICES CO.

Database File: 011820pe.db
 Dataset Pathname: pass3.8
 Presentation Format: _dil
 Dataset Creation: Fri Dec 06 04:04:45 2013
 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

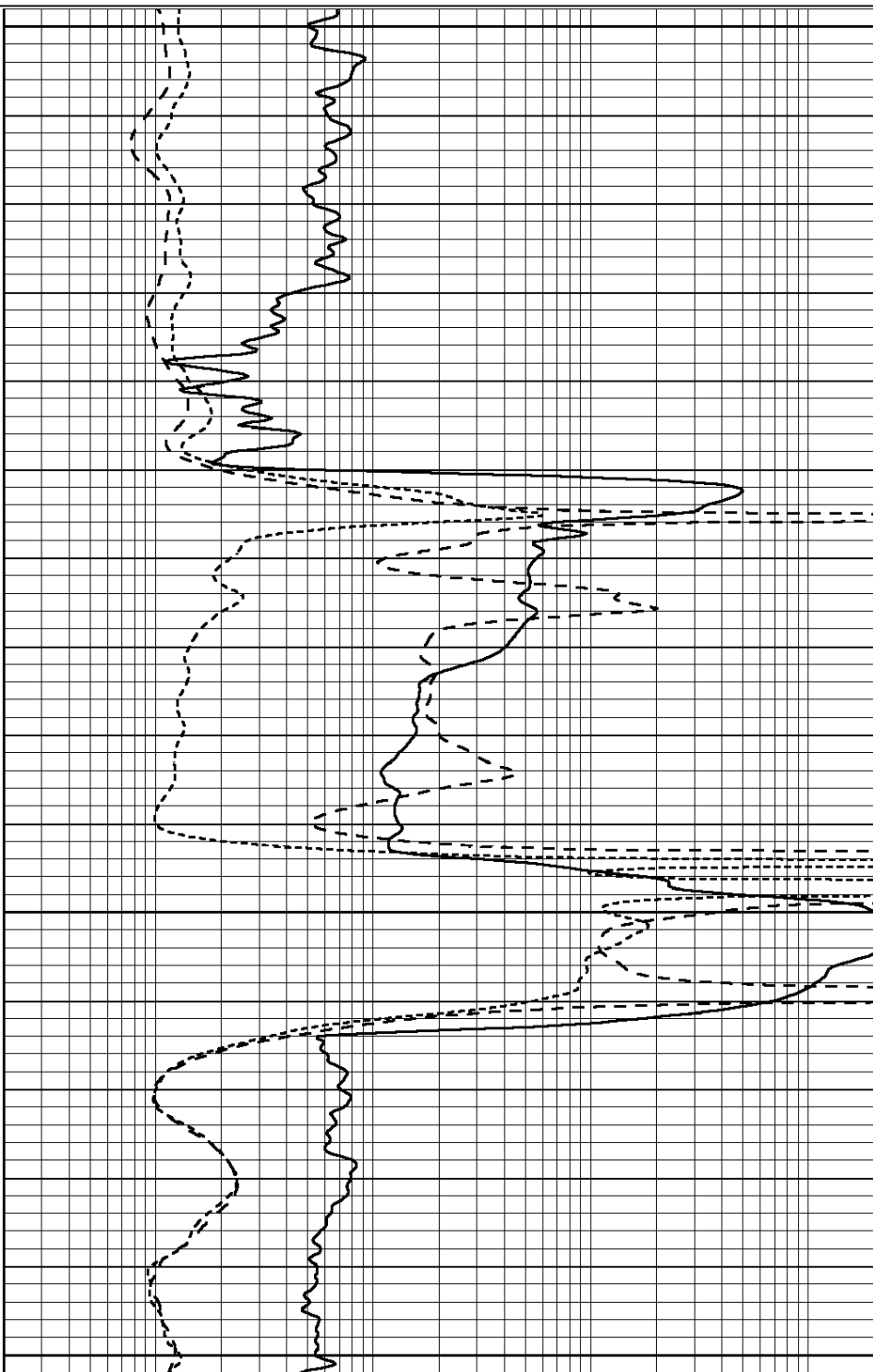


2250

2300

2350

2400



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



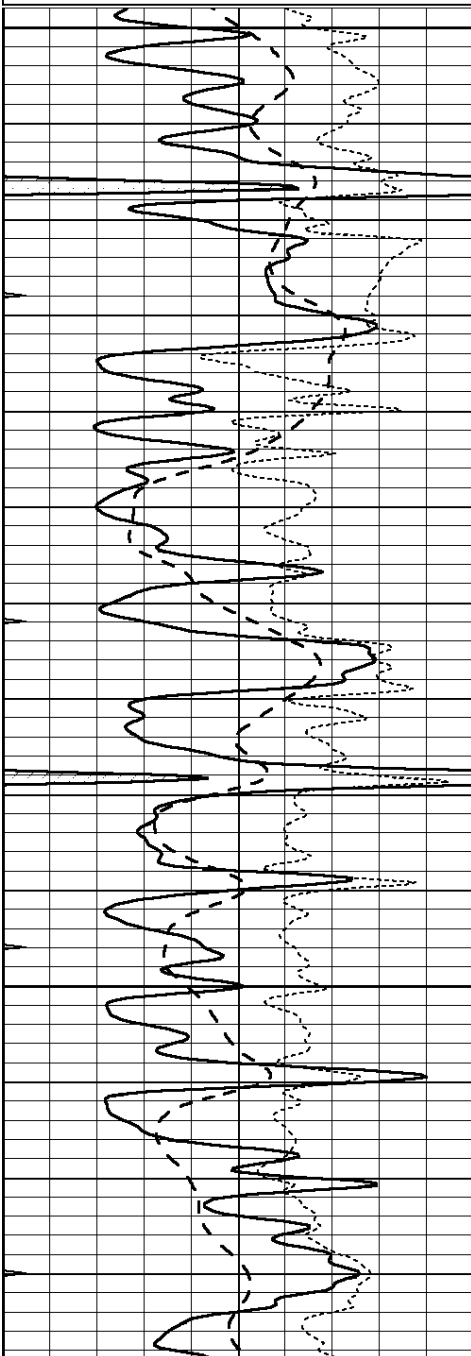
**COMPLETION
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MAIN SECTION

Database File: 011820pe.db
Dataset Pathname: pass3.7
Presentation Format: dil
Dataset Creation: Fri Dec 06 04:03:29 2013
Charted by: Depth in Feet scaled 1:240

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

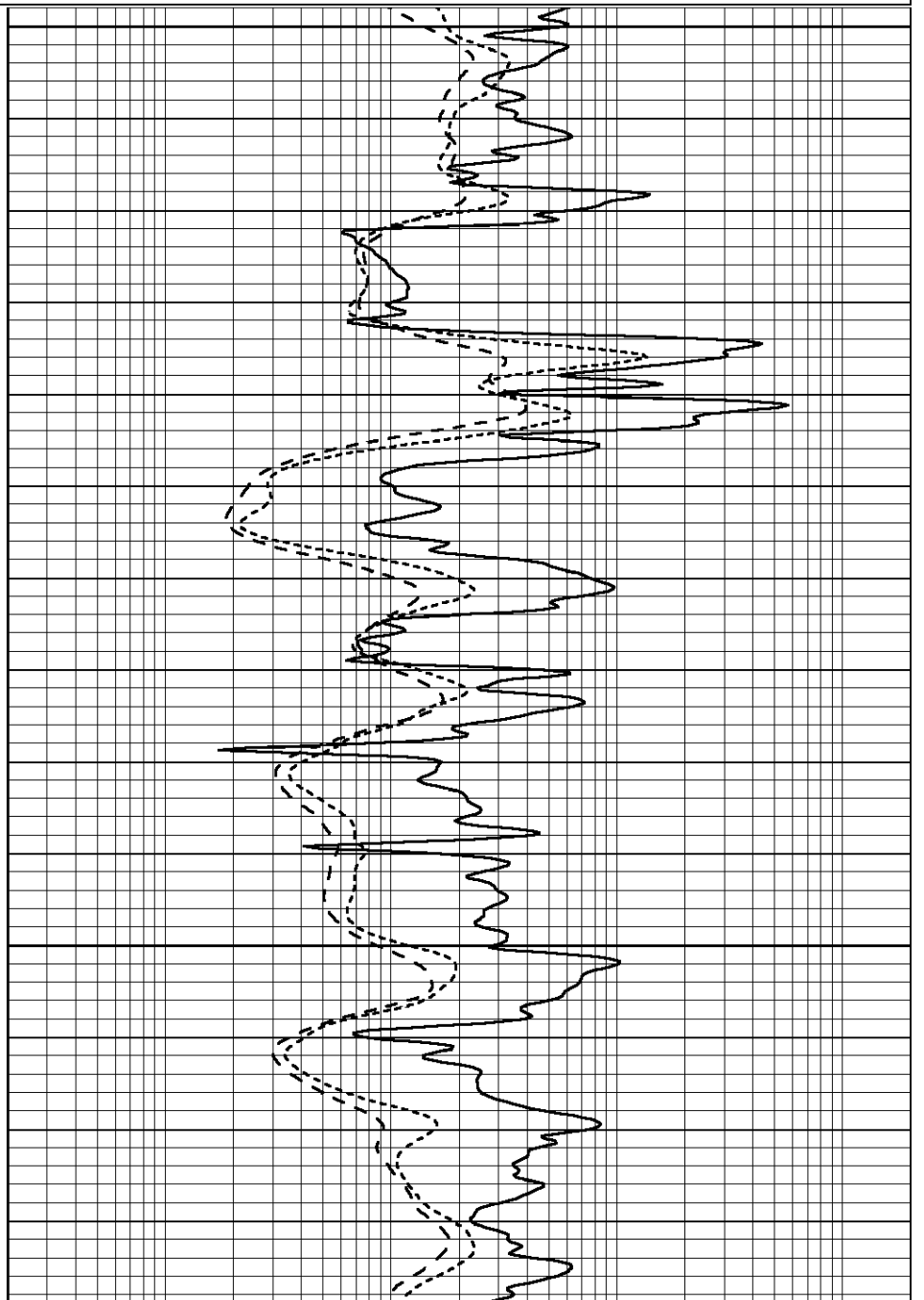
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

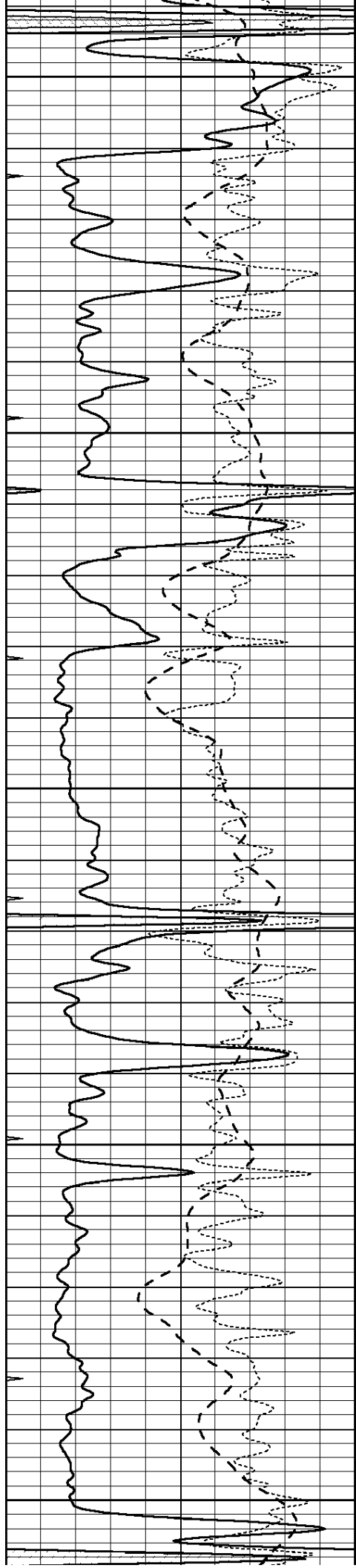


3800

3850

3900





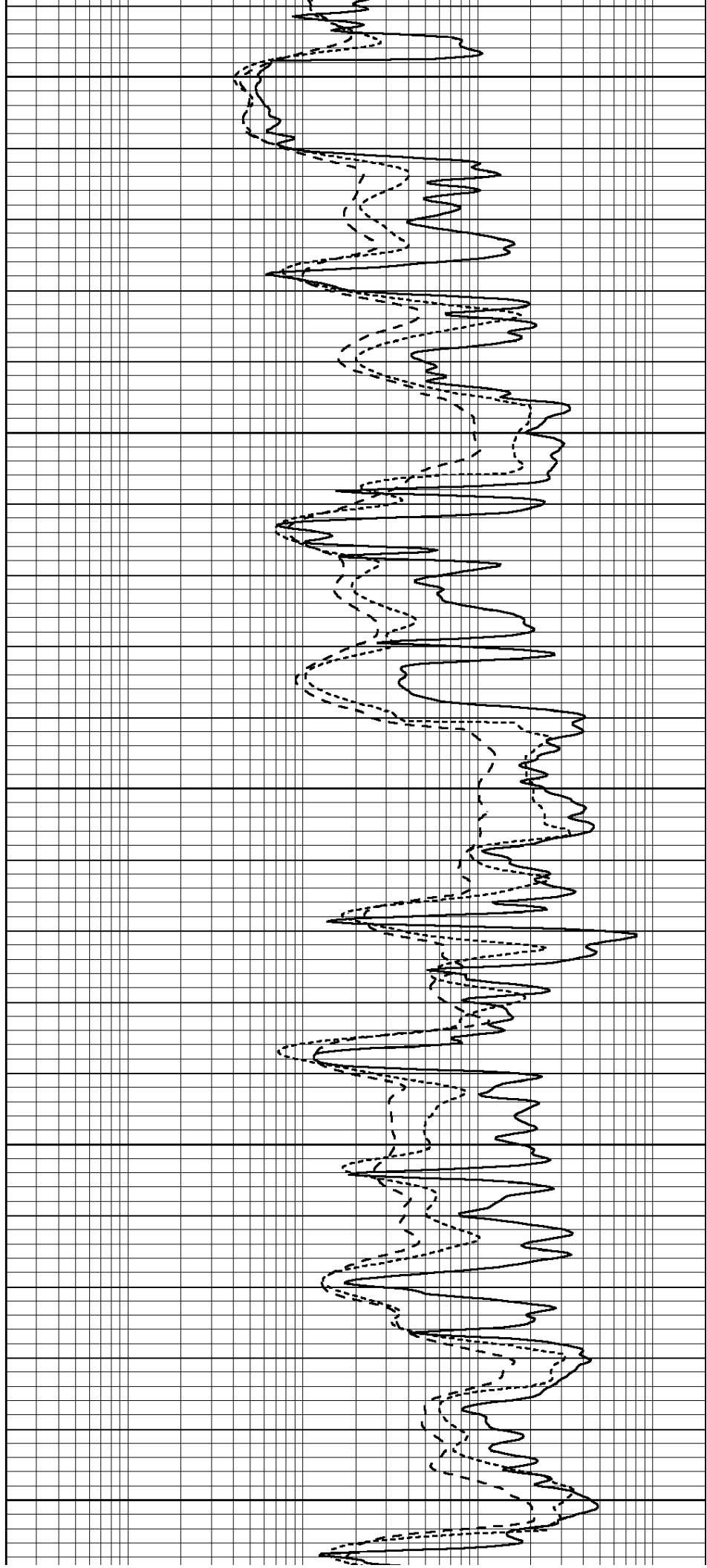
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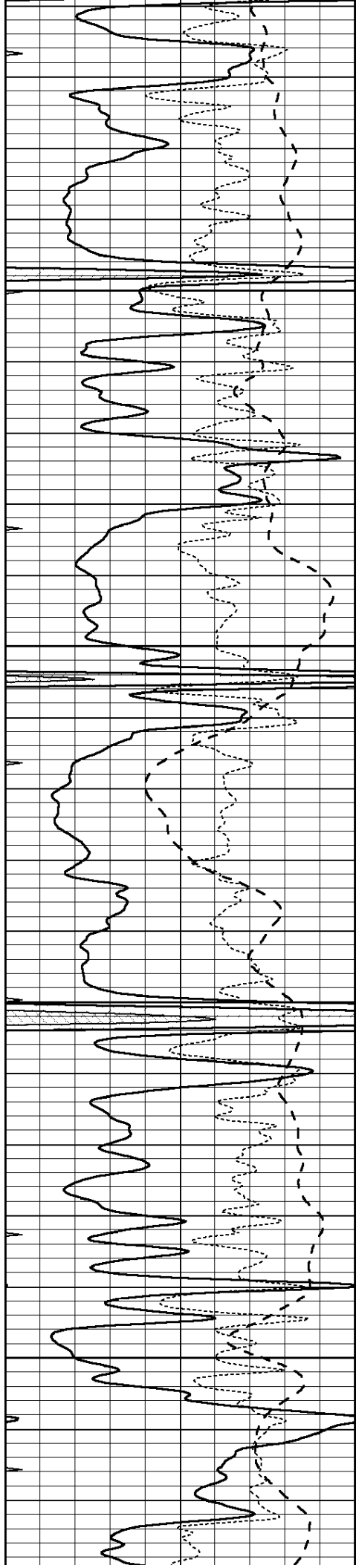
4000

4050

4100

4150



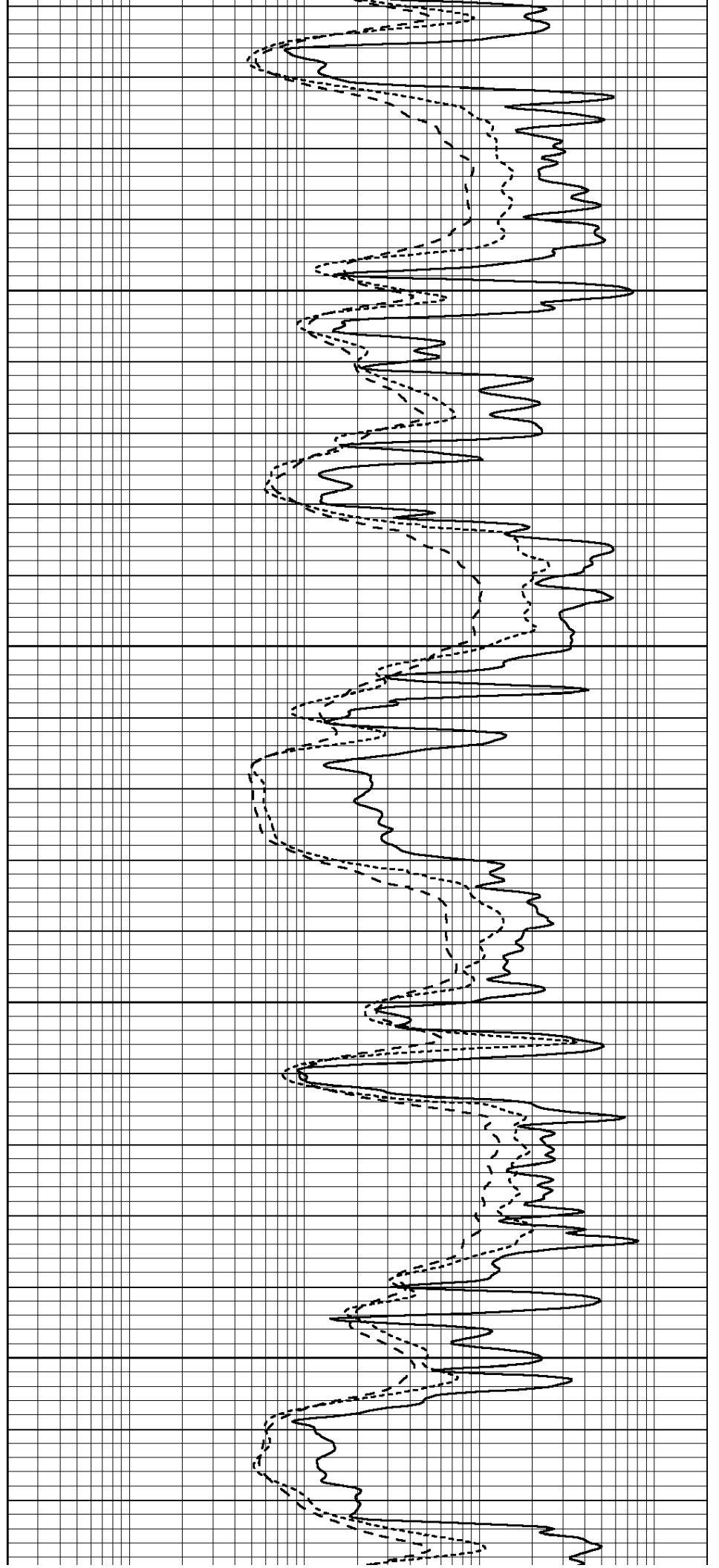


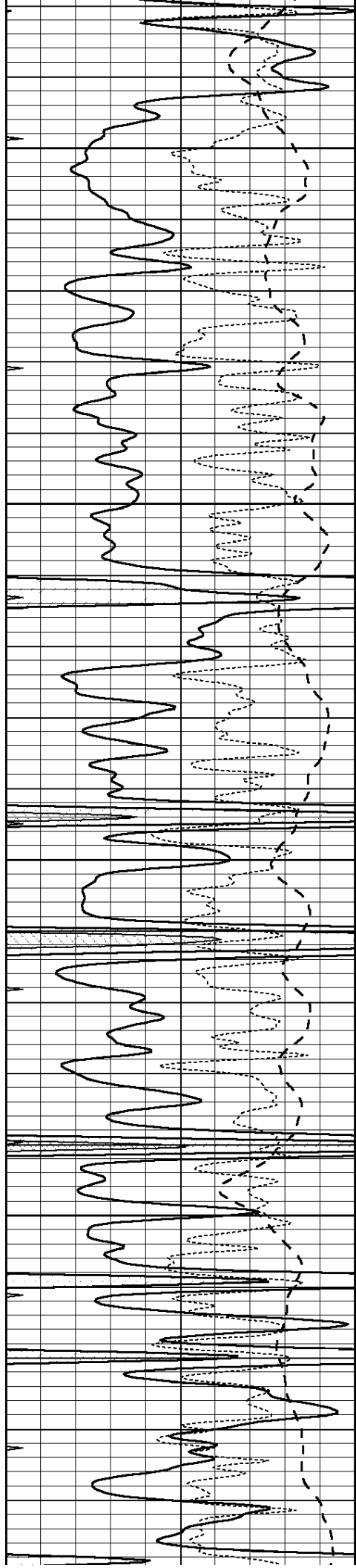
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4250

4300

4350



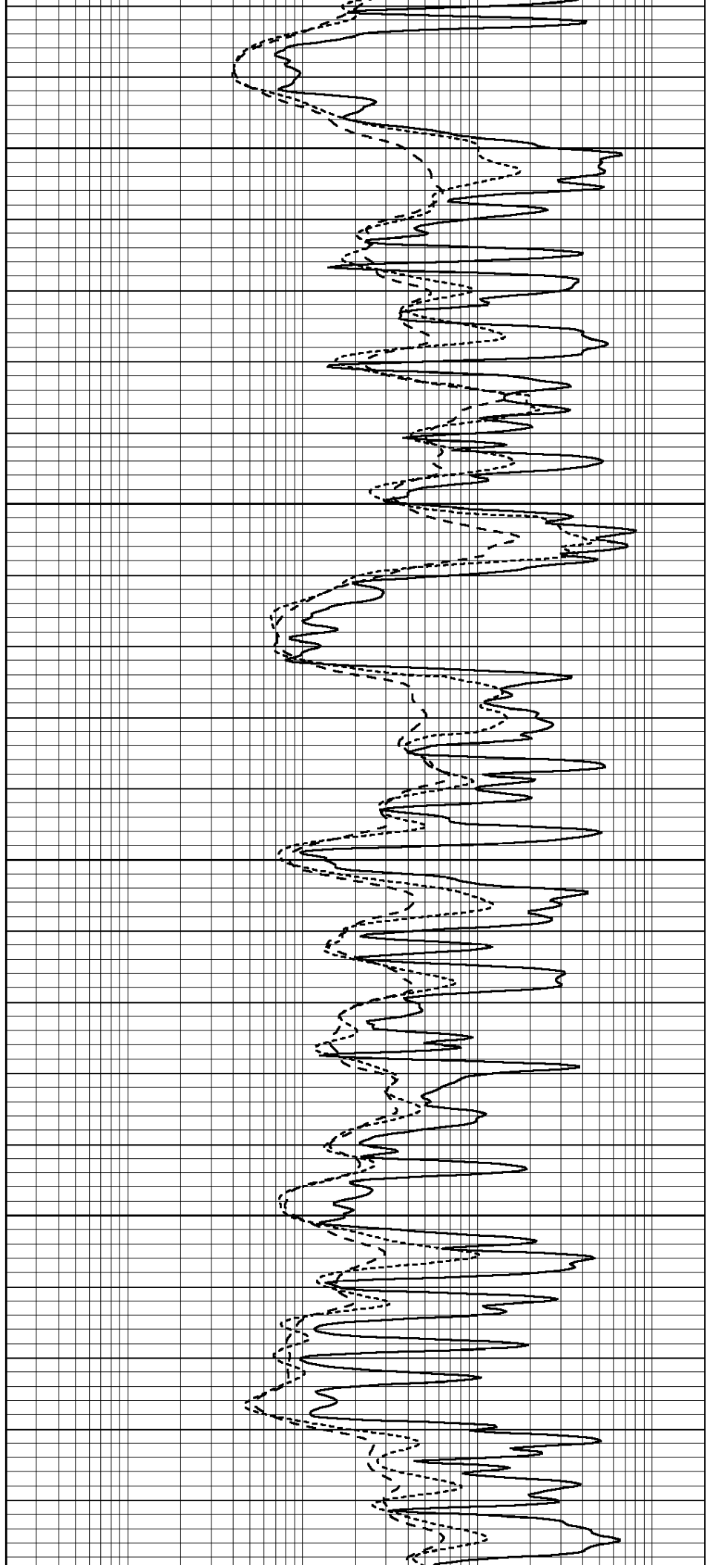


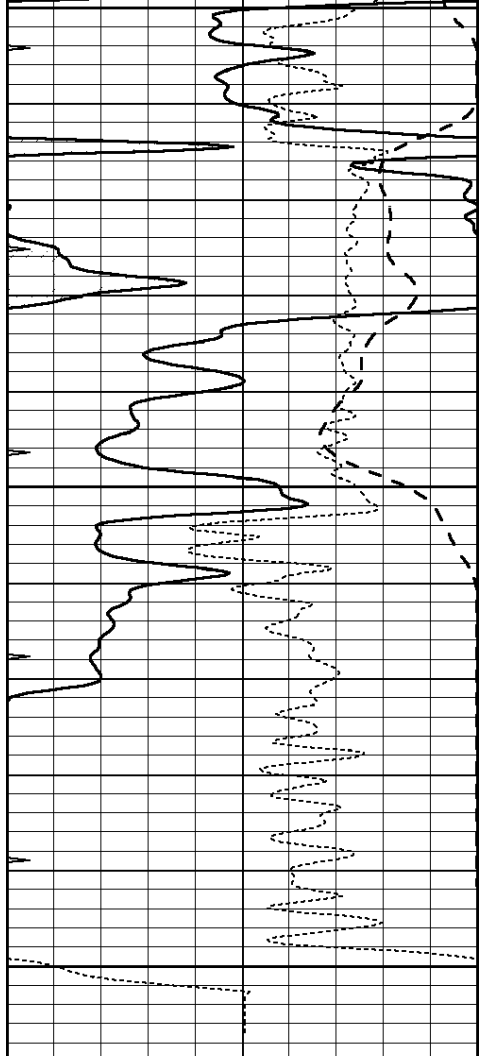
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4450

4500

4550



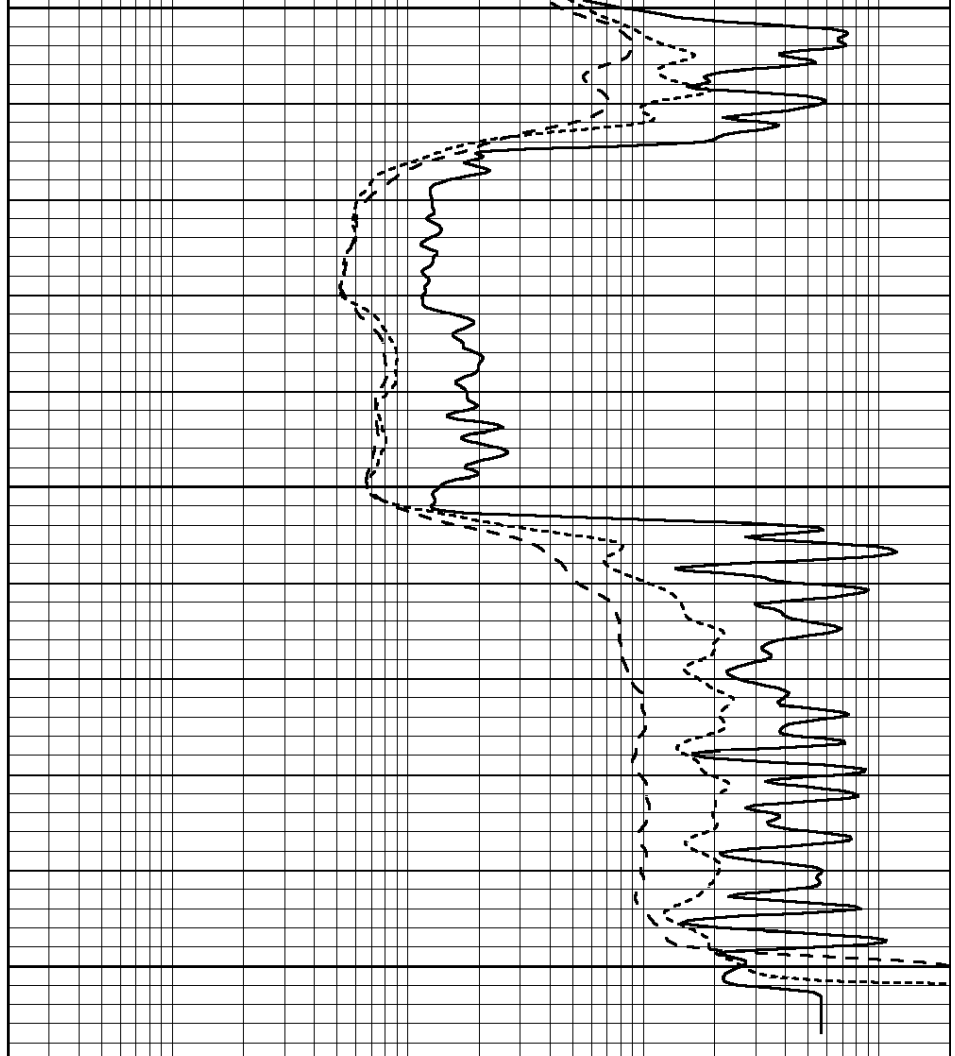


4600

4650

4700

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

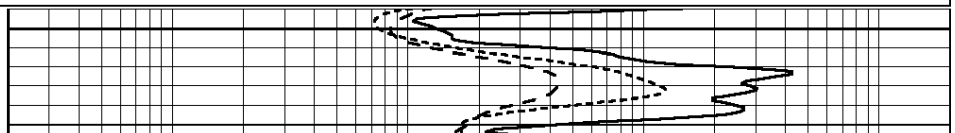
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 Presentation Format: _dil
 Dataset Creation: Fri Dec 06 02:42:43 2013 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

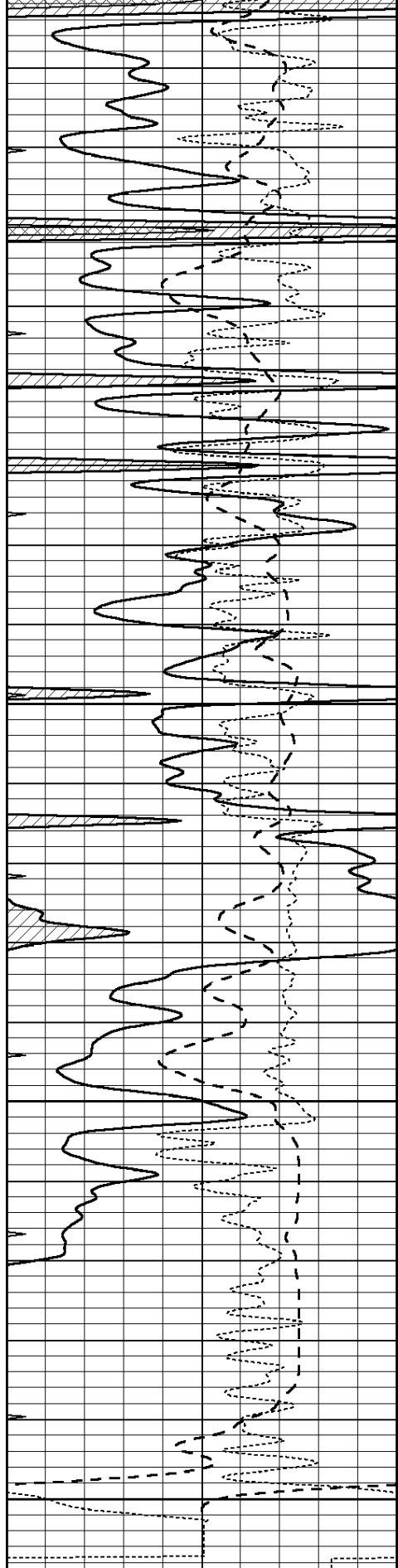
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

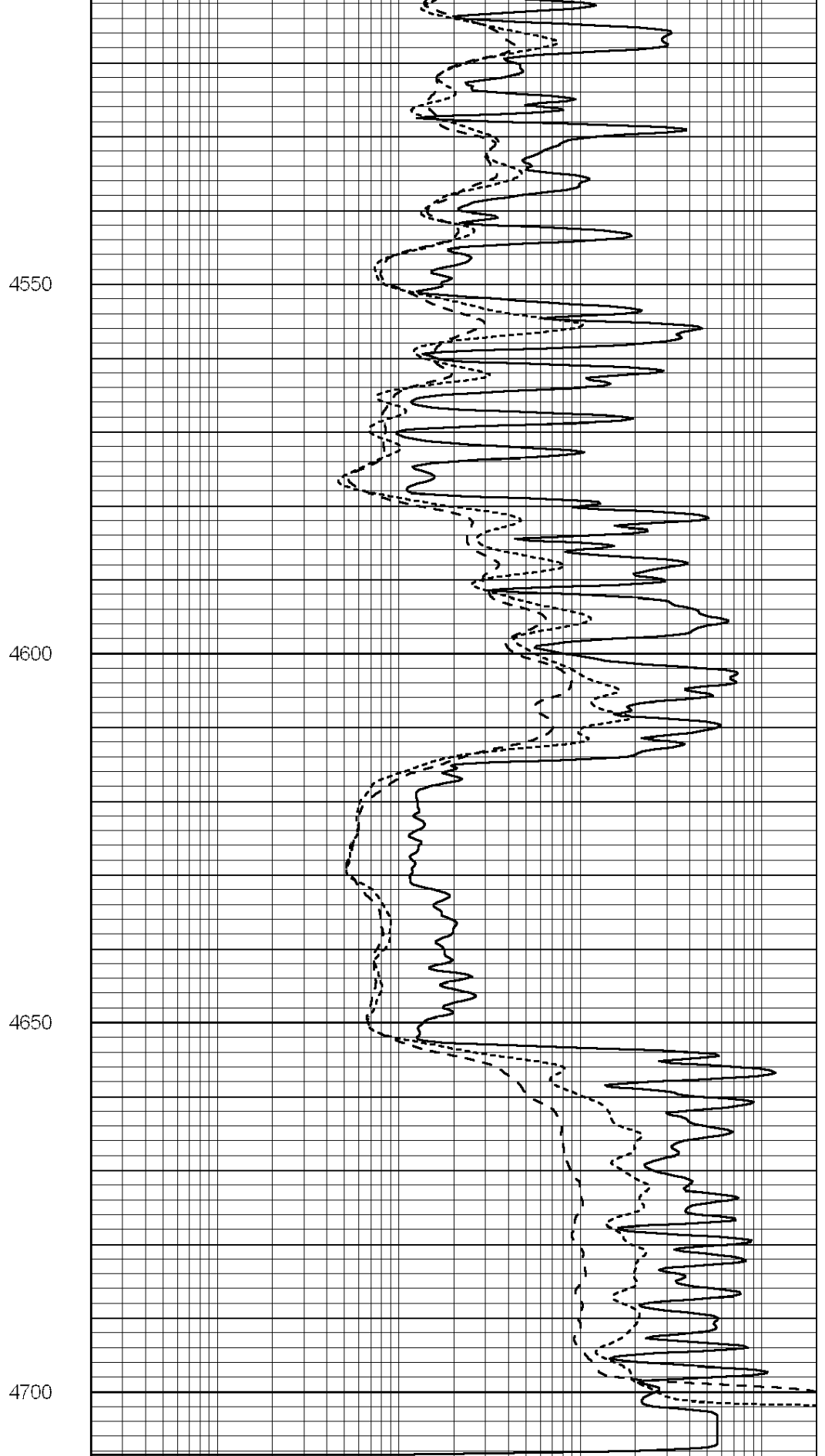


4500





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: 011820pe.db
 Dataset Pathname: pass3.7
 Dataset Creation: Fri Dec 06 04:03:29 2013

Dual Induction Calibration Report

Serial-Model: DIL4-GEAR
 Surface Cal Performed: Fri Dec 06 01:34:28 2013
 Downhole Cal Performed: Tue Sep 25 17:01:29 2001
 After Survey Verification Performed: Sat Jun 11 16:07:12 2005

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.008	0.666	V	0.000	400.000	mmho/m	570.000	0.000
Medium	-0.003	0.769	V	0.000	462.500	mmho/m	560.000	-2.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.013	0.651	V	0.000	400.000	mmho/m	627.541	-8.365
Medium	0.020	0.754	V	0.000	462.500	mmho/m	630.311	-12.549

Downhole Calibration

Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	2.525	0.026	V	500.000	2.000	Ohm-m	250.000	-2.500

After Survey Verification

Internal:	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Litho Density Calibration Report

Serial: 004N Model: PRB

Master Calibration

Performed Mon Jun 03 09:36:56 2013

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1417.6	10391.4	3464.6	11537.5	cps
Window 2	1295.0	8959.7	3050.1	9816.4	cps
Window 3	1105.1	5464.2	2051.0	5838.8	cps
Window 4	315.0	317.7	312.9	319.8	cps
Long Space	0.0	7664.6	1755.0	8521.3	cps
Short Space	1.8	1582.4	1040.8	1699.4	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle : 44.1 Rib Slope : 0.970 Density/Spine Ratio : 0.574
 Spine Angle : 74.1 Spine Slope : 3.519 Spine Intercept : -17.0

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		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 070559
 Tool Model: OPEN_GR
 Performed: Sun Nov 03 21:08:13 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps