



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL  
INDUCTION  
LOG**

Company WILTON PETROLEUM  
Well DOWELL I #2  
Field DOWELL WEST  
County GOVE  
State KANSAS

Company WILTON PETROLEUM  
Well DOWELL I #2  
Field DOWELL WEST  
County GOVE State KANSAS

Location: 660' FSL & 990' FEL  
API # : 15-063-22144-0000  
SEC 33 TWP 15S RGE 29W  
Permanent Datum GROUND LEVEL Elevation 2624  
Log Measured From KELLY BUSHING 9' A.G.L.  
Drilling Measured From KELLY BUSHING  
Elevation  
K.B. 2633  
D.F. 2631  
G.L. 2624

Date	11/7/13
Run Number	ONE
Depth Driller	4100
Depth Logger	4102
Bottom Logged Interval	4100
Top Log Interval	0
Casing Driller	8 5/8" @ 352'
Casing Logger	352'
Bit Size	7 7/8
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4 / 60
pH / Fluid Loss	11.0 / 6.0
Source of Sample	FLOWLINE
Rin @ Meas. Temp	1.50 @ 75F
Rmf @ Meas. Temp	1.13 @ 75F
Rmc @ Meas. Temp	1.80 @ 75F
Source of Rmf / Rmc	MEASURED
Rin @ BHT	0.96 @ 117F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	117F
Equipment Number	680
Location	HAYS, KS.
Recorded By	JEFF GRONEMEG
Witnessed By	MACKLIN ARMSTRONG

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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.

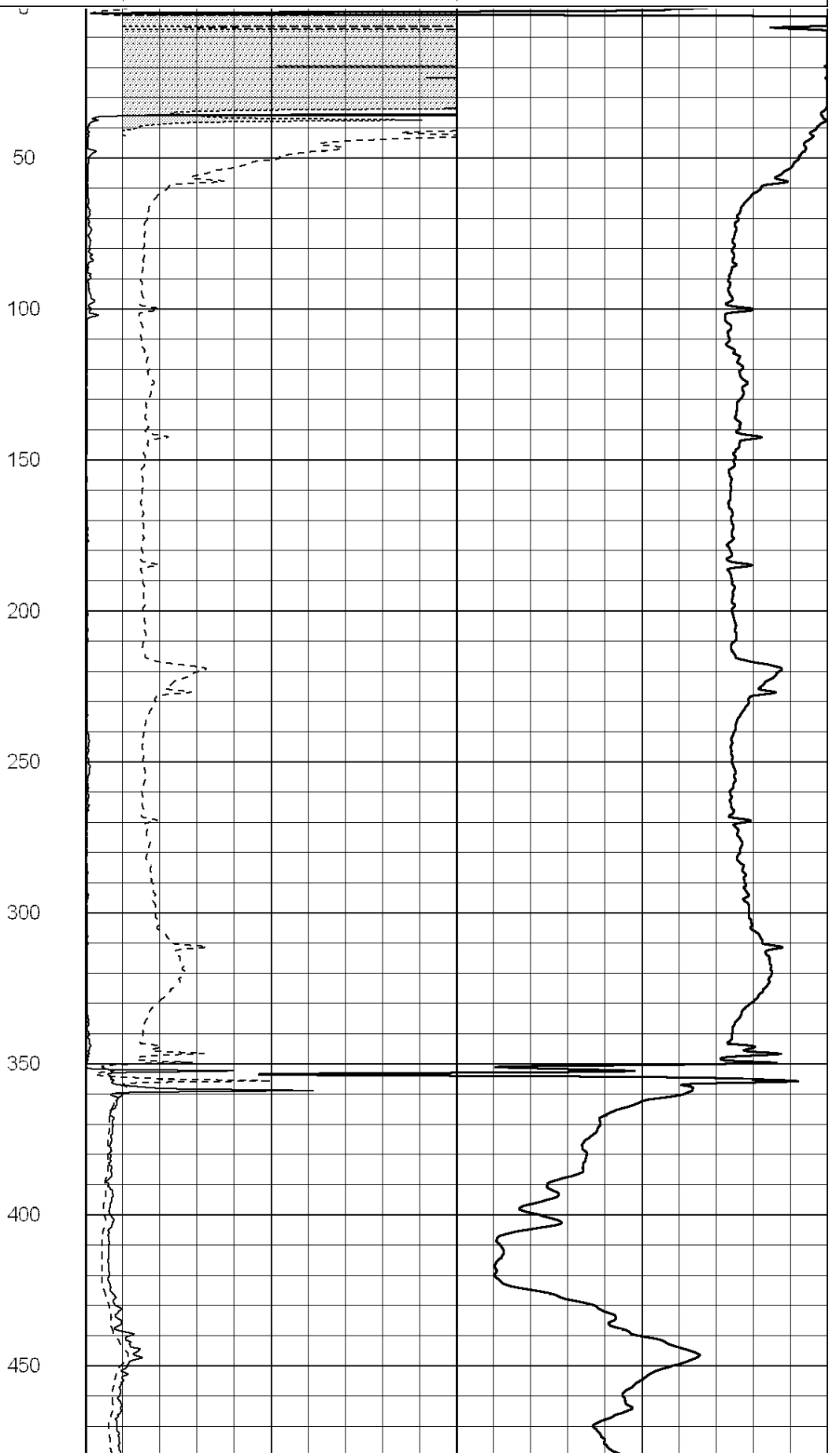
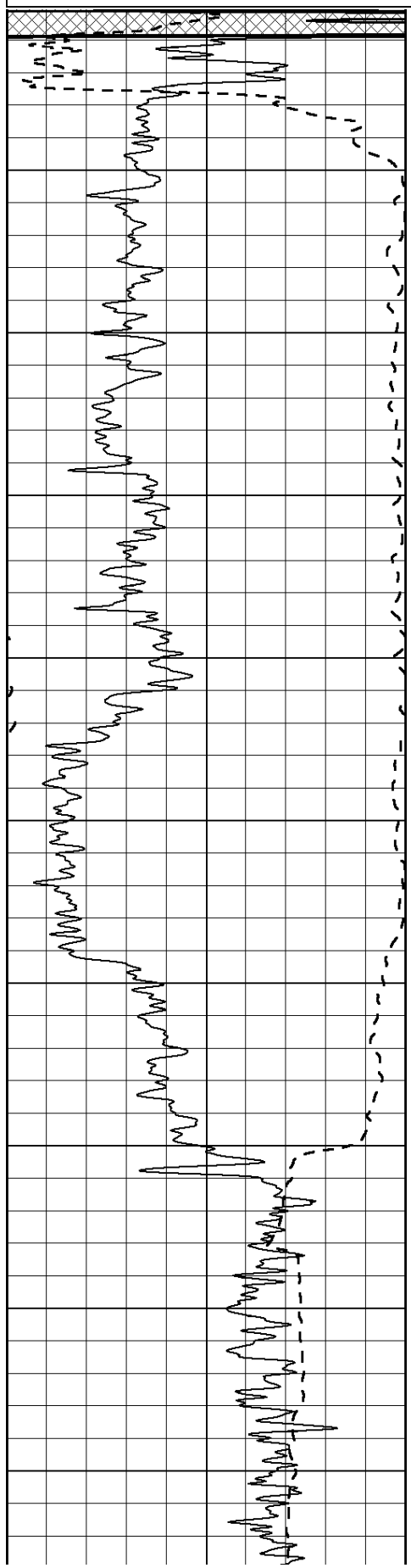
**Comments**

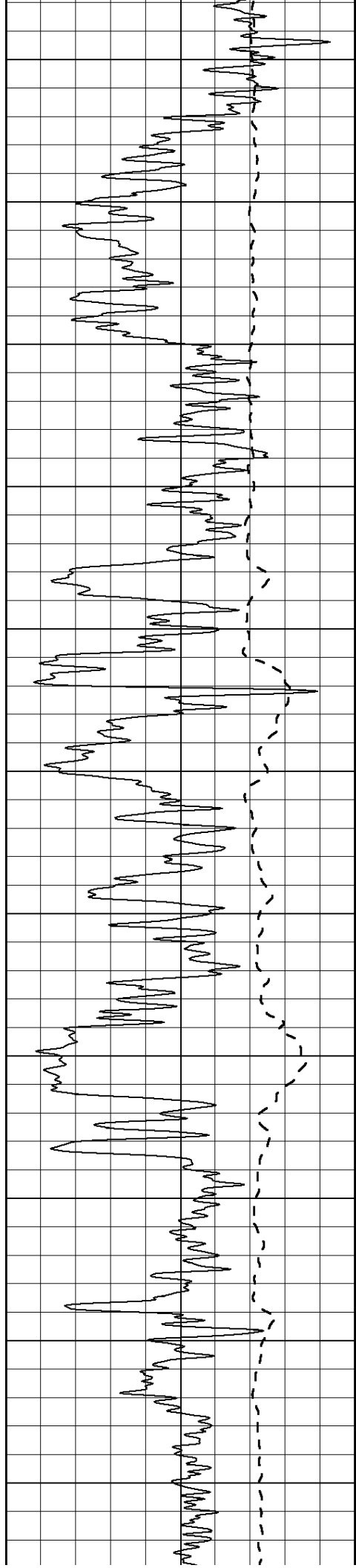
THANK YOU FOR USING NABORS COMPLETION & PRODUCTION SVCS. (785) 628-6395

DIRECTIONS:  
GOVE, KS - SOUTH TO GOVE/LANE COUNTY LINE  
2 1/2 MILES WEST - 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

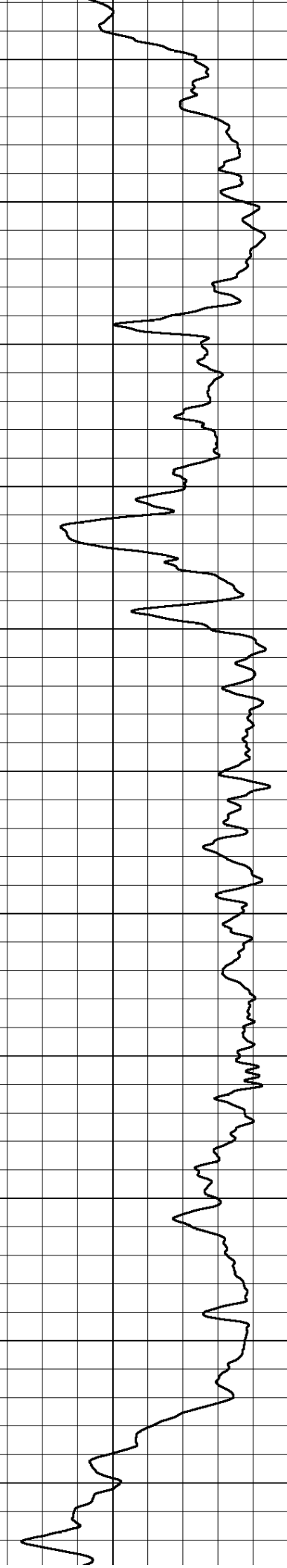
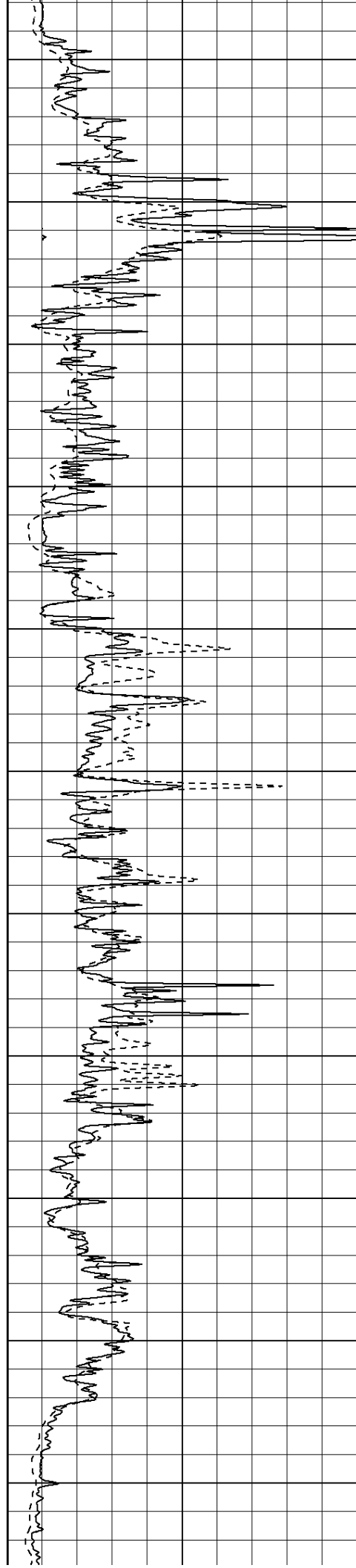
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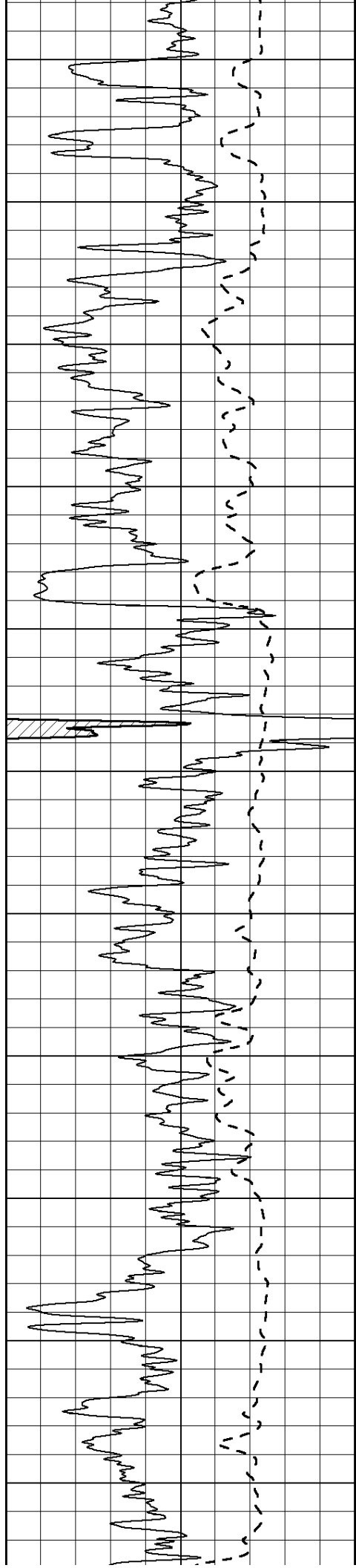
850

900

950

1000





1050

1100

1150

1200

1250

1300

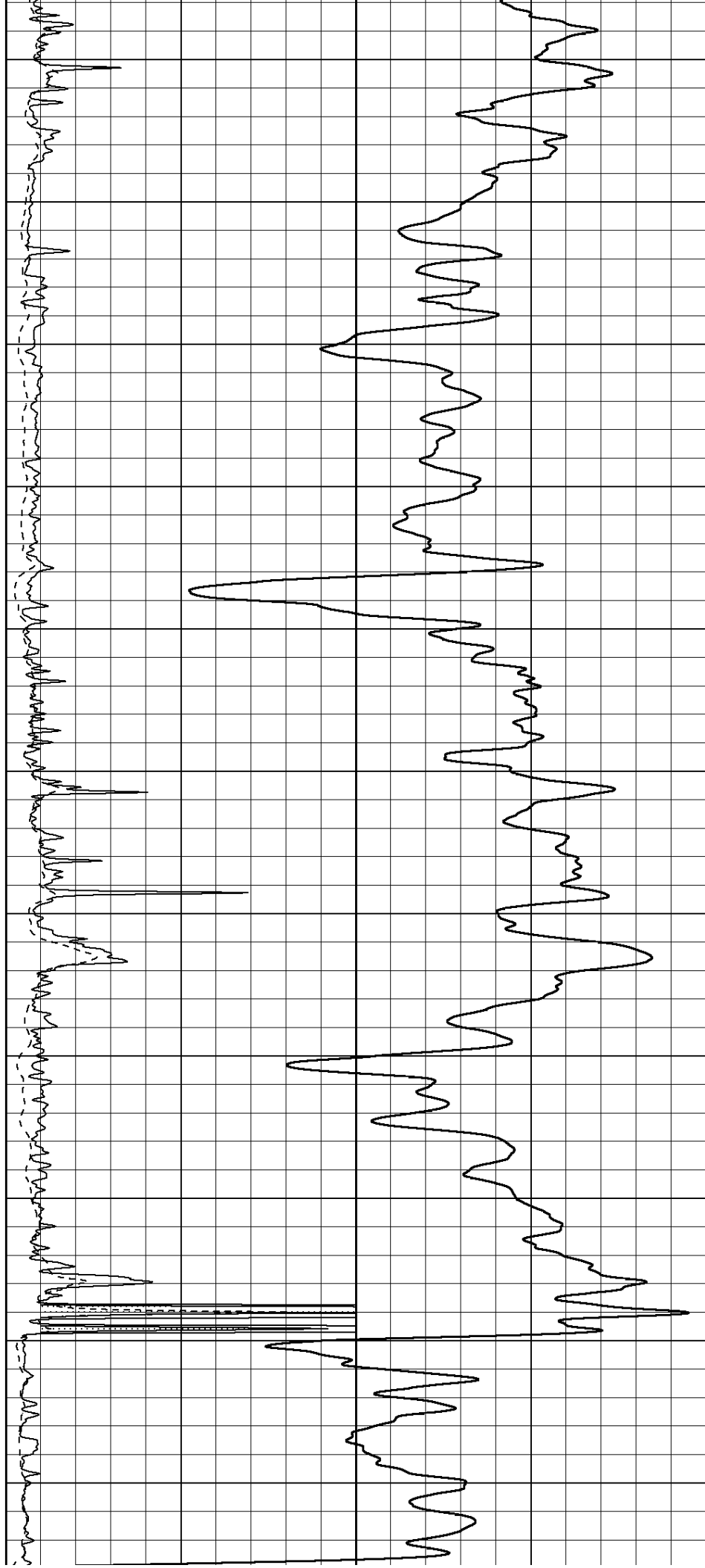
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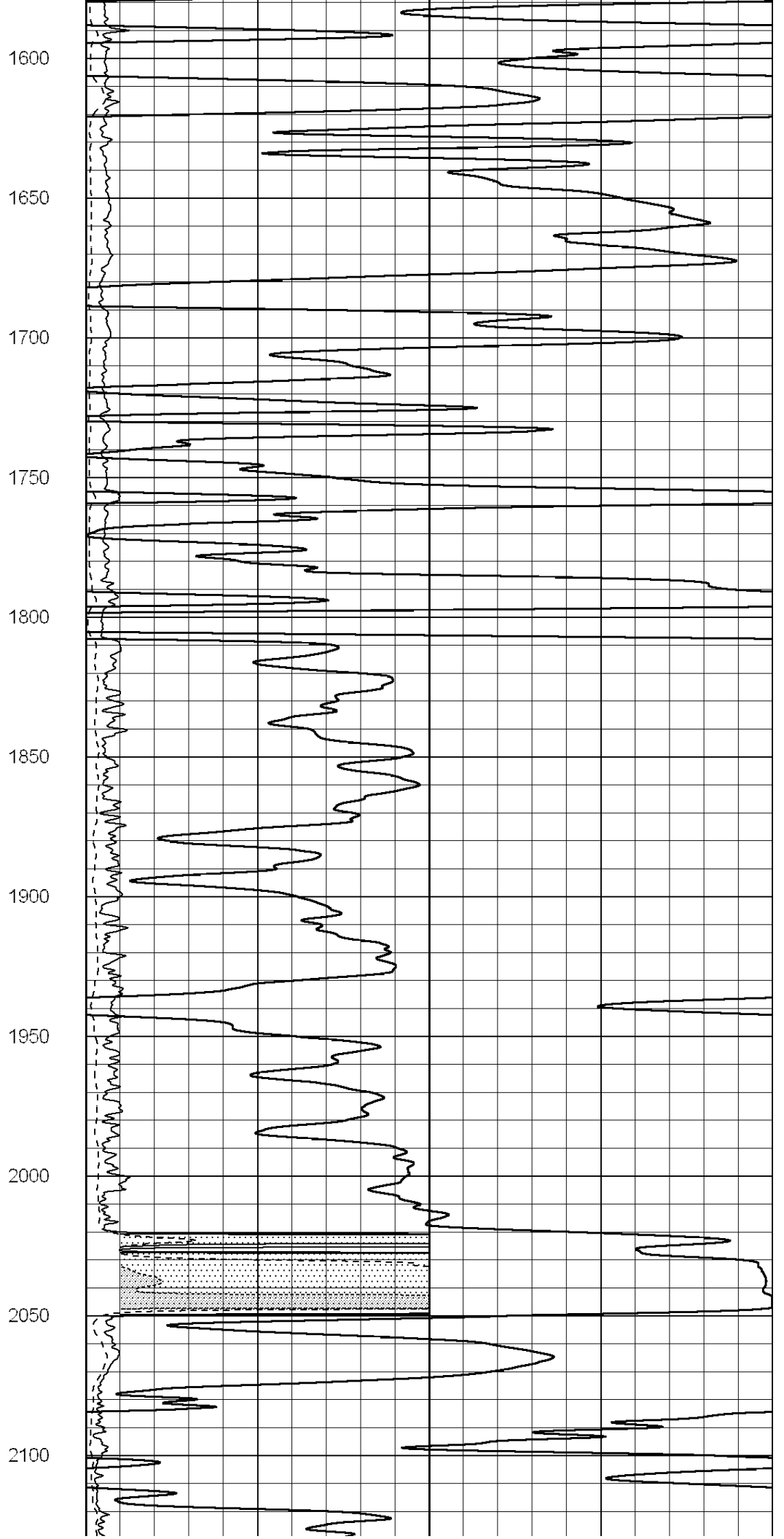
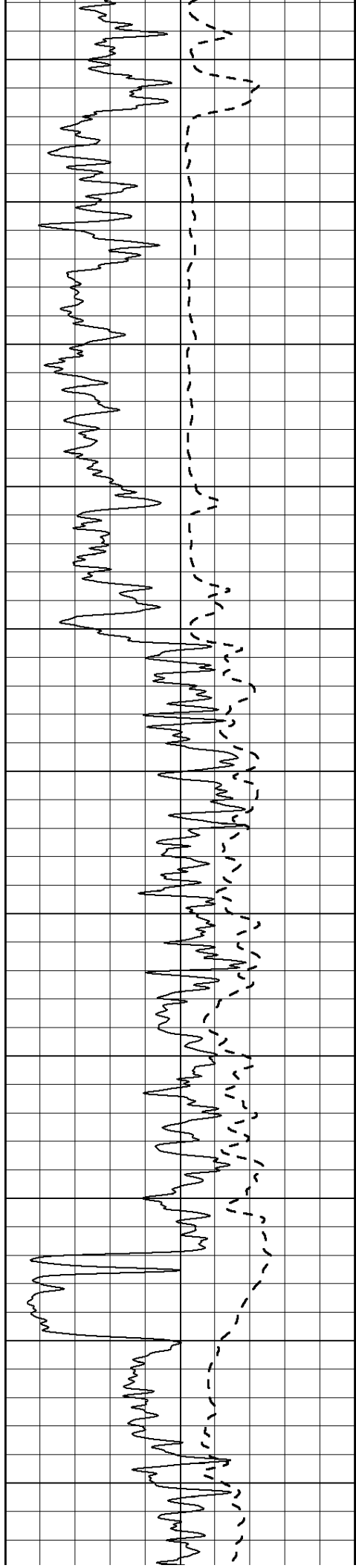
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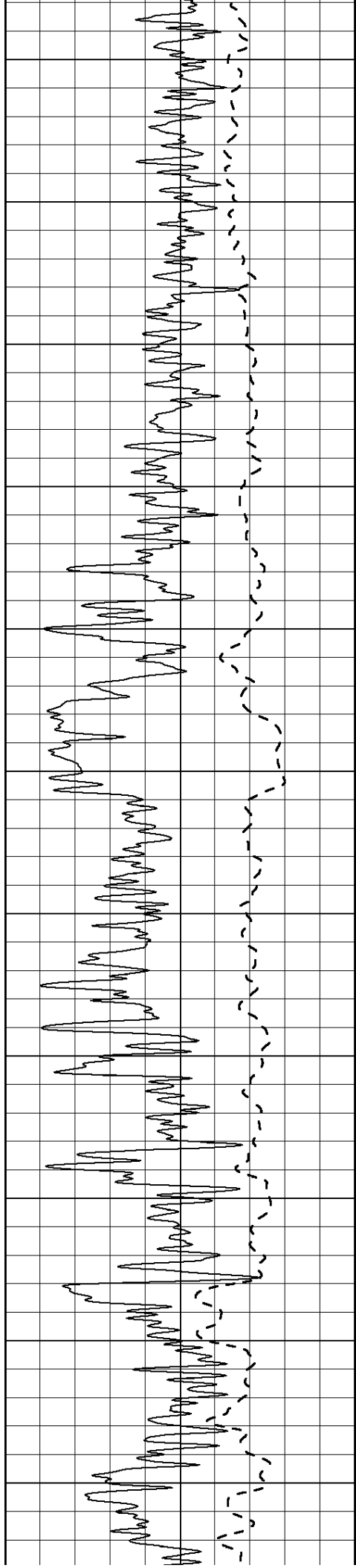
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1500

1550







2150

2200

2250

2300

2350

2400

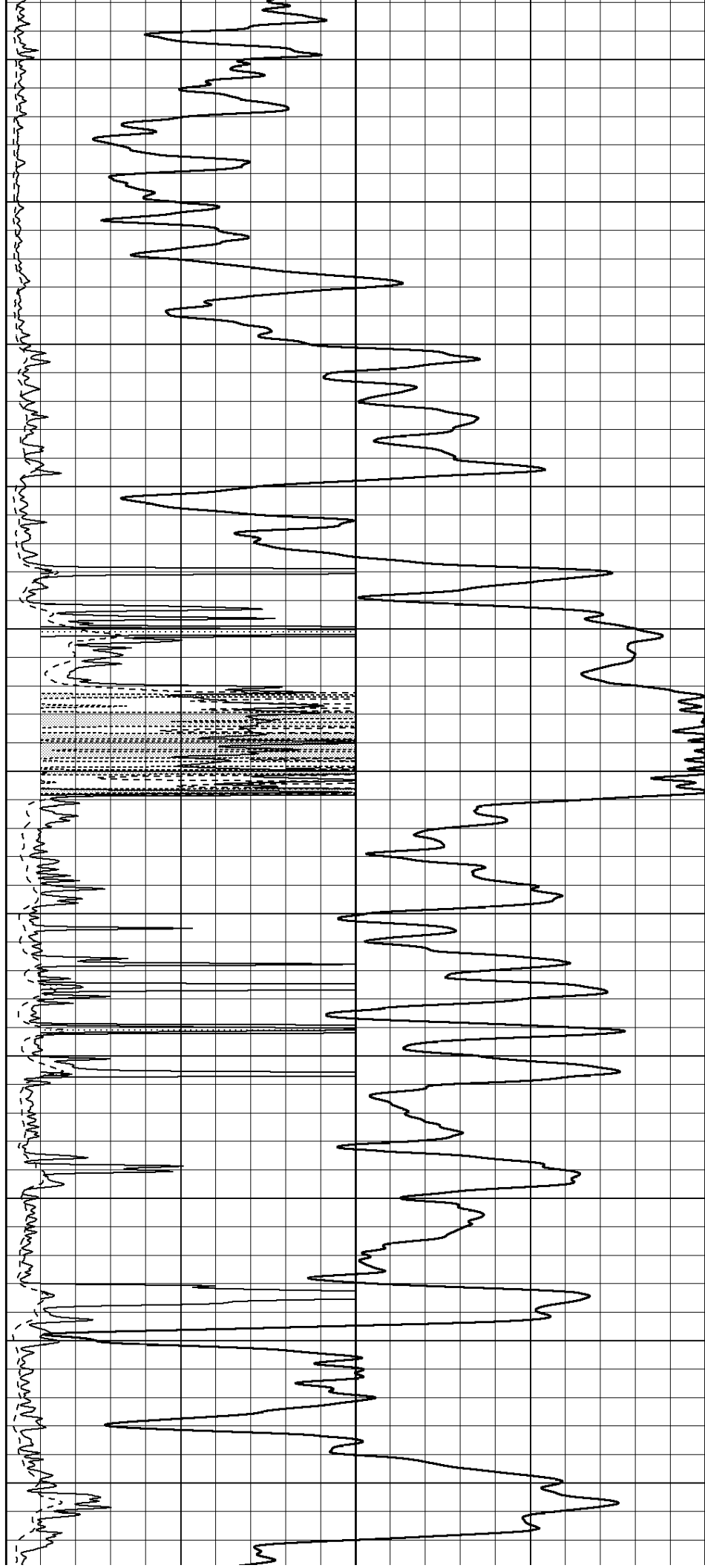
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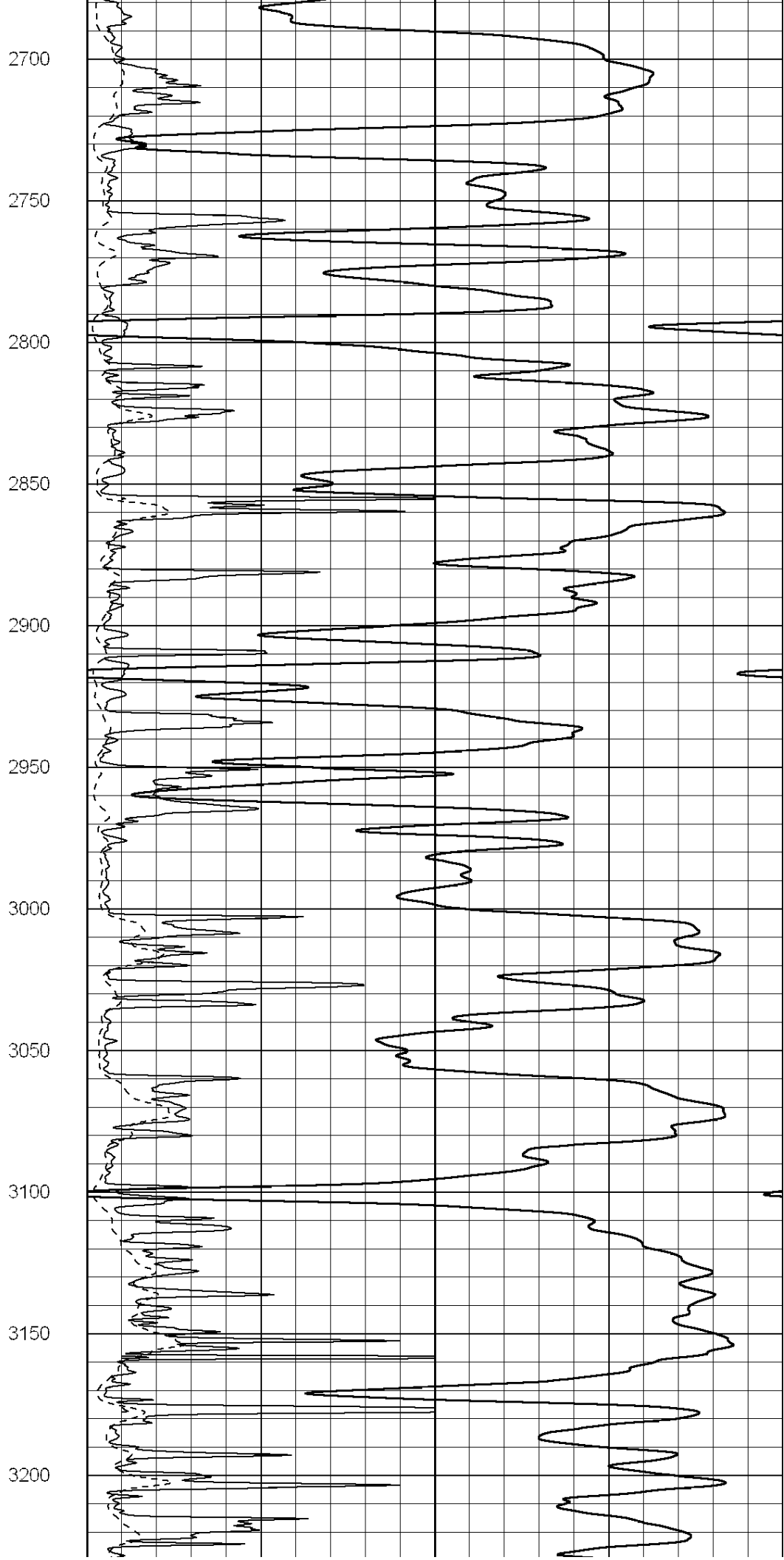
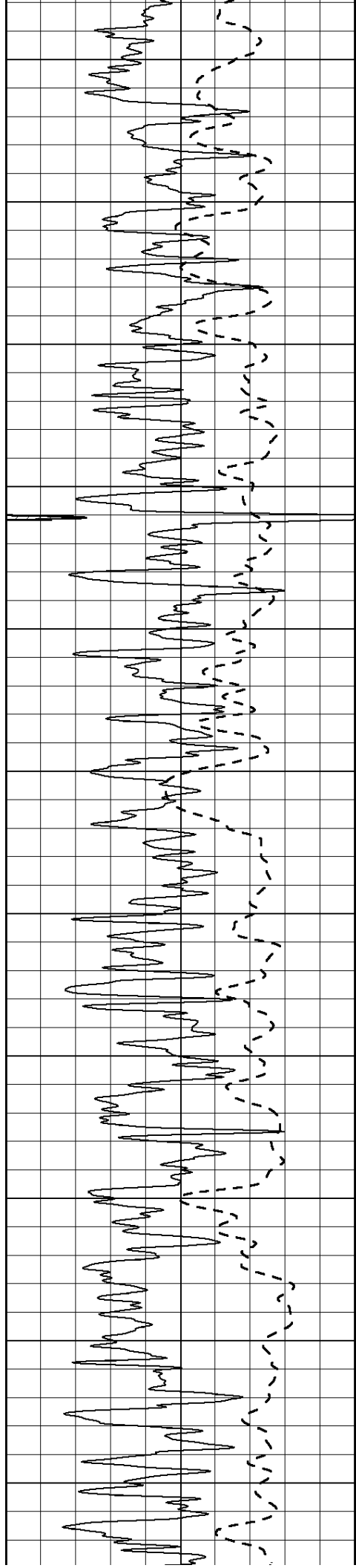
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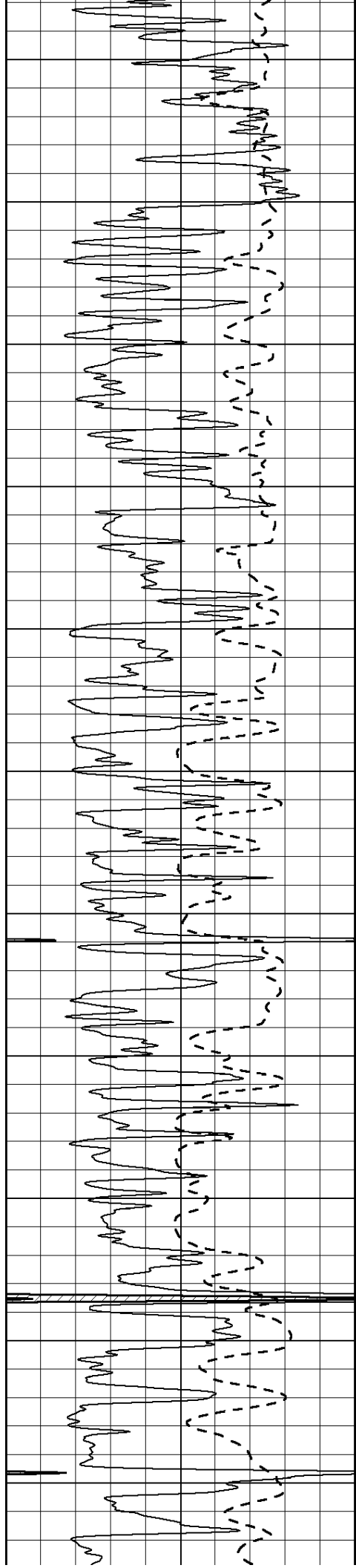
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2600

2650







3250

3300

3350

3400

3450

3500

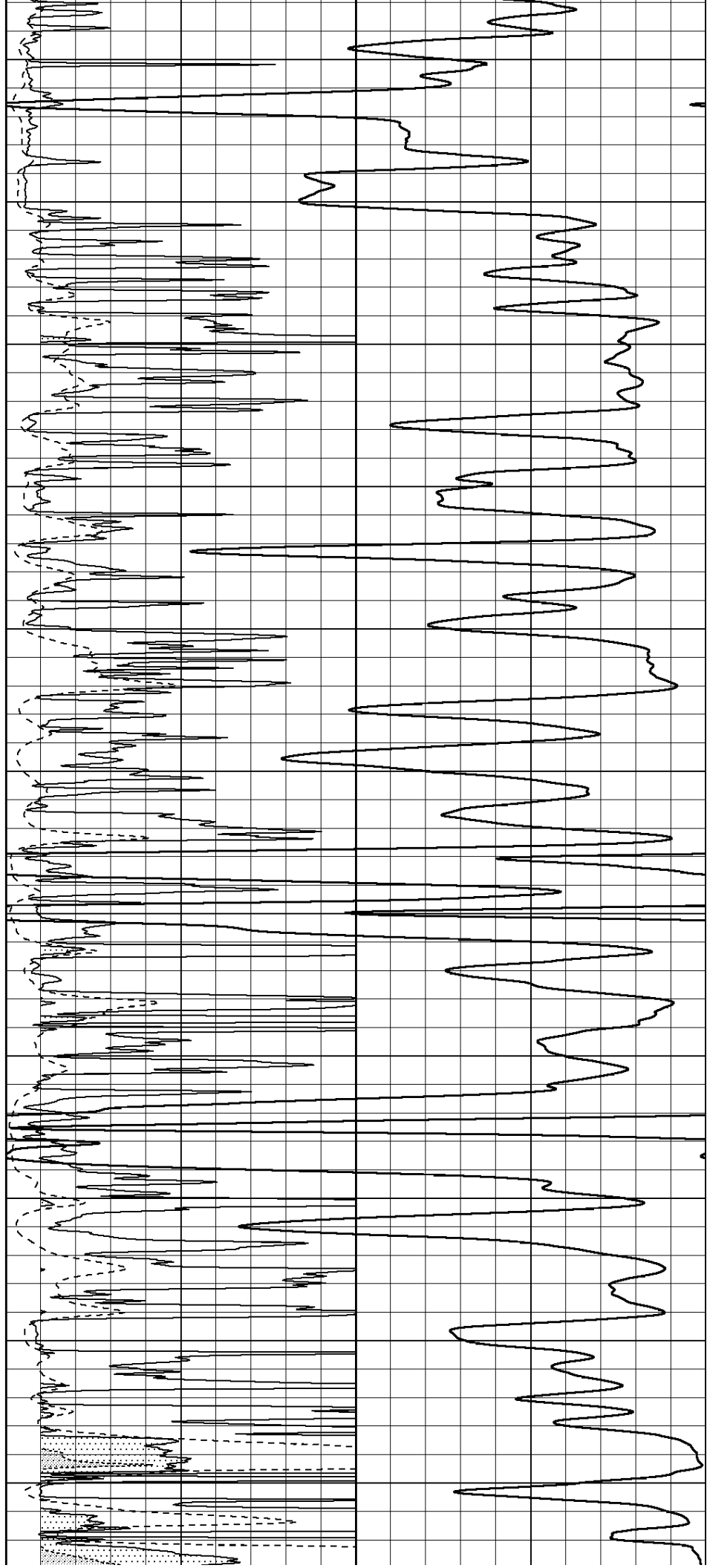
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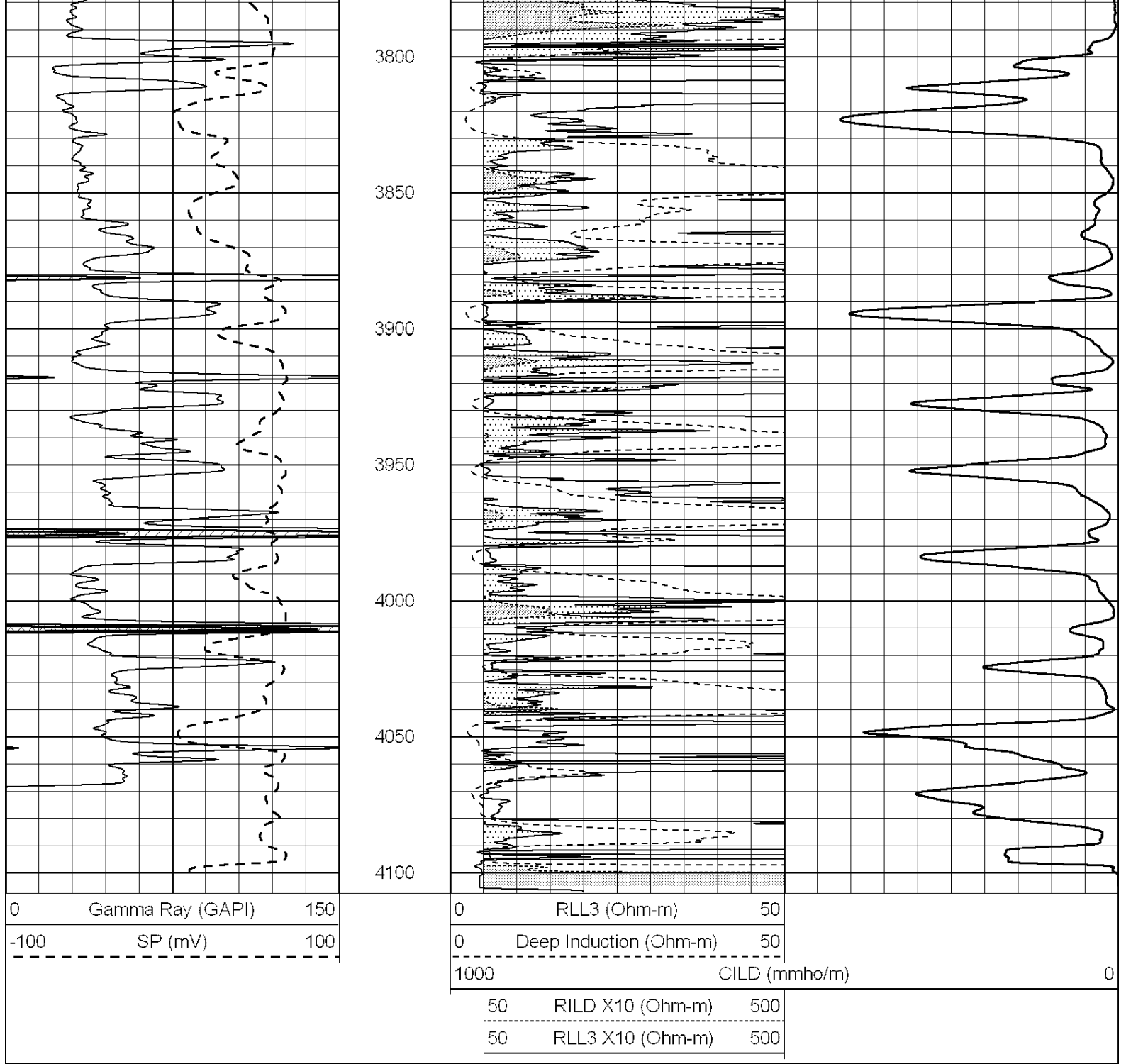
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3650

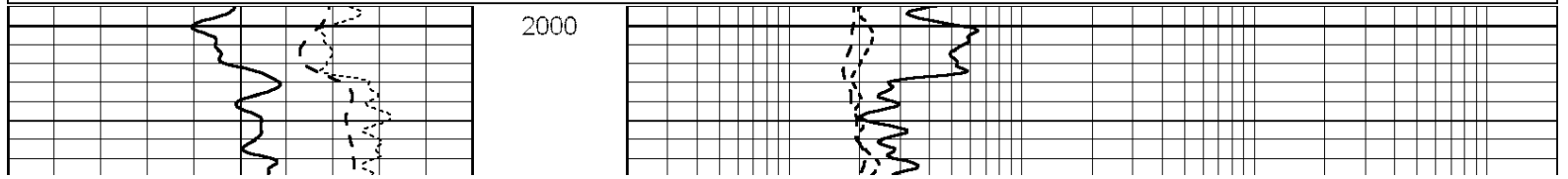
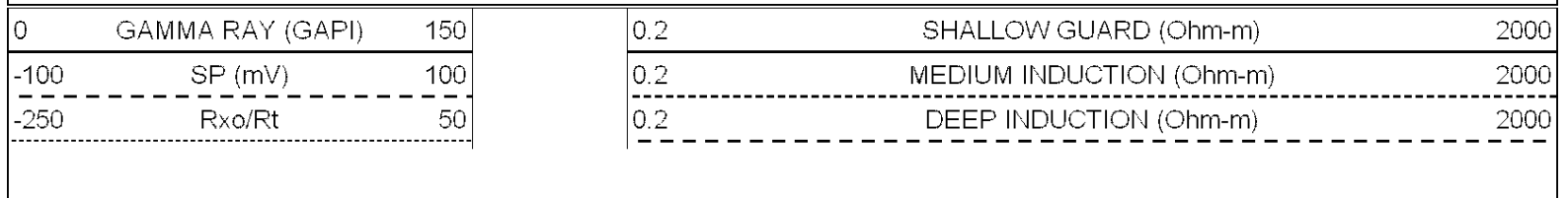
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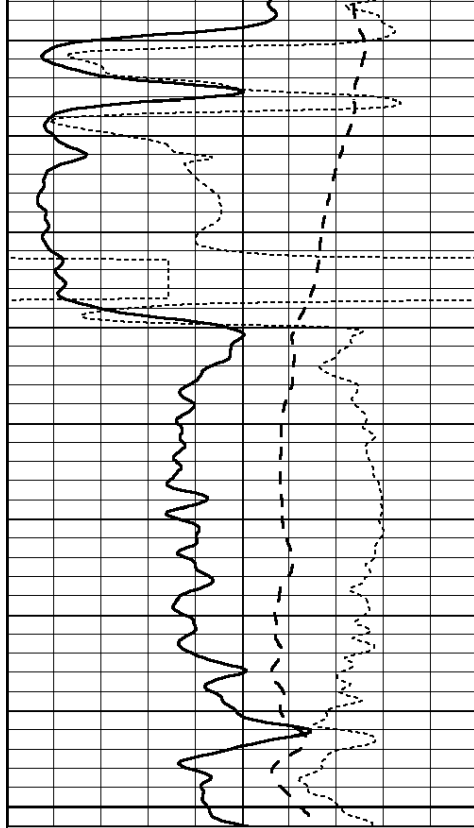
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 Dataset Pathname: pass3.2  
 Presentation Format: \_dil  
 Dataset Creation: Thu Nov 07 11:55:39 2013 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

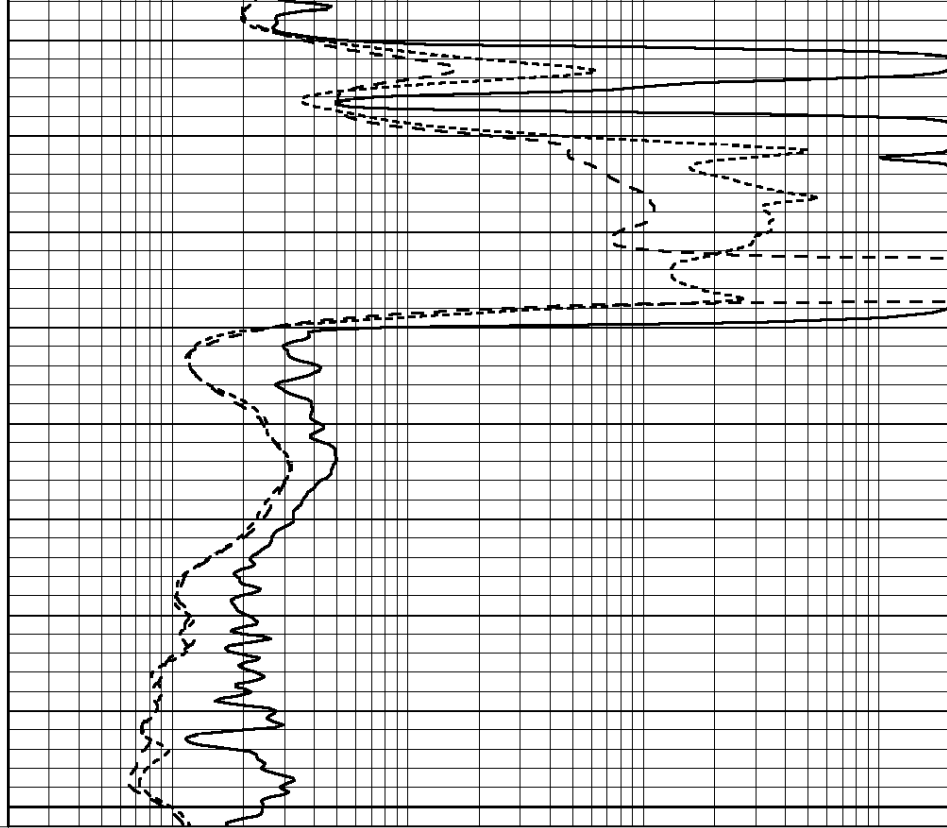




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

2050

2100

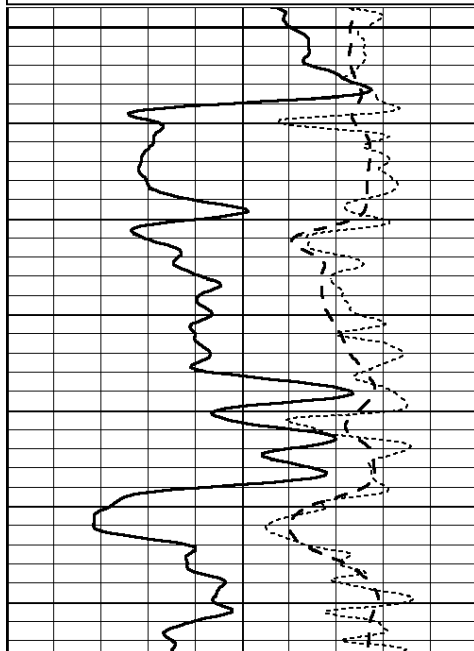


0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

Database File: 012086ddn.db  
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 Presentation Format: \_dil  
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 Charted by: Depth in Feet scaled 1:240

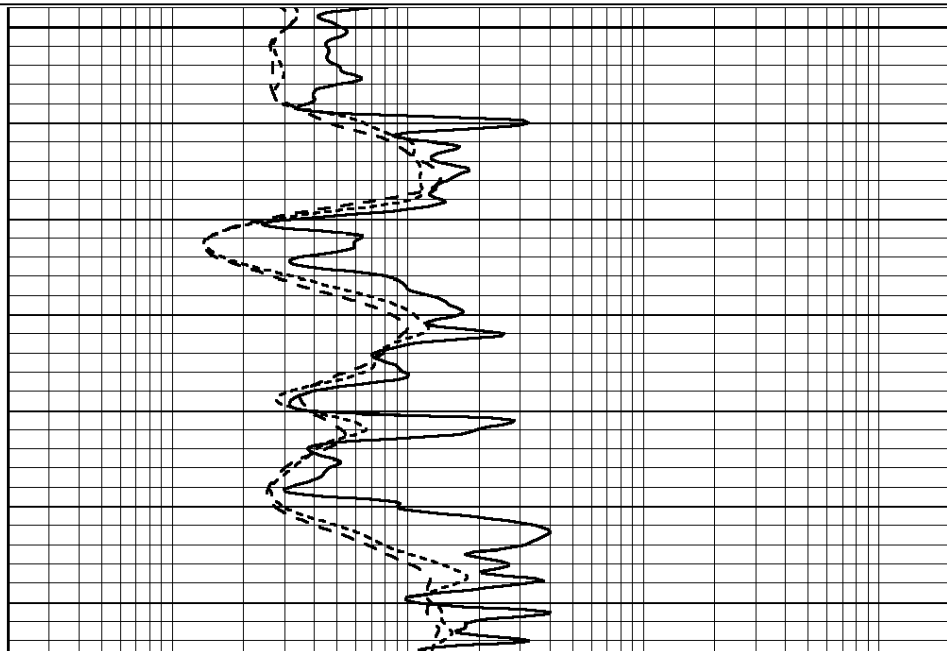
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-100	SP (mV)	100
-250	Rxo/Rt	50

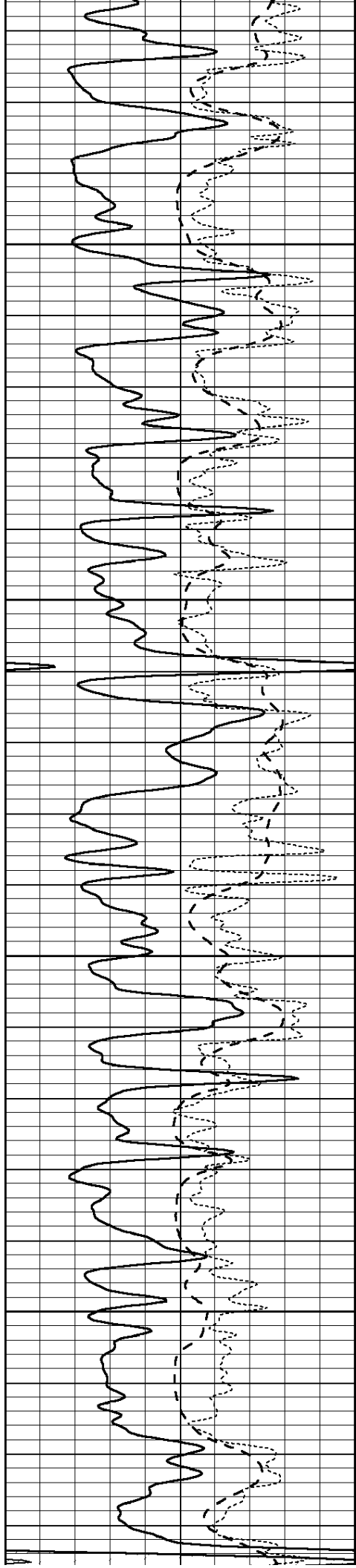
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



3400

3450



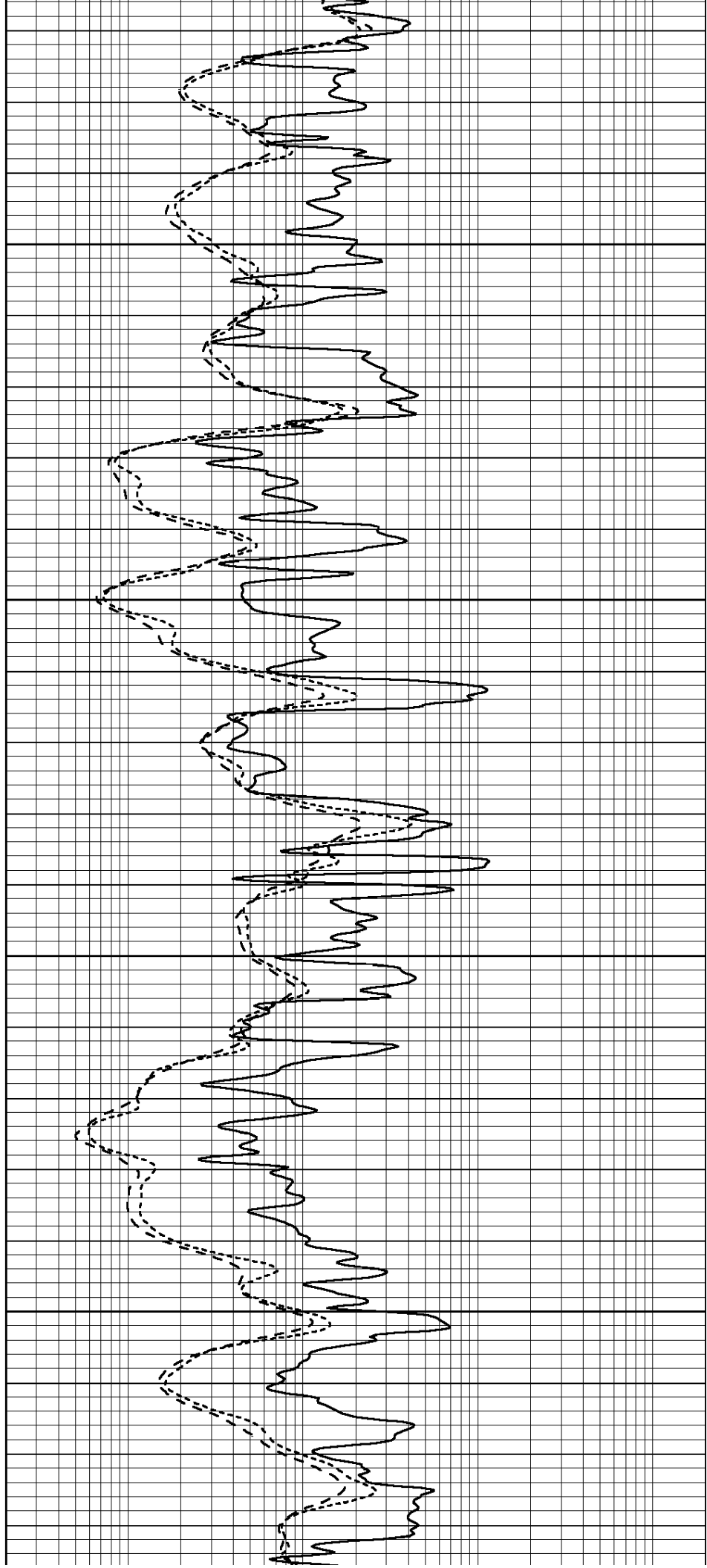


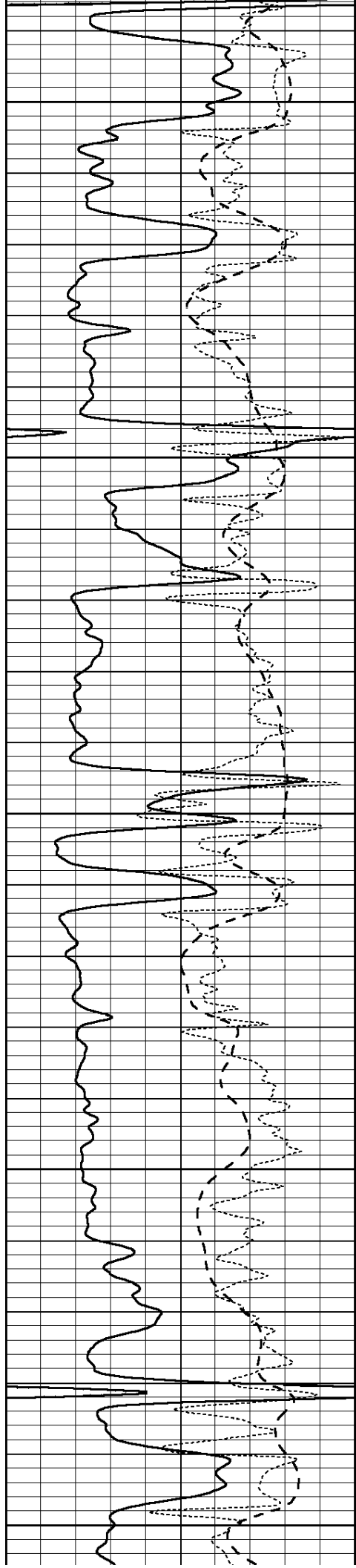
3500

3550

3600

3650





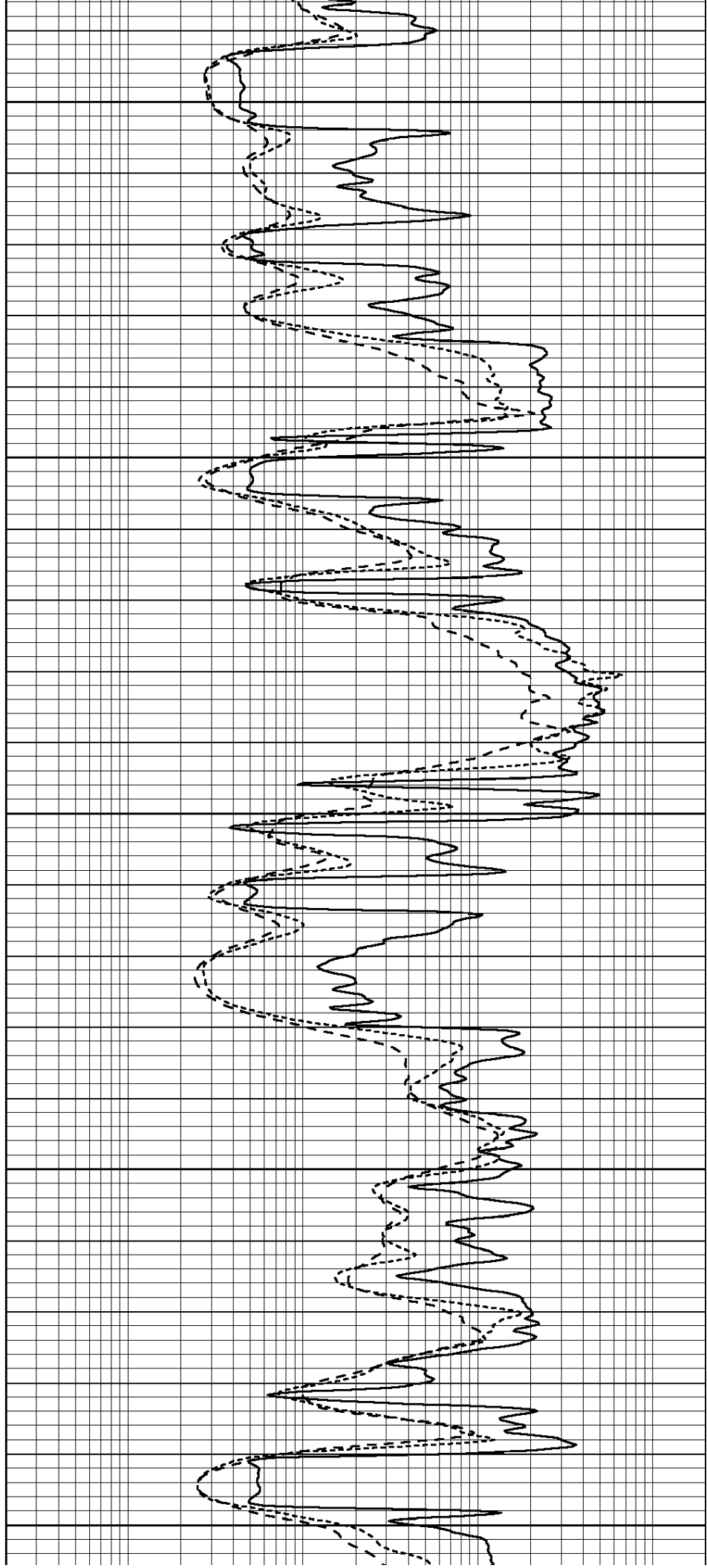
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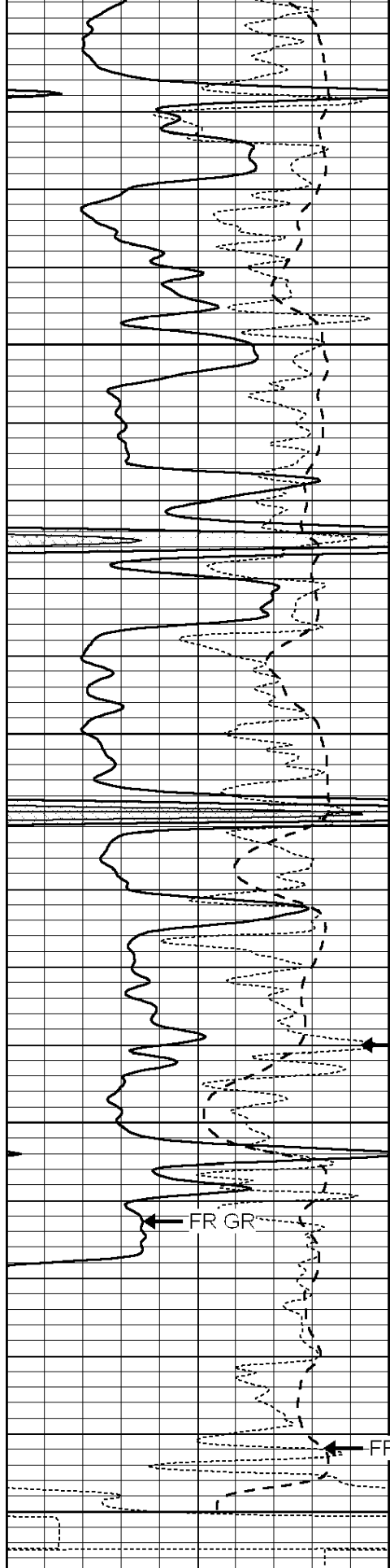
3750

3800

3850

3900





3950

4000

4050

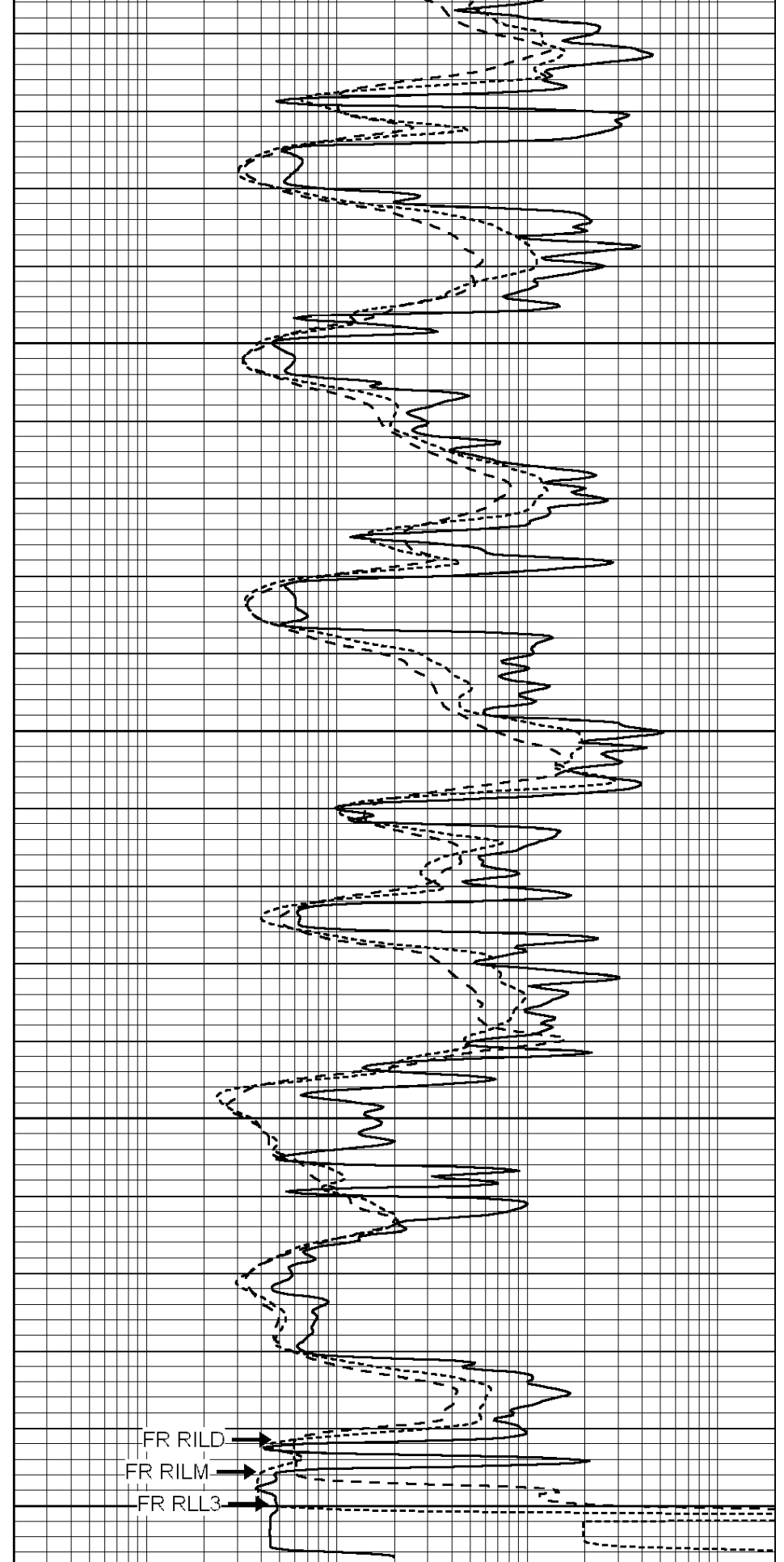
Rxo/Rt

FR GR

FR SP

LTD 4102

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



FR RILD

FR RILM

FR RLL3

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



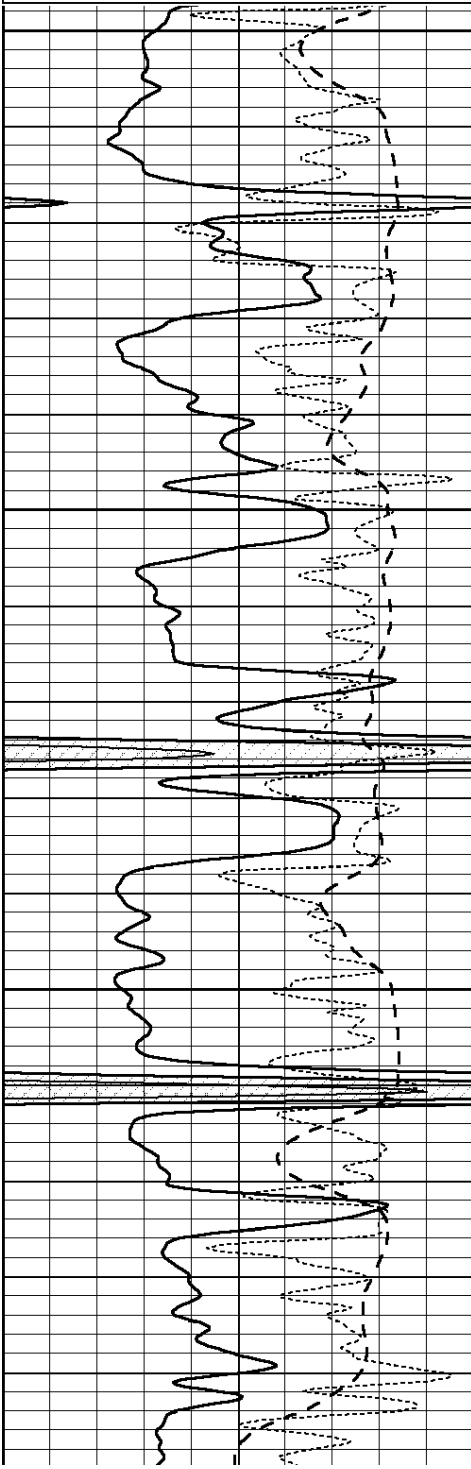
**COMPLETION  
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SERVICES CO.**

# REPEAT SECTION

Database File: 012086ddn.db  
Dataset Pathname: pass2.2  
Presentation Format: \_dil  
Dataset Creation: Thu Nov 07 10:41:34 2013 by Calc Open-Cased 090629  
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

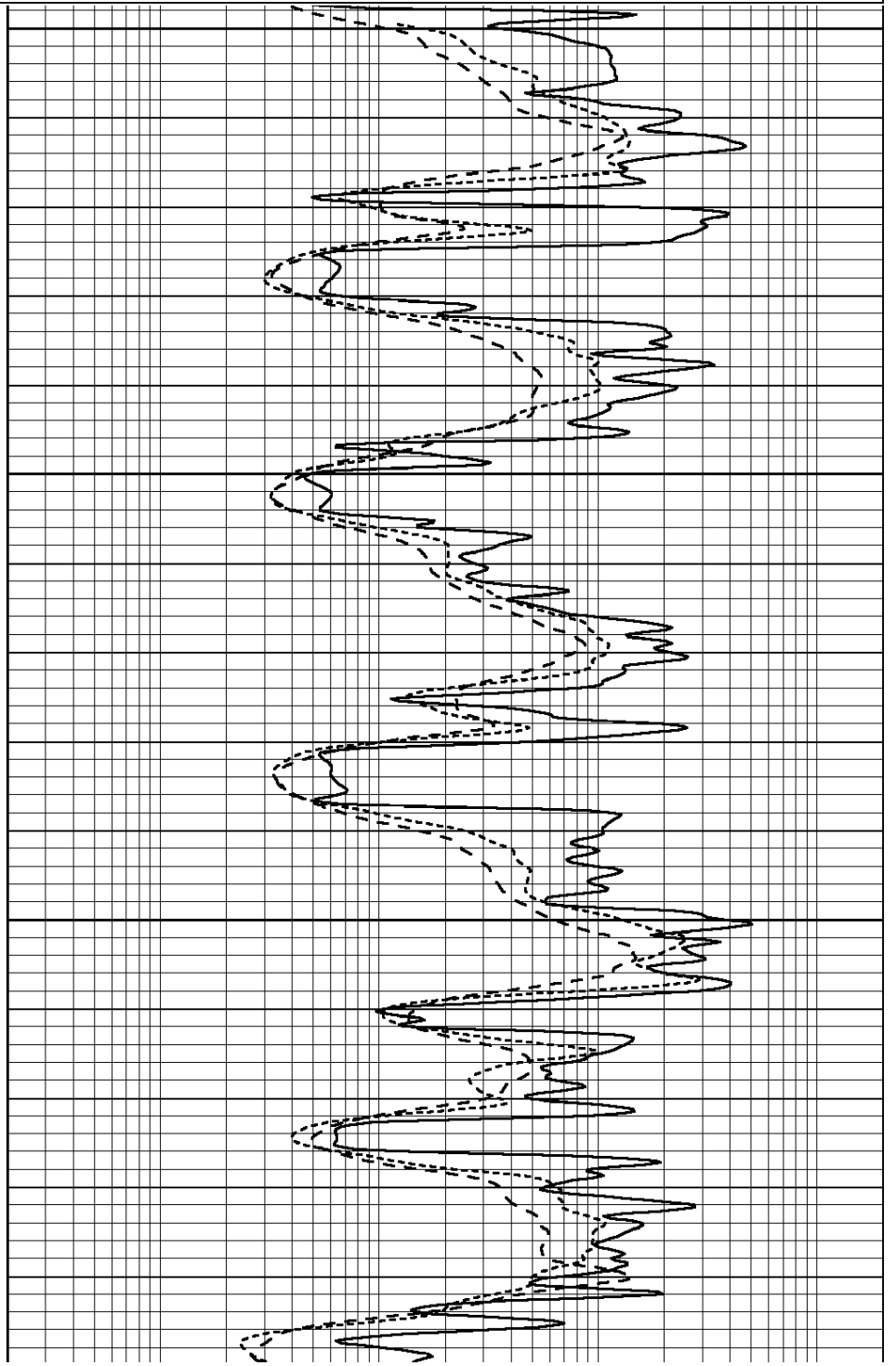


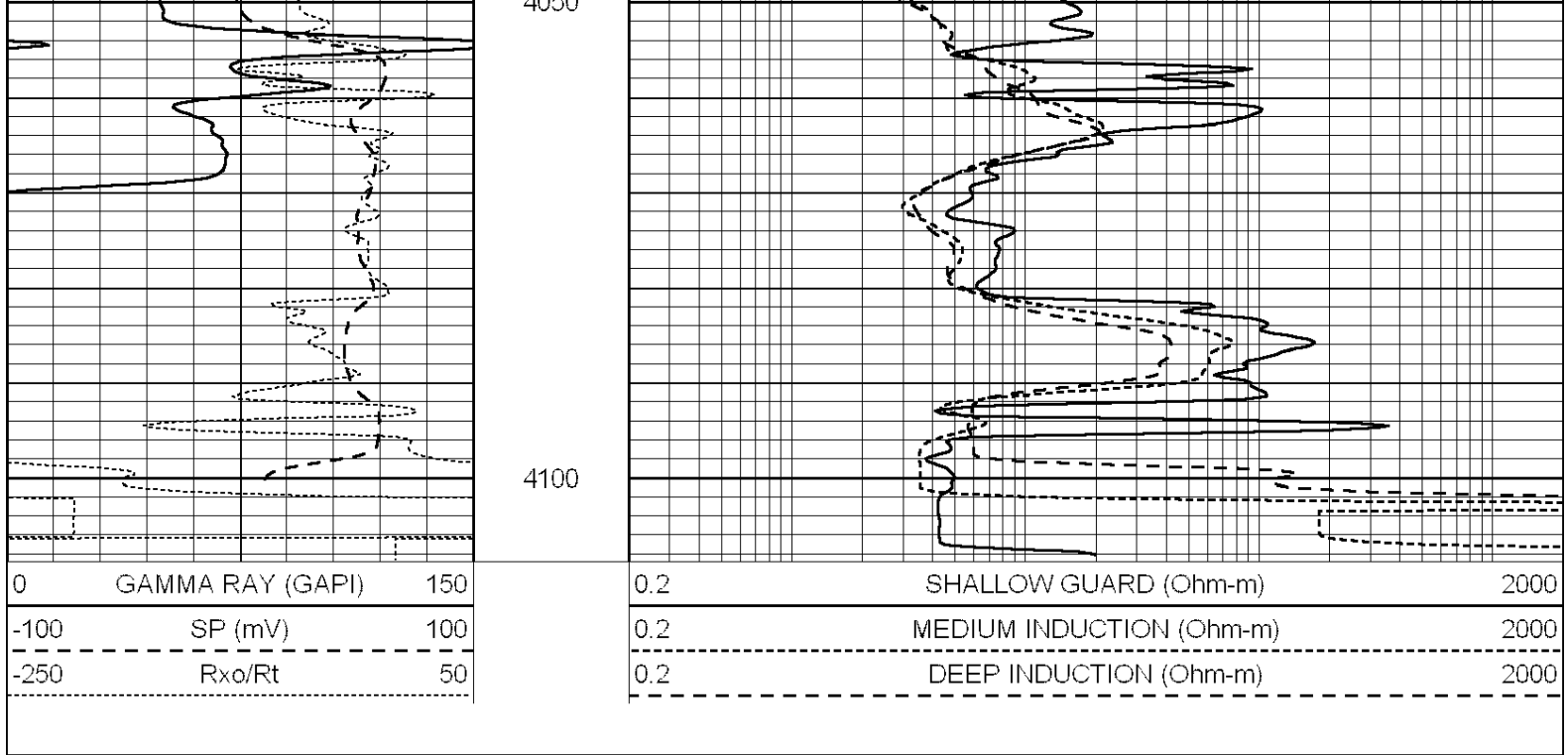
3900

3950

4000

4050





Calibration Report

Database File: 012086ddn.db  
 Dataset Pathname: pass3.2  
 Dataset Creation: Thu Nov 07 11:55:39 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG  
 Surface Cal Performed: Fri Aug 01 06:33:19 2008  
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008  
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings			References			Results	
	Zero	Cal	V	Zero	Cal	mmho/m	m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal	mmho/m	Zero	Cal	mmho/m	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		

Compensated Density Calibration Report

Serial-Model: GEAR4-GEARHART  
 Source / Verifier: 143 / 143  
 Master Calibration Performed: Mon Mar 19 19:07:19 2012

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1015.91	497.51	cps
Aluminum	2.600	g/cc	227.67	350.20	cps
Spine Angle = 76.79			Density/Spine Ratio = 0.579		
	Size		Reading		
Small Ring	8.00	in	3.21	V	
Large Ring	14.00	in	5.46	V	

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: 080327  
 Tool Model: Probe1  
 Performed: Sun Jun 13 14:33:21 1993

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.4300 GAPI/cps