



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL INDUCTION
LOG**

Company MUSTANG ENERGY CORPORATION
Well GOTTSCHALK "A" #1
Field WILDCAT
County RUSH
State KANSAS

Company MUSTANG ENERGY CORPORATION
Well GOTTSCHALK "A" #1
Field WILDCAT
County RUSH State KANSAS

Location: API # : 15-165-22041-0000
720' FSL & 2310' FEL
S/2 - NW - SW - SE
SEC 2 TWP 16S RGE 19W
Permanent Datum GROUND LEVEL Elevation 2033
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
MEL/SONIC
Elevation
K.B. 2041
D.F. 2039
G.L. 2033

Date	9/9/13		
Run Number	ONE		
Depth Driller	3718		
Depth Logger	3714		
Bottom Logged Interval	3712		
Top Log Interval	00		
Casing Driller	8 5/8" @ 1242'		
Casing Logger	1242		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,000 PPM	
Density / Viscosity	9.2/46		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.500 @ 90F		
Rmf @ Meas. Temp	.375 @ 90F		
Rmc @ Meas. Temp	.600 @ 90F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.398 @ 113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	4:45 P.M.		
Maximum Recorded Temperature	113F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	CHRIS NEELEY		

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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
SCHOENCHEN, KS. & HWY 183, S. ON 183 1 MILE PAST COUNTY LINE, 3W., N. INTO



MAIN SECTION

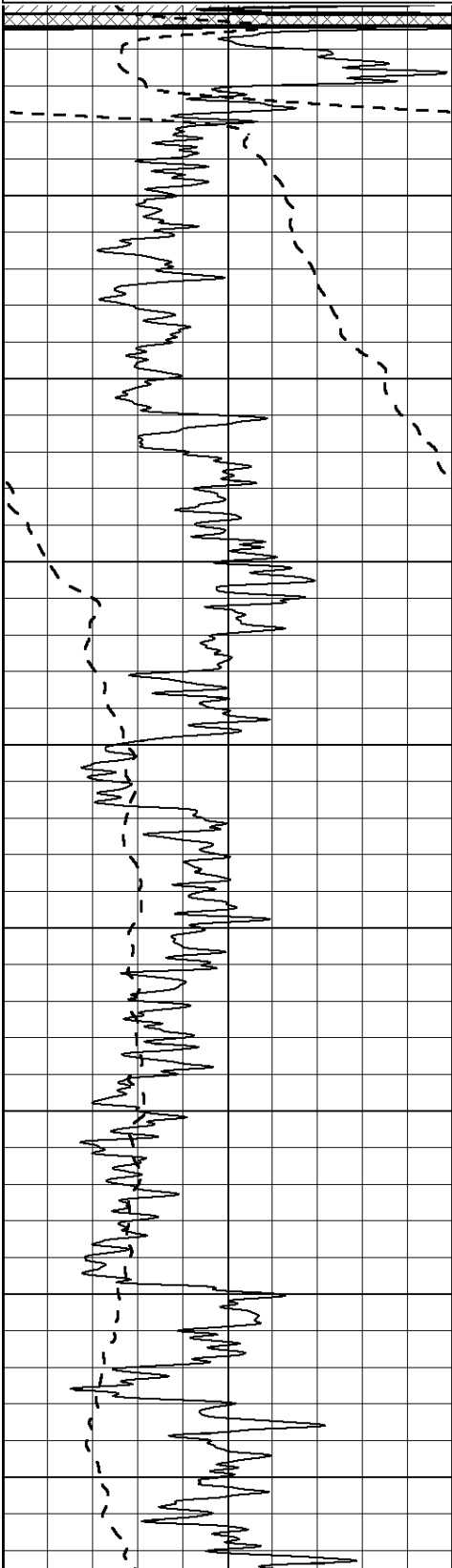
Database File: 011668ddn.db
 Dataset Pathname: pass3.7
 Presentation Format: dil2
 Dataset Creation: Mon Sep 09 18:02:23 2013
 Charted by: Depth in Feet scaled 1:600

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

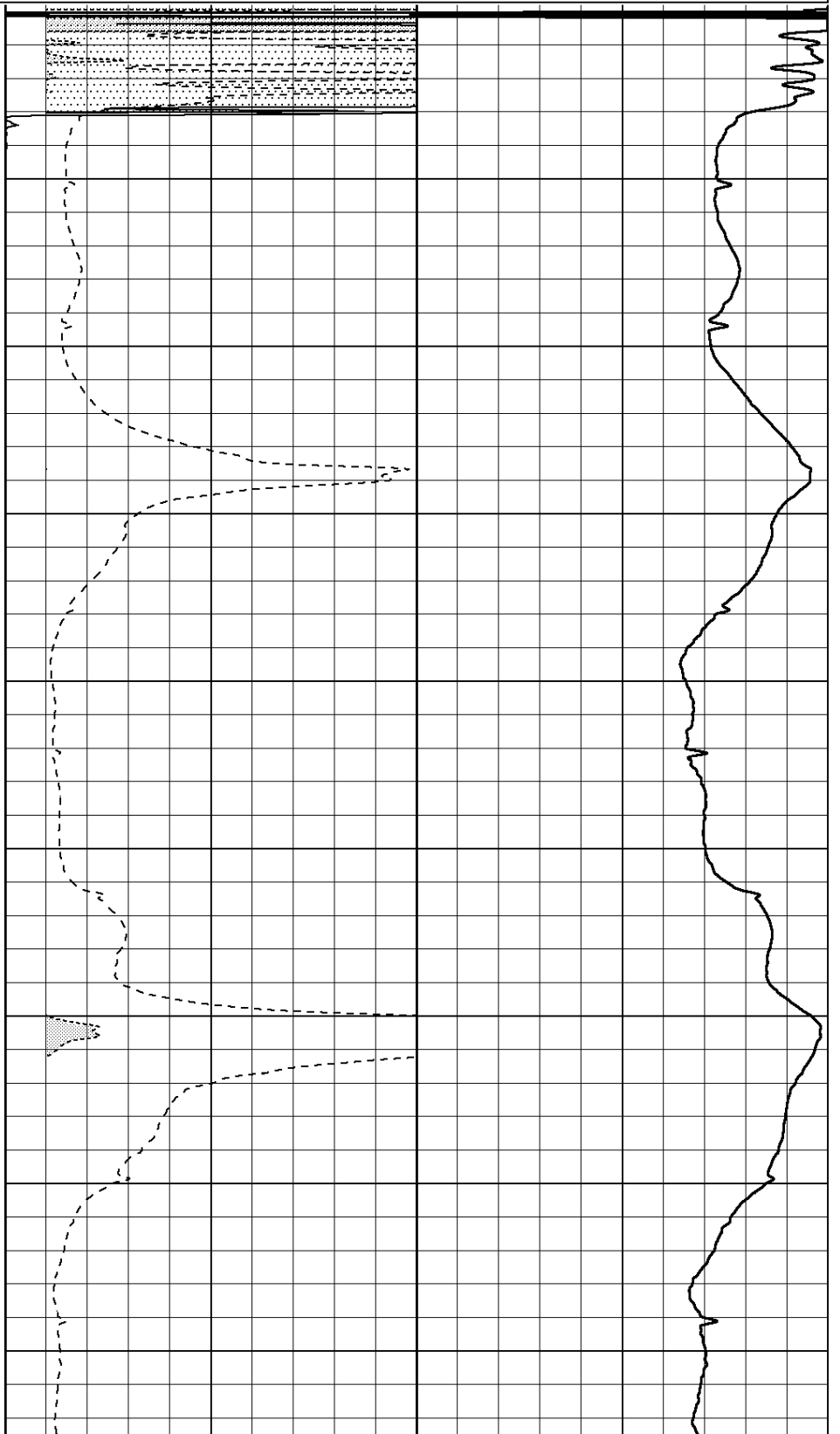
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0	RILD (Ohm-m)	50

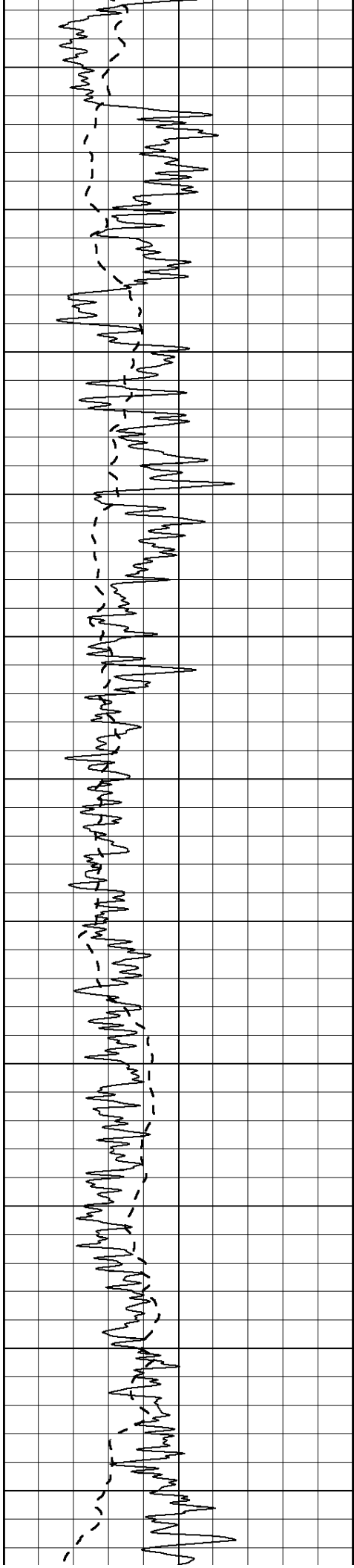
1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



0
50
100
150
200
250
300
350
400





450

500

550

600

650

700

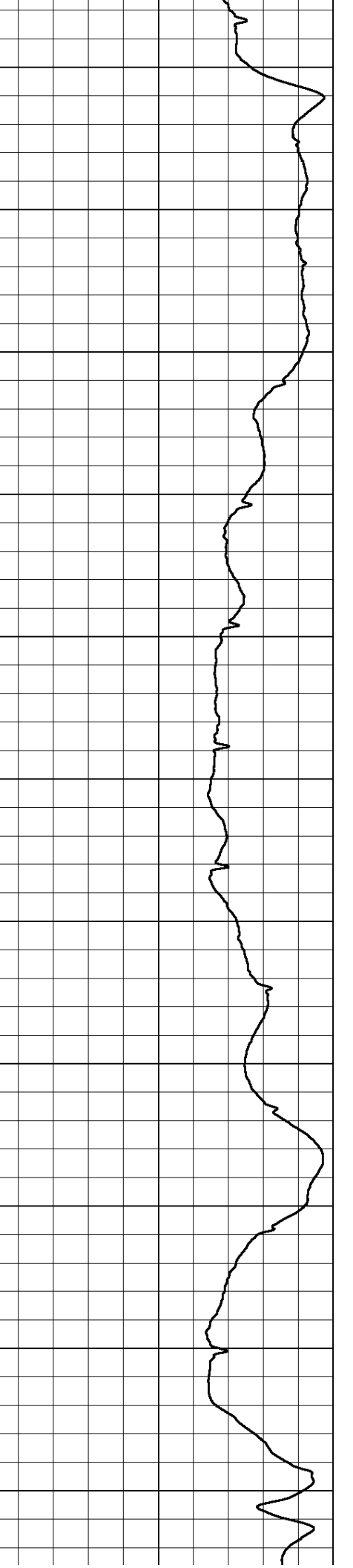
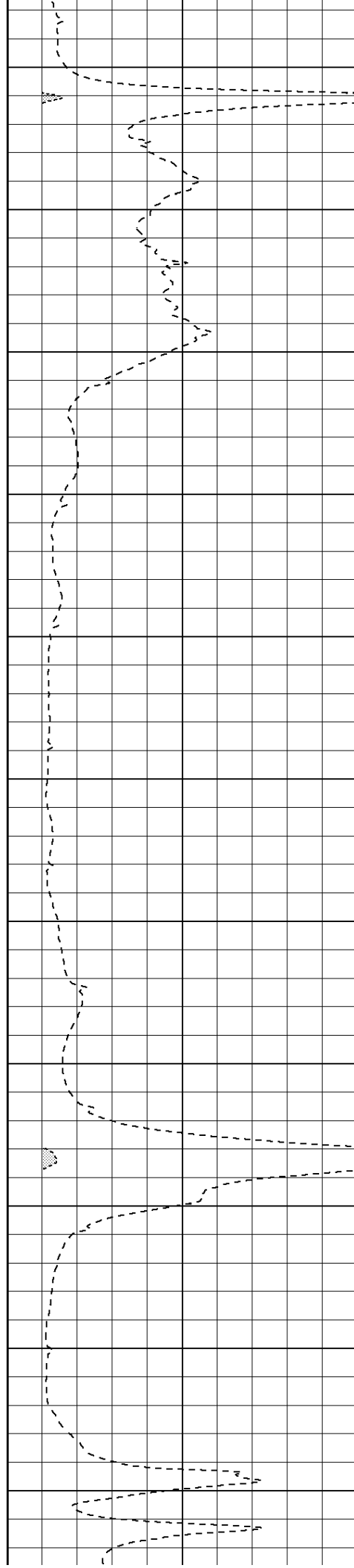
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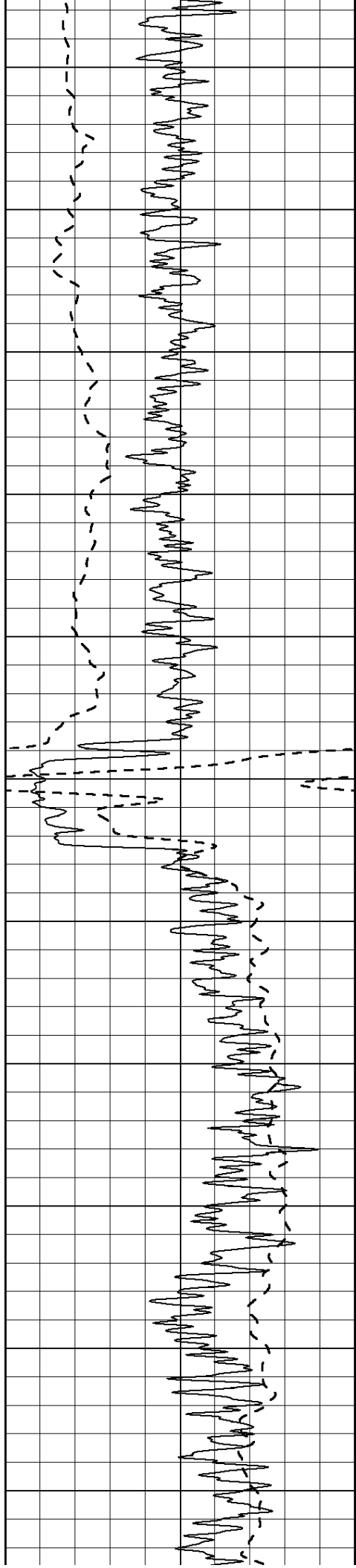
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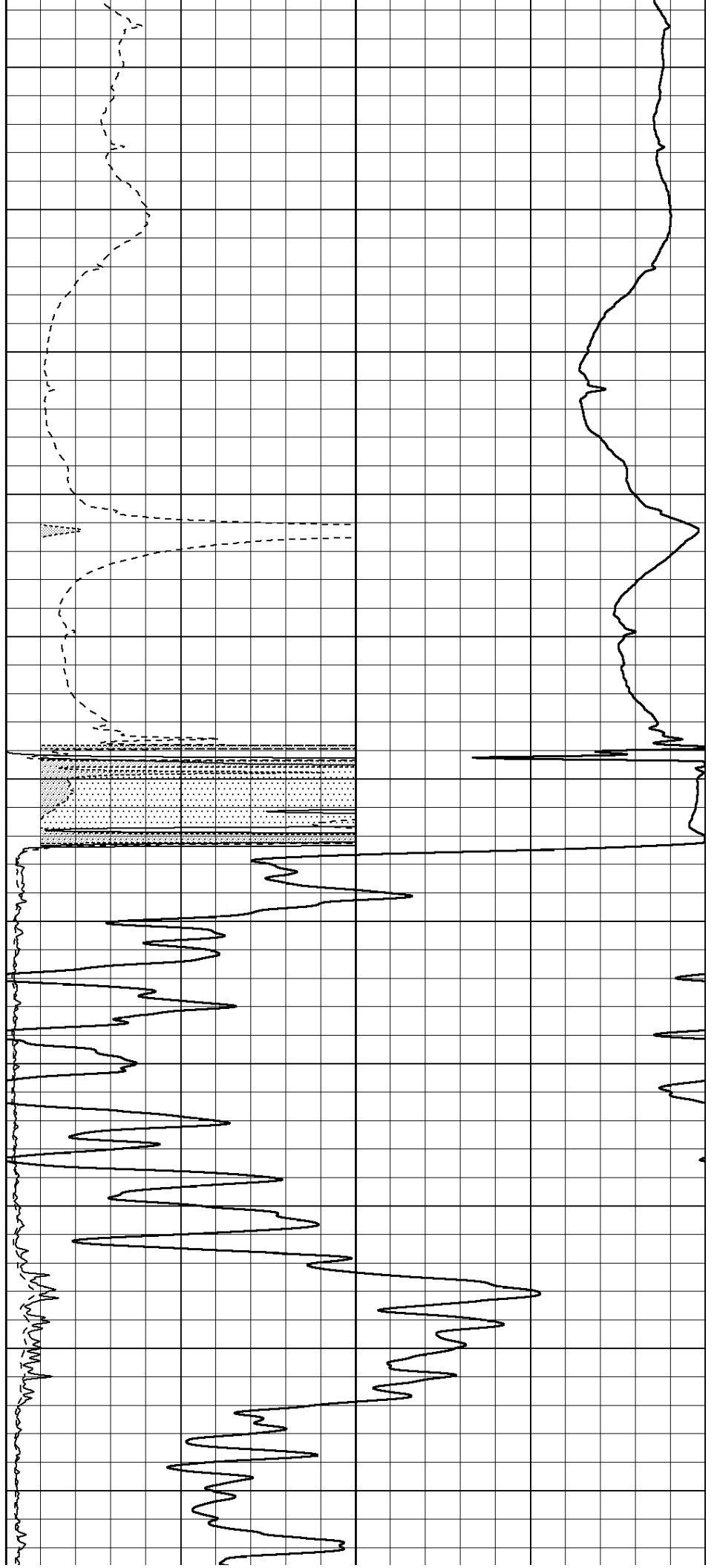
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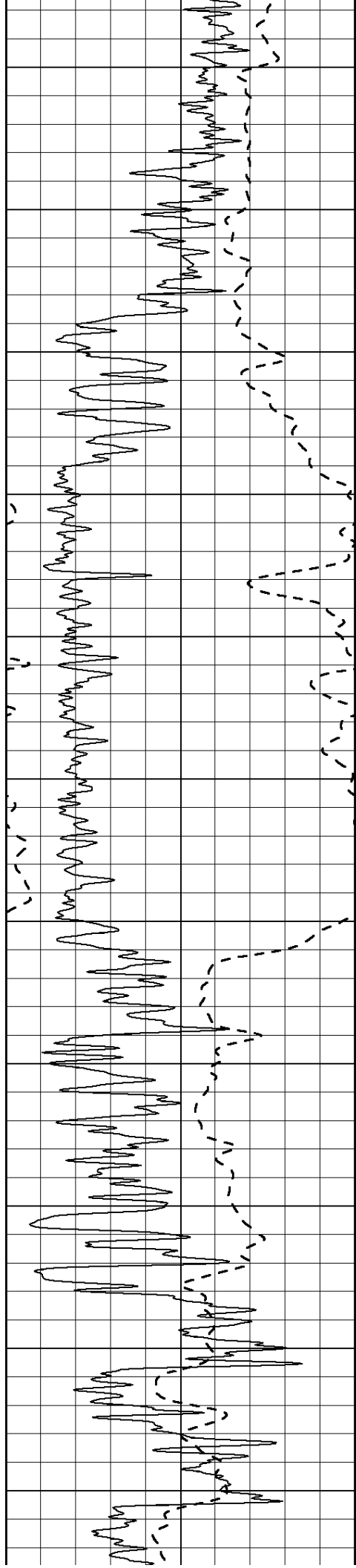
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1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





1550

1600

1650

1700

1750

1800

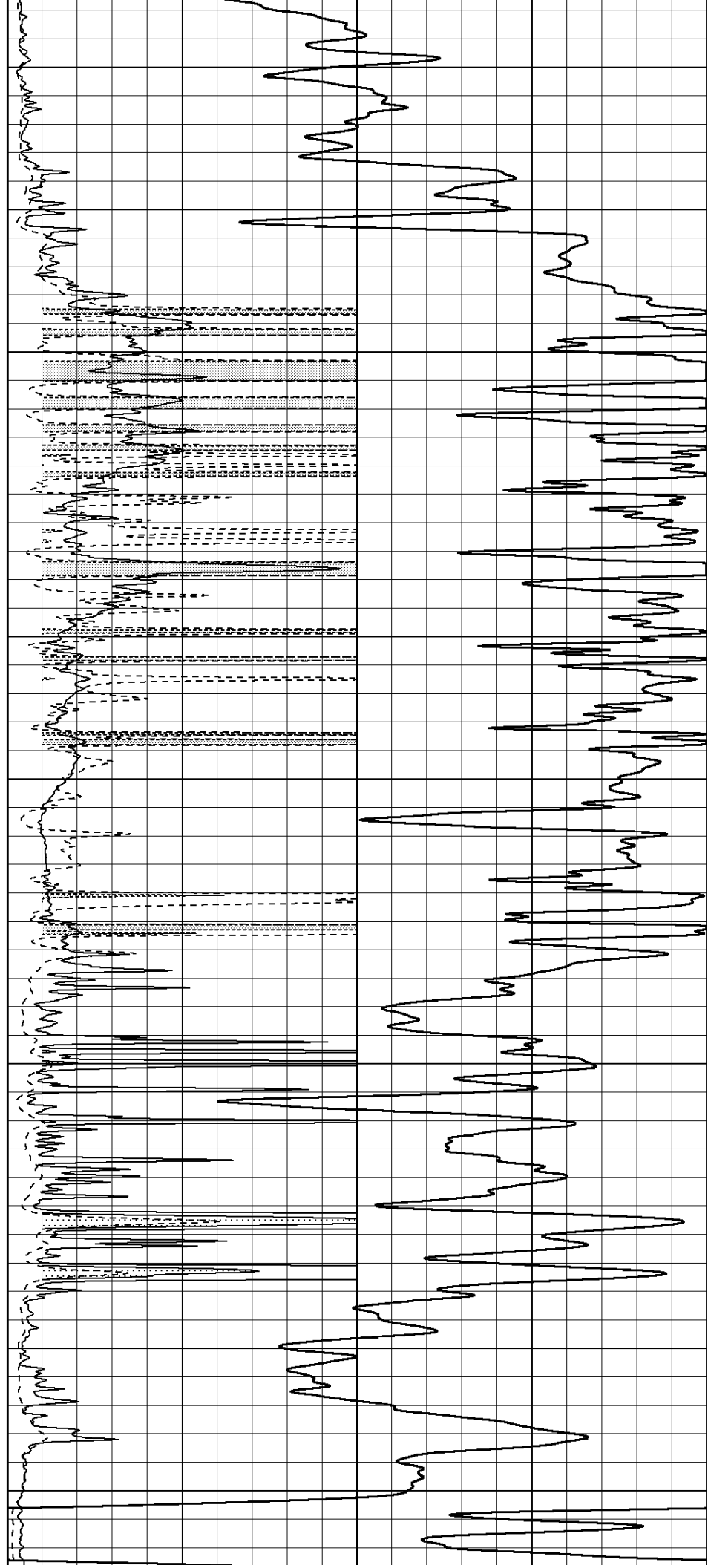
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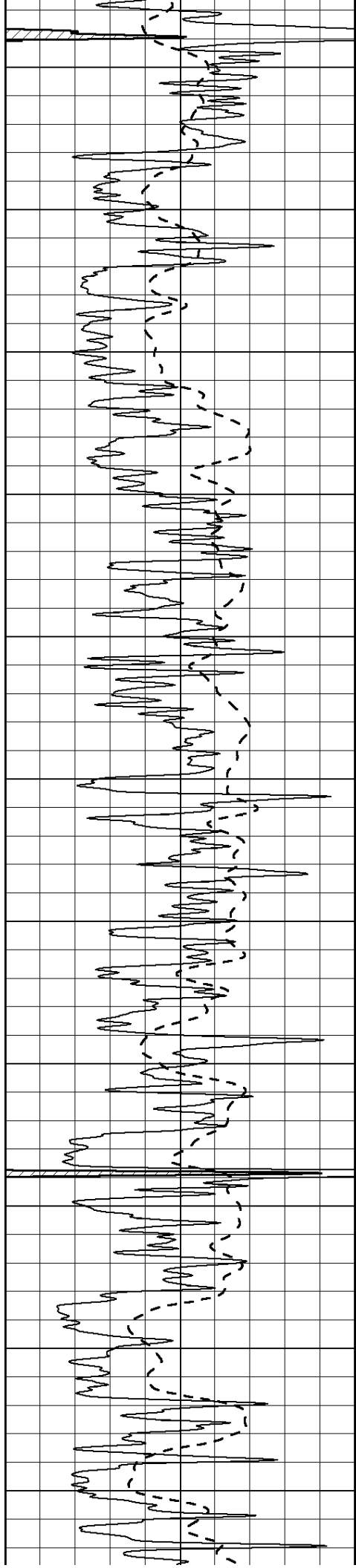
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1950

2000

2050





2100

2150

2200

2250

2300

2350

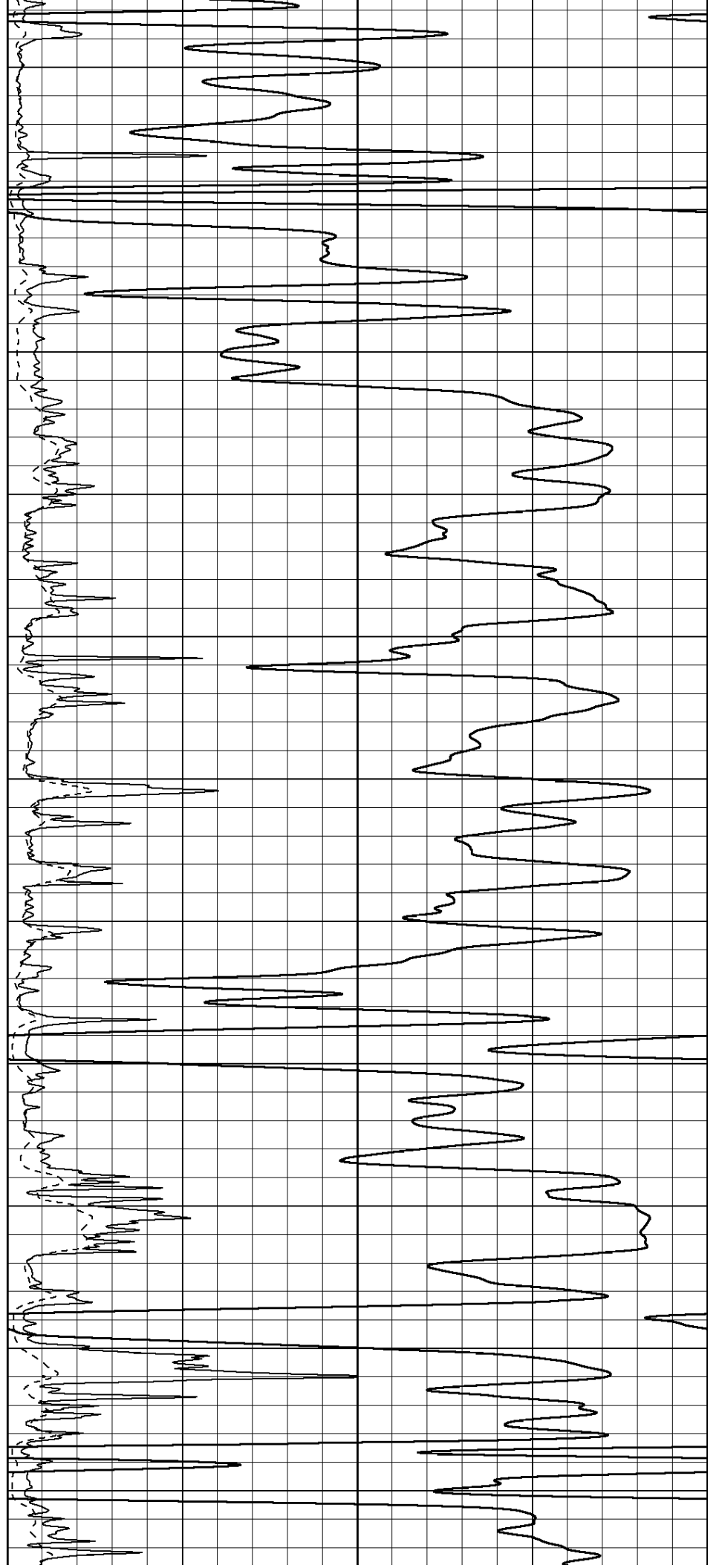
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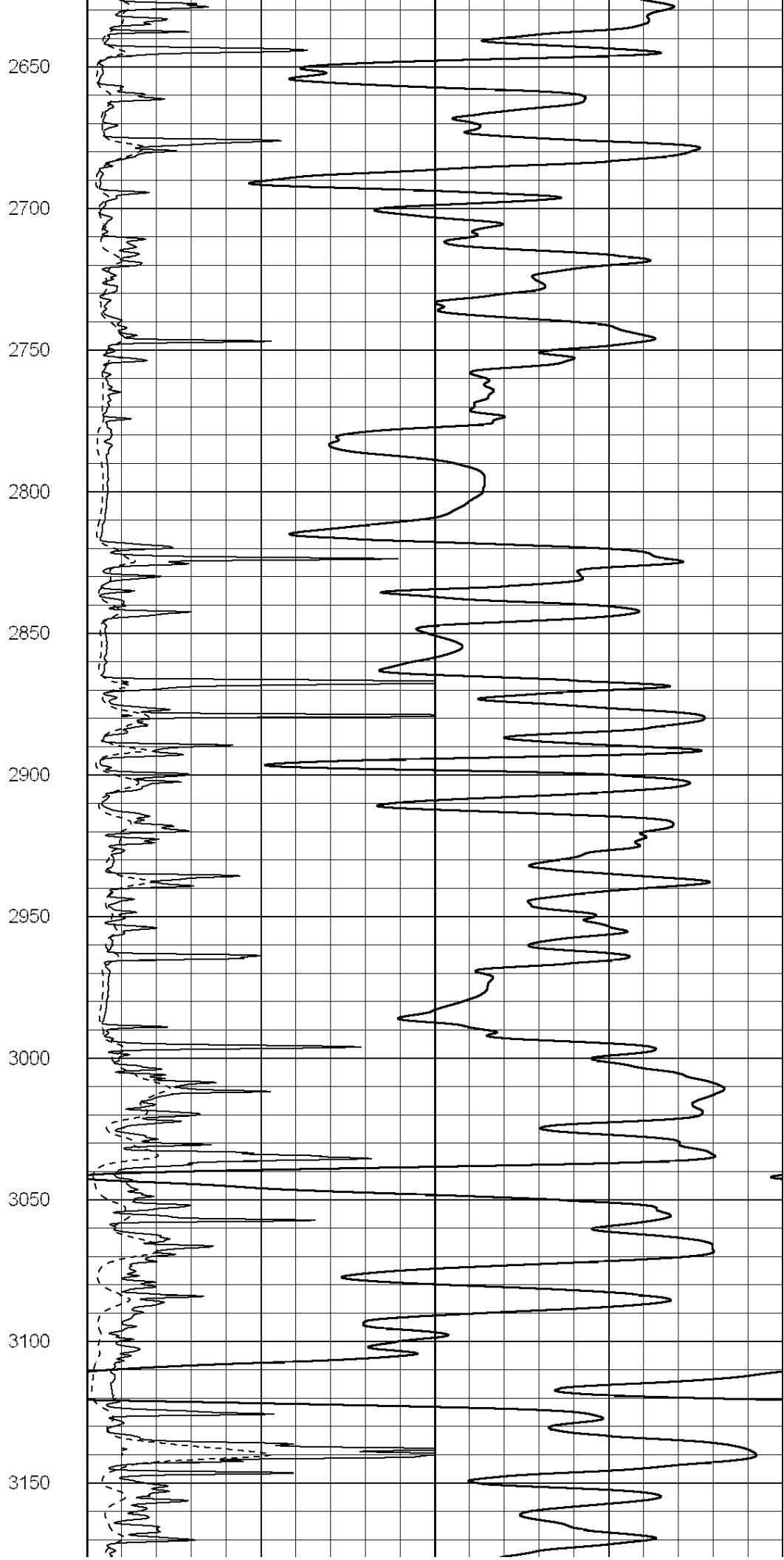
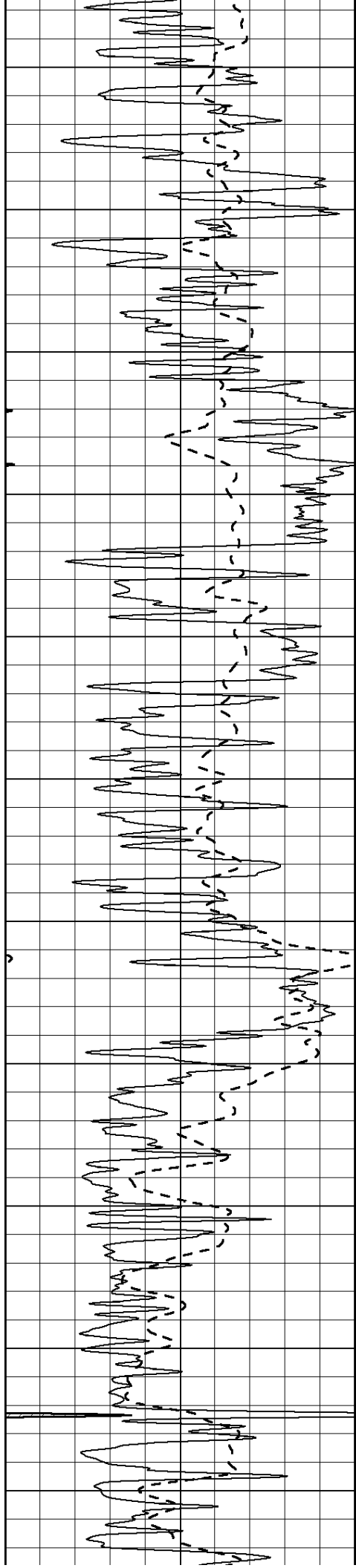
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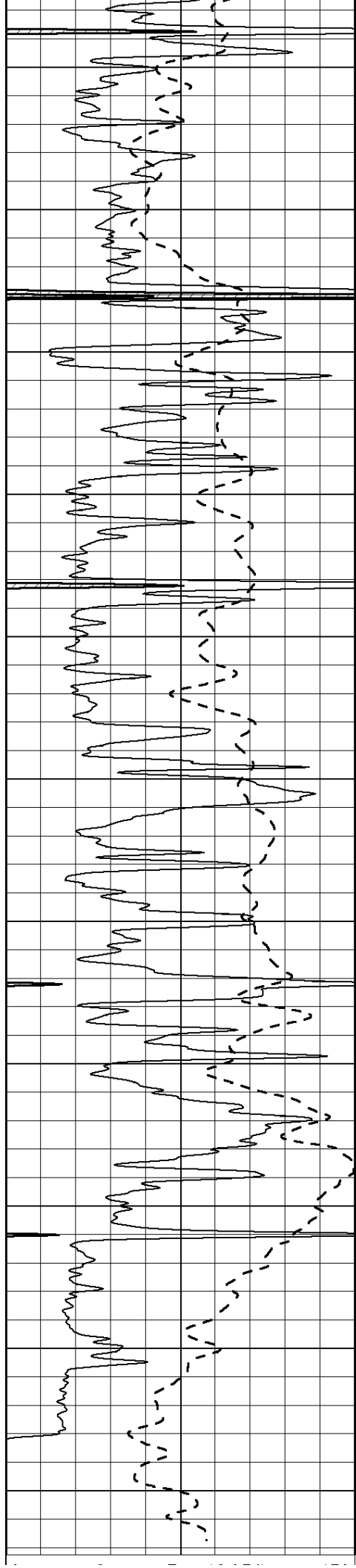
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2550

2600







3200

3250

3300

3350

3400

3450

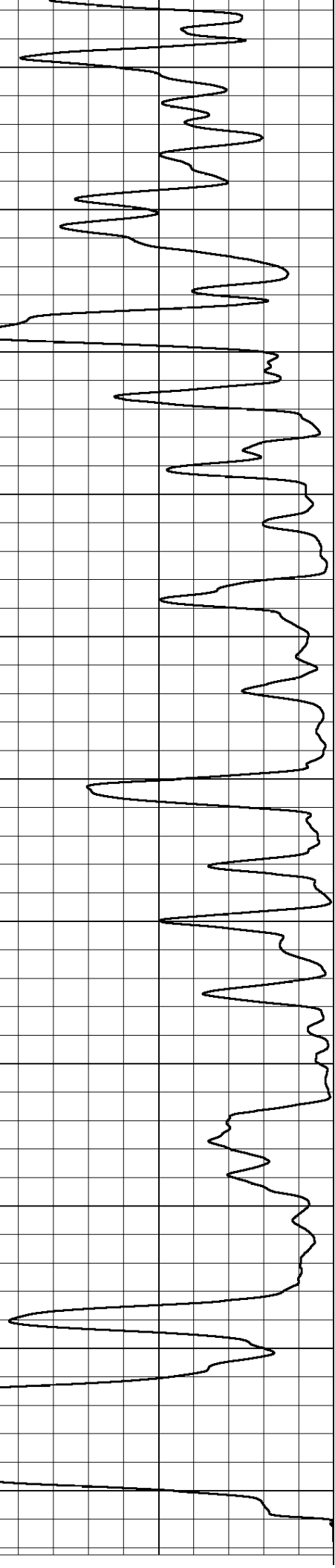
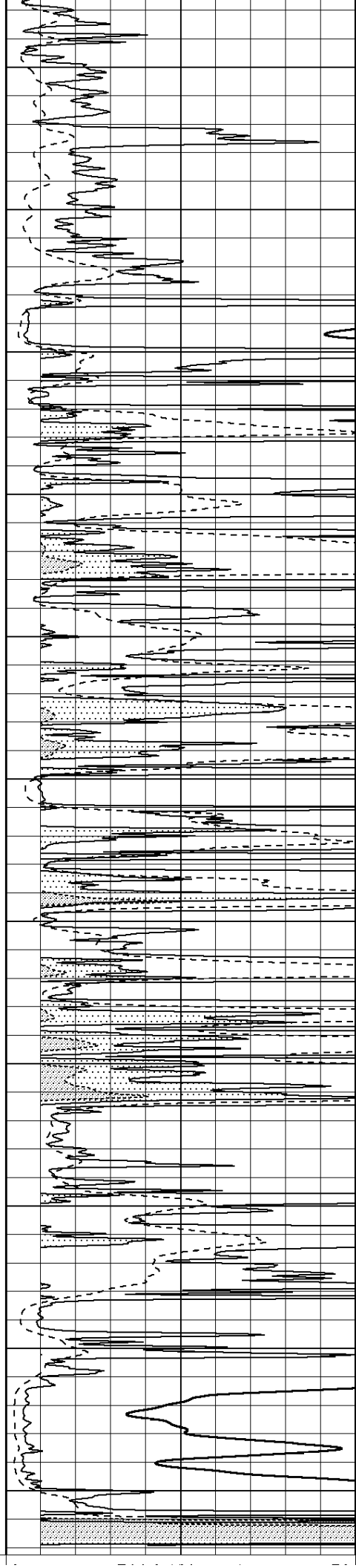
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3550

3600

3650

3700



0	Gamma Ray (GAPI)	150
-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

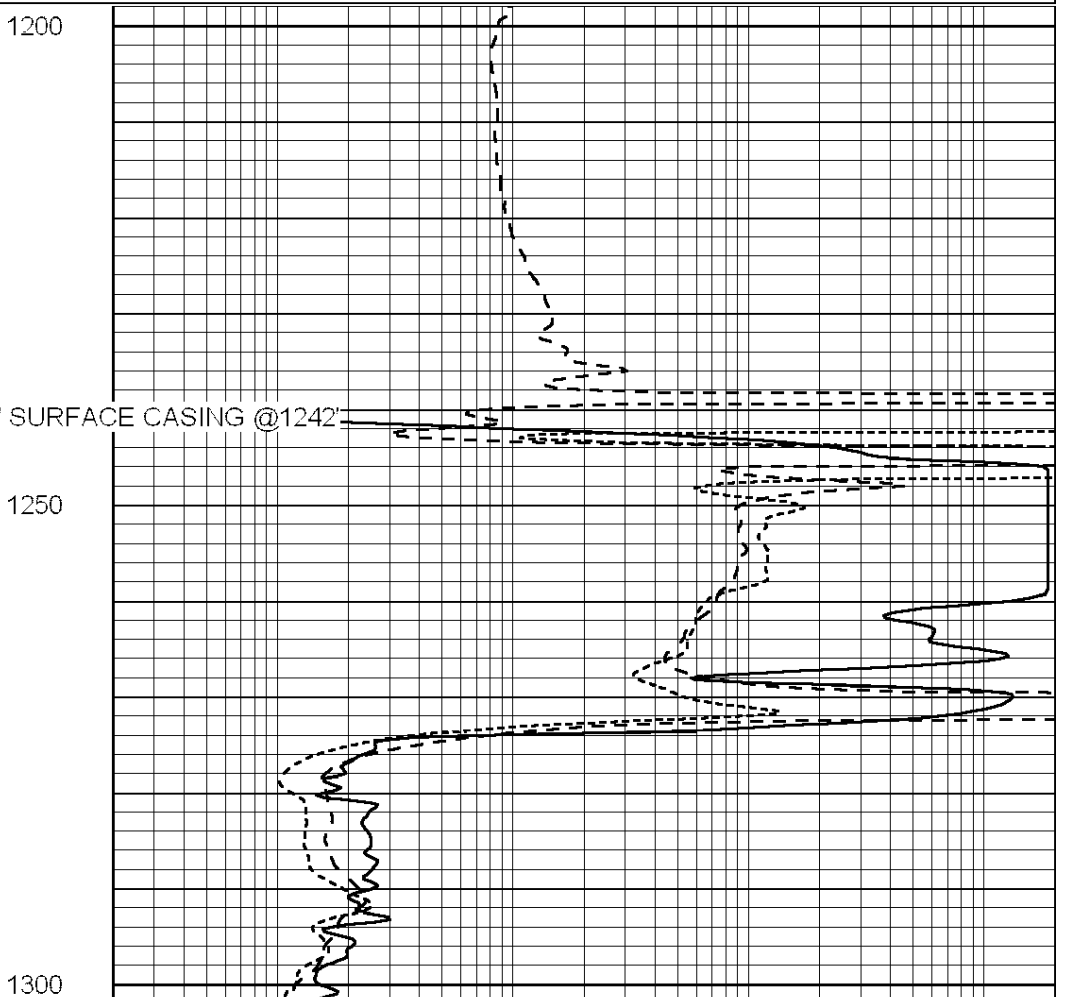
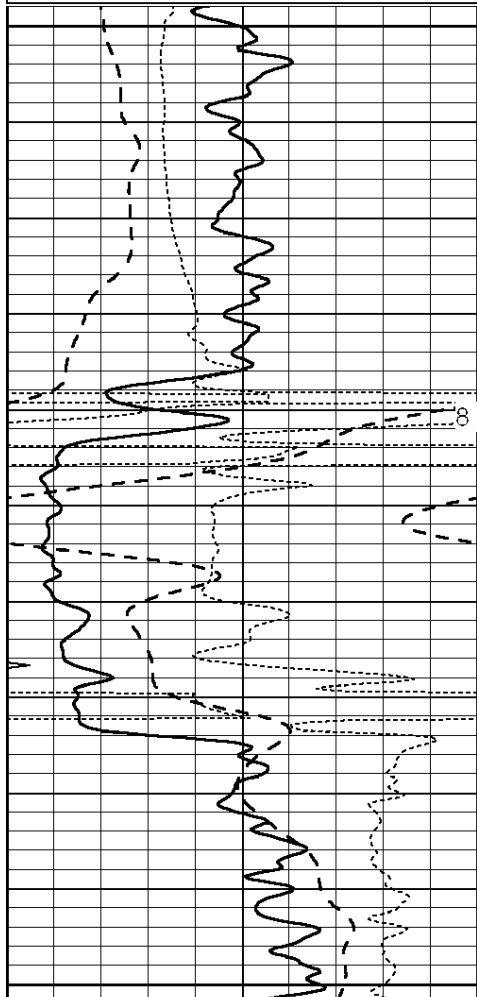


ANHYDRITE

Database File: 011668ddn.db
 Dataset Pathname: pass3.8
 Presentation Format: _dil
 Dataset Creation: Mon Sep 09 18:02:59 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



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



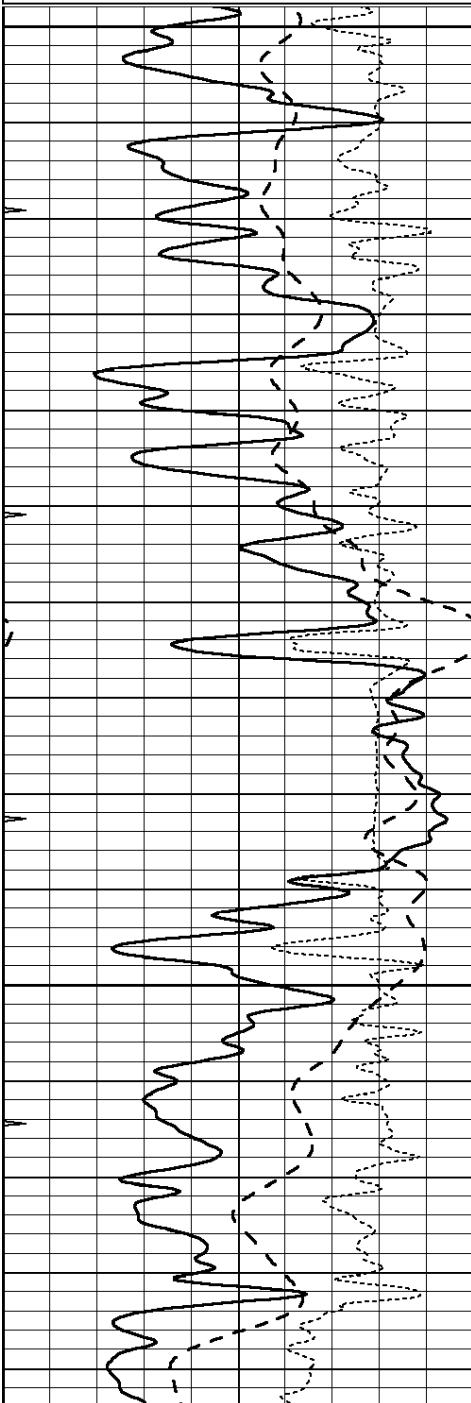
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MAIN SECTION

Database File: 011668ddn.db
Dataset Pathname: pass3.7
Presentation Format: dil
Dataset Creation: Mon Sep 09 18:02:23 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

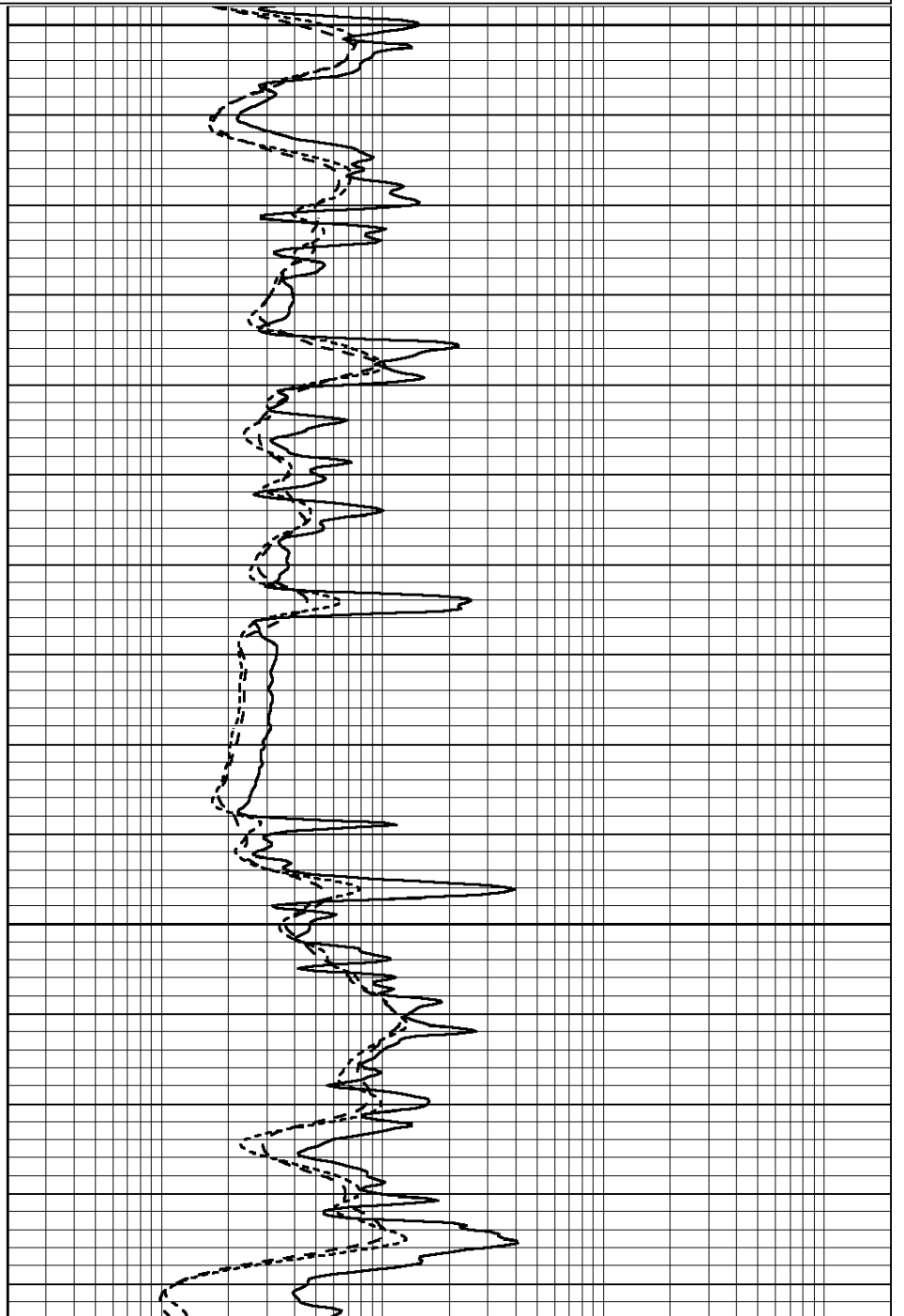
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

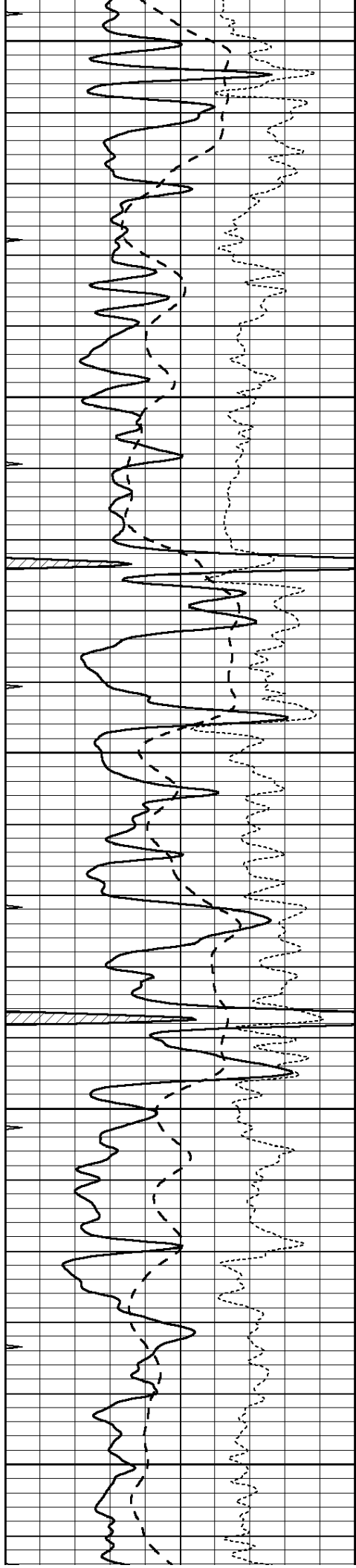


2900

2950

3000





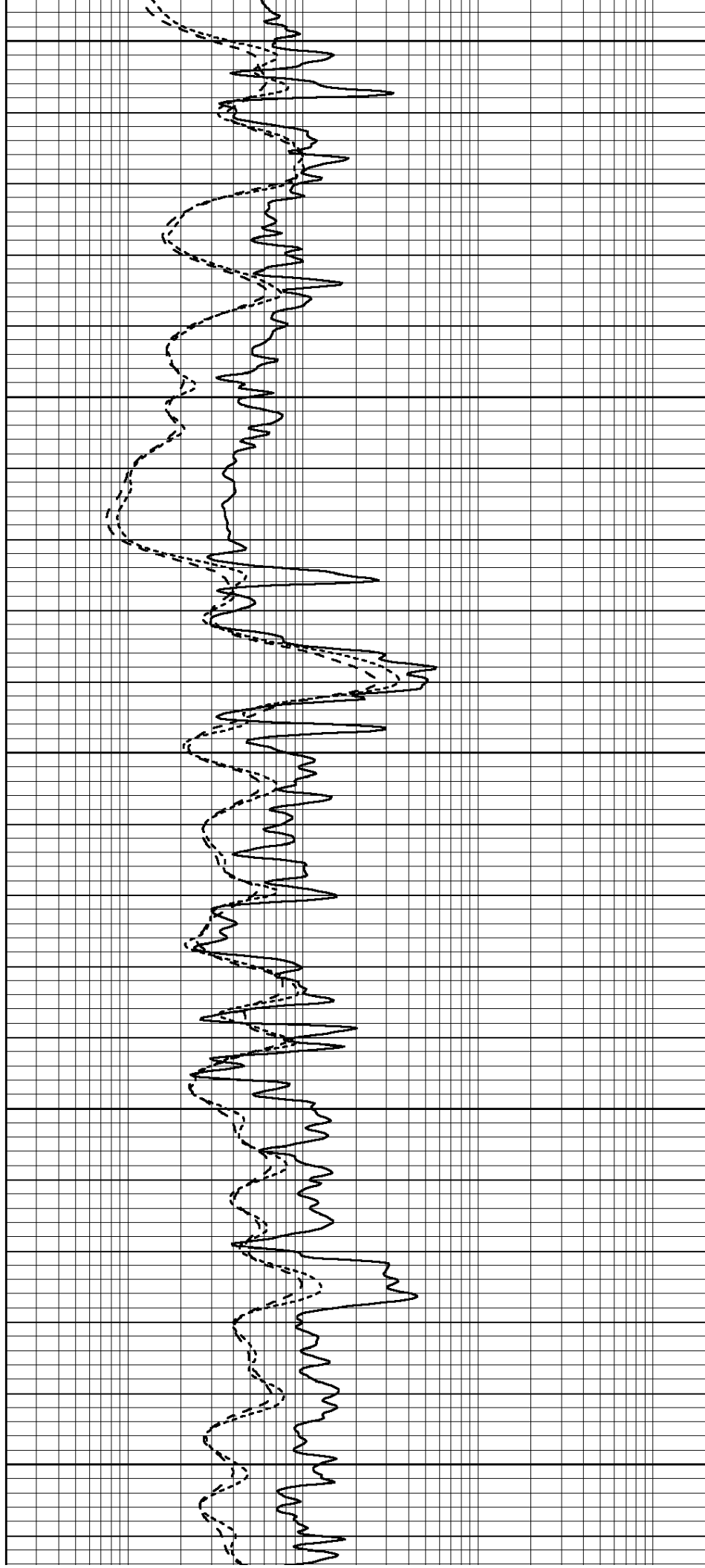
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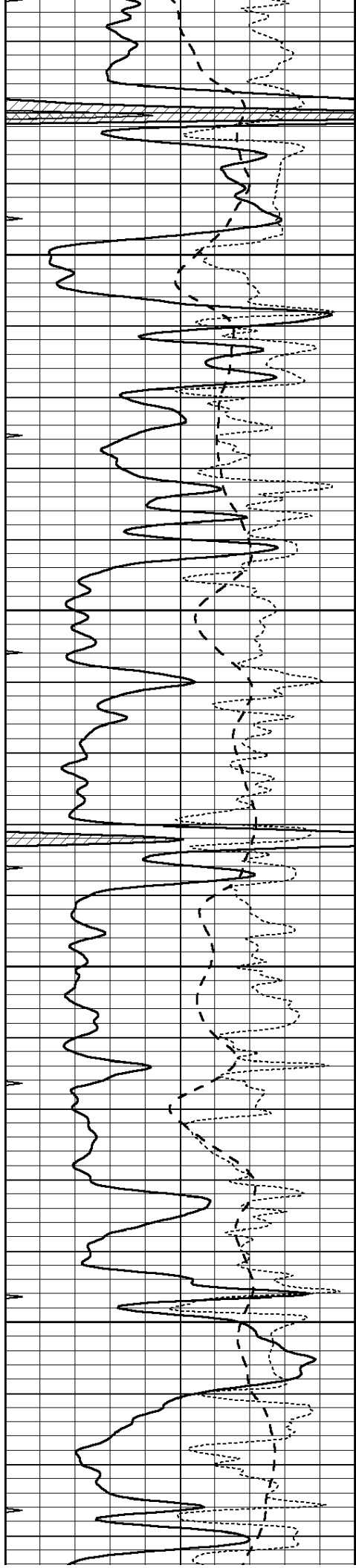
3100

3150

3200

3250



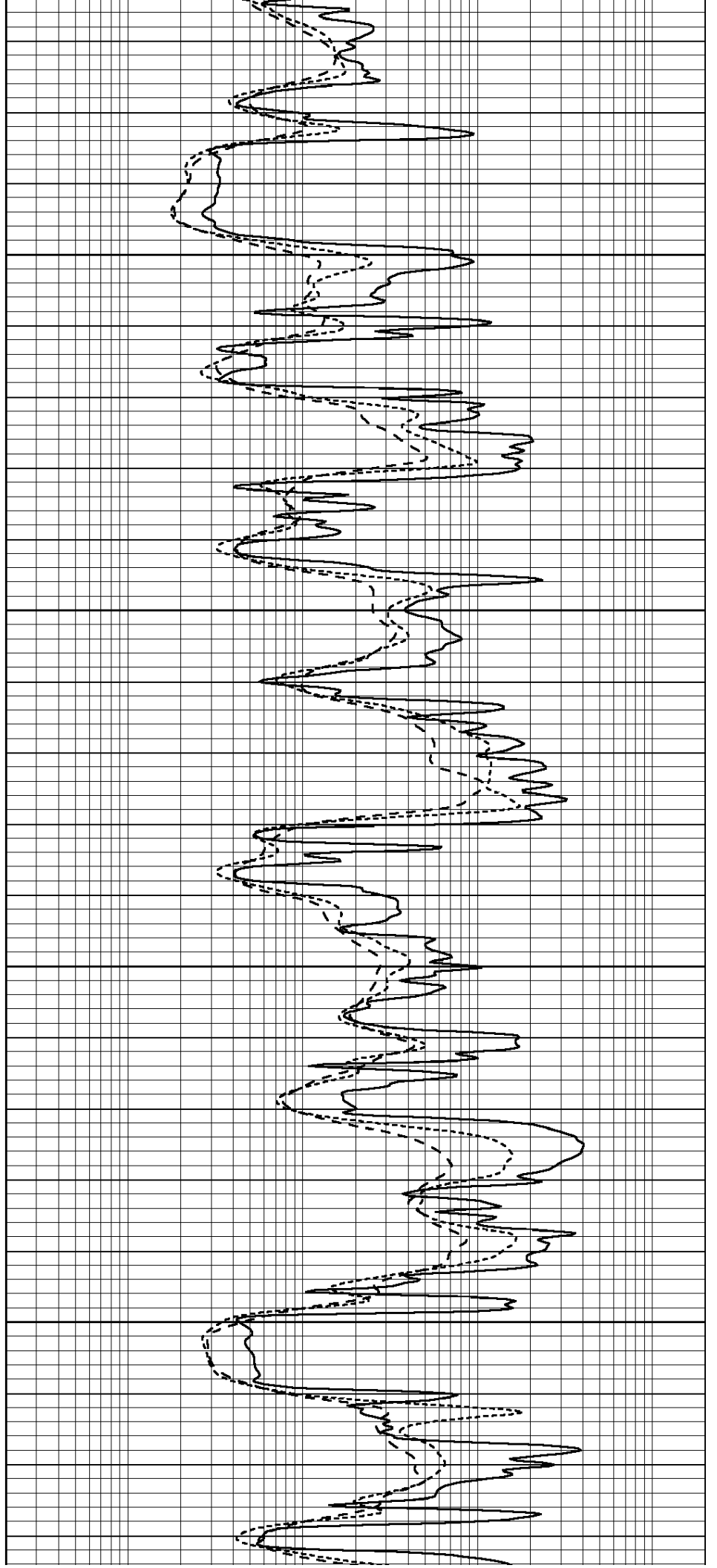


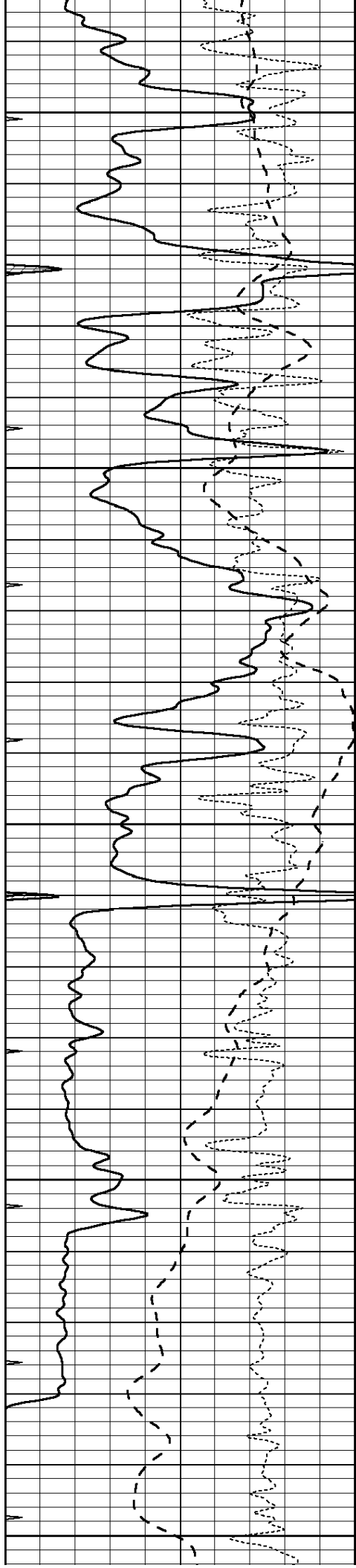
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3350

3400

3450





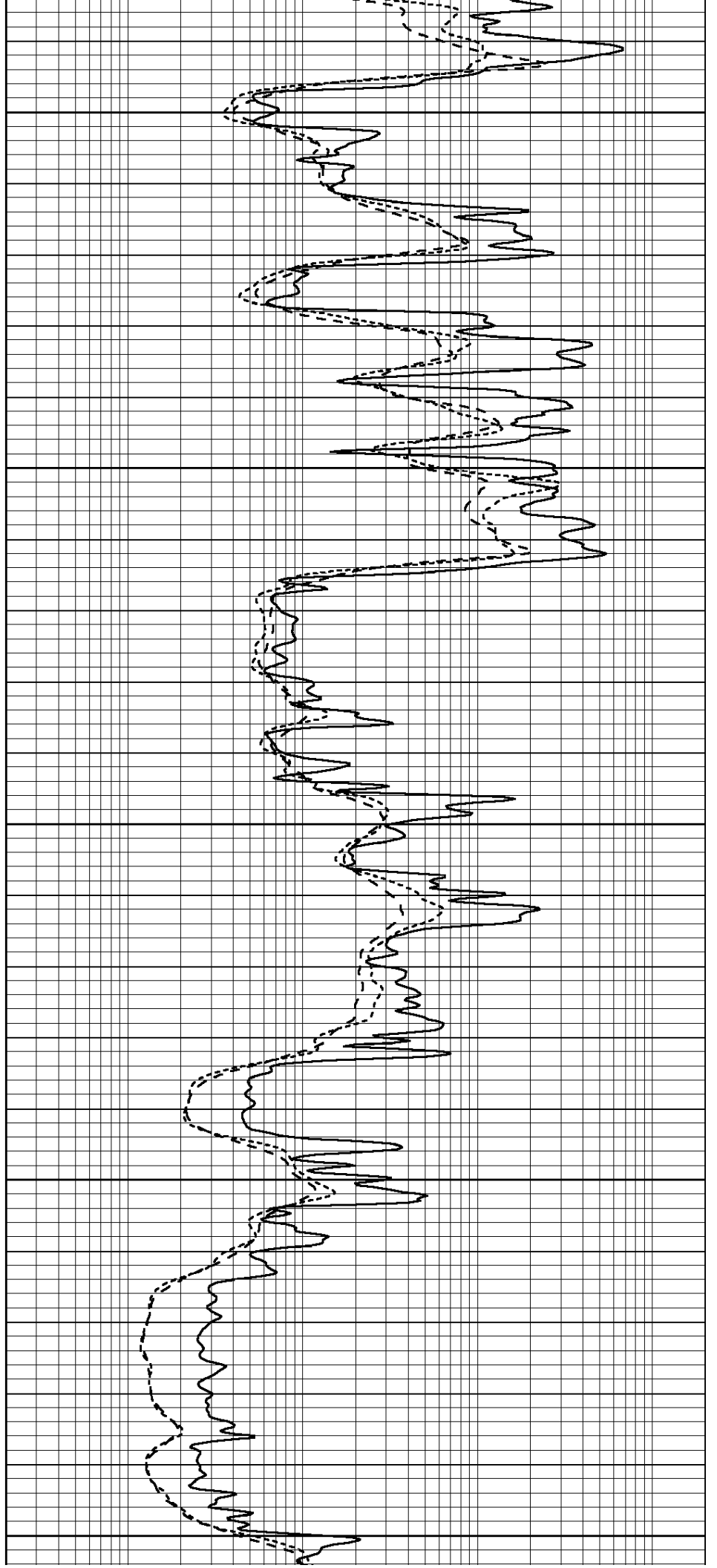
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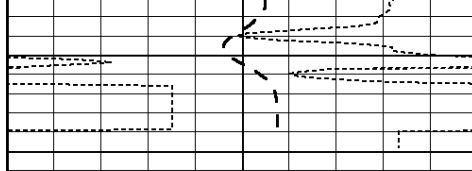
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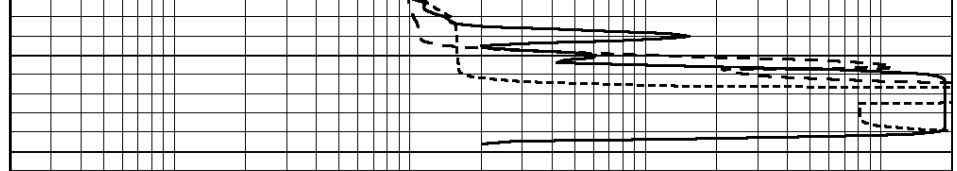
3650

3700





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



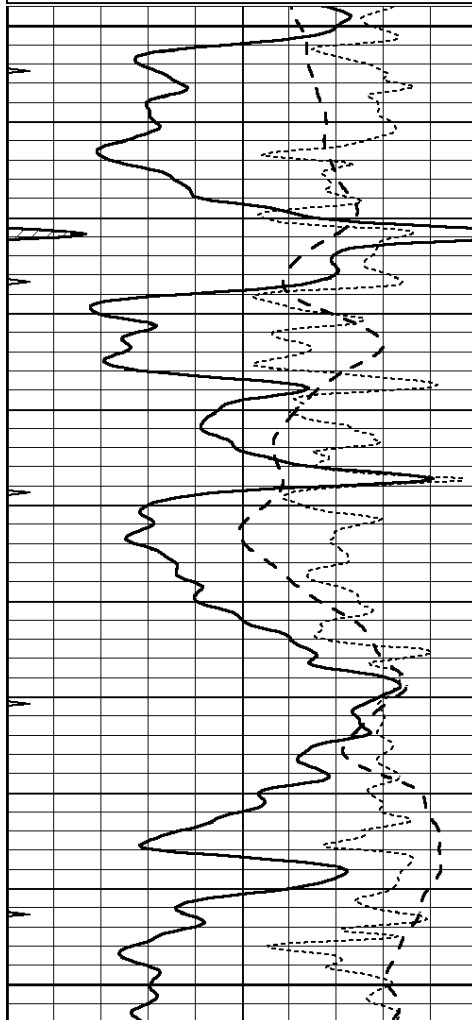
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REPEAT SECTION

Database File: 011668ddn.db
 Dataset Pathname: pass2.5
 Presentation Format: _dil
 Dataset Creation: Mon Sep 09 17:03:53 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

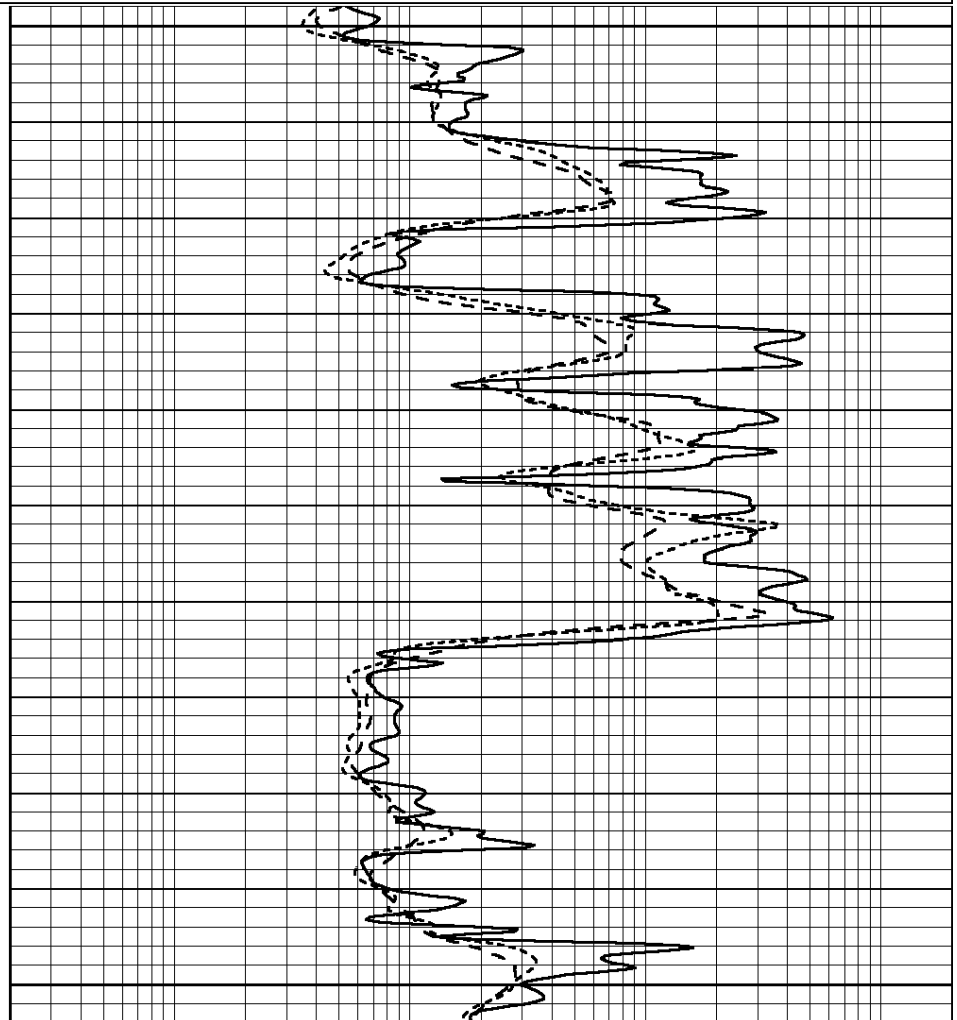
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

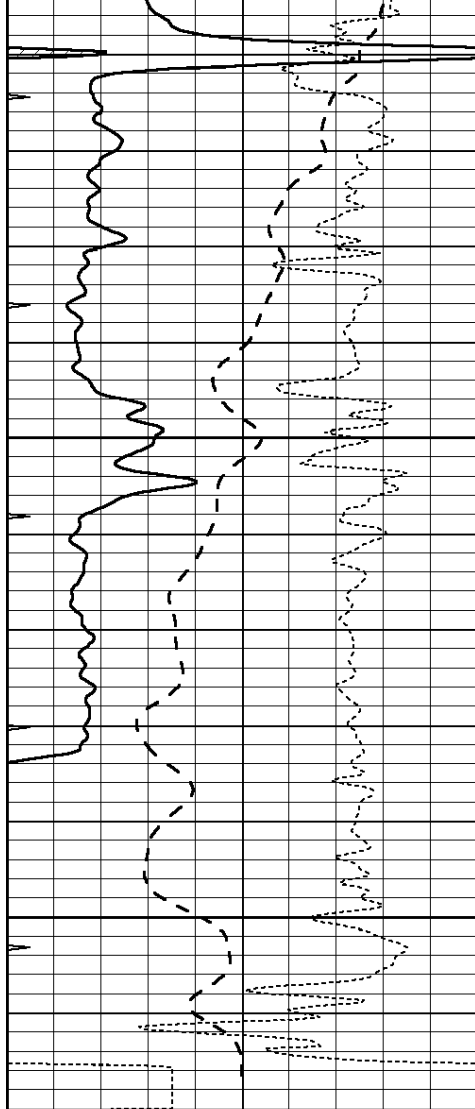


3500

3550

3600

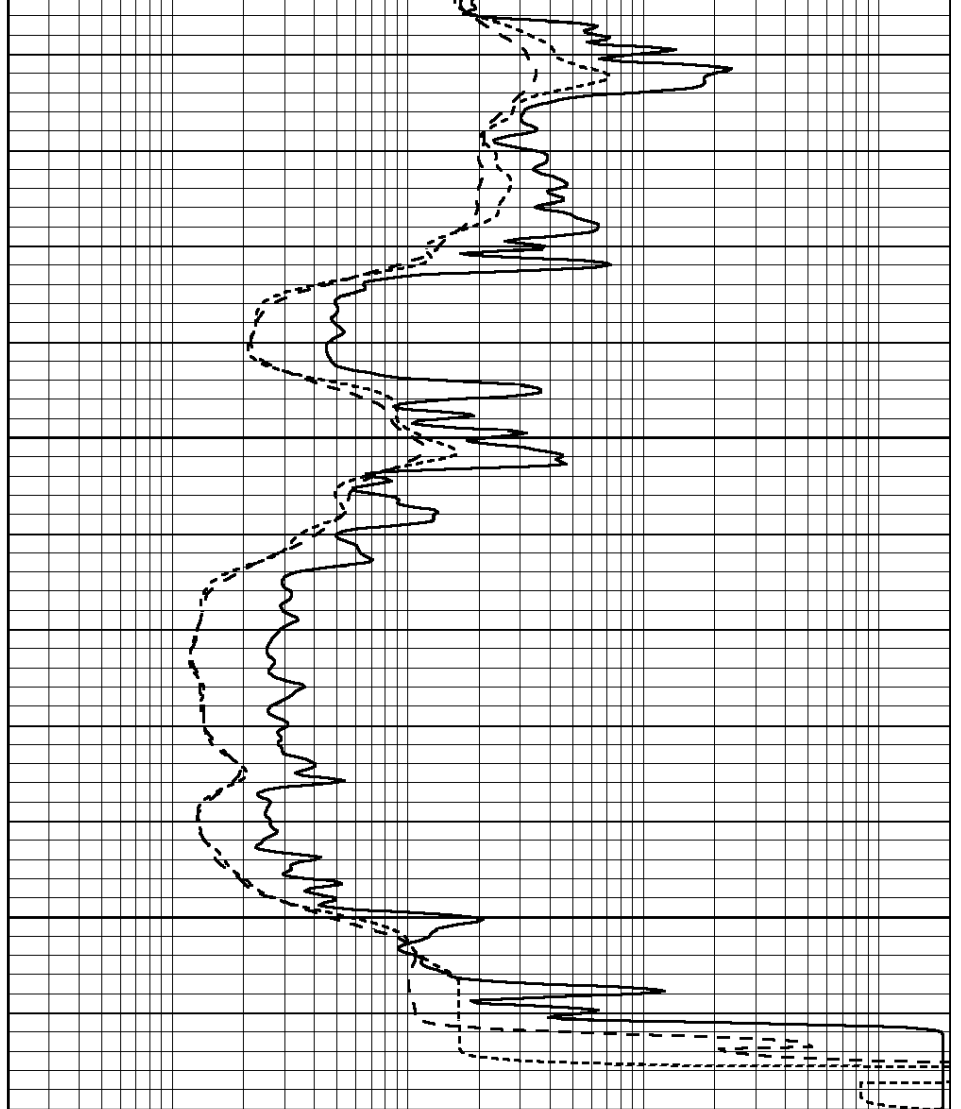




3650

3700

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: 011668ddn.db
 Dataset Pathname: pass3.7
 Dataset Creation: Mon Sep 09 18:02:23 2013

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Mon Sep 09 16:08:22 2013
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings			V	References		Results	
	Air	Loop			Air	Loop	m	b
Deep	-0.014	0.629		0.000	400.000	mmho/m	621.923	-4.000
Medium	0.039	0.728		0.000	464.000	mmho/m	640.000	-11.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610		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 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

Before Survey Verification								
Performed Wed Dec 31 18:00:00 1969								
	Background		Magnesium	Aluminum		Sandstone		
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								
	Background		Magnesium	Aluminum		Sandstone		
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 K10	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:	Wed Jun 12 18:25:42 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3500	GAPI/cps