



SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company		DOWNING - NELSON OIL COMPANY, INC.	
Well		ALMA HERL #1-13	
Field		GATSCHET SOUTHEAST	
County		ELLIS	
State		KANSAS	
Location:		API # : 15-051-26133-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 8' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 13 TWP 13S RGE 19W		Elevation	
		K.B. 2062	
		D.F. 2060	
		G.L. 2054	
Date	4/27/11		
Run Number	ONE		
Depth Driller	3753		
Depth Logger	3754		
Bottom Logged Interval	3752		
Top Log Interval	00		
Casing Driller	8 5/8"@224'		
Casing Logger	224		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 11,000PPM	
Density / Viscosity	9.2/68		
pH / Fluid Loss	9.0/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.400@75F		
Rmf @ Meas. Temp	.300@75F		
Rmc @ Meas. Temp	.480@75F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.263@114F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	11:45 A.M.		
Maximum Recorded Temperature	114F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	AL DOWNING	MARC DOWNING	

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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 SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS HAYS, KS. (ELLIS COUNTY FAIRGROUNDS) 1/2 MILE W. OF 220 AVE., 1/2N. INTO



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MAIN SECTION

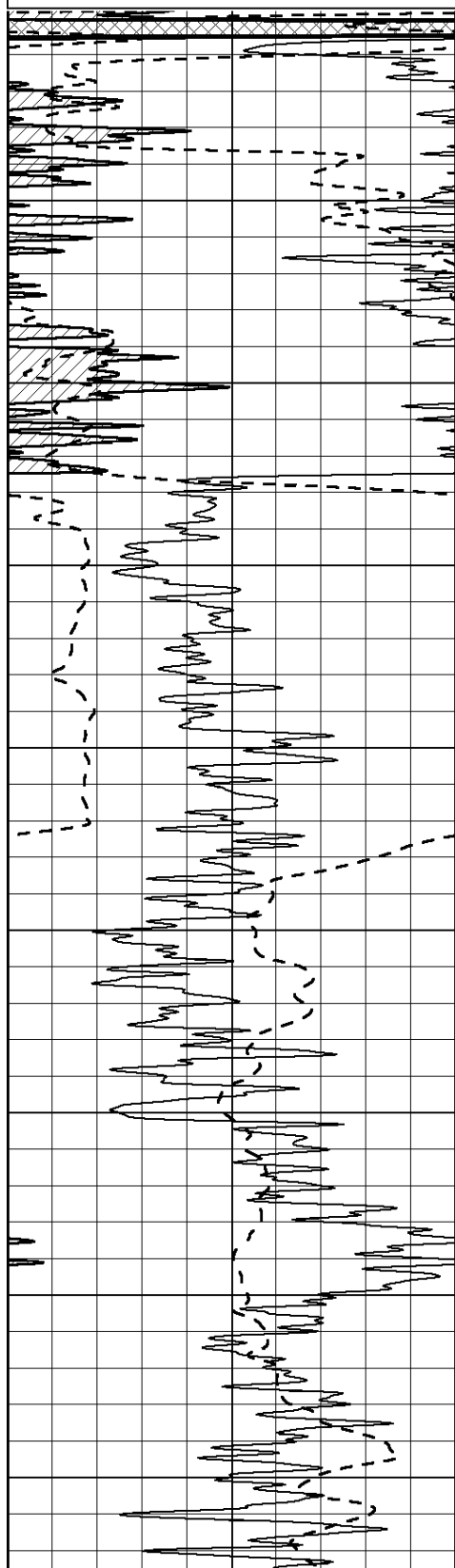
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Dataset Pathname: pass3.3
Presentation Format: dil2
Dataset Creation: Wed Apr 27 13:13:45 2011 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

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

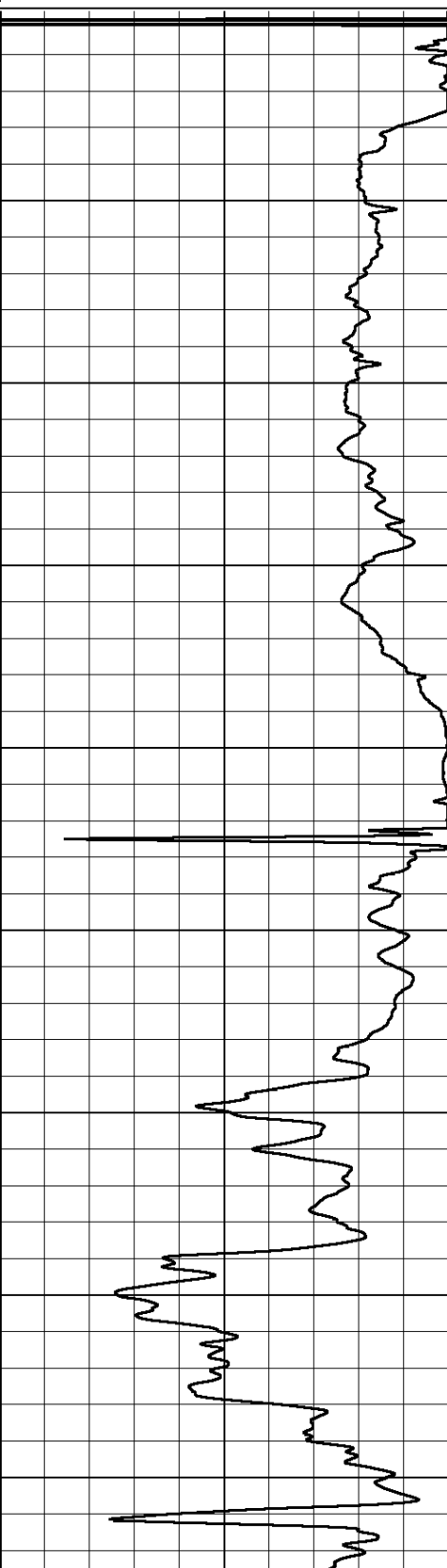
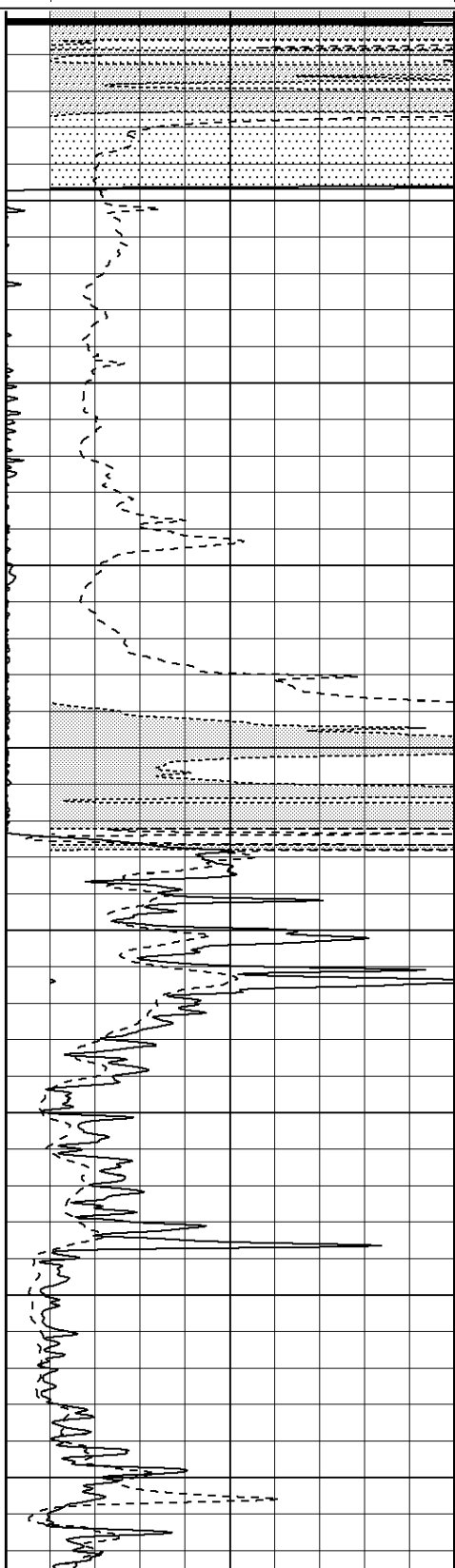
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0	RILD (Ohm-m)	50

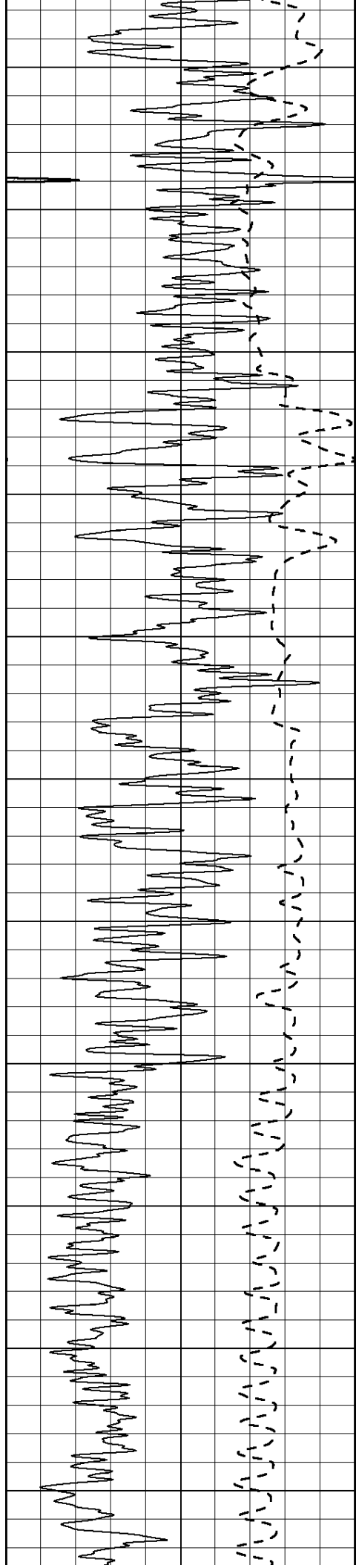
1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



0
50
100
150
200
250
300
350
400





450

500

550

600

650

700

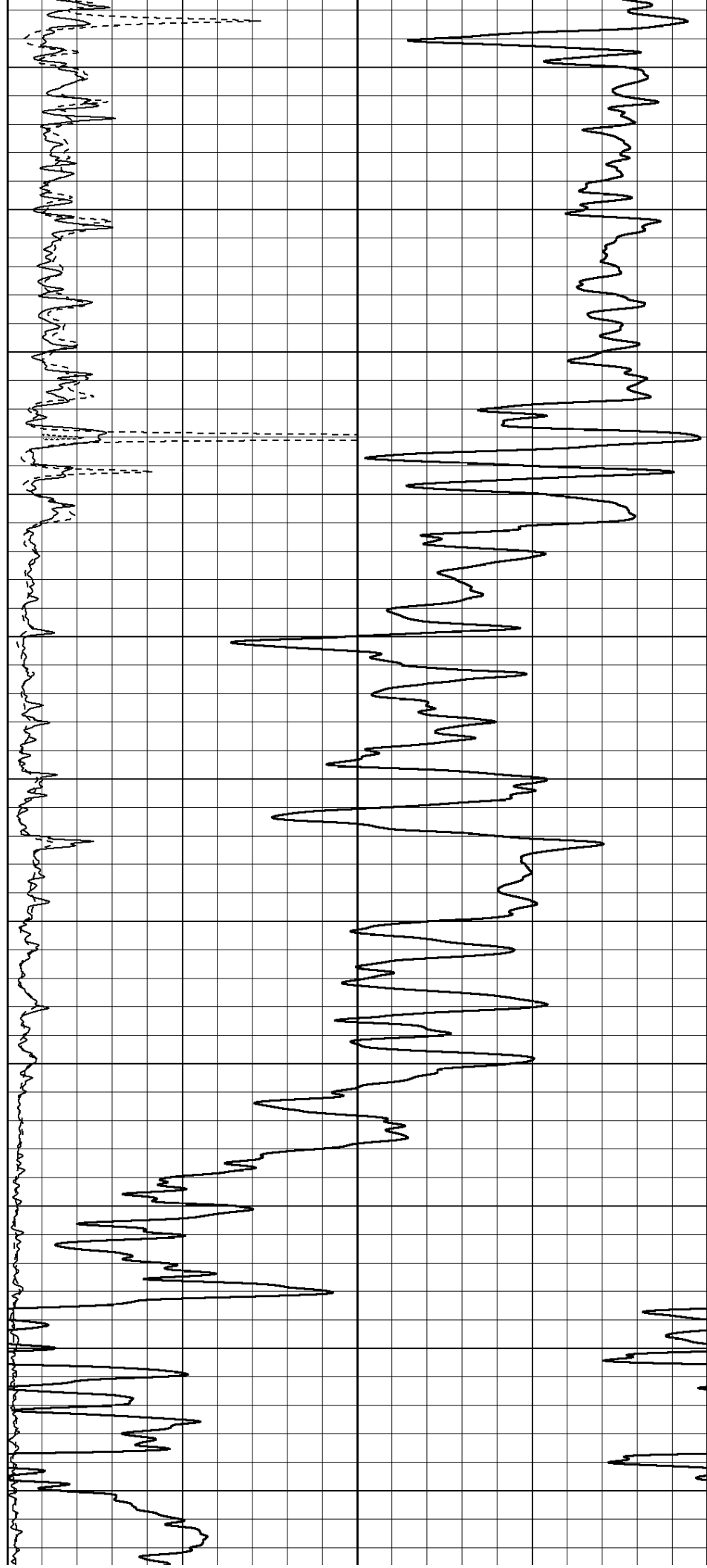
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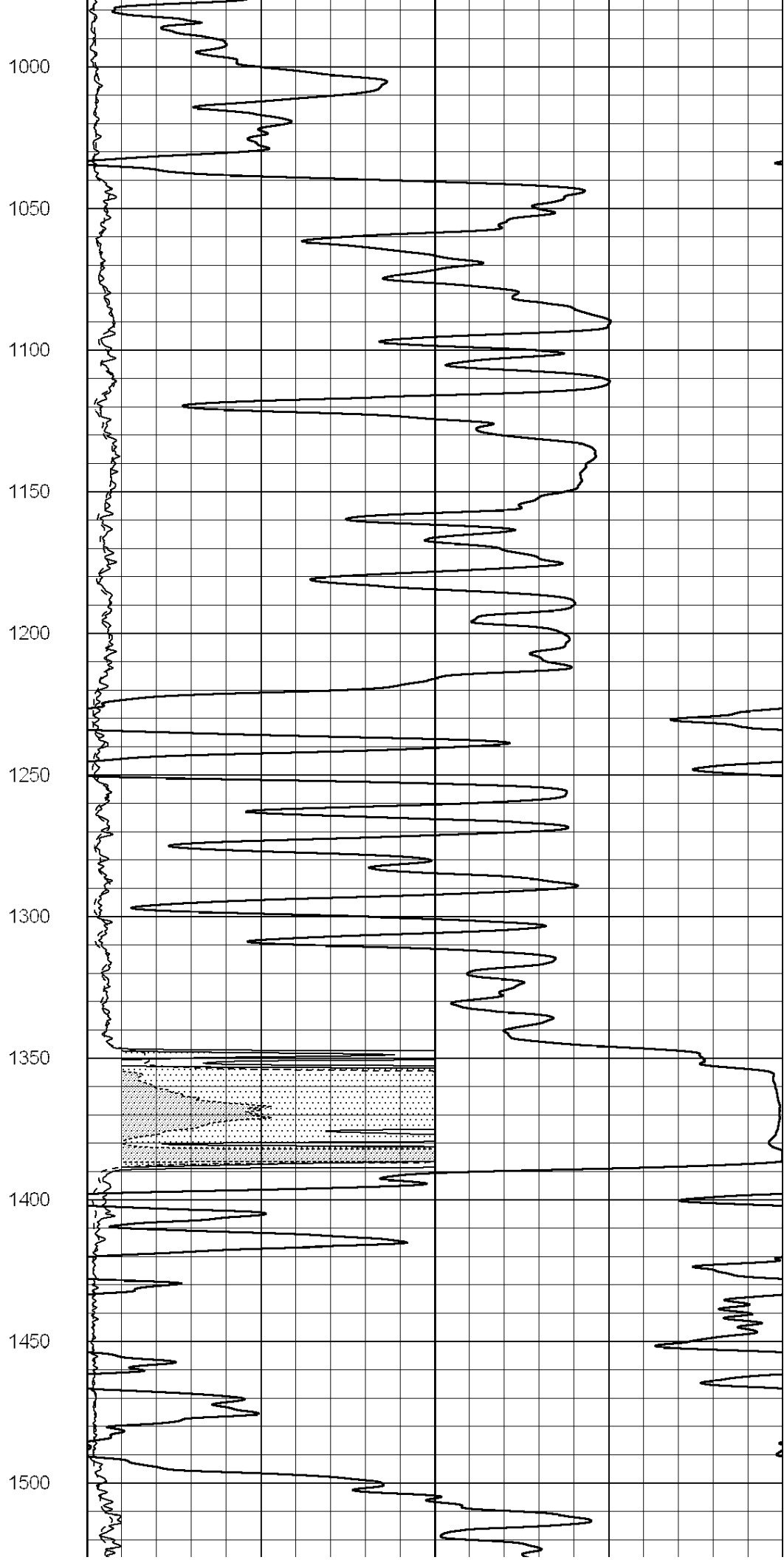
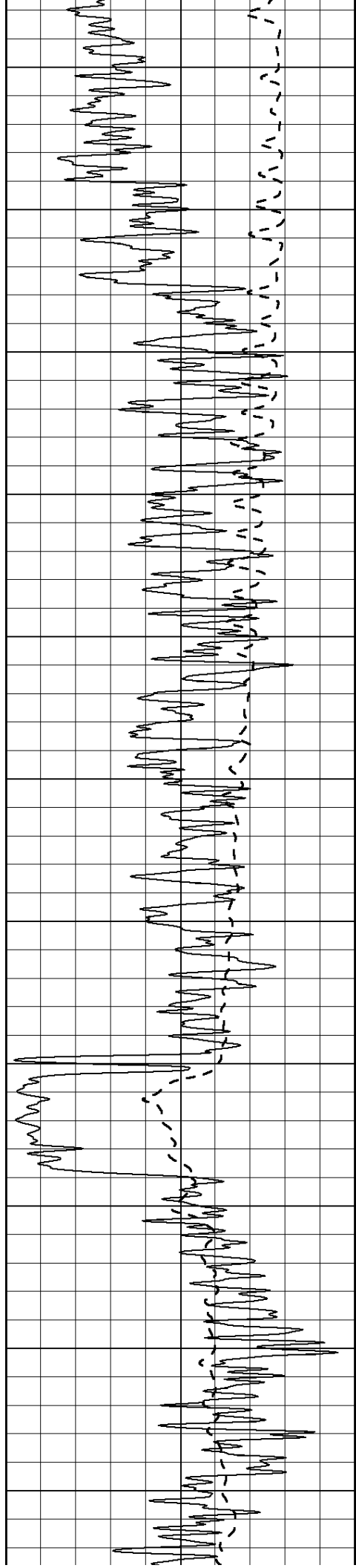
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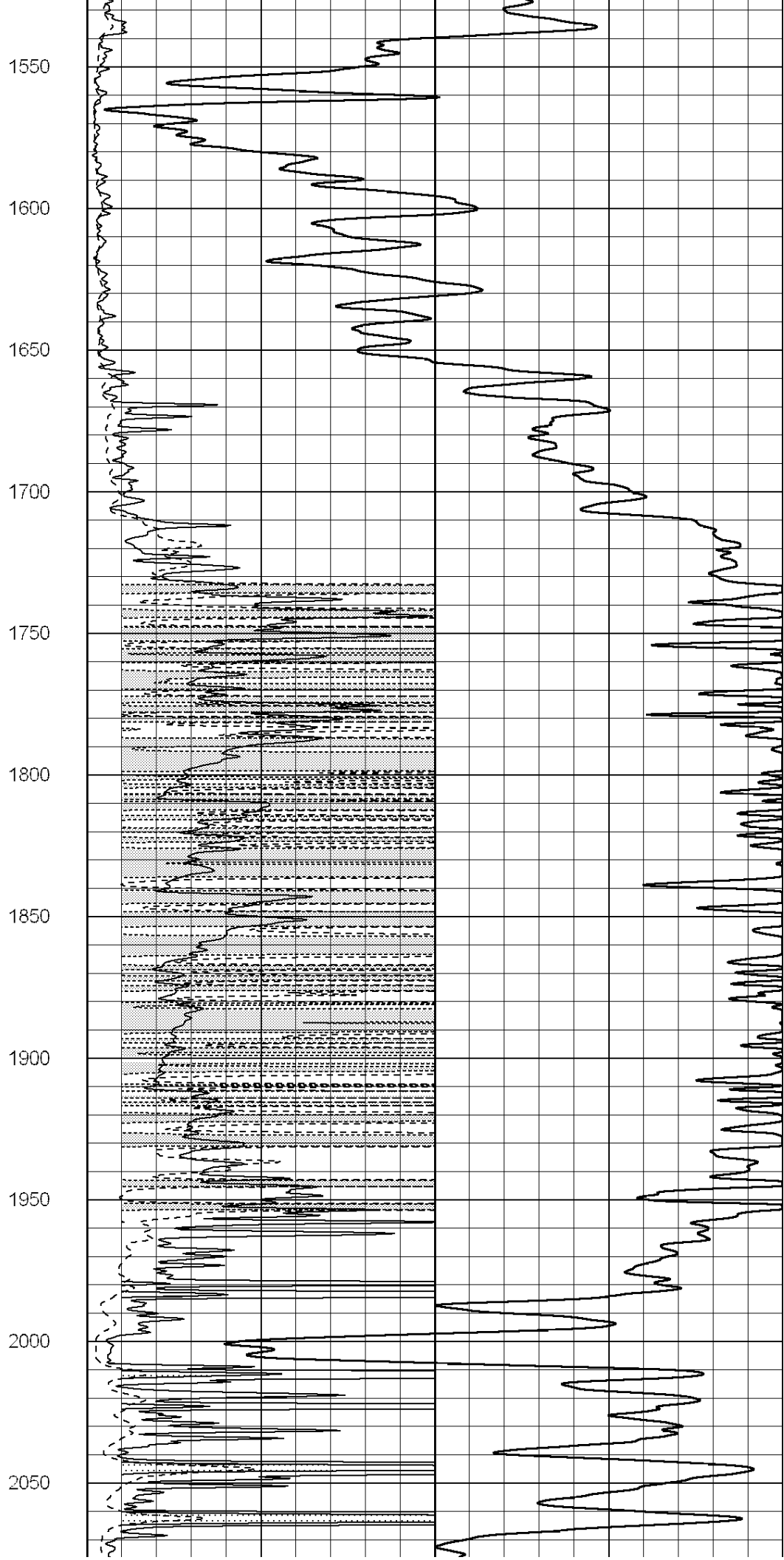
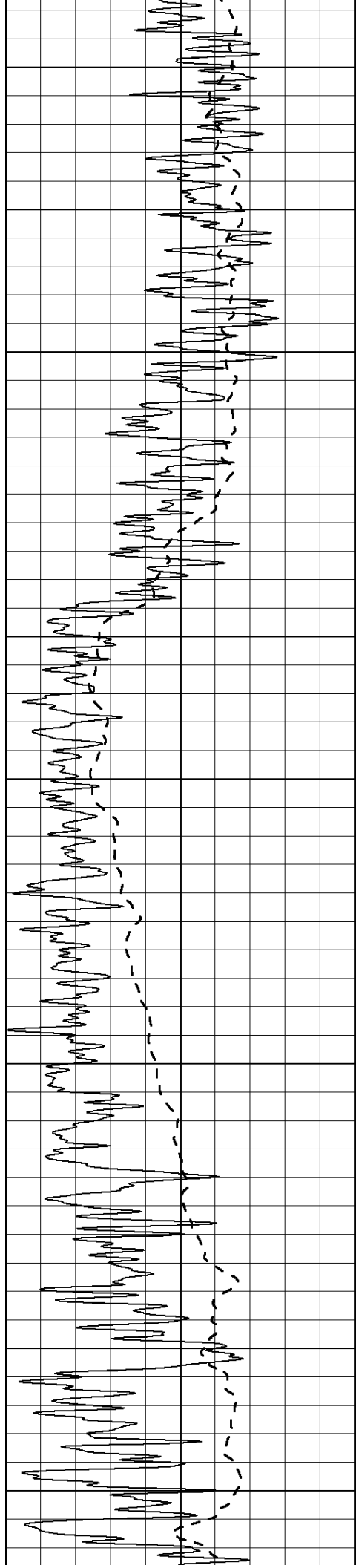
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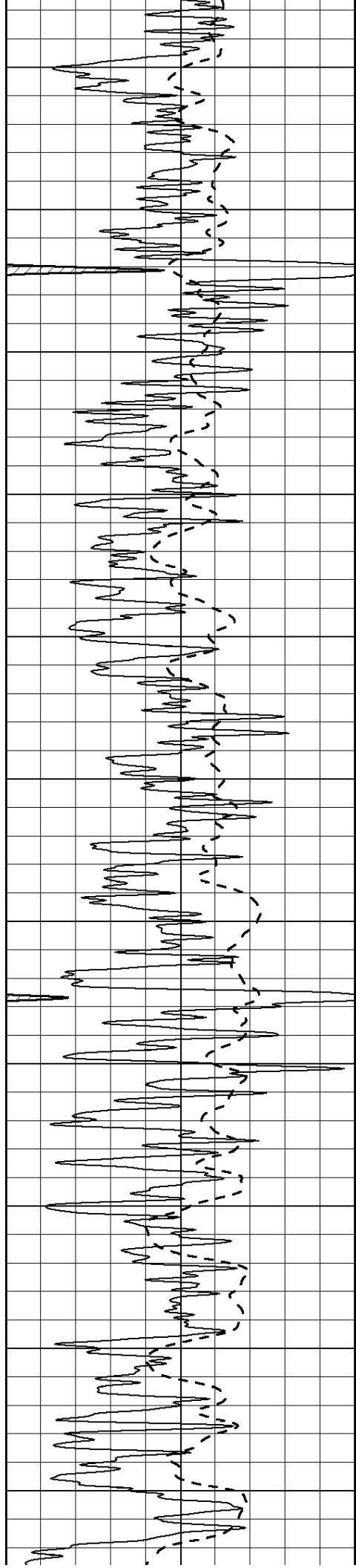
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950









2100

2150

2200

2250

2300

2350

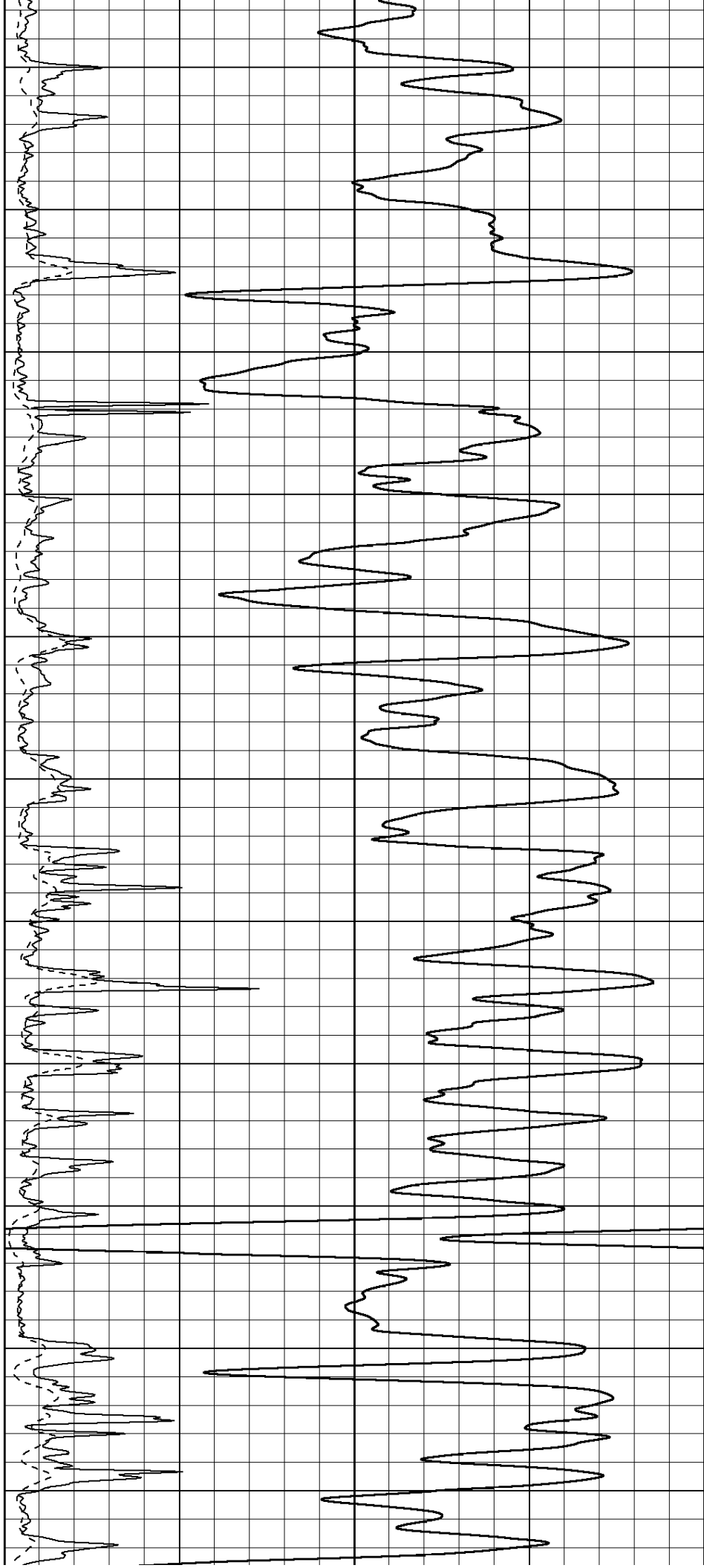
2400

2450

2500

2550

2600



2650

2700

2750

2800

2850

2900

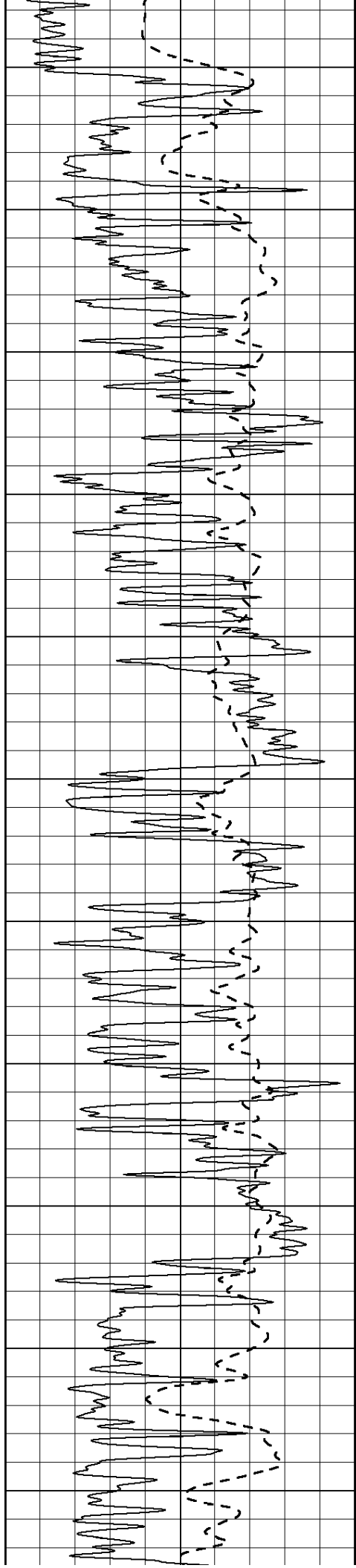
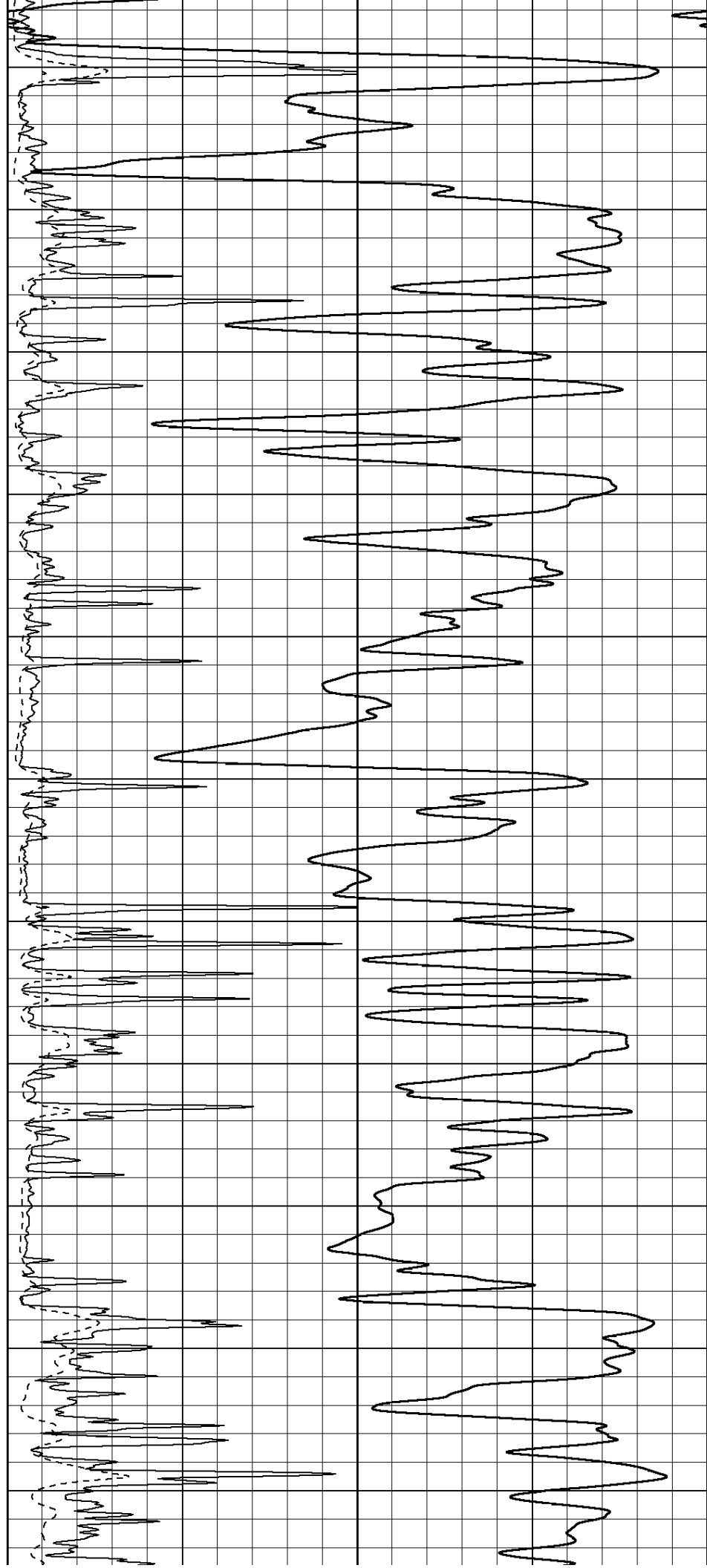
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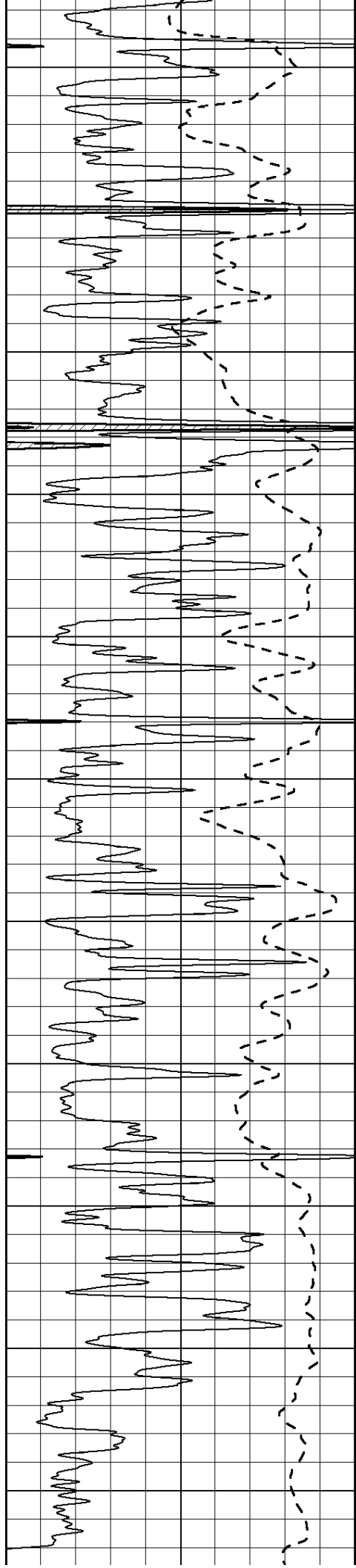
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3050

3100

3150





3200

3250

3300

3350

3400

3450

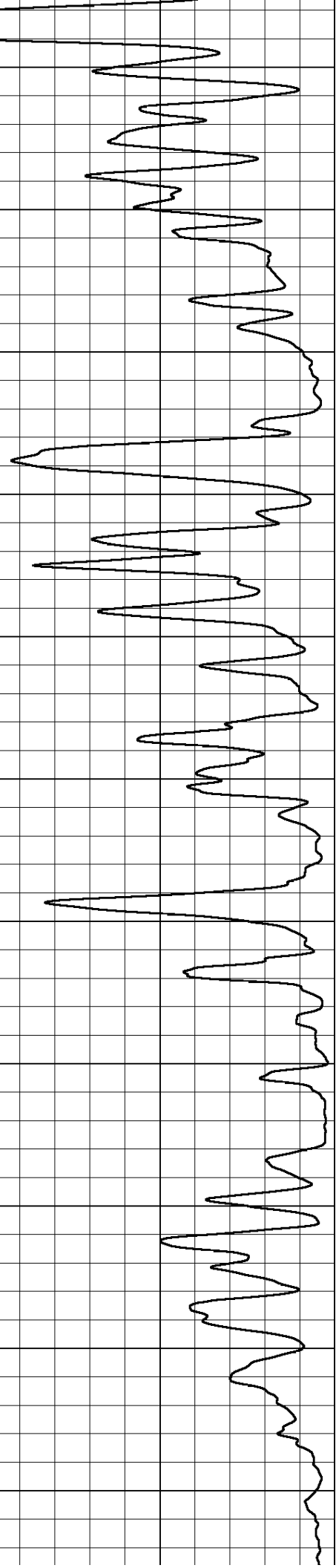
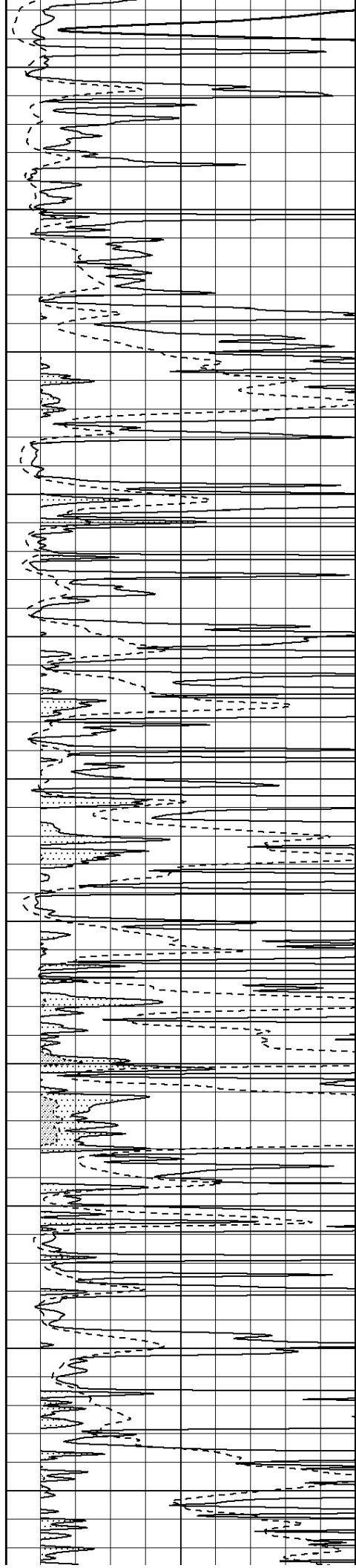
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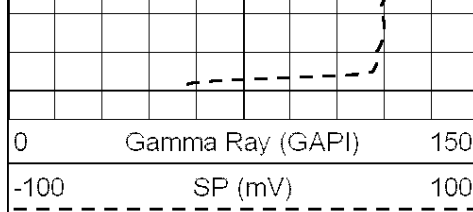
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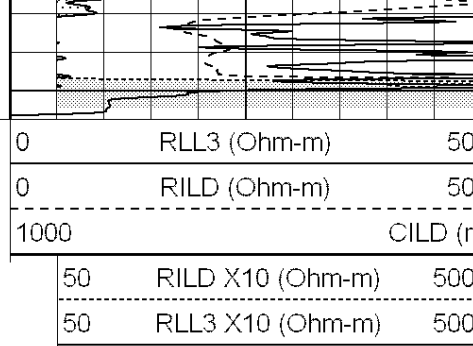
3650

3700





3750



CILD (mmho/m)

0

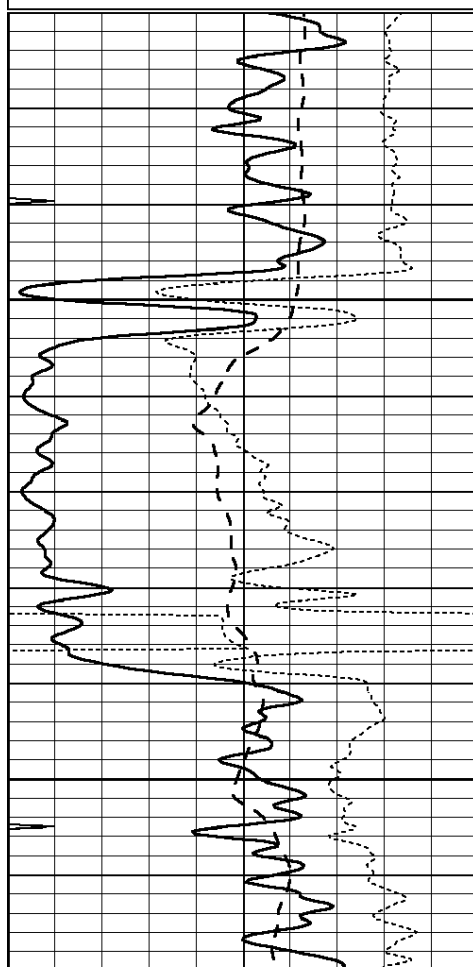
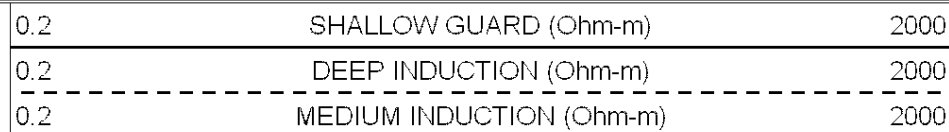
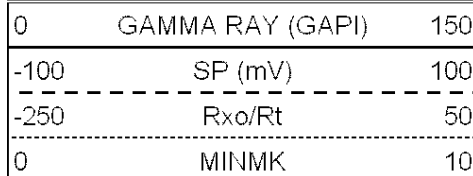
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



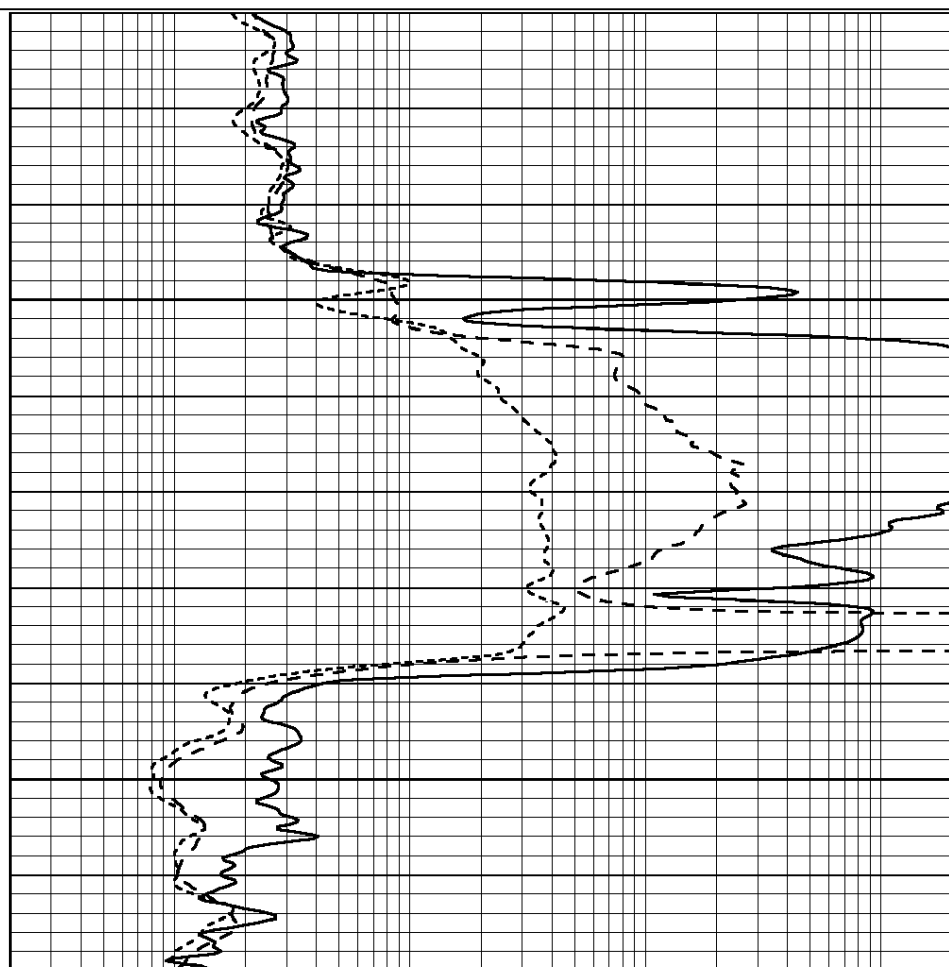
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ANHYDRITE

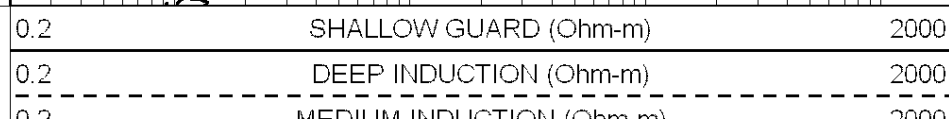
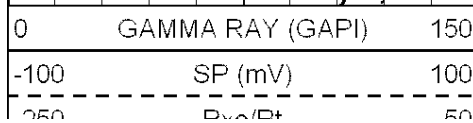
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Dataset Pathname: pass3.4
Presentation Format: dil
Dataset Creation: Wed Apr 27 13:13:59 2011 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240



1350



1400



250	Rxo/Rt	50
0	MINMK	10

0.2	MEDIUM INDUCTION (Ohm-m)	2000
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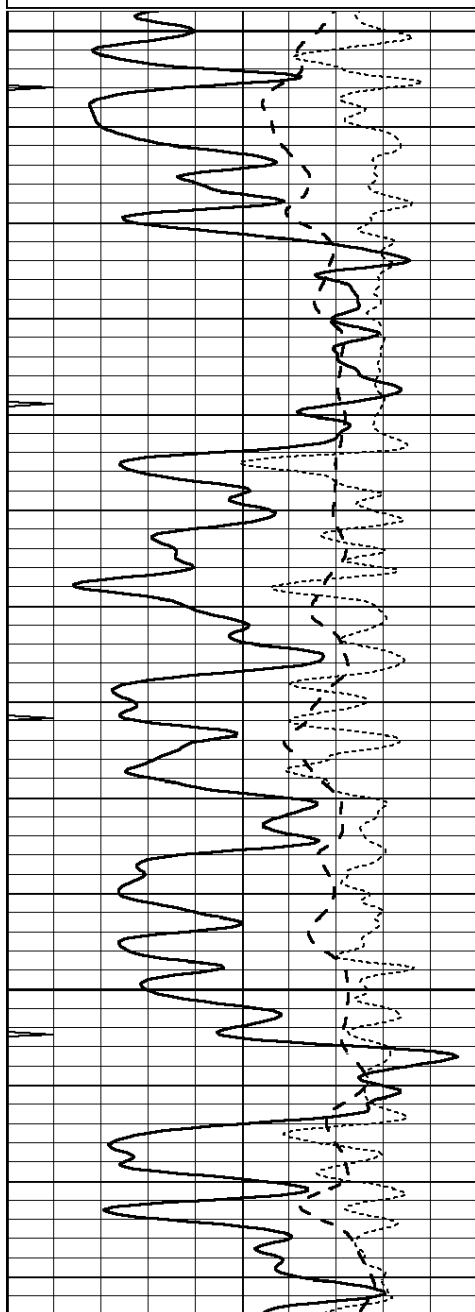
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MAIN SECTION

Database File: 006818ddn.db
Dataset Pathname: pass3.3
Presentation Format: dil
Dataset Creation: Wed Apr 27 13:13:45 2011 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	MINMK	10

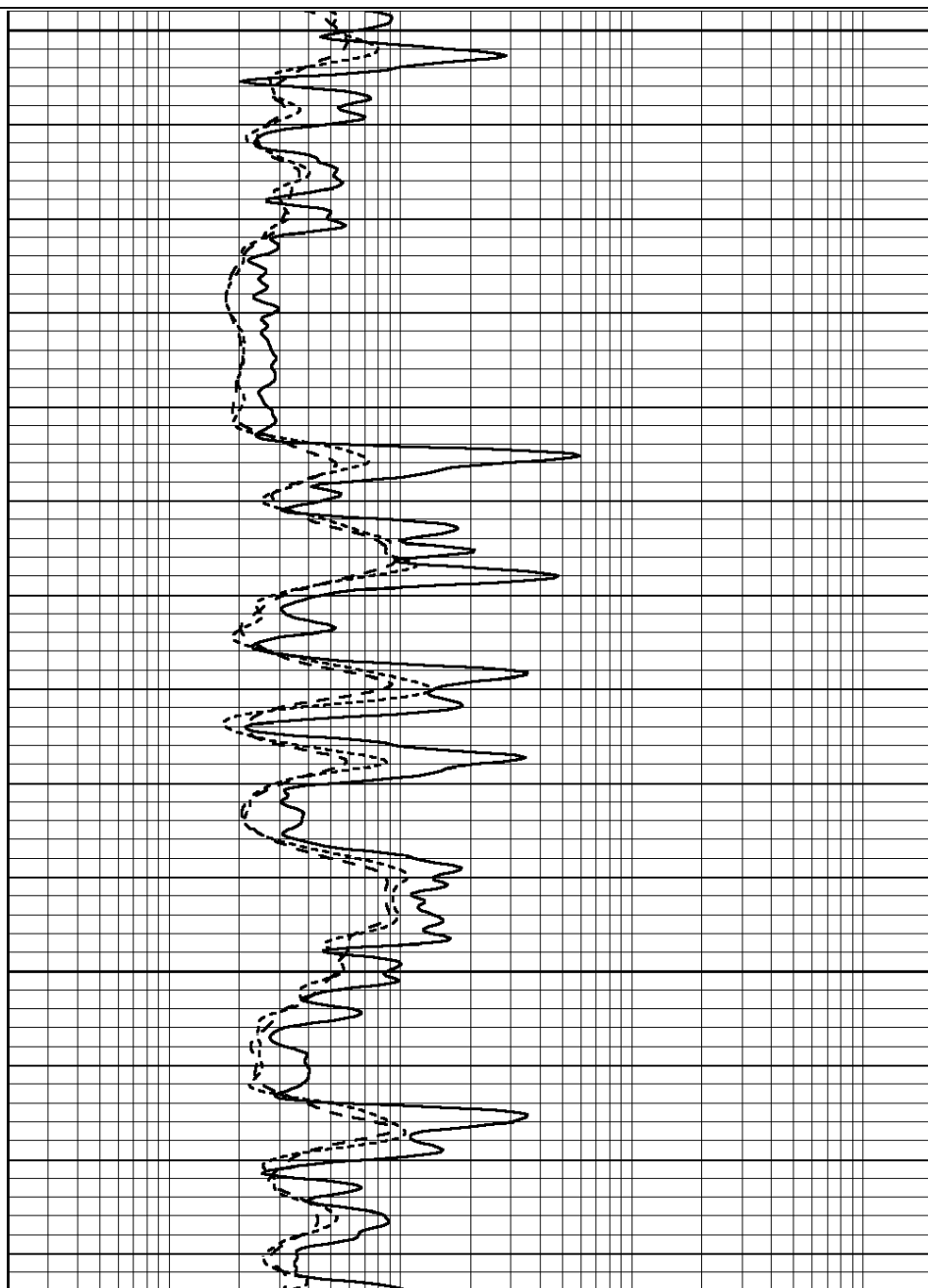
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

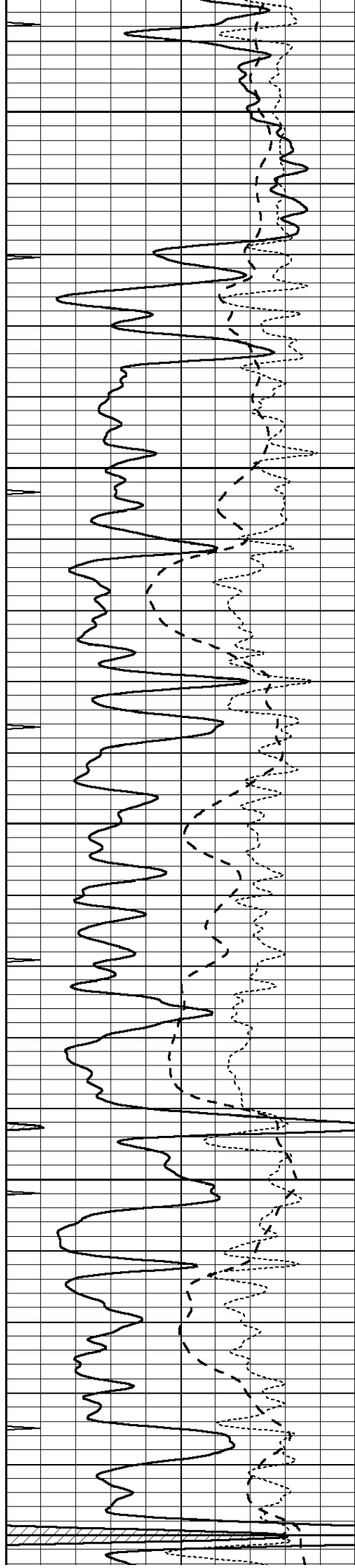


2900

2950

3000





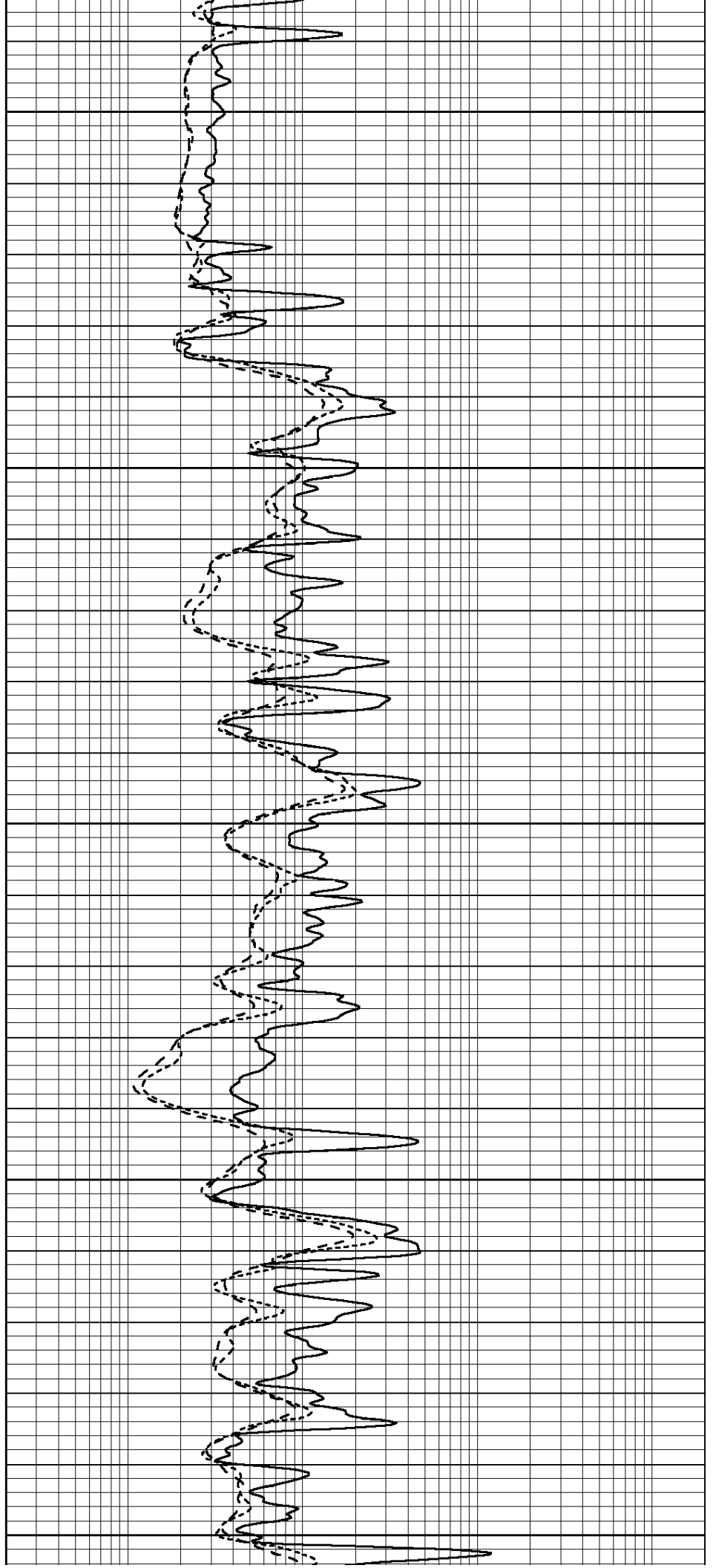
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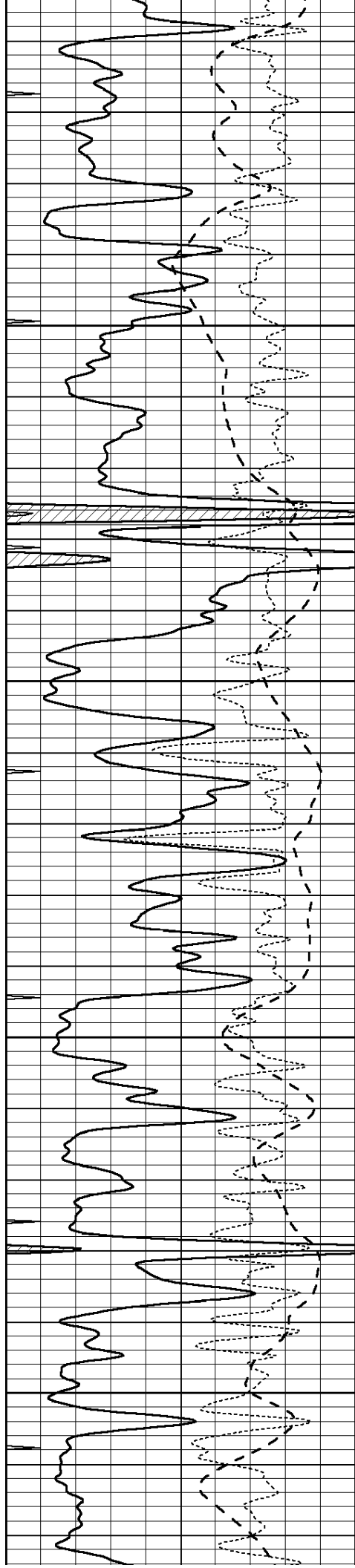
3100

3150

3200

3250



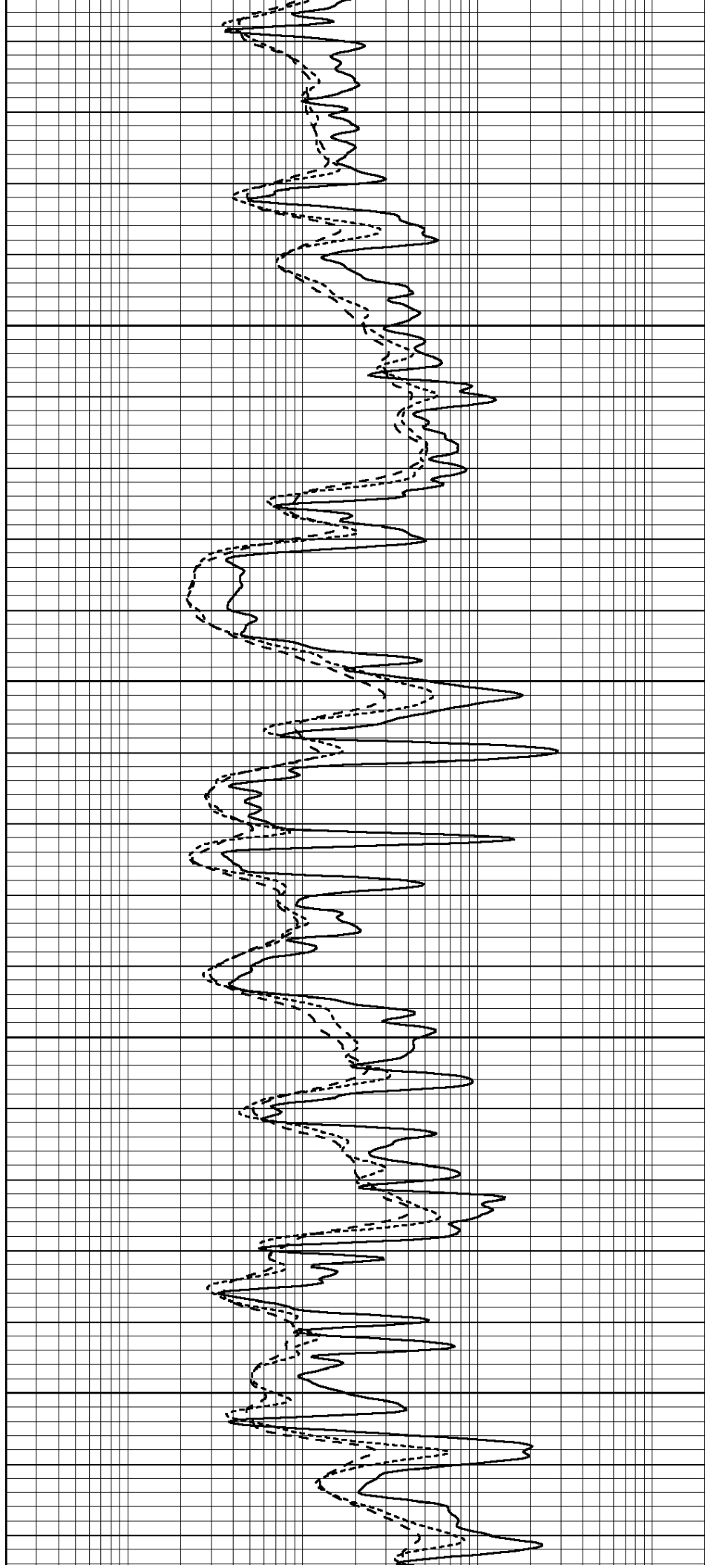


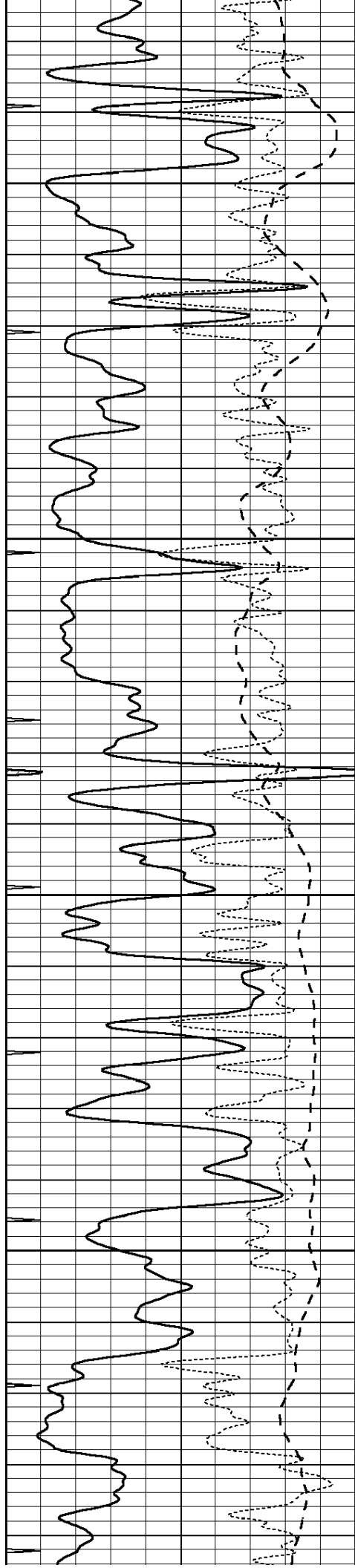
3300

3350

3400

3450



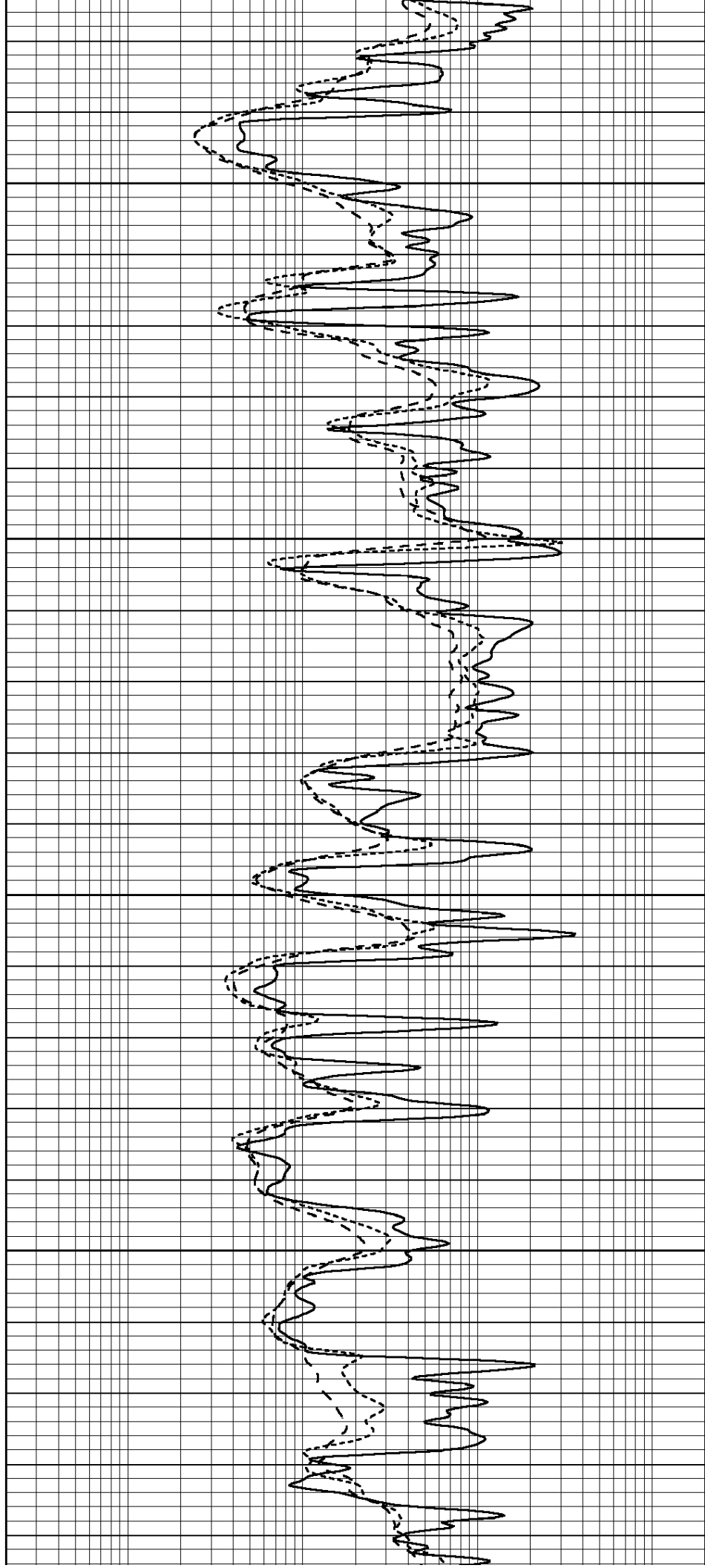


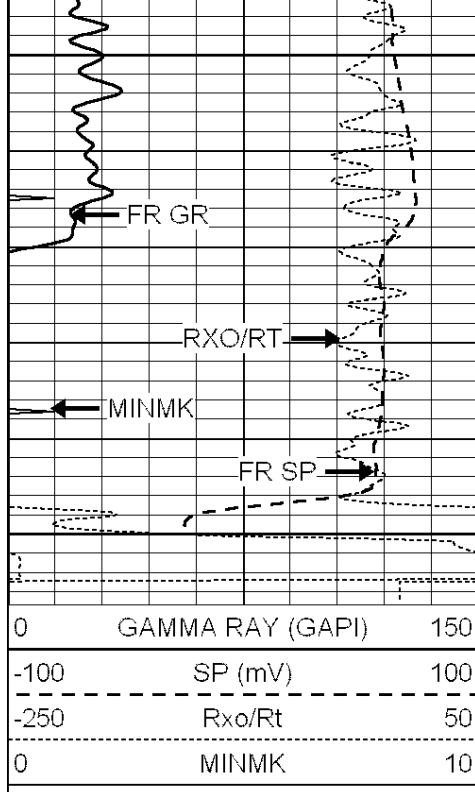
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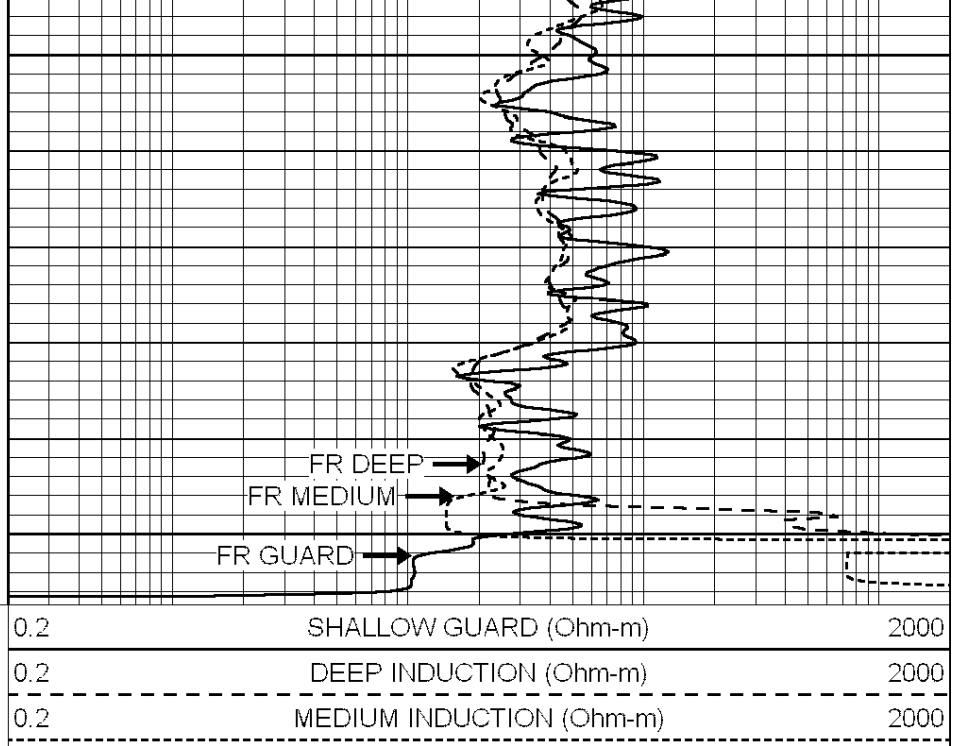
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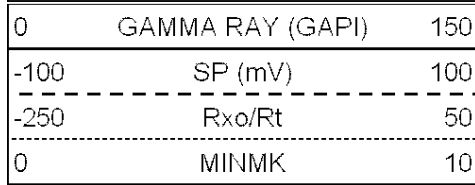
3700
3750
LTD 3754



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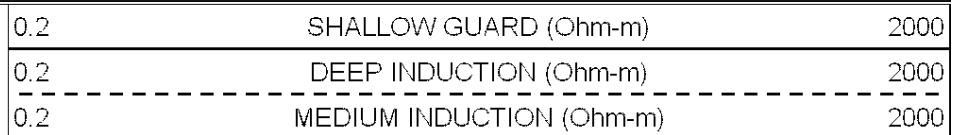
REPEAT SECTION

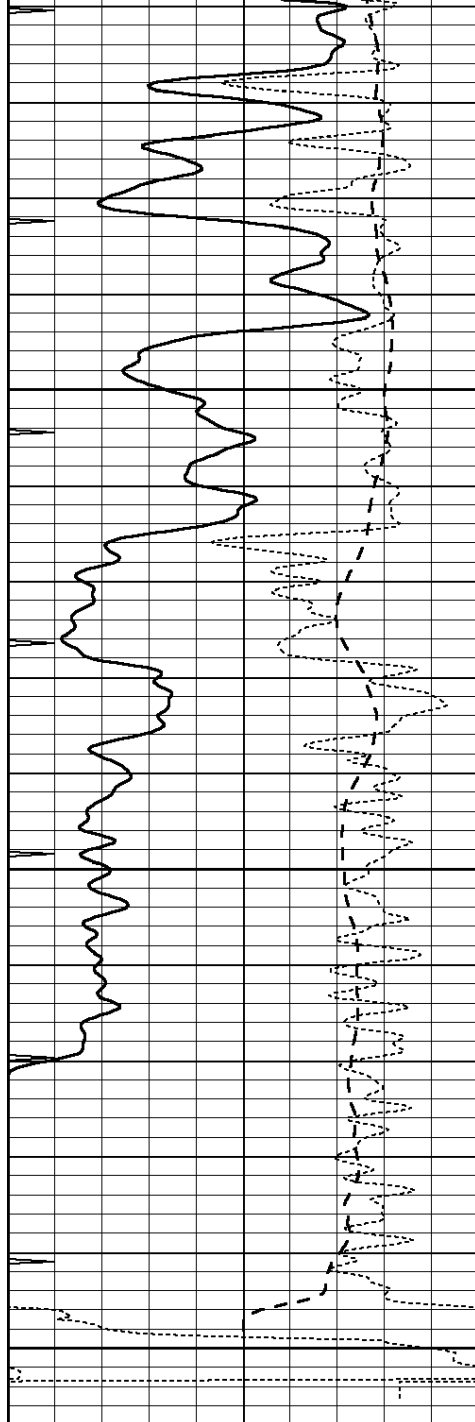
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Dataset Creation: Wed Apr 27 12:11:14 2011
Charted by: Depth in Feet scaled 1:240



3550

3600



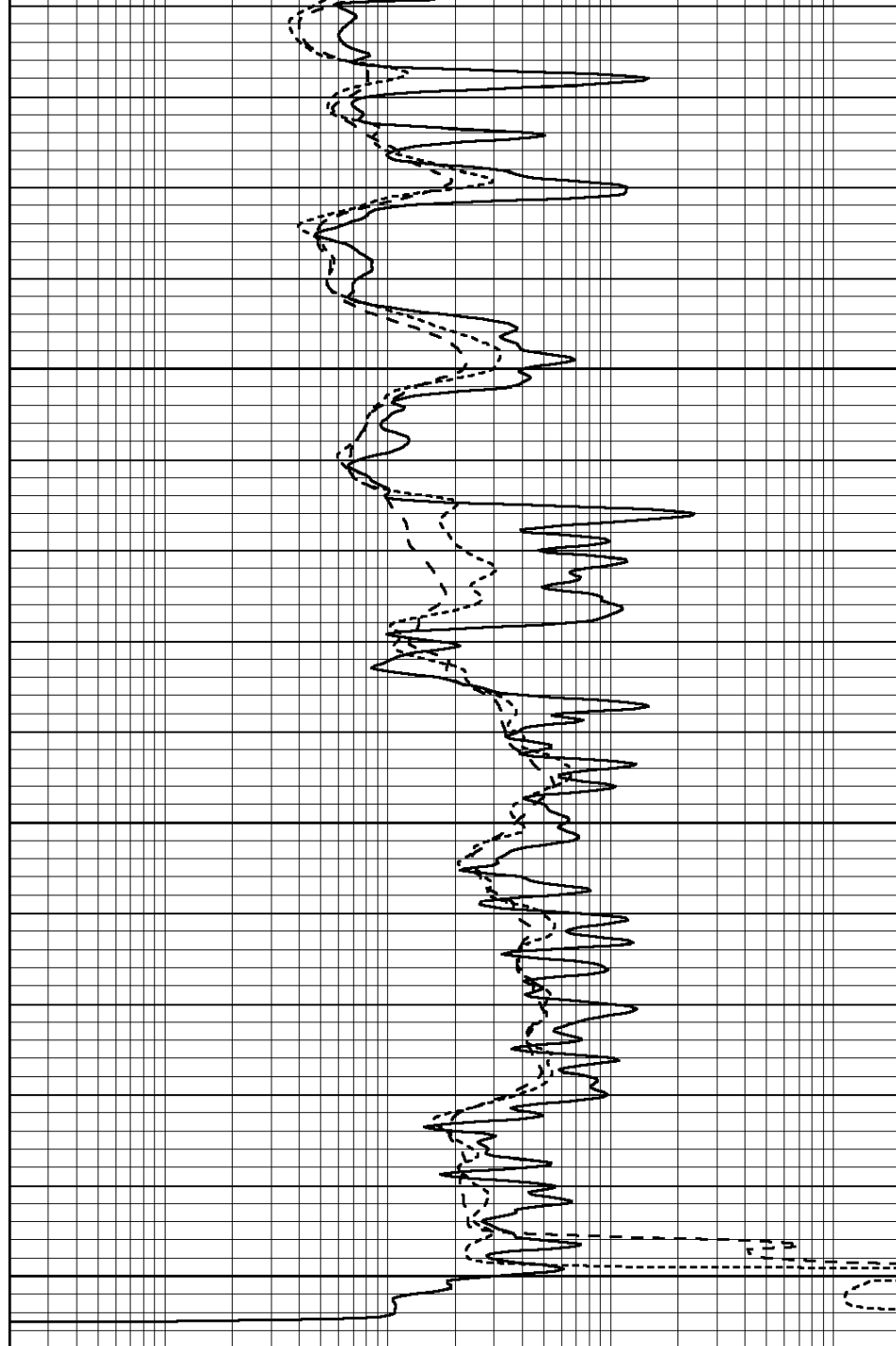


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

3650

3700

3750



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: 006818ddn.db
 Dataset Pathname: pass3.3
 Dataset Creation: Wed Apr 27 13:13:45 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Sat Apr 23 10:25:26 2011

Readings

References

Results

Loop:	All	Loop		All	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	-1.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-14.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report
Serial: 003N Model: PRB
Performed Tue Sep 08 14:14:44 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2042.6	12312.8	4225.8	13758.4	cps
Window 2	1855.8	10134.7	3624.2	11113.1	cps
Window 3	1639.4	6760.2	2716.3	7260.3	cps
Window 4	466.4	469.2	466.1	476.5	cps
Long Space	0.0	8278.9	1768.4	9257.4	cps
Short Space	2.2	2377.3	1544.1	2574.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.549
Spine Angle	: 74.4	Spine Slope	: 3.577	Spine Intercept	: -18.8

Caliper

	Readings	Reference	
Low Ref	2.1	7.2	
High Ref	4.4	14.0	
Gain: 2.9			Offset: 1.1

Compensated Neutron Calibration Report

Serial Number: NEU_3I
Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	997.00 cps	1000.00 cps	1.0000
Long Space	986.00 cps	1000.00 cps	1.0000

Gamma Ray Calibration Report

Serial Number: GR3
Tool Model: OPEN
Performed: Wed Apr 27 11:40:32 2011

Calibrator Value: 200.0 GAPI

Background Reading: 3.0 cps
Calibrator Reading: 186.0 cps

Sensitivity: 0.7000 GAPI/cps