



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company RED OAK ENERGY, INC.
Well BROWN #9-1
Field WILDCAT
County GRAHAM
State KANSAS

Company RED OAK ENERGY, INC.
Well BROWN #9-1
Field WILDCAT
County GRAHAM State KANSAS

Location: API #: 15-065-24068
SEC 9 TWP 7S RGE 24W
2125' FSL & 420' FWL
Permanent Datum GROUND LEVEL Elevation 2518
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
SONIC/MEL
Elevation
K.B. 2523
D.F.
G.L. 2518

Date	11-13-14
Run Number	ONE
Depth Driller	4050
Depth Logger	4050
Bottom Logged Interval	4048
Top Log Interval	00
Casing Driller	303
Casing Logger	306
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	8.9 / 50
pH / Fluid Loss	10.3 / 6.4
Source of Sample	FLOWLINE
Rim @ Meas. Temp	1.20 @ 70F
Rmf @ Meas. Temp	0.90 @ 70F
Rmc @ Meas. Temp	1.44 @ 70F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	.730 @ 115F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	7:30 P.M.
Maximum Recorded Temperature	115F
Equipment Number	3802
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	SEAN DEENIHAN

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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

NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: HILL CITY, 9W TO RD. #170, 6N TO RD.W, 3/4E, N INTO.



**COMPLETION
& PRODUCTION**

MAIN SECTION

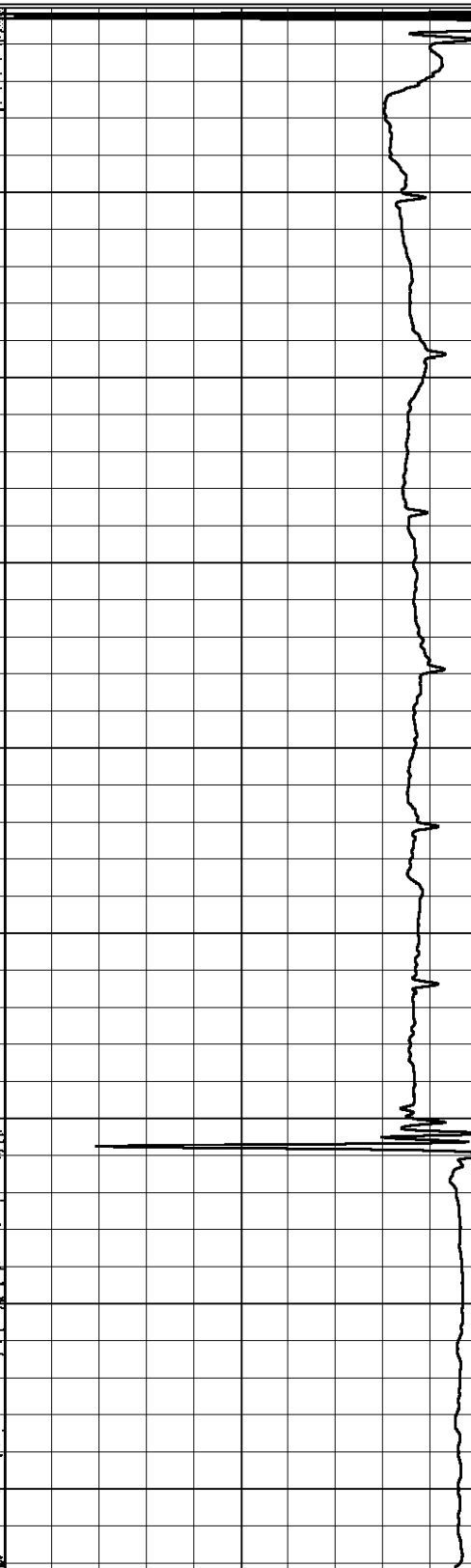
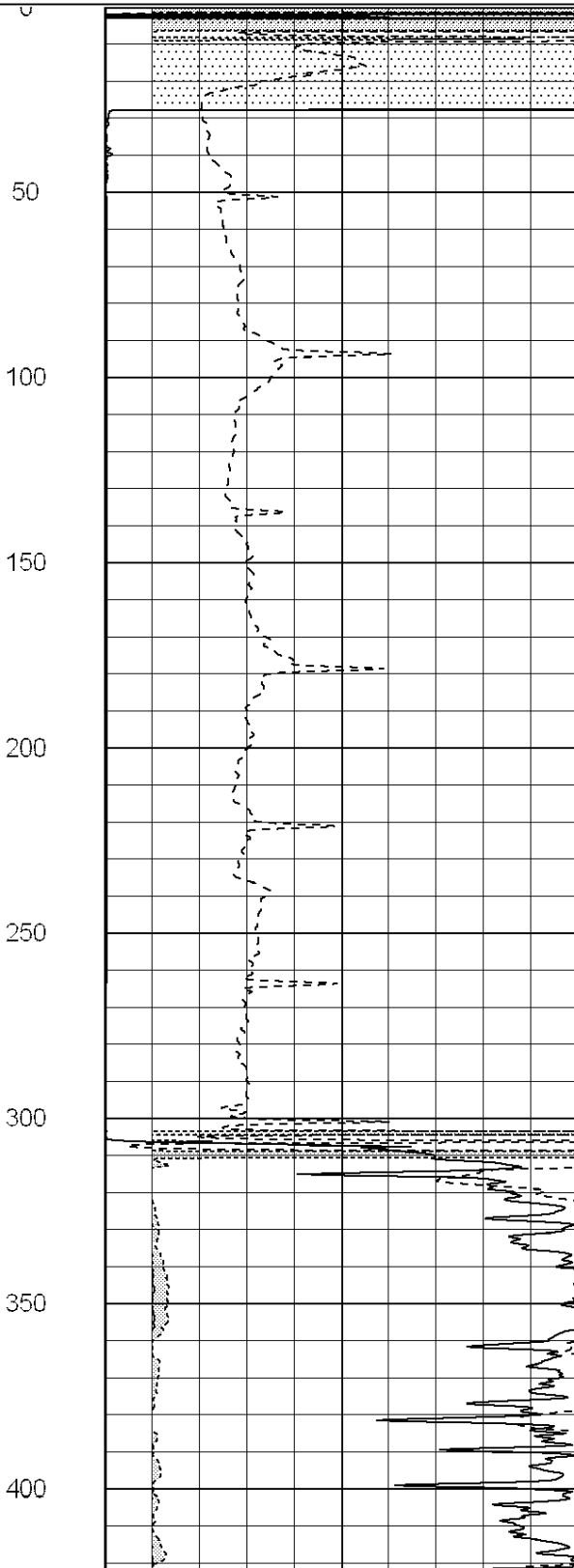
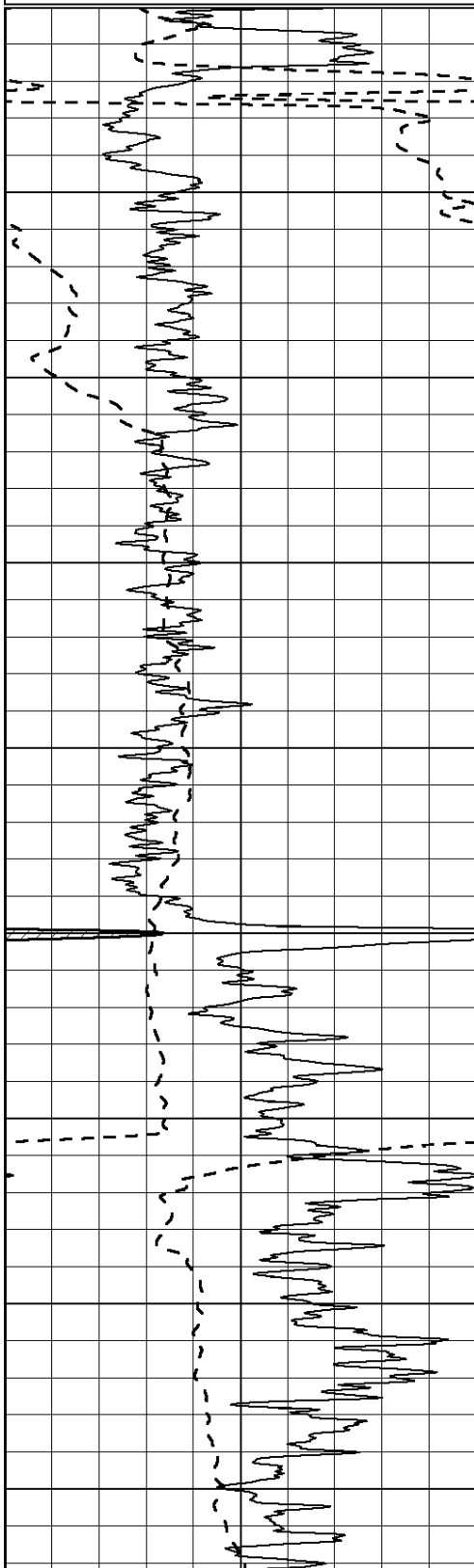
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 Presentation Format: _dil2
 Dataset Creation: Thu Nov 13 21:15:01 2014 by Calc Open-Cased 090629
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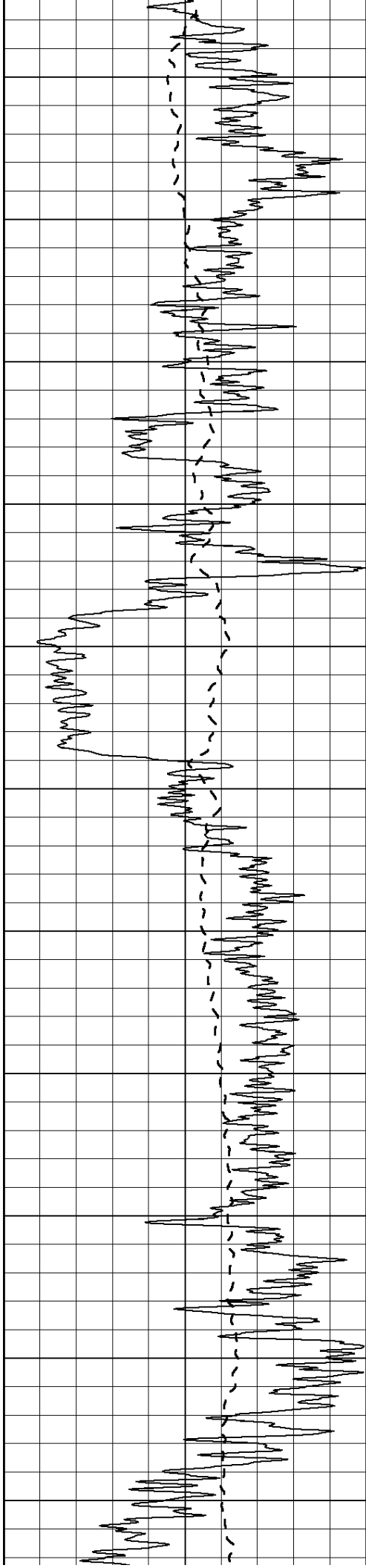
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-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50

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





450

500

550

600

650

700

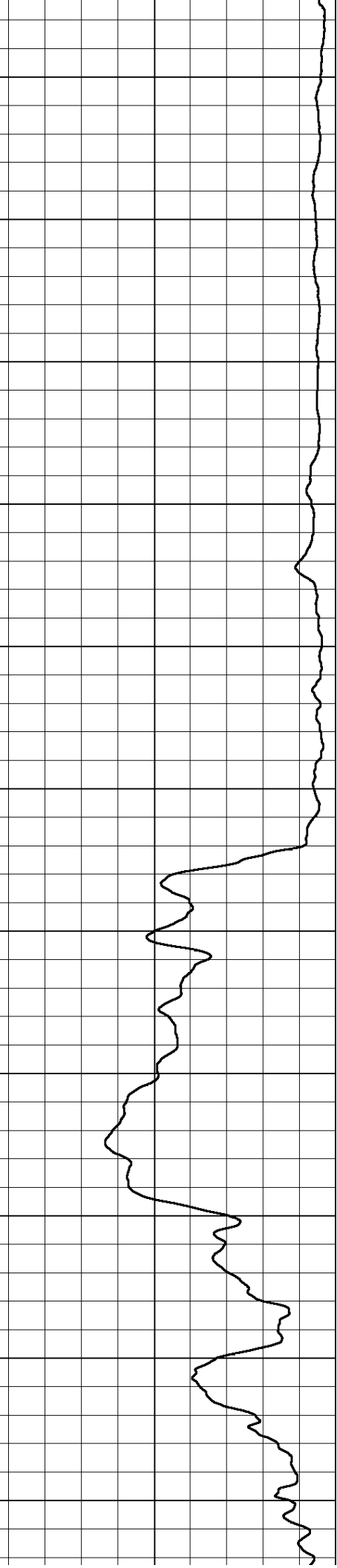
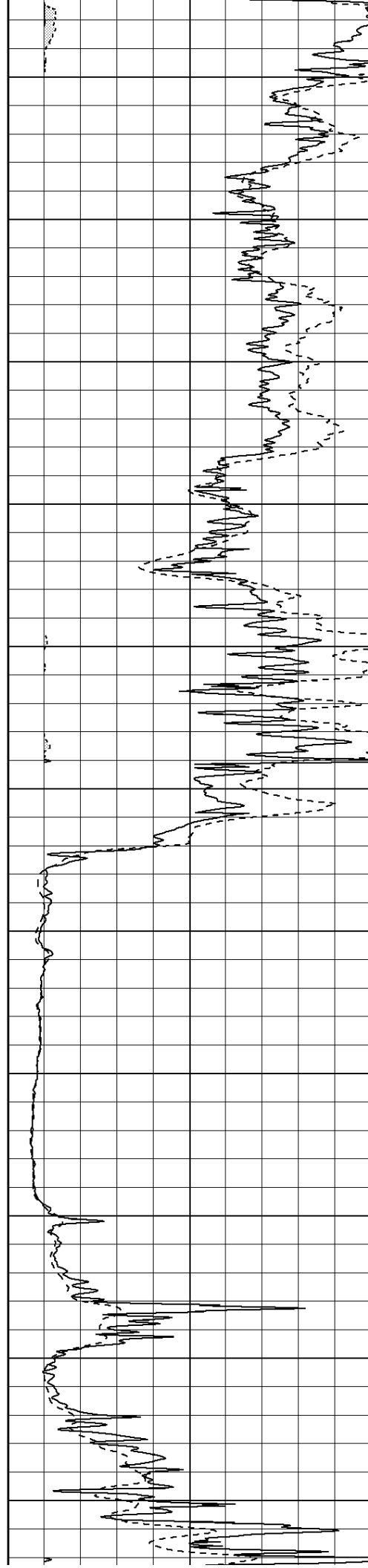
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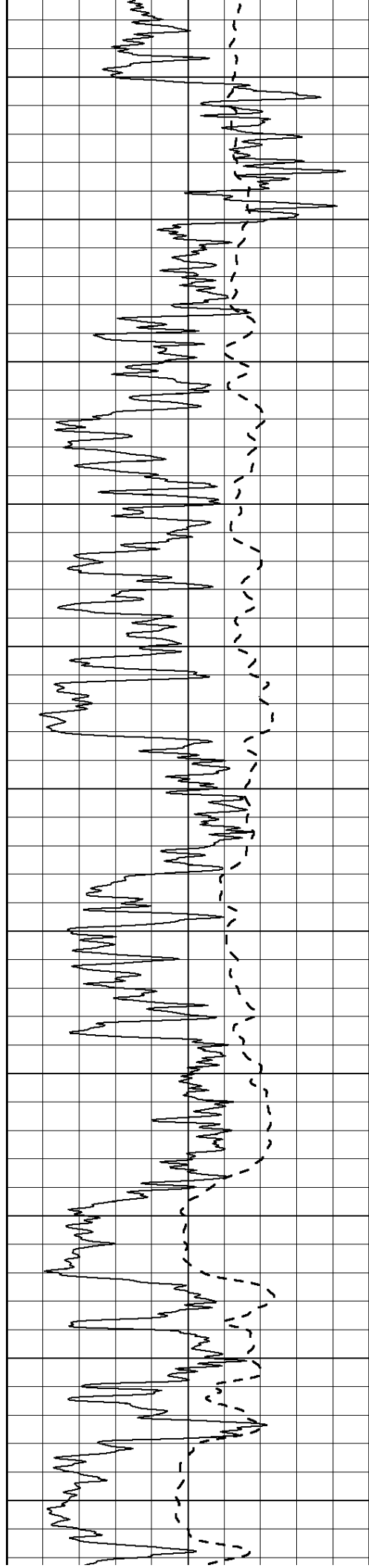
800

850

900

950





1000

1050

1100

1150

1200

1250

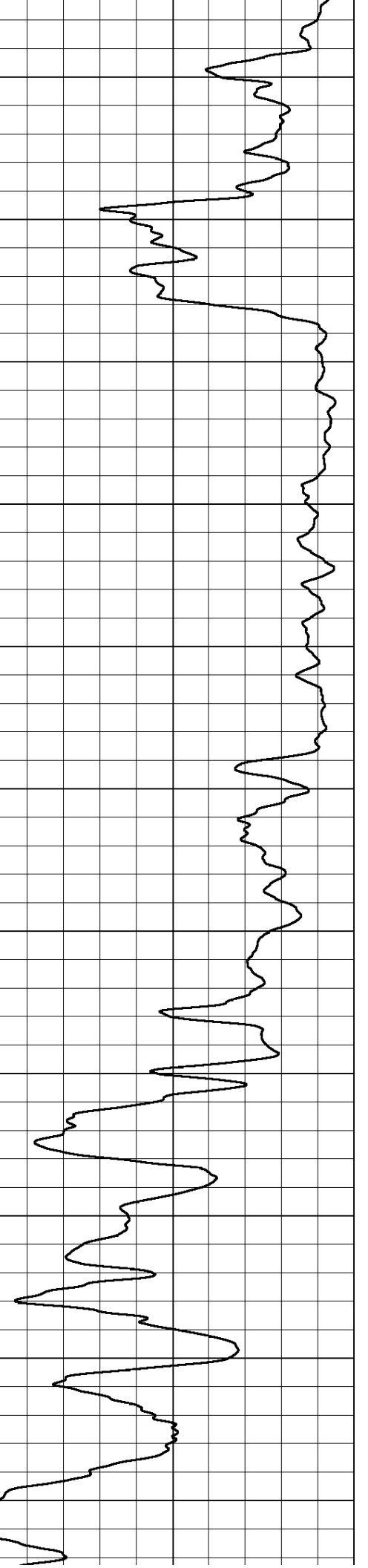
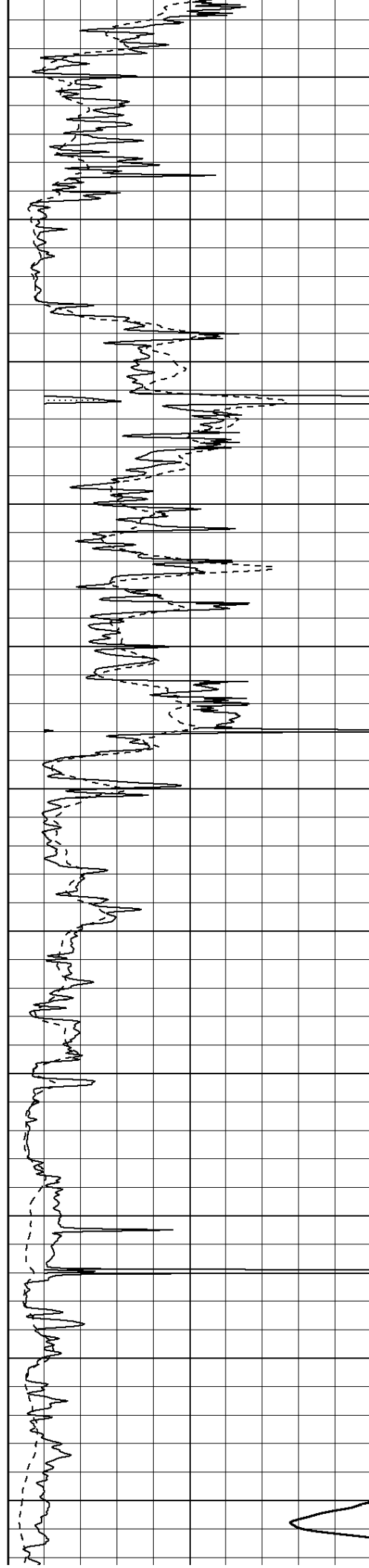
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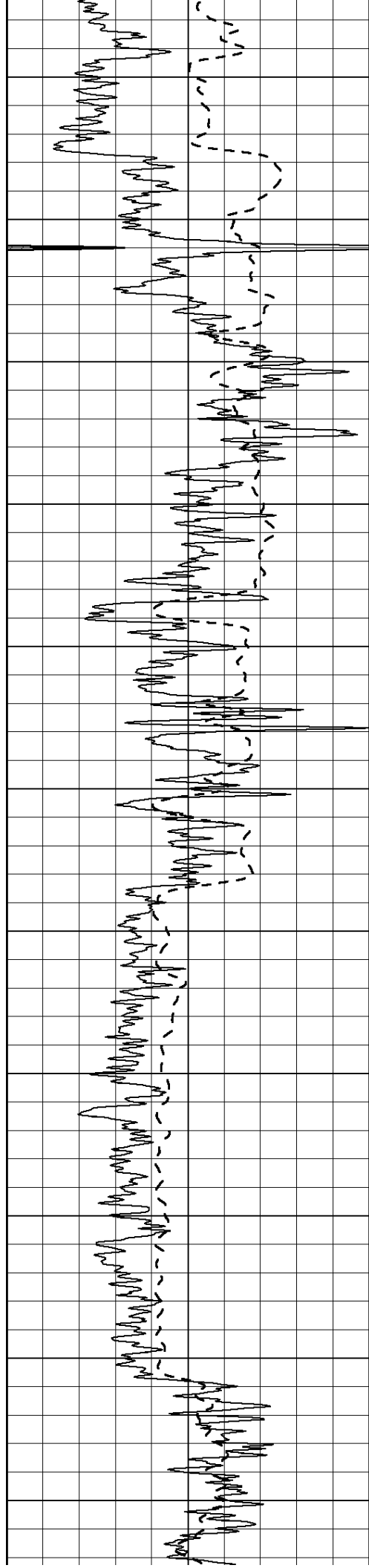
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1400

1450

1500





1550

1600

1650

1700

1750

1800

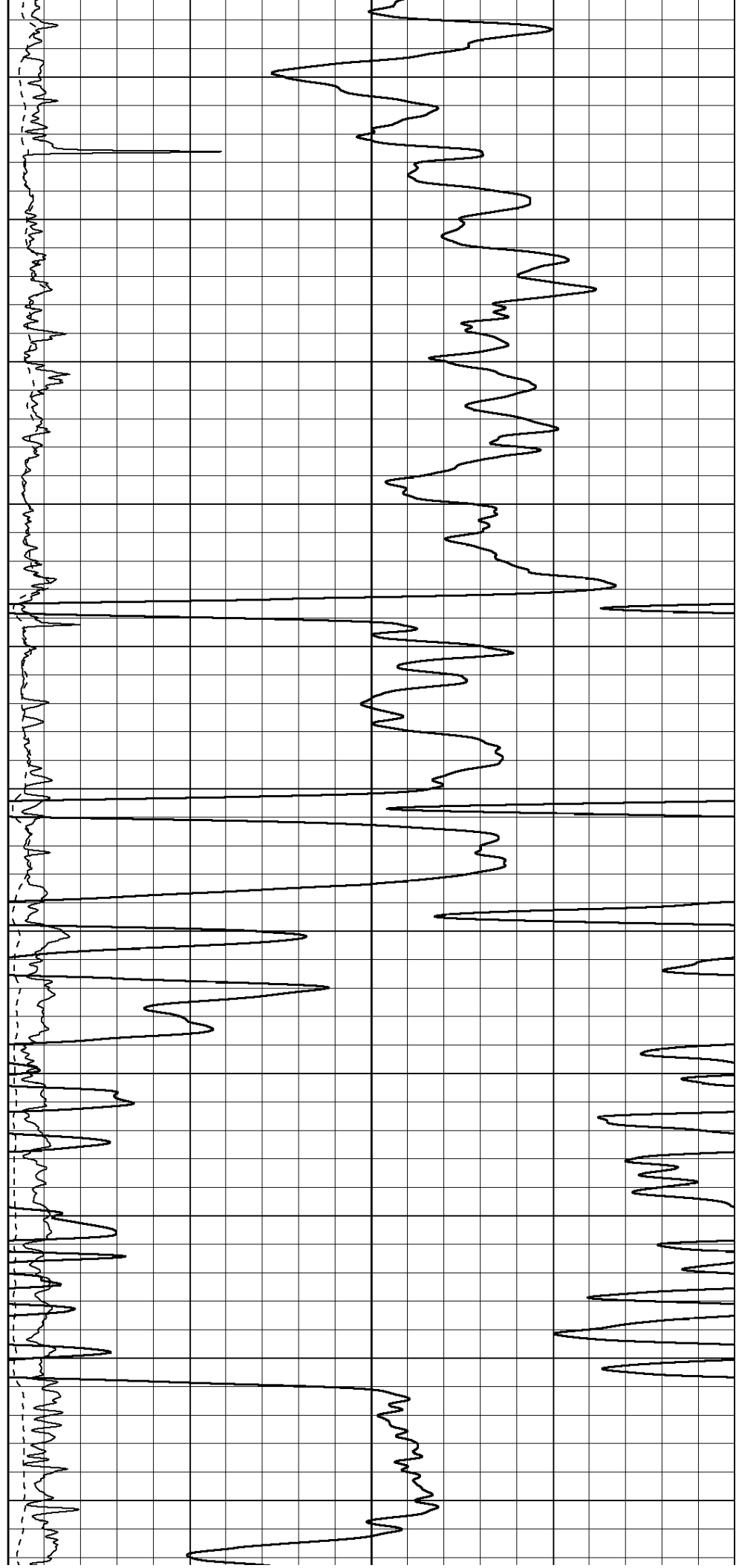
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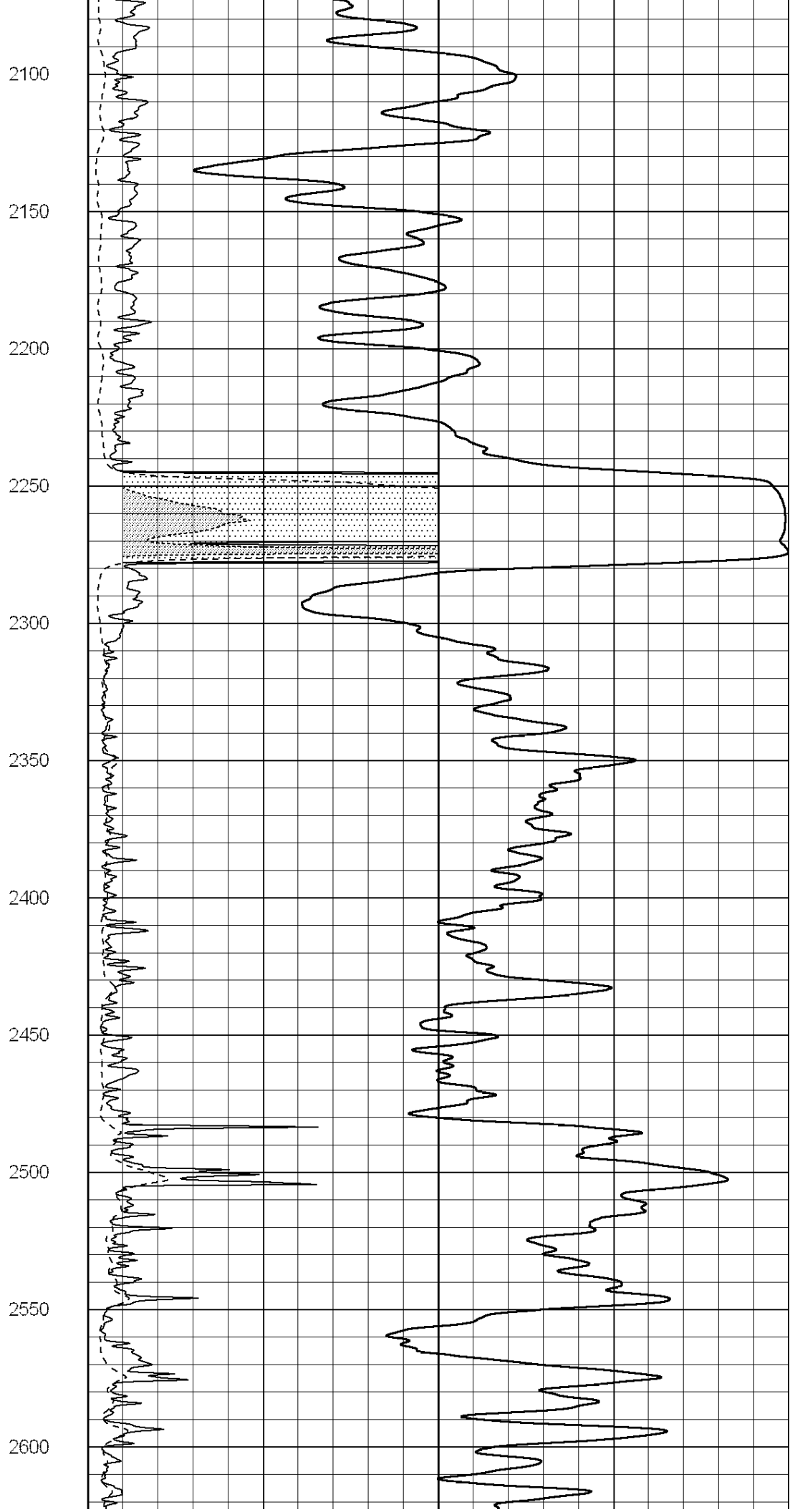
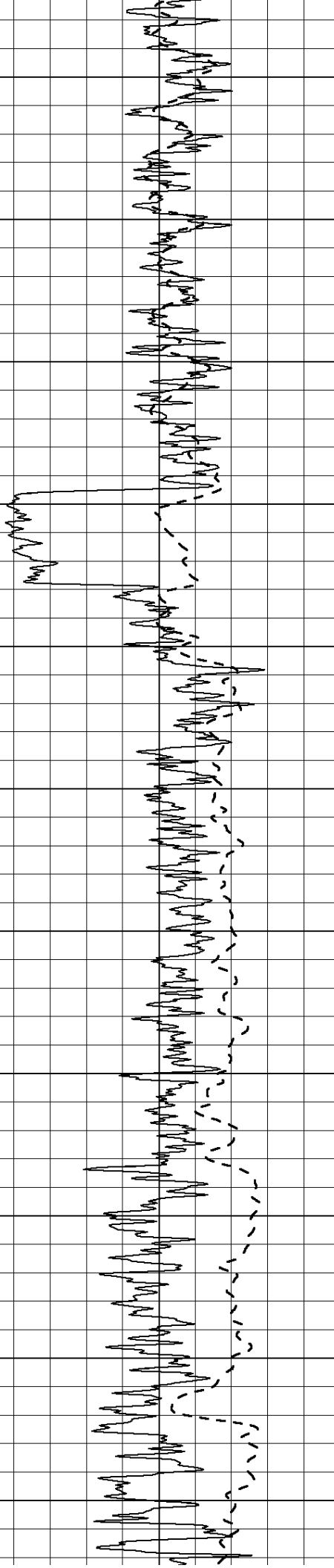
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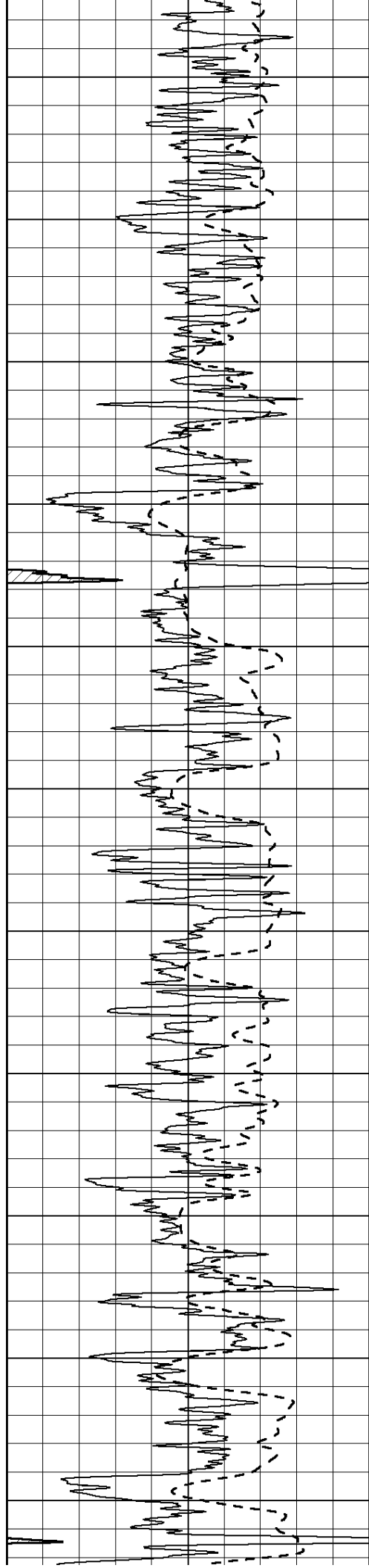
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2000

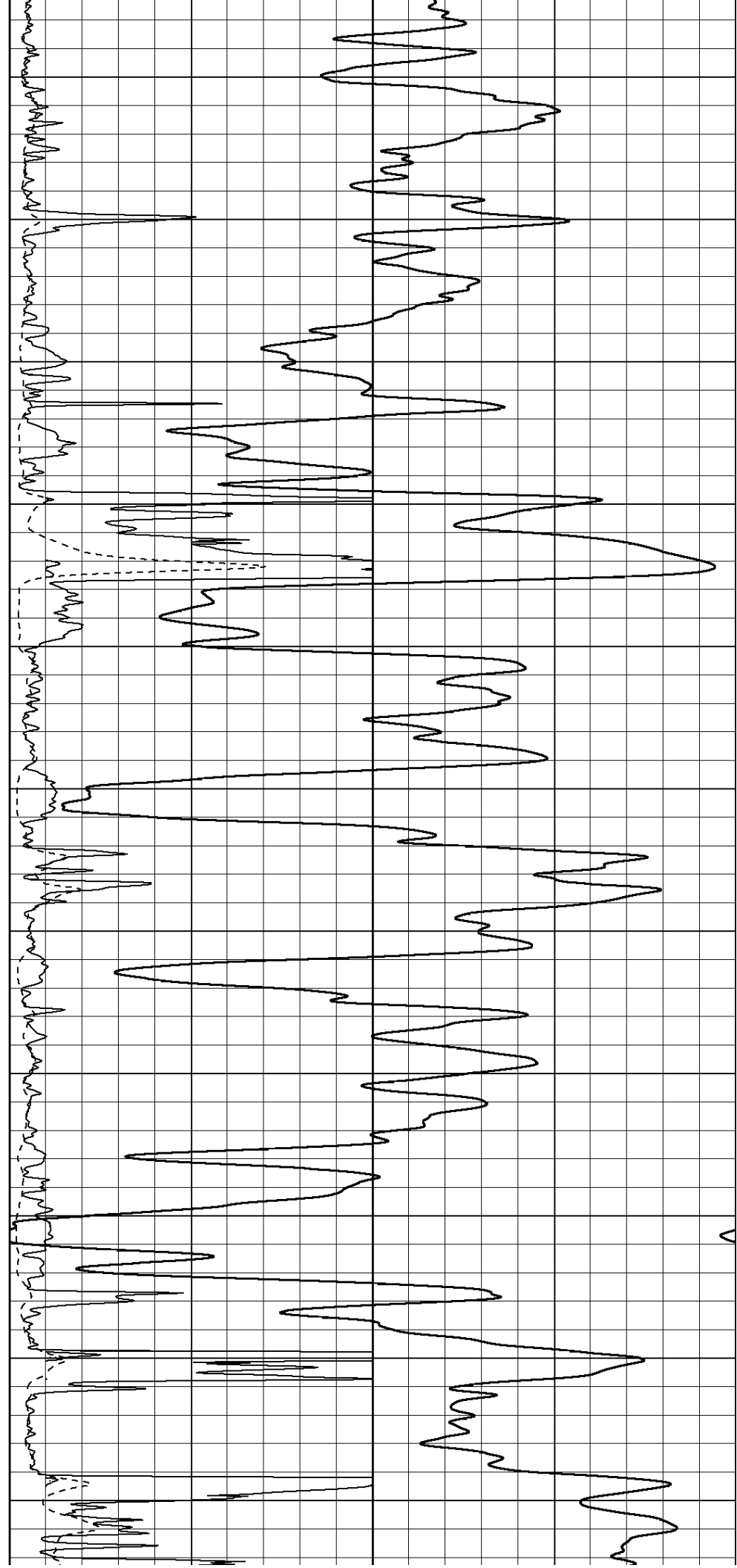
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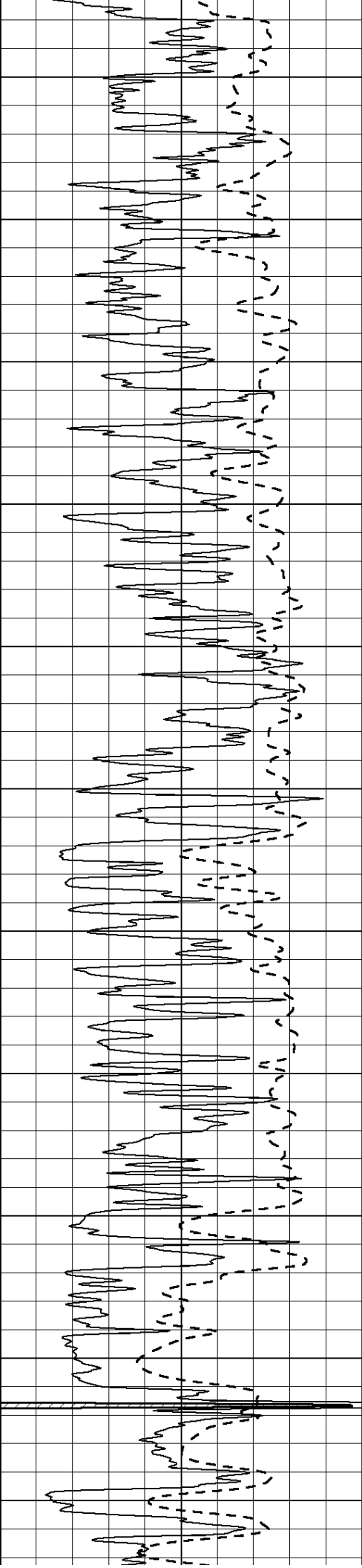






2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150





3200

3250

3300

3350

3400

3450

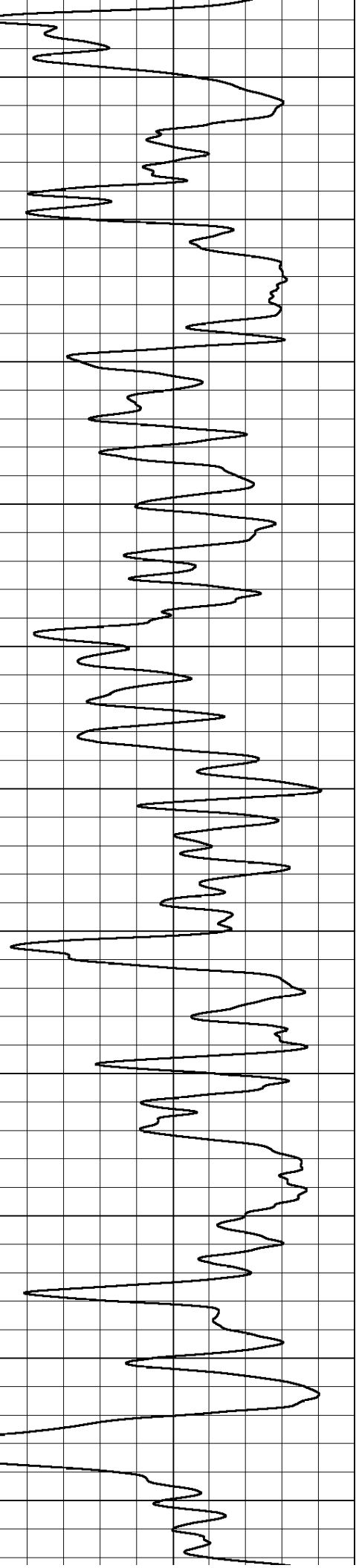
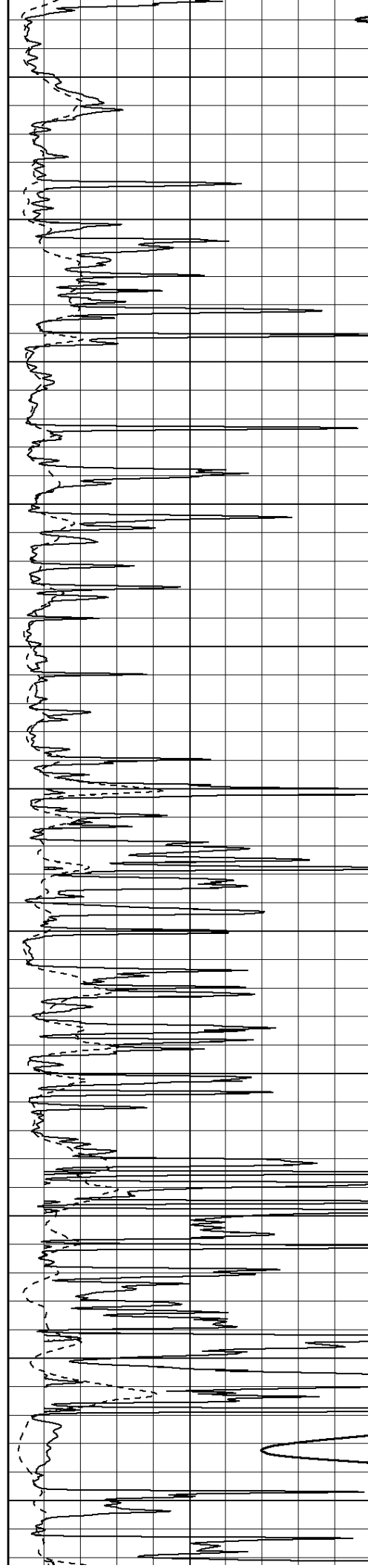
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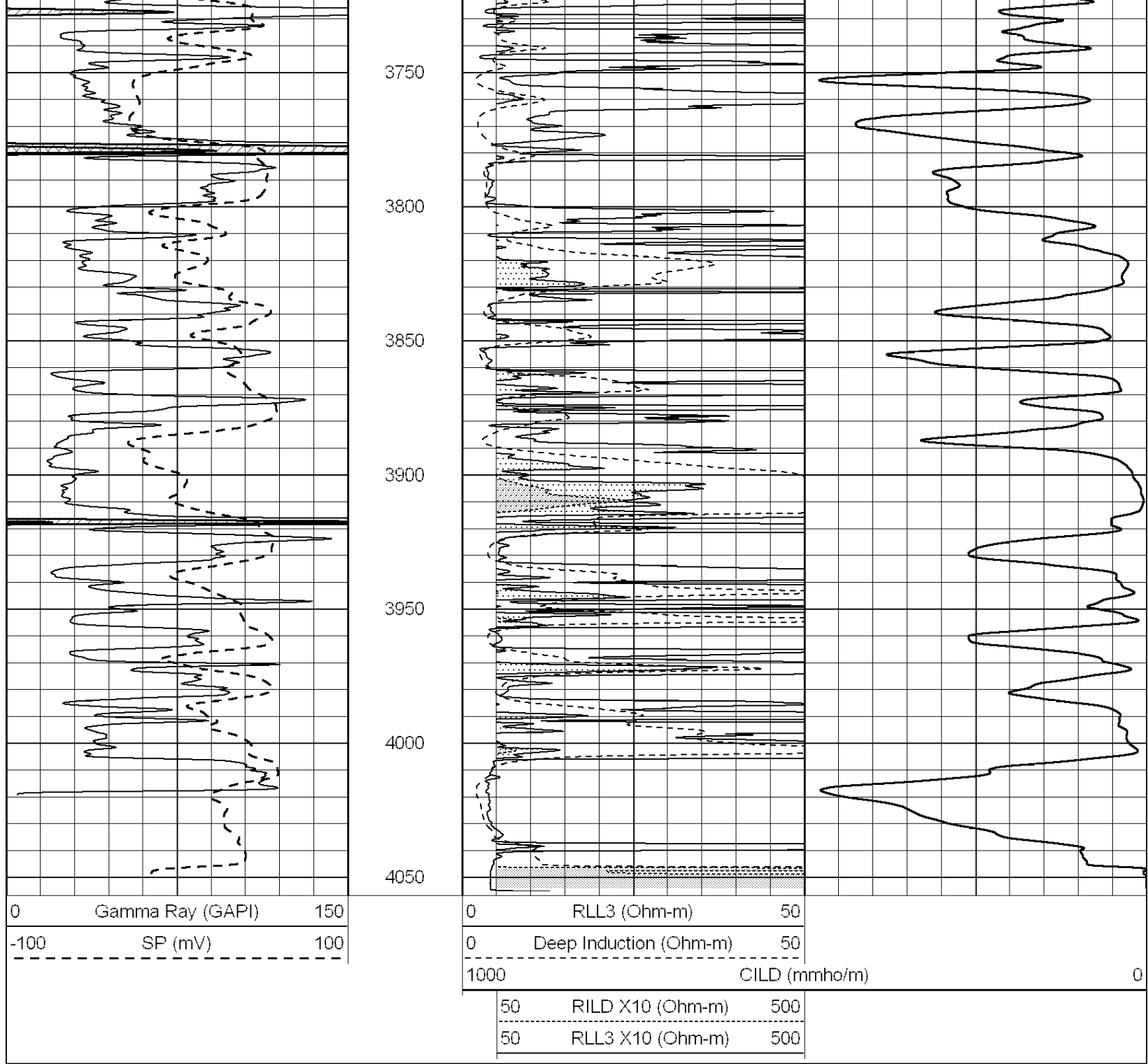
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3600

3650

3700

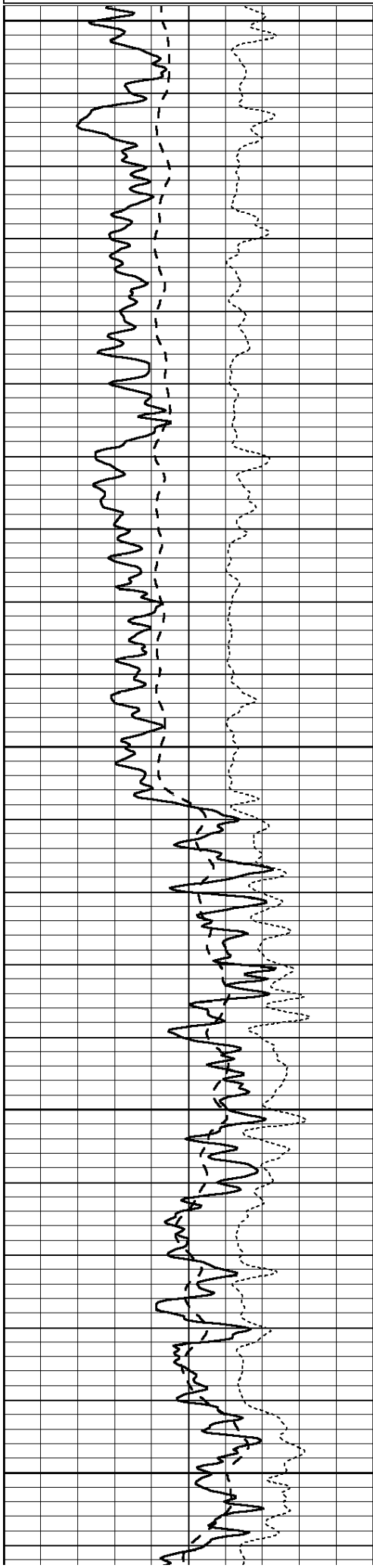




MAIN SECTION

Database File: 26257ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Thu Nov 13 21:15:01 2014 by Calc Open-Cased 090629
 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	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000



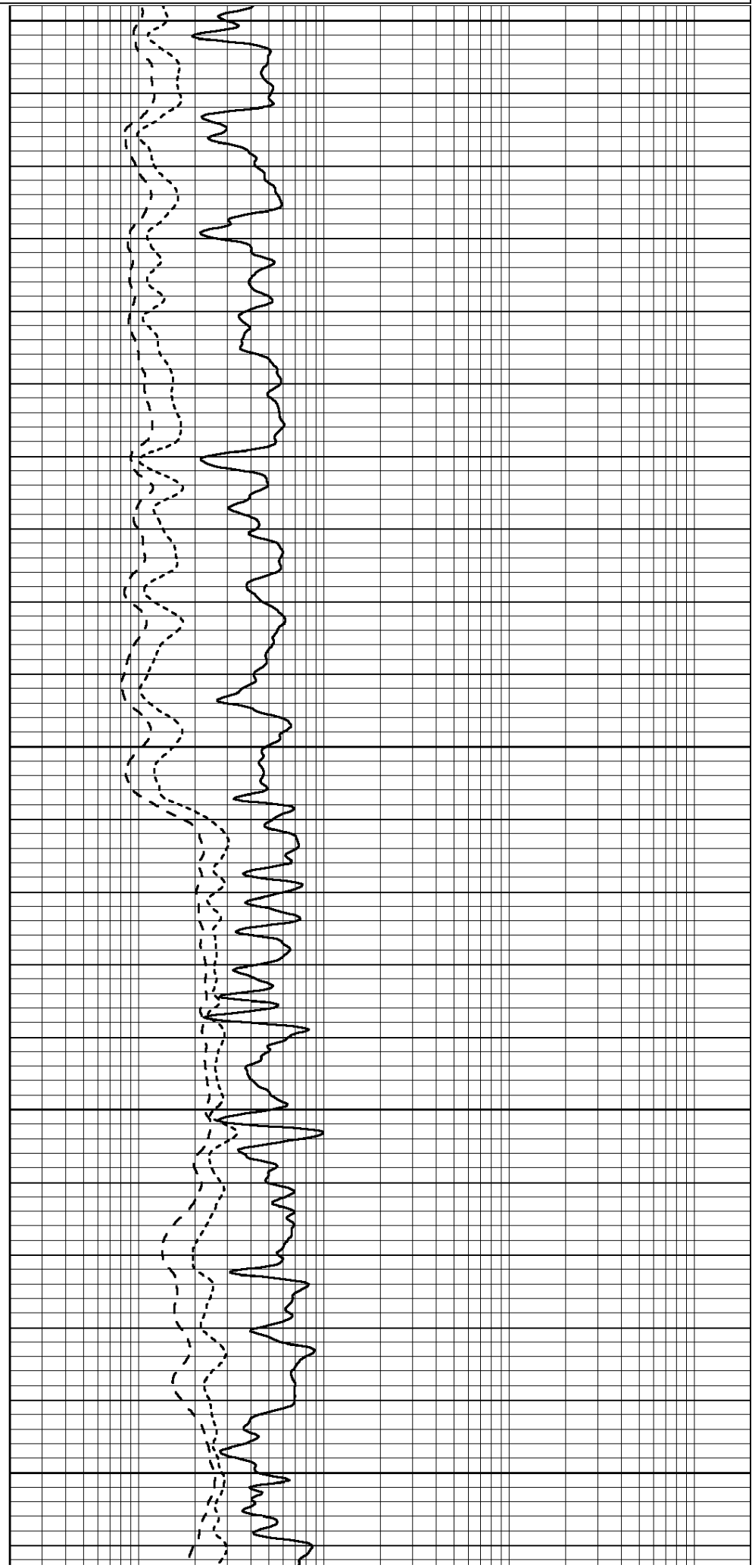
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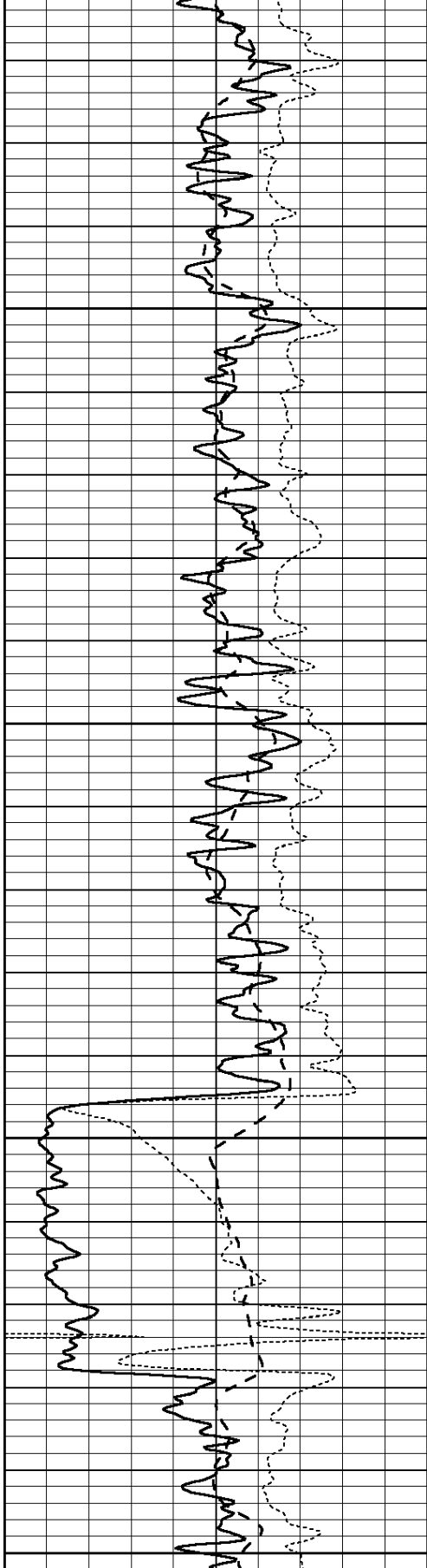
1950

2000

2050

2100





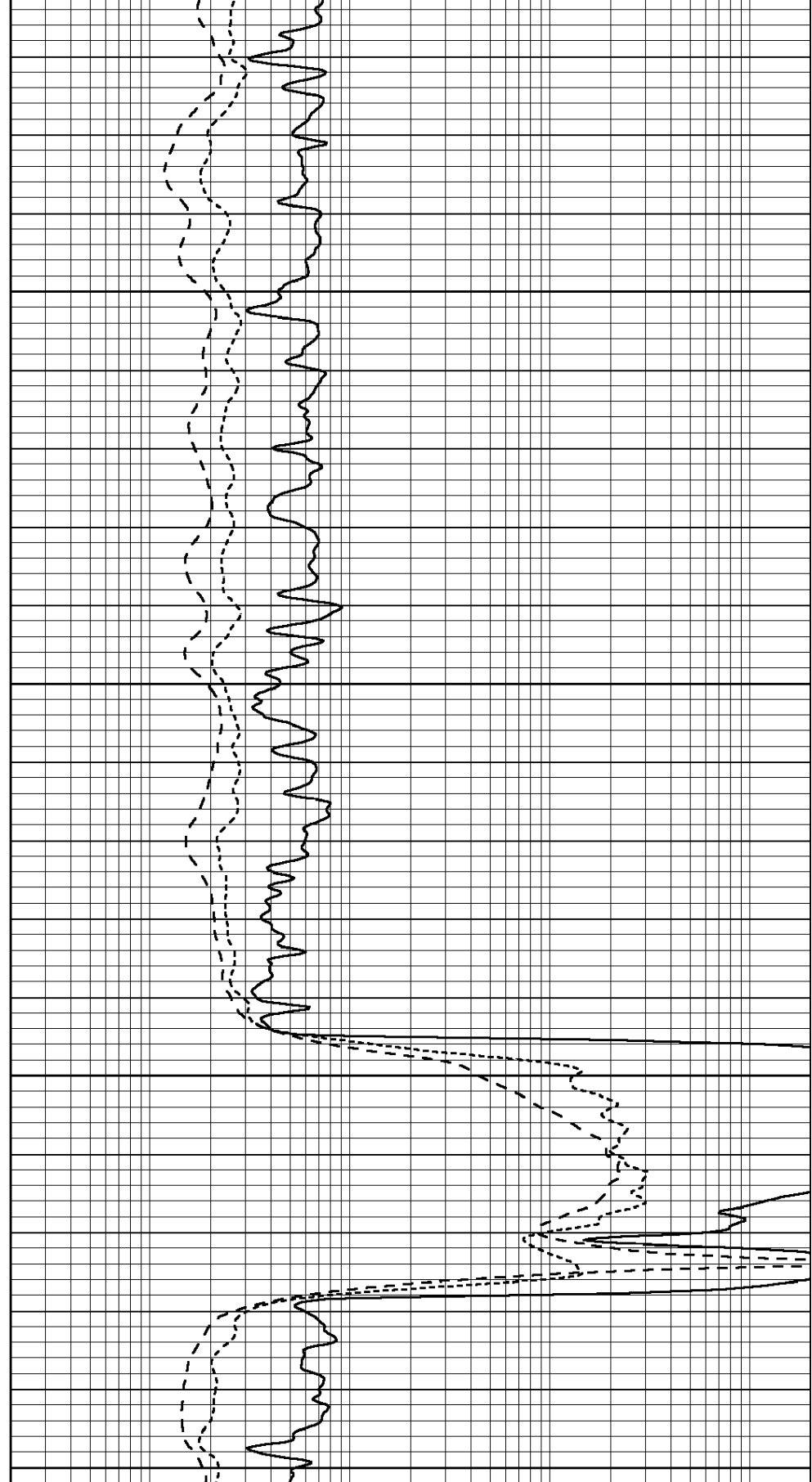
2150

2200

2250

2300

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

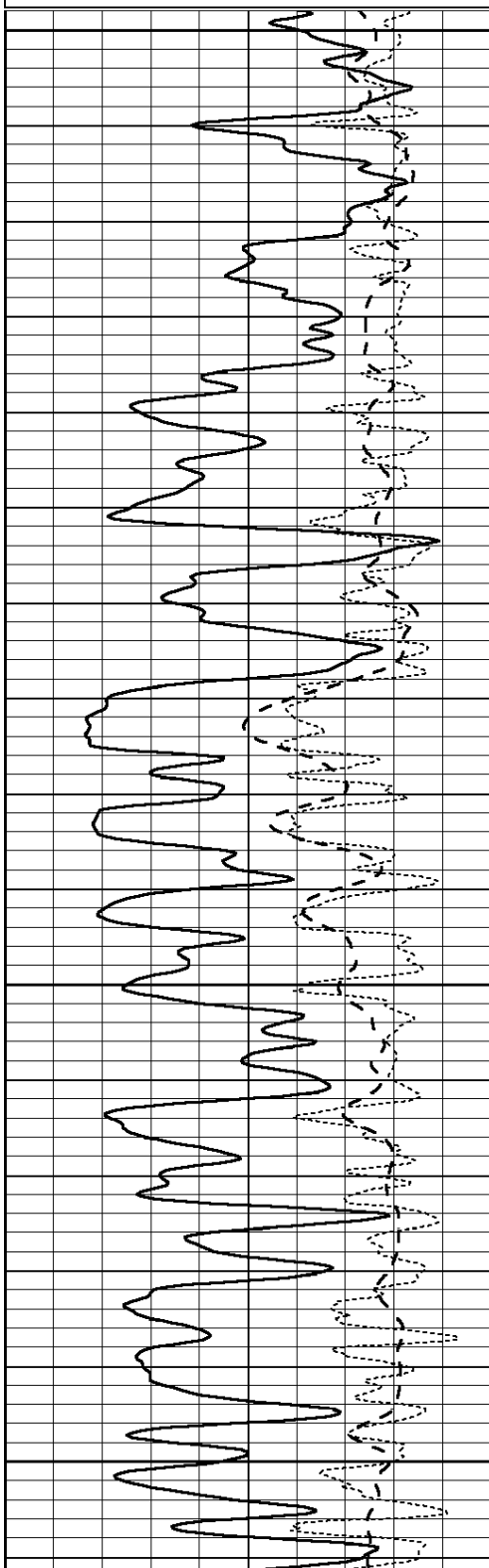
MAIN SECTION

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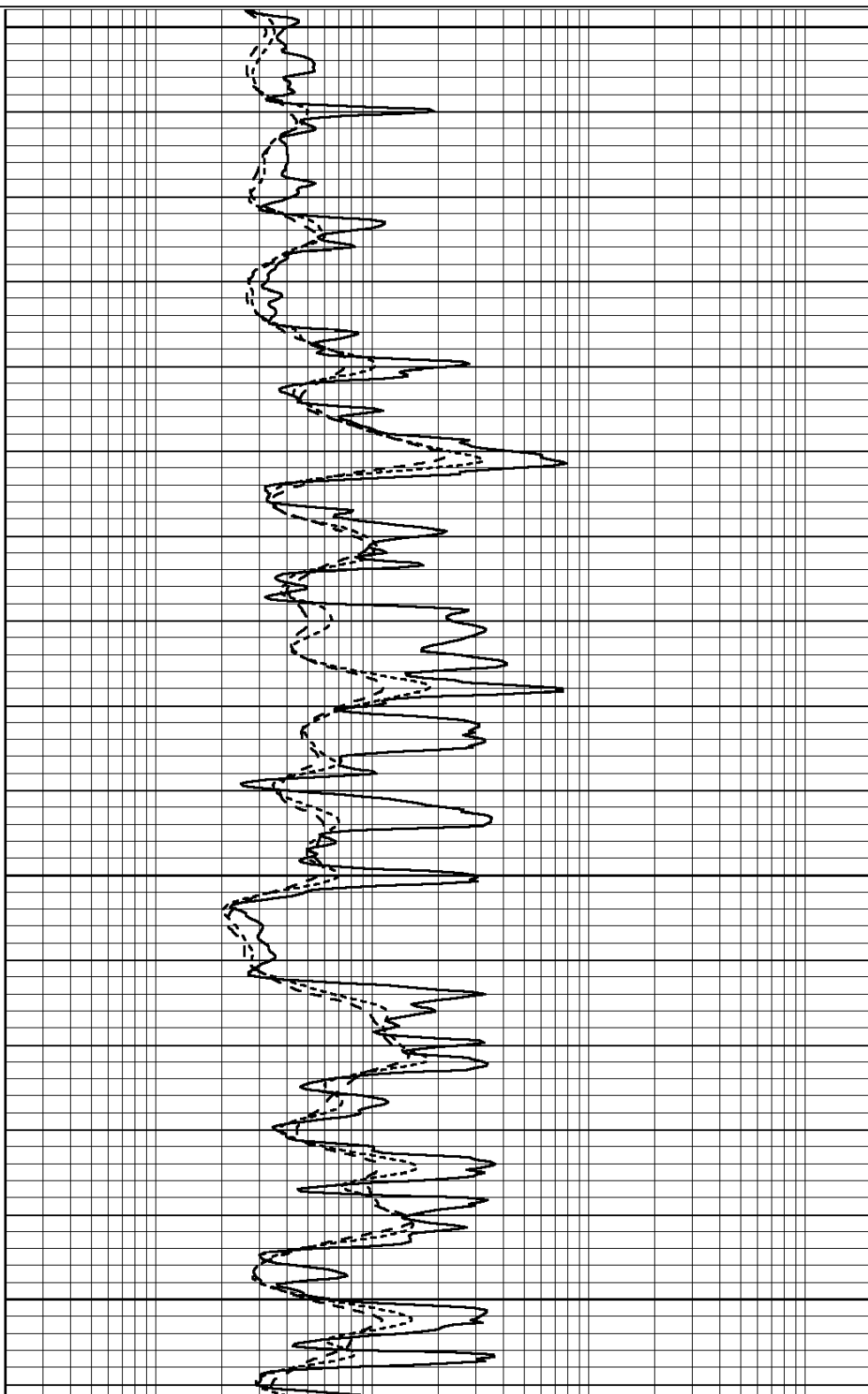
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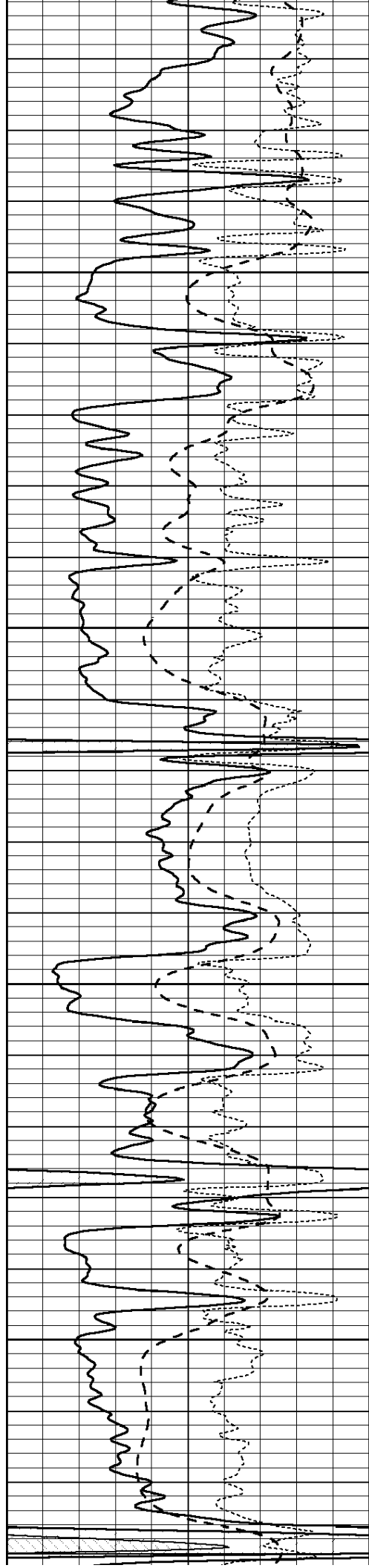
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

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



3400
3450
3500
3550



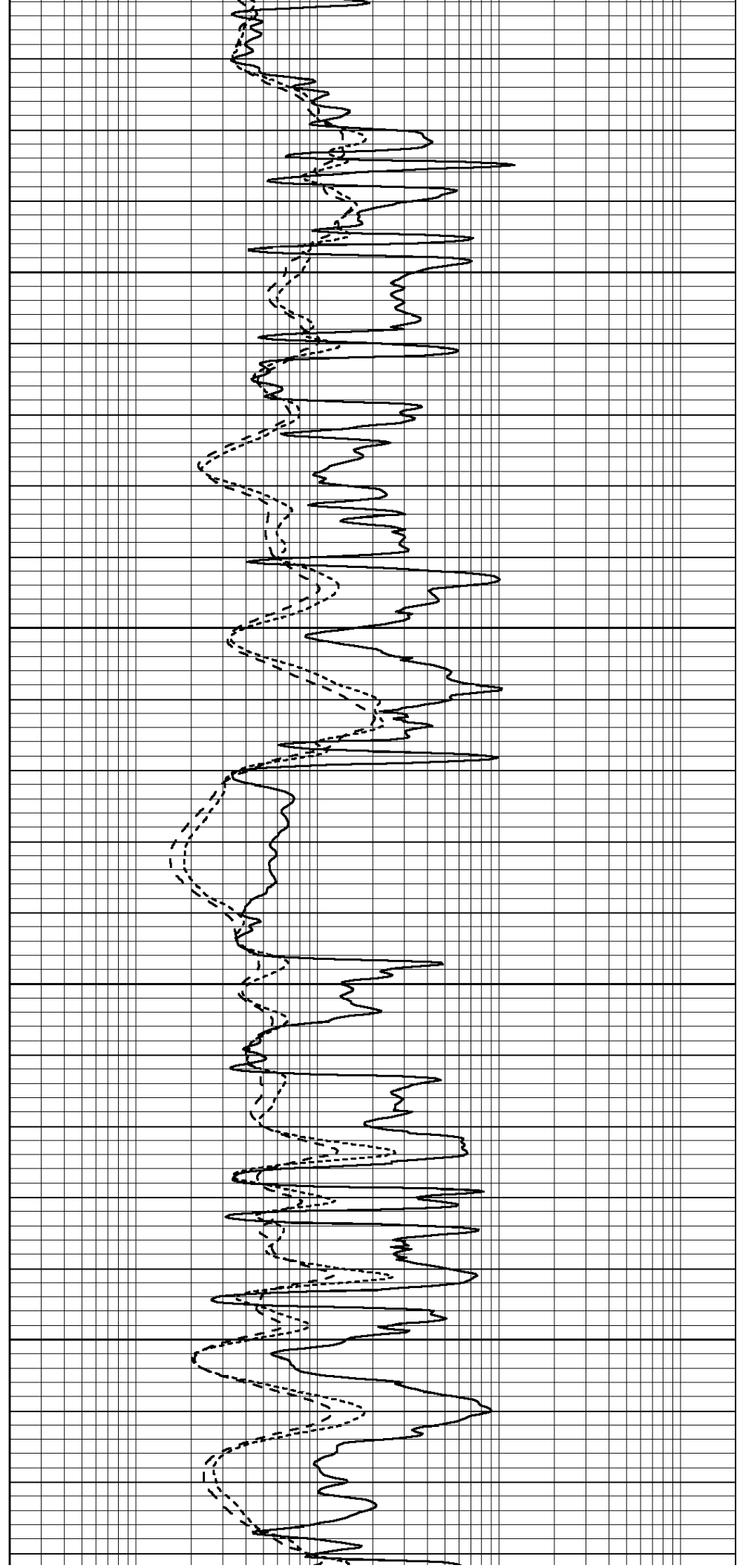


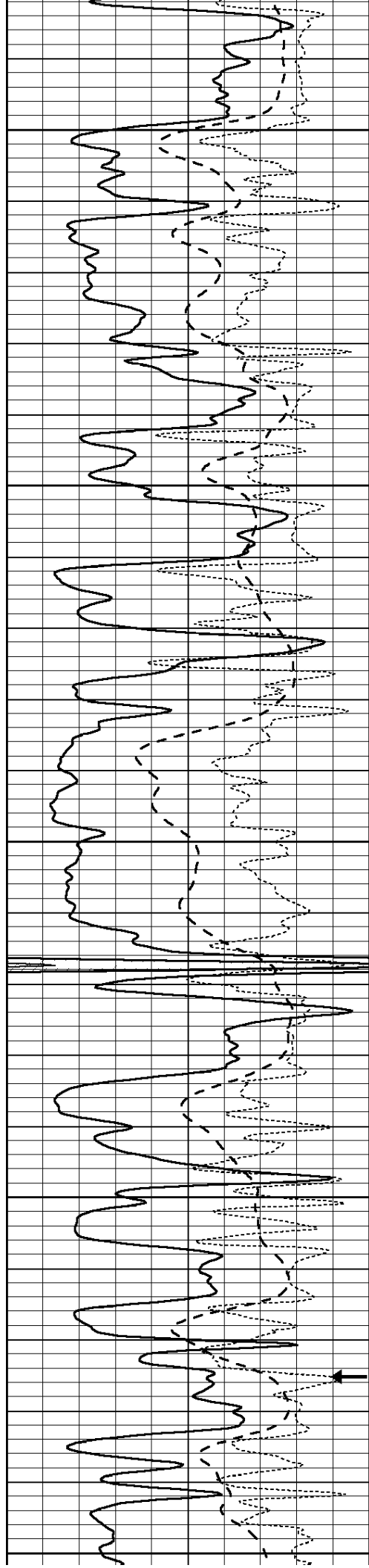
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3650

3700

3750





3800

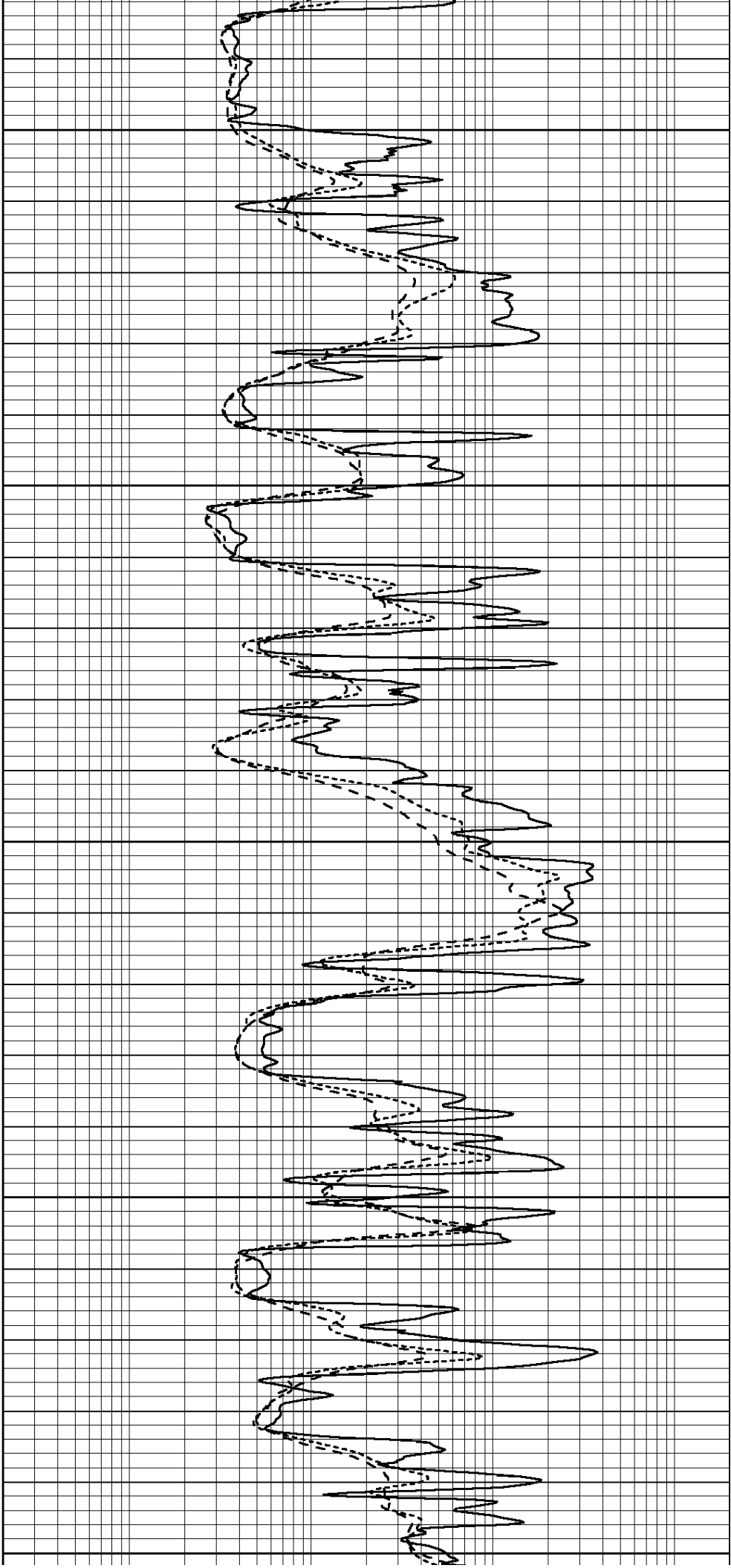
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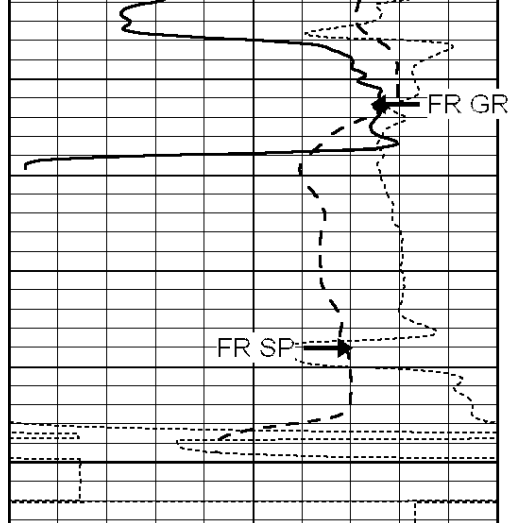
3900

3950

4000

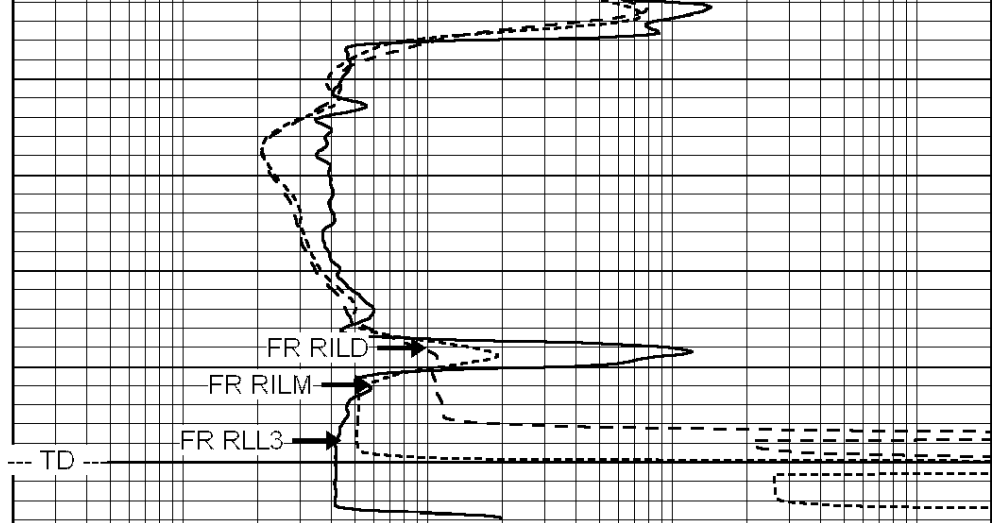
RxoRt





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

4050



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

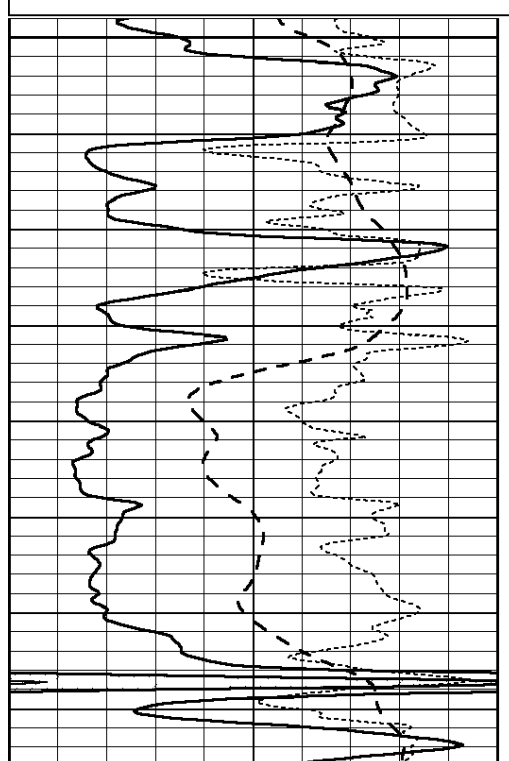


REPEAT SECTION

Database File: 26257ddn.db
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 Charted by: Depth in Feet scaled 1:240

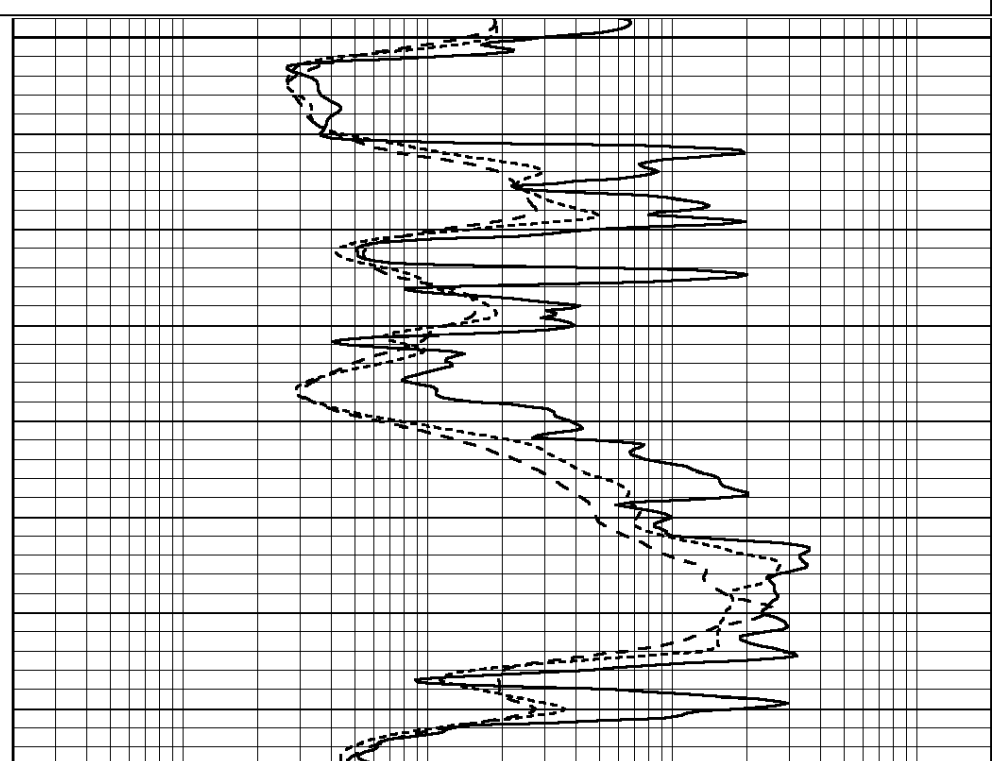
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-100	SP (mV)	100
-250	Rxo/Rt	50

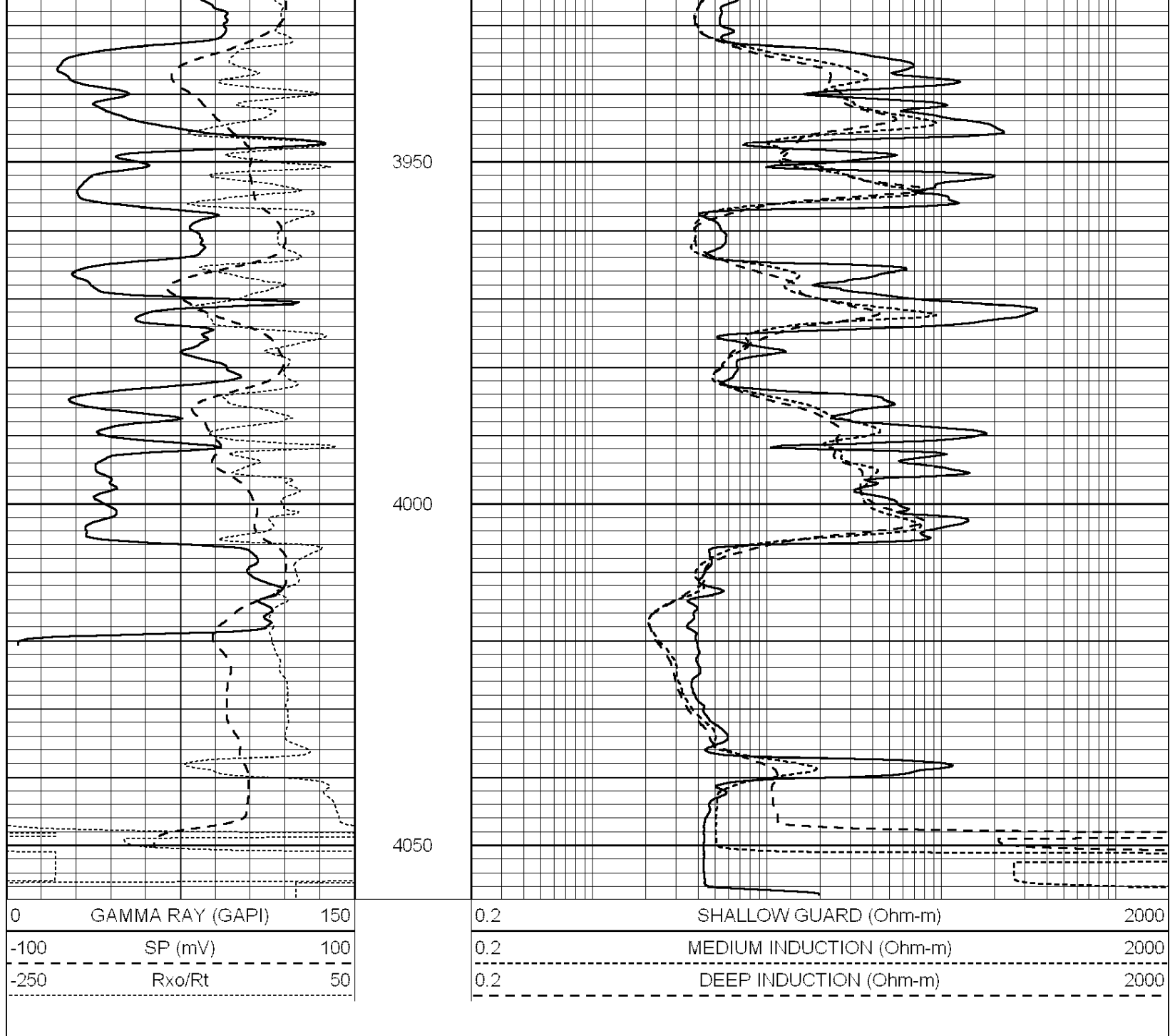
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



3850

3900





Calibration Report

Database File: 26257ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Thu Nov 13 21:15:01 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Thu Nov 13 20:07:11 2014
 Downhole Cal Performed: Sat Jan 19 19:51:38 2013
 After Survey Verification Performed: Sat Jan 19 19:51:38 2013

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	530.000	12.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	570.000	-30.000

Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

Compensated Density Calibration Report

Serial-Model:	GEAR5-GEARHART
Source / Verifier:	147 / 147
Master Calibration Performed:	Thu Nov 13 20:08:50 2014

Master Calibration						
	Density		Far Detector	Near Detector		
Magnesium	1.710	g/cc	943.83	576.01	cps	
Aluminum	2.580	g/cc	212.01	399.19	cps	
	Spine Angle = 76.20		Density/Spine Ratio = 0.566			
	Size		Reading			
Small Ring	8.20	in	1.64	V		
Large Ring	14.00	in	2.93	V		

Compensated Neutron Calibration Report

Serial Number:	080620
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:	46001
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Tool Model: Probe1
Performed: Thu Nov 13 18:06:24 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps

Calibrator Reading: 1.0 cps

Sensitivity: 0.2600 GAPI/cps