



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	MAI OIL OPERATIONS, INC.		
Well	REISER #10		
Field	MUELLER		
County	STAFFORD	State	KANSAS
Location:	API # : 15-185-23907		Other Services CDL/CNL MICRO
2000' FNL & 1375' FWL			
Permanent Datum	GROUND LEVEL	Elevation	1849
Log Measured From	KELLY BUSHING 8' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	11-6-14		
Run Number	ONE		
Depth Driller	3700		
Depth Logger	3700		
Bottom Logged Interval	3698		
Top Log Interval	00		
Casing Driller	641		
Casing Logger	642		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.5 / 49		
pH / Fluid Loss	8.5 / 8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.70 @ 78F		
Rmf @ Meas. Temp	0.52 @ 78F		
Rmc @ Meas. Temp	0.84 @ 78F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.487 @ 112F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	2:30 P.M.		
Maximum Recorded Temperature	112F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	RUPP		
Witnessed By	JIM MUSGROVE		

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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: GREAT BEND, 10S TO RD. #180, 5E, 1/2S, E INTO.



NABORS

**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File: 26254ddn.db
 Dataset Pathname: pass3A
 Presentation Format: _dil2
 Dataset Creation: Thu Nov 06 16:34:00 2014
 Charted by: Depth in Feet scaled 1:600

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

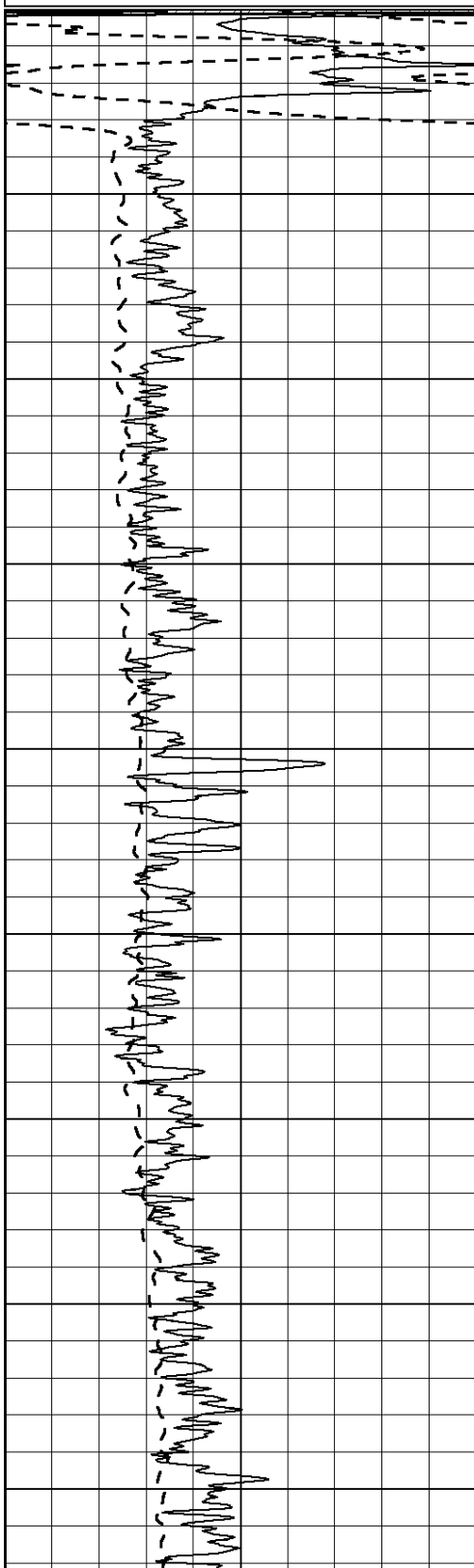
0 RLL3 (Ohm-m) 50

0 Deep Induction (Ohm-m) 50

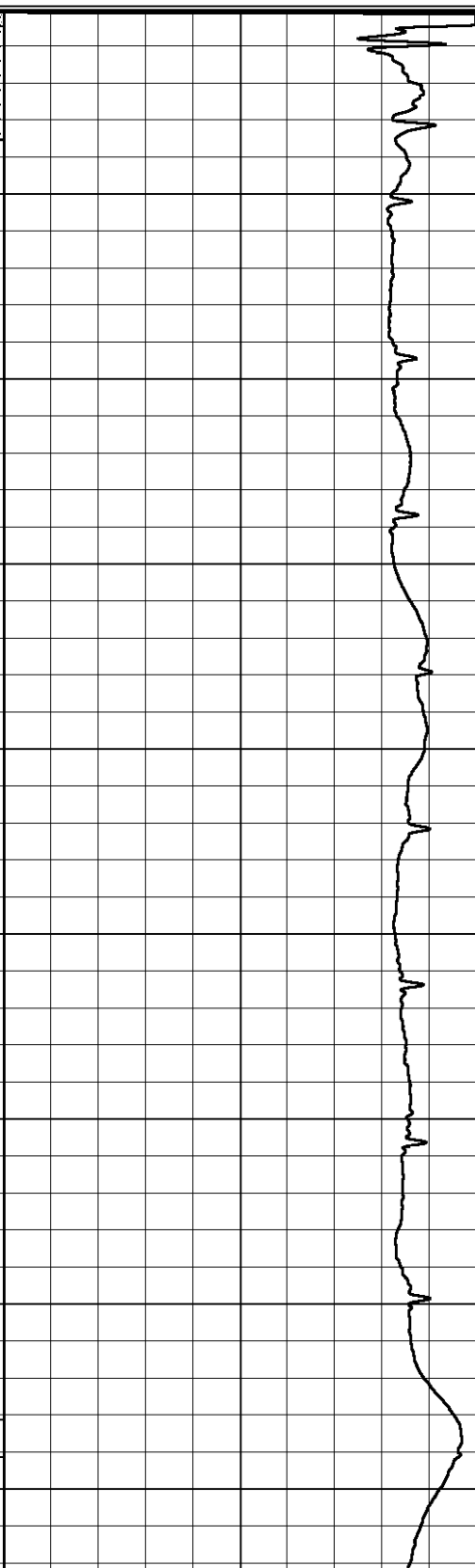
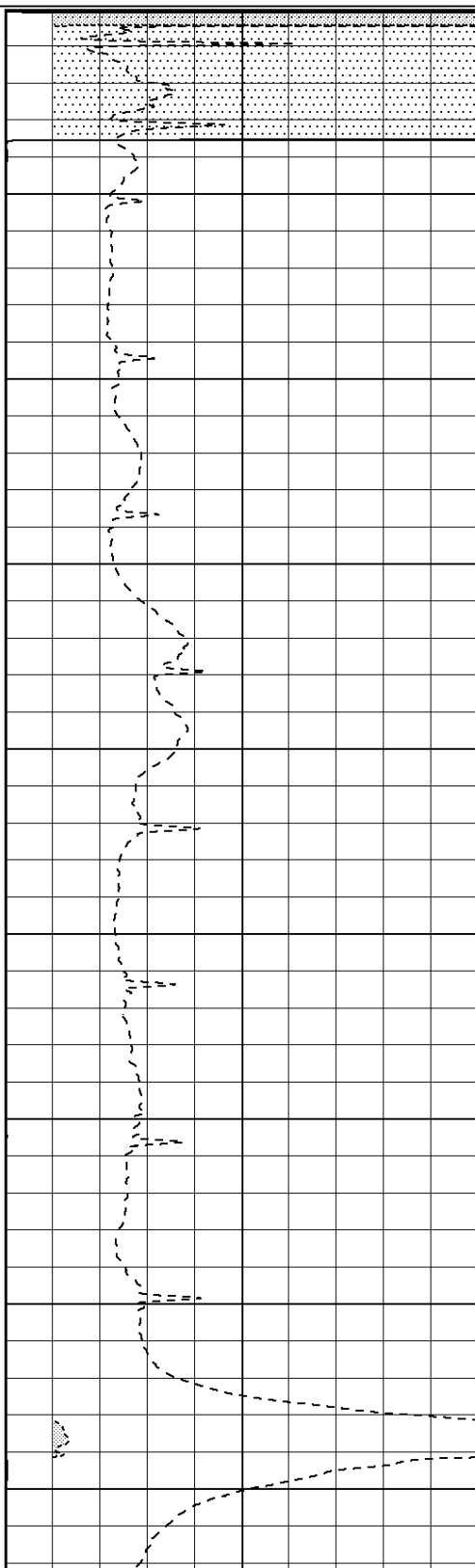
1000 CILD (mmho/m) 0

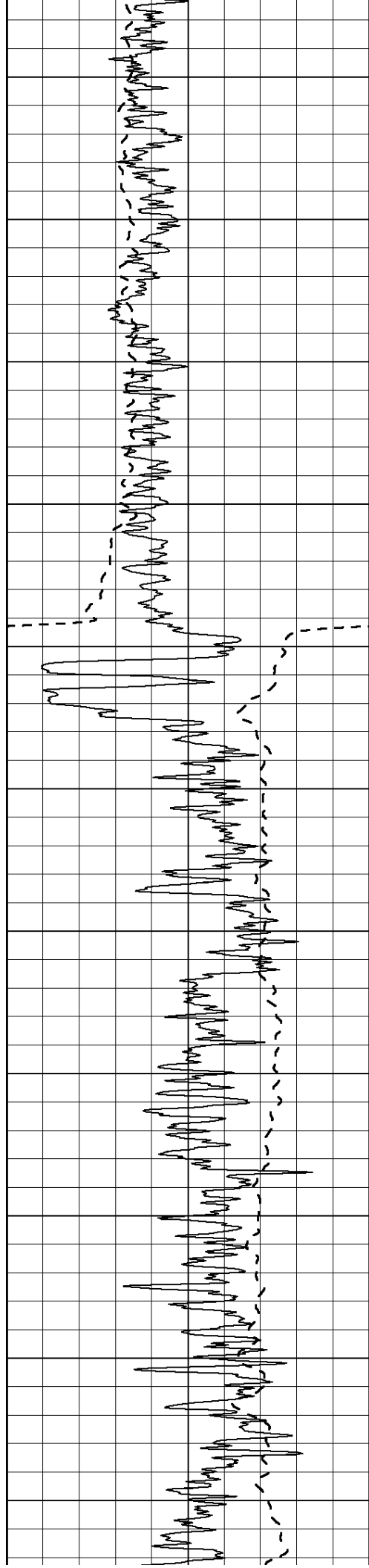
50 RILD X10 (Ohm-m) 500

50 RLL3 X10 (Ohm-m) 500



0
 50
 100
 150
 200
 250
 300
 350
 400





450

500

550

600

650

700

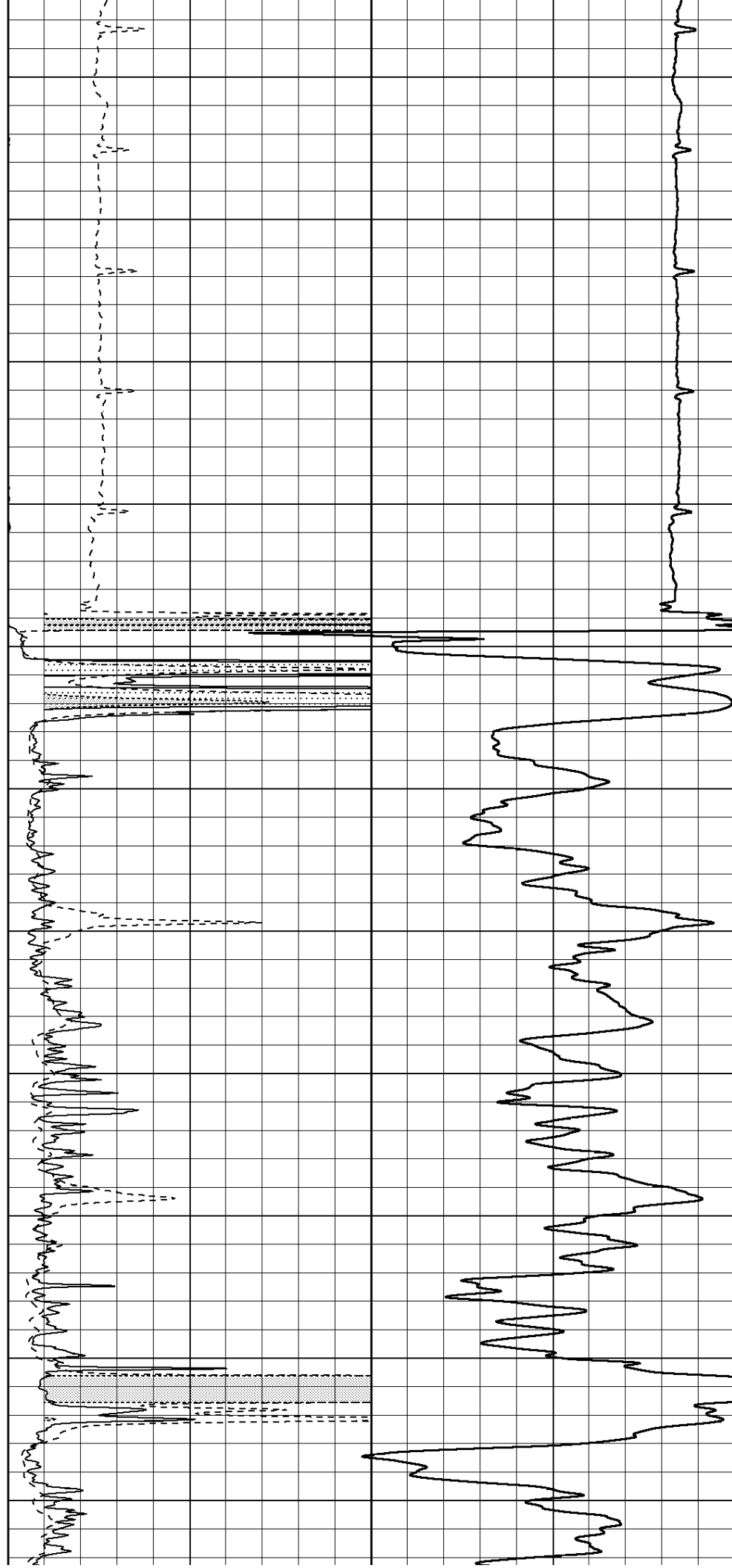
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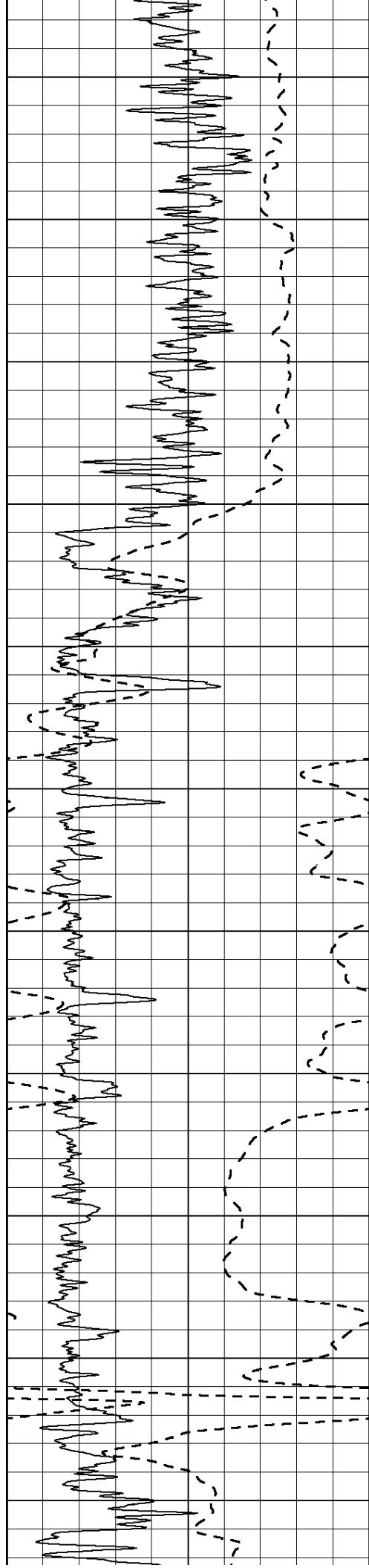
800

850

900

950





1000

1050

1100

1150

1200

1250

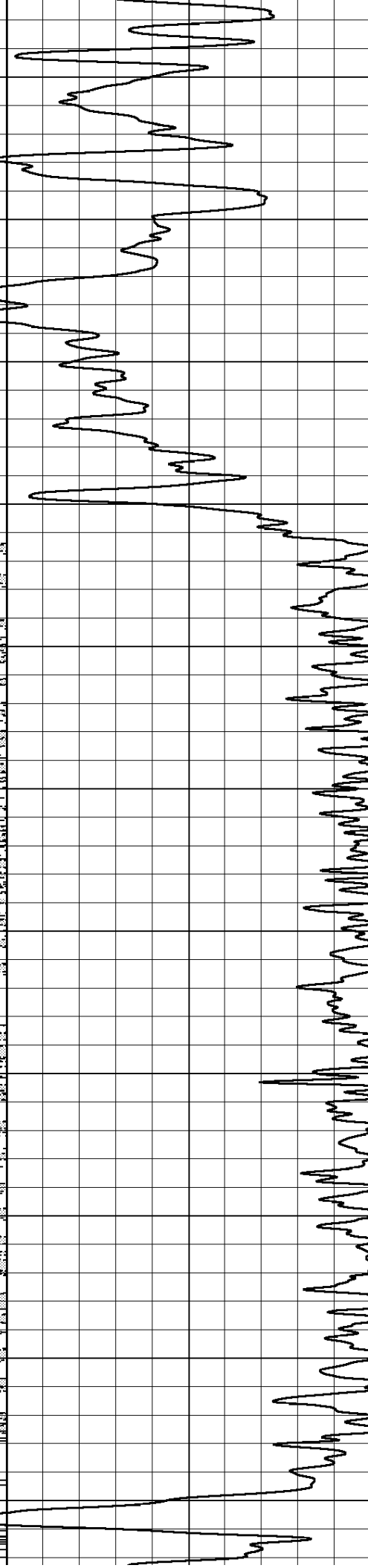
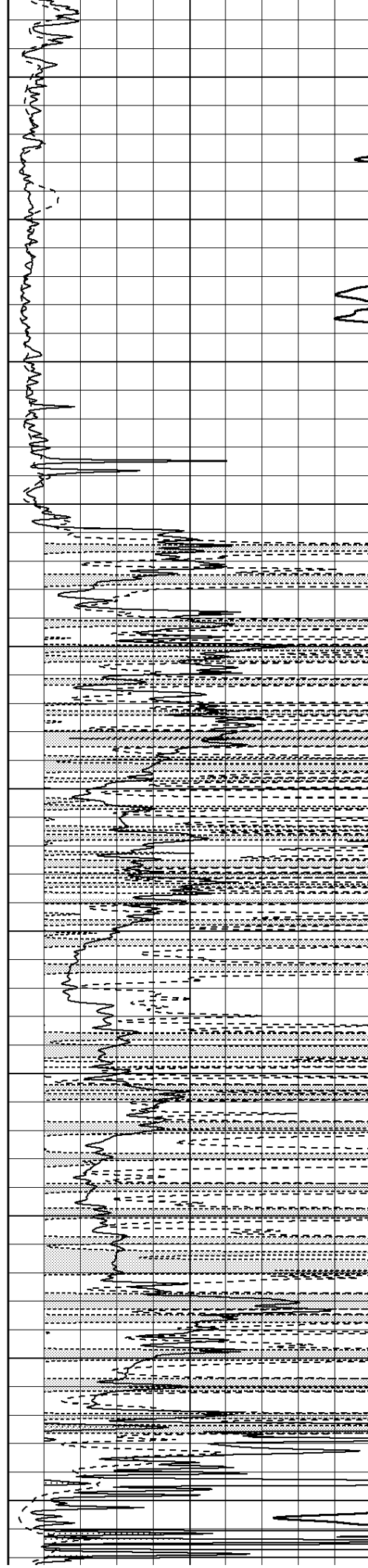
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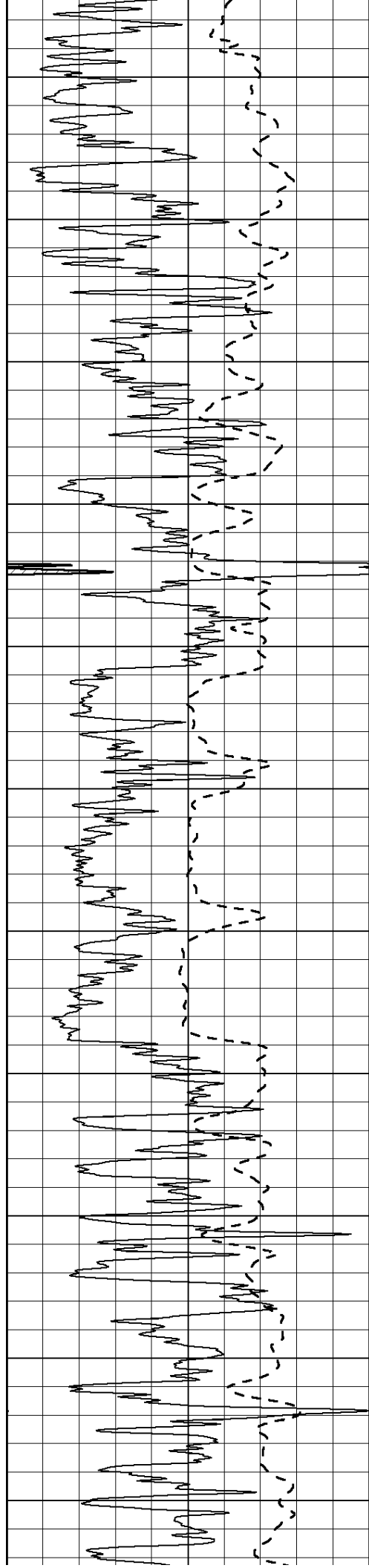
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1400

1450

1500





1550

1600

1650

1700

1750

1800

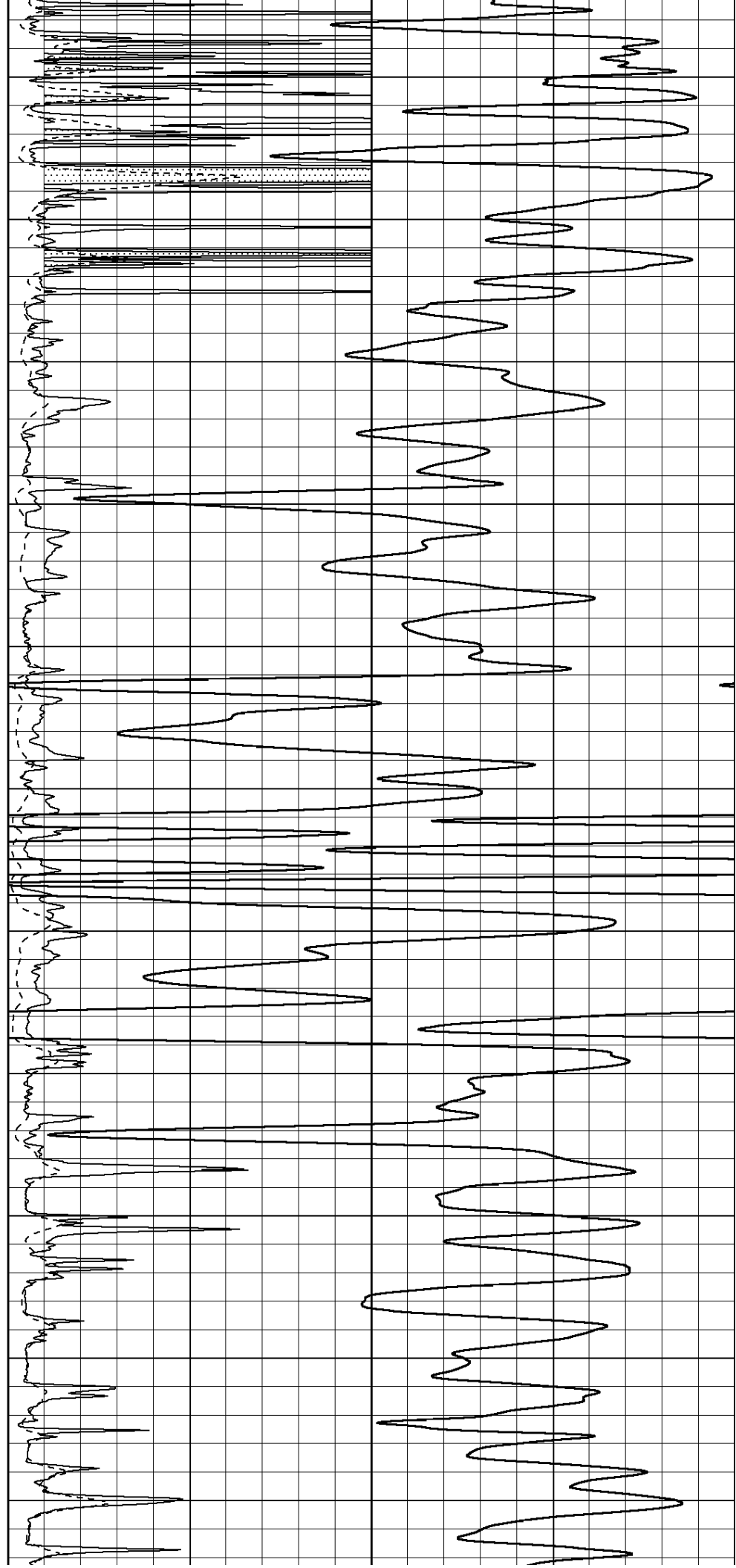
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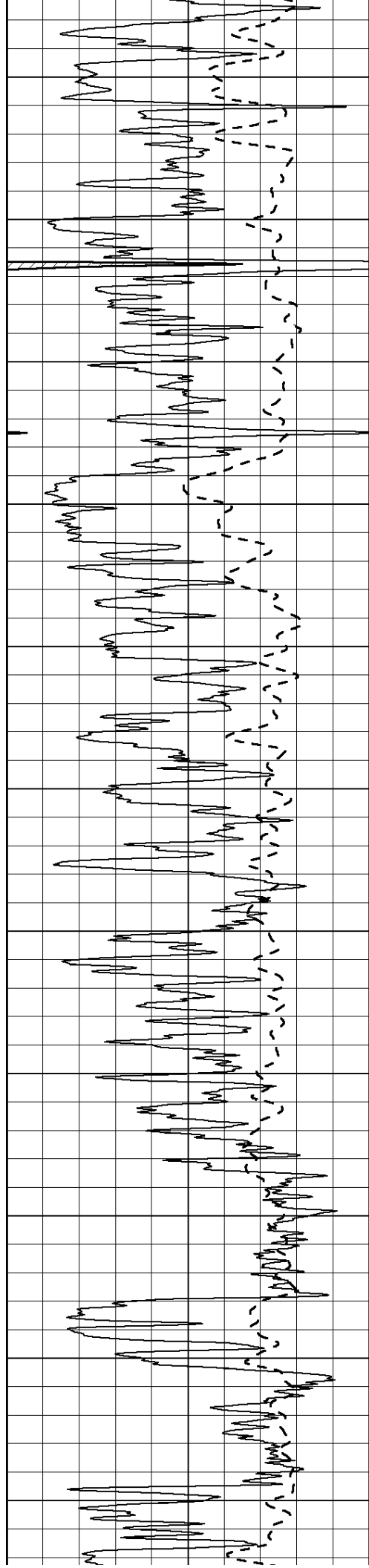
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

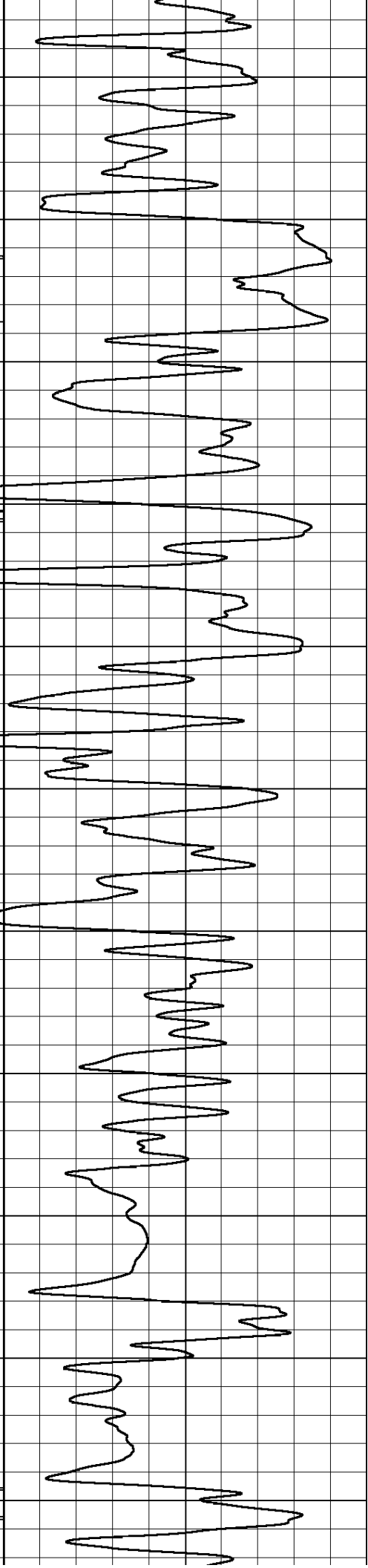
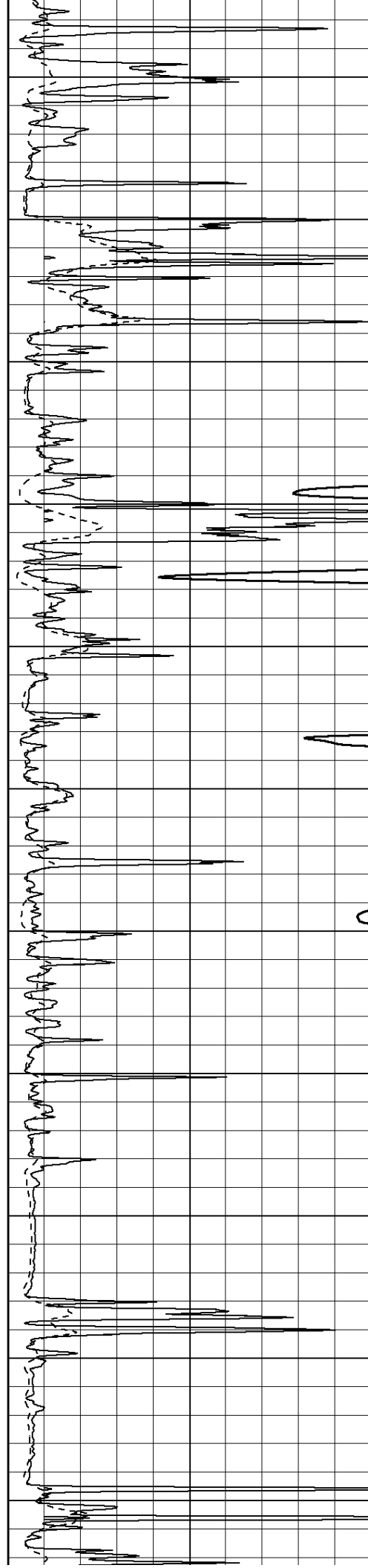
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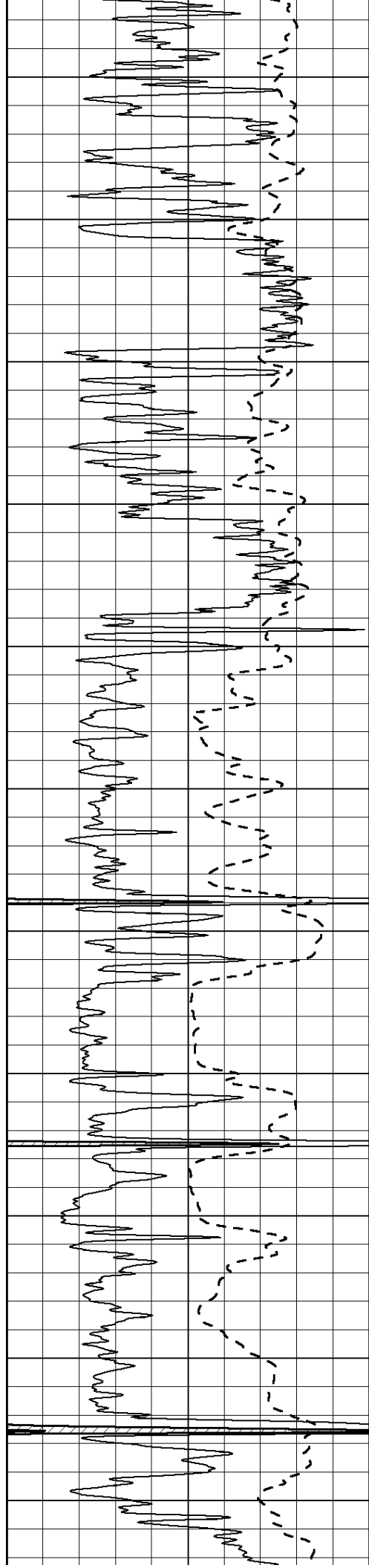
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

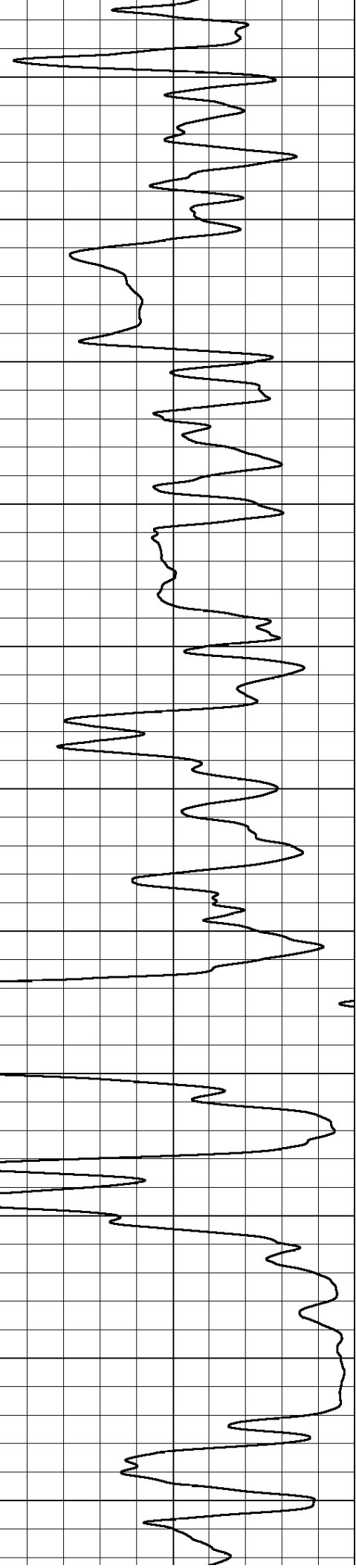
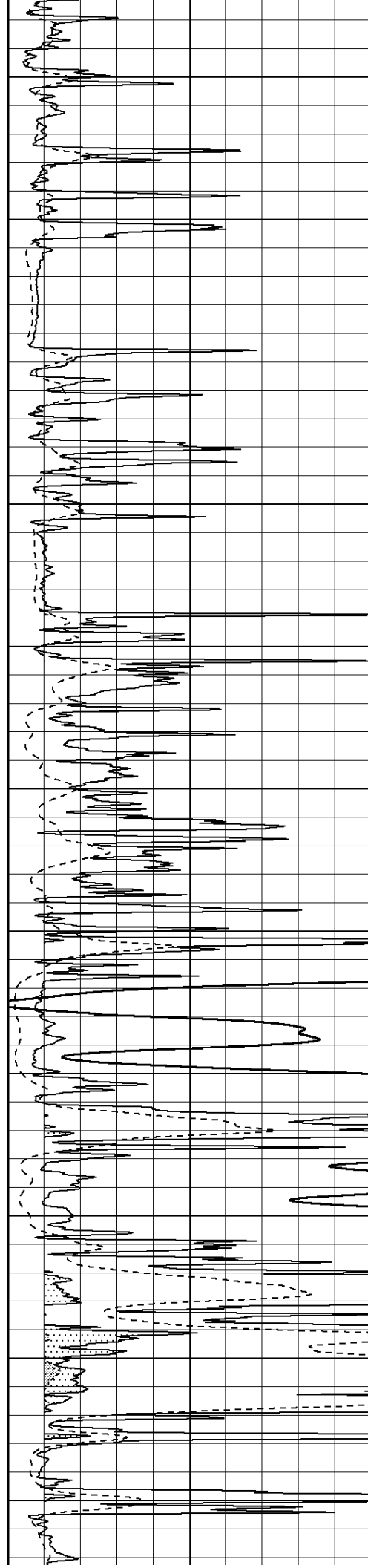
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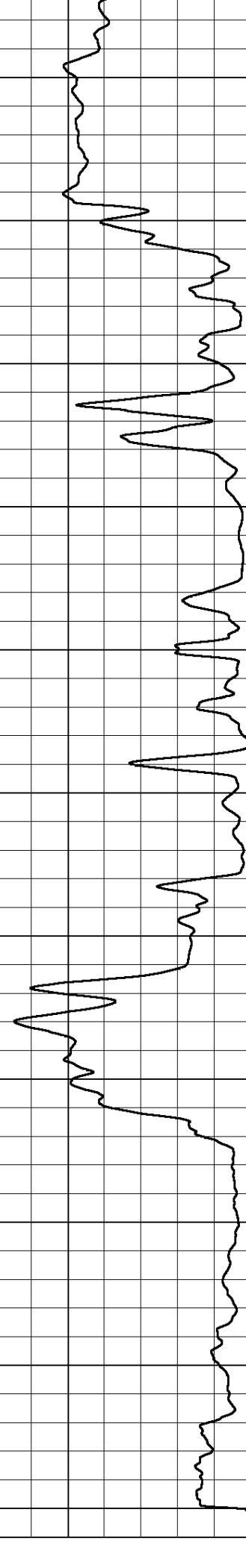
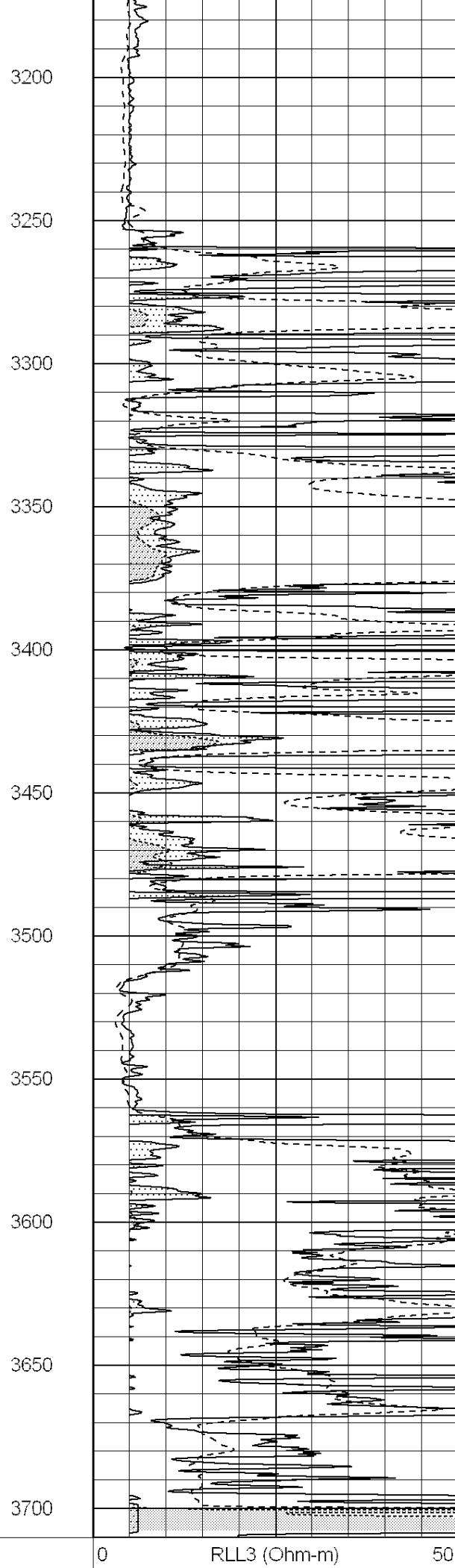
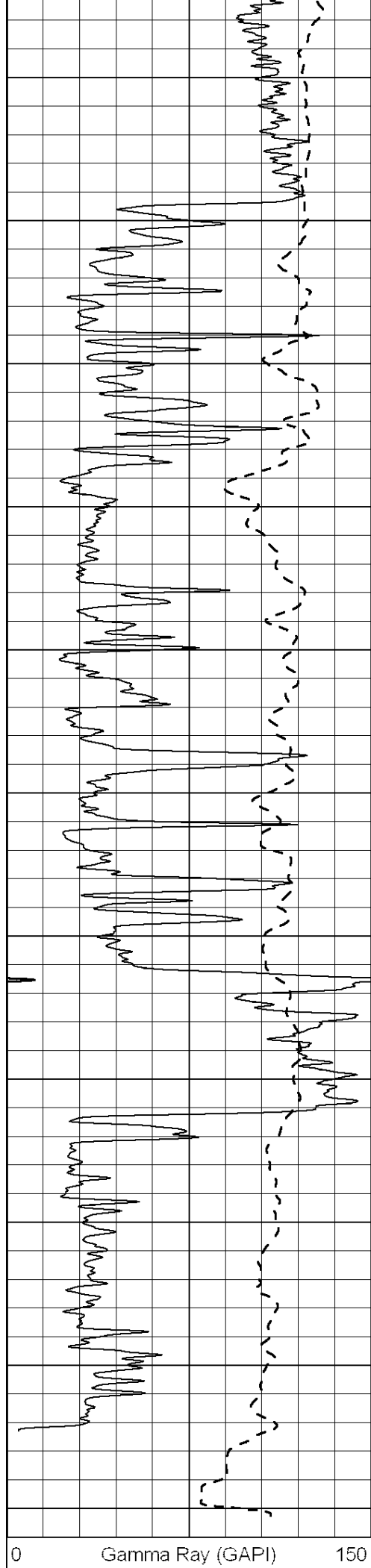
3000

3050

3100

3150





-100 SP (mV) 100

0 Deep Induction (Ohm-m) 50

1000 CILD (mmho/m) 0

50 RILD X10 (Ohm-m) 500

50 RLL3 X10 (Ohm-m) 500



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MAIN SECTION

Database File: 26254ddn.db
Dataset Pathname: pass3A
Presentation Format: _dil
Dataset Creation: Thu Nov 06 16:34:00 2014
Charted by: Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150

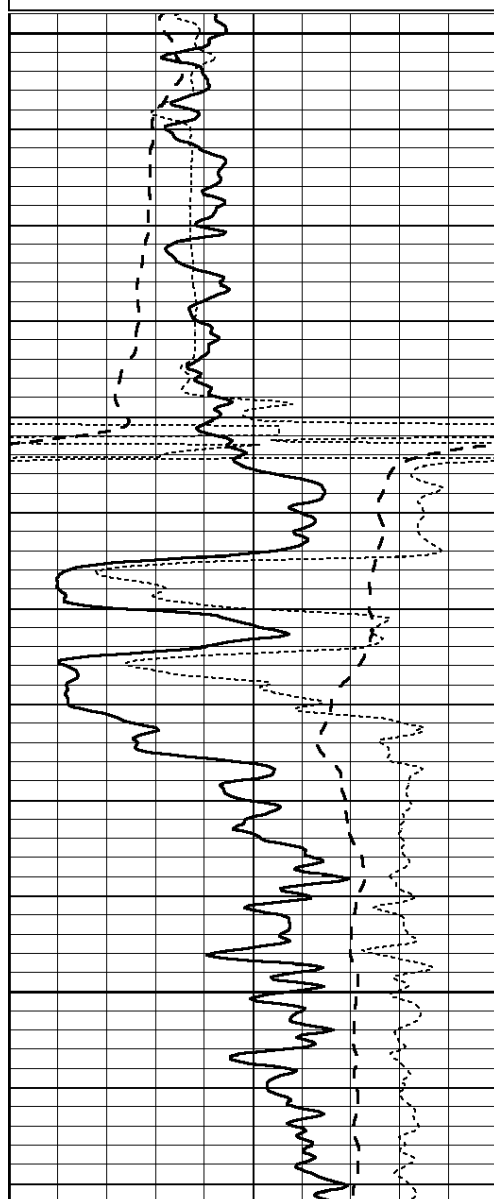
-100 SP (mV) 100

-250 Rxo/Rt 50

0.2 SHALLOW GUARD (Ohm-m) 2000

0.2 MEDIUM INDUCTION (Ohm-m) 2000

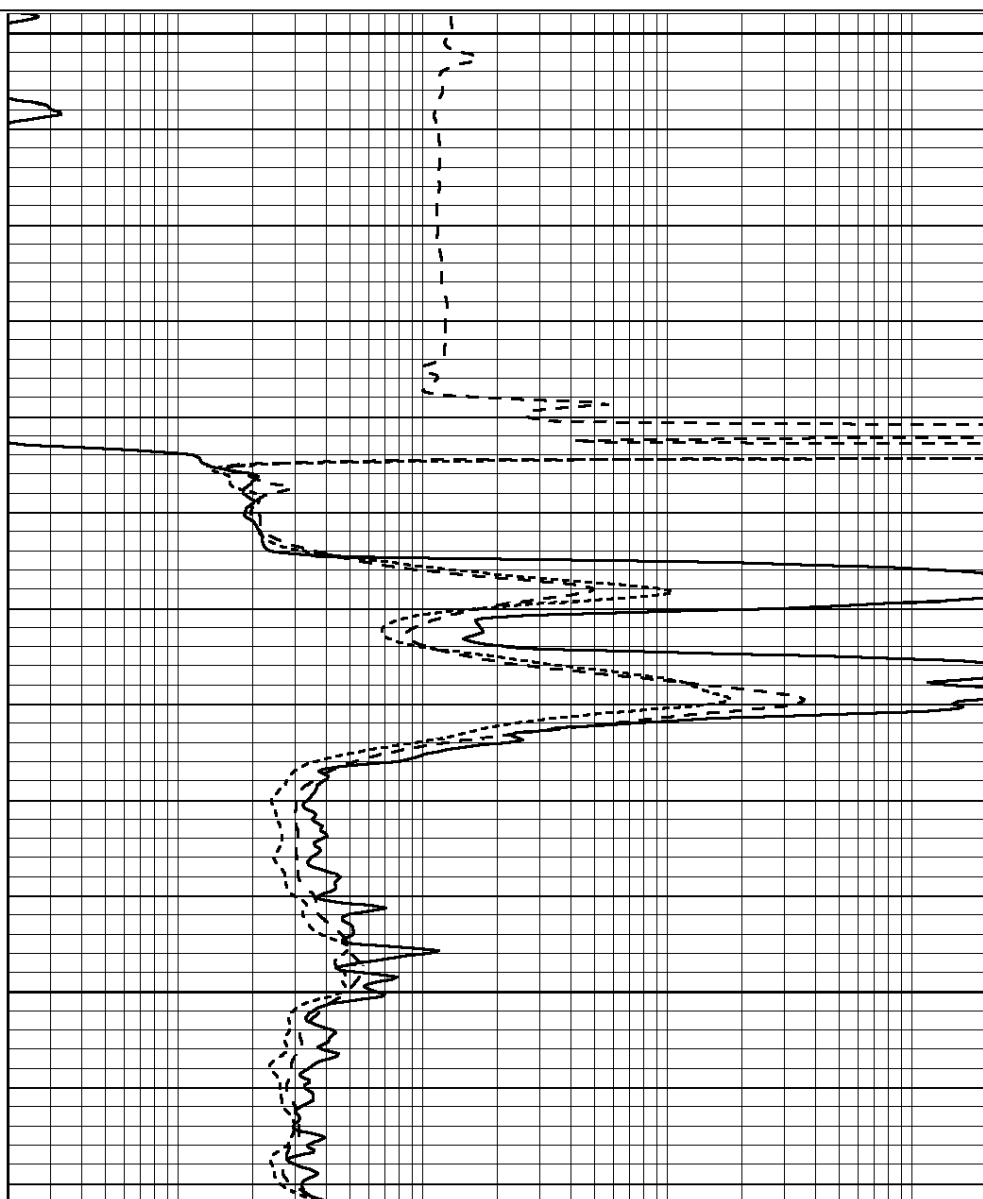
0.2 DEEP INDUCTION (Ohm-m) 2000



600

650

700



0 GAMMA RAY (GAPI) 150

-100 SP (mV) 100

0.2 SHALLOW GUARD (Ohm-m) 2000

0.2 MEDIUM INDUCTION (Ohm-m) 2000

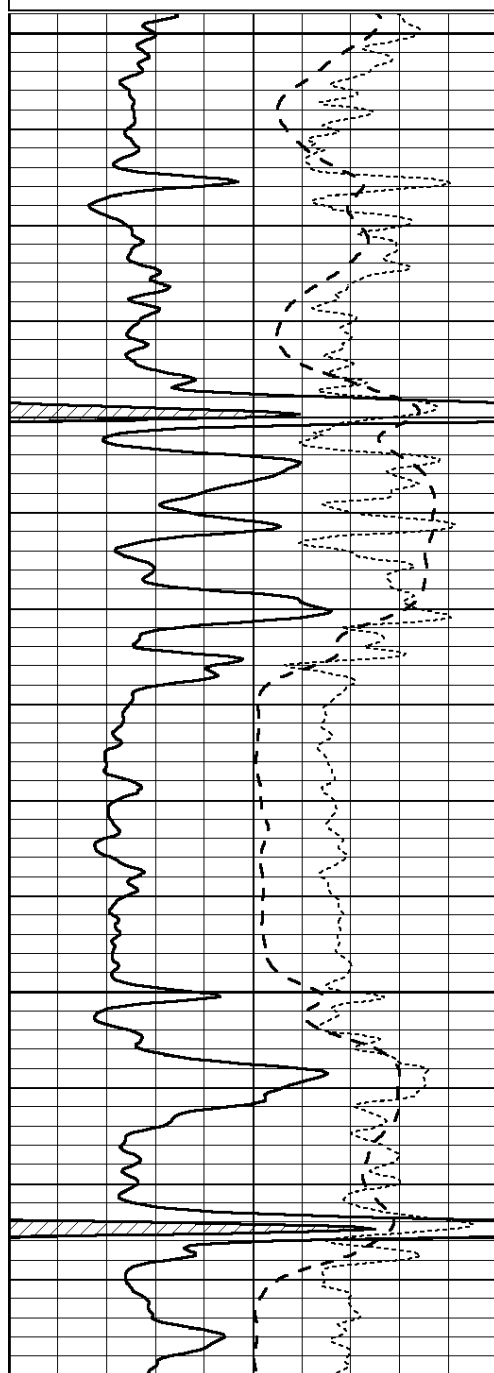


MAIN SECTION

Database File: 26254ddn.db
 Dataset Pathname: pass3A
 Presentation Format: _dil
 Dataset Creation: Thu Nov 06 16:34:00 2014
 Charted by: Depth in Feet scaled 1:240

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

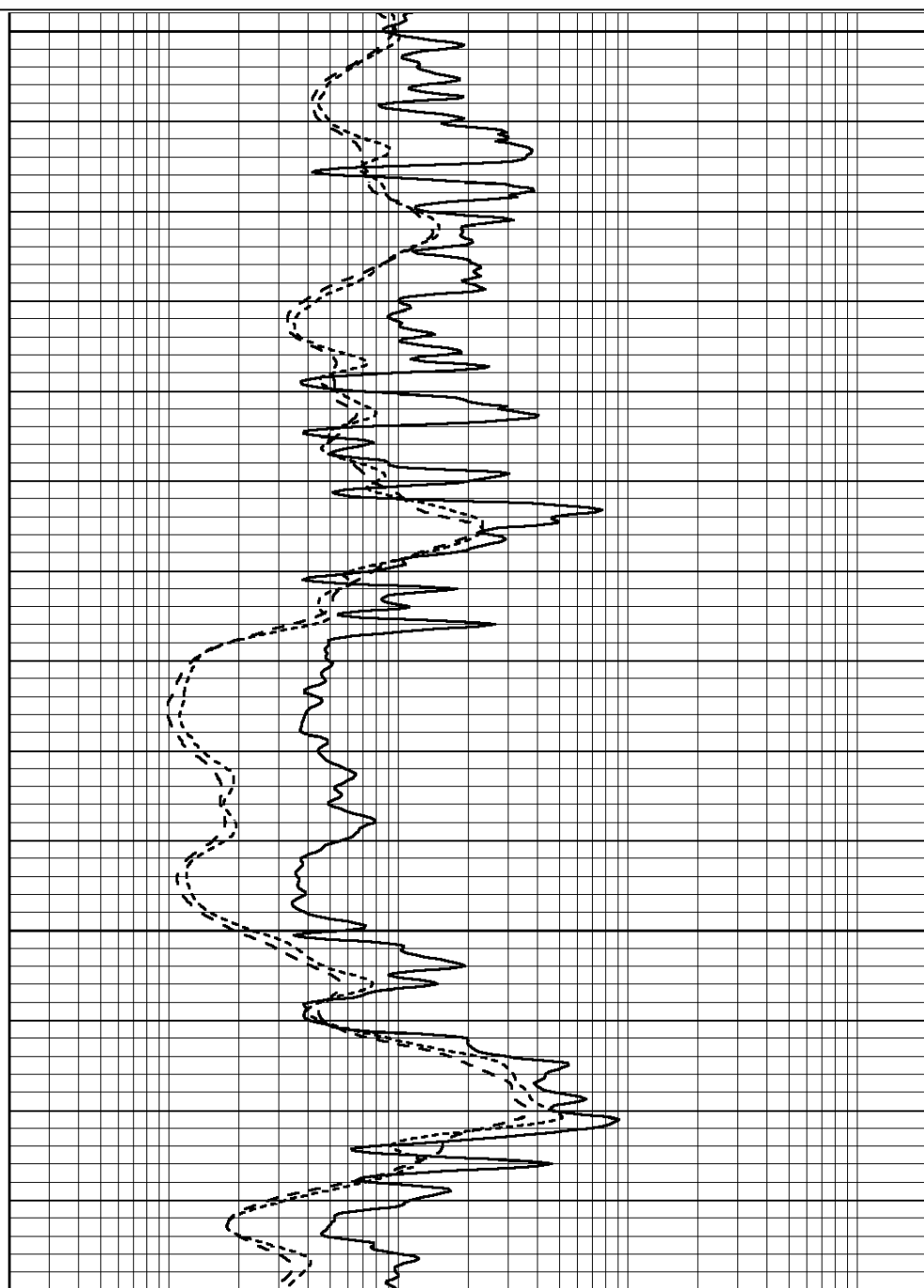
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

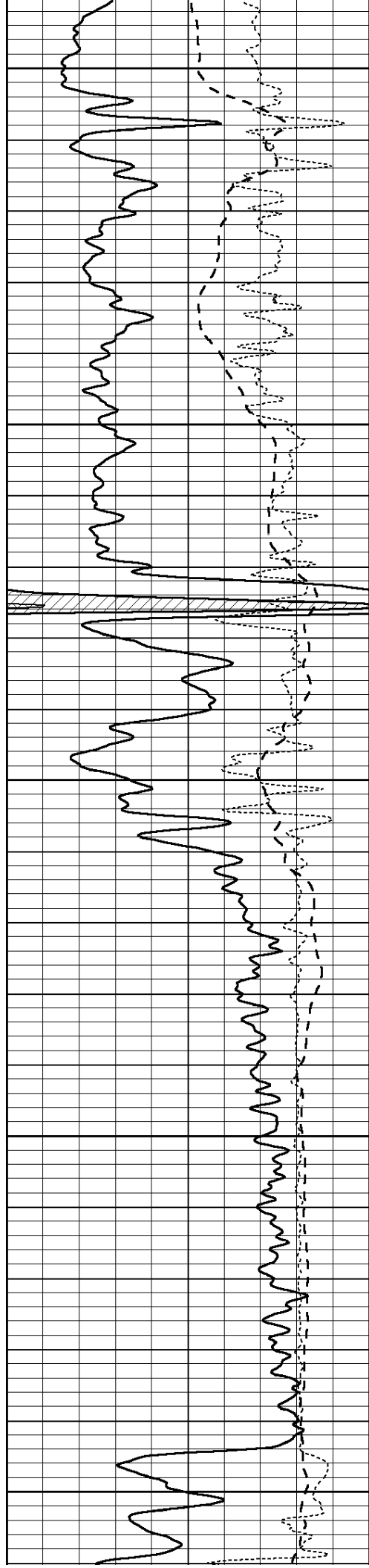


2900

2950

3000





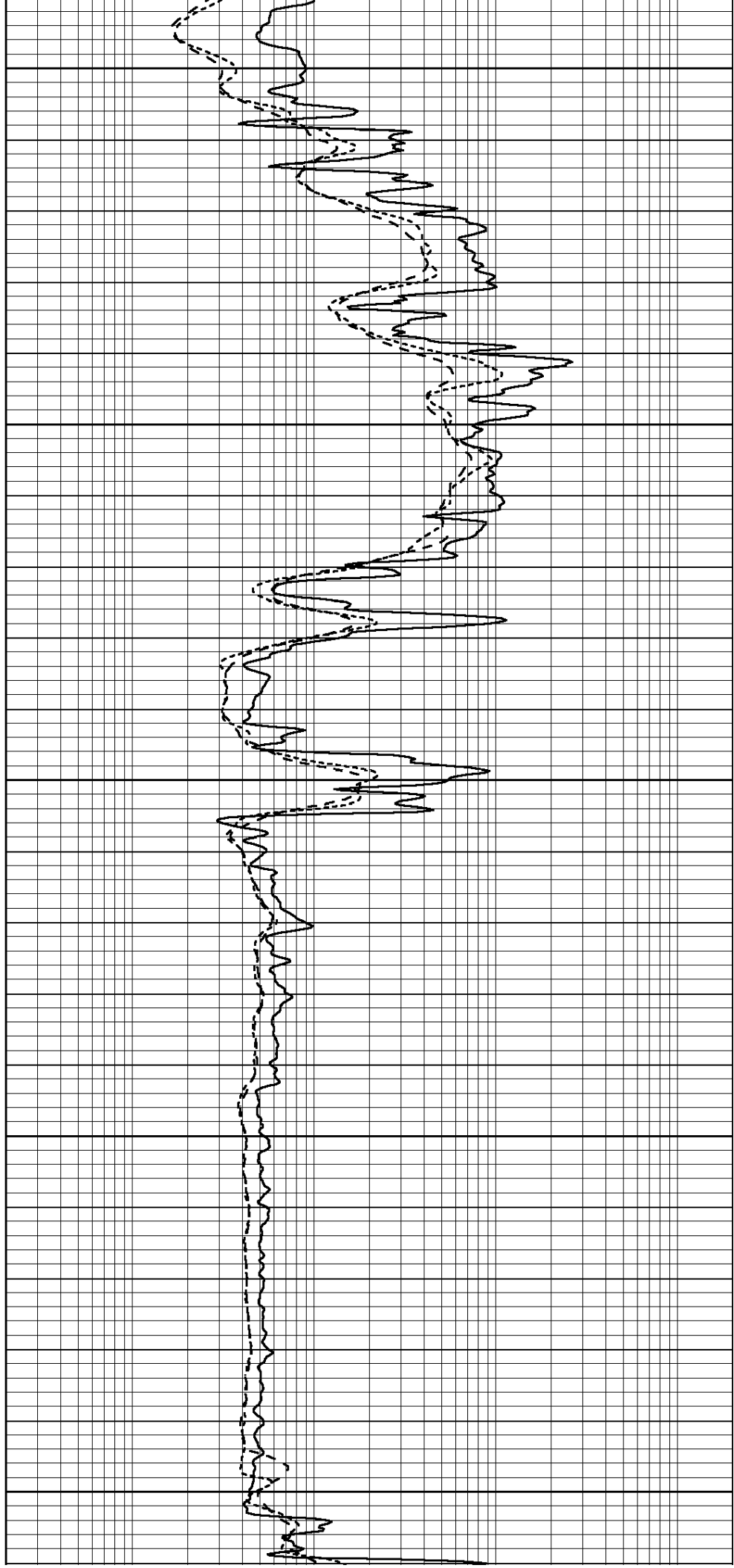
3050

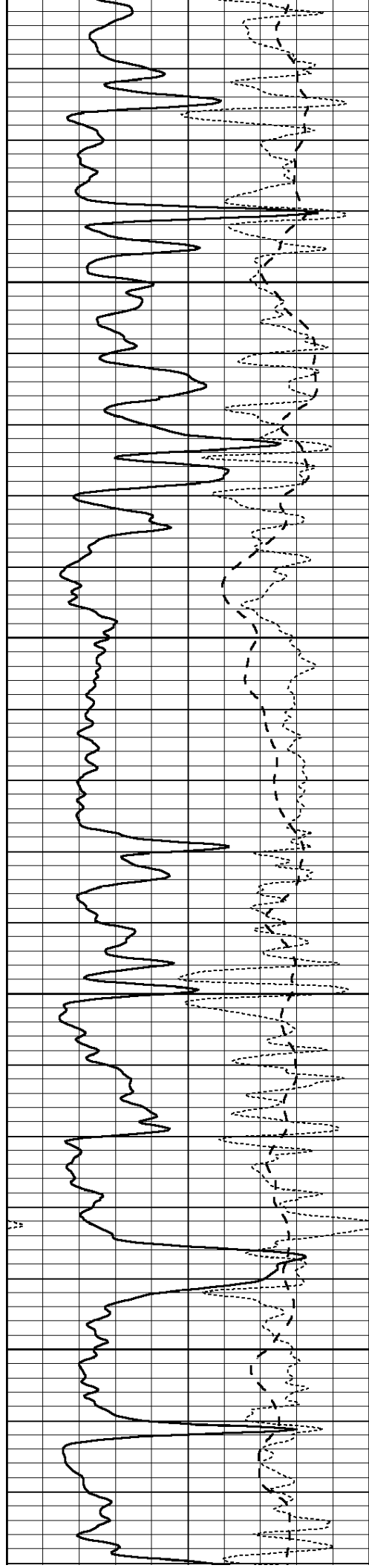
3100

3150

3200

3250



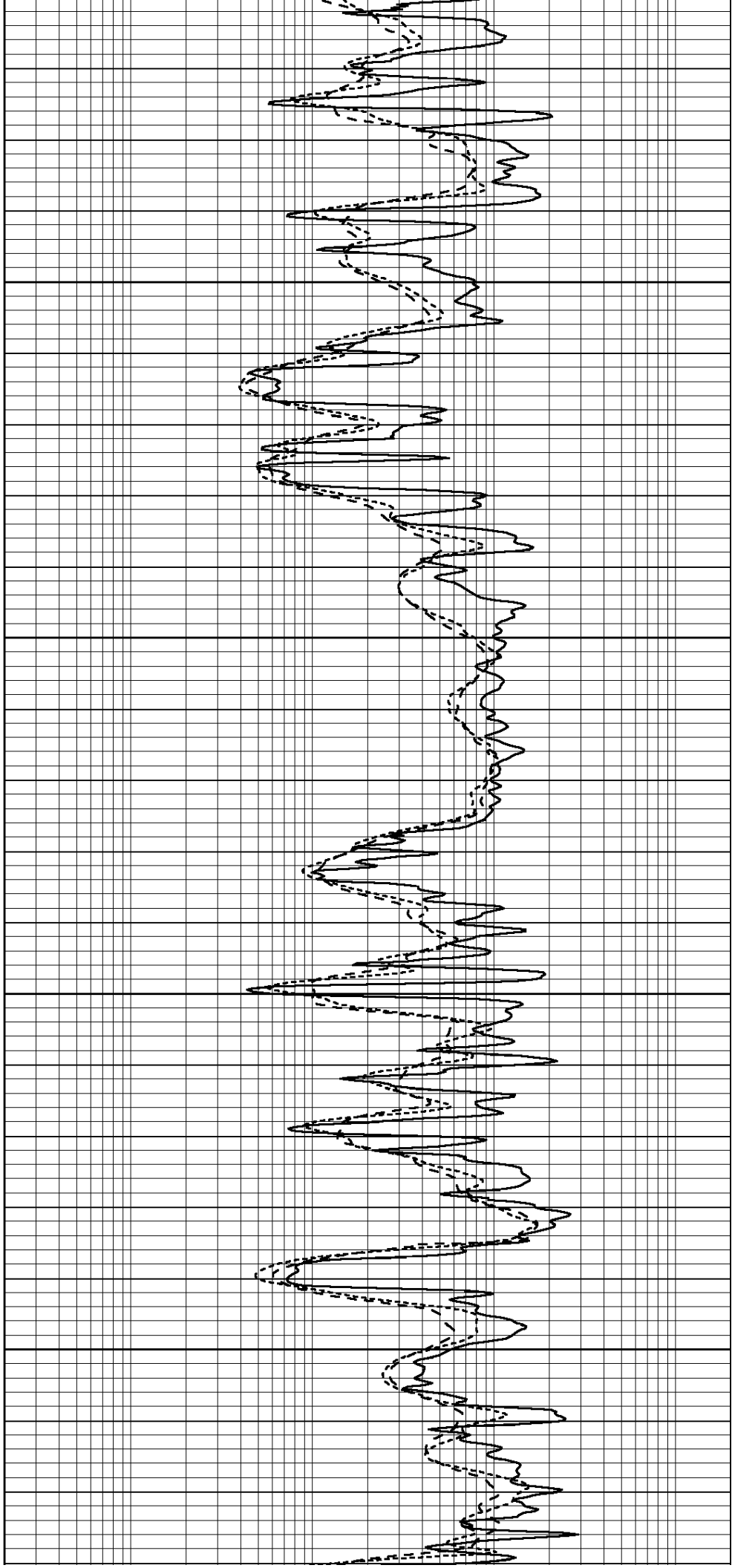


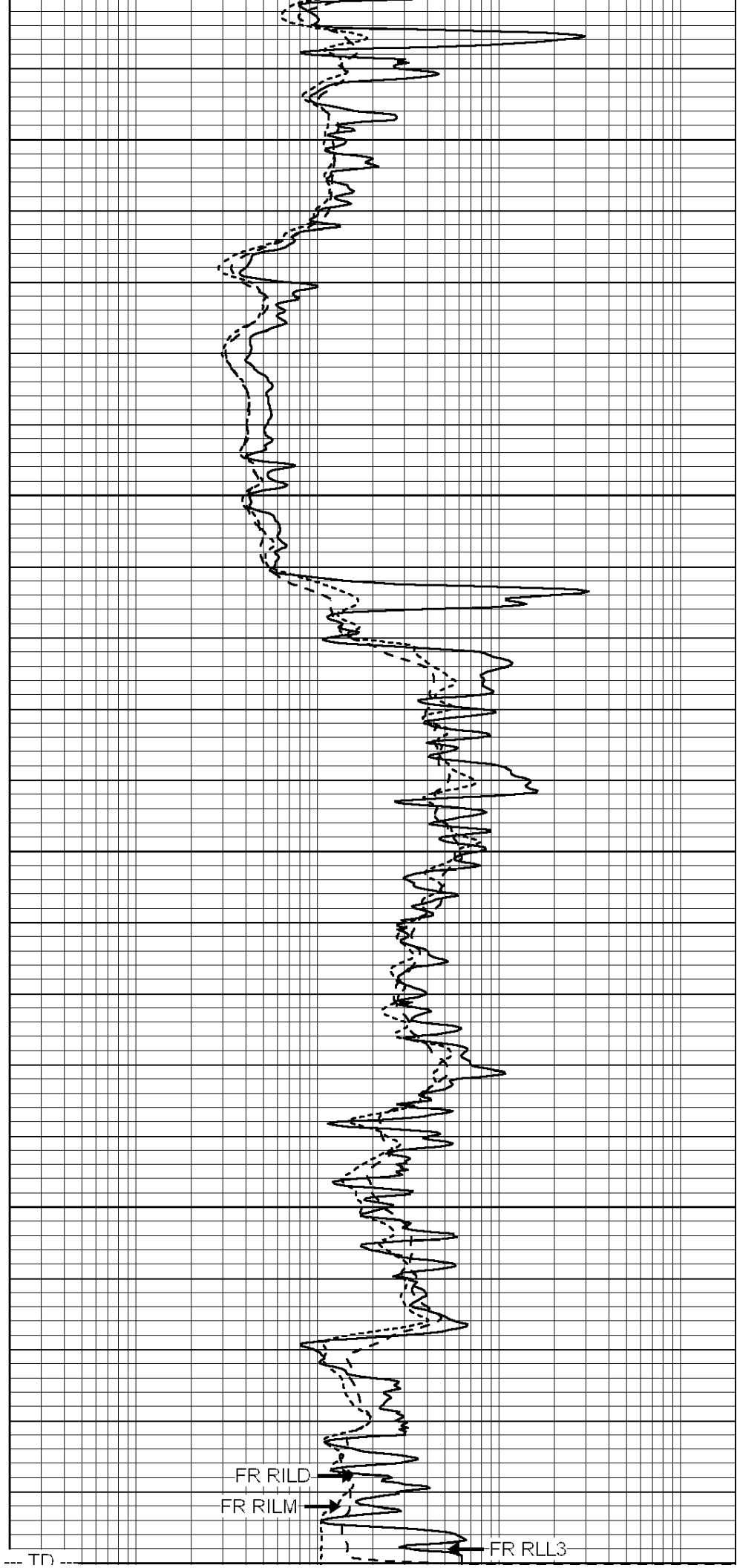
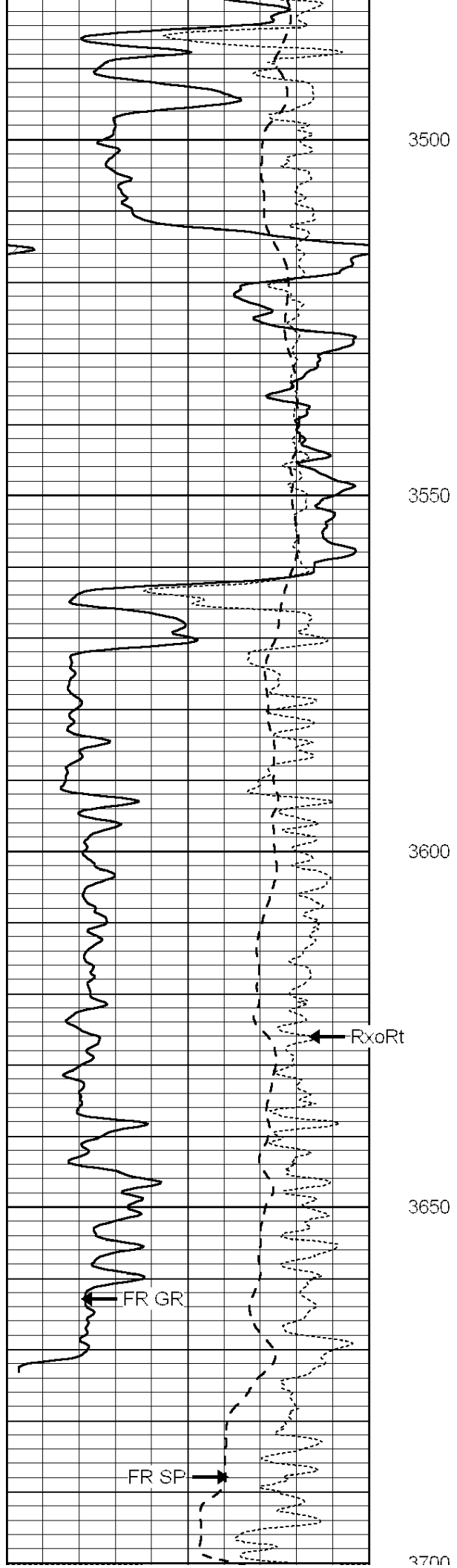
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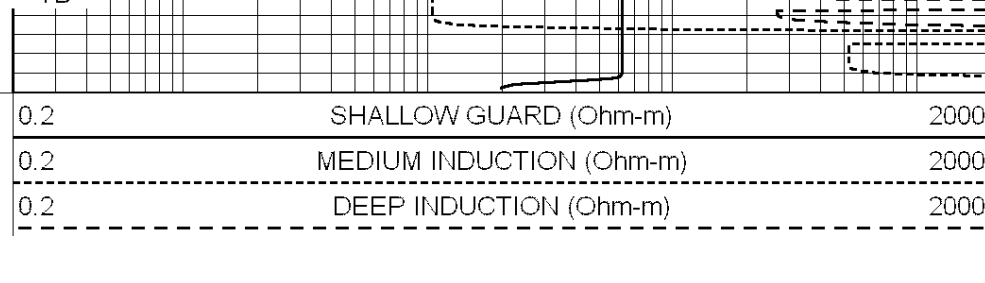
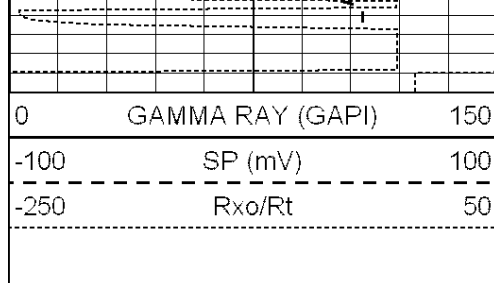
3350

3400

3450

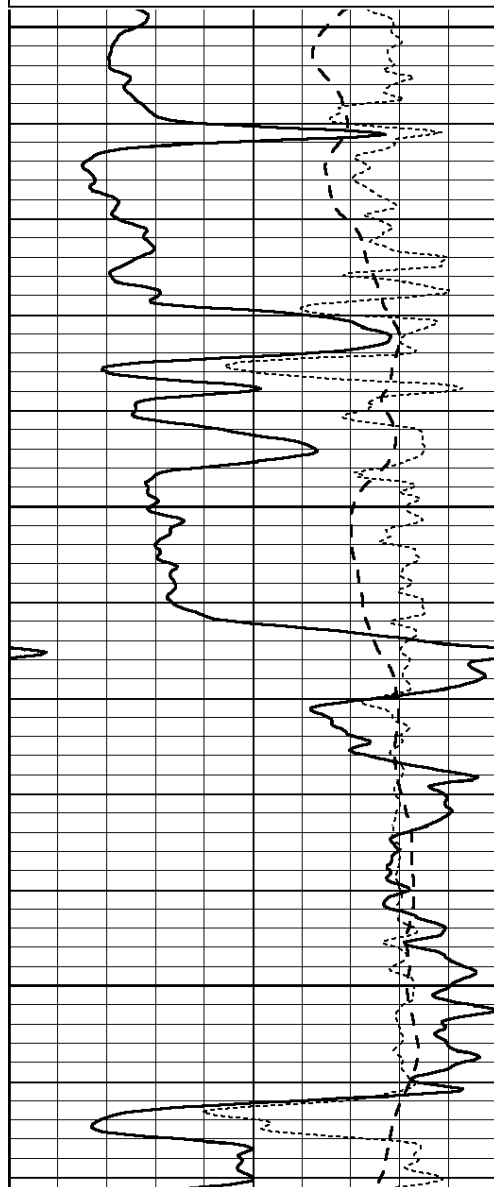
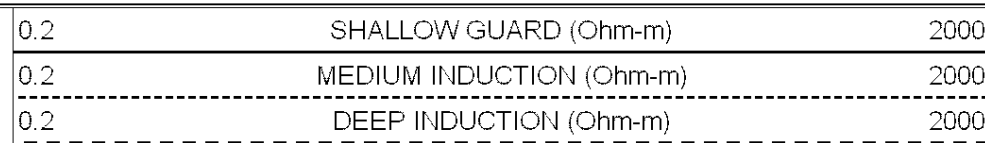
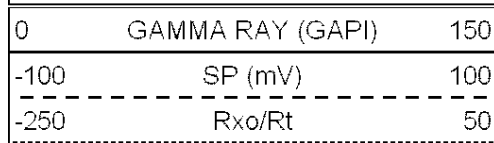






REPEAT SECTION

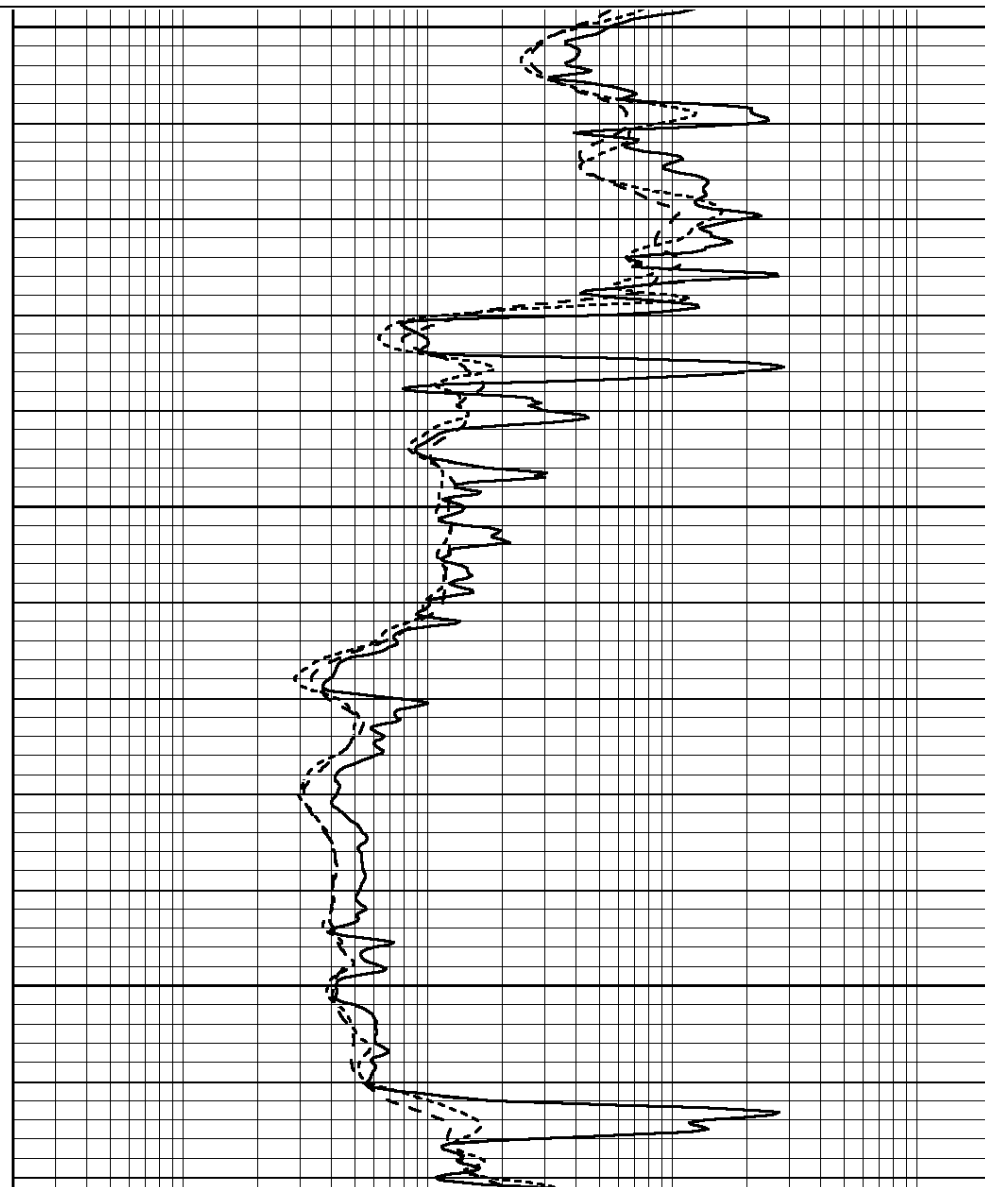
Database File: 26254ddn.db
 Dataset Pathname: pass2A
 Presentation Format: _dil
 Dataset Creation: Thu Nov 06 16:15:55 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

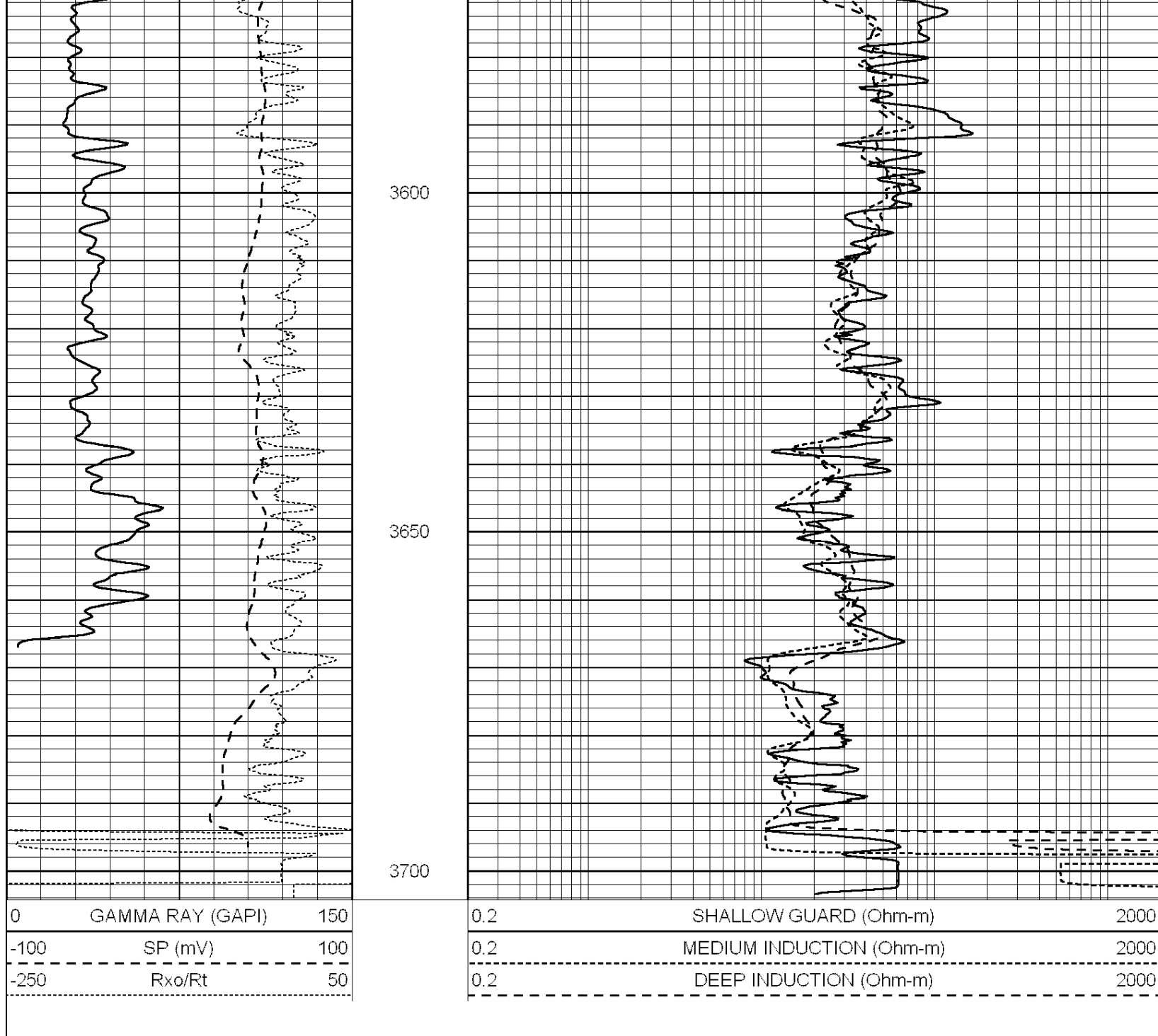


3450

3500

3550





Calibration Report

Database File: 26254ddn.db
 Dataset Pathname: pass3A
 Dataset Creation: Thu Nov 06 16:34:00 2014

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Thu Nov 06 15:13:29 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		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	520.000	11.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	580.000	-33.000

Internal:	<u>Zero</u>	<u>Cal</u>		<u>Zero</u>	<u>Cal</u>		<u>m</u>	<u>b</u>
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	
	<u>Zero</u>	<u>Cal</u>		<u>Zero</u>	<u>Cal</u>		<u>m'</u>	<u>b'</u>
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	
	<u>Zero</u>	<u>Cal</u>		<u>Zero</u>	<u>Cal</u>		<u>m'</u>	<u>b'</u>
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 06 14:50:55 2014

Master Calibration								
	<u>Density</u>			<u>Far Detector</u>		<u>Near Detector</u>		
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				
	<u>Size</u>			<u>Reading</u>				
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:	40004
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Serial Number:	40001
Tool Model:	Probe1
Performed:	Thu Nov 06 14:17:52 2014

Calibrator Value:	1.0	GAPI
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Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps

Sensitivity:	0.2600	GAPI/cps
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