



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	LD DRILLING	Company	LD DRILLING
Well	BLANKENSHIP #3-2	Well	BLANKENSHIP #3-2
Field	OTIS-ALBERT	Field	OTIS-ALBERT
County	BARTON	County	BARTON
State	KANSAS	State	KANSAS
Location:	API # : 15-009-25961-00-00 1320' FSL & 1320' FEL SE/4	Other Services CDL/CNL MEL	
SEC 2	TWP 19S	RGE 15W	
Permanent Datum	GROUND LEVEL	Elevation	1952
Log Measured From	KELLY BUSHING 5' A.G.L.	K.B. 1957 D.F. 1955 G.L. 1952	
Drilling Measured From	KELLY BUSHING		
Date	10/3/14		
Run Number	ONE		
Depth Driller	3660		
Depth Logger	3658		
Bottom Logged Interval	3656		
Top Log Interval	0		
Casing Driller	8 5/8" @ 954		
Casing Logger	952		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,000 PPM	
Density / Viscosity	9.2/65		
pH / Fluid Loss	10.5/9.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.50 @ 74F		
Rmf @ Meas. Temp	0.38 @ 74F		
Rmc @ Meas. Temp	0.60 @ 74F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	0.33 @ 113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	113F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	JEFF GRONEWEG		
Witnessed By	KURT TALBOTT		

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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

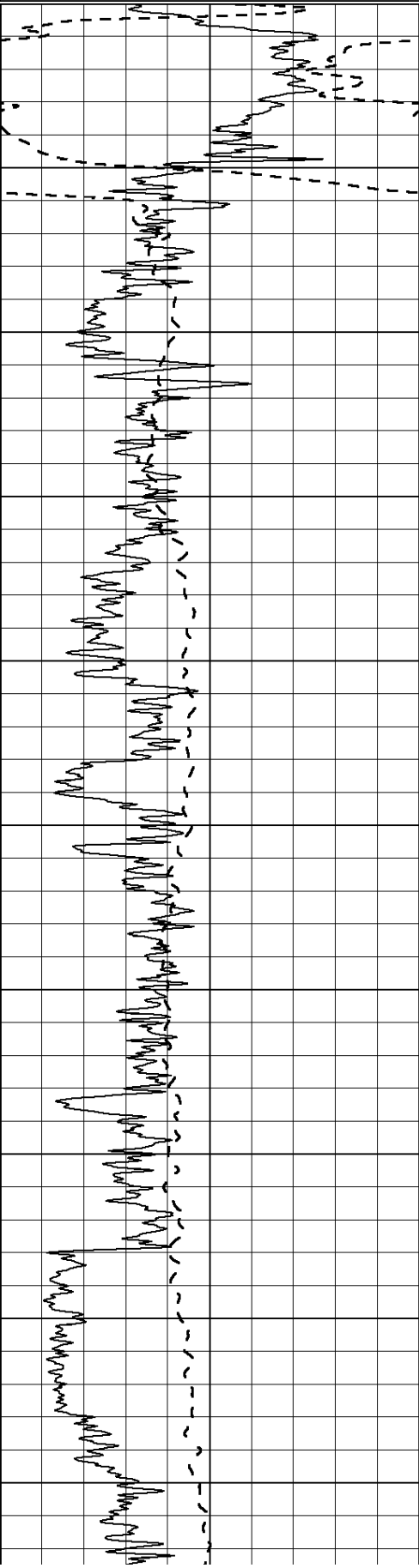
THANK YOU FOR USING NABORS COMPLETION & PRODUCTION SVCS. (785) 628-6395

DIRECTIONS: HEIZER, KS - 1 MILE WEST TO RD NW90 - 1 3/4 MILES SOUTH WEST INTO

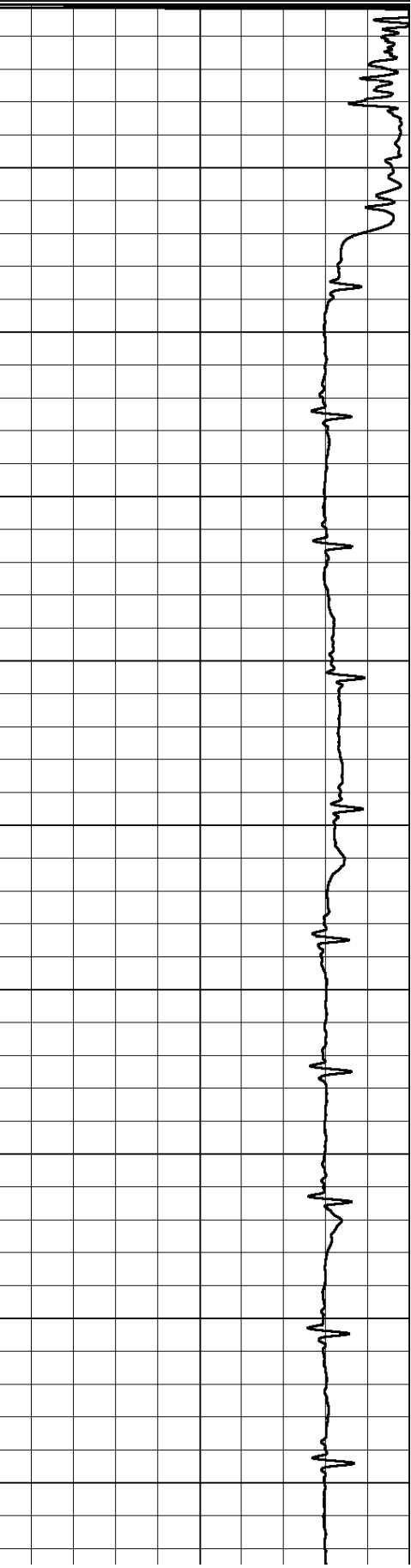
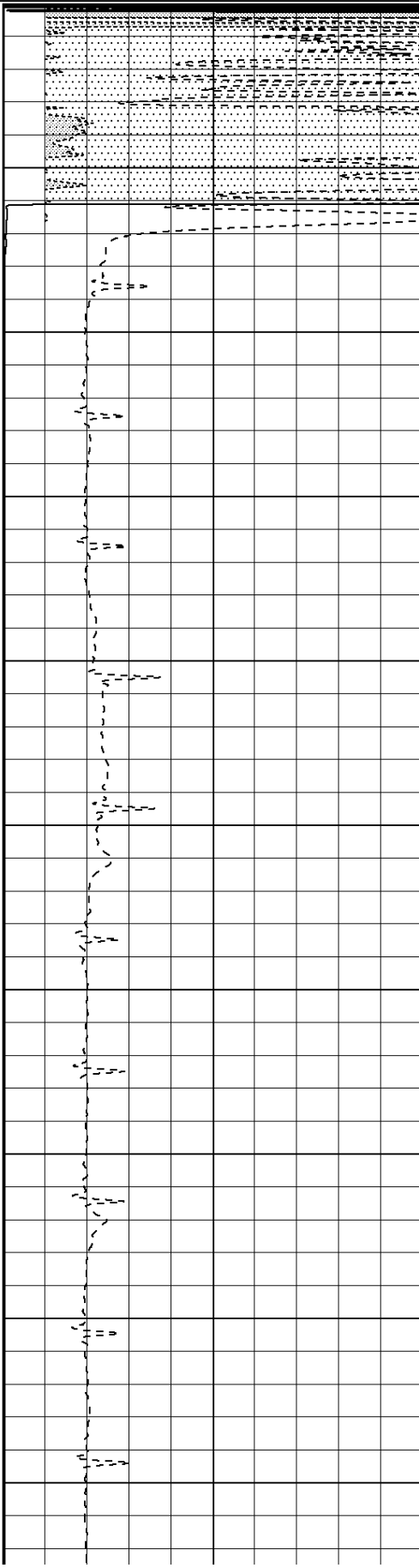
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

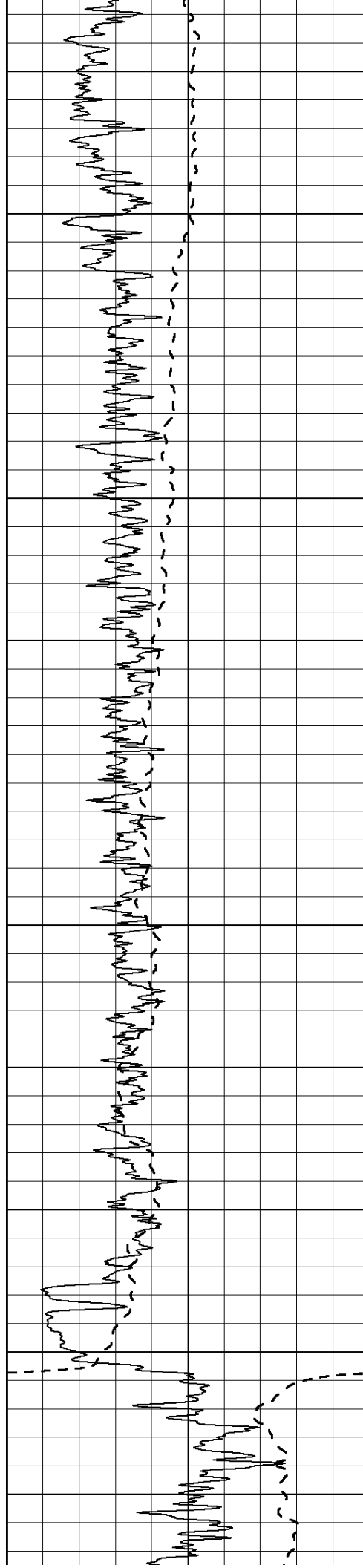
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50

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



0
50
100
150
200
250
300
350
400
450





500

550

600

650

700

750

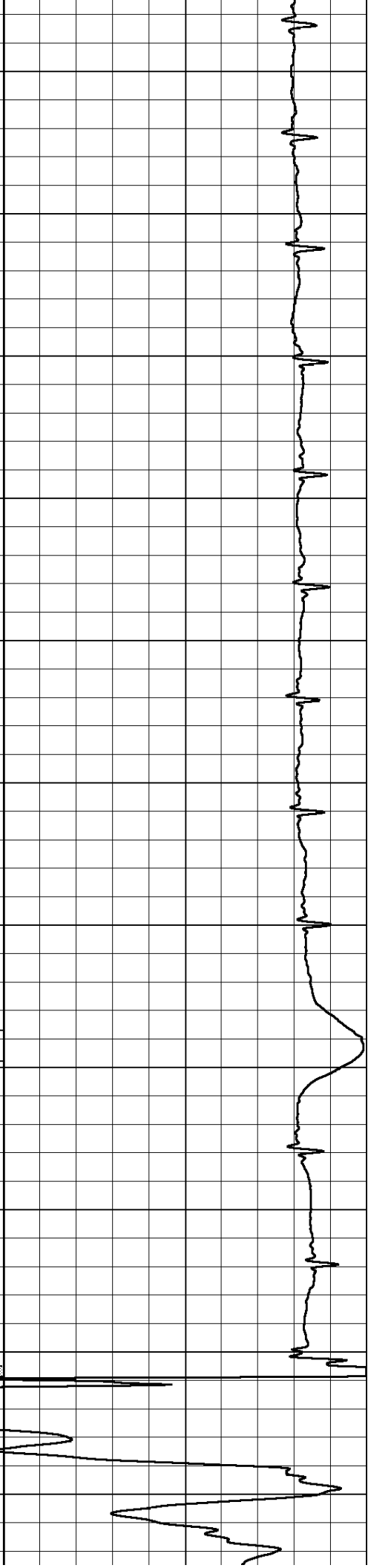
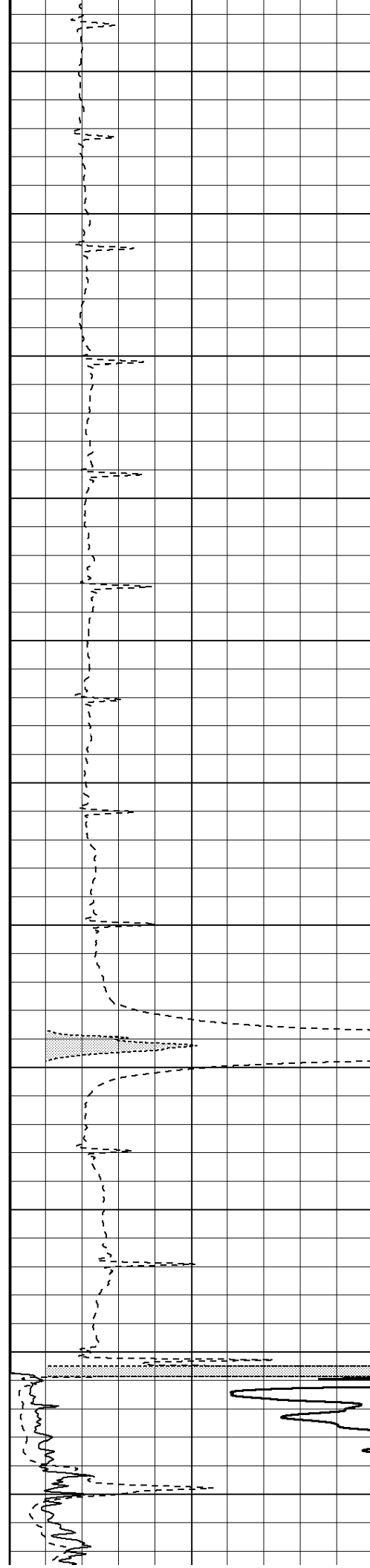
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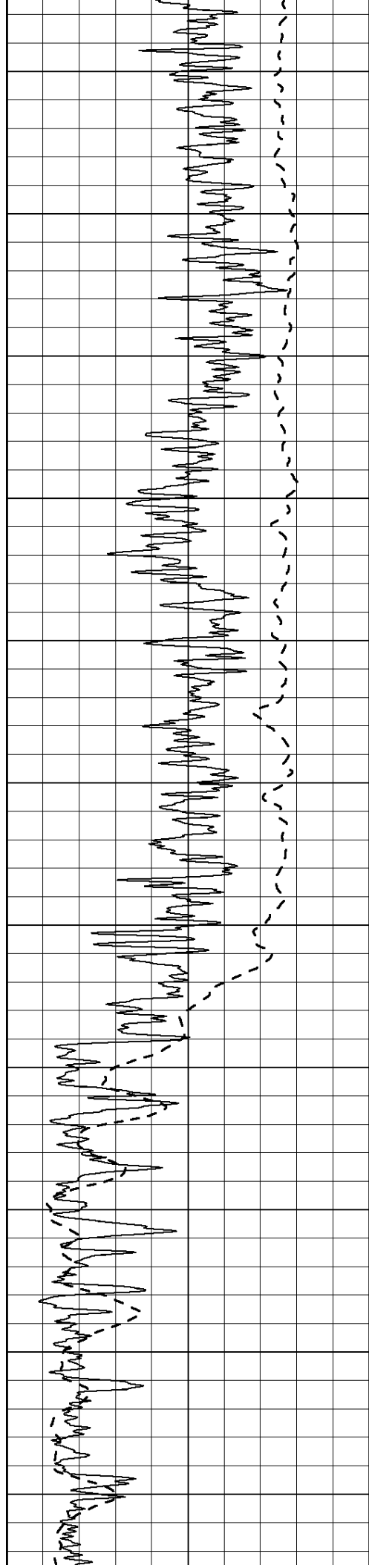
850

900

950

1000





1050

1100

1150

1200

1250

1300

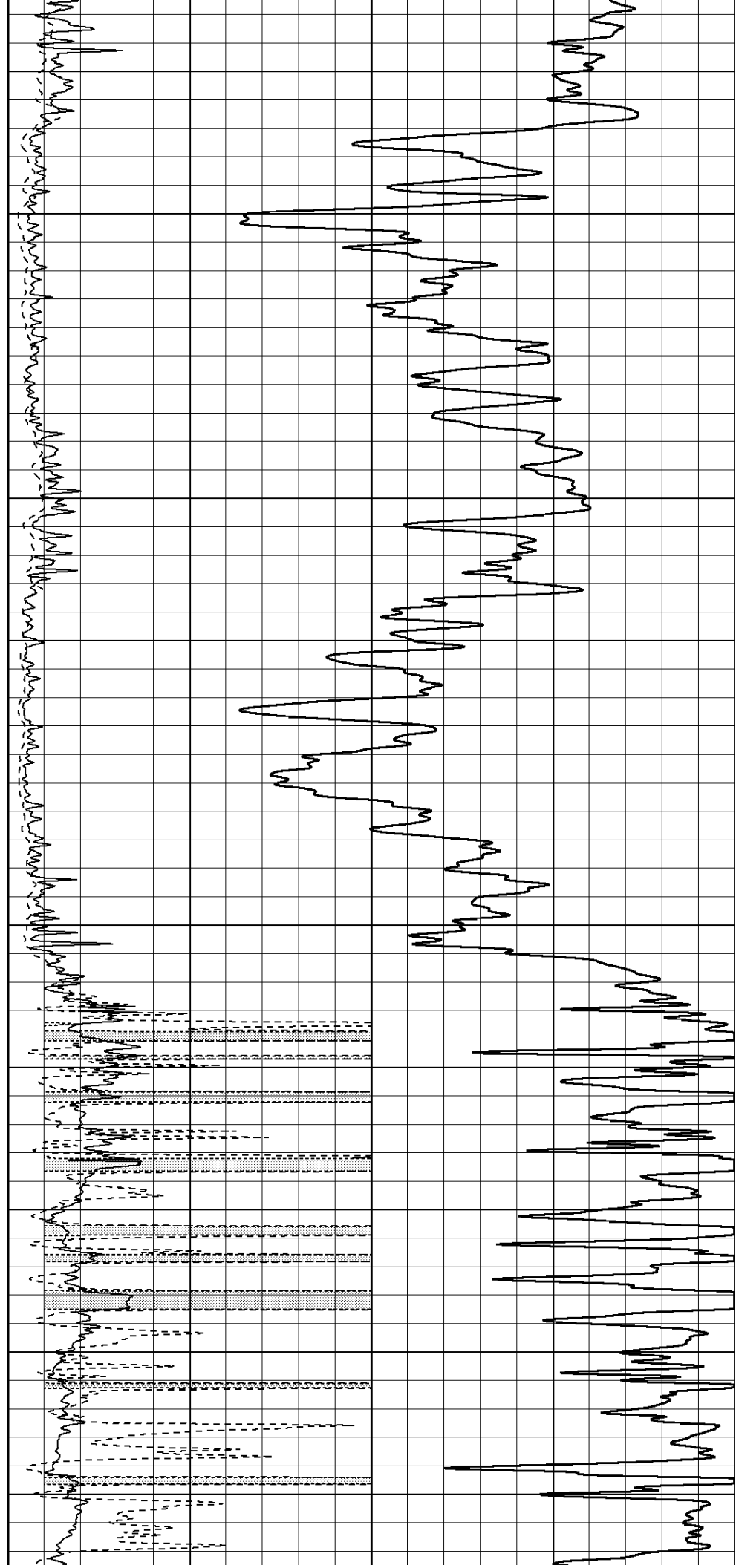
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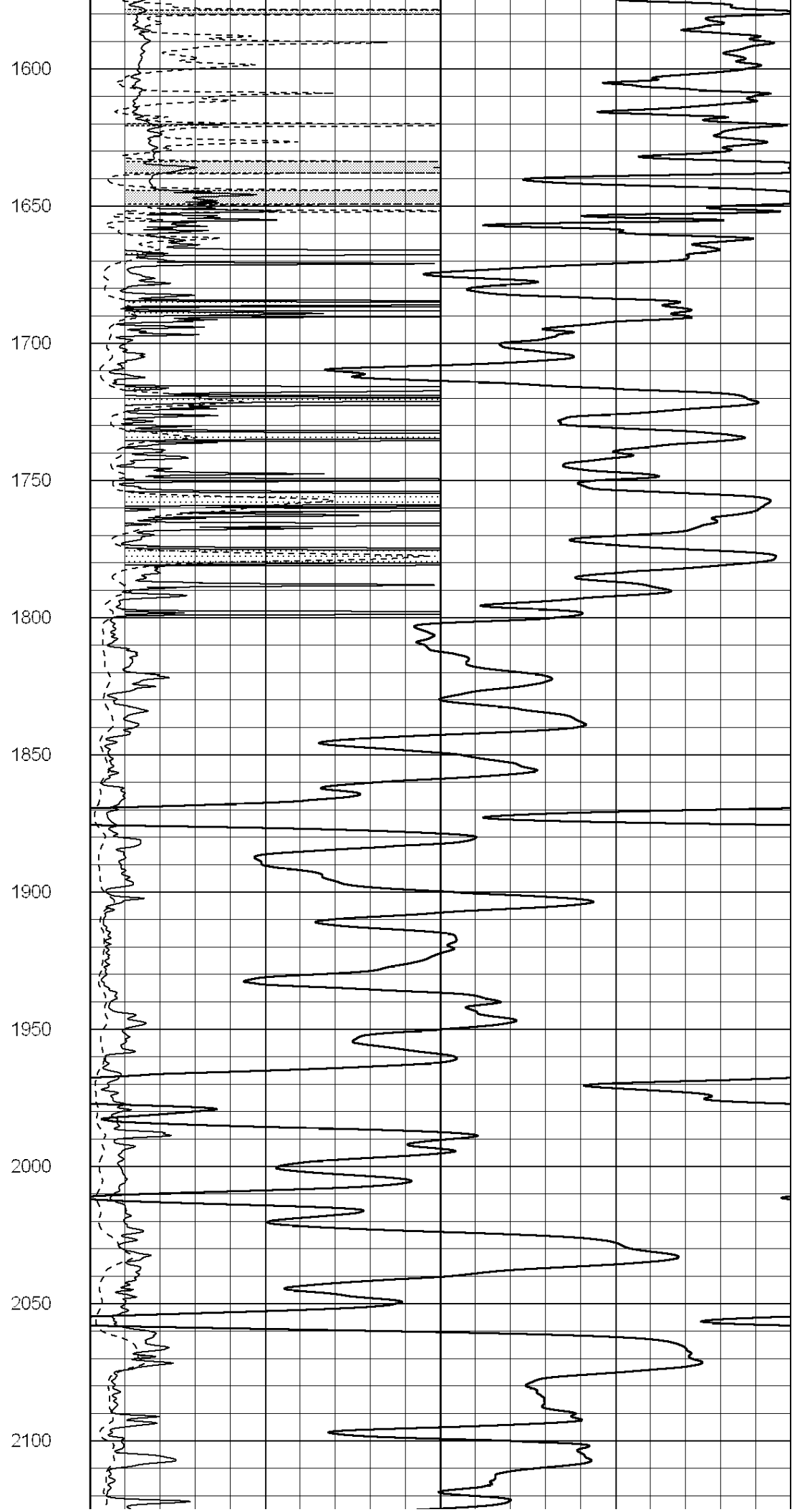
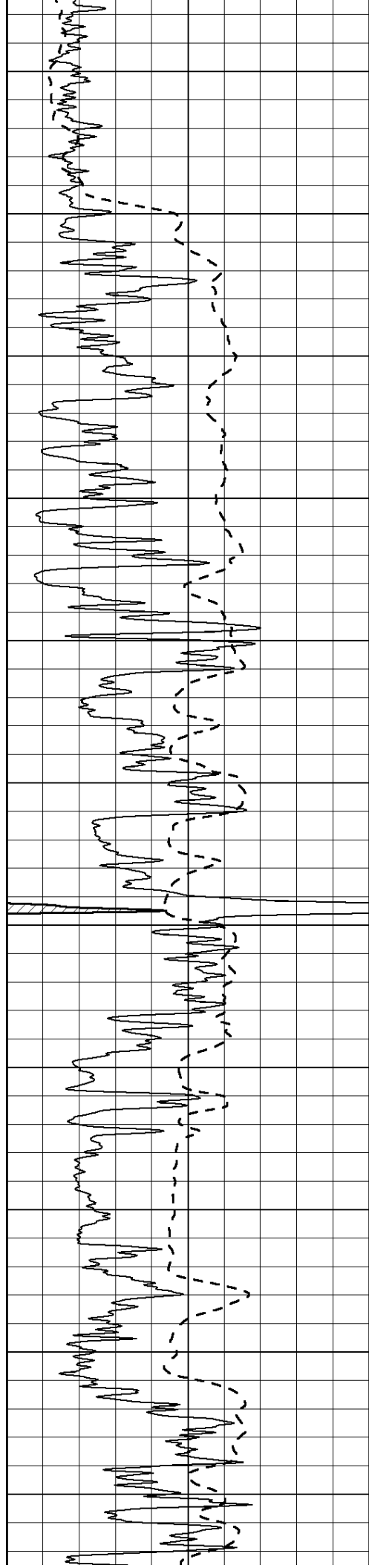
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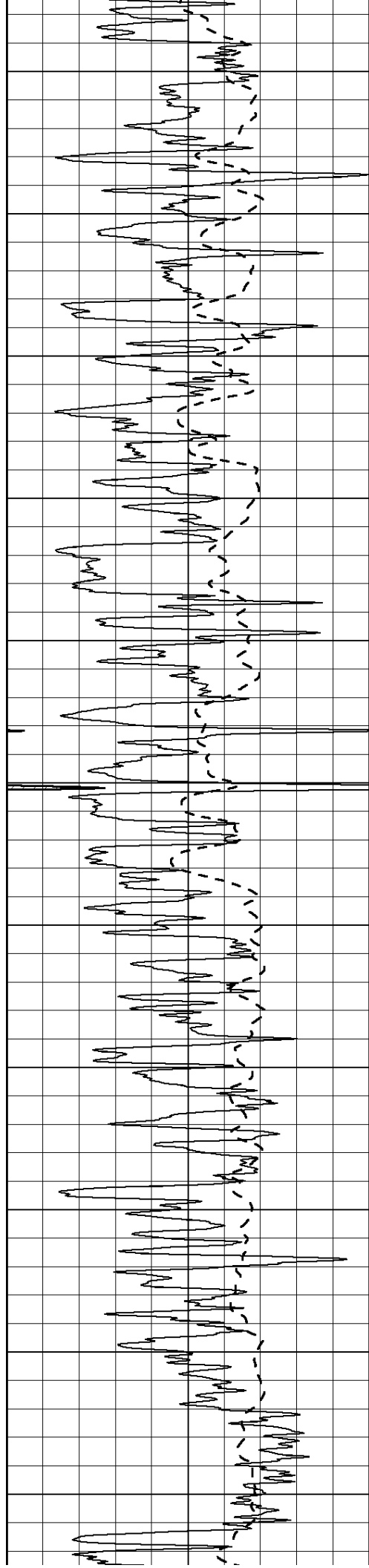
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1500

1550







2150

2200

2250

2300

2350

2400

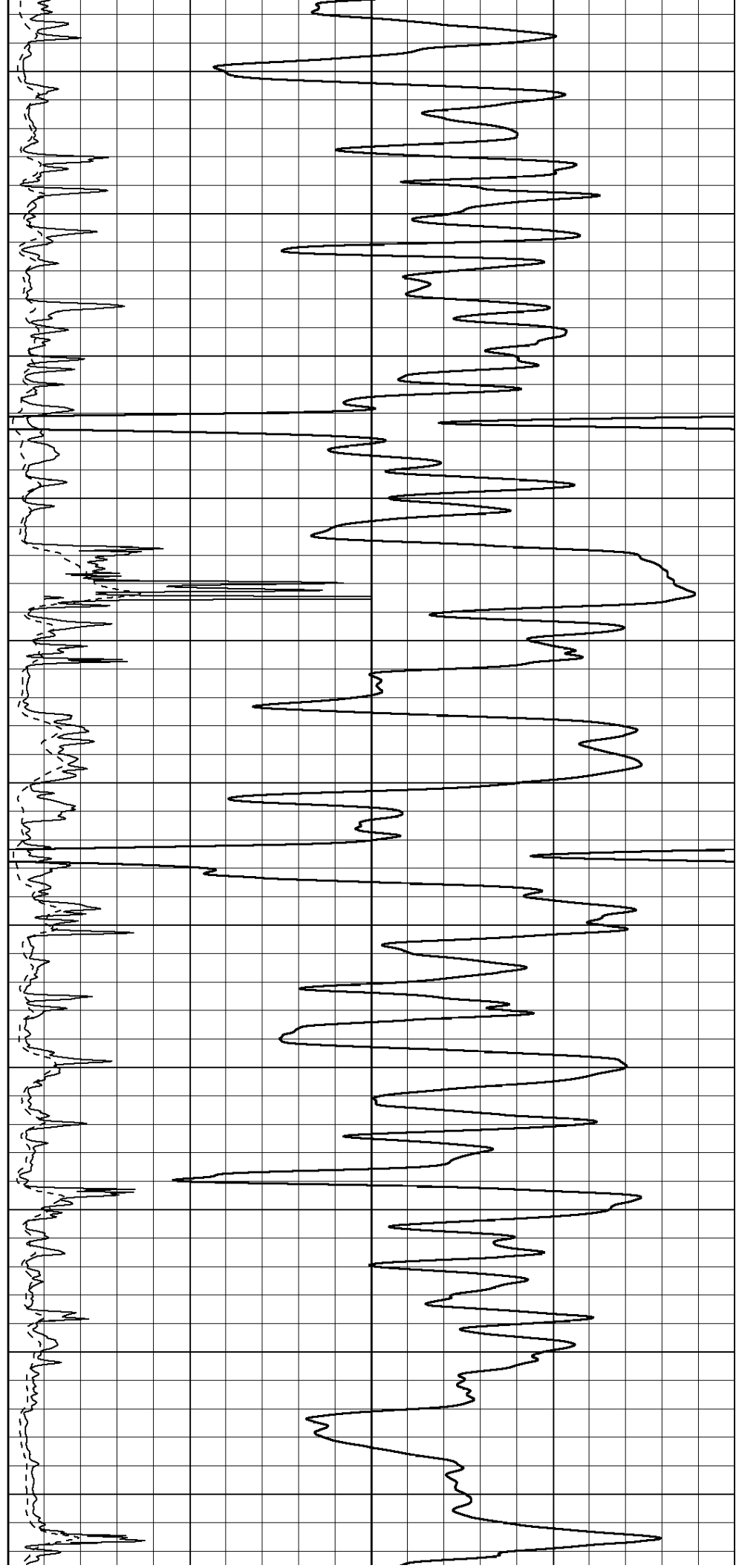
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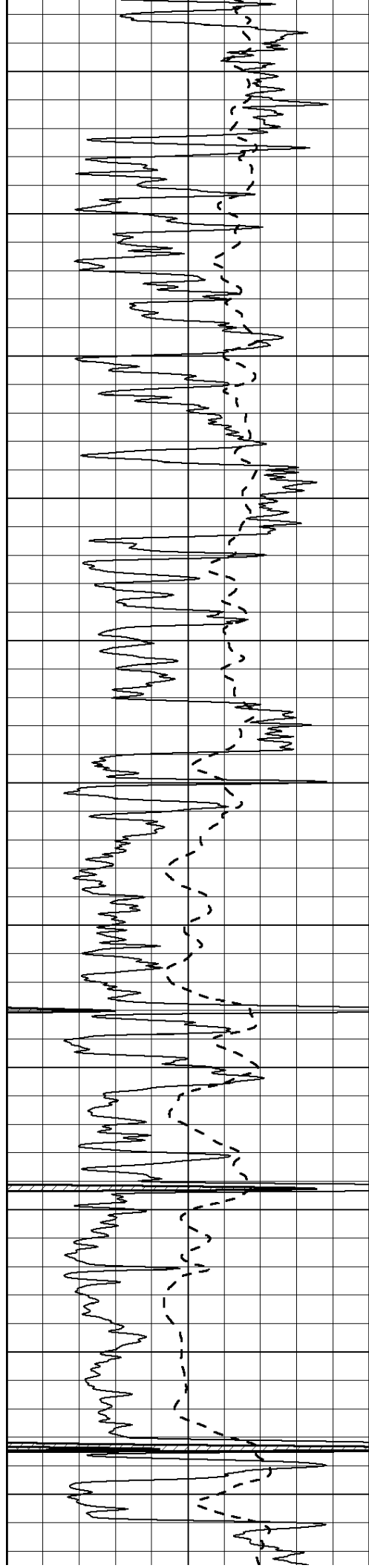
2500

2550

2600

2650





2700

2750

2800

2850

2900

2950

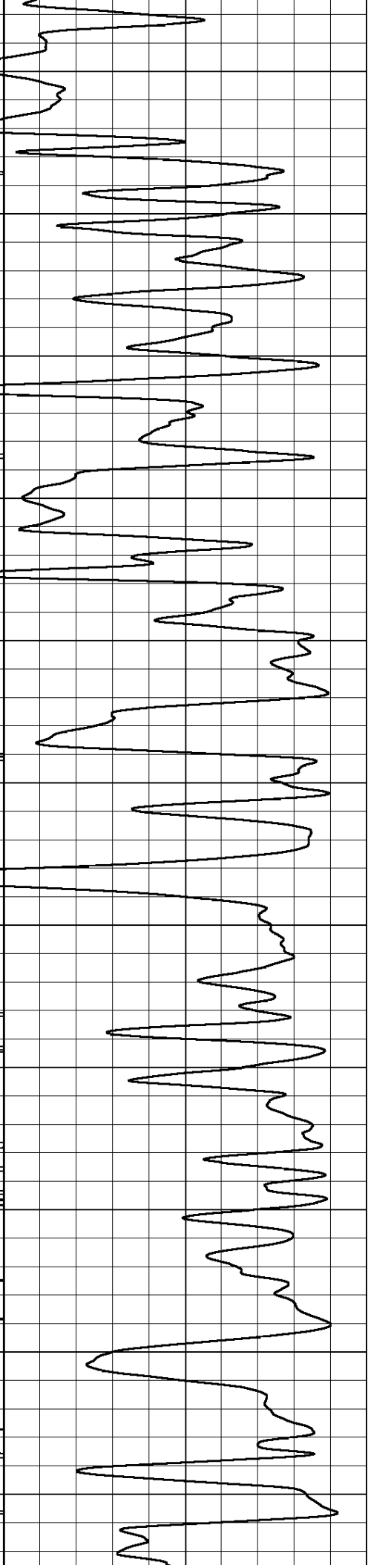
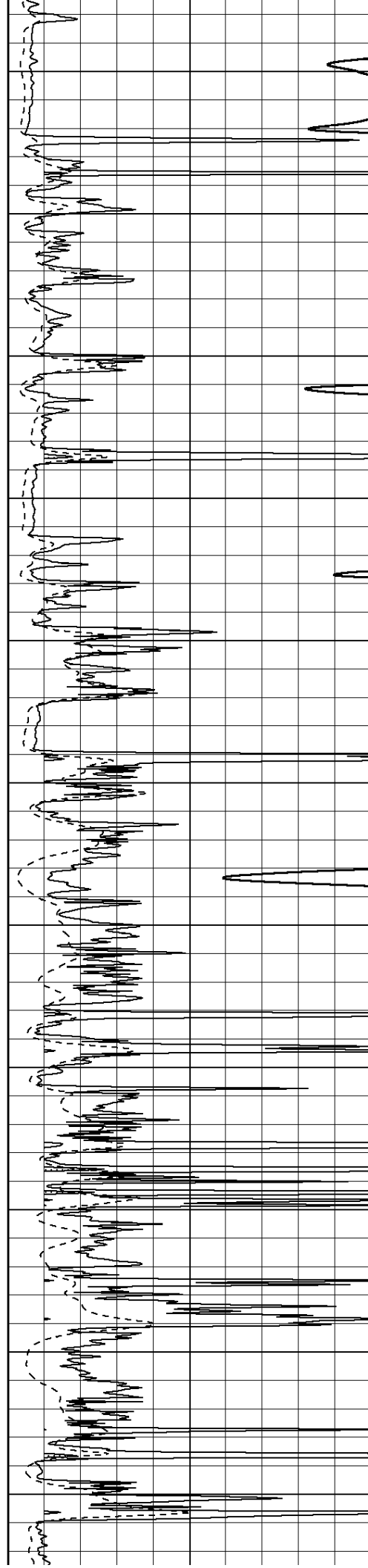
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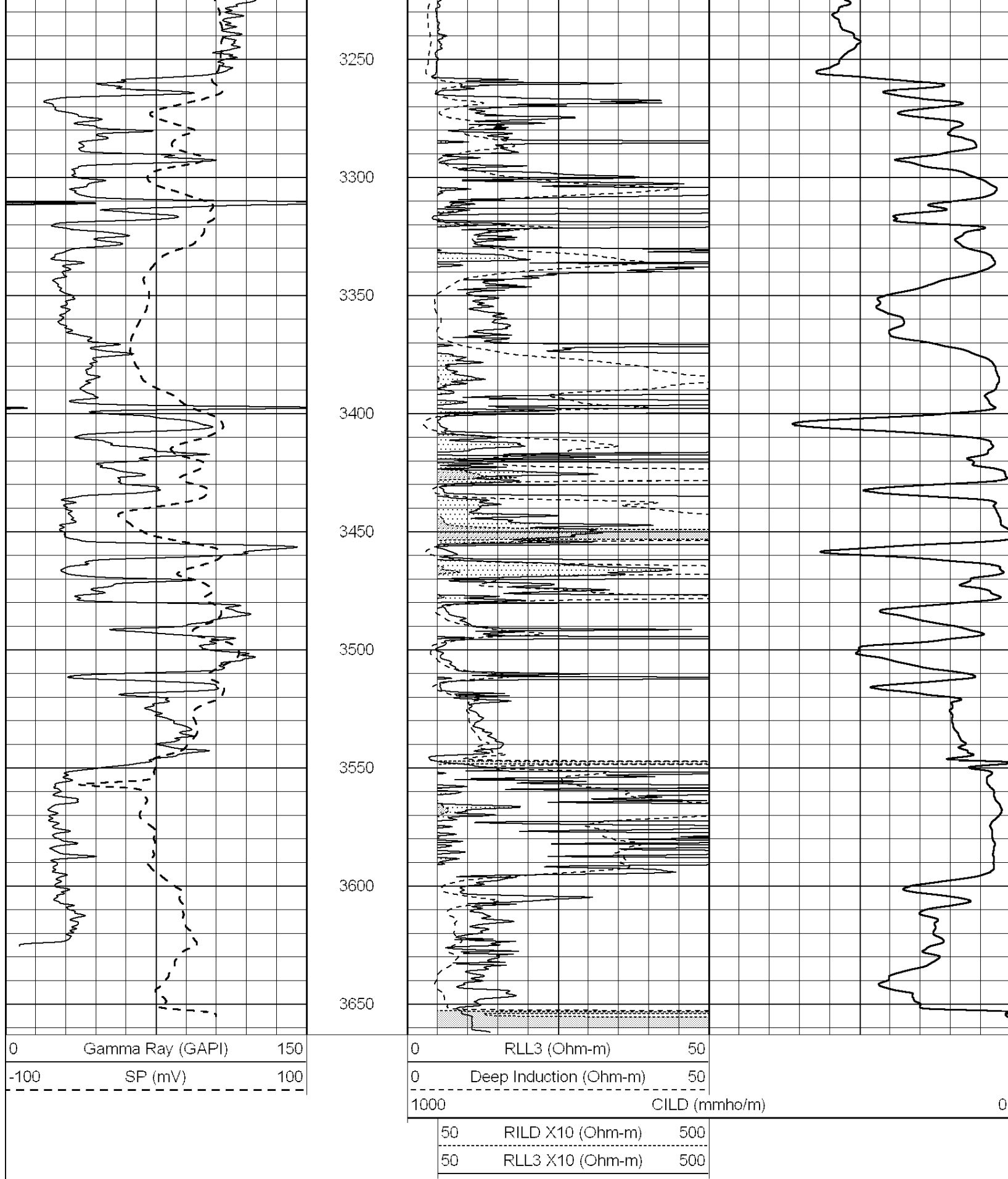
3050

3100

3150

3200

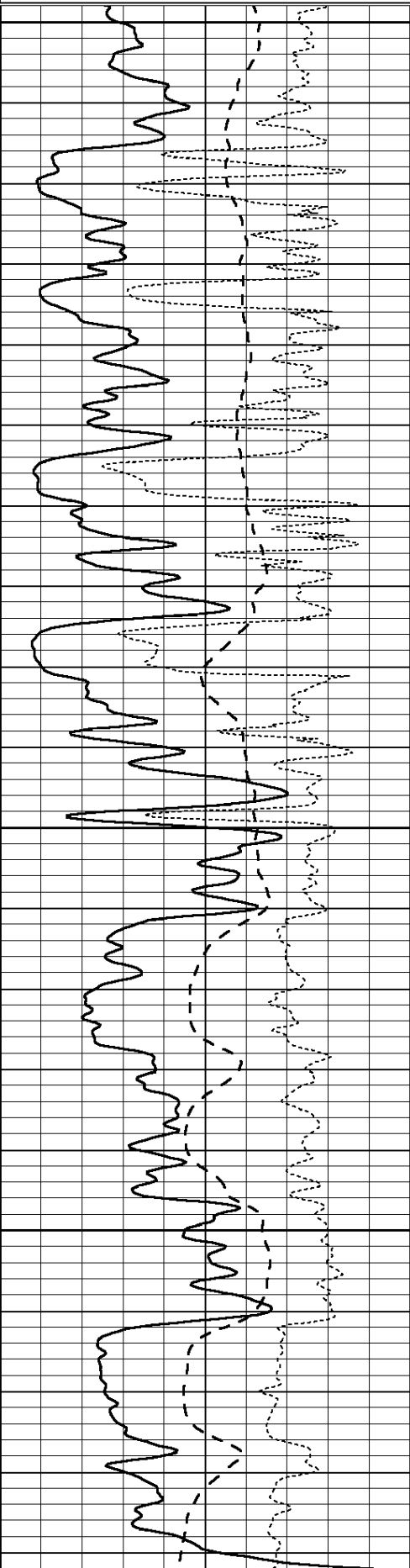




Database File: 26230ddn.db
Dataset Pathname: pass3.3
Presentation Format: _dil
Dataset Creation: Fri Oct 03 02:57:21 2014 by Calc Open-Cased 090629

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

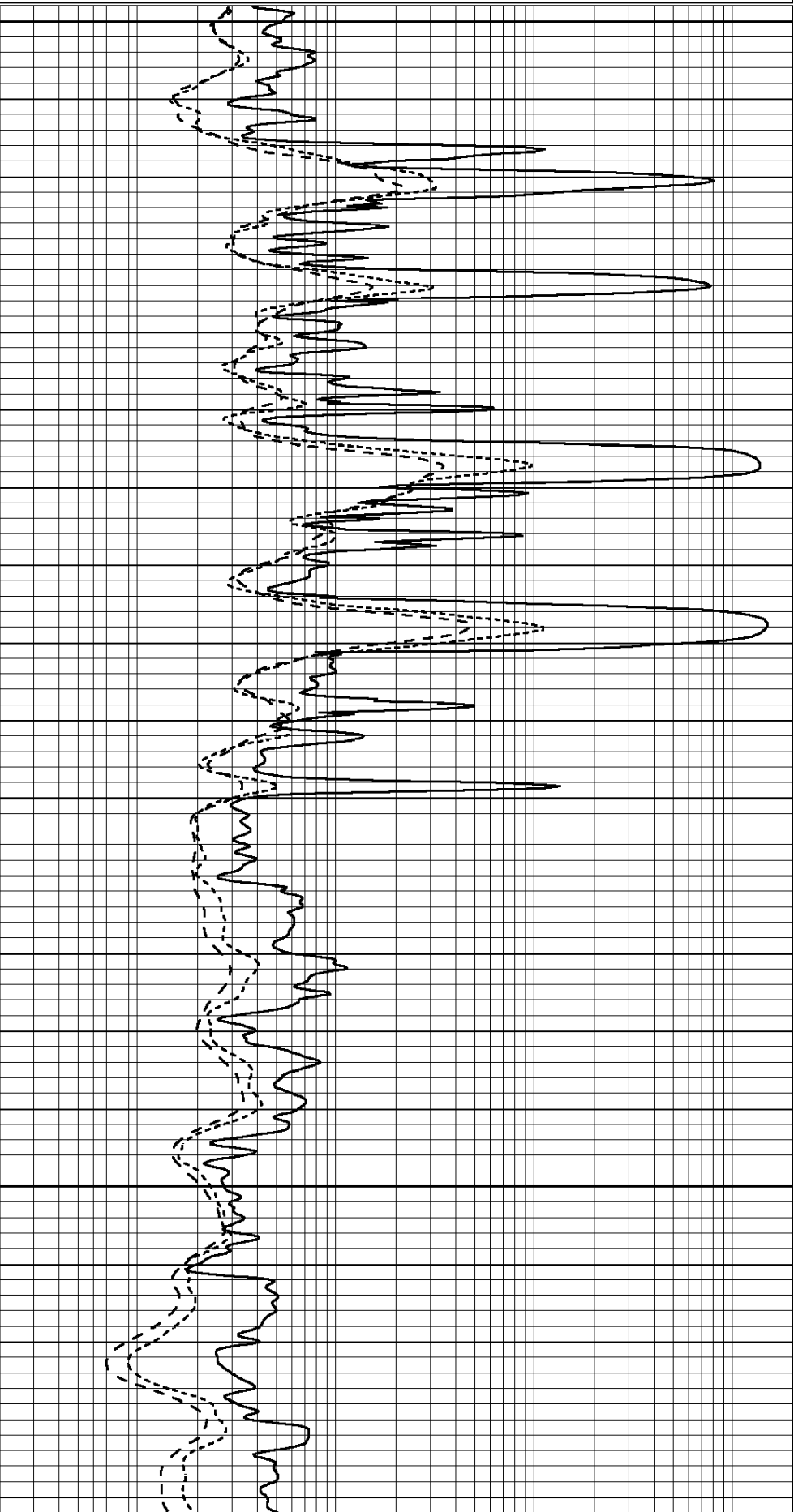


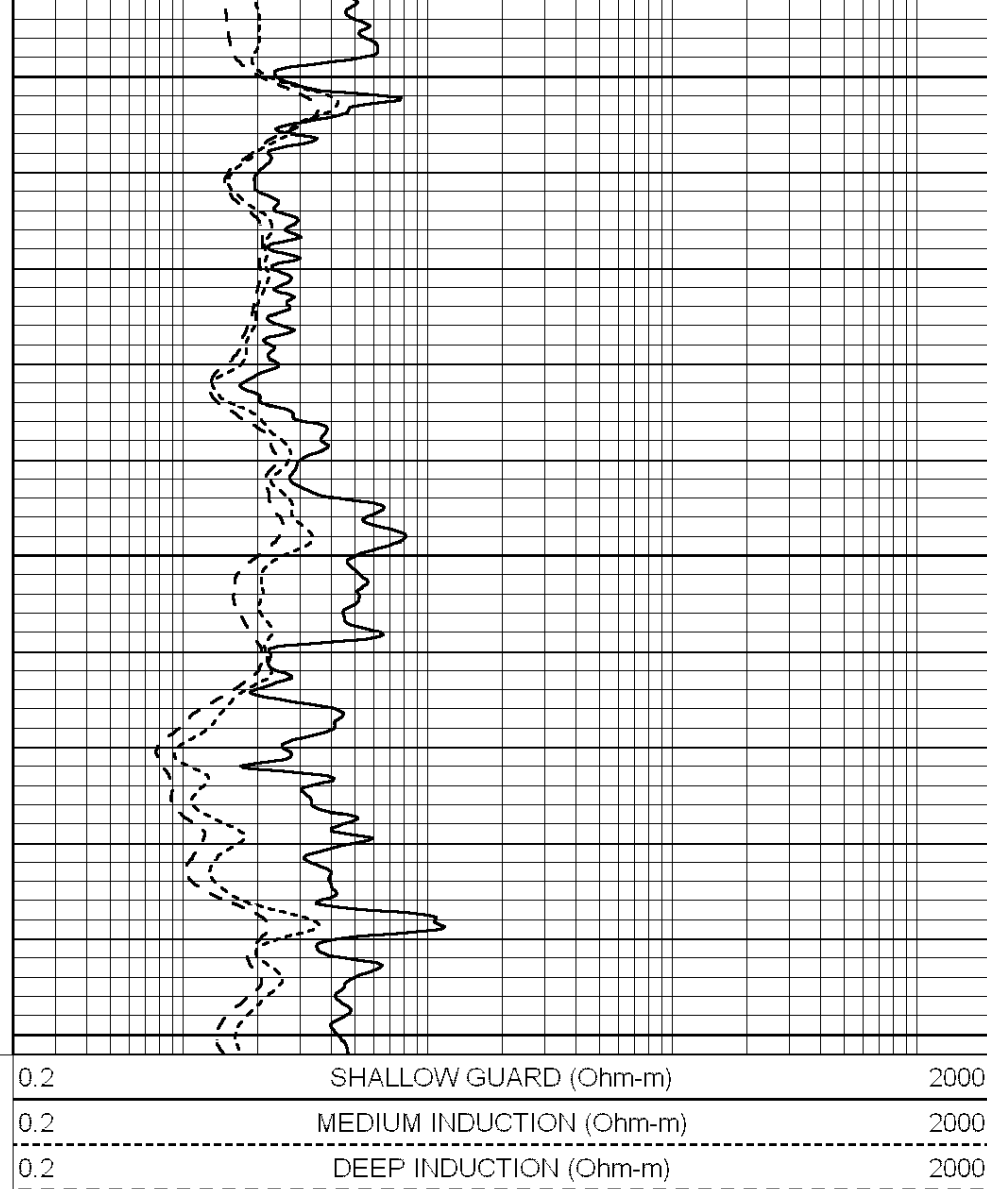
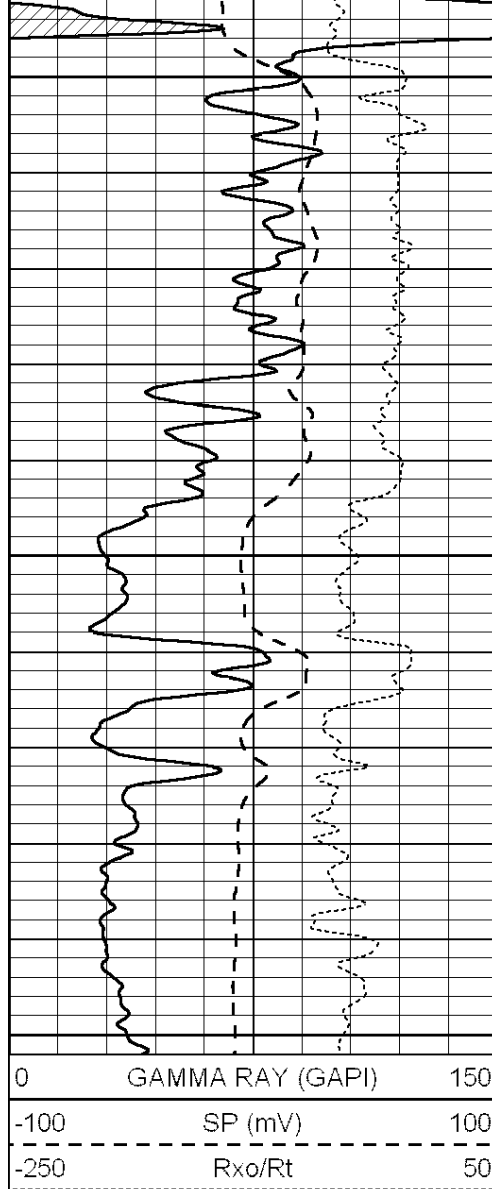
1700

1750

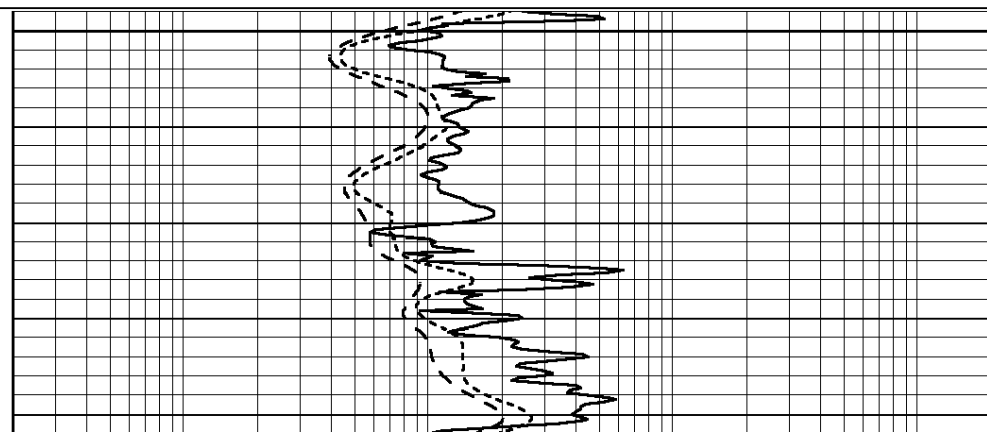
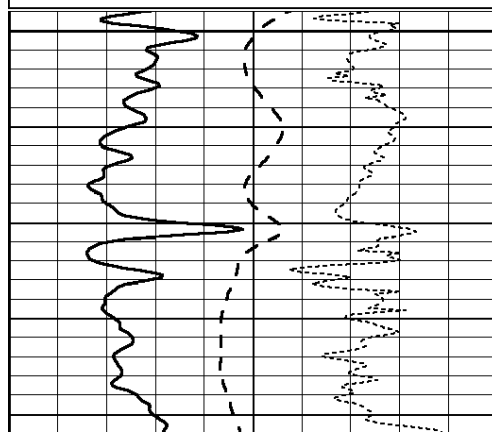
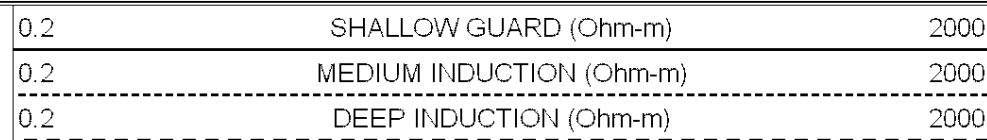
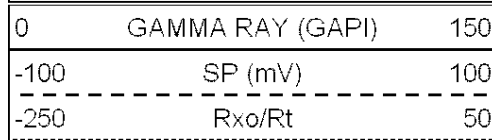
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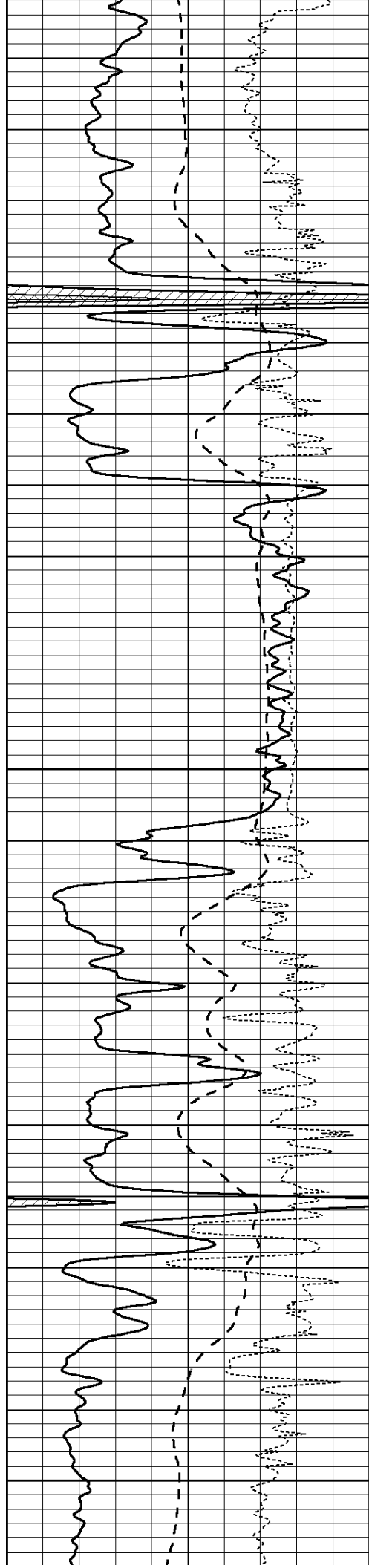
1850





Database File: 26230ddn.db
Dataset Pathname: pass3.2
Presentation Format: _dil
Dataset Creation: Fri Oct 03 01:30:17 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240





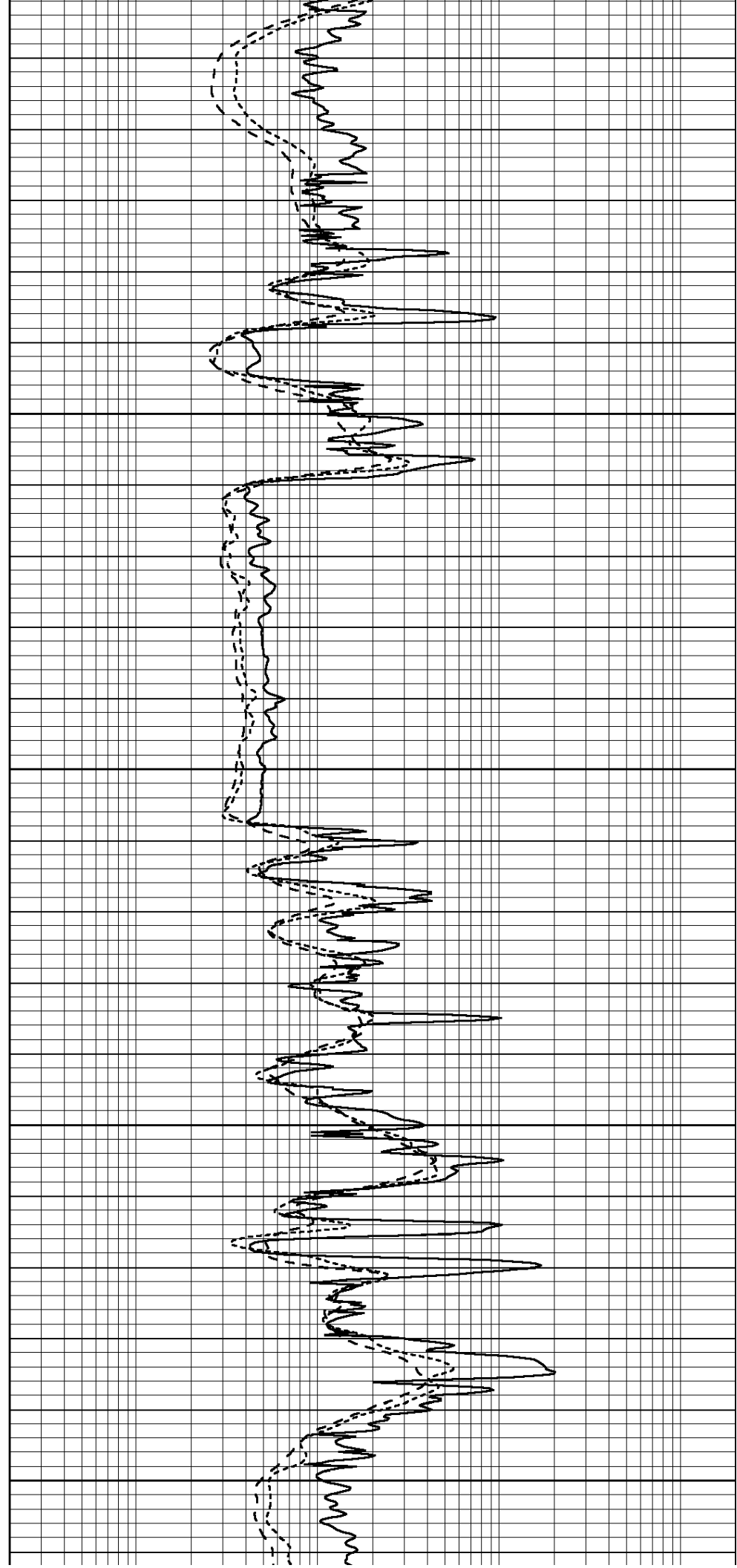
3150

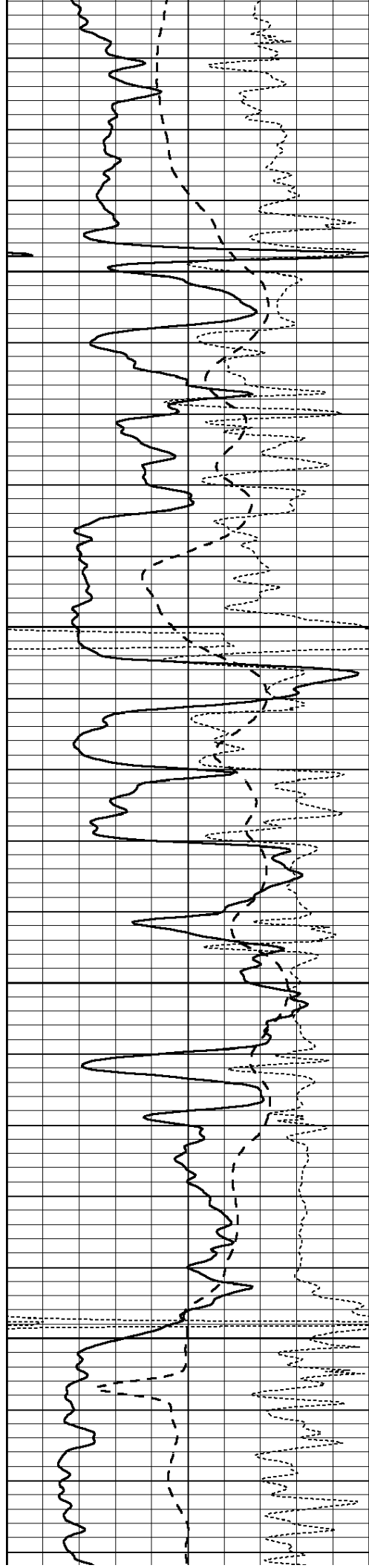
3200

3250

3300

3350



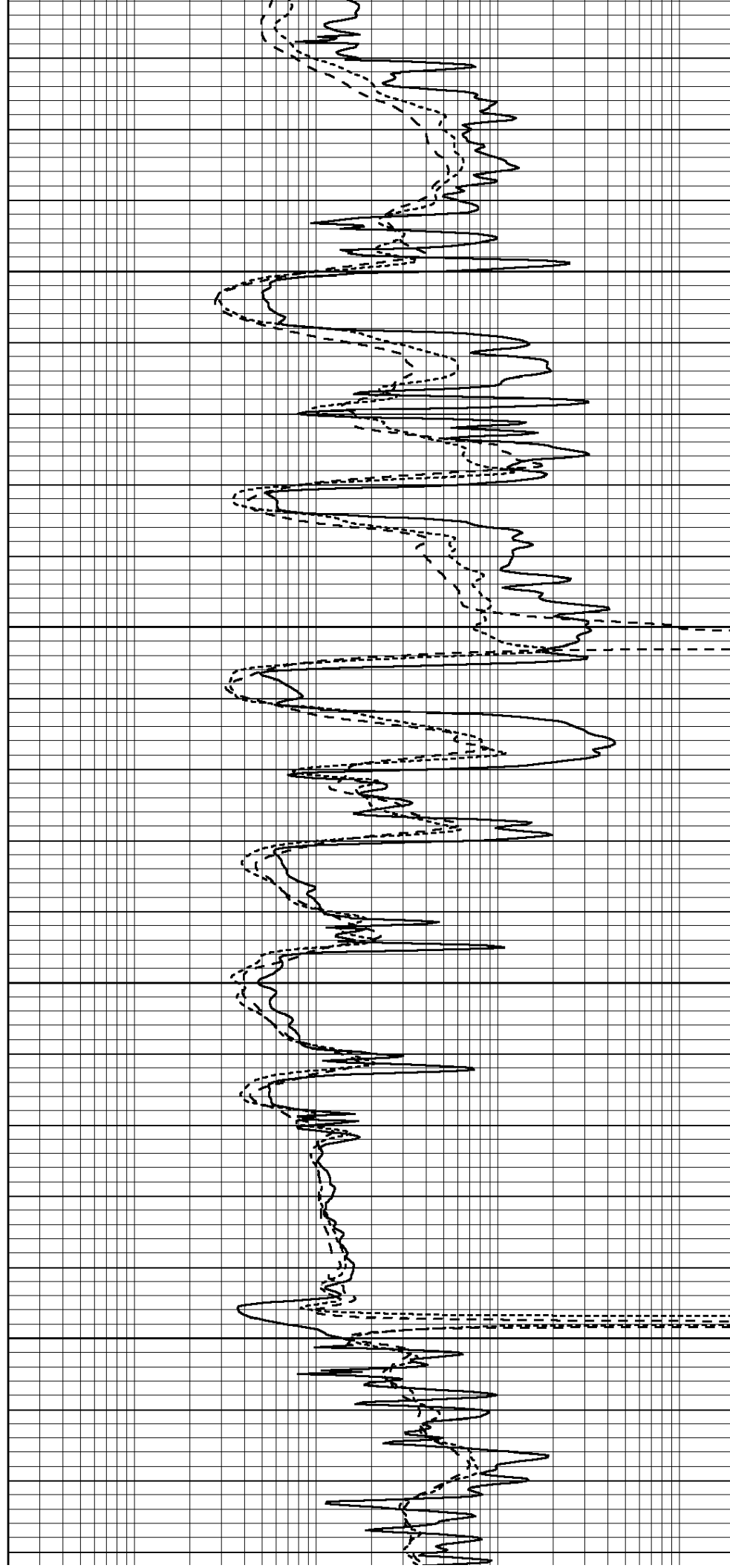


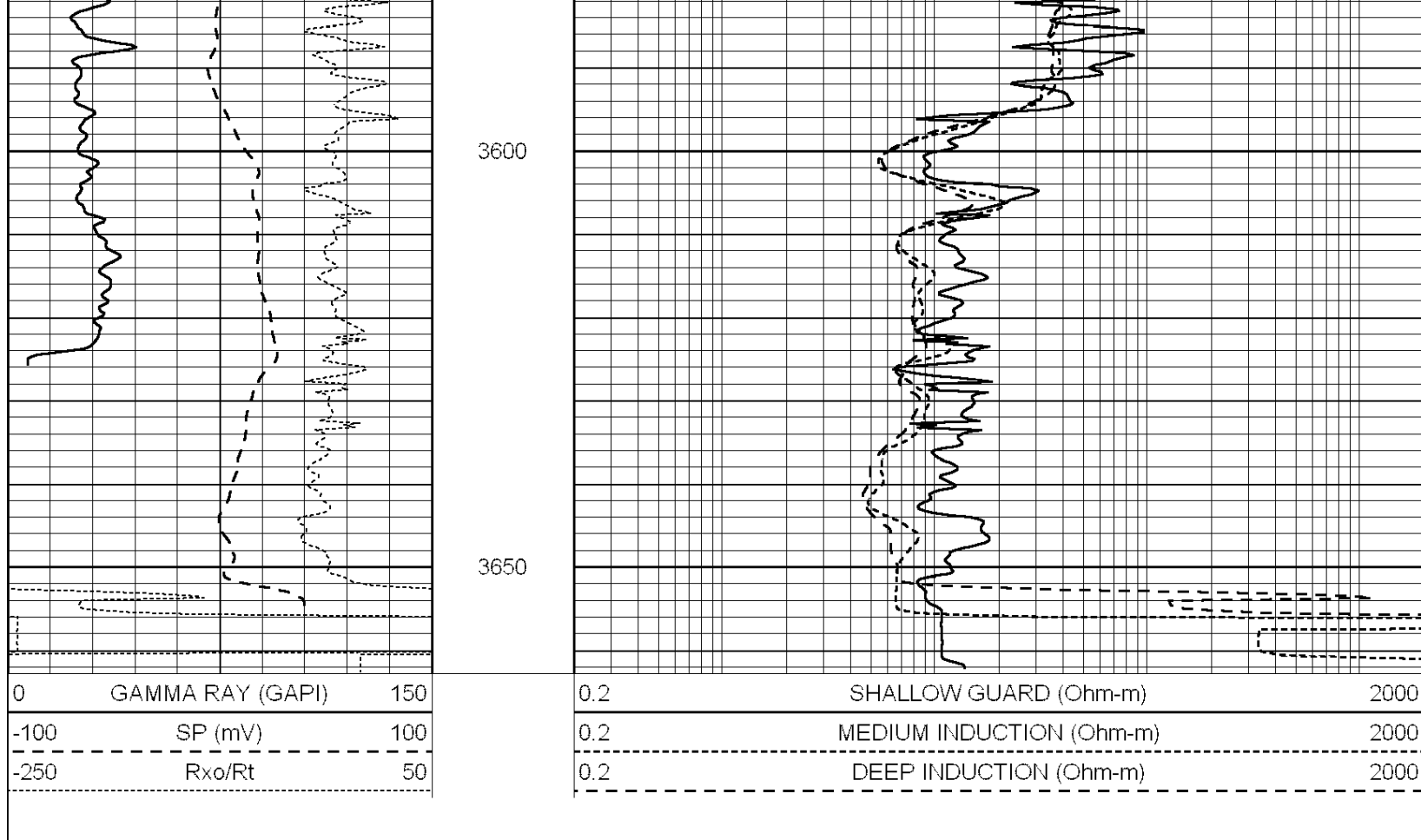
3400

3450

3500

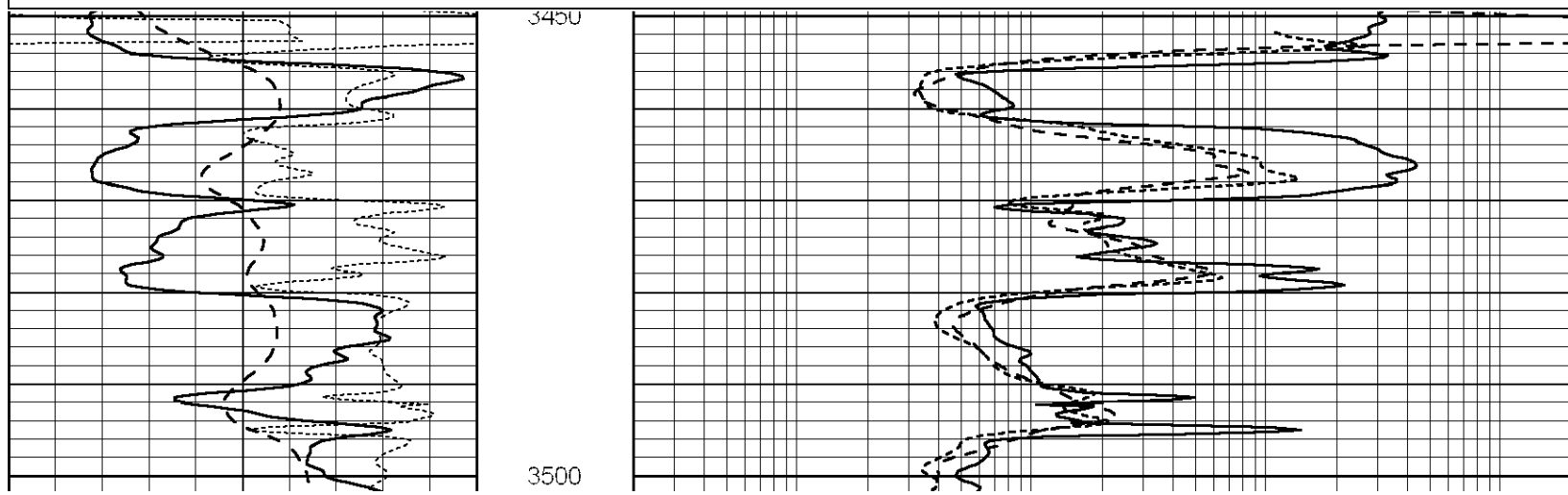
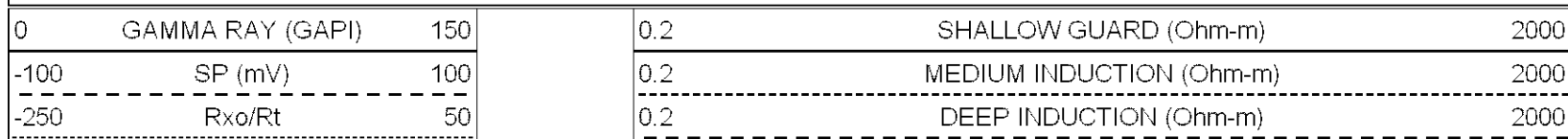
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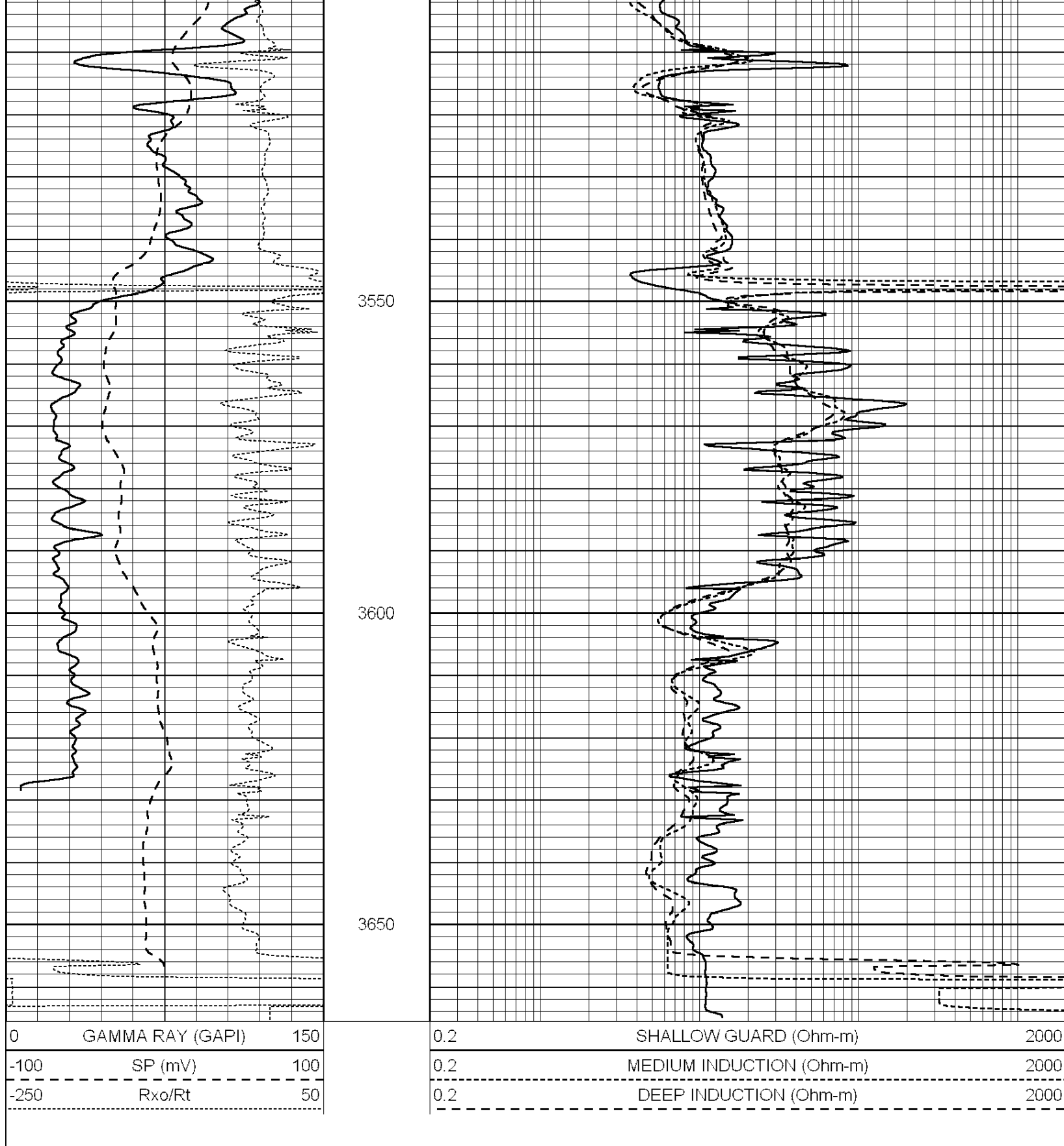




REPEAT SECTION

Database File: 26230ddn.db
 Dataset Pathname: pass2.2
 Presentation Format: _dil
 Dataset Creation: Fri Oct 03 00:59:10 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240





Calibration Report

Database File: 26230ddn.db
Dataset Pathname: pass3.3
Dataset Creation: Fri Oct 03 02:57:21 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
Surface Cal Performed: Tue Sep 02 02:19:29 2014

Surface Calibration								
Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.593	0.593	V	0.000	400.000	mmho/m	620.000	-7.000
Medium	0.668	0.668	V	0.000	464.000	mmho/m	630.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.030	0.644	V	0.000	400.000	mmho/m	651.380	-19.739
Medium	0.027	0.815	V	0.000	464.000	mmho/m	588.755	-16.048

Downhole Calibration								
Readings				References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	3353890.000	-304691.000	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	16235500.000	-3735510.000	mmho/m	1.000	0.000
LL3		2.500	V		1400.000	Ohm-m		
		0.022	V		20.000	Ohm-m		
		-7.278	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		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:	Tue Sep 02 02:18:22 2014

Master Calibration						
Density			Far Detector		Near Detector	
Magnesium	1.710	g/cc	943.83		576.01	cps
Aluminum	2.600	g/cc	212.01		399.19	cps
Spine Angle = 76.20			Density/Spine Ratio = 0.579			
Size			Reading			
Small Ring	8.00	in	1.77	V		
Large Ring	14.00	in	2.90	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		
Tool Model:	Probe1		
Performed:	Tue Sep 02 02:32:49 2014		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2600	GAPI/cps	