



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	MID-CONTINENT ENERGY CO.	Company	MID-CONTINENT ENERGY CO.
Well	WILLIAMS #1-29	Well	WILLIAMS #1-29
Field	WILDCAT	Field	WILDCAT
County	LANE	County	LANE
State	KANSAS	State	KANSAS
Location:	API # : 15-101-22483 1220' FNL & 1320' FEL	Other Services CDL/CNL MICRO	
SEC 29 TWP 19S RGE 27W		Elevation	
Permanent Datum	GROUND LEVEL	Elevation	
Log Measured From	KELLY BUSHING 10' A.G.L.	K.B. 2728	
Drilling Measured From	KELLY BUSHING	D.F. G.L. 2718	
Date	1-4-14		
Run Number	ONE		
Depth Driller	4740		
Depth Logger	4738		
Bottom Logged Interval	4736		
Top Log Interval	00		
Casing Driller	308		
Casing Logger	308		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.5 / 50		
pH / Fluid Loss	10.0 / 6.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.80 @ 70F		
Rmf @ Meas. Temp	0.60 @ 70F		
Rmc @ Meas. Temp	0.96 @ 70F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.460 @ 122F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	10:15 A.M.		
Maximum Recorded Temperature	122F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	RUPP		
Witnessed By	TOM PRONOLD		

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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

NABORE COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: DIGHTON, 6E TO TURKEY RED RD., 6S TO 80TH RD., 1/2W, S INTO.



**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File: 22209ddn.db
 Dataset Pathname: pass3.1A
 Presentation Format: _dil2
 Dataset Creation: Sat Jan 04 11:35:10 2014
 Charted by: Depth in Feet scaled 1:600

0 Gamma Ray (GAPI) 150

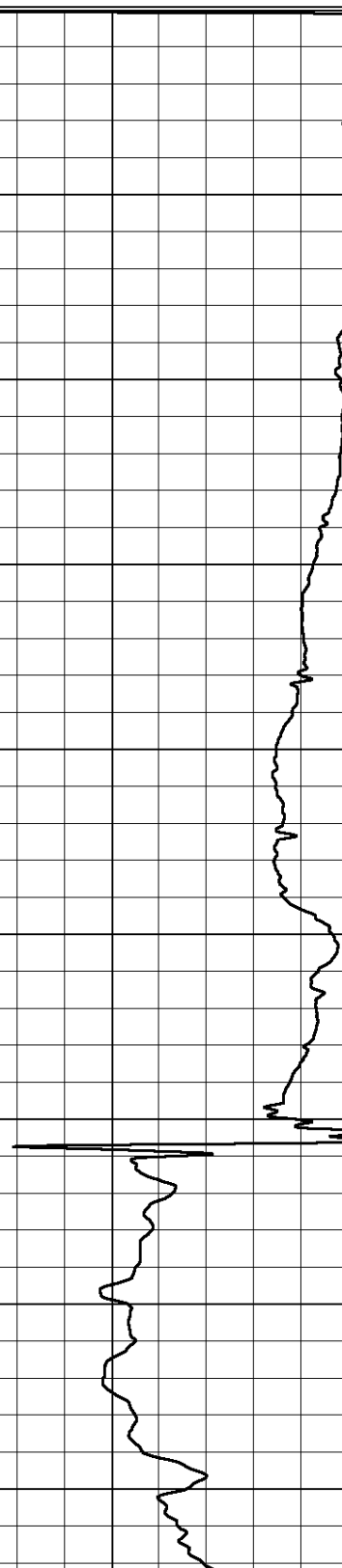
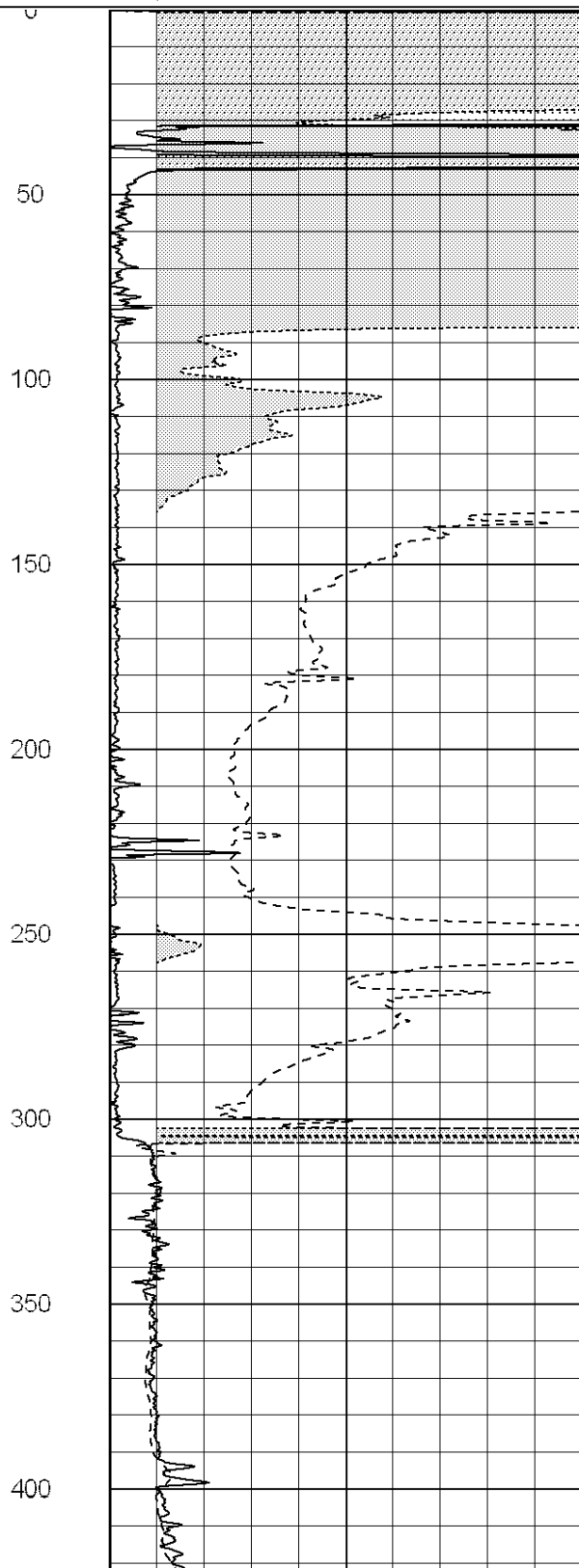
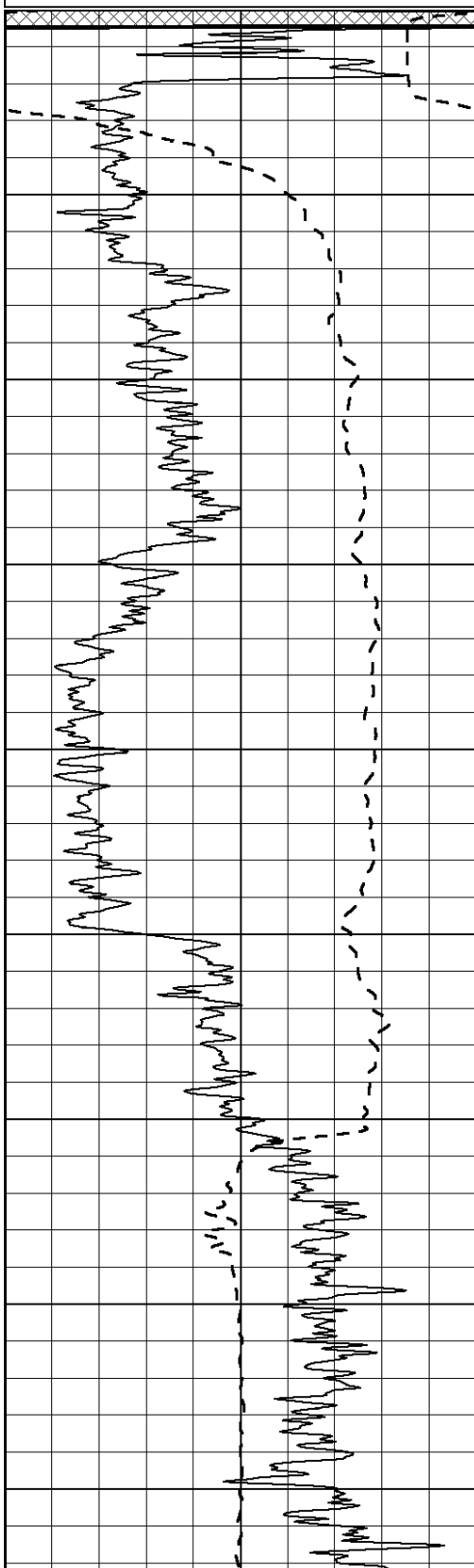
0 RLL3 (Ohm-m) 50

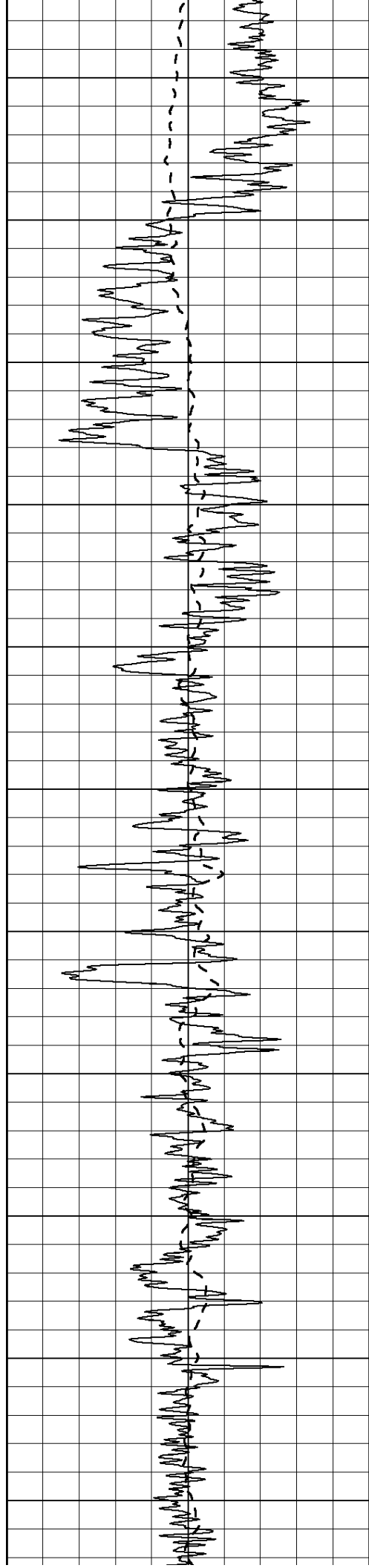
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1000 CILD (mmho/m) 0

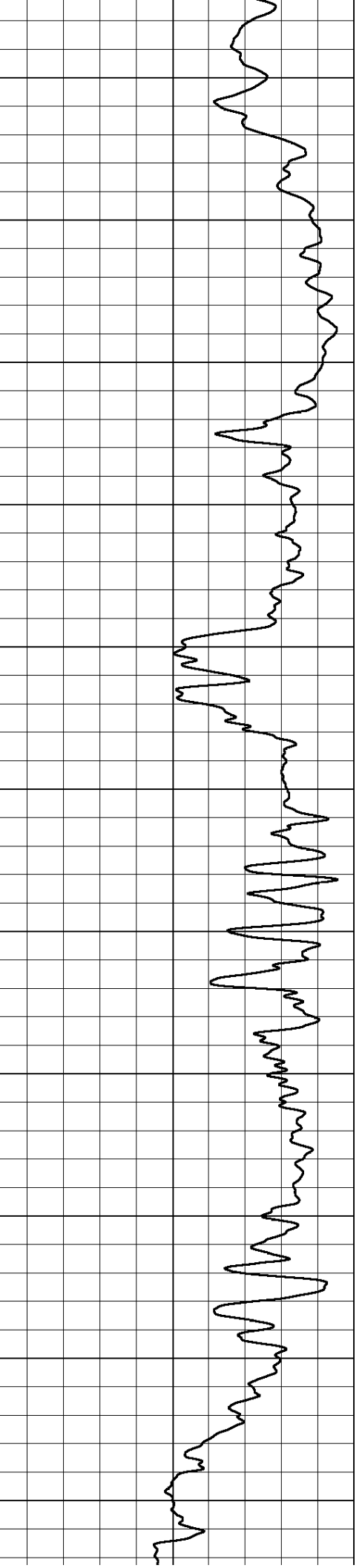
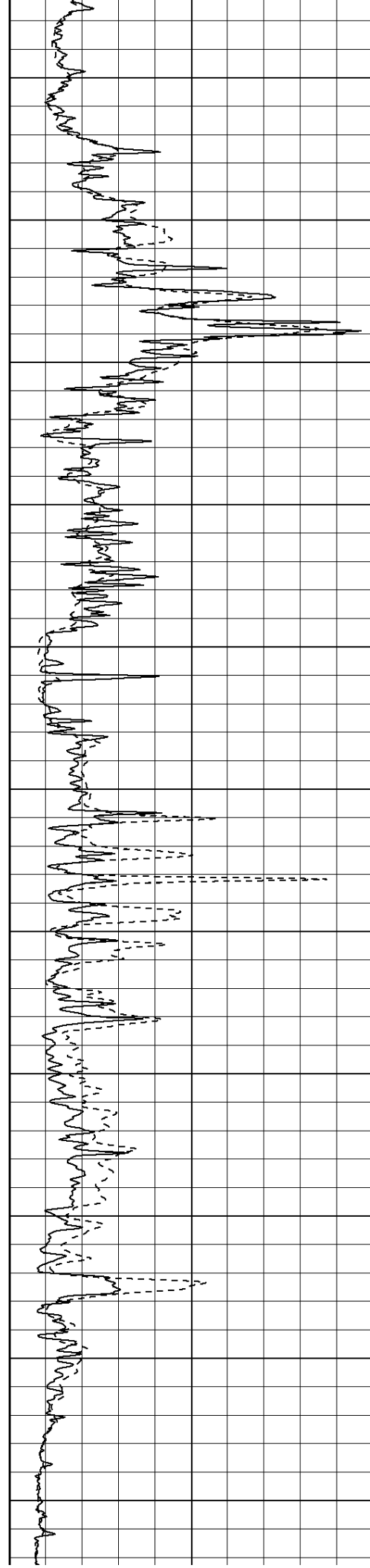
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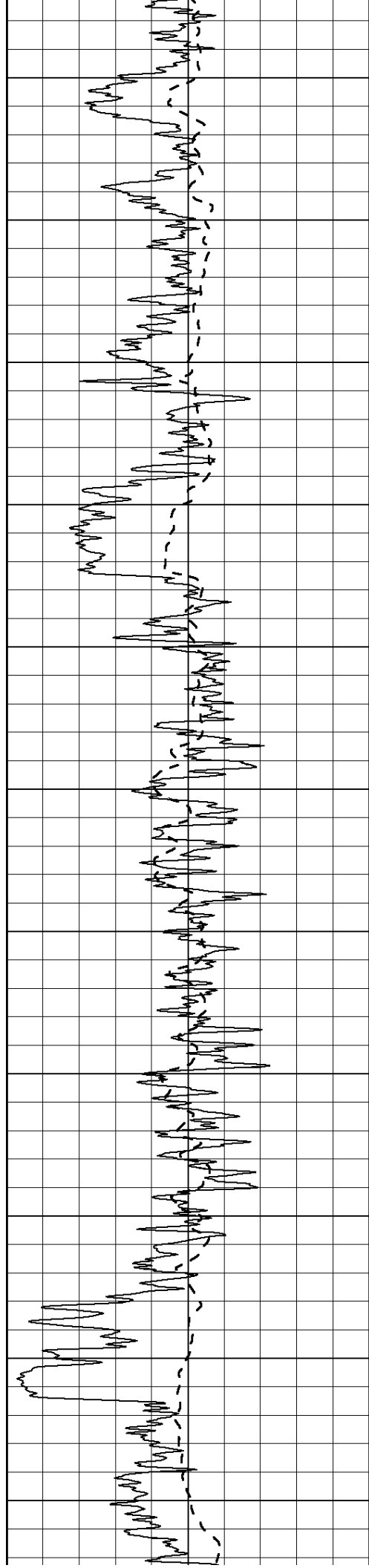
50 RLL3 X10 (Ohm-m) 500





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500
550
600
650
700
750
800
850
900
950





1000

1050

1100

1150

1200

1250

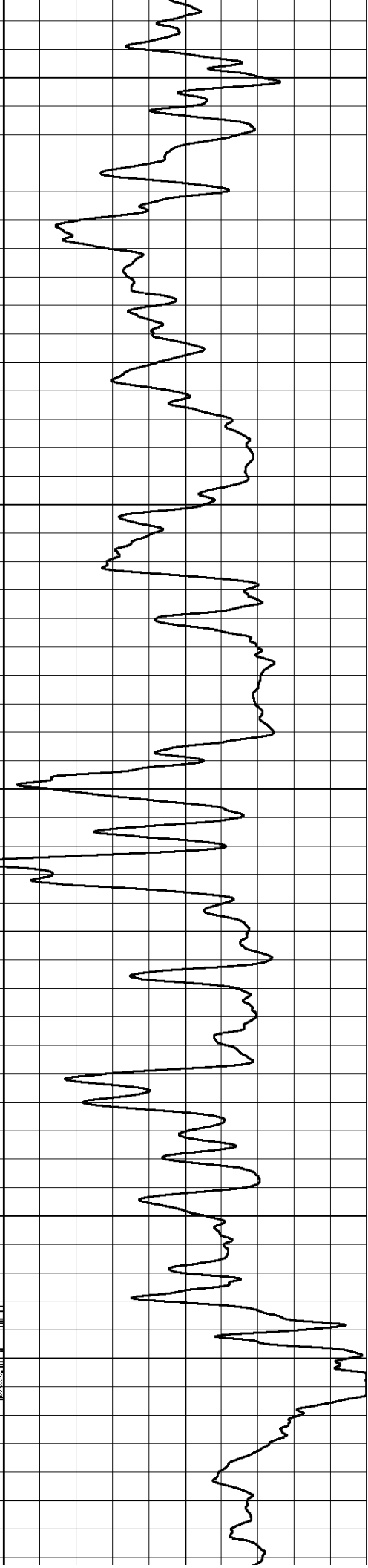
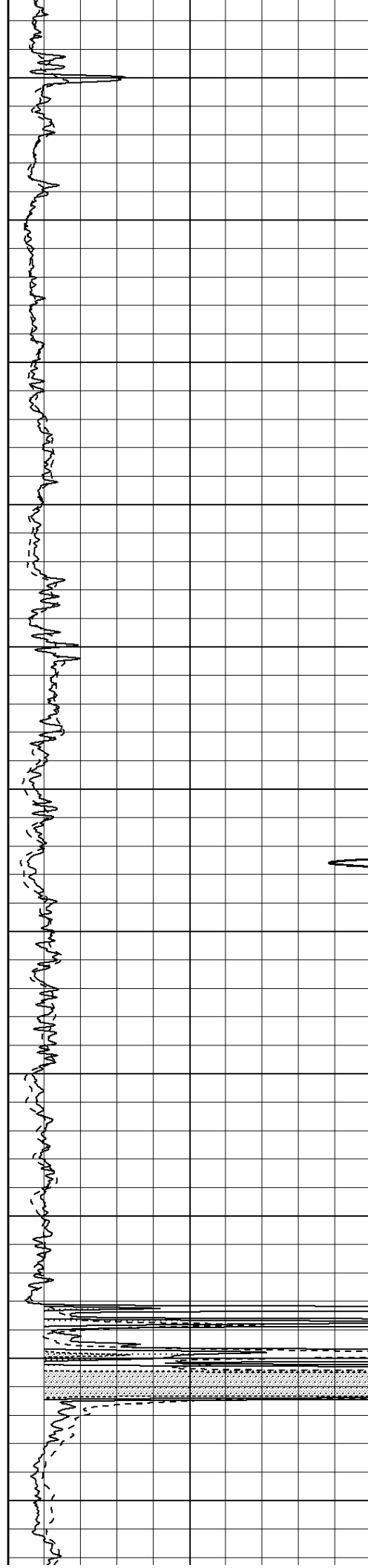
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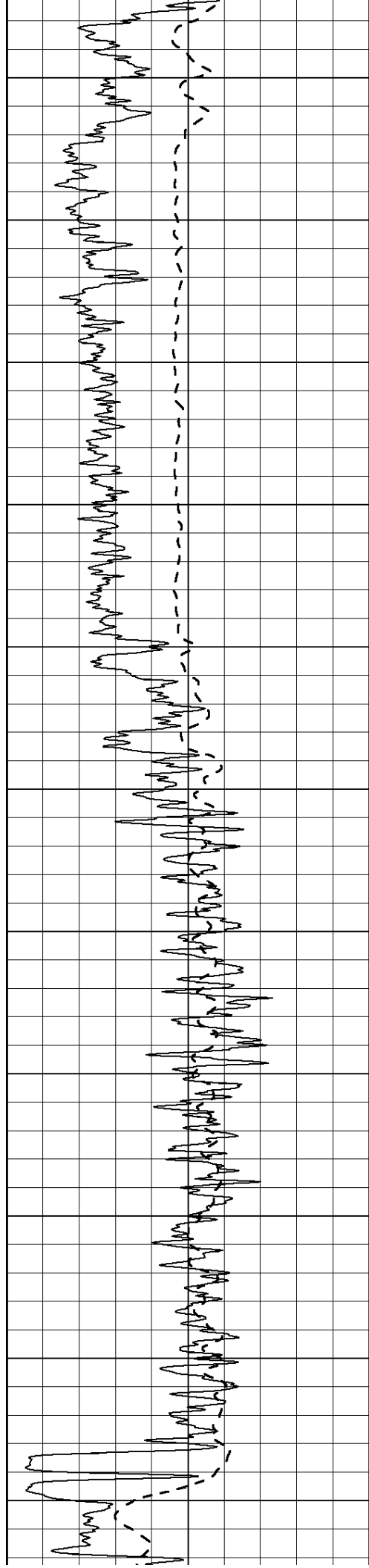
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1400

1450

1500





1550

1600

1650

1700

1750

1800

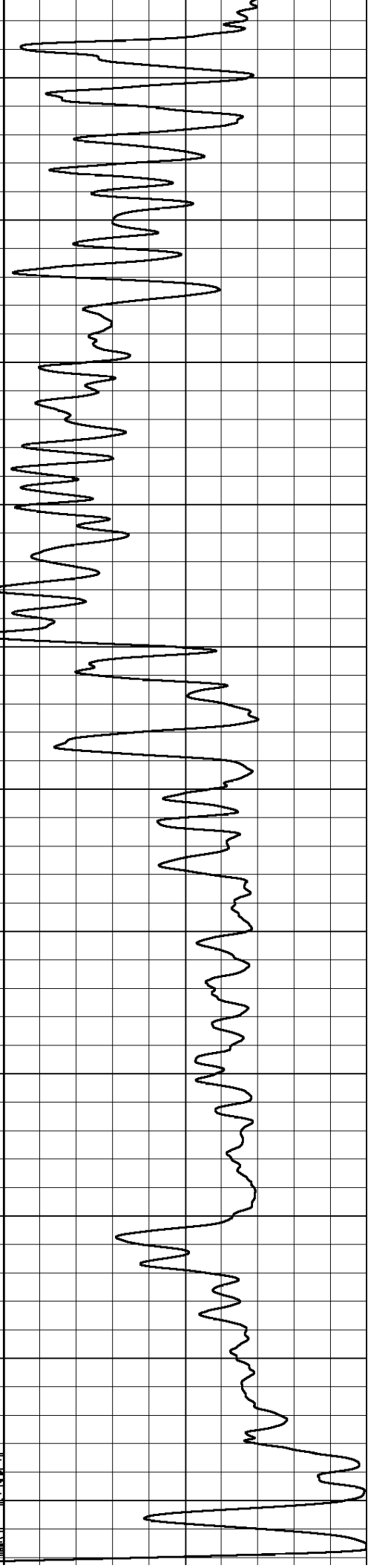
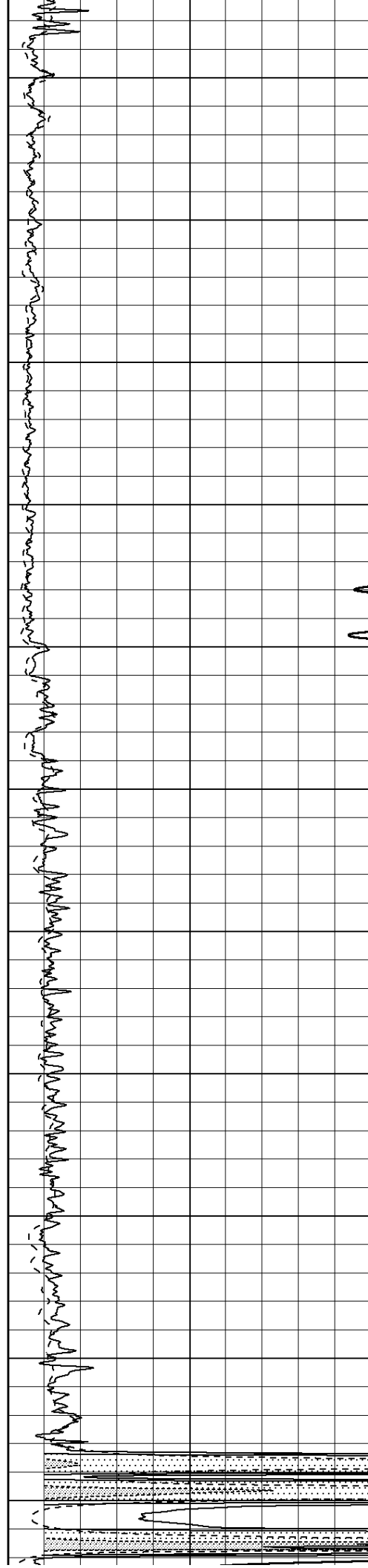
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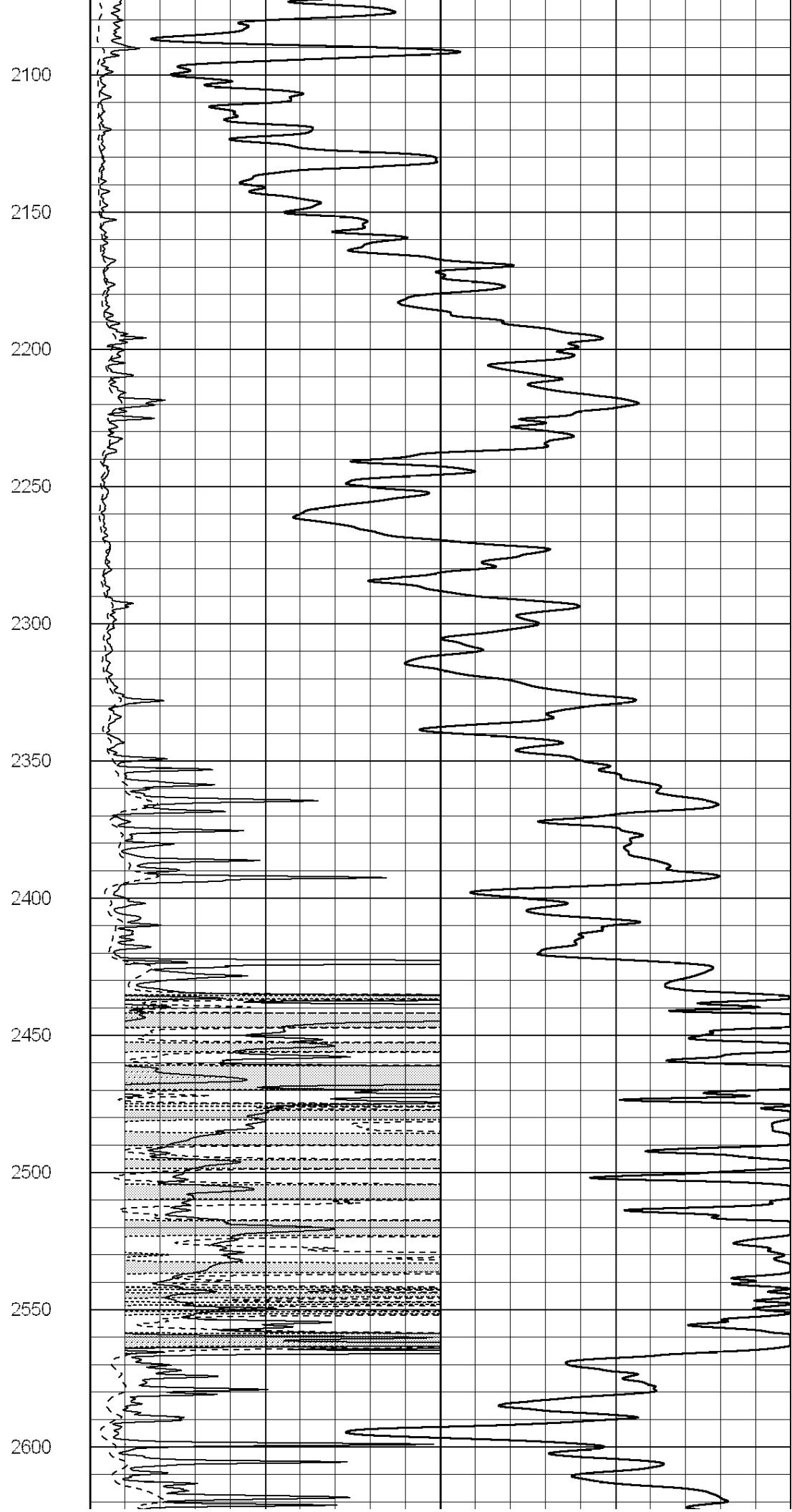
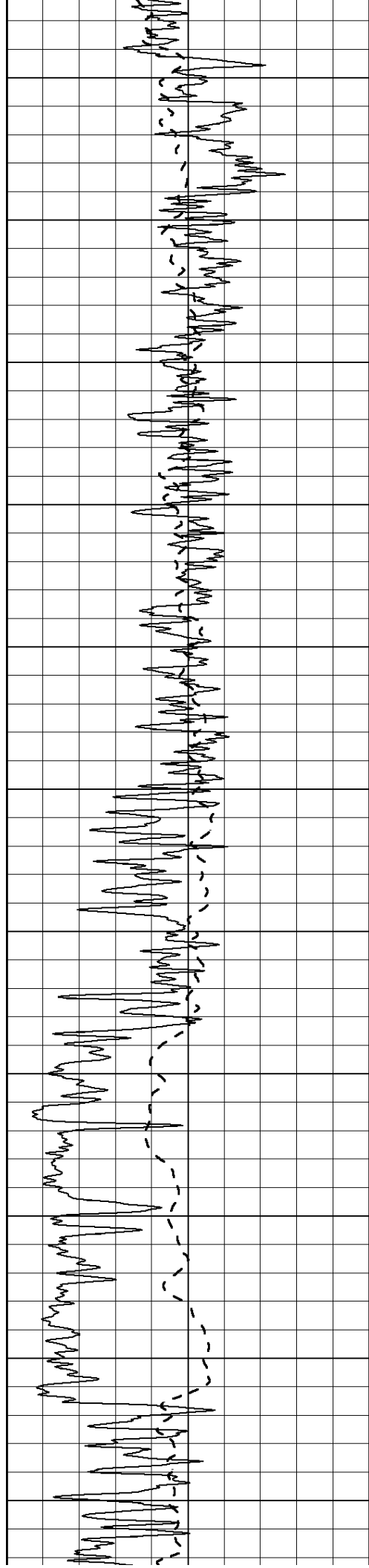
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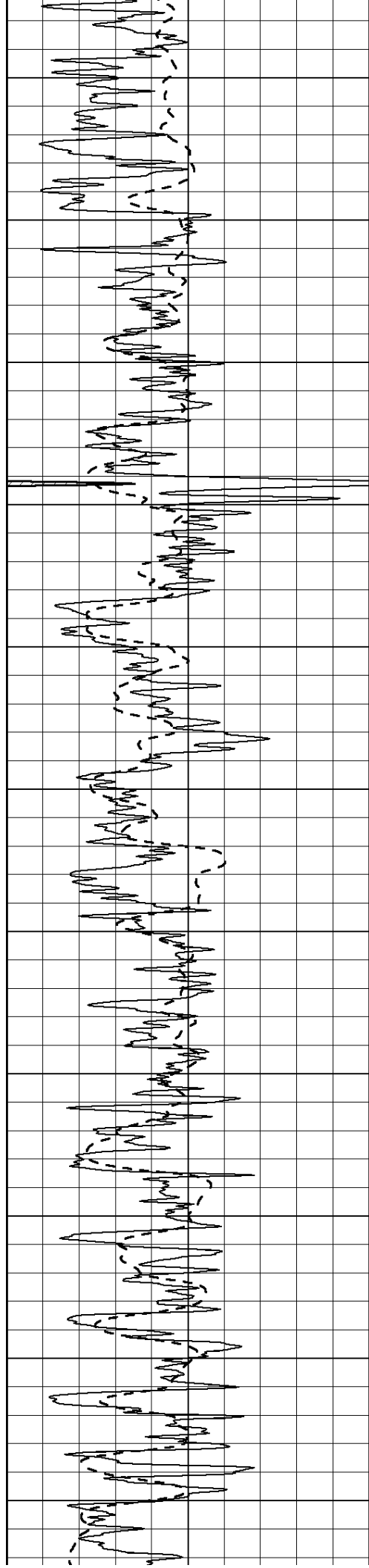
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2000

2050







2650

2700

2750

2800

2850

2900

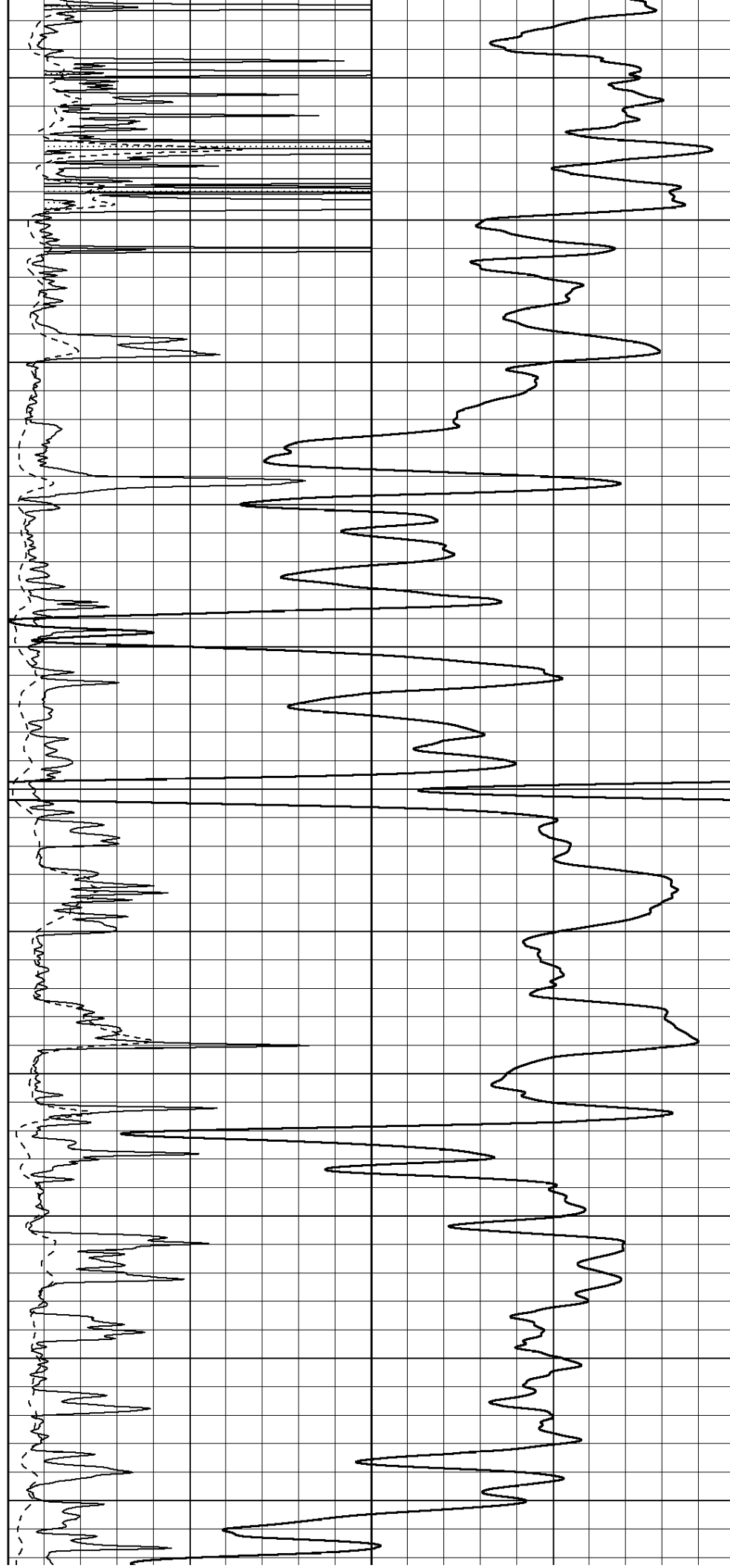
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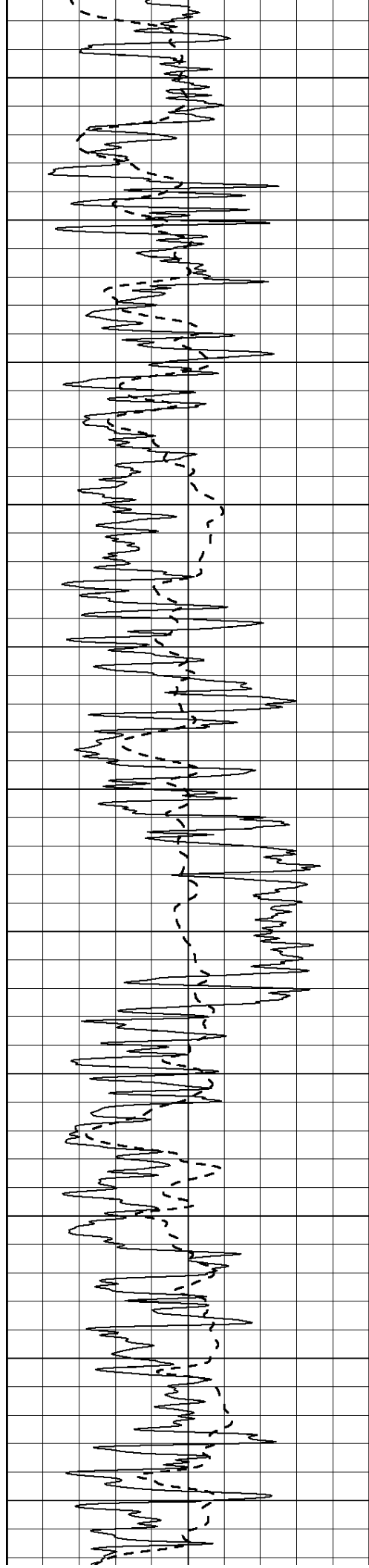
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3050

3100

3150





3200

3250

3300

3350

3400

3450

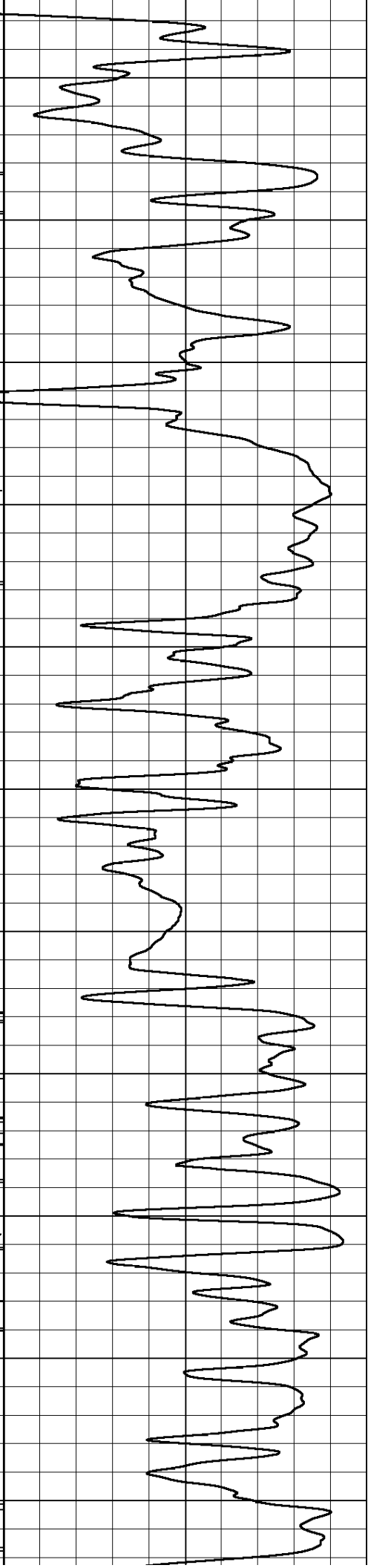
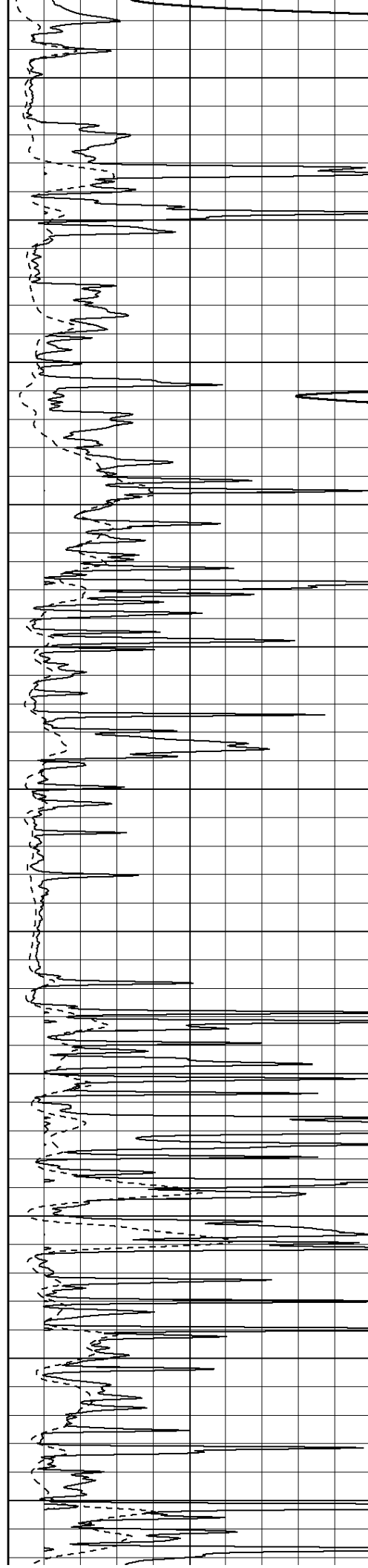
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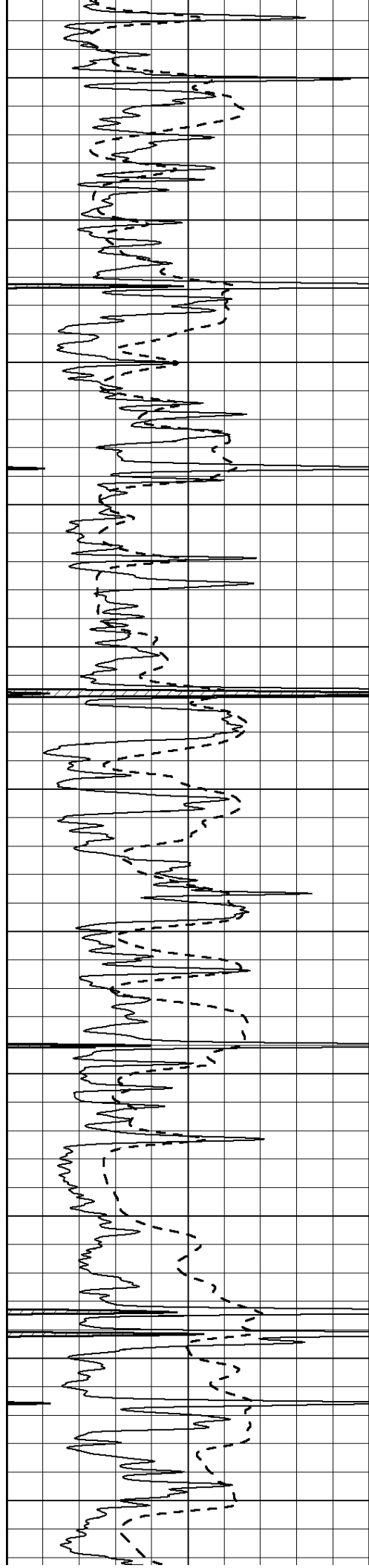
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3650

3700





3750

3800

3850

3900

3950

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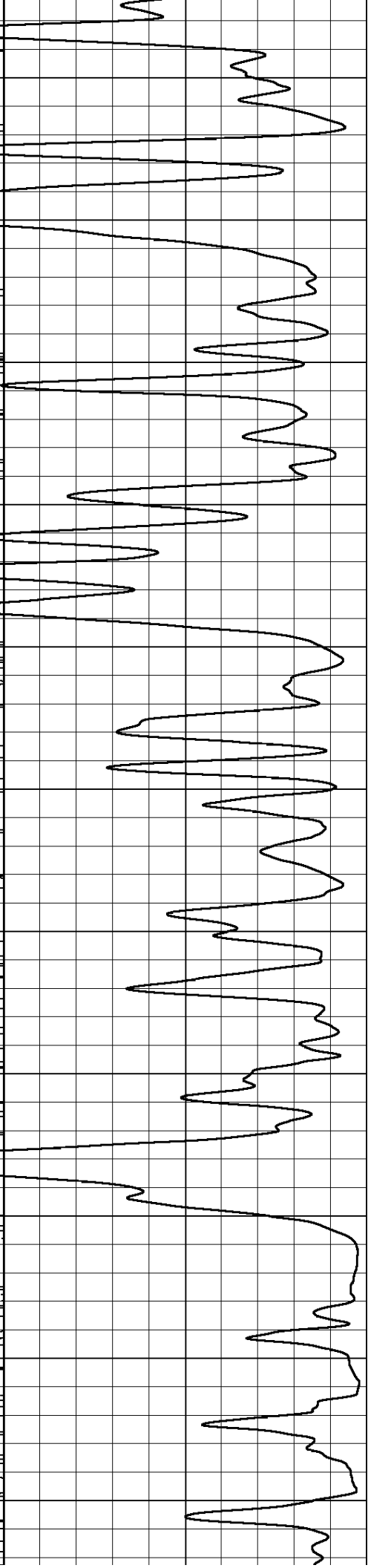
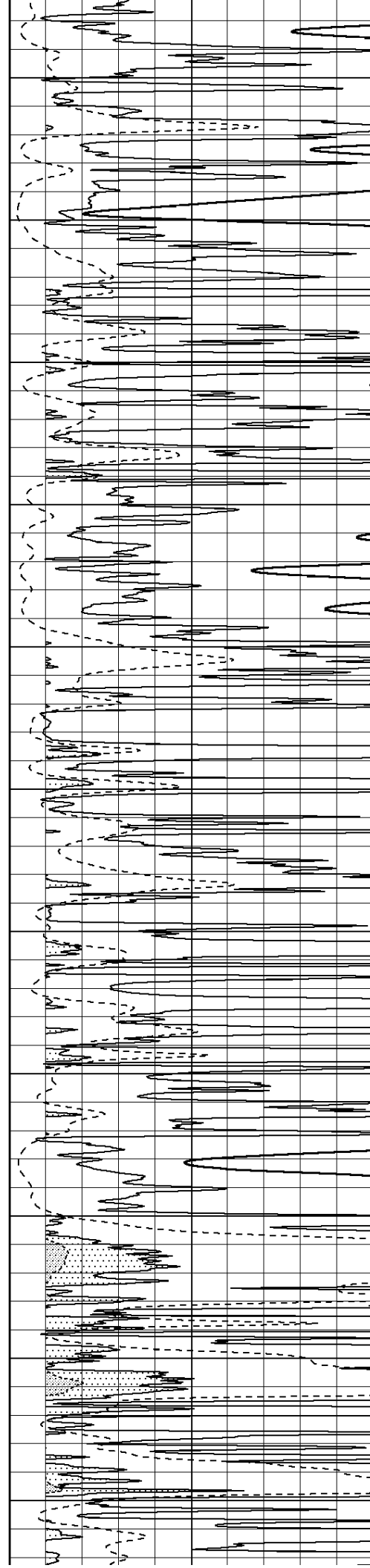
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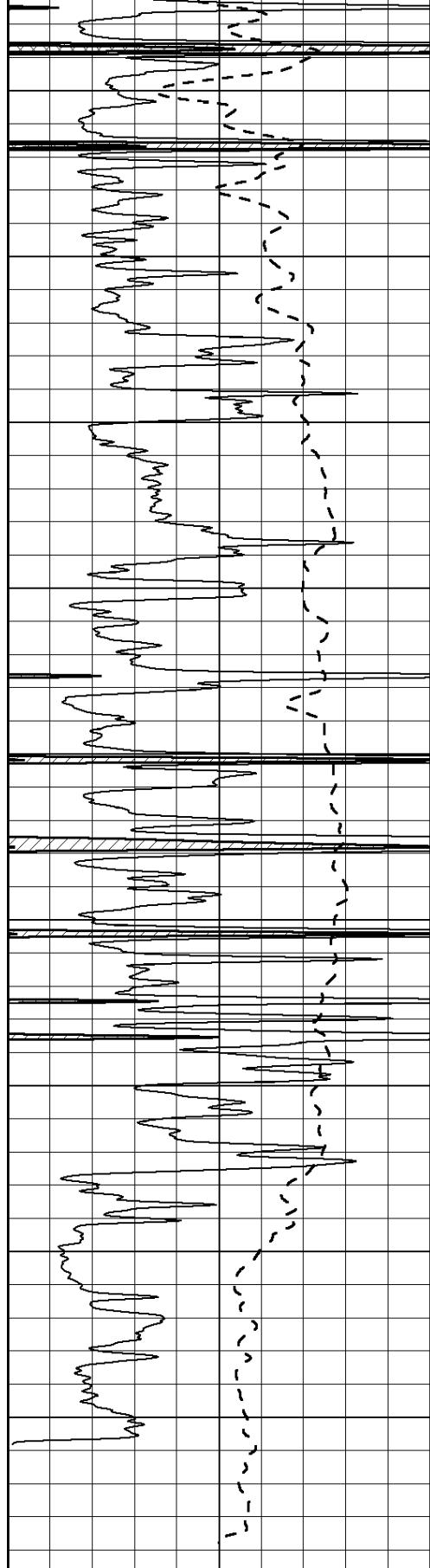
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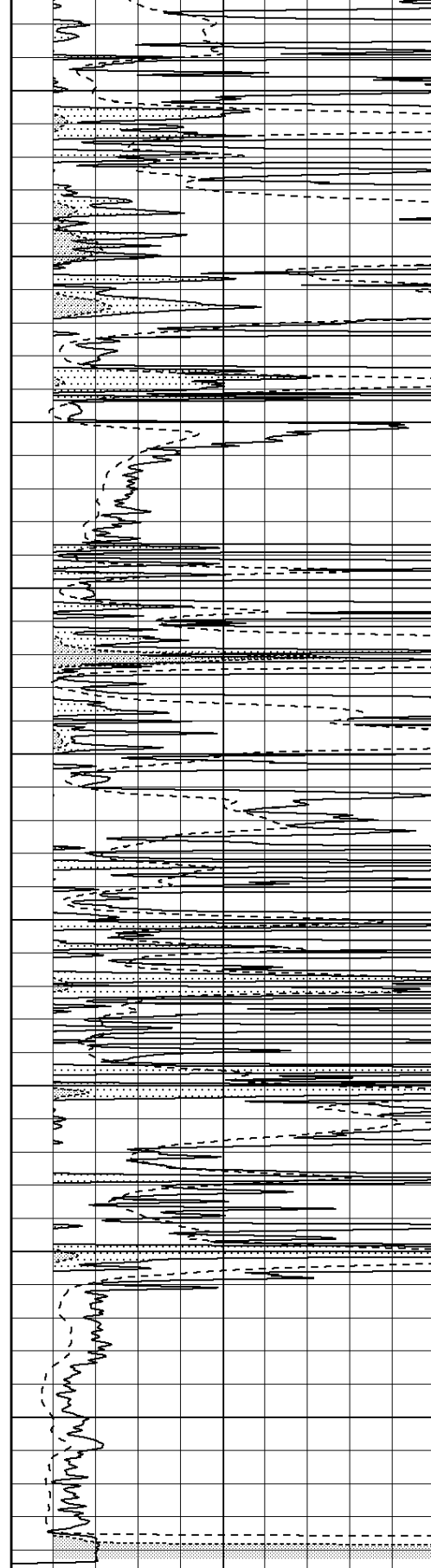
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0 Gamma Ray (GAPI) 150

4300
4350
4400
4450
4500
4550
4600
4650
4700



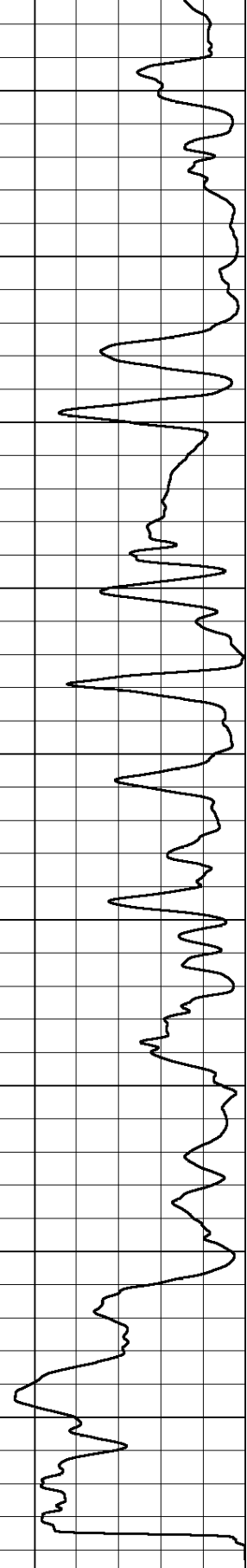
0 RLL3 (Ohm-m) 50

0 Deep Induction (Ohm-m) 50

1000 CILD (mmho/m) 0

50 RILD X10 (Ohm-m) 500

50 RLL3 X10 (Ohm-m) 500





NABORS

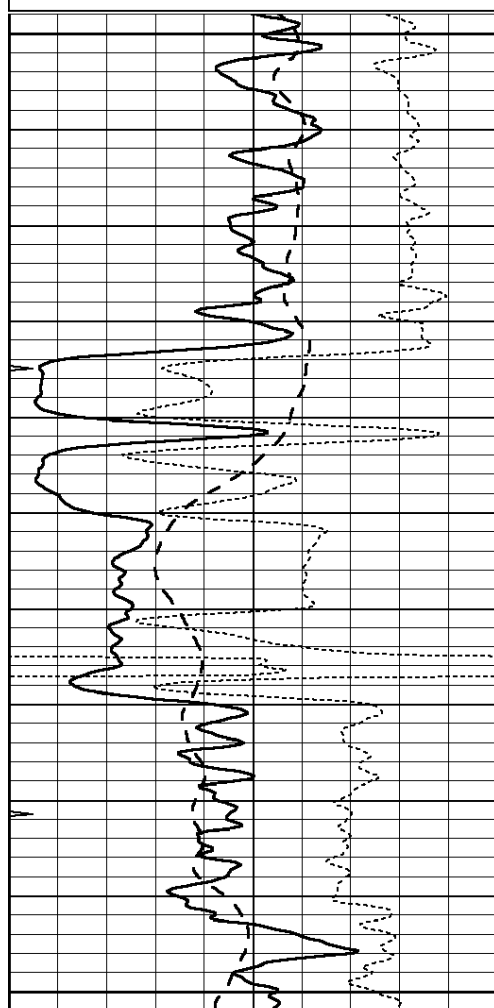
**COMPLETION
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SERVICES CO.**

MAIN SECTION

Database File: 22209ddn.db
Dataset Pathname: pass3.1A
Presentation Format: _dil
Dataset Creation: Sat Jan 04 11:35:10 2014
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

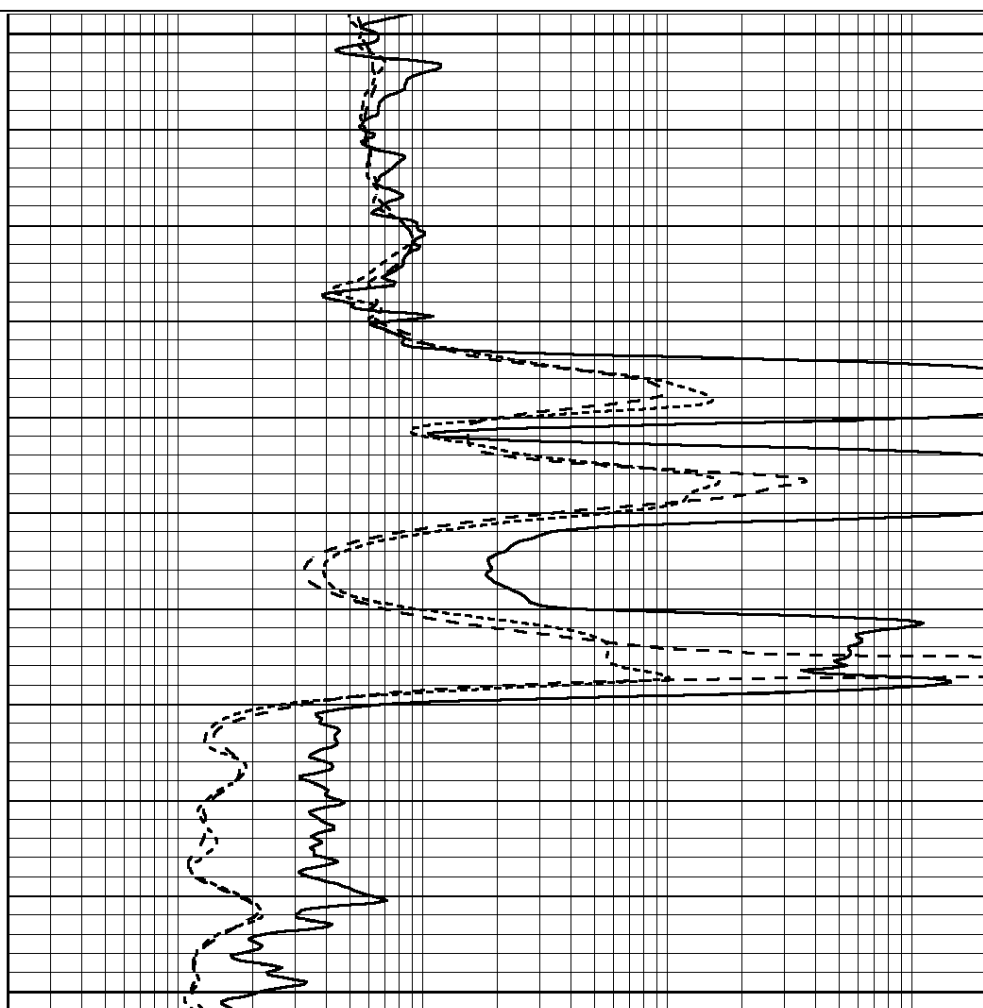
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



2000

2050

2100



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

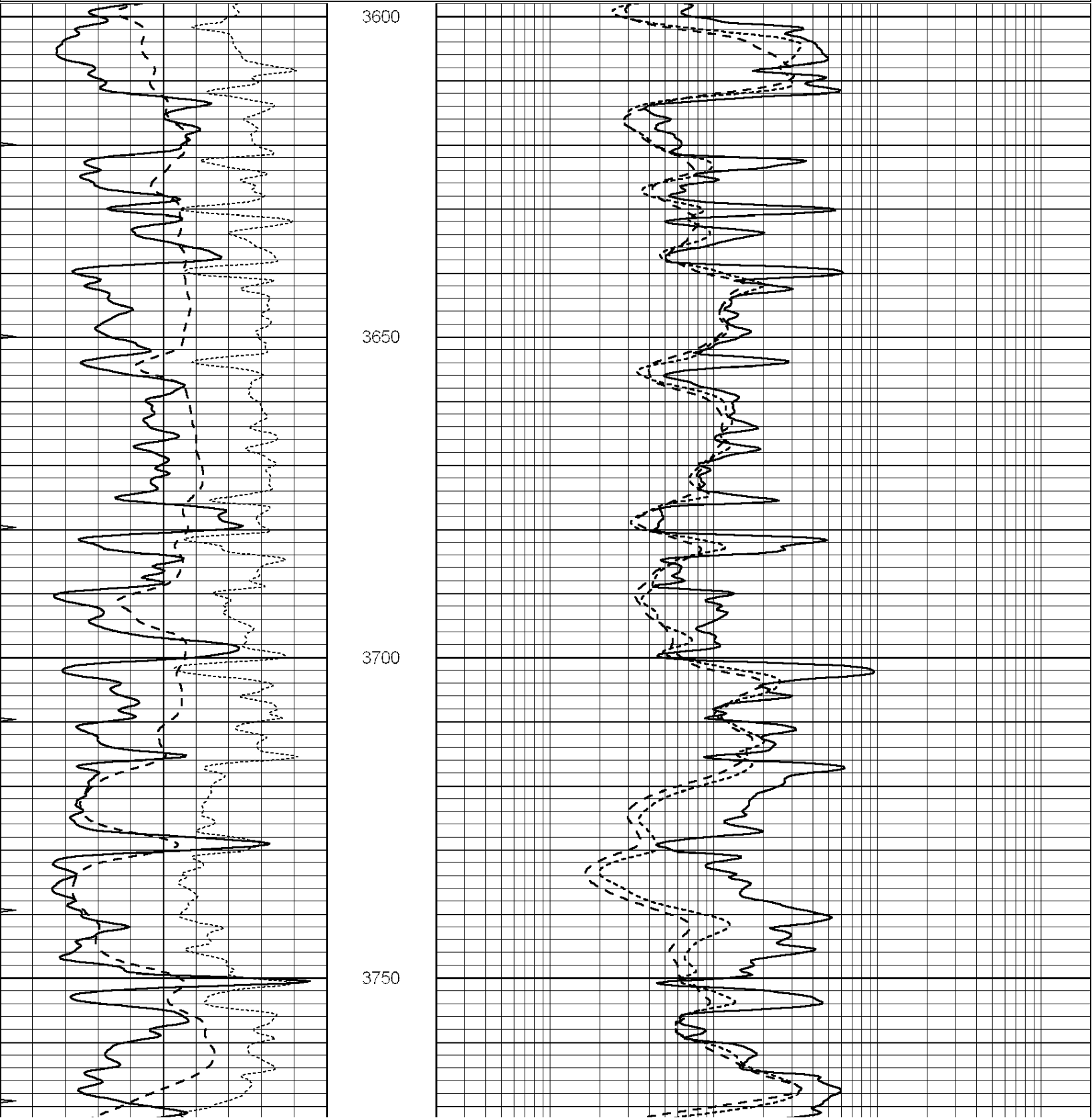


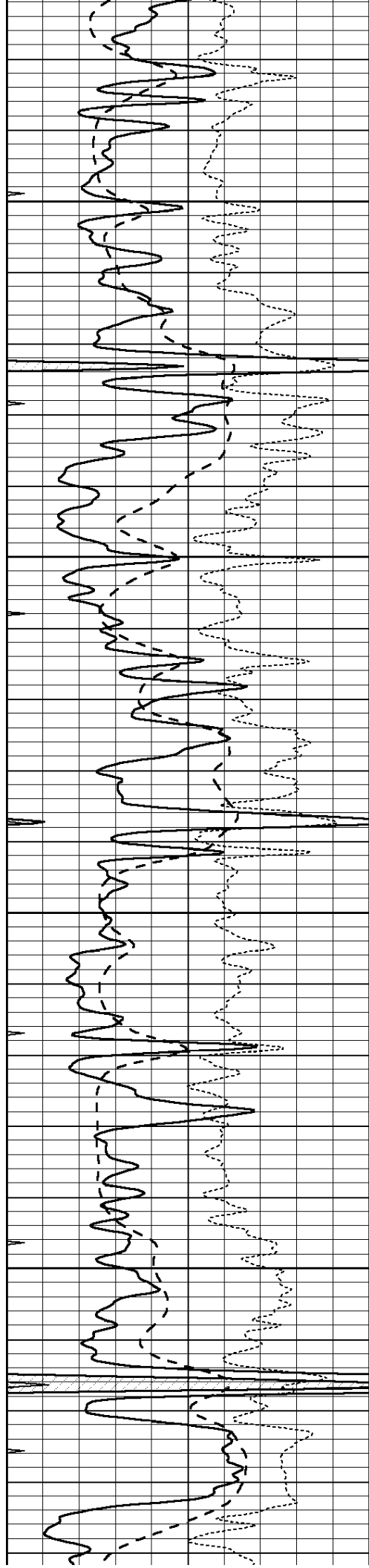
NABORS

**COMPLETION
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MAIN SECTION

0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



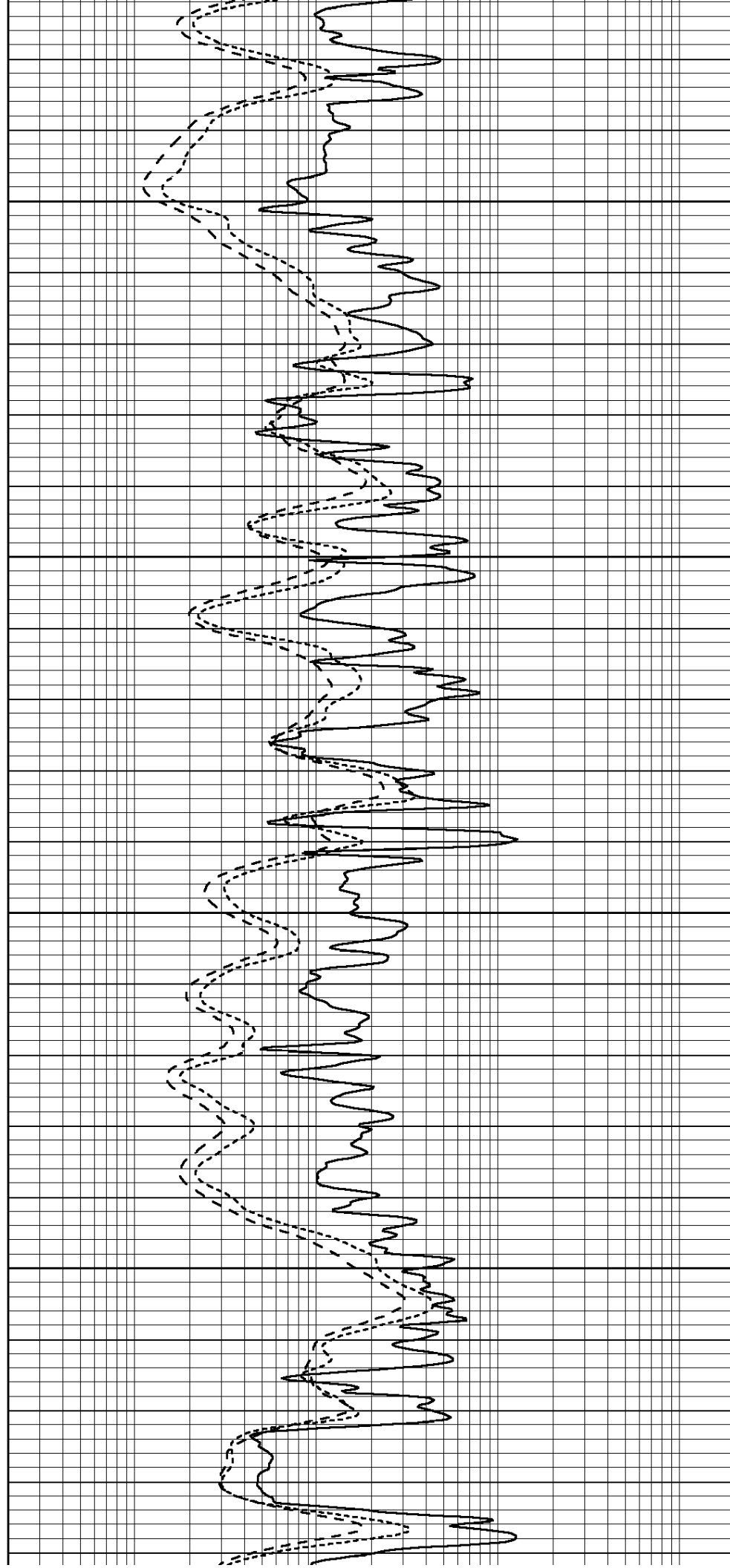


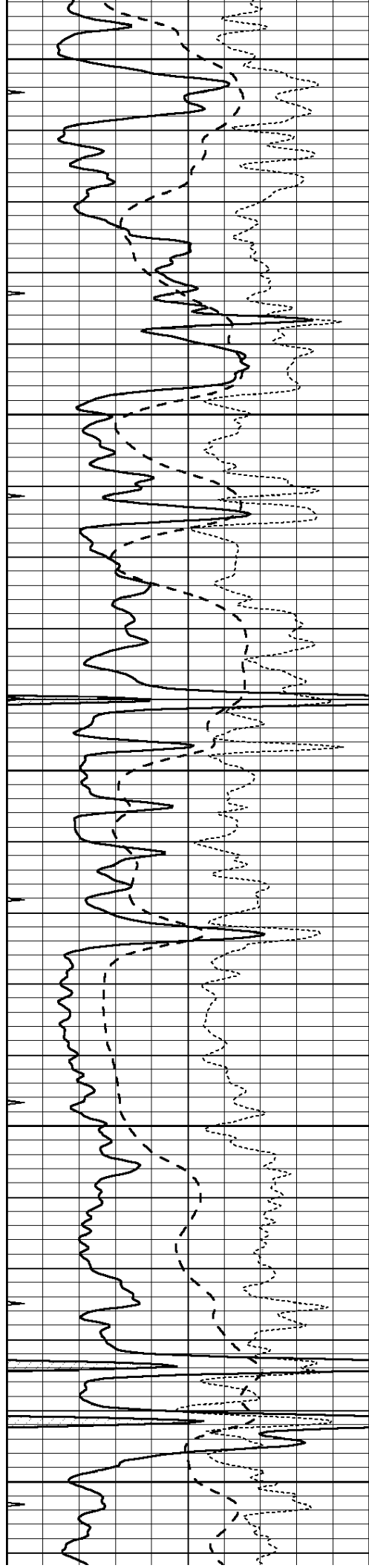
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3850

3900

3950





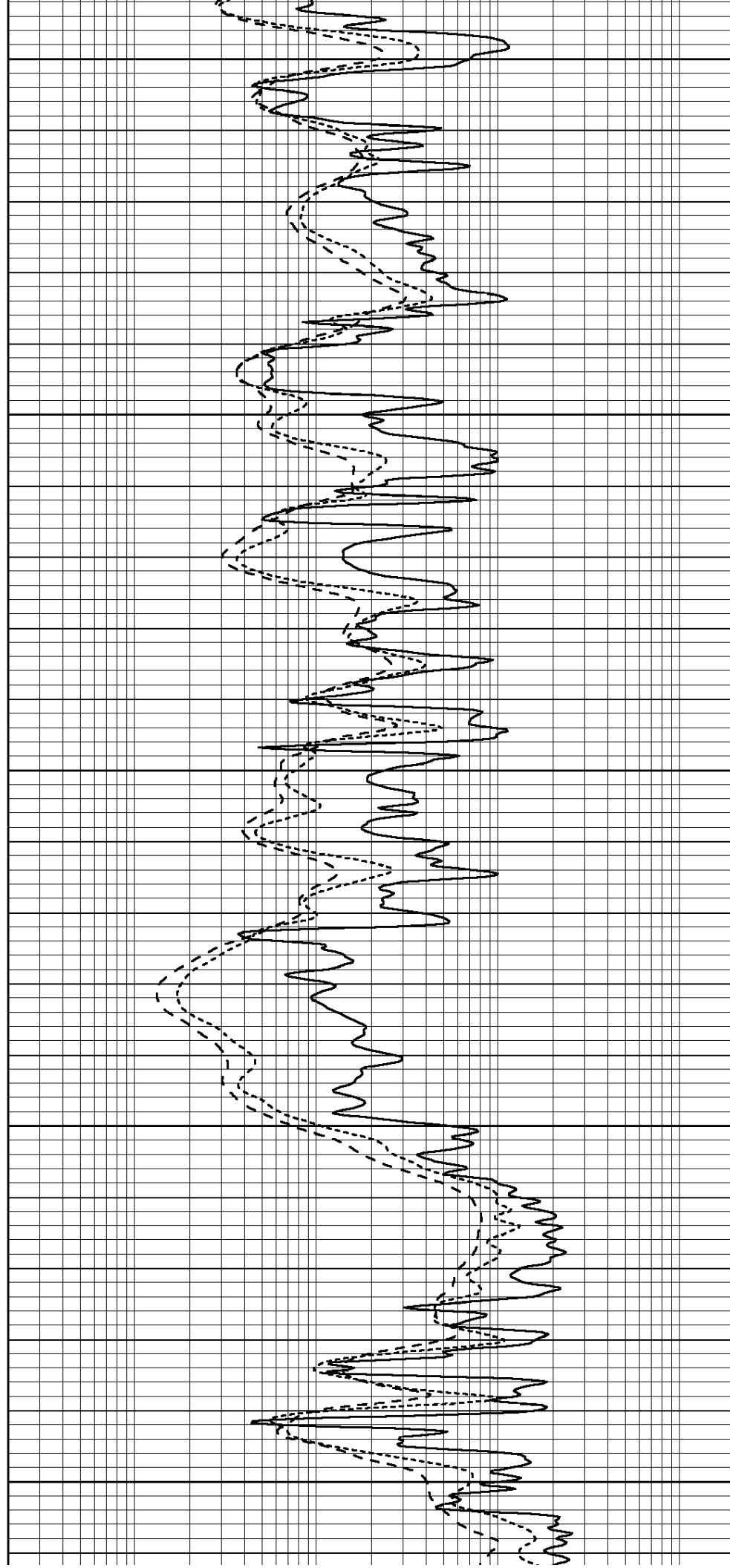
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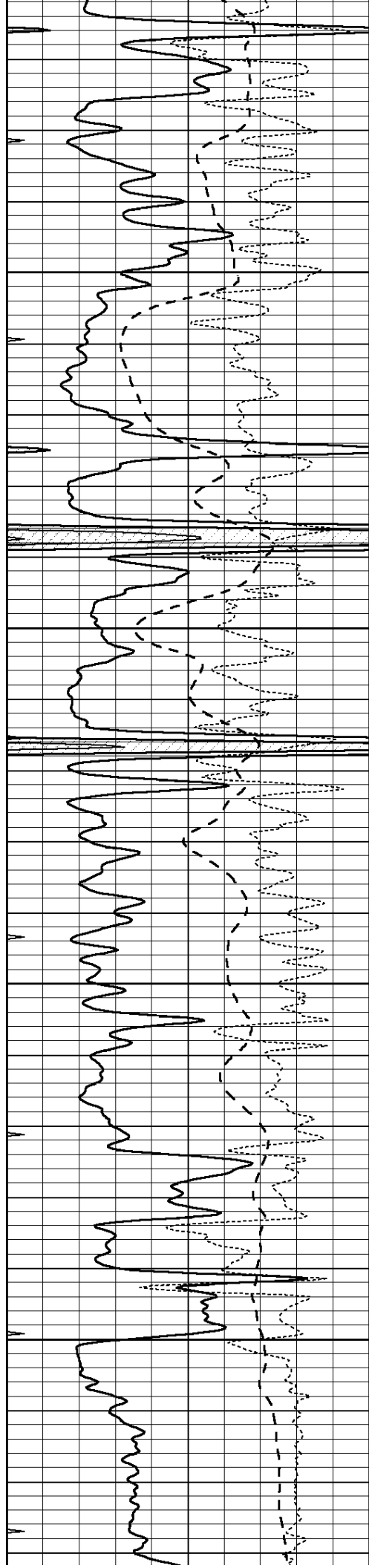
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4100

4150

4200



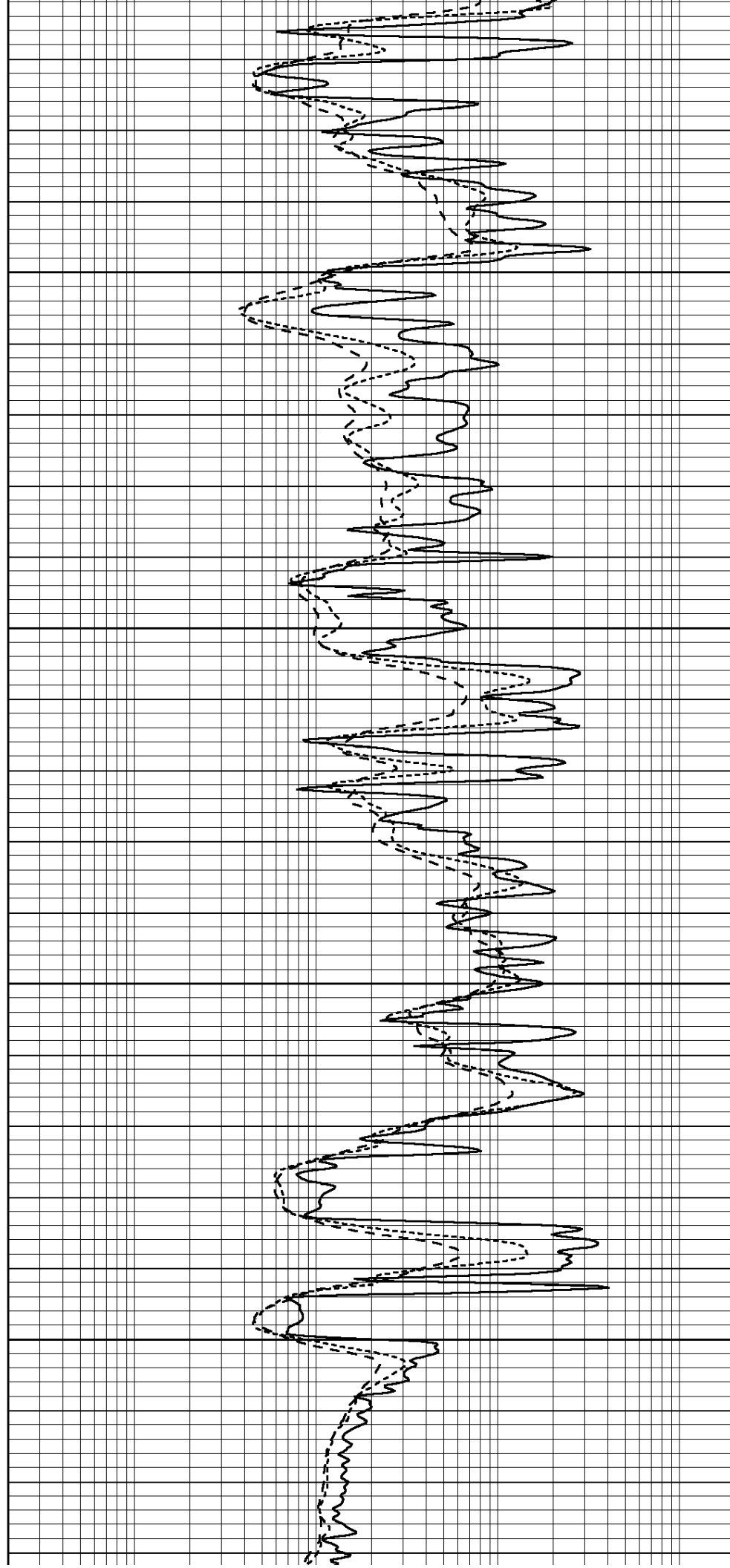


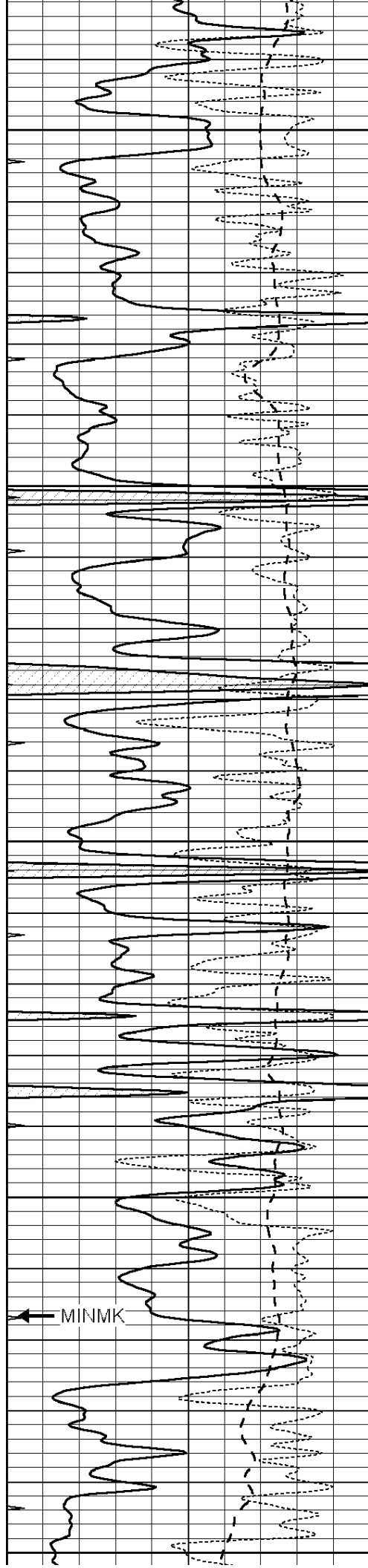
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4300

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4400





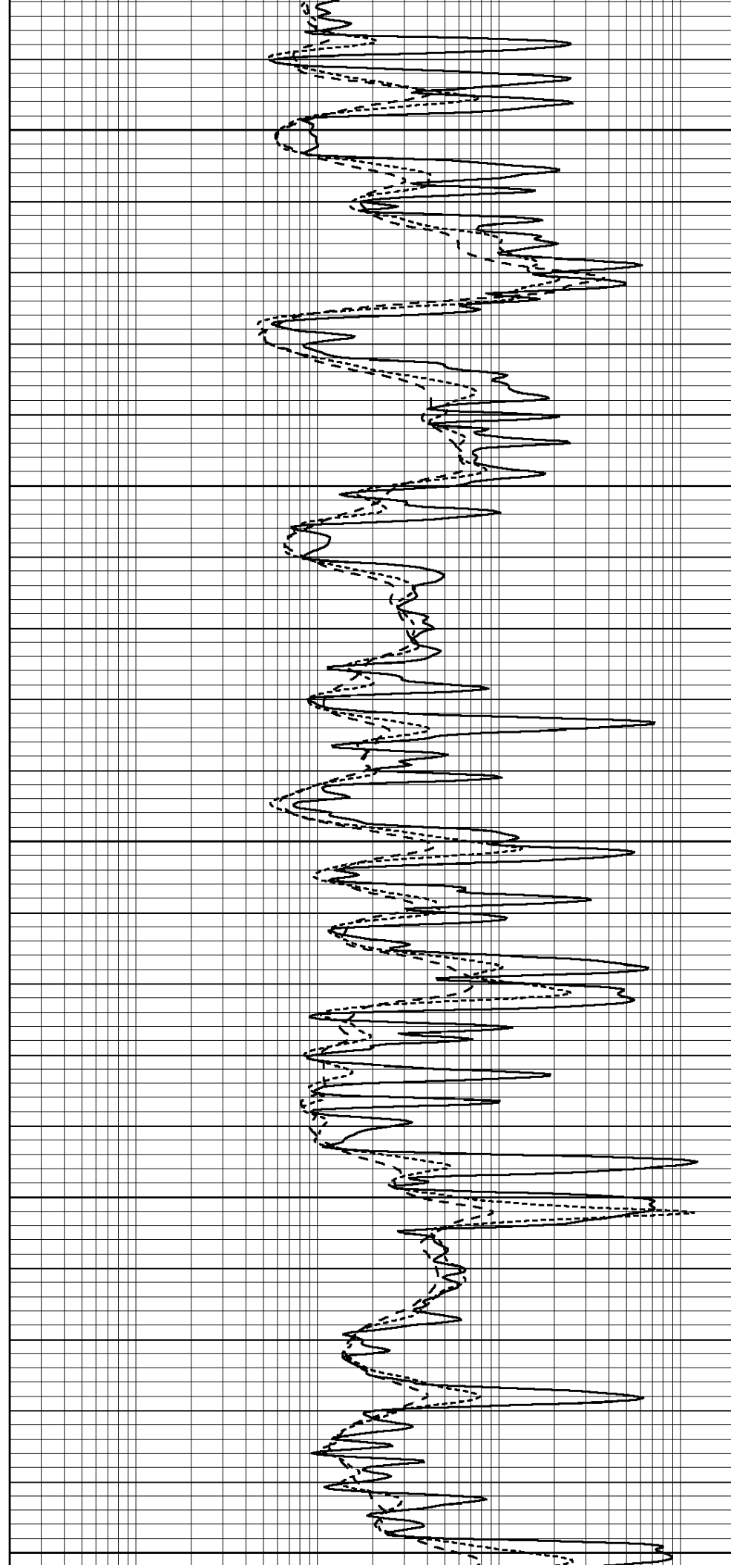
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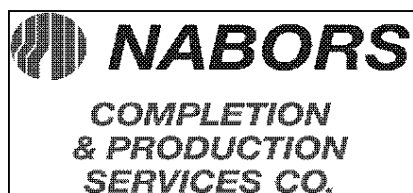
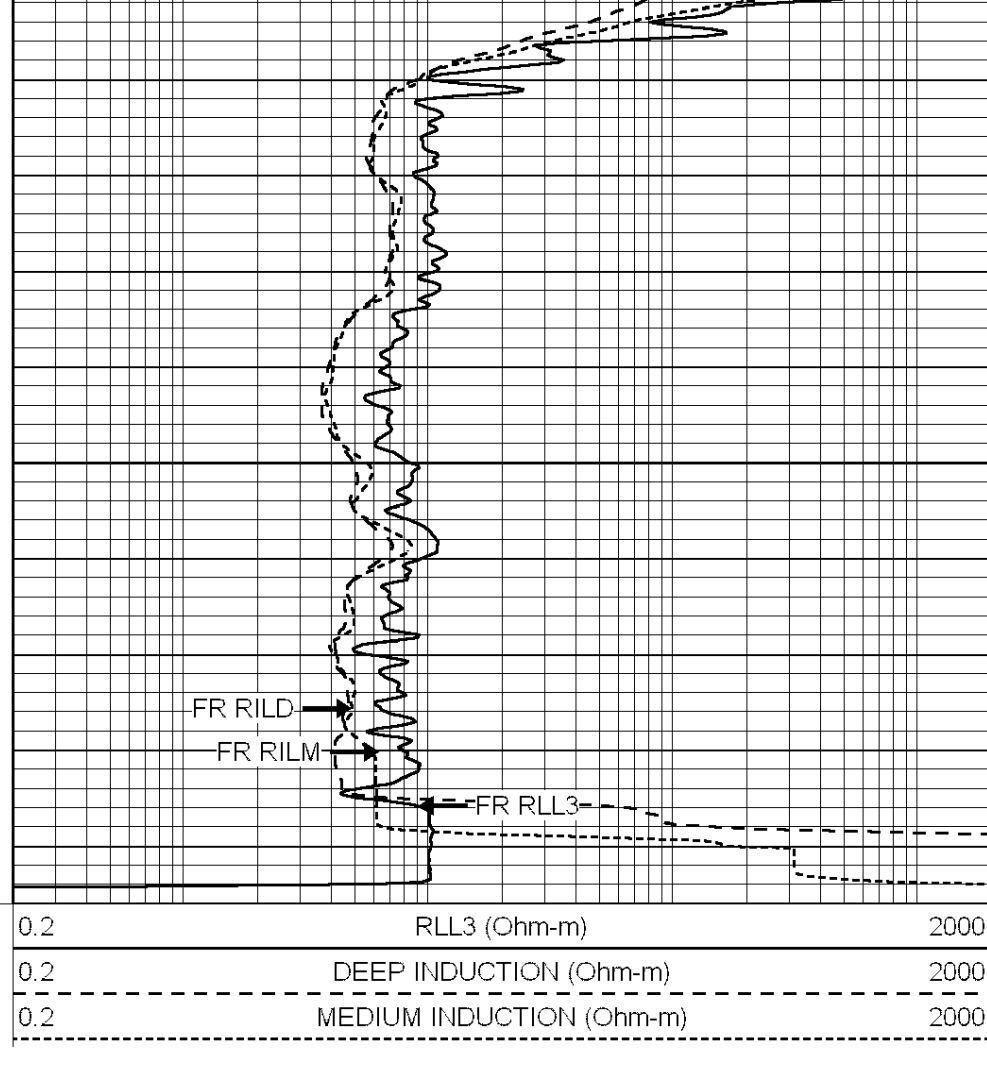
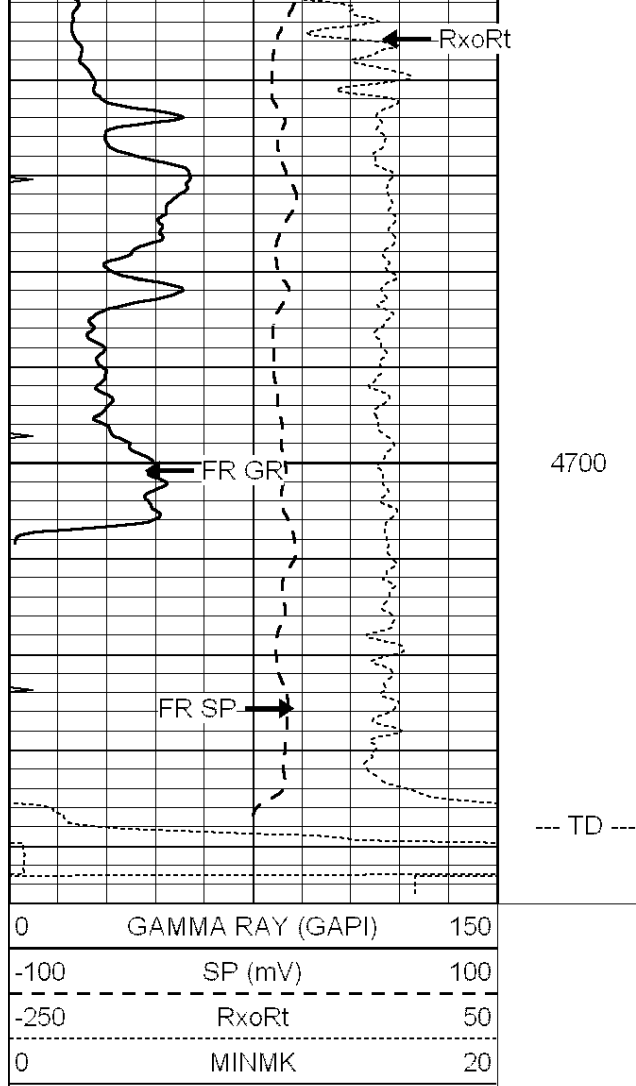
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4550

4600

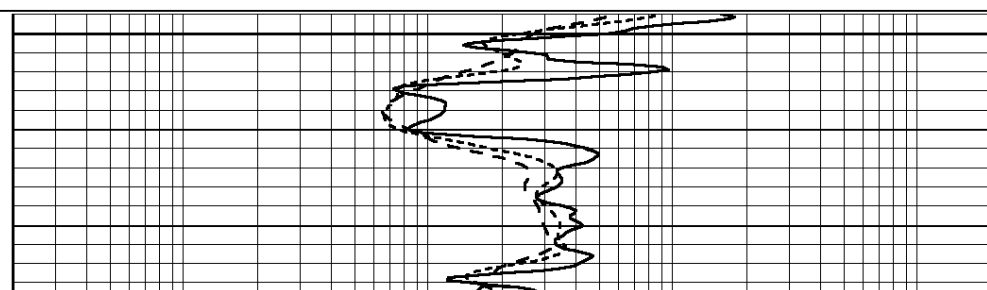
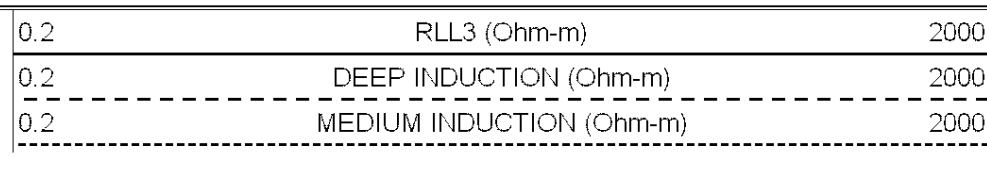
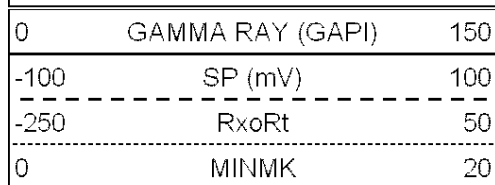
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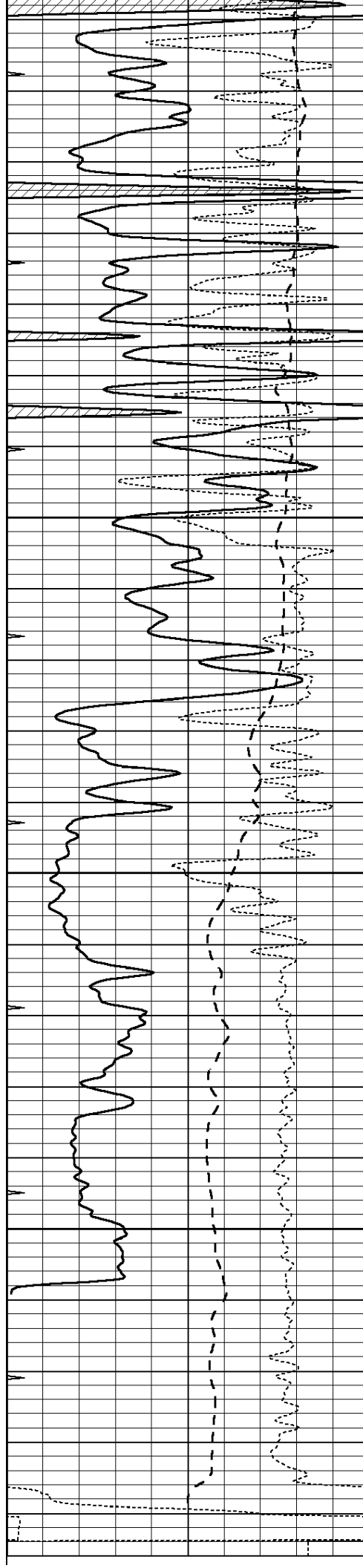




REPEAT SECTION

Database File: 22209ddn.db
 Dataset Pathname: pass2.1A
 Presentation Format: _dil
 Dataset Creation: Sat Jan 04 11:41:12 2014
 Charted by: Depth in Feet scaled 1:240



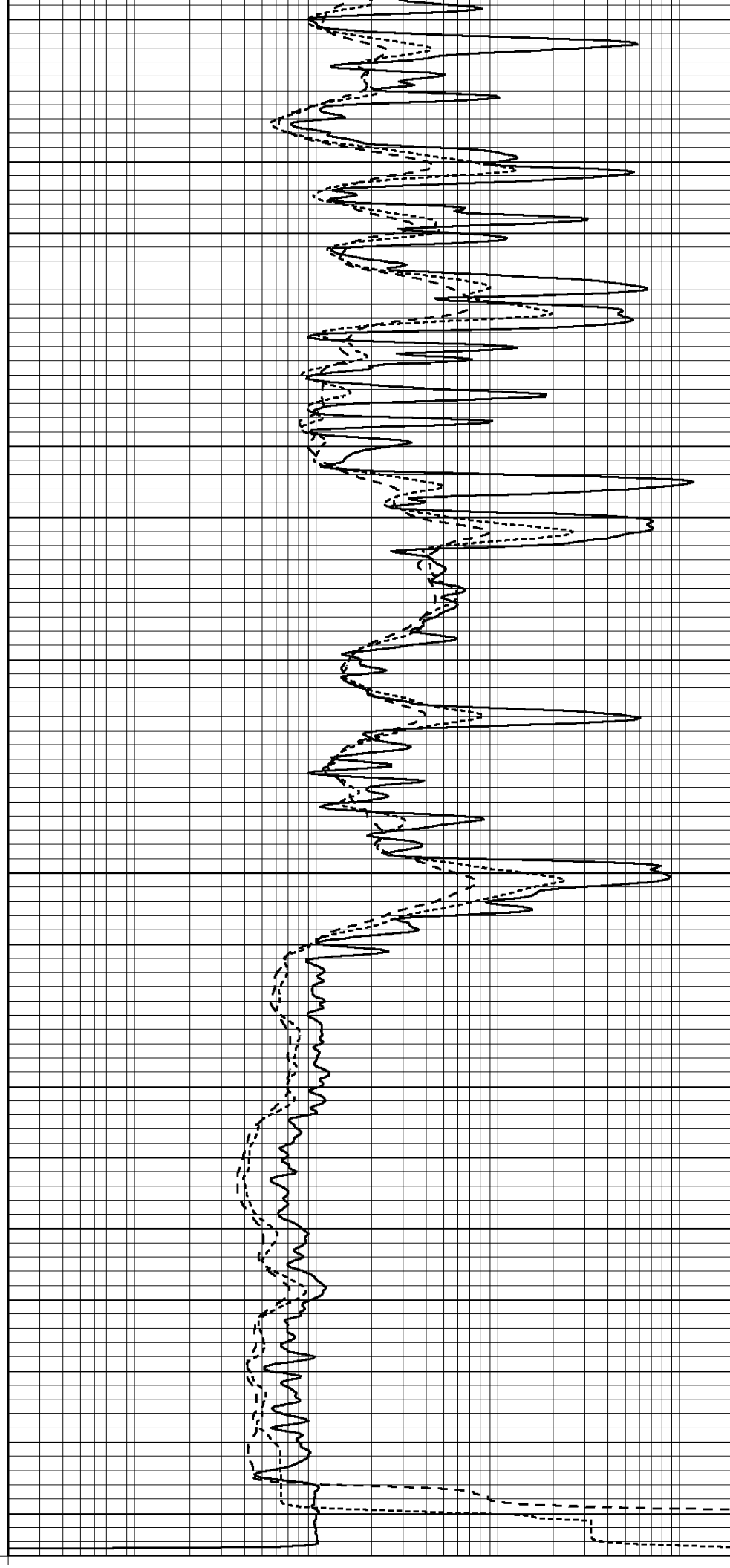


4550

4600

4650

4700



0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

Calibration Report																																																																															
Database File:		22209ddn.db																																																																													
Dataset Pathname:		pass3.1A																																																																													
Dataset Creation:		Sat Jan 04 11:35:10 2014																																																																													
Dual Induction Calibration Report																																																																															
Serial-Model: Performed:				DIL3-GEAR Sat Jan 04 10:54:27 2014																																																																											
<table><tr><td colspan="4">Readings</td><td colspan="3">References</td><td colspan="3">Results</td></tr><tr><td>Loop:</td><td>Air</td><td>Loop</td><td></td><td>Air</td><td>Loop</td><td></td><td>m</td><td>b</td><td></td></tr><tr><td>Deep</td><td>0.011</td><td>0.656</td><td>V</td><td>0.000</td><td>400.000</td><td>mmho/m</td><td>500.000</td><td>2.000</td><td></td></tr><tr><td>Medium</td><td>0.013</td><td>0.740</td><td>V</td><td>0.000</td><td>462.500</td><td>mmho/m</td><td>580.000</td><td>3.000</td><td></td></tr><tr><td>Internal:</td><td>Zero</td><td>Cal</td><td></td><td>Zero</td><td>Cal</td><td></td><td>m</td><td>b</td><td></td></tr><tr><td>Deep</td><td>0.002</td><td>0.645</td><td>V</td><td>0.000</td><td>400.000</td><td>mmho/m</td><td>560.000</td><td>-1.071</td><td></td></tr><tr><td>Medium</td><td>0.007</td><td>0.740</td><td>V</td><td>0.000</td><td>462.500</td><td>mmho/m</td><td>540.000</td><td>-4.000</td><td></td></tr></table>										Readings				References			Results			Loop:	Air	Loop		Air	Loop		m	b		Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	2.000		Medium	0.013	0.740	V	0.000	462.500	mmho/m	580.000	3.000		Internal:	Zero	Cal		Zero	Cal		m	b		Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071		Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000	
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Compensated Density Calibration Report																																																																															
Serial-Model: Source / Verifier: Master Calibration Performed:				GEAR1-GEARHART 147 / 147 Sat Jan 04 08:49:49 2014																																																																											
Master Calibration																																																																															
<table><tr><td colspan="3">Density</td><td colspan="2">Far Detector</td><td colspan="3">Near Detector</td></tr><tr><td>Magnesium</td><td>1.710</td><td>g/cc</td><td>1205.77</td><td>610.74</td><td>cps</td><td></td><td></td><td></td></tr><tr><td>Aluminum</td><td>2.580</td><td>g/cc</td><td>271.21</td><td>419.72</td><td>cps</td><td></td><td></td><td></td></tr><tr><td colspan="3">Spine Angle = 75.89</td><td colspan="6">Density/Spine Ratio = 0.566</td></tr><tr><td colspan="3">Size</td><td colspan="2">Reading</td><td colspan="4"></td></tr><tr><td>Small Ring</td><td>8.20</td><td>in</td><td>4.83</td><td>V</td><td></td><td></td><td></td><td></td></tr><tr><td>Large Ring</td><td>14.00</td><td>in</td><td>7.01</td><td>V</td><td></td><td></td><td></td><td></td></tr></table>										Density			Far Detector		Near Detector			Magnesium	1.710	g/cc	1205.77	610.74	cps				Aluminum	2.580	g/cc	271.21	419.72	cps				Spine Angle = 75.89			Density/Spine Ratio = 0.566						Size			Reading						Small Ring	8.20	in	4.83	V					Large Ring	14.00	in	7.01	V												
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Compensated Neutron Calibration Report																																																																															
Serial Number: Tool Model:				080620 Probe																																																																											
PRE-SURVEY VERIFICATION																																																																															
Detector		Readings		Measured		Target																																																																									
Short Space		cps		pu		pu																																																																									
Long Space		cps																																																																													
POST-SURVEY VERIFICATION																																																																															
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Short Space		cps		pu		pu																																																																									
Long Space		cps																																																																													

Long Space

cps

ps

ps

Gamma Ray Calibration Report

Serial Number:	7	
Tool Model:	Probe1	
Performed:	Sat Jan 04 10:53:32 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.4600	GAPI/cps