

DUAL INDUCTION LOG

Company	MULL DRILLING COMPANY, INC.	Company	MULL DRILLING COMPANY, INC.
Well	GILLASPIE #1-1	Well	GILLASPIE #1-1
Field	WILDCAT	Field	WILDCAT
County	MORRIS	County	MORRIS
State	KANSAS	State	KANSAS
Location:	API # : 15-127-20602-0000 2039' FSL & 2622' FEL SW - NW - NW - SE	Permanent Datum Log Measured From Drilling Measured From	GROUND LEVEL KELLY BUSHING 12' A.G.L. KELLY BUSHING
	SEC 1 TWP 16S RGE 7E		Elevation K.B. 1467 D.F. 1465 G.L. 1455
Date	10/20/20		
Run Number	ONE		
Depth Driller	2060		
Depth Logger	2059		
Bottom Logged Interval	2057		
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 940 PPM	
Density / Viscosity	9.4/45		
pH / Fluid Loss	10.5/9.1		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.80@78F		
Rmf @ Meas. Temp	1.35@78F		
Rmc @ Meas. Temp	2.16@78F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	1.42@99F		
Time Circulation Stopped	8 HOURS		
Time Logger on Bottom	5:30 P.M.		
Maximum Recorded Temperature	99F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	RUSTY MOURNING		

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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.

15-127-20602-0000

Comments

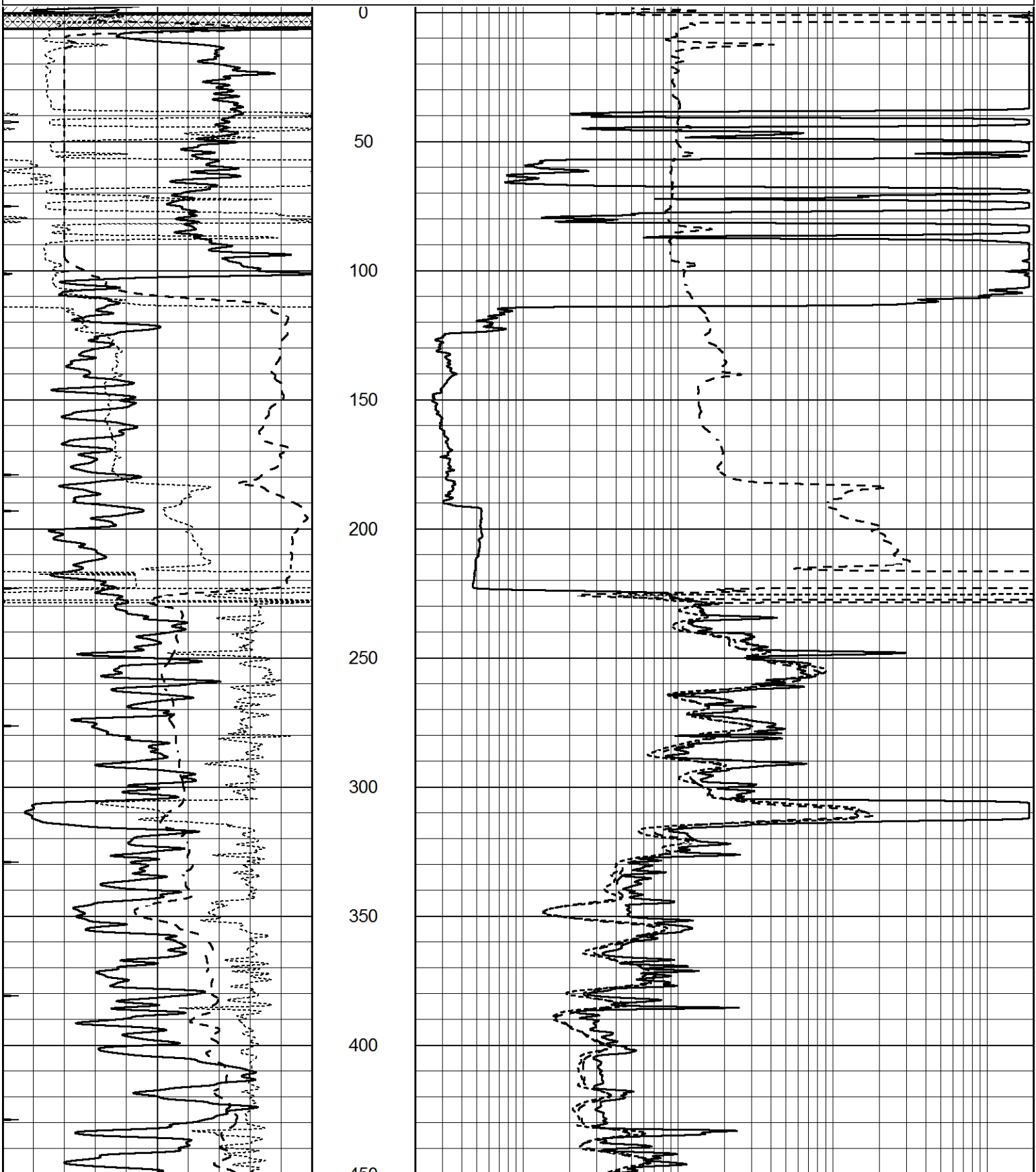
THANK YOU FOR USING E.L.I. WIRELINE SERVICES HAYS, KANSAS (785)628-6395
DIRECTIONS
COUNCIL GROVE, KS., 6W. ON HWY 56 TO "RD. 1400", 2N., 1/4W., N. INTO

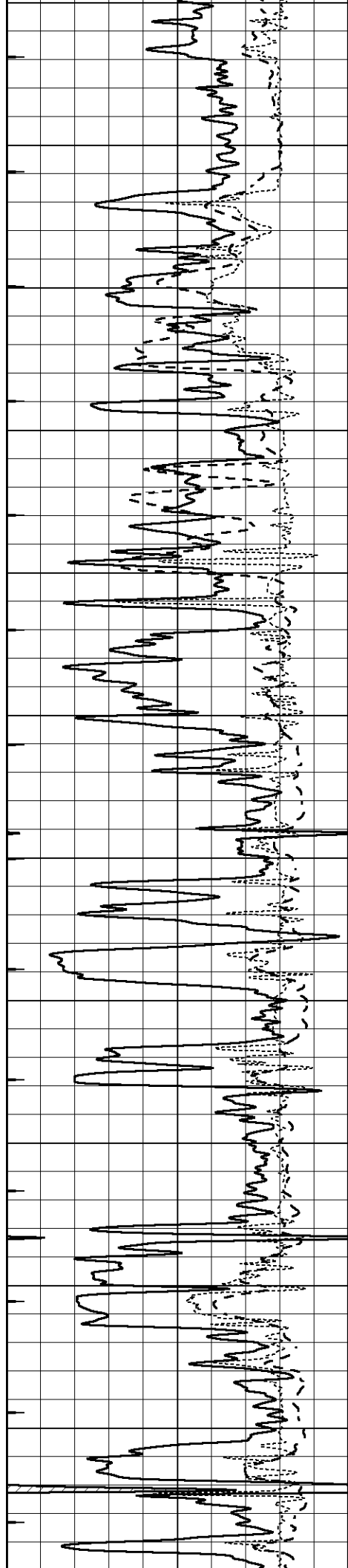


MAIN SECTION

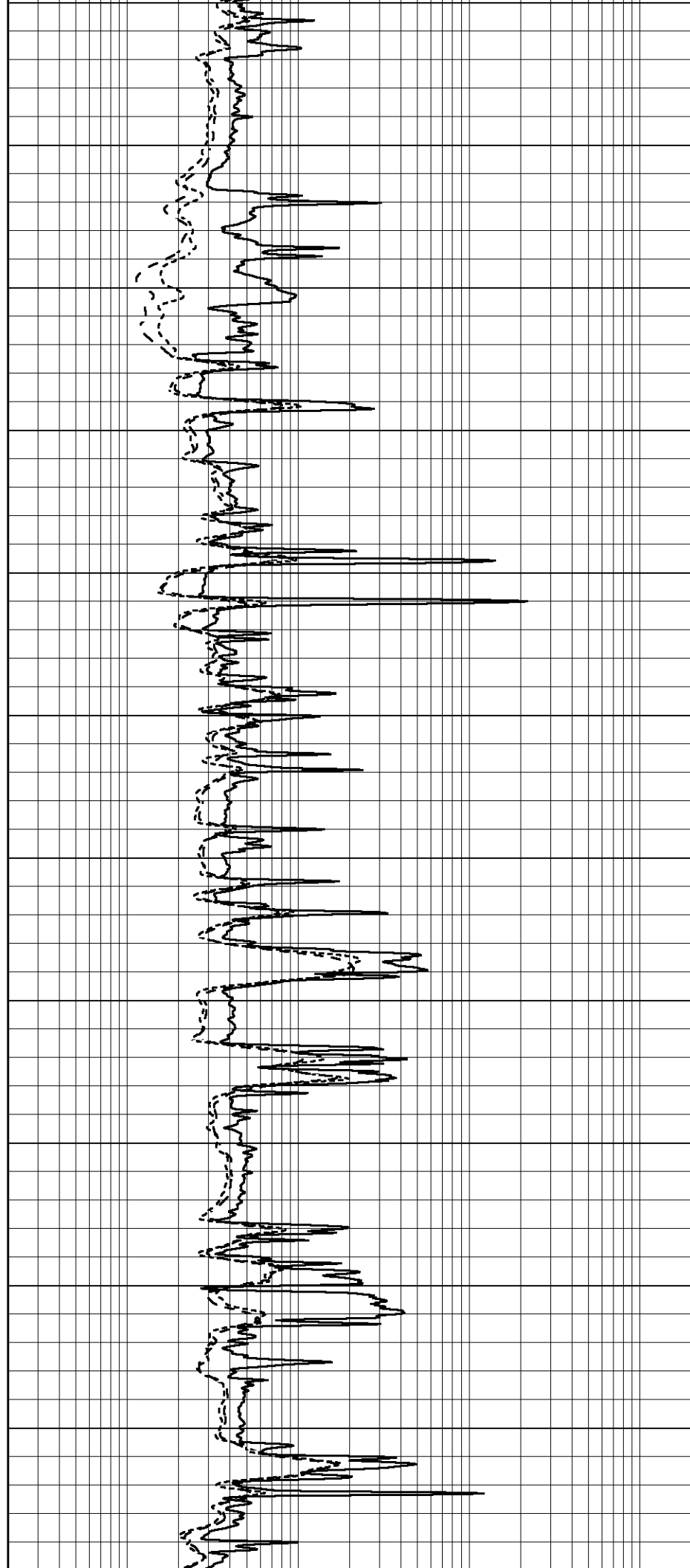
Database File	4813pe.db
Dataset Pathname	pass3.7
Presentation Format	dil2
Dataset Creation	Tue Oct 20 19:06:00 2020
Charted by	Depth in Feet scaled 1:600

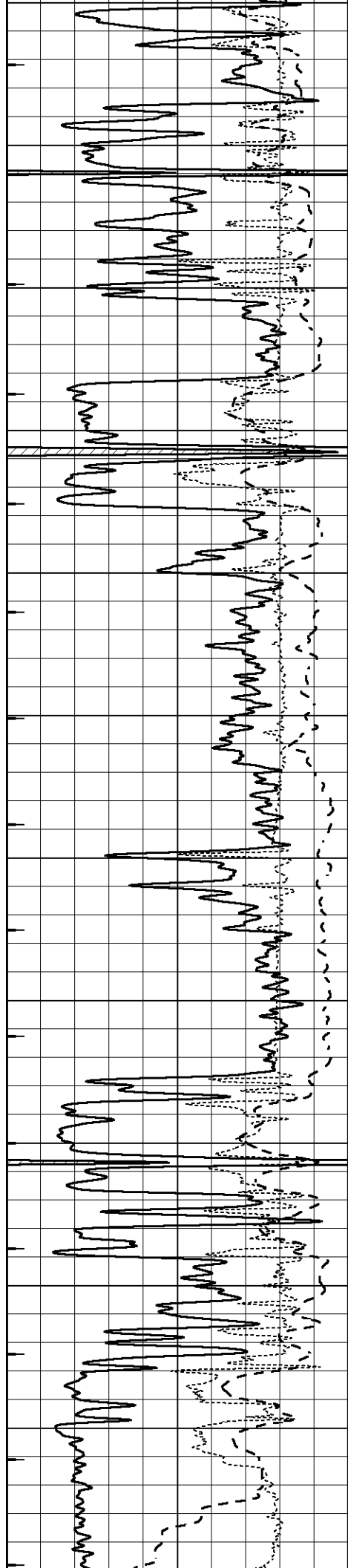
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



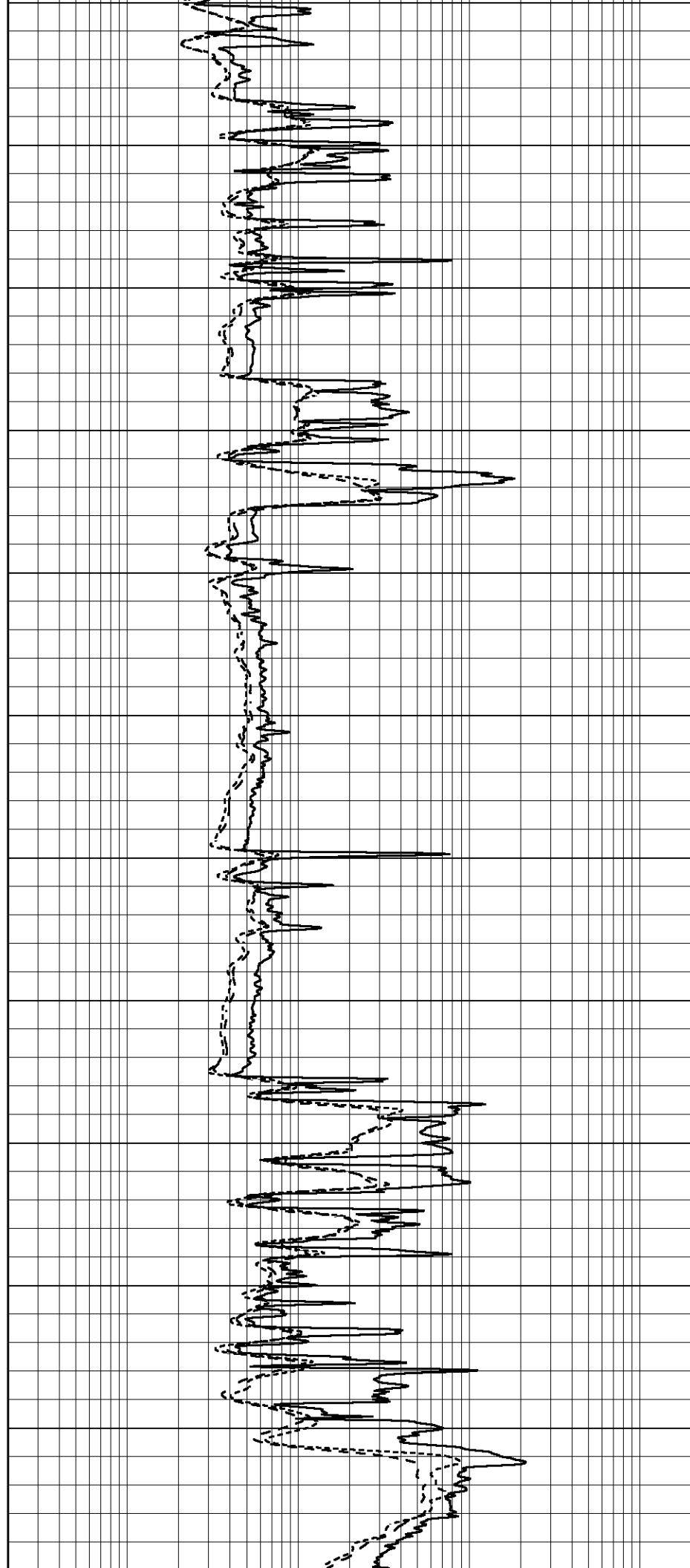


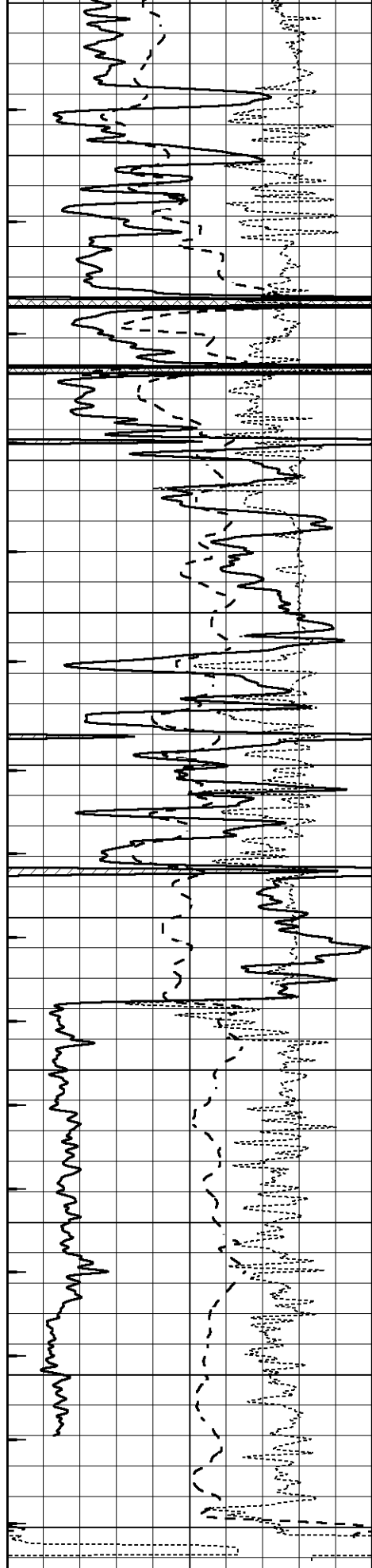
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500
550
600
650
700
750
800
850
900
950
1000



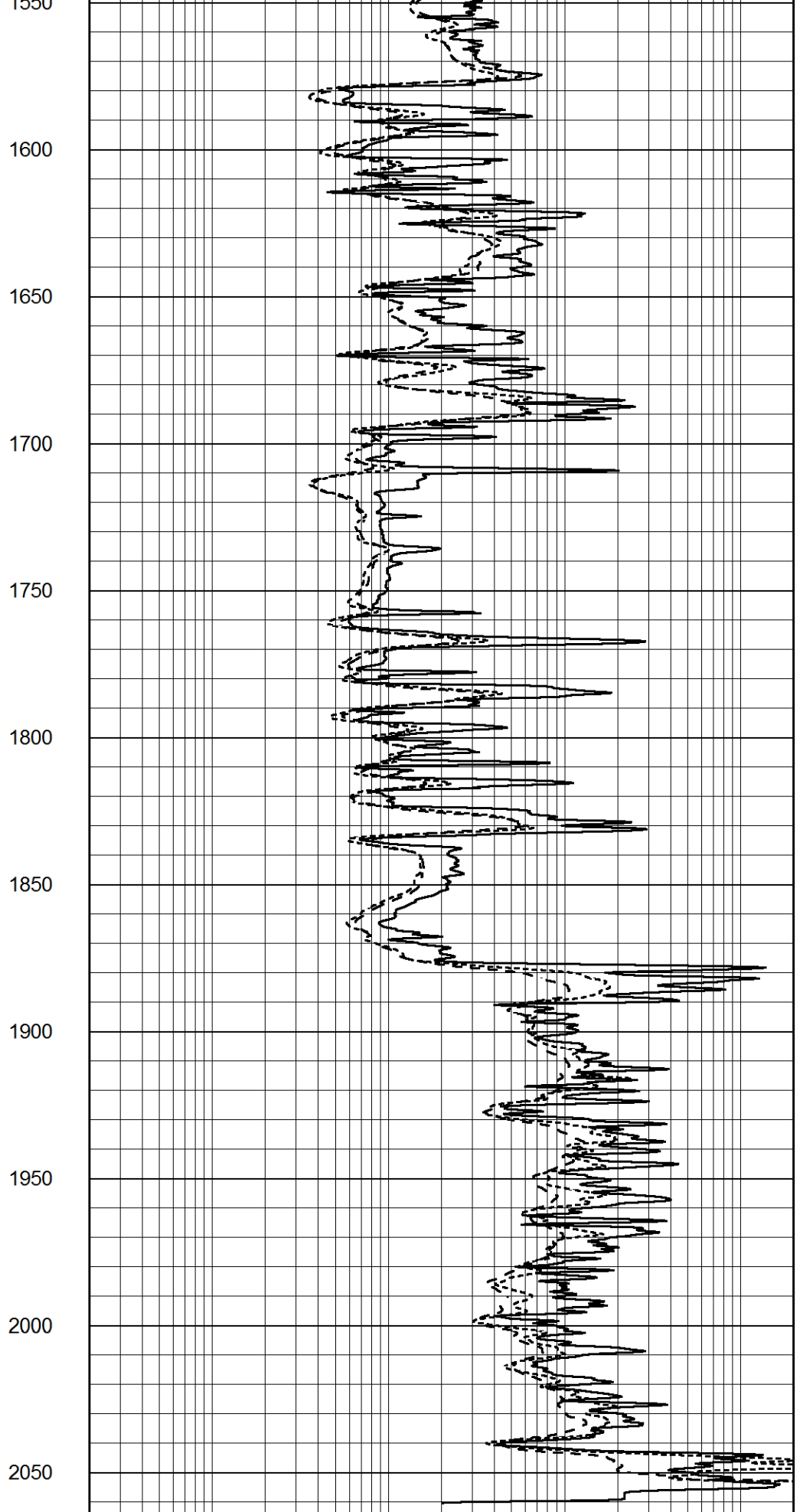


1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550





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



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



MAIN SECTION

Database File4813pe.db

Dataset Pathnamepass3.7

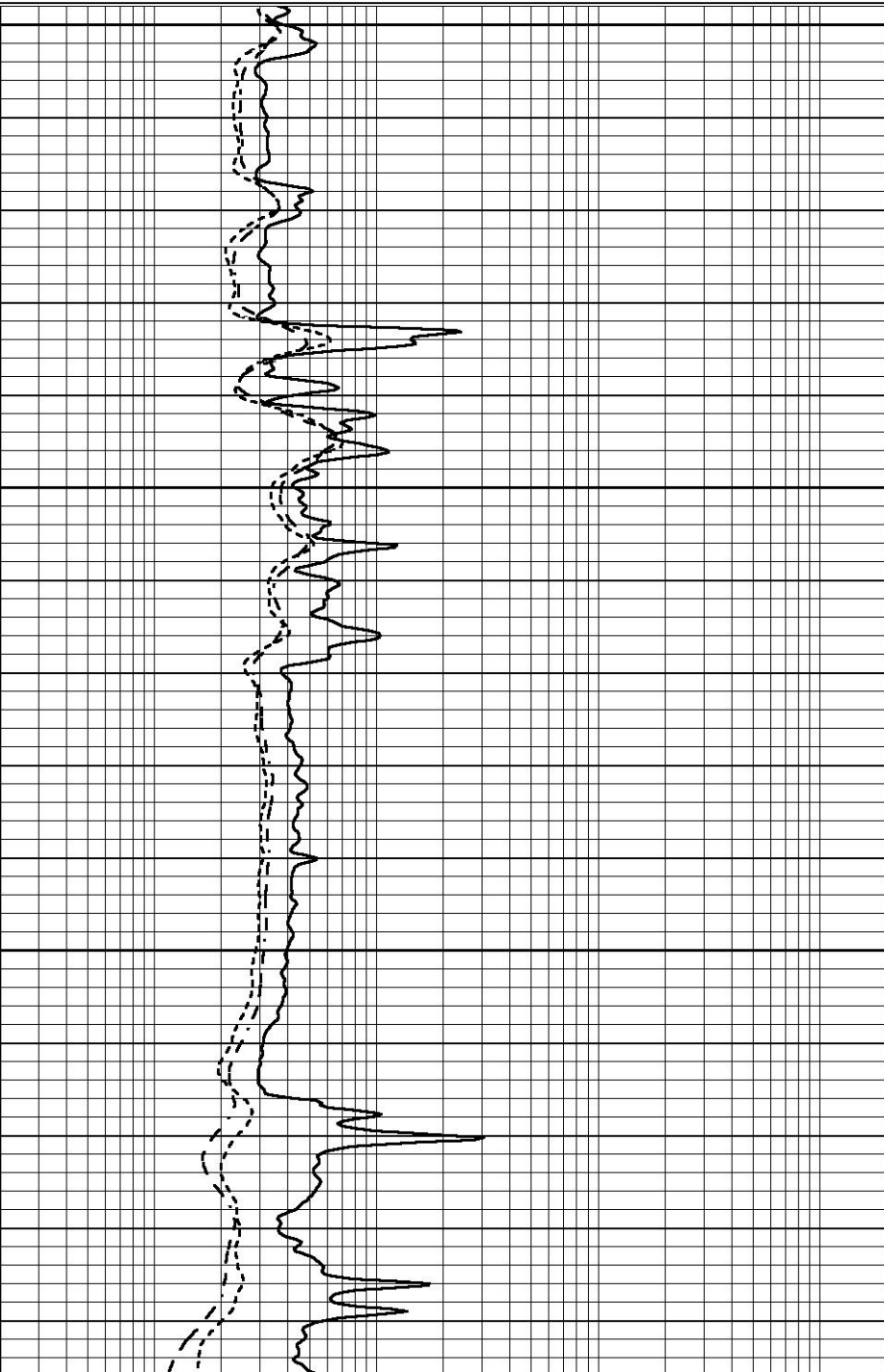
Presentation Format_dil

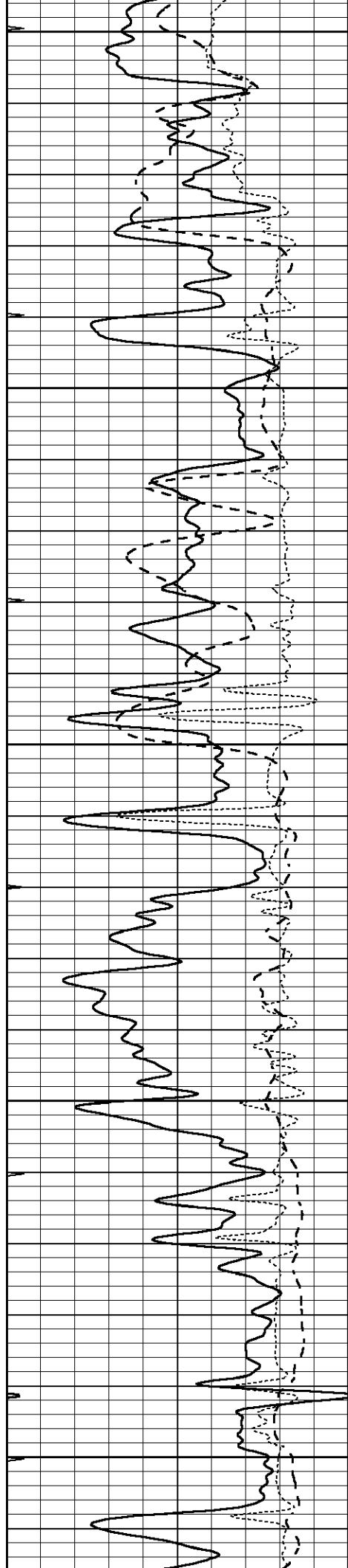
Dataset CreationTue Oct 20 19:06:00 2020

Charted byDepth in Feet scaled 1:240

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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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





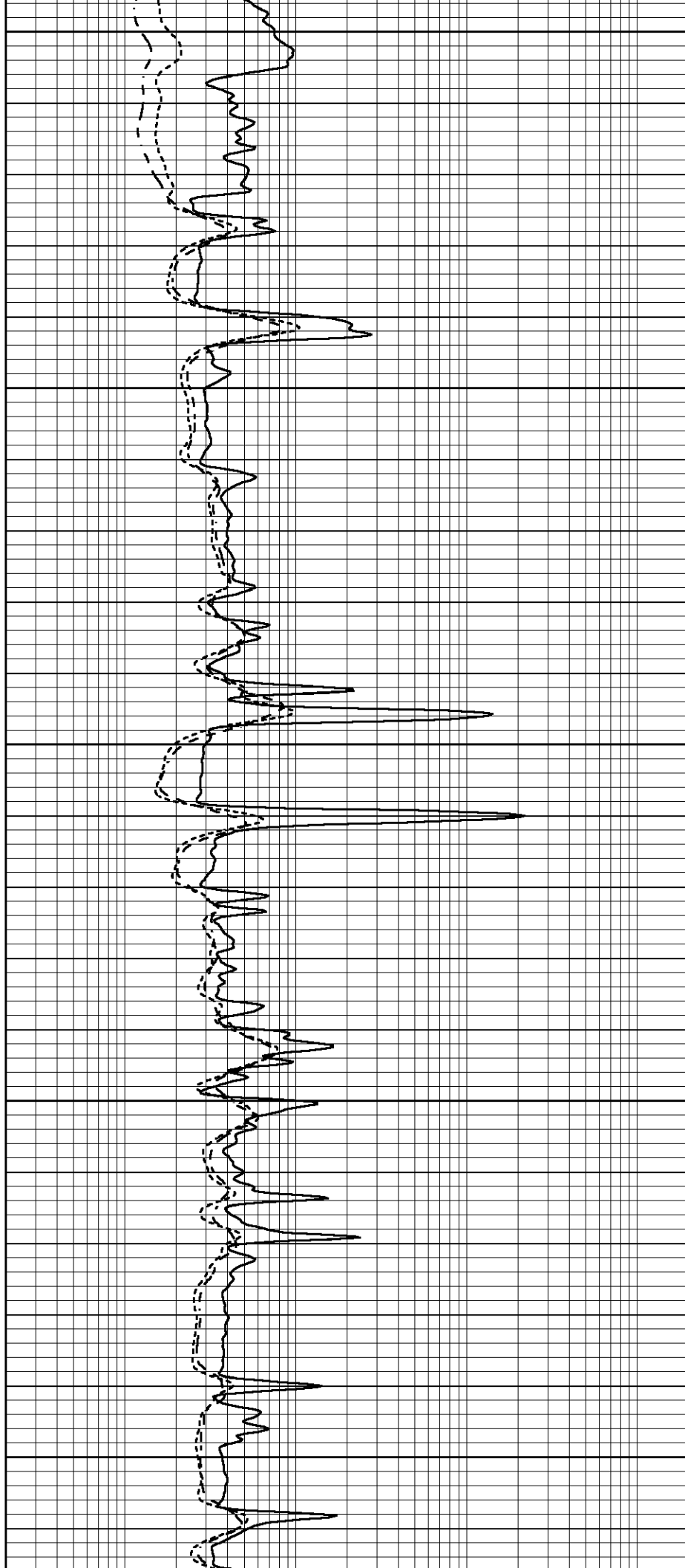
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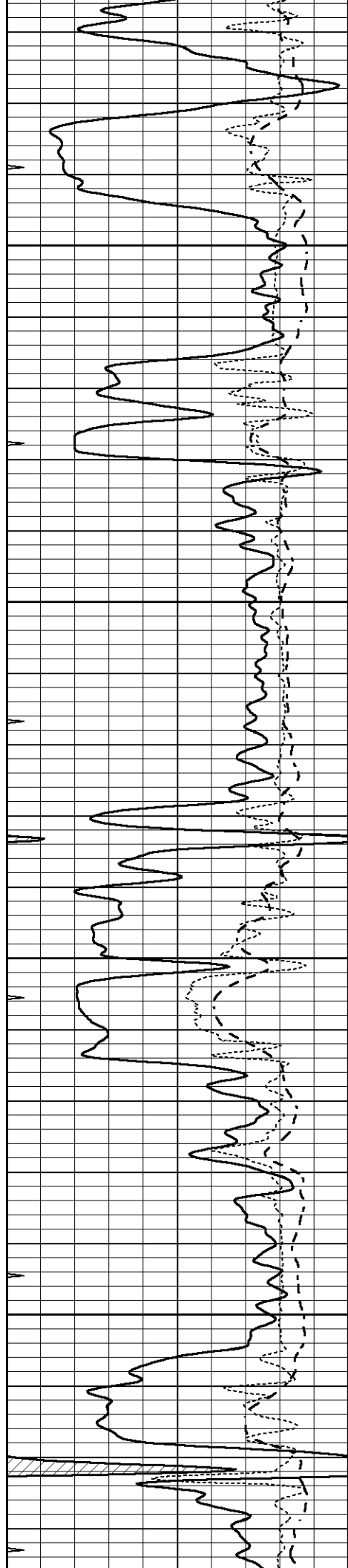
600

650

700

750



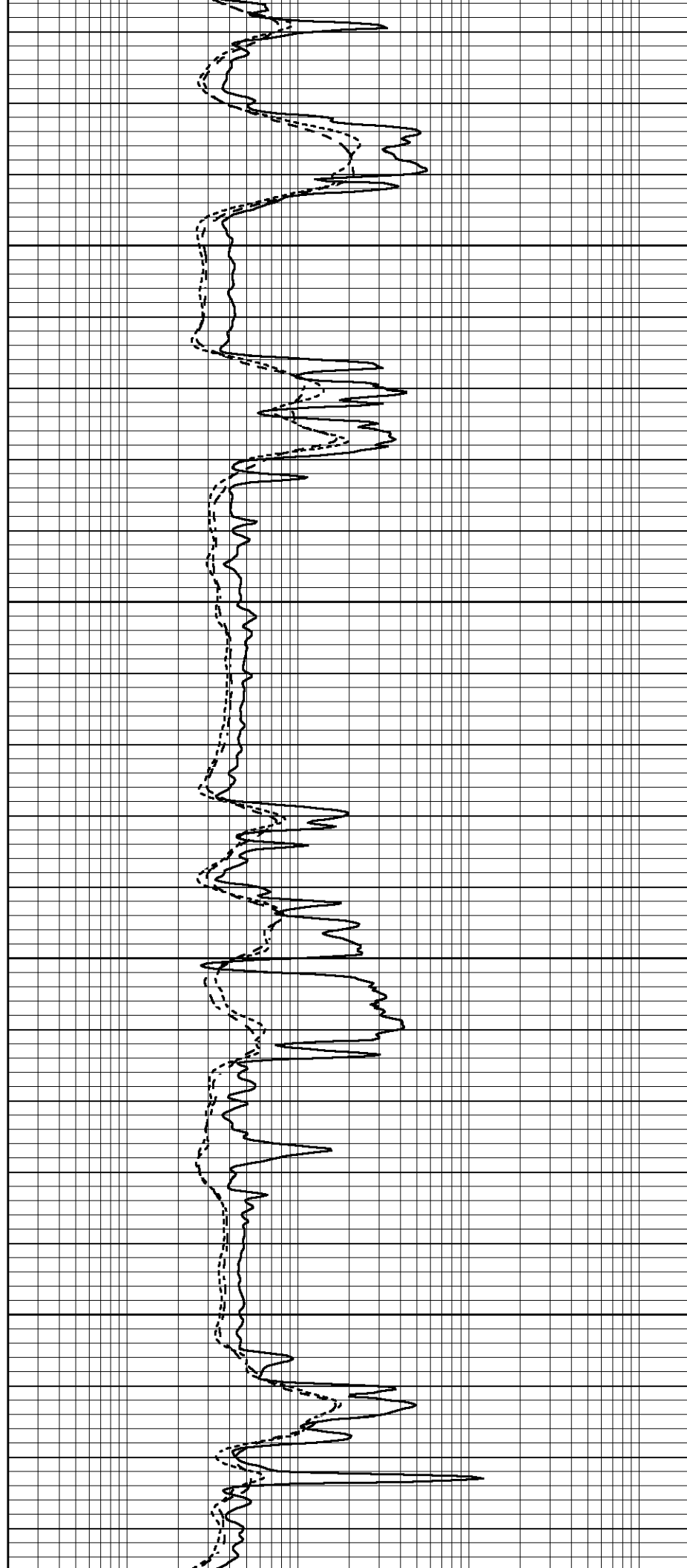


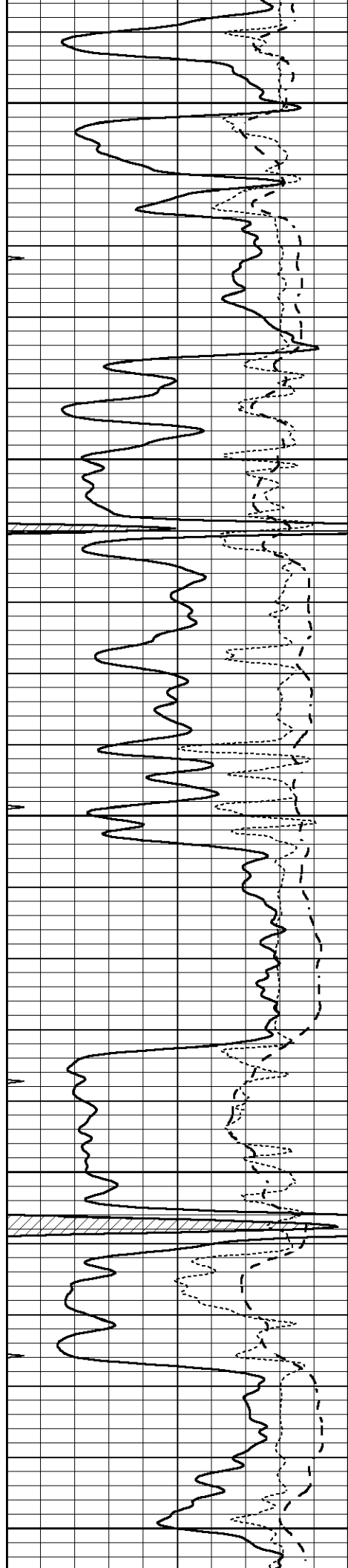
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850

900

950





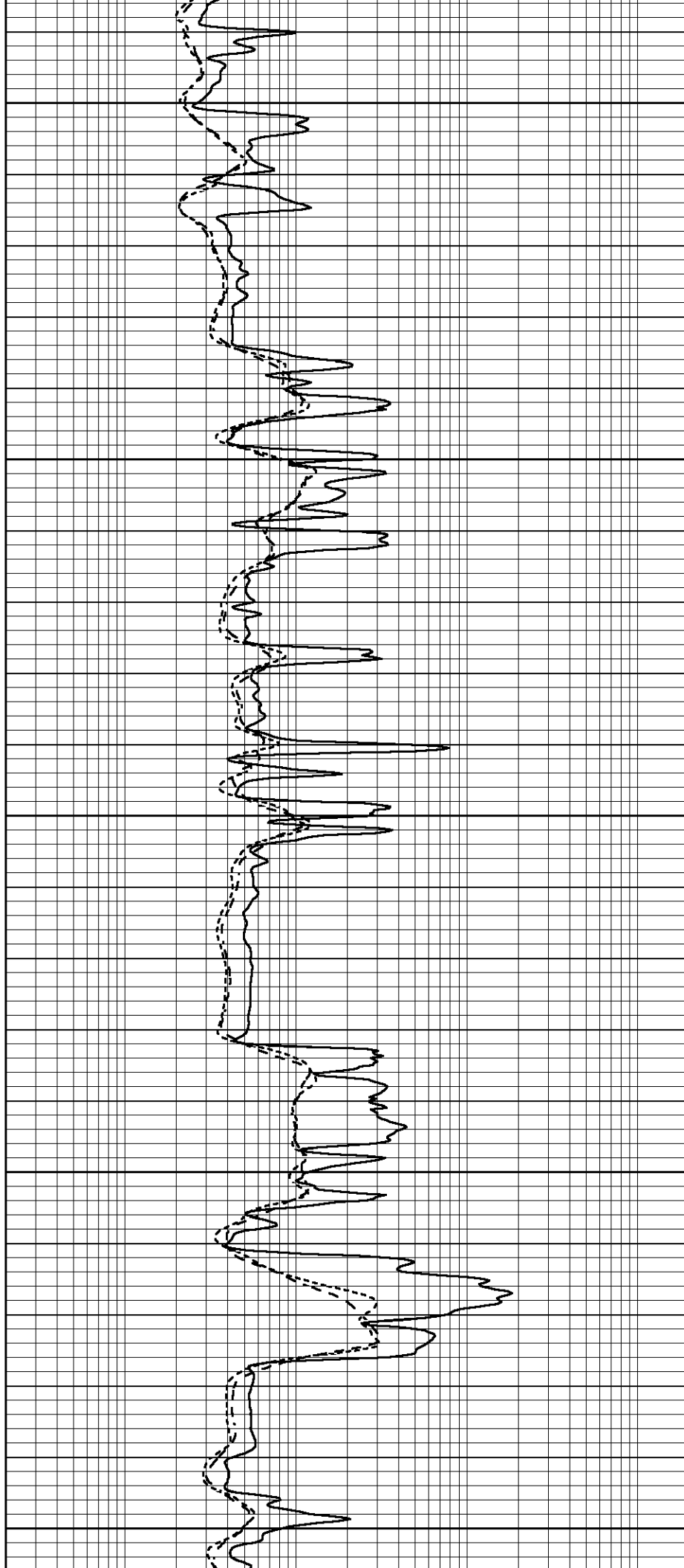
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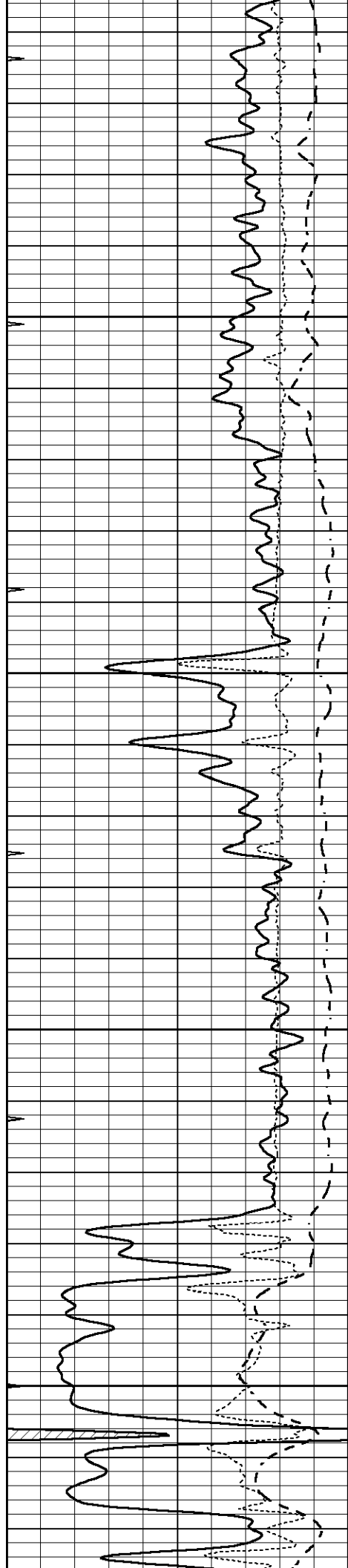
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1100

1150

1200



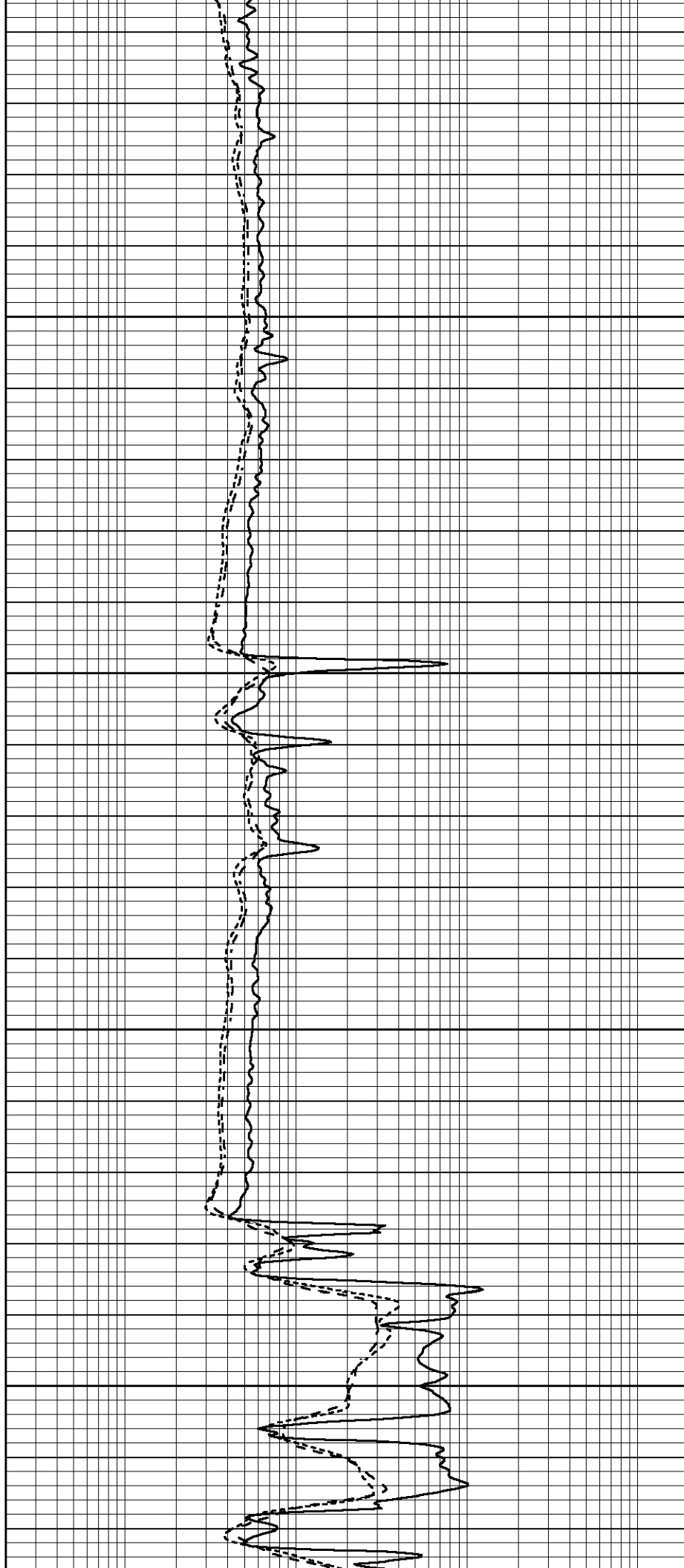


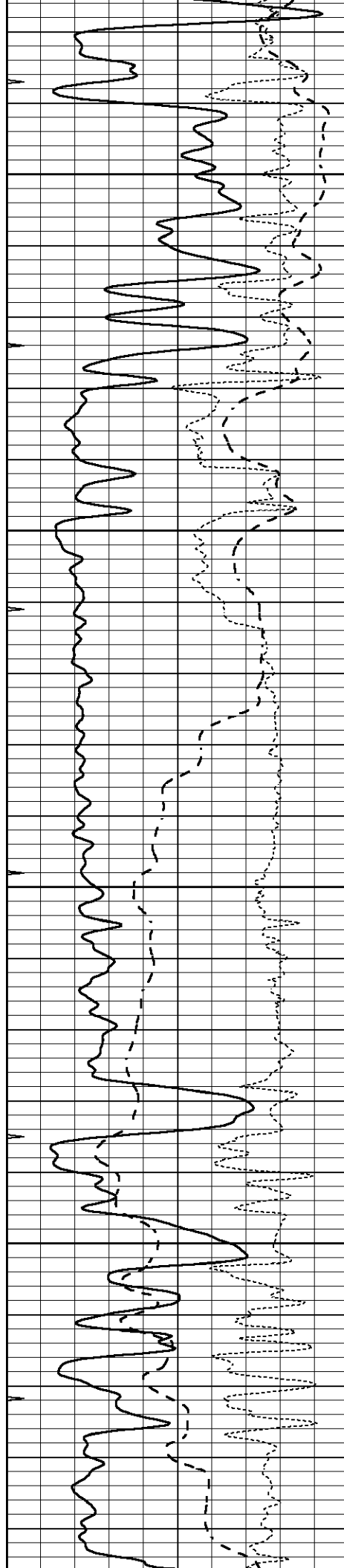
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1300

1350

1400



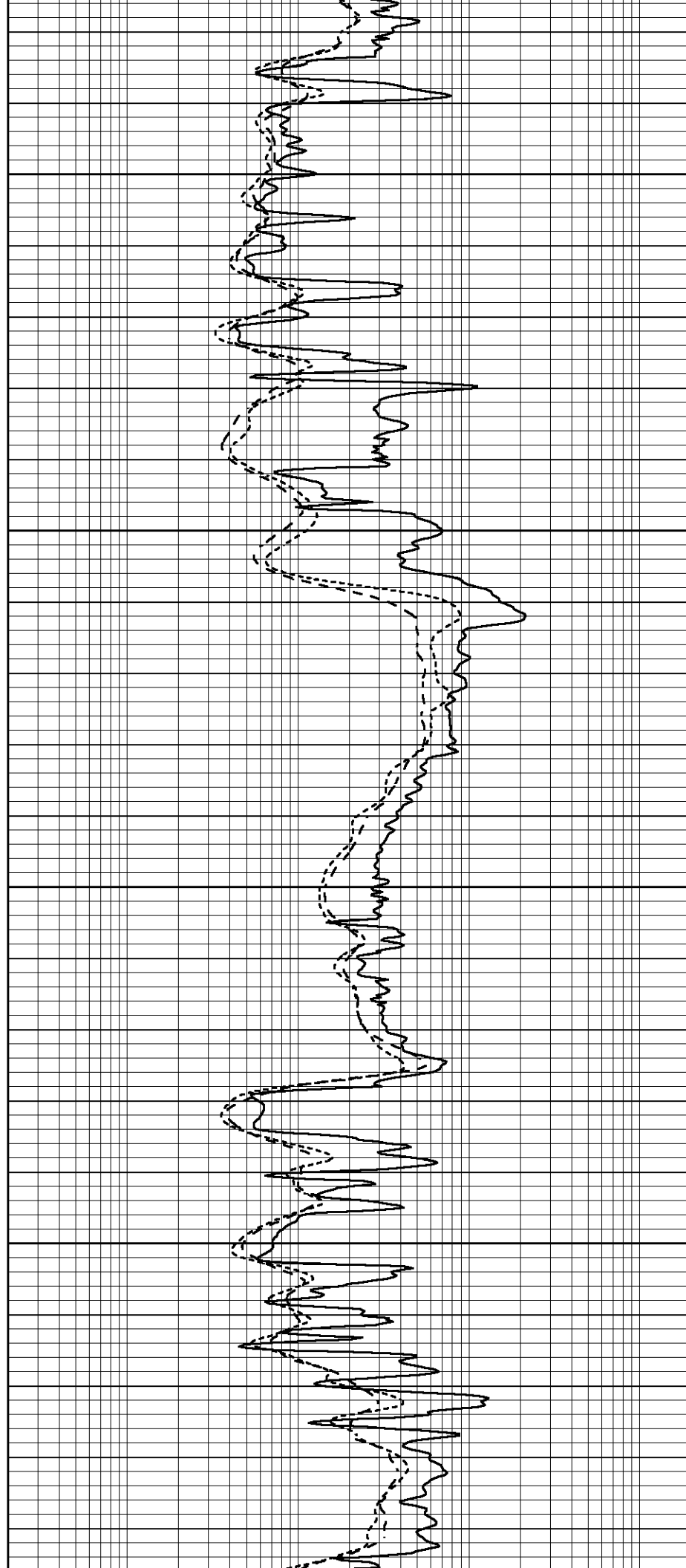


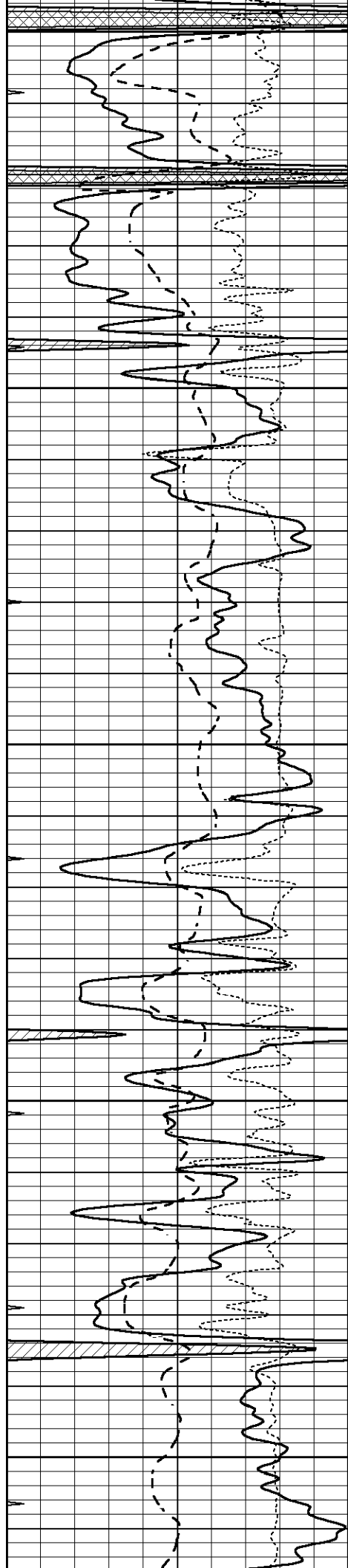
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1500

1550

1600





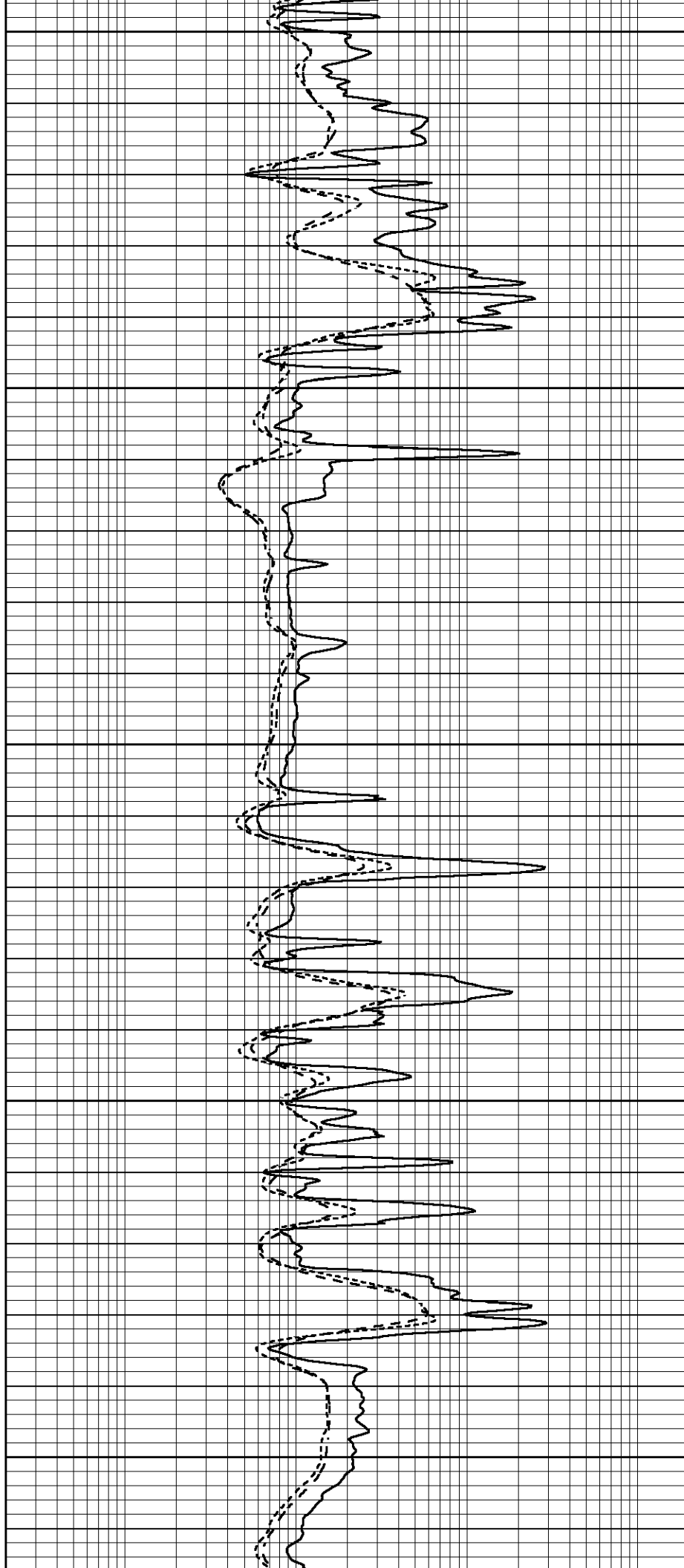
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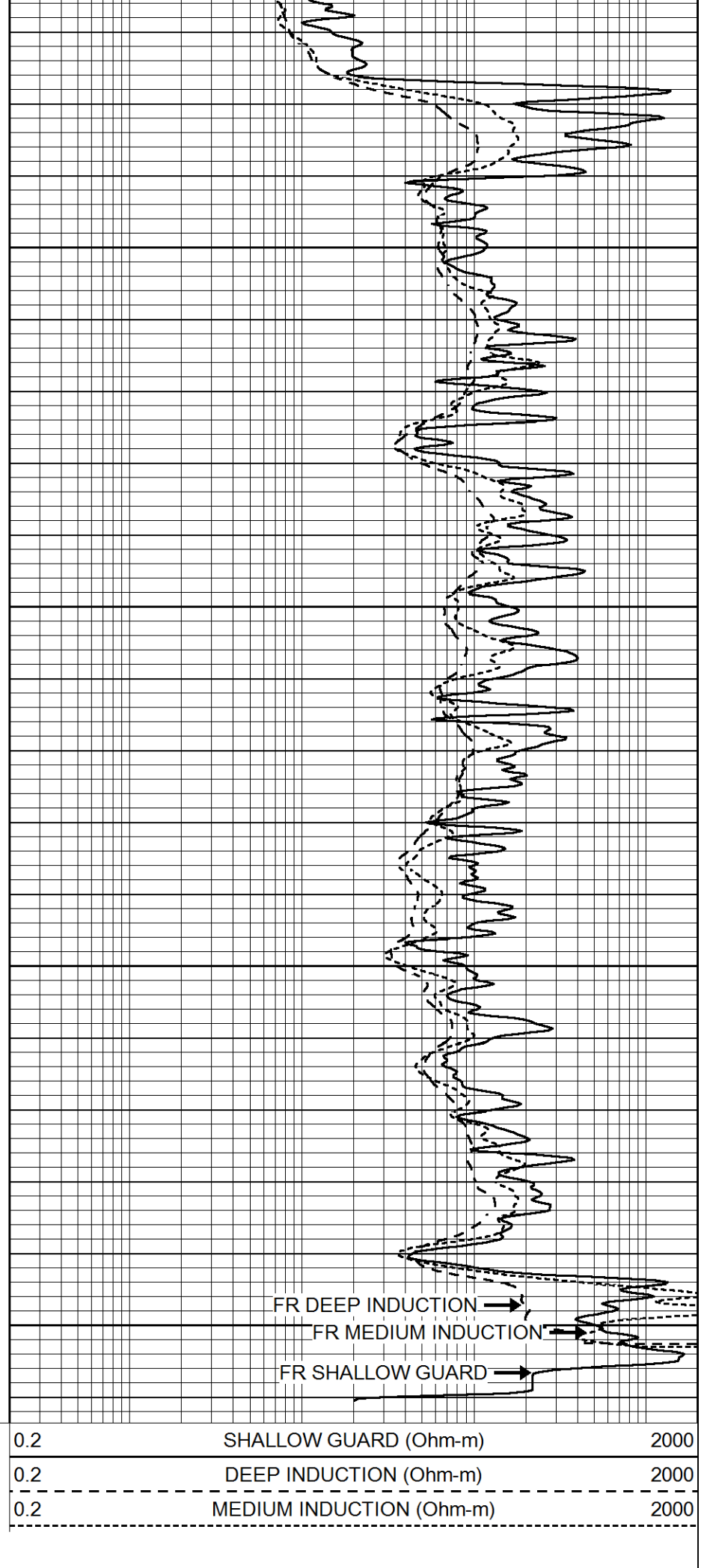
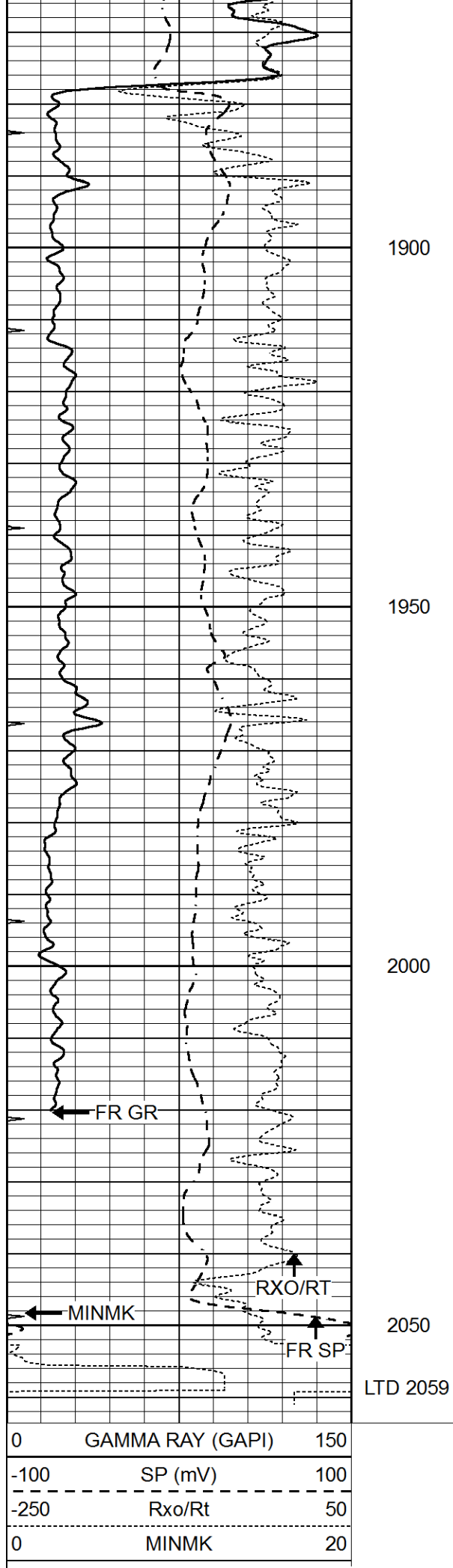
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1750

1800

1850





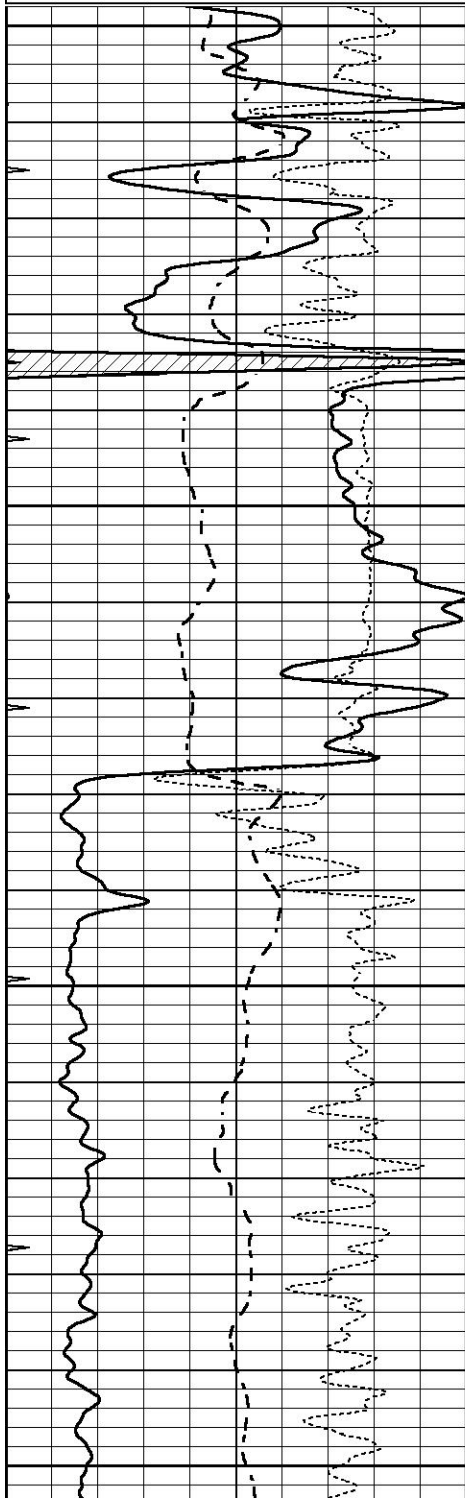


REPEAT SECTION

Database File 4813pe.db
Dataset Pathname pass2.6
Presentation Format _dil
Dataset Creation Tue Oct 20 19:40:52 2020
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

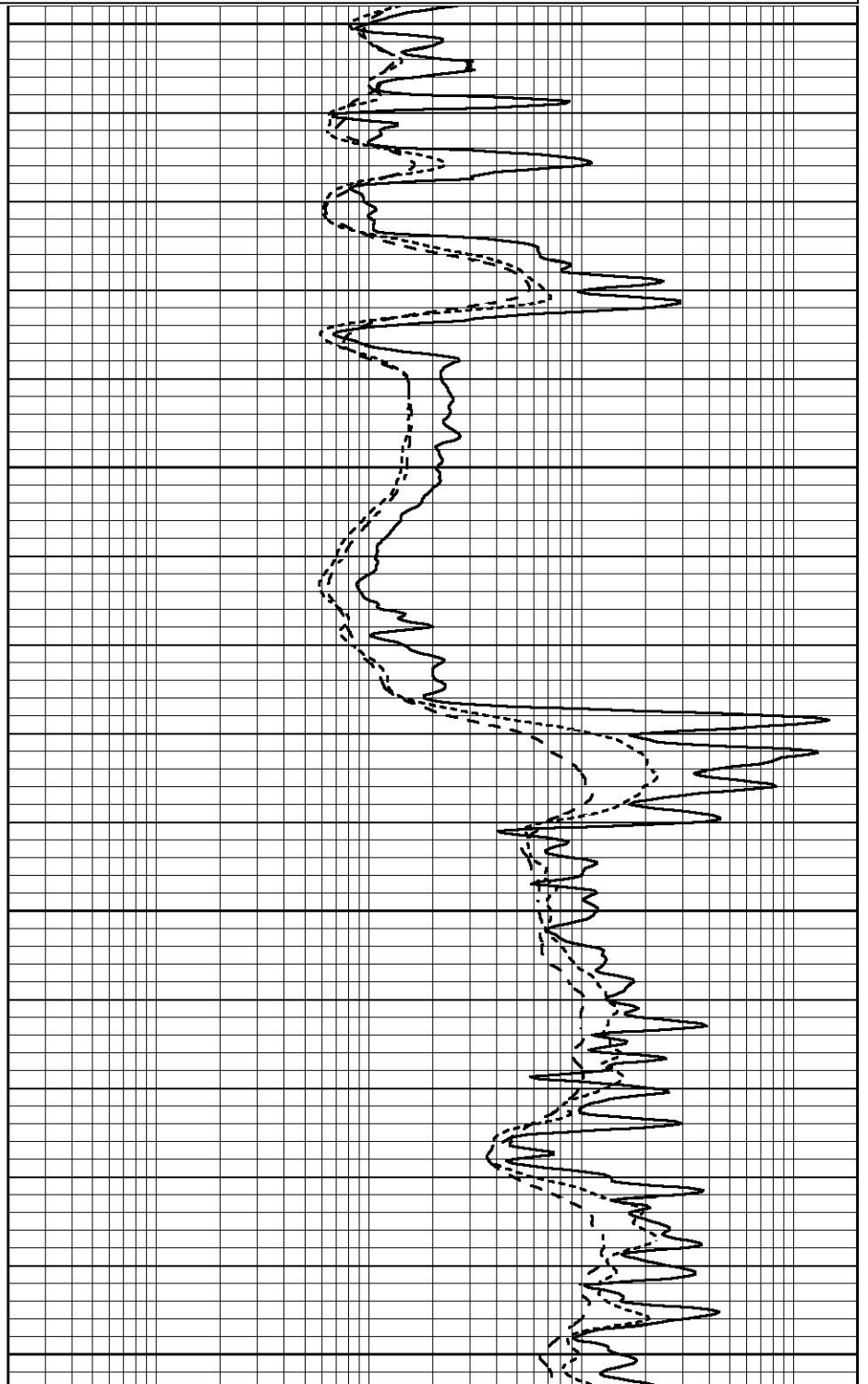


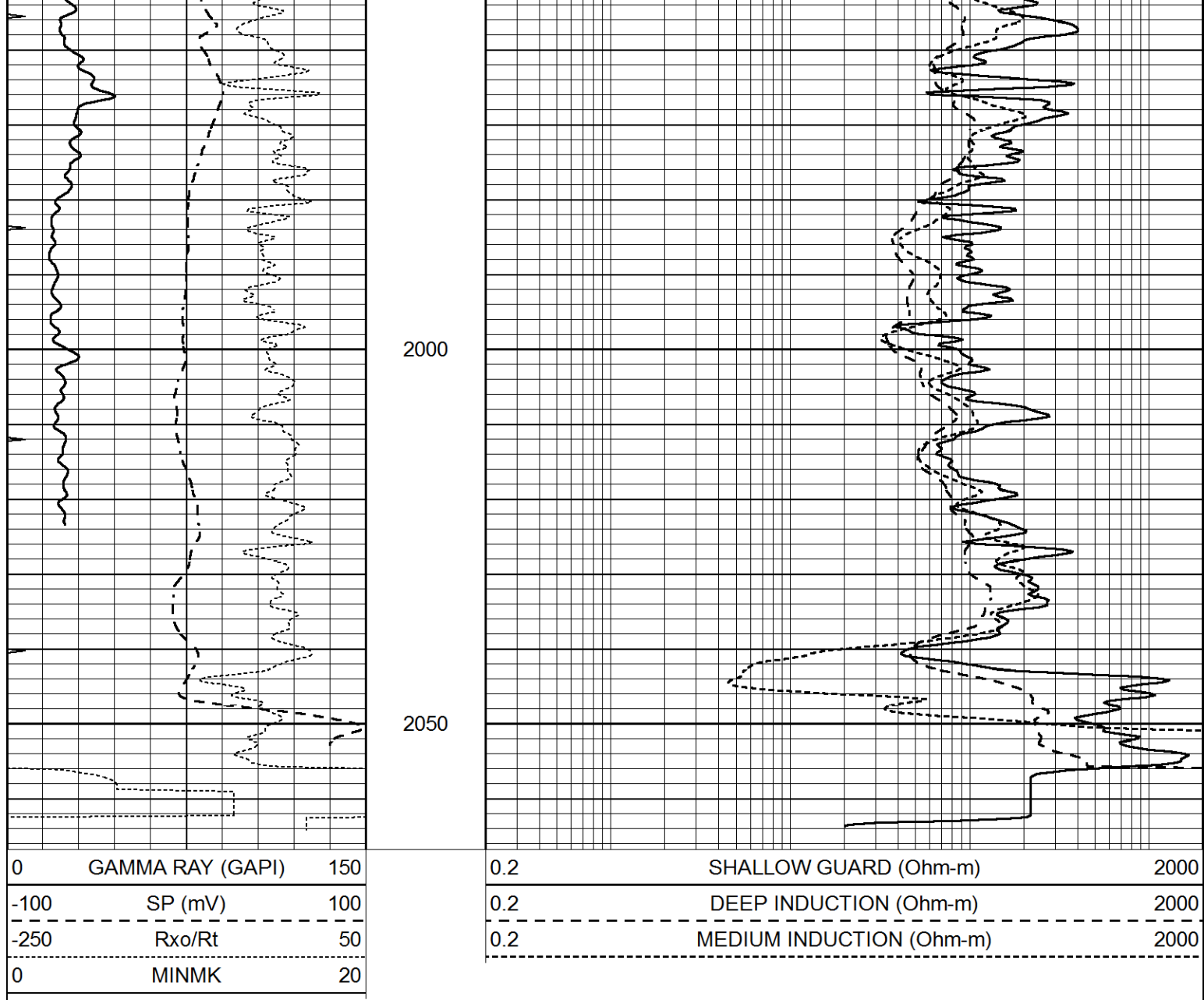
1800

1850

1900

1950





Calibration Report									
Database File	4813pe.db								
Dataset Pathname	pass3.7								
Dataset Creation	Tue Oct 20 19:06:00 2020								
Dual Induction Calibration Report									
Serial-Model:					PROBE7-DILG				
Surface Cal Performed:					Mon Oct 12 13:20:50 2020				
Downhole Cal Performed:					Thu Mar 12 11:45:10 2020				
After Survey Verification Performed:					Thu Mar 12 11:45:00 2020				
Surface Calibration									
Readings				References			Results		
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	2.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-50.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256	
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102	

Downhole Calibration			Readings				References		Results	
	Zero		Cal		Zero		Cal		m'	b'
Deep	0.000	0.000	mmho/m		14.508	388.384	mmho/m		1.000	0.000
Medium	0.000	0.000	mmho/m		166.367	504.400	mmho/m		1.000	0.000
LL3		7.500	V			1400.000	Ohm-m			
		0.000	V			20.000	Ohm-m			
		-7.200	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		1.000	Ohm-m			1.000	Ohm-m			
		0.000	Ohm-m			0.000	Ohm-m			
		0.000	mmho-m			4000.000	mmho-m			
Litho Density Calibration Report										
Serial: 003 Model: PRB										
Master Calibration			Performed Mon May 11 11:11:10 2020							
	Background		Magnesium		Aluminum		Aluminum+Fe			
Window 1	6088.4		14971.1		8028.3		7691.8		cps	
Window 2	5948.0		13017.2		7488.0		7264.1		cps	
Window 3	1282.1		5830.7		2242.8		2125.4		cps	
Window 4	365.4		367.2		362.0		364.6		cps	
Long Space	0.0		7069.2		1540.0		1316.1		cps	
Short Space	1.8		2869.4		1829.2		1548.1		cps	
Rho			1.7100		2.5900		0.0000		g/cc	
Pe			2.0000		2.7500		5.7900			
Rib Angle	: 43.5		Rib Slope	: 0.950	Density/Spine Ratio				: 0.554	
Spine Angle	: 73.5		Spine Slope	: 3.385	Spine Intercept				: -18.1	
Before Survey Verification			Performed Wed Dec 31 18:00:00 1969							
Window 1	0.0		0.0		0.0		0.0		cps	
Window 2	0.0		0.0		0.0		0.0		cps	
Window 3	0.0		0.0		0.0		0.0		cps	
Window 4	0.0		0.0		0.0		0.0		cps	
Long Space	0.0		0.0		0.0		0.0		cps	
Short Space	0.0		0.0		0.0		0.0		cps	
Measured Rho			0.0000		0.0000		0.0000		g/cc	
Measured Correction			0.0000		0.0000		0.0000		g/cc	
Measured Pe					0.0000		0.0000			
After Survey Verification			Performed Wed Dec 31 18:00:00 1969							
Window 1	0.0		0.0		0.0		0.0		cps	
Window 2	0.0		0.0		0.0		0.0		cps	
Window 3	0.0		0.0		0.0		0.0		cps	
Window 4	0.0		0.0		0.0		0.0		cps	
Long Space	0.0		0.0		0.0		0.0		cps	
Short Space	0.0		0.0		0.0		0.0		cps	
Measured Rho			0.0000		0.0000		0.0000		g/cc	

Measured Correction	0.0000	0.0000	0.0000	g/cc
Measured Pe		0.0000	0.0000	
Compensated Neutron Calibration Report				
Serial Number:		070808PMC		
Tool Model:		NABORS		
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:	070558			
Tool Model:	OPEN_GR			
Performed:	Wed Jul 03 10:25:53 2019			
Calibrator Value:	1.0	GAPI		
Background Reading:	0.0	cps		
Calibrator Reading:	1.0	cps		
Sensitivity:	0.3000	GAPI/cps		