



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company		MAI OIL OPERATIONS, INC.	
Well		MIGHELL - WEEKS TRUST UNIT #1	
Field		TRAPP	
County		RUSSELL	
State		KANSAS	
Location:		API # : 15-167-24000-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		Elevation 1852	
Drilling Measured From		KELLY BUSHING 8' A.G.L.	
SEC 18 TWP 15S RGE 13W		Other Services CDL/CNL MEL	
Elevation		K.B. 1860 D.F. 1858 G.L. 1852	
Date	9/16/14		
Run Number	ONE		
Depth Driller	3375		
Depth Logger	3371		
Bottom Logged Interval	3369		
Top Log Interval	00		
Casing Driller	8 5/8"@514'		
Casing Logger	516		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.3/48		
pH / Fluid Loss	10.5/9.2		
Source of Sample	FLOWLINE	CHLORIDES 5,800 PPM	
Rim @ Meas. Temp	.750@80F		
Rmf @ Meas. Temp	.563@80F		
Rmc @ Meas. Temp	.900@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.545@110F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	9:00 P.M.		
Maximum Recorded Temperature	110F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	WYATT URBAN		

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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" HAYS, KANSAS (785) 628-6395
DIRECTIONS

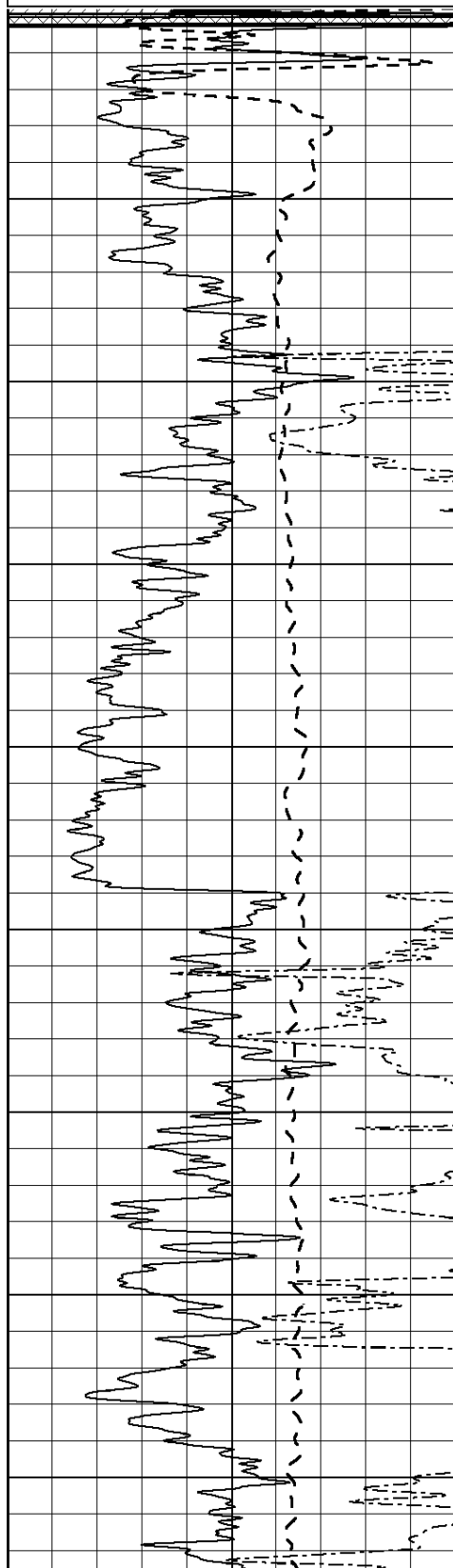
RUSSELL, KS. & I-70, 10S. TO "WINTERSET RD."(BURNED DOWN SCHOOL), 3E. TO "188TH RD.", 1/2N.,
1/2 W. INTO @TANK BATTERY

Database File: 25881ddn.db
 Dataset Pathname: pass3.5
 Presentation Format: dil2
 Dataset Creation: Tue Sep 16 22:11:31 2014
 Charted by: Depth in Feet scaled 1:600

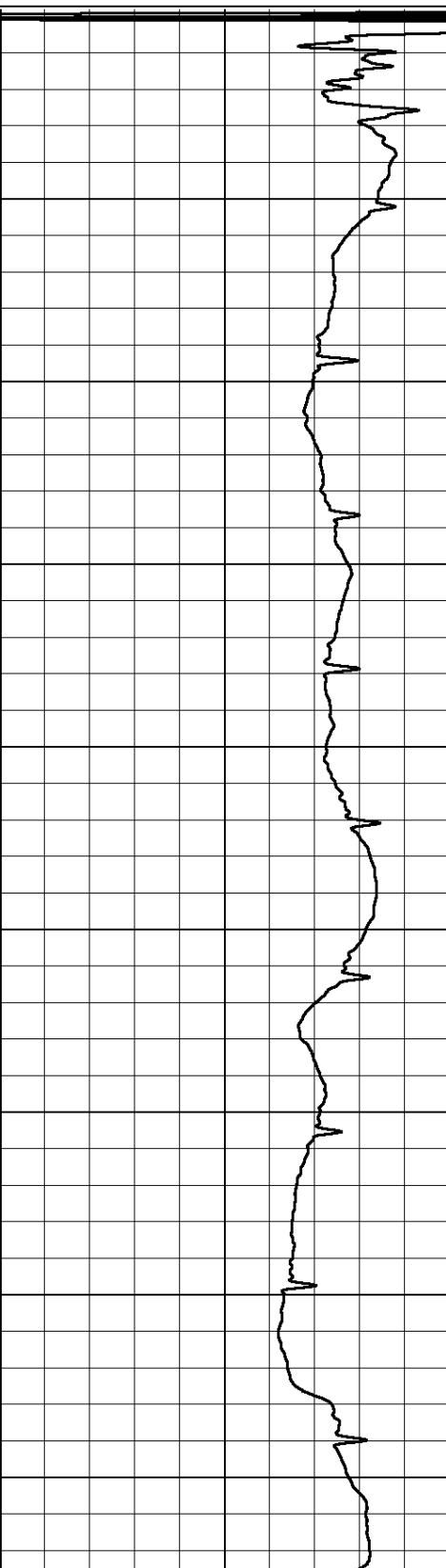
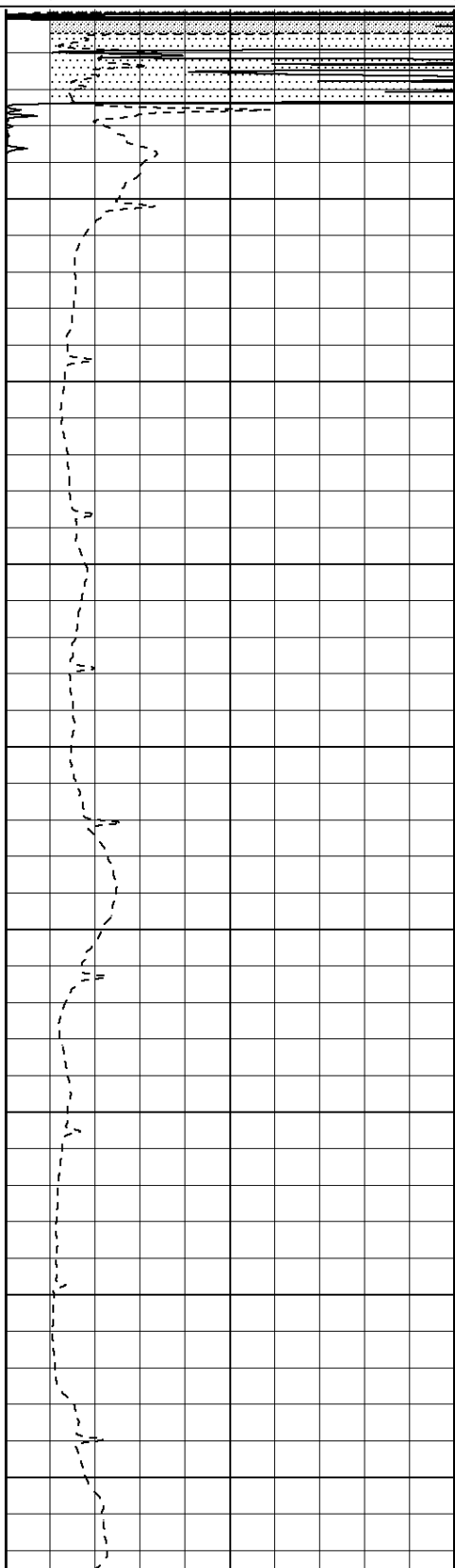
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

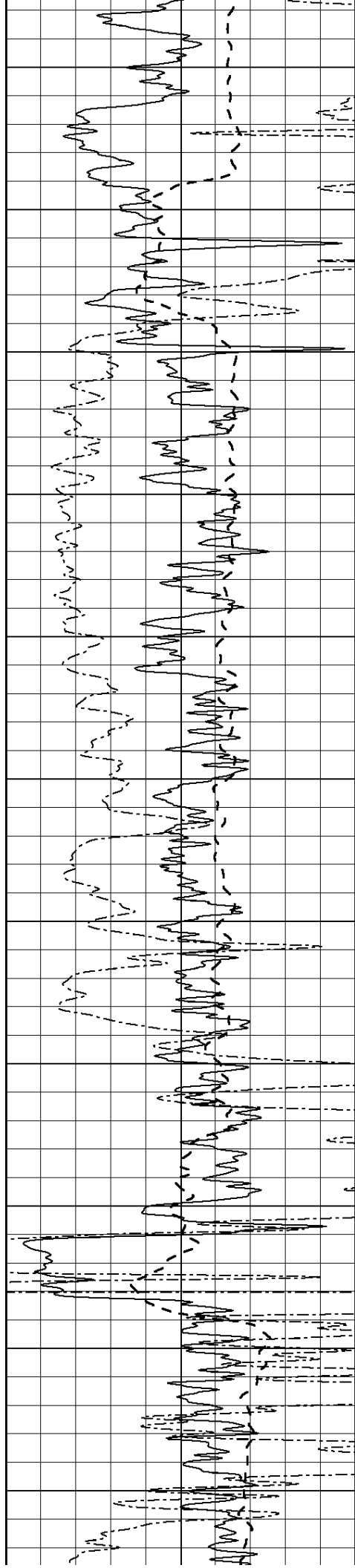
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0

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

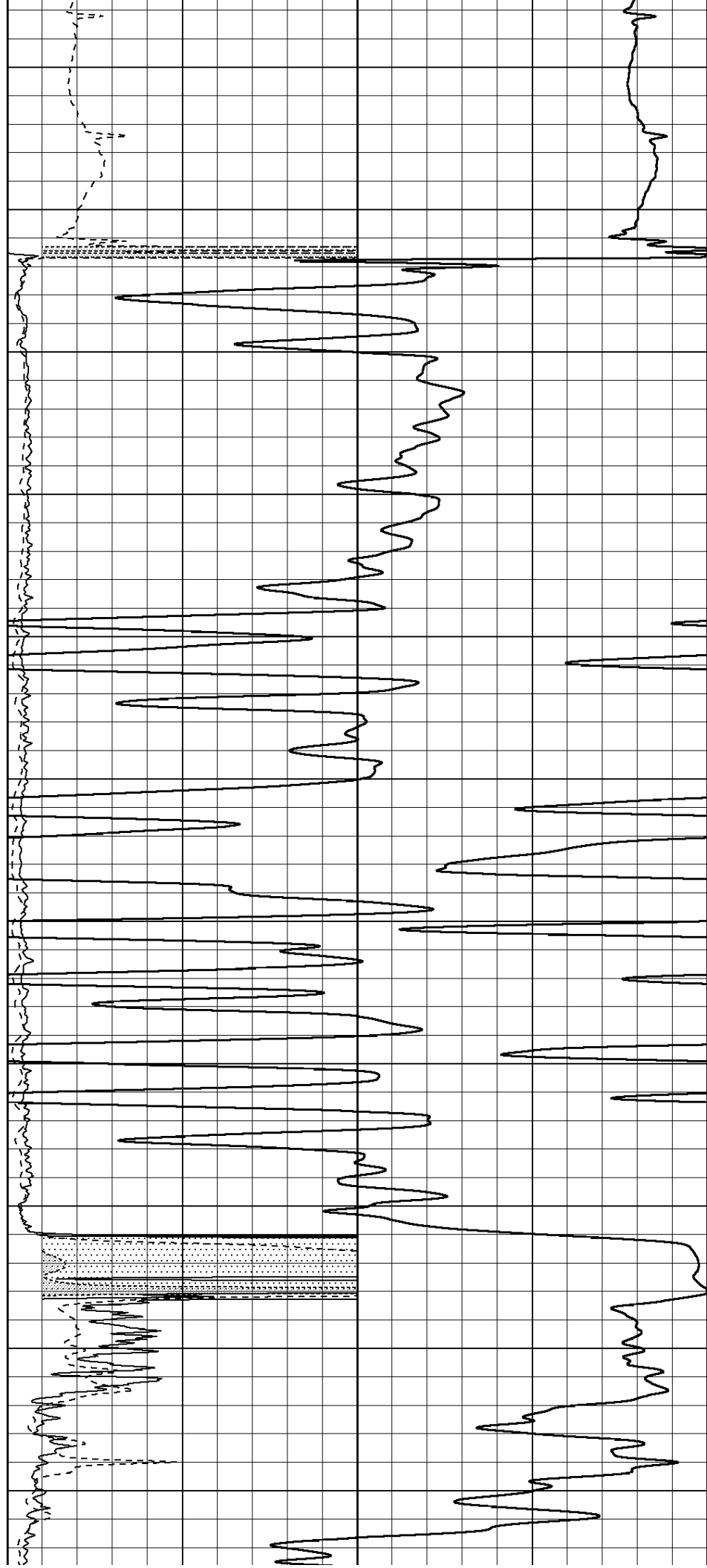
750

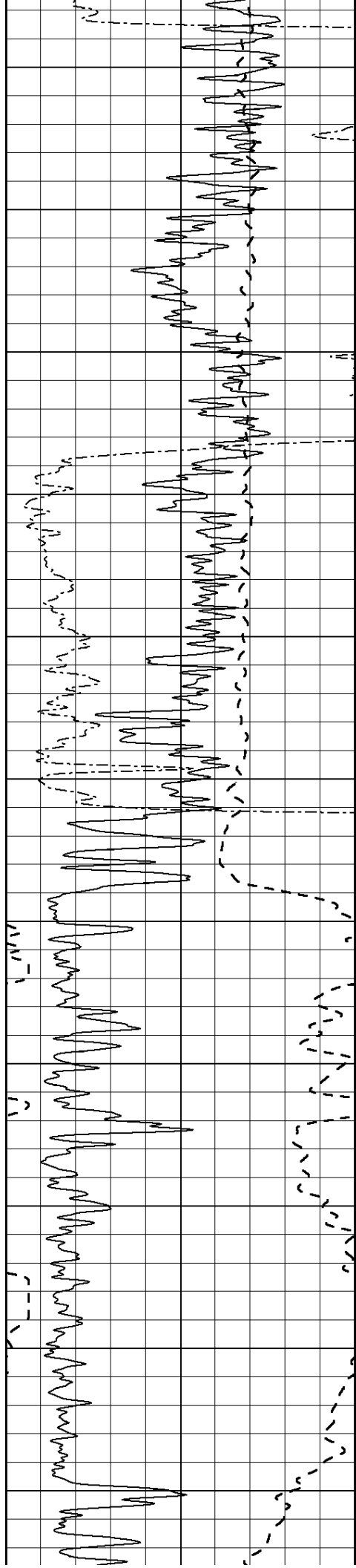
800

850

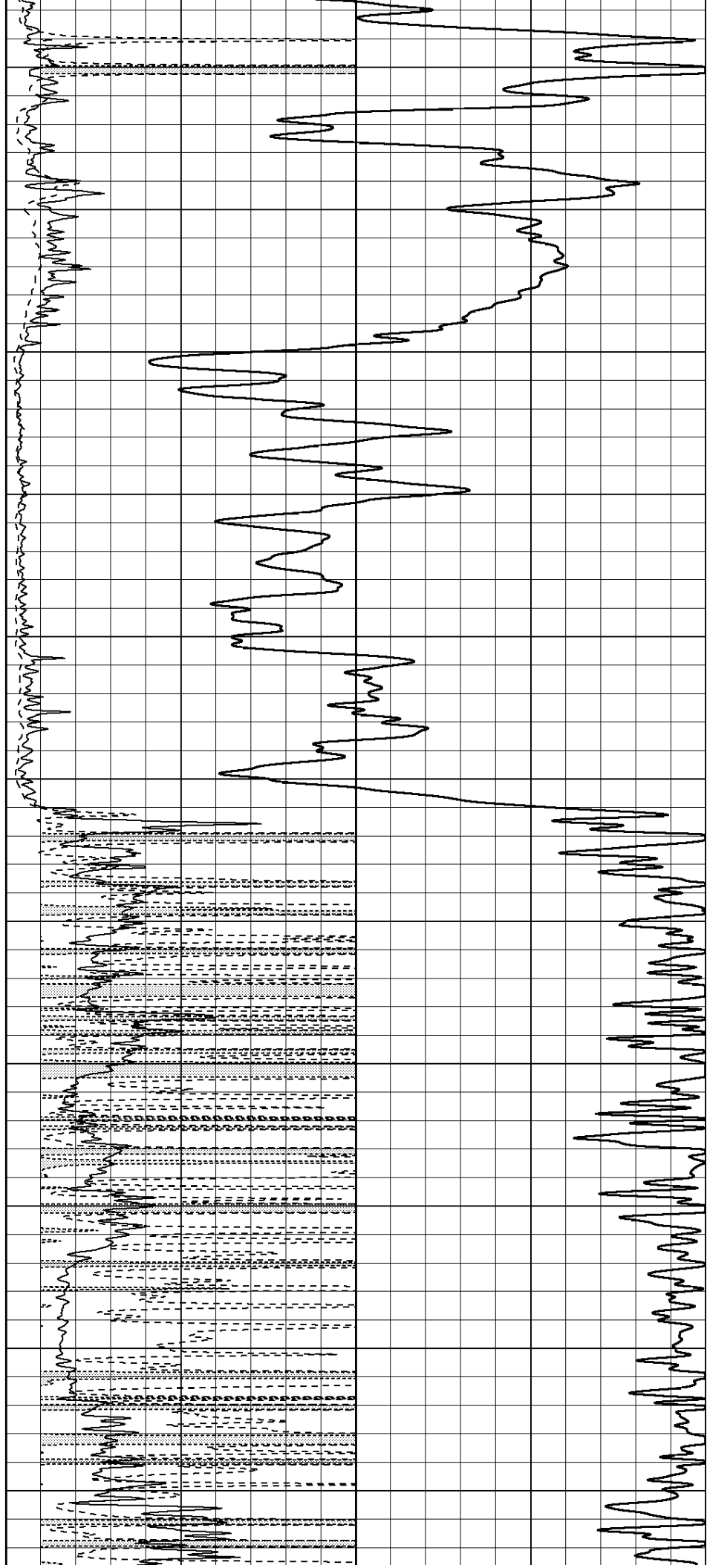
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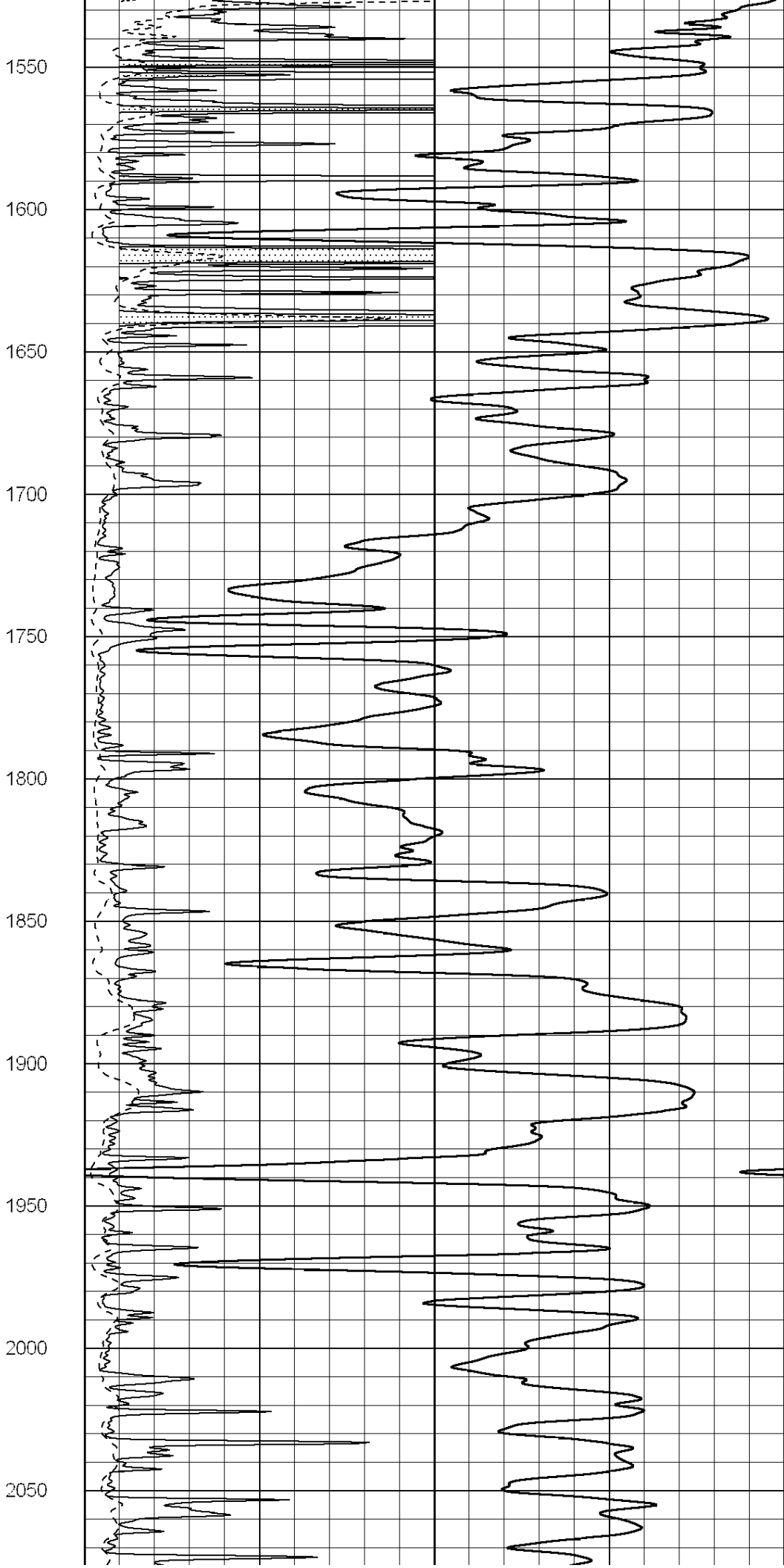
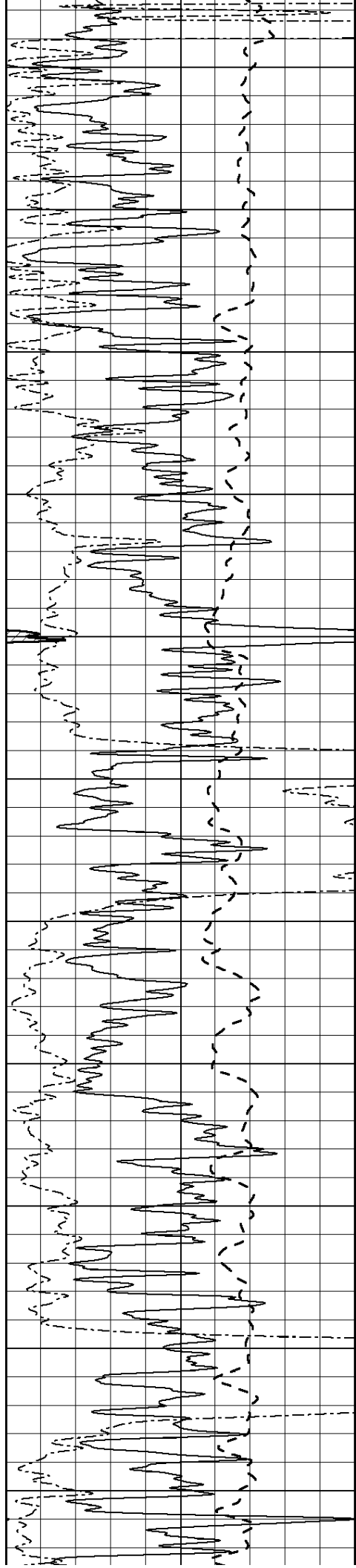
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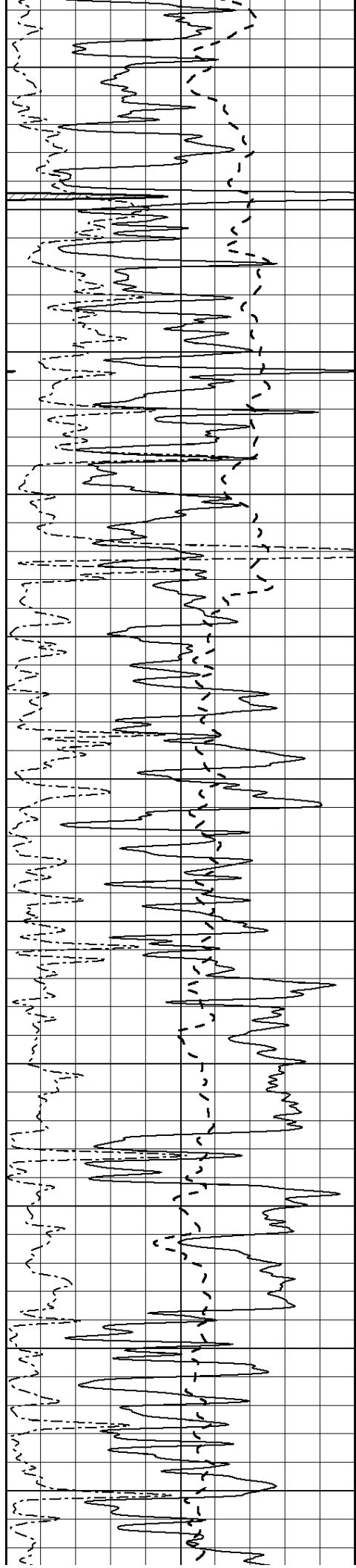




1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500







2100

2150

2200

2250

2300

2350

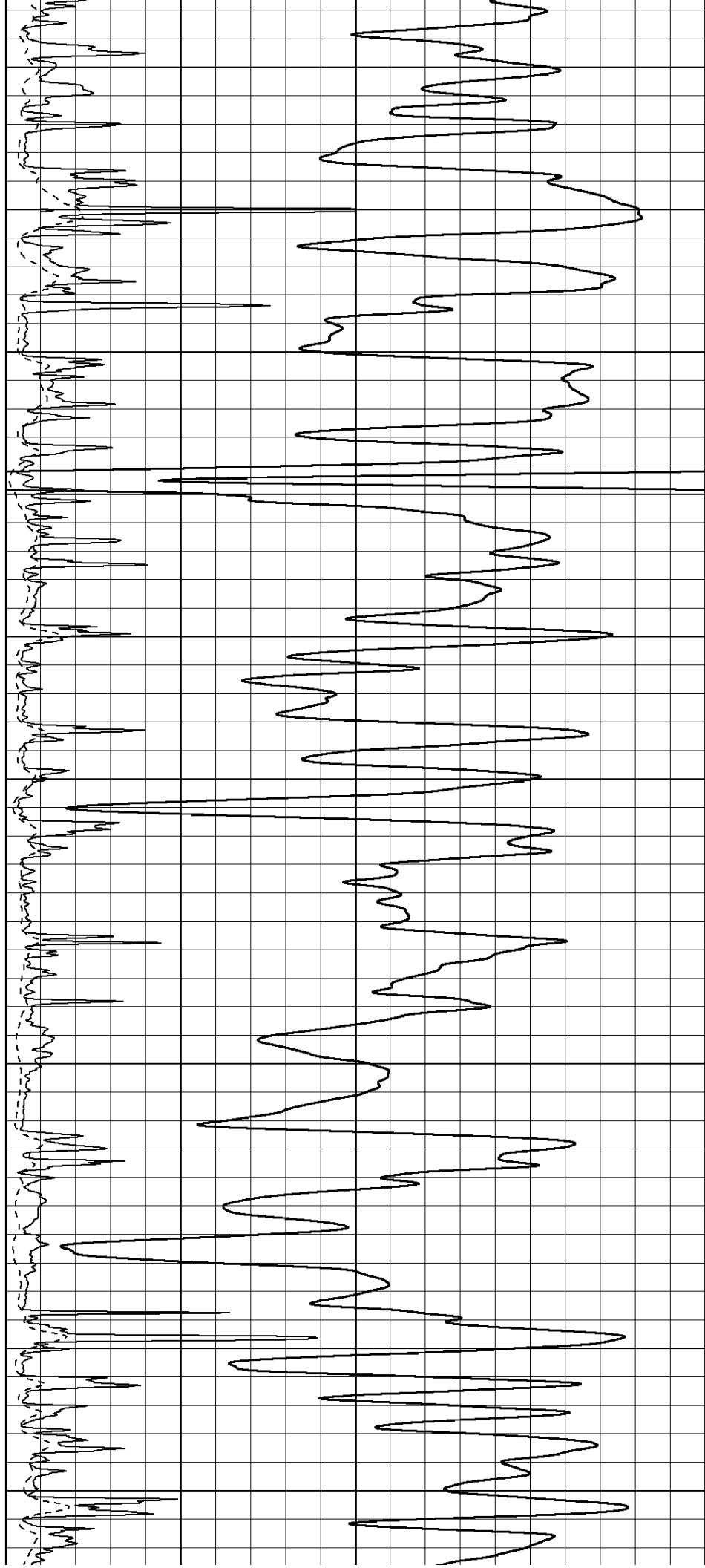
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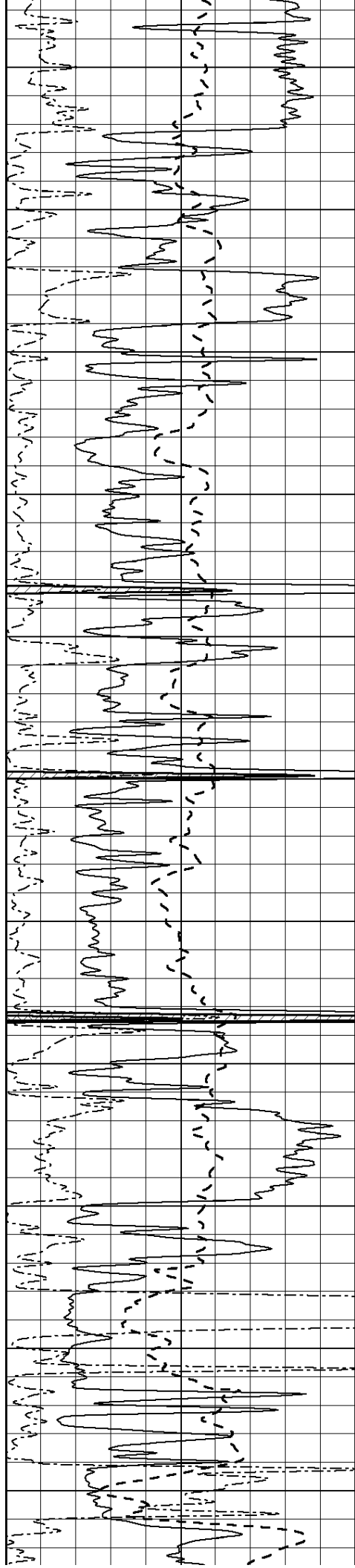
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

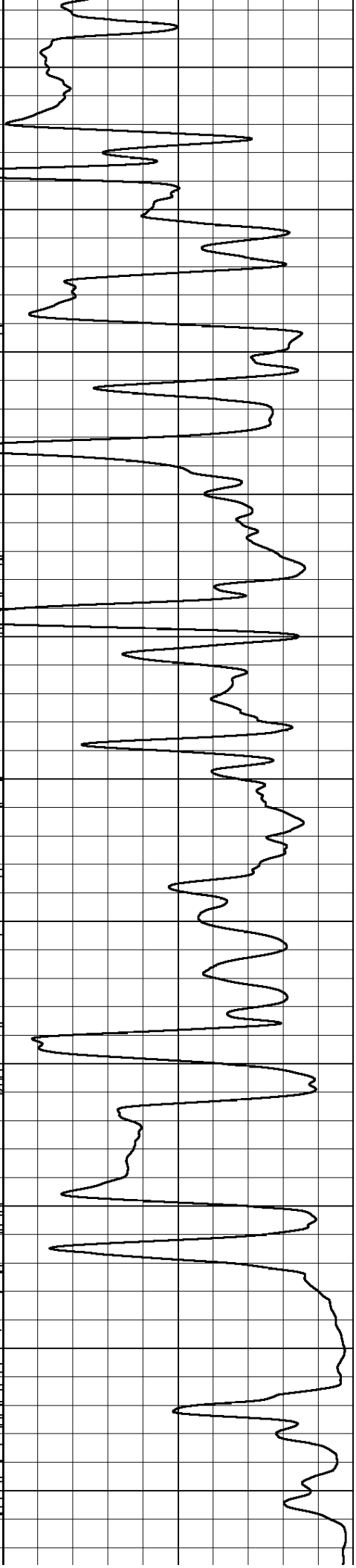
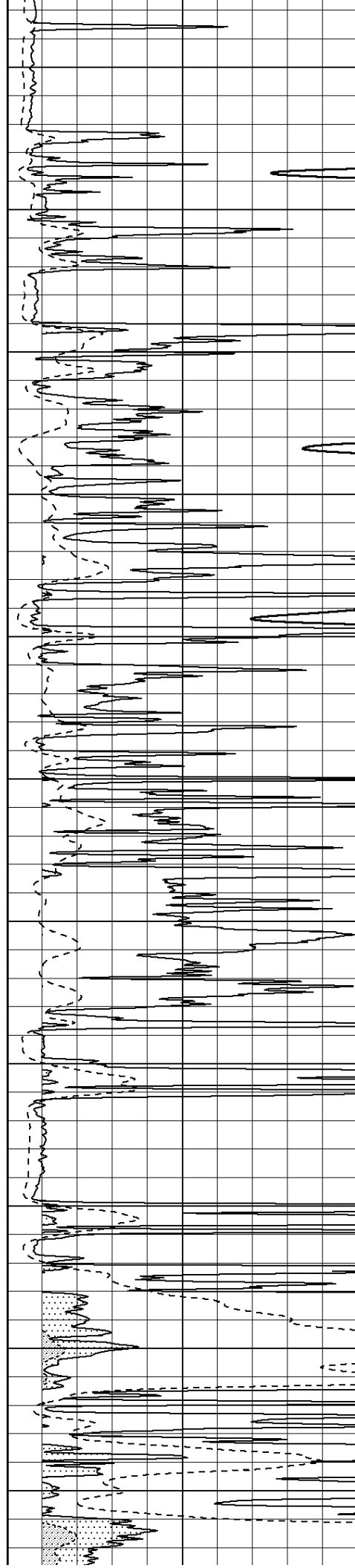
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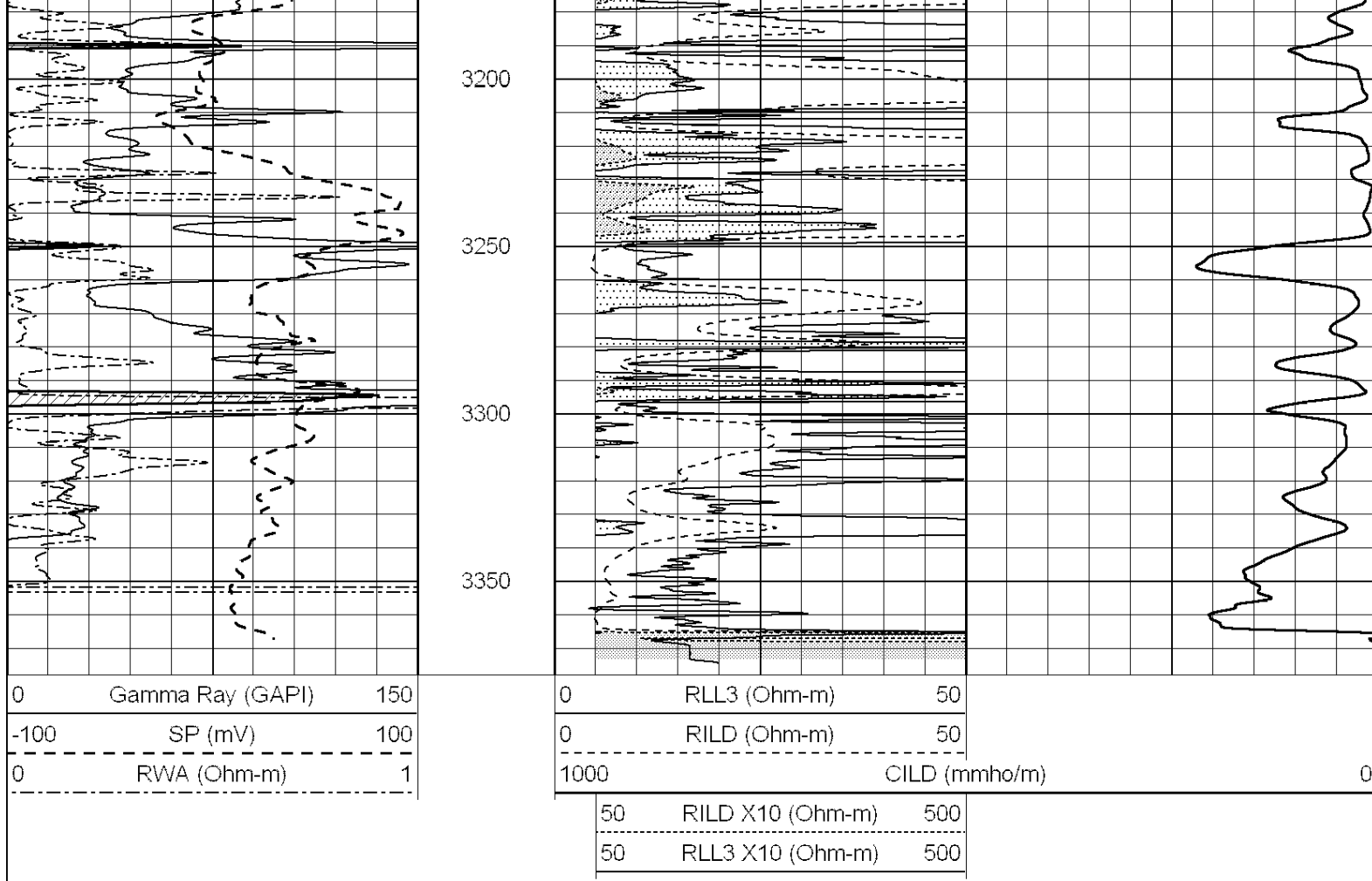
3000

3050

3100

3150



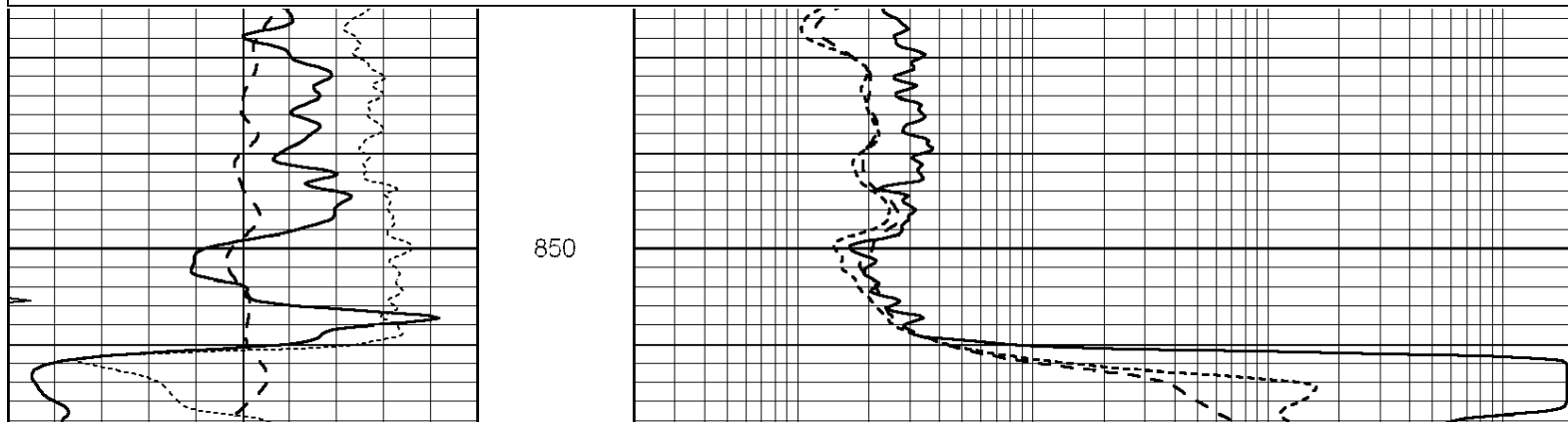


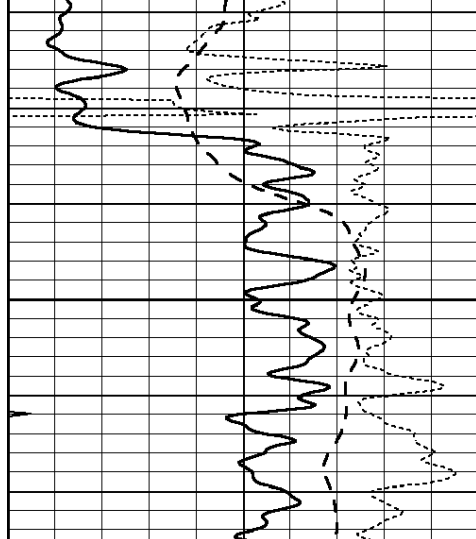
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ANHYDRITE

Database File: 25881ddn.db
 Dataset Pathname: pass3.6
 Presentation Format: _dil
 Dataset Creation: Tue Sep 16 22:11:45 2014
 Charted by: Depth in Feet scaled 1:240

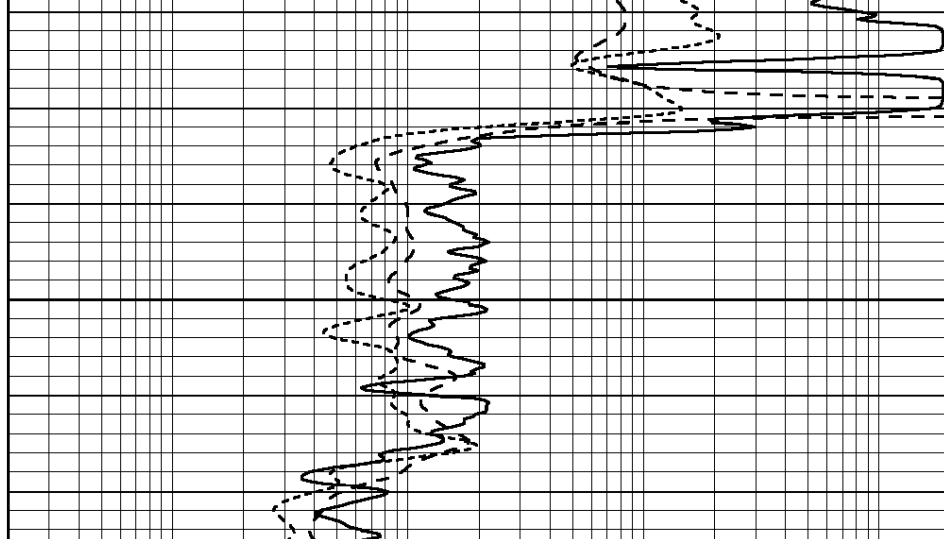
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





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

900



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

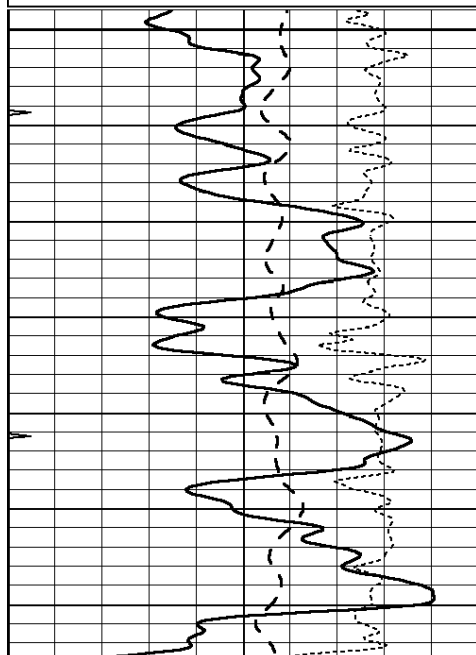


MAIN SECTION

Database File: 25881ddn.db
 Dataset Pathname: pass3.5
 Presentation Format: _dil
 Dataset Creation: Tue Sep 16 22:11:31 2014
 Charted by: Depth in Feet scaled 1:240

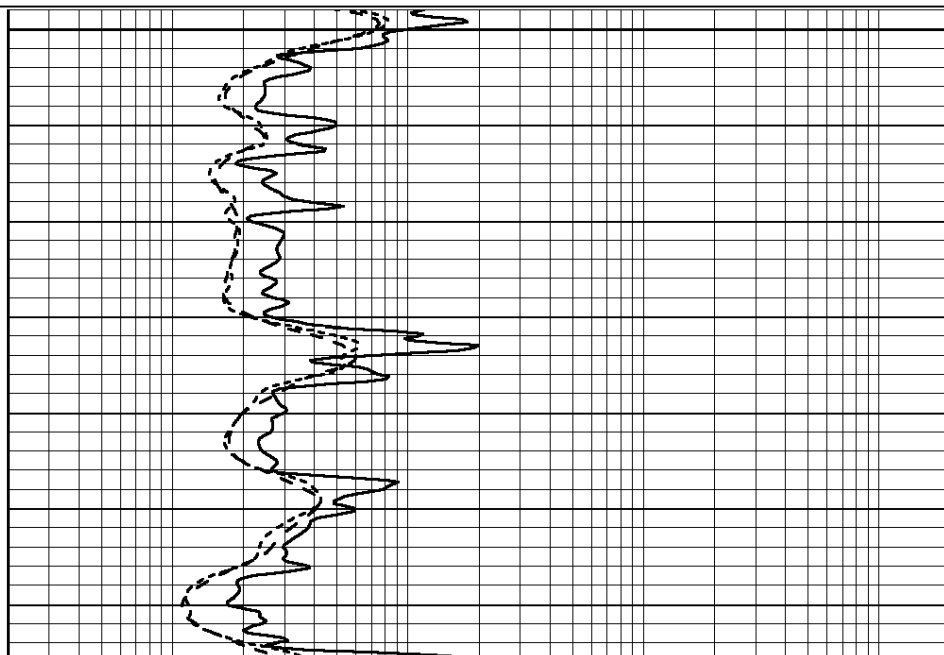
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

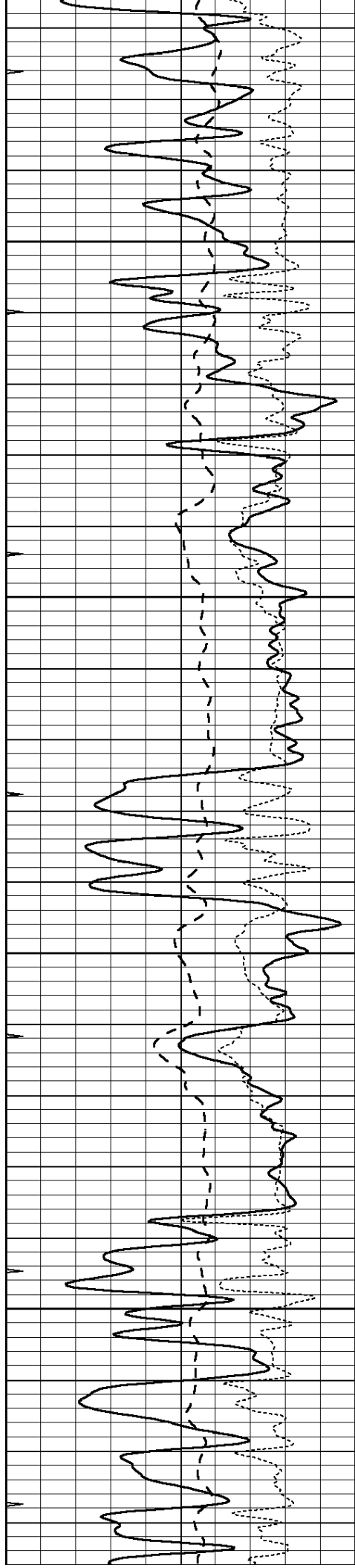
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



2300

2350



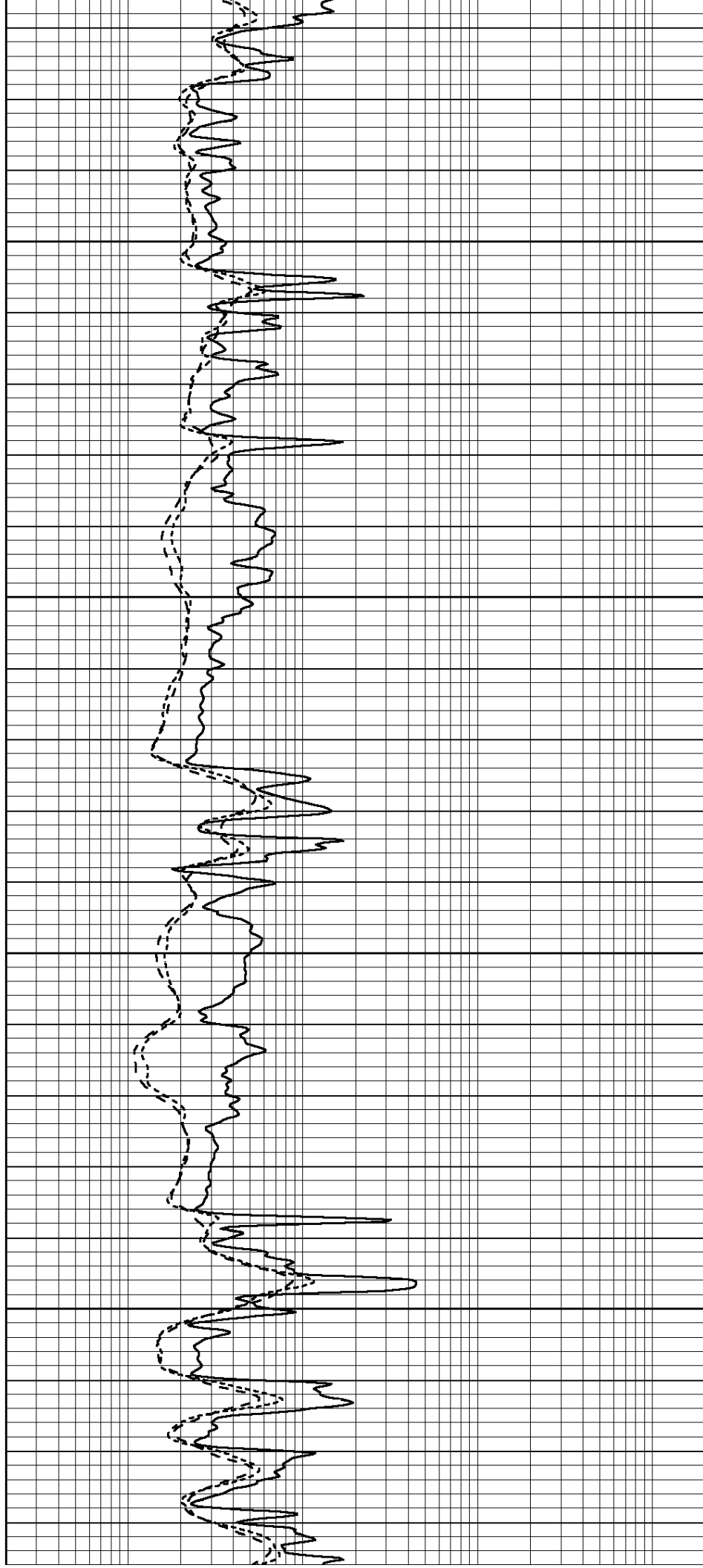


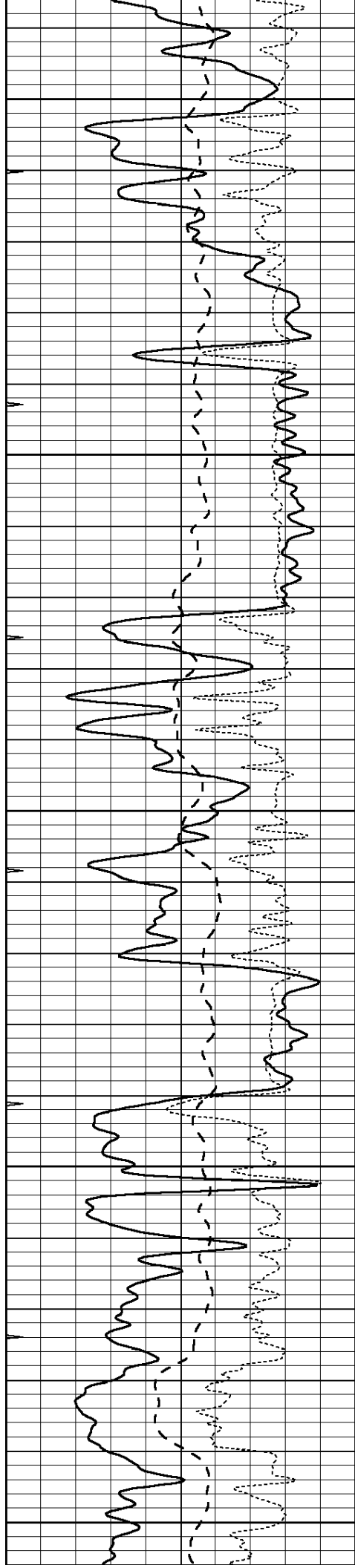
2400

2450

2500

2550





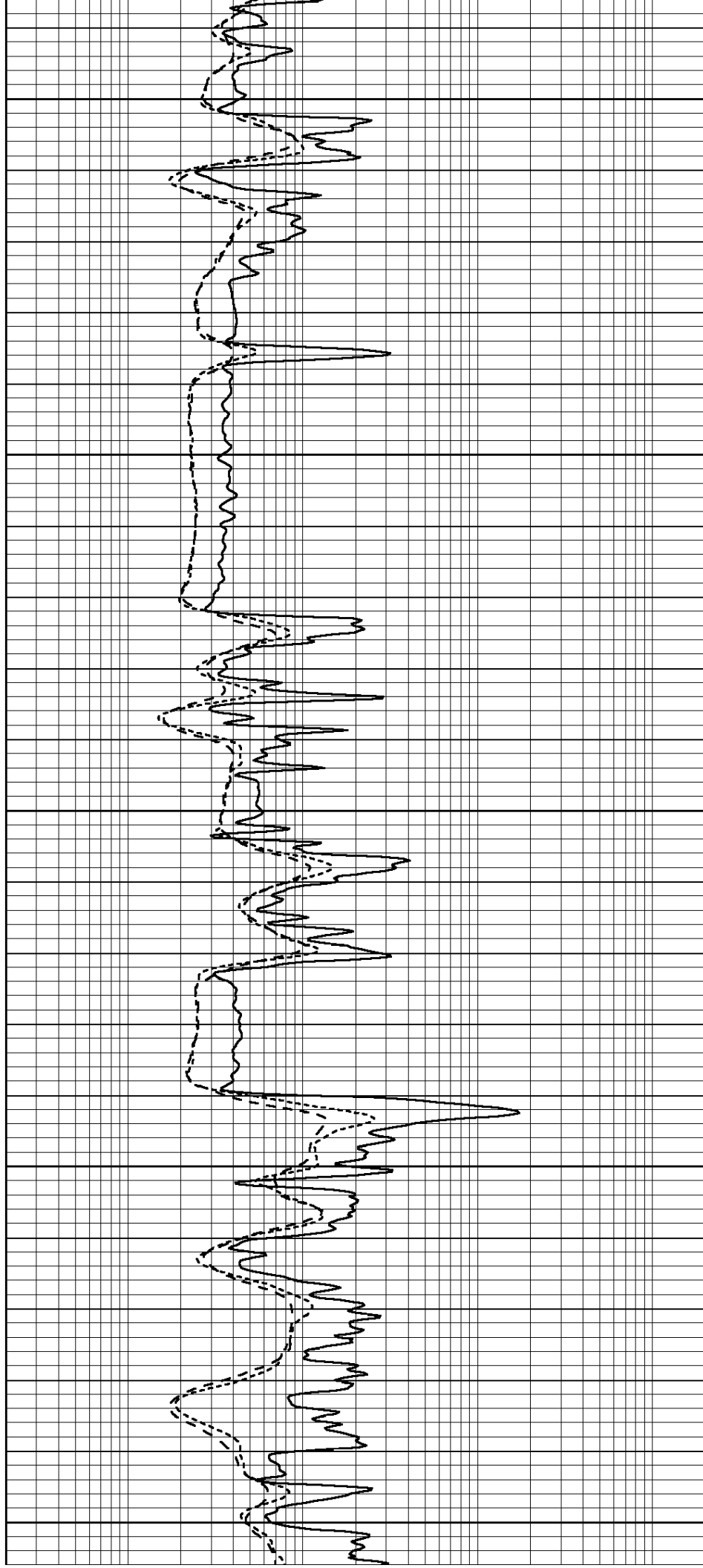
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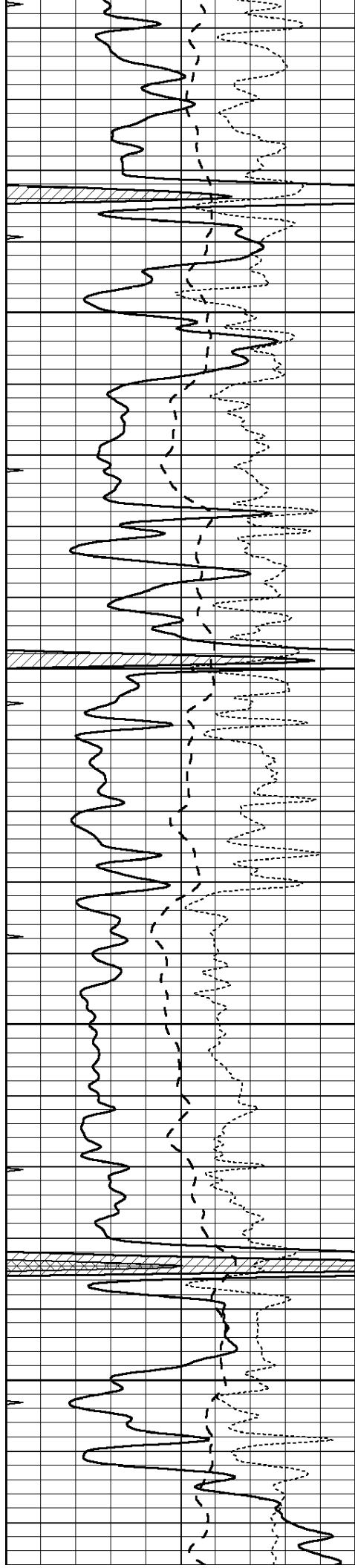
2650

2700

2750

2800



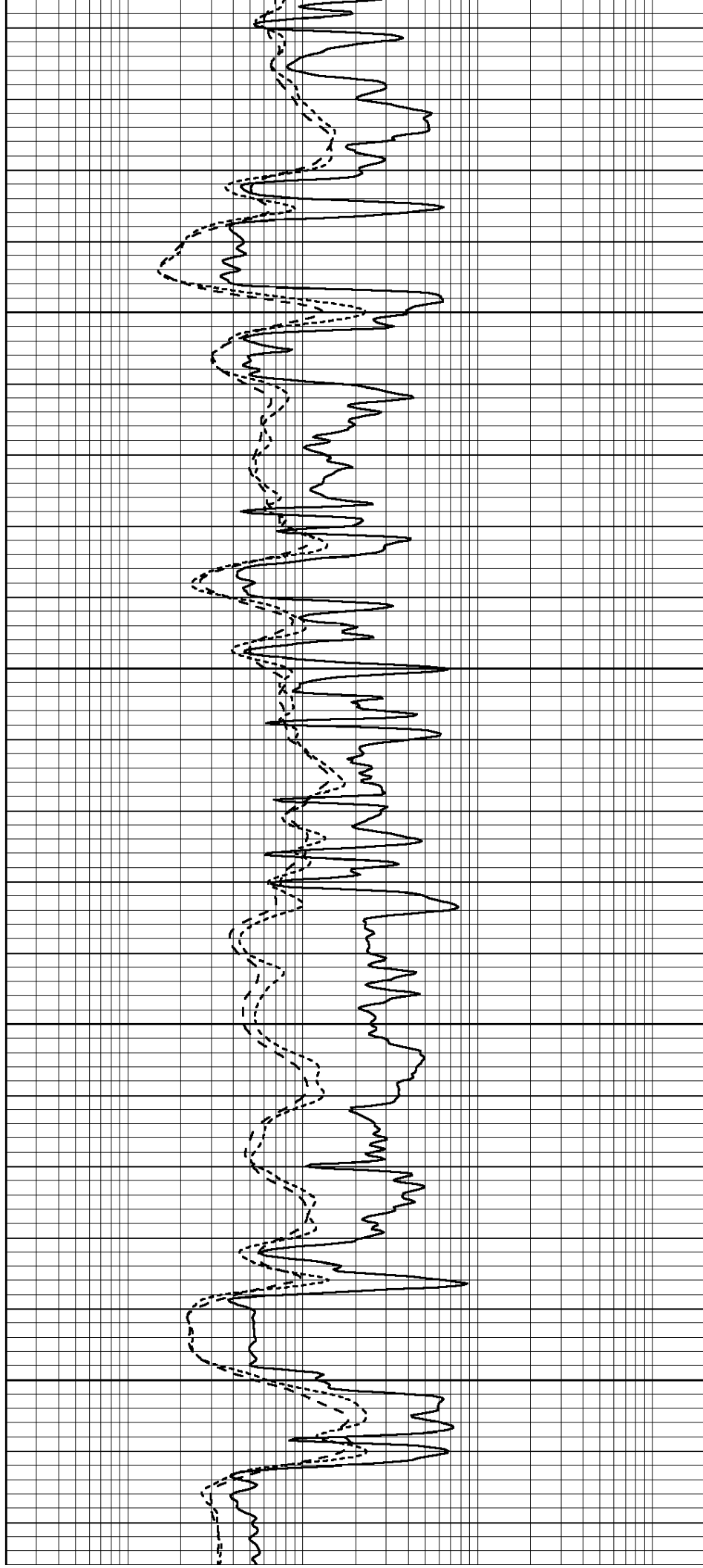


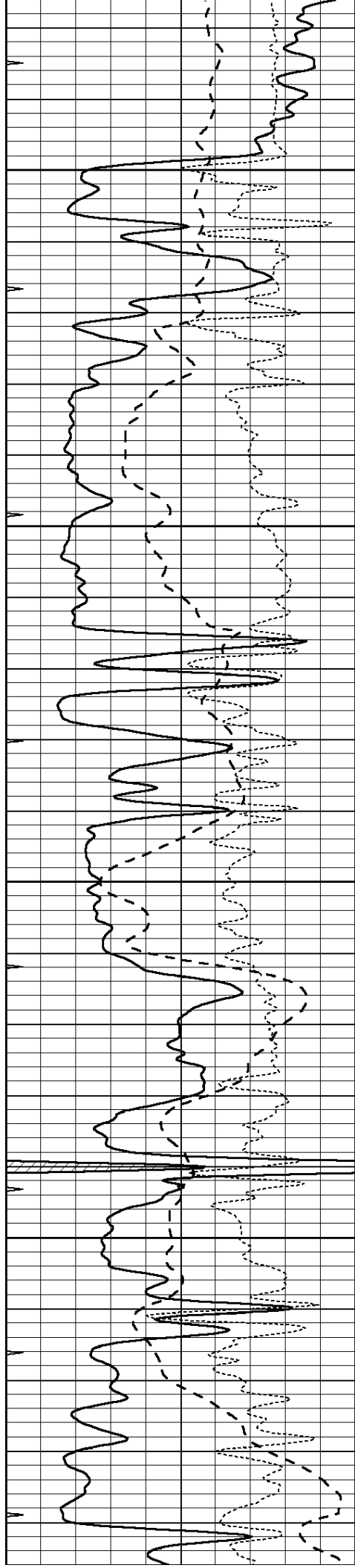
2850

2900

2950

3000



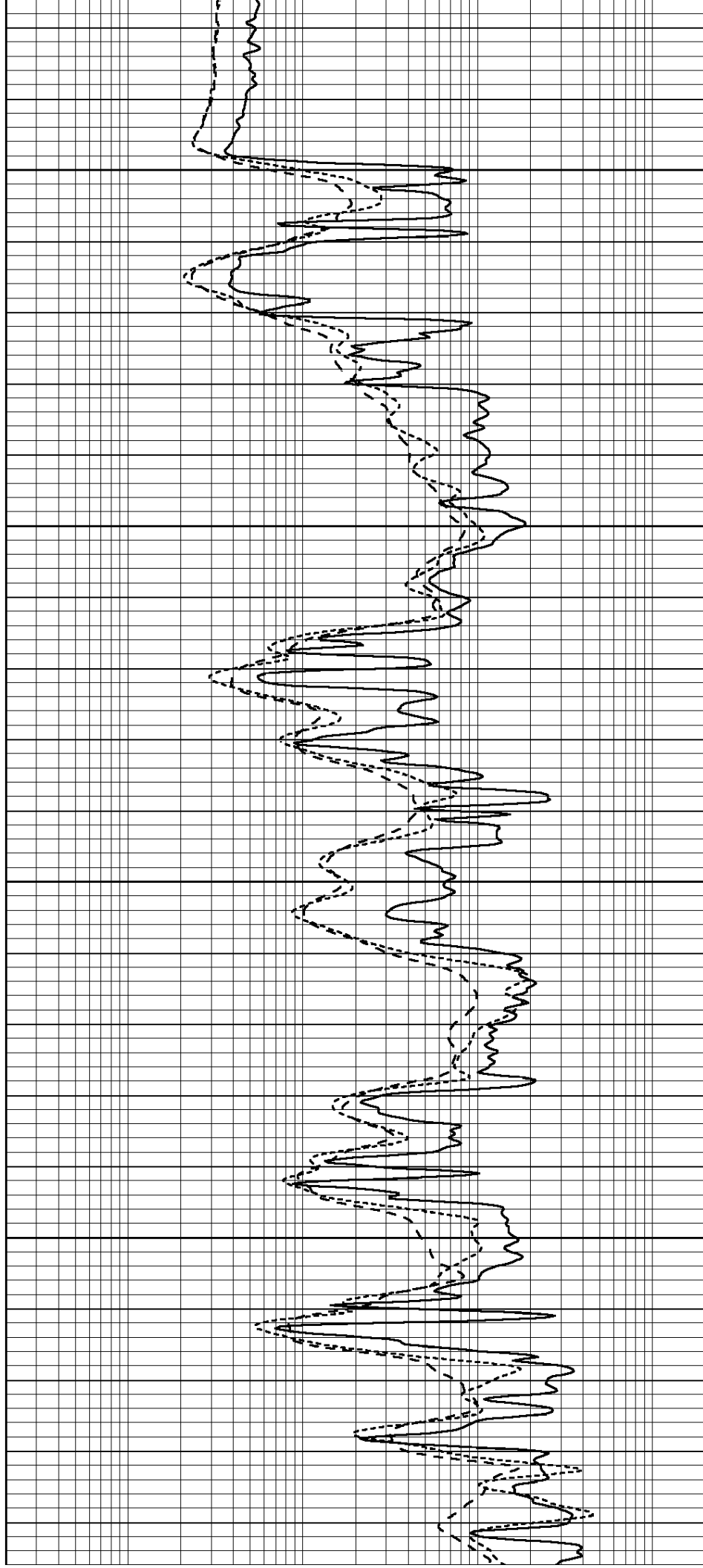


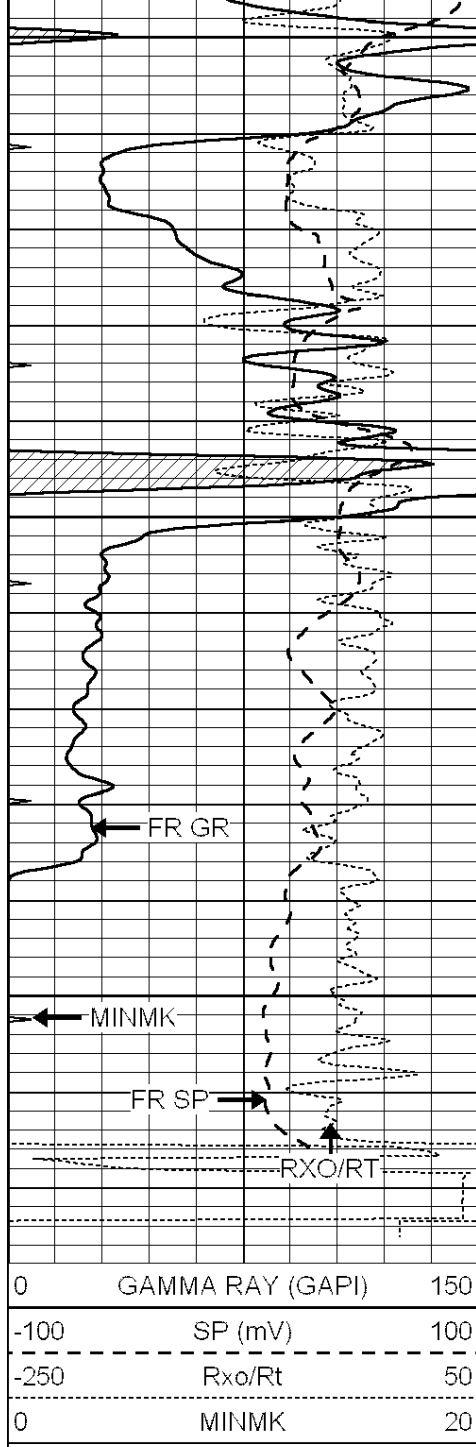
3050

3100

3150

3200



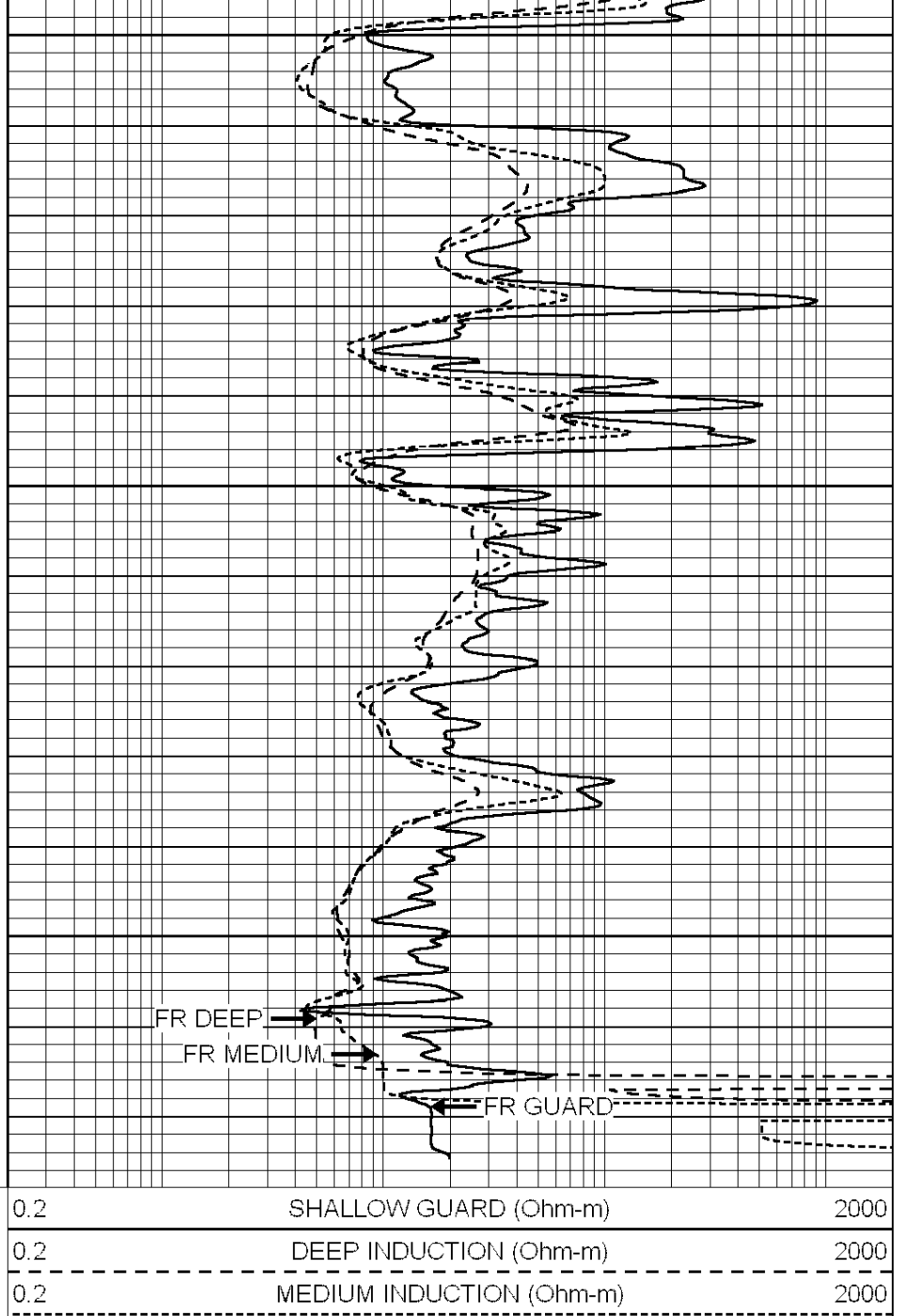


3250

3300

3350

LTD 3371



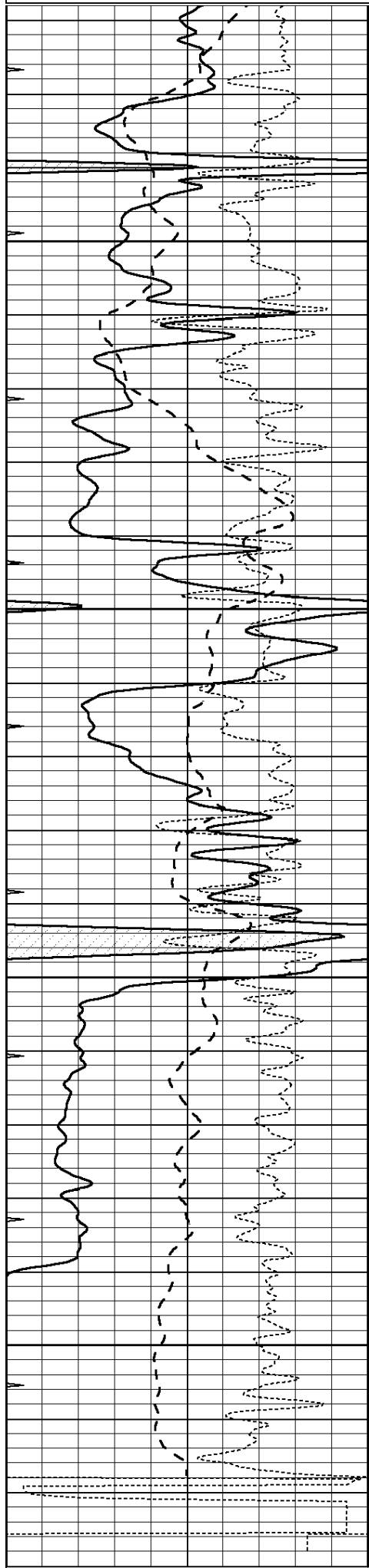
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REPEAT SECTION

Database File: 25881ddn.db
Dataset Pathname: pass2.8
Presentation Format: _dil
Dataset Creation: Tue Sep 16 21:17:21 2014
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

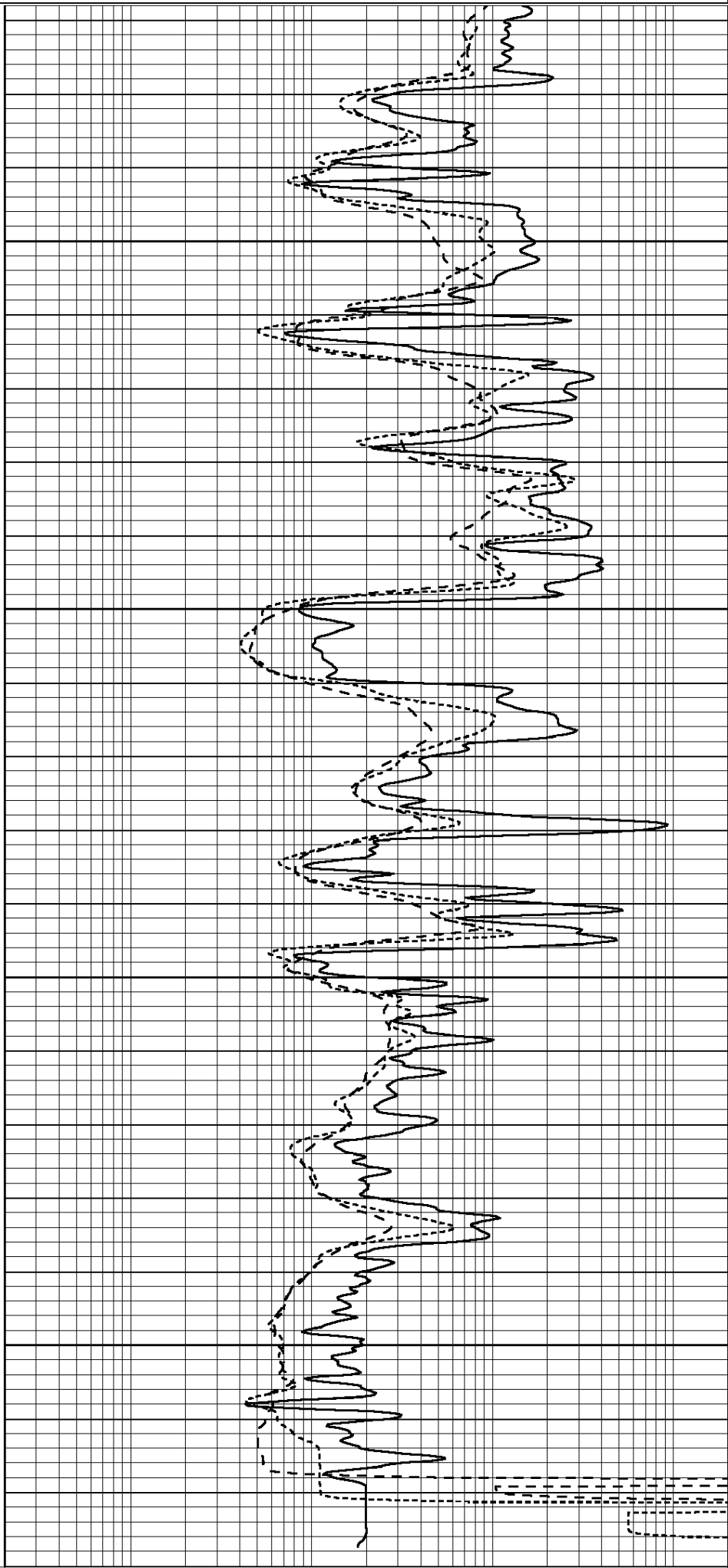


3200

3250

3300

3350



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			

Calibration Report									
Database File:		25881ddn.db							
Dataset Pathname:		pass3.5							
Dataset Creation:		Tue Sep 16 22:11:31 2014							
Dual Induction Calibration Report									
Serial-Model:		PROBE9-DILG							
Surface Cal Performed:		Tue Sep 16 21:06:10 2014							
Downhole Cal Performed:		Mon Jul 28 12:02:56 2008							
After Survey Verification Performed:		Mon Jul 28 12:02:56 2008							
Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	670.000	-20.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	670.000	-34.000	
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			
		1.000	mmho-m		1.000	mmho-m			

Litho Density Calibration Report									
Serial: 003N		Model: PRB							
Master Calibration					Performed Tue Sep 08 14:14:44 2009				
	Background	Magnesium	Aluminum	Sandstone					
Window 1	2042.6	12312.8	4225.8	13758.4				cps	
Window 2	1855.8	10134.7	3624.2	11113.1				cps	
Window 3	1639.4	6760.2	2716.3	7260.3				cps	
Window 4	466.4	469.2	466.1	476.5				cps	
Long Space	0.0	8278.9	1768.4	9257.4				cps	
Short Space	2.2	2377.3	1544.1	2574.2				cps	

Short Space	2.2	2.0775	1.944.1	2.074.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.549
Spine Angle	: 74.4	Spine Slope	: 3.577	Spine Intercept	: -18.8

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	

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Compensated Neutron Calibration Report
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Serial Number:	070808
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:	070558	
Tool Model:	OPEN_GR	
Performed:	Mon Jun 30 21:53:39 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps

