



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company		MAI OIL OPERATIONS, INC.	
Well		STOSS-NEELAND UNIT #1	
Field		WILDCAT	
County		BARTON	
State		KANSAS	
Location:		API # : 15-009-25343-0001 1560' FSL & 370' FWL SE - SW - NW - SW	
SEC 28 TWP 17S RGE 15W		Other Services CDL/CNL	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 8' A.G.L.	
Drilling Measured From		KELLY BUSHING	
Elevation		K.B. 2013 D.F. 2011 G.L. 2005	
Date	11/9/13		
Run Number	ONE		
Depth Driller	3632		
Depth Logger	3620		
Bottom Logged Interval	3618		
Top Log Interval	0		
Casing Driller	8 5/8" @ 1031		
Casing Logger	1031		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6700 PPM	
Density / Viscosity	9.1 / 68		
pH / Fluid Loss	11.5 / 10.0		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	0.65 @ 75F		
Rinf @ Meas. Temp	0.49 @ 75F		
Rinc @ Meas. Temp	0.78 @ 75F		
Source of Rinf / Rinc	MEASURED		
Rin @ BHT	0.43 @ 113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	113F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JEFF GRONEMEG		
Witnessed By	JIM MUSGROVE		

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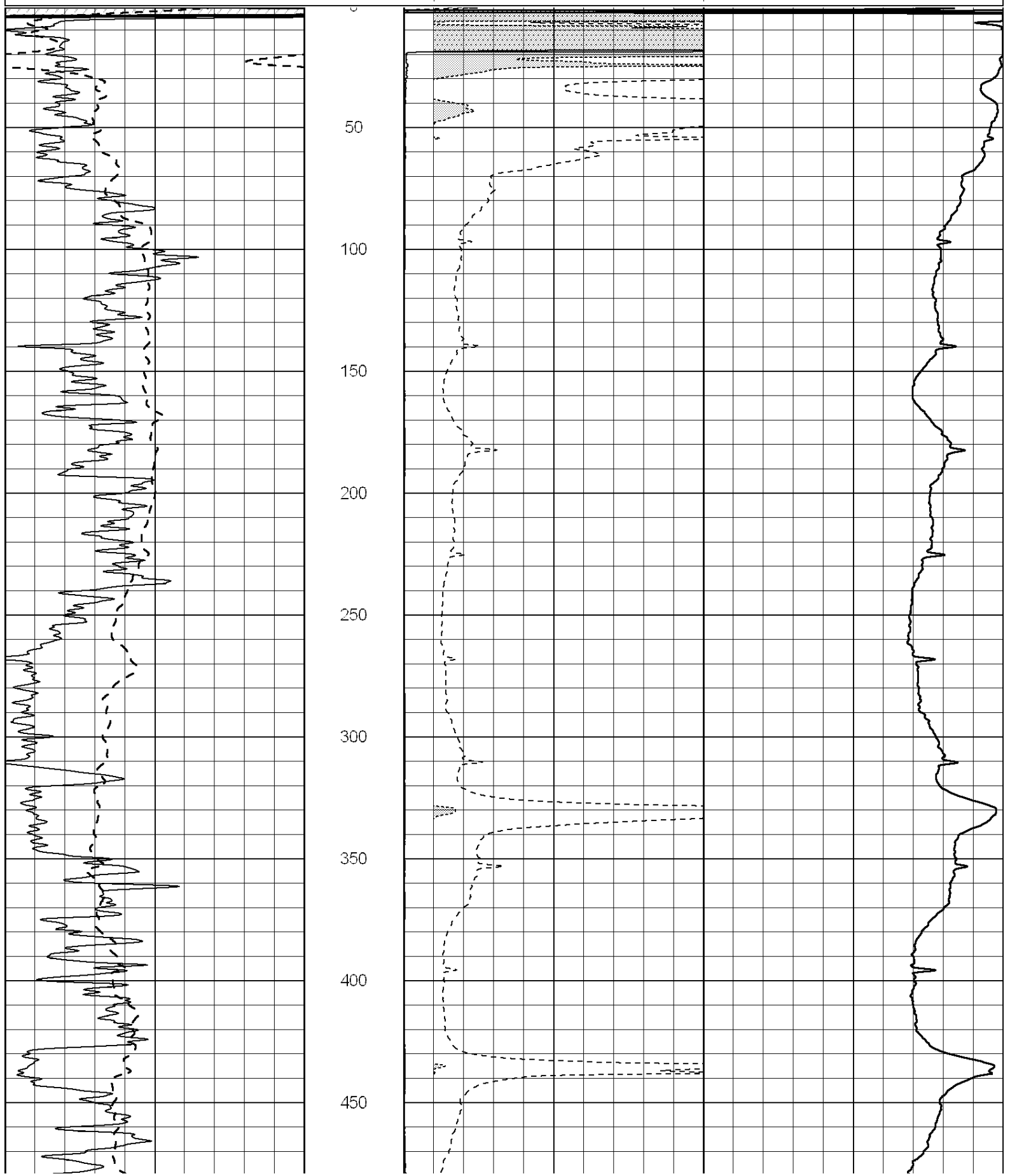
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

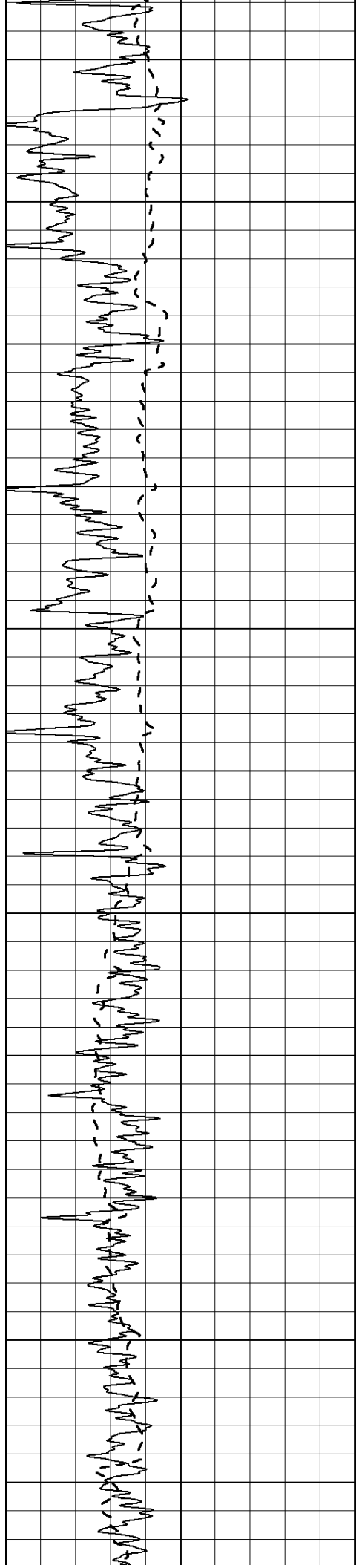
Comments

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

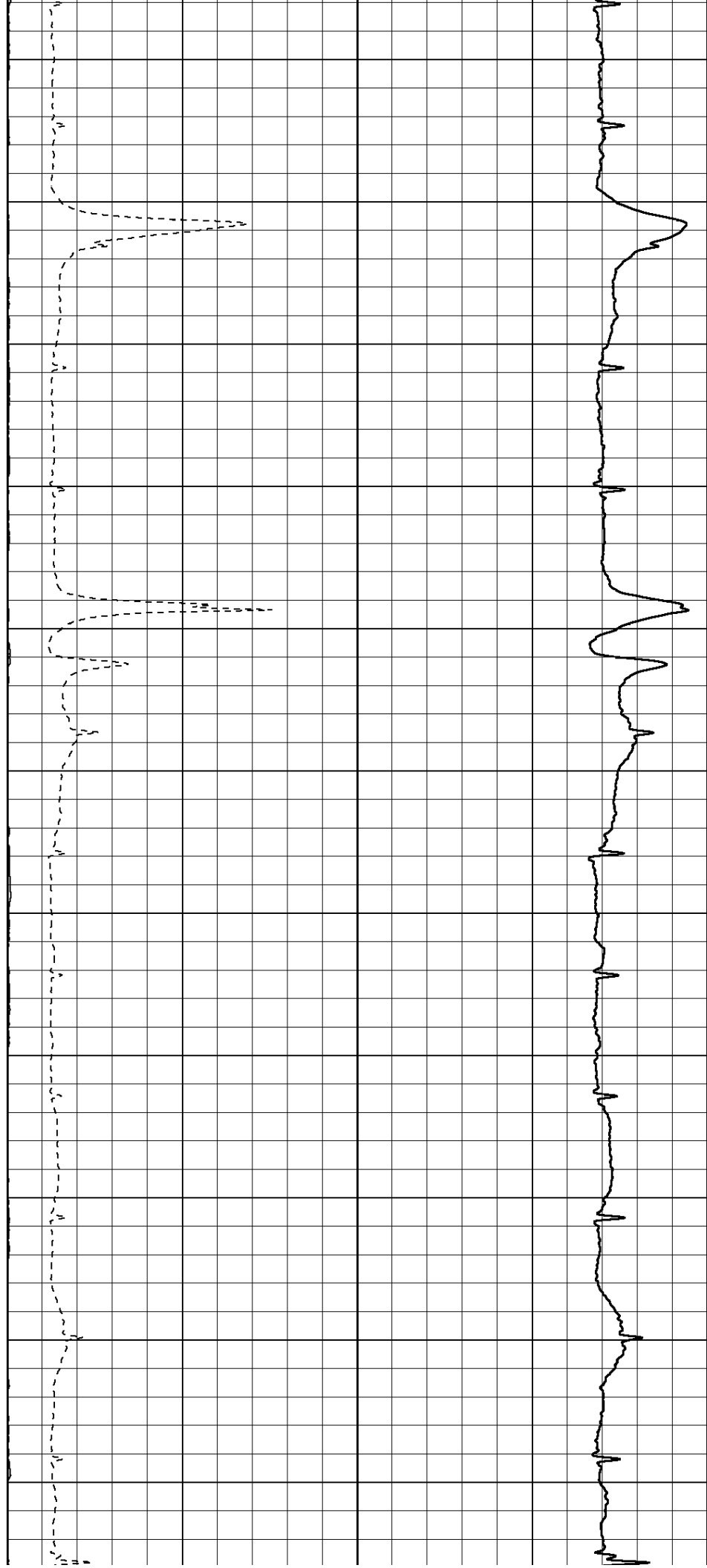
DIRECTIONS:
OTIS, KS - 3 MILES EAST TO RD 120 - 1/4 MILE NORTH - EAST INTO

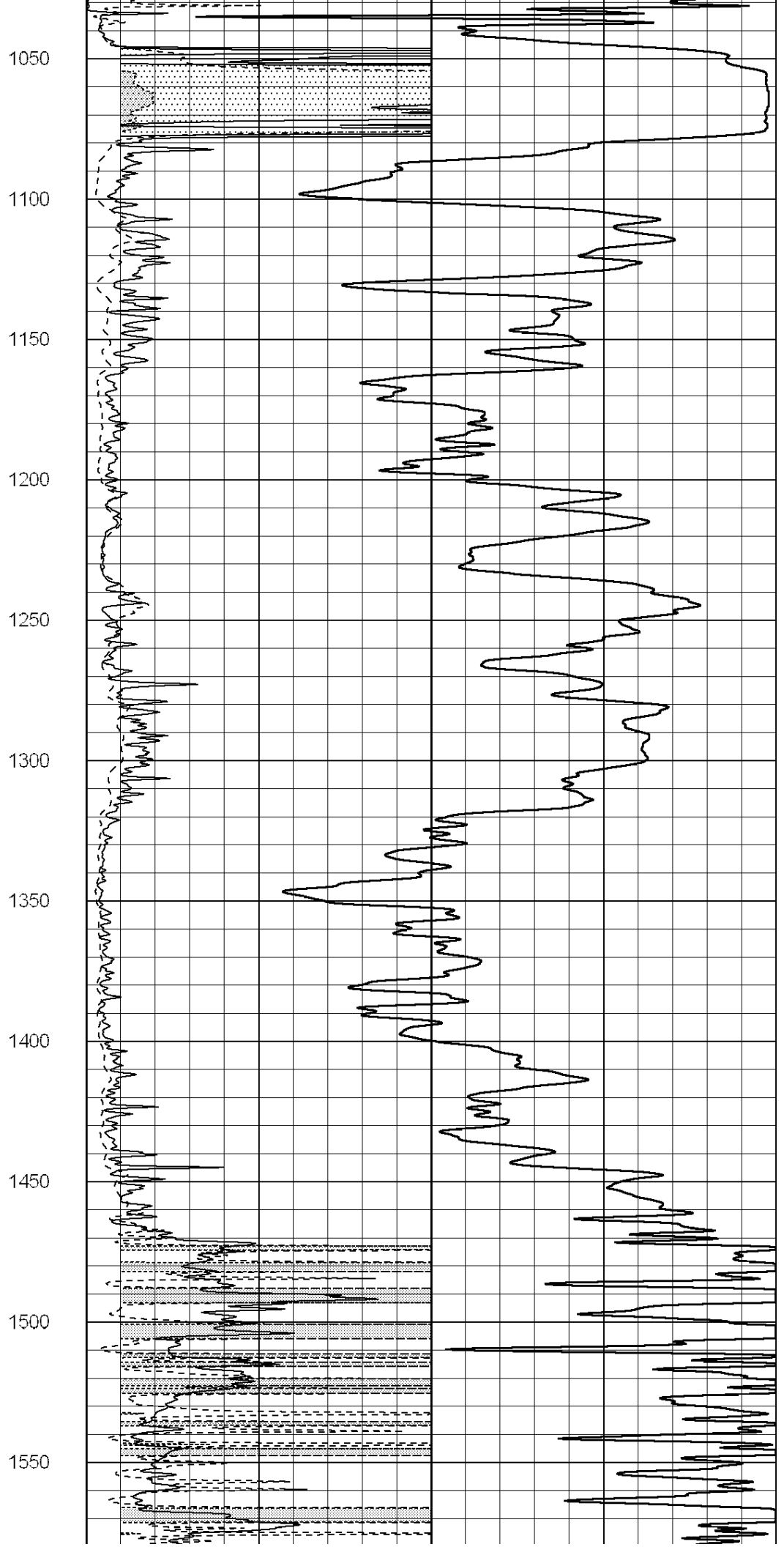
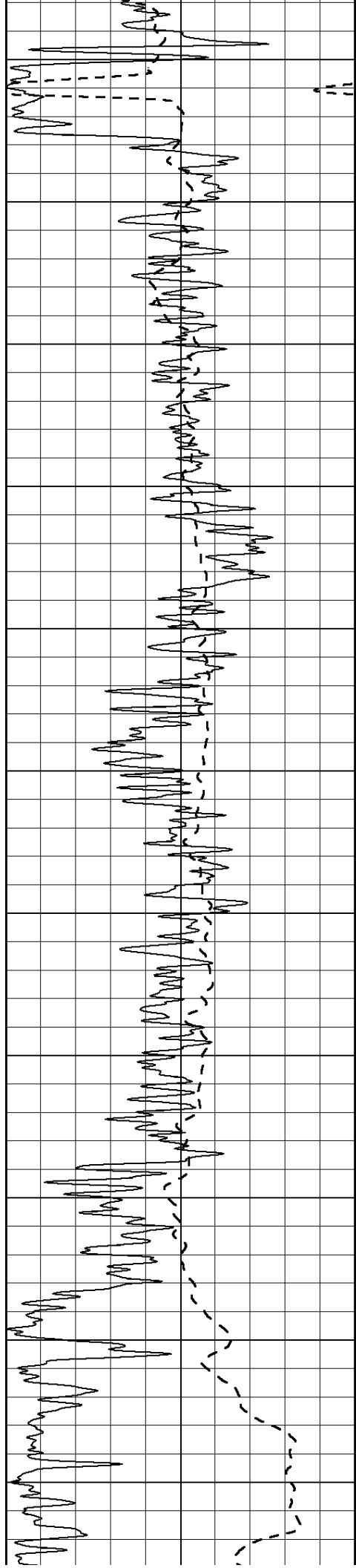
Charted by: _____ Depth in Feet used: 1000					
0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
-100	SP (mV)	100	0	Deep Induction (Ohm-m)	50
-----			-----		
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

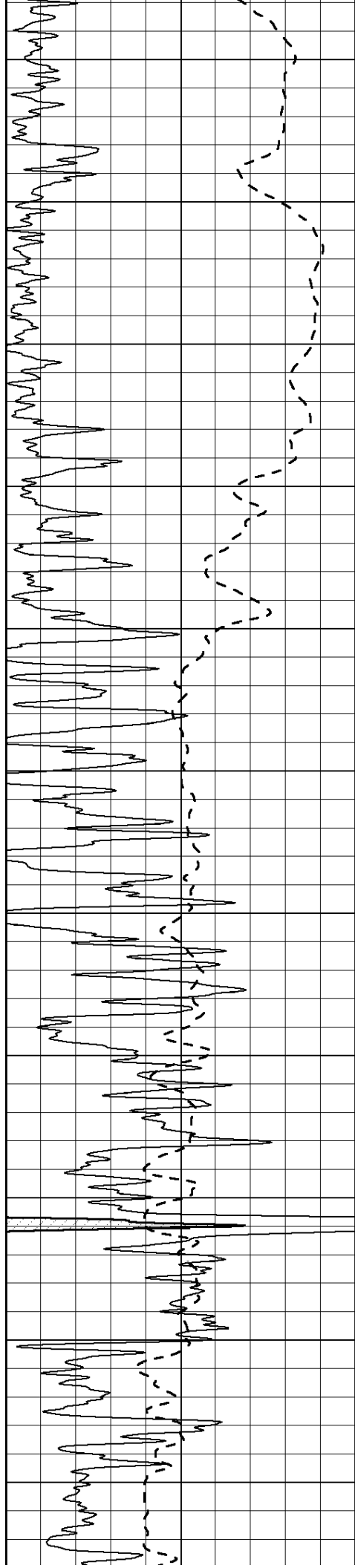




500
550
600
650
700
750
800
850
900
950
1000







1600

1650

1700

1750

1800

1850

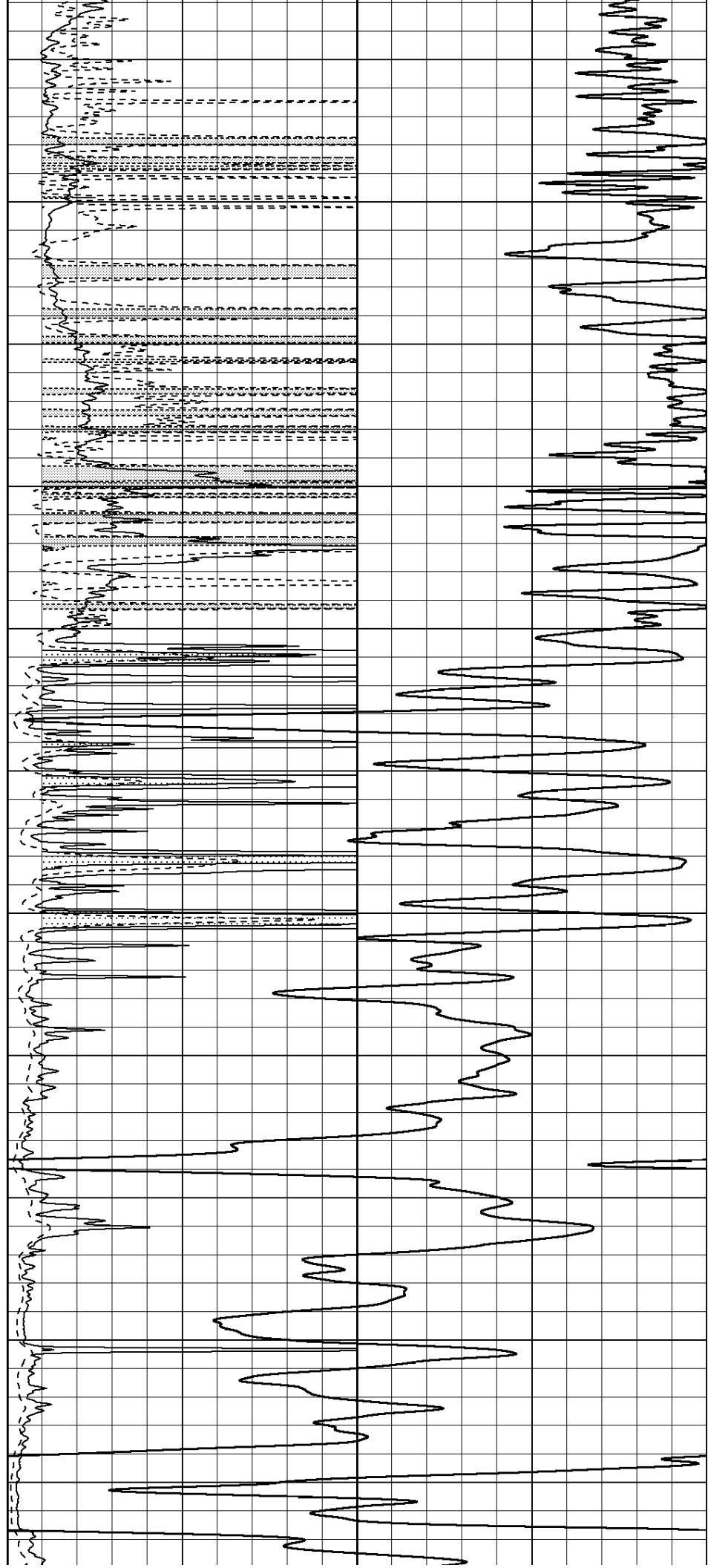
1900

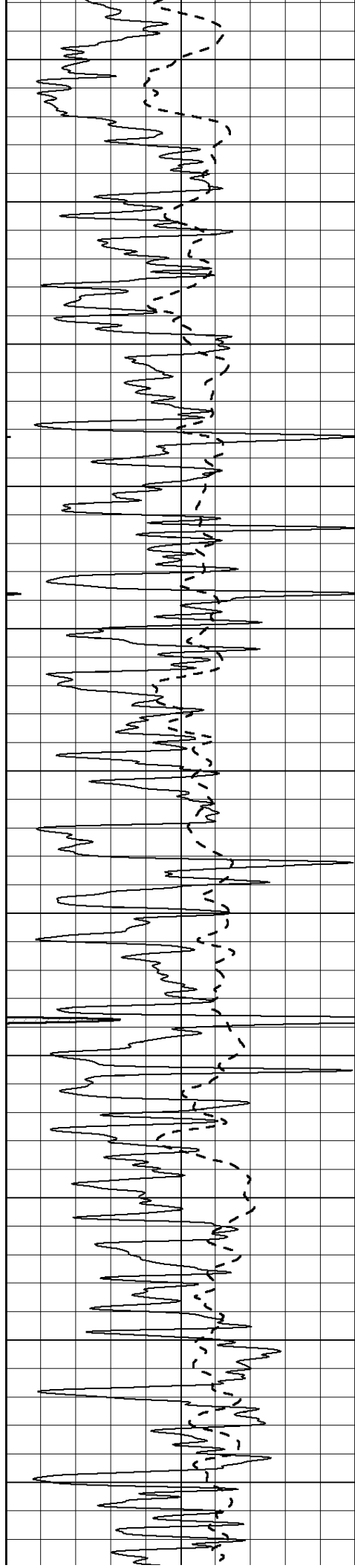
1950

2000

2050

2100





2150

2200

2250

2300

2350

2400

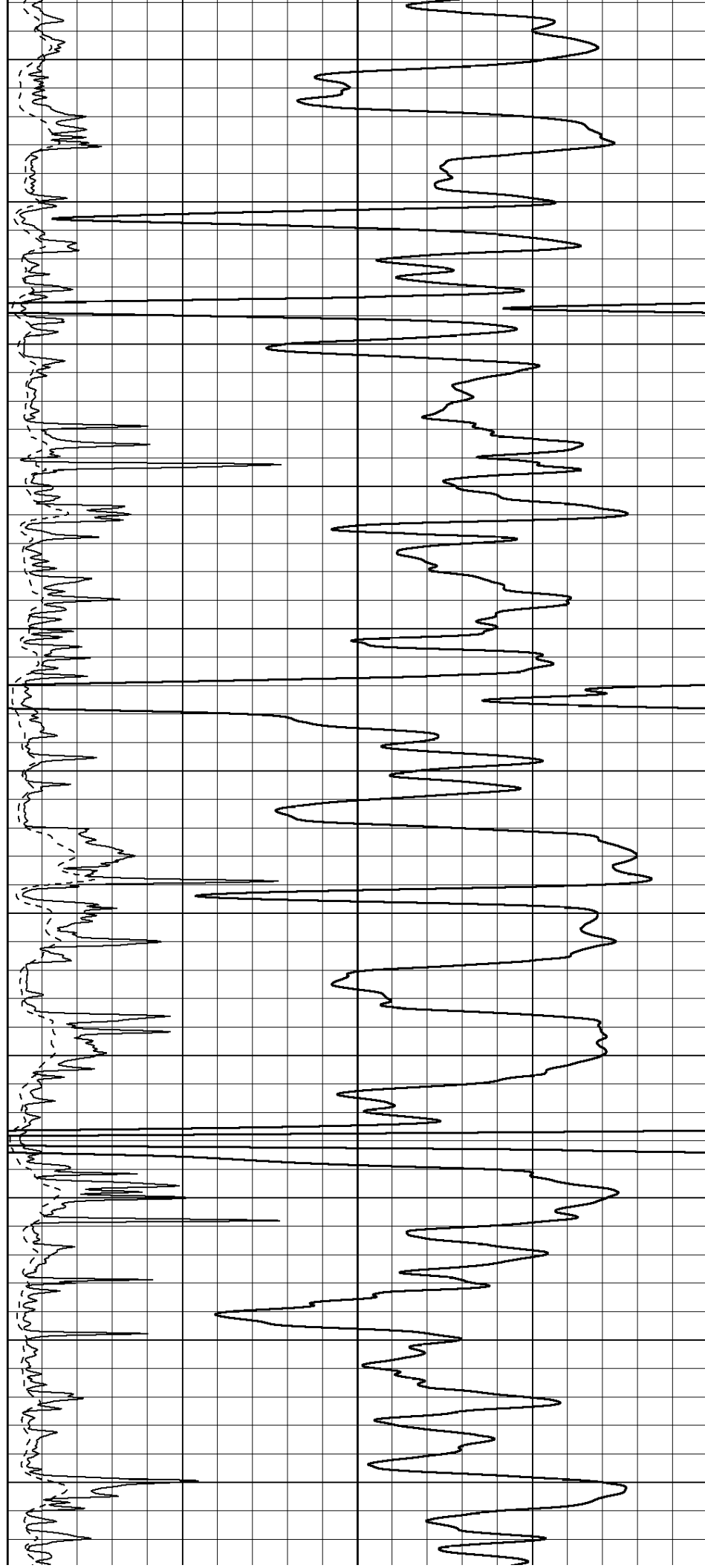
2450

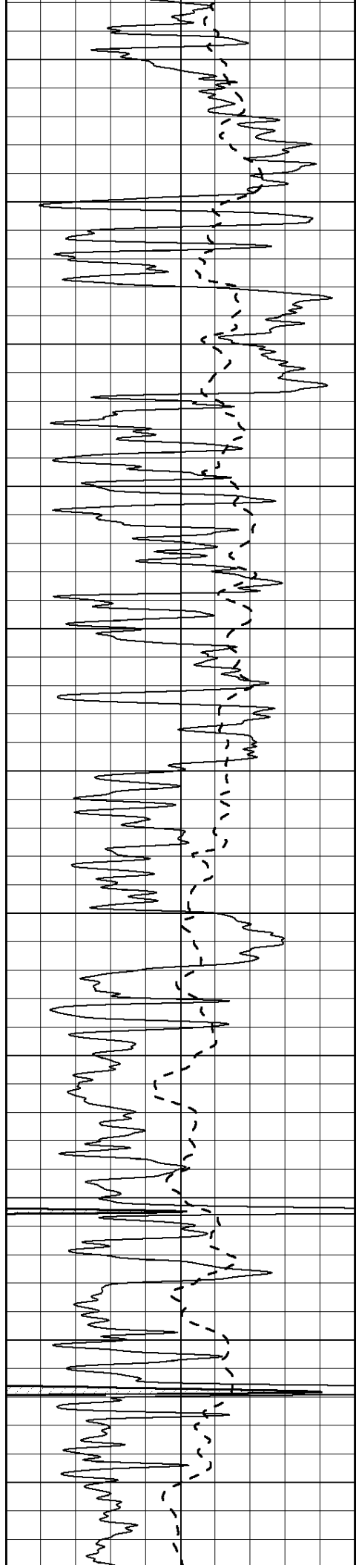
2500

2550

2600

2650





2700

2750

2800

2850

2900

2950

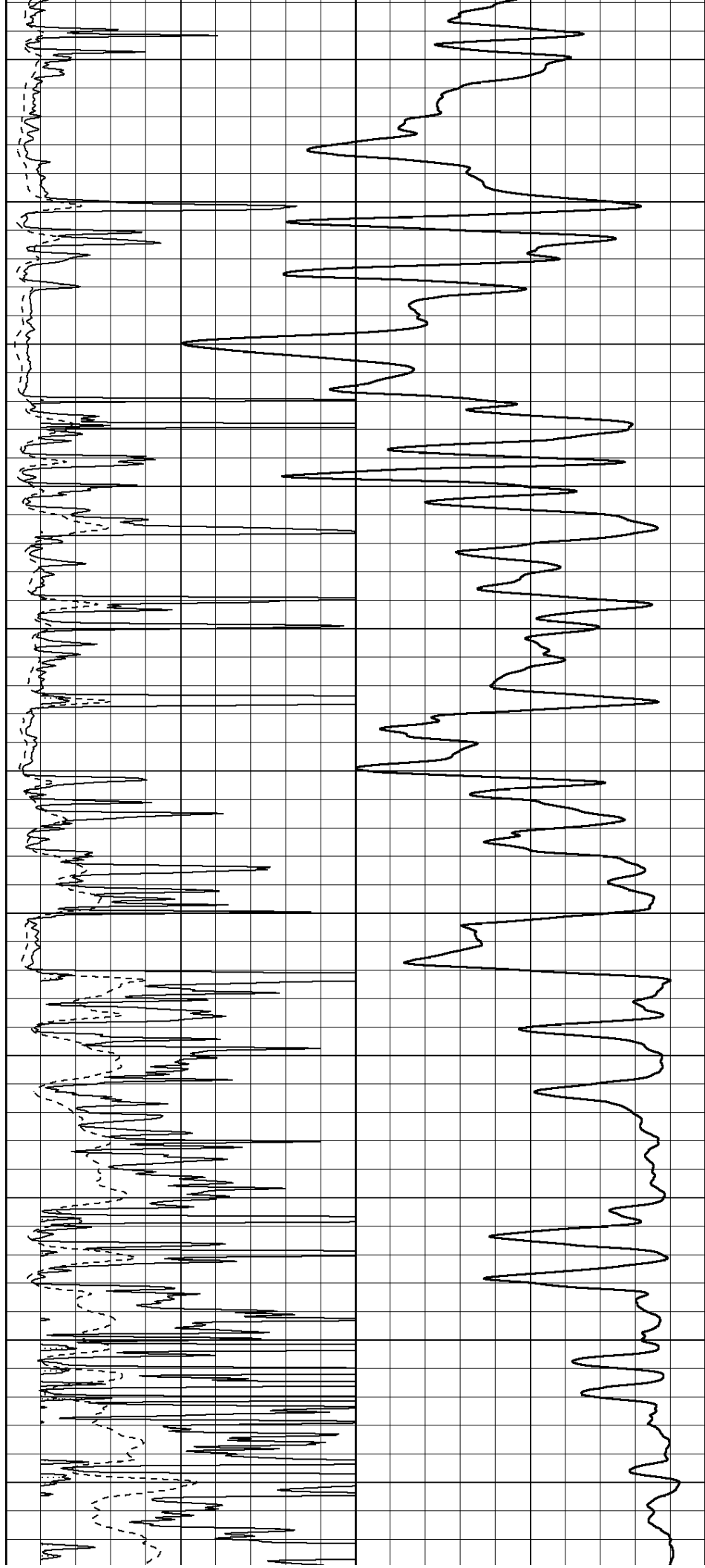
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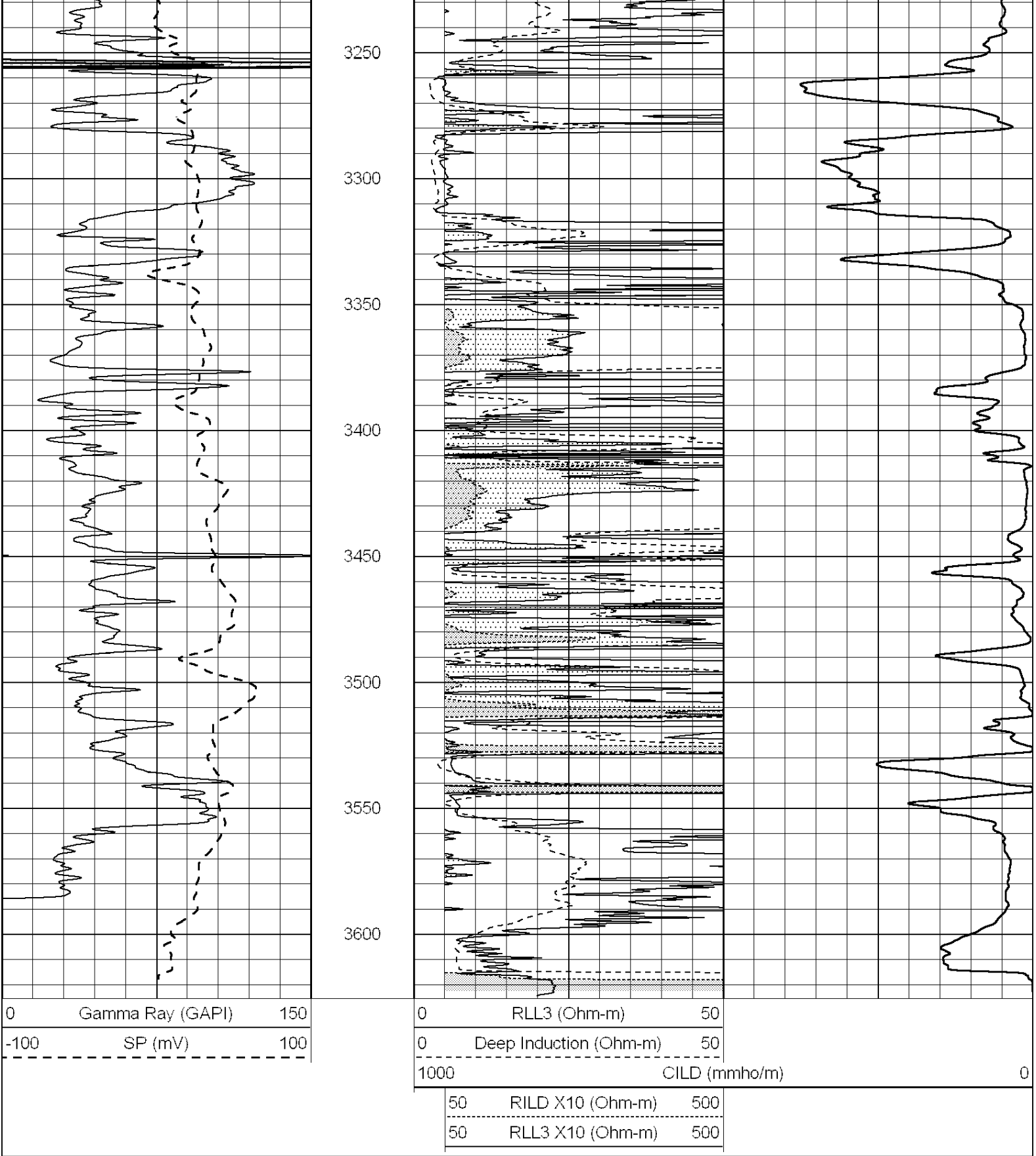
3050

3100

3150

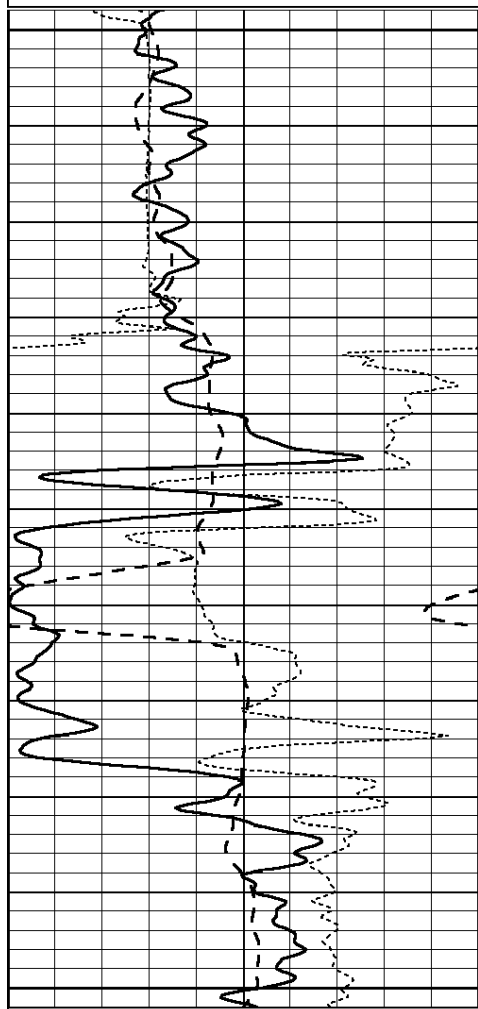
3200





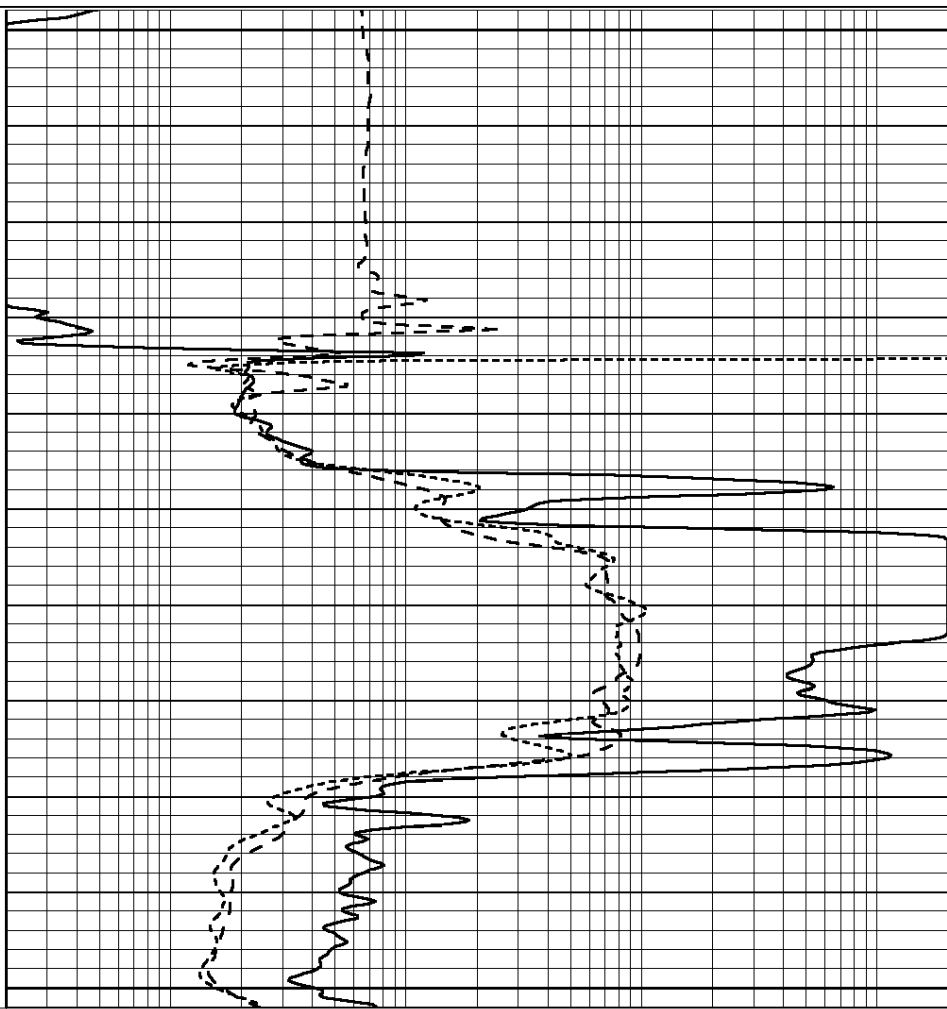
Database File: 012088ddn.db					
Dataset Pathname: pass2.8					
Presentation Format: _dil					
Dataset Creation: Sat Nov 09 17:30:03 2013 by Calc Open-Cased 090629					
Charted by: Depth in Feet scaled 1:240					
0	GAMMA RAY (GAPI)	150		0.2	SHALLOW GUARD (Ohm-m) 2000
-100	SP (mV)	100		0.2	MEDIUM INDUCTION (Ohm-m) 2000
0	SP (mV)	100		0.2	DEEP INDUCTION (Ohm-m) 2000

-250 Rxo/Rt 50



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

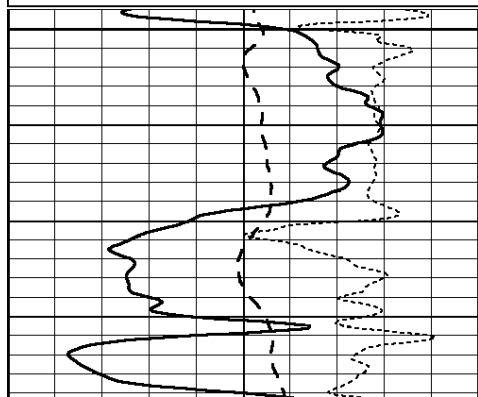
0.2 DEEP INDUCTION (Ohm-m) 2000



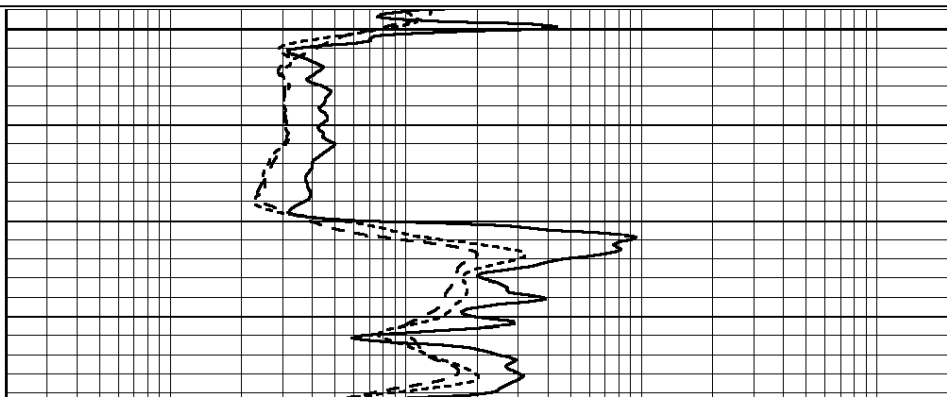
0.2 SHALLOW GUARD (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000
0.2 DEEP INDUCTION (Ohm-m) 2000

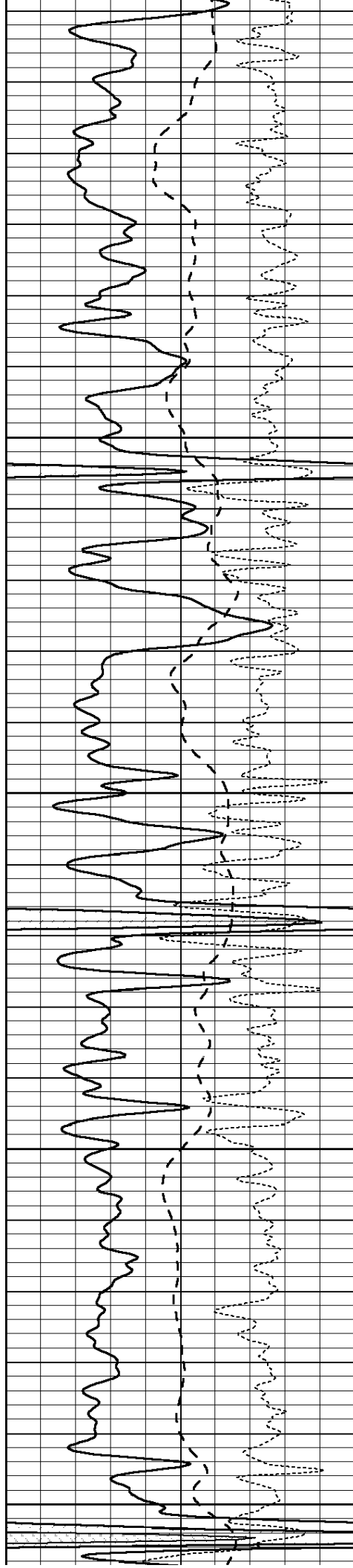
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Dataset Pathname: pass2.7
Presentation Format: _dil
Dataset Creation: Sat Nov 09 16:33:24 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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





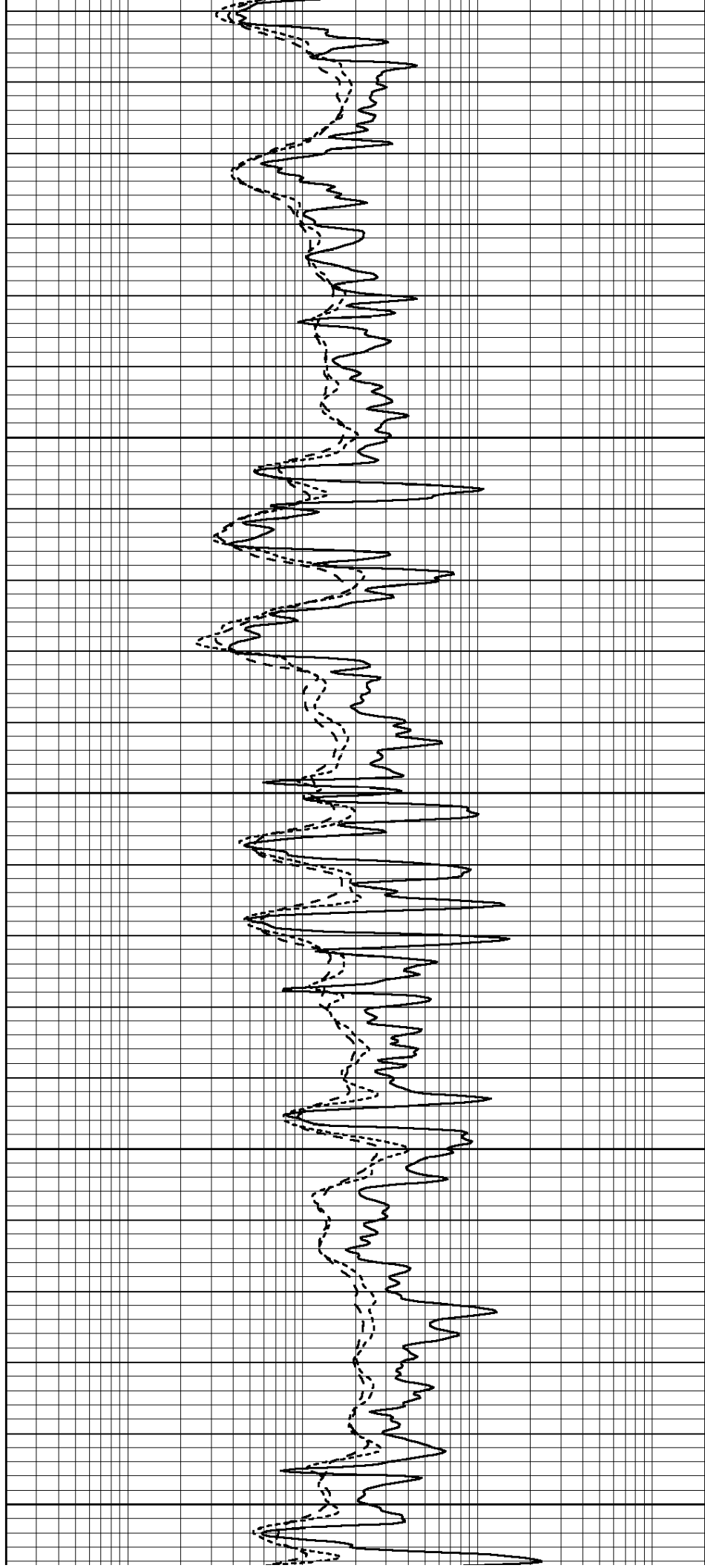
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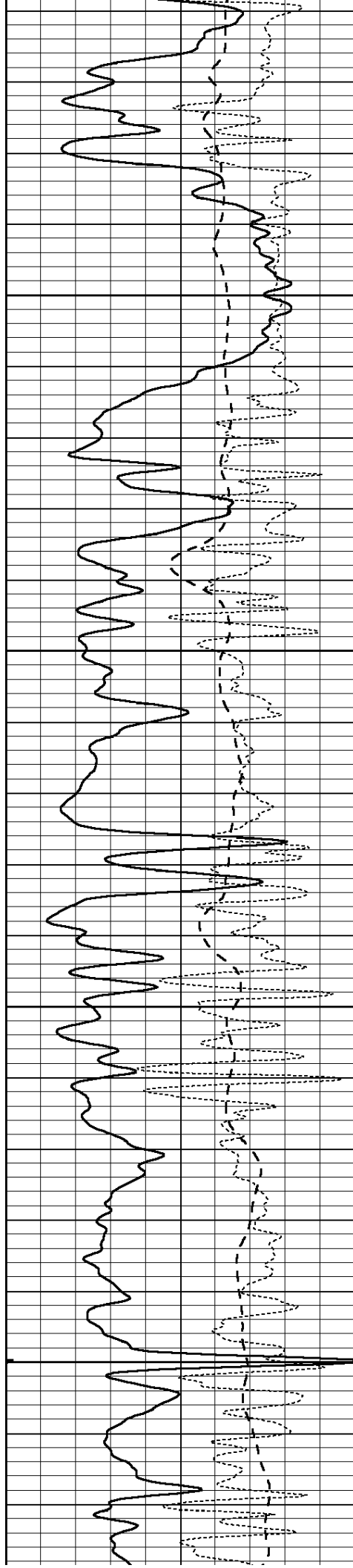
3100

3150

3200

3250



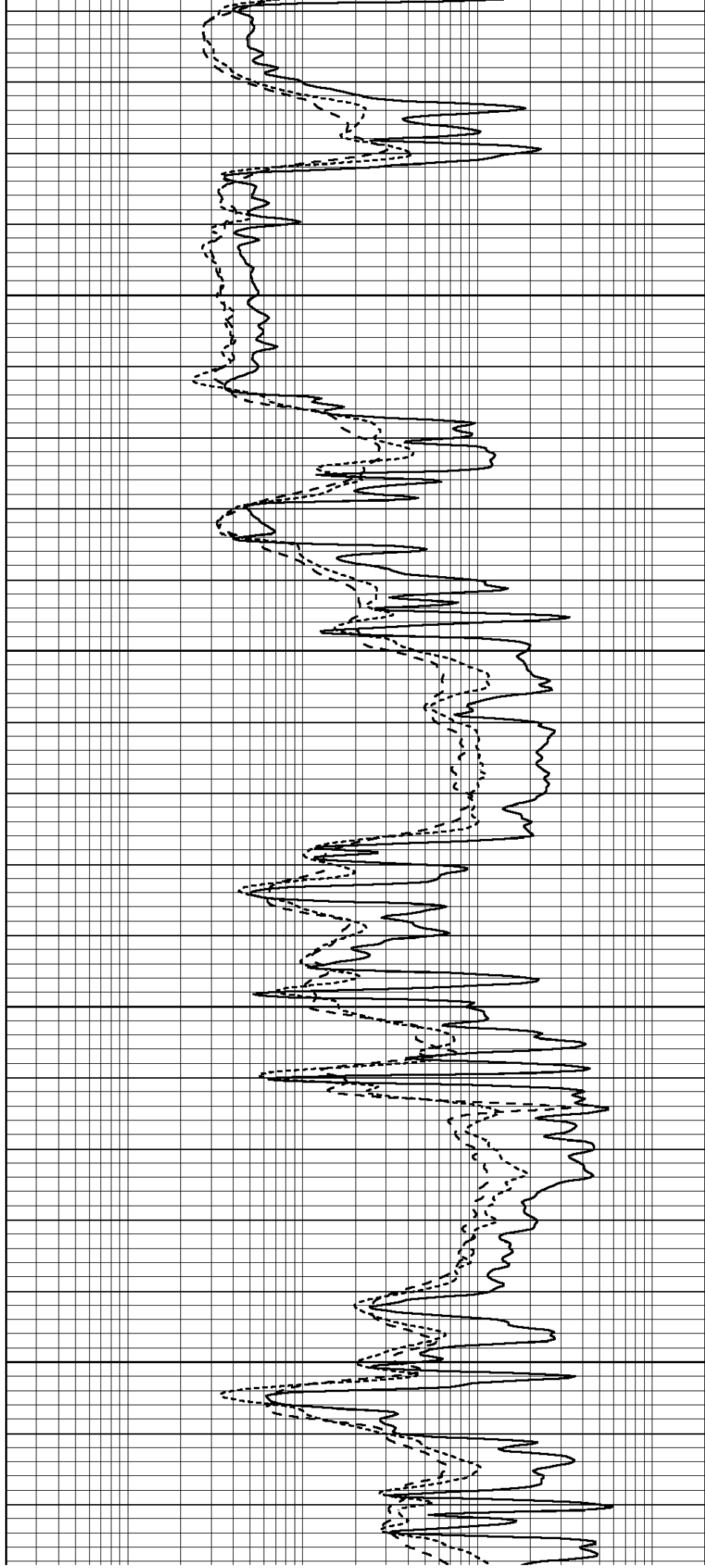


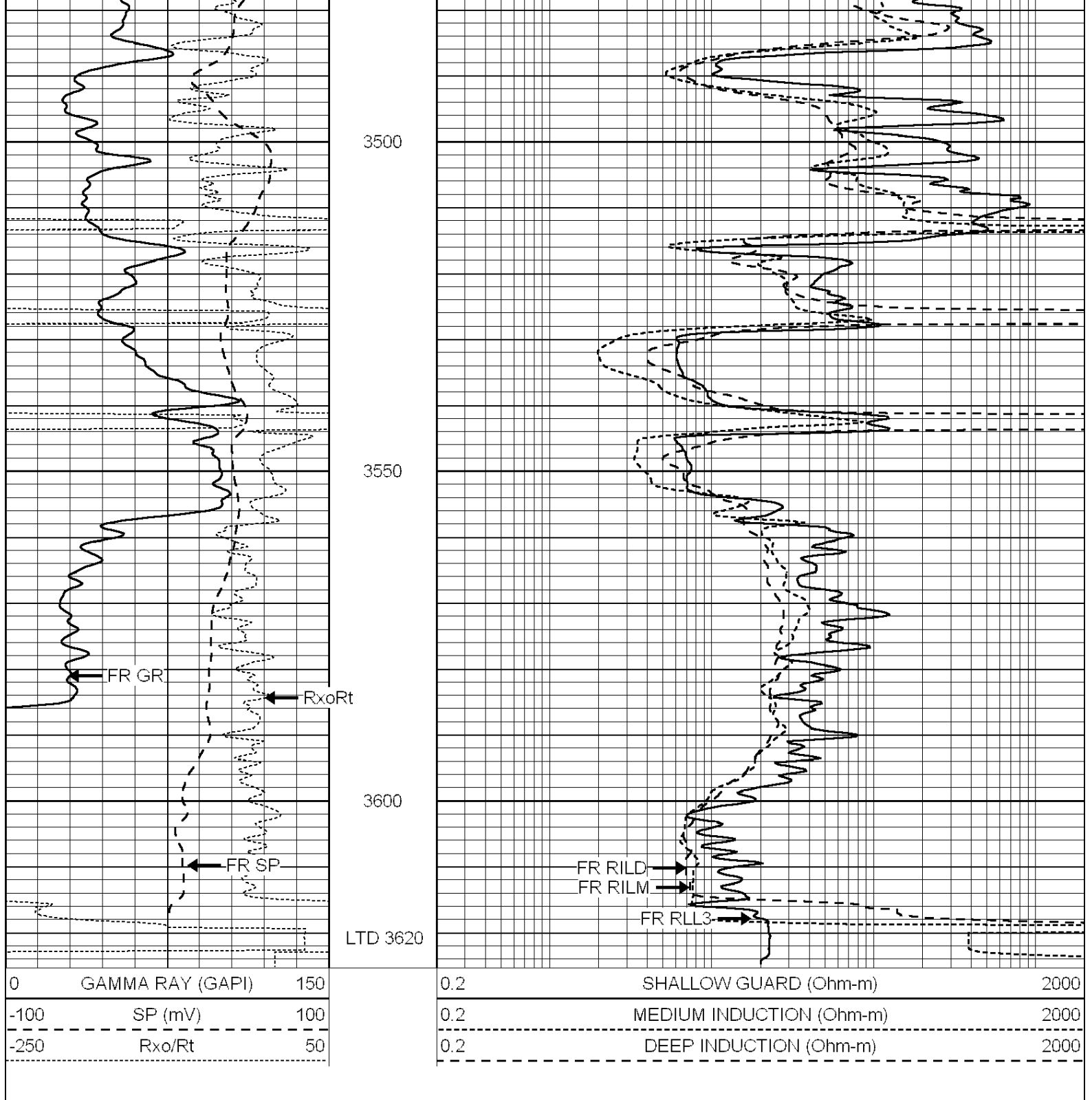
3300

3350

3400

3450





Calibration Report

Database File: 012088ddn.db
Dataset Pathname: pass2.8
Dataset Creation: Sat Nov 09 17:30:03 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
Surface Cal Performed: Fri Aug 01 06:33:19 2008
Downhole Cal Performed: Mon Jul 28 11:08:27 2008
After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	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		

Compensated Density Calibration Report

Serial-Model:	GEAR4-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Mon Mar 19 19:07:19 2012

Master Calibration								
	Density			Far Detector		Near Detector		
Magnesium	1.710	g/cc		1015.91		497.51	cps	
Aluminum	2.560	g/cc		227.67		350.20	cps	
Spine Angle = 76.79				Density/Spine Ratio = 0.553				
	Size			Reading				
Small Ring	8.00	in		3.21	V			
Large Ring	14.00	in		5.46	V			

Compensated Neutron Calibration Report

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:	080327			
Tool Model:	Probe1			
Performed:	Sun Jun 13 14:33:21 1993			
Calibrator Value:	1.0	GAPI		
Background Reading:	0.0	cps		
Calibrator Reading:	1.0	cps		
Sensitivity:	0.6000	GAPI/cps		