



SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company	HERMAN L. LOEB, LLC.	Company	HERMAN L. LOEB, LLC.
Well	BEETZ "A" #3-28	Well	BEETZ "A" #3-28
Field	TRAPP	Field	TRAPP
County	BARTON	County	BARTON
State	KANSAS	State	KANSAS
Location:	AP1 # : 15-009-25694-0000	Other Services	CDL/CNL MEL/SONIC
Permanent Datum	GROUND LEVEL	Elevation	1918
Log Measured From	KELLY BUSHING 9' A.G.L.	Elevation	K.B. 1927 D.F. 1925 G.L. 1918
Drilling Measured From	KELLY BUSHING		
SEC 28 TWP 17S RGE 13W			
815' FSL & 2100' FWL			
SW - NE - SE - SW			
6/24/12	ONE		
3395			
3394			
3392			
00			
8 5/8"@869'			
868			
7 7/8"			
CHEMICAL MUD	CHLORIDES 4,700 PPM		
9.0/58			
11 0/8 4			
FLOWLINE			
.850@90F			
.636@90F			
1.02@90F			
MEASUREMENT			
.689@111F			
8 HOURS			
7:15 P.M.			
111F			
4010			
HAYS, KANSAS			
JEFF LUEBBERS			
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

THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
HOISINGTON, KS. 1N. OF "DAIRY QUEEN" ON (SUSANK BLKTOP), 1/2E., N. INTO

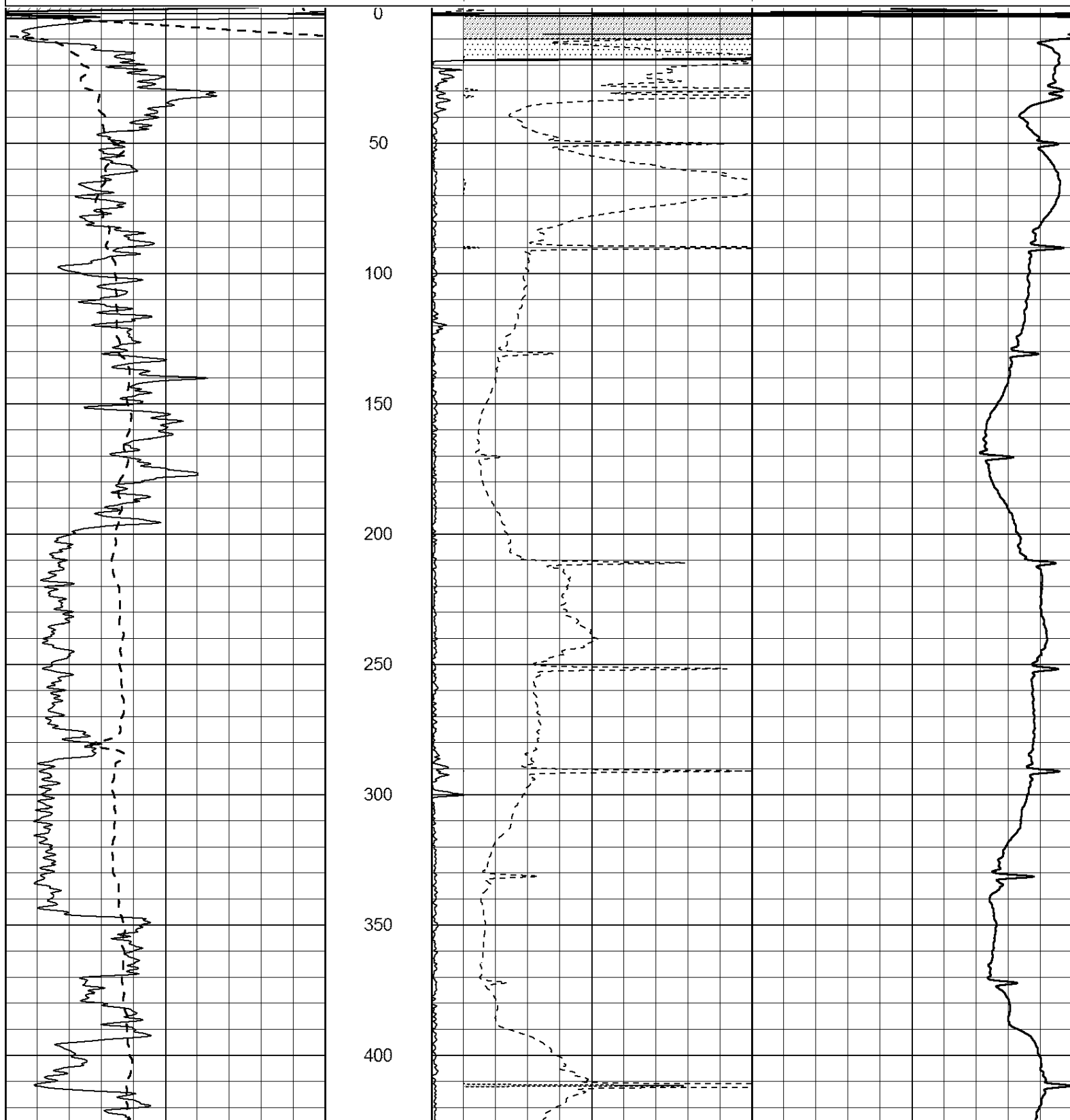


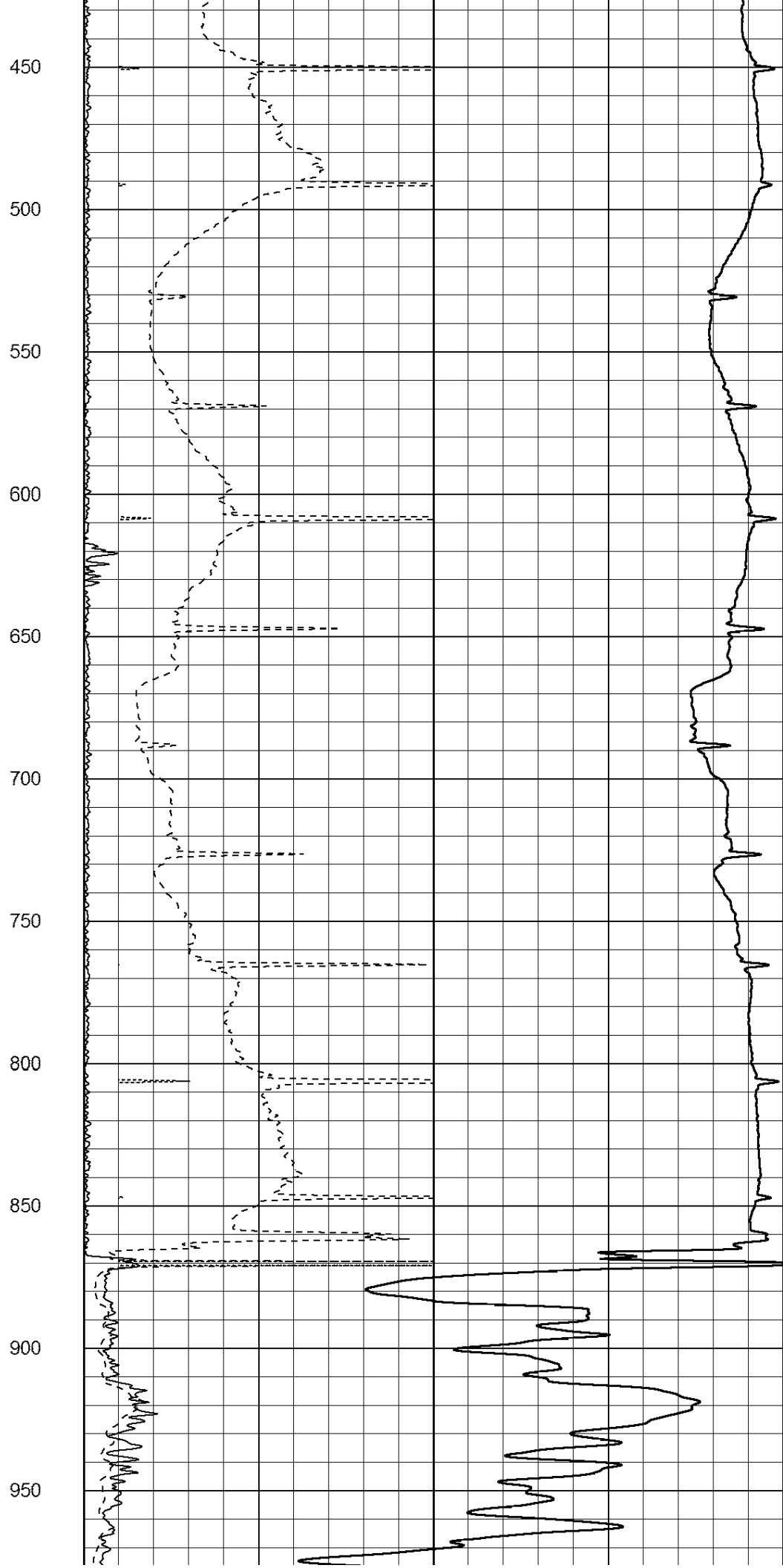
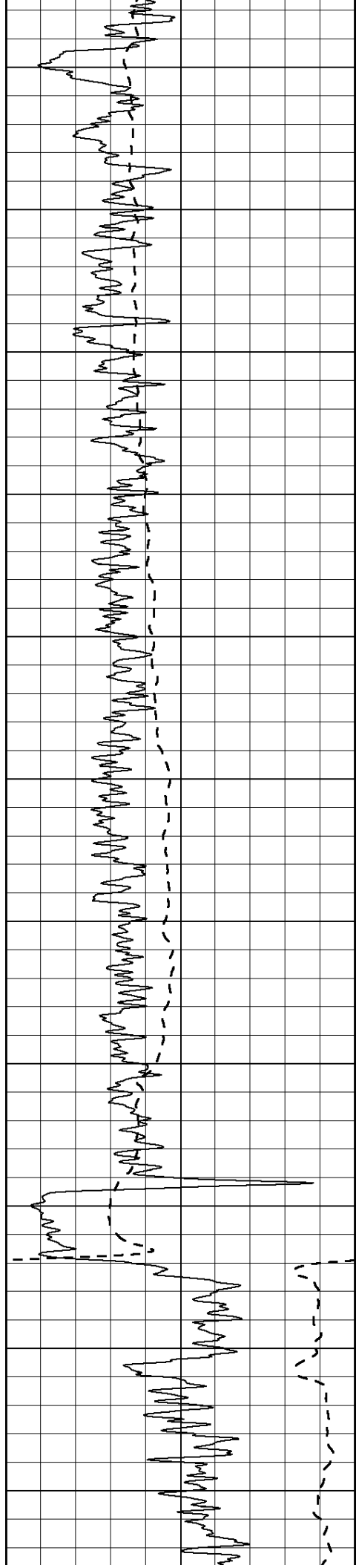
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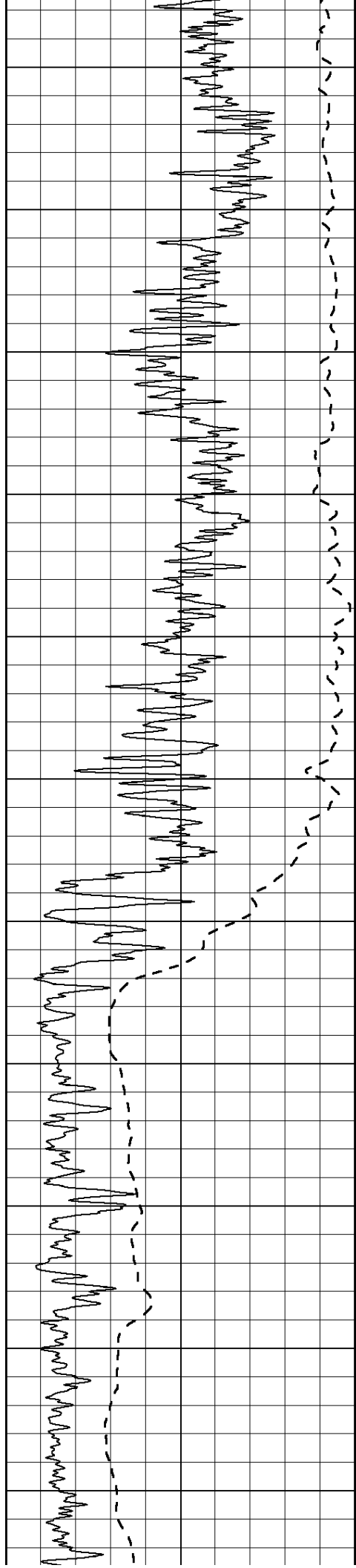
MAIN SECTION

Database File: 409144ddn.db
 Dataset Pathname: pass3.6
 Presentation Format: dil2
 Dataset Creation: Sun Jun 24 20:50:18 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:600

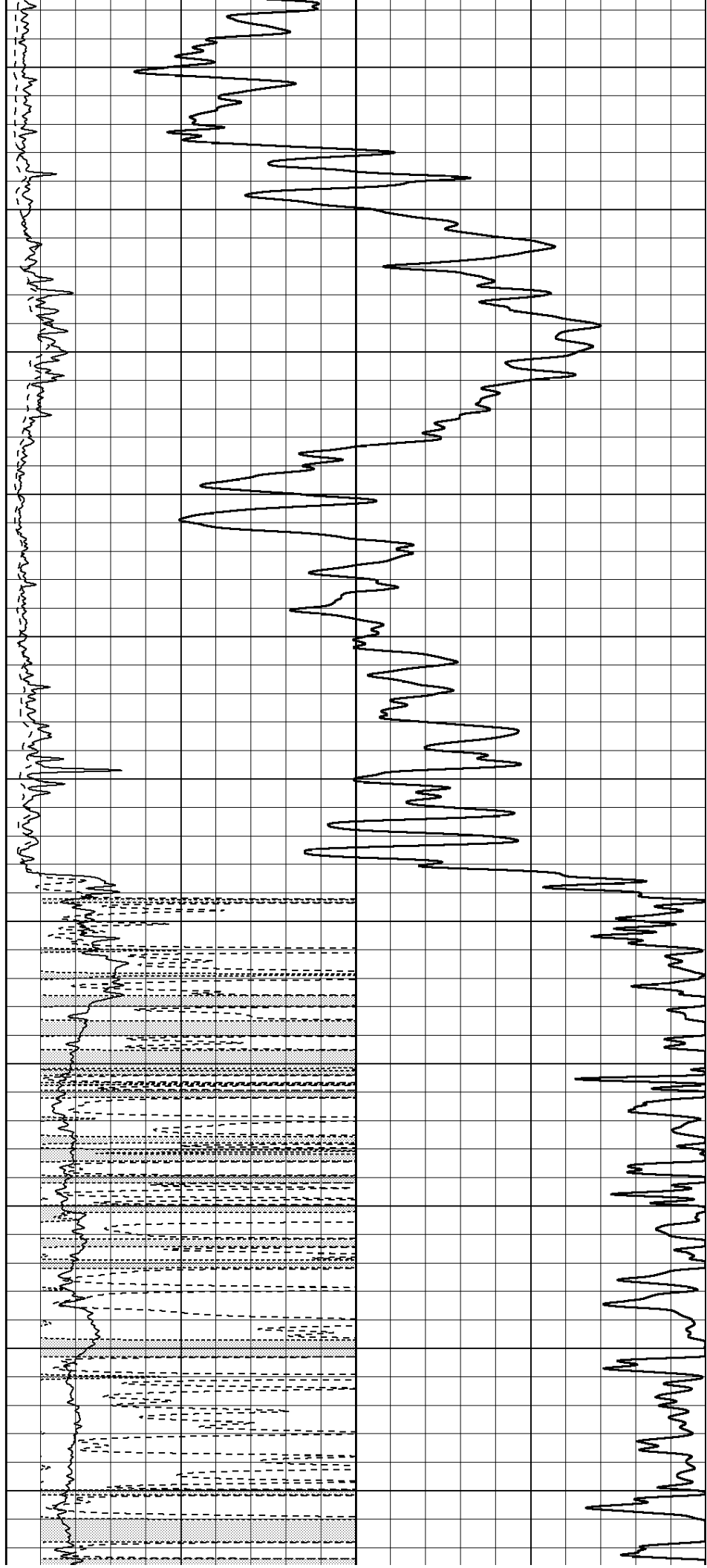
0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
-100	SP (mV)	100	0	RILD (Ohm-m)	50
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

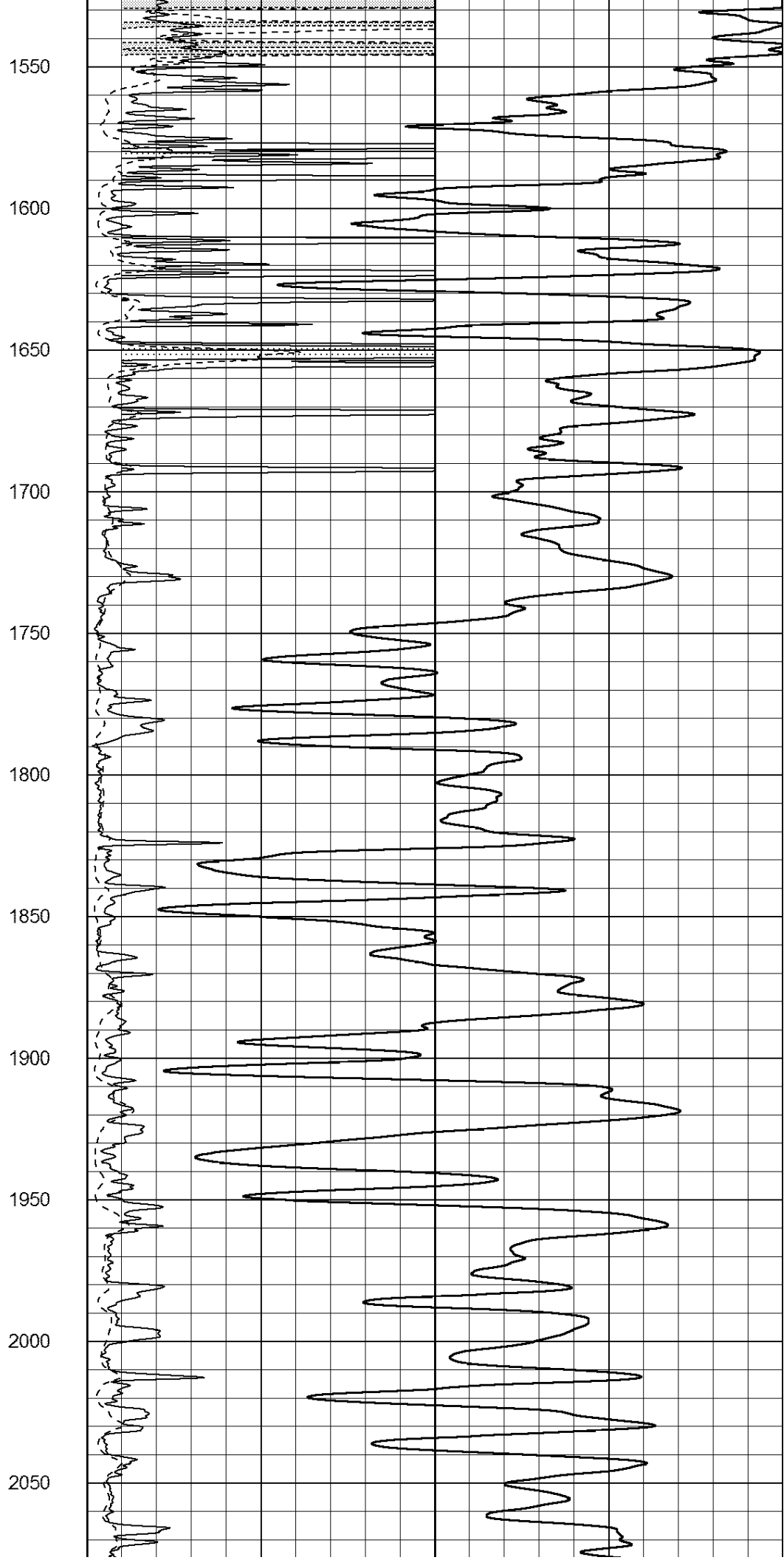
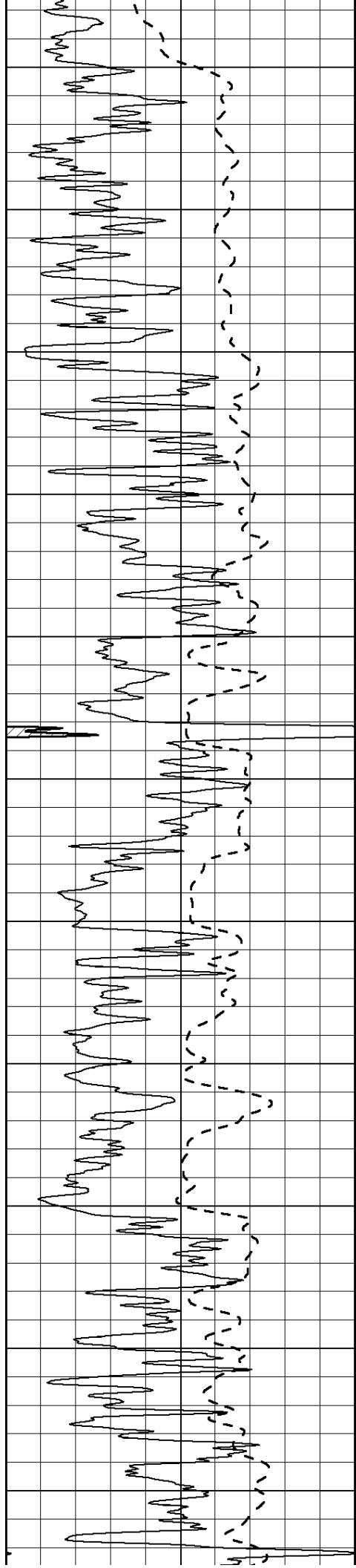


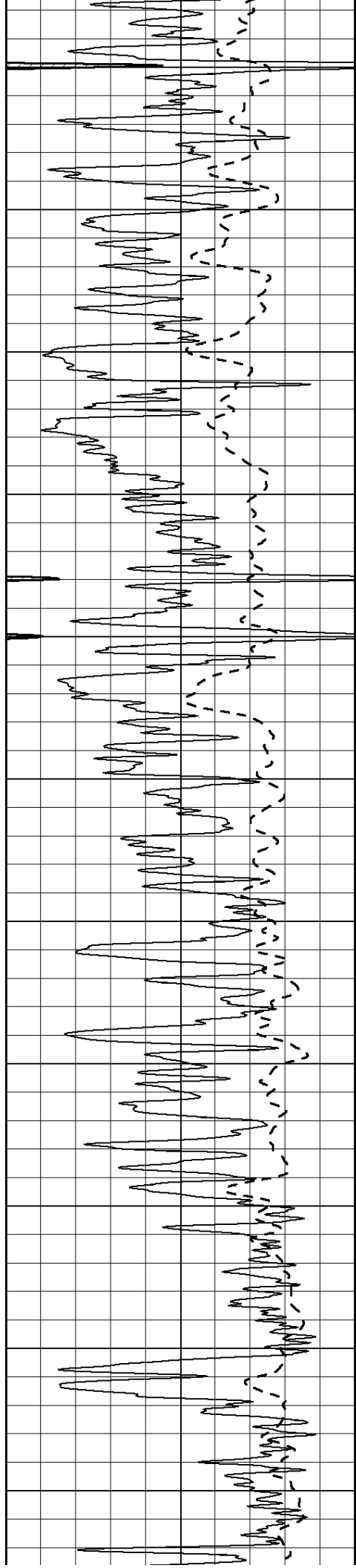




1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500







2100

2150

2200

2250

2300

2350

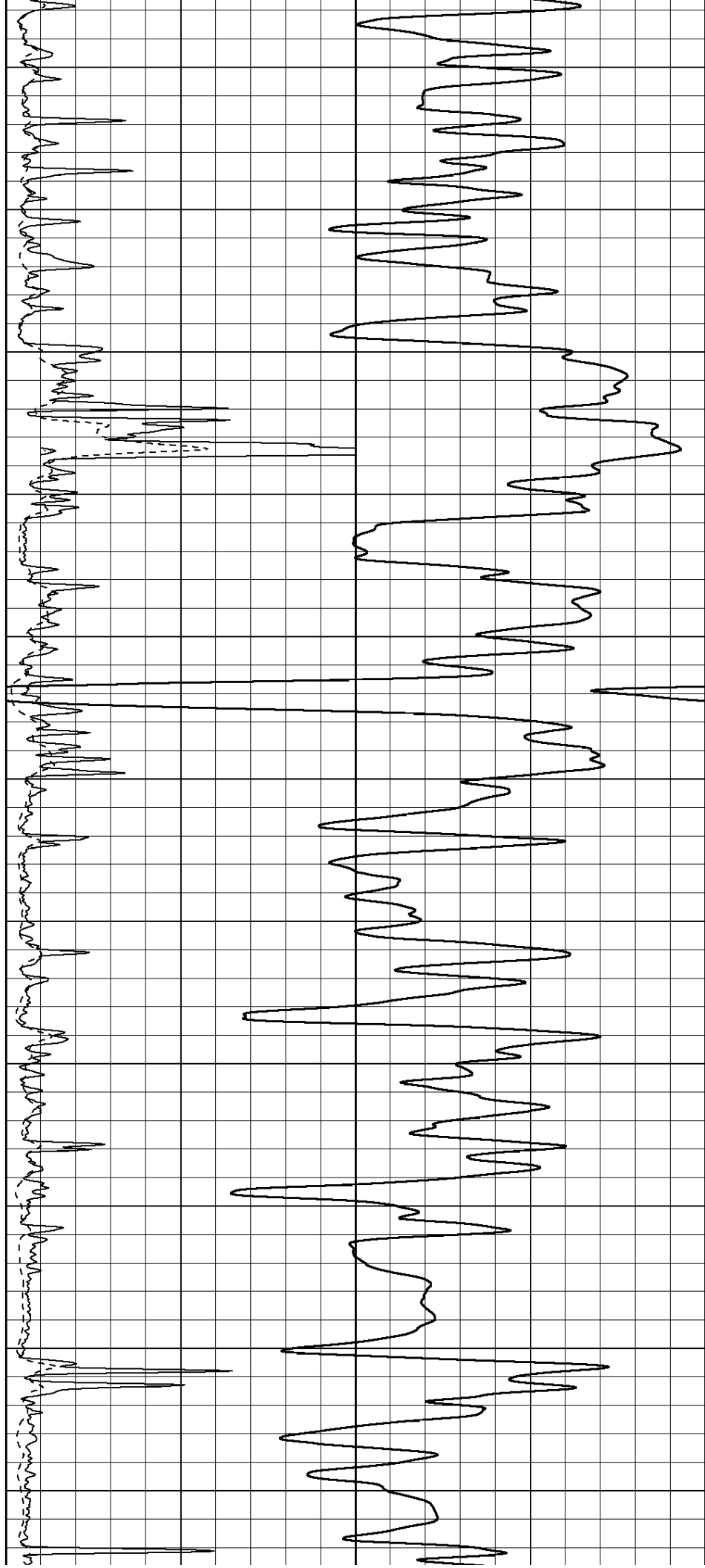
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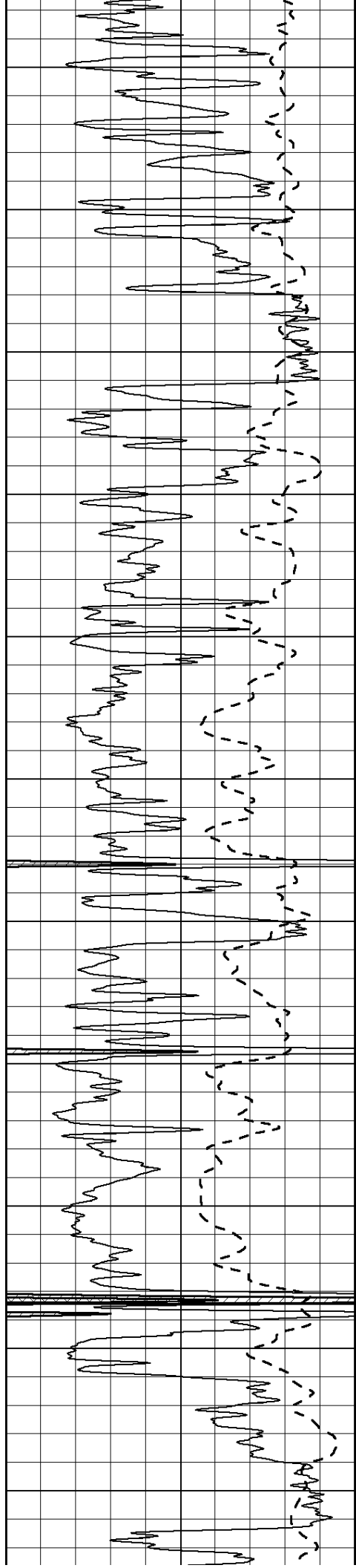
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2500

2550

2600





2650

2700

2750

2800

2850

2900

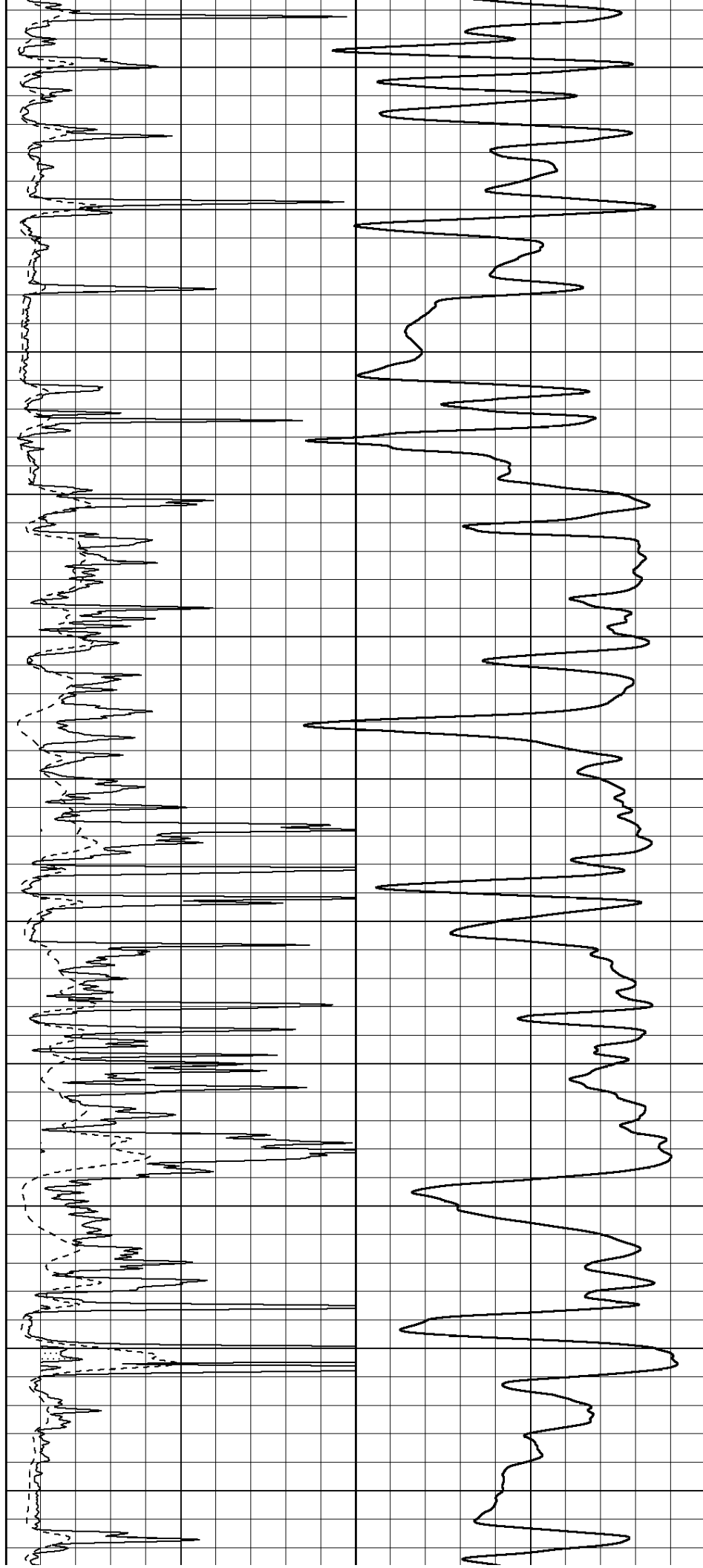
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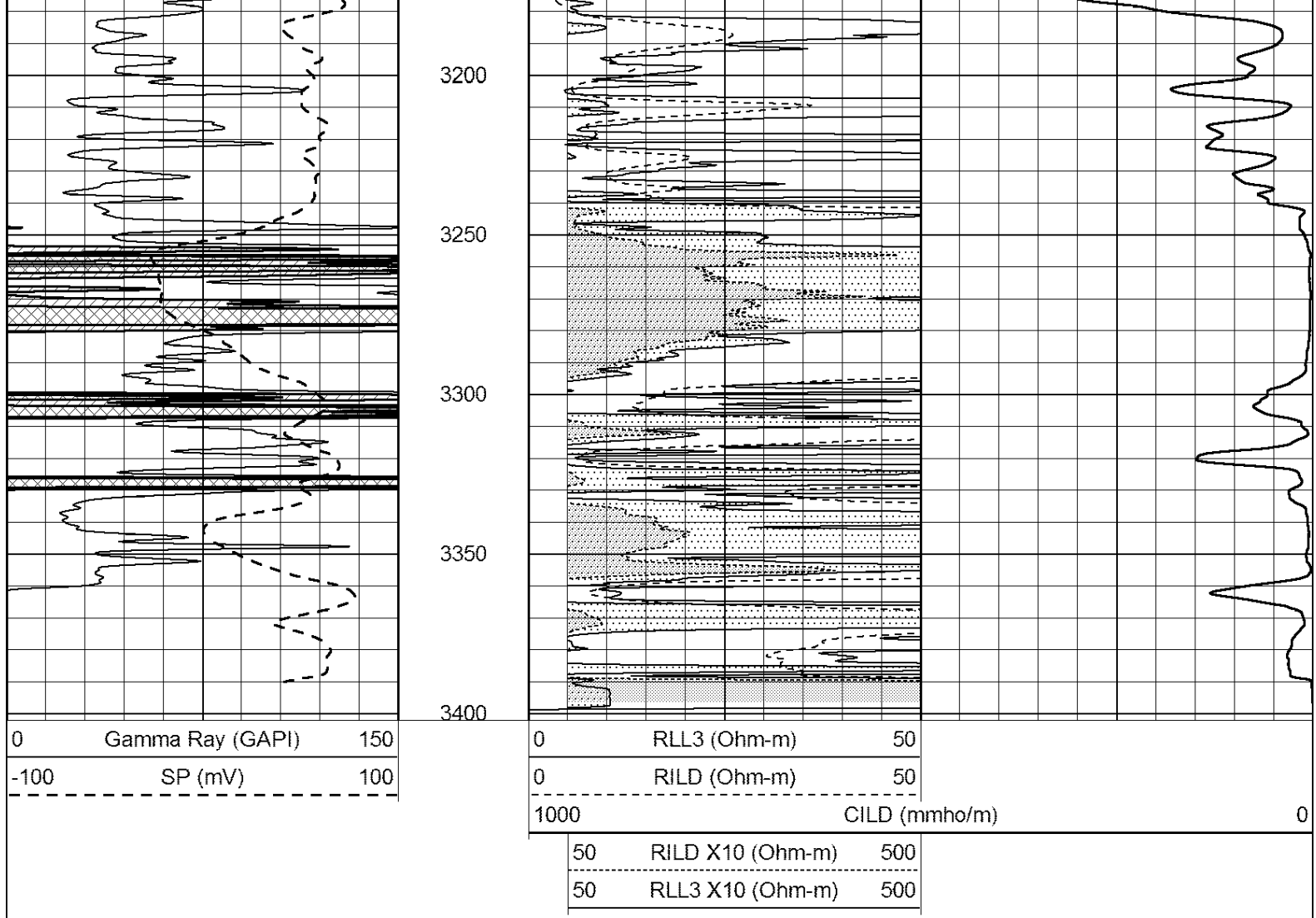
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3050

3100

3150





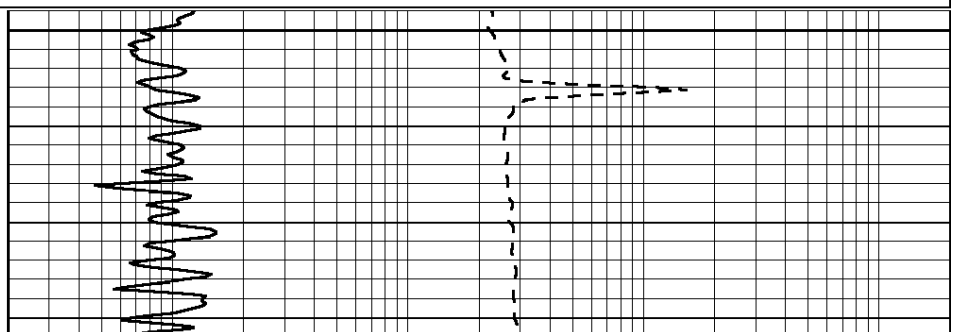
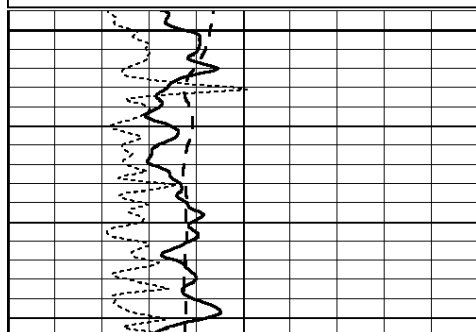
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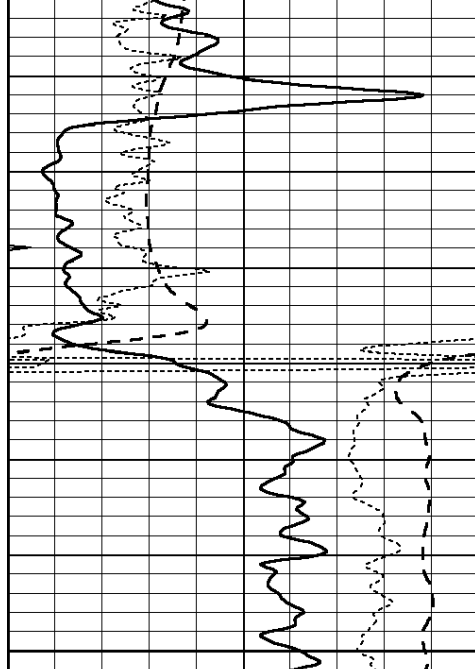
ANHYDRITE

Database File: 409144ddn.db
 Dataset Pathname: pass3.8
 Presentation Format: _dil
 Dataset Creation: Sun Jun 24 20:51:44 2012 by Calc Open-Cased 110302
 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

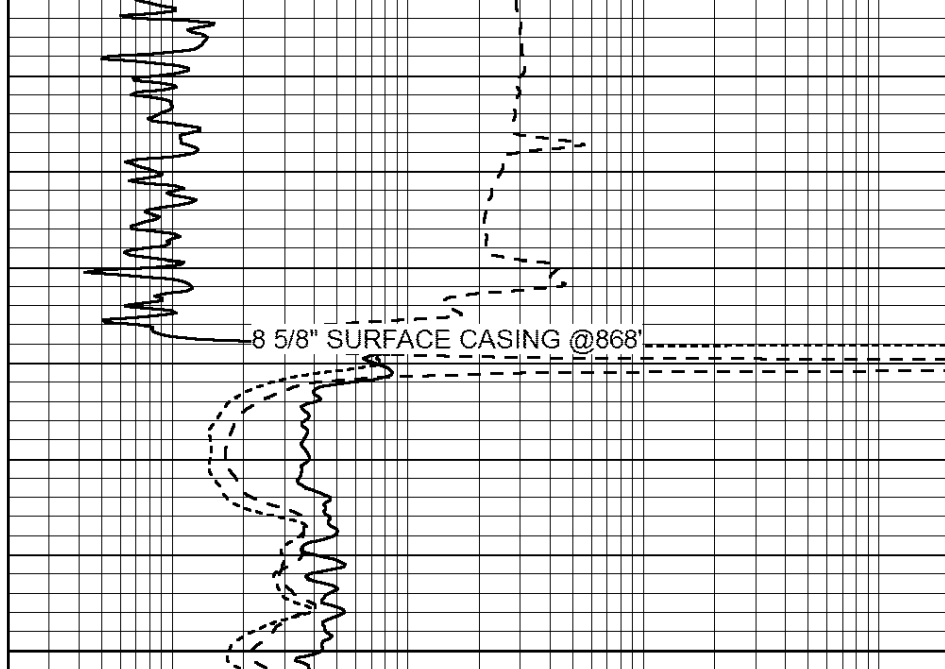




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

850

900



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



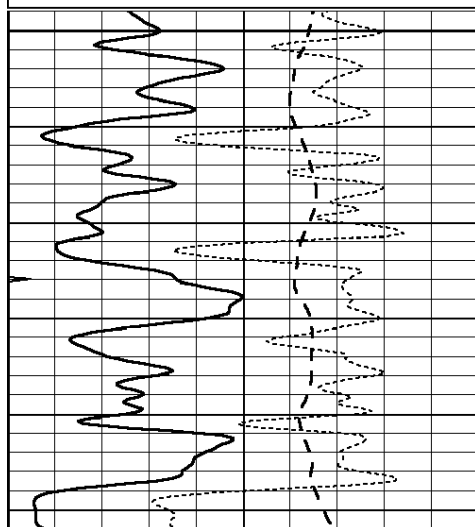
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UPPER SECTION

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 Dataset Creation: Sun Jun 24 20:51:10 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

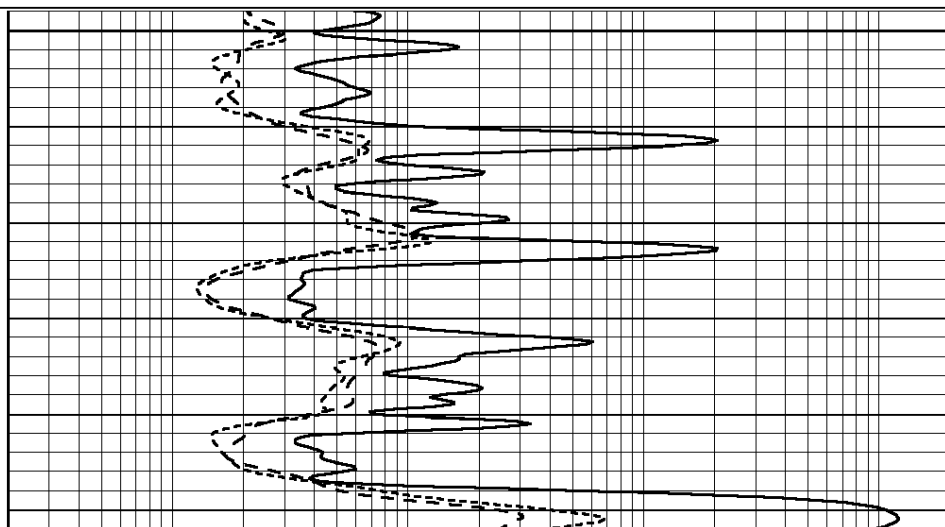
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

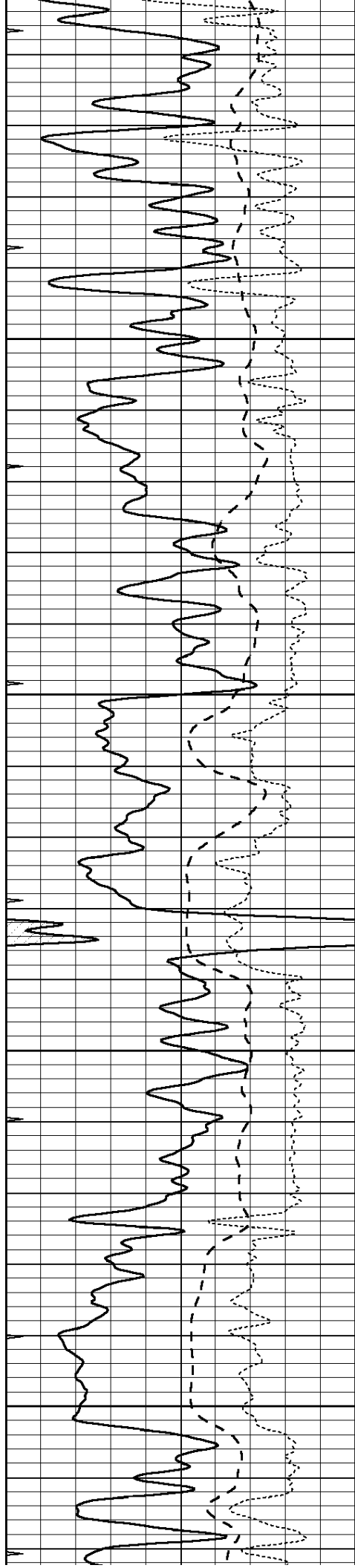
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



1600

1650



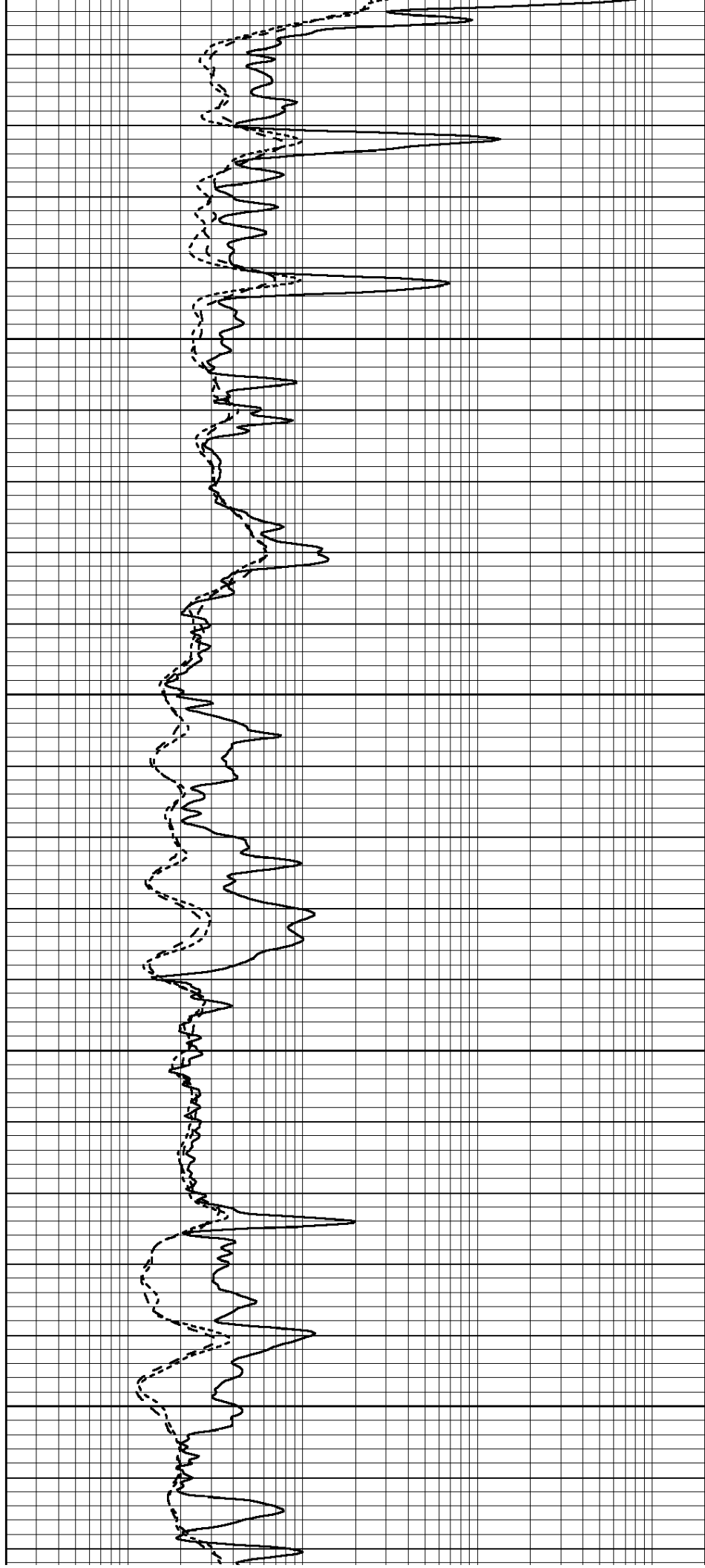


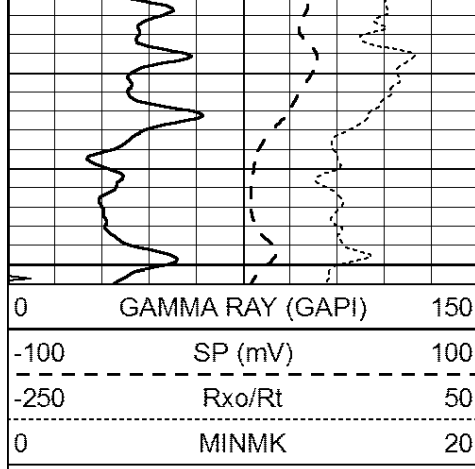
1700

1750

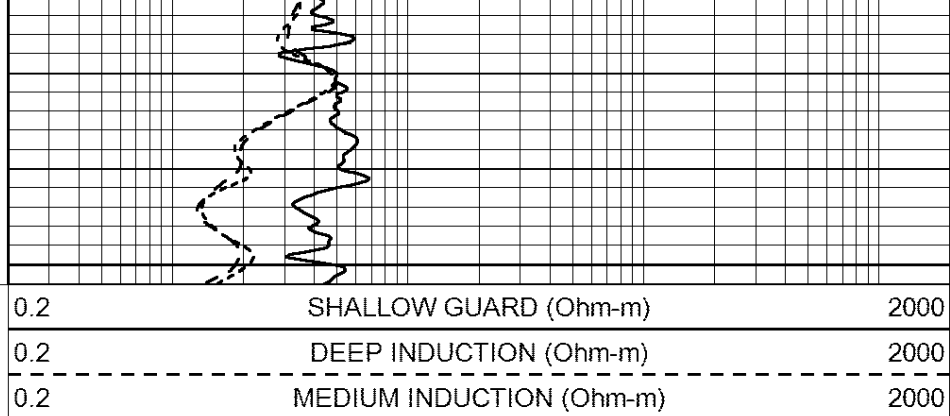
1800

1850





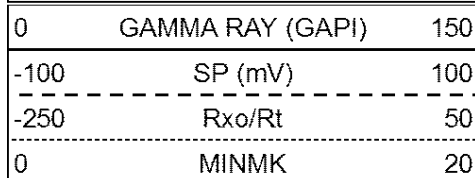
1900



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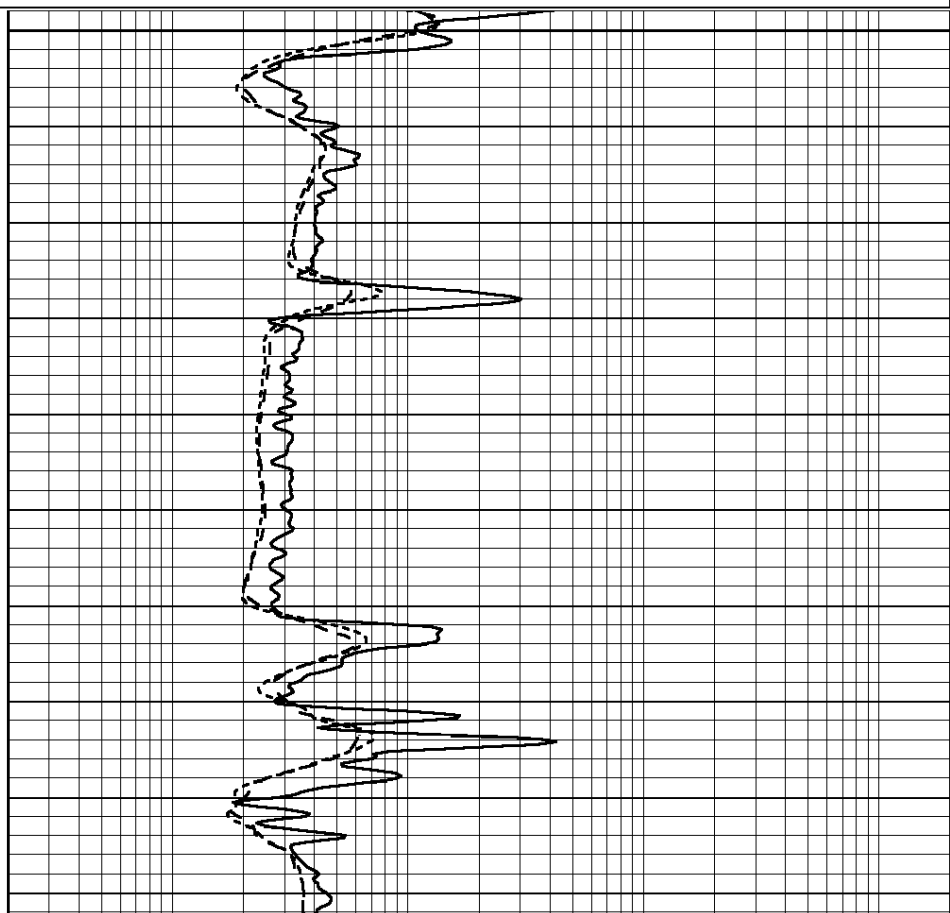
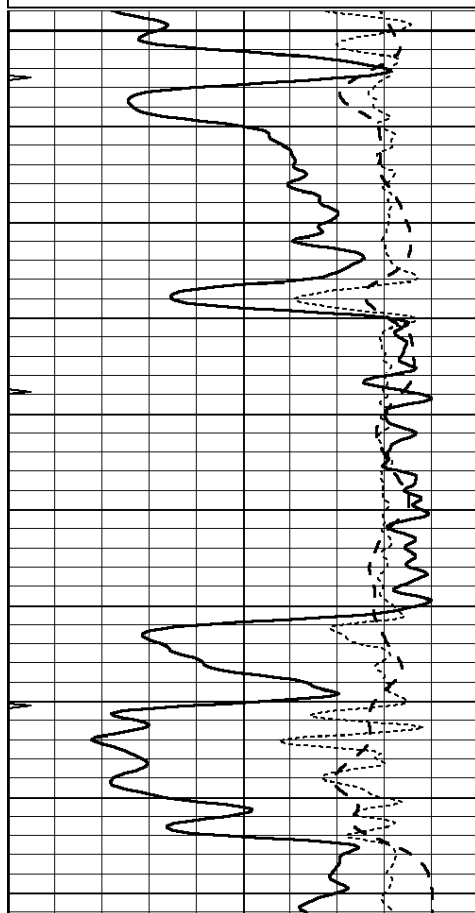
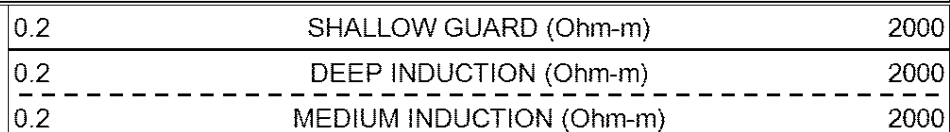
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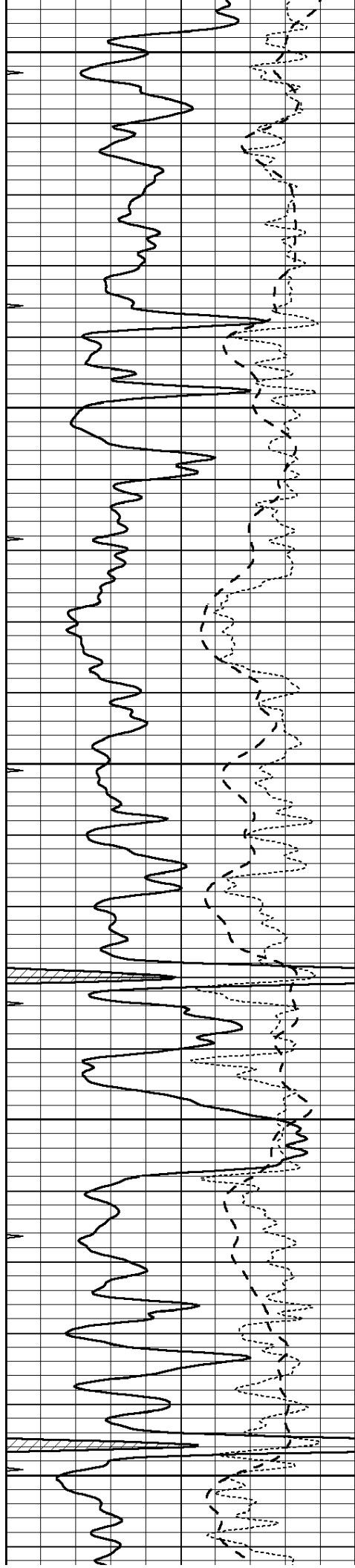
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 Dataset Pathname: pass3.6
 Presentation Format: dil
 Dataset Creation: Sun Jun 24 20:50:18 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240



2700

2750





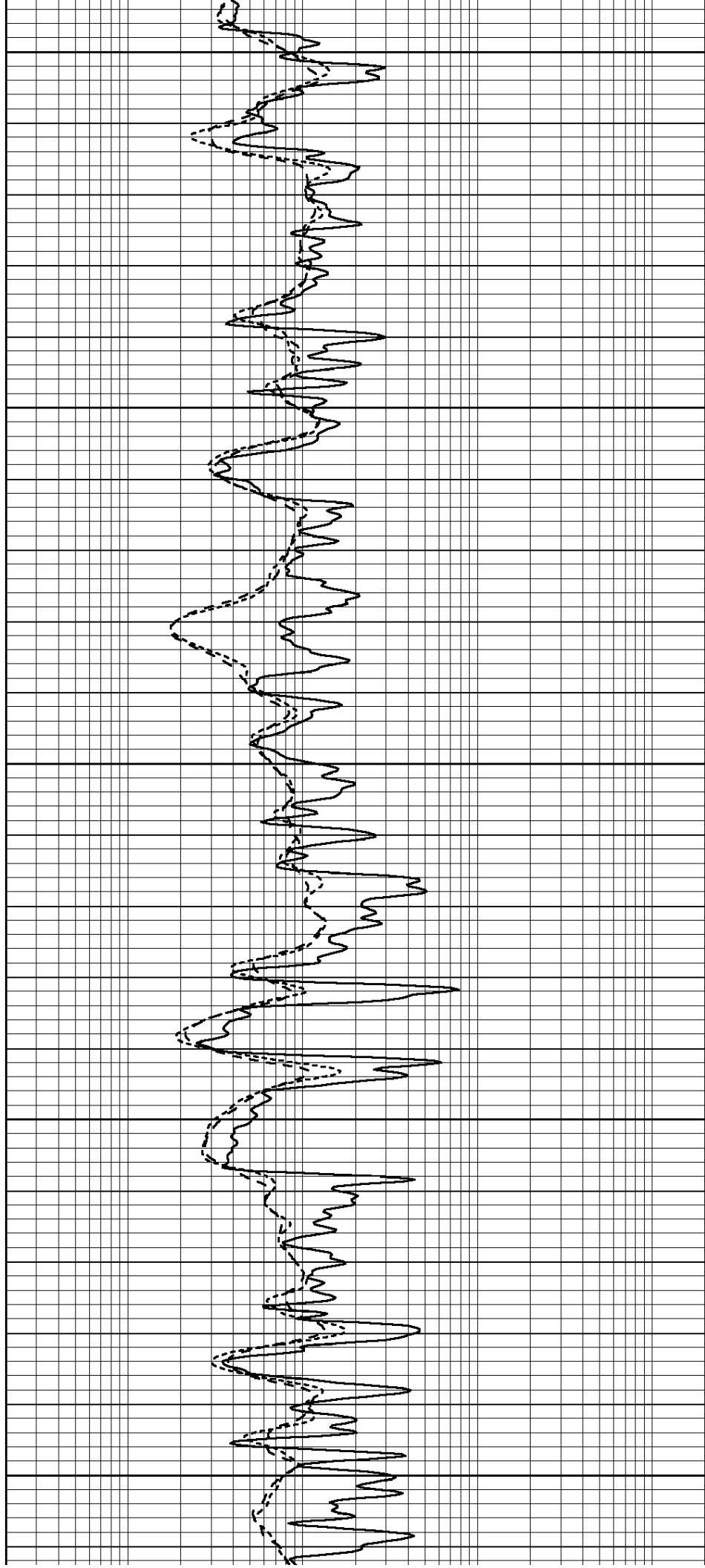
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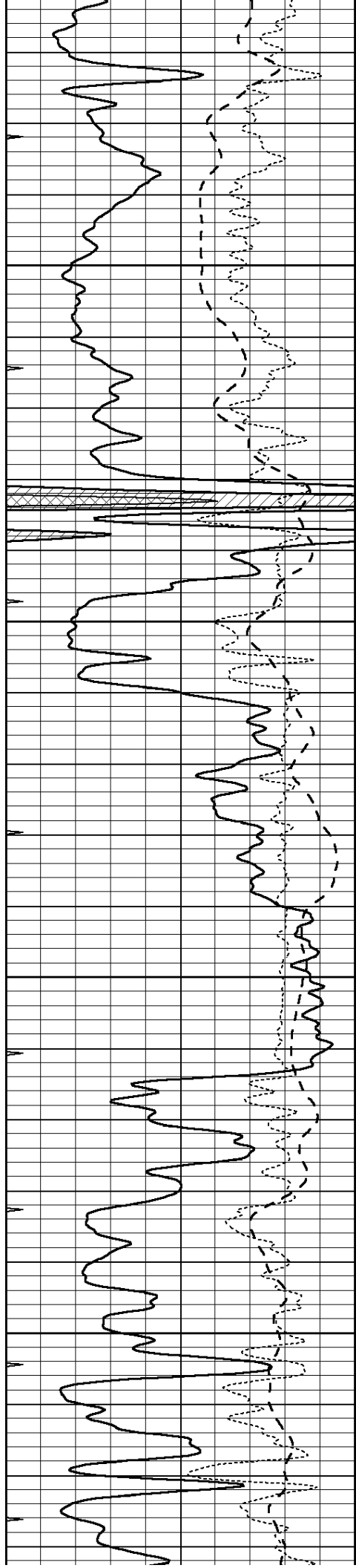
2850

2900

2950

3000



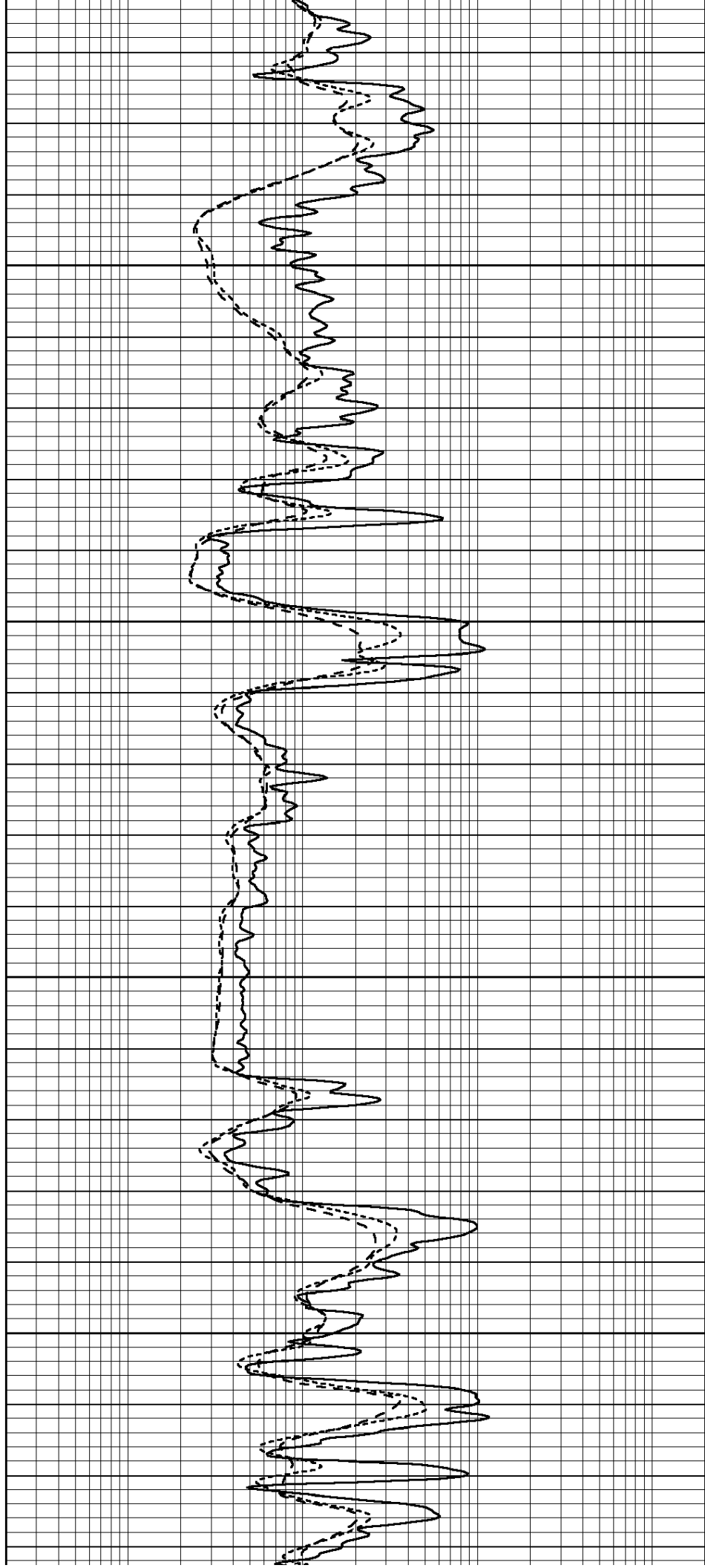


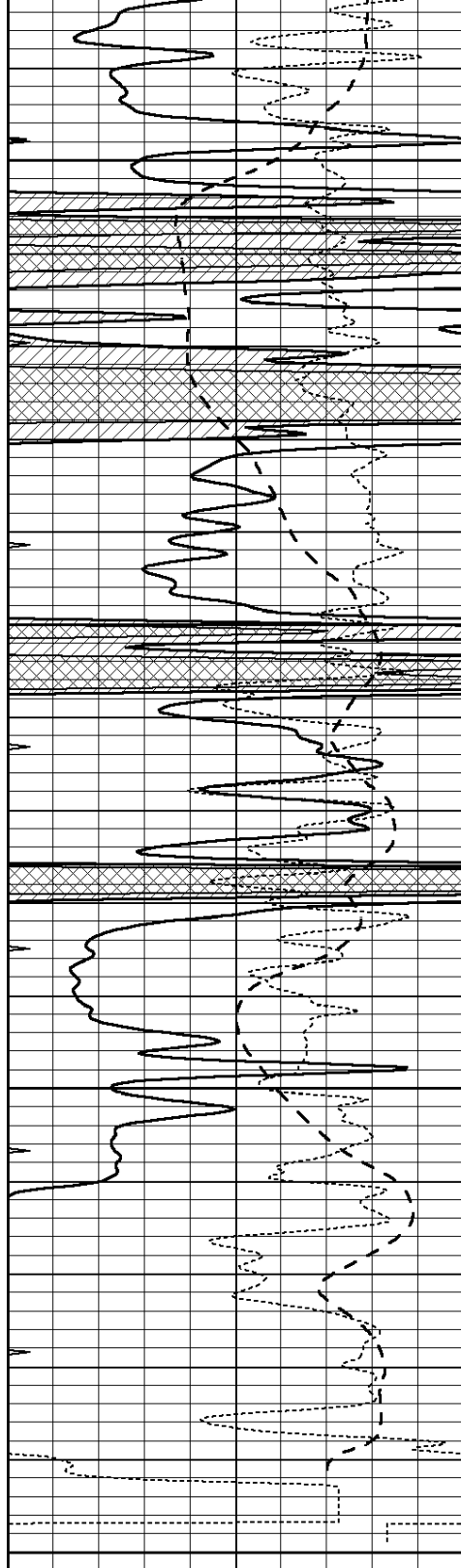
3050

3100

3150

3200





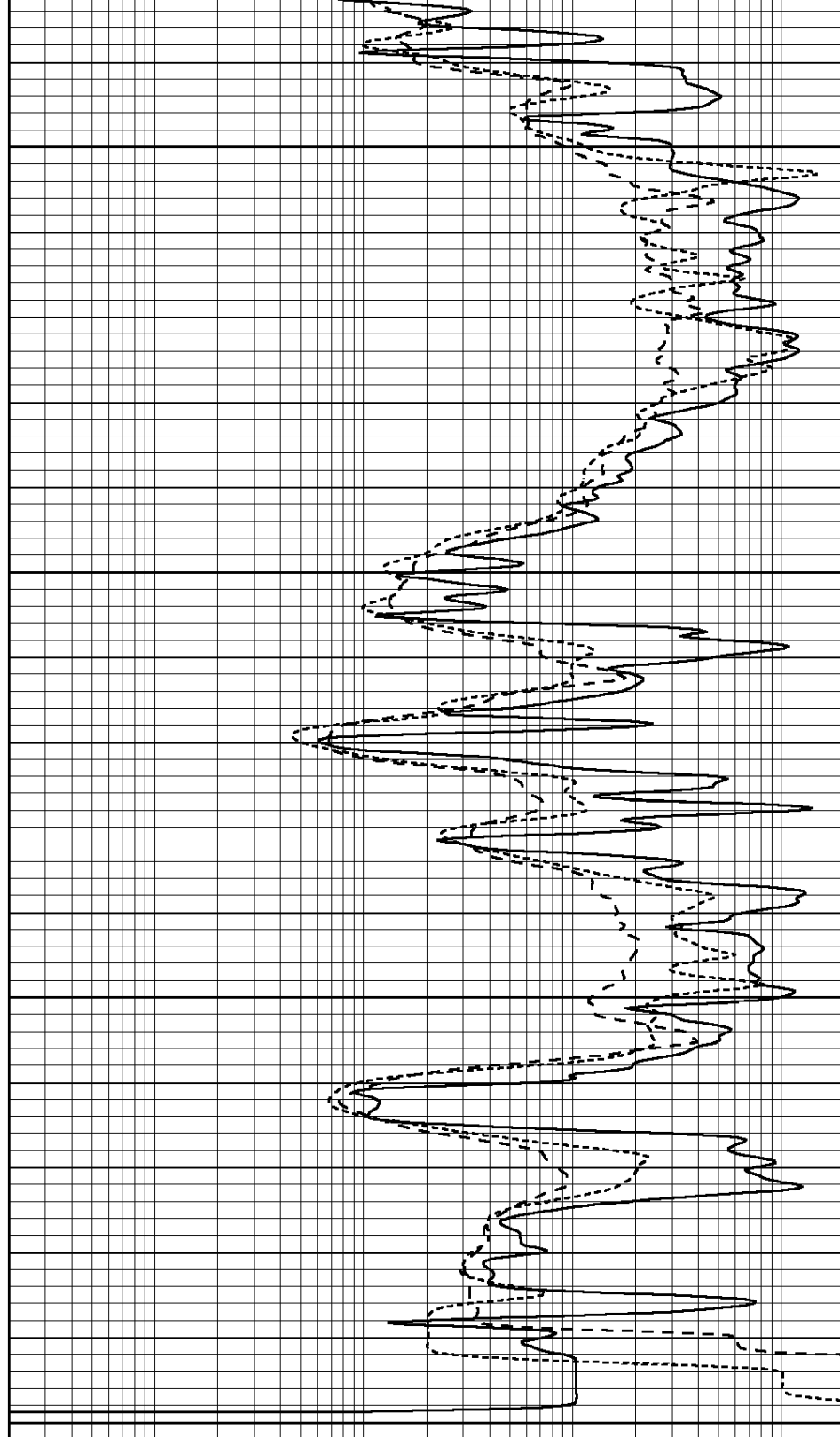
3250

3300

3350

3400

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

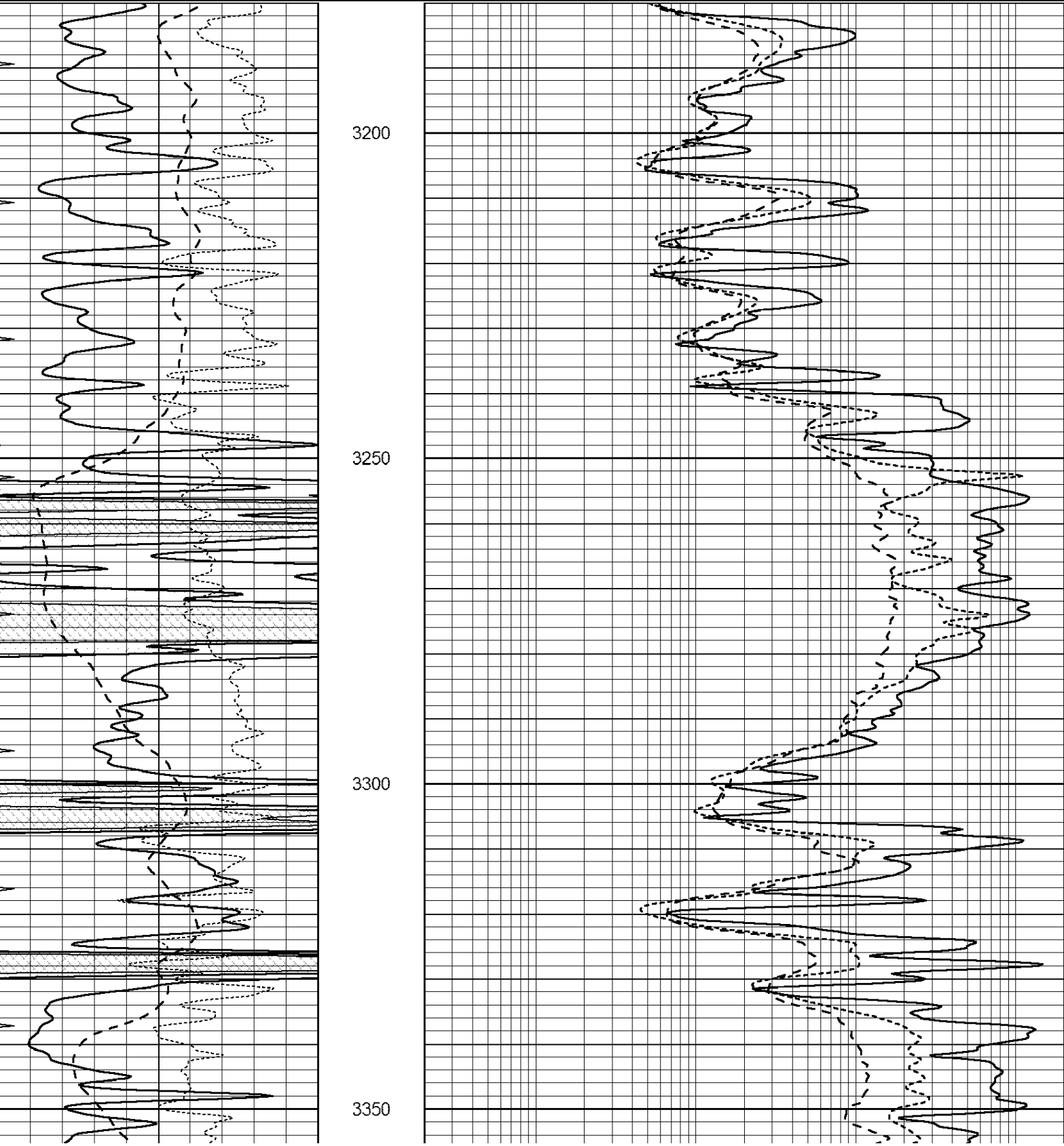


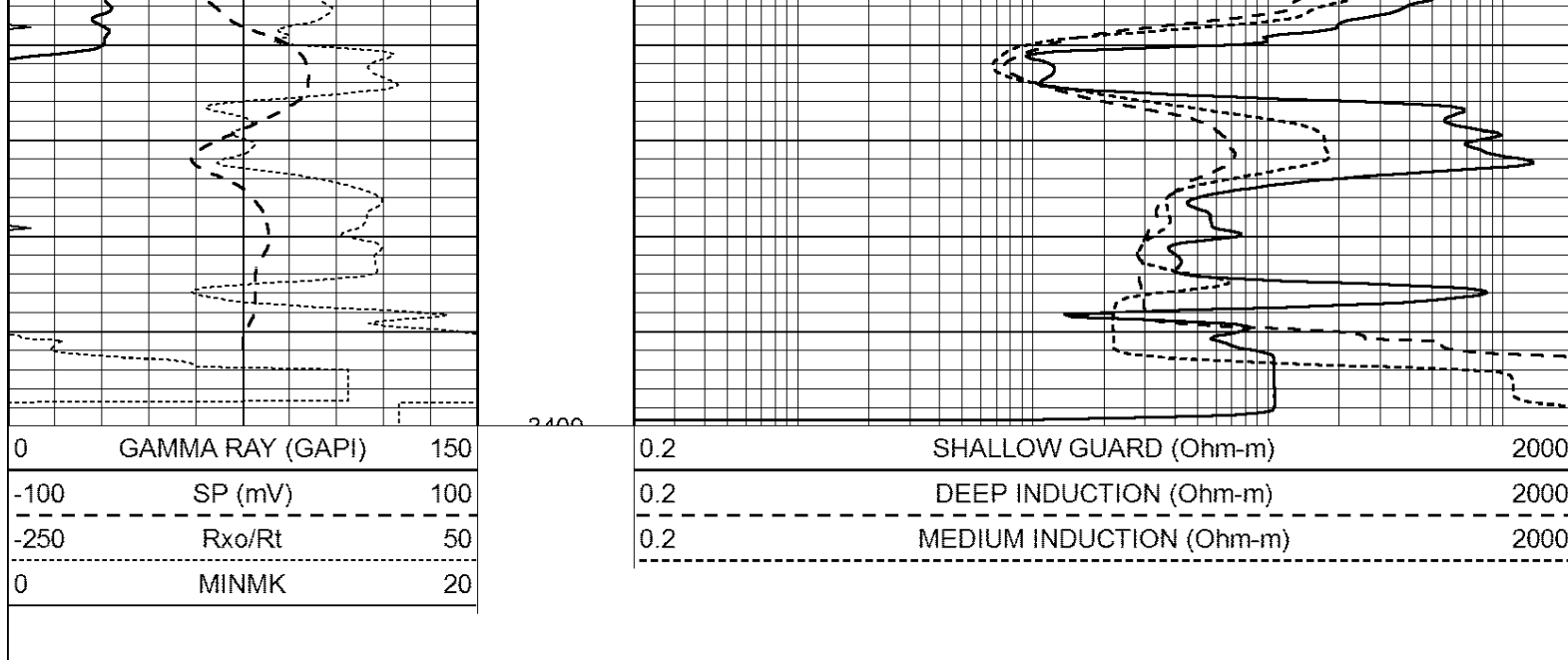
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REPEAT SECTION

Database File: 409144ddn.db
Dataset Pathname: pass2.5
Presentation Format: dil
Dataset Creation: Sun Jun 24 20:25:54 2012 by Calc Open-Cased 110302
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			





Calibration Report	
Database File:	409144ddn.db
Dataset Pathname:	pass3.6
Dataset Creation:	Sun Jun 24 20:50:18 2012 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model:	DIL4-GEAR
Performed:	Sun Jun 24 18:53:50 2012

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.008	0.666	V	0.000	400.000	mmho/m	570.000	0.000
Medium	-0.003	0.769	V	0.000	462.500	mmho/m	560.000	0.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.013	0.651	V	0.000	400.000	mmho/m	627.541	-8.365
Medium	0.020	0.754	V	0.000	462.500	mmho/m	630.311	-12.549

Litho Density Calibration Report	
Serial: 003N	Model: PRB
Performed Tue Sep 08 14:14:44 2009	

Litho Density Calibration					
	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
Rho		1.7100	2.5900	1.3800	g/cc
Pe			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

Caliper	Readings	Reference

Low Ref	3.4	7.9	
High Ref	5.5	15.0	
	Gain: 3.4		Offset: -3.5
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:		070559	
Tool Model:		OPEN_GR	
Performed:		Wed Jun 20 19:26:40 2012	
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.3000	GAPI/cps	