



SUPERIOR
Hays,
Kansas

**DUAL INDUCTION
LOG**

Company HERMAN L. LOEB, LLC.
Well STOSKOPF #4-28
Field TRAPP
County BARTON
State KANSAS

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Well STOSKOPF #4-28
Field TRAPP
County BARTON
State KANSAS

Location: API # : 15-009-25692-0000
2225' FNL & 2290' FEL
NE - SW - SW - NE
SEC 28 TWP 17S RGE 13W
Permanent Datum GROUND LEVEL Elevation 1962
Log Measured From KELLY BUSHING 9' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
MEL/SONIC
Elevation
K.B. 1971
D.F. 1969
G.L. 1962

Date	5/29/12		
Run Number	ONE		
Depth Driller	3500		
Depth Logger	3500		
Bottom Logged Interval	3498		
Top Log Interval	00		
Casing Driller	8 5/8"@918'		
Casing Logger	918		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,500 PPM	
Density / Viscosity	9.4/49		
pH / Fluid Loss	10.5/10.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.50@76F		
Rmt @ Meas. Temp	1.13@76F		
Rmc @ Meas. Temp	1.80@76F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	1.02@112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	7:30 A.M.		
Maximum Recorded Temperature	112F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KURT TALBOTT		

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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. 1 3/4N. OF DAIRY QUEEN ON BLKTOP, 1/2 E. INTO @ CATTLE GUARD



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MAIN SECTION

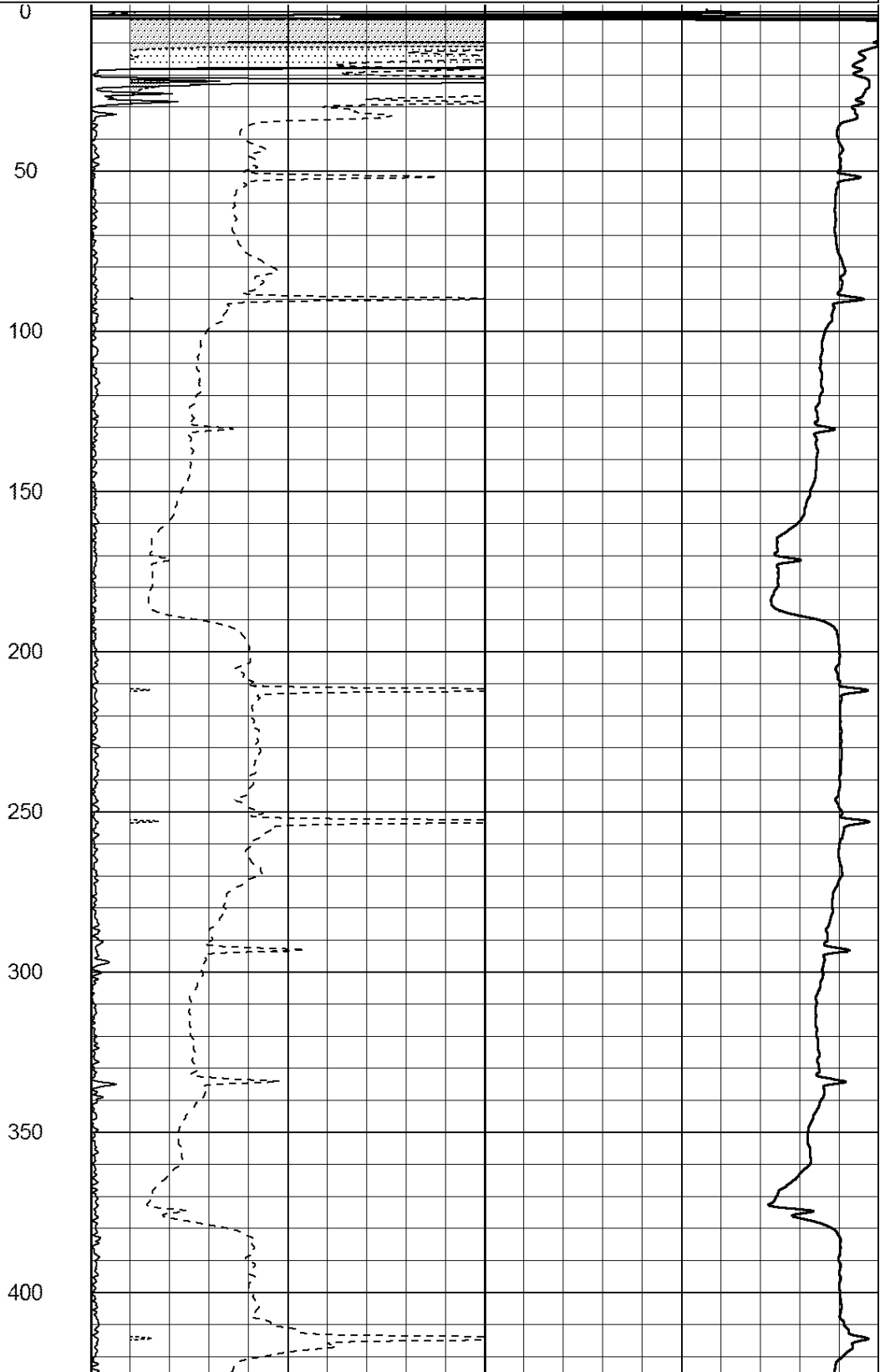
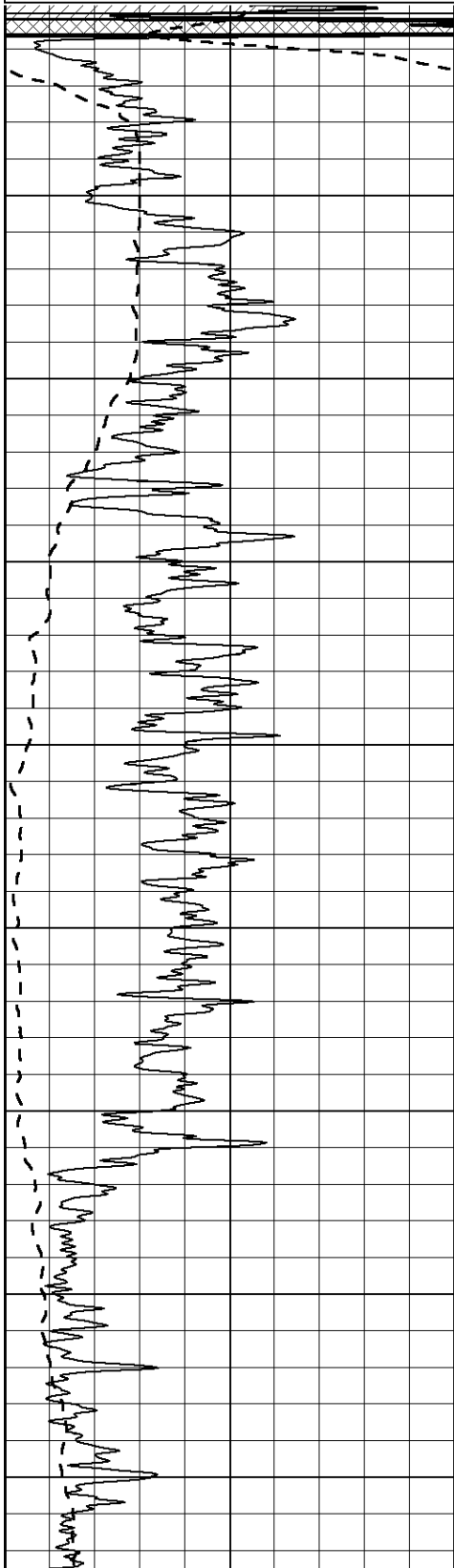
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 Presentation Format: dil2
 Dataset Creation: Tue May 29 08:56:46 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:600

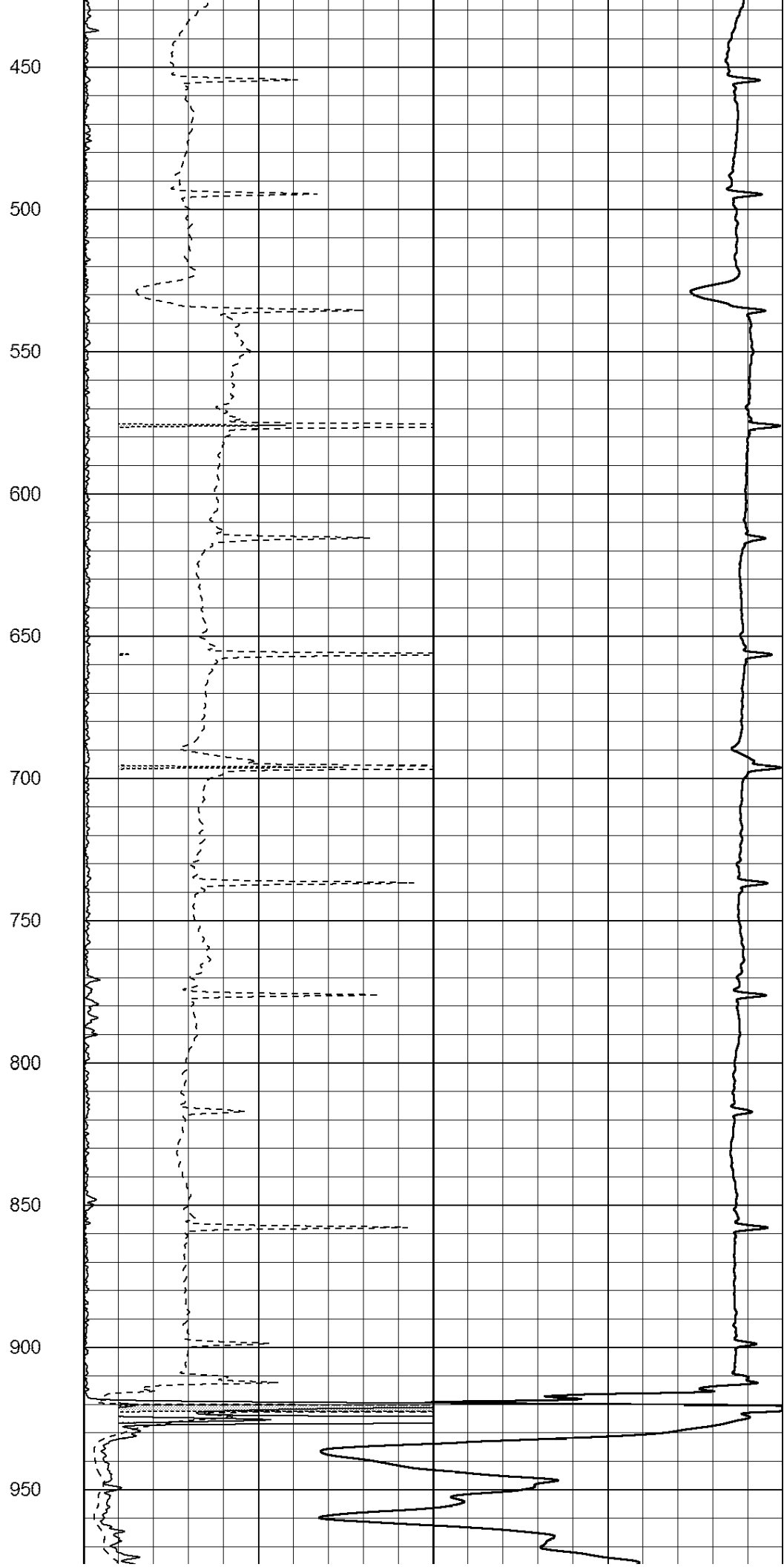
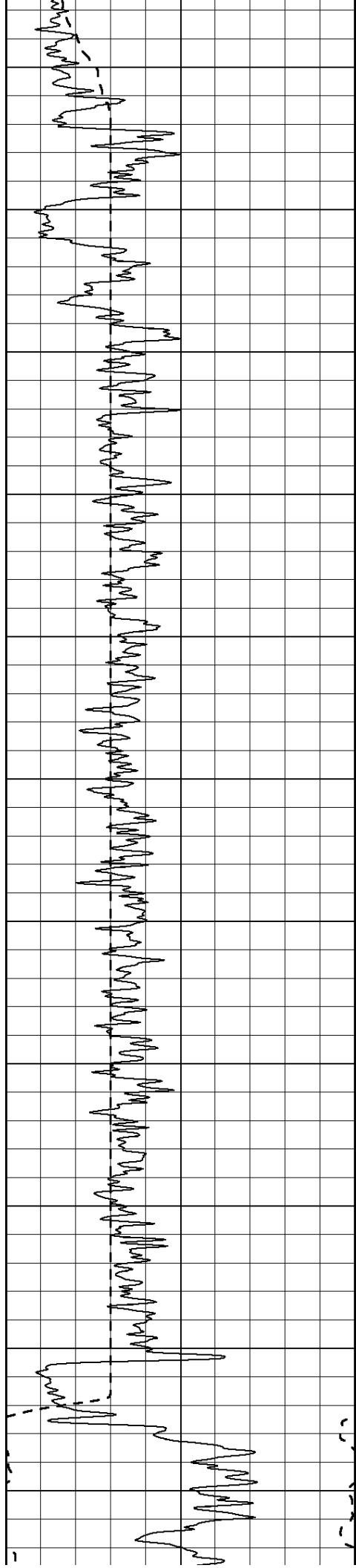
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-100	SP (mV)	100

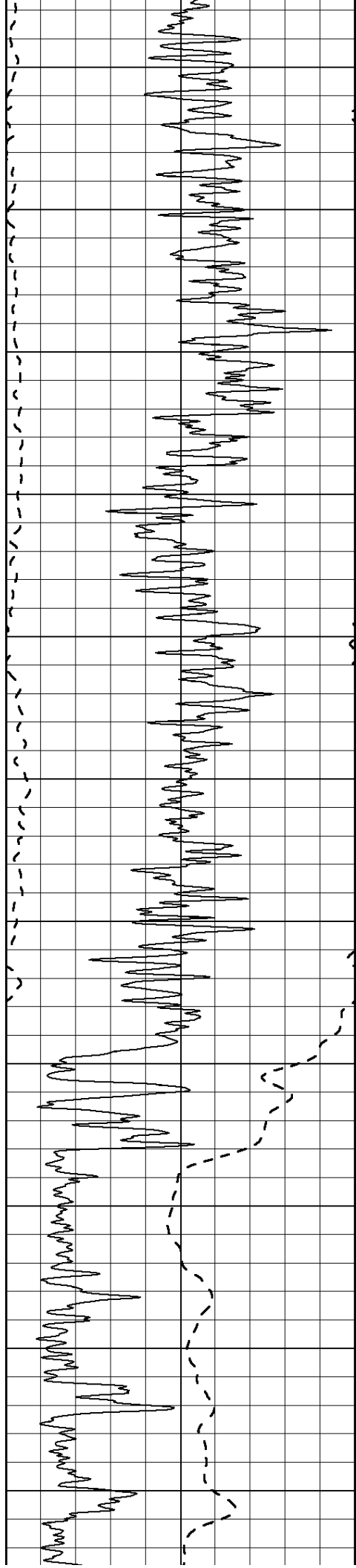
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

1000	CILD (mmho/m)	0
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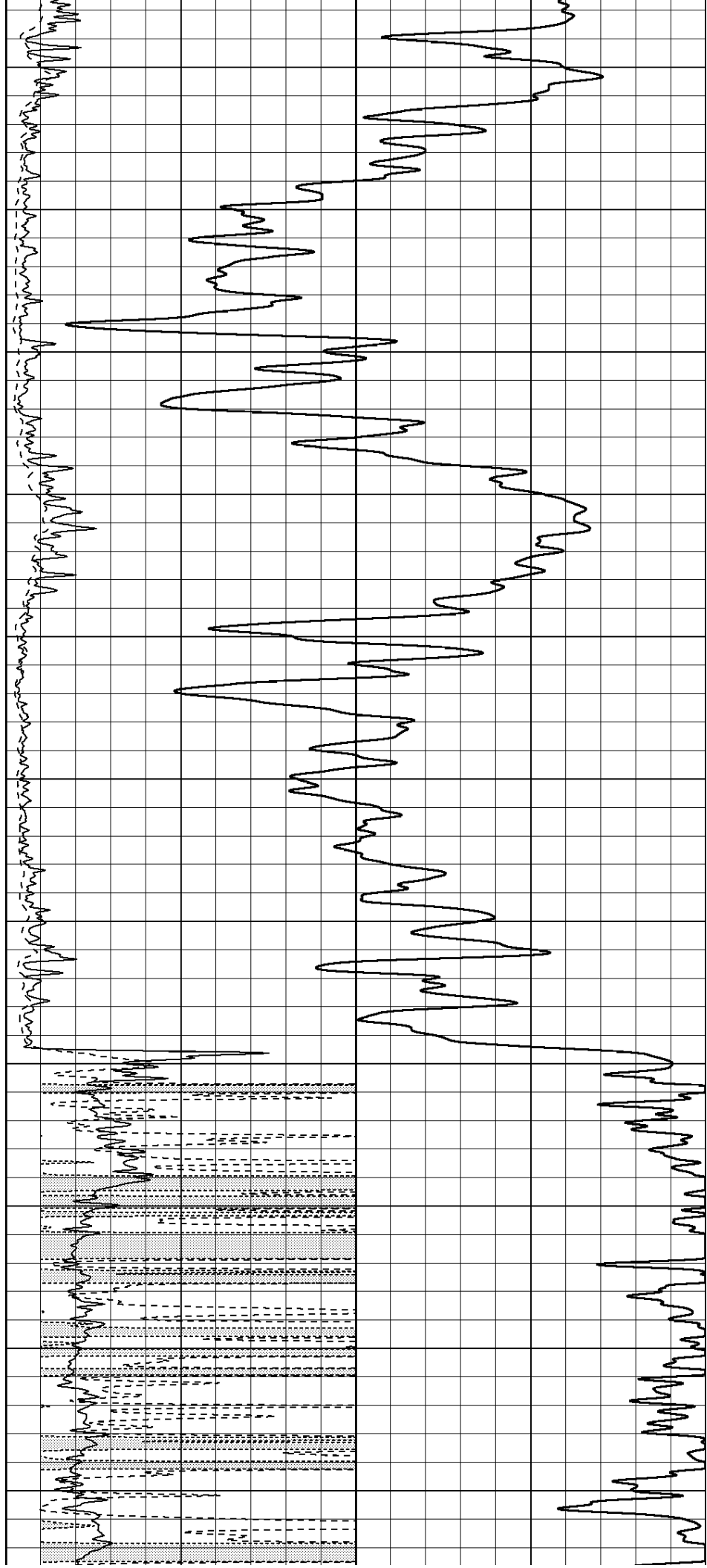
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50	RLL3 X10 (Ohm-m)	500

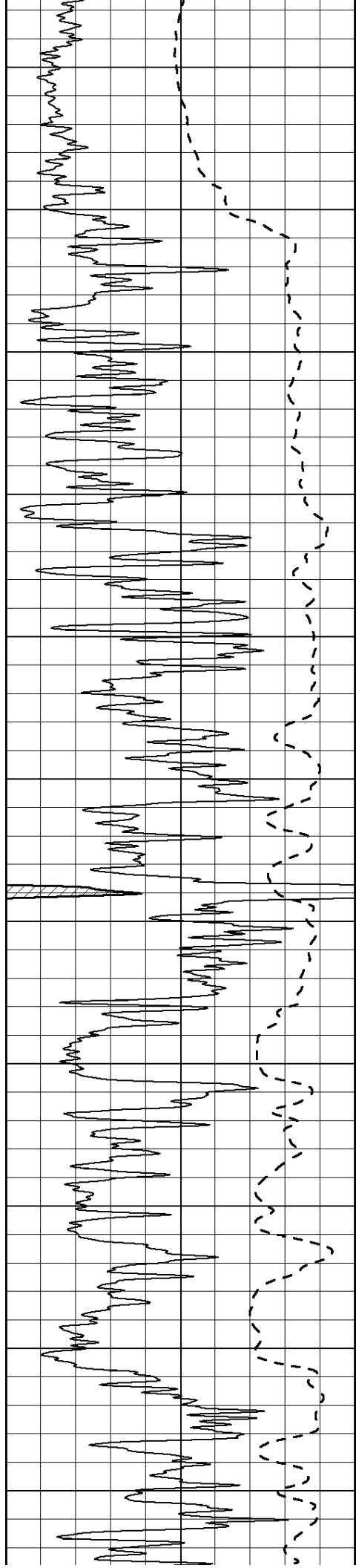






1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





1550

1600

1650

1700

1750

1800

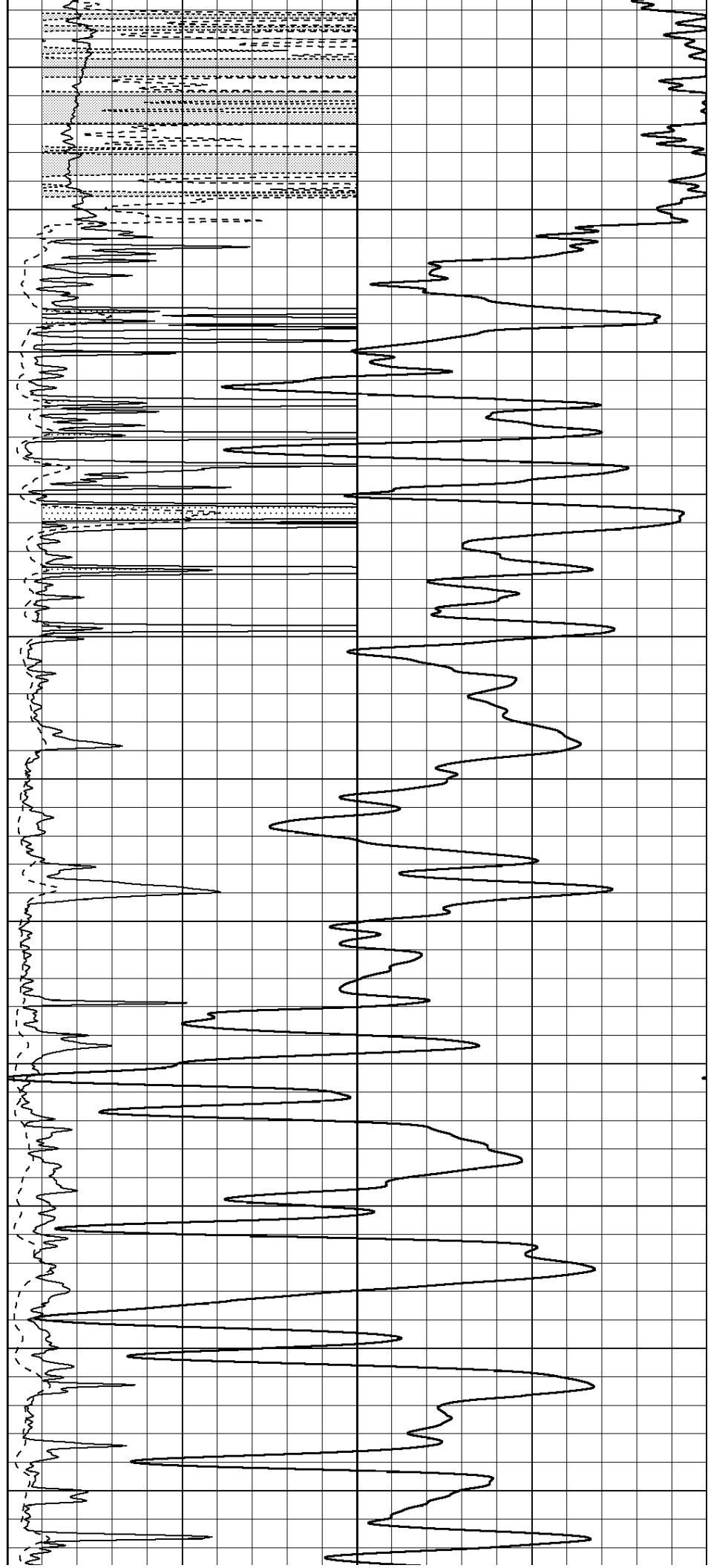
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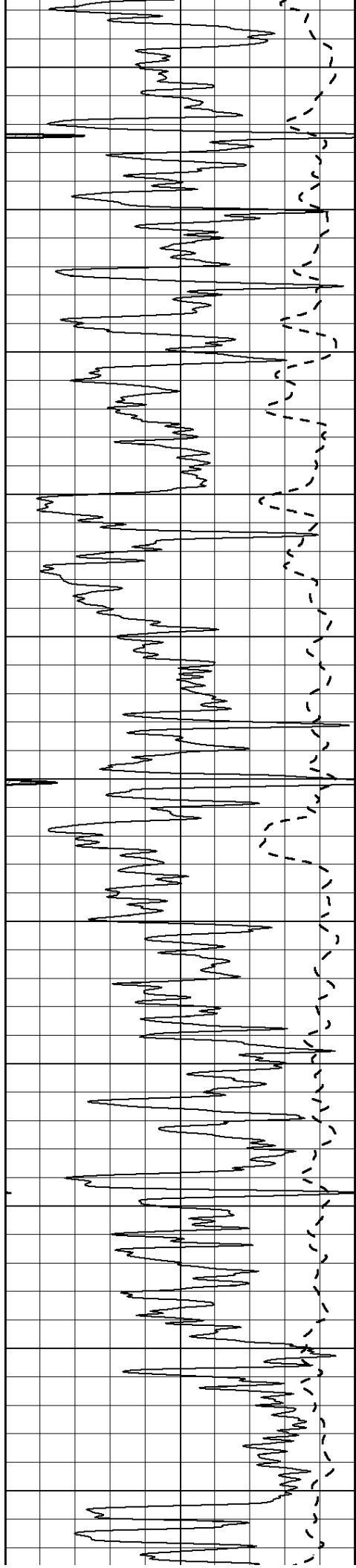
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

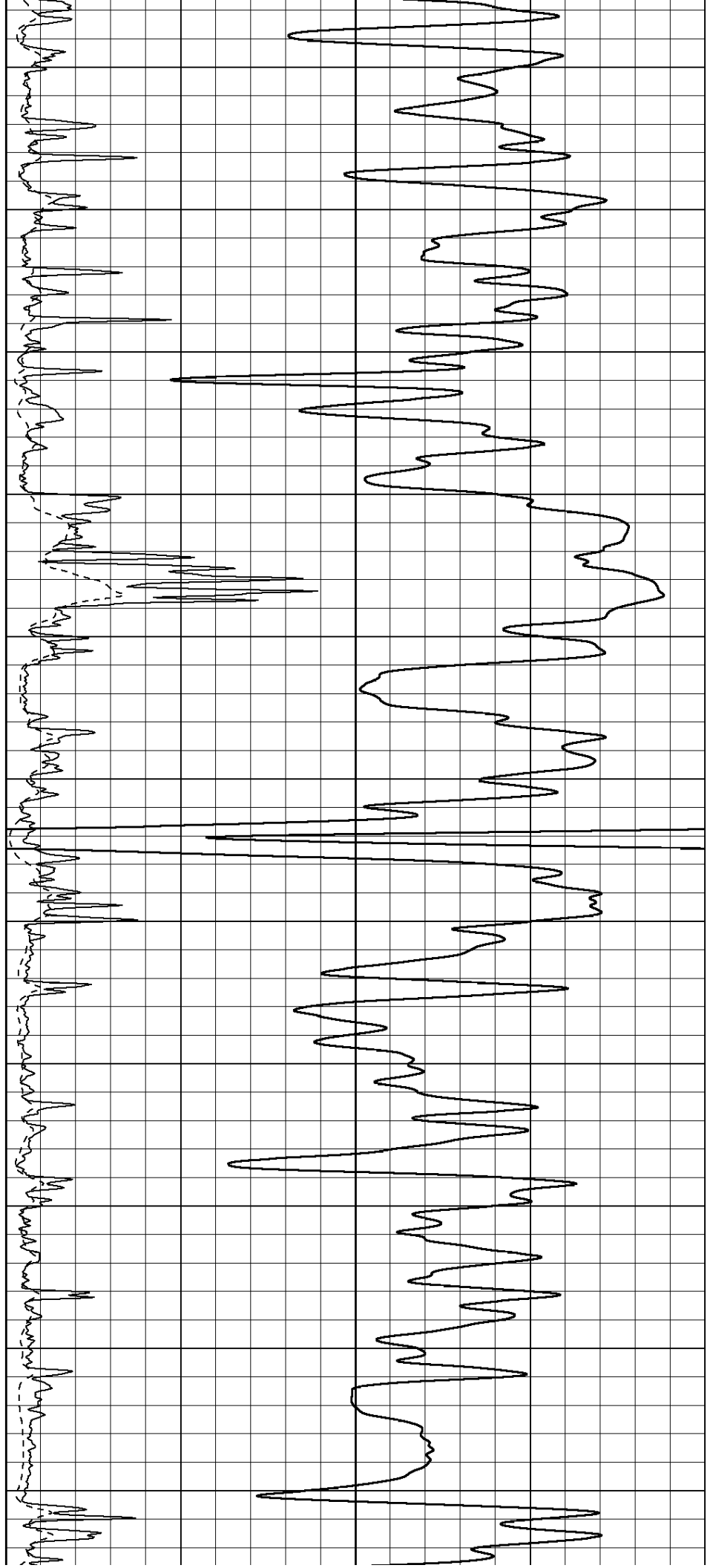
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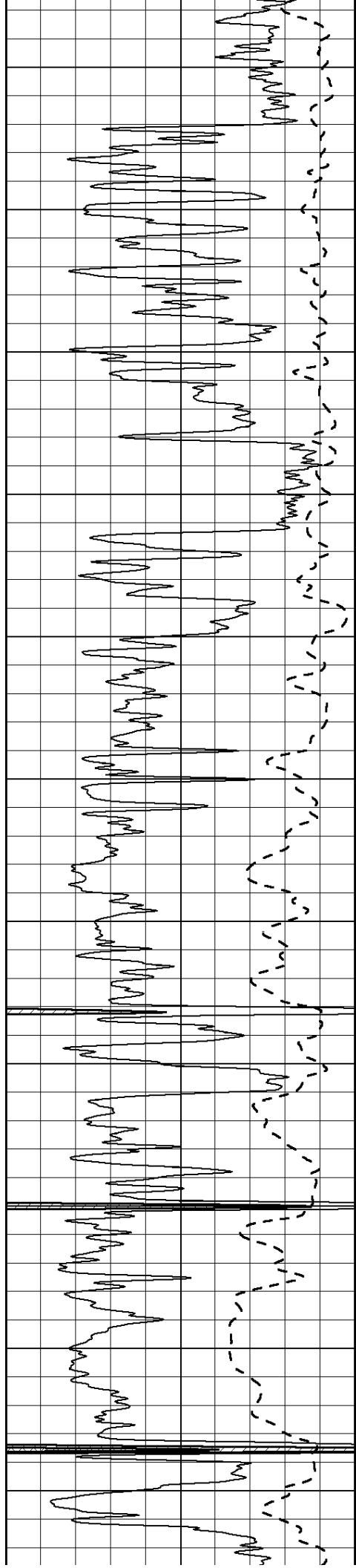
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2500

2550

2600





2650

2700

2750

2800

2850

2900

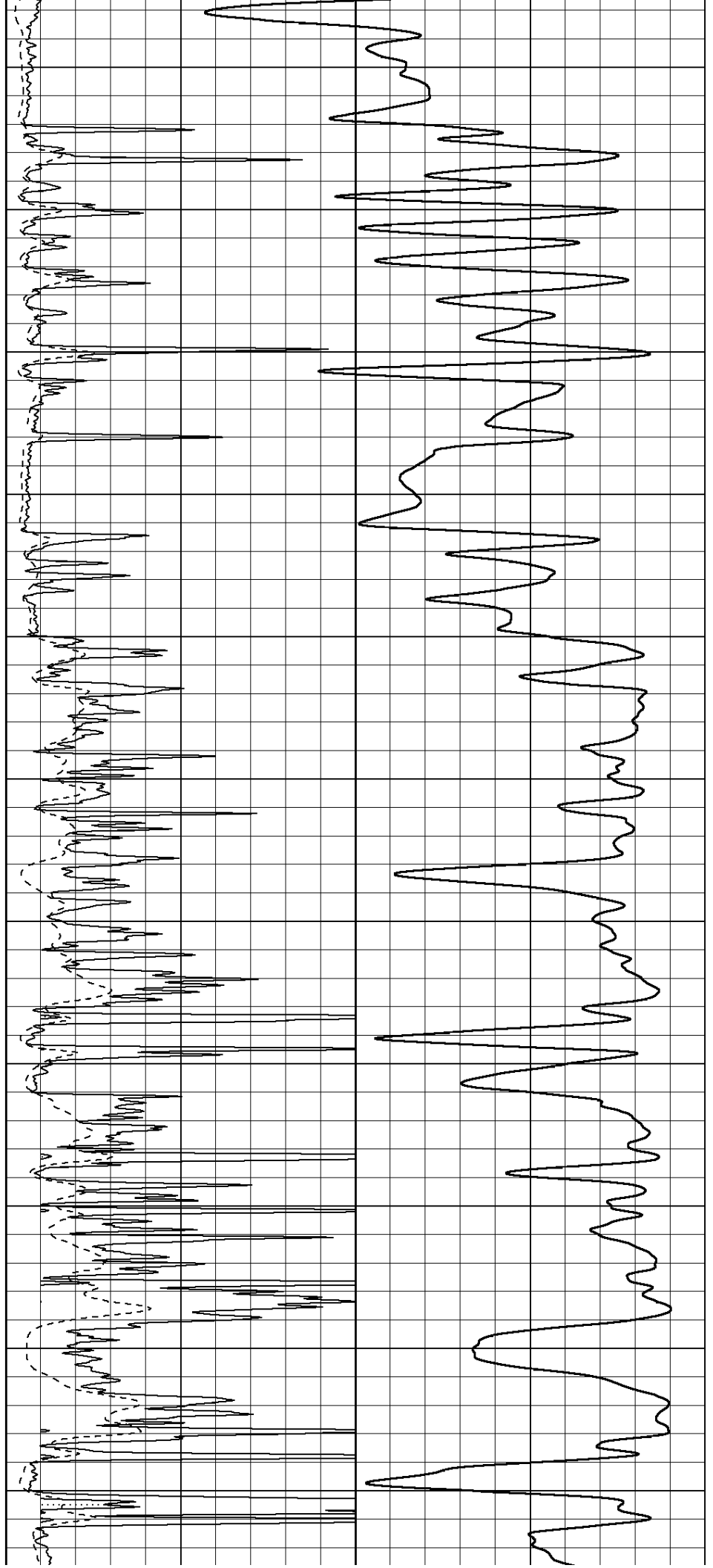
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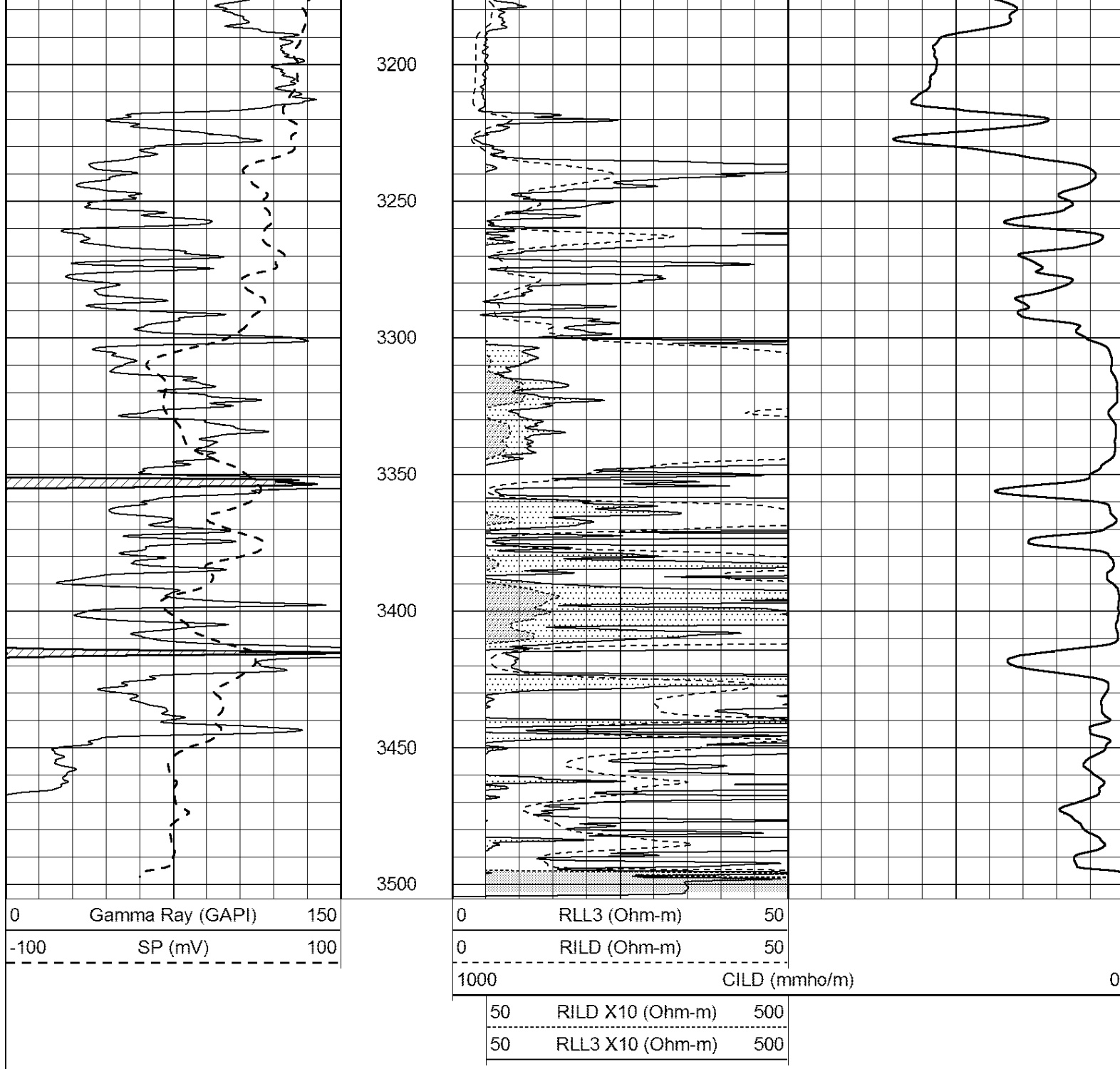
3000

3050

3100

3150





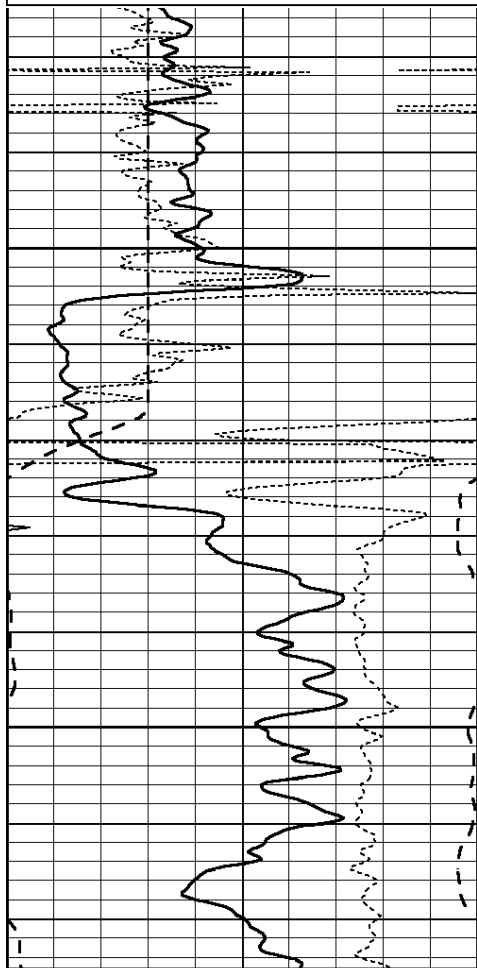
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ANHYDRITE

Database File: 409127ddn.db
 Dataset Pathname: pass3.3
 Presentation Format: dil
 Dataset Creation: Tue May 29 08:58:42 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

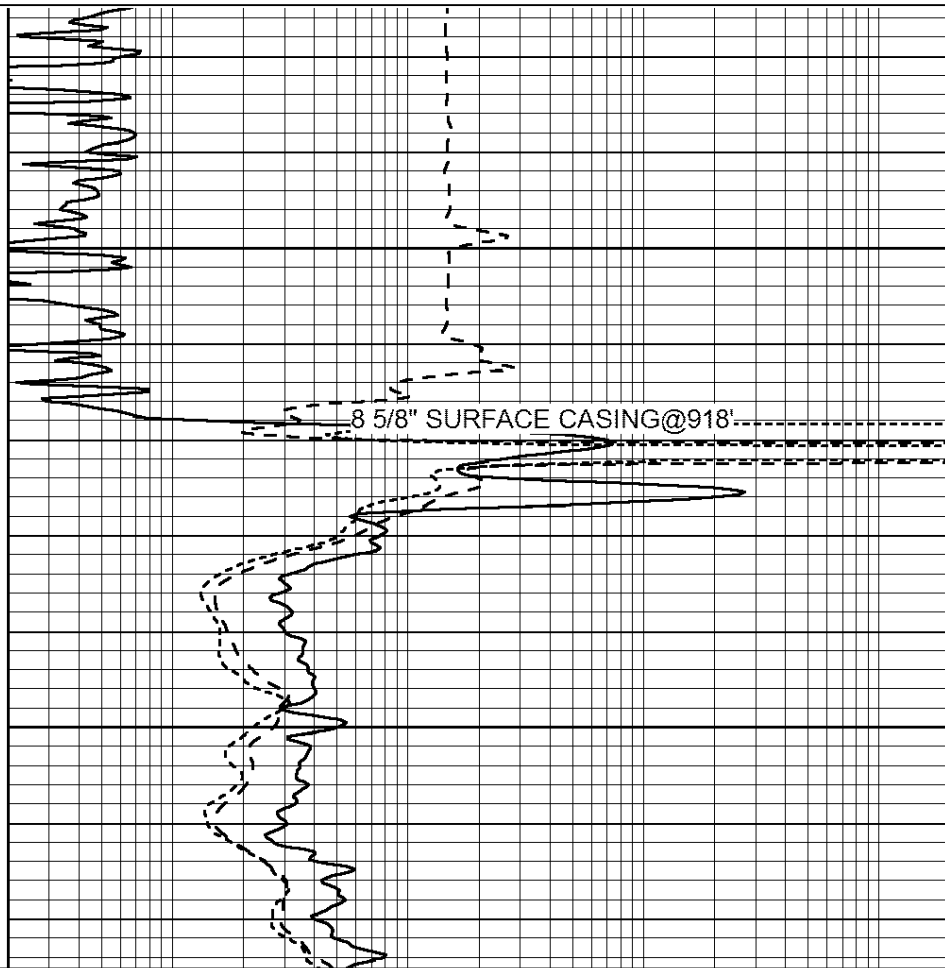
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



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

900

950



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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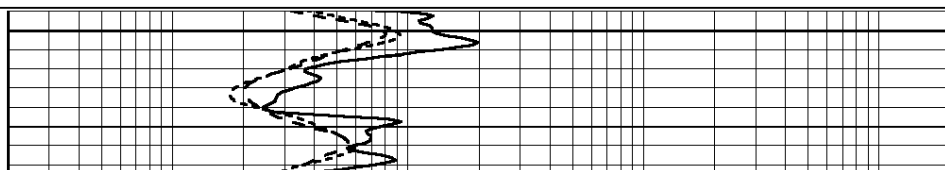
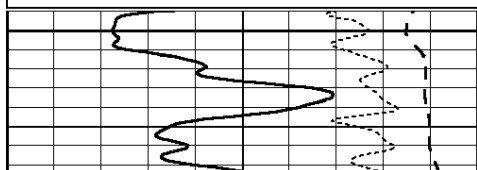
MAIN SECTION

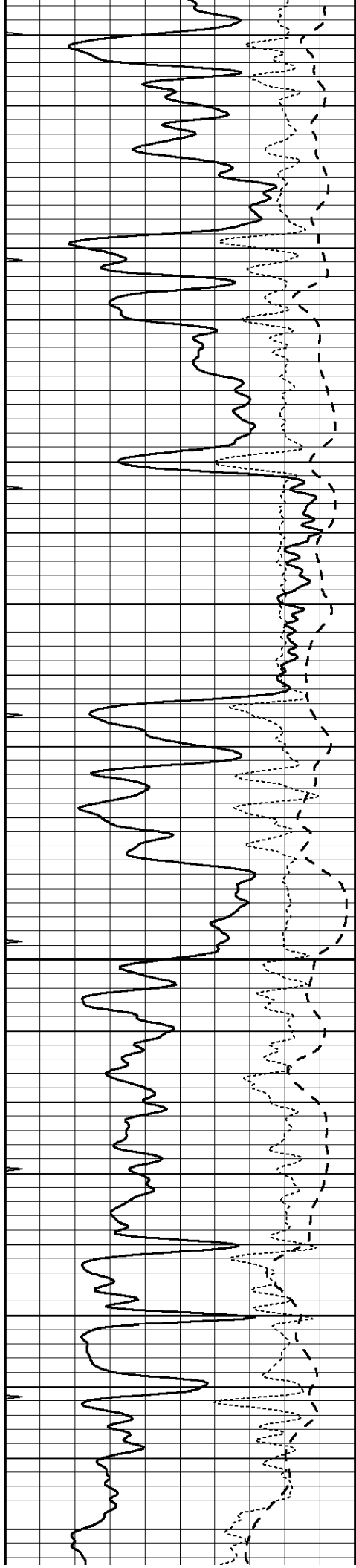
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 Dataset Pathname: pass3.2
 Presentation Format: dil
 Dataset Creation: Tue May 29 08:56:46 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

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

2700



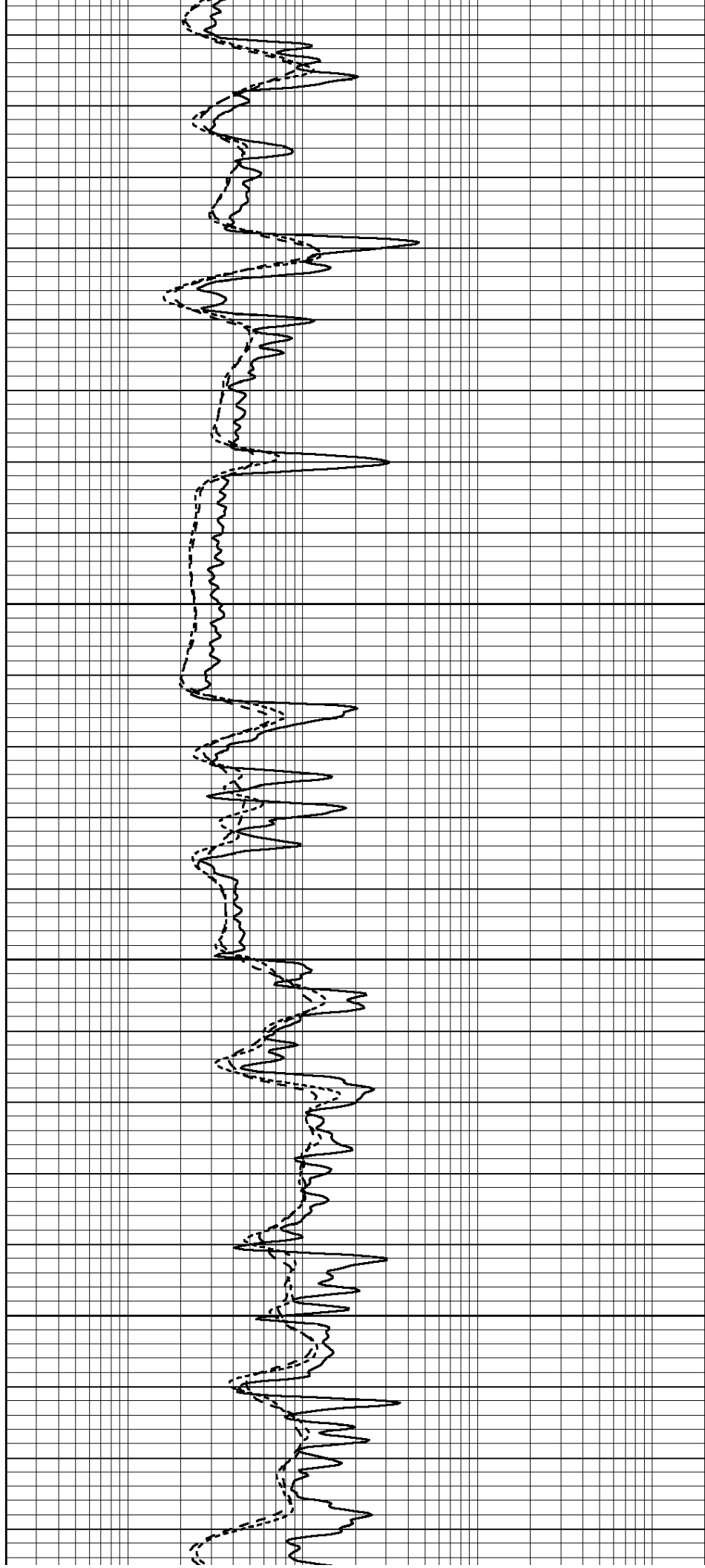


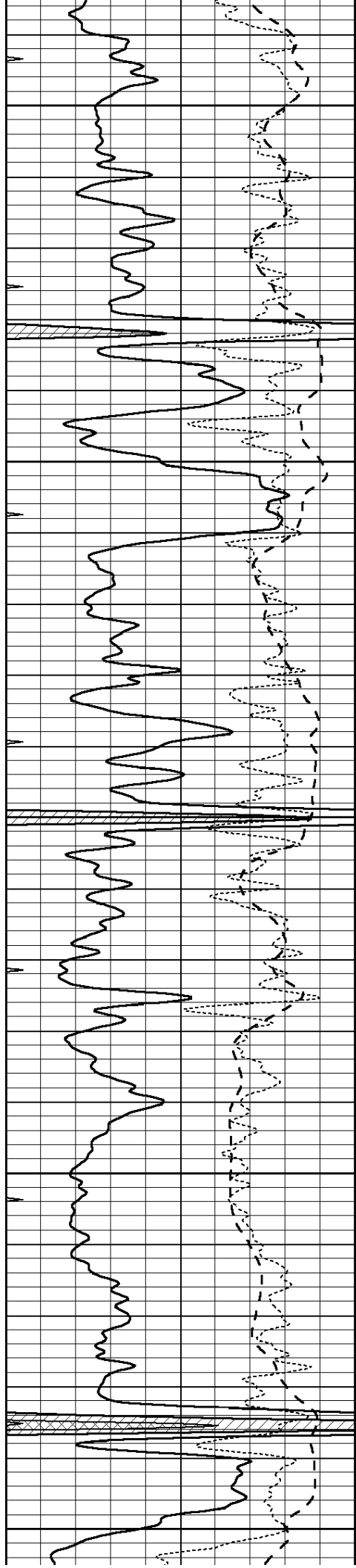
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2800

2850

2900





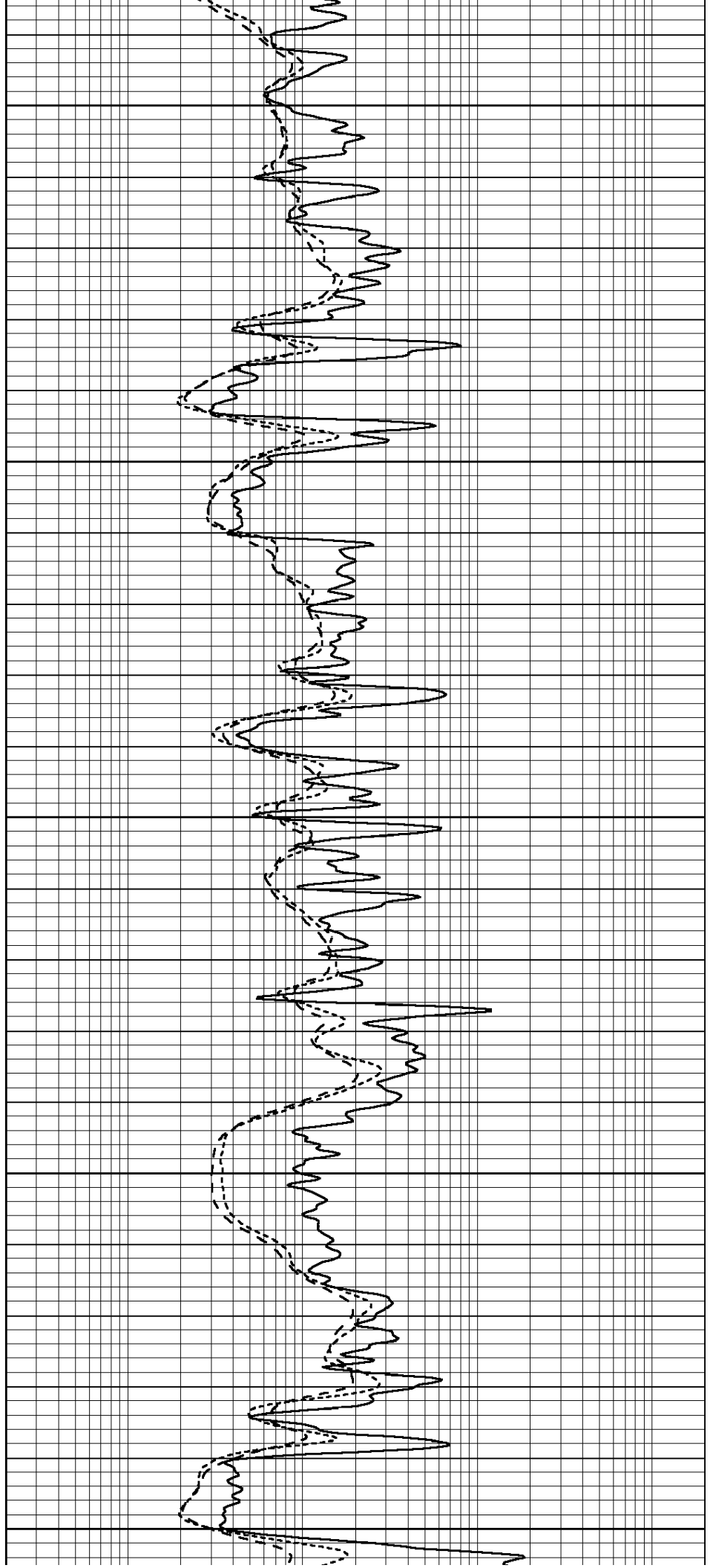
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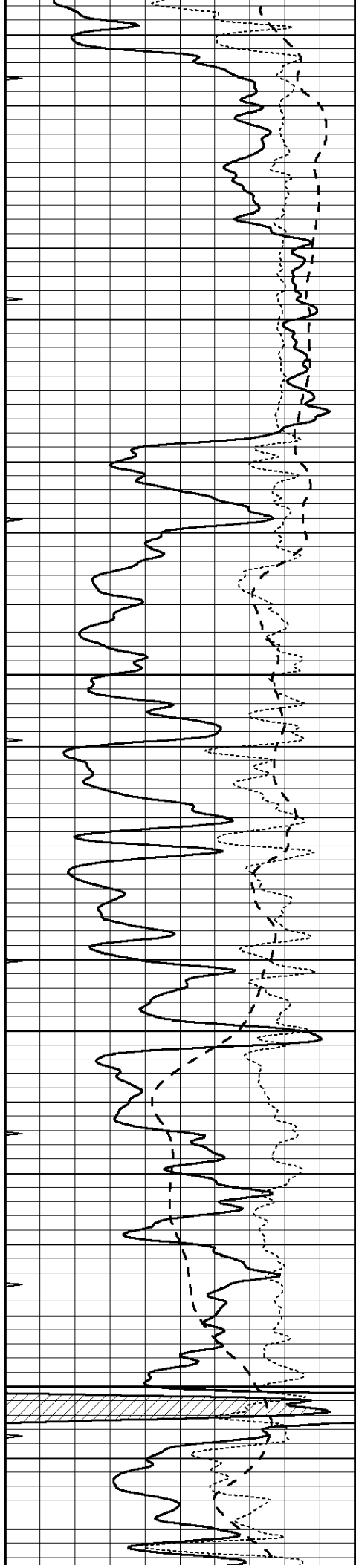
3000

3050

3100

3150



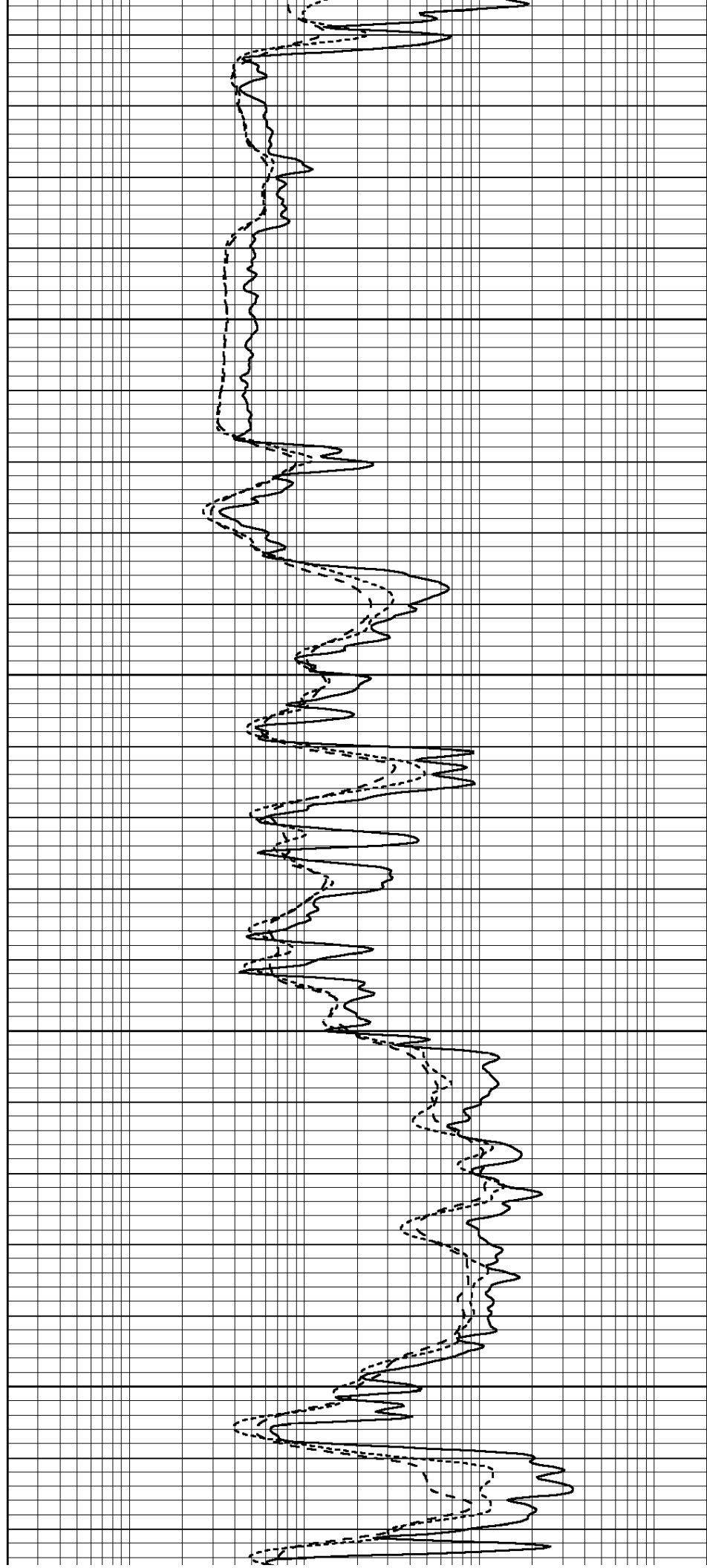


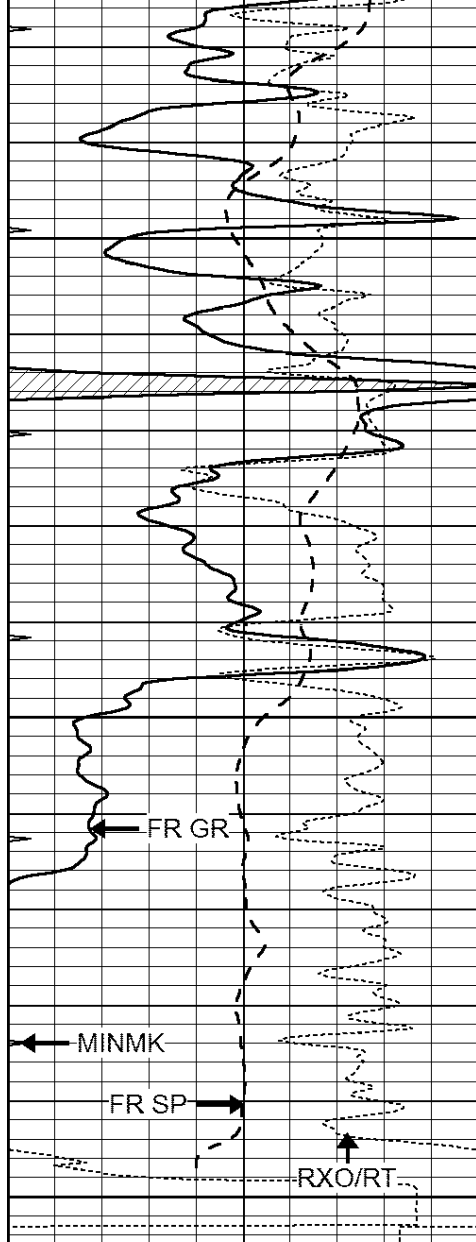
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3250

3300

3350



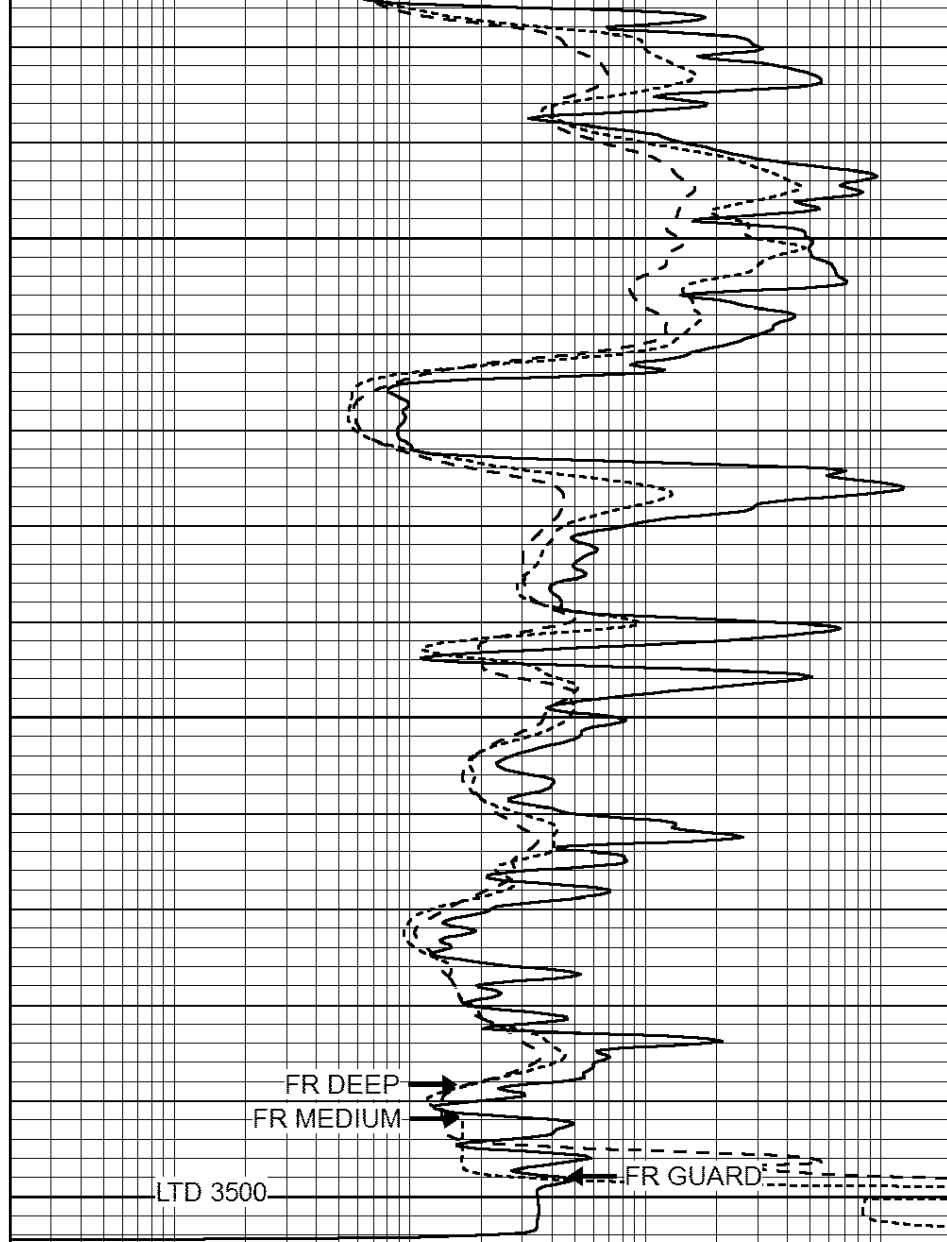


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

3400

3450

3500



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



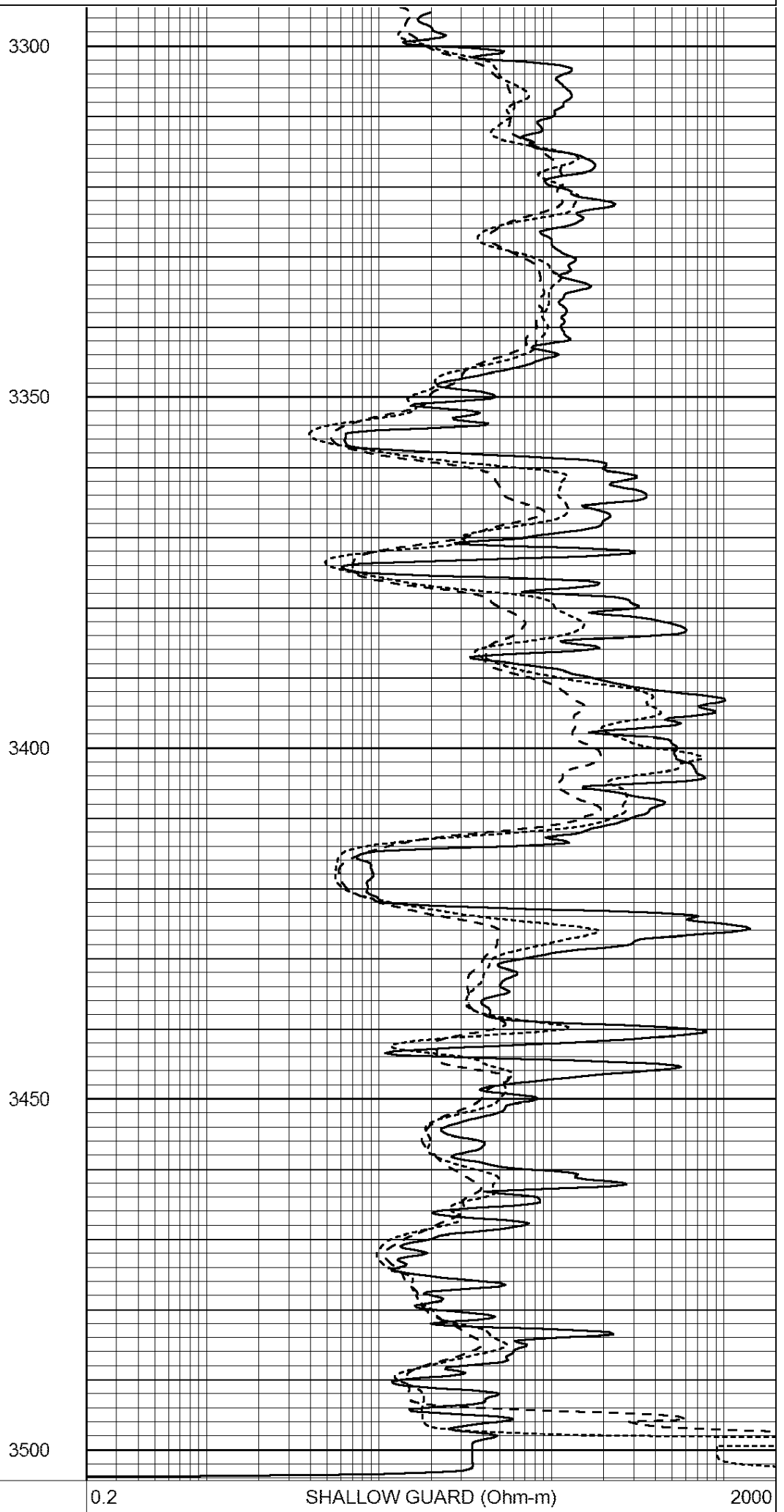
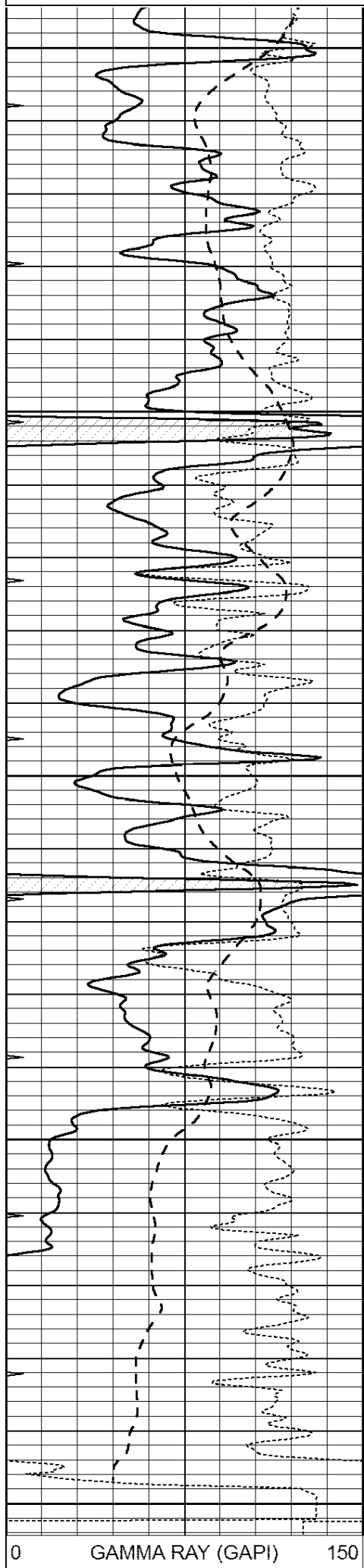
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REPEAT SECTION

Database File: 409127ddn.db
 Dataset Pathname: pass2.4
 Presentation Format: dil
 Dataset Creation: Tue May 29 07:54:16 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



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

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

Calibration Report

Database File: 409127ddn.db
 Dataset Pathname: pass3.2
 Dataset Creation: Tue May 29 08:56:46 2012 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL4-GEAR
 Performed: Tue May 29 07:54:53 2012

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.008	0.666	V	0.000	400.000	mmho/m	570.000	-2.000
Medium	-0.003	0.769	V	0.000	462.500	mmho/m	560.000	-3.000
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	7.8	
High Ref	5.5	15.0	
	Gain: 3.4		Offset: -3.8

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:	Tue May 22 19:38:45 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps