



SUPERIOR
Hays,
Kansas

**DUAL INDUCTION
LOG**

Company	MAI OIL OPERATIONS, INC.	Company	MAI OIL OPERATIONS, INC.
Well	HABERER "A" #4	Well	HABERER "A" #4
Field	ELASSER	Field	ELASSER
County	RUSSELL	County	RUSSELL
State	KANSAS	State	KANSAS
Location:	API # : 15-167-23759-0000	Other Services	CDL/CNL MEL
Permanent Datum	GROUND LEVEL	Elevation	1628
Log Measured From	KELLY BUSHING 8' A.G.L.	K.B.	1636
Drilling Measured From	KELLY BUSHING	D.F.	1634
	SEC 14 TWP 12S RGE 15W	G.L.	1628

Date	1/24/12
Run Number	ONE
Depth Driller	3160
Depth Logger	3160
Bottom Logged Interval	3158
Top Log Interval	00
Casing Driller	8 5/8"@705'
Casing Logger	707
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/54
pH / Fluid Loss	10.0/7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.400@70F
Rmt @ Meas. Temp	.300@70F
Rmc @ Meas. Temp	.480@70F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.259@108F
Time Circulation Stopped	1.5 HOURS
Time Logger on Bottom	8:45 P.M.
Maximum Recorded Temperature	108F
Equipment Number	4010
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	JOSH AUSTIN
	ALLEN BANGERT

<<< Fold Here >>>

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
 GORHAM, KS. 1E. ON OLD 40 TO "FAIRPORT BLKTOP", 10N. TO "CANYON RD.", 4 E. & S. & E., N. INTO
 @CATTLE GUARD



SUPERIOR
Hays,
Kansas

MAIN SECTION

Database File: 008146ddn.db
 Dataset Pathname: pass3.5
 Presentation Format: dil2
 Dataset Creation: Tue Jan 24 22:02:14 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:600

0 Gamma Ray (GAPI) 150
 -100 SP (mV) 100

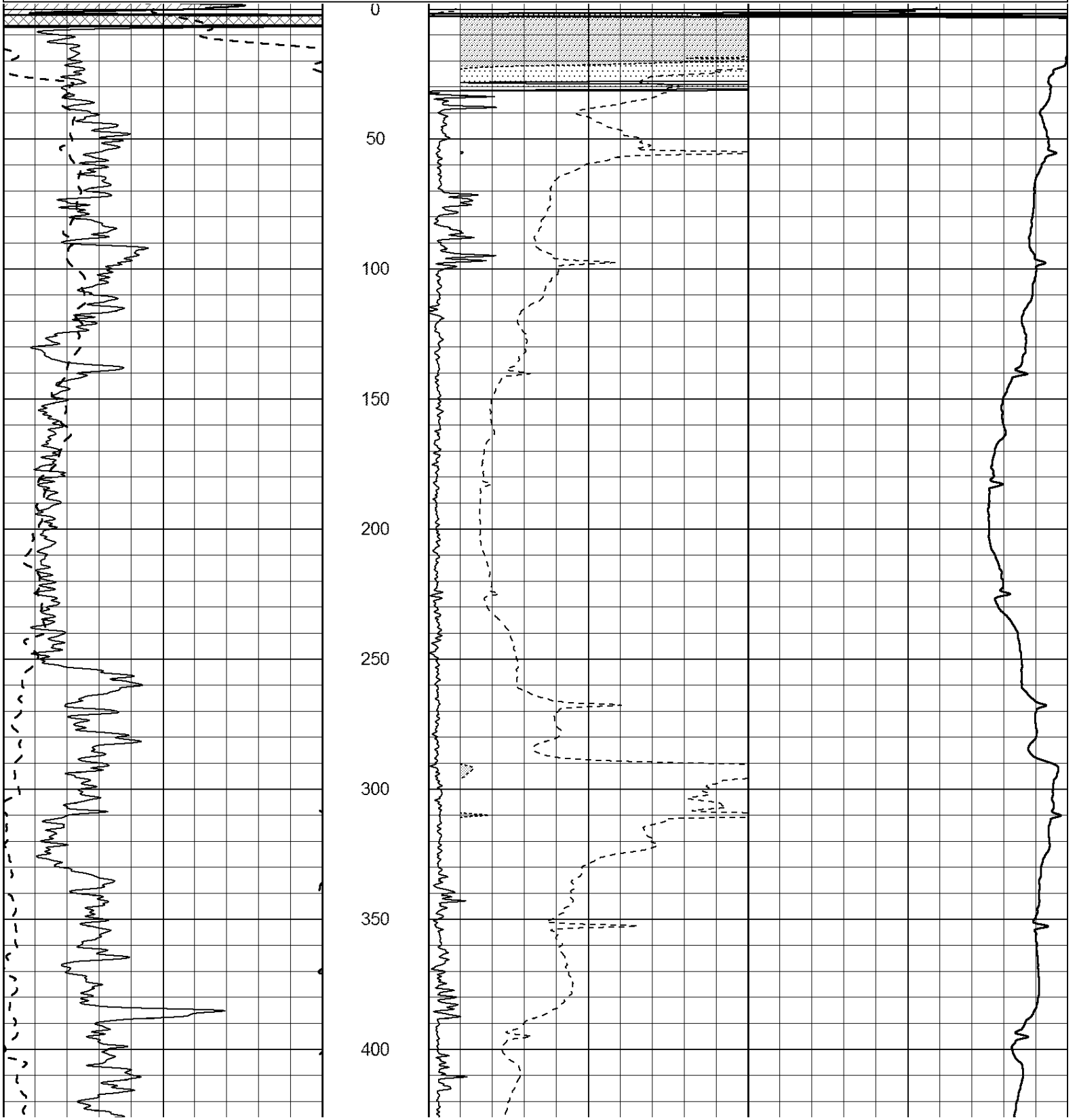
0 RLL3 (Ohm-m) 50

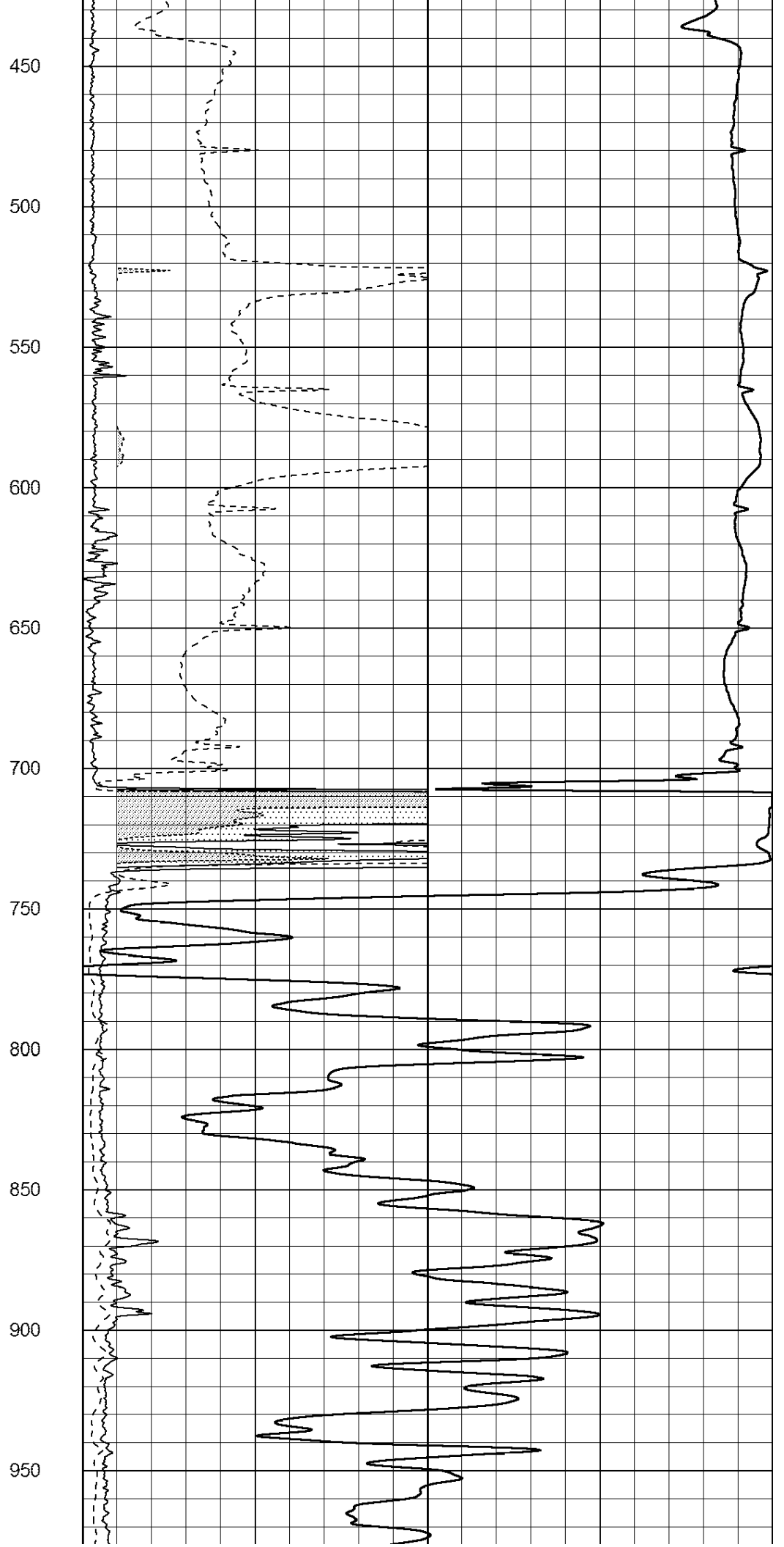
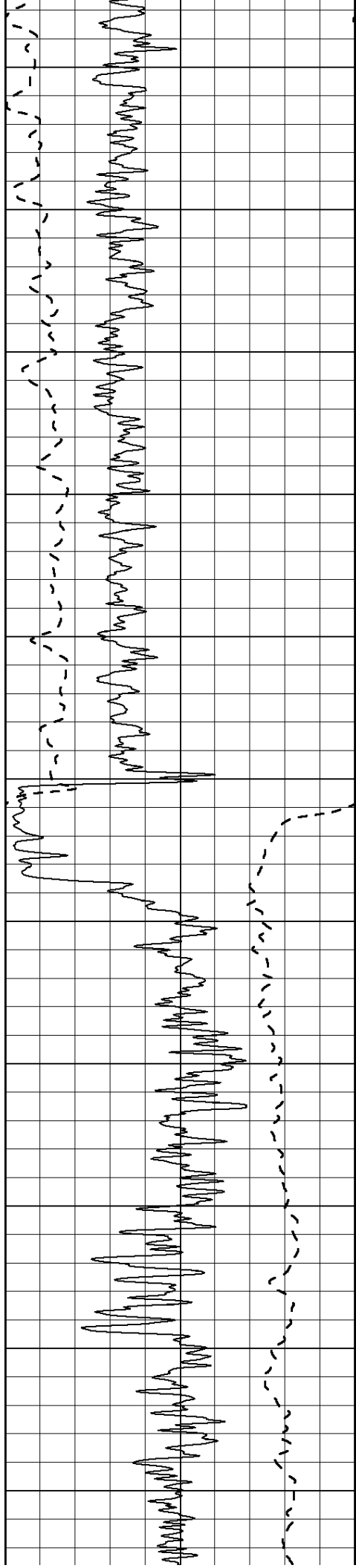
0 RILD (Ohm-m) 50

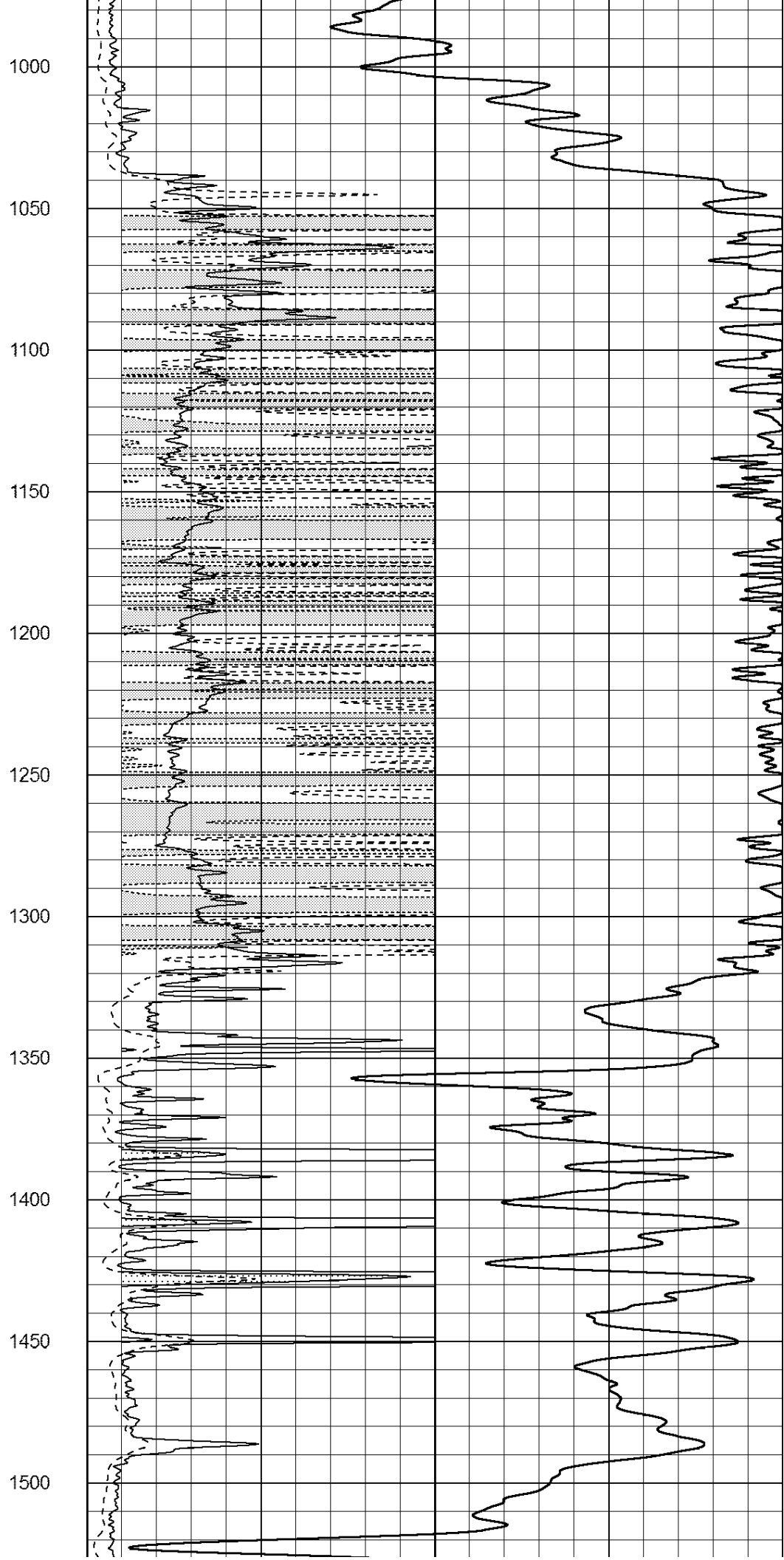
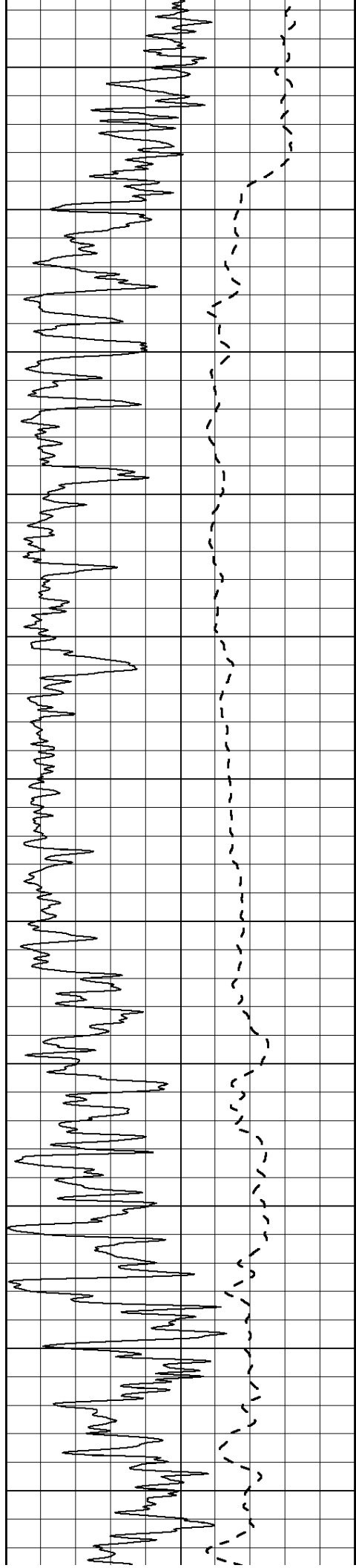
1000 CILD (mmho/m) 0

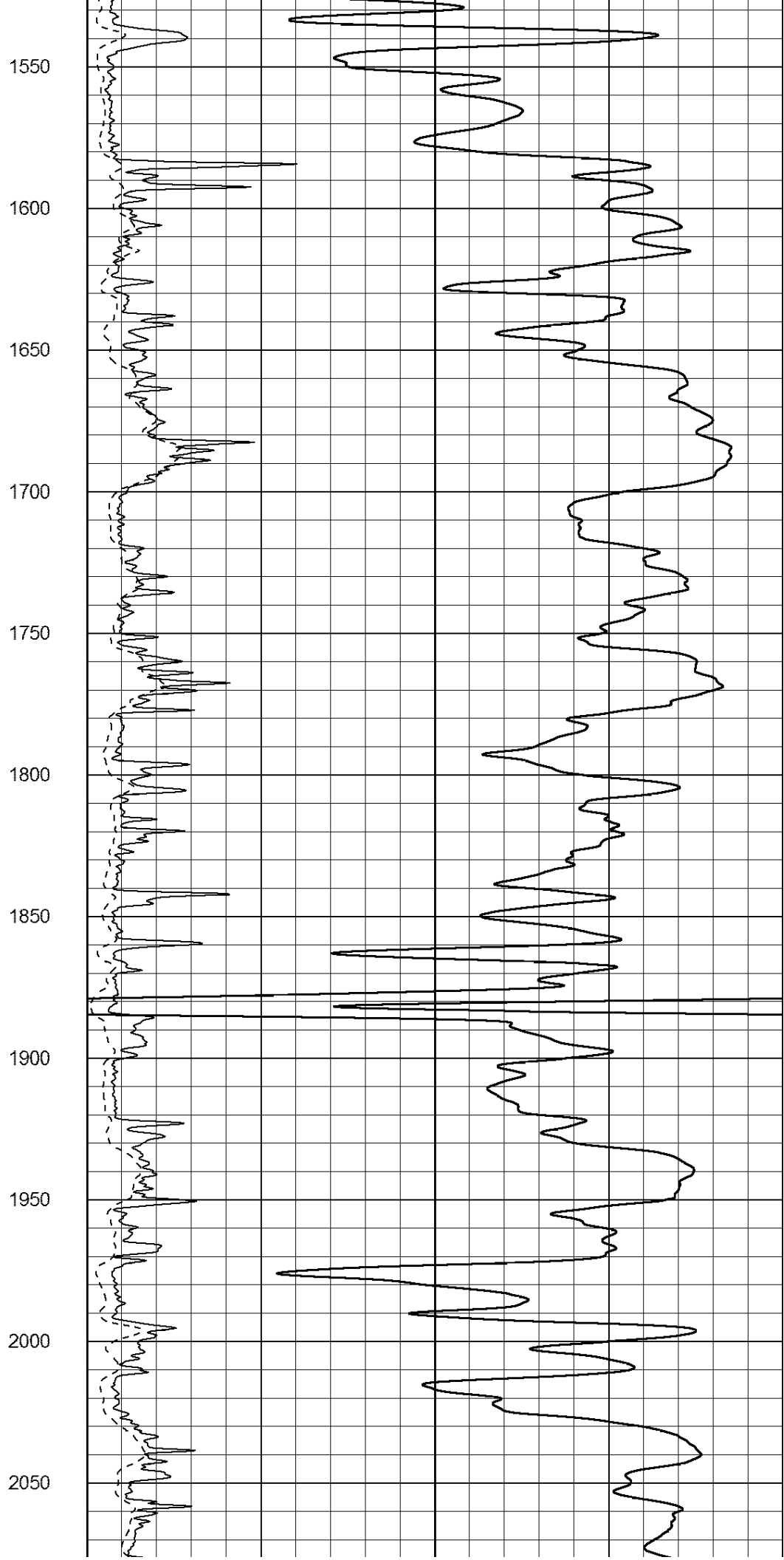
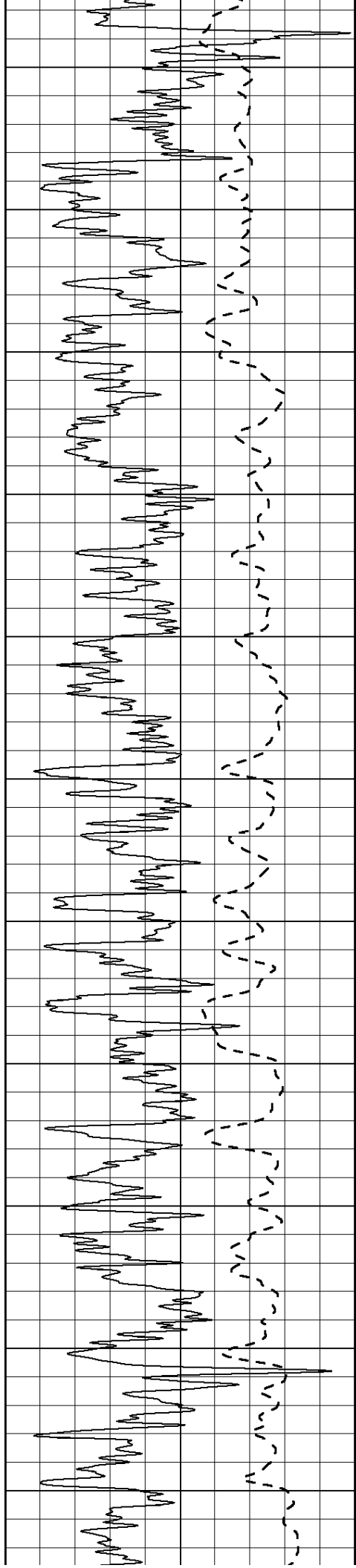
50 RILD X10 (Ohm-m) 500

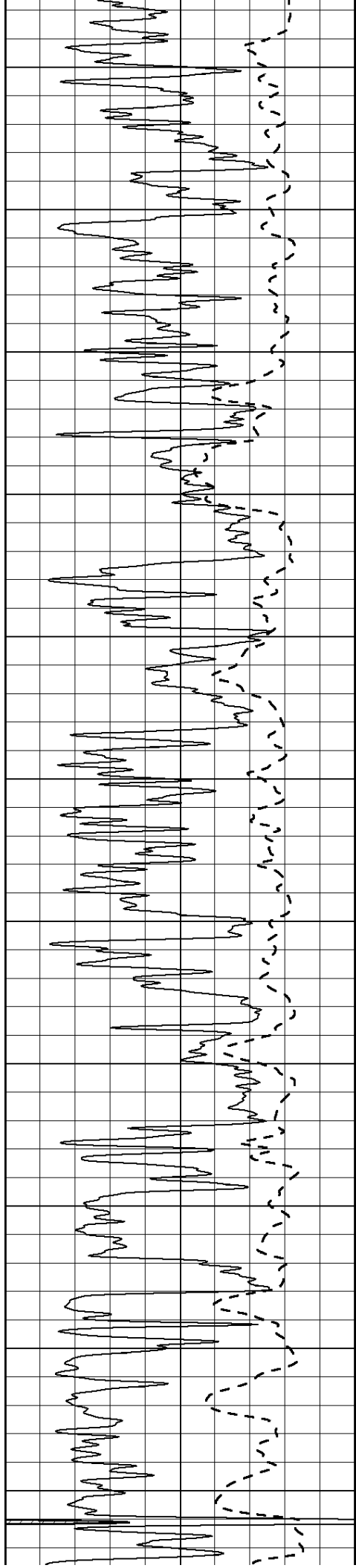
50 RLL3 X10 (Ohm-m) 500











2100

2150

2200

2250

2300

2350

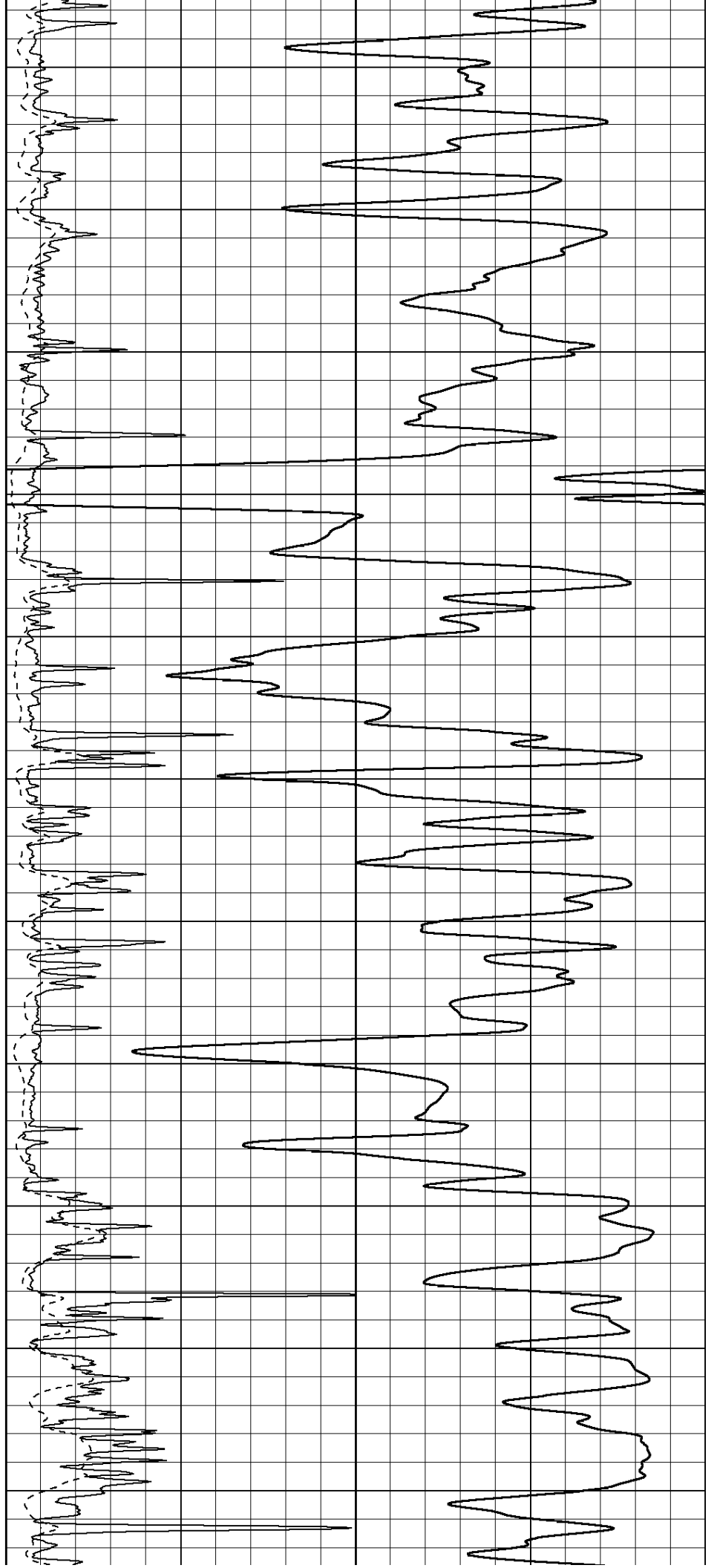
2400

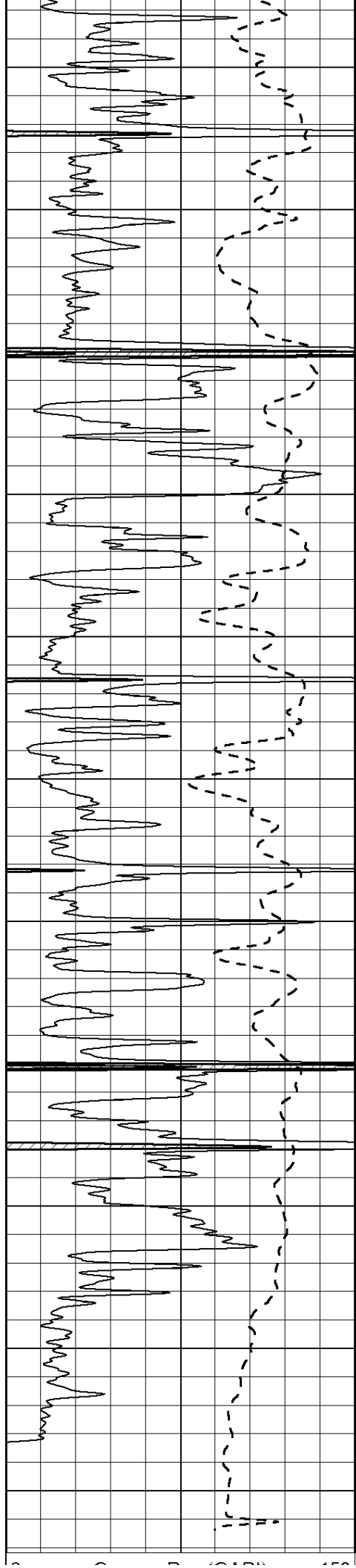
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

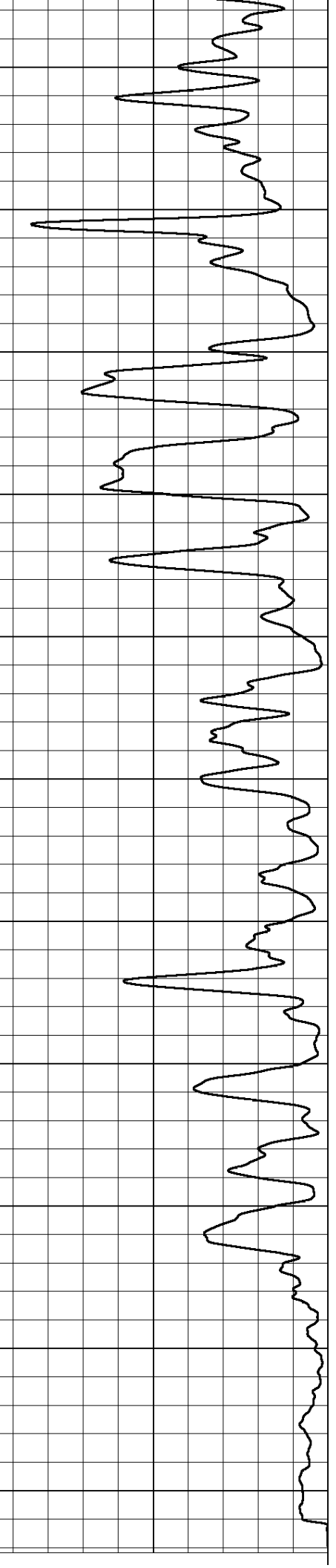
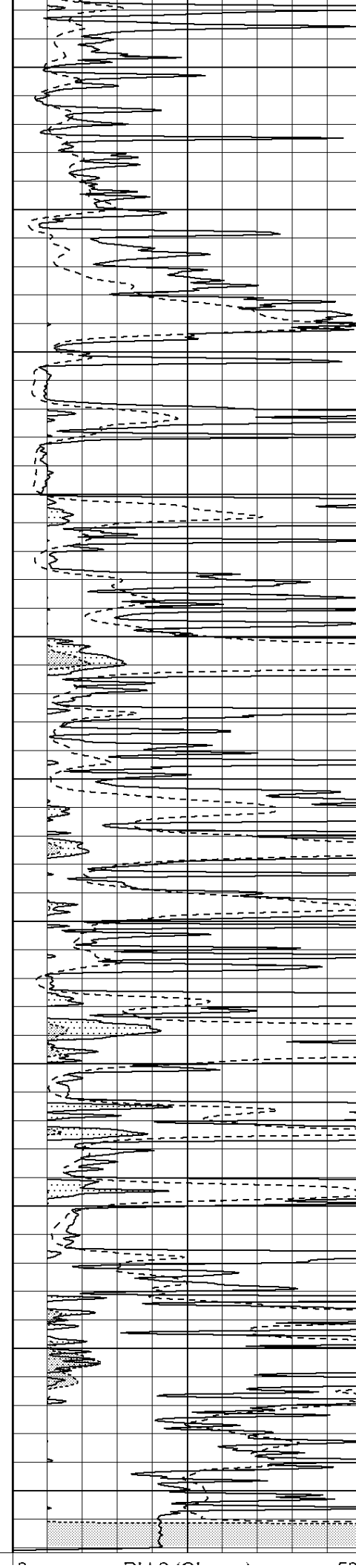
2950

3000

3050

3100

3150



0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

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
----	------------------	-----



SUPERIOR
Hays,
Kansas

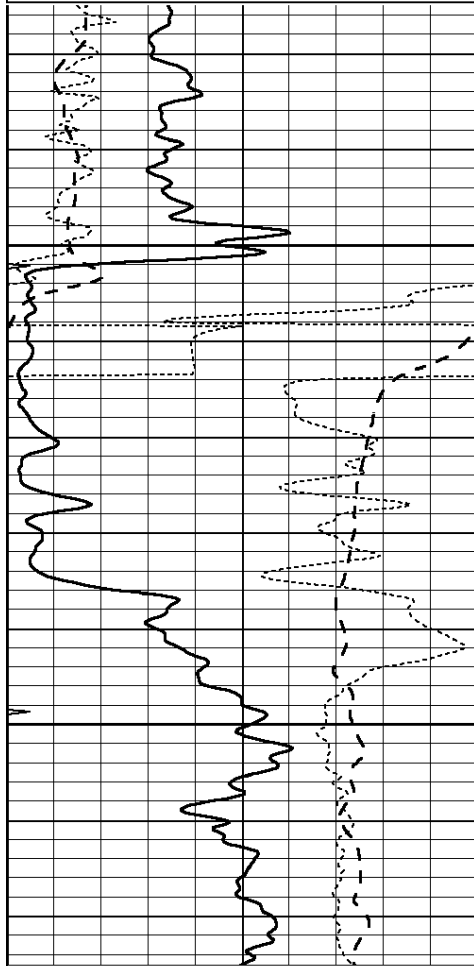
ANHYDRITE

Database File: 008146ddn.db
 Dataset Pathname: pass3.6
 Presentation Format: dil
 Dataset Creation: Tue Jan 24 22:02:41 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

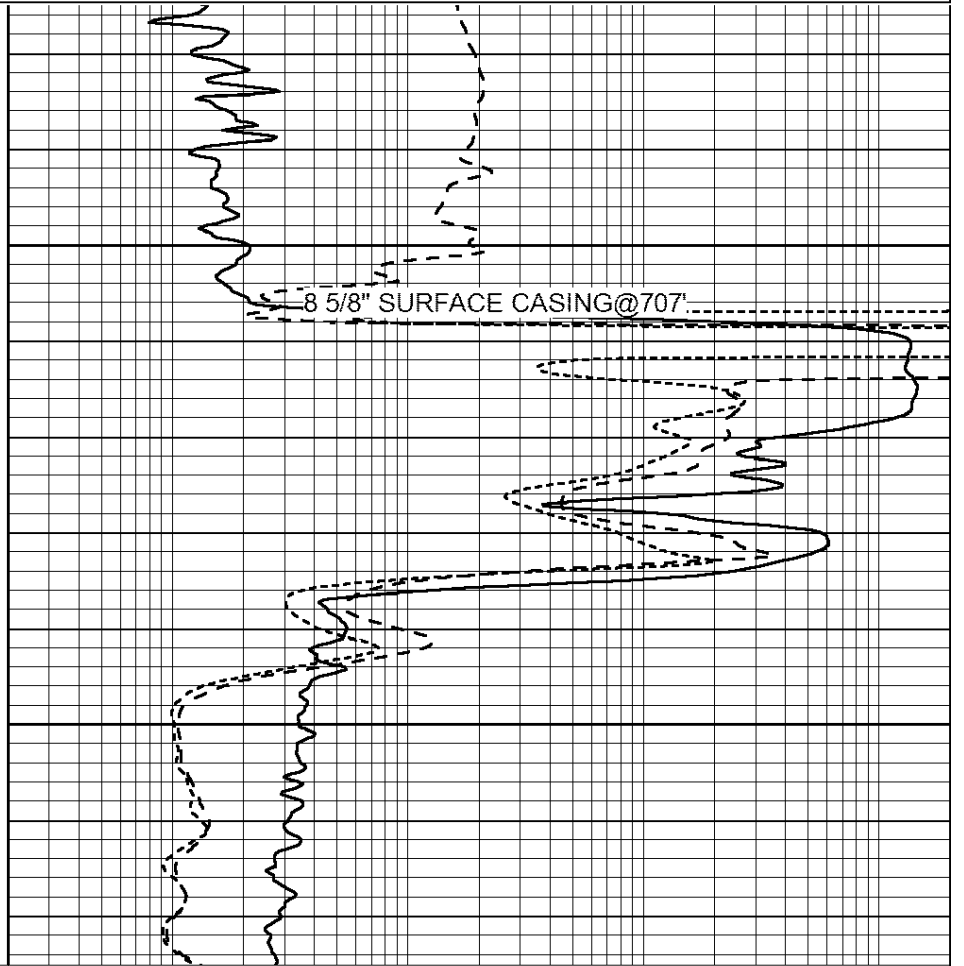
0	MINMK	20

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



700

750



8 5/8" SURFACE CASING@707'

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



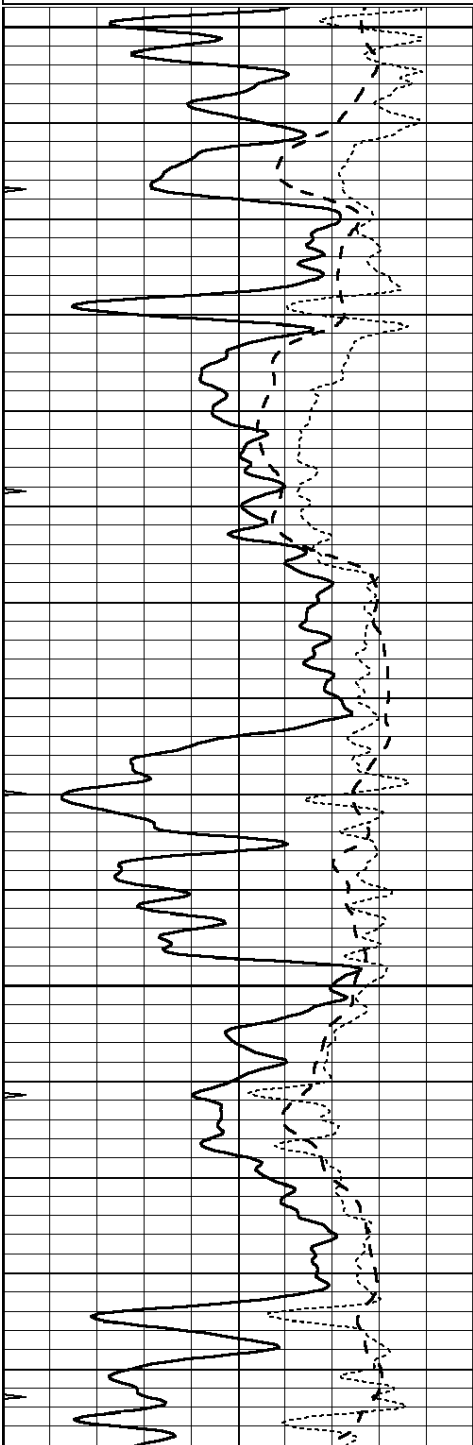
SUPERIOR
Hays,
Kansas

MAIN SECTION

Database File: 008146ddn.db
 Dataset Pathname: pass3.5
 Presentation Format: dil
 Dataset Creation: Tue Jan 24 22:02:14 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

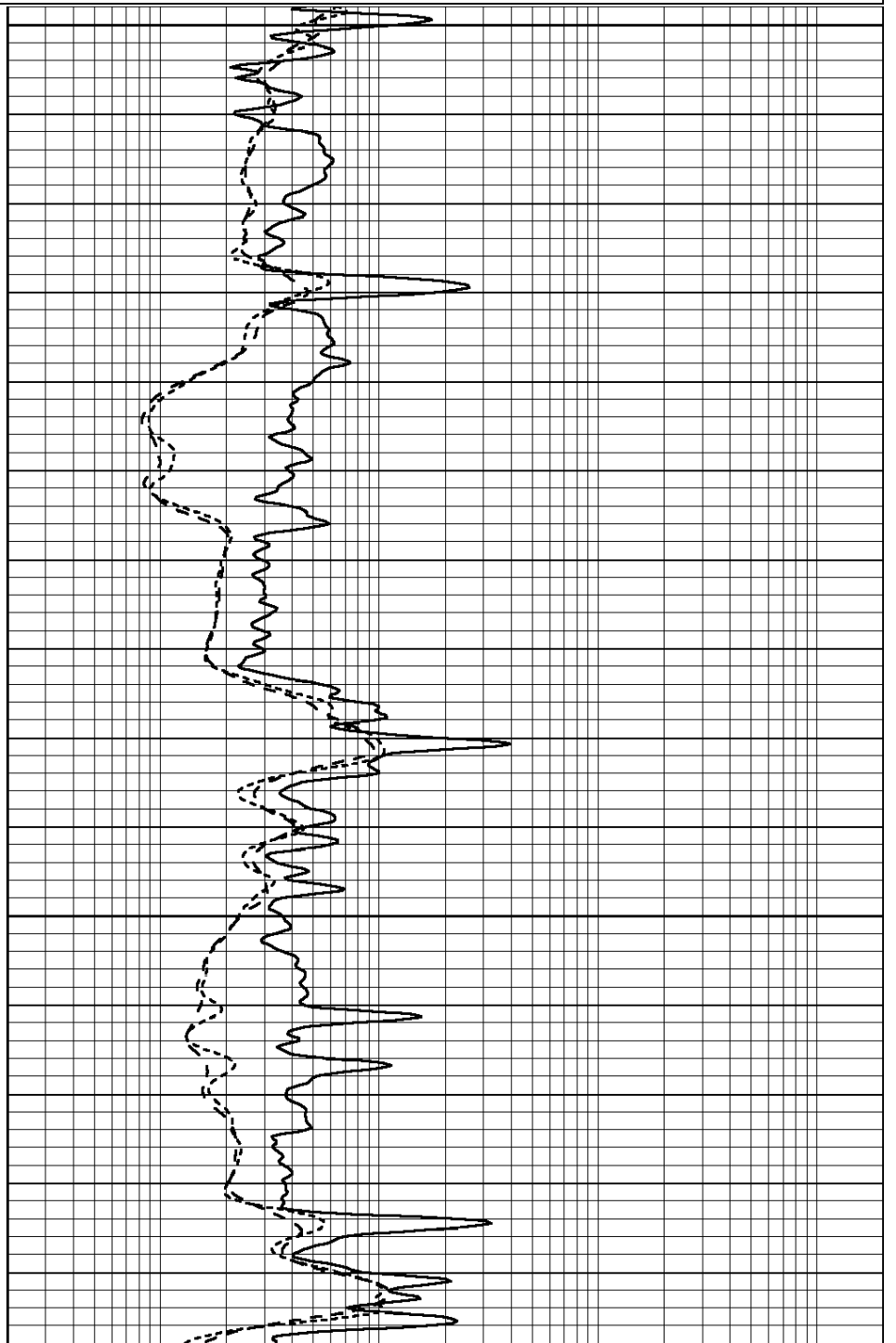
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

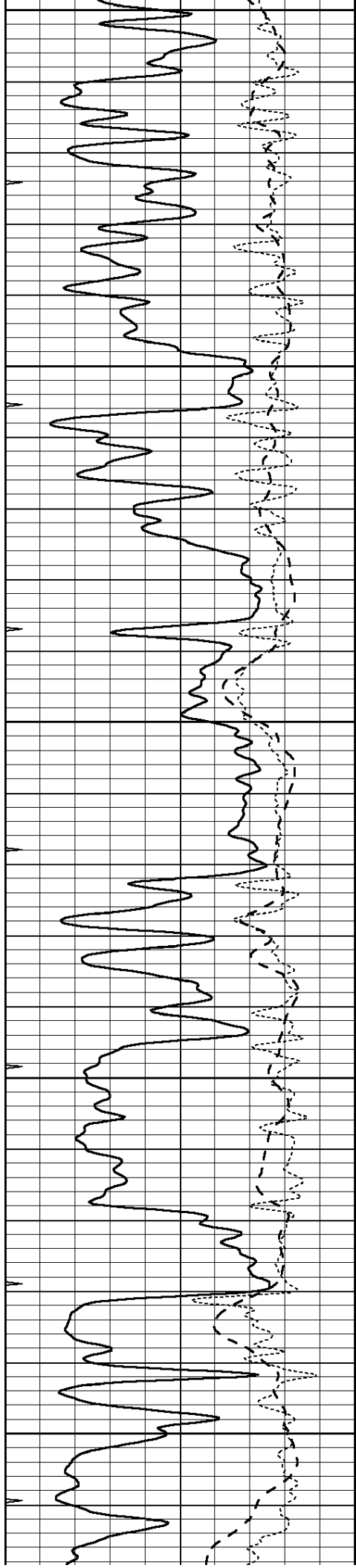


2200

2250

2300





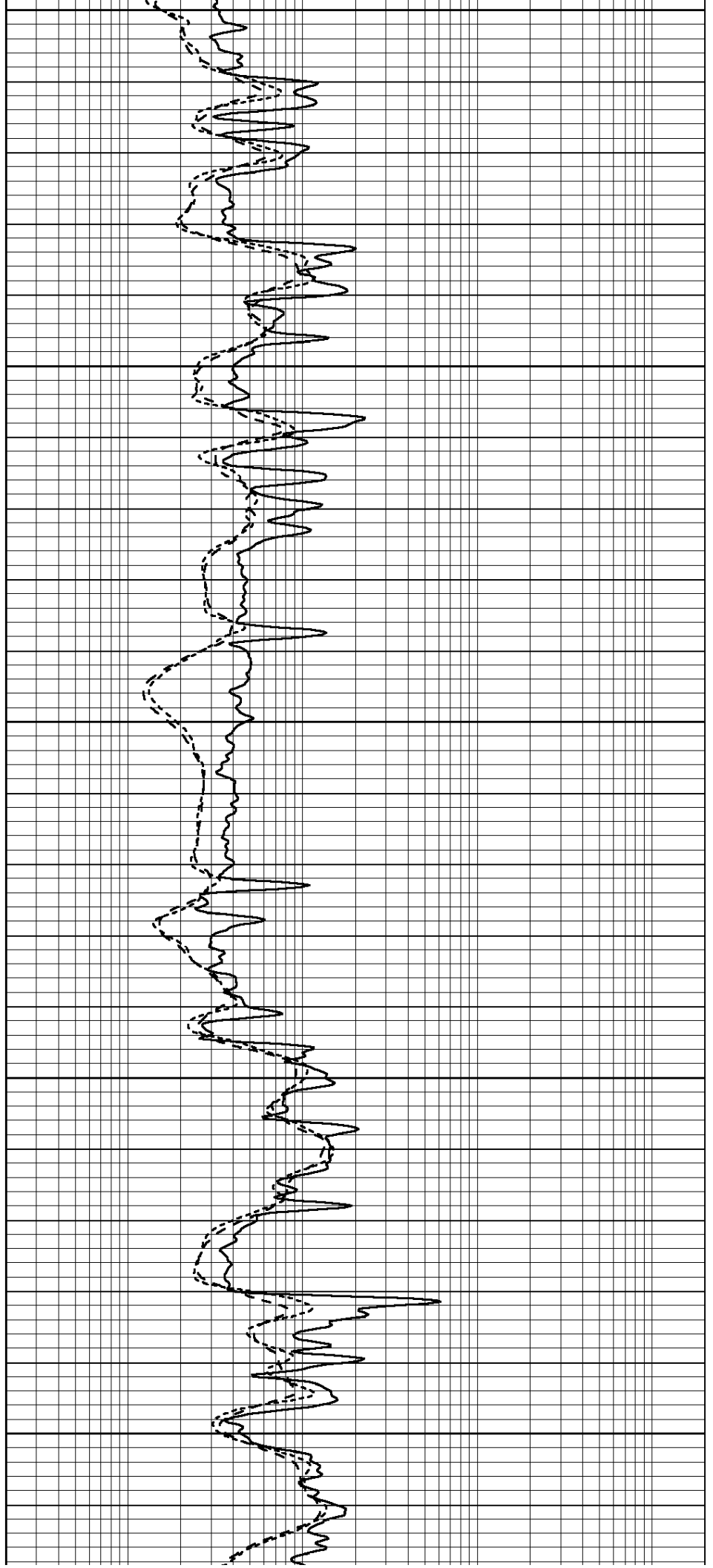
2350

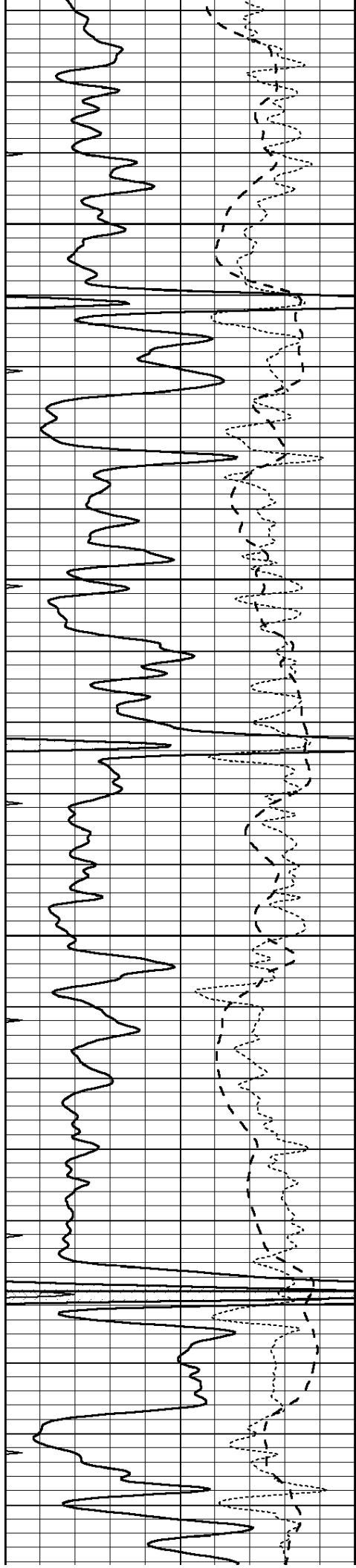
2400

2450

2500

2550



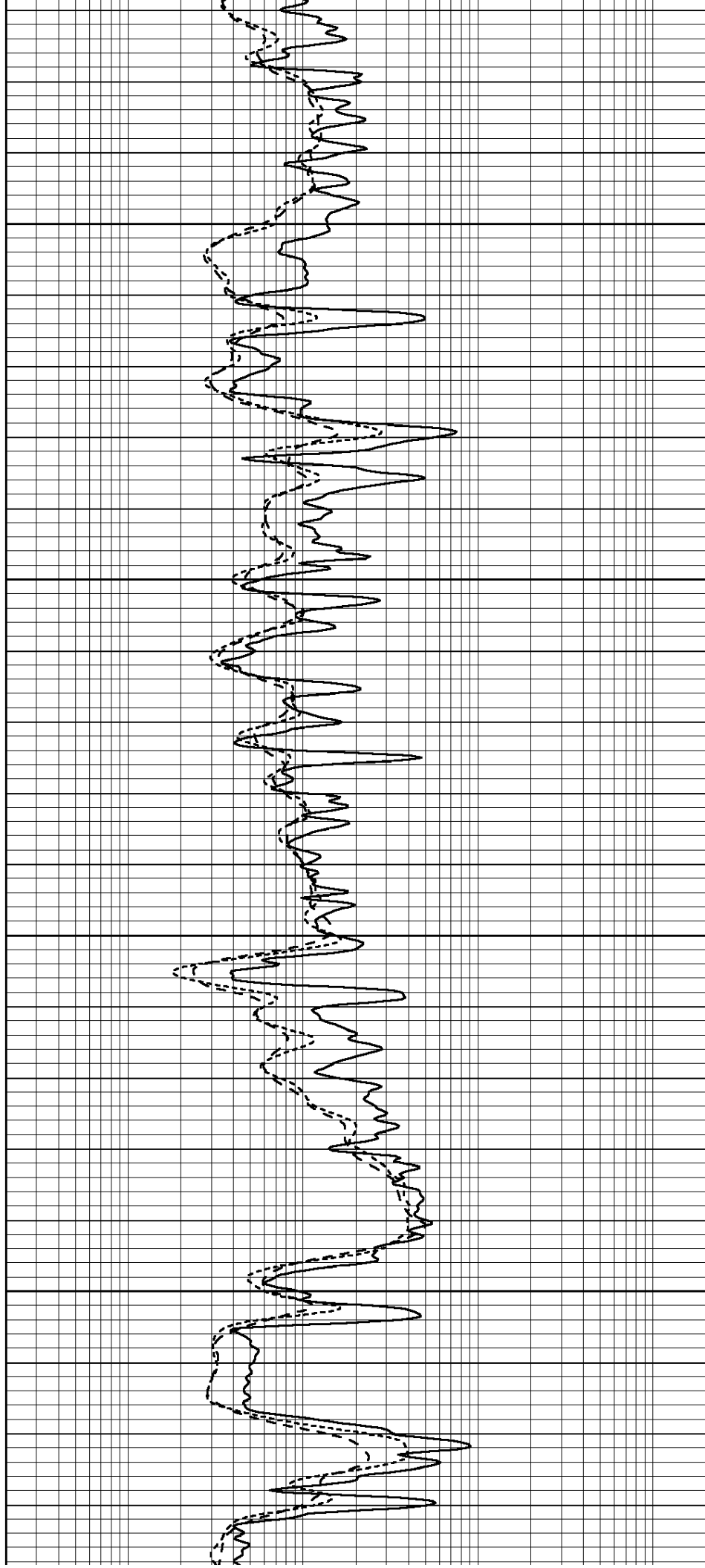


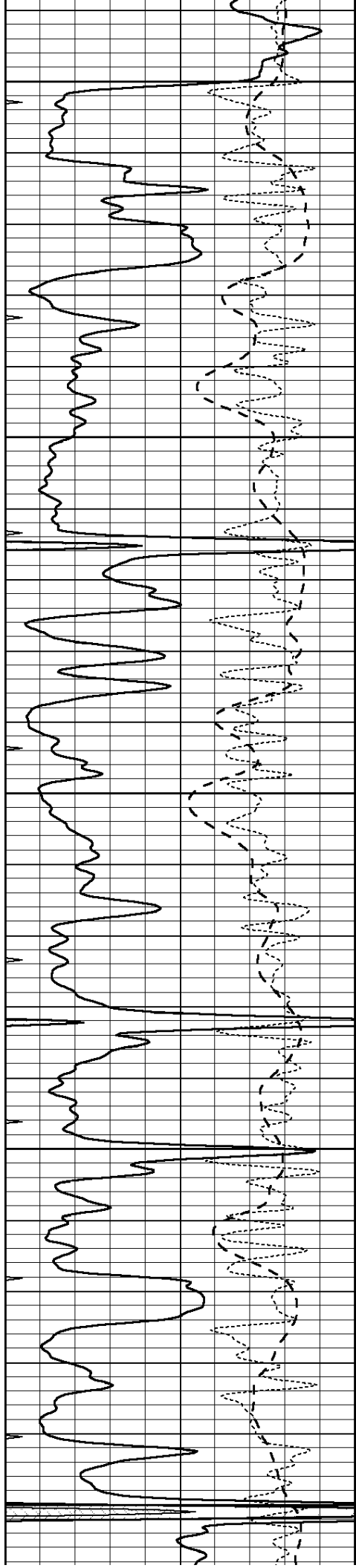
2600

2650

2700

2750





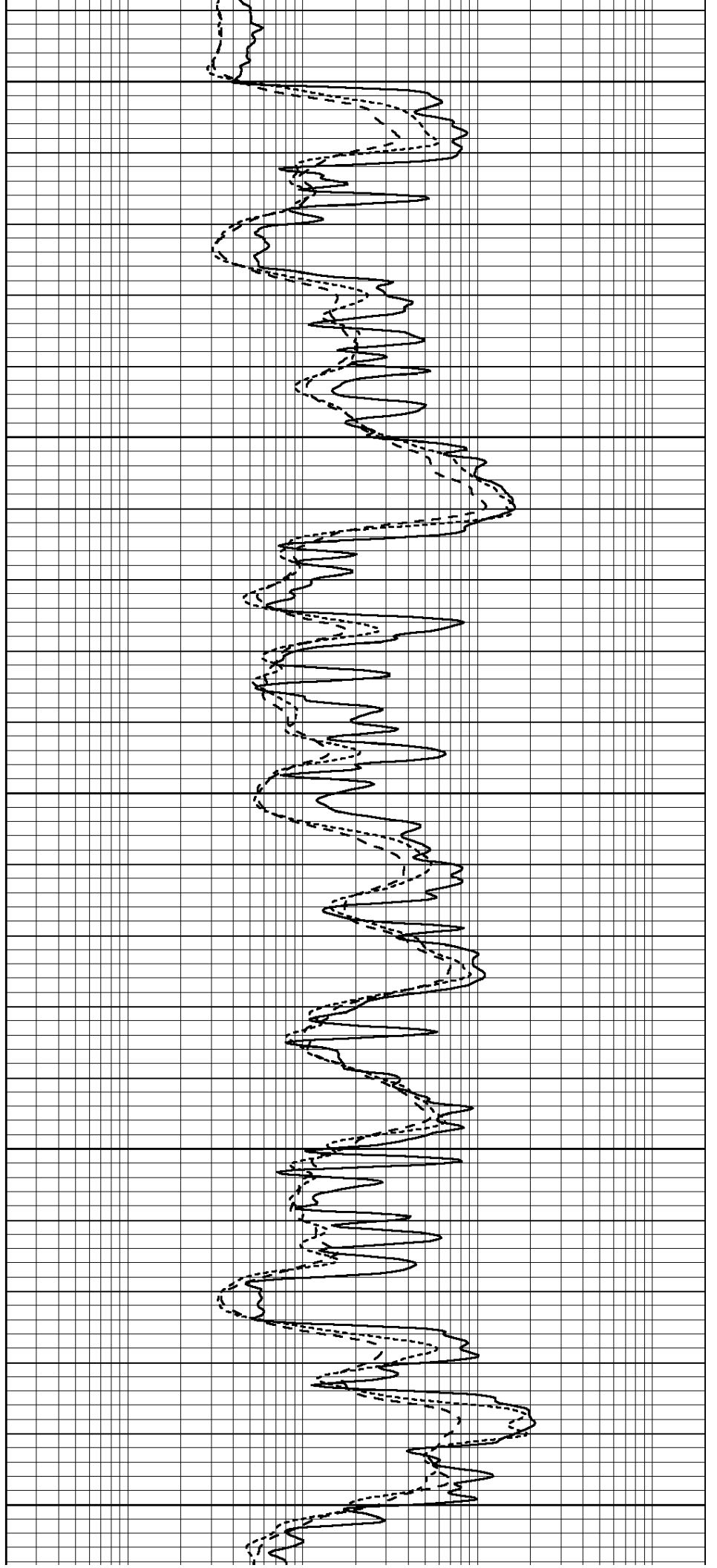
2800

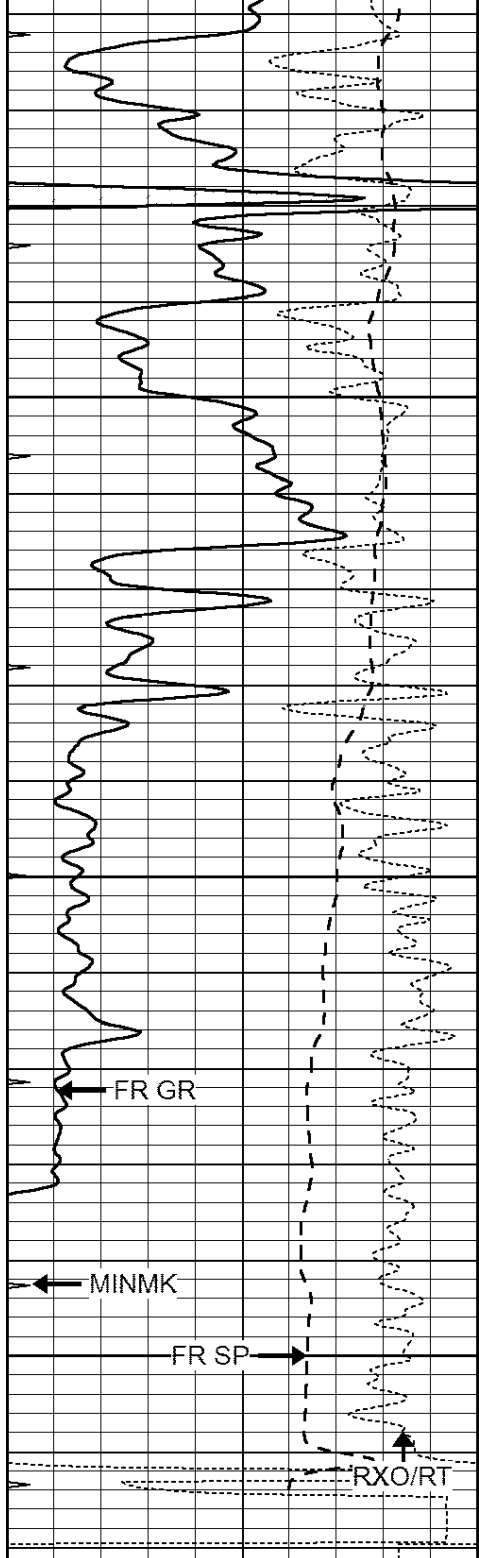
2850

2900

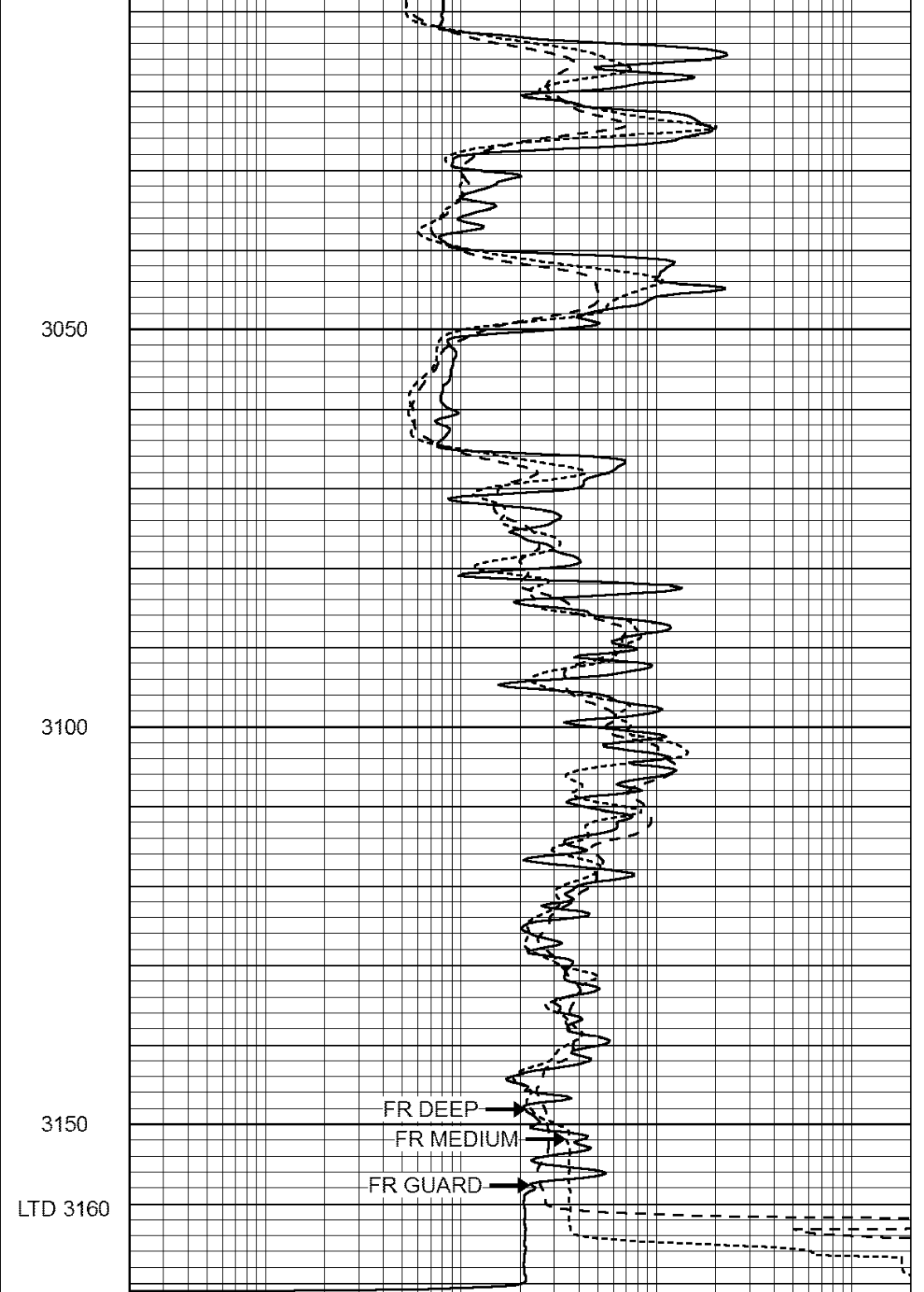
2950

3000





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



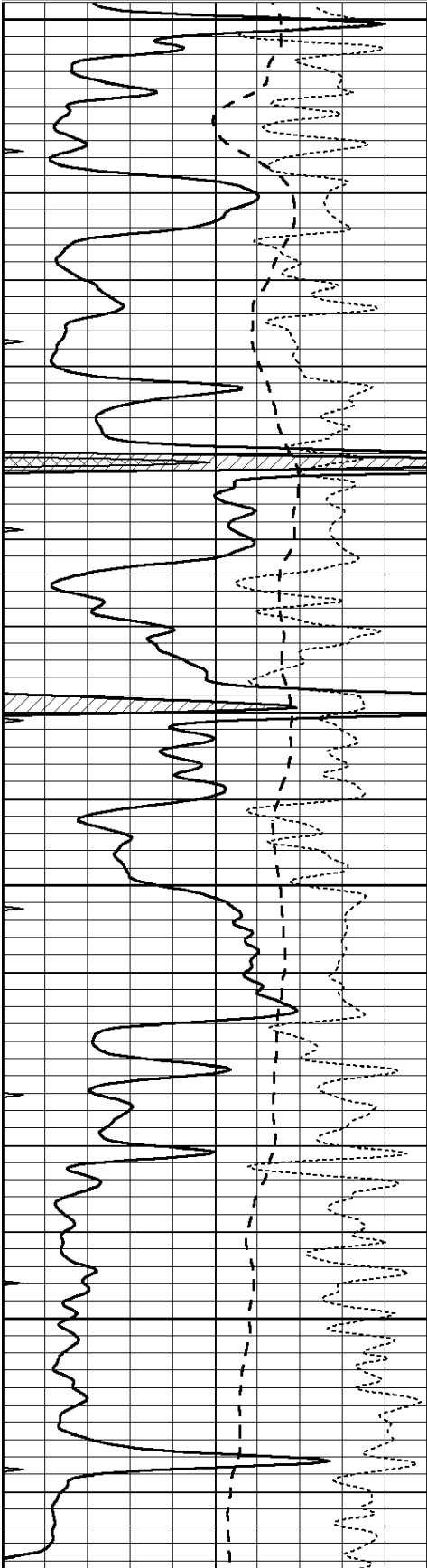
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Dataset Pathname: pass2.11
 Presentation Format: dil
 Dataset Creation: Tue Jan 24 21:24:29 2012
 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

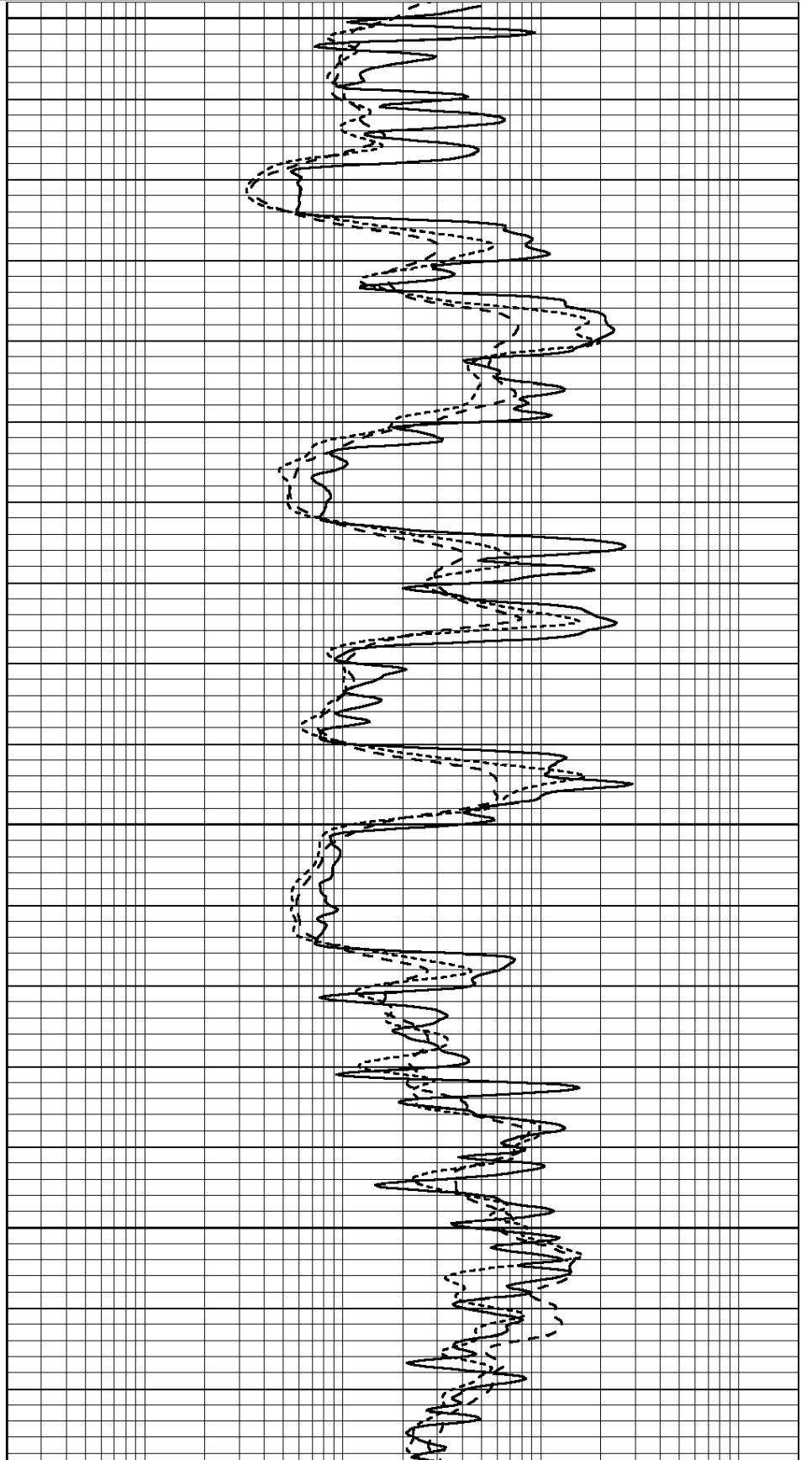


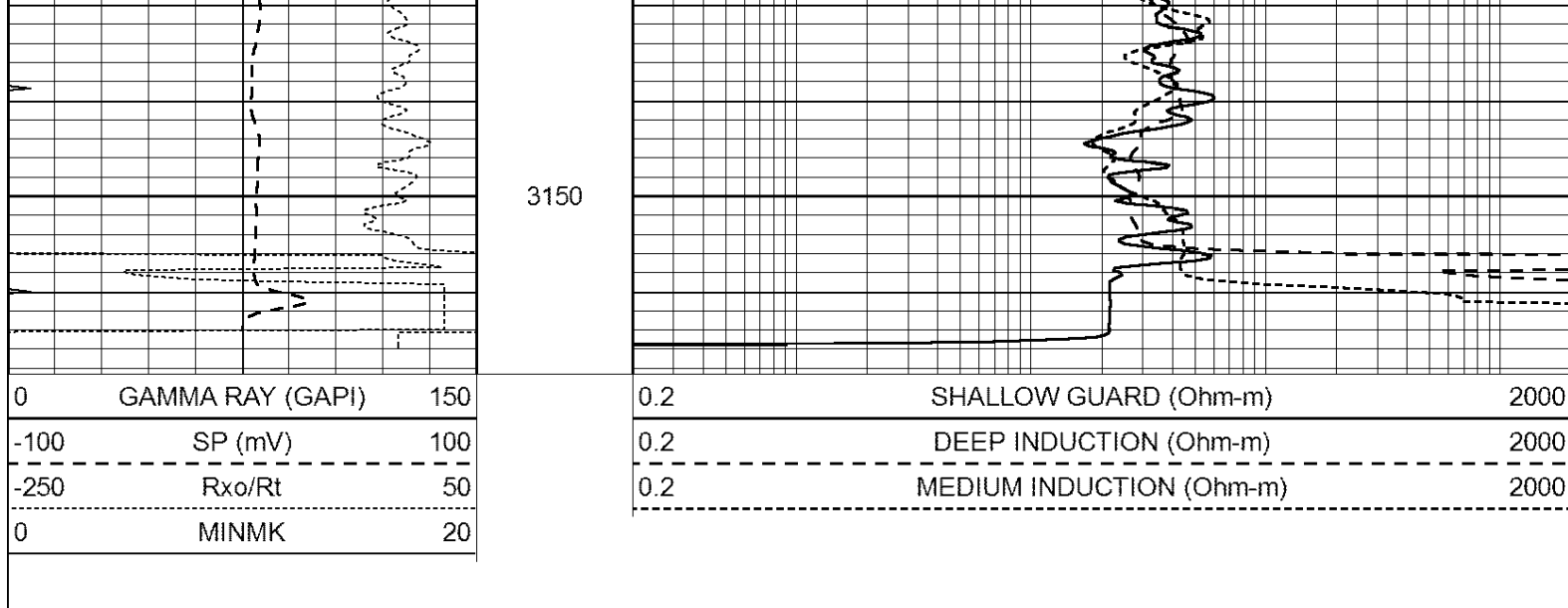
2950

3000

3050

3100





Calibration Report

Database File: 008146ddn.db
 Dataset Pathname: pass3.5
 Dataset Creation: Tue Jan 24 22:02:14 2012 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL4-GEAR
 Performed: Tue Jan 24 21:11:29 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	-4.000
Medium	-0.003	0.769	V	0.000	462.500	mmho/m	560.000	1.000
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: 004N Model: PRB
 Performed Tue Sep 08 13:49:55 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1535.8	11161.3	3721.6	12498.8	cps
Window 2	1402.6	9435.7	3219.7	10417.7	cps
Window 3	1077.6	4422.0	1779.2	4753.4	cps
Window 4	337.3	342.8	337.4	343.7	cps
Long Space	0.0	8033.1	1817.0	9015.1	cps
Short Space	1.2	1671.8	1138.1	1813.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.5	Rib Slope	: 1.017	Density/Spine Ratio	: 0.573
Spine Angle	: 75.5	Spine Slope	: 3.865	Spine Intercept	: -19.7

Caliper

	Readings	Reference
Low Ref	2.6	6.8
High Ref	4.3	15.0

Gain: 4.9

Offset: -5.7

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 Jan 24 20:58:28 2012

Calibrator Value: 1.0 GAPI
Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps
Sensitivity: 0.2800 GAPI/cps