



DUAL INDUCTION LOG

Company EDISON OPERATING COMPANY, LLC.
 Well WILD TURKEY#1-7
 Field KNOCHE WEST
 County STAFFORD
 State KANSAS

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 Well WILD TURKEY#1-7
 Field KNOCHE WEST
 County STAFFORD State KANSAS

Location: API # : 15-185-24025-00-00
 2266' FNL & 2262' FEL
 SEC 7 TWP 24S RGE 12W
 Permanent Datum GROUND LEVEL Elevation 1887
 Log Measured From KELLY BUSHING 10' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services CDL/CNL/ML/EL SONIC
 Elevation K.B. 1897
 D.F. 1895
 G.L. 1887

Date	08/16/18
Run Number	ONE
Depth Driller	4125
Depth Logger	4124
Bottom Logged Interval	4122
Top Log Interval	2700
Casing Driller	8 5/8" @ 432
Casing Logger	432
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/50
pH / Fluid Loss	10.5/11.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.40@88
Rmt @ Meas. Temp	.30@88
Rmc @ Meas. Temp	.48@88
Source of Rmt / Rmc	MEASURED
Rm @ BHT	.30@117
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	///
Maximum Recorded Temperature	117F
Equipment Number	1523
Location	HAYS, KANSAS
Recorded By	GUS PFANENSTIEL
Witnessed By	DEREK PATTERSON

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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 ELI WIRELINE, HAYS, KS. (785) 628-6395

DIRECTIONS
 SOUTH OF ST. JOHN 1 MILE,
 EAST 4 MILES TO CURVE SOUTH 1/4,
 WEST INTO.



MAIN PASS

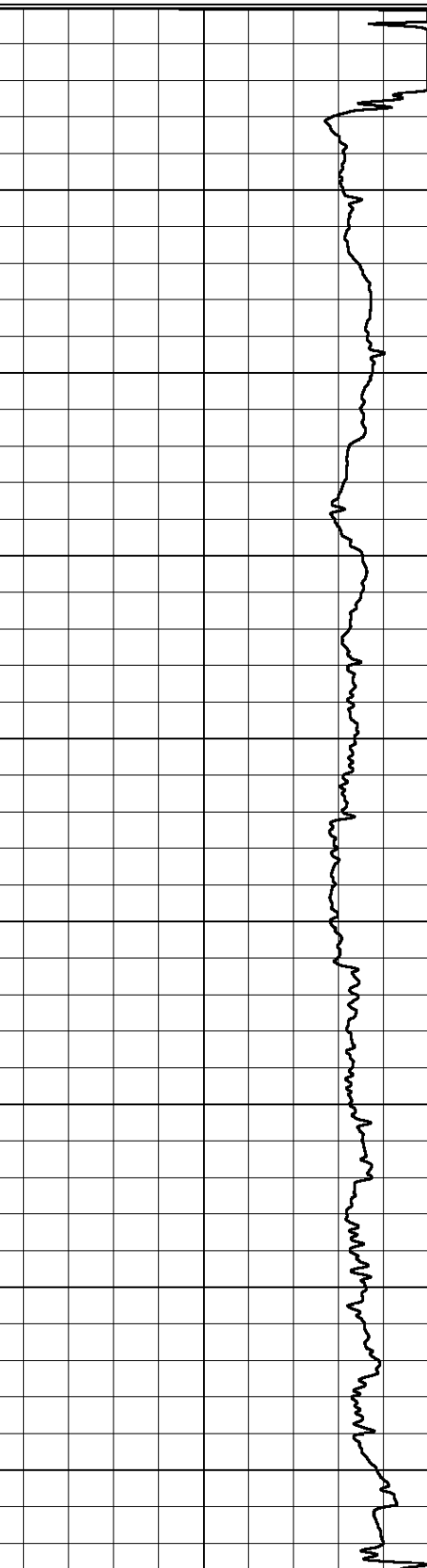
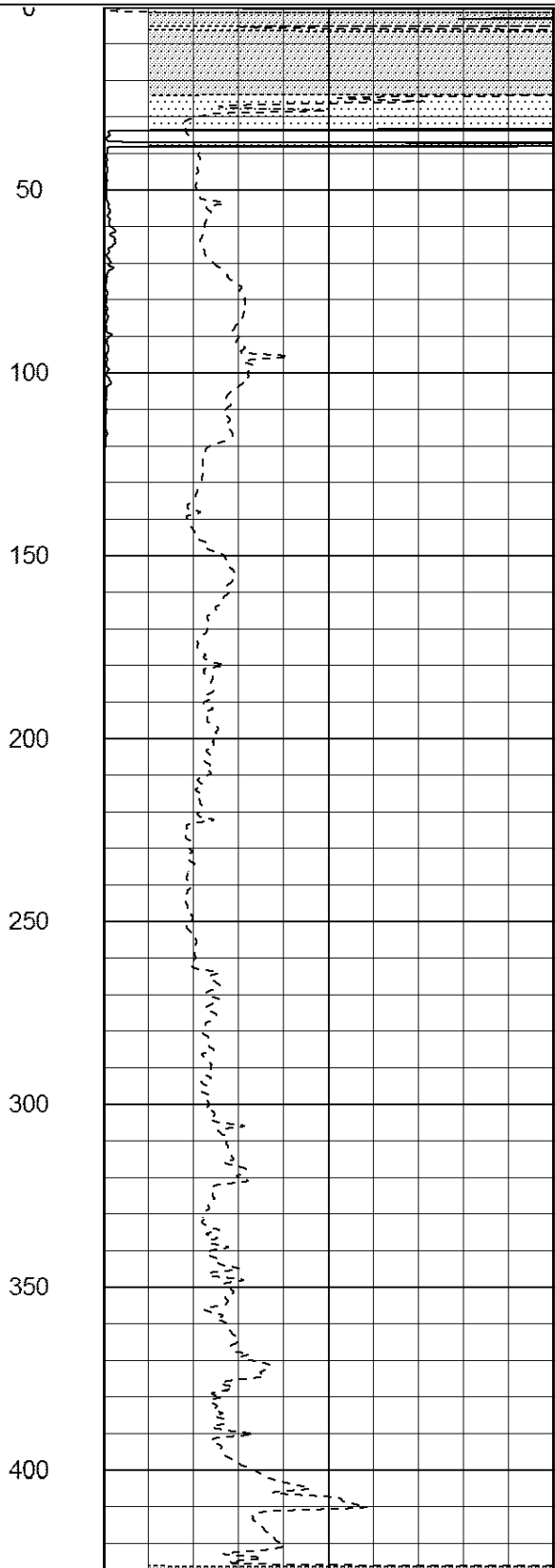
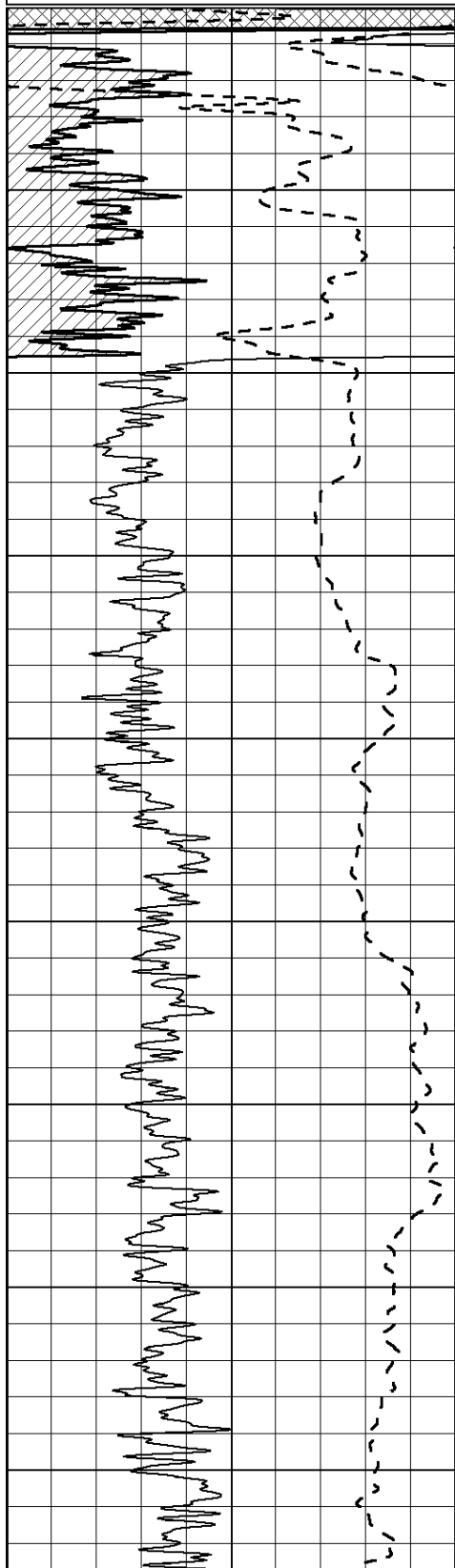
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 Dataset Pathname: pass3.1
 Presentation Format: _dil2
 Dataset Creation: Thu Aug 16 20:13:49 2018 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:600

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

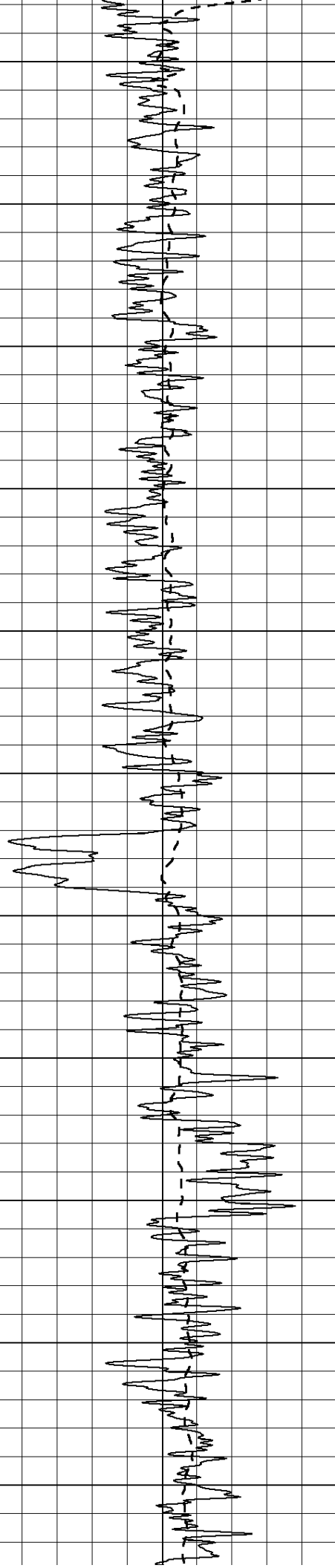
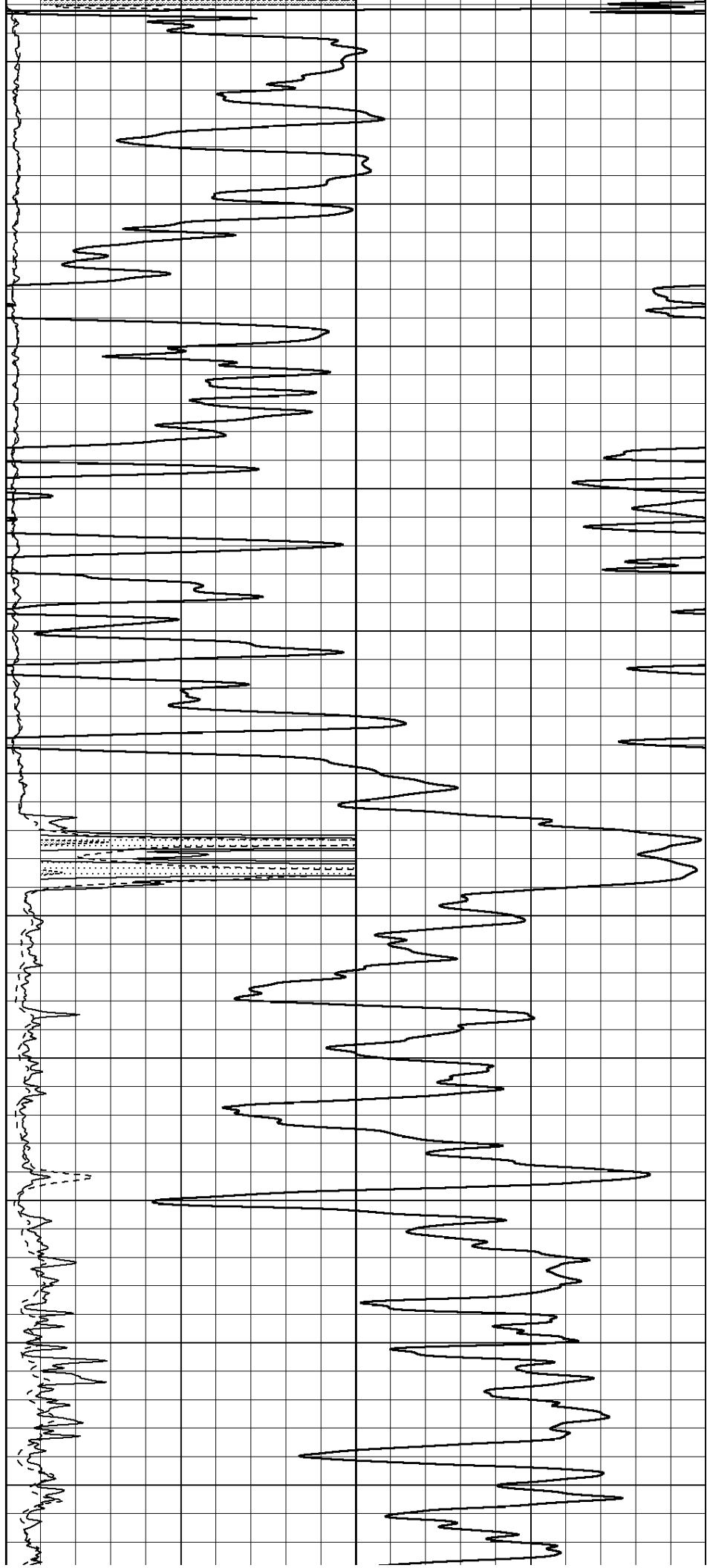
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0	RILD (Ohm-m)	50

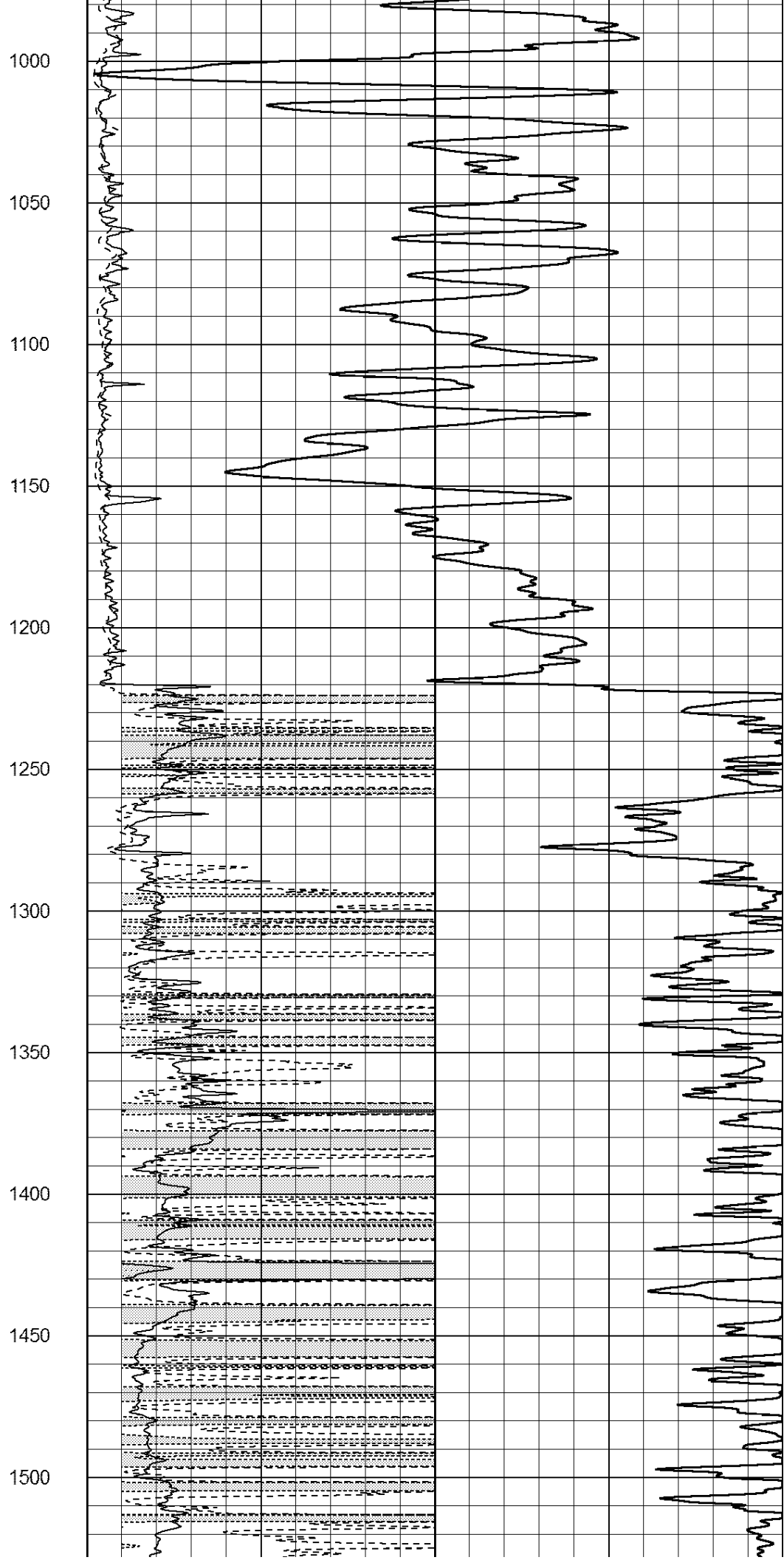
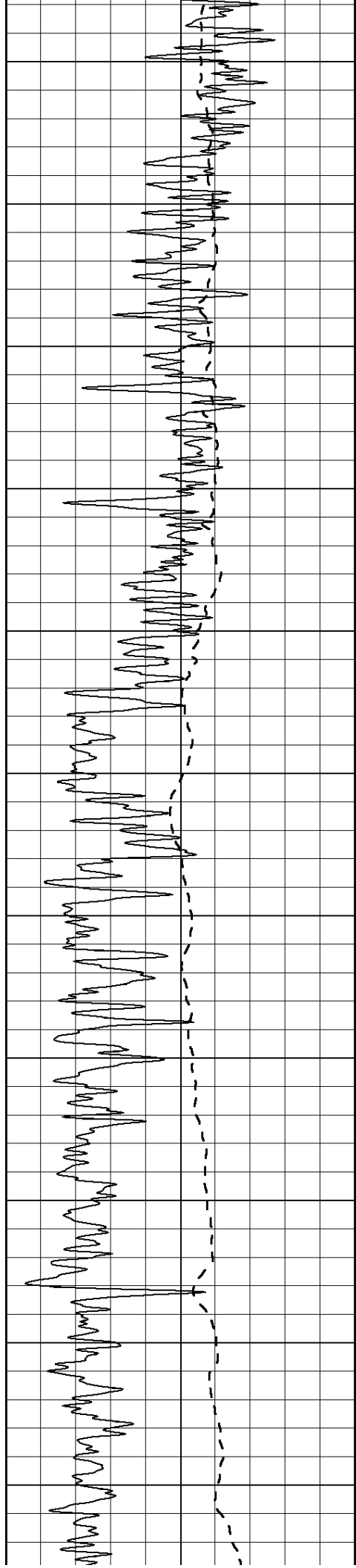
1000	CILD (mmho/m)	0
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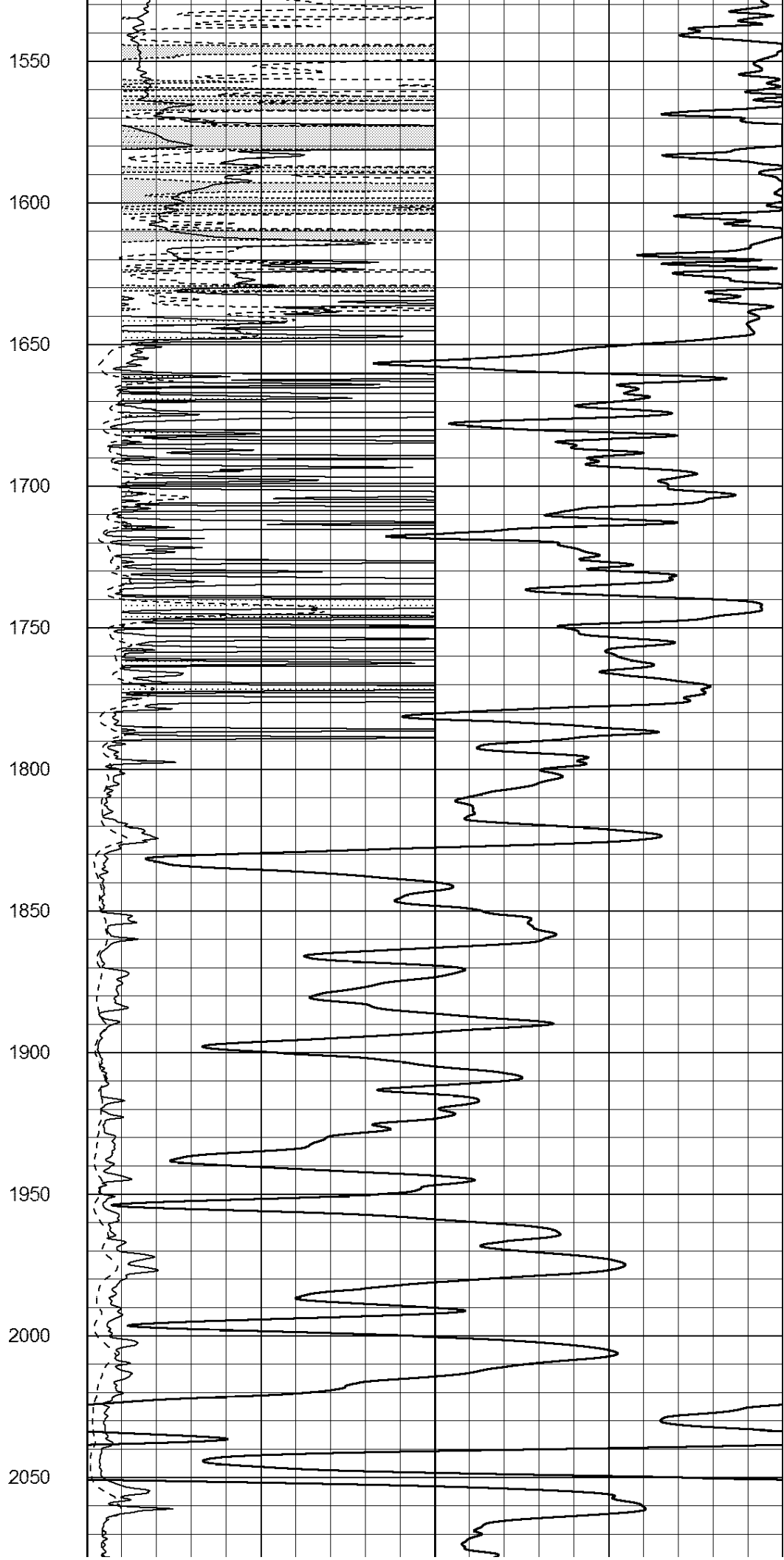
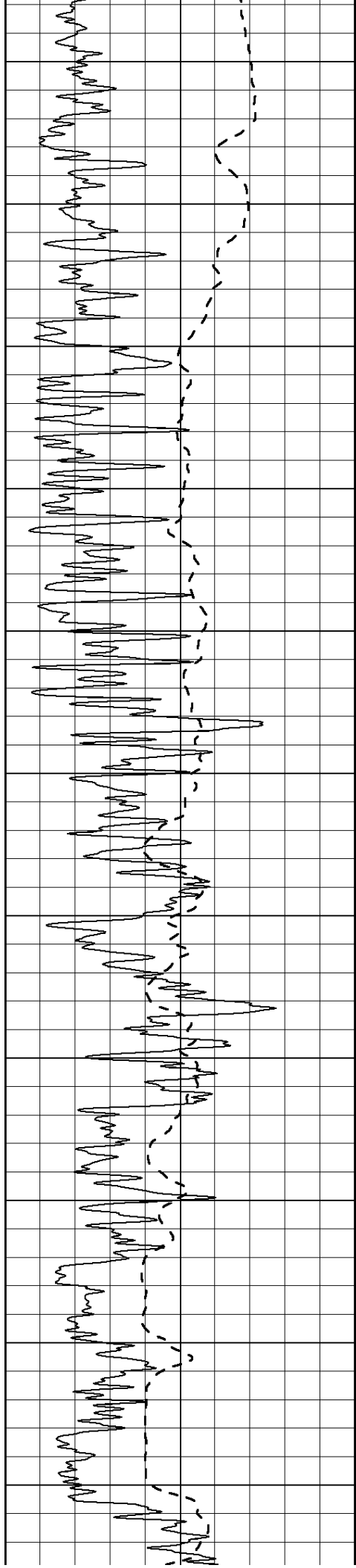
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50	RLL3 X10 (Ohm-m)	500

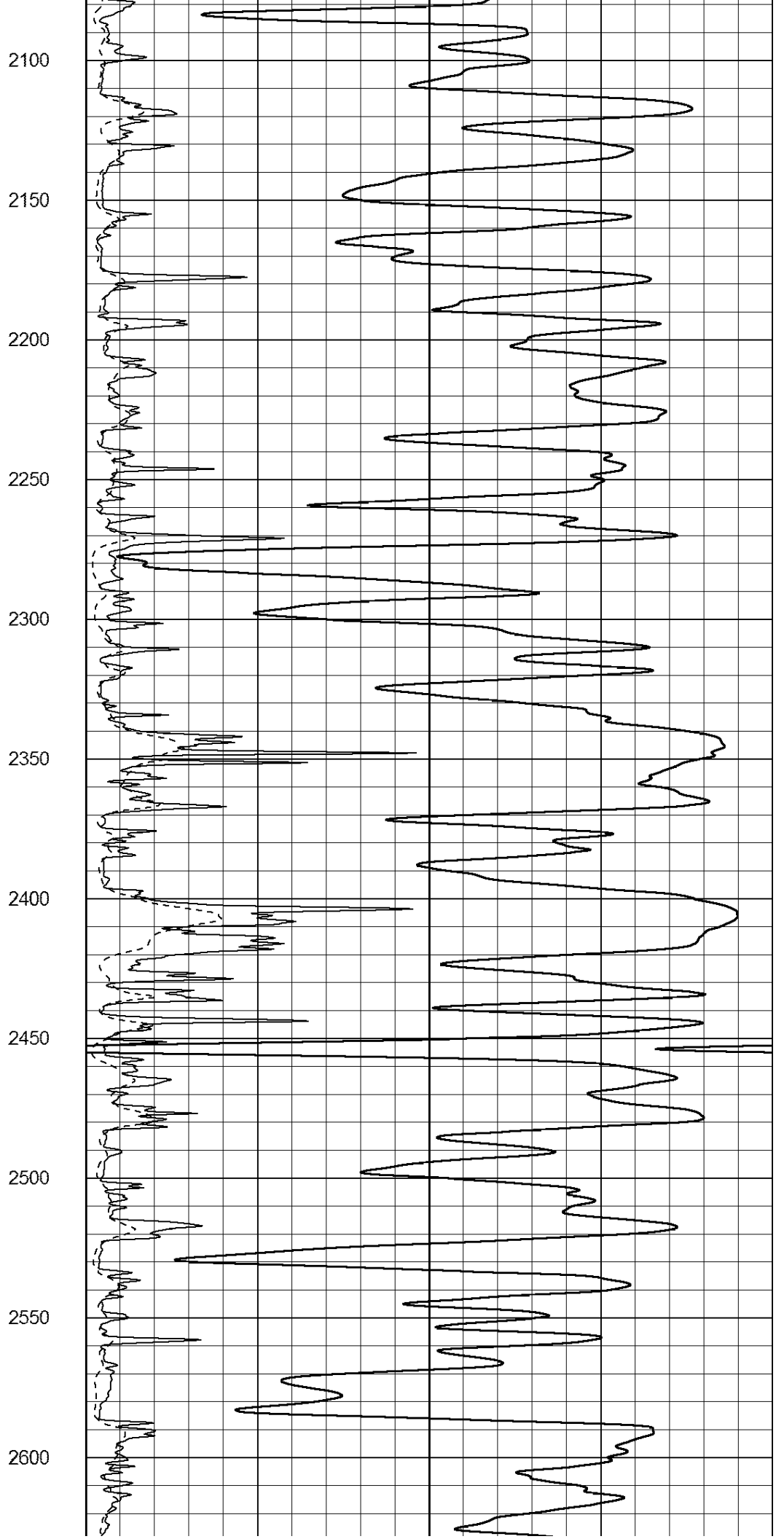
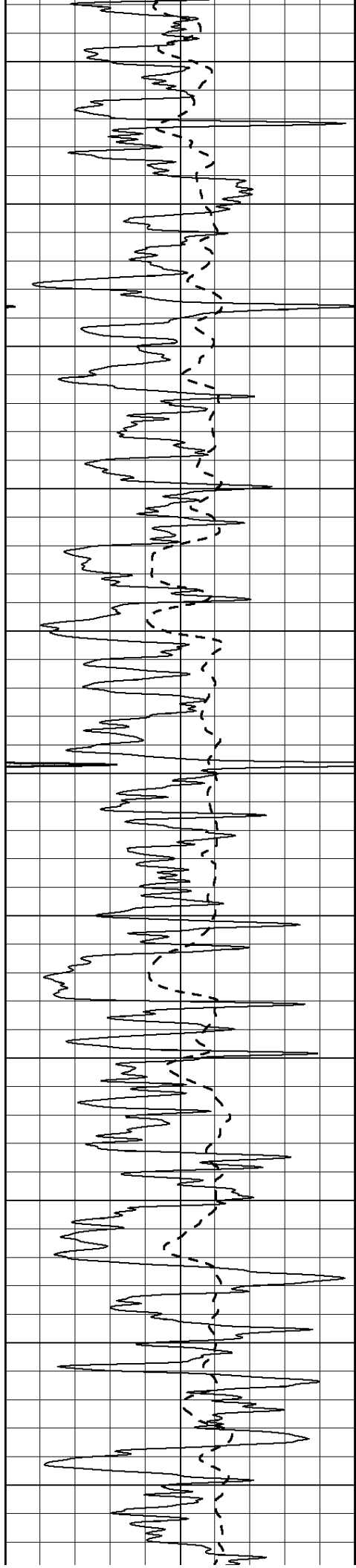


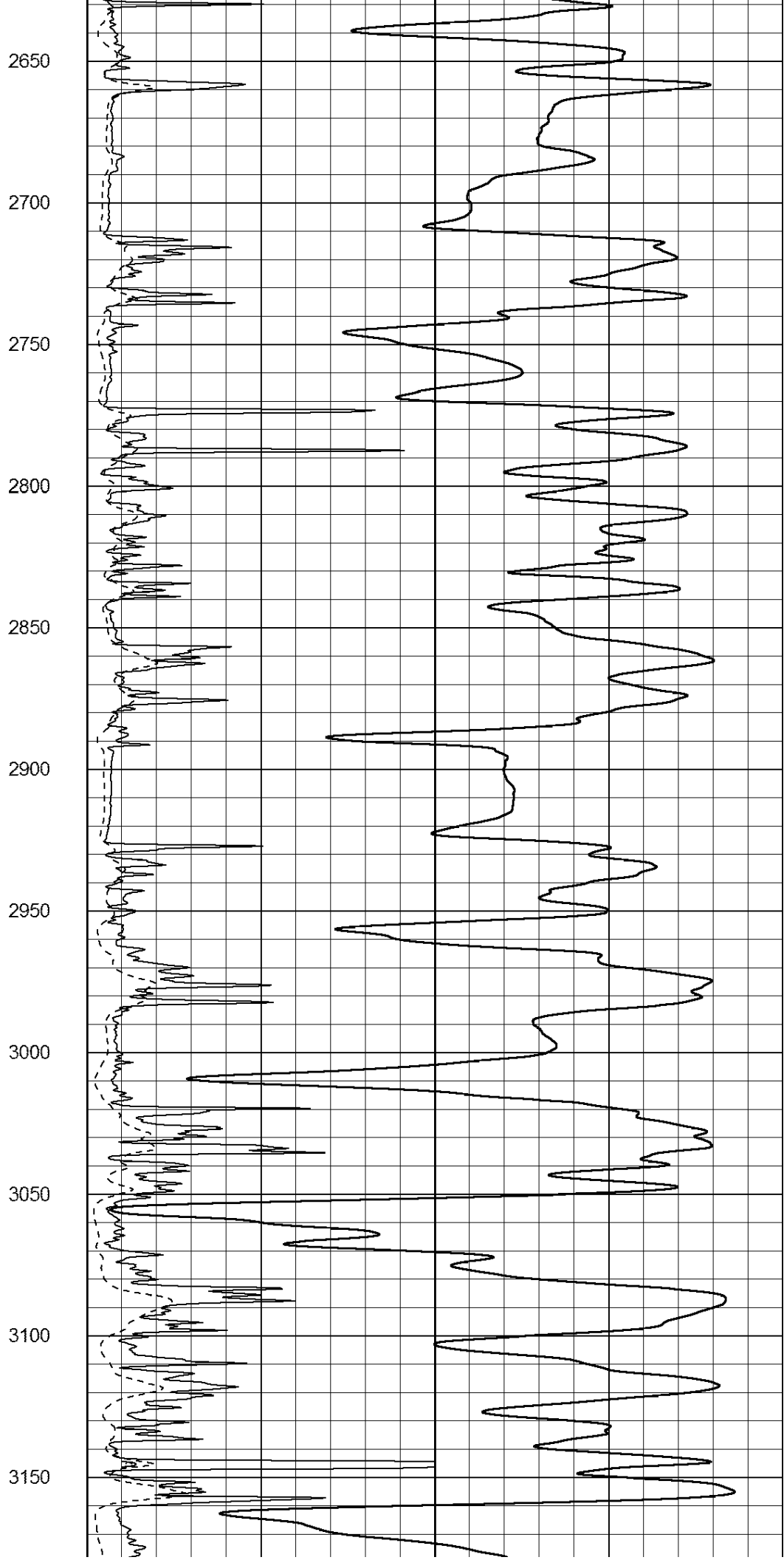
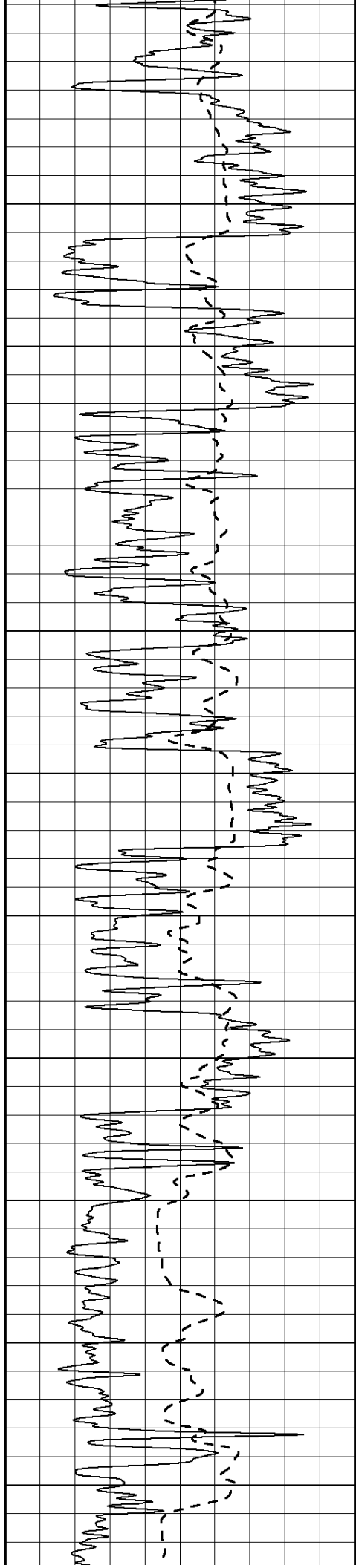
450
500
550
600
650
700
750
800
850
900
950

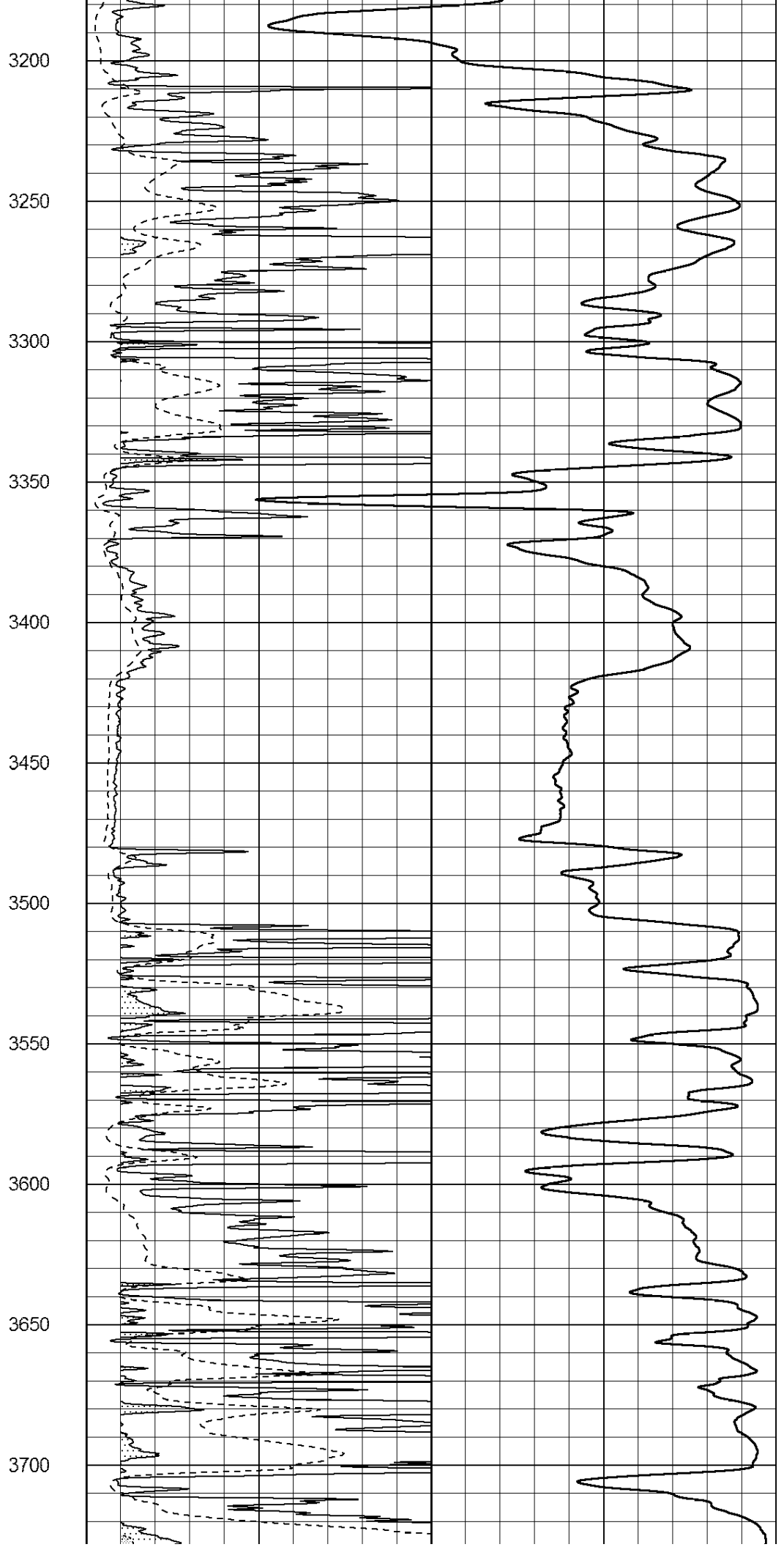
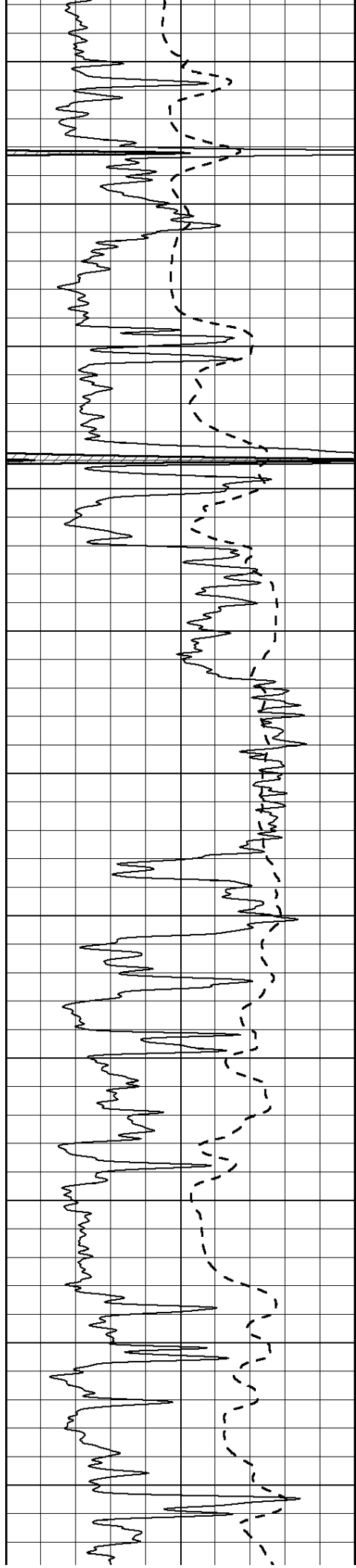


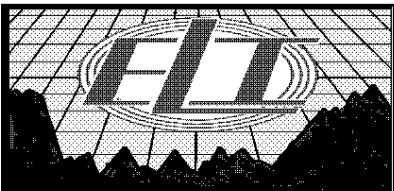
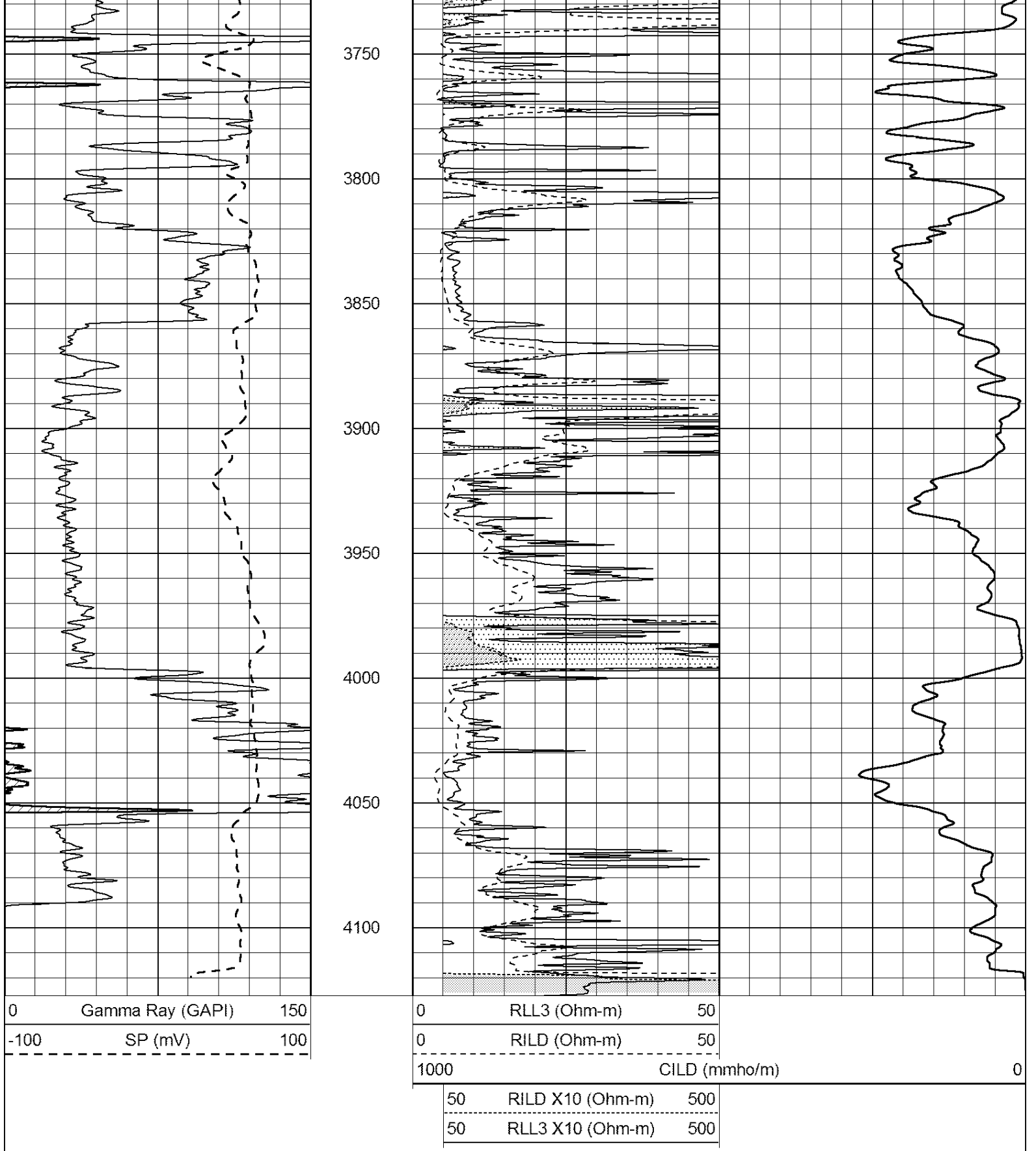










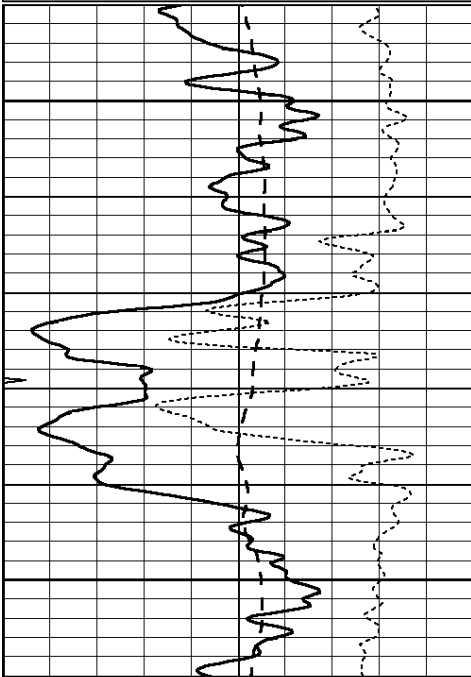


MAIN PASS

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 Dataset Pathname: pass3.1
 Presentation Format: dil

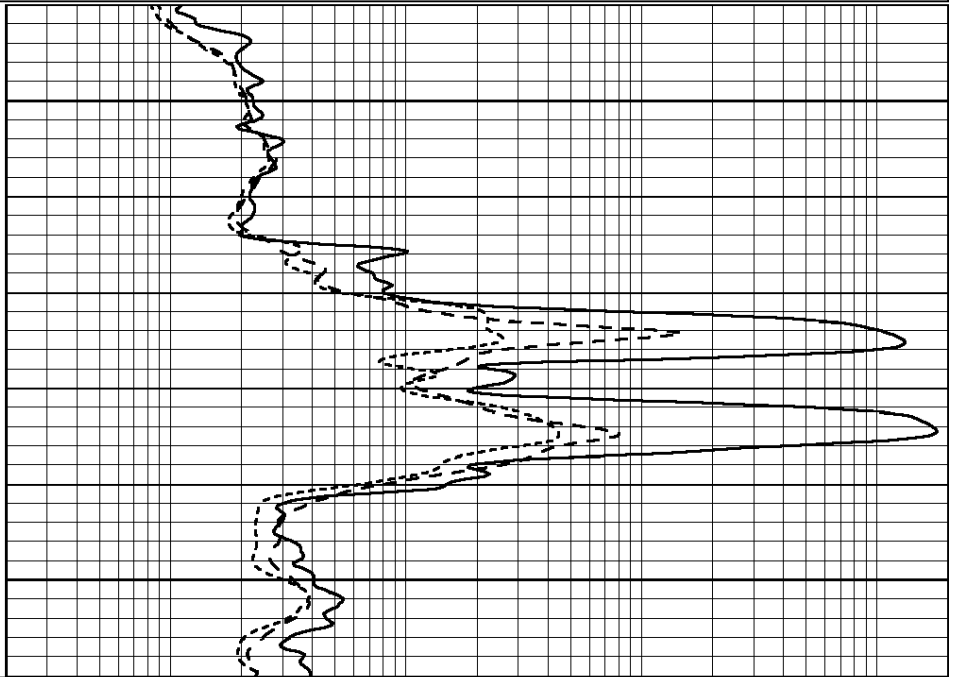
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



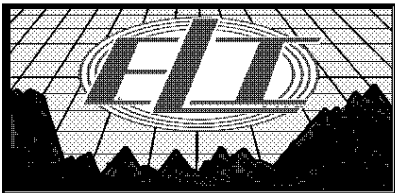
700

750



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

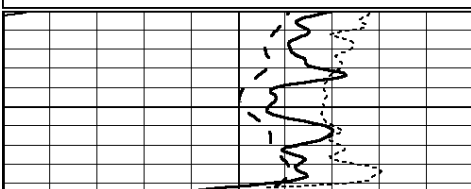


MAIN PASS

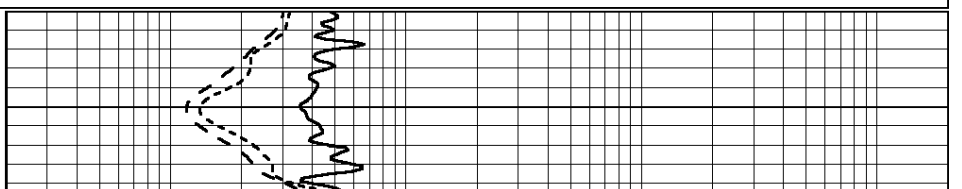
Database File: 2904pe.db
 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Thu Aug 16 20:13:49 2018 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

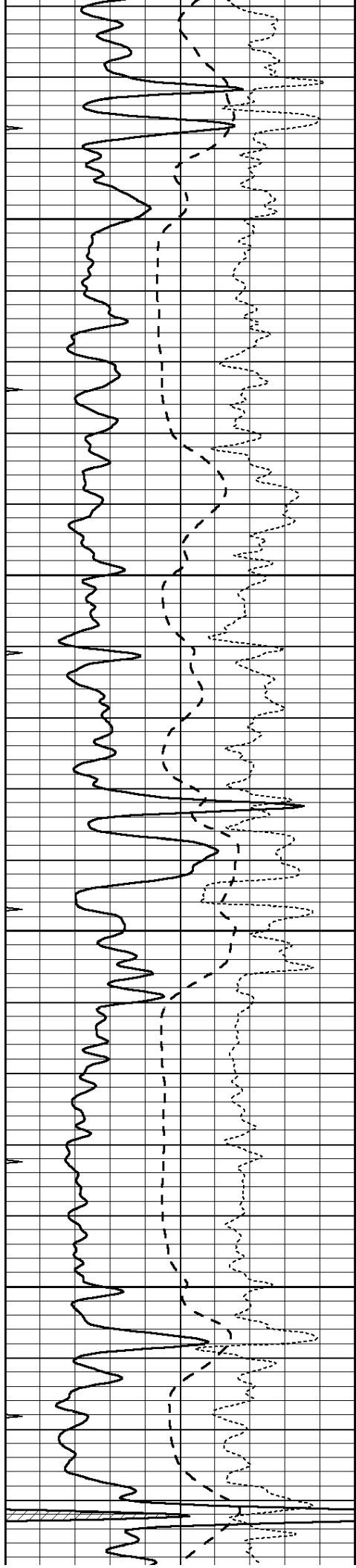
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



5000



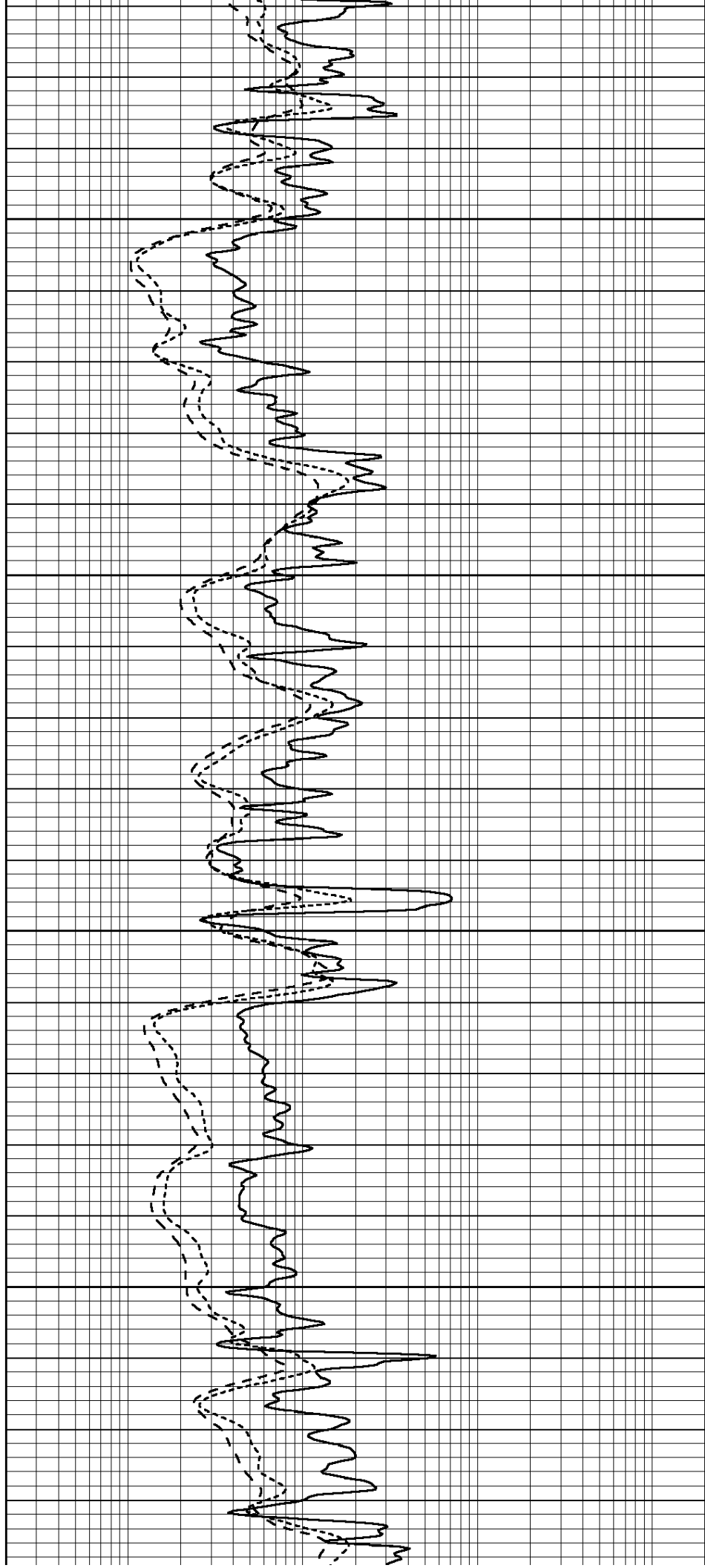


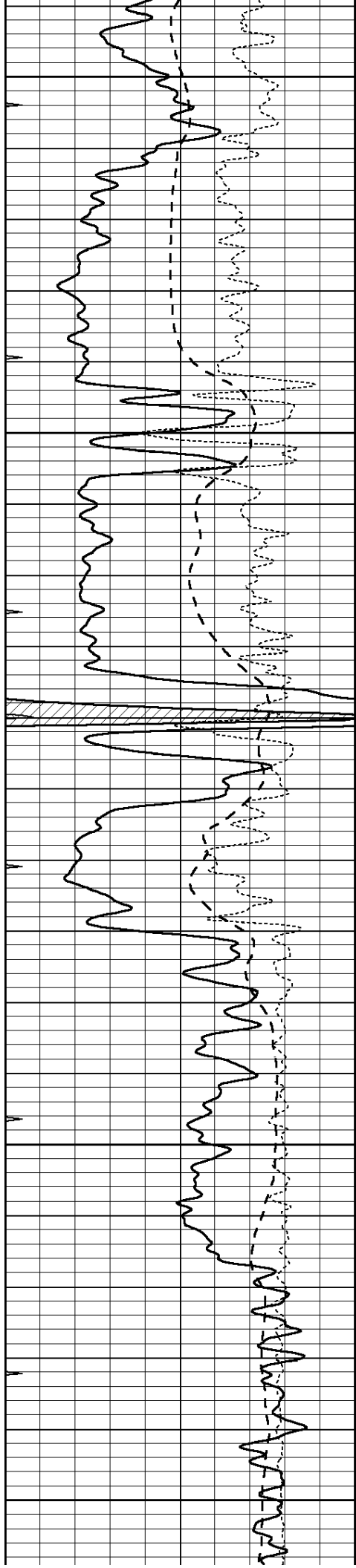
3050

3100

3150

3200





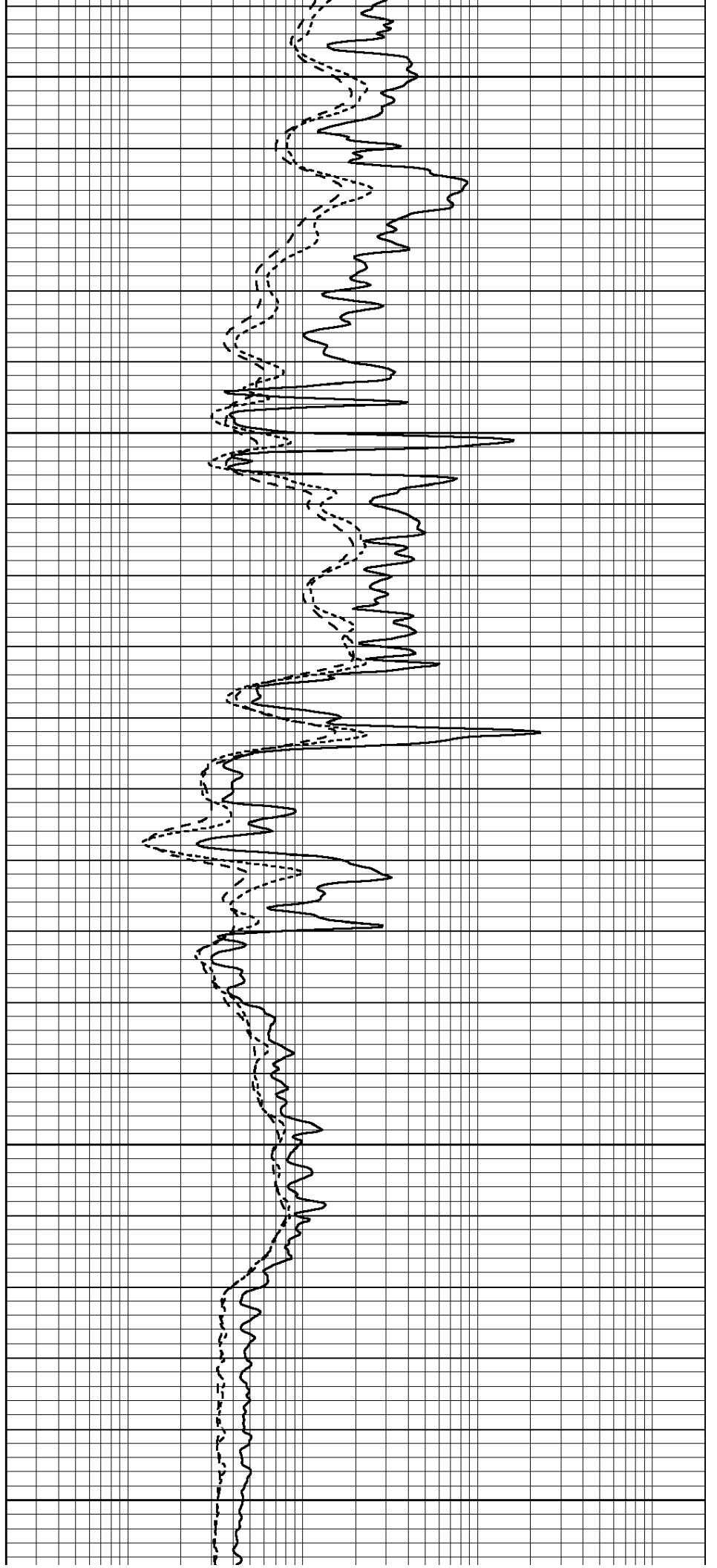
3250

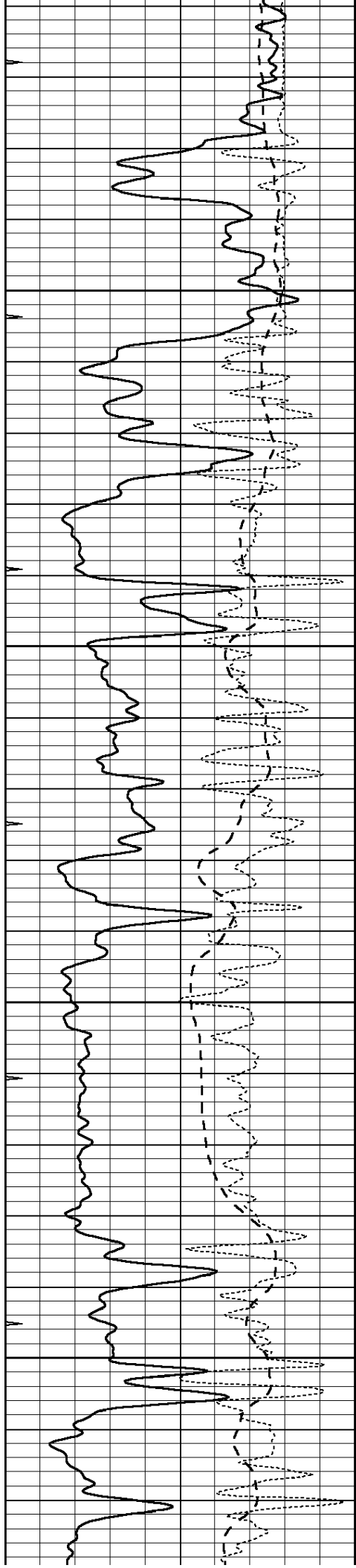
3300

3350

3400

3450



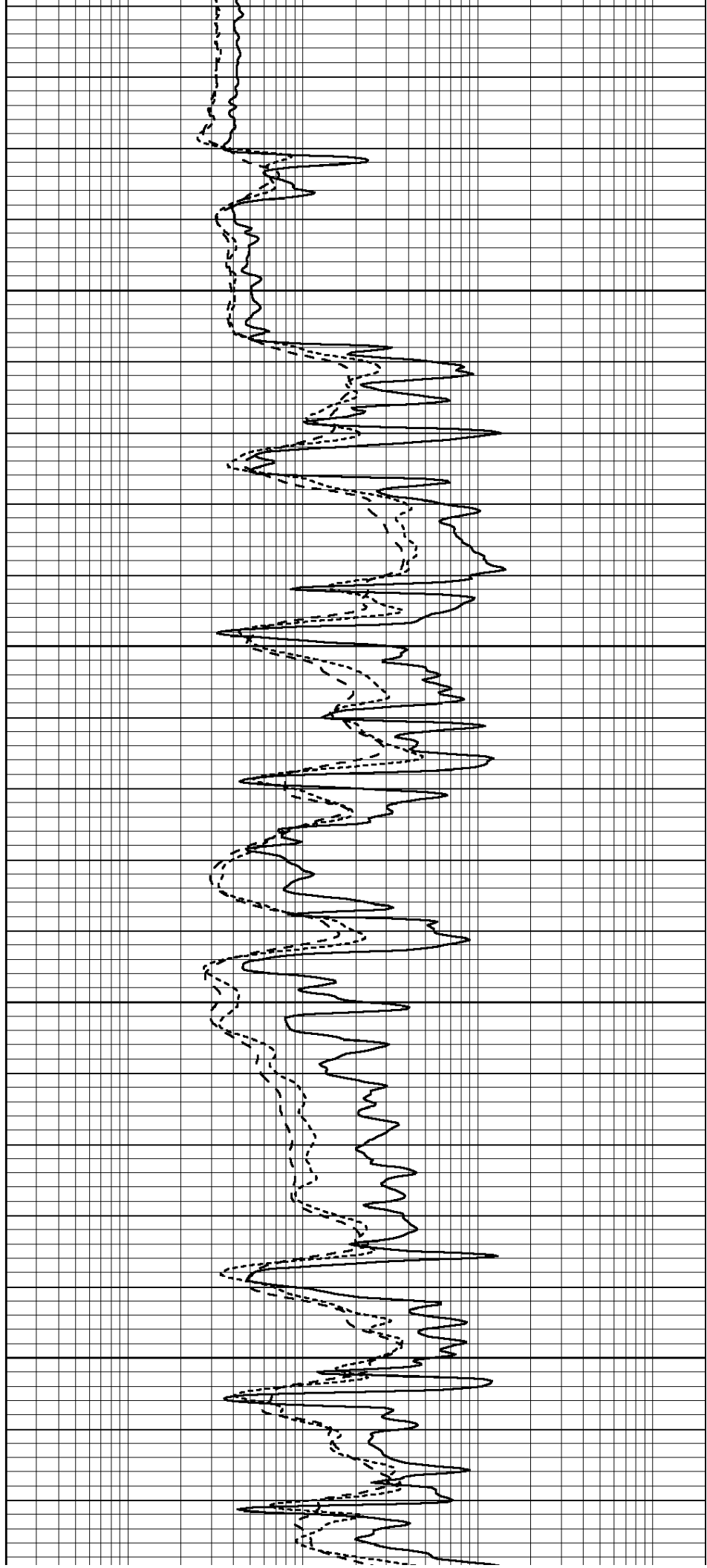


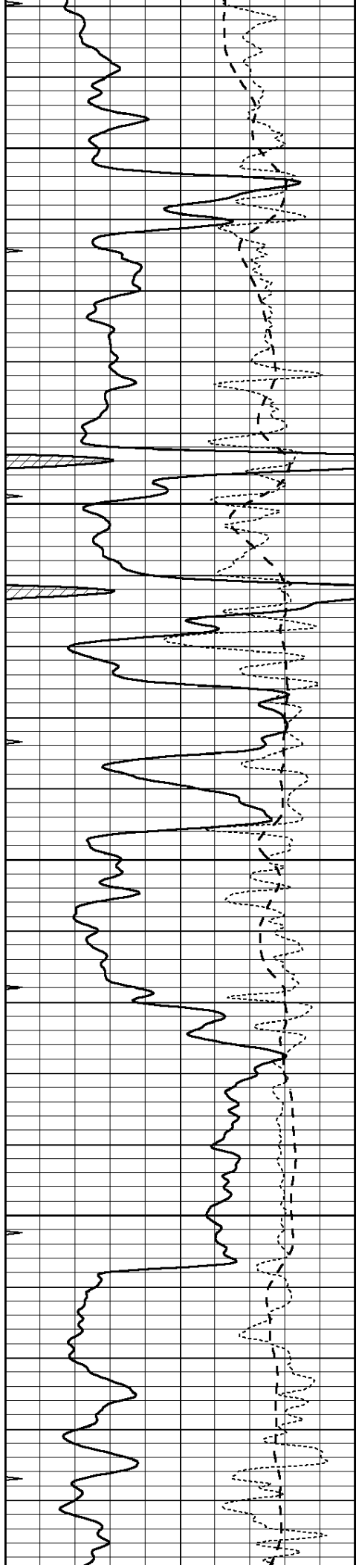
3500

3550

3600

3650



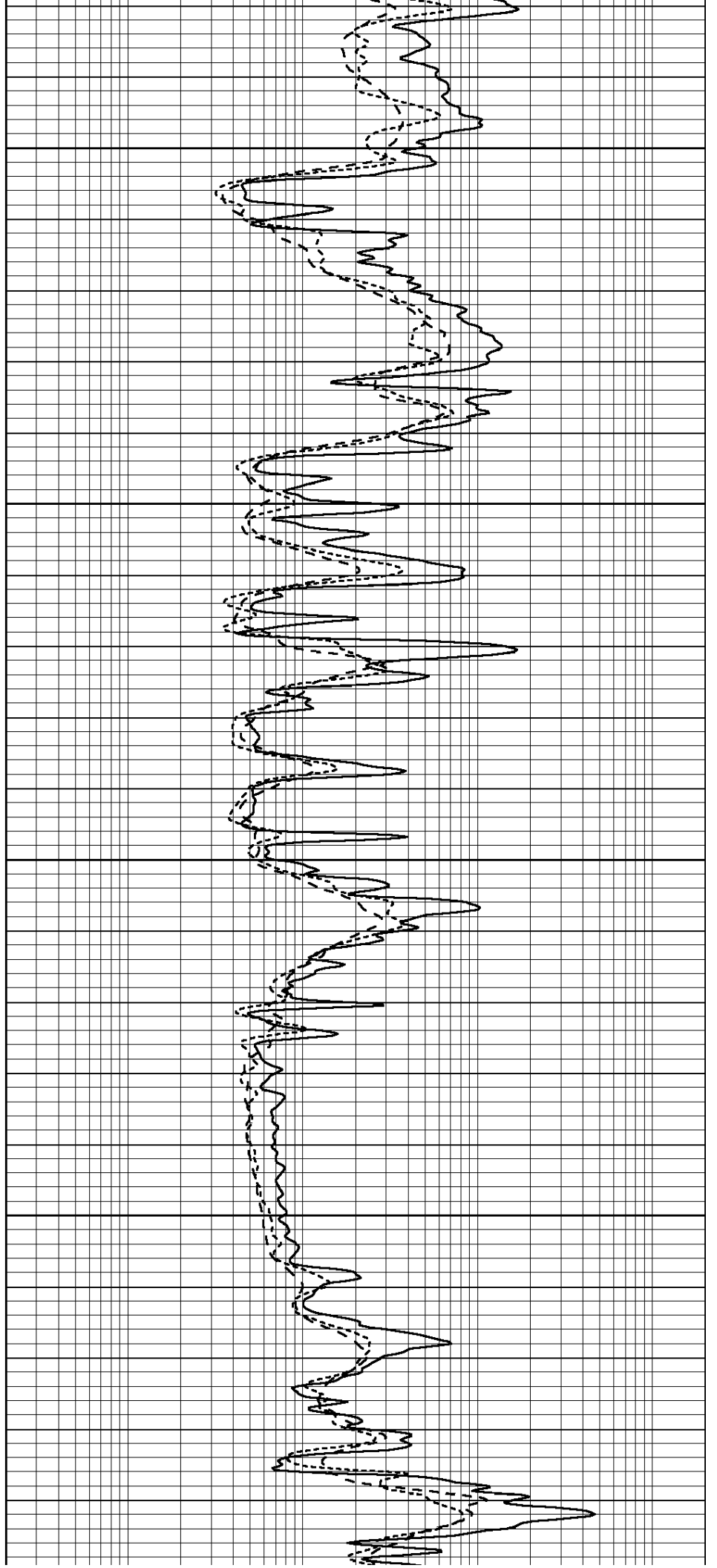


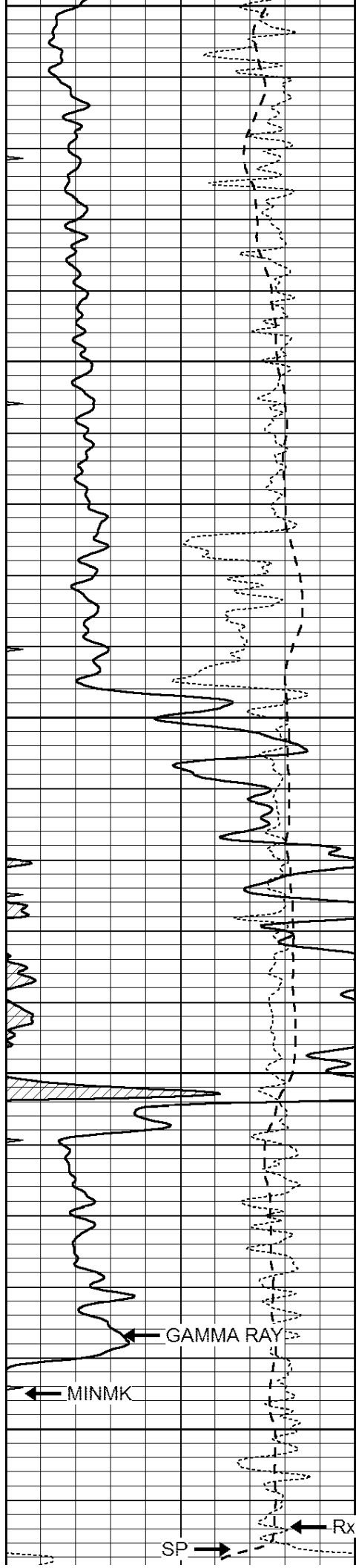
3700

3750

3800

3850





3900

3950

4000

4050

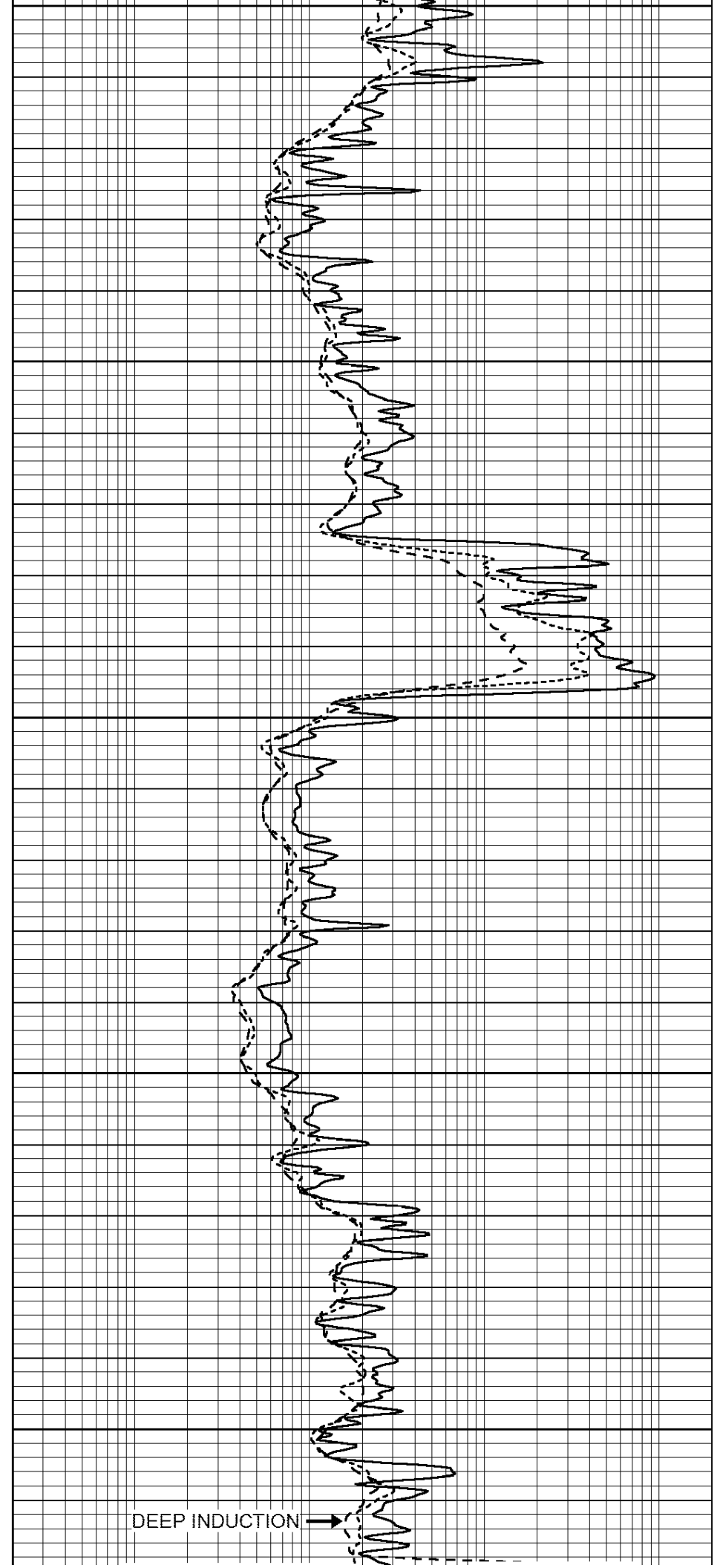
4100

GAMMA RAY

MINMK

SP

Rxo/Rt



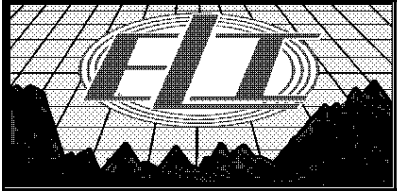
DEEP INDUCTION

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

LTD 4124

MEDIUM INDUCTION → ← SHALLOW GUARD

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

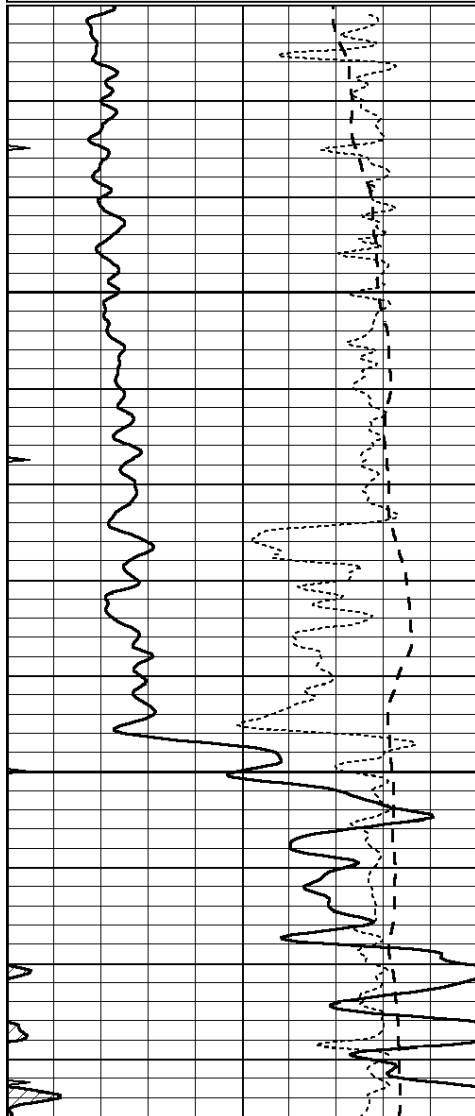


REPEAT SECTION

Database File: 2904pe.db
 Dataset Pathname: pass2.1
 Presentation Format: _dil
 Dataset Creation: Thu Aug 16 19:09:44 2018
 Charted by: Depth in Feet scaled 1:240

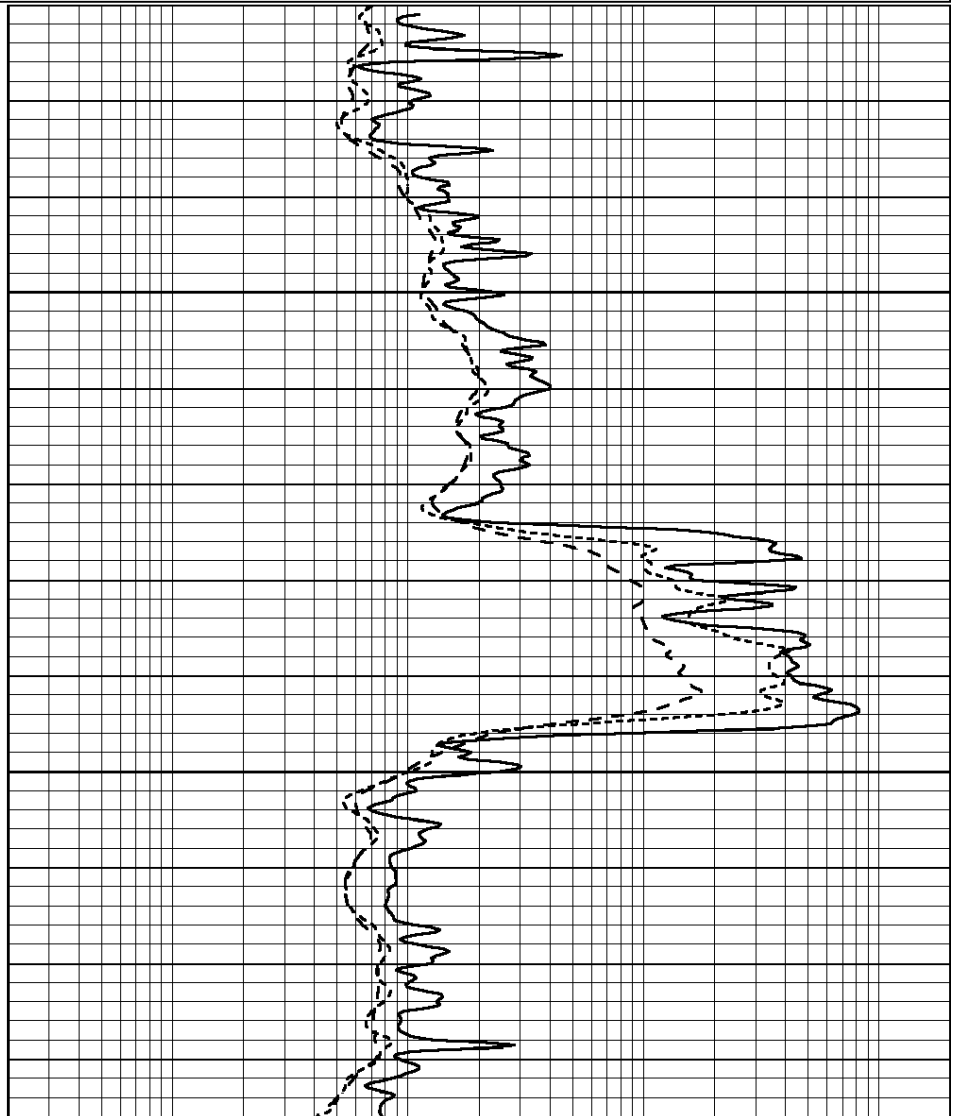
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

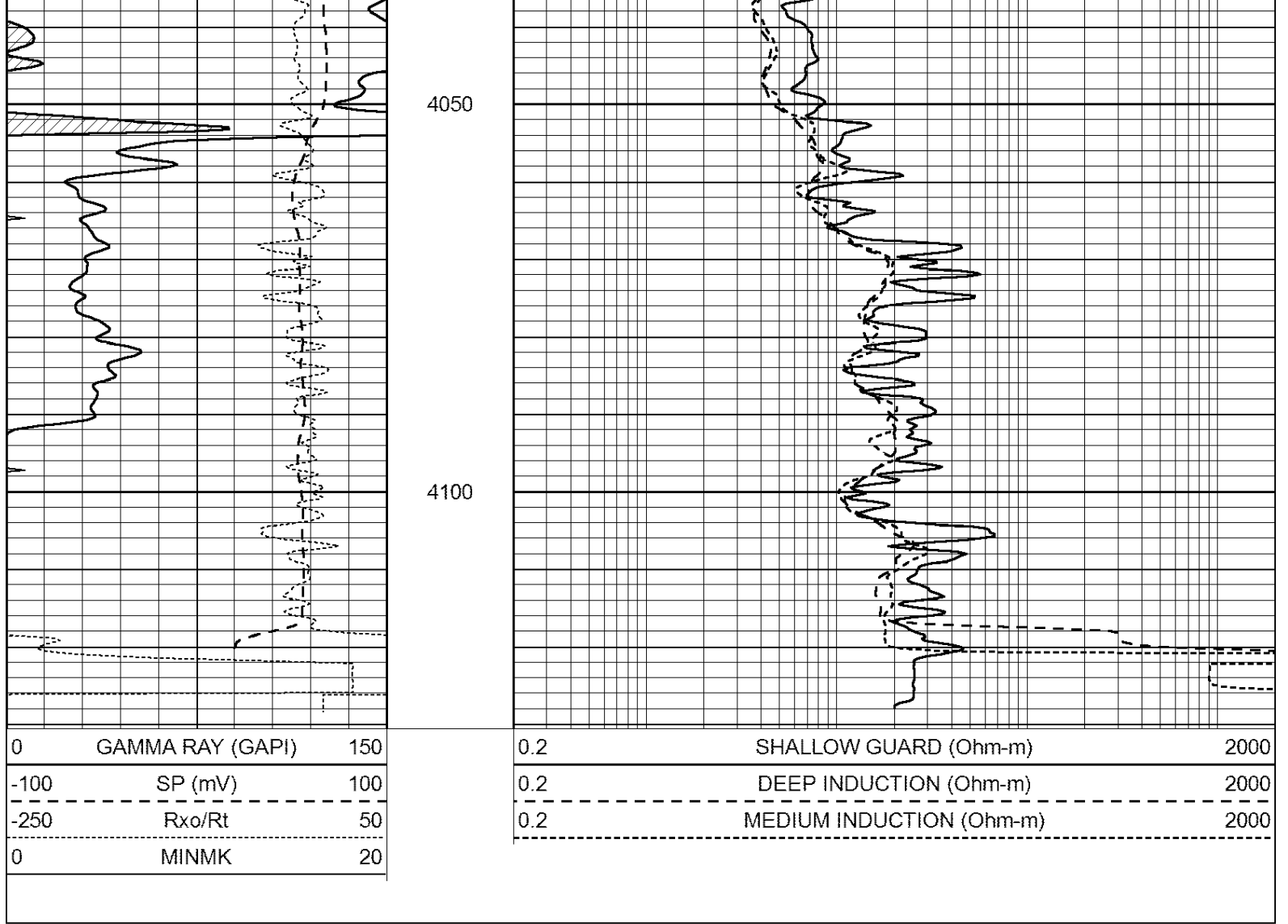
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3950

4000





Calibration Report

Database File: pe2.db
 Dataset Pathname: pass2
 Dataset Creation: Mon Aug 21 11:58:02 2017 by Log Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Mon Aug 21 11:58:18 2017
 Downhole Cal Performed: Mon Aug 21 11:58:21 2017
 After Survey Verification Performed: Mon Aug 21 11:58:23 2017

Surface Calibration

Loop:	Readings				References		Results	
	Air	Loop	V		Air	Loop	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
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		

Litho Density Calibration Report
Serial: 002 Model: PRB

Master Calibration		Performed Mon Aug 21 11:56:41 2017					
	Background	Magnesium	Aluminum	Sandstone			
Window 1	833.6	7394.2	2287.3	8111.8	cps		
Window 2	768.9	6322.3	1995.6	6800.0	cps		
Window 3	621.5	3261.9	1186.4	3380.9	cps		
Window 4	184.2	185.7	184.9	184.8	cps		
Long Space	0.0	5553.4	1226.6	6031.1	cps		
Short Space	1.2	1307.5	903.9	1387.7	cps		
Rho		1.7100	2.5900	1.3800	g/cc		
Pe		0.0000	2.5700	1.5500			
Rib Angle	: 46.3	Rib Slope	: 1.045	Density/Spine Ratio	: 0.566		
Spine Angle	: 76.3	Spine Slope	: 4.090	Spine Intercept	: -20.7		

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969					
	Background	Magnesium	Aluminum	Sandstone			
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					
	Background	Magnesium	Aluminum	Sandstone			
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			

Serial Number: 61
Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	1.00 cps	1.00 cps	1.0000
Long Space	1.00 cps	1.00 cps	1.0000

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	
3)	Short Space	cps		
	Long Space	cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: GR6
Tool Model: OPEN
Performed: Mon Aug 21 11:59:01 2017

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity: 0.5500 GAPI/cps