



DUAL
INDUCTION
LOG

Company DOWNING NELSON OIL COMPANY, INC.
Well GEIST-TILLET UNIT B #1-22
Field CONNESS
County GRAHAM
State KANSAS

Company DOWNING NELSON OIL COMPANY, INC.
Well GEIST-TILLET UNIT B #1-22
Field CONNESS
County GRAHAM State KANSAS

Location: API #: 15-065-24187-0000
1645' FSL & 2420' FEL
SEC 22 TWP 10S RGE 23W
Permanent Datum GROUND LEVEL Elevation 2347
Log Measured From KELLY BUSHING 8' A.G.L
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
MEL
Elevation
K.B. 2355
D.F. 2353
G.L. 2347

Date	11/25/20
Run Number	ONE
Depth Driller	3950
Depth Logger	3952
Bottom Logged Interval	3950
Top Log Interval	00
Casing Driller	8 5/8" @ 220
Casing Logger	220
Bit Size	7 7/8
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.5/52
pH / Fluid Loss	9.5/10.6
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.90 @ 64F
Rmf @ Meas. Temp	.67 @ 64F
Rmc @ Meas. Temp	1.08 @ 64F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.49 @ 116F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	////
Maximum Recorded Temperature	116F
Equipment Number	3802
Location	HAYS, KANSAS
Recorded By	JASON CAPPELLUCCI
Witnessed By	MARC DOWNING

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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 SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
WAKEENEY, KS. - NORTH TO GRAHAM COUNTY LINE - 2 MORE NORTH TO C RD.
1/2 WEST - NORTH INTO

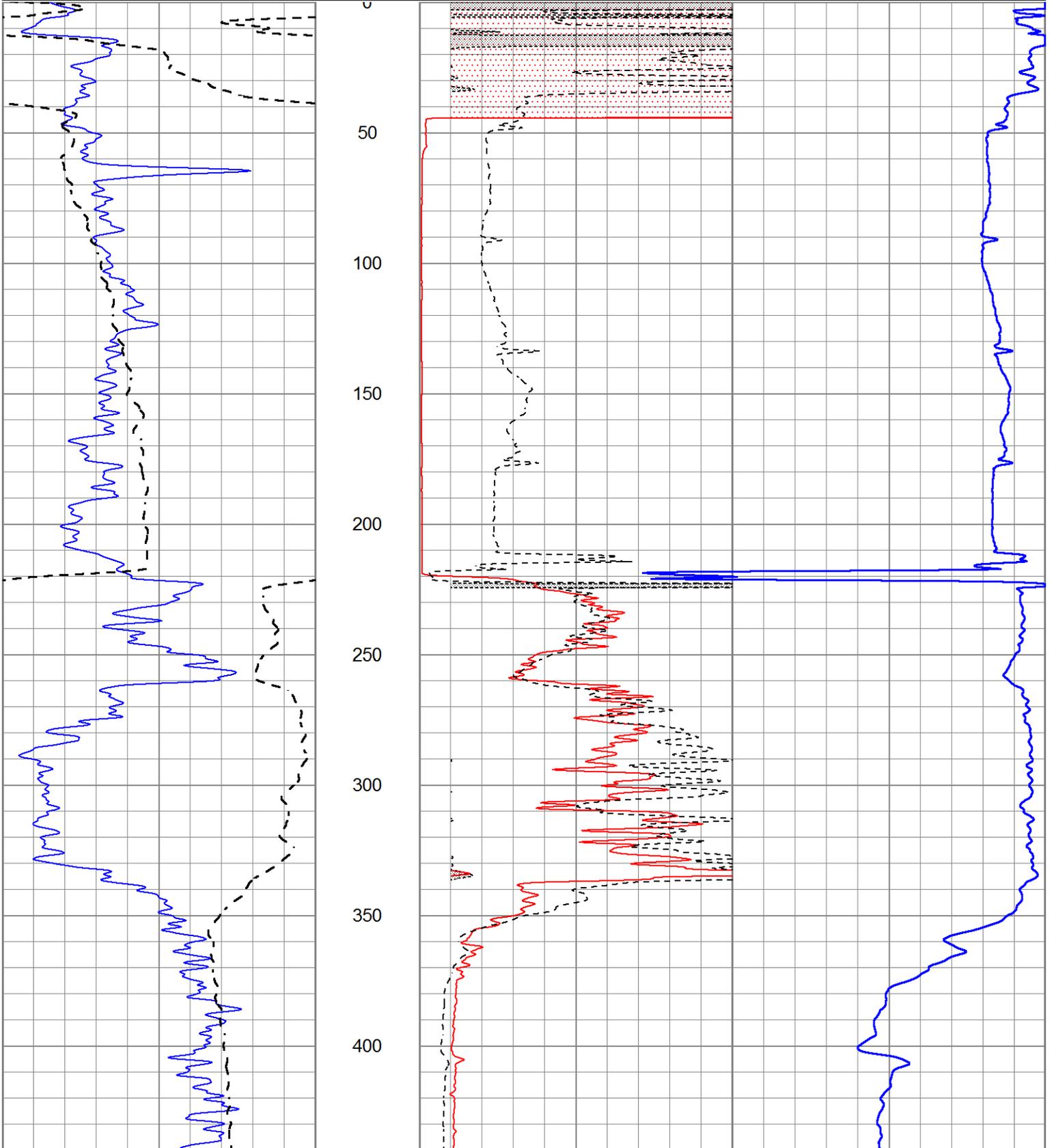


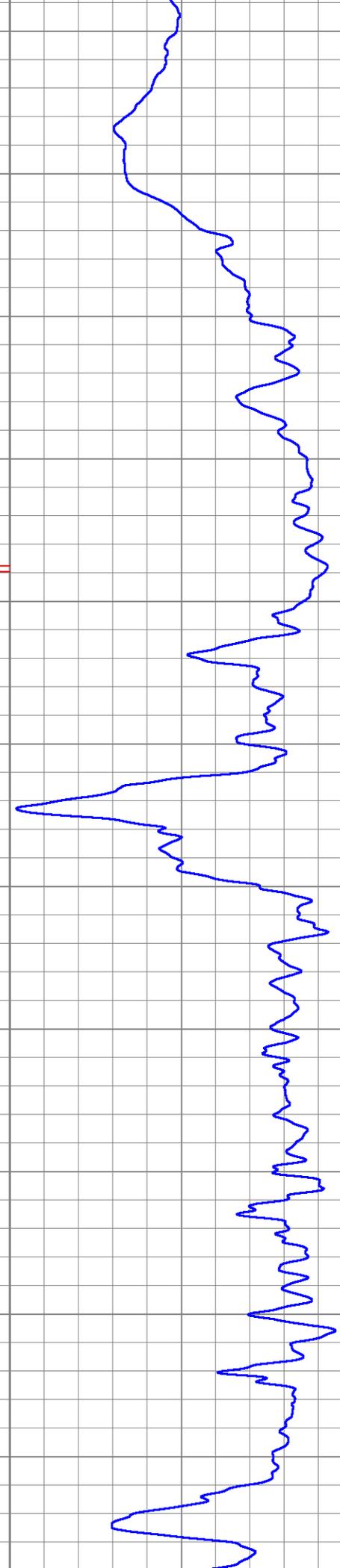
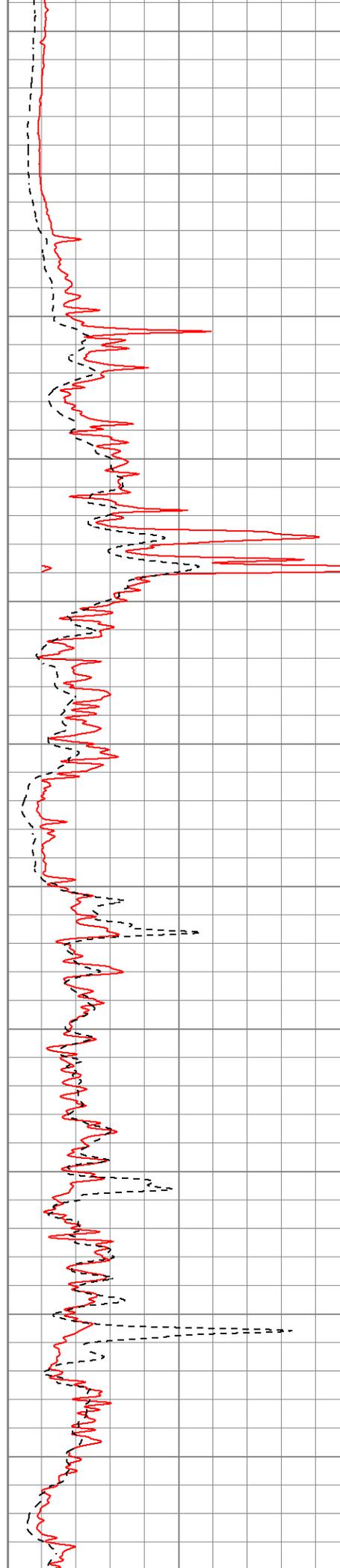
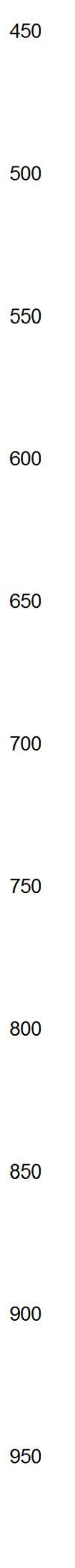
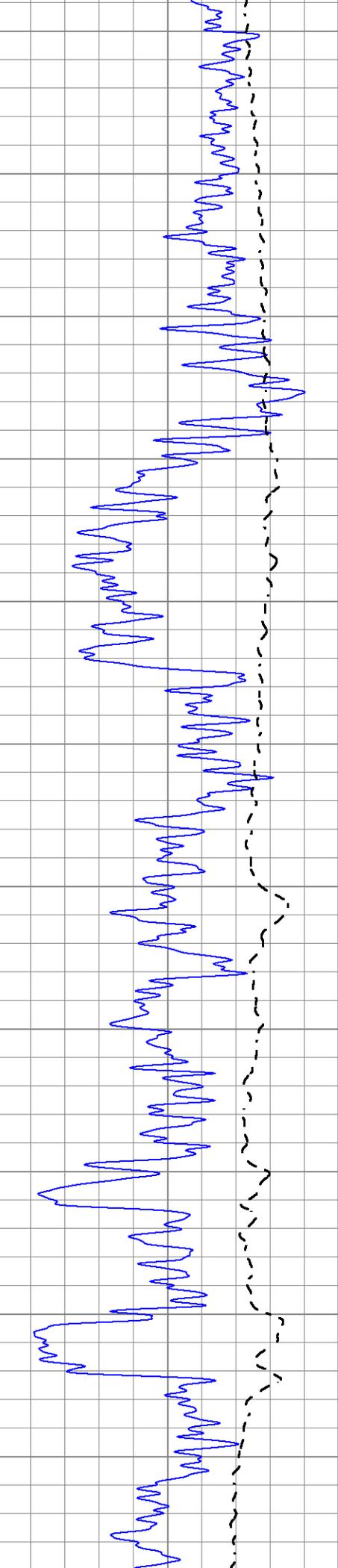
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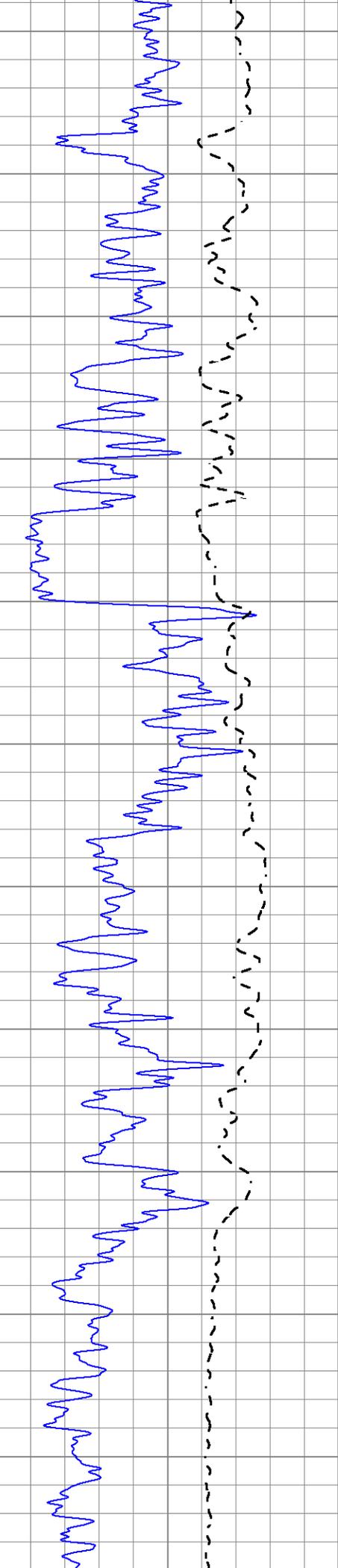
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 Presentation Format _dil2
 Dataset Creation Wed Nov 25 08:49:09 2020
 Charted by Depth in Feet scaled 1:600

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

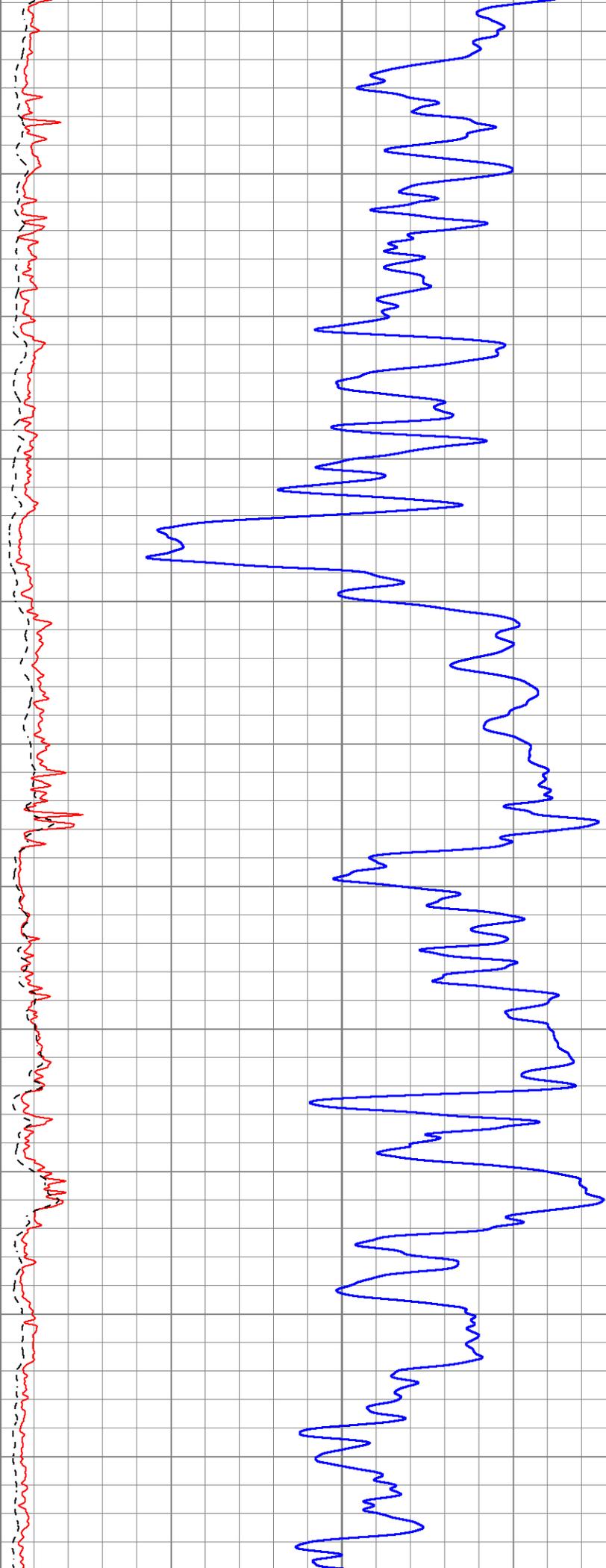
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

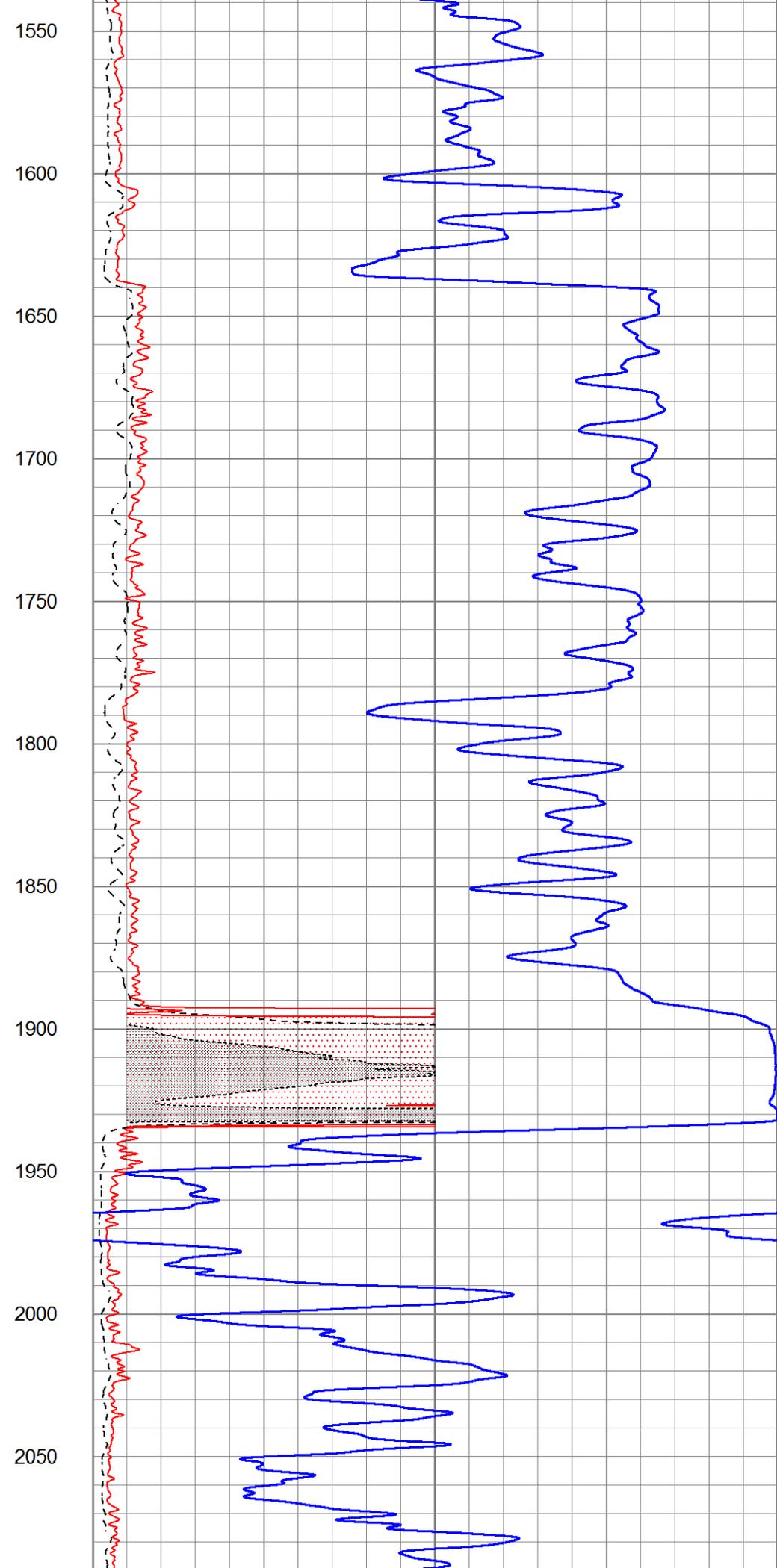
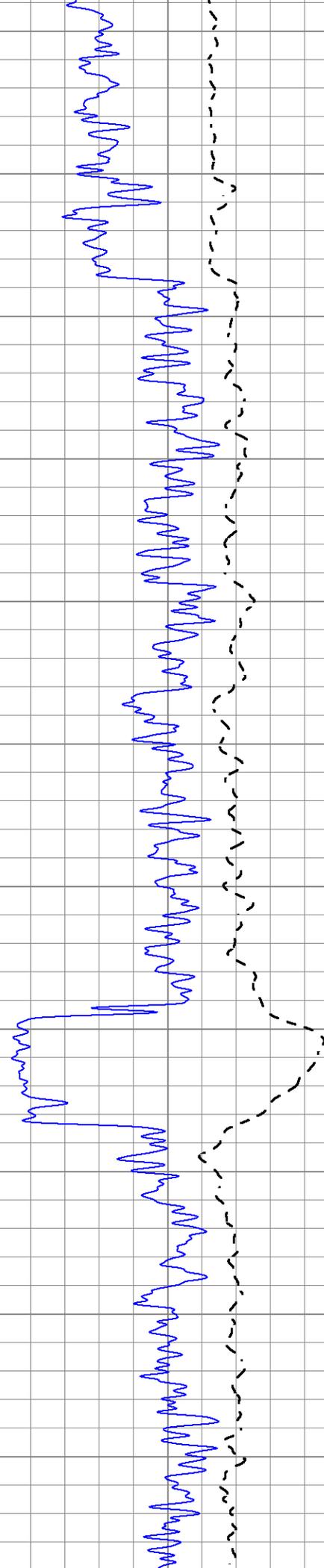


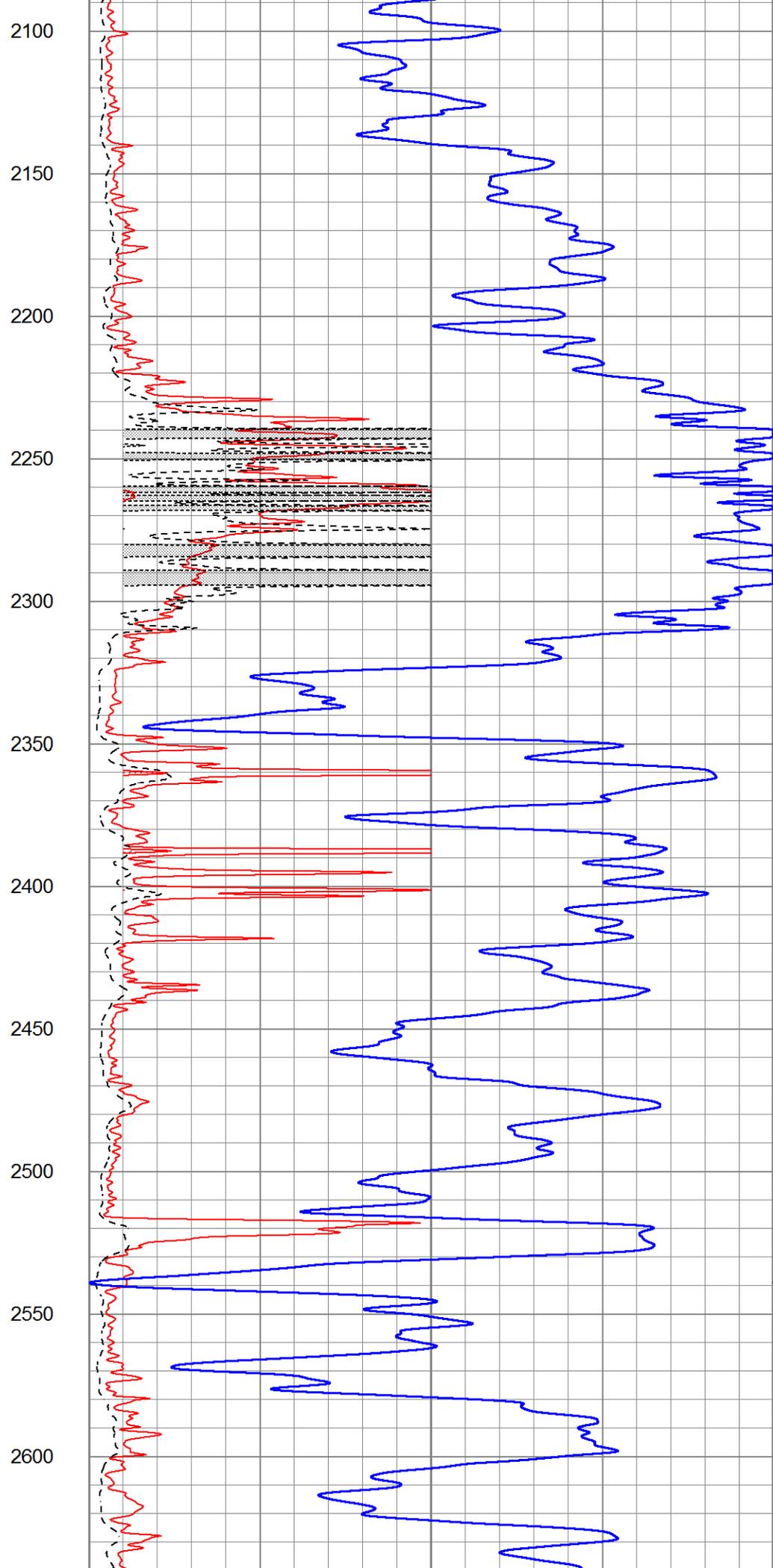
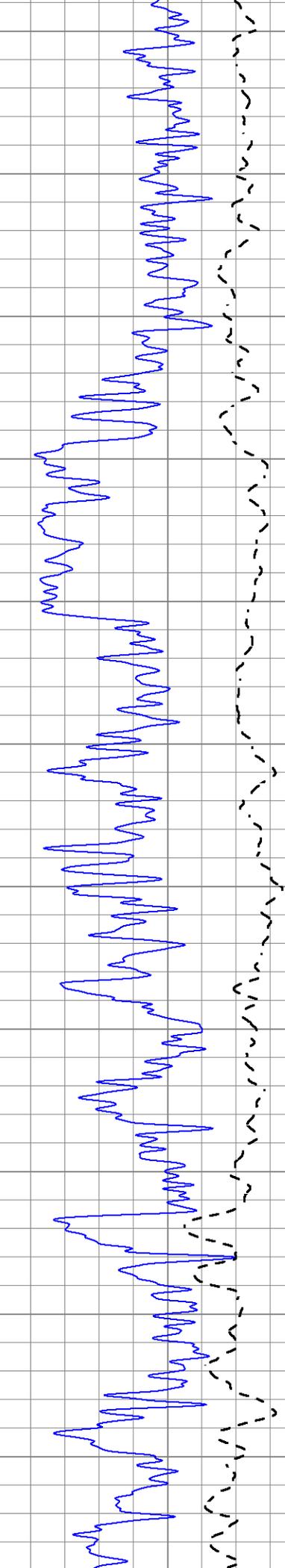


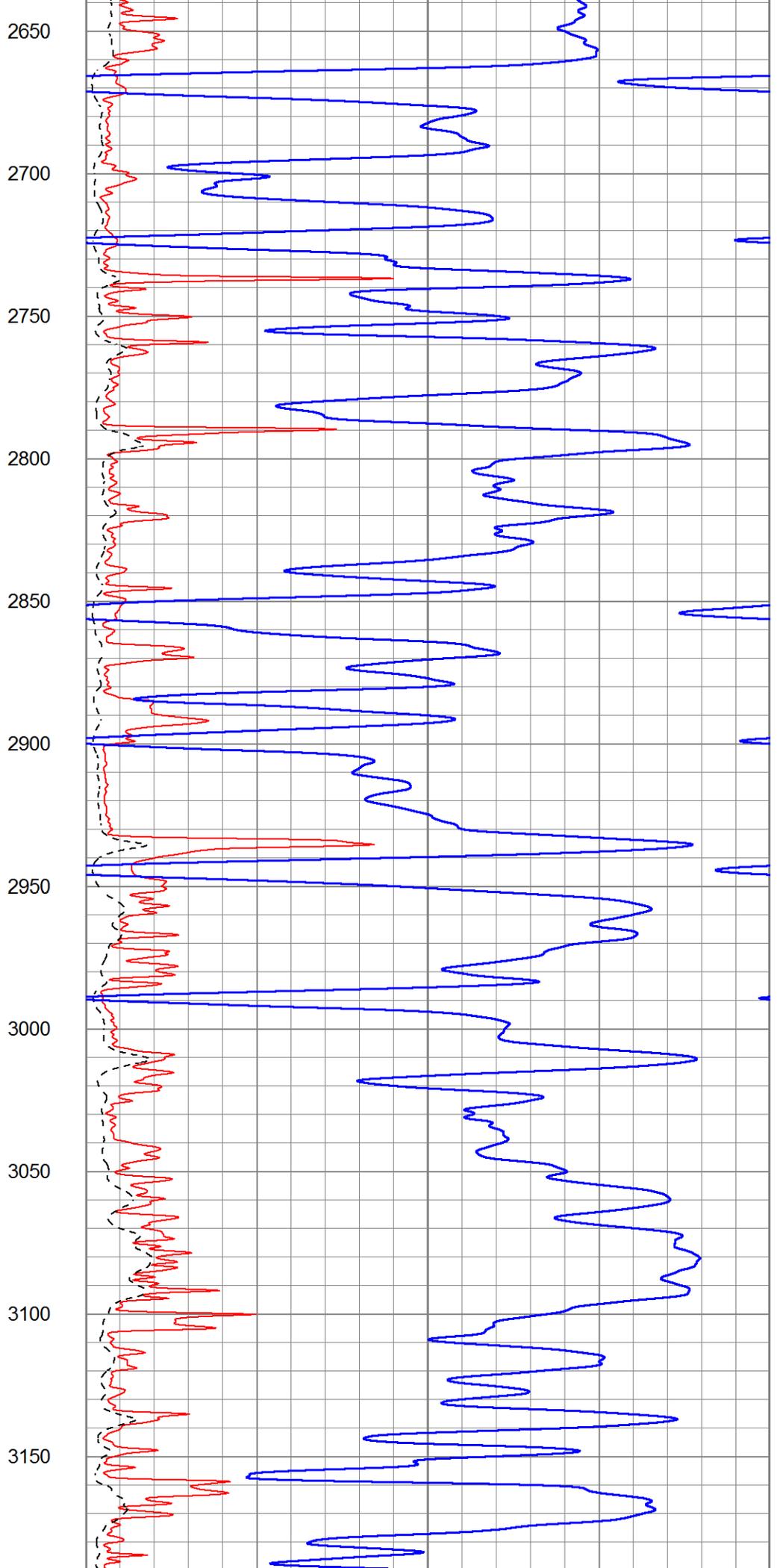
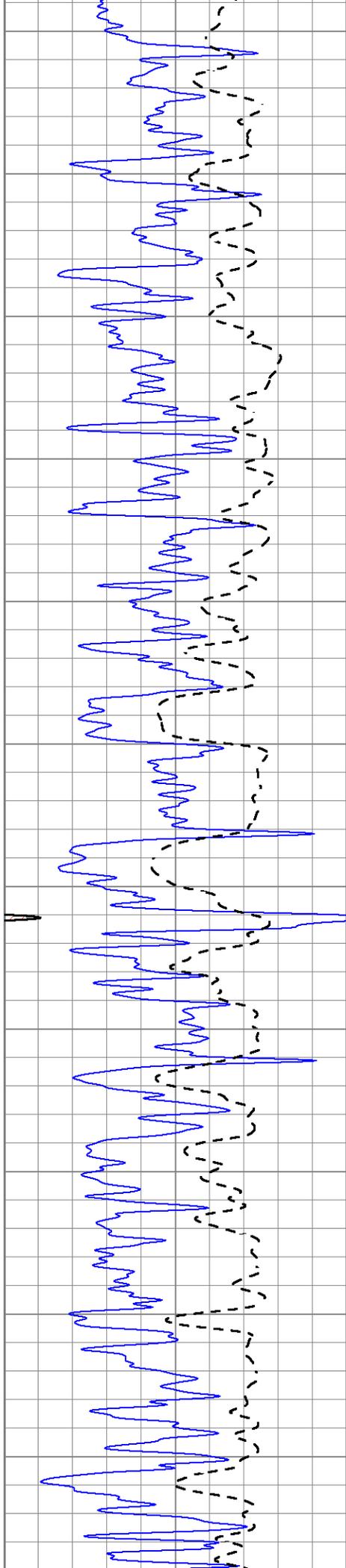


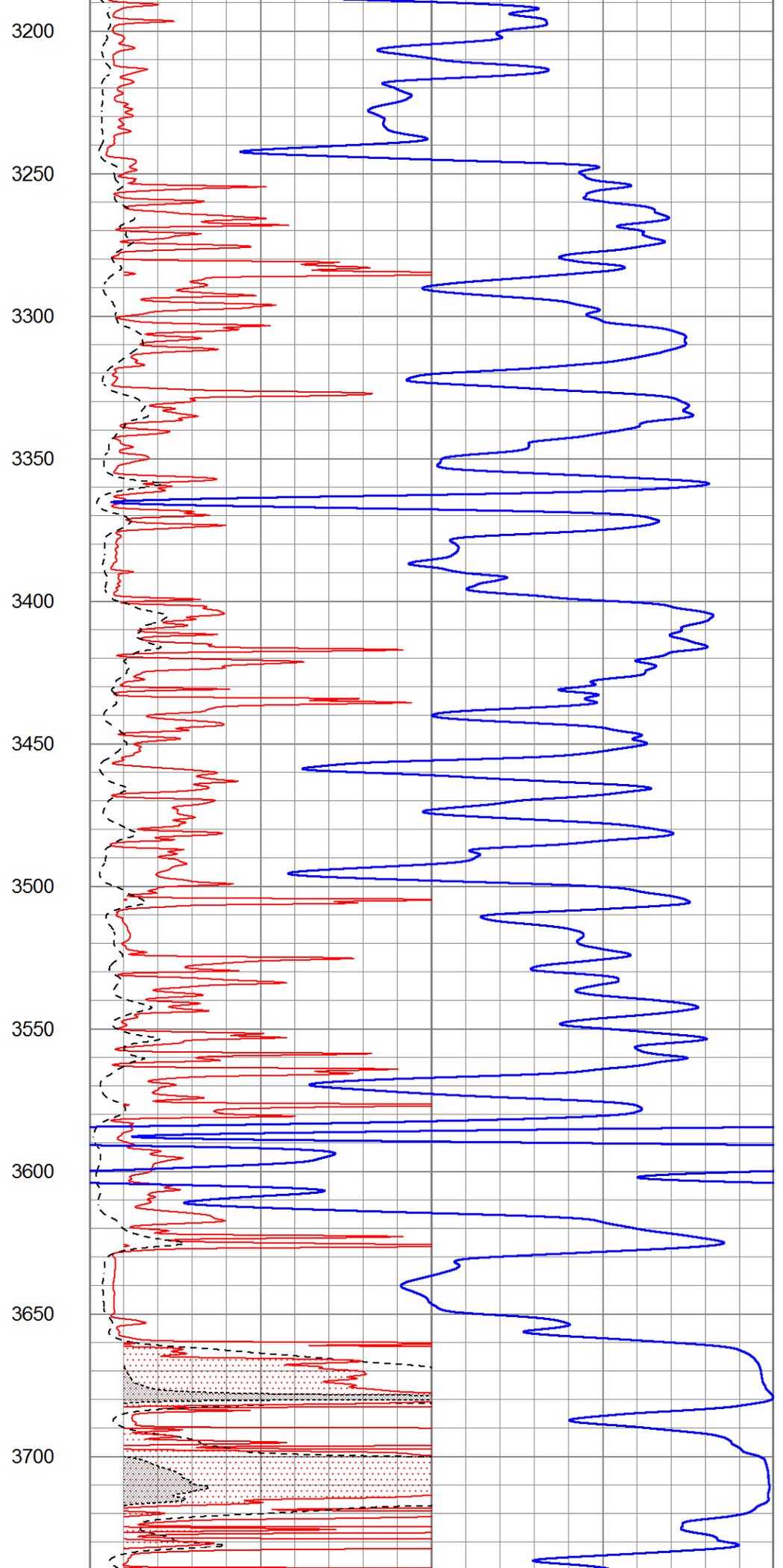
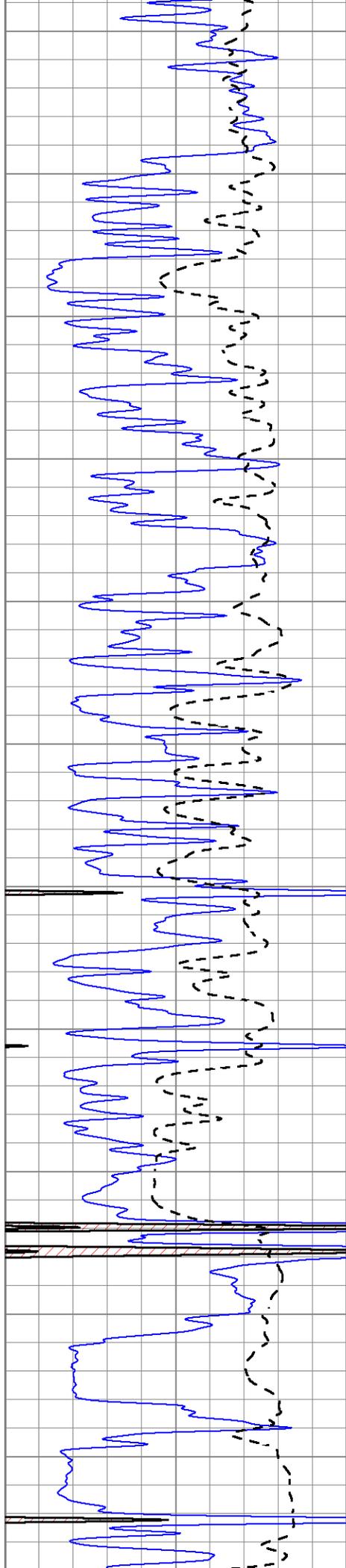
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

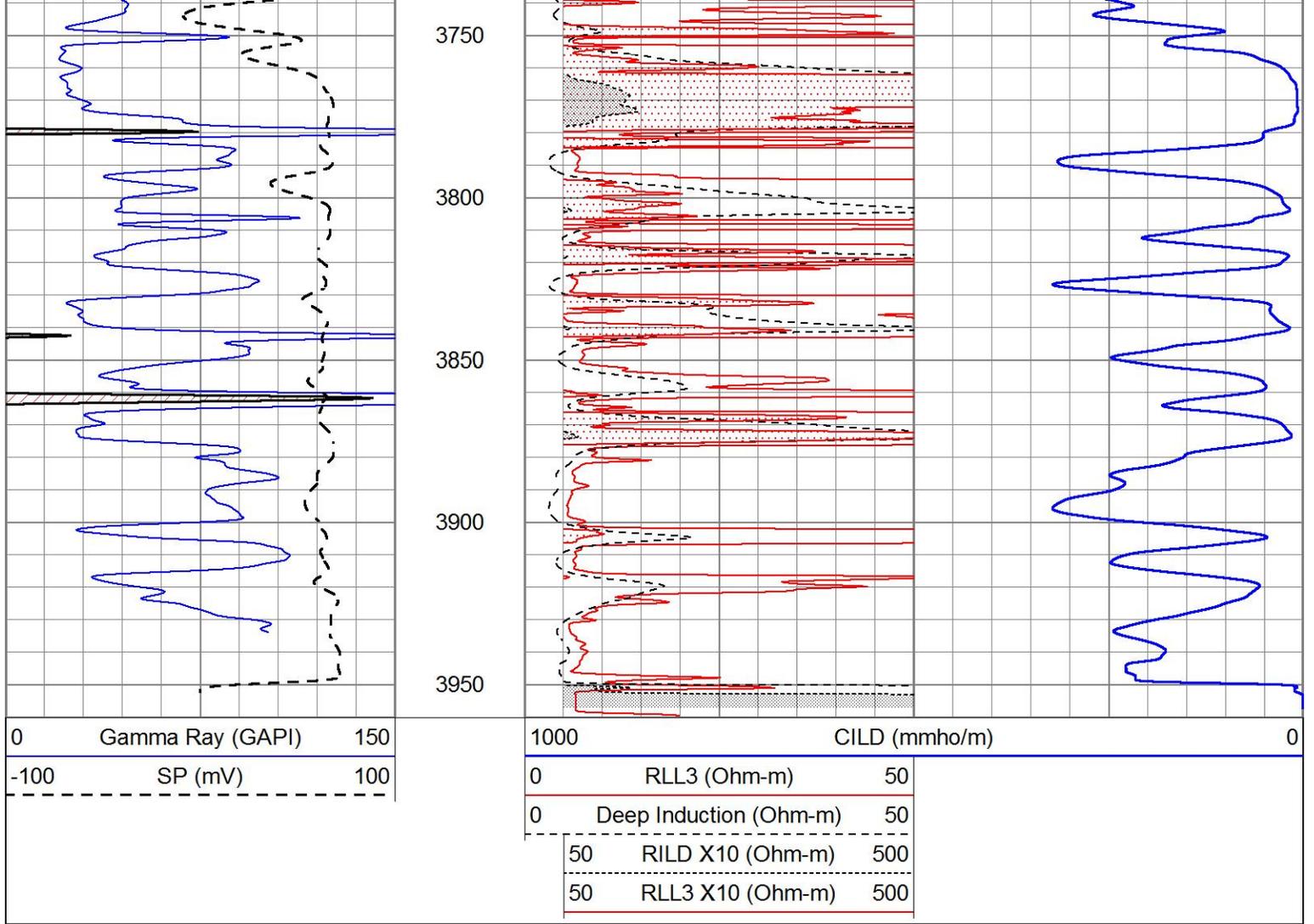










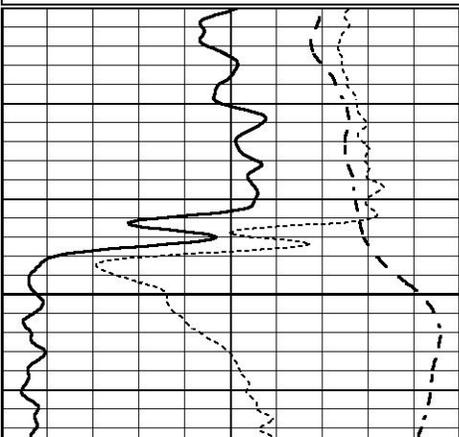


ANHYDRITE

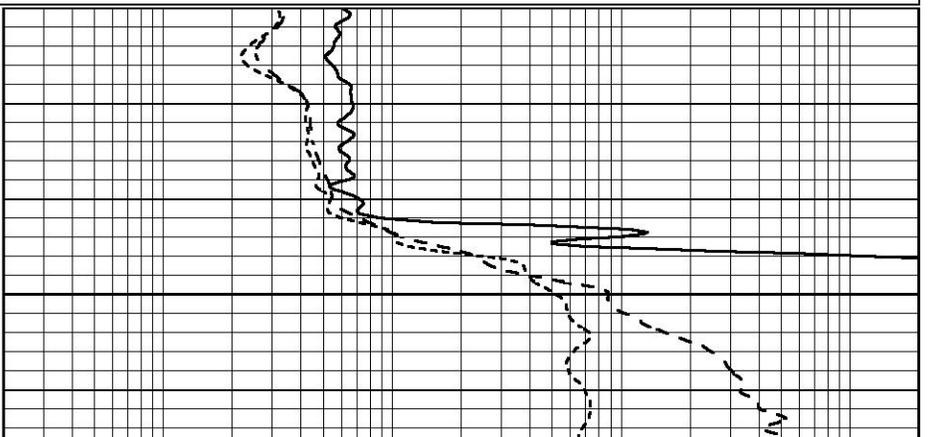
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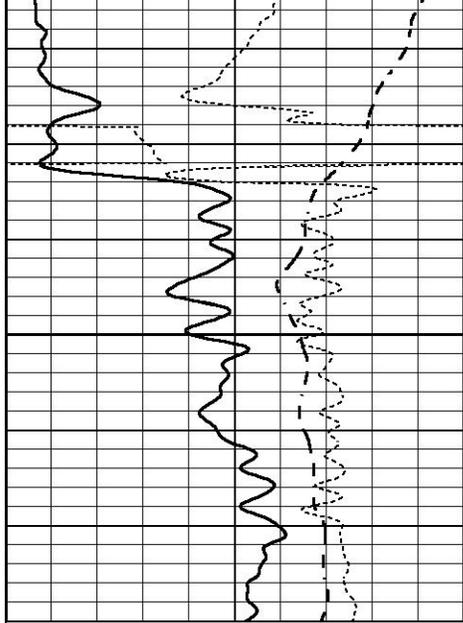
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

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



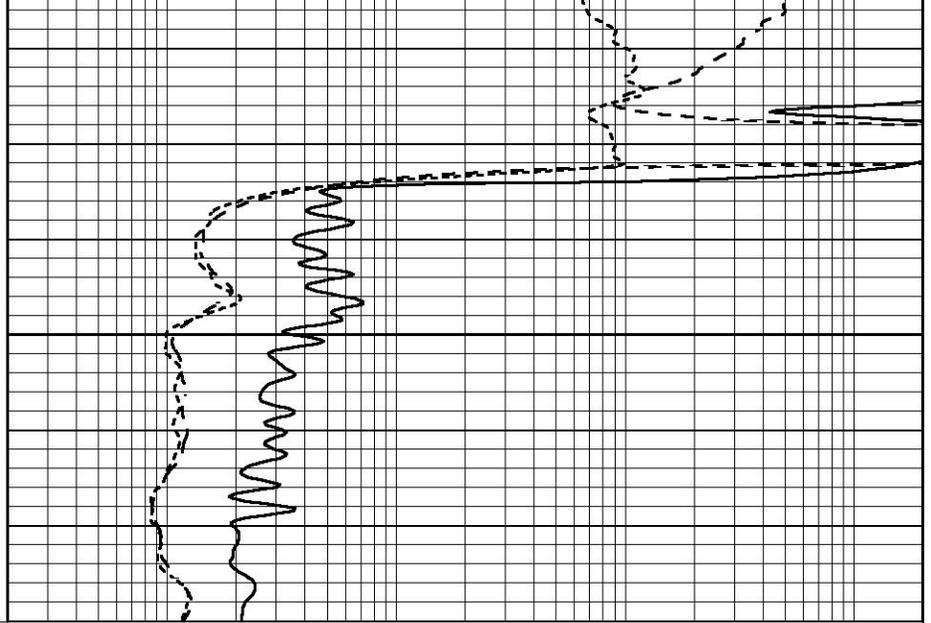
1900





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

1950



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

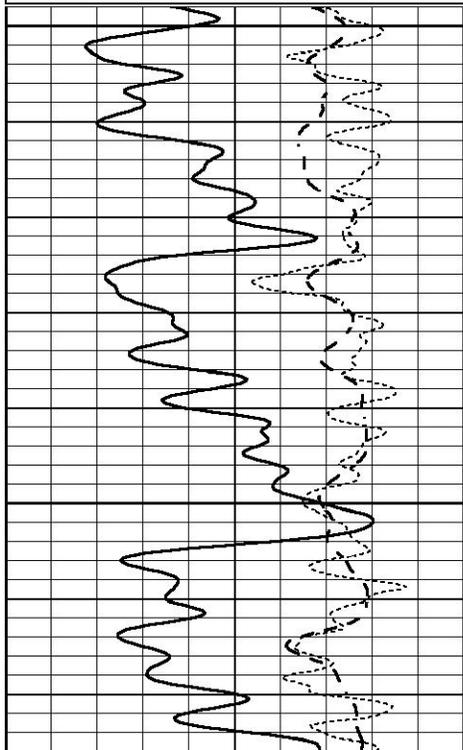


MAIN SECTION

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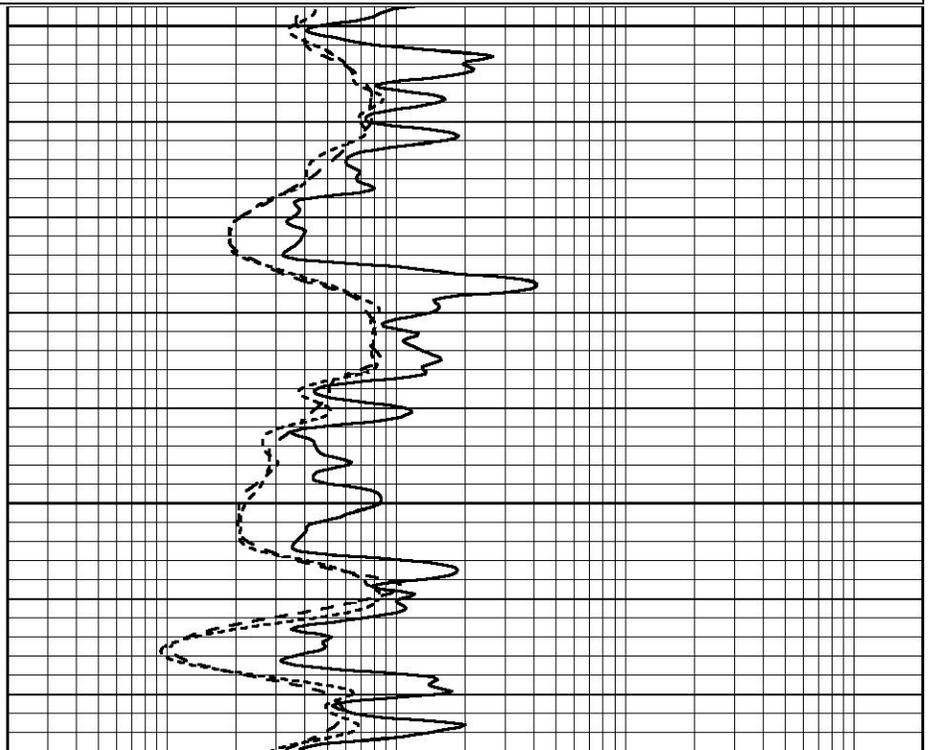
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

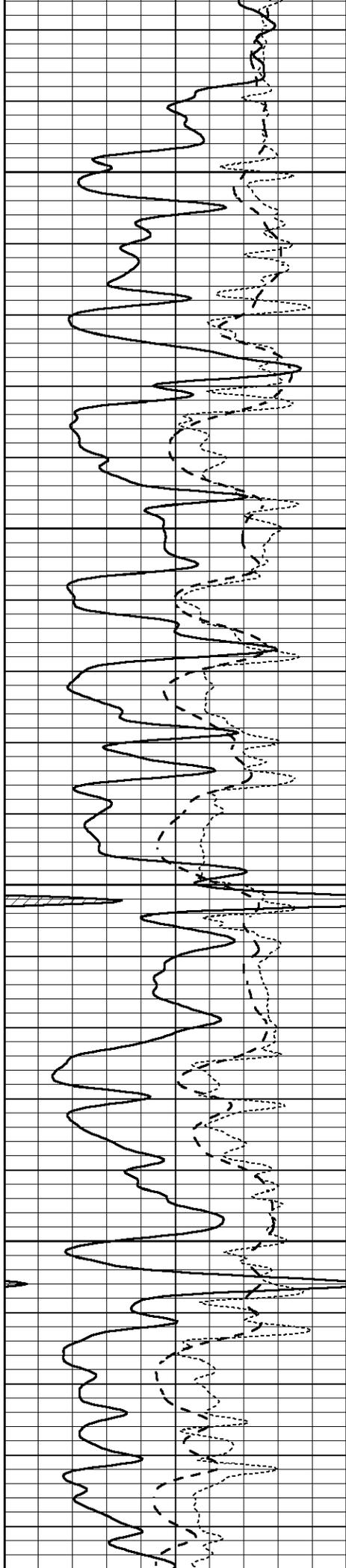
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



3300

3350



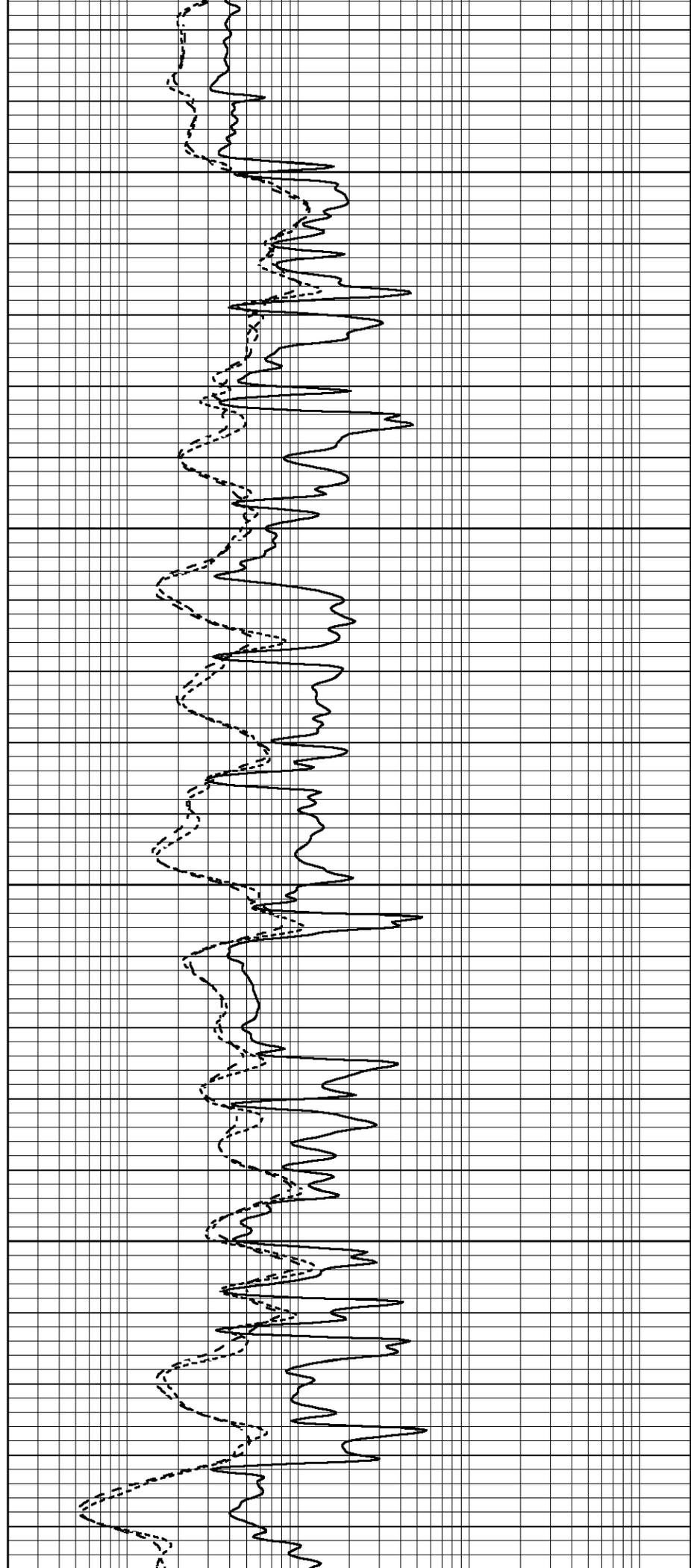


3400

3450

3500

3550

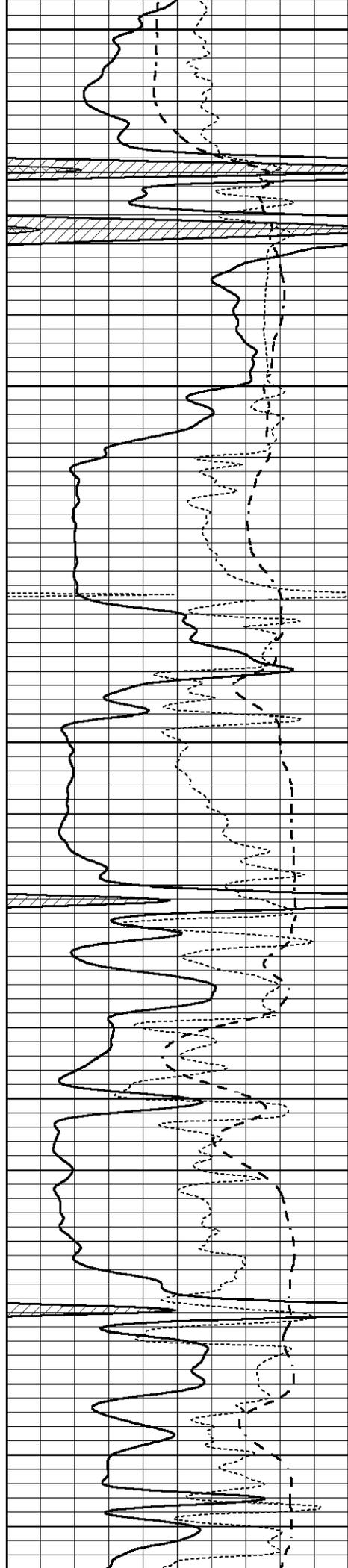


3400

3450

3500

3550



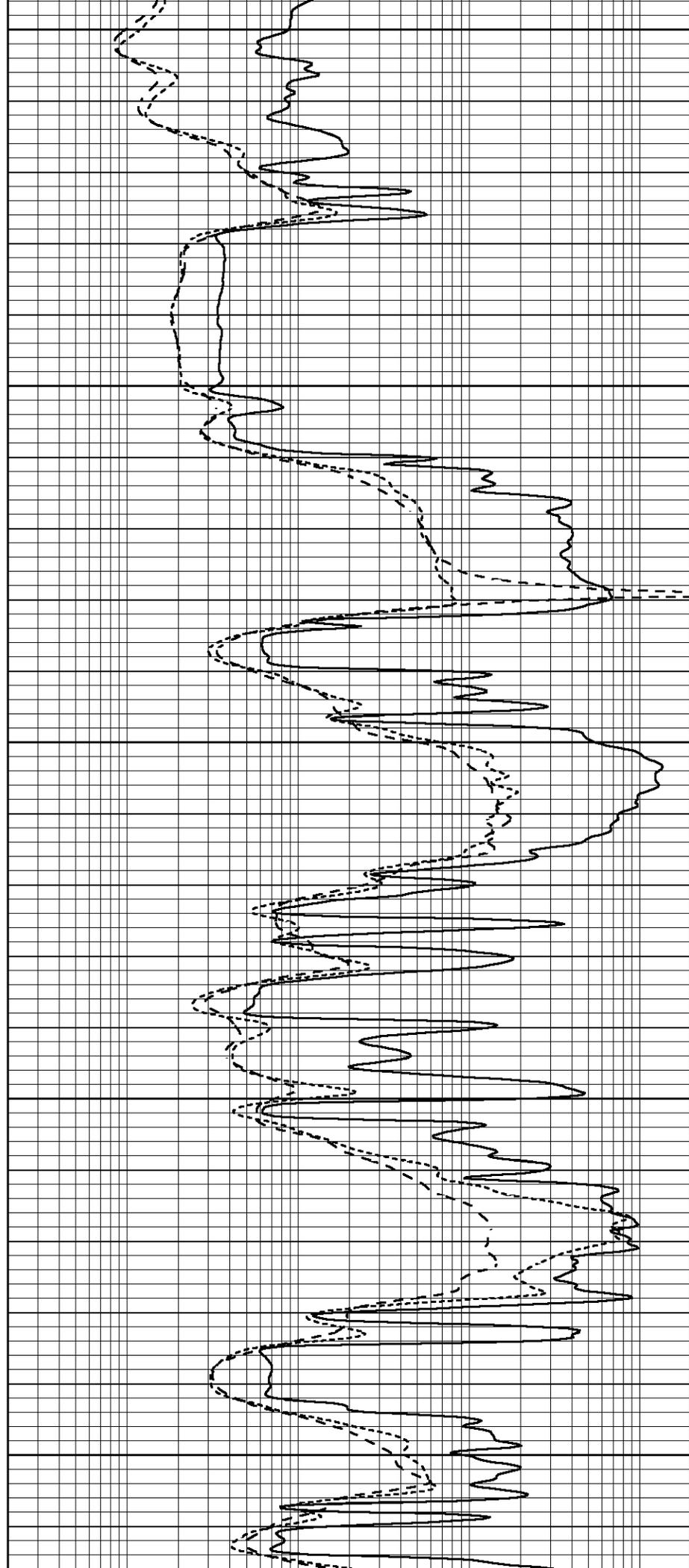
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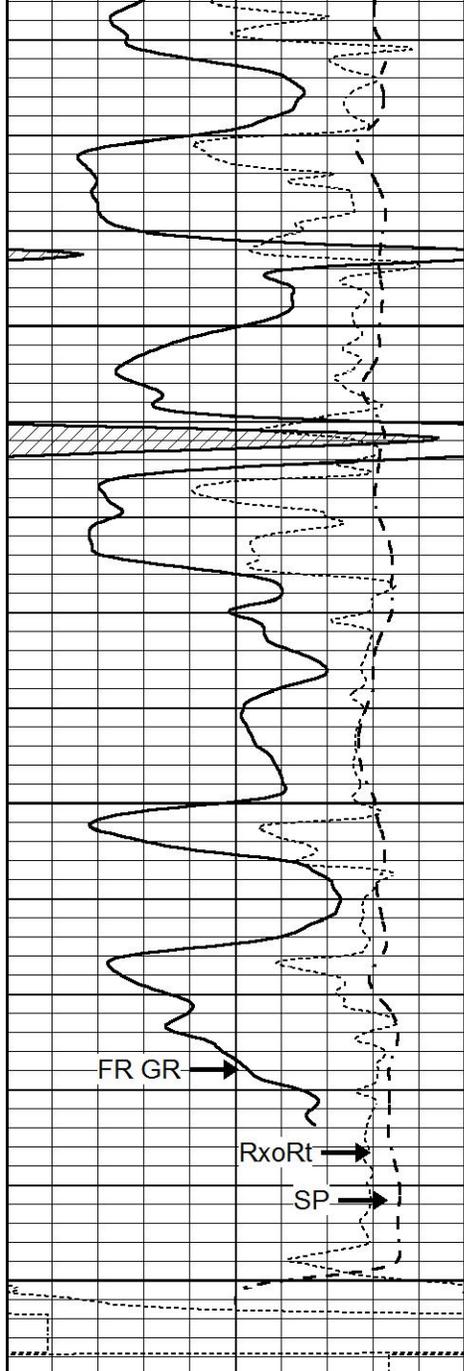
3650

3700

3750

3800



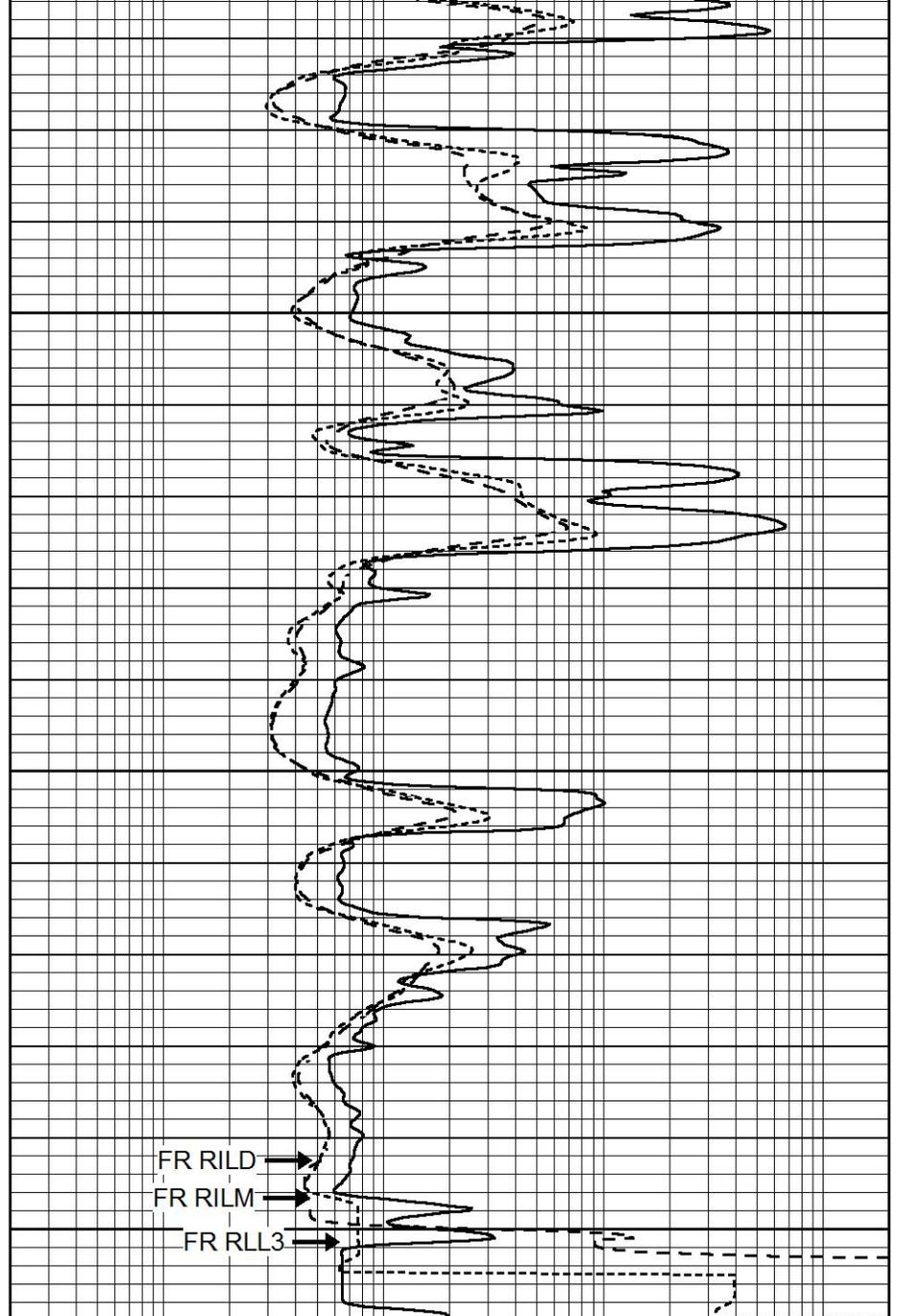


3850

3900

3950
LTD 3952

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

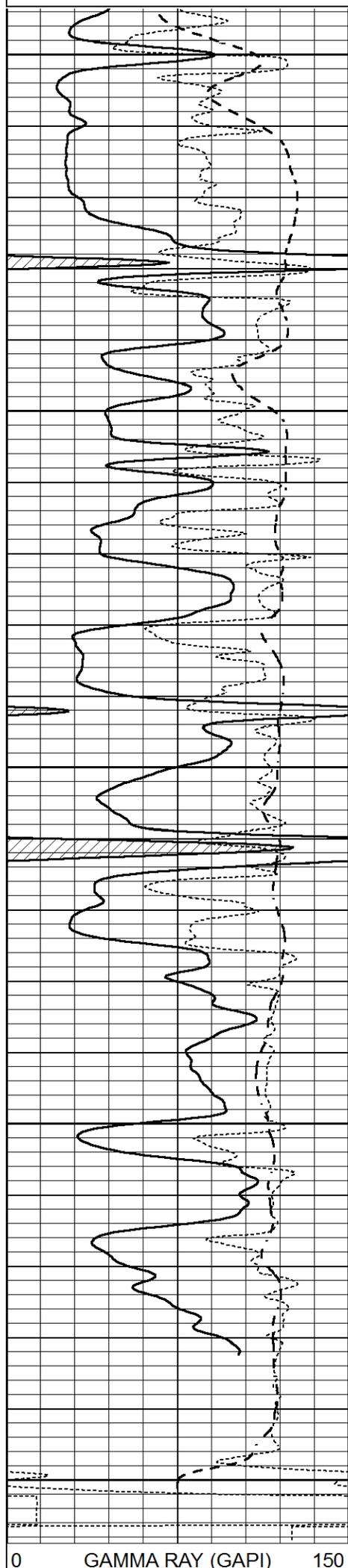


REPEAT SECTION

Database File 5242ddn.db
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 Presentation Format _dil
 Dataset Creation Wed Nov 25 08:03:05 2020
 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



3750

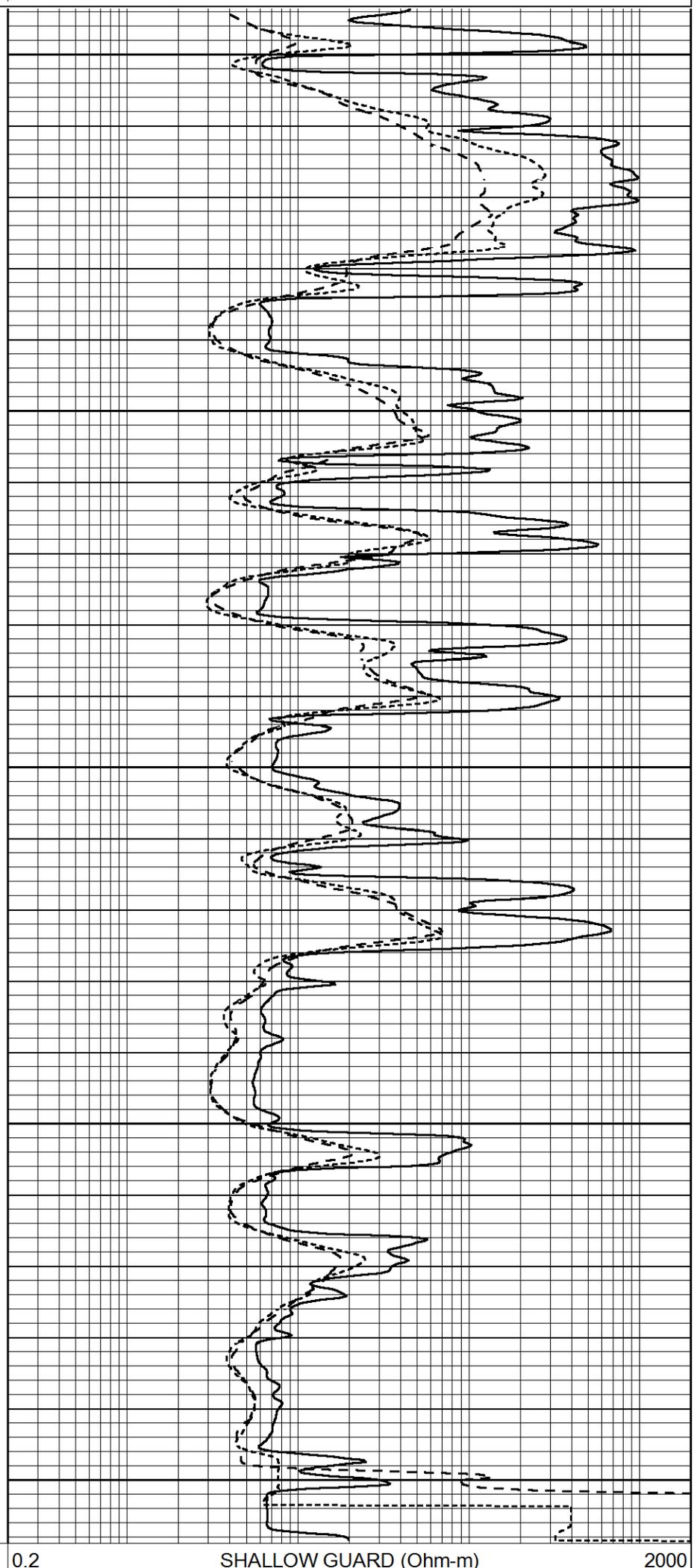
3800

3850

3900

3950

0 GAMMA RAY (GAPI) 150



0.2 SHALLOW GUARD (Ohm-m) 2000

-100	SP (mV)	100	0.2	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000

Calibration Report

Database File 5242ddn.db
Dataset Pathname pass6.1
Dataset Creation Wed Nov 25 08:03:05 2020

Dual Induction Calibration Report

Serial-Model: FW1410-56-Probe
Surface Cal Performed: Mon Jun 15 22:52:02 2020
Downhole Cal Performed: Tue Jul 25 12:15:37 2017
After Survey Verification Performed: Tue Jul 25 12:15:38 2017

Surface Calibration

Readings			References				Results	
Loop:	Air	Loop	Air	Loop		m	b	
Deep	0.008	0.765	V	1.000	400.000	mmho/m	400.061	-3.201
Medium	-0.056	0.761	V	1.000	464.000	mmho/m	425.187	32.510
Internal:	Zero	Cal	Zero	Cal		m	b	
Deep	0.005	0.624	V	0.000	400.000	mmho/m	645.611	-3.034
Medium	0.012	0.721	V	0.000	464.000	mmho/m	653.591	-7.532

Downhole Calibration

Readings			References				Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.647	301.329	mmho/m	-0.780	336.378	mmho/m	1.117	-0.058
Medium	38.256	411.013	mmho/m	39.046	441.706	mmho/m	1.080	-2.280
LL3		7.471	V		2500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.085	V		5000.000	mmho-m		

After Survey Verification

Readings			Targets				Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.647	301.329	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	38.256	411.013	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Gamma Ray Calibration Report

Serial Number: 7
Tool Model: Probe1
Performed: Tue Dec 10 10:02:55 2019

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.4300 GAPI/cps