



DUAL INDUCTION LOG

Company DOWNING-NELSON OIL COMPANY, INC.
 Well VELMA "B" #2-14
 Field COTTON EAST
 County TREGO State KANSAS

Location: API #: 15-195-23149-0000
 2000' FSL & 480' FEL
 SW - NE - NE - SE
 SEC 14 TWP 12S RGE 21W
 Permanent Datum GROUND LEVEL Elevation 2302
 Log Measured From KELLY BUSHING 8' A.G.L
 Drilling Measured From KELLY BUSHING
 Other Services
 CDL/CNL
 MEL
 Elevation
 K.B. 2310
 D.F. 2308
 G.L. 2302

Date	10/14/22		
Run Number	ONE		
Depth Driller	4085		
Depth Logger	4085		
Bottom Logged Interval	4083		
Top Log Interval	00		
Casing Driller	8 5/8" @ 221		
Casing Logger	221		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,000 PPM	
Density / Viscosity	9.2/56		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.10 @ 80F		
Rmt @ Meas. Temp	.825 @ 80F		
Rmc @ Meas. Temp	1.32 @ 80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.752 @ 117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	7:30 A.M.		
Maximum Recorded Temperature	117F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	COLE ROBBEN		
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:

NORTH OF ELLIS, KANSAS TO CURVE, WEST AT CURVE TO 400 AVENUE, NORTH 1.5 MILES,
WEST INTO

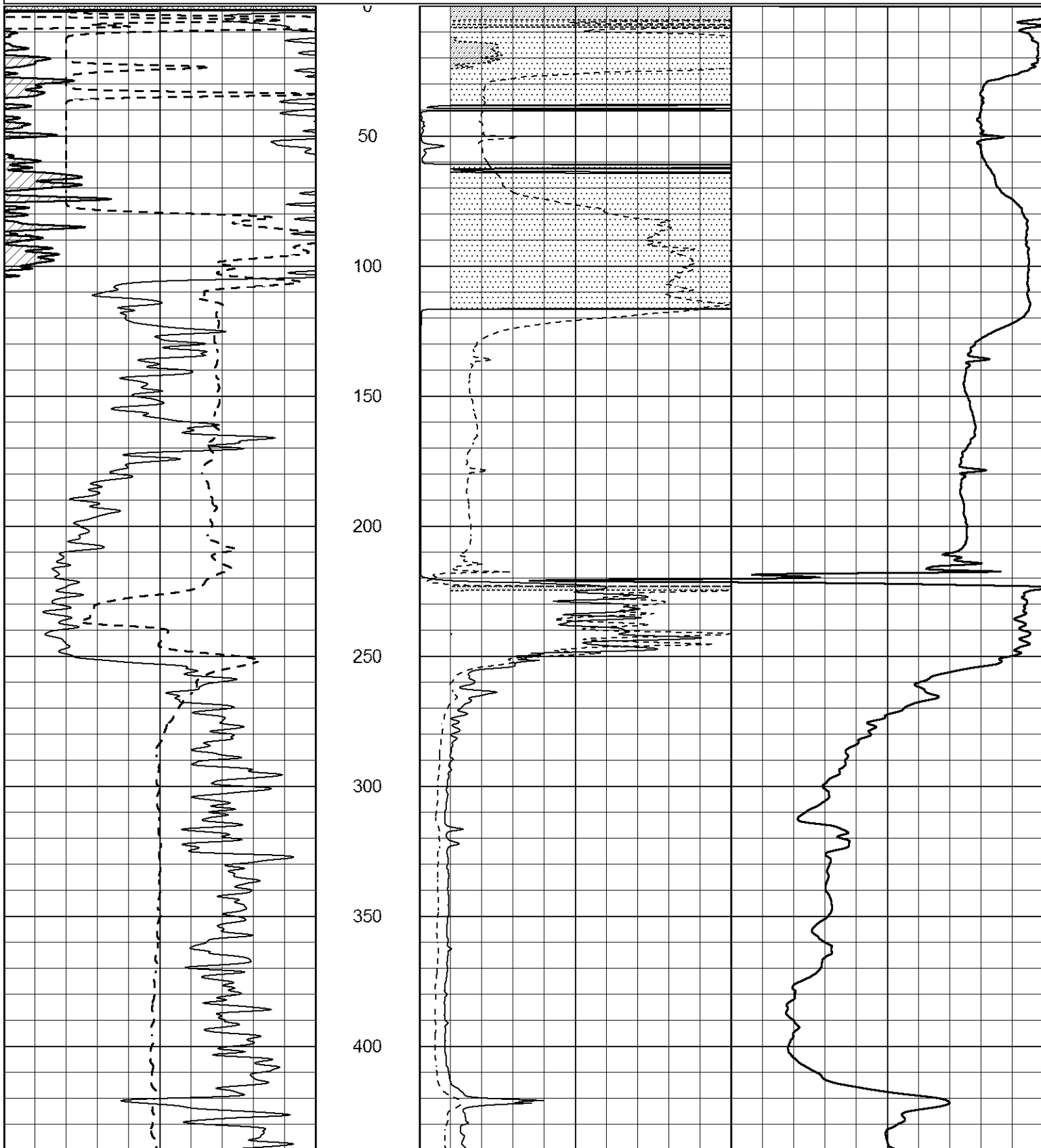


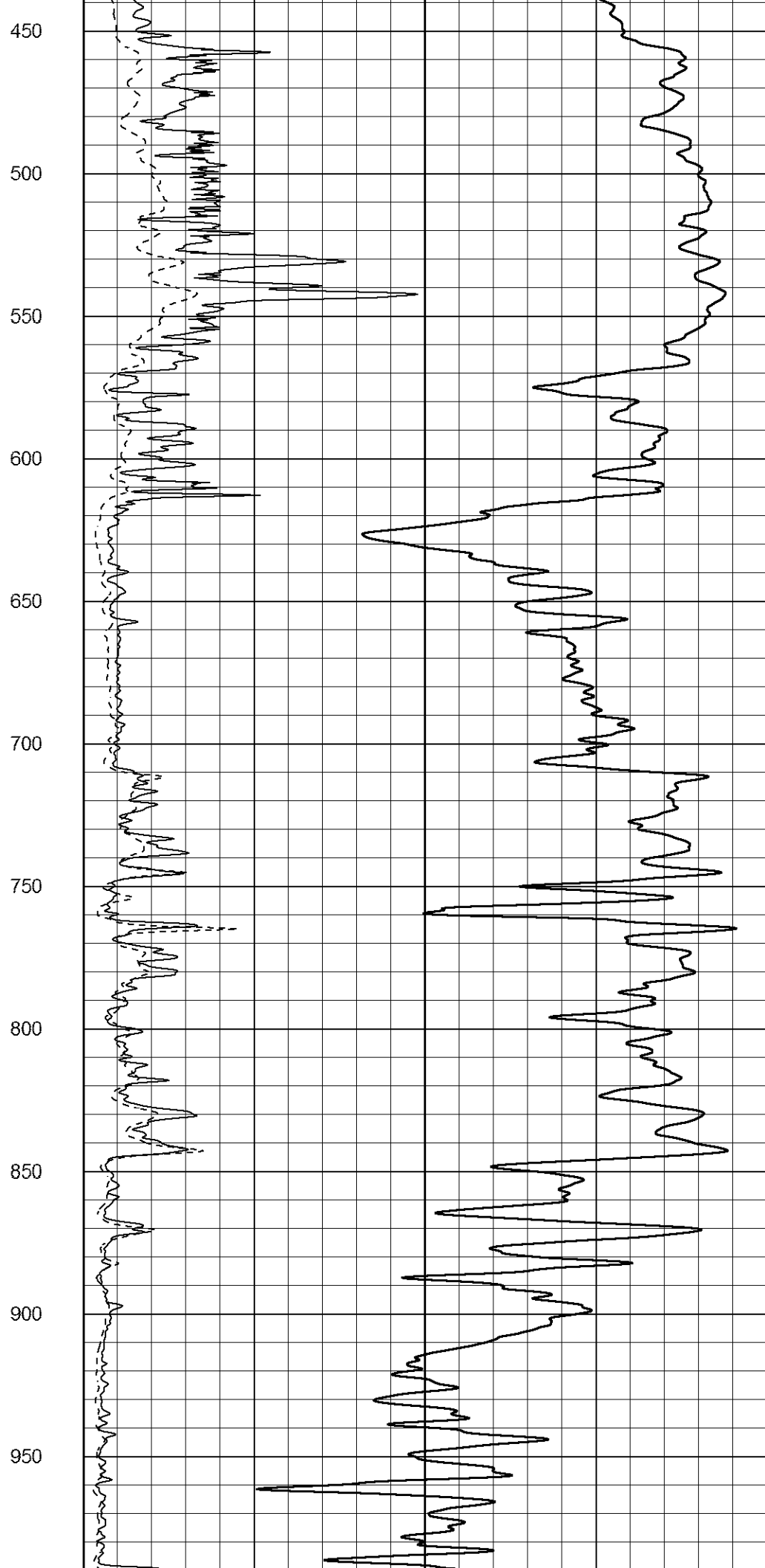
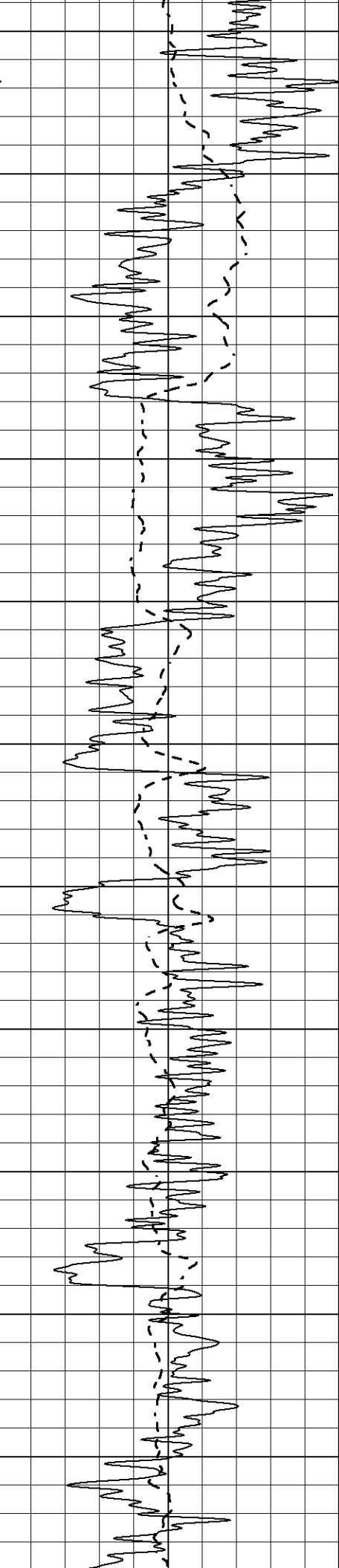
MAIN SECTION

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 Presentation Format _dil2
 Dataset Creation Fri Oct 14 08:50:51 2022
 Charted by Depth in Feet scaled 1:600

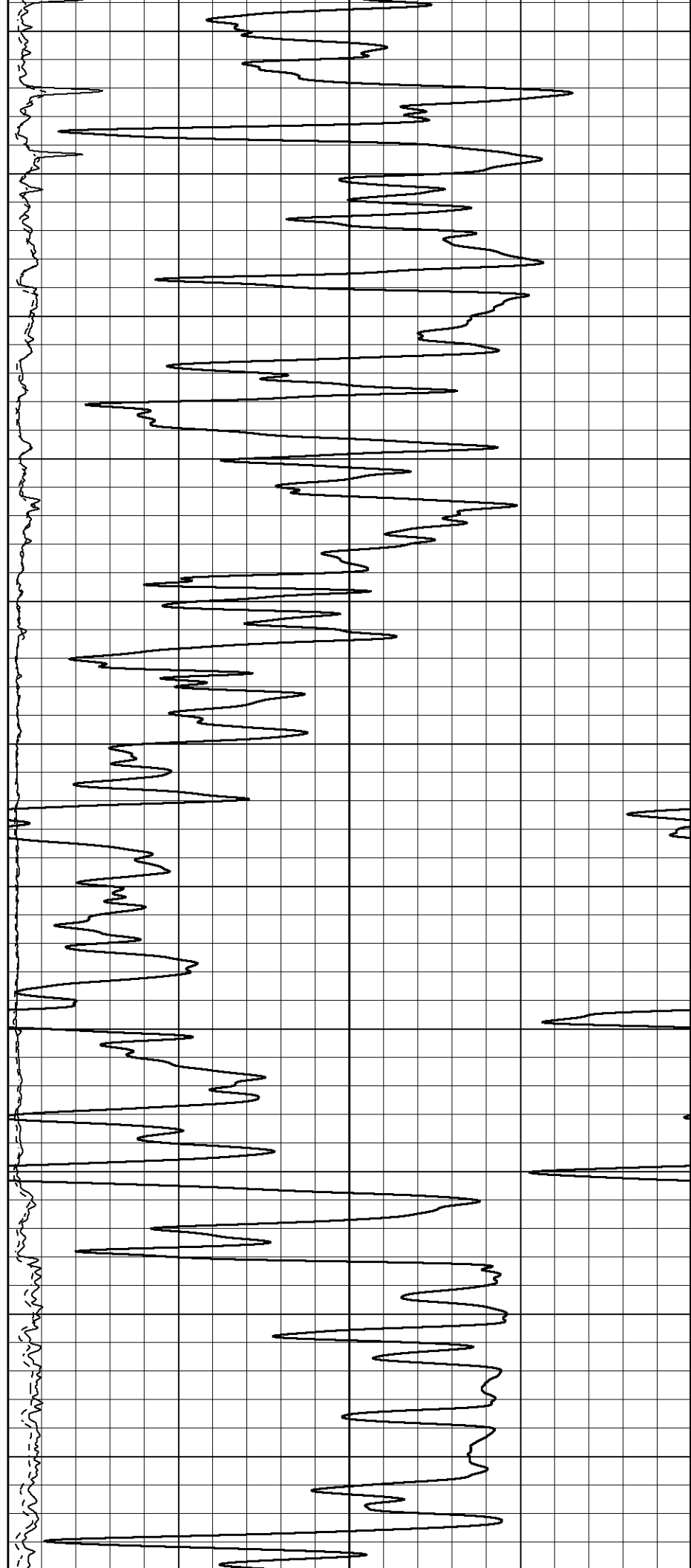
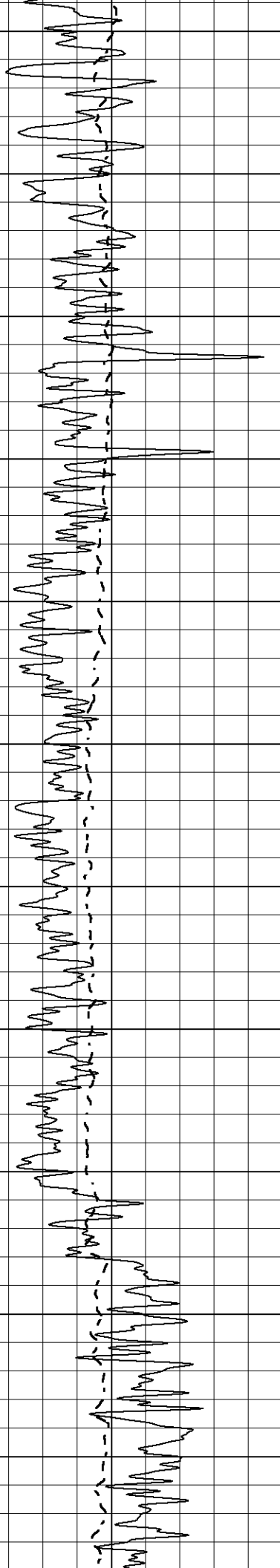
0 Gamma Ray (GAPI) 150
 -100 SP (mV) 100

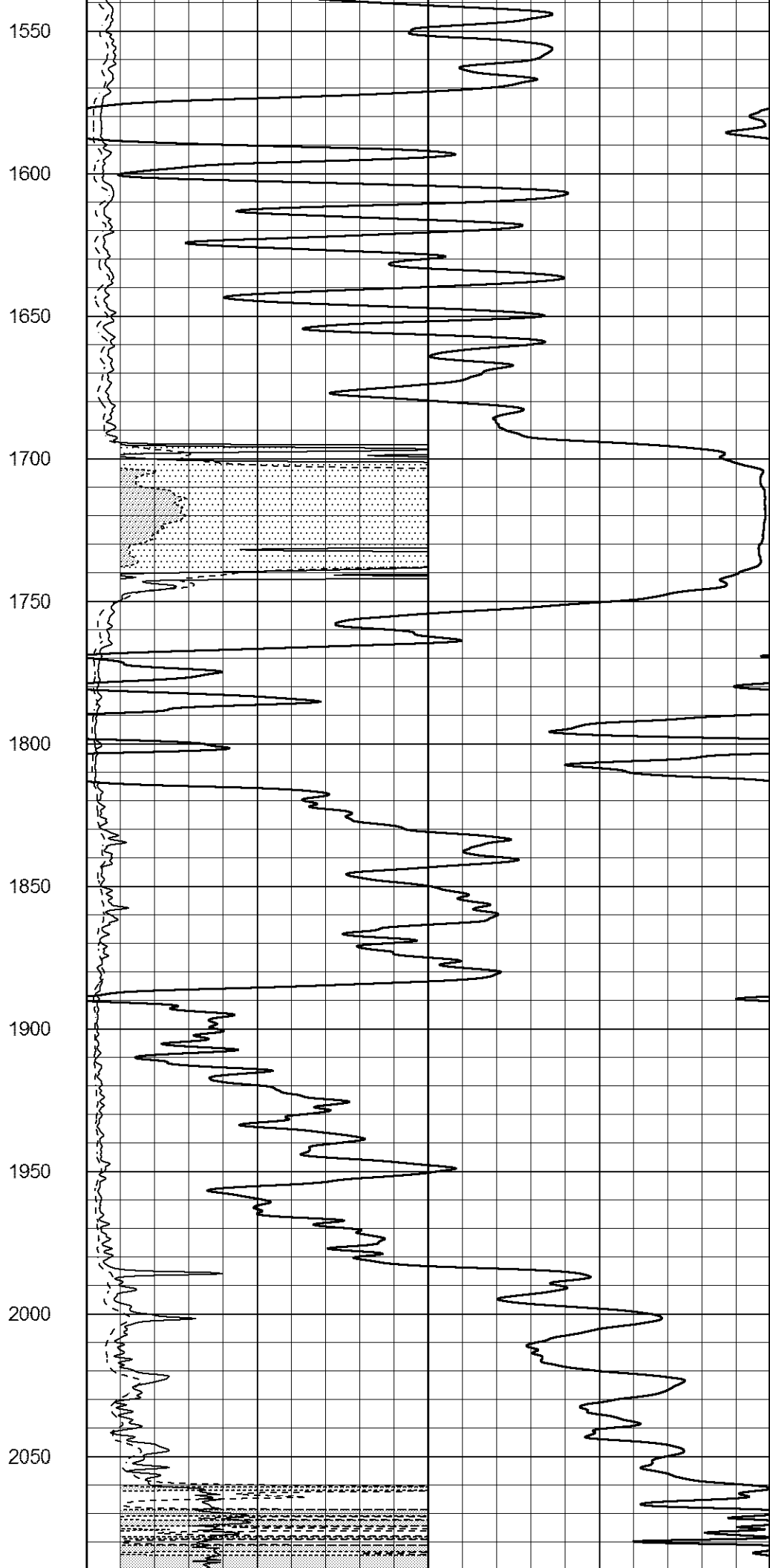
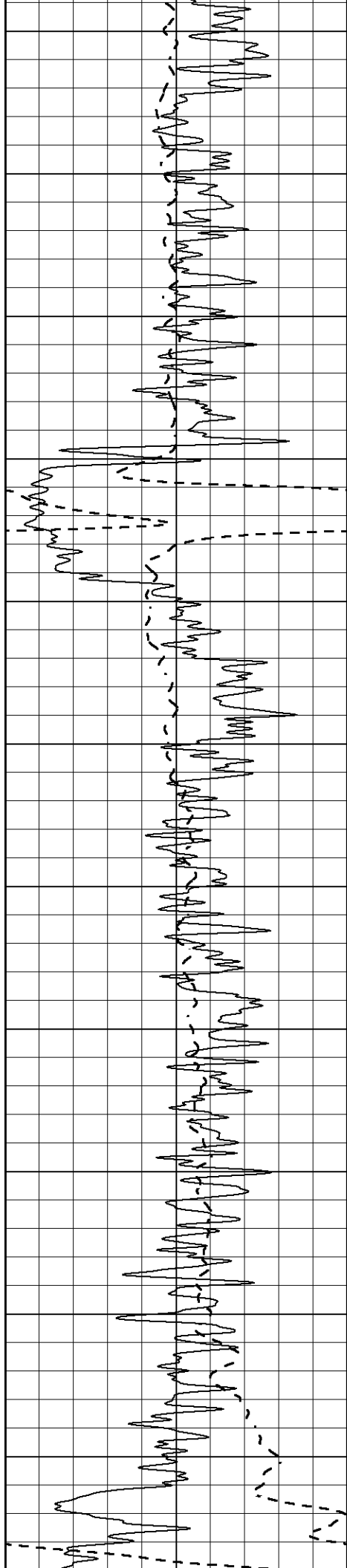
1000 CILD (mmho/m) 0
 0 RLL3 (Ohm-m) 50
 0 Deep Induction (Ohm-m) 50
 50 RILD X10 (Ohm-m) 500
 50 RLL3 X10 (Ohm-m) 500

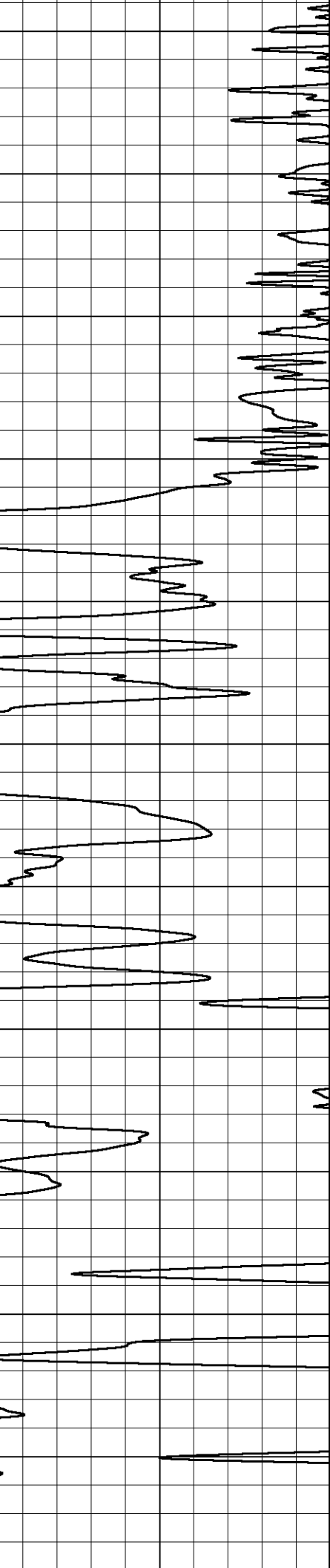
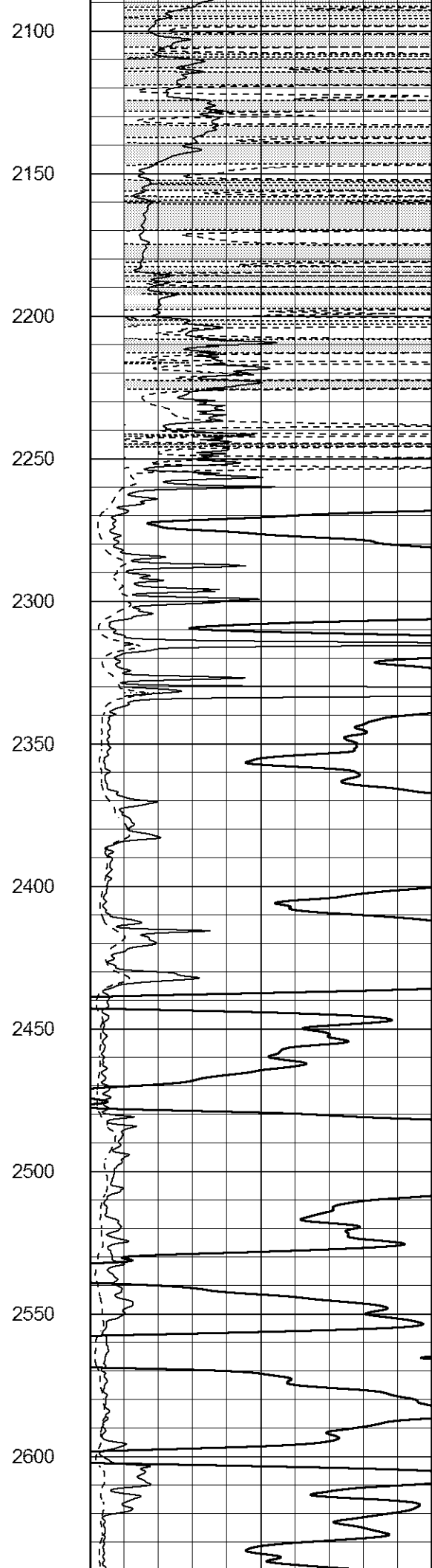
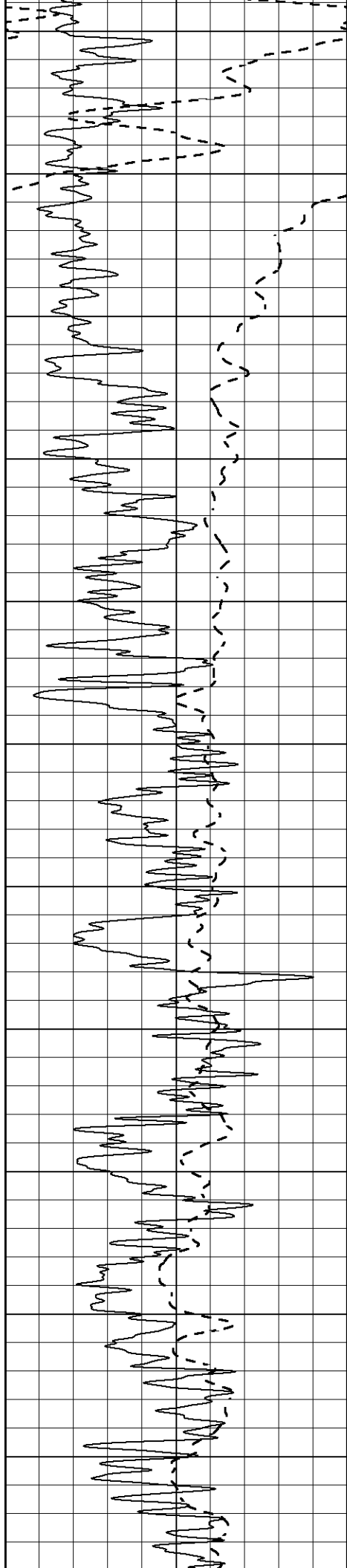


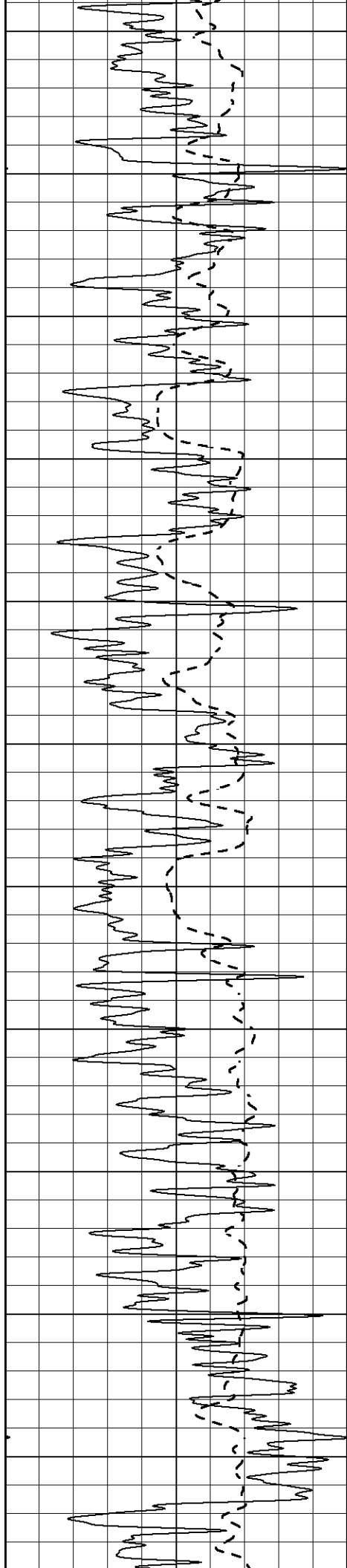


1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

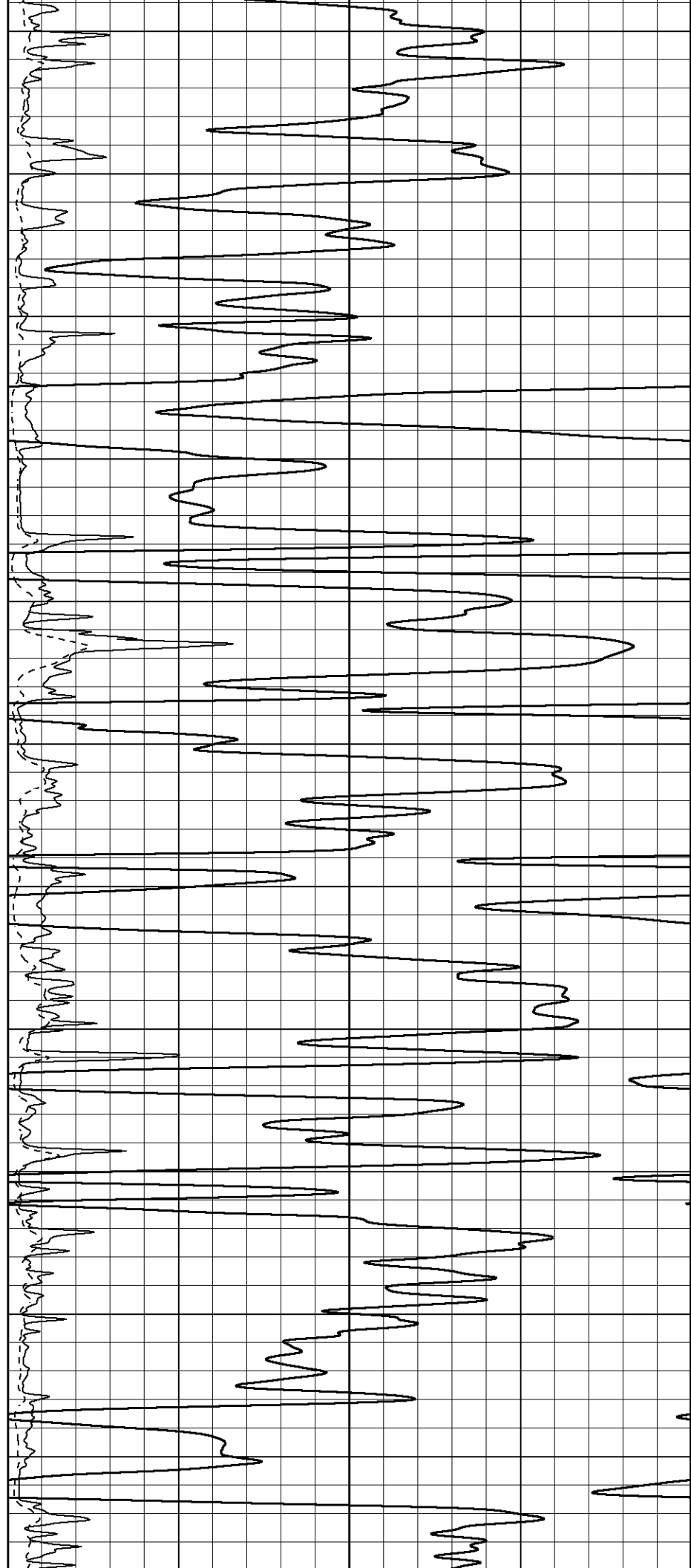


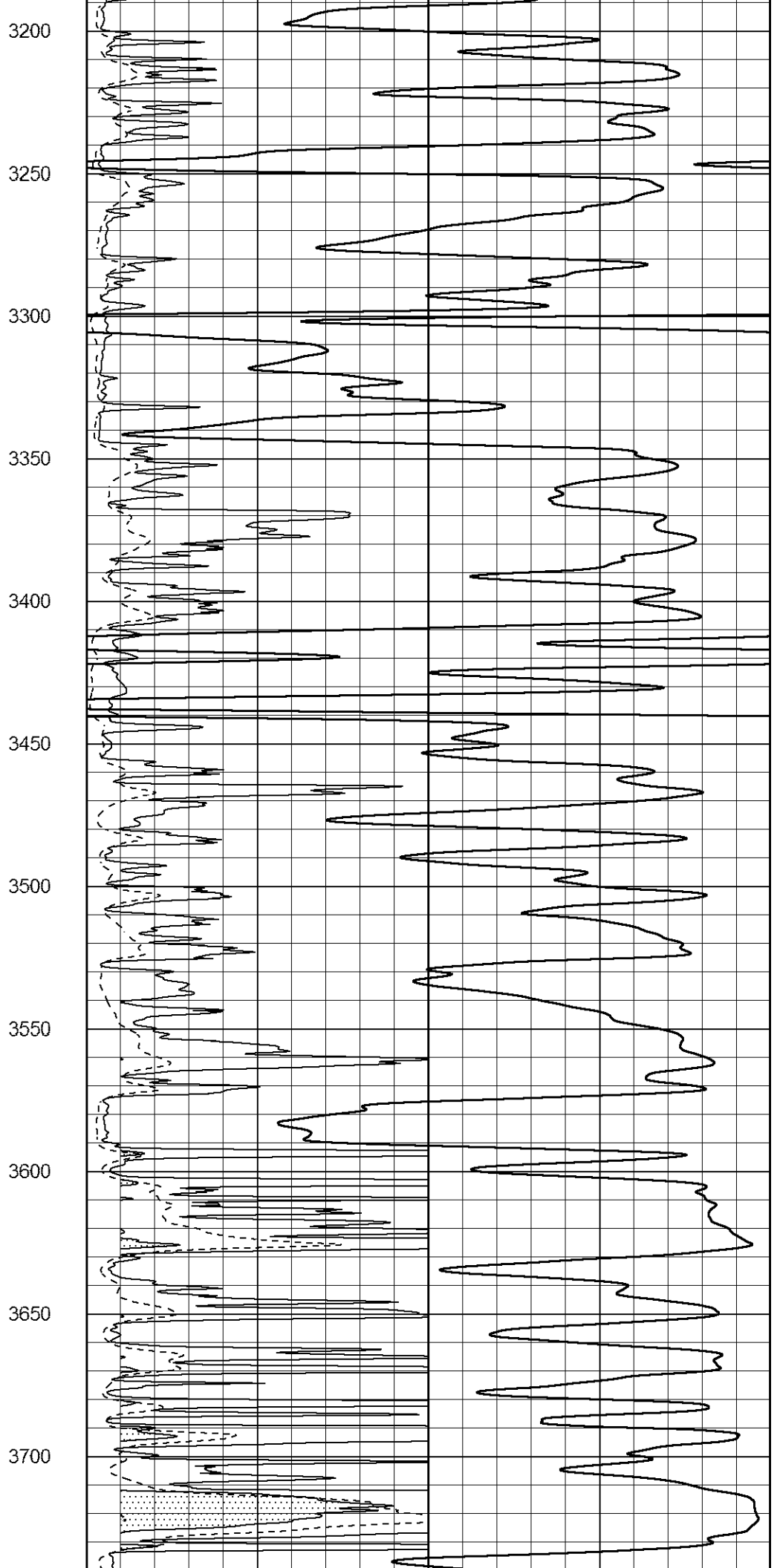
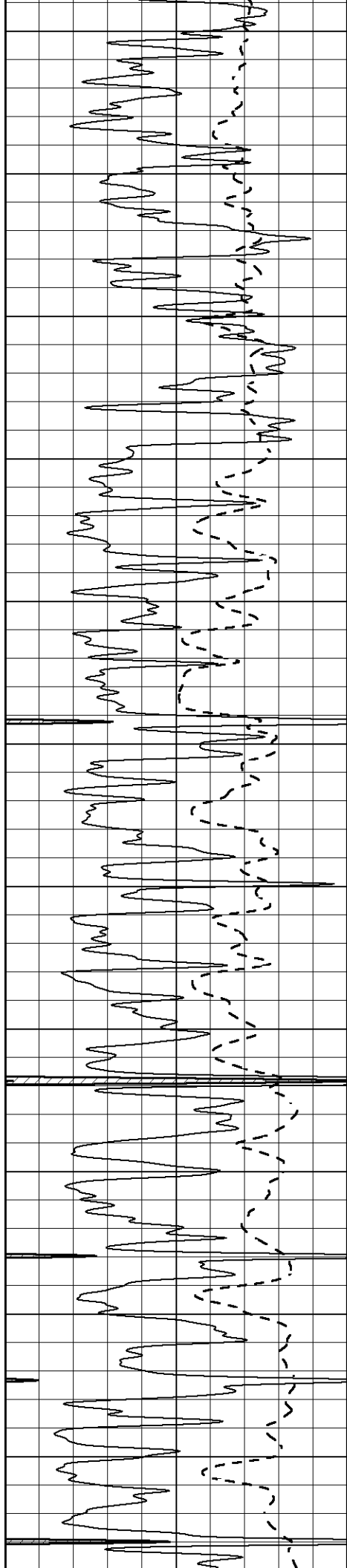


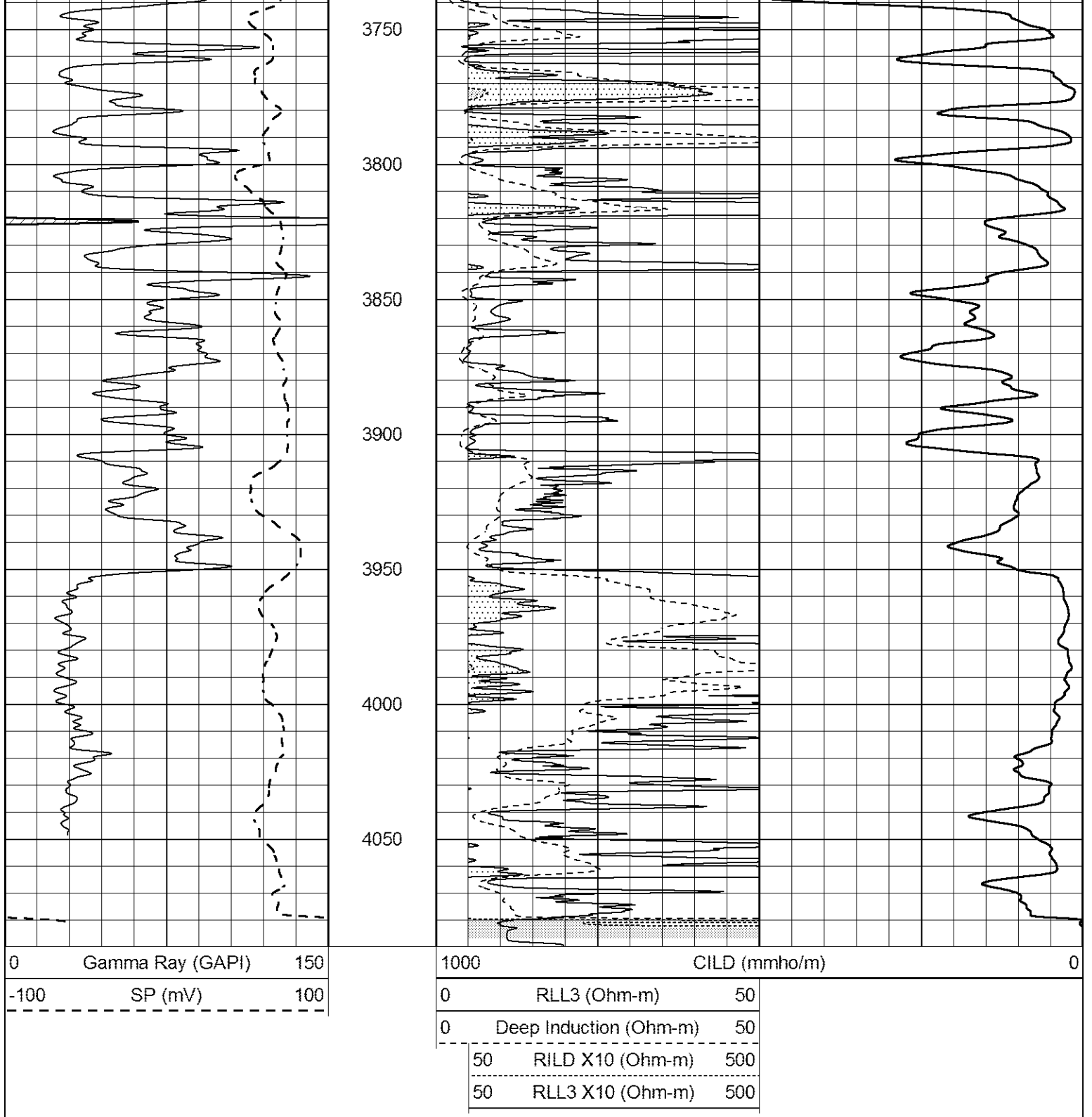




2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150





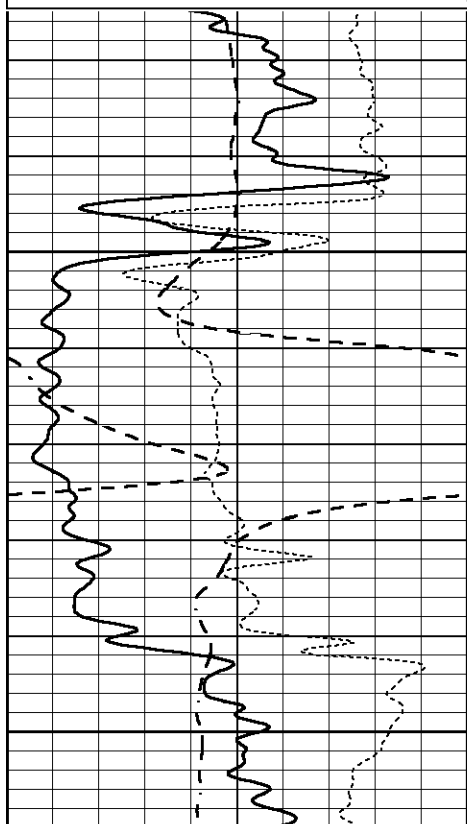


ANHYDRITE

Database File 7233ddn.db
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 Charted by Depth in Feet scaled 1:240

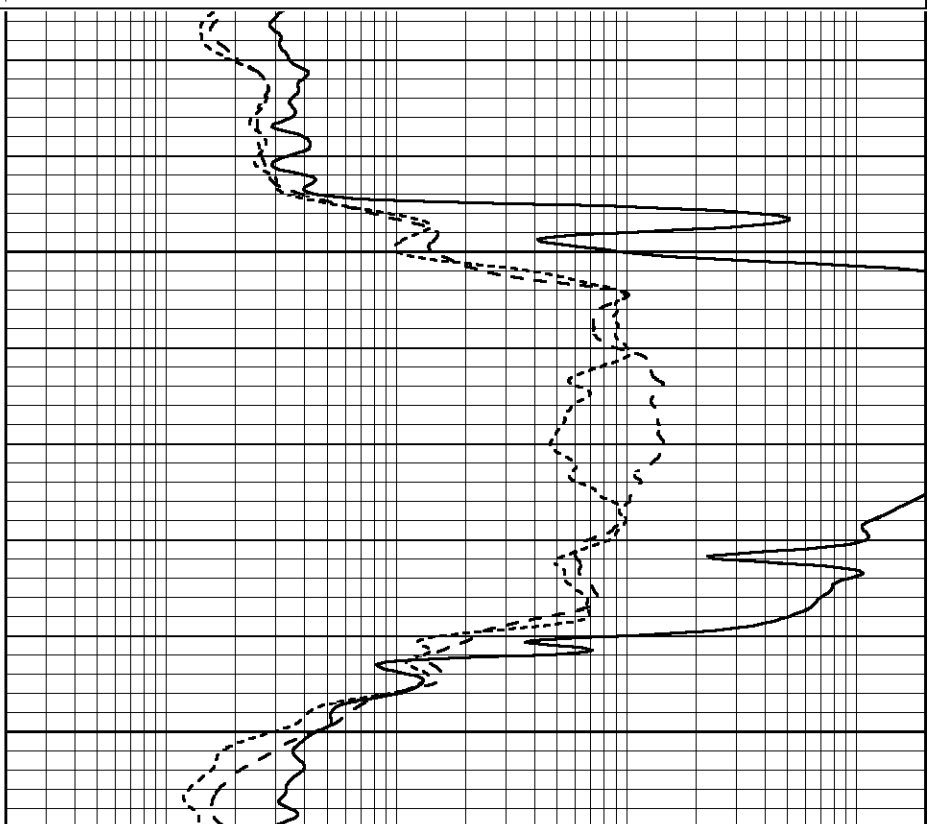
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	MEDIUM INDUCTION (Ohm-m)	2000

-250 Rxo/Rt 50

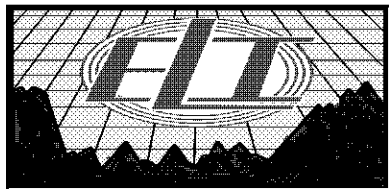


0 GAMMA RAY (GAPI) 150
 -100 SP (mV) 100
 -250 Rxo/Rt 50

0.2 DEEP INDUCTION (Ohm-m) 2000



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

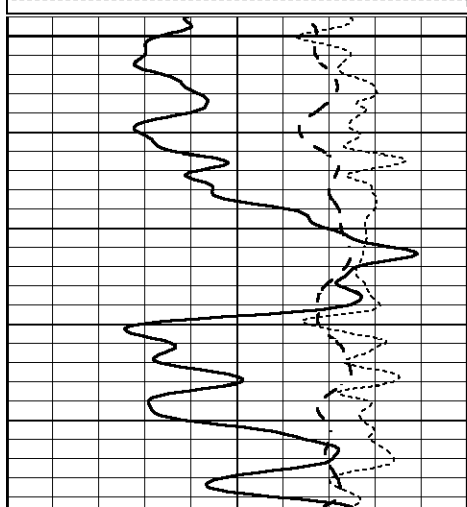


MAIN SECTION

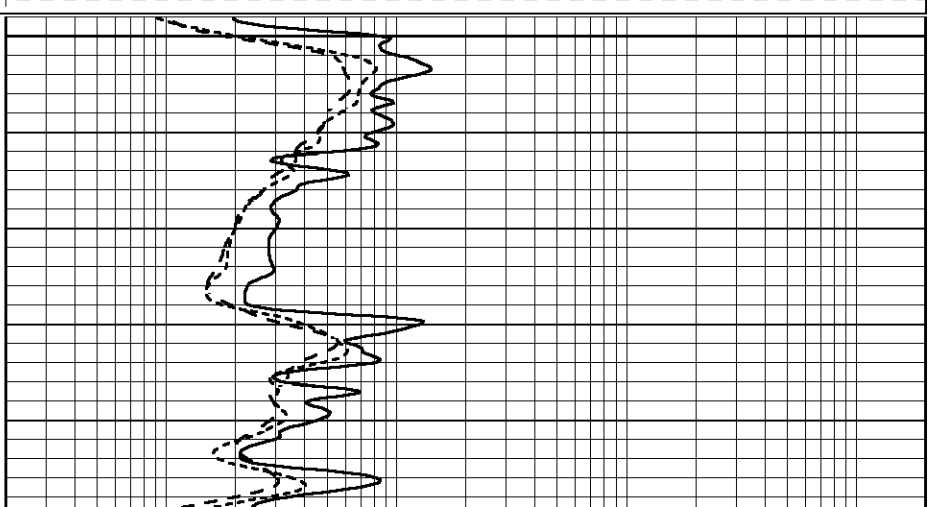
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 Presentation Format _dil
 Dataset Creation Fri Oct 14 08:40:00 2022
 Charted by Depth in Feet scaled 1:240

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



3250



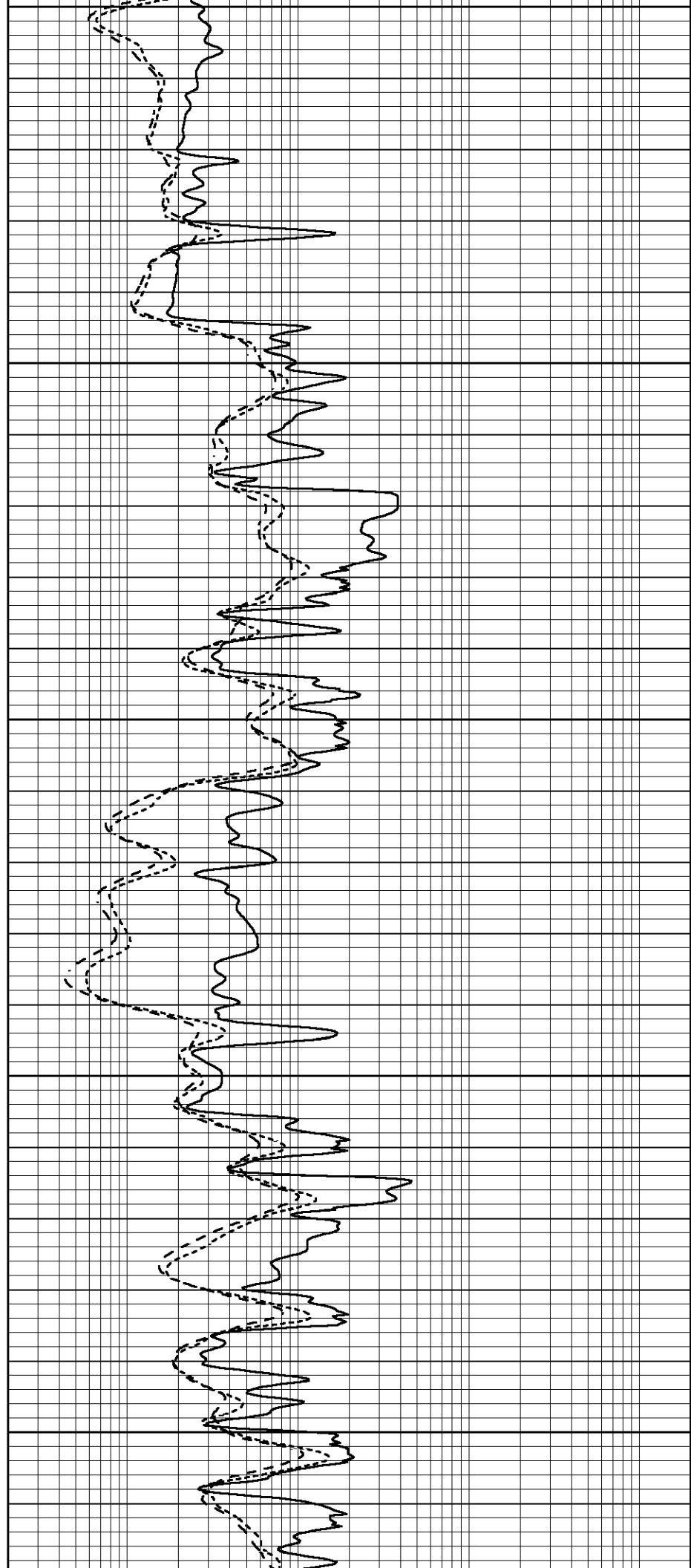
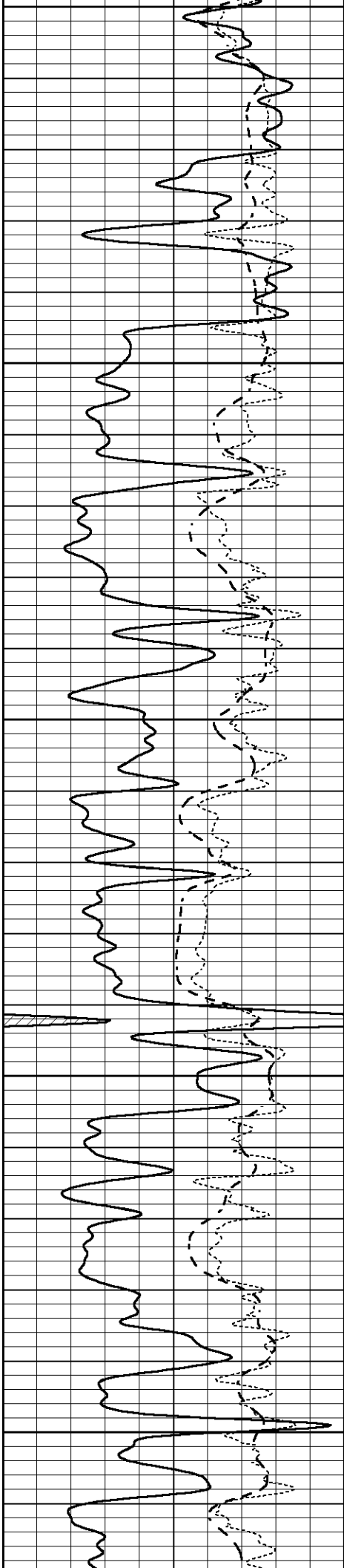
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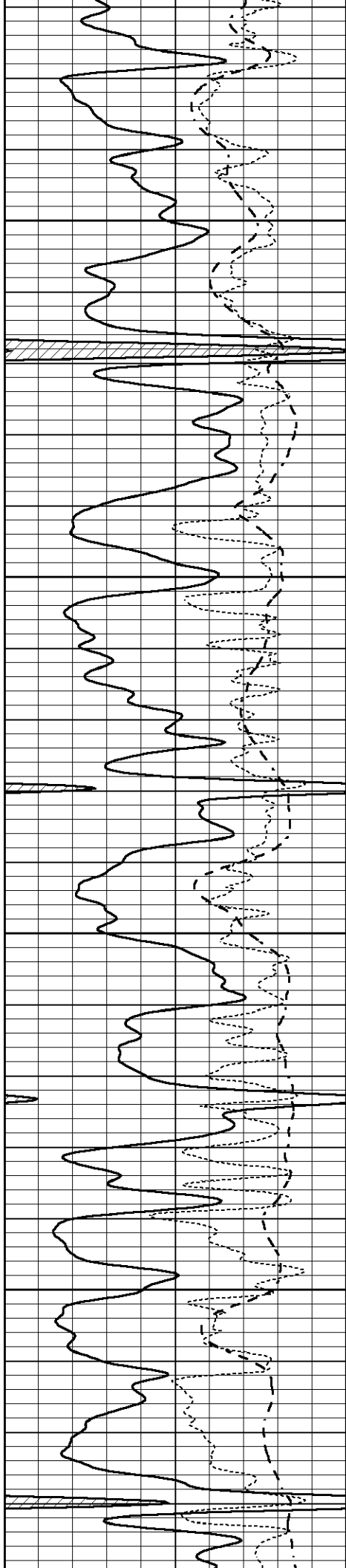
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3400

3450

3500



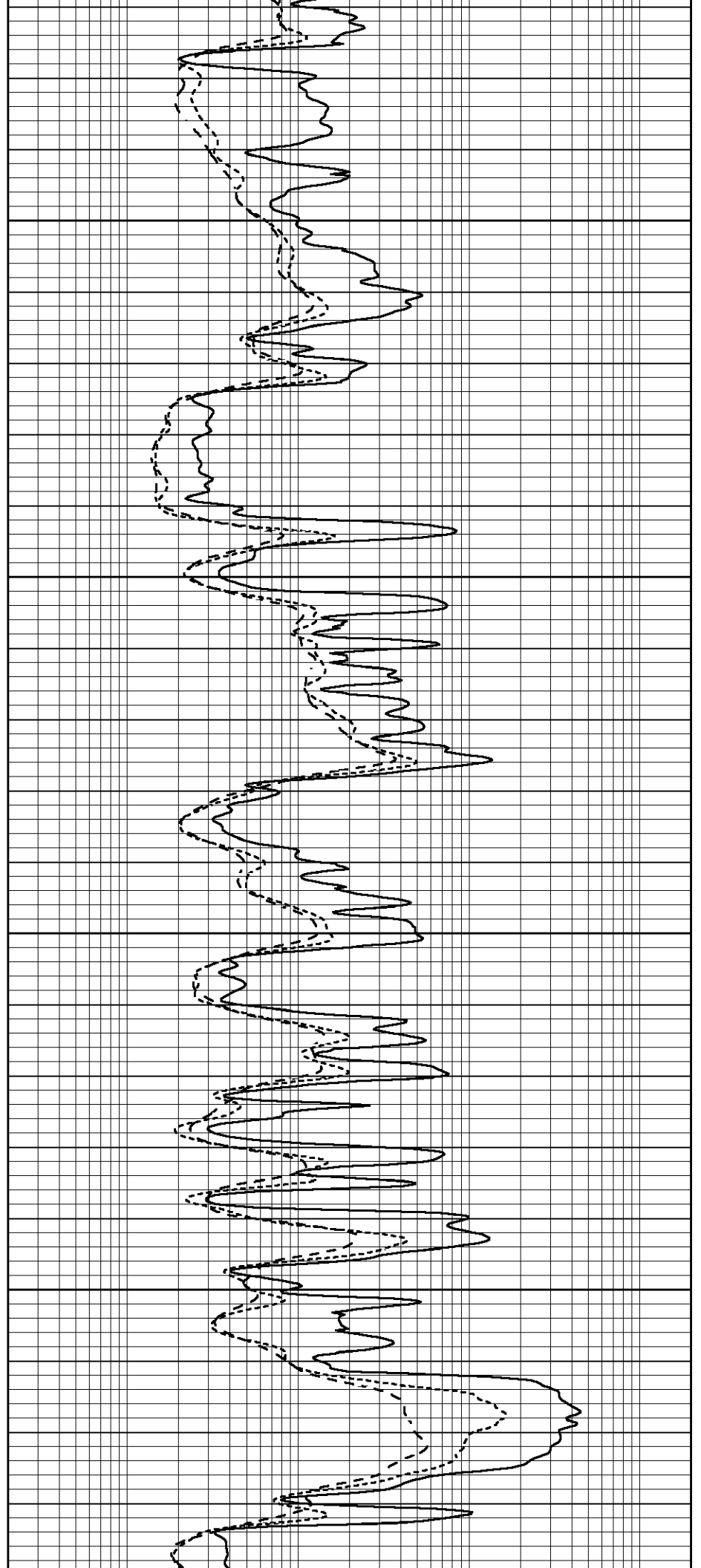


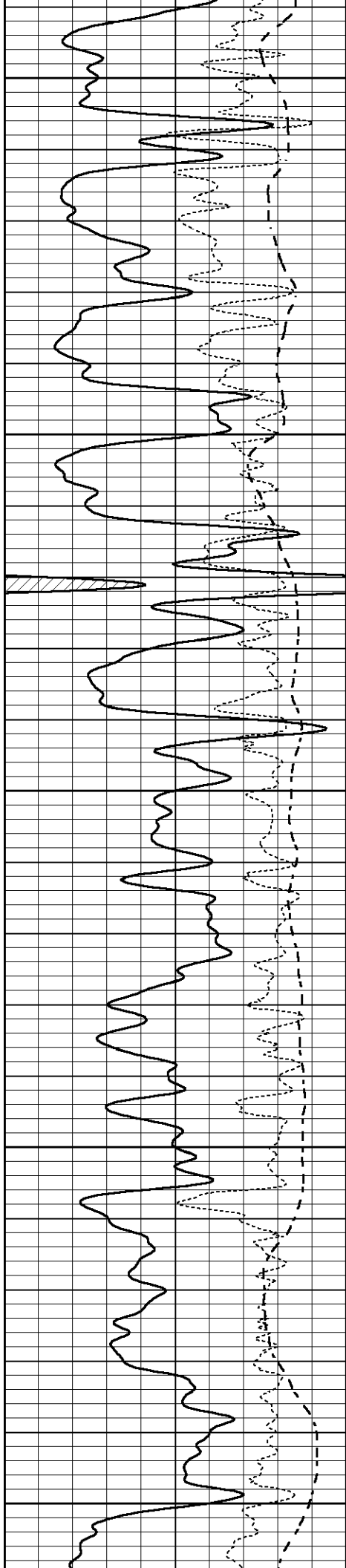
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3600

3650

3700





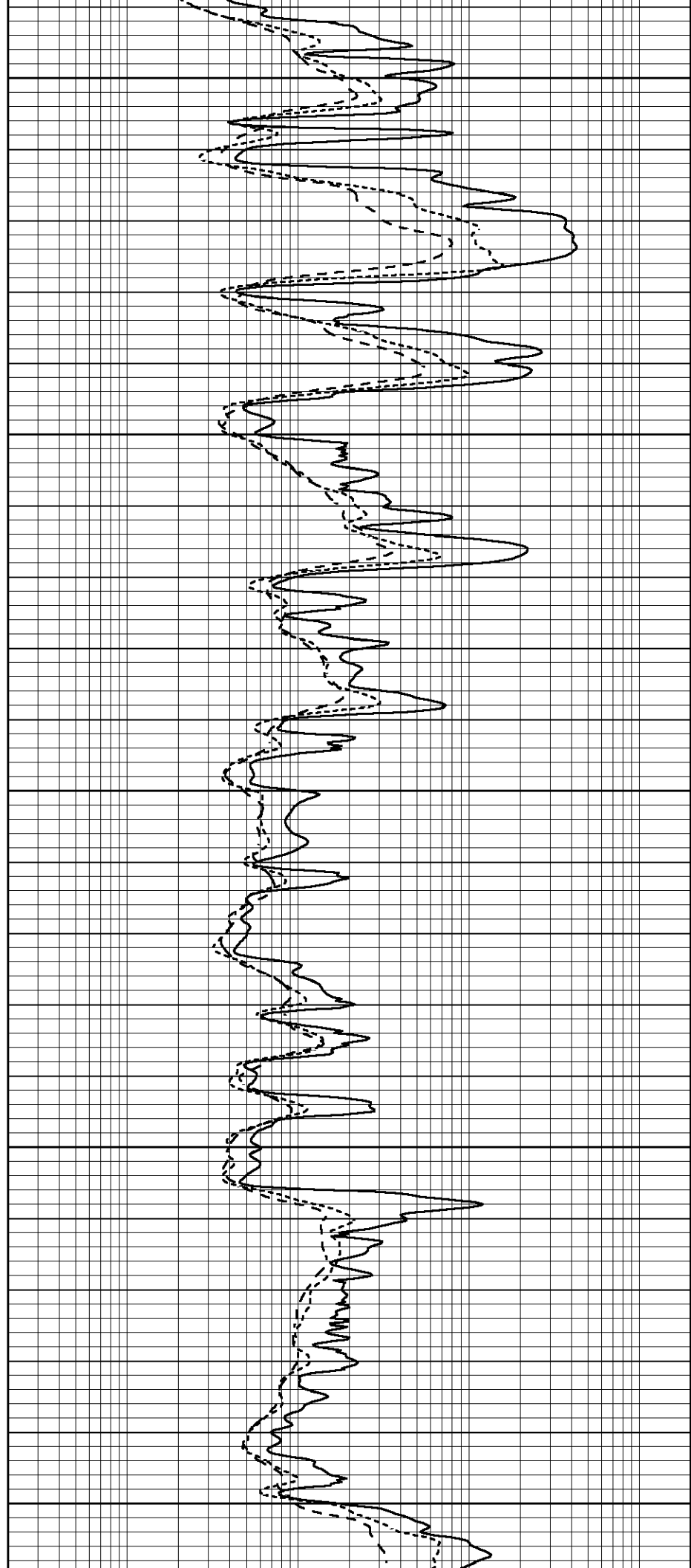
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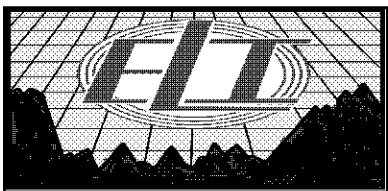
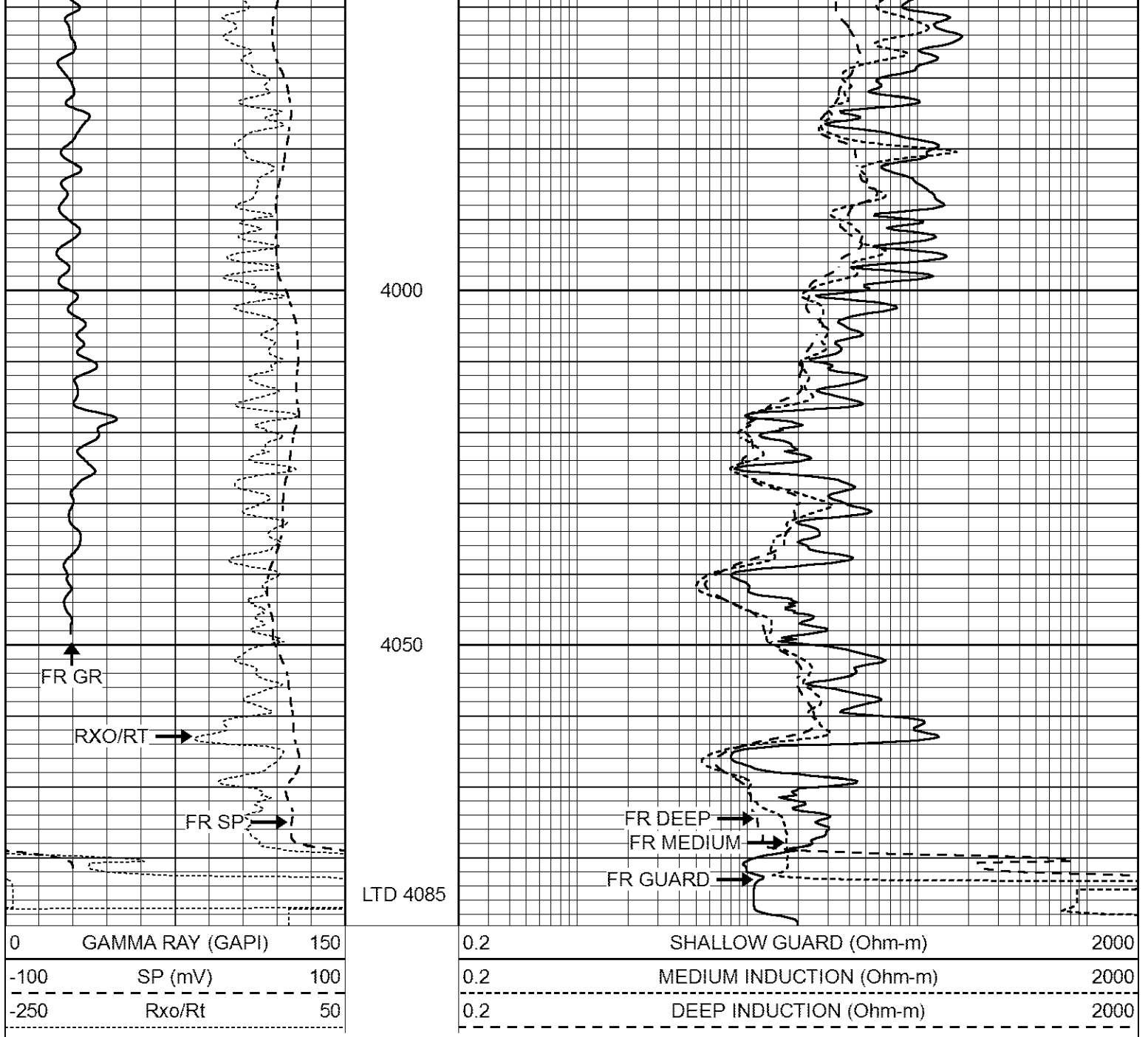
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3850

3900

3950

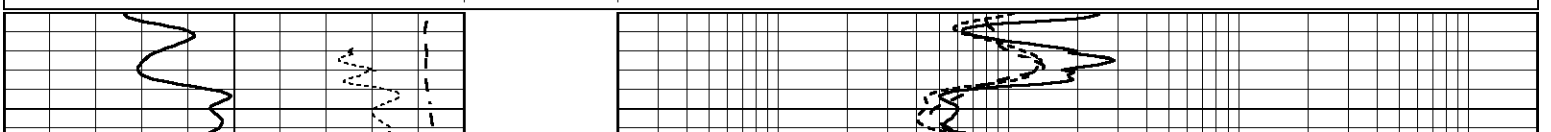


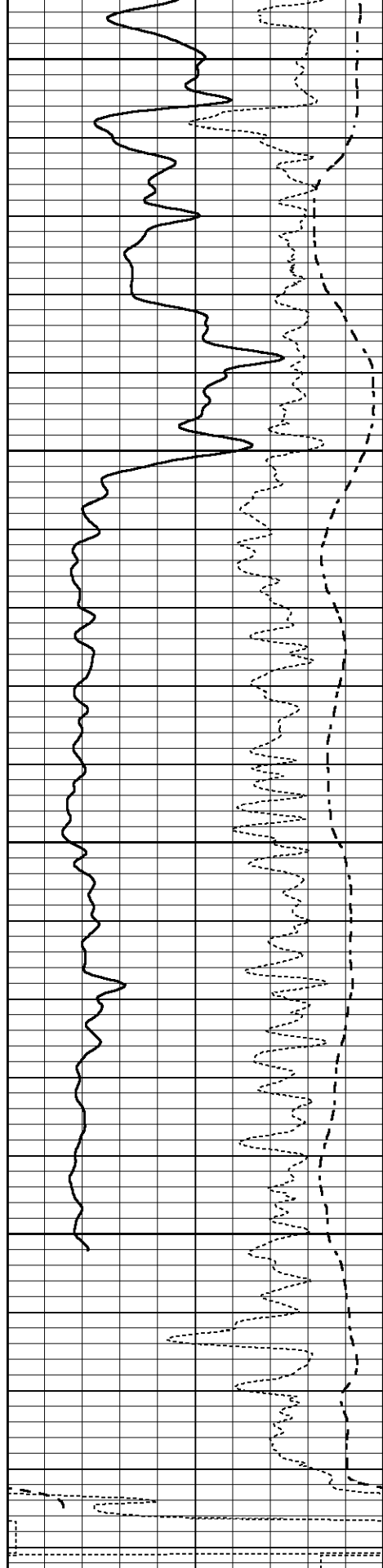


REPEAT SECTION

Database File 7233ddn.db
 Dataset Pathname pass2DR
 Presentation Format _dil
 Dataset Creation Fri Oct 14 08:27:49 2022
 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	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000





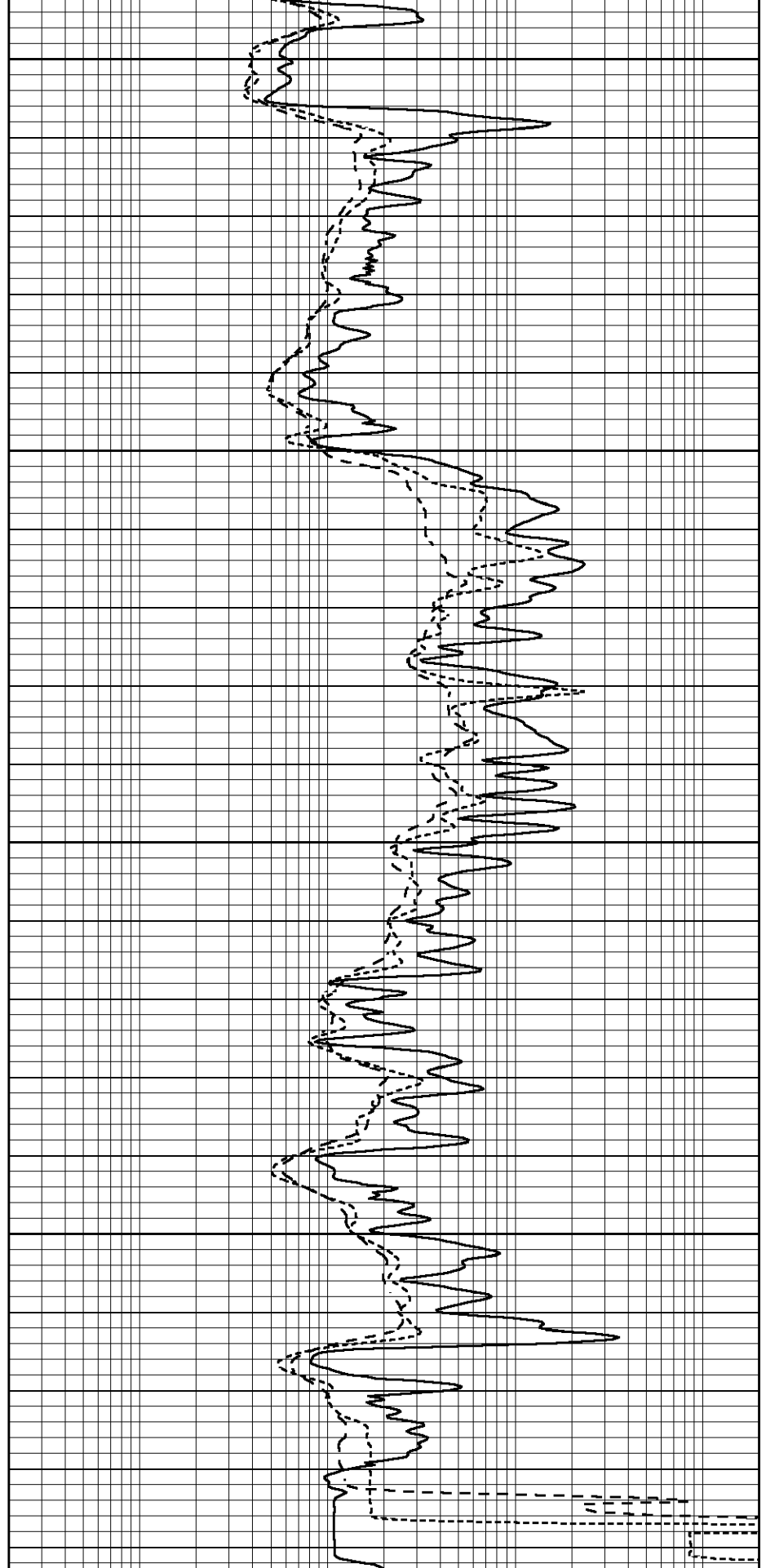
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

3900

3950

4000

4050



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

Calibration Report

Database File 7233ddn.db
 Dataset Pathname pass3M
 Dataset Creation Fri Oct 14 08:50:51 2022

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Thu Jun 30 01:48:00 2022
 Downhole Cal Performed: Tue Feb 19 11:44:24 2019
 After Survey Verification Performed: Tue Feb 19 11:44:27 2019

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	780.000	-3.000
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	760.000	-10.500
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.649	V	0.000	400.000	mmho/m	623.784	-4.595
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	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		

Litho Density Calibration Report

Serial: 140704
 Model: V4_10P
 Source Number: 74GBq-19

Master Calibration

Performed: Wed Jul 20 12:36:34 2022

	Background	Aluminum	Magnesium	
Window 1	503.67	5439.20	23645.11	cps
Window 2	40.11	1218.66	5702.60	cps
Window 4	221.18	1240.69	5295.43	cps
Window 5	542.56	7631.48	14305.13	cps
Window 6	41.67	1209.53	2345.40	cps
Window 8	256.91	2493.92	4591.85	cps
Bulk Density	-	2.6020	1.6830	g/cc
Pe	-	3.0000	2.5070	b/e

LS Alpha: : -1.8302
LS Beta: : 122464.5983

SS Alpha: : -0.7503
SS Beta: : 16307.0478

LS CPE: : 1.1699
SS CPE: : 1.6095

Before Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

After Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

Lithodensity Caliper Calibration

Performed: Wed Jul 20 12:36:34 2022

Results		Readings		References (in)		Gain	Offset
Low	High	Low	High				
15673.1	16120.1	8.0	14.0			0.0	-202.0

Before Survey Caliper Verification

Performed:

	Reference	Reading
Caliper (in)	_____	_____

After Survey Caliper Verification

Performed:

	Reference	Reading
Caliper (in)	_____	_____

Compensated Neutron Calibration Report

Serial Number: 080621PMC
Tool Model: NABORS

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:	7
Tool Model:	Probe1
Performed:	Thu May 26 08:56:46 2022

Calibrator Value:	1.0	GAPI
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Background Reading:	0.0	cps
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Calibrator Reading:	1.0	cps
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Sensitivity:	0.5500	GAPI/cps
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