



DUAL INDUCTION LOG

Company RANNEY OIL COMPANY, LLC.
 Well VANCE #A-2 OWWO
 Field NICHOLSON
 County ELLIS State KANSAS

Location: API #: 15-051-03550-0001
 2276' FNL & 1002' FWL
 NE - SE - SW - NW
 SEC 19 TWP 11S RGE 20W
 Permanent Datum GROUND LEVEL Elevation 2179
 Log Measured From KELLY BUSHING 5' A.G.L
 Drilling Measured From KELLY BUSHING
 Other Services CDL/CNL MEL
 Elevation K.B. 2184 D.F. 2182 G.L. 2179

Date	6/10/23
Run Number	ONE
Depth Driller	3840
Depth Logger	3805
Bottom Logged Interval	3803
Top Log Interval	00
Casing Driller	8 5/8" @ 228
Casing Logger	228
Bit Size	7 7/8
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.0/48
PH / Fluid Loss	10.5/10.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.370 @ 78F
Rmt @ Meas. Temp	.278 @ 78F
Rmc @ Meas. Temp	.444 @ 78F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.261 @ 115F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	9:45 A.M.
Maximum Recorded Temperature	115F
Equipment Number	8916
Location	HAYS, KANSAS
Recorded By	COLE ROBBEN
Witnessed By	DUANE STECKLEIN

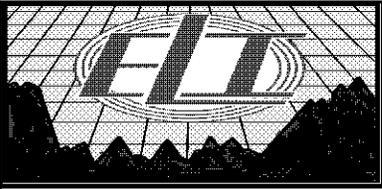
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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:
 FROM ELLIS KANSAS GO NORTH ON 130TH AVENUE TO SLEEPY HOLLOW ROAD,
 WEST TO 100TH AVENUE, NORTH 1 1/2 MILES, EAST INTO

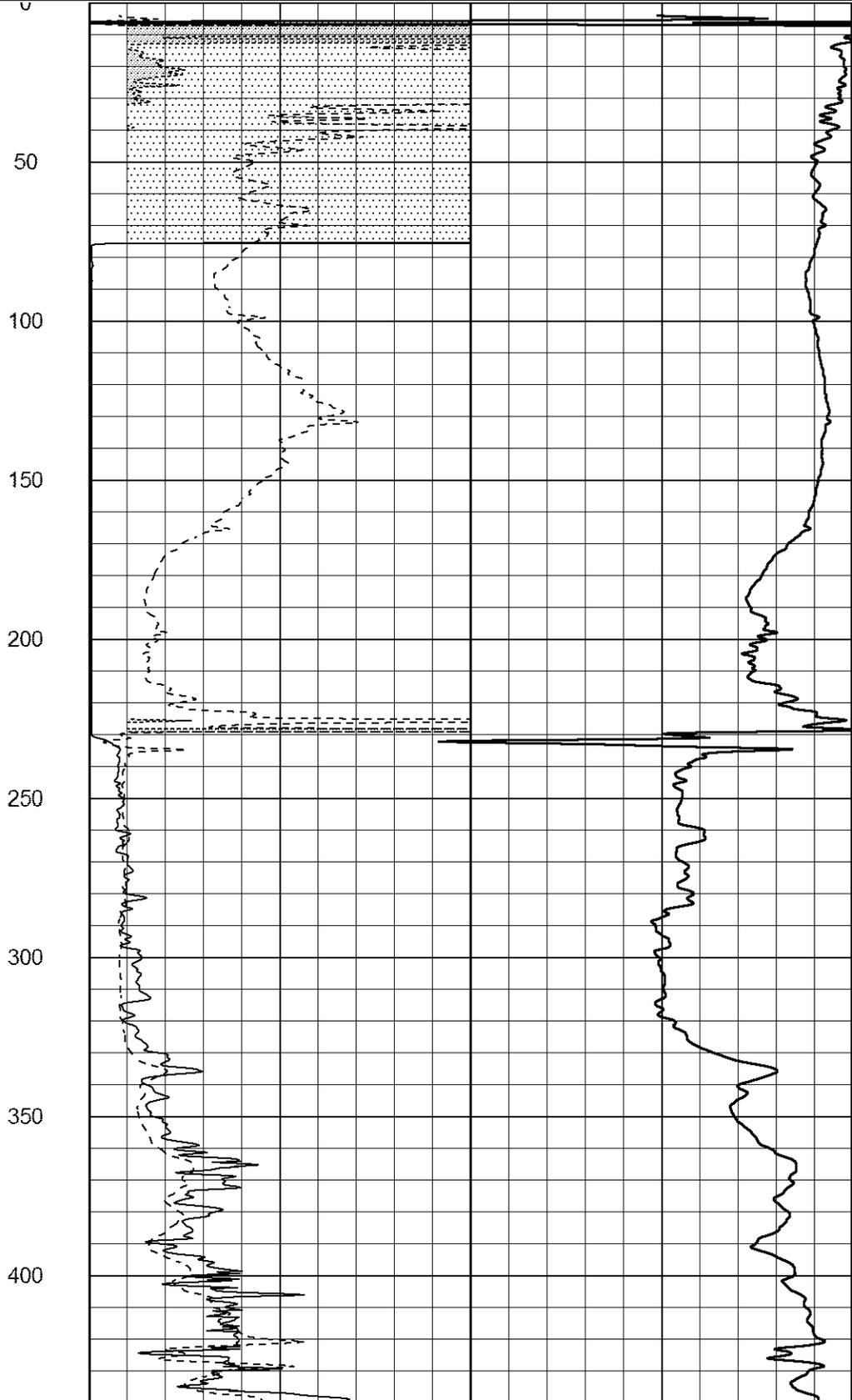
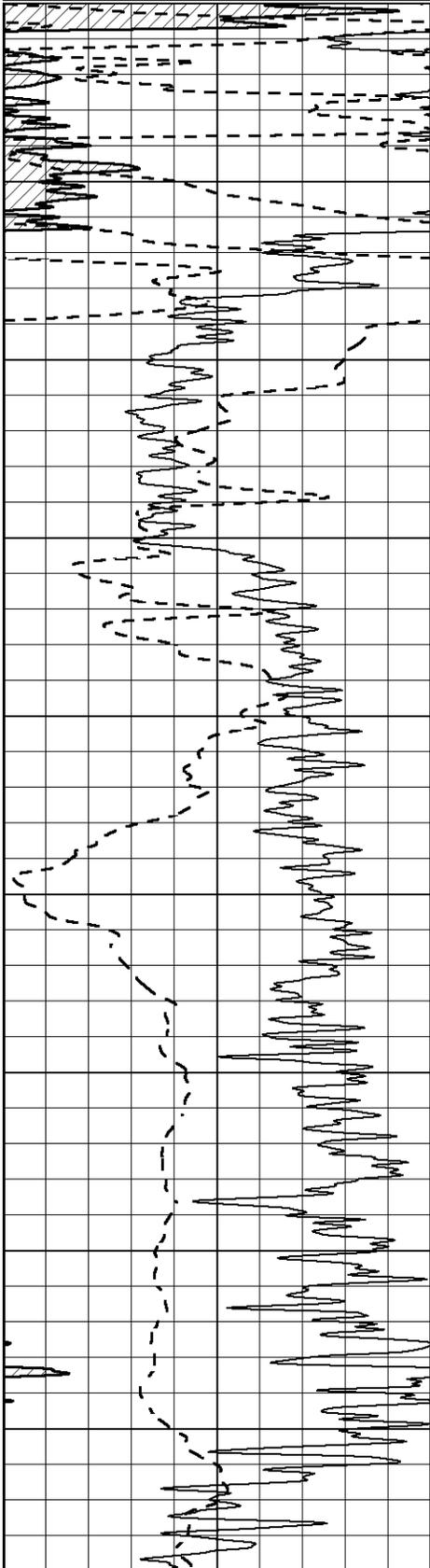


MAIN SECTION

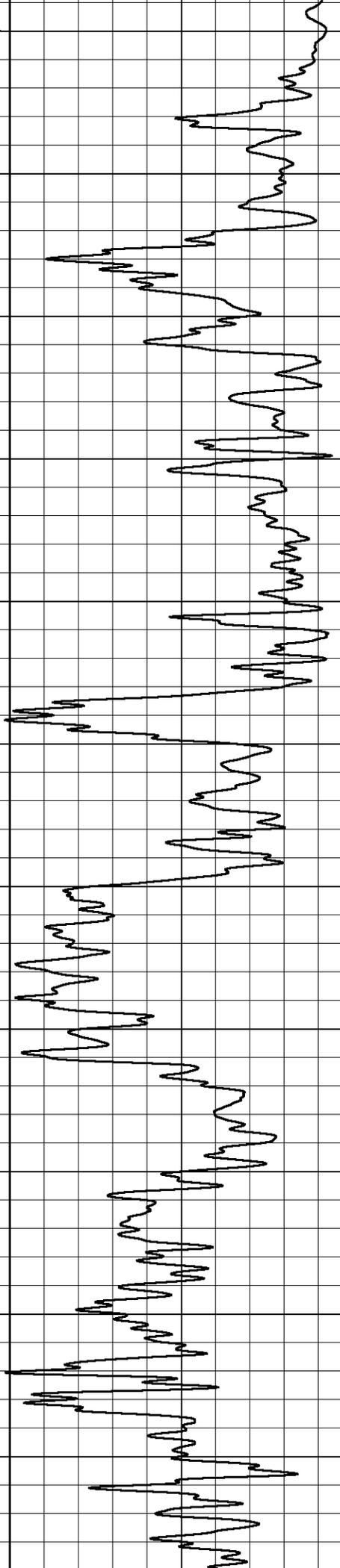
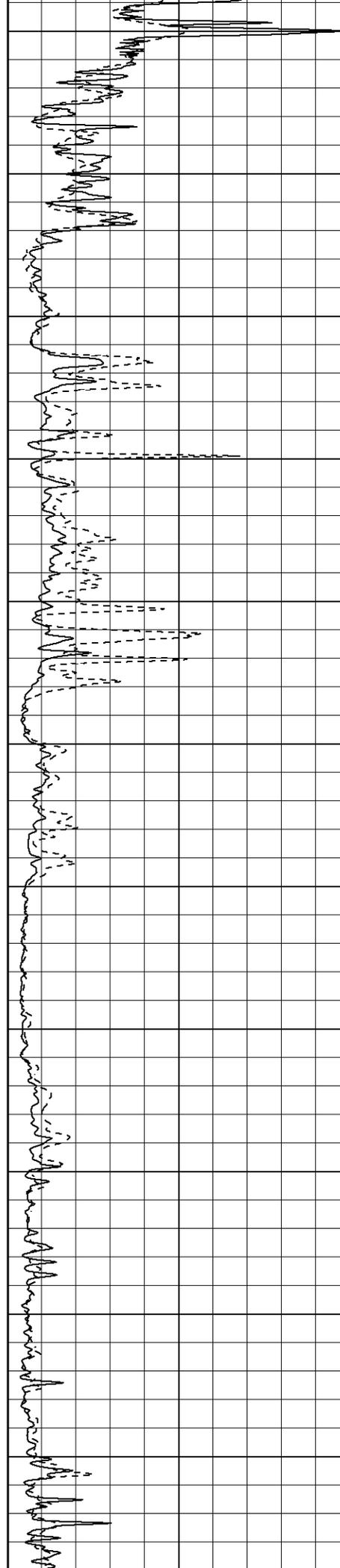
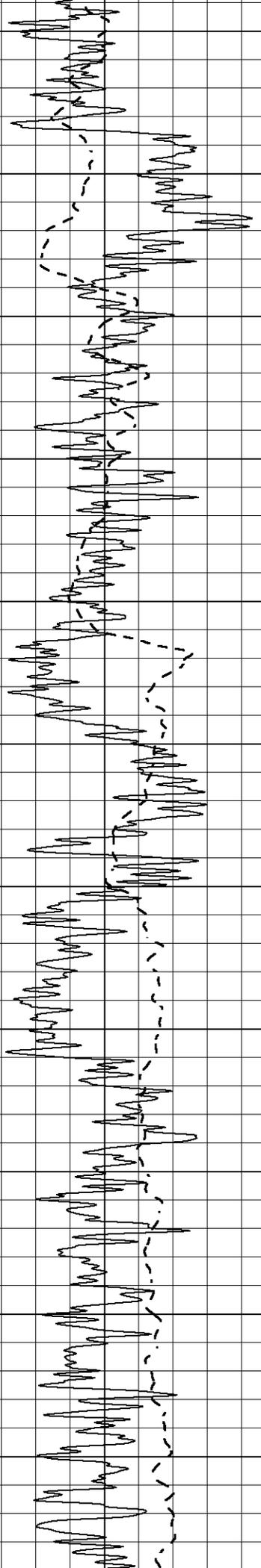
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 Presentation Format _dil2
 Dataset Creation Sat Jun 10 12:36:08 2023
 Charted by Depth in Feet scaled 1:600

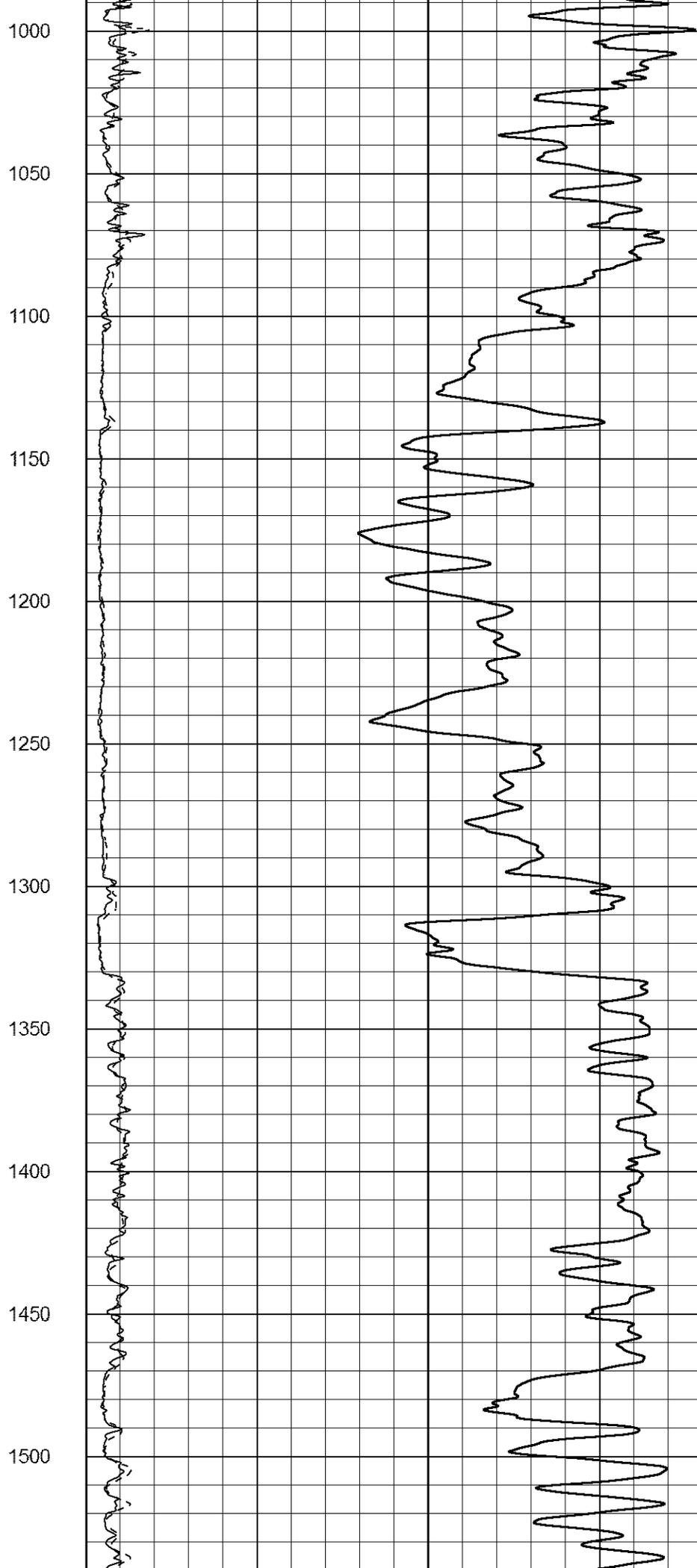
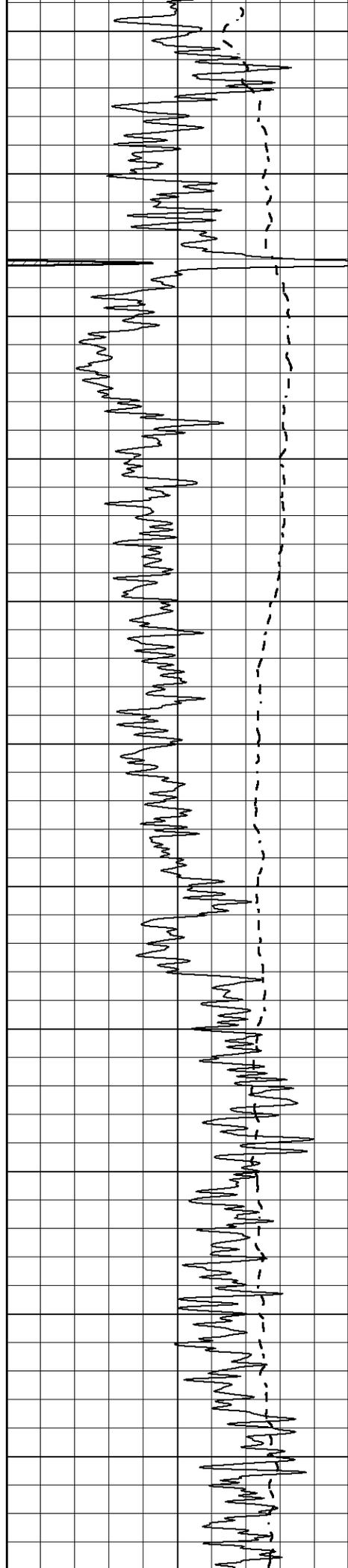
0 Gamma Ray (GAPI) 150
 -100 SP (mV) 100

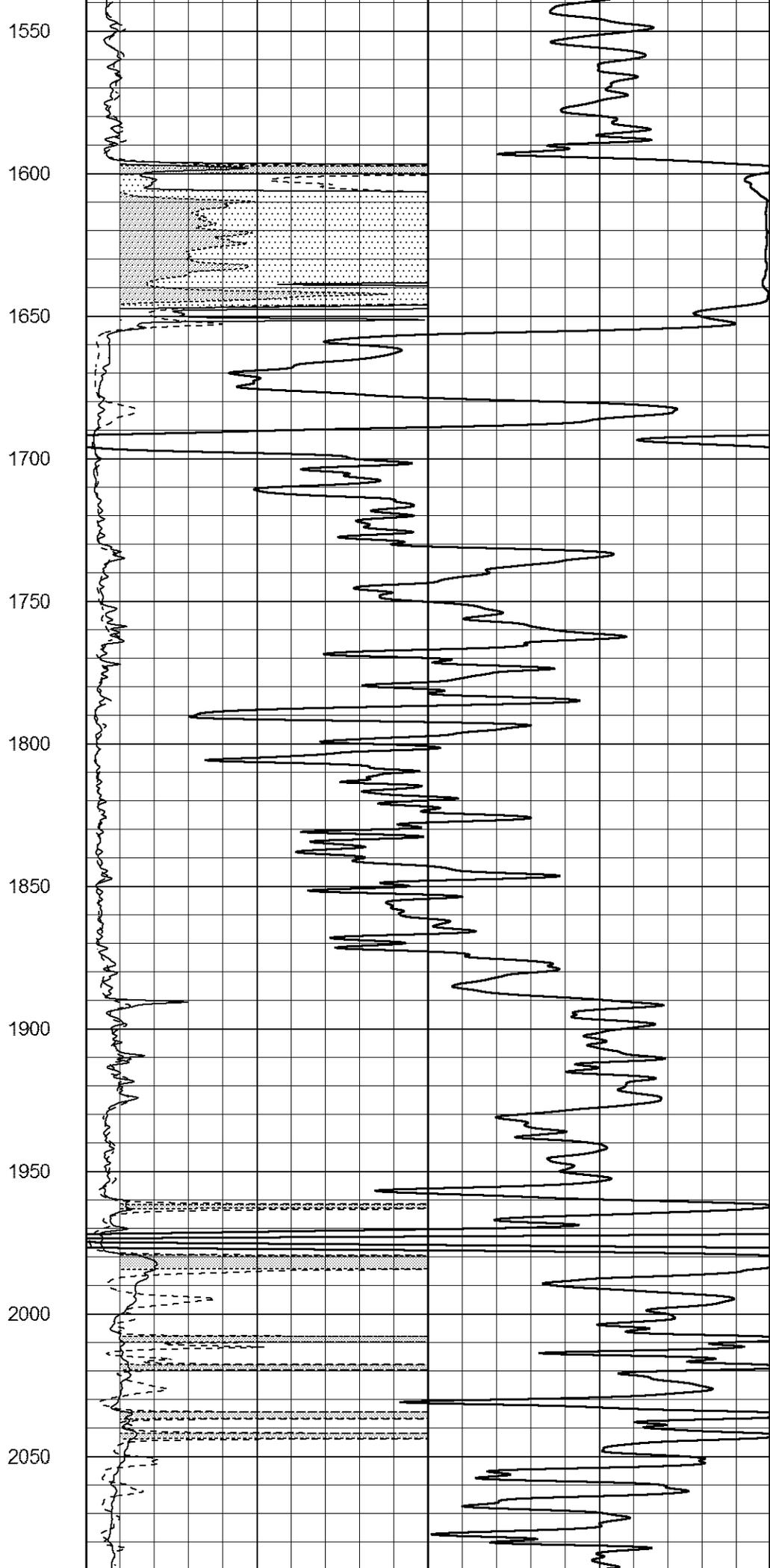
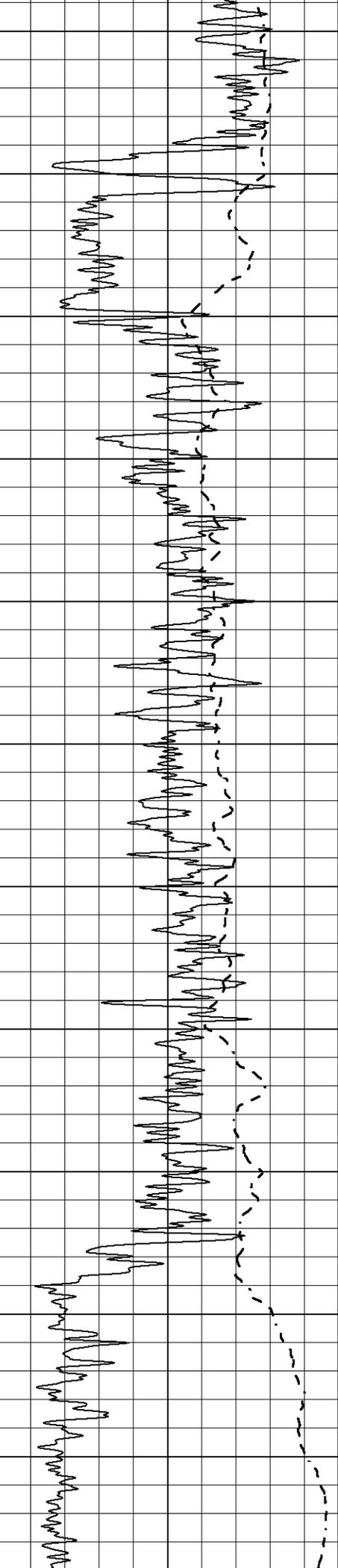
1000 CILD (mmho/m) 0
 0 RLL3 (Ohm-m) 50
 0 Deep Induction (Ohm-m) 50
 50 RILD X10 (Ohm-m) 500
 50 RLL3 X10 (Ohm-m) 500

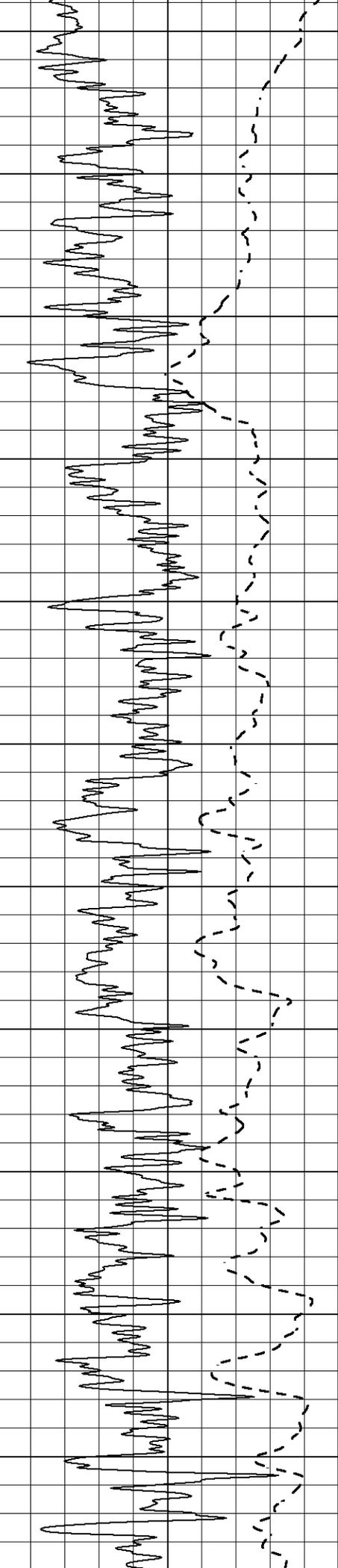


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950

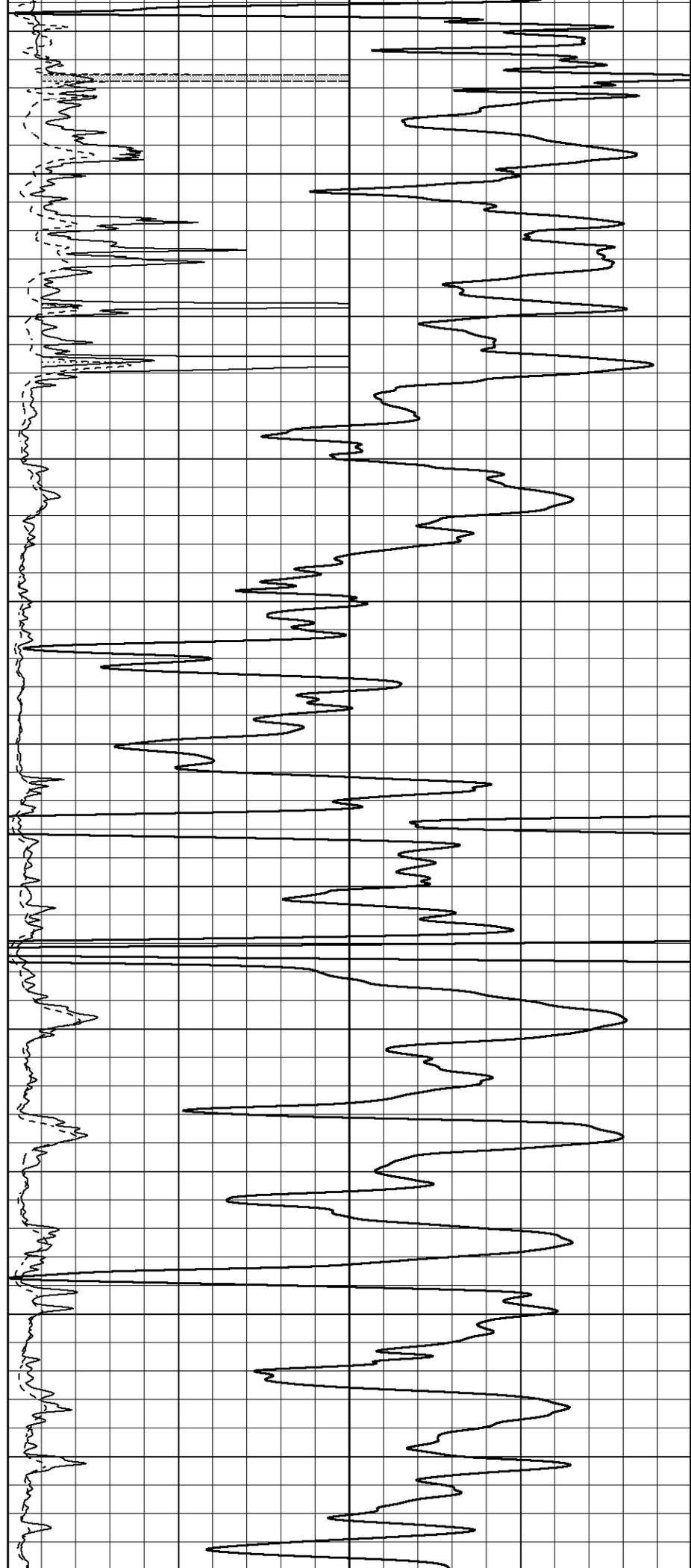




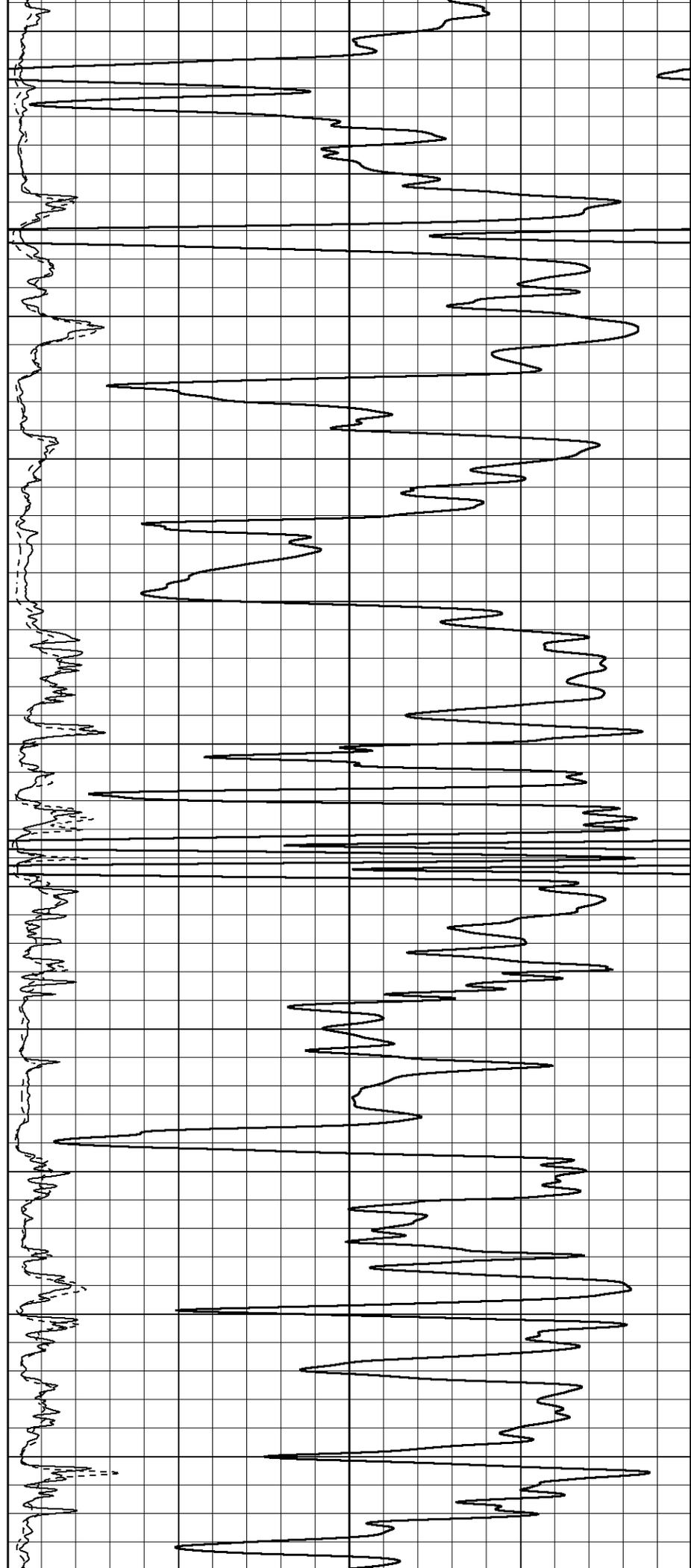
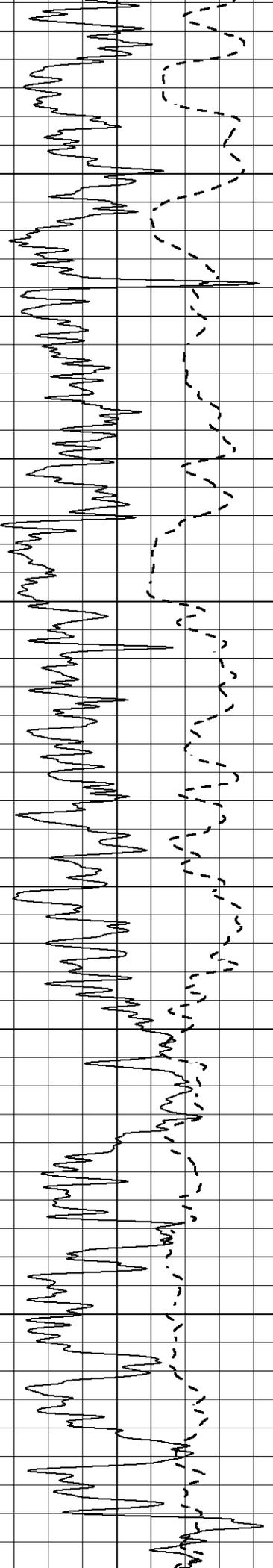


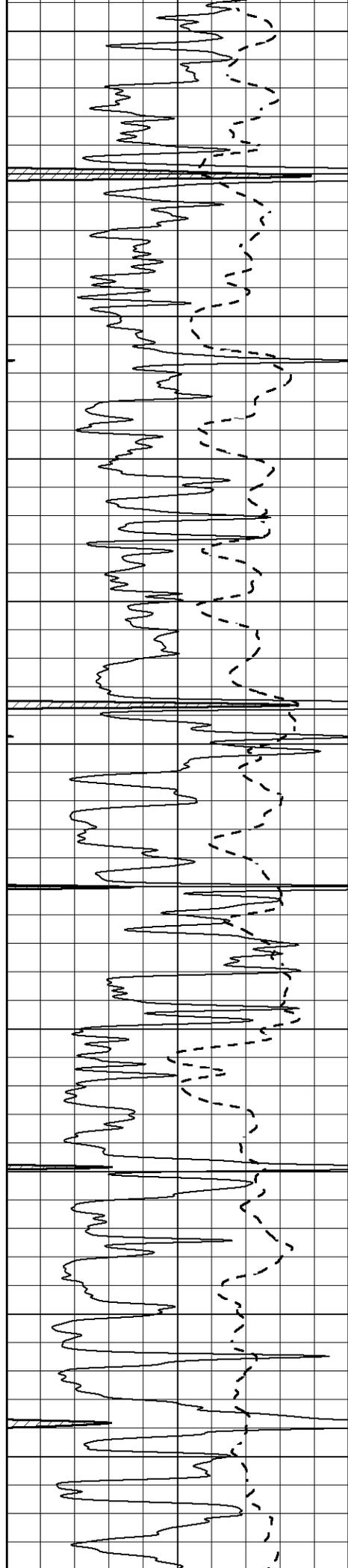


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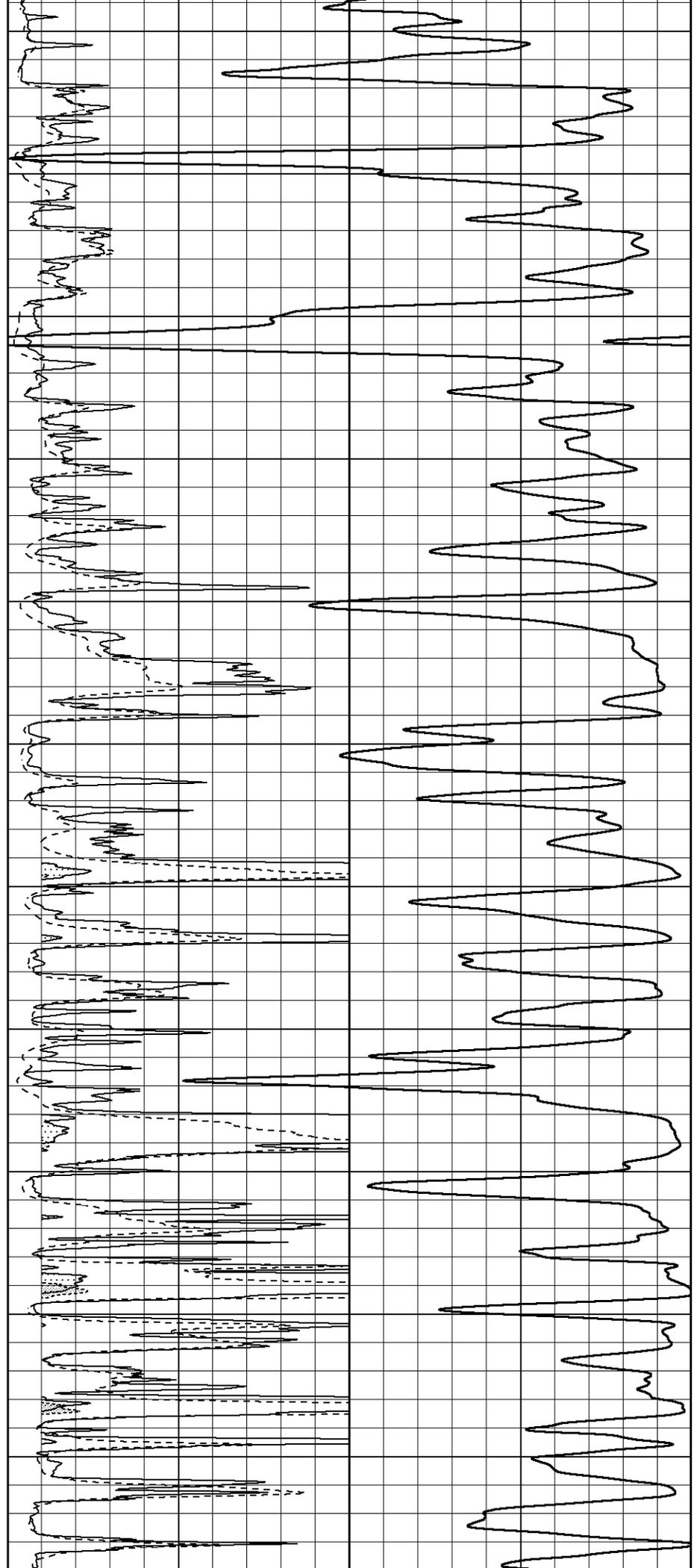


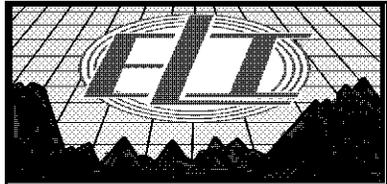
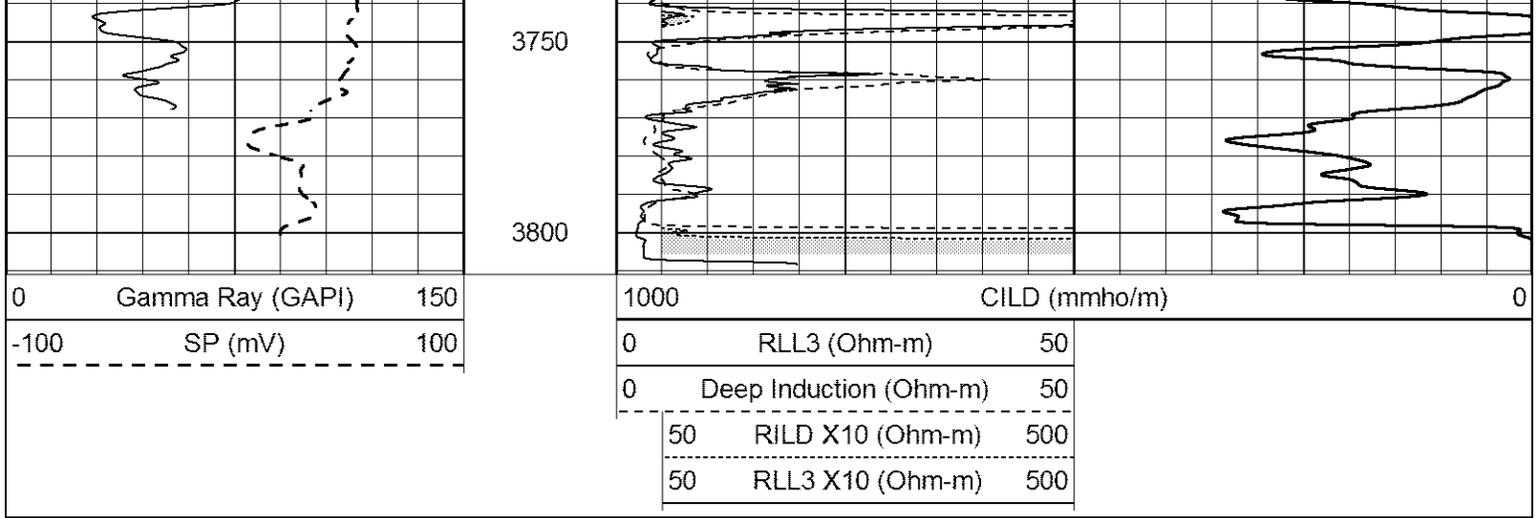
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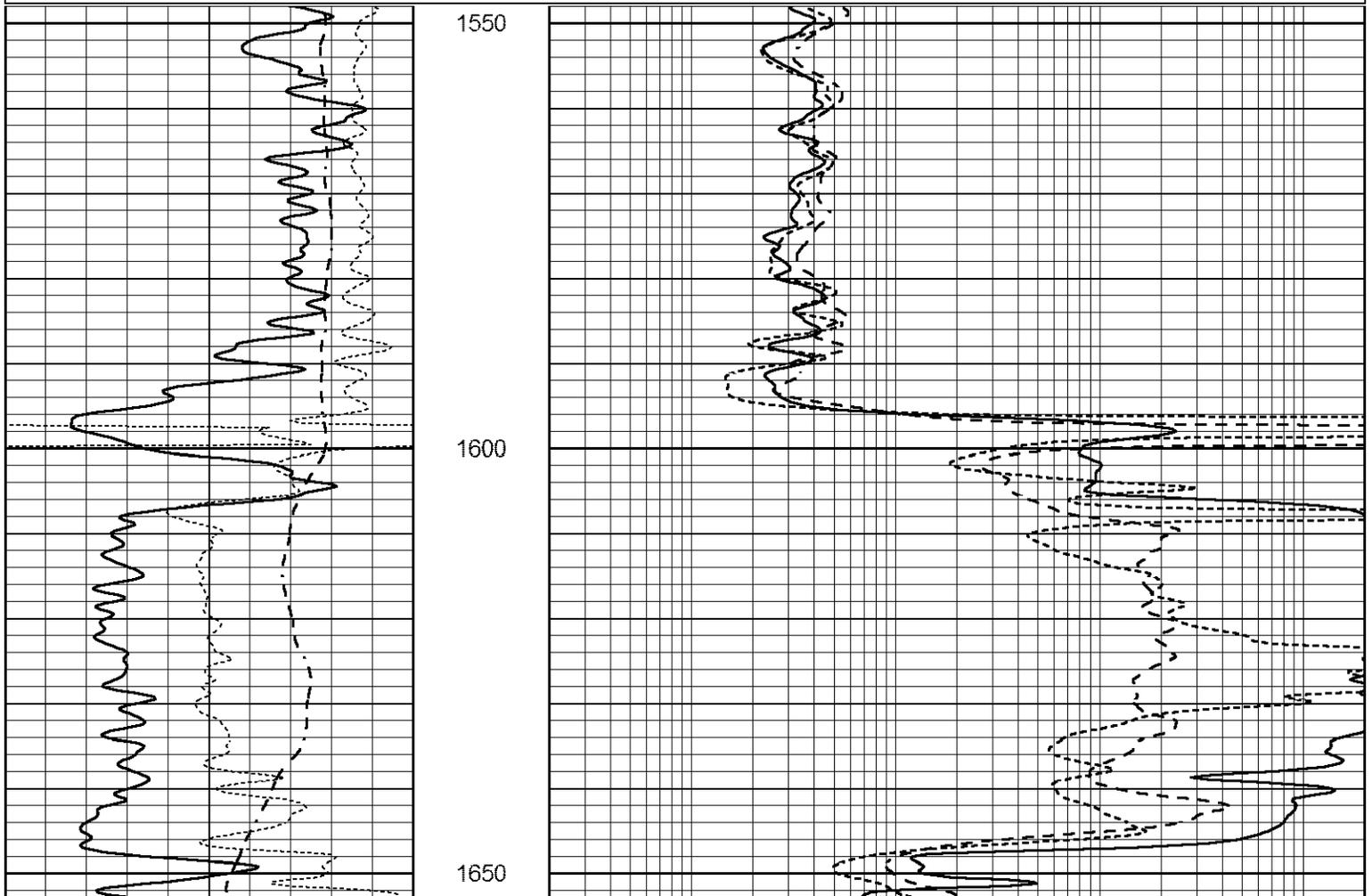
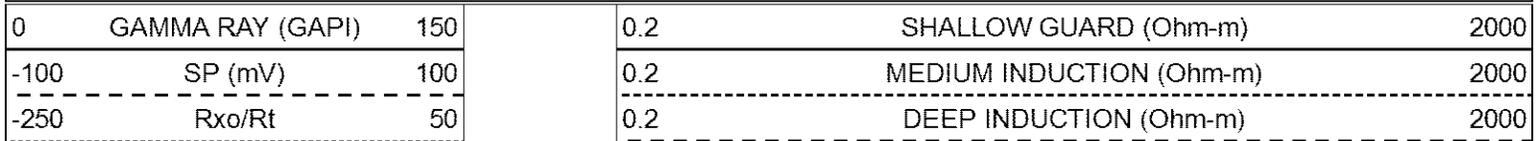
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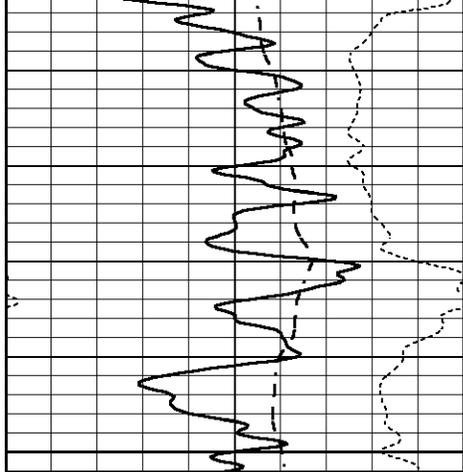




ANHYDRITE

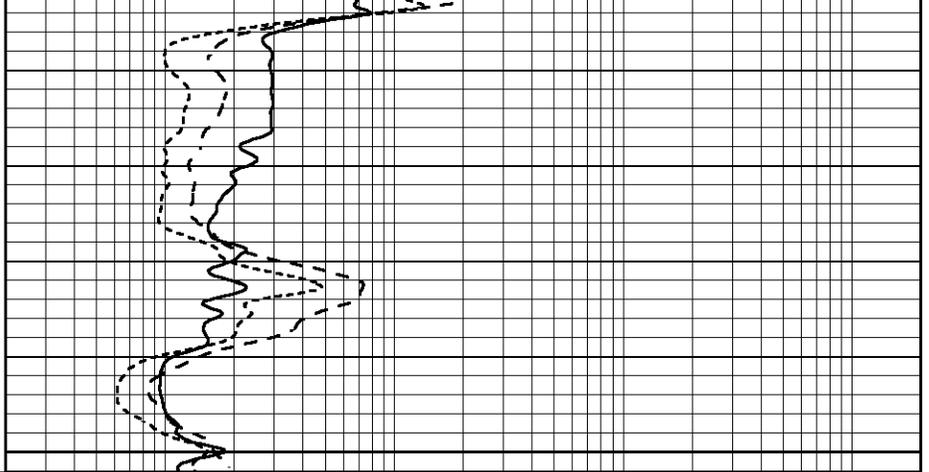
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 Dataset Pathname pass3A.2
 Presentation Format _dil
 Dataset Creation Sat Jun 10 12:43:09 2023
 Charted by Depth in Feet scaled 1:240





1700

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

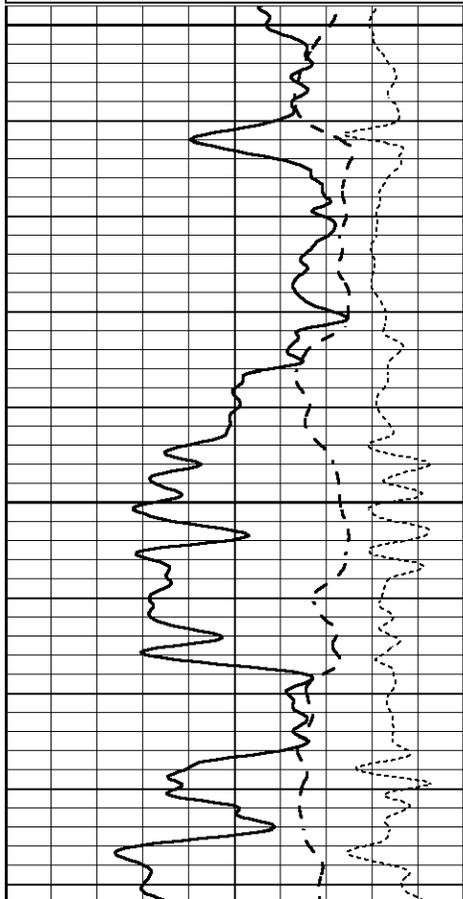


MAIN SECTION

Database File 7593ddn.db
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 Presentation Format _dil
 Dataset Creation Sat Jun 10 12:36:08 2023
 Charted by Depth in Feet scaled 1:240

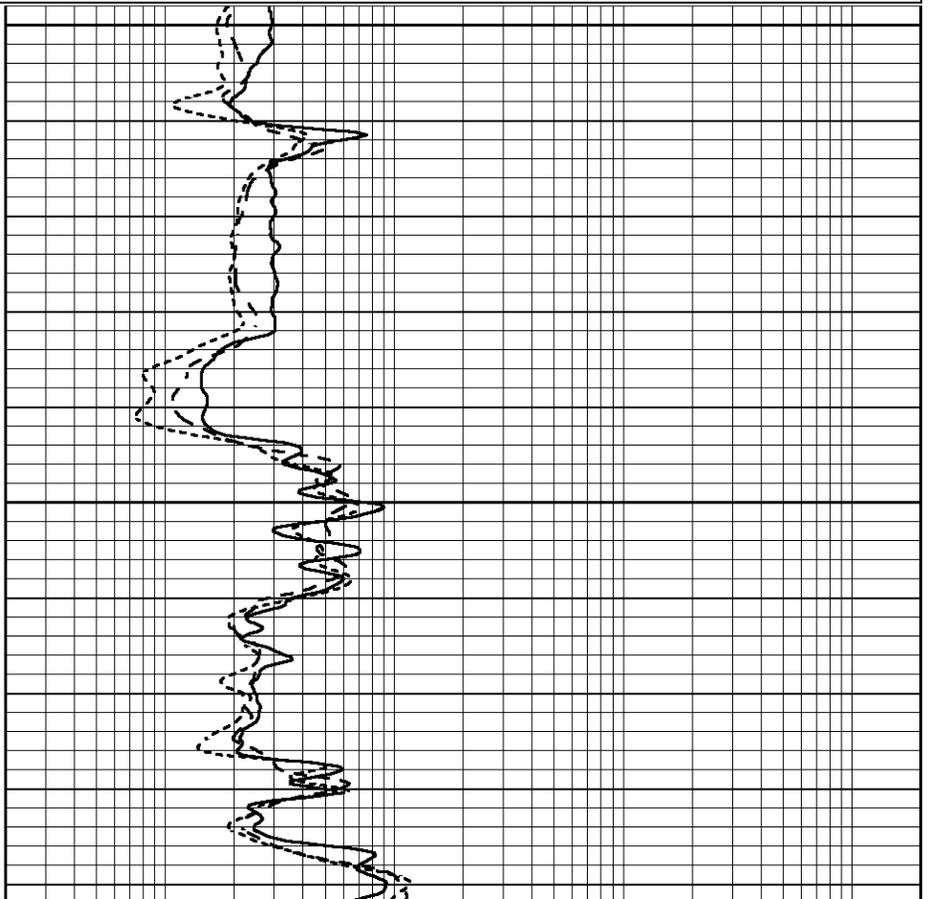
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

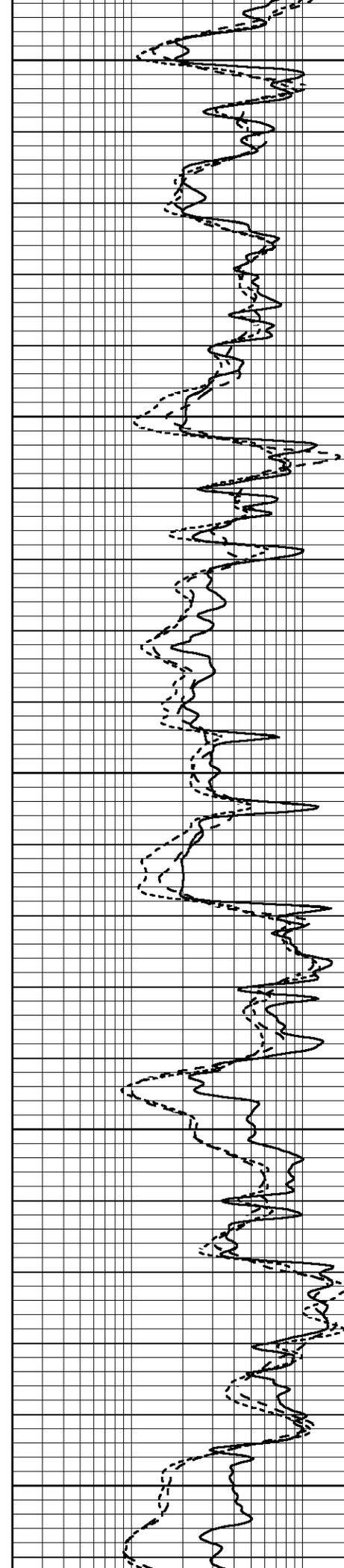
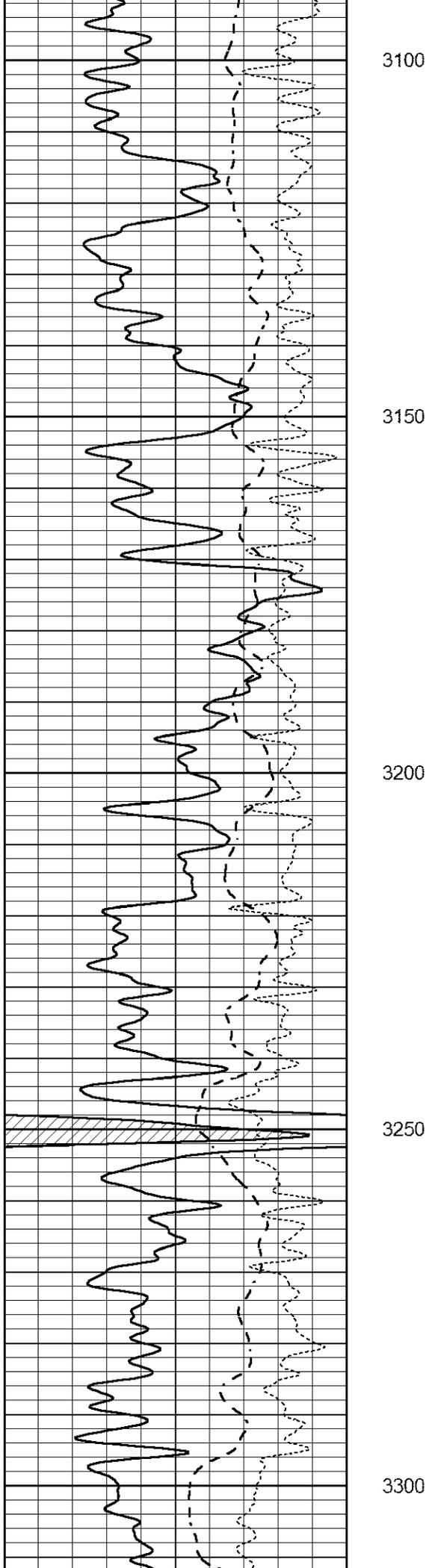
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

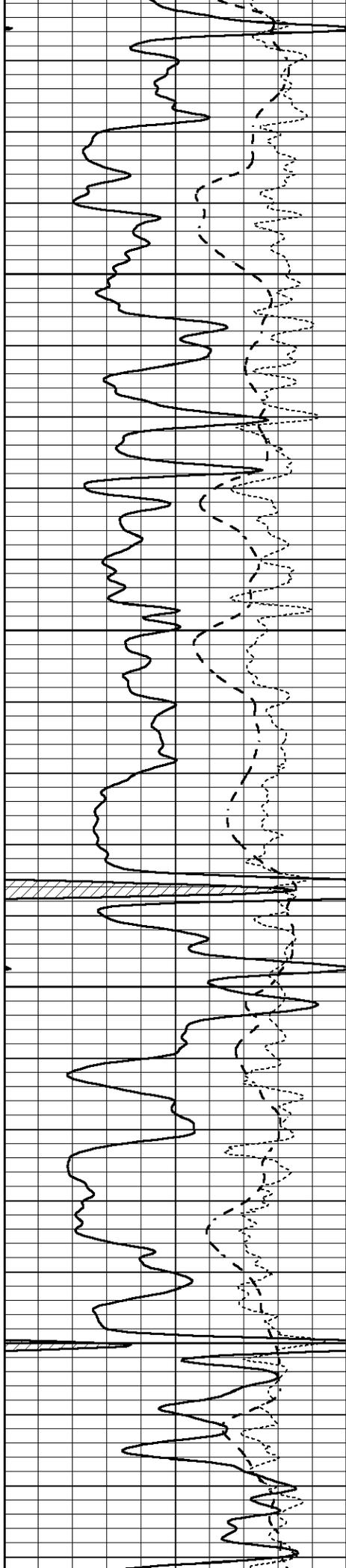


3000

3050





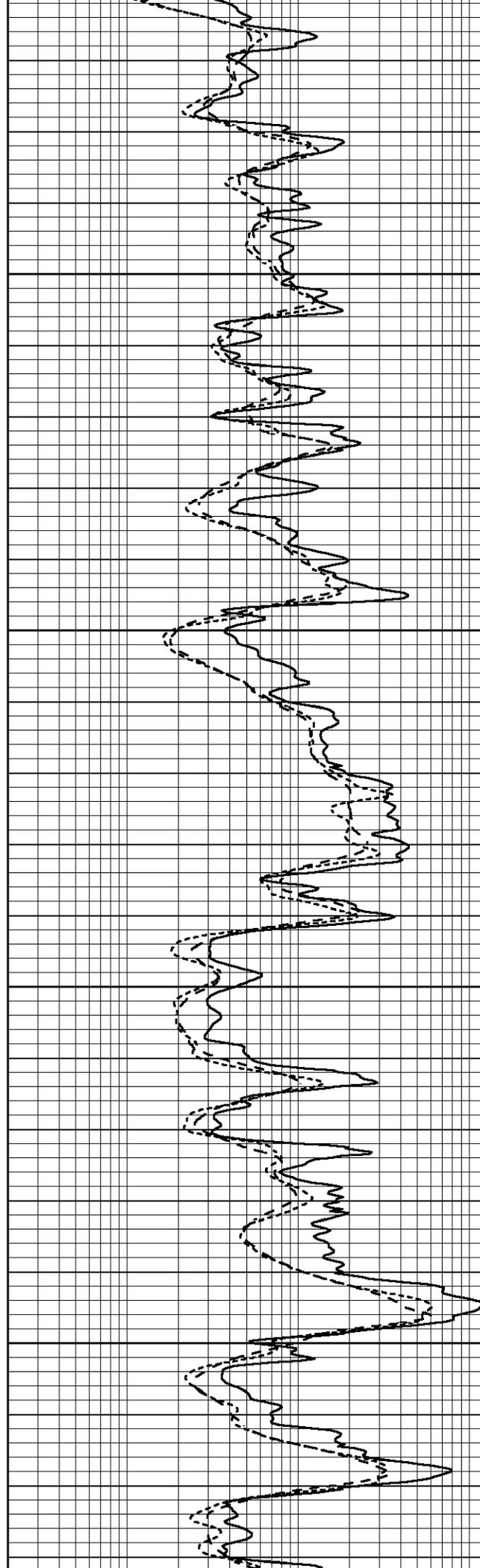


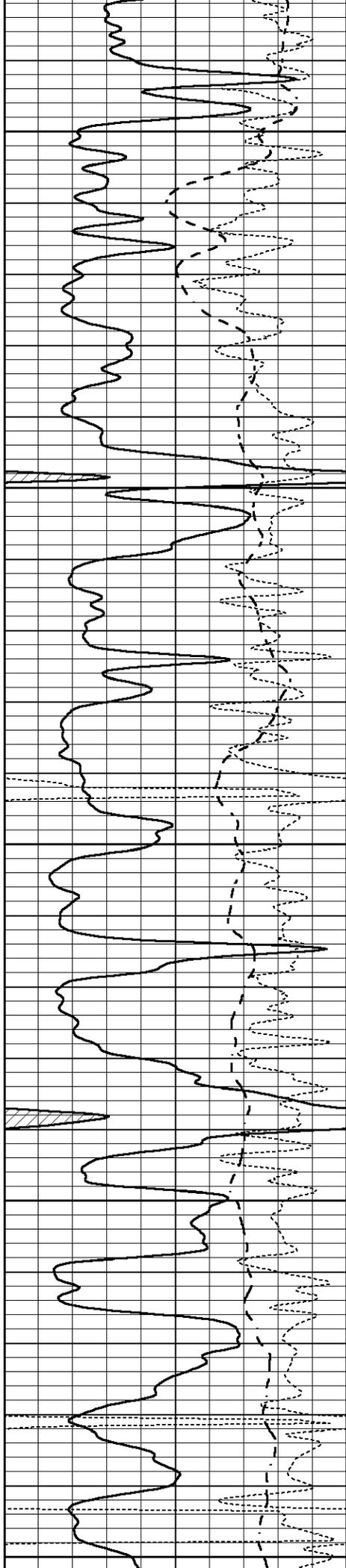
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3400

3450

3500





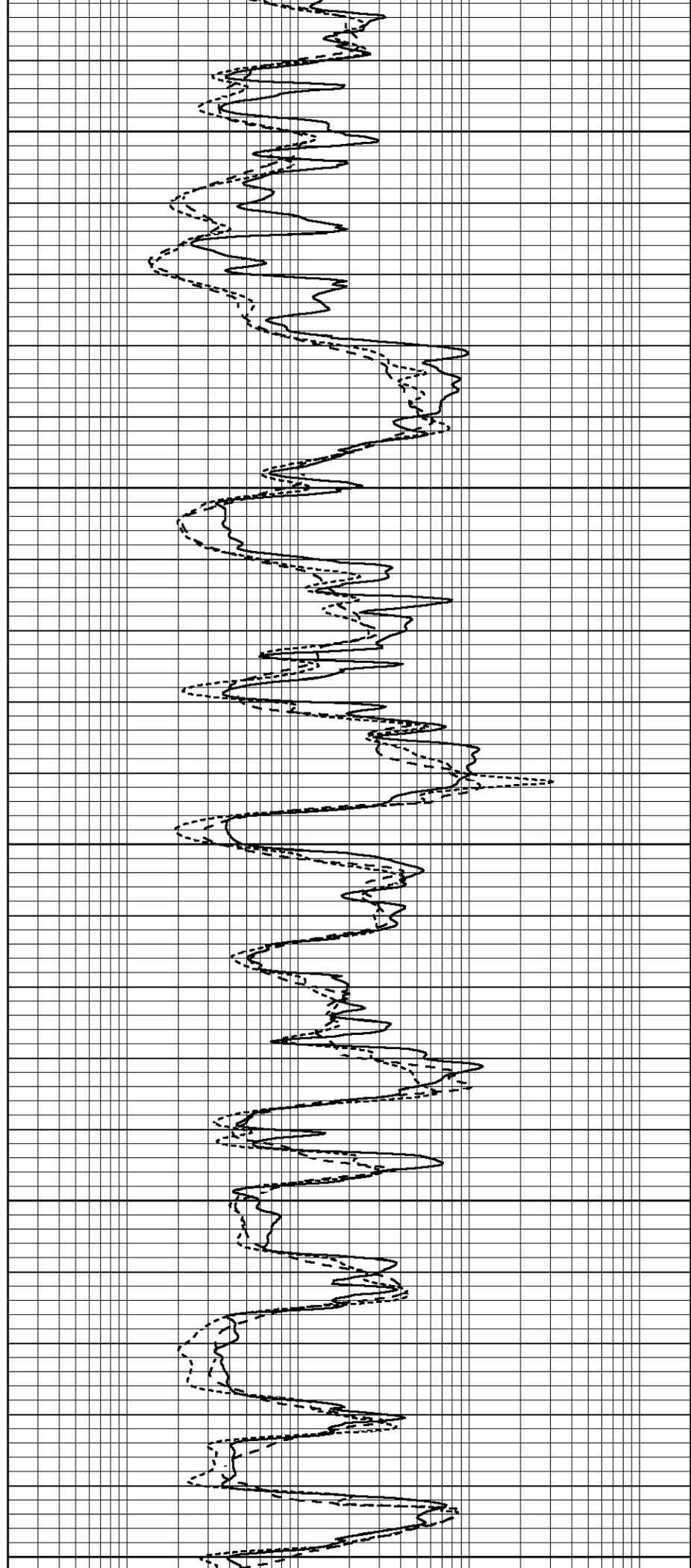
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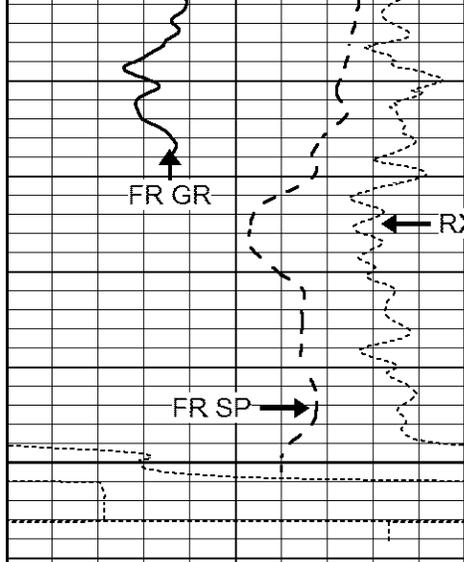
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3700

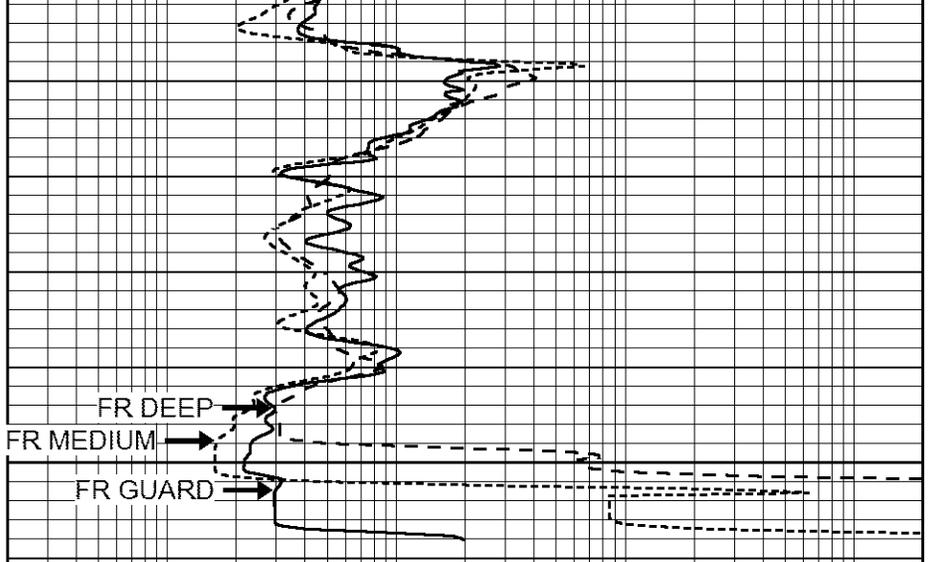
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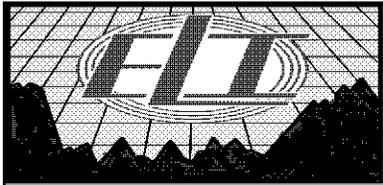


3800
LTD 3805

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

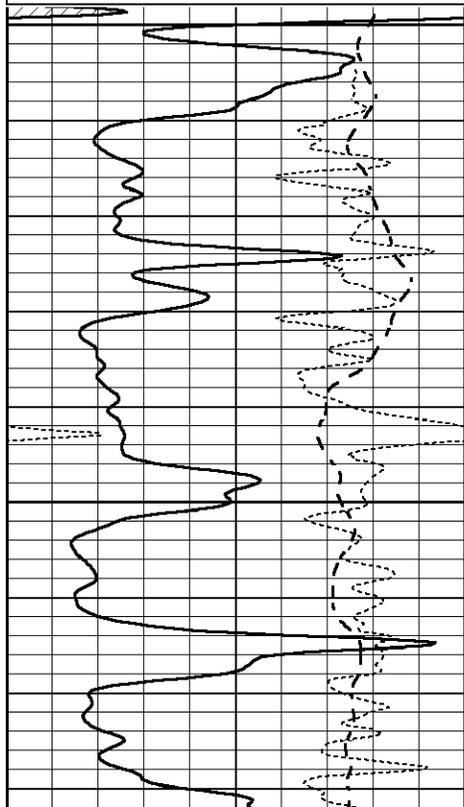


REPEAT SECTION

Database File 7593ddn.db
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 Presentation Format _dil
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 Charted by Depth in Feet scaled 1:240

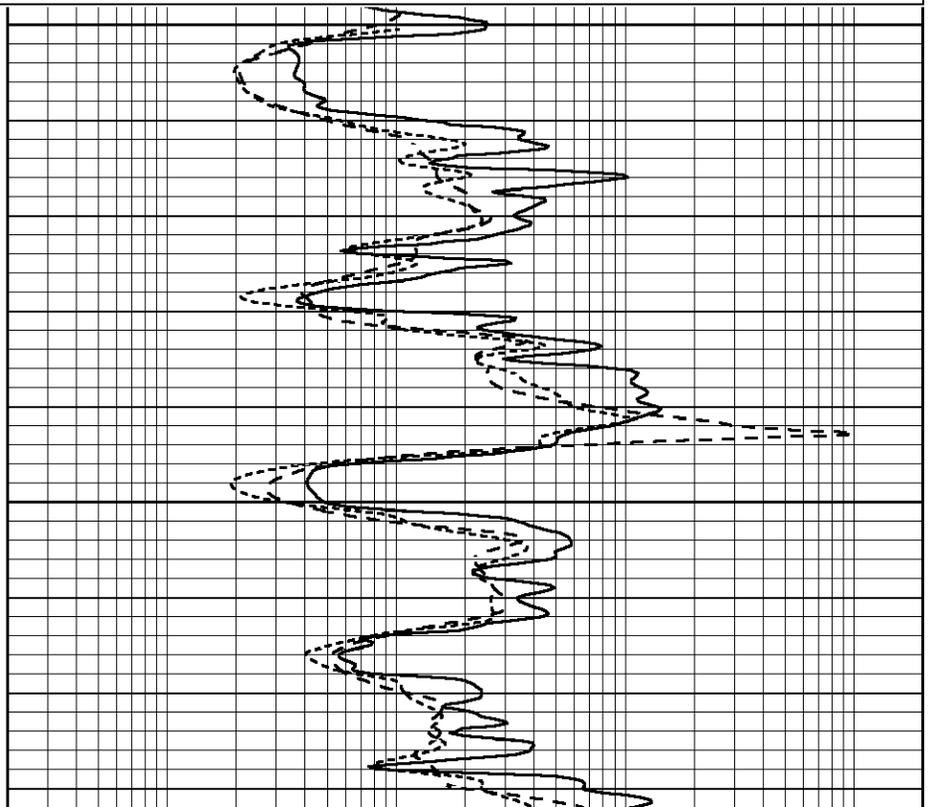
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

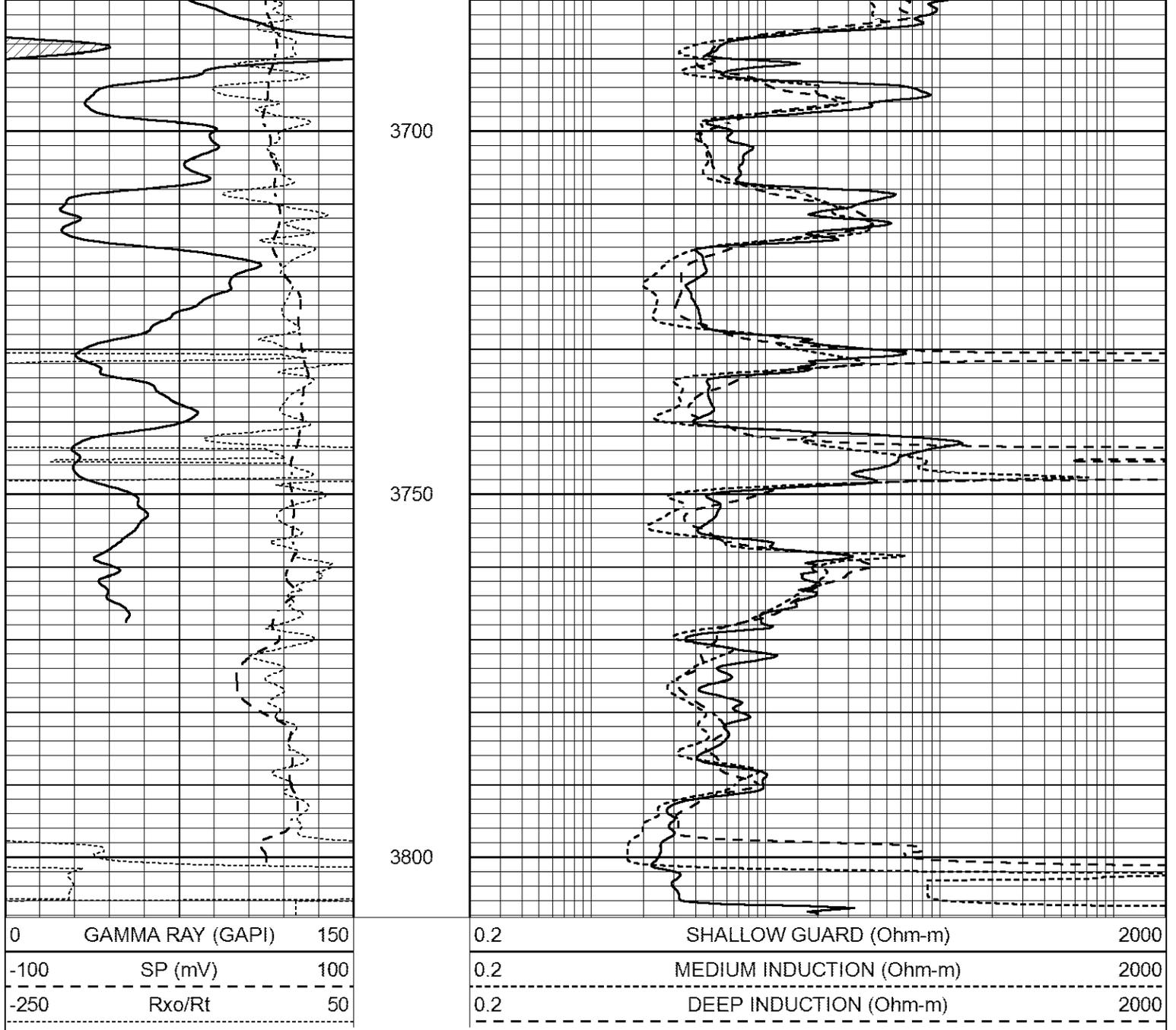
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



3600

3650





Calibration Report

Database File 7593ddn.db
 Dataset Pathname pass3MM
 Dataset Creation Sat Jun 10 12:36:08 2023

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Sun Apr 02 09:22:50 2023
 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	V	Air	Loop	mmho/m	m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	550.000	-3.000
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	550.000	-10.000
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: Fri May 12 10:26:47 2023			
	Background		Aluminum		Magnesium			
Window 1	521.46		5212.91		23528.37		cps	
Window 2	43.81		1175.90		6160.42		cps	
Window 4	226.45		1217.97		4891.35		cps	
Window 5	519.17		8959.34		17037.10		cps	
Window 6	39.35		1453.85		2926.68		cps	
Window 8	253.66		2919.24		5361.51		cps	
Bulk Density	-		2.6020		1.6830		g/cc	
Pe	-		3.0000		2.5070		b/e	
LS Alpha:	:-1.7699		SS Alpha: :-0.7448		LS CPE:		: 1.1844	
LS Beta:	: 101708.6271		SS Beta: : 19263.5258		SS CPE:		: 1.5835	

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: Fri May 12 10:26:47 2023

Results	Readings		References (in)		Gain	Offset
	Low	High	Low	High		
	7228.5	10151.9	8.0	14.0	0.0	-6.8

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: Sun Apr 02 09:22:40 2023

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.4000 GAPI/cps