

DUAL INDUCTION LOG

Company	PIONEER OPERATIONS, LLC	Company	PIONEER OPERATIONS, LLC
Well	HAZEN #1	Well	HAZEN #1
Field	WEBSTER VIEW SOUTHEAST	Field	WEBSTER VIEW SOUTHEAST
County	ROOKS	County	ROOKS
State	KANSAS	State	KANSAS
Location:	API # : 15-163-24443-0000 2785' FSL & 1438' FEL SE/SE/SW/NE	Other Services CNL/CDL MEL	
Permanent Datum	SEC 4 TWP 8S RGE 18W	Elevation	
Log Measured From	GROUND LEVEL Elevation 1919 KELLY BUSHING 5' A.G.L	K.B. 1924 D.F. 1922 G.L. 1919	
Drilling Measured From	KELLY BUSHING		
Date	3/26/22		
Run Number	ONE		
Depth Driller	3434		
Depth Logger	3434		
Bottom Logged Interval	3432		
Top Log Interval	00		
Casing Driller	8 5/8" @245		
Casing Logger	245		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4600 PPM	
Density / Viscosity	9.3/56		
pH / Fluid Loss	10.5/6.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.95@65F		
Rmf @ Meas. Temp	.71@65F		
Rmc @ Meas. Temp	1.14@65F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.56@111F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	111F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	TJ DREILING		
Witnessed By	JANELL STAAB		

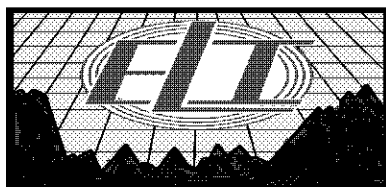
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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

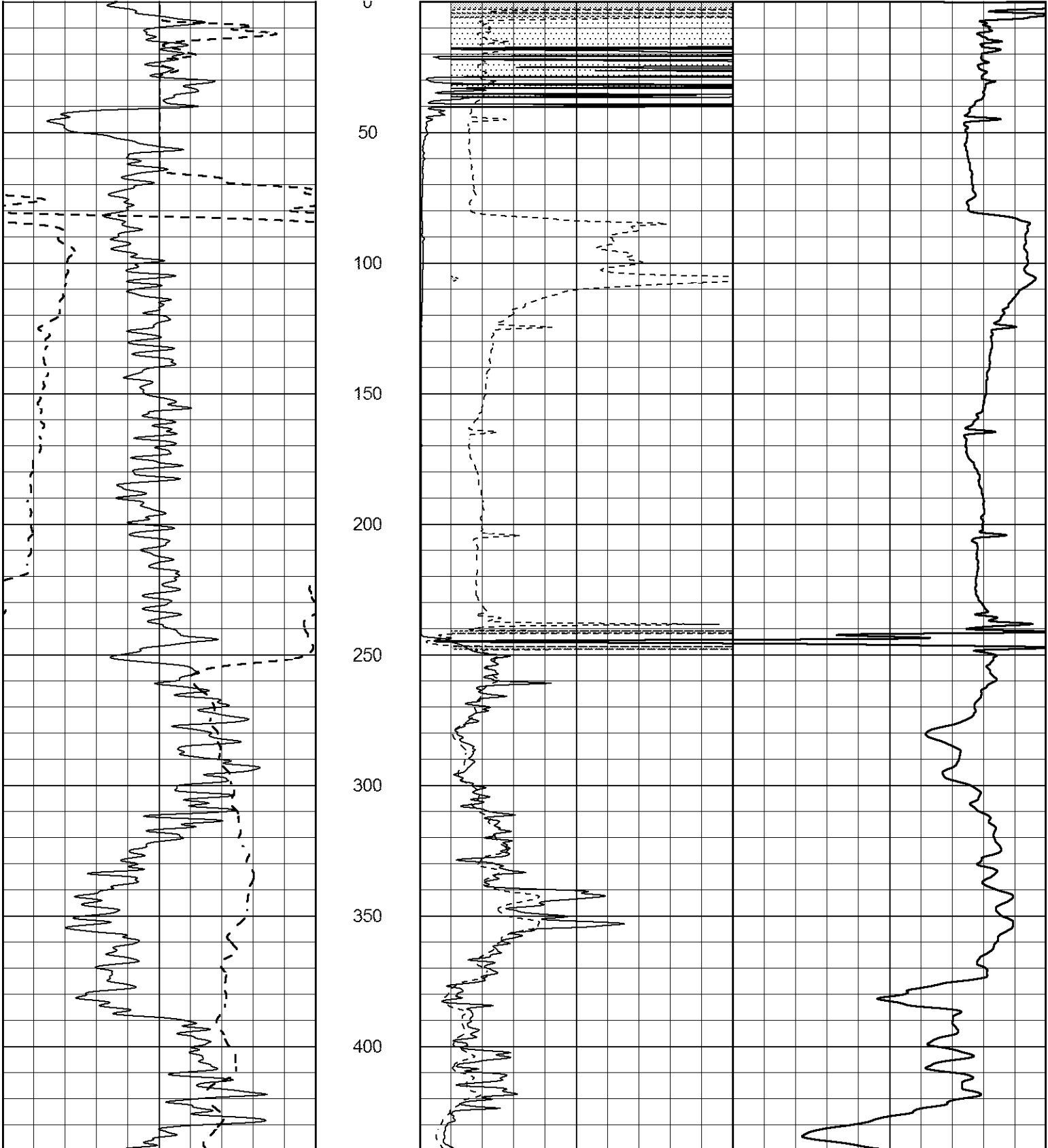
-COMING INTO STOCKTON KANSAS, TAKE ROAD "K" (BY TIRE SHOP) WEST A COUPLE MILES,
-THE ROAD CURVES SOUTH TO "L" TERRACE, - BACK WEST 1/4 MILE,
-SOUTH INTO THROUGH PASTURE

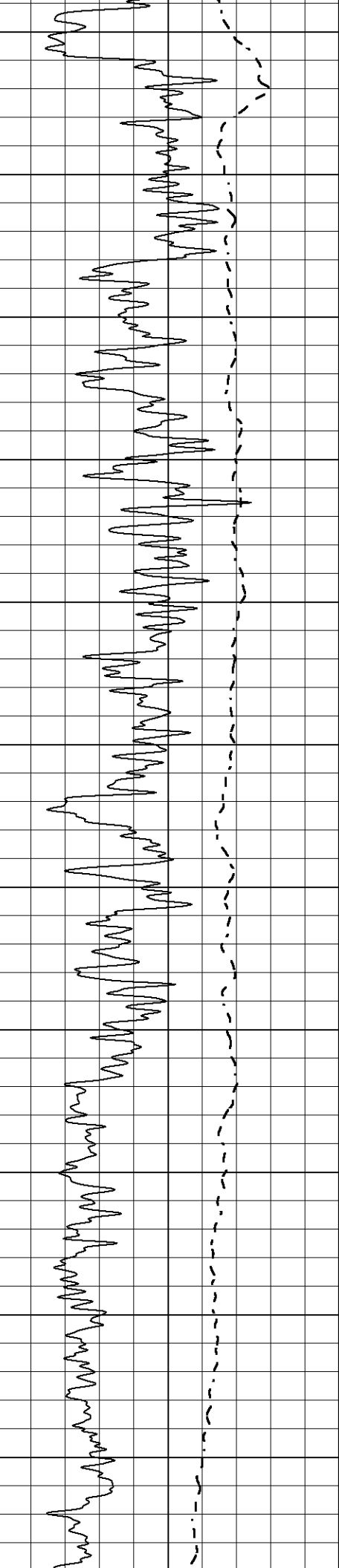


MAIN SECTION

Database File	6380ddn.db
Dataset Pathname	pass3.8
Presentation Format	_dil2
Dataset Creation	Sat Mar 26 19:00:43 2022
Charted by	Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	1000	CILD (mmho/m)	0
-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
-----			0	Deep Induction (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500





450

500

550

600

650

700

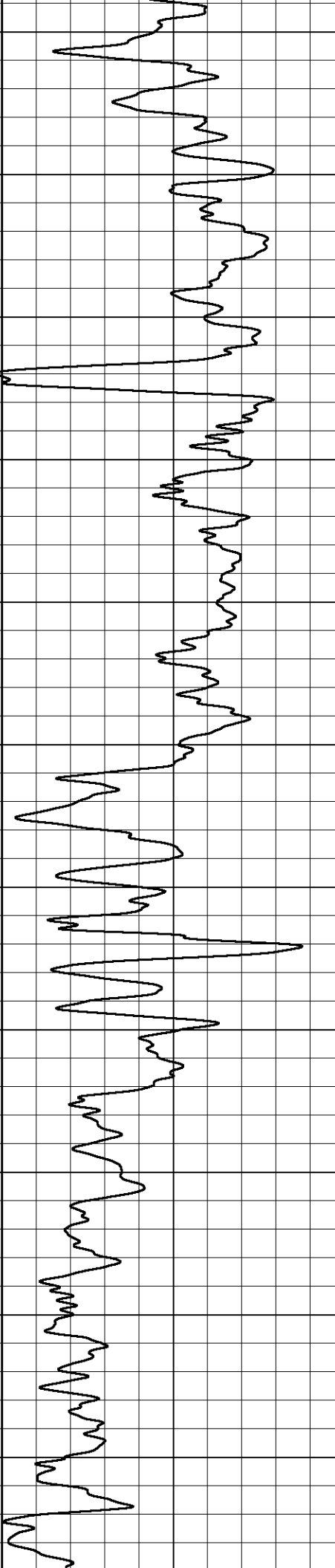
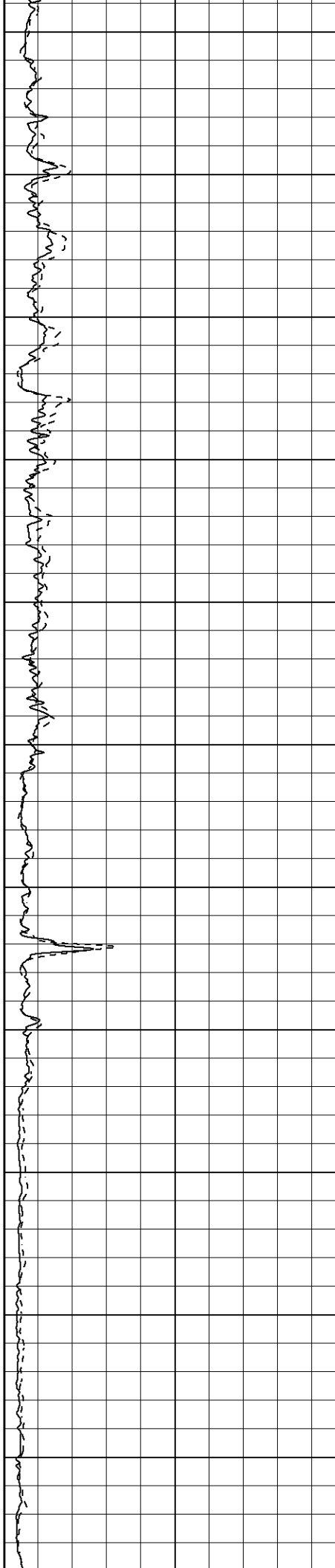
750

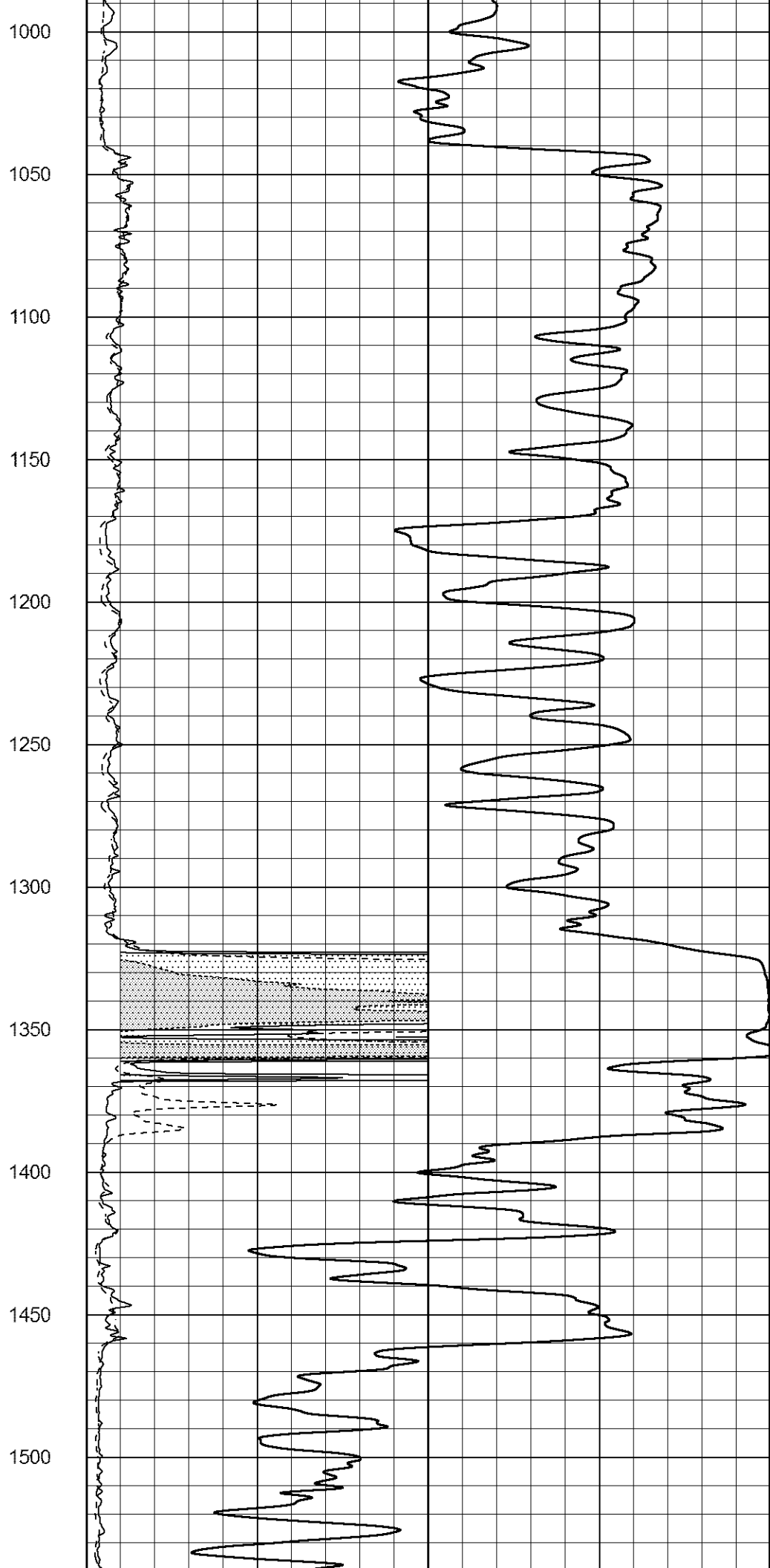
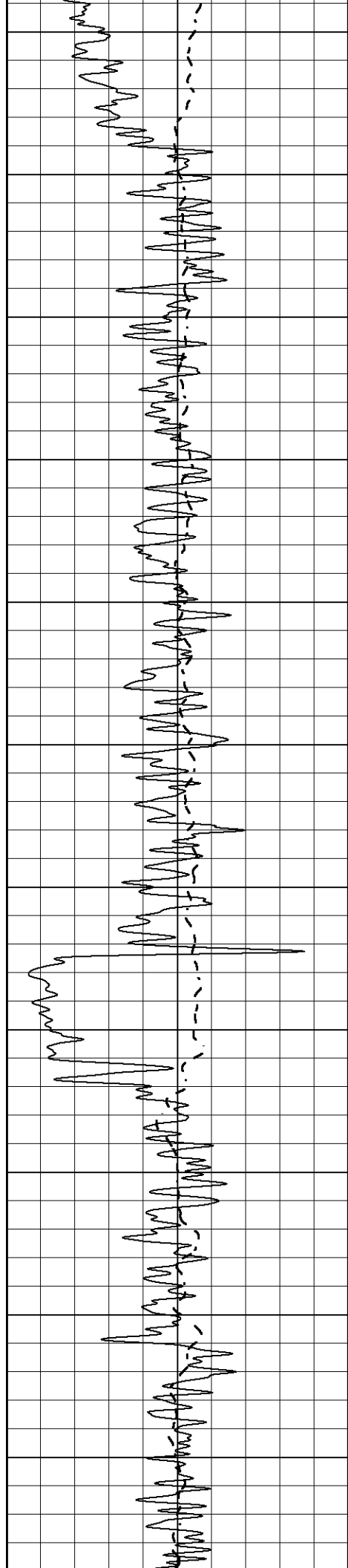
800

850

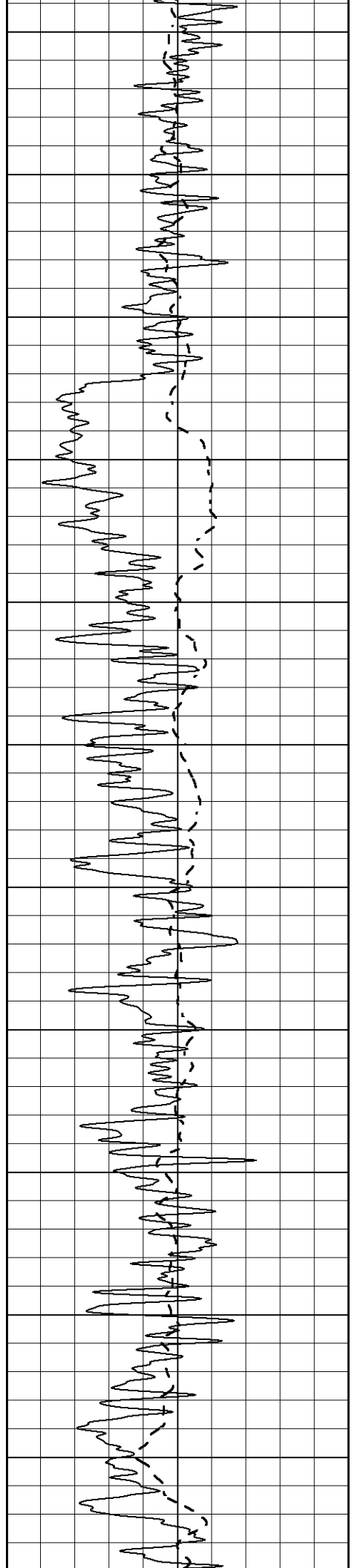
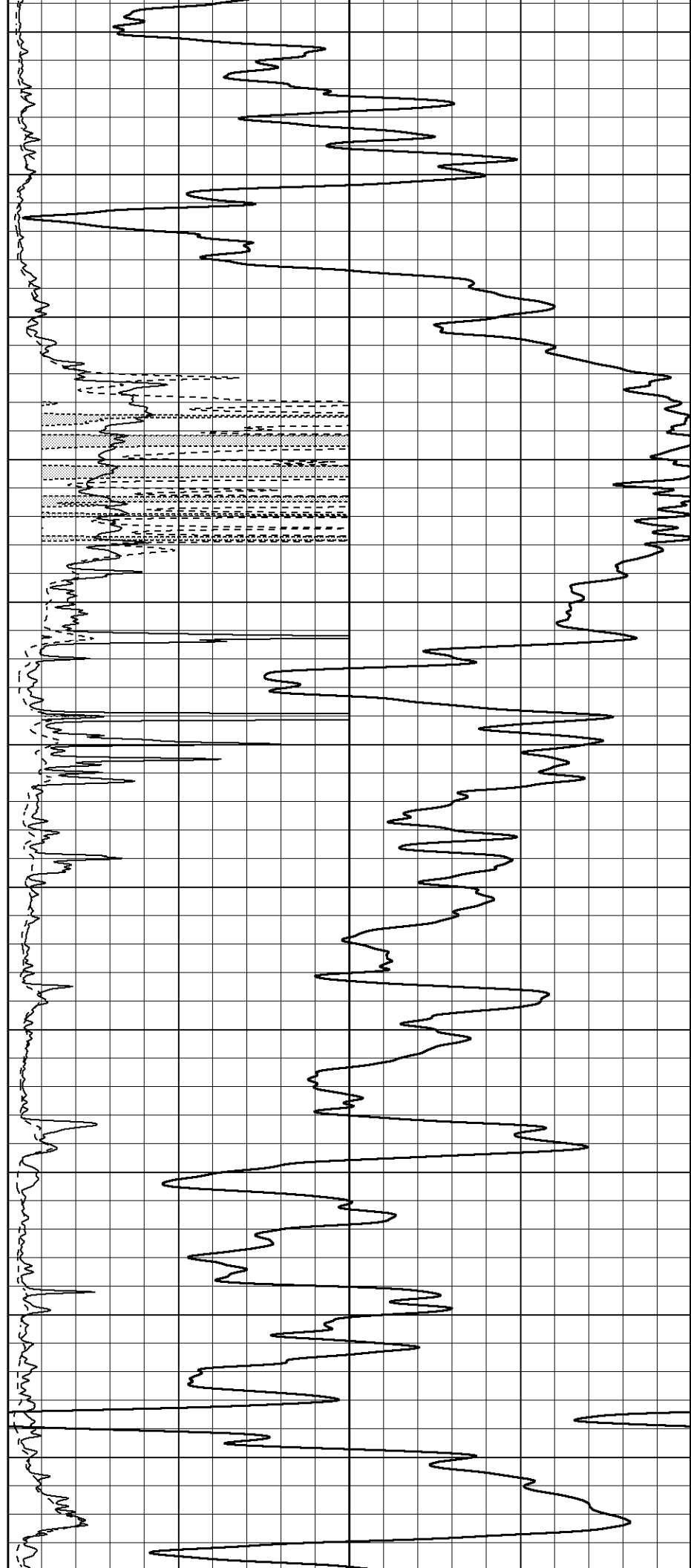
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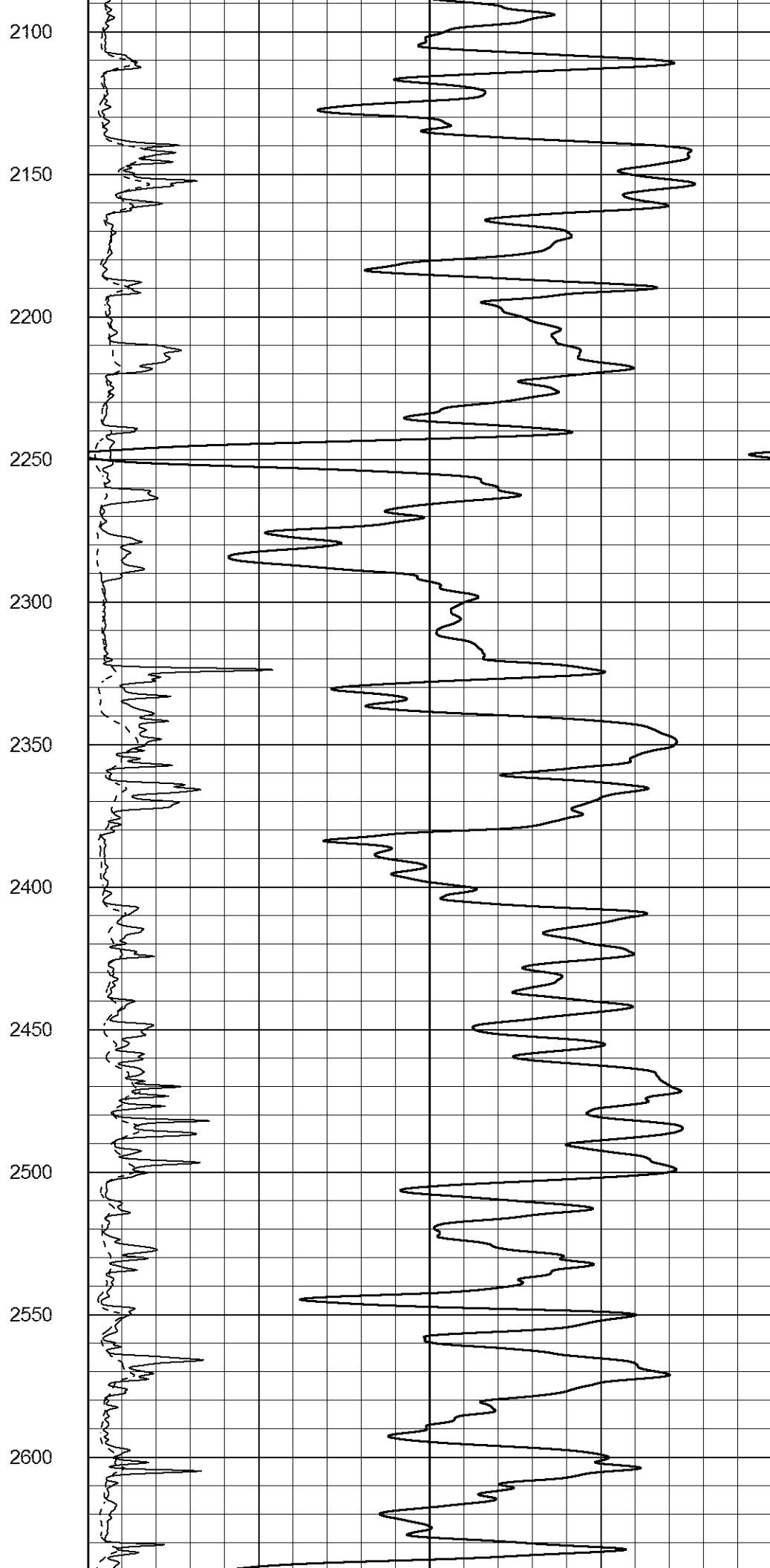
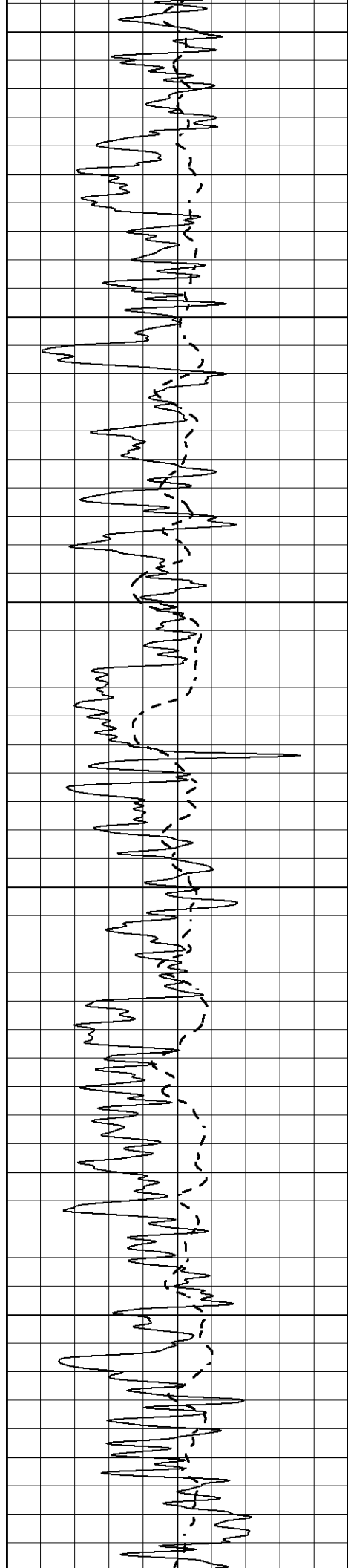
950

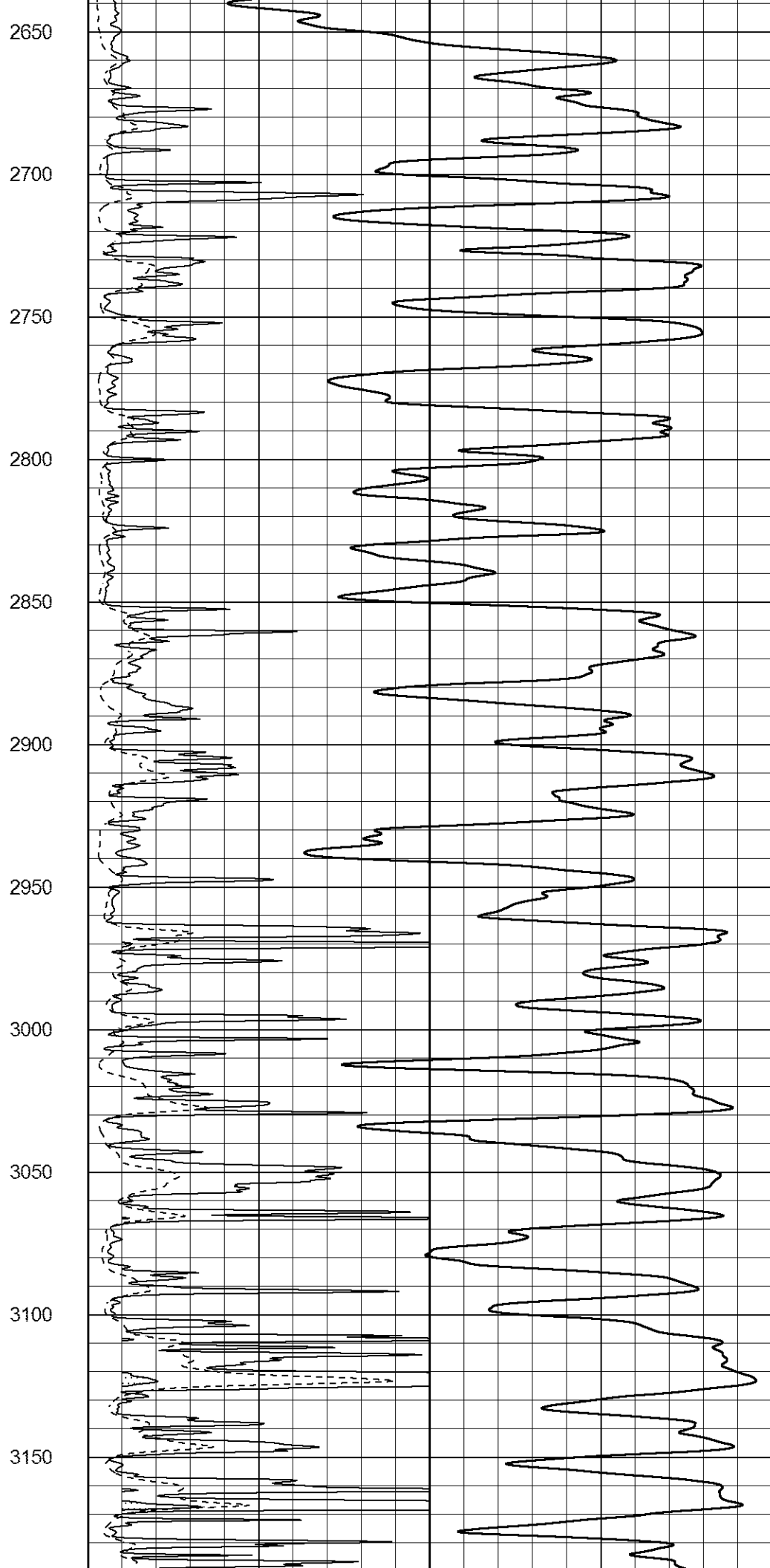
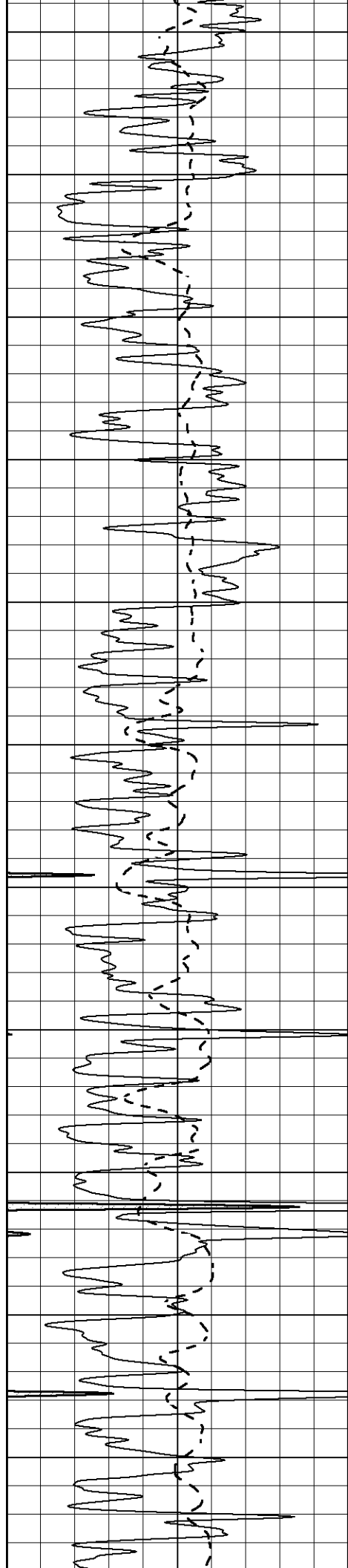


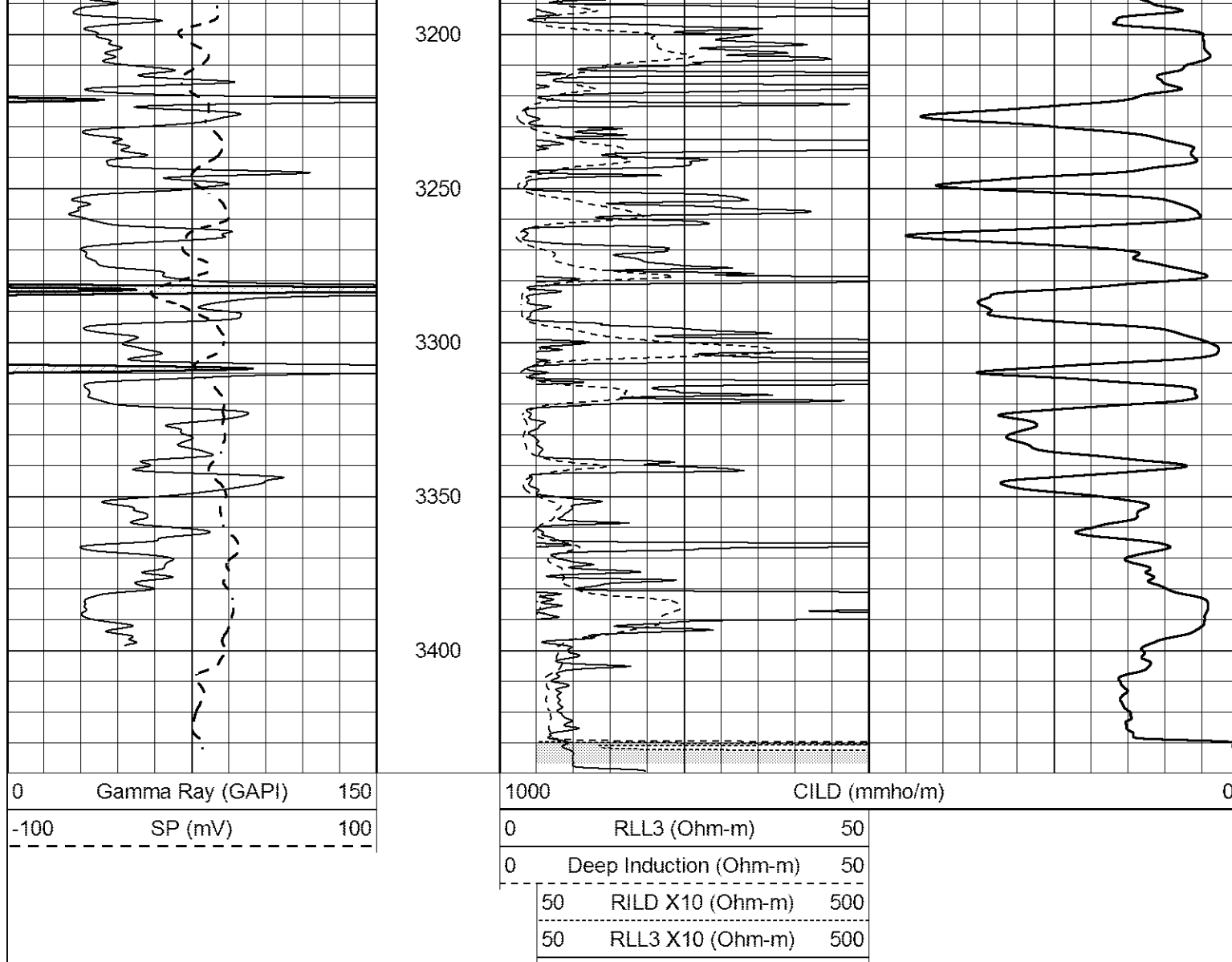


1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050





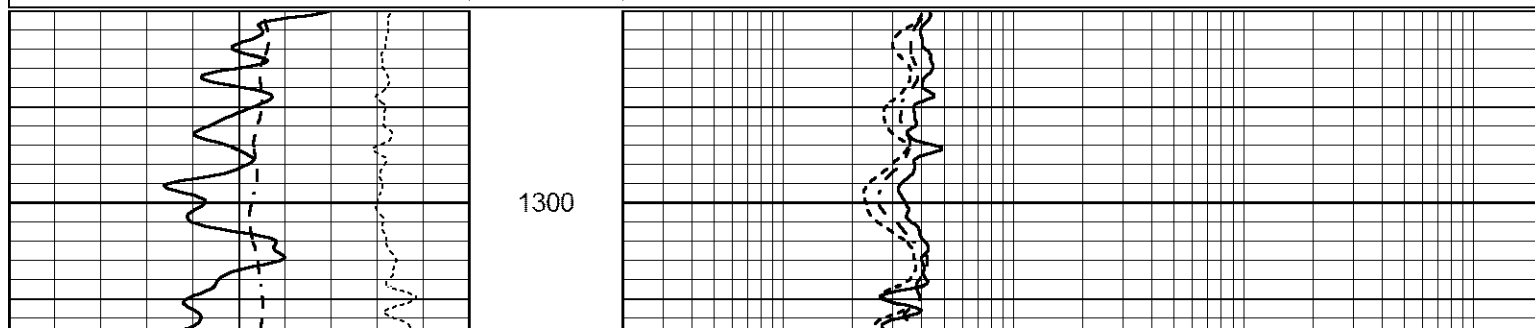


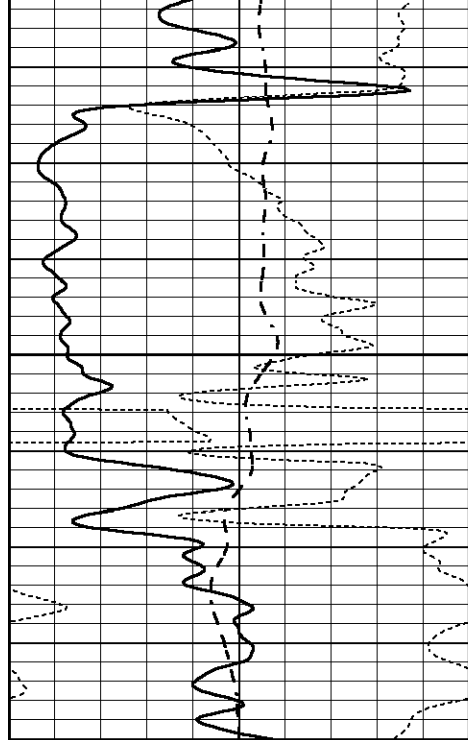


ANHYDRITE

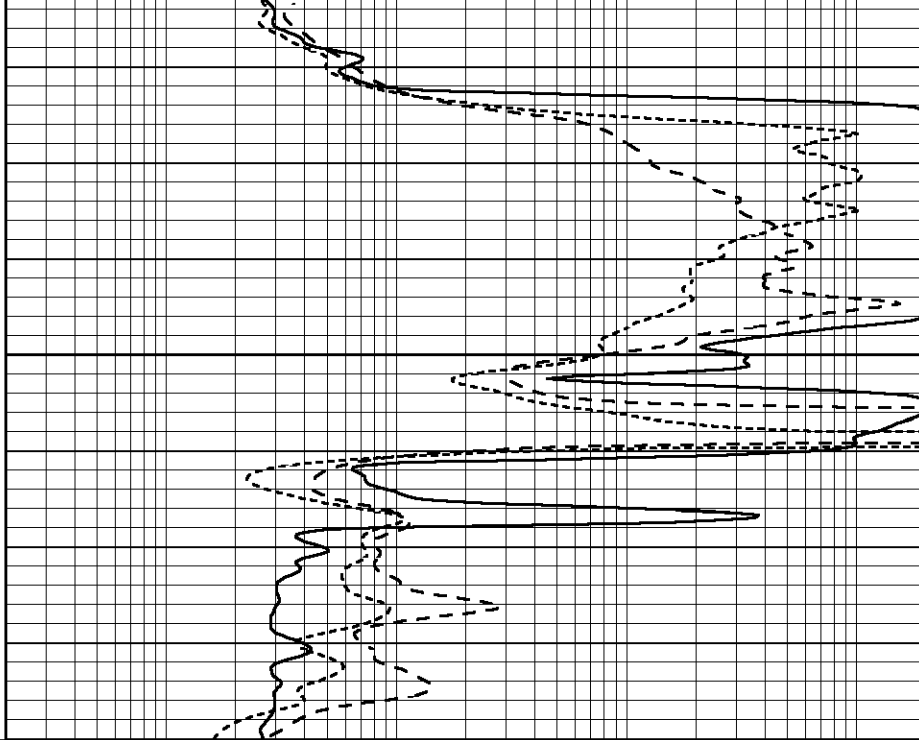
Database File 6380ddn.db
 Dataset Pathname pass3.91
 Presentation Format _dil
 Dataset Creation Sat Mar 26 19:42:34 2022
 Charted by Depth in Feet scaled 1:240

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



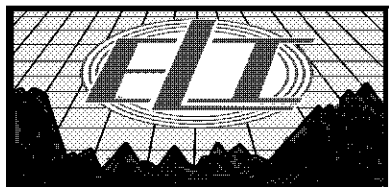


1350



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

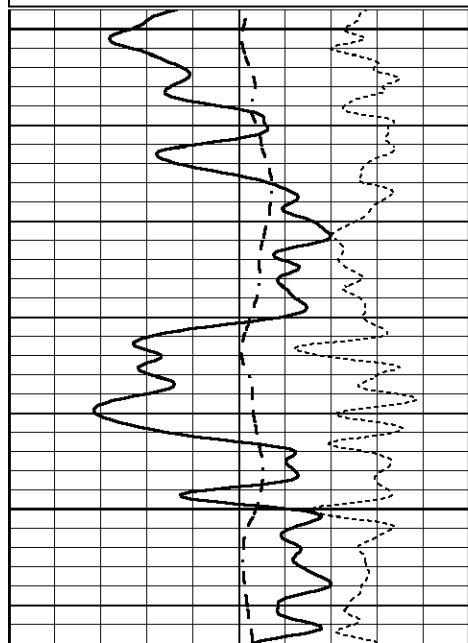


MAIN SECTION

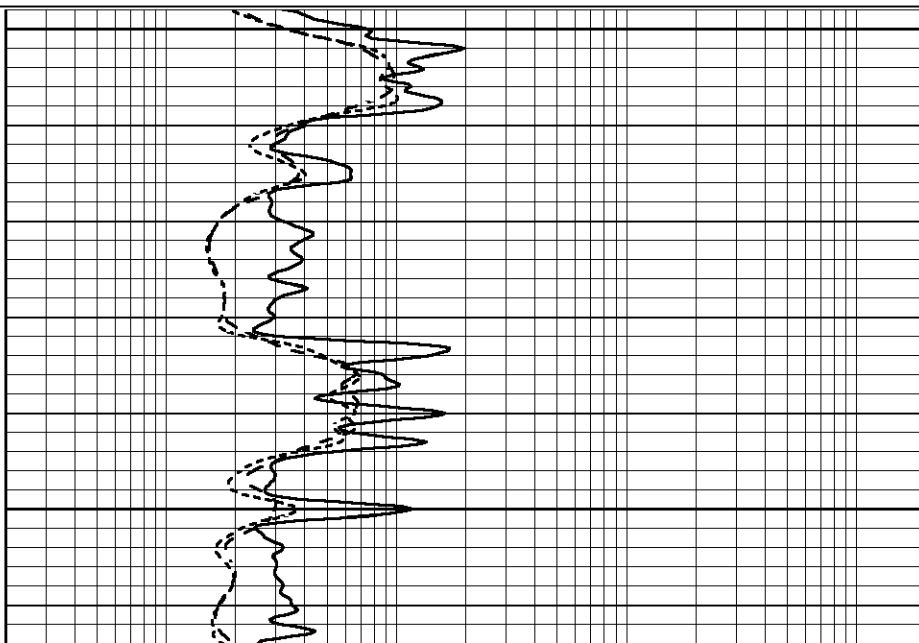
Database File 6380ddn.db
 Dataset Pathname pass3.4
 Presentation Format _dil
 Dataset Creation Sat Mar 26 18:26:34 2022
 Charted by Depth in Feet scaled 1:240

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

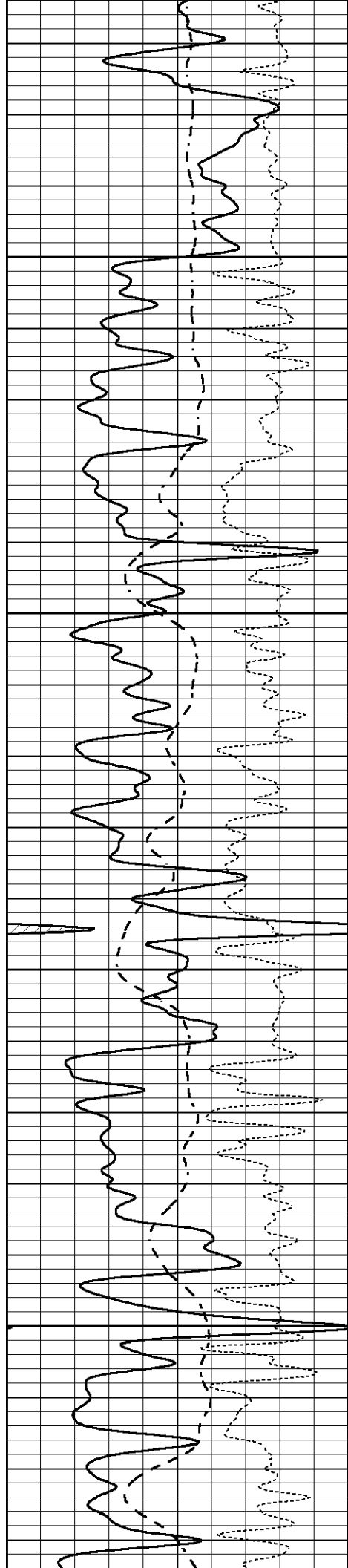
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



2750



2800

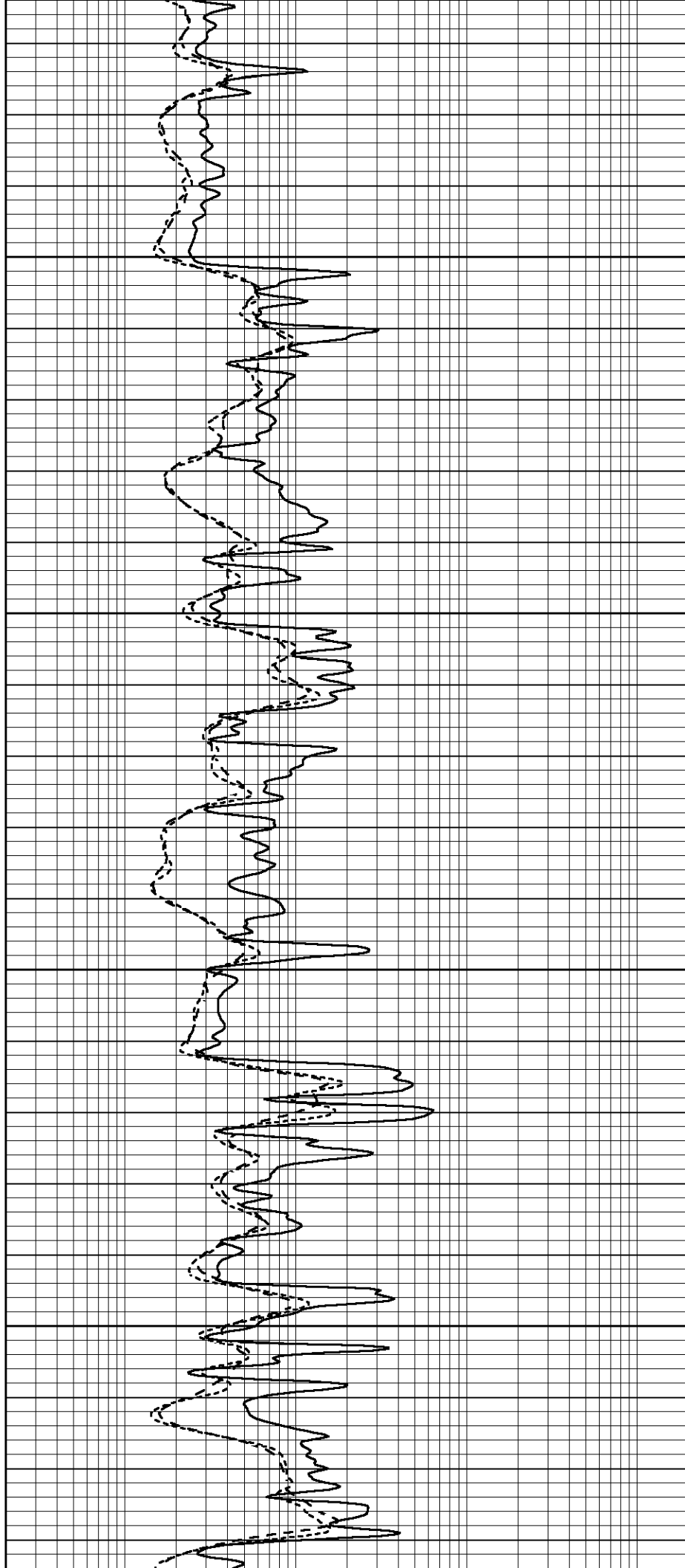


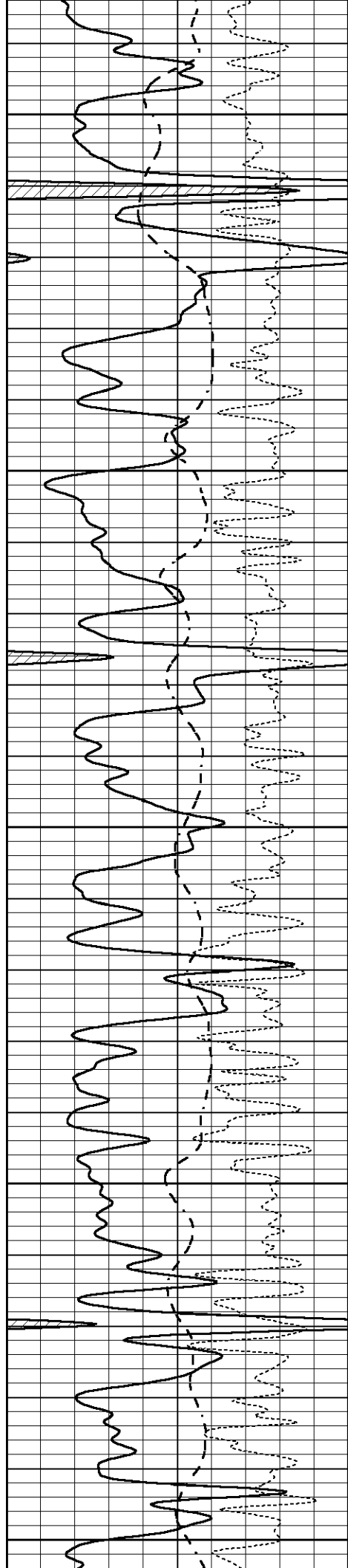
2850

2900

2950

3000





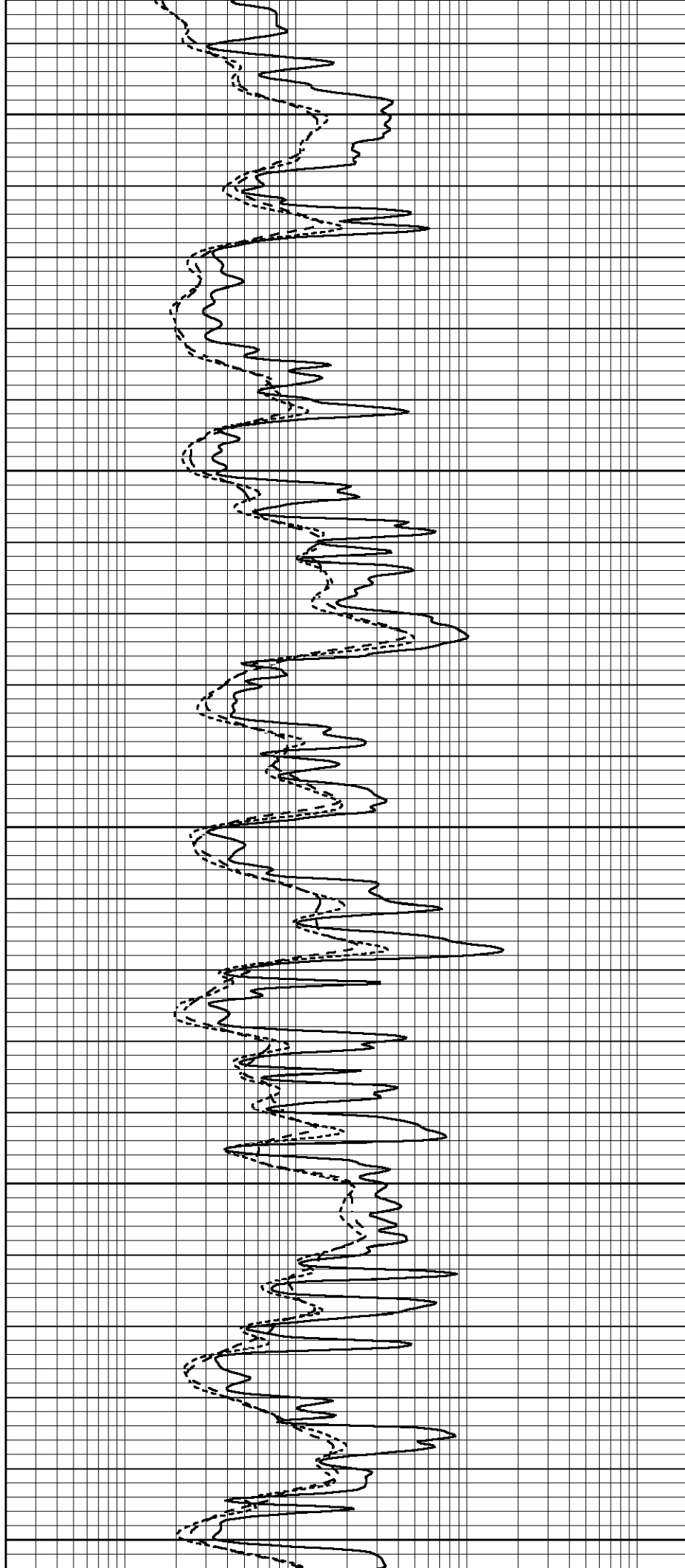
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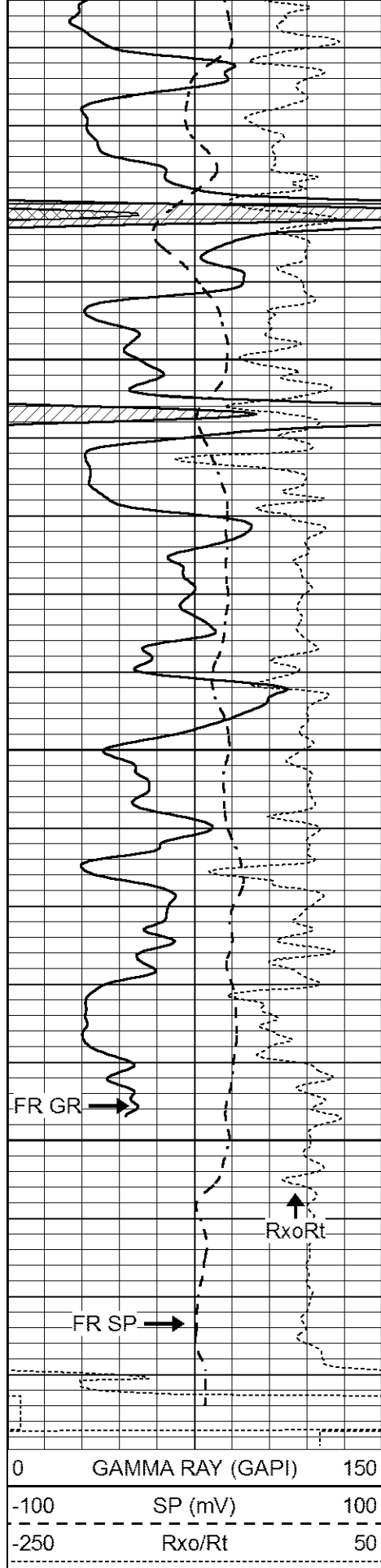
3100

3150

3200

3250

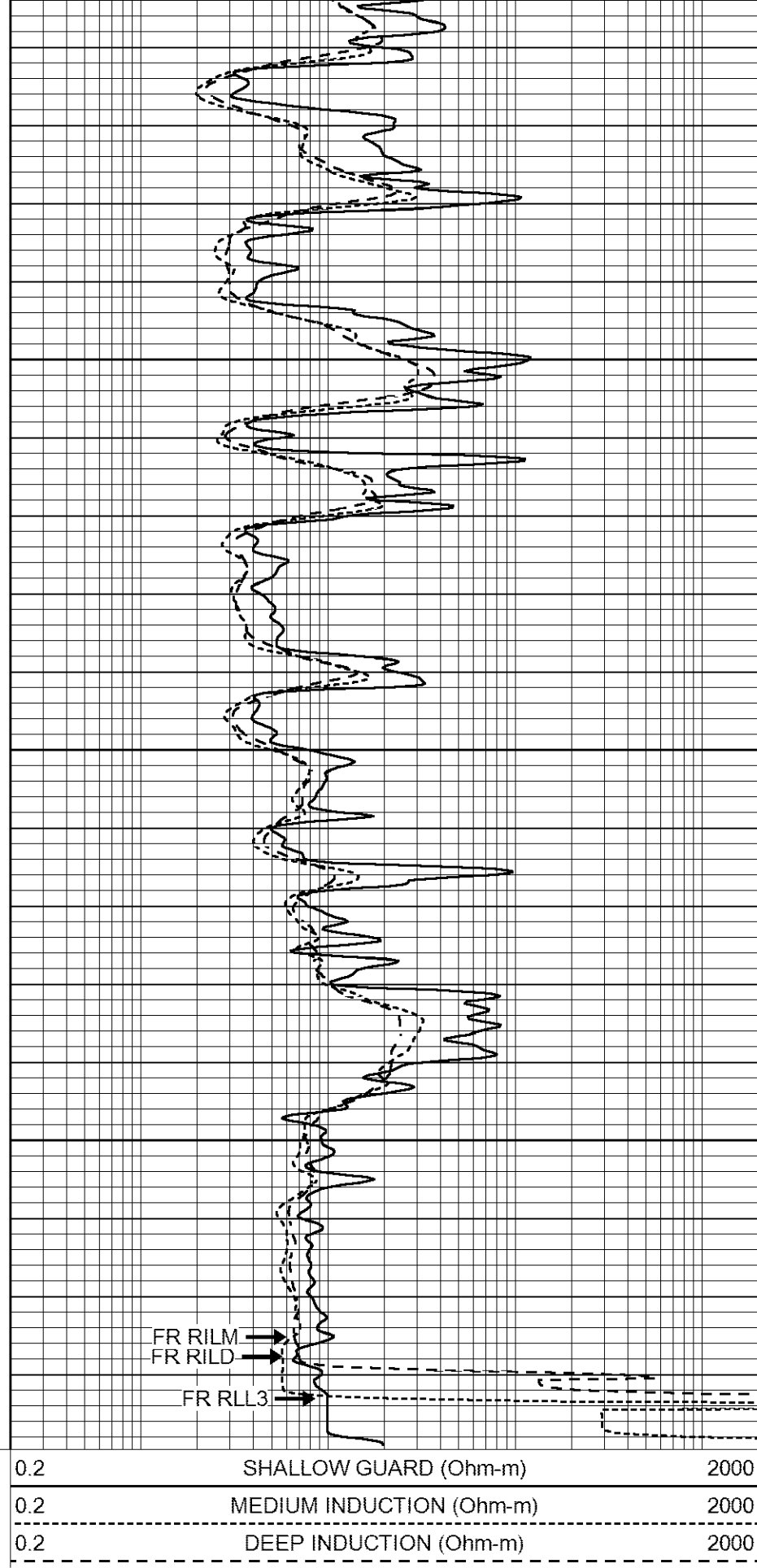




3300

3350

3400



REPEAT SECTION

Database File6380ddn.db

Dataset Pathnamepass2.3

Presentation Format_dil

Dataset CreationSat Mar 26 18:29:58 2022

Charted byDepth in Feet scaled 1:240

0GAMMA RAY (GAPI)150

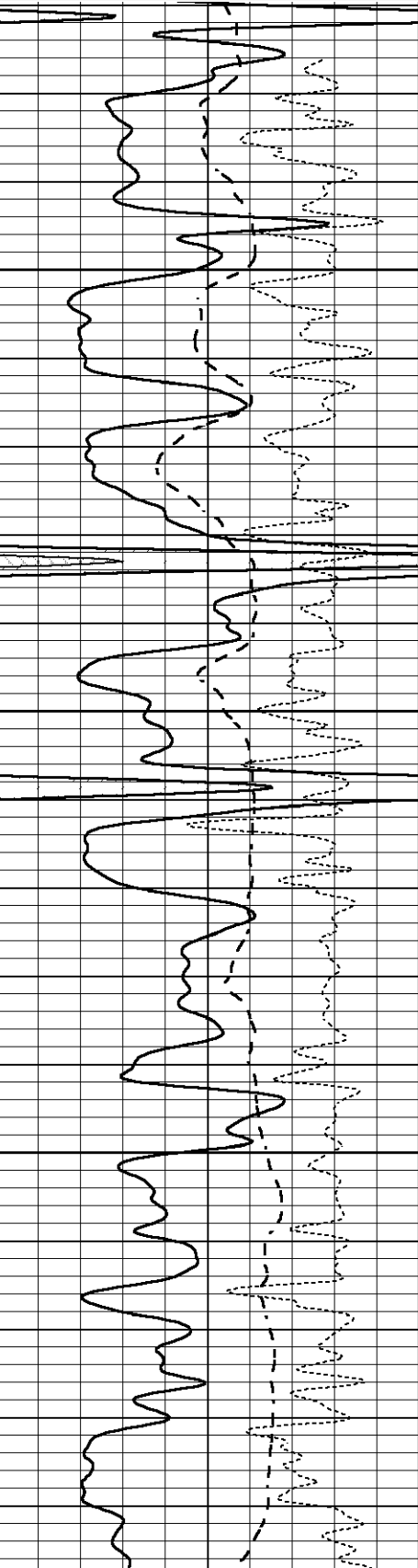
-100SP (mV)100

-250Rxo/Rt50

0.2SHALLOW GUARD (Ohm-m)2000

0.2MEDIUM INDUCTION (Ohm-m)2000

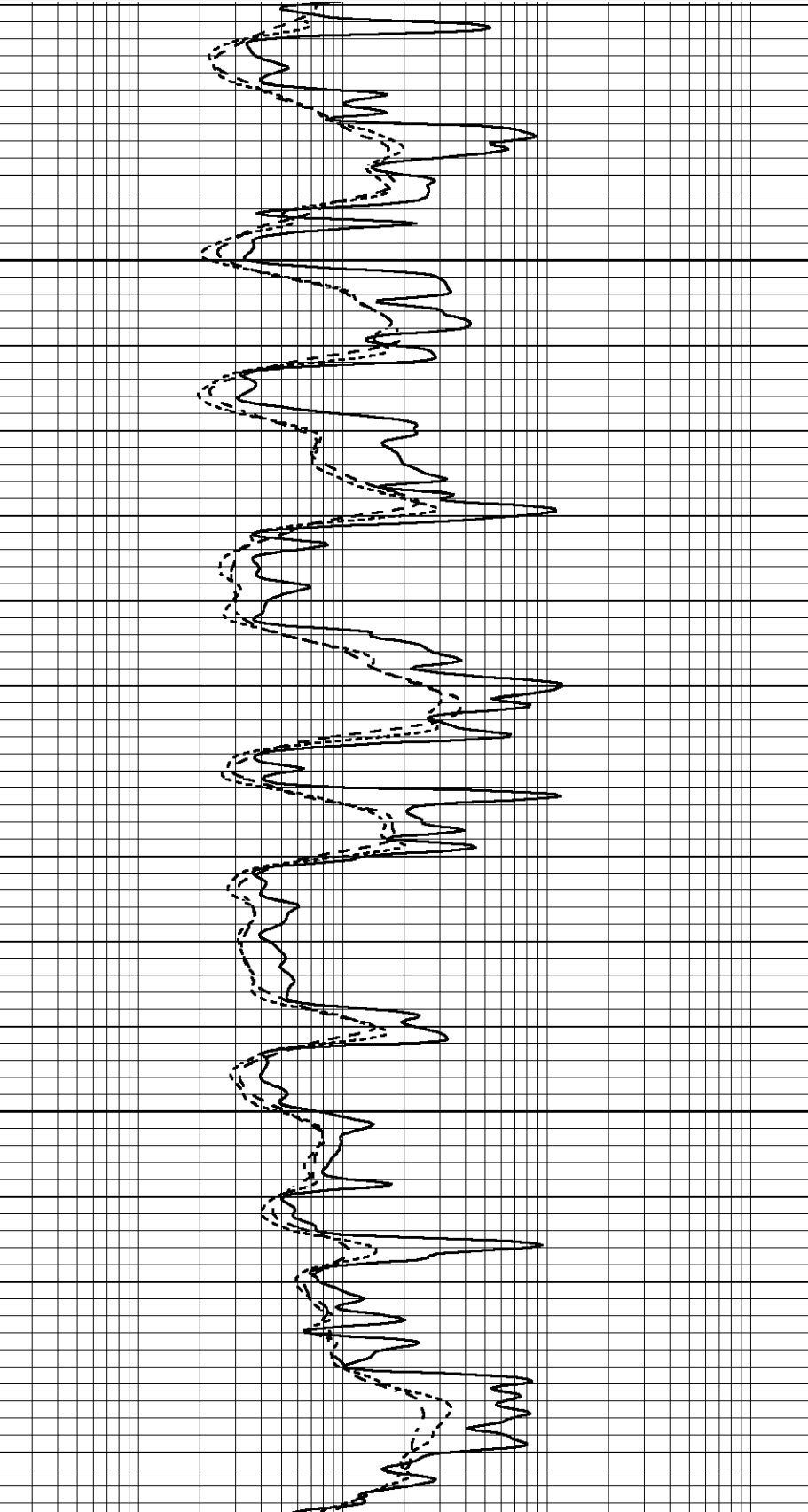
0.2DEEP INDUCTION (Ohm-m)2000

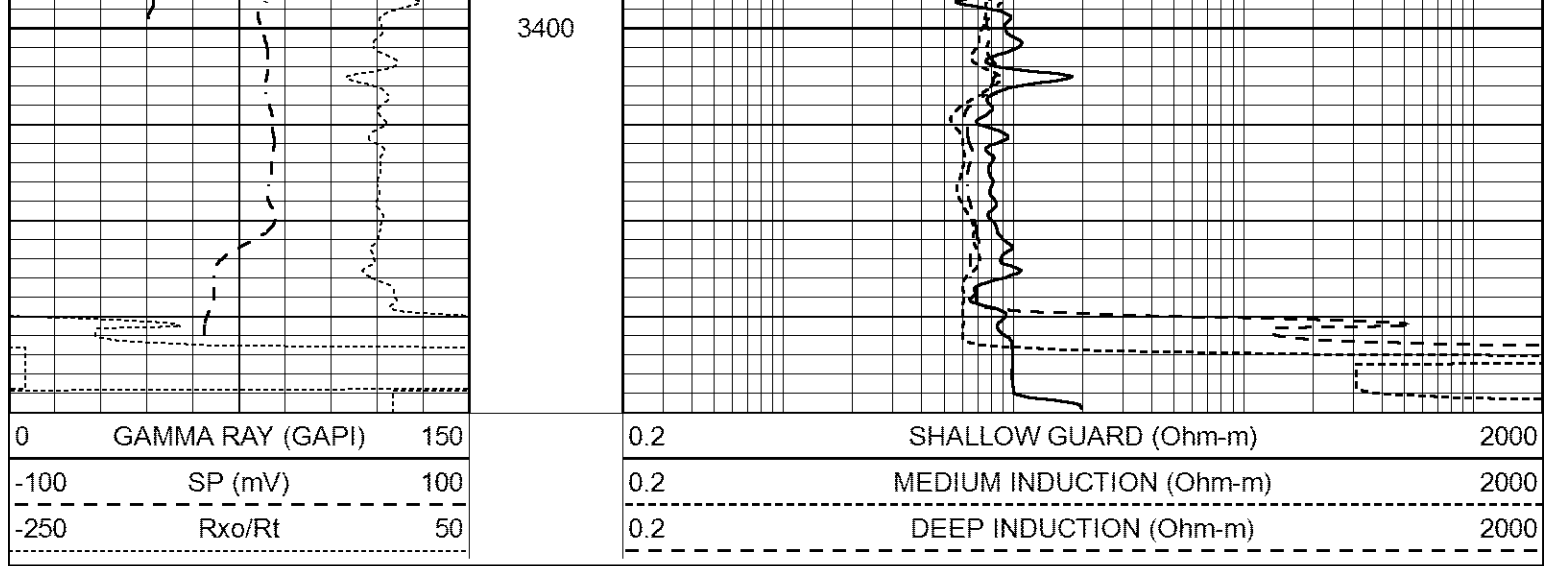


3250

3300

3350





Calibration Report

Database File 6380ddn.db
 Dataset Pathname pass3.4
 Dataset Creation Sat Mar 26 18:26:34 2022

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Sat Jan 29 11:57:42 2022
 Downhole Cal Performed: Tue Feb 19 11:44:24 2019
 After Survey Verification Performed: Tue Feb 19 11:44:27 2019

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	618.595	-5.524
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	632.856	1.197
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

Master Calibration

Performed: Fri Feb 18 15:41:27 2022

	Background	Aluminum	Magnesium		
Window 1	515.75	5443.58	23734.91	cps	
Window 2	41.45	1226.32	5757.32	cps	
Window 4	224.78	1223.03	5315.97	cps	
Window 5	549.25	7983.61	15349.73	cps	
Window 6	43.12	1271.88	2496.98	cps	
Window 8	261.02	2595.65	4928.92	cps	
Bulk Density	-	2.6020	1.6830	g/cc	
Pe	-	3.0000	2.5070	b/e	
LS Alpha:	: -1.8571	SS Alpha:	: -0.7875	LS CPE:	: 1.1396
LS Beta:	: 128618.9672	SS Beta:	: 18780.4869	SS CPE:	: 1.5966

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 Feb 18 15:41:27 2022

Results	Readings	References (in)		Gain	Offset
Low	High	Low	High		
8107.9	11082.1	8.0	14.0	0.0	-7.7

Before Survey Caliper Verification

Performed:

Reference	Reading
_____	_____
Caliper (in)	

After Survey Caliper Verification

Performed:

Reference	Reading
_____	_____
Caliper (in)	

		Serial Number: Tool Model:	080621PMC 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:	Tue Jan 19 17:50:08 2021		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.5300	GAPI/cps	