



# DUAL INDUCTION LOG

Company RAYMOND OIL COMPANY, INC.

Well #12-1 SANSOM

Field WILDCAT

County NORTON

State KANSAS

Location: 1089' FSL & 798' FSL  
NW - NE - SW - SW

AP1 #: 15-137-20758-0000

SEC 12 TWP 4S RGE 22W

Permanent Datum GROUND LEVEL Elevation 2247  
Log Measured From KELLY BUSHING 5' A.G.L.  
Drilling Measured From KELLY BUSHING

Other Services  
CDL/CNL  
MEL

Elevation

K.B. 2252  
D.F. 2250  
G.L. 2246

Date	12/20/21
Run Number	ONE
Depth Driller	3843
Depth Logger	3842
Bottom Logged Interval	3840
Top Log Interval	00
Casing Driller	8 5/8"@260
Casing Logger	260
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/46
pH / Fluid Loss	10.0/8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.50@65F
Rmf @ Meas. Temp	1.13@65F
Rmc @ Meas. Temp	1.80@65F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.848@115F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	3.45 A.M.
Maximum Recorded Temperature	115F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	KIM SHOEMAKER
	ROBERT TURNER

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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.

15-137-20758-0000

Comments

THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
EDMOND, KS., 3E. ON HWY 9 TO "RD. 7", 4N. TO "RD. U", 1/4E., N. INTO

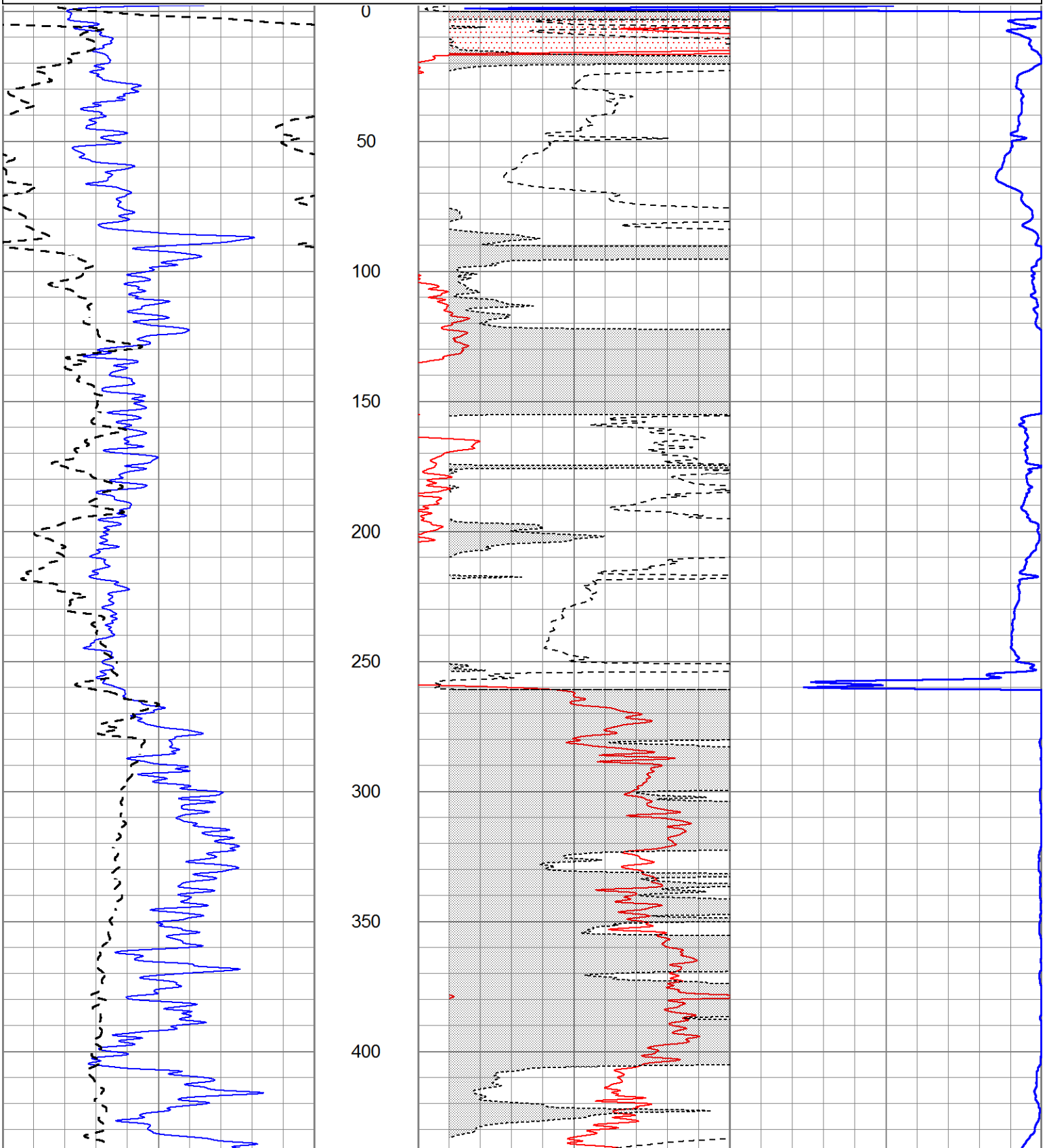


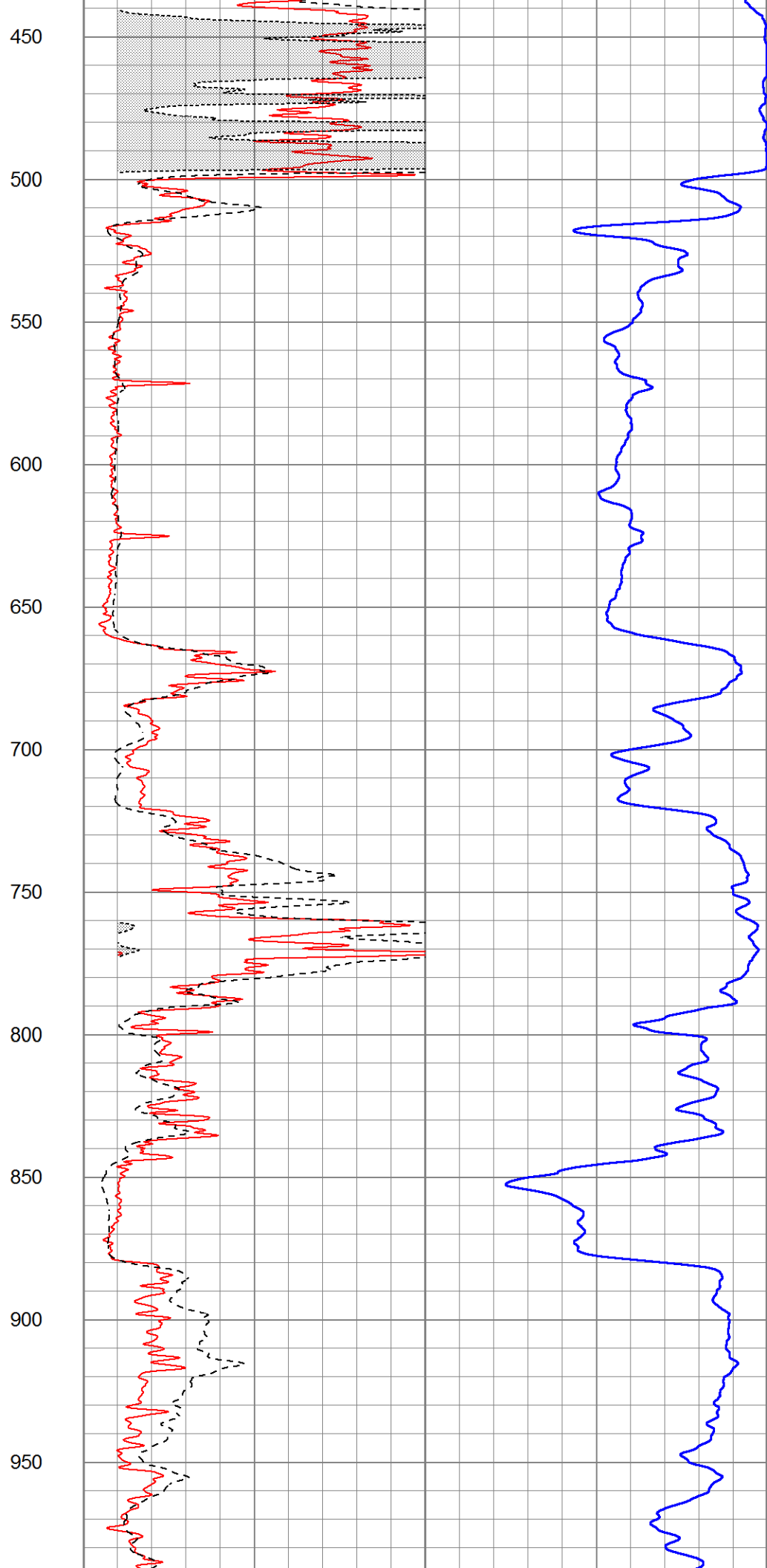
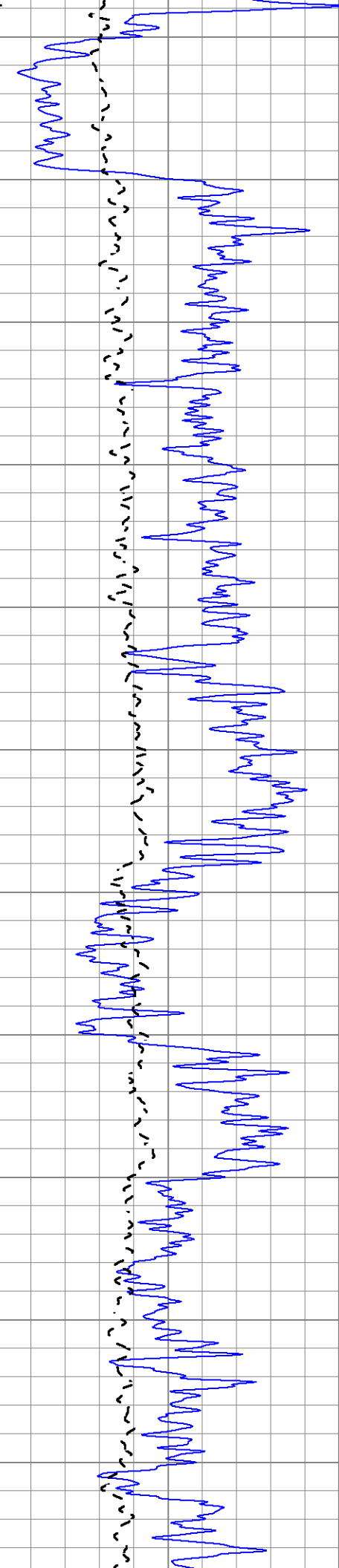
# MAIN SECTION

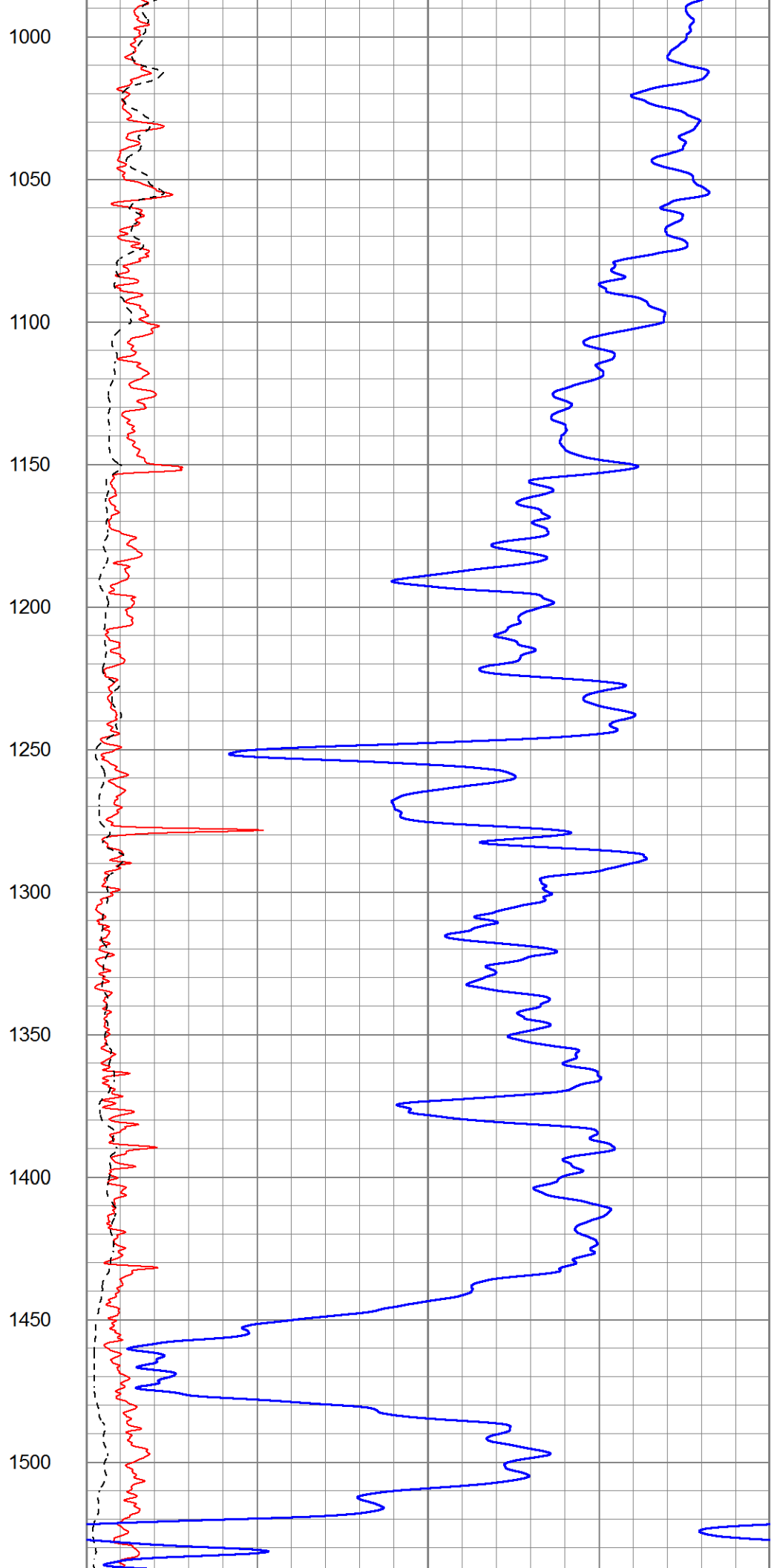
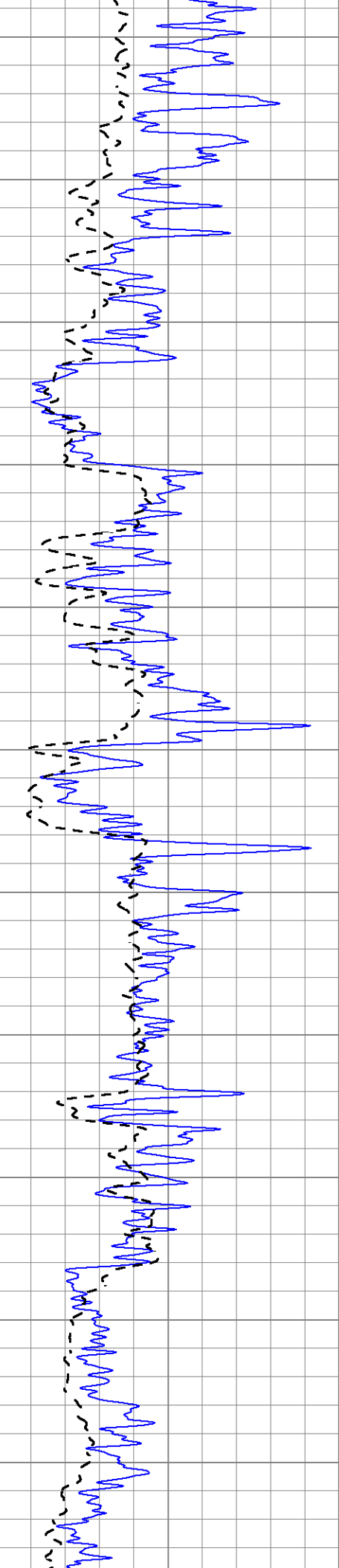
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 Presentation Format dil2  
 Dataset Creation Mon Dec 20 05:34:23 2021  
 Charted by Depth in Feet scaled 1:600

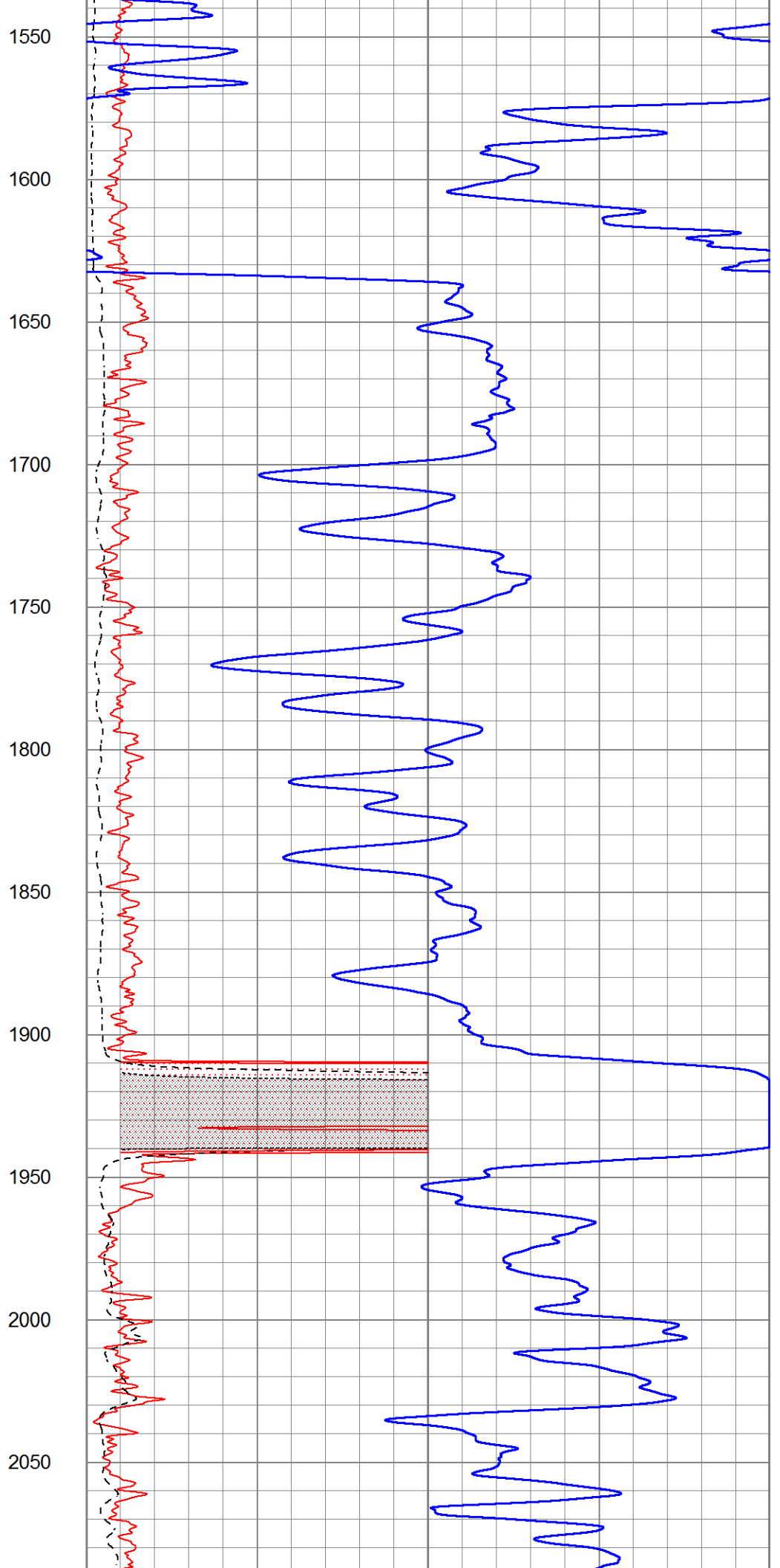
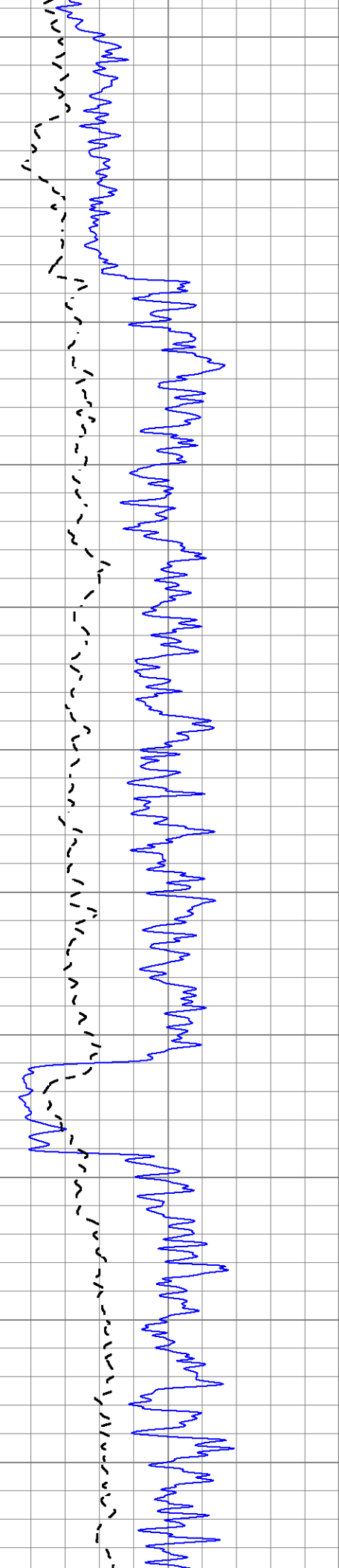
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-100	SP (mV)	100
0	RWA (Ohm-m)	1

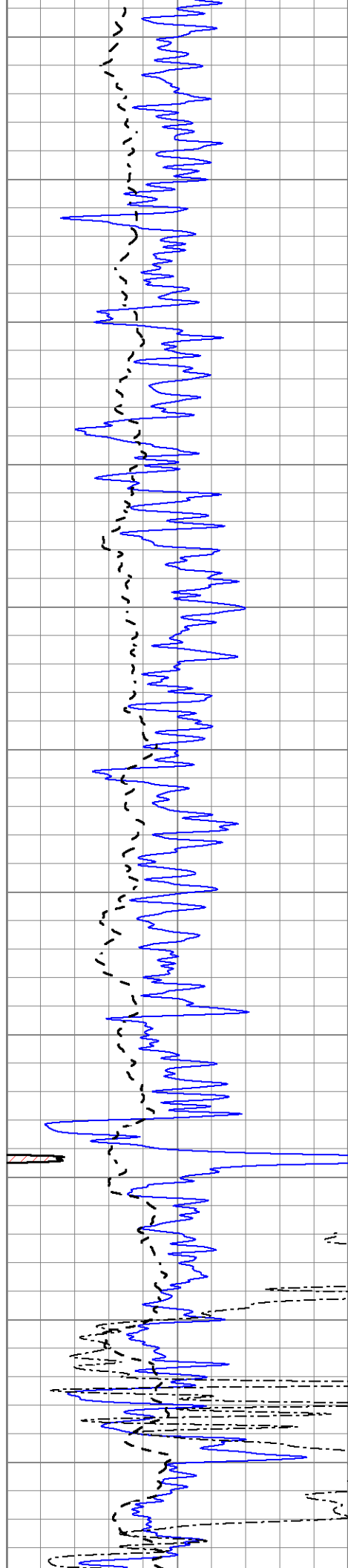
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500











2100

2150

2200

2250

2300

2350

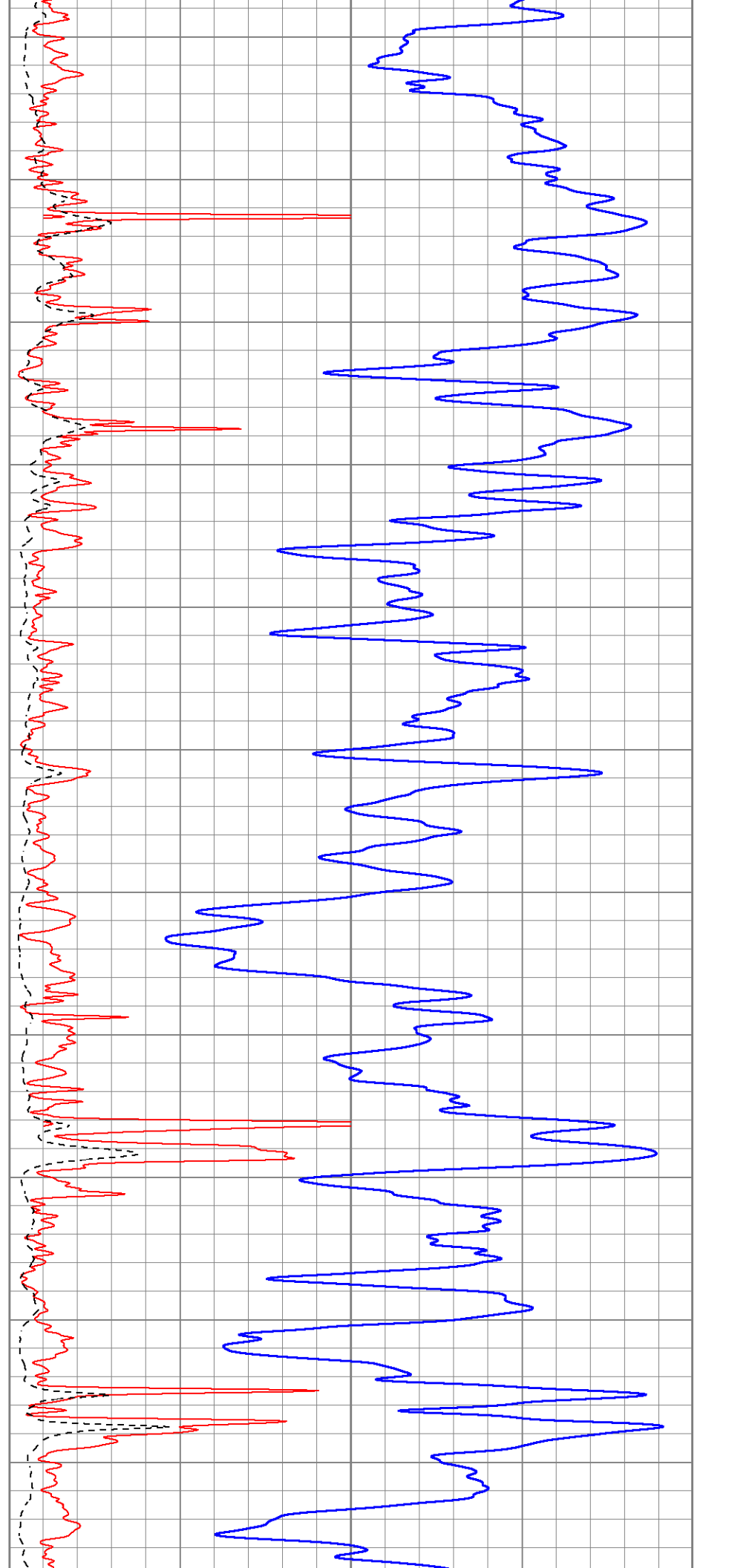
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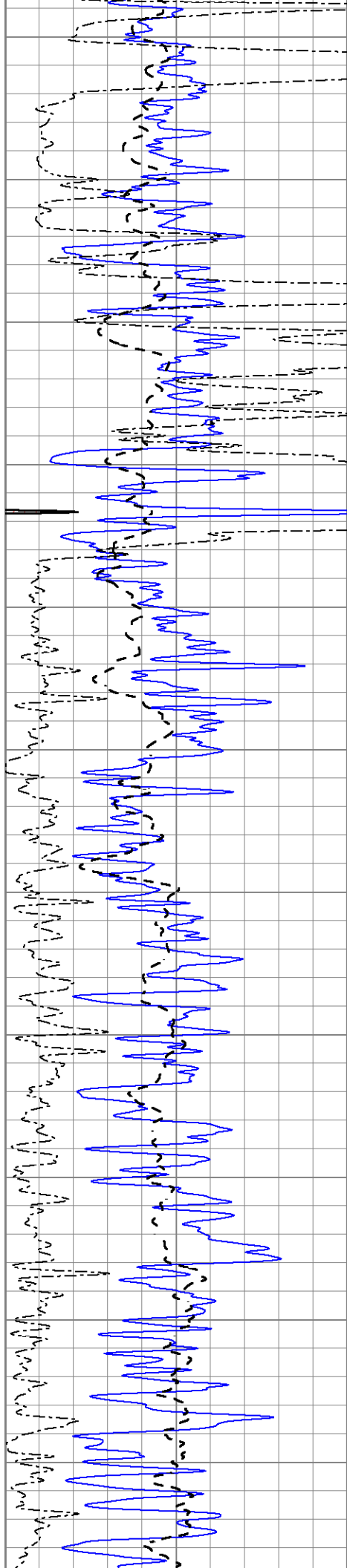
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2500

2550

2600





2650

2700

2750

2800

2850

2900

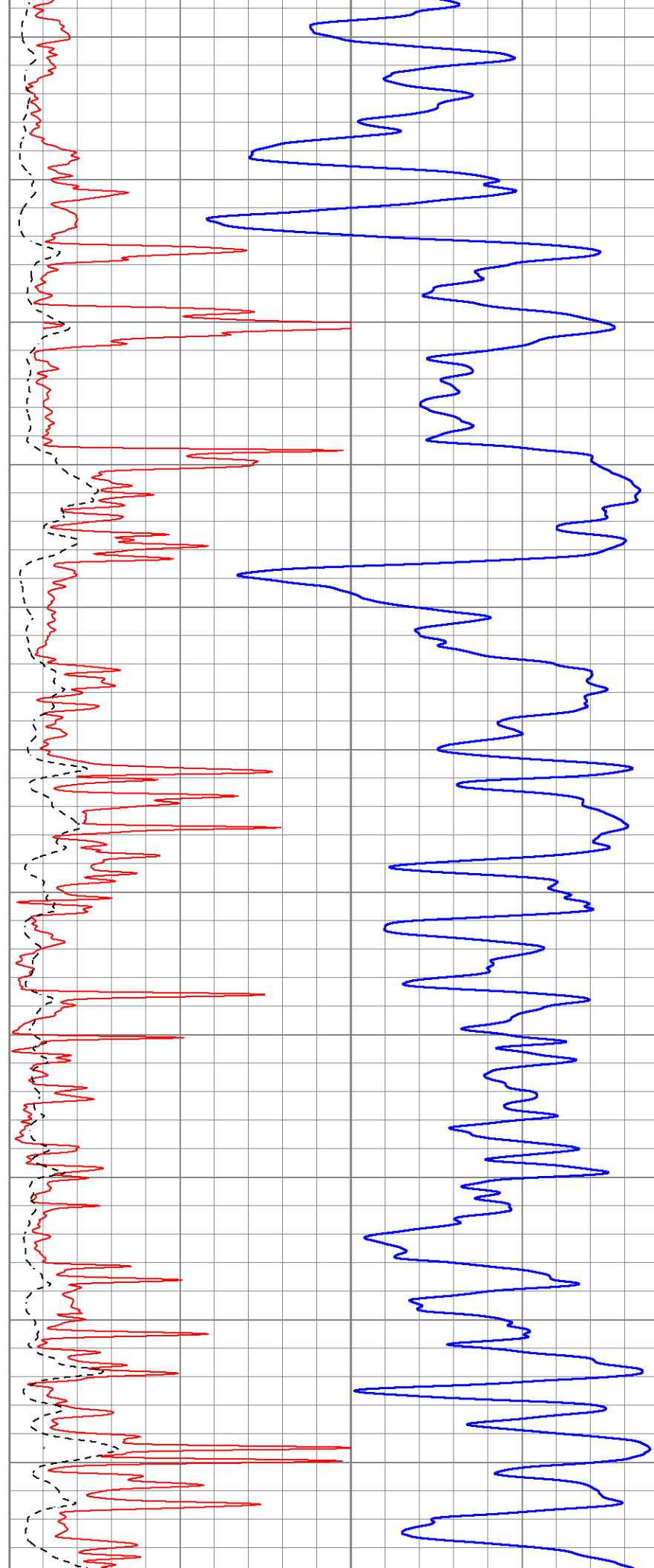
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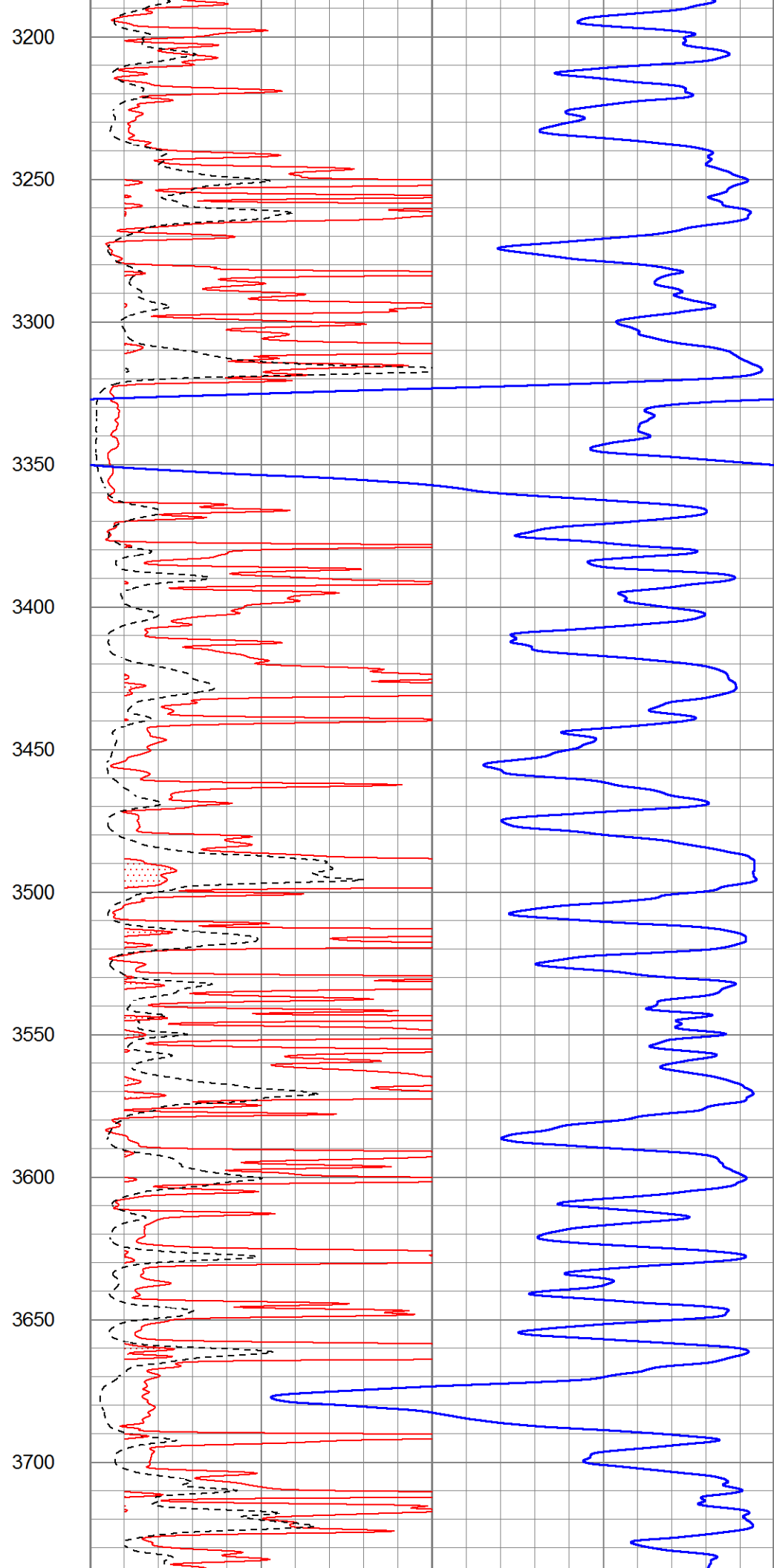
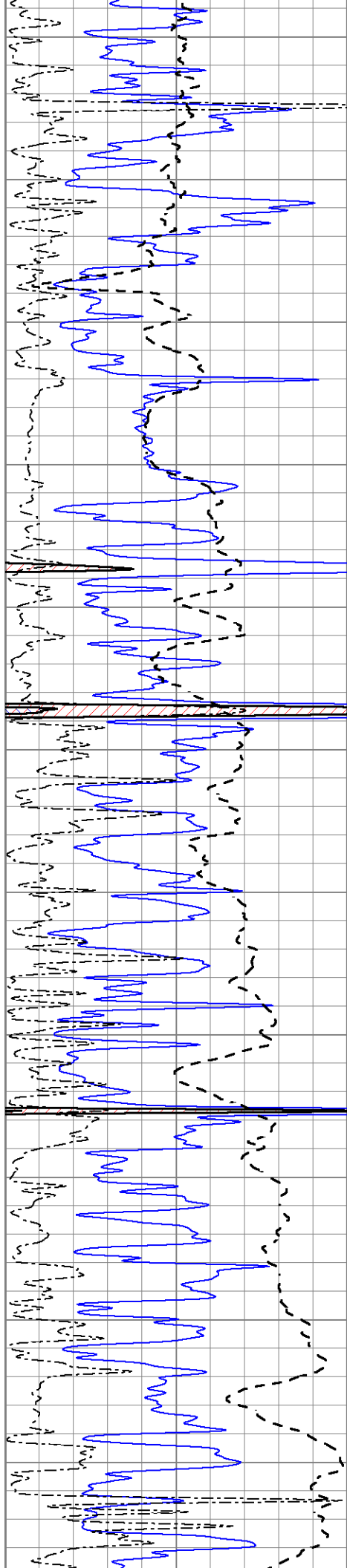
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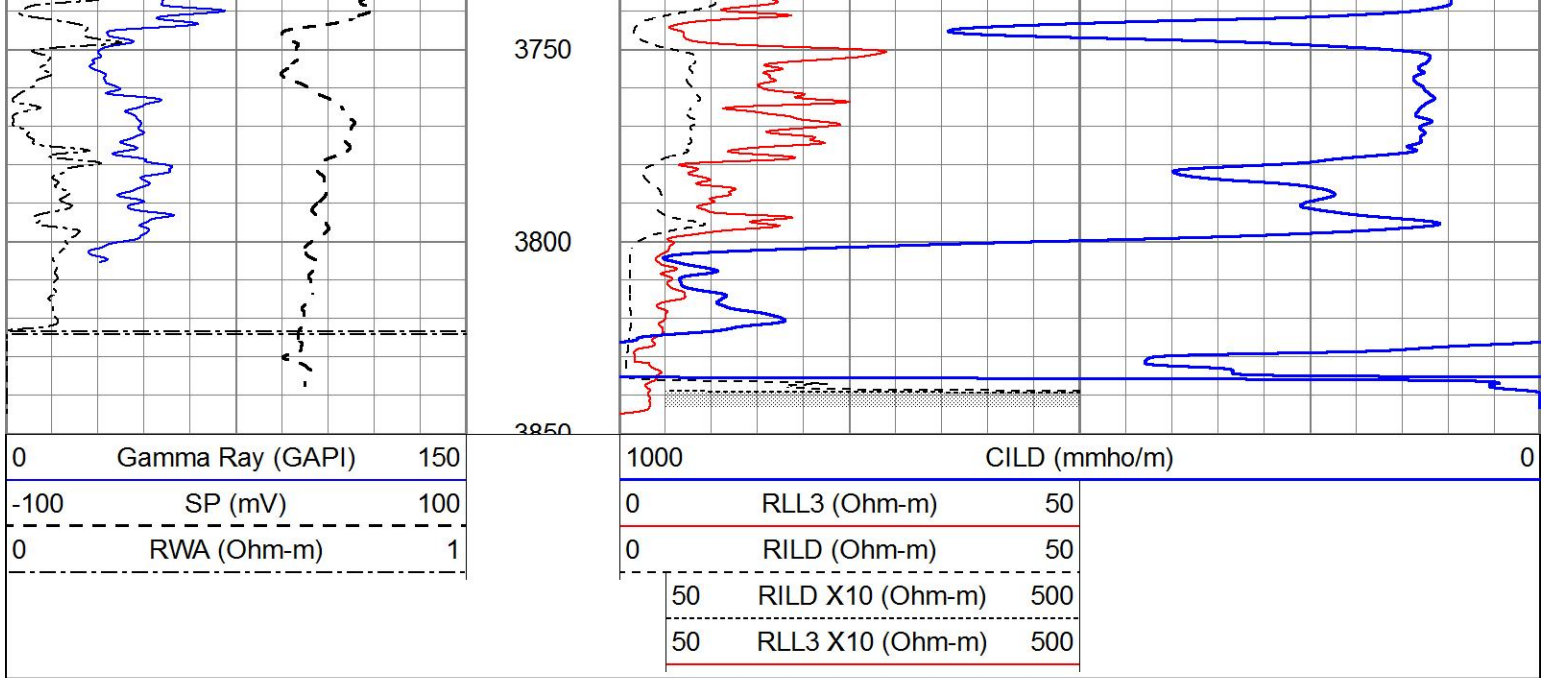
3050

3100

3150



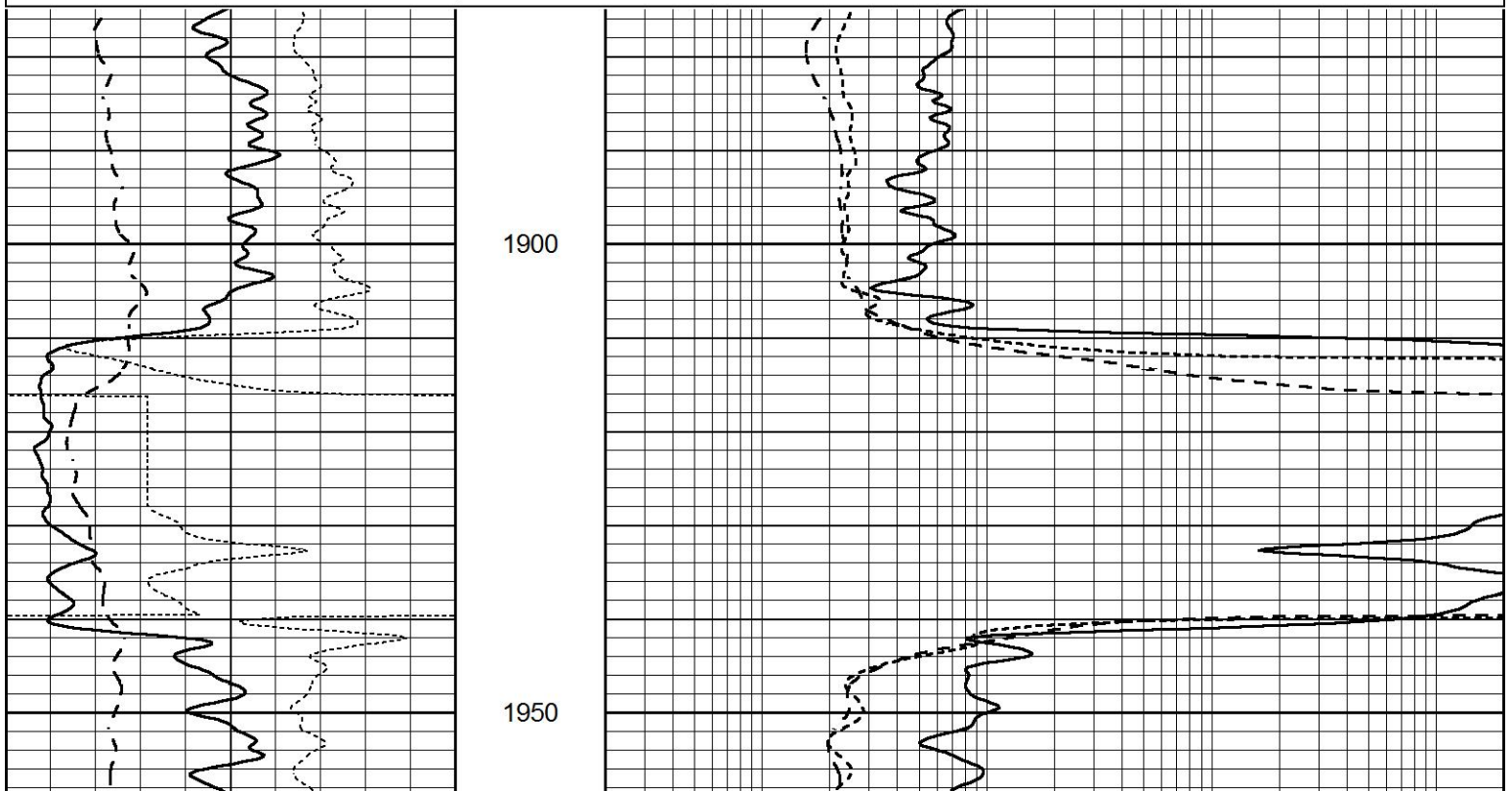


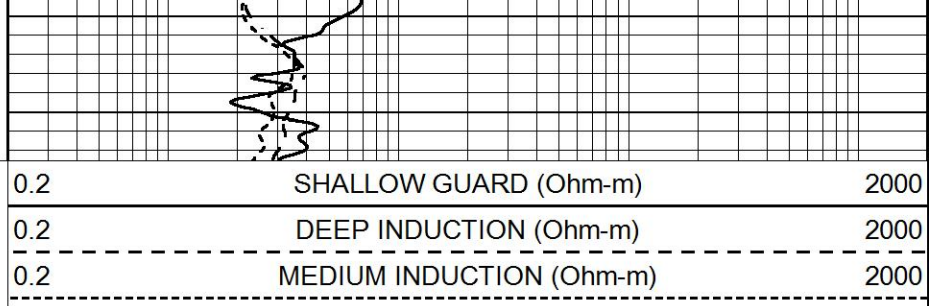
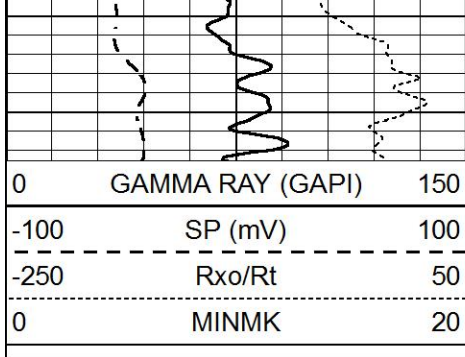


# ANHYDRITE

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 Dataset Creation Mon Dec 20 05:35:40 2021  
 Charted by Depth in Feet scaled 1:240

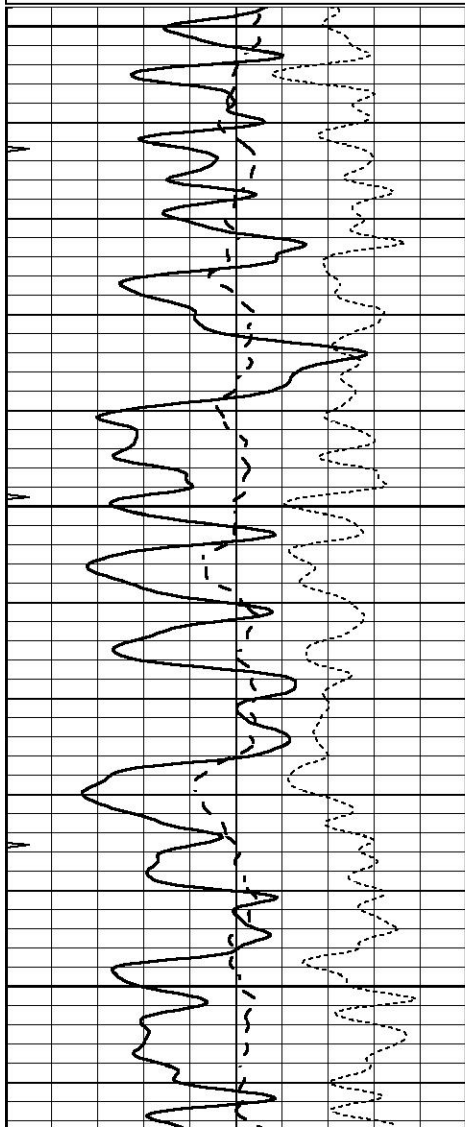
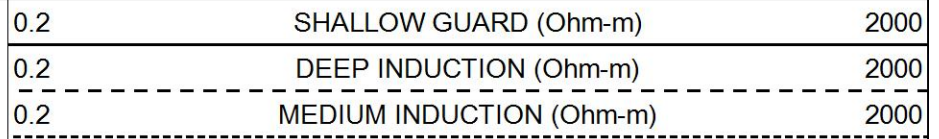
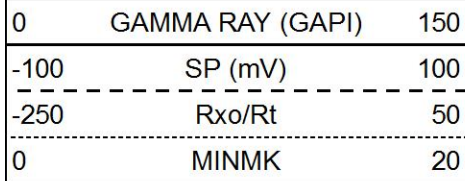
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





# MAIN SECTION

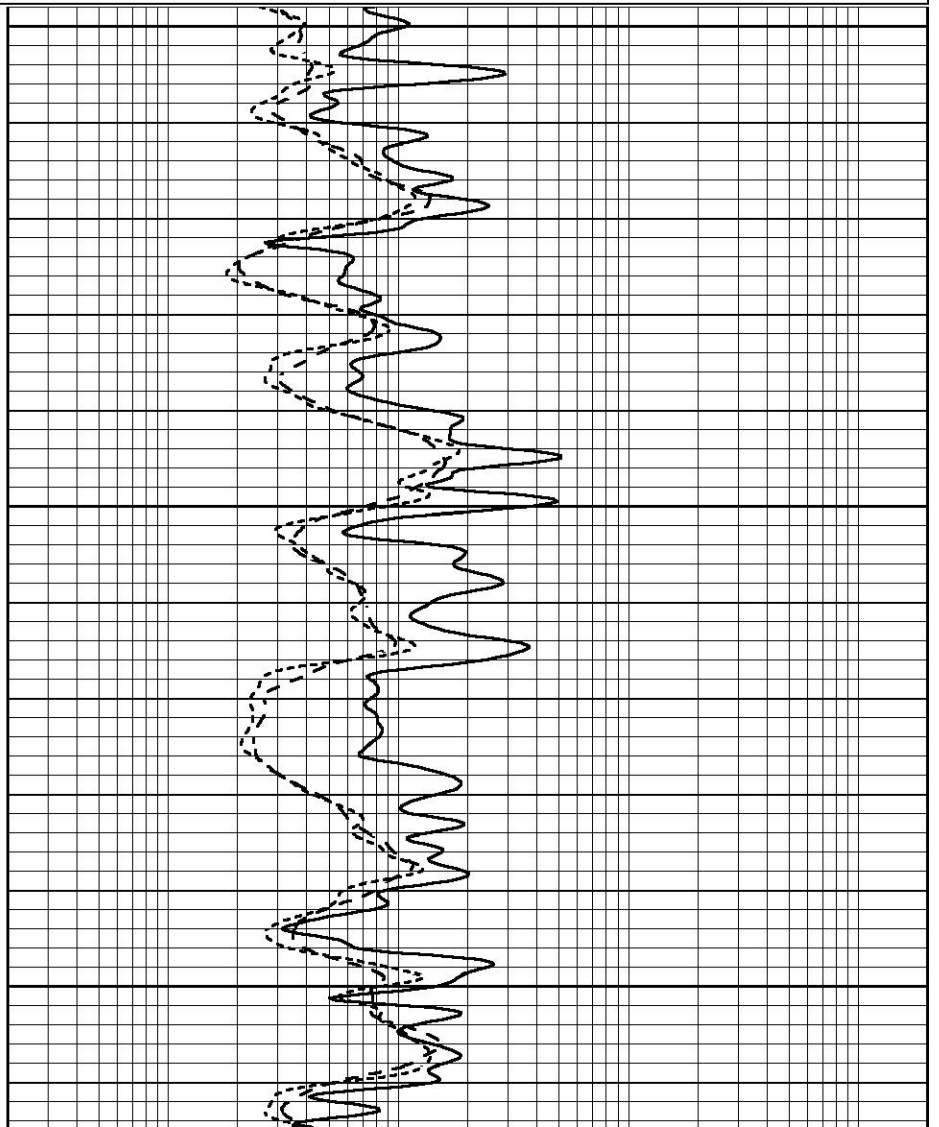
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 Dataset Creation Mon Dec 20 05:34:23 2021  
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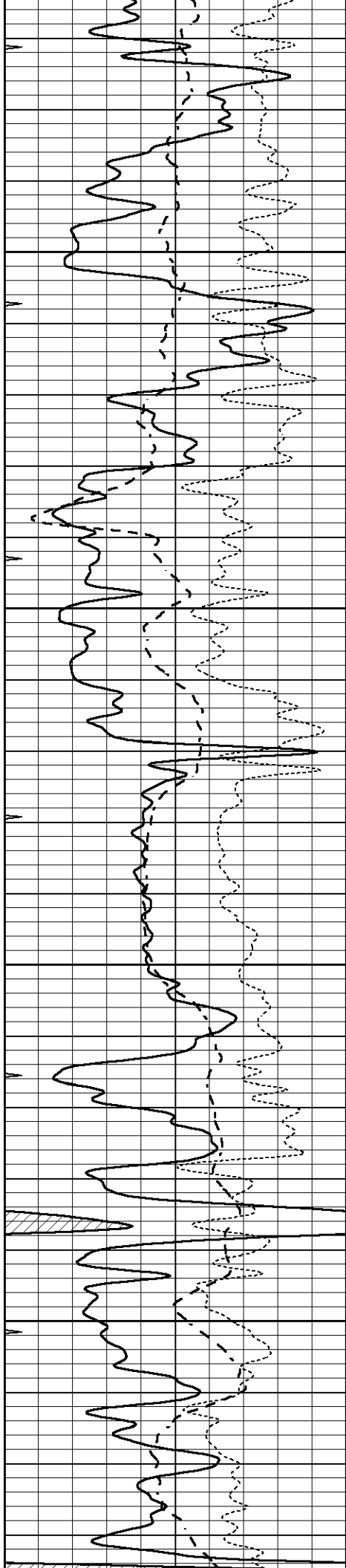


3100

3150

3200



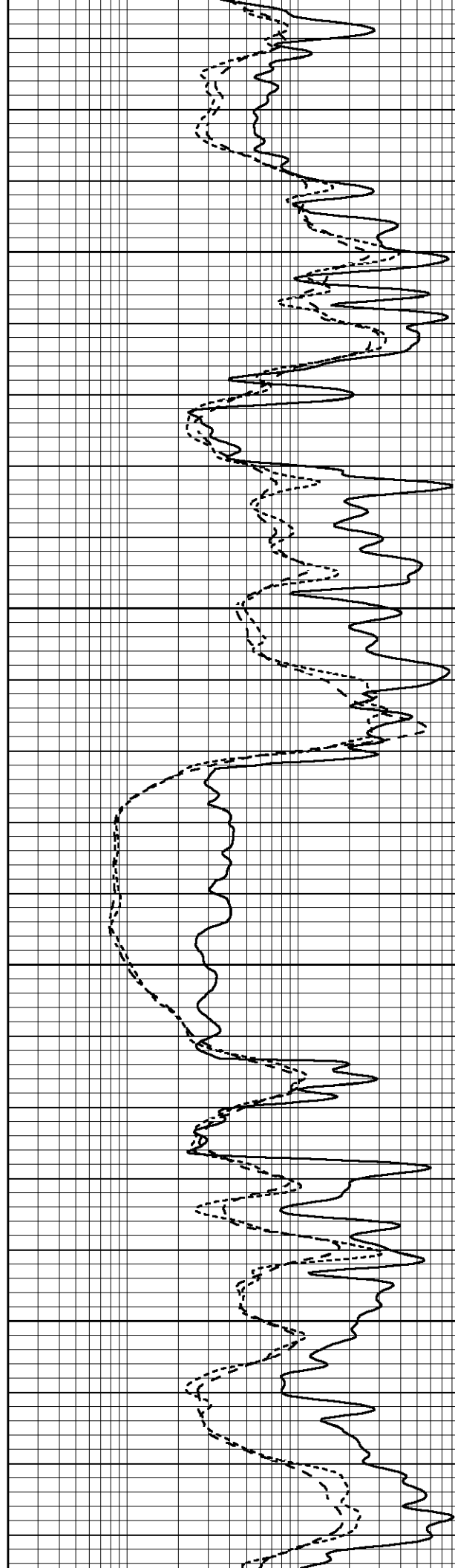


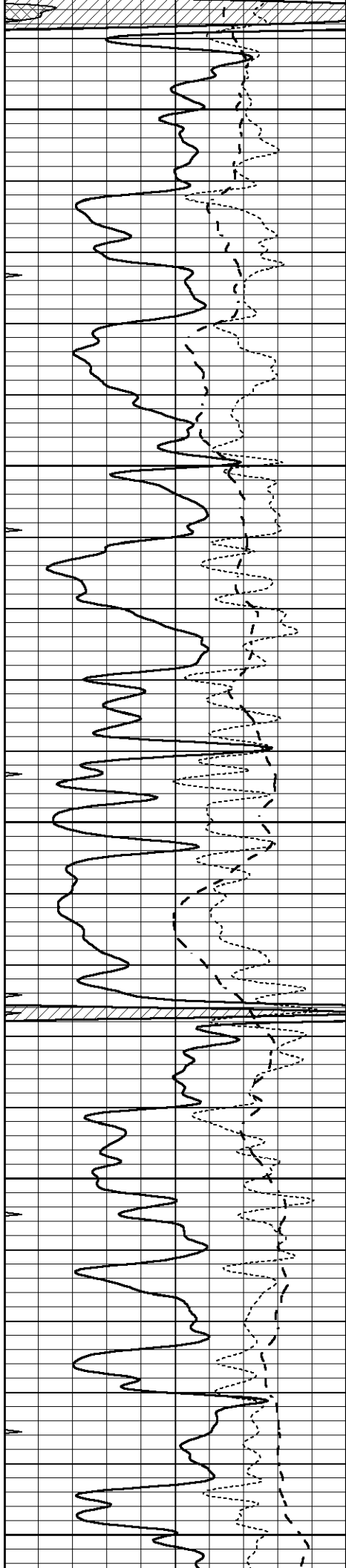
3250

3300

3350

3400





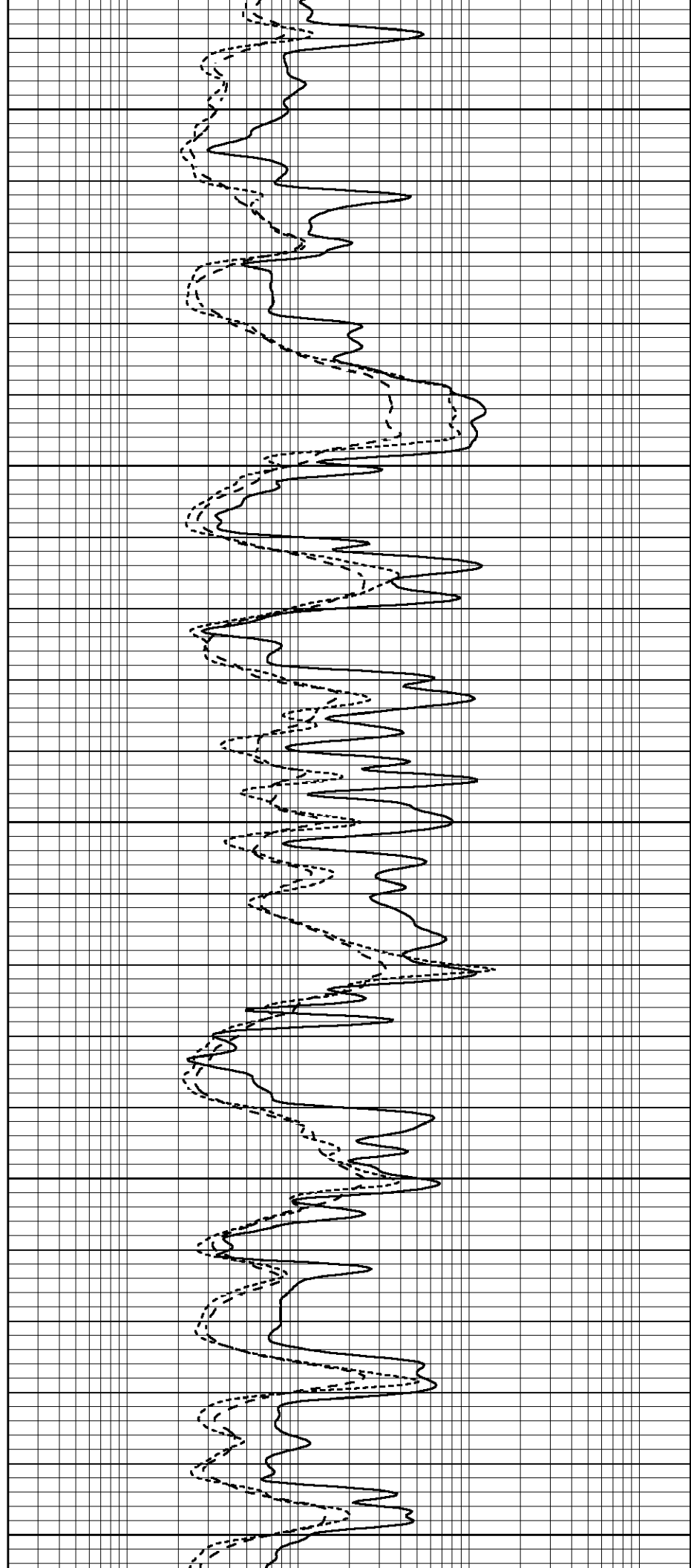
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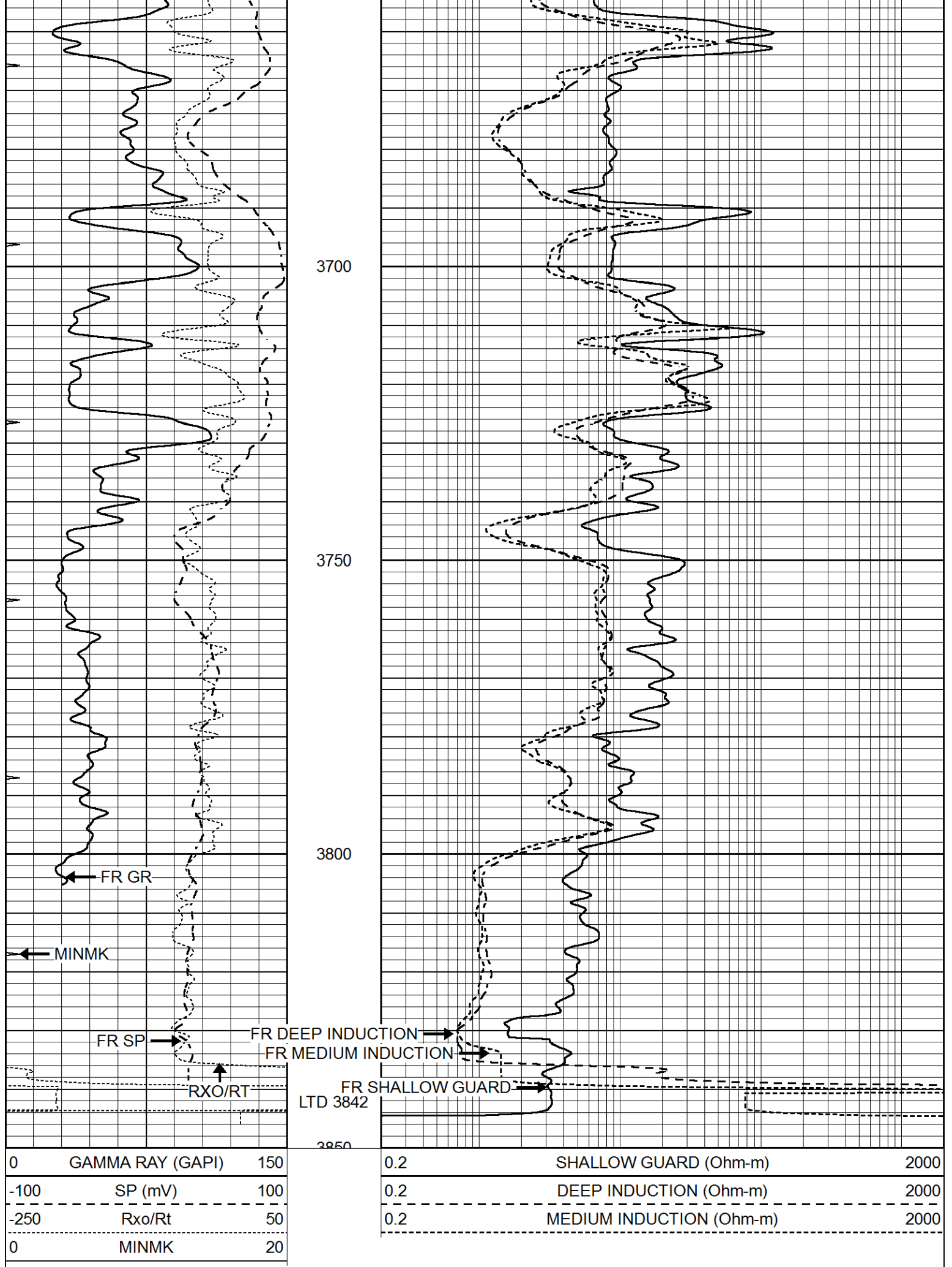
3500

3550

3600

3650





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

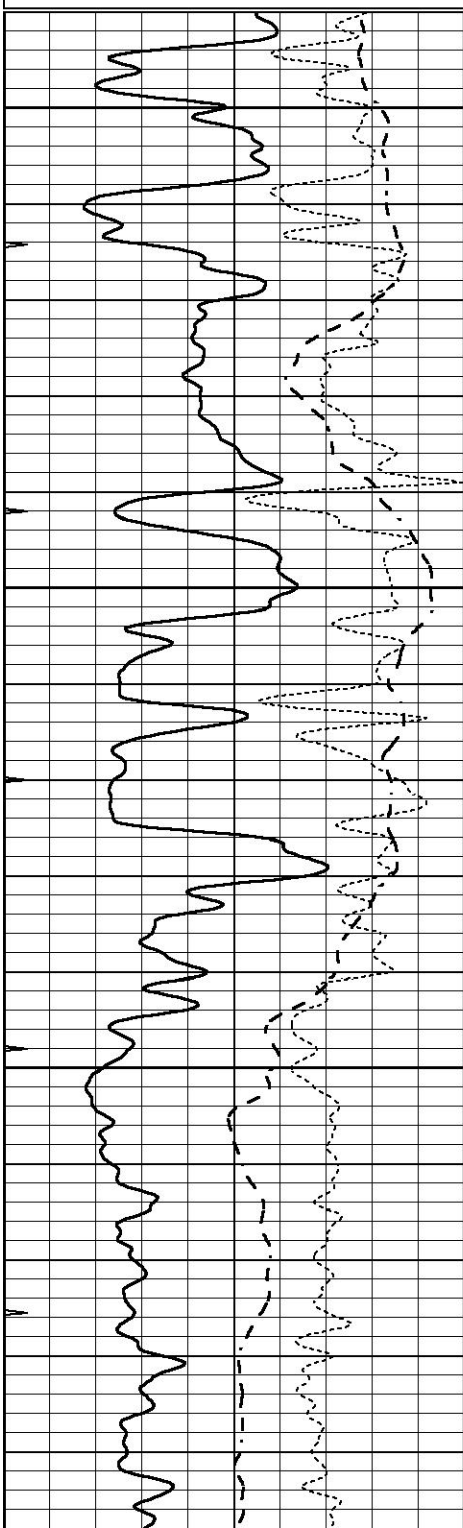


# REPEAT SECTION

Database File 5850ddn.db  
Dataset Pathname pass2.1R  
Presentation Format \_dil  
Dataset Creation Mon Dec 20 04:47:46 2021  
Charted by Depth in Feet scaled 1:240

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

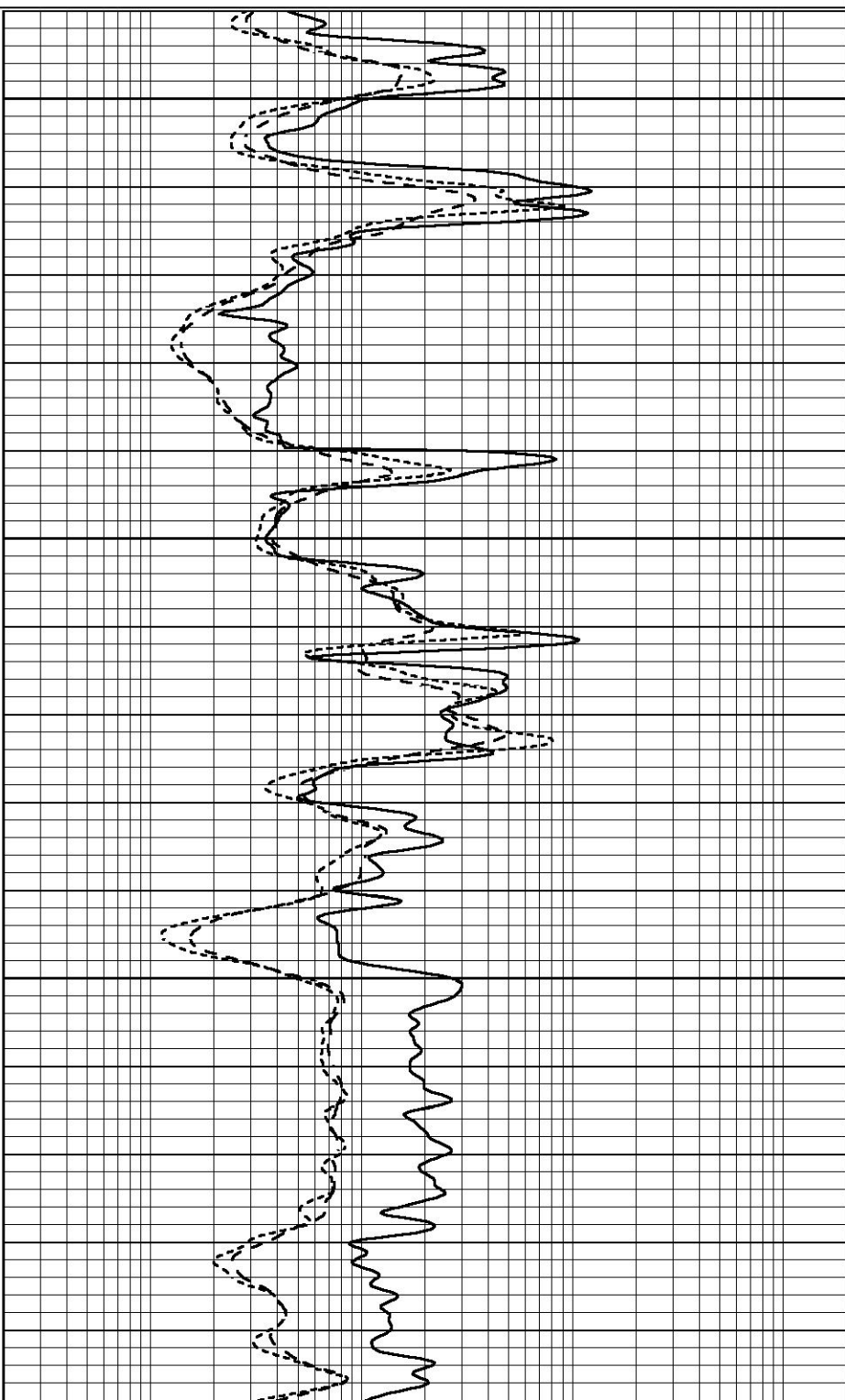
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



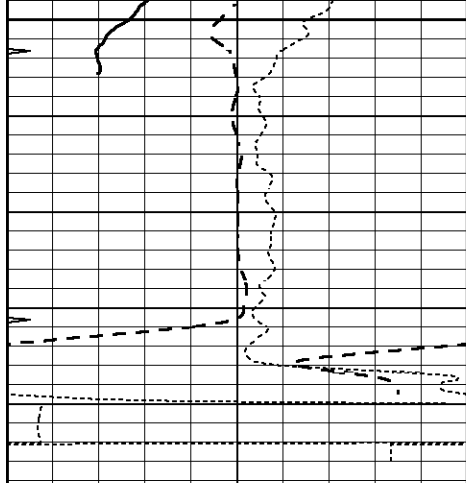
3650

3700

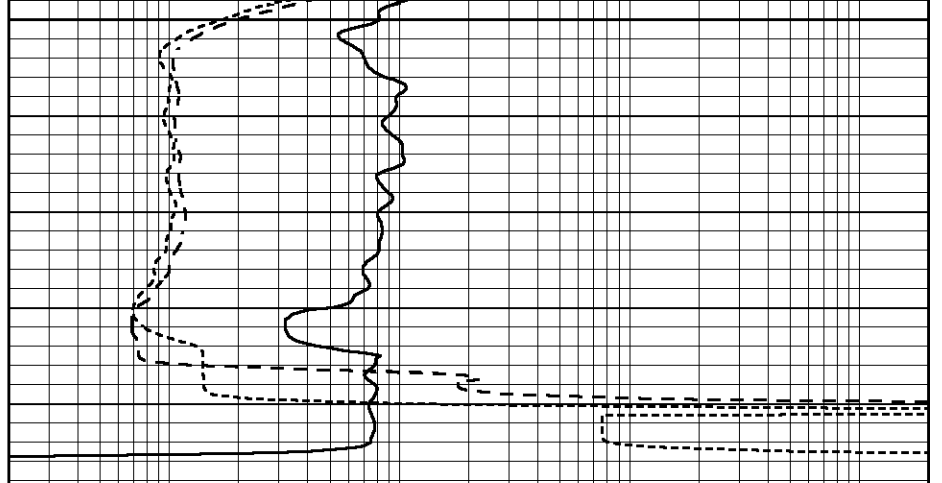
3750



3800



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

### Calibration Report

Database File 5850ddn.db  
 Dataset Pathname pass3.2M  
 Dataset Creation Mon Dec 20 05:34:23 2021

### Dual Induction Calibration Report

Serial-Model: DIL4-GEAR  
 Surface Cal Performed: Mon Dec 20 03:47:01 2021  
 Downhole Cal Performed: Tue Sep 25 17:01:29 2001  
 After Survey Verification Performed: Sat Jun 11 16:07:12 2005

#### Surface Calibration

Loop:	Readings				References			Results	
	Air	Loop	V		Air	Loop	mmho/m	m	b
Deep	0.008	0.666	V	0.000	400.000	mmho/m	520.000	-10.000	
Medium	-0.003	0.769	V	0.000	462.500	mmho/m	560.000	-18.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.013	0.651	V	0.000	400.000	mmho/m	627.541	-8.365	
Medium	0.020	0.754	V	0.000	462.500	mmho/m	630.311	-12.549	

#### Downhole Calibration

Internal:	Readings				References			Results	
	Zero	Cal	mmho/m		Zero	Cal	mmho/m	m	b
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000	
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000	
Shallow	2.525	0.026	V	500.000	2.000	Ohm-m	250.000	-2.000	

#### After Survey Verification

Internal:	Readings				Targets			Results	
	Zero	Cal	mmho/m		Zero	Cal	mmho/m	m'	b'
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000	
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000	

Litho Density Calibration Report  
Serial: 004 Model: PRB

Master Calibration Performed Tue May 18 11:02:48 2021

	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1187.1	10004.0	3142.5	2810.8	cps
Window 2	1084.9	8556.6	2749.3	2502.4	cps
Window 3	923.1	5129.8	1819.8	1719.3	cps
Window 4	263.5	263.6	259.7	262.8	cps
Long Space	0.0	7471.7	1664.4	1417.5	cps
Short Space	1.5	984.9	645.6	561.2	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	
Rib Angle	: 44.3	Rib Slope	: 0.976	Density/Spine Ratio	: 0.564
Spine Angle	: 74.3	Spine Slope	: 3.555	Spine Intercept	: -15.6

Before Survey Verification Performed Wed Dec 31 18:00:00 1969

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

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	

Compensated Neutron Calibration Report

Serial Number: 070808PMC  
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
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Short Space  
Long Space

cps  
cps

pu

pu

Gamma Ray Calibration Report

Serial Number:	070558	
Tool Model:	OPEN_GR	
Performed:	Fri Sep 03 05:25:49 2021	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps