

DUAL INDUCTION LOG

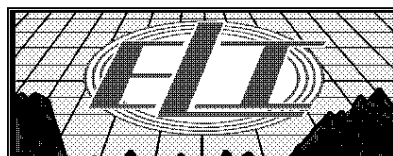
Company		PHILLIPS EXPLORATION COMPANY, L.	
Well		GEYER #1-3 YEP	
Field			
County		TREGO	
State		KANSAS	
Company		RICHEL EXPLORATION, INC.	
Well		GEYER #1-3 YEP	
Field			
County		TREGO	
State		KANSAS	
Location:		API # : 15-195-23078-0000 660' FNL & 1980' FVL	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 5' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 3 TWP 11S RGE 24W		Elevation K.B. 2363 D.F. 2361 G.L. 2358	
Date	1/13/19		
Run Number	ONE		
Depth Driller	4025		
Depth Logger	4026		
Bottom Logged Interval	4024		
Top Log Interval	00		
Casing Driller	8 5/8"@214		
Casing Logger	214		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2800 PPM	
Density / Viscosity	9.1/53		
pH / Fluid Loss	10.5/6.4		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.90 @ 75F		
Rmf @ Meas. Temp	.67 @ 75F		
Rmc @ Meas. Temp	1.08 @ 75F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.58 @ 116F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	116F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	PAT DEENIHAN		

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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 HAYS, KANSAS (785) 628-6395
DIRECTIONS
WAKEENEY, KS. - NORTH JUST PAST SALINE RIVER TO RD. B - WEST TO RD. 200
1 NORTH - 1/2 EAST - SOUTH INTO



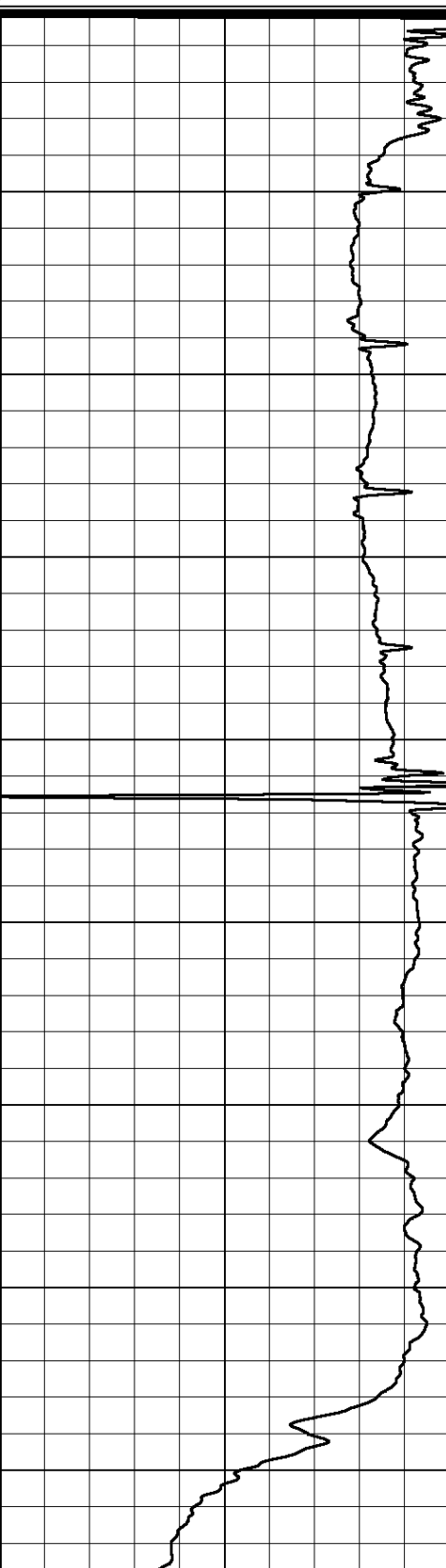
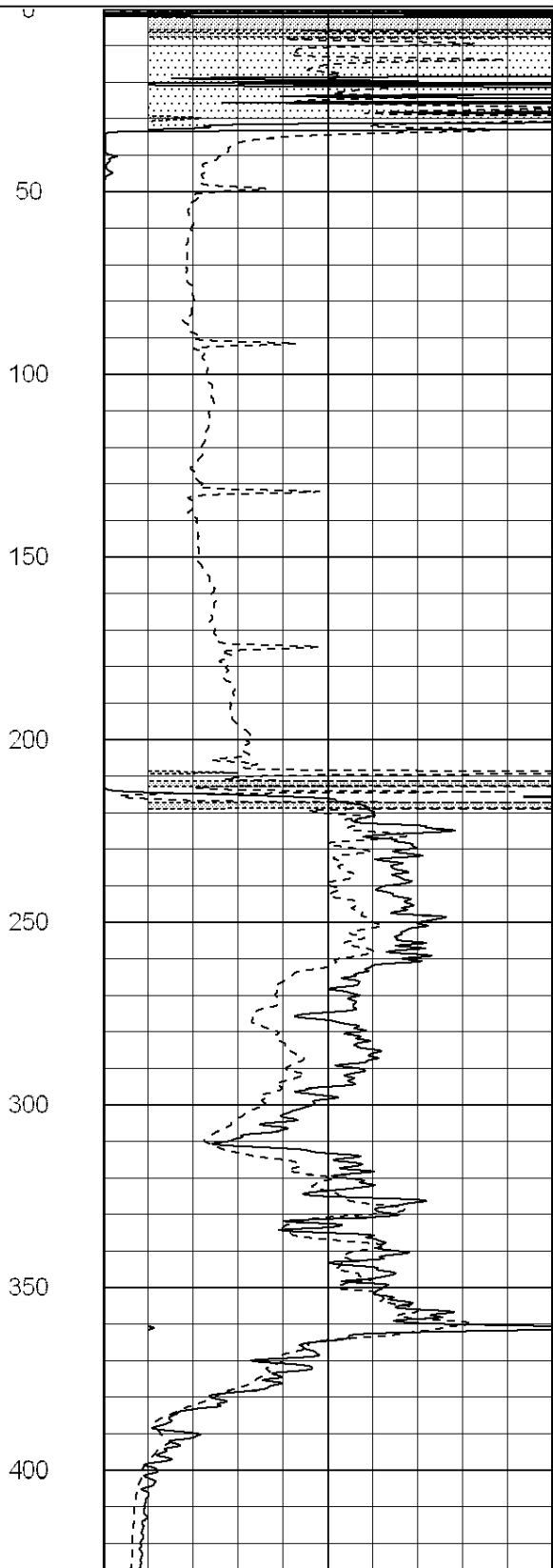
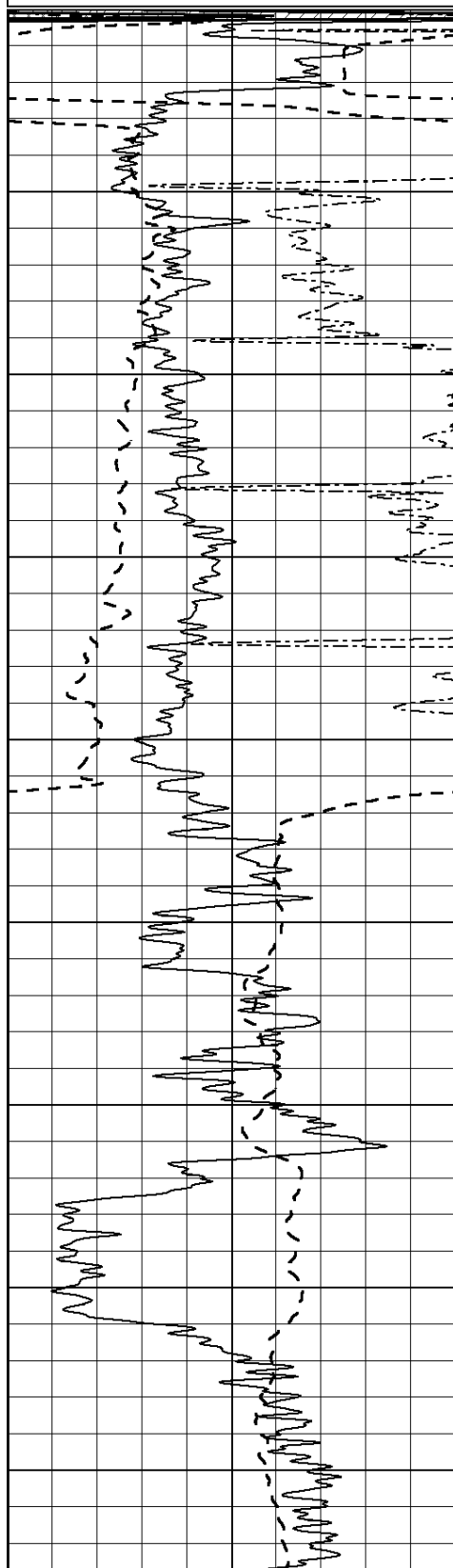
MAIN SECTION

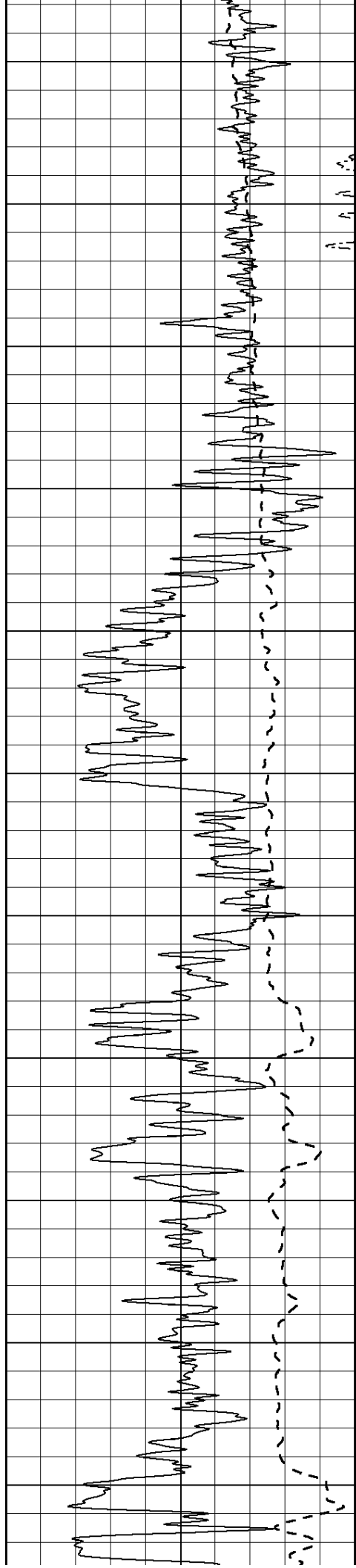
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 Dataset Pathname: pass3.3
 Presentation Format: _dil2
 Dataset Creation: Sun Jan 13 13:06:40 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

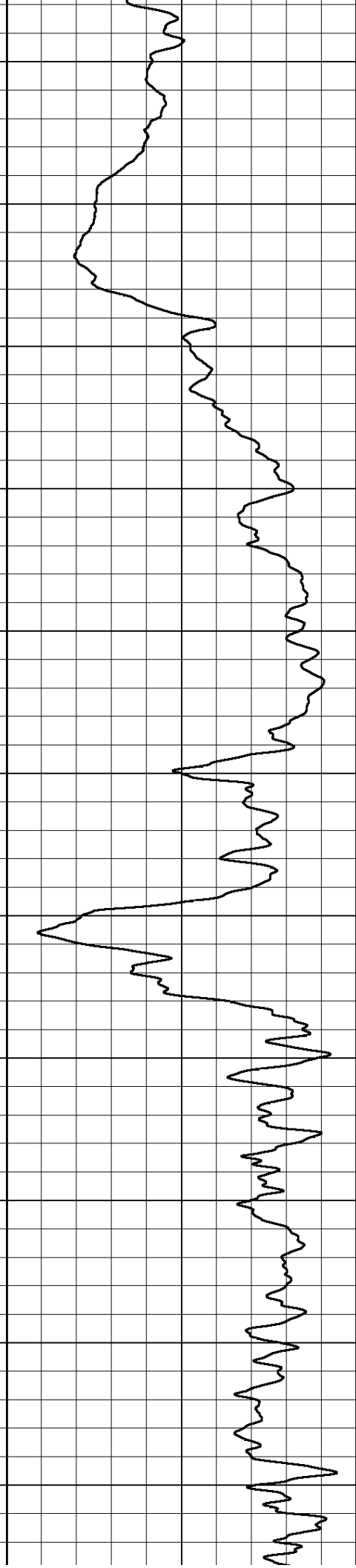
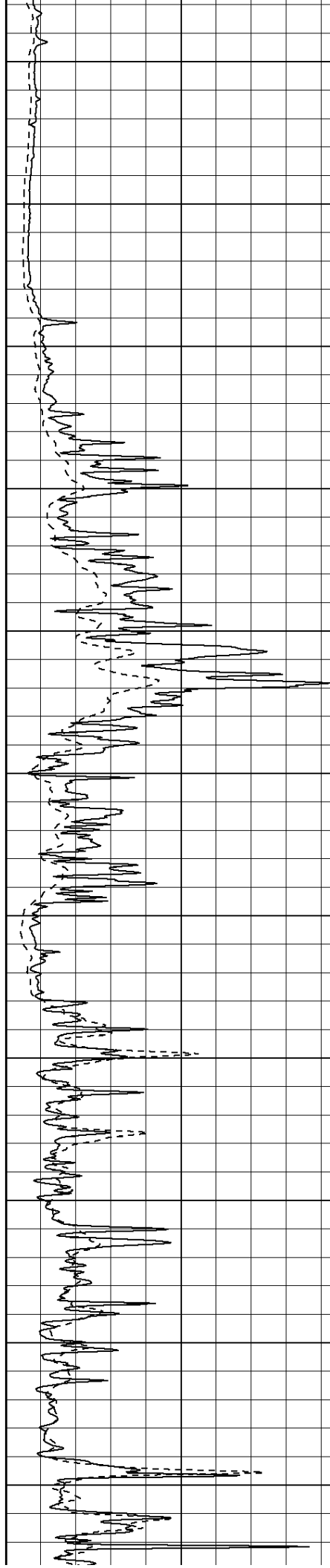
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0

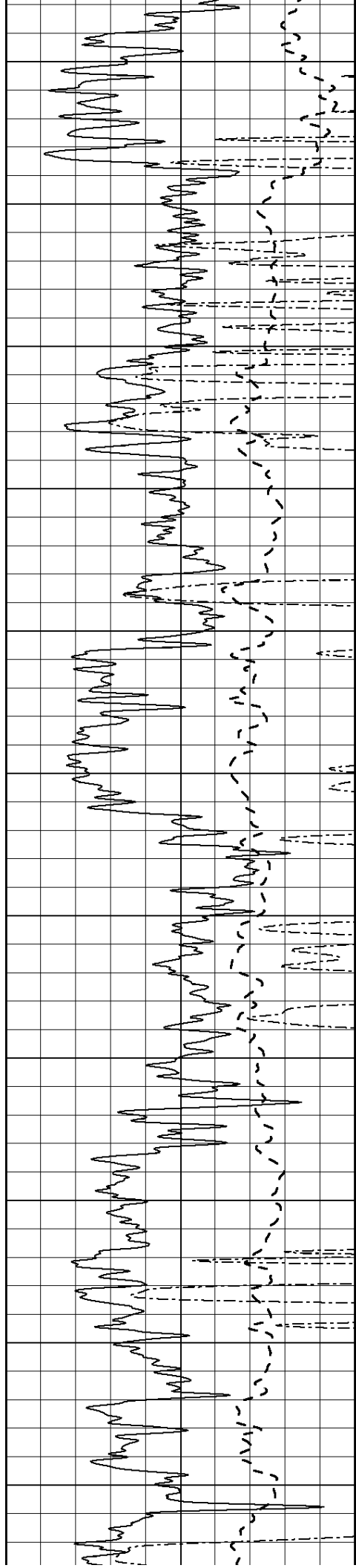
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



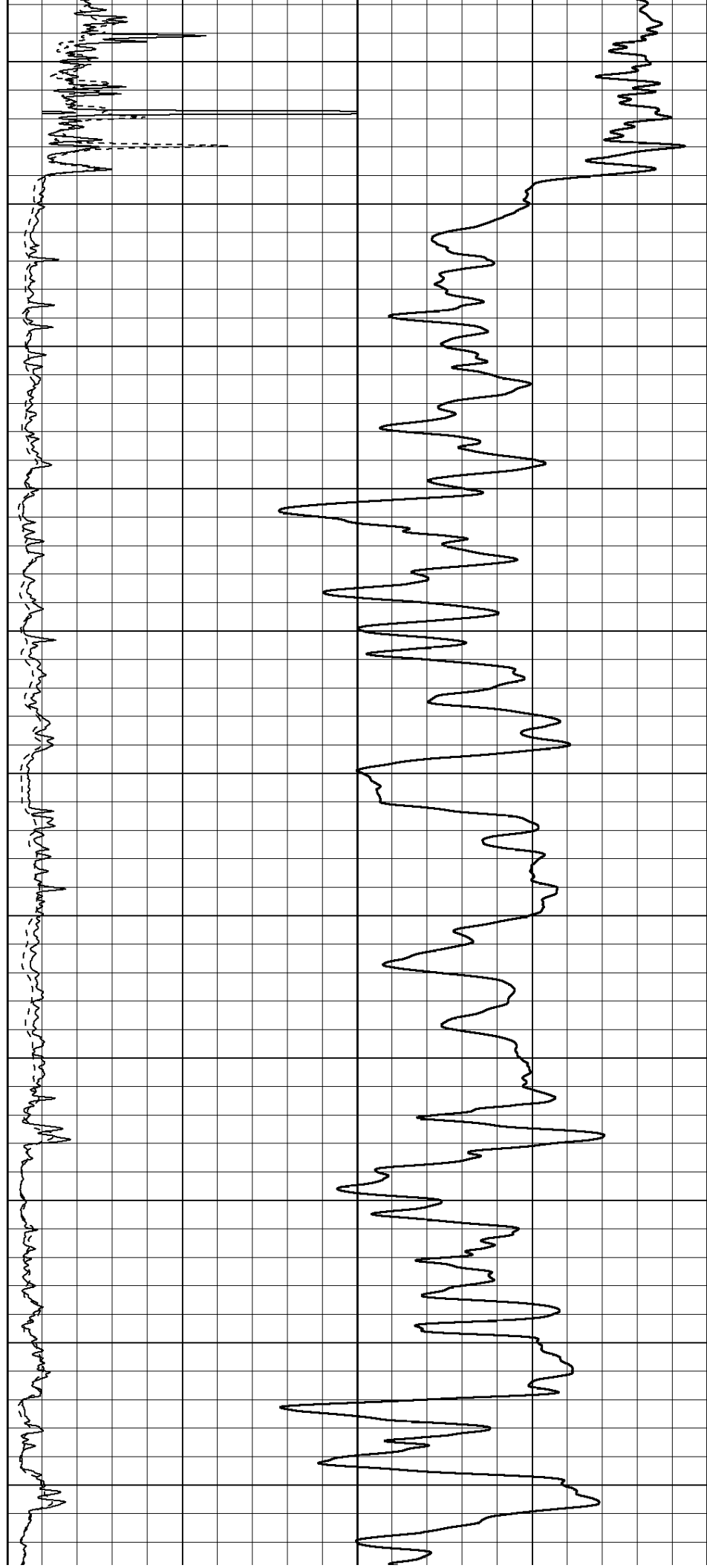


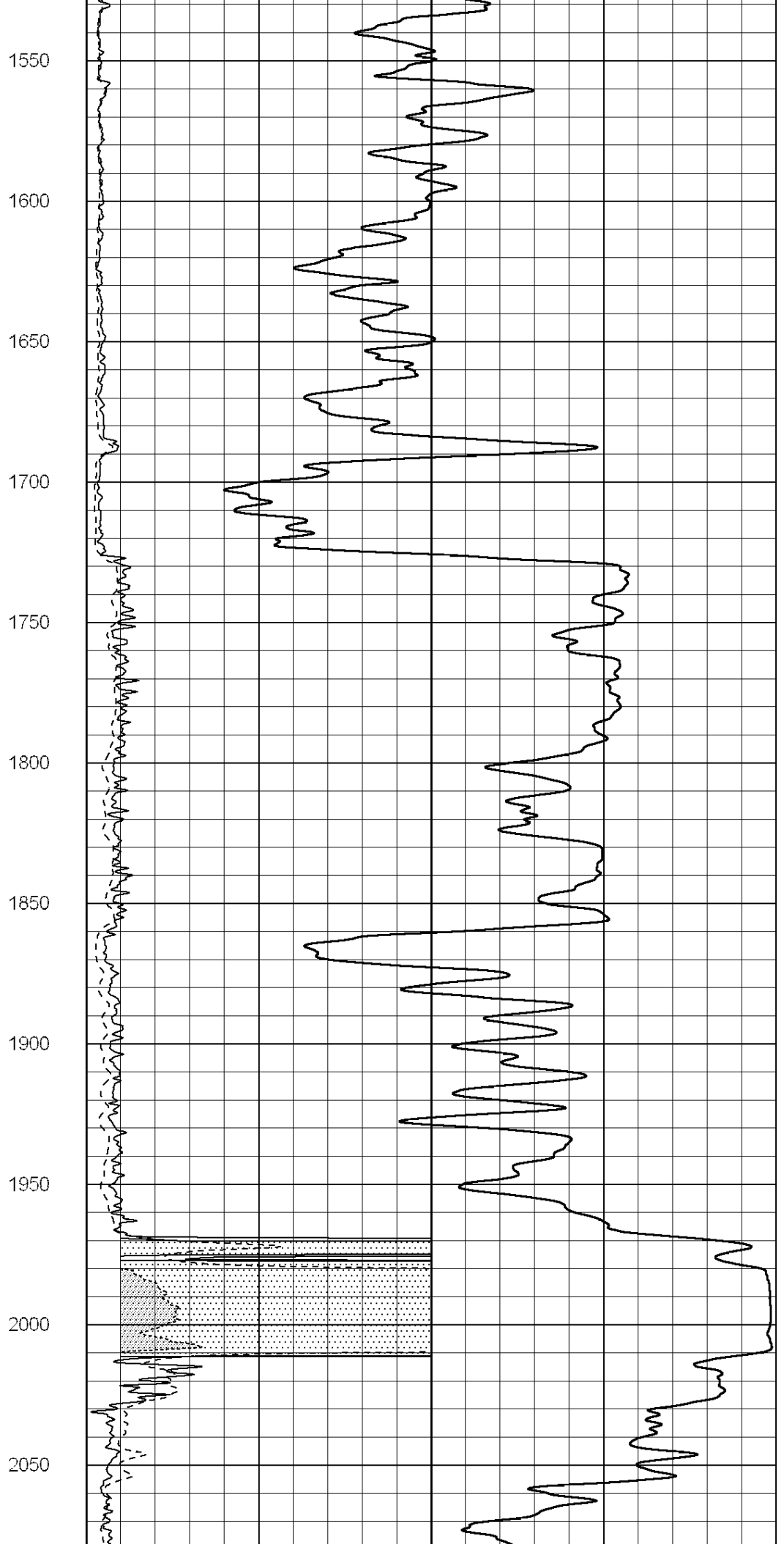
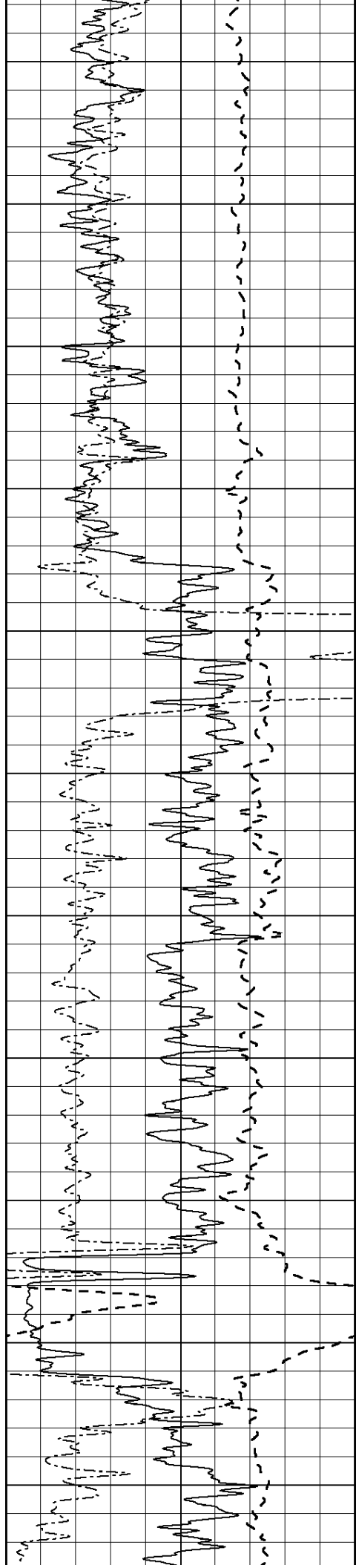
450
500
550
600
650
700
750
800
850
900
950



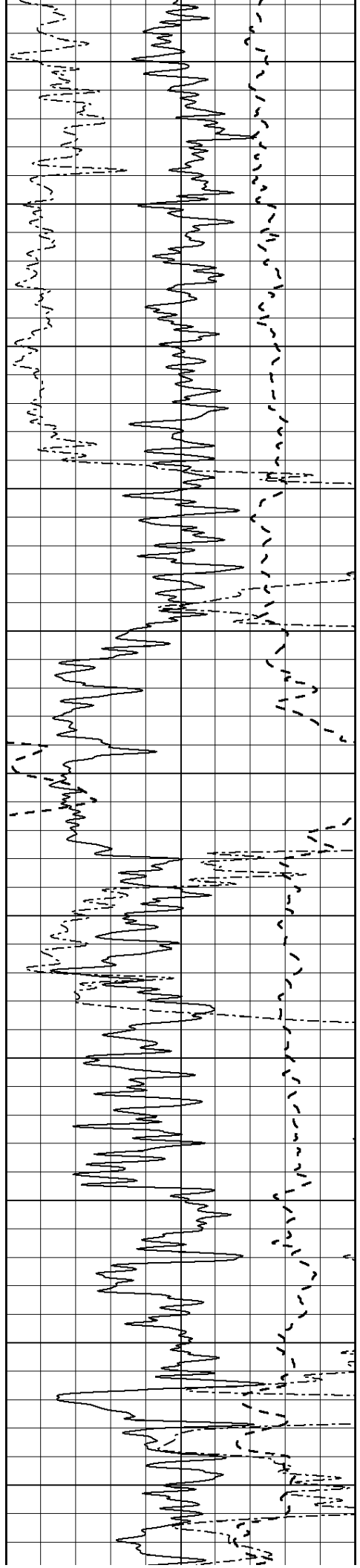
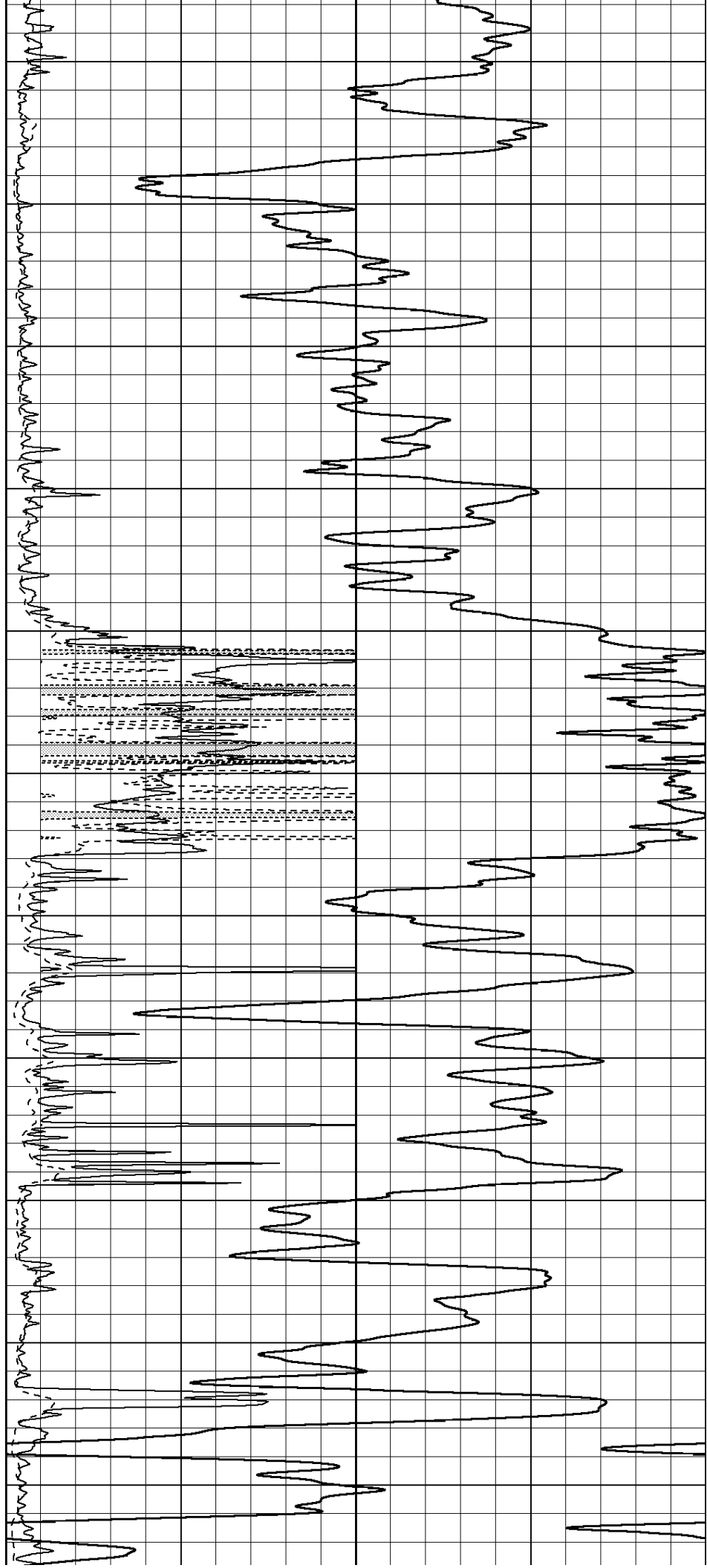


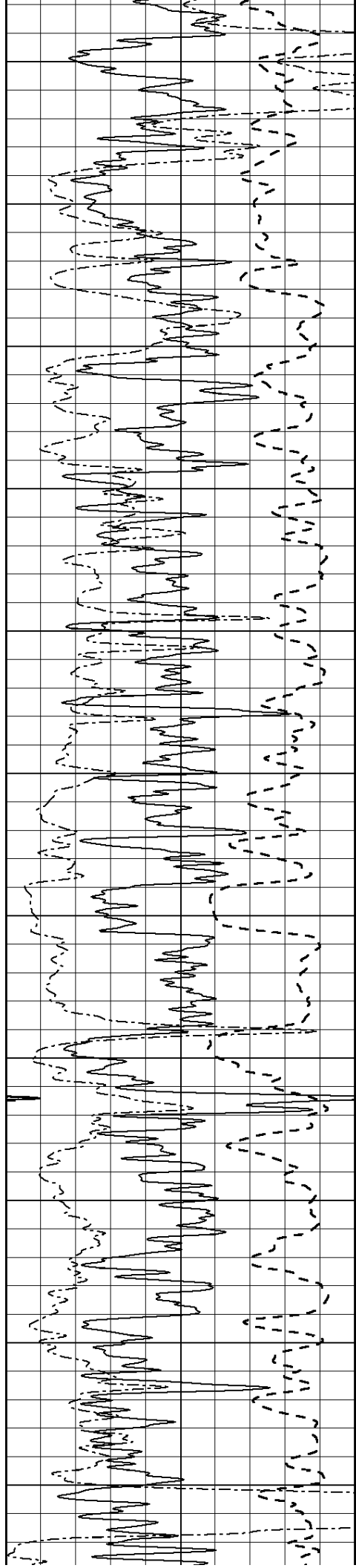
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600





2650

2700

2750

2800

2850

2900

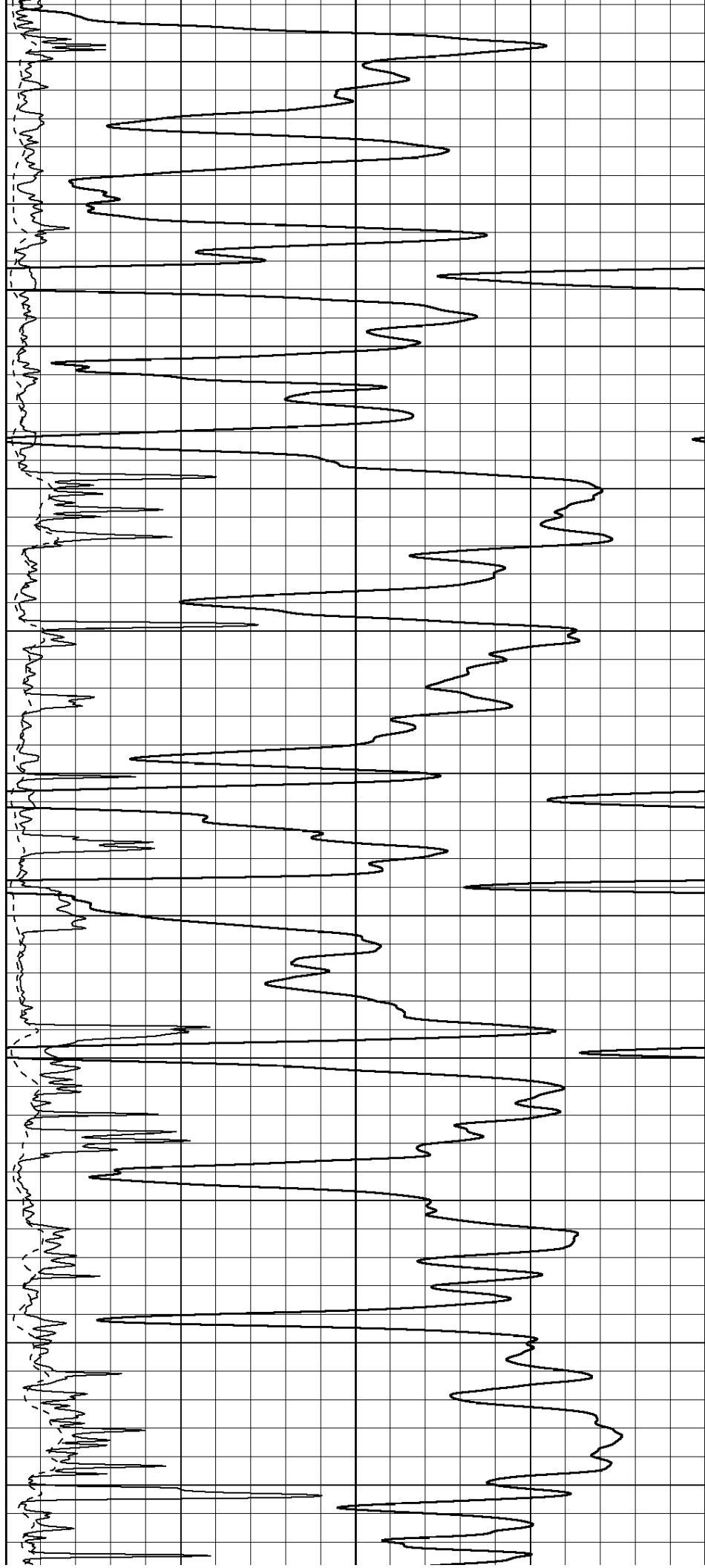
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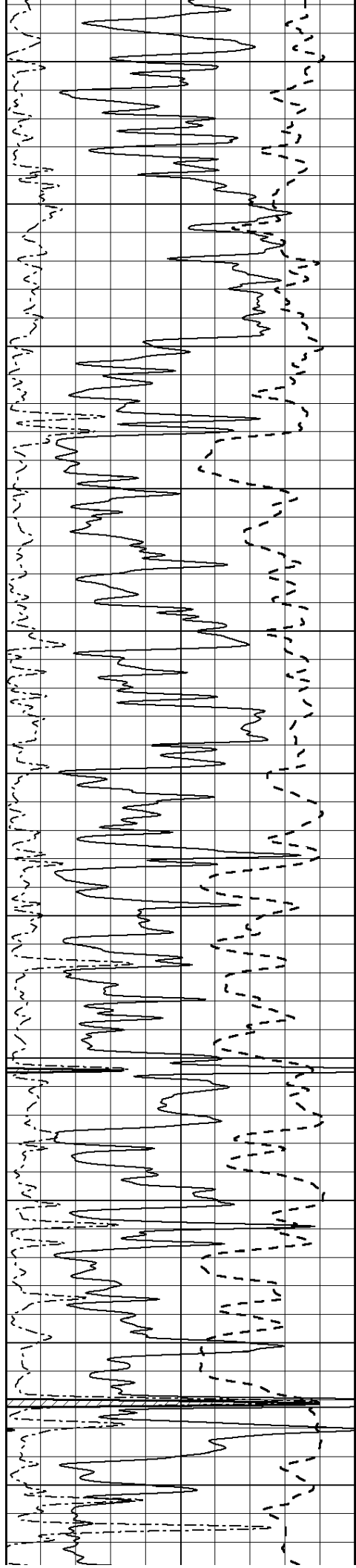
3000

3050

3100

3150





3200

3250

3300

3350

3400

3450

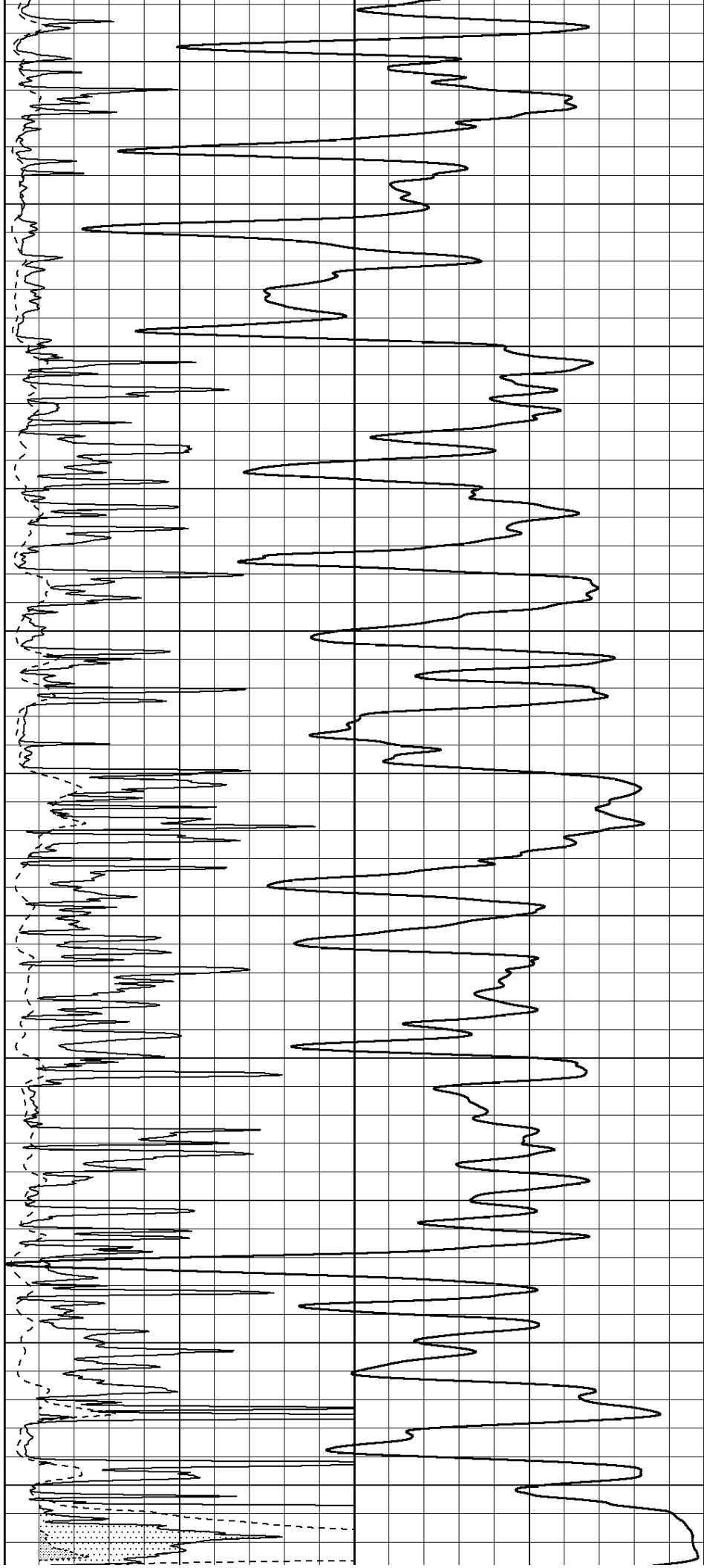
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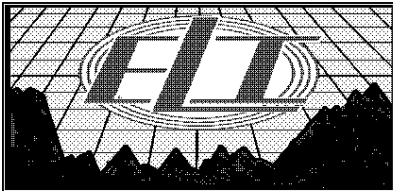
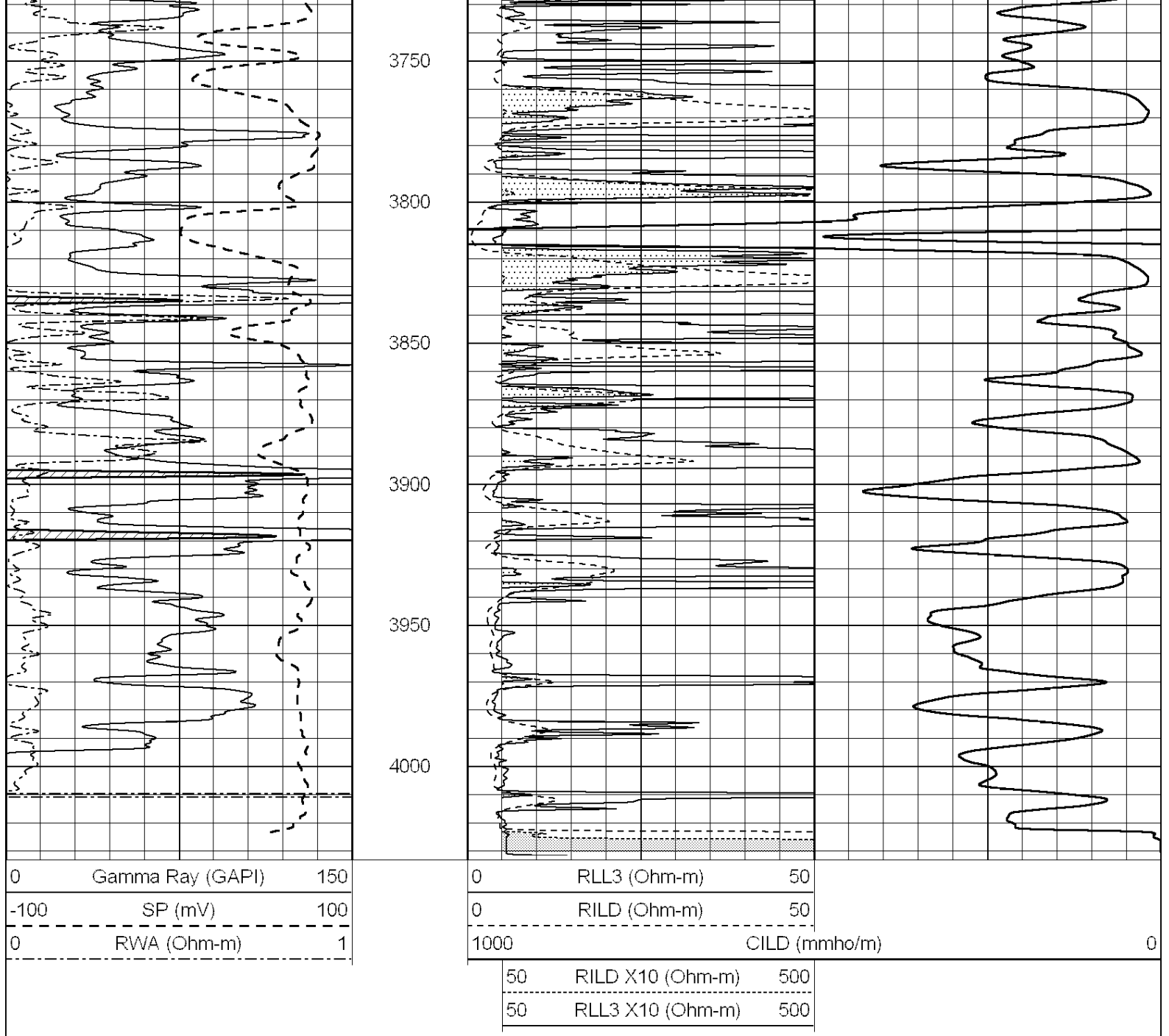
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3600

3650

3700



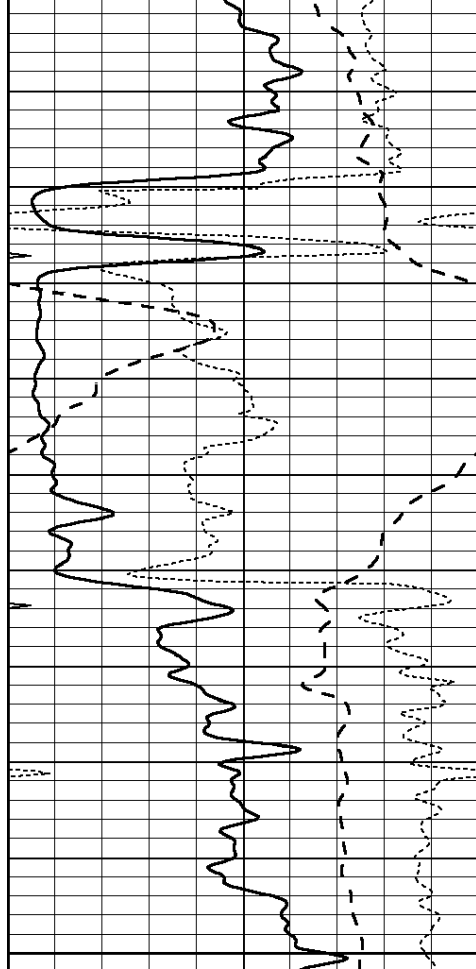


ANHYDRITE

Database File: 3332ddn.db
 Dataset Pathname: pass3.2
 Presentation Format: _dil
 Dataset Creation: Sun Jan 13 12:42:44 2019 by Calc SOC 120430
 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			

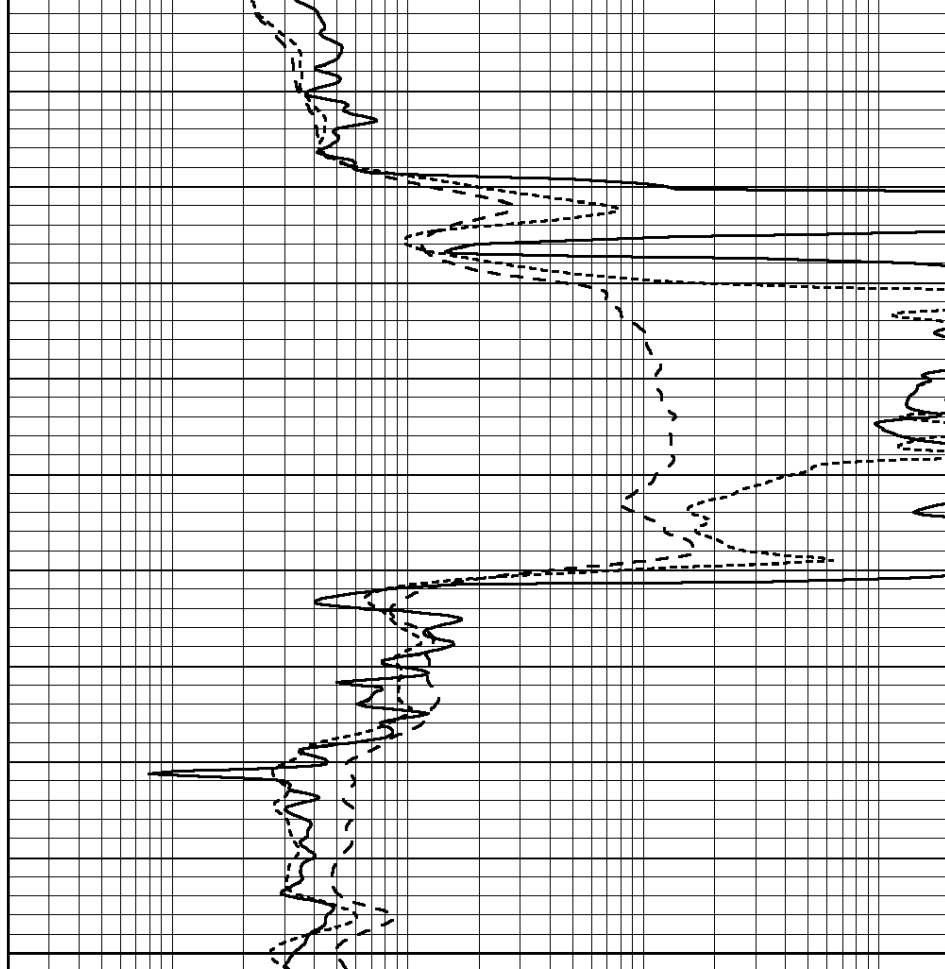




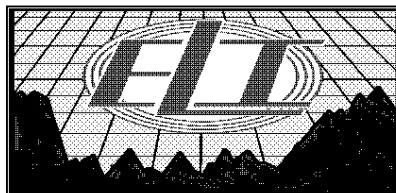
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

2000

2050



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



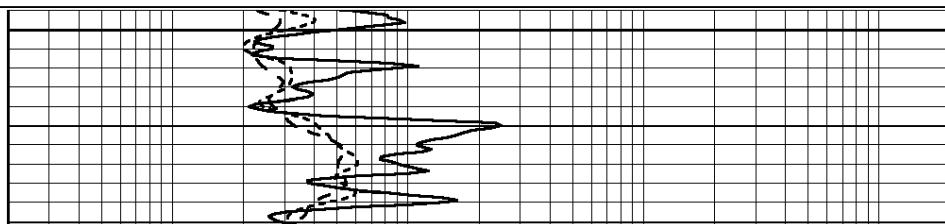
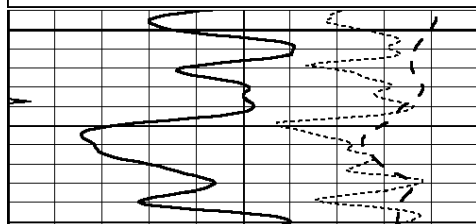
MAIN SECTION

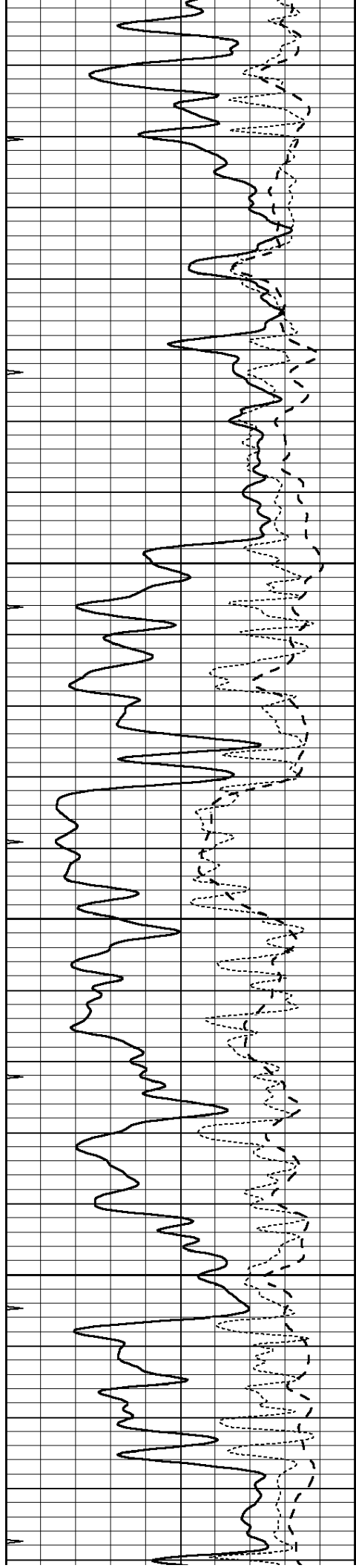
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 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Sun Jan 13 12:21:32 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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

3200



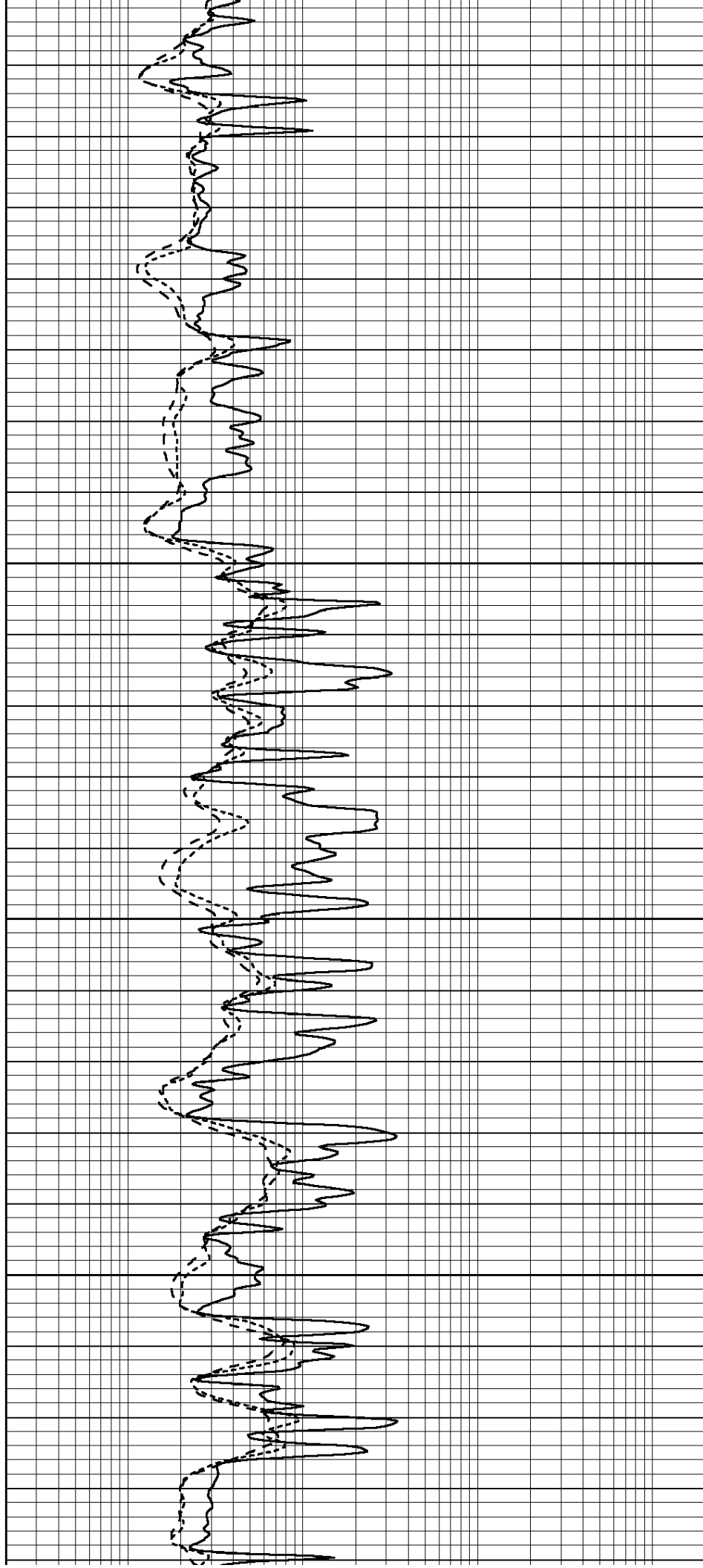


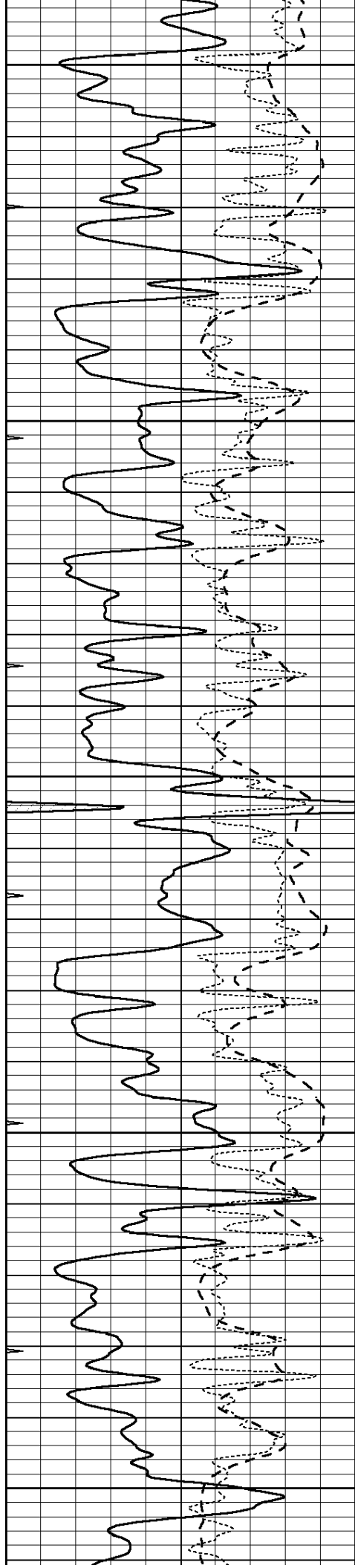
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3300

3350

3400





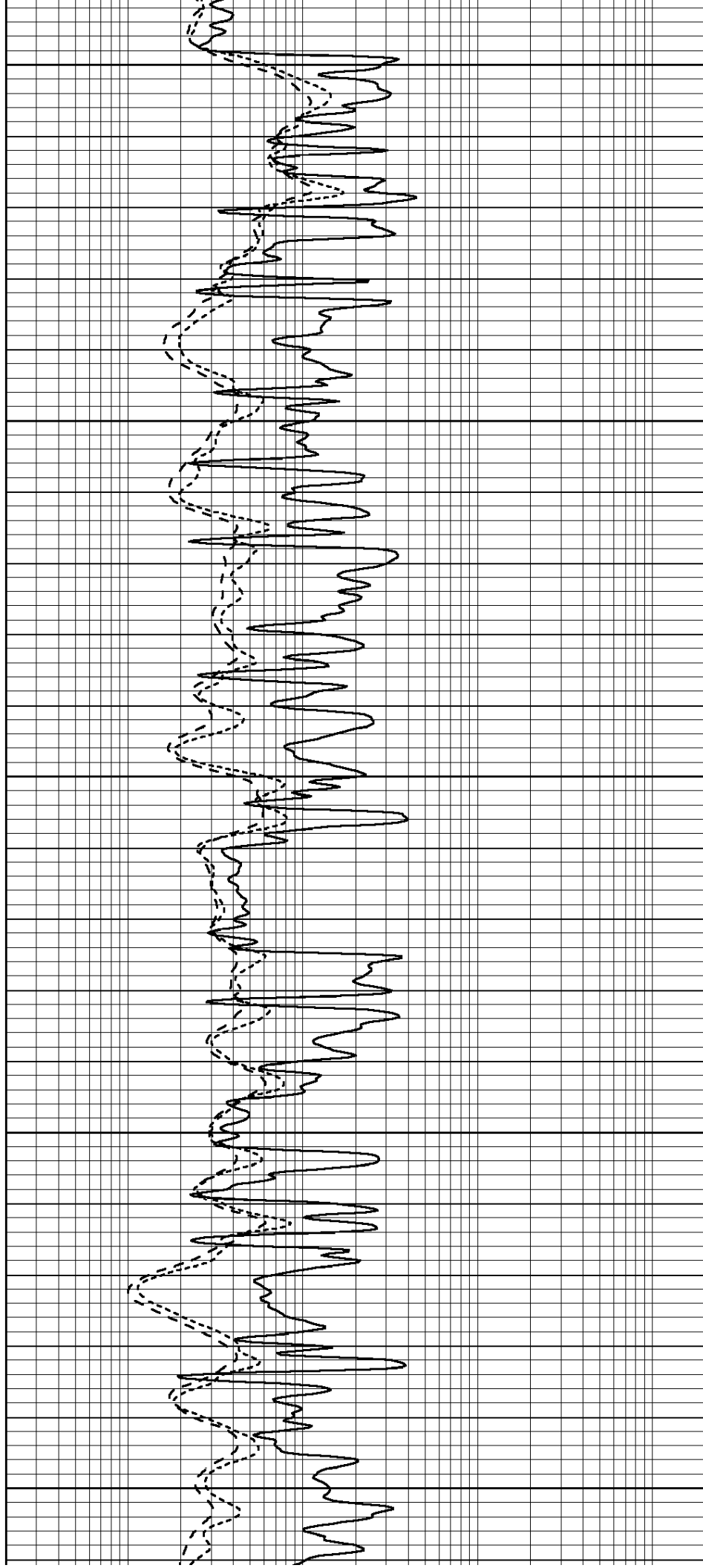
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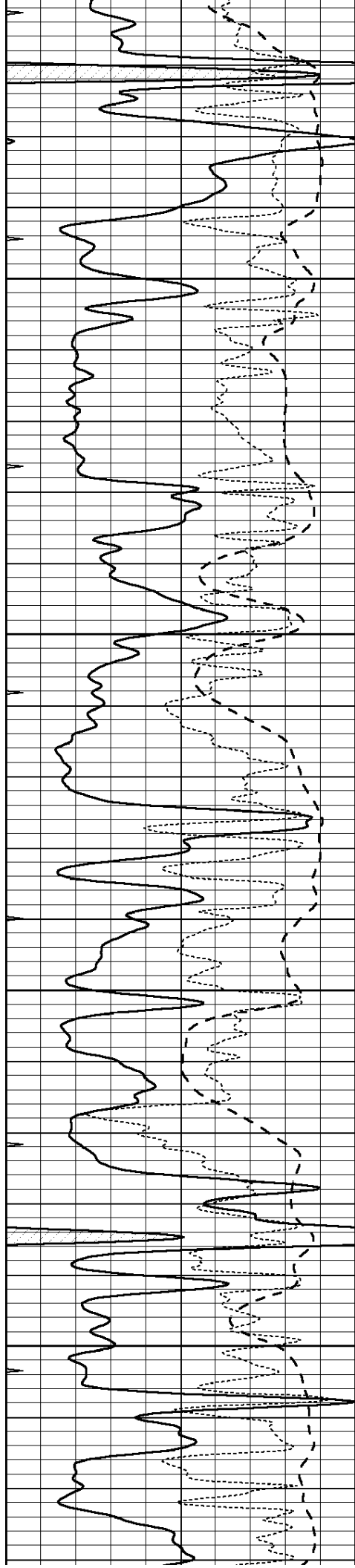
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3550

3600

3650



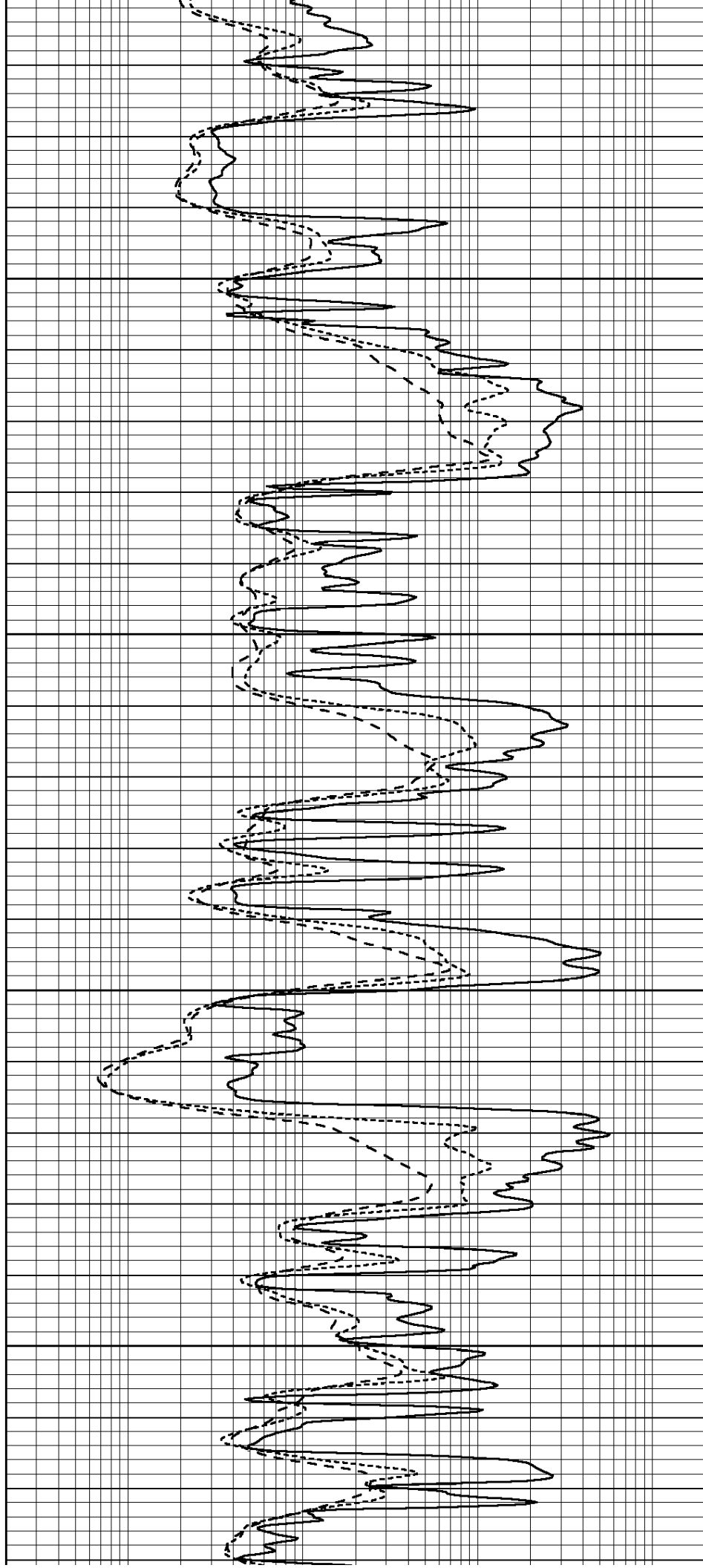


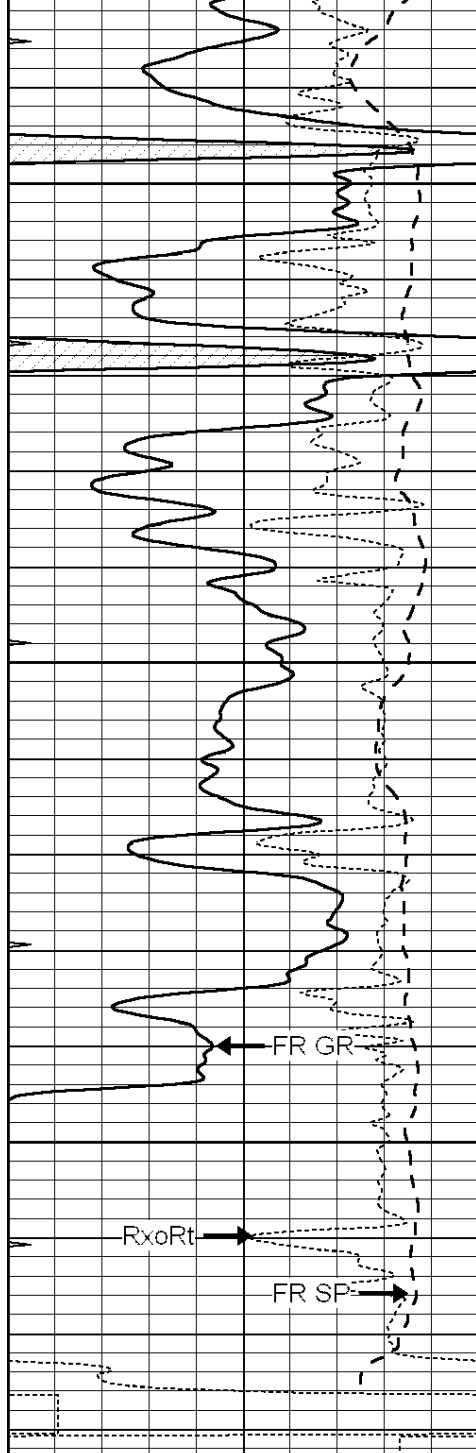
3700

3750

3800

3850





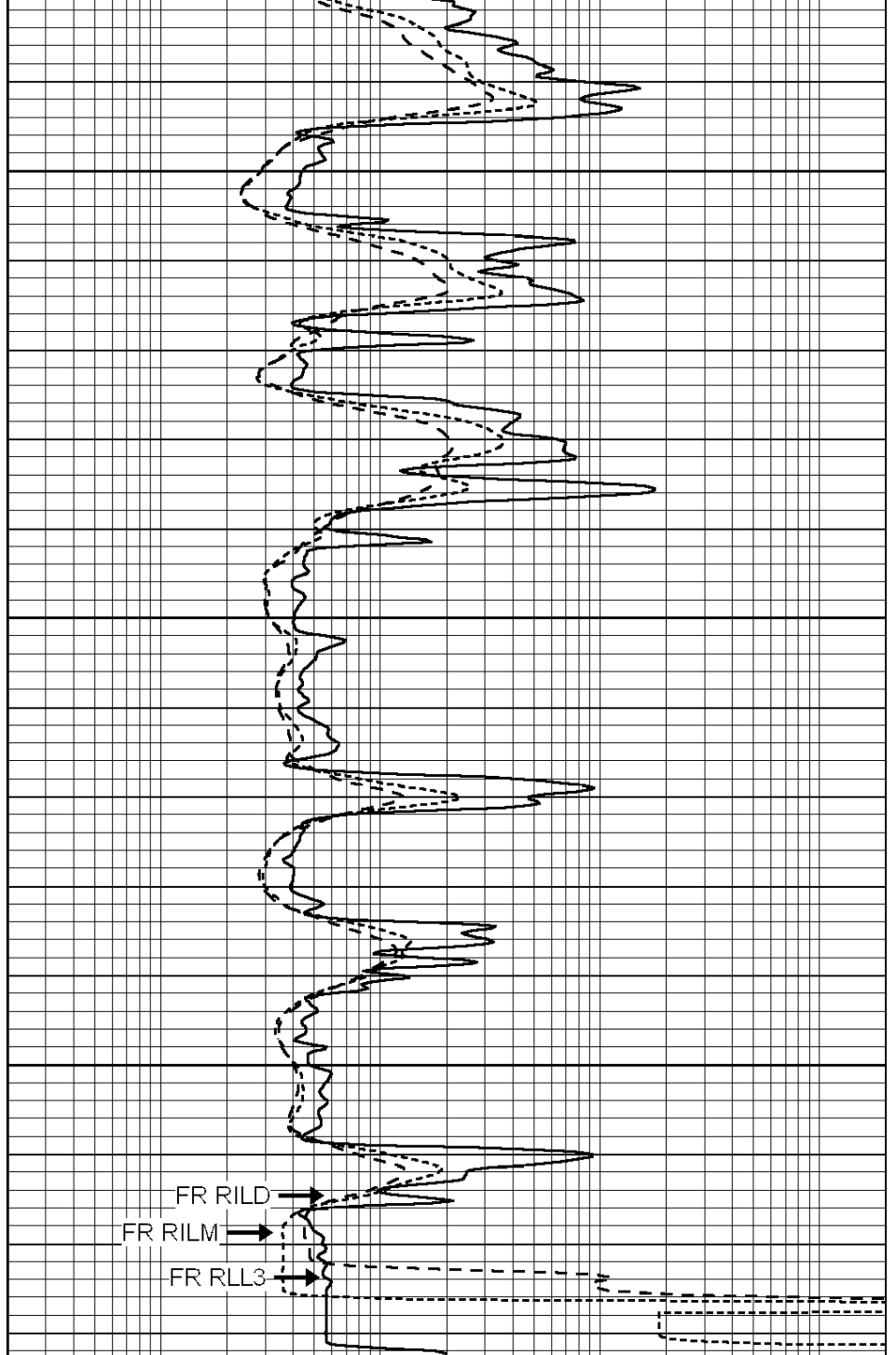
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3950

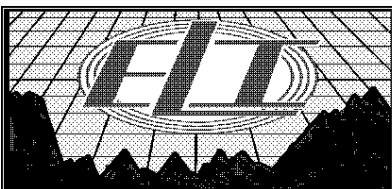
4000

LTD 4026

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



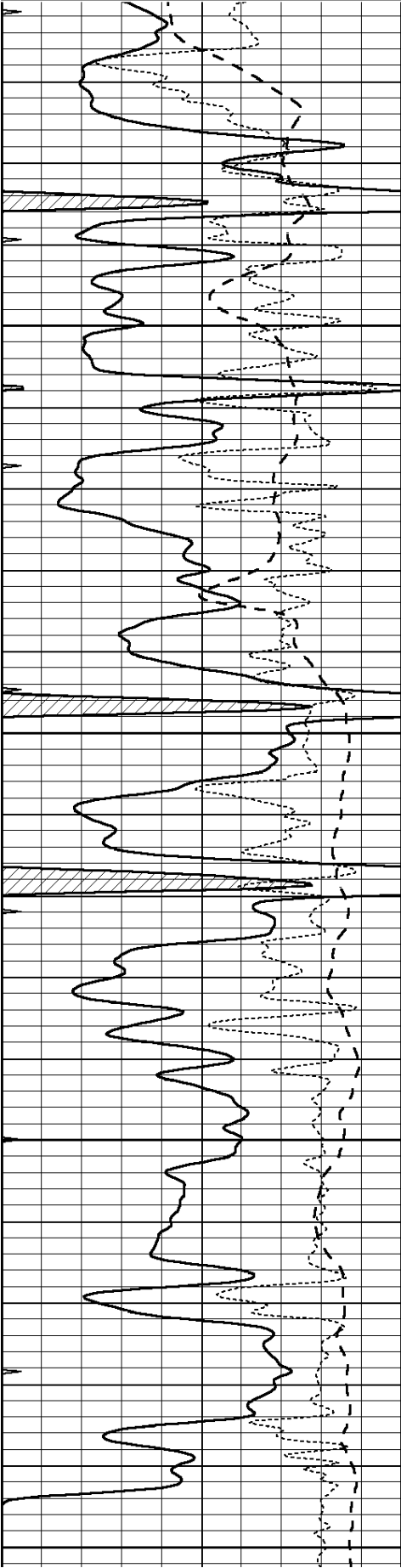
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



REPEAT SECTION

Database File: 3332ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: _dil
 Dataset Creation: Sun Jan 13 12:14:57 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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



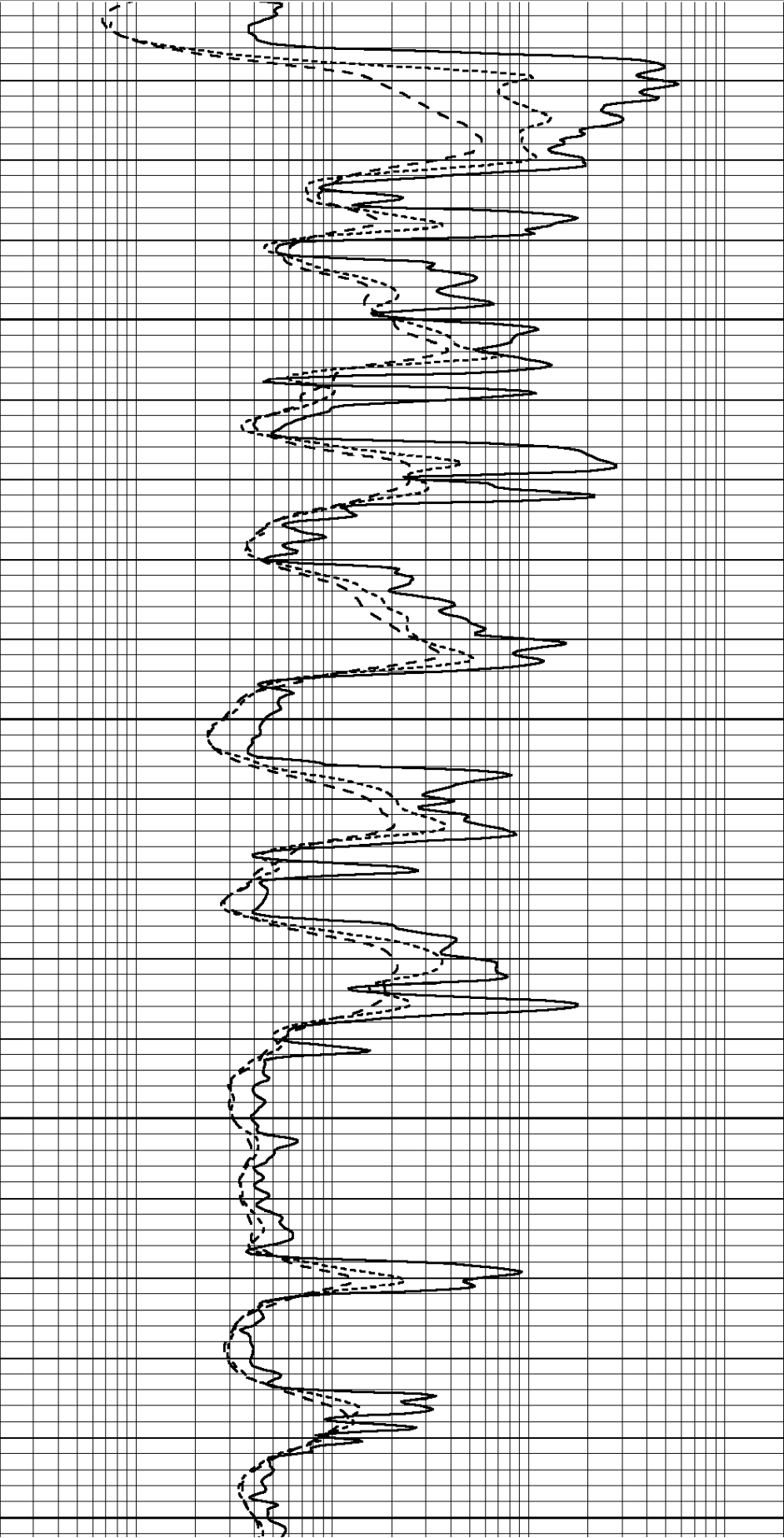
3850

3900

3950

4000

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



	Background	Magnesium	Aluminum	Sandstone	
Window 1	1378.8	10804.6	3492.0	12453.4	cps
Window 2	1262.4	9313.5	3076.7	10594.7	cps
Window 3	1077.6	5668.7	2076.0	6314.8	cps
Window 4	306.4	313.0	306.4	315.6	cps
Long Space	0.0	8051.0	1814.3	9332.3	cps
Short Space	1.9	1706.1	1146.0	1707.6	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 45.0	Rib Slope	: 1.002	Density/Spine Ratio	: 0.571
Spine Angle	: 75.0	Spine Slope	: 3.745	Spine Intercept	: -18.9

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: 070808
Tool Model: Probe

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: 070558

Serial Number: 010000
Tool Model: OPEN_GR
Performed: Fri Dec 22 13:36:24 2017

Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps