



DUAL INDUCTION LOG

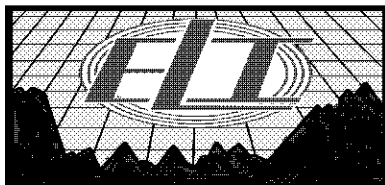
Company SANDLIN OIL CORPORATION		
Well	PAUL McRAE #1	
Field	BEMIS SHUTTS	
County	ELLIS	
State	KANSAS	
Location: API #: 15-051-26862-0000 1555' FNL & 2300' FWL		
County	ELLIS	
State	KANSAS	
Permanent Datum	GROUND LEVEL Elevation	2160
Log Measured From	KELLY BUSHING 6" A.G.L	
Drilling Measured From	KELLY BUSHING	
SEC 27 TWP 12S RGE 18W		Elevation K.B. 2166 D.F. 2164 G.L. 2160
Date	2/14/17	
Run Number	ONE	
Depth Driller	3750	
Depth Logger	3752	
Bottom Logged Interval	3750	
Top Log Interval	00	
Casing Driller	8 5/8" @ 213	
Casing Logger	213	
Bit Size	7 7/8	
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5500 PPM
Density / Viscosity	8.9/56	
pH / Fluid Loss	11.0/7.6	
Source of Sample	FLOWLINE	
Rm @ Meas. Temp	1.0 @ 65F	
Rmf @ Meas. Temp	.75 @ 65F	
Rmc @ Meas. Temp	1.2 @ 65F	
Source of Rmf / Rmc	MEASUREMENT	
Rm @ BHT	.57 @ 65F	
Time Circulation Stopped	2 HOURS	
Time Logger on Bottom		
Maximum Recorded Temperature	113F	
Equipment Number	3802	
Location	HAYS, KANSAS	
Recorded By	JASON CAPPELLUCCI	GUS PFANENSTIEL
Witnessed By	HERB DEINES	

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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
HAYS, KS. - NORTH TO LOCUST GROVE RD. - 1/2 EAST - SOUTH INTO



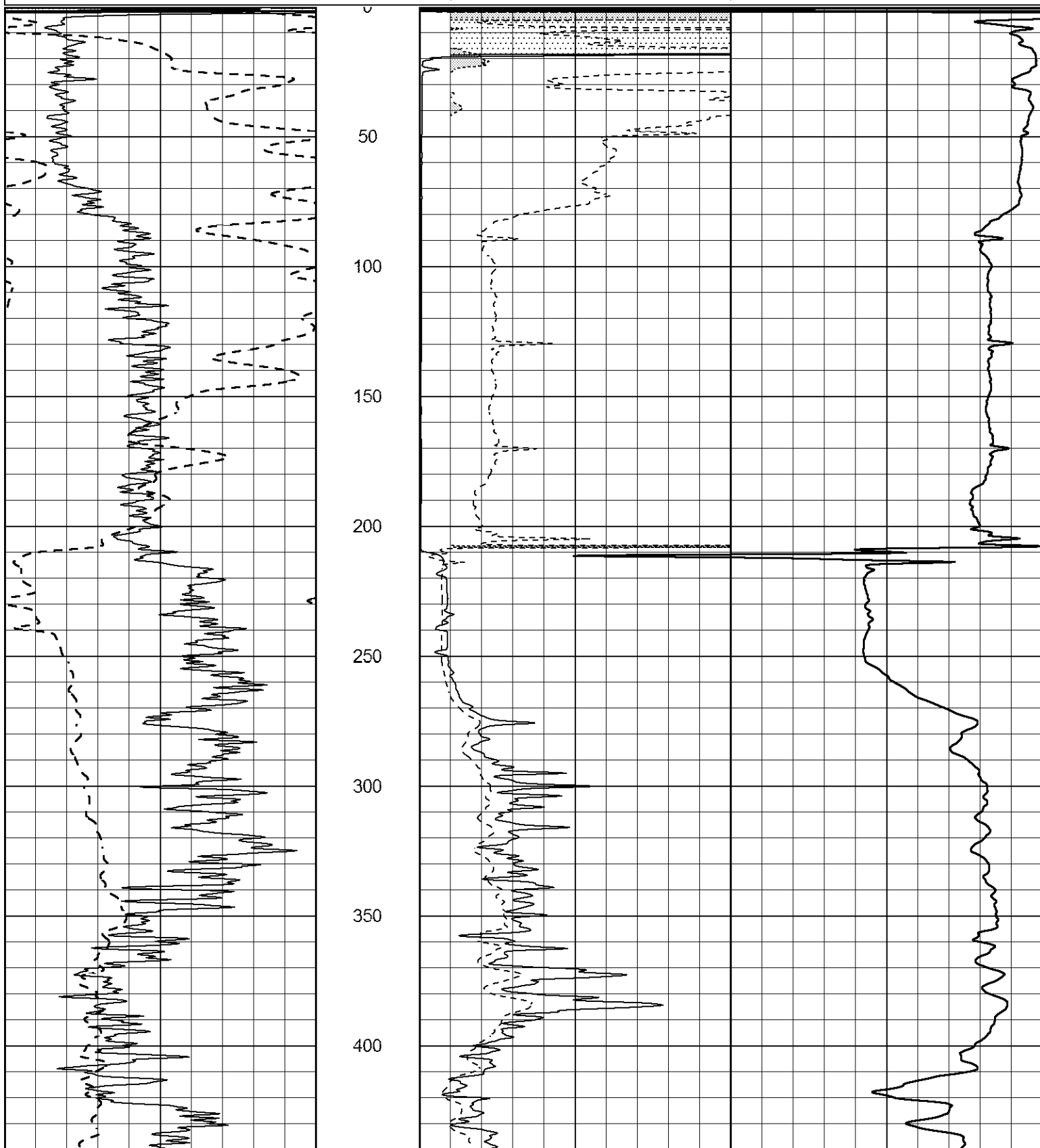
MAIN PASS

Database File 1119ddn8.db
Dataset Pathname pass4
Presentation Format _dil2
Dataset Creation Tue Feb 14 06:51:47 2017
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



450

500

550

600

650

700

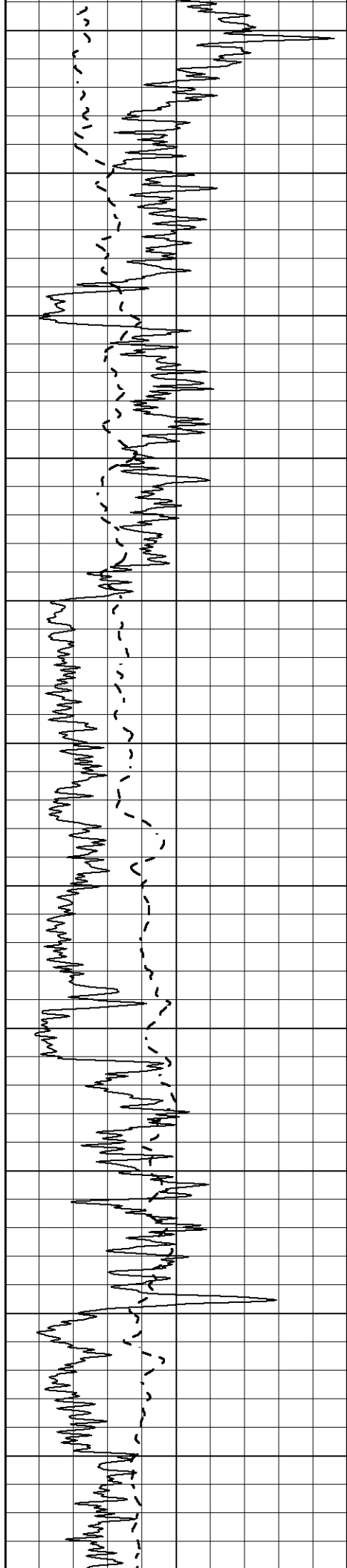
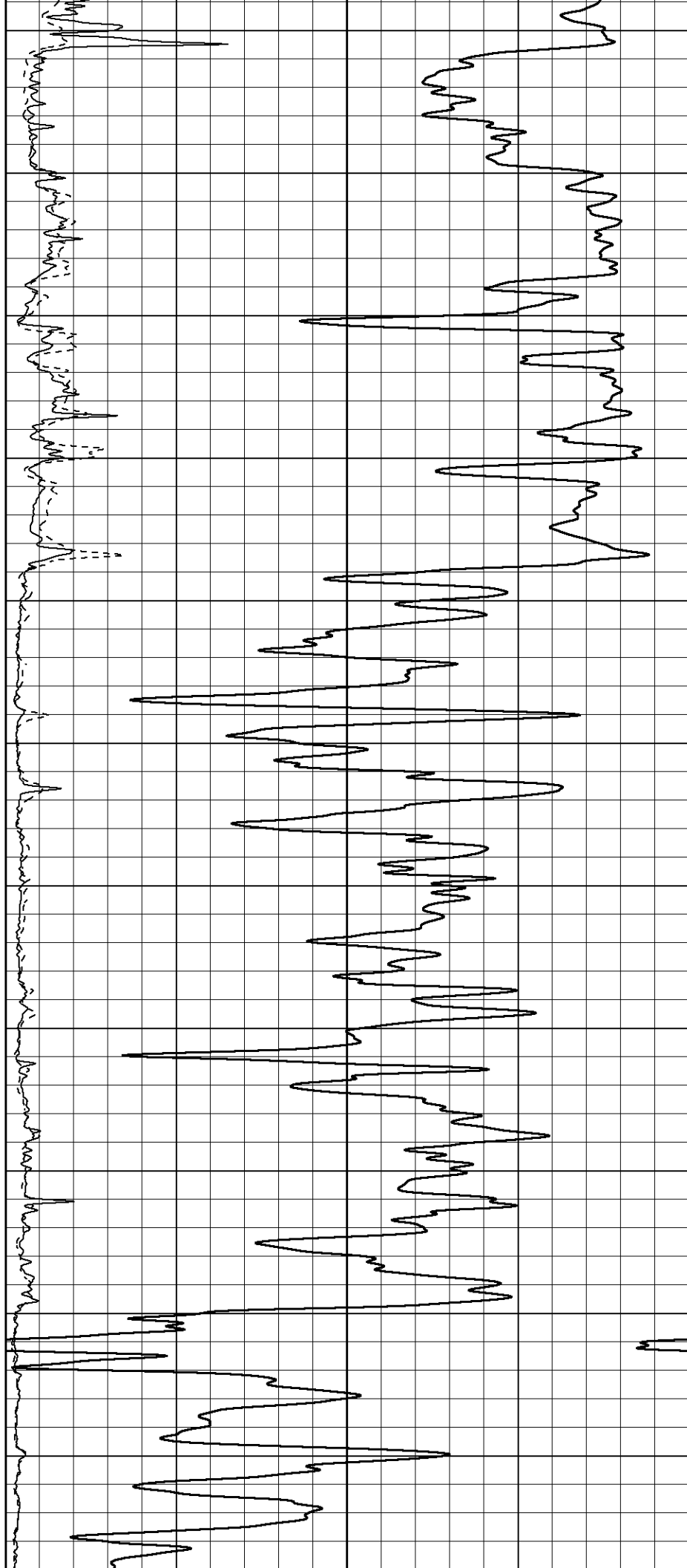
750

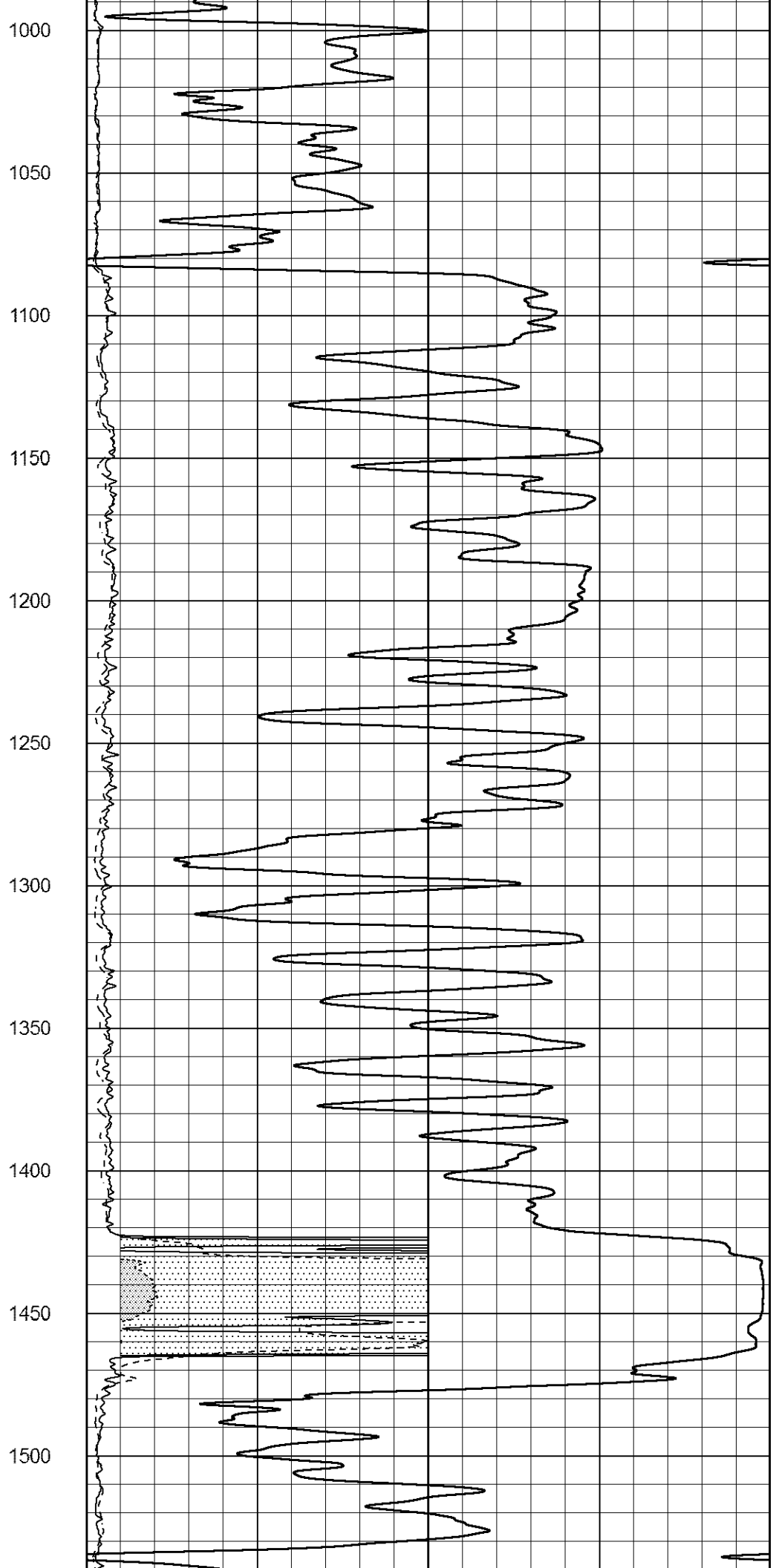
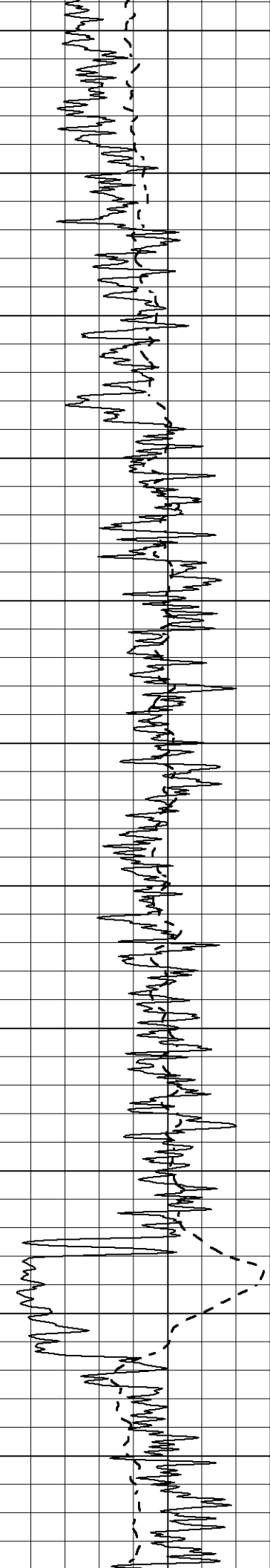
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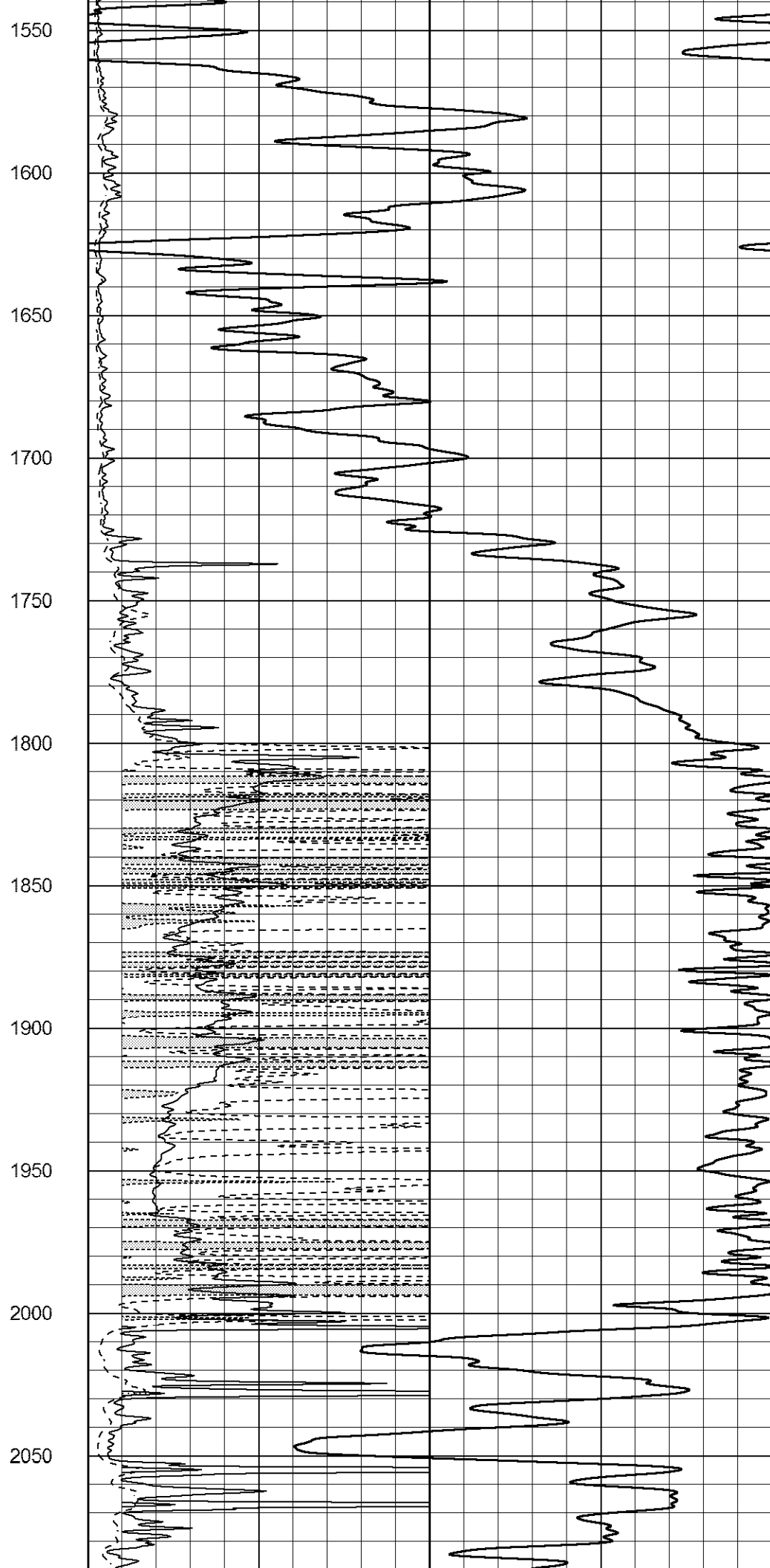
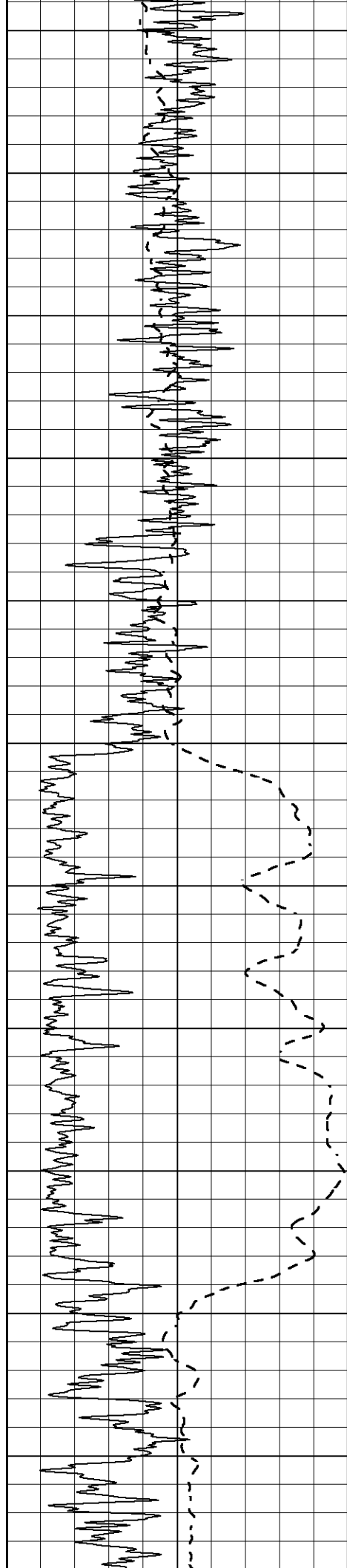
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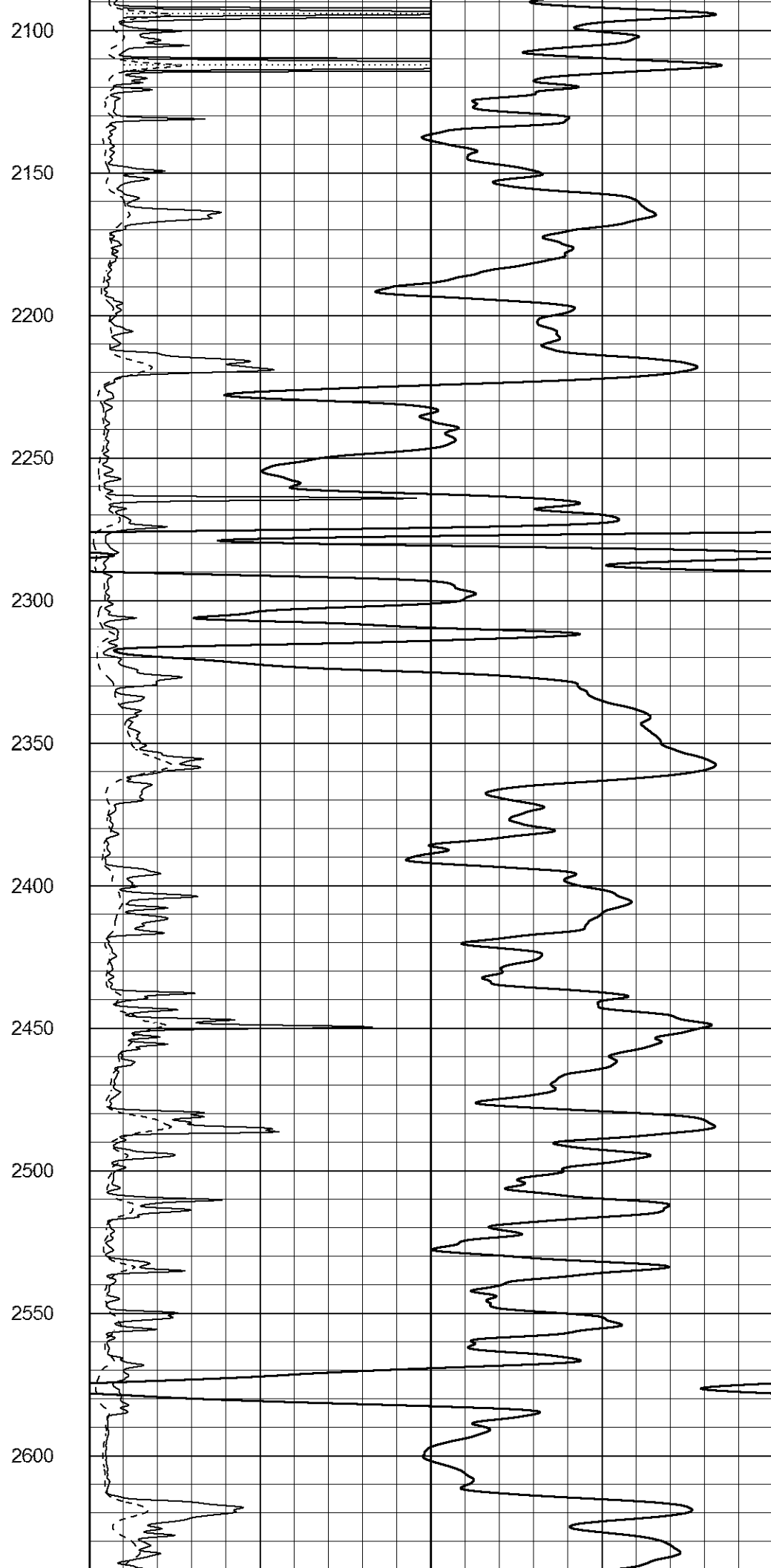
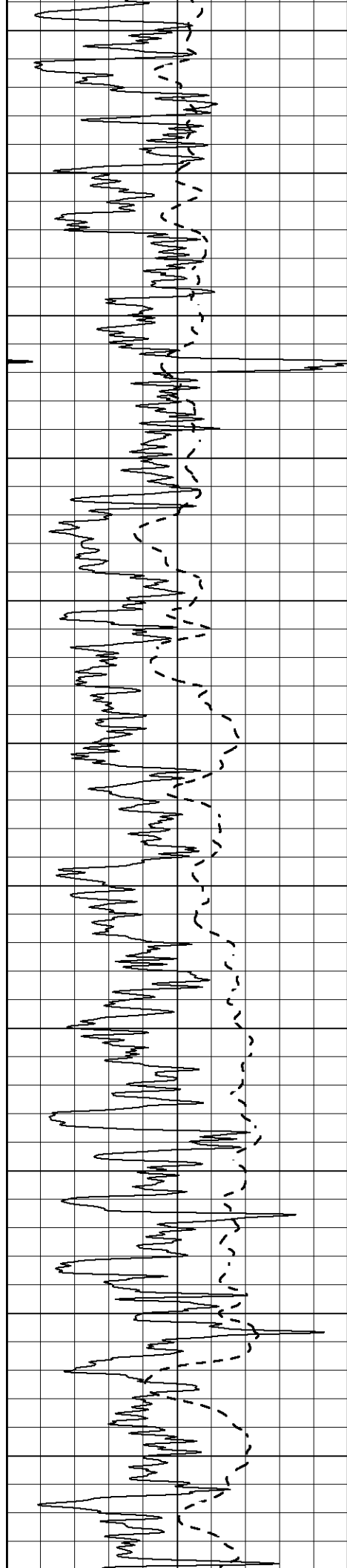
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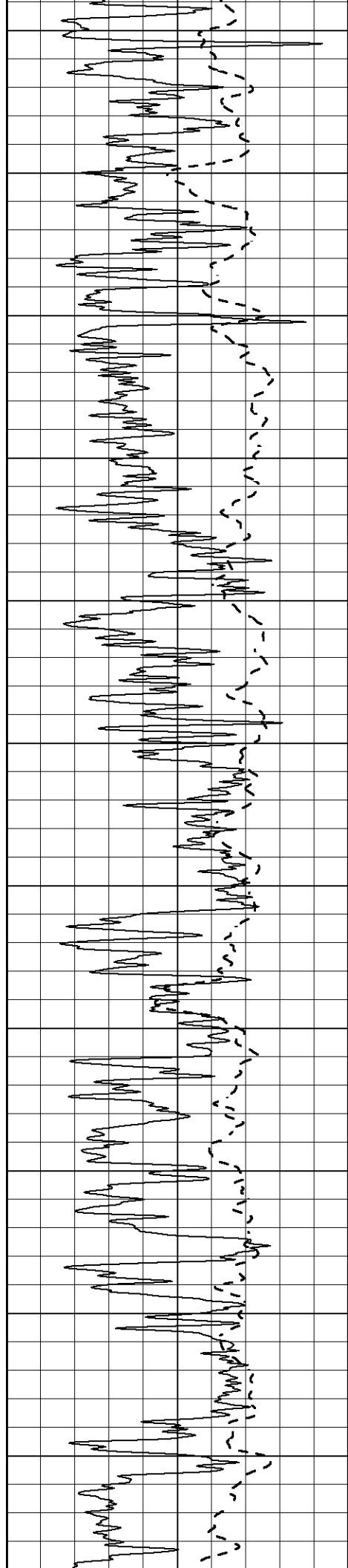
950











2650

2700

2750

2800

2850

2900

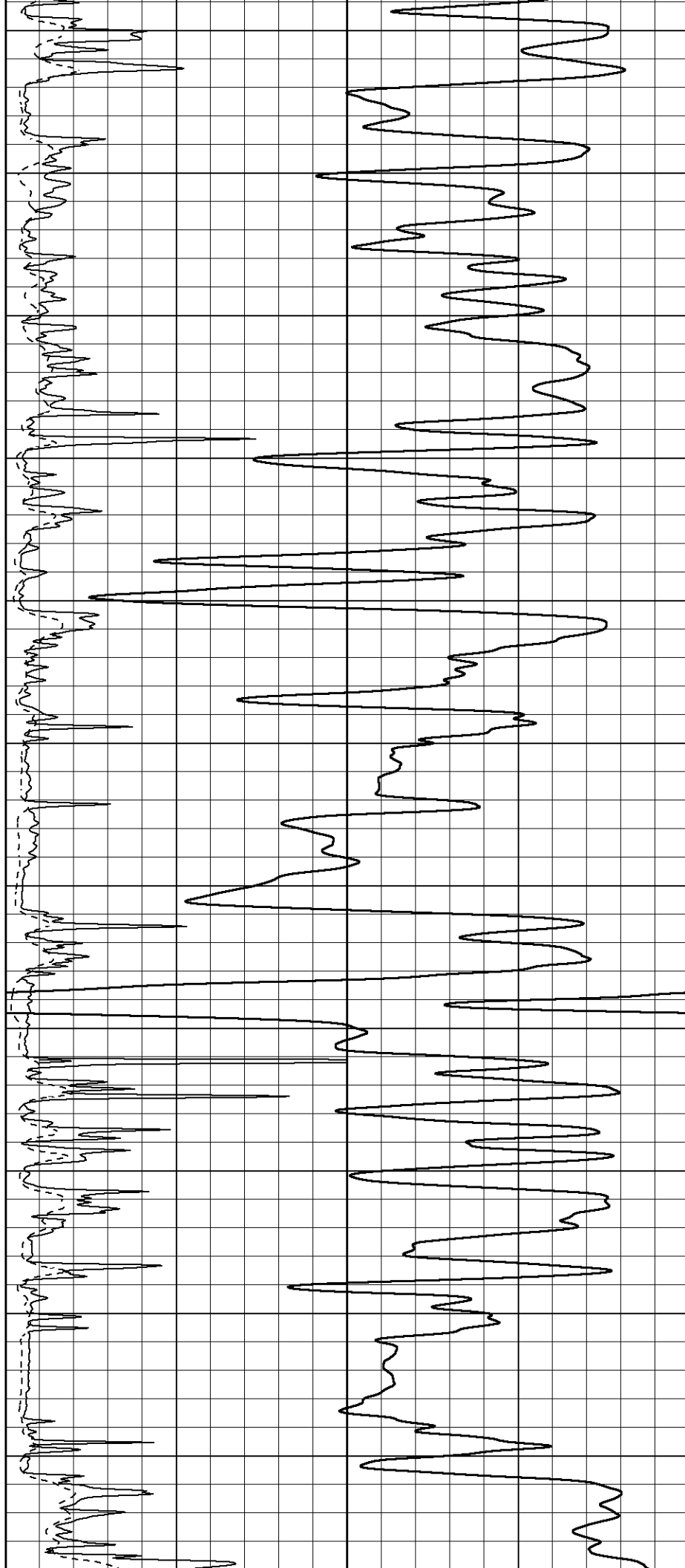
2950

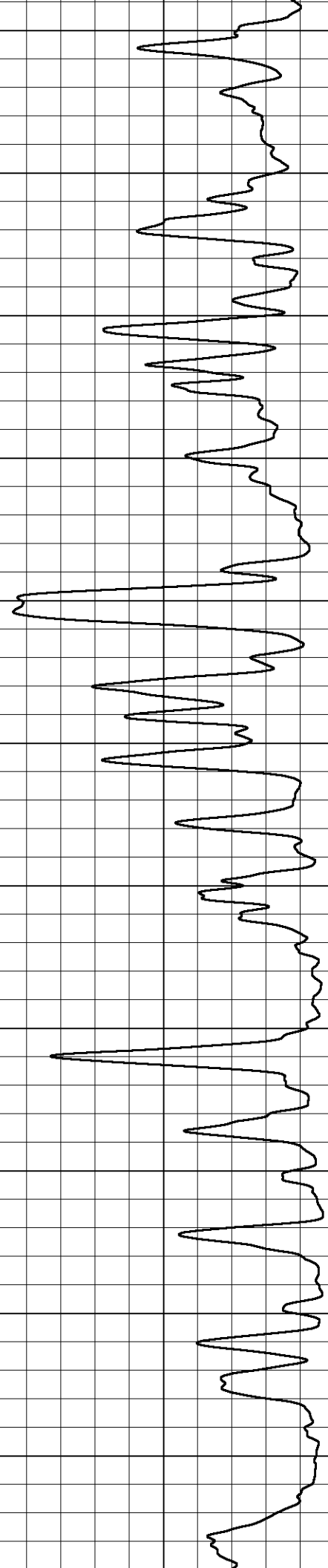
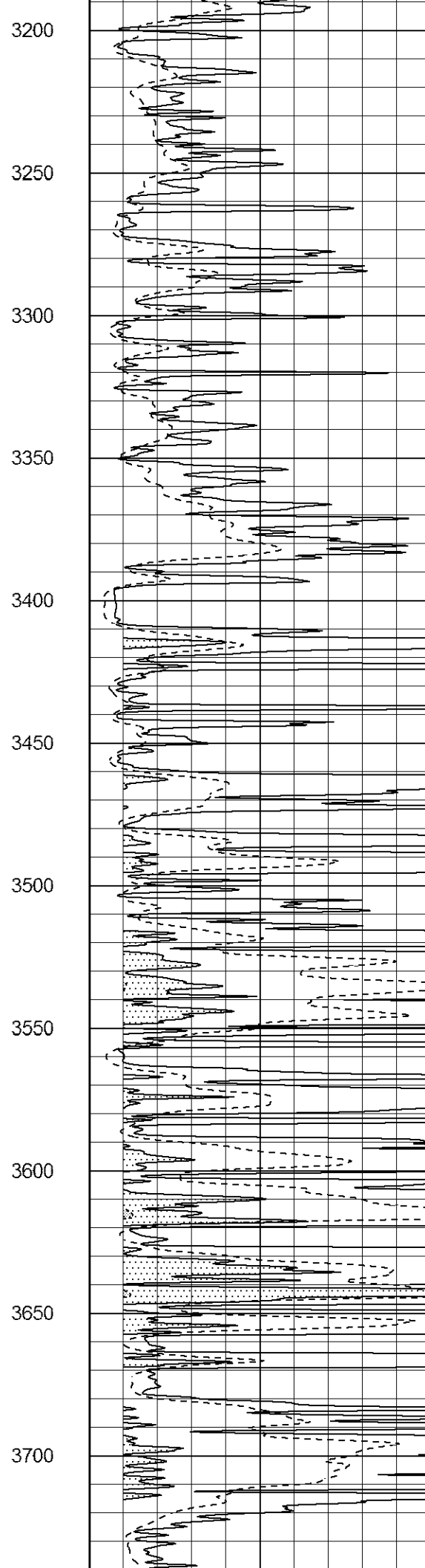
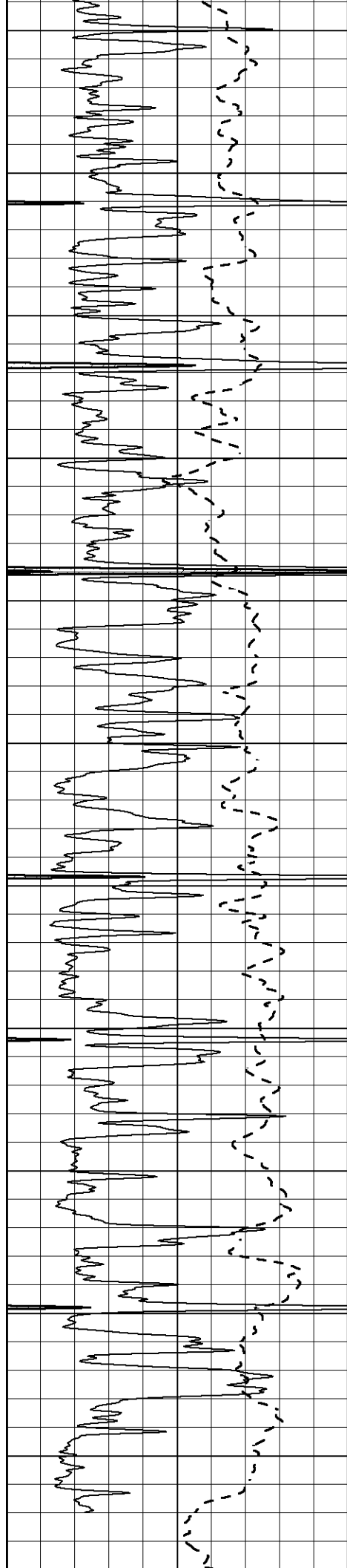
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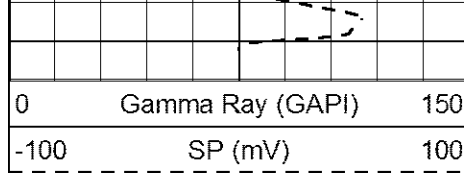
3050

3100

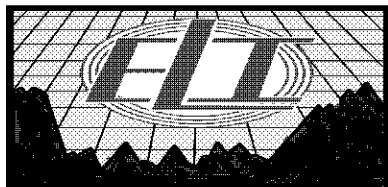
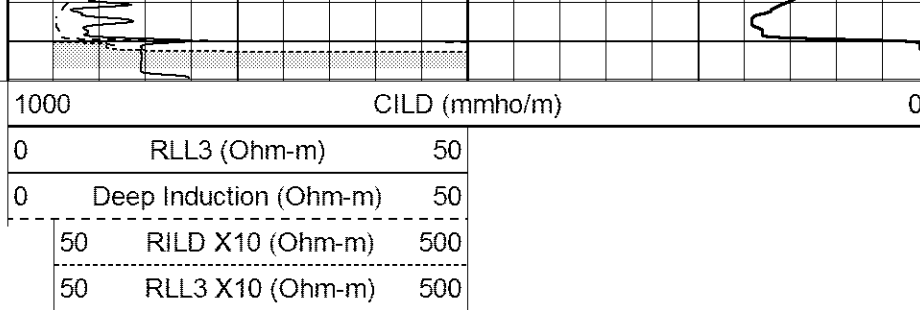
3150





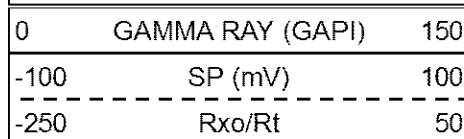


3750



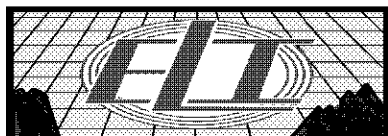
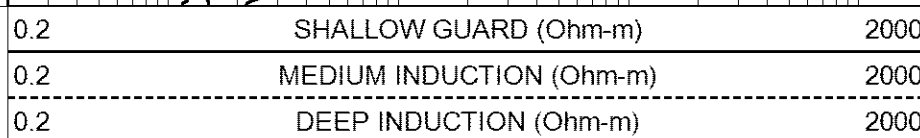
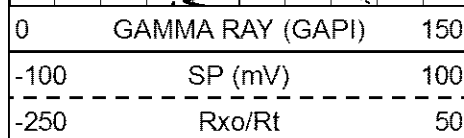
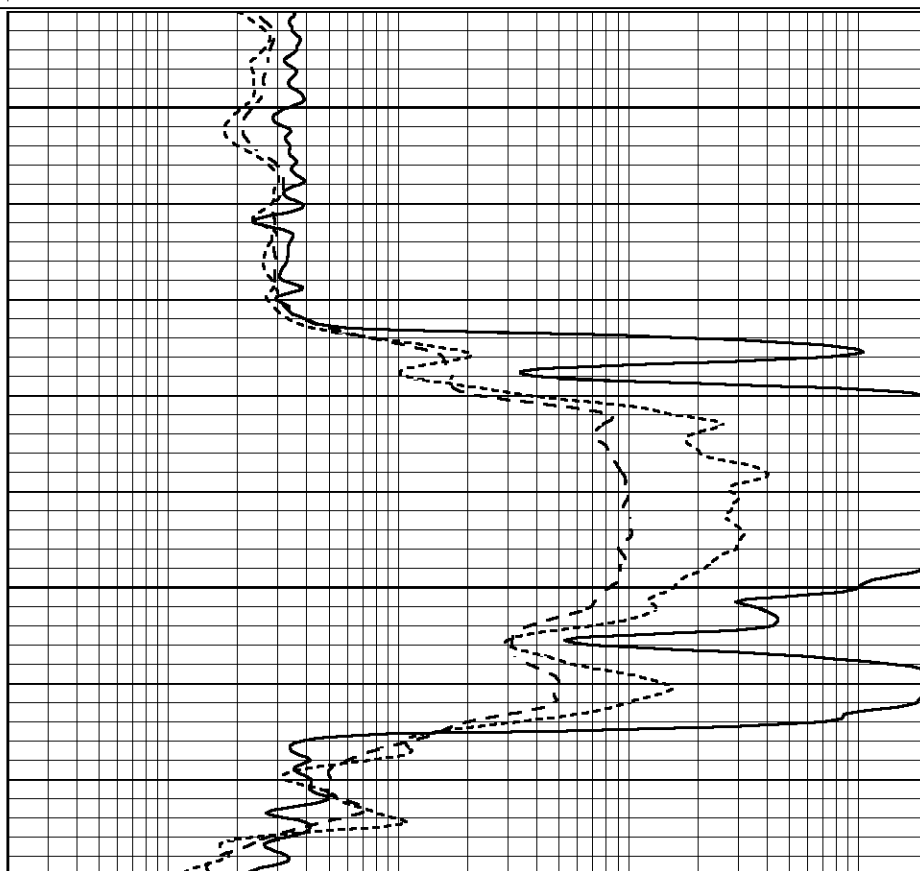
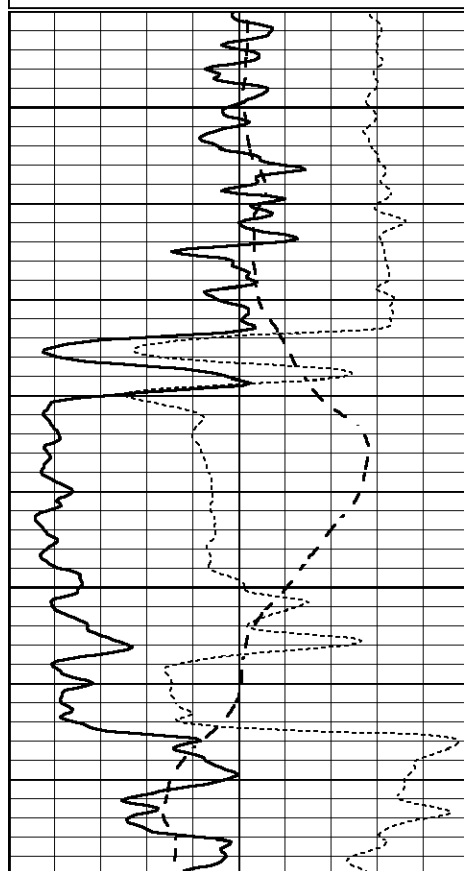
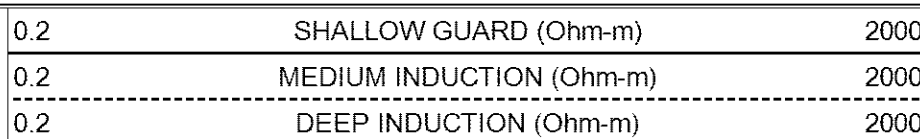
ANHYDRITE

Database File 1119ddn8.db
 Dataset Pathname pass4ANH
 Presentation Format _dil
 Dataset Creation Tue Feb 14 07:35:02 2017
 Charted by Depth in Feet scaled 1:240



1400

1450

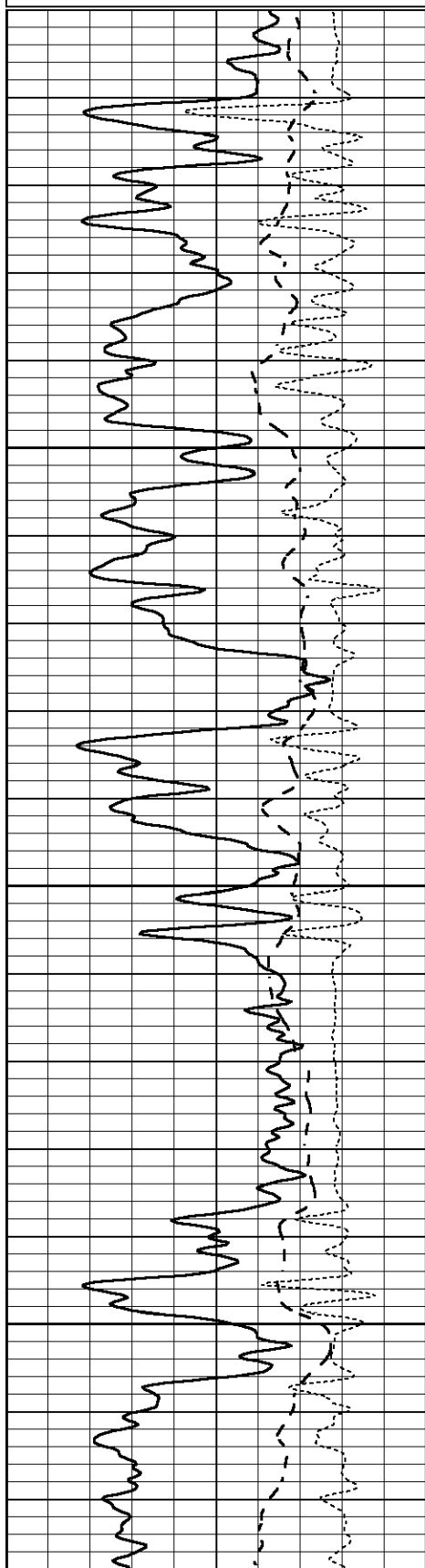


MAIN PASS

Database File 1119ddn8.db
 Dataset Pathname pass4.1
 Presentation Format _dil
 Dataset Creation Tue Feb 14 07:19:13 2017
 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

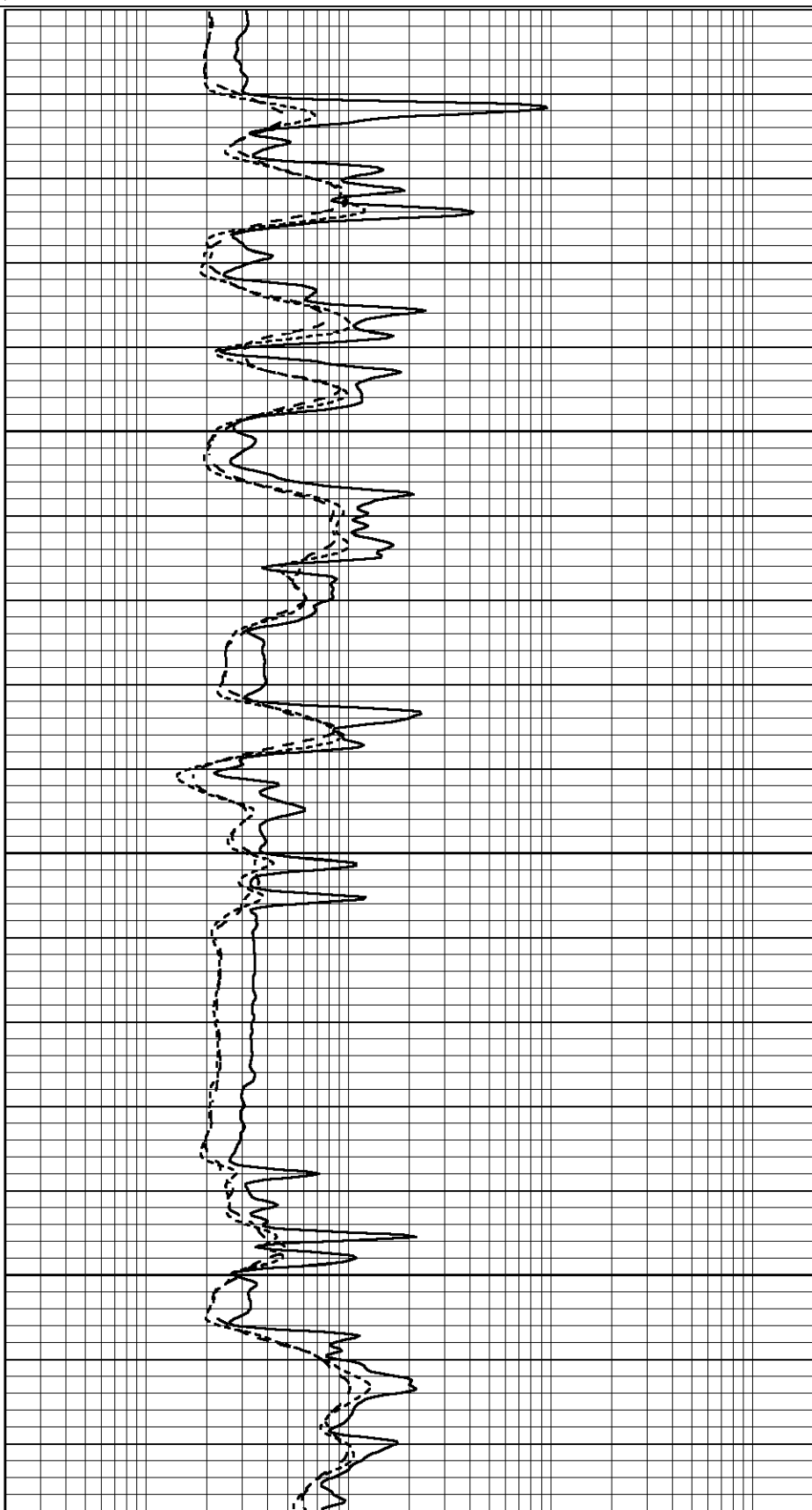


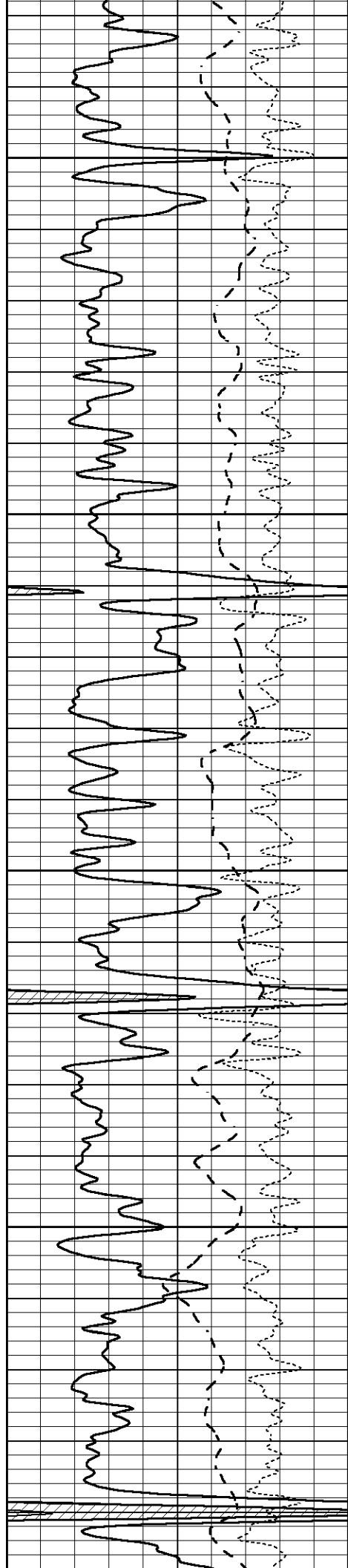
3000

3050

3100

3150



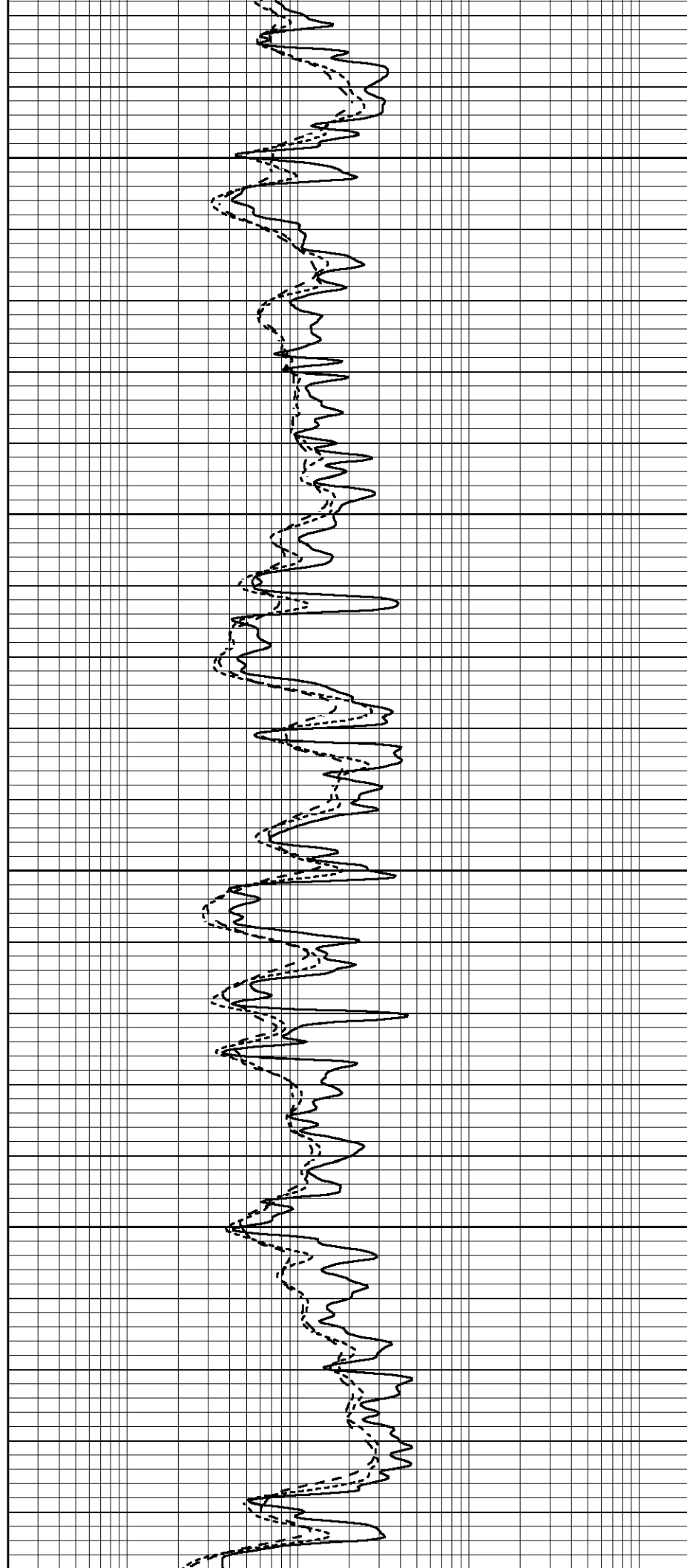


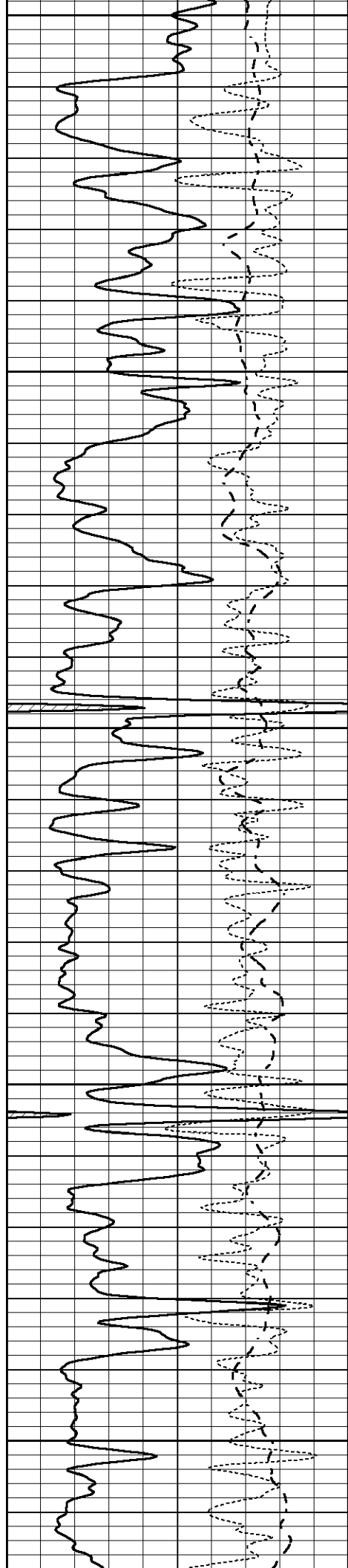
3200

3250

3300

3350





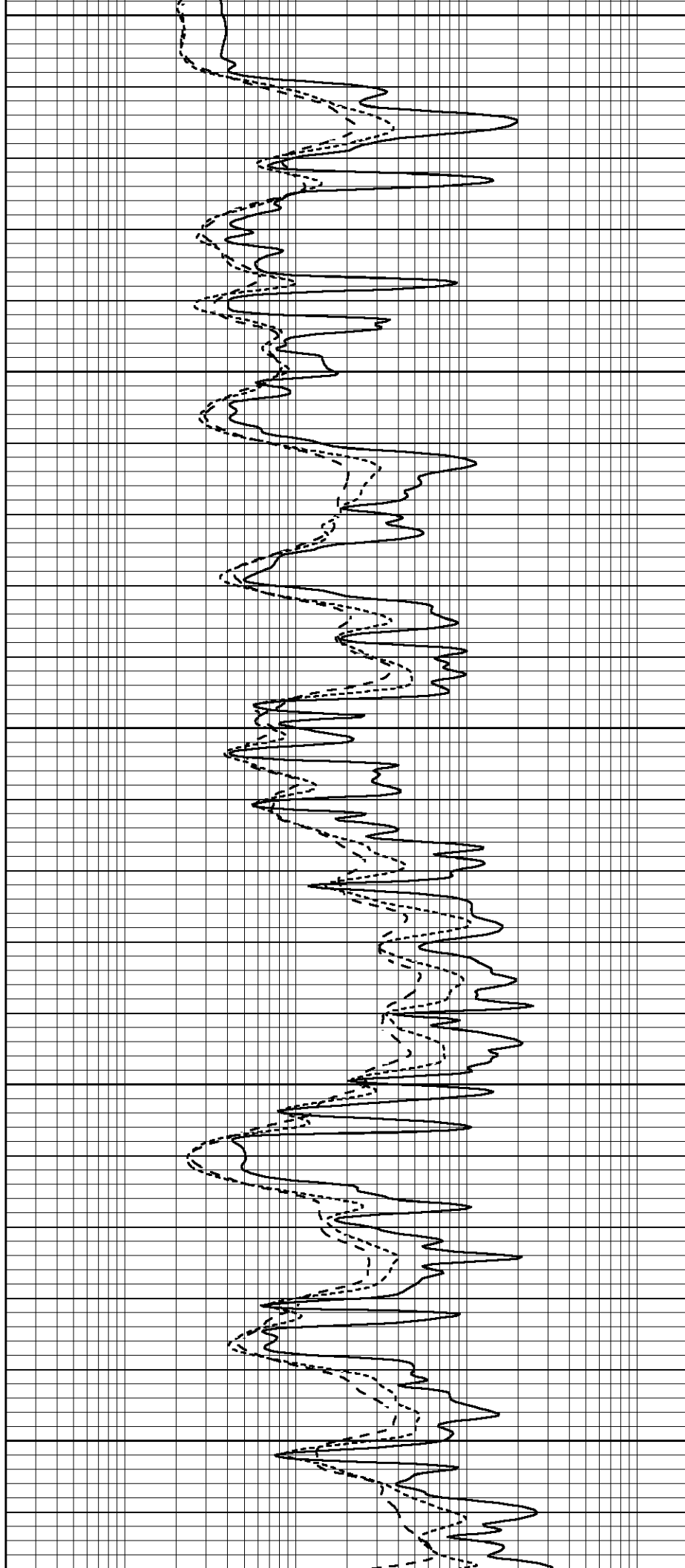
3400

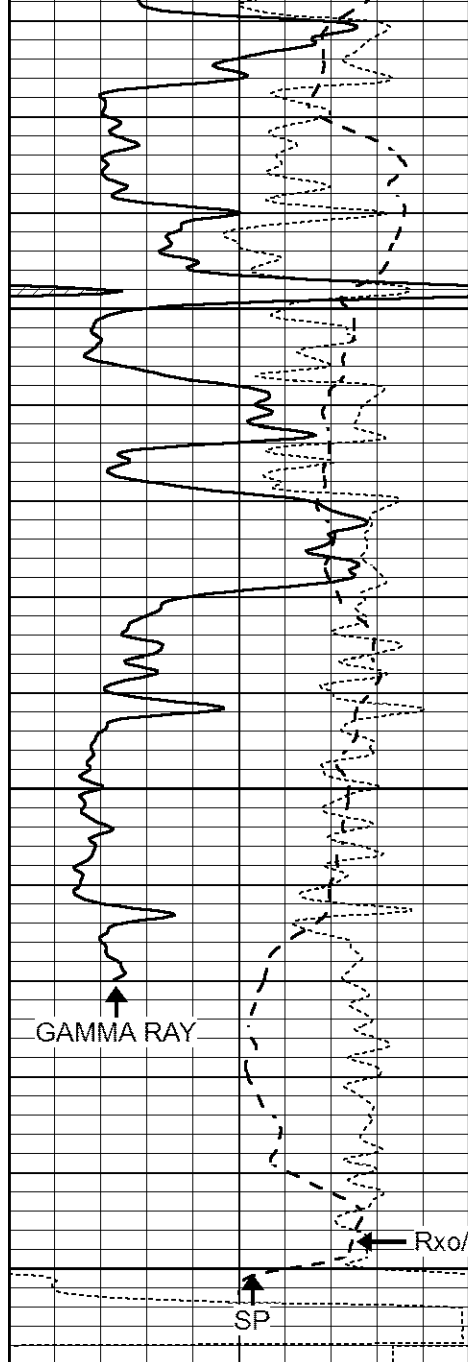
3450

3500

3550

3600





3650

3700

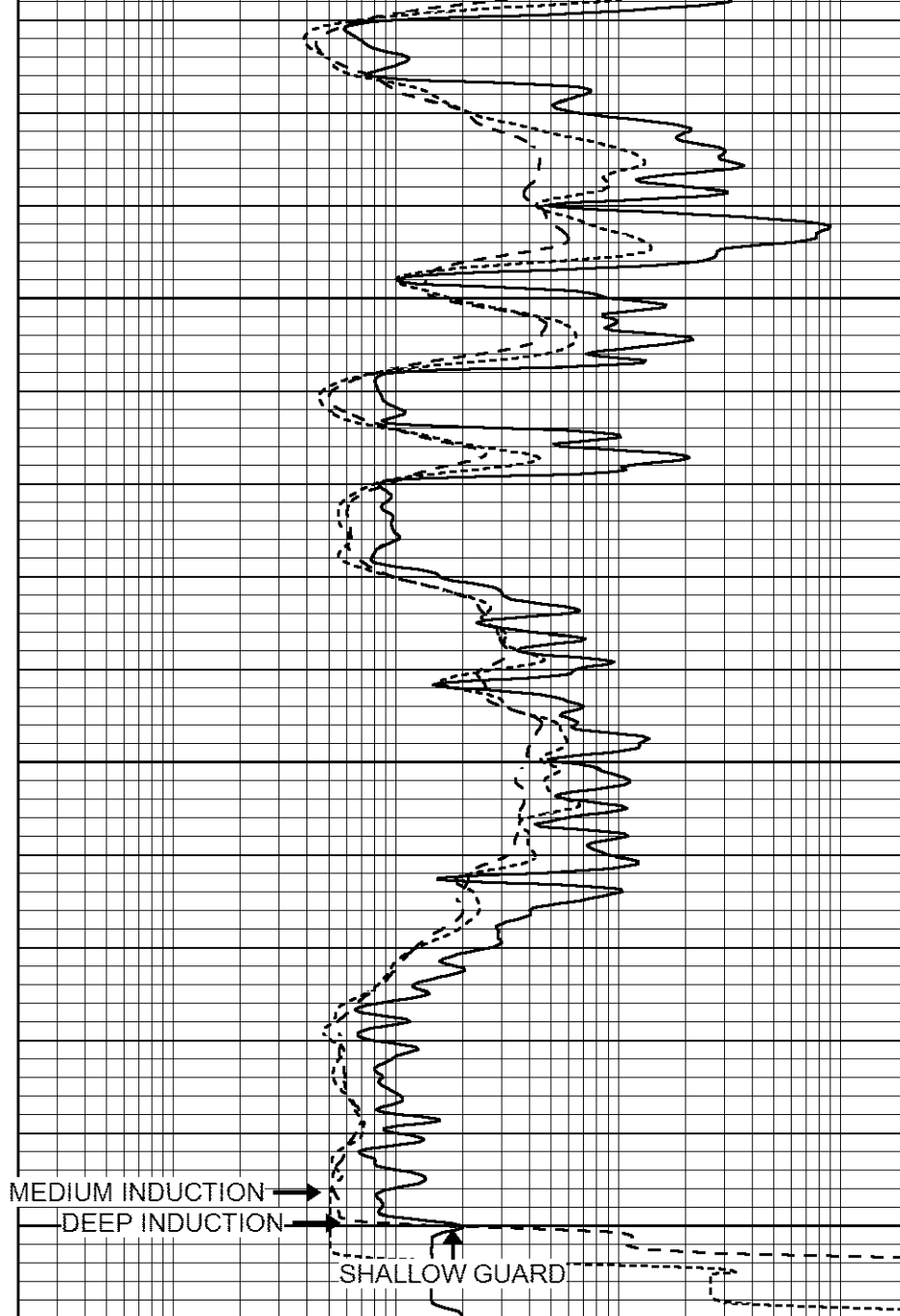
GAMMA RAY

Rxo/Rt

SP

3750
LTD 3752

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

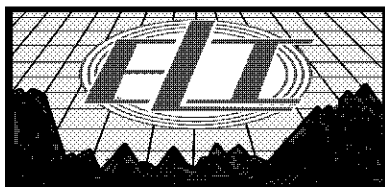


MEDIUM INDUCTION

DEEP INDUCTION

SHALLOW GUARD

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

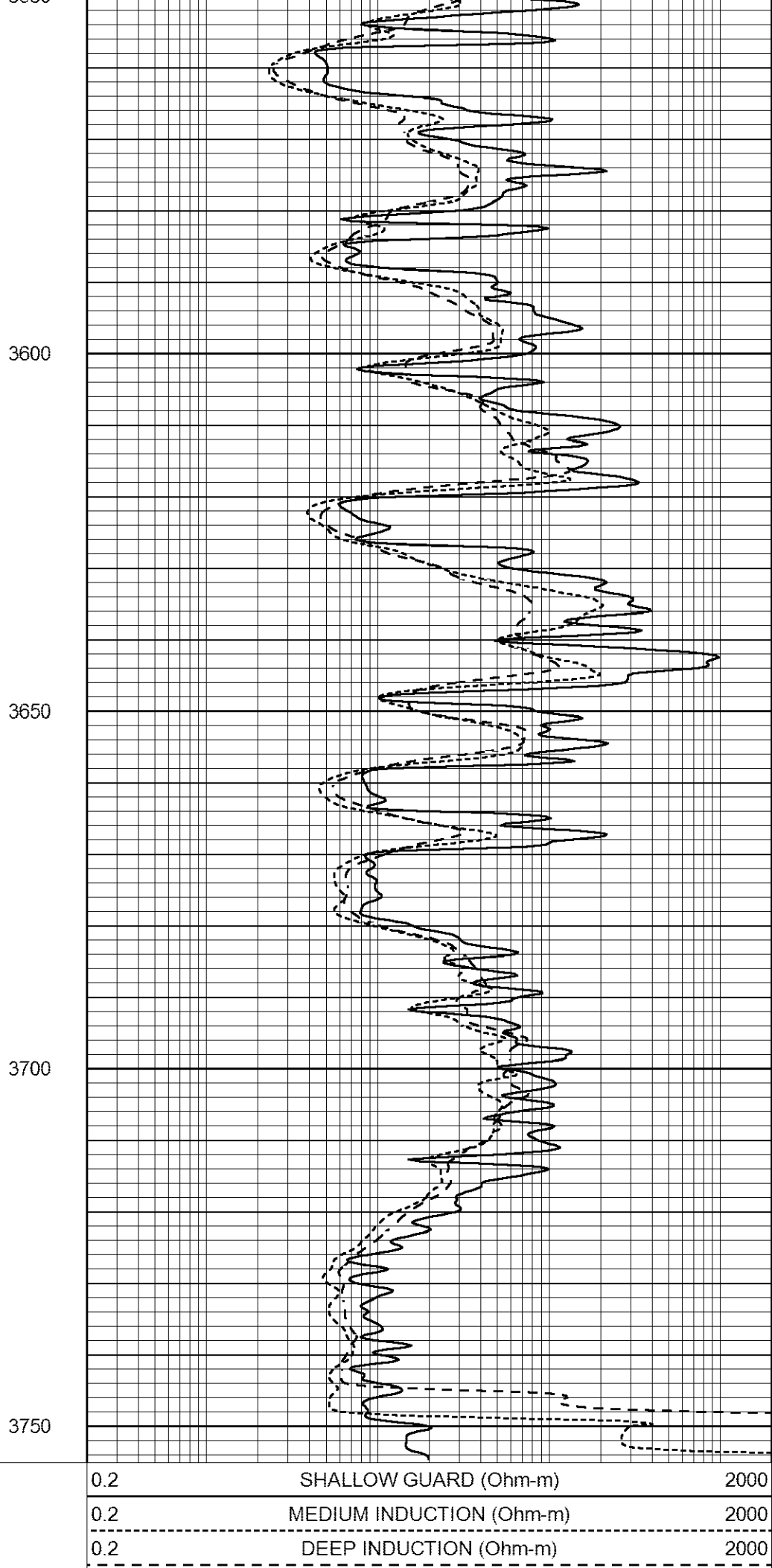
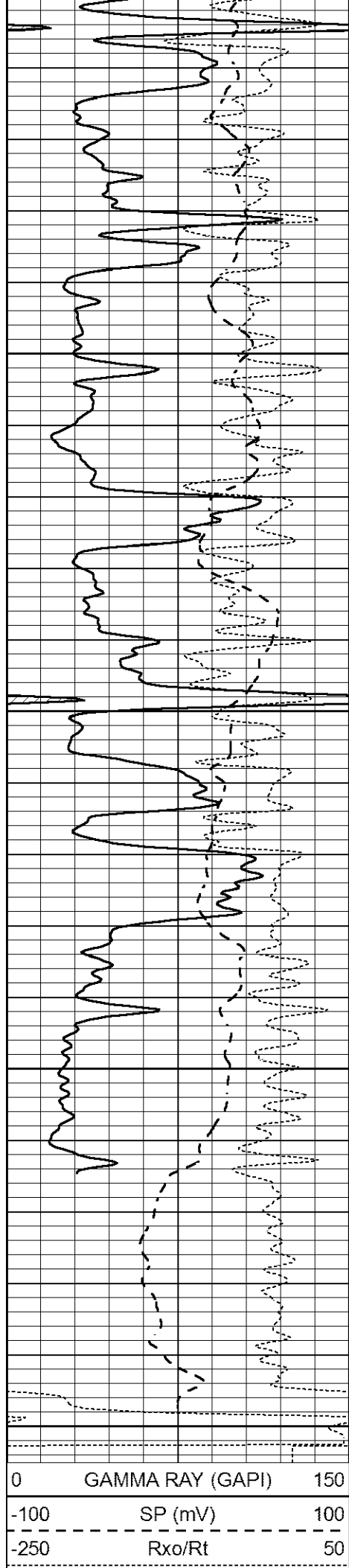


REPEAT SECTION

Database File 1119ddn8.db
 Dataset Pathname pass2.1
 Presentation Format _dil
 Dataset Creation Tue Feb 14 07:01:39 2017
 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



Calibration Report		
Database File	1119ddn8.db	
Dataset Pathname	pass2.1	
Dataset Creation	Tue Feb 14 07:01:39 2017	

Dual Induction Calibration Report

Serial-Model:	FW1410-55-Probe
Surface Cal Performed:	Thu Mar 12 09:27:11 2015
Downhole Cal Performed:	Thu Mar 12 09:29:20 2015
After Survey Verification Performed:	Thu Mar 12 09:29:20 2015

Surface Calibration								
Loop:	Readings			References			Results	
	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

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

Master Calibration					Performed: Wed Feb 11 18:53:41 2015			
	Background	Aluminum	Magnesium					
Window 1	613.01	6027.40	27508.60	cps				
Window 2	48.21	1424.77	7132.66	cps				
Window 4	266.48	1373.19	5767.15	cps				
Window 5	622.07	10090.30	18937.90	cps				
Window 6	49.07	1682.84	3271.18	cps				
Window 8	298.04	3248.38	5980.58	cps				
Bulk Density	-	2.6020	1.6830	g/cc				
Pe	-	3.0000	2.5070	b/e				

LS Alpha: : -1.8451		SS Alpha: : -0.7542		LS CPE: : 1.0882	
LS Beta: : 138648.8473		SS Beta: : 21960.9250		SS CPE: : 1.5181	
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 Feb 11 18:53:41 2015	
Results		Readings		References (in)	
Low		High		Gain	
5123.0		9461.6		0.0	
				Offset	
				1.5	
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:	070558	
Tool Model:	Probe1	
Performed:	Wed Jun 29 08:29:10 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps