DUAL INDUCTION LOG

Company DIXON OPERATING COMPANY, LLC.
Well CURTIS #1-4
Field RATTLESNAKE CREEK
County STAFFORD State KANSAS

Location: API # : 15-185-23987-0000
330' FSL & 3960' FEL
SEC 4 TWP 23S RGE 12W

Other Services
CDL/CNL/PE
MEL/SON

Permanent Datum GROUND LEVEL Elevation 1843
Log Measured From KELLY BUSHING 9' A.G.L
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1852
D.F. 1850
G.L. 1843

Date	6/10/17			
Run Number	ONE			
Depth Driller	3825			
Depth Logger	3823			
Bottom Logged Interval	3821			
Top Log Interval	00			
Casing Driller	8 5/8" @ 347'			
Casing Logger	347'			
Bit Size	7 7/8			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5500 PPM		
Density / Viscosity	9.4/49			
pH / Fluid Loss	10.0/9.6			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	.51 @ 79F			
Rmf @ Meas. Temp	.38 @ 79F			
Rmc @ Meas. Temp	.61 @ 79F			
Source of Rmf / Rmc	MEASUREMENT			
Rm @ BHT	.35 @ 114F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom				
Maximum Recorded Temperature	114F			
Equipment Number	3802			
Location	HAYS, KANSAS			
Recorded By	JASON CAPPELLUCCI			
Witnessed By	CHUCK SCHMALTZ			

<<< Fold Here >>>

Comments

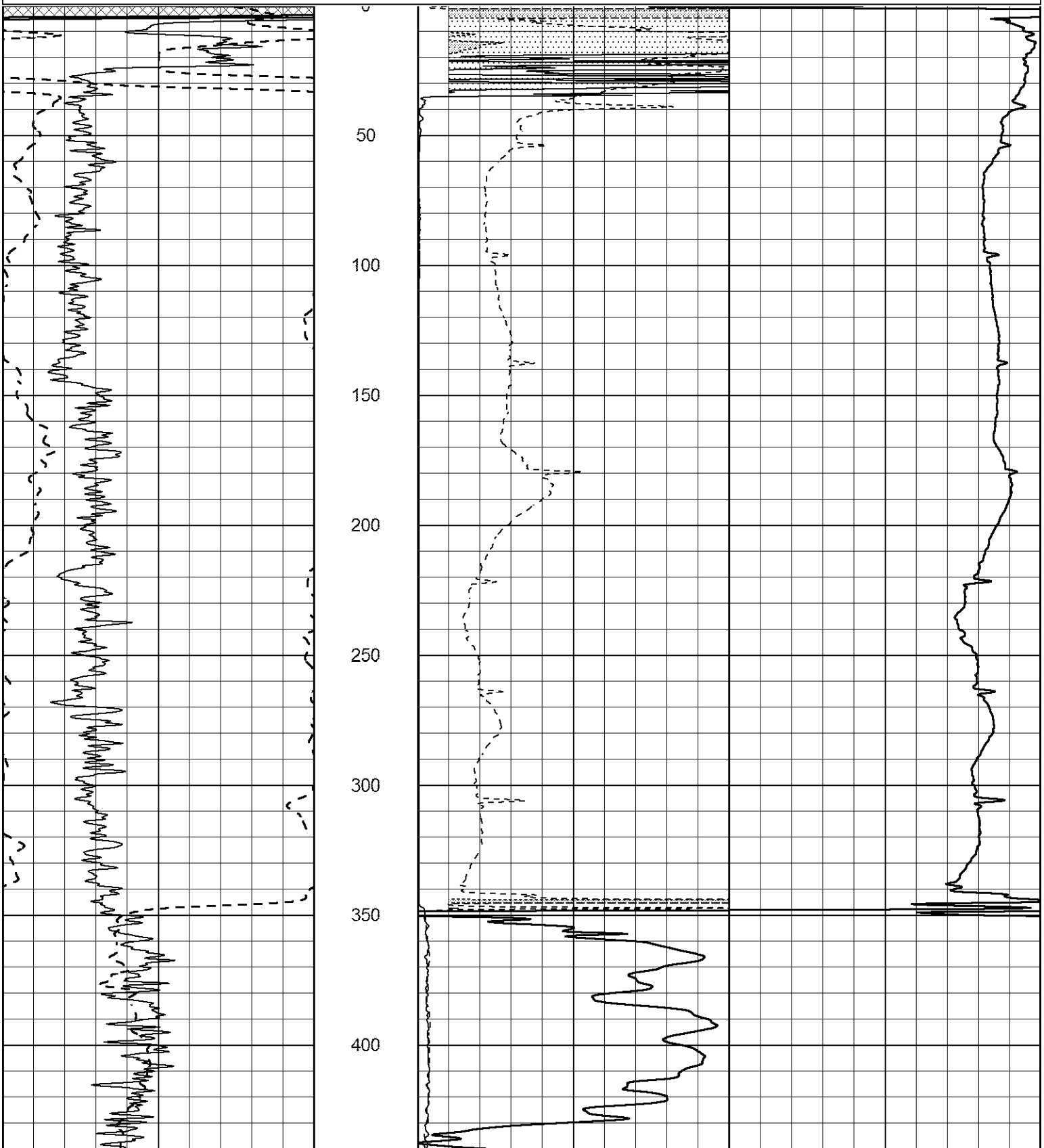
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
ST. JOHN, KS. - 3 NORTH TO 70TH RD. - 5 EAST TO 50 RD. - 1 NORTH - 1/4 EAST - NORTH INTO

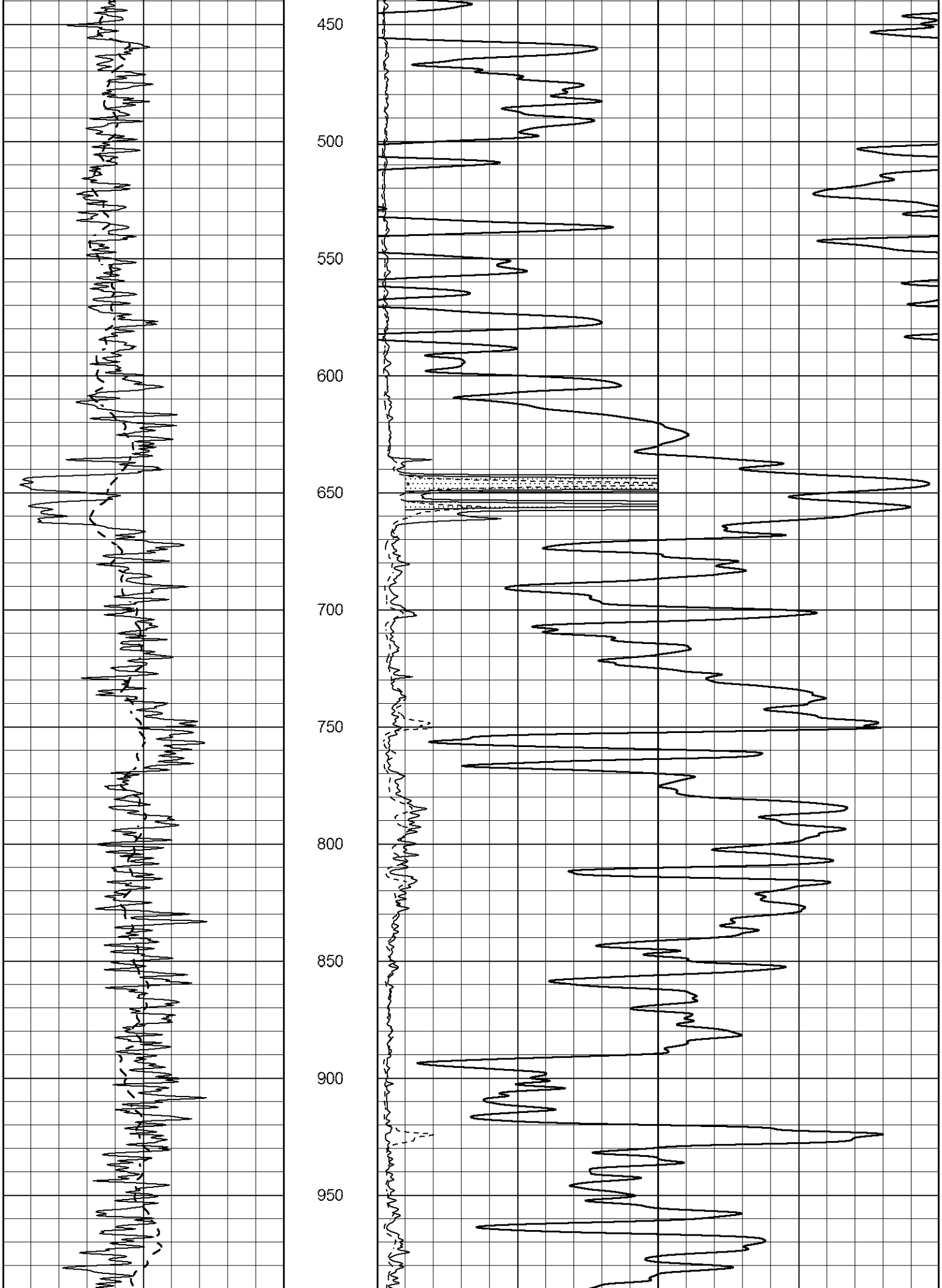
MAIN SECTION

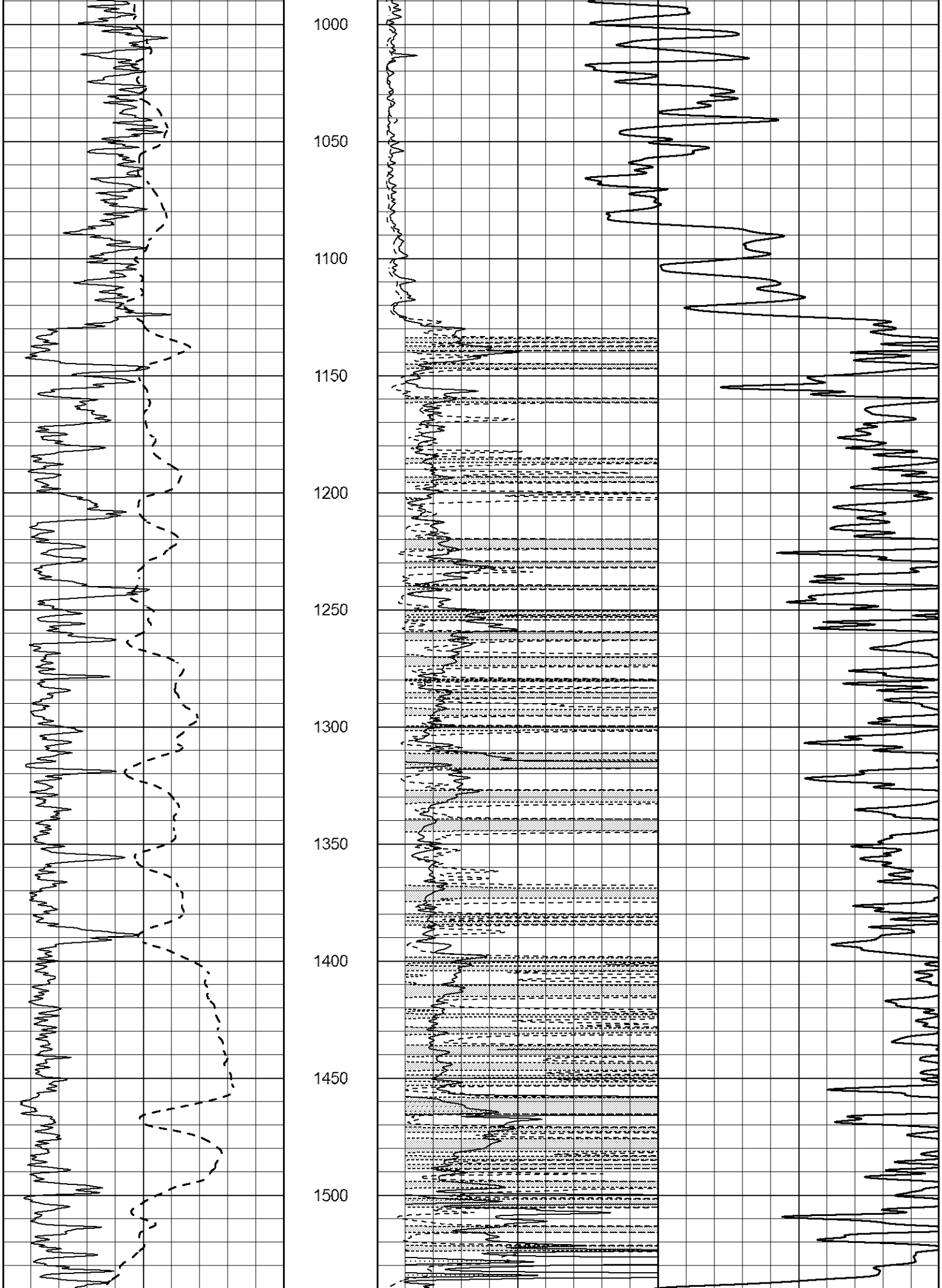
Database File	1148pe8_autosave.db
Dataset Pathname	pass3.3
Presentation Format	_dil2
Dataset Creation	Sat Jun 10 10:24:06 2017
Charted by	Depth in Feet scaled 1:600

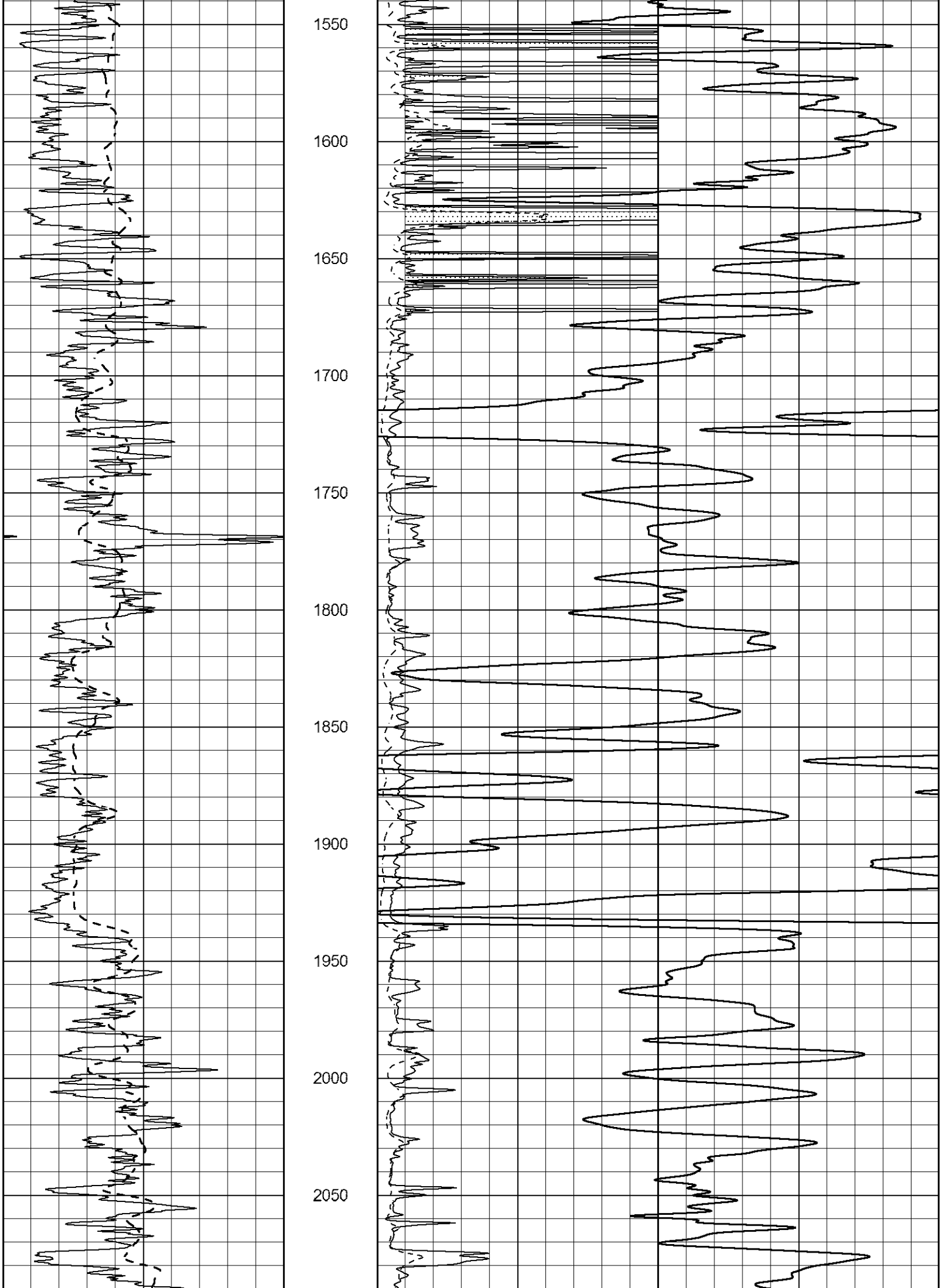
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

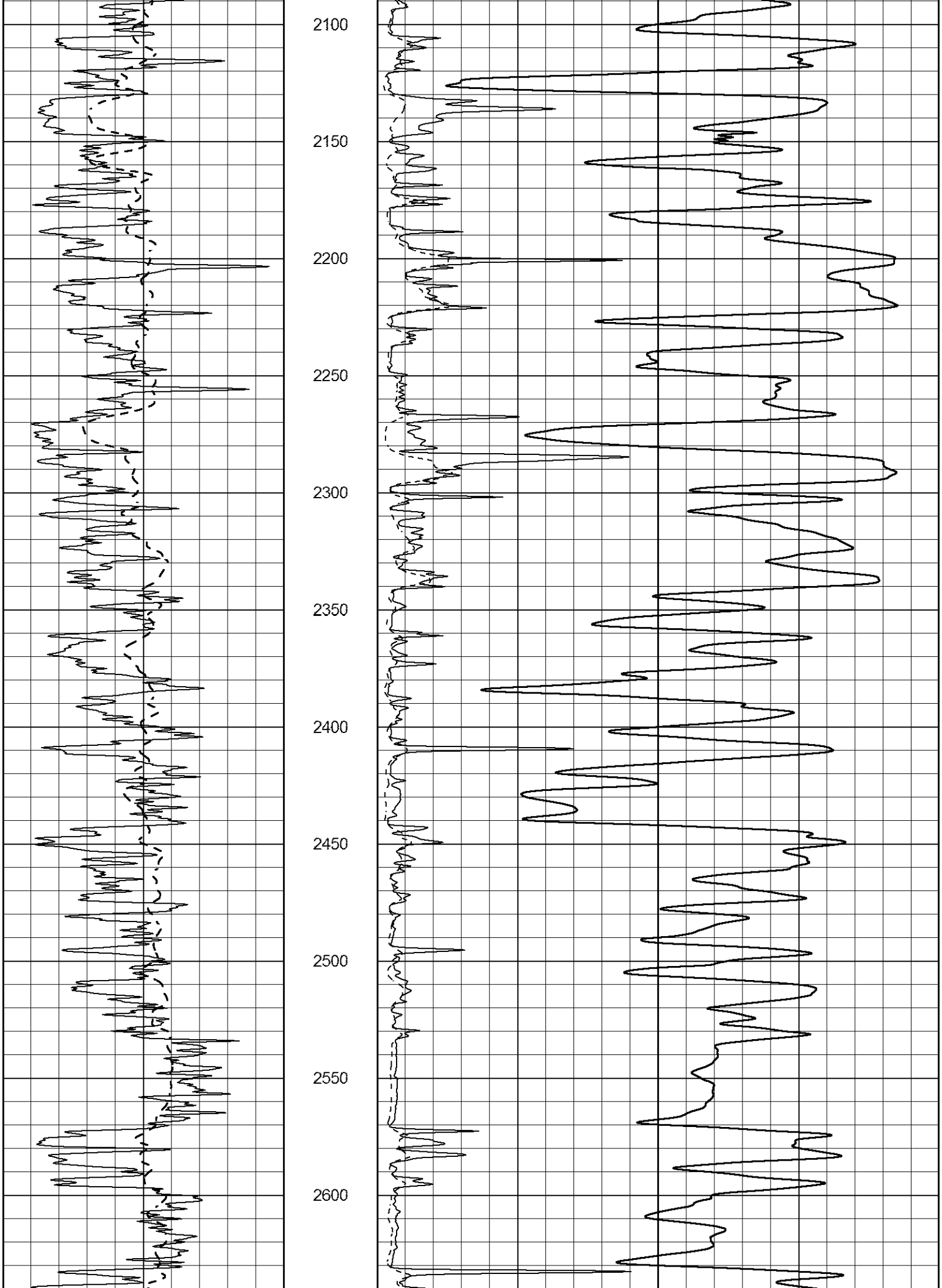
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	*Deep Induction (Ohm-m)*	50
50	*RILD X10 (Ohm-m)*	500
50	RLL3 X10 (Ohm-m)	500

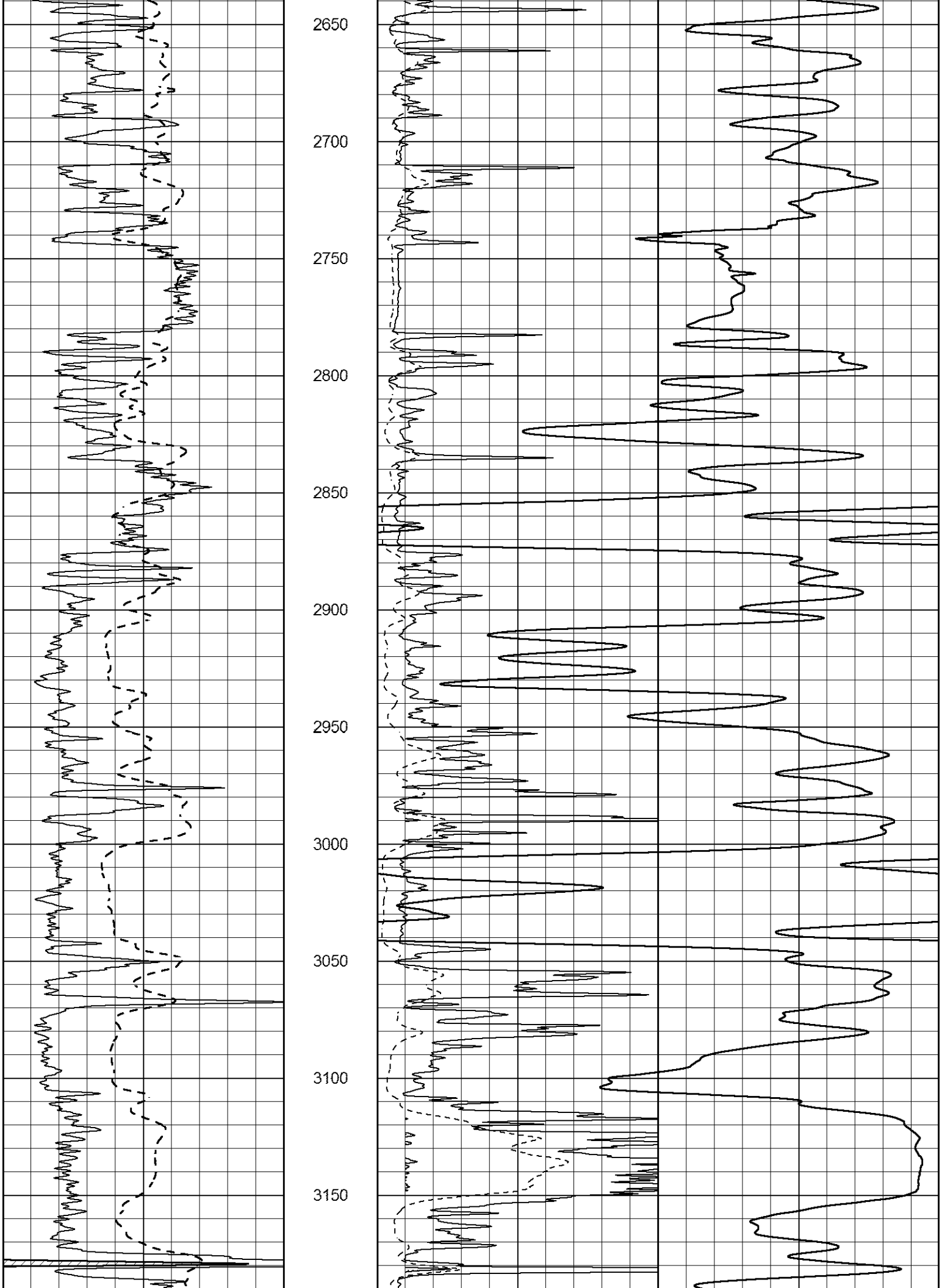


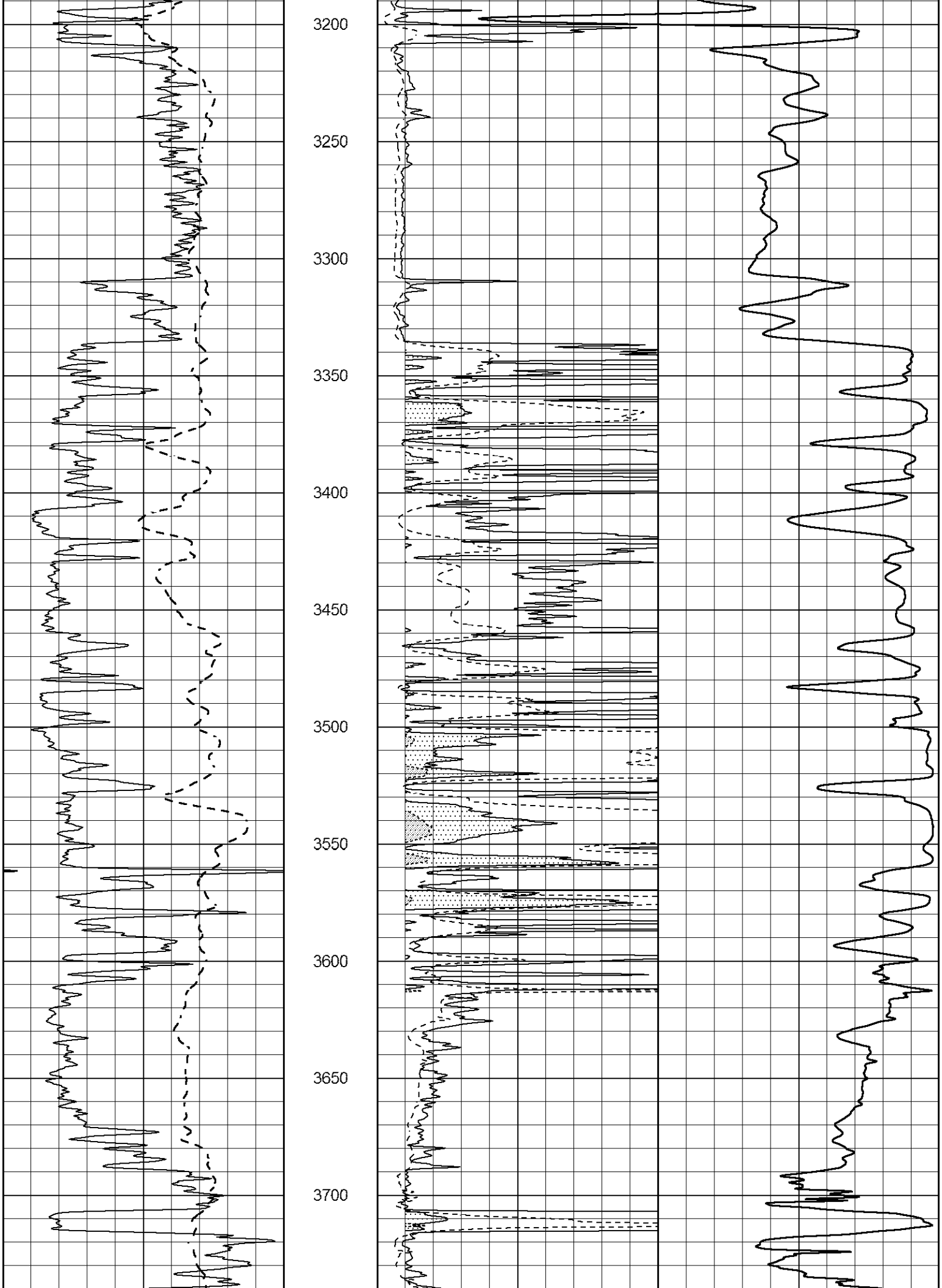

450
500
550
600
650
700
750
800
850
900
950

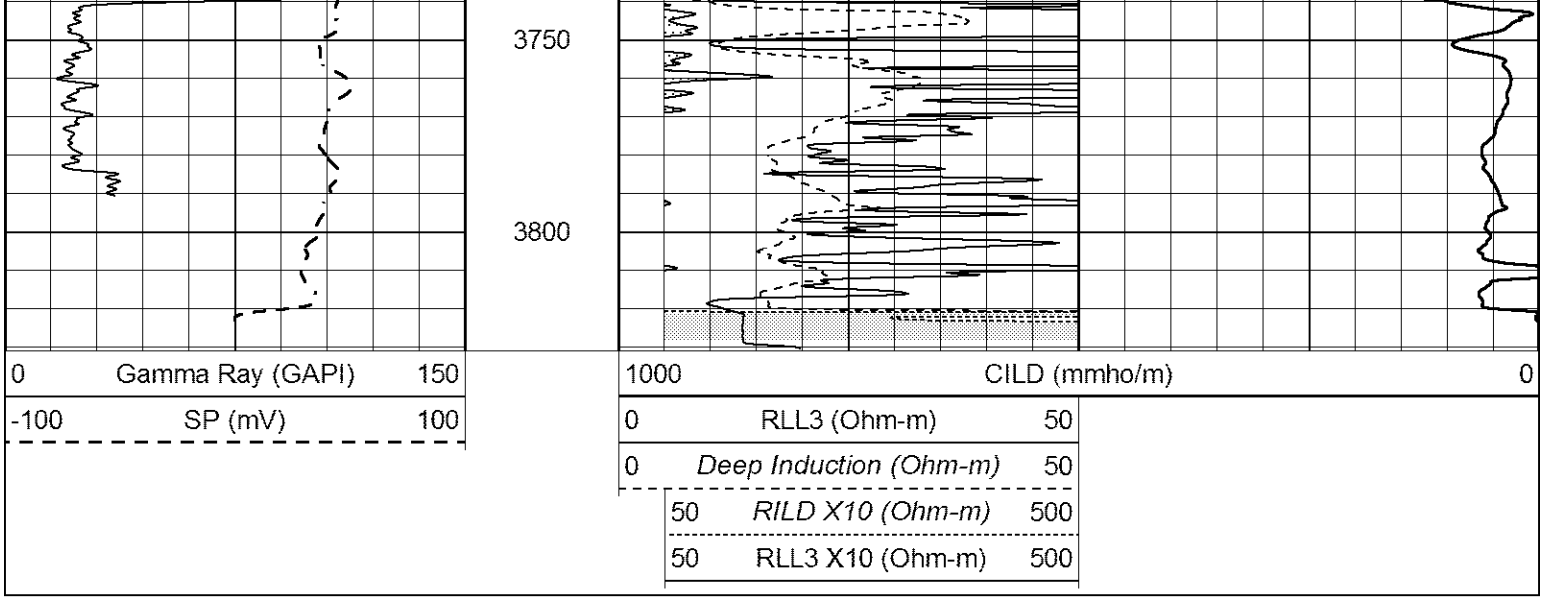

1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500


1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050


2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600

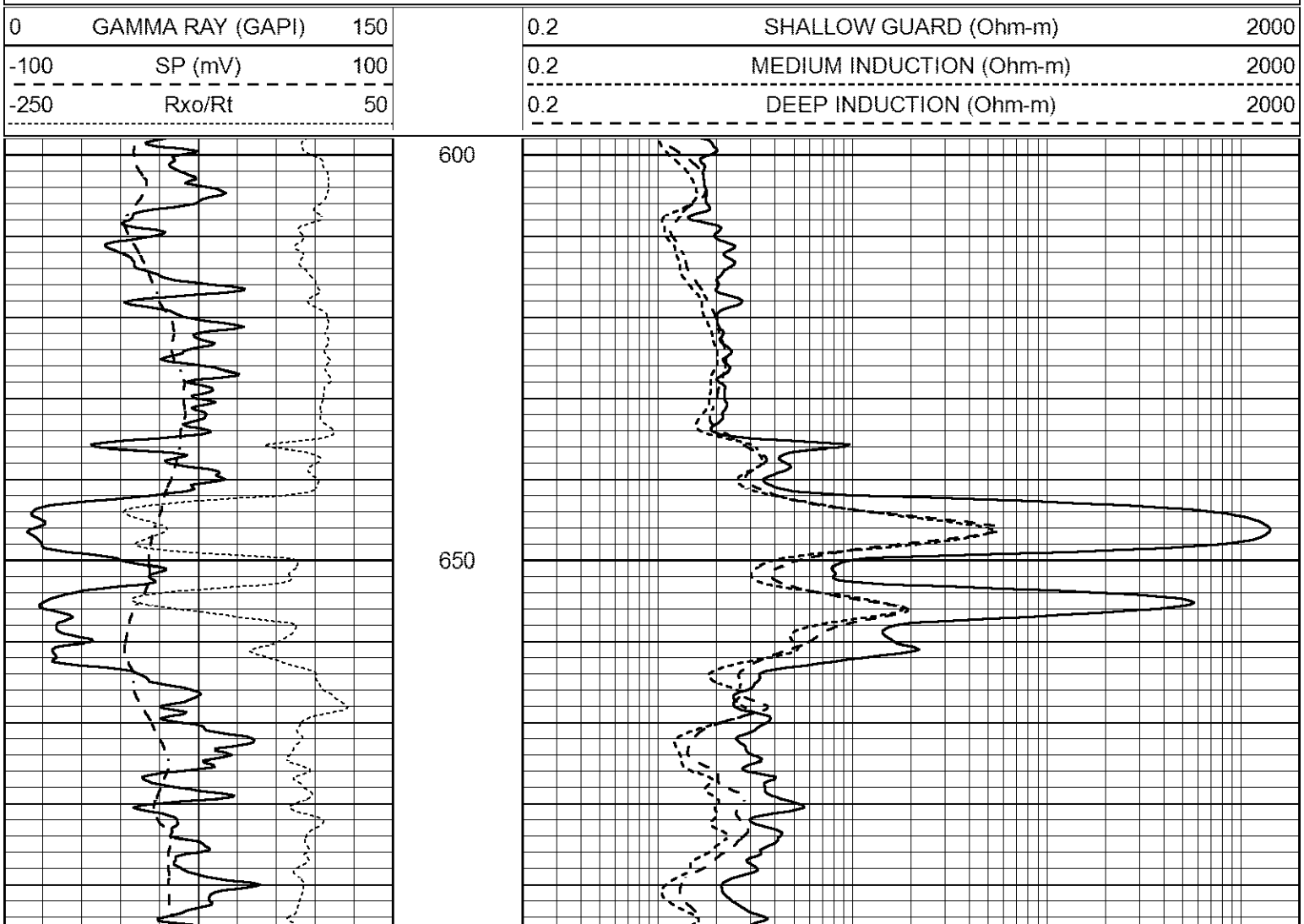

2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150

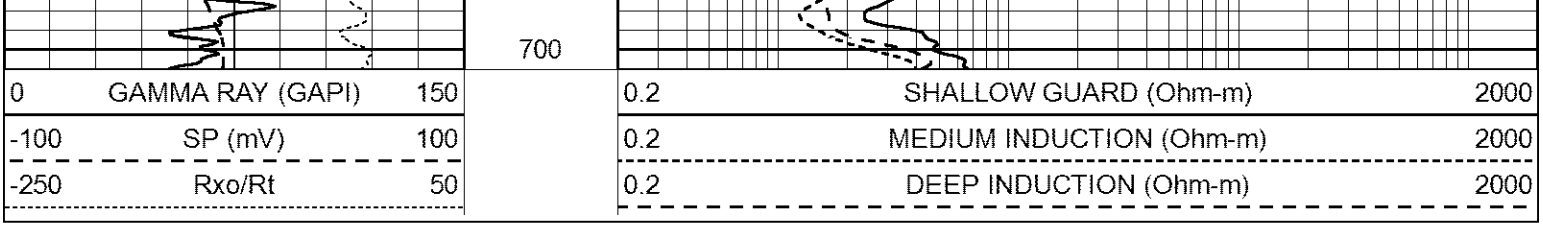

3200
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700



ANHYDRITE

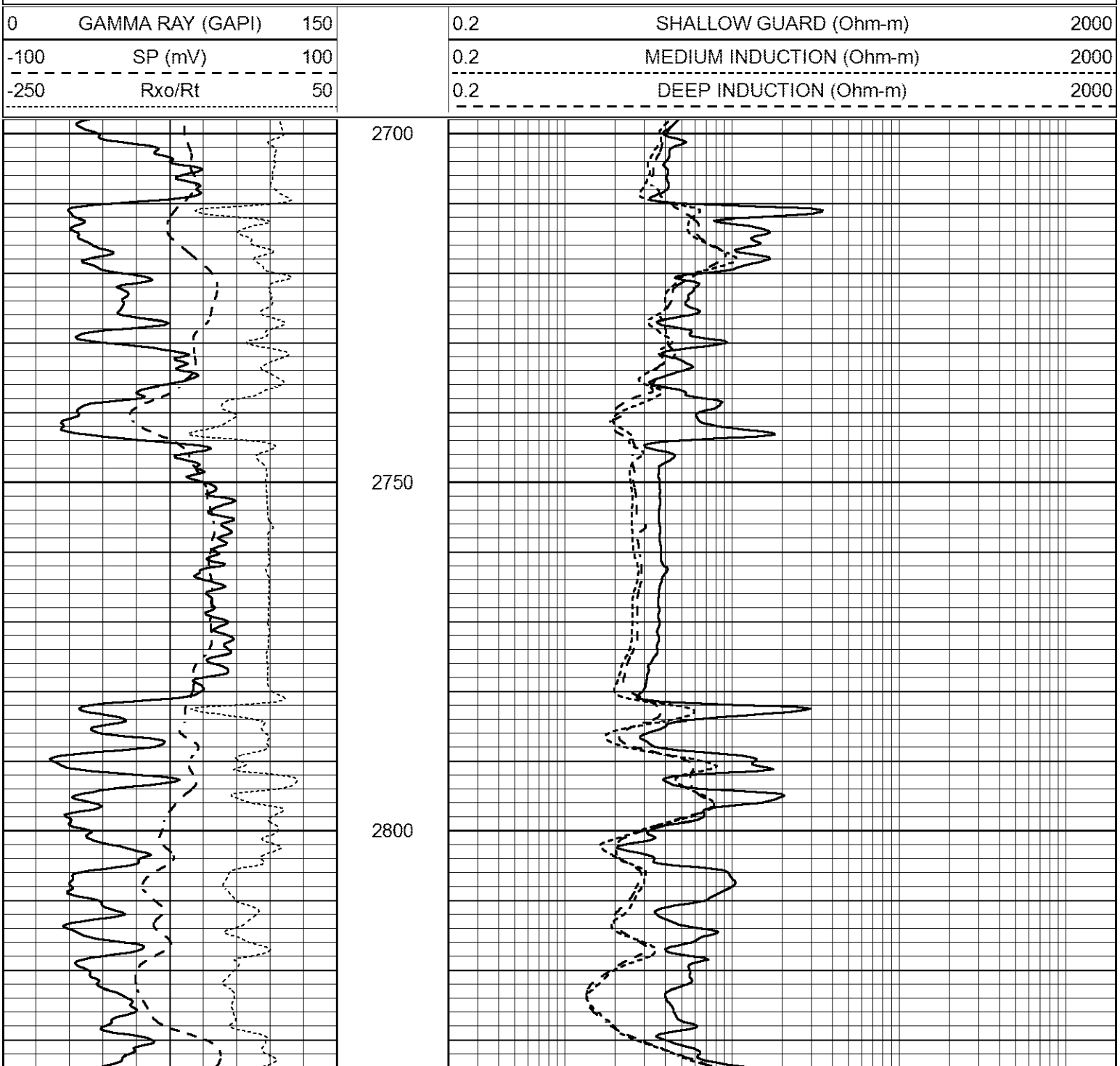
Database File	1148pe8_autosave.db
Dataset Pathname	pass3.2.1
Presentation Format	_dil
Dataset Creation	Sat Jun 10 09:49:47 2017
Charted by	Depth in Feet scaled 1:240

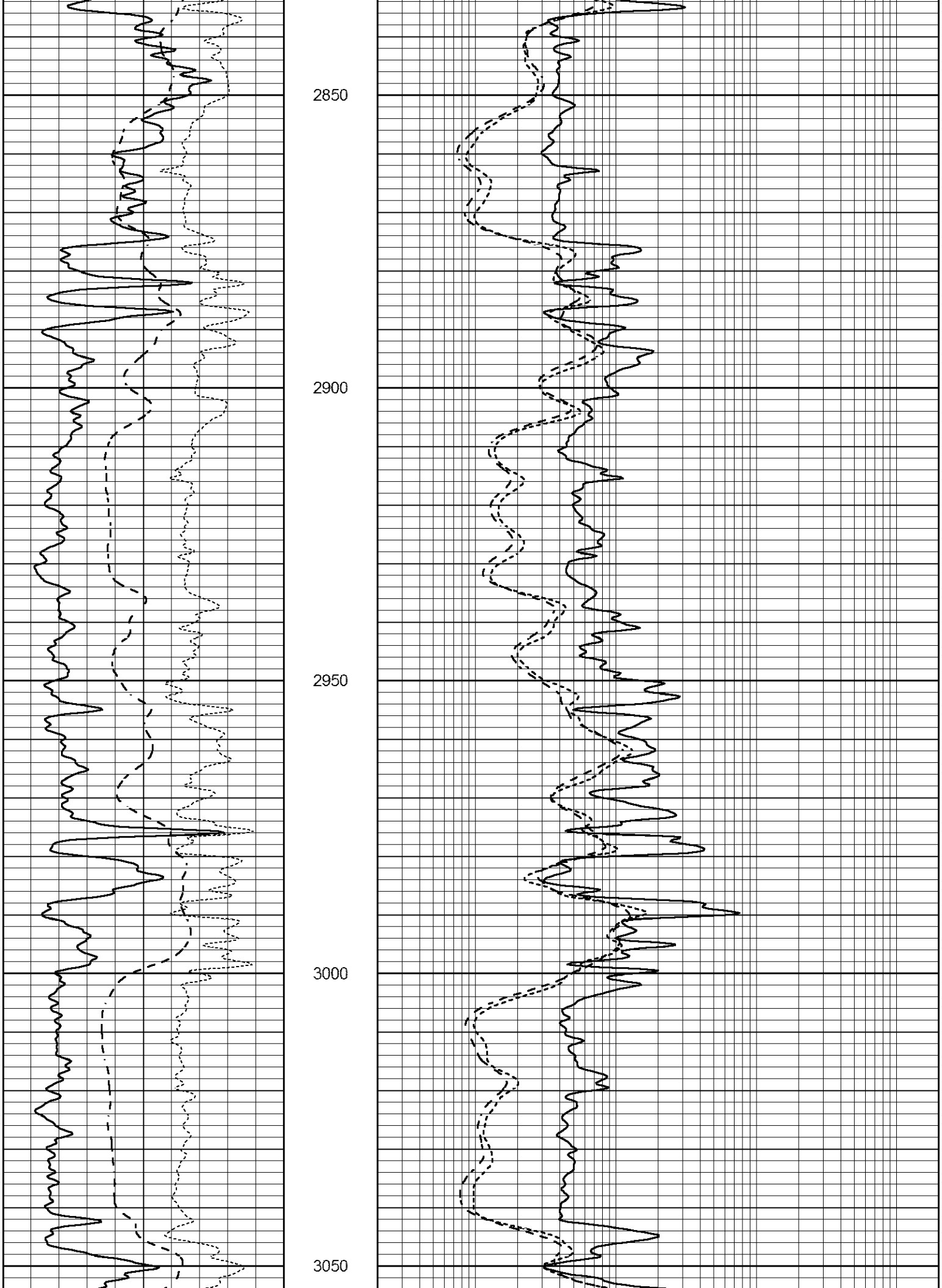


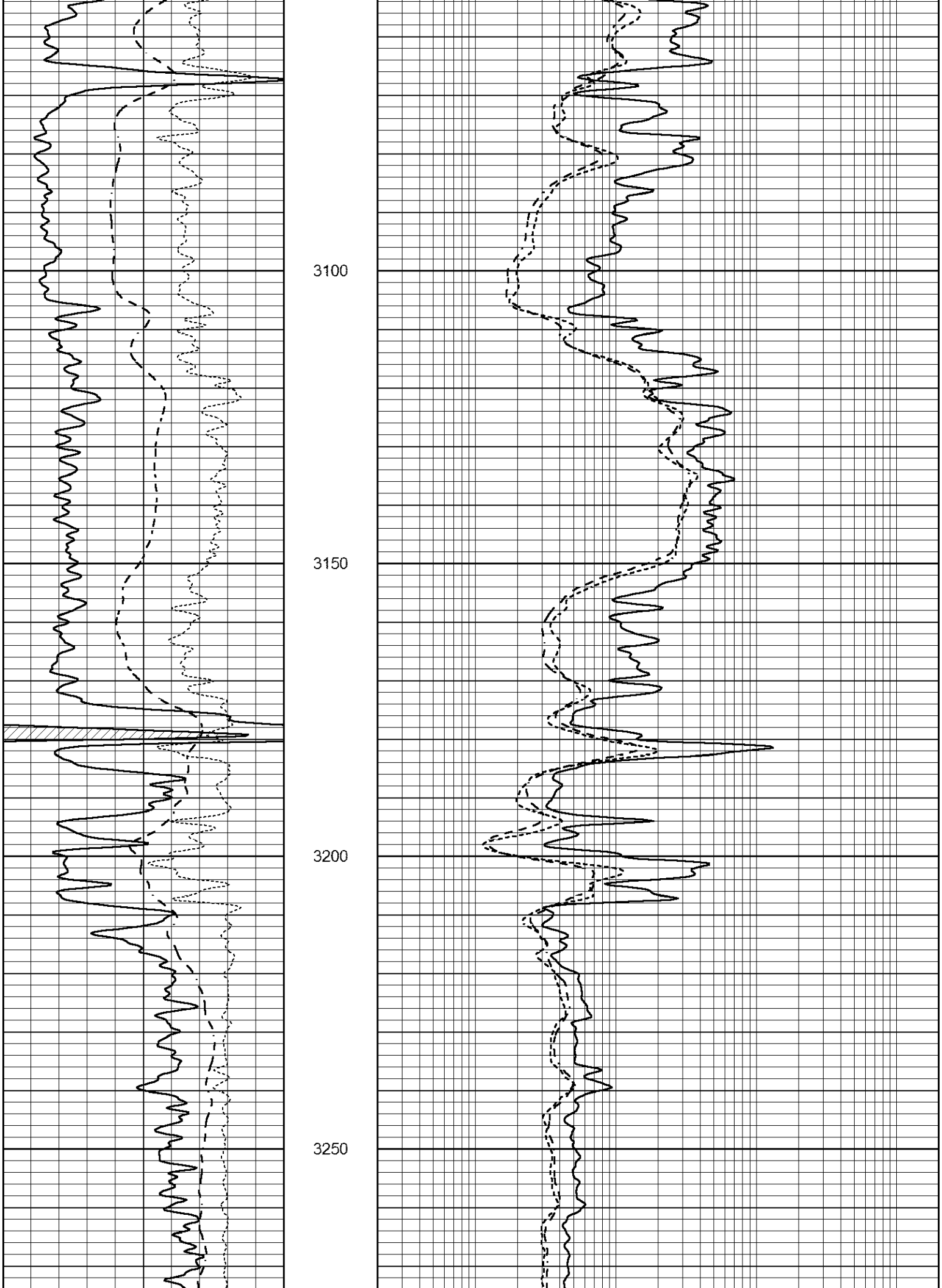


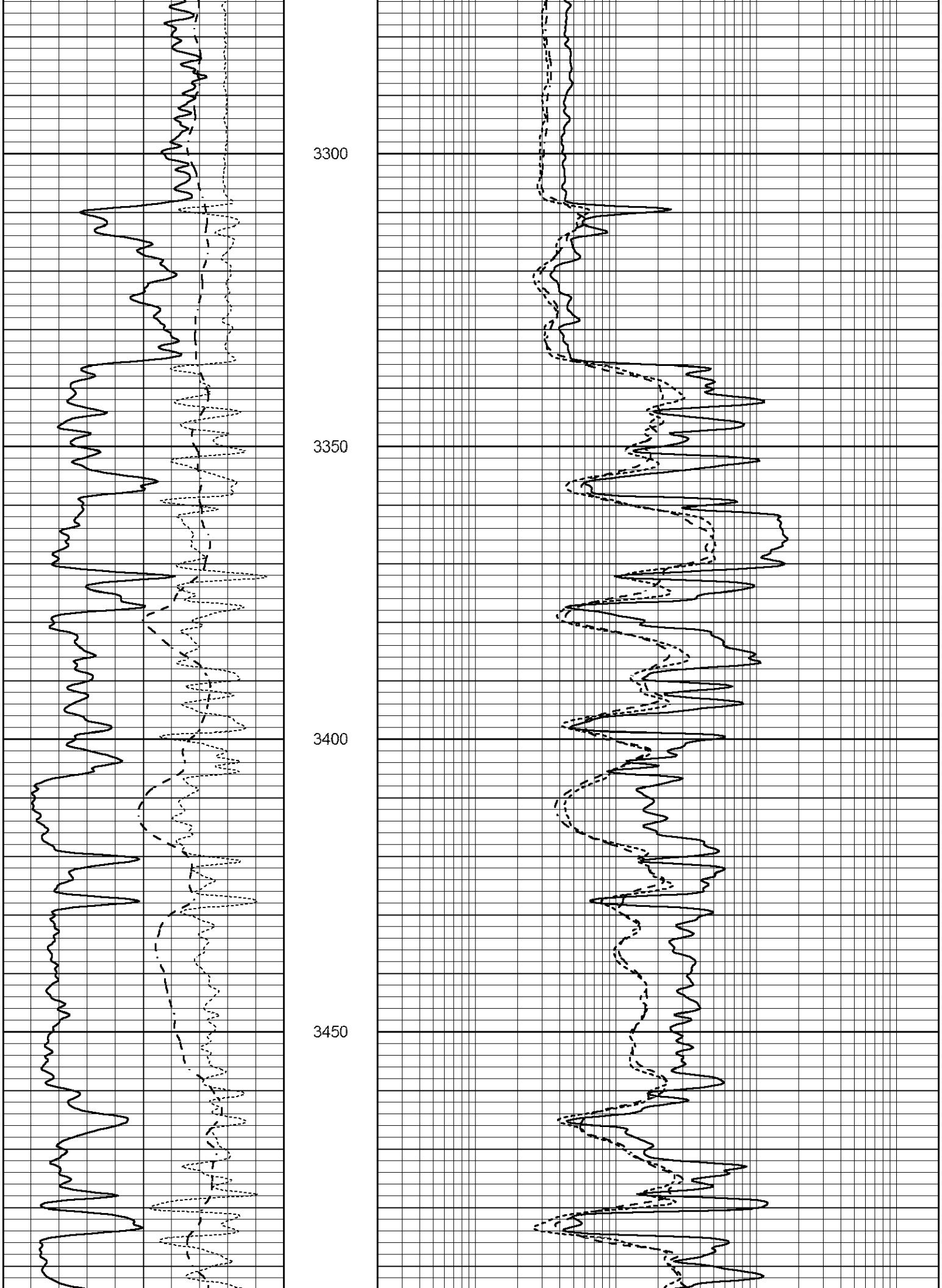
MAIN SECTION

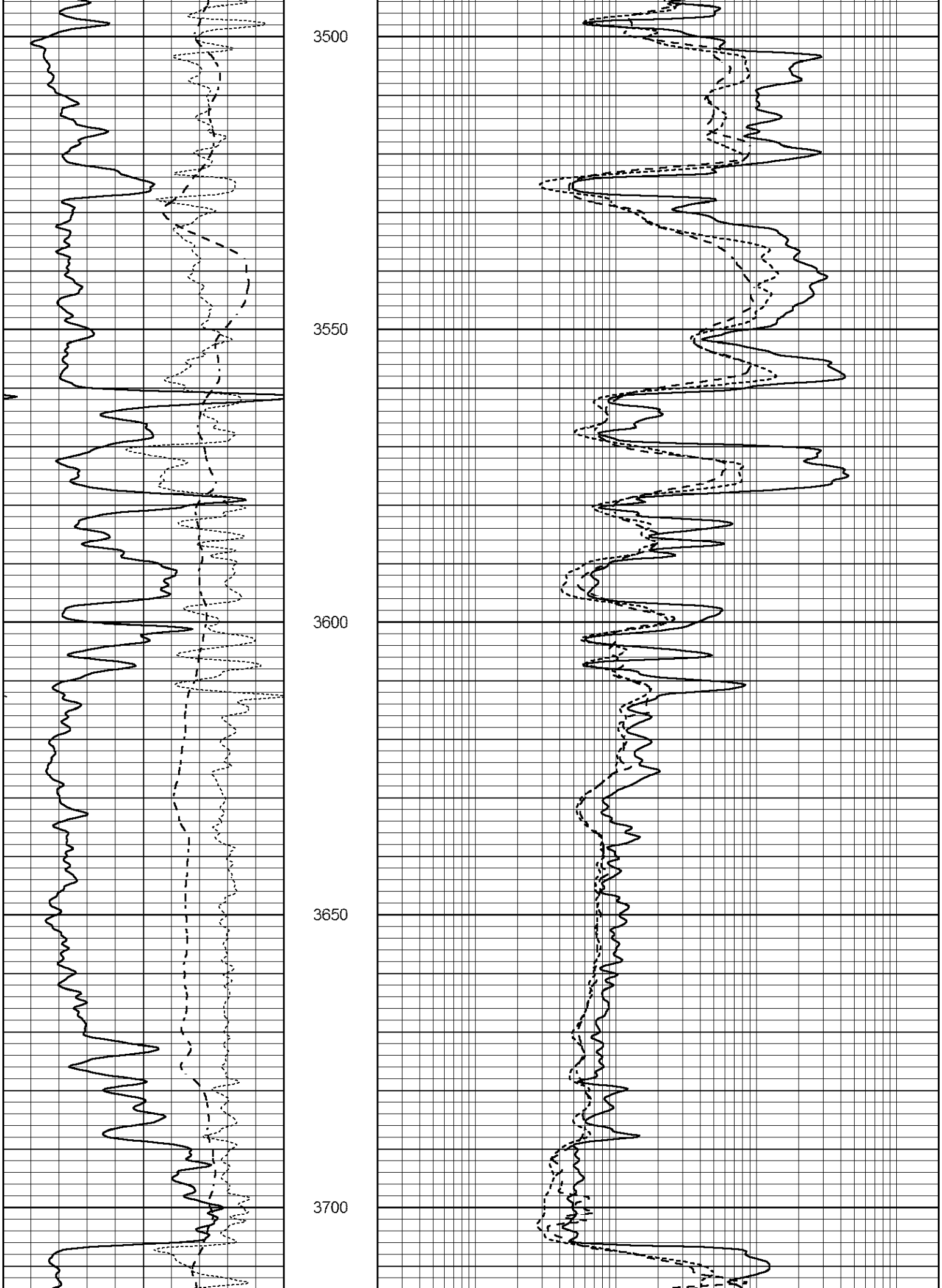
Database File	1148pe8.db
Dataset Pathname	pass3.1.1
Presentation Format	_dil
Dataset Creation	Sat Jun 10 09:38:39 2017
Charted by	Depth in Feet scaled 1:240

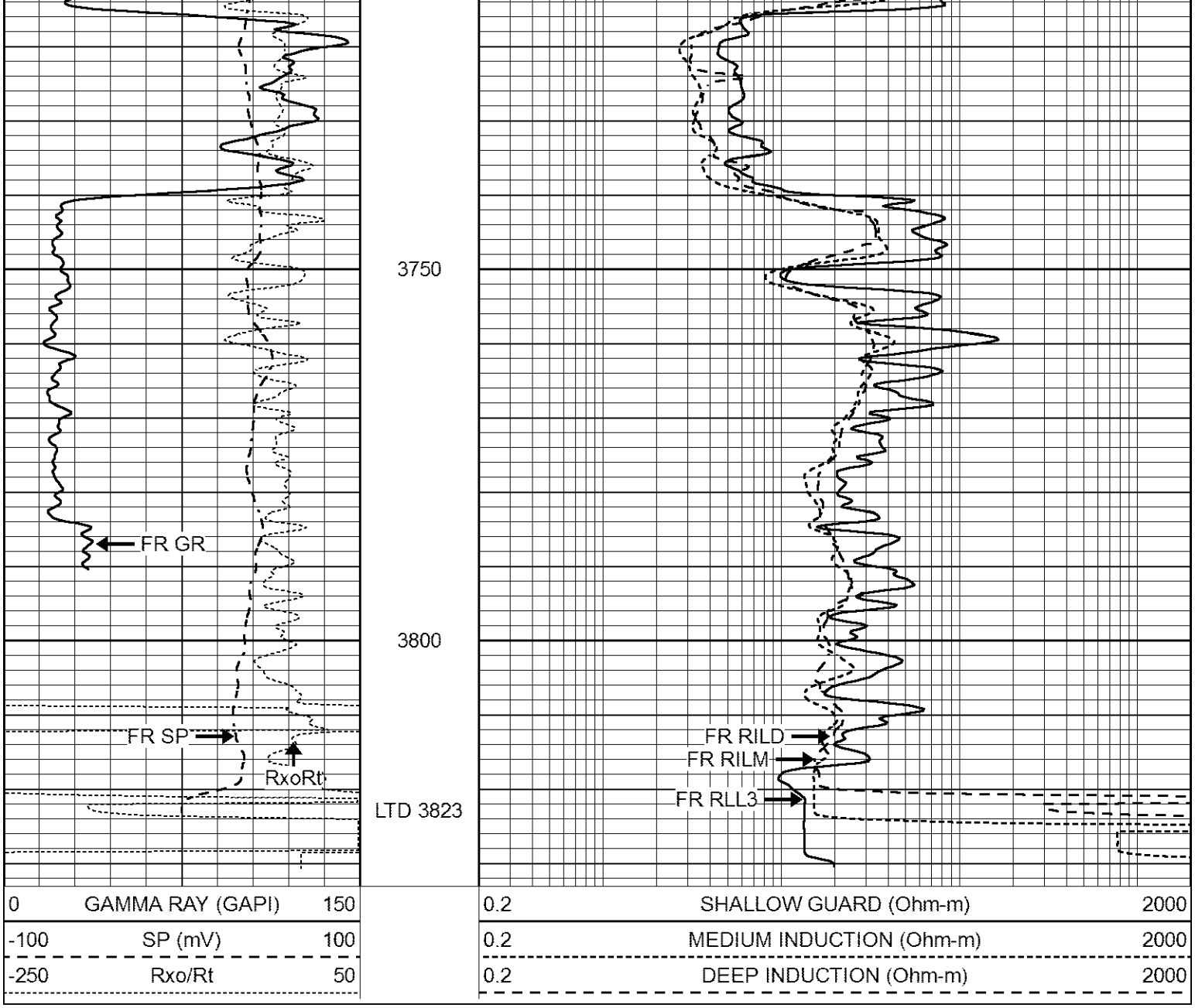



2850
2900
2950
3000
3050


3100
3150
3200
3250

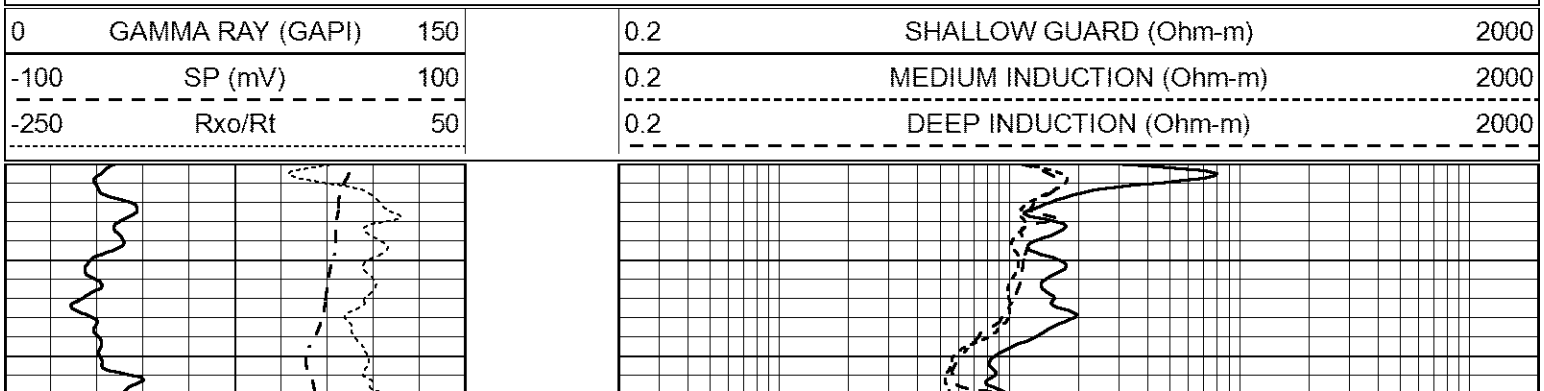

3300
3350
3400
3450

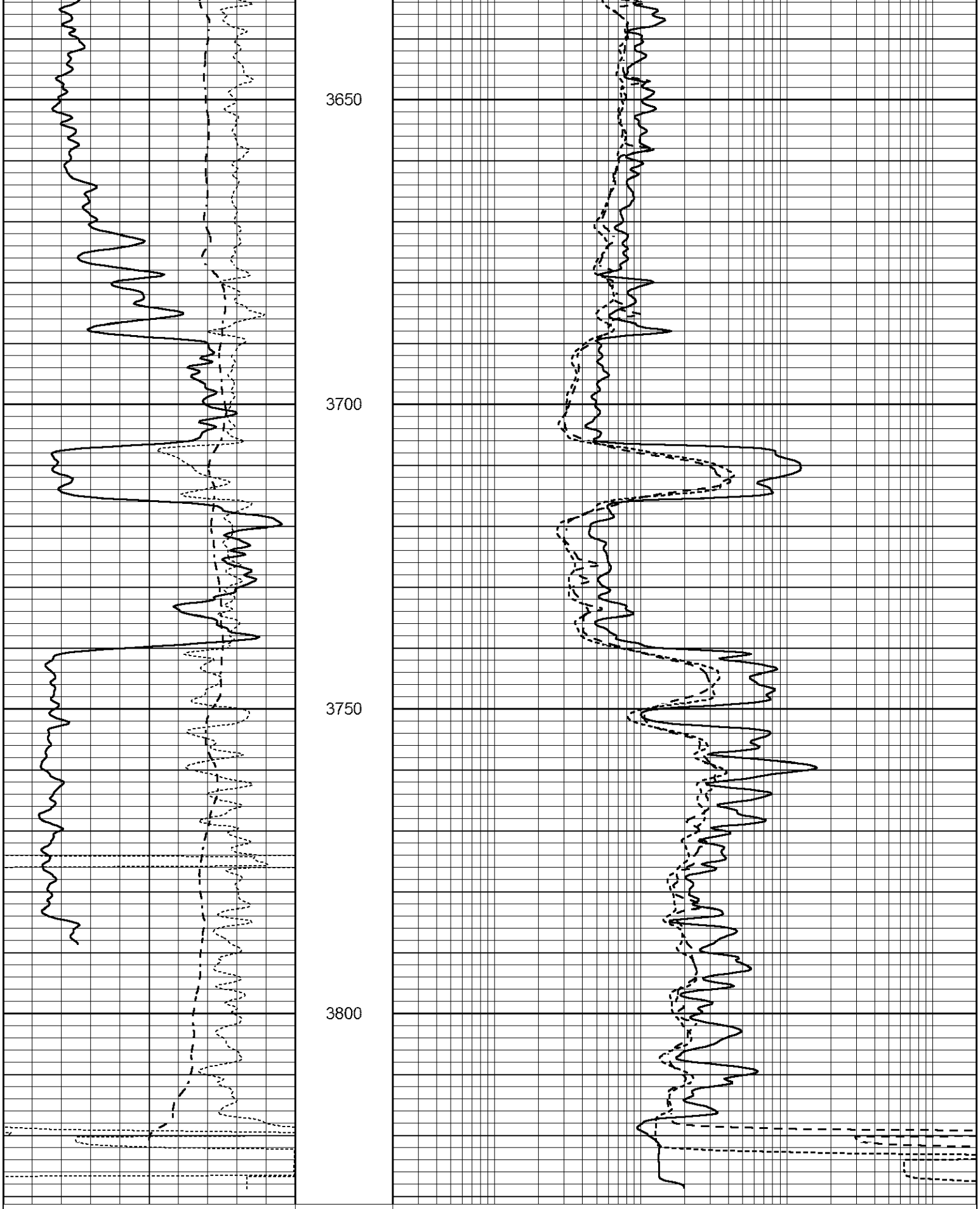

3500
3550
3600
3650
3700



REPEAT SECTION

Database File	1148pe8.db
Dataset Pathname	pass2.1
Presentation Format	_dil
Dataset Creation	Sat Jun 10 09:11:09 2017
Charted by	Depth in Feet scaled 1:240




3650
3700
3750
3800
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 1148pe8.db
Dataset Pathname pass2.1
Dataset Creation Sat Jun 10 09:11:09 2017

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
Surface Cal Performed: Mon May 22 14:23:32 2017
Downhole Cal Performed: Thu Mar 12 09:29:20 2015
After Survey Verification Performed: Thu Mar 12 09:29:20 2015

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

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 Backround 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	Low	High	Gain	Offset
1107.5	7124.1	8.0	15.0	0.0	6.5

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:	Mon May 22 14:24:46 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps