DUAL INDUCTION LOG

Company JASPAR CO.
Well LIZA #1
Field
County ROOKS State KANSAS

Location: API # : 15-163-24373-0000

855' FNL & 1005' FEL

SEC 29 TWP 9S RGE 19W

Other Services
CDL/CNL
MEL

Elevation
K.B. 2188
D.F. 2186
G.L. 2183

Permanent Datum GROUND LEVEL Elevation 2183
Log Measured From KELLY BUSHING 5' A.G.L
Drilling Measured From KELLY BUSHING

Date	9/27/18		
Run Number	ONE		
Depth Driller	3700		
Depth Logger	3701		
Bottom Logged Interval	3699		
Top Log Interval	00		
Casing Driller	8 5/8" @ 260		
Casing Logger	260		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6000 PPM	
Density / Viscosity	9.0/52		
pH / Fluid Loss	10.5/7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.50 @ 77F		
Rmf @ Meas. Temp	.37 @ 77F		
Rmc @ Meas. Temp	.60 @ 77F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.34 @ 113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	113F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	JEFF LAWLER		

<<< Fold Here >>>

Comments

THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395

DIRECTIONS

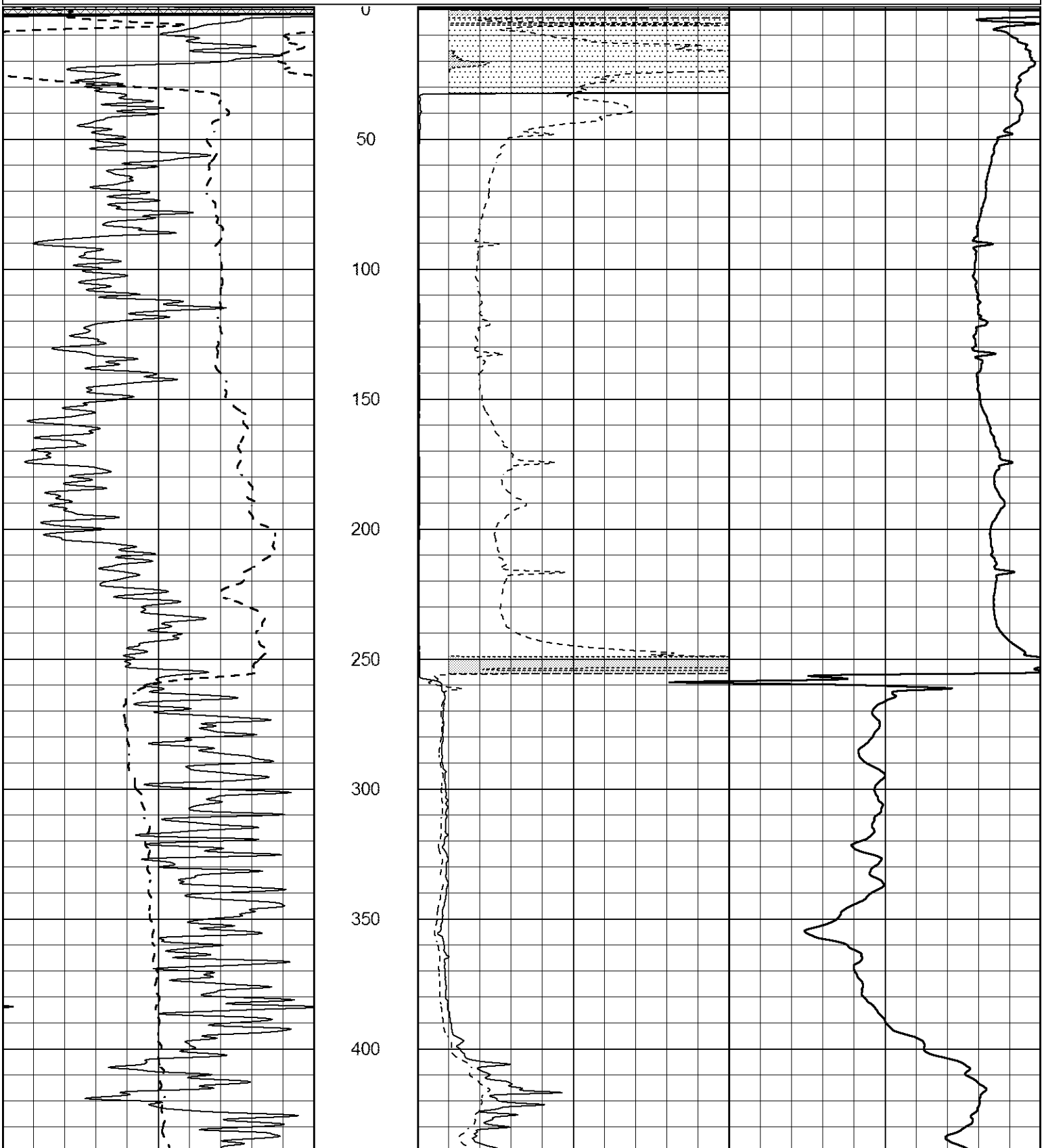
ZURICH, KS. - 1 WEST TO RD. 9 - 3/4 NORTH - WEST INTO

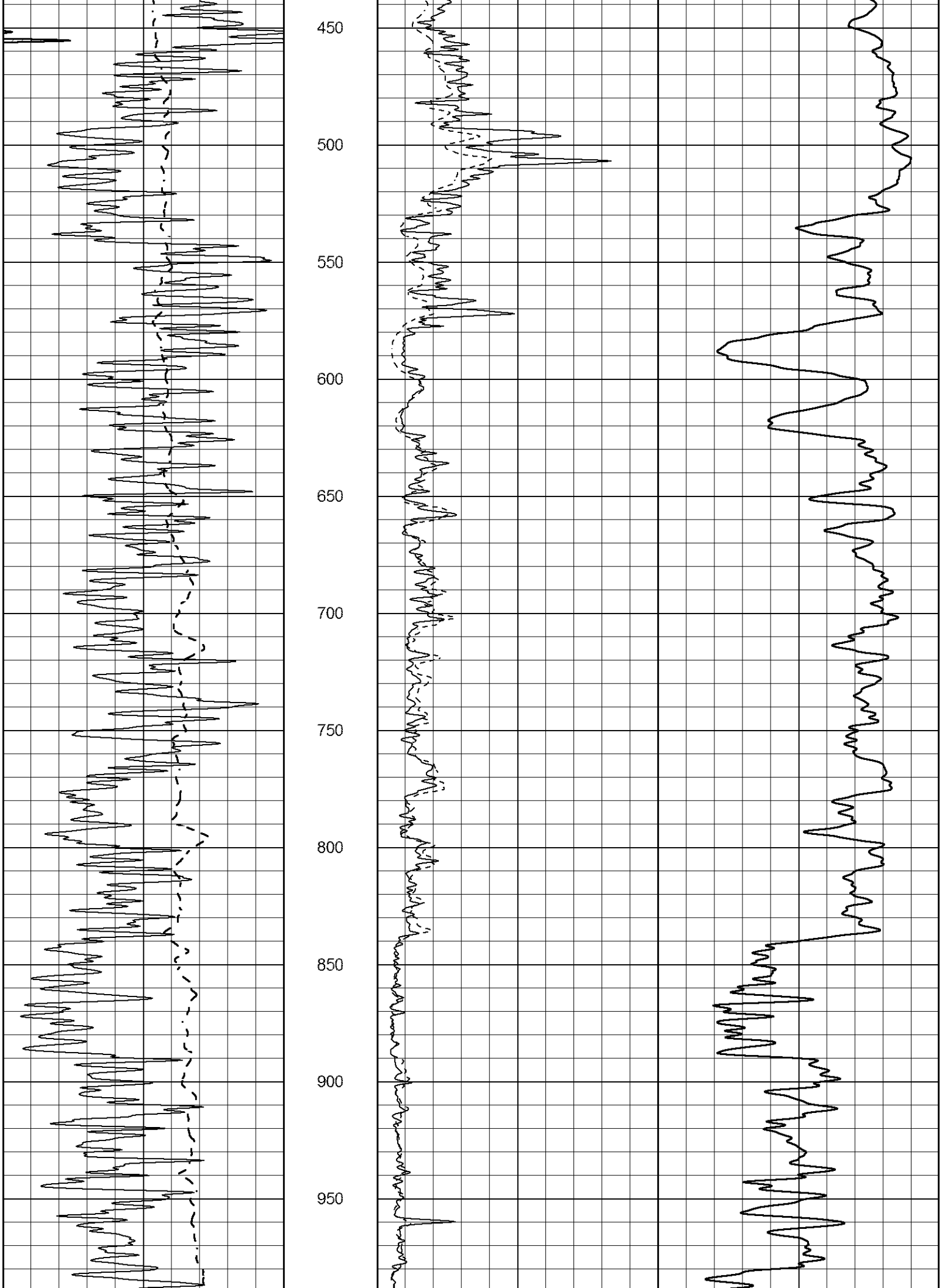
MAIN SECTION

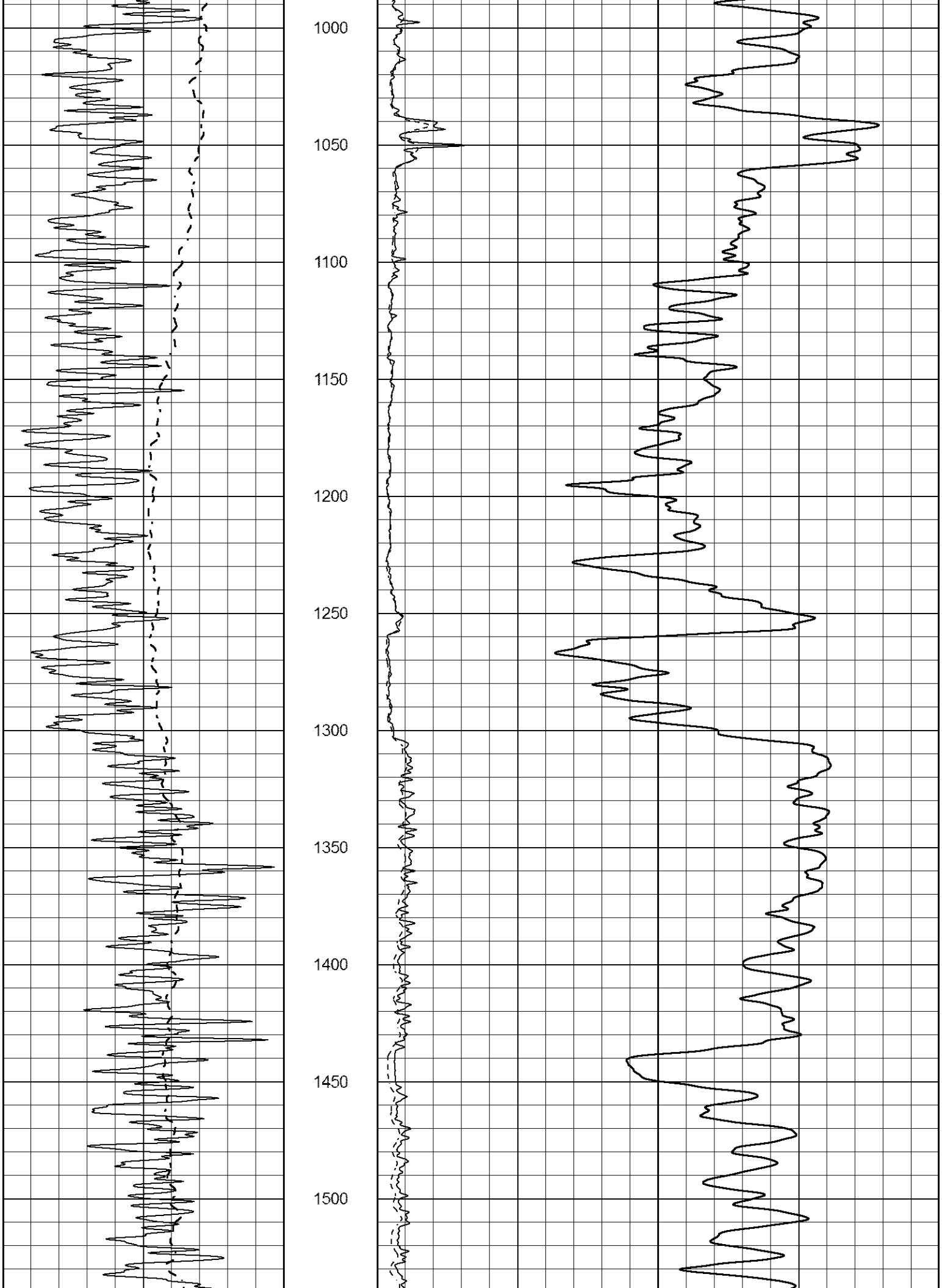
Database File	3005ddn.db
Dataset Pathname	pass3.3
Presentation Format	_dil2
Dataset Creation	Thu Sep 27 11:23:37 2018
Charted by	Depth in Feet scaled 1:600

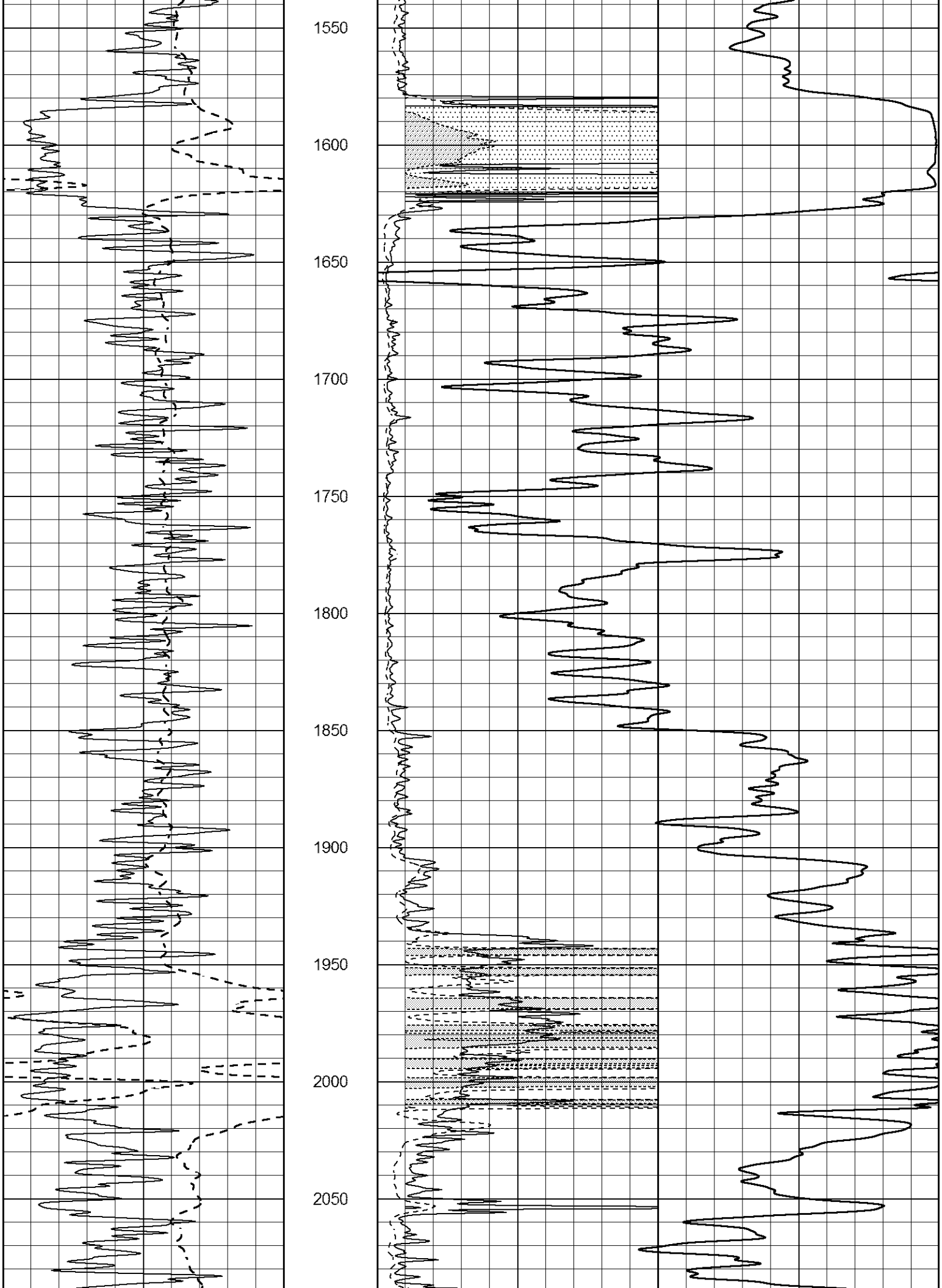
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

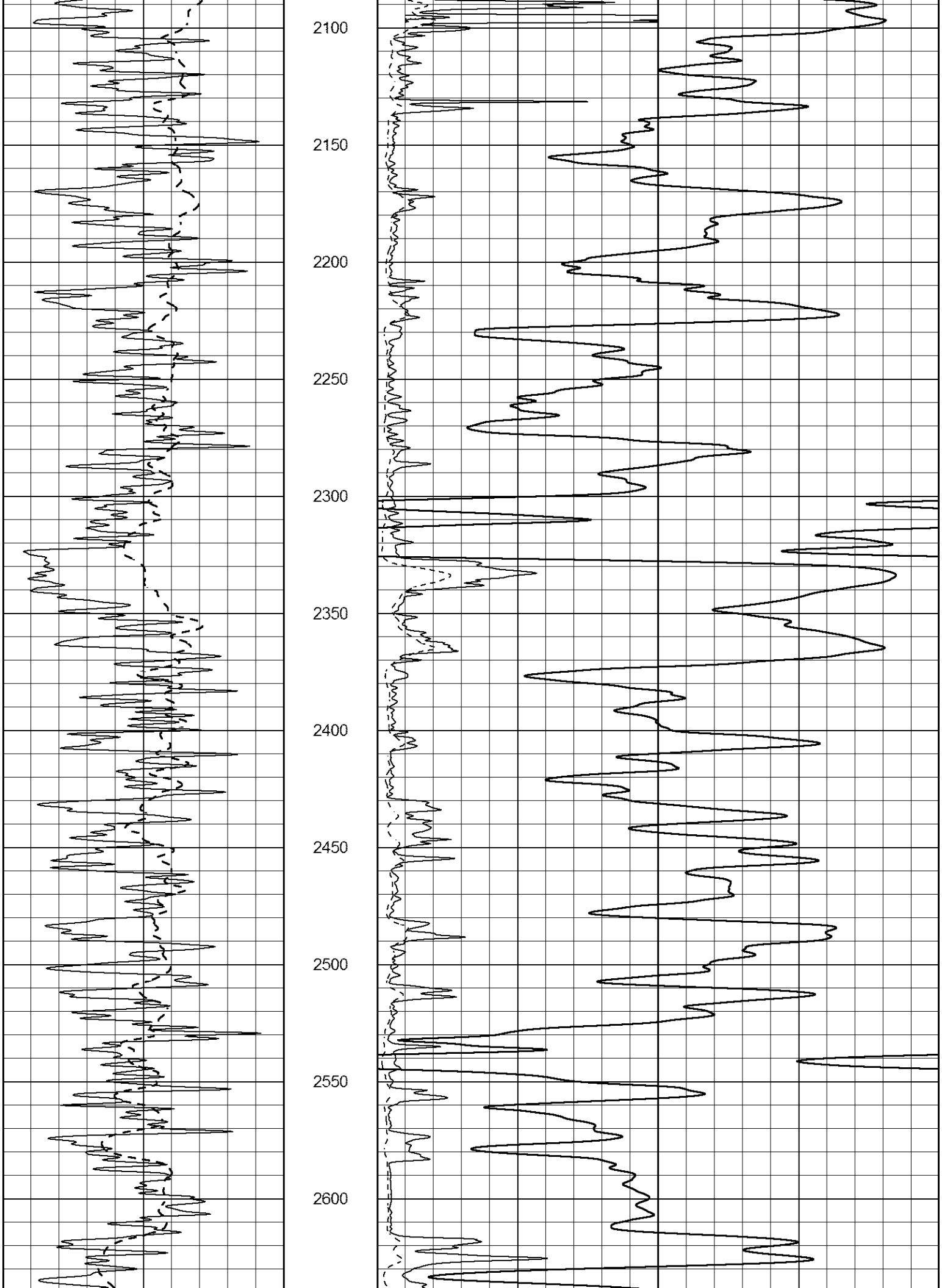
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

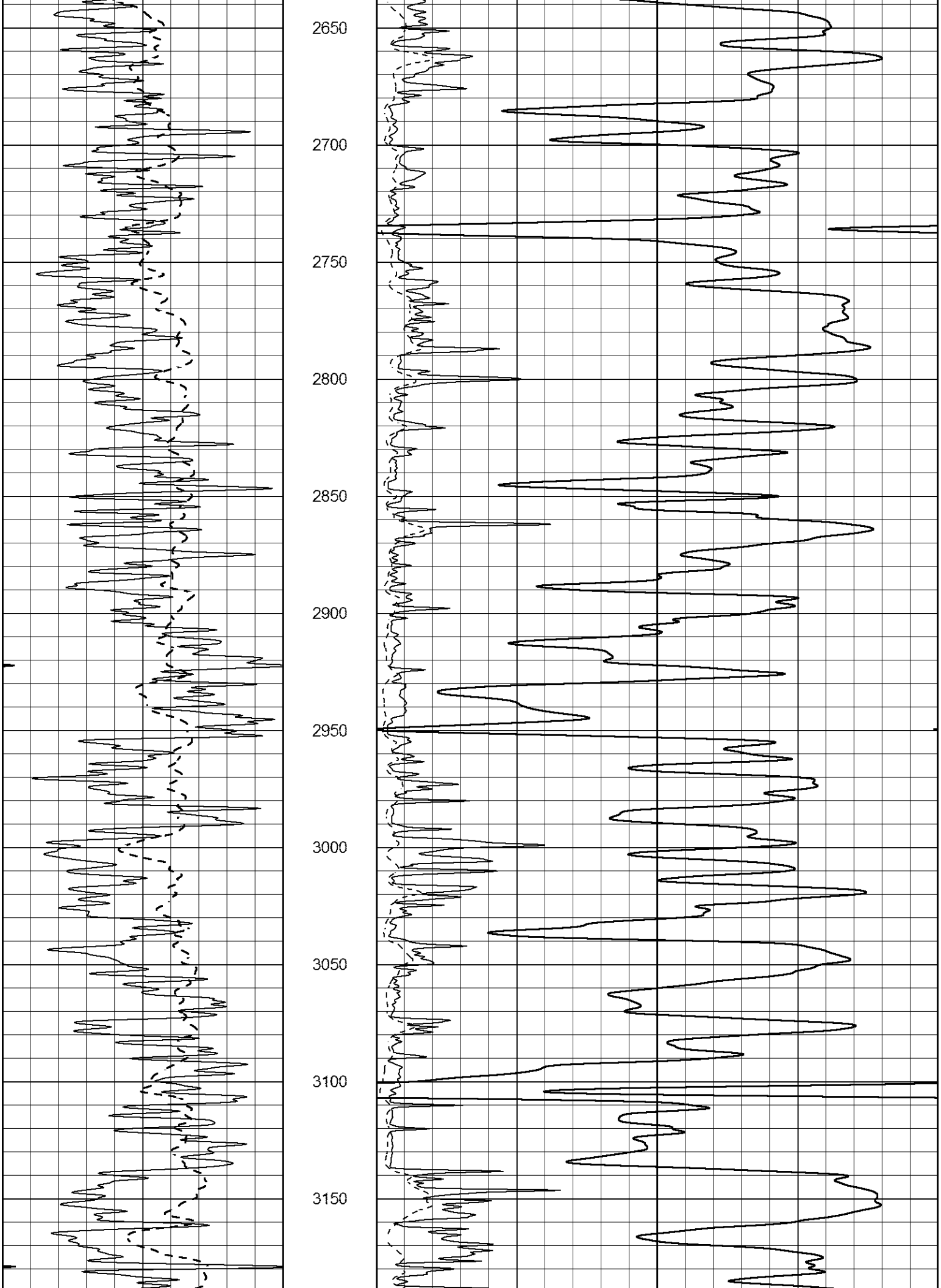


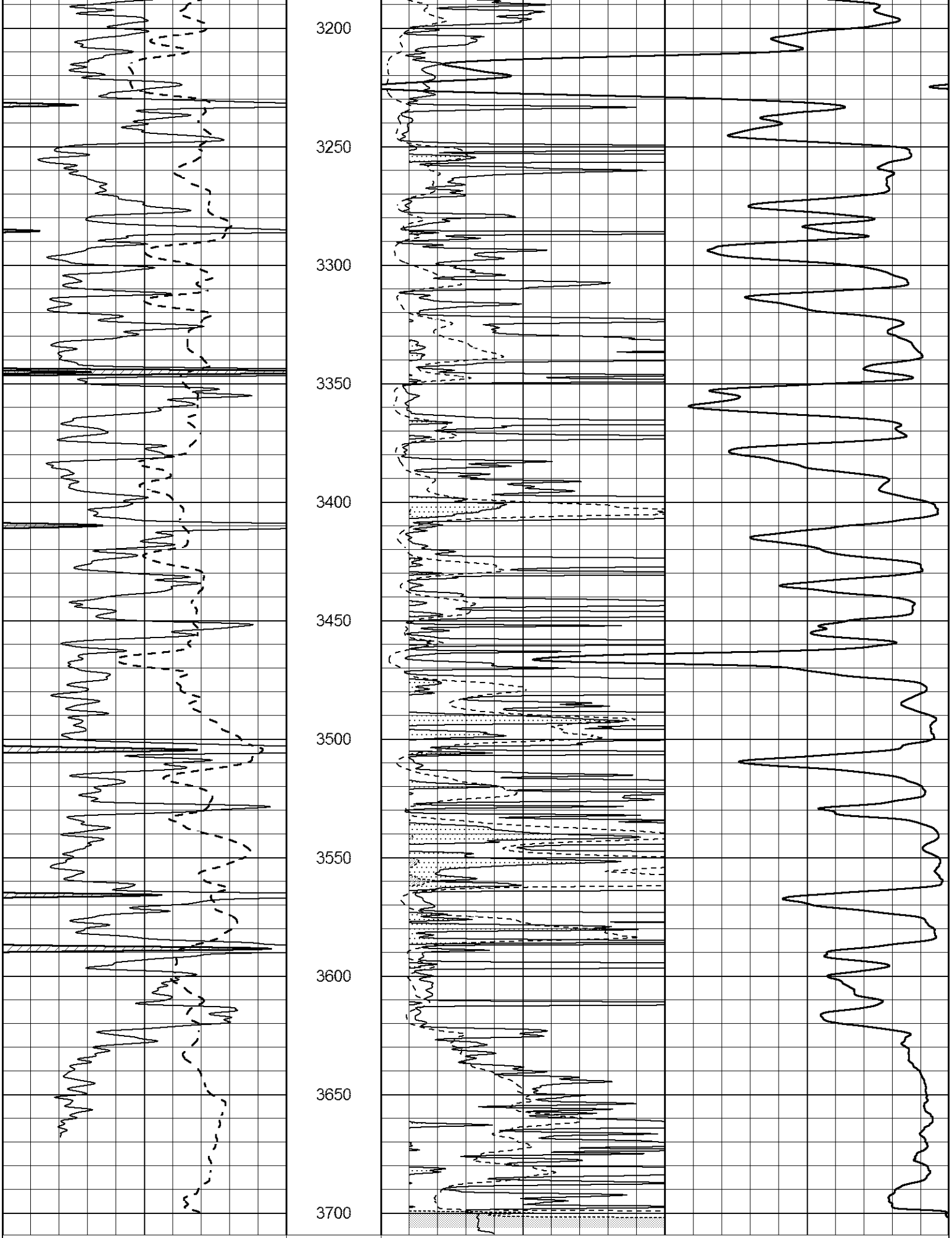

450
500
550
600
650
700
750
800
850
900
950


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
0
Gamma Ray (GAPI)
150
-100
SP (mV)
100
1000
CILD (mmho/m)
0
0
RLL3 (Ohm-m)
50

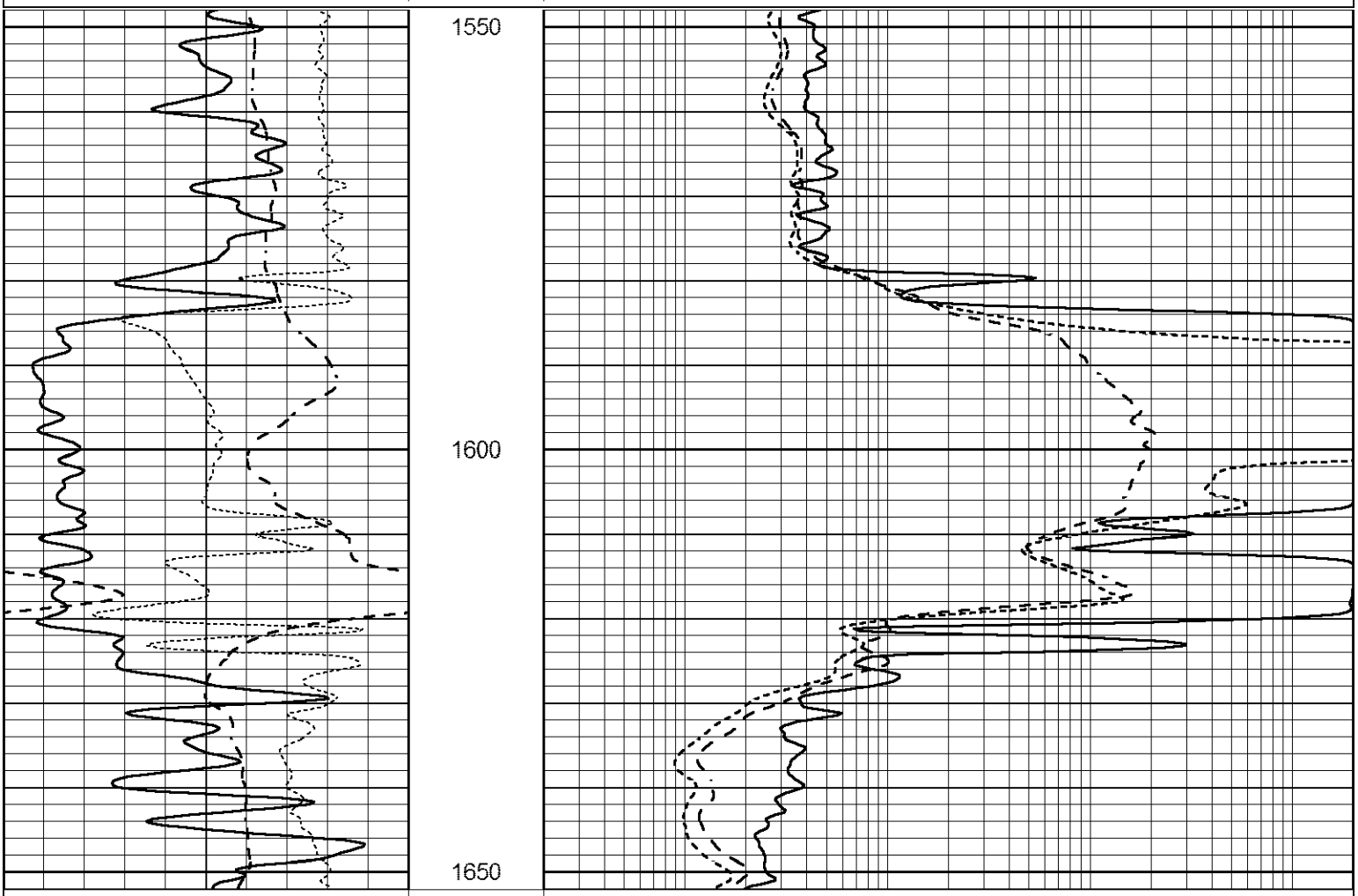
0	Deep Induction (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

ANHYDRITE

Database File	3005ddn.db
Dataset Pathname	pass3.2
Presentation Format	_dil
Dataset Creation	Thu Sep 27 10:49:29 2018
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



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

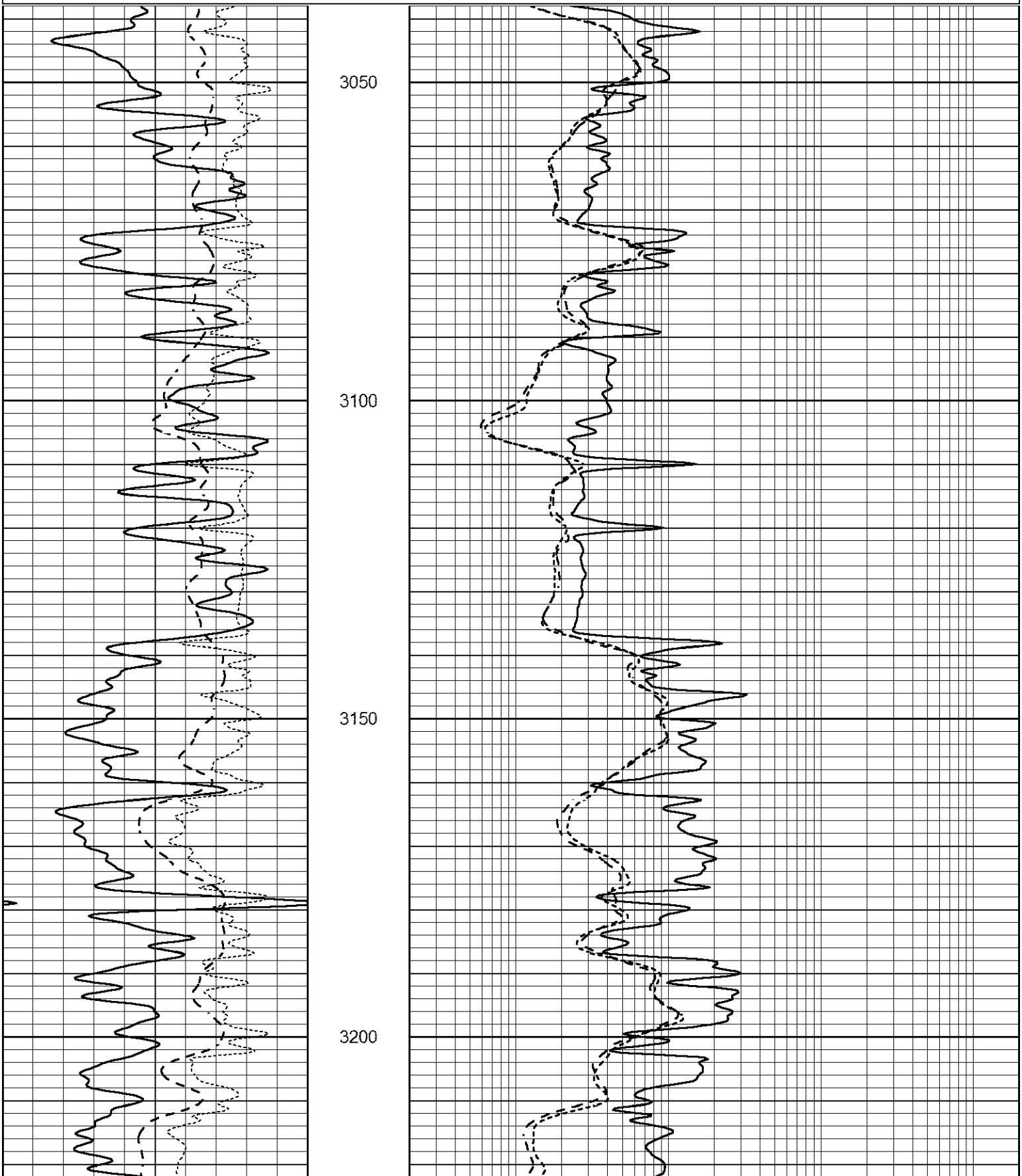
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

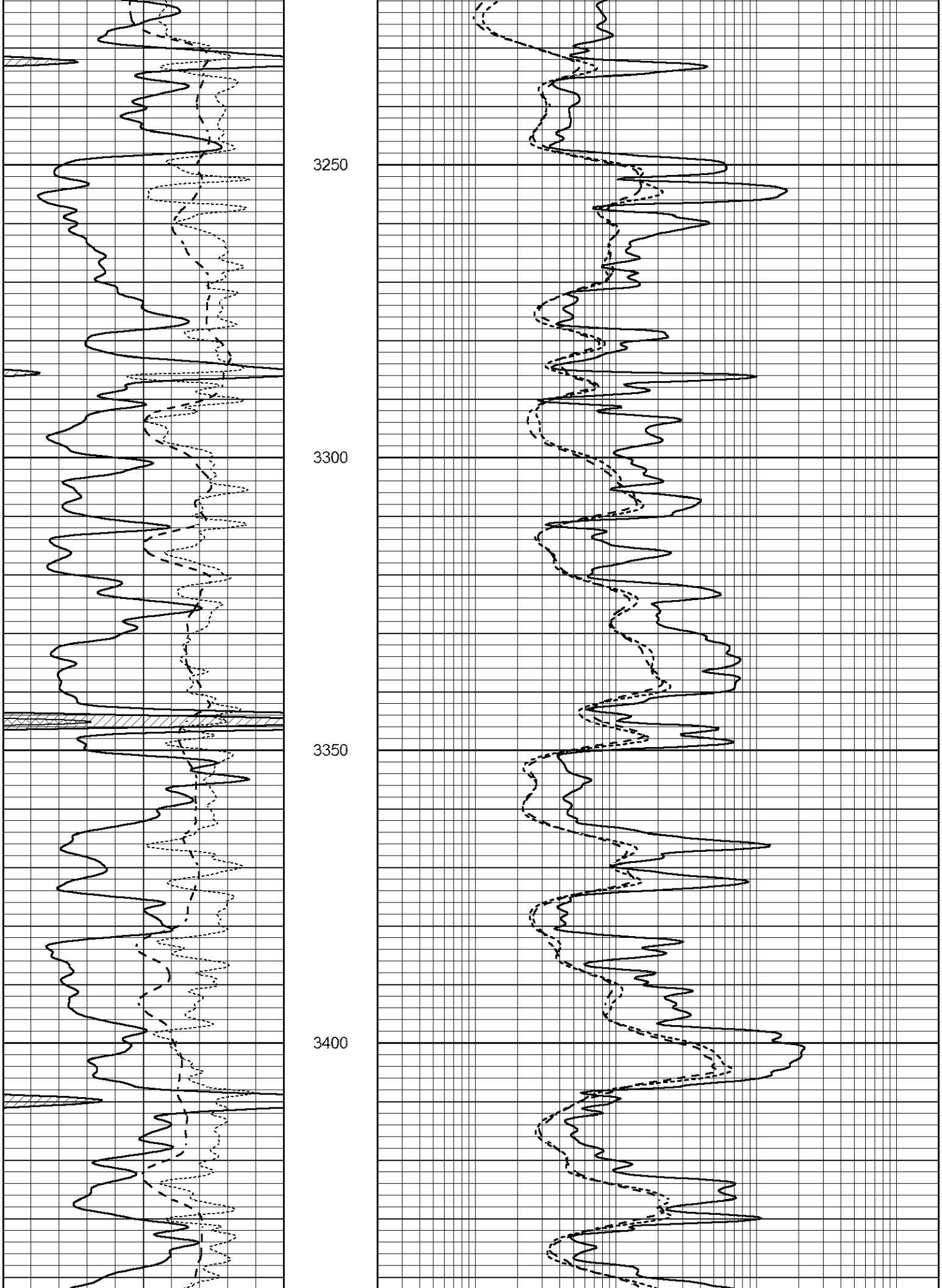
MAIN SECTION

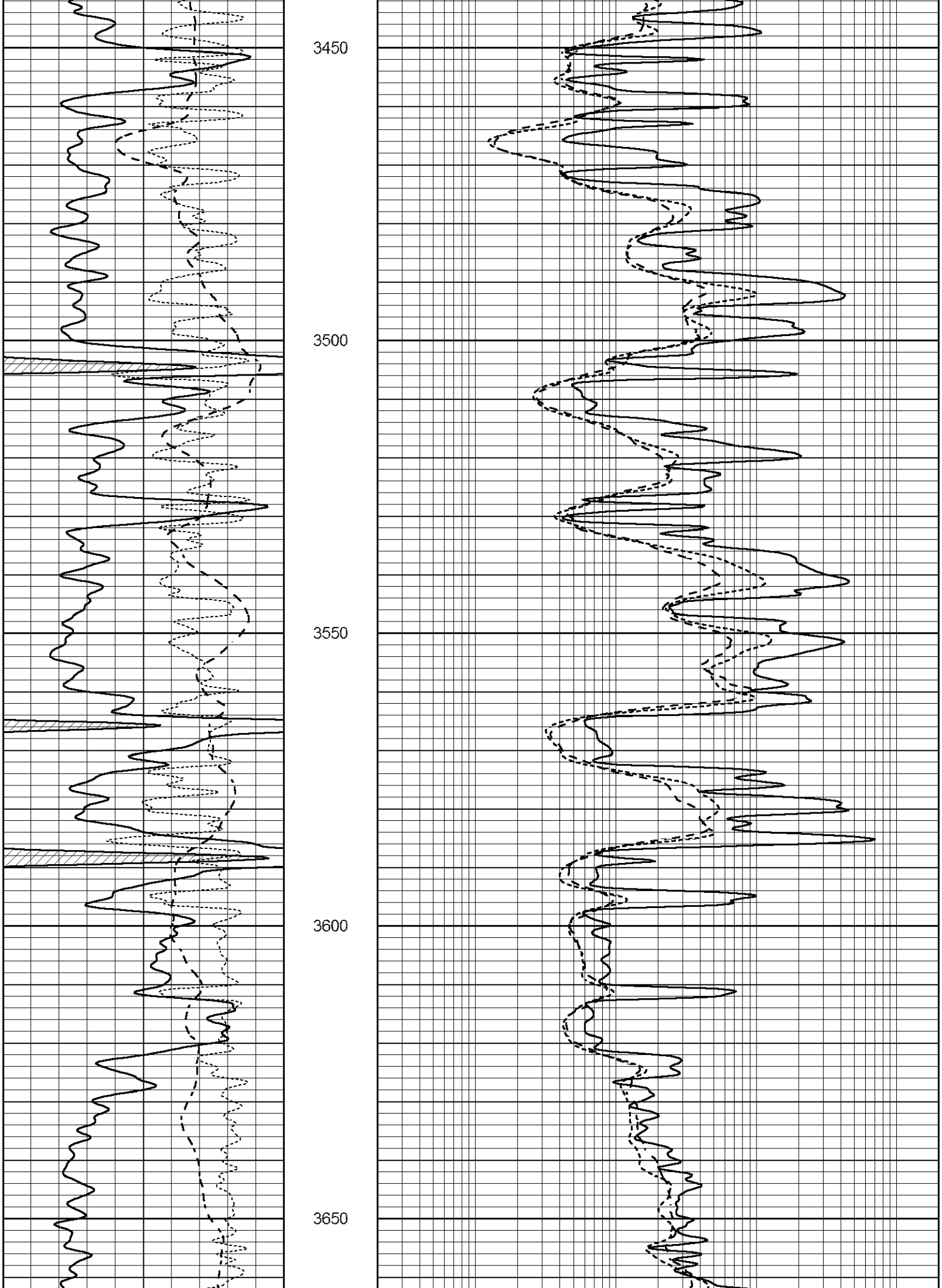
Database File	3005ddn.db
Dataset Pathname	pass3.1
Presentation Format	_dil
Dataset Creation	Thu Sep 27 10:35:10 2018
Charted by	Depth in Feet scaled 1:240

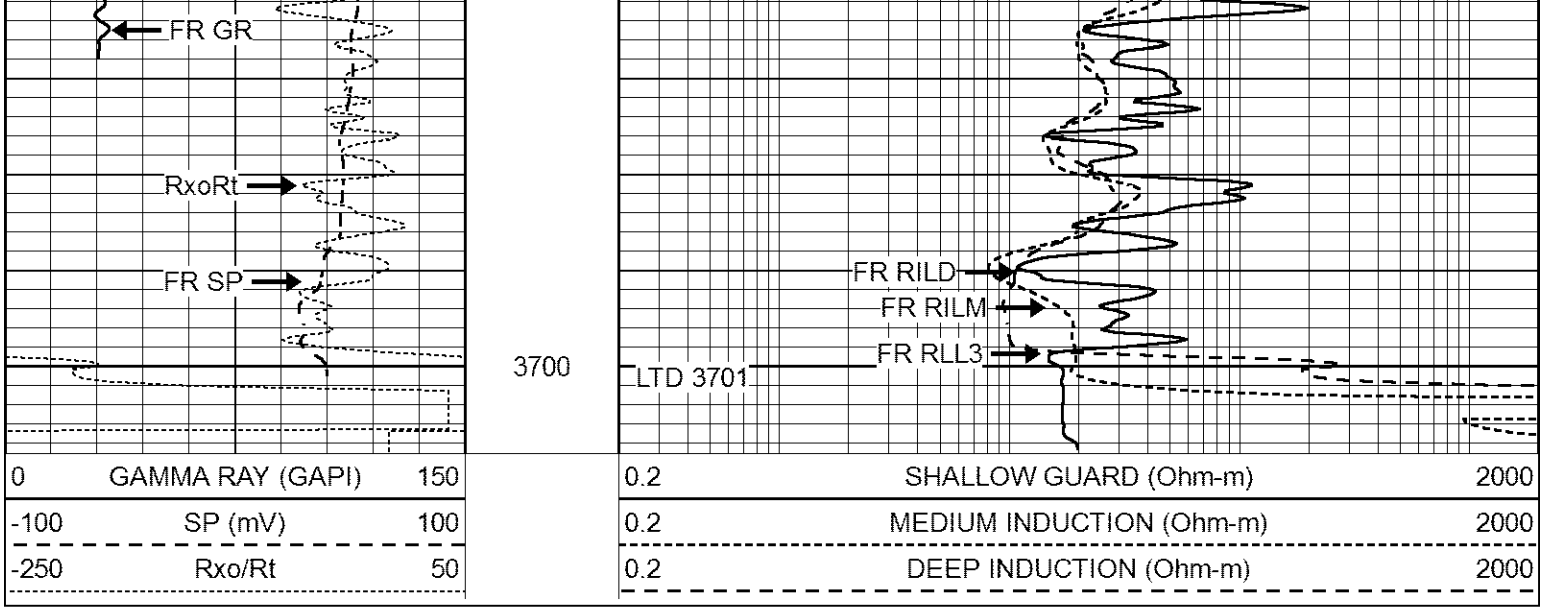
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

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




3250
3300
3350
3400


3450
3500
3550
3600
3650



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

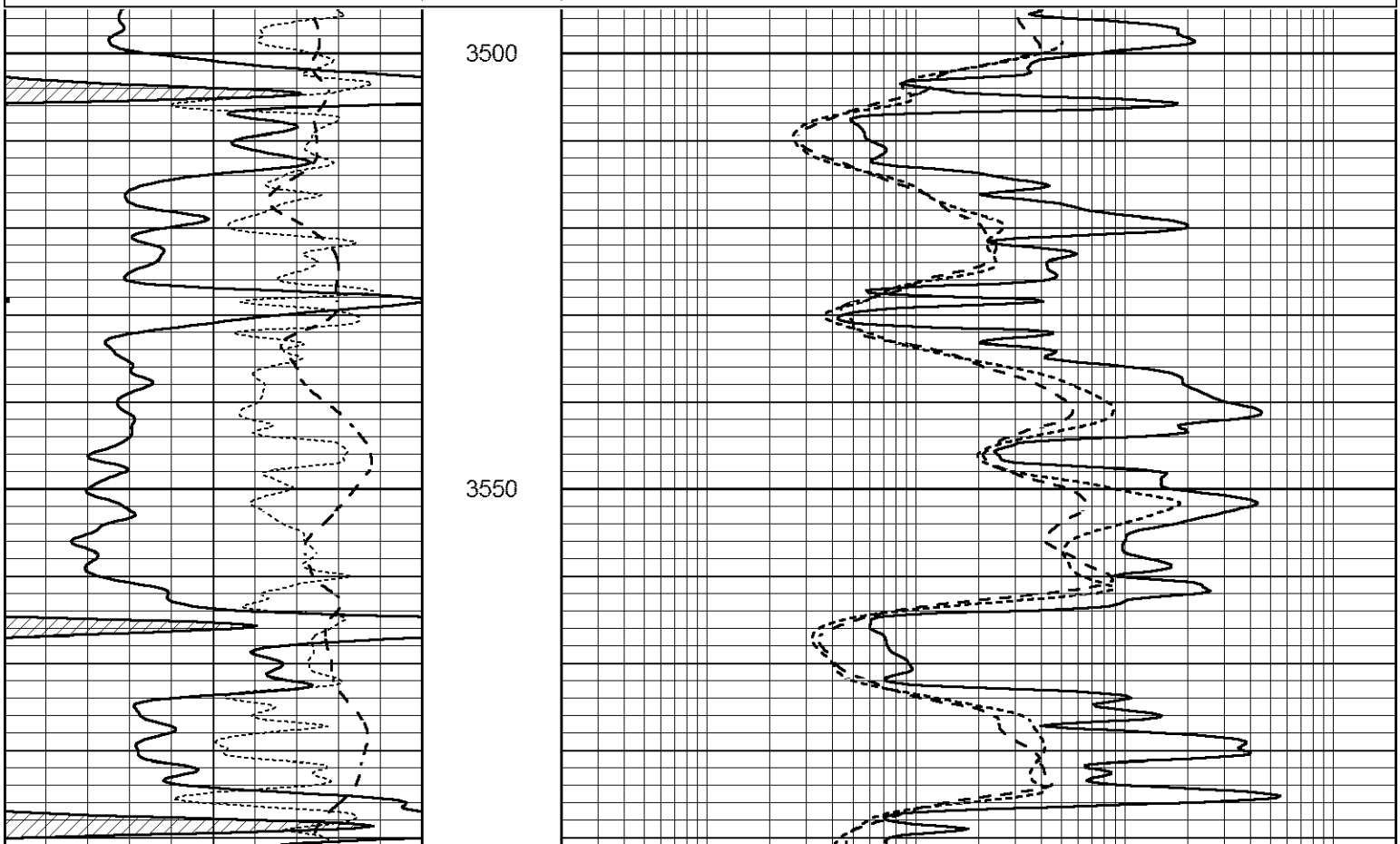
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

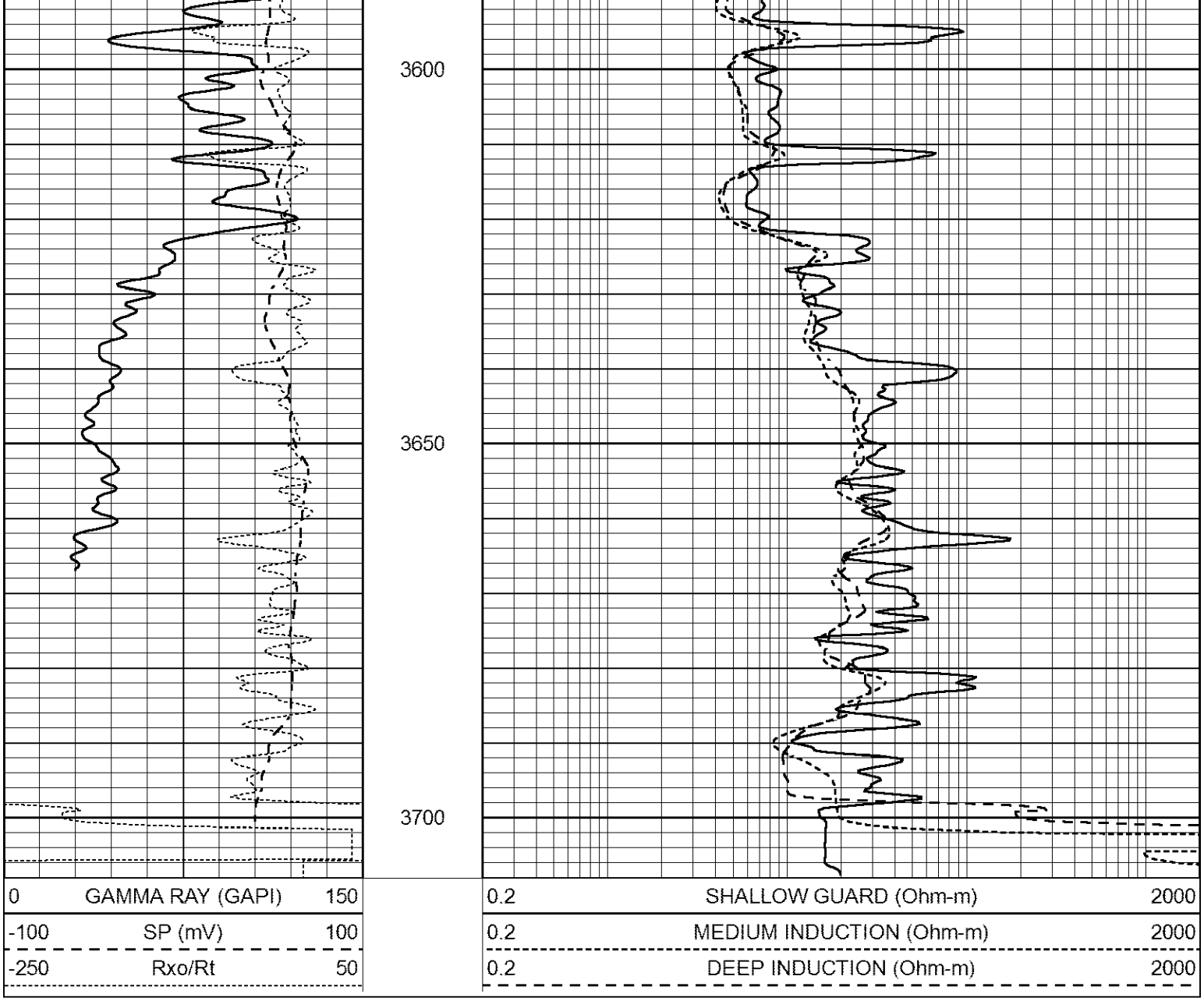
REPEAT SECTION

Database File	3005ddn.db
Dataset Pathname	pass2.1
Presentation Format	_dil
Dataset Creation	Thu Sep 27 10:34:20 2018
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	3005ddn.db
Dataset Pathname	pass2.1
Dataset Creation	Thu Sep 27 10:34:20 2018

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		

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: 7
Tool Model: Probe1
Performed: Wed Jun 29 11:10:58 2016

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.4300 GAPI/cps