Company FOURWINDS OIL CORPORATION
Well GLENNEMEIER "B" #1
Field RAY WEST
County NORTON
State KANSAS

DUAL INDUCTION LOG

Company FOURWINDS OIL CORPORATION
Well GLENNEMEIER "B" #1
Field RAY WEST
County NORTON State KANSAS

Location: API # : 15-137-20751-0000
660' FNL & 1800' FEL
W/2 E/2 NW NE
SEC 28 TWP 5S RGE 21W

Other Services
CDL/CNL
MEL

Permanent Datum GROUND LEVEL Elevation 2276
Log Measured From KELLY BUSHING 8' A.G.L
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2284
D.F. 2282
G.L. 2276

Date	3/5/19		
Run Number	ONE		
Depth Driller	3716		
Depth Logger	3714		
Bottom Logged Interval	3712		
Top Log Interval	00		
Casing Driller	8 5/8" @ 222'		
Casing Logger	222'		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 500 PPM	
Density / Viscosity	9.3/46		
pH / Fluid Loss	9.5/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.20 @ 60F		
Rmf @ Meas. Temp	.90 @ 60F		
Rmc @ Meas. Temp	1.44 @ 60F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.63 @ 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

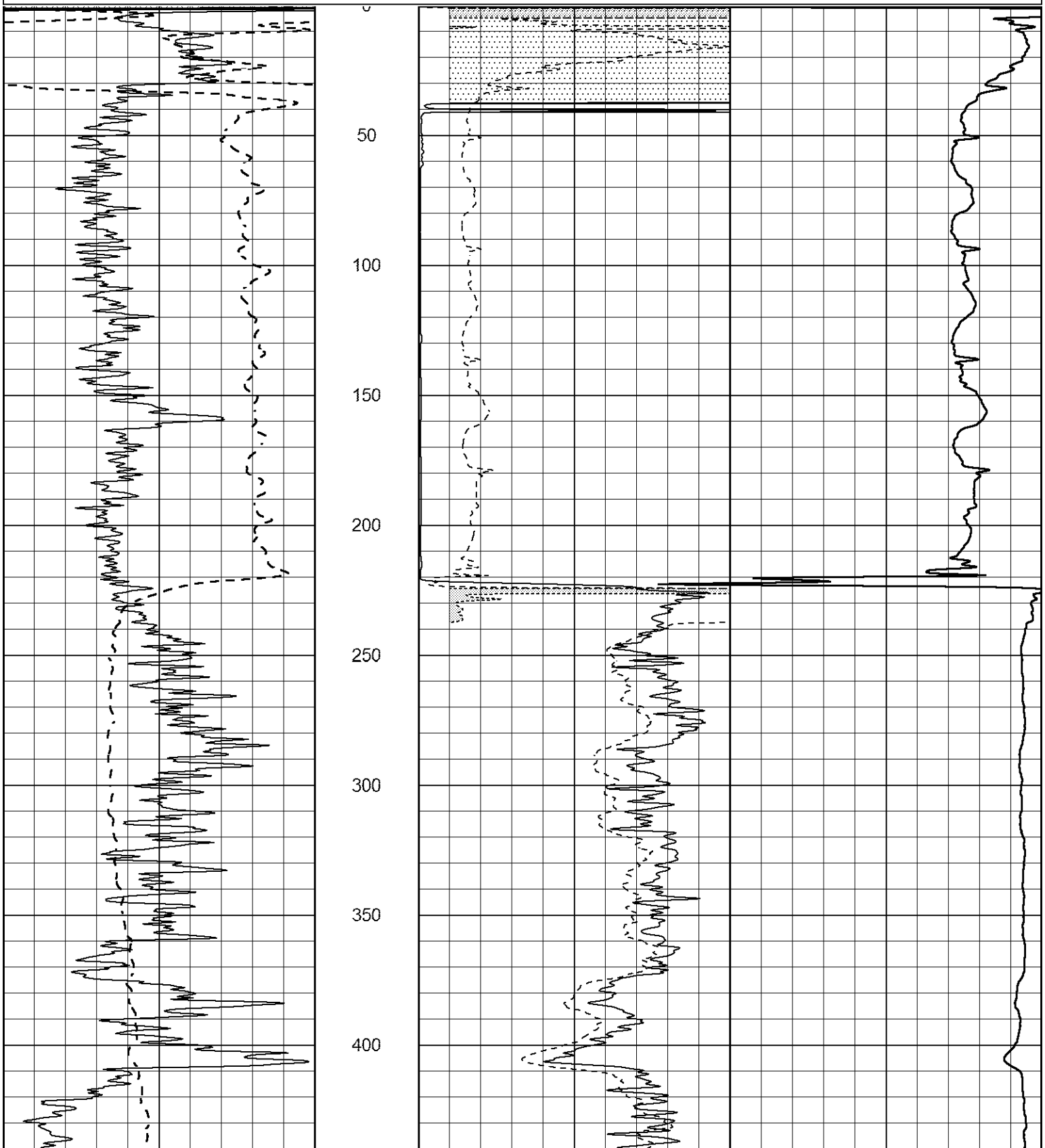
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
LOGAN, KS. - WEST TO RD. 12 - 1 1/4 SOUTH - 1 WEST TO RD. 11 - 2 SOUTH
WEST INTO ABOUT 500 FEET PAST TANK BATTERY

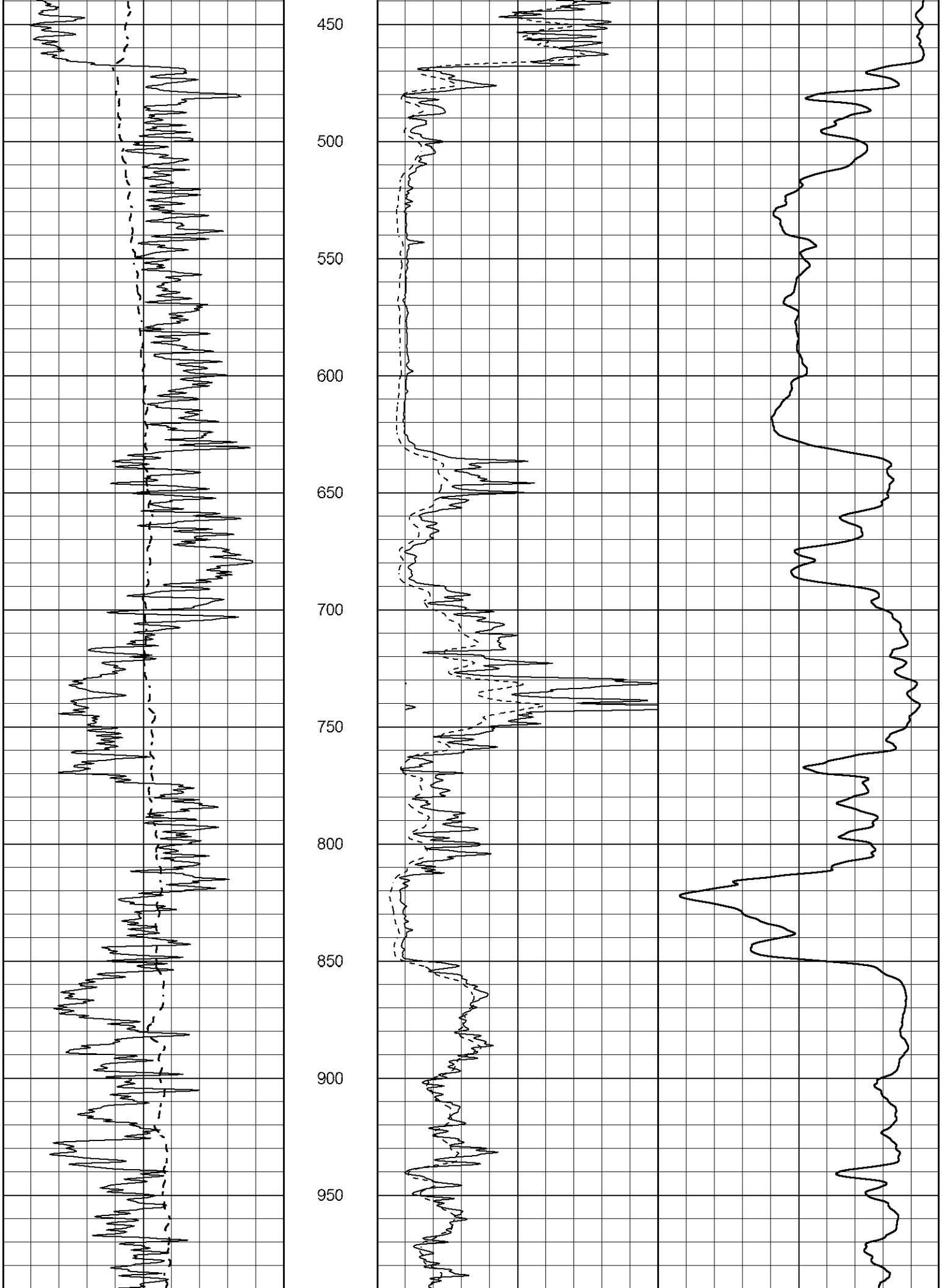
MAIN SECTION

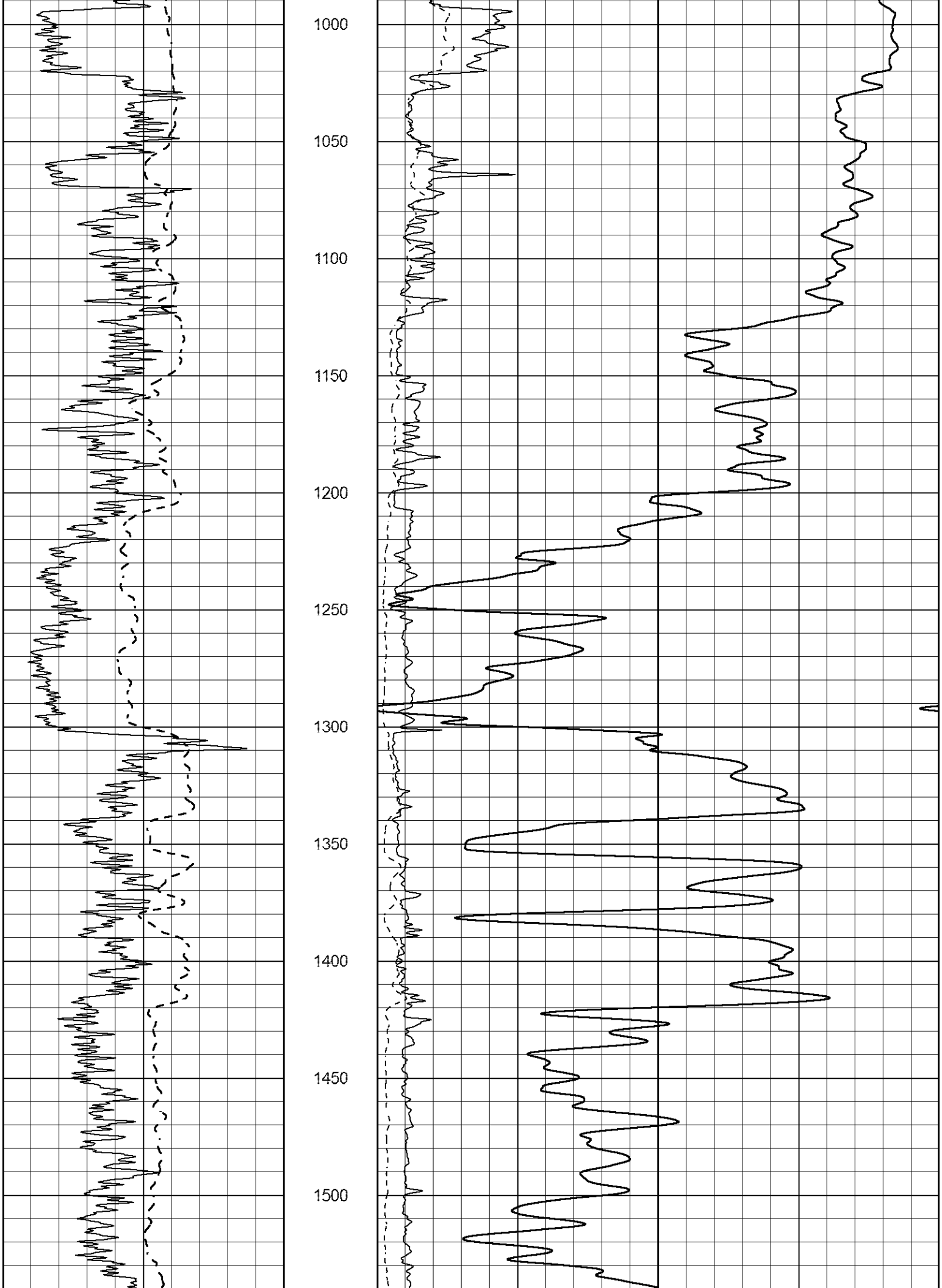
Database File	3448ddn8.db
Dataset Pathname	pass3.3
Presentation Format	_dil2
Dataset Creation	Tue Mar 05 18:20:50 2019
Charted by	Depth in Feet scaled 1:600

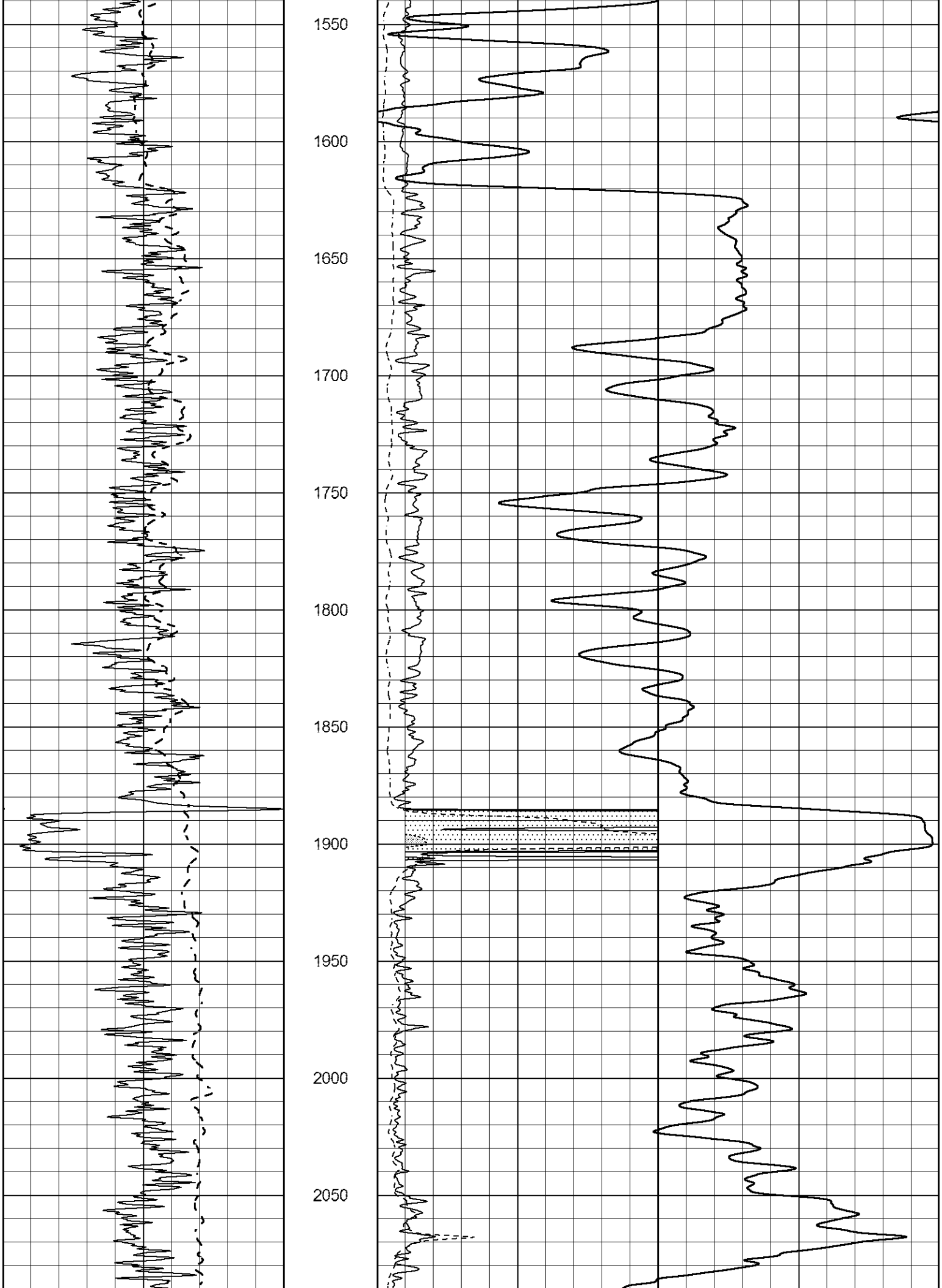
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

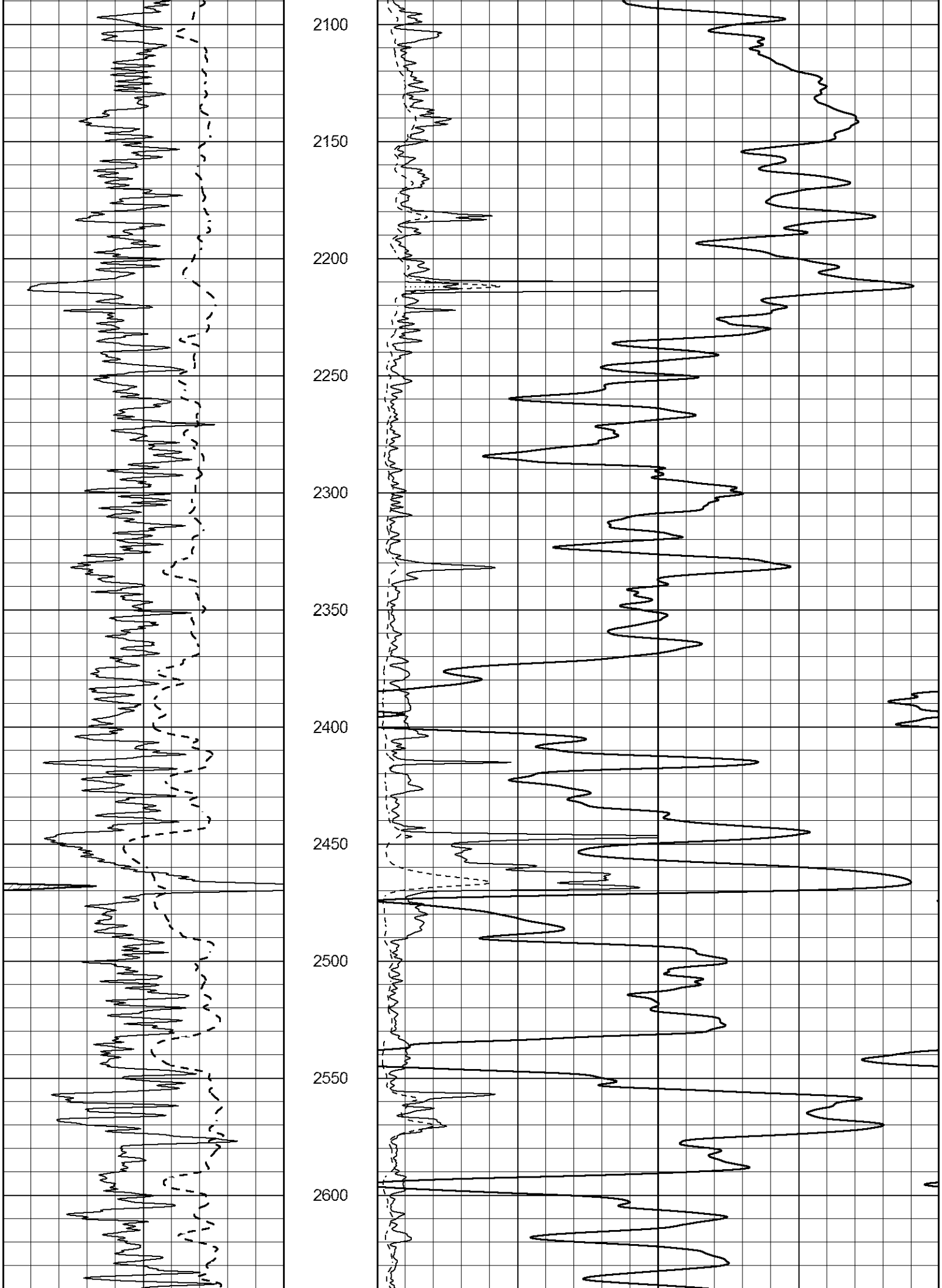
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

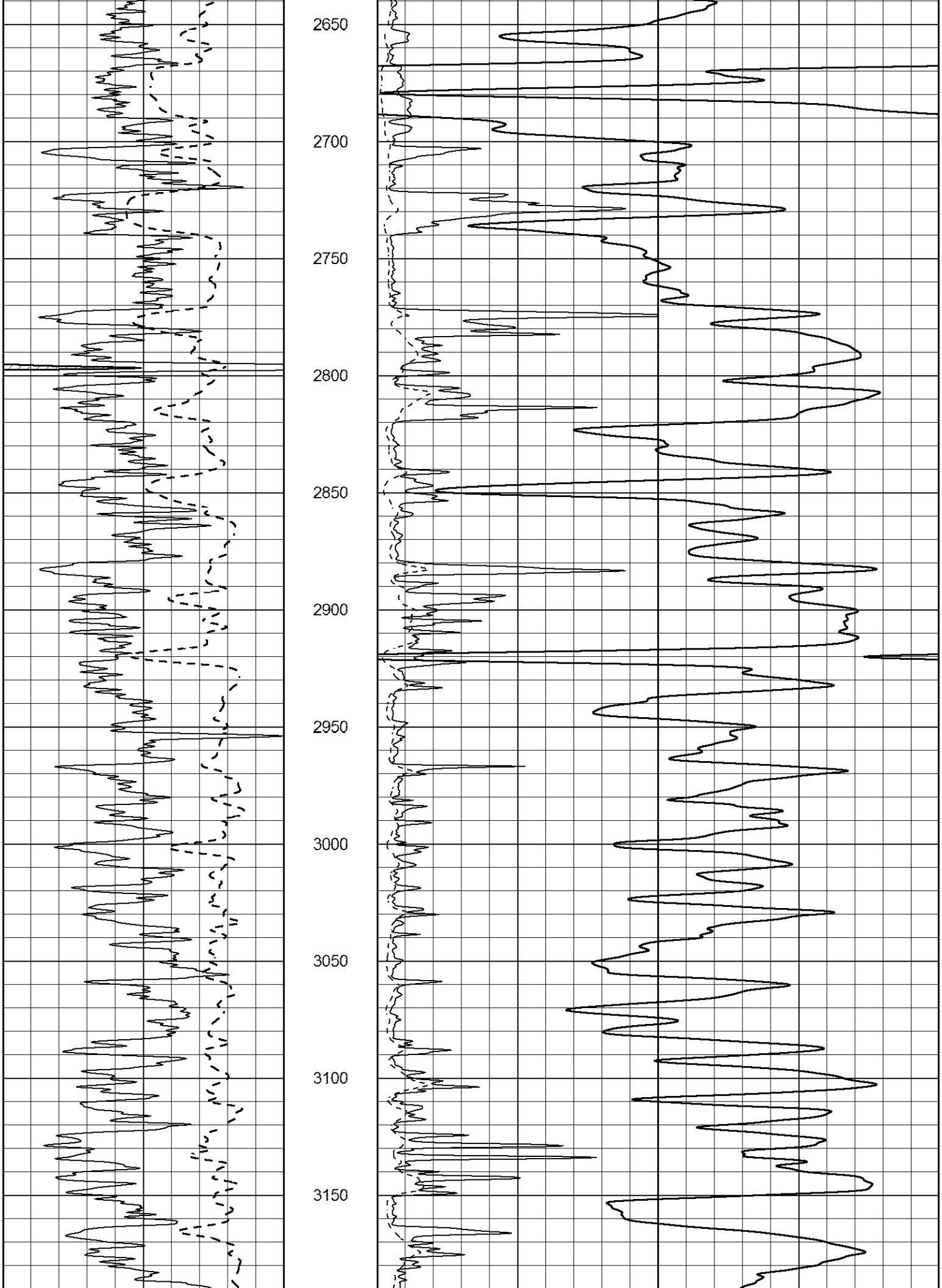


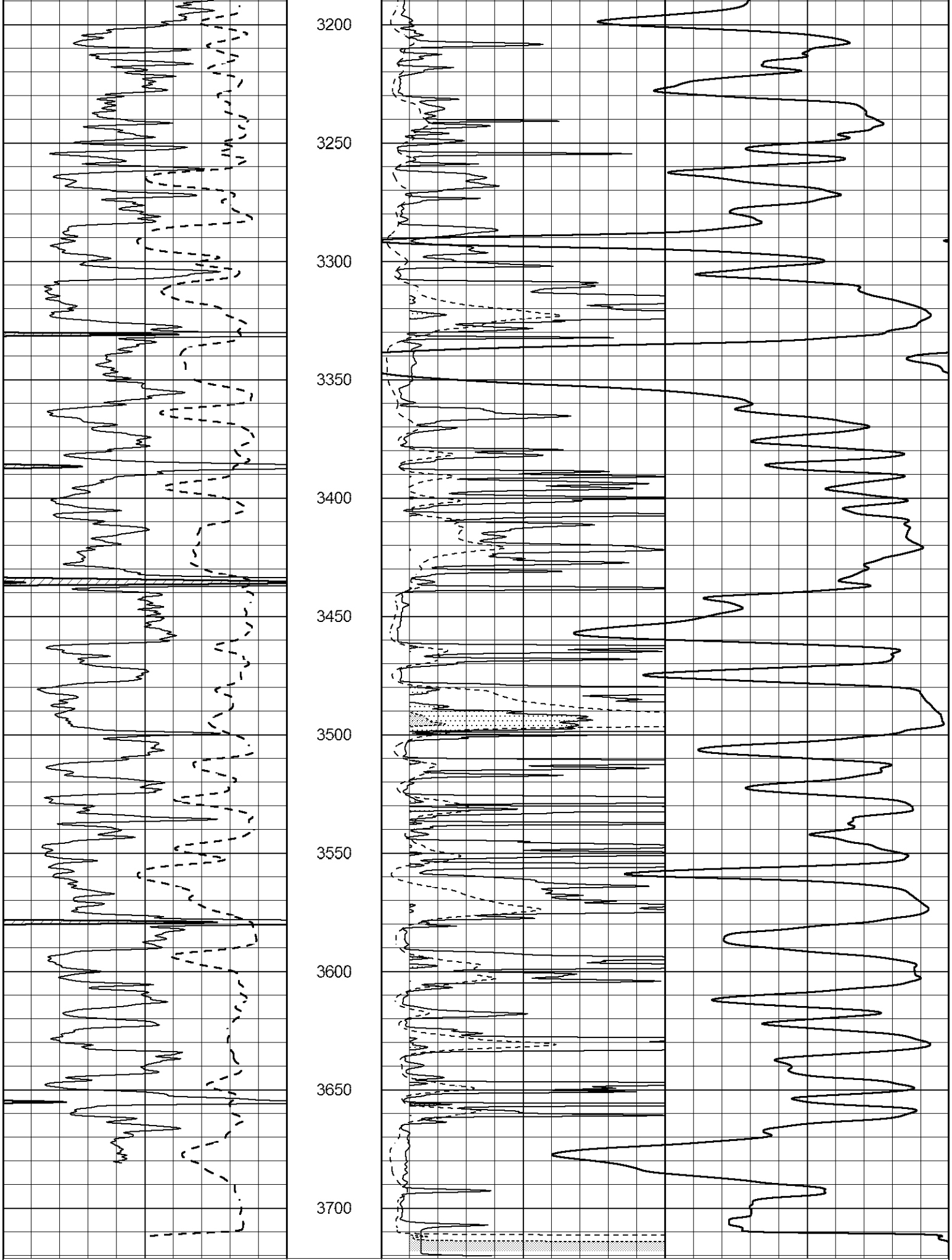

450
500
550
600
650
700
750
800
850
900
950


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

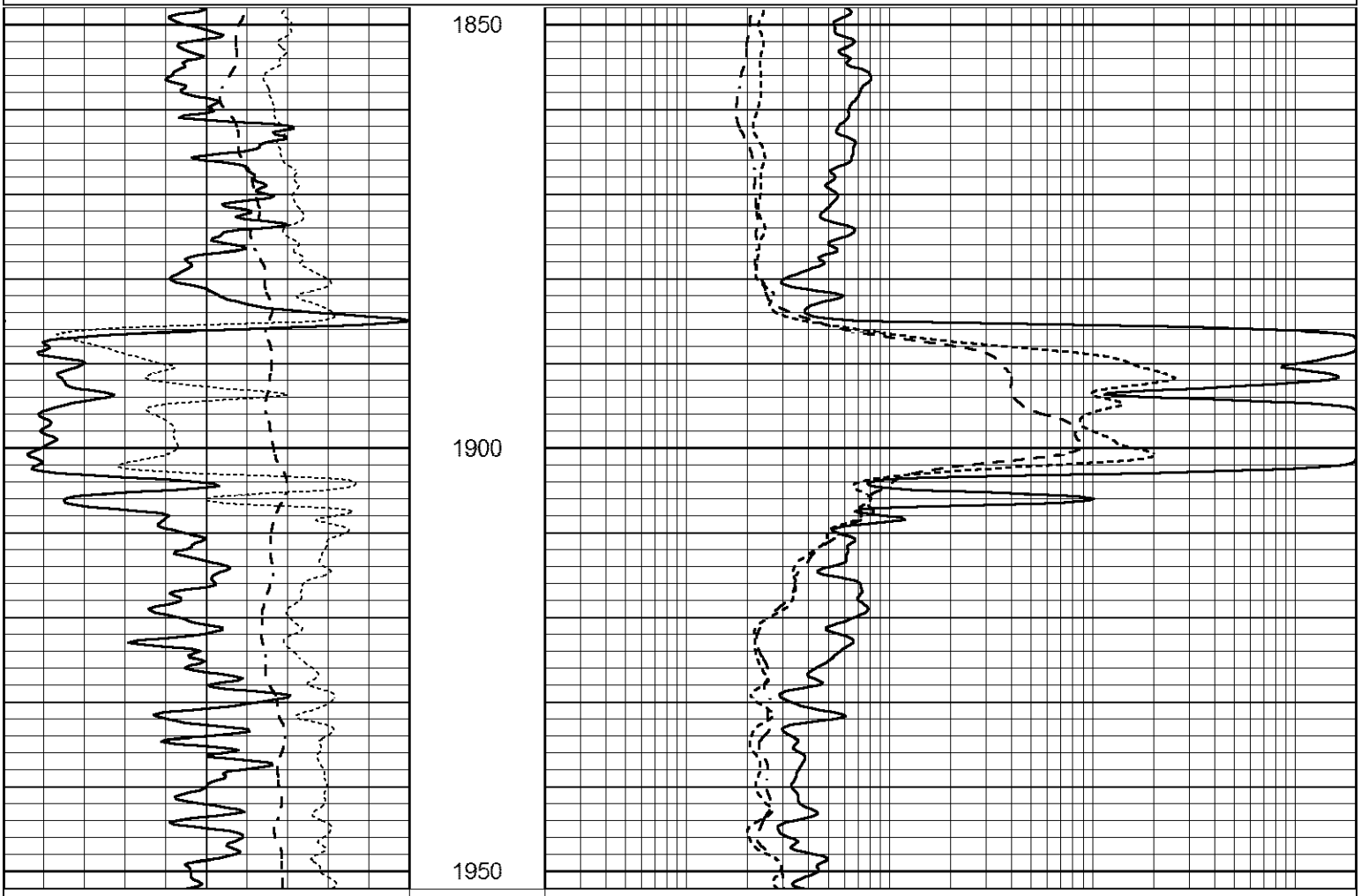

3200
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700
0
Gamma Ray (GAPI)
150
1000
CILD (mmho/m)
0
100
SP (mV)
100
0
RLL3 (Ohm.m)
50

-100	SP (mV)	100
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	3448ddn8.db
Dataset Pathname	pass3.2
Presentation Format	_dil
Dataset Creation	Tue Mar 05 17:43:31 2019
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	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000



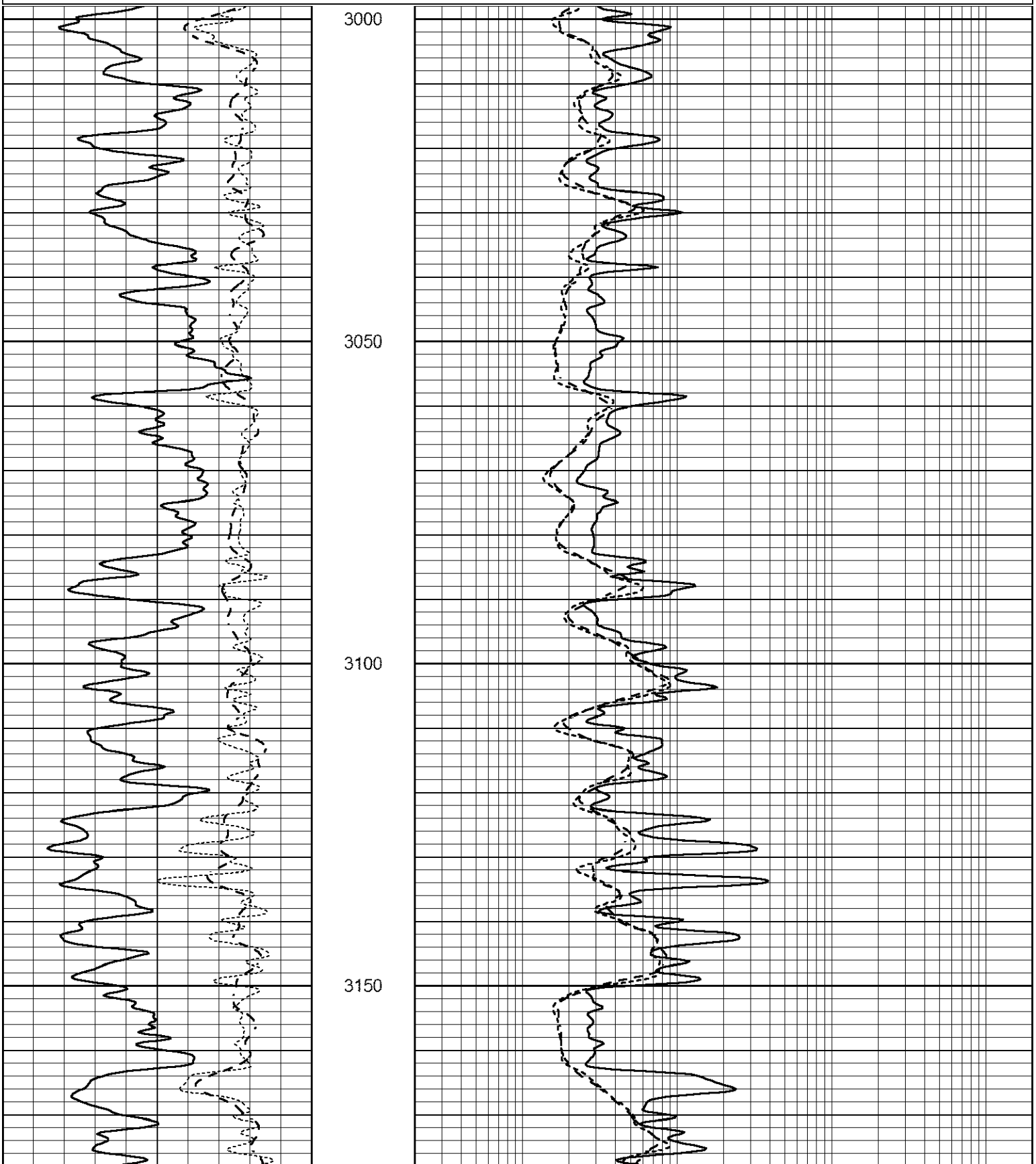
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000

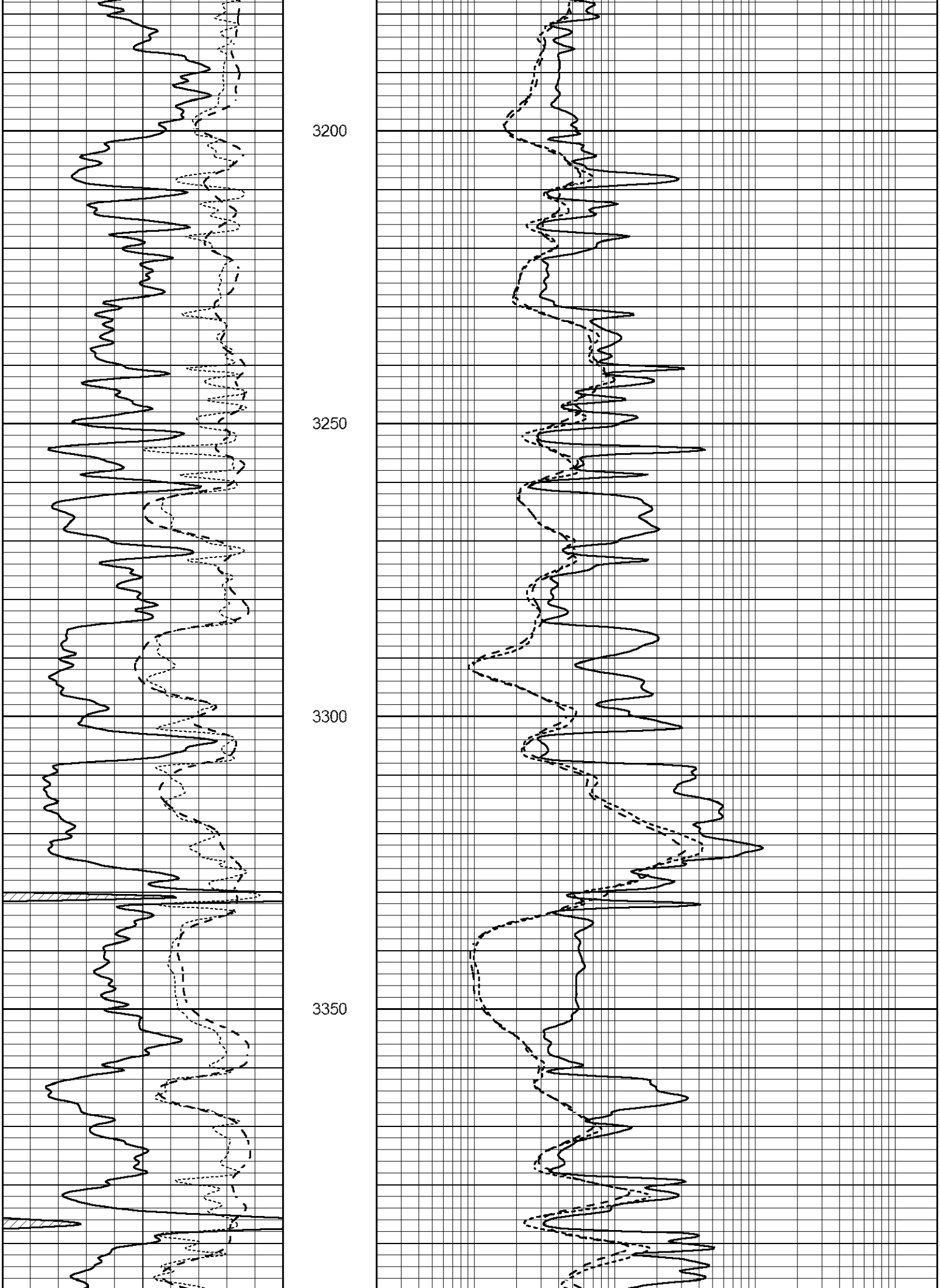
MAIN SECTION

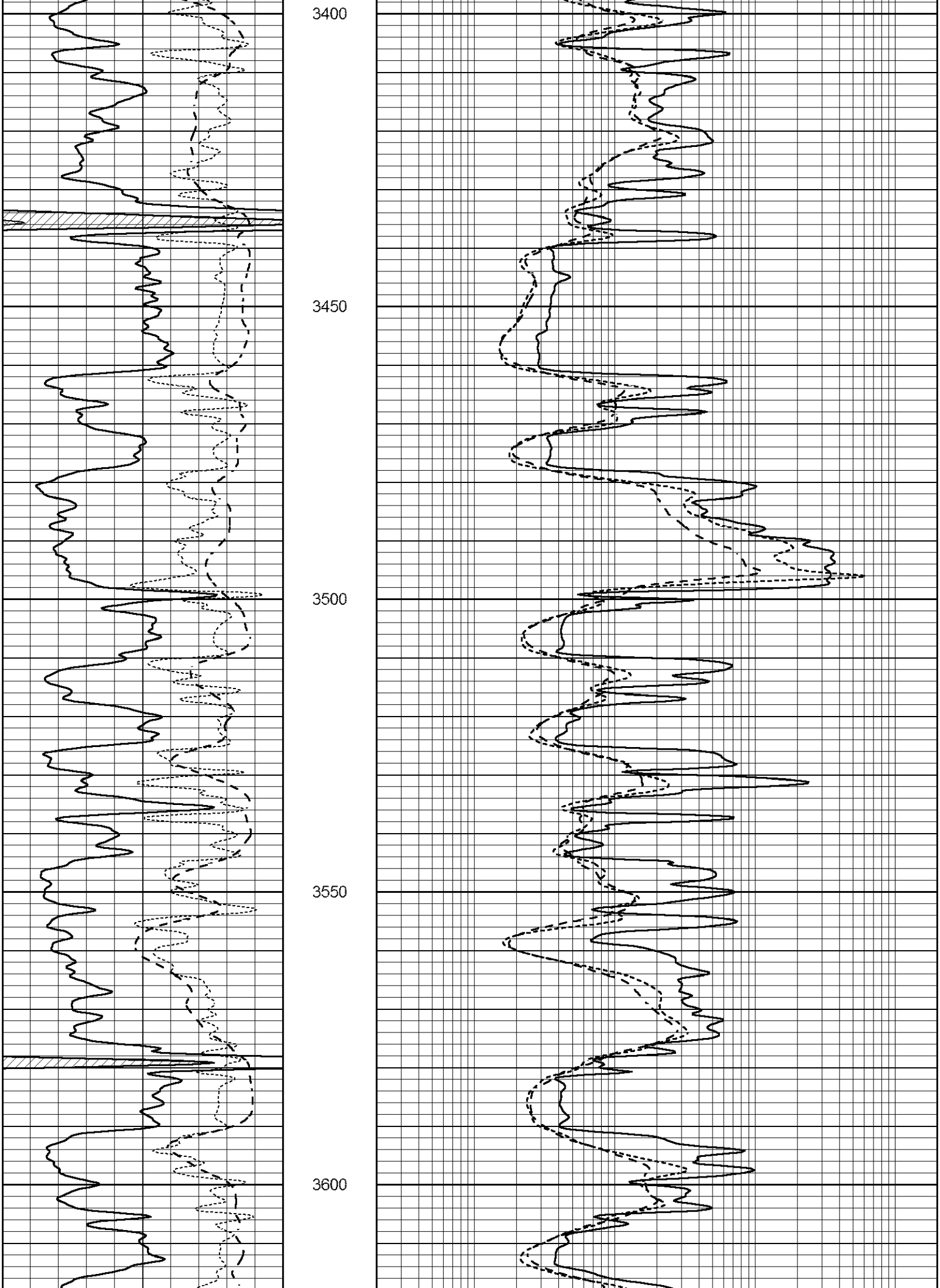
Database File	3448ddn8.db
Dataset Pathname	pass3.1
Presentation Format	_dil
Dataset Creation	Tue Mar 05 17:30:20 2019
Charted by	Depth in Feet scaled 1:240

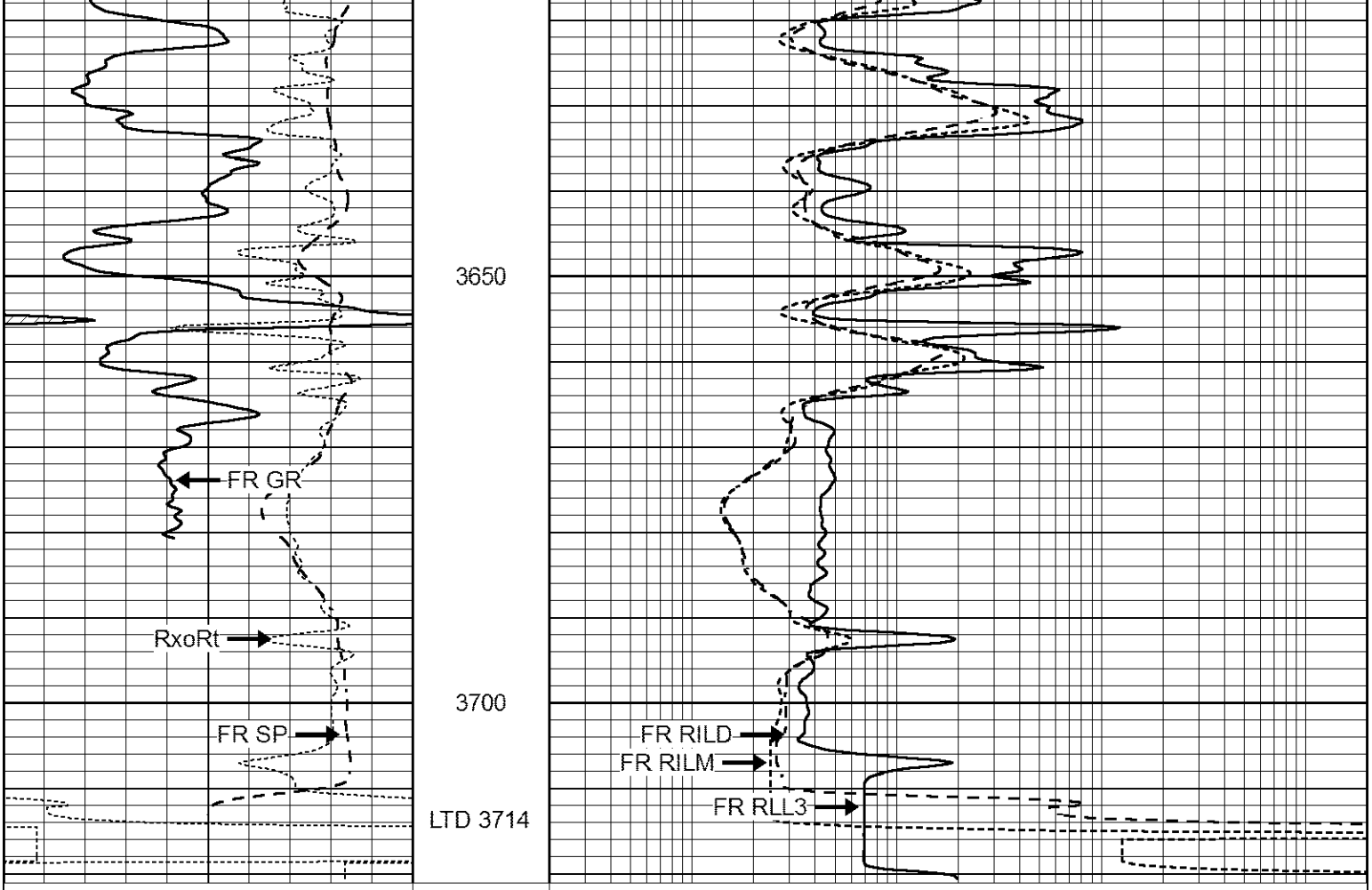
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

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




3200
3250
3300
3350


3400
3450
3500
3550
3600



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

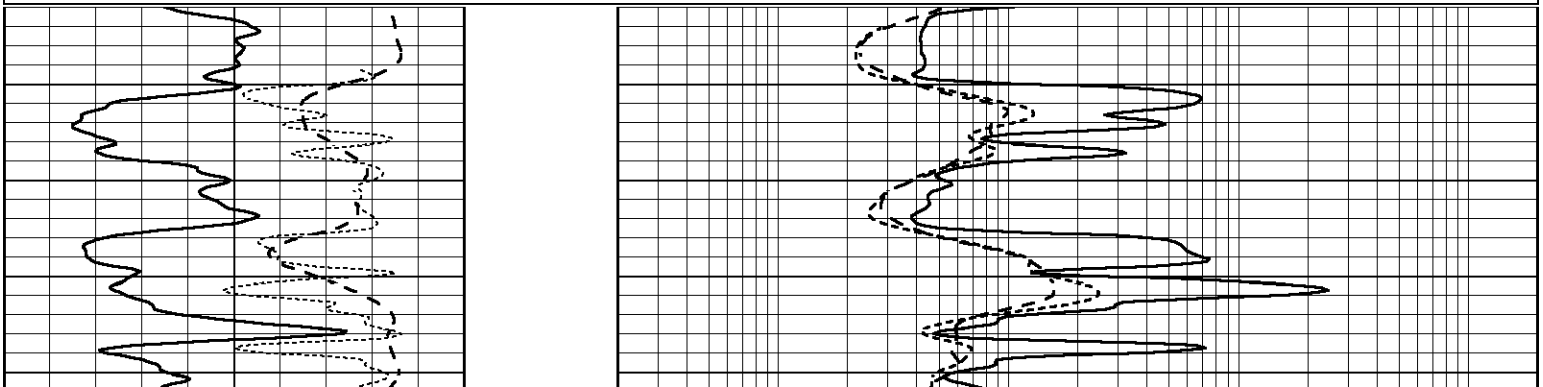
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

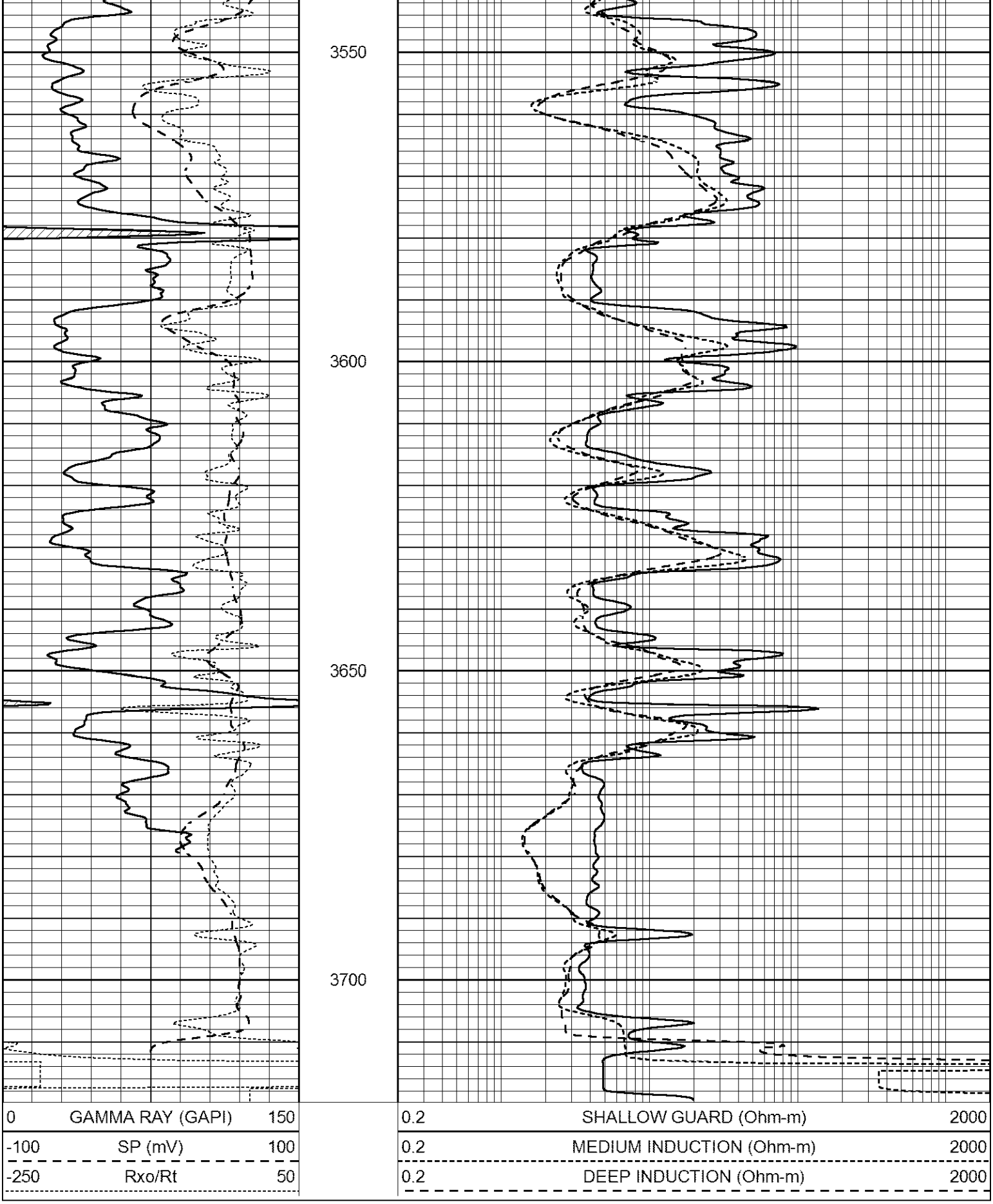
REPEAT SECTION

Database File	3448ddn8.db
Dataset Pathname	pass2.1
Presentation Format	_dil
Dataset Creation	Tue Mar 05 17:14:57 2019
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	3448ddn8.db
Dataset Pathname	pass2.1
Dataset Creation	Tue Mar 05 17:14:57 2019

Dual Induction Calibration Report

Serial-Model:	FW1410-55-Probe
Surface Cal Performed:	Tue Feb 19 11:44:18 2019
Downhole Cal Performed:	Tue Feb 19 11:44:24 2019
After Survey Verification Performed:	Tue Feb 19 11:44:27 2019

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: Fri Jan 18 10:53:52 2019

	Background	Aluminum	Magnesium	
Window 1	563.20	5403.39	24190.50	cps
Window 2	44.78	1243.51	6049.93	cps
Window 4	247.62	1222.40	5239.60	cps
Window 5	568.17	8975.27	17094.80	cps
Window 6	44.48	1484.88	2922.28	cps
Window 8	270.82	2877.34	5377.89	cps
Bulk Density	-	2.6020	1.6830	g/cc
Pe	-	3.0000	2.5070	b/e

LS Alpha:	: -1.8641	SS Alpha:	: -0.7692	LS CPE:	: 1.1004
LS Beta:	: 127931.7253	SS Beta:	: 20075.8142	SS CPE:	: 1.5209

Before Survey Backround Counts Verification — Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	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: Fri Jan 18 10:53:52 2019

Results Readings		References (in)			
Low	High	Low	High	Gain	Offset
90.2	3611.6	8.0	14.0	0.0	7.8

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: 7
Tool Model: Probe1
Performed: Tue Feb 19 11:45:10 2019

Calibrator Value: 1.0 GAPI

Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.4300	GAPI/cps