NABORS
COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company	O'BRIEN RESOURCES, LLC.
Well	MSJ PENNER 28 #2
Field	WILDCAT
County	GOVE
State	KANSAS

Company O'BRIEN RESOURCES, LLC.
Well MSJ PENNER 28 #2
Field WILDCAT
County GOVE State KANSAS
Location: API # : 15-063-22210-0000
1891' FNL & 933' FWL
SW - NE - SW - NW
SEC 28 TWP 14S RGE 30W

Other Services: CDL/CNL/PE, MEL

Permanent Datum: GROUND LEVEL Elevation 2764
Log Measured From: KELLY BUSHING 13' A.G.L.
Drilling Measured From: KELLY BUSHING

Elevation: K.B. 2777, D.F. 2775, G.L. 2764

Date	11/5/14		
Run Number	ONE		
Depth Driller	4615		
Depth Logger	4618		
Bottom Logged Interval	4616		
Top Log Interval	00		
Casing Driller	8 5/8"@271'		
Casing Logger	269		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,800 PPM	
Density / Viscosity	9.2/45		
pH / Fluid Loss	11.0/6.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.950@80F		
Rmf @ Meas. Temp	.713@80F		
Rmc @ Meas. Temp	1.14@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.623@122F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	6:30 A.M.		
Maximum Recorded Temperature	122F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KURT TALBOTT		

<<< Fold Here >>>

Comments

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
GOVE, KS., 9S. ON HWY 23 TO "CO. RD. 22", 9W., S. INTO @TANK BATTERY

NABORS
COMPLETION & PRODUCTION

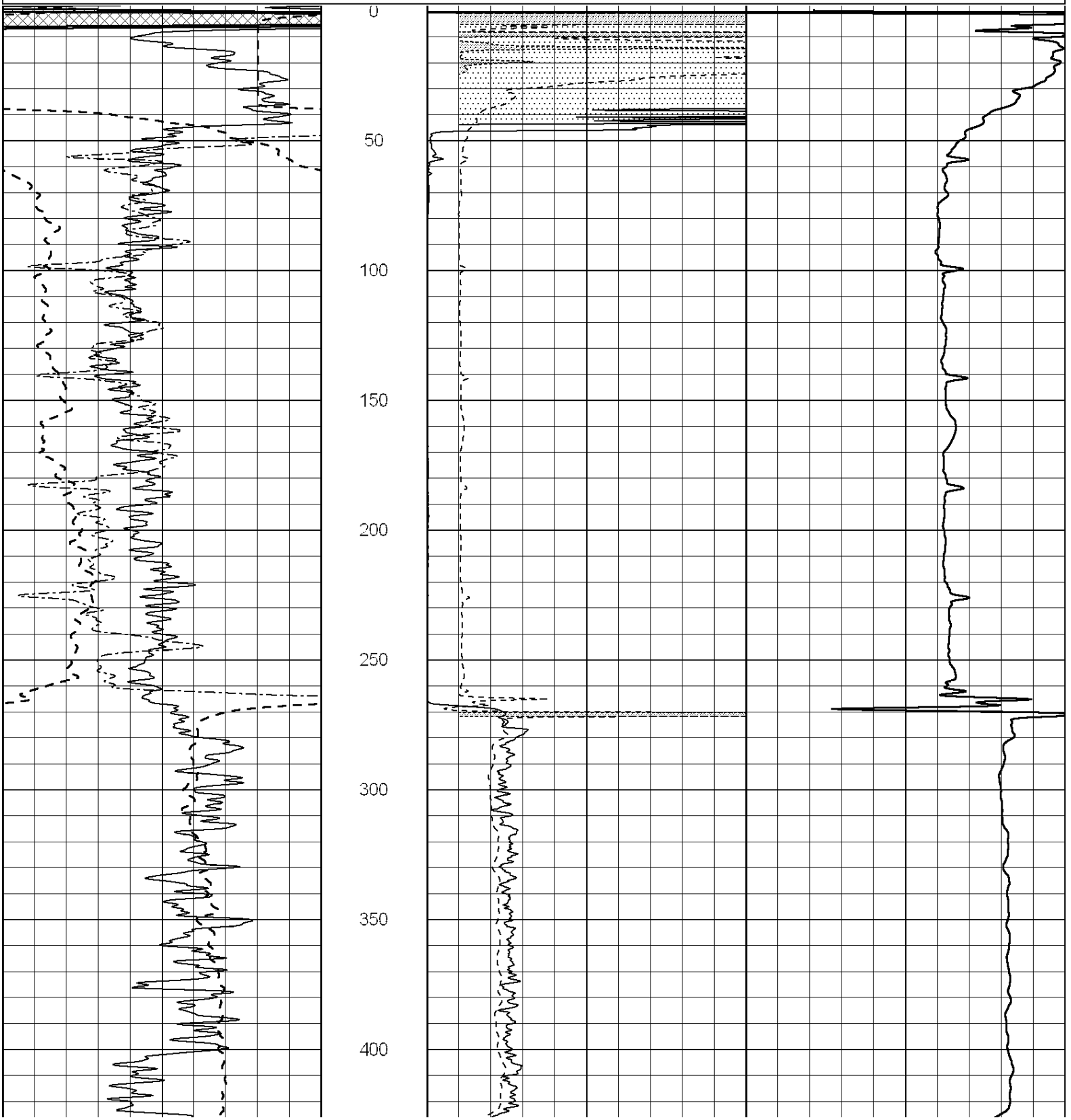
MAIN SECTION

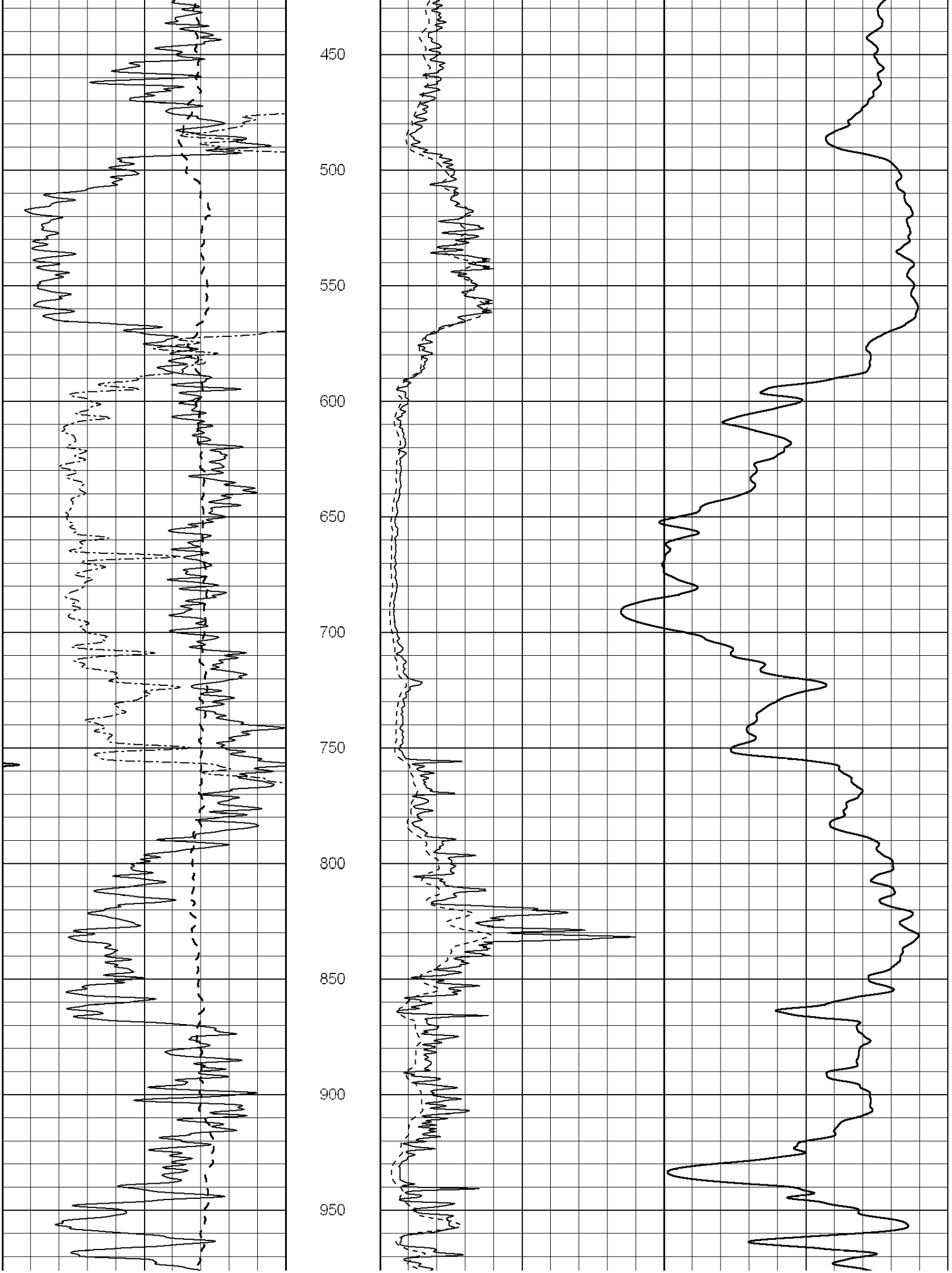
SERVICES CO.

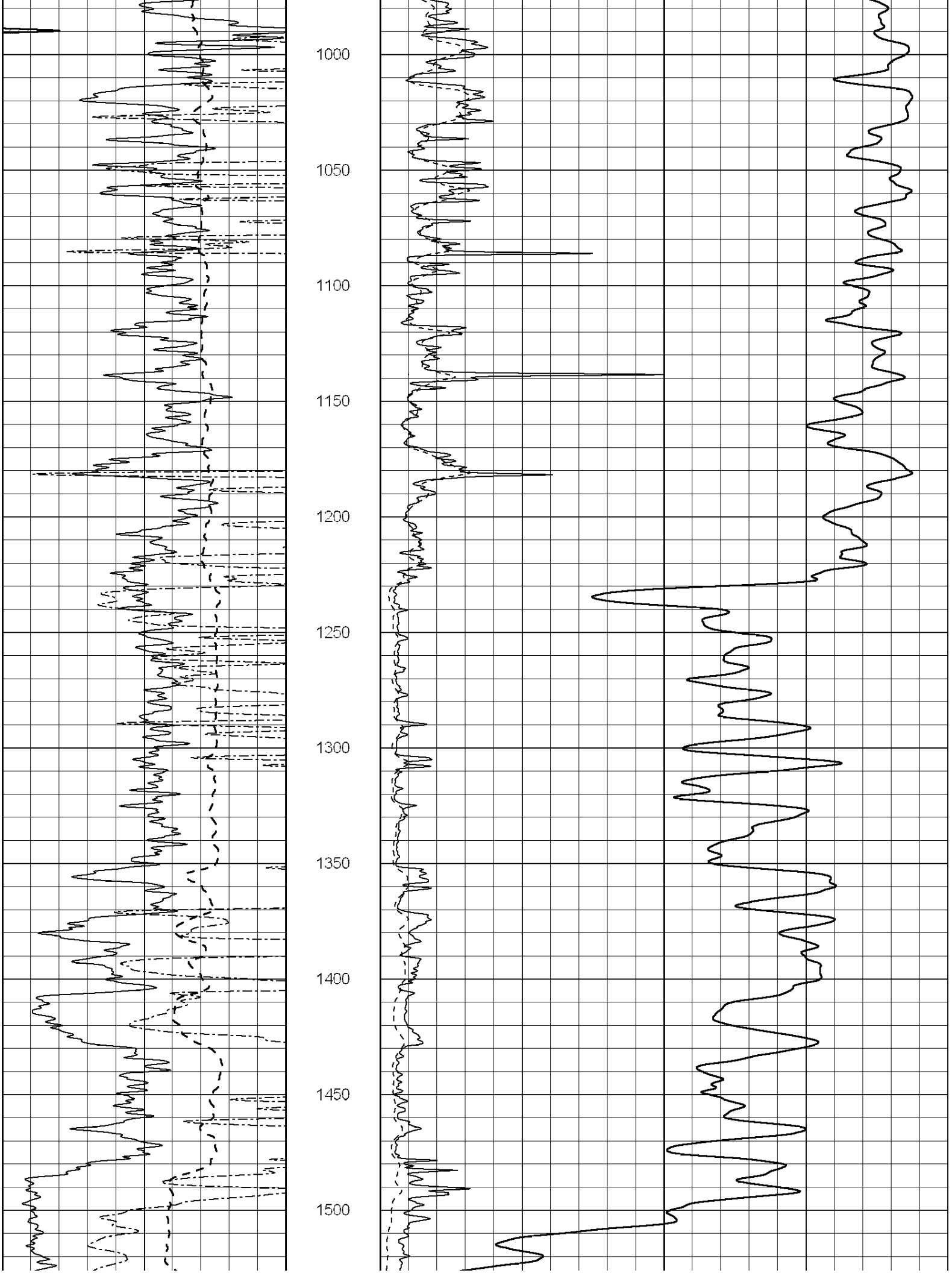
Database File: 25908pe.db
Dataset Pathname: pass3.4
Presentation Format: dil2
Dataset Creation: Wed Nov 05 07:55:04 2014
Charted by: Depth in Feet scaled 1:600

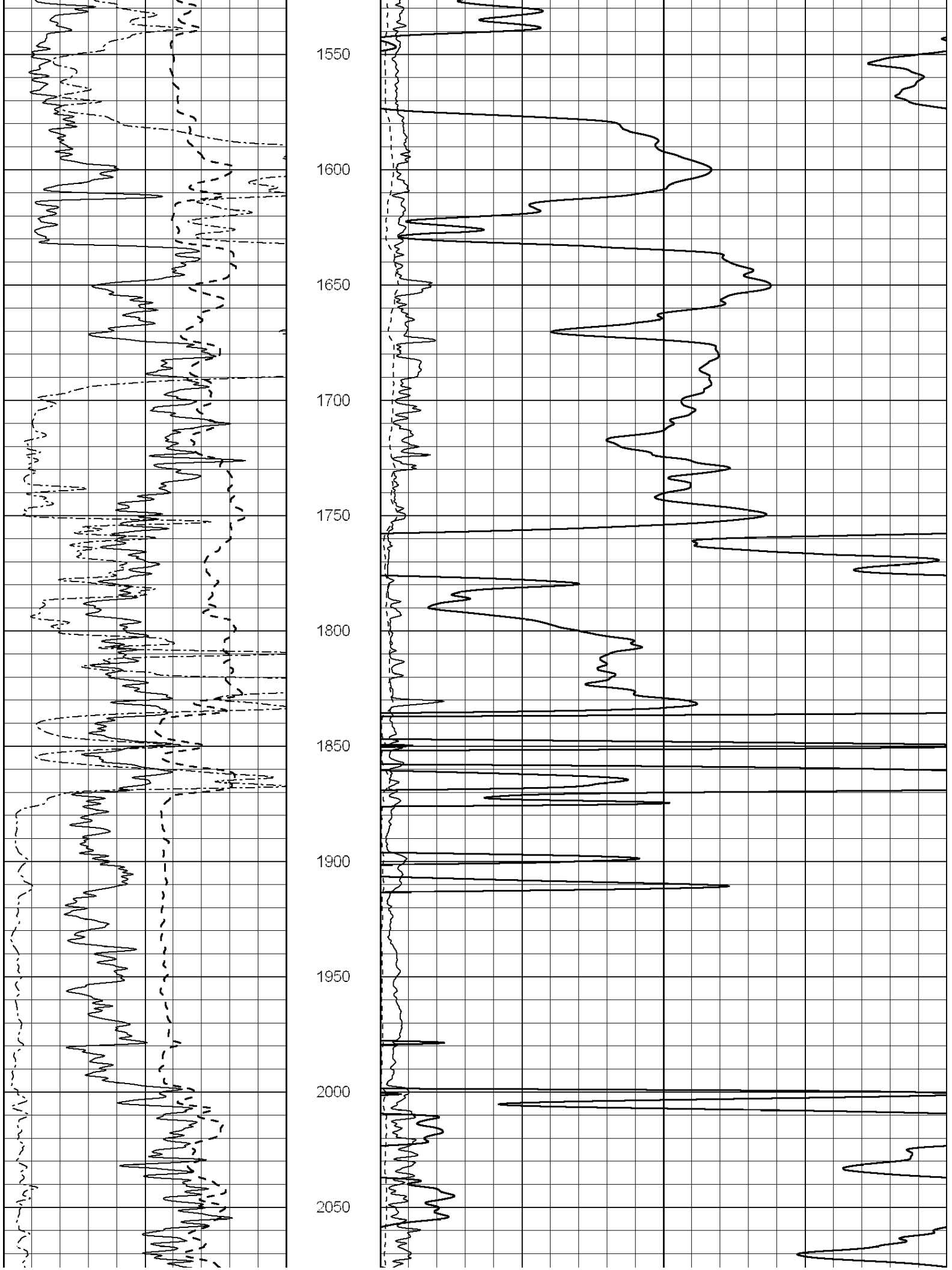
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

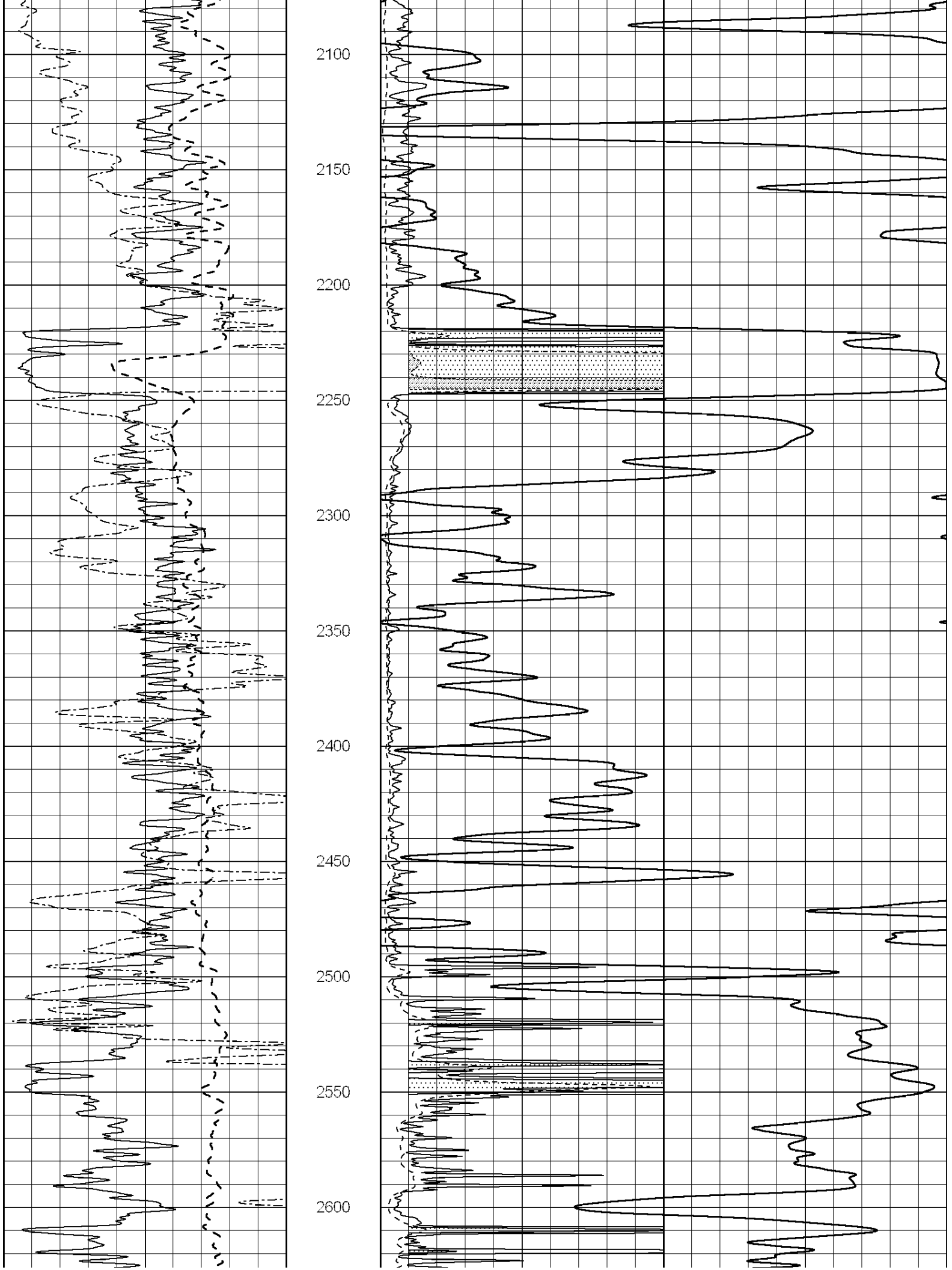
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

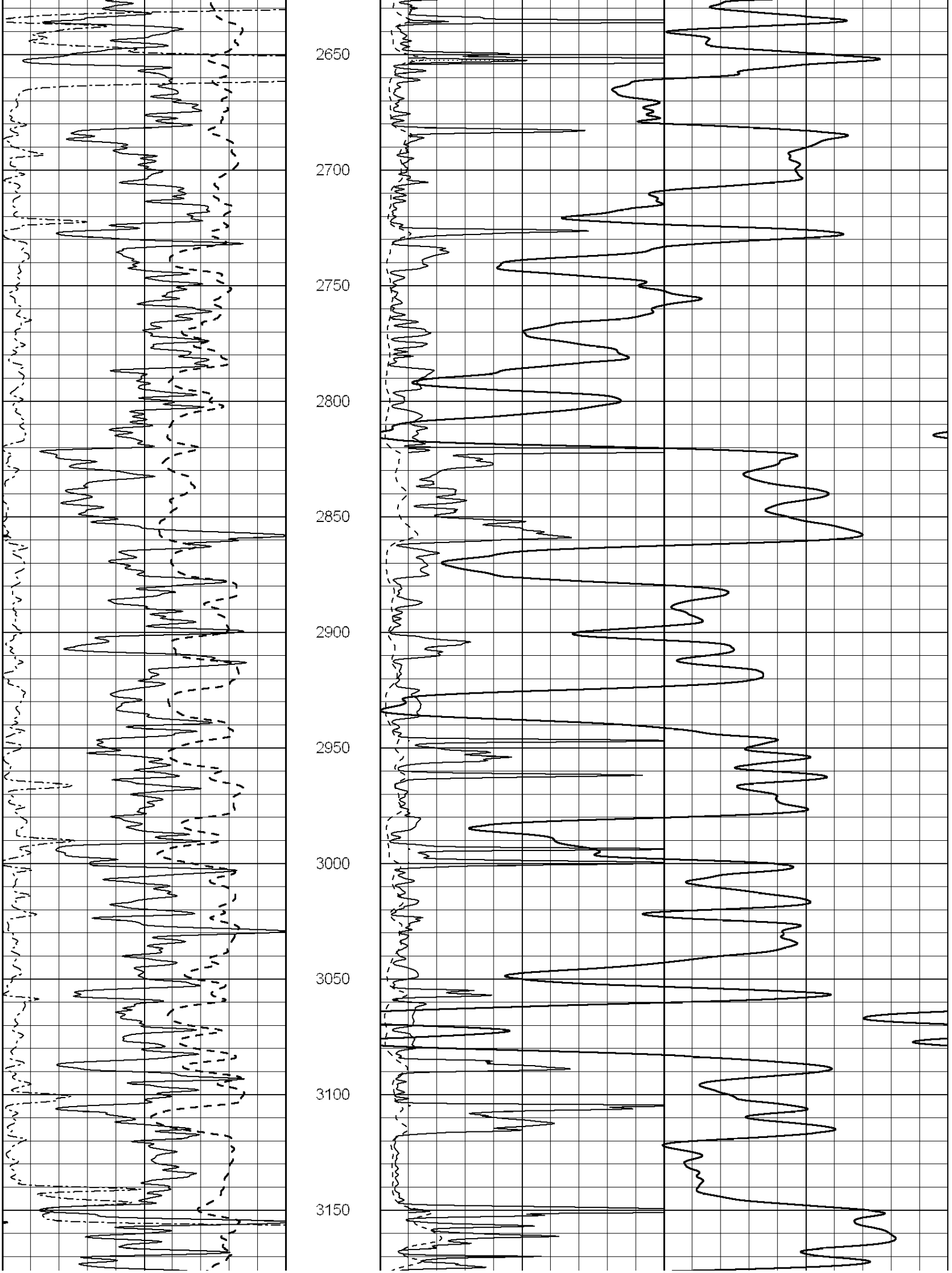


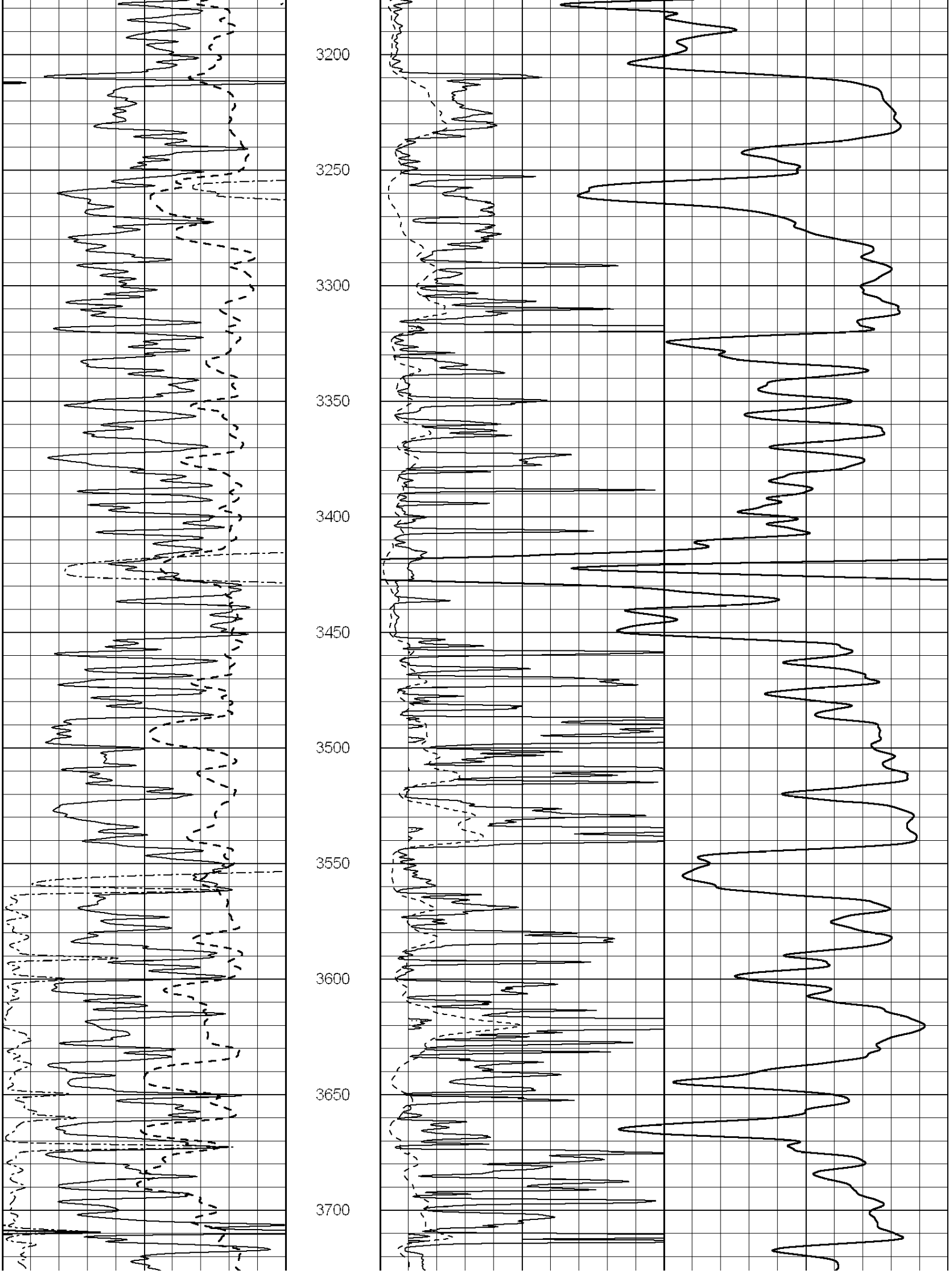

450
500
550
600
650
700
750
800
850
900
950

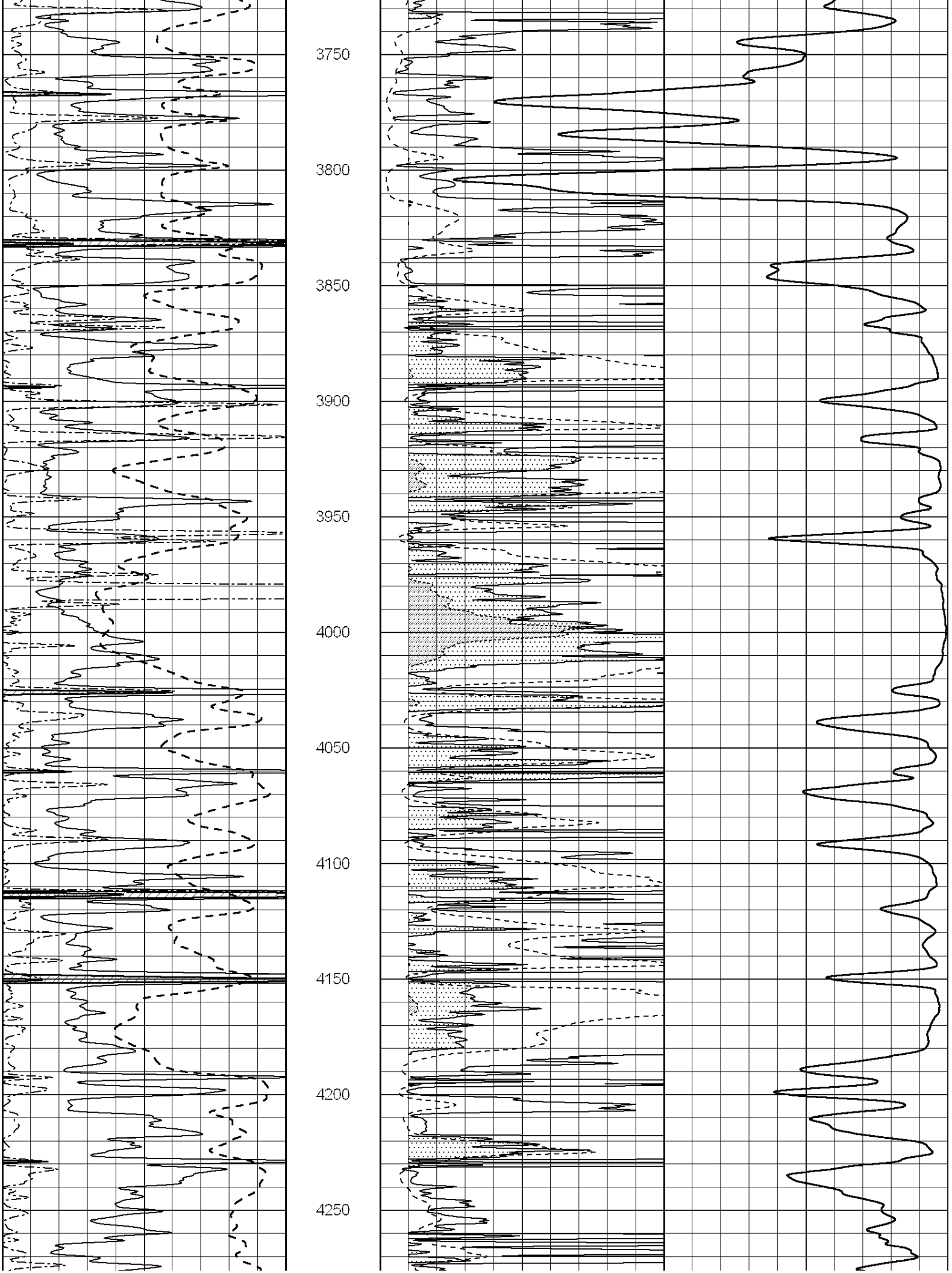

1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

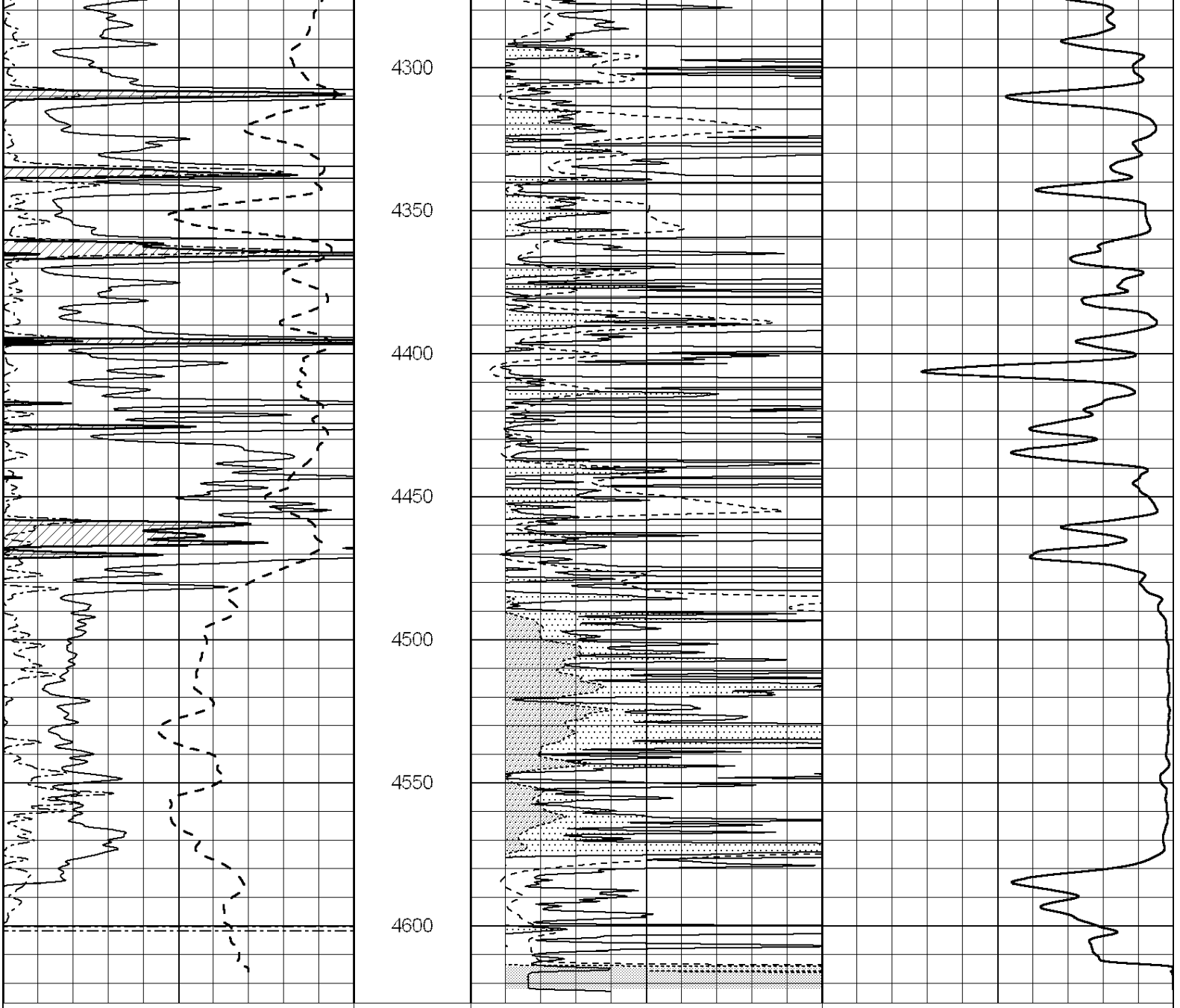

1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050


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


3750
3800
3850
3900
3950
4000
4050
4100
4150
4200
4250



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

NABORS
COMPLETION & PRODUCTION SERVICES CO.

ANHYDRITE

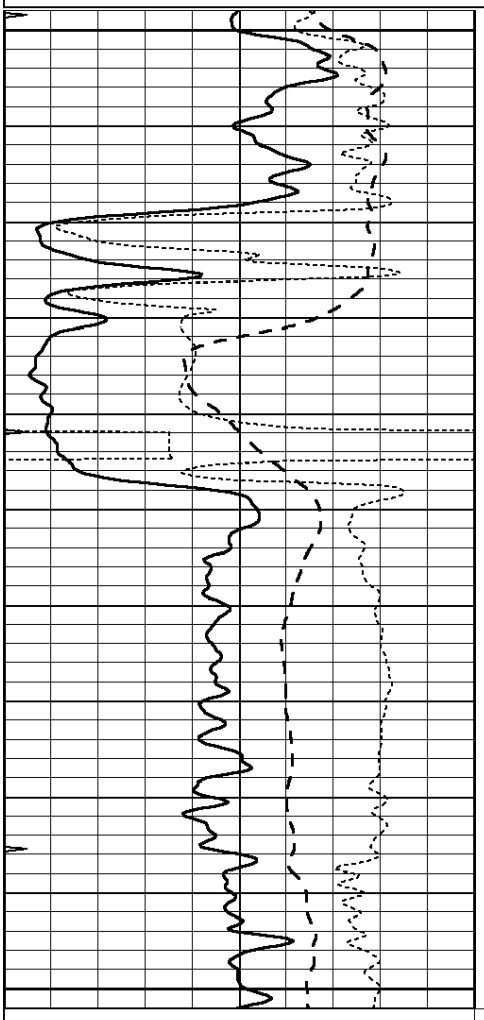
Database File: 25908pe.db
Dataset Pathname: pass3.5
Presentation Format: _dil
Dataset Creation: Wed Nov 05 07:55:22 2014
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100

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

-250	Rxo/Rt	50
0	MINMK	20

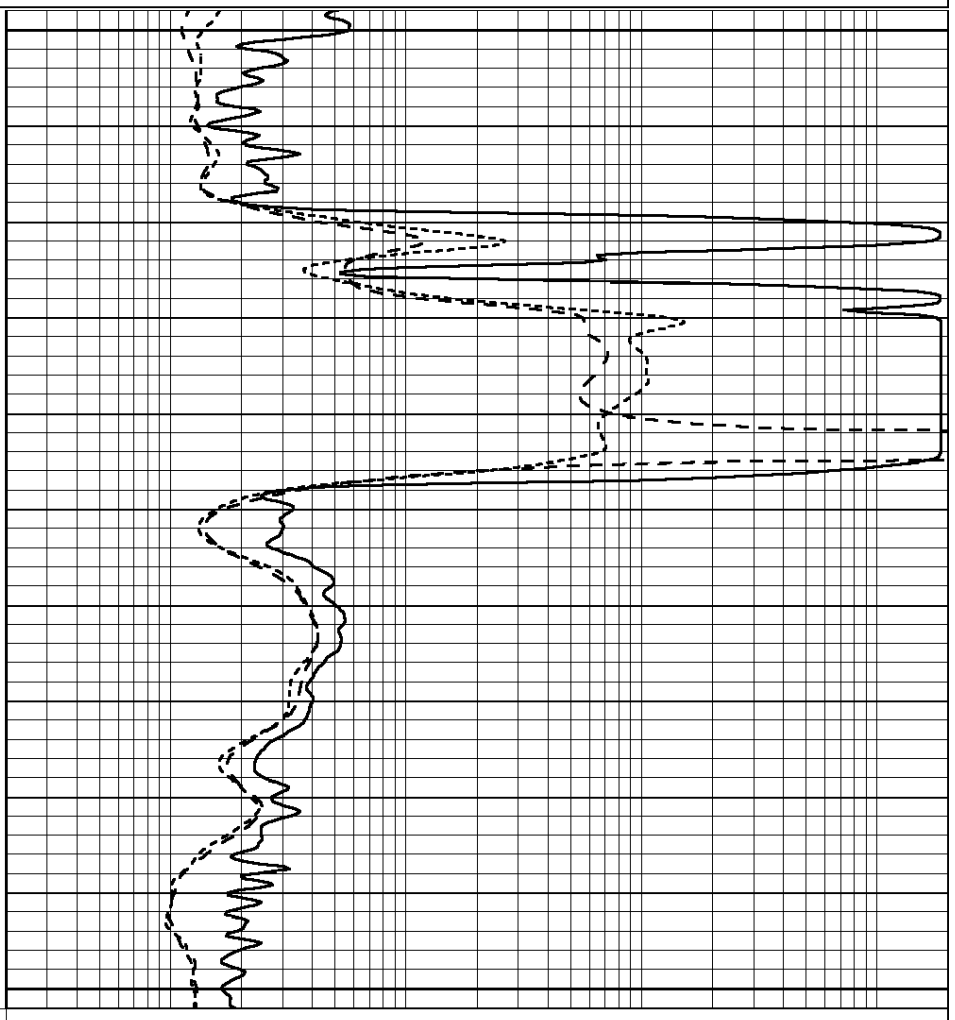
0.2	MEDIUM INDUCTION (Ohm-m)	2000



2200

2250

2300



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

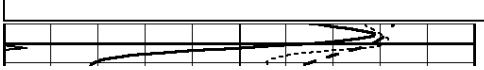
NABORS
COMPLETION & PRODUCTION SERVICES CO.

MAIN SECTION

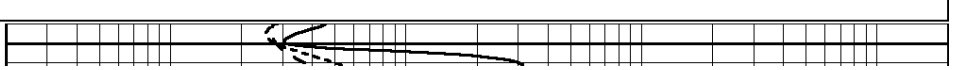
Database File:	25908pe.db
Dataset Pathname:	pass3.4
Presentation Format:	_dil
Dataset Creation:	Wed Nov 05 07:55:04 2014
Charted by:	Depth in Feet scaled 1:240

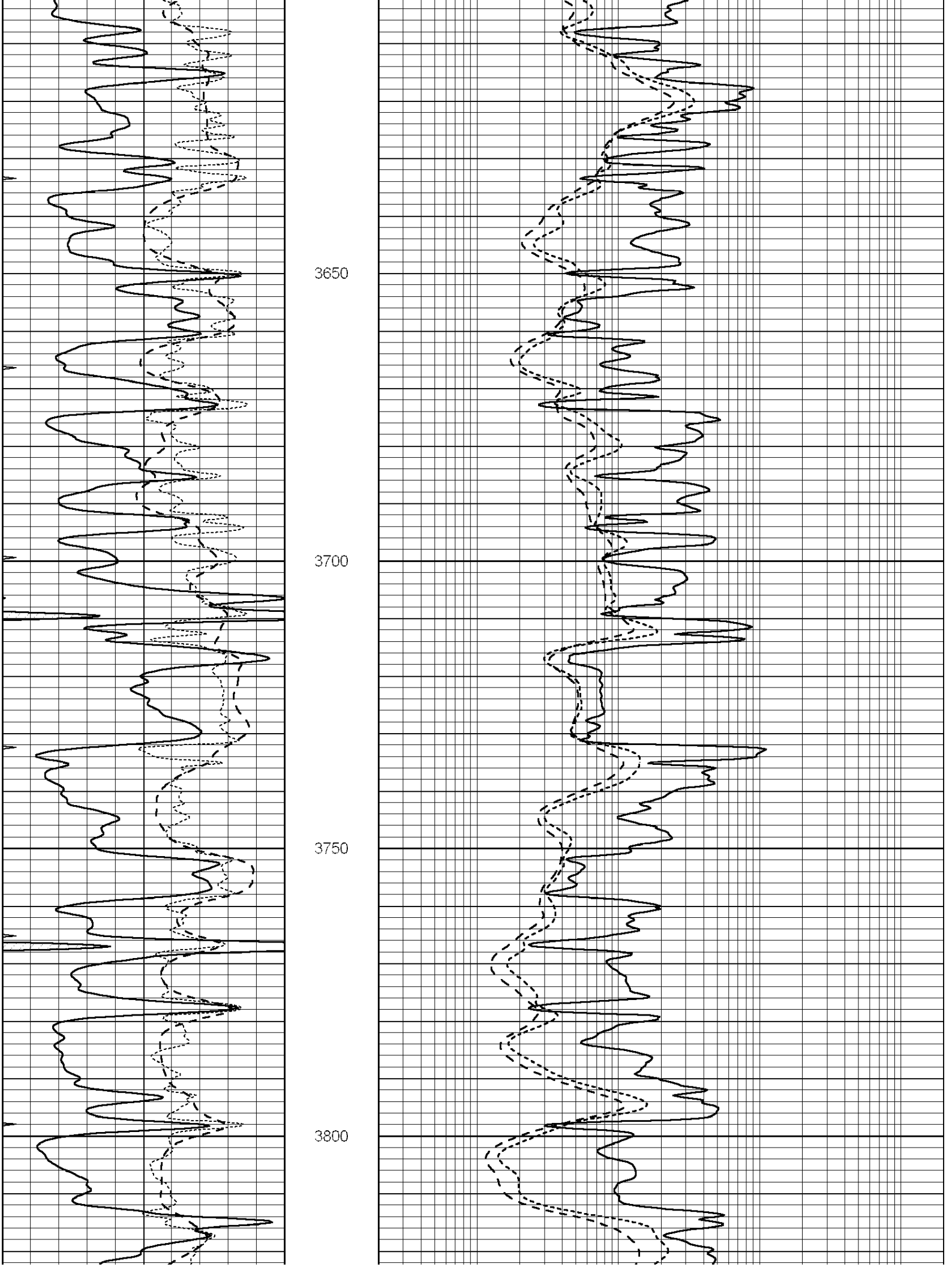
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

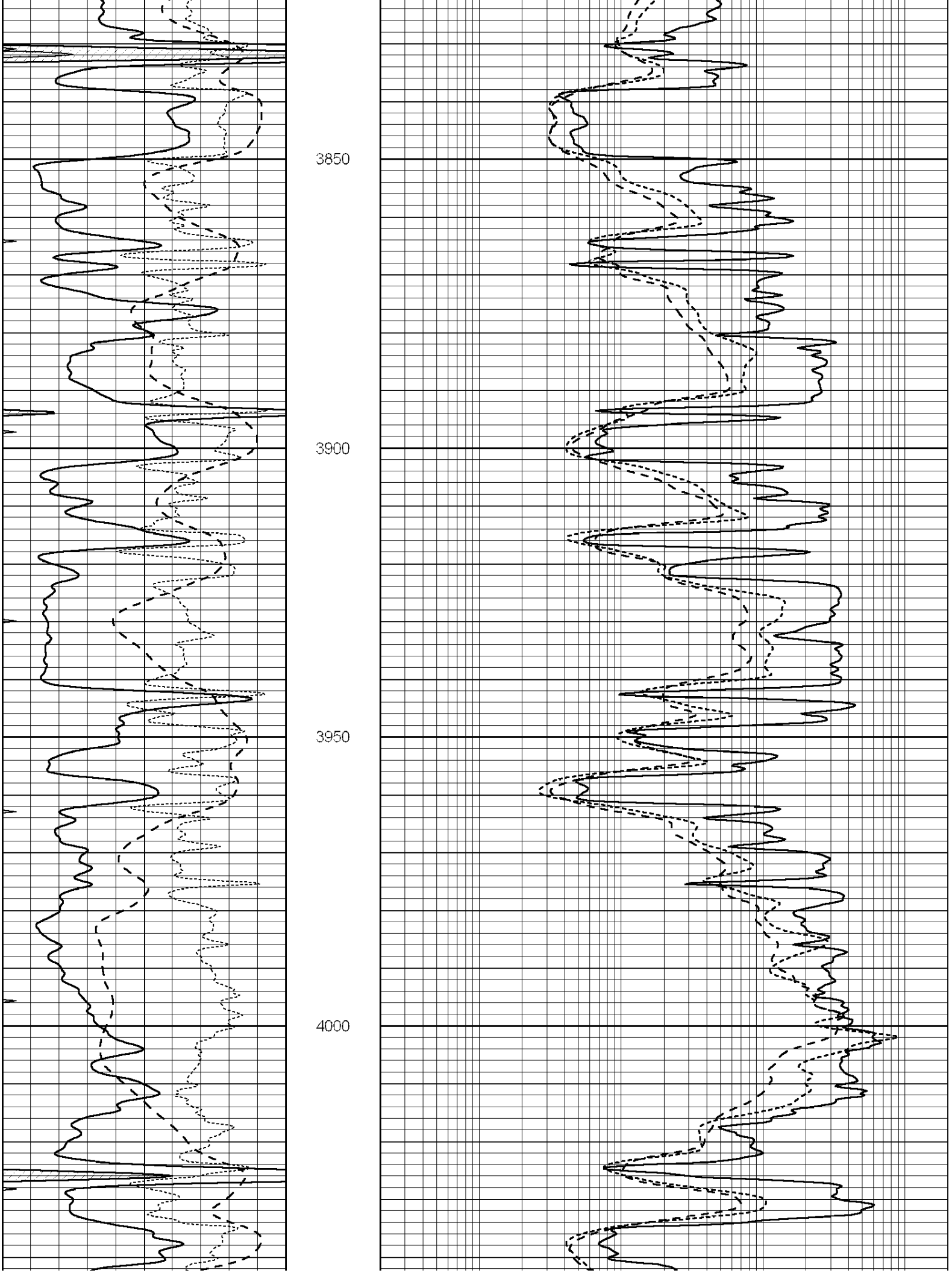
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

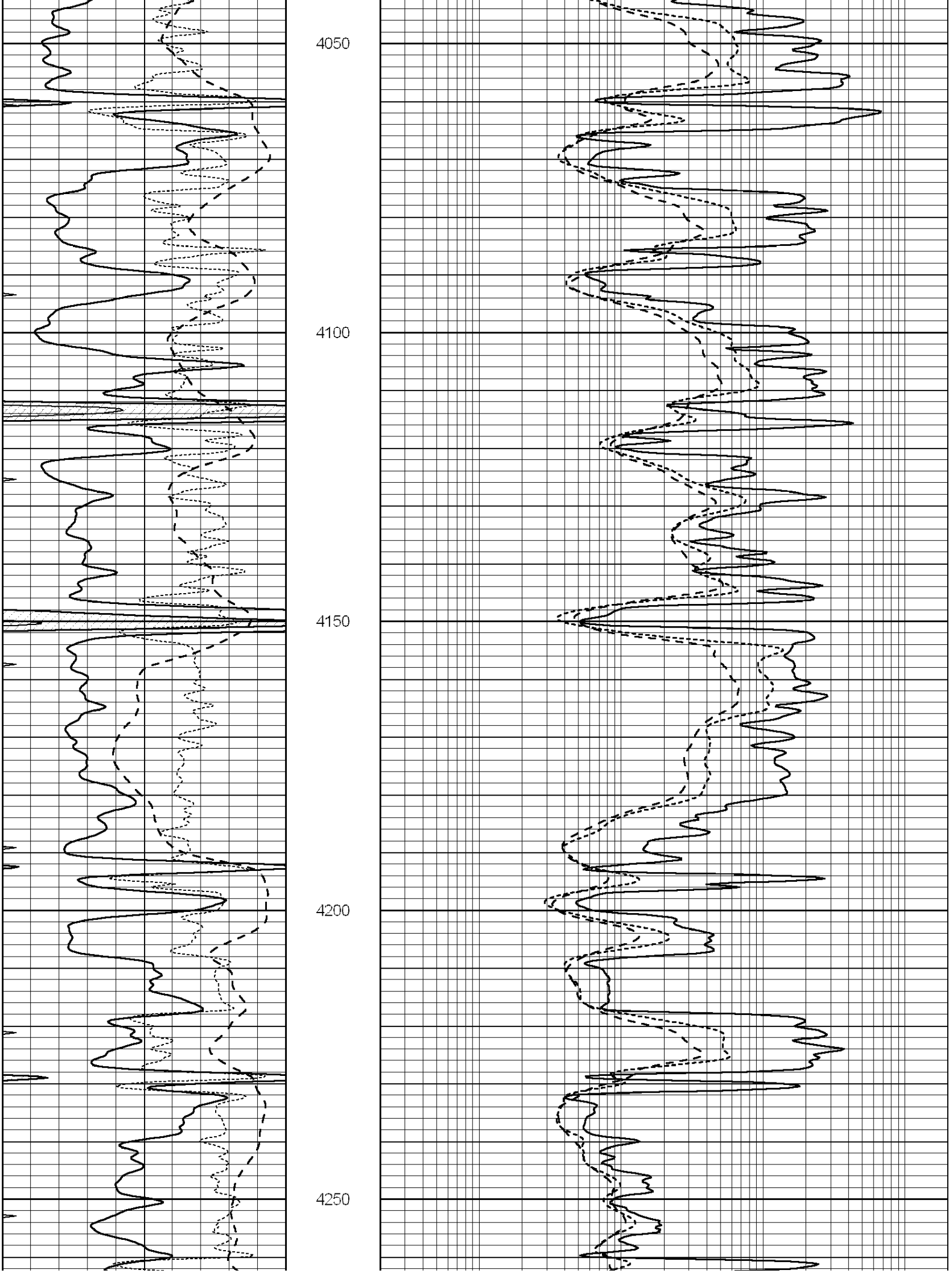


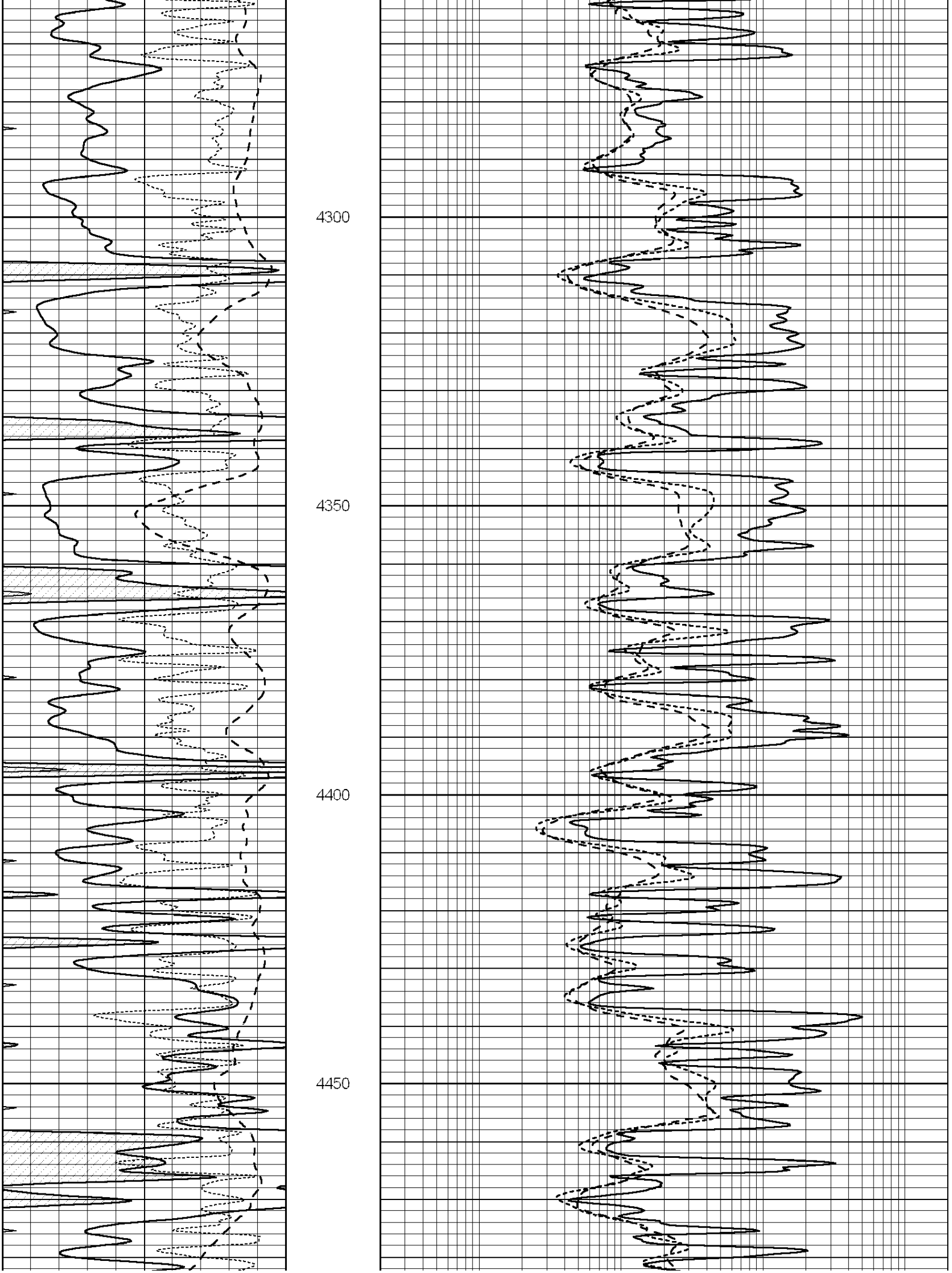
3600

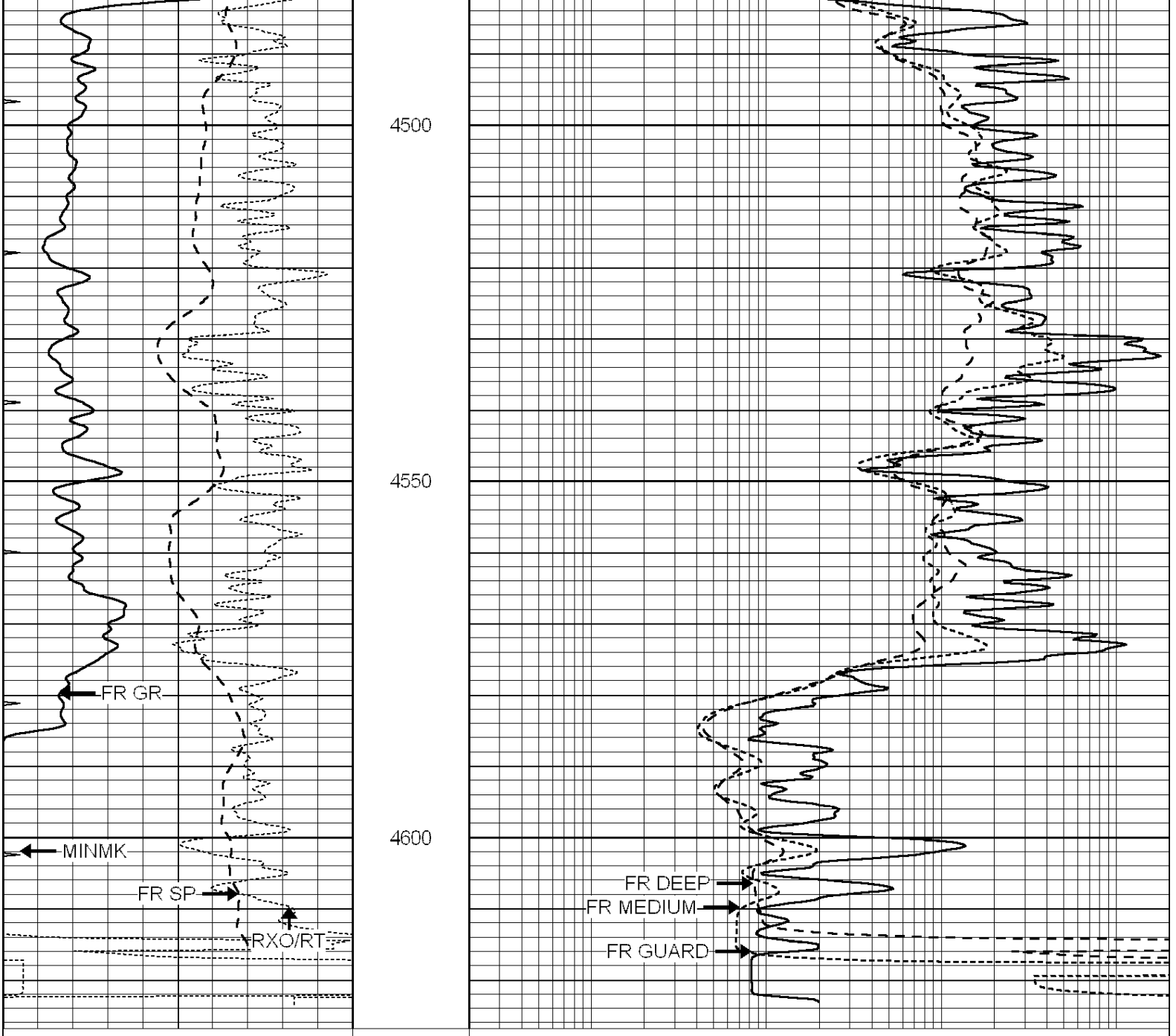



3650
3700
3750
3800


3850
3900
3950
4000


4050
4100
4150
4200
4250


4300
4350
4400
4450



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

NABORS
COMPLETION & PRODUCTION SERVICES CO.

REPEAT SECTION

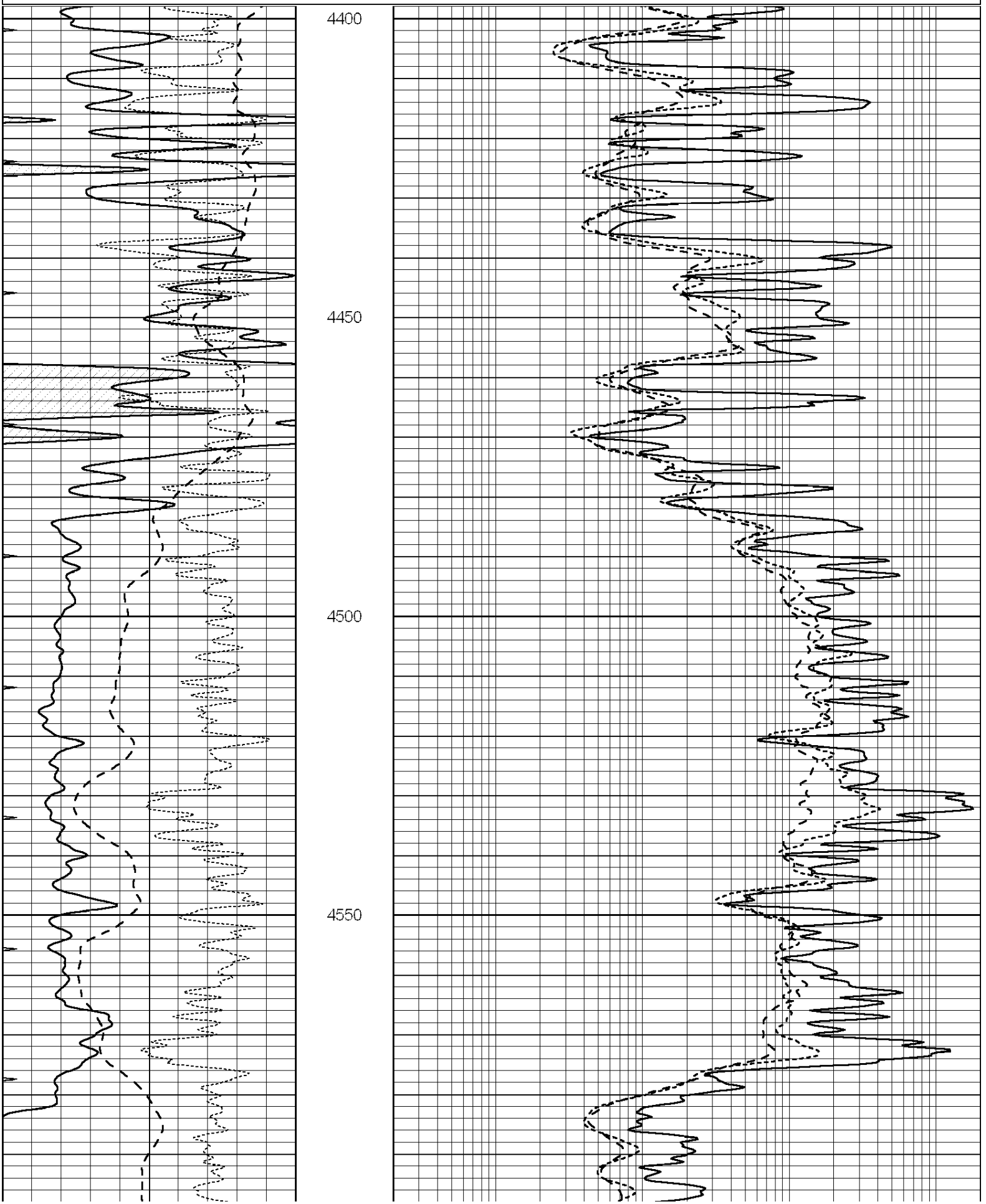
Database File:	25908pe.db
Dataset Pathname:	pass2.2
Presentation Format:	_dil
Dataset Creation:	Wed Nov 05 06:31:17 2014 by Calc SOC 120430
Charted by:	Depth in Feet scaled 1:240

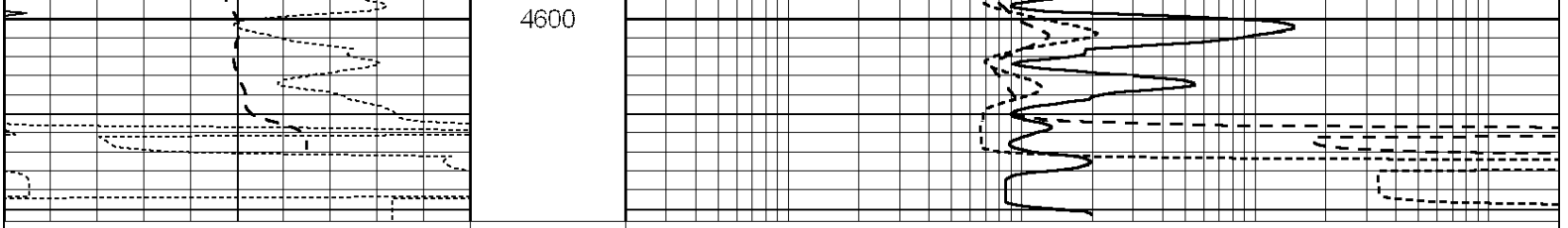
0	GAMMA RAY (GAPI)	150

0.2	SHALLOW GUARD (Ohm-m)	2000

-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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





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

Calibration Report

Database File: 25908pe.db
Dataset Pathname: pass3.4
Dataset Creation: Wed Nov 05 07:55:04 2014

Dual Induction Calibration Report

Serial-Model:	PROBE9-DILG
Surface Cal Performed:	Wed Nov 05 06:16:07 2014
Downhole Cal Performed:	Mon Jul 28 12:02:56 2008
After Survey Verification Performed:	Mon Jul 28 12:02:56 2008

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	670.000	-11.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	670.000	-21.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report

Serial: 004N Model: PRB

Master Calibration — Performed Fri May 30 11:01:00 2014

	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
Tool Model: OPEN_GR
Performed: Mon Jun 30 21:53:39 2014

Performed:	Mon Jun 06 21:05:05 2011	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps