NABORS COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company	EDISON OPERATING COMPANY, LLC.
Well	MILLER TRUST #1-13
Field	WILDCAT
County	GOVE
State	KANSAS

Company EDISON OPERATING COMPANY, LLC.
Well MILLER TRUST #1-13
Field WILDCAT
County GOVE State KANSAS
Location: API # : 15-063-22096-0000
880' FSL & 1580' FWL
(SW NW SE SW)
SEC 13 TWP 15S RGE 31W

Other Services: CDL/CNL/PE, SONIC

Permanent Datum	GROUND LEVEL	Elevation 2612	Elevation: K.B. 2617
Log Measured From	KELLY BUSHING 5' A.G.L.		D.F. 2615
Drilling Measured From	KELLY BUSHING		G.L. 2612

Date	4/24/13		
Run Number	ONE		
Depth Driller	4351		
Depth Logger	4350		
Bottom Logged Interval	4348		
Top Log Interval	00		
Casing Driller	8 5/8" @ 259		
Casing Logger	259		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.4/49	CHLORIDES 2000 PPM	
pH / Fluid Loss	10.0/7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.0 @ 71F		
Rmf @ Meas. Temp	.75 @ 71F		
Rmc @ Meas. Temp	1.20 @ 71F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.59 @ 119F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	119F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	DEREK PATTERSON		

<<< Fold Here >>>

Comments

THANK YOU FOR USING NABORS COMPLETION & PRODUCTION SVCS. (785) 628-6395

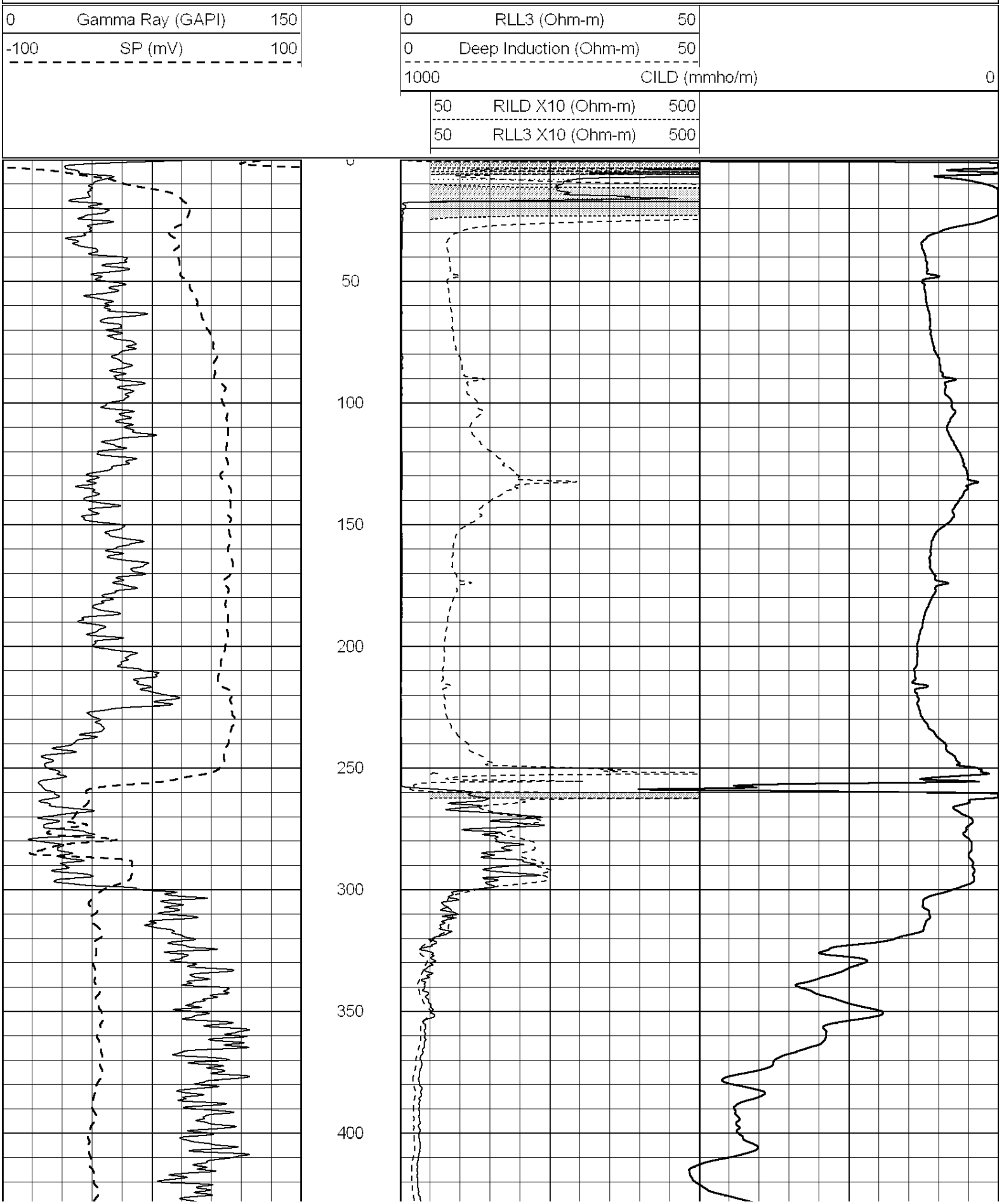
DIRECTIONS:
HEALY, KS. - 1 1/2 W. TO BISON RD. - 3 N. TO BISON II RD. - W. & N. 1 3/4 MILES TO CURVE WEST
GO WEST FOR 1/4 MILE TO FARM AND BACK NORTH TO RD. 290 - W. TO WILLOW RD.
N. 3 MILES TO CATTLE GUARD - NW. INTO ON TRAIL

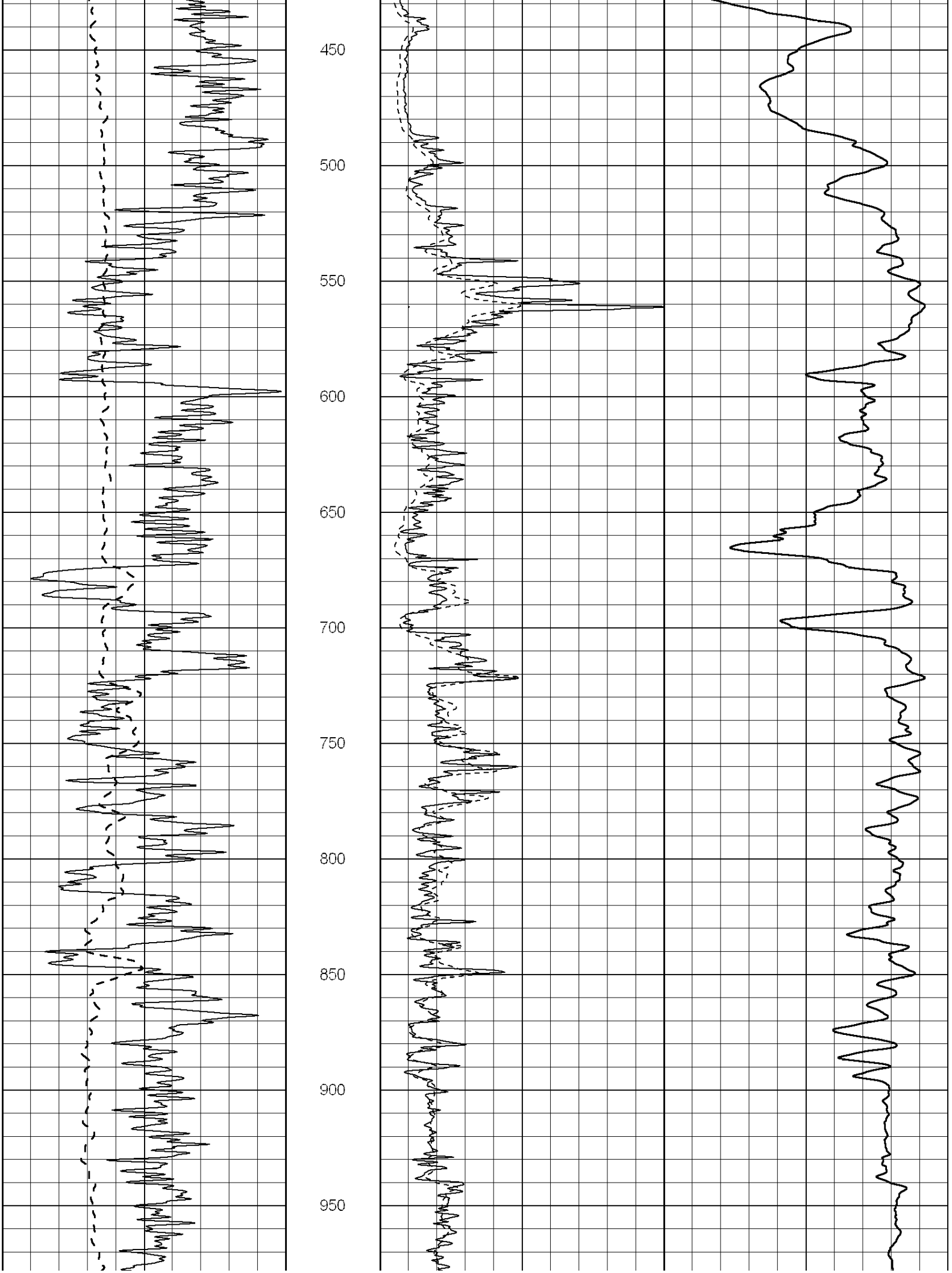
NABORS COMPLETION & PRODUCTION SERVICES CO.

MAIN SECTION

SERVICES CO.

Database File: 010146pe.db
Dataset Pathname: pass4.3
Presentation Format: _dil2
Dataset Creation: Wed Apr 24 07:51:12 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

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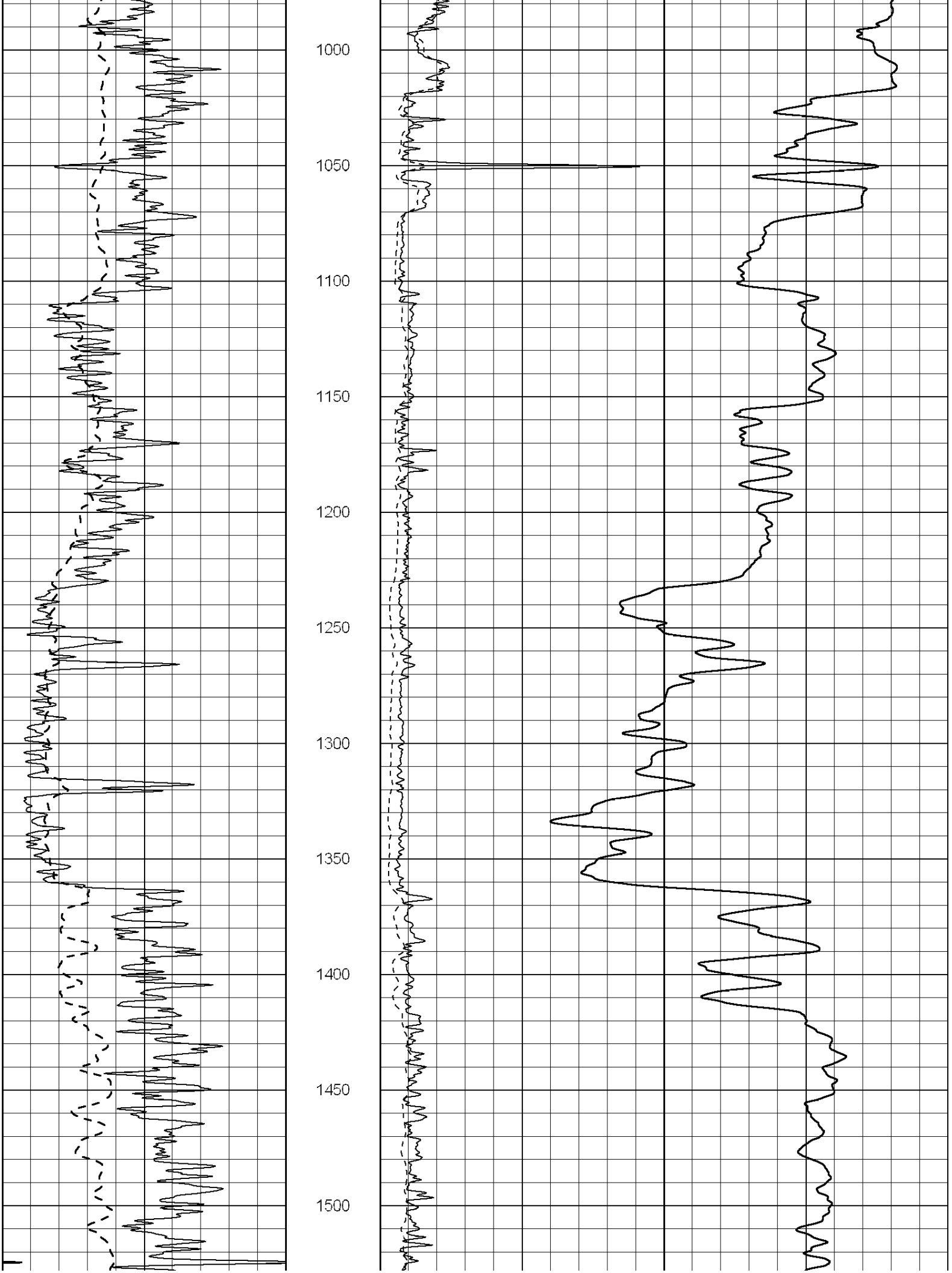
950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1450
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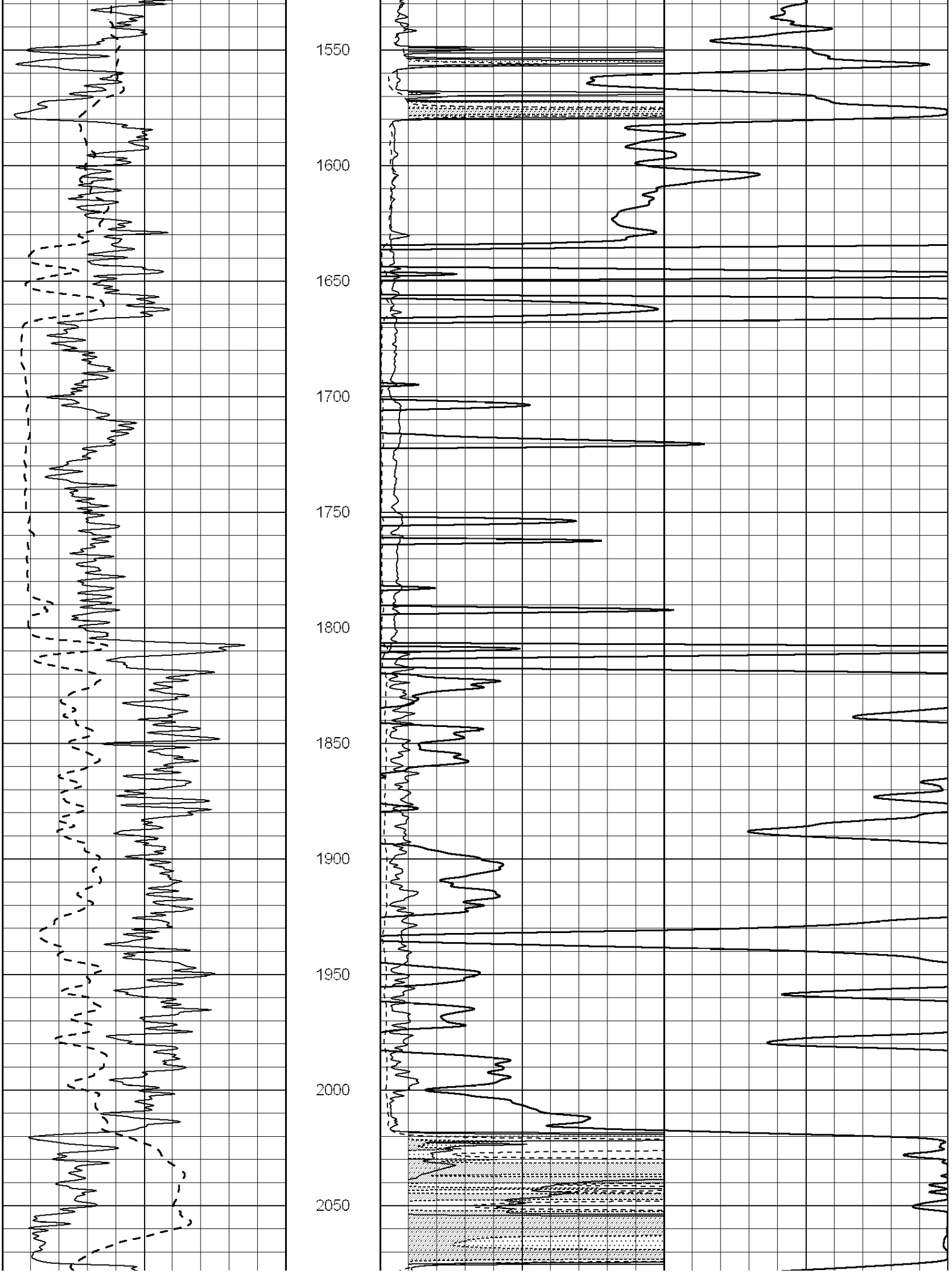
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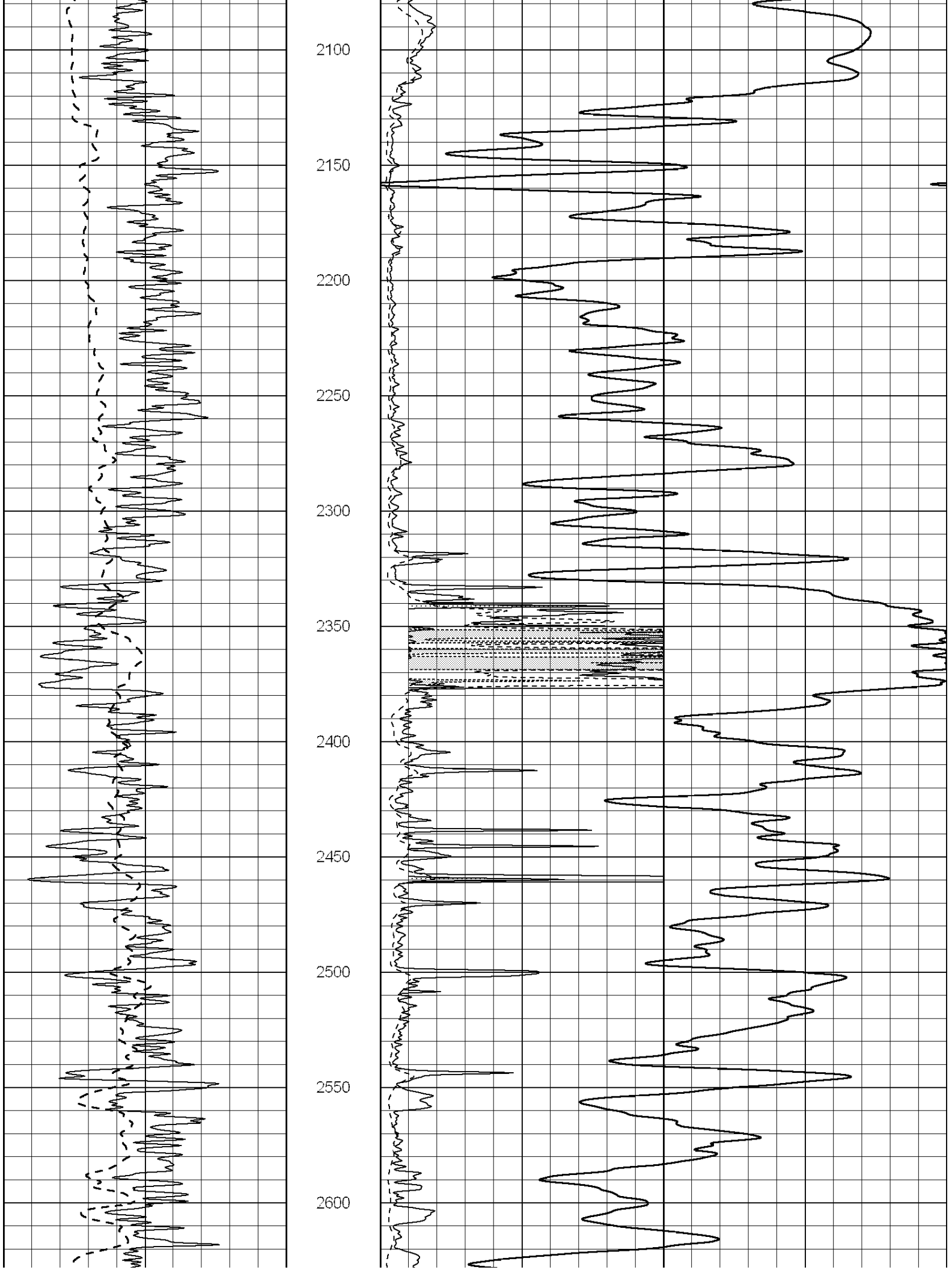
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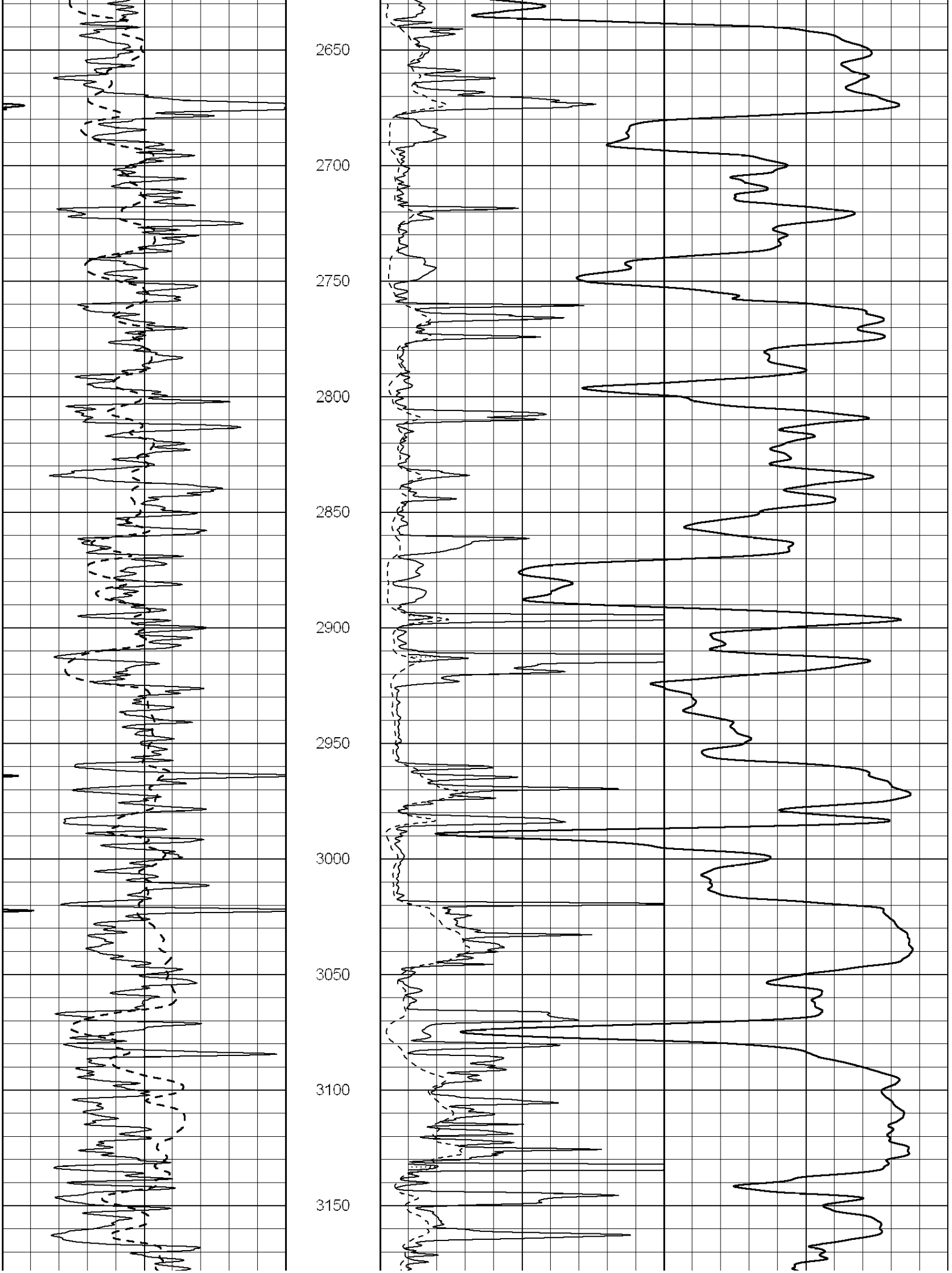
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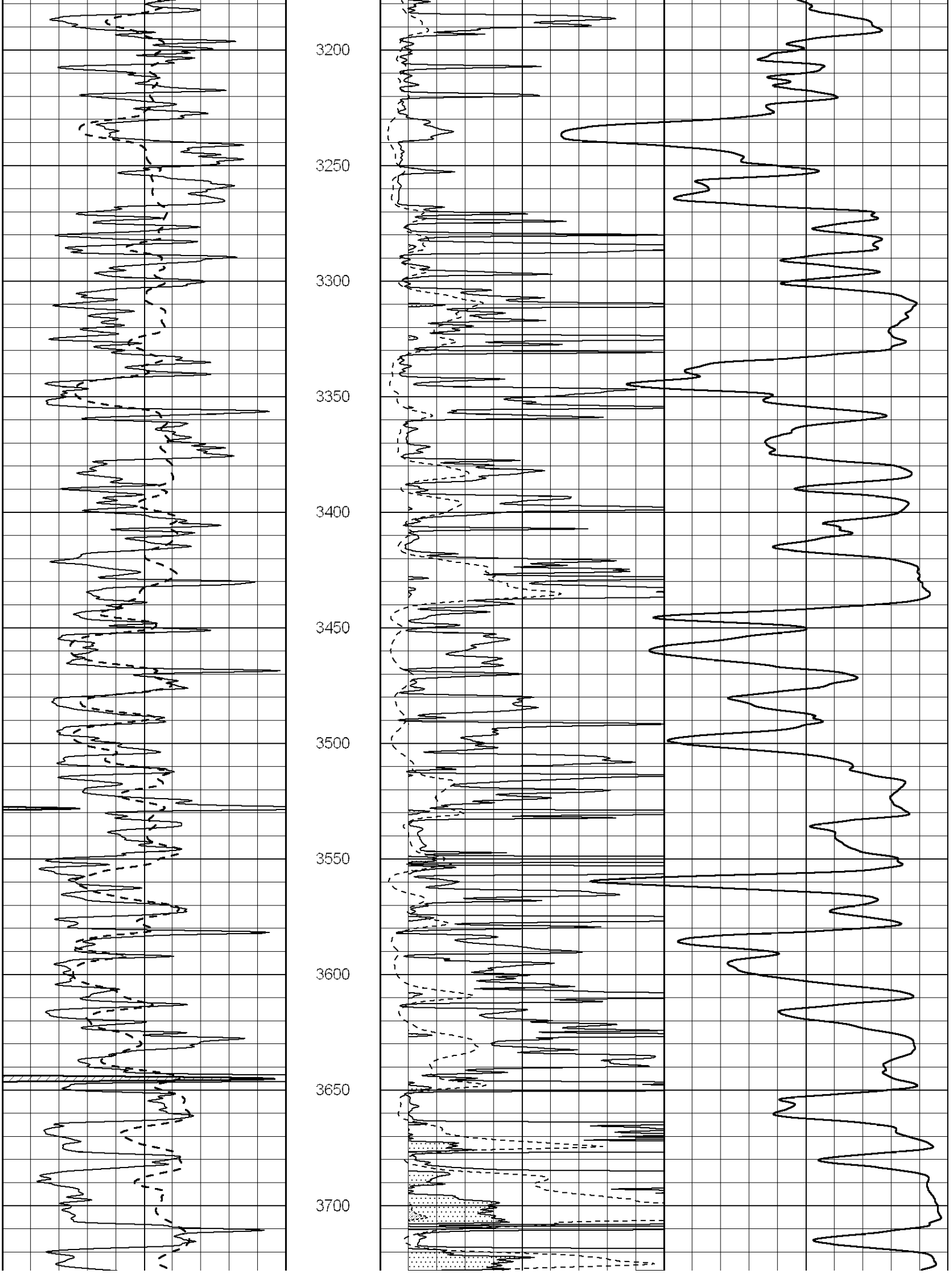
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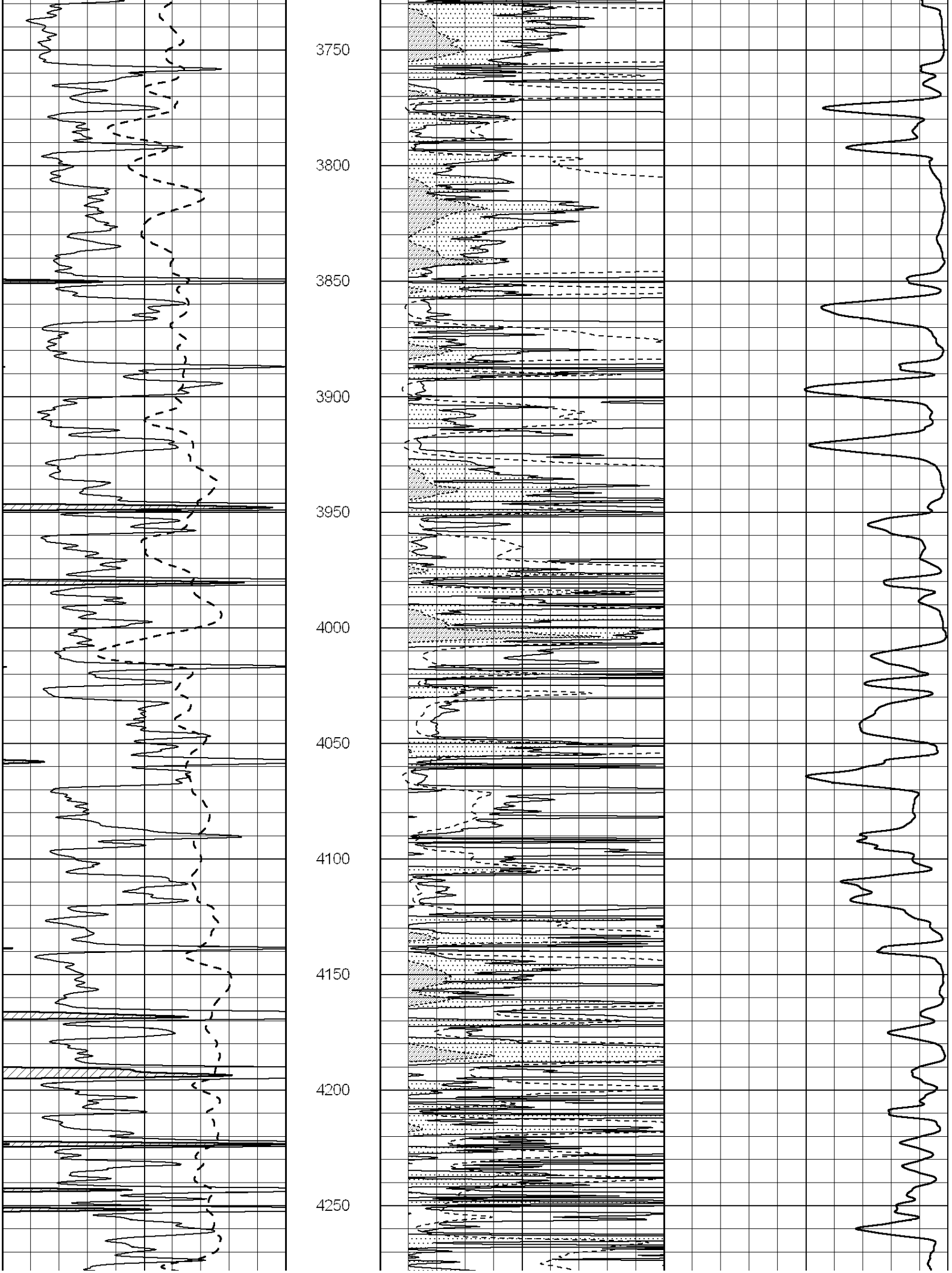
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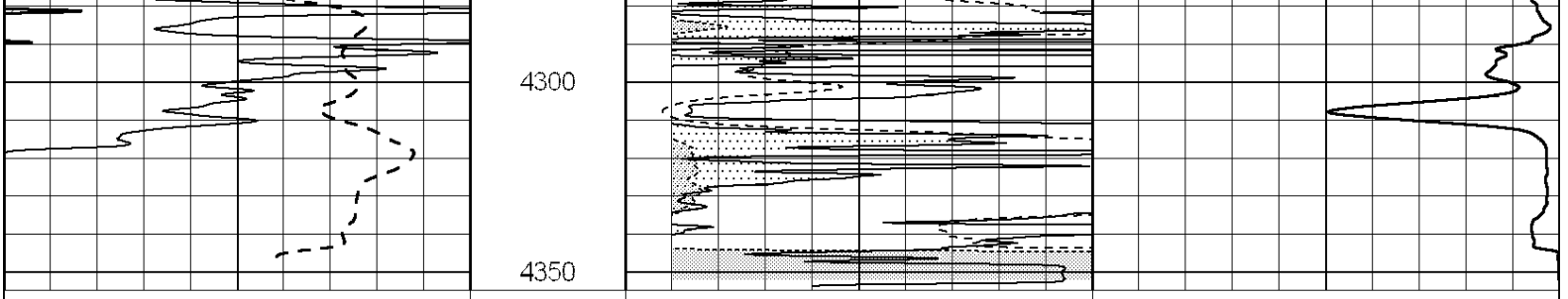
4250



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

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

50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

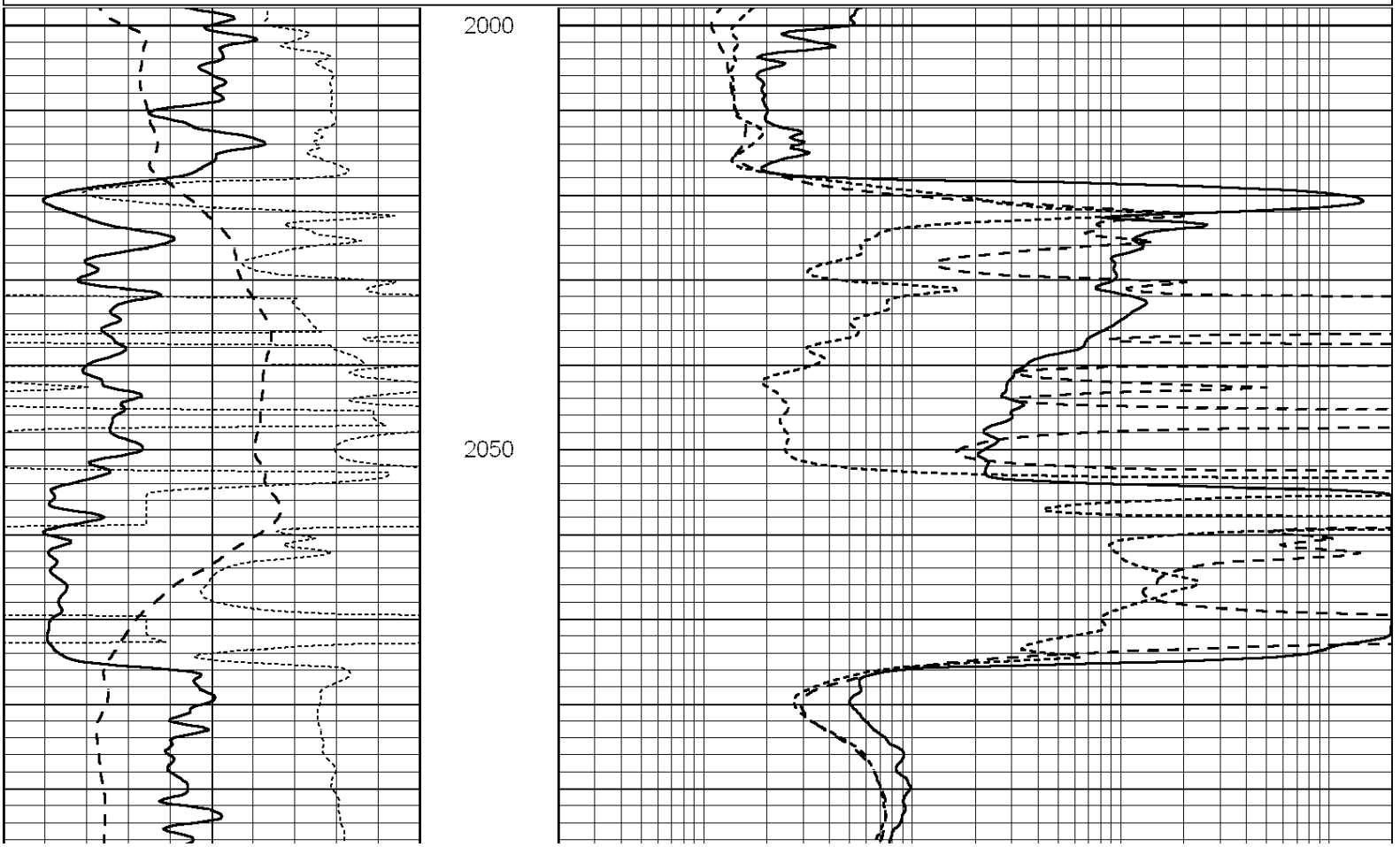
NABORS
COMPLETION & PRODUCTION SERVICES CO.

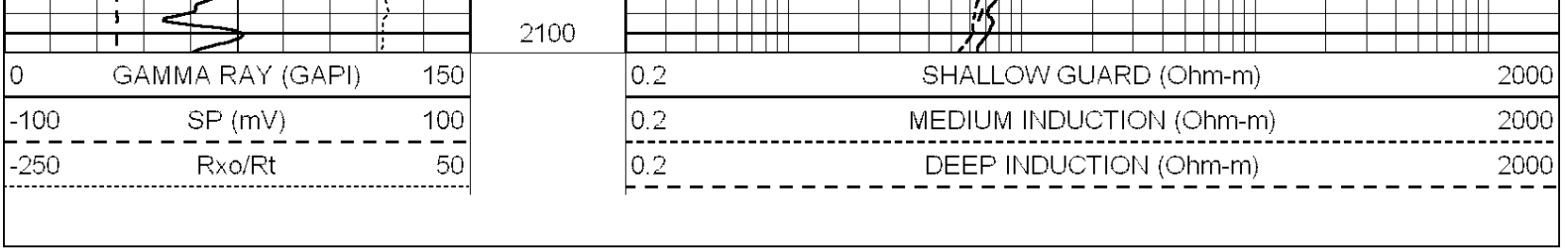
ANHYDRITE

Database File: 010146pe.db
Dataset Pathname: pass4.2
Presentation Format: _dil
Dataset Creation: Wed Apr 24 07:10:05 2013 by Calc Open-Cased 090629
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





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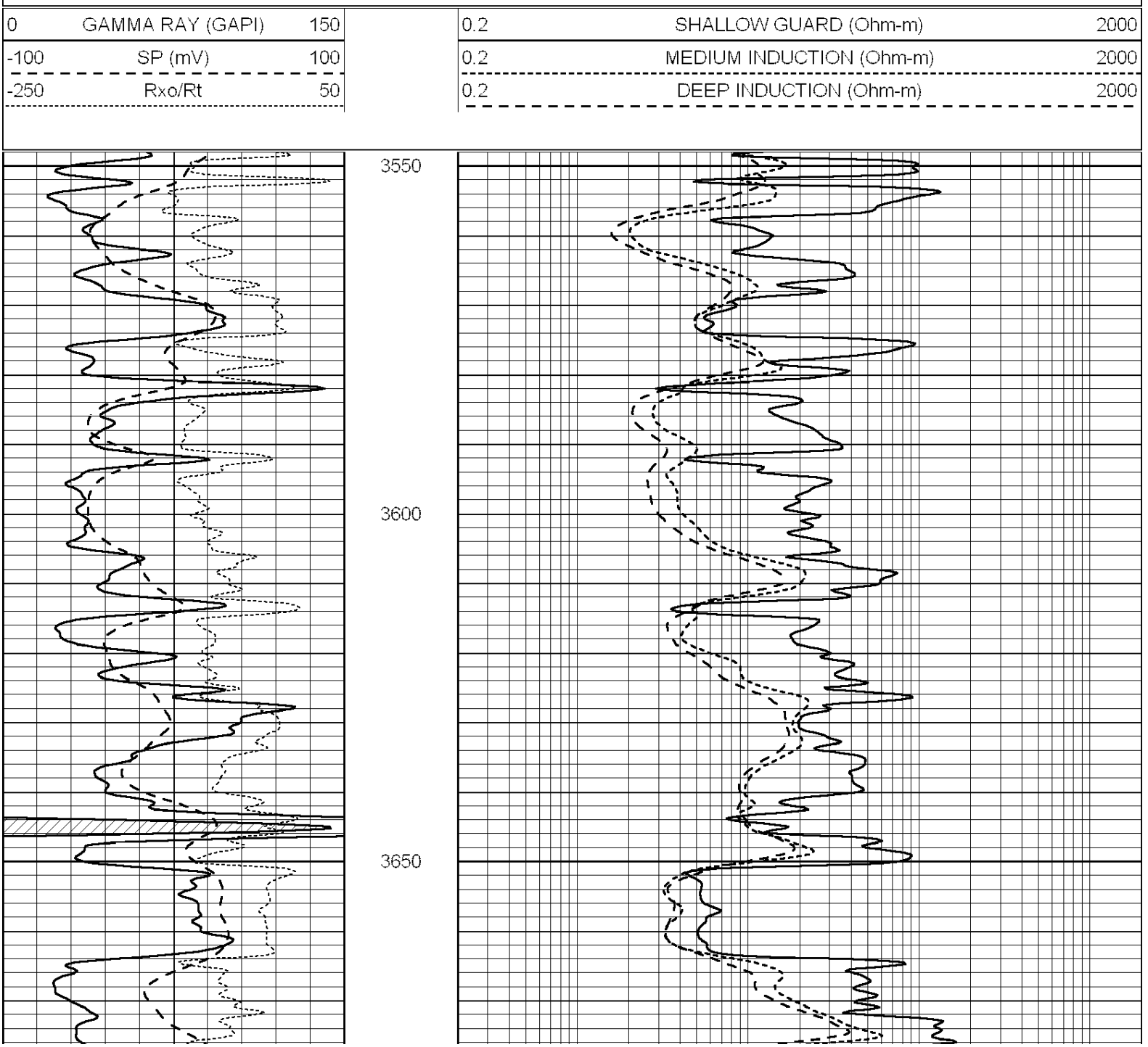
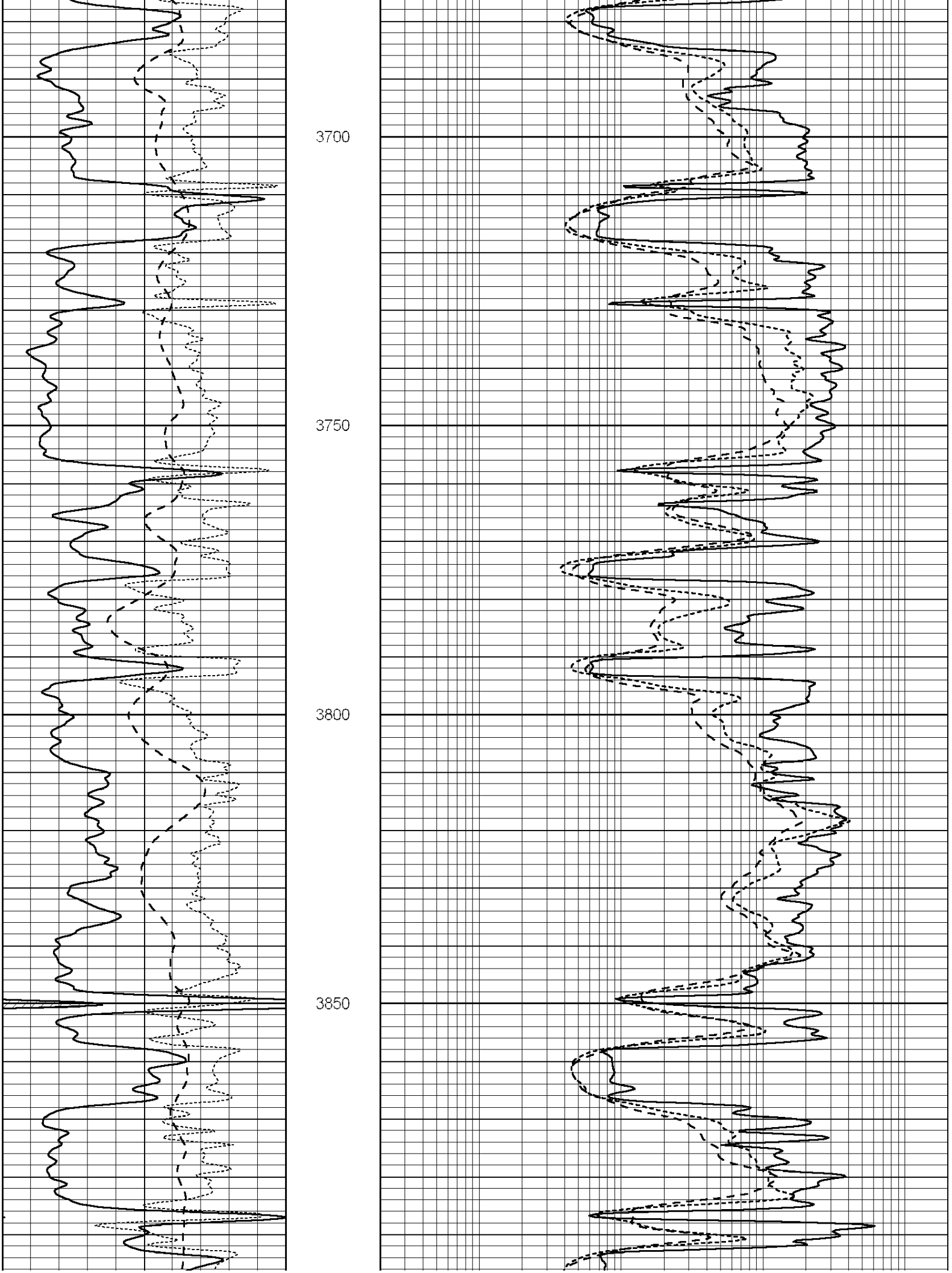
MAIN SECTION

Database File: 010146pe.db
Dataset Pathname: pass4.1
Presentation Format: _dil
Dataset Creation: Wed Apr 24 07:04:43 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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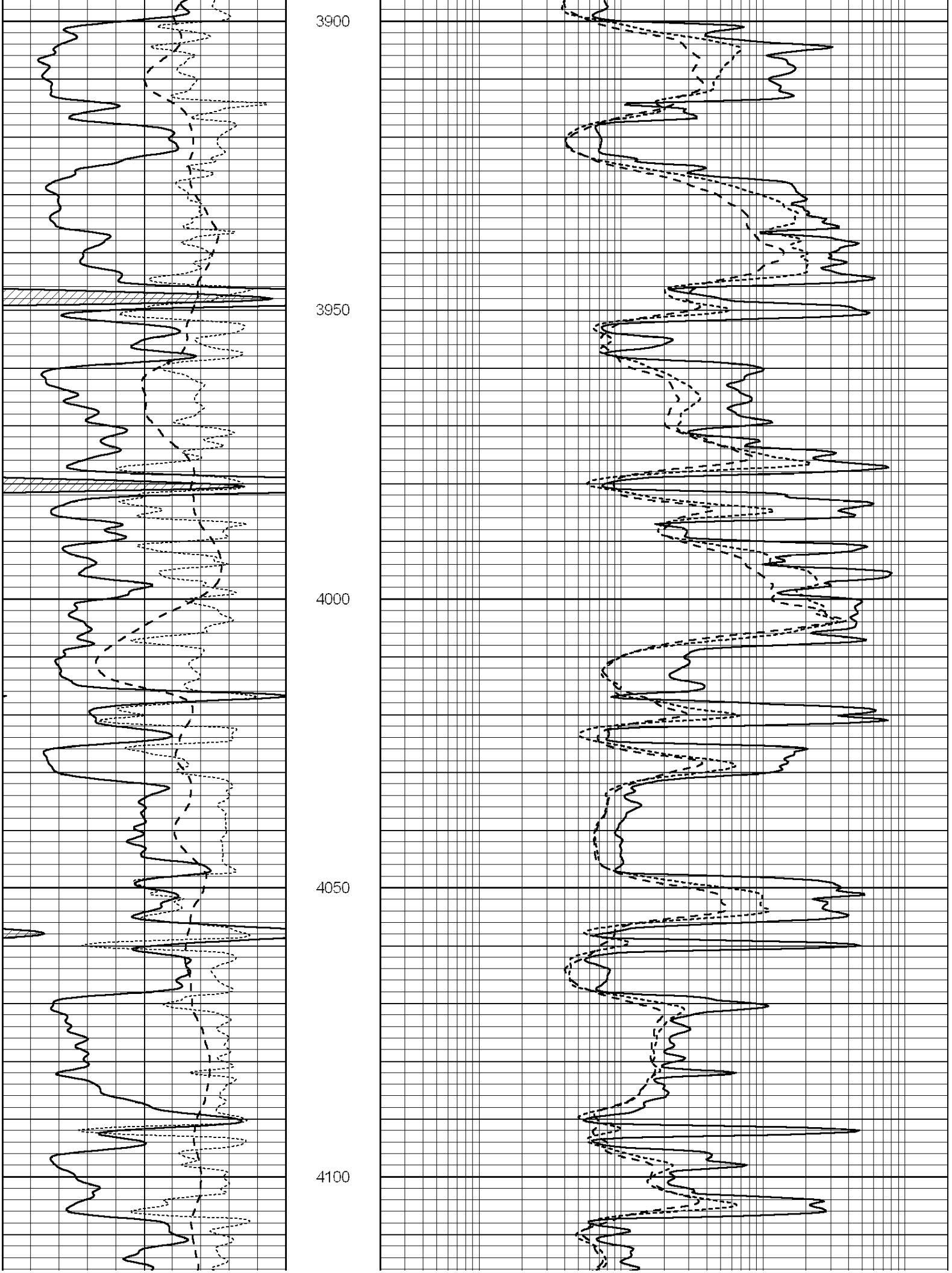
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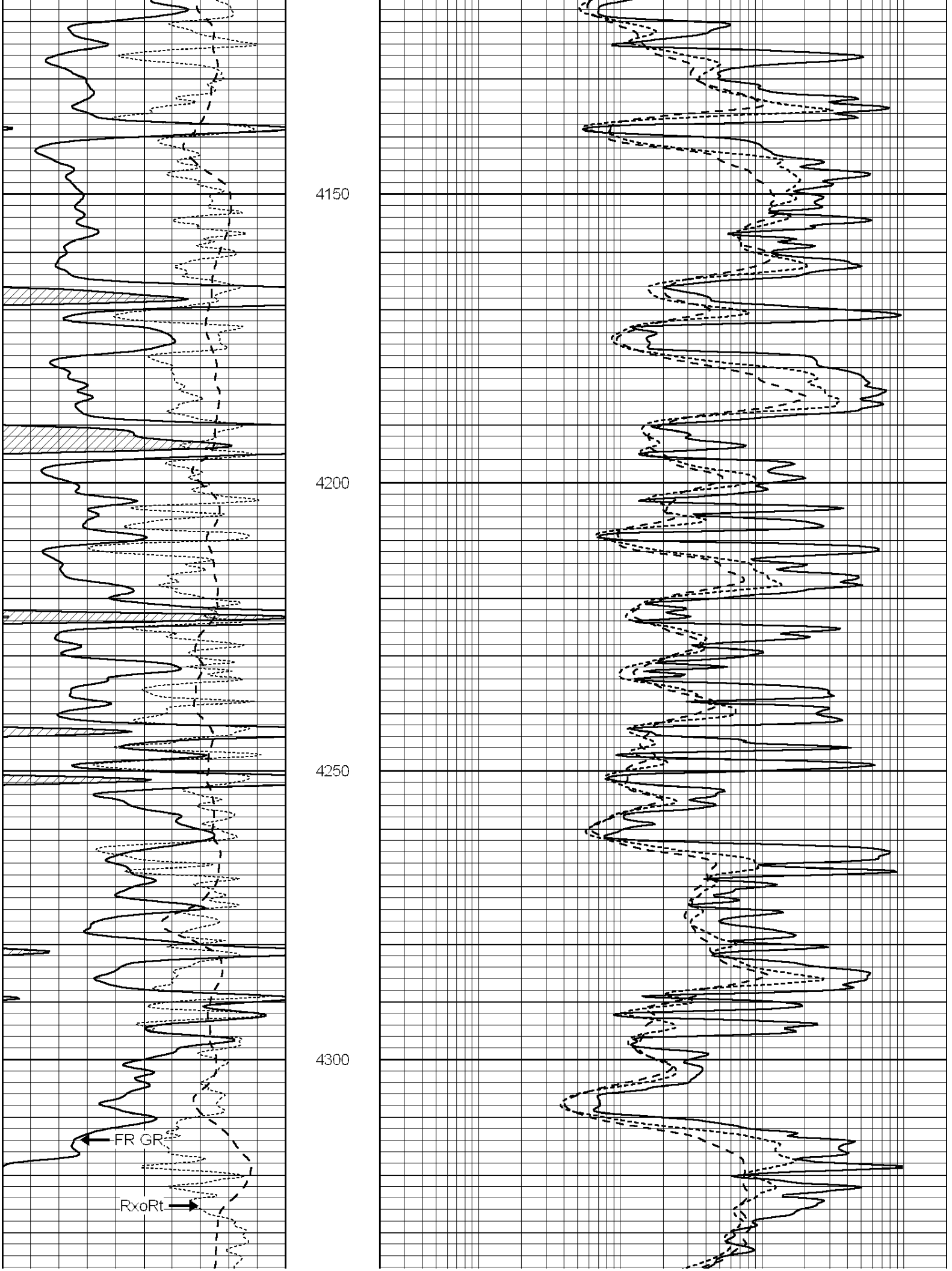
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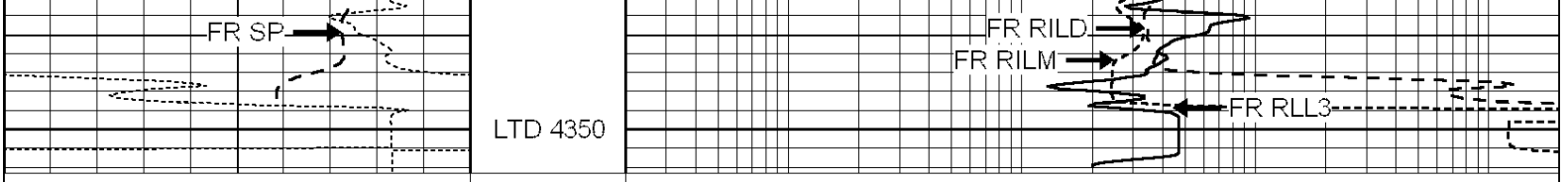
FR GR
RxoRt



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

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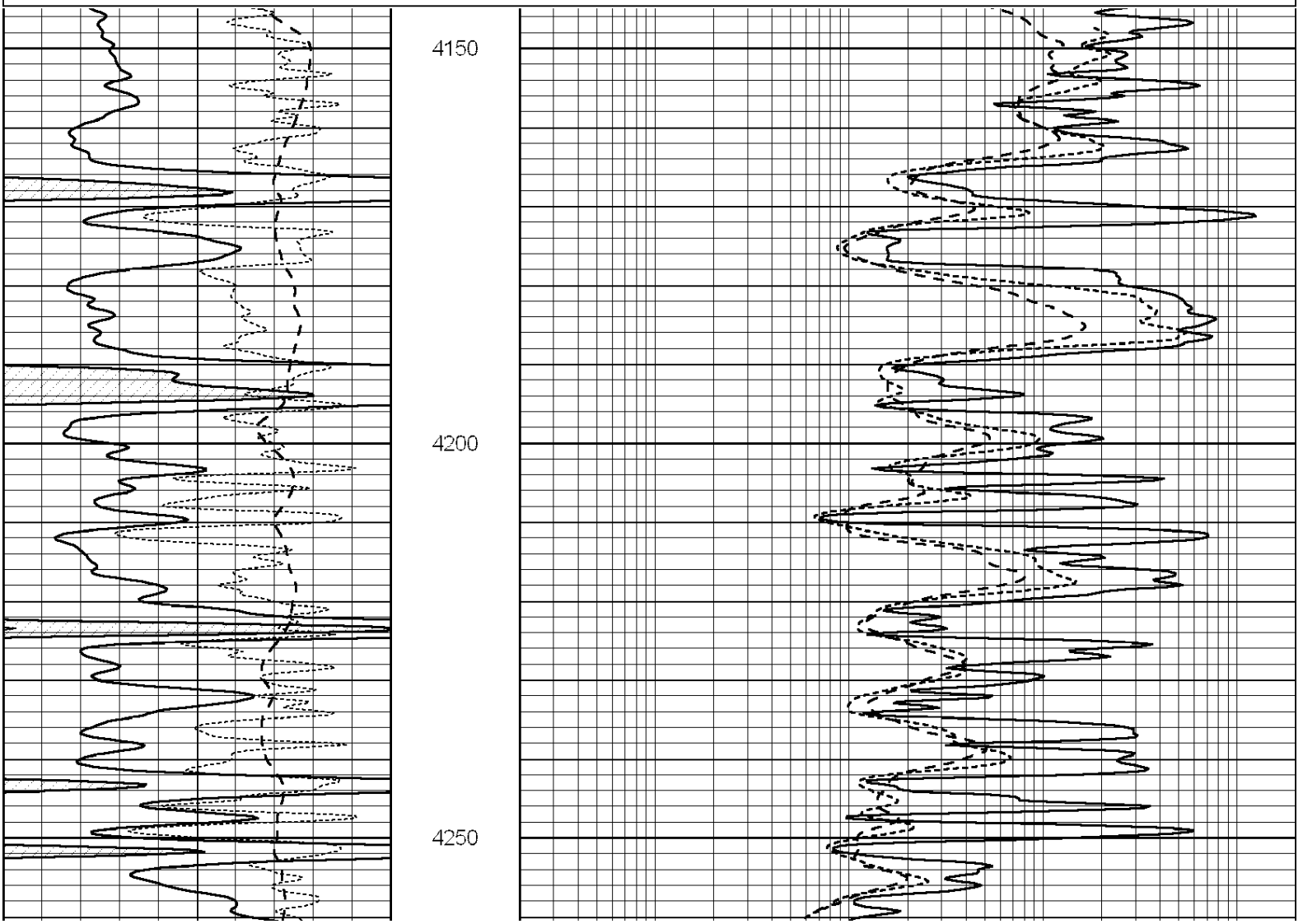
COMPLETION & PRODUCTION SERVICES CO.

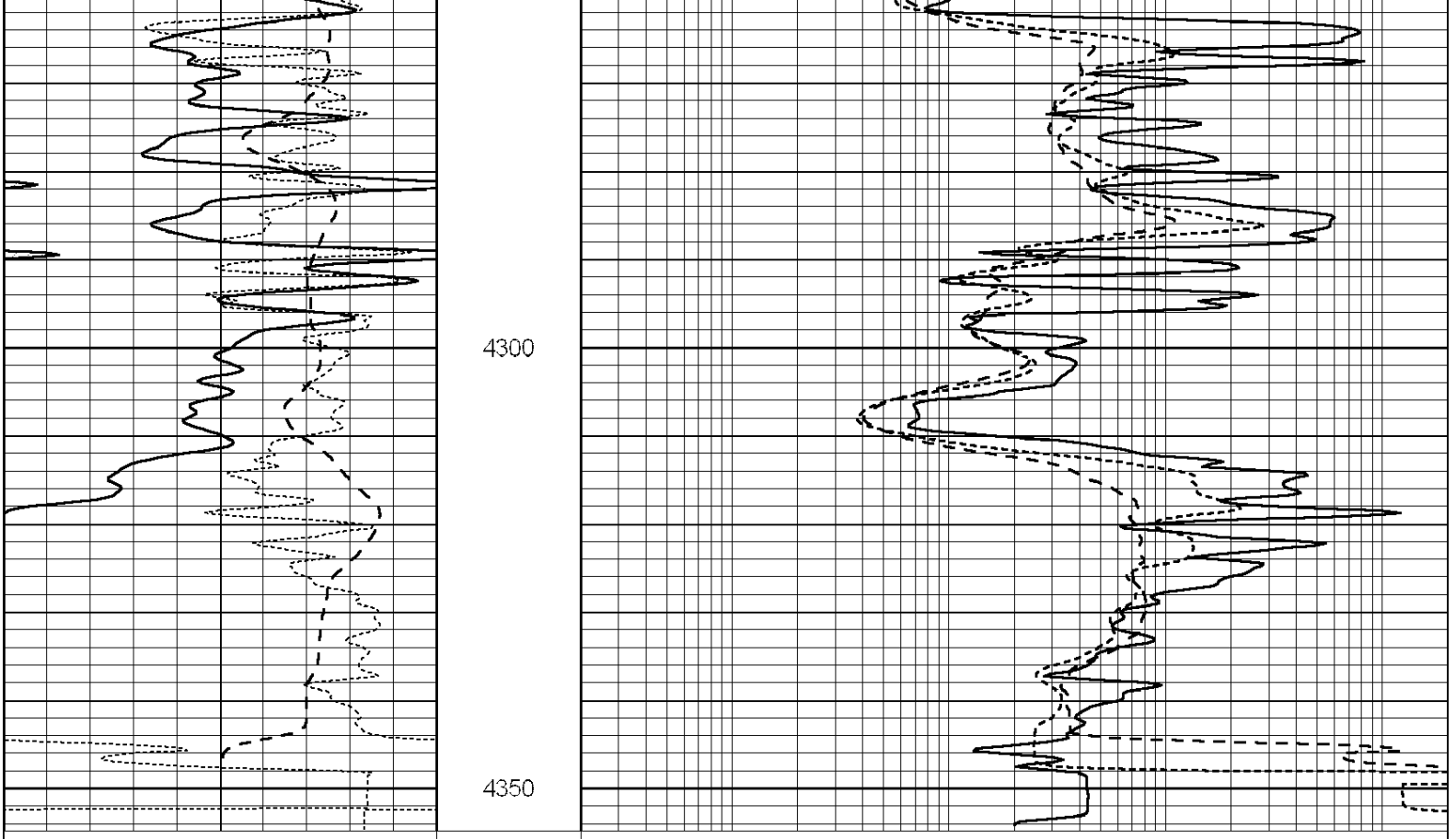
REPEAT SECTION

Database File: 010146pe.db
Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Wed Apr 24 06:41:13 2013 by Calc Open-Cased 090629
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: 010146pe.db
Dataset Pathname: pass3.1
Dataset Creation: Wed Apr 24 06:41:13 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Fri Aug 01 06:33:19 2008
Downhole Cal Performed:	Mon Jul 28 11:08:27 2008
After Survey Verification Performed:	Mon Jul 28 11:08:27 2008

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000

Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	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: 001 Model: PRB
Performed Thu Sep 17 09:57:21 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2056.0	9796.8	3673.1	10821.3	cps
Window 2	1920.0	8541.1	3303.5	9307.2	cps
Window 3	1563.1	4735.7	2212.8	5017.5	cps
Window 4	466.0	466.1	465.6	471.5	cps
Long Space	0.0	6621.1	1383.5	7387.2	cps
Short Space	2.5	2361.7	1523.2	2534.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 44.4	Rib Slope	: 0.978	Density/Spine Ratio	: 0.541
Spine Angle	: 74.4	Spine Slope	: 3.570	Spine Intercept	: -18.9

Caliper

	Readings	Reference
Low Ref	3.1	8.4
High Ref	4.3	14.3
	Gain: 4.6	Offset: -7.4

Compensated Neutron Calibration Report

Serial Number: 6I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number: #8
Tool Model: OPEN
Performed: Mon Jun 13 16:56:43 2011

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 175.0 cps

Sensitivity: 0.8371 GAPI/cps