NABORS
COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company ANDERSON ENERGY, INC.
Well MESERVE-SESSION UNIT #1
Field MESERVE EAST
County ELLIS
State KANSAS

Company ANDERSON ENERGY, INC.

Well MESERVE-SESSION UNIT #1

Field MESERVE EAST

County ELLIS State KANSAS

Location: API # : 15-051-26564-00-00
1543' FSL & 2604' FEL
SW - SW - NW - SE/4

SEC 7 TWP 15S RGE 20W

Other Services
CDL/CNL
MEL

Permanent Datum GROUND LEVEL Elevation 2097
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2197
D.F. 2195
G.L. 2097

Date	8/11/13		
Run Number	ONE		
Depth Driller	3950		
Depth Logger	3951		
Bottom Logged Interval	3949		
Top Log Interval	00		
Casing Driller	8 5/8" @ 304'		
Casing Logger	304		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4200 PPM	
Density / Viscosity	9.2/55		
pH / Fluid Loss	10.5/7.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.40 @ 83F		
Rmf @ Meas. Temp	.30 @ 83F		
Rmc @ Meas. Temp	.48 @ 83F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.28 @ 116F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	116F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	ROGER FISHER		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
ELLIS, KS. - 12 S. TO GRANTS VILLA RD. - 2 W. - 1/2 S. - E. INTO

MAIN SECTION

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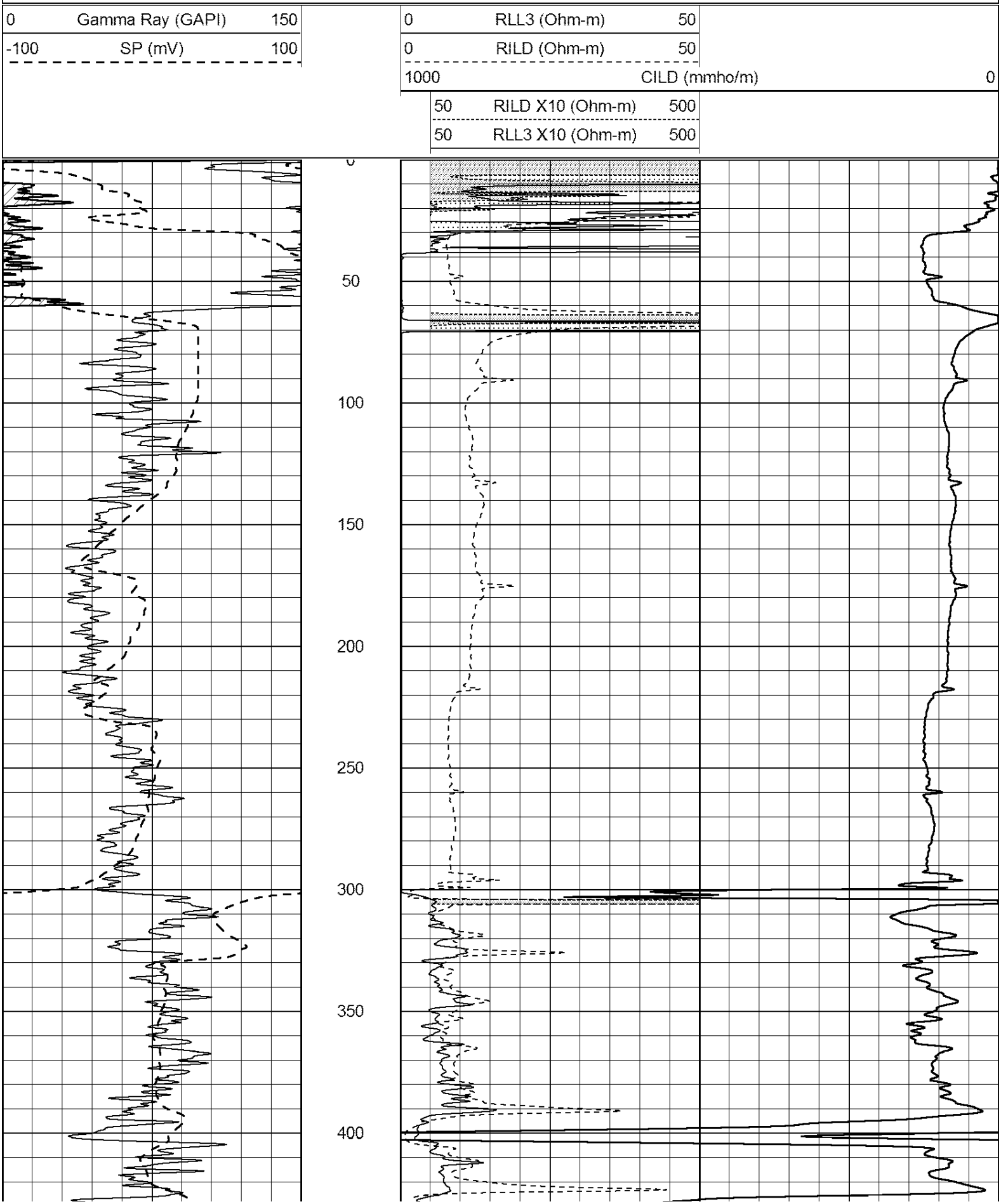
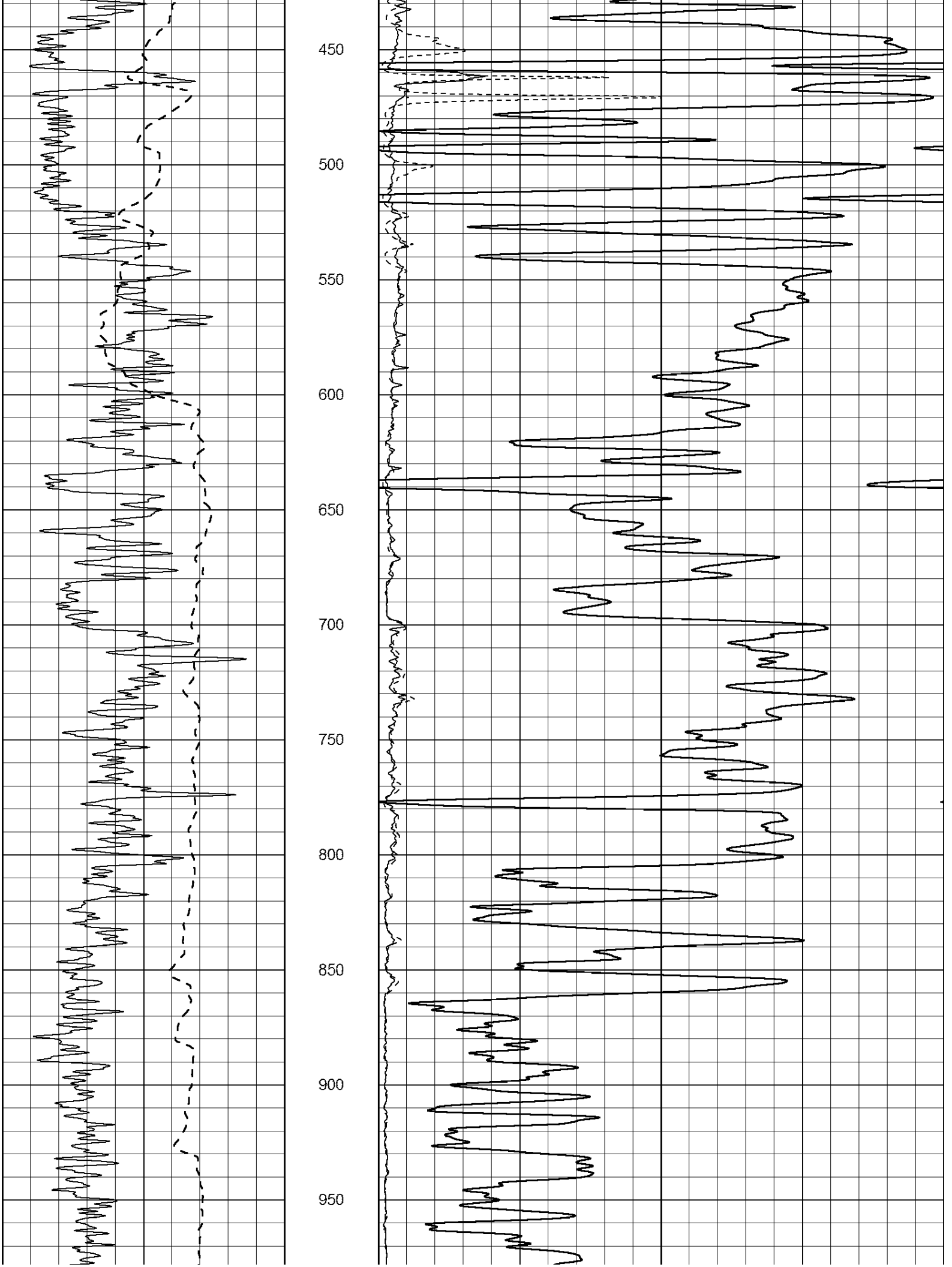
SERVICES CO.

Database File: 011586ddn.db
Dataset Pathname: pass3.3
Presentation Format: _dil2
Dataset Creation: Sun Aug 11 07:07:45 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

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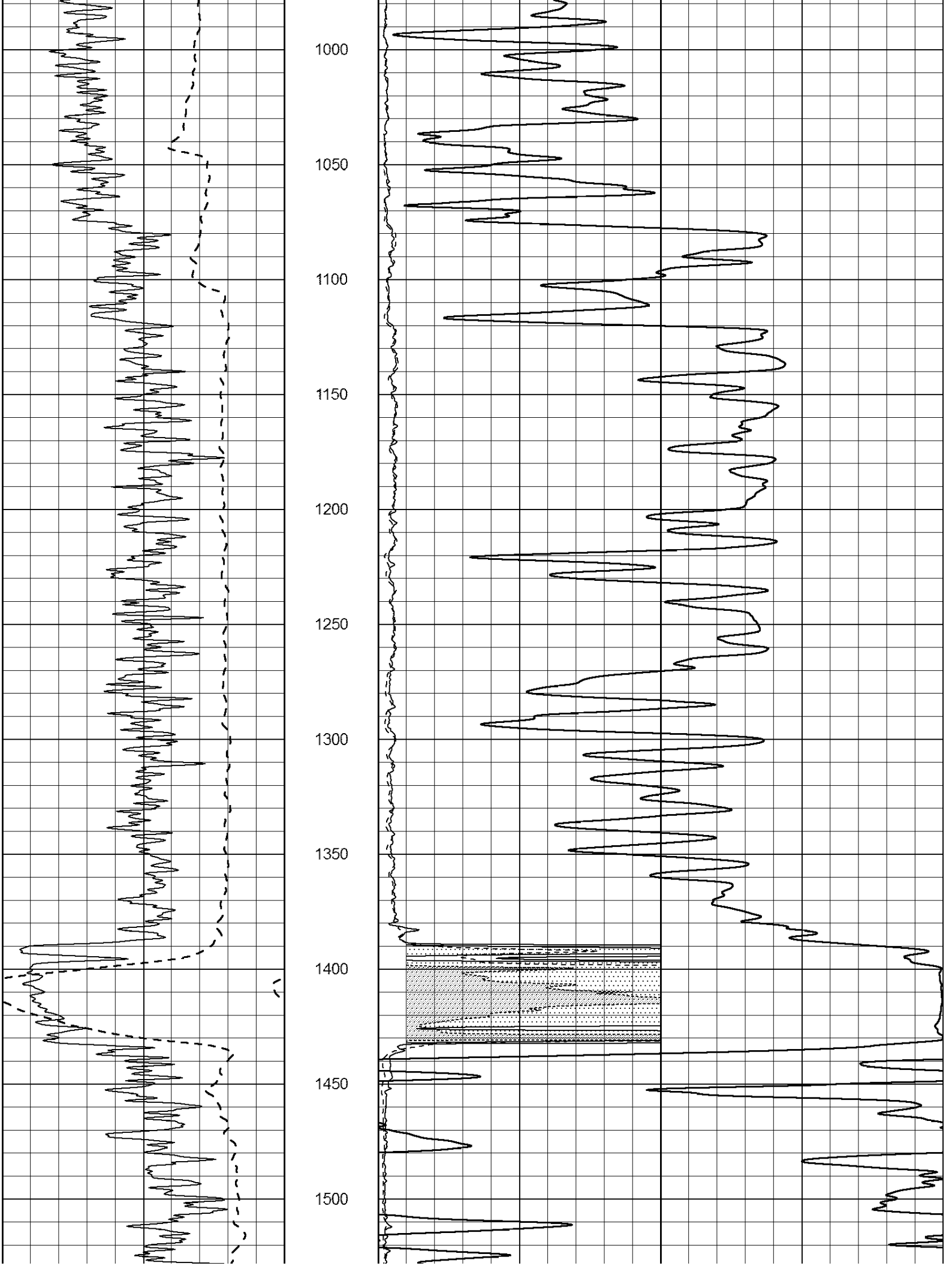
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1450
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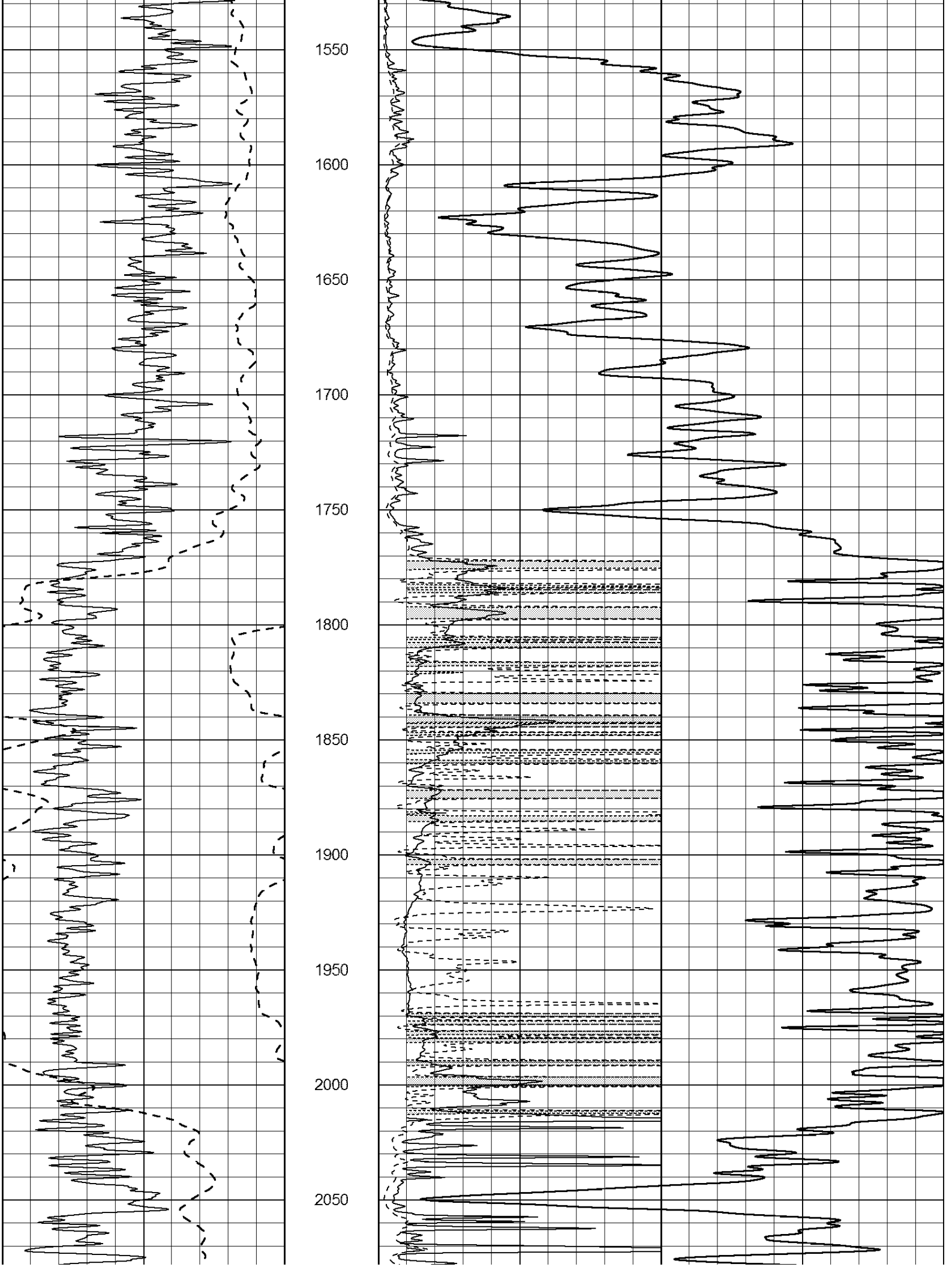
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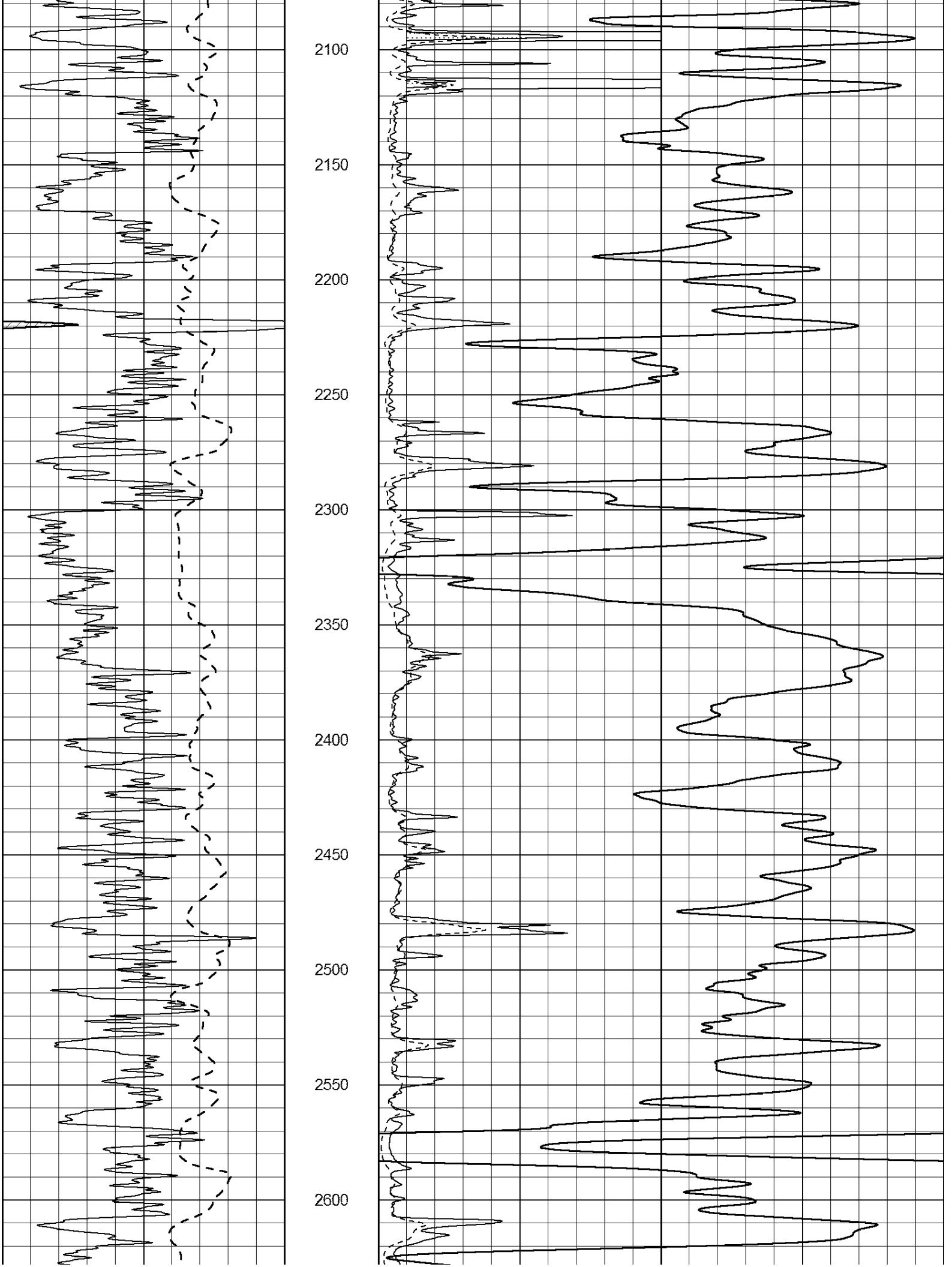
2050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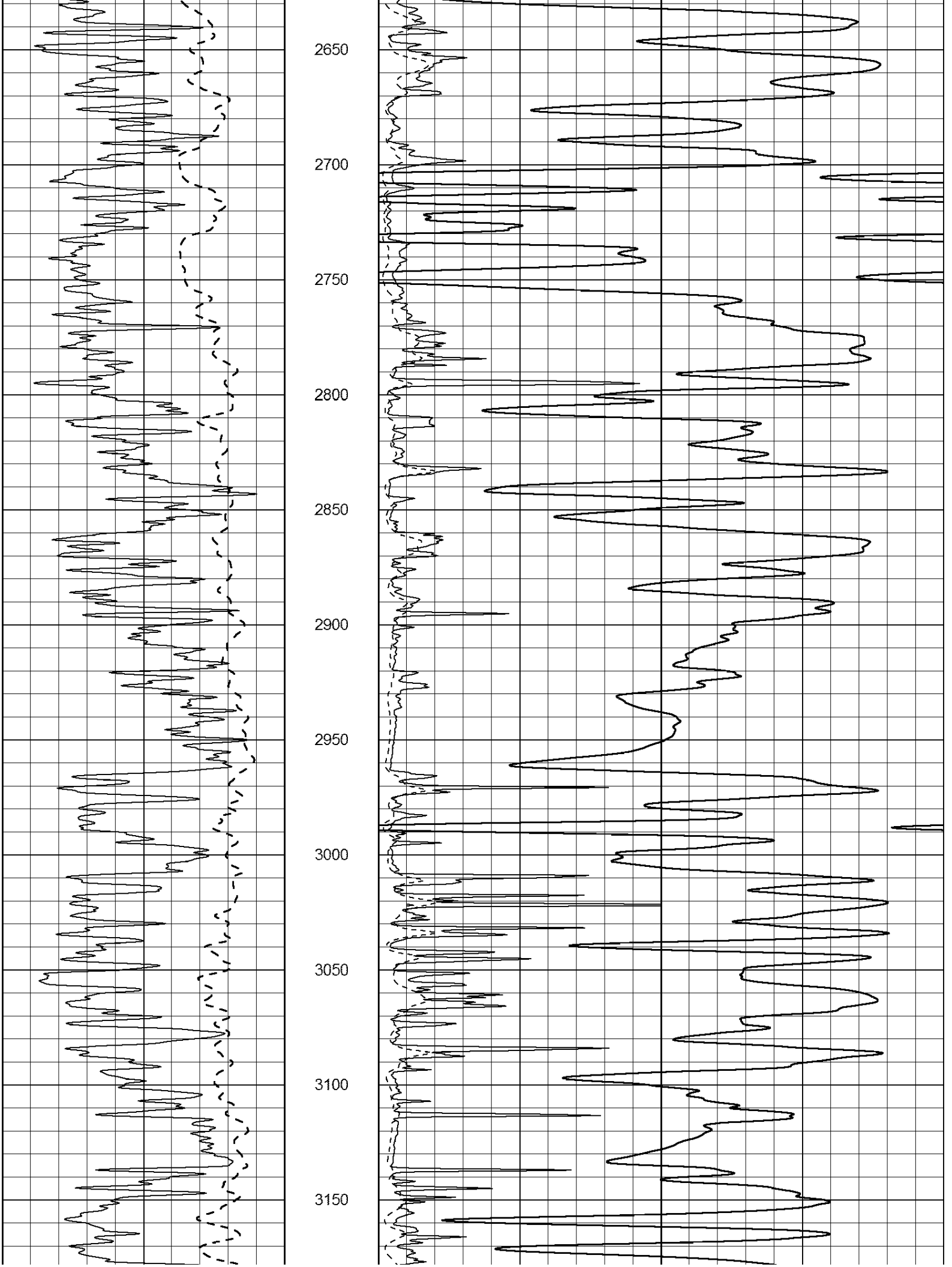
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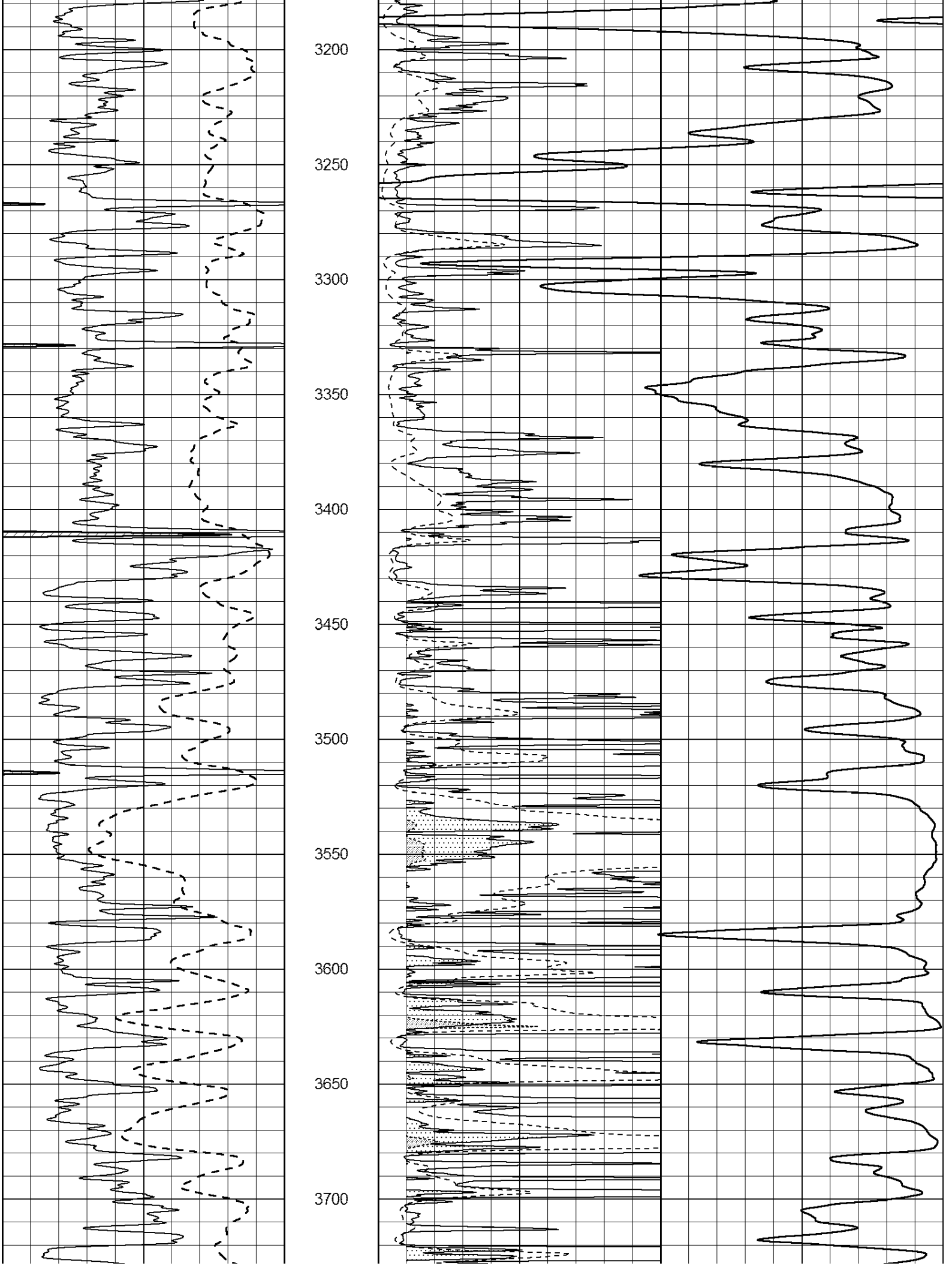
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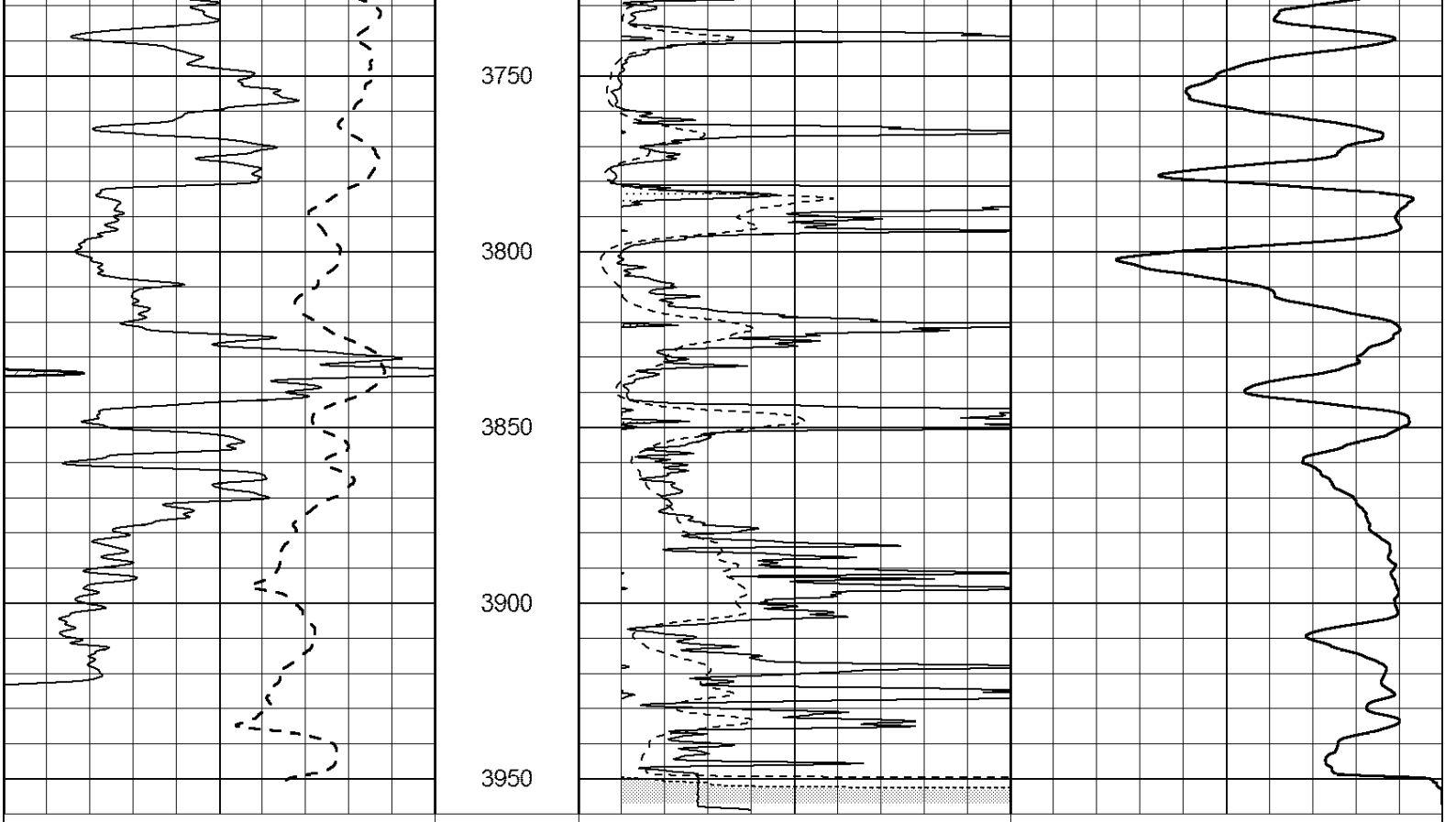
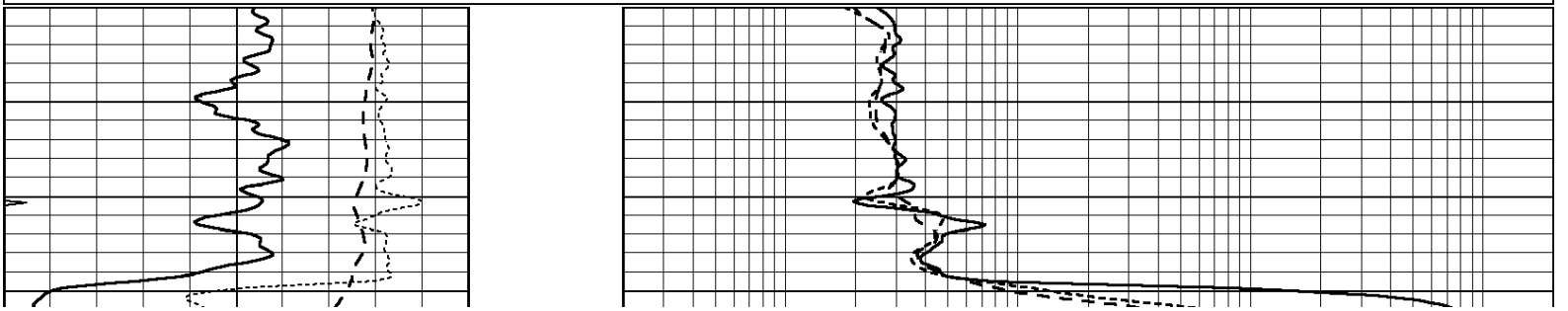


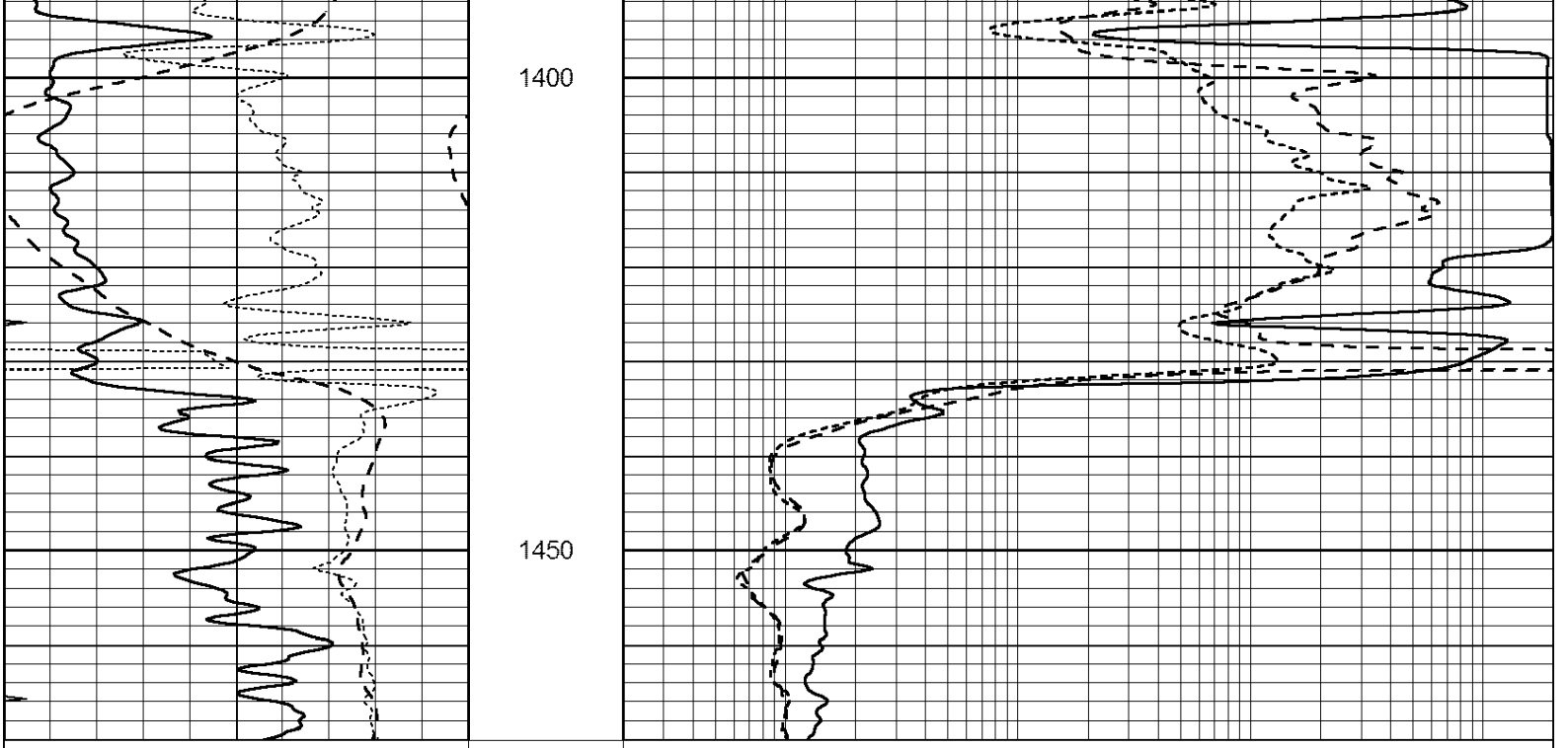
NABORS
COMPLETION & PRODUCTION SERVICES CO.

ANHYDRITE

Database File: 011586ddn.db
Dataset Pathname: pass3.2
Presentation Format: _dil
Dataset Creation: Sun Aug 11 06:26:17 2013 by Calc Open-Cased 090629
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	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





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

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MAIN SECTION

Database File:	011586ddn.db
Dataset Pathname:	pass3.1
Presentation Format:	_dil
Dataset Creation:	Sun Aug 11 06:14:30 2013 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240

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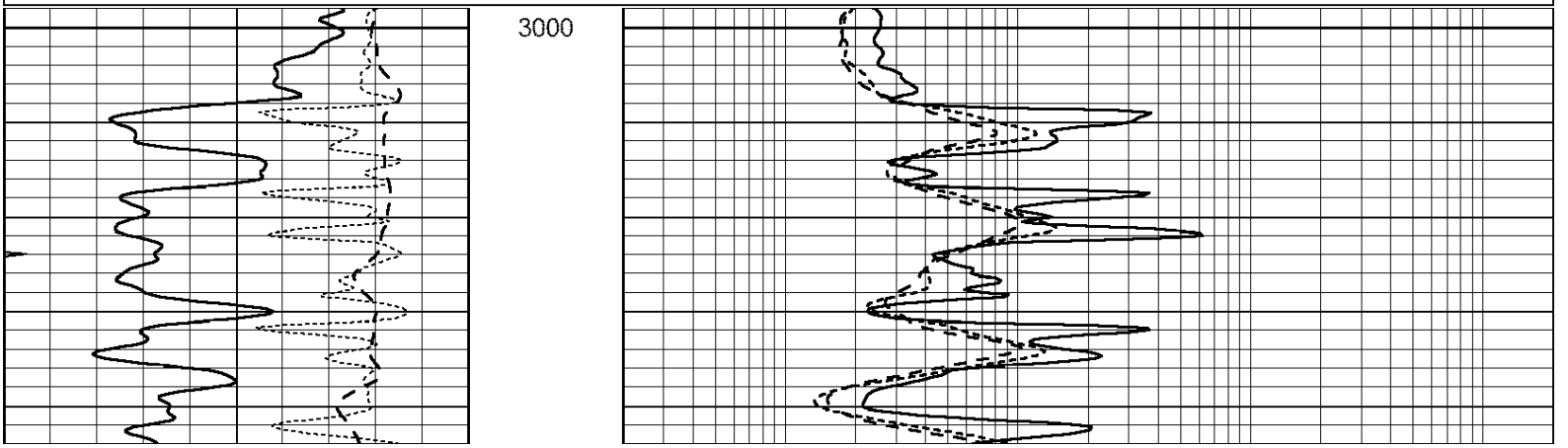
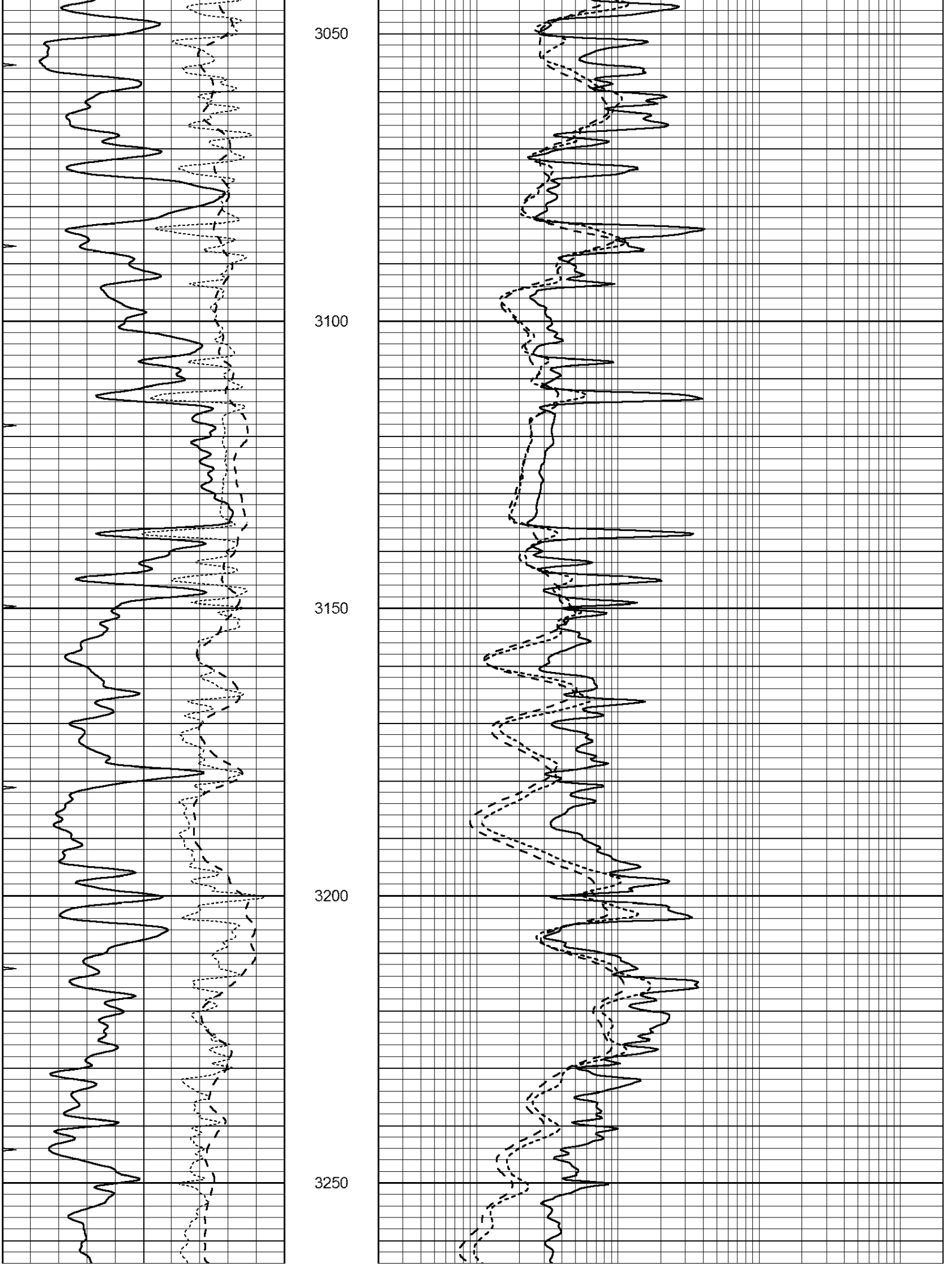
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

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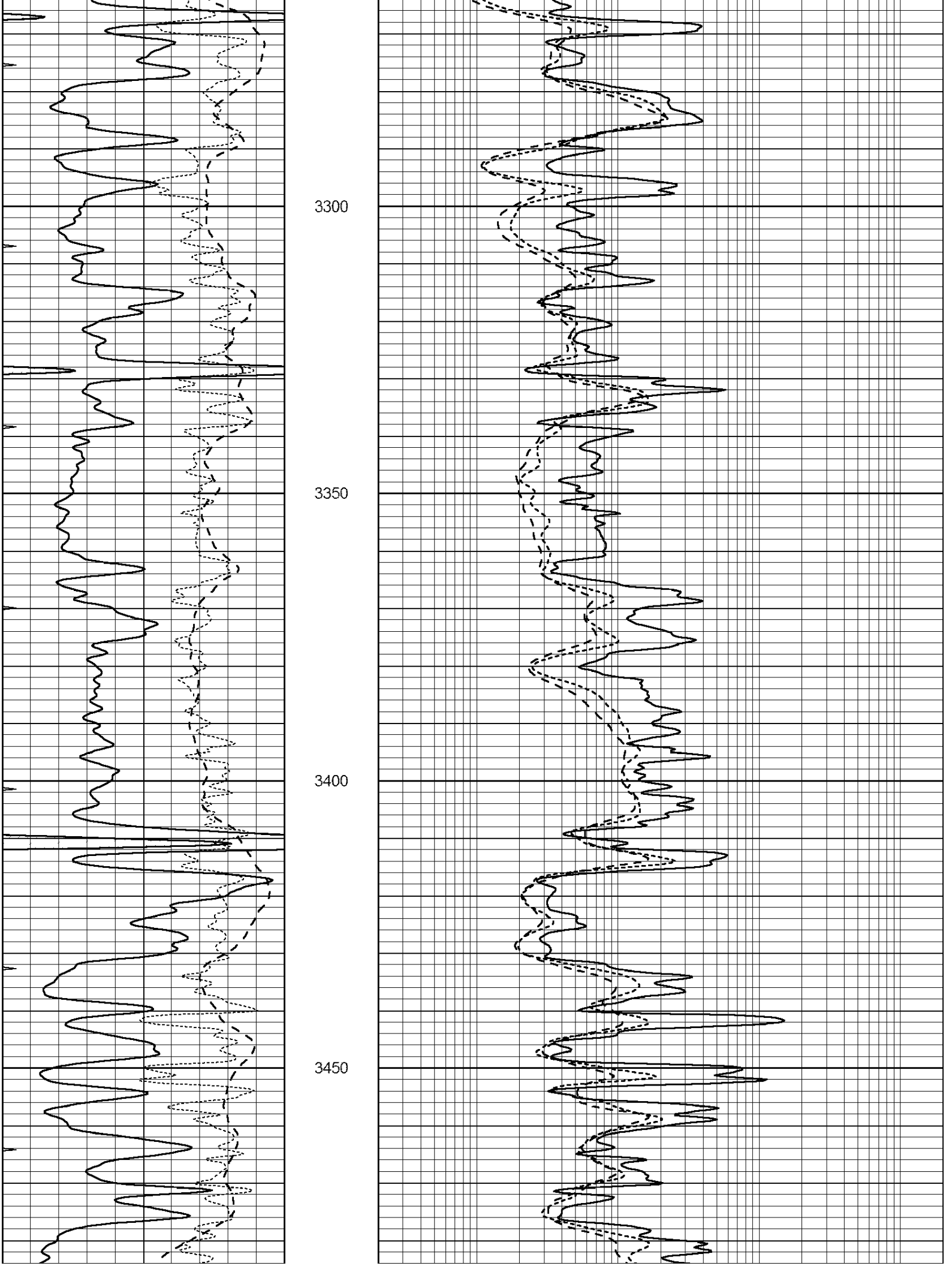
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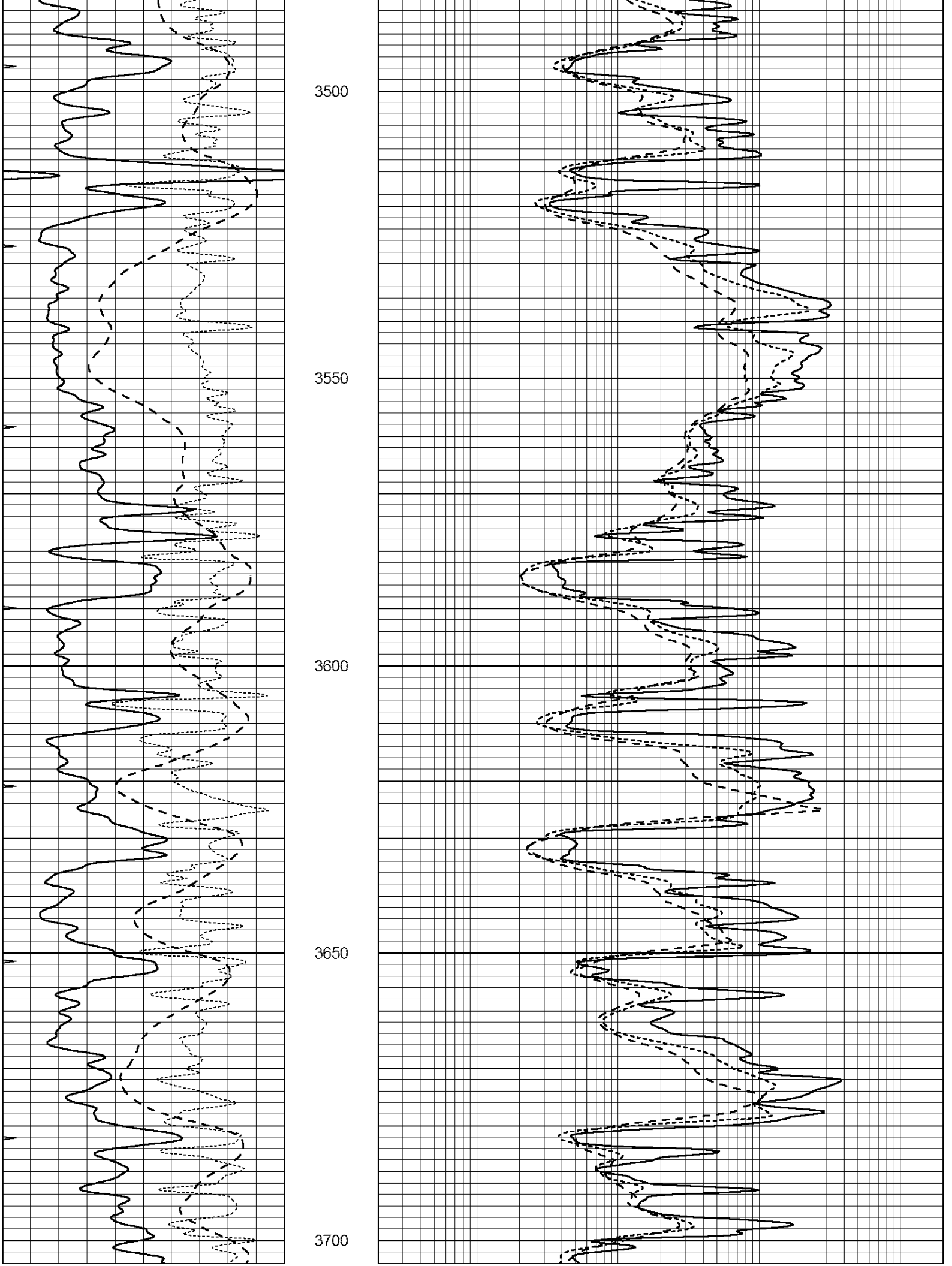
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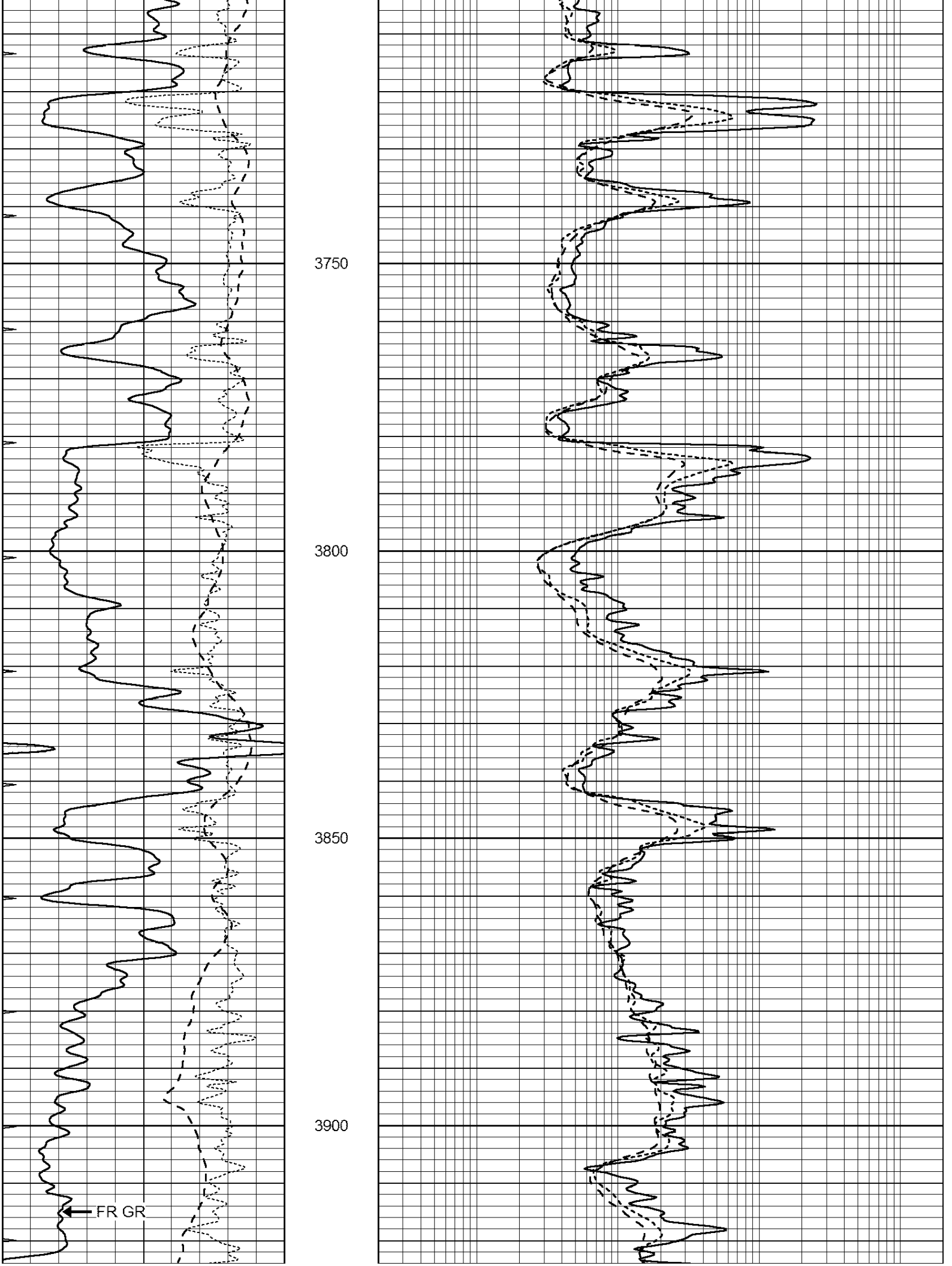
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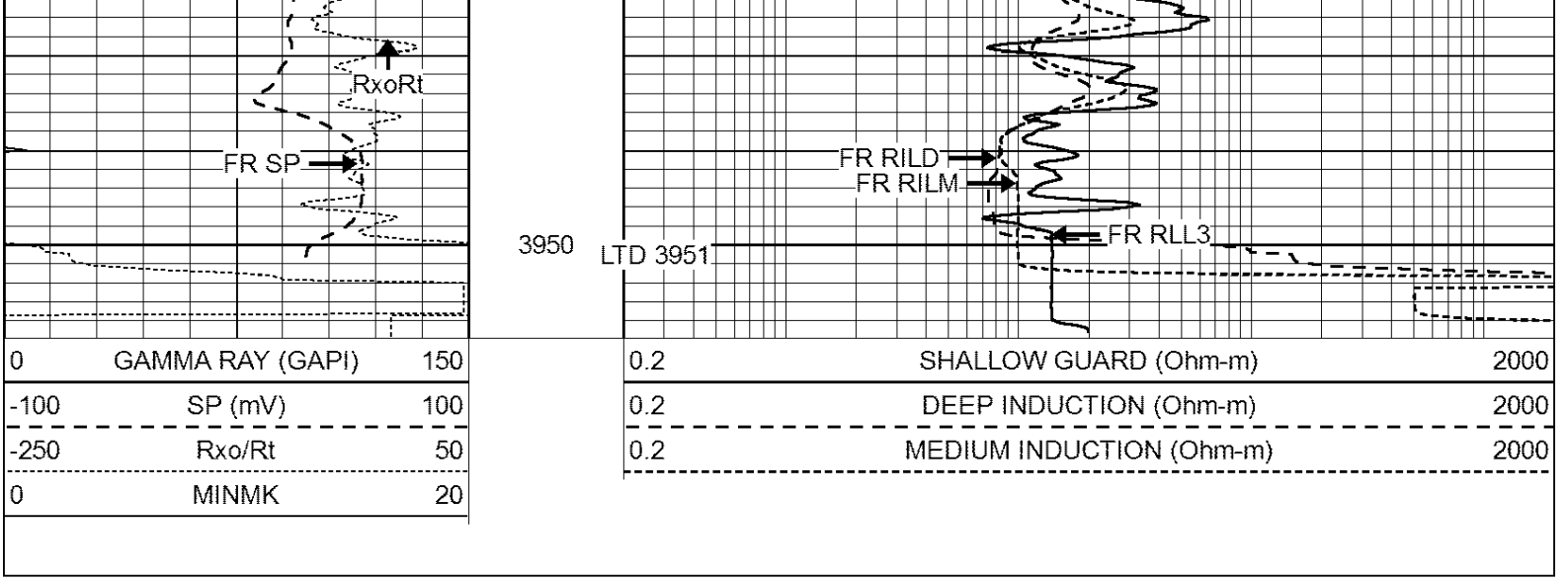

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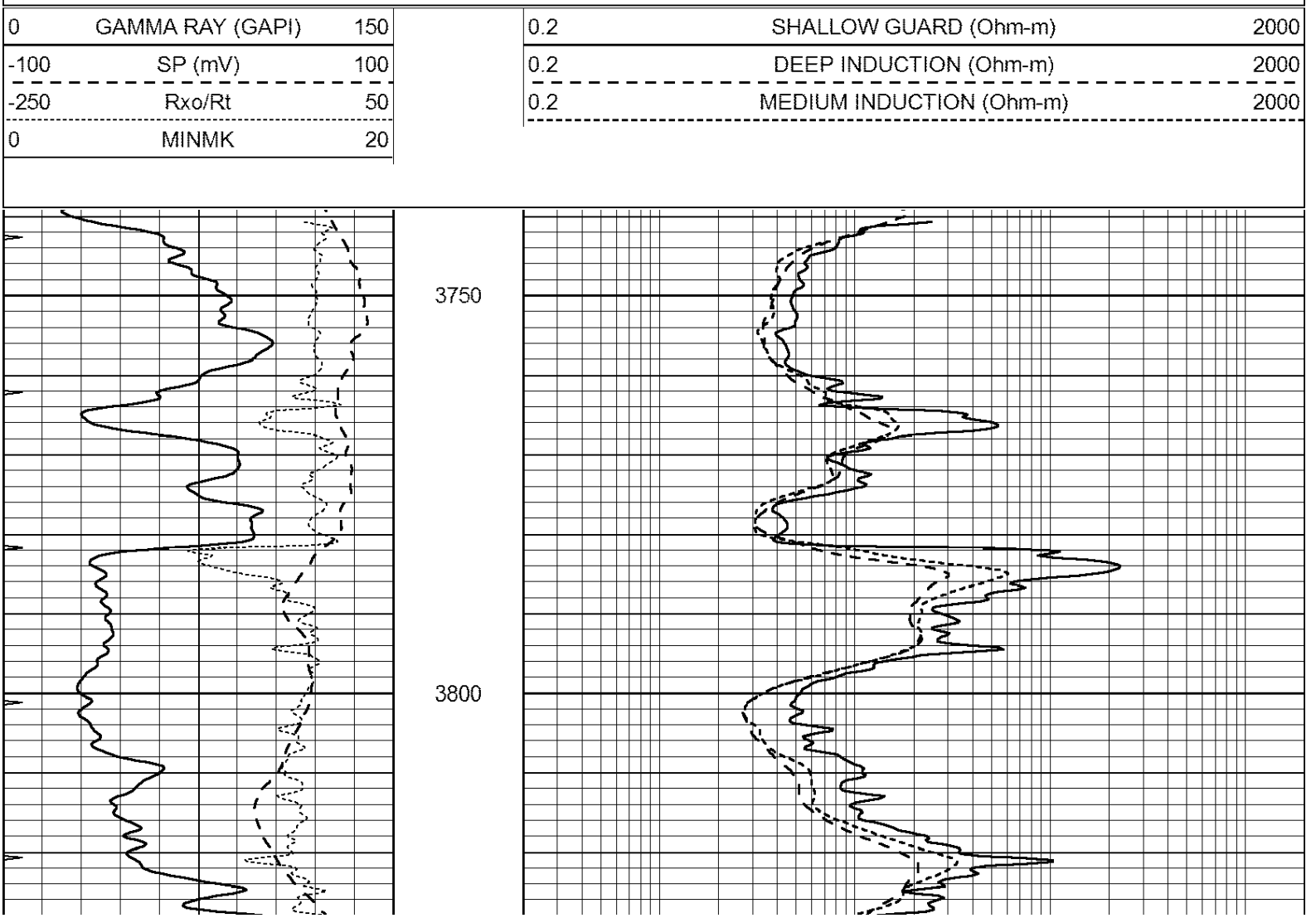
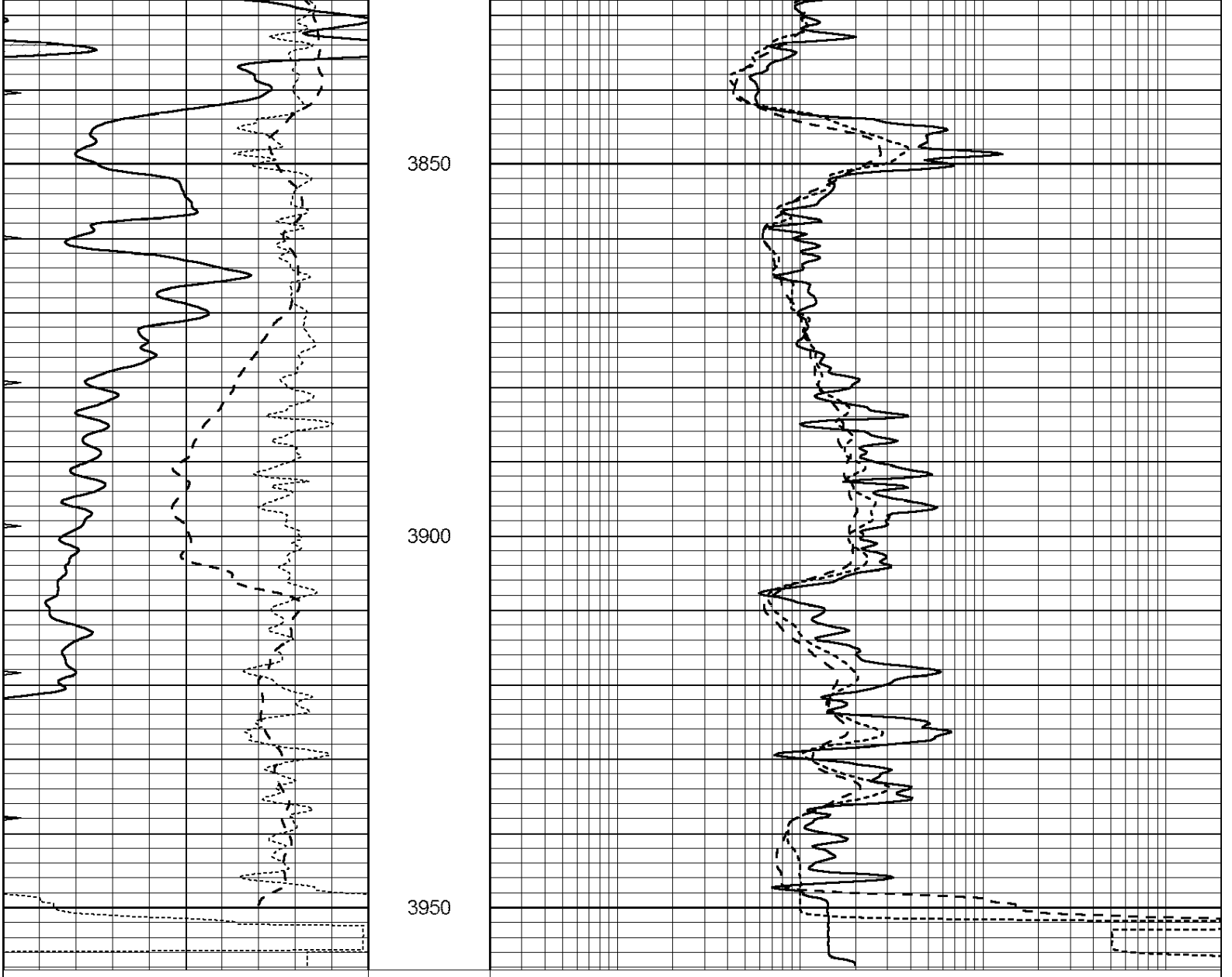
REPEAT SECTION

Database File:	011586ddn.db
Dataset Pathname:	pass2.1
Presentation Format:	_dil
Dataset Creation:	Sun Aug 11 06:12:35 2013 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240





Calibration Report

Database File: 011586ddn.db
Dataset Pathname: pass2.1
Dataset Creation: Sun Aug 11 06:12:35 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		

Compensated Density Calibration Report

Serial-Model:	GEAR3-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Fri Jan 04 15:48:16 2013
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	935.36	501.55	cps
Aluminum	2.580	g/cc	209.32	357.01	cps

Spine Angle = 77.21

Density/Spine Ratio = 0.567

	Size		Reading	
Small Ring	8.00	in	4.29	V
Large Ring	14.00	in	6.24	V

Before Survey Verification

Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

After Survey Verification

Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

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

PRE-SURVEY VERIFICATION

	Detector	Readings		Measured		Target	
1)	Short Space		cps				
	Long Space		cps		pu		pu
2)	Short Space		cps				
	Long Space		cps		pu		
3)	Short Space		cps				
	Long Space		cps		pu		

POST-SURVEY VERIFICATION

	Detector	Readings		Measured		Target	
1)	Short Space		cps				
	Long Space		cps		pu		pu
2)	Short Space		cps				
	Long Space		cps		pu		pu
3)	Short Space		cps				
	Long Space		cps		pu		pu

Gamma Ray Calibration Report

Serial Number:	#8	
Tool Model:	OPEN	
Performed:	Tue Jun 18 19:34:11 2013	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	175.0	cps
Sensitivity:	0.8371	GAPI/cps