NABORS
COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company RITCHIE EXPLORATION, INC.
Well #1 HAMMEKE 13C
Field WILDCAT
County LANE State KANSAS

Location: API # : 15-101-22470
1935' FSL & 335' FWL
SEC 13 TWP 18S RGE 28W

Other Services
CDL/CNL

Elevation
K.B. 2728
D.F.
G.L. 2723

Permanent Datum GROUND LEVEL Elevation 2723
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING

Company RITCHIE EXPLORATION, INC.
Well #1 HAMMEKE 13C
Field WILDCAT
County LANE
State KANSAS

Date	11-3-13		
Run Number	ONE		
Depth Driller	4695		
Depth Logger	4696		
Bottom Logged Interval	4694		
Top Log Interval	00		
Casing Driller	232		
Casing Logger	232		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.2 / 54		
pH / Fluid Loss	10.5 / 6.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.10 @ 80F		
Rmf @ Meas. Temp	0.83 @ 80F		
Rmc @ Meas. Temp	1.32 @ 80F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.720 @ 122F		
Time Circulation Stopped	3HOURS		
Time Logger on Bottom	2:45 P.M.		
Maximum Recorded Temperature	122F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	RUPP		
Witnessed By	MIKE ENGELBRECHT		

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Comments

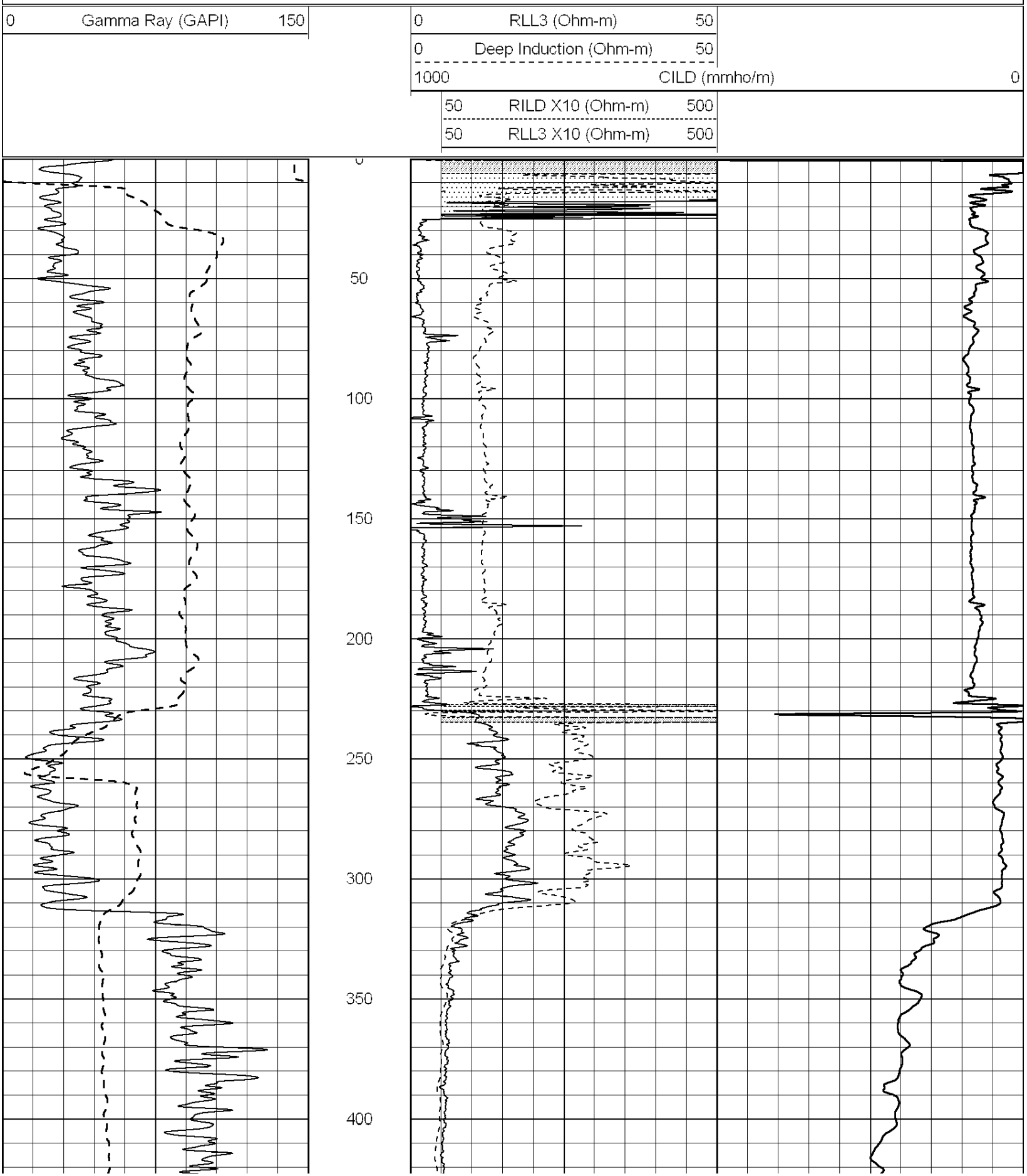
NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: DIGHTON, 5E TO PAWNEE RD., 1/2N, E INTO.

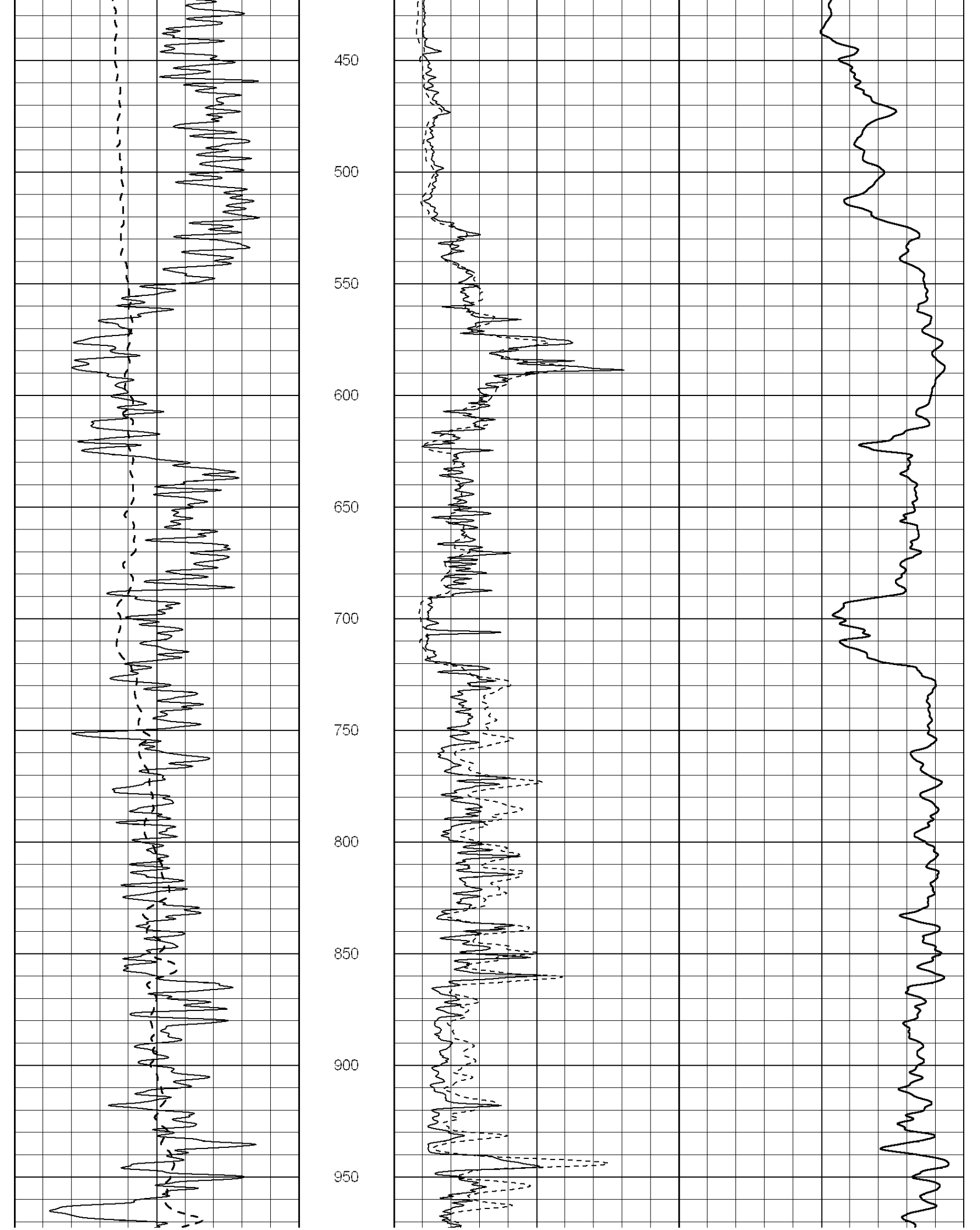
MAIN SECTION

NABORS COMPLETION & PRODUCTION

& PRODUCTION
SERVICES CO.

Database File: 012031ddn.db
Dataset Pathname: pass3.3A
Presentation Format: _dil2
Dataset Creation: Sun Nov 03 18:05:30 2013
Charted by: Depth in Feet scaled 1:600

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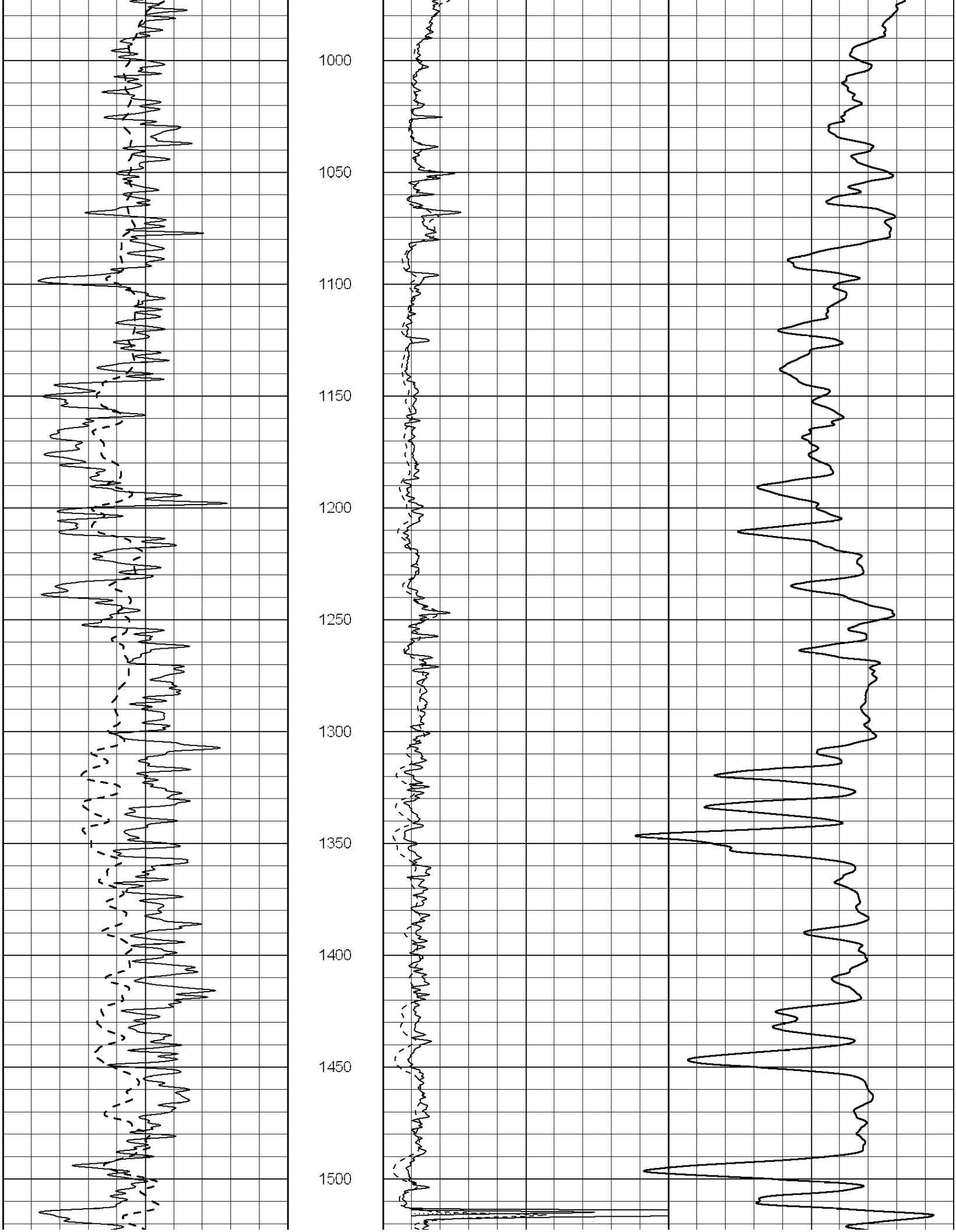
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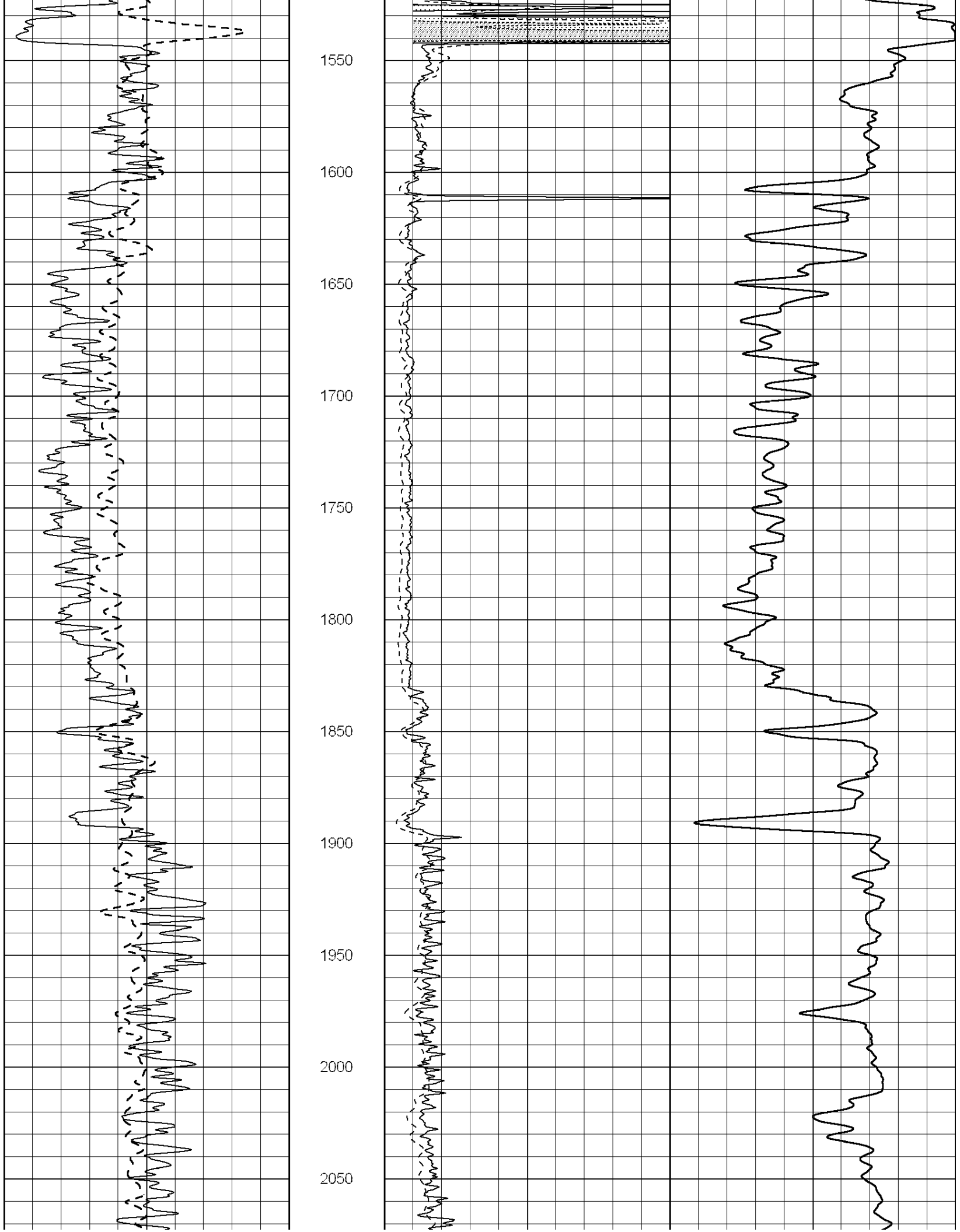
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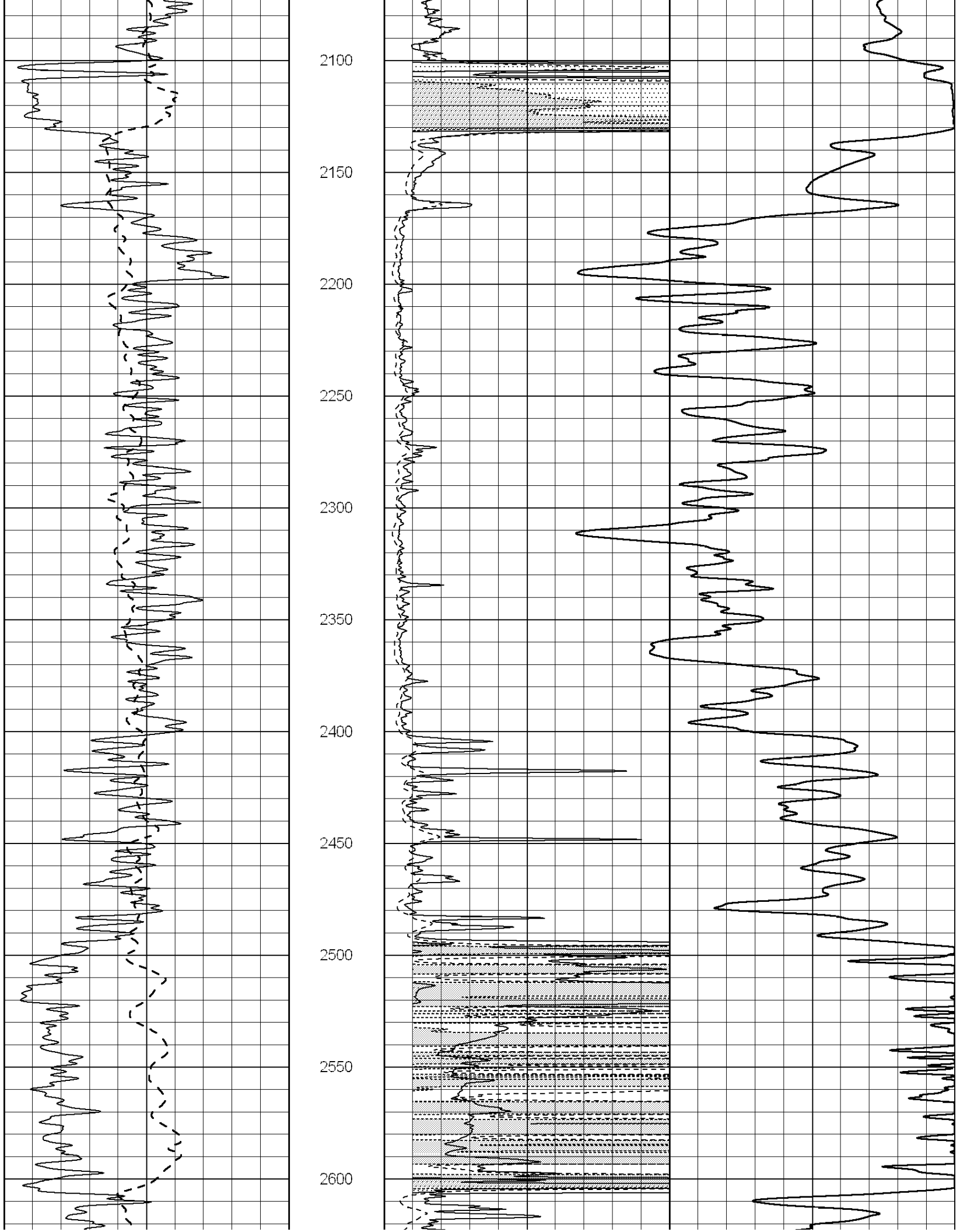
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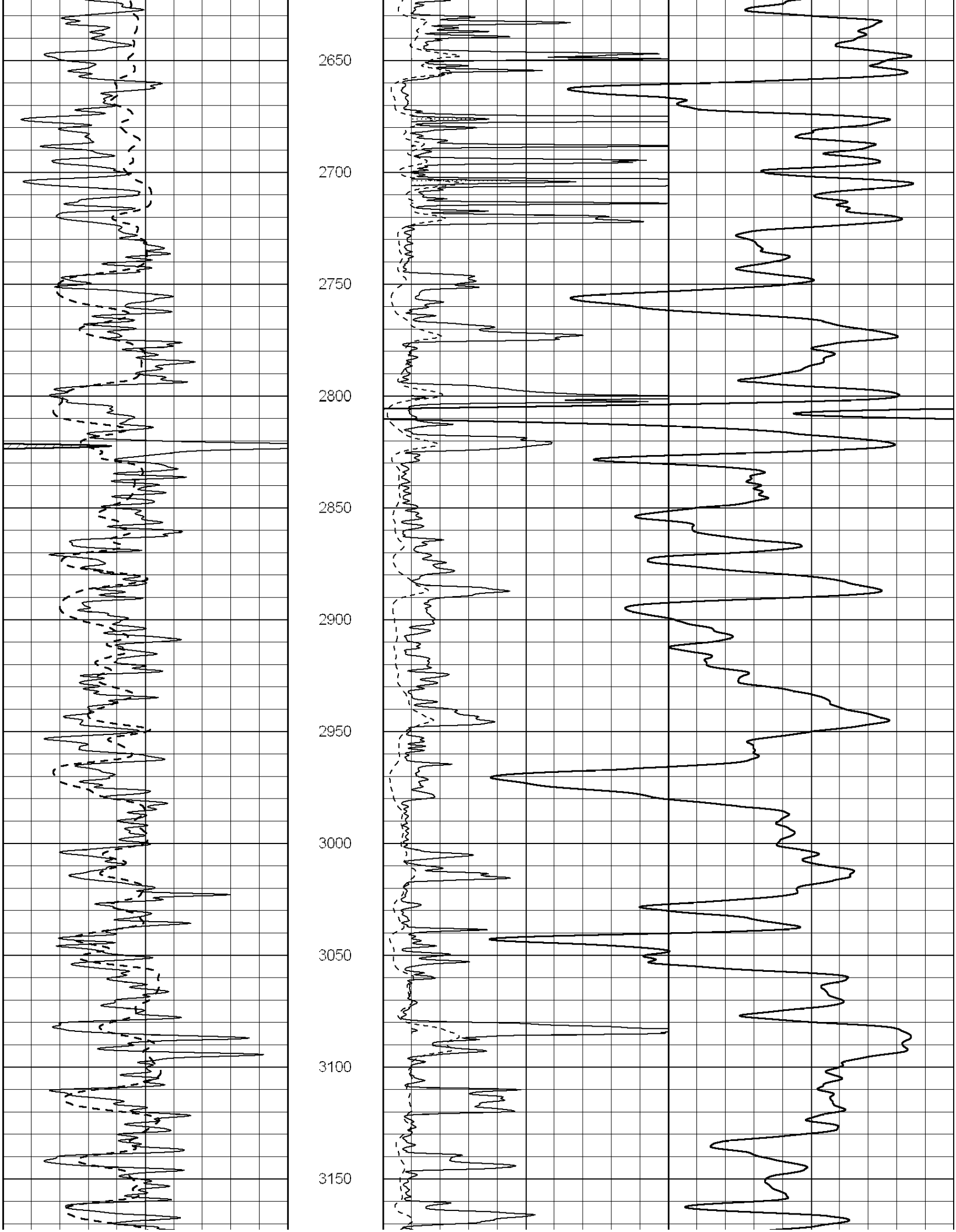
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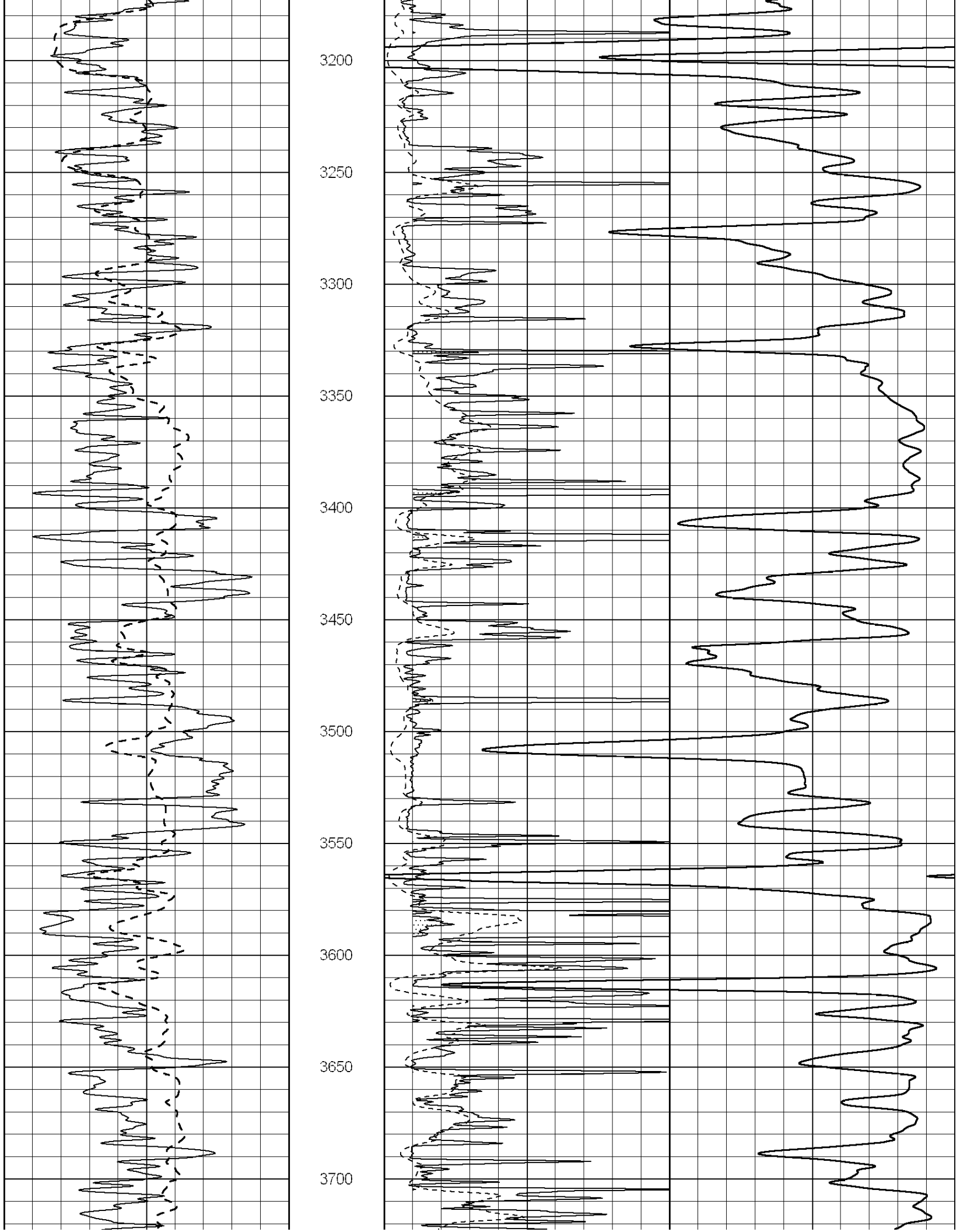
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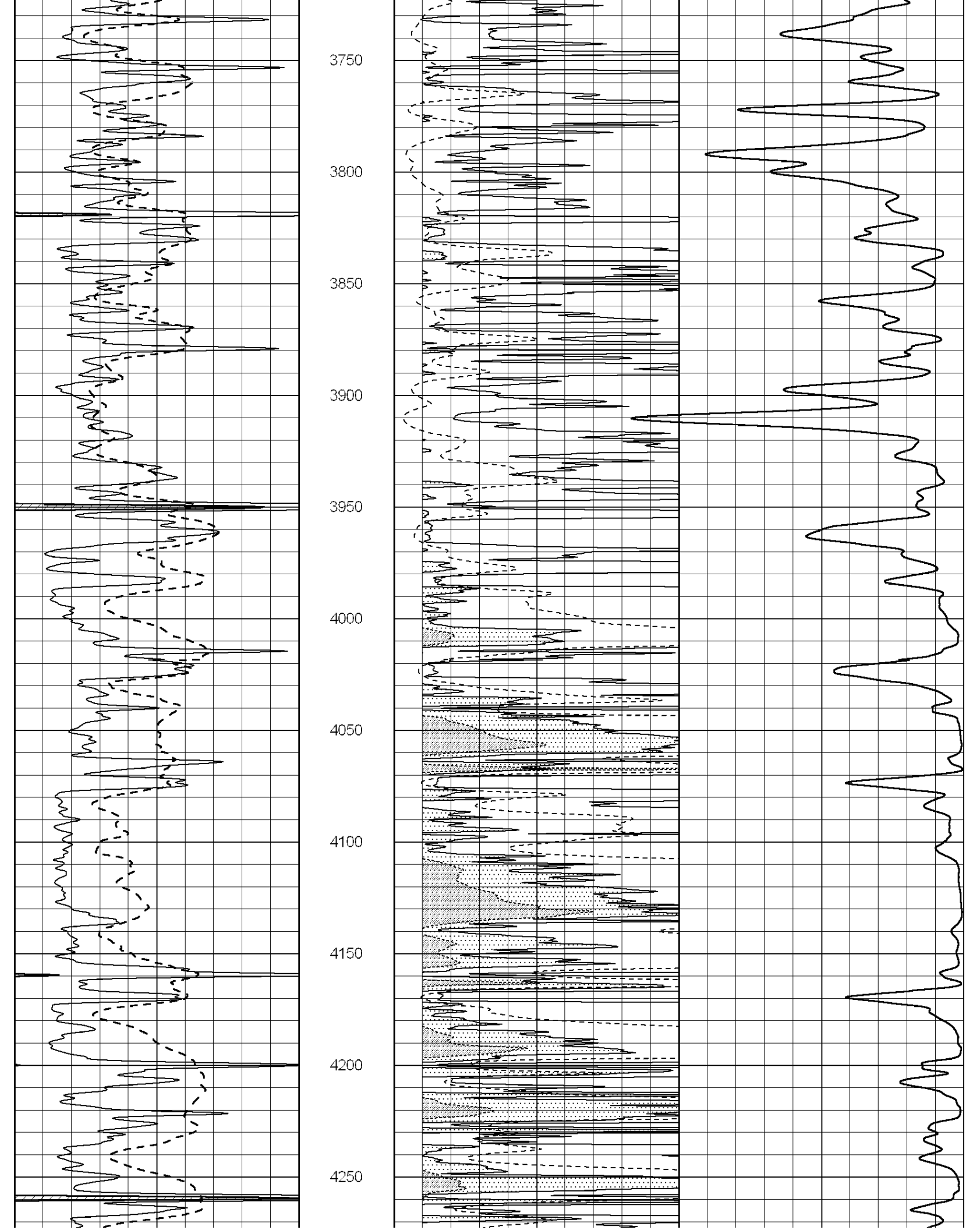
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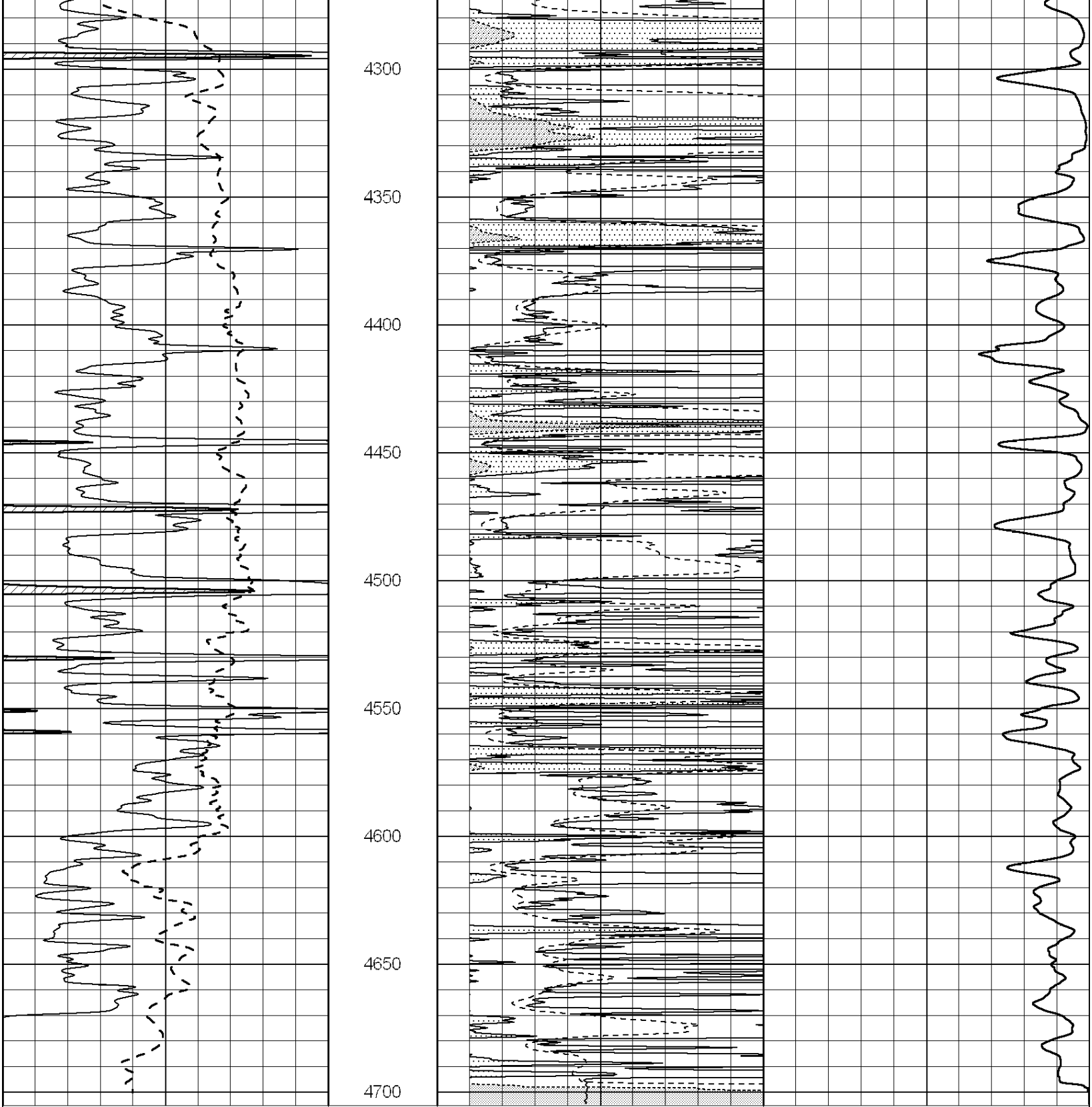


NABORS

COMPLETION & PRODUCTION

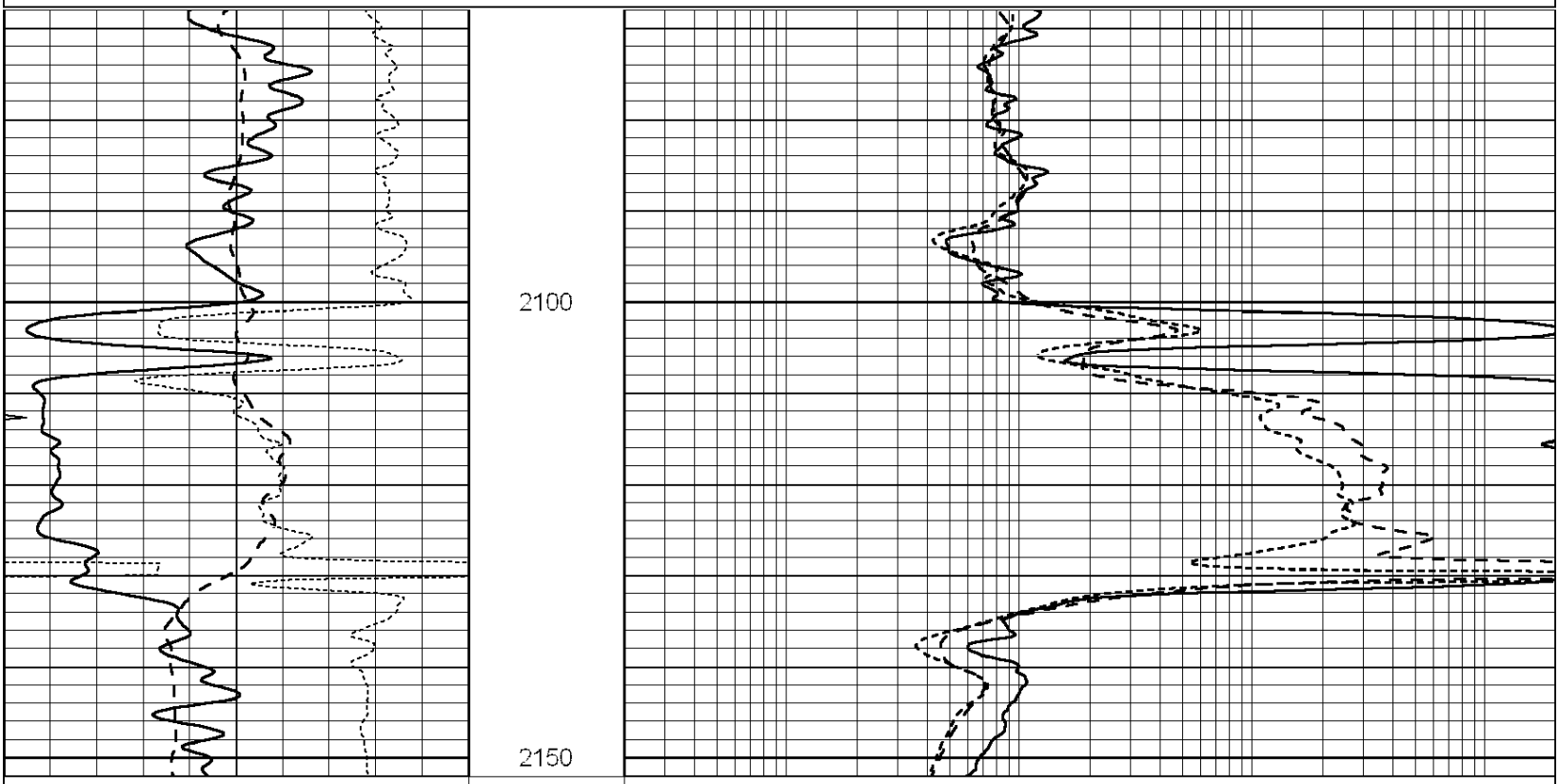
MAIN SECTION

SERVICES CO.

Database File: 012031ddn.db
Dataset Pathname: pass3.3A
Presentation Format: _dil
Dataset Creation: Sun Nov 03 18:05:30 2013
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
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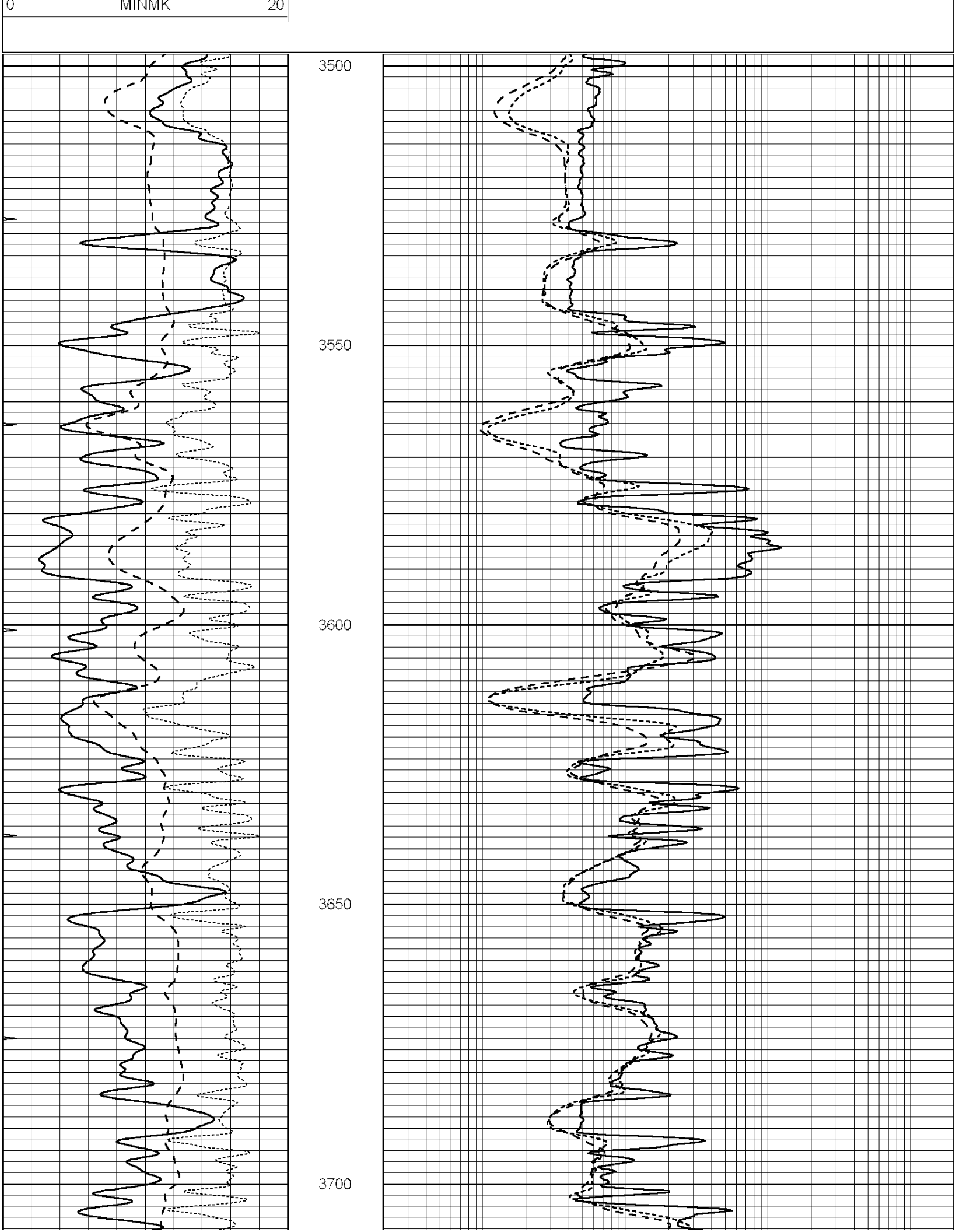
MAIN SECTION

Database File: 012031ddn.db
Dataset Pathname: pass3.3A
Presentation Format: _dil
Dataset Creation: Sun Nov 03 18:05:30 2013
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000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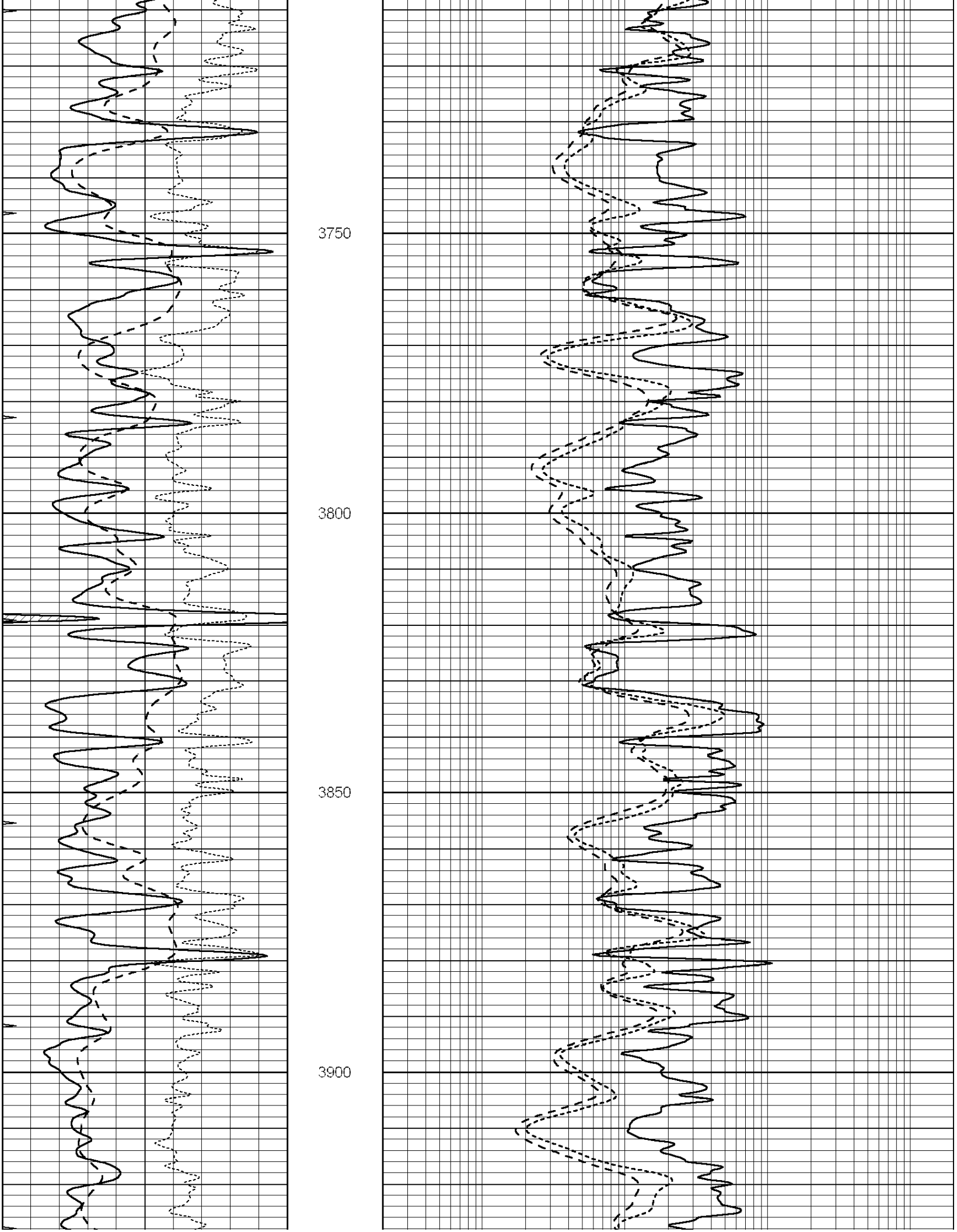
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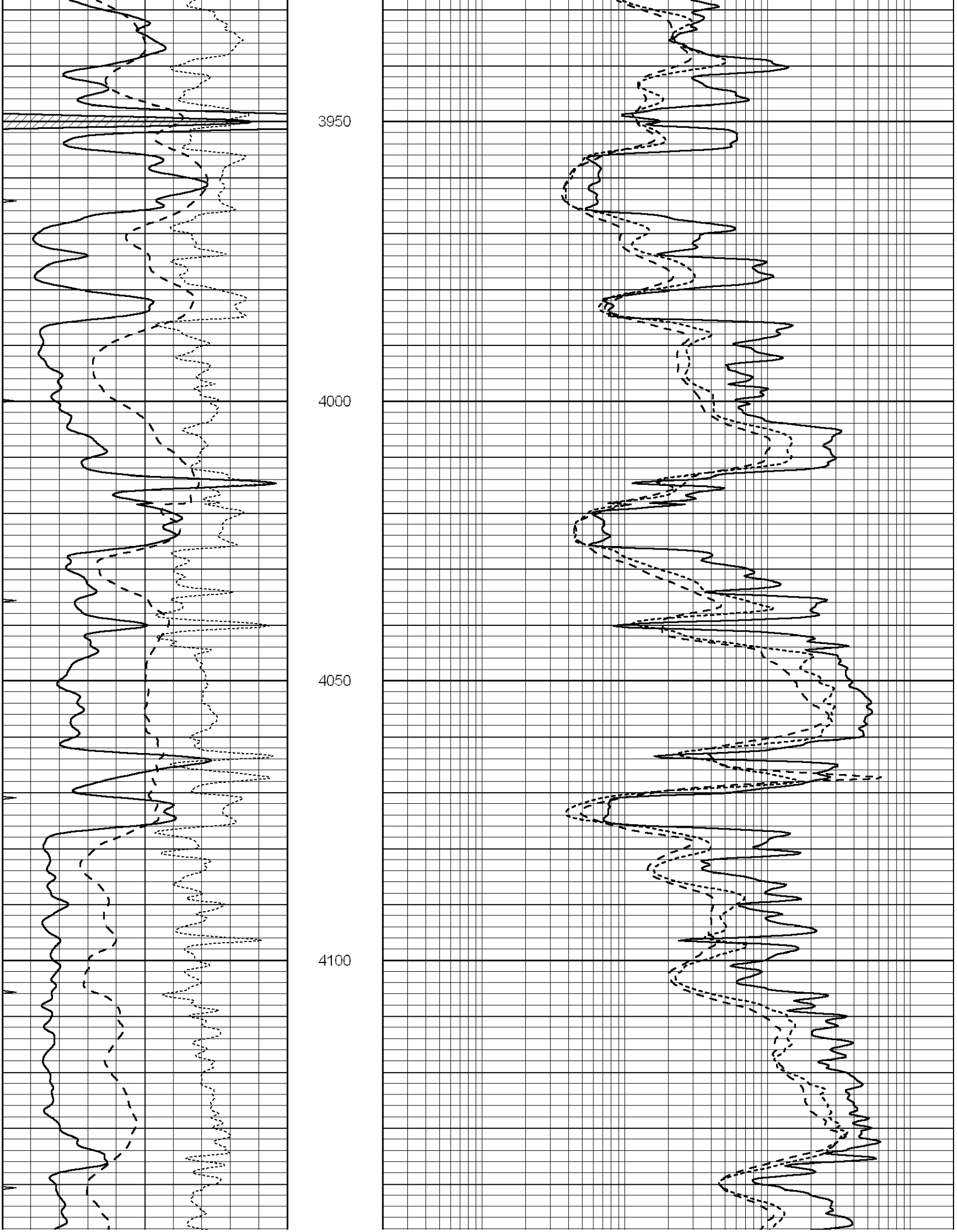
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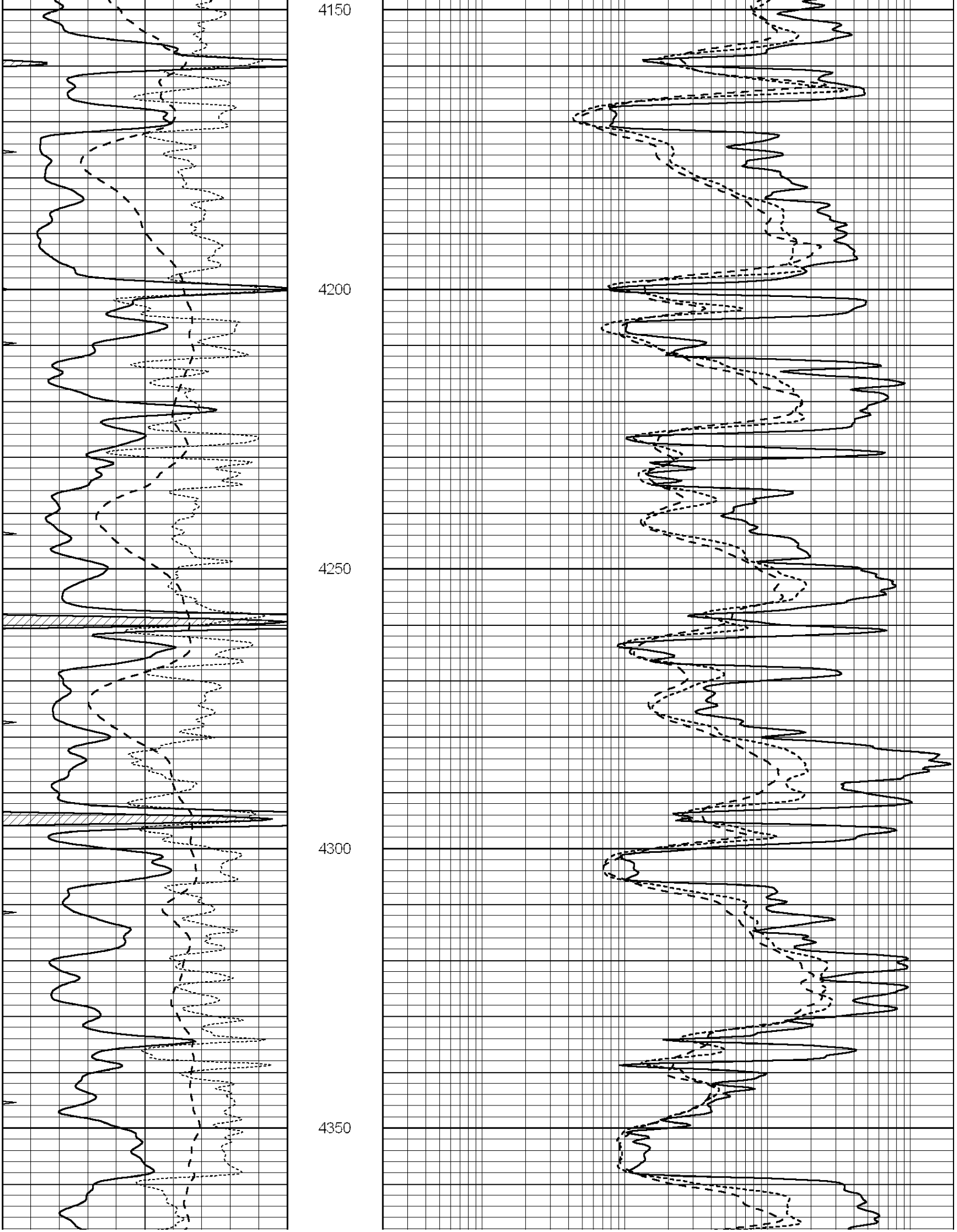
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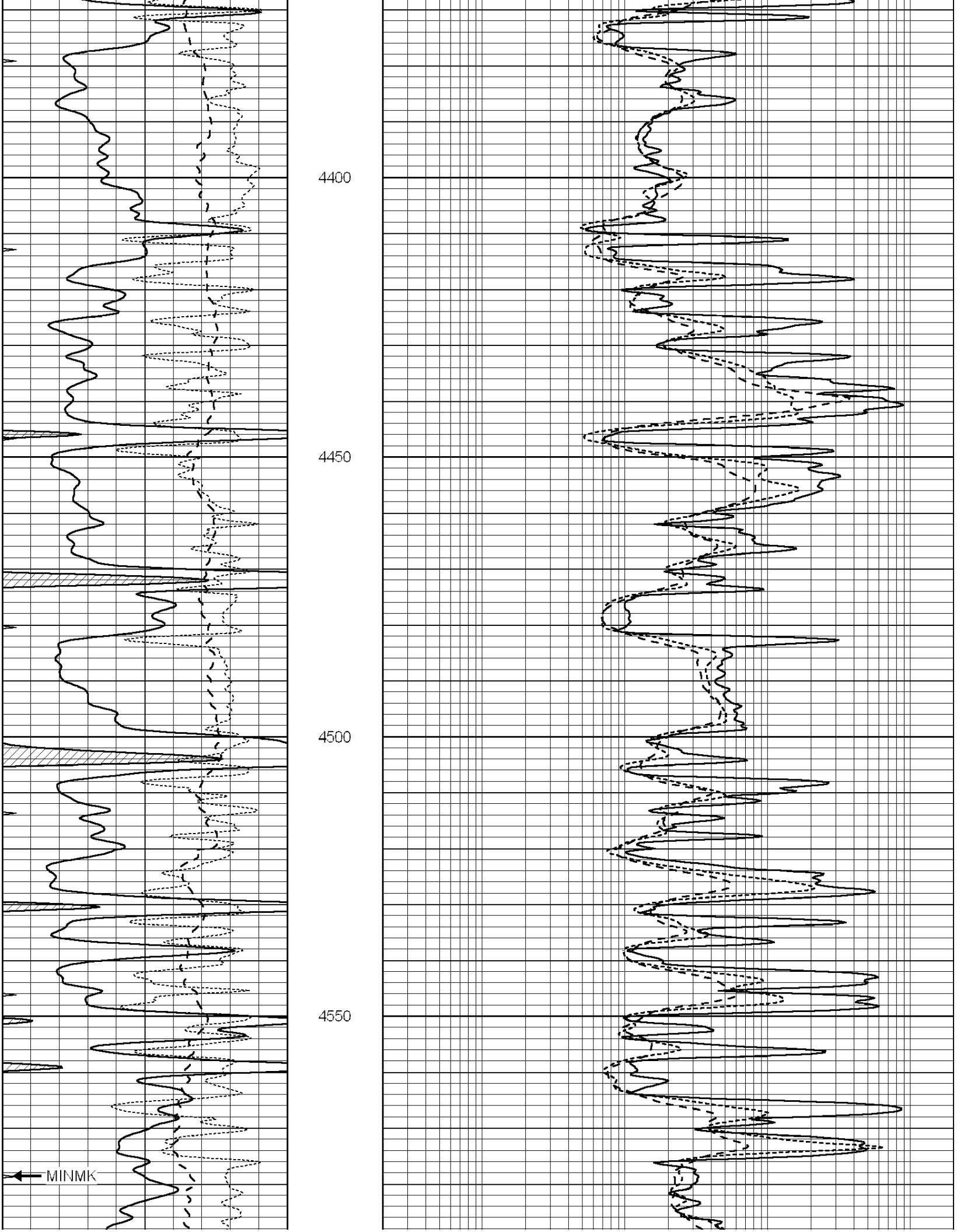
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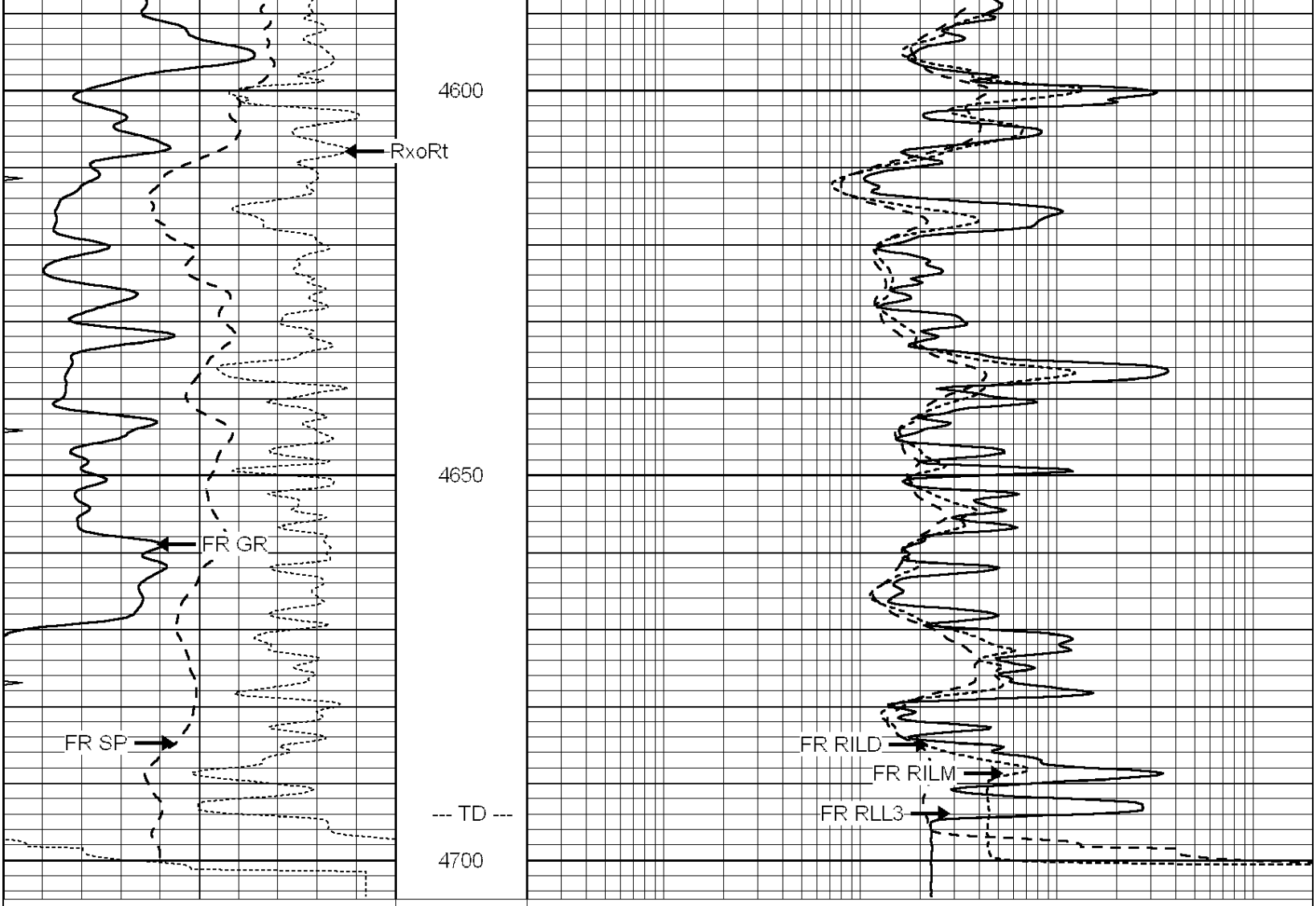


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

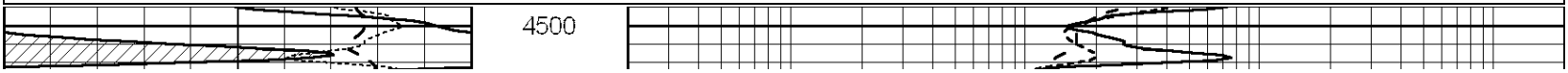
NABORS
COMPLETION & PRODUCTION SERVICES CO.

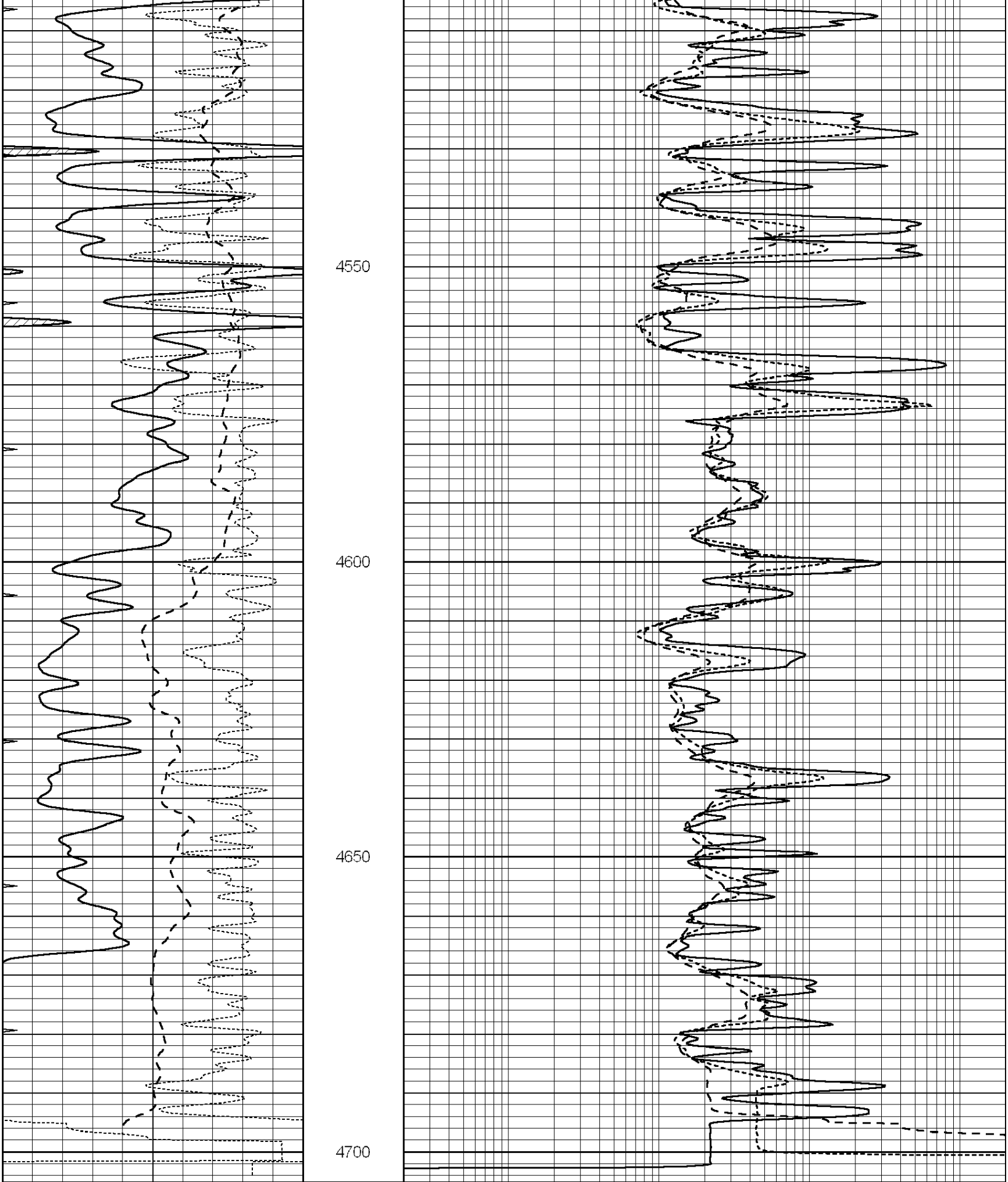
REPEAT SECTION

Database File:	012031ddn.db
Dataset Pathname:	pass2A
Presentation Format:	_dil
Dataset Creation:	Sun Nov 03 18:25:14 2013
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Calibration Report

Database File: 012031ddn.db
Dataset Pathname: pass3.3A
Dataset Creation: Sun Nov 03 18:05:30 2013

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Sun Nov 03 15:42:07 2013

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	480.000	4.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	540.000	-4.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
Source / Verifier: 147 / 147
Master Calibration Performed: Sun Nov 03 15:50:26 2013

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1205.77	610.74	cps
Aluminum	2.550	g/cc	271.21	419.72	cps

Spine Angle = 75.89 Density/Spine Ratio = 0.546

	Size		Reading	
Small Ring	8.20	in	4.83	V
Large Ring	14.00	in	7.01	V

Compensated Neutron Calibration Report

Serial Number: NEU_4I
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: GR5
Tool Model: OPEN
Performed: Sun Nov 03 15:58:48 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.9100 GAPI/cps

Sensitivity:	0.9100	GAPI/cps