NABORS COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company	DREILING OIL COMPANY, INC.
Well	KOHL A #2-11
Field	KOHL
County	TREGO
State	KANSAS

Company DREILING OIL COMPANY, INC.

Well KOHL A #2-11

Field KOHL

County TREGO State KANSAS

Location: API # : 15-195-22925-0000

1750' FSL & 330' FWL
N2-SW-NW-SW/4
SEC 11 TWP 12S RGE 21W

Other Services: CDL/CNL, MEL

Permanent Datum: GROUND LEVEL Elevation 2345

Log Measured From: KELLY BUSHING 8' A.G.L.

Drilling Measured From: KELLY BUSHING

Elevation: K.B. 2353, D.F. 2351, G.L. 2345

Date	5/8/14			
Run Number	ONE			
Depth Driller	4100			
Depth Logger	4102			
Bottom Logged Interval	4100			
Top Log Interval	00			
Casing Driller	8 5/8" @ 221			
Casing Logger	219			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5000 PPM		
Density / Viscosity	9.3/57			
pH / Fluid Loss	9.0/10.4			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	.60 @ 82F			
Rmf @ Meas. Temp	.45 @ 82F			
Rmc @ Meas. Temp	.72 @ 82F			
Source of Rmf / Rmc	MEASUREMENT			
Rm @ BHT	.42 @ 117F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom				
Maximum Recorded Temperature	117F			
Equipment Number	4010			
Location	HAYS, KANSAS			
Recorded By	JASON CAPPELLUCCI			
Witnessed By	ROGER FISHER			

<<< Fold Here >>>

Comments

THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
I 70 @ RIGA EXIT - 3 NORTH - 1 EAST - 1/4 NORTH - EAST INTO

NABORS COMPLETION & PRODUCTION SERVICES CO.

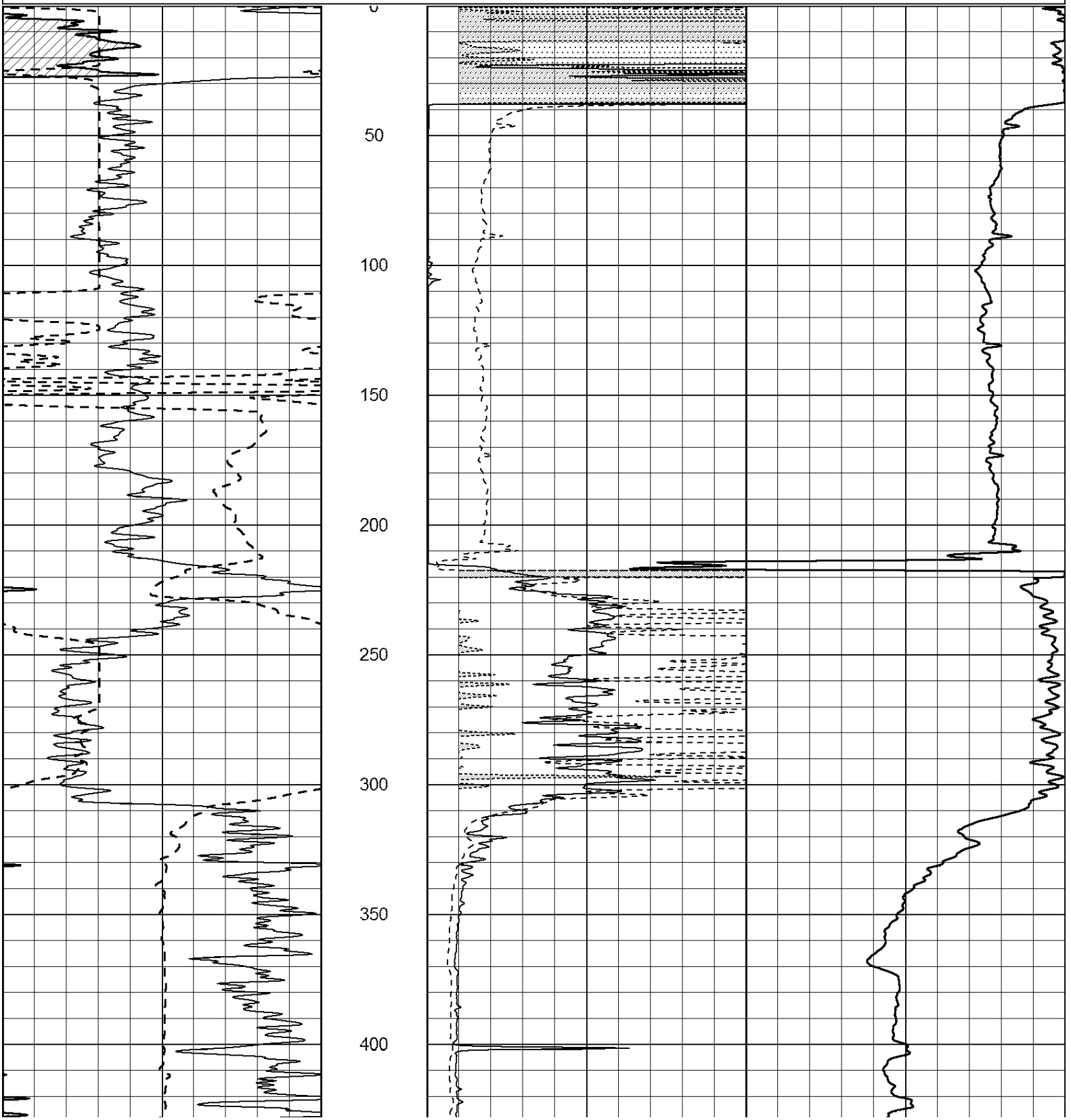
MAIN SECTION

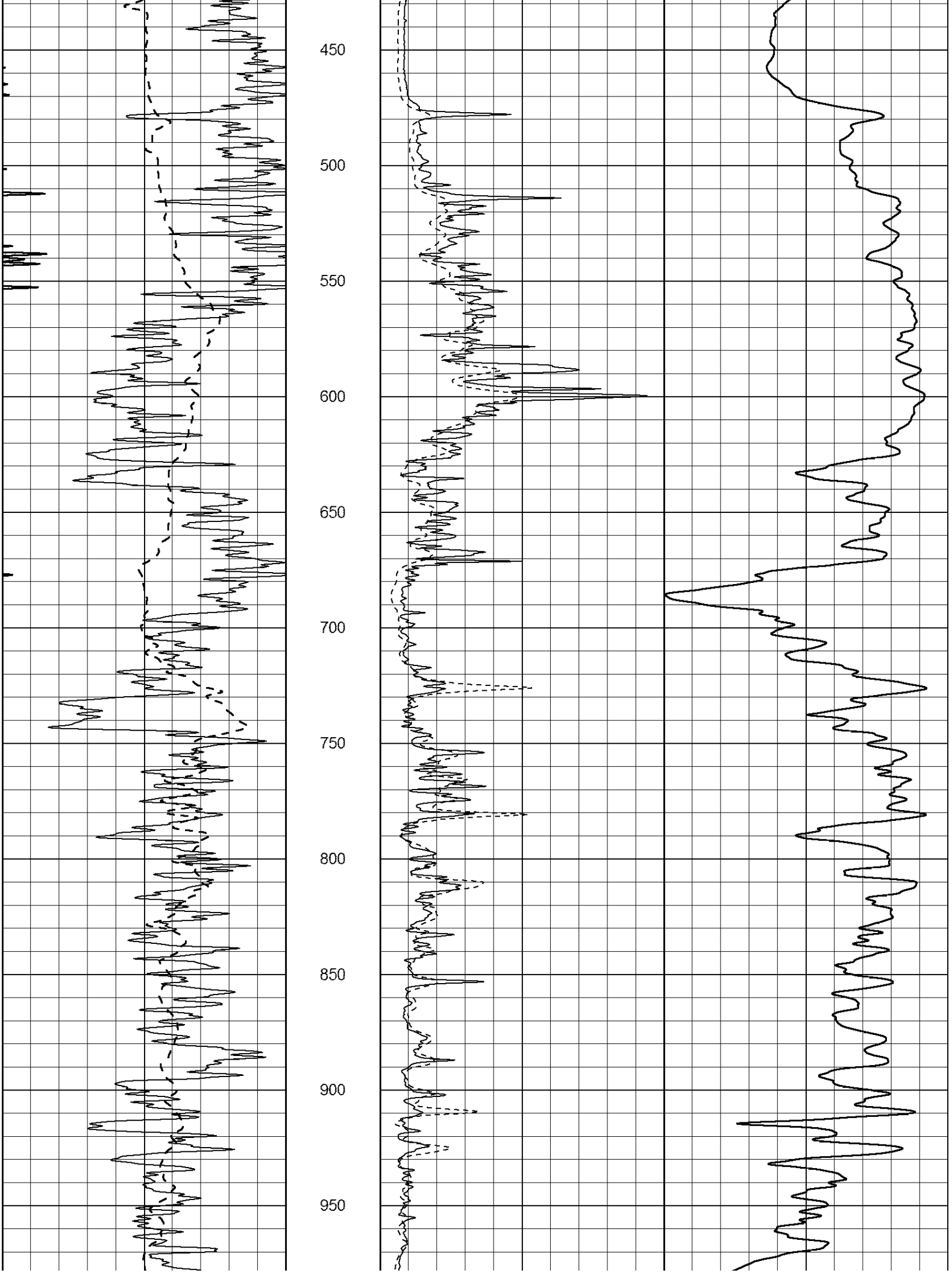
SERVICES CO.

Database File: 24240ddn.db
Dataset Pathname: pass3.3
Presentation Format: _dil2
Dataset Creation: Thu May 08 09:25:57 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

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

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

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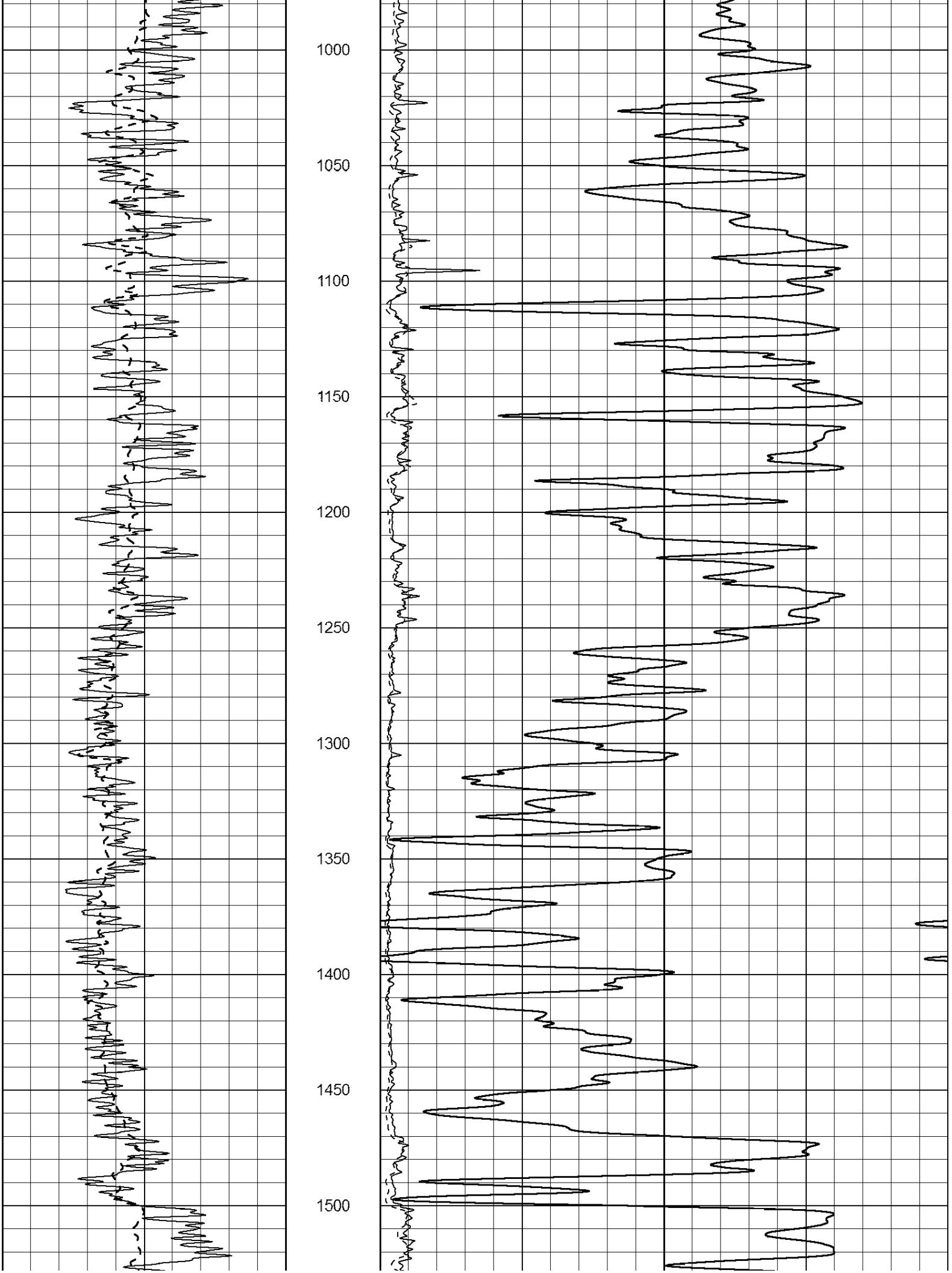
550
600
650
700
750
800
850
900
950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1100
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1200
1250
1300
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1400
1450
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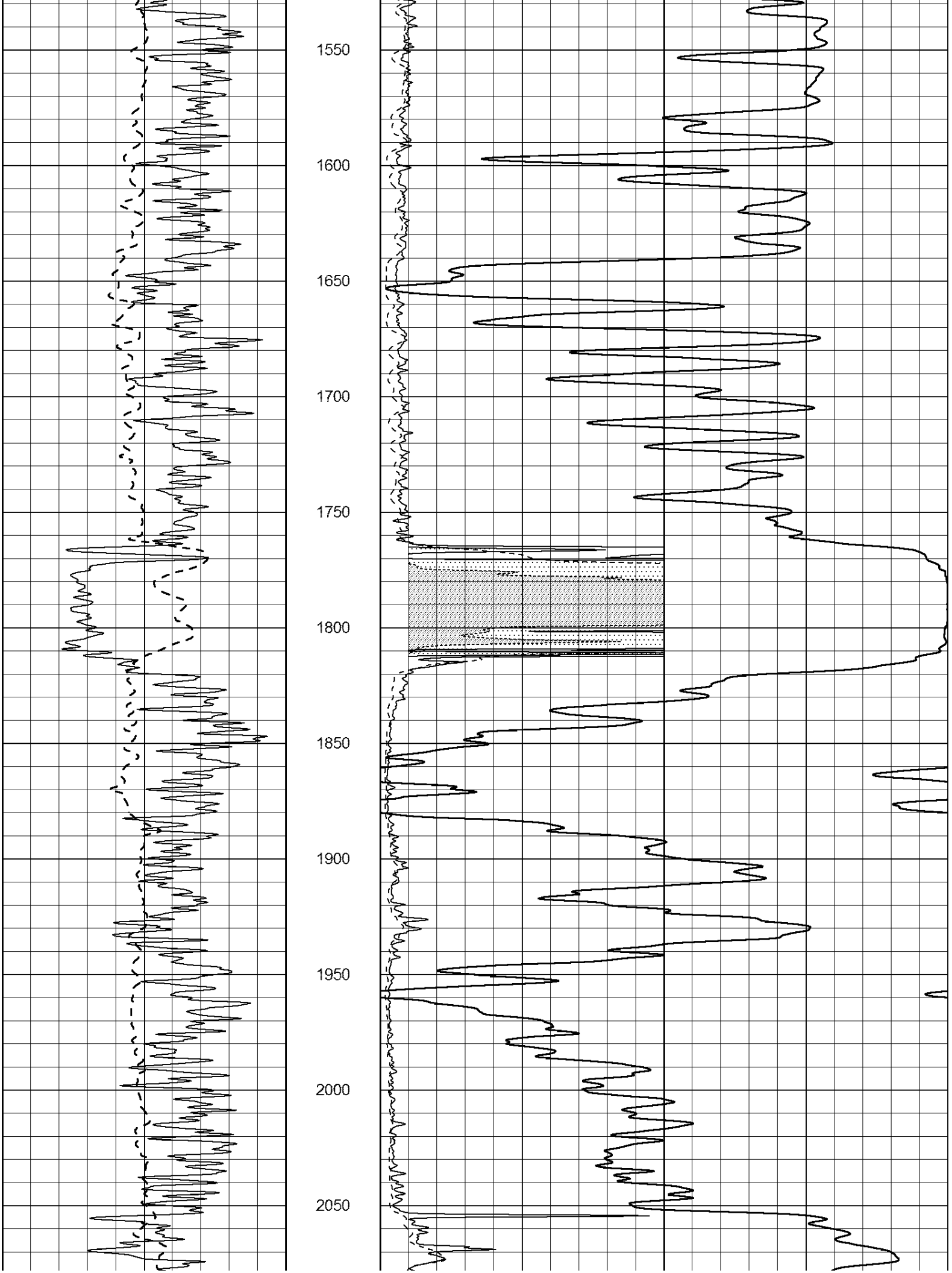
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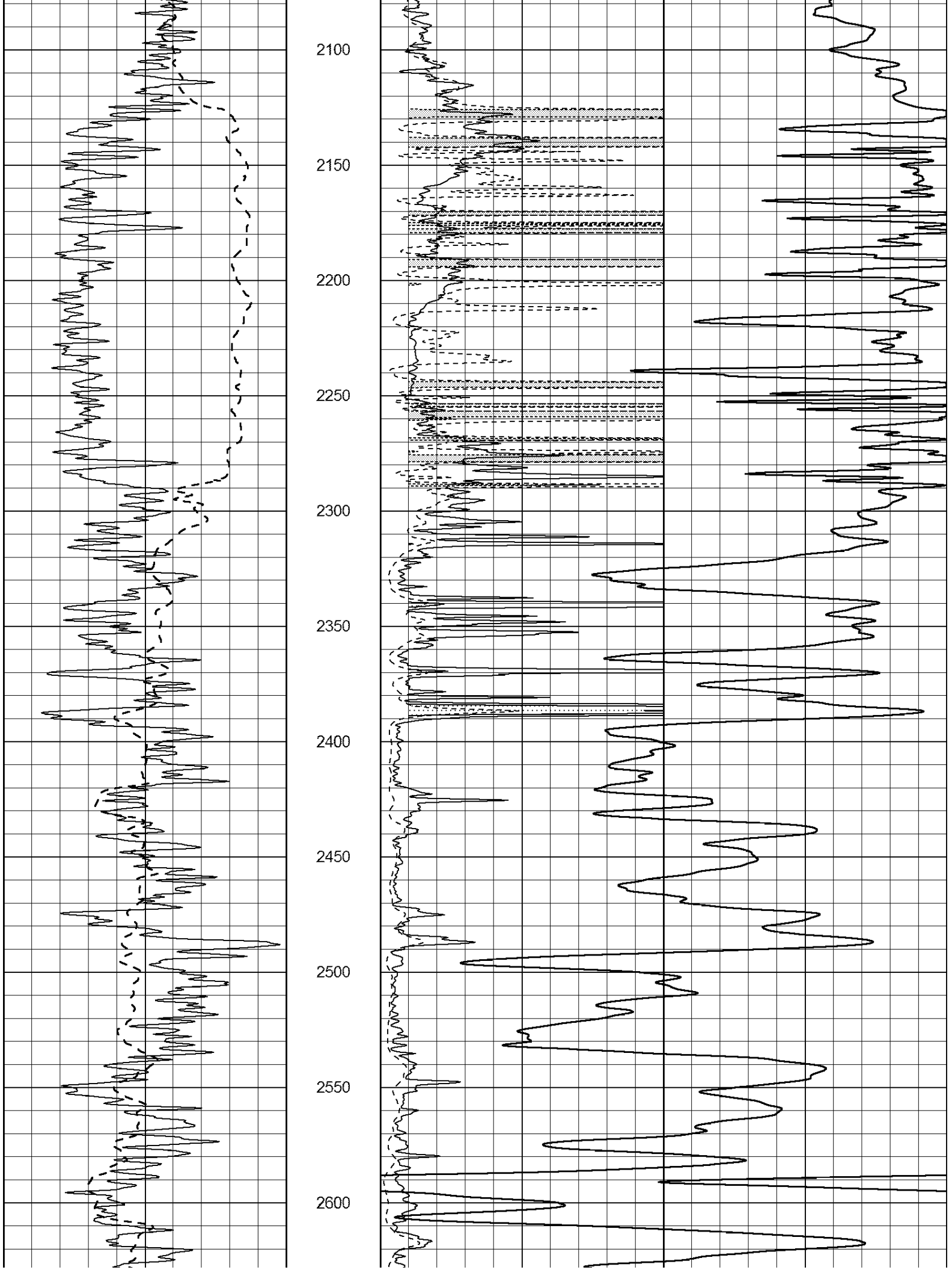
1650
1700
1750
1800
1850
1900
1950
2000
2050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2550
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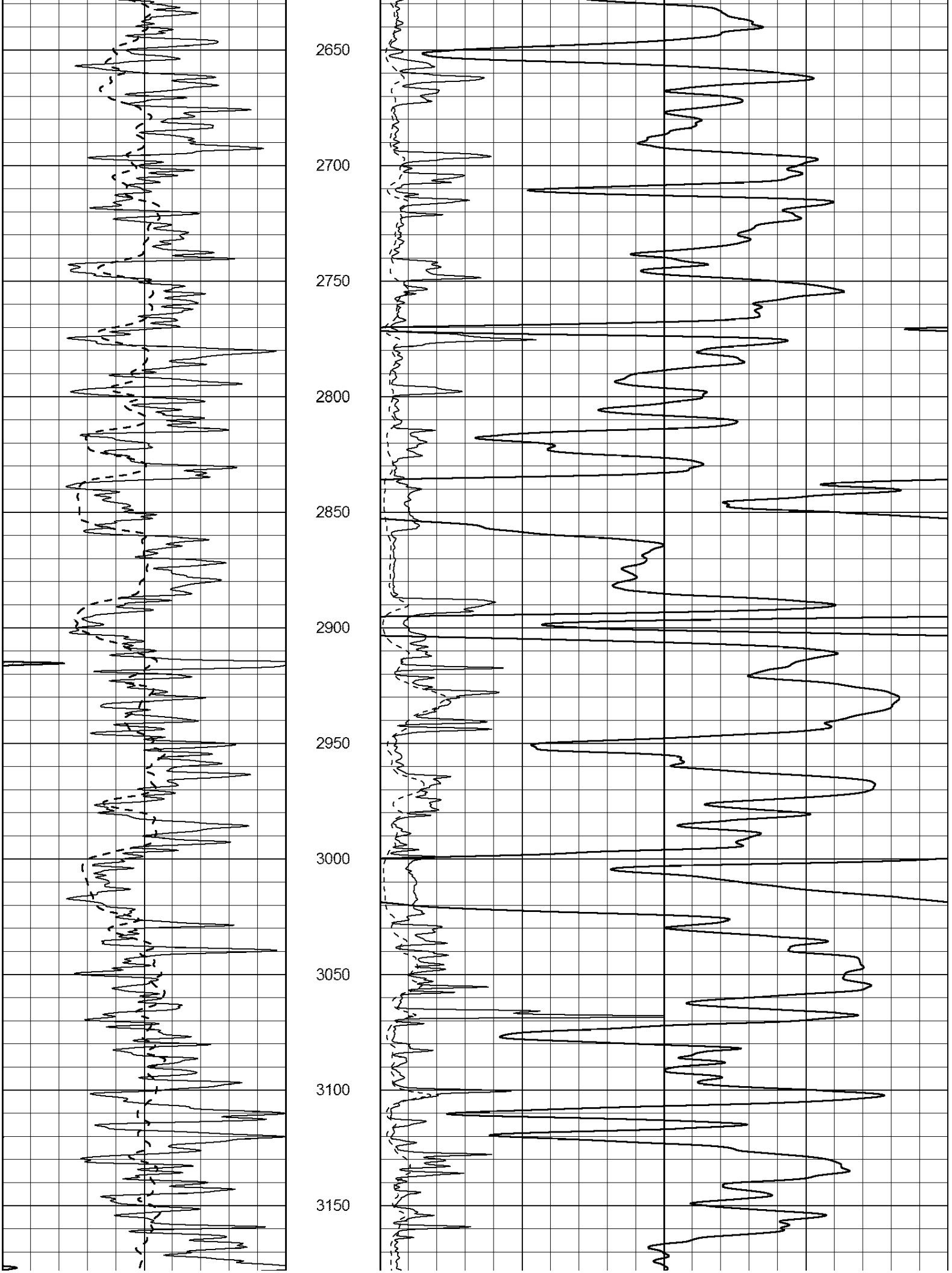
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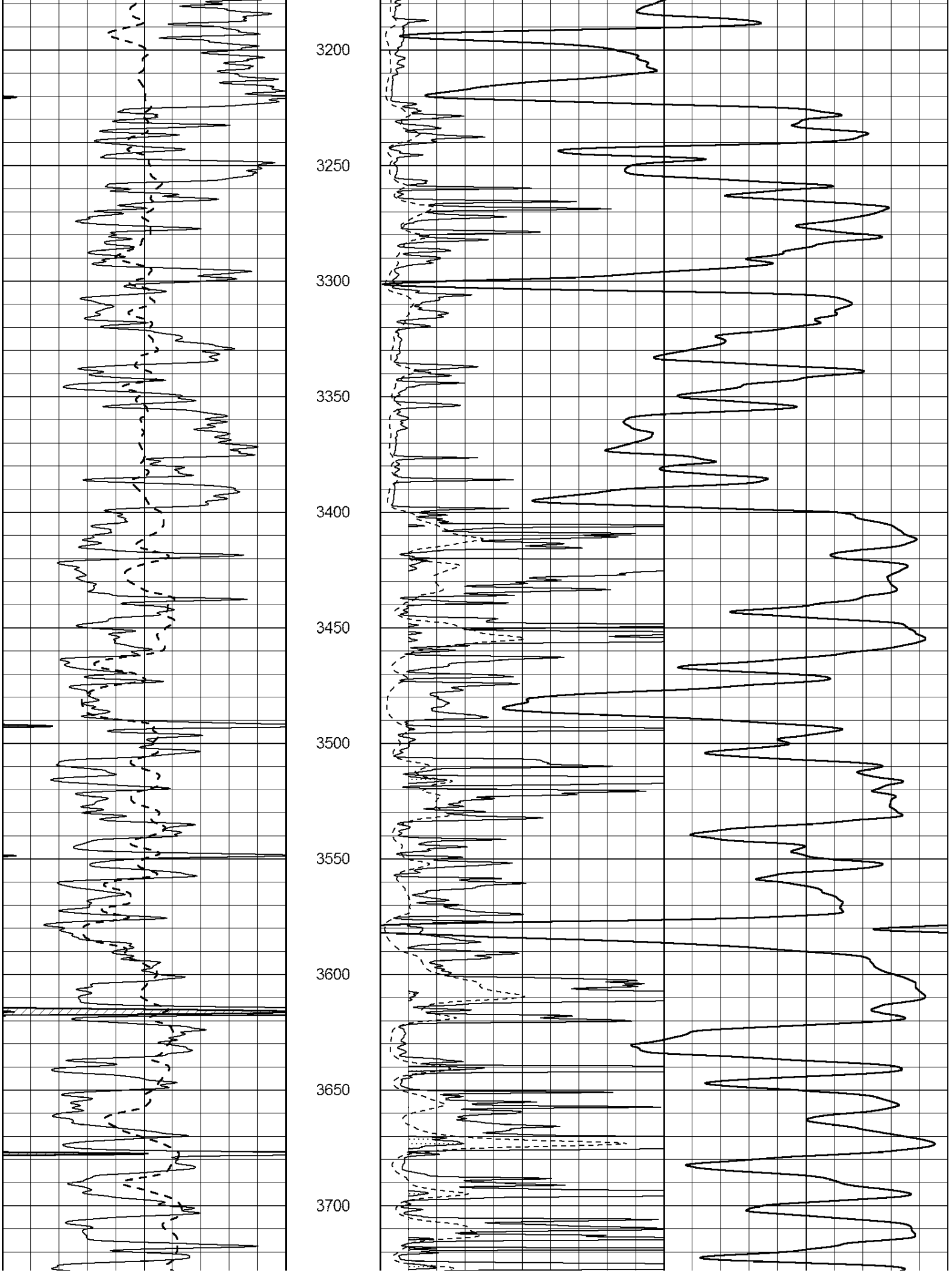
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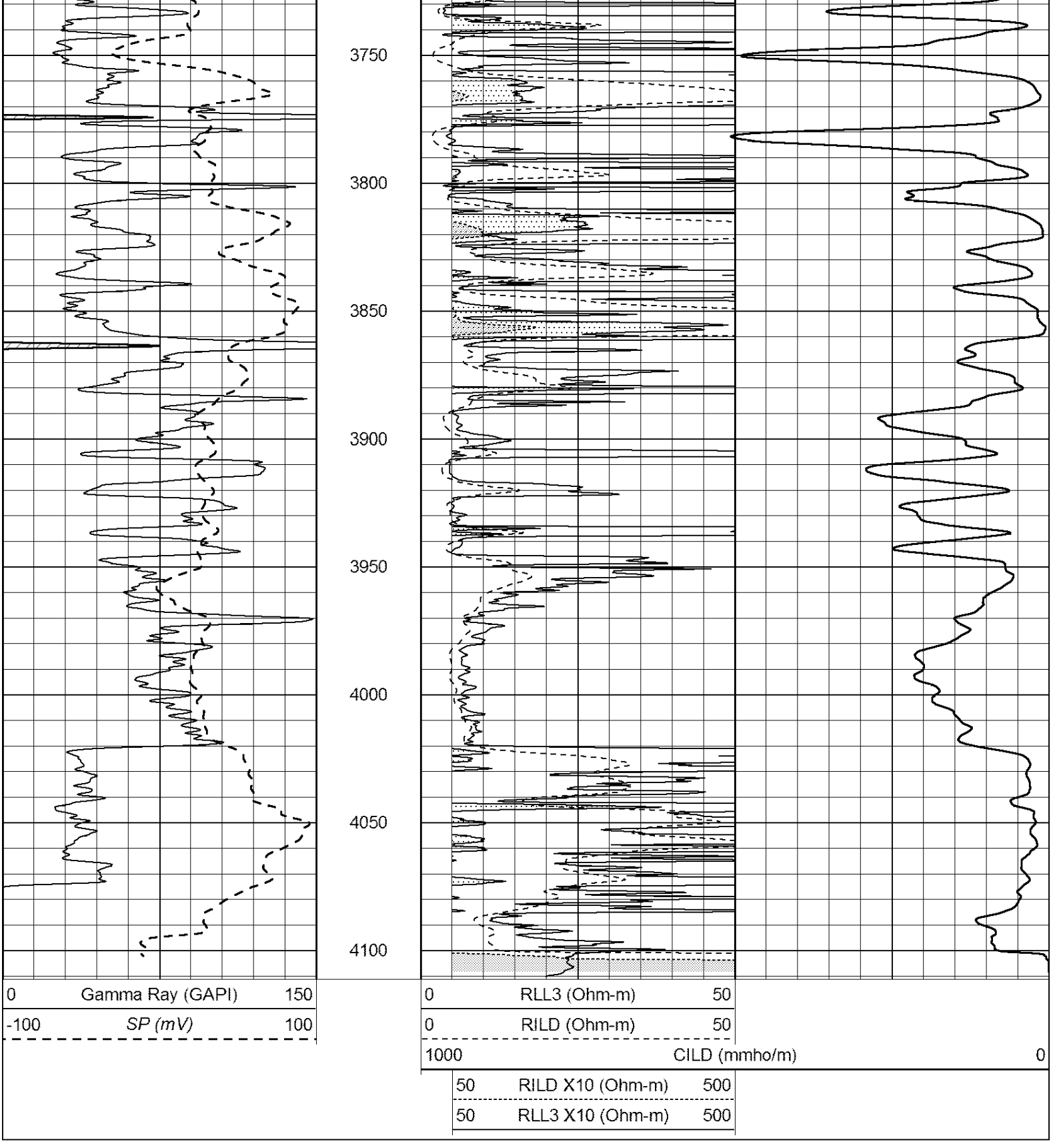
3350
3400
3450
3500
3550
3600
3650
3700



NABORS
COMPLETION & PRODUCTION SERVICES CO.

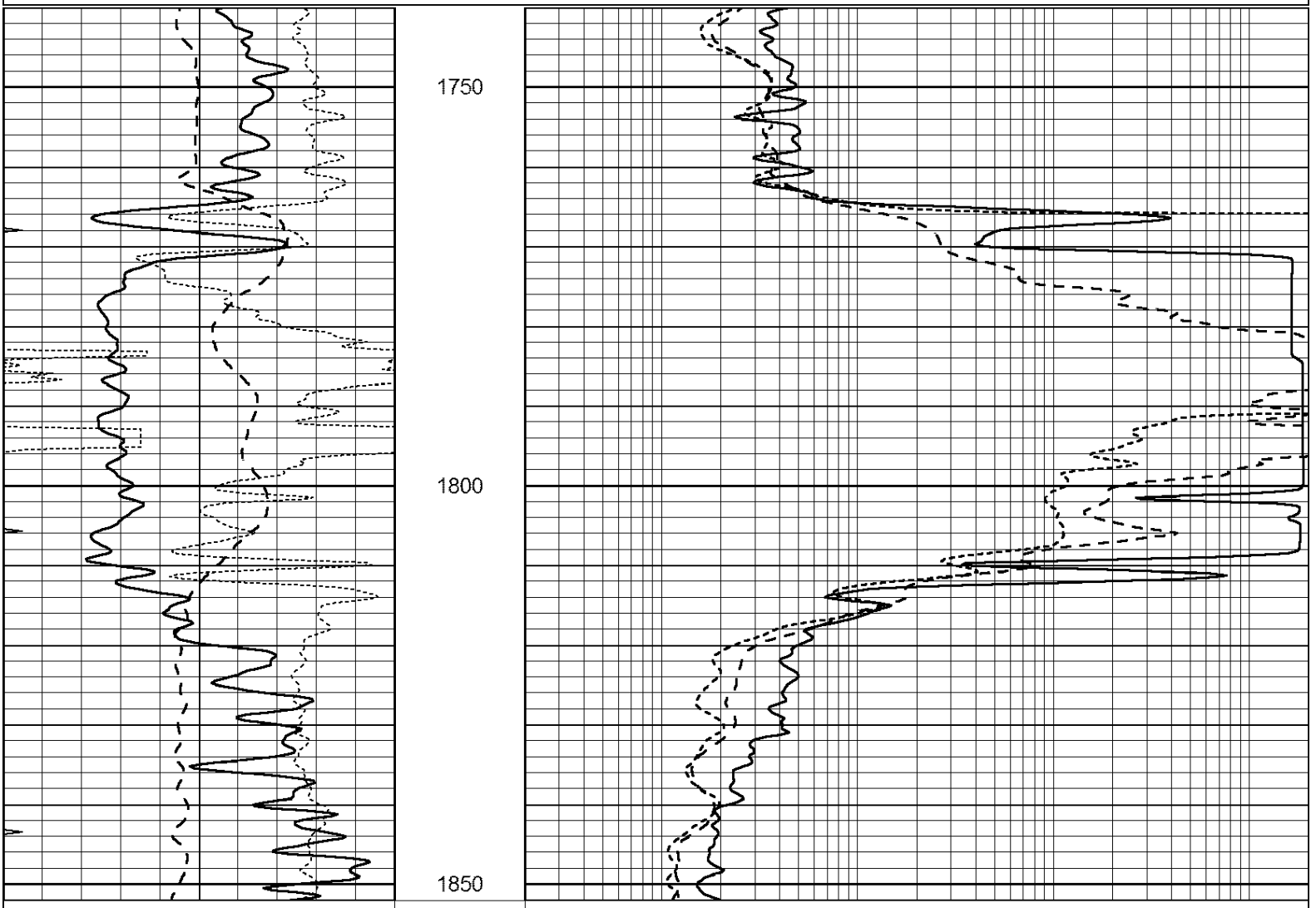
ANHYDRITE

Database File:	24240ddn.db
Dataset Pathname:	pass3.2
Presentation Format:	_dil
Dataset Creation:	Thu May 08 08:49:49 2014 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240

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



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

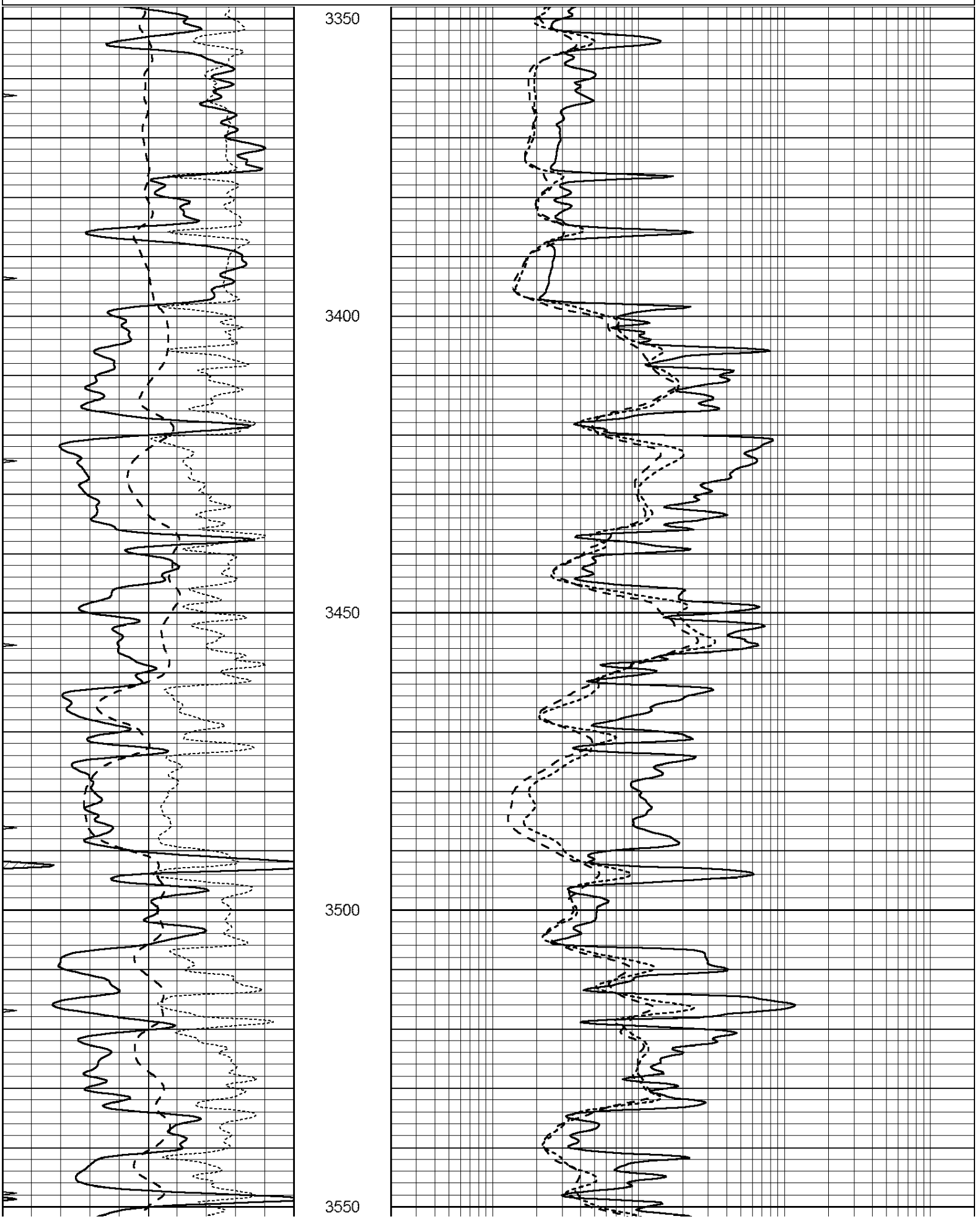
Database File: 24240ddn.db
Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Thu May 08 08:38:36 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

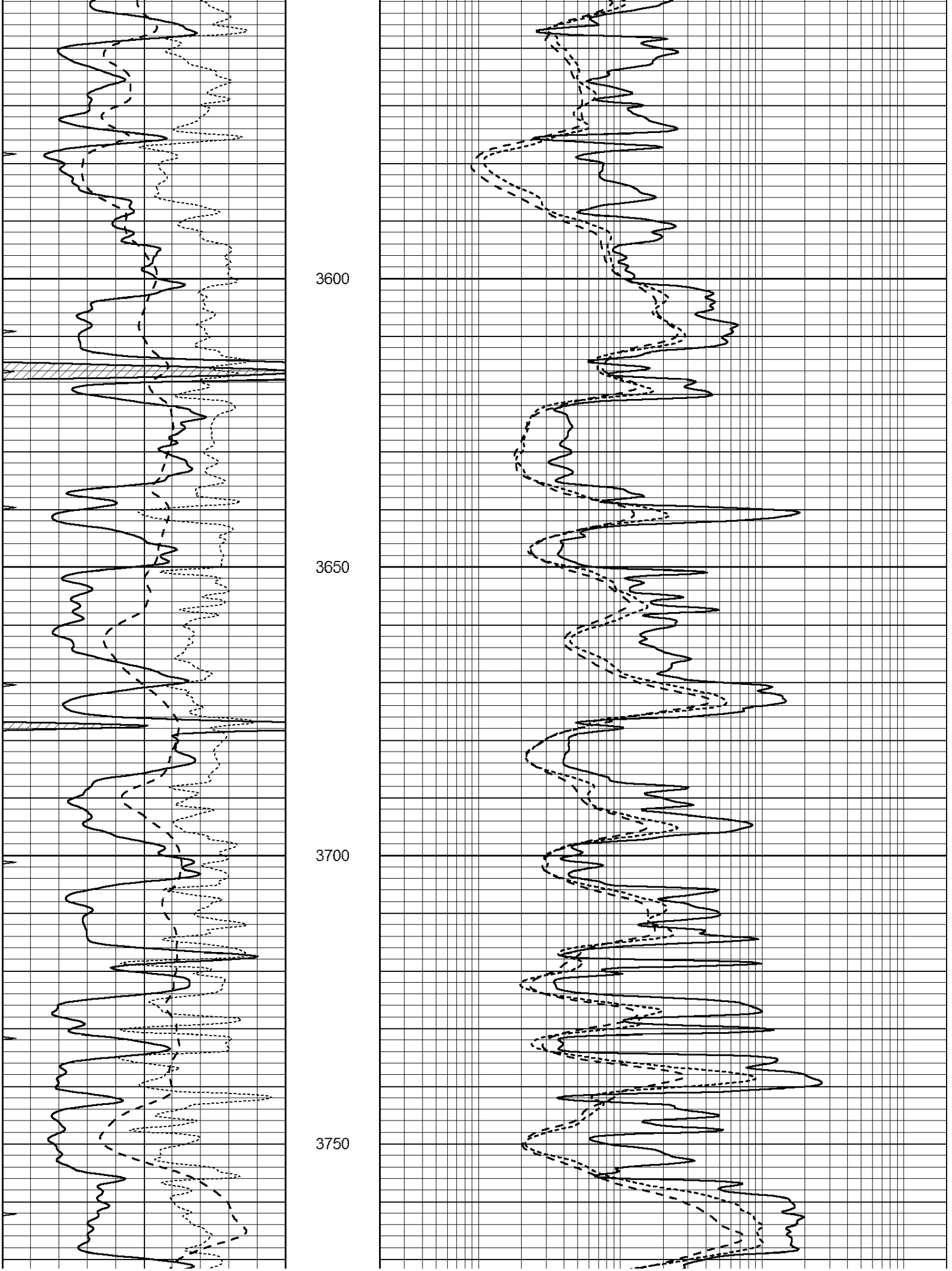
0	GAMMA RAY (GAPI)	150
-100	*SP (mV)*	100

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

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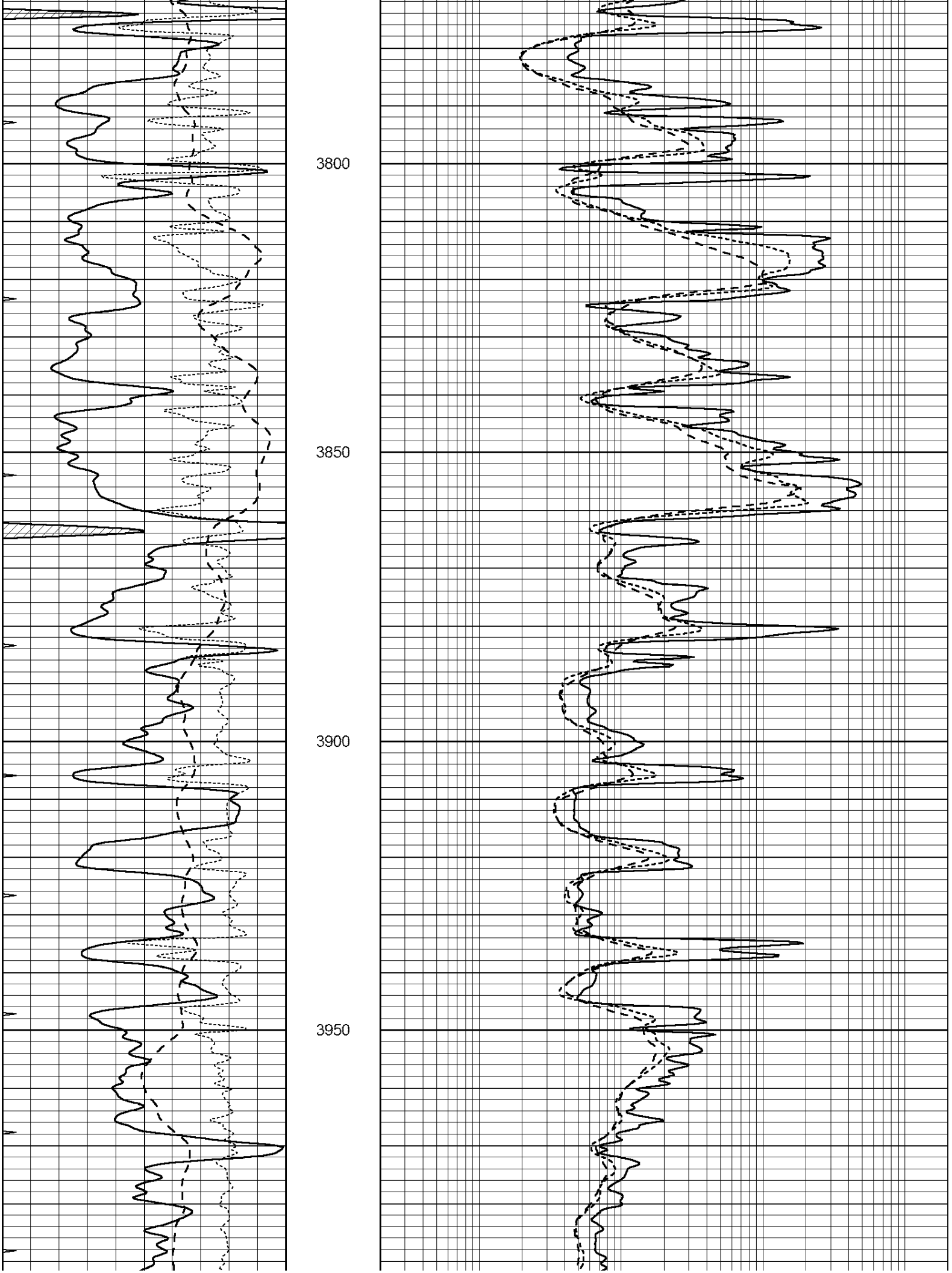
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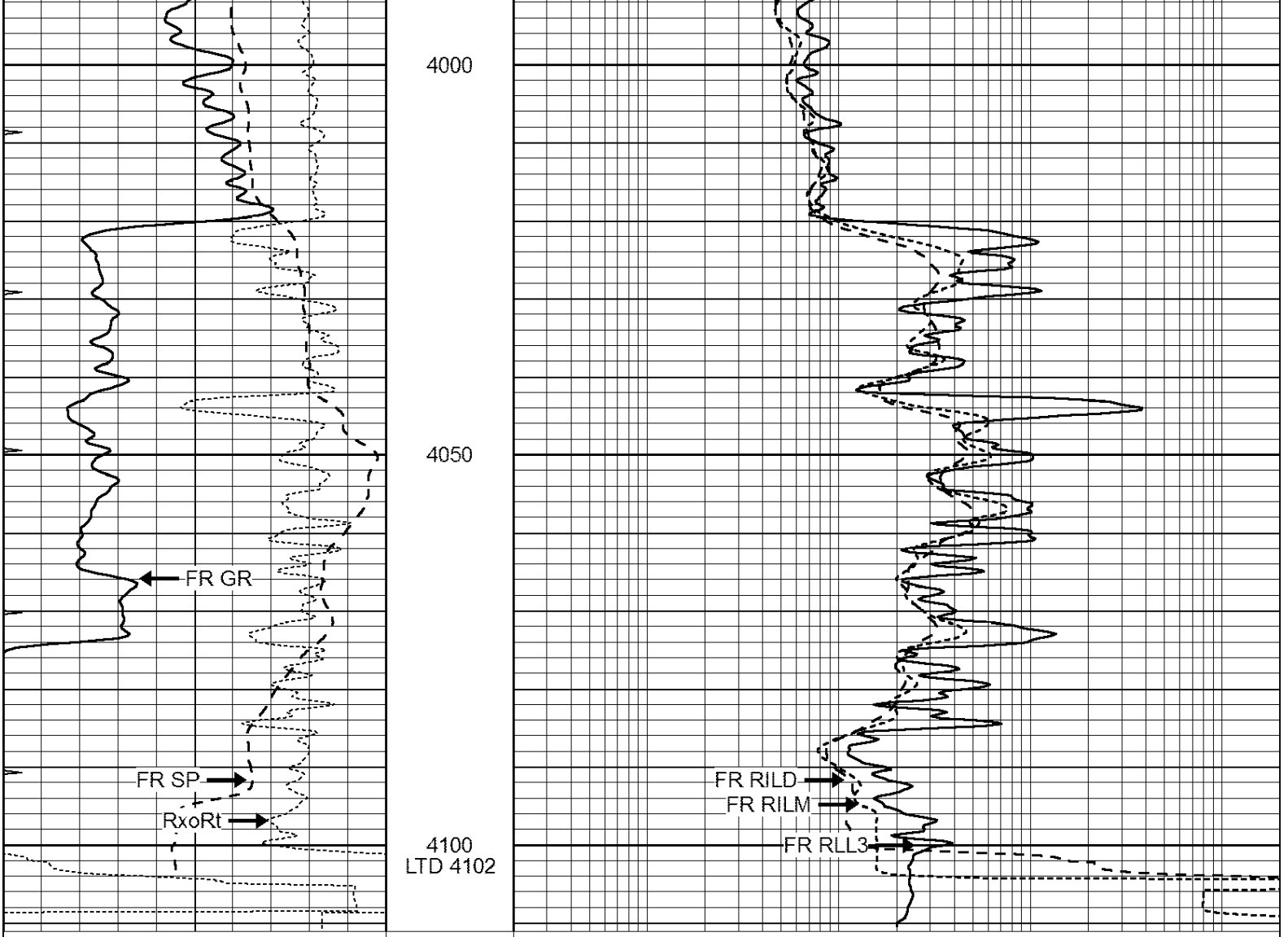


0	GAMMA RAY (GAPI)	150
-100	*SP (mV)*	100
-250	Rxo/Rt	50
0	MINMK	20

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

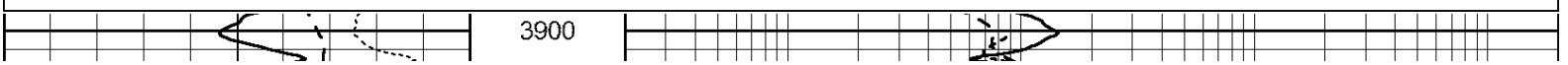
NABORS
COMPLETION & PRODUCTION SERVICES CO.

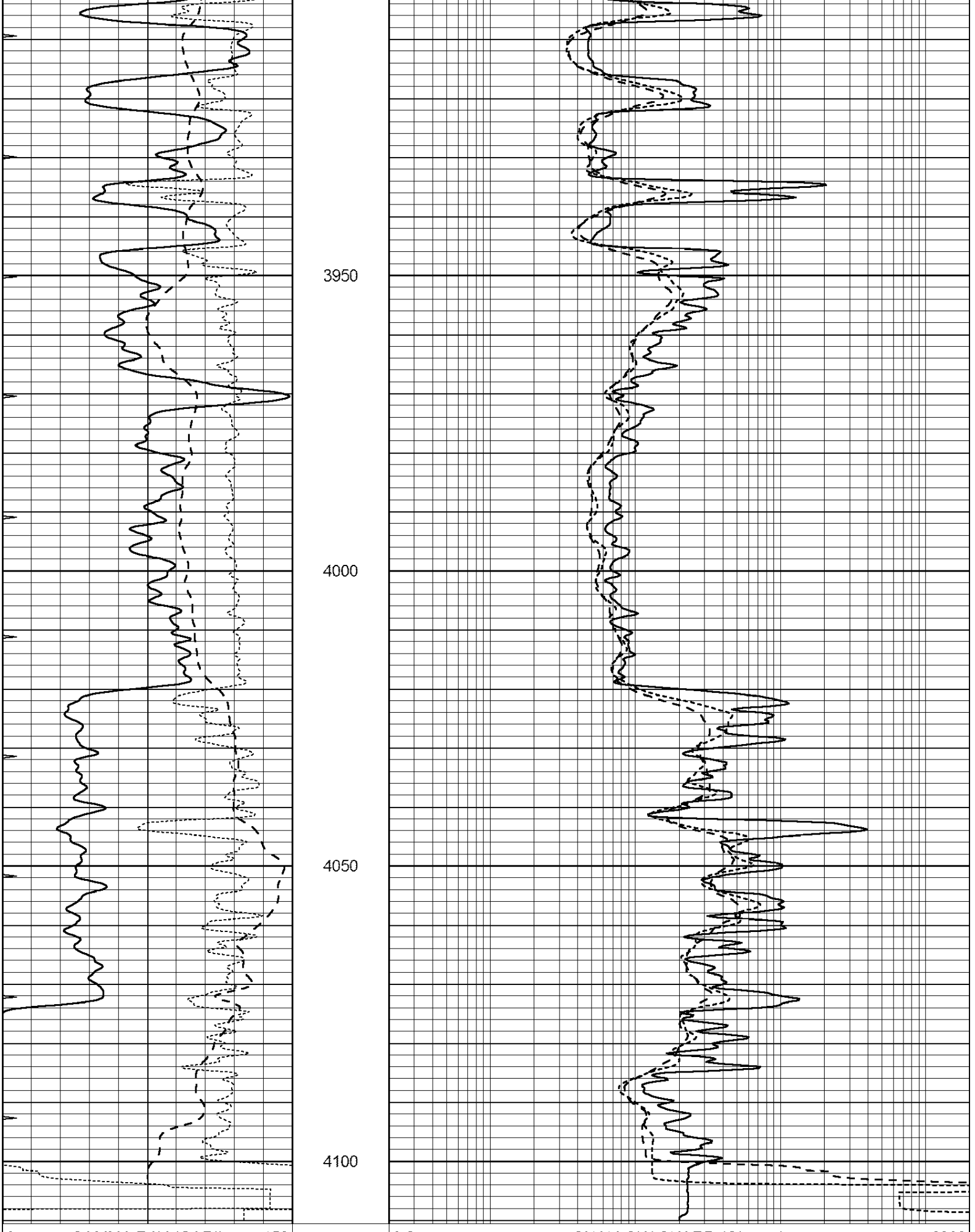
REPEAT SECTION

Database File: 24240ddn.db
Dataset Pathname: pass2.2
Presentation Format: _dil
Dataset Creation: Thu May 08 08:35:00 2014 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	MINMK	20

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




3950
4000
4050
4100
0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100
-250 Rxo/Rt 50
0.2 SHALLOW GUARD (Ohm-m) 2000
0.2 DEEP INDUCTION (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000

0	MINMK	20

Calibration Report

Database File: 24240ddn.db
Dataset Pathname: pass2.2
Dataset Creation: Thu May 08 08:35:00 2014 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:	GEAR4-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Wed Sep 18 03:03:09 2013
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1075.98	532.39	cps
Aluminum	2.560	g/cc	286.51	422.88	cps

Spine Angle = 80.13 Density/Spine Ratio = 0.633

	Size		Reading	
Small Ring	8.00	in	3.21	V
Large Ring	14.00	in	5.46	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: GR6
Tool Model: OPEN
Performed: Tue May 06 06:07:07 2014

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity:	0.8035	GAPI/cps