NABORS
COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company TREK AEC, LLC
Well MCCASKEY #2-20
Field WILDCAT
County PRATT State KANSAS
Location: API # : 15-151-22448-00-00
SE - SW - NE - SW
1520' FSL & 1820' FWL
SEC 20 TWP 29S RGE 11W

Other Services
CNL/CDL
MEL/SON

Permanent Datum GROUND LEVEL Elevation 1855
Log Measured From KELLY BUSHING 12' A.G.L
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1867
D.F. 1865
G.L. 1855

Company TREK AEC, LLC
Well MCCASKEY #2-20
Field WILDCAT
County PRATT
State KANSAS

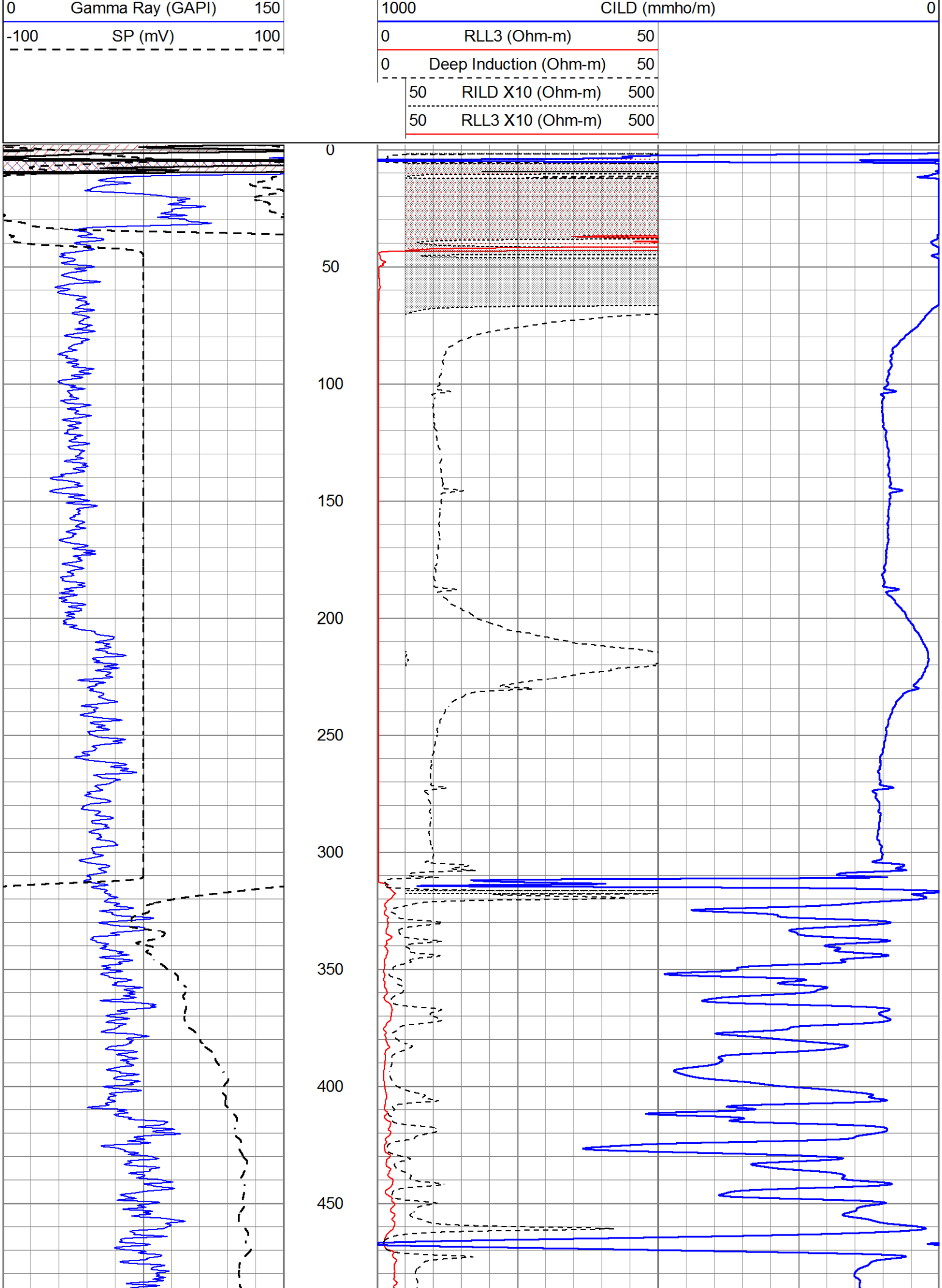
Date	7-28-15					
Run Number	ONE					
Depth Driller	4740					
Depth Logger	4740					
Bottom Logged Interval	4738					
Top Log Interval	00					
Casing Driller	8 5/8 @ 308'					
Casing Logger	310'					
Bit Size	7 7/8					
Type Fluid in Hole	CHEMICAL MUD				CHLORIDES 9.000 PPM	
Density / Viscosity	9.0/46					
pH / Fluid Loss	10.0/10.8					
Source of Sample	FLOWLINE					
Rm @ Meas. Temp	0.40 @ 97F					
Rmf @ Meas. Temp	0.30 @ 97F					
Rmc @ Meas. Temp	0.48 @ 97F					
Source of Rmf / Rmc	MEASUREMENT					
Rm @ BHT	0.32 @ 123F					
Time Circulation Stopped	2 HOURS					
Time Logger on Bottom						
Maximum Recorded Temperature	123F					
Equipment Number	3802					
Location	HAYS, KANSAS					
Recorded By	IAN MABB					
Witnessed By	ROGER MARTIN	DAVE BARKER				

<<< Fold Here >>>

Comments

THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS : SAWYER, KS. - 7 1/4 MILES EAST - NORTH INTO

Database File	26602ddn8.db
Dataset Pathname	pass3.2
Presentation Format	_dil2
Dataset Creation	Tue Jul 28 15:05:05 2015
Charted by	Depth in Feet scaled 1:600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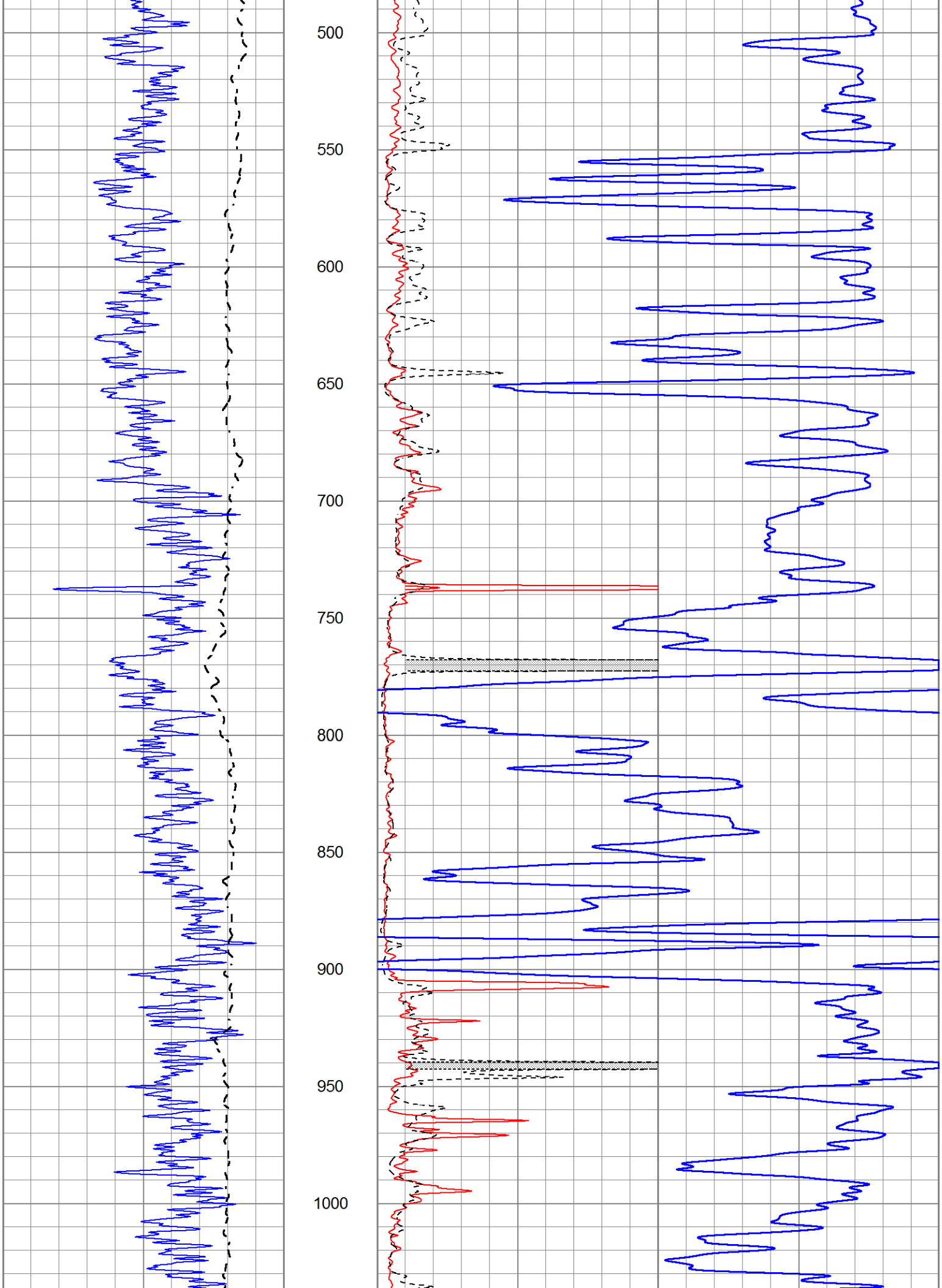
-100 SP (mV) 100
1000 CILD (mmho/m) 0
0 RLL3 (Ohm-m) 50
0 Deep Induction (Ohm-m) 50
50 RILD X10 (Ohm-m) 500
50 RLL3 X10 (Ohm-m) 500
0
50
100
150
200
250
300
350
400
450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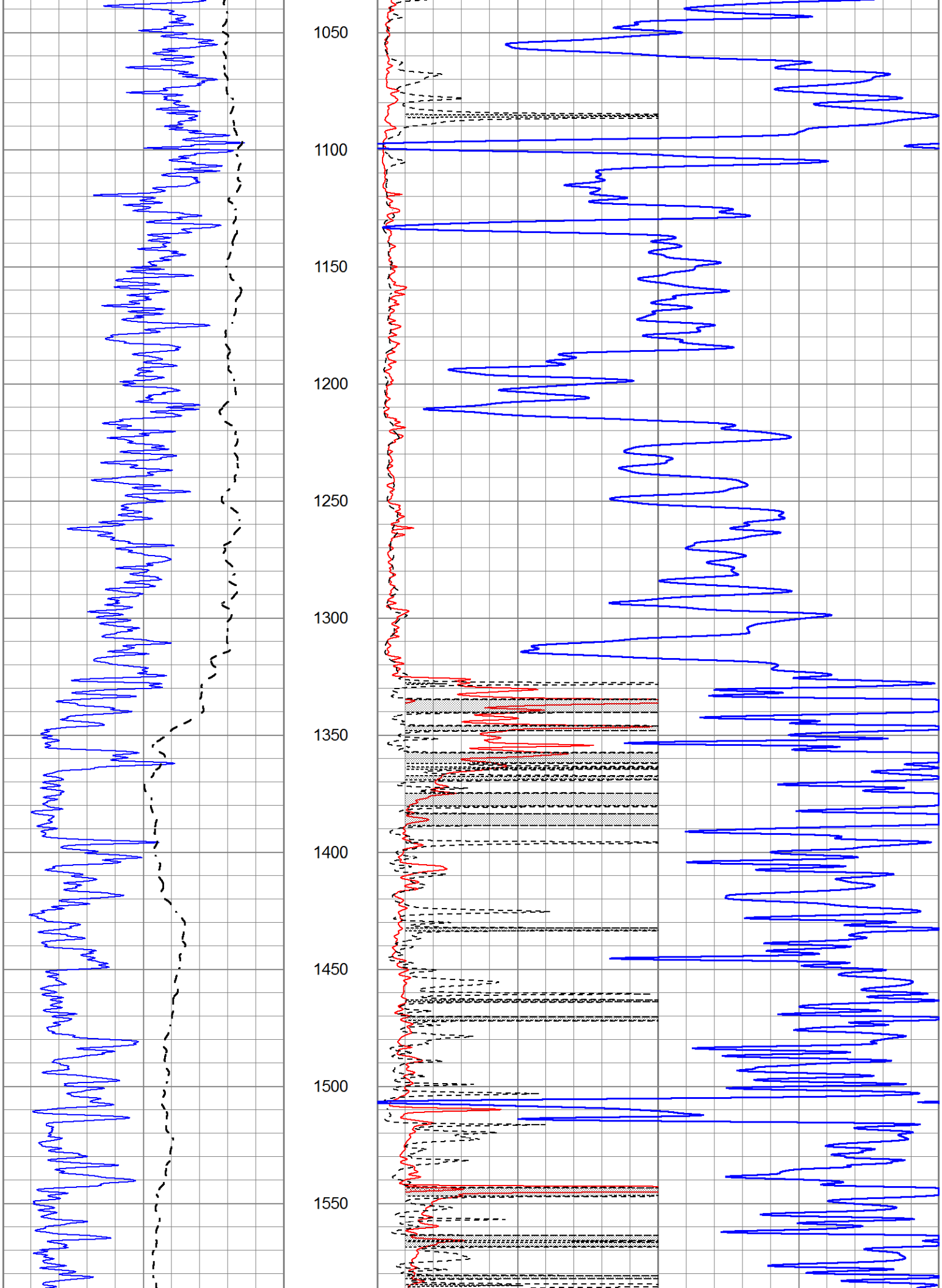
600
650
700
750
800
850
900
950
1000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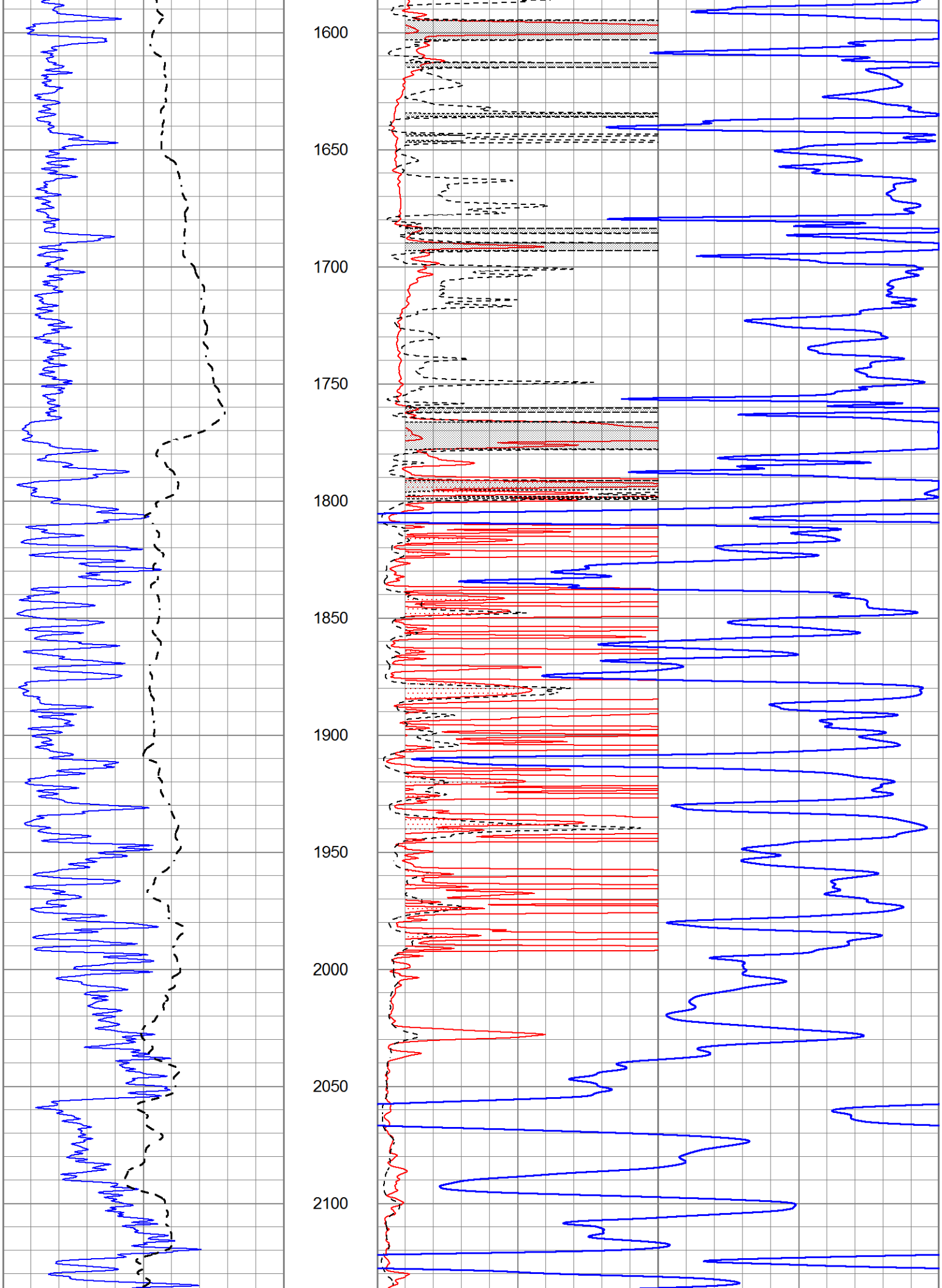
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550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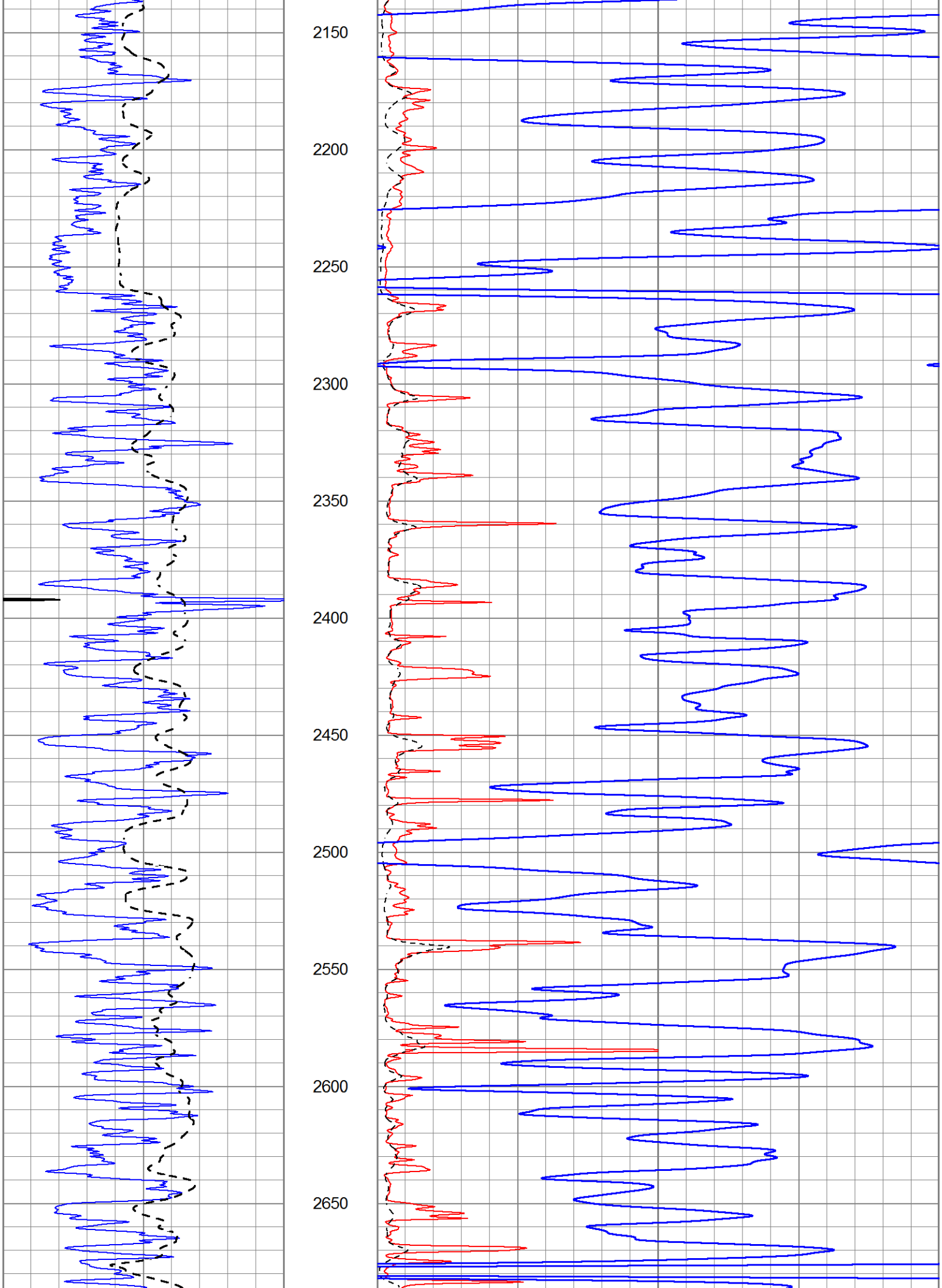
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100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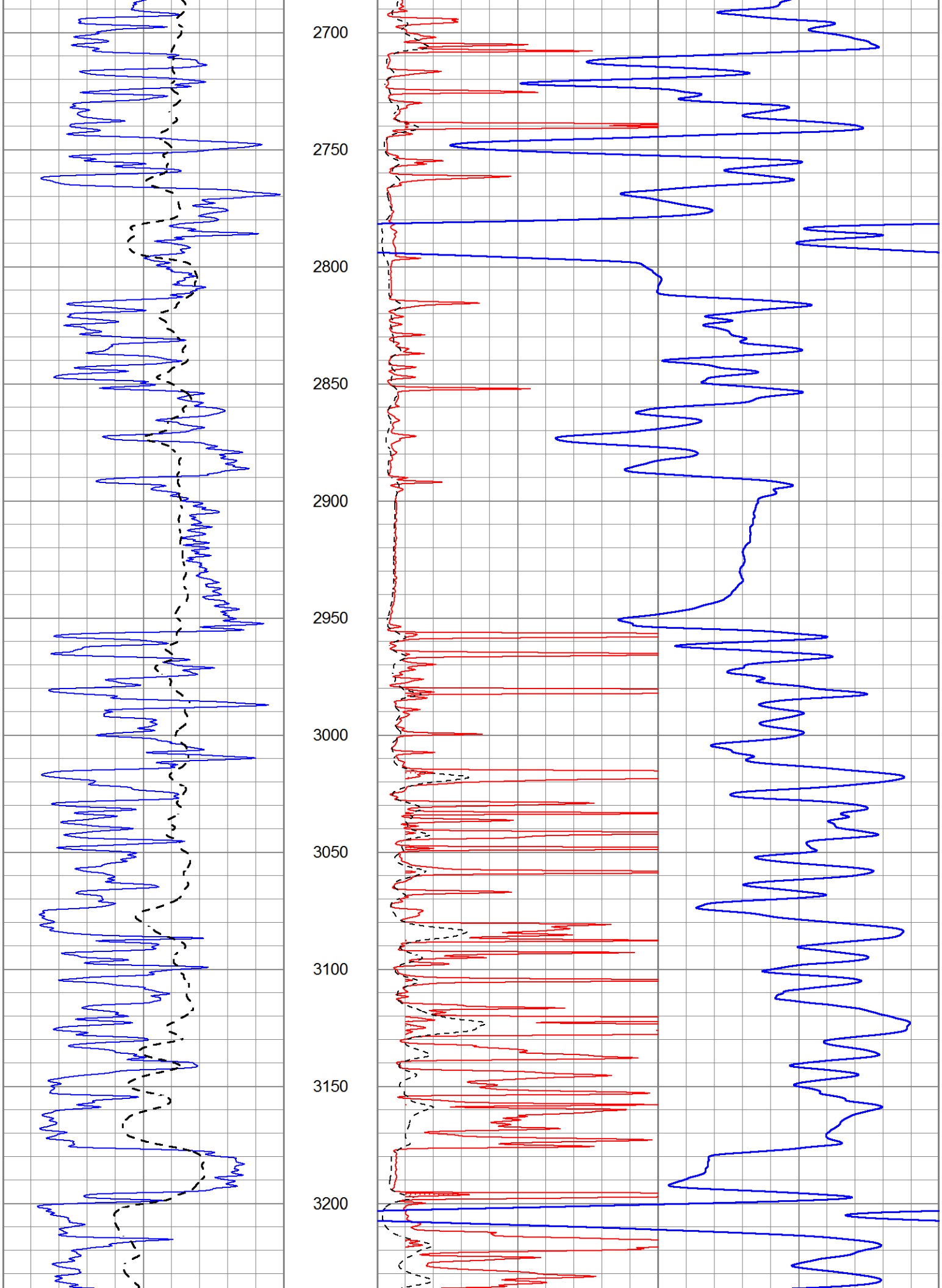
2200
2250
2300
2350
2400
2450
2500
2550
2600
2650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2800
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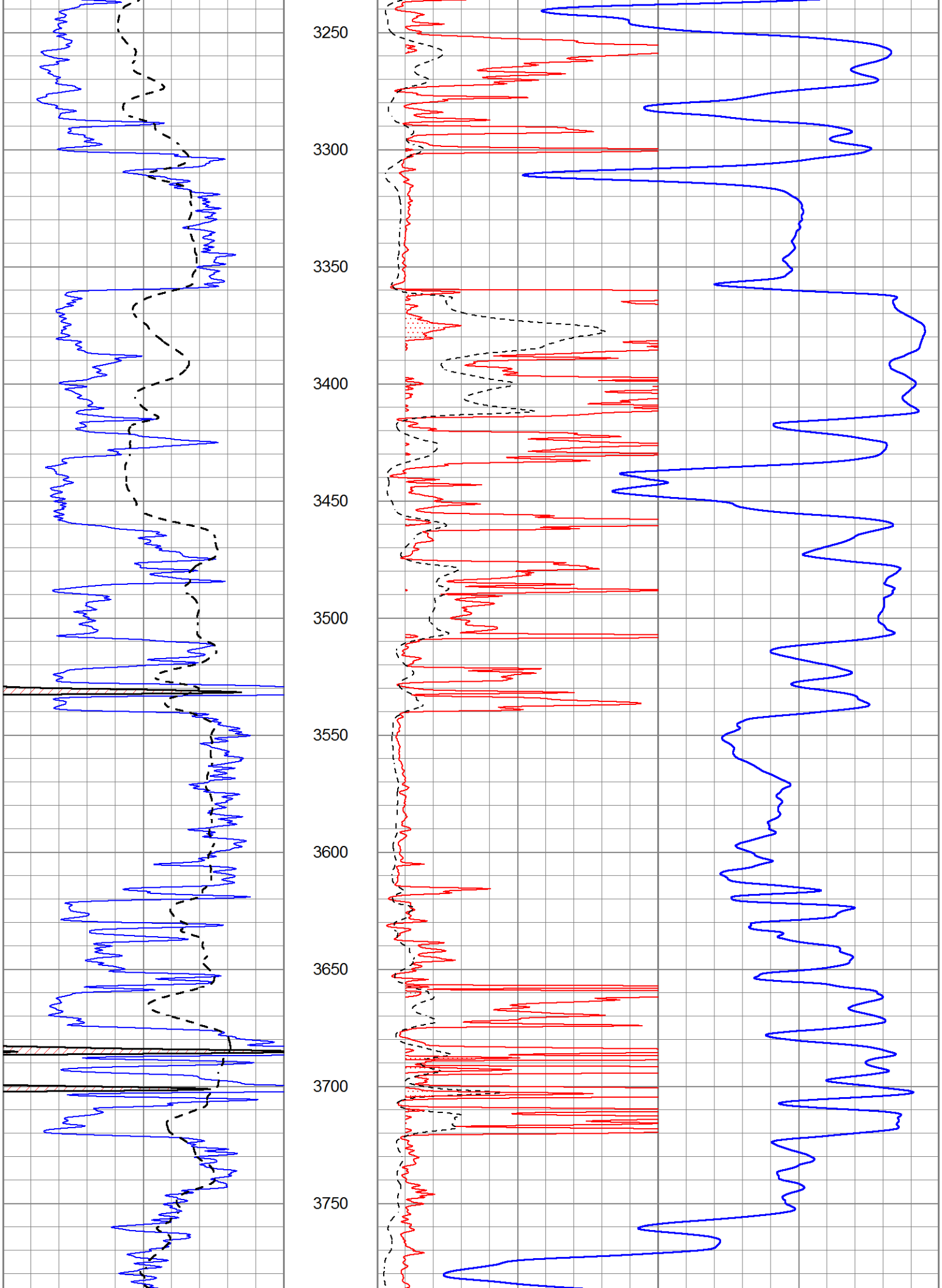
2900
2950
3000
3050
3100
3150
3200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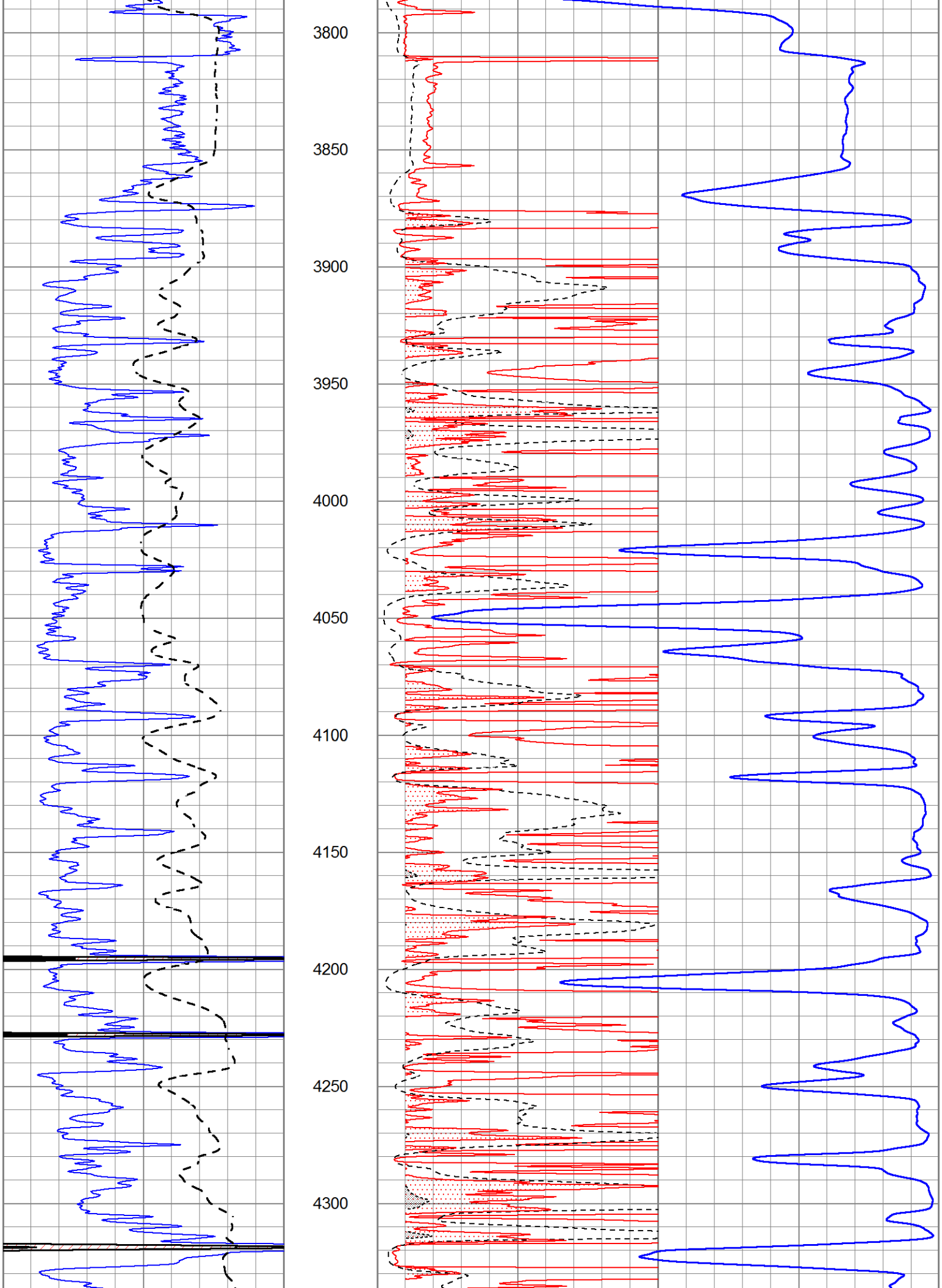
3350
3400
3450
3500
3550
3600
3650
3700
3750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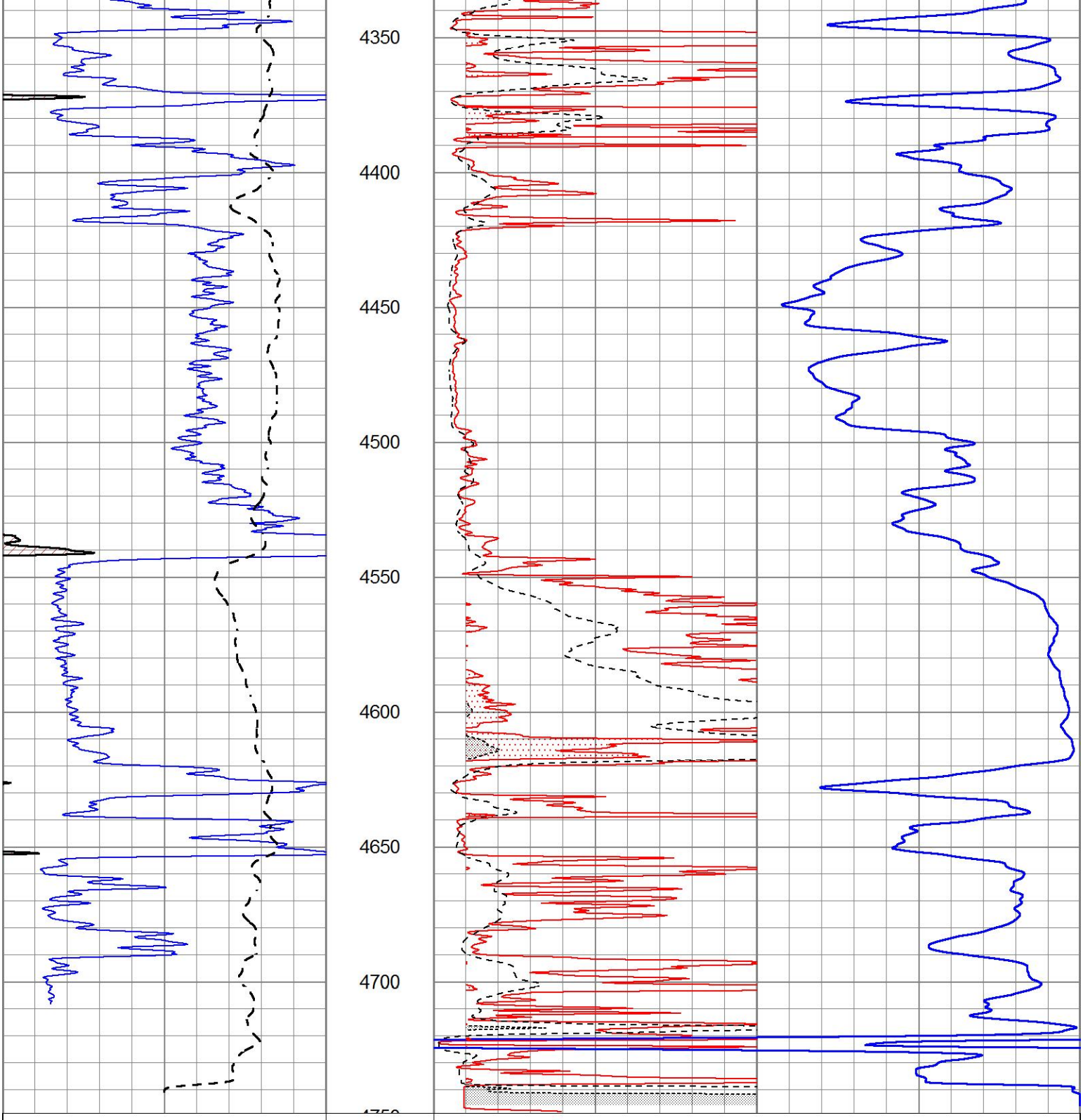
3900
3950
4000
4050
4100
4150
4200
4250
4300



NABORS
COMPLETION & PRODUCTION SERVICES CO.

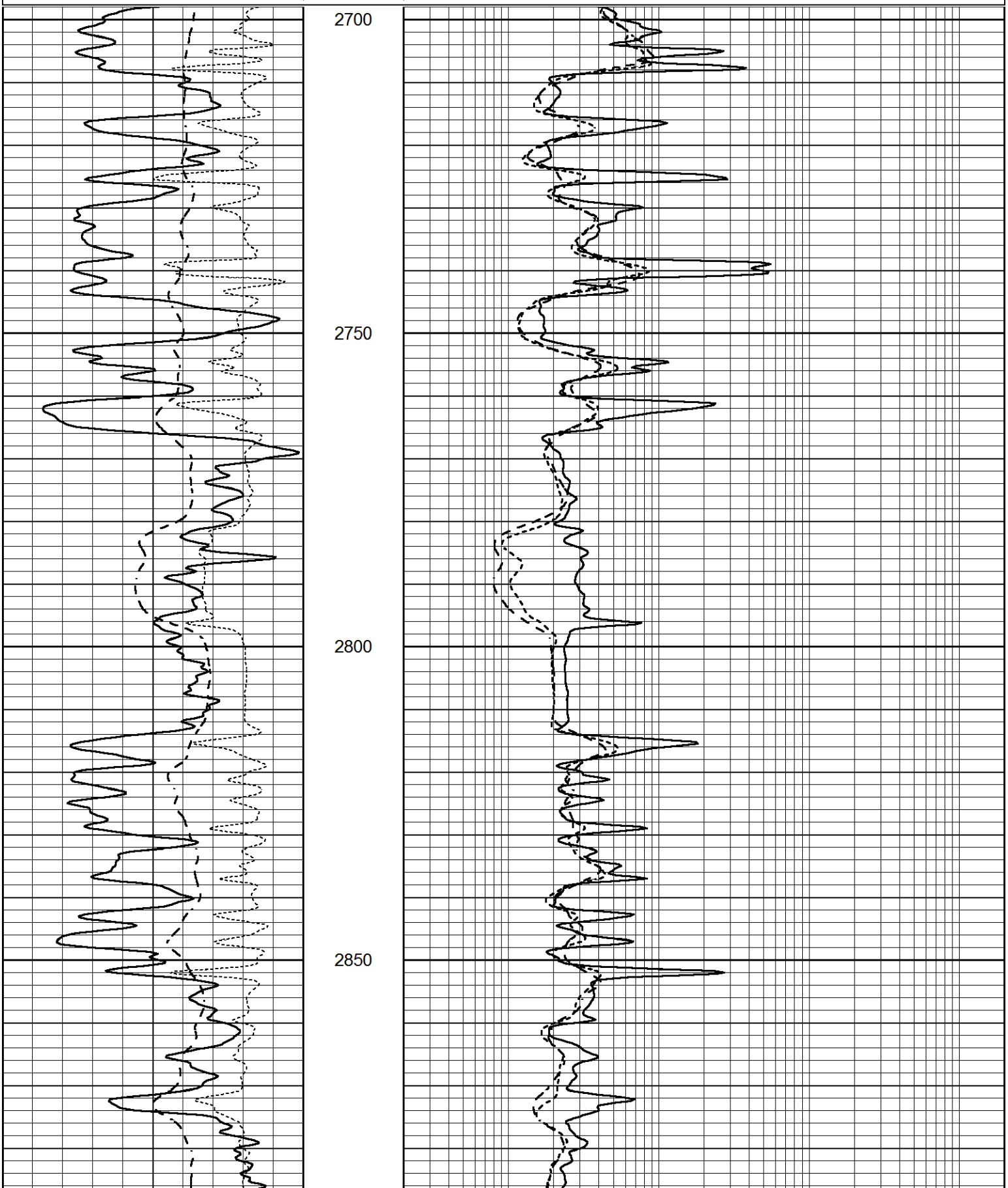
MAIN SECTION

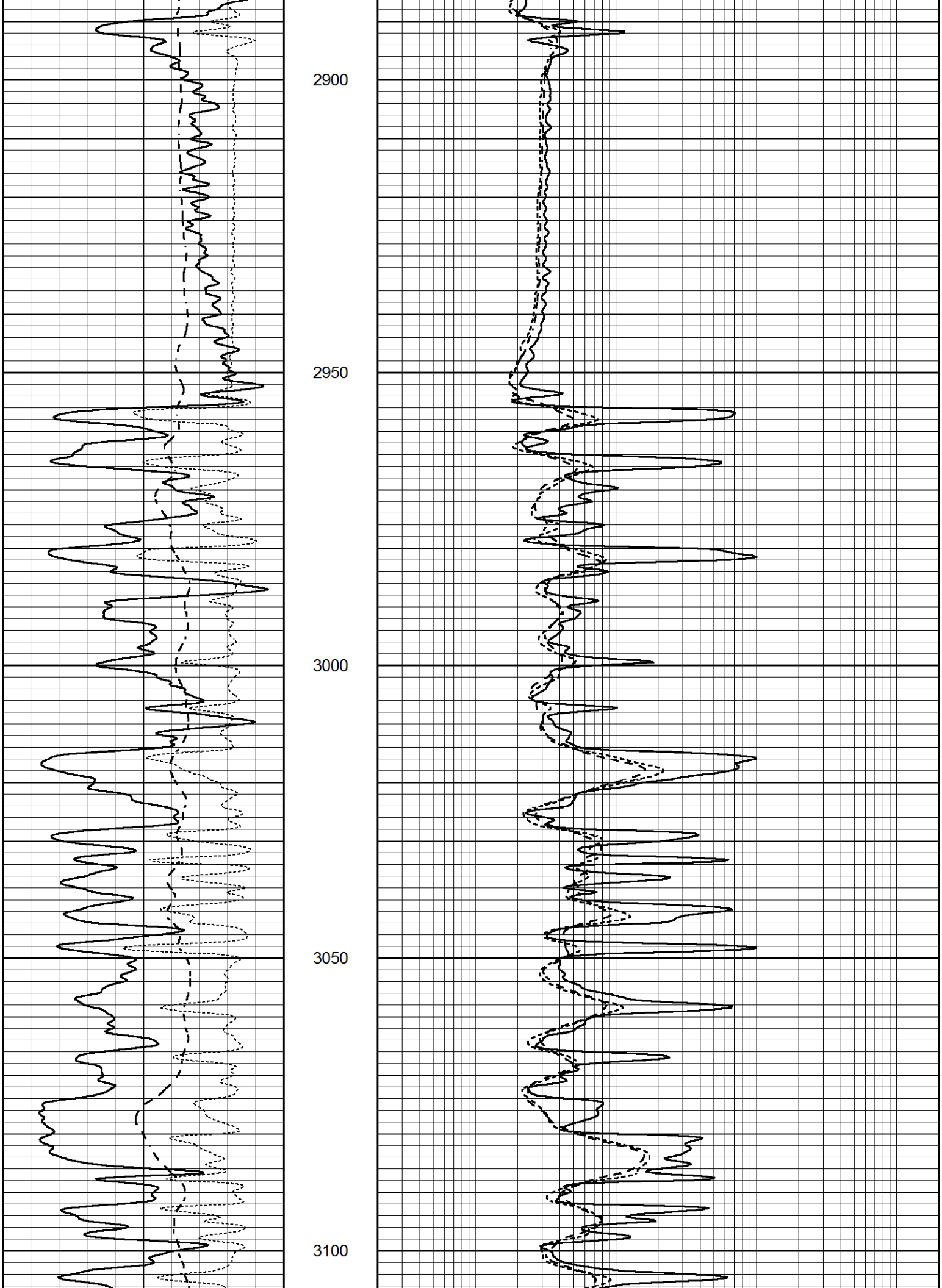
Database File 26602ddn8.db

Dataset Pathname	pass3.1
Presentation Format	_dil
Dataset Creation	Tue Jul 28 14:21:11 2015
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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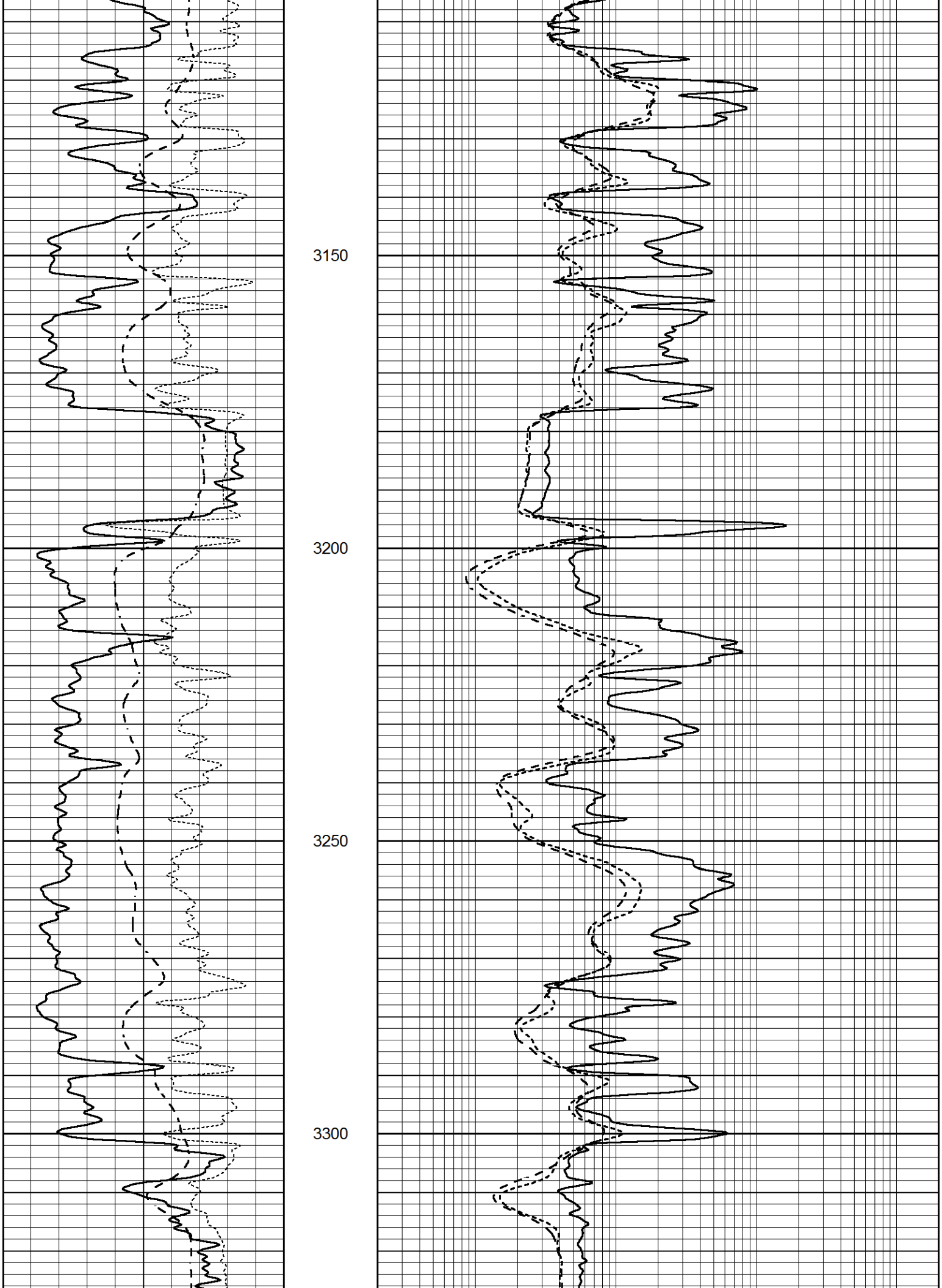
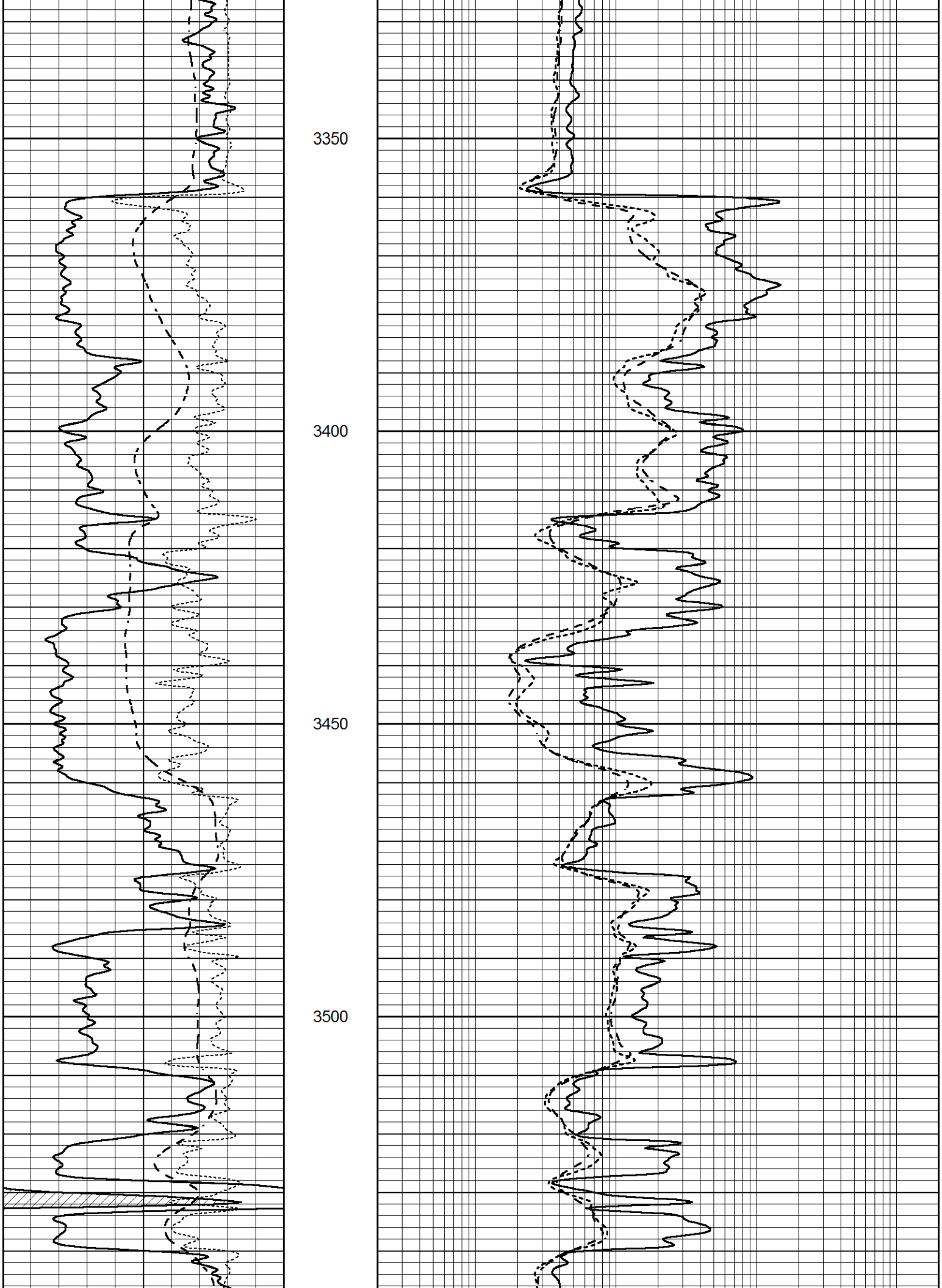
2950
3000
3050
3100


3150
3200
3250
3300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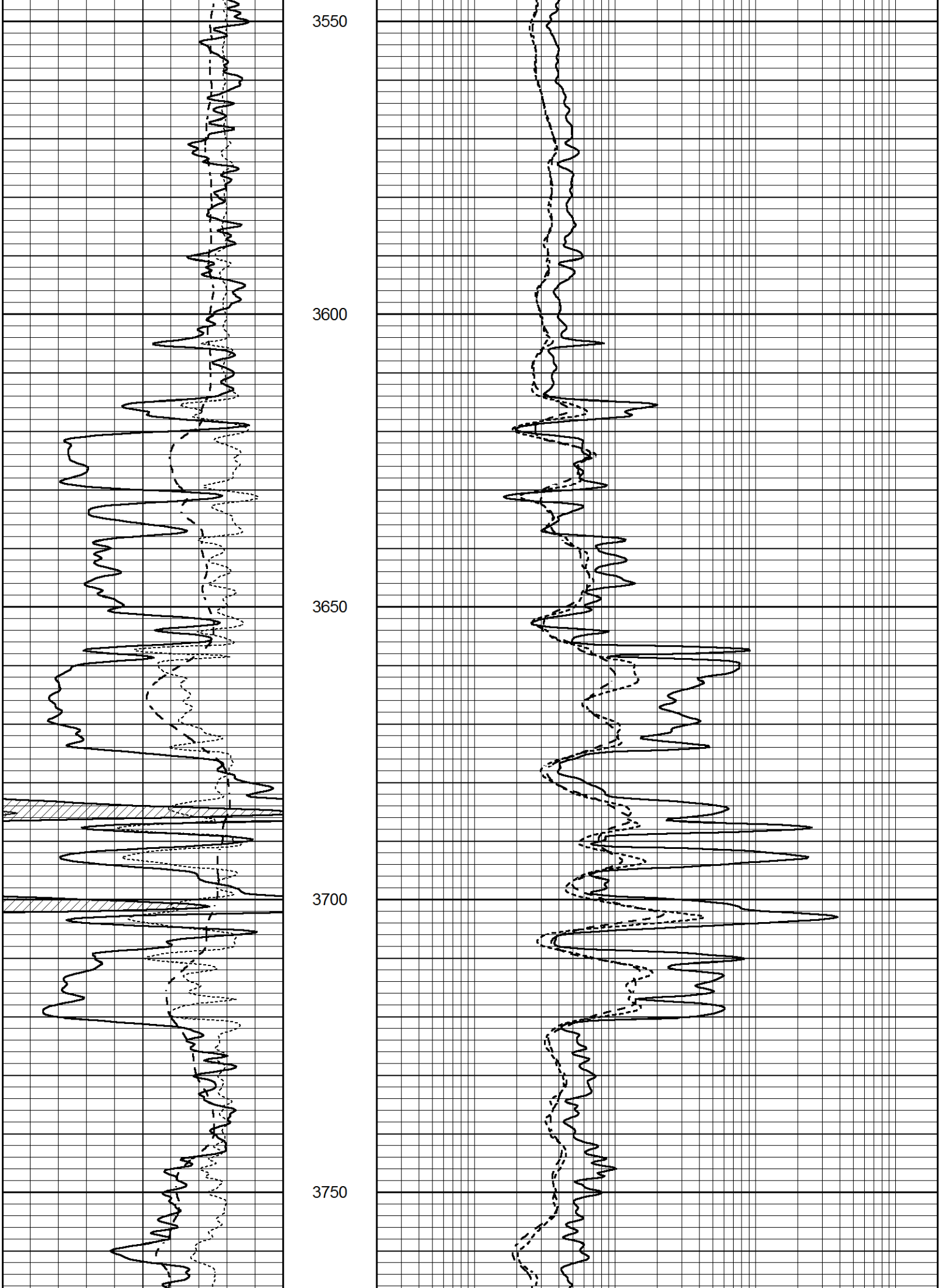
3400
3450
3500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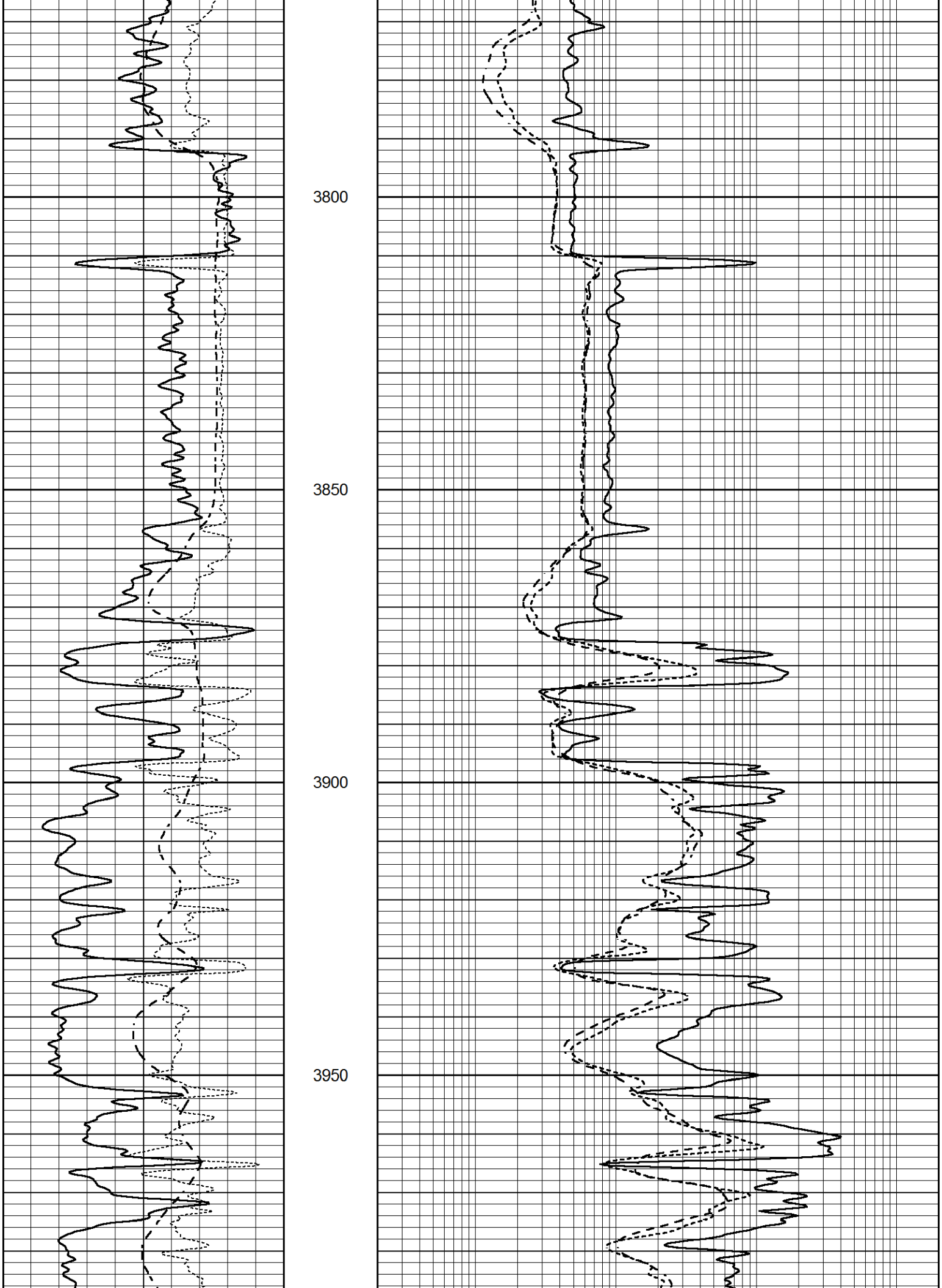
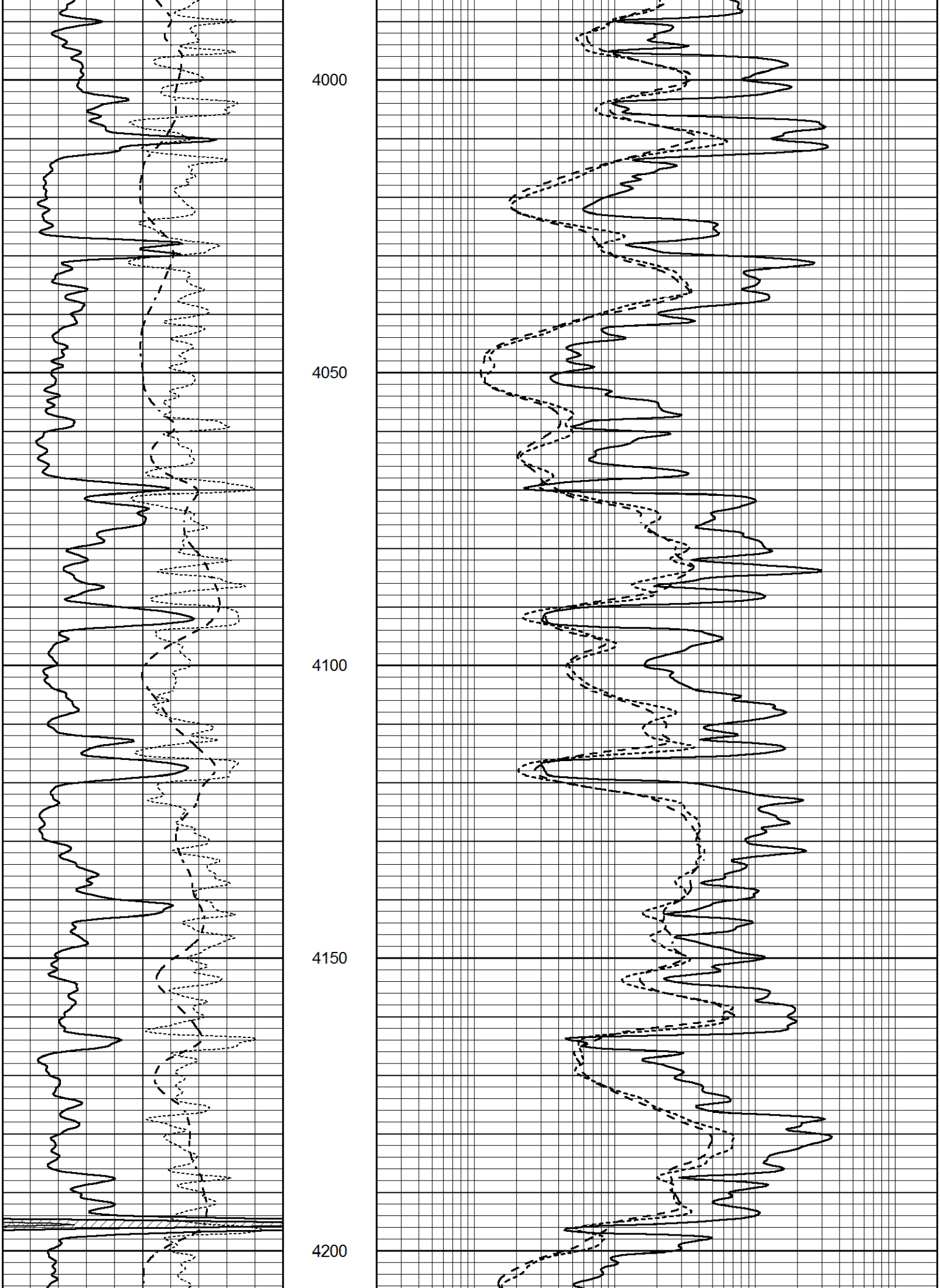
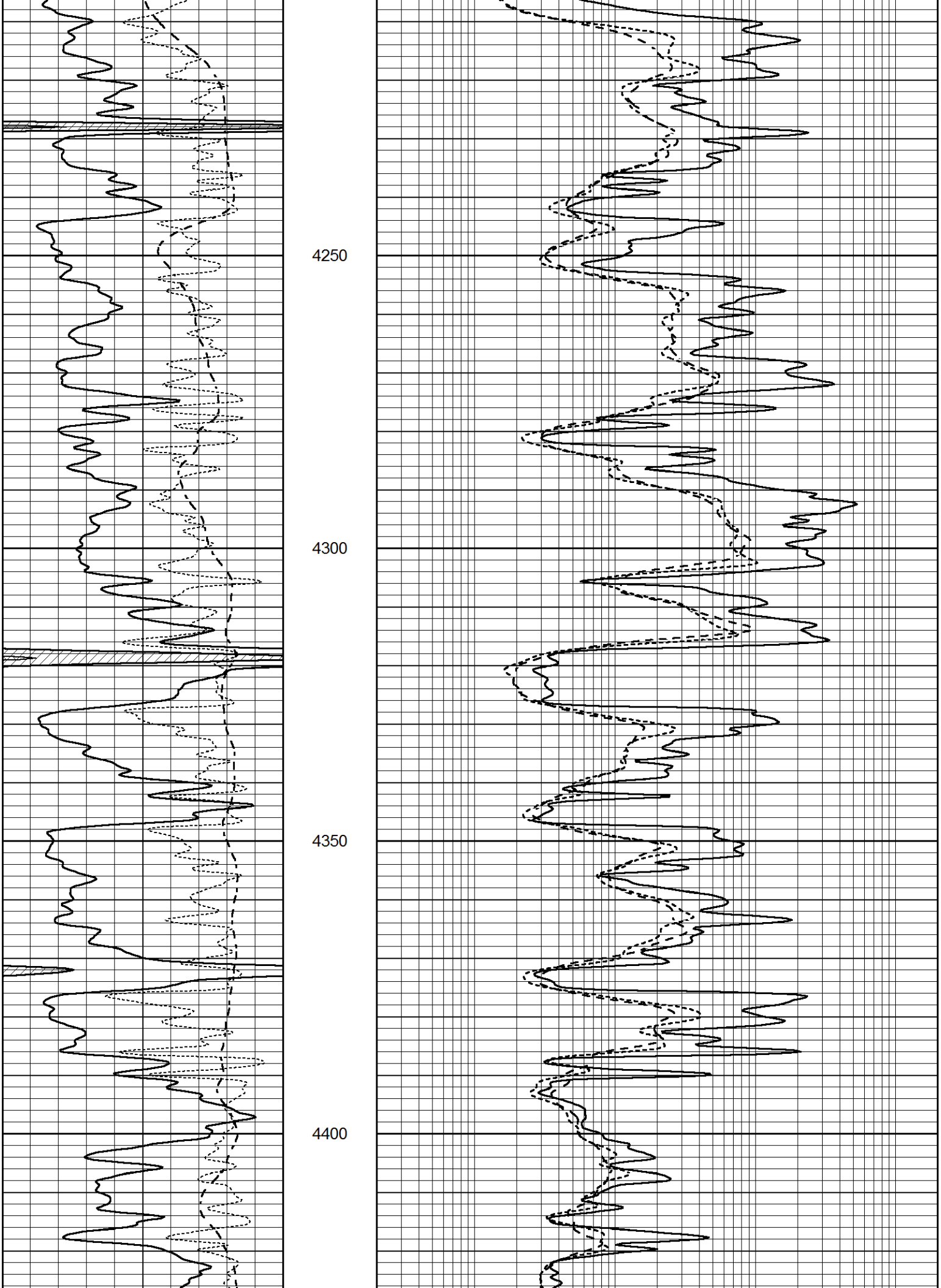
3600
3650
3700
3750


3800
3850
3900
3950


4000
4050
4100
4150
4200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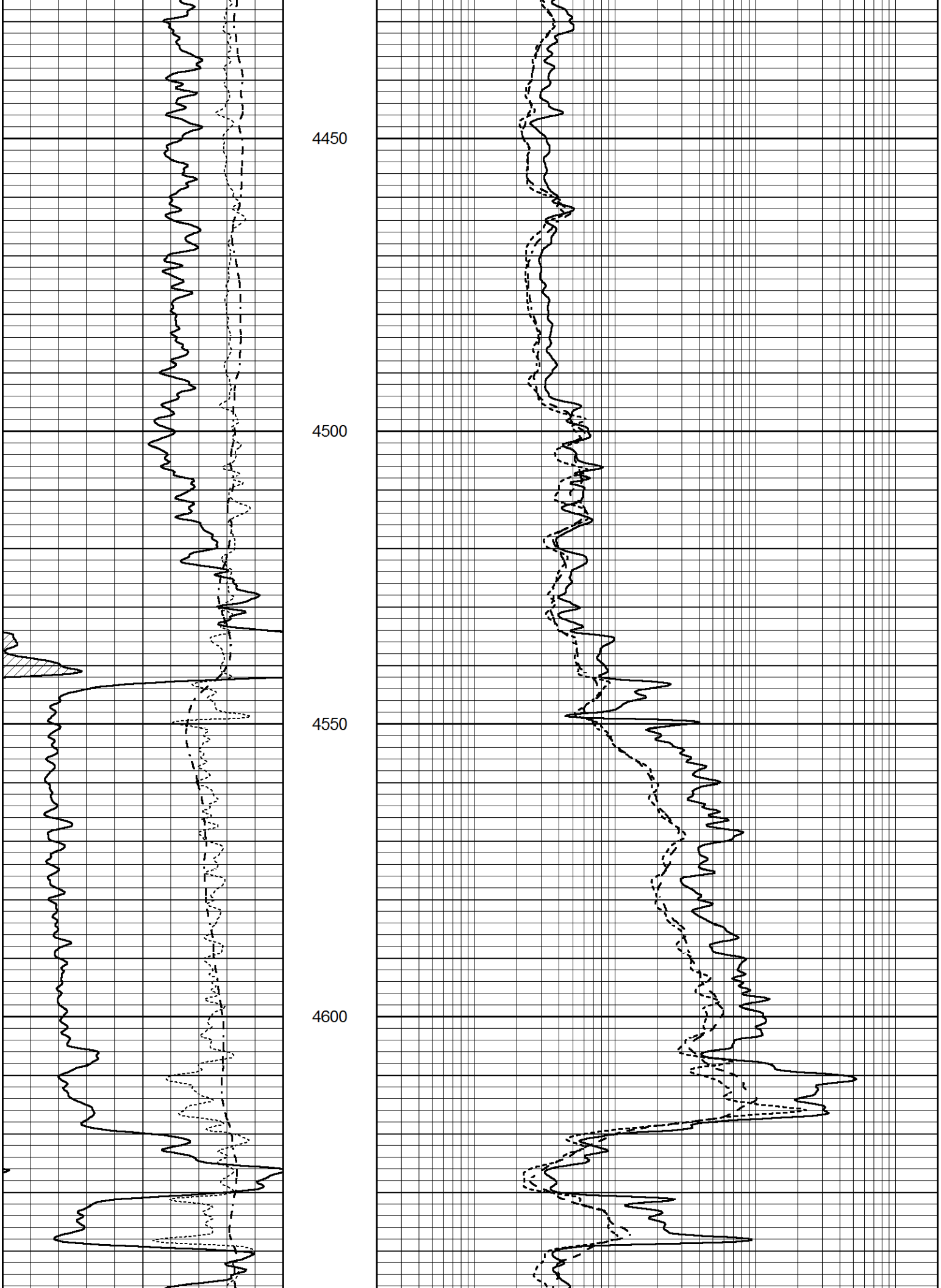
4300
4350
4400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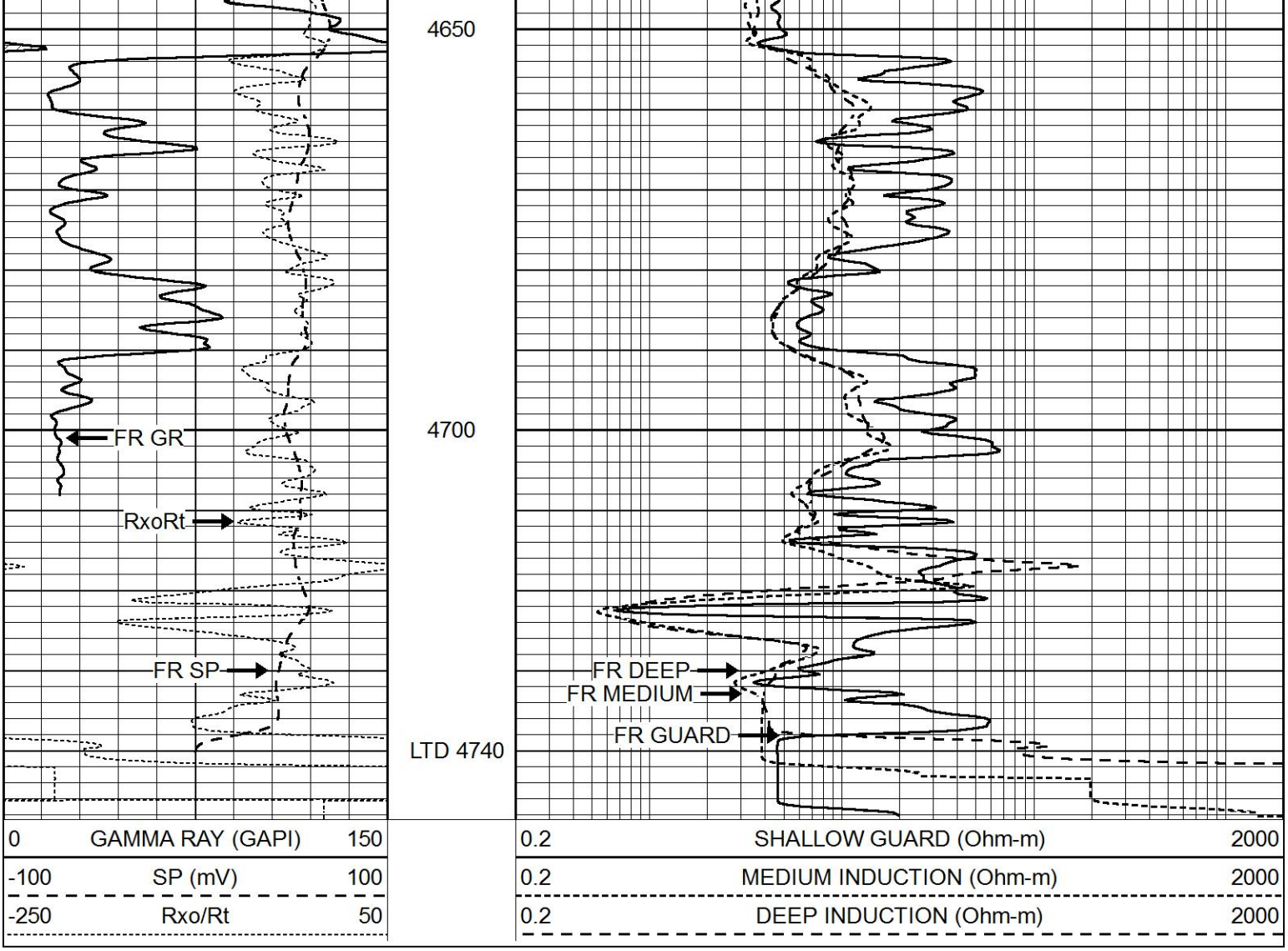
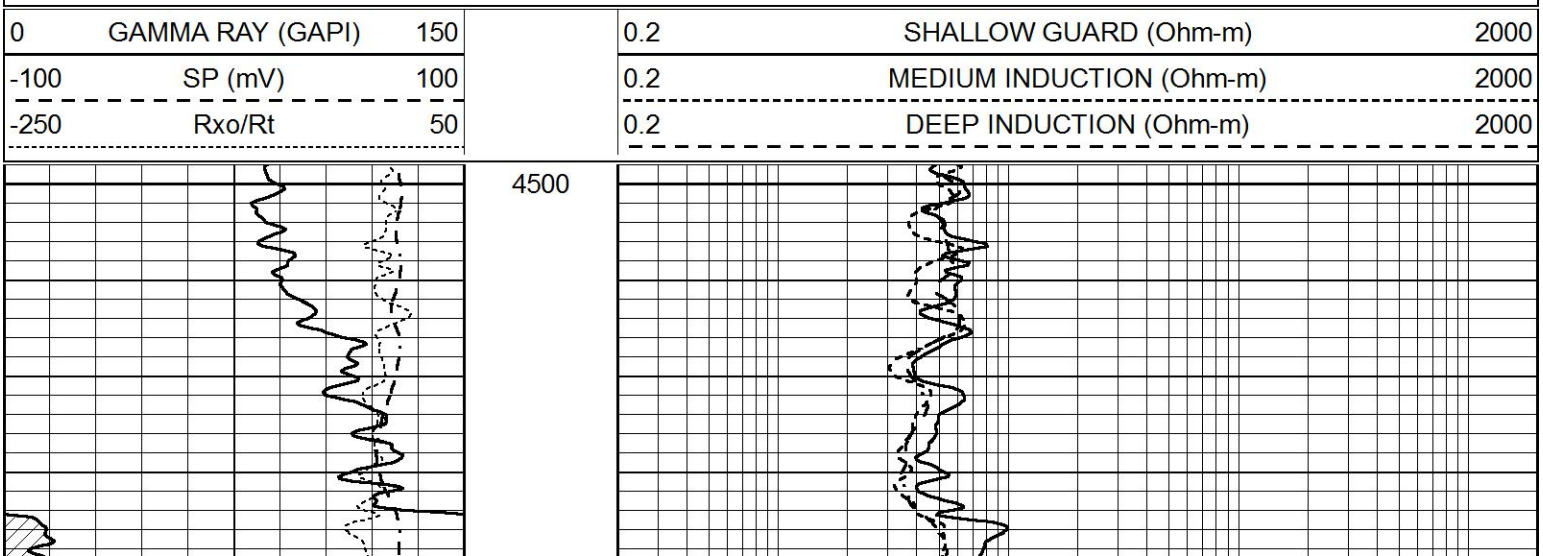
4500
4550
4600

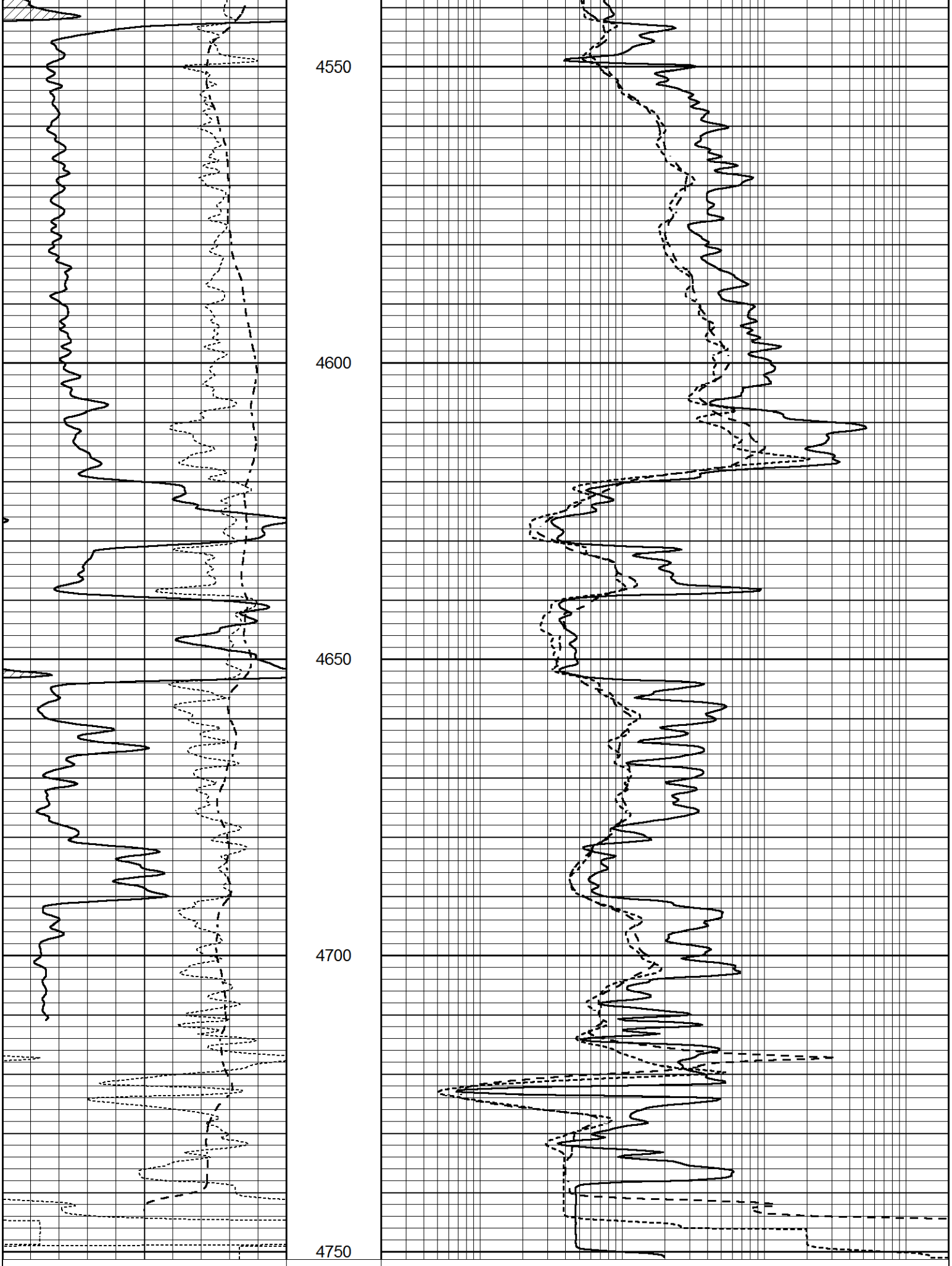


NABORS
COMPLETION & PRODUCTION SERVICES CO.

REPEAT SECTION

Database File	26602ddn8.db
Dataset Pathname	pass2.1
Presentation Format	_dil
Dataset Creation	Tue Jul 28 13:18:10 2015
Charted by	Depth in Feet scaled 1:240




4550
4600
4650
4700
4750
0
GAMMA RAY (GAPI)
150
-100
SP (mV)
100
0.2
SHALLOW GUARD (Ohm-m)
2000
0.2
MEDIUM INDUCTION (Ohm-m)
2000

-100	SP (mV)	100	0.2	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000

Calibration Report

Database File 26602ddn8.db
Dataset Pathname pass3.2
Dataset Creation Tue Jul 28 15:05:05 2015

Dual Induction Calibration Report

Serial-Model: FW1410-56-Probe
Surface Cal Performed: Fri Mar 13 14:03:50 2015
Downhole Cal Performed: Fri Mar 13 15:37:29 2015
After Survey Verification Performed: Fri Mar 13 15:37:29 2015

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.008	0.765	V	1.000	400.000	mmho/m	527.061	-3.201
Medium	-0.056	0.761	V	1.000	464.000	mmho/m	567.187	32.510
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.005	0.624	V	0.000	400.000	mmho/m	645.611	-3.034
Medium	0.012	0.721	V	0.000	464.000	mmho/m	653.591	-7.532

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.647	301.329	mmho/m	-0.780	336.378	mmho/m	1.117	-0.058
Medium	38.256	411.013	mmho/m	39.046	441.706	mmho/m	1.080	-2.280
LL3		7.471	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.085	V		6000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.647	301.329	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	38.256	411.013	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Litho Density Calibration Report

Serial: 140704
Model: V4_10P
Source Number: 74GBq-19

Master Calibration

Performed: Wed Feb 11 18:53:41 2015

	Background	Aluminum	Magnesium	
Window 1	613.01	6027.40	27508.60	cps
Window 2	48.21	1424.77	7132.66	cps
Window 4	266.48	1373.19	5767.15	cps
Window 5	622.07	10090.30	18937.90	cps
Window 6	49.07	1682.84	3271.18	cps
Window 8	298.04	3248.38	5980.58	cps

Bulk Density	-	2.6020	1.6830	g/cc
Pe	-	3.0000	2.5070	b/e

LS Alpha:	: -1.8451	SS Alpha:	: -0.7542	LS CPE:	: 1.0882
LS Beta:	: 138648.8473	SS Beta:	: 21960.9250	SS CPE:	: 1.5181

Before Survey Backround Counts Verification — Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

After Survey Background Counts Verification — Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

Lithodensity Caliper Calibration — Performed: Wed Feb 11 18:53:41 2015

Results		References (in)			
Low	High	Low	High	Gain	Offset
5123.0	9461.6	8.5	14.0	0.0	1.6

Before Survey Caliper Verification — Performed:

	Reference	Reading
Caliper (in)		

After Survey Caliper Verification — Performed:

	Reference	Reading
Caliper (in)		

Compensated Neutron Calibration Report

Serial Number: 080620PMC
Tool Model: NABORS

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:	46001	
Tool Model:	Probe1	
Performed:	Mon Nov 24 09:45:18 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2600	GAPI/cps