NABORS

COMPLETION & PRODUCTION SERVICES CO.

COMPENSATED DENSITY / NEUTRON LOG

Company	RITCHIE EXPLORATION, INC.
Well	BAKER 31 C #1
Field	AMERICAN BEAUTY
County	LOGAN
State	KANSAS

Location: API # : 15-109-21372-00-00

800' FSL & 1890' FWL
E2 - SE - SW

SEC 31 TWP 15S RGE 34W

Other Services: DIL/MEL

Permanent Datum	GROUND LEVEL	Elevation	3044
Log Measured From	KELLY BUSHING 5' A.G.L.		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 3049
D.F. 3047
G.L. 3044

Date	11-28-14		
Run Number	ONE		
Depth Driller	4784		
Depth Logger	4788		
Bottom Logged Interval	4764		
Top Log Interval	3400		
Casing Driller	8 5/8 @ 218'		
Casing Logger	216'		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,000 PPM	
Density / Viscosity	9.2 / 74		
pH / Fluid Loss	10.5 / 10.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.50 @ 86F		
Rmf @ Meas. Temp	0.38 @ 86F		
Rmc @ Meas. Temp	0.60 @ 86F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.35 @ 123F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	123F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	MAX LOVELY		

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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

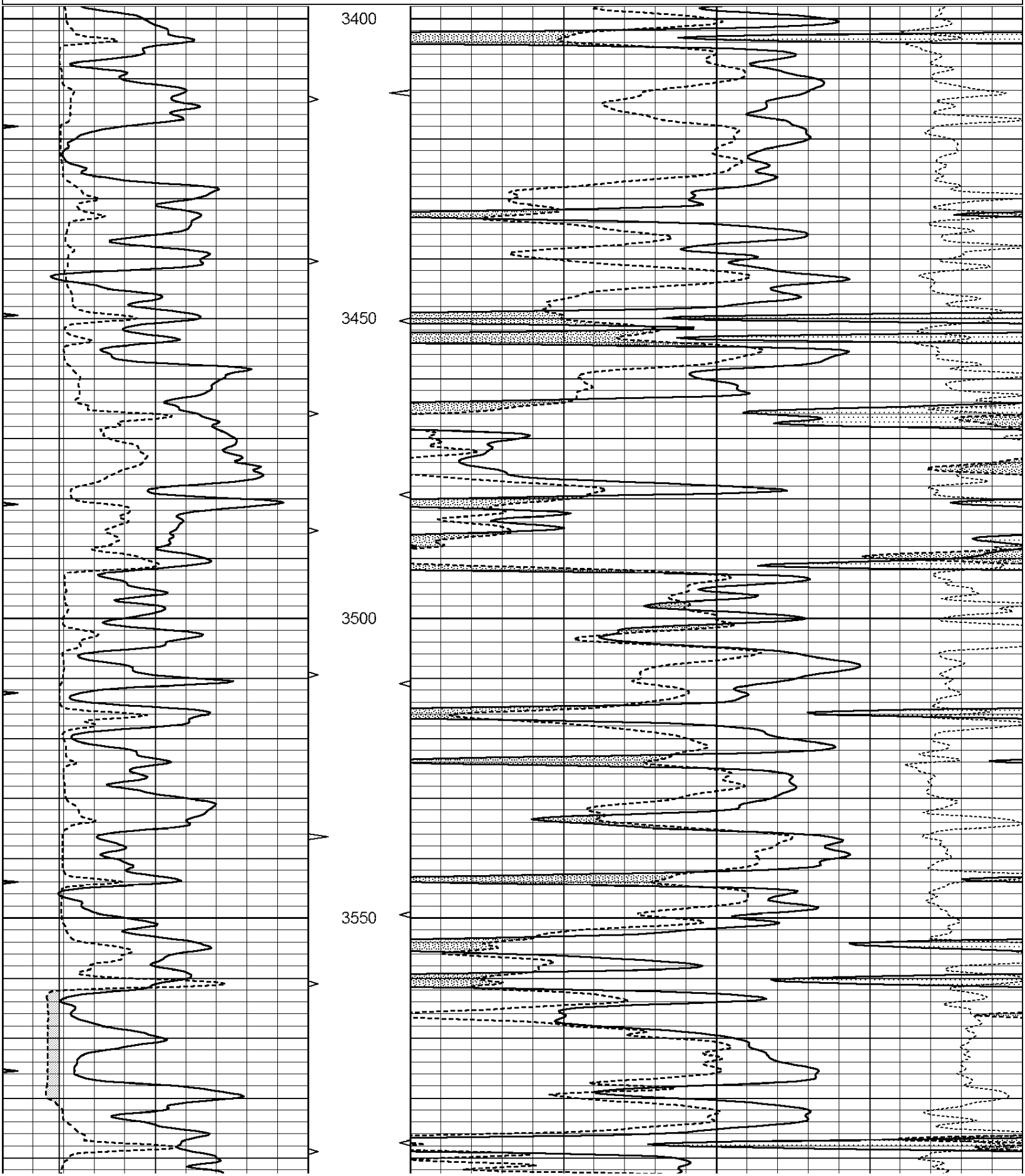
NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: PENCE, KS. - 3 1/2 MILES NORTH WEST INTO 1/2 MILE - SOUTH THROUGH CATTLE GUARD

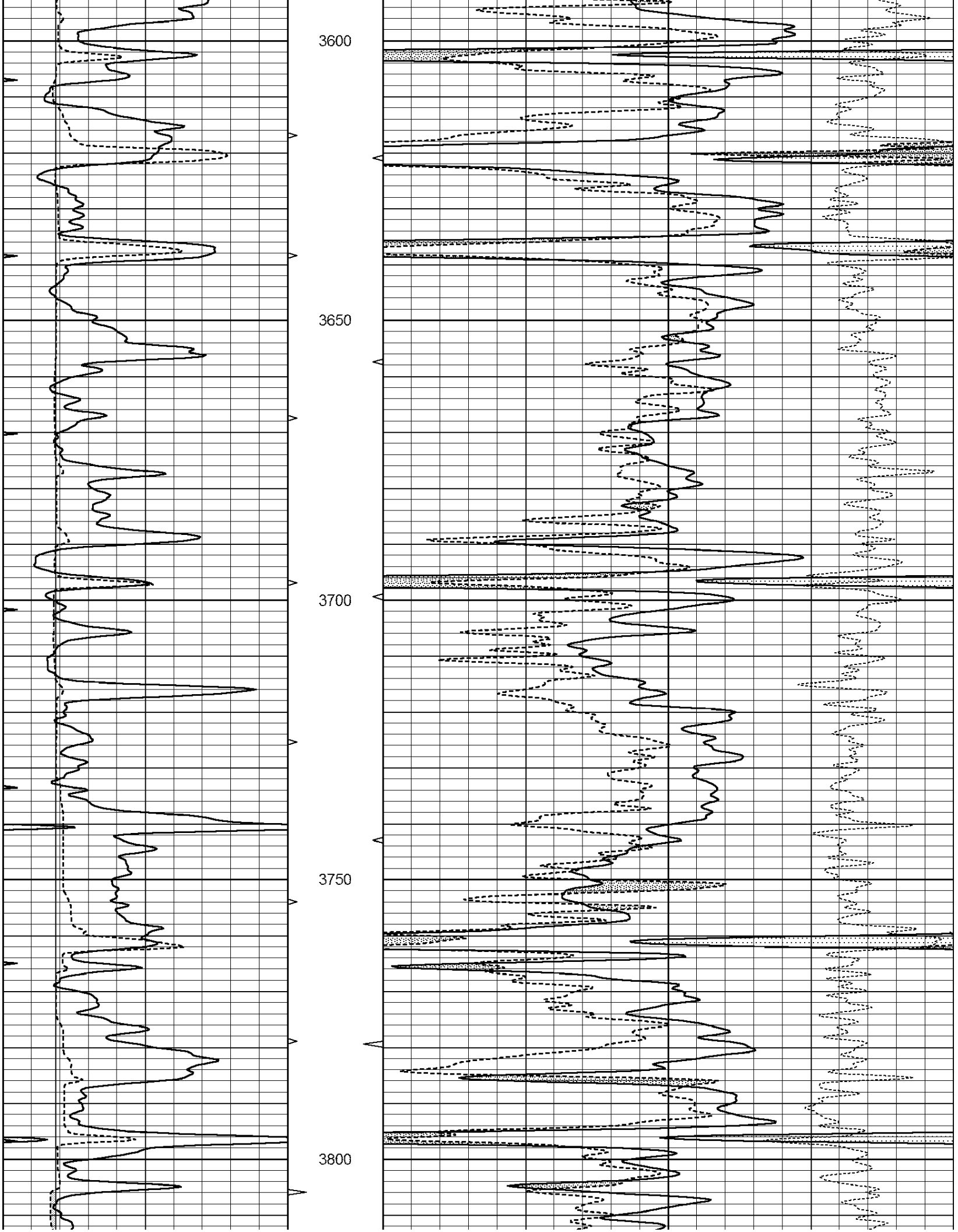
Company RITCHIE EXPLORATION, INC.
Well BAKER 31 C #1
Field AMERICAN BEAUTY
County LOGAN
State KANSAS

Database File: 26265ddn.db
Dataset Pathname: pass3.2
Presentation Format: _den_neu
Dataset Creation: Sat Nov 29 01:28:17 2014 by Calc Open-Cased 090629

Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	AVTX	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	BVTX			-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10				

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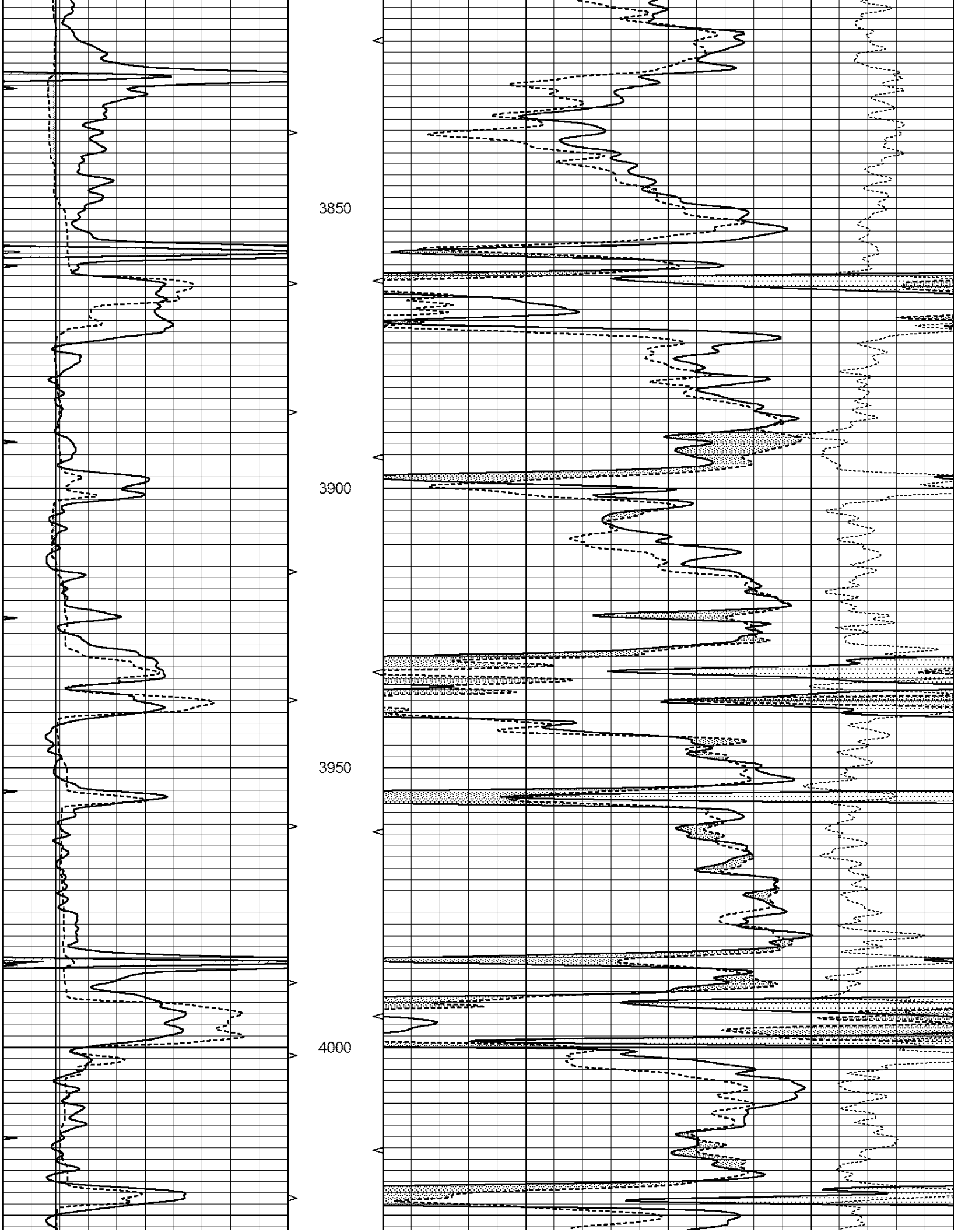
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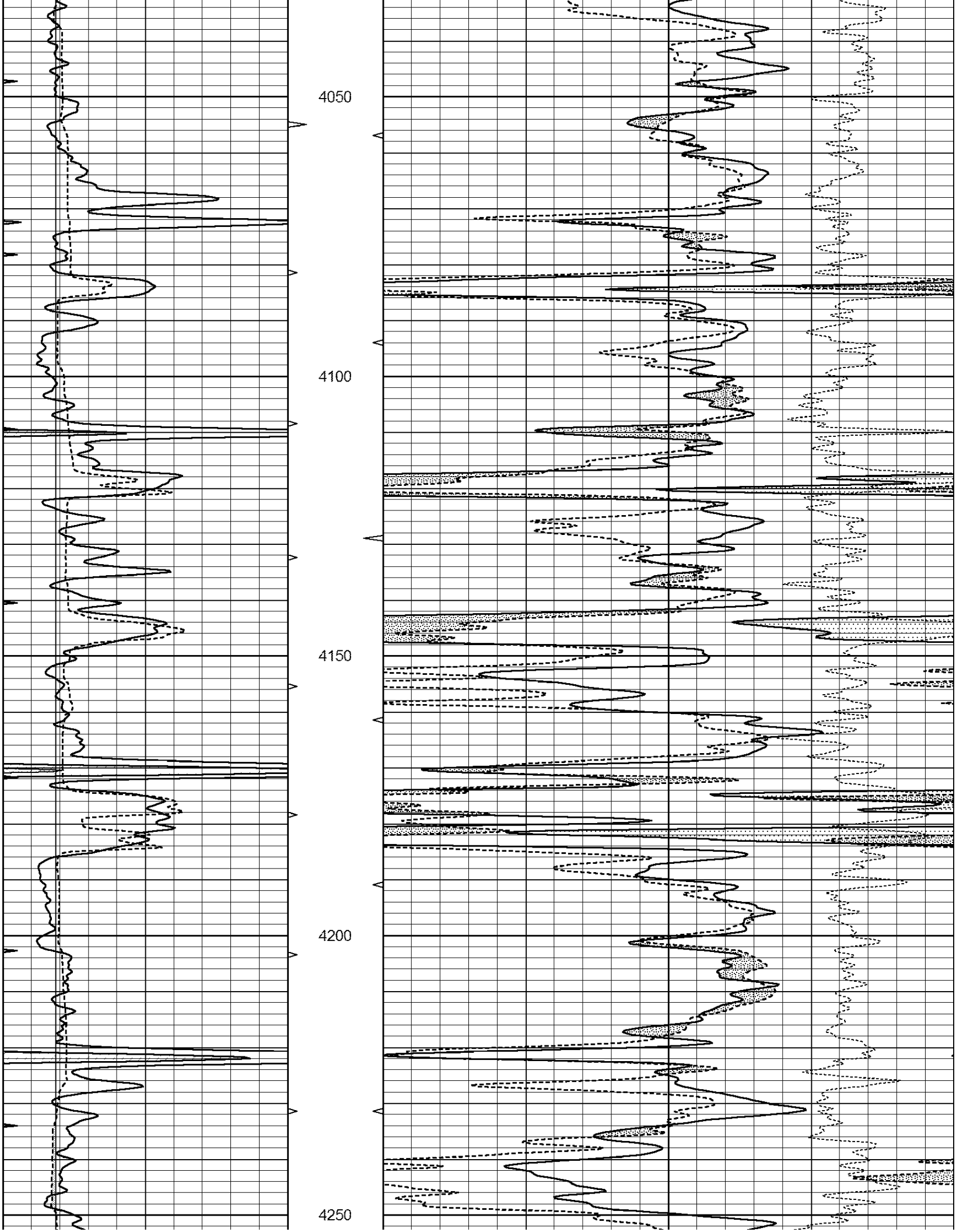
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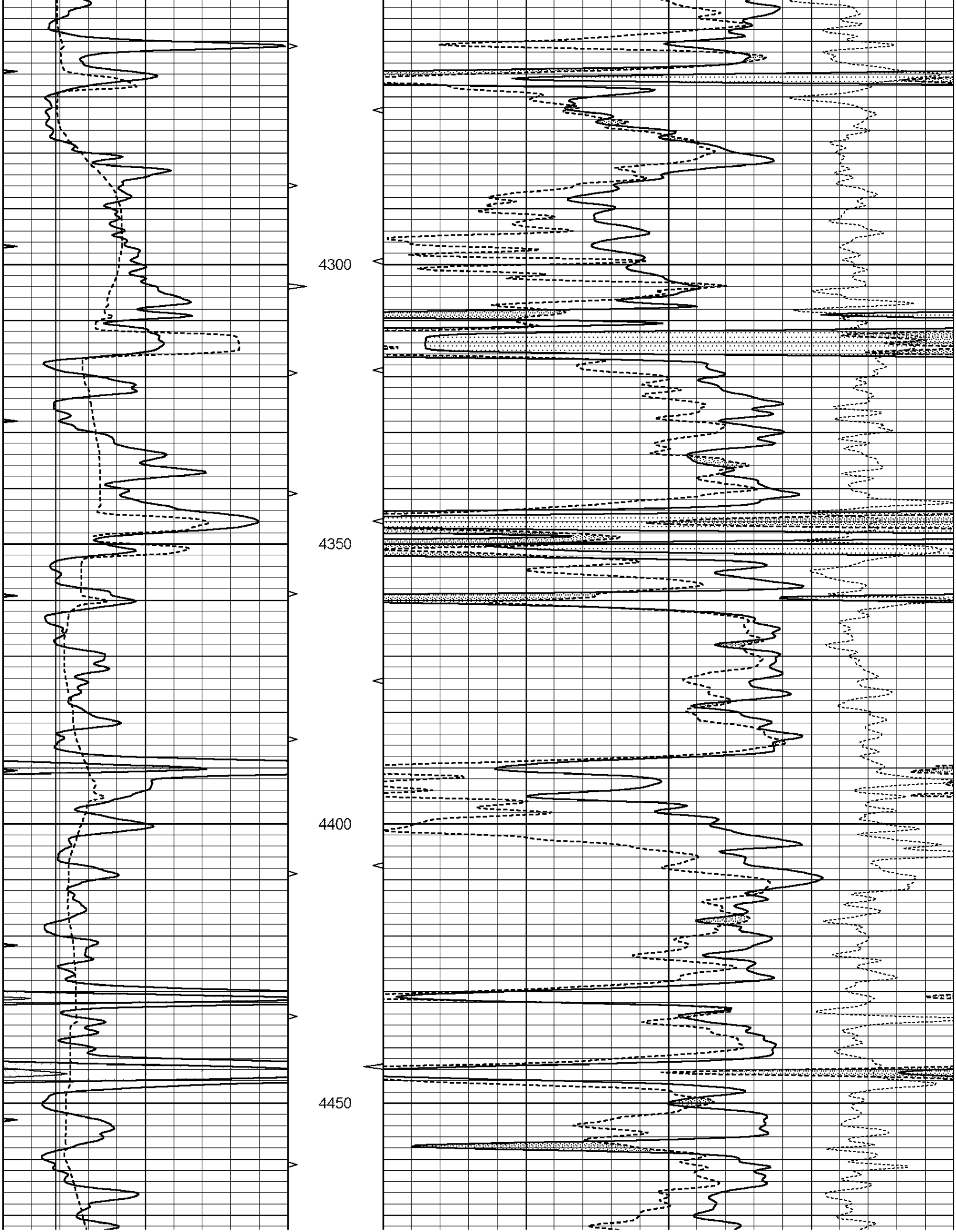
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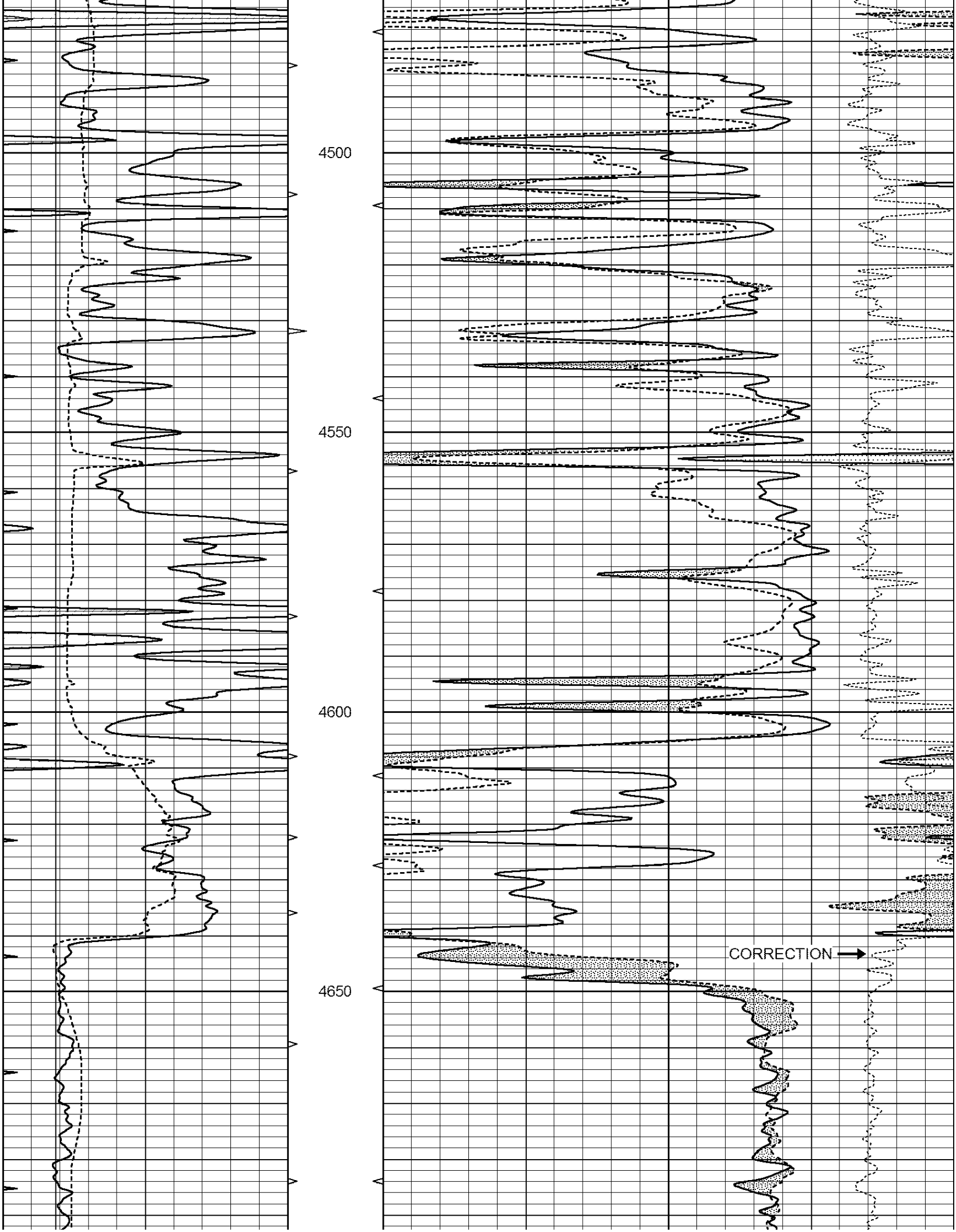
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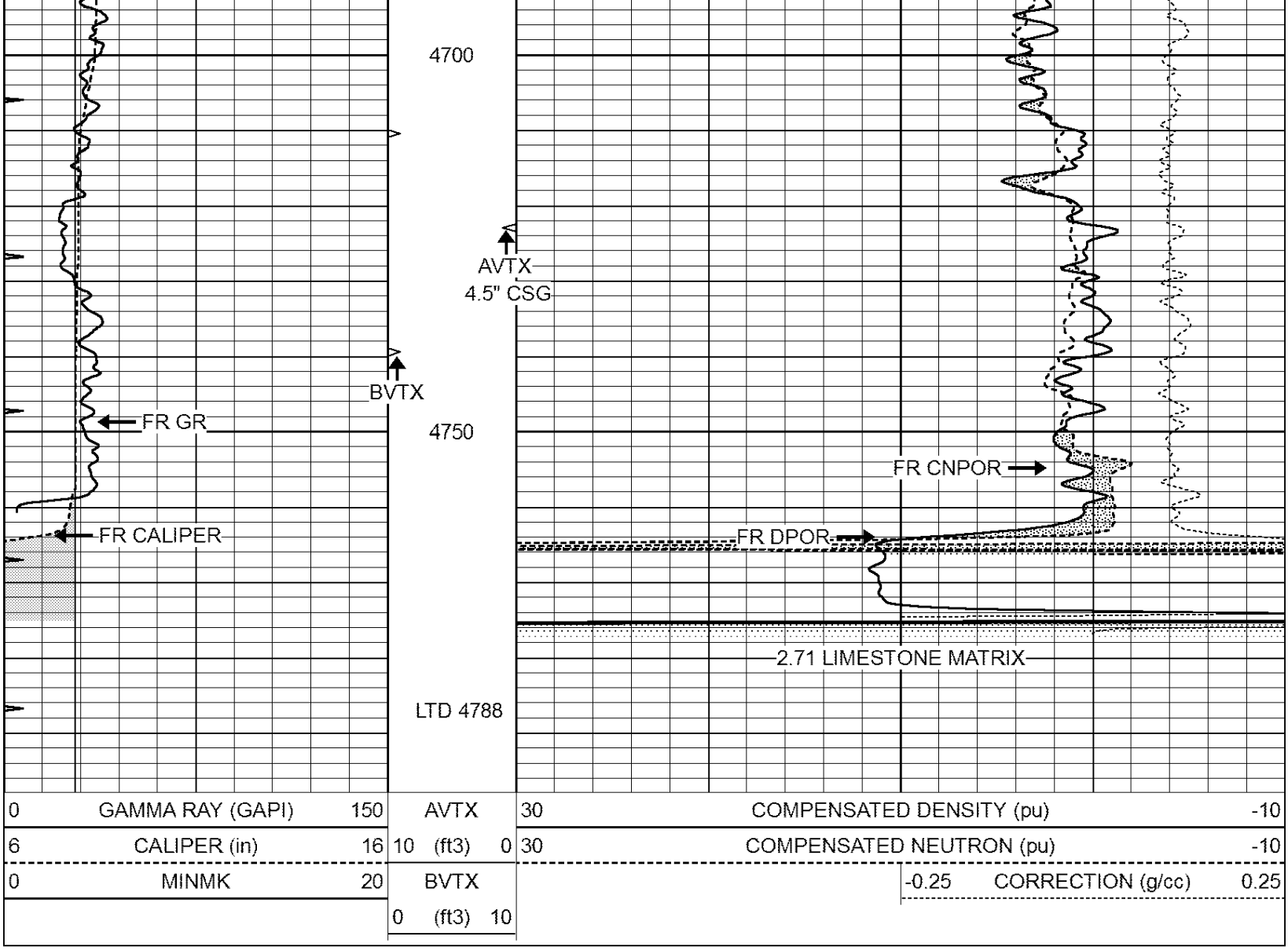
CORRECTION



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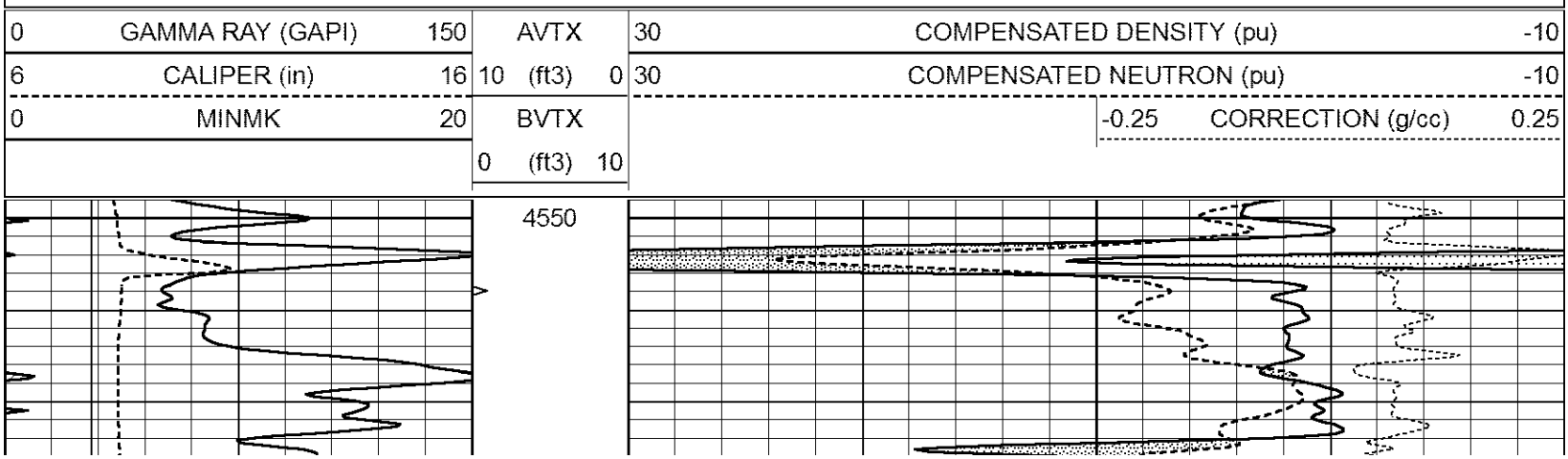
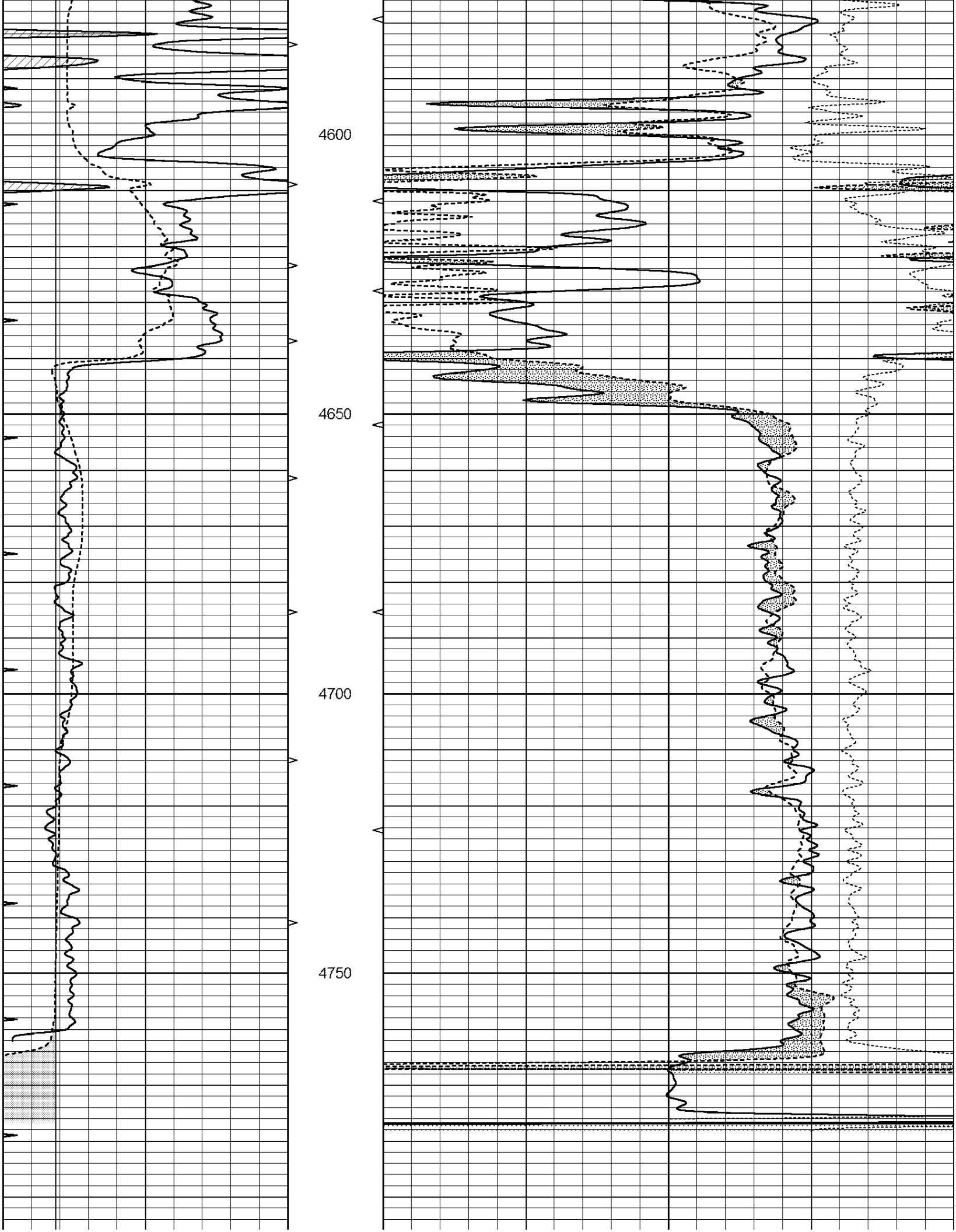
REPEAT SECTION

Database File: 26265ddn.db
Dataset Pathname: pass2.1
Presentation Format: _den_neu
Dataset Creation: Sat Nov 29 00:32:50 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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4650
4700
4750

0	GAMMA RAY (GAPI)	150	AVTX		30	COMPENSATED DENSITY (pu)			-10
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)			-10
0	MINMK	20	BVTX				-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					

Calibration Report

Database File: 26265ddn.db
Dataset Pathname: pass3.2
Dataset Creation: Sat Nov 29 01:28:17 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Mon Nov 24 11:09:57 2014
Downhole Cal Performed:	Sat Jan 19 19:51:38 2013
After Survey Verification Performed:	Sat Jan 19 19:51:38 2013

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	520.000	14.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	570.000	-28.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

Compensated Density Calibration Report

Serial-Model:	GEAR5-GEARHART
Source / Verifier:	147 / 147
Master Calibration Performed:	Sat Nov 29 00:24:07 2014
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	848.07	511.00	cps

Aluminum	2.610	g/cc	183.22	341.84	cps

Spine Angle = 75.30 Density/Spine Ratio = 0.568

	Size		Reading	
Small Ring	8.20	in	1.64	V
Large Ring	14.00	in	2.93	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: 080620
Tool Model: Probe

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