



COMPENSATED
DENSITY / NEUTRON
PE LOG

Company DARRAH OIL COMPANY, LLC.

Well BISHOP #1-17

Field WILDCAT

County LOGAN State KANSAS

Location: API #: 15-109-21623-0000

1292' FNL & 1120' FEL

SW - SW - NE - NE

SEC 17 TWP 12S RGE 36W

Permanent Datum GROUND LEVEL Elevation 3153
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
DILMEI
SONIC

Elevation

K.B. 3164

D.F. 3162

G.L. 3153

Date 7/21/21

Run Number ONE

Depth Driller 4792

Depth Logger 4793

Bottom Logged Interval 4769

Top Log Interval 3400

Casing Driller 8 5/8" @ 258'

Casing Logger 258

Bit Size 7 7/8"

Type Fluid in Hole CHEMICAL MUD

Density / Viscosity 9.4/45

pH / Fluid Loss 10.5/8.8

Source of Sample FLOWLINE

Rm @ Meas. Temp .540 @ 104F

Rmf @ Meas. Temp .405 @ 104F

Rmc @ Meas. Temp .648 @ 104F

Source of Rmf / Rmc MEASUREMENT

Rm @ BHT .457 @ 123F

Time Circulation Stopped 3.5 HOURS

Time Logger on Bottom 2:15 P.M.

Maximum Recorded Temperature 123F

Equipment Number 922339

Location HAYS, KANSAS

Recorded By JEFF LUEBBERS

Witnessed By LARRY NICHOLSON

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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.

15-109-21623-0000 Comments

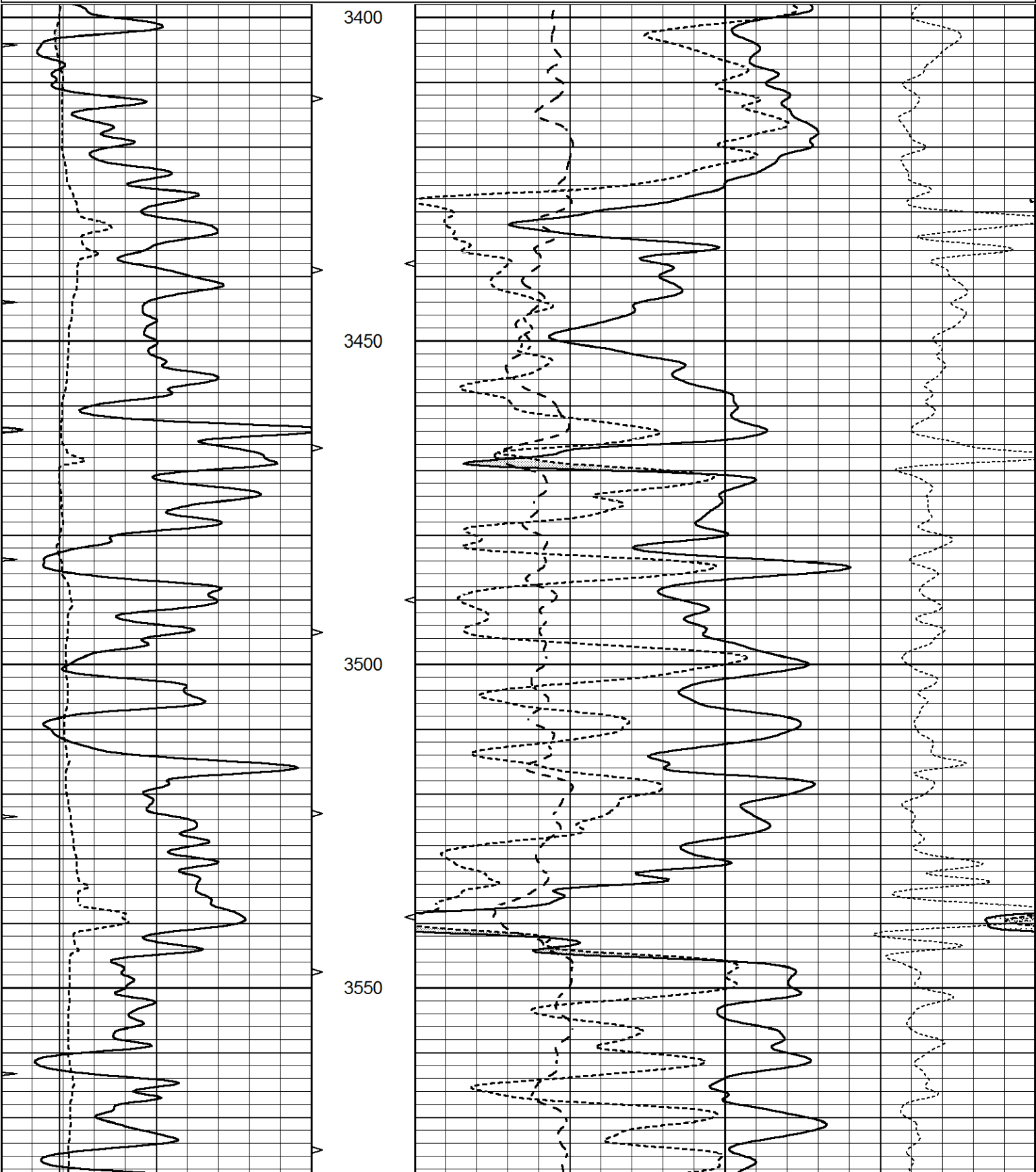
THANK YOU FOR USING E.L.I. WIRELINE SERVICES HAYS, KANSAS (785)628-6395
DIRECTIONS
WINONA, KS. 5W. ON OLD 40 TO JUST PAST MM# 41, S. INTO

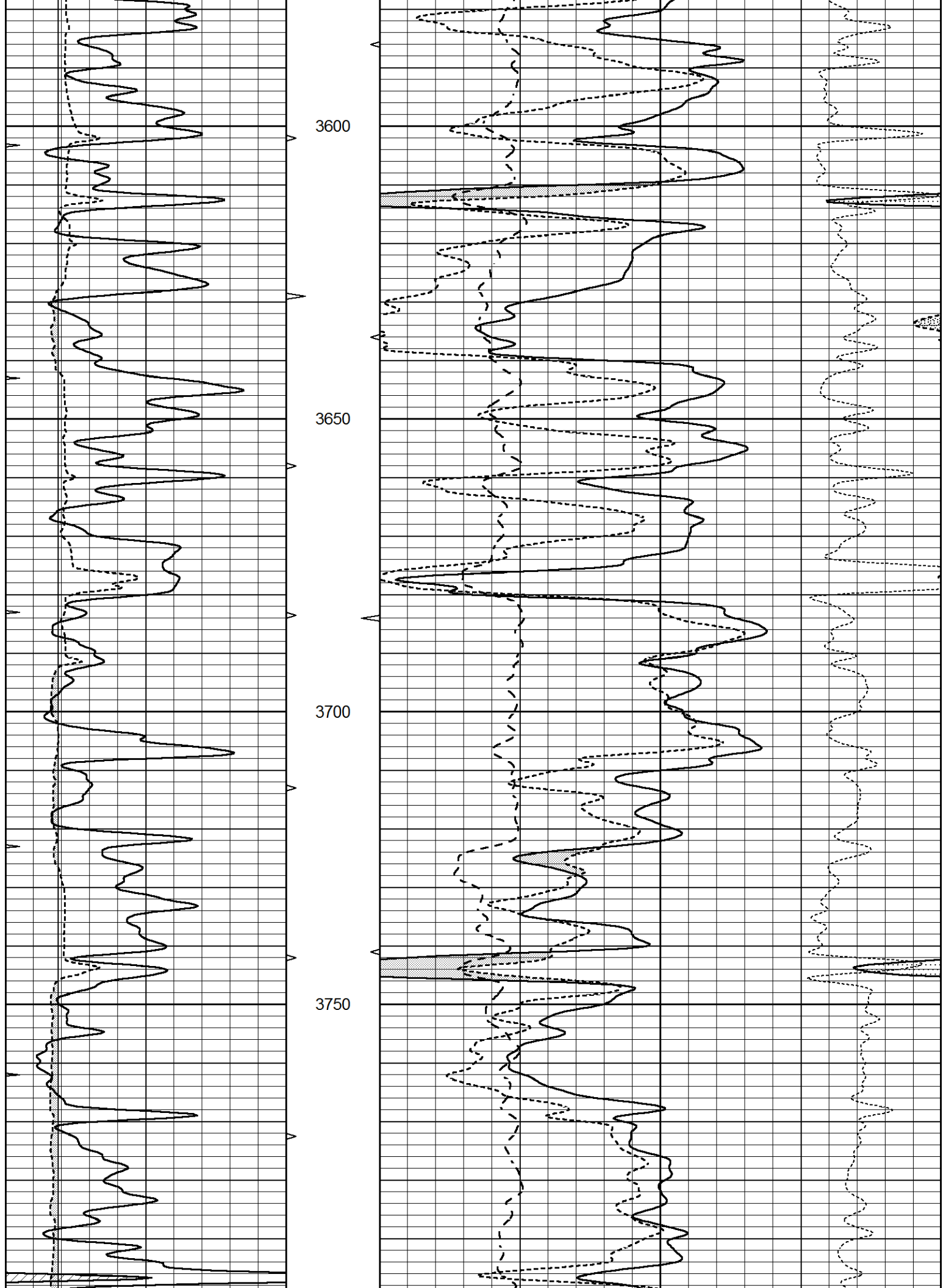


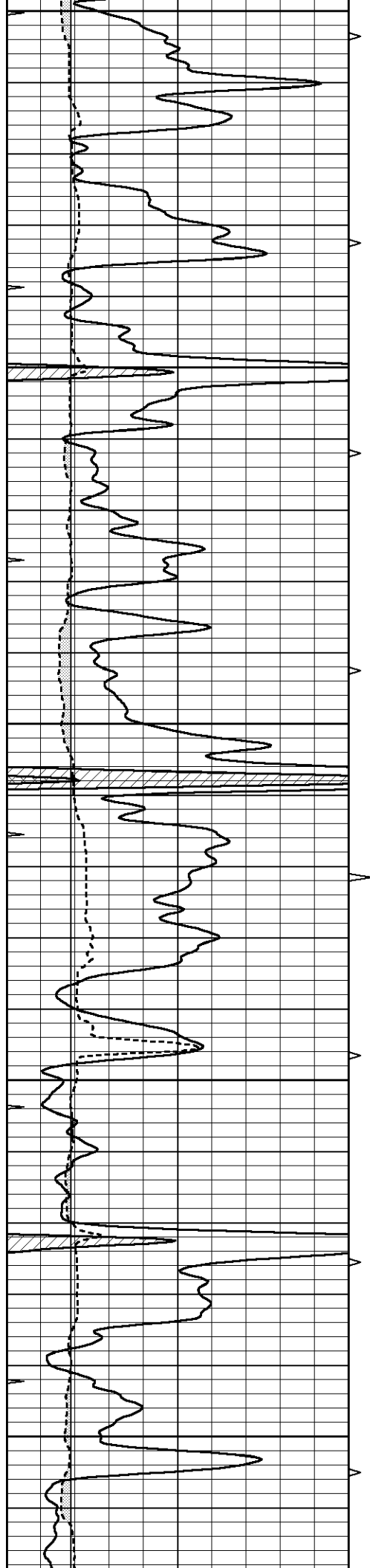
MAIN SECTION

Database File	5590pe.db
Dataset Pathname	pass3.1M
Presentation Format	ldt_neu
Dataset Creation	Wed Jul 21 15:41:36 2021
Charted by	Depth in Feet scaled 1:240

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







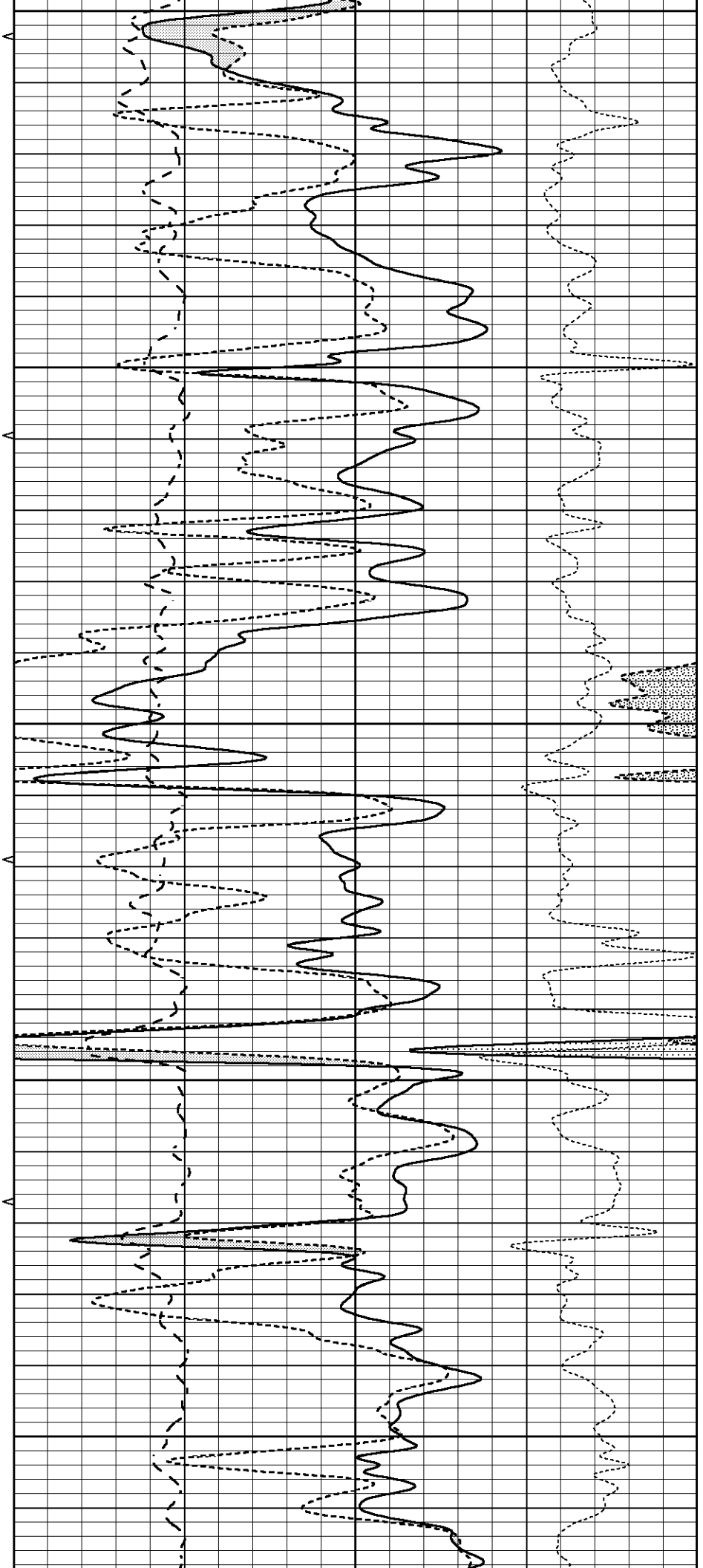
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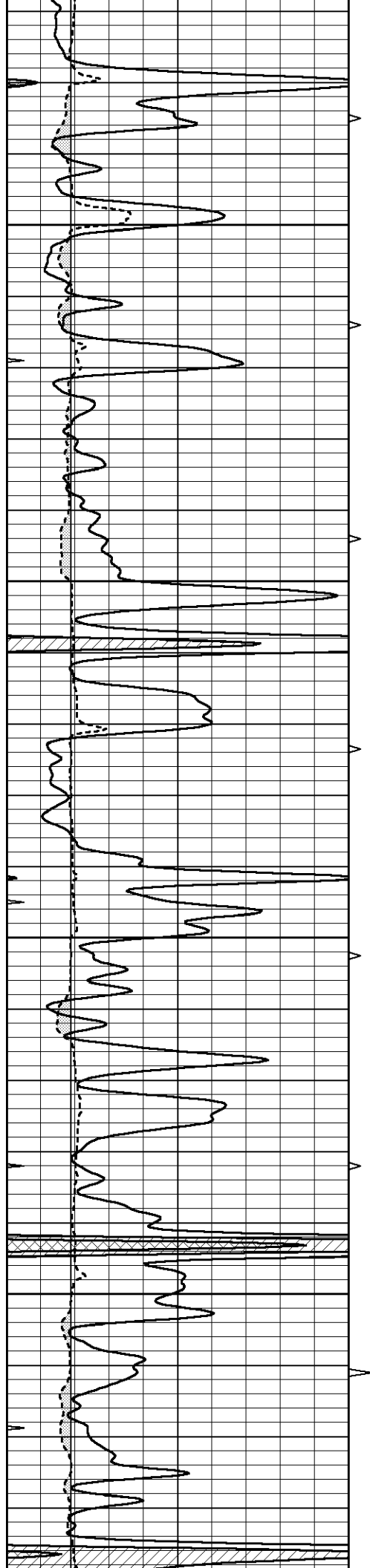
3850

3900

3950

4000



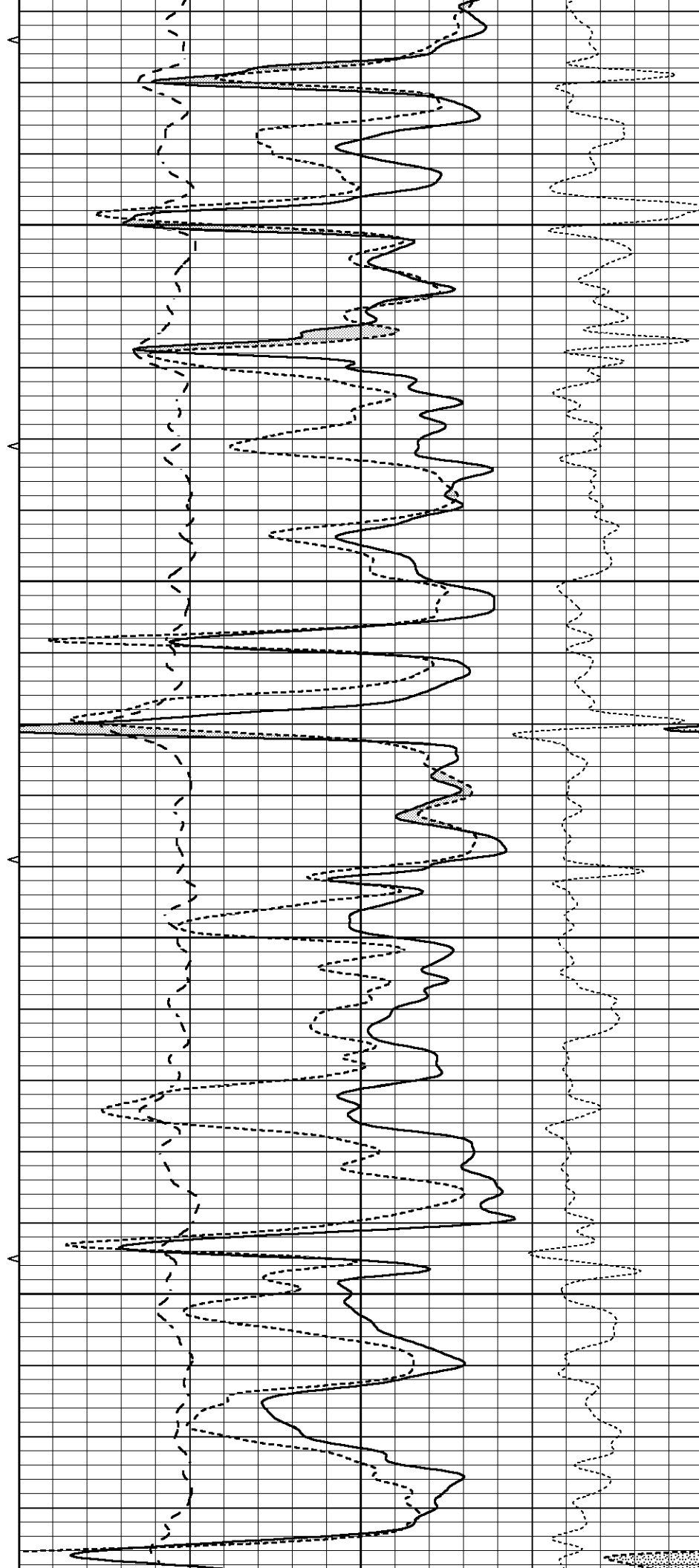


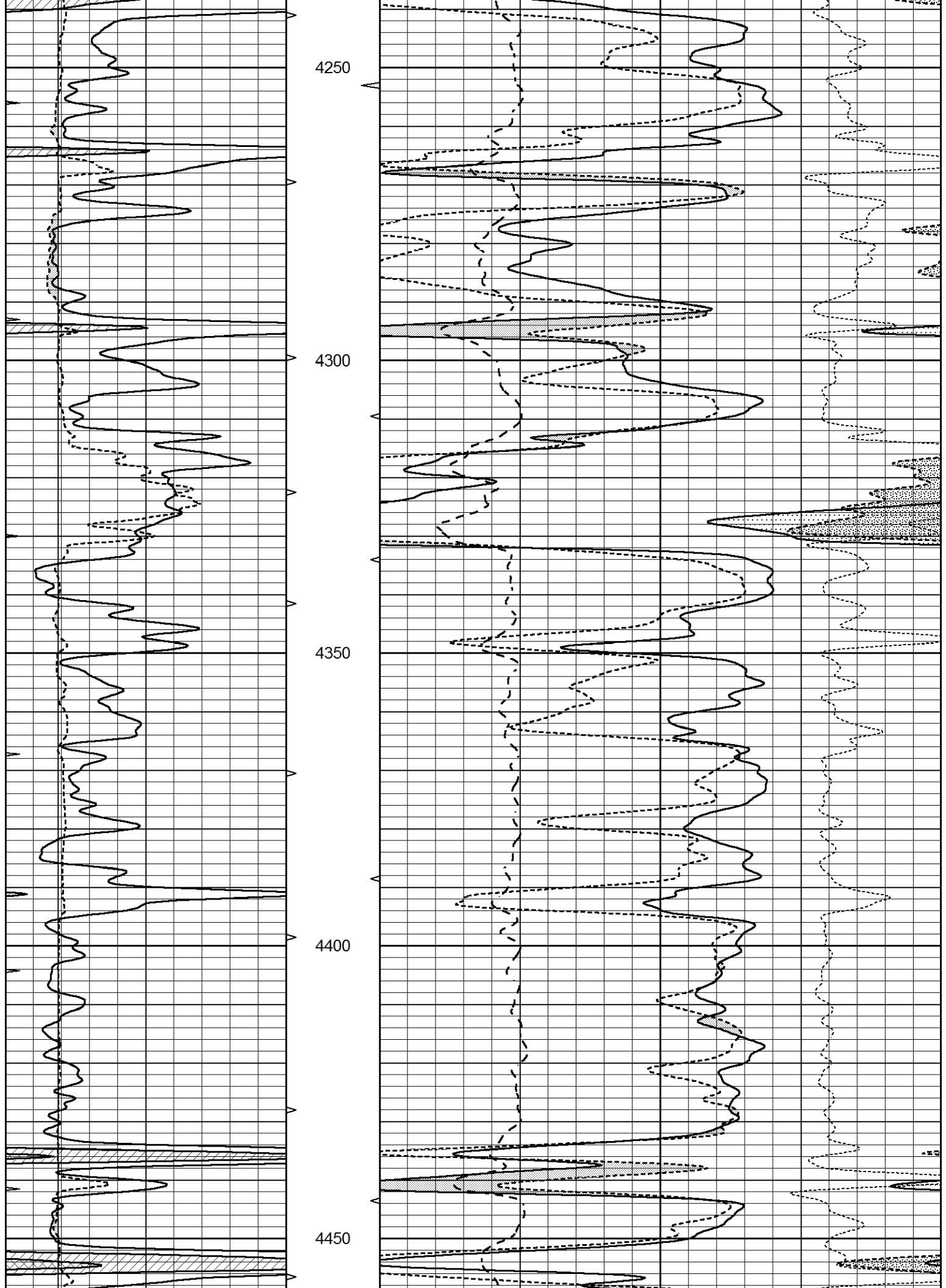
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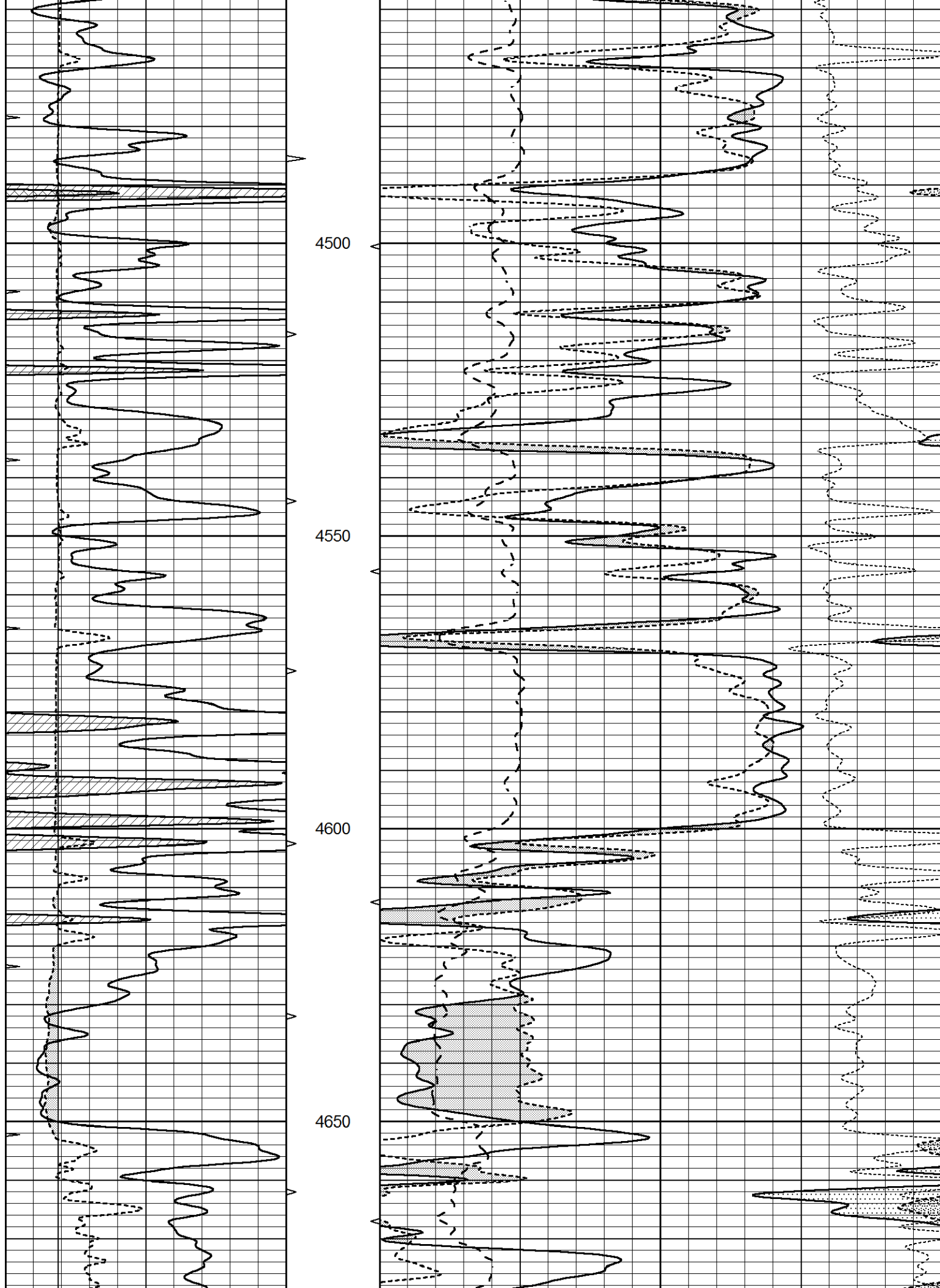
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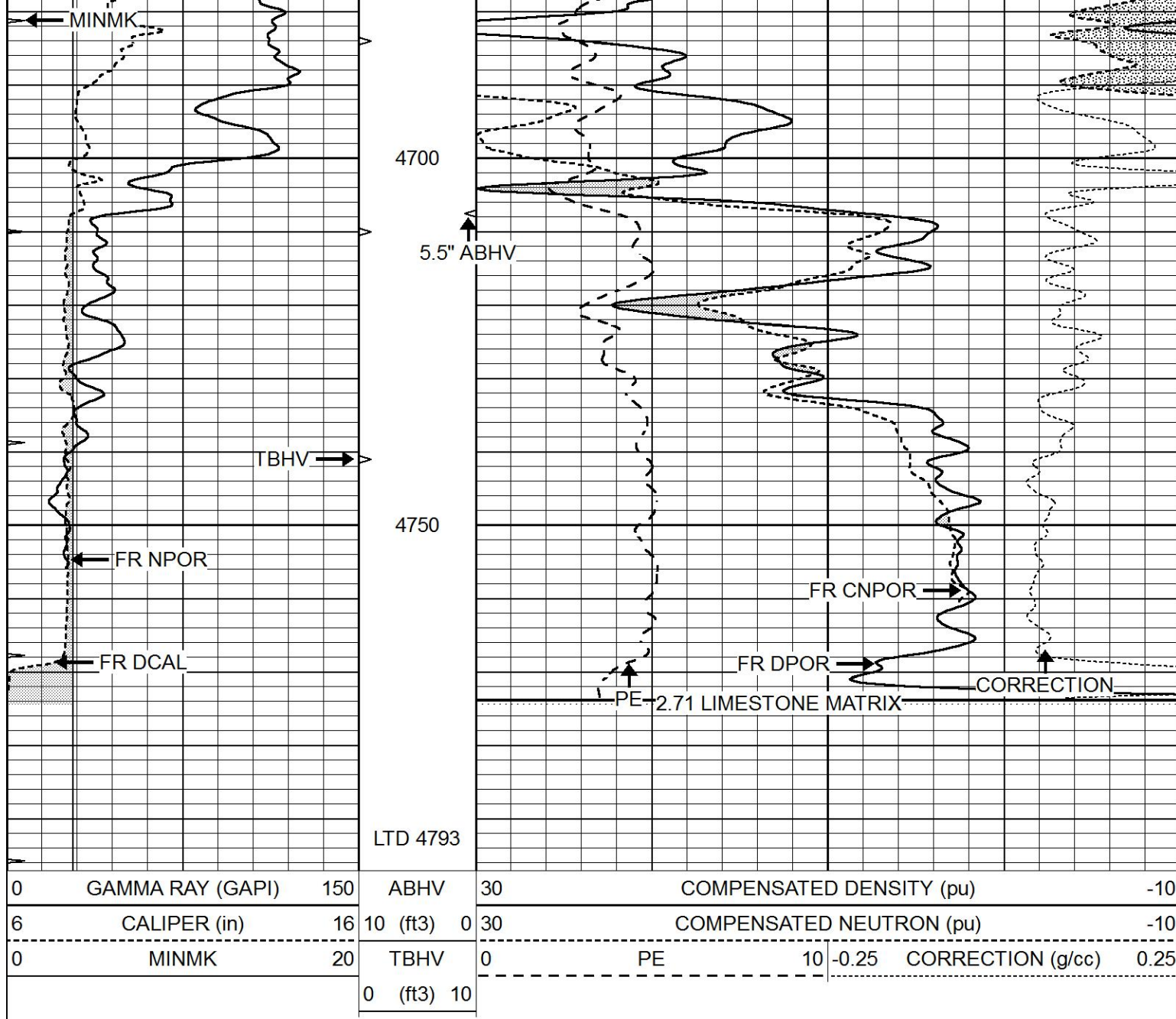
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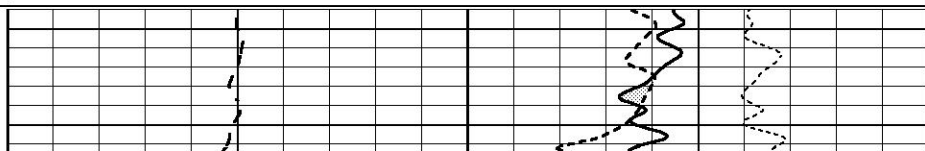
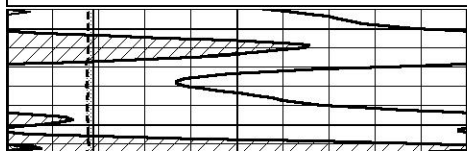
REPEAT SECTION

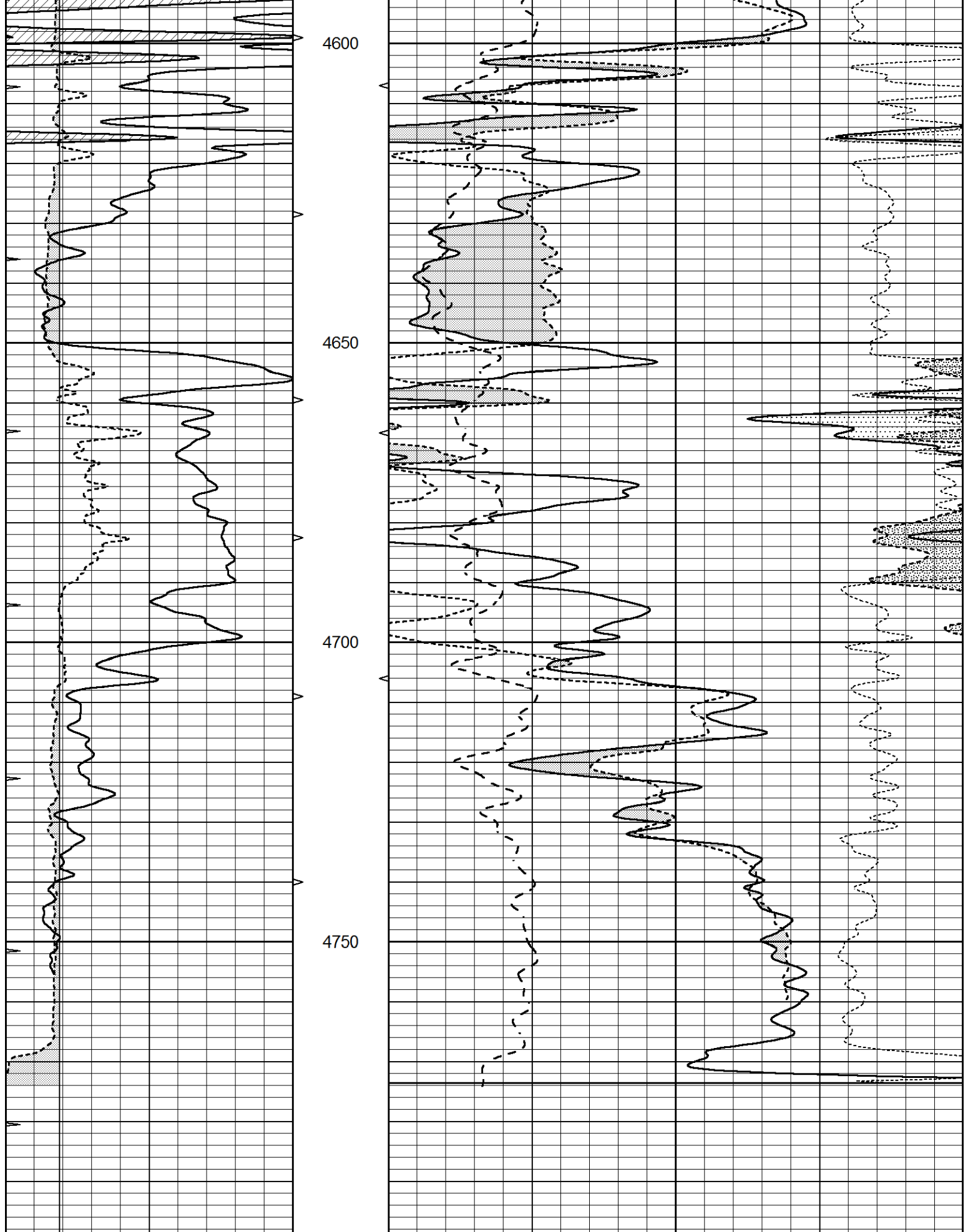
Database File 5590pe.db
 Dataset Pathname pass2.1R
 Presentation Format ldt_neu
 Dataset Creation Wed Jul 21 14:29:26 2021
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)				-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)				-10

0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25

			0 (ft3) 10						





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

Calibration Report

Database File 5590pe.db
 Dataset Pathname pass3.1M
 Dataset Creation Wed Jul 21 15:41:36 2021

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Wed Jul 21 14:45:28 2021
 Downhole Cal Performed: Wed Mar 11 11:31:19 2020
 After Survey Verification Performed: Wed Mar 11 11:31:22 2020

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	720.000	-16.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	720.000	-28.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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		

 Litho Density Calibration Report
 Serial: 003 Model: PRB

Master Calibration

Performed Fri Mar 05 10:51:07 2021

	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1570.6	10682.1	3457.0	3096.9	cps
Window 2	1451.7	9432.7	3101.4	2816.5	cps
Window 3	1334.0	7160.6	2532.0	2369.3	cps
Window 4	370.4	373.1	366.4	370.9	cps
Long Space	0.0	7981.0	1649.7	1364.8	cps
Short Space	2.8	3522.0	2211.0	1823.6	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	

Rib Angle : 43.5 Rib Slope : 0.951 Density/Spine Ratio : 0.535
 Spin Angle : 70.5 Spin Slope : 0.000 Spin Density Ratio : 10.7

Spine Angle : 73.5 Spine Slope : 3.386 Spine Intercept : -18.7

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 070808PMC
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: 070558
Tool Model: OPEN_GR
Performed: Fri Jul 09 13:16:04 2021

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps