



SUPERIOR  
Hays,  
Kansas

# COMPENSATED DENSITY / NEUTRON LOG

Company RITCHIE EXPLORATION, INC.  
Well #1 HORNUNG 34B  
Field WILDCAT  
County KIT CARSON  
State COLORADO

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County KIT CARSON State COLORADO

Location: API # : 05-063-06344-0000

710' FNL & 1481' FWL

DIL

SEC 34 TWP 10S RGE 46W

Permanent Datum GROUND LEVEL Elevation 4488  
Log Measured From KELLY BUSHING 11' A.G.L.  
Drilling Measured From KELLY BUSHING

Elevation  
K.B. 4499  
D.F. 4497  
G.L. 4488

Date 8/1/12

Run Number ONE

Depth Driller 5954

Depth Logger 5951

Bottom Logged Interval 5927

Top Log Interval 4600

Casing Driller 8 5/8" @ 440'

Casing Logger 434

Bit Size 7 7/8"

Type Fluid in Hole CHEMICAL MUD

Density / Viscosity 8.7/54

pH / Fluid Loss 9.0/8.8

Source of Sample FLOWLINE

Rm @ Meas. Temp 3.50 @ 90F

Rmt @ Meas. Temp 2.63 @ 90F

Rmc @ Meas. Temp 4.20 @ 90F

Source of Rmt / Rmc MEASUREMENT

Rm @ BHT 2.35 @ 134F

Time Circulation Stopped 3.5 HOURS

Time Logger on Bottom 1:45 P.M.

Maximum Recorded Temperature 134F

Equipment Number 4010

Location HAYS, KANSAS

Recorded By JEFF LUEBBERS

Witnessed By DAVE WILLIAMS

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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

THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395  
DIRECTIONS

BURLINGTON, CO. (I-70 SECOND EXIT) 13 S. ON HWY 383 TO MM #176 "RD. G", 12 W. TO "RD. 35", 1  
1/2N., 1/2W., S. INTO

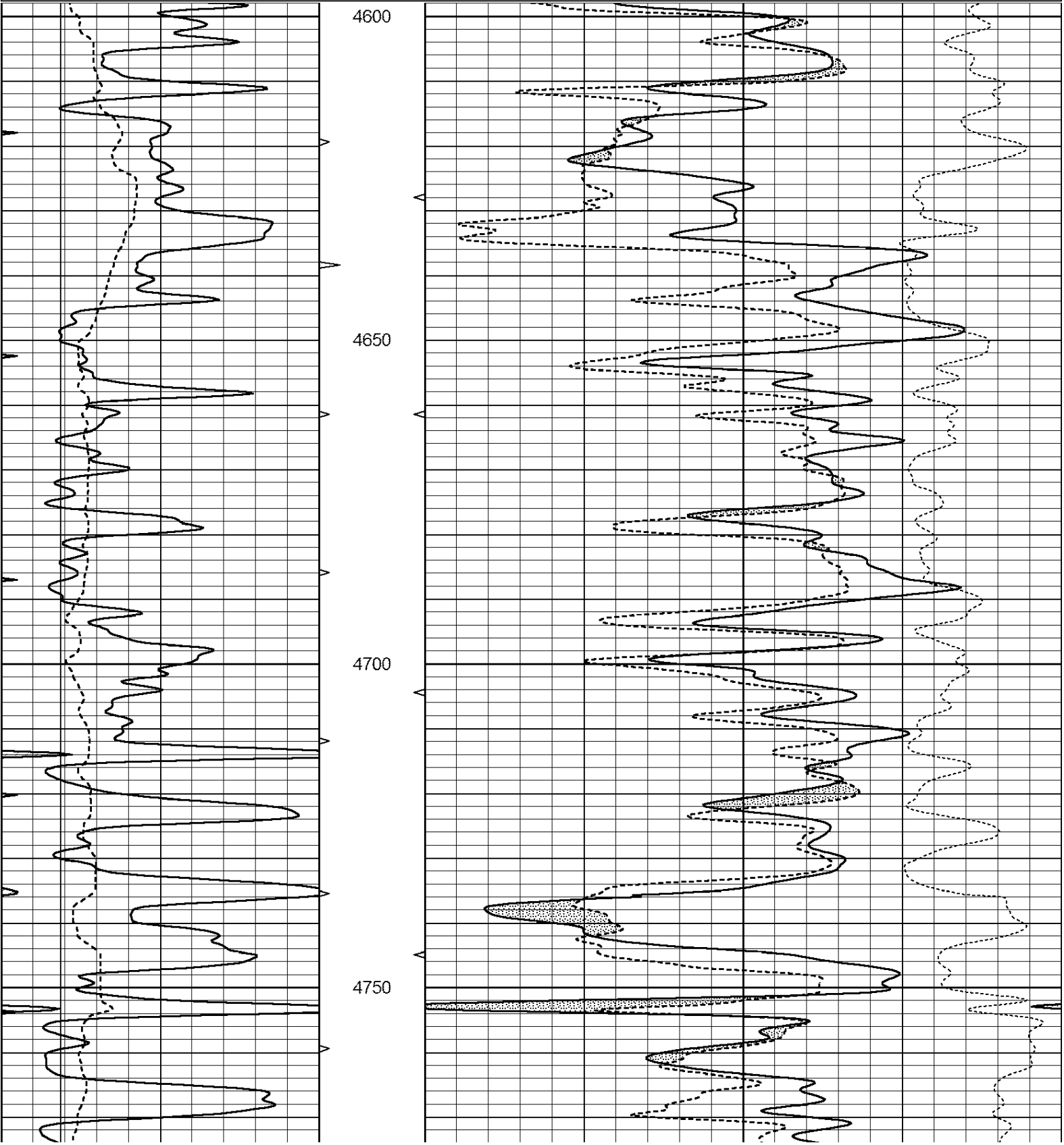


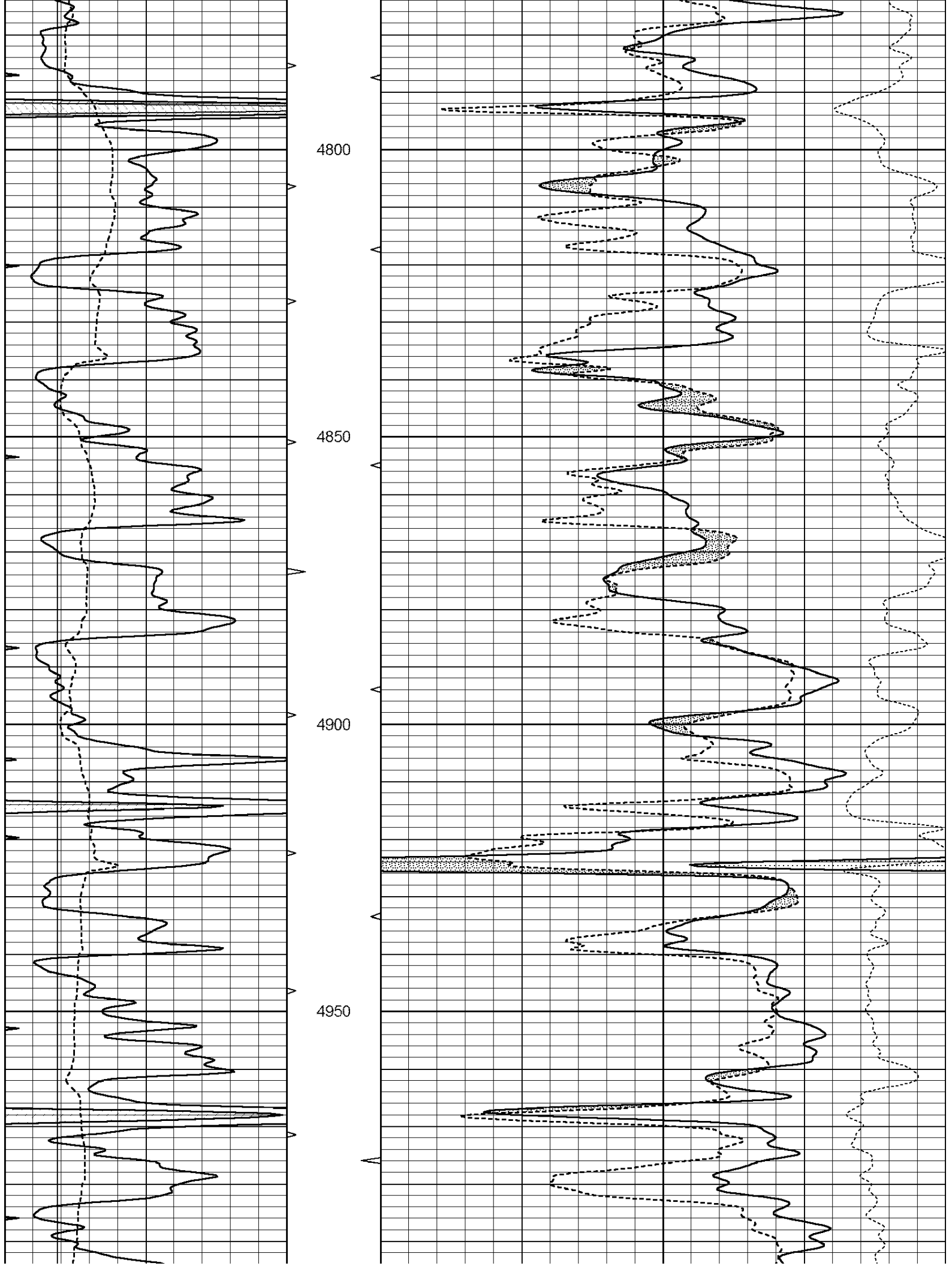
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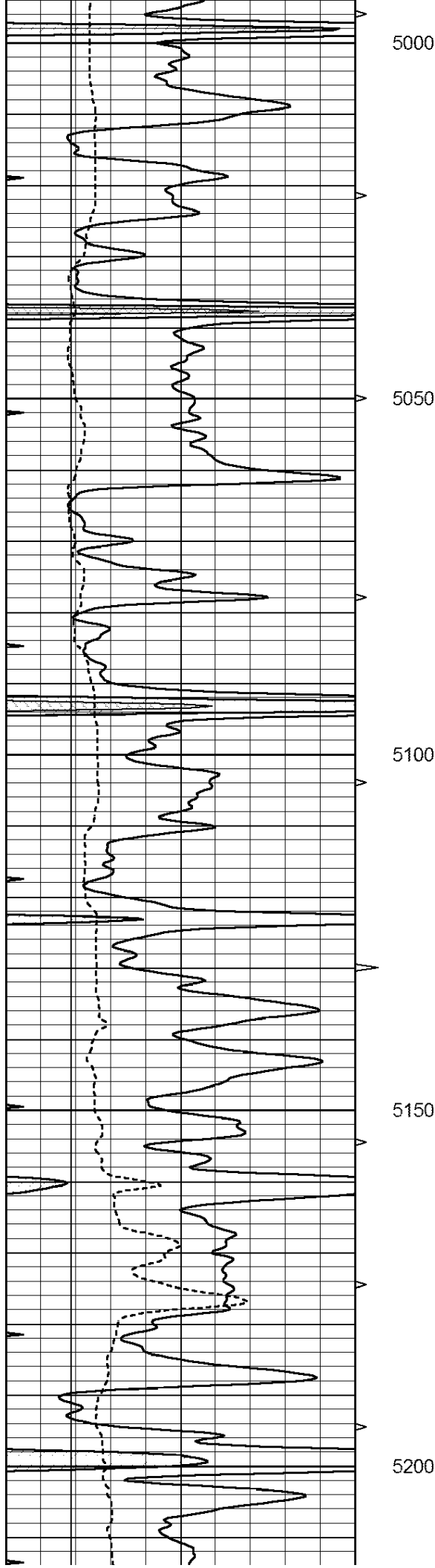
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Dataset Pathname: pass3.7  
Presentation Format: den\_neu  
Dataset Creation: Wed Aug 01 14:56:51 2012  
Charted by: Depth in Feet scaled 1:240

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		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		







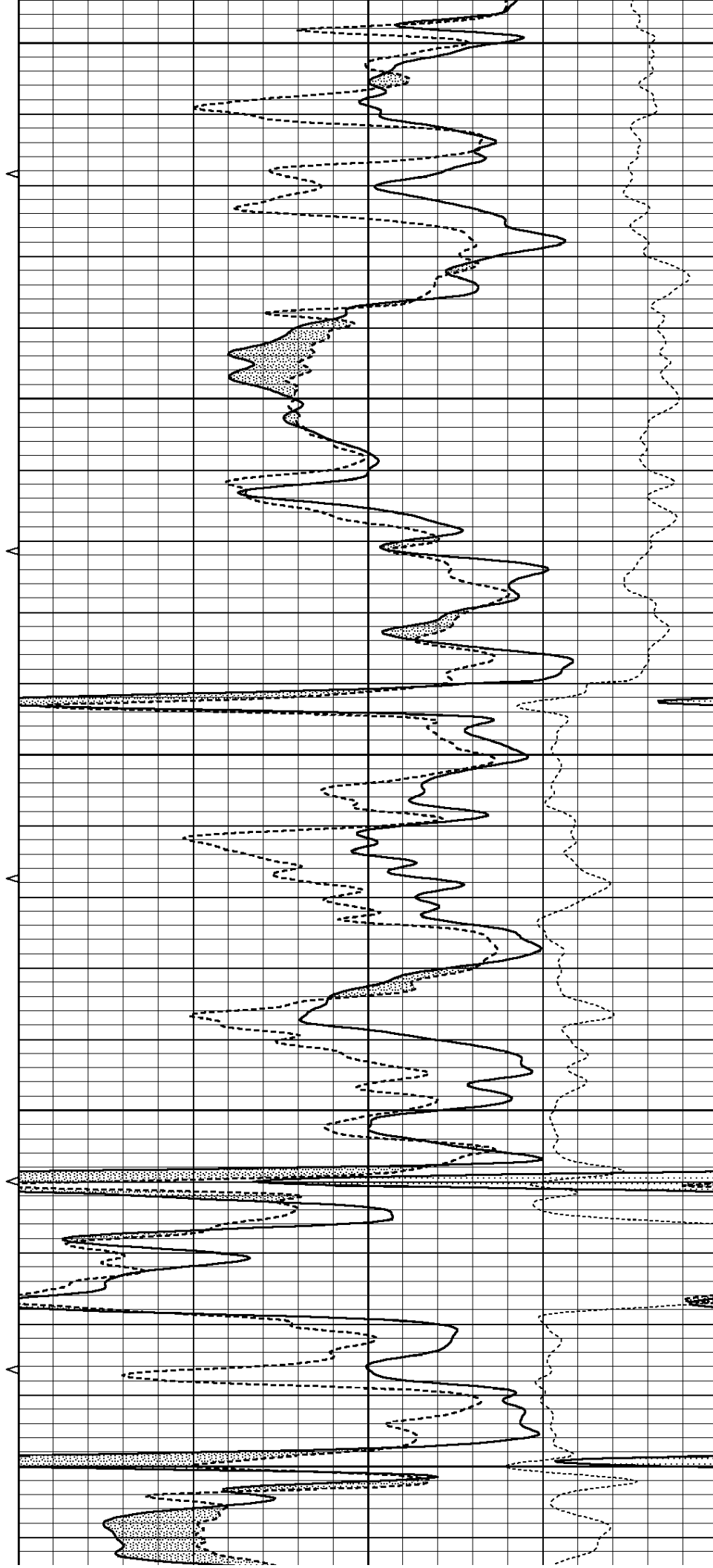
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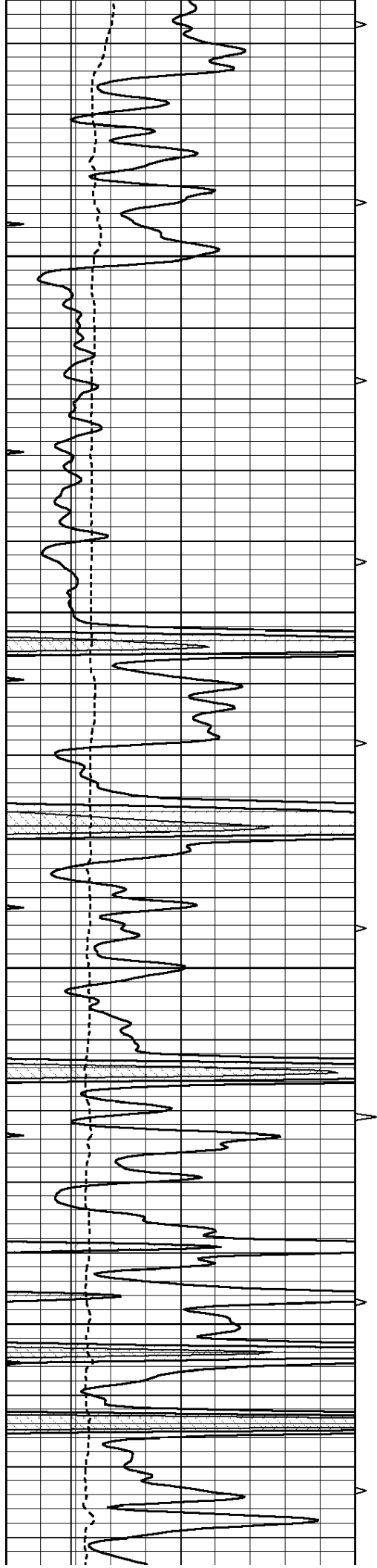
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5100

5150

5200



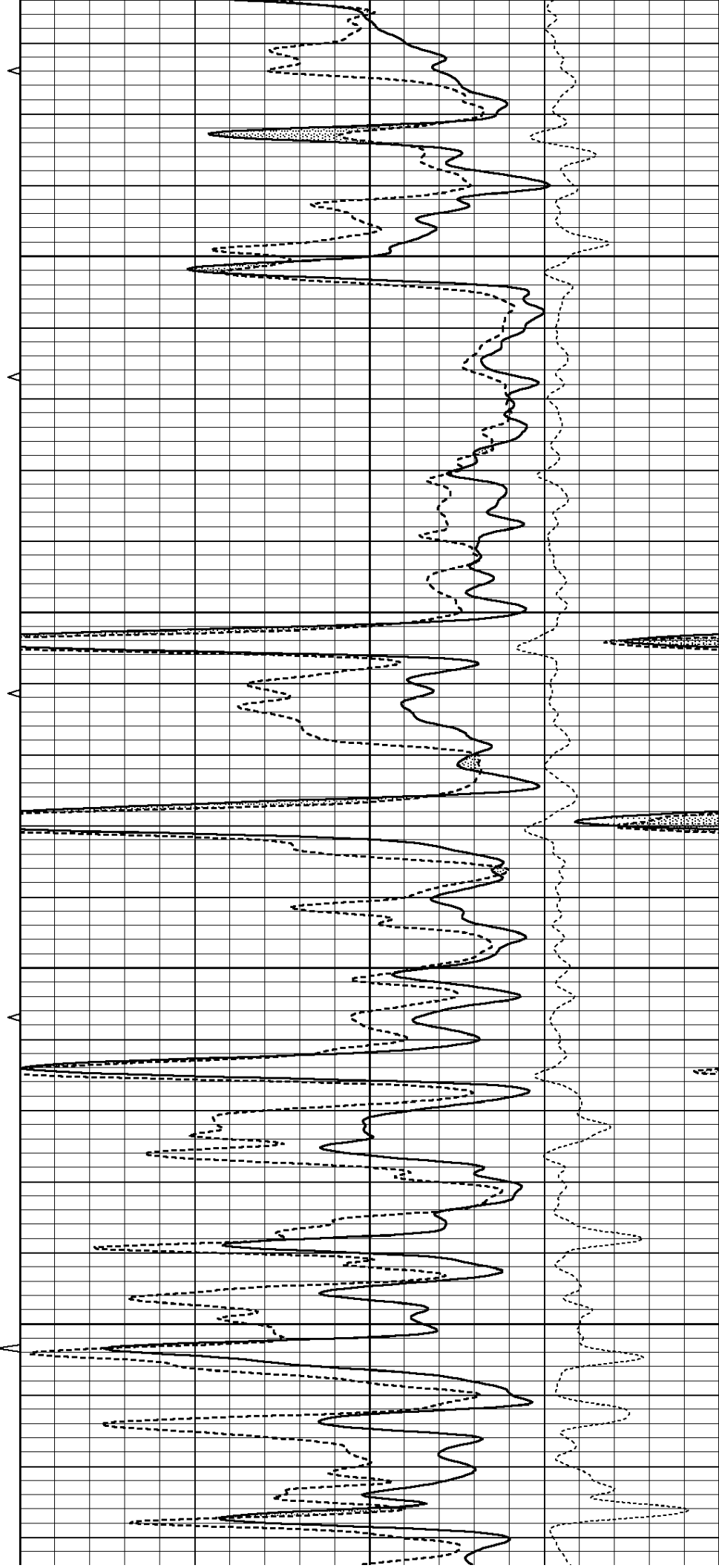


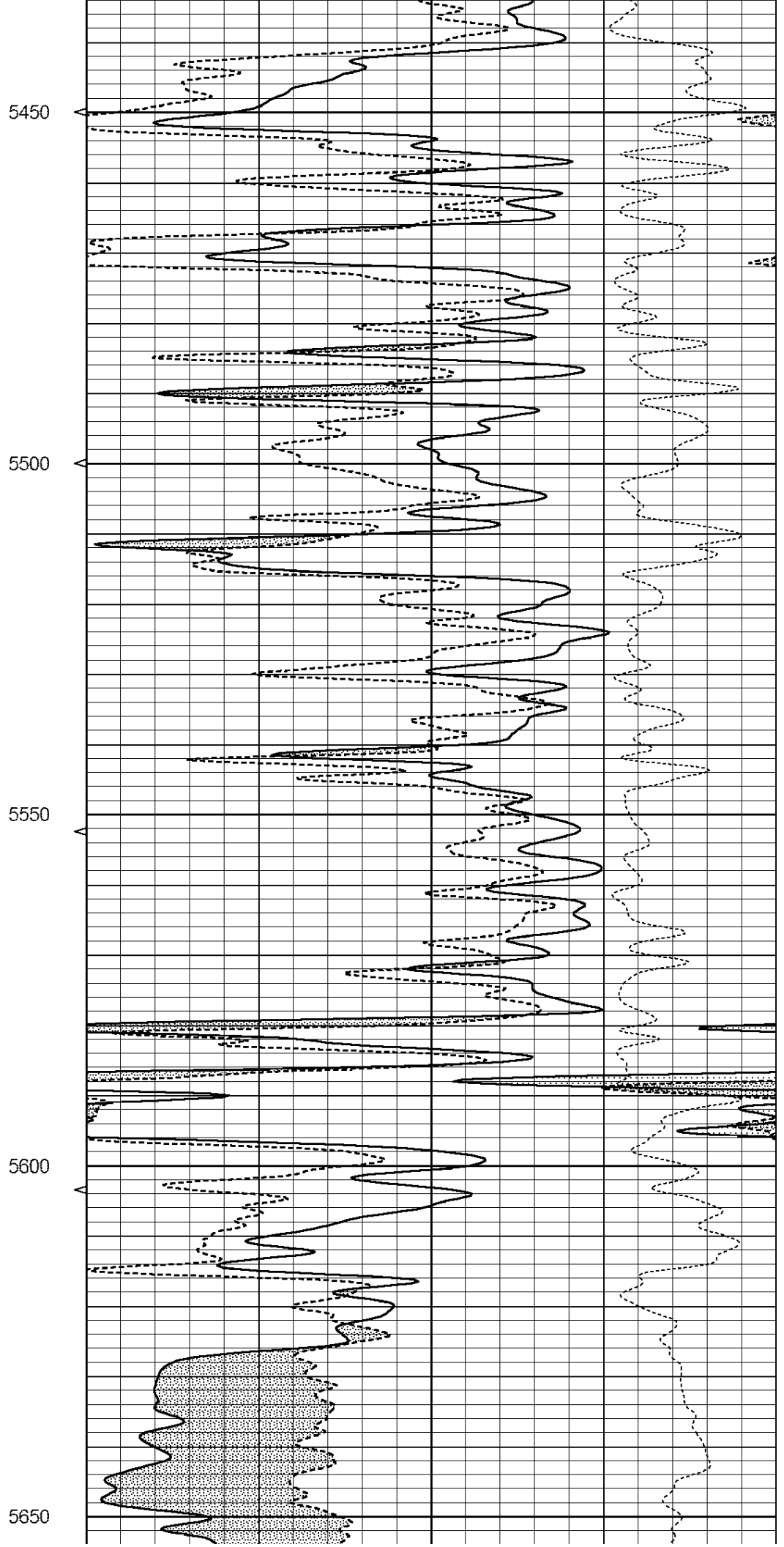
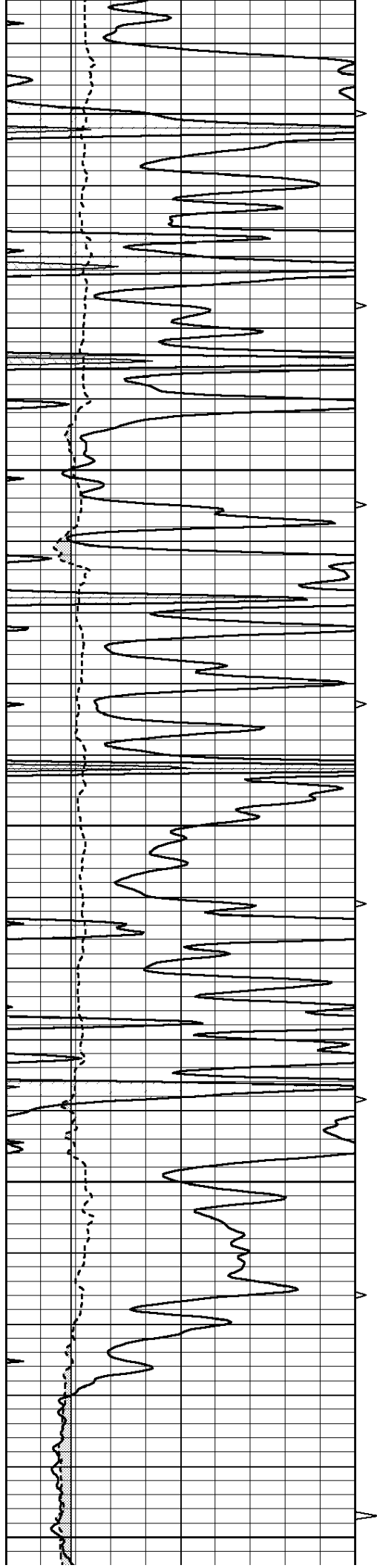
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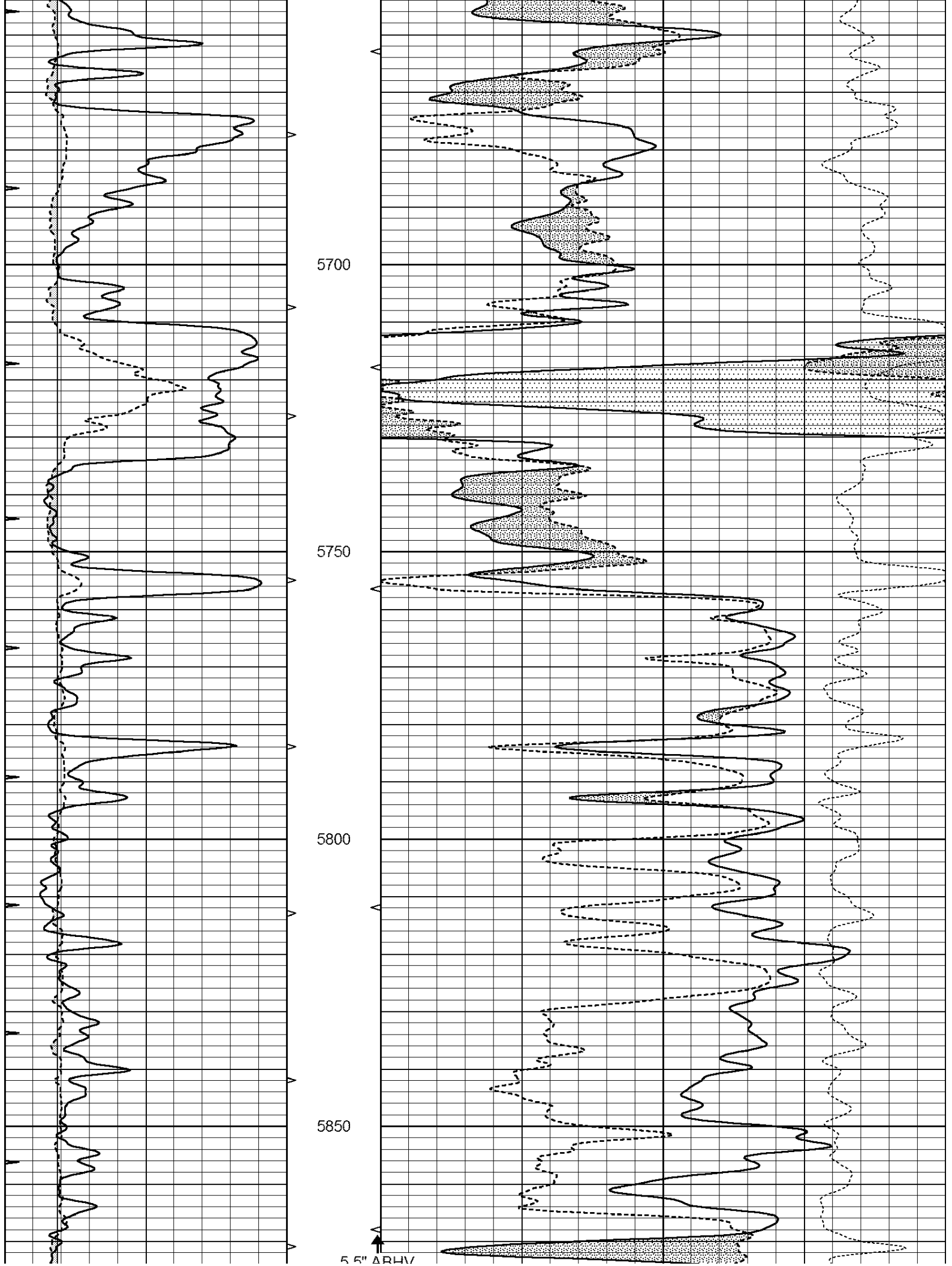
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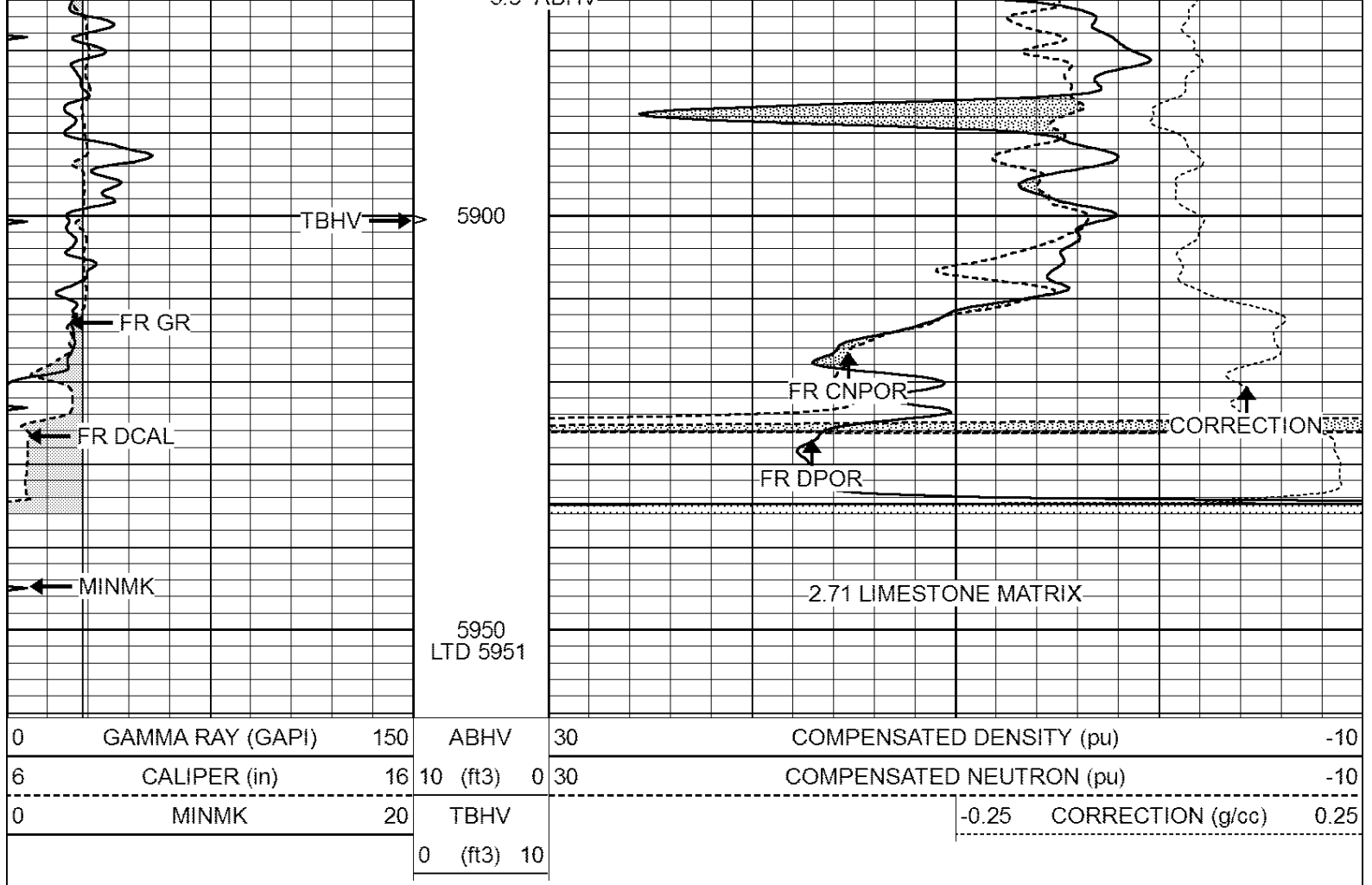
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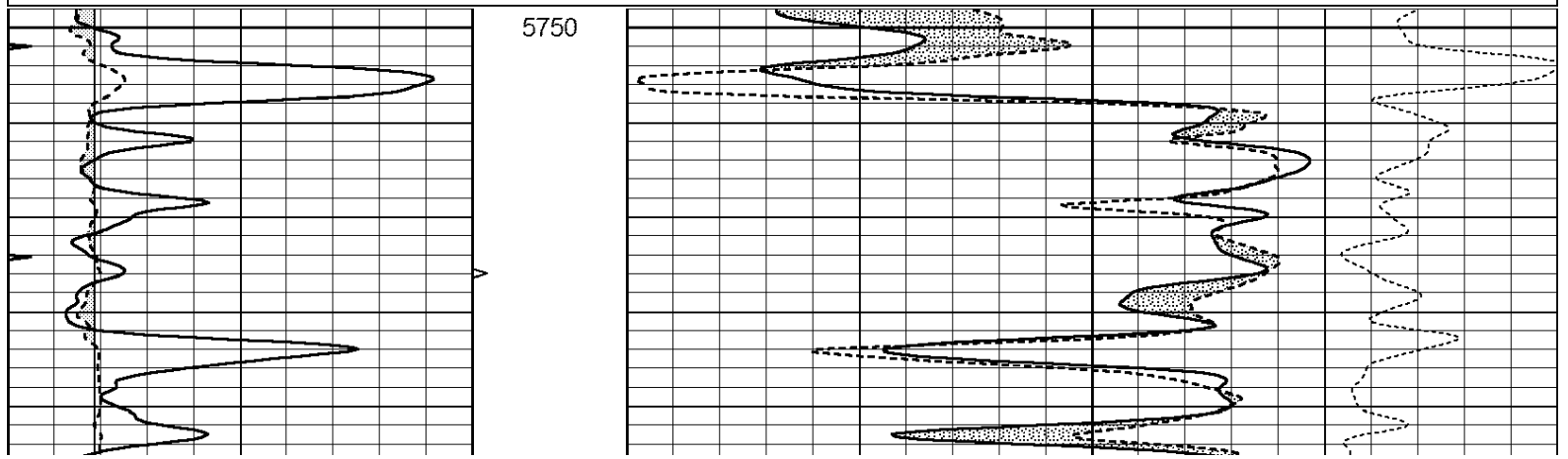


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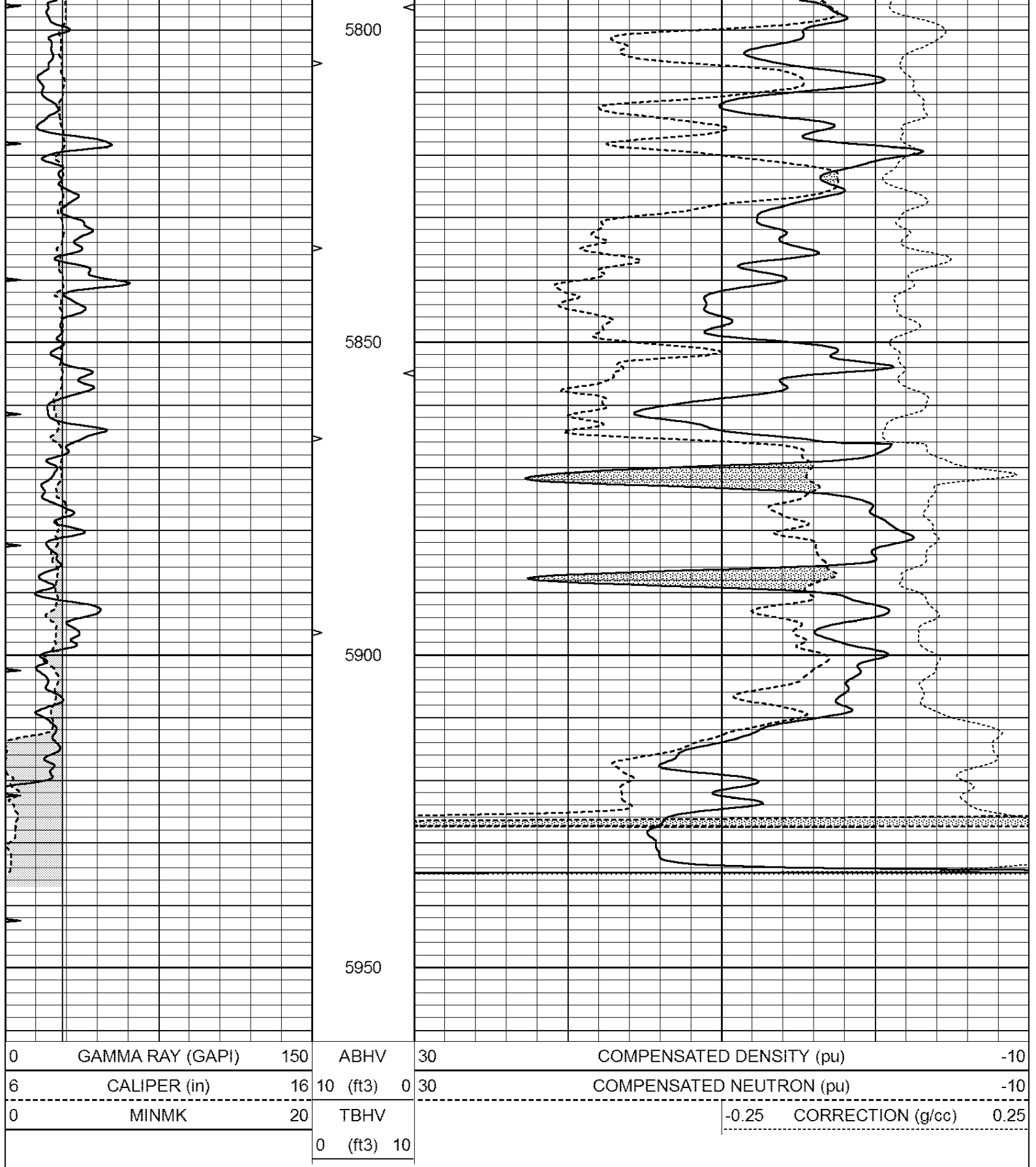
# REPEAT SECTION

Database File: 409444ddn.db  
 Dataset Pathname: pass2.9  
 Presentation Format: den\_neu  
 Dataset Creation: Wed Aug 01 14:41:20 2012  
 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		-0.25	CORRECTION (g/cc) 0.25
			0 (ft3)	10		







Calibration Report

Database File: 409444ddn.db  
Dataset Pathname: pass3.7  
Dataset Creation: Wed Aug 01 14:56:51 2012

Dual Induction Calibration Report

Serial-Model:

DIL3-GEAR

Readings			References			Results		
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	9.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-4.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report  
Serial: 006 Model: PRB  
Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

Caliper

	Readings	Reference
Low Ref	3.5	8.0
High Ref	5.5	15.0
Gain: 3.6		Offset: -4.8

Compensated Neutron Calibration Report

Serial Number: 070808  
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: 070559  
Tool Model: OPEN\_GR  
Performed: Thu Jul 26 17:34:29 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity:

0.3000

GAPI/cps