



**Casedhole
Solutions**

**COMPENSATED
DENSITY / NEUTRON
LOG**

Company	DOWNING - NELSON OIL COMPANY		
Well	HOGAN FAMILY TRUST #1-21		
Field	WILDCAT		
County	PAWNEE		
State	KANSAS		
Company	DOWNING - NELSON OIL COMPANY		
Well	HOGAN FAMILY TRUST #1-21		
Field	WILDCAT		
County	PAWNEE		
State	KANSAS		
Location:	API # : 15-145-21807-0000		Other Services DIL/MEL SONIC
Permanent Datum	GROUND LEVEL		Elevation 2113
Log Measured From	KELLY BUSHING 8' A.G.L.		
Drilling Measured From	KELLY BUSHING		Elevation K.B. 2121 D.F. 2119 G.L. 2113
Date	9/5/15		
Run Number	ONE		
Depth Driller	4460		
Depth Logger	4456		
Bottom Logged Interval	4432		
Top Log Interval	3500		
Casing Driller	8 5/8" @ 1189'		
Casing Logger	1190		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		CHLORIDES 9,000 PPM
Density / Viscosity	9.2/48		
pH / Fluid Loss	9.0/9.6		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	.400 @ 82F		
Rinf @ Meas. Temp	.300 @ 82F		
Rinc @ Meas. Temp	.480 @ 82F		
Source of Rinf / Rinc	MEASUREMENT		
Rin @ BHT	.273 @ 120F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	8:00 A.M.		
Maximum Recorded Temperature	120F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	MARC DOWNING		

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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 C & J ENERGY (CASED HOLE SOLUTIONS) HAYS, KANSAS (785) 628-6395
DIRECTIONS
(HWY 183 & 156 JUNCTION), 10S. ON HWY 183, 1/4E., S. INTO @MAILBOX

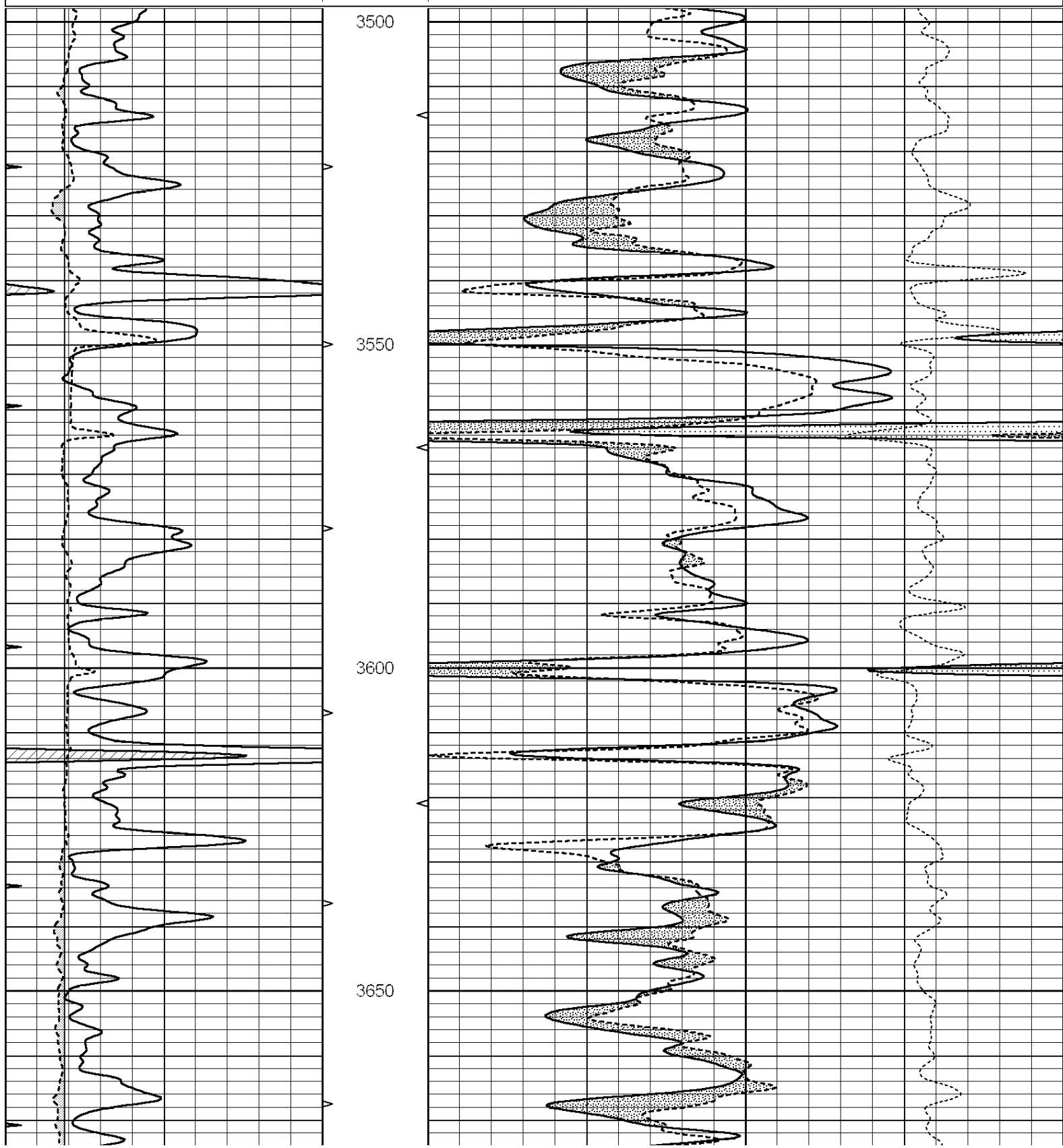


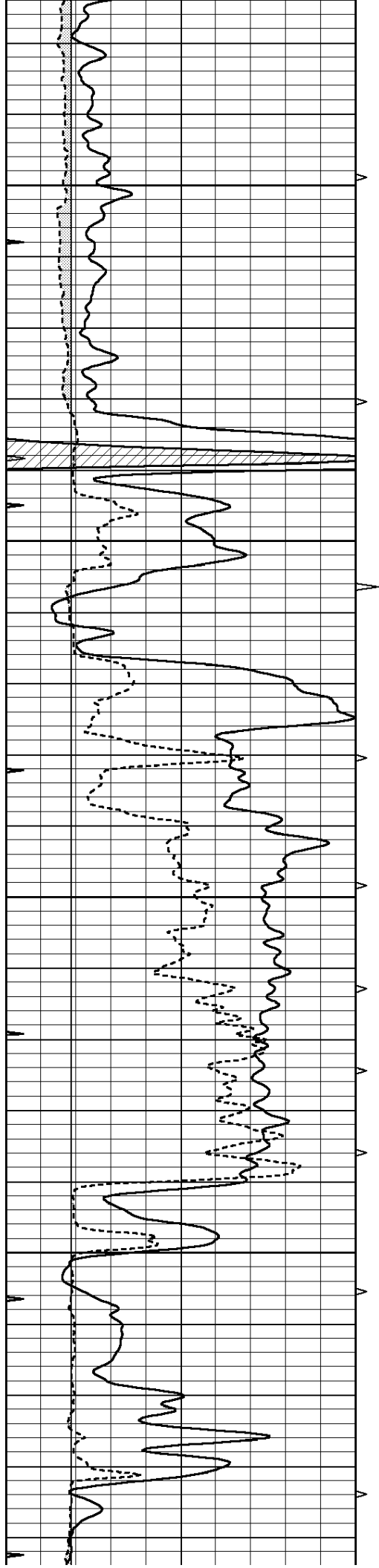
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MAIN SECTION

Database File: 26638ddn.db
Dataset Pathname: pass3.5
Presentation Format: den_neu
Dataset Creation: Sat Sep 05 09:56:45 2015
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		



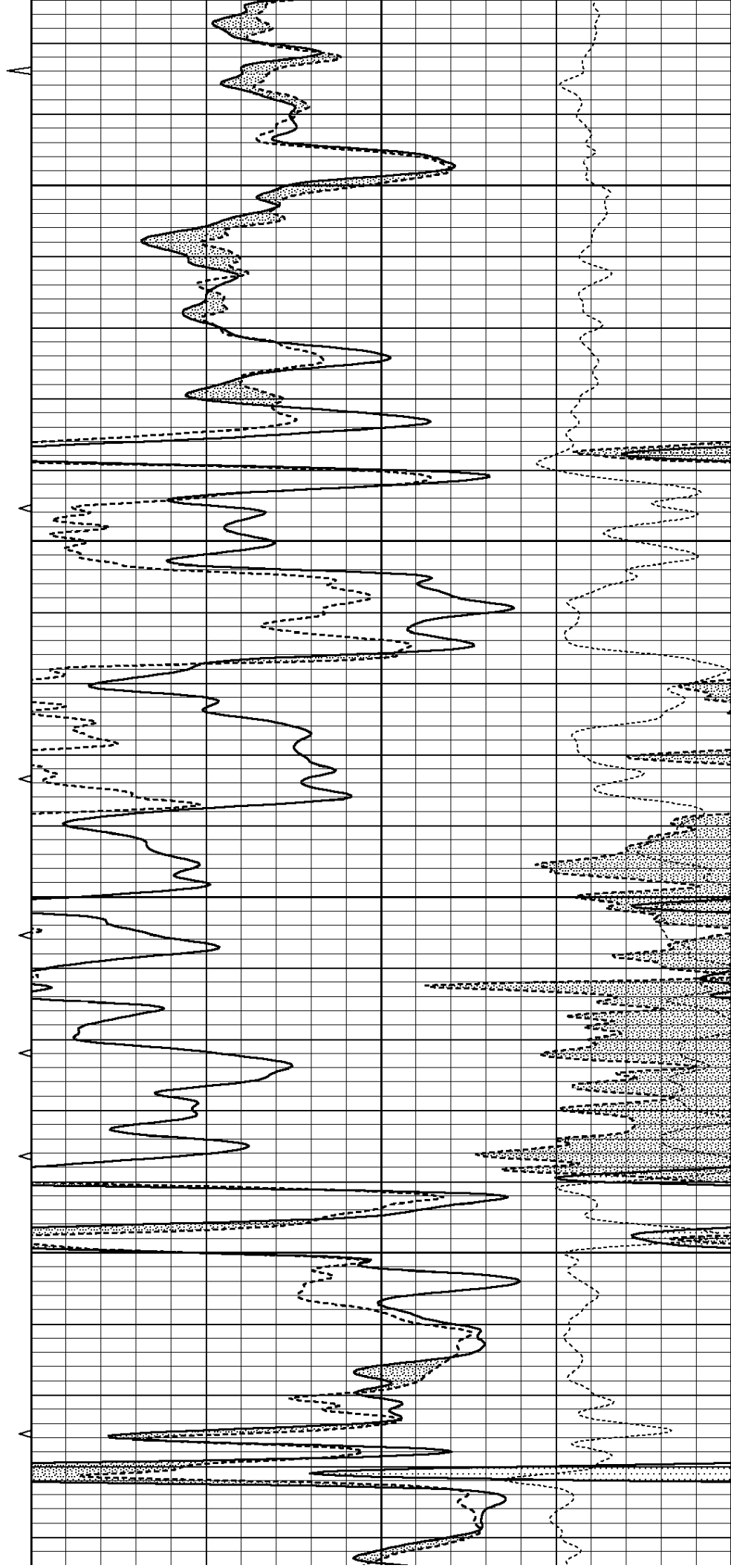


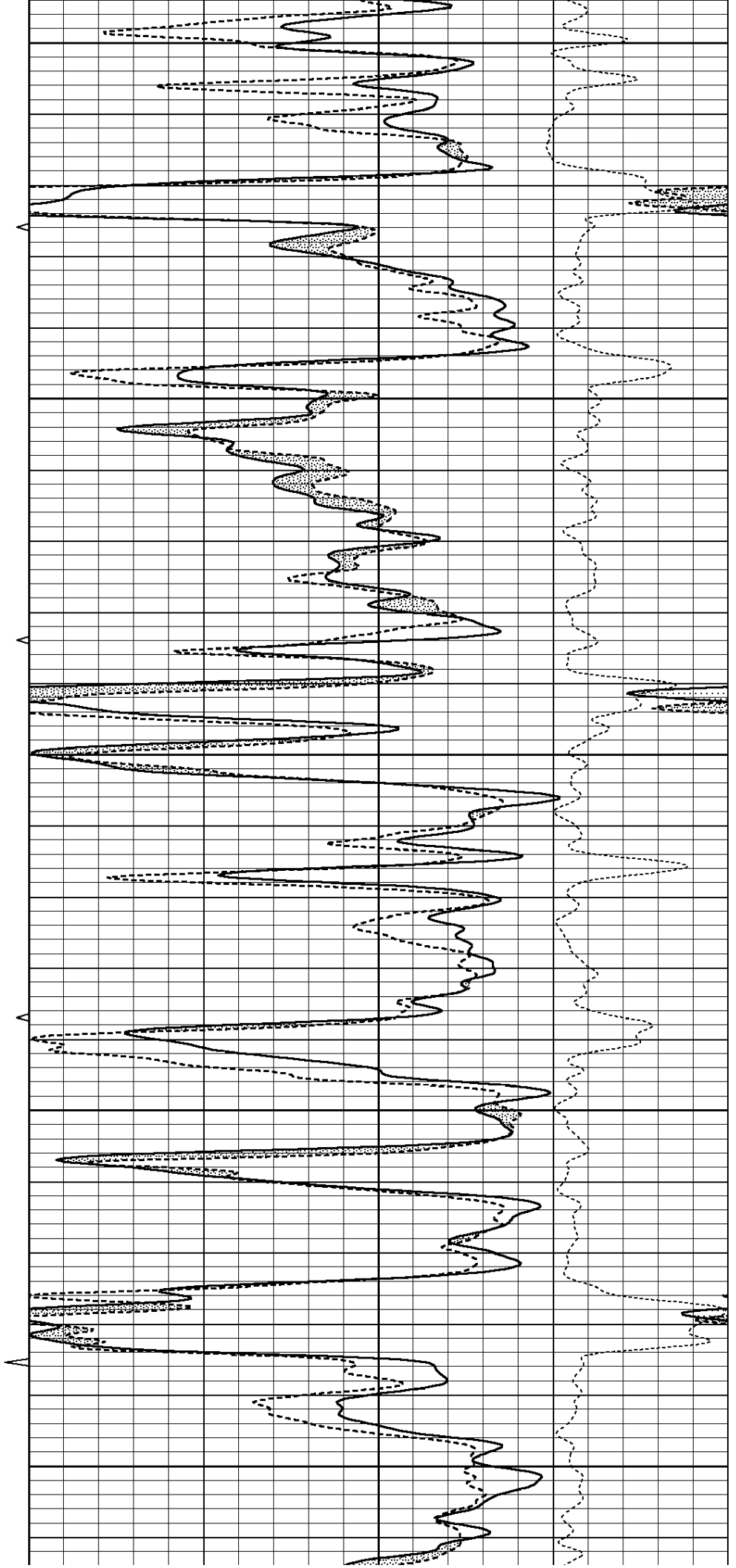
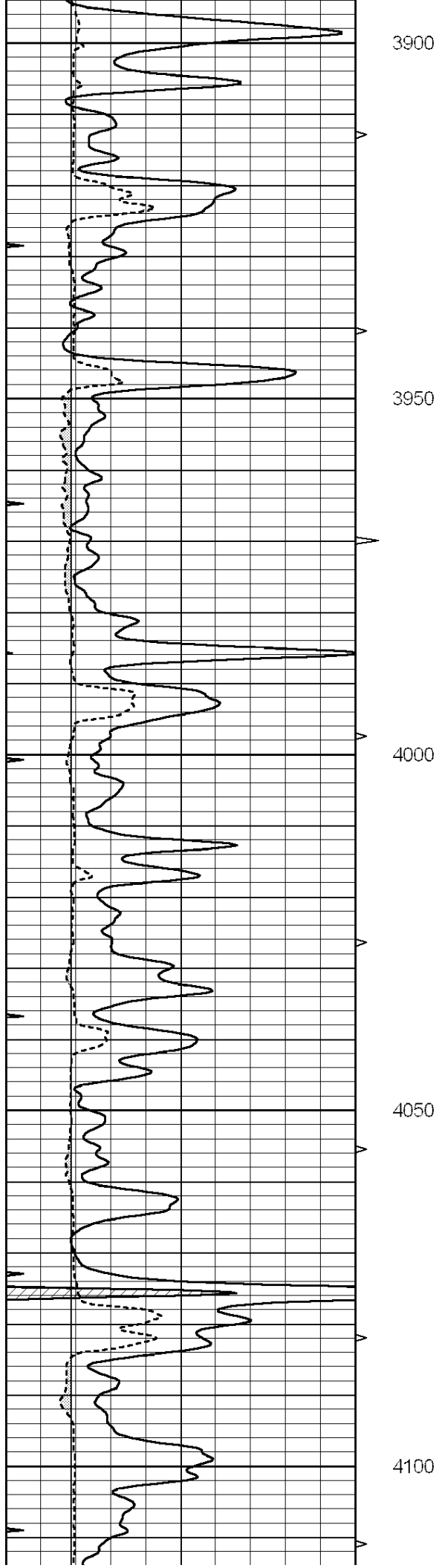
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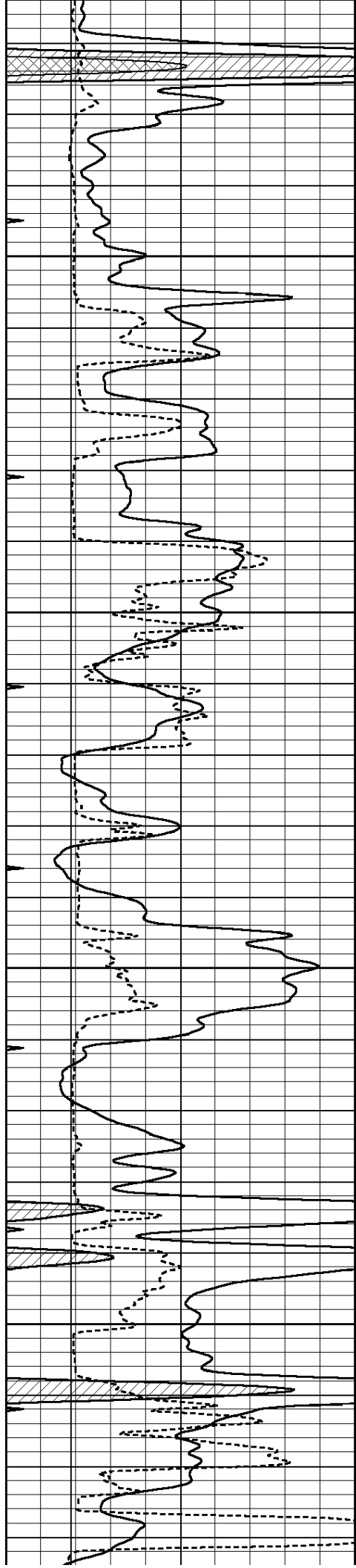
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3800

3850





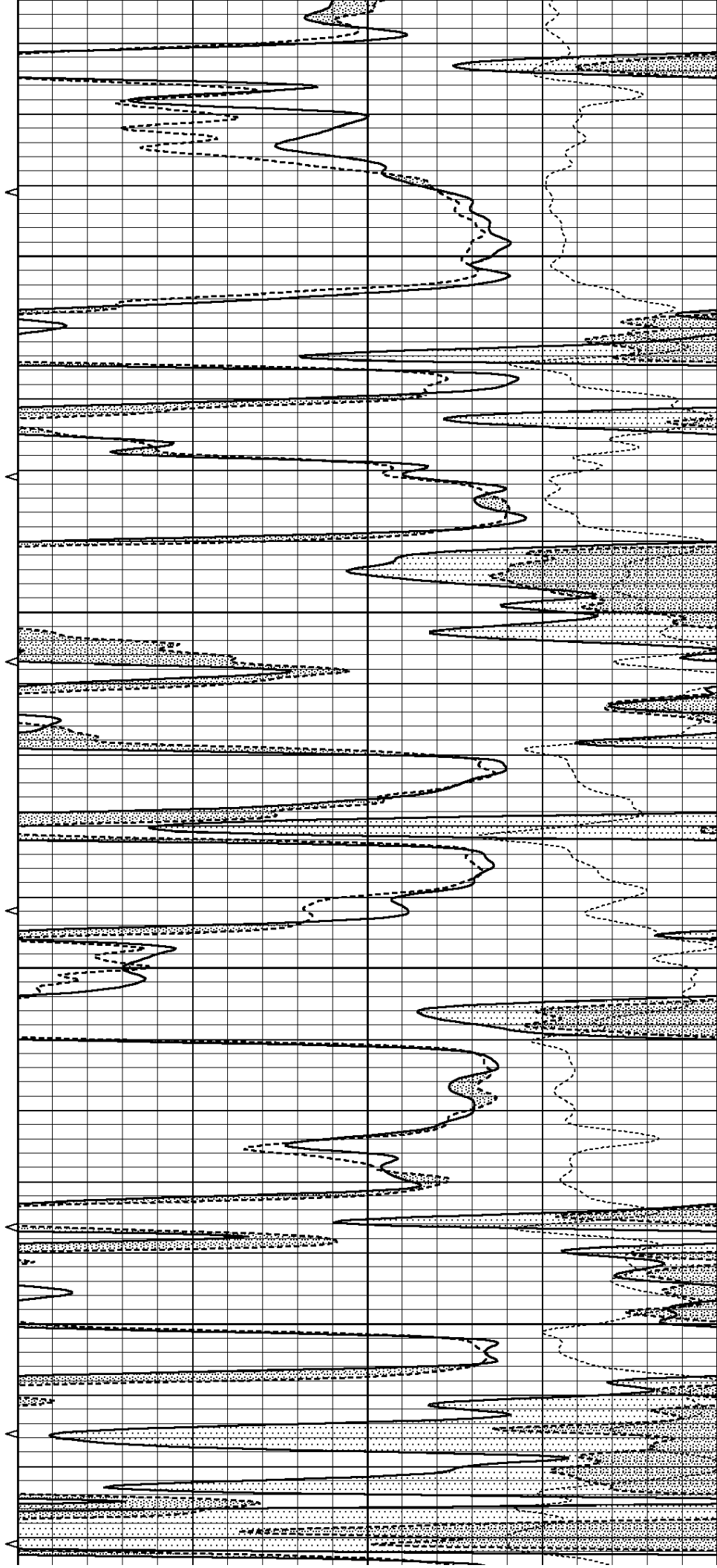


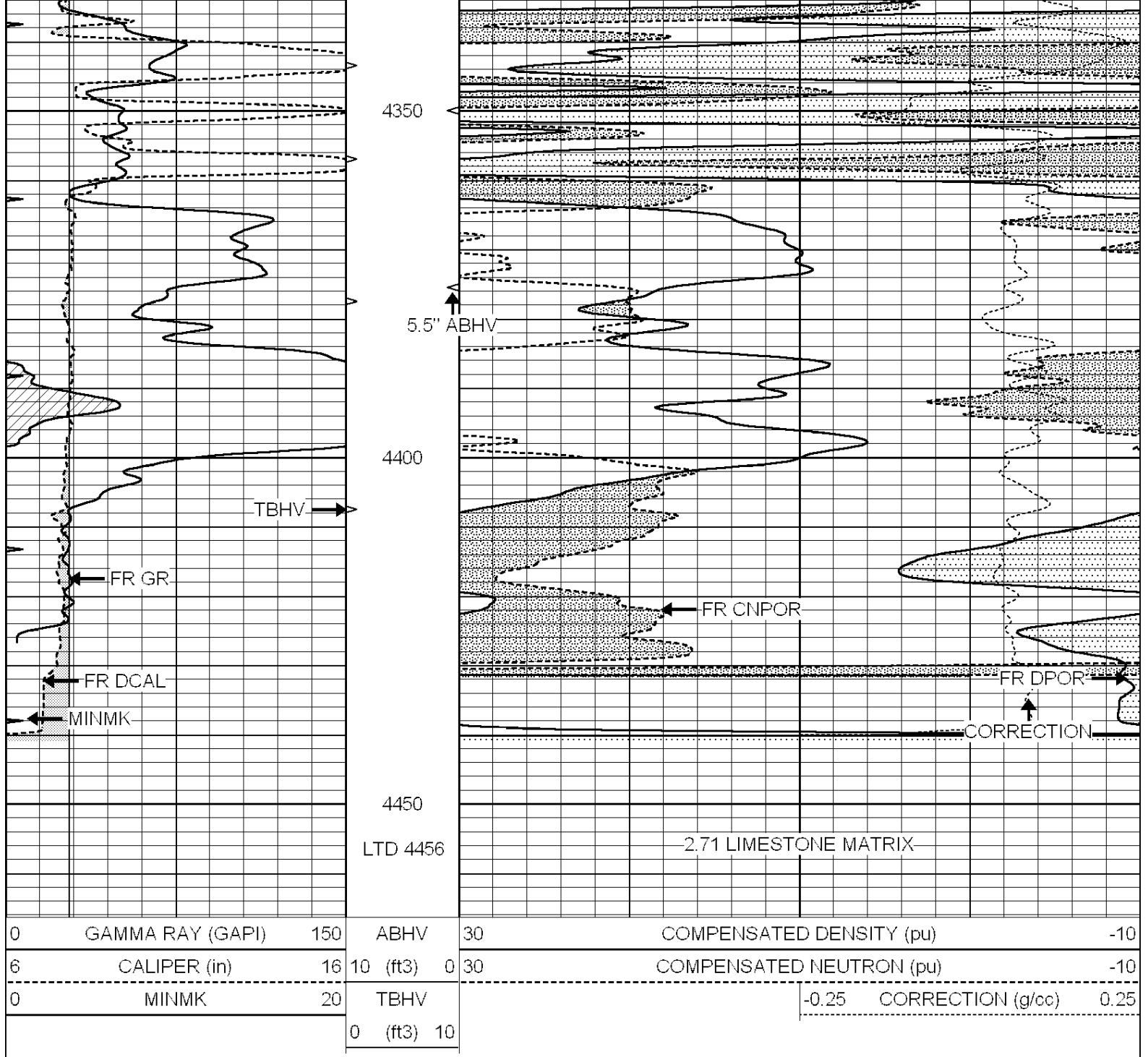
4150

4200

4250

4300





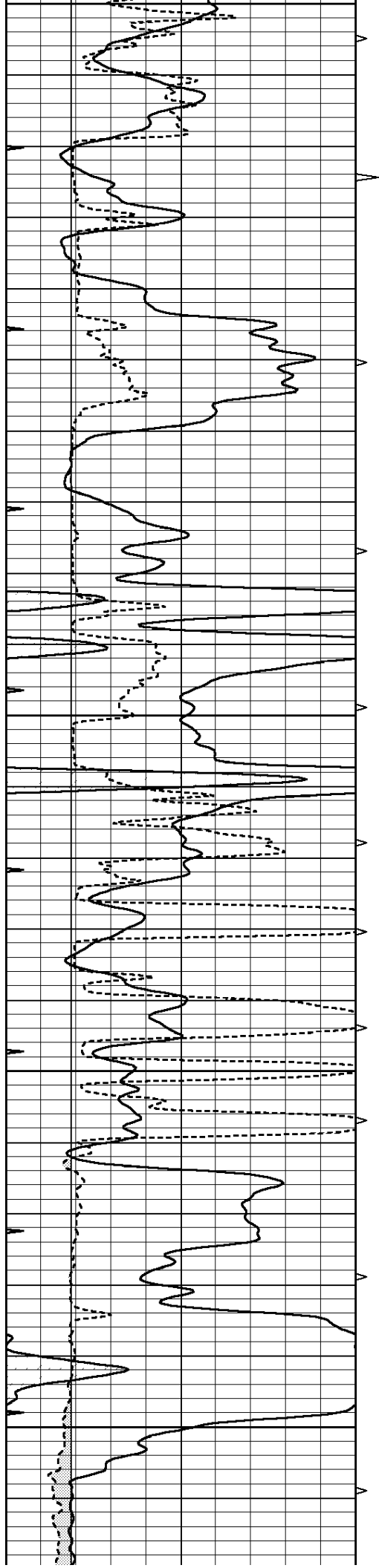
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REPEAT SECTION

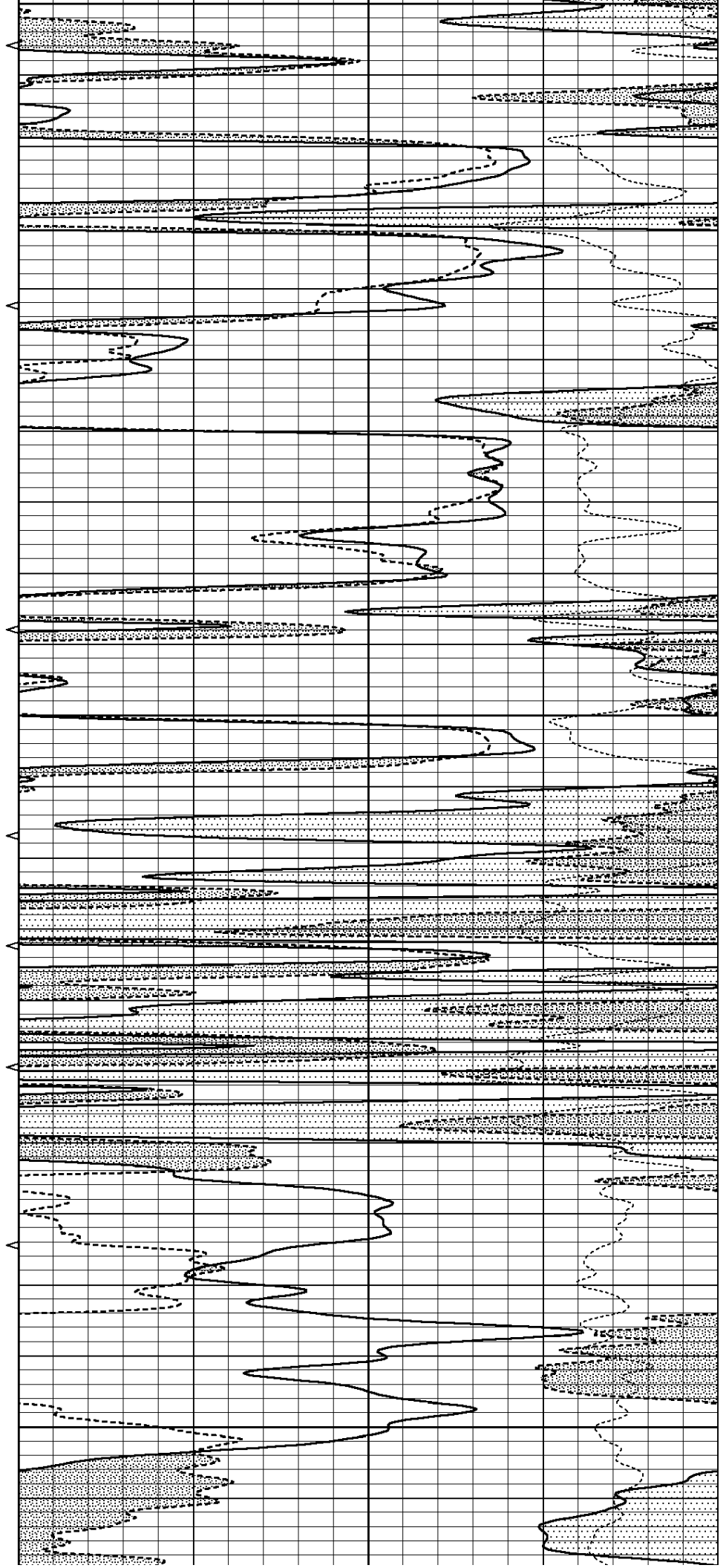
Database File: 26638ddn.db
 Dataset Pathname: pass2.2
 Presentation Format: den_neu
 Dataset Creation: Sat Sep 05 08:36:45 2015
 Charted by: Depth in Feet scaled 1:240

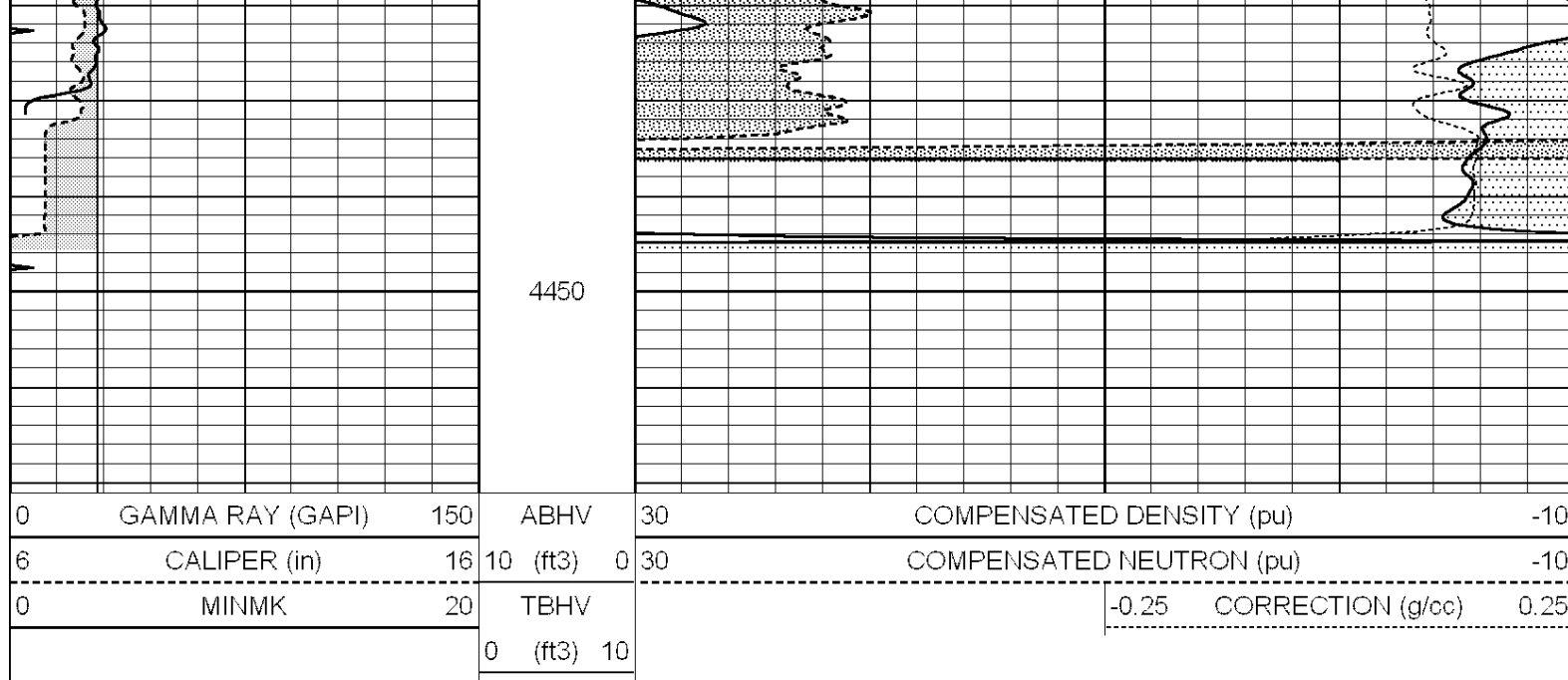
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)			-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)			-10

0	MINMK	20	TBHV			-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10					



4200
4250
4300
4350
4400





Calibration Report

Database File: 26638ddn.db
 Dataset Pathname: pass3.5
 Dataset Creation: Sat Sep 05 09:56:45 2015

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Thu Sep 03 12:01:33 2015
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	670.000	-10.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	670.000	-25.000
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		

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:	Thu Sep 03 14:11:59 2015		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2800	GAPI/cps	