



**COMPENSATED
DENSITY/NEUTRON
LOG**

Company DOWNING NELSON OIL COMPANY, INC.
 Well HEBERLEIN #1-25
 Field FLAX
 County TREGO
 State KANSAS

Location: API #: 15-195-23048-0000
 1662' FSL & 335' FWL
 SEC 25 TWP 13S RGE 21W
 Permanent Datum GROUND LEVEL Elevation 2327
 Log Measured From KELLY BUSHING 8' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services
 DILMEL
 SONIC
 Elevation
 K.B. 2335
 D.F. 2333
 G.L. 2327

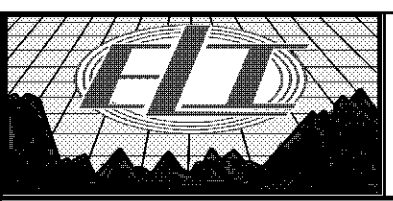
Date	6/8/18		
Run Number	ONE		
Depth Driller	4108		
Depth Logger	4107		
Bottom Logged Interval	4083		
Top Log Interval	3250		
Casing Driller	8 5/8" @ 221		
Casing Logger	220		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 7000 PPM	
Density / Viscosity	9.2/53		
PH / Fluid Loss	9.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.65 @ 98F		
Rmt @ Meas. Temp	.48 @ 98F		
Rmc @ Meas. Temp	.78 @ 98F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.54 @ 117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	117F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
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

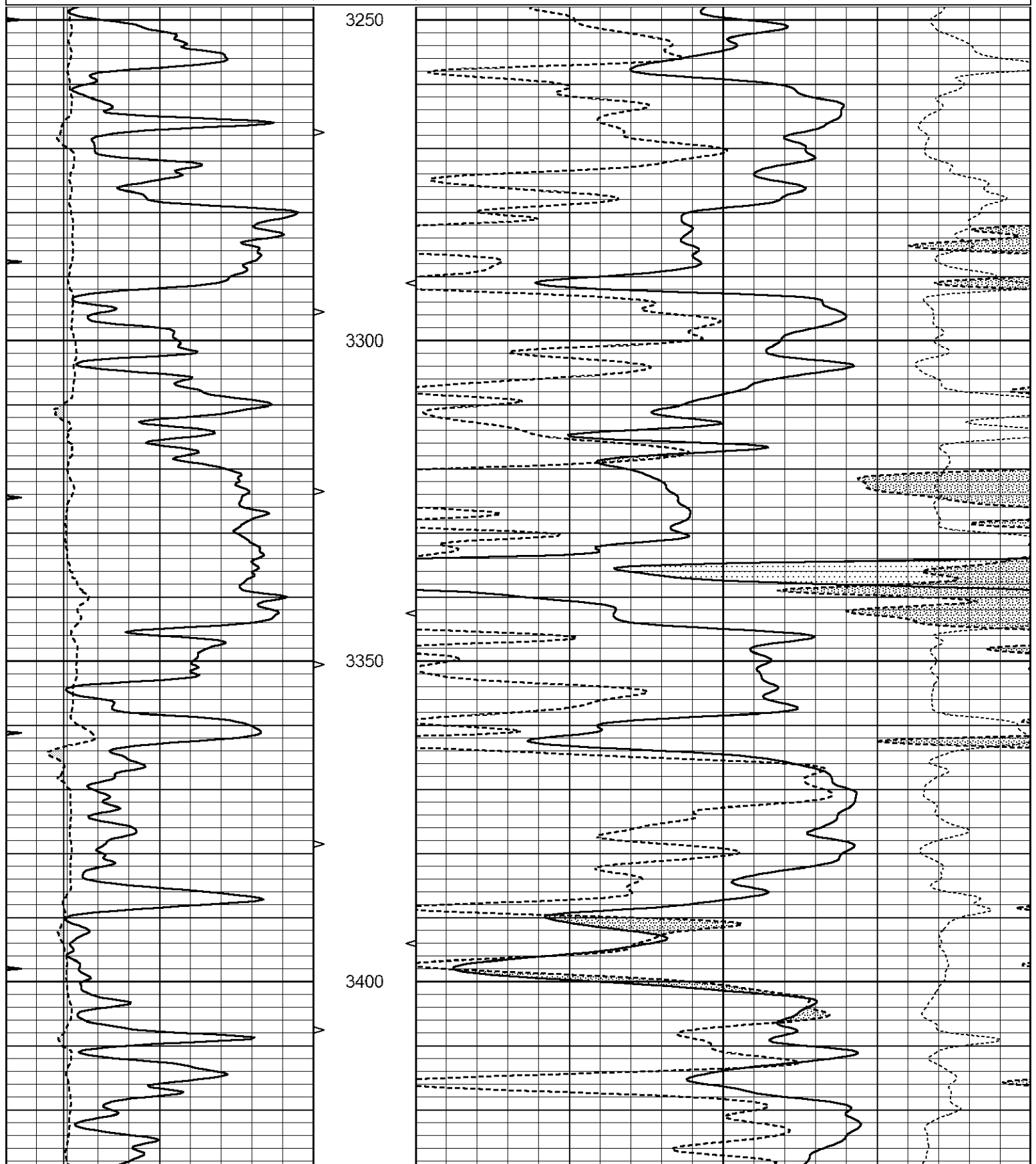
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
 DIRECTIONS
 ELLIS, KS. - 2 WEST ON HWY 40 TO RD. 400 - 3 3/4 SOUTH - EAST INTO

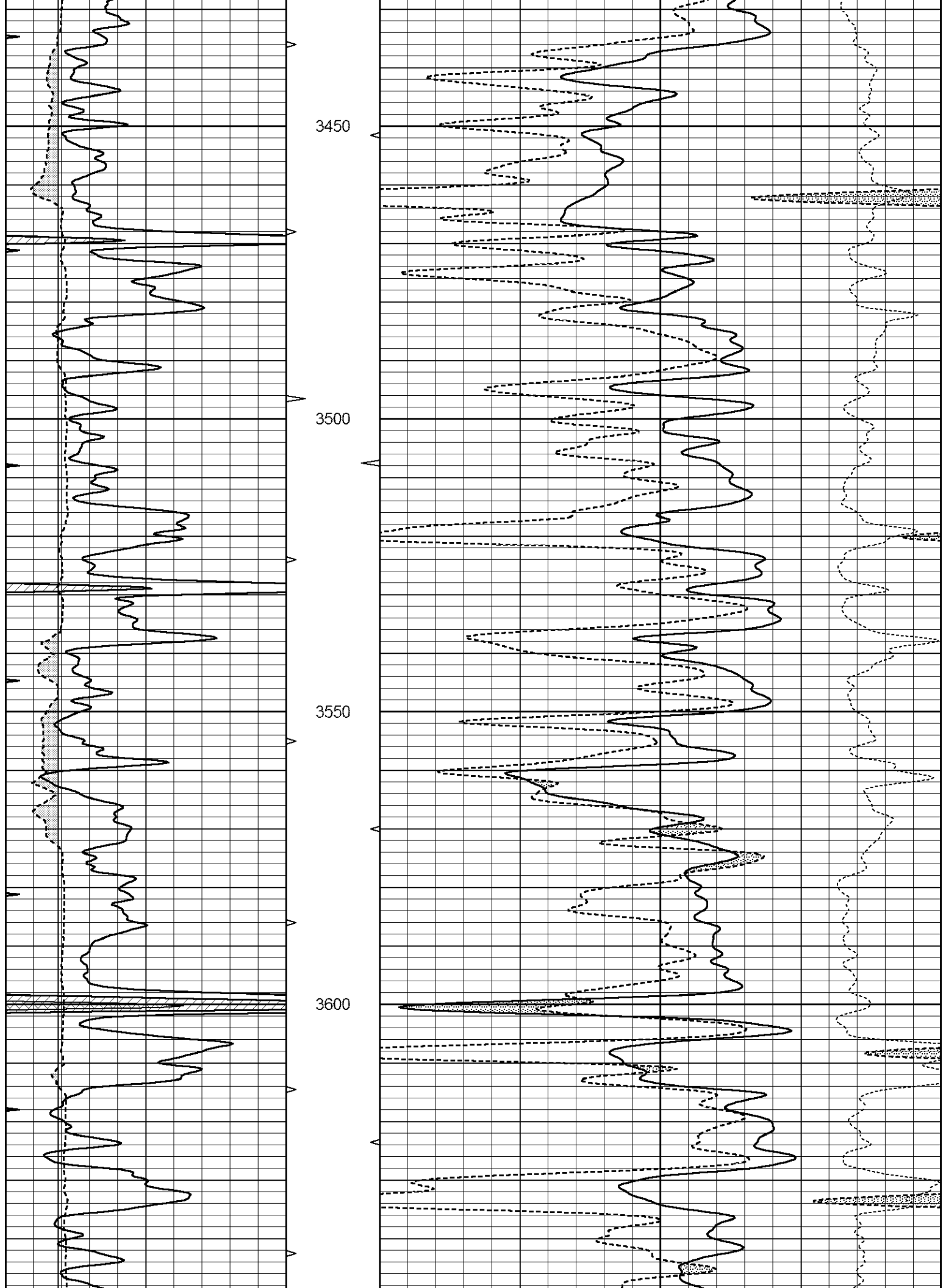


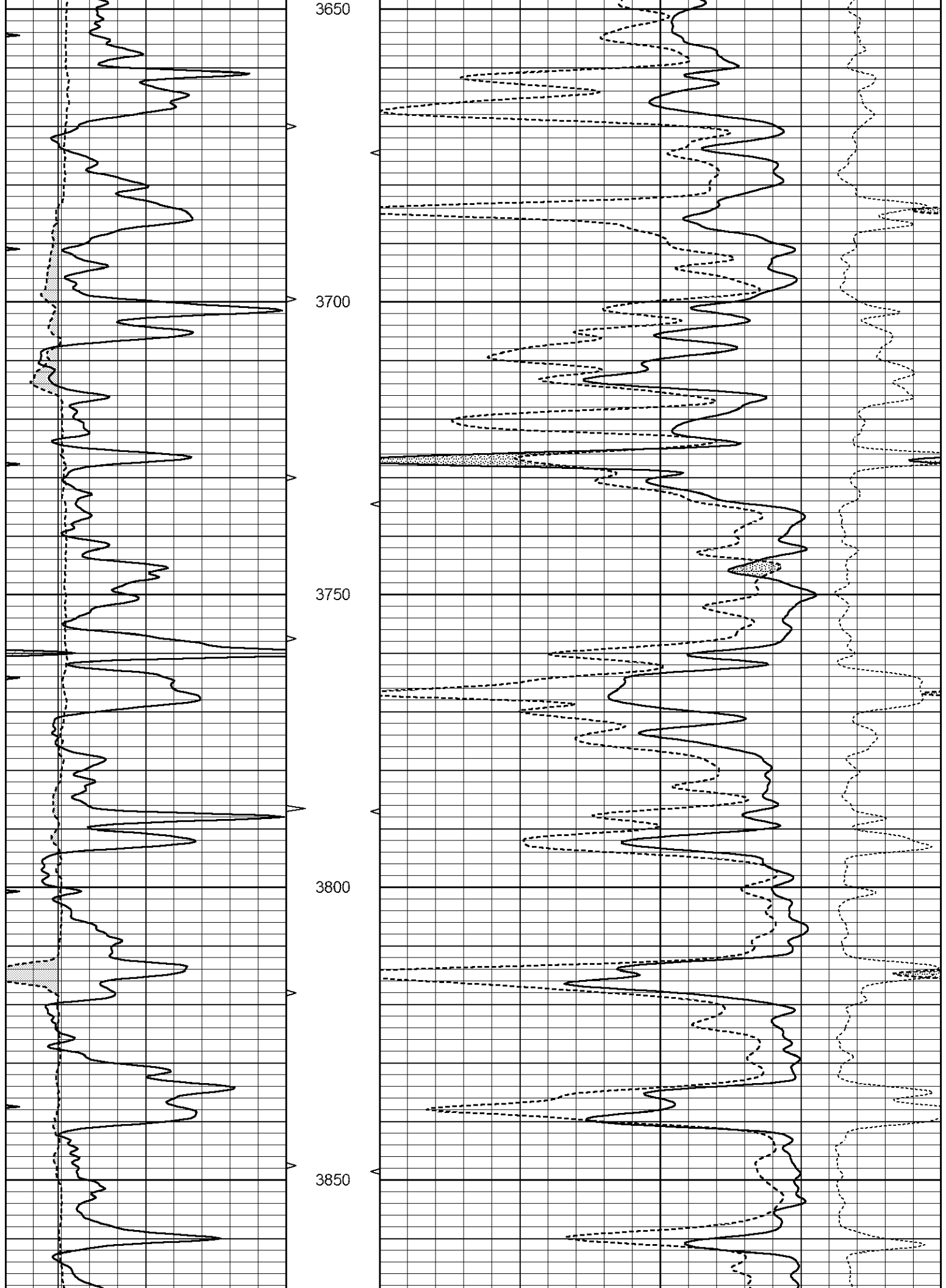
MAIN SECTION

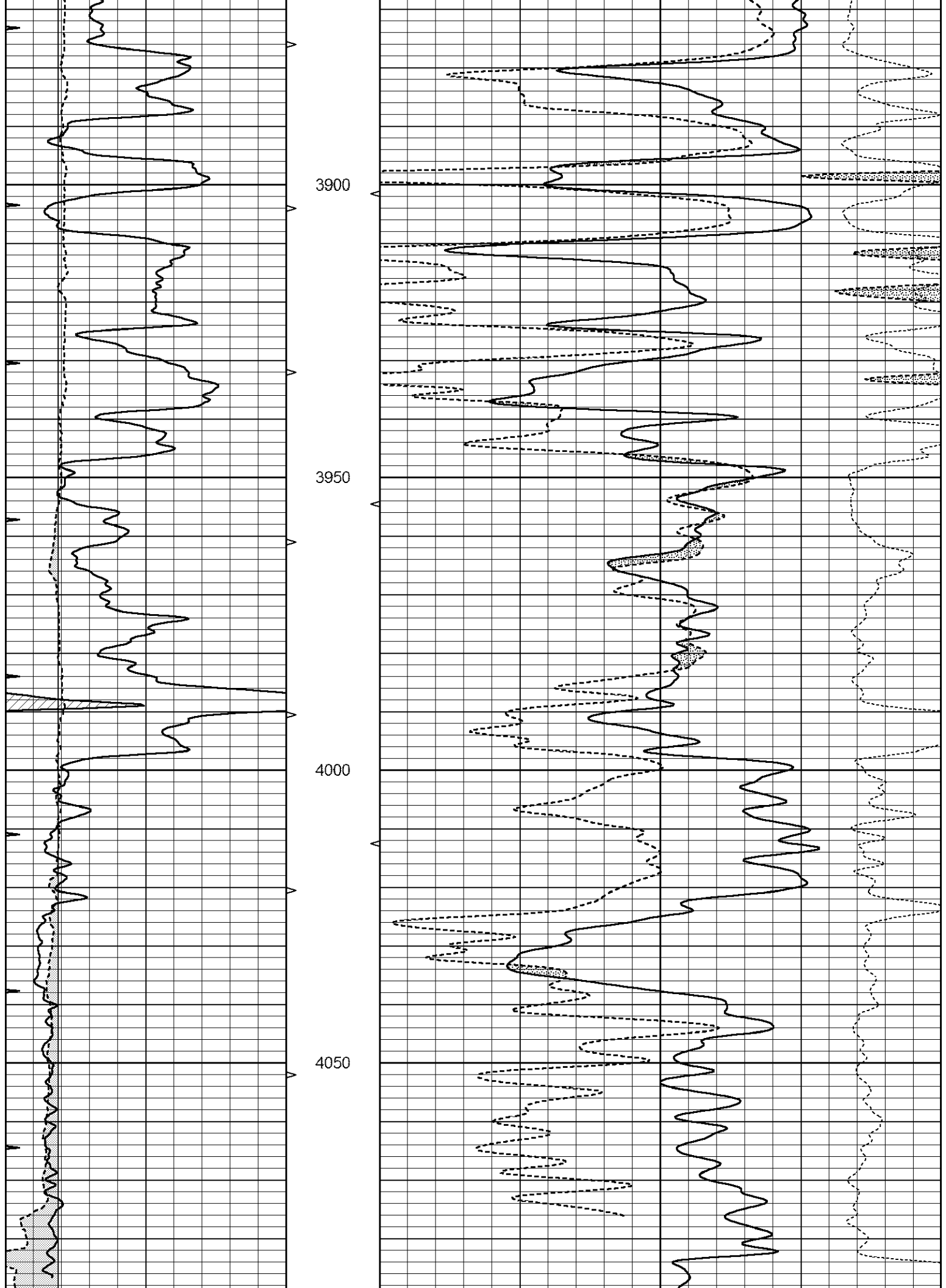
Database File 2505ddn8.db
 Dataset Pathname pass3M
 Presentation Format den_neu
 Dataset Creation Mon Jun 11 12:08:53 2018
 Charted by Depth in Feet scaled 1:240

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			

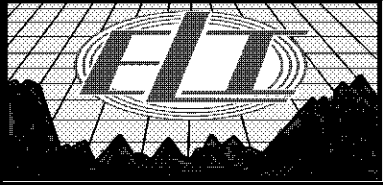








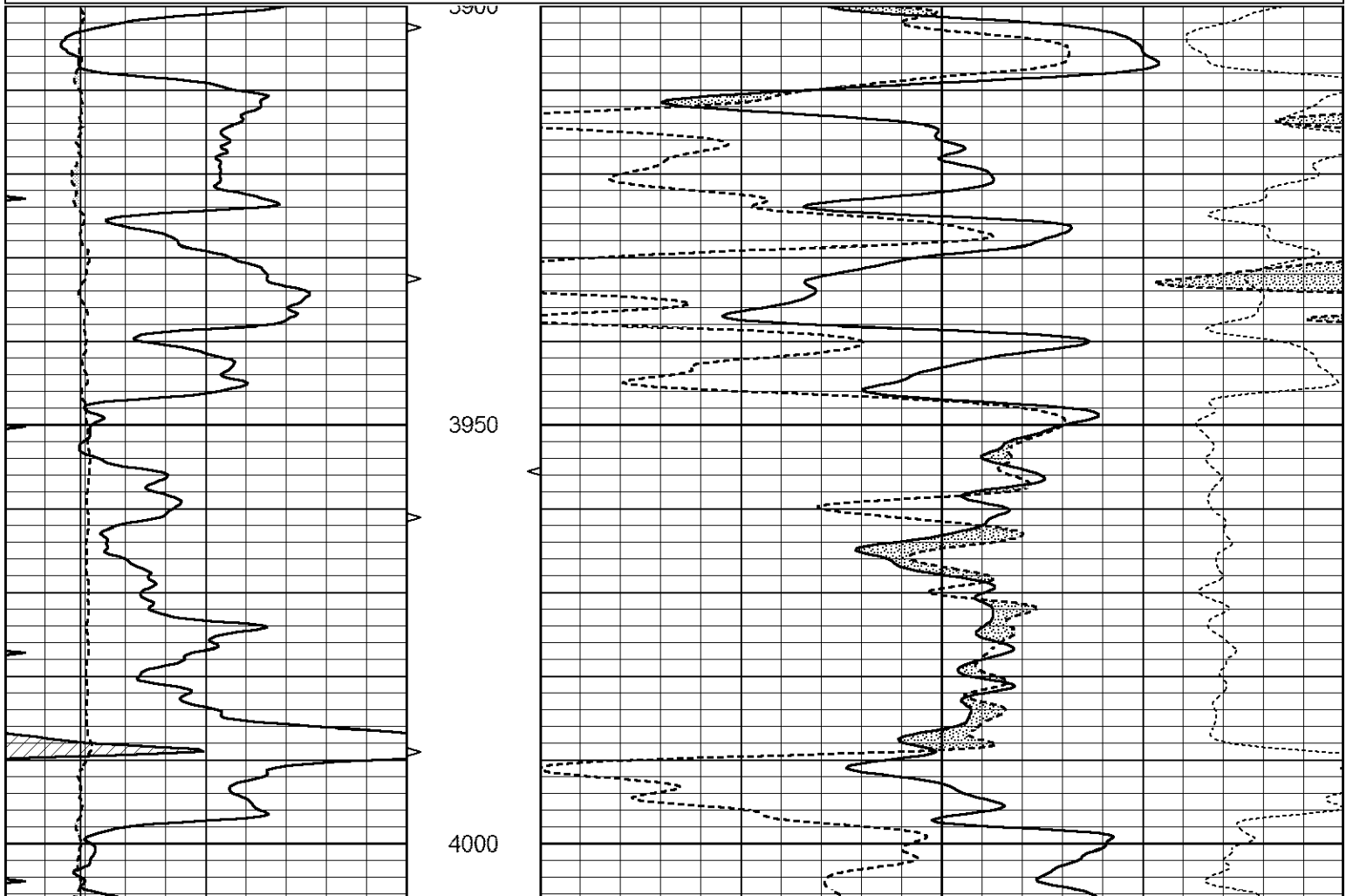
		4100			
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu) -10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu) -10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10		

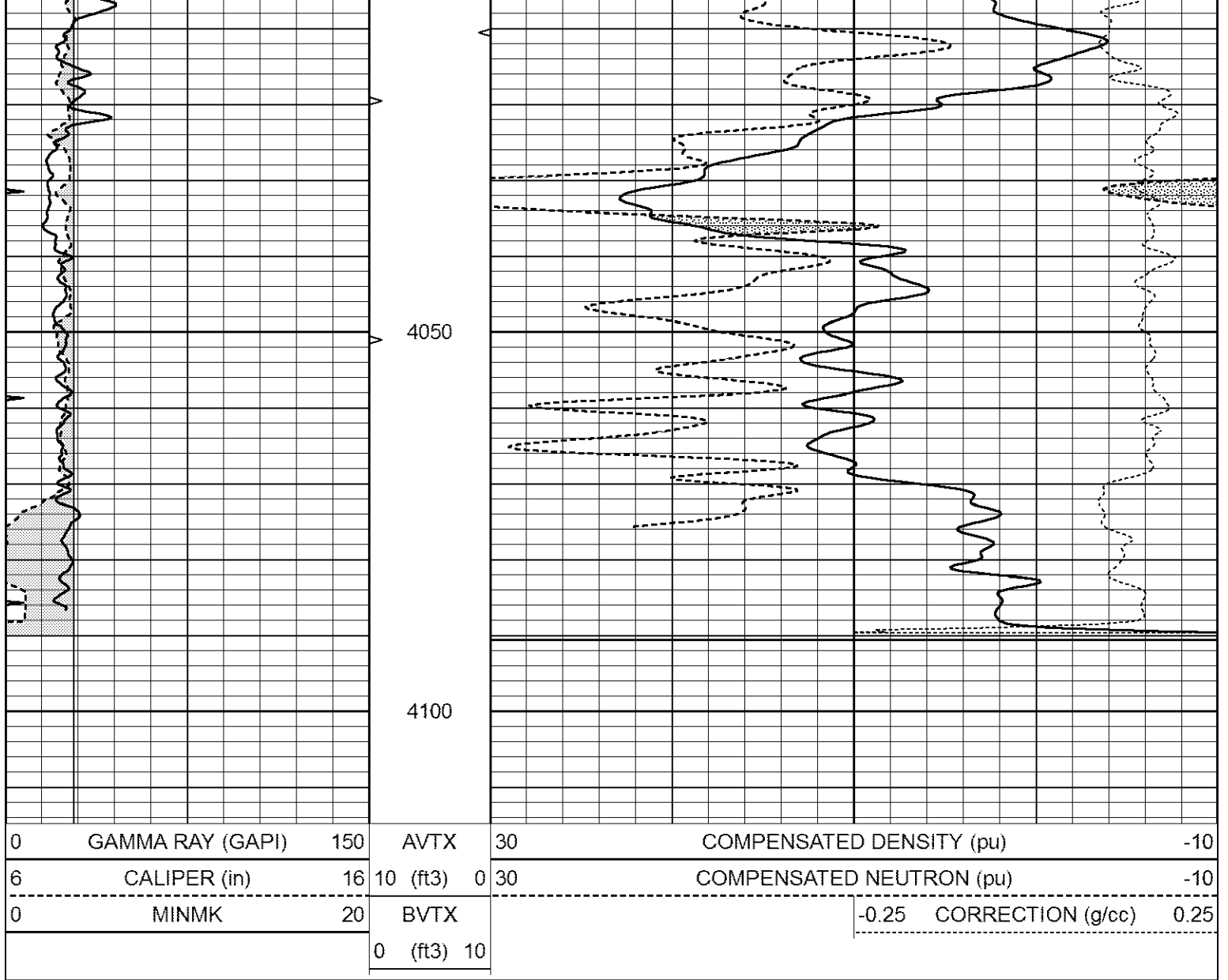


REPEAT SECTION

Database File 2505ddn8.db
 Dataset Pathname pass2RP
 Presentation Format _den_neu
 Dataset Creation Mon Jun 11 12:32:01 2018
 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		





Calibration Report

Database File 2505ddn8.db
 Dataset Pathname pass3.1
 Dataset Creation Fri Jun 08 19:53:09 2018

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Mon May 22 14:23:32 2017
 Downhole Cal Performed: Thu Mar 12 09:29:20 2015
 After Survey Verification Performed: Thu Mar 12 09:29:20 2015

Surface Calibration

Loop:	Readings				References			Results	
	Air	Loop	V		Air	Loop	mmho/m	m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	618.595	-5.524	
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	632.856	1.197	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.007	0.649	V	0.000	400.000	mmho/m	623.784	-4.595	
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251	

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		2500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	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		

Compensated Neutron Calibration Report

Serial Number: 080621PMC
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: Probe1
Performed: Tue Jul 25 12:16:33 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.4000 GAPI/cps