



**COMPENSATED  
DENSITY/NEUTRON  
LOG**

Company L.D. DRILLING, INC.

Well #1-36 HORN

Field J-MUR NORTHEAST

County LANE State KANSAS

Location: API #: 15-101-22631-0000

165' FSL & 1320' FEL

Other Services  
DILMEL

SEC 36 TWP 19S RGE 29W

Elevation

Permanent Datum GROUND LEVEL Elevation 2816

Log Measured From KELLY BUSHING 5' A.G.L

Drilling Measured From KELLY BUSHING

K.B. 2821  
D.F. 2819  
G.L. 2816

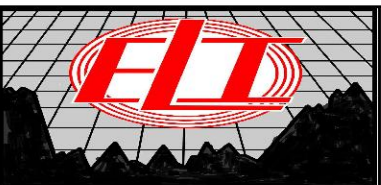
Date	9/26/19		
Run Number	ONE		
Depth Driller	4747		
Depth Logger	4748		
Bottom Logged Interval	4724		
Top Log Interval	3500		
Casing Driller	8 5/8" @ 303'		
Casing Logger	303'		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3600 PPM	
Density / Viscosity	9.4/46		
pH / Fluid Loss	9.0/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.0 @ 80F		
Rmf @ Meas. Temp	.75 @ 80F		
Rmc @ Meas. Temp	1.2 @ 80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.65 @ 123F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	123F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	KIM SHOEMAKER		

<<< Fold Here >>>

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

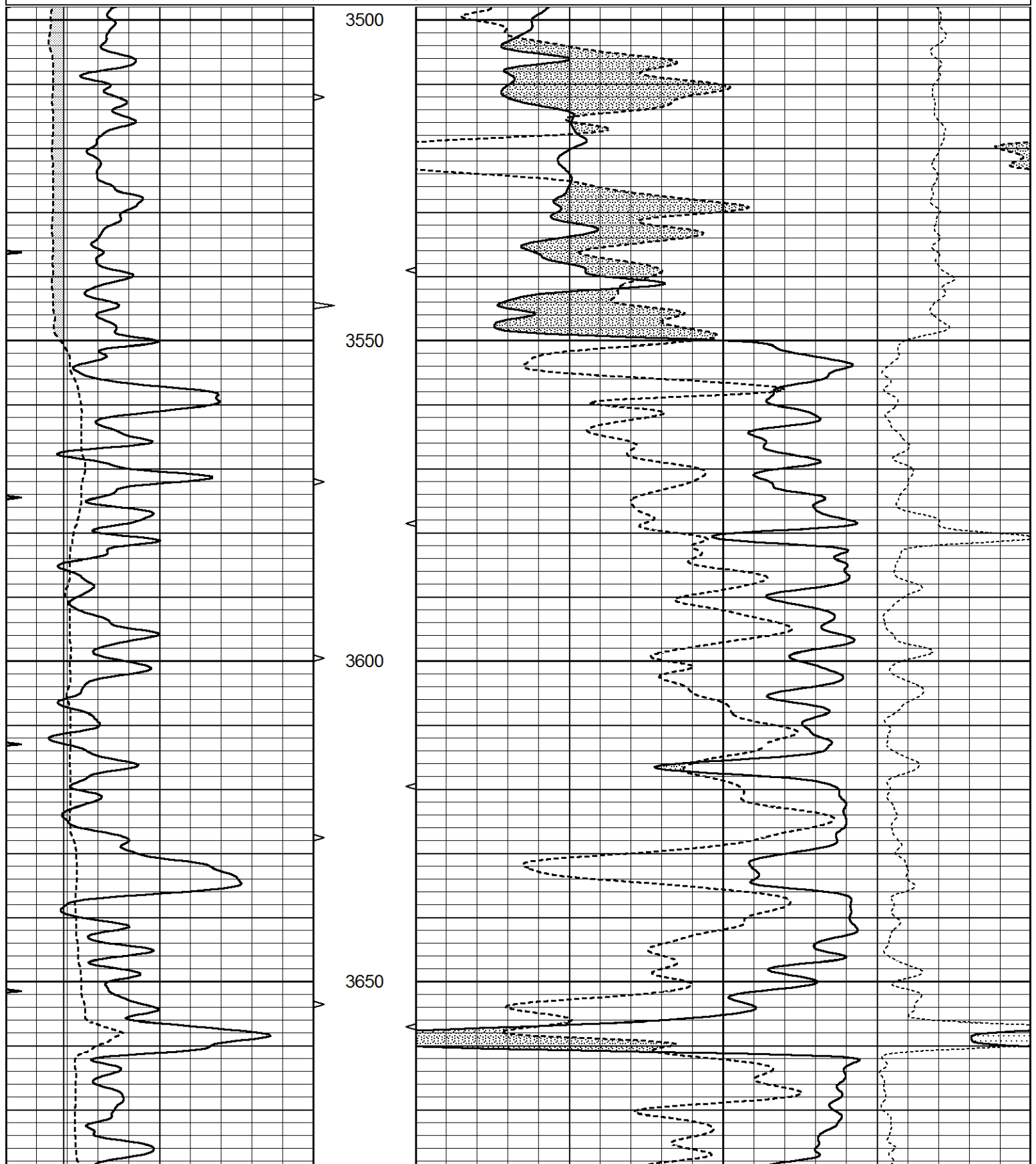
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. ( 785 ) 628-6395  
DIRECTIONS  
DIGHTON, KS. - 9 SOUTH TO RD. 60 - 1/4 WEST - NORTH INTO

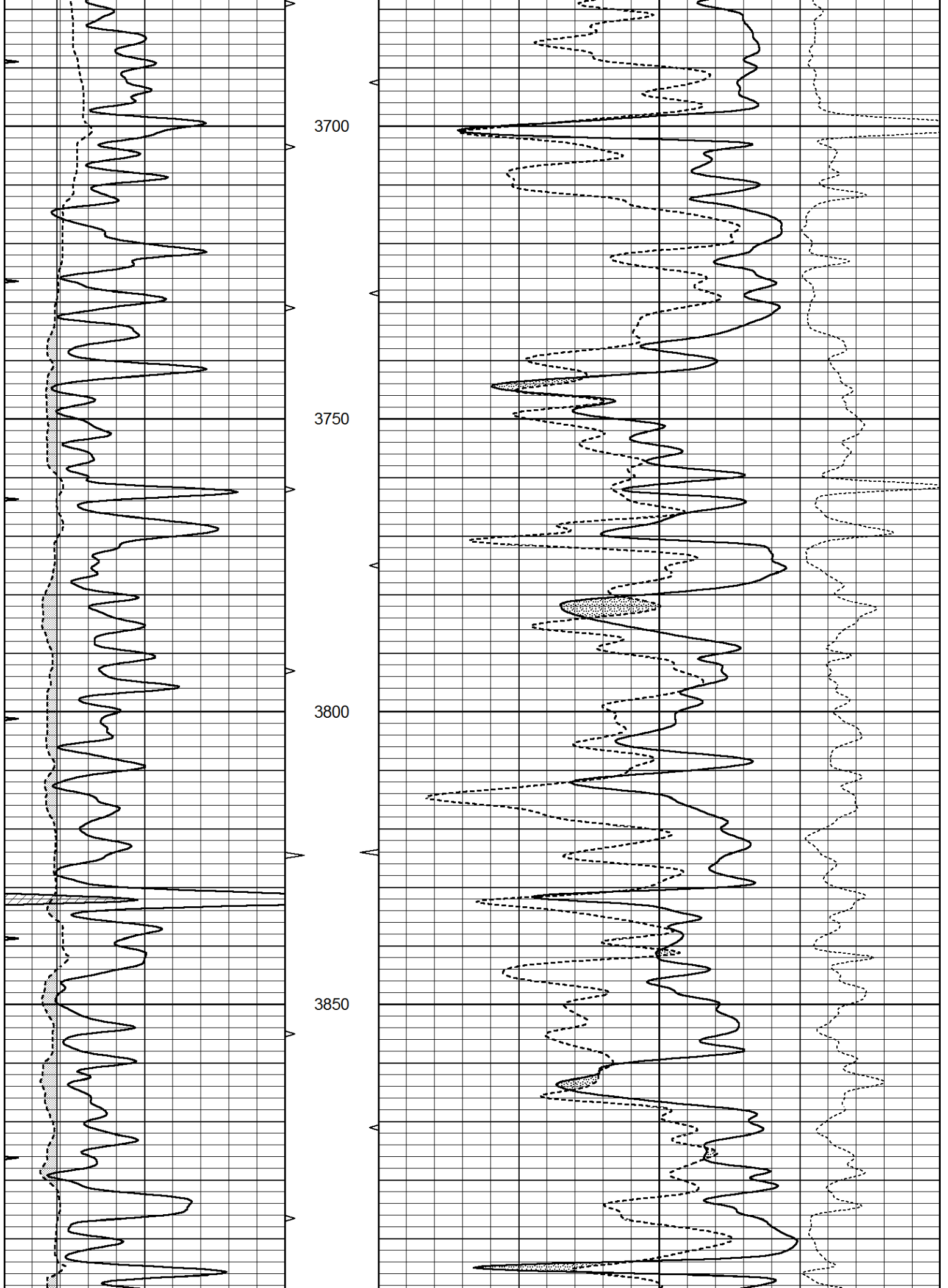


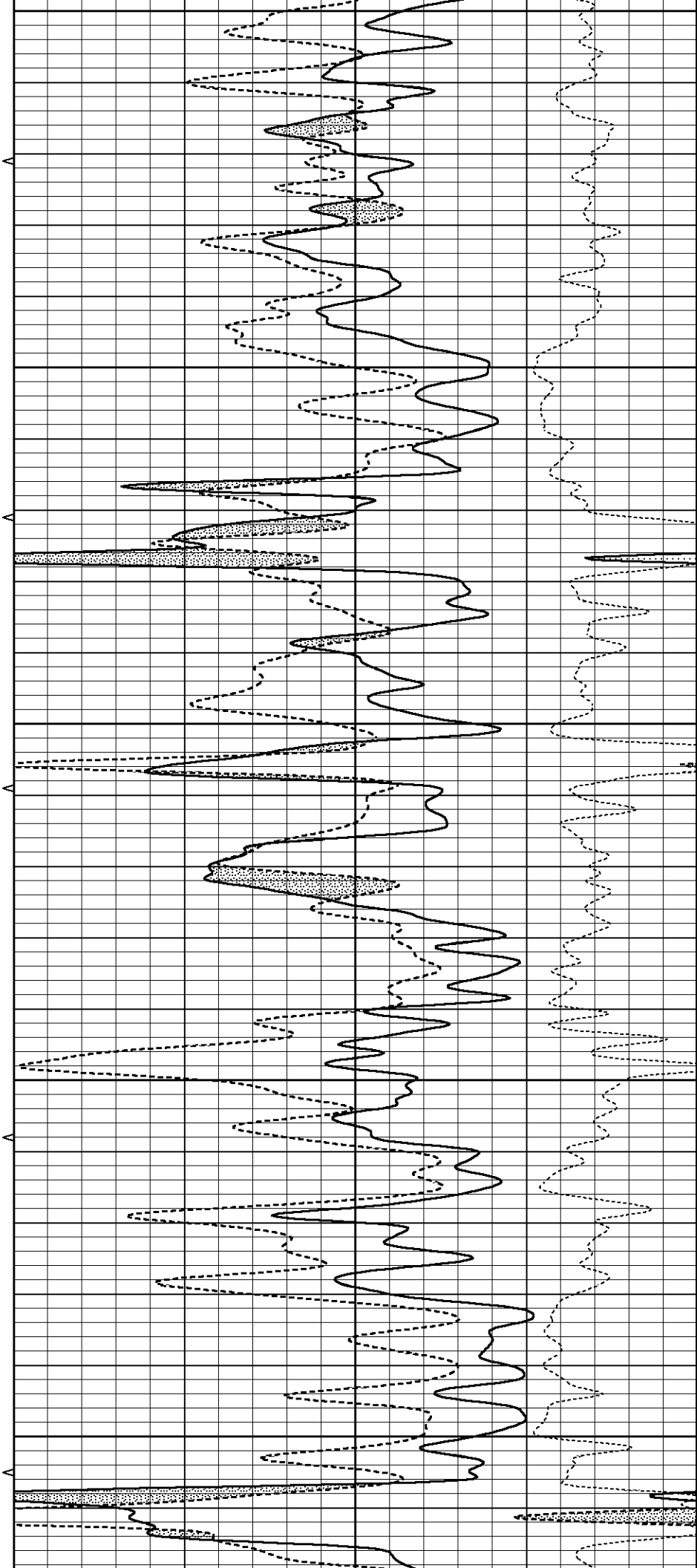
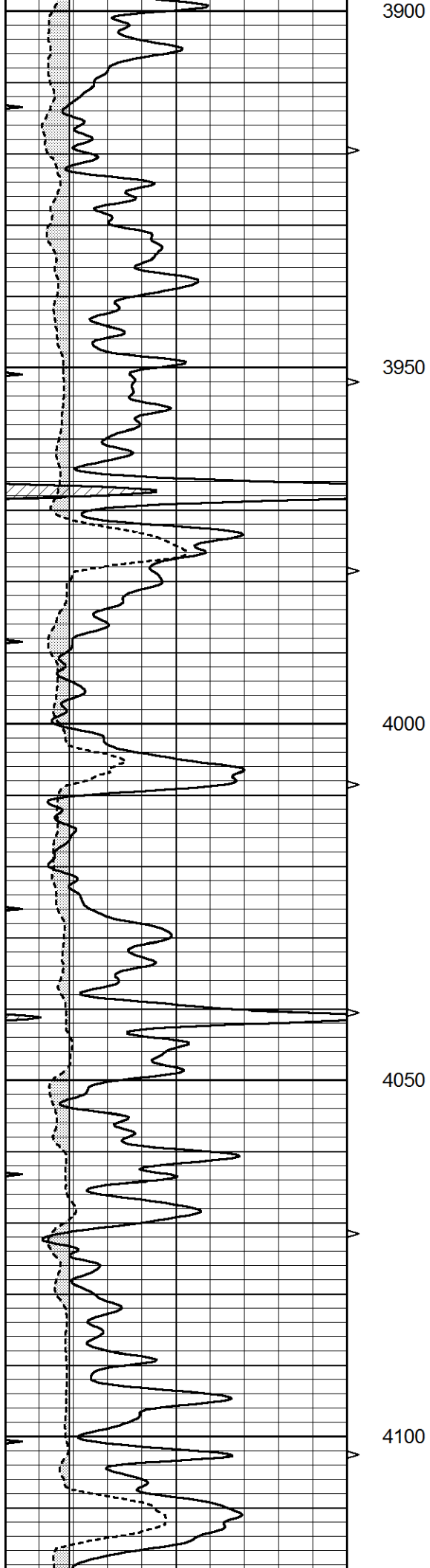
# MAIN SECTION

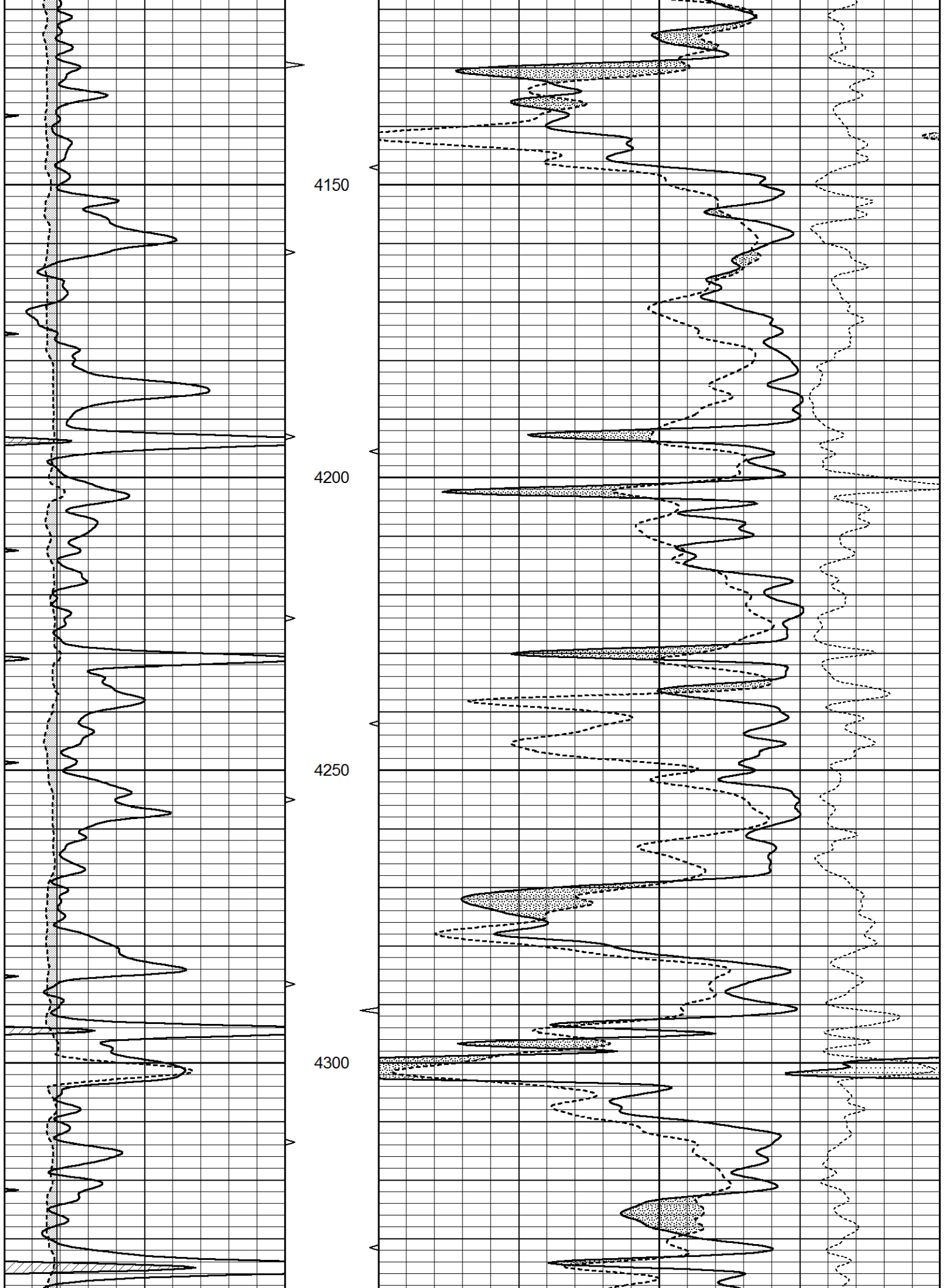
Database File 3995ddn8.db  
 Dataset Pathname pass3.1  
 Presentation Format \_den\_neu  
 Dataset Creation Thu Sep 26 01:43:22 2019  
 Charted by Depth in Feet scaled 1:240

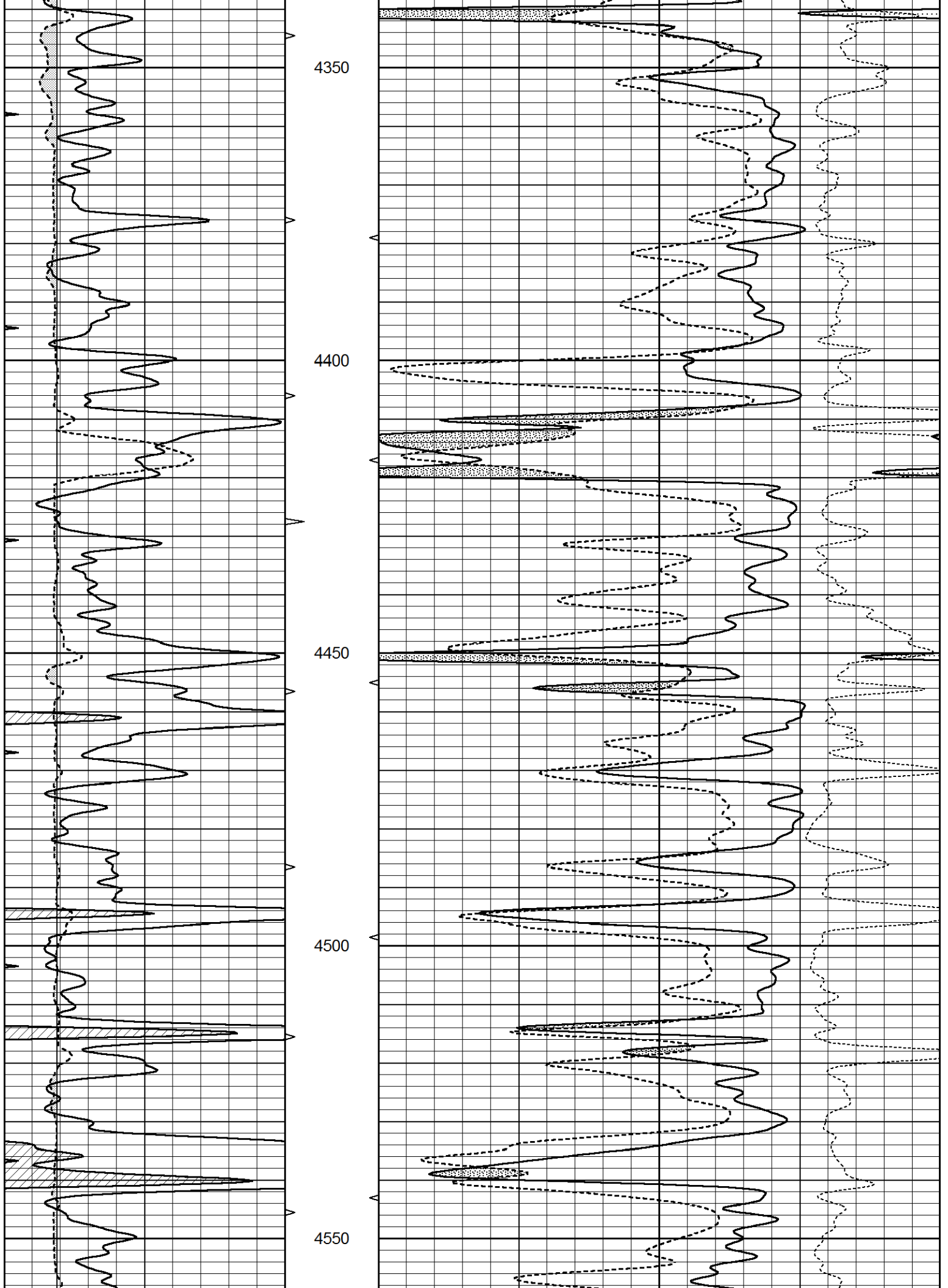
0	GAMMA RAY (GAPI)	150	AVTX	30	COMPENSATED DENSITY (pu)	-10
0	MINMK	20	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
6	CALIPER (in)	16	BVTX		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			

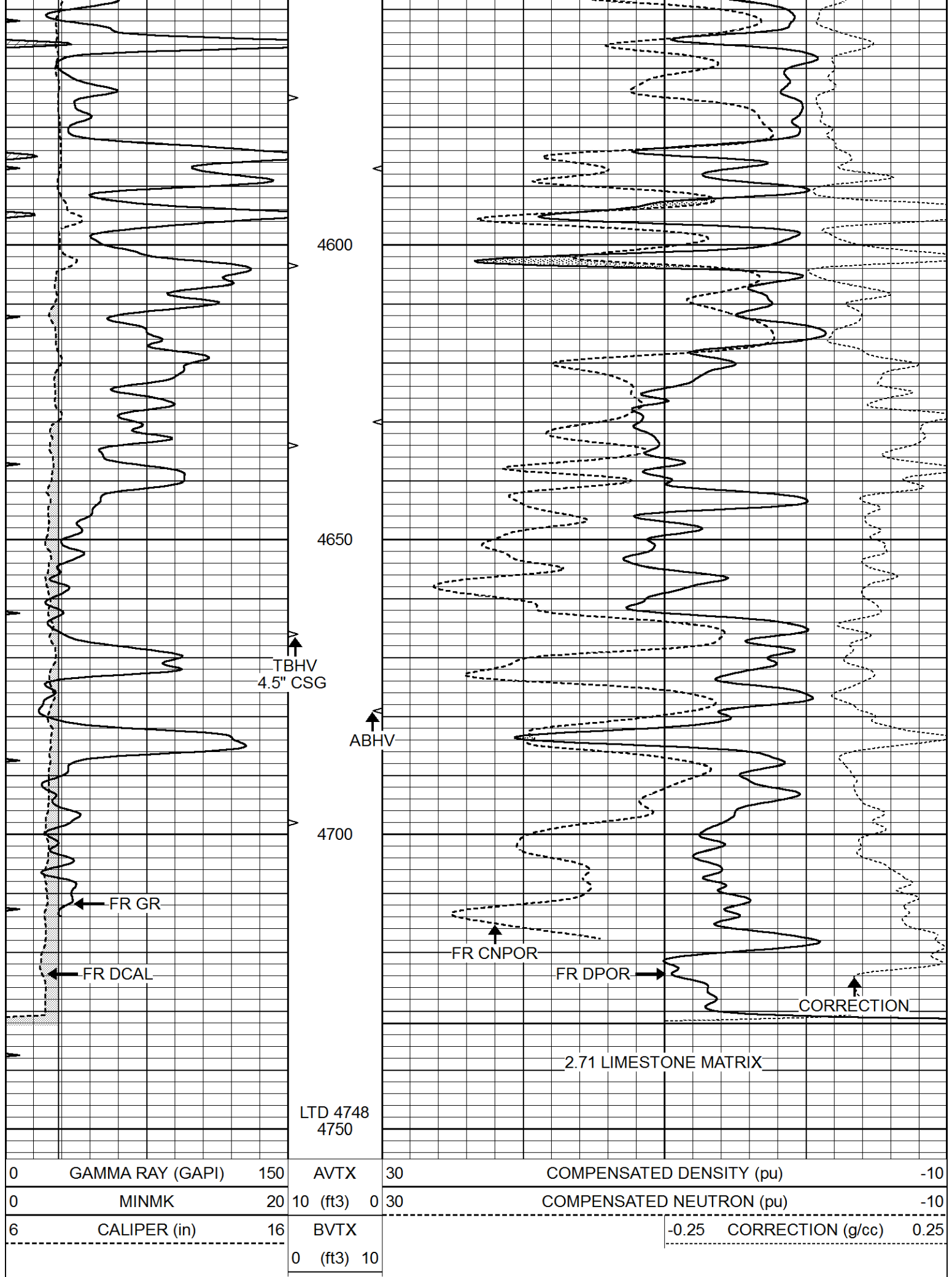












4600

4650

4700

TBHV  
4.5" CSG

ABHV

FR GR

FR DCAL

FR CNPOR

FR DPOR

CORRECTION

2.71 LIMESTONE MATRIX

LTD 4748  
4750

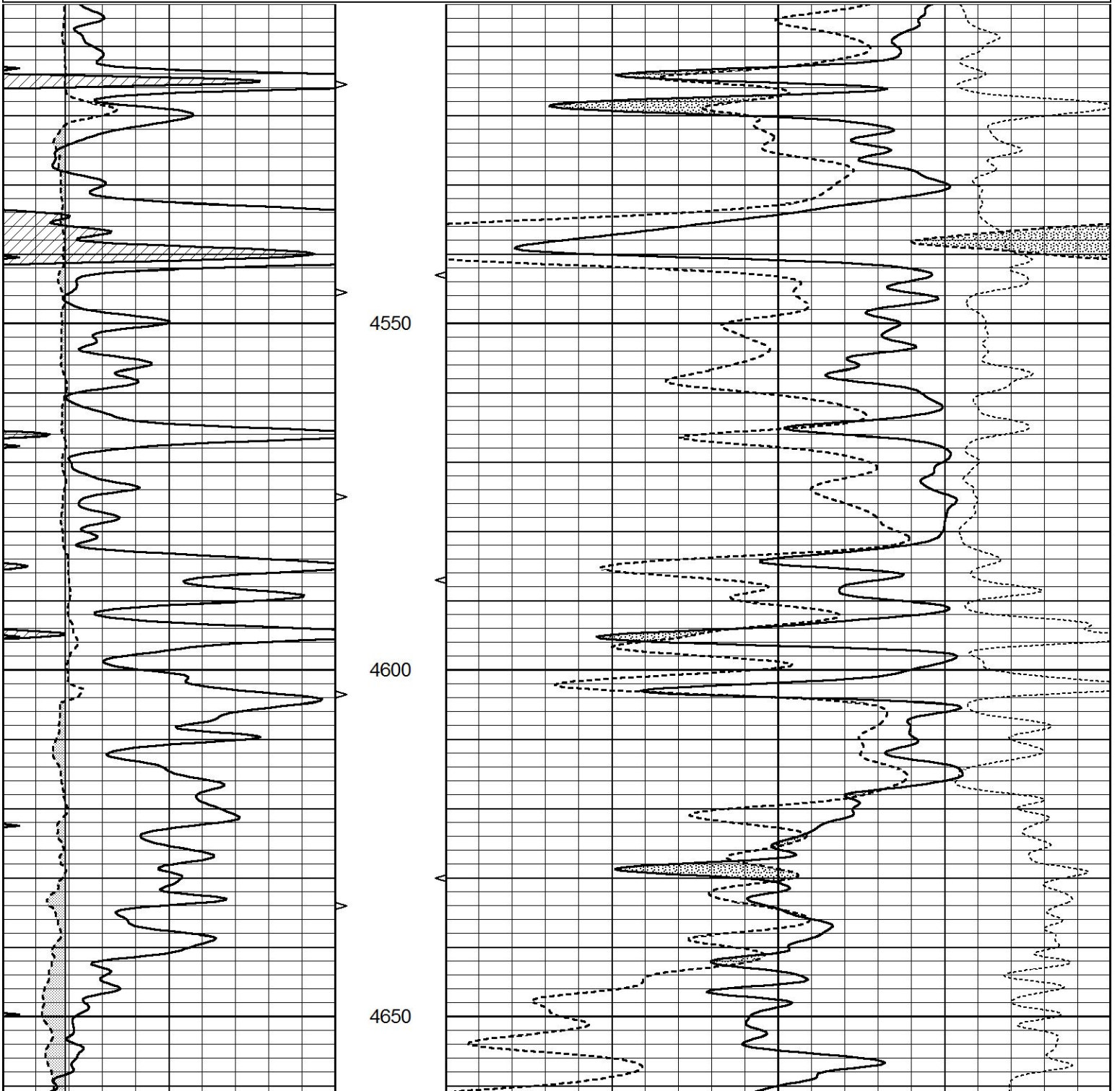
0	GAMMA RAY (GAPI)	150	AVTX	30	COMPENSATED DENSITY (pu)	-10
0	MINMK	20	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
6	CALIPER (in)	16	BVTX		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

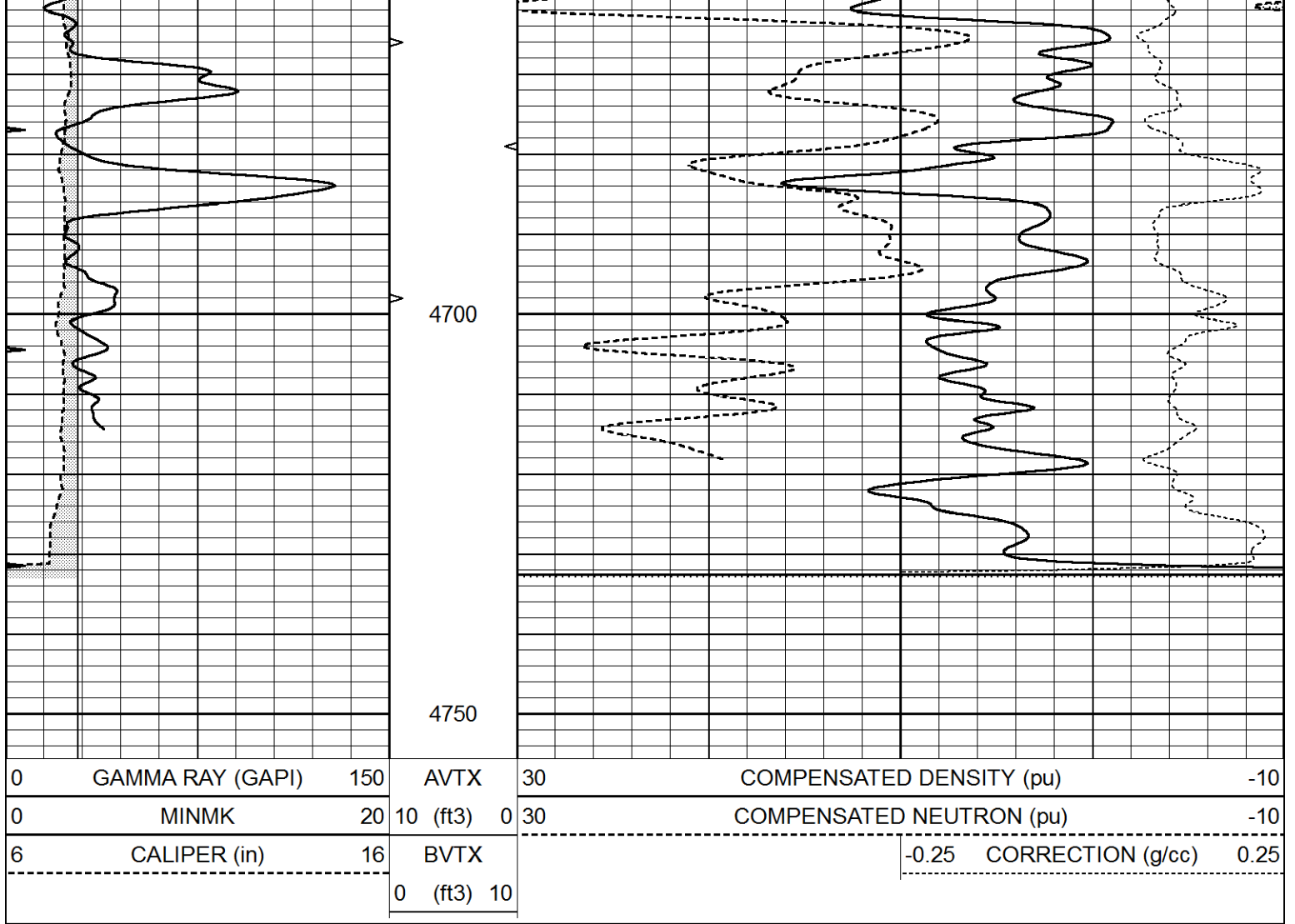


# REPEAT SECTION

Database File 3995ddn8.db  
 Dataset Pathname pass2.1  
 Presentation Format \_den\_neu  
 Dataset Creation Thu Sep 26 01:36:51 2019  
 Charted by Depth in Feet scaled 1:240

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





### Calibration Report

Database File 3995ddn8.db  
 Dataset Pathname pass2.1  
 Dataset Creation Thu Sep 26 01:36:51 2019

### Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe  
 Surface Cal Performed: Tue Feb 19 11:44:18 2019  
 Downhole Cal Performed: Tue Feb 19 11:44:24 2019  
 After Survey Verification Performed: Tue Feb 19 11:44:27 2019

#### Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		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	0.004	0.017		0.000	207.550	mmho/m	1.004	0.110

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		1500.000	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:	7
Tool Model:	Probe1
Performed:	Tue Feb 19 11:45:10 2019
Calibrator Value:	1.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	1.0 cps
Sensitivity:	0.4300 GAPI/cps