

COMPENSATED DENSITY / NEUTRON LOG

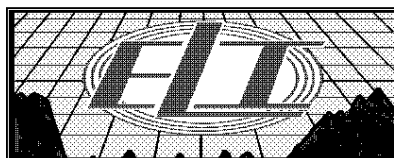
Company		PHILLIPS EXPLORATION COMPANY, L.	
Well		GEYER #1-3 YEP	
Field			
County		TREGO	
State		KANSAS	
Company		RICHEL EXPLORATION, INC.	
Well		GEYER #1-3 YEP	
Field			
County		TREGO	
State		KANSAS	
Location:		API # : 15-195-23078-0000 660' FNL & 1980' FVL	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 5' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 3		TWP 11S	
		RGE 24W	
		Elevation	
		K.B. 2363	
		D.F. 2361	
		G.L. 2358	
Date		1/13/19	
Run Number		ONE	
Depth Driller		4025	
Depth Logger		4026	
Bottom Logged Interval		4002	
Top Log Interval		3200	
Casing Driller		8 5/8"@214	
Casing Logger		214	
Bit Size		7 7/8"	
Type Fluid in Hole		CHEMICAL MUD	
Density / Viscosity		9.1/53	
pH / Fluid Loss		10.5/6.4	
Source of Sample		FLOWLINE	
Rim @ Meas. Temp		.90 @ 75F	
Rmf @ Meas. Temp		.67 @ 75F	
Rmc @ Meas. Temp		1.08 @ 75F	
Source of Rmf / Rmc		MEASUREMENT	
Rim @ BHT		.58 @ 116F	
Time Circulation Stopped		2 HOURS	
Time Logger on Bottom			
Maximum Recorded Temperature		116F	
Equipment Number		922339	
Location		HAYS, KANSAS	
Recorded By		JASON CAPPELLUCCI	
Witnessed By		PAT DEENIHAN	

<<< 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

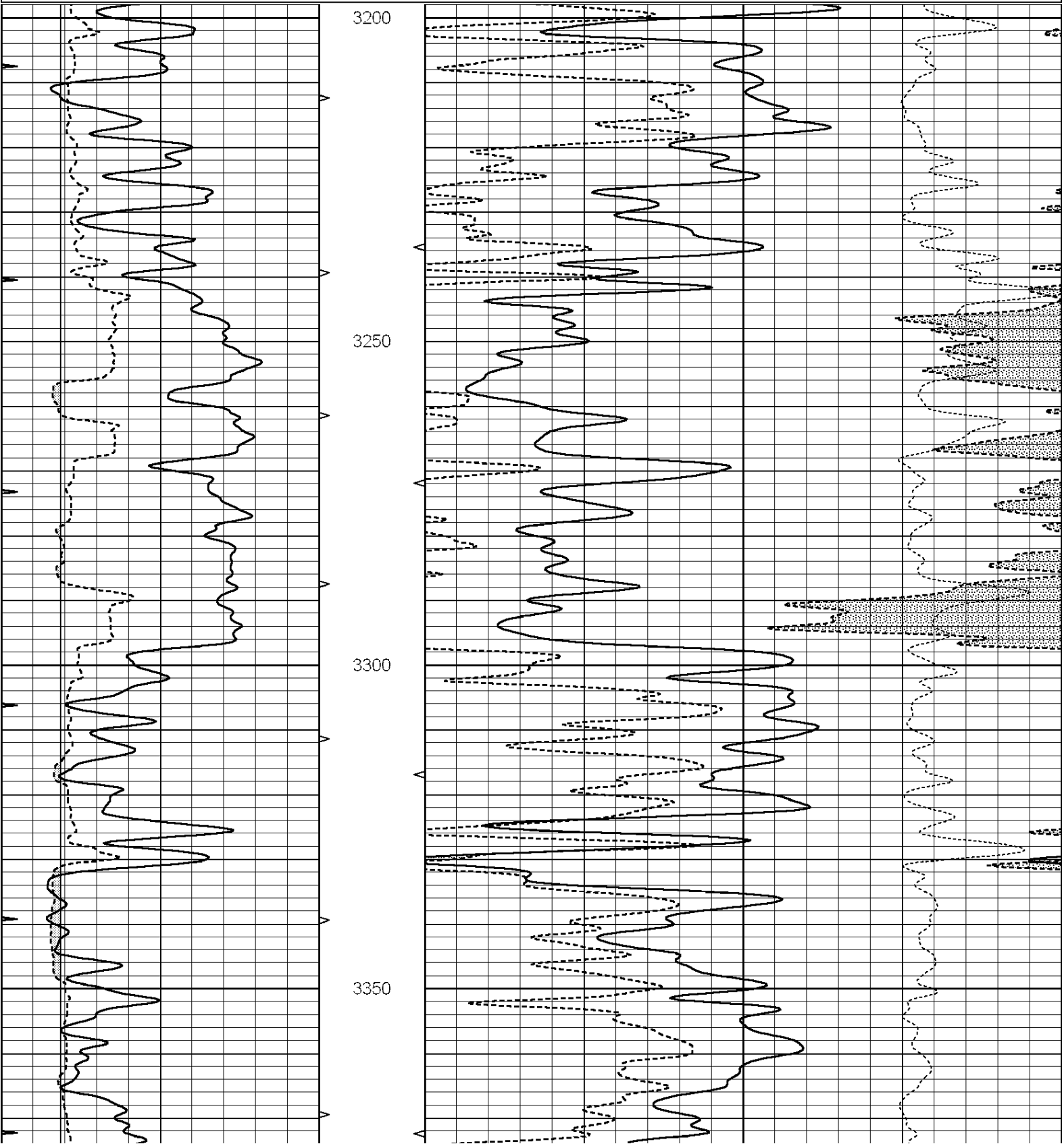
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
WAKEENEY, KS. - NORTH JUST PAST SALINE RIVER TO RD. B - WEST TO RD. 200
1 NORTH - 1/2 EAST - SOUTH INTO

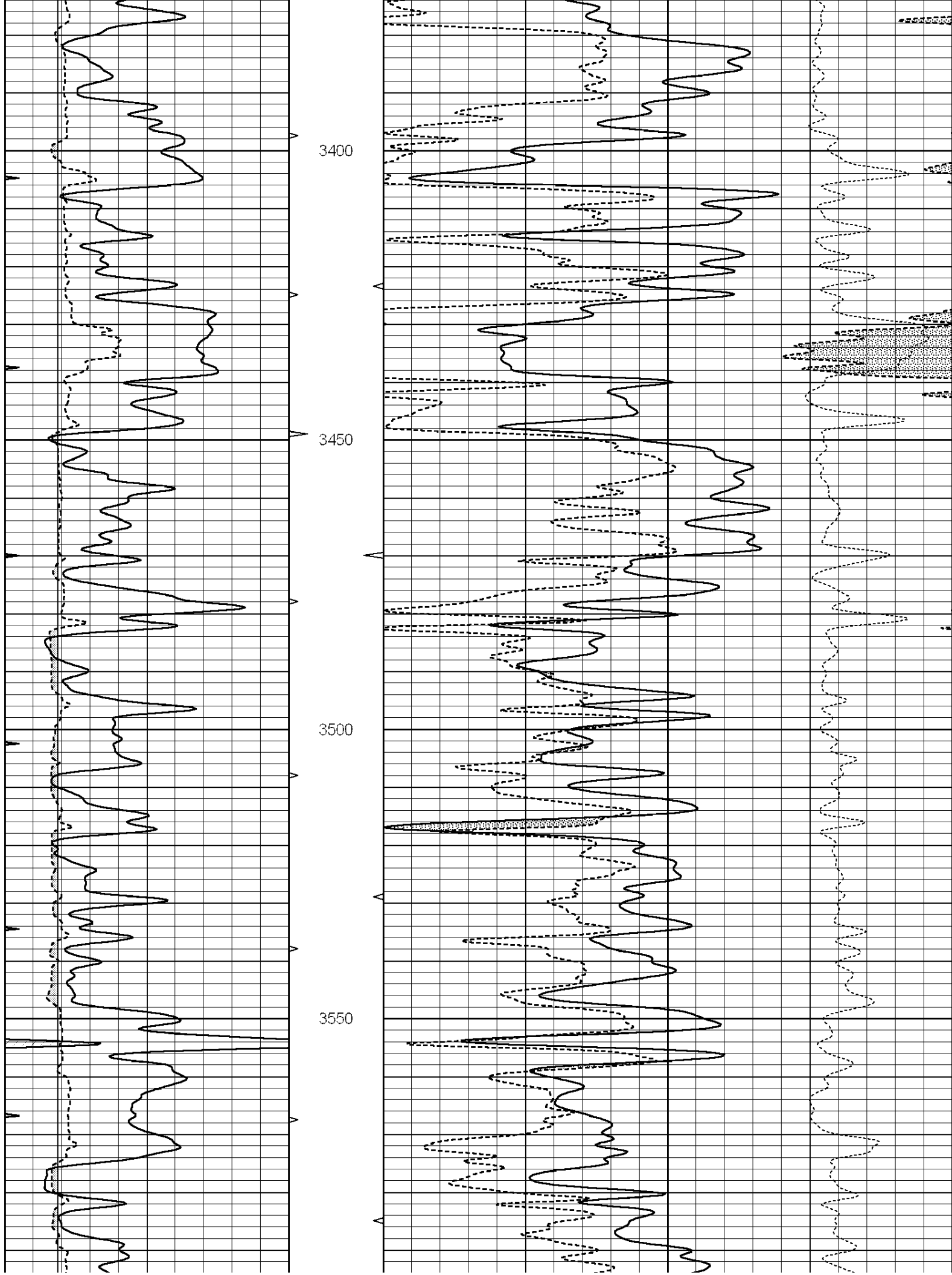


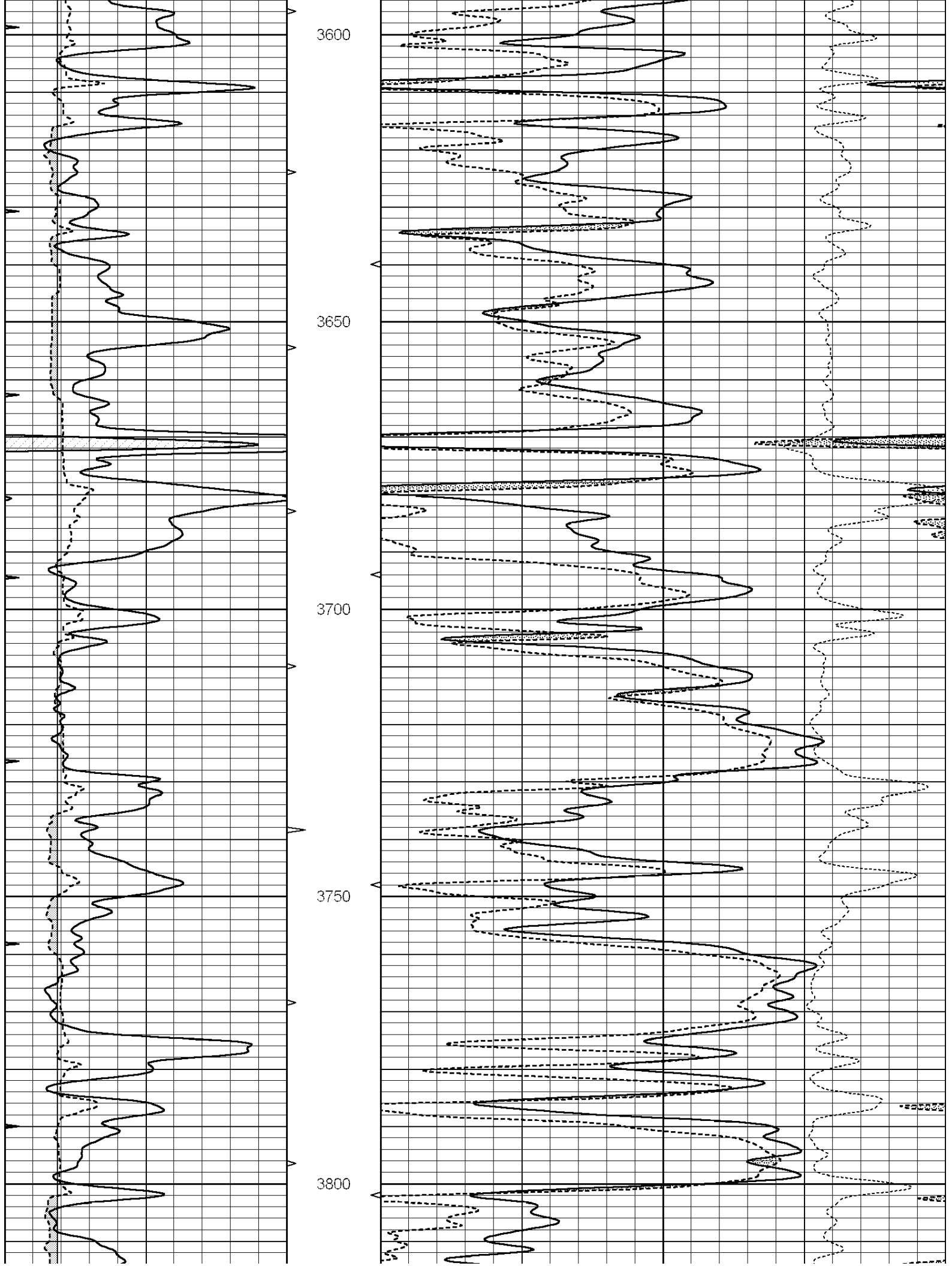
MAIN SECTION

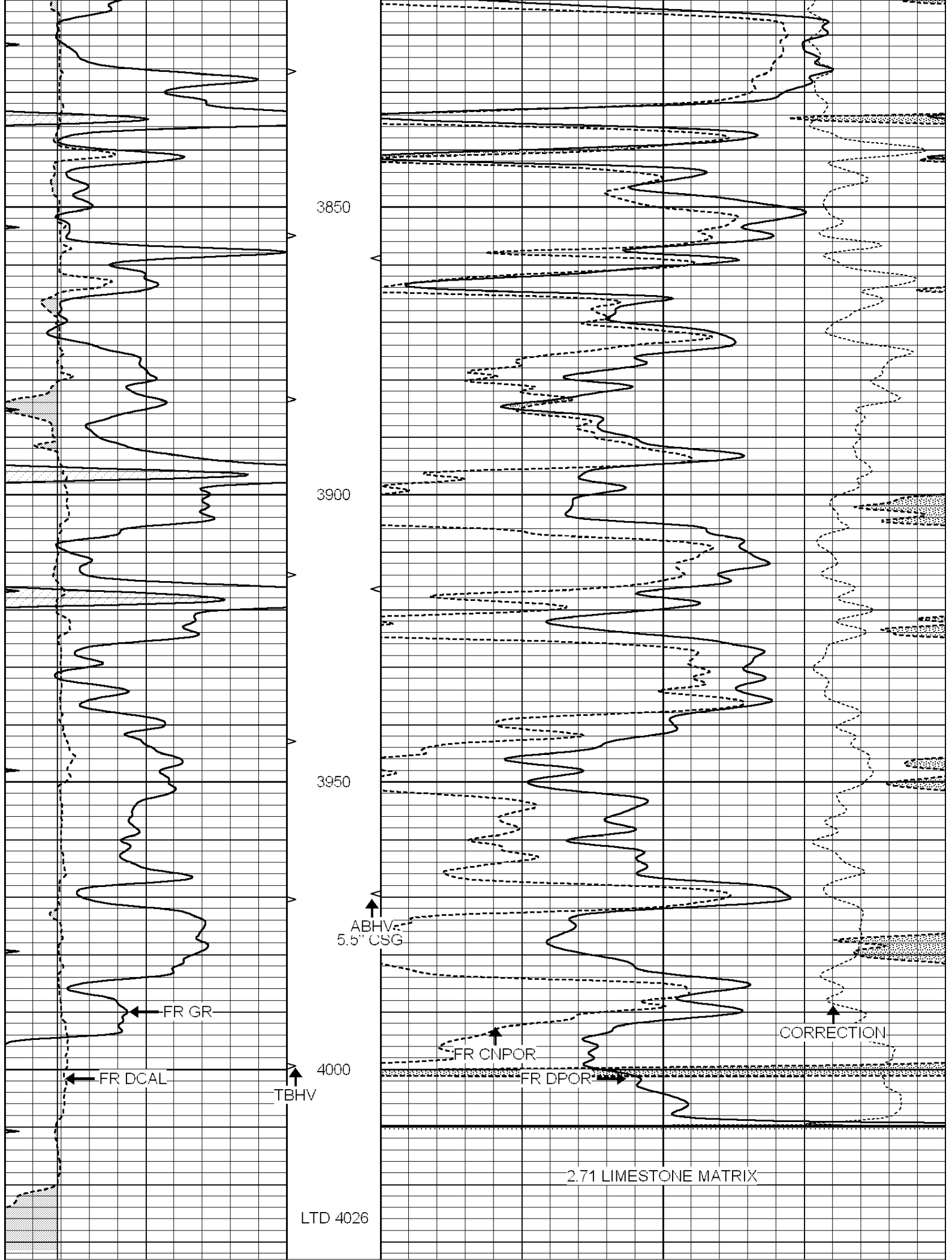
Database File: 3332ddn.db
Dataset Pathname: pass3.1
Presentation Format: den_neu
Dataset Creation: Sun Jan 13 12:21:32 2019 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240

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		



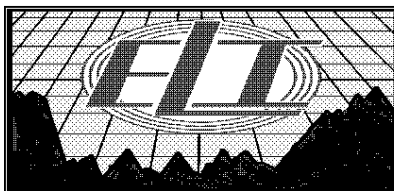






0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)			-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)			-10

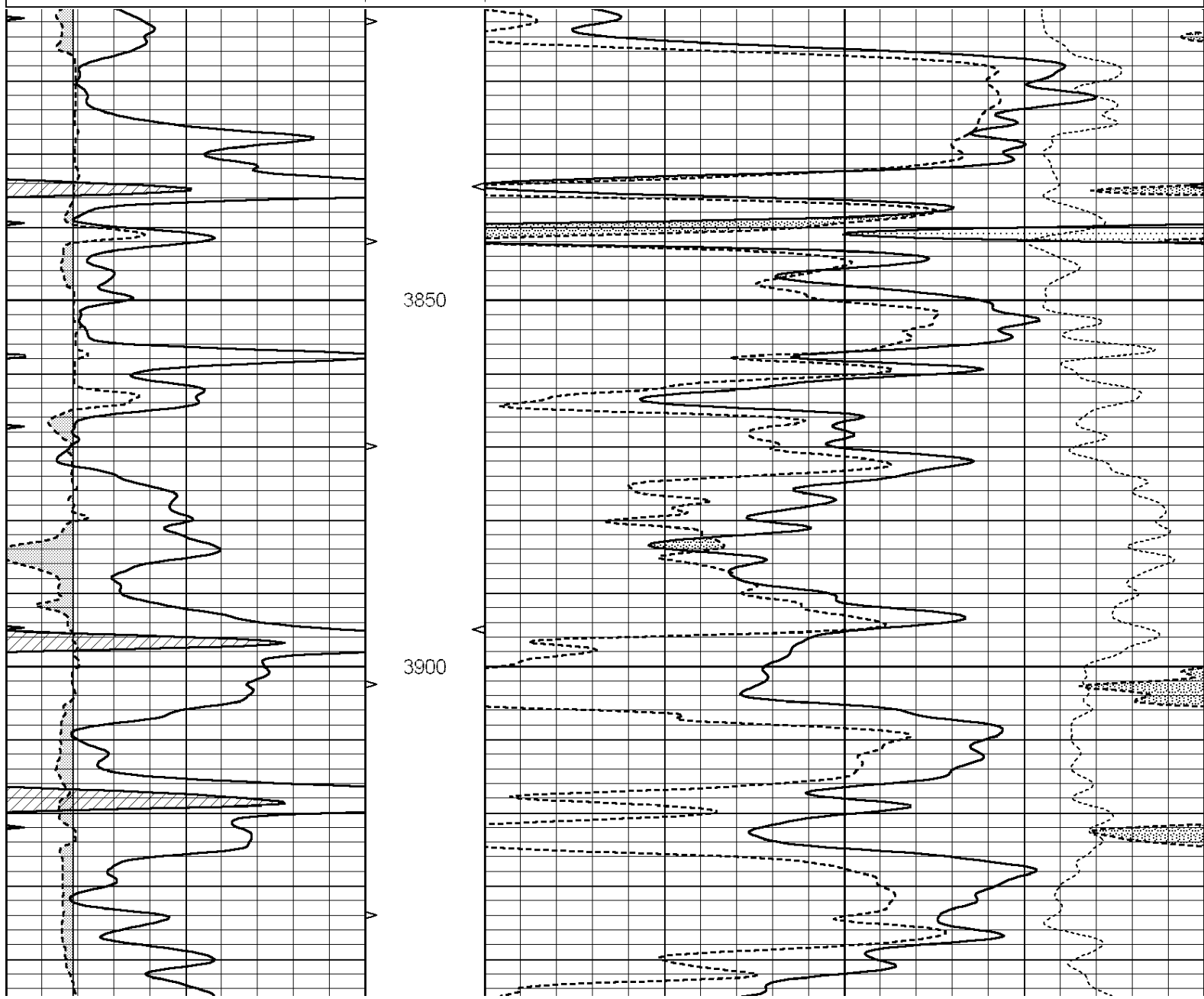
0	MINMK	20	TBHV			-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10					

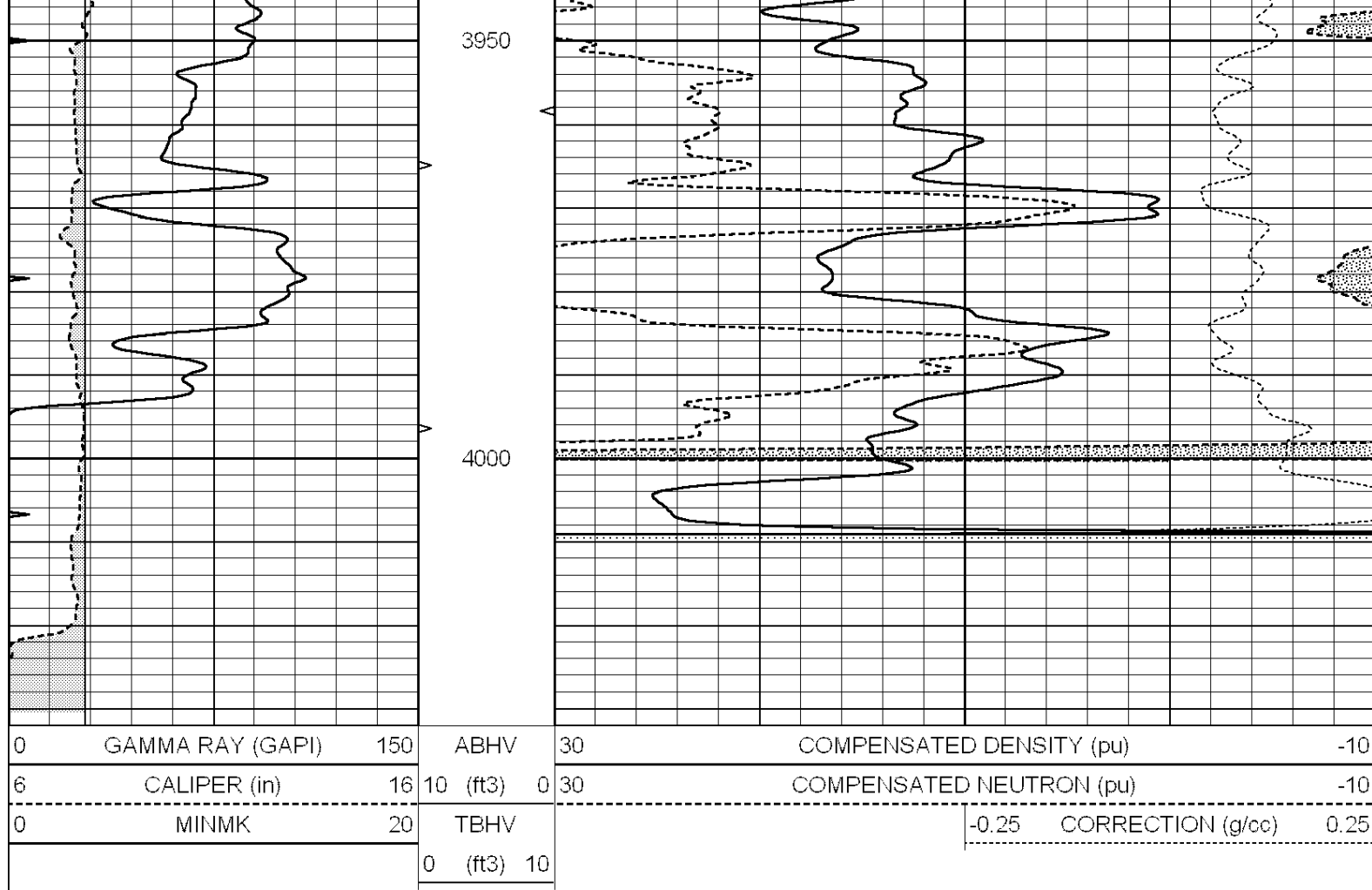


REPEAT SECTION

Database File: 3332ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Sun Jan 13 12:14:57 2019 by Calc SOC 120430
 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
						-0.25 CORRECTION (g/cc)			0.25
0	MINMK	20	TBHV						
			0 (ft3)	10					





Calibration Report								
Database File:		3332ddn.db						
Dataset Pathname:		pass2.1						
Dataset Creation:		Sun Jan 13 12:14:57 2019 by Calc SOC 120430						
Dual Induction Calibration Report								
Serial-Model:		PROBE7-DILG						
Surface Cal Performed:		Sat Jan 05 20:09:14 2019						
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	620.000	-2.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-52.000
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		00.000	Ohm-m		

0.000 V 20.000 Ohm-m
-7.200 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: 004N Model: PRB

Master Calibration

Performed Fri May 30 11:01:00 2014

Background

Magnesium

Aluminum

Sandstone

Window 1	1378.8	10804.6	3492.0	12453.4	cps
Window 2	1262.4	9313.5	3076.7	10594.7	cps
Window 3	1077.6	5668.7	2076.0	6314.8	cps
Window 4	306.4	313.0	306.4	315.6	cps
Long Space	0.0	8051.0	1814.3	9332.3	cps
Short Space	1.9	1706.1	1146.0	1707.6	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 45.0	Rib Slope	: 1.002	Density/Spine Ratio	: 0.571
Spine Angle	: 75.0	Spine Slope	: 3.745	Spine Intercept	: -18.9

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: 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:	070558		
Tool Model:	OPEN_GR		
Performed:	Fri Dec 22 13:36:24 2017		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2800	GAPI/cps	