



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY / NEUTRON LOG

Company	RED OAK ENERGY, INC.		
Well	PERSINGER FARMS #1-1		
Field	NORTON		
County	NORTON		
State	KANSAS		
Company	RED OAK ENERGY, INC.		
Well	PERSINGER FARMS #1-1		
Field	NORTON		
County	NORTON	State	KANSAS
Location:	API # : 15-137-20653-0000		Other Services
	330' FNL & 2220' FWL		DIL/MEL
	SEC 1 TWP 4S RGE 24W		
Permanent Datum	GROUND LEVEL	Elevation	2480
Log Measured From	KELLY BUSHING 8' A.G.L.	K.B.	2488
Drilling Measured From	KELLY BUSHING	D.F.	2486
		G.L.	2480
Date	5/22/13		
Run Number	ONE		
Depth Driller	3875		
Depth Logger	3874		
Bottom Logged Interval	3850		
Top Log Interval	3200		
Casing Driller	8 5/8"@305'		
Casing Logger	304		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES	1,600 PPM
Density / Viscosity	9.4/50		
pH / Fluid Loss	10.5/7.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	1.50@78F		
Rmf @ Meas. Temp	1.13@78F		
Rmc @ Meas. Temp	1.80@78F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	1.02@115F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	11:30 A.M.		
Maximum Recorded Temperature	115F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	PAT DEENIHAN		

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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 "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
NORTON, KS. 4S. ON HWY 283 TO "RD. S", 4 1/4W., S. INTO



NABORS

**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File:

010912ddn.db

Dataset Pathname:

pass3.3

Presentation Format:

den_neu

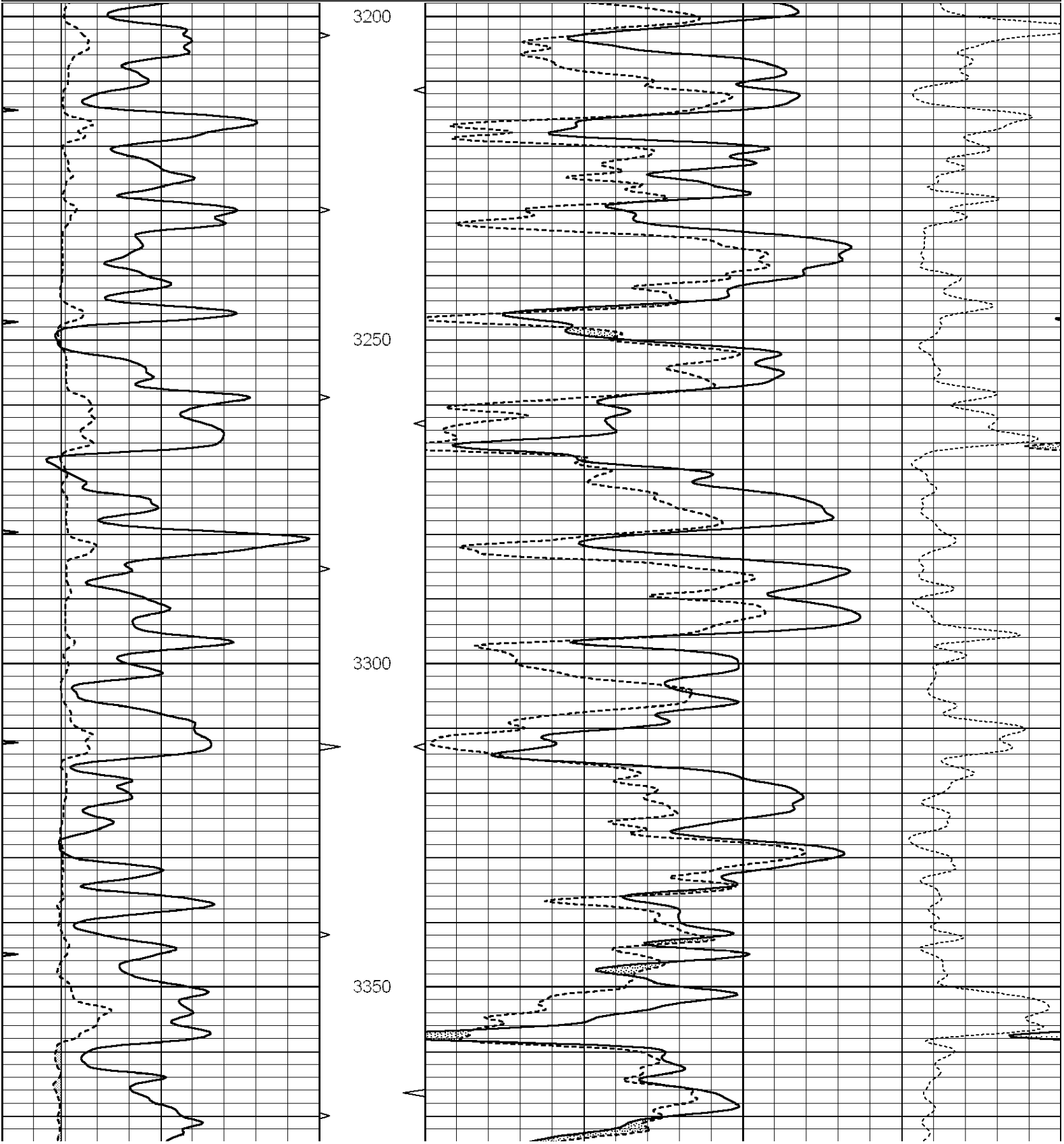
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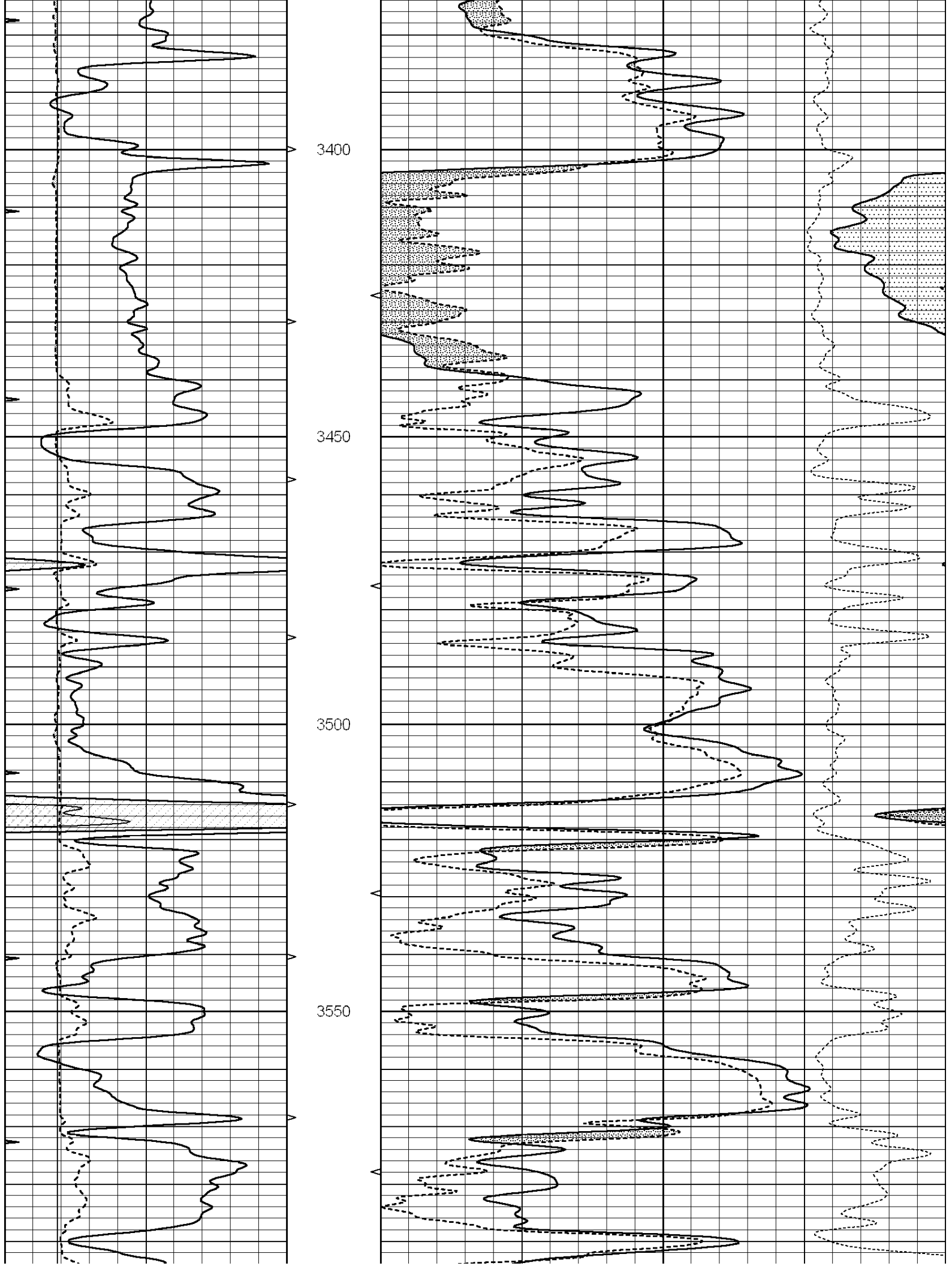
Wed May 22 12:35:13 2013 by Calc SOC 120430

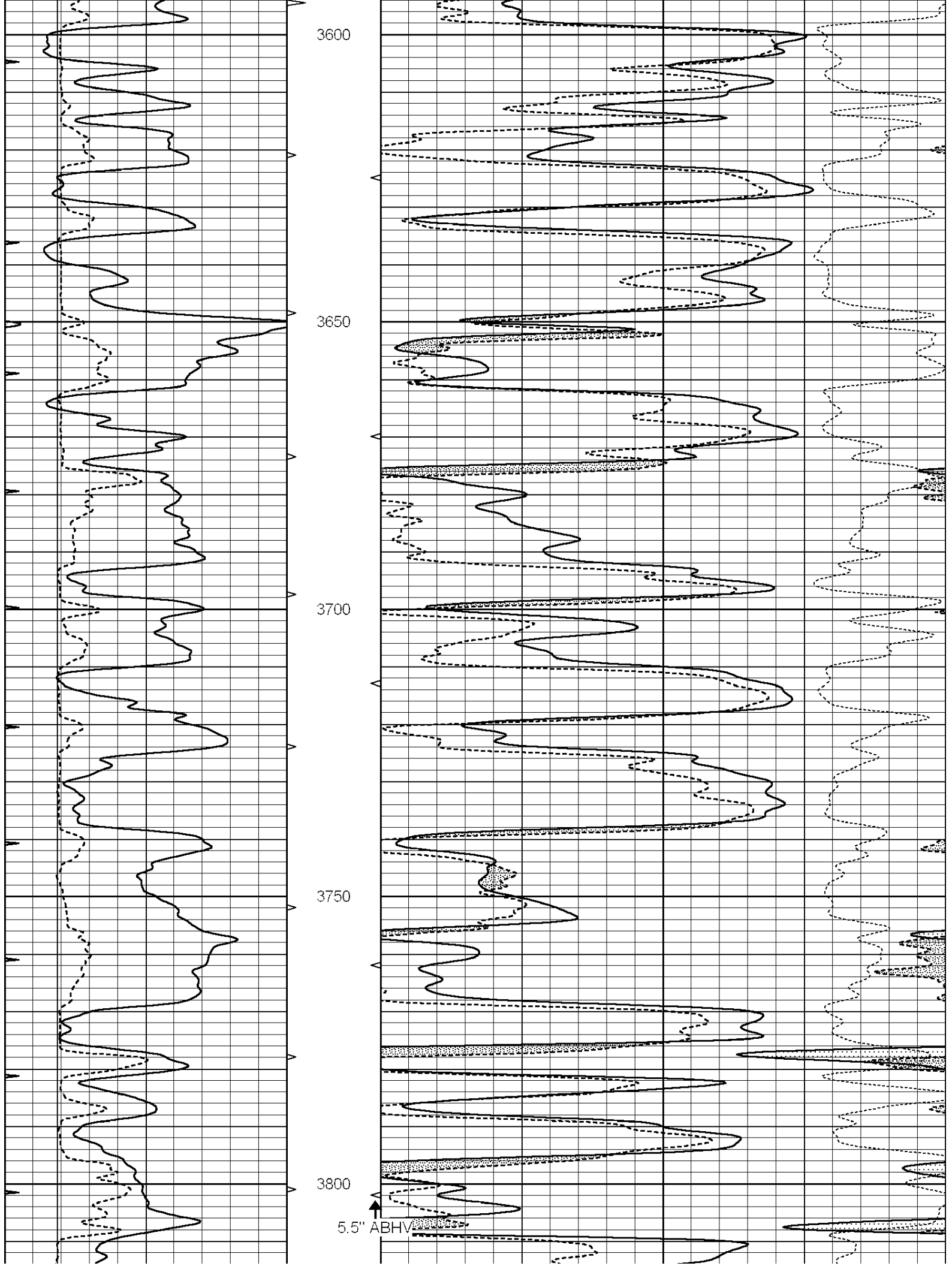
Charted by:

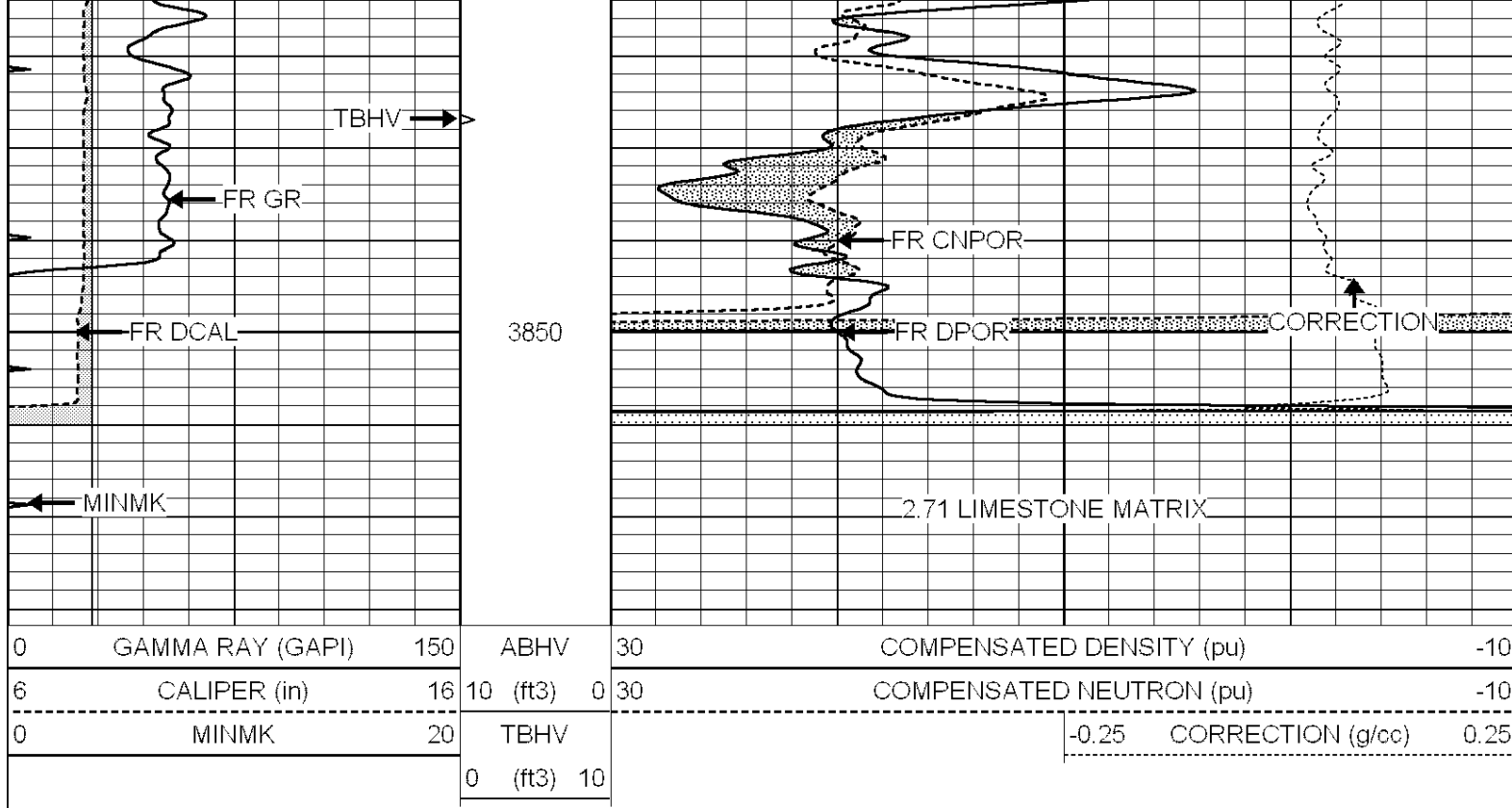
Depth in Feet scaled 1:240

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		





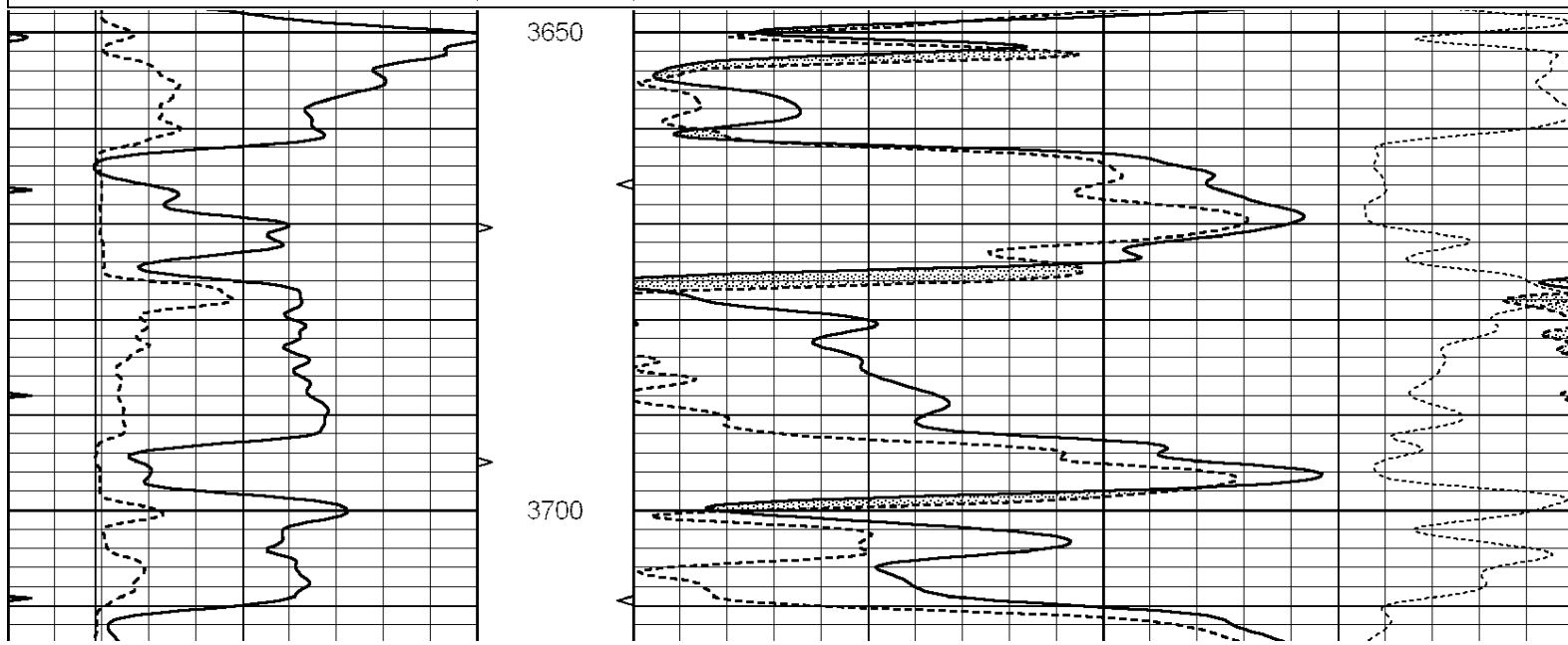


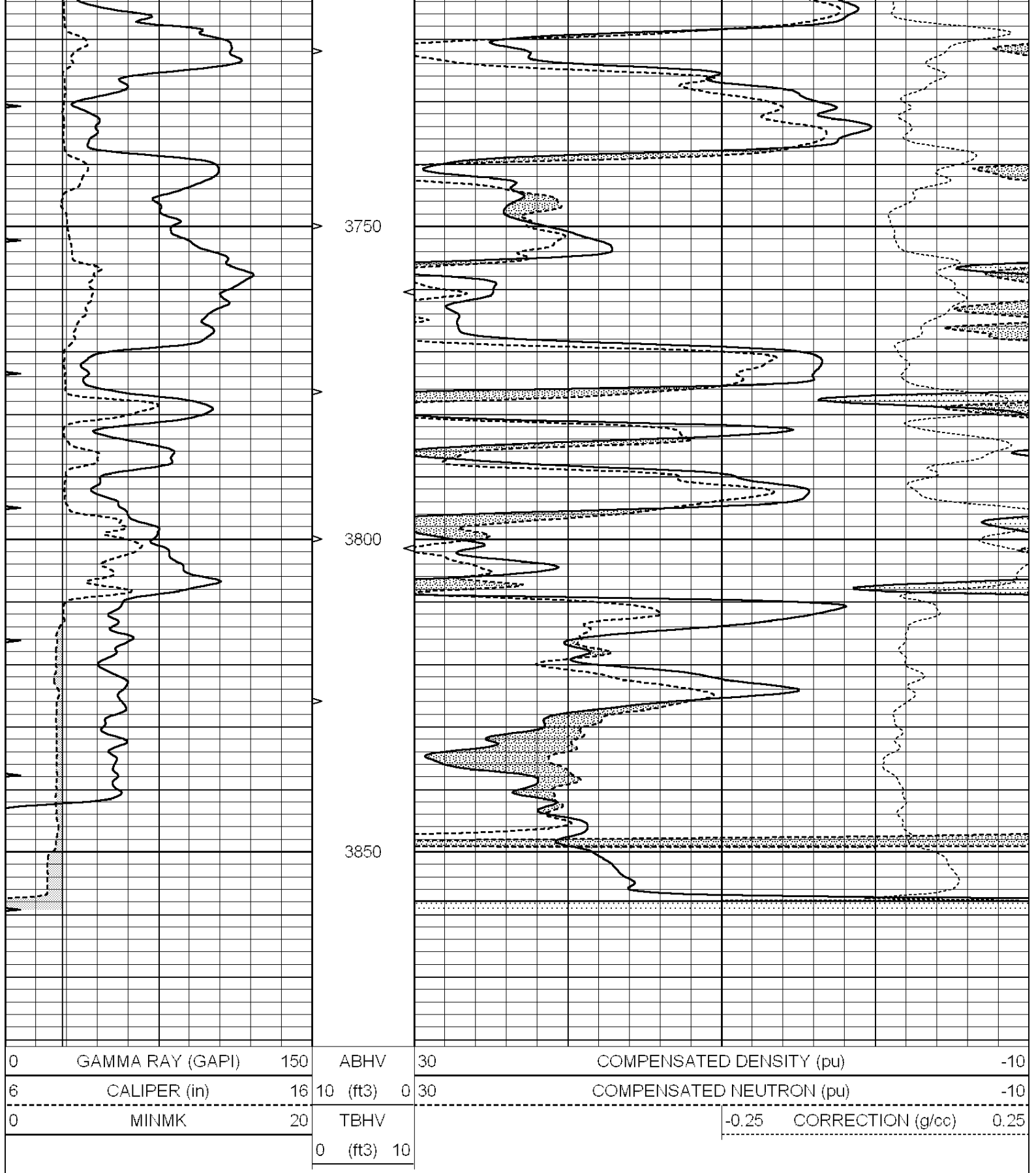


REPEAT SECTION

Database File: 010912ddn.db
 Dataset Pathname: pass2.4
 Presentation Format: den_neu
 Dataset Creation: Wed May 22 11:37:11 2013 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		





Calibration Report

Database File: 010912ddn.db
Dataset Pathname: pass3.3
Dataset Creation: Wed May 22 12:35:13 2013 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model:

PROBE9-DILG

Surface Calibration								
Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	621.923	-16.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-22.000
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		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report								
Serial: 006			Model: PRB					

Master Calibration					Performed Sun Aug 15 09:48:41 2010			
	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		0.0000	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	

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 Rho	0.0000	0.0000	0.0000	g/cc
Measured Correction	0.0000	0.0000	0.0000	
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	cps
Window 2	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	cps
Short Space	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:	070559			
Tool Model:	OPEN_GR			
Performed:	Mon Apr 15 10:30:52 2013			
Calibrator Value:	1.0	GAPI		
Background Reading:	0.0	cps		
Calibrator Reading:	1.0	cps		
Sensitivity:	0.3500	GAPI/cps		