

COMPENSATED DENSITY / NEUTRON LOG

Company	DOWNING - NELSON OIL CO., INC.		
Well	DEUTSCHER - SCHOENTHALER UNIT #		
Field	ELLIS WEST		
County	TREGO	State	KANSAS
Company	DOWNING - NELSON OIL COMPANY, INC.		
Well	DEUTSCHER - SCHOENTHALER UNIT #1-3		
Field	ELLIS WEST		
County	TREGO	State	KANSAS
Location:	API # : 15-195-23006-0000		Other Services
	960' FNL & 1350' FEL NE - SE - NW - NE		DIL/MEL
Permanent Datum	GROUND LEVEL		Elevation
Log Measured From	KELLY BUSHING 8' A.G.L.		2197
Drilling Measured From	KELLY BUSHING		K.B. 2205 D.F. 2203 G.L. 2197
Date	7/3/16		
Run Number	ONE		
Depth Driller	3930		
Depth Logger	3931		
Bottom Logged Interval	3907		
Top Log Interval	3100		
Casing Driller	8 5/8"@220'		
Casing Logger	220		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 11,000 PPM	
Density / Viscosity	9.3/40		
pH / Fluid Loss	10.0/9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.550@95F		
Rmf @ Meas. Temp	.413@95F		
Rmc @ Meas. Temp	.660@95F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.454@115F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	10:00 P.M.		
Maximum Recorded Temperature	115F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	MARC DOWNING		

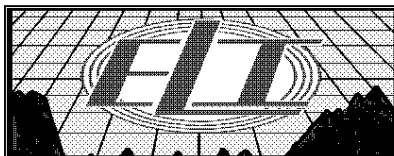
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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 ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS

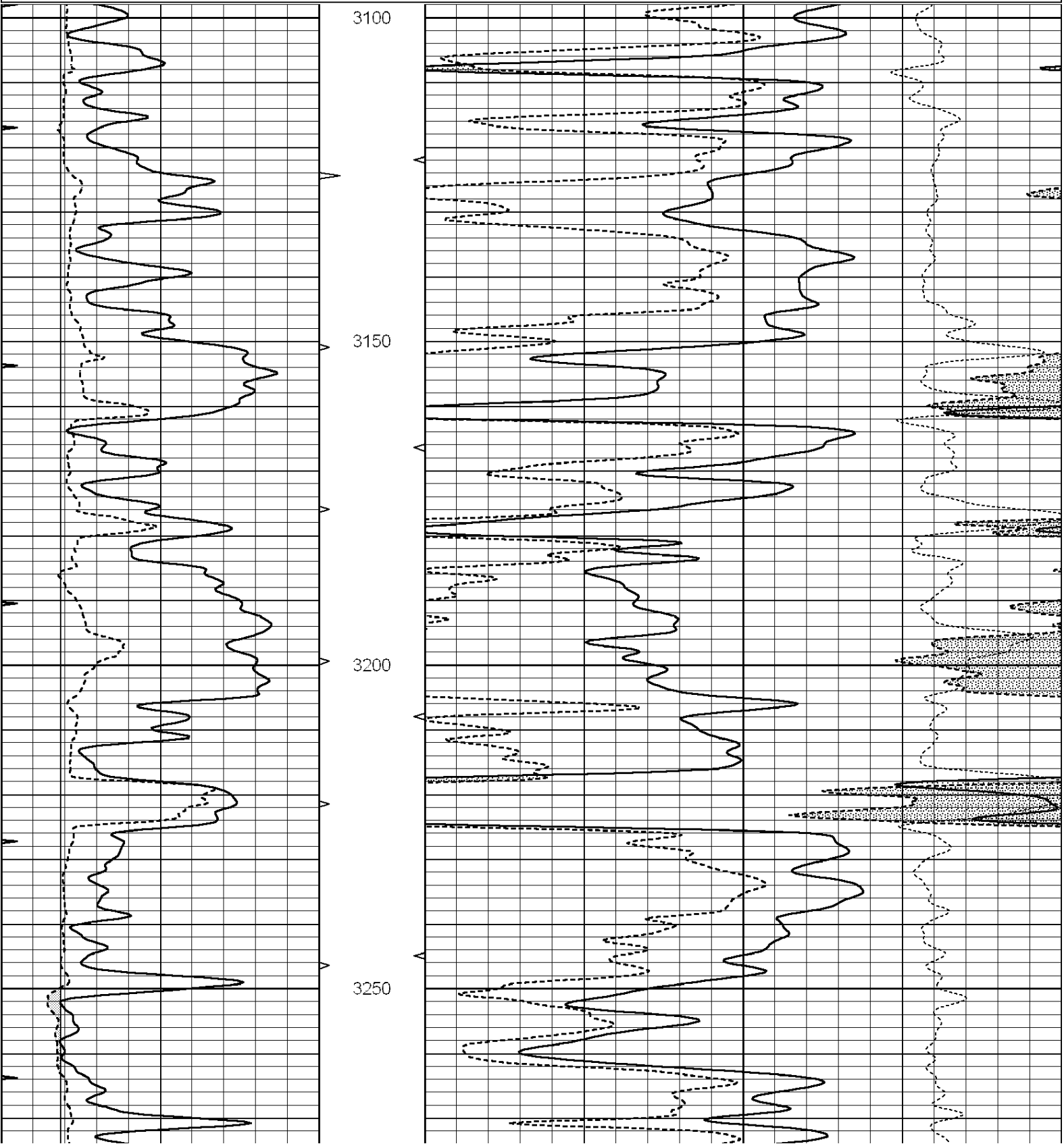
RIGA, KS. & I-70, 1/2S., TURN BEFORE RIVER BRIDGE, 1E., 1/4S. TO TANK BATTERY, 1/2 W. INTO

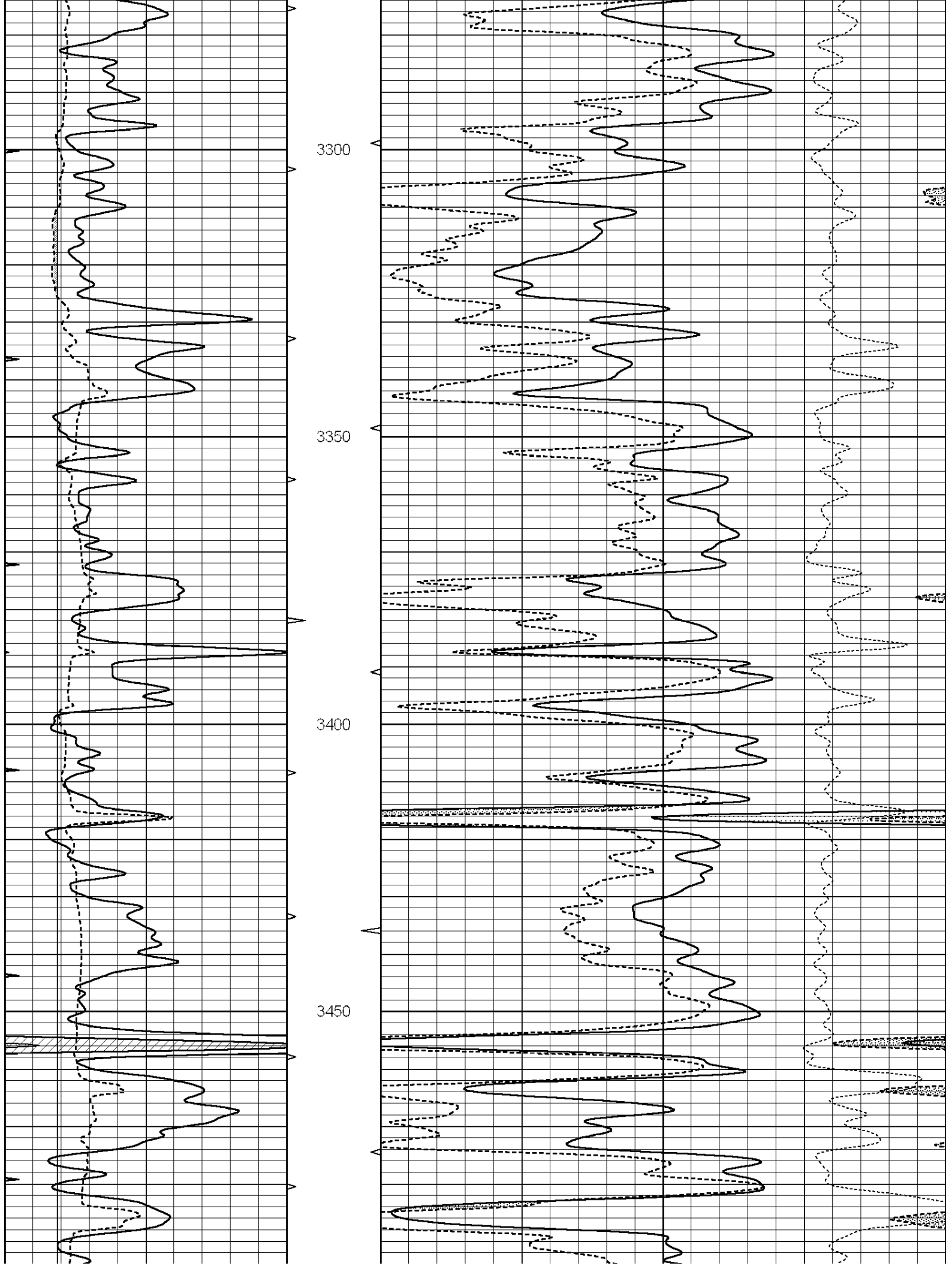


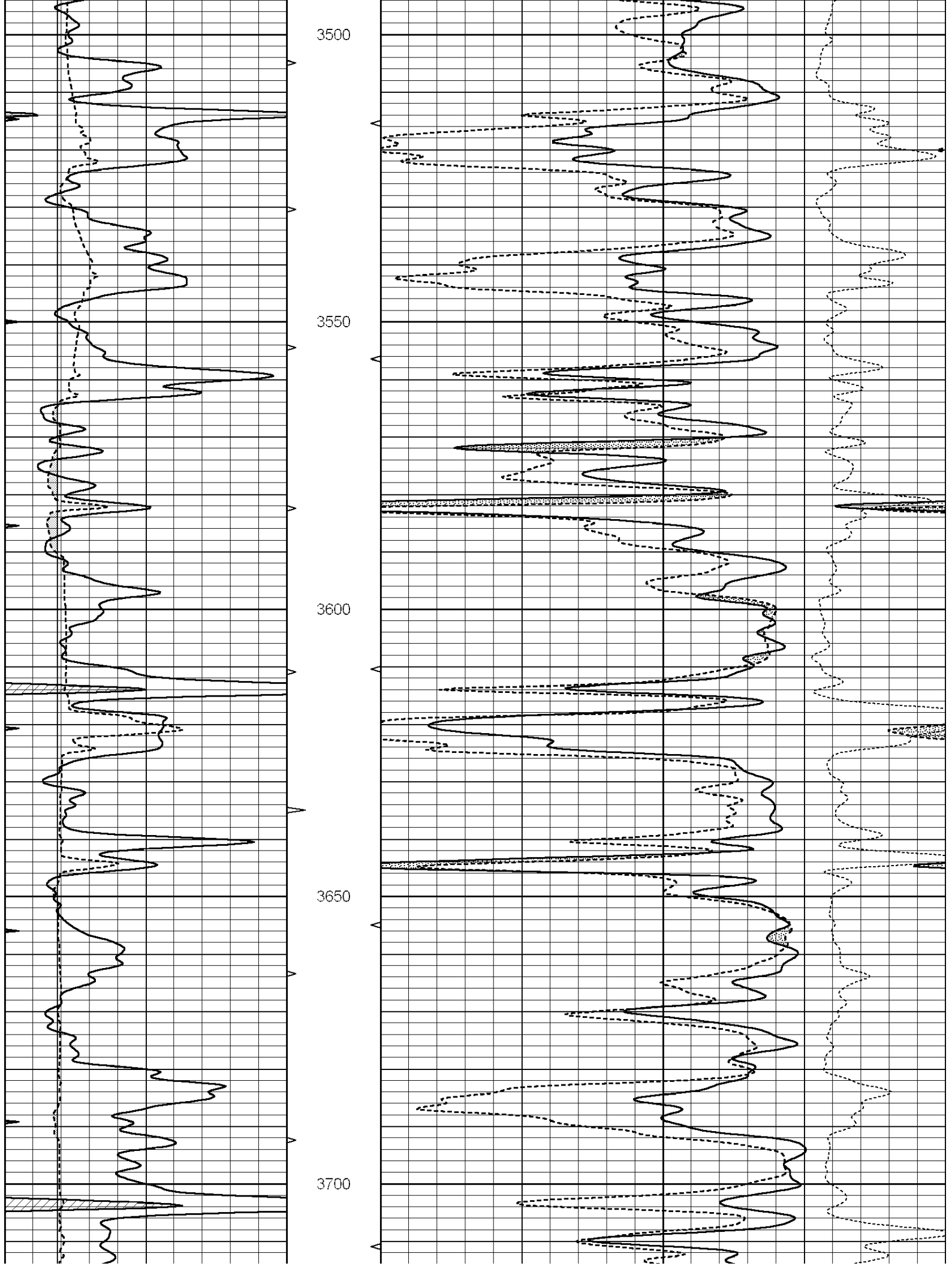
MAIN SECTION

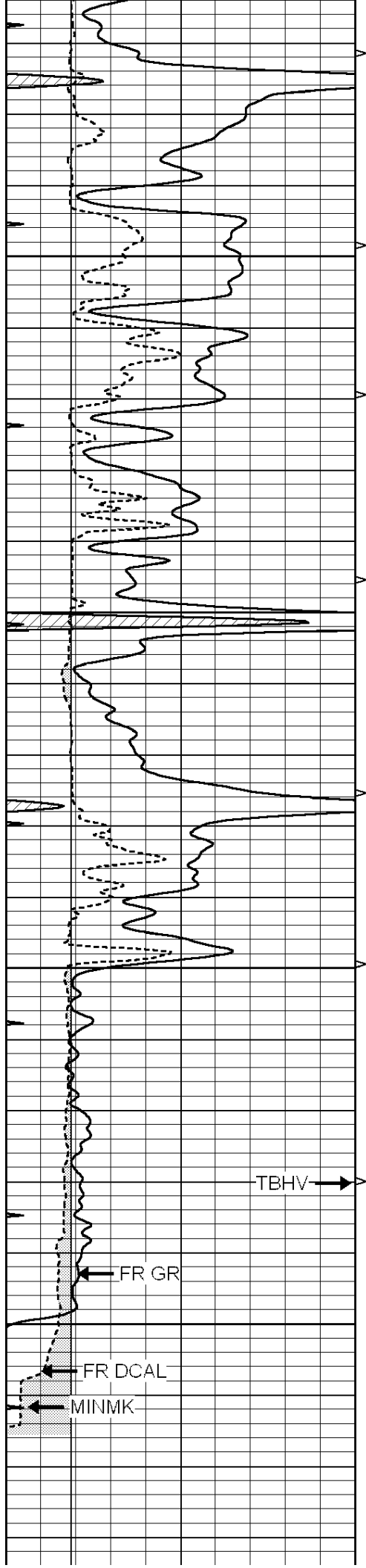
Database File: 30750ddn.db
Dataset Pathname: pass3.6
Presentation Format: den_neu
Dataset Creation: Sun Jul 03 23:13:09 2016 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240

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		









3750

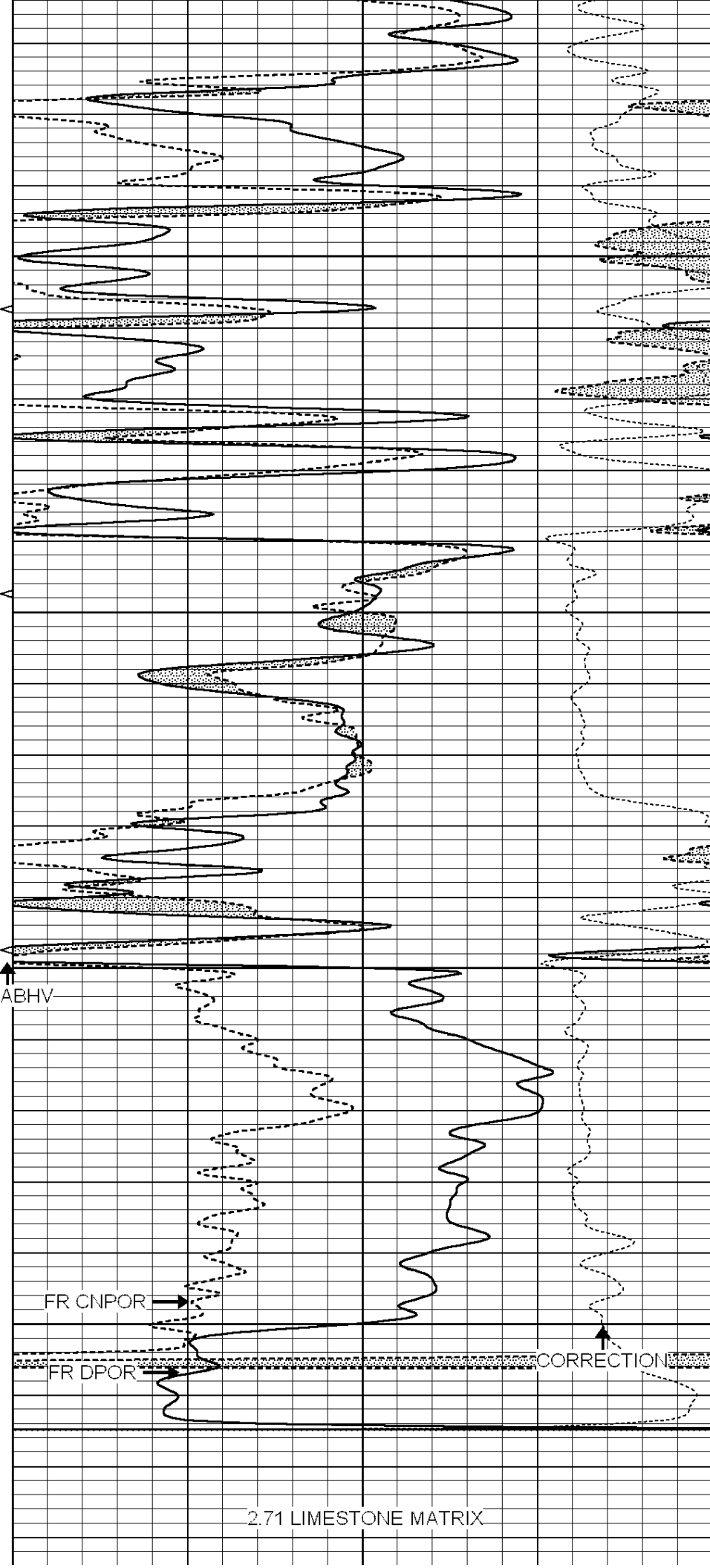
3800

3850

5.5" ABHV

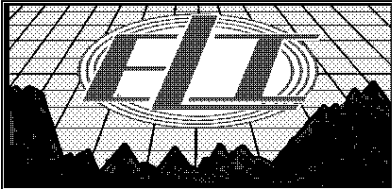
3900

LTD 3931



2.71 LIMESTONE MATRIX

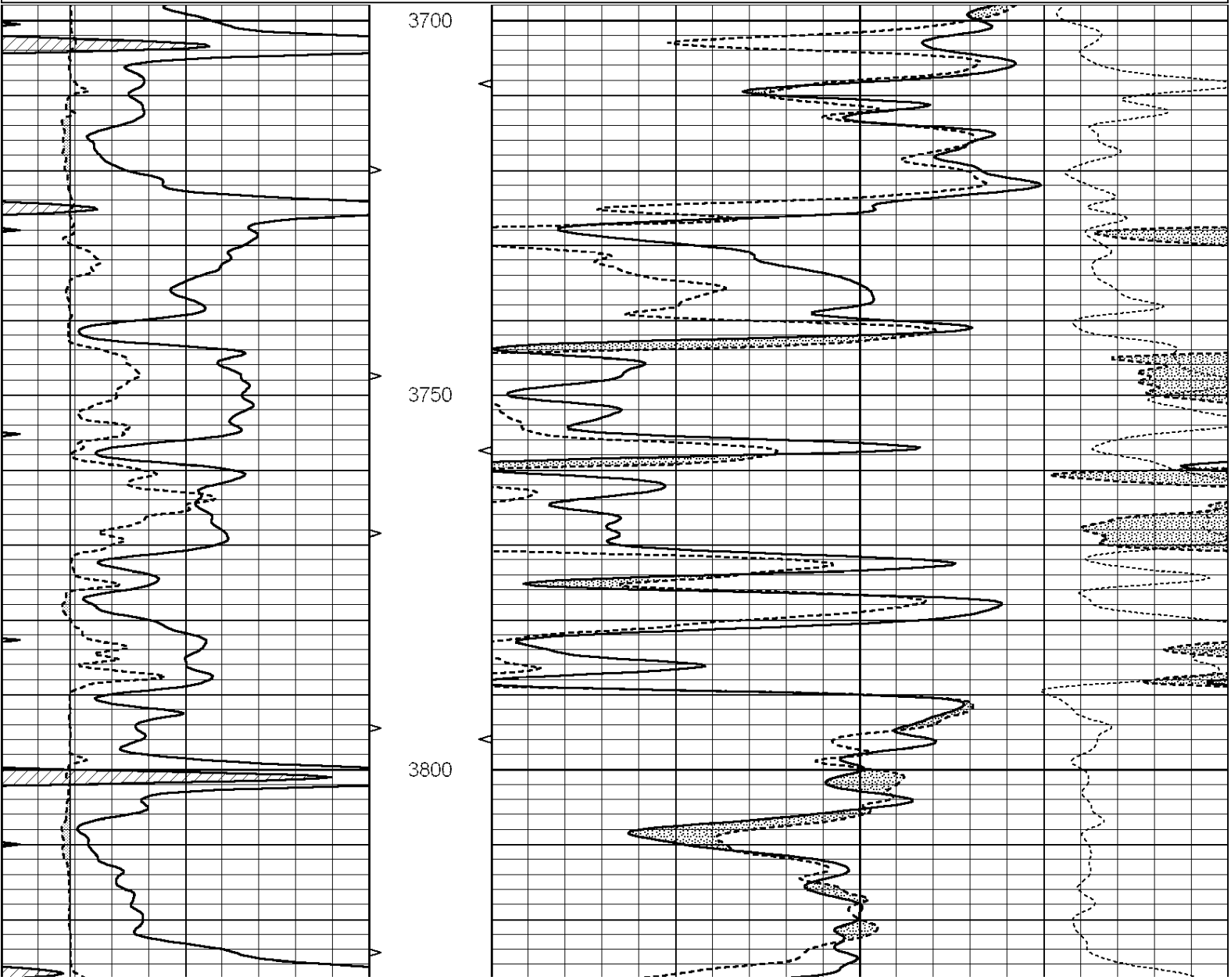
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			

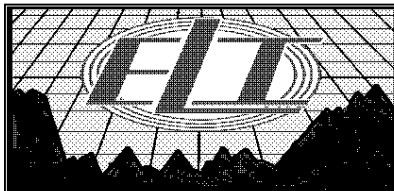
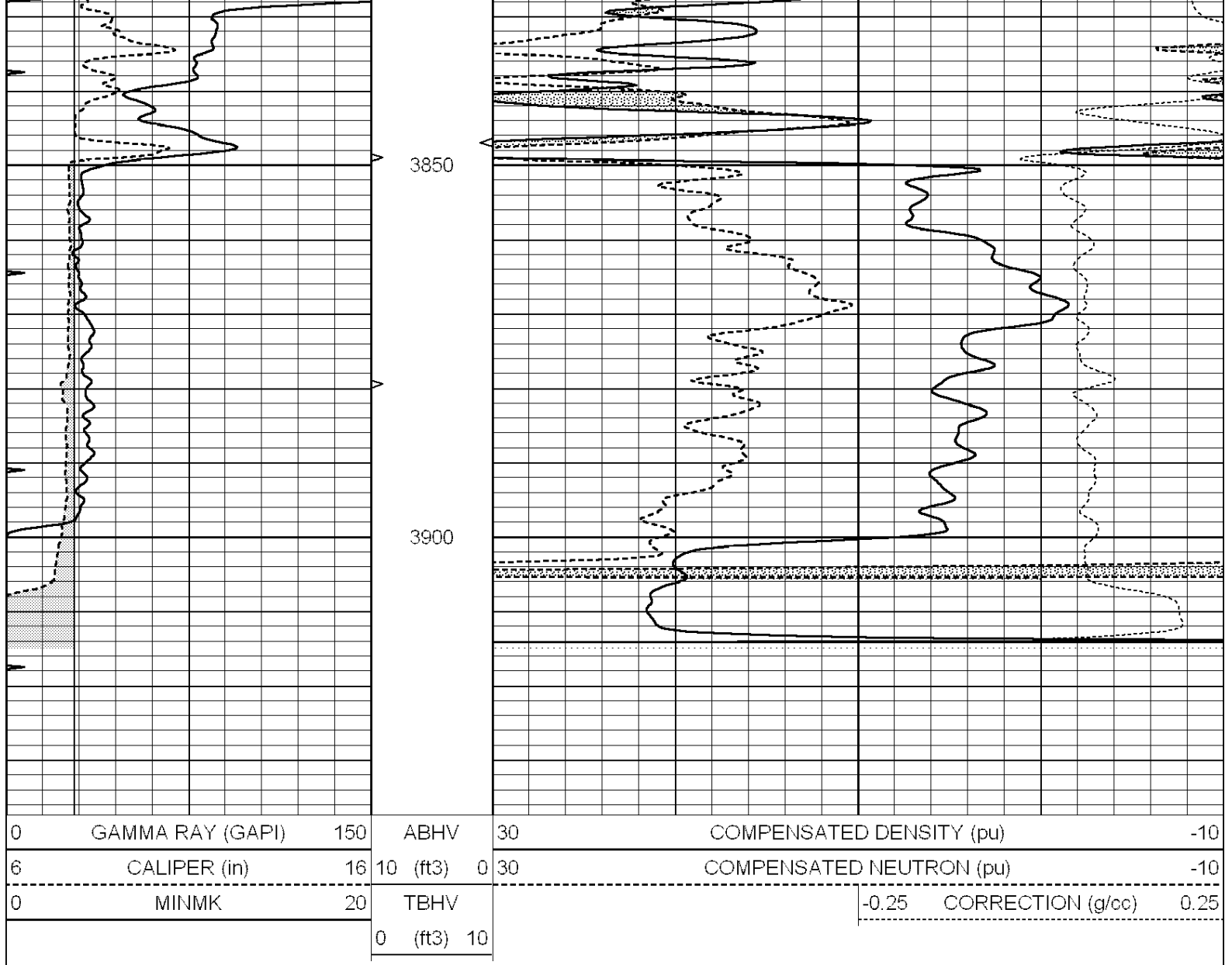


REPEAT SECTION

Database File:	30750ddn.db
Dataset Pathname:	pass2.9
Presentation Format:	den_neu
Dataset Creation:	Sun Jul 03 22:29:27 2016 by Calc SOC 120430
Charted by:	Depth in Feet scaled 1:240

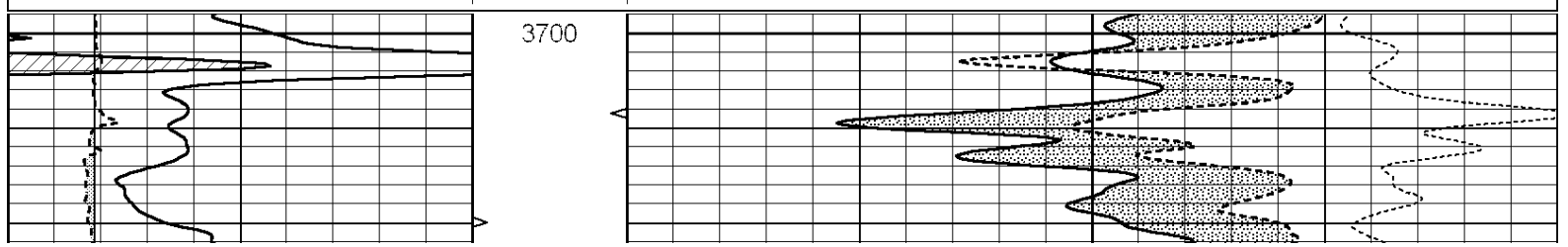
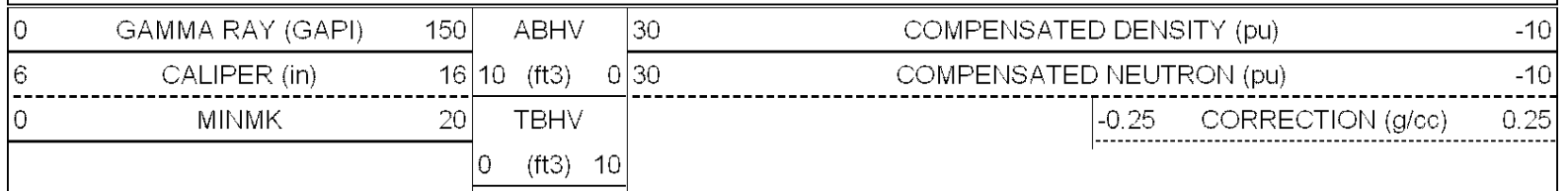
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			

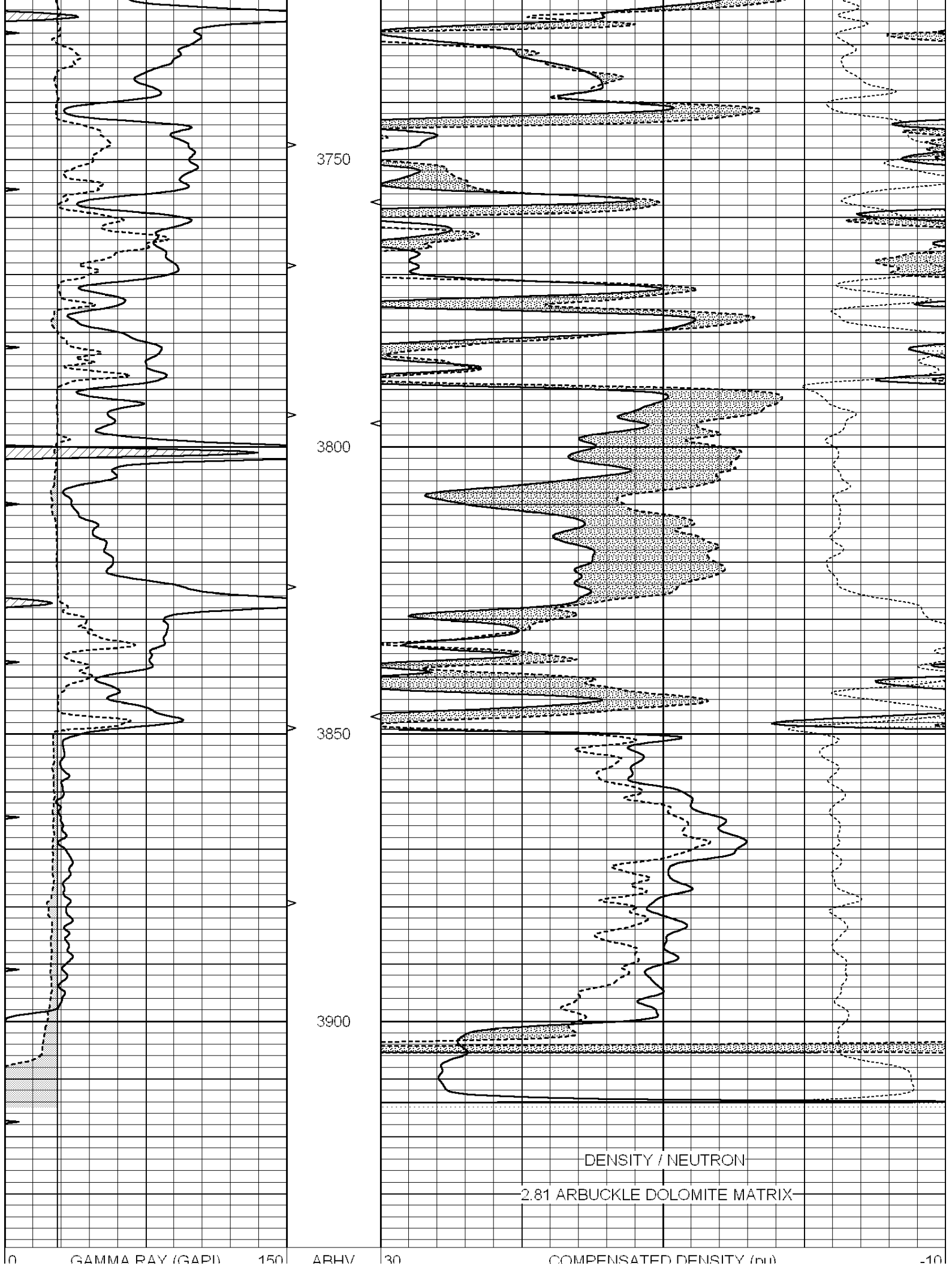




DOLOMITE MATRIX

Database File: 30750ddn.db
 Dataset Pathname: pass2.9D
 Presentation Format: den_neu
 Dataset Creation: Sun Jul 03 22:32:31 2016
 Charted by: Depth in Feet scaled 1:240





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:	30750ddn.db
Dataset Pathname:	pass3.6
Dataset Creation:	Sun Jul 03 23:13:09 2016 by Calc SOC 120430

Dual Induction Calibration Report	
Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Sun Jul 03 21:57:45 2016
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	625.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-42.000
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			Targets			Results		
	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:	003N
Model:	PRB

Master Calibration		Performed Mon Mar 14 08:48:13 2016			
	Background	Magnesium	Aluminum	Sandstone	
Window 1	1751.3	11741.0	3857.3	12907.8	cps
Window 2	1589.4	9536.2	3267.6	10282.0	cps
Window 3	1413.4	6466.1	2463.2	6828.7	cps
Window 4	399.5	407.1	405.1	406.5	cps
Long Space	0.0	7946.7	1678.1	8692.6	cps
Short Space	2.2	3366.2	2134.1	3410.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 43.7	Rib Slope	: 0.954	Density/Spine Ratio	: 0.543
Spine Angle	: 73.7	Spine Slope	: 3.412	Spine Intercept	: -18.7

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
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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:	Sun Jul 03 22:02:17 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps