COMPENSATED DENSITY / NEUTRON LOG

Company MAI OIL OPERATIONS, INC.
Well MILTON - BUTLER UNIT #1
Field MUELLER
County STAFFORD State KANSAS
Location: API # : 15-185-23962-0000
1848' FNL & 785' FEL
SE - NW - SE - NE
SEC 29 TWP 21S RGE 12W
Other Services
DIL/MEL
Permanent Datum GROUND LEVEL Elevation 1853
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Elevation
K.B. 1861
D.F. 1859
G.L. 1853

Company	MAI OIL OPOERATIONS, INC.		
Well	MILTON - BUTLER UNIT #1		
Field	MUELLER		
County	STAFFORD		
State	KANSAS		
Date	8/23/16		
Run Number	ONE		
Depth Driller	3700		
Depth Logger	3700		
Bottom Logged Interval	3676		
Top Log Interval	2900		
Casing Driller	8 5/8"@667'		
Casing Logger	666		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,700 PPM	
Density / Viscosity	9.4/52		
pH / Fluid Loss	9.5/10.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.700@90F		
Rmf @ Meas. Temp	.525@90F		
Rmc @ Meas. Temp	.840@90F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.558@113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	2:00 P.M.		
Maximum Recorded Temperature	113F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	WYATT URBAN	ALLEN BANGERT	

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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.

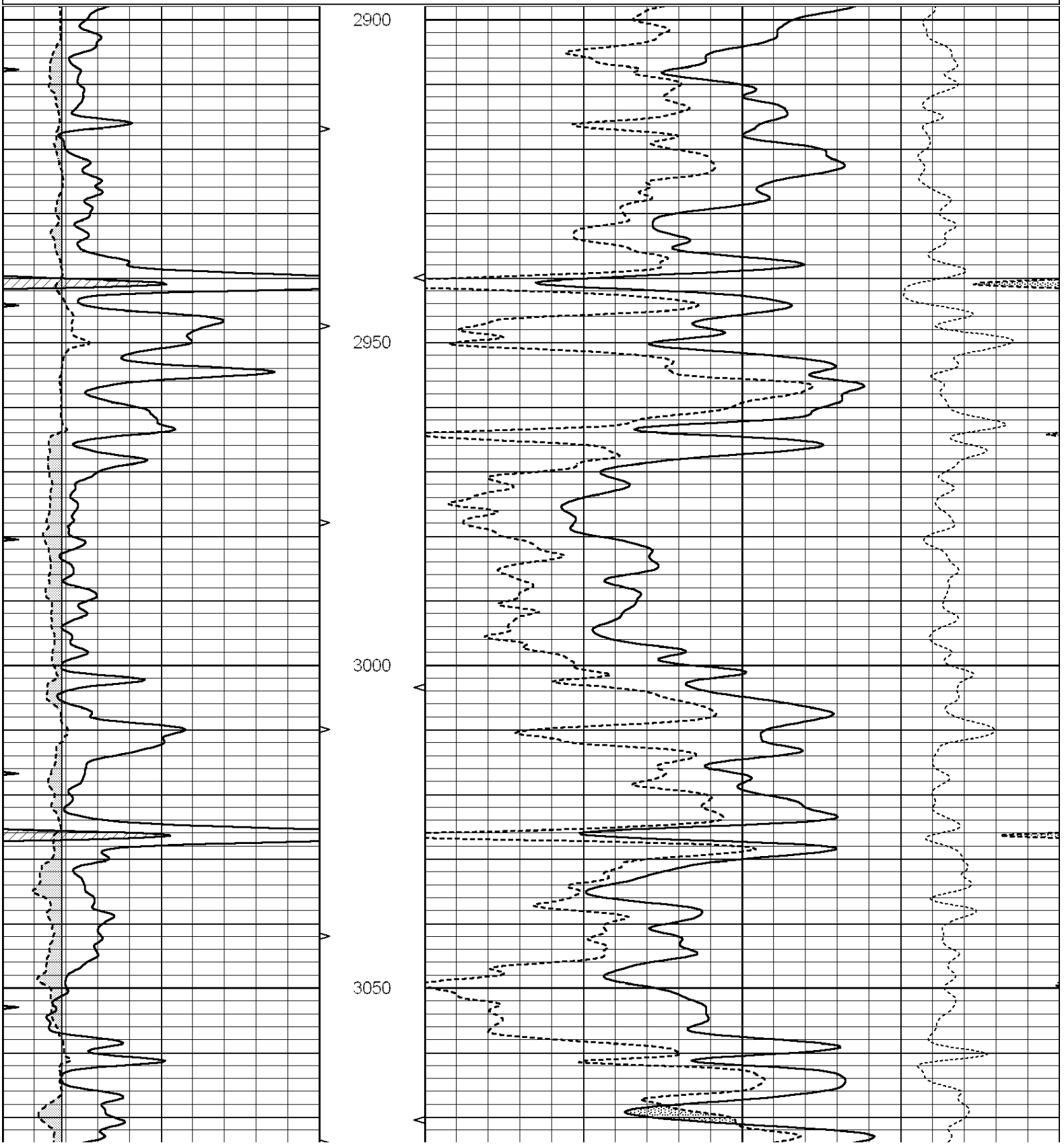
Comments

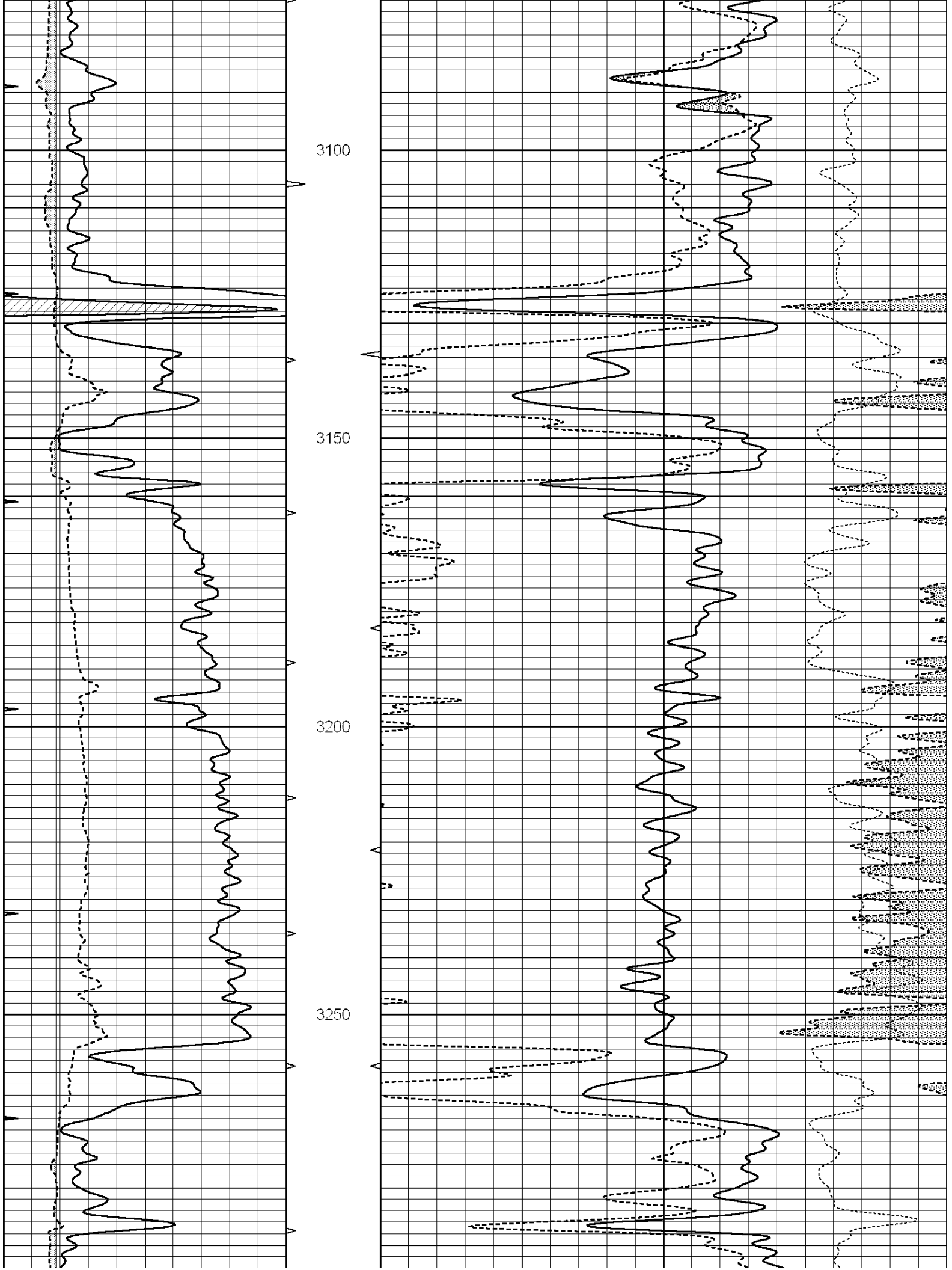
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
GREAT BEND, KS., E. ON HWY 96 TO "DARTMOUTH BLKTOP", 12S. TO "170TH RD.", 1E., 1/2S., W. INTO

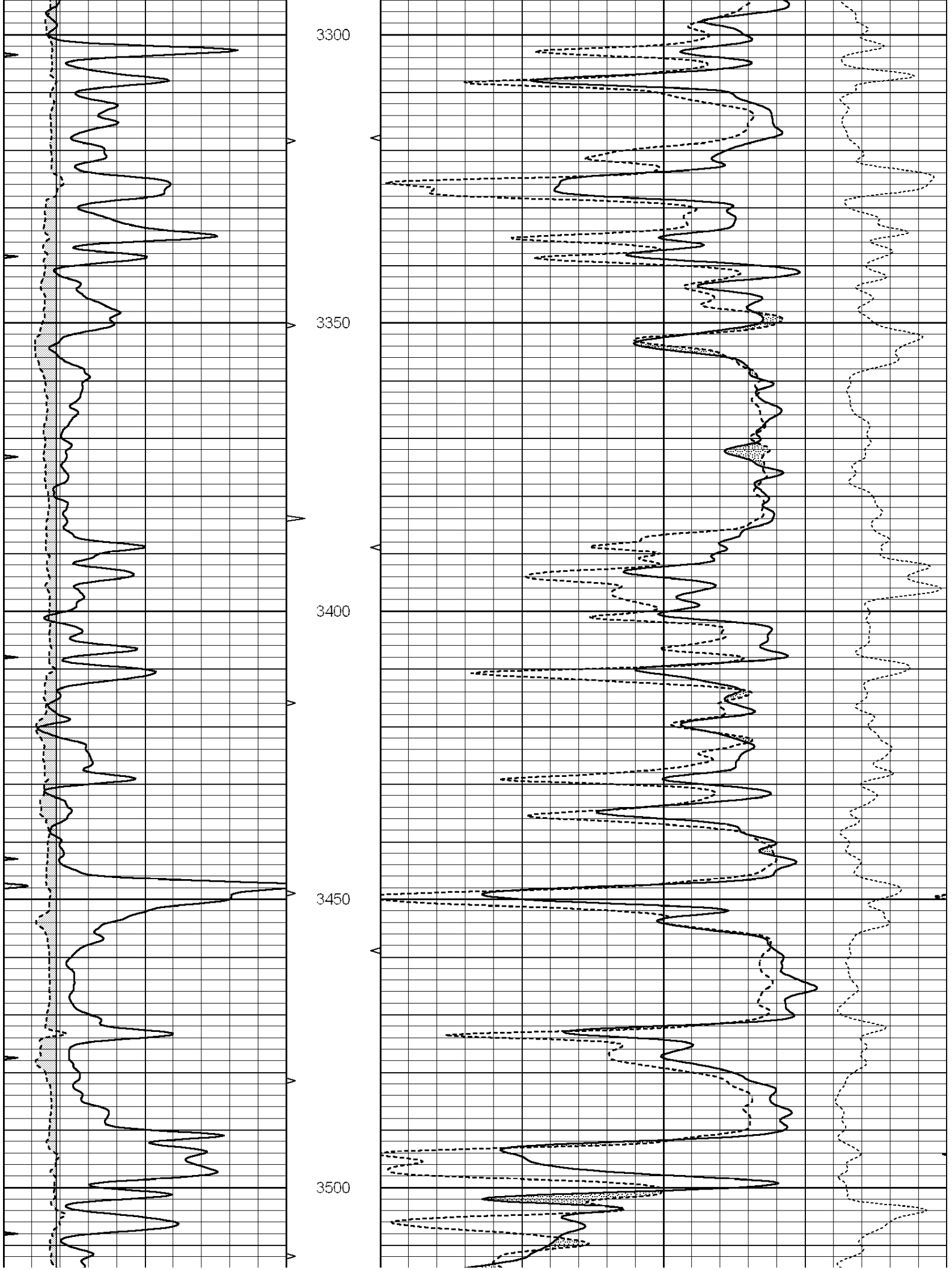
MAIN SECTION

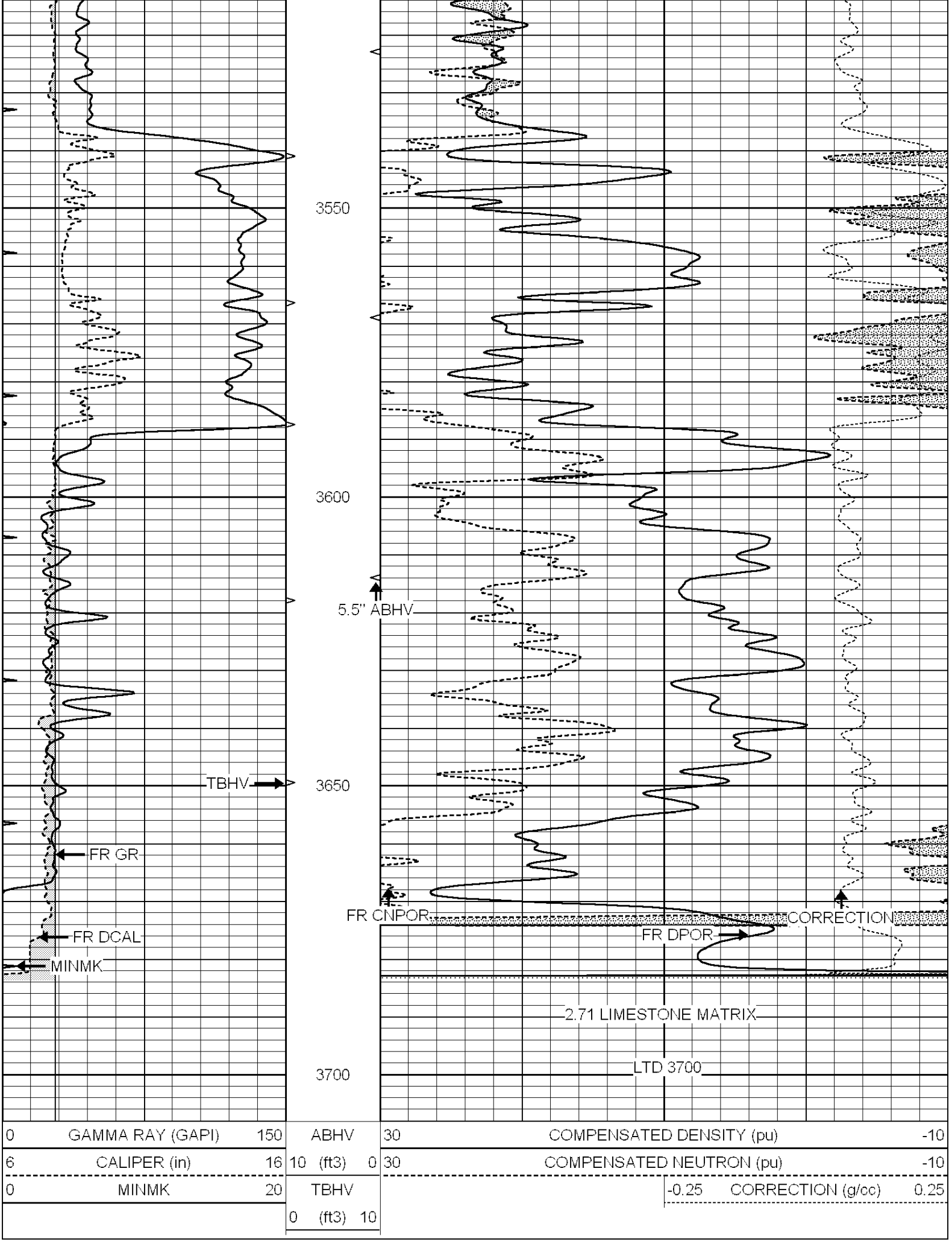
Database File:	30763ddn.db
Dataset Pathname:	pass3.9
Presentation Format:	den_neu
Dataset Creation:	Tue Aug 23 15:27:19 2016
Charted by:	Depth in Feet scaled 1:240

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		




3100
3150
3200
3250

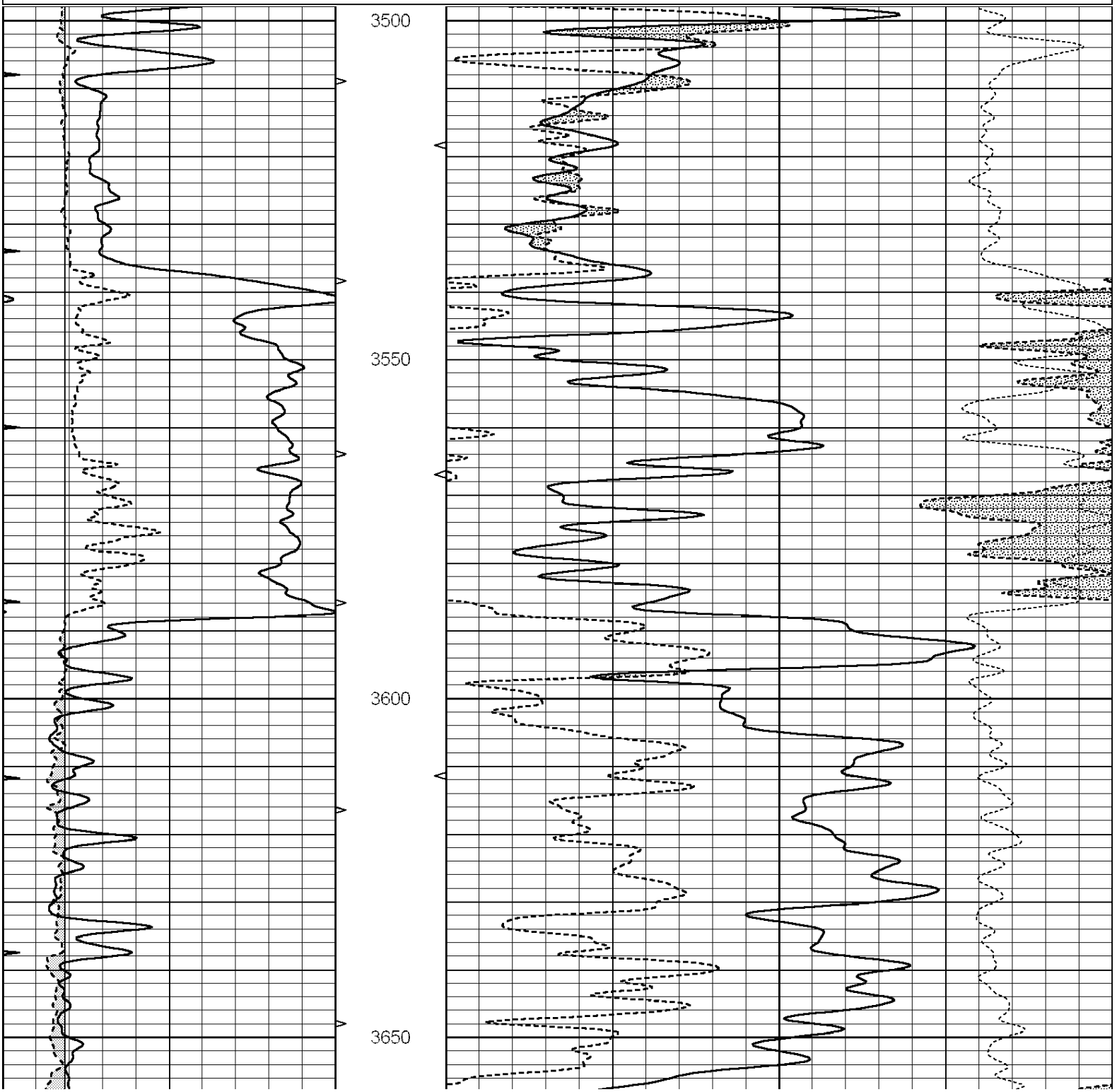

3300
3350
3400
3450
3500

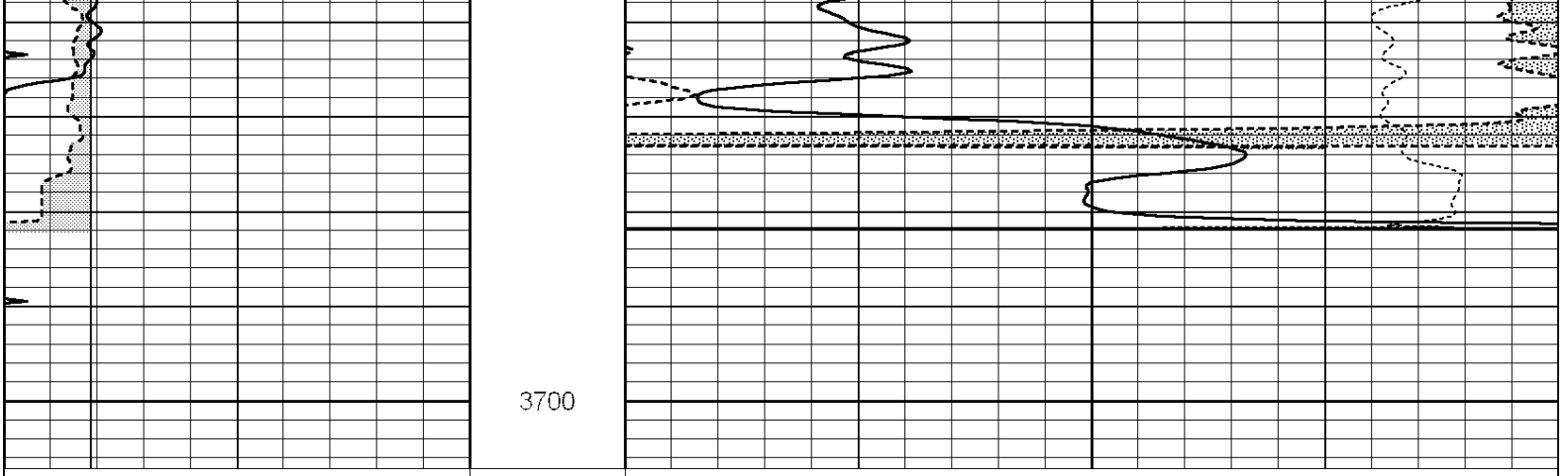

3550
3600
3650
3700
5.5" ABHV
TBHV
FR GR
FR DCAL
MINMK
FR CNPOR
CORRECTION
FR DPOR
2.71 LIMESTONE MATRIX
LTD 3700
0 GAMMA RAY (GAPI) 150
6 CALIPER (in) 16
0 MINMK 20
ABHV
10 (ft3) 0
TBHV
0 (ft3) 10
30 COMPENSATED DENSITY (pu) -10
30 COMPENSATED NEUTRON (pu) -10
-0.25 CORRECTION (g/cc) 0.25

REPEAT SECTION

Database File:	30763ddn.db
Dataset Pathname:	pass2.2R
Presentation Format:	den_neu
Dataset Creation:	Tue Aug 23 14:28:38 2016
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				



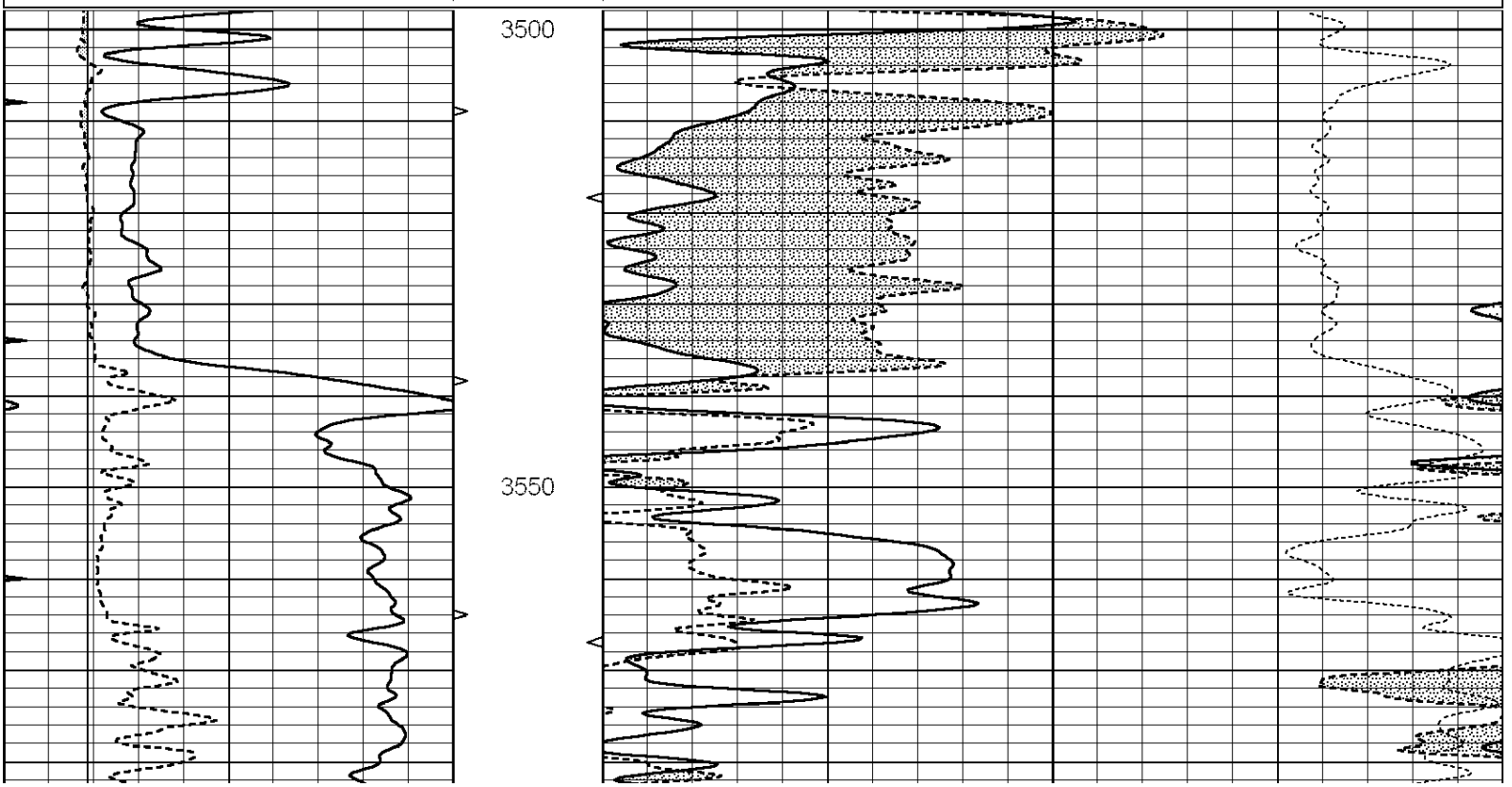


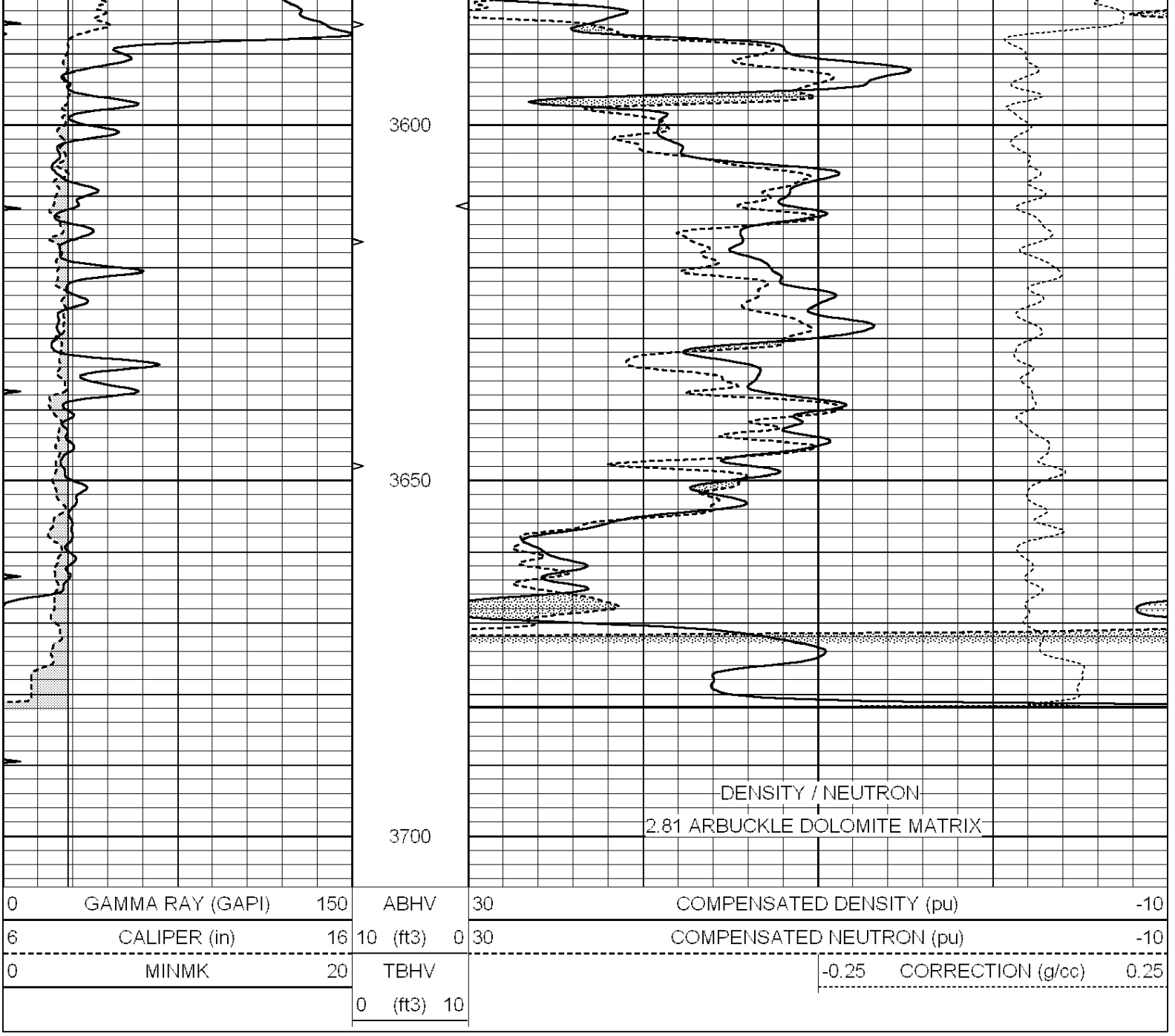
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	TBHV		-0.25	CORRECTION (g/cc)	0.25
			0 (ft3) 10				

DOLOMITE MATRIX

Database File: 30763ddn.db
Dataset Pathname: pass2.2D
Presentation Format: den_neu
Dataset Creation: Tue Aug 23 14:20:54 2016
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: 30763ddn.db
Dataset Pathname: pass3.9
Dataset Creation: Tue Aug 23 15:27:19 2016

Dual Induction Calibration Report

Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Sun Aug 21 16:27:19 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	2.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-40.000
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: 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

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: Mon Aug 22 01:00:15 2016

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps