



Casedhole Solutions

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company SHELBY RESOURCES, LLC
Well FRANCIS #1-36
Field SWEENEY SOUTHWEST
County PAWNEE
State KANSAS

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Location: API # : 15-145-21817-0000
2325' FNL & 2197' FWL
SEC 36 TWP 21S RGE 17W
Permanent Datum GROUND LEVEL Elevation 1971
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
SONIC
Elevation
K.B. 1982
D.F. 1980
G.L. 1971

Date	3/23/16		
Run Number	ONE		
Depth Driller	4000		
Depth Logger	3998		
Bottom Logged Interval	3974		
Top Log Interval	3000		
Casing Driller	8 5/8"@970'		
Casing Logger	968		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,700 PPM	
Density / Viscosity	9.4/63		
pH / Fluid Loss	10.5/7.2		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	.900@71F		
Rmf @ Meas. Temp	.675@71F		
Rmc @ Meas. Temp	1.08@71F		
Source of Rmf / Rmc	MEASUREMENT		
Rin @ BHT	.551@116F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	6:00 P.M.		
Maximum Recorded Temperature	116F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KEITH REAVIS		

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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 (C & J ENERY/ CASEDHOLE SOLUTIONS) HAYS, KANSAS (785) 628-6395
DIRECTIONS
LARNED, KS. & HWY 19, 3E. RD "80TH AVE.", 1 1/2N, AROUND CURVE, E. INTO AND FOLLOW TRAIL
BACK NORTH

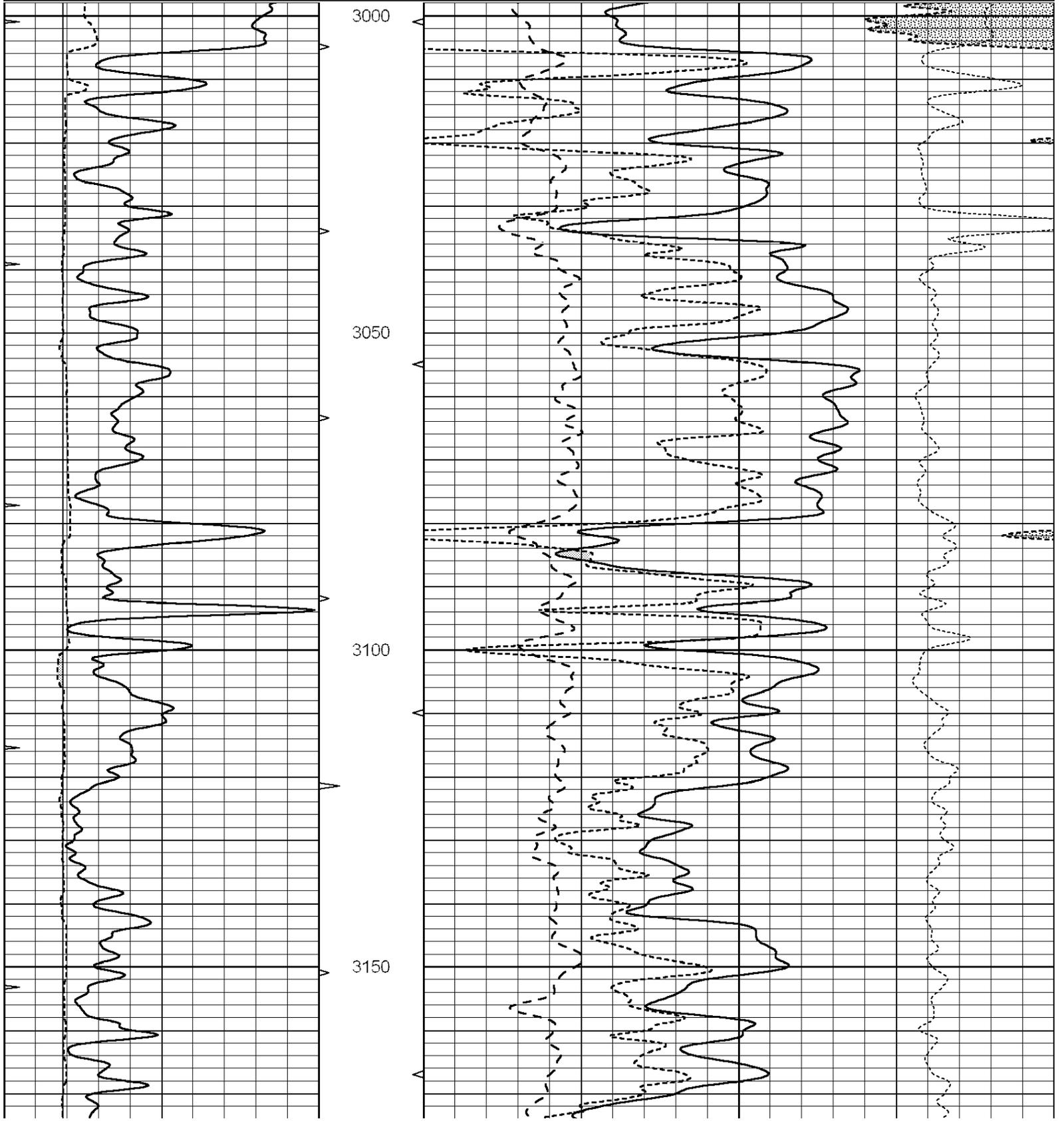


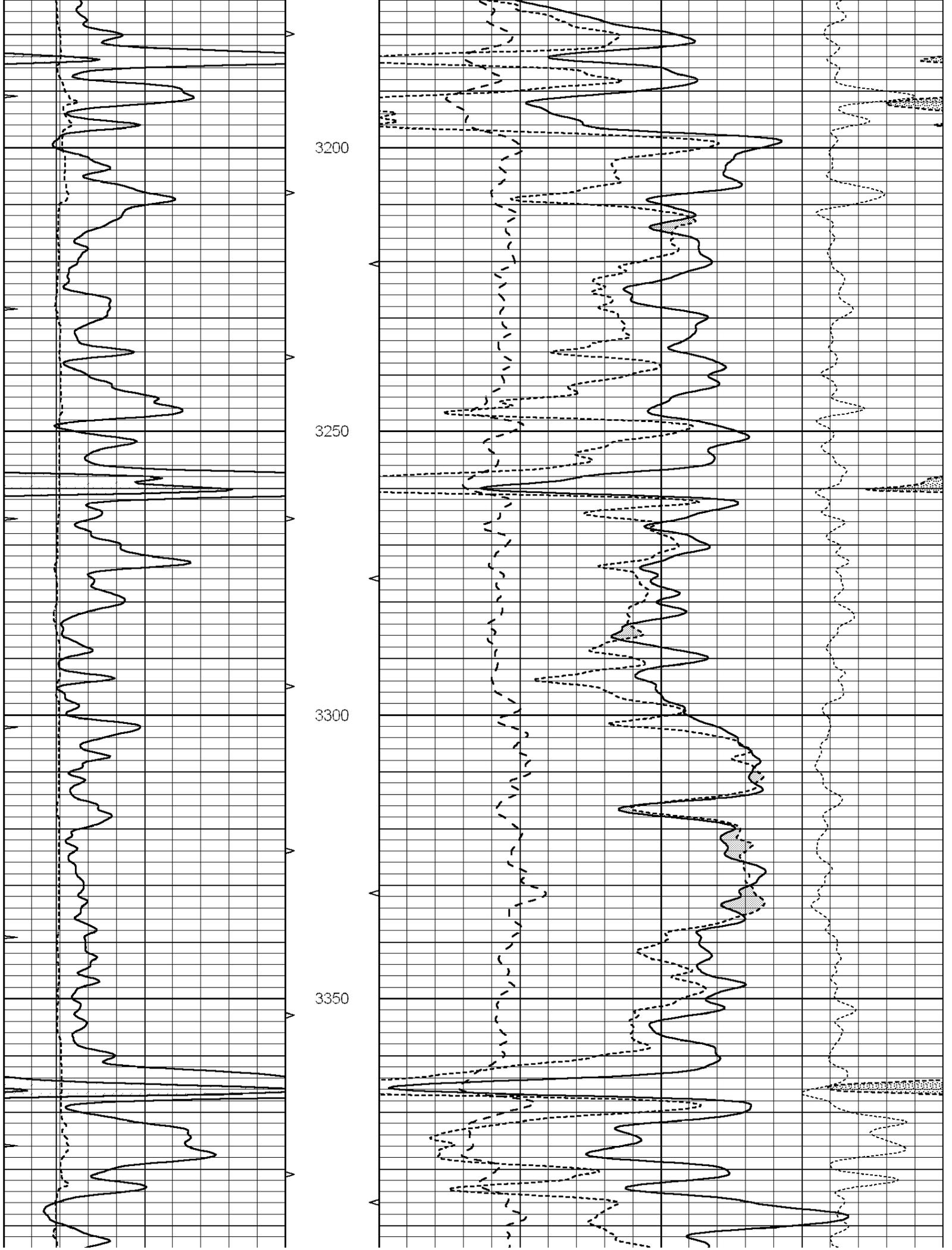
Casedhole Solutions

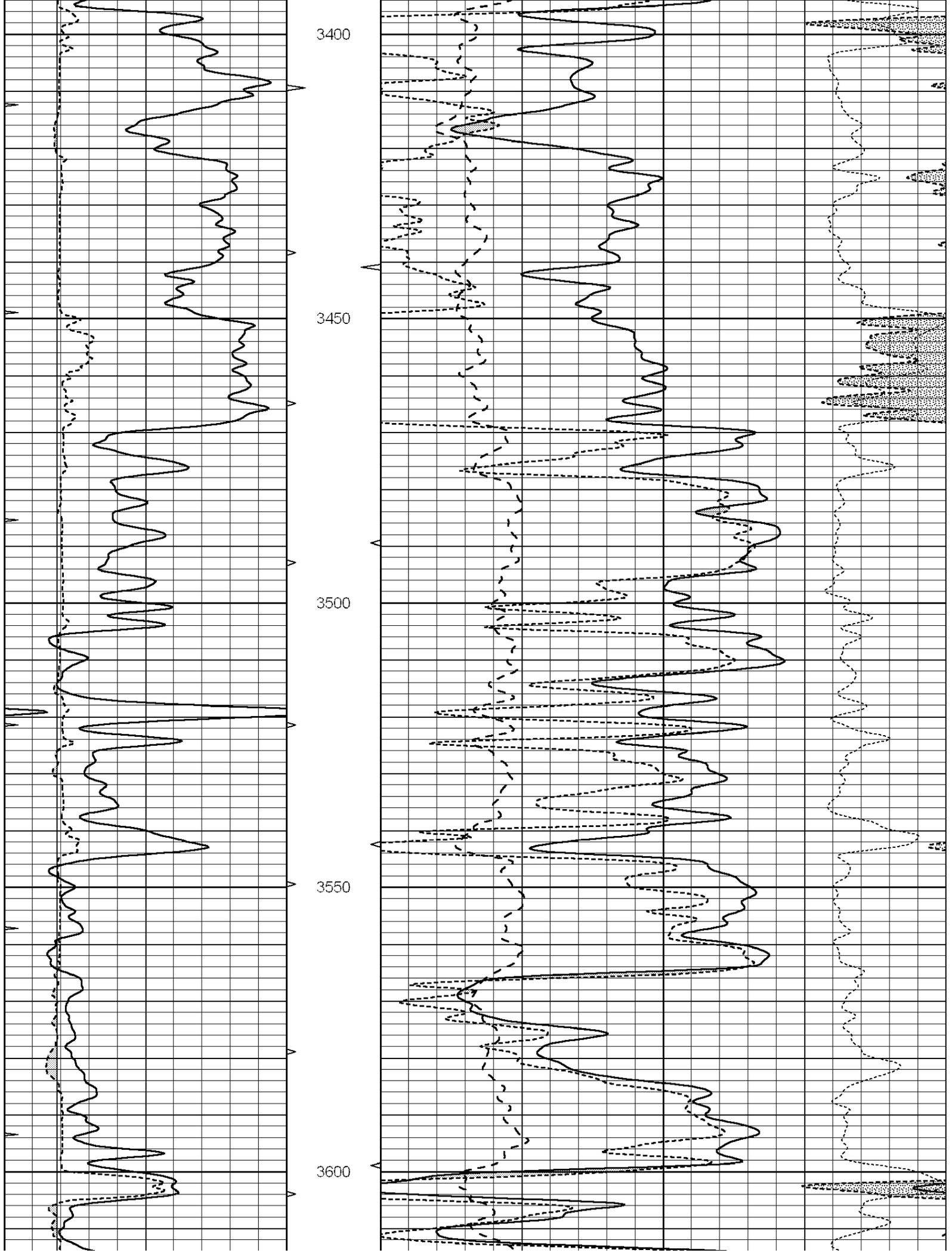
MAIN SECTION

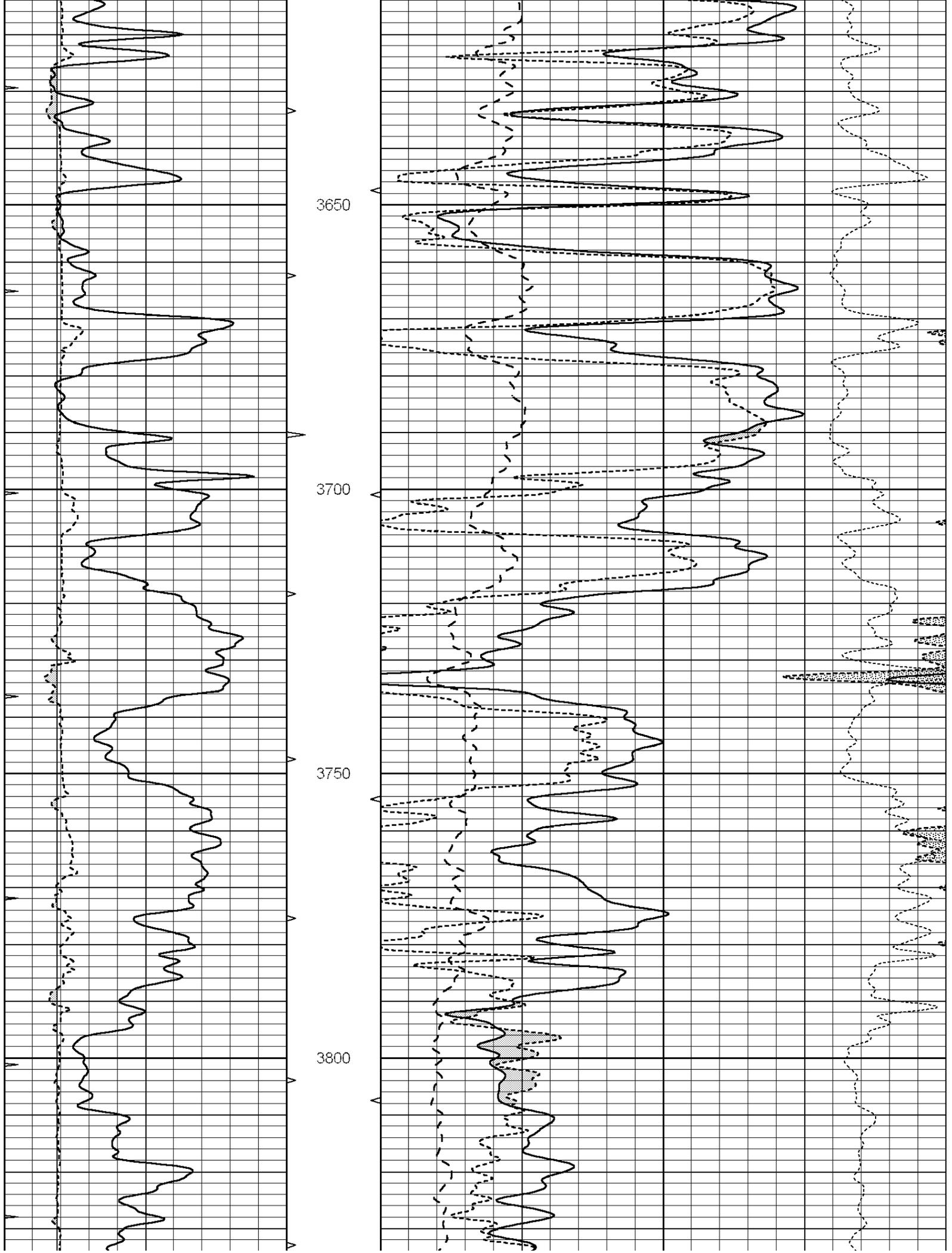
Database File: 30691pe.db
 Dataset Pathname: pass3.4
 Presentation Format: ldt_neu
 Dataset Creation: Wed Mar 23 09:37:31 2016 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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



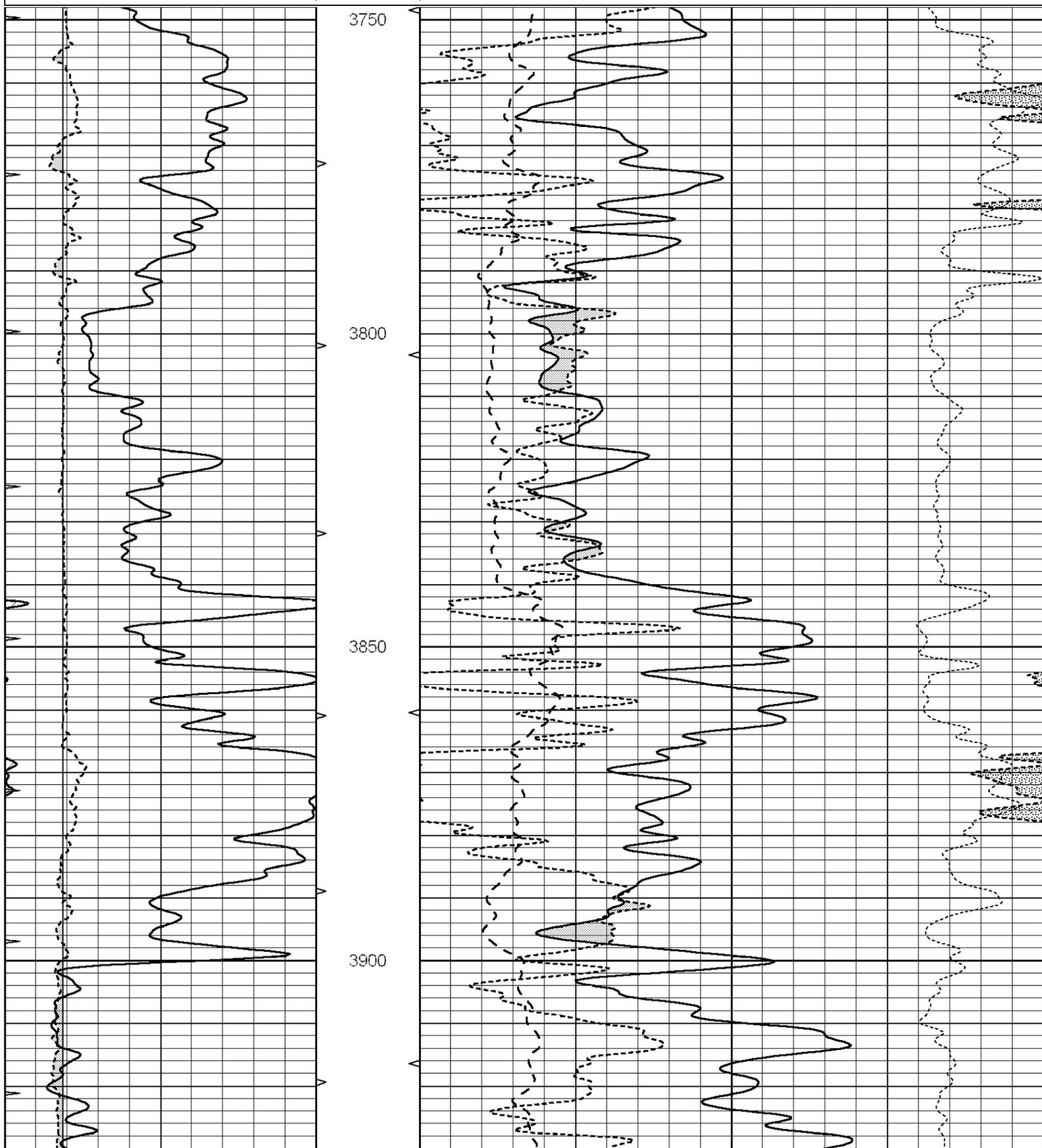


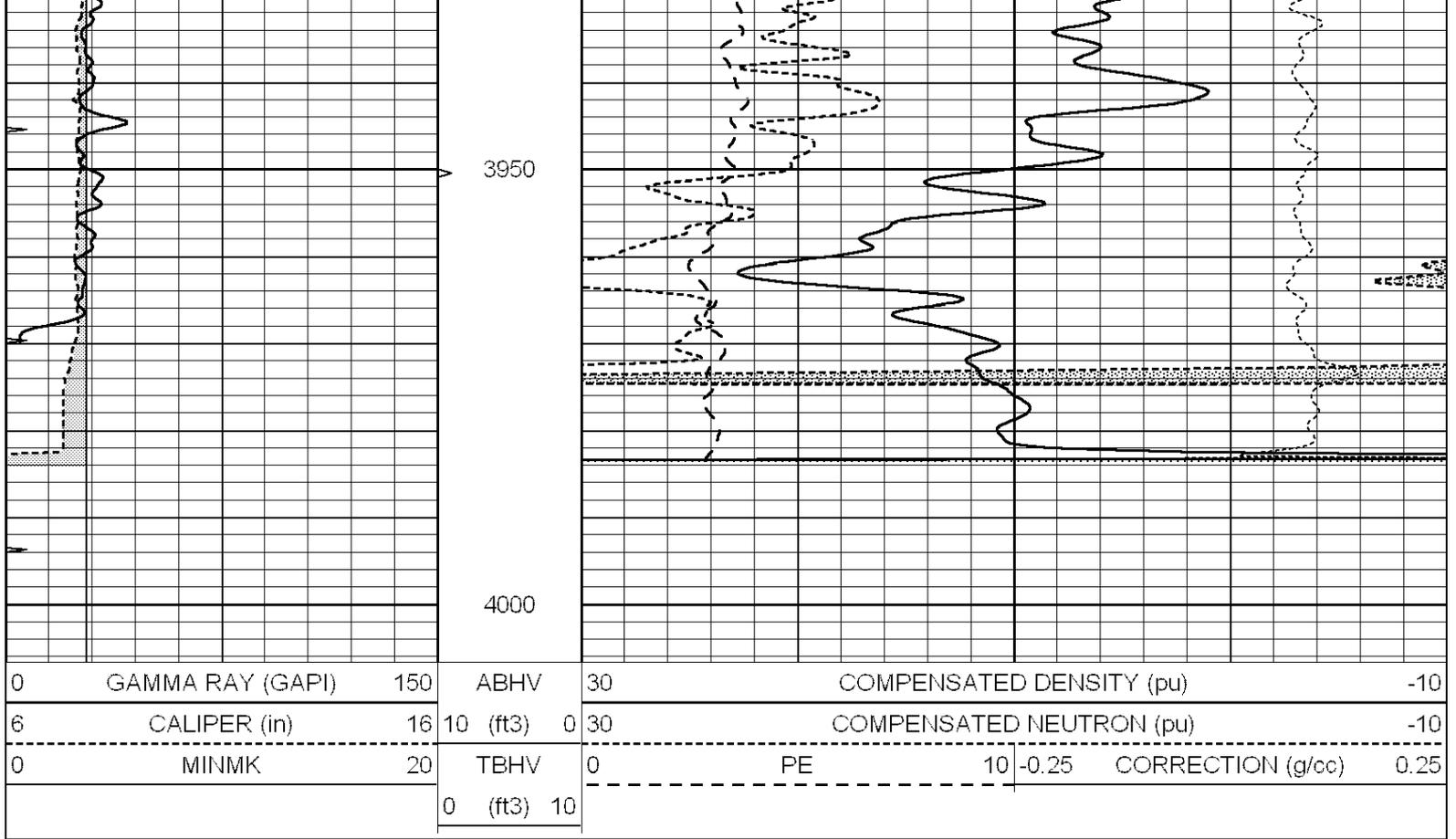




Database File: 30691pe.db
 Dataset Pathname: pass2.8
 Presentation Format: ldt_neu
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 Charted by: Depth in Feet scaled 1:240

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



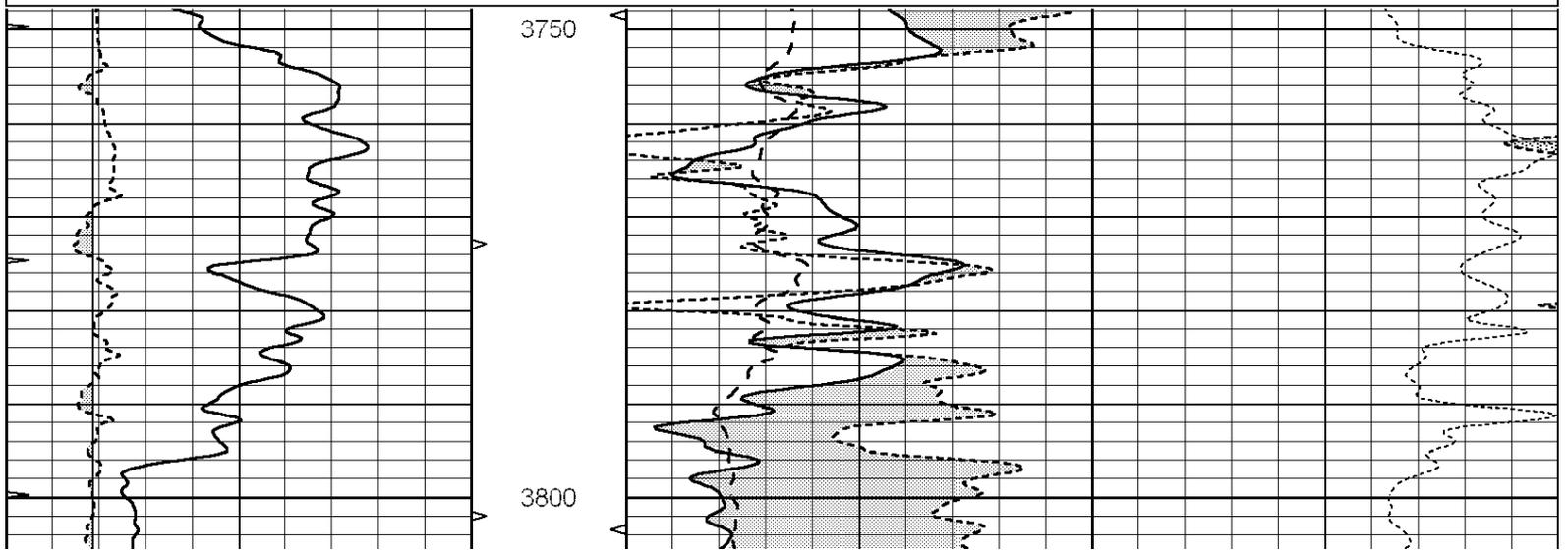


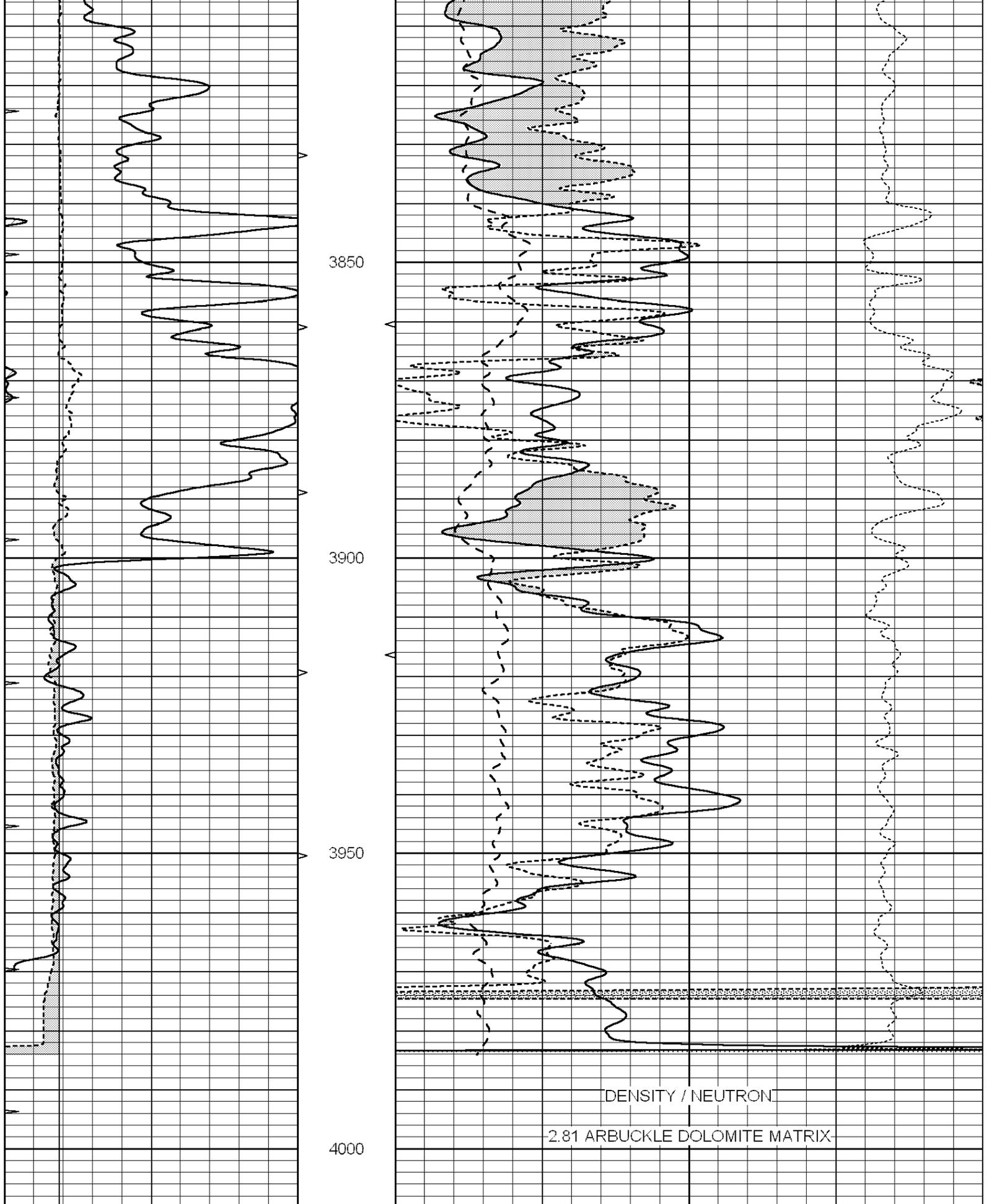
**Casedhole
Solutions**

DOLOMITE MATRIX

Database File: 30691pe.db
 Dataset Pathname: pass2.4
 Presentation Format: ldt_neu
 Dataset Creation: Wed Mar 23 08:51:28 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	PE	10	-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	PE	10	-0.25	CORRECTION (g/cc)	0.25

Calibration Report

Database File: 30691pe.db
 Dataset Pathname: pass3.4
 Dataset Creation: Wed Mar 23 09:37:31 2016 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Sat Mar 12 18:49:27 2016
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	670.000	-18.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	685.000	-32.000
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: Sat Mar 12 18:34:02 2016

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps