



**COMPENSATED
DENSITY/NEUTRON
LOG**

Company SHELBY RESOURCES, LLC.
Well BORCK UNIT #1-25
Field N/A
County PAWNEE
State KANSAS

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Well BORCK UNIT #1-25
Field N/A
County PAWNEE State KANSAS

Location: API # : 15-145-21843-00-00
1024 FSL & 2521 FEL
SEC 25 TWP 21S RGE 16W
Permanent Datum GROUND LEVEL Elevation 1970'
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
SONIC
Elevation
K.B. 1981
D.F. 1979
G.L. 1970

Date	12/11/18
Run Number	ONE
Depth Driller	3980
Depth Logger	3980
Bottom Logged Interval	3960
Top Log Interval	2900
Casing Driller	8 5/8@ 975
Casing Logger	975
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4/64
pH / Fluid Loss	10.0/10.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.1@62
Rmt @ Meas. Temp	.83@62
Rmc @ Meas. Temp	1.32@62
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.59@116
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	///
Maximum Recorded Temperature	116F
Equipment Number	4010
Location	HAYS, KANSAS
Recorded By	GUS PFANENSTIEL
Witnessed By	JEREMY SCHWARTZ

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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, KS. (785) 628-6395

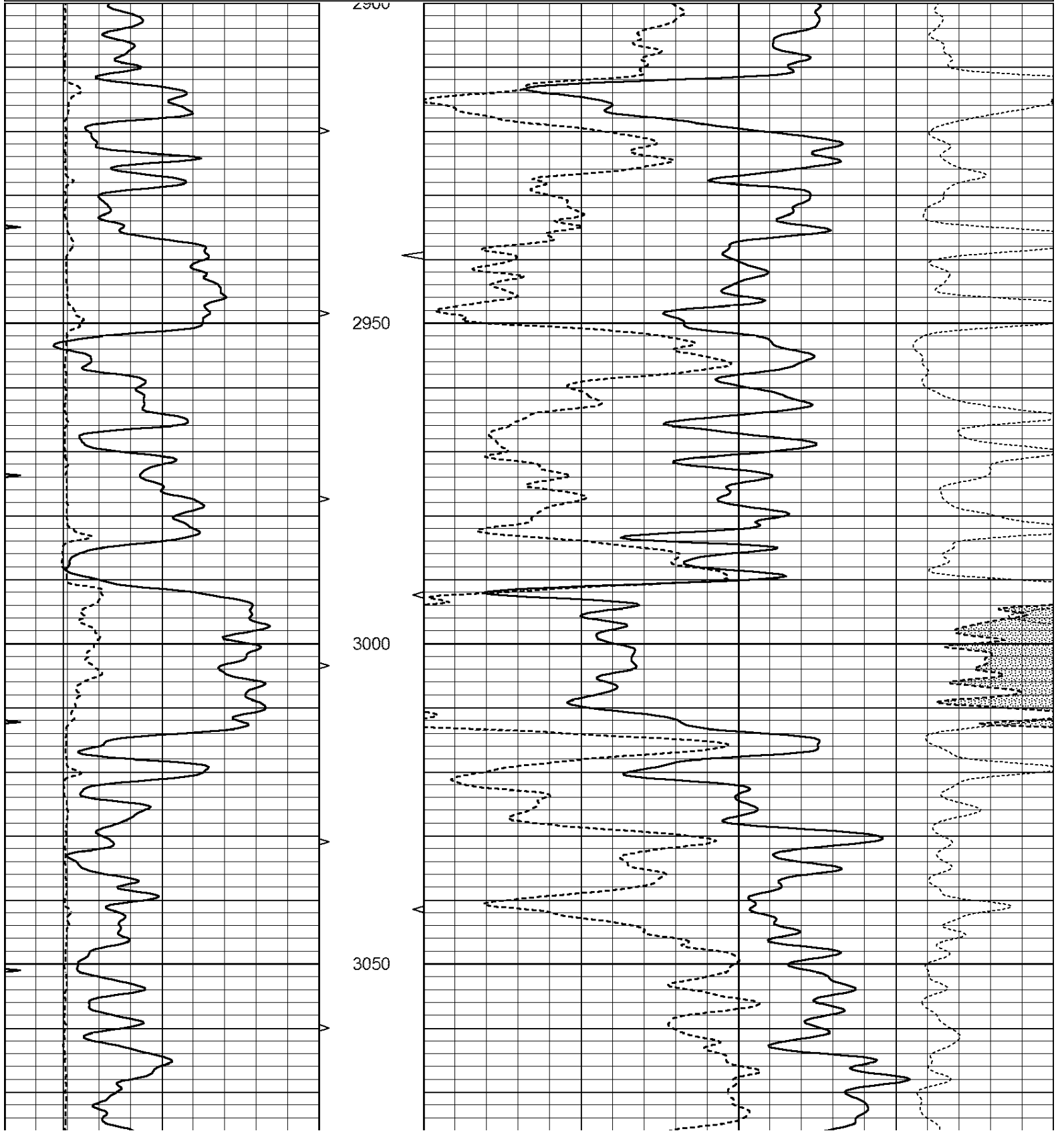
DIRECTIONS
LARNED, HEAD NE ON HIGHWAY TILL YOU GET TO O RD.
GO SE TO 80 TH, GO SOUTH TO DEAD IN EAST INTO.

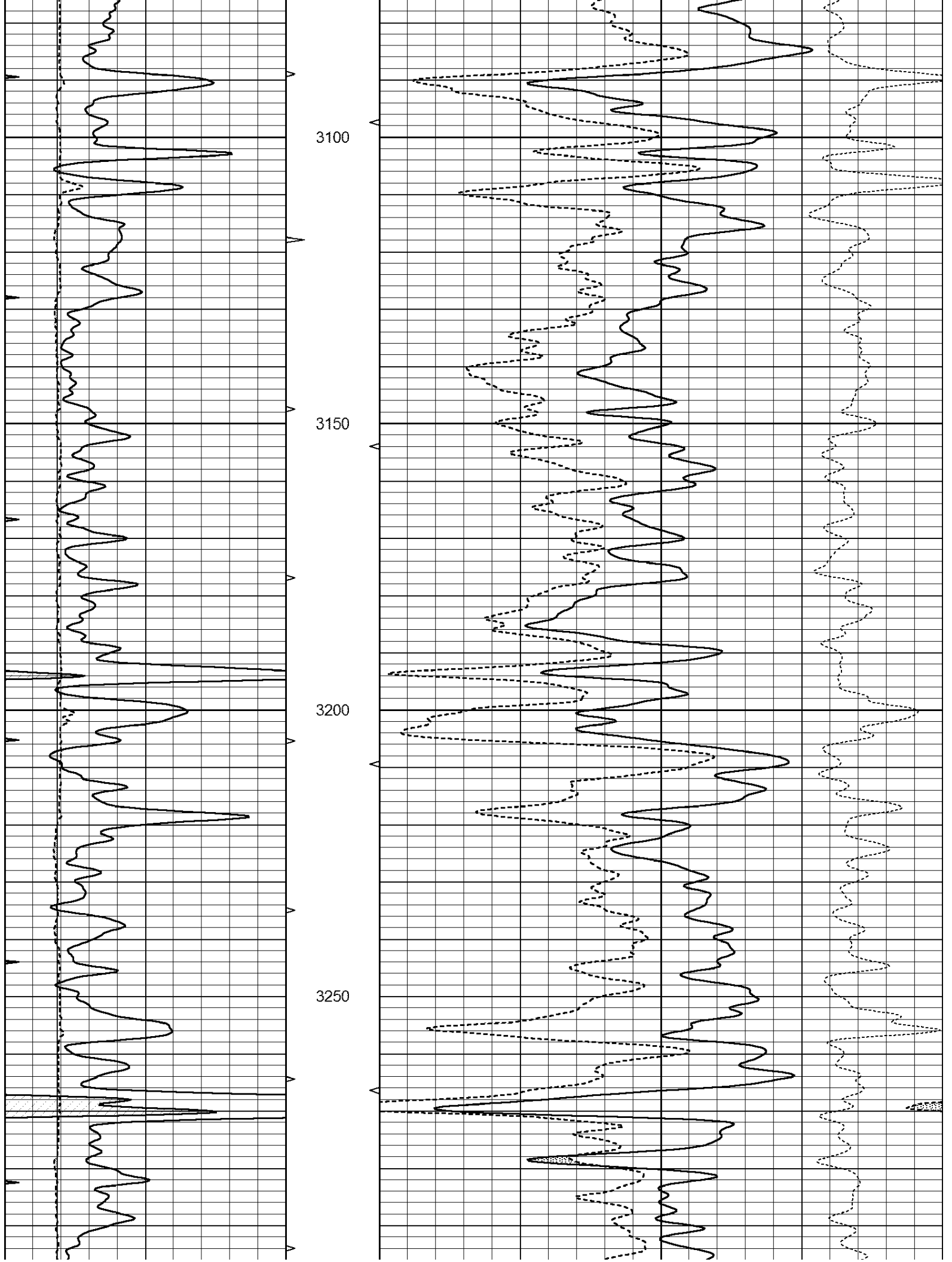


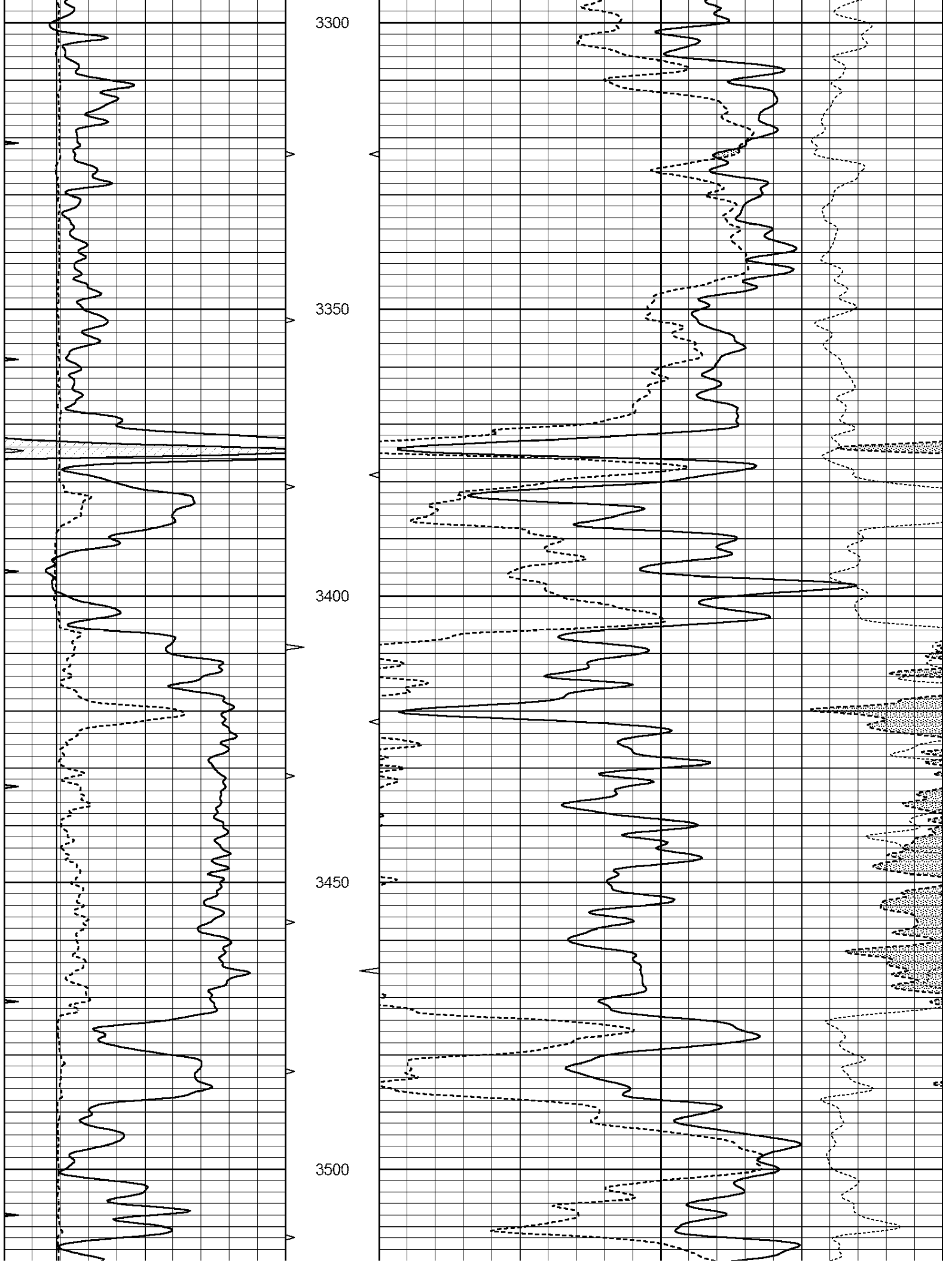
MAIN PASS

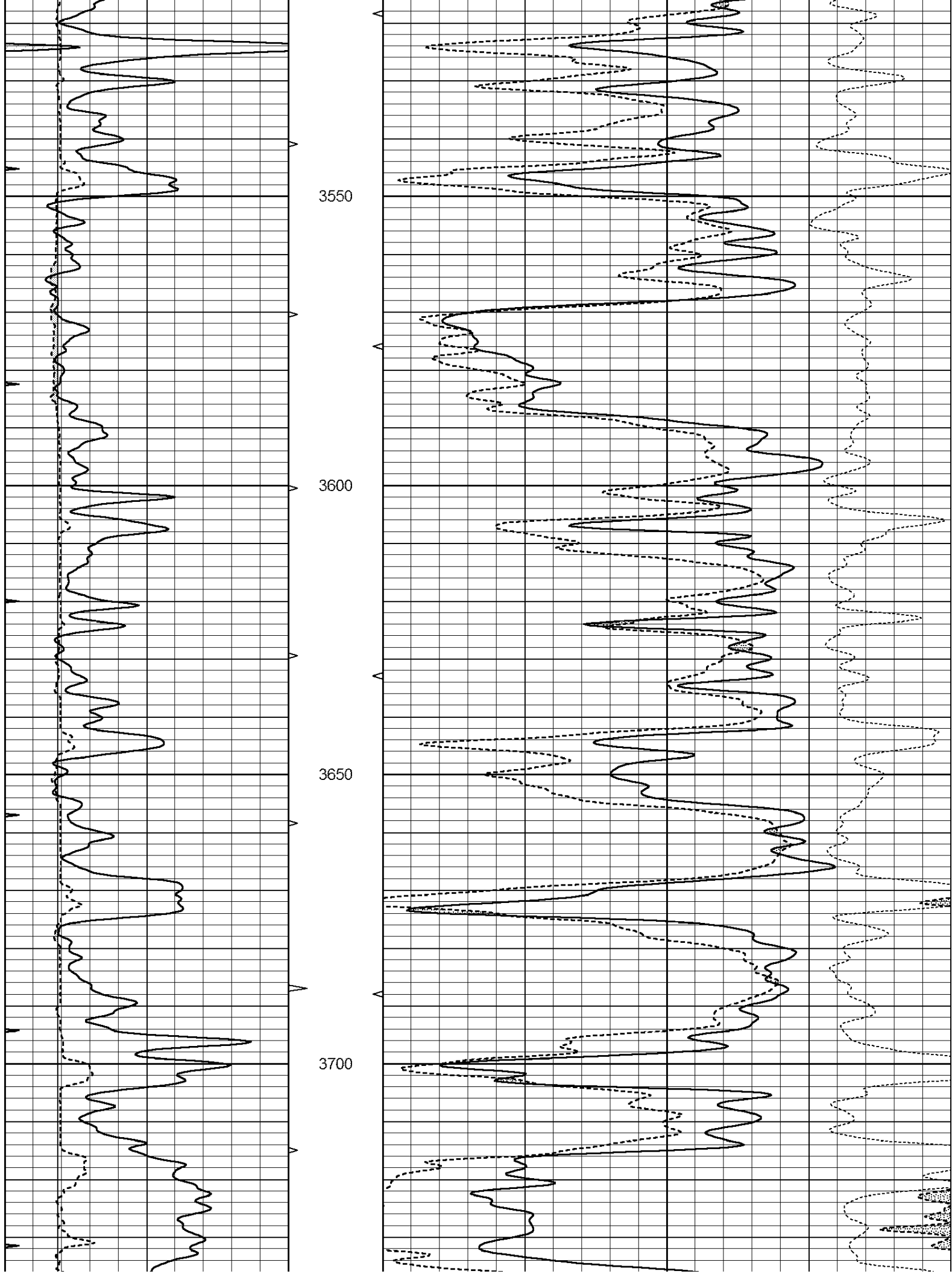
Database File: 3165ddn.db
 Dataset Pathname: pass3
 Presentation Format: den_neu
 Dataset Creation: Tue Dec 11 17:06:12 2018 by Log Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

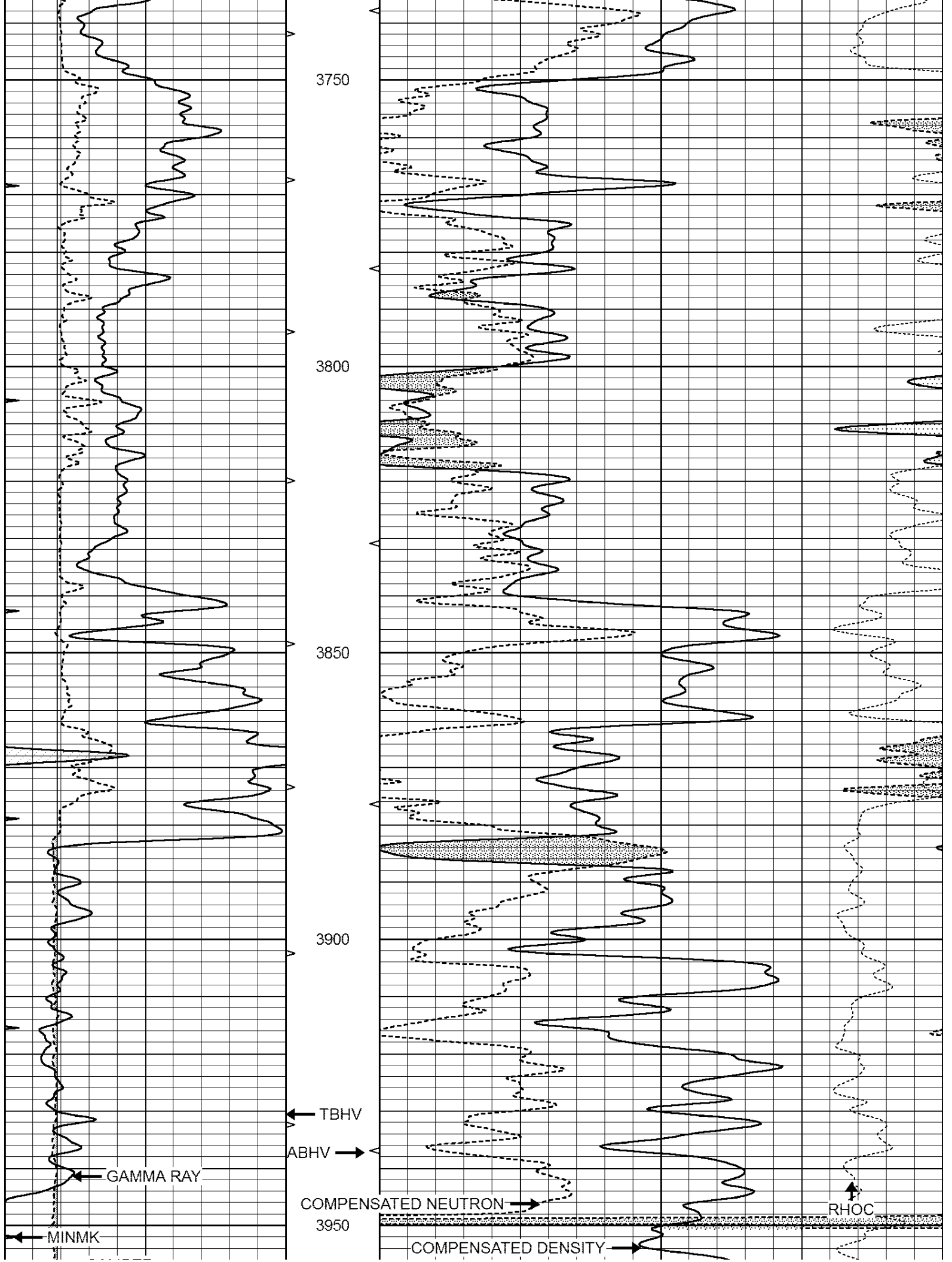
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		



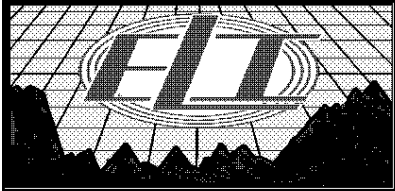








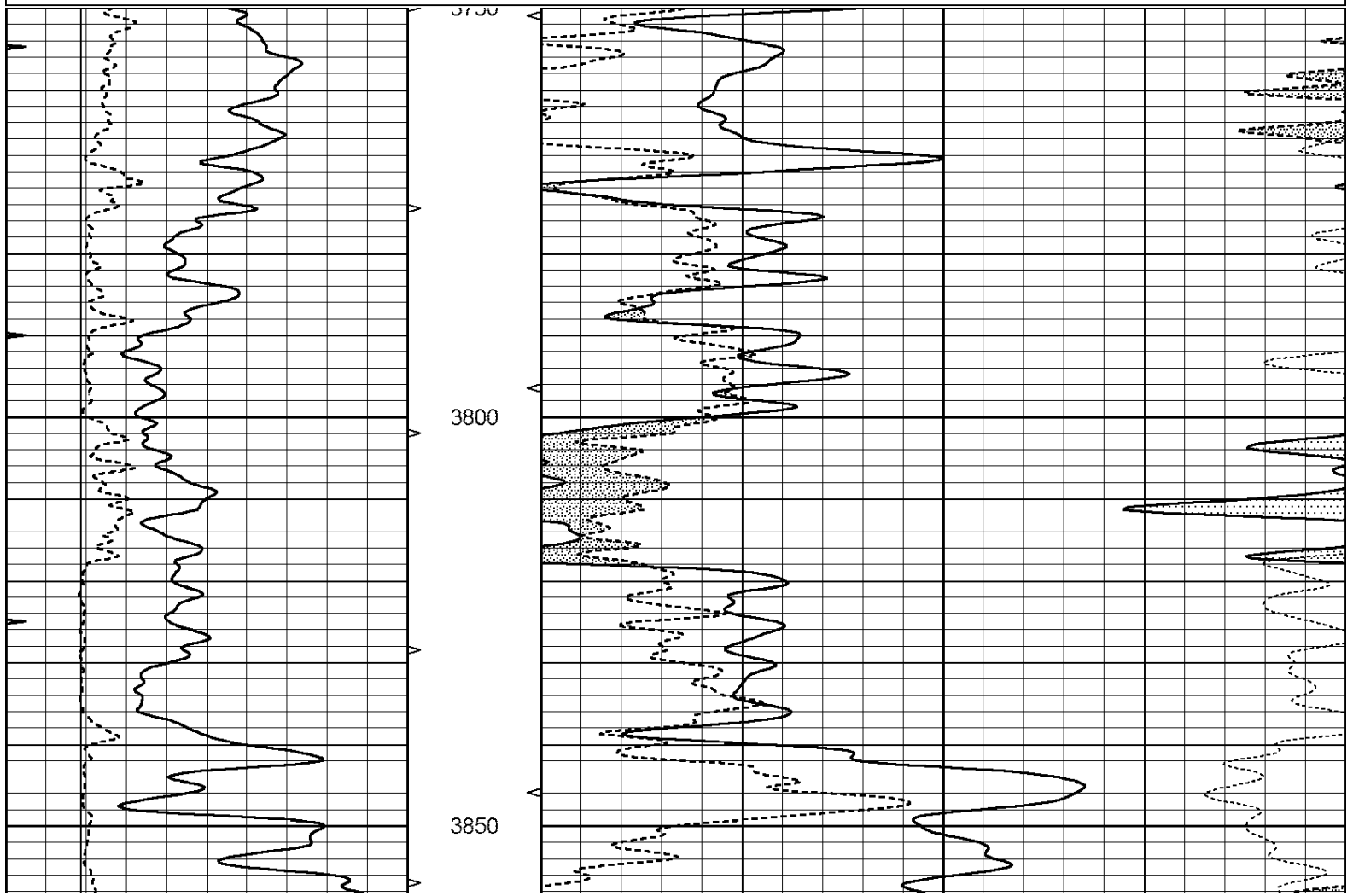
← CALIPER									
← BOREID									
						LIMESTONE MATRIX 2.71			
		LTD 3980							
0	GAMMA RAY (GAPI)	150	ABHV	30		COMPENSATED DENSITY (pu)		-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)		-10	
0	MINMK	20	TBHV			-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10					

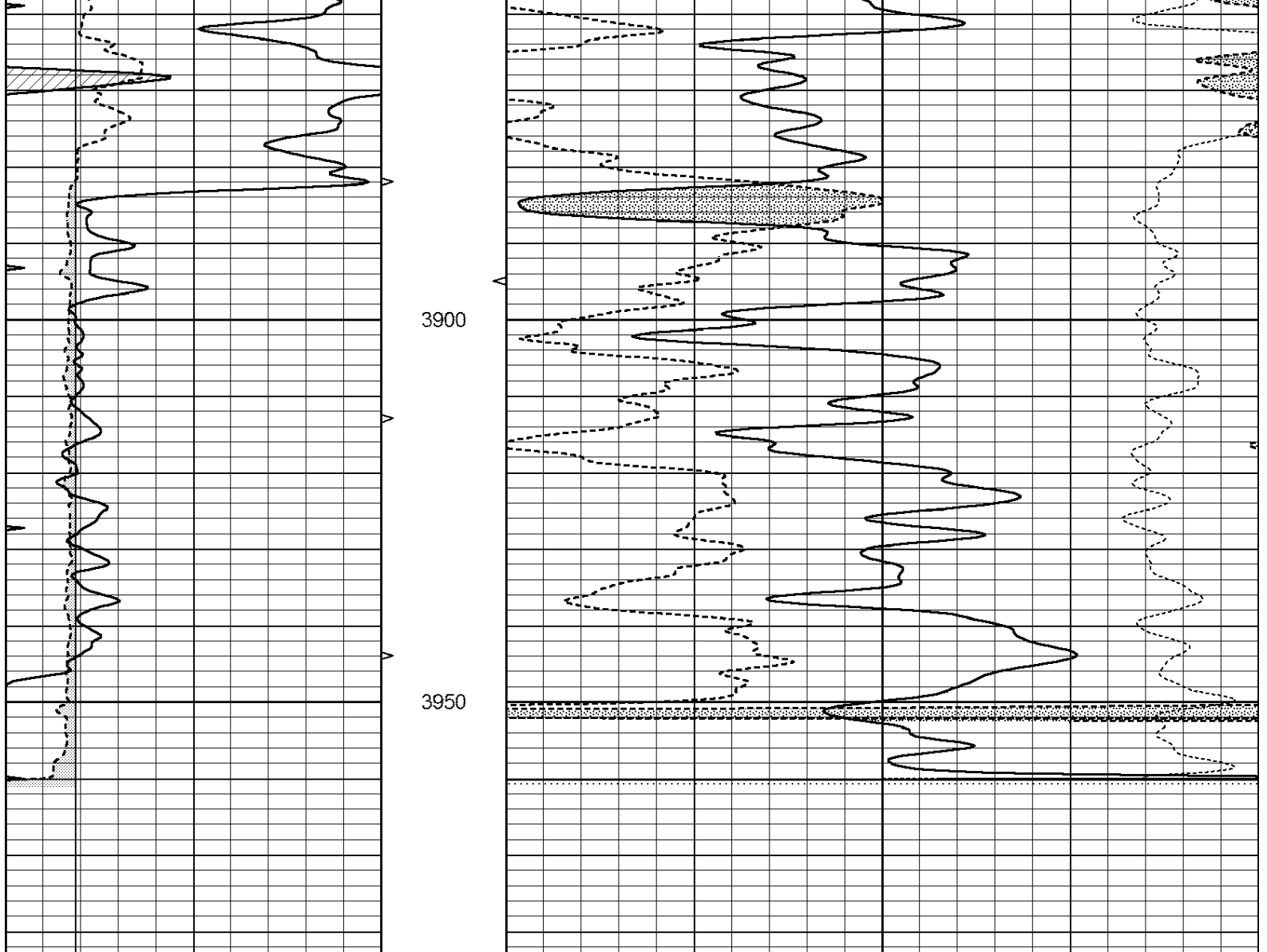


REPEAT SECTION

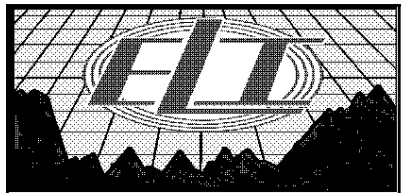
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 Dataset Pathname: pass2
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 Dataset Creation: Tue Dec 11 16:54:51 2018 by Log Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

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					





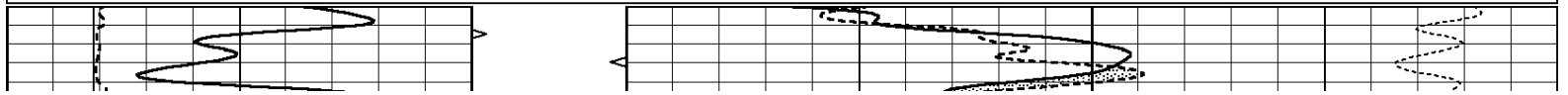
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

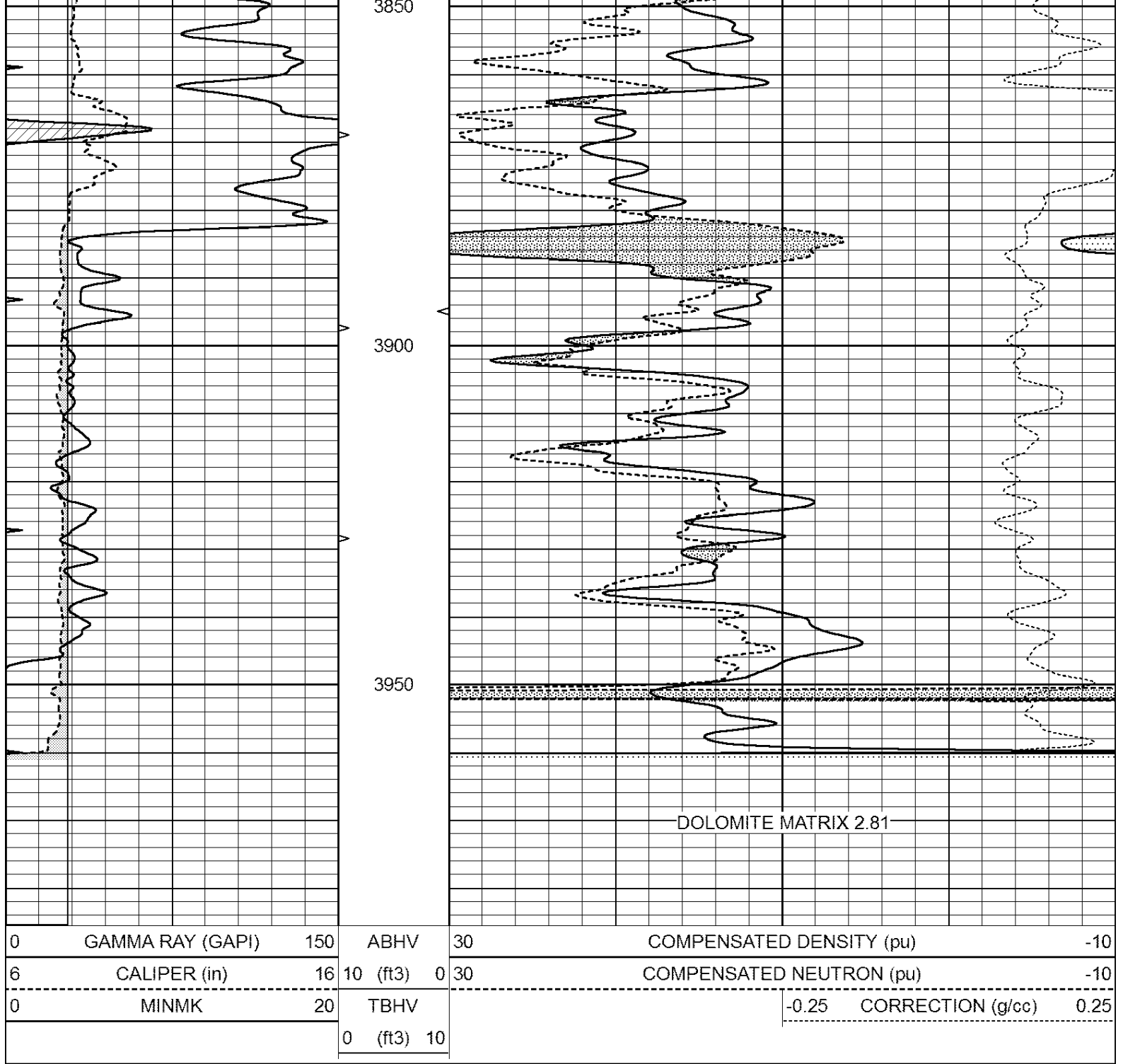


DOLOMITE MATIX 2.81

Database File: 3165ddn.db
 Dataset Pathname: pass2DOL
 Presentation Format: den_neu
 Dataset Creation: Tue Dec 11 17:41:46 2018
 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: 3165ddn.db
 Dataset Pathname: pass2
 Dataset Creation: Tue Dec 11 16:54:51 2018 by Log Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Mon Sep 10 14:28:35 2018
 Downhole Cal Performed: Mon Sep 10 14:28:38 2018
 After Survey Verification Performed: Mon Sep 10 14:28:40 2018

Surface Calibration

Loop:	Readings		V	References		Results	
	Air	Loop		Air	Loop	m	b
Deen	0.015	0.648		0.000	400.000	mmho/m	620.000 0.000

Deep	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	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 Thu Sep 27 12:07:11 2018						
	Background	Magnesium	Aluminum	Sandstone				
Window 1	1185.6	7077.4	2520.9	8182.4			cps	
Window 2	1116.8	5910.1	2163.2	6739.4			cps	
Window 3	880.1	3145.8	1325.0	3461.2			cps	
Window 4	289.5	295.8	290.8	295.3			cps	
Long Space	0.0	4793.3	1046.5	5622.7			cps	
Short Space	2.9	1608.0	1038.9	1622.7			cps	
Rho		1.7100	2.5960	1.3800			g/cc	
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 44.0	Rib Slope	: 0.965	Density/Spine Ratio			: 0.560	
Spine Angle	: 74.0	Spine Slope	: 3.484	Spine Intercept			: -17.2	

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969						
	Background	Magnesium	Aluminum	Sandstone				
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						
	Background	Magnesium	Aluminum	Sandstone				
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				

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: 6I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

PRE-SURVEY VERIFICATION

	Detector	Readings		Measured	Target
1)	Short Space		cps		
	Long Space		cps	pu	pu
2)	Short Space		cps		
	Long Space		cps	pu	
3)	Short Space		cps		
	Long Space		cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings		Measured	Target
1)	Short Space		cps		
	Long Space		cps	pu	pu
2)	Short Space		cps		
	Long Space		cps	pu	pu
3)	Short Space		cps		
	Long Space		cps	pu	pu

Gamma Ray Calibration Report

Serial Number: GR6
Tool Model: OPEN
Performed: Mon Sep 10 14:29:23 2018

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity: 0.5500 GAPI/cps