



**COMPENSATED
DENSITY/NEUTRON
LOG**

Company MAI OIL OPERATIONS, INC.
 Well RICHARDS #15
 Field MENDOTA
 County ELLIS State KANSAS

Location: API #: 15-051-26943-0000
 680' FSL & 1915' FEL
 SW-NE-SW-SE
 SEC 6 TWP 11S RGE 20W
 Permanent Datum GROUND LEVEL Elevation 2090
 Log Measured From KELLY BUSHING 8' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services DIL/MEL
 Elevation K.B. 2098
 D.F. 2096
 G.L. 2090

Date	1/21/19
Run Number	ONE
Depth Driller	3770
Depth Logger	3770
Bottom Logged Interval	3746
Top Log Interval	3000
Casing Driller	8 5/8" @ 261
Casing Logger	260
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4/57
PH / Fluid Loss	10.0/8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.80 @ 65F
Rmt @ Meas. Temp	.60 @ 65F
Rmc @ Meas. Temp	.96 @ 65F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.45 @ 114F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	////
Maximum Recorded Temperature	114F
Equipment Number	3802
Location	HAYS, KANSAS
Recorded By	JASON CAPPELLUCCI
Witnessed By	WYATT URBAN

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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

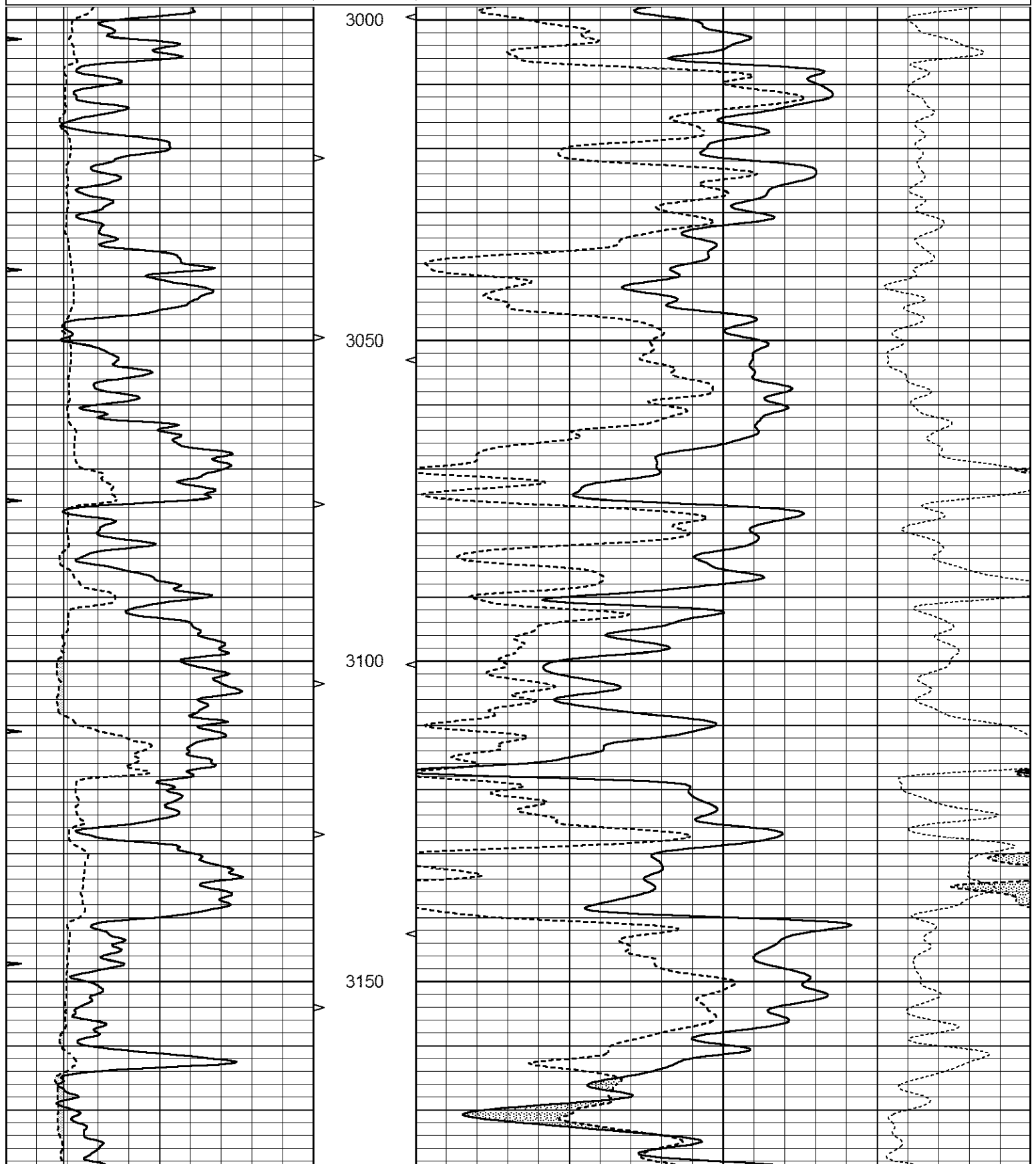
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
 DIRECTIONS
 ELLIS, KS. - NORTH TO COUNTY LINE - 3 WEST FROM THE CURVE WEST
 TO RD. 100 - 1 SOUTH - EAST INTO

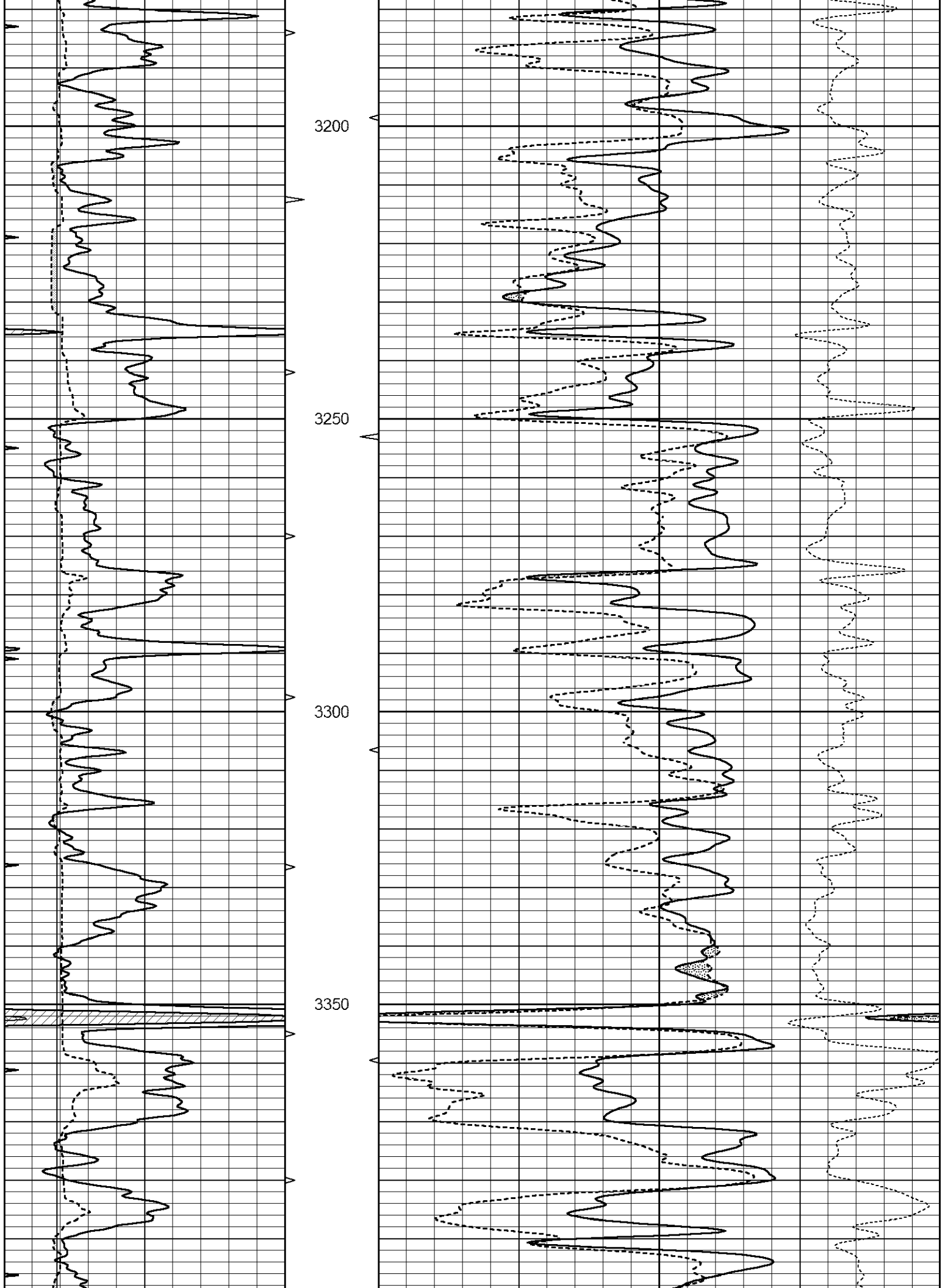


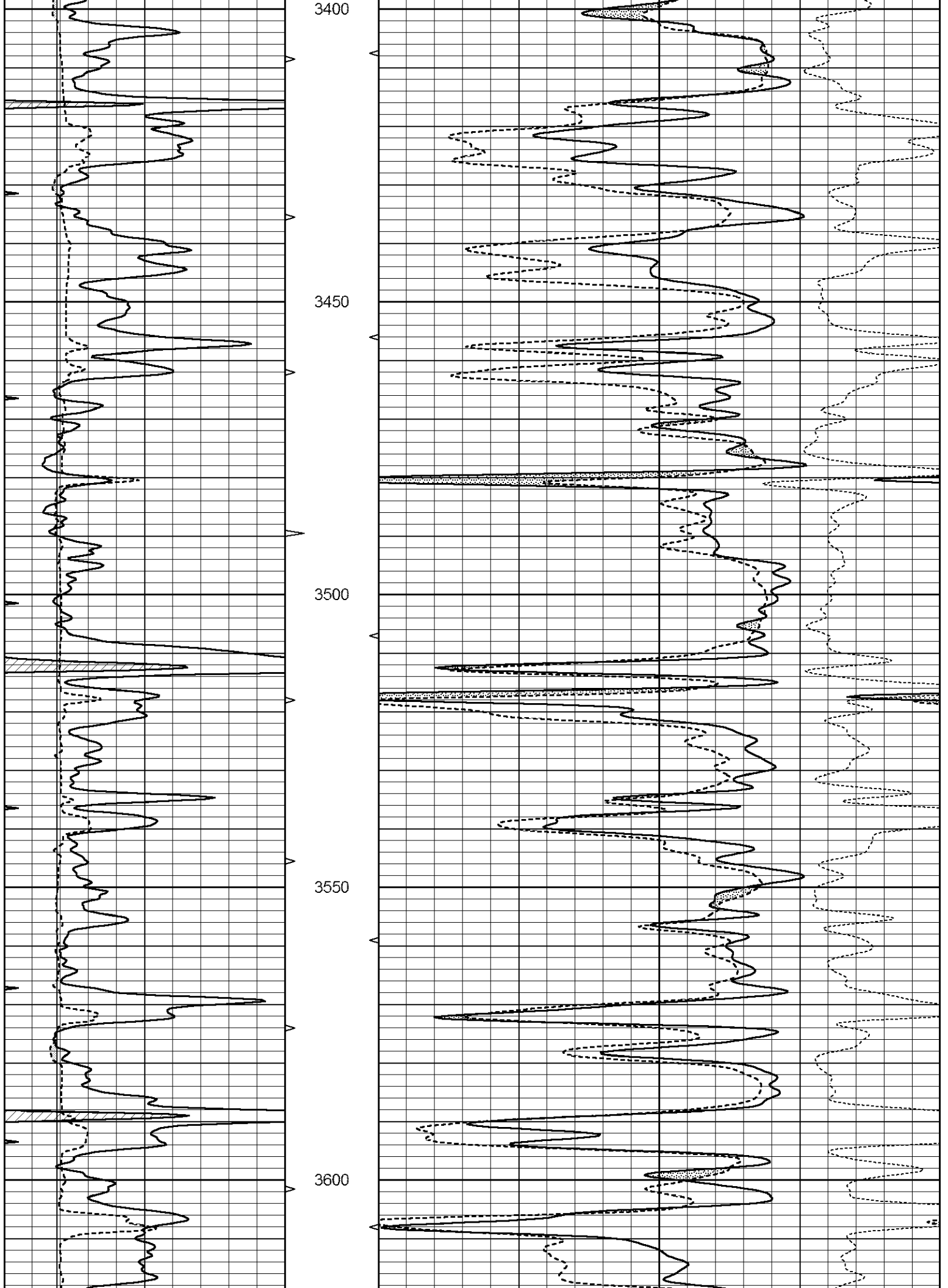
MAIN SECTION

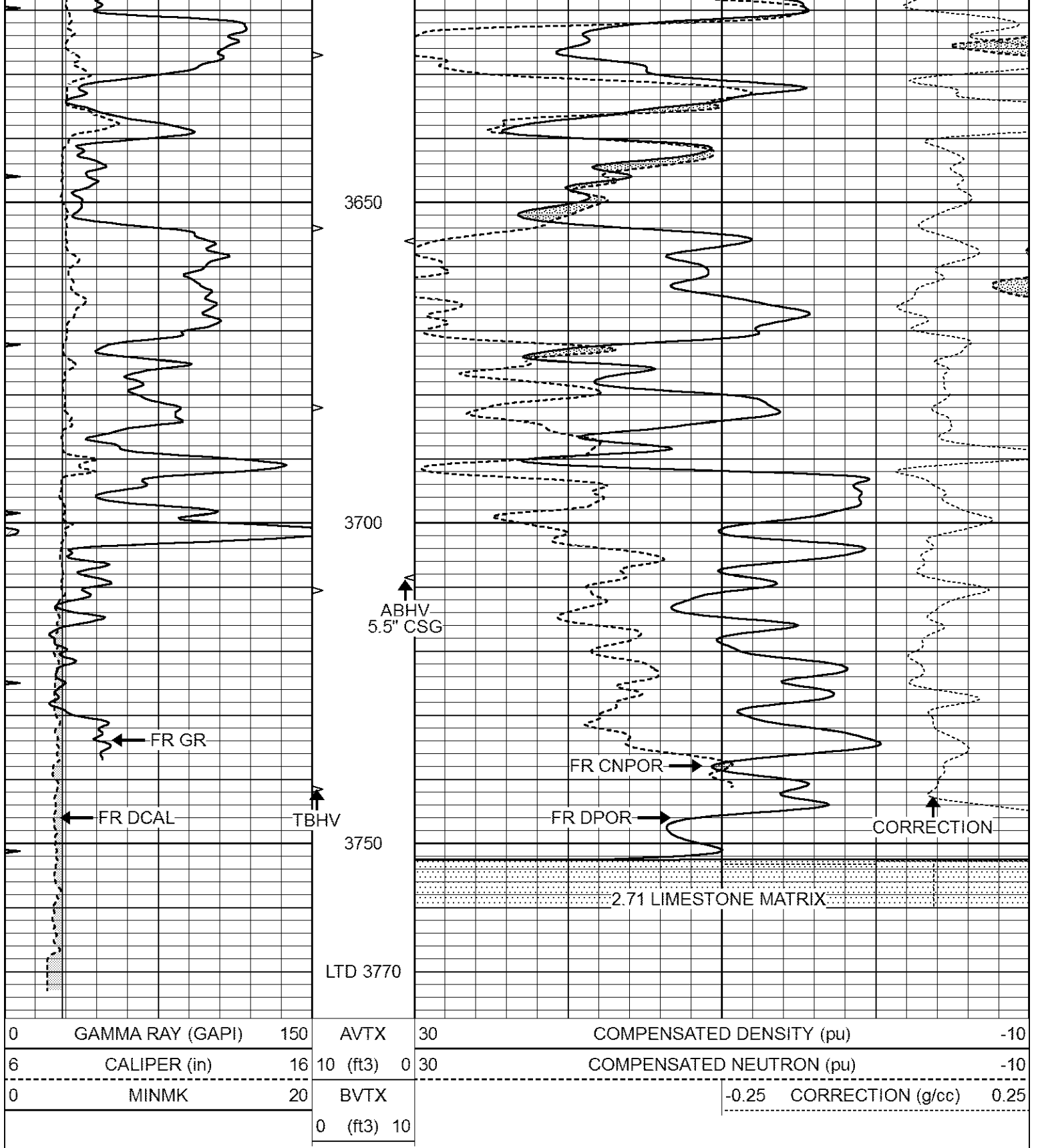
Database File 3437ddn8.db
 Dataset Pathname pass3.1
 Presentation Format _den_neu
 Dataset Creation Mon Jan 21 18:18:09 2019
 Charted by Depth in Feet scaled 1:240

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





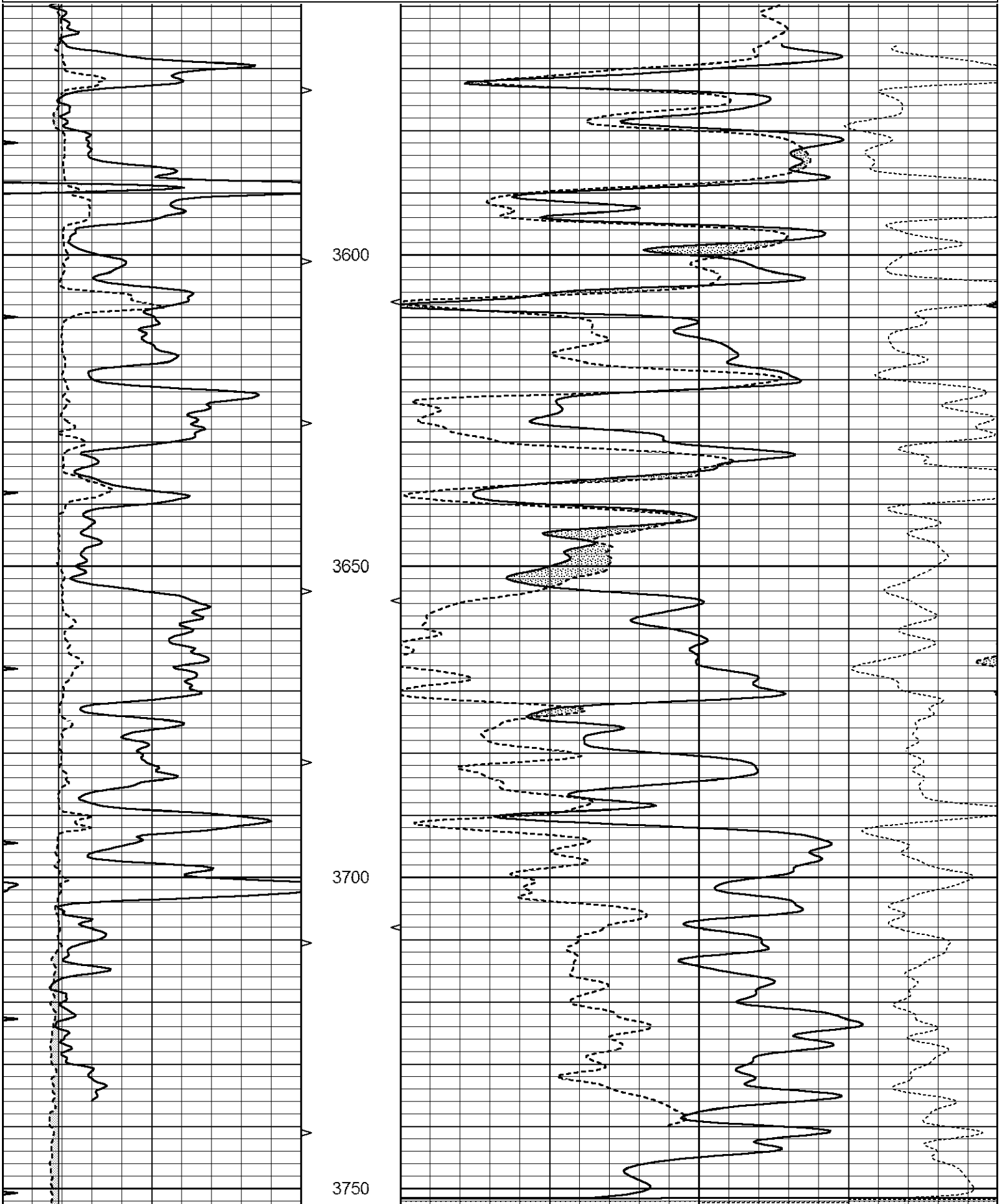




REPEAT SECTION

Database File 3437ddn8.db
 Dataset Pathname pass2.1
 Presentation Format _den_neu
 Dataset Creation Mon Jan 21 18:12:42 2019
 Client ID Position File Path

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



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

Calibration Report

Database File 3437ddn8.db
 Dataset Pathname pass2.1
 Dataset Creation Mon Jan 21 18:12:42 2019

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Mon May 22 14:23:32 2017
 Downhole Cal Performed: Thu Mar 12 09:29:20 2015
 After Survey Verification Performed: Thu Mar 12 09:29:20 2015

Surface Calibration

Loop:	Readings				References			Results	
	Air	Loop			Air	Loop		m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	618.595	-5.524	
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	632.856	1.197	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.007	0.649	V	0.000	400.000	mmho/m	623.784	-4.595	
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251	

Downhole Calibration

	Readings				References			Results	
	Zero	Cal			Zero	Cal		m'	b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149	
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099	
LL3		7.503	V		1500.000	Ohm-m			
		0.001	V		20.000	Ohm-m			
		-7.481	V		3745.000	mmho-m			

After Survey Verification

	Readings				Targets			Results	
	Zero	Cal			Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000	
Medium	0.000	0.000	mmho/m	3.565	471.327	mmho/m	1.000	0.000	
LL3		0.000	Ohm-m		1500.000	Ohm-m			
		0.000	Ohm-m		20.000	Ohm-m			
		0.000	mmho-m		3745.000	mmho-m			

Litho Density Calibration Report

Serial: 140704
 Model: V4_10P
 Source Number: 74GBq-19

	Background	Aluminum	Magnesium		
Window 1	563.20	5403.39	24190.50	cps	
Window 2	44.78	1243.51	6049.93	cps	
Window 4	247.62	1222.40	5239.60	cps	
Window 5	568.17	8975.27	17094.80	cps	
Window 6	44.48	1484.88	2922.28	cps	
Window 8	270.82	2877.34	5377.89	cps	
Bulk Density	-	2.6020	1.6830	g/cc	
Pe	-	3.0000	2.5070	b/e	
LS Alpha:	: -1.8641	SS Alpha:	: -0.7692	LS CPE:	: 1.1004
LS Beta:	: 127931.7253	SS Beta:	: 20075.8142	SS CPE:	: 1.5209

Before Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

After Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

Lithodensity Caliper Calibration

Performed: Fri Jan 18 10:53:52 2019

Results	Readings	References (in)		Gain	Offset
Low	High	Low	High		
90.2	3611.6	8.0	14.0	0.0	7.8

Before Survey Caliper Verification

Performed:

	Reference	Reading
Caliper (in)	_____	_____

After Survey Caliper Verification

Performed:

	Reference	Reading
Caliper (in)	_____	_____

Compensated Neutron Calibration Report

Serial Number: 080621PMC
Tool Model: NABORS

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:	7		
Tool Model:	Probe1		
Performed:	Wed Dec 05 01:26:33 2018		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.4300	GAPI/cps	