



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

Company DREILING OIL CO., INC.  
Well DREILING TRUST #2  
Field SUGARLOAF  
County ELLIS  
State KANSAS

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Location: API #: 15-051-26715-00-00  
1510' FNL & 1190' FEL  
NW - NW - SE - SE/4  
SEC 20 TWP 13S RGE 17W  
Permanent Datum GROUND LEVEL Elevation 2037  
Log Measured From KELLY BUSHING 8' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
DIL  
MEL  
Elevation  
K.B. 2045  
D.F. 2043  
G.L. 2037

Date	8/7/14		
Run Number	ONE		
Depth Driller	3680		
Depth Logger	3682		
Bottom Logged Interval	3658		
Top Log Interval	3000		
Casing Driller	8 5/8 @ 222'		
Casing Logger	223'		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.3 / 48	CHLORIDES 9,000 PPM	
pH / Fluid Loss	9.5 / 9.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.40 @ 89F		
Rmf @ Meas. Temp	0.30 @ 89F		
Rmc @ Meas. Temp	0.48 @ 89F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.31 @ 113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	113F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	ROGER FISHER		

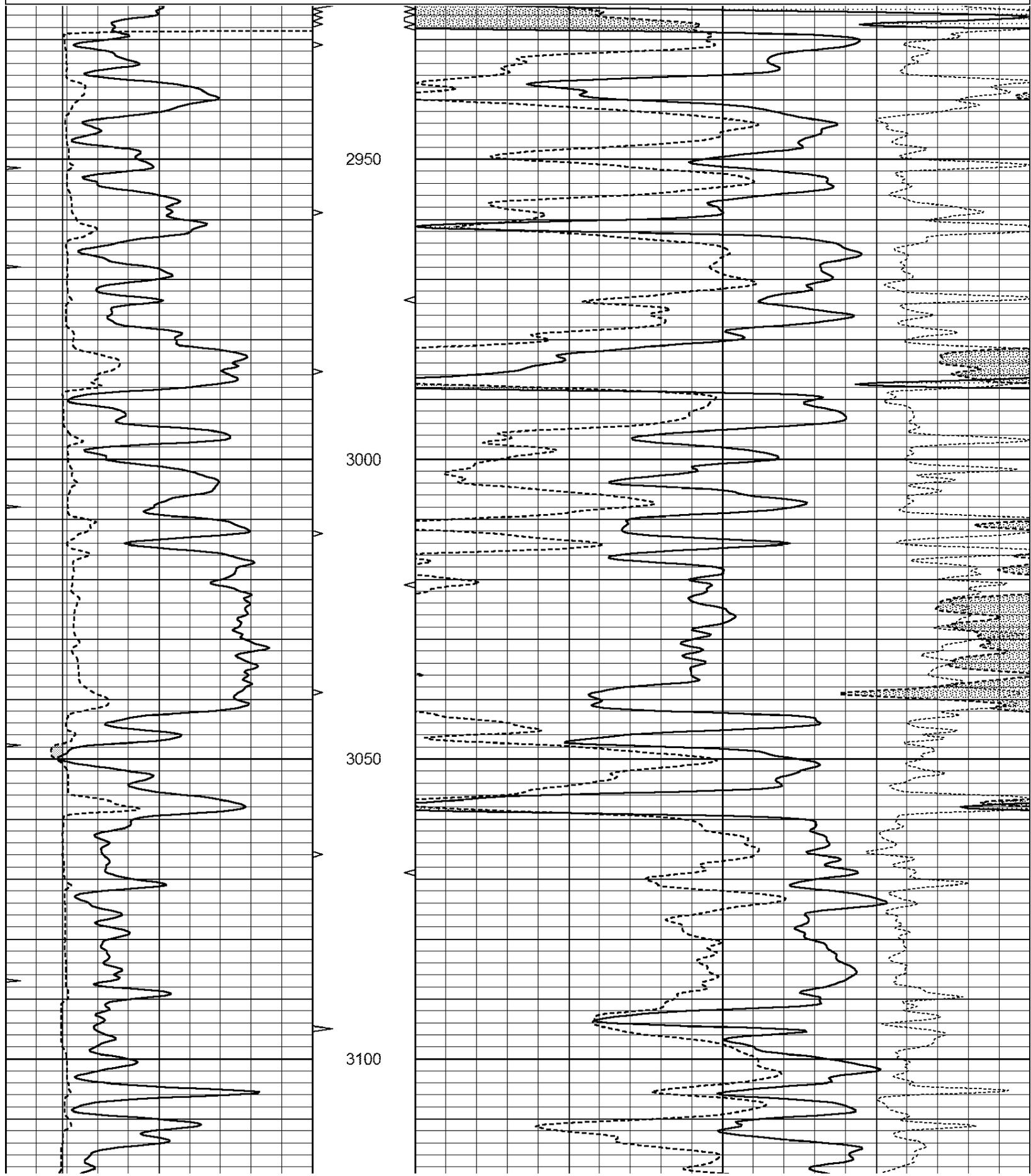
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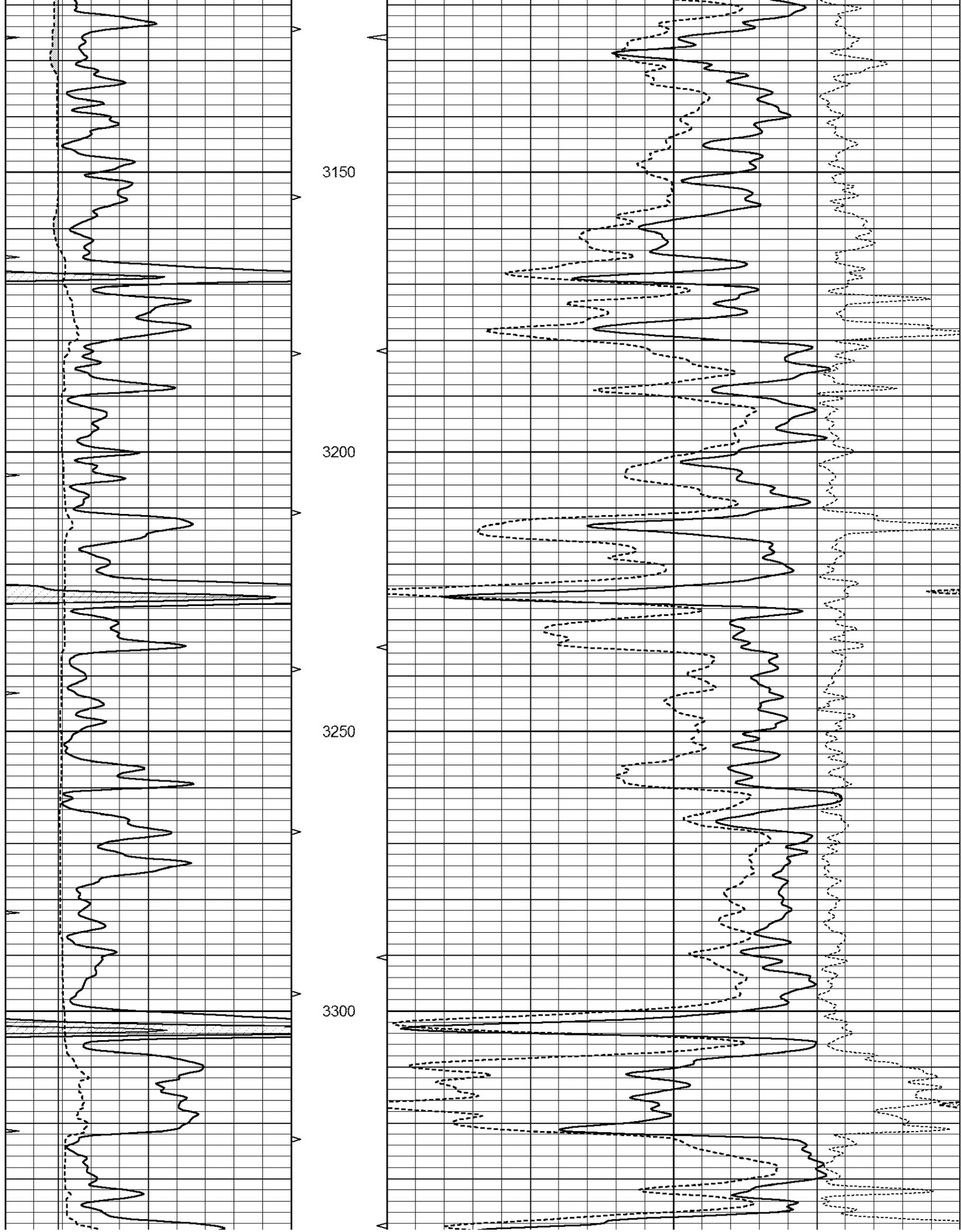
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

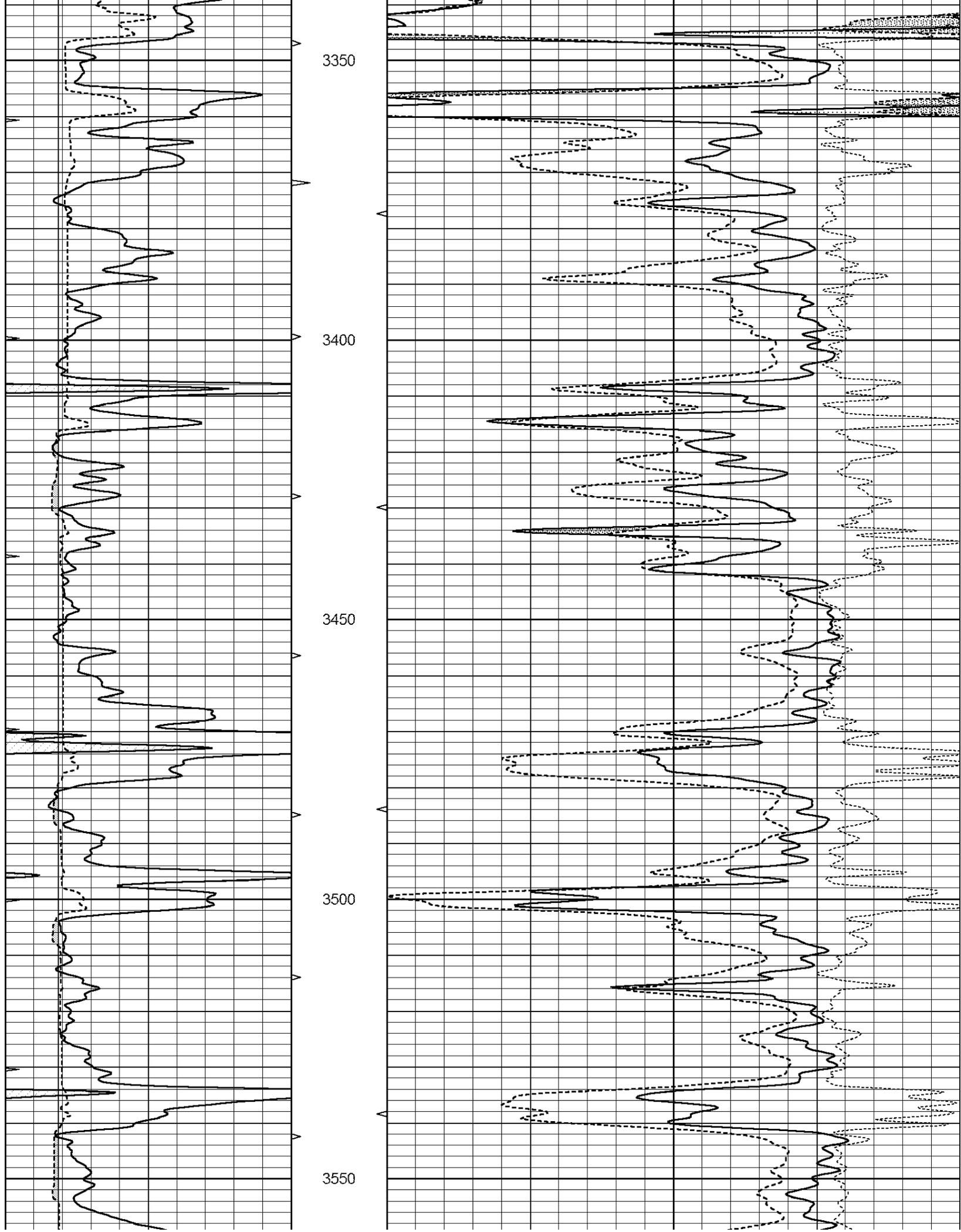
Comments

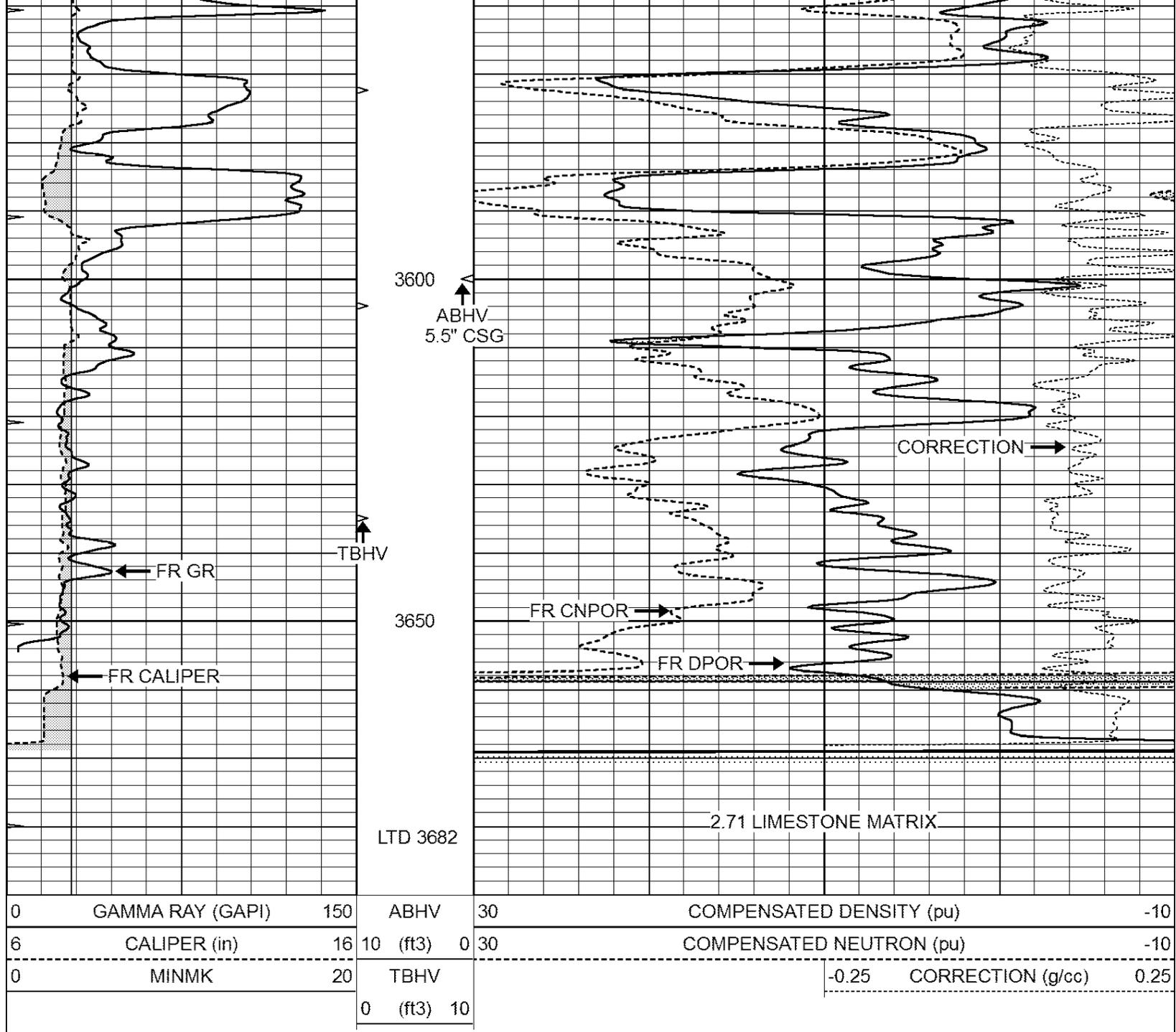
NABORS COMPLETION & PRODUCTION SERVICES CO.  
785 ( 628 - 6395 )  
THANK YOU FOR YOUR BUSINESS  
DIRECTIONS : HAYS, KS. - EAST ON I-70 TO TOULON AVE. - NORTH 2 1/2 MILES EAST INTO

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		





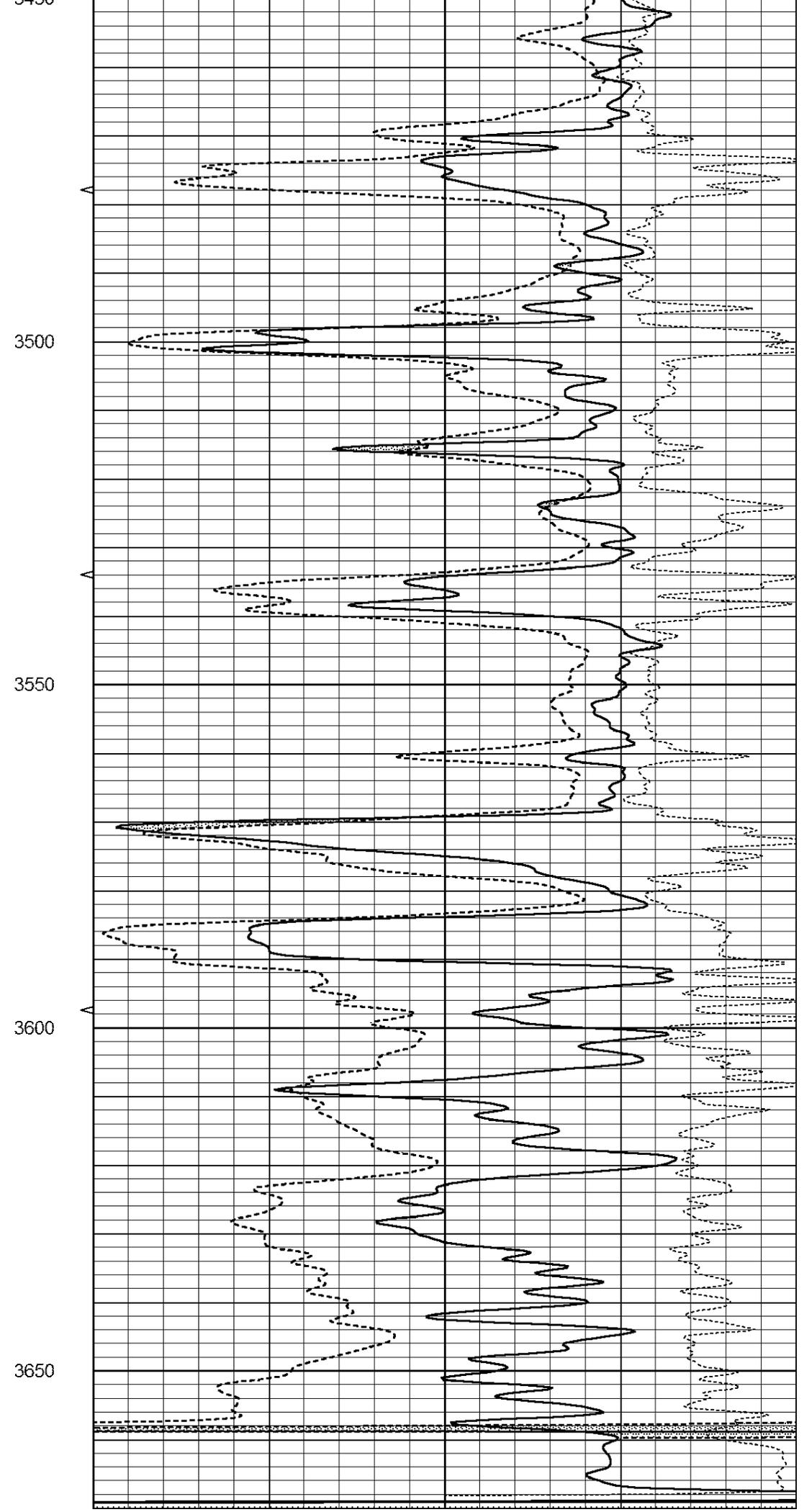
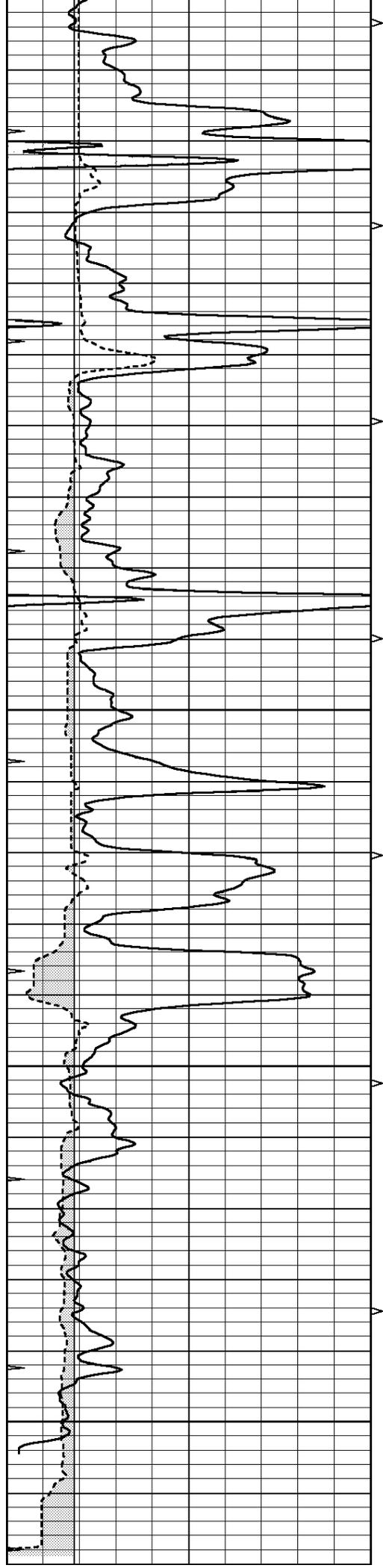




# REPEAT SECTION

Database File: 24721ddn.db  
 Dataset Pathname: pass2.1  
 Presentation Format: \_den\_neu  
 Dataset Creation: Thu Aug 07 21:32:20 2014 by Calc 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						

**Calibration Report**

Database File: 24721ddn.db  
 Dataset Pathname: pass3.3  
 Dataset Creation: Thu Aug 07 21:57:58 2014 by Calc Open-Cased 090629

**Dual Induction Calibration Report**

Serial-Model: PROBE7-DILG  
 Surface Cal Performed: Sat Aug 02 01:54:49 2014  
 Downhole Cal Performed: Sat Jan 19 19:51:38 2013  
 After Survey Verification Performed: Sat Jan 19 19:51:38 2013

**Surface Calibration**

Loop:	Readings			V	References			Results	
	Air	Loop			Air	Loop	mmho/m	m	b
Deep	0.793	0.790		0.000	400.000	mmho/m	550.000	14.000	
Medium	0.992	1.002		0.000	464.000	mmho/m	580.000	-32.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011	
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367	

**Downhole Calibration**

	Readings			mmho/m	References			Results	
	Zero	Cal			Zero	Cal	mmho/m	m'	b'
Deep	135384.000	27094.500		135400.000	27082.400	mmho/m	1.000	-19.259	
Medium	-47330.100	-9381.740		-47327.100	-9389.280	mmho/m	1.000	-10.154	
LL3		7.322	V		1400.000	Ohm-m			
		0.038	V		20.000	Ohm-m			
		-7.273	V		4000.000	mmho-m			

**After Survey Verification**

	Readings			mmho/m	Targets			Results	
	Zero	Cal			Zero	Cal	mmho/m	m'	b'
Deep	0.000	0.000		135384.000	27094.500	mmho/m	1.000	0.000	
Medium	0.000	0.000		-47330.100	-9381.740	mmho/m	1.000	0.000	
LL3		0.000			1400.000	Ohm-m			
		0.000			20.000	Ohm-m			
		0.000			4000.000	mmho-m			

**Compensated Density Calibration Report**

Serial-Model: GEAR5-GEARHART  
 Source / Verifier: 147 / 147  
 Master Calibration Performed: Sat Aug 02 01:49:41 2014  
 Before Survey Verification Performed:  
 After Survey Verification Performed:

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	943.83	576.01	cps
Aluminum	2.610	g/cc	212.01	399.19	cps
Spine Angle = 76.20			Density/Spine Ratio = 0.585		
	Size		Reading		
Small Ring	8.40	in	1.64	V	
Large Ring	14.00	in	2.93	V	

Before Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

After Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

Compensated Neutron Calibration Report

Serial Number: 080620  
 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: 46001  
 Tool Model: Probe1  
 Performed: Sat Aug 02 01:56:52 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.2600 GAPI/cps