



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company IA OPERATING, INC.
Well MARVIN WUDTKE TRUST #34-1
Field
County NORTON
State KANSAS

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Field
County NORTON State KANSAS

Location: API # : 15-137-20690-0000
1294' FNL & 739' FWL
SW - SE - NW - NW
SEC 34 TWP 2S RGE 24W
Permanent Datum GROUND LEVEL Elevation 2458
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
MEL/SON
Elevation
K.B. 2466
D.F. 2464
G.L. 2458

Date	3/27/14		
Run Number	ONE		
Depth Driller	3770		
Depth Logger	3768		
Bottom Logged Interval	3744		
Top Log Interval	3150		
Casing Driller	8 5/8" @ 220		
Casing Logger	219		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1750 PPM	
Density / Viscosity	9.2/59		
pH / Fluid Loss	10.0/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	2.20 @ 68F		
Rmt @ Meas. Temp	1.65 @ 68F		
Rmc @ Meas. Temp	2.64 @ 68F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	1.31 @ 114F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	114F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF GRONWEG		
Witnessed By	JEFF LAWLER		

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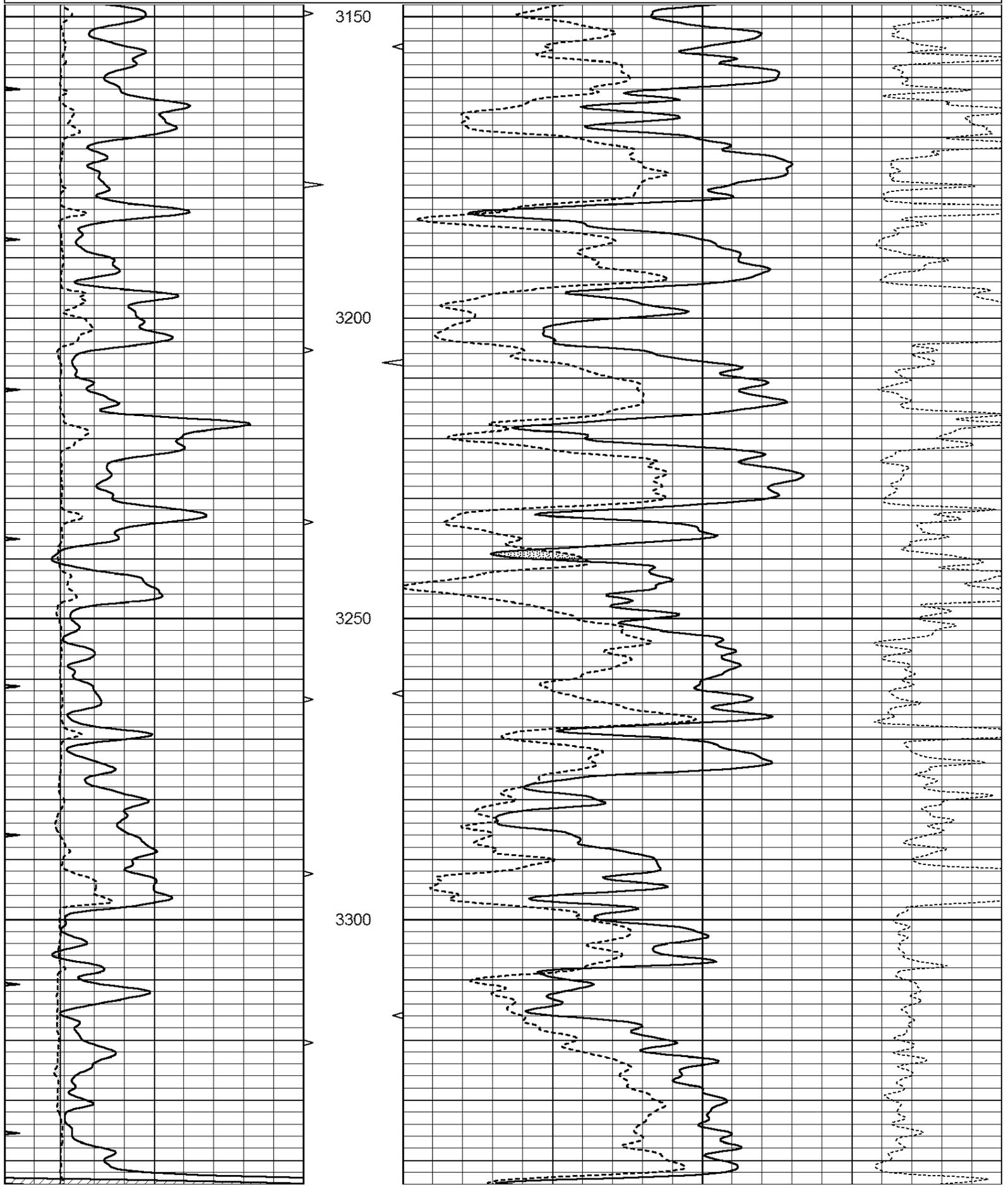
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

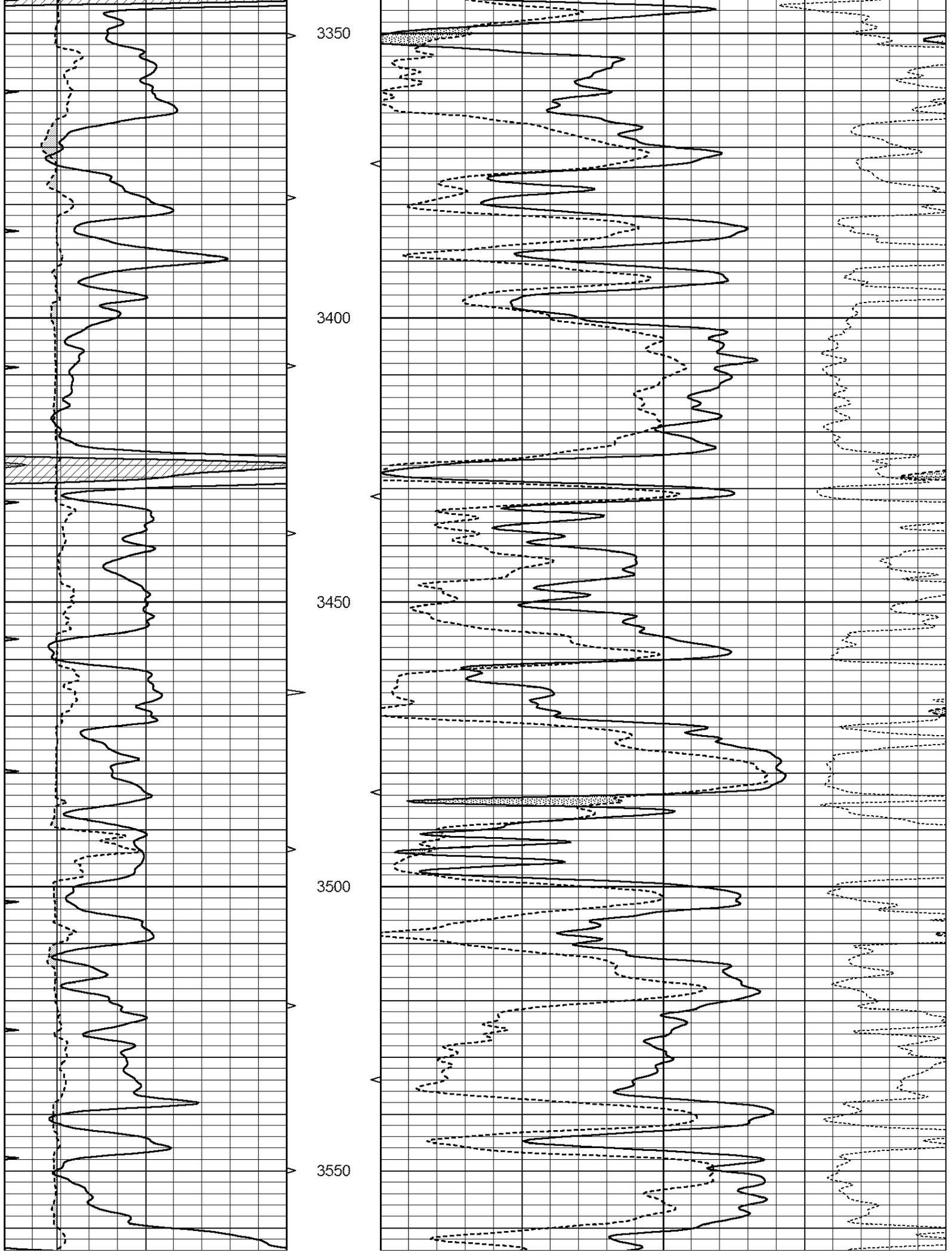
Comments

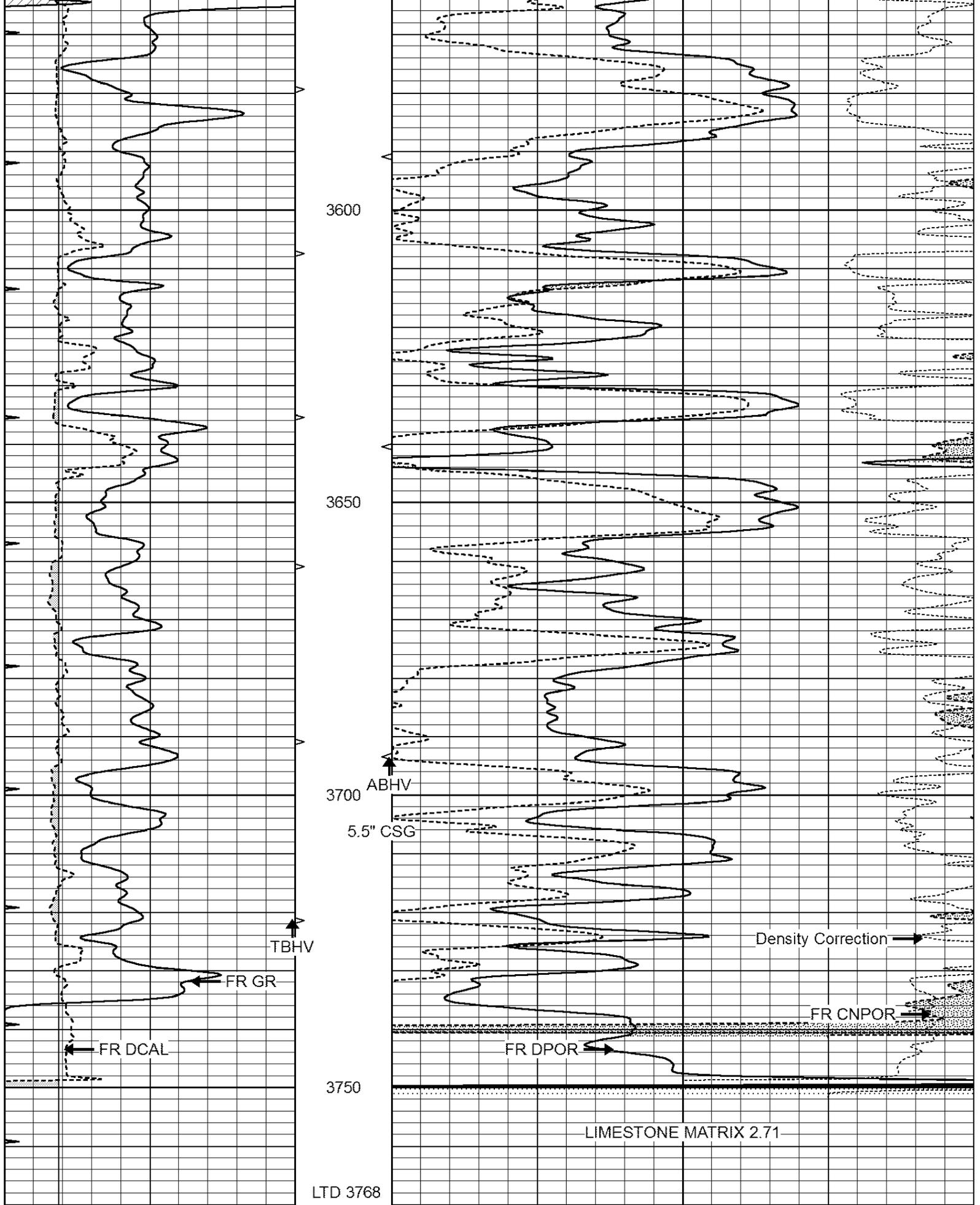
THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
NORTON, KS - 7 MILES WEST TO RD W7 - 3/4 MILE NORTH
EAST INTO

Database File: 24014ddn.db
Dataset Pathname: pass3.2
Presentation Format: den_neu
Dataset Creation: Thu Mar 27 21:26:25 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	MINIMAX	20	TBHV	0.25	CORRECTION (pu)	0.25

MINMK

20

TBHV

-0.25

CORRECTION (g/cc)

0.25

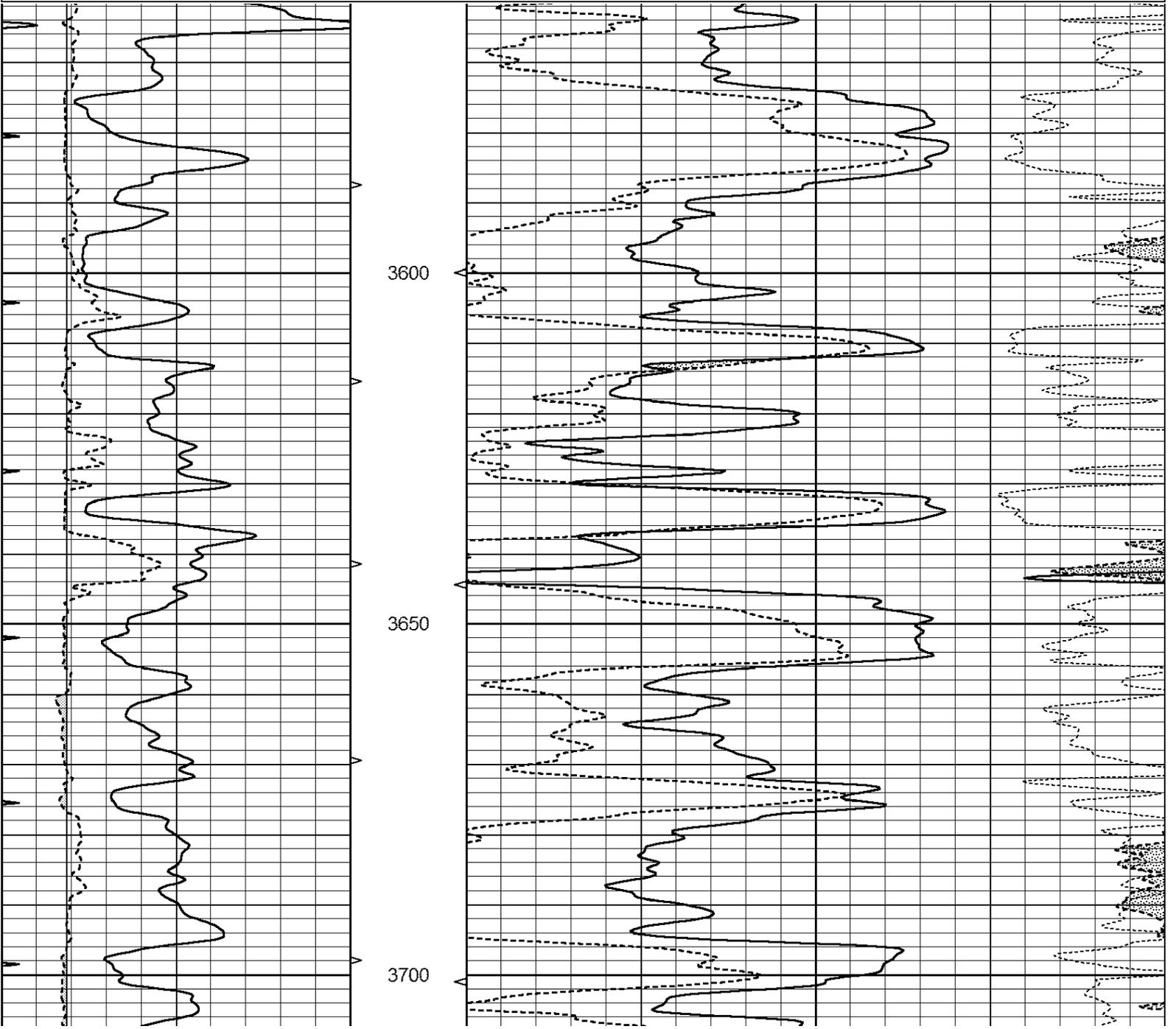
0 (ft3) 10



REPEAT SECTION

Database File: 24014ddn.db
 Dataset Pathname: pass2.2
 Presentation Format: den_neu
 Dataset Creation: Thu Mar 27 20:55:37 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		



	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		

Compensated Density Calibration Report

Serial-Model: GEAR4-GEARHART
 Source / Verifier: 143 / 143
 Master Calibration Performed: Wed Sep 18 03:03:09 2013
 Before Survey Verification Performed:
 After Survey Verification Performed:

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1075.98	532.39	cps
Aluminum	2.560	g/cc	286.51	422.88	cps
Spine Angle = 80.13			Density/Spine Ratio = 0.633		
	Size		Reading		
Small Ring	8.00	in	3.21	V	
Large Ring	14.00	in	5.46	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: 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 Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Fri Nov 29 08:34:37 2013	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.7035	GAPI/cps