



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company MAI OIL OPERATIONS, INC.
Well HAMMEKE B #4
Field SYMS SOUTHEAST
County STAFFORD
State KANSAS

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County STAFFORD State KANSAS

Location: API # : 15-185-23919-00-00
640' FSL & 1360' FEL
NE - SE - SW - SE
SEC 21 TWP 21S RGE 12W
Permanent Datum GROUND LEVEL Elevation 1844
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services DIL/MEL
Elevation
K.B. 1852
D.F. 1850
G.L. 1844

Date	1/11/15		
Run Number	ONE		
Depth Driller	3700		
Depth Logger	3700		
Bottom Logged Interval	3676		
Top Log Interval	2900		
Casing Driller	8 5/8" @ 843		
Casing Logger	640		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,500 PPM	
Density / Viscosity	9.6/62		
pH / Fluid Loss	9.0/9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.70 @ 50F		
Rmt @ Meas. Temp	.52 @ 50F		
Rmc @ Meas. Temp	.84 @ 50F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.29 @ 113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	113F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	IAN MABB		
Witnessed By	KURT TALBOTT		

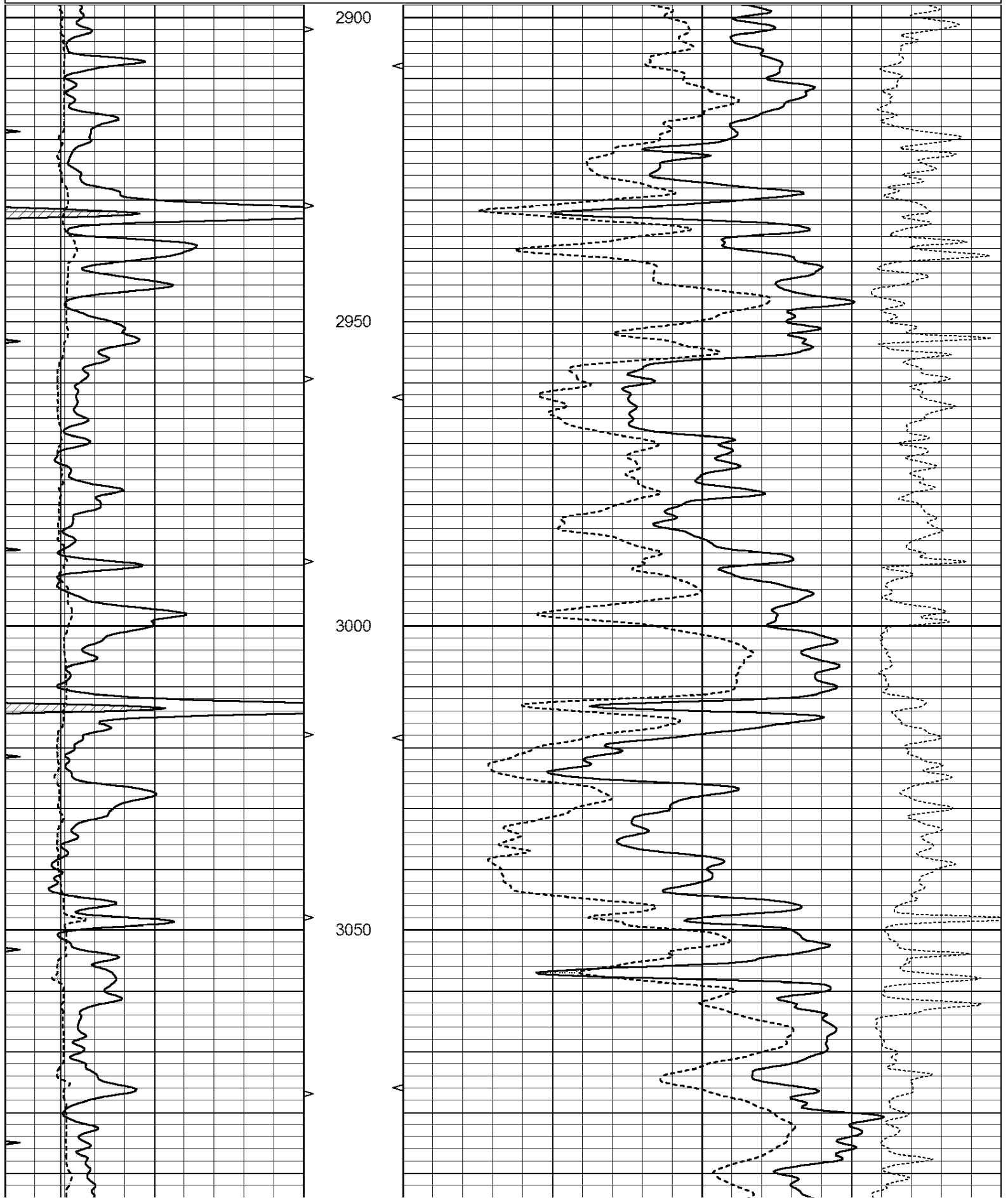
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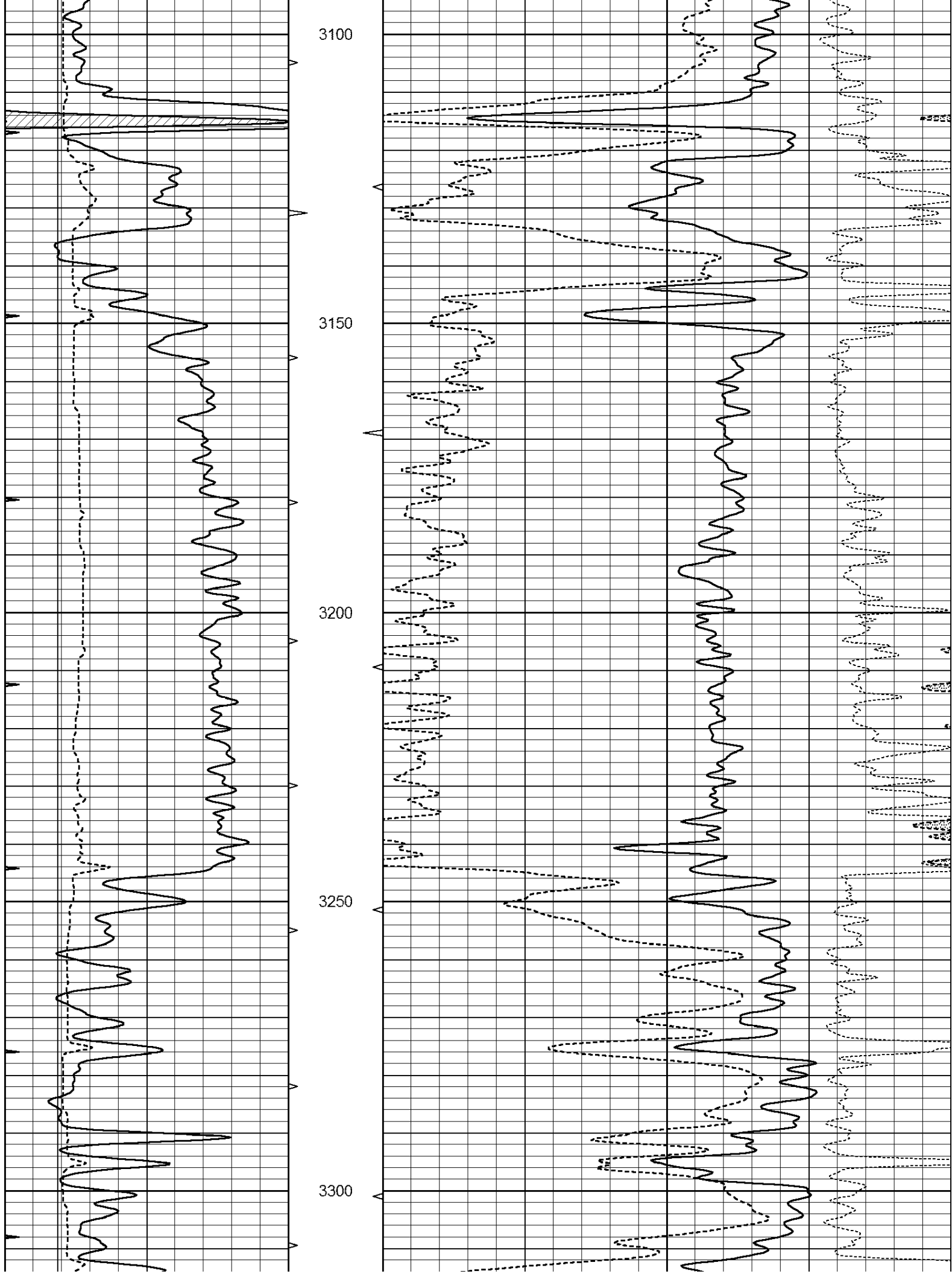
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

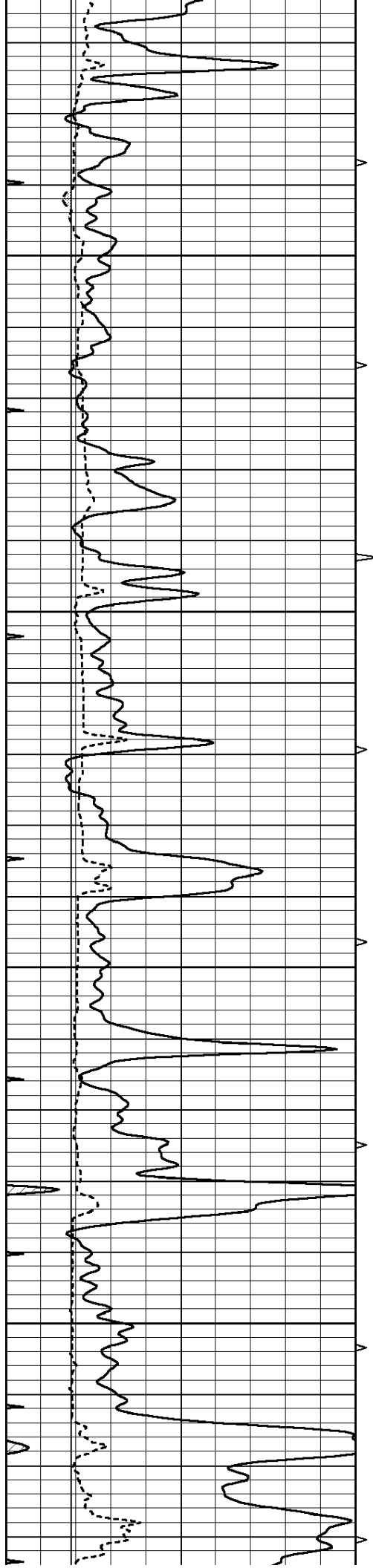
Comments

THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
GREAT BEND, KS. - 10TH ST. & HWY 281 - 11 MILES SOUTH TO NE 170TH RD - 6 MILES EAST TO NE 60TH RD - NORTH 1/4 MILES - WEST 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		





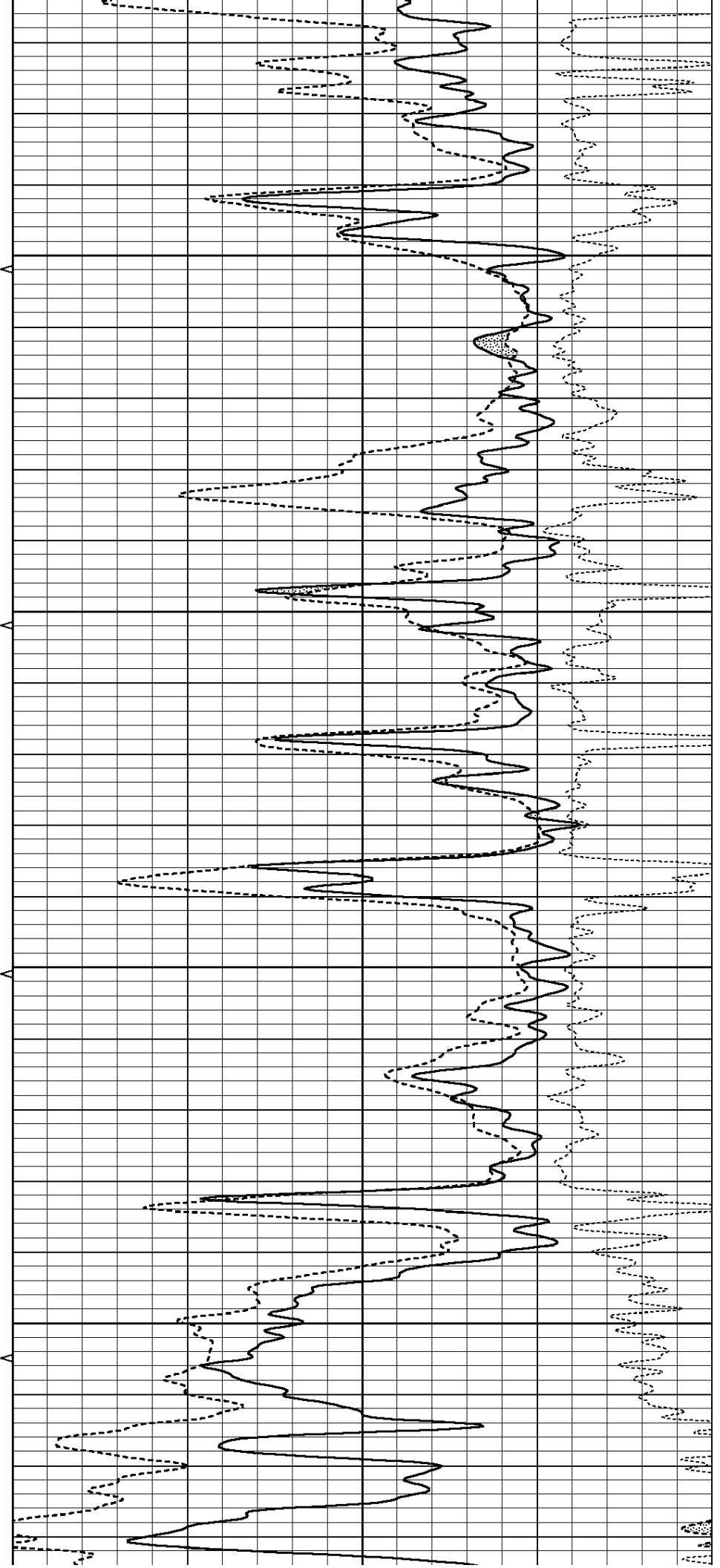


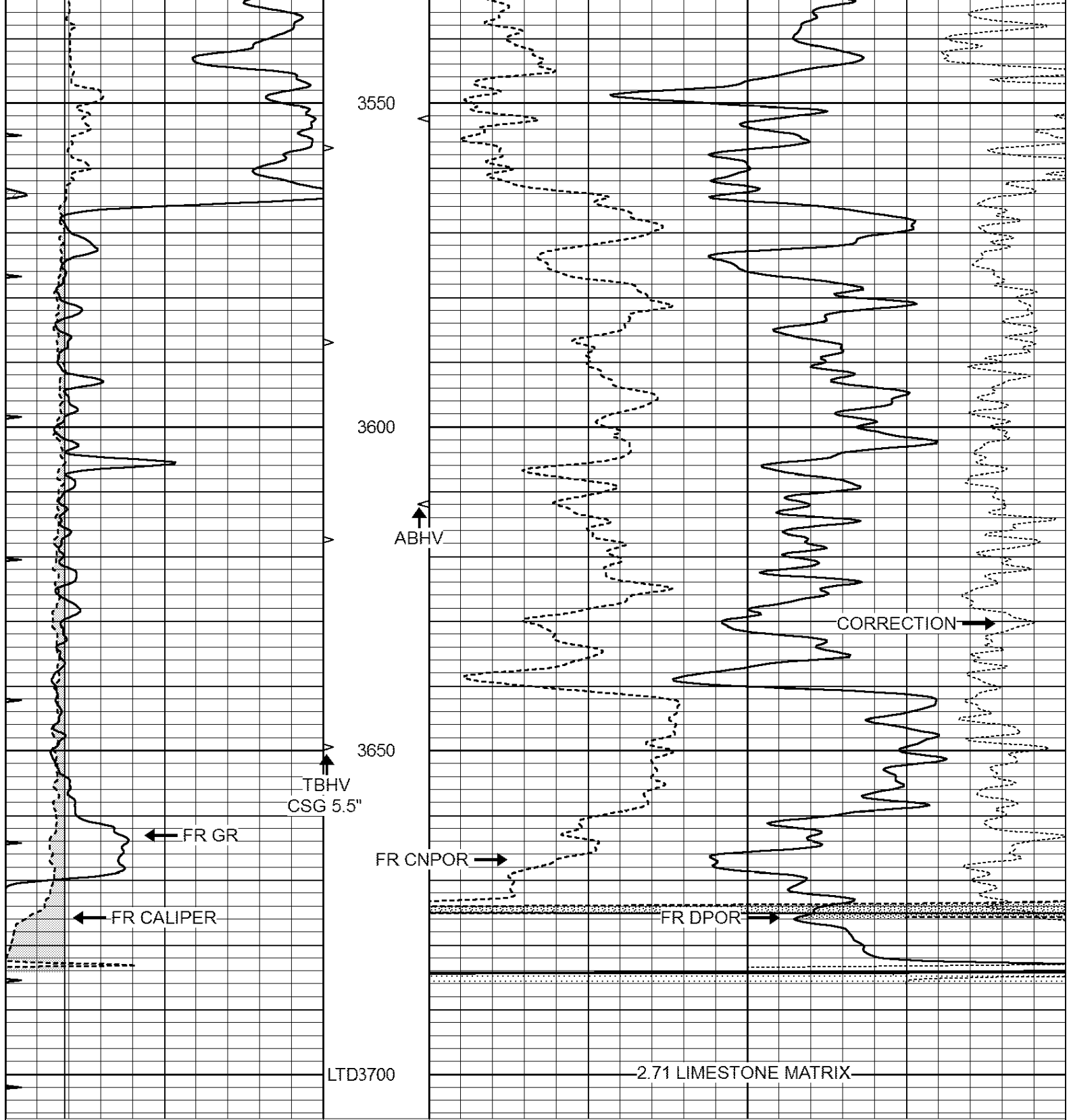
3350

3400

3450

3500





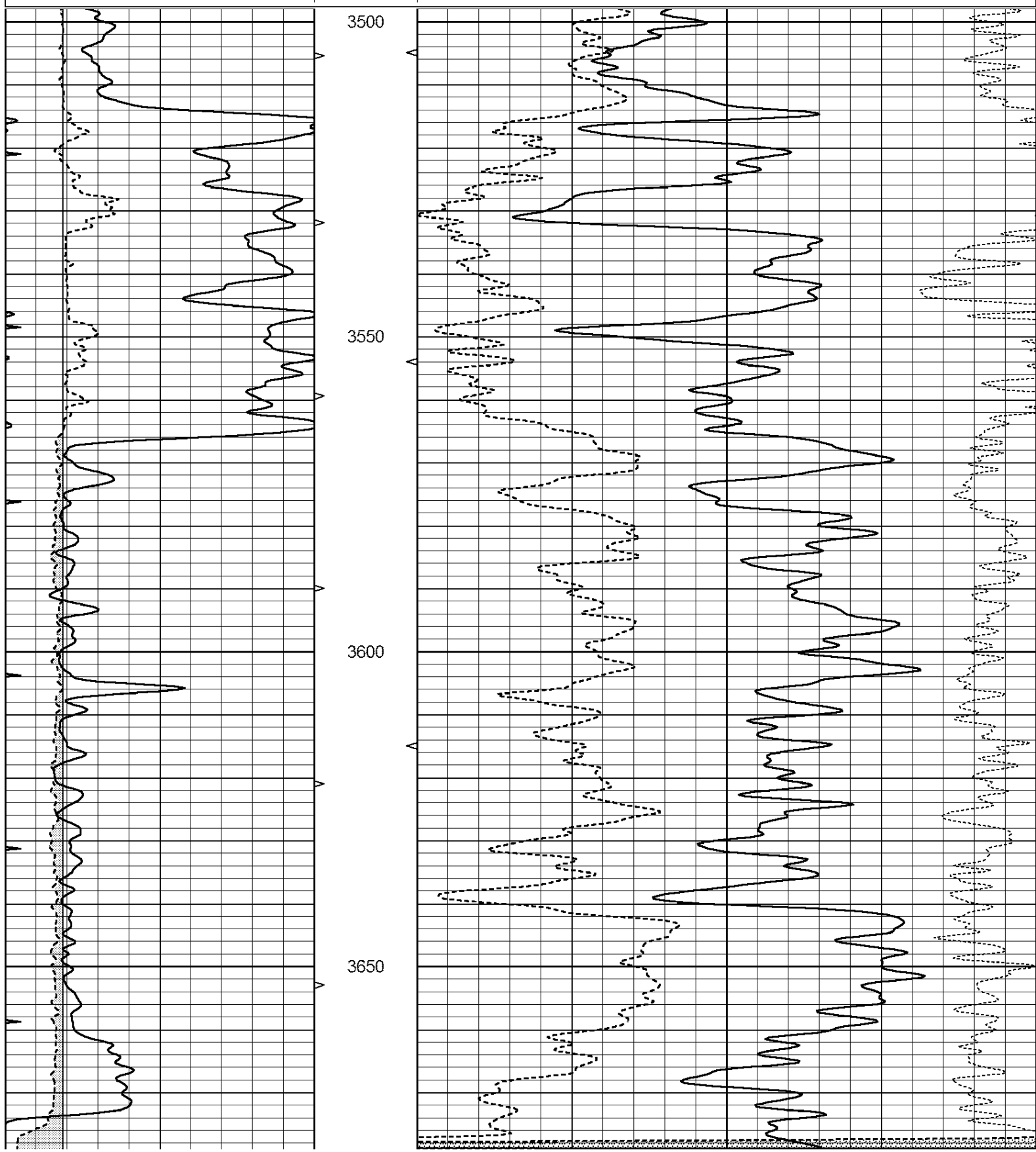
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10	
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)	-10	
0	MINMK	20	TBHV		-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10			



REPEAT SECTION

Database File: 26525ddn.db
 Dataset Pathname: pass2.5
 Presentation Format: den_neu
 Dataset Creation: Sun Jan 11 02:59:58 2015 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		



			3700						
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: 26525ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Sun Jan 11 03:24:41 2015 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Sun Aug 17 08:09:53 2014
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	-2.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-16.000
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		

Compensated Density Calibration Report

Serial-Model: GEAR3-GEARHART
 Source / Verifier: 143 / 143

Master Calibration

	Density		Far Detector		Near Detector	
Magnesium	1.710	g/cc	881.29		468.35	cps
Aluminum	2.580	g/cc	210.51		354.56	cps
Spine Angle = 79.00			Density/Spine Ratio = 0.596			
	Size		Reading			
Small Ring	8.00	in	4.29	V		
Large Ring	14.00	in	6.24	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: 61
 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:	Wed Dec 10 11:09:24 2014	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.8000	GAPI/cps