



**SUPERIOR
Hays,
Kansas**

**COMPENSATED
DENSITY / NEUTRON
LOG**

Company OIL PRODUCERS INC OF KANSAS
Well LOWRY #1-20
Field BRAY
County ROOKS State KANSAS

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State KANSAS

Location: API #: 15-163-24058-0000
780' FSL & 3845' FWL
SW - NW - SE - SE
SEC 20 TWP 8S RGE 19W
Permanent Datum GROUND LEVEL Elevation 1999
Log Measured From KELLY BUSHING 9' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
MEL/SON
Elevation
K.B. 2008
D.F. 2006
G.L. 1999

Date	9/8/12		
Run Number	ONE		
Depth Driller	3520		
Depth Logger	3522		
Bottom Logged Interval	3498		
Top Log Interval	3100		
Casing Driller	332		
Casing Logger	332		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.0 / 54	CHLORIDES 1,600 PPM	
pH / Fluid Loss	10.5 / 7.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.80 @ 74F		
Rmf @ Meas. Temp	0.60 @ 74F		
Rmc @ Meas. Temp	0.96 @ 74F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.53 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	JEFF GRONEWEG		
Witnessed By	DOUG DAVIS		

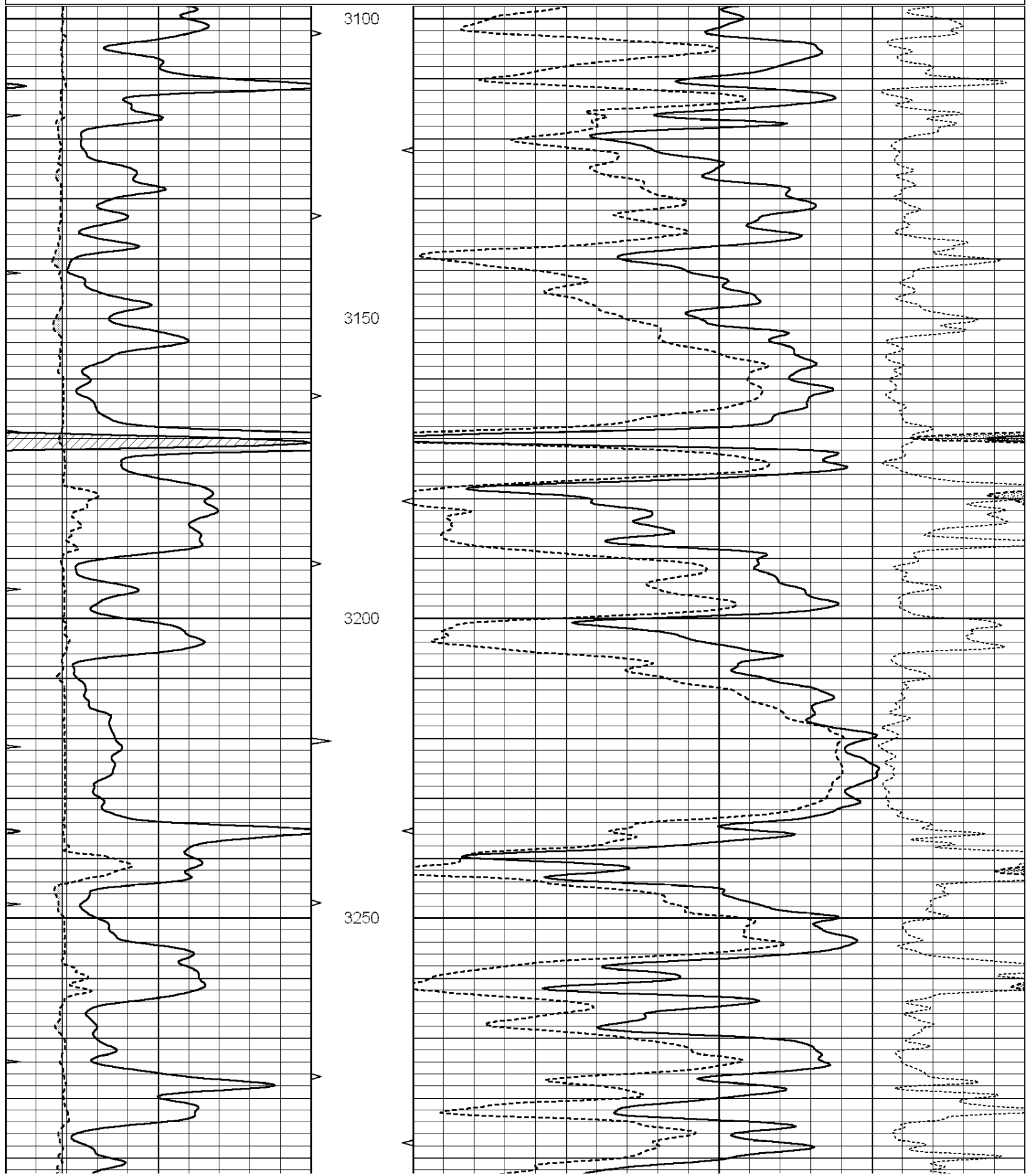
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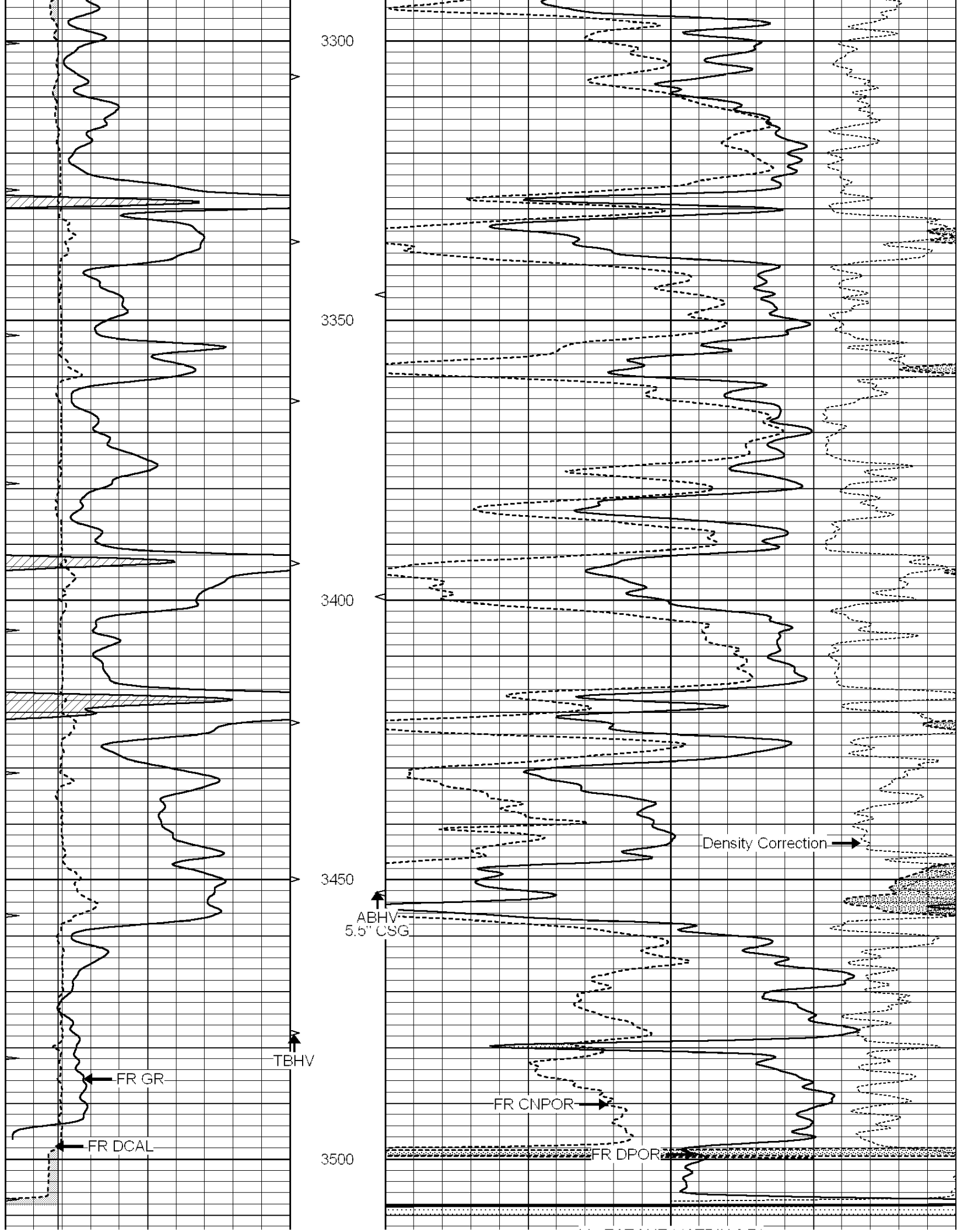
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 SUPERIOR WELL SERVICES
785-628-6395
ZURICH, KS - 7 MILES NORTH TO RD Q - 1 3/4 MILES WEST - NORTH 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		





LTD 3522

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			

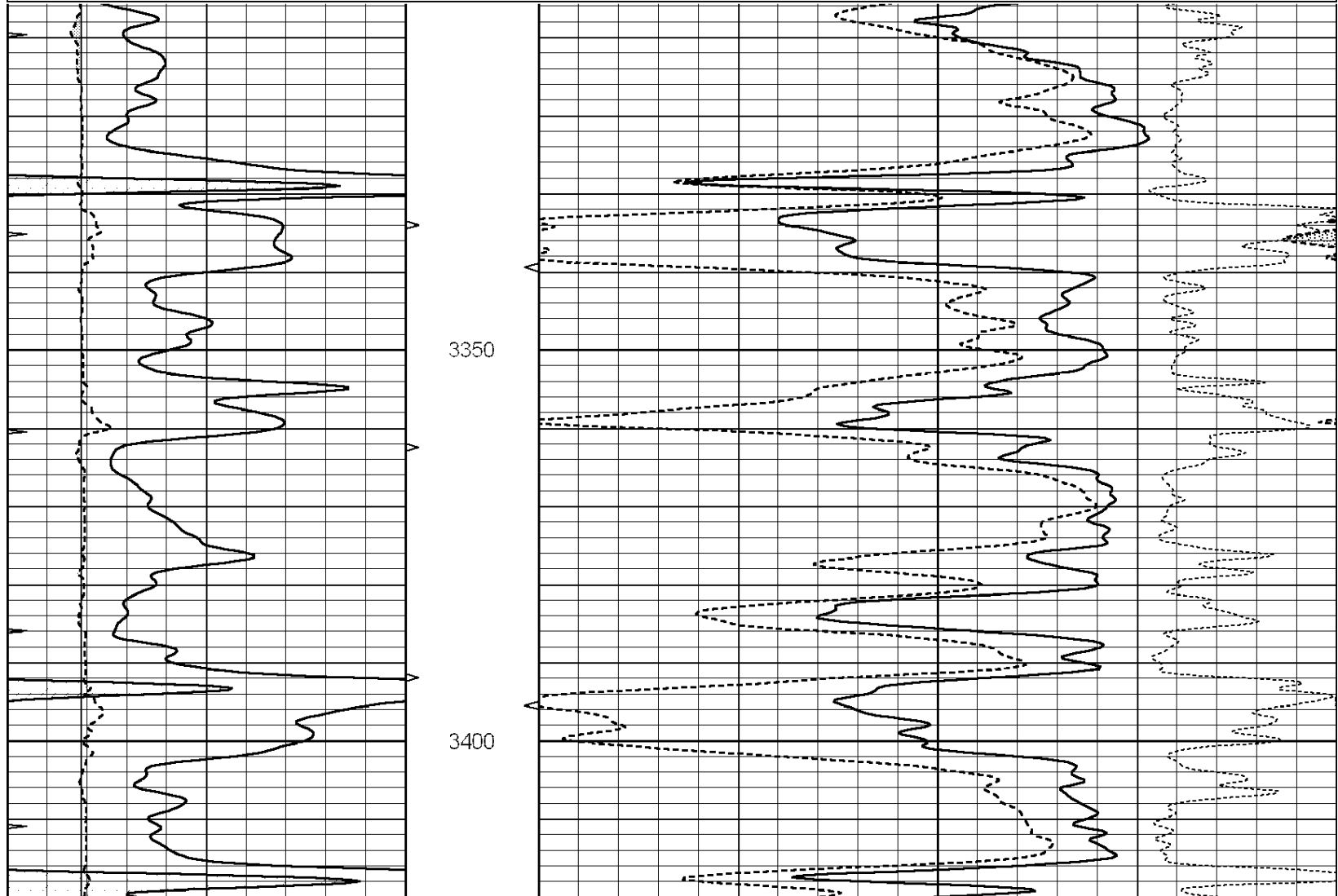


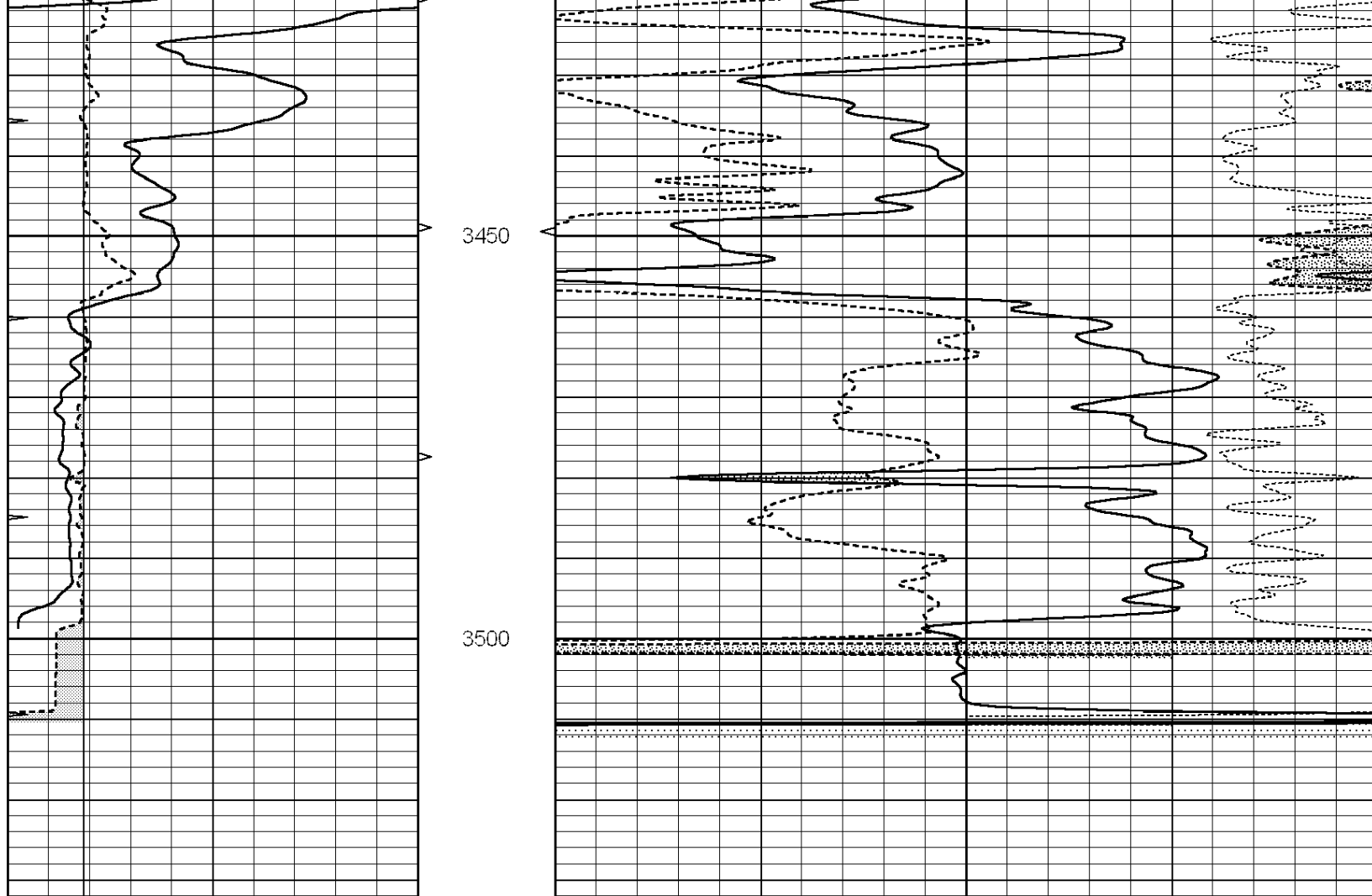
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 009662ddn.db
 Dataset Pathname: pass2.2
 Presentation Format: den_neu
 Dataset Creation: Sat Sep 08 15:20:00 2012 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: 009662ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Sat Sep 08 15:38:52 2012 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Wed Aug 29 20:23:16 2012

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	490.000	-15.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	530.000	-10.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.006	0.655	V	0.000	400.000	mmho/m	615.668	-3.483
Medium	0.010	0.747	V	0.000	462.500	mmho/m	627.607	-6.064

Compensated Density Calibration Report

Serial-Model: GEAR2-GEARHART

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1451.87	701.81	cps
Aluminum	2.590	g/cc	324.88	493.46	cps
Spine Angle = 76.76			Density/Spine Ratio = 0.572		
	Size		Reading		
Small Ring	8.00	in	5.48	V	
Large Ring	14.00	in	7.58	V	

Compensated Neutron Calibration Report

Serial Number: NUE_2I
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

Gamma Ray Calibration Report

Serial Number: GR5
Tool Model: OPEN
Performed: Wed Aug 08 15:07:38 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.7500 GAPI/cps