



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company BLACK DIAMOND OIL INC.
Well GLENNEMEIER A #3
Field
County NORTON
State KANSAS

Company BLACK DIAMOND OIL INC.
Well GLENNEMEIER A #3
Field
County NORTON State KANSAS

Location: API # : 15-137-20730-00-00
105' FSL & 905' FEL
SEC 21 TWP 5S RGE 21W
Permanent Datum GROUND LEVEL Elevation 2211
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Elevation
K.B. 2216
D.F. 2214
G.L. 2216

Date	5/23/15		
Run Number	ONE		
Depth Driller	3654		
Depth Logger	3655		
Bottom Logged Interval	3631		
Top Log Interval	3000		
Casing Driller	8 5/8" @ 217'		
Casing Logger	218'		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 750 PPM	
Density / Viscosity	9.4/54		
pH / Fluid Loss	9.5/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	2.00 @ 70F		
Rmt @ Meas. Temp	1.50 @ 70F		
Rmc @ Meas. Temp	2.40 @ 70F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	1.25 @ 113F		
Time Circulation Stopped	4 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI	BLAKE WAGGONER	
Witnessed By	JEFF LAWLER		

<<< Fold Here >>>

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:

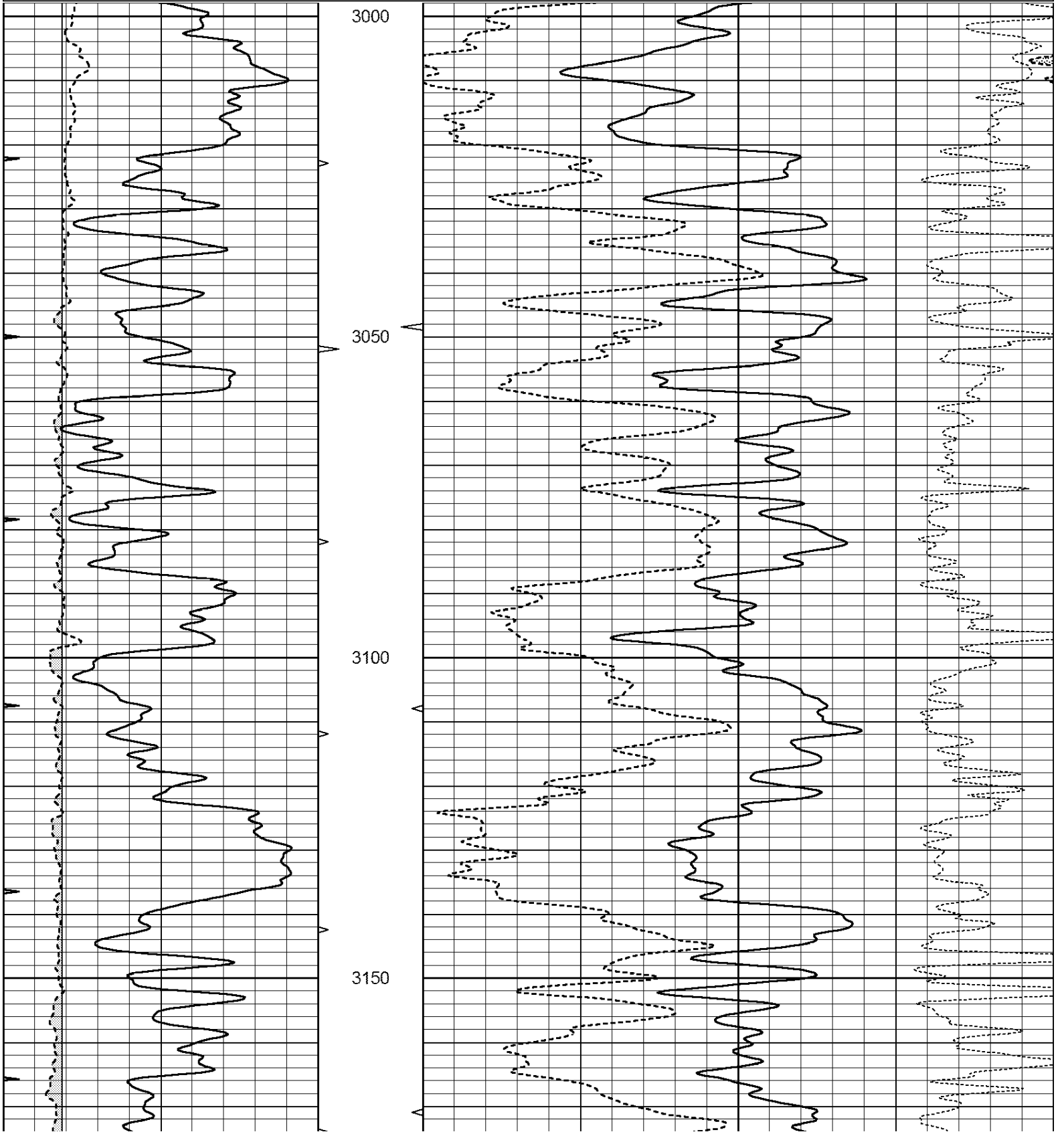
FROM LOGAN 5 MILES WEST TO ROAD E12, 1 MILE SOUTH, 1 MILE WEST, 2 MILES SOUTH, WEST INTO

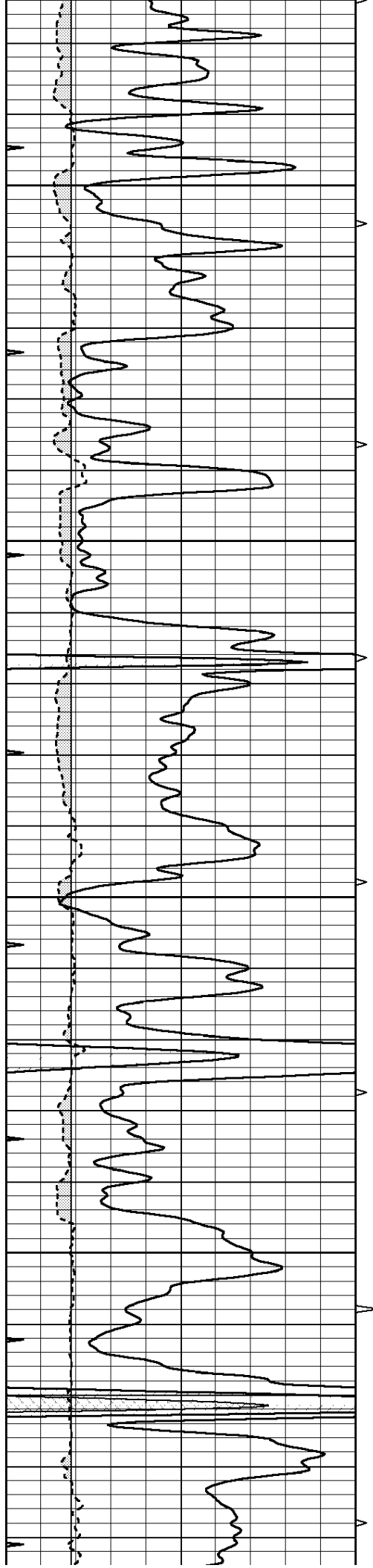


MAIN SECTION

Database File: 30506ddn.db
 Dataset Pathname: pass3.3
 Presentation Format: den_neu
 Dataset Creation: Sun May 24 00:40:17 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		



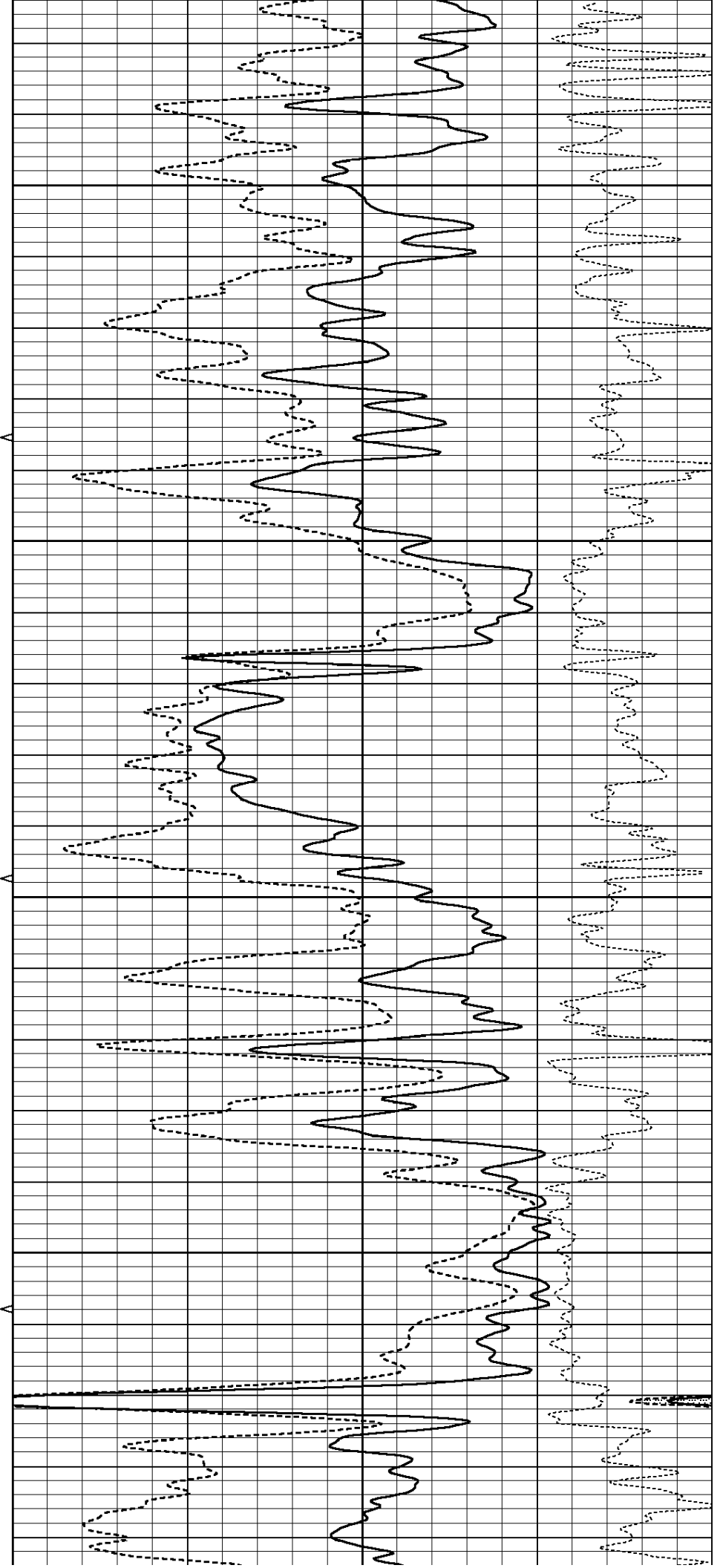


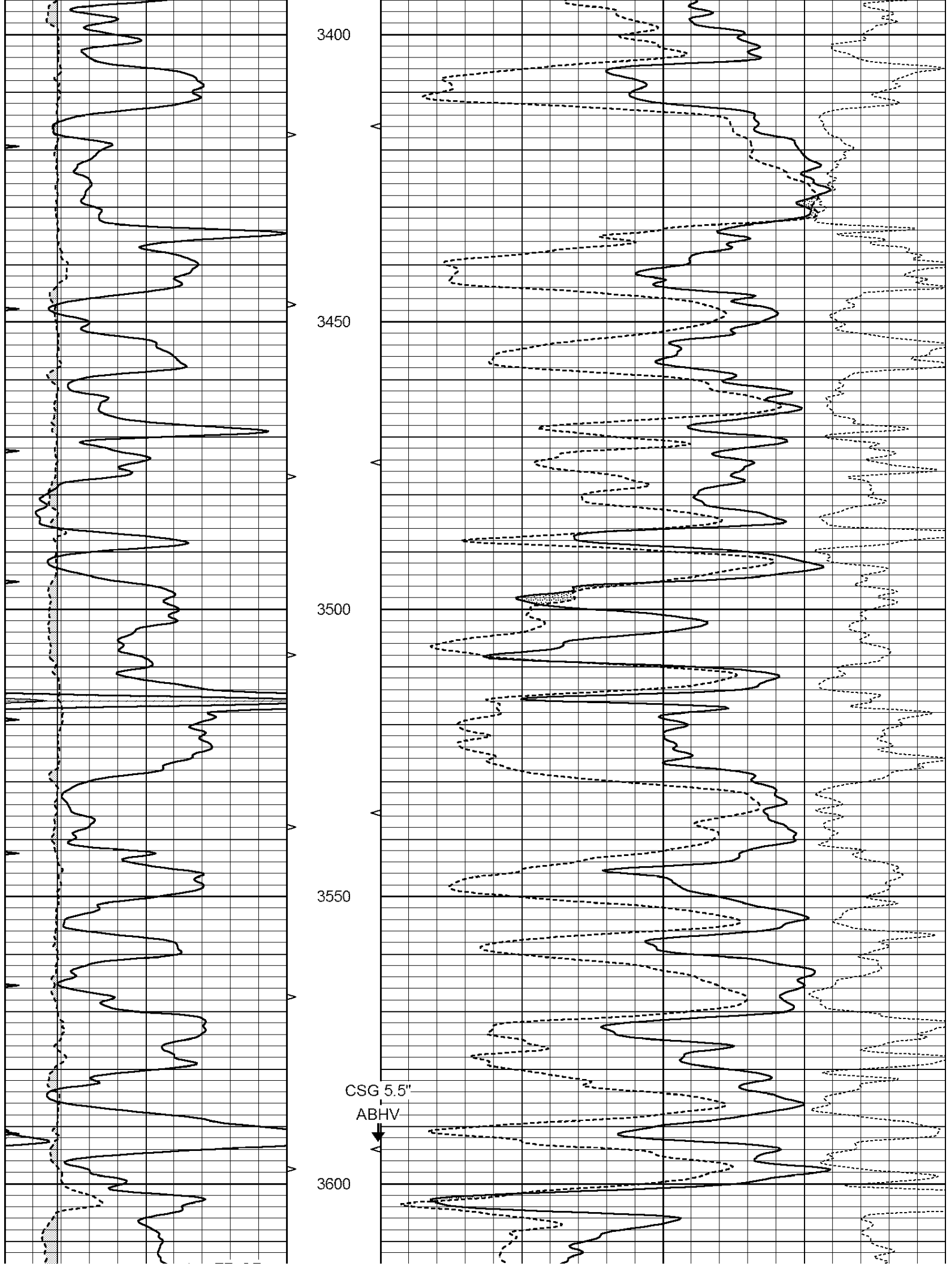
3200

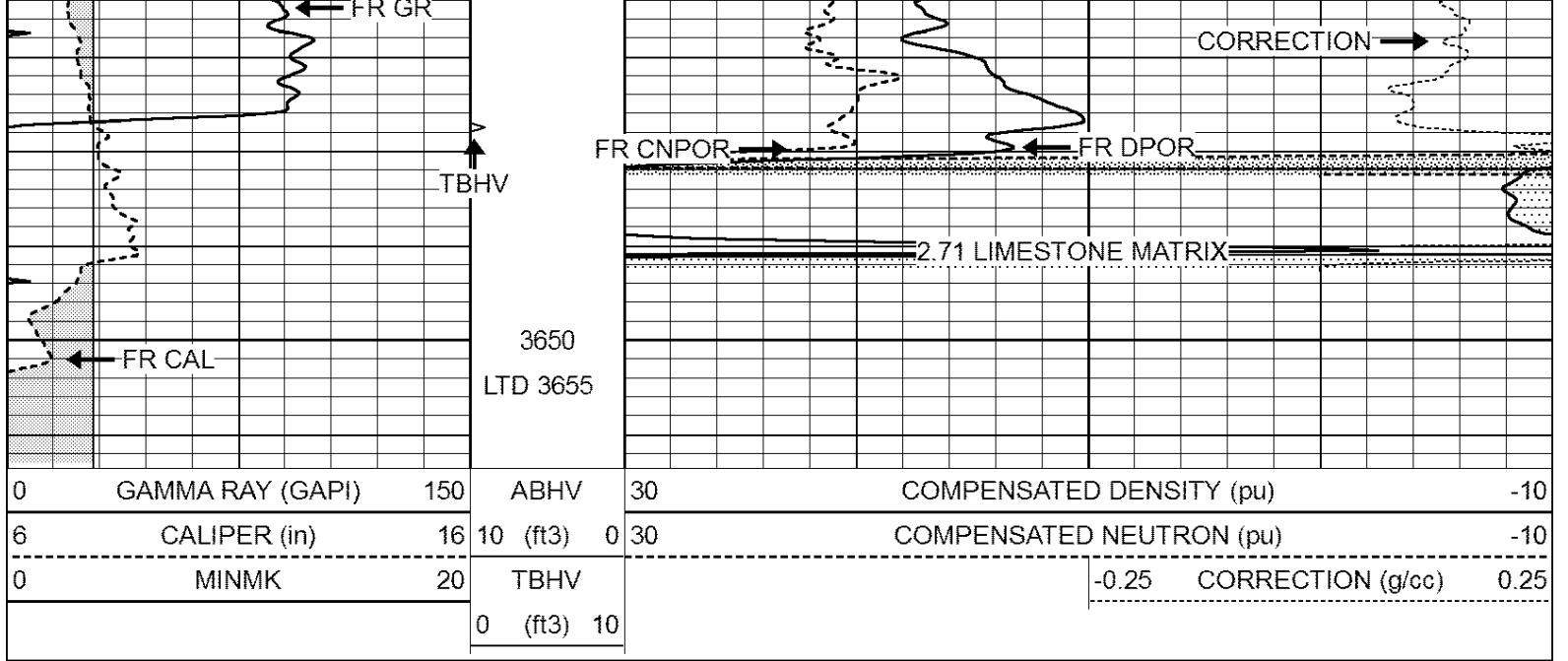
3250

3300

3350



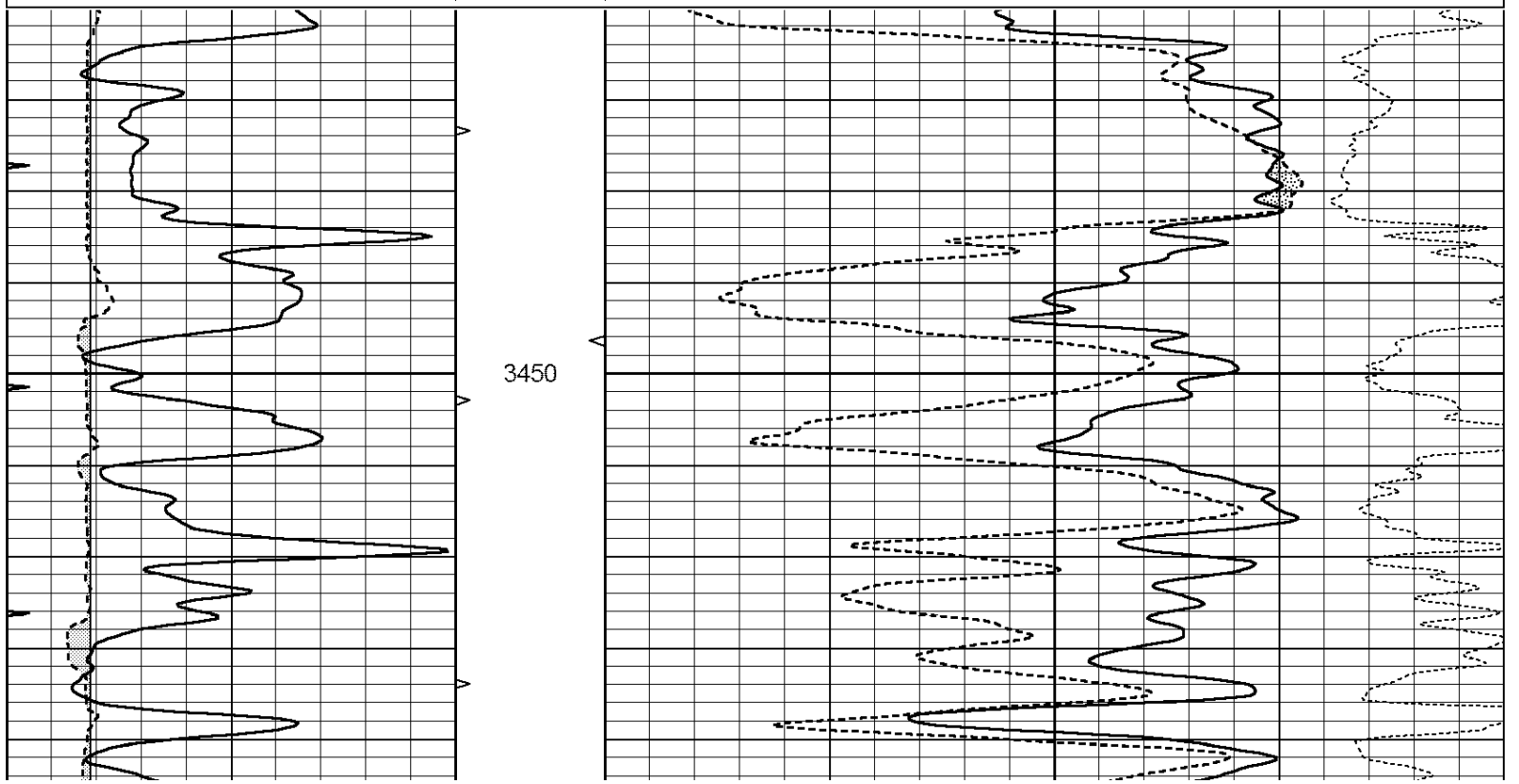


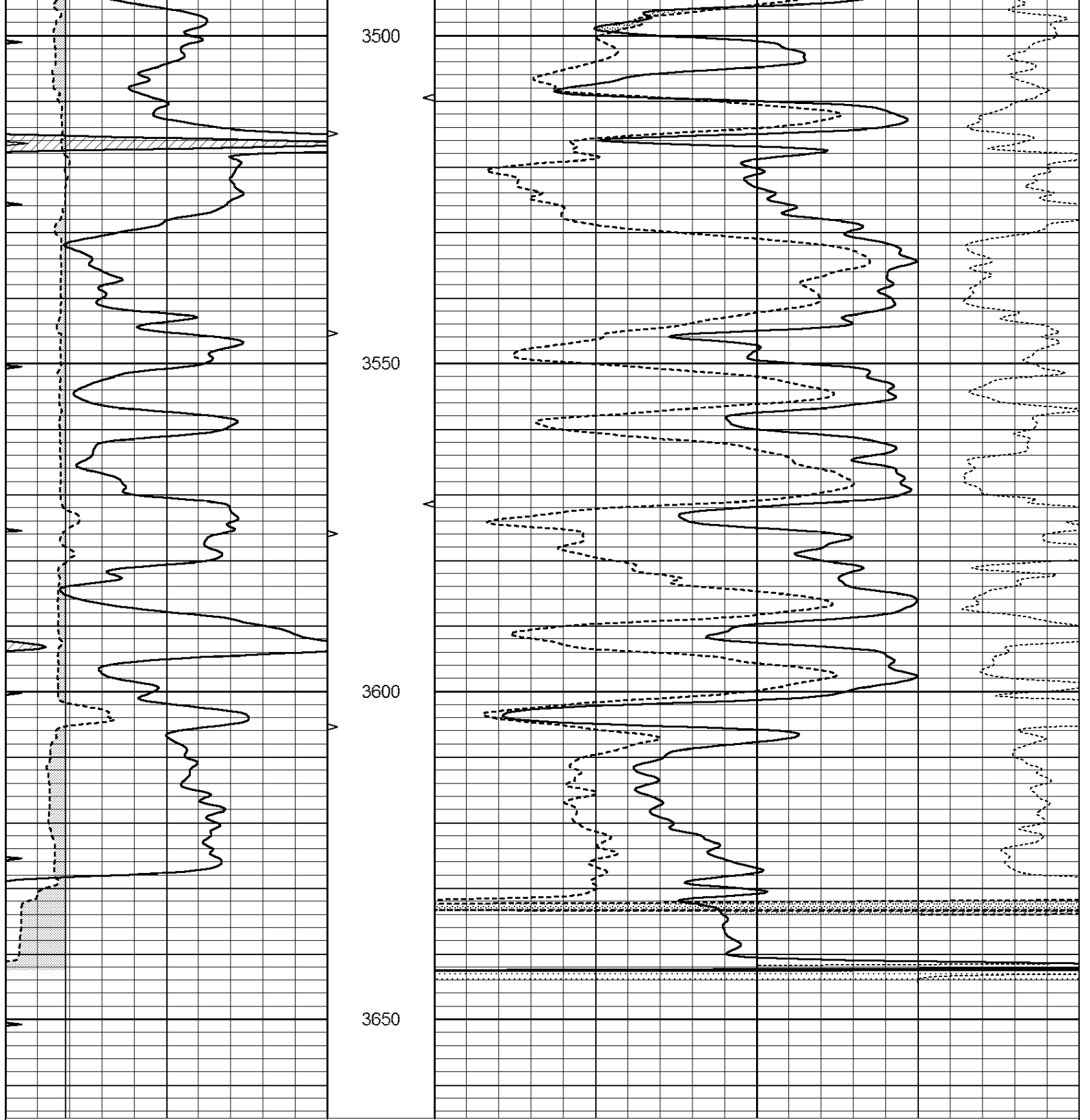


REPEAT SECTION

Database File: 30506ddn.db
 Dataset Pathname: pass2.3
 Presentation Format: den_neu
 Dataset Creation: Sun May 24 00:10:06 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		





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: 30506ddn.db
 Dataset Pathname: pass3.3
 Dataset Creation: Sun May 24 00:40:17 2015 by Calc Open-Cased 090629

Serial-Model:
 Surface Cal Performed:
 Downhole Cal Performed:
 After Survey Verification Performed:

PROBE8-DILG
 Sun May 10 19:54:09 2015
 Mon Jul 28 11:08:27 2008
 Mon Jul 28 11:08:27 2008

Surface Calibration

		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000	
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000	
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 Performed: Sun May 10 19:53:41 2015
 Before Survey Verification Performed:
 After Survey Verification Performed:

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

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	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: Sun May 10 18:59:16 2015

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 276.0 cps

Sensitivity: 0.8000 GAPI/cps