NABORS COMPLETION & PRODUCTION SERVICES CO.

COMPENSATED DENSITY/NEUTRON LOG

Company	DOWNING-NELSON OIL COMPANY, INC.
Well	HILLMAN-DUBACH #1-31
Field	WILDCAT
County	TREGO
State	KANSAS

Company DOWNING-NELSON OIL COMPANY, INC.

Well HILLMAN-DUBACH #1-31

Field WILDCAT

County TREGO State KANSAS

Location: API # : 15-195-22809-0000

600' FNL & 270' FEL

SE - NE - NE - NE

SEC 31 TWP 12S RGE 21W

Other Services: DIL/MEL, SON

Permanent Datum	GROUND LEVEL	Elevation 2275	Elevation: K.B. 2283
Log Measured From	KELLY BUSHING 8' A.G.L.		D.F. 2281
Drilling Measured From	KELLY BUSHING		G.L. 2275

Date	10/7/12		
Run Number	ONE		
Depth Driller	4048		
Depth Logger	4048		
Bottom Logged Interval	4024		
Top Log Interval	3250		
Casing Driller	8 5/8" @ 219		
Casing Logger	217		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1000 PPM	
Density / Viscosity	9.0/53		
pH / Fluid Loss	10.0/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.0 @ 55F		
Rmf @ Meas. Temp	.75 @ 55F		
Rmc @ Meas. Temp	1.20 @ 55F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.47 @ 117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	117F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	AL DOWNING		

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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 SERVICE (785) 628-6395

DIRECTIONS

HWY 40 & RIGA ELEVATOR - 1 W. - 1 1/4 N. - 1 W. - S. INTO

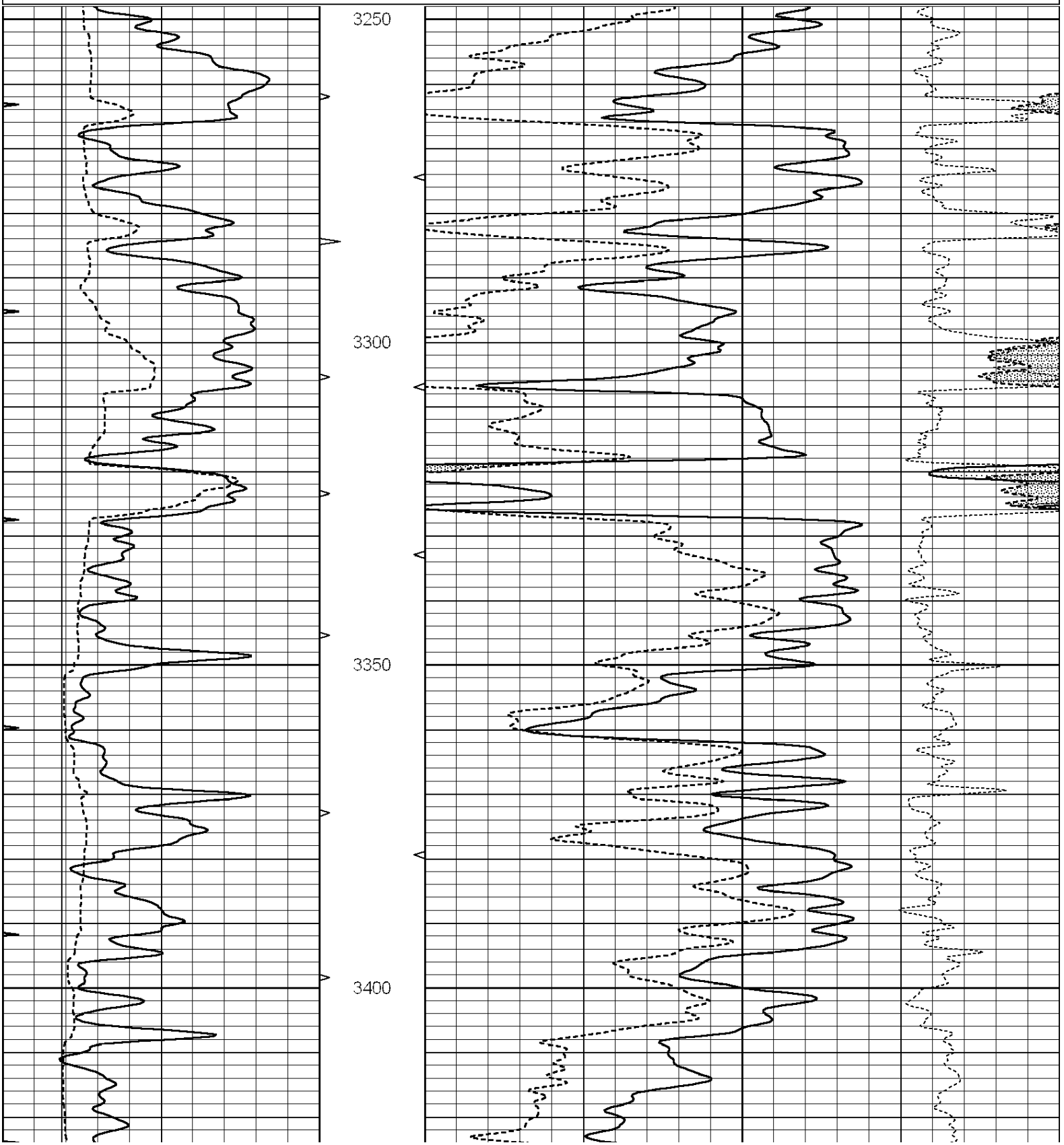
NABORS COMPLETION & PRODUCTION

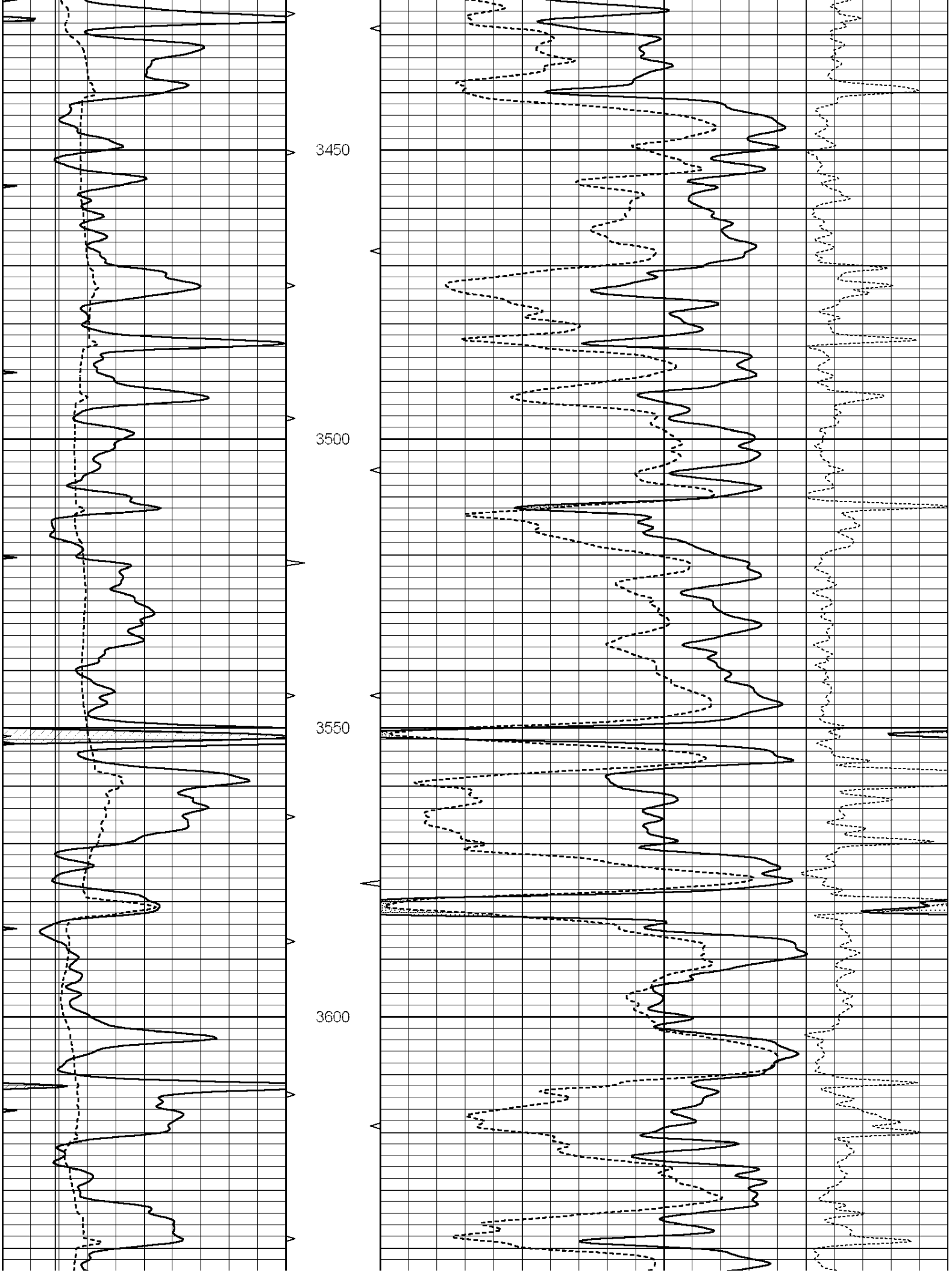
MAIN SECTION

SERVICES CO.

Database File: 009744ddn.db
Dataset Pathname: pass4.1
Presentation Format: _den_neu
Dataset Creation: Sun Oct 07 07:11:36 2012 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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

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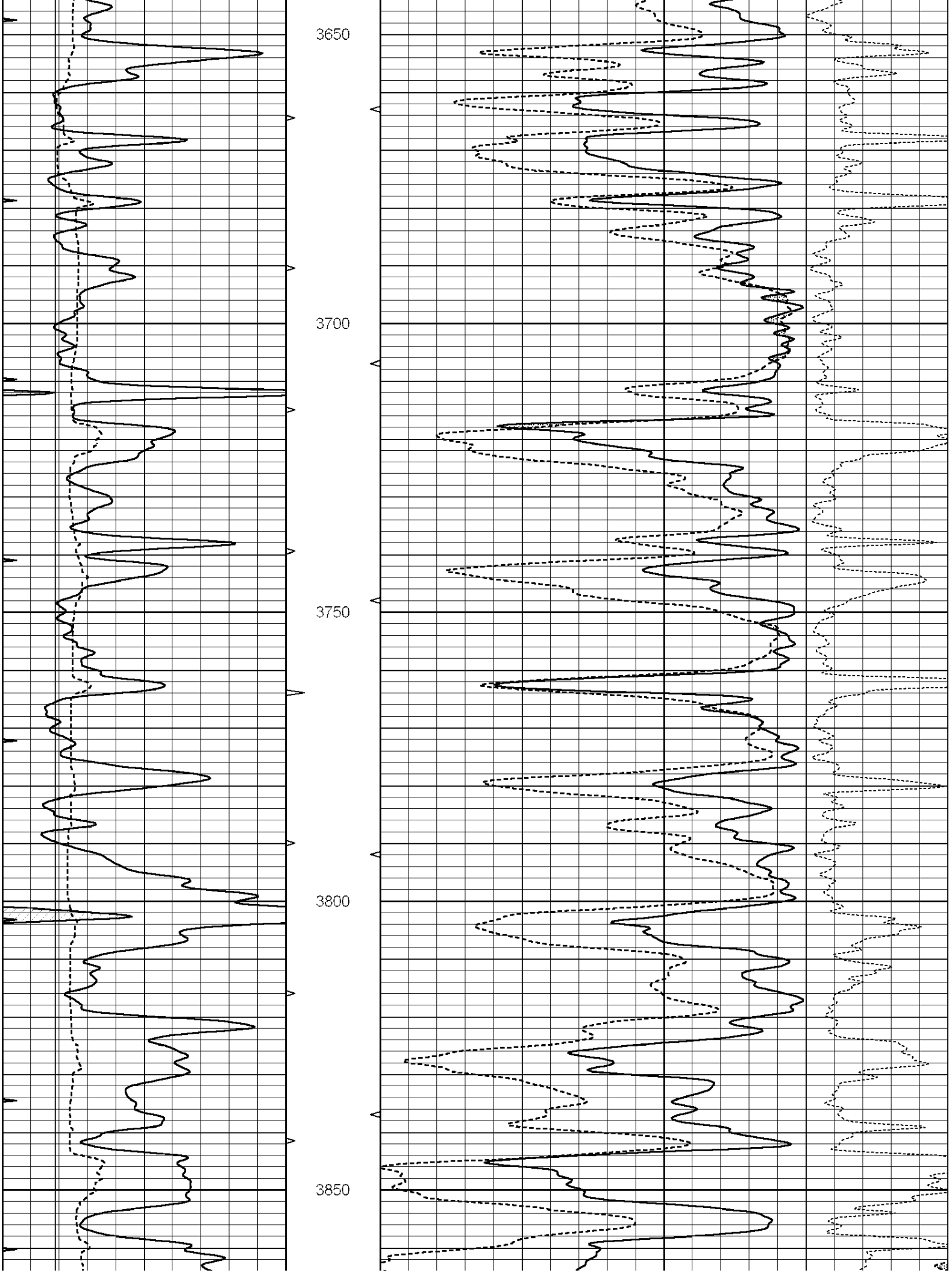
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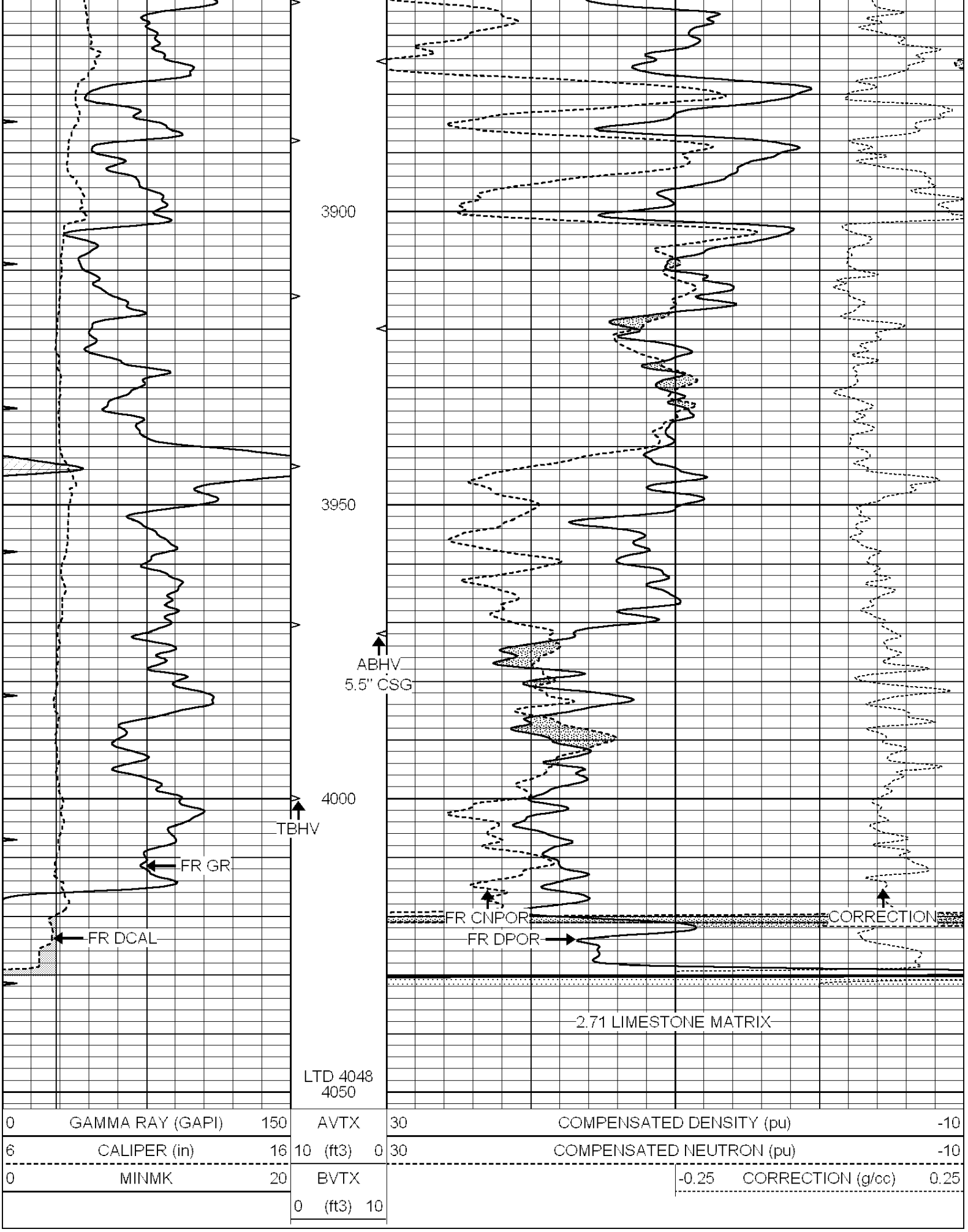

3900
3950
4000
ABHV
5.5" CSG
TBHV
FR GR
FR DCAL
FR CNPOR
FR DPOR
CORRECTION
2.71 LIMESTONE MATRIX
LTD 4048
4050
0 GAMMA RAY (GAPI) 150
6 CALIPER (in) 16
0 MINMK 20
AVTX
10 (ft3) 0
BVTX
0 (ft3) 10
30 COMPENSATED DENSITY (pu) -10
30 COMPENSATED NEUTRON (pu) -10
-0.25 CORRECTION (g/cc) 0.25

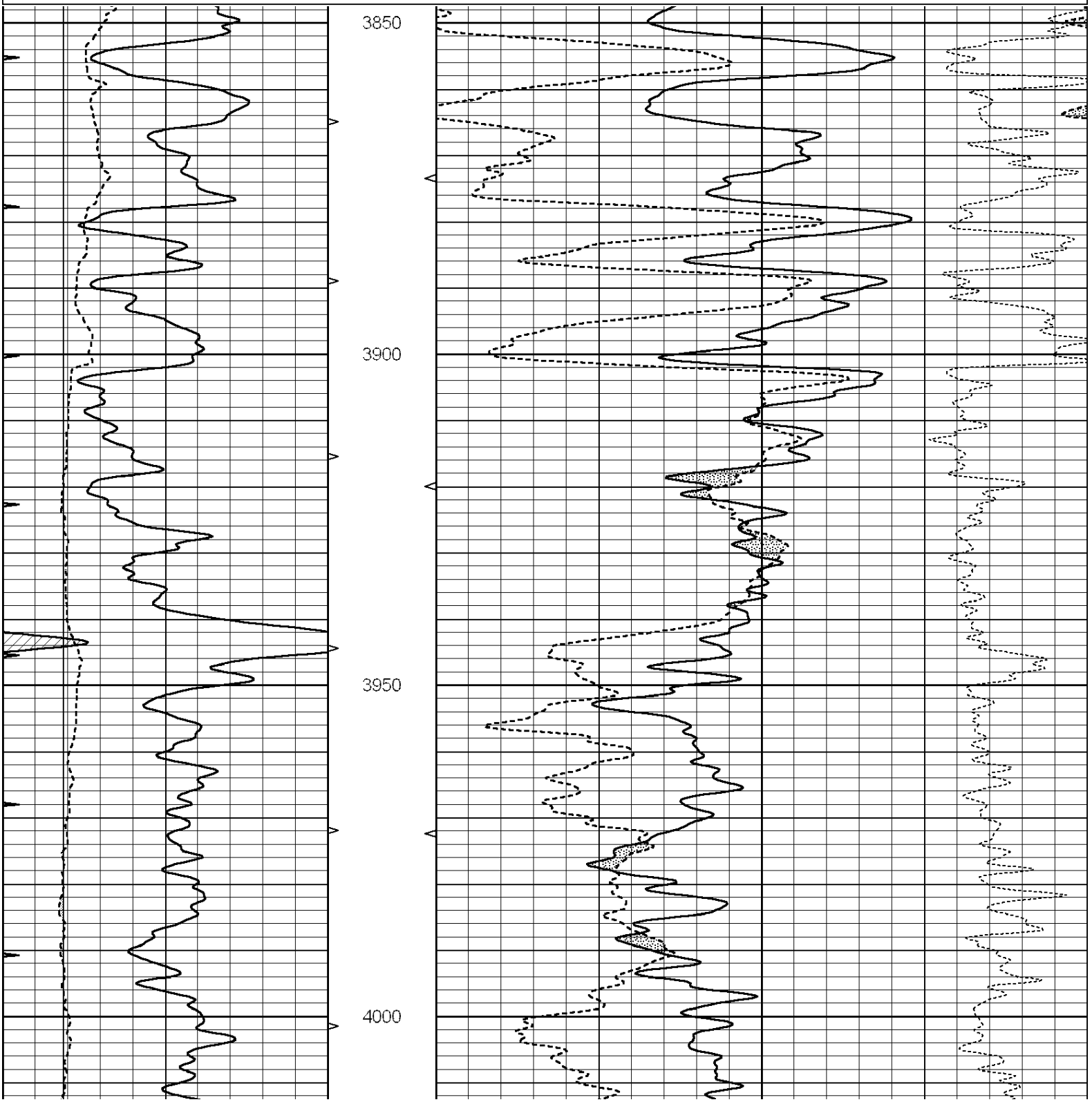
NABORS

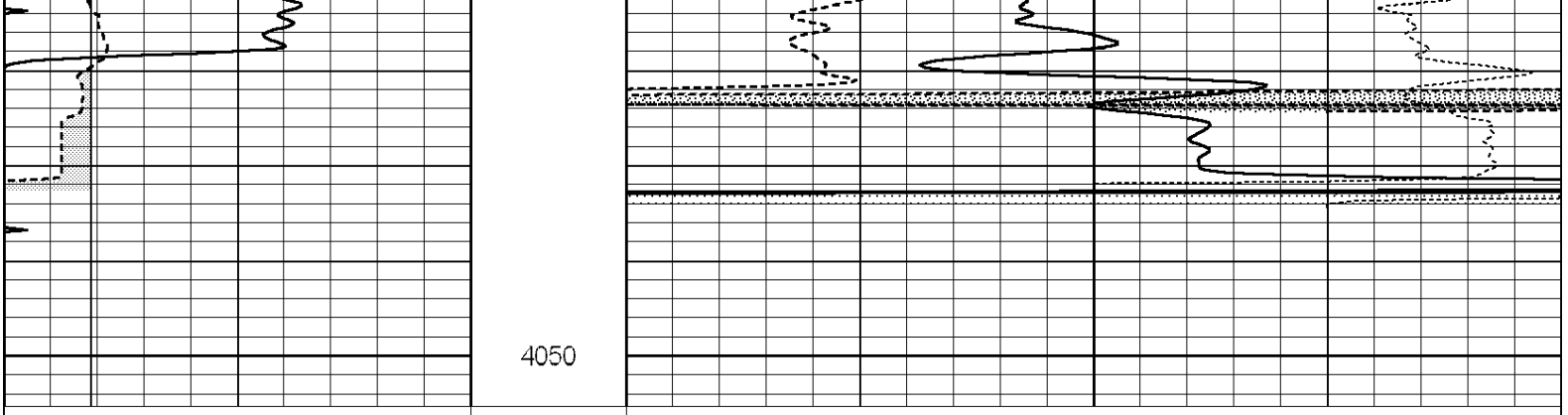
COMPLETION & PRODUCTION SERVICES CO.

REPEAT SECTION

Database File:	009744ddn.db
Dataset Pathname:	pass3.1
Presentation Format:	_den_neu
Dataset Creation:	Sun Oct 07 07:04:15 2012 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240

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





Calibration Report

Database File: 009744ddn.db
Dataset Pathname: pass3.1
Dataset Creation: Sun Oct 07 07:04:15 2012 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Fri Aug 01 06:33:19 2008
Downhole Cal Performed:	Mon Jul 28 11:08:27 2008
After Survey Verification Performed:	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	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
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

Compensated Density Calibration Report

Serial-Model:	GEAR4-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Mon Mar 19 19:07:19 2012

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1015.91	497.51	cps
Aluminum	2.600	g/cc	227.67	350.20	cps

Spine Angle = 76.79 Density/Spine Ratio = 0.579

	Size		Reading	
Small Ring	8.00	in	3.21	V
Large Ring	14.00	in	5.46	V

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

Gamma Ray Calibration Report

Serial Number:	#8	
Tool Model:	OPEN	
Performed:	Mon Jun 13 16:56:43 2011	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	175.0	cps
Sensitivity:	0.8371	GAPI/cps