



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY/NEUTRON LOG

Company		LD DRILLING, INC.	
Well		MILLER #3-16	
Field			
County		BARTON	
State		KANSAS	
Location:		API # : 15-009-25796-0000 2310' FSL & 2310' FEL NW - NW - SE	
Other Services DIL/MEL			
Permanent Datum		GROUND LEVEL Elevation 1867	
Log Measured From		KELLY BUSHING 5' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 16 TWP 19S RGE 12W			
Date	7/22/13		
Run Number	ONE		
Depth Driller	3560		
Depth Logger	3561		
Bottom Logged Interval	3537		
Top Log Interval	2800		
Casing Driller	8 5/8" @ 722		
Casing Logger	722		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5000 PPM	
Density / Viscosity	9.4/54		
pH / Fluid Loss	9.5/9.2		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	.65 @ 87F		
Rmf @ Meas. Temp	.48 @ 87F		
Rmc @ Meas. Temp	.78 @ 87F		
Source of Rmf / Rmc	MEASURED		
Rin @ BHT	.50 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	JIM MUSGROVE		

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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 COMPLETION & PRODUCTION SVCS. (785) 628-6395

DIRECTIONS:

HOISINGTON, KS. - S. TO BARTON COMMUNITY COLLEGE RD.
E. TO HWY 156 - 2 MILES EAST TO RD. 70 - 1/2 S. - W. INTO



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MAIN SECTION

Database File:

400112ddn.db

Dataset Pathname:

pass3.1

Presentation Format:

_den_neu

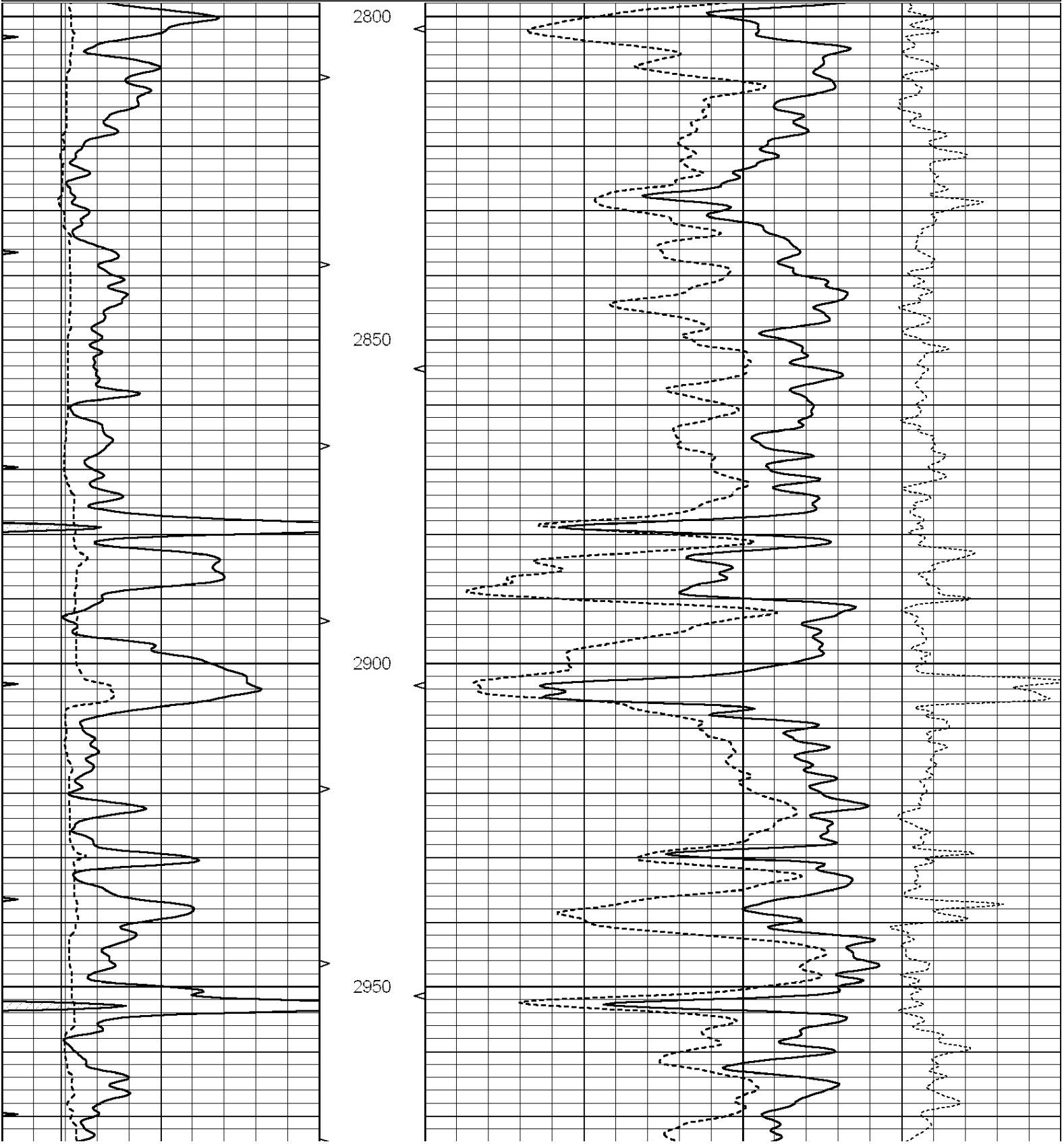
Dataset Creation:

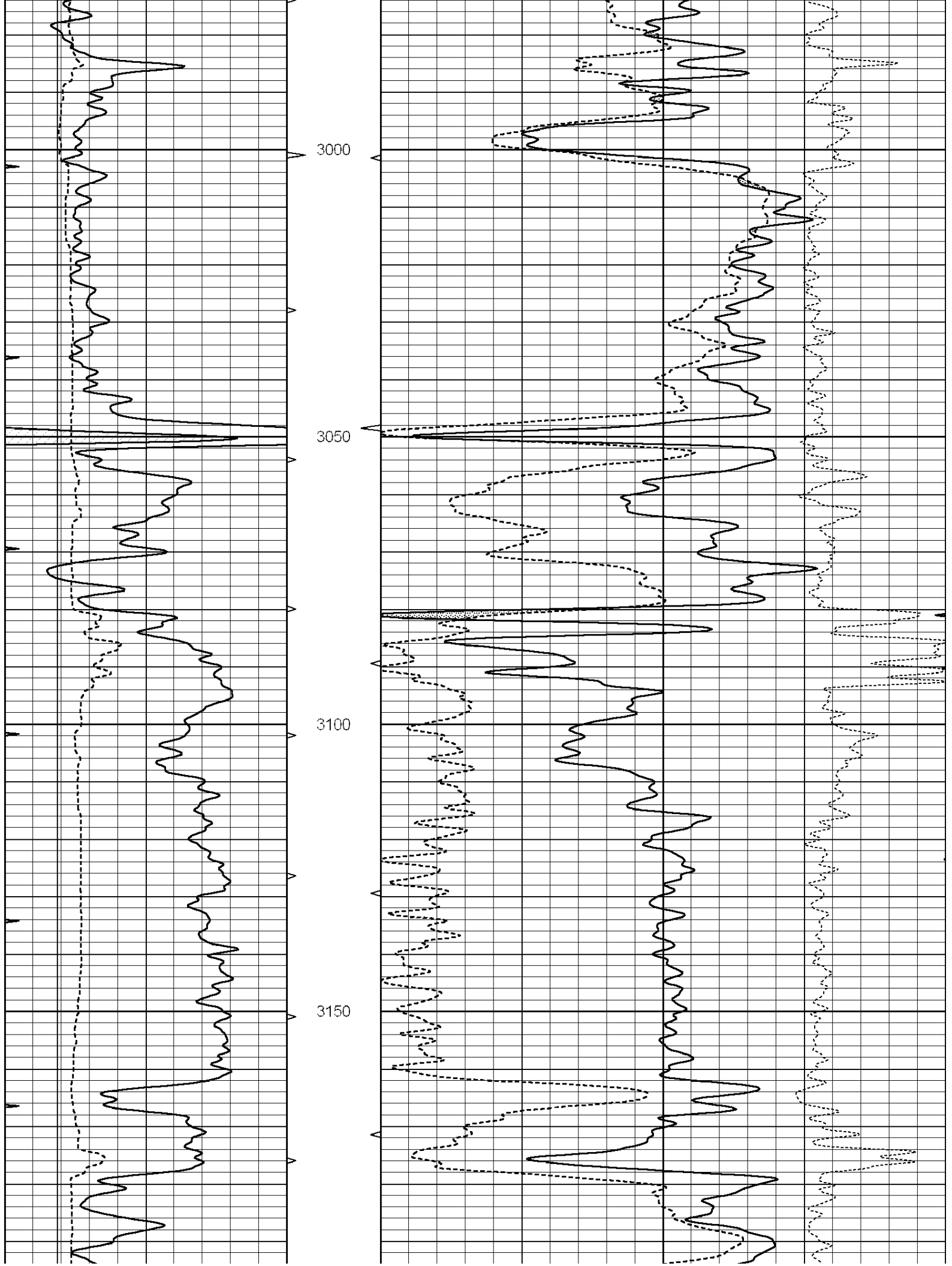
Mon Jul 22 05:54:39 2013 by Calc Open-Cased 090629

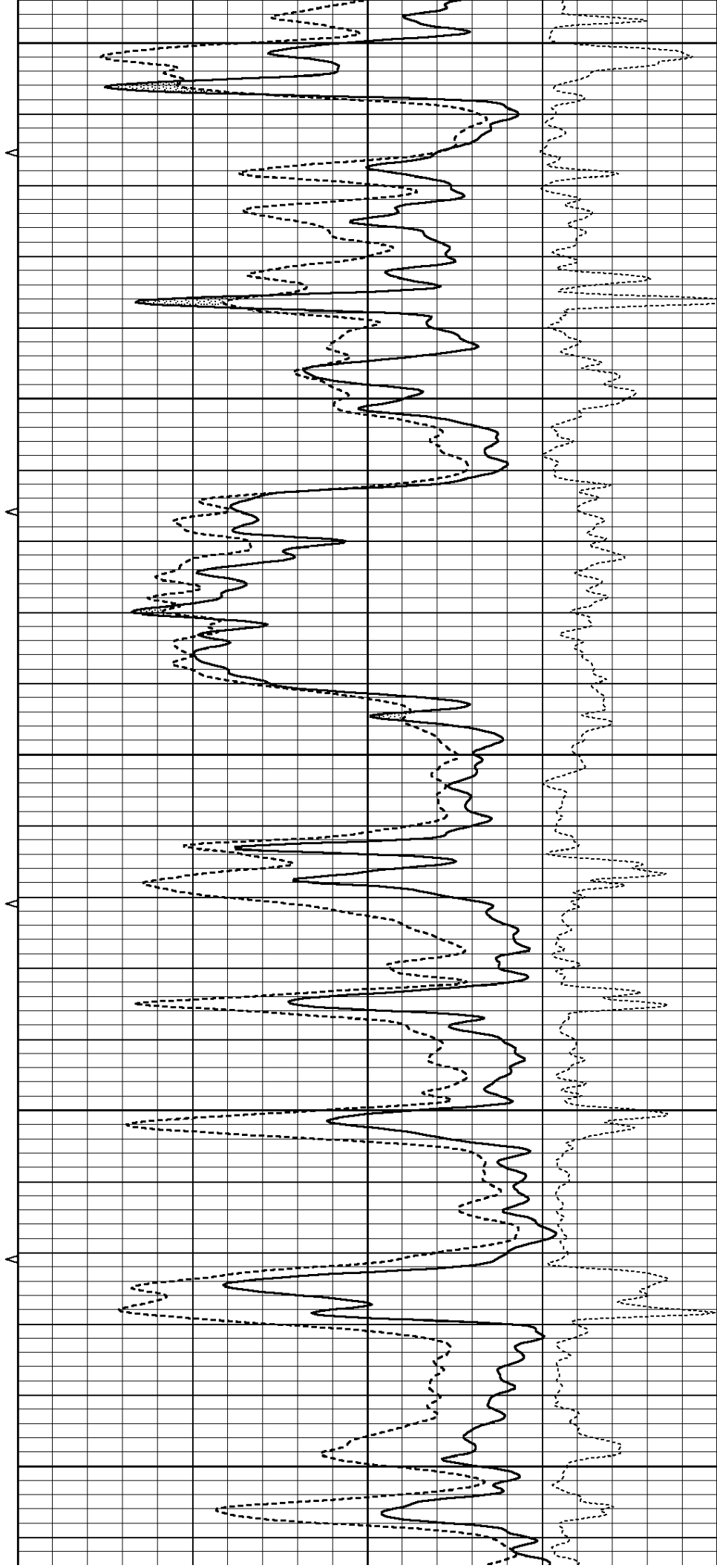
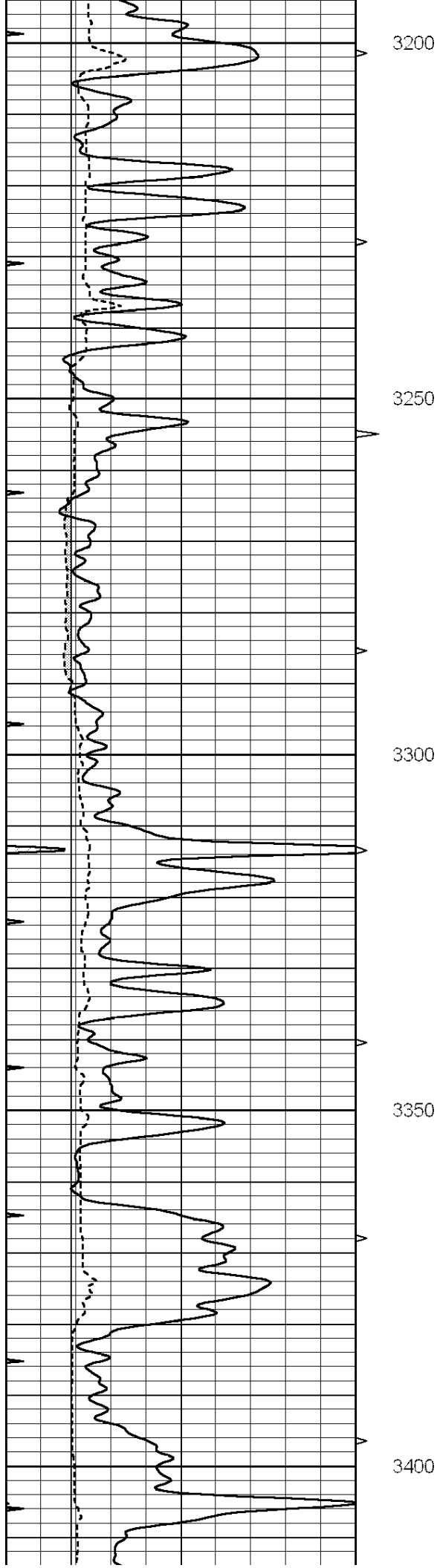
Charted by:

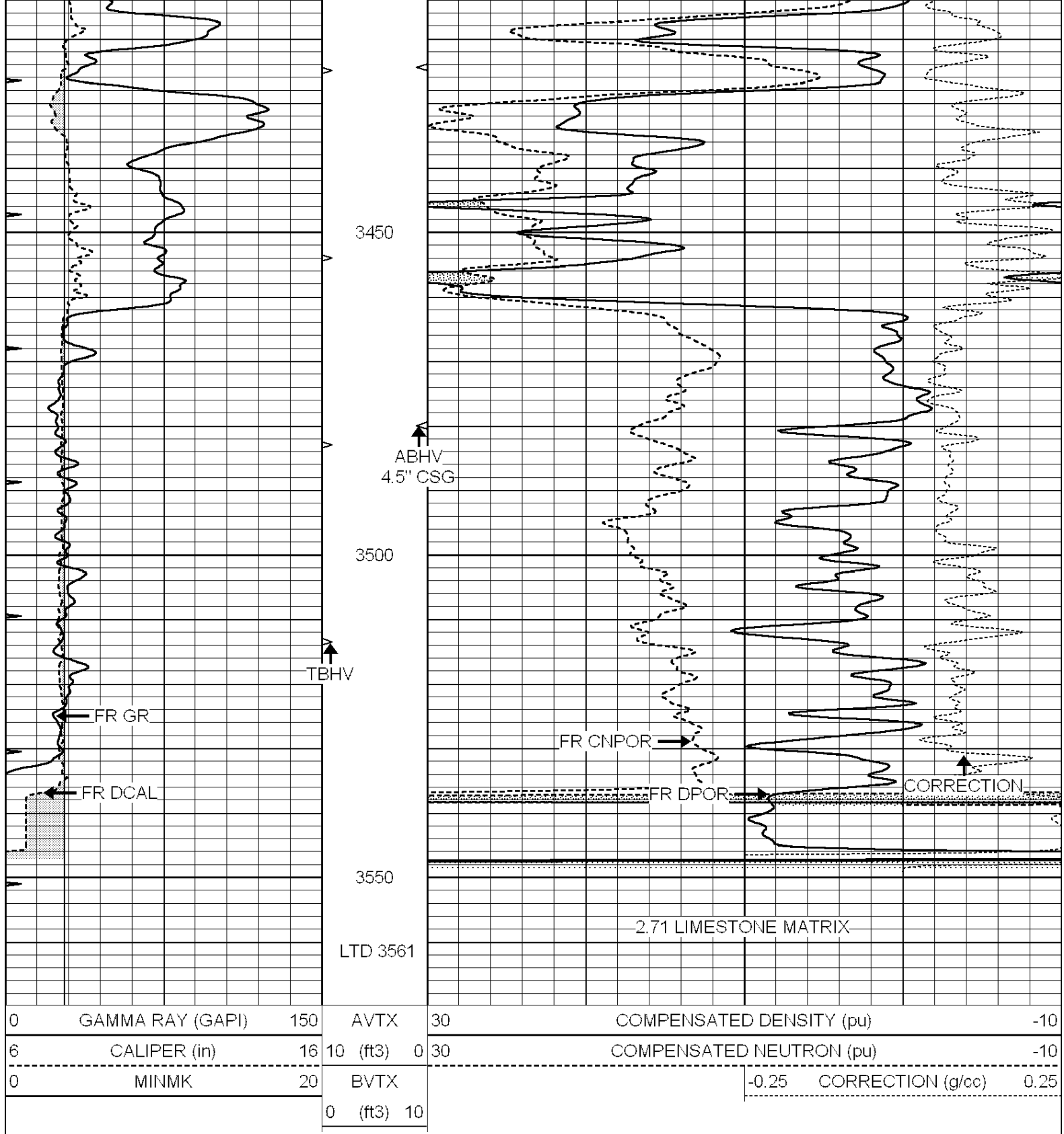
Depth in Feet scaled 1:240

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		





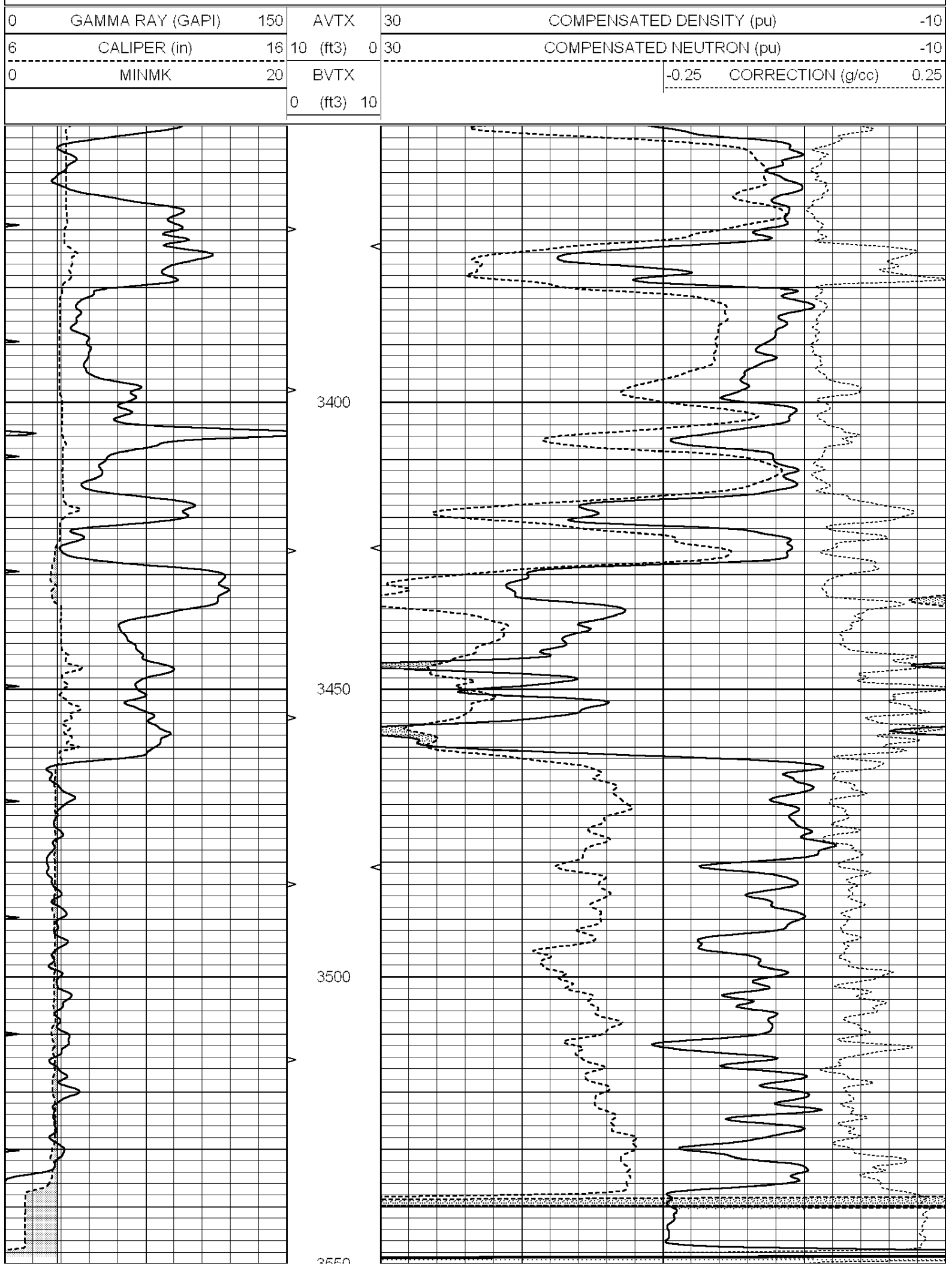




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REPEAT SECTION

Database File: 400112ddn.db
Dataset Pathname: pass2.1
Presentation Format: _den_neu
Dataset Creation: Mon Jul 22 05:53:08 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240



[illegible]

Calibration Report

Database File: 400112ddn.db
Dataset Pathname: pass2.1
Dataset Creation: Mon Jul 22 05:53:08 2013 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

Serial-Model: GEAR3-GEARHART
Source / Verifier: 143 / 143
Master Calibration Performed: Tue May 28 03:33:01 2013

Master Calibration

	Density		Far Detector		Near Detector	
Magnesium	1.710	g/cc	971.18	557.33	cps	
Aluminum	2.600	g/cc	212.31	367.26	cps	
Spine Angle = 74.66			Density/Spine Ratio = 0.564			
	Size		Reading			
Small Ring	8.00	in	4.29	V		
Large Ring	14.00	in	6.24	V		

Compensated Neutron Calibration Report
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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