



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company	L.D. DRILLING, INC.	Company	L.D. DRILLING, INC.
Well	BARNES #2-21	Well	BARNES #2-21
Field		Field	
County	BARTON	County	BARTON
State	KANSAS	State	KANSAS
Location:	API # : 15-009-26087-0000	Other Services DIL/MEL SONIC	
Permanent Datum	900' FNL & 330' FWL N/2 SW NW NW	Elevation	
Log Measured From	SEC 21 TWP 18S RGE 14W	K.B. 1934	
Drilling Measured From	GROUND LEVEL KELLY BUSHING 5' A.G.L. KELLY BUSHING	D.F. 1932	
		G.L. 1929	
Date	4/7/15		
Run Number	ONE		
Depth Driller	3560		
Depth Logger	3566		
Bottom Logged Interval	3542		
Top Log Interval	2800		
Casing Driller	8 5/8" @ 938		
Casing Logger	933		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 9500 PPM	
Density / Viscosity	9.3/59		
pH / Fluid Loss	11.0/10.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.50 @ 68F		
Rmt @ Meas. Temp	.37 @ 68F		
Rmc @ Meas. Temp	1.59 @ 68F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.30 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	4010		
Location	HAYS, KANSAS		
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, HAYS, KS. (785) 628-6395
DIRECTIONS:

FROM HWY 281 & HWY 4 GO 4 MILES SOUTH TO CURVE - 2 WEST - 1/4 SOUTH - EAST INTO

Database File:

26550ddn.db

Dataset Pathname:

pass3.1

Presentation Format:

den_neu

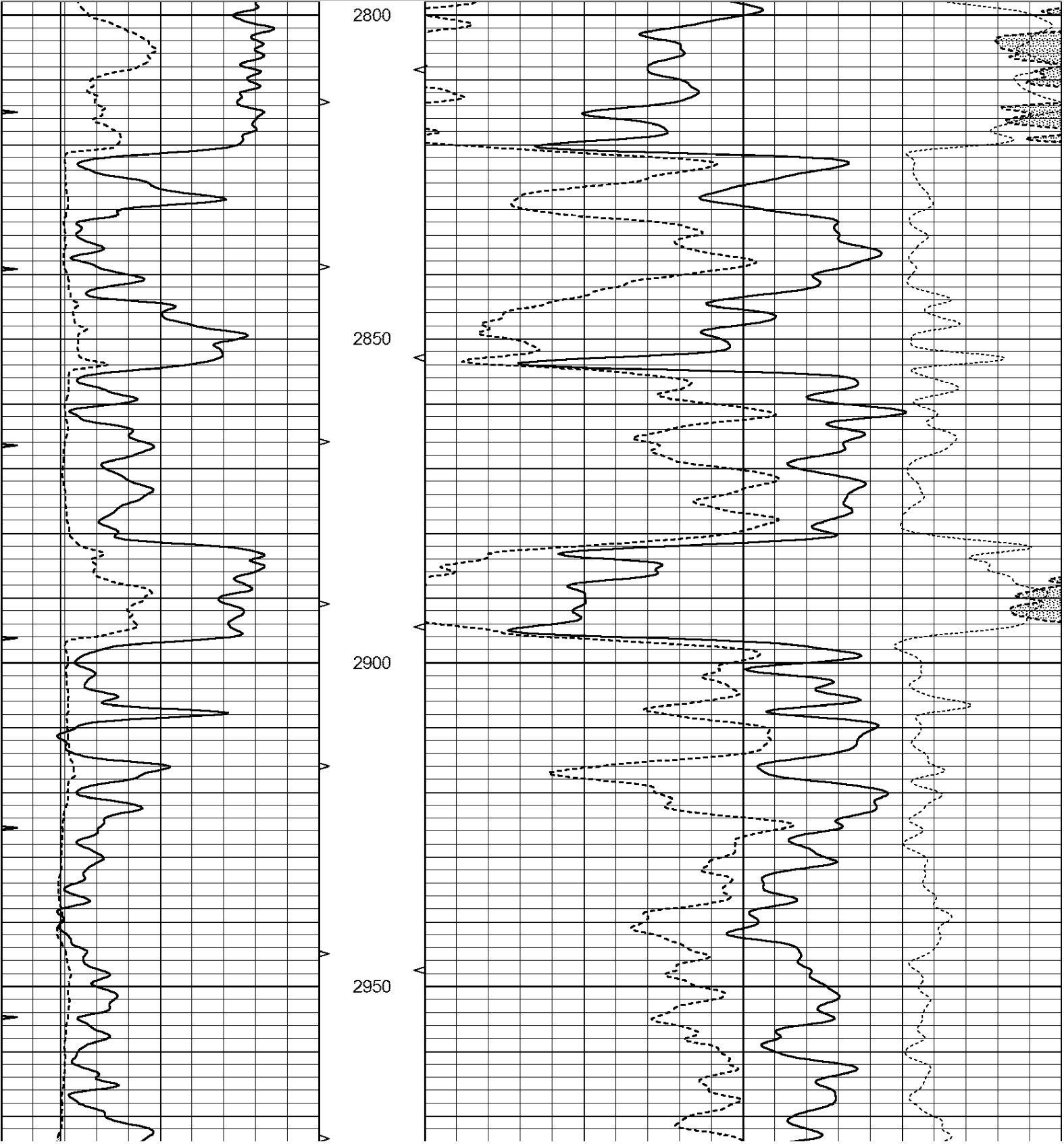
Dataset Creation:

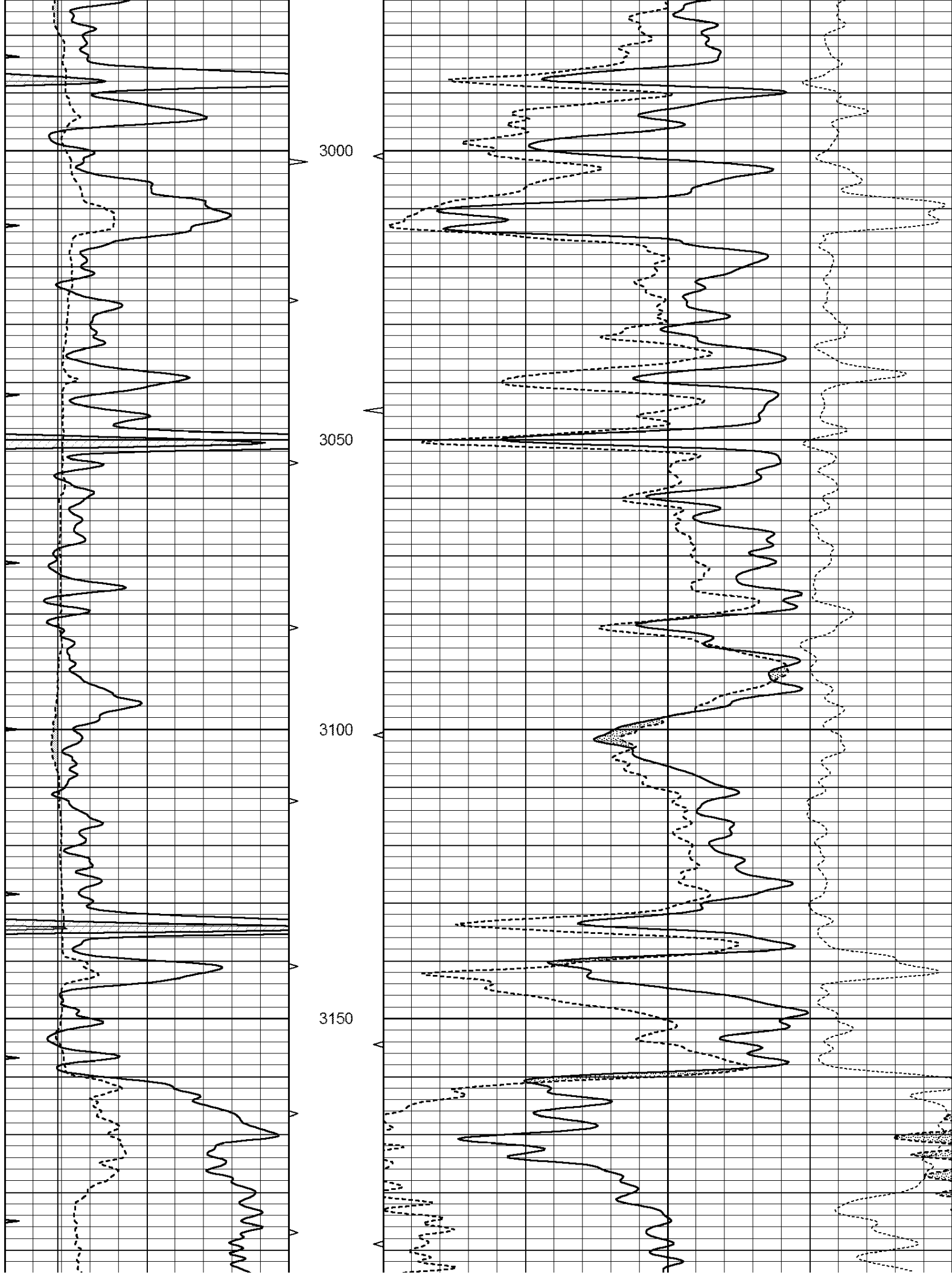
Tue Apr 07 10:08:32 2015 by Calc Open-Cased 090629

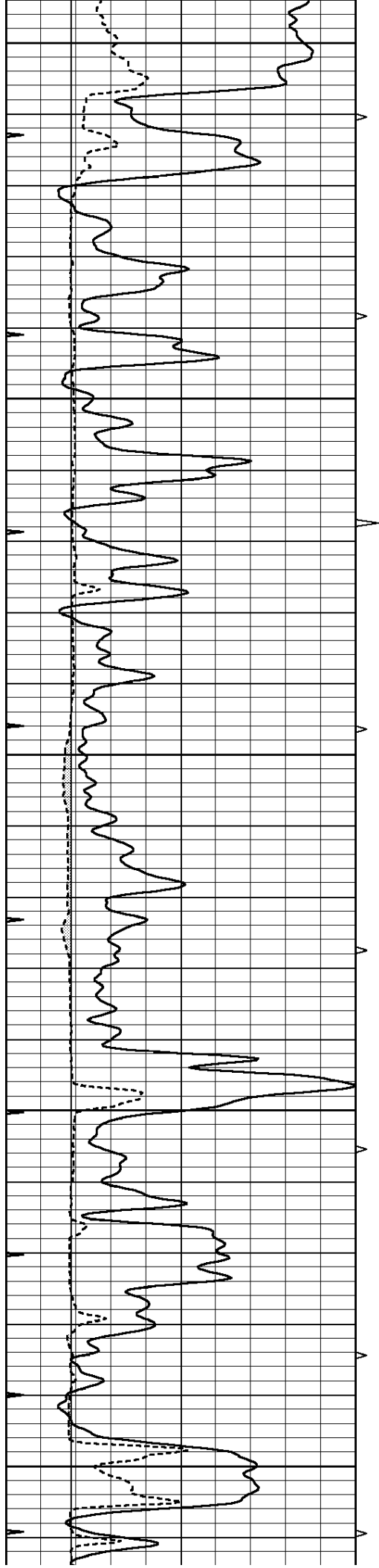
Charted by:

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		







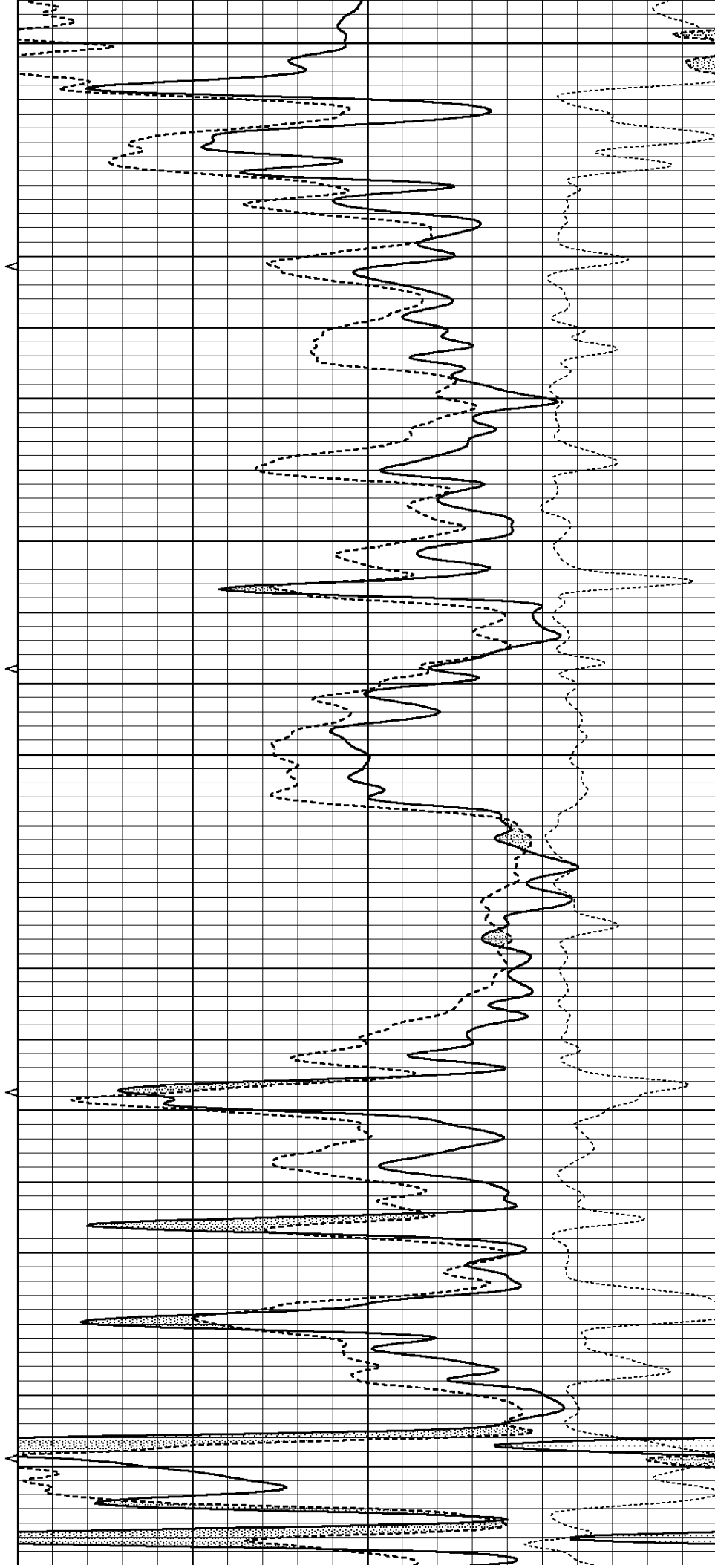
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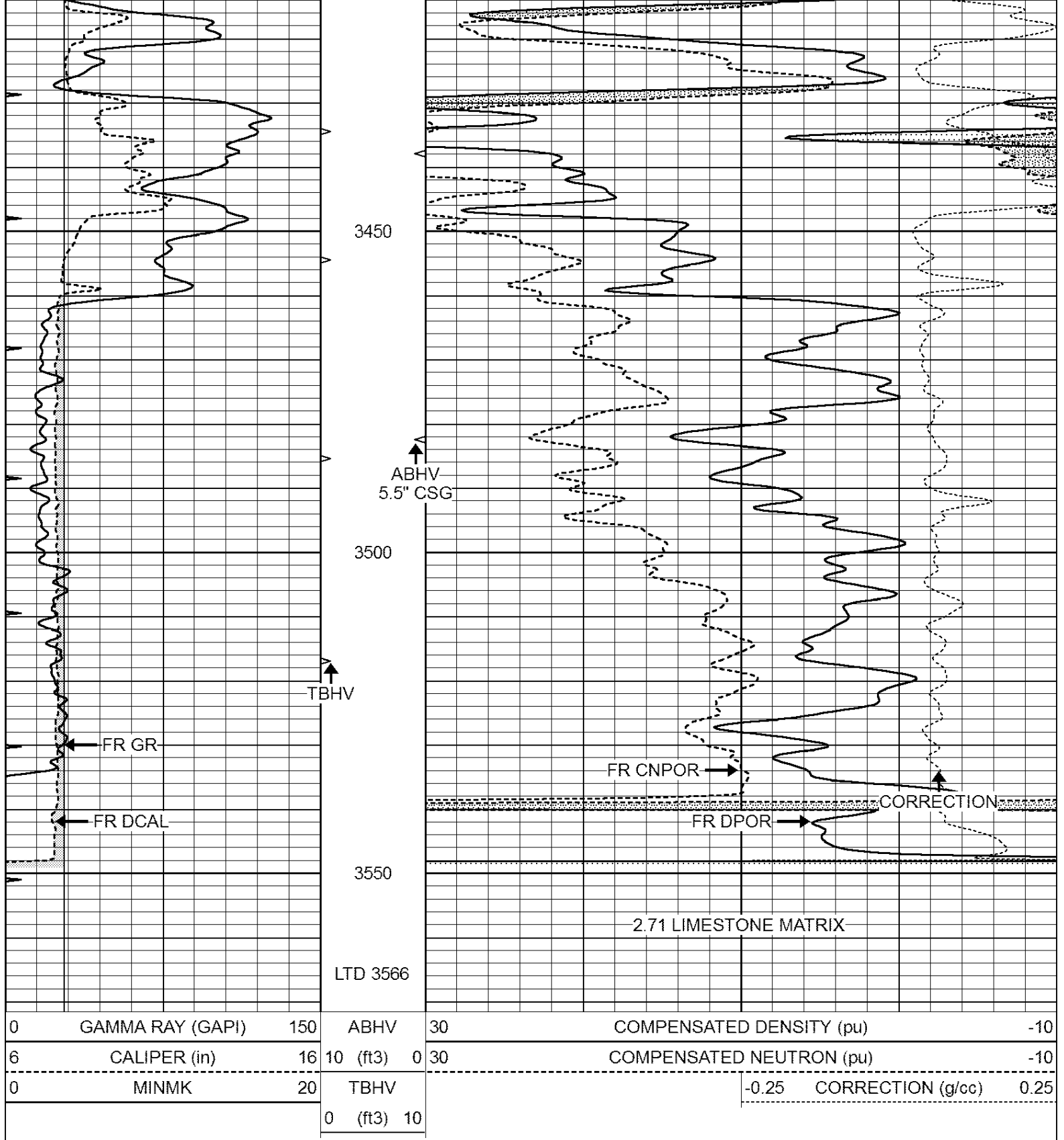
3250

3300

3350

3400





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REPEAT SECTION

Database File: 26550ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Tue Apr 07 10:11:23 2015 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

Master Calibration		Performed Wed Mar 12 14:26:38 2014			
	Background	Magnesium	Aluminum	Sandstone	
Window 1	1296.6	7199.0	2625.4	7833.2	cps
Window 2	1218.8	5956.6	2257.8	6372.0	cps

Window 2	1219.7	2990.0	1318.7	3107.7	cps
Window 3	926.7	319.6	320.3	326.2	cps
Window 4	314.3				
Long Space	0.0	4737.9	1039.0	5153.3	cps
Short Space	1.3	1655.6	1074.2	1728.4	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.1	Rib Slope	: 0.969	Density/Spine Ratio	: 0.562
Spine Angle	: 74.1	Spine Slope	: 3.507	Spine Intercept	: -17.5

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

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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	

	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 Mar 08 22:55:40 2015	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.8000	GAPI/cps