



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY / NEUTRON LOG

Company		EDISON OPERATING CO., LLC.	
Well		BARBARA #1-31	
Field		SEEVERS NW	
County		STAFFORD	
State		KANSAS	
Company		EDISON OPERATING COMPANY, LLC.	
Well		BARBARA #1-31	
Field		SEEVERS NW	
County		STAFFORD	
State		KANSAS	
Location:		API # : 15-185-23781-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		660' FSL & 660' FWL	
Drilling Measured From		SW - SW	
SEC 31 TWP 24S RGE 13W		Other Services DIL/MEL SONIC	
Elevation		K.B. 1958 D.F. 1956 G.L. 1948	
Date	12/22/12		
Run Number	ONE		
Depth Driller	4230		
Depth Logger	4232		
Bottom Logged Interval	4208		
Top Log Interval	3250		
Casing Driller	8 5/8" @ 296'		
Casing Logger	296'		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 7,200 PPM	
Density / Viscosity	9.0/60		
pH / Fluid Loss	8.0/9.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.60 @ 80F		
Rmf @ Meas. Temp	0.45 @ 80F		
Rmc @ Meas. Temp	0.72 @ 80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	0.41 @ 118F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	118F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF GRONEMEG		
Witnessed By	DEREK PATTERSON		

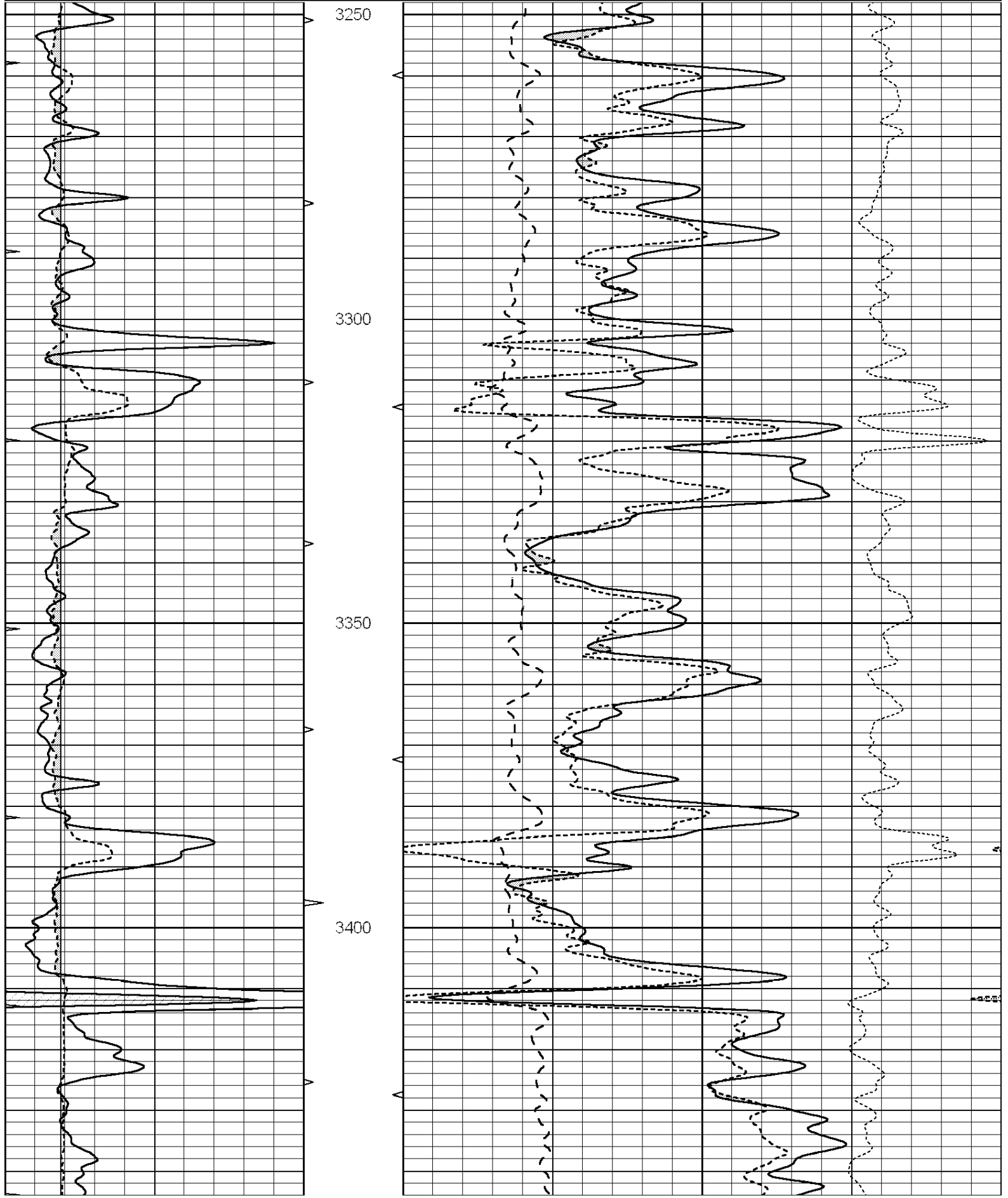
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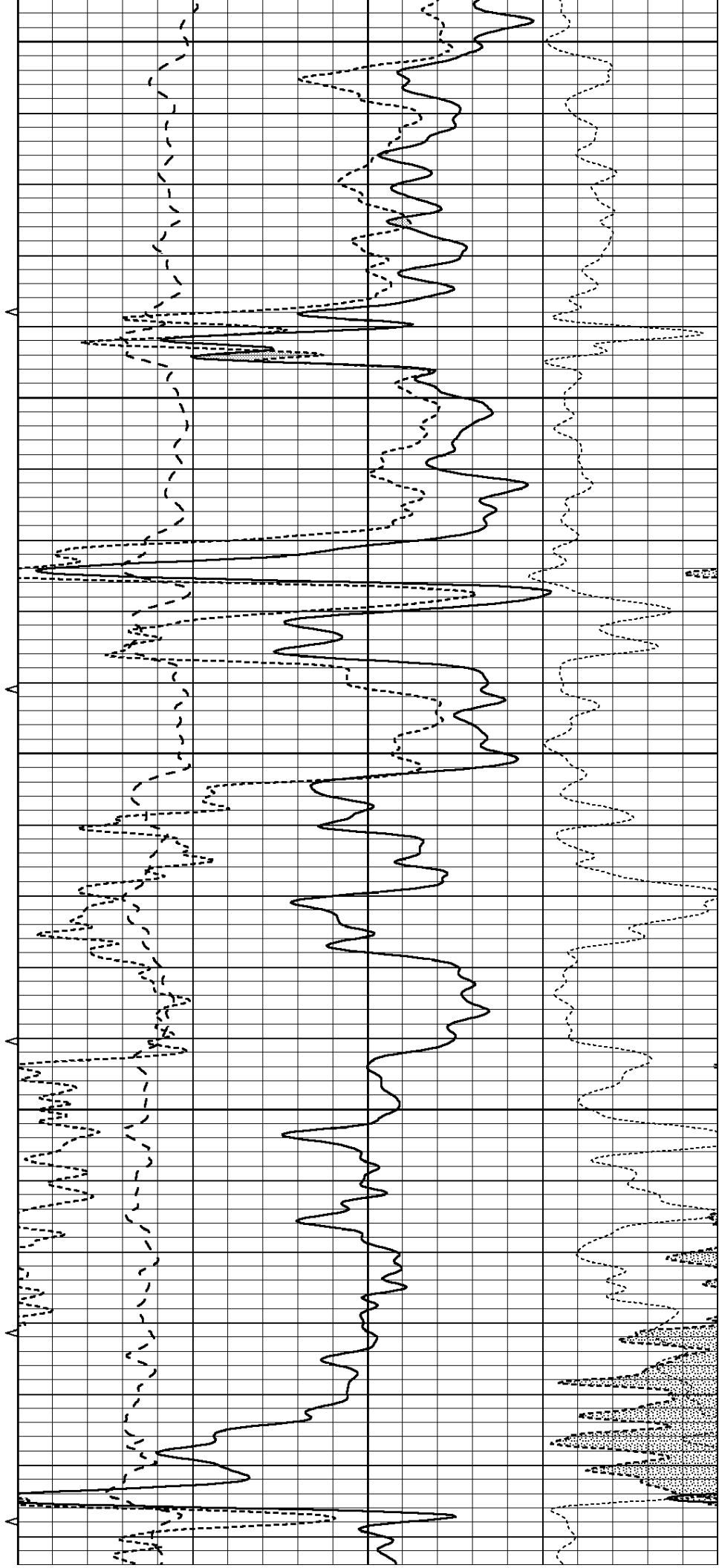
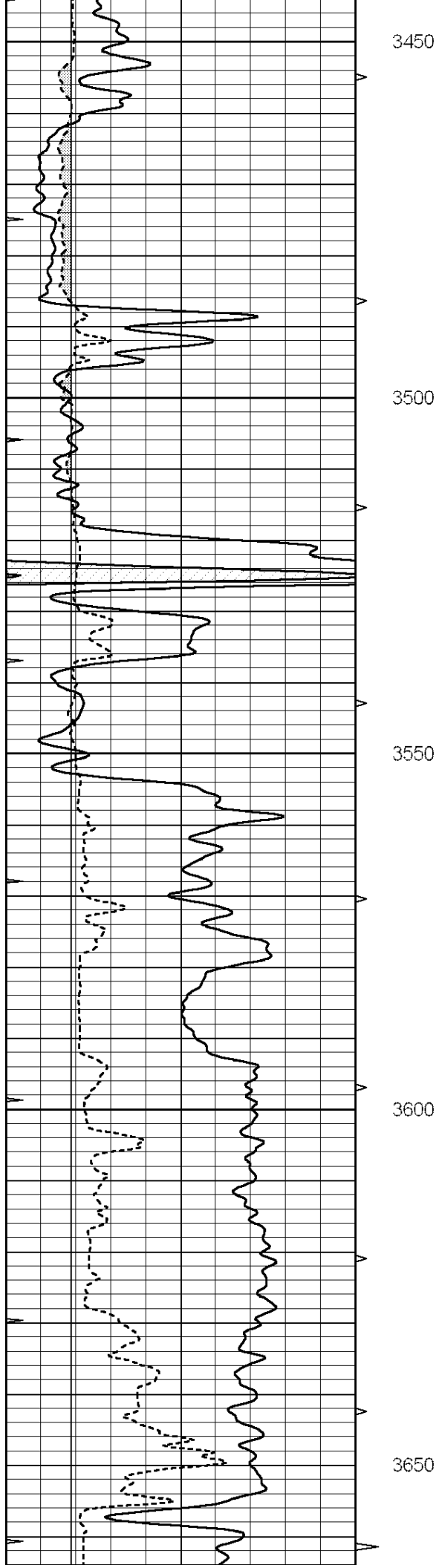
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

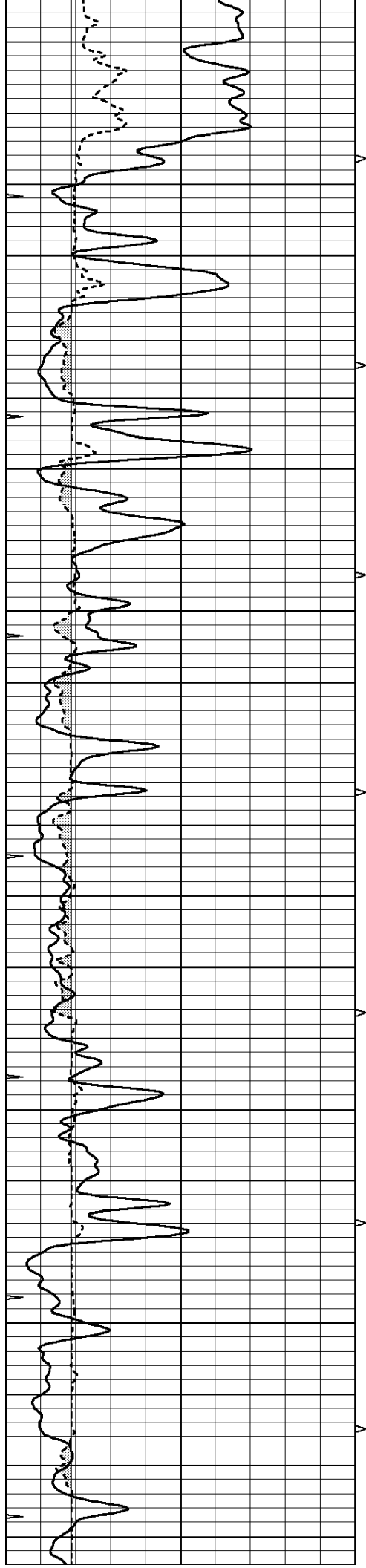
Comments

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
ST. JOHN, KS - SOUTH TO INTERSECTION OF HWYS 281 & 50
3 MILES WEST TO RD 30 - 3 MILES SOUTH - EAST INTO

Charted by:		Depth in Feet scaled 1:2.15					
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16		10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	
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0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10	-----			





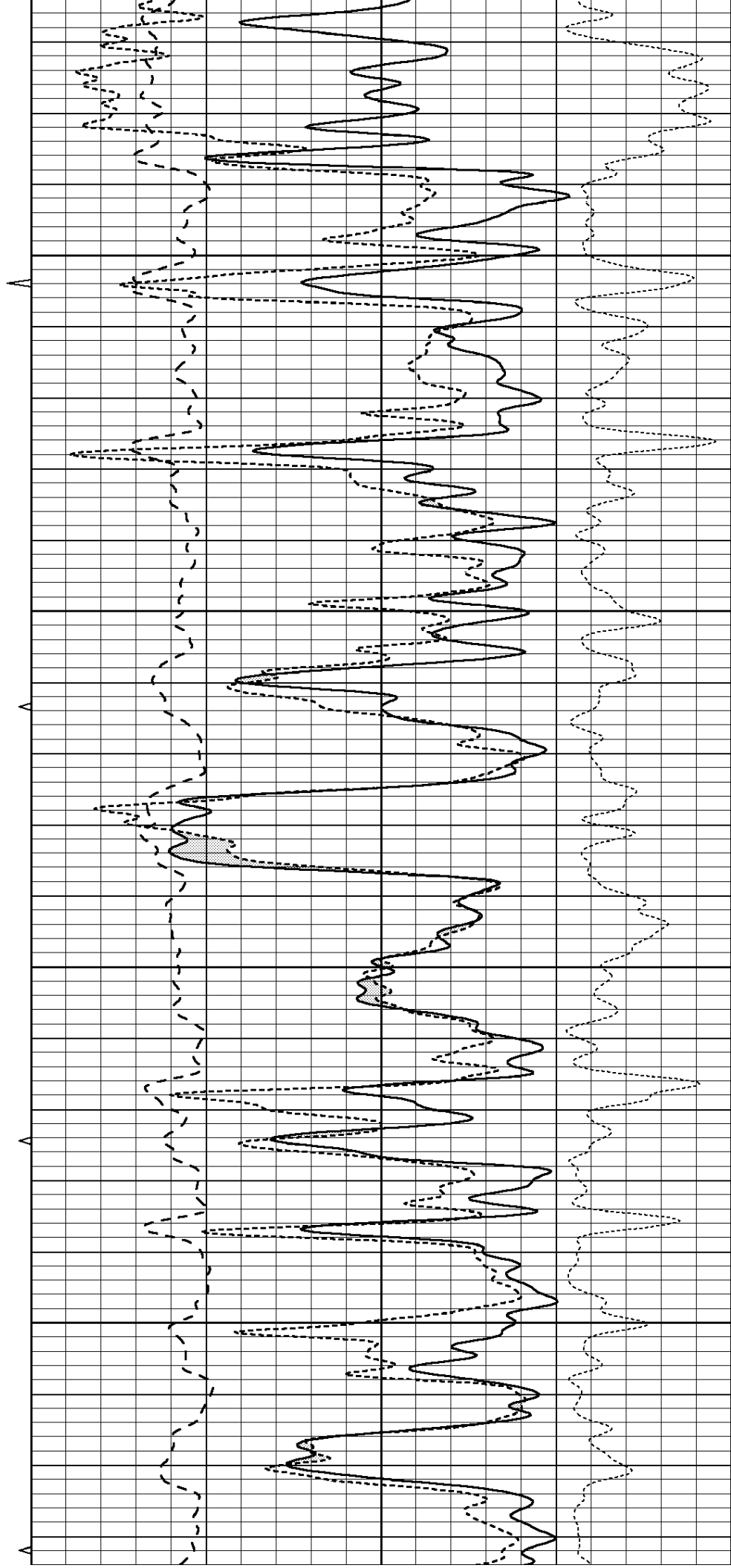


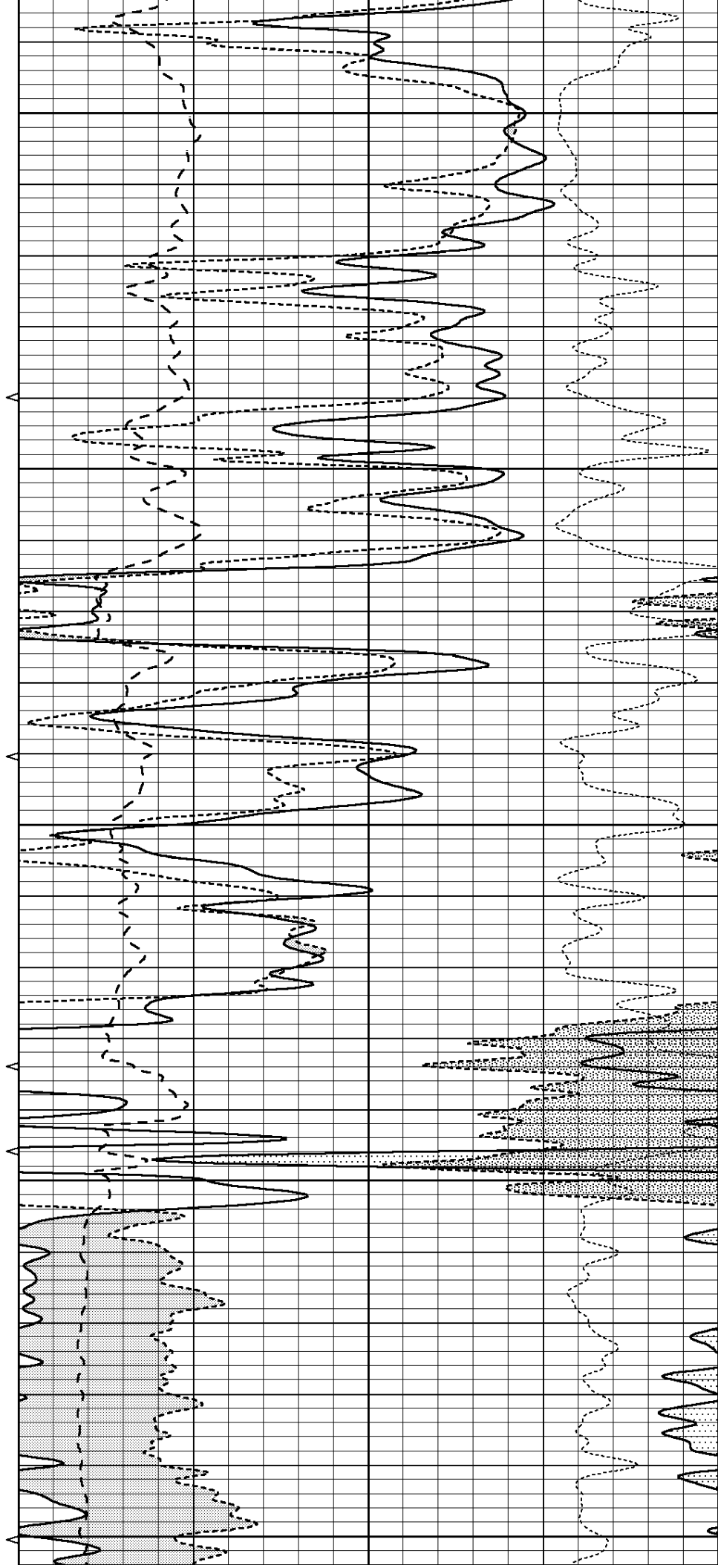
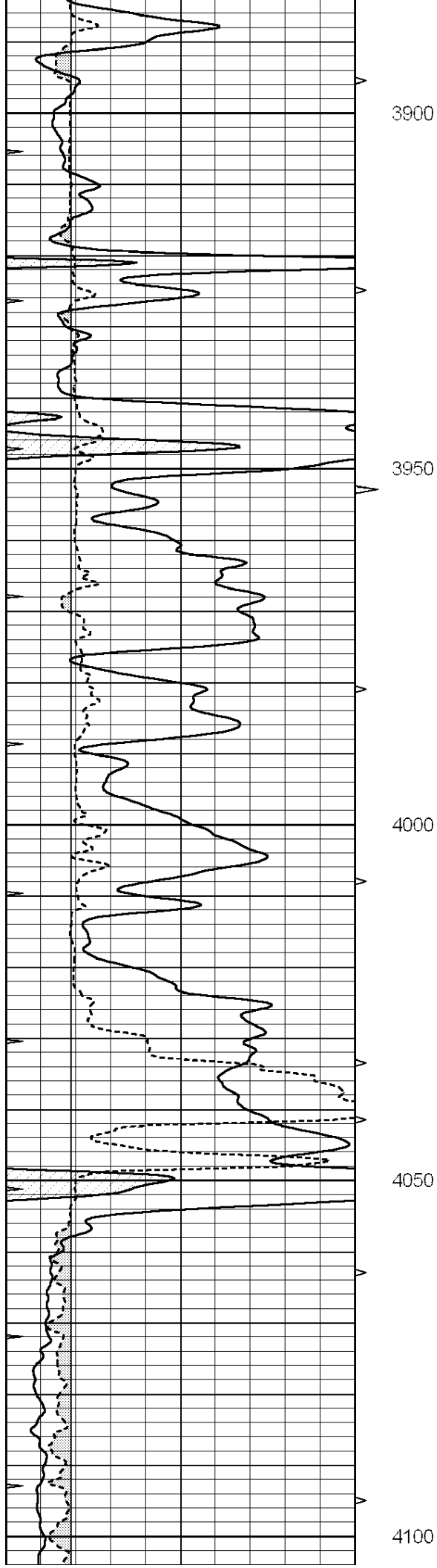
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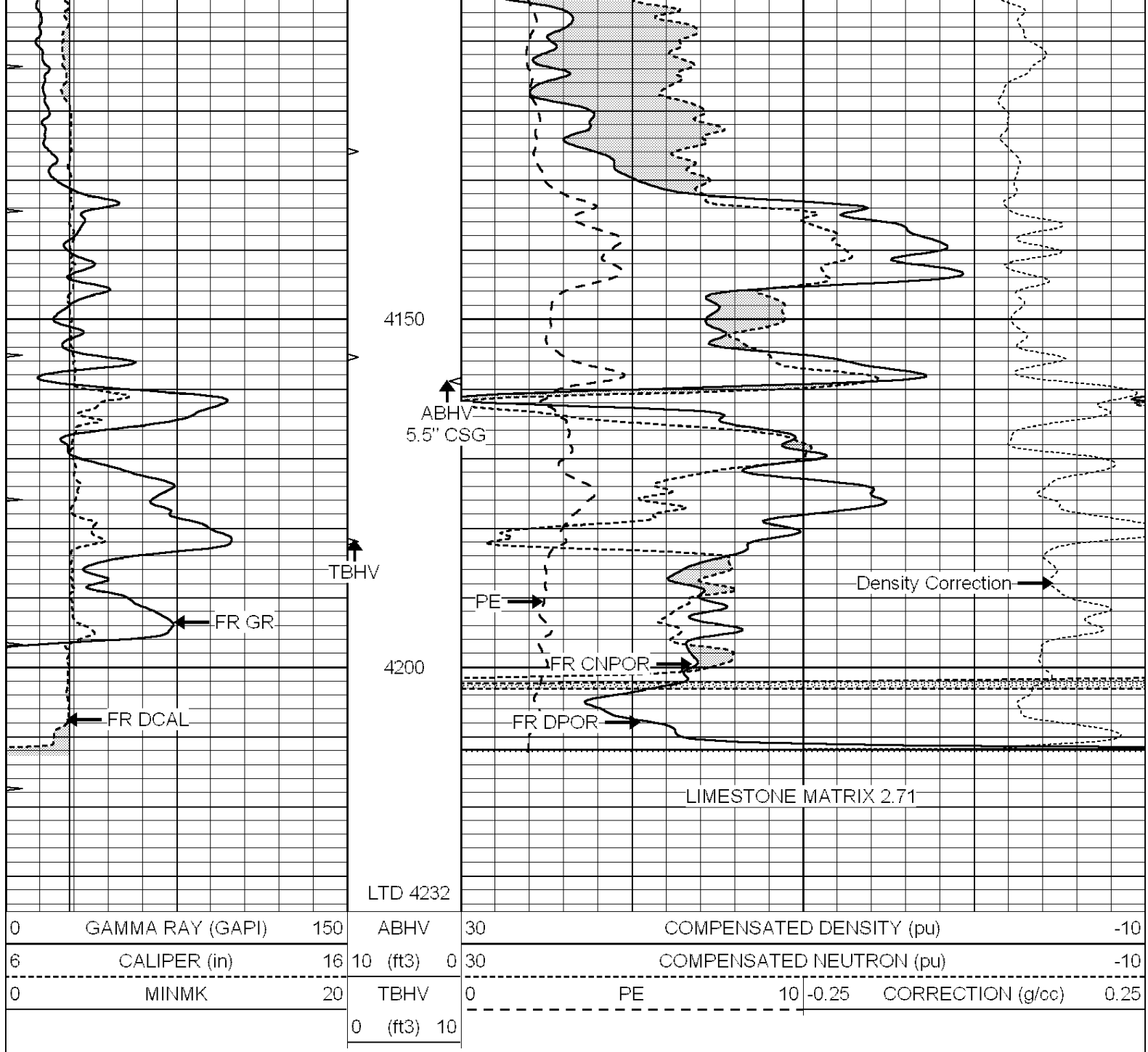
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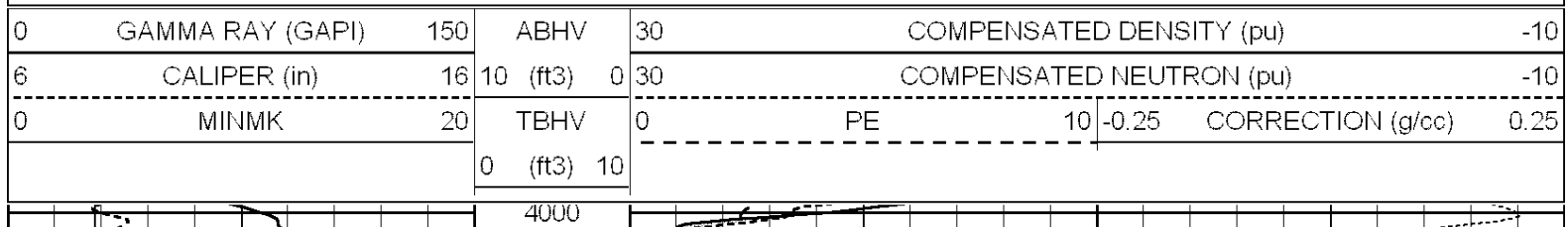


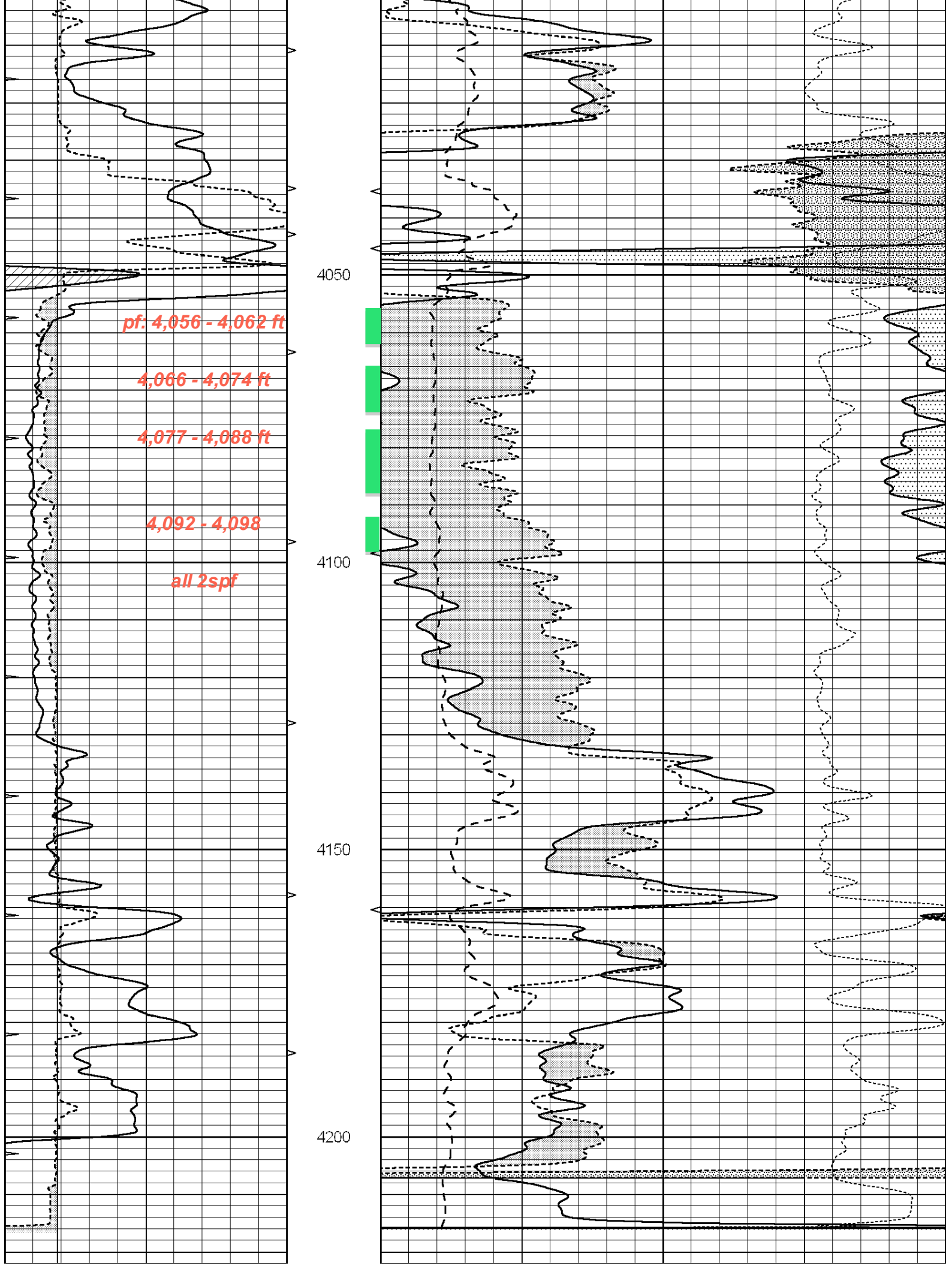


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REPEAT SECTION

Database File: 010037pe.db
Dataset Pathname: pass3.2
Presentation Format: _ldt_neu
Dataset Creation: Sat Dec 22 19:02:29 2012 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240





Master Calibration		Performed Sun Aug 15 09:48:41 2010		
	Background	Magnesium	Aluminum	Sandstone
Window 1	1686.6	11612.8	3932.0	12718.8
Window 2	1531.4	9204.7	3267.8	9851.9
Window 3	1198.3	4733.6	1952.5	4920.6

Window 3	1150.3	4755.0	1552.9	4520.0	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

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:	070808
Tool Model:	Probe

PRE-SURVEY VERIFICATION			
Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

POST-SURVEY VERIFICATION			
Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	070559
Tool Model:	OPEN_GR
Performed:	Wed Nov 28 18:32:17 2012
Calibrator Value:	1.0 GAPI
Background Reading:	0.0 cps

Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps