



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/ NEUTRON
PE / LOG**

Company	EMPIRE ENERGY E&P, LLC.		
Well	CARMICHAEL "A" #19		
Field	BEMIS SHUTTS		
County	ELLIS	State	KANSAS
Location:	API # : 15-051-26747		Other Services DIL SONIC/MEL
	833' FNL & 1323' FWL		
	SEC 18 TWP 11S RGE 17W		
Permanent Datum	GROUND LEVEL	Elevation	1841
Log Measured From	KELLY BUSHING 5' A.G.L.	K.B. 1846	
Drilling Measured From	KELLY BUSHING	D.F. 1841	
Date	11-19-14		
Run Number	ONE		
Depth Driller	3430		
Depth Logger	3430		
Bottom Logged Interval	3428		
Top Log Interval	2200		
Casing Driller	1079		
Casing Logger	1080		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.0 / 59		
pH / Fluid Loss	9.0 / 12.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.60 @ 67F		
Rmf @ Meas. Temp	0.45 @ 67F		
Rmc @ Meas. Temp	0.72 @ 67F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.369 @ 109F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	5:00 P.M.		
Maximum Recorded Temperature	109F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	RUPP		
Witnessed By	MIKE BAIR		

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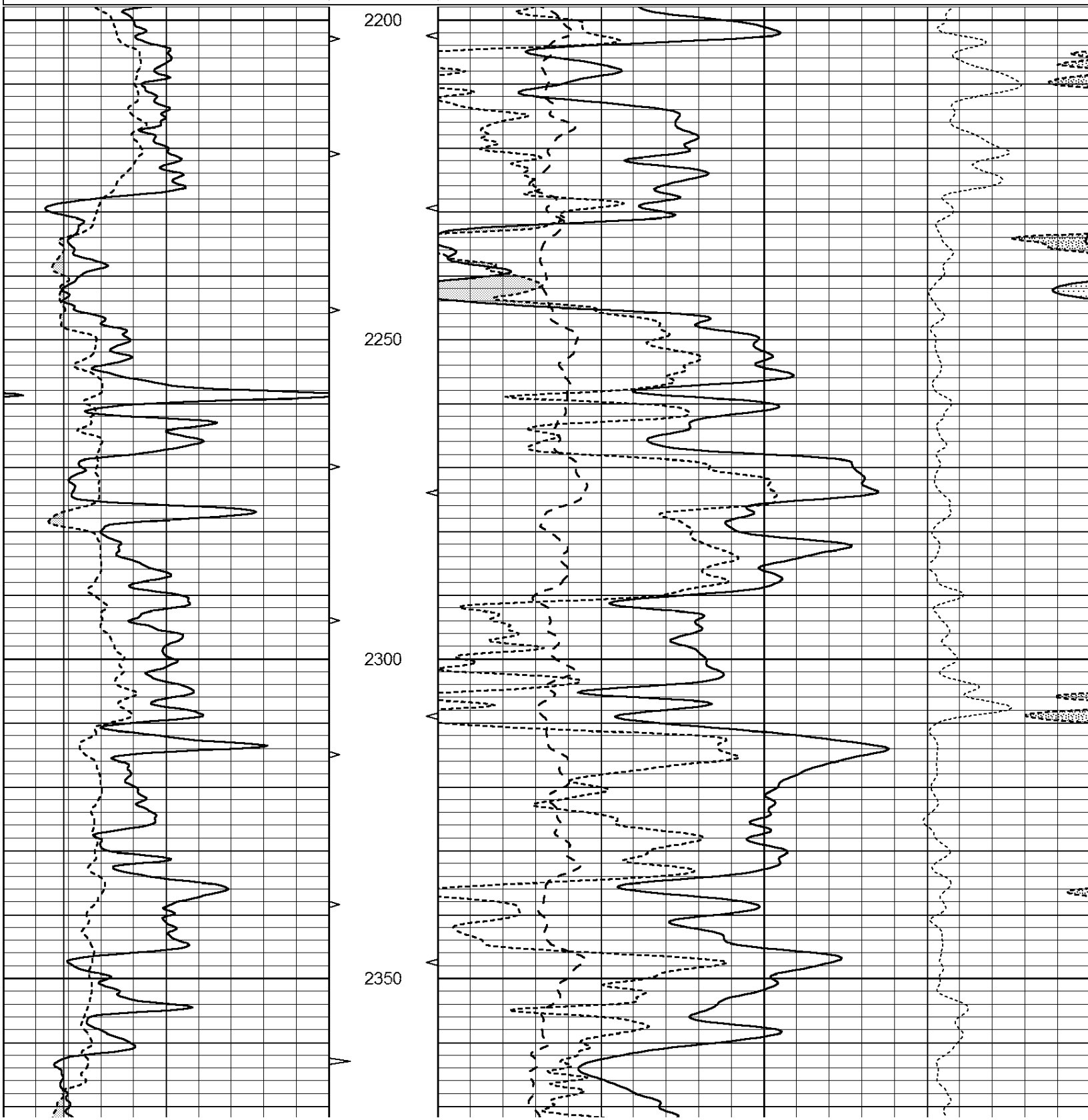
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

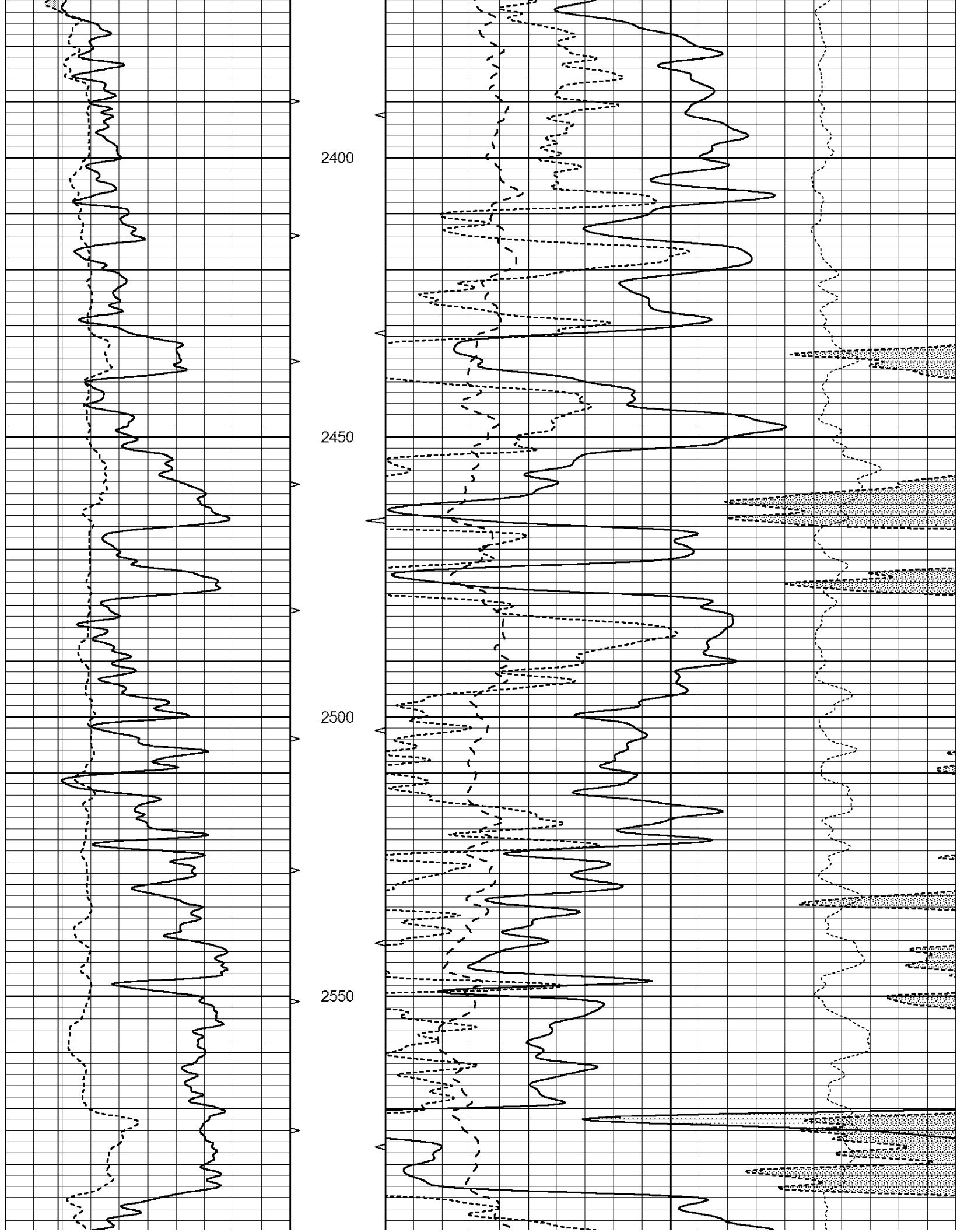
Comments

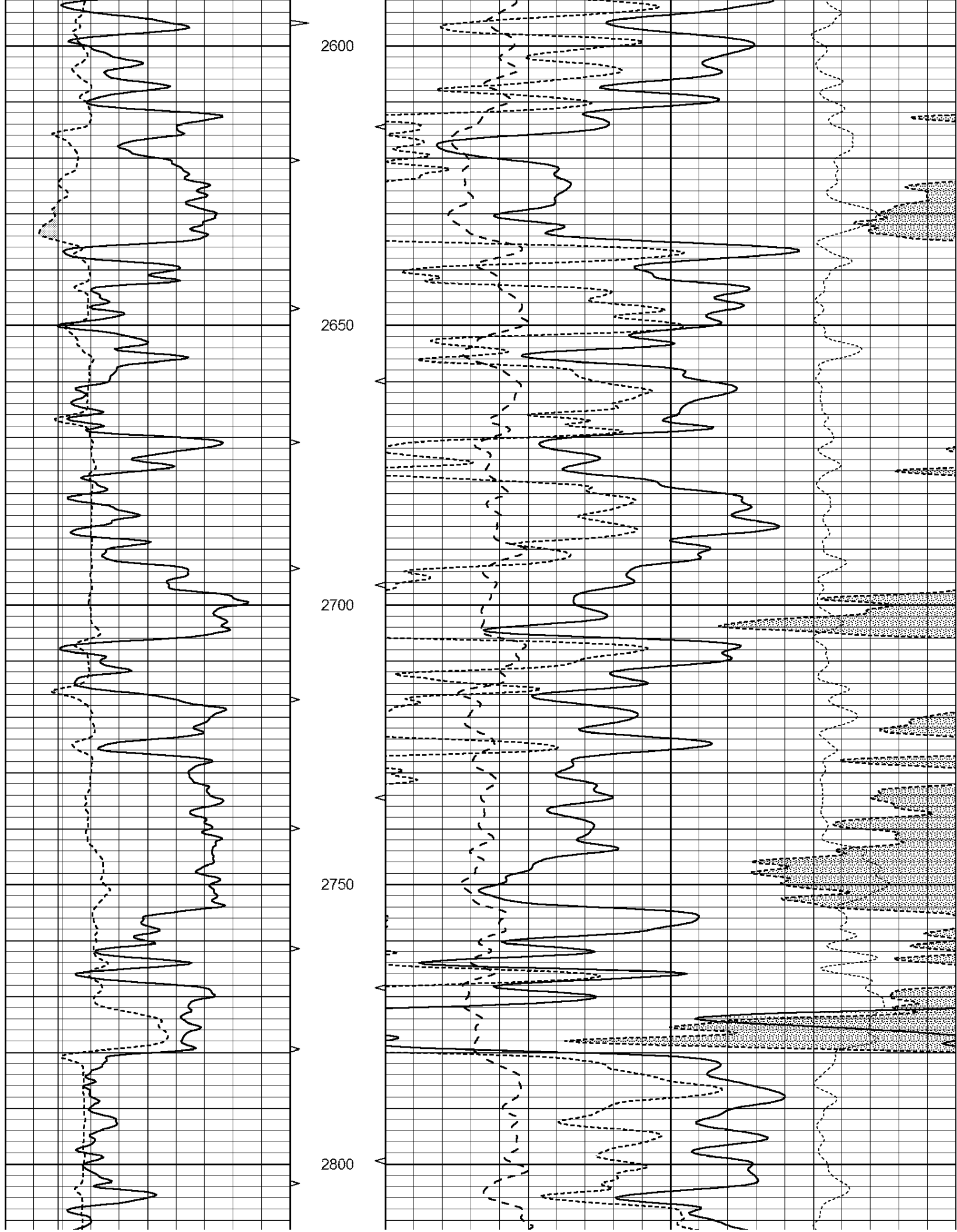
NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: HAYS, N TO SALINE RIVER RD., 2 3/4E, S INTO.

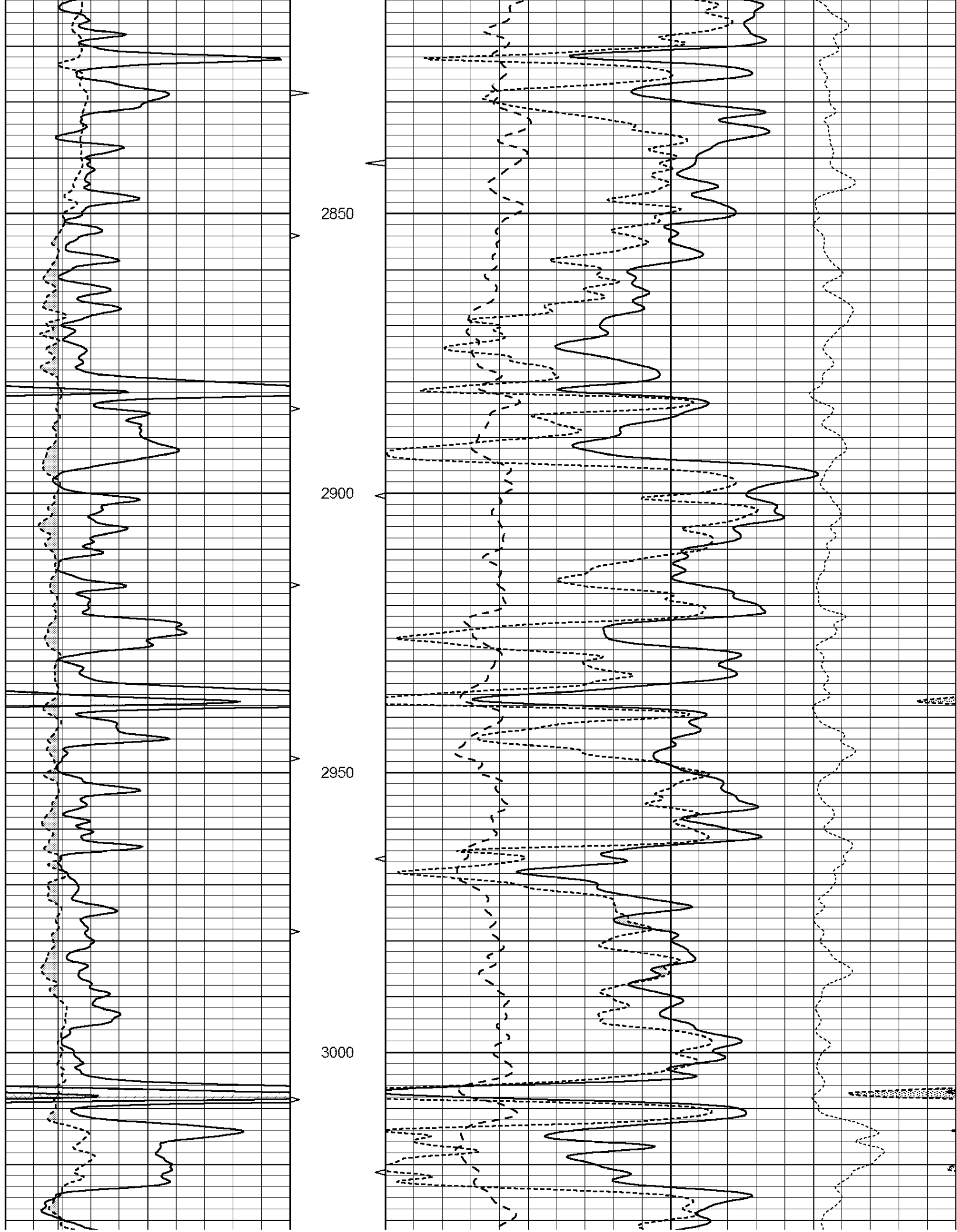
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 Dataset Pathname: pass3.3
 Presentation Format: _ldt_neu
 Dataset Creation: Wed Nov 19 19:35:33 2014
 Charted by: Depth in Feet scaled 1:240

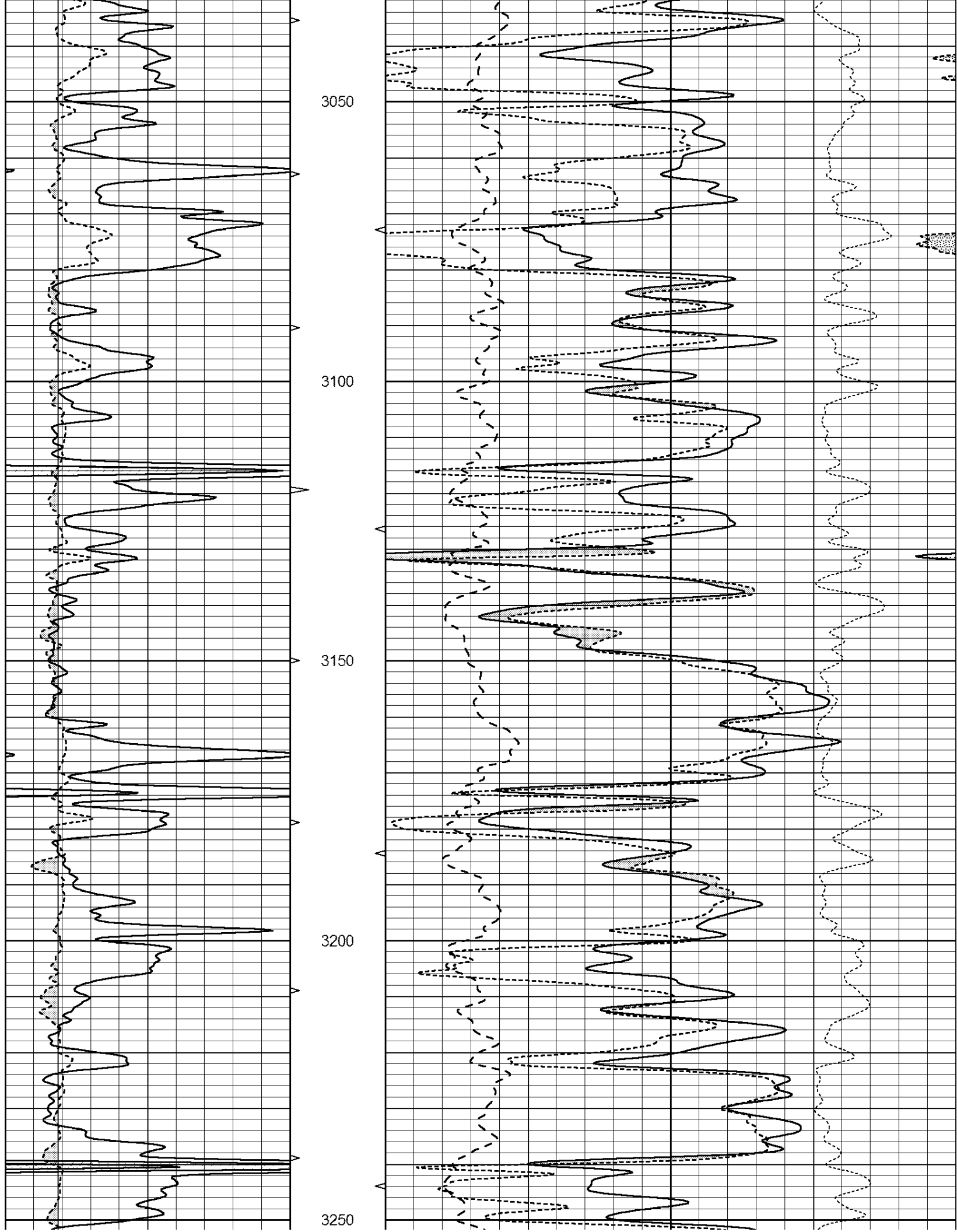
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
			TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			

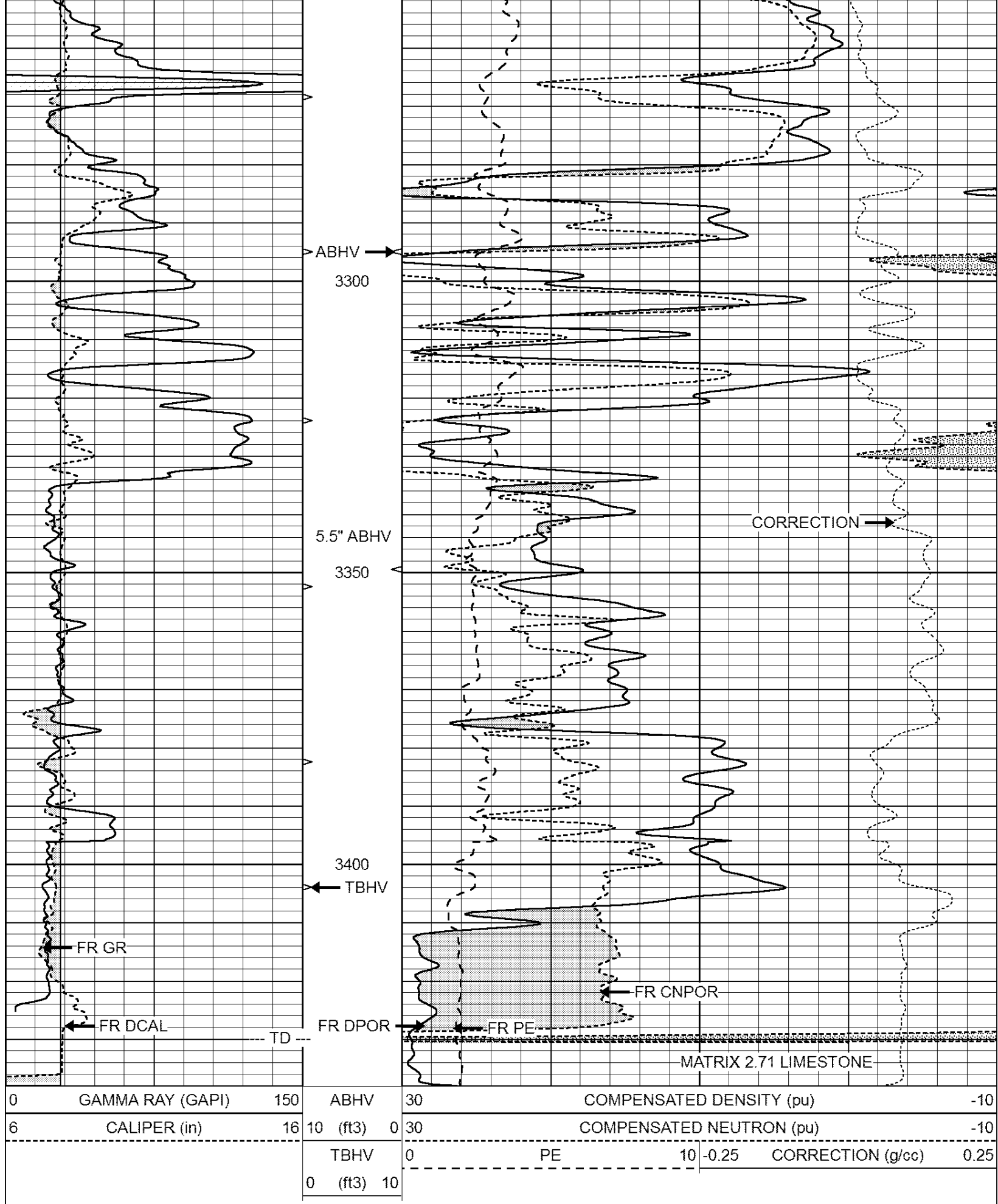






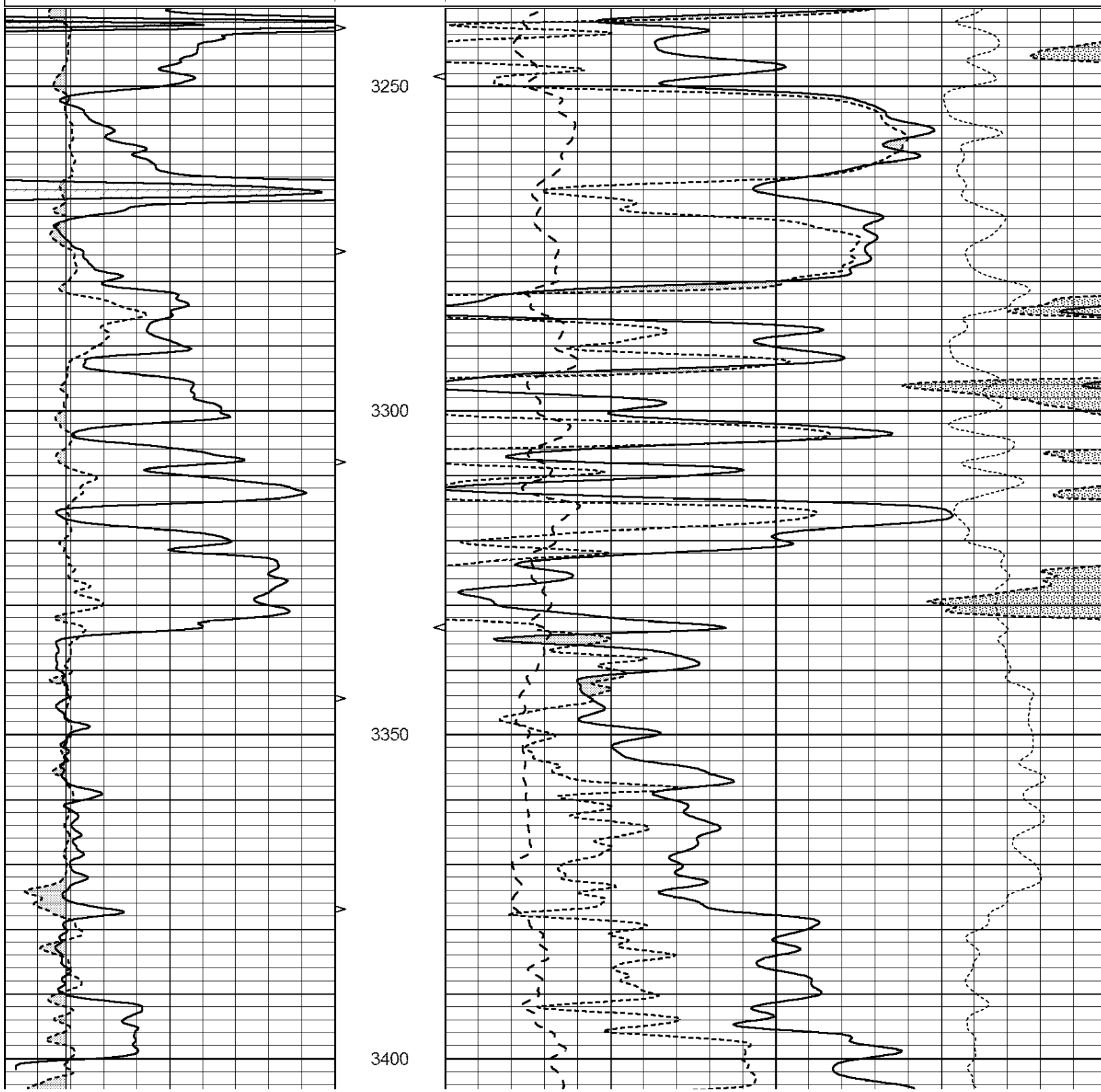






Database File: 26259pdn.db
Dataset Pathname: pass2.3A
Presentation Format: _ldt_neu
Dataset Creation: Wed Nov 19 18:51:50 2014
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
			TBHV	0	PE	10 -0.25
			0 (ft3) 10	CORRECTION (g/cc) 0.25		



Calibration Report								
Database File:		26259pdn.db						
Dataset Pathname:		pass3.3						
Dataset Creation:		Wed Nov 19 19:35:33 2014						
Dual Induction Calibration Report								
Serial-Model:		PROBE7-DILG						
Surface Cal Performed:		Wed Nov 19 18:15:20 2014						
Downhole Cal Performed:		Sat Jan 19 19:51:38 2013						
After Survey Verification Performed:		Sat Jan 19 19:51:38 2013						
Surface Calibration								
		Readings			References		Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	500.000	8.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	550.000	-36.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367
Downhole Calibration								
		Readings			References		Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		
After Survey Verification								
		Readings			Targets		Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		
Litho Density Calibration Report								
Serial: 06		Model: PRB						

Master Calibration		Performed Tue May 27 11:57:51 2014			
	Background	Magnesium	Aluminum	Sandstone	
Window 1	1289.5	7810.5	2674.4	8037.2	cps
Window 2	1206.9	6556.3	2297.3	6540.6	cps
Window 3	913.8	3391.2	1327.7	3198.3	cps
Window 4	602.5	319.3	304.5	310.6	cps
Long Space	0.0	5349.4	1090.4	5333.8	cps
Short Space	1.9	1879.1	1195.7	1883.0	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio	: 0.536
Spine Angle	: 74.1	Spine Slope	: 3.519	Spine Intercept	: -17.9

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	

Compensated Neutron Calibration Report				
		Serial Number:	080620	
		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:		46001		

Tool Model:	Probe1
Performed:	Wed Nov 19 18:14:32 2014

Calibrator Value:	1.0	GAPI
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Background Reading:	0.0	cps
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Calibrator Reading:	1.0	cps
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Sensitivity:	0.2600	GAPI/cps
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