



COMPENSATED DENSITY/NEUTRON LOG

Company	L.D. DRILLING, INC.		
Well	ROUS #1-28		
Field	KRAFT-PRUSA		
County	BARTON	State	KANSAS
Location:	AP1 # : 15-009-26200-00-00		Other Services DIL/MEL
2310' FNL & 1650' FWL			
SEC 28 TWP 16S RGE 11W			
Permanent Datum	GROUND LEVEL	Elevation	1918'
Log Measured From	KELLY BUSHING 5' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	02/25/18		
Run Number	ONE		
Depth Driller	3460		
Depth Logger	3460		
Bottom Logged Interval	3436		
Top Log Interval	2600		
Casing Driller	8 5/8" @ 413		
Casing Logger	413		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	8.9/57		
pH / Fluid Loss	10.5/9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.0@54		
Rmt @ Meas. Temp	.75@54		
Rmc @ Meas. Temp	1.2@54		
Source of Rmt / Rmc	MEASURED		
Rm @ BHT	.48@111		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	///		
Maximum Recorded Temperature	111F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	GUS PFANENSTIEL		
Witnessed By	KIM SHOEMAKER		

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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 ELI WIRELINE, HAYS, KS. (785) 628-6395

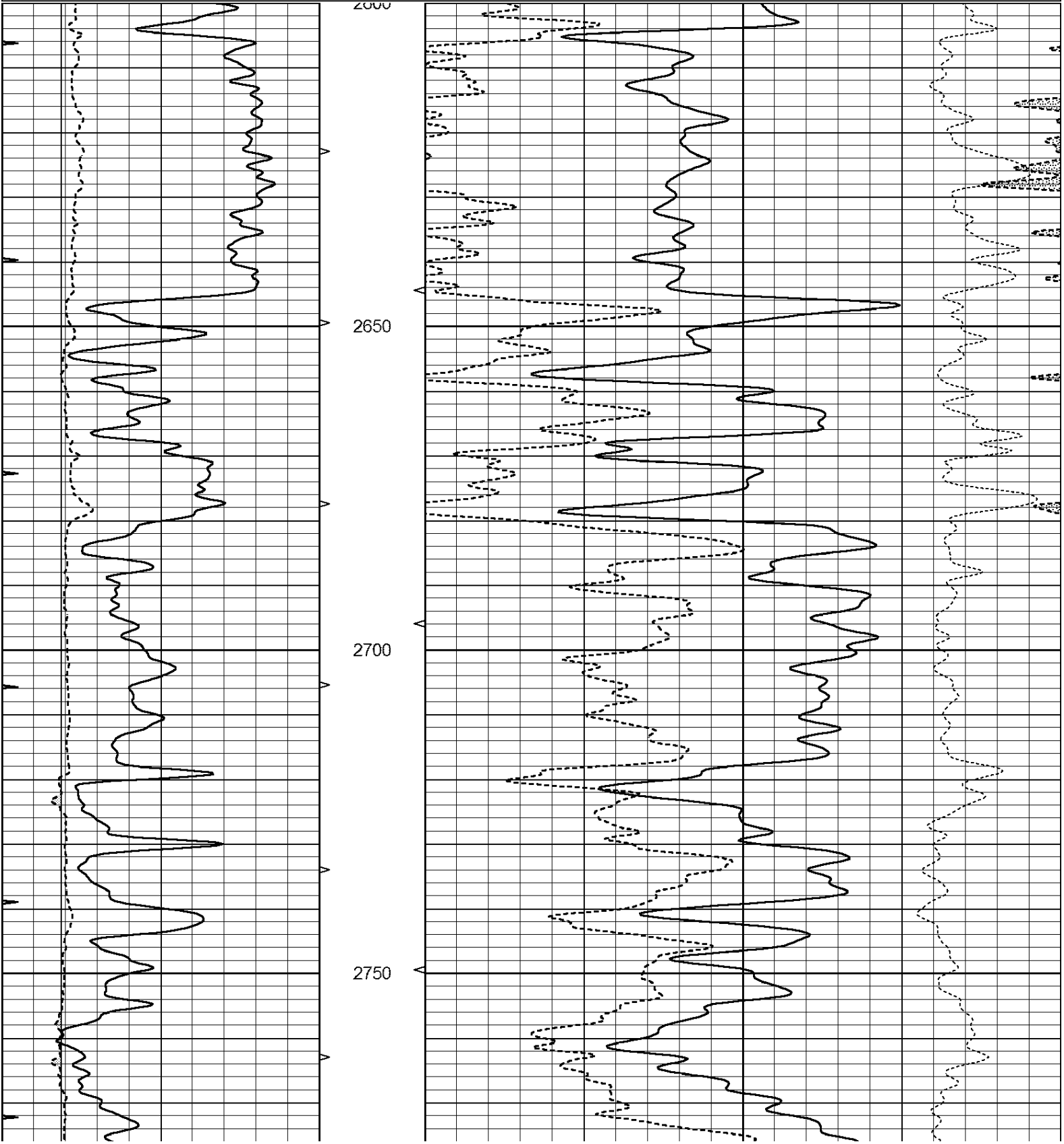
DIRECTIONS
SOUTH OF WILSON 13 MILES TO 190 RD.
4 WEST, 1/2 SOUTH, EAST INTO.
(BETWEEN TANKS)

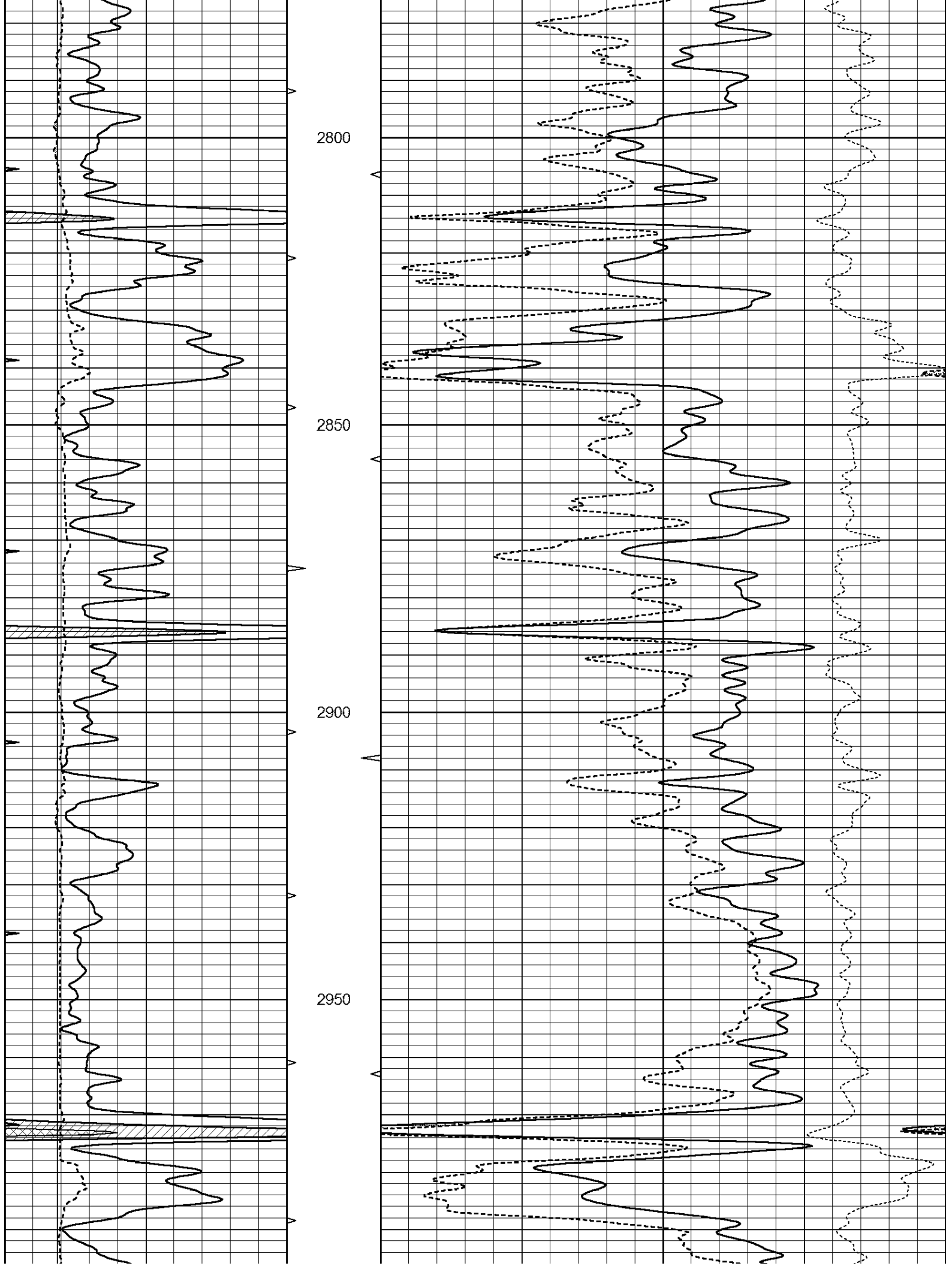


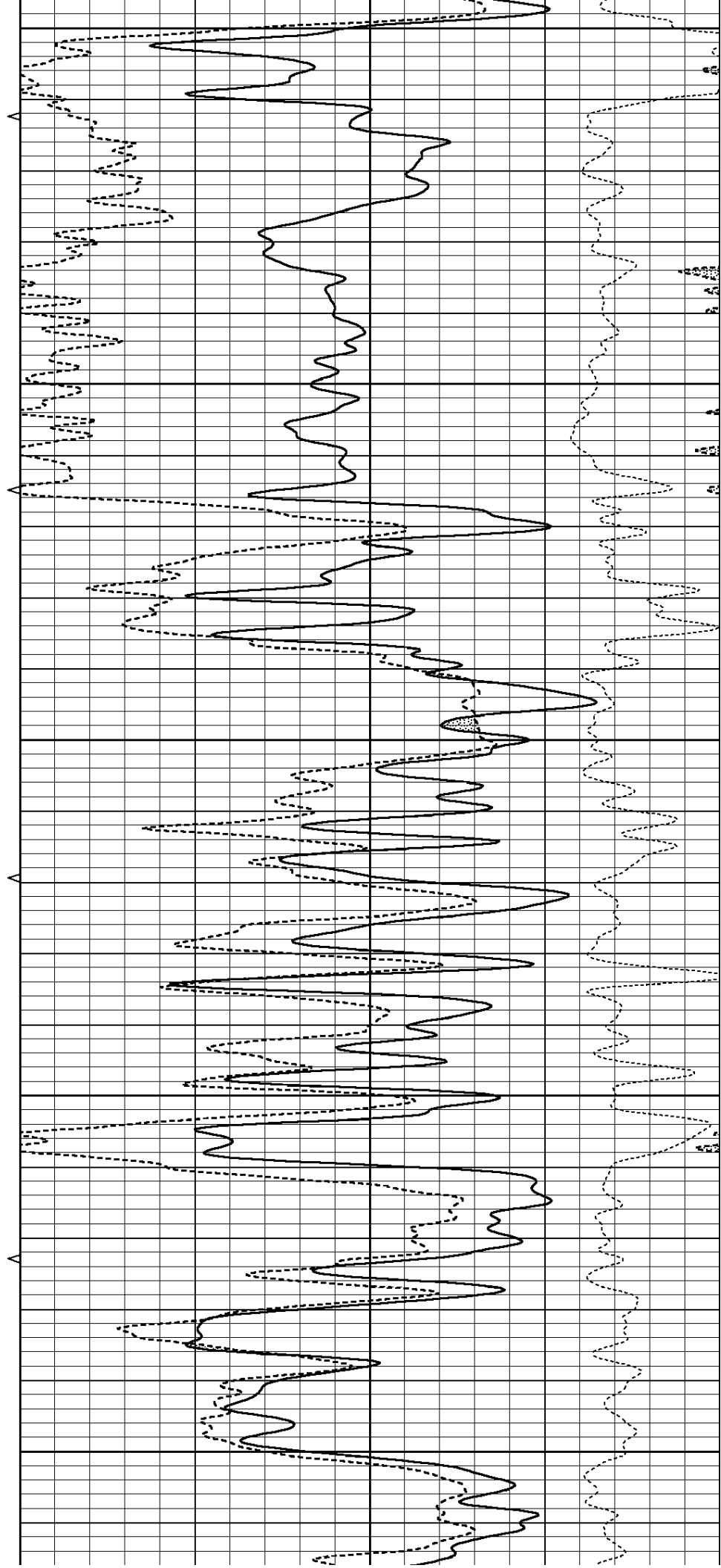
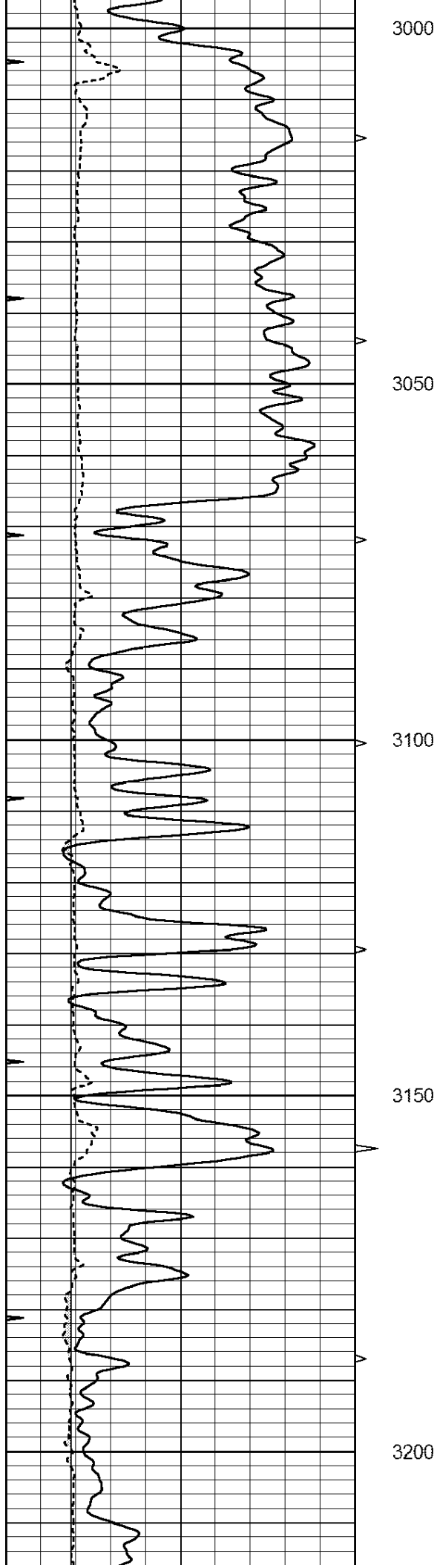
MAIN PASS

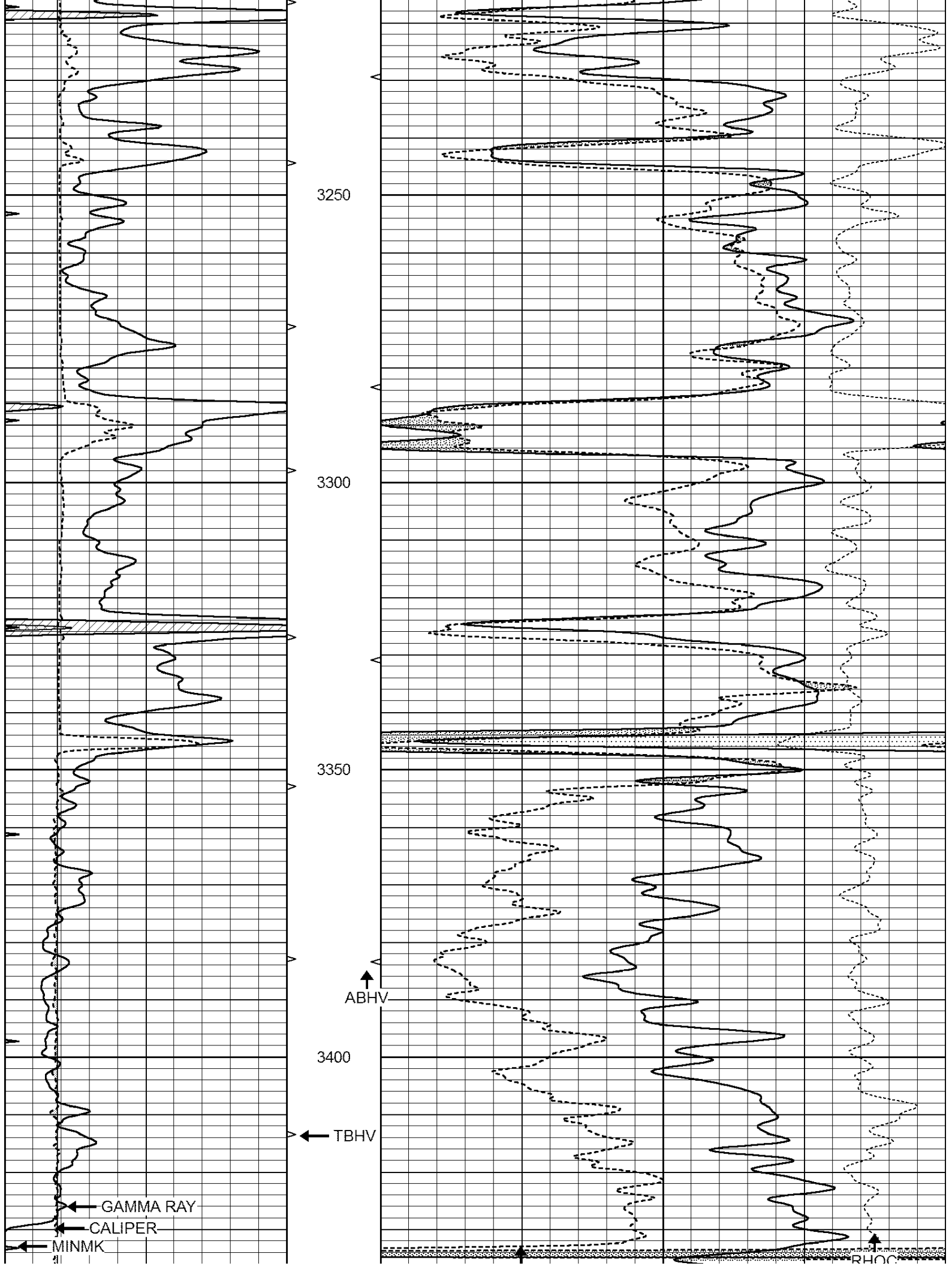
Database File: 2412ddn.db
Dataset Pathname: pass3.1
Presentation Format: den_neu
Dataset Creation: Mon Feb 26 01:49:53 2018 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

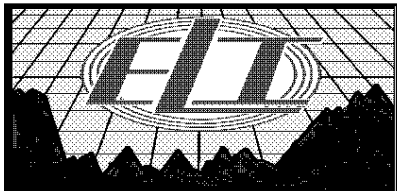
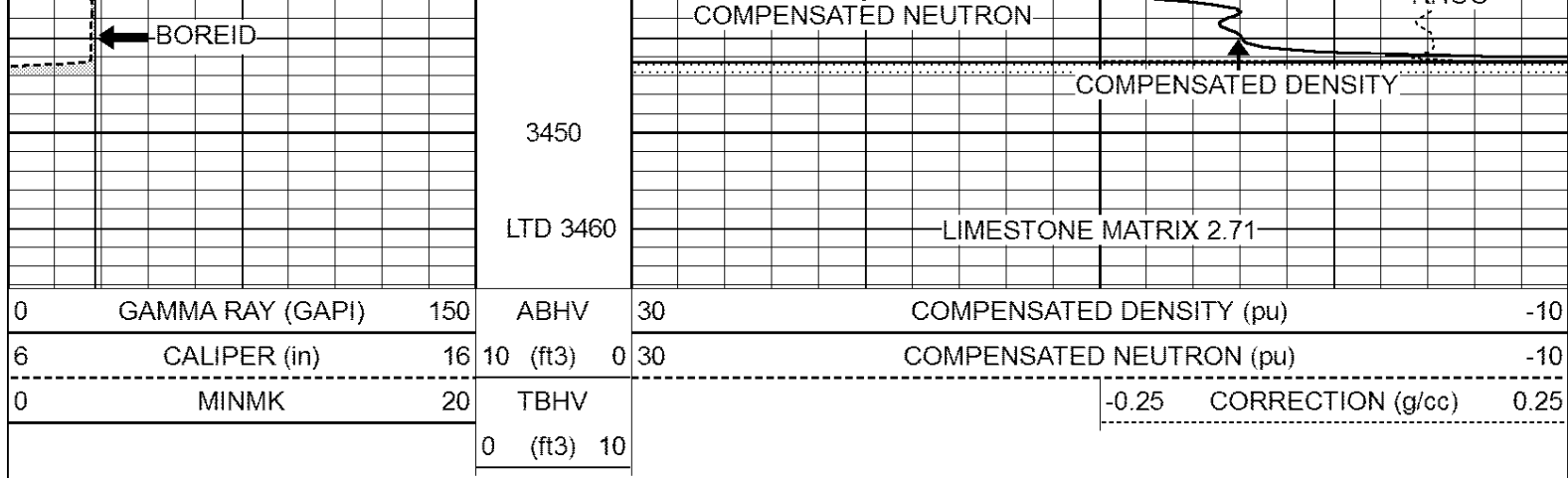
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		







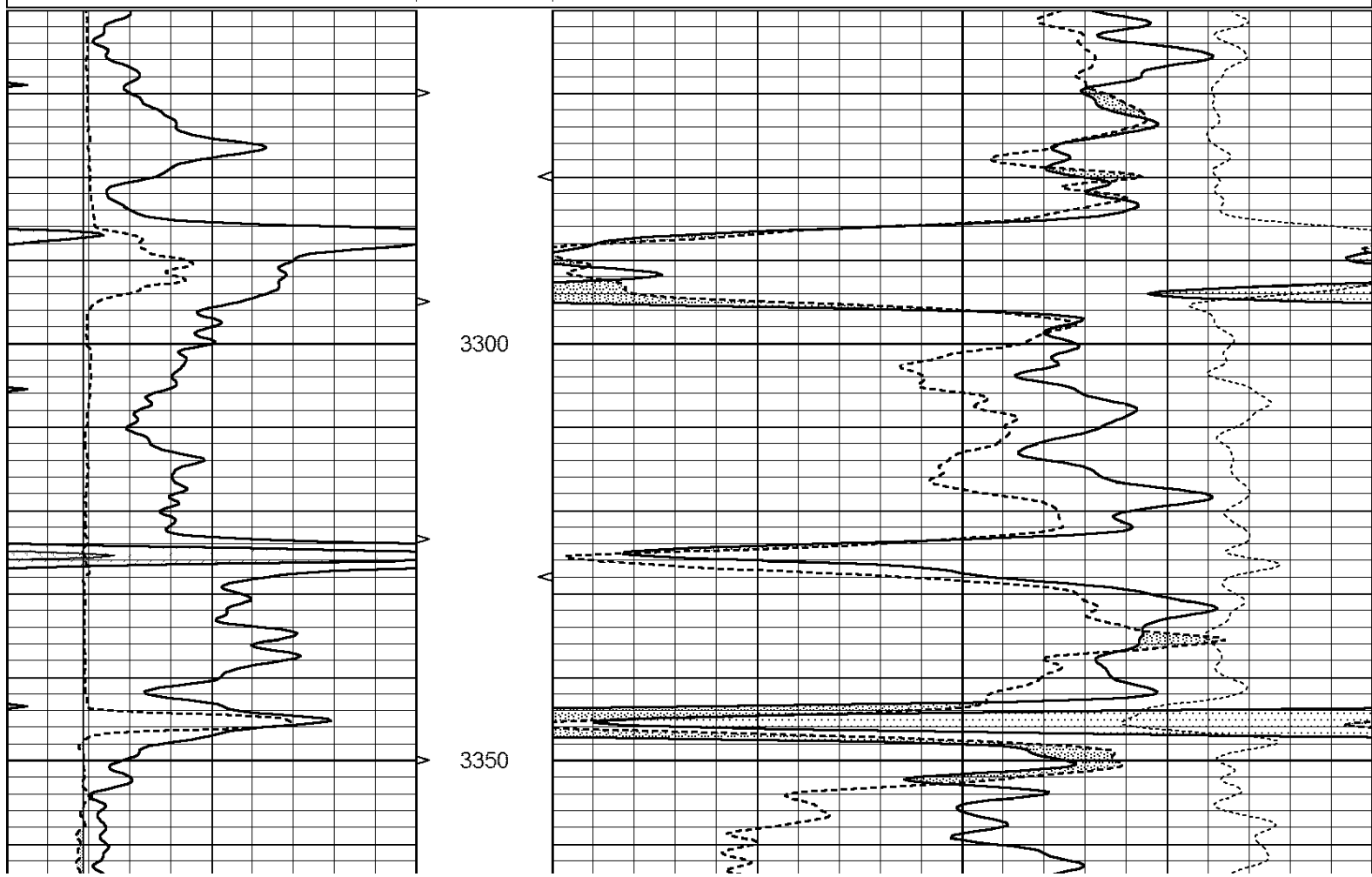


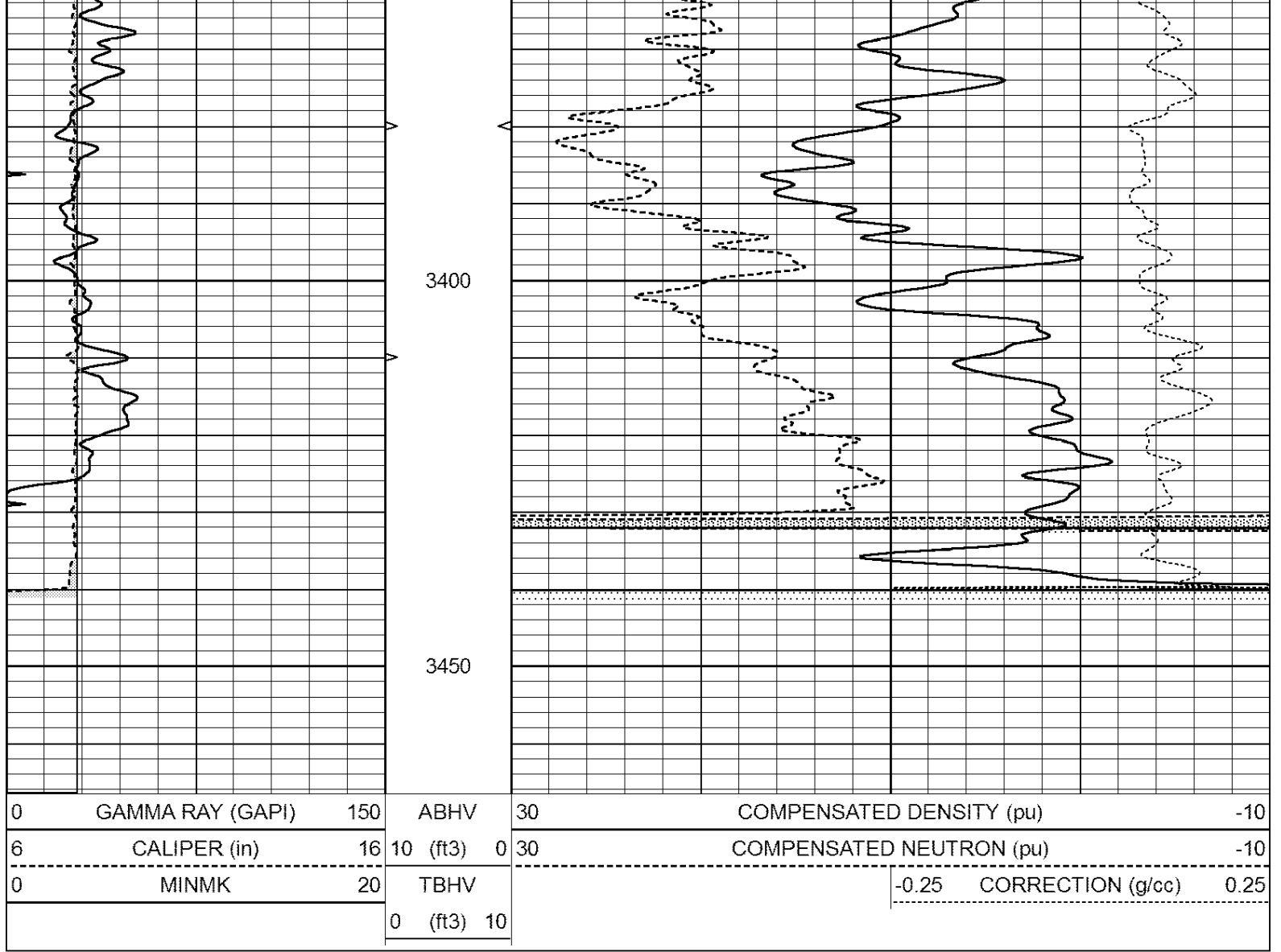


REPEAT SECTION

Database File: 2412ddn.db
 Dataset Pathname: pass2RP
 Presentation Format: den_neu
 Dataset Creation: Mon Feb 26 01:08:59 2018
 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					





Calibration Report								
Database File:	pe2.db							
Dataset Pathname:	pass2							
Dataset Creation:	Mon Aug 21 11:58:02 2017 by Log Open-Cased 090629							
Dual Induction Calibration Report								
Serial-Model:			PROBE8-DILG					
Surface Cal Performed:			Mon Aug 21 11:58:18 2017					
Downhole Cal Performed:			Mon Aug 21 11:58:21 2017					
After Survey Verification Performed:			Mon Aug 21 11:58:23 2017					
Surface Calibration								
Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
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	
Loop:	Air	Loop		Air	Loop		m	b

	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		
Litho Density Calibration Report								
Serial: 002 Model: PRB								
Master Calibration			Performed Mon Aug 21 11:56:41 2017					
	Background	Magnesium		Aluminum		Sandstone		
Window 1	833.6	7394.2		2287.3		8111.8		cps
Window 2	768.9	6322.3		1995.6		6800.0		cps
Window 3	621.5	3261.9		1186.4		3380.9		cps
Window 4	184.2	185.7		184.9		184.8		cps
Long Space	0.0	5553.4		1226.6		6031.1		cps
Short Space	1.2	1307.5		903.9		1387.7		cps
Rho		1.7100		2.5900		1.3800		g/cc
Pe		0.0000		2.5700		1.5500		
Rib Angle	: 46.3	Rib Slope	: 1.045	Density/Spine Ratio		: 0.566		
Spine Angle	: 76.3	Spine Slope	: 4.090	Spine Intercept		: -20.7		
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: 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
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: Mon Aug 21 11:59:01 2017

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity: 0.5500 GAPI/cps