

COMPENSATED DENSITY/NEUTRON LOG

Company	DOWNING-NELSON OIL CO., INC.		
Well	RUPP #2-15		
Field	WILDCAT		
County	TREGO	State	KANSAS
Location:	API # : 15-195-23038-00-00		Other Services DIL/SONIC MEL
Permanent Datum	SEC 15 TWP 13S RGE 21W	Elevation	2186'
Log Measured From	1070 FNL & 1865 FWL		
Drilling Measured From	KELLY BUSHING 8' A.G.L. KELLY BUSHING		
Date	02/01/18		
Run Number	ONE		
Depth Driller	3982		
Depth Logger	3984		
Bottom Logged Interval	3960		
Top Log Interval	3100		
Casing Driller	8 5/8 @ 222		
Casing Logger	222		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6500 PPM	
Density / Viscosity	9.1/56		
pH / Fluid Loss	10.0/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.90 @ 56		
Rmt @ Meas. Temp	.66 @ 56		
Rmc @ Meas. Temp	1.08 @ 56		
Source of Rmt / Rmc	MEASURED		
Rm @ BHT	.43 @ 115		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	///		
Maximum Recorded Temperature	115F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	GUS PFANENSTIEL		
Witnessed By	MARC DOWNING		

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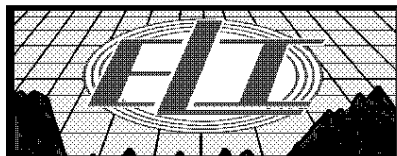
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

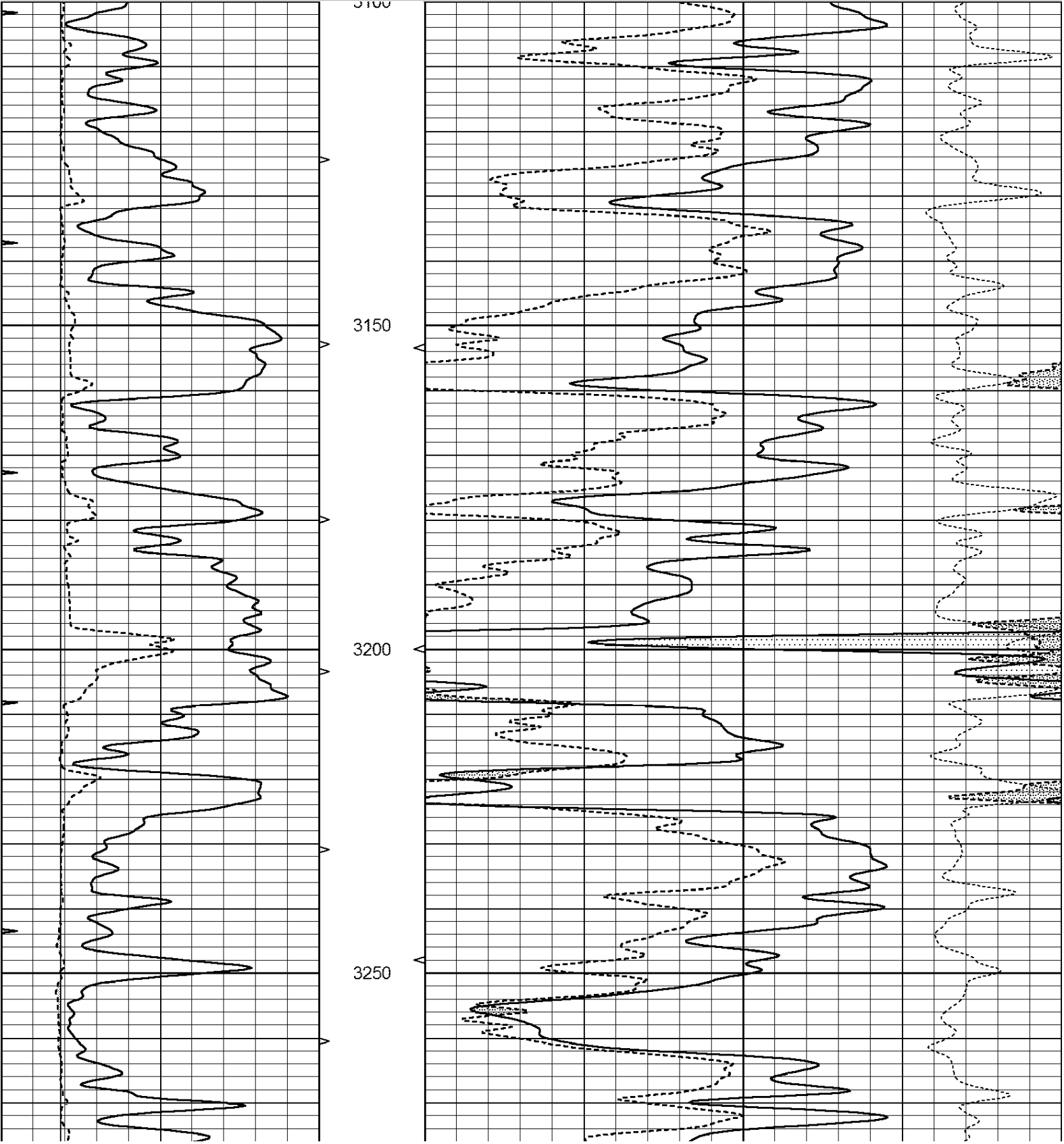
I 70 RIGGA EXIT TO OLD 40, 1 MILE EAST, 1 MILE SOUTH,
3/4 WEST, SOUTH INTO.

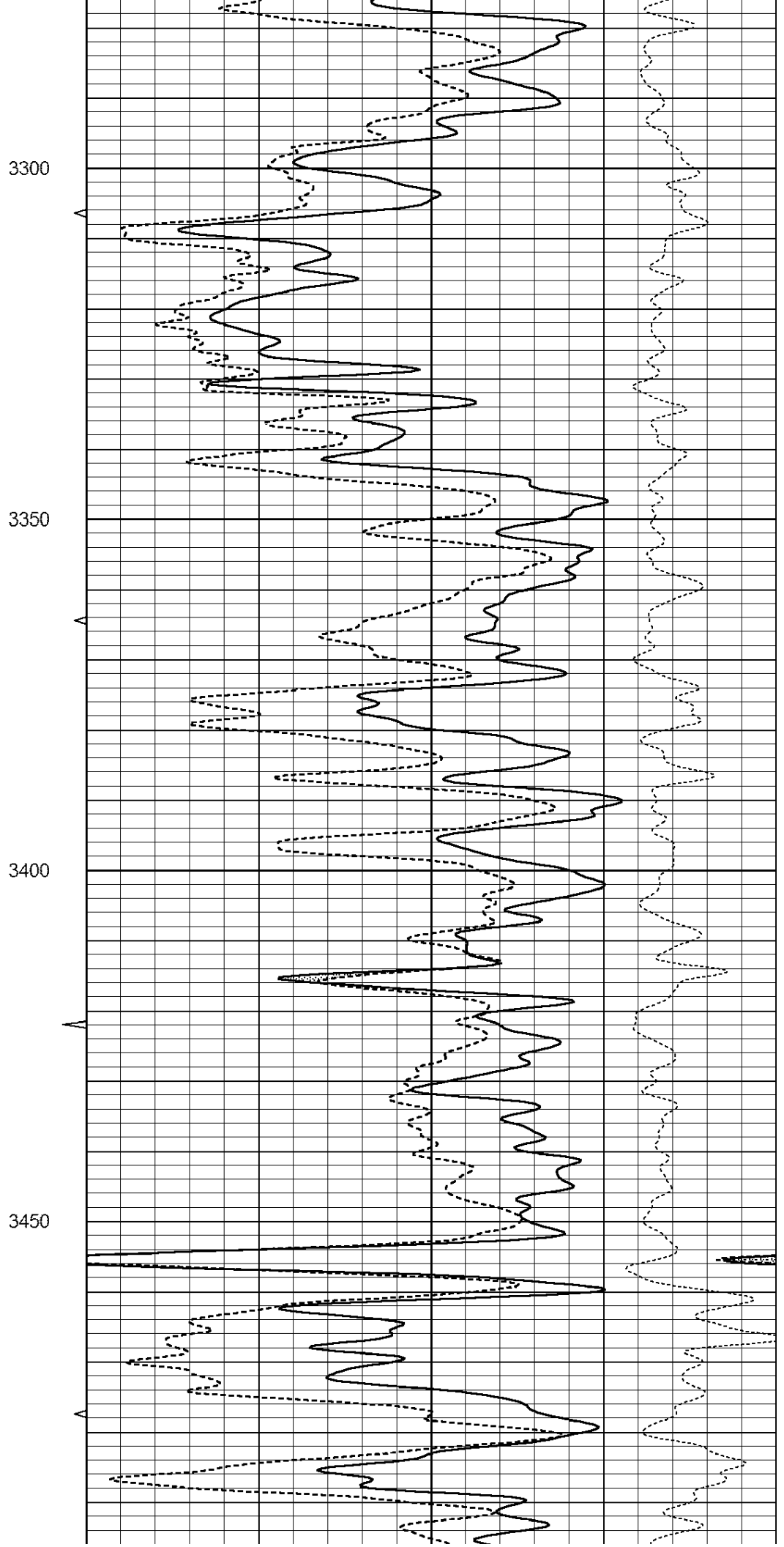
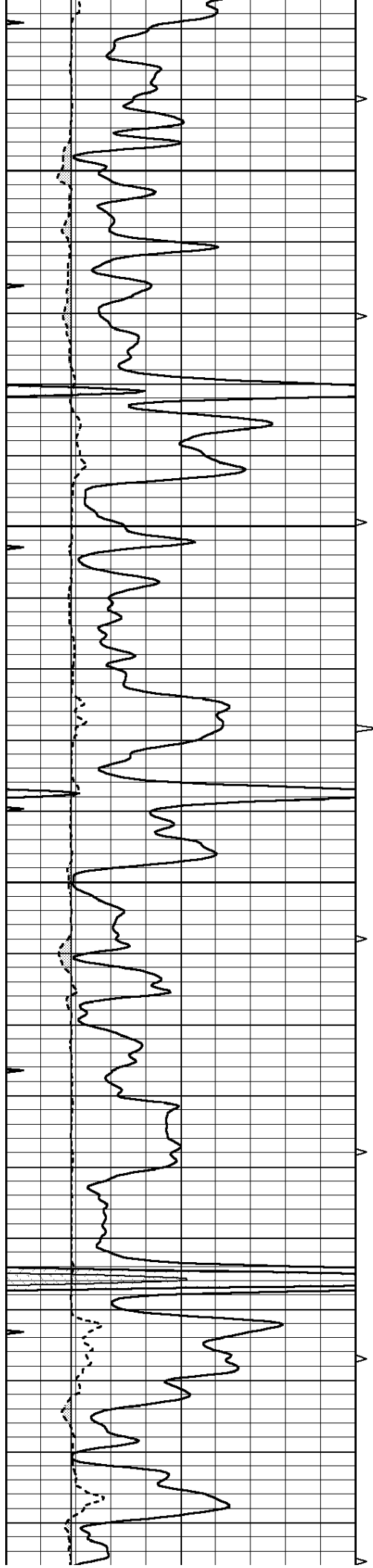


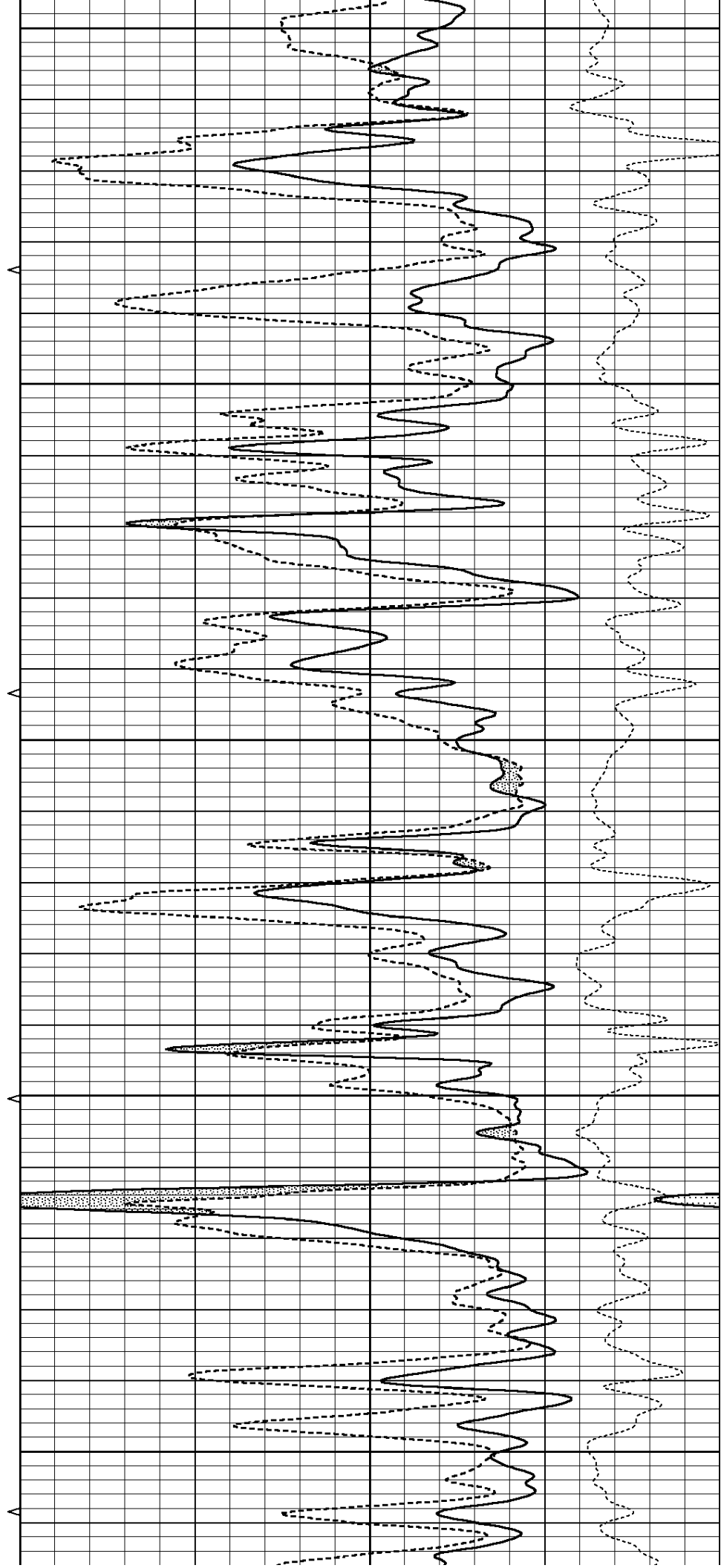
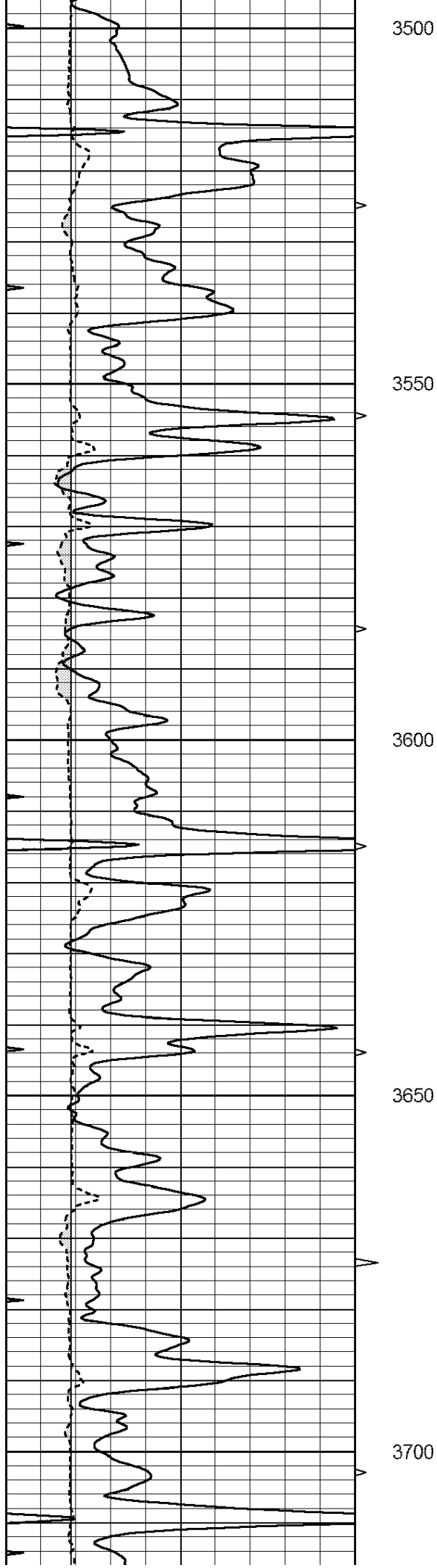
MAIN PASS

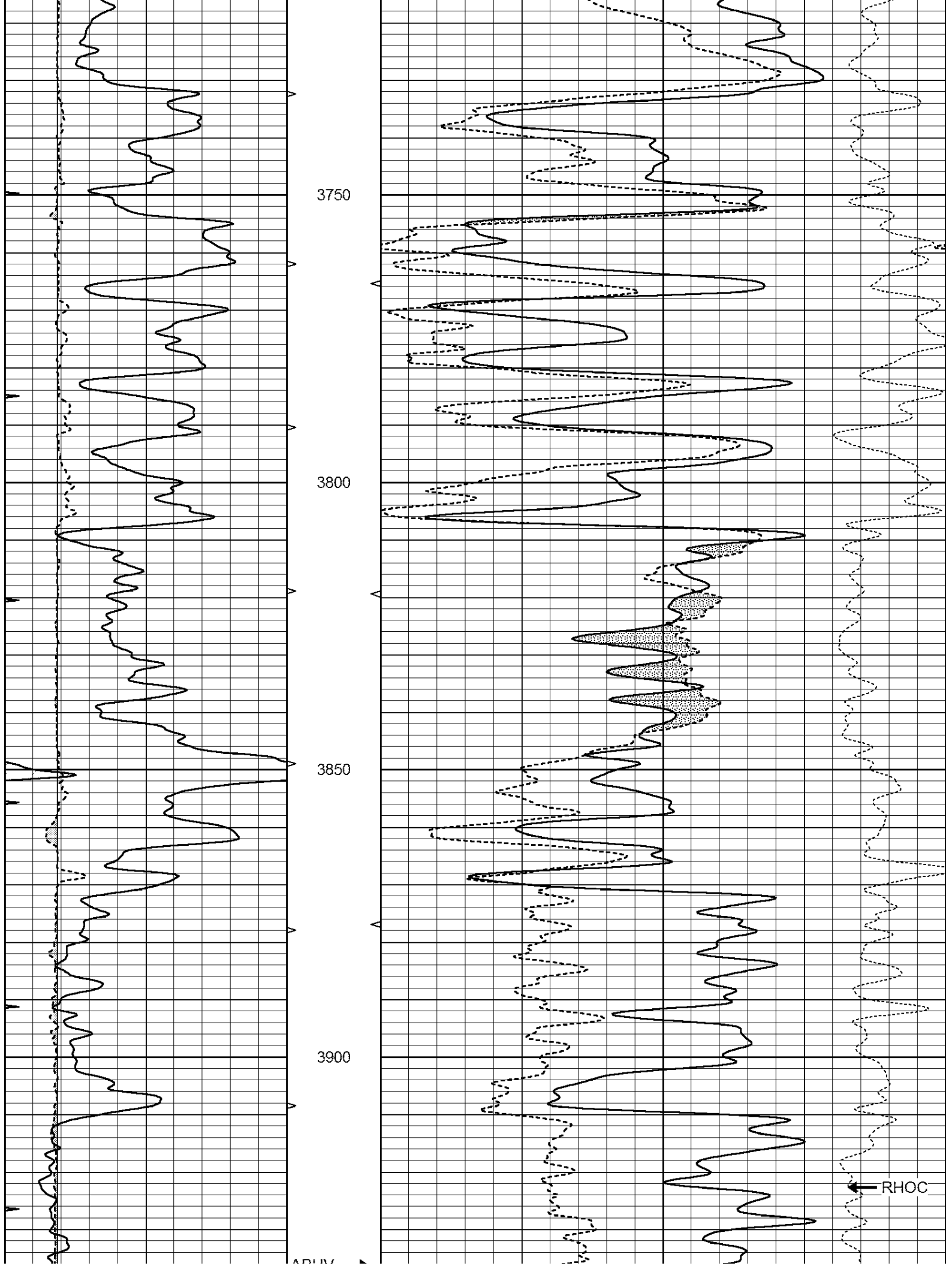
Database File: 2404ddn.db
Dataset Pathname: pass3
Presentation Format: den_neu
Dataset Creation: Thu Feb 01 06:22:20 2018 by Log Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

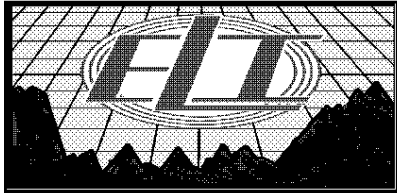
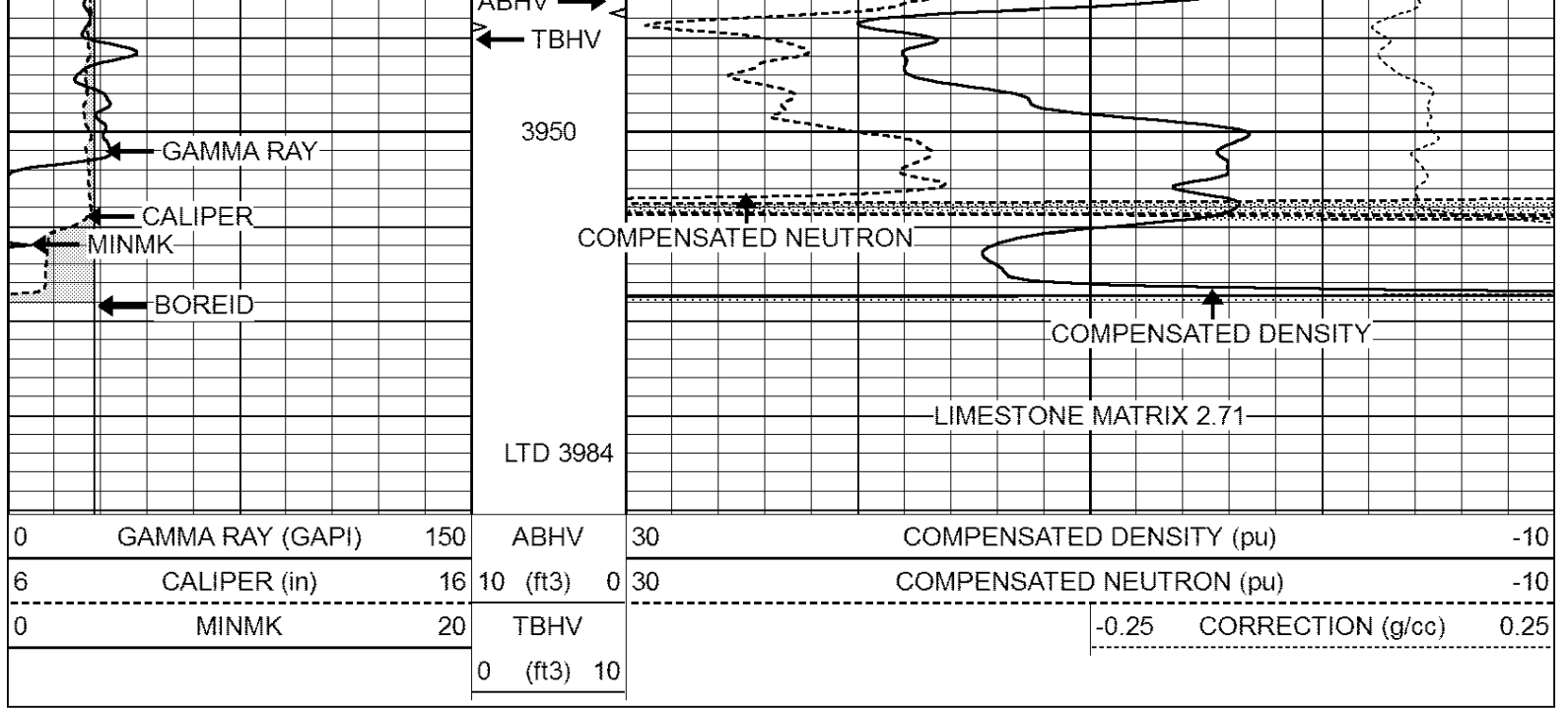
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		







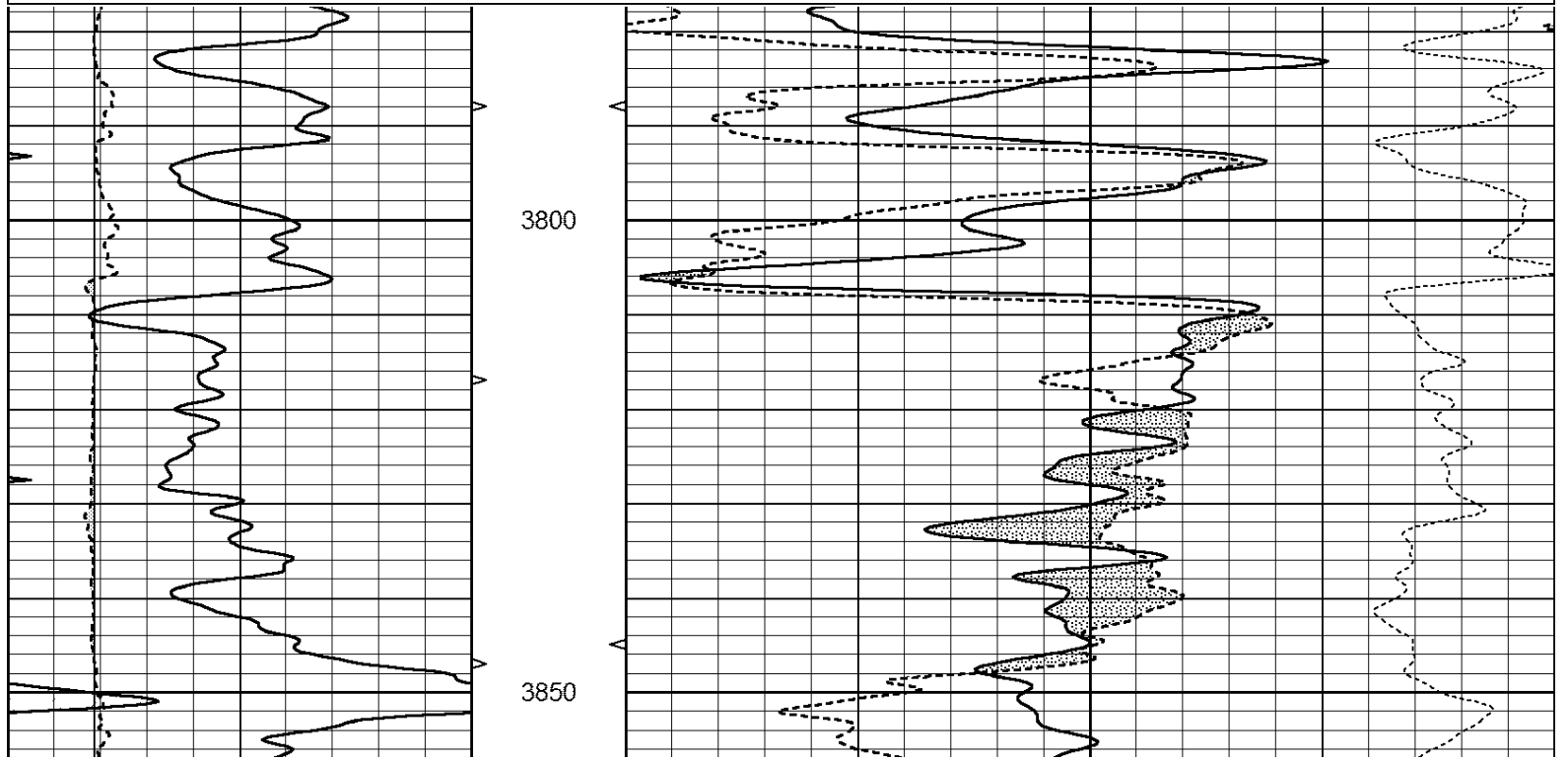


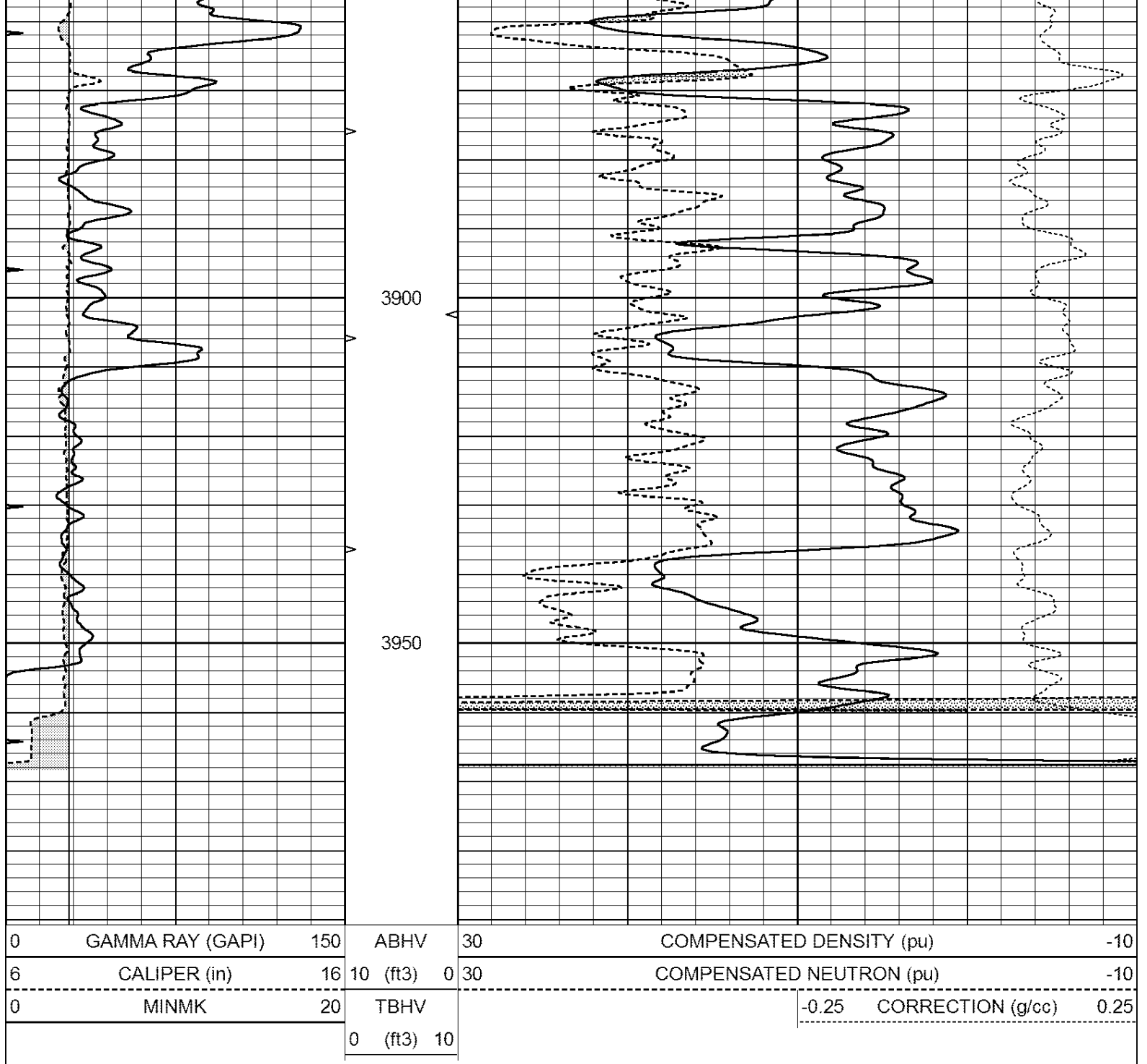


REPEAT SECTION

Database File: 2404ddn.db
 Dataset Pathname: pass2
 Presentation Format: den_neu
 Dataset Creation: Thu Feb 01 06:13:10 2018 by Log 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					





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

Loop:	Readings			References			Results	
	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

Medium	0.025	0.750	V	0.000	464.000	mmho/m	555.000	-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	
	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	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	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	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	g/cc
Measured Pe				0.0000		0.0000		

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:	6l
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