

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company EDISON OPERATING CO., LLC
Well ARMBRISTER #1-1
Field ELLIS
County TREGO
State KANSAS

Company EDISON OPERATING CO., LLC
Well ARMBRISTER #1-1
Field ELLIS
County TREGO State KANSAS

Location: API #: 15-195-22779
825' FNL & 2310' FWL
SEC 1 TWP 13S RGE 21W
Permanent Datum GROUND LEVEL Elevation 2171
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
SONIC/MEL
Elevation
K.B. 2176
D.F.
G.L. 2171

Date	10-6-12
Run Number	ONE
Depth Driller	3900
Depth Logger	3900
Bottom Logged Interval	3876
Top Log Interval	3000
Casing Driller	260
Casing Logger	259
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3 / 55
pH / Fluid Loss	10.5 / 7.6
Source of Sample	FLOWLINE
Rim @ Meas. Temp	1.10 @ 60F
Rmf @ Meas. Temp	0.83 @ 60F
Rmc @ Meas. Temp	1.32 @ 60F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	.580 @ 114F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	1.45 A.M.
Maximum Recorded Temperature	114F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	ADAM KENNEDY

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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 CO.
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: ELLIS W TO RD. #400, 2N TO RD. M, 1/2E, S INTO.

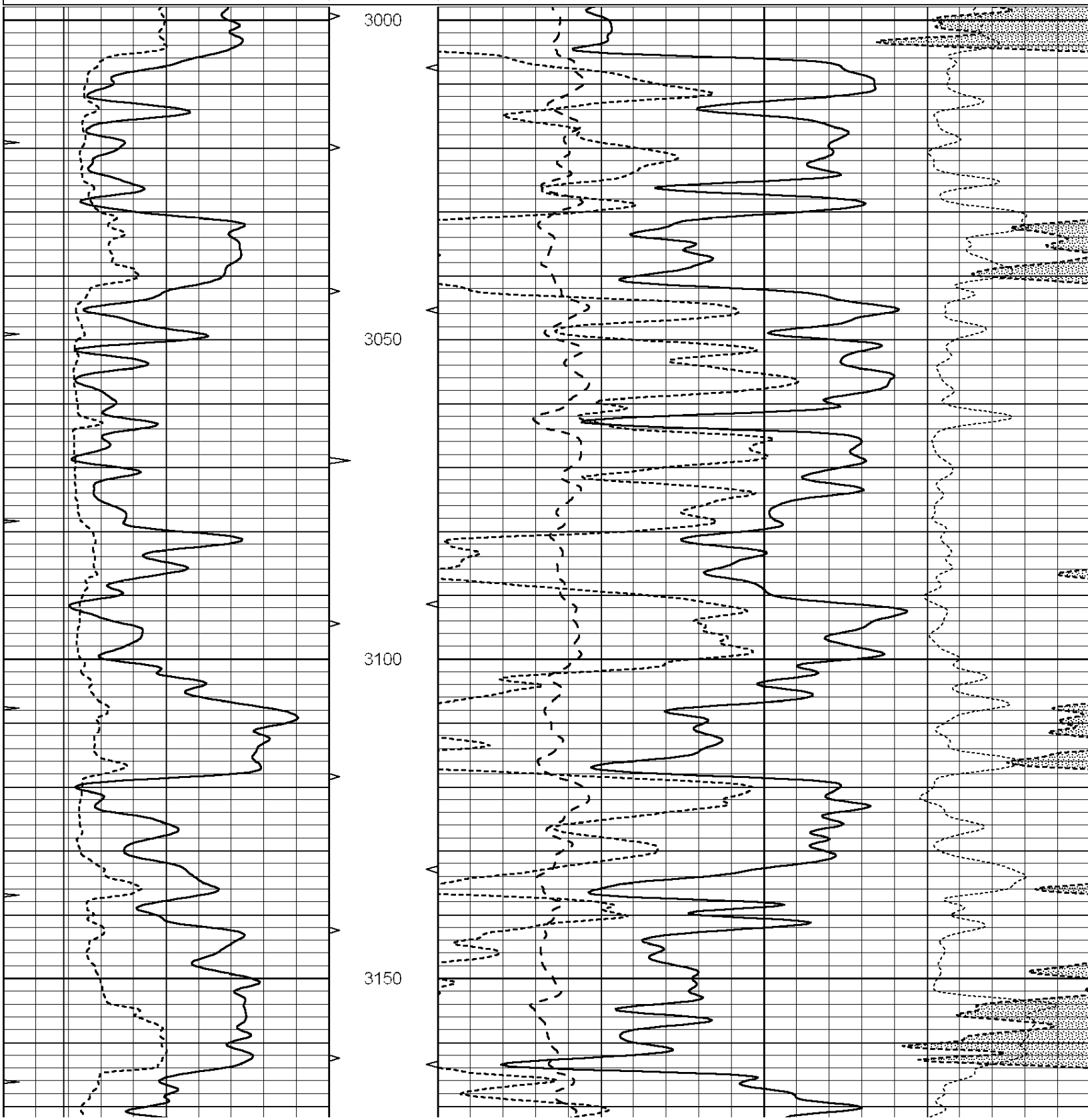


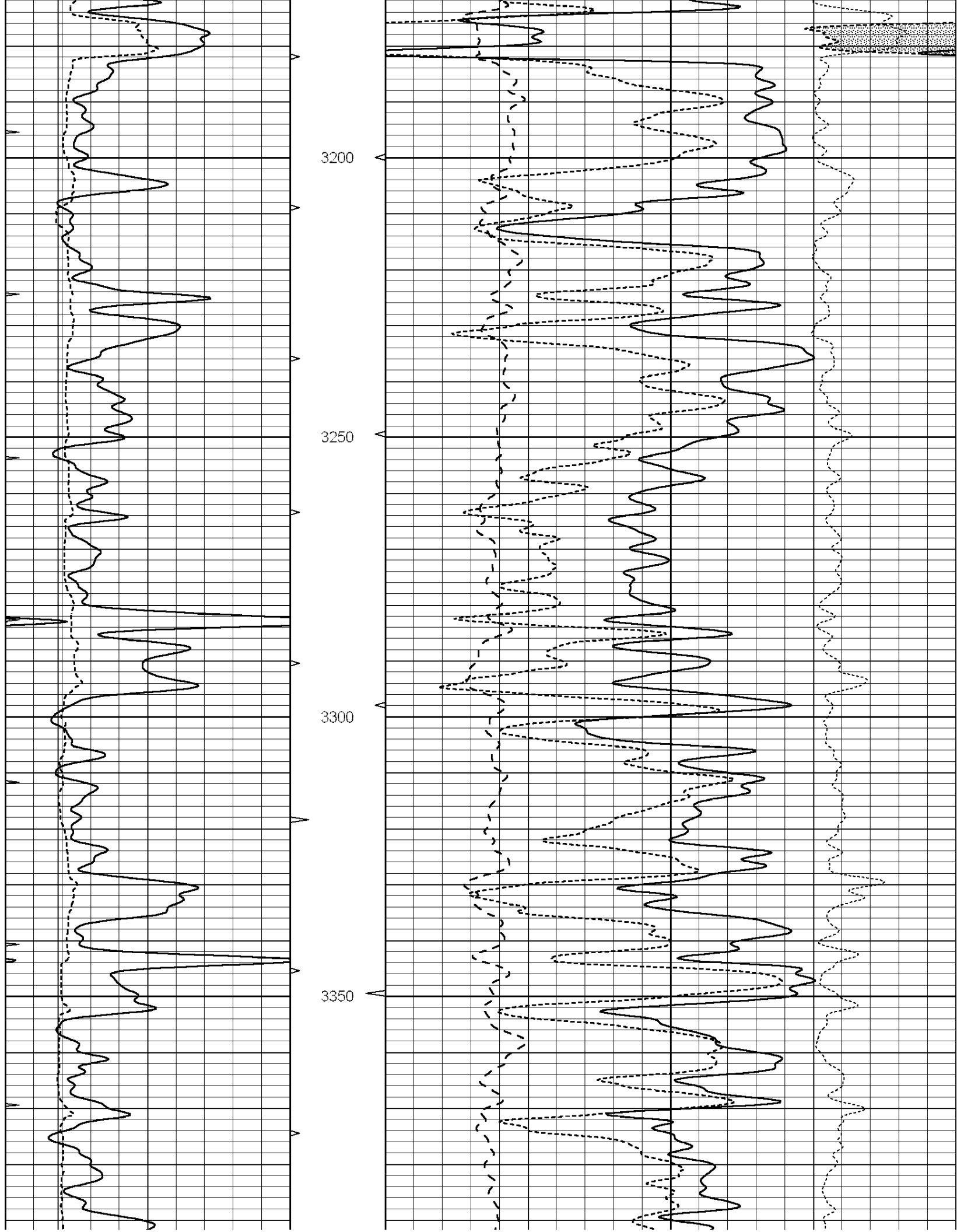
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& PRODUCTION**

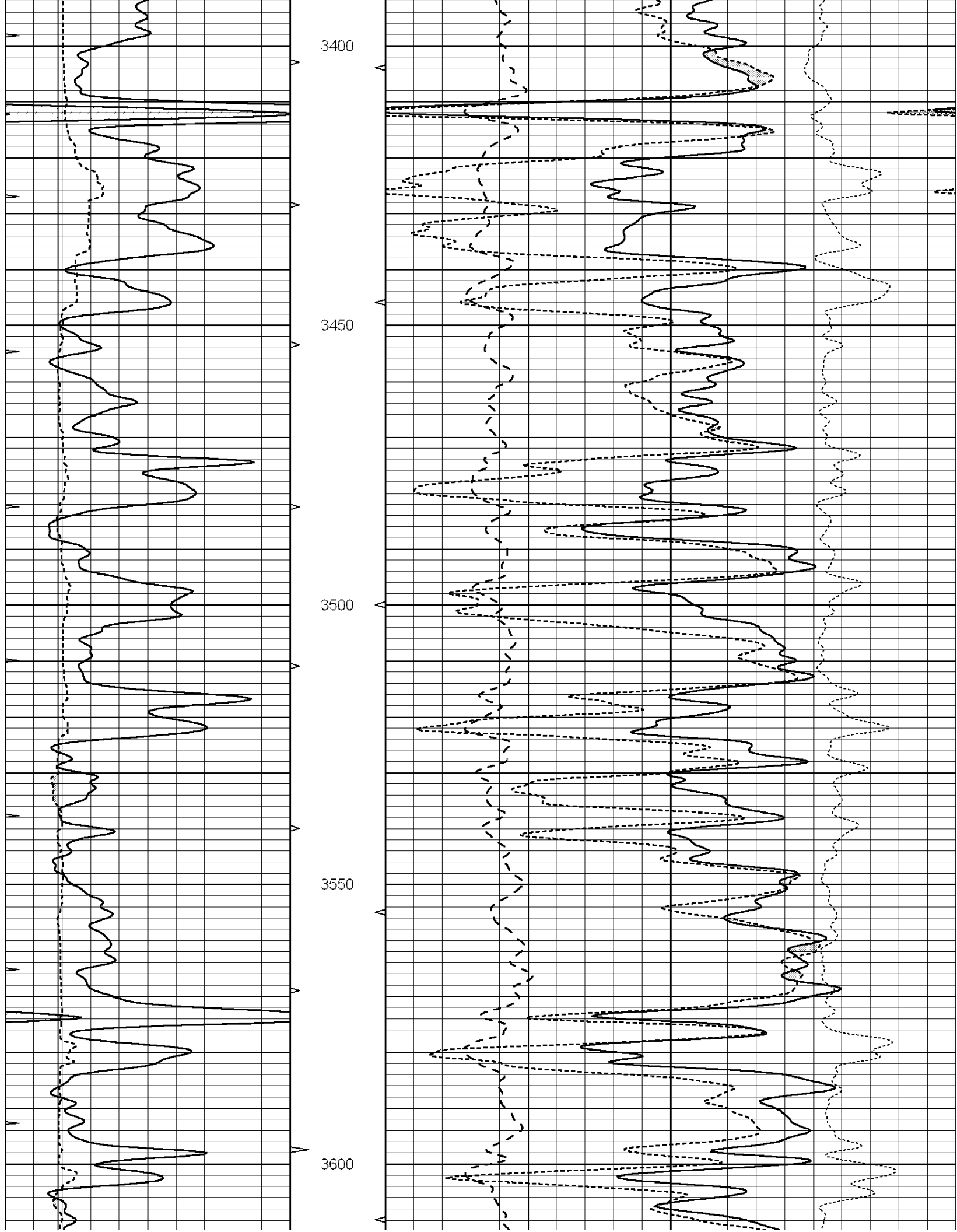
MAIN SECTION

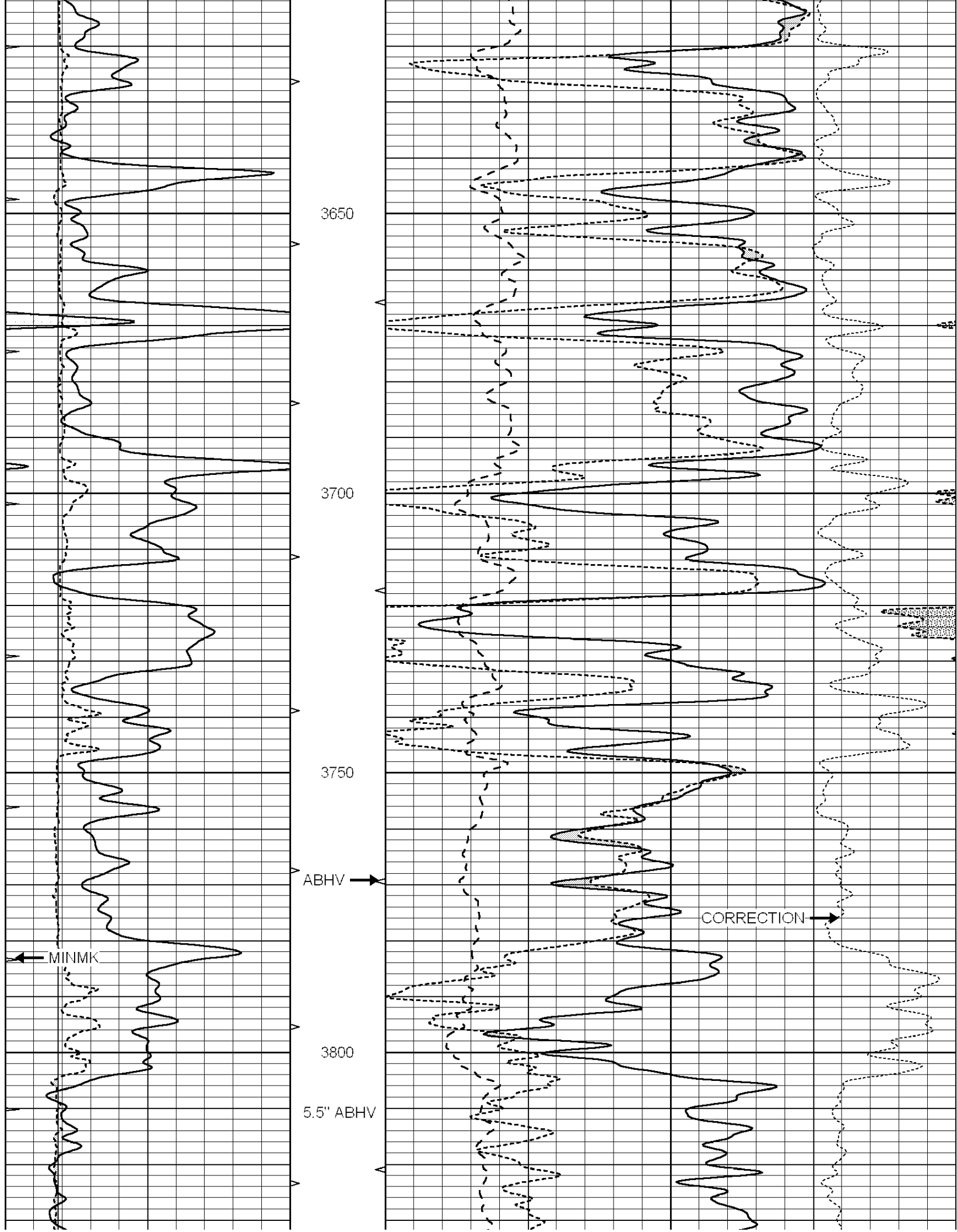
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 Dataset Pathname: pass3.1A
 Presentation Format: ldt_neu
 Dataset Creation: Sat Oct 06 02:55:33 2012
 Charted by: Depth in Feet scaled 1:240

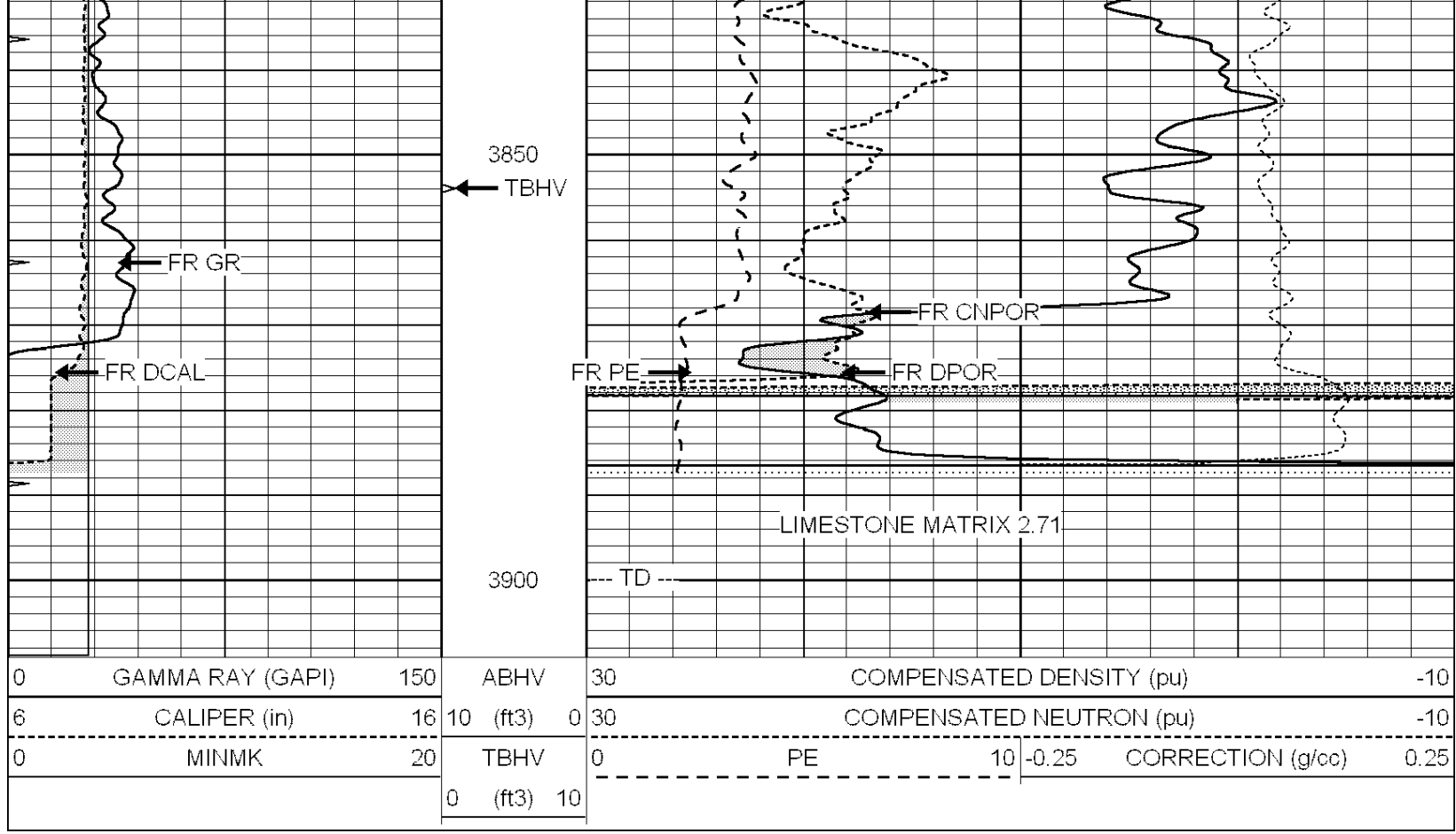
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10				









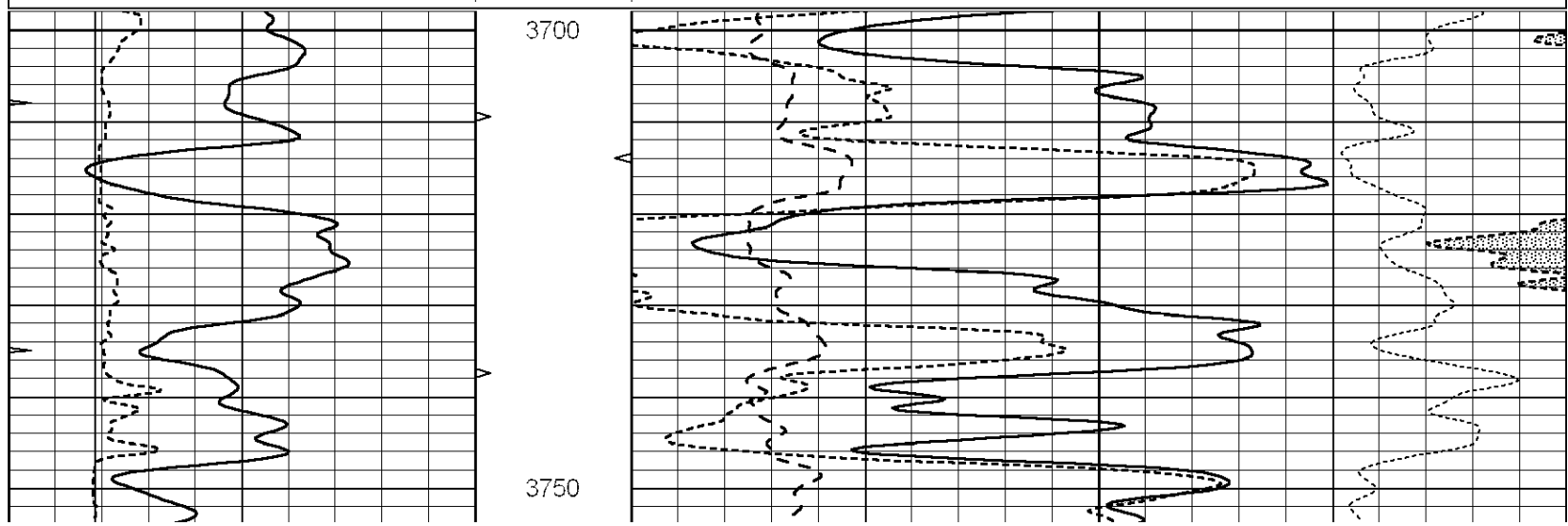


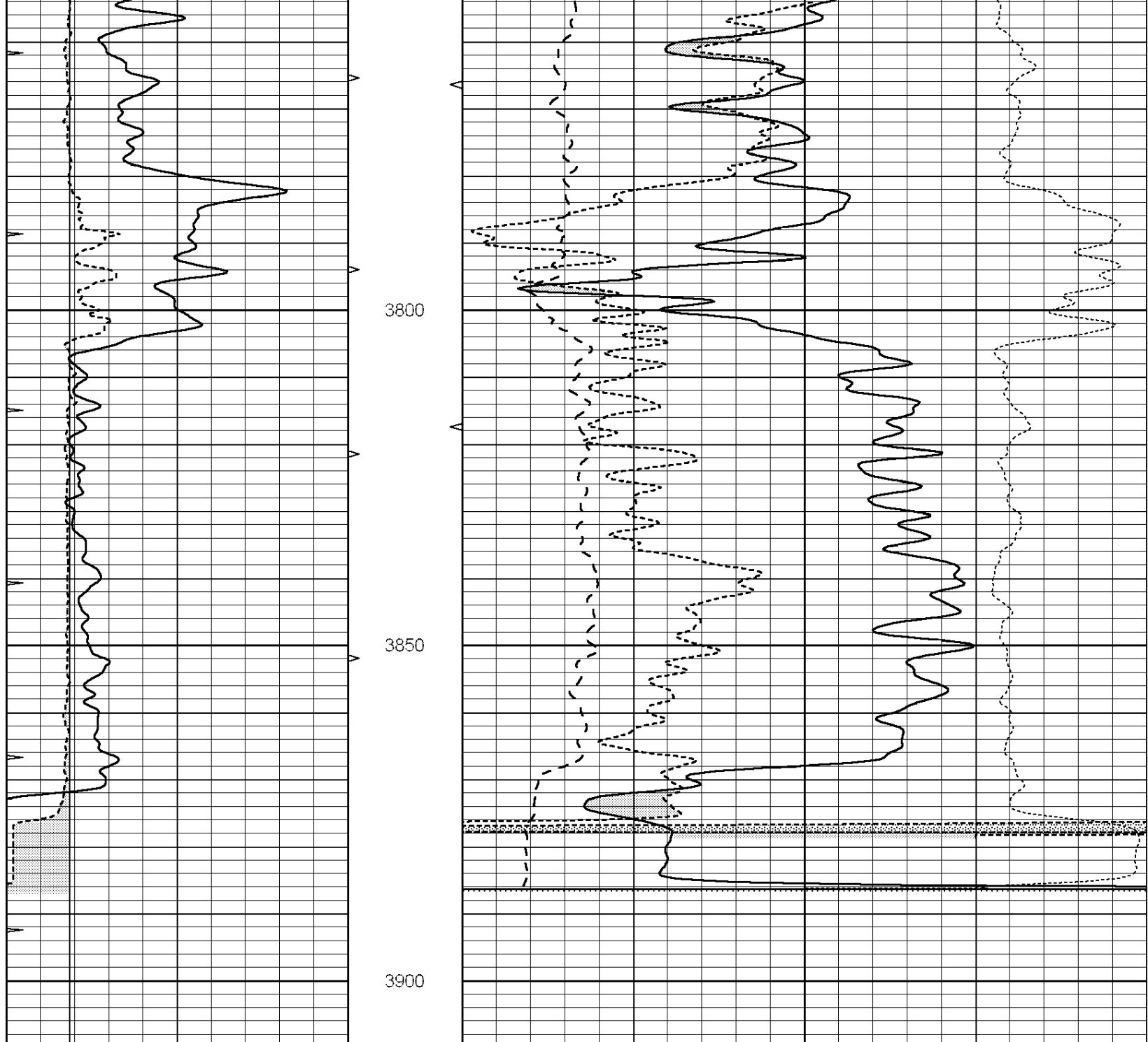
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REPEAT SECTION

Database File: 009928pdl.db
 Dataset Pathname: pass2.A
 Presentation Format: ldt_neu
 Dataset Creation: Sat Oct 06 02:17:13 2012 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	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			





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

Calibration Report

Database File: 009928pdn.db
 Dataset Pathname: pass3.1A
 Dataset Creation: Sat Oct 06 02:55:33 2012

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Sat Oct 06 00:10:41 2012

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	490.000	-14.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	510.000	-11.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.006	0.655	V	0.000	400.000	mmho/m	615.668	-3.483
Medium	0.010	0.747	V	0.000	462.500	mmho/m	627.607	-6.064

Litho Density Calibration Report
Serial: 002 Model: PRB
Performed Mon Apr 02 17:56:53 2012

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	872.3	7266.3	2292.6	7931.5	cps
Window 2	822.9	5957.5	1958.0	6389.6	cps
Window 3	670.4	3219.9	1211.9	3388.2	cps
Window 4	201.6	201.1	202.3	204.6	cps
Long Space	0.0	5134.6	1135.0	5566.6	cps
Short Space	1.1	994.2	674.4	1059.2	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.6	Rib Slope	: 1.020	Density/Spine Ratio	: 0.569
Spine Angle	: 75.6	Spine Slope	: 3.888	Spine Intercept	: -18.3

Caliper

	Readings	Reference	
Low Ref	4.3	8.4	
High Ref	6.1	14.0	
	Gain: 3.0		Offset: -4.4

Compensated Neutron Calibration Report

Serial Number: NUE_2I
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

Gamma Ray Calibration Report

Serial Number: GR5
Tool Model: OPEN
Performed: Sat Oct 06 01:43:28 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.7500 GAPI/cps