SUPERIOR WELL SERVICES

SUPERIOR
Hays, Kansas

COMPENSATED DENSITY / NEUTRON LOG

Company HUTCHINSON OIL COMPANY
Well SLEEPER #21-1
Field WILDCAT
County STAFFORD
State KANSAS

Company HUTCHINSON OIL COMPANY
Well SLEEPER #21-1
Field WILDCAT
County STAFFORD State KANSAS

Location: API # : 15-185-23610-0000

1015' FNL & 90' FWL

SEC 21 TWP 22S RGE 11W

Other Services
DIL/MEL
SONIC

Permanent Datum GROUND LEVEL Elevation 1819
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1827
D.F. 1825
G.L. 1819

Date	3/6/10		
Run Number	ONE		
Depth Driller	3700		
Depth Logger	3696		
Bottom Logged Interval	3672		
Top Log Interval	2600		
Casing Driller	8 5/8"@327'		
Casing Logger	328		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 19,500PPM	
Density / Viscosity	8.6/51		
pH / Fluid Loss	10.0/11.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.200@80F		
Rmf @ Meas. Temp	.150@80F		
Rmc @ Meas. Temp	.240@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.143@113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	3:30 P.M.		
Maximum Recorded Temperature	113F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	JEFFREY A. BURK	STEVE HUTCHINSON	

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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 SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
HUDSON, KS. 5E. TO DEAD END, 1/2N., 1E., 3/4N., E. INTO

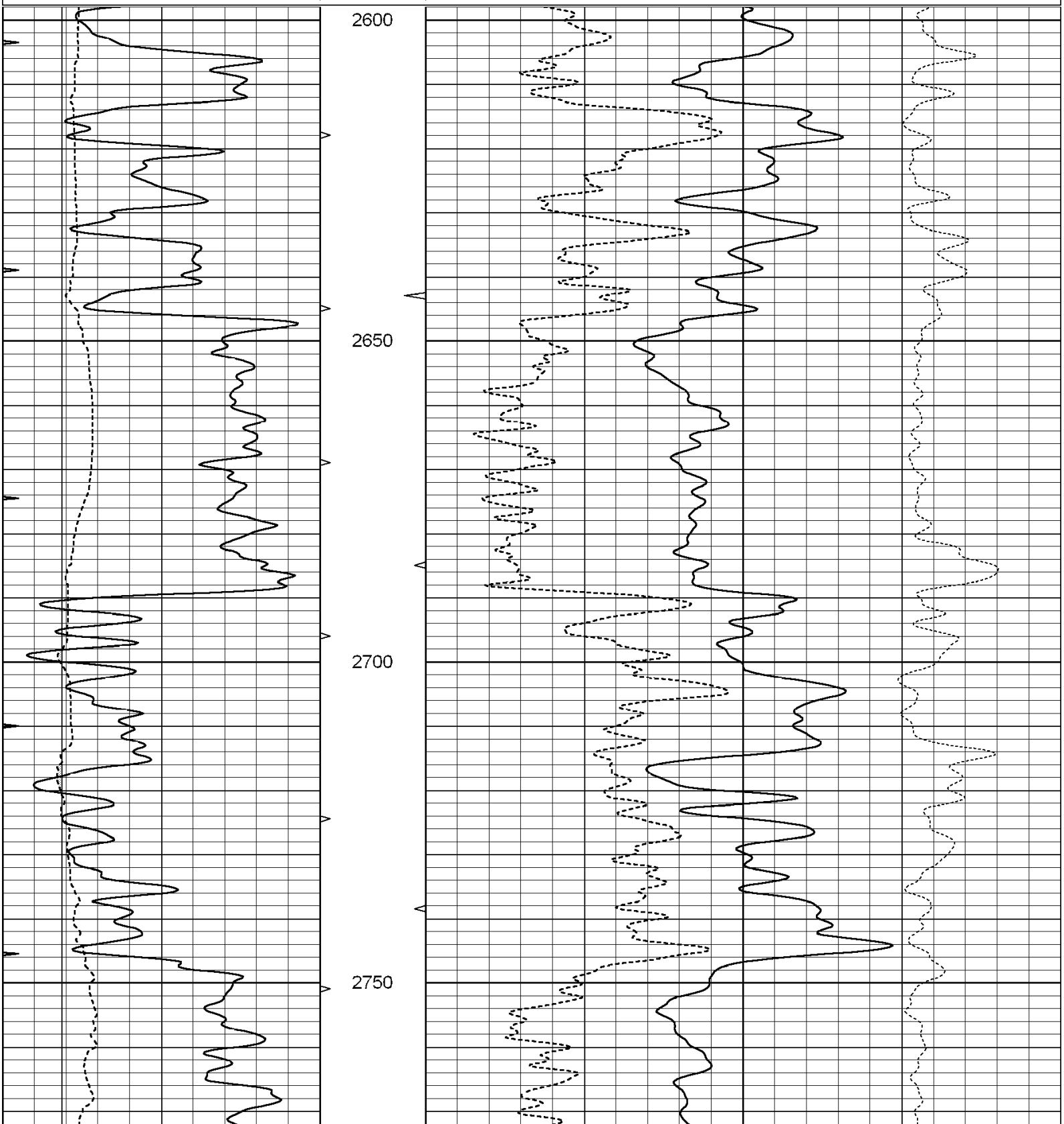
MAIN SECTION

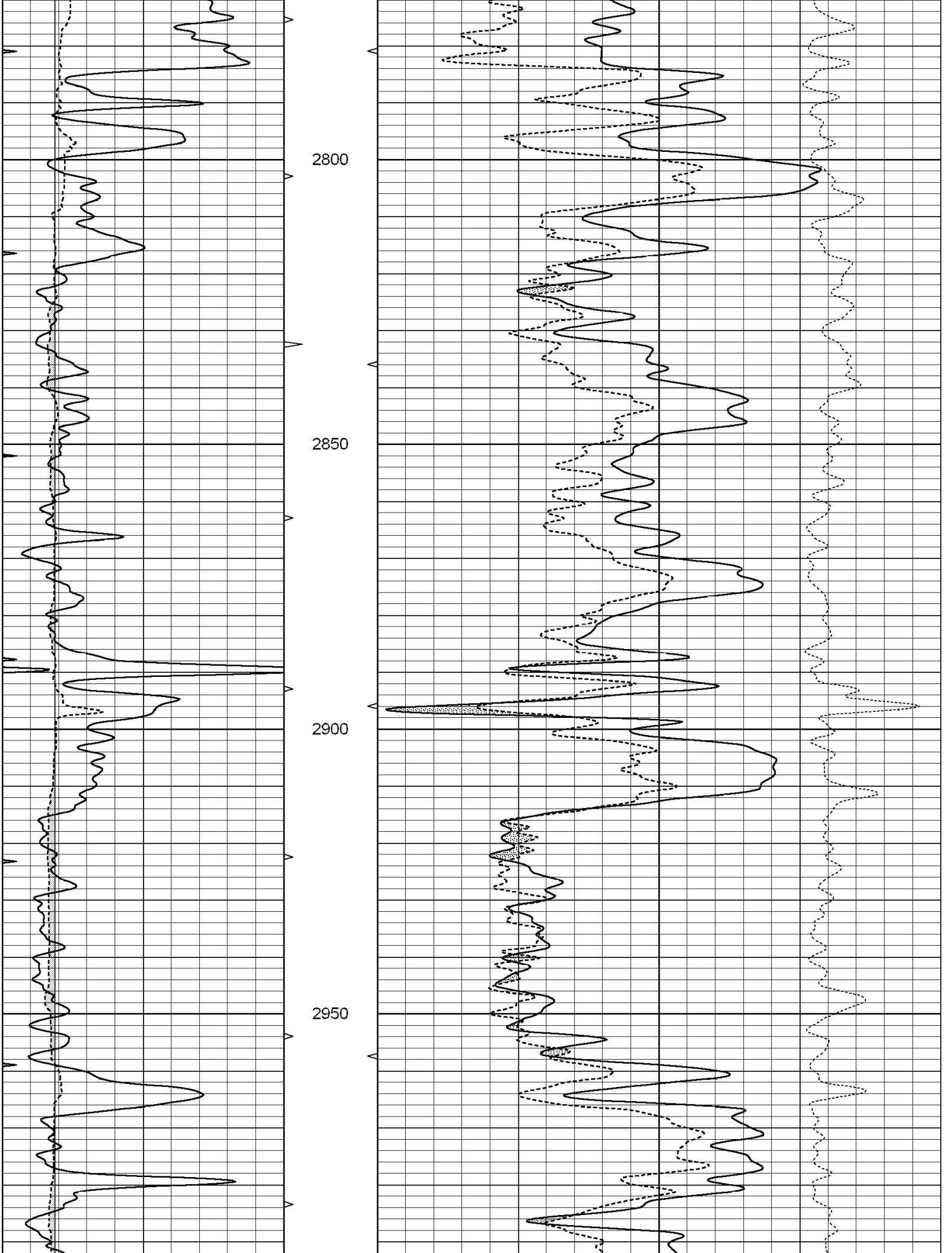
SUPERIOR
Hays, Kansas

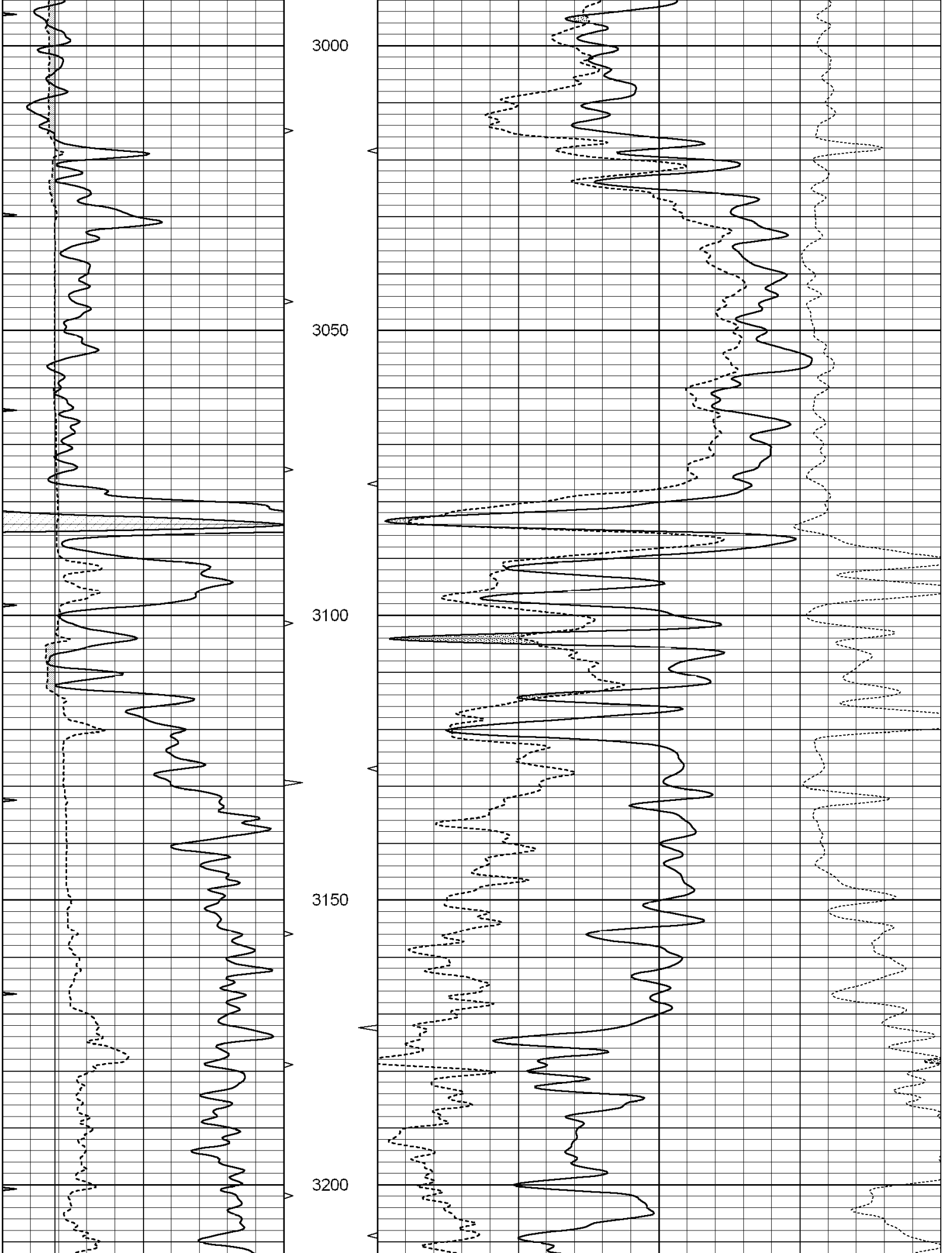
SUPERIOR WELL SERVICES

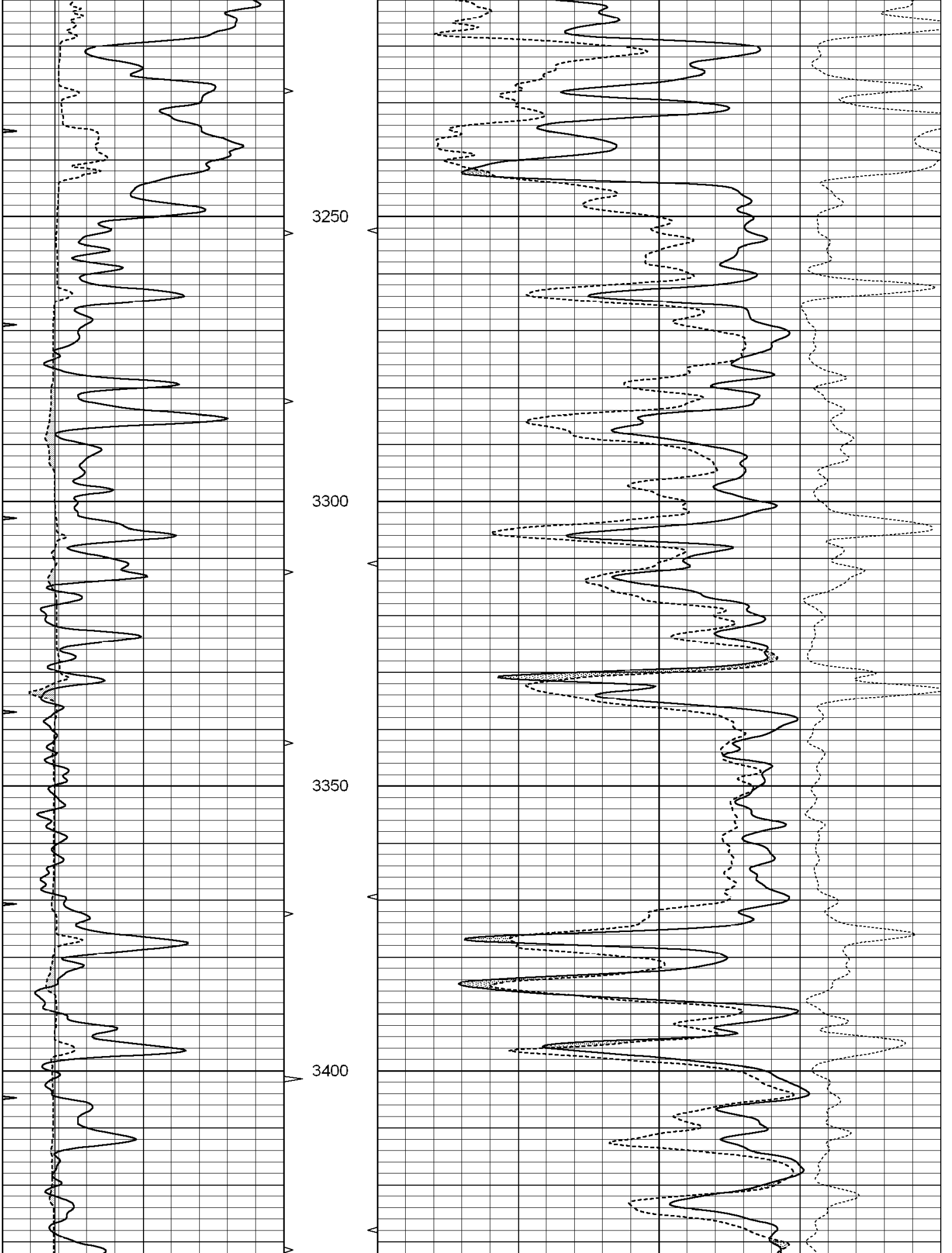
Database File: 004829ddn.db
Dataset Pathname: pass3.3
Presentation Format: den_neu
Dataset Creation: Sat Mar 06 16:28:01 2010 by Calc Open-Cased 060407
Charted by: Depth in Feet scaled 1:240

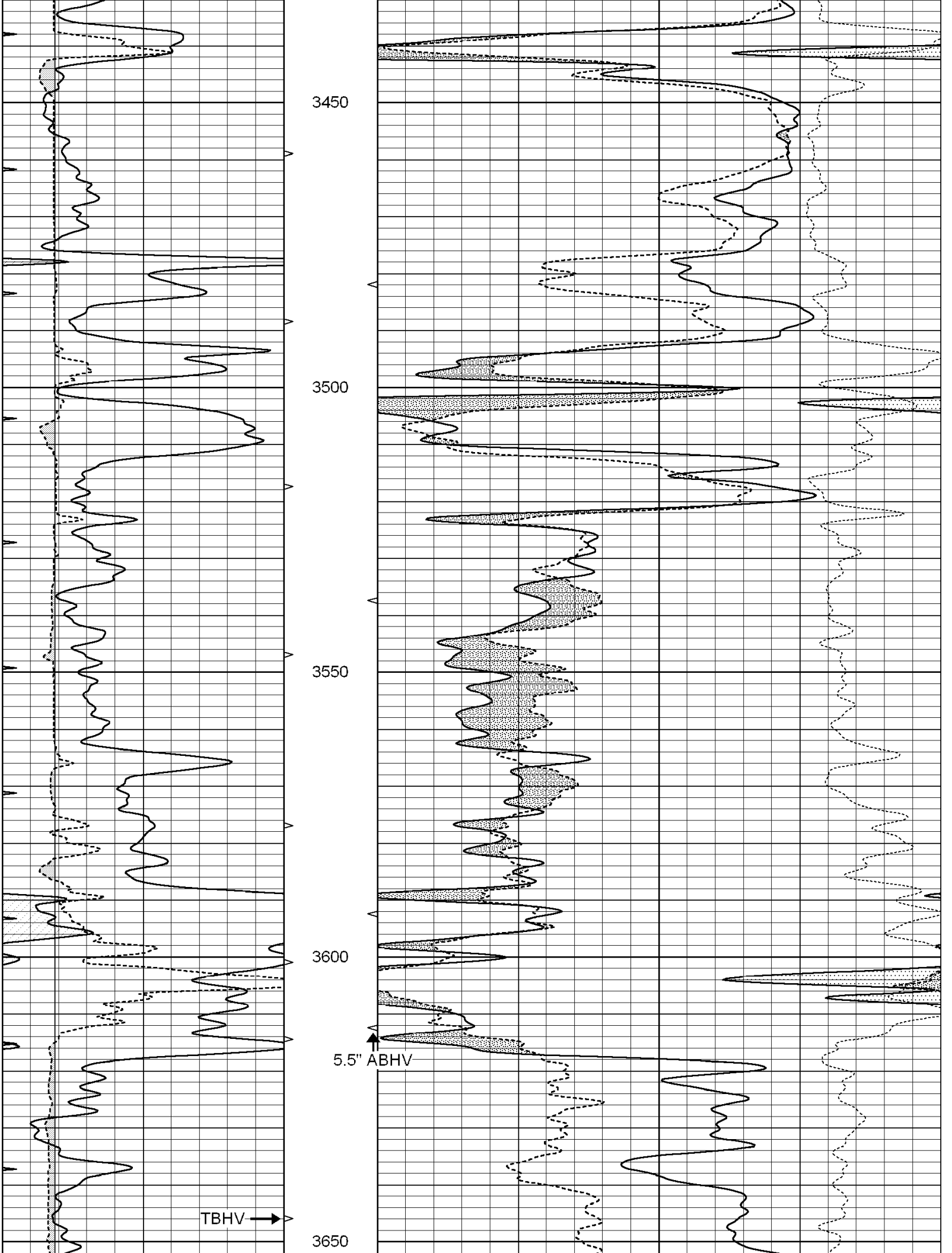
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			

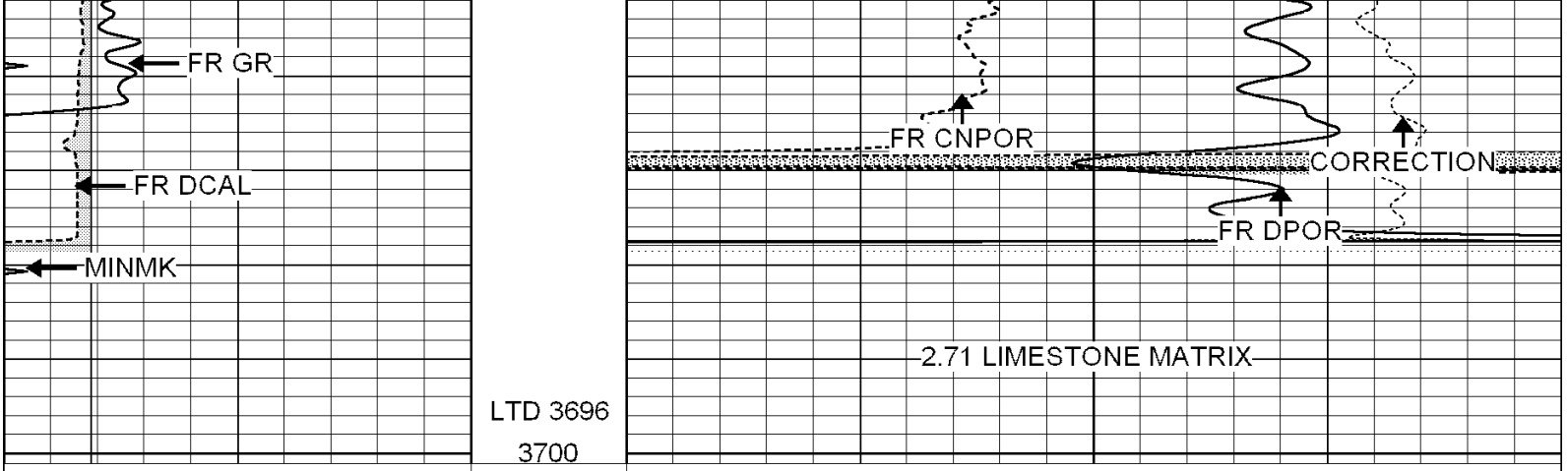



2800
2850
2900
2950


3000
3050
3100
3150
3200


3250
3300
3350
3400


3450
3500
3550
3600
5.5" ABHV
TBHV
3650



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				

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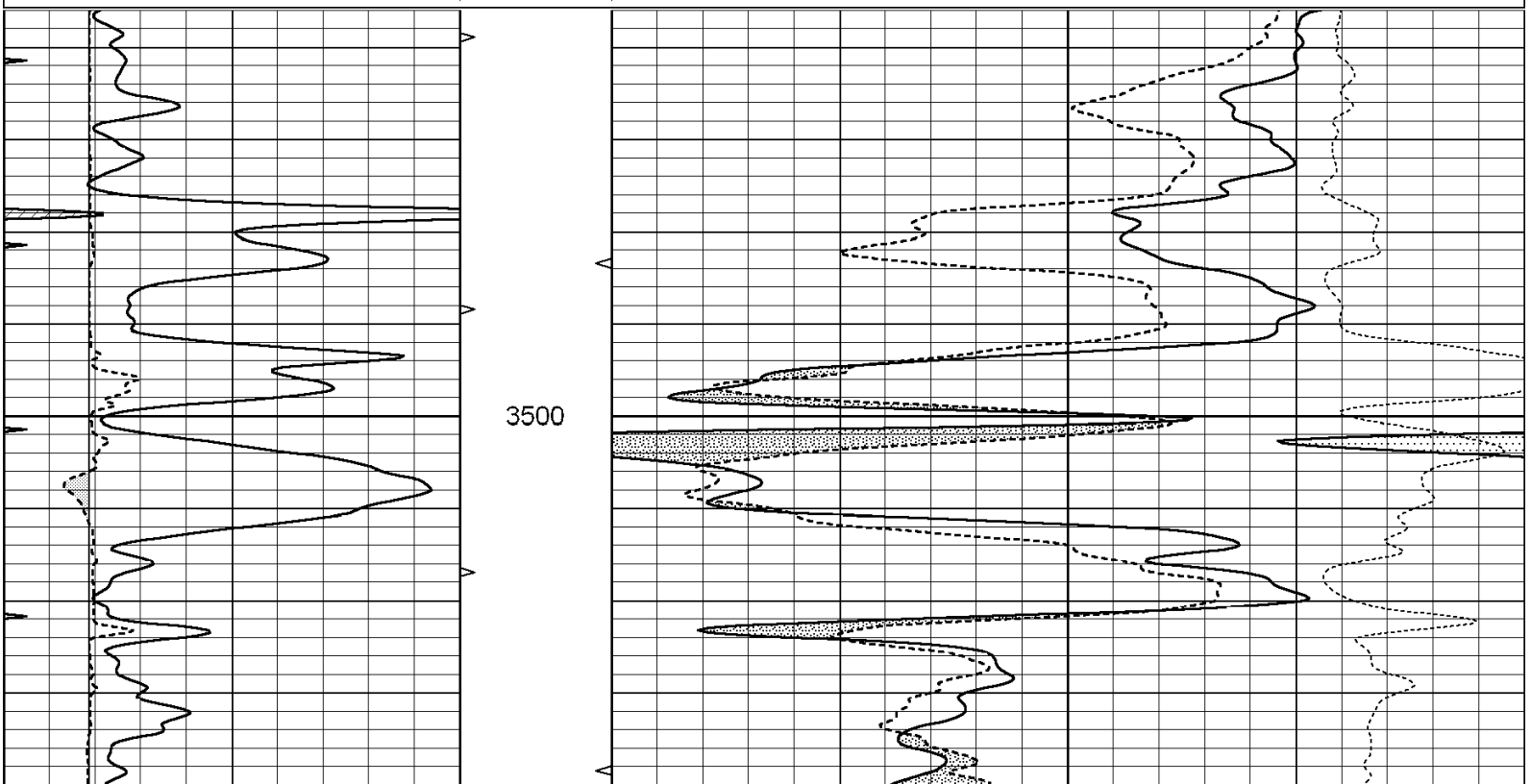
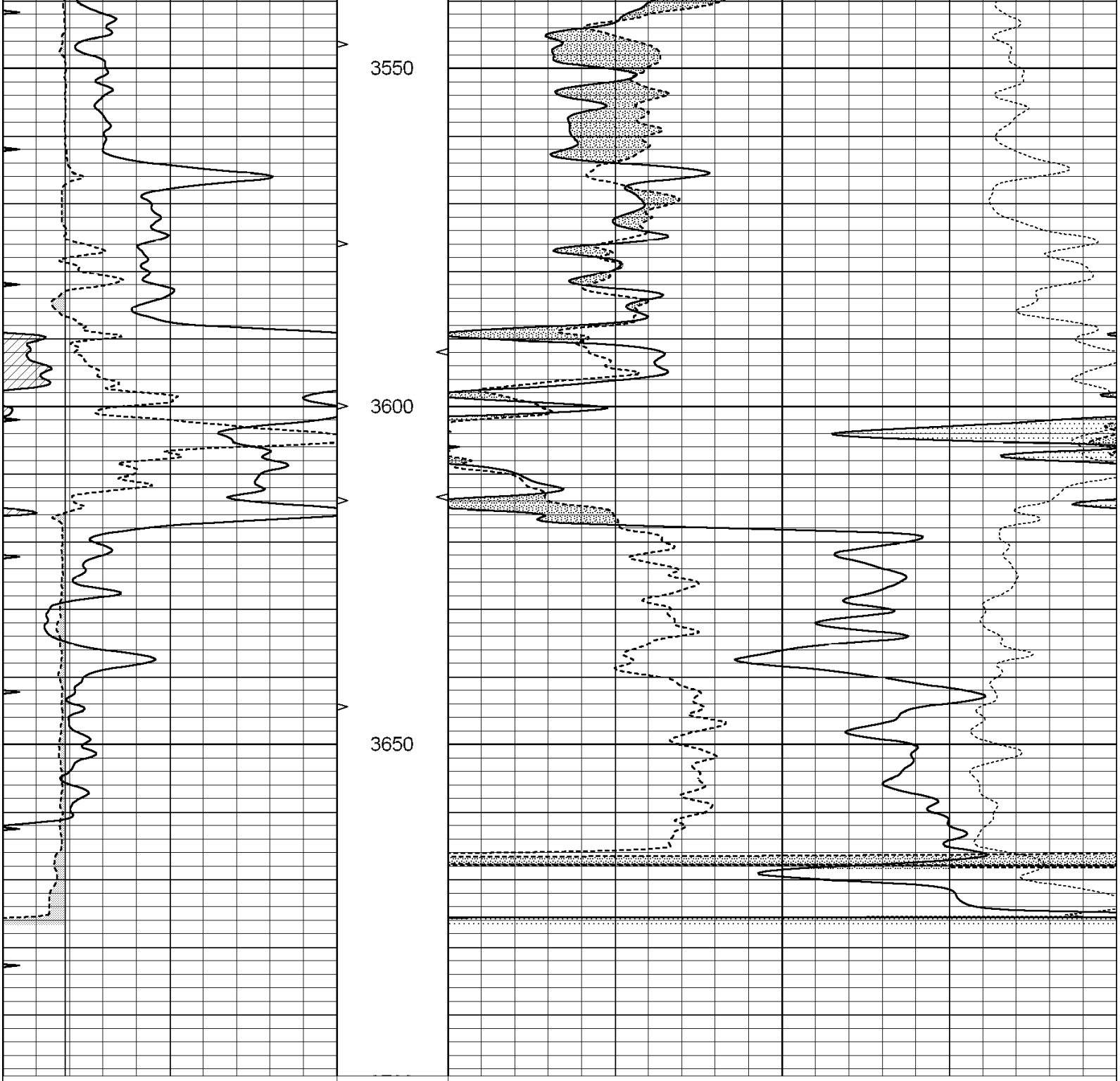
REPEAT SECTION

Database File:	004829ddn.db
Dataset Pathname:	pass2.6
Presentation Format:	den_neu
Dataset Creation:	Sat Mar 06 16:11:21 2010 by Calc Open-Cased 060407
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				





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				

SUPERIOR WELL SERVICES

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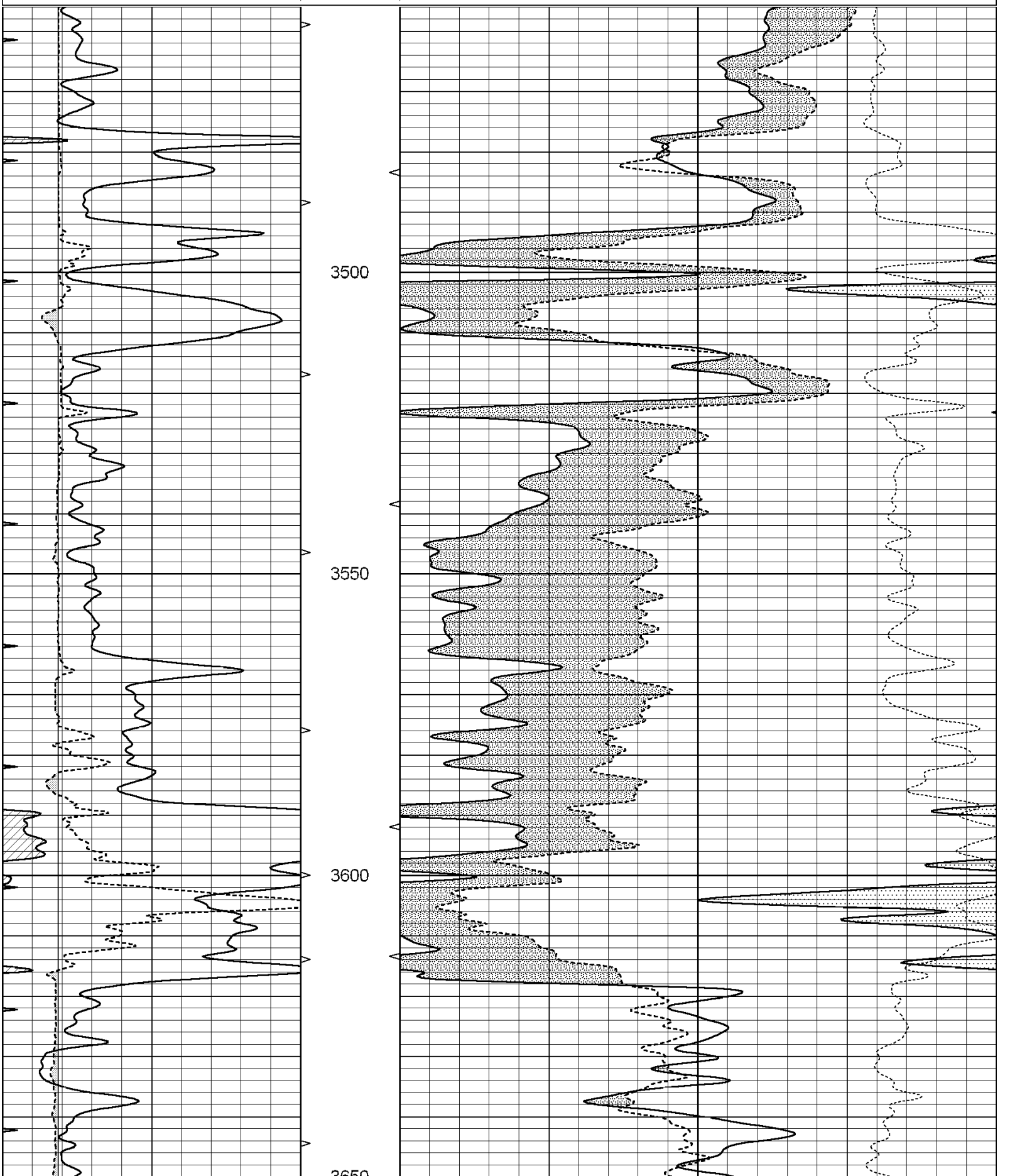
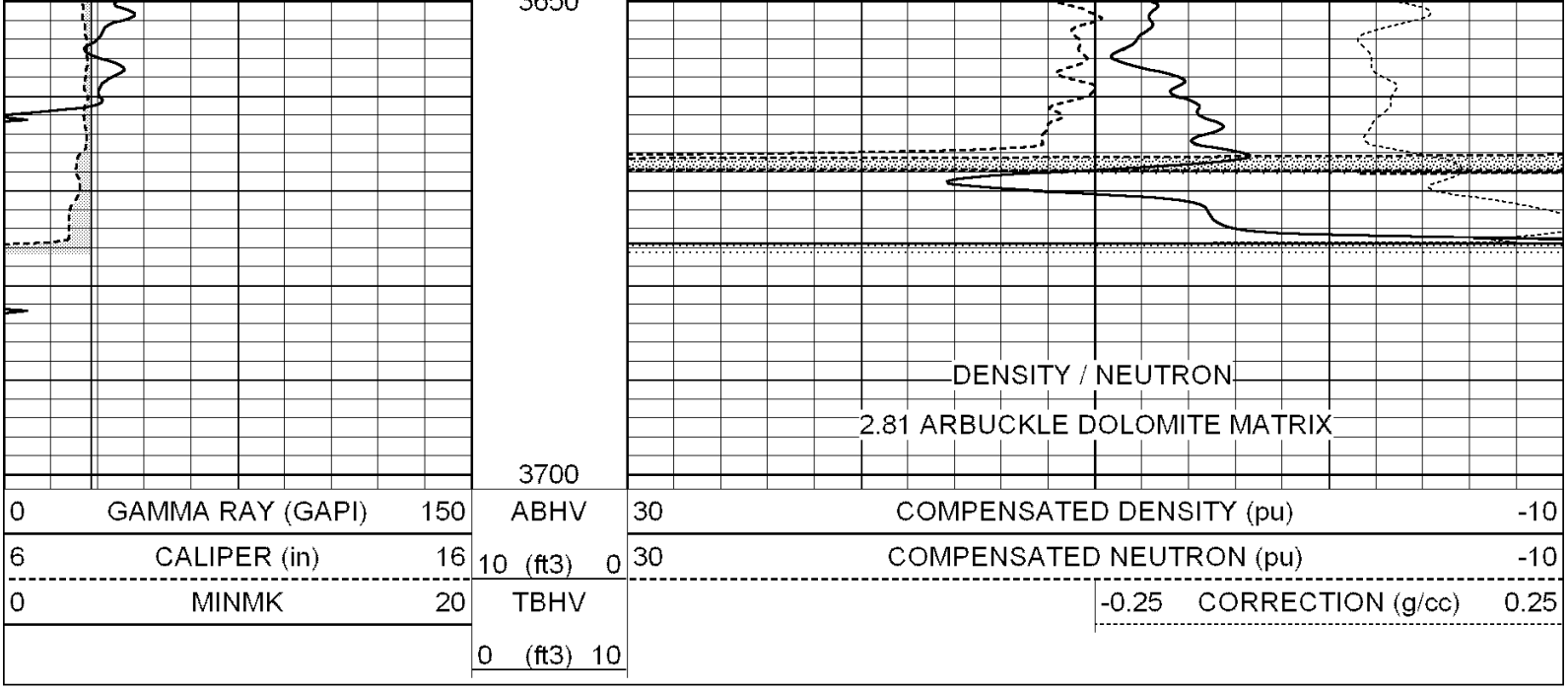
DOLOMITE MATRIX

Database File: 004829ddn.db
Dataset Pathname: pass2.8
Presentation Format: den_neu
Dataset Creation: Sat Mar 06 16:15:12 2010

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: 004829ddn.db
Dataset Pathname: pass3.3
Dataset Creation: Sat Mar 06 16:28:01 2010 by Calc Open-Cased 060407

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Sat Mar 06 15:44:56 2010

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho-m	640.000	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho-m	700.000	-10.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho-m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho-m	631.393	-4.555

Litho Density Calibration Report

Serial: 003N Model: PRB
Performed Tue Sep 08 14:14:44 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2042.6	12312.8	4225.8	13758.4	cps
Window 2	1855.8	10134.7	3624.2	11113.1	cps
Window 3	1639.4	6760.2	2716.3	7260.3	cps
Window 4	466.4	469.2	466.1	476.5	cps
Long Space	0.0	8278.9	1768.4	9257.4	cps
Short Space	2.2	2377.3	1544.1	2574.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.549
Spine Angle	: 74.4	Spine Slope	: 3.577	Spine Intercept	: -18.8

Caliper

	Readings	Reference
Low Ref	2.2	6.7
High Ref	4.6	14.0

Gain: 3.0 Offset: 0.2

Compensated Neutron Calibration Report

Serial Number: NEU_3I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	997.00	cps	1000.00	cps	1.0000
Long Space	986.00	cps	1000.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number: GR3
Tool Model: OPEN
Performed: Sat Mar 06 15:44:38 2010

Calibrator Value: 200.0 GAPI

Background Reading: 3.0 cps
Calibrator Reading: 186.0 cps

Sensitivity: 0.6500 GAPI/cps