SUPERIOR WELL SERVICES

SUPERIOR
Hays, Kansas

COMPENSATED DENSITY / NEUTRON LOG

Company PAXCO, INC.
Well SANDER #12
Field TOULON
County ELLIS State KANSAS

Location: API # : 15-051-25871-0000
2172' FNL & 447' FEL
SW - SW - NW
SEC 10 TWP 14S RGE 17W

Other Services
DIL/MEL

Elevation
K.B. 2020
D.F. 2018
G.L. 2012

Permanent Datum GROUND LEVEL Elevation 2012
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING

Date	7/25/09		
Run Number	ONE		
Depth Driller	3982'		
Depth Logger	3981'		
Bottom Logged Interval	3957'		
Top Log Interval	2900'		
Casing Driller	8 5/8" @ 653'		
Casing Logger	652'		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	8.7 / 63	CHLORIDES 5,100	
pH / Fluid Loss	10.0 / 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.65 @ 90F		
Rmf @ Meas. Temp	0.49 @ 90F		
Rmc @ Meas. Temp	0.78 @ 90F		
Source of Rmf / Rmc	CAL/CAL		
Rm @ BHT	0.50 @ 116F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	116F		
Equipment Number	680		
Location	HAYS, KS		
Recorded By	JEFF GRONEWEG		
Witnessed By	HERB DEINES	VINCE WERTH	

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Comments

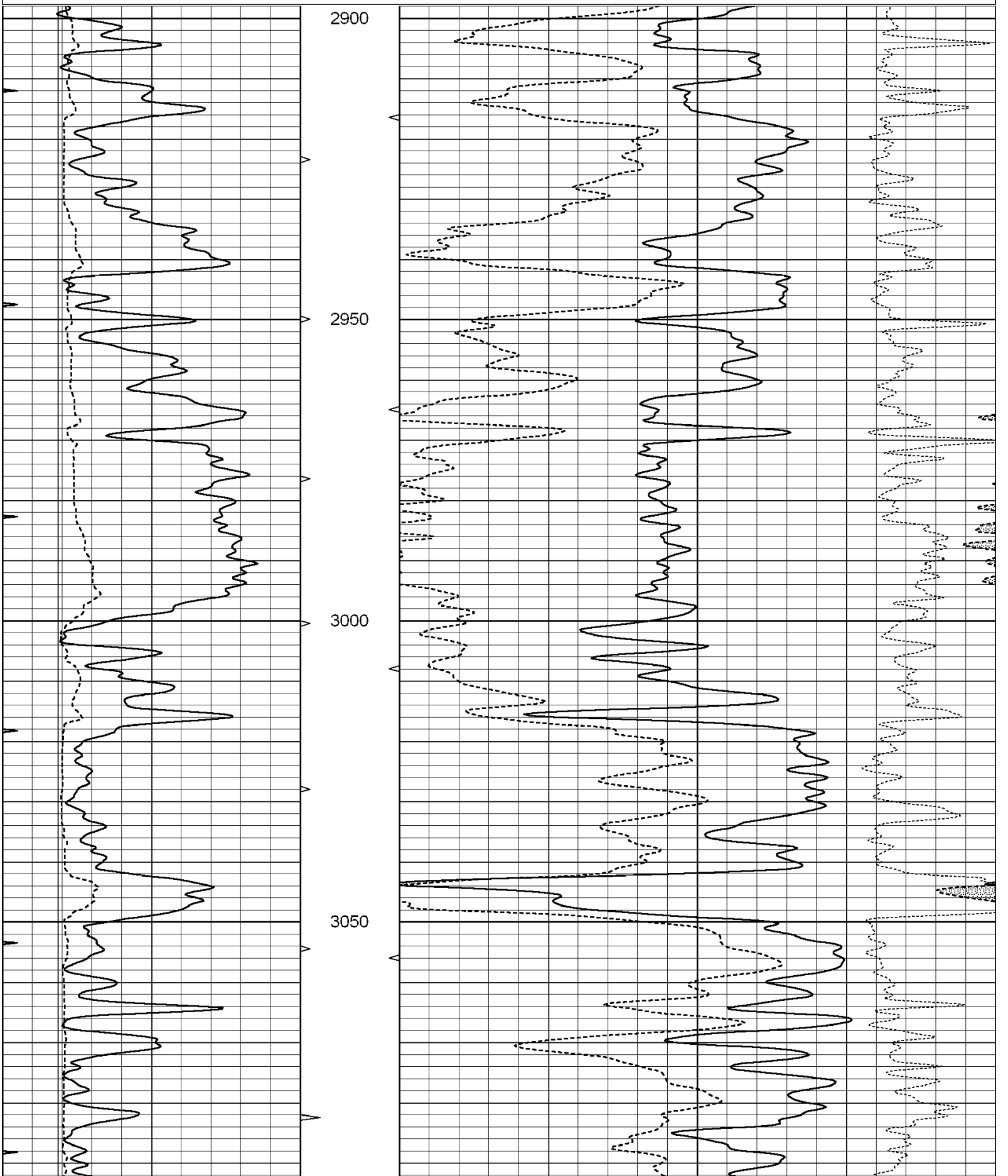
THANK YOU FOR USING SUPERIOR WELL SERVICES
HAYS, KS. 785-628-6395

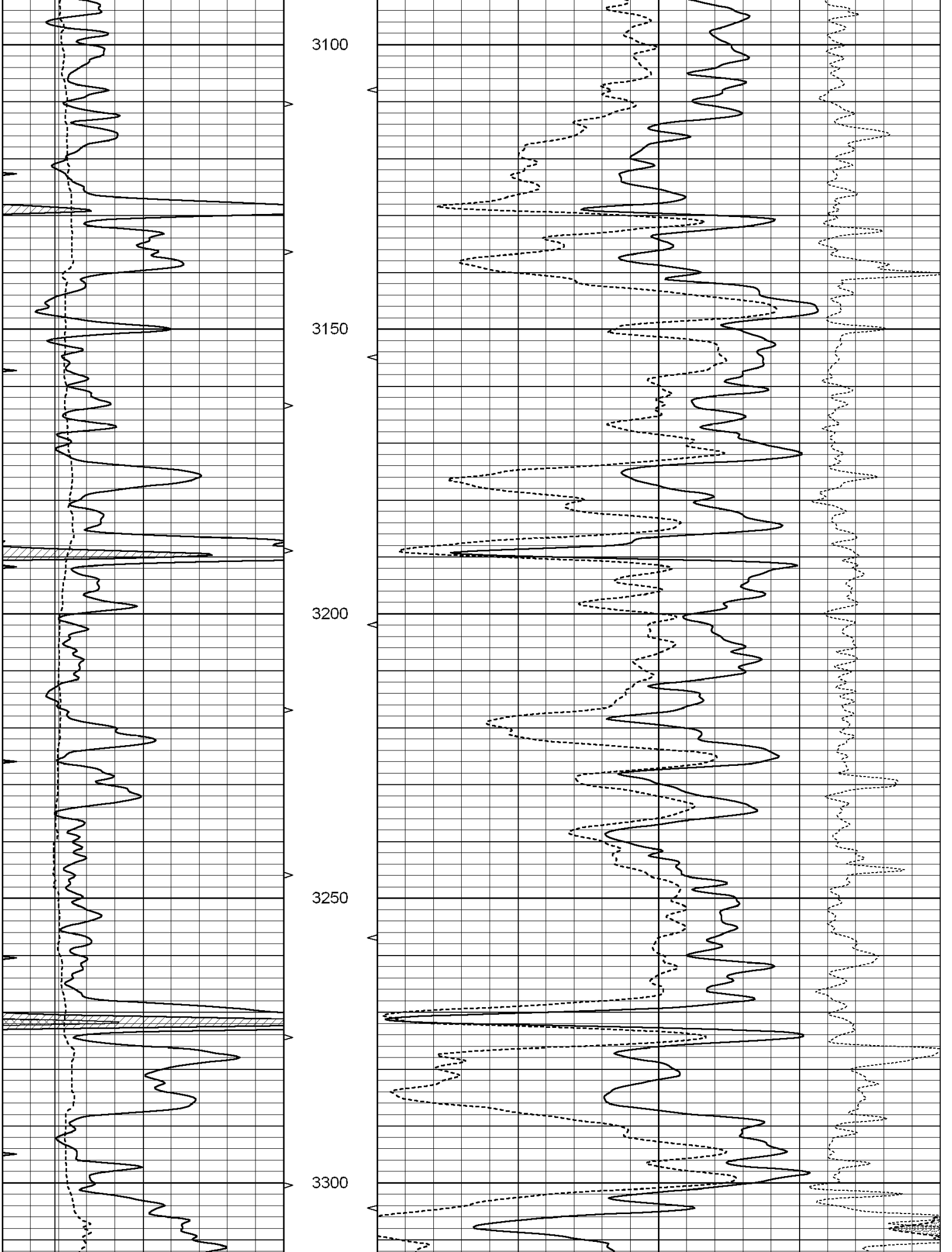
DIRECTIONS: TOULON ELEVATOR - 2 MILES EAST - 1/2 MILE NORTH
EAST INTO

Database File: 004082ddn.db
Dataset Pathname: pass3.2
Presentation Format: _den_neu
Dataset Creation: Sat Jul 25 16:37:53 2009 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	

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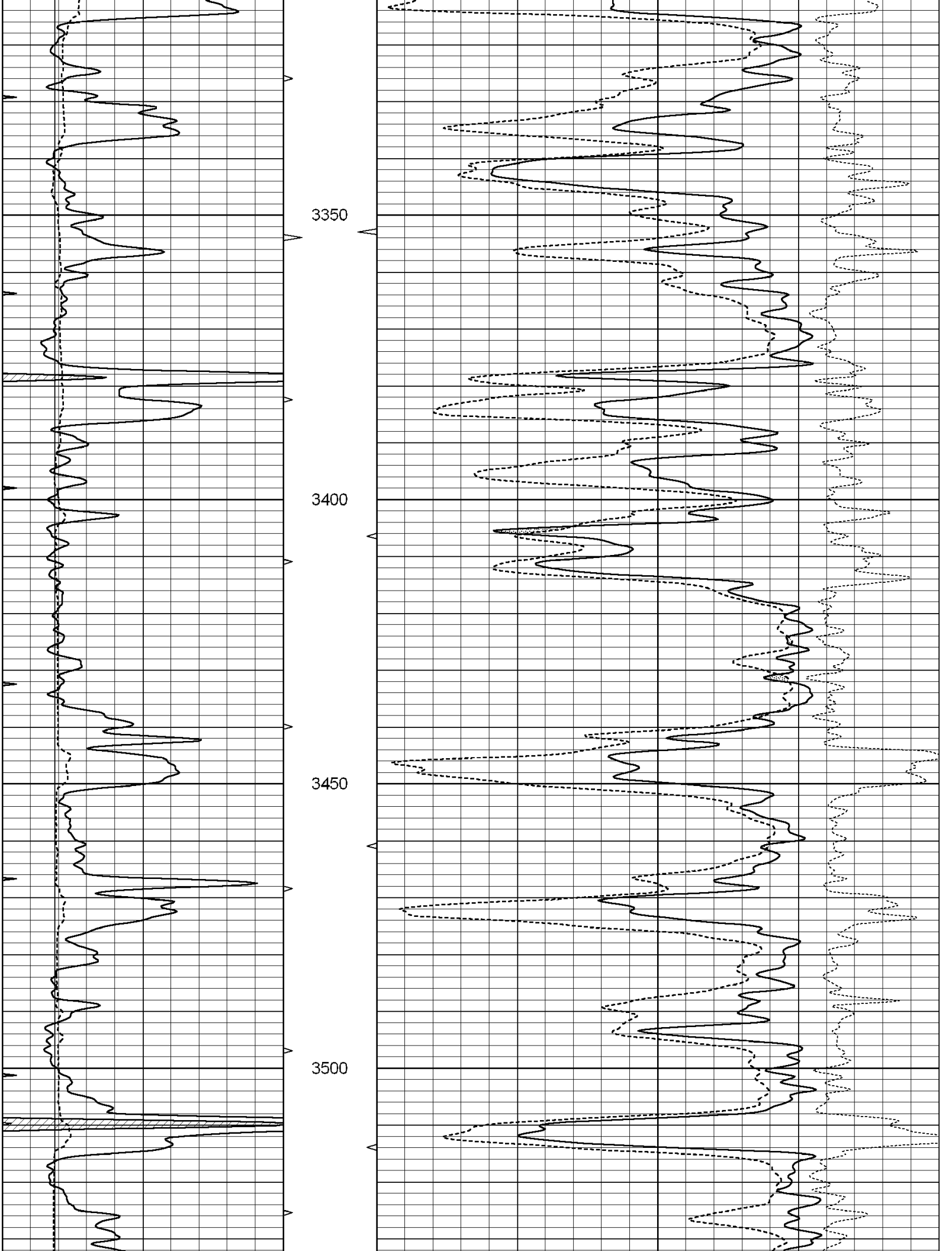
3250
3300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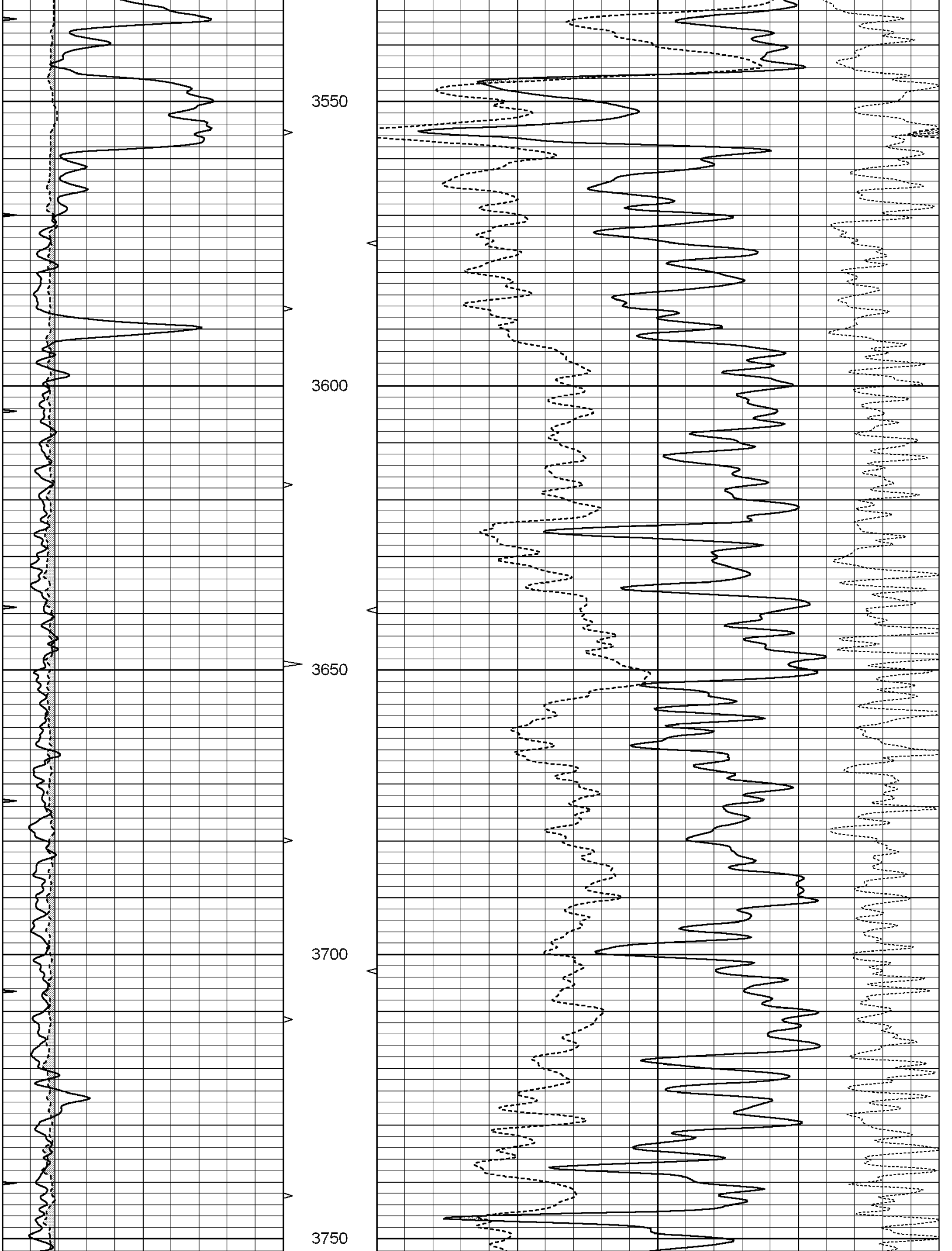
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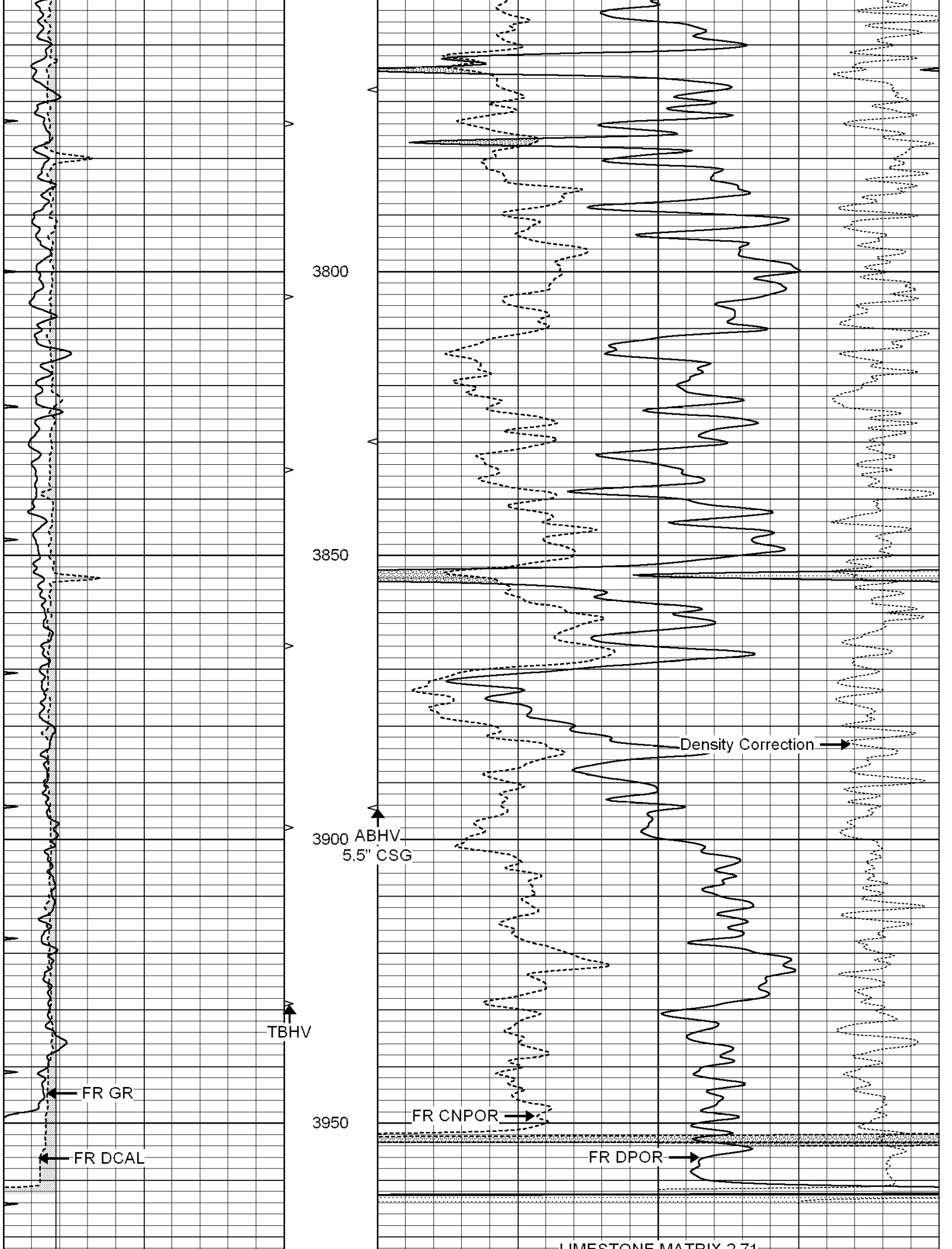
3800
3850
3900
3950
ABHV
5.5" CSG
TBHV
FR GR
FR DCAL
Density Correction
FR CNPOR
FR DPOR
LIMESTONE MATRIX 2.71

LIMESTONE MATRIX 2.71

LTD 3981

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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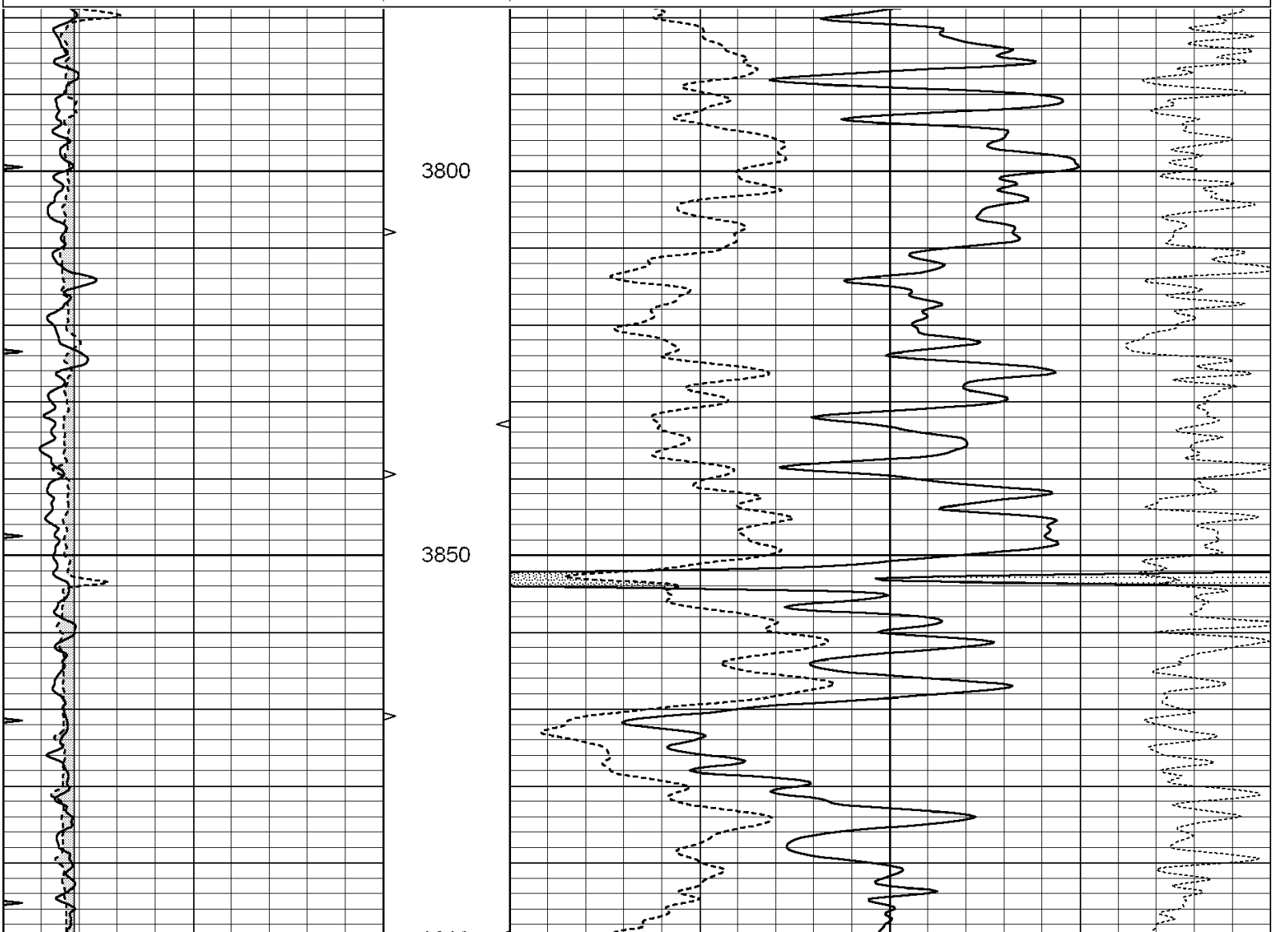
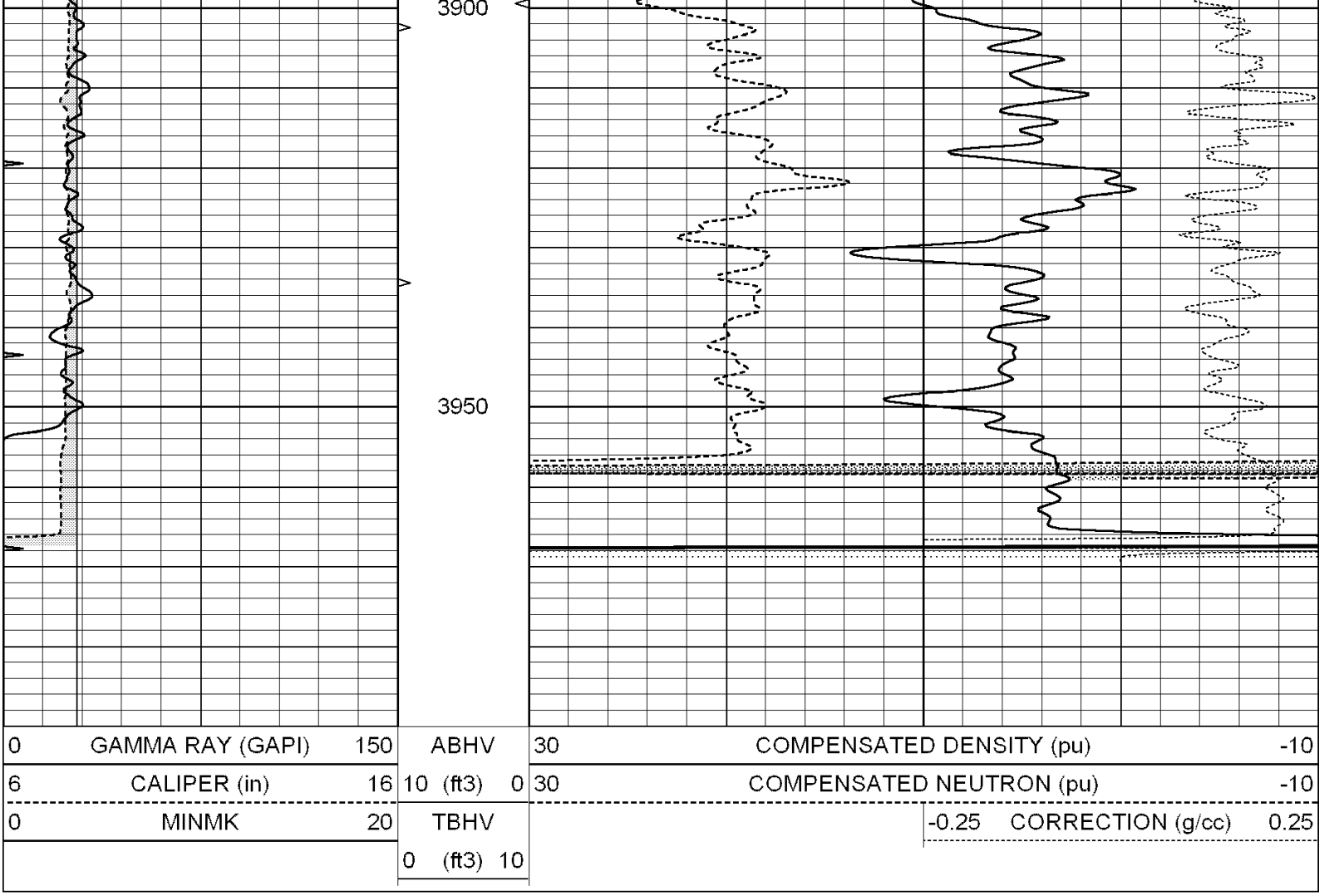
Kansas

REPEAT SECTION

Database File: 004082ddn.db
Dataset Pathname: pass2.1
Presentation Format: _den_neu
Dataset Creation: Sat Jul 25 16:24:32 2009 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			





Calibration Report

Database File: 004082ddn.db
Dataset Pathname: pass3.2
Dataset Creation: Sat Jul 25 16:37:53 2009 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Fri Aug 01 06:33:19 2008
Downhole Cal Performed:	Mon Jul 28 11:08:27 2008
After Survey Verification Performed:	Mon Jul 28 11:08:27 2008

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
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		
	-6.500	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		

Compensated Density Calibration Report

Serial-Model: GEAR3-GEARHART
Source / Verifier: 143 / 143
Master Calibration Performed: Fri Mar 06 10:44:04 2009

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1127.25	444.45	cps
Aluminum	2.600	g/cc	260.89	307.54	cps

Spine Angle = 75.88 Density/Spine Ratio = 0.590

	Size		Reading	
Small Ring	8.00	in	4.19	V
Large Ring	14.00	in	6.17	V

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

Gamma Ray Calibration Report

Serial Number: GR6
Tool Model: OPEN
Performed: Thu Jul 09 09:06:42 2009

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity: 0.6835 GAPI/cps