



**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY/NEUTRON LOG

<<< Fold Here >>>

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.

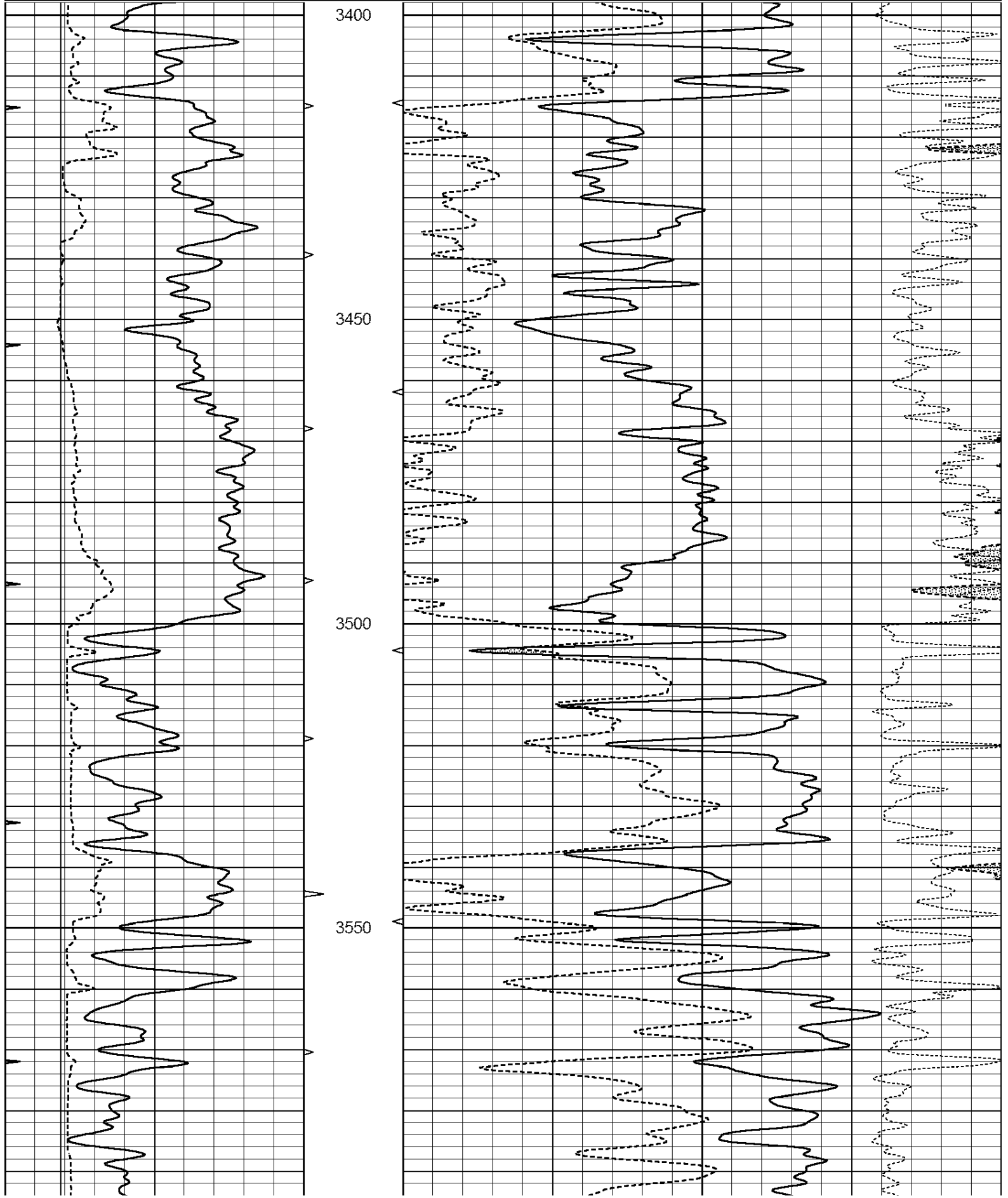
Comments

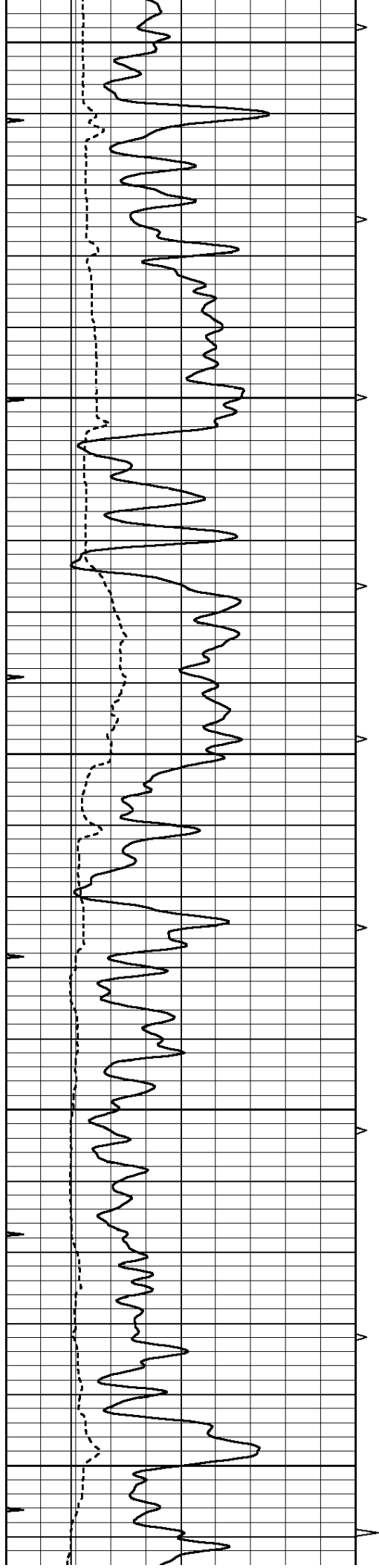
THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:

SPEARVILLE, KS. - 1 MILE SOUTH - 1/4 WEST - 1 MILE SOUTH - EAST 1/3 OF A MILE NORTH INTO

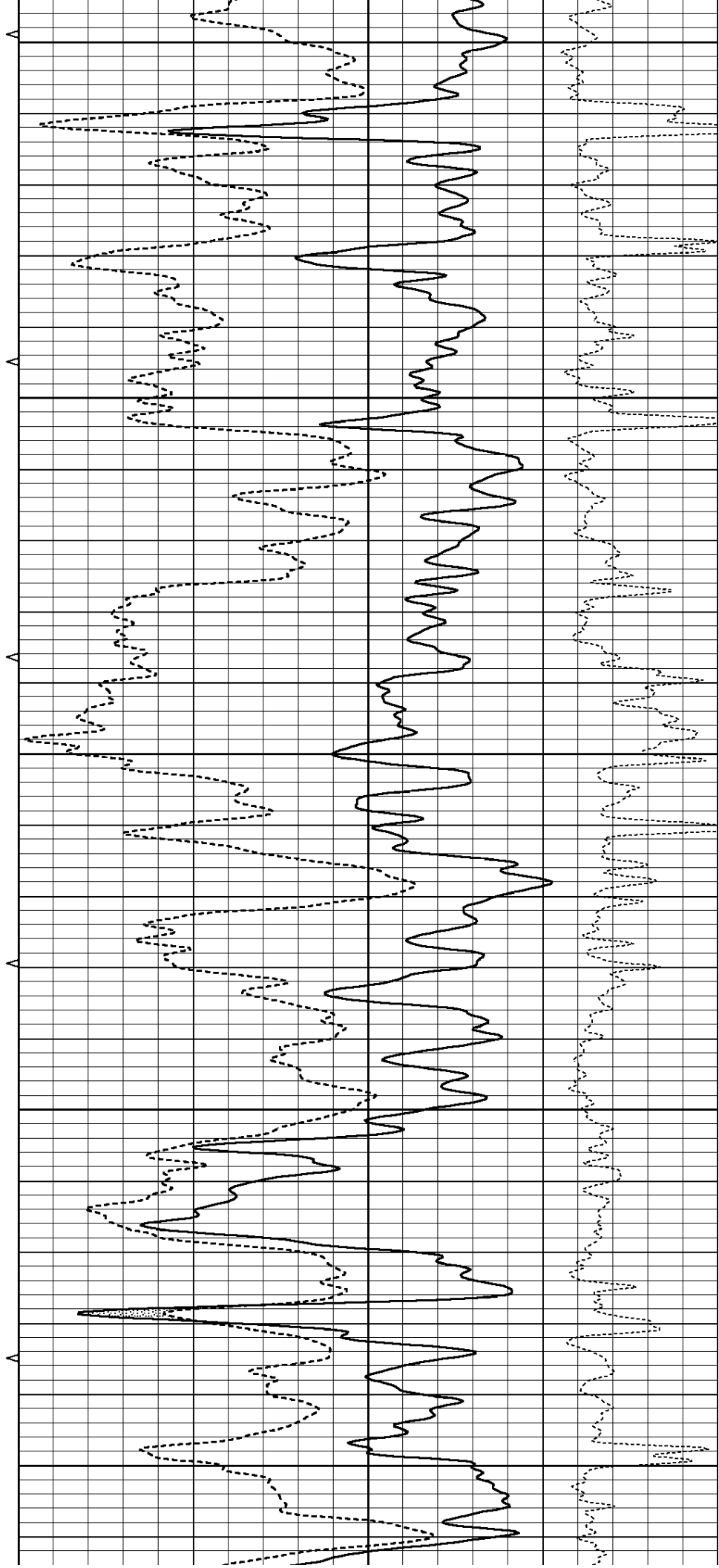
Database File: 010871ddn.db
Dataset Pathname: pass3.3
Presentation Format: den_neu
Dataset Creation: Sat Apr 13 16:03:21 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

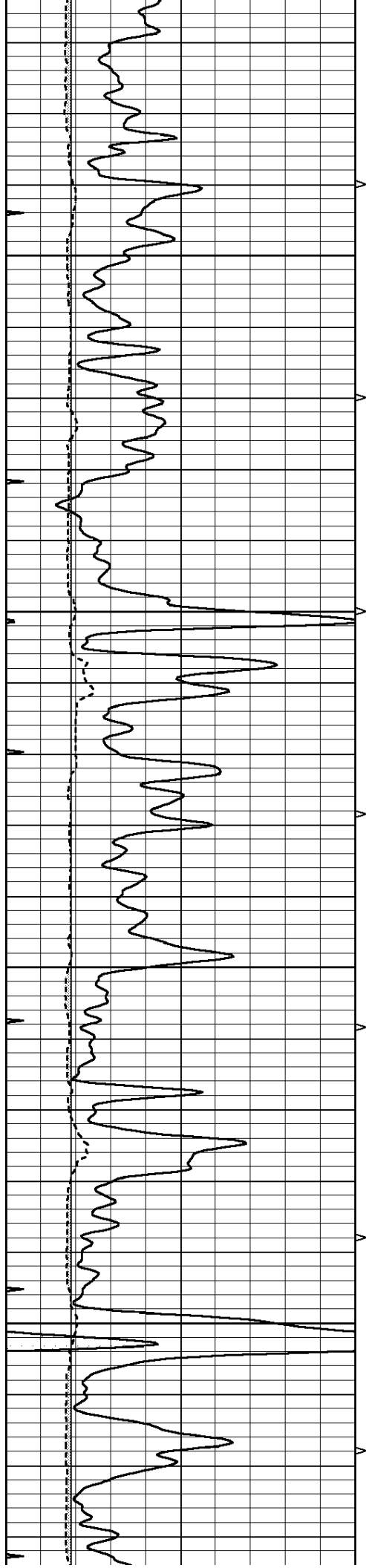
Charted by:		Depth in Feet scaled 1:2.10			
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu) -10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu) -10
0	MINMK	20	TBHV	-0.25 CORRECTION (g/cc) 0.25	
			0 (ft3) 10		





3600
3650
3700
3750
3800



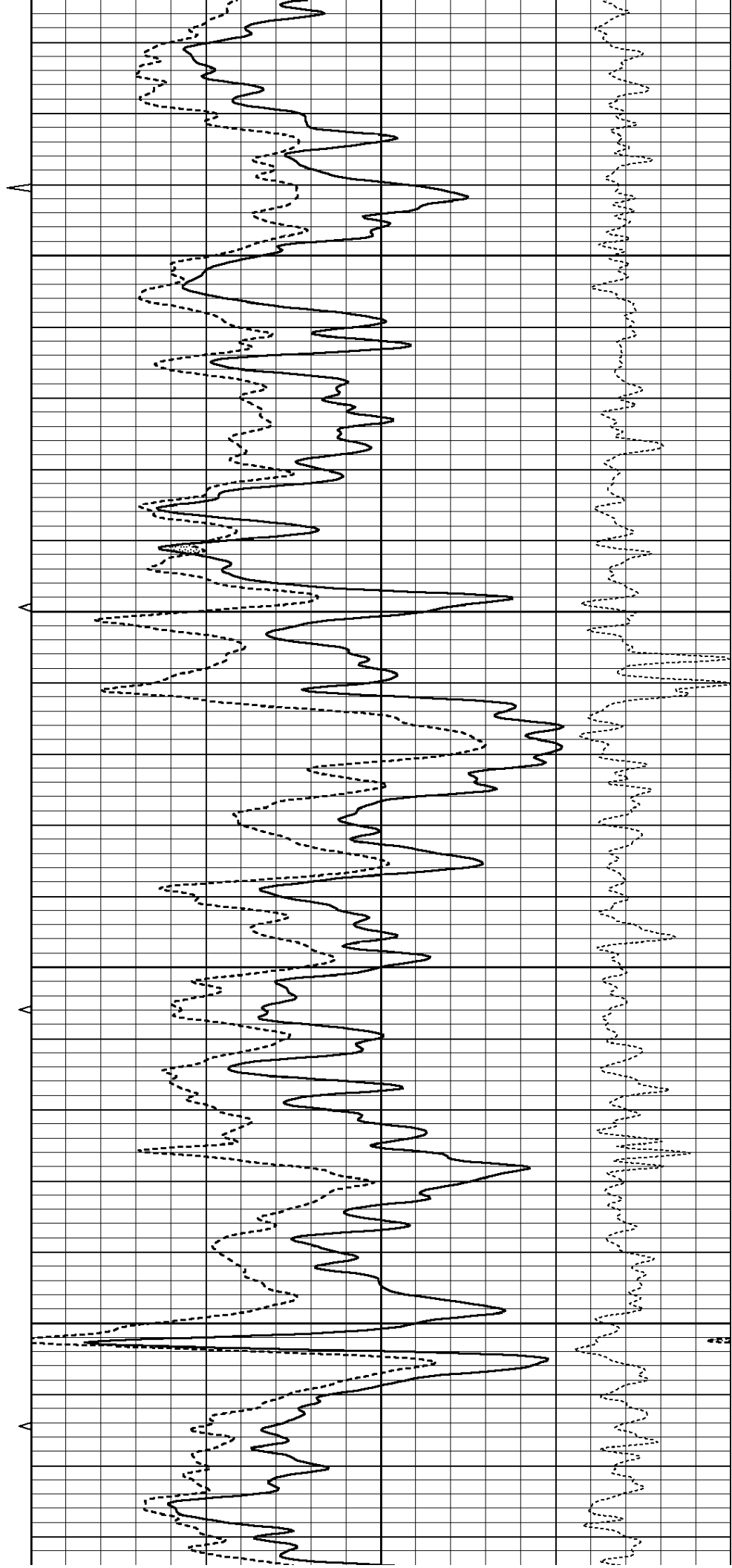


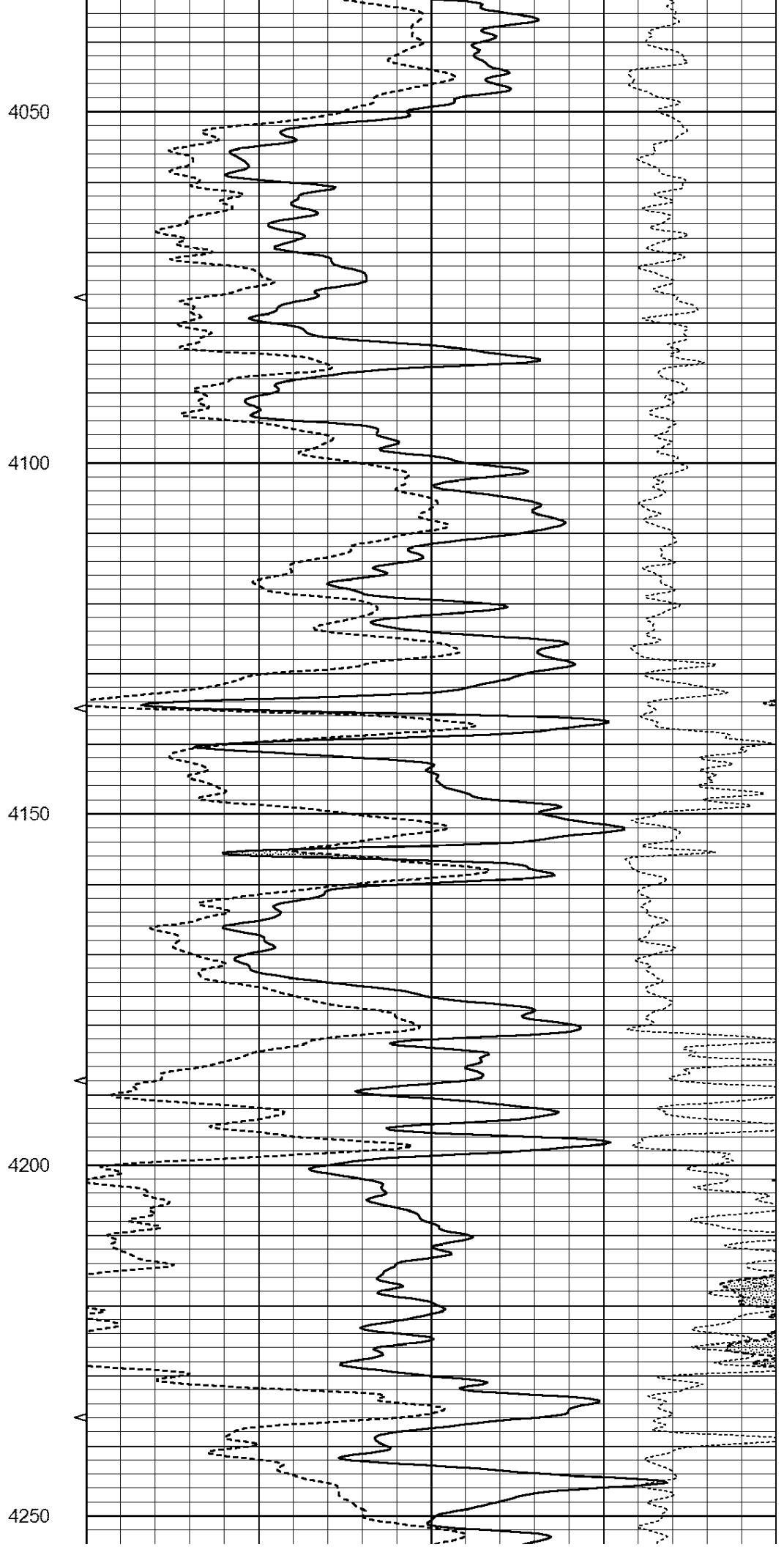
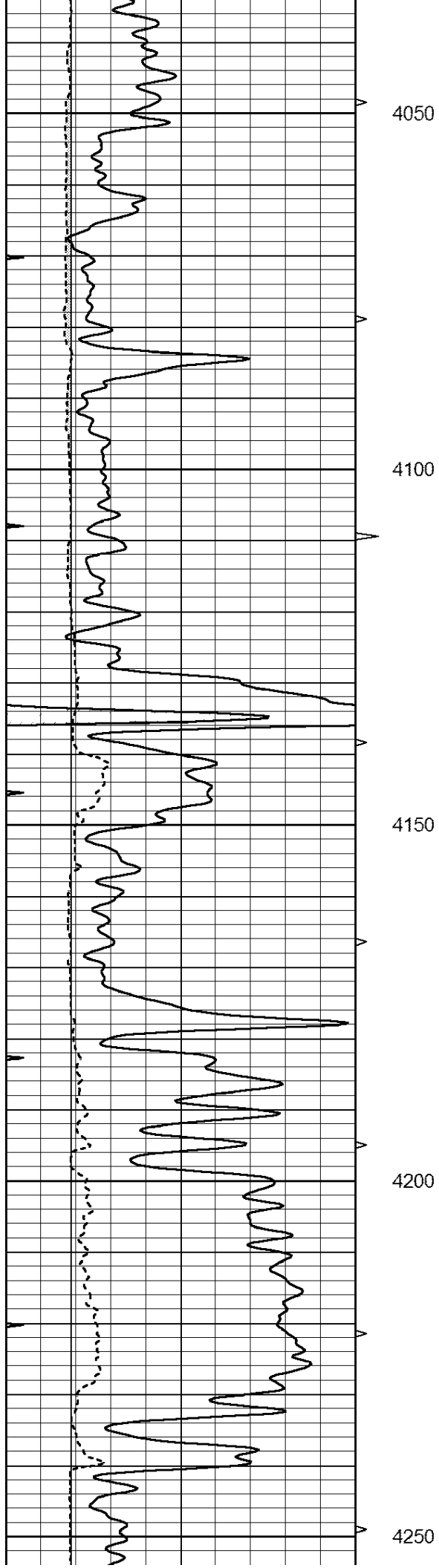
3850

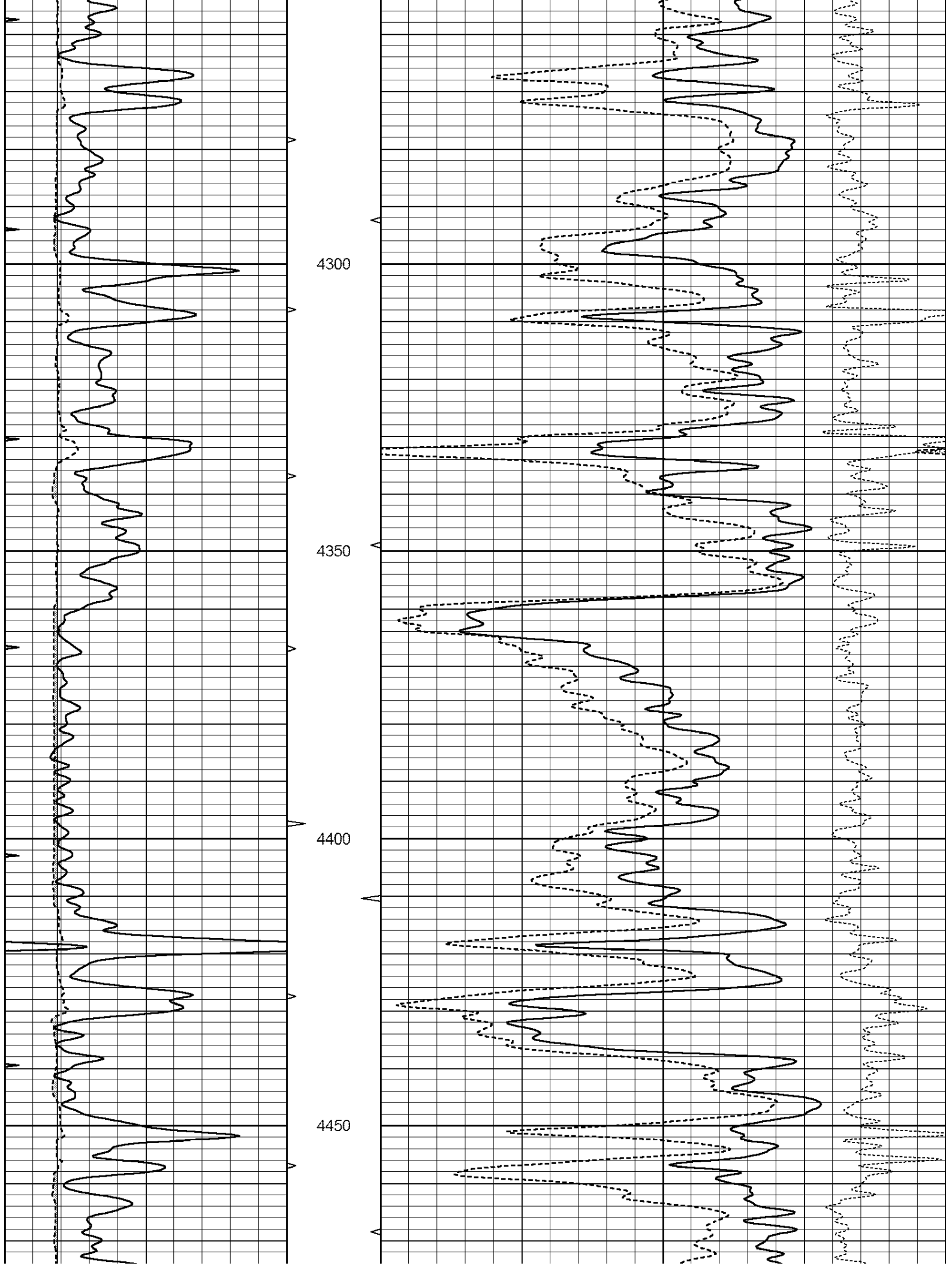
3900

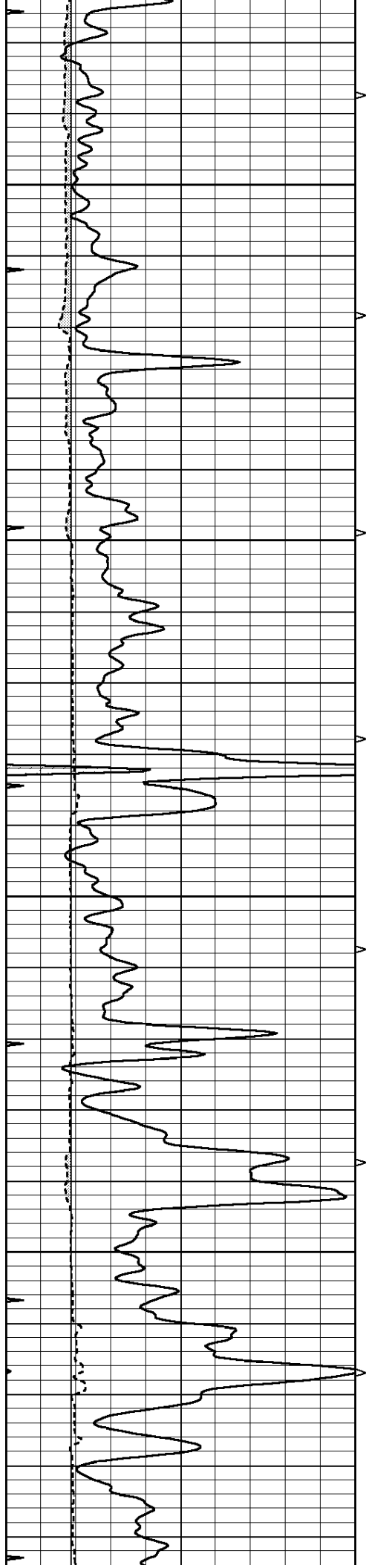
3950

4000







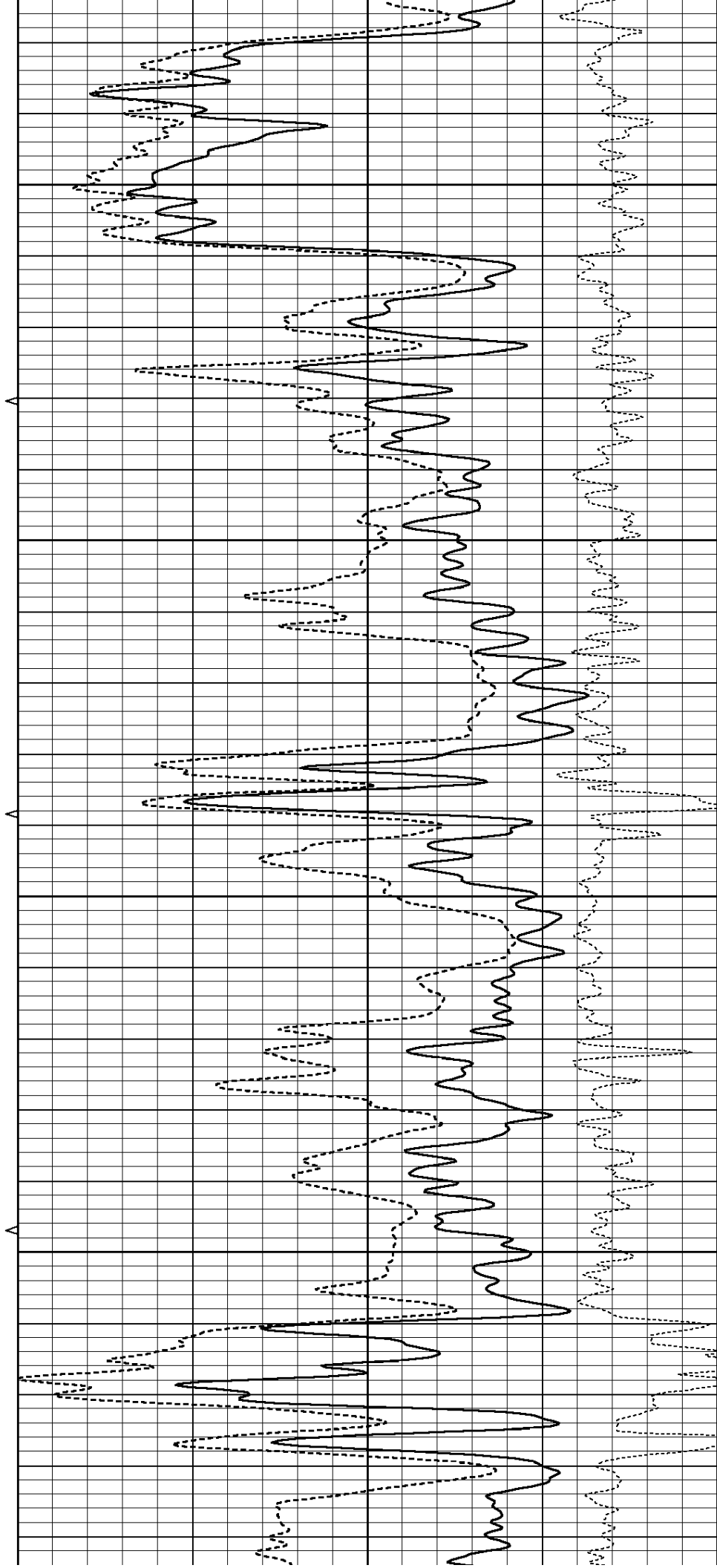


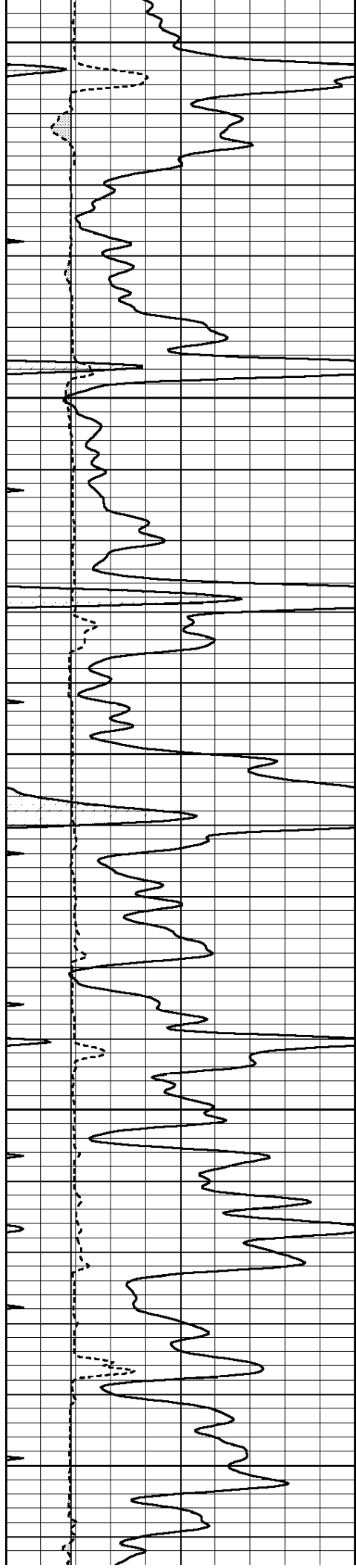
4500

4550

4600

4650





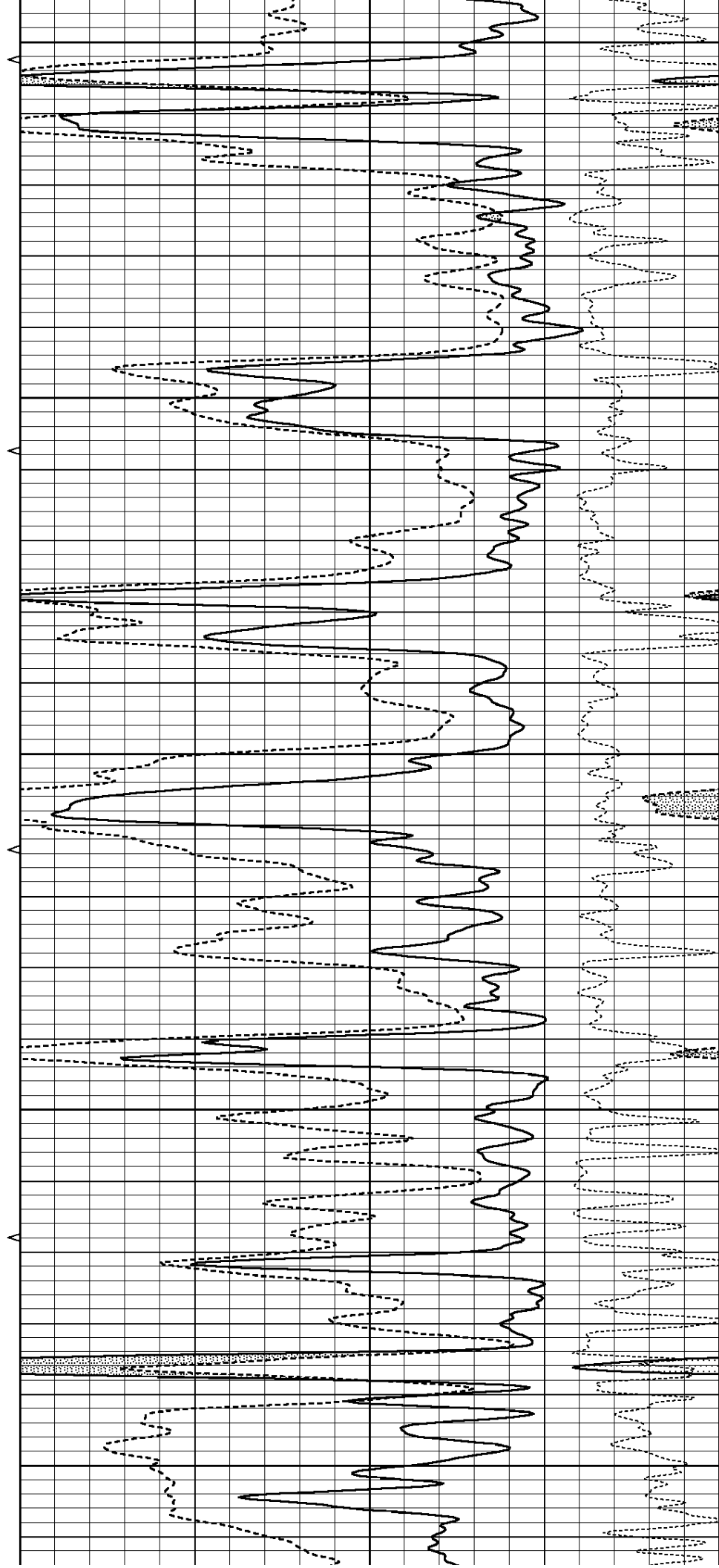
4700

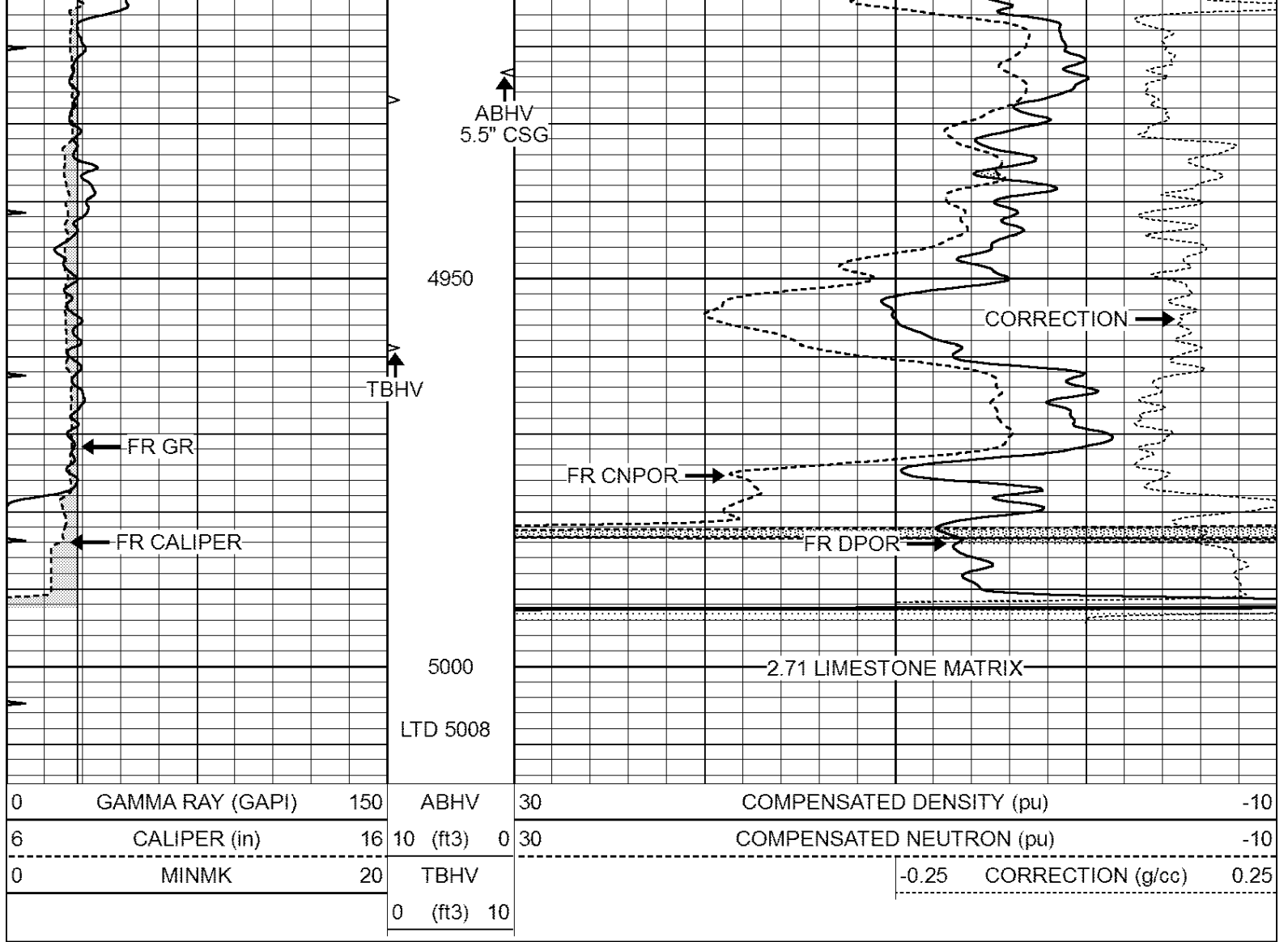
4750

4800

4850

4900

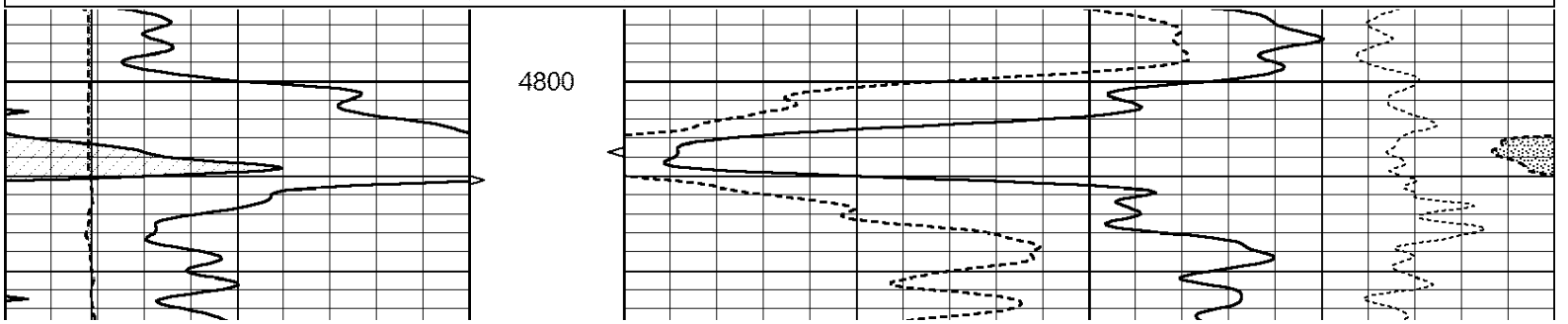


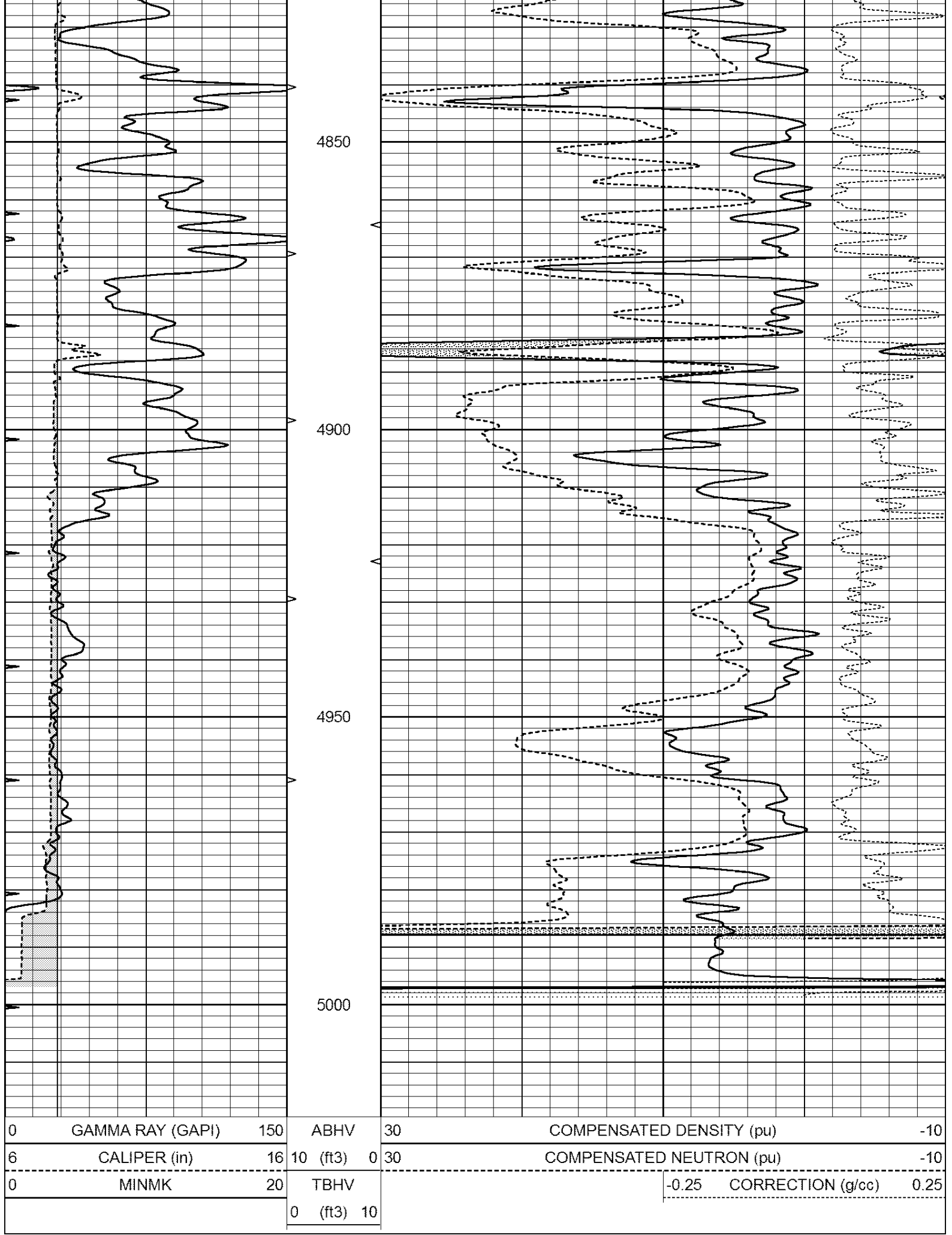


REPEAT SECTION

Database File: 010871ddn.db
 Dataset Pathname: pass2.3
 Presentation Format: den_neu
 Dataset Creation: Sat Apr 13 15:06:24 2013 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					





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: 010871ddn.db
 Dataset Pathname: pass3.3
 Dataset Creation: Sat Apr 13 16:03:21 2013 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		
		-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		

Compensated Density Calibration Report

Serial-Model: GEAR3-GEARHART
 Source / Verifier: 143 / 143
 Master Calibration Performed: Fri Jan 04 15:48:16 2013
 Before Survey Verification Performed:
 After Survey Verification Performed:

Master Calibration

	Density			Far Detector	Near Detector	
Magnesium	1.710	g/cc		935.36	501.55	cps
Aluminum	2.580	g/cc		209.32	357.01	cps
Spine Angle = 77.21				Density/Spine Ratio = 0.567		
	Size			Reading		
Small Ring	8.00	in		4.29	V	
Large Ring	14.00	in		6.24	V	

Before Survey Verification						
		<u>Target</u>		<u>Measured</u>		
		g/cc		g/cc		
		g/cc		g/cc		
		g/cc		g/cc		
After Survey Verification						
		<u>Target</u>		<u>Measured</u>		
		g/cc		g/cc		
		g/cc		g/cc		
		g/cc		g/cc		
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:		#8				
Tool Model:		OPEN				
Performed:		Mon Jun 13 16:56:43 2011				
Calibrator Value:		150.0	GAPI			
Background Reading:		0.0	cps			
Calibrator Reading:		175.0	cps			
Sensitivity:		0.8371	GAPI/cps			