



**Casedhole
Solutions**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company	SHELBY RESOURCES, LLC.	Company	SHELBY RESOURCES, LLC.
Well	ELSIE UNIT #1-3	Well	ELSIE UNIT #1-3
Field		Field	
County	PAWNEE	County	PAWNEE
State	KANSAS	State	KANSAS
Location:	AP1 # : 15-145-21812-00-00 2326' FSL & 168' FEL	Other Services DIL MEL/SON	
Permanent Datum	GROUND LEVEL	Elevation	
Log Measured From	KELLY BUSHING 11' A.G.L.	K.B. 2000 D.F. 1988 G.L. 1989	
Drilling Measured From	KELLY BUSHING		
SEC 3	TWP 22S	RGE 16W	
Date	11/12/15		
Run Number	ONE		
Depth Driller	4115		
Depth Logger	4116		
Bottom Logged Interval	4092		
Top Log Interval	3100		
Casing Driller	8 5/8" @ 1016		
Casing Logger	1015		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5500 PPM	
Density / Viscosity	9.5/61		
pH / Fluid Loss	9.0/8.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.70 @ 55F		
Rmt @ Meas. Temp	.52 @ 55F		
Rmc @ Meas. Temp	.84 @ 55F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.32 @ 117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	117F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	JEREMIE SCHWARTZ		

<<< 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 CASEDHOLE SOLUTIONS, HAYS, KS. (785) 628-6395
DIRECTIONS:
LARNED, KS. - SOUTH TO HWY 19 - 1 1/2 EAST TO 90TH RD. - 1/4 NORTH - WEST INTO

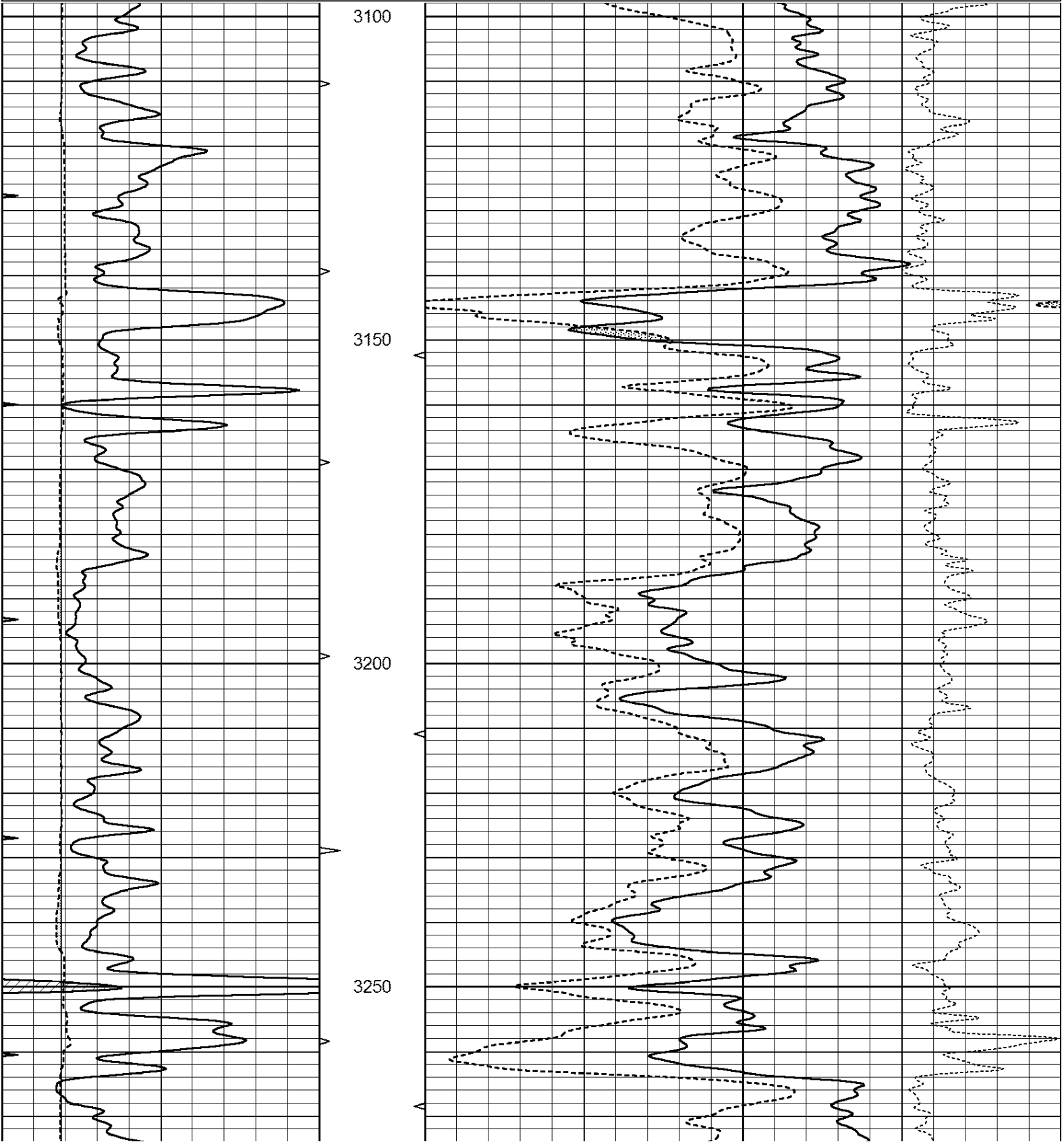


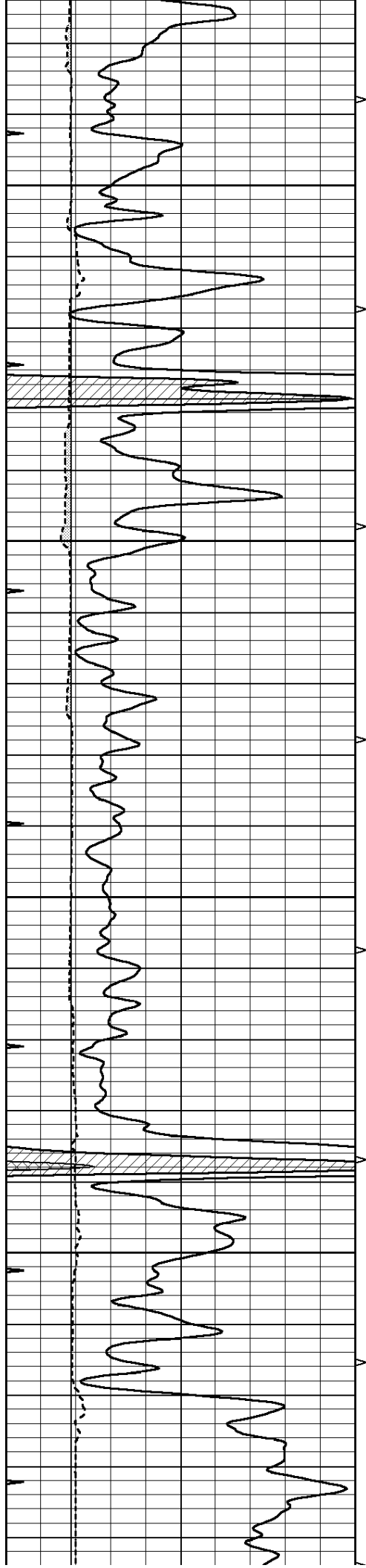
**Casedhole
Solutions**

MAIN SECTION

Database File: 30882ddn.db
Dataset Pathname: pass3.1
Presentation Format: den_neu
Dataset Creation: Thu Nov 12 05:25:31 2015 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		



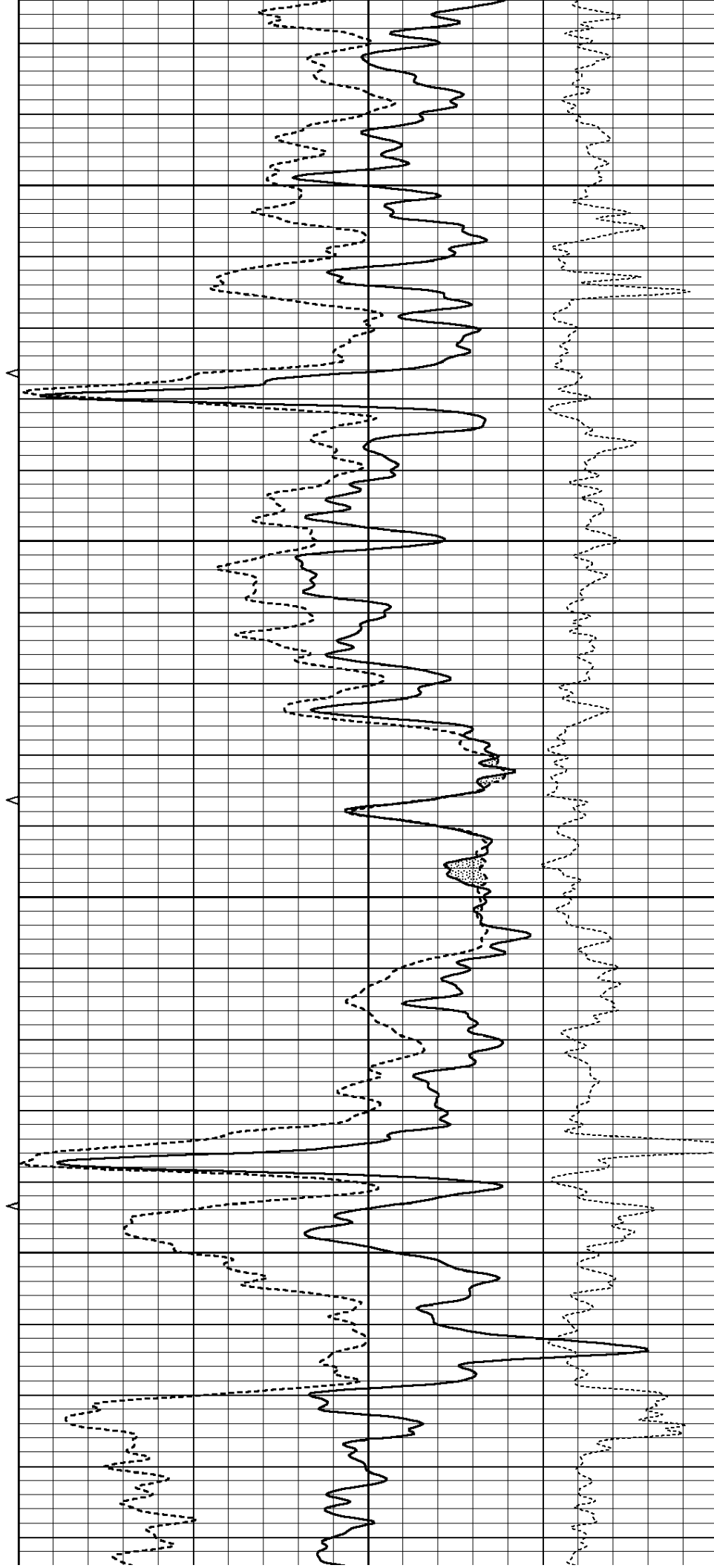


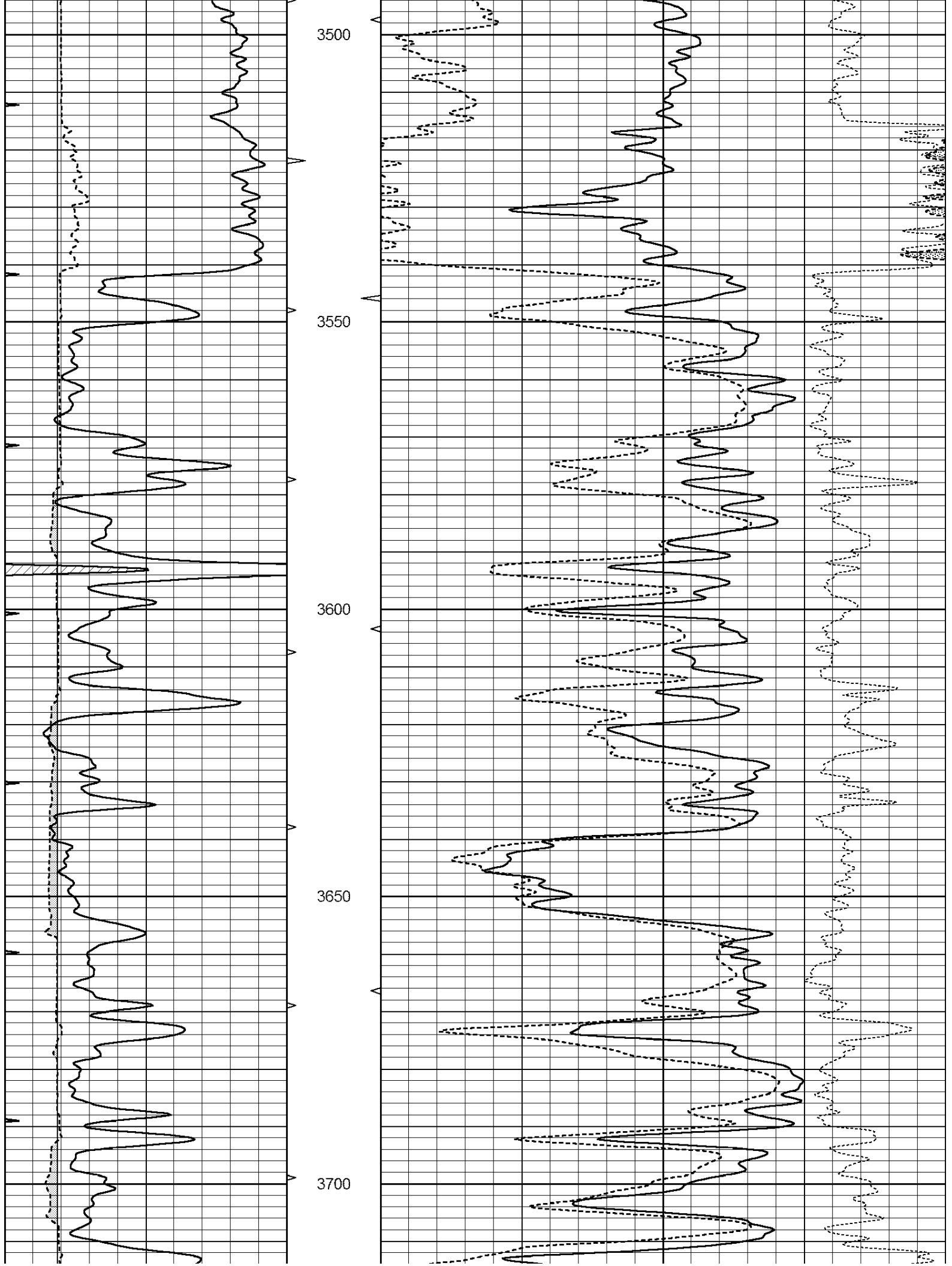
3300

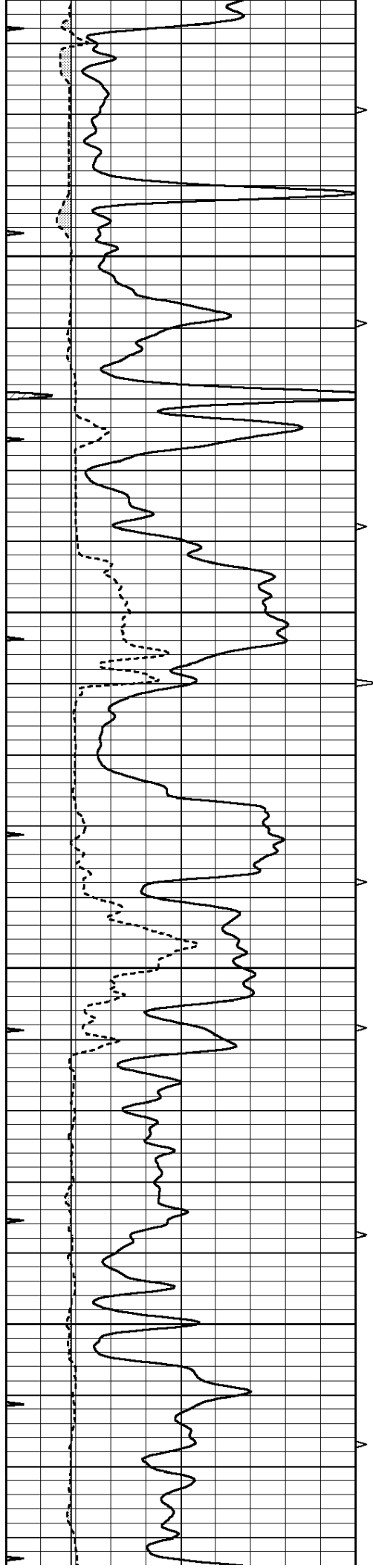
3350

3400

3450





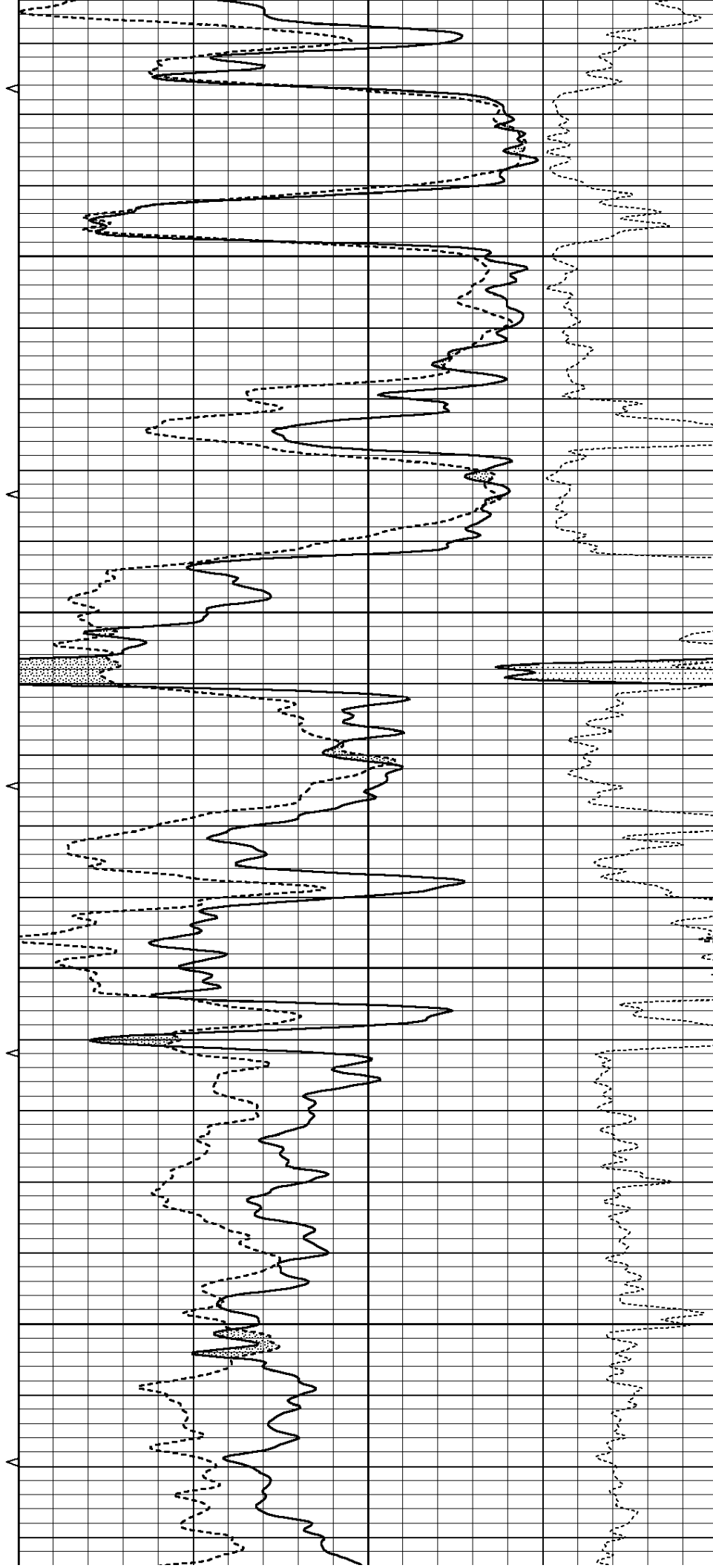


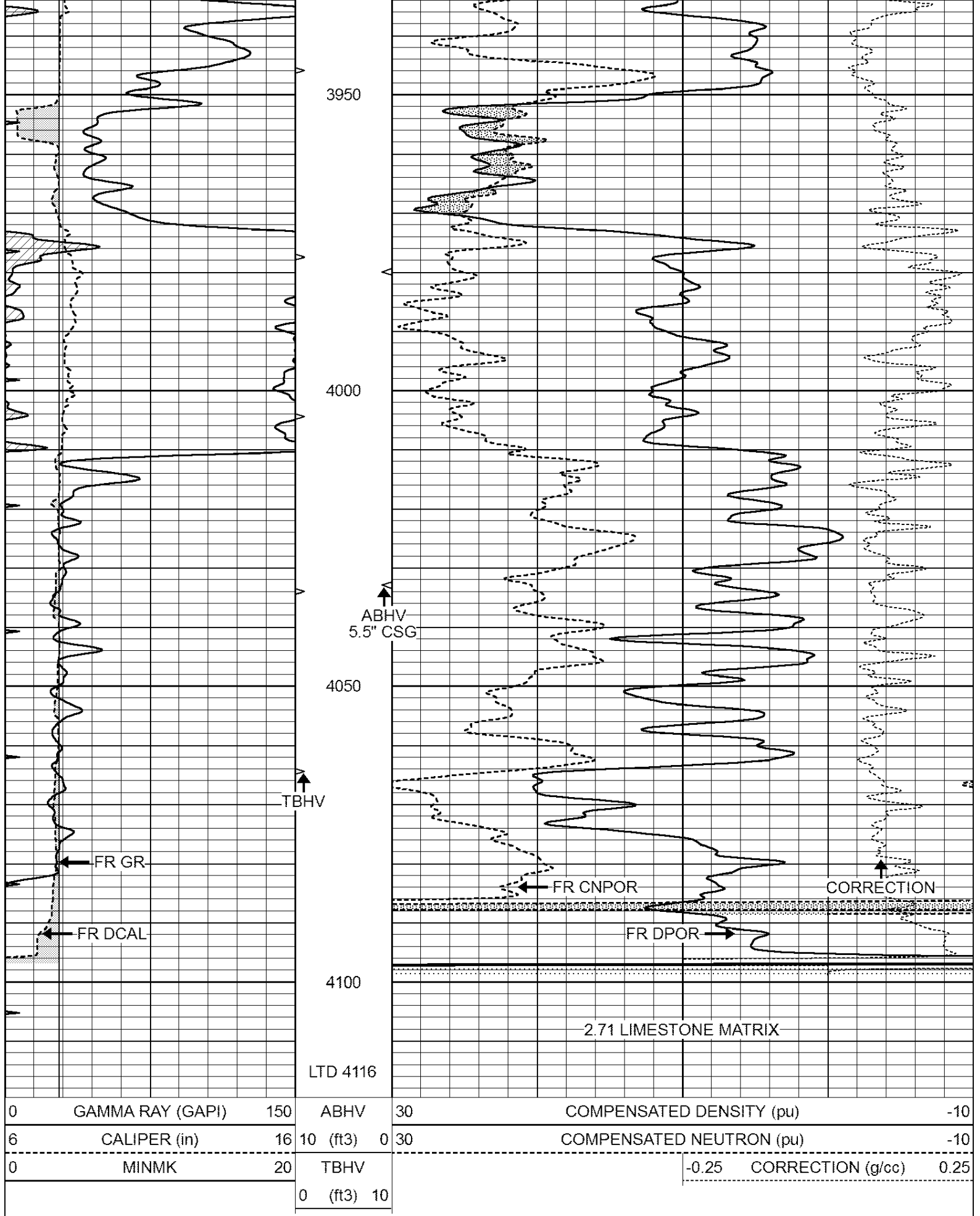
3750

3800

3850

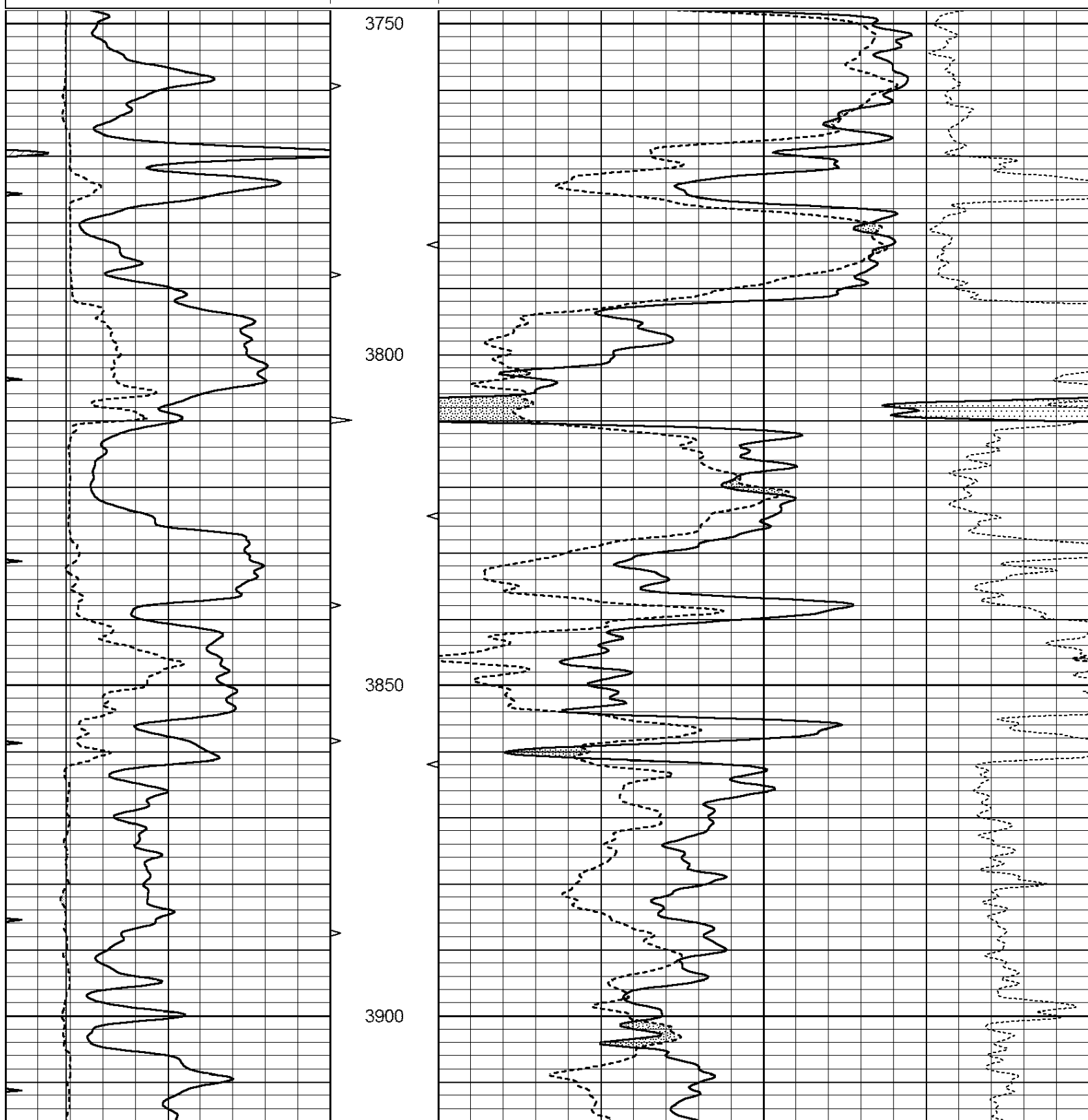
3900

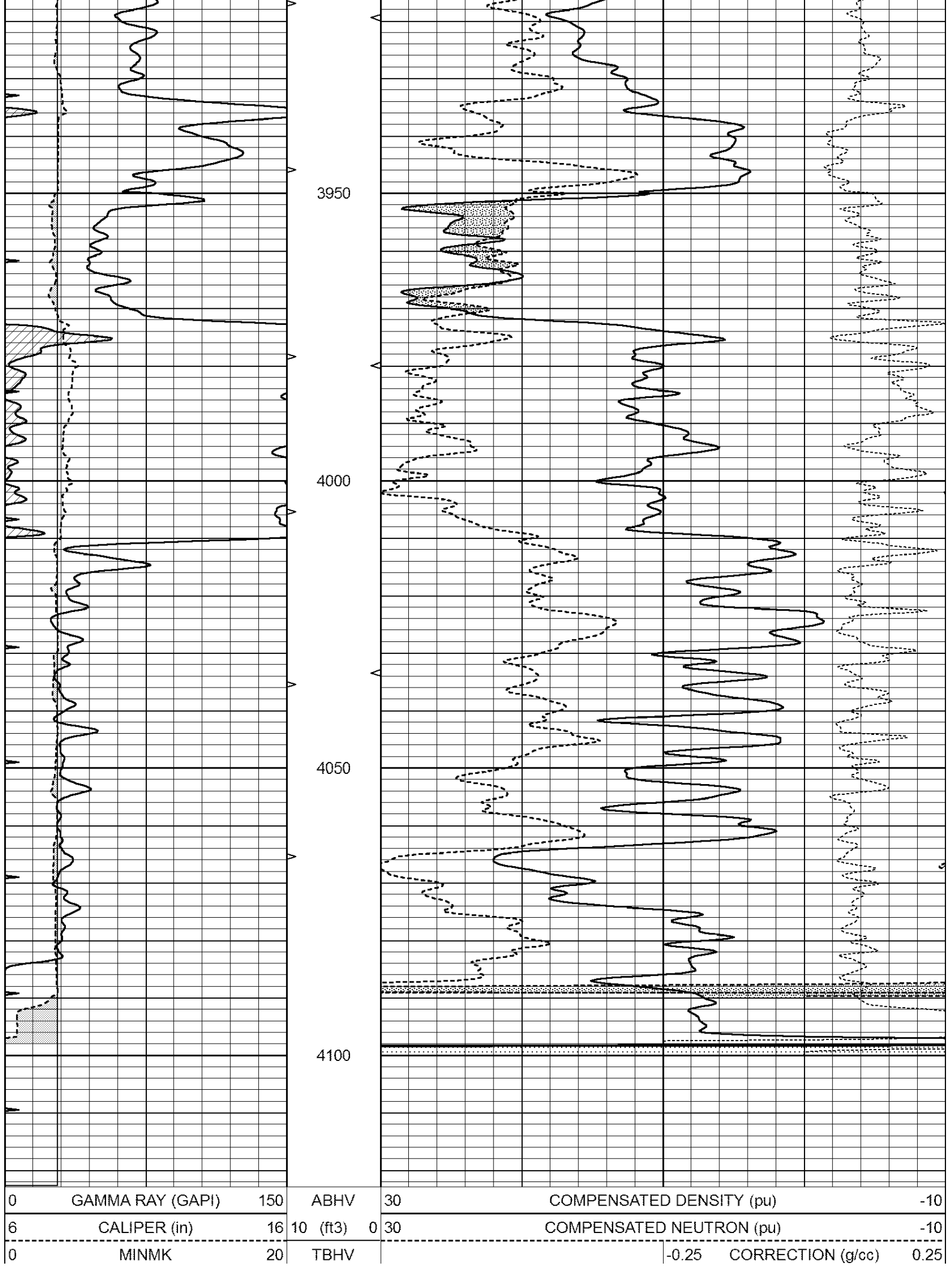




Database File: 30882ddn.db
 Dataset Pathname: pass2.4
 Presentation Format: den_neu
 Dataset Creation: Thu Nov 12 06:49:30 2015
 Charted by: Depth in Feet scaled 1:240

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					





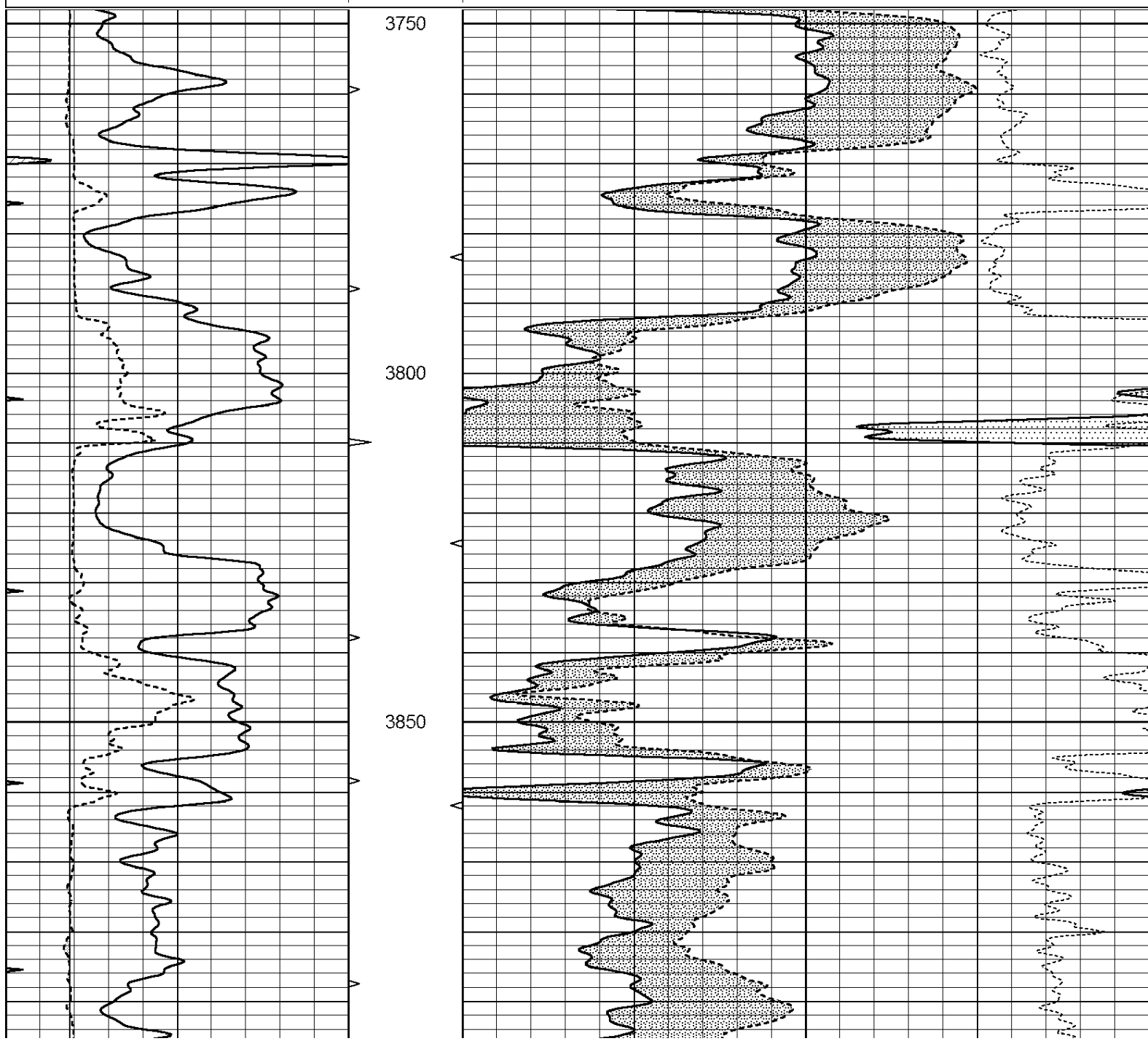


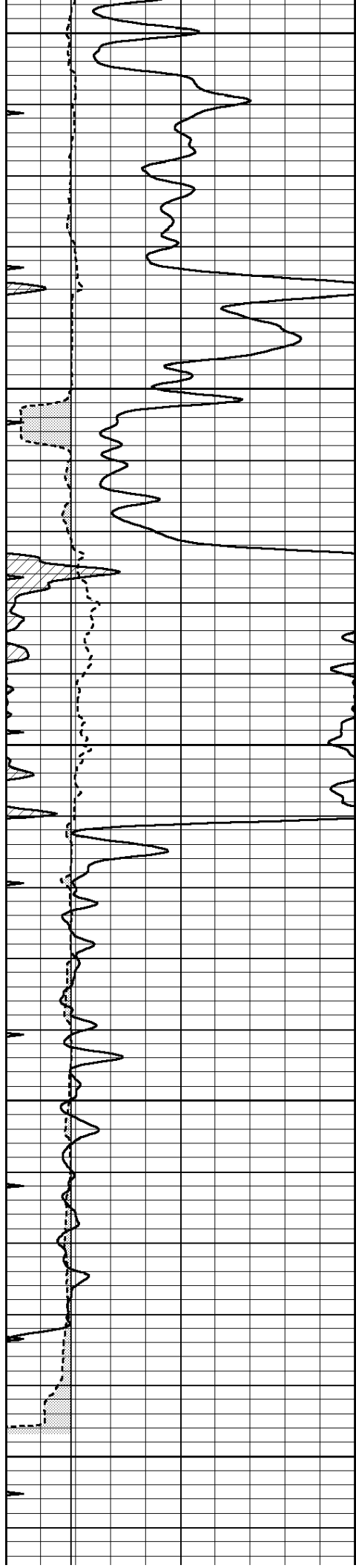
**Casedhole
Solutions**

DOLOMITE MATRIX

Database File: 30882ddn.db
 Dataset Pathname: pass2.4.1
 Presentation Format: den_neu
 Dataset Creation: Thu Nov 12 06:54:09 2015
 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			





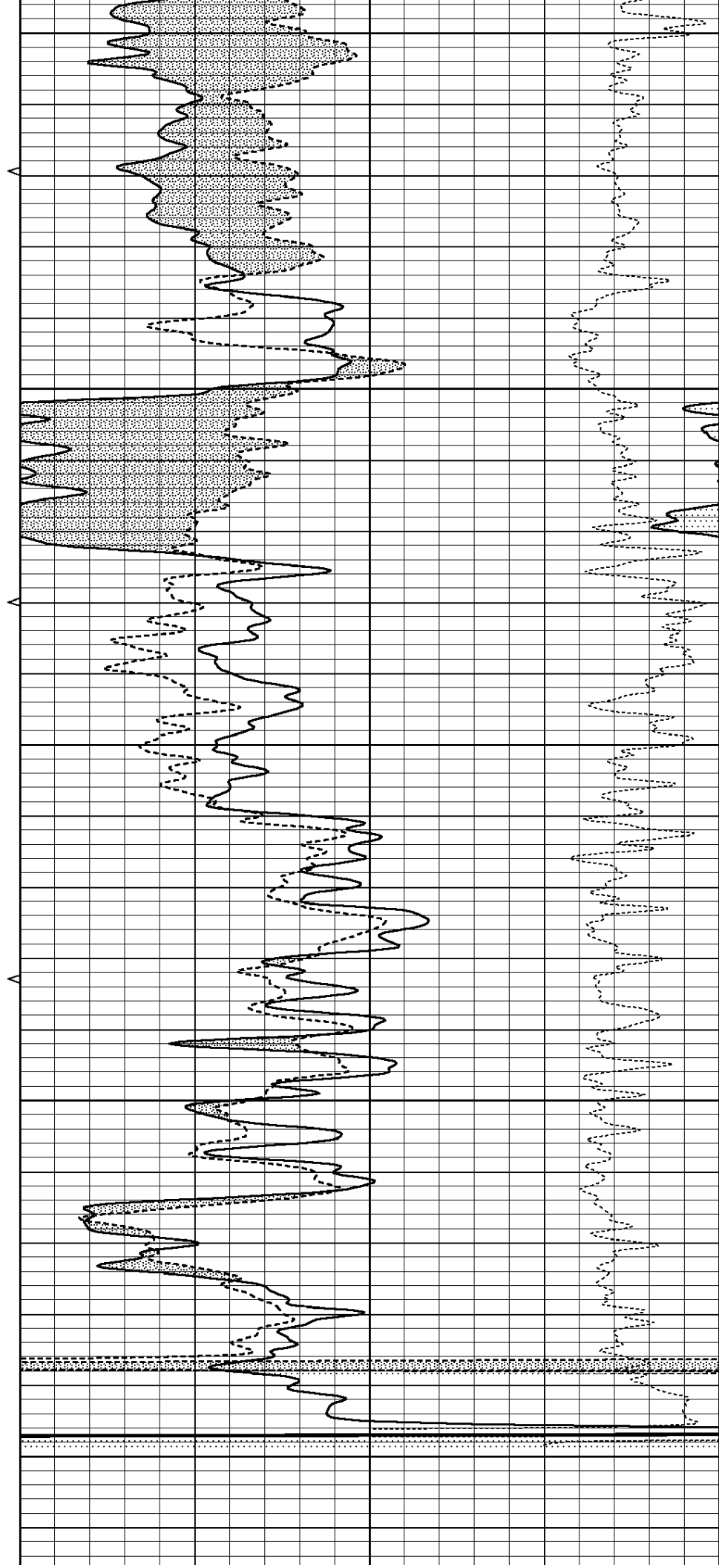
3900

3950

4000

4050

4100



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:	30882ddn.db					
Dataset Pathname:	pass2.2					
Dataset Creation:	Thu Nov 12 05:24:42 2015 by Calc Open-Cased 090629					

Dual Induction Calibration Report						
-----------------------------------	--	--	--	--	--	--

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Sun May 10 19:54:09 2015
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	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-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		

Compensated Density Calibration Report						
--	--	--	--	--	--	--

Serial-Model:	GEAR5-GEARHART
Source / Verifier:	/
Master Calibration Performed:	Thu Aug 27 11:05:57 2015
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration						
Density		Far Detector		Near Detector		

Magnesium	1.710	g/cc	798.83	465.02	cps
Aluminum	2.570	g/cc	178.16	323.19	cps
Spine Angle = 76.37			Density/Spine Ratio = 0.557		
	Size		Reading		
Small Ring	7.00	in	1.47	V	
Large Ring	14.00	in	3.01	V	
Before Survey Verification					
	Target		Measured		
		g/cc			g/cc
		g/cc			g/cc
		g/cc			g/cc
After Survey Verification					
	Target		Measured		
		g/cc			g/cc
		g/cc			g/cc
		g/cc			g/cc
Compensated Neutron Calibration Report					
Serial Number:		6I			
Tool Model:		G			
CALIBRATION					
Detector		Readings		Target	
Short Space		1.00	cps	1.00	cps
Long Space		1.00	cps	1.00	cps
				Normalization	
				1.0000	
				1.0000	
PRE-SURVEY VERIFICATION					
Detector		Readings		Measured	
1) Short Space		cps			
Long Space		cps		pu	
2) Short Space		cps			
Long Space		cps		pu	
3) Short Space		cps			
Long Space		cps		pu	
POST-SURVEY VERIFICATION					
Detector		Readings		Measured	
1) Short Space		cps			
Long Space		cps		pu	
2) Short Space		cps			
Long Space		cps		pu	
3) Short Space		cps			
Long Space		cps		pu	
Gamma Ray Calibration Report					
Serial Number:		GR6			
Tool Model:		OPEN			
Performed:		Fri Sep 04 01:07:14 2015			

Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.4500	GAPI/cps