



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company SHELBY RESOURCES LLC.
Well ARKANSAS RIVER UNIT #1-3
Field
County PAWNEE
State KANSAS

Company SHELBY RESOURCES LLC.
Well ARKANSAS RIVER UNIT #1-3
Field
County PAWNEE State KANSAS

Location: API # : 15-145-21792-0000
2206' FNL & 1382' FEL
SEC 3 TWP 22S RGE 16W
Permanent Datum GROUND LEVEL Elevation 1986
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
SONIC
Elevation
K.B. 1999
D.F. 1997
G.L. 1986

Date	12/14/14		
Run Number	ONE		
Depth Driller	4100		
Depth Logger	4101		
Bottom Logged Interval	4077		
Top Log Interval	3100		
Casing Driller	8 5/8" @ 1039		
Casing Logger	1038		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5200 PPM	
Density / Viscosity	9.2/52		
pH / Fluid Loss	11.0/7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.80 @ 60F		
Rmt @ Meas. Temp	.60 @ 60F		
Rmc @ Meas. Temp	.96 @ 60F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.43 @ 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	JEREMY SCHWARTZ		

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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

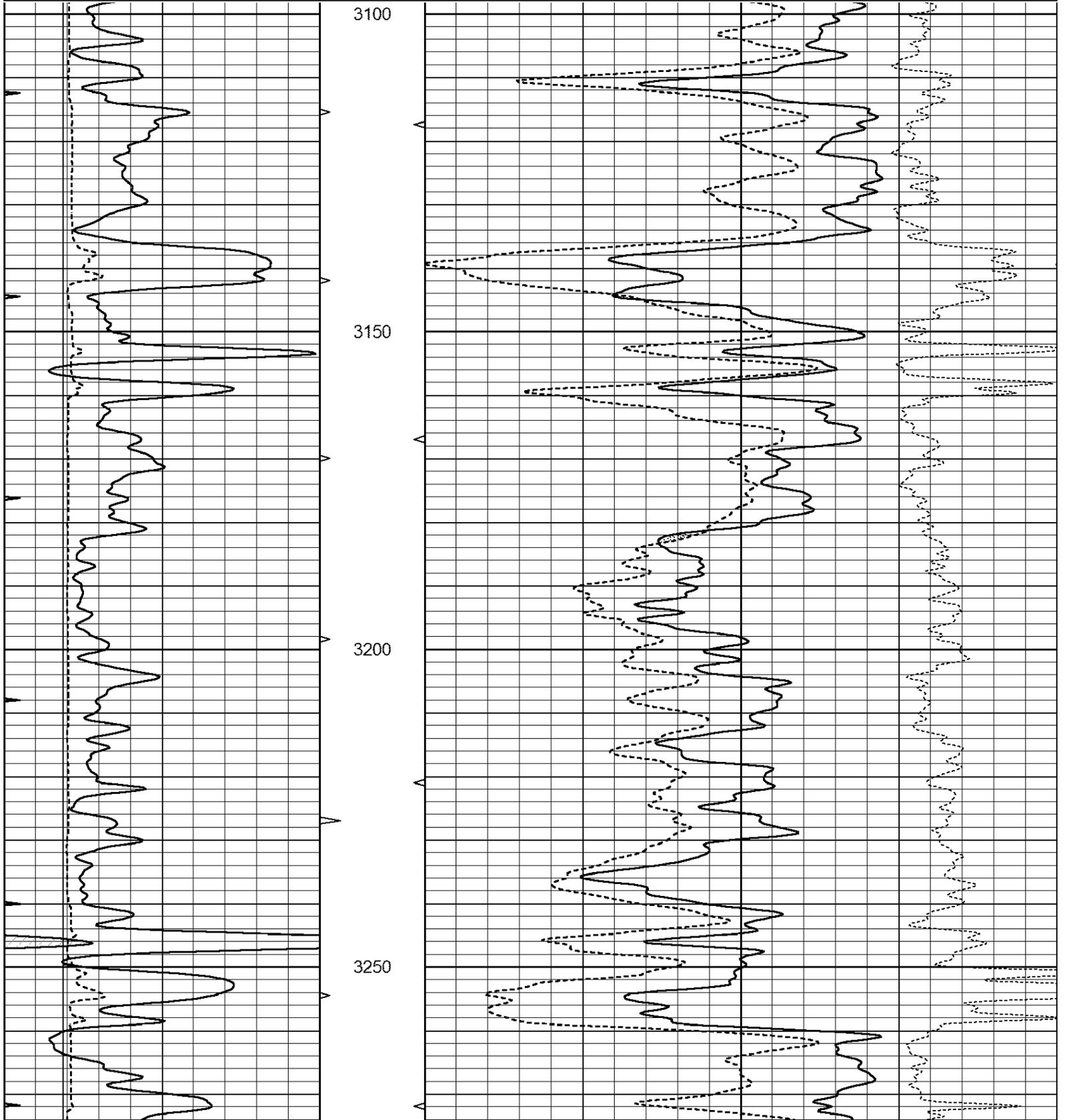
THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
LARNED, KS. - SOUTH TO HWY 19 - 2 EAST - 1 NORTH - WEST INTO

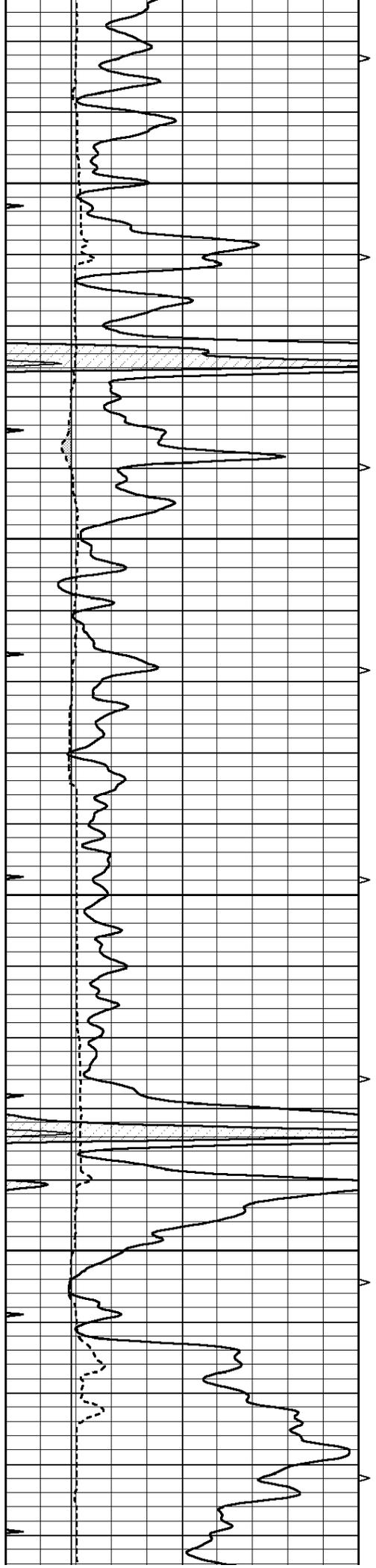


MAIN SECTION

Database File: 26418ddn.db
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 Presentation Format: den_neu
 Dataset Creation: Sun Dec 14 13:14:13 2014 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		



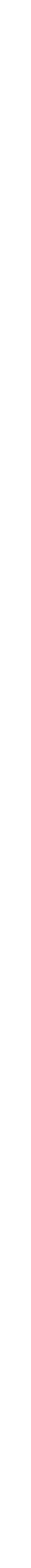
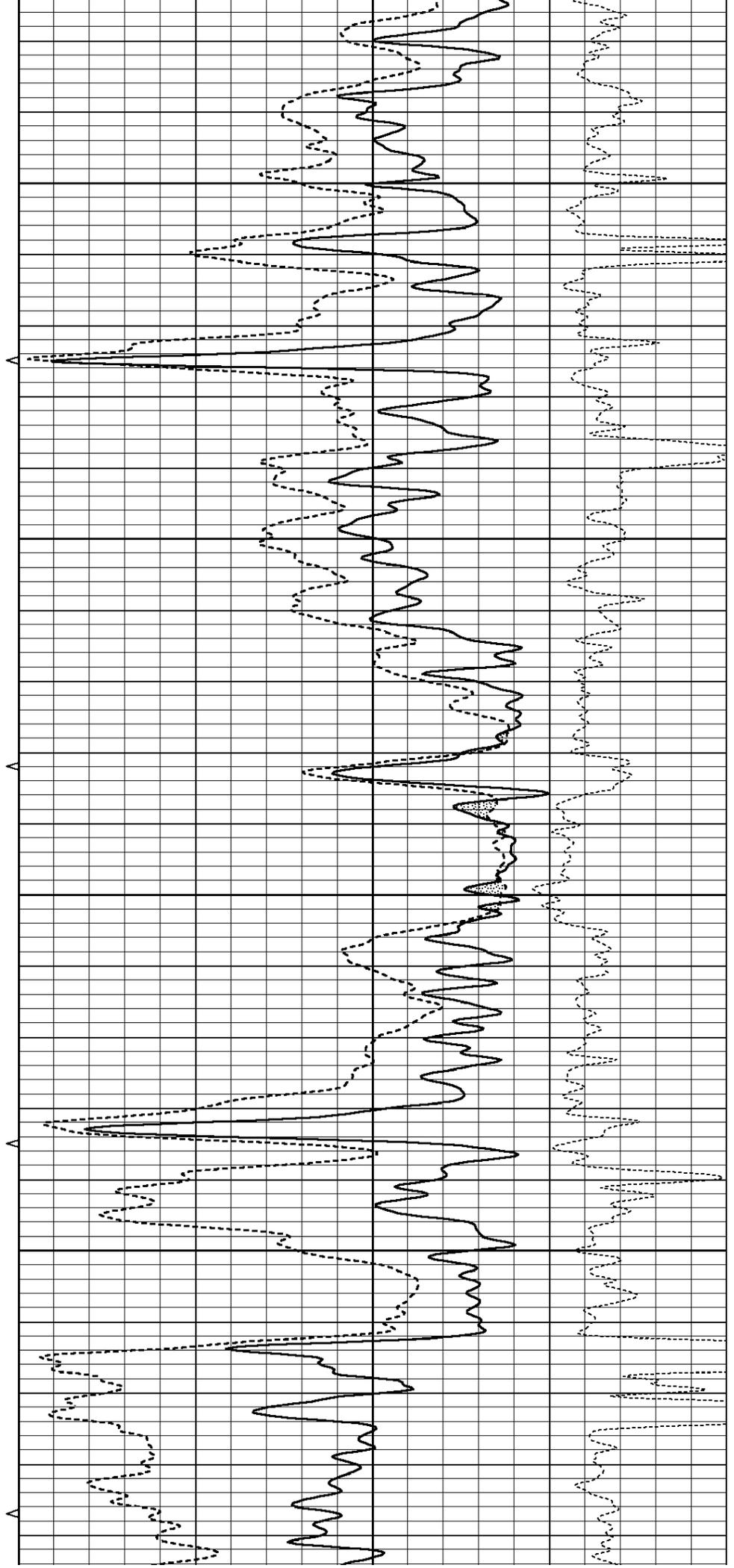


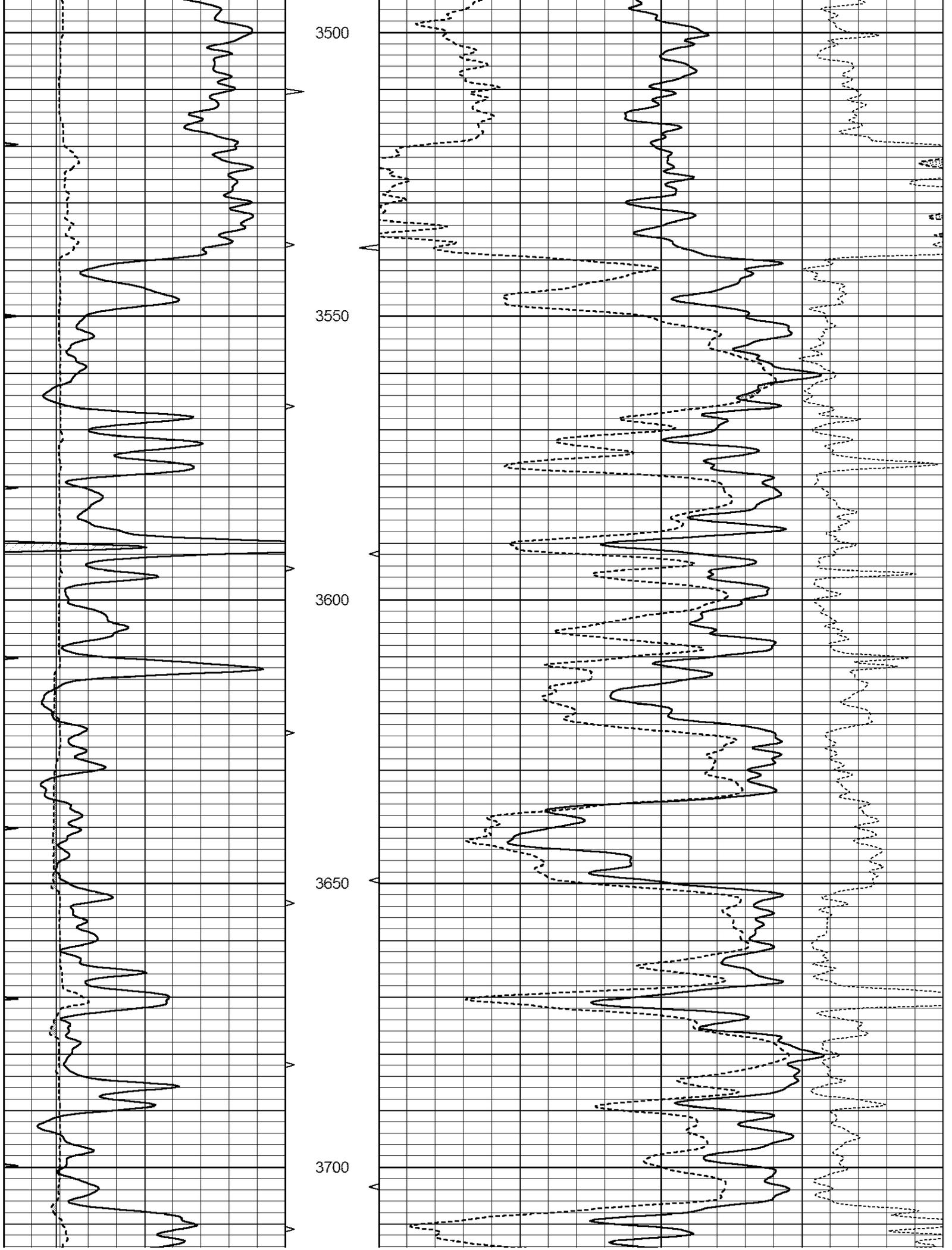
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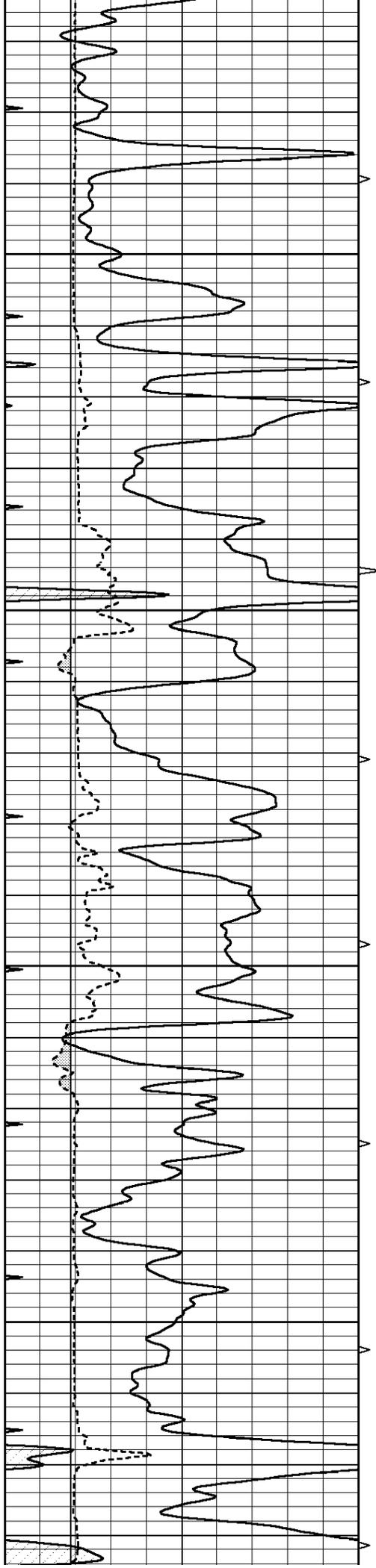
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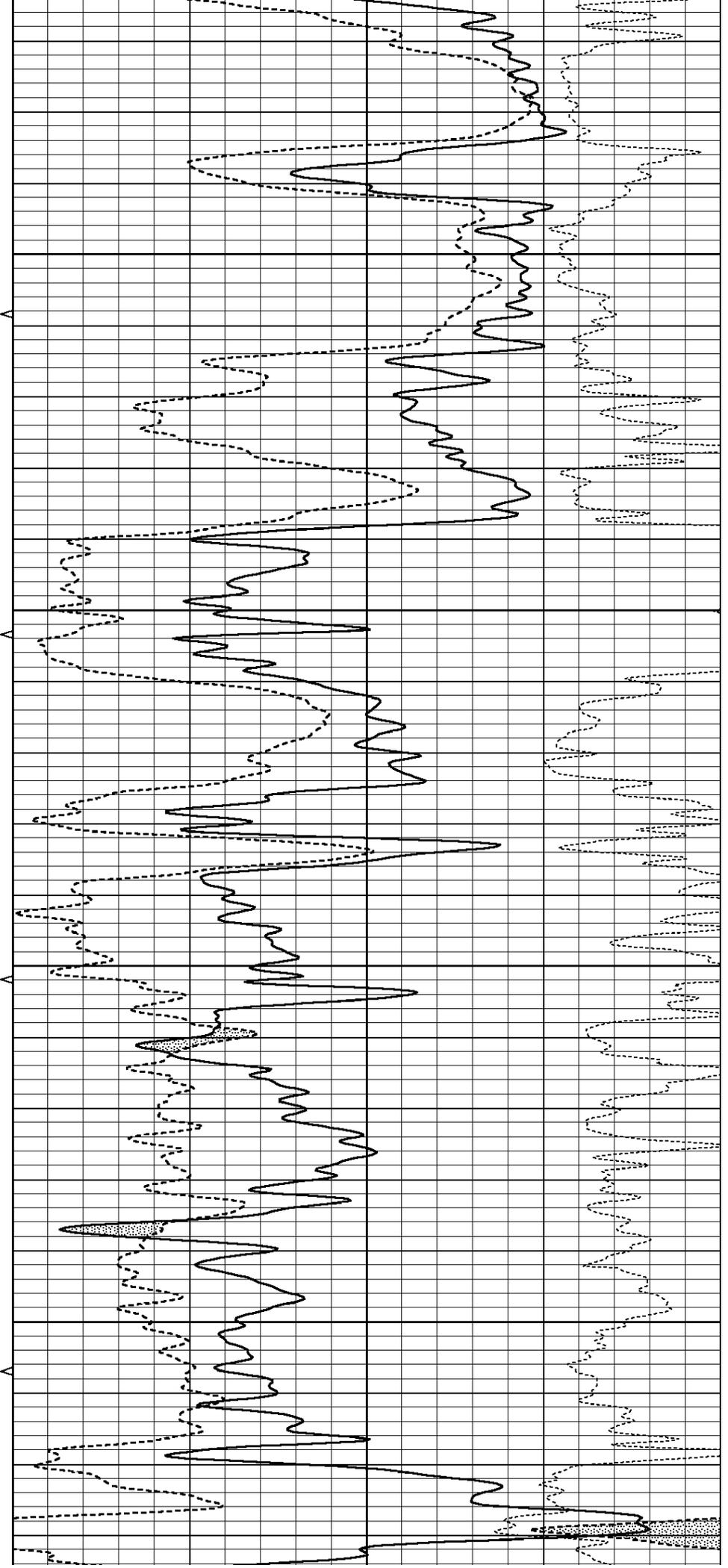


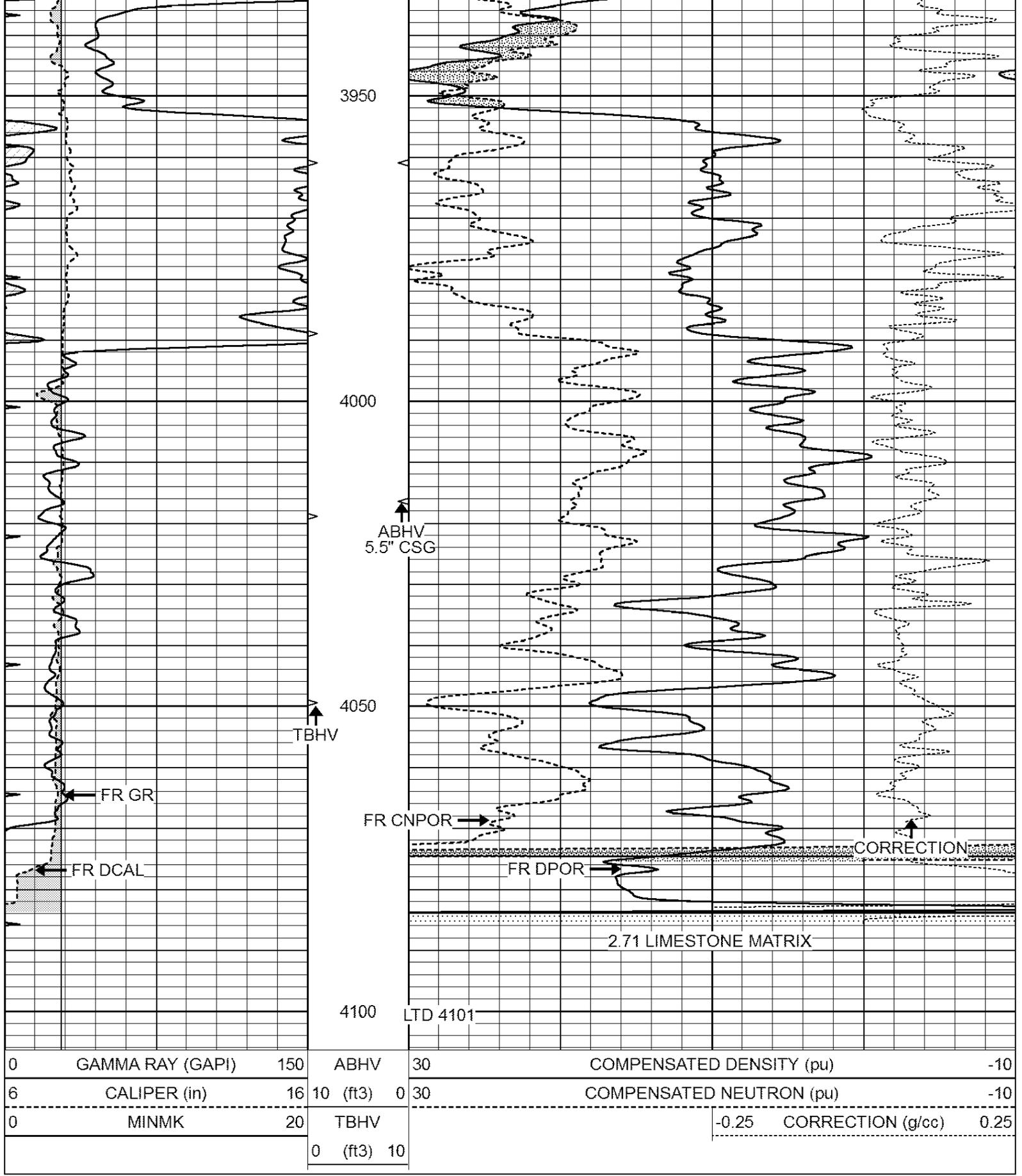
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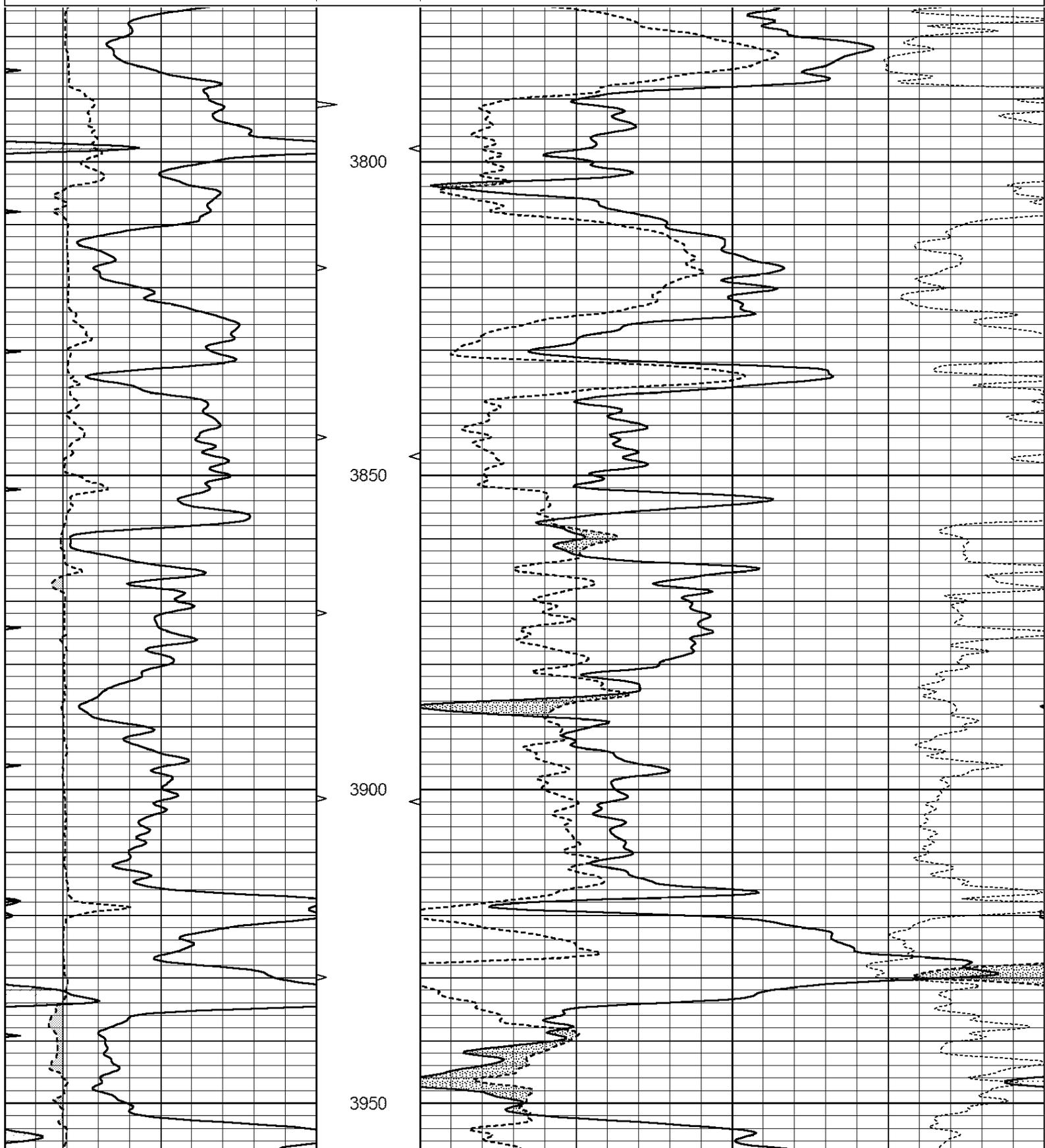
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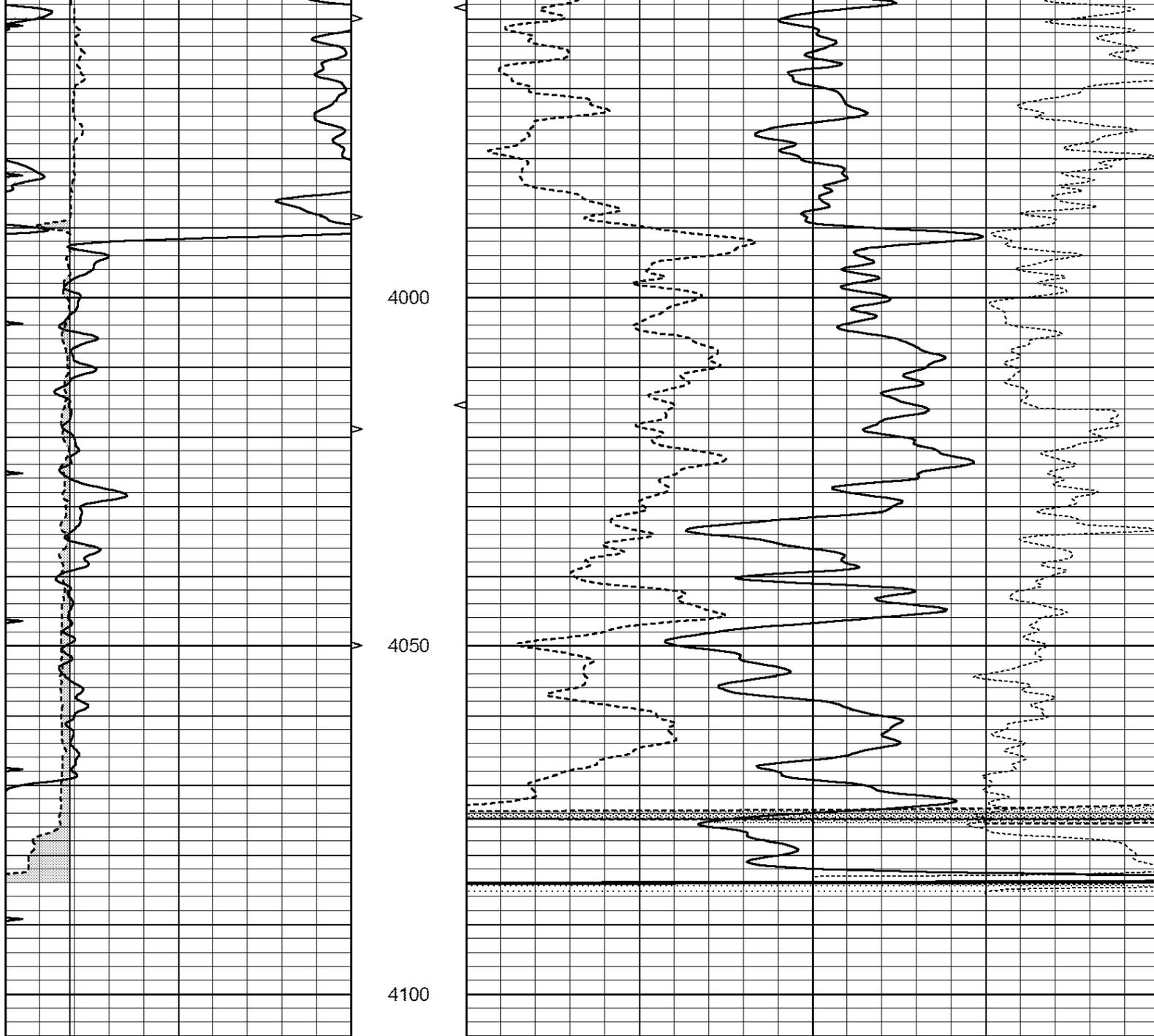




Database File: 26418ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Sun Dec 14 12:49:39 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

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	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

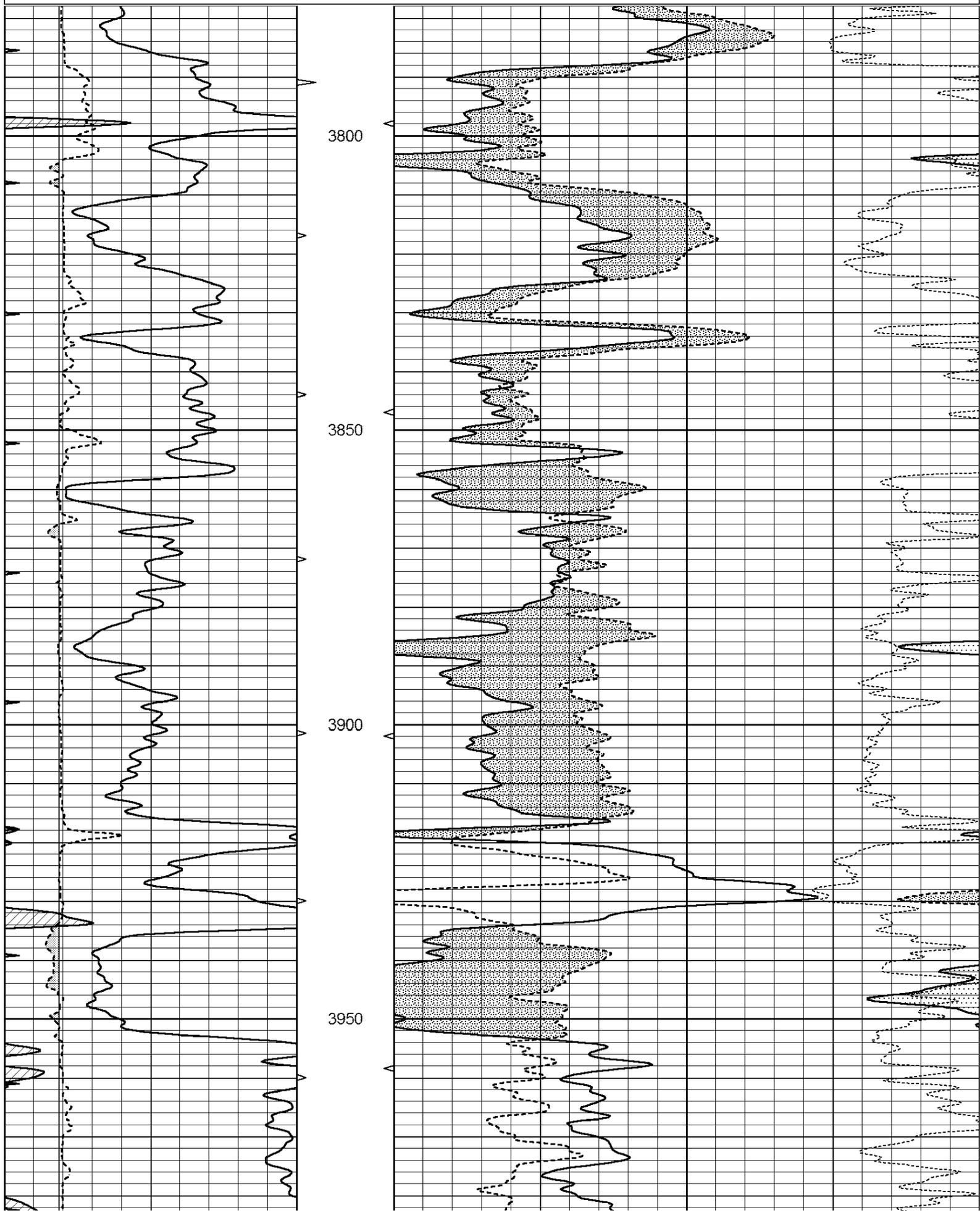


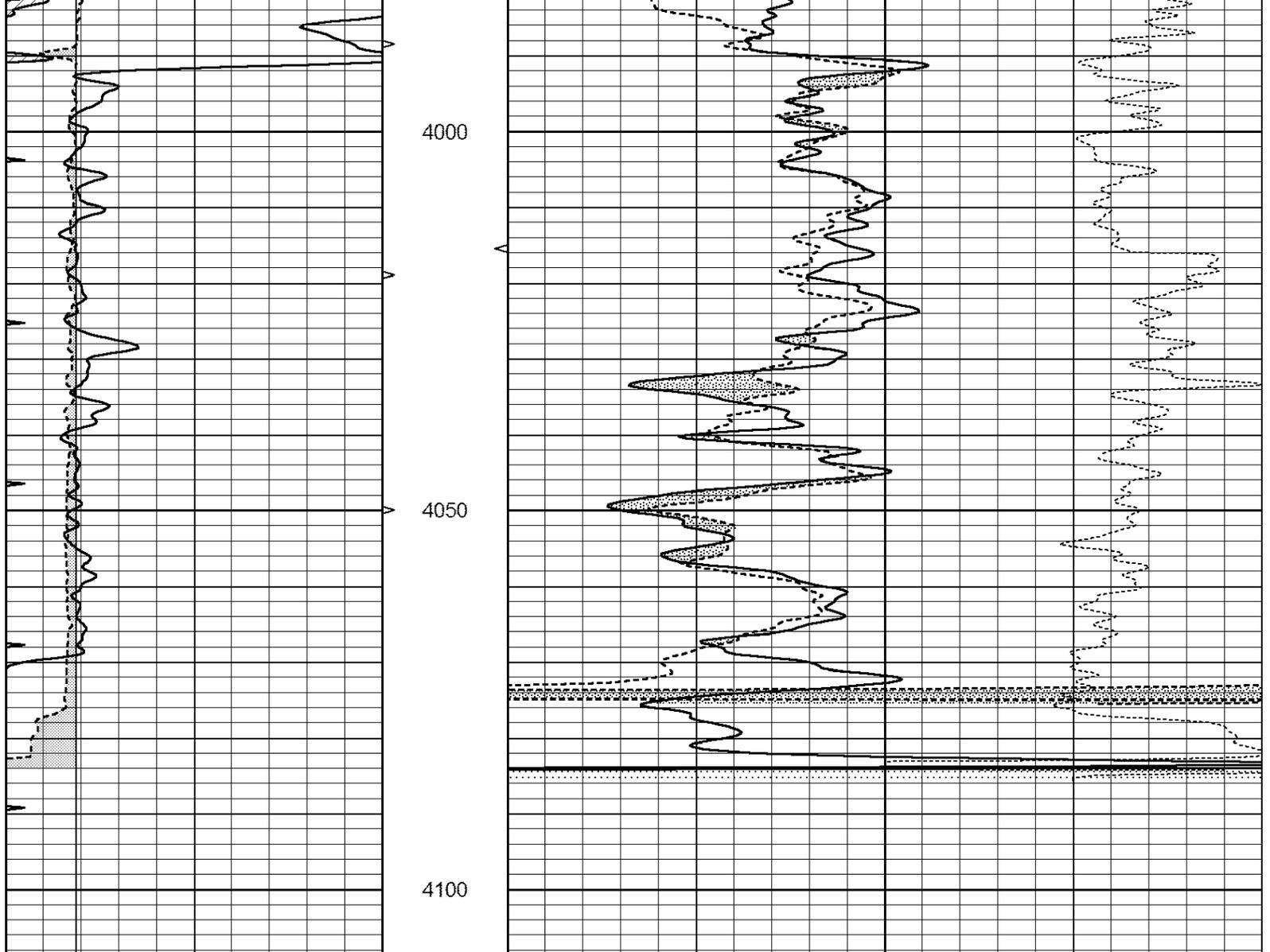
DOLOMITE MATRIX

Database File: 26418ddn.db
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 Presentation Format: den_neu
 Dataset Creation: Sun Dec 14 12:47:35 2014
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
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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: 26418ddn.db
 Dataset Pathname: pass2.1
 Dataset Creation: Sun Dec 14 12:49:39 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Sun Aug 17 08:09:53 2014
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings			V	References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.015	0.648		V	0.000	400.000 mmho/m	620.000	-2.000
Medium	0.029	0.796		V	0.000	464.000 mmho/m	590.000	-16.000
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:	GEAR3-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Tue Oct 28 11:14:59 2014
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration						
	Density		Far Detector	Near Detector		
Magnesium	1.710	g/cc	881.29	468.35	cps	
Aluminum	2.580	g/cc	210.51	354.56	cps	
Spine Angle = 79.00			Density/Spine Ratio = 0.596			
	Size		Reading			
Small Ring	8.00	in	4.29	V		
Large Ring	14.00	in	6.24	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	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:	GR6
Tool Model:	OPEN
Performed:	Wed Dec 10 11:09:24 2014
Calibrator Value:	150.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	276.0 cps
Sensitivity:	0.8000 GAPI/cps