SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company BUFFALO RESOURCES, LLC.
Well NEY #2-23
Field ELASSER
County RUSSELL State KANSAS

Location: API # : 15-167-23597-0000

335' FNL & 1490' FEL, NE/4

SEC 23 TWP 12S RGE 15W

Other Services
CDL/CNL
MEL/SONIC

Permanent Datum GROUND LEVEL Elevation 1681
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1689
D.F. 1687
G.L. 1681

Company BUFFALO RESOURCES, LLC.
Well NEY #2-23
Field ELASSER
County RUSSELL
State KANSAS

Date	9/29/09		
Run Number	ONE		
Depth Driller	3200		
Depth Logger	3201		
Bottom Logged Interval	3199		
Top Log Interval	00		
Casing Driller	8 5/8"@355'		
Casing Logger	350		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,200 PPM	
Density / Viscosity	9.2/52		
pH / Fluid Loss	8.4/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.520@82F		
Rmf @ Meas. Temp	.390@82F		
Rmc @ Meas. Temp	.624@82F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.391@109F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	12:15 P.M.		
Maximum Recorded Temperature	109F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	CURTIS COVEY	DARON PATTERSON	

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Comments

THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395

DIRECTIONS

RUSSELL, KS.& I-70, 9N. ON HWY 281 TO MELLARD RD., 3W., 1/2N.,2 1/4W. TO STOP SIGN, JOG S. W. INTO GATE

MAIN SECTION

SUPERIOR WELL SERVICES

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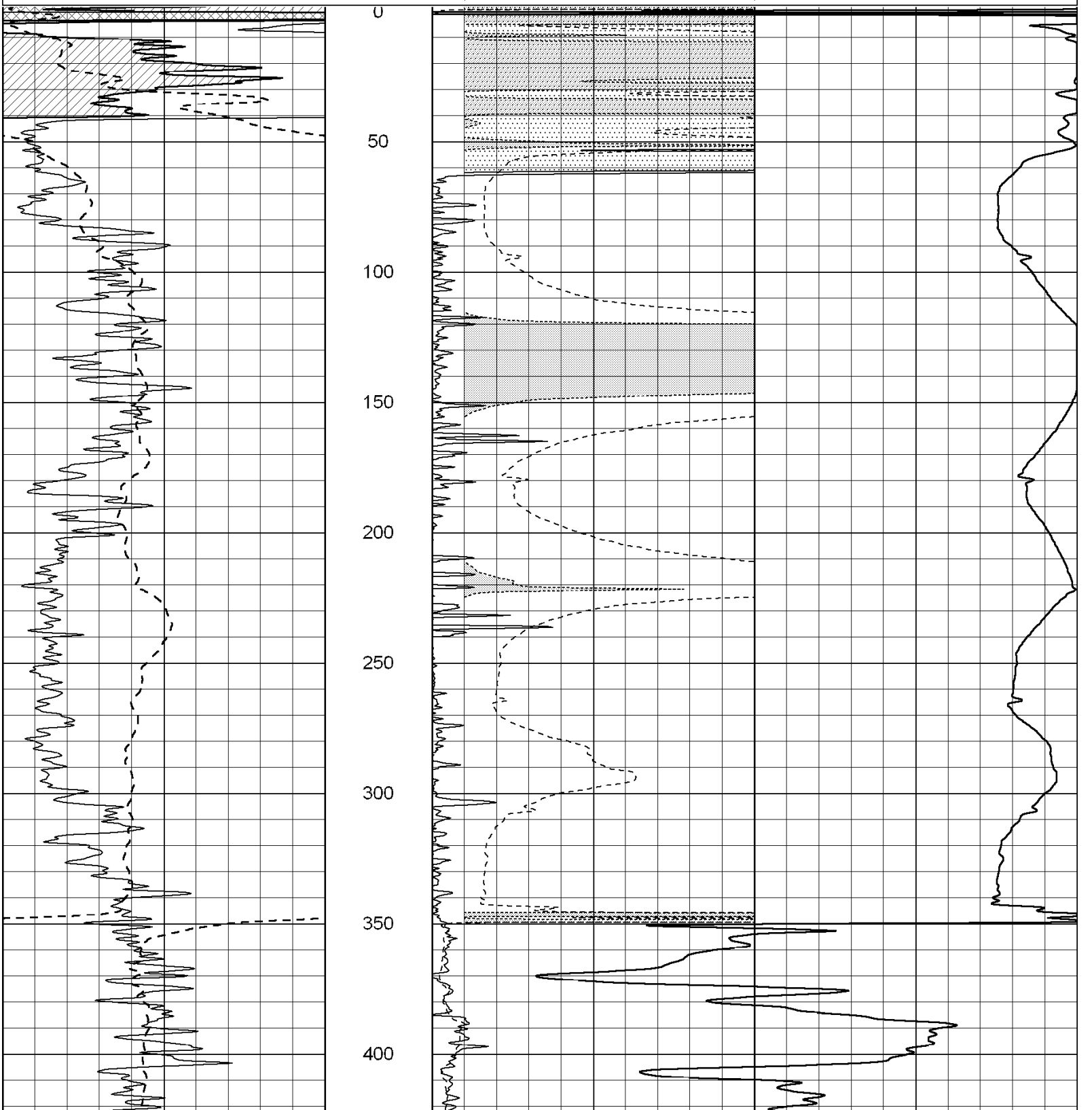
Hays,
Kansas

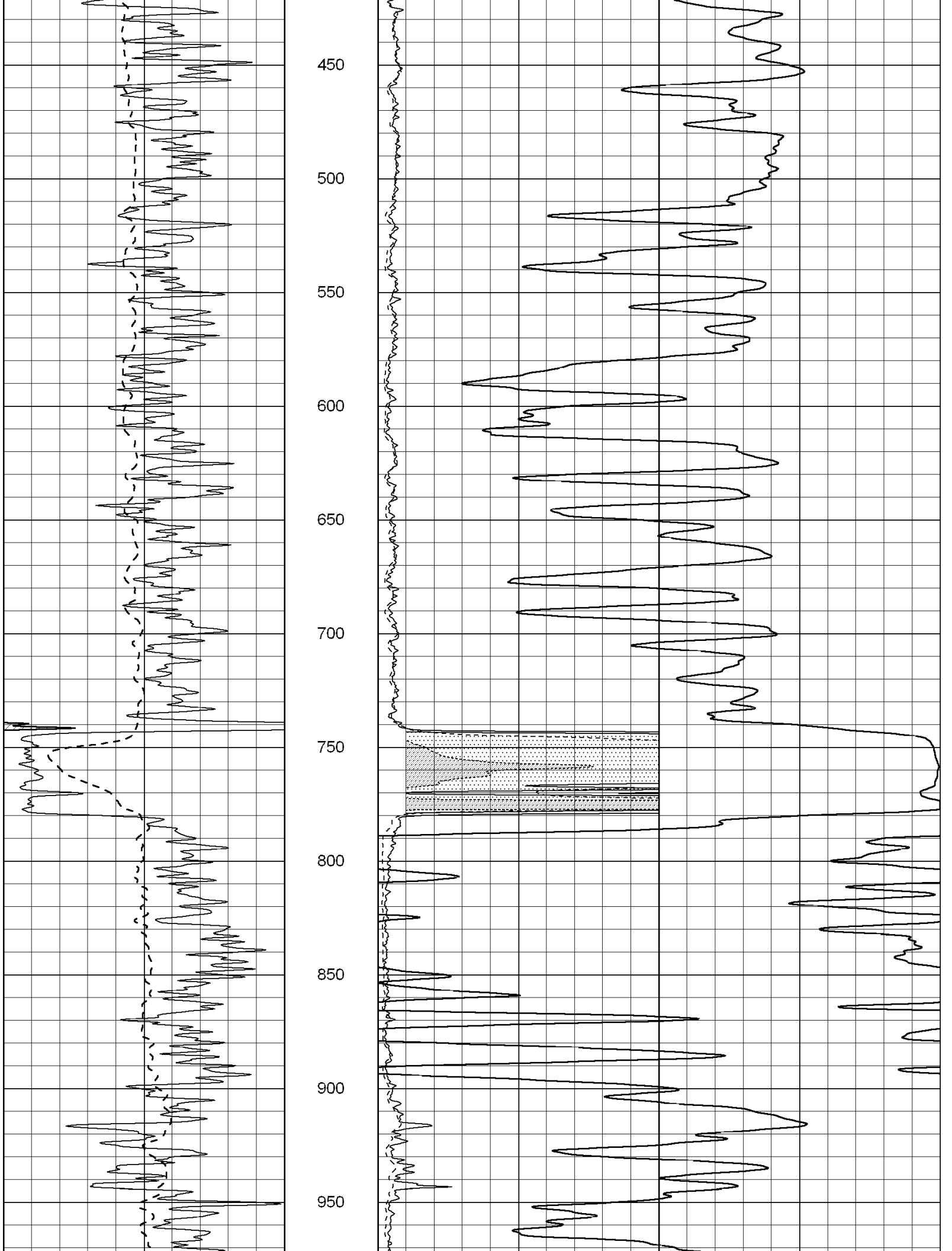
Kansas

Database File:	004352ddn.db
Dataset Pathname:	pass3.11
Presentation Format:	dil2
Dataset Creation:	Tue Sep 29 14:20:20 2009
Charted by:	Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho-m)	0
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

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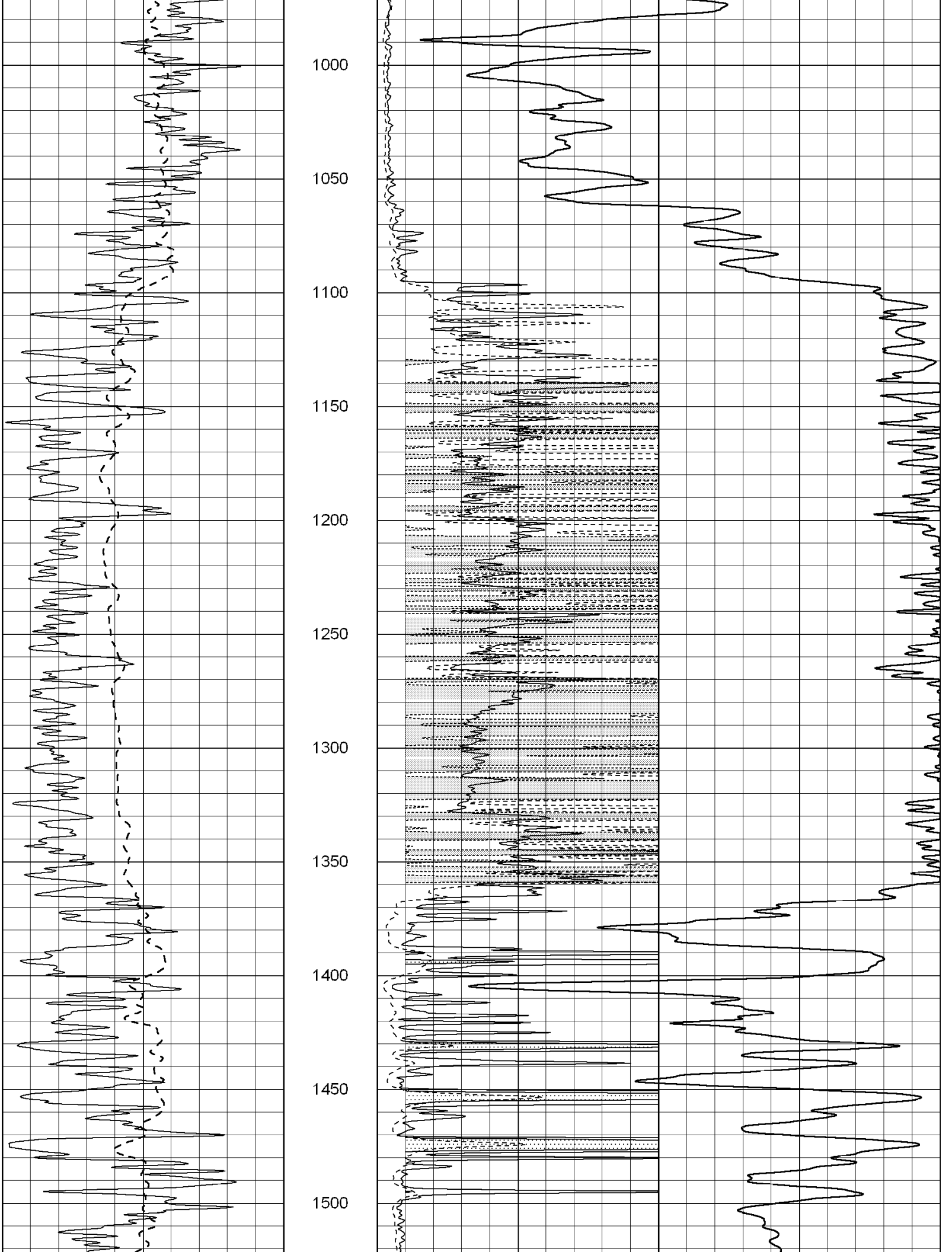
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1200
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1300
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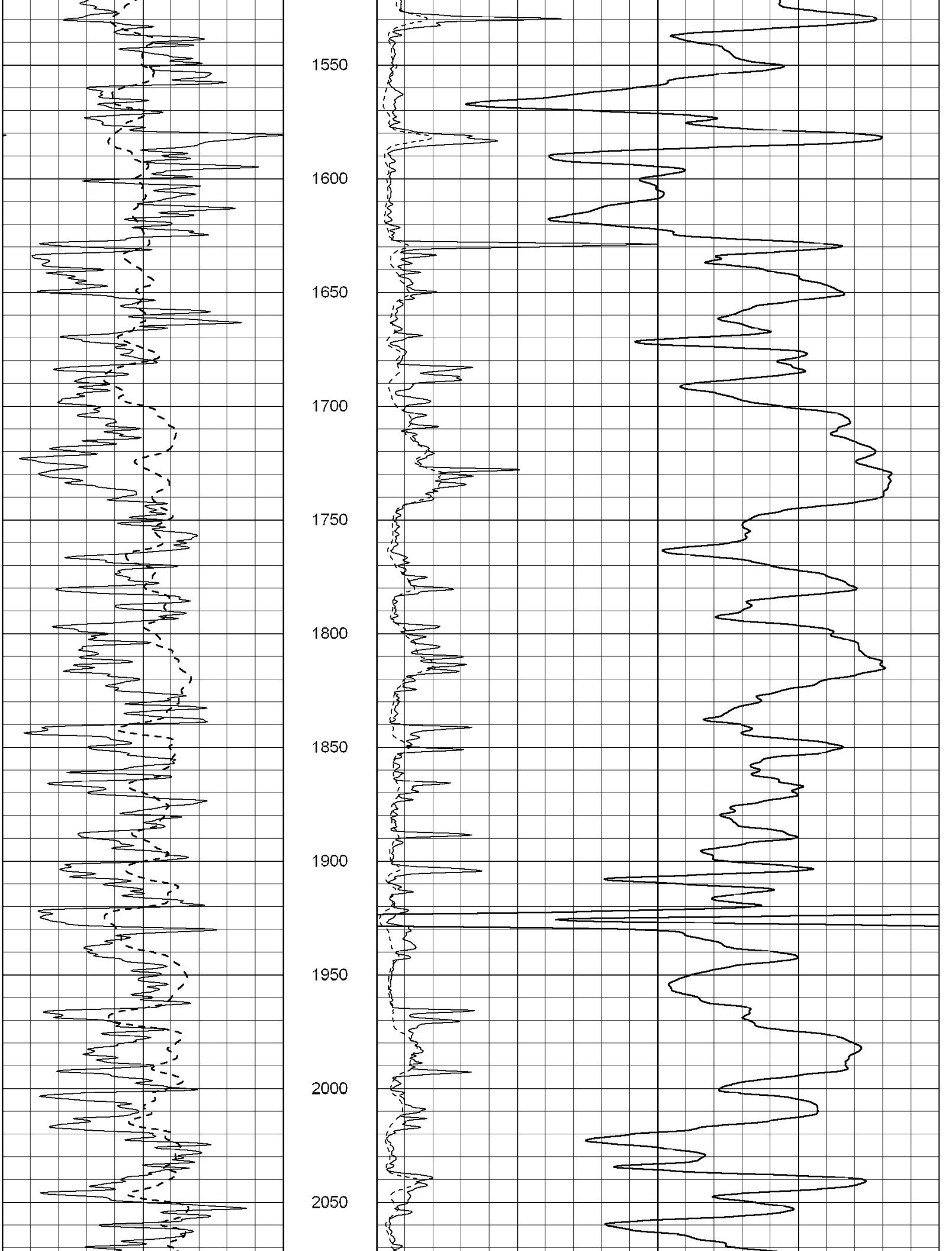
1400
1450
1500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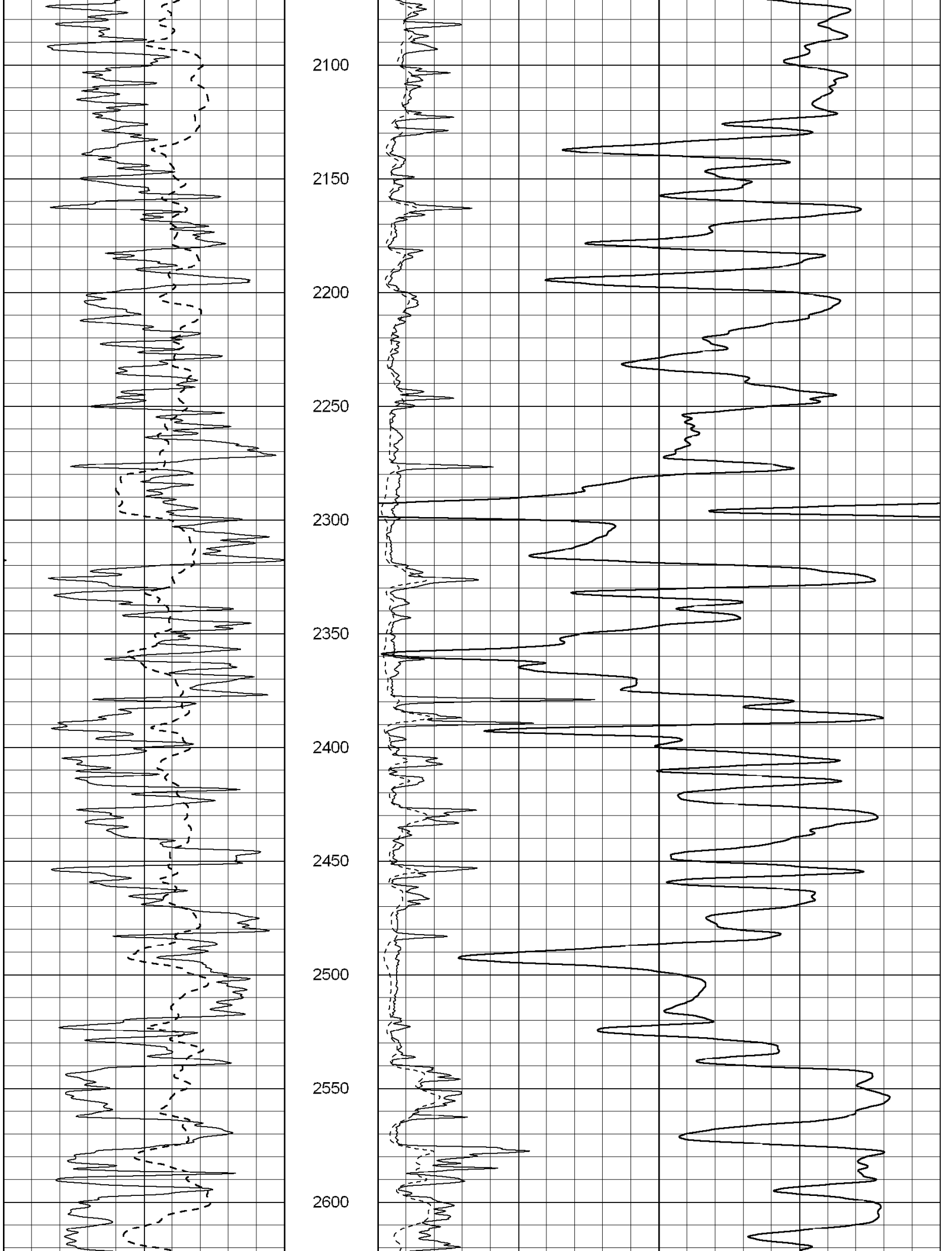
1850
1900
1950
2000
2050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2400
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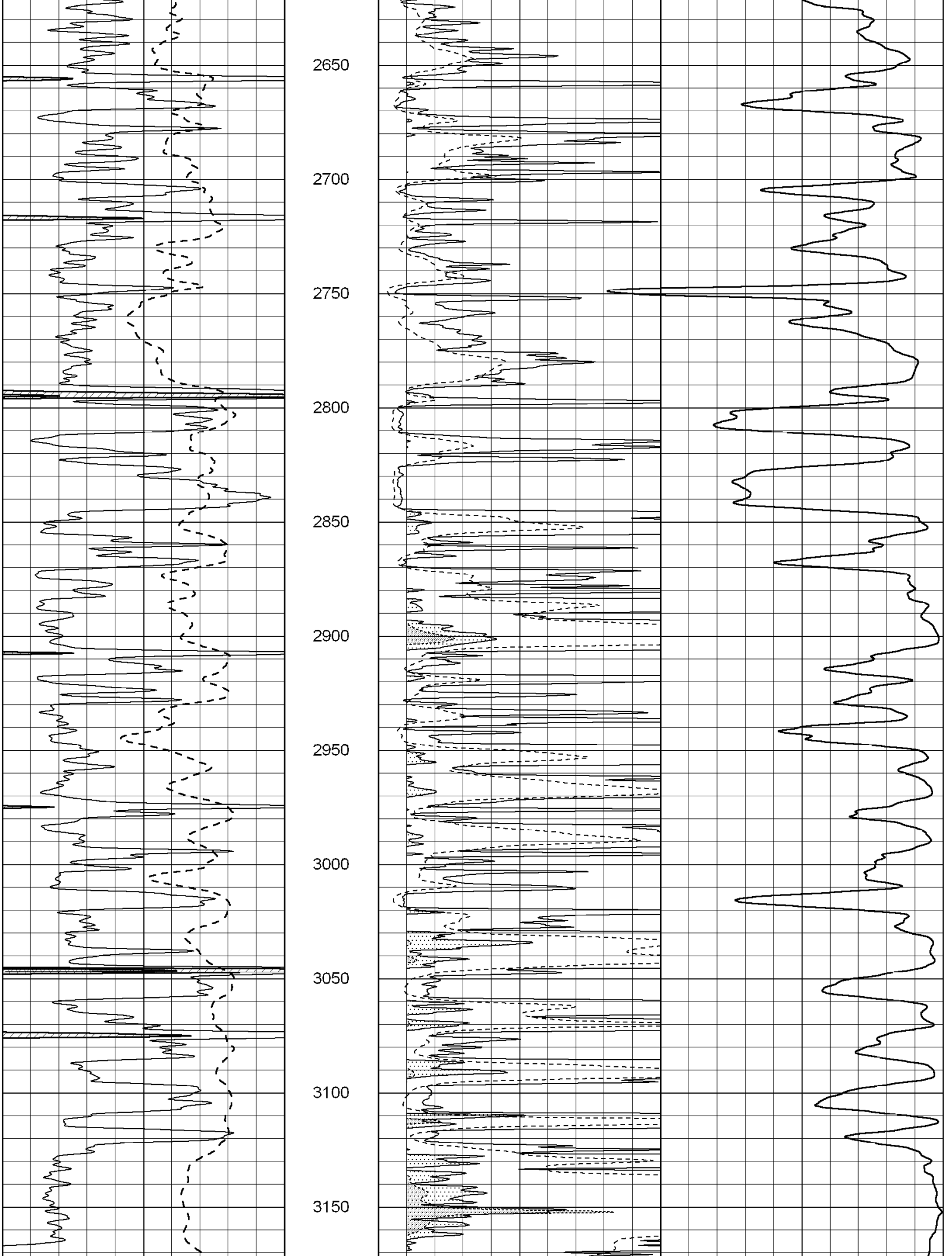
2600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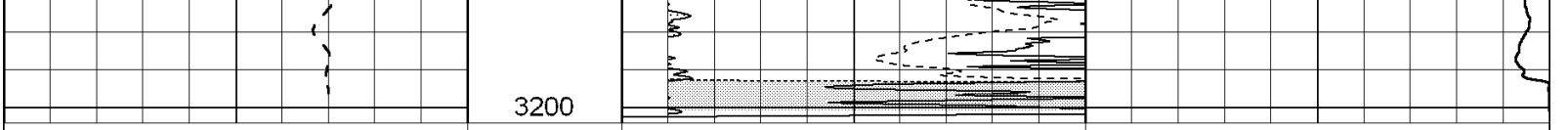

SUPERIOR WELL SERVICES

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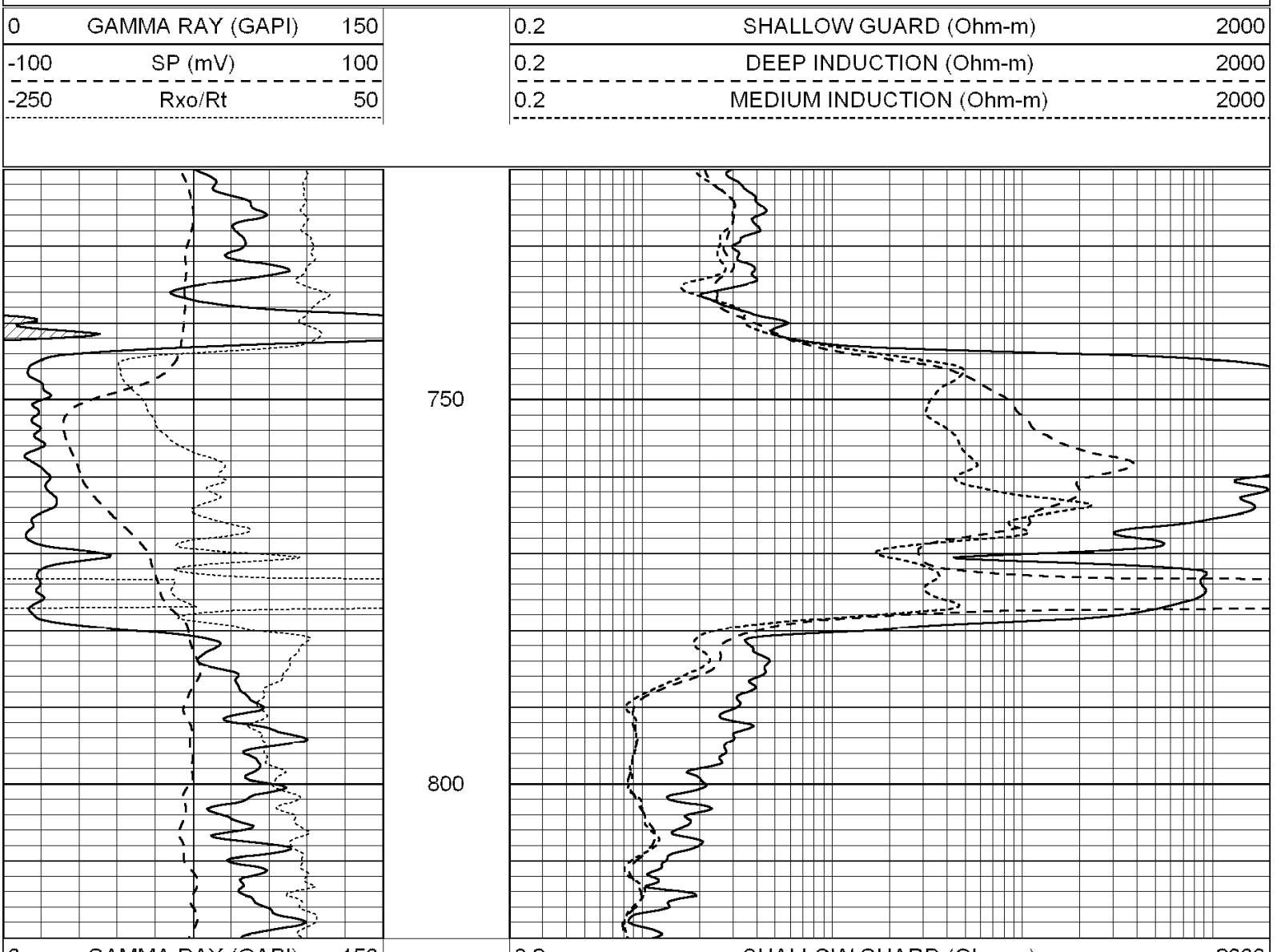
ANHYDRITE

Database File:	004352ddn.db
Dataset Pathname:	pass3.8
Presentation Format:	dil
Dataset Creation:	Tue Sep 29 13:27:26 2009 by Calc Open-Cased 060407
Charted by:	Depth in Feet scaled 1:240



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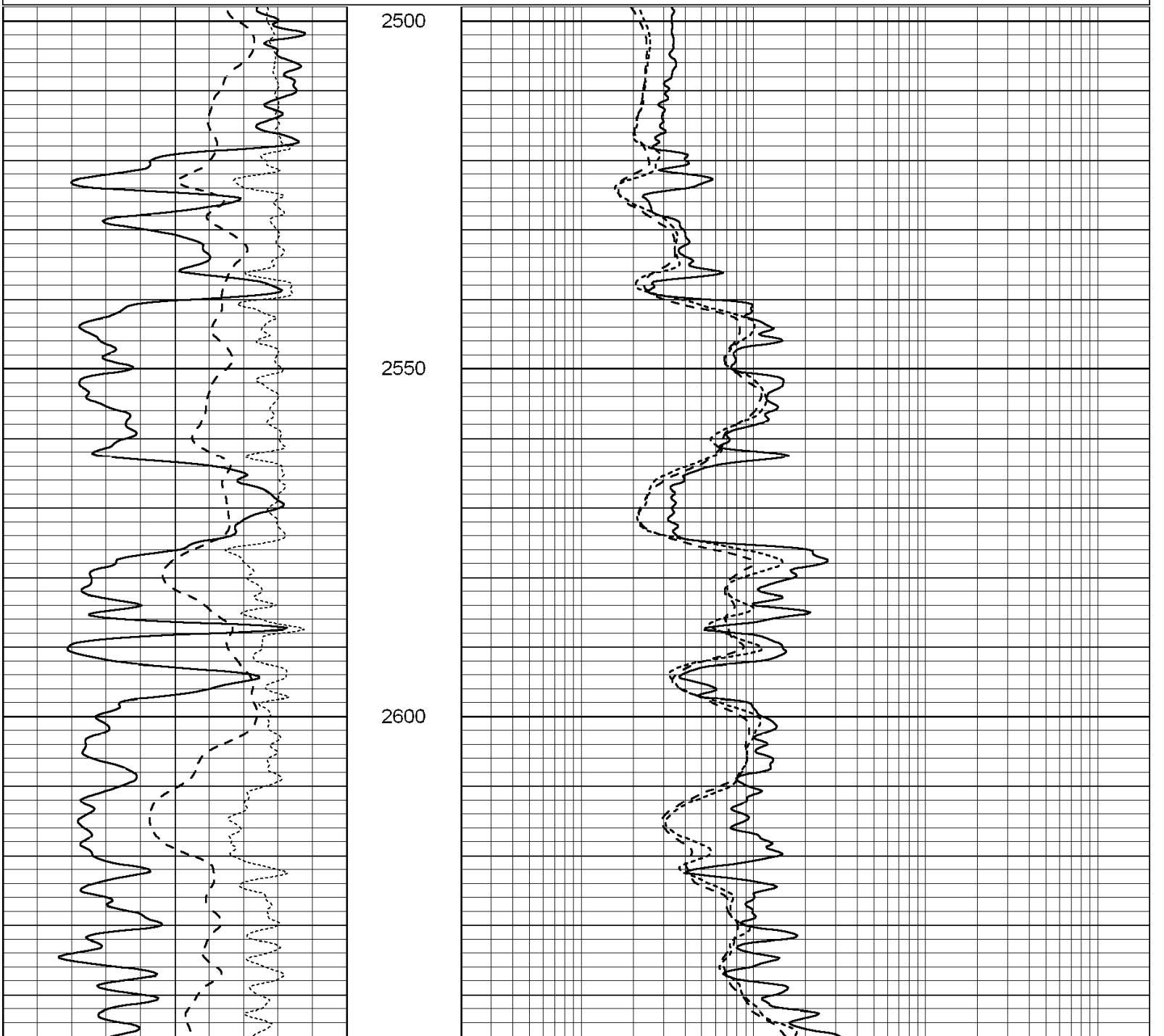
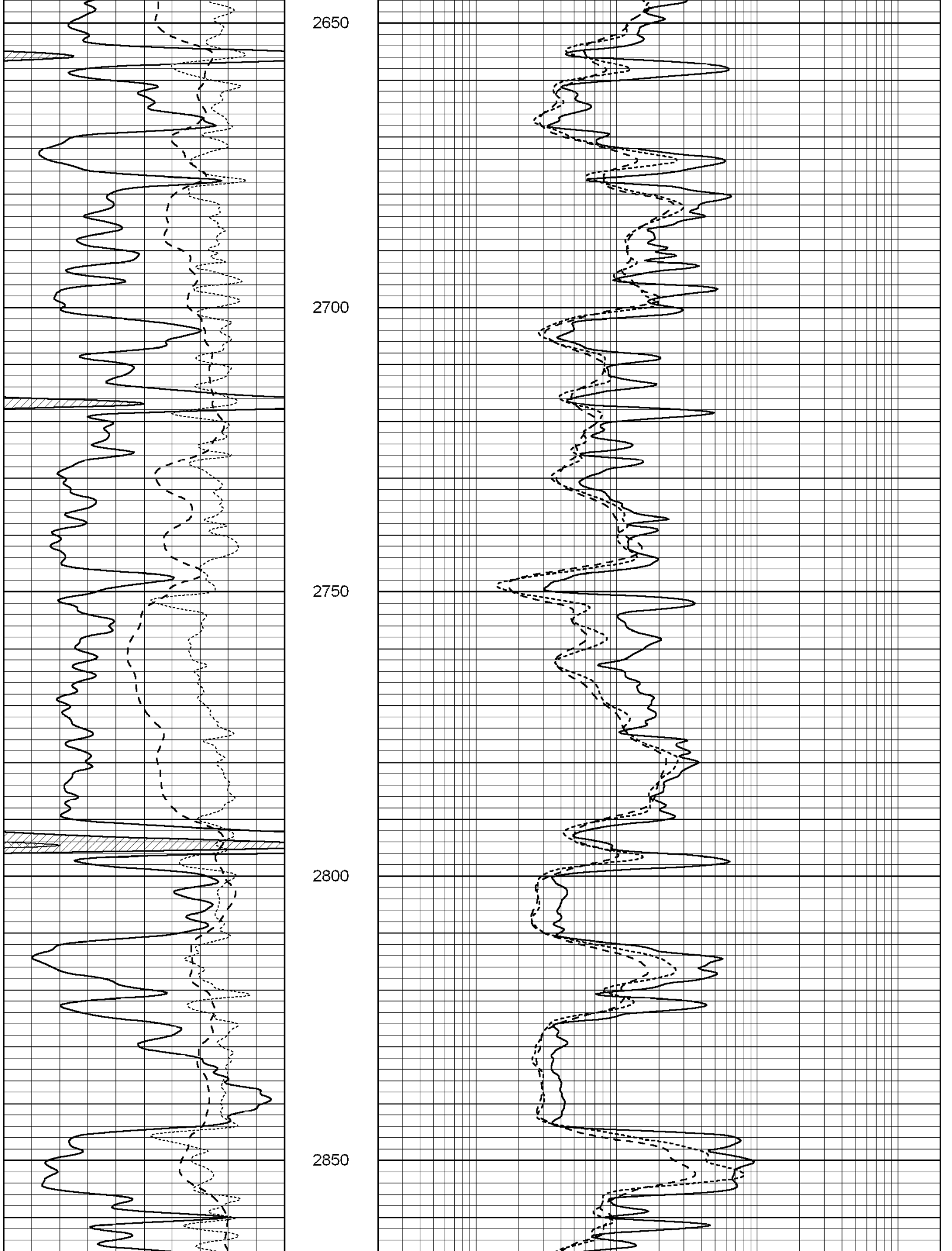
MAIN SECTION

Database File:	004352ddn.db
Dataset Pathname:	pass3.11
Presentation Format:	dil
Dataset Creation:	Tue Sep 29 14:20:20 2009
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

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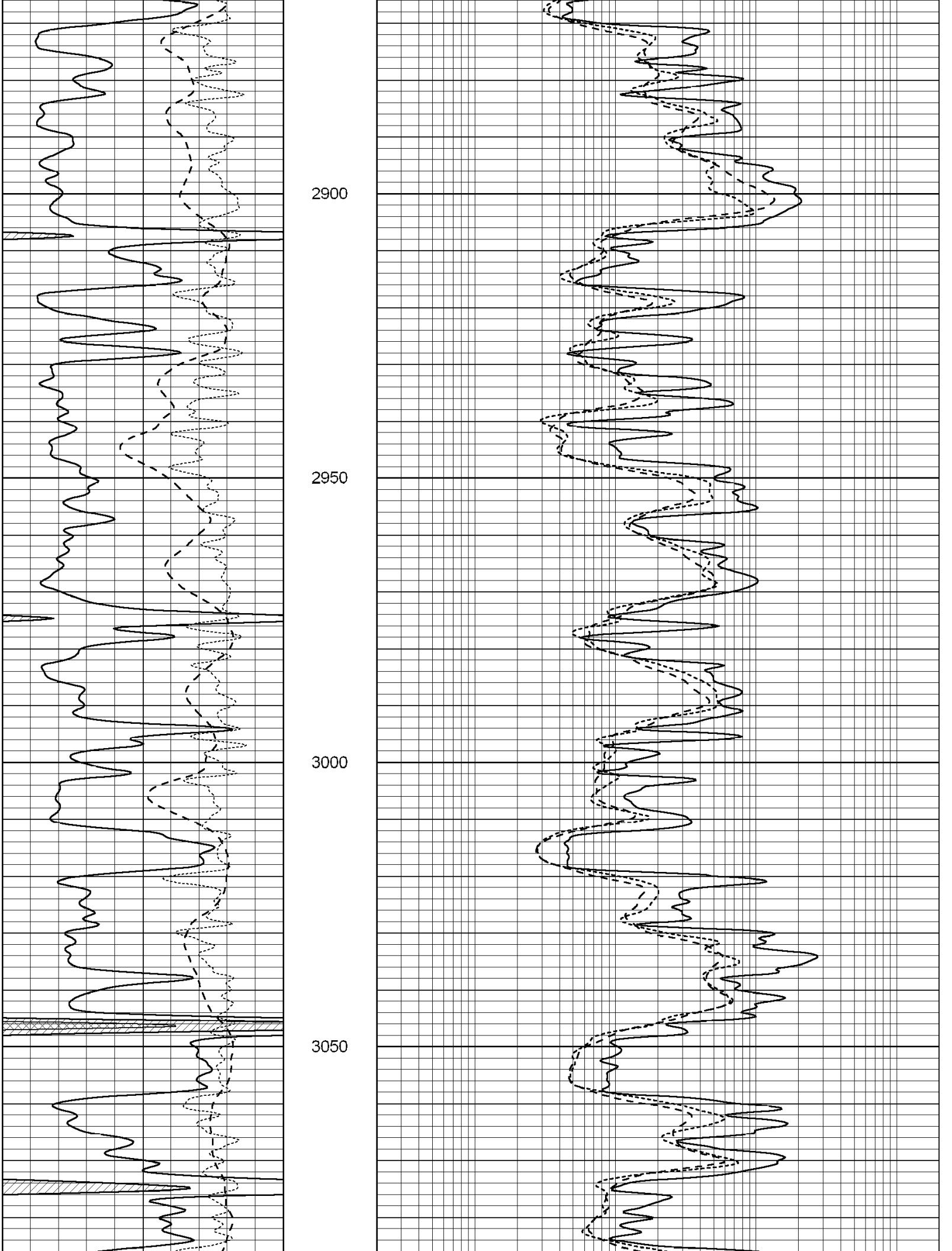
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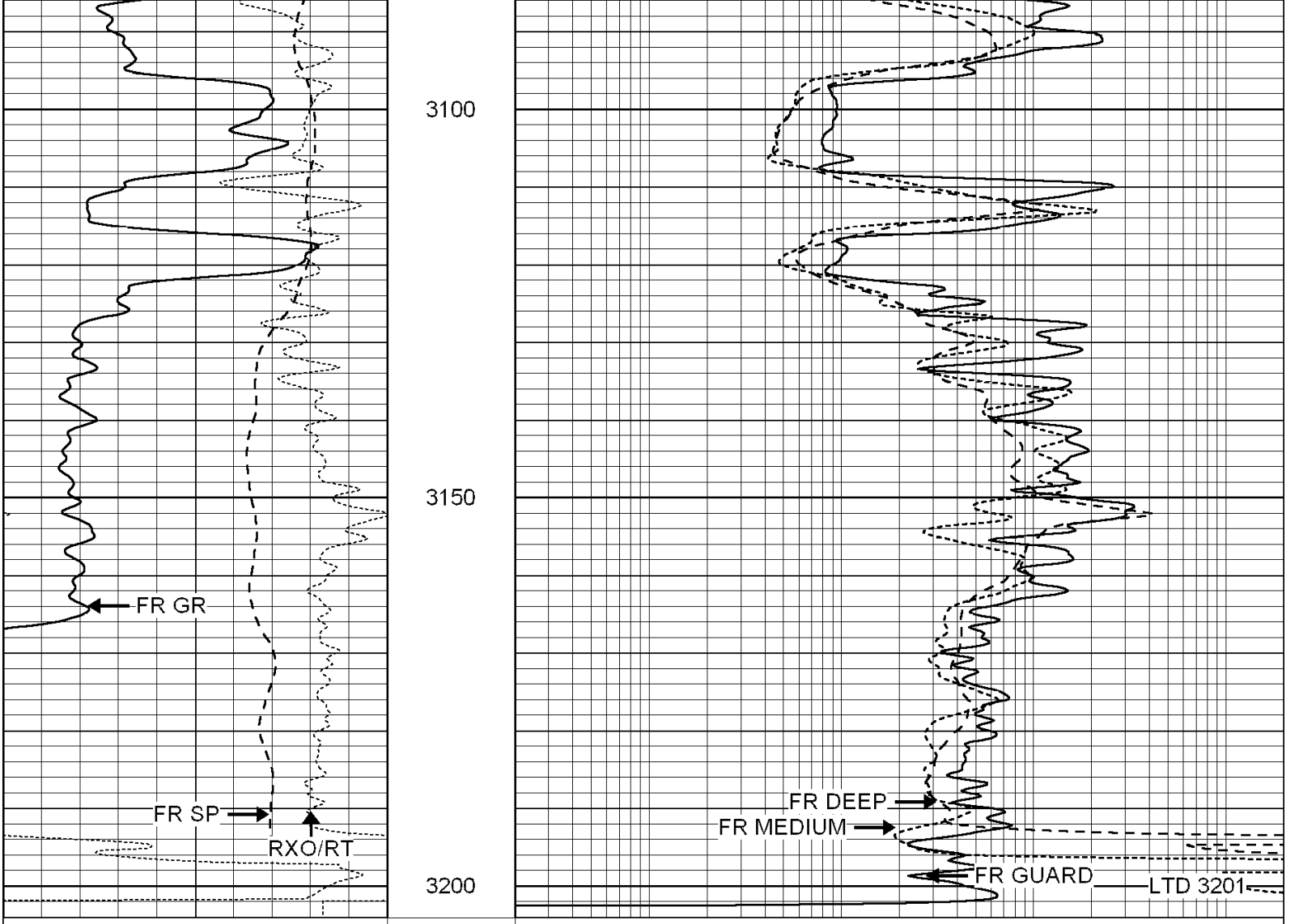
2950
3000
3050



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

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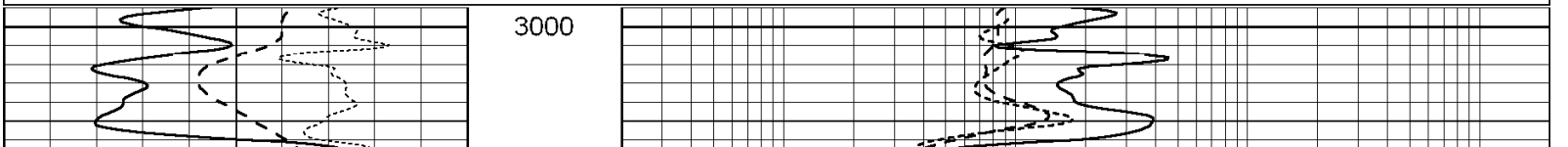
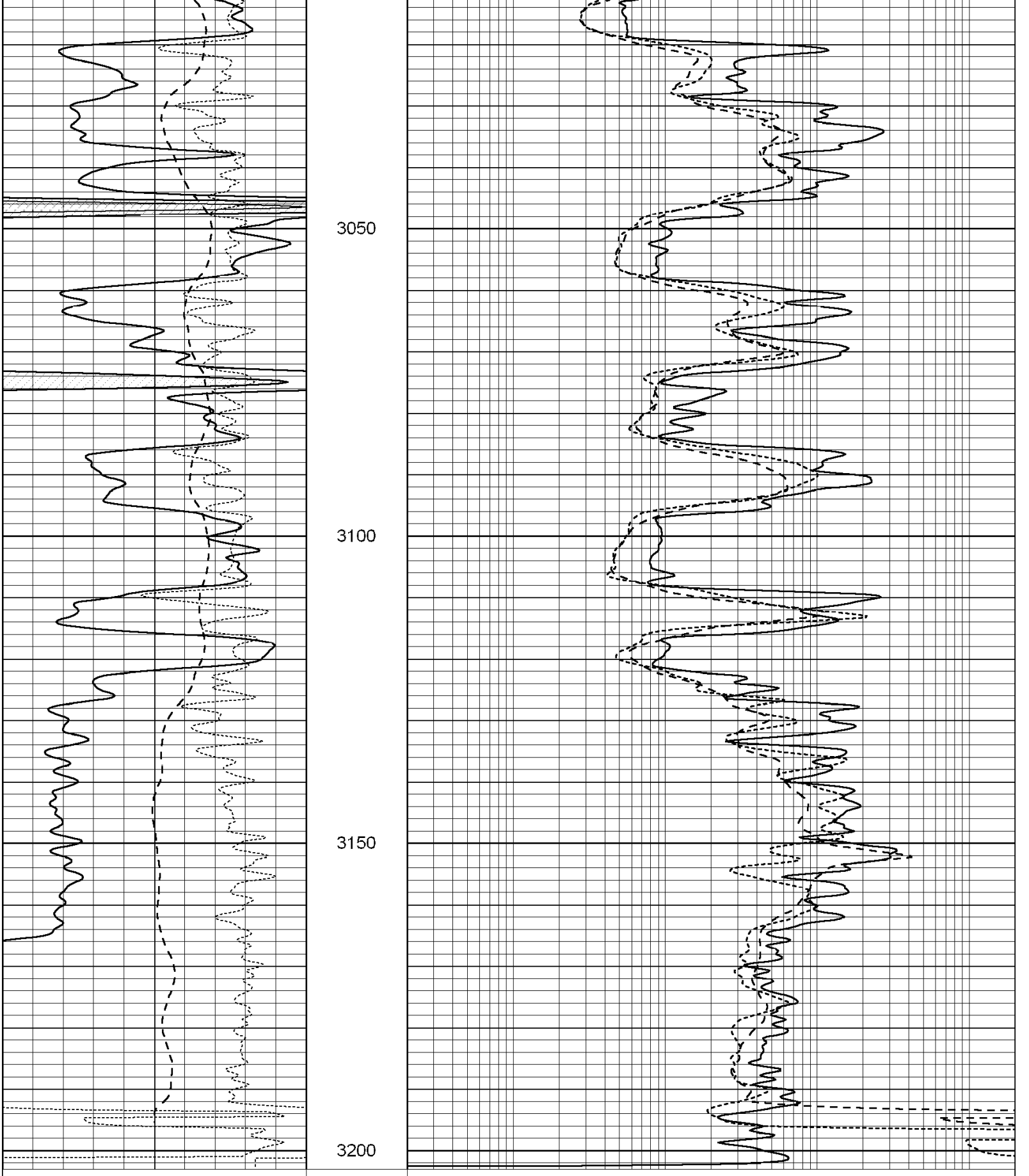
REPEAT SECTION

Database File:	004352ddn.db
Dataset Pathname:	pass2.10
Presentation Format:	dil
Dataset Creation:	Tue Sep 29 13:08:42 2009 by Calc Open-Cased 060407
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





Calibration Report

Calibration Report

Database File: 004352ddn.db
Dataset Pathname: pass3.7
Dataset Creation: Tue Sep 29 13:26:58 2009 by Calc Open-Cased 060407

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Tue Sep 29 11:46:39 2009

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho-m	640.000	-1.000
Medium	0.013	0.740	V	0.000	462.500	mmho-m	675.000	-9.000
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	1.8	7.0
High Ref	4.2	14.0

Gain: 3.0 Offset: 1.6

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: Tue Sep 29 12:42:00 2009

Calibrator Value: 200.0 GAPI

Background Reading:	3.0	cps
Calibrator Reading:	186.0	cps
Sensitivity:	0.5000	GAPI/cps