Casedhole Solutions

DUAL INDUCTION LOG

Company	YOUNGER ENERGY COMPANY
Well	SHARTZ #2-34
Field	HURRAY
County	PAWNEE
State	KANSAS

Company YOUNGER ENERGY COMPANY
Well SHARTZ #2-34
Field HURRAY
County PAWNEE State KANSAS
Location: API # : 15-145-21814-0000
1450' FSL & 1100' FEL
SEC 34 TWP 21S RGE 15W

Other Services
CDL/CNL
MEL

Permanent Datum GROUND LEVEL Elevation 1970
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1978
D.F. 1976
G.L. 1970

Date	12/8/15		
Run Number	ONE		
Depth Driller	4000		
Depth Logger	3993		
Bottom Logged Interval	3991		
Top Log Interval	00		
Casing Driller	8 5/8" @ 945		
Casing Logger	936		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 7600 PPM	
Density / Viscosity	9.2/47		
pH / Fluid Loss	10.0/9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.50 @ 60F		
Rmf @ Meas. Temp	.37 @ 60F		
Rmc @ Meas. Temp	.60 @ 60F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.25 @ 116F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	7:00 P.M.		
Maximum Recorded Temperature	116F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	KEITH REAVIS		

<<< Fold Here >>>

Comments

THANK YOU FOR USING CASEDHOLE SOLUTIONS, HAYS, KS. (785) 628-6395
DIRECTIONS:
LARNED, KS. - 8 EAST ON HWY 19 TO RD. 30 - 1 NORTH - 1/4 WEST - NORTH INTO
THRU ELECTRIC GATE

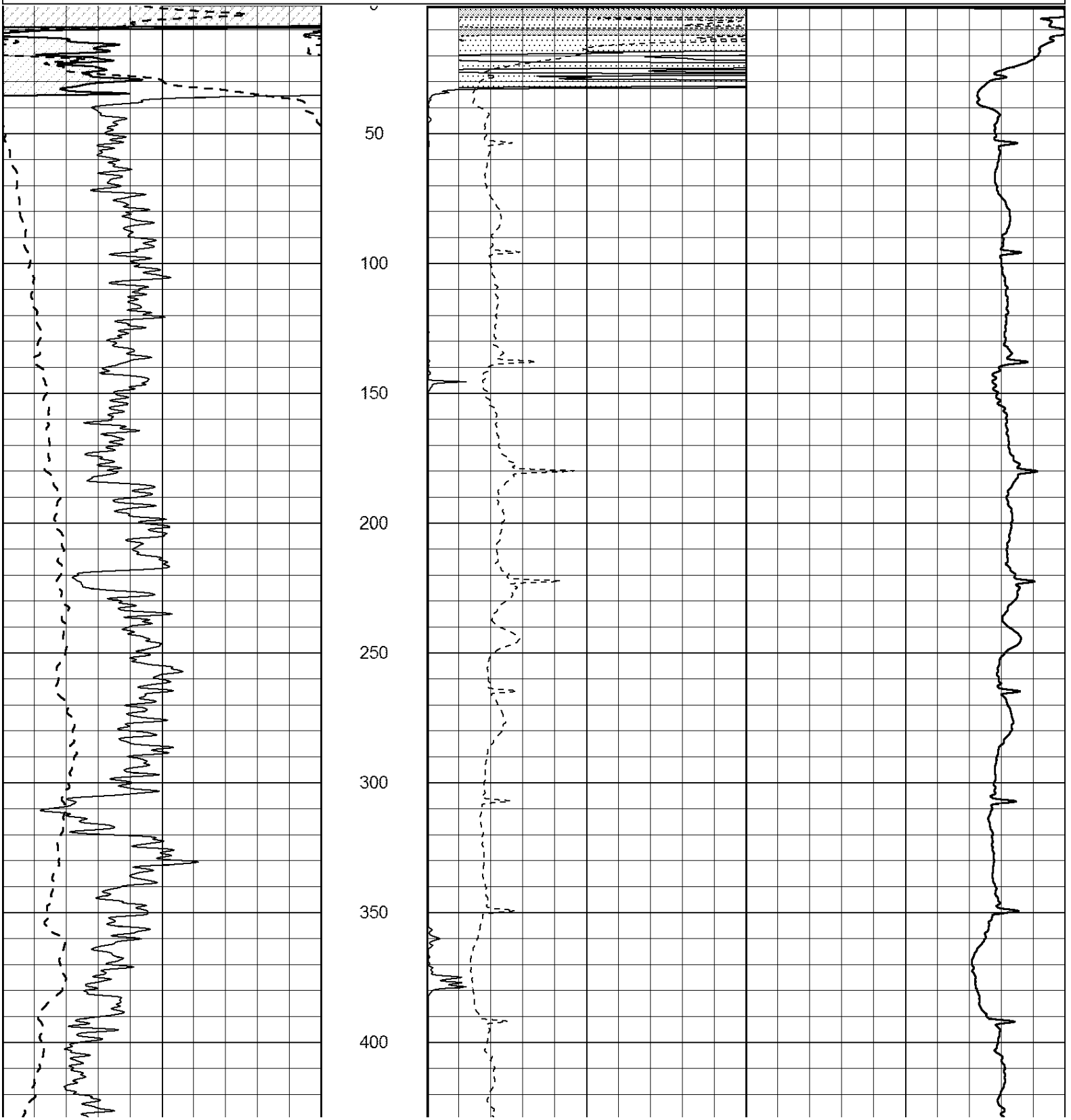
Casedhole Solutions

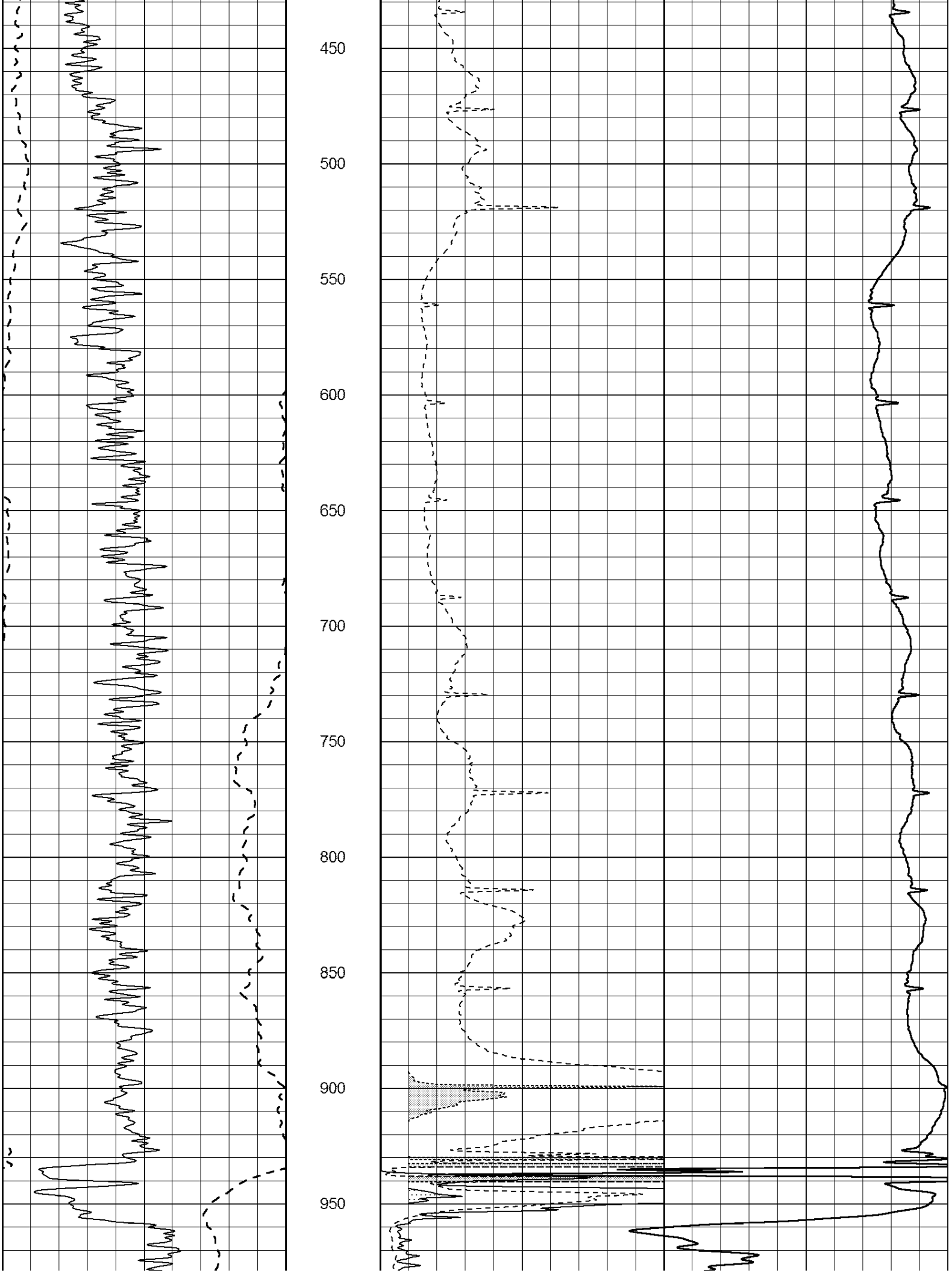
MAIN SECTION

Database File: 30887ddn.db
Dataset Pathname: pass3.3
Presentation Format: _dil2
Dataset Creation: Tue Dec 08 20:33:51 2015 by Calc Open-Cased 090629
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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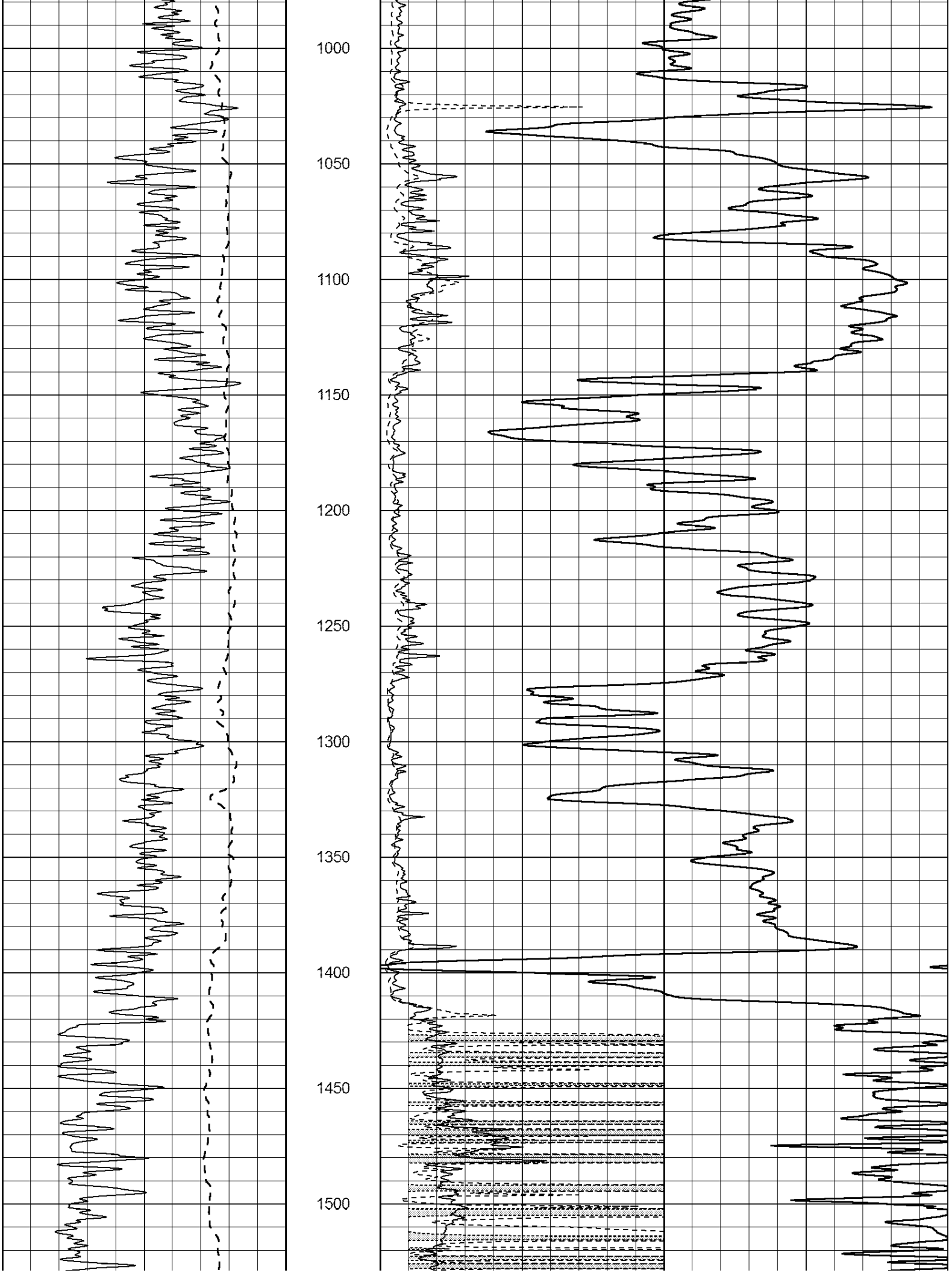
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1250
1300
1350
1400
1450
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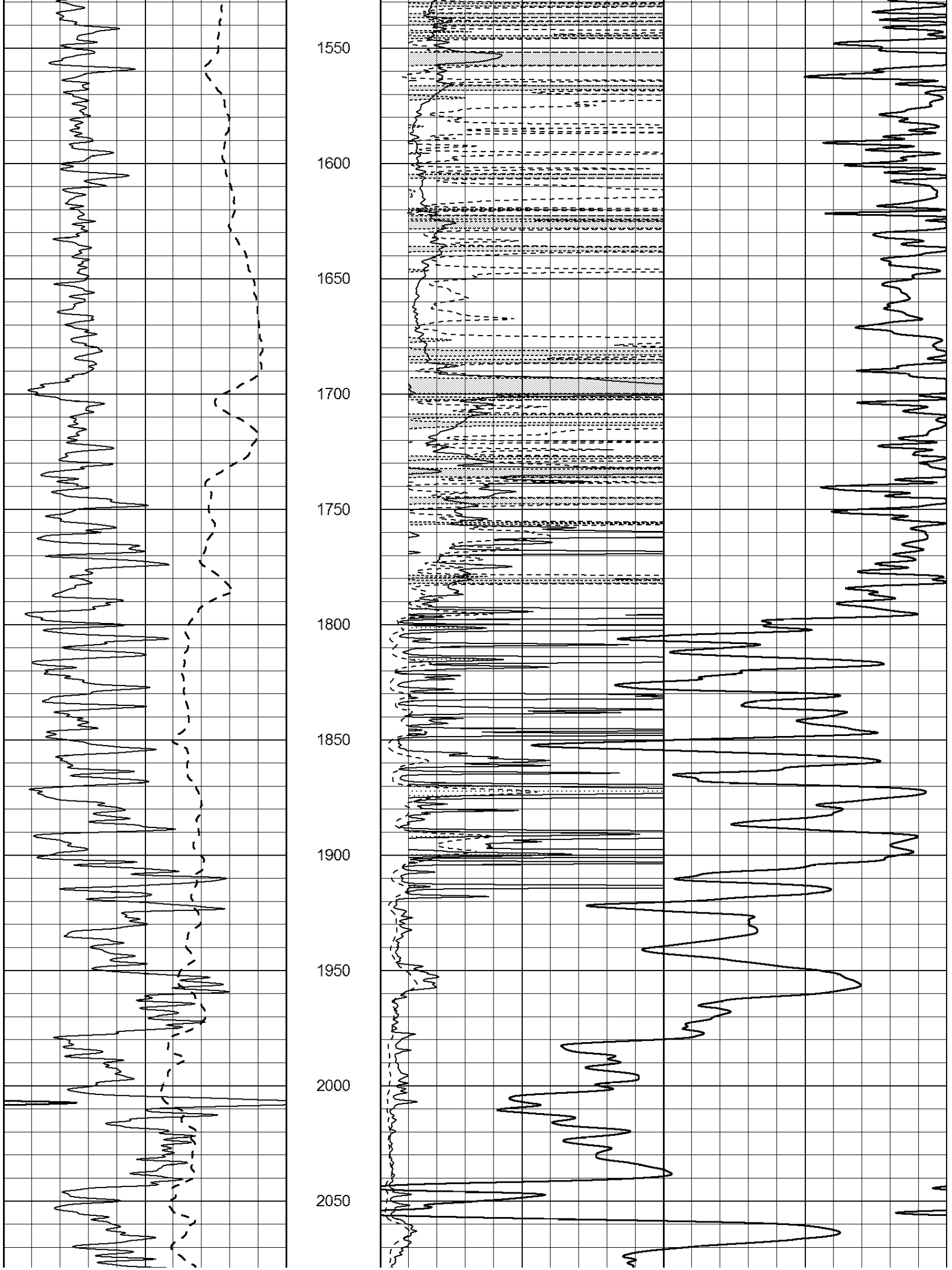
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1800
1850
1900
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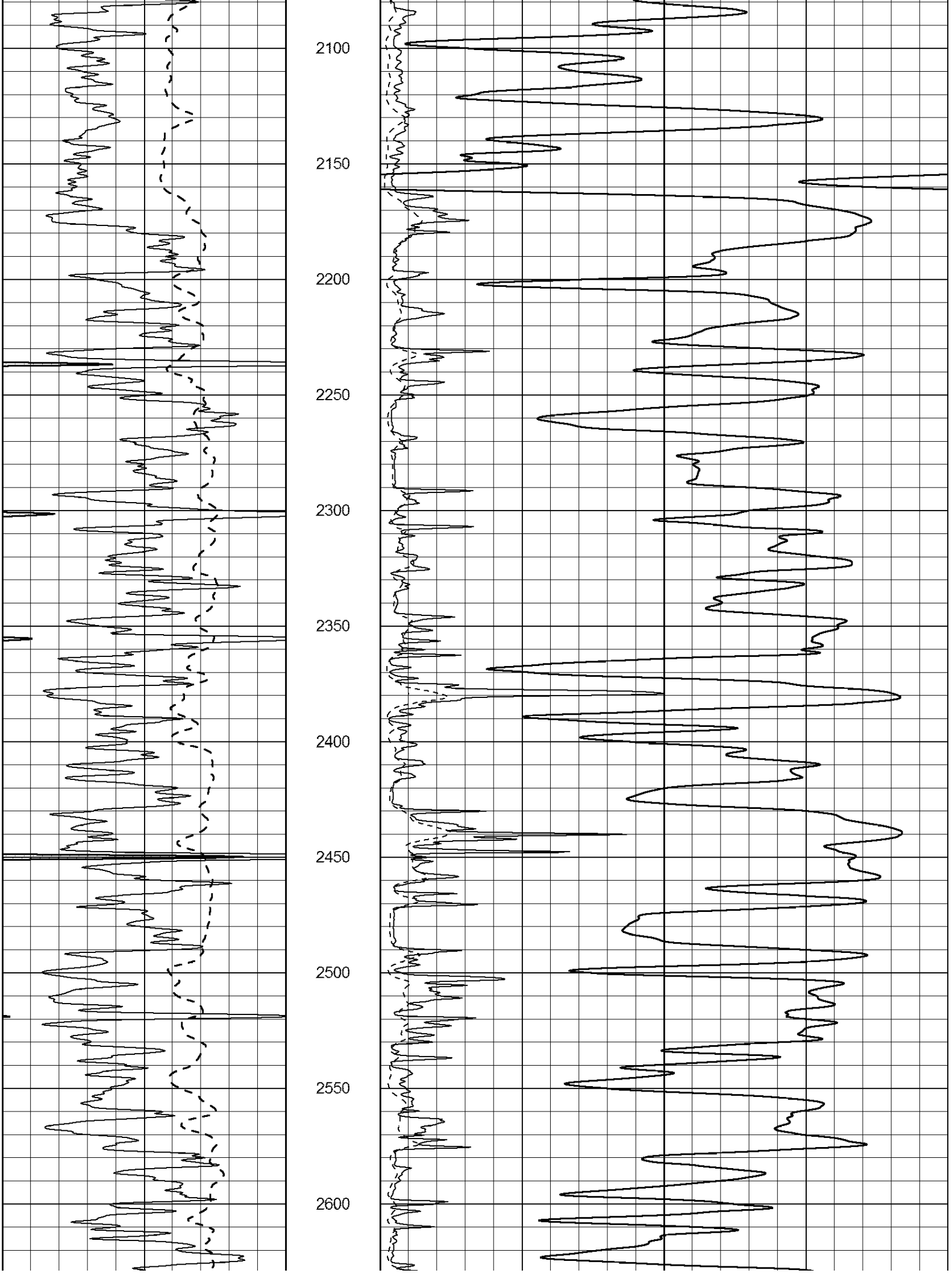
2050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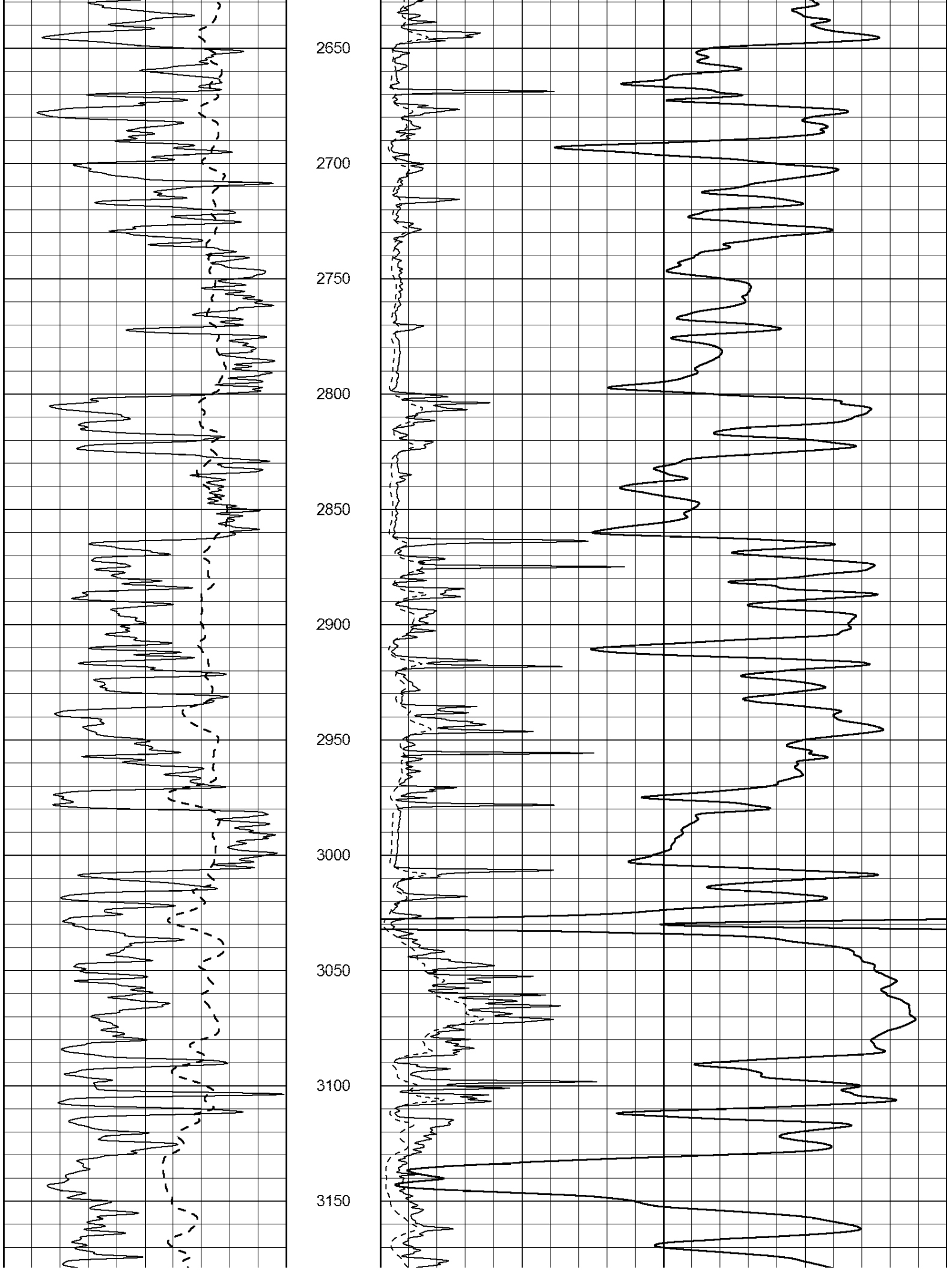
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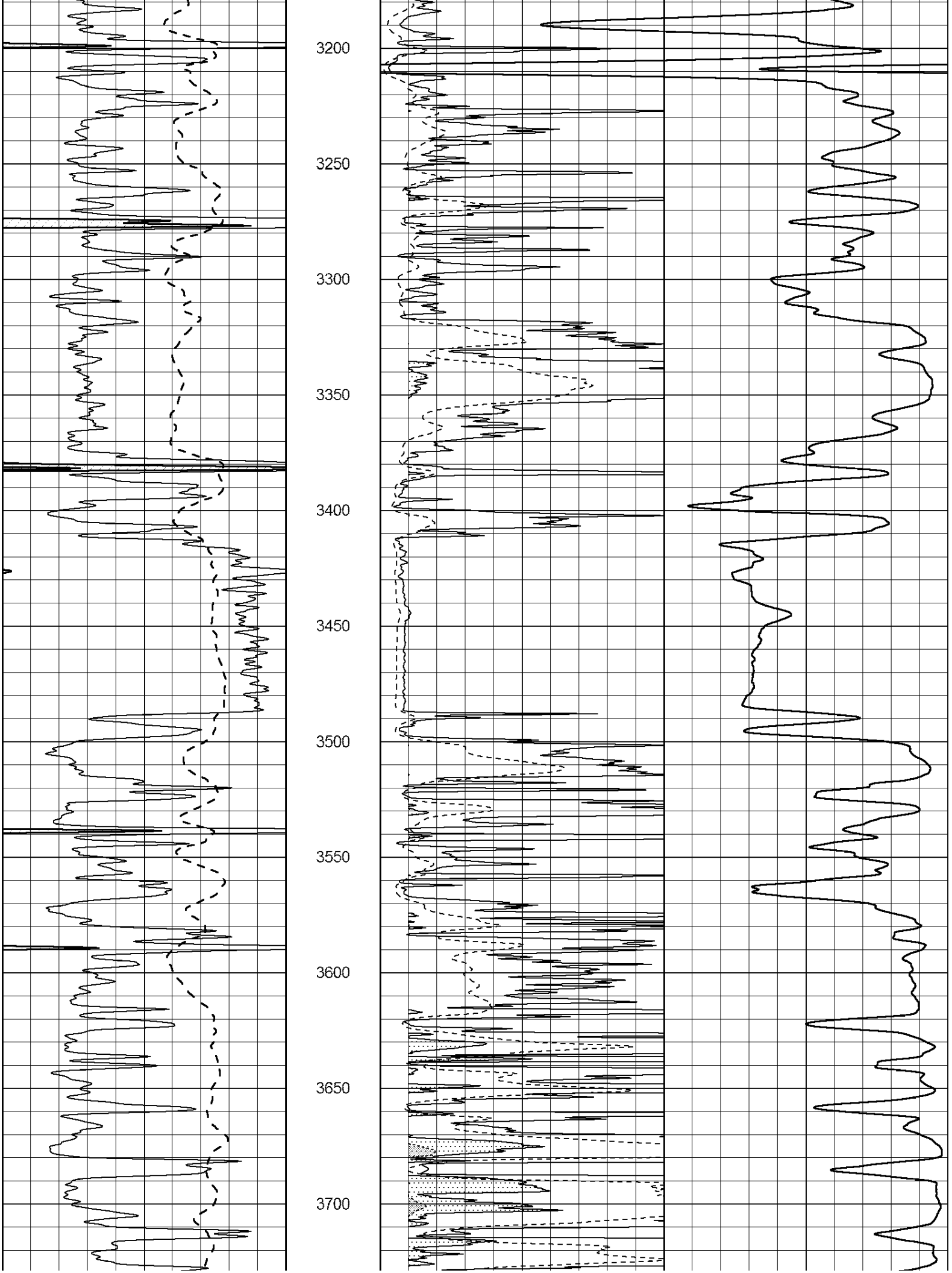
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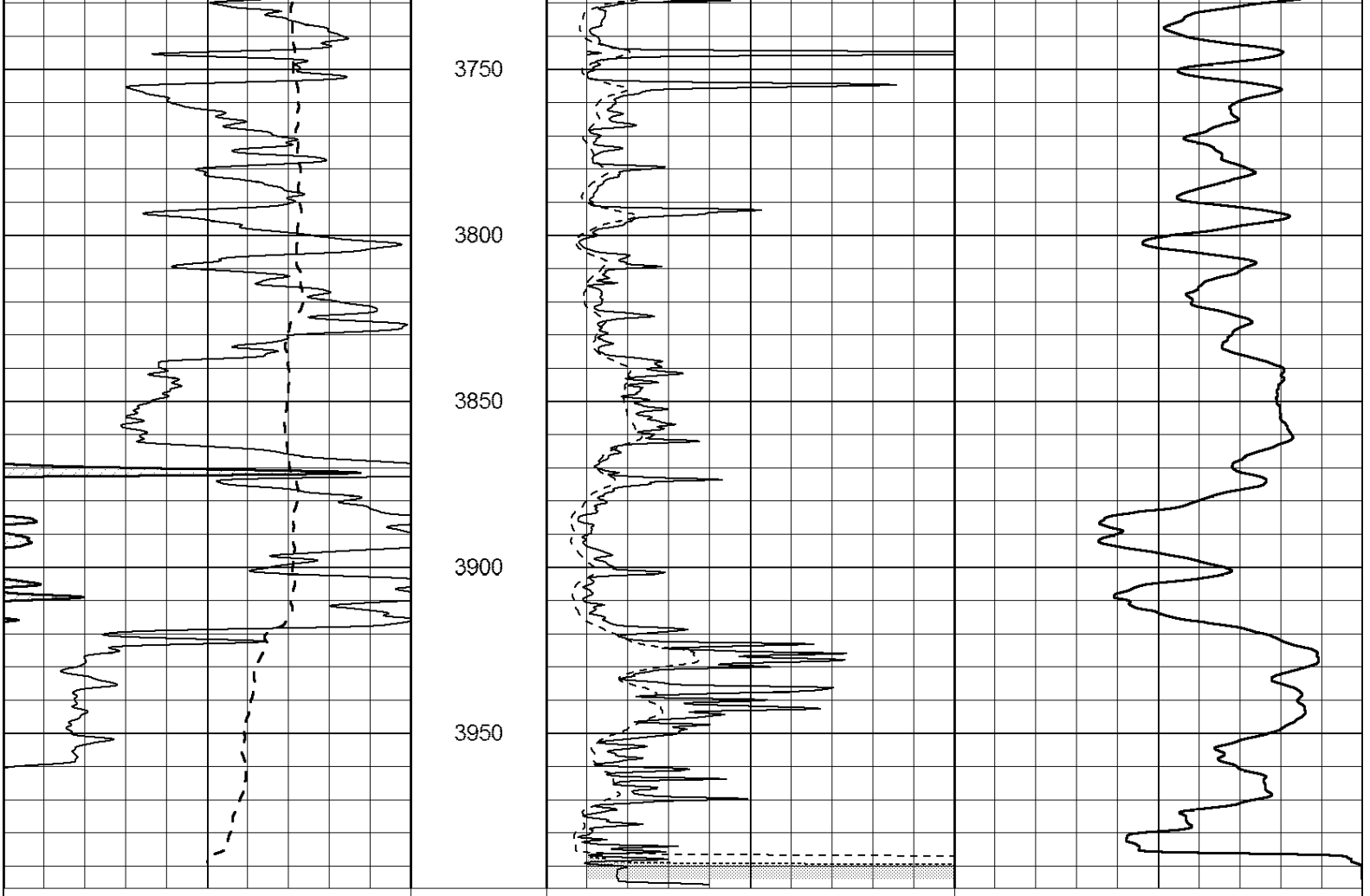

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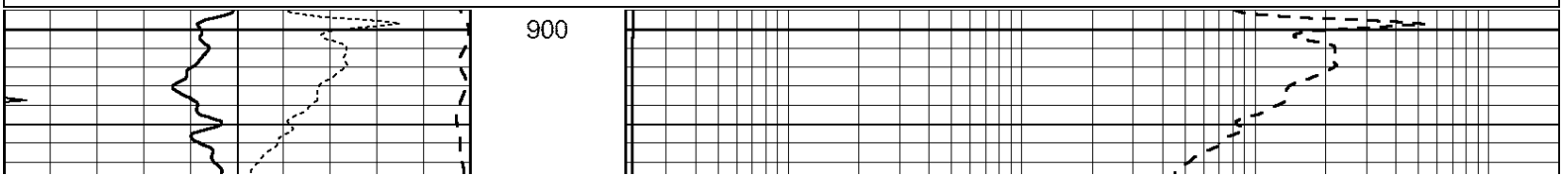
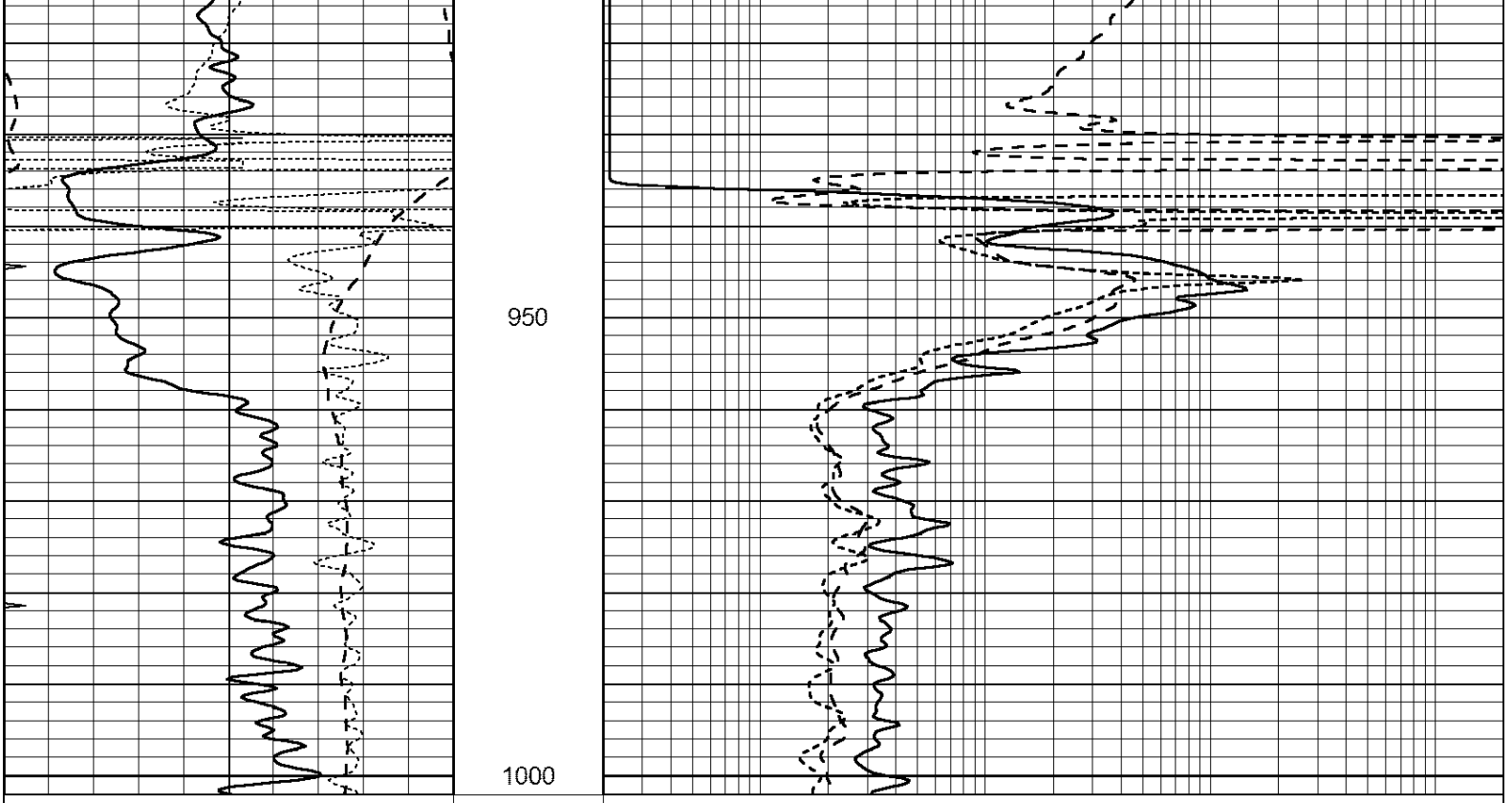
ANHYDRITE

Database File: 30887ddn.db
Dataset Pathname: pass3.2
Presentation Format: _dil
Dataset Creation: Tue Dec 08 20:32:17 2015 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

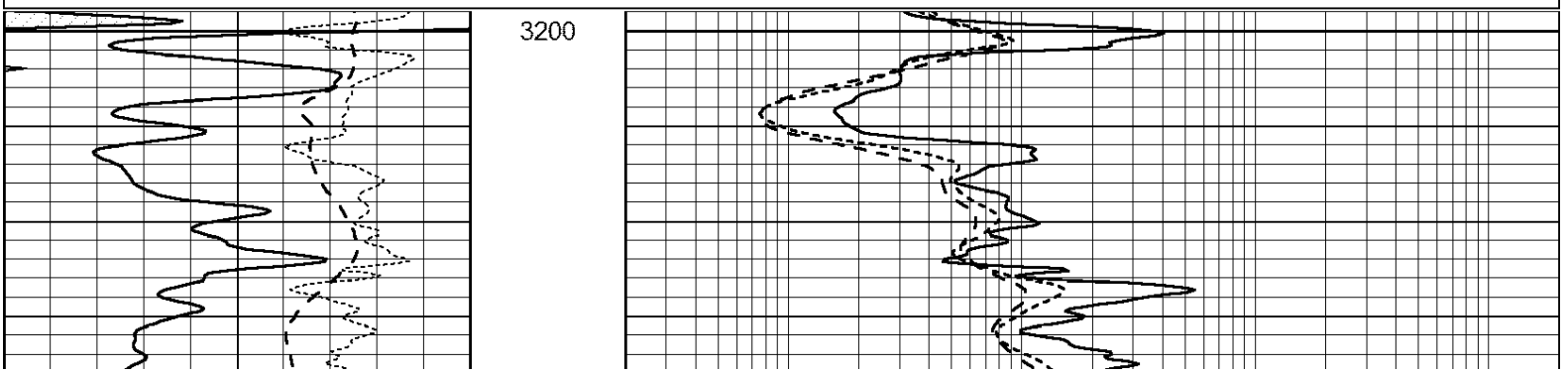
Casedhole Solutions

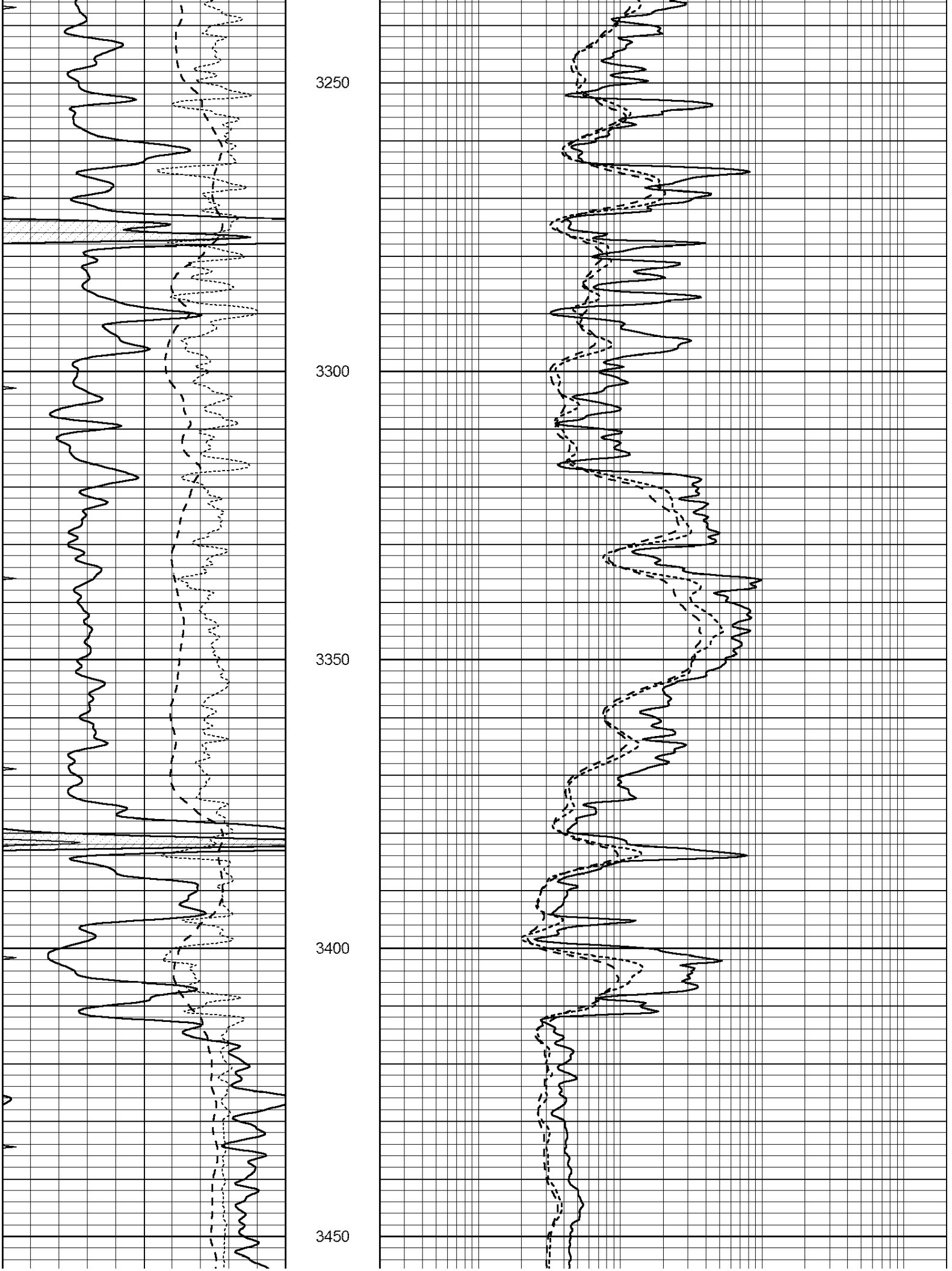
MAIN SECTION

Database File: 30887ddn.db
Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Tue Dec 08 19:41:48 2015 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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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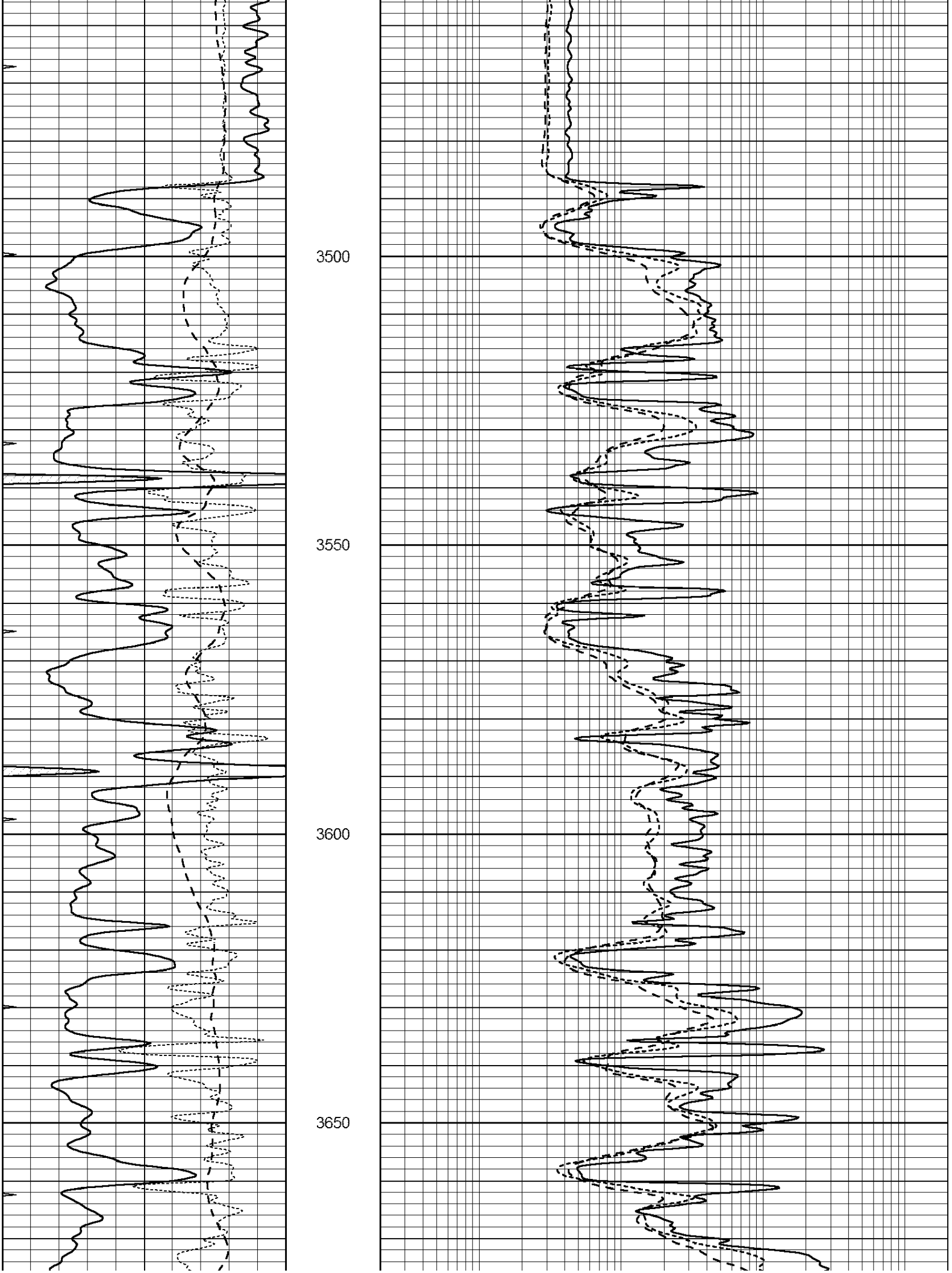
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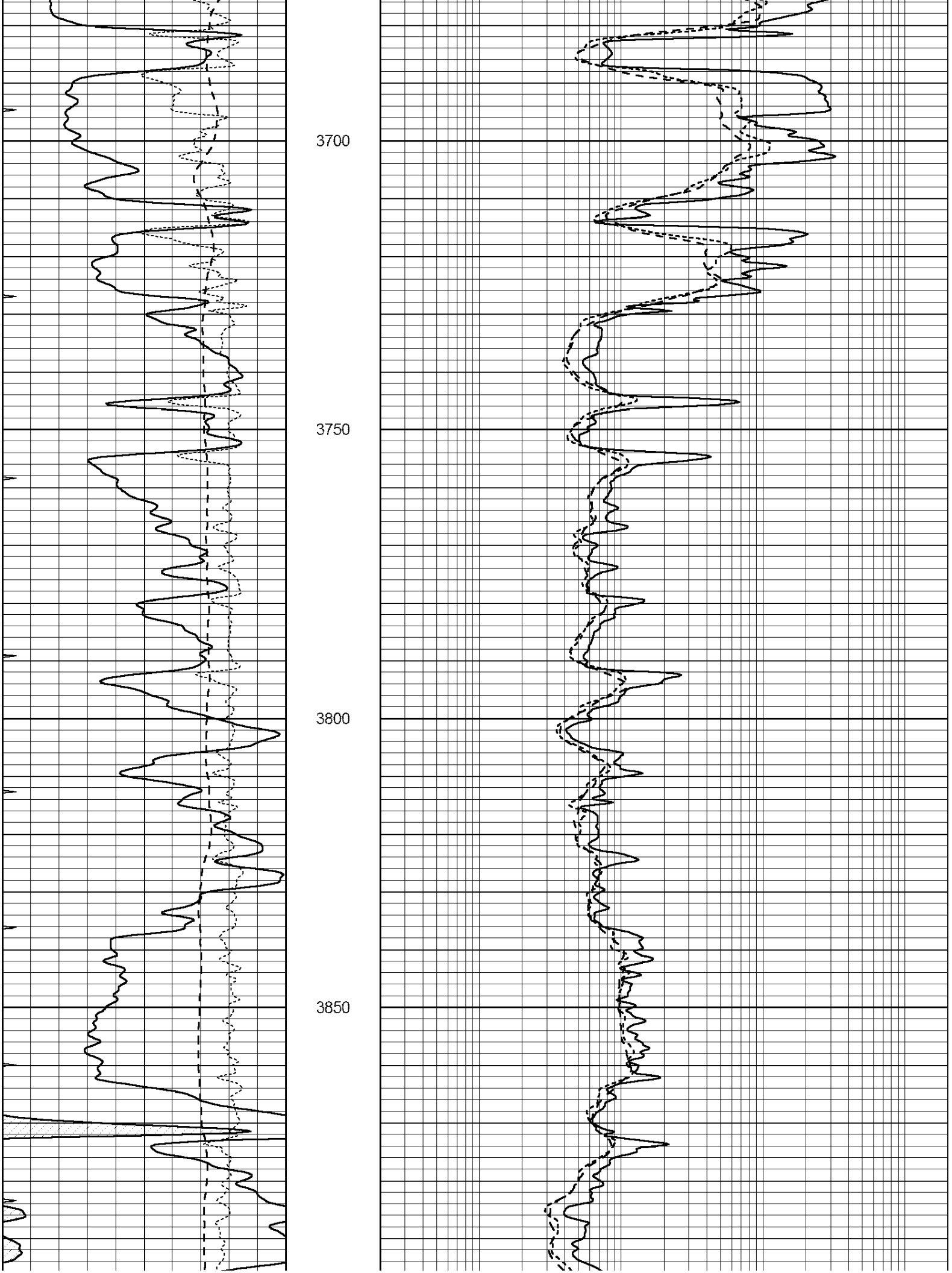
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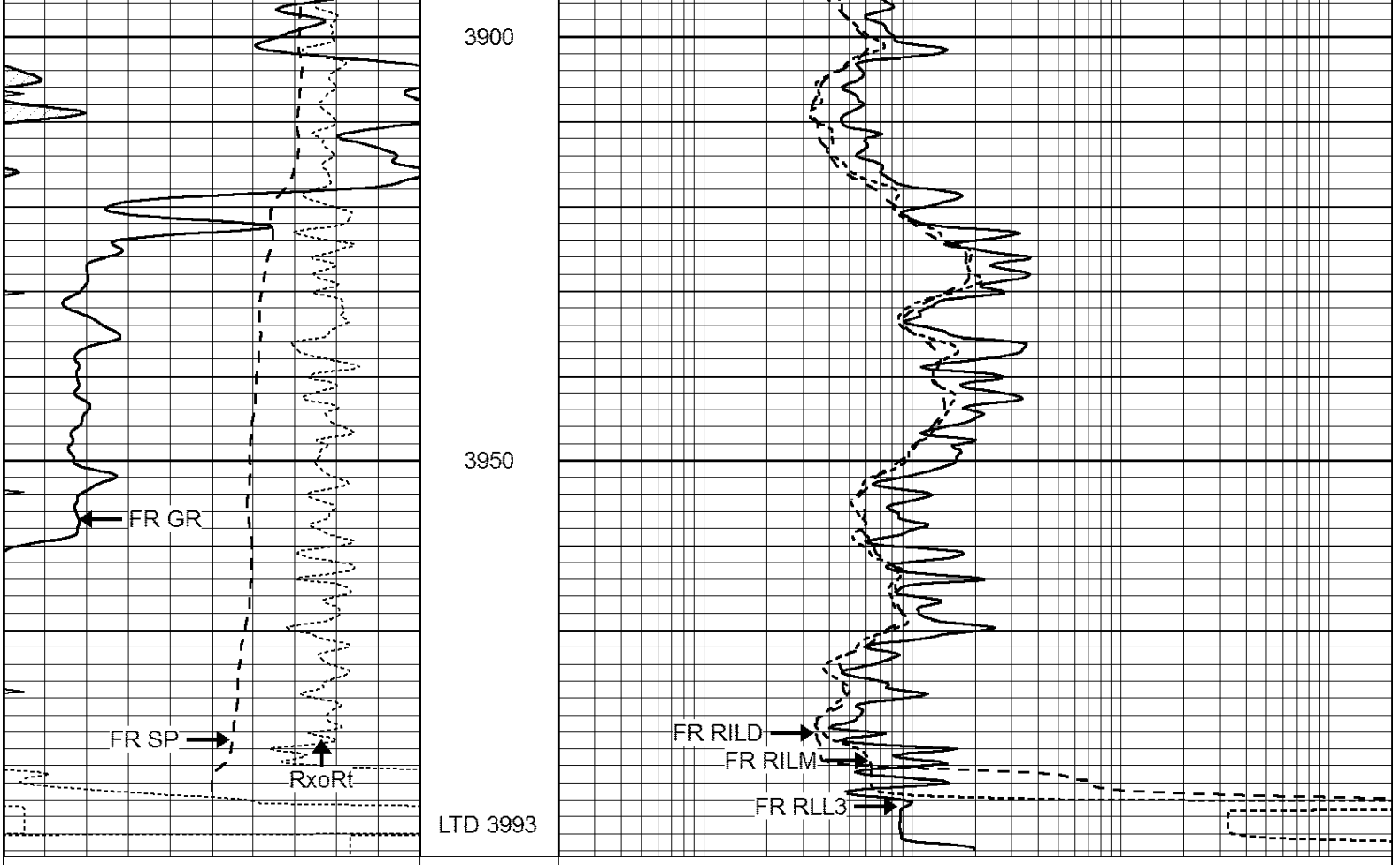


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

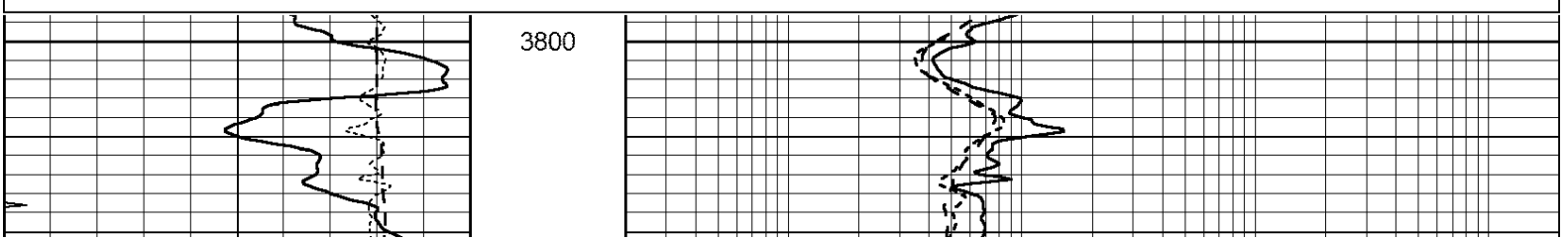
Casedhole Solutions

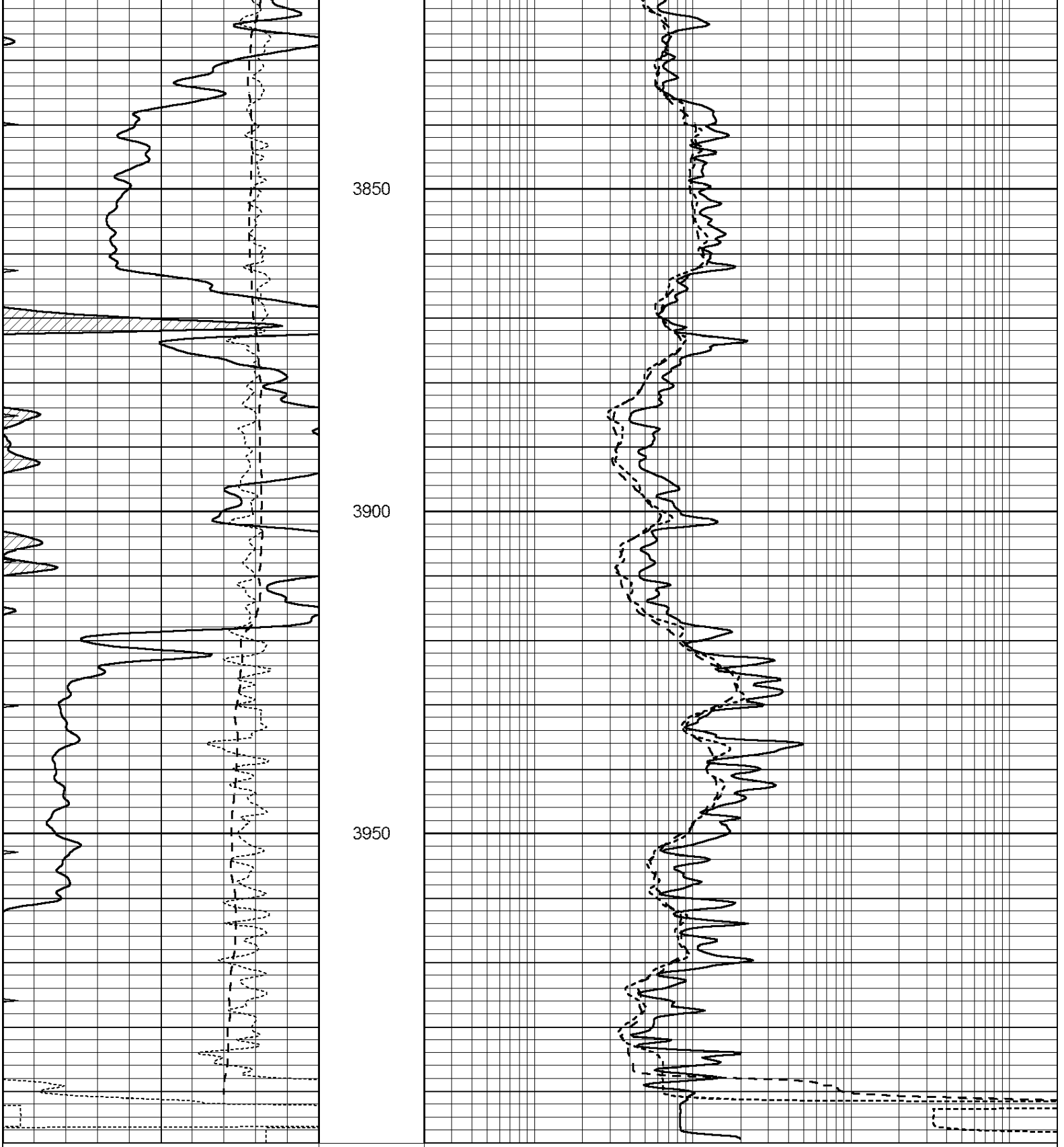
REPEAT SECTION

Database File: 30887ddn.db
Dataset Pathname: pass2.1
Presentation Format: _dil
Dataset Creation: Tue Dec 08 19:31:51 2015 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

Calibration Report

Database File: 30887ddn.db
Dataset Pathname: pass3.1

Dataset Creation: Tue Dec 08 19:41:48 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:	Sun Dec 06 13:45:22 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		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:	Thu Nov 12 05:47:01 2015	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.4500	GAPI/cps