NABORS COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company L. D. DRILLING, INC.
Well #1-7 SCHLESSIGER/HICKEL
Field WILDCAT
County BARTON
State KANSAS

Company L. D. DRILLING, INC.
Well #1-7 SCHLESSIGER/HICKEL
Field WILDCAT
County BARTON State KANSAS
Location: API # : 15-009-26106-0000
361' FNL & 1236' FEL
SEC 7 TWP 17S RGE 12W

Other Services: CDL/CNL, MEL

Permanent Datum: GROUND LEVEL Elevation 1964
Log Measured From: KELLY BUSHING 6' A.G.L.
Drilling Measured From: KELLY BUSHING

Elevation: K.B. 1970, D.F. 1968, G.L. 1964

Date	8/11/15		
Run Number	ONE		
Depth Driller	3550		
Depth Logger	3553		
Bottom Logged Interval	3551		
Top Log Interval	0		
Casing Driller	8 5/8" @ 432'		
Casing Logger	432'		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6000 PPM	
Density / Viscosity	9.4/48		
pH / Fluid Loss	9.0/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.75 @ 95F		
Rmf @ Meas. Temp	.56 @ 95F		
Rmc @ Meas. Temp	.90 @ 95F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.84 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	BLAKE WAGGONER		
Witnessed By	KIM SHOEMAKER		

<<< Fold Here >>>

Comments

THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
SUSANK, KS - 4 MILES EAST TO 50 RD - 3 MILES SOUTH - 1/4 WEST

NABORS COMPLETION & PRODUCTION SERVICES CO.

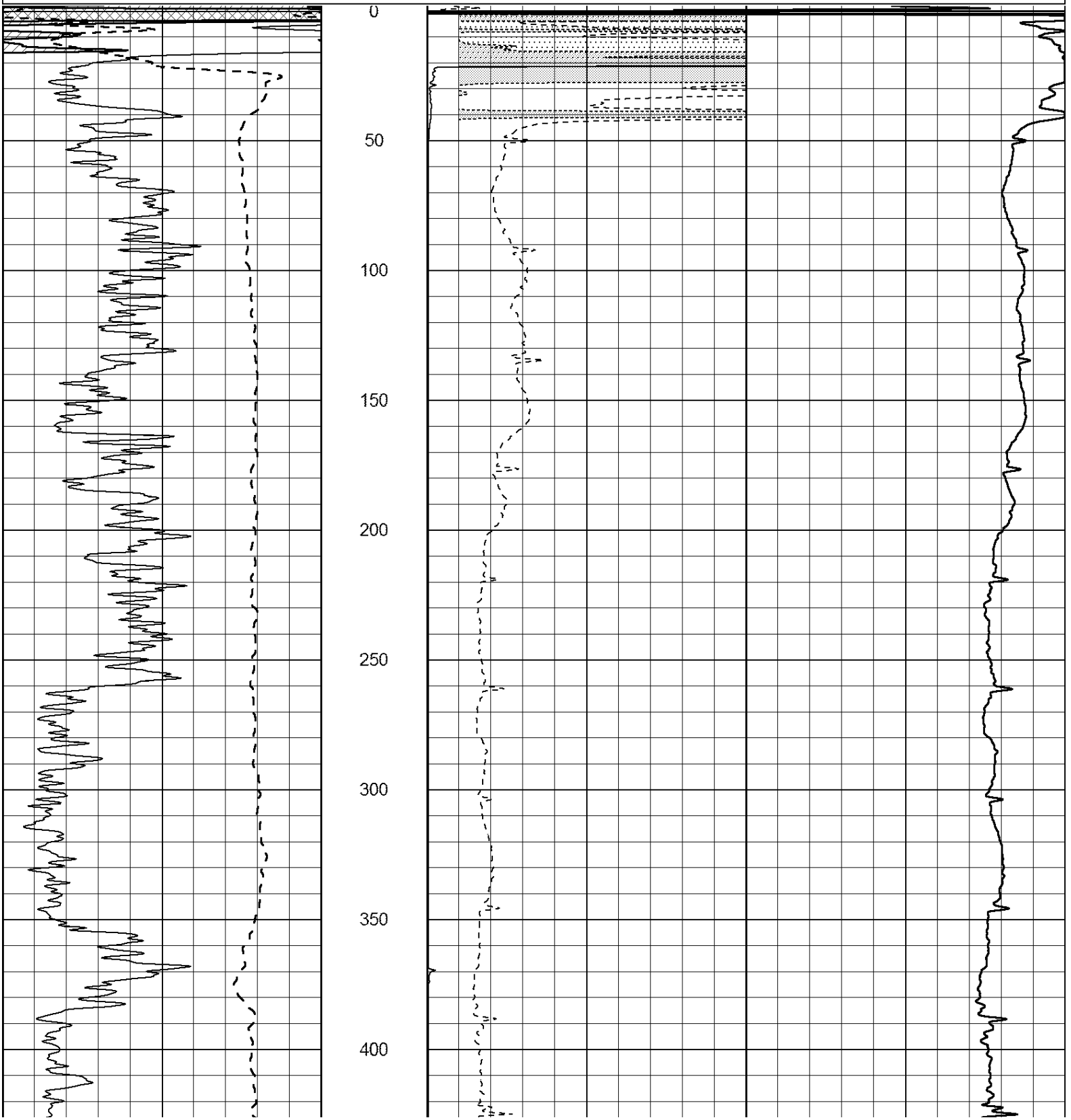
MAIN SECTION

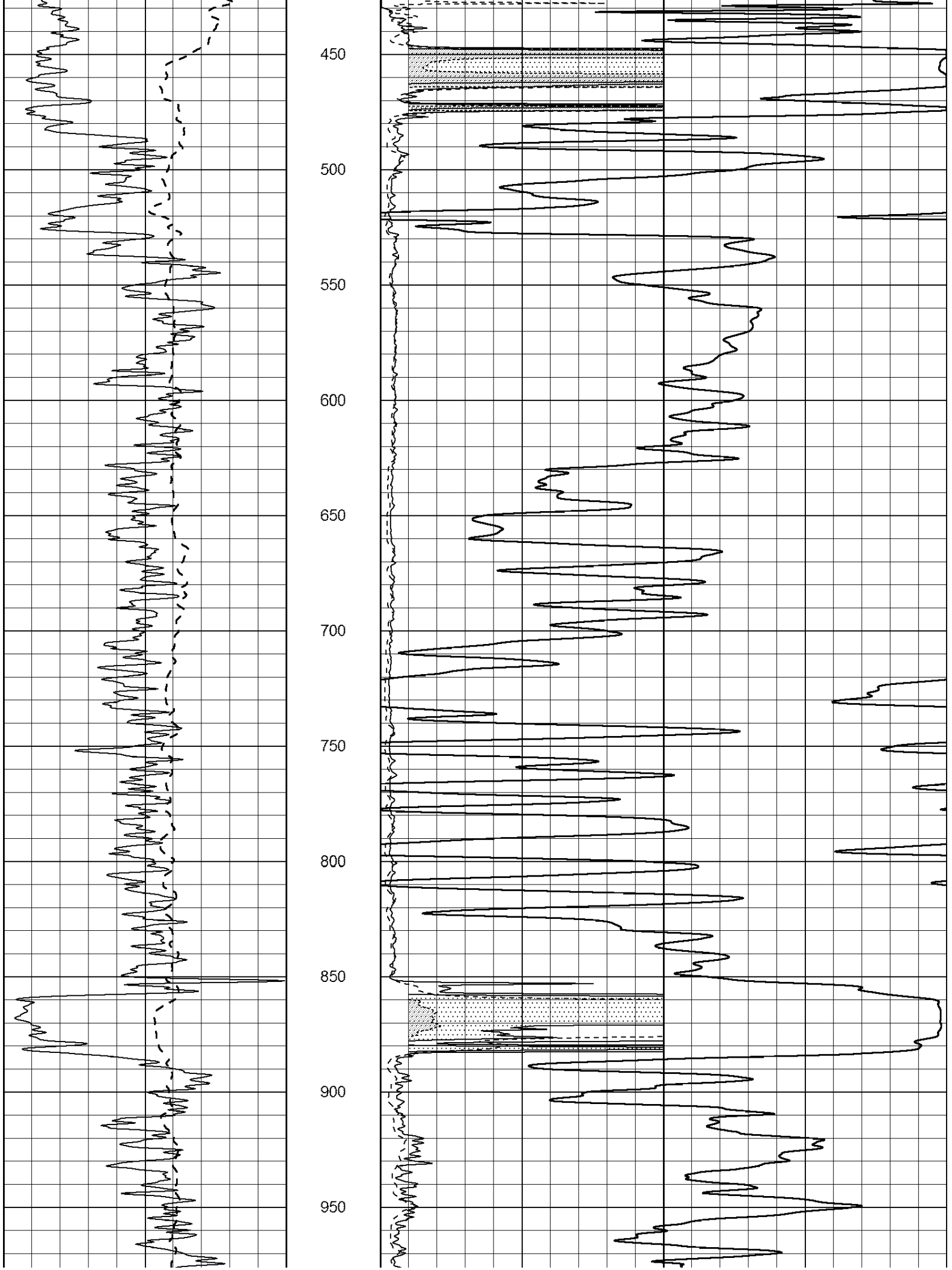
SERVICES CO.

Database File: 30514ddn.db
Dataset Pathname: pass4.3
Presentation Format: _dil2
Dataset Creation: Tue Aug 11 06:17:16 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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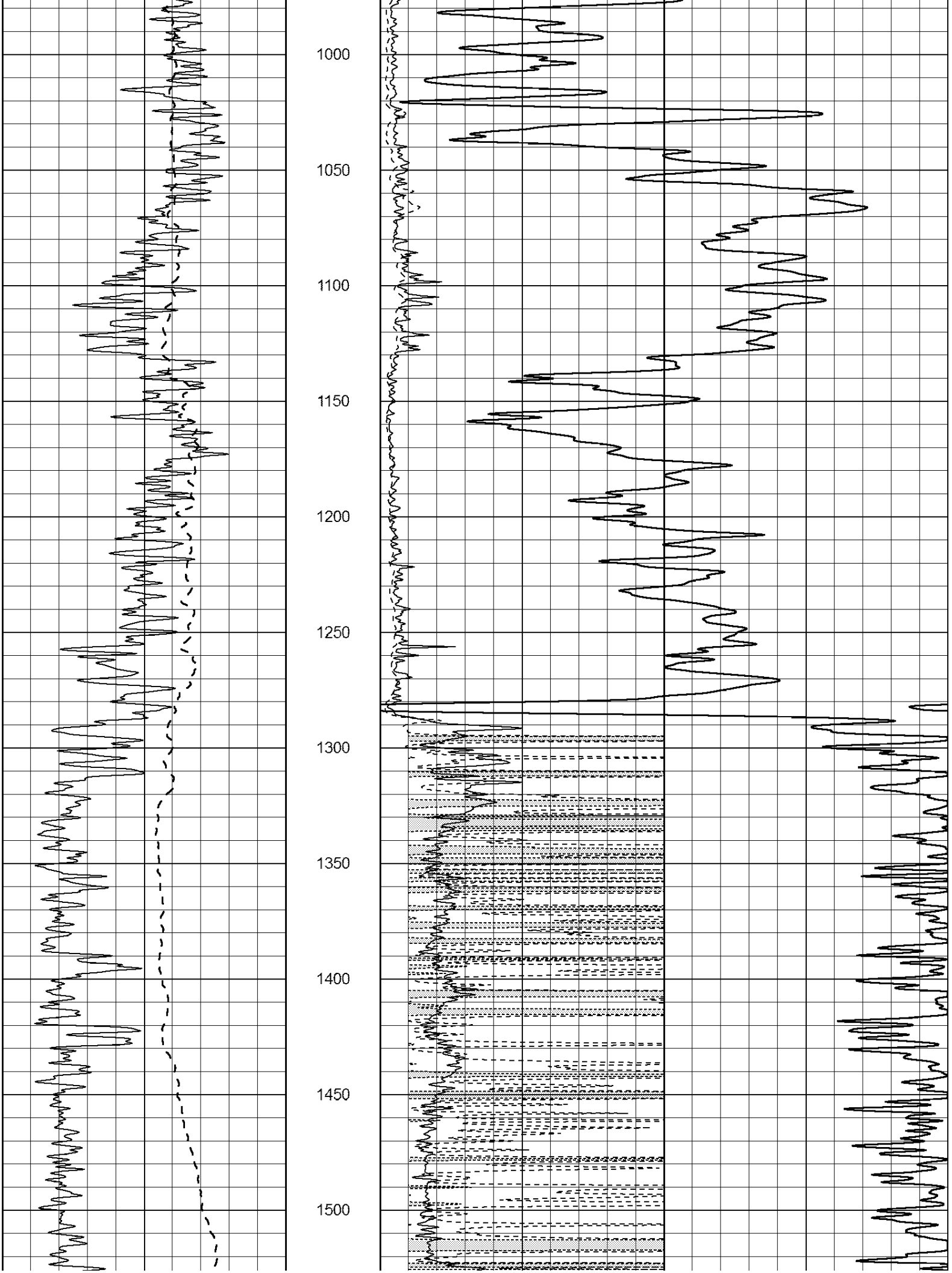
500
550
600
650
700
750
800
850
900
950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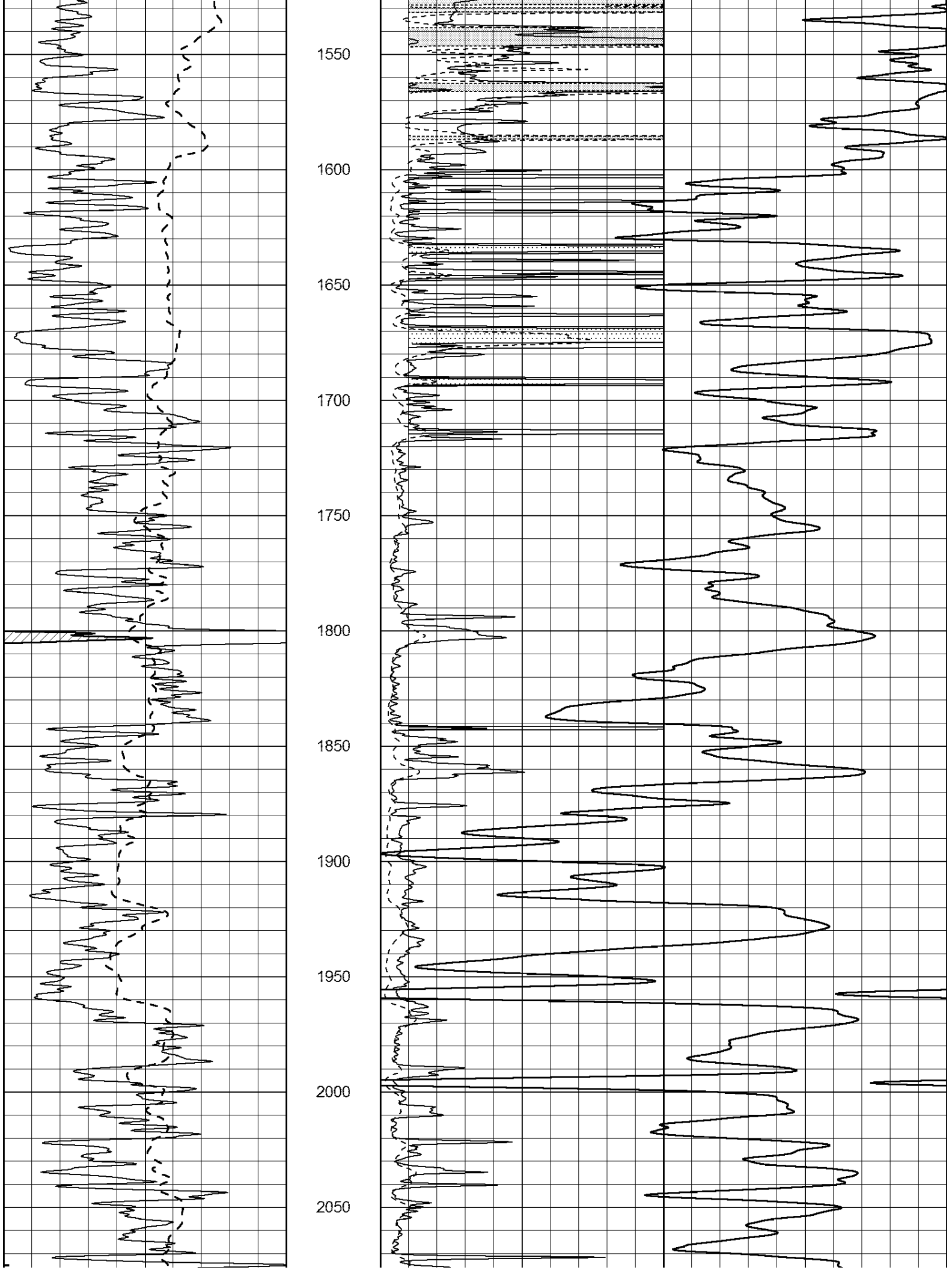
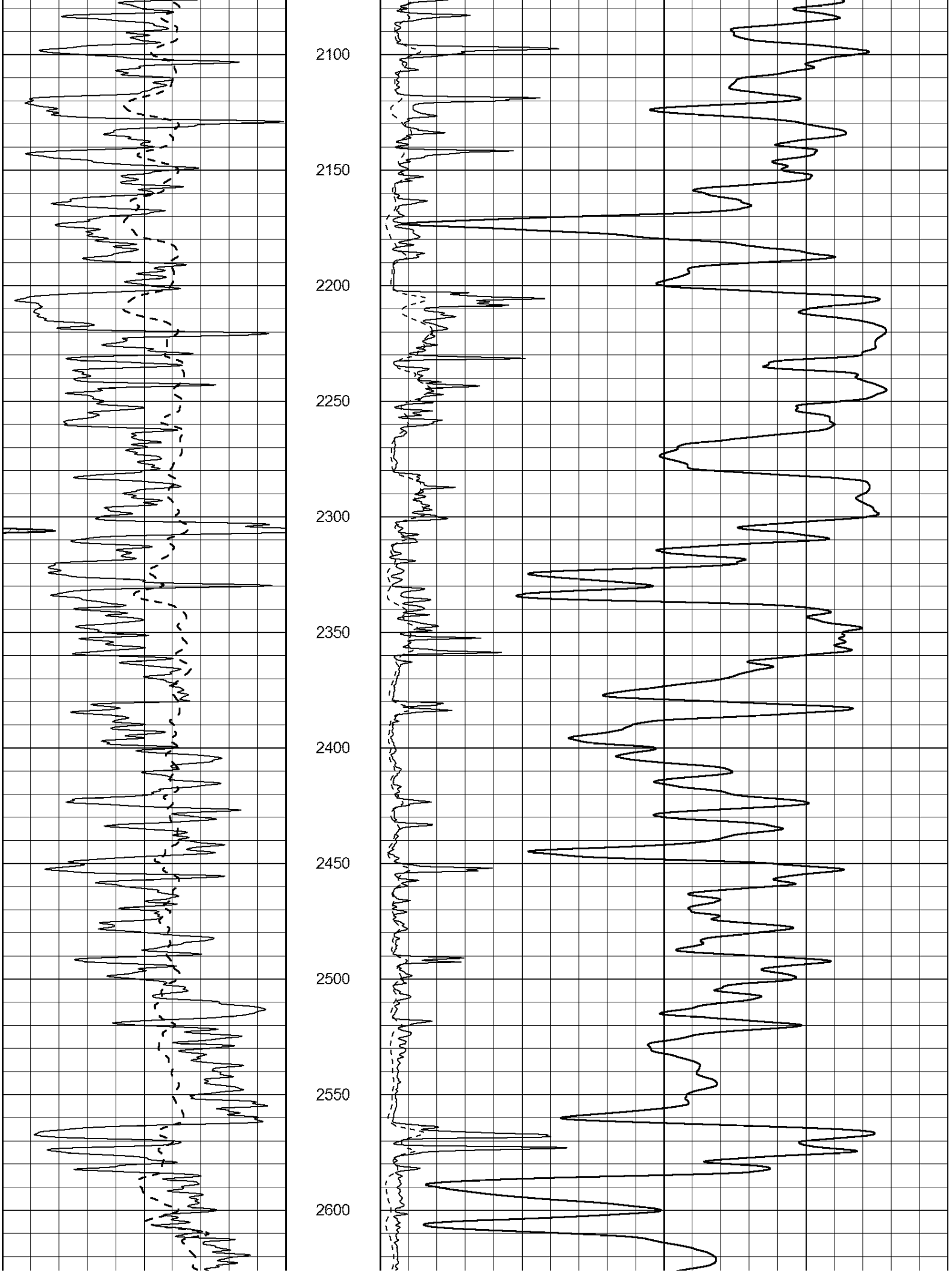
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500


1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050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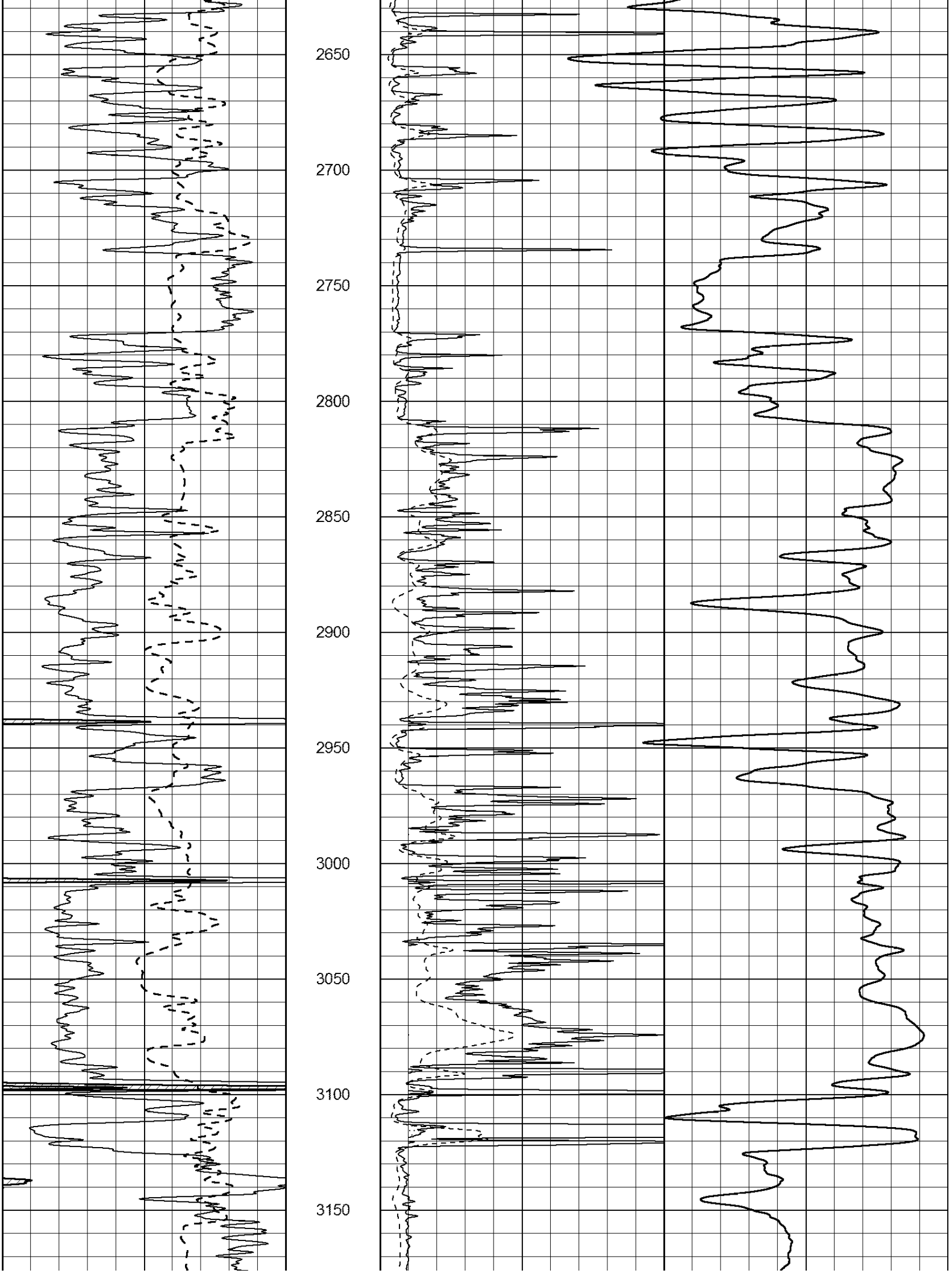
2200
2250
2300
2350
2400
2450
2500
2550
2600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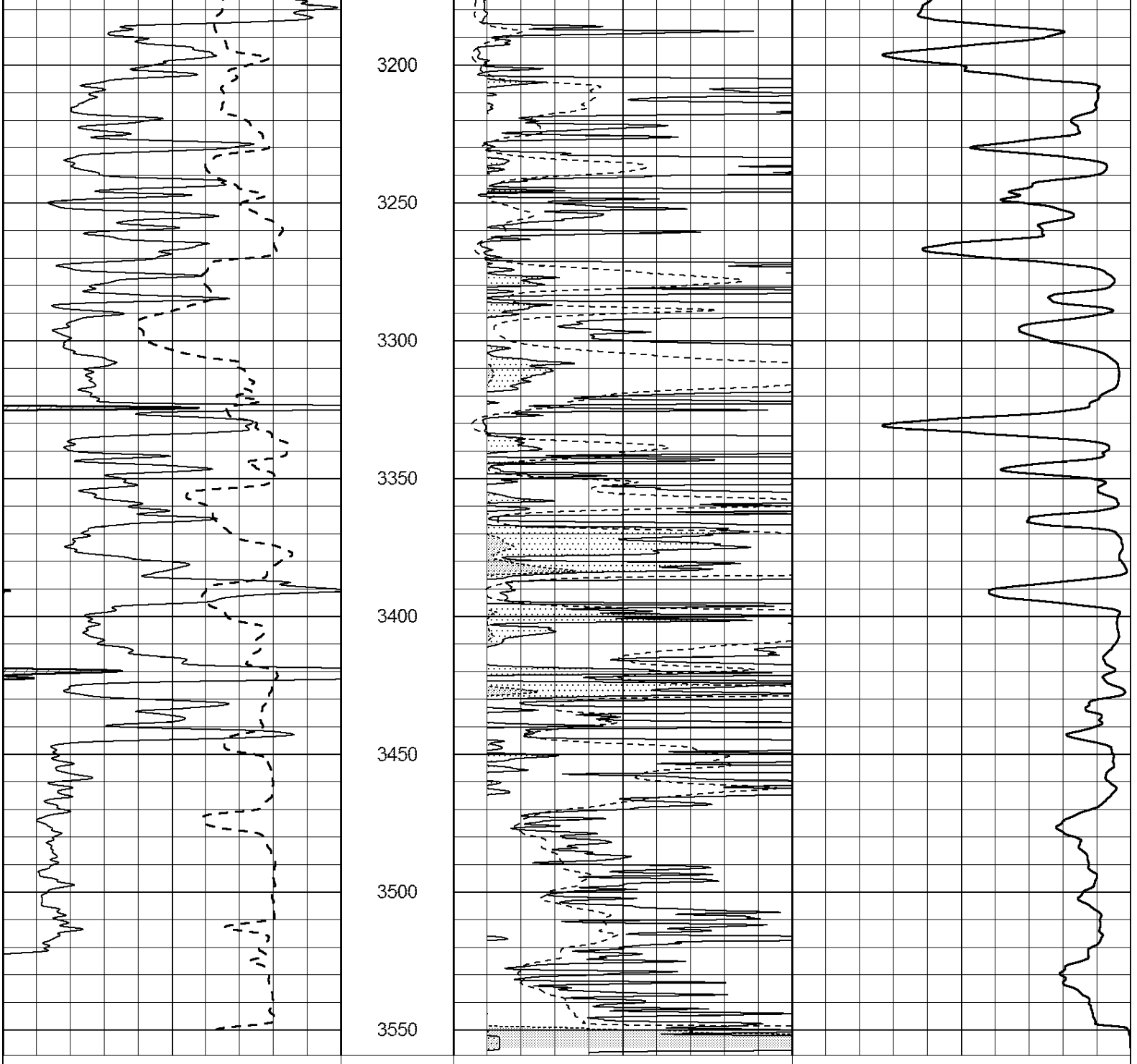
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150



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COMPLETION & PRODUCTION SERVICES CO.

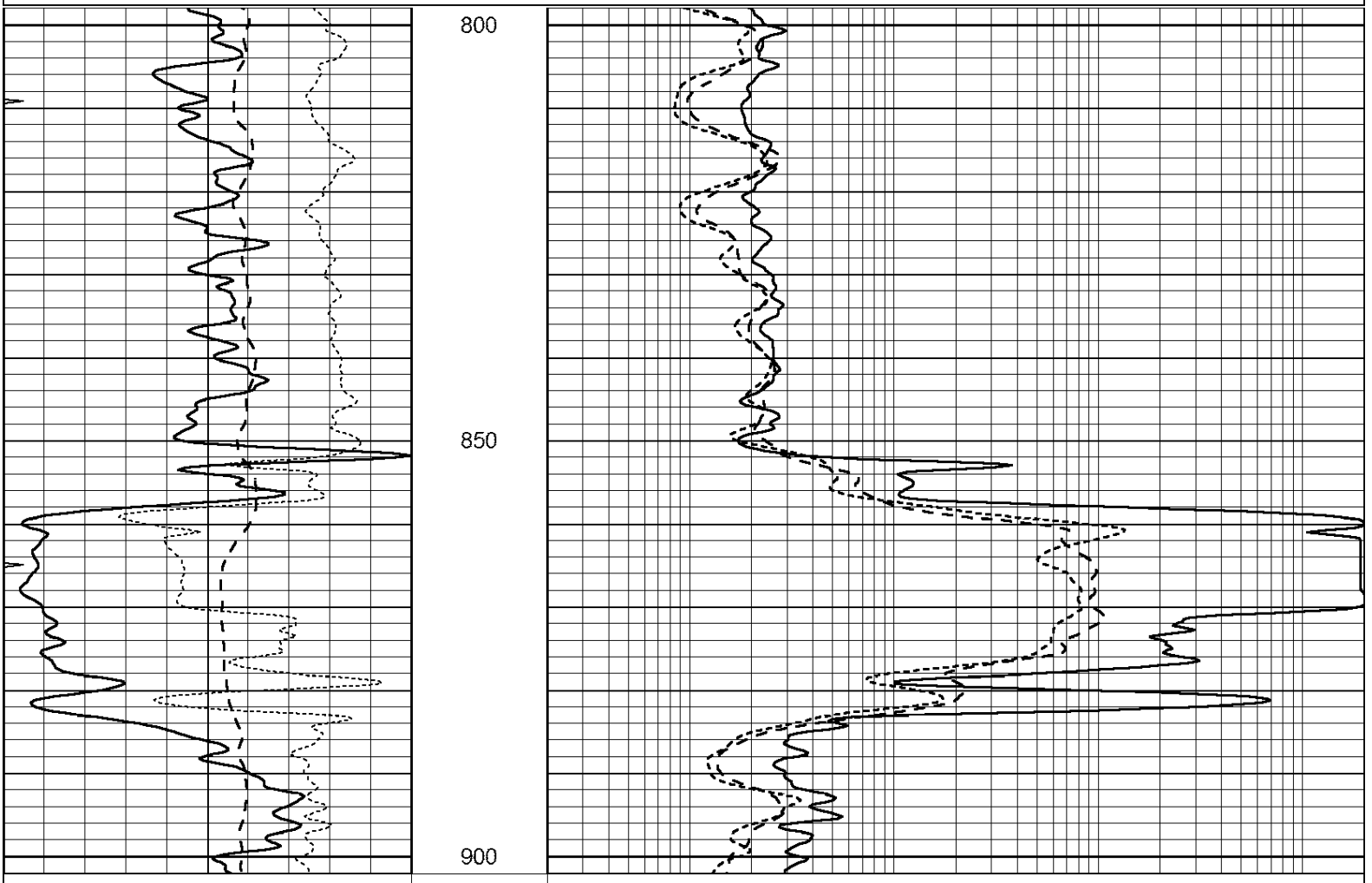
ANHYDRITE

Database File:	30514ddn.db
Dataset Pathname:	pass4.2
Presentation Format:	_dil
Dataset Creation:	Tue Aug 11 06:00:40 2015 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240

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

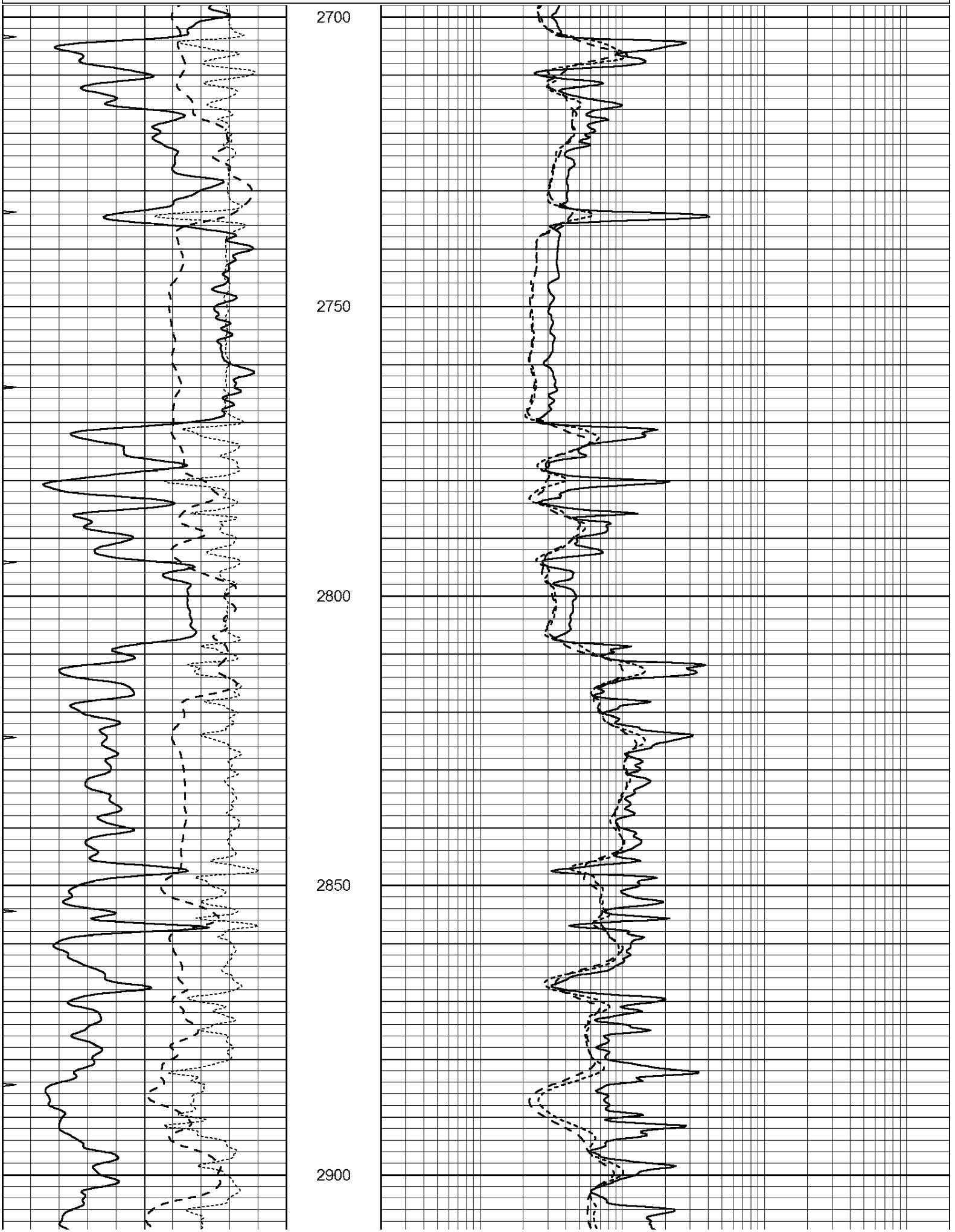
NABORS
COMPLETION & PRODUCTION SERVICES CO.

MAIN SECTION

Database File: 30514ddn.db
Dataset Pathname: pass4.1
Presentation Format: _dil
Dataset Creation: Tue Aug 11 05:38:46 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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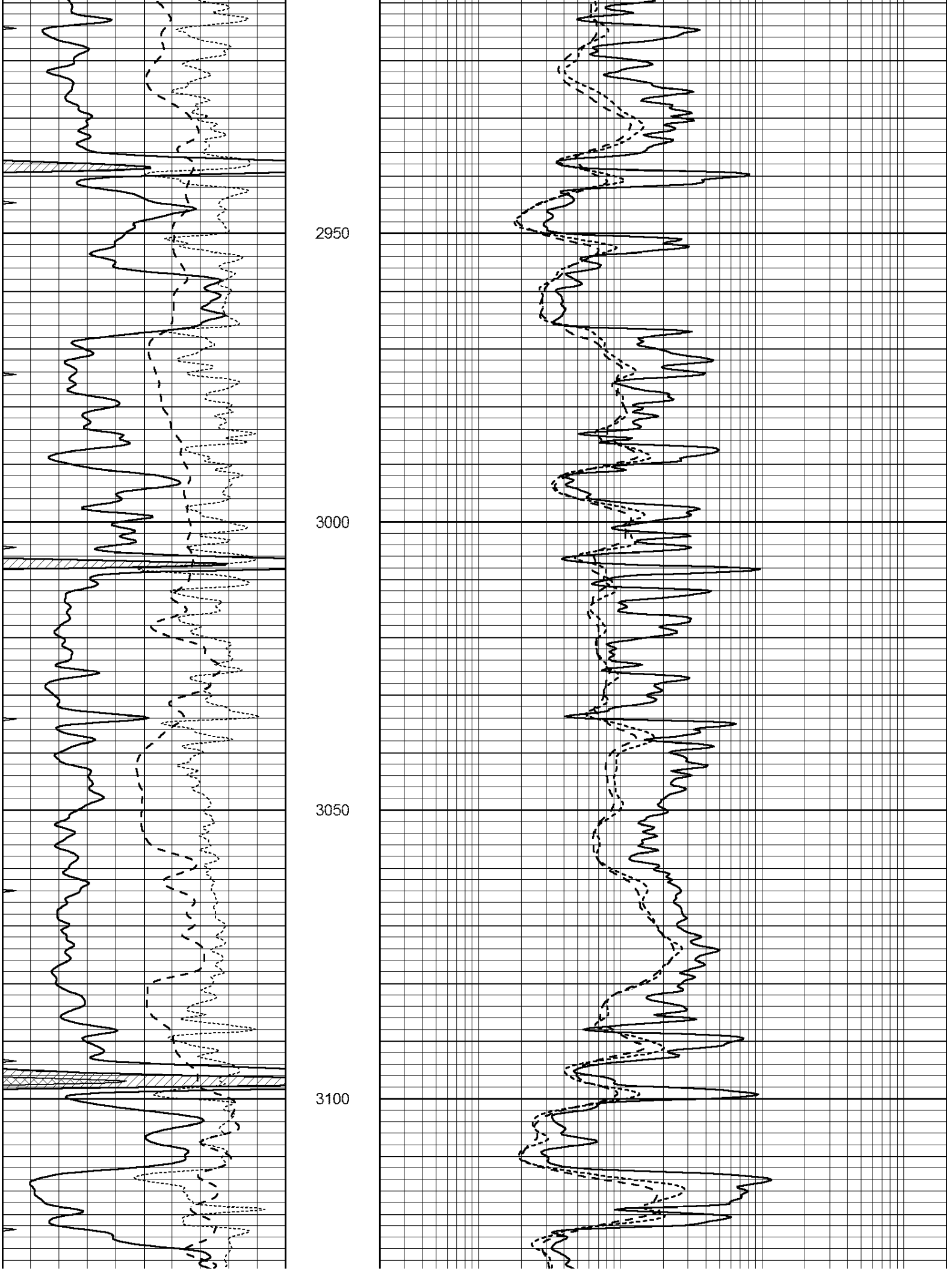
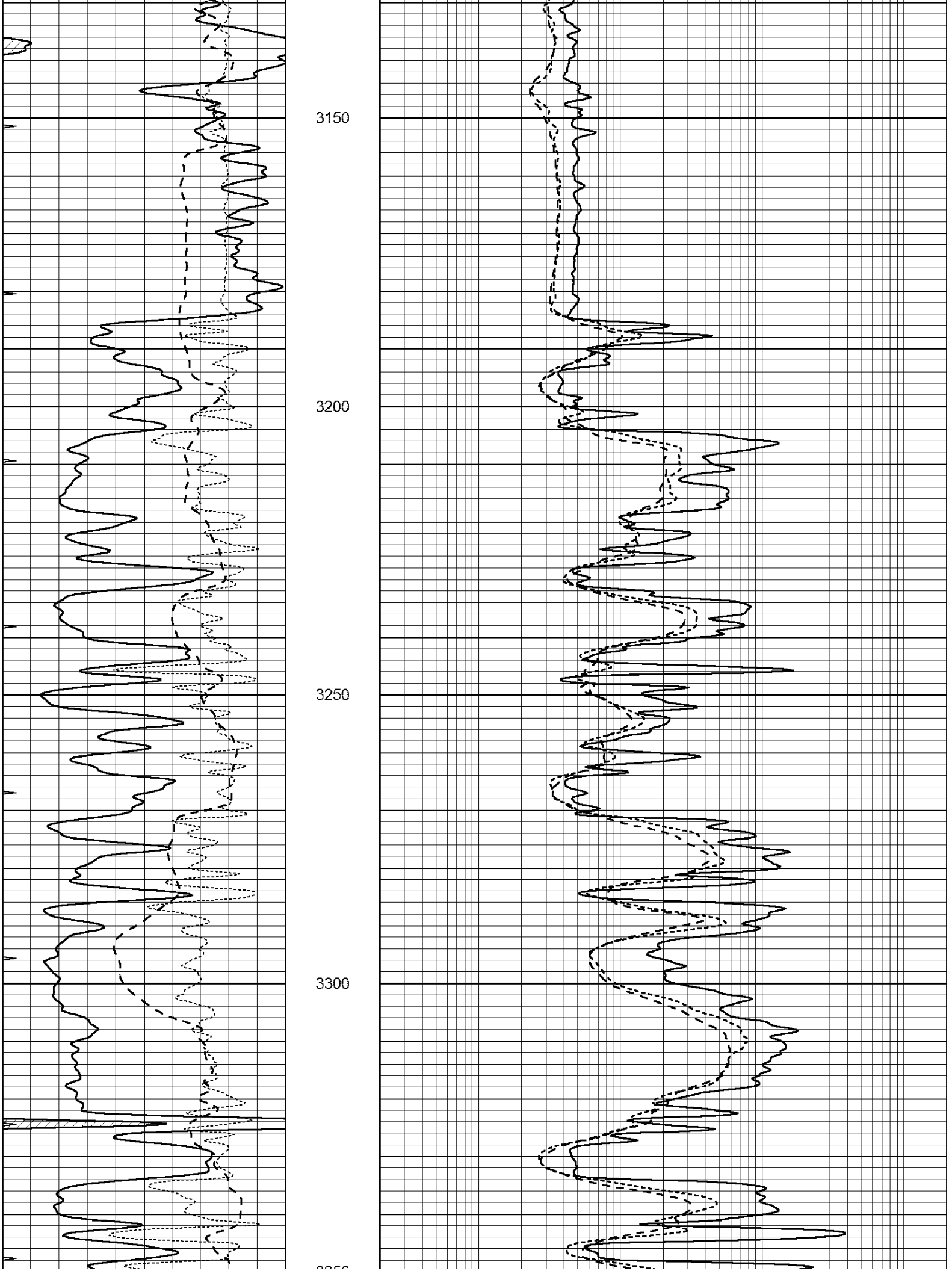
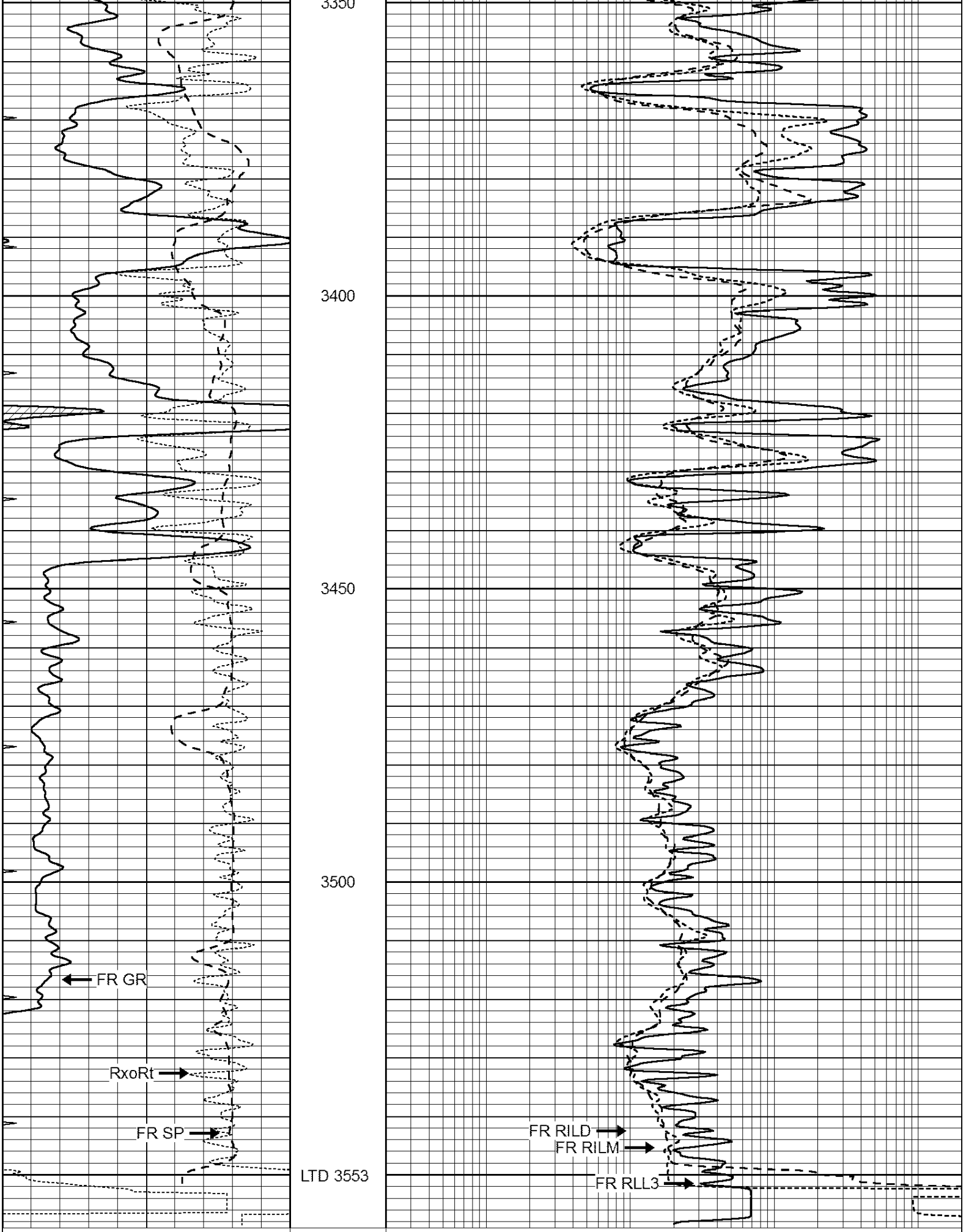
2800
2850
2900


2950
3000
3050
3100


3150
3200
3250
3300


3350
3400
3450
3500
FR GR
RxoRt
FR SP
LTD 3553
FR RILD
FR RILM
FR RLL3
0
GAMMA RAY (GAPI)
150
-100
SP (mV)
100
0.2
SHALLOW GUARD (Ohm-m)
2000
0.2
DEEP INDUCTION (Ohm-m)
2000

-250	Rxo/Rt	50
0	MINMK	20

0.2	MEDIUM INDUCTION (Ohm-m)	2000

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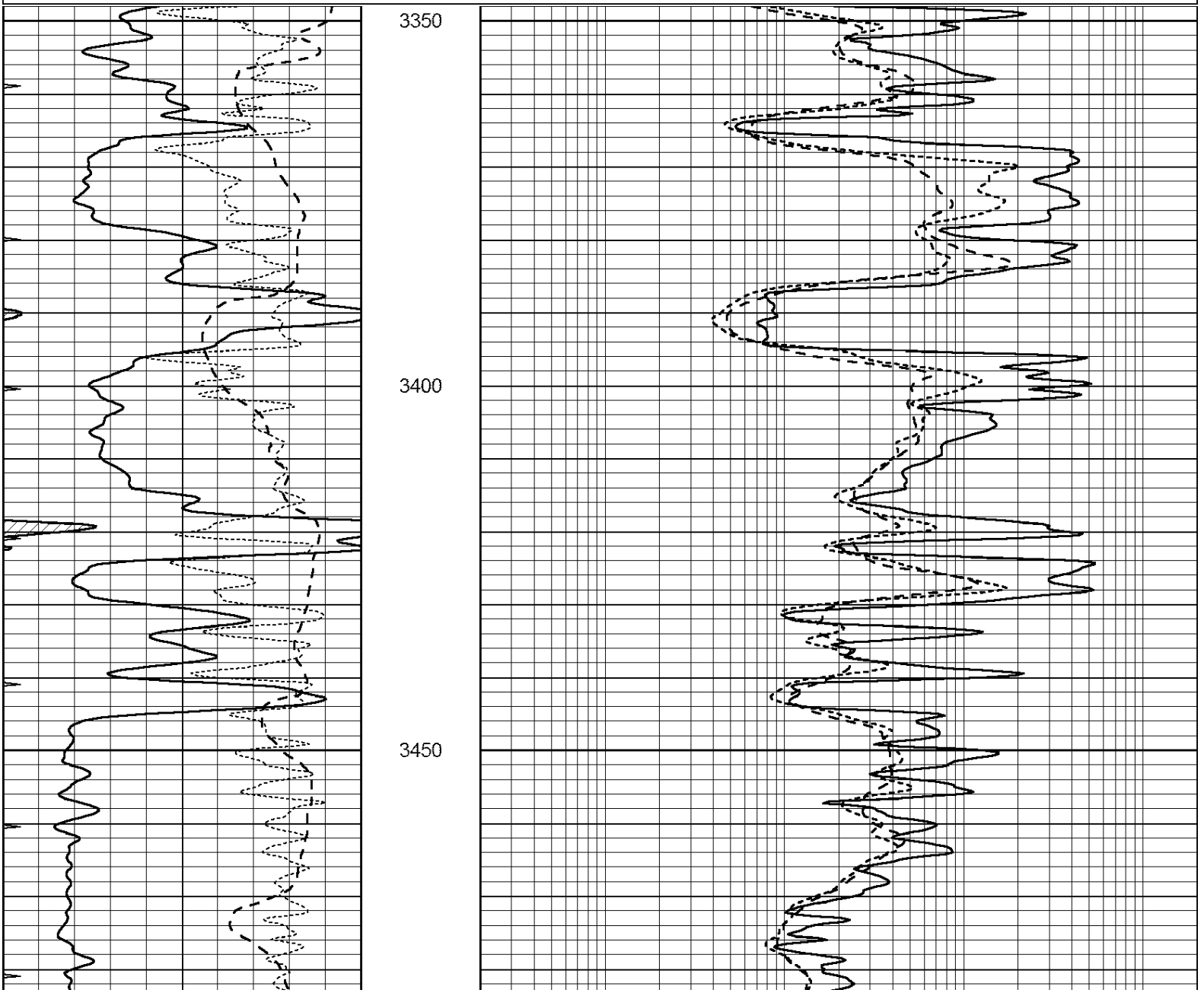
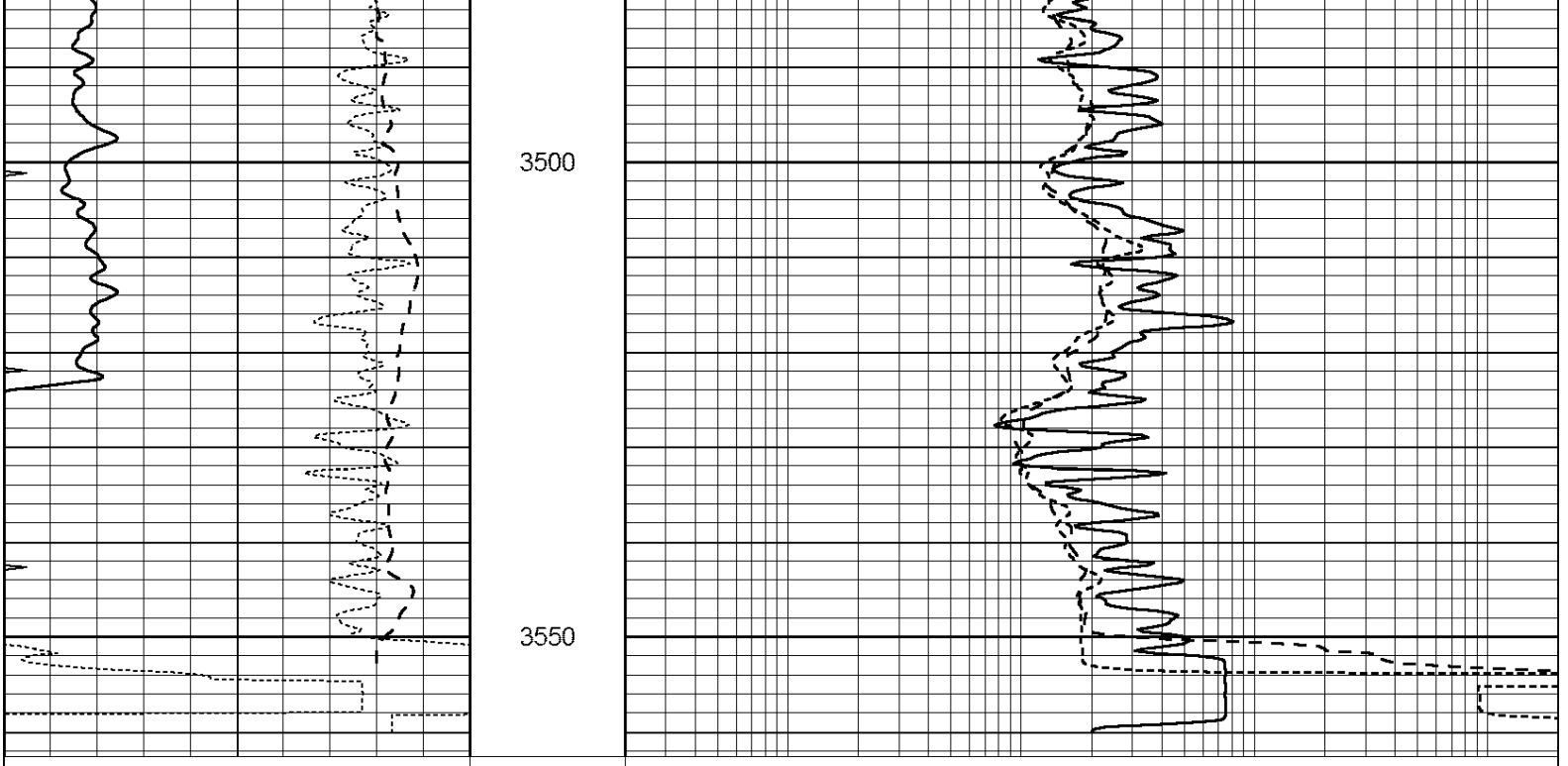
REPEAT SECTION

Database File: 30514ddn.db
Dataset Pathname: pass2.2
Presentation Format: _dil
Dataset Creation: Tue Aug 11 05:31:32 2015
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: 30514ddn.db
Dataset Pathname: pass4.3
Dataset Creation: Tue Aug 11 06:17:16 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:	GEAR3-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Mon Jul 27 17:00:09 2015
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	2.540	g/cc	210.51	354.56	cps

Spine Angle = 79.00 Density/Spine Ratio = 0.569

	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:	Sun May 10 18:59:16 2015	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.8000	GAPI/cps