



**DUAL
INDUCTION
LOG**

Company Russell Oil, Inc.
Well Dorothy #21-1
Field Rumback
County Logan State Kansas

Location: 2045' FNL & 2310' FWL
API #: 15 109 21528
SEC 21 TWP 11S RGE 32W
Permanent Datum Ground Level Elevation 3037'
Log Measured From KB 7' AGL
Drilling Measured From KB
Other Services
CDNL
ML
Elevation
K.B. 3045'
D.F. 3044'
G.L. 3037'

Date	10-30-17
Run Number	One
Depth Driller	4720'
Depth Logger	4720'
Bottom Logged Interval	4718'
Top Log Interval	320'
Casing Driller	8 5/8" @ 344'
Casing Logger	344'
Bit Size	7 7/8"
Type Fluid in Hole	Chemical
Density / Viscosity	9.1/58
PH / Fluid Loss	10.5/7.6
Source of Sample	Pit
Rm @ Meas. Temp	1.10@72degf
Rmf @ Meas. Temp	0.88@72degf
Rmc @ Meas. Temp	1.41@72degf
Source of Rmf / Rmc	Calculated
Rm @ BHT	0.68@116degf
Time Circulation Stopped	10:00 a.m
Time Logger on Bottom	12:45 p.m
Maximum Recorded Temperature	116degf
Equipment Number	T729
Location	Hays, KS
Recorded By	Casey P.
Witnessed By	Mrs. Kitt Noah

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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

West of Oakley to 430 Rd.,(West Edge of Golf Course)
Then South 5 mi. to Porter B Tank Batteries (west Side),
Then go west through red gate on southwest side of Porter B tank Batteries,
Then West to North into Location

Open & Shut gate as leaving & going)

Thanks for using Gemini Wireline LLC
785-625-1182



MAIN PASS

Database File rodorothy21-1oh.db
 Dataset Pathname pass2.1
 Presentation Format kdillinn
 Dataset Creation Mon Oct 30 13:54:45 2017
 Charted by Depth in Feet scaled 1:600

0 GR (GAPI) 150

1000 CILD (mmho/m) 0

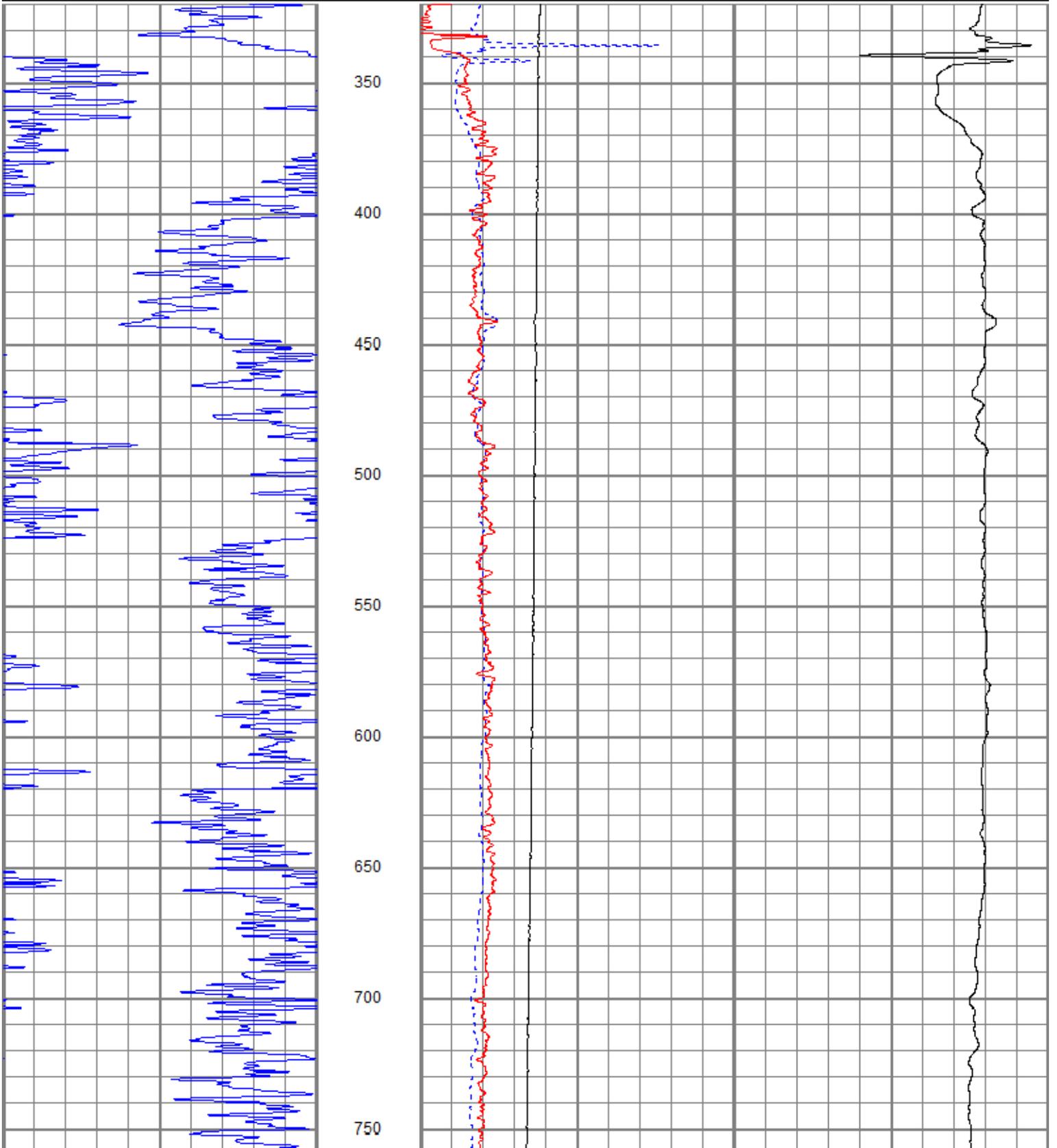
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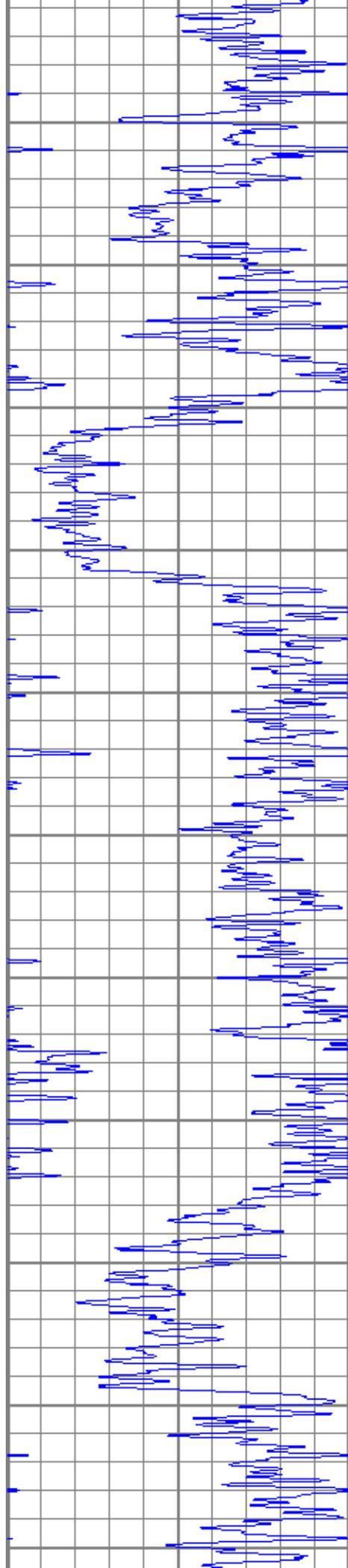
0 RILD (Ohm-m) 50

0 RLL3 (Ohm-m) 50

50 RILD x 10 (Ohm-m) 500

50 RLL3 x 10 (Ohm-m) 500





800

850

900

950

1000

1050

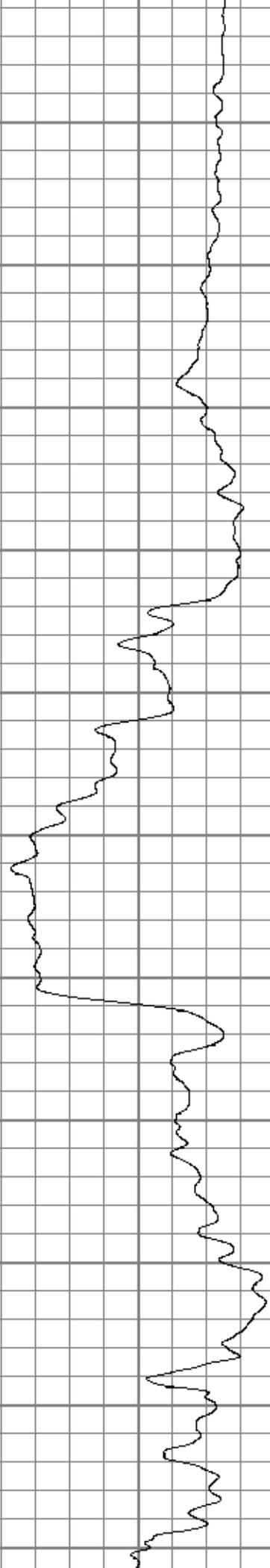
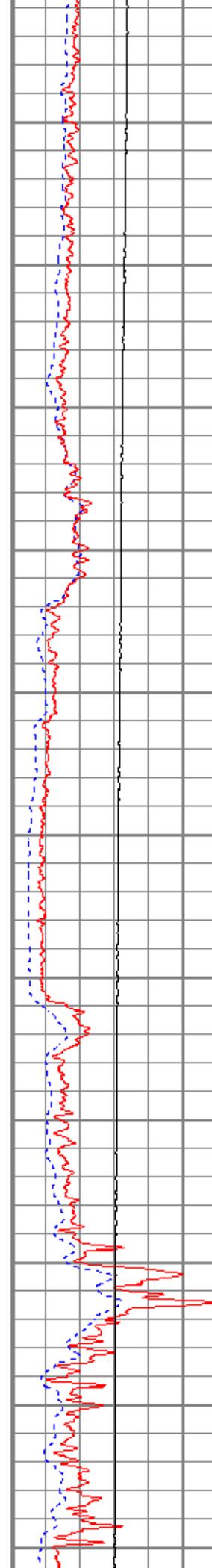
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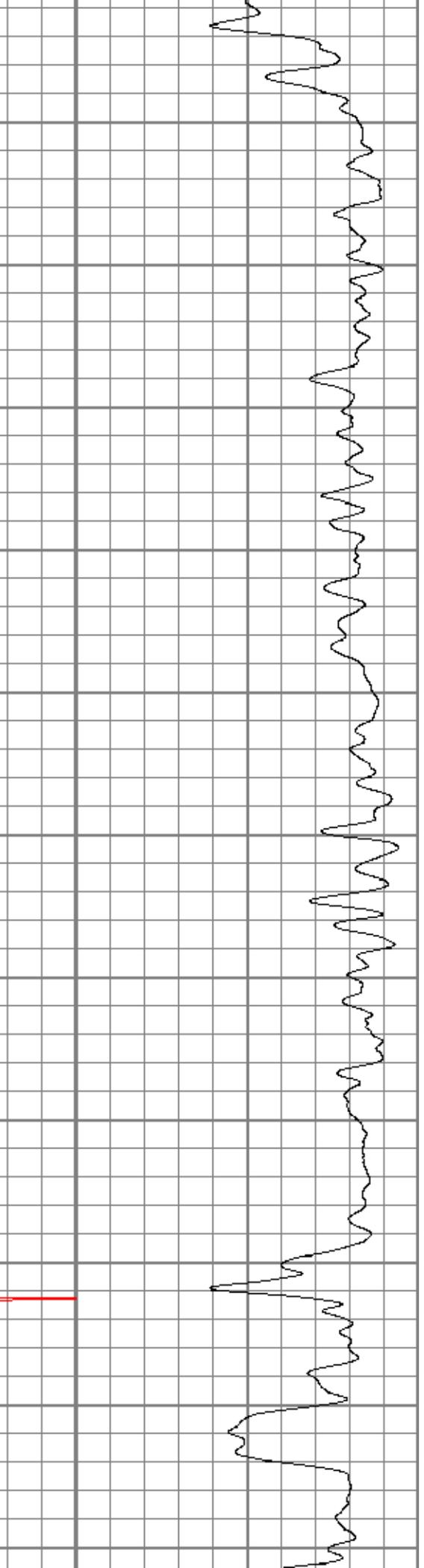
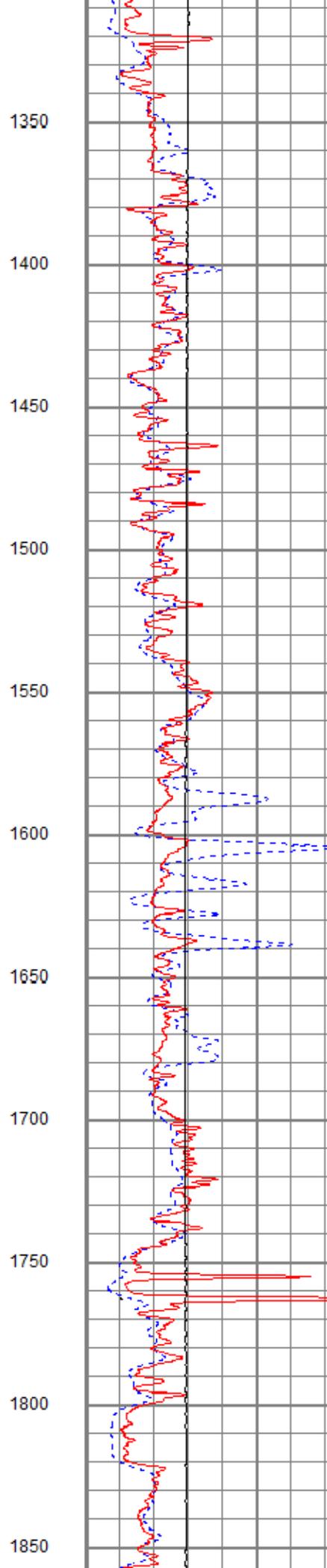
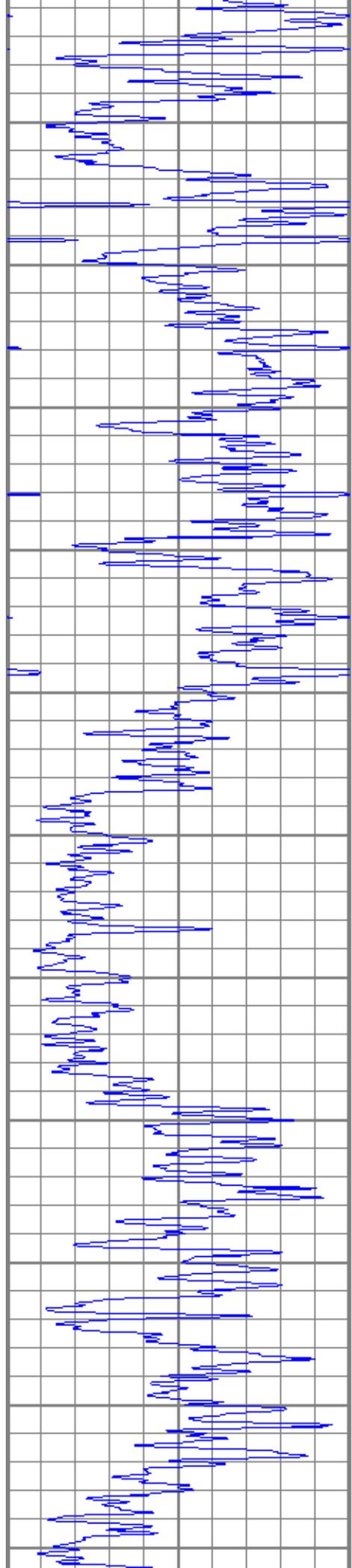
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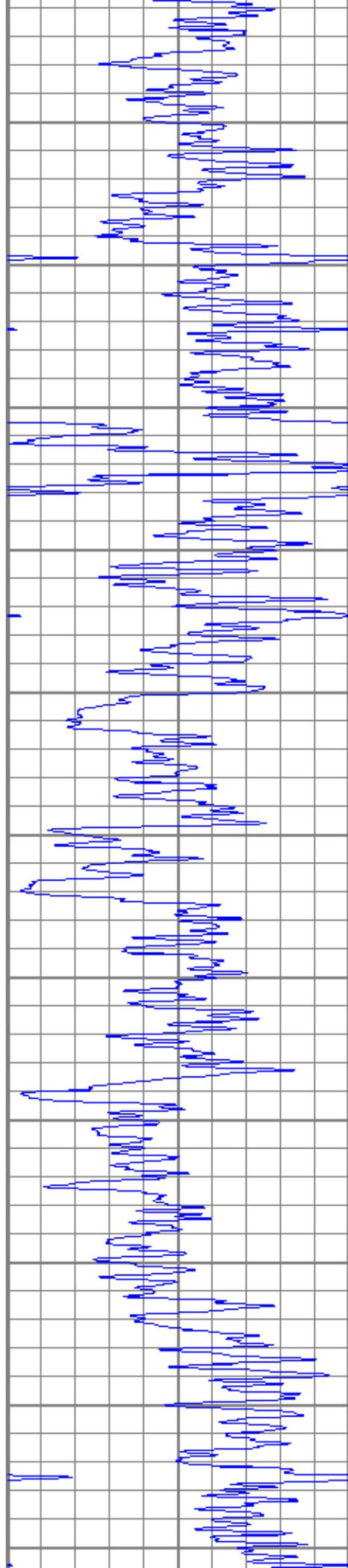
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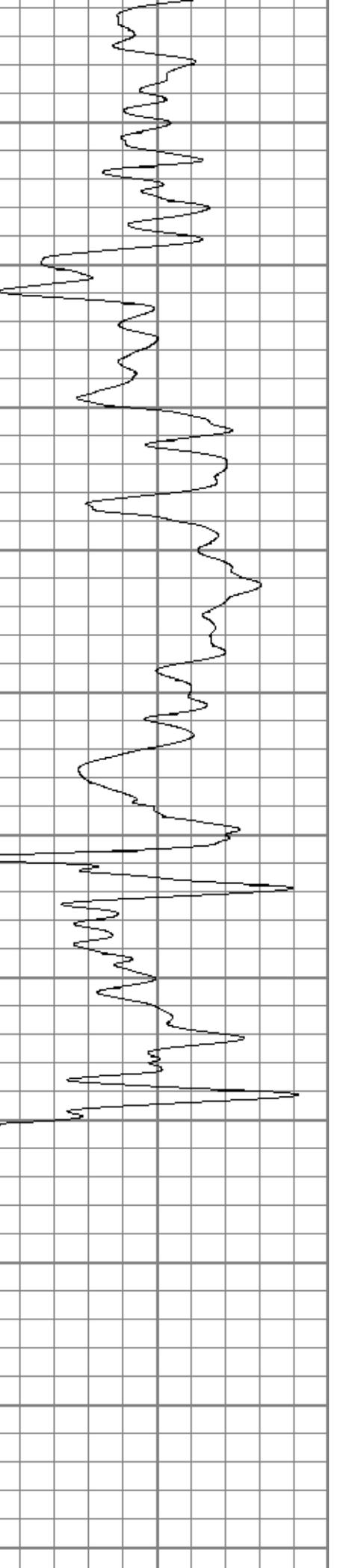
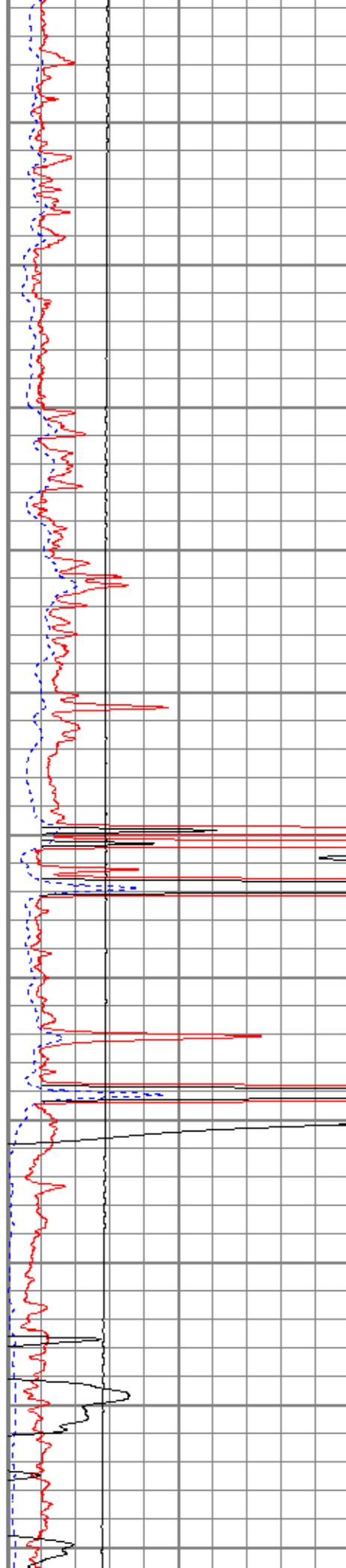
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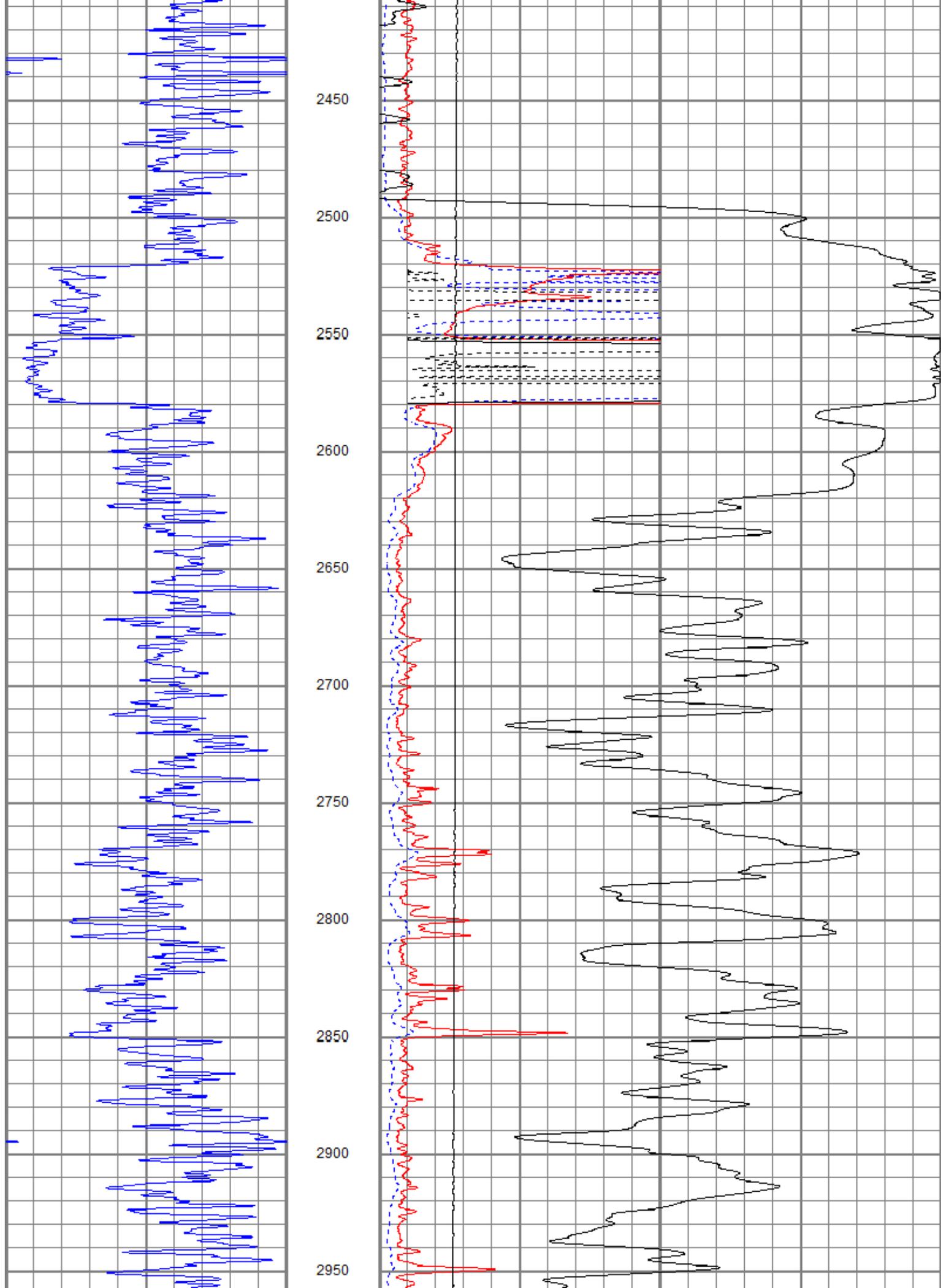


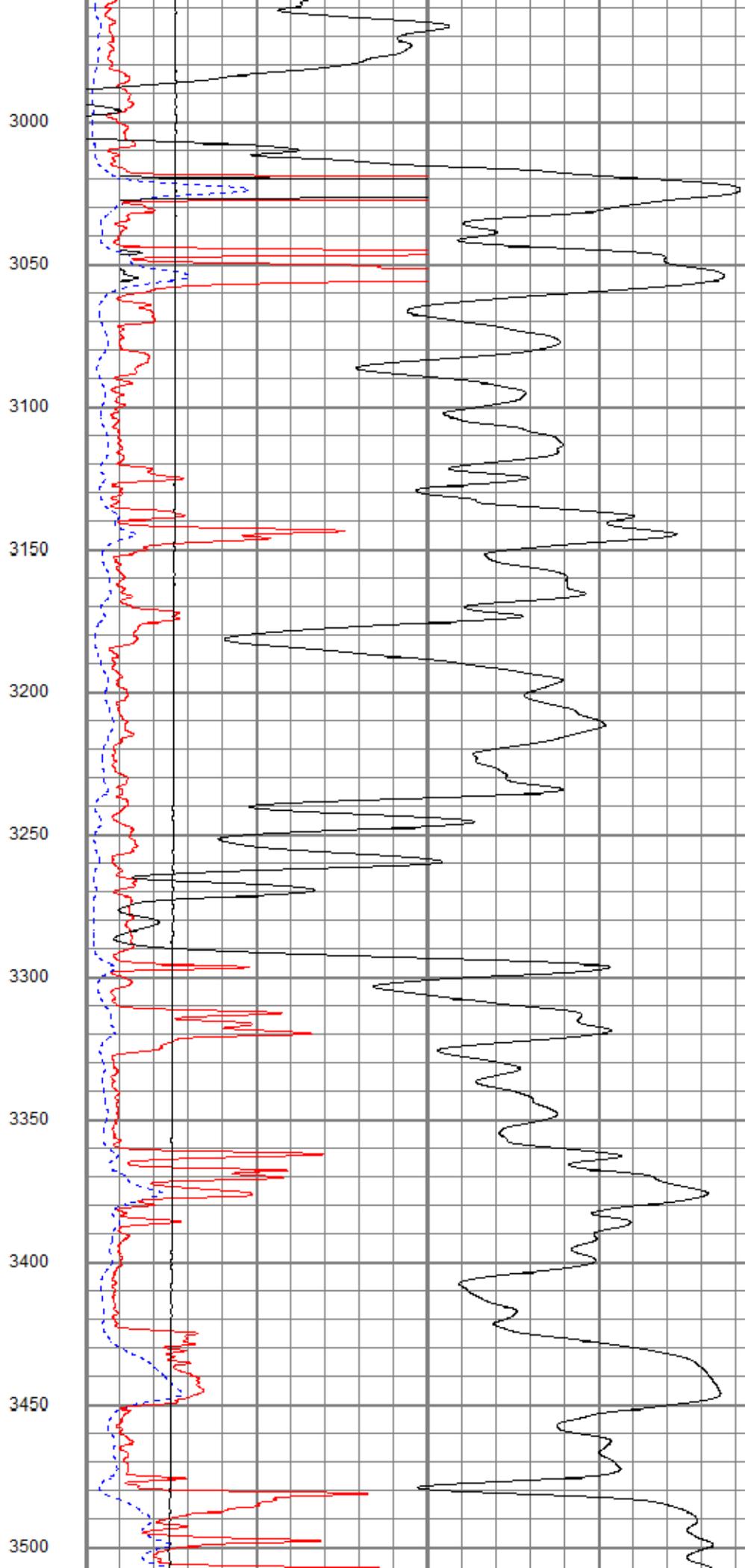
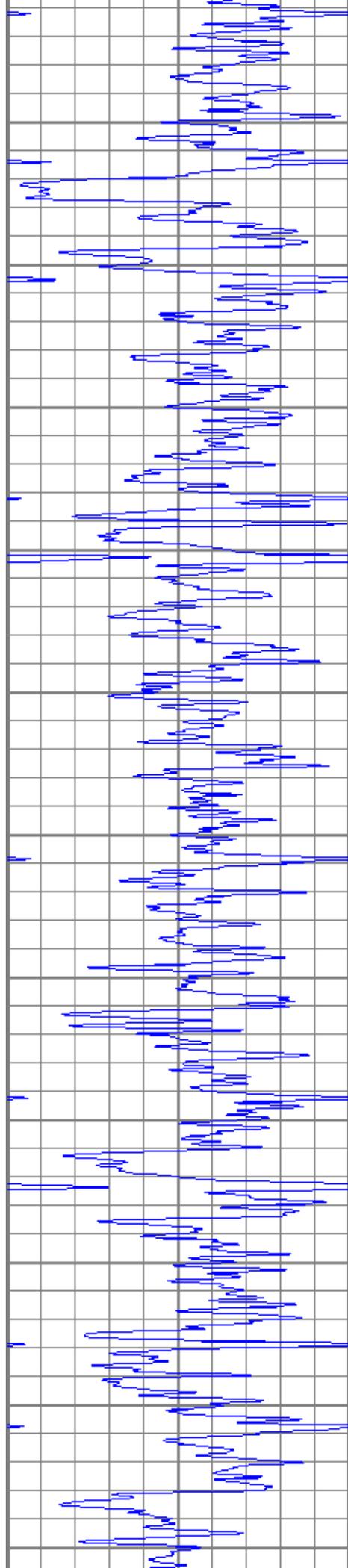


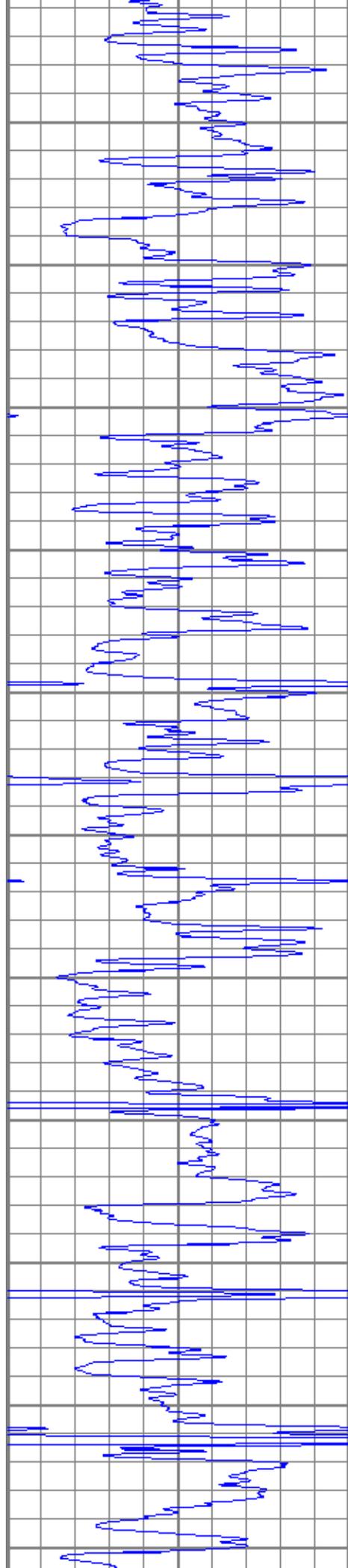


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2400

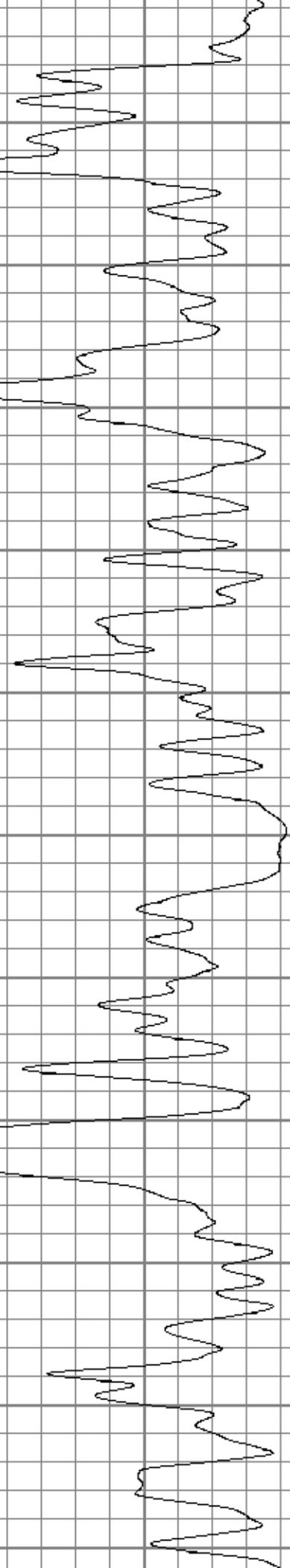
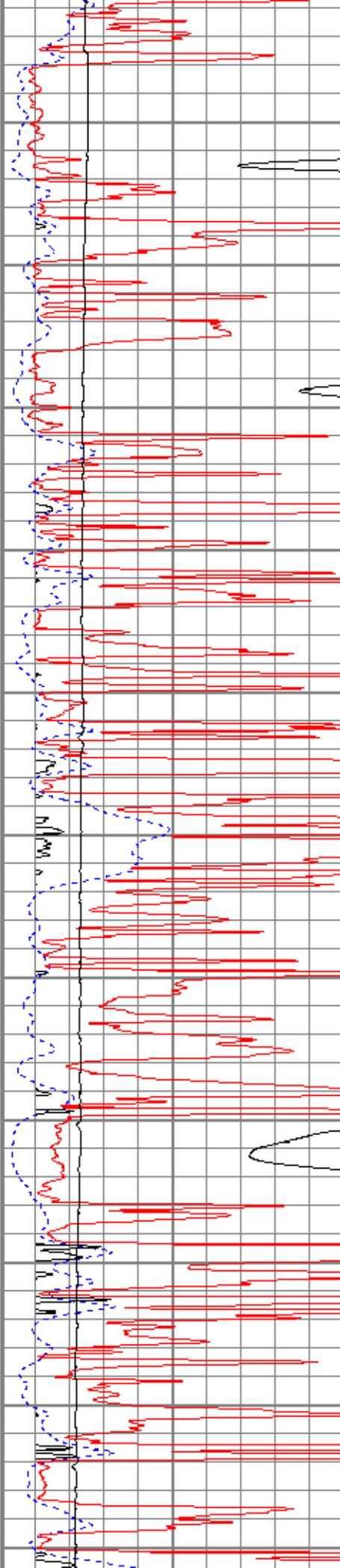


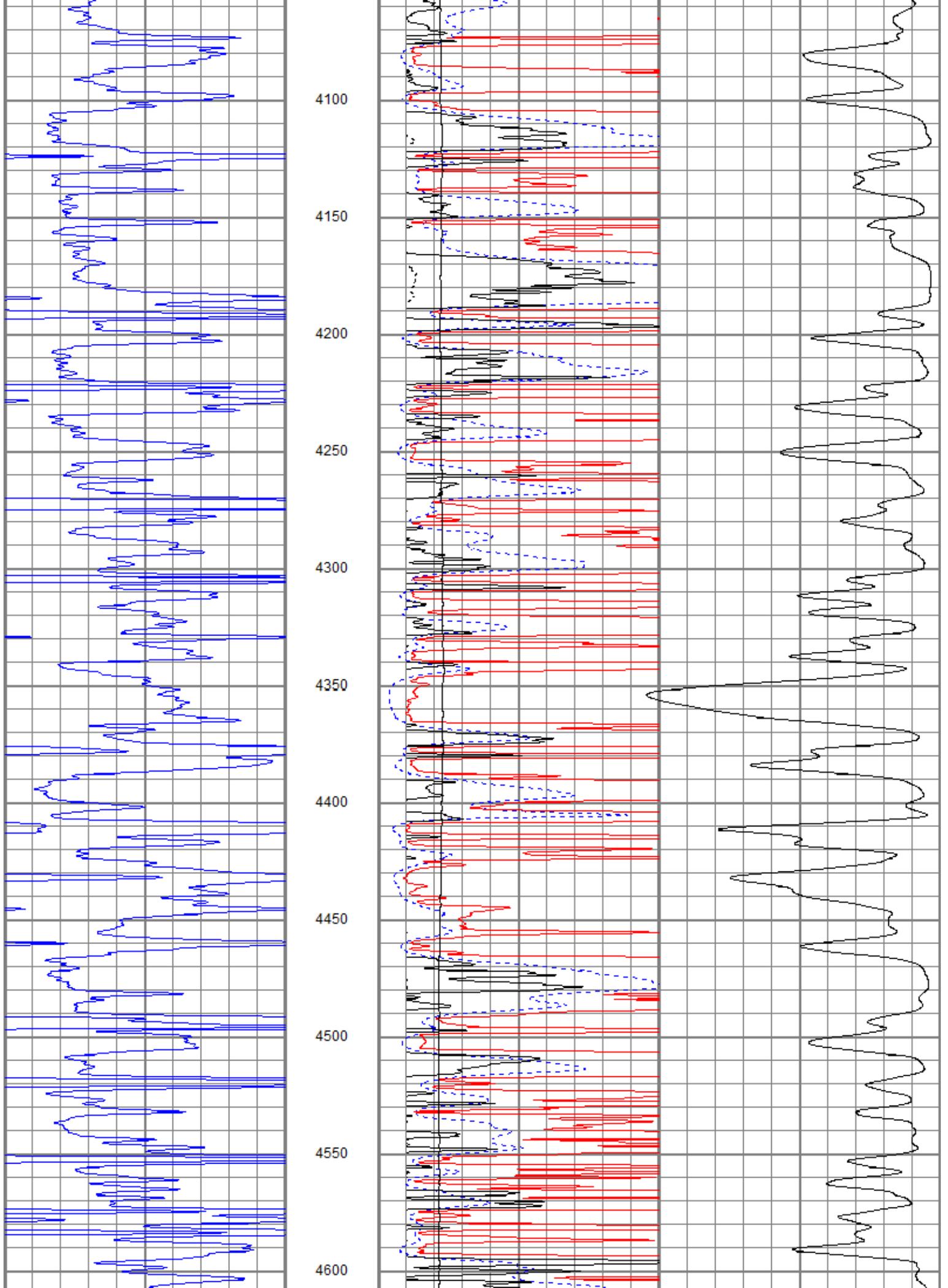


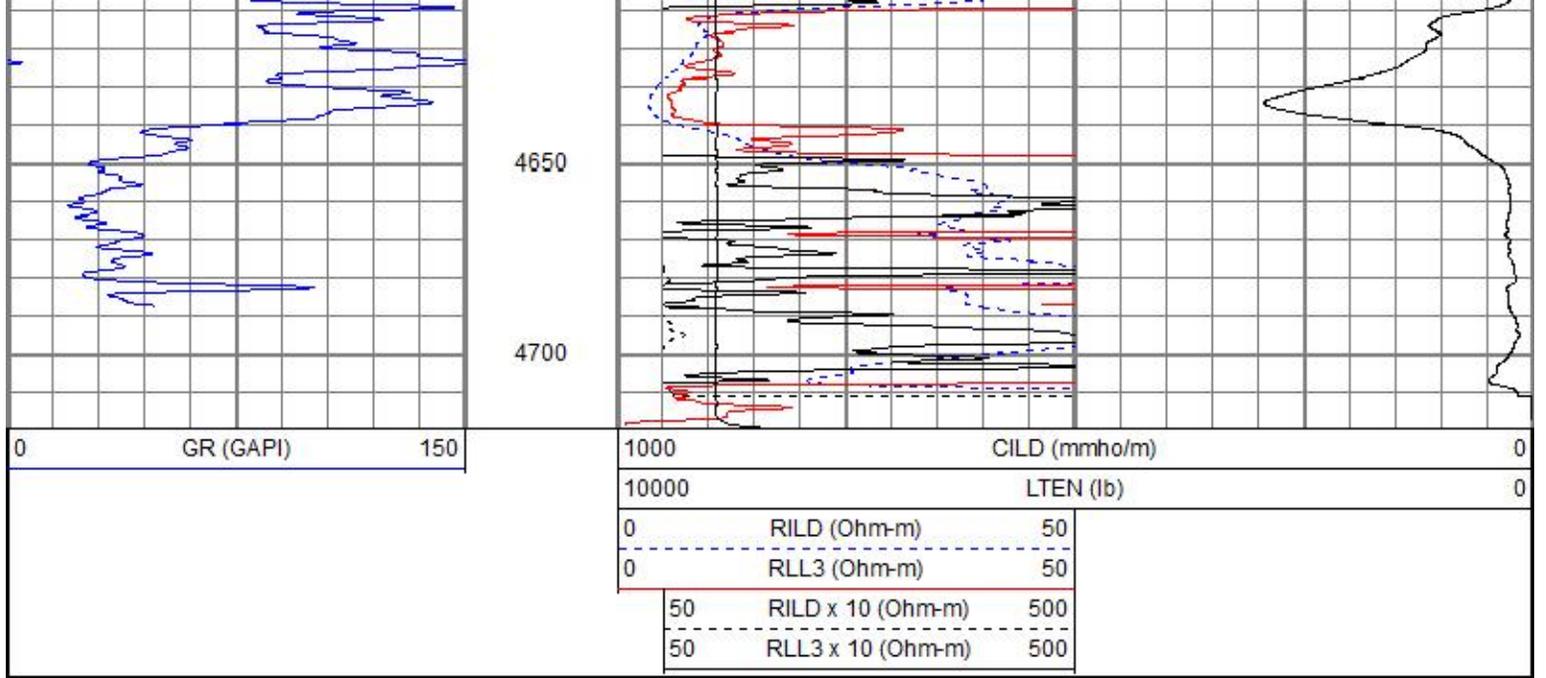




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4000
4050



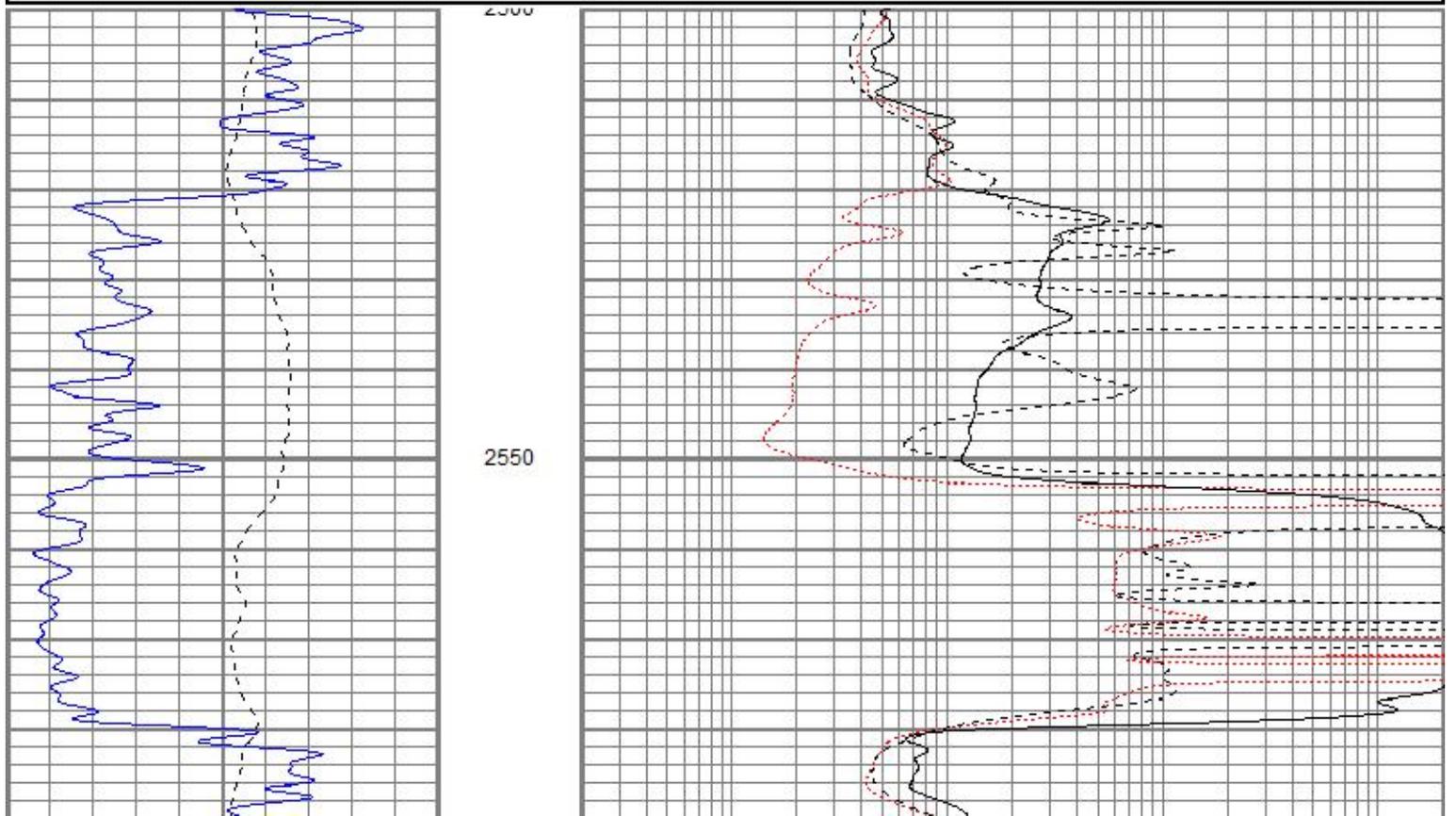


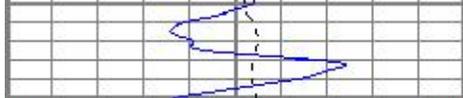


MAIN PASS

Database File: rodorothy21-1oh.db
 Dataset Pathname: pass2.1
 Presentation Format: kdil
 Dataset Creation: Mon Oct 30 13:54:45 2017
 Charted by: Depth in Feet scaled 1:240

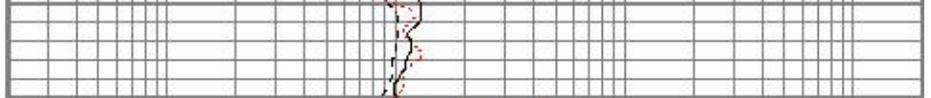
0	GR (GAPI)	150	0.2	RILM (Ohm-m)	2000
-100	SP (mV)	100	0.2	RILD (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000





0	GR (GAPI)	150
-100	SP (mV)	100

2600



0.2	RILM (Ohm-m)	2000
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000

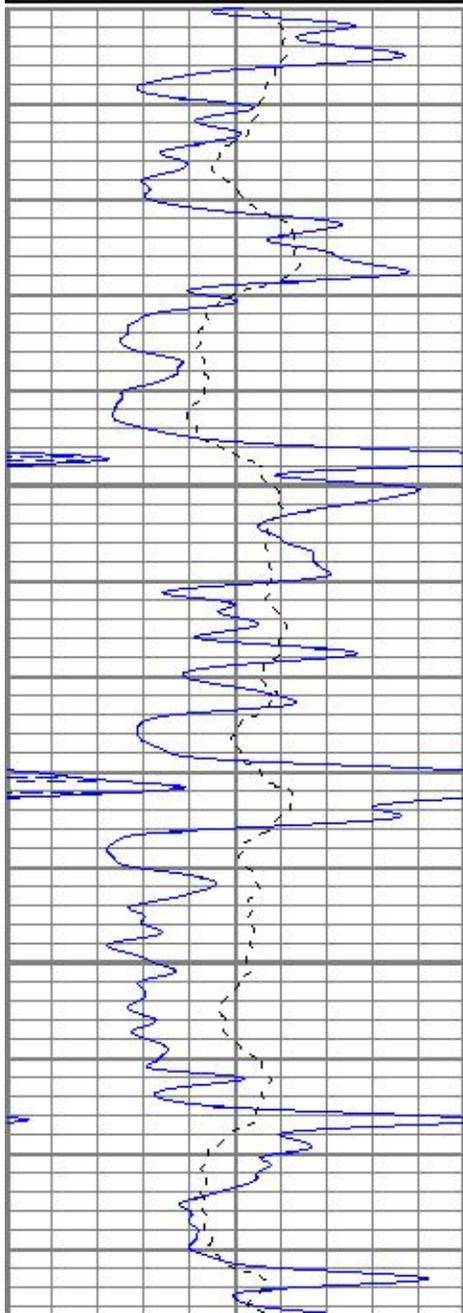


MAIN PASS

Database File: rodorothy21-1oh.db
 Dataset Pathname: pass2.1
 Presentation Format: kdil
 Dataset Creation: Mon Oct 30 13:54:45 2017
 Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	150
-100	SP (mV)	100

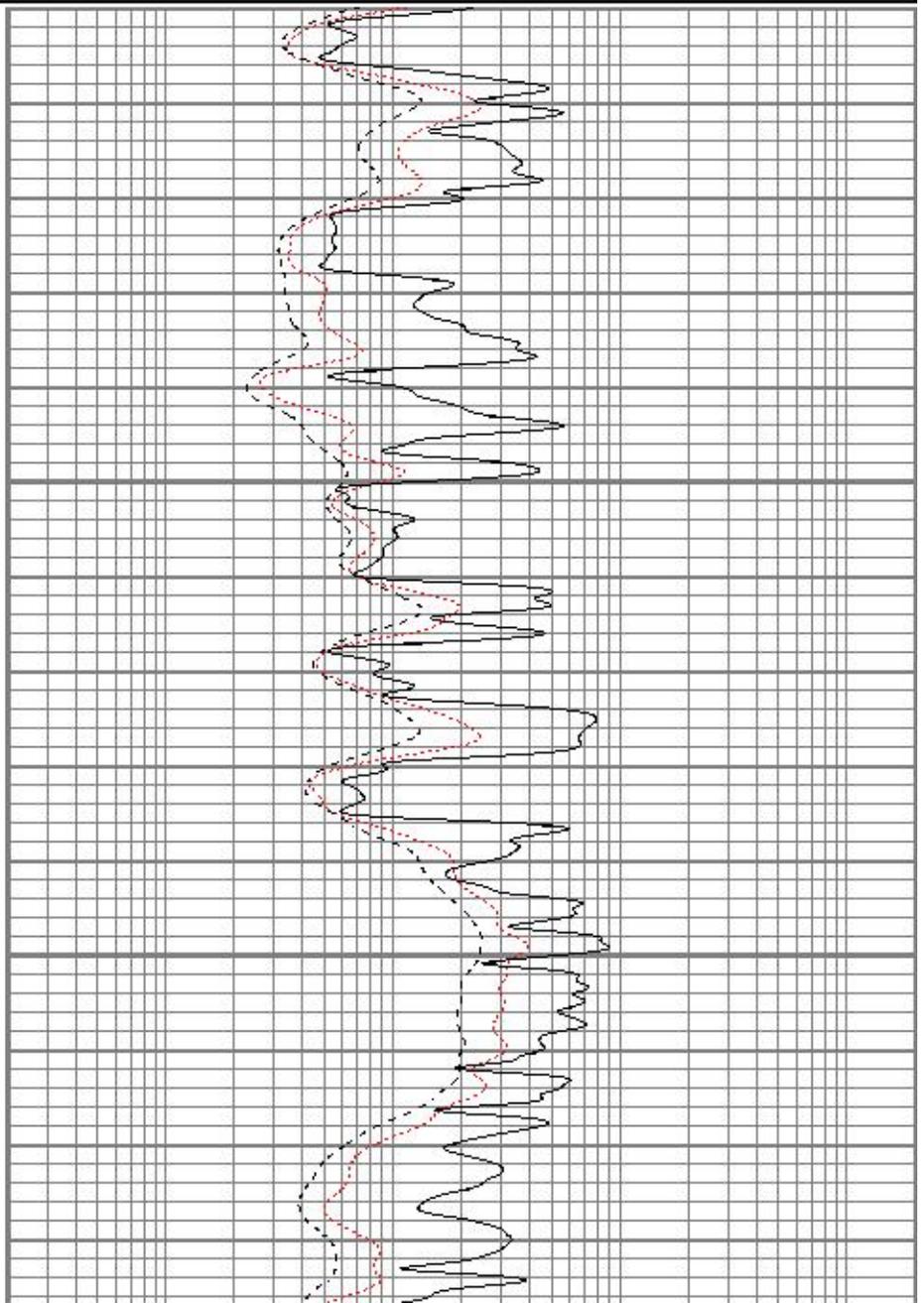
0.2	RILM (Ohm-m)	2000
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000

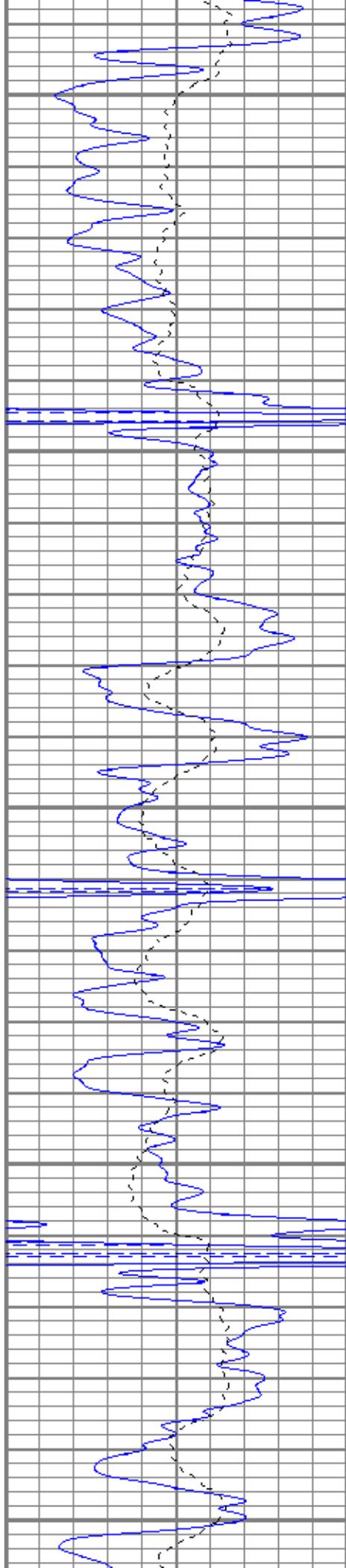


3700

3750

3800





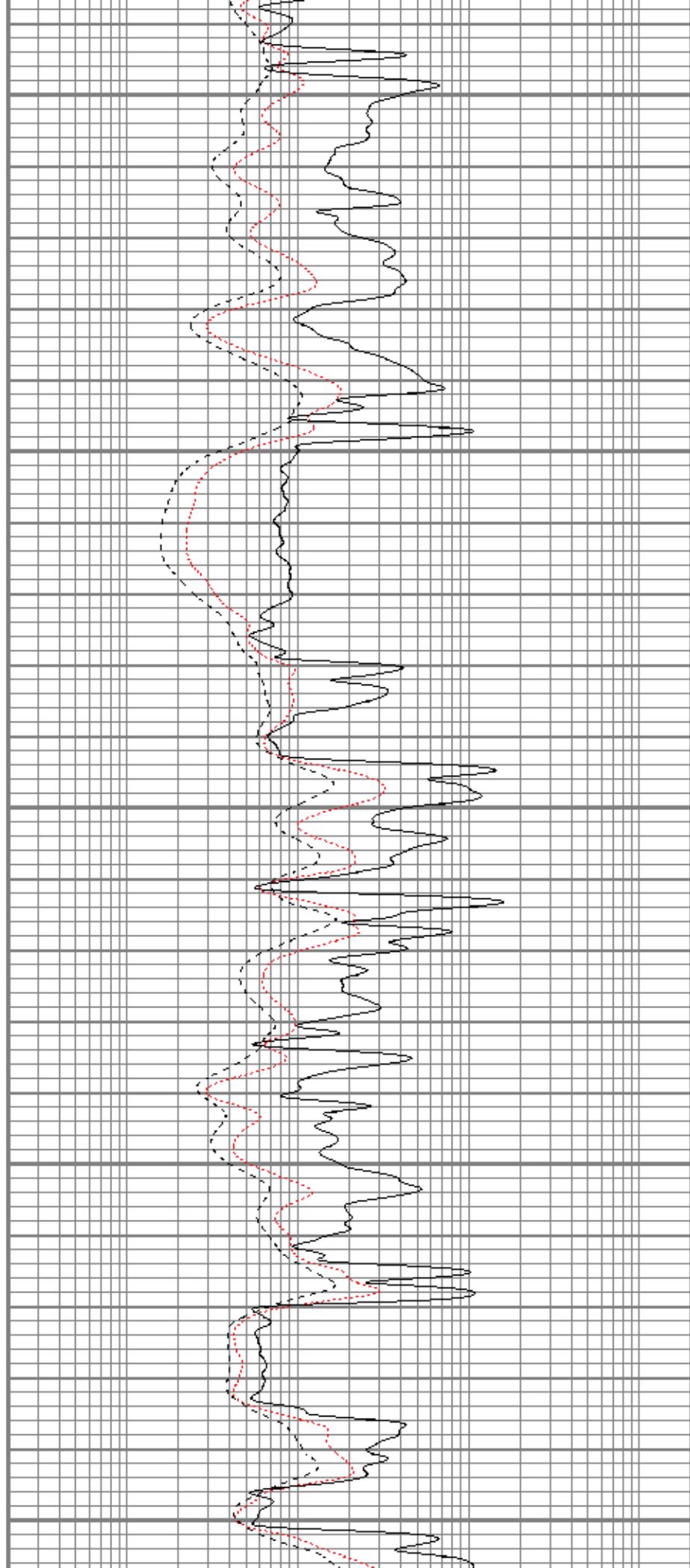
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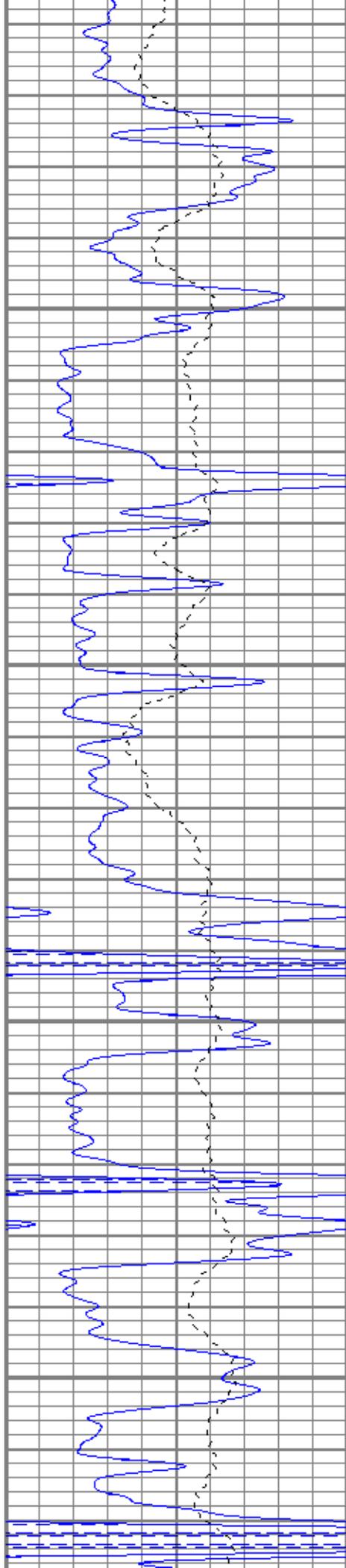
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3950

4000

4050



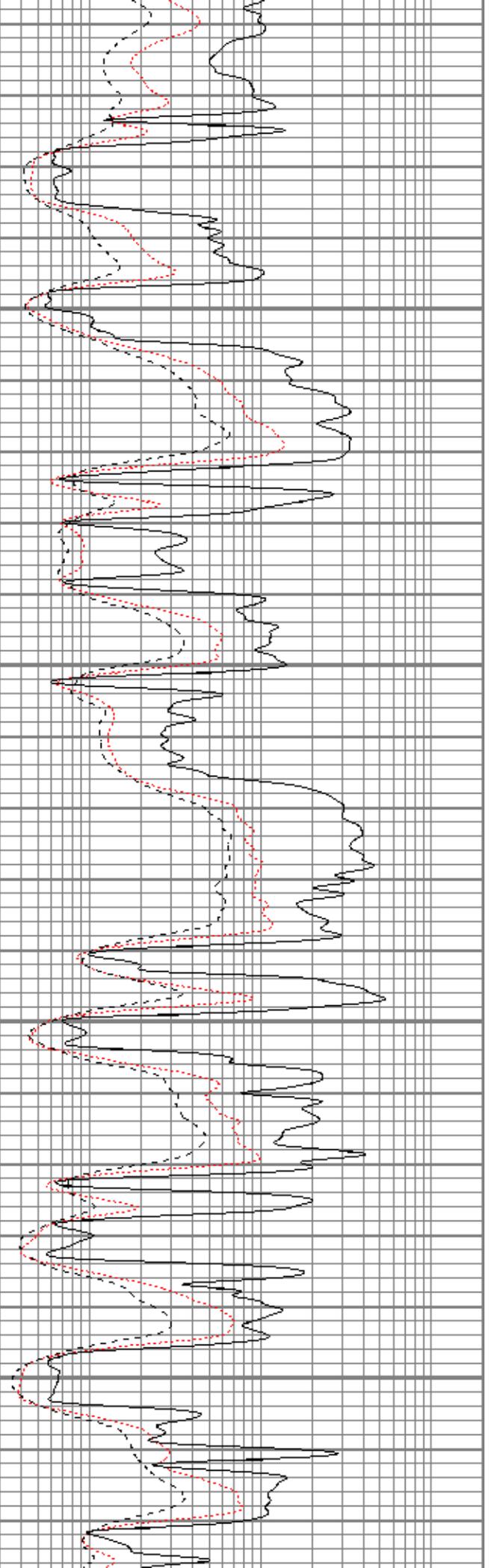


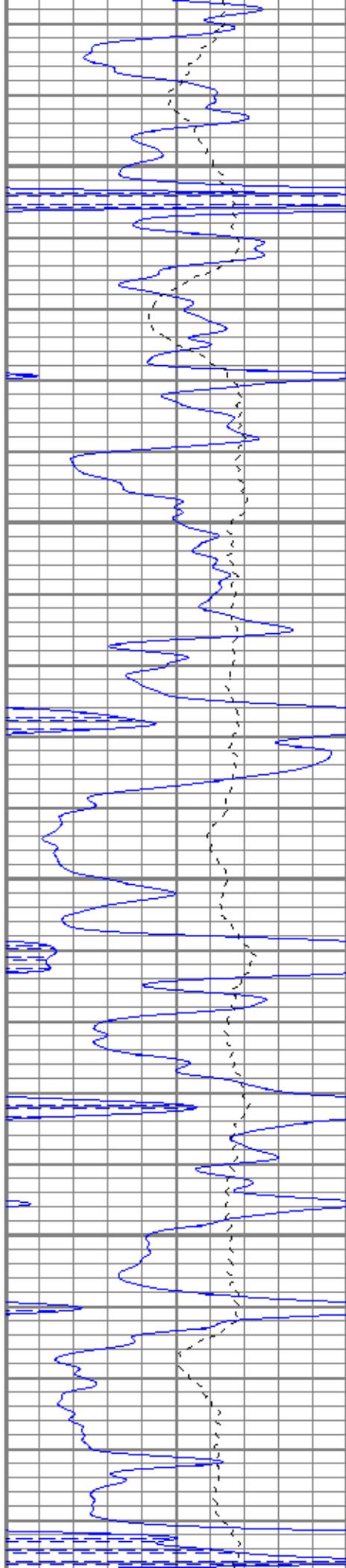
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4150

4200

4250



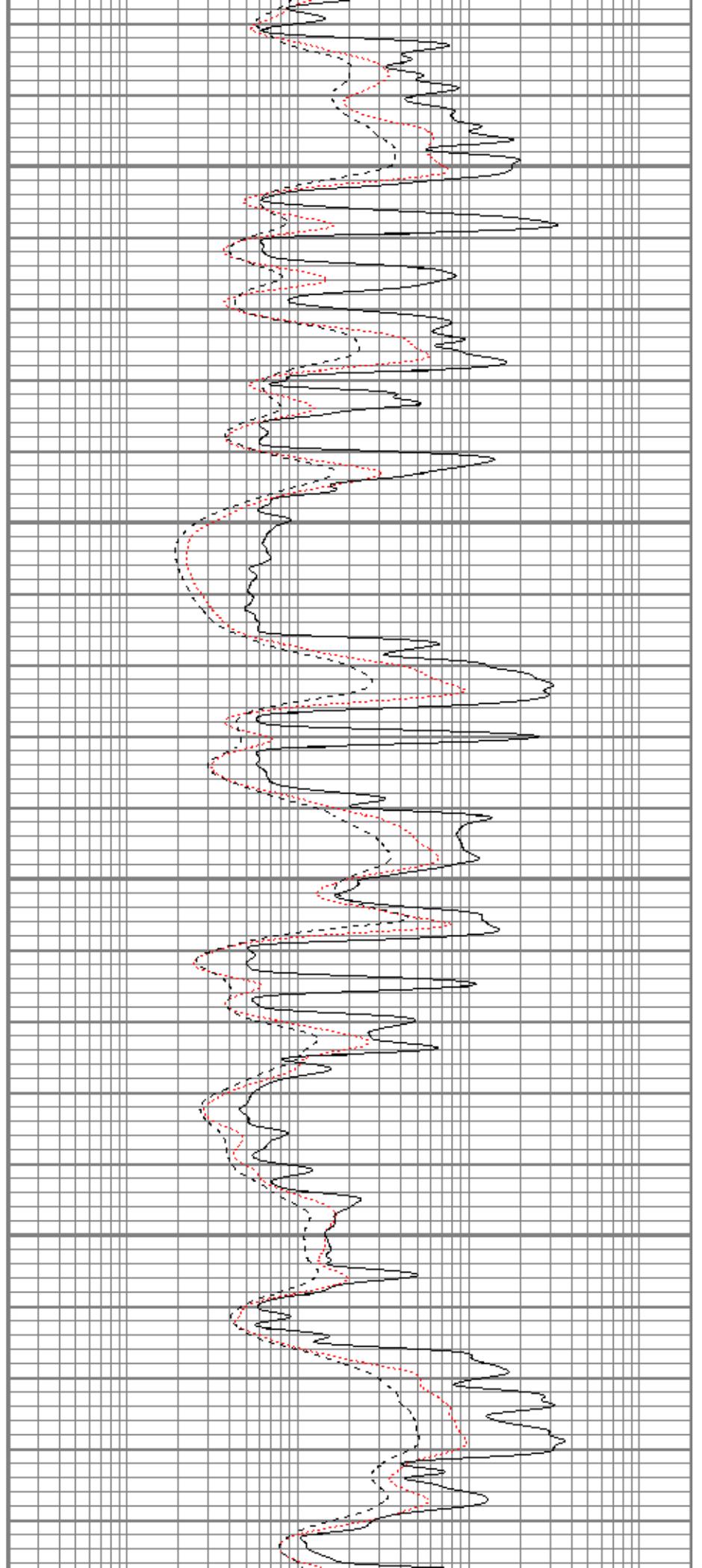


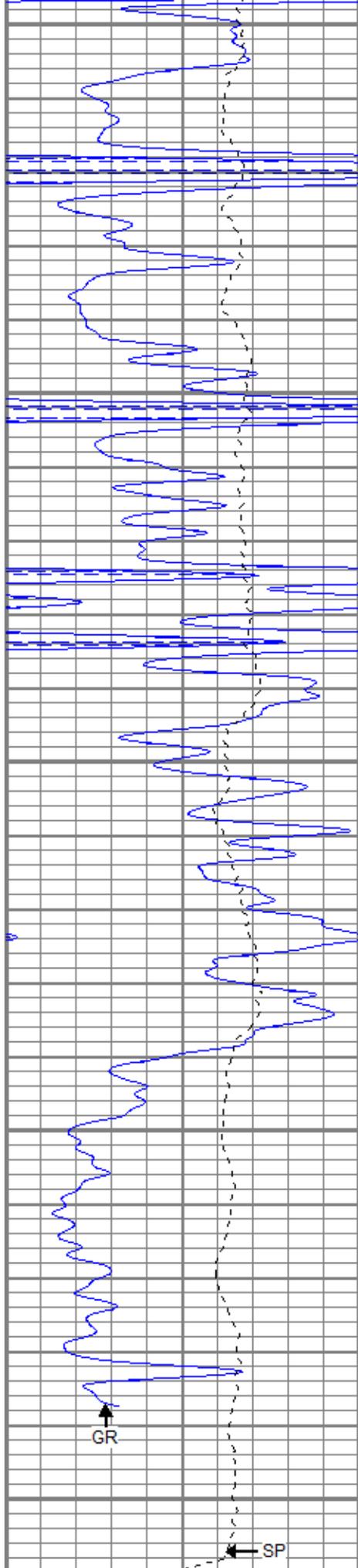
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4350

4400

4450





4500

4550

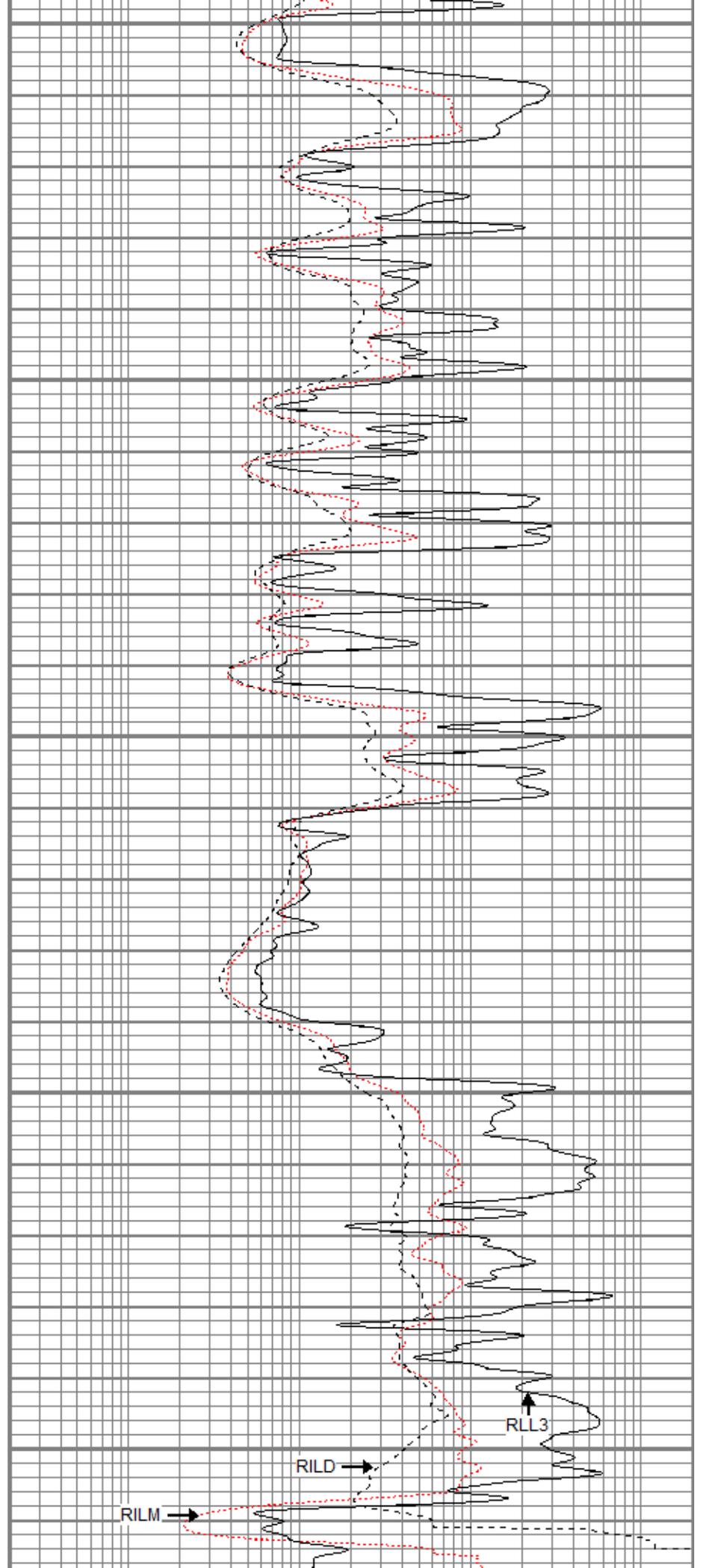
4600

4650

4700

GR

SP



RILD

RILM

RLL3

0	GR (GAPI)	150
-100	SP (mV)	100

0.2	RILM (Ohm-m)	2000
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000

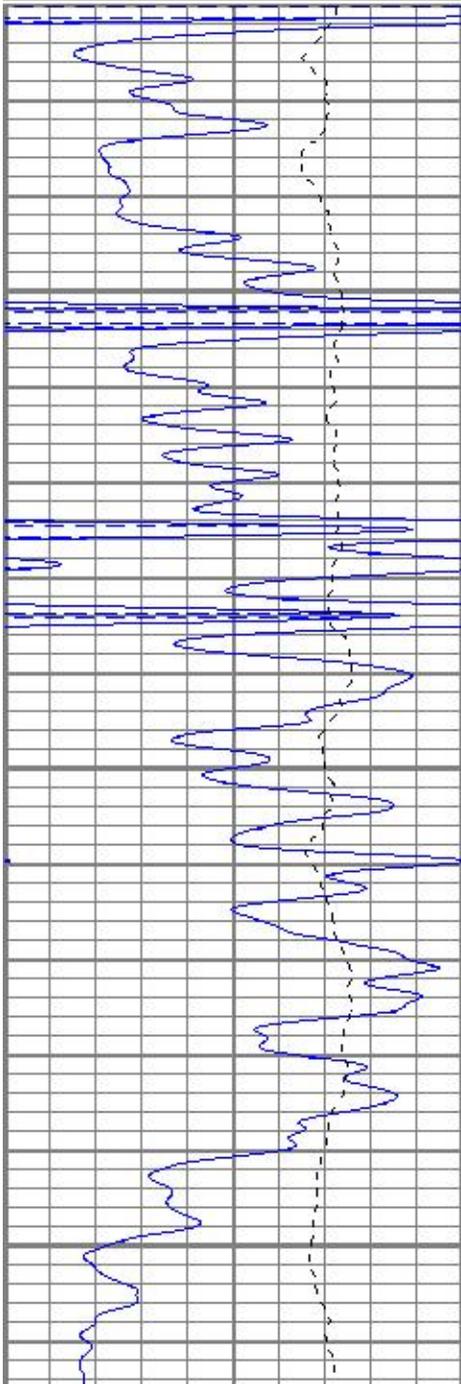


REPEAT SECTION

Database File: rodorothy21-1oh.db
 Dataset Pathname: pass1.1
 Presentation Format: kdil
 Dataset Creation: Mon Oct 30 13:22:43 2017
 Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	150
-100	SP (mV)	100

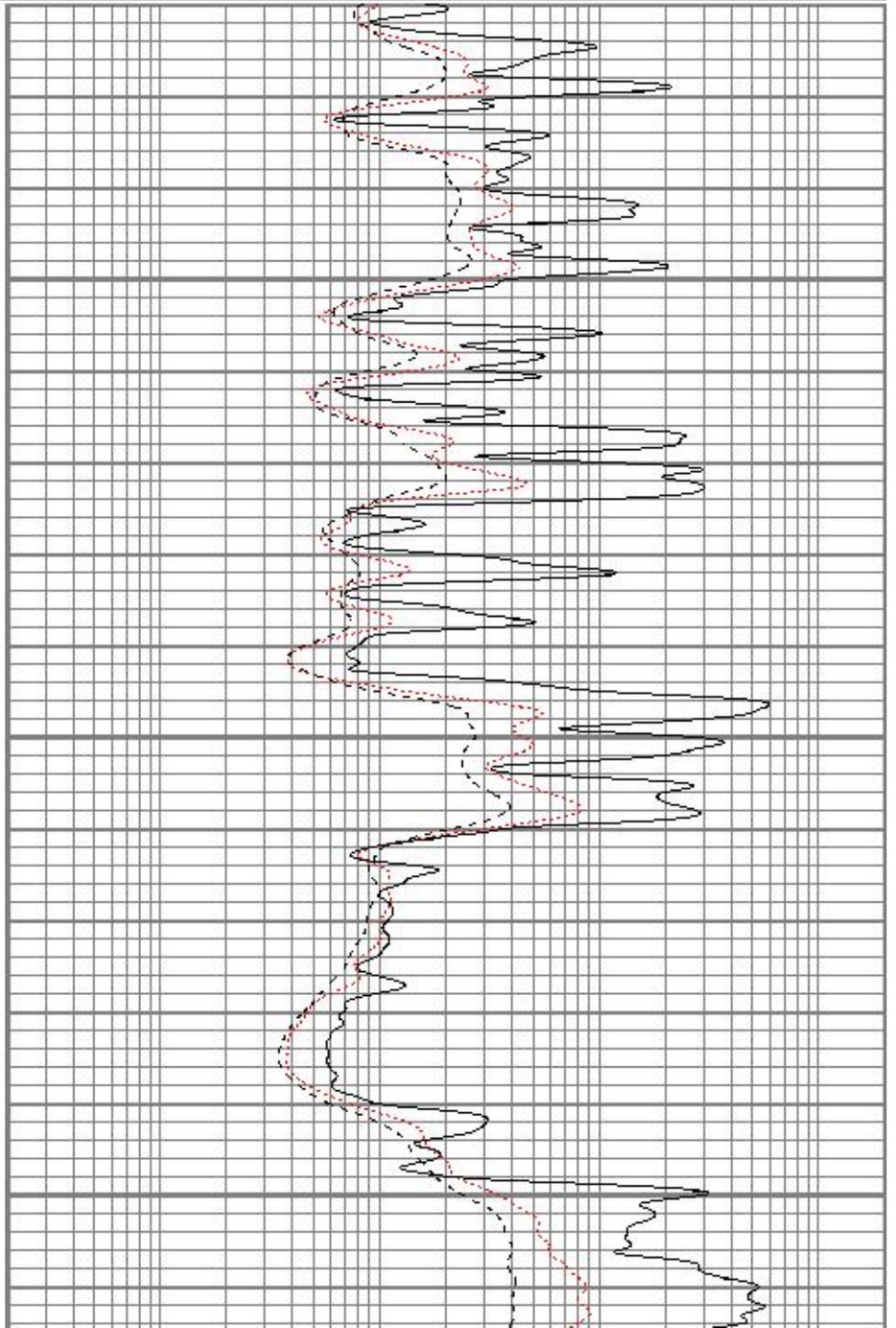
0.2	RILM (Ohm-m)	2000
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000

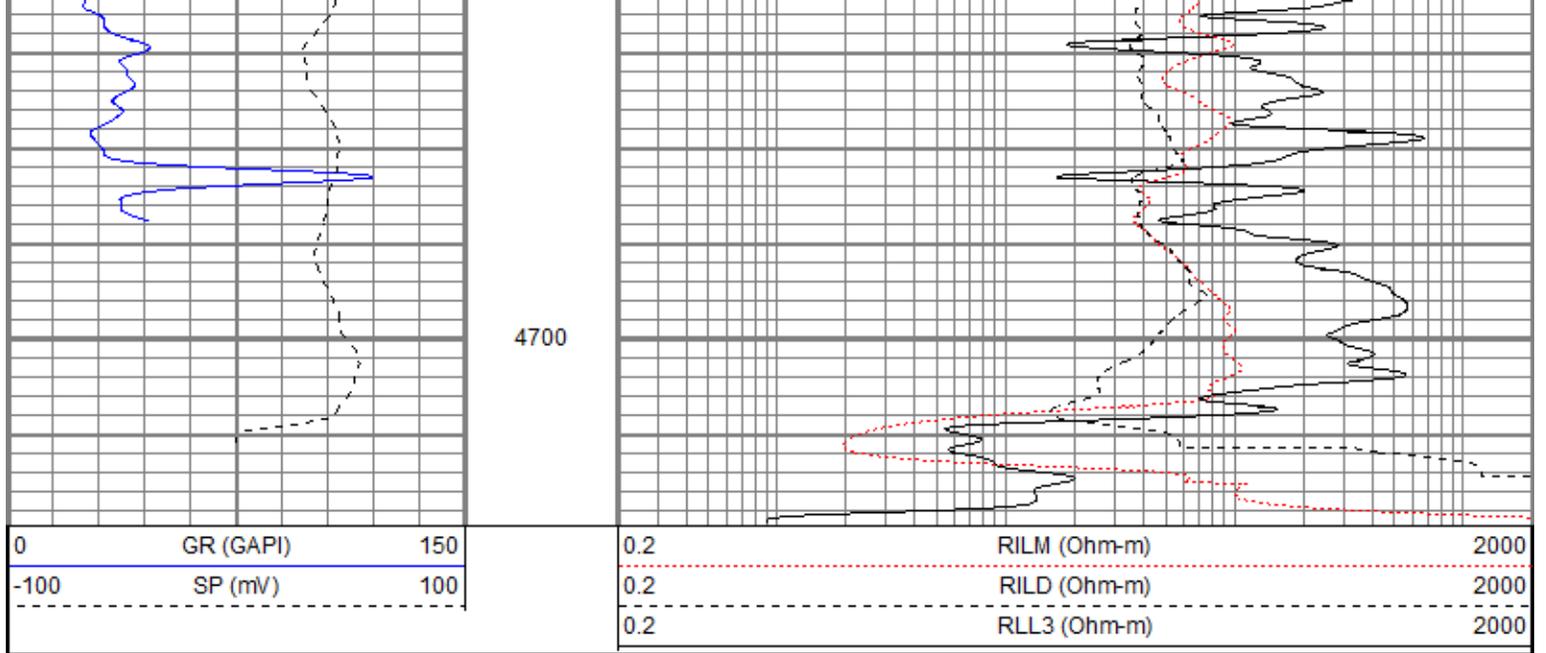


4550

4600

4650





Calibration Report

Database File rodorothy21-1oh.db
 Dataset Pathname pass2.1
 Dataset Creation Mon Oct 30 13:54:45 2017

Dual Induction Calibration Report

Serial-Model: 5375-G
 Surface Cal Performed: Tue Aug 15 10:21:23 2017
 Downhole Cal Performed: Tue Aug 15 10:22:14 2017
 After Survey Verification Performed: Tue Aug 15 10:22:14 2017

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.003	0.635	V	0.000	350.000	mmho/m	548.445	1.715
Medium	-0.001	0.717	V	0.000	400.000	mmho/m	556.583	0.684
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.003	0.635	V	0.000	350.000	mmho/m	548.268	1.663
Medium	-0.001	0.718	V	0.000	400.000	mmho/m	556.234	0.694

Downhole Calibration

Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	0.131	349.928	mmho/m	0.052	350.165	mmho/m	1.001	-0.079
Medium	-0.084	400.178	mmho/m	-0.010	400.241	mmho/m	1.000	0.073
Shallow	2.425	0.005	V	500.000	2.000	Ohm-m	205.838	0.894

After Survey Verification

Internal:	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.131	349.928	mmho/m	1.001	-0.079
Medium	0.000	0.000	mmho/m	-0.084	400.178	mmho/m	1.000	0.073
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Compensated Density Calibration Report

Serial-Model:
 Source / Verifier:
 Master Calibration Performed:
 Before Survey Verification Performed:
 After Survey Verification Performed:

2113TN-Aoilex
 csv n-20 /
 Wed Oct 11 14:43:37 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	466.46	301.08	cps
Aluminum	2.690	g/cc	85.94	195.82	cps
Spine Angle = 75.73			Density/Spine Ratio = 0.539		
	Size		Reading		
Small Ring	9.35	in	1.49	V	
Large Ring	14.00	in	3.25	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

Gamma Ray Calibration Report

Serial Number: 2213TN
 Tool Model: Aoilex
 Performed: Wed Oct 11 14:43:45 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 1.1000 GAPI/cps

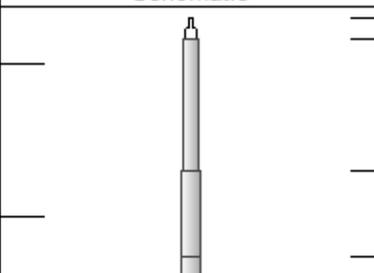
Neutron Calibration Report

Serial Number: 2301AN
 Tool Model: Oilex
 Performed: Wed Oct 11 14:43:43 2017

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
NEU	34.62		CHD-None	0.75	1.50	5.00
			NEU-Oilex (2301AN) Oilex 100V NEU	4.27	3.50	80.00
GR	29.60		GR-Aoilex (2213TN) Admyr GR	2.84	4.00	50.00

LSD	24.57		CDL-Aoilex (2113TN) Admyr Oilex	6.80	4.00	250.00
DCAL	24.30					
SSD	24.05					
SP	10.60		DIL-G (5375) Gearhart	21.47	4.00	345.00
CILD	10.60					
CILM	6.89					
RLL3	1.70					

Dataset: rodorothy21-1oh.db: field/well/run1/pass2.1
 Total length: 36.14 ft
 Total weight: 730.00 lb
 O.D.: 4.00 in