



**DUAL  
INDUCTION  
LOG**

Company American Oil LLC.  
Well Hendrich Unit #2-18  
Field Gra-Rook  
County Rooks  
State Kansas

Company American Oil LLC.  
Well Hendrich Unit #2-18  
Field Gra-Rook  
County Rooks State Kansas

Location: 990' FSL & 2310' FEL  
API #: 15 163 24376  
SEC 18 TWP 9S RGE 20W  
Permanent Datum Ground Level Elevation 2246'  
Log Measured From KB 5' AGL  
Drilling Measured From KB  
Other Services  
CDNL  
Elevation  
K.B. 2251'  
D.F. 2250'  
G.L. 2246'

Date	11-5-18
Run Number	One
Depth Driller	3848'
Depth Logger	3841'
Bottom Logged Interval	3839'
Top Log Interval	250'
Casing Driller	8 5/8" @ 261'
Casing Logger	261'
Bit Size	7 7/8"
Type Fluid in Hole	Chemical
Density / Viscosity	9.0/48
PH / Fluid Loss	9.8/8.0
Source of Sample	Pit
Rm @ Meas. Temp	0.8 @ 64degf
Rmf @ Meas. Temp	0.6 @ 64degf
Rmc @ Meas. Temp	0.96 @ 64degf
Source of Rmf / Rmc	Calculated
Rm @ BHT	0.52 @ 99degf
Time Circulation Stopped	4:15 p.m.
Time Logger on Bottom	6:30 p.m.
Maximum Recorded Temperature	99degf
Equipment Number	T127
Location	Hays, KS.
Recorded By	C. Patterson
Witnessed By	Mr. Austin Klaus

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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**

W side of Palco,KS 3rd (W4th St.) or Hwy 18 W of Palco  
To V Rd., Then W 1.5 mi on V Rd., N to W into through cattle guard



**MAIN PASS**

Database File aohendrich#2-18oh.db  
 Dataset Pathname pass2.1  
 Presentation Format kdi11inn  
 Dataset Creation Mon Nov 05 19:43:25 2018  
 Charted by Depth in Feet scaled 1:600

0 GR (GAPI) 150

1000 CILD (mmho/m) 0

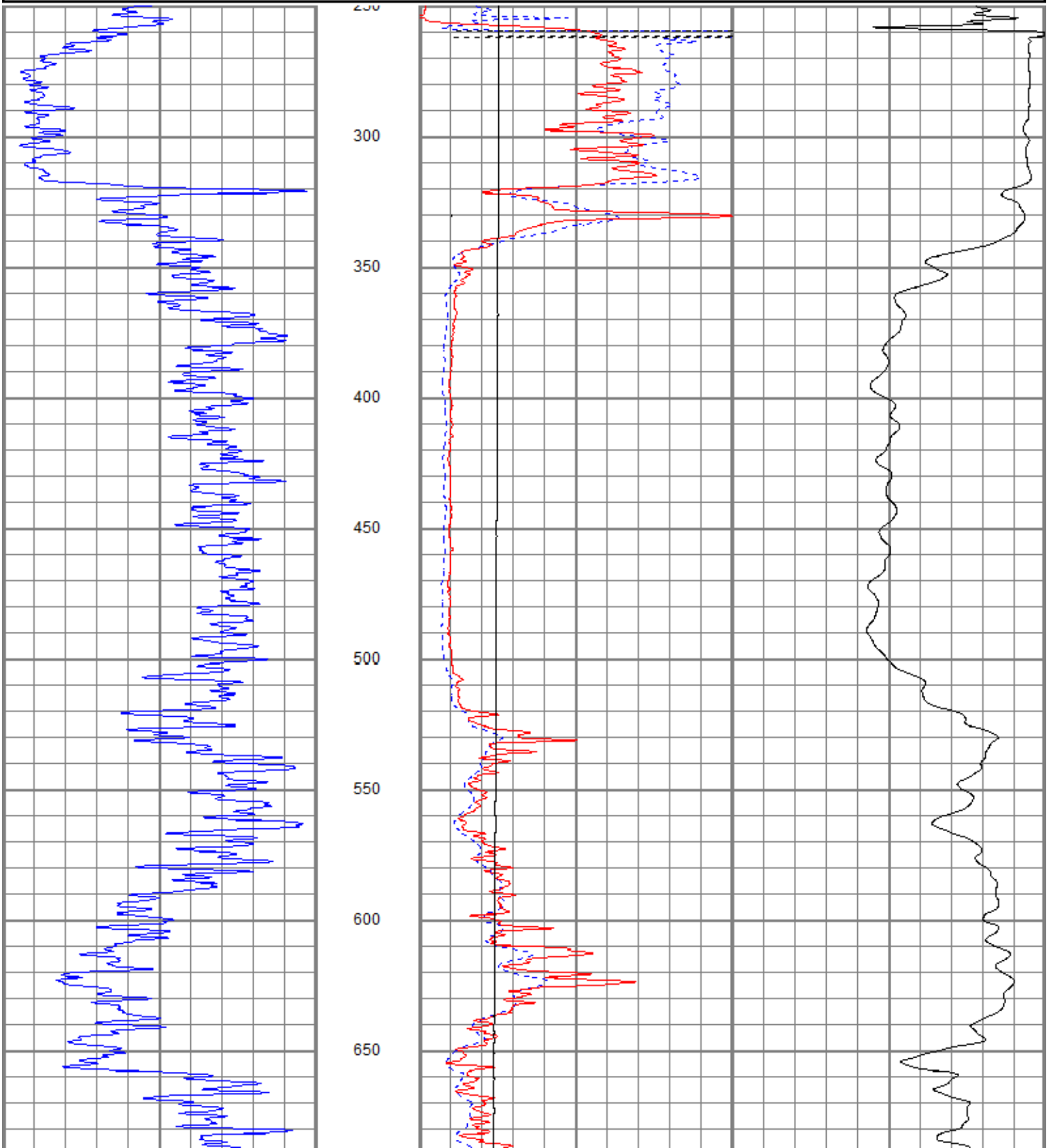
10000 LTEN (lb) 0

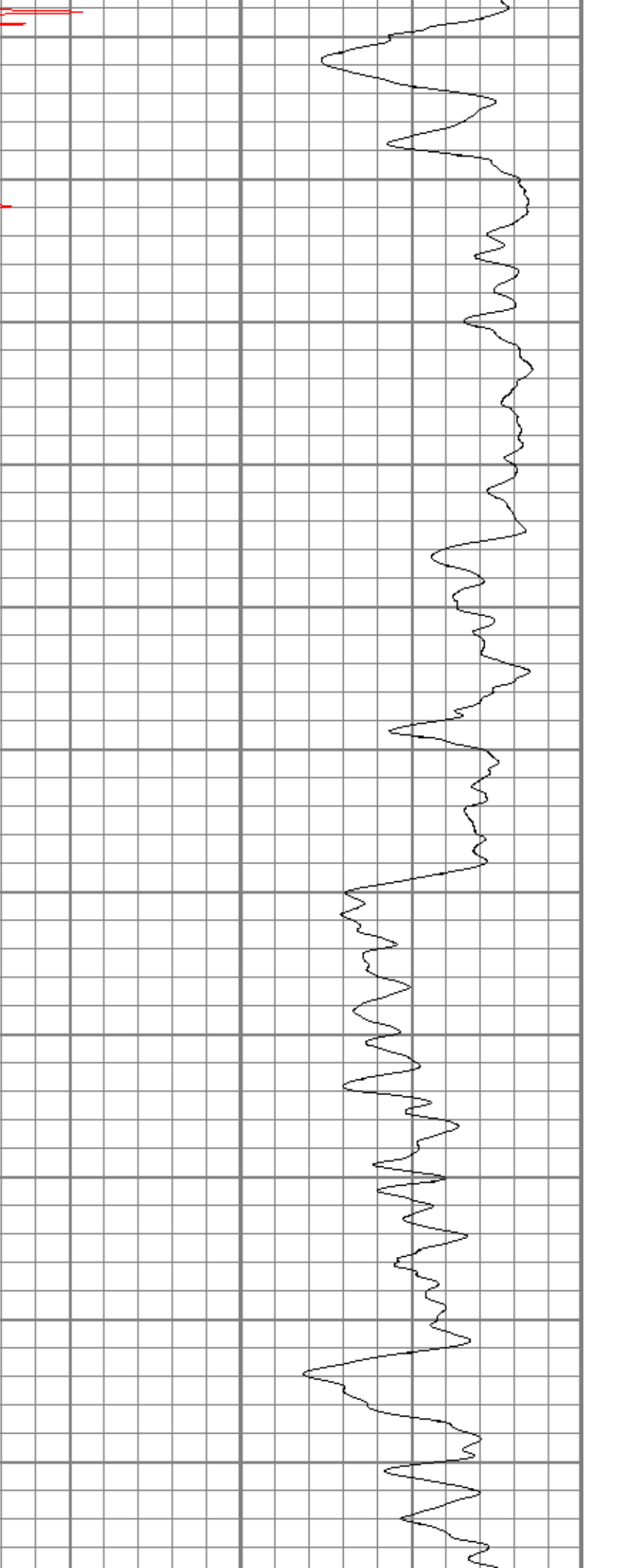
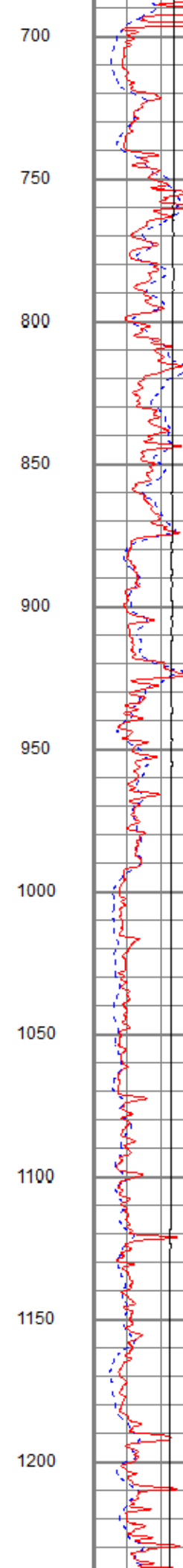
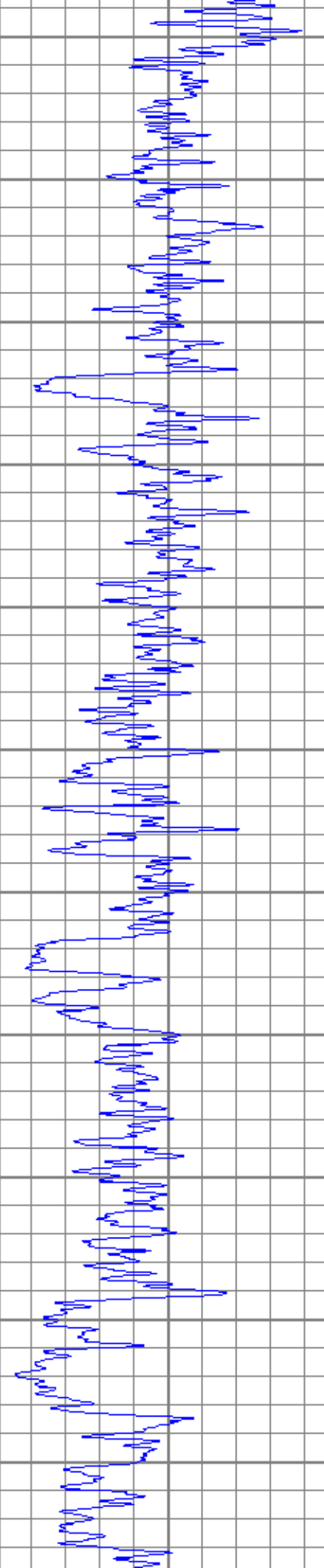
0 RILD (Ohm-m) 50

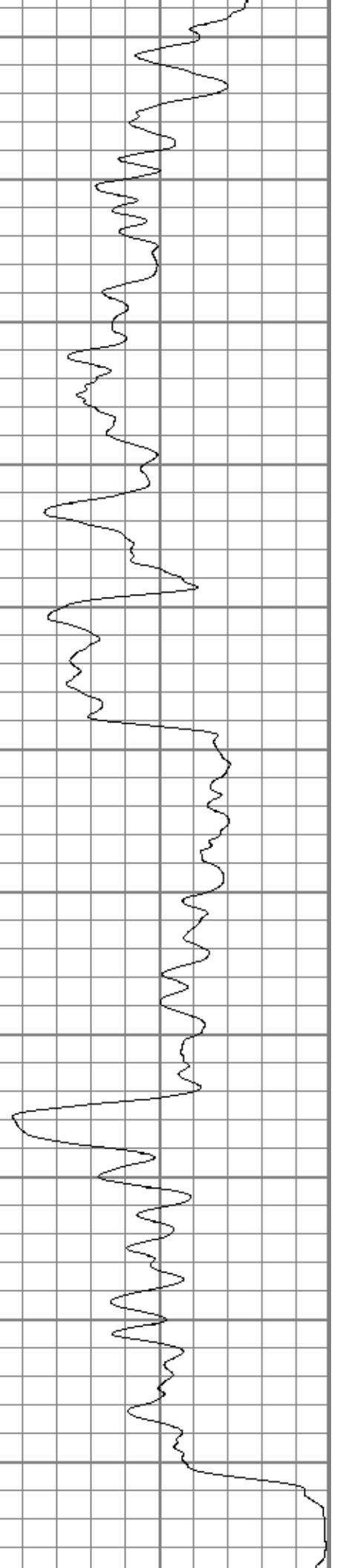
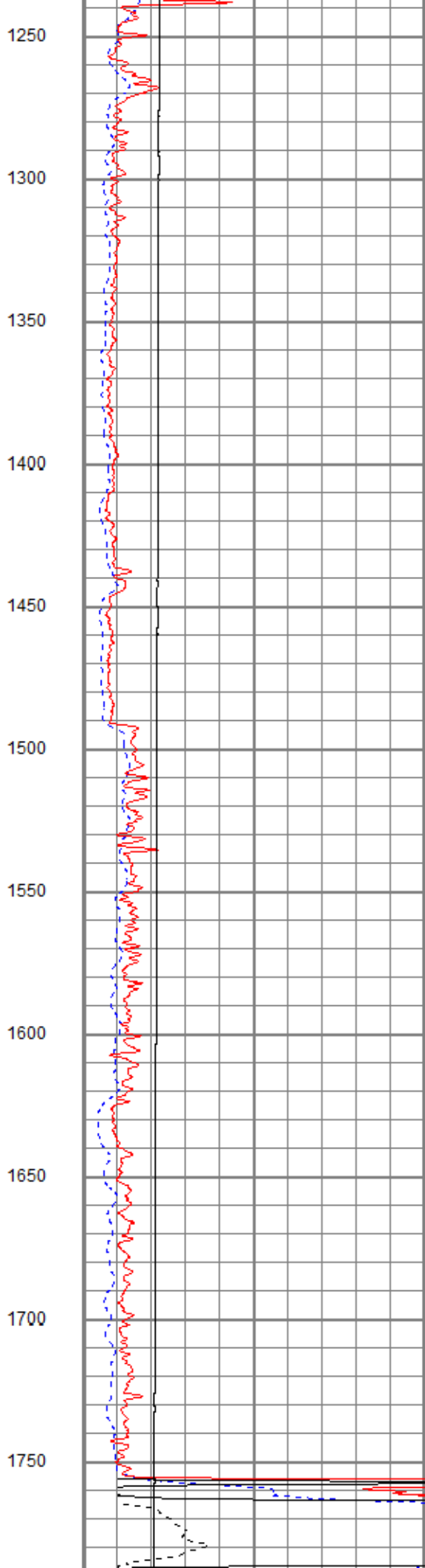
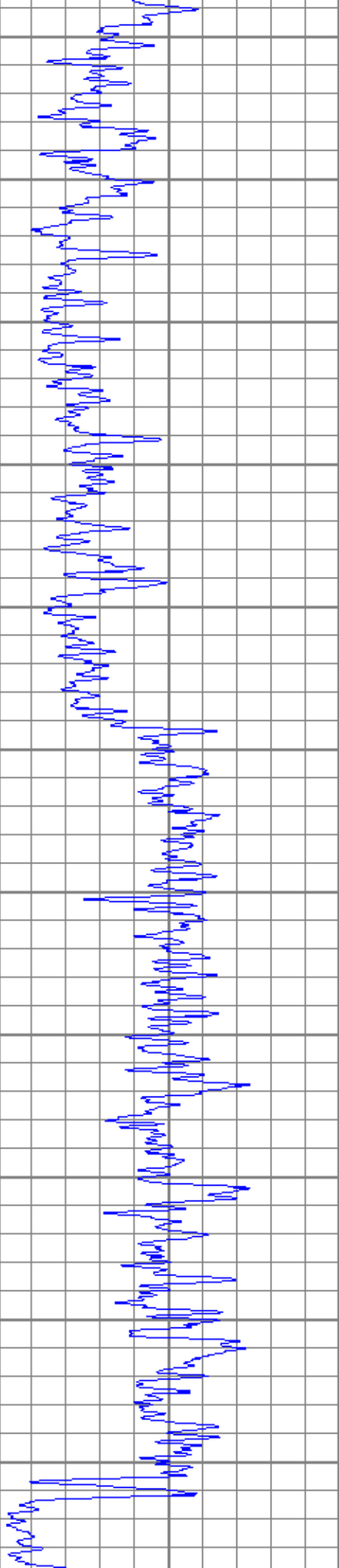
0 RLL3 (Ohm-m) 50

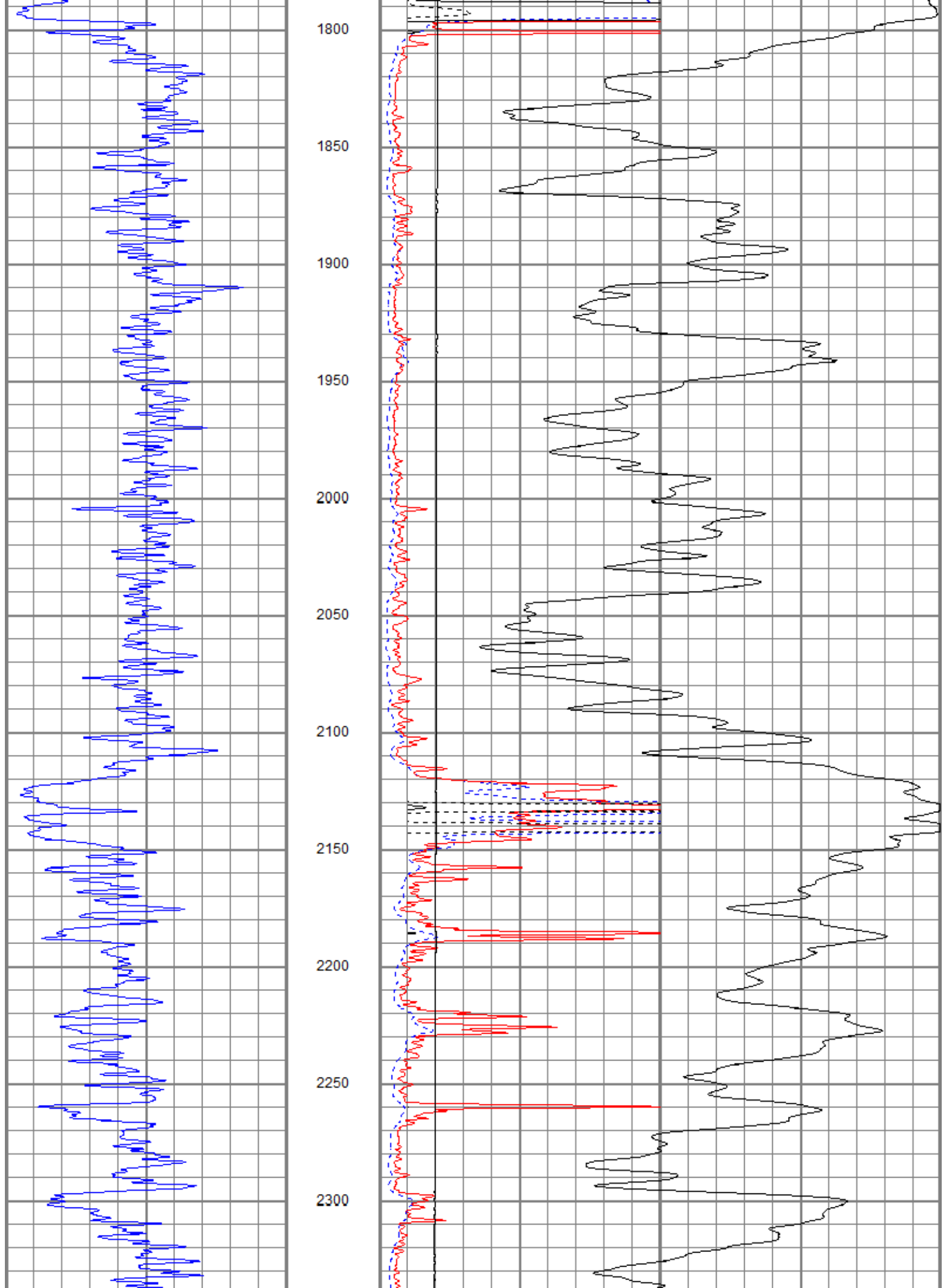
50 RILD x 10 (Ohm-m) 500

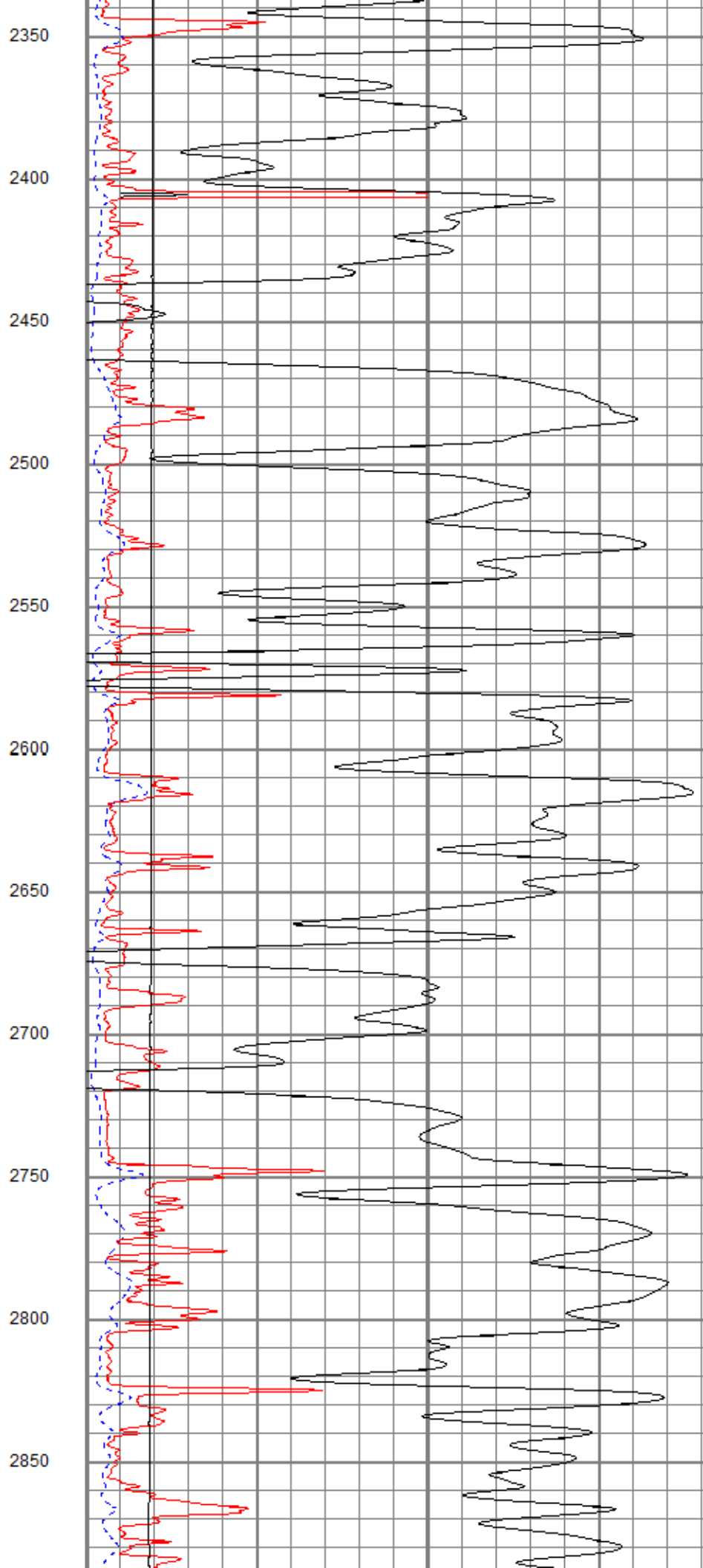
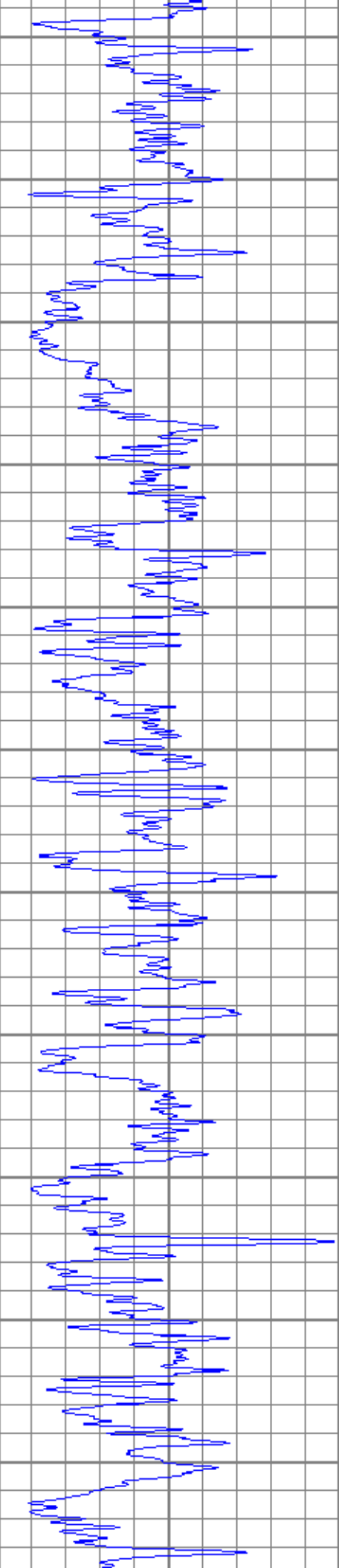
50 RLL3 x 10 (Ohm-m) 500

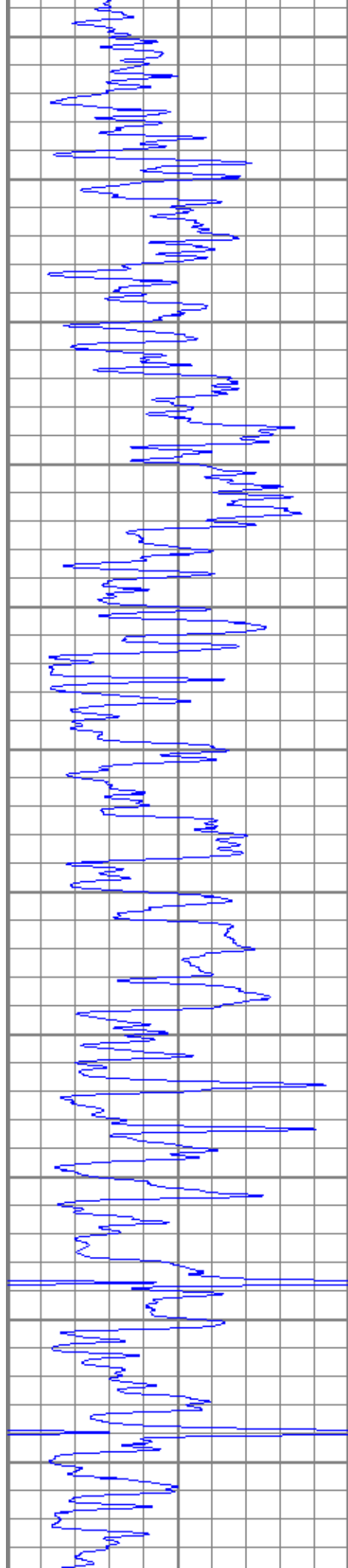




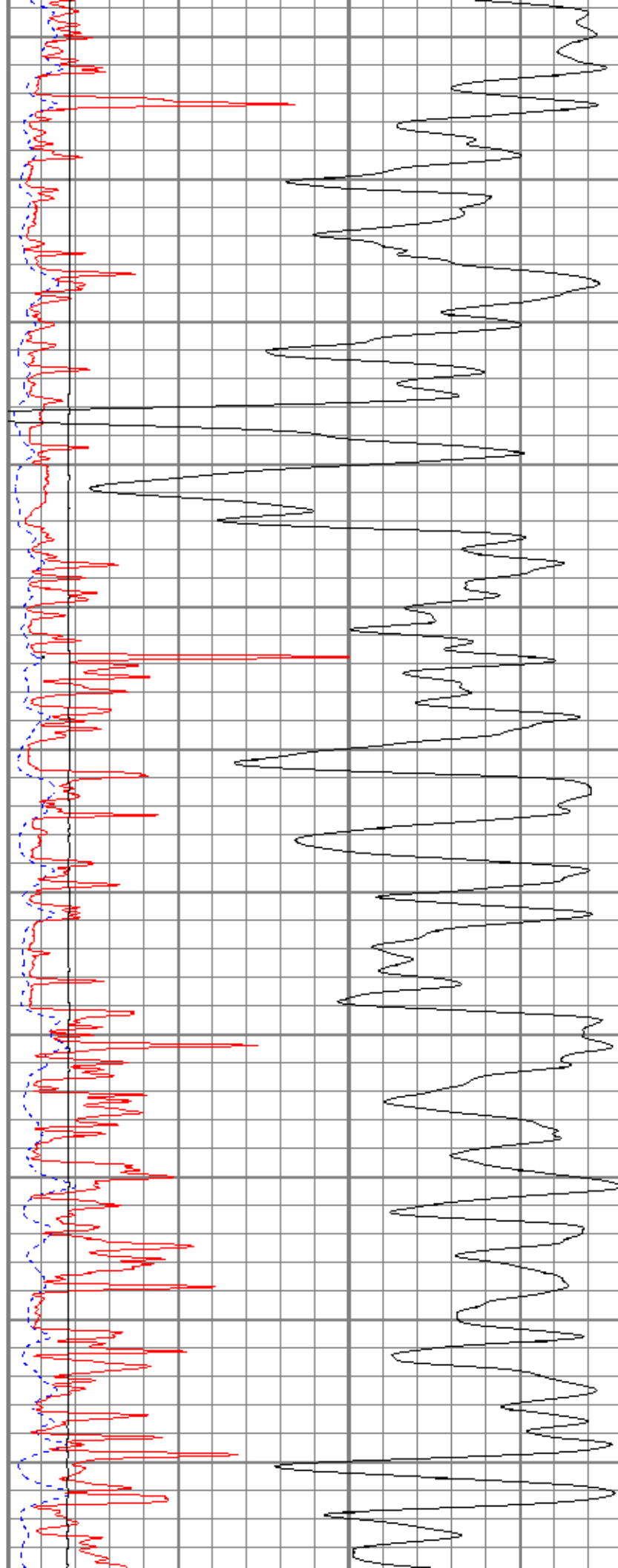


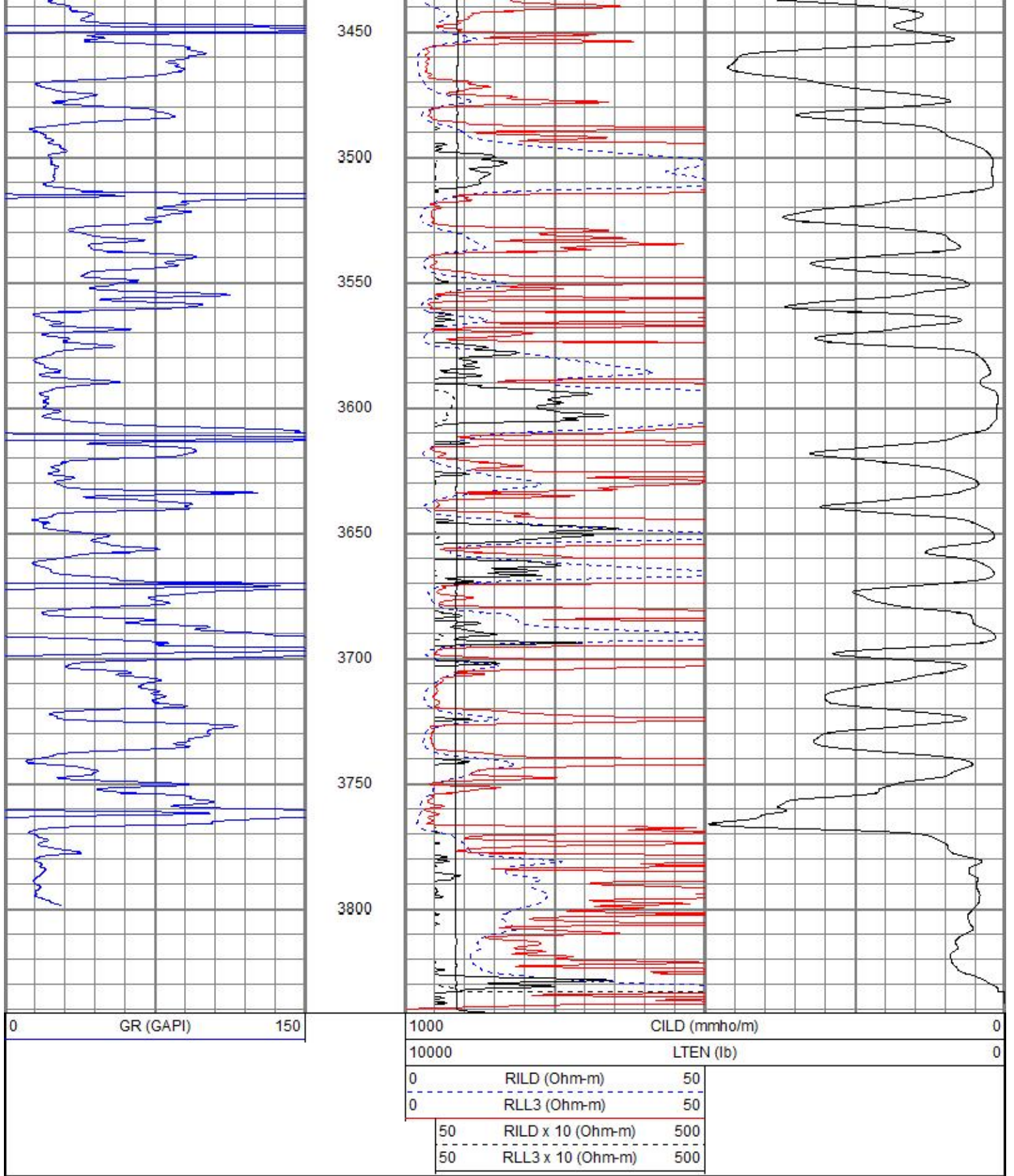






2900  
2950  
3000  
3050  
3100  
3150  
3200  
3250  
3300  
3350  
3400



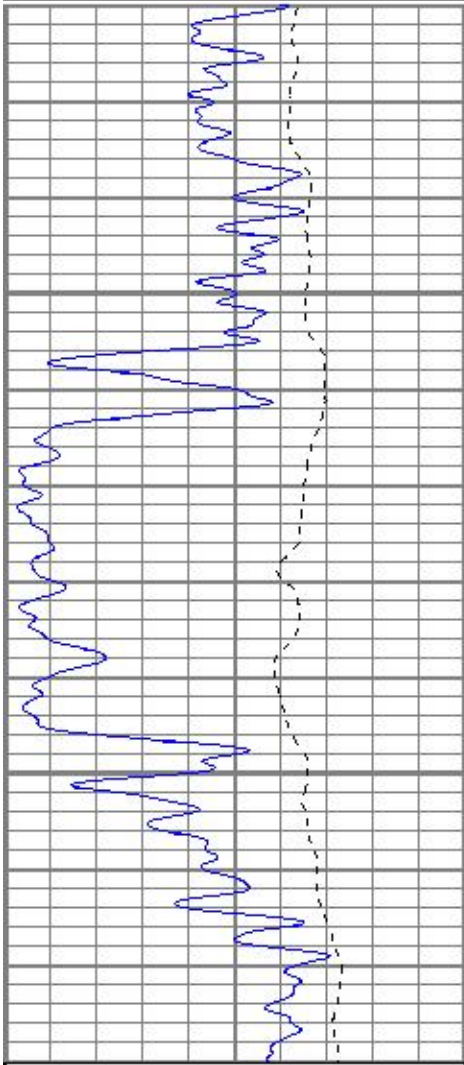


# MAIN PASS

Dataset Pathname: pass2.1  
 Presentation Format: kdil  
 Dataset Creation: Mon Nov 05 19:43:25 2018  
 Charted by: Depth in Feet scaled 1:240

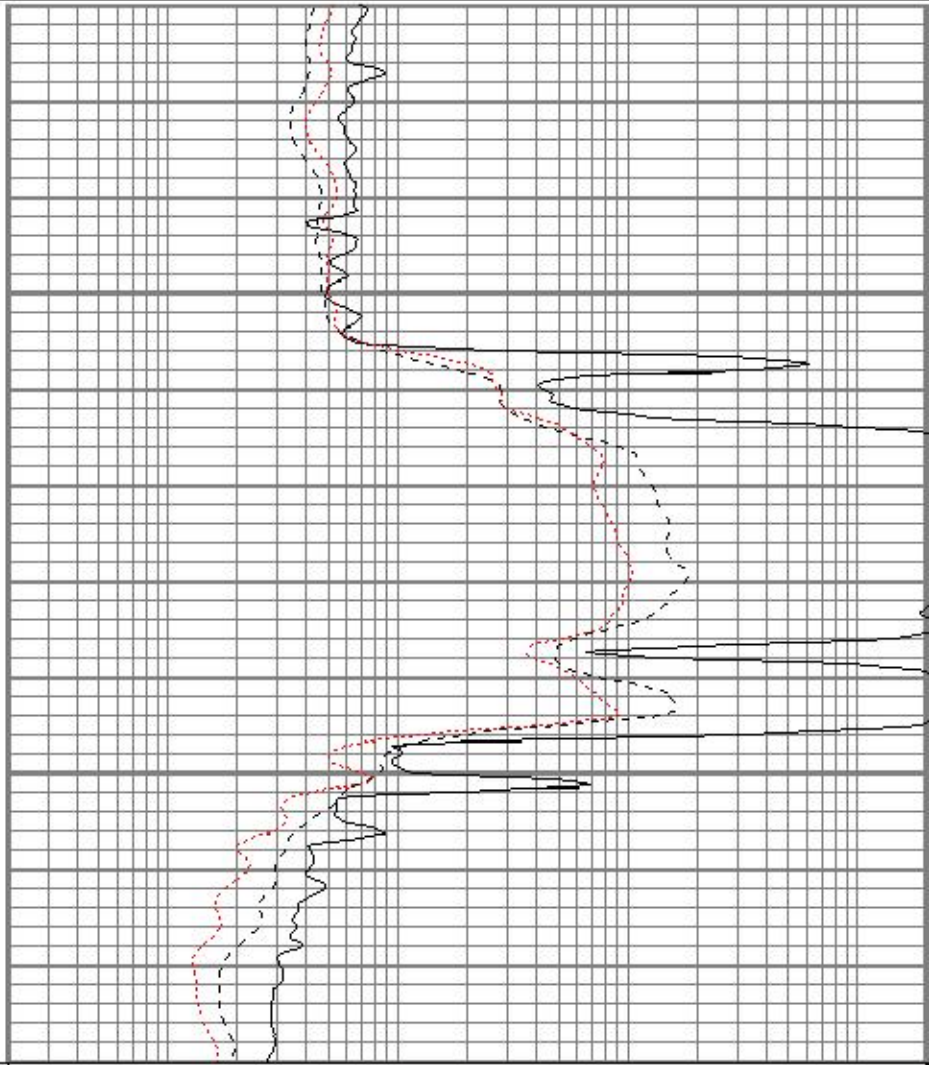
0	GR (GAPI)	150
-100	SP (mV)	100

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



1750

1800



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

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

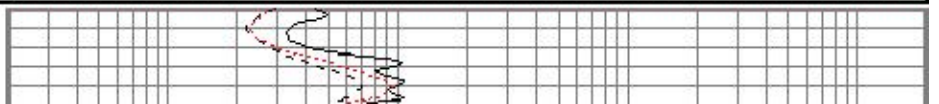


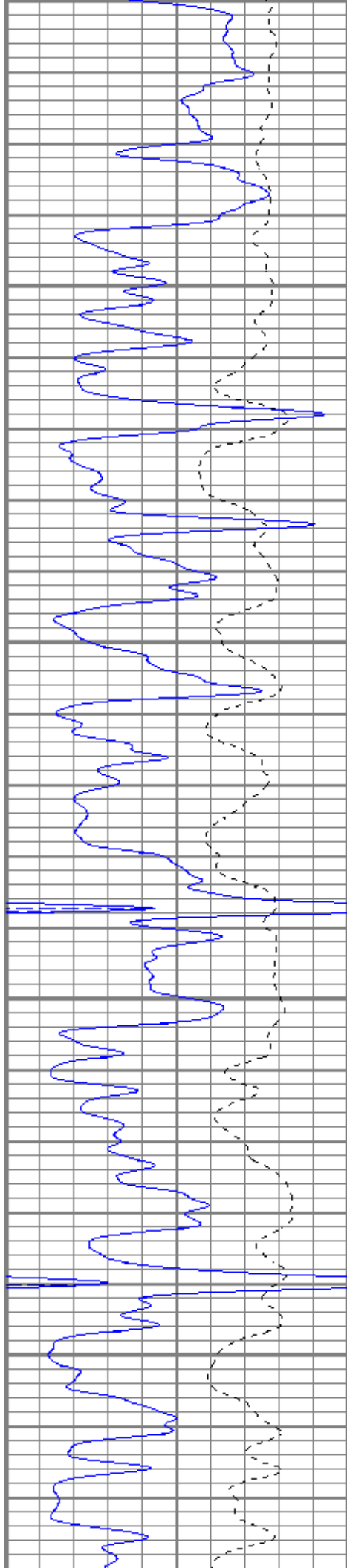
# MAIN PASS

Database File: aohendrich#2-18oh.db  
 Dataset Pathname: pass2.1  
 Presentation Format: kdil  
 Dataset Creation: Mon Nov 05 19:43:25 2018  
 Charted by: Depth in Feet scaled 1:240

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

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



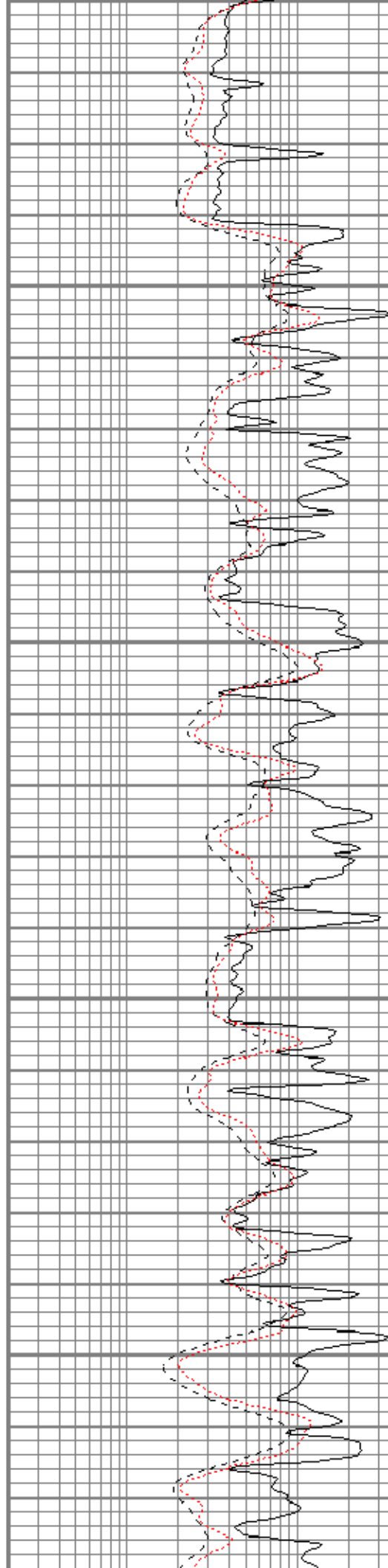


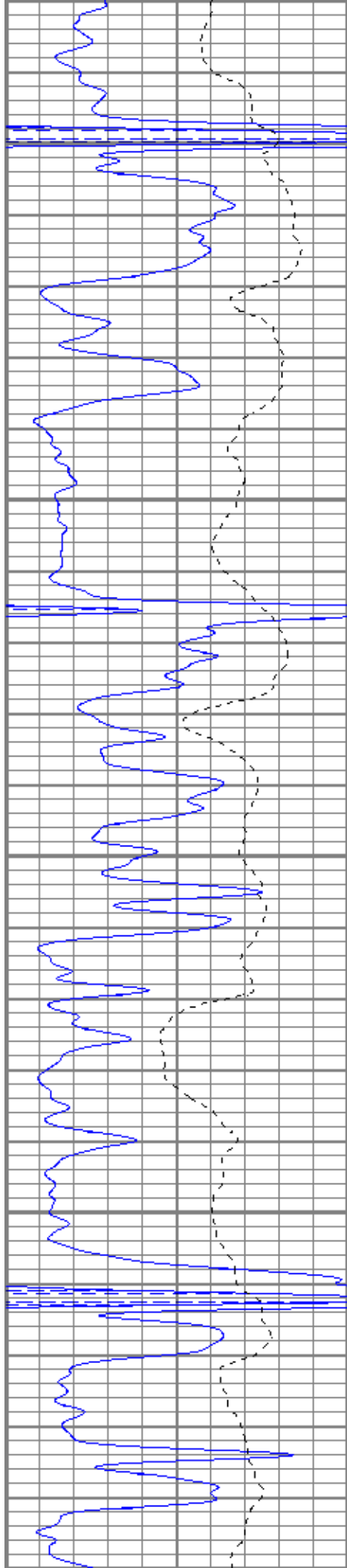
3250

3300

3350

3400





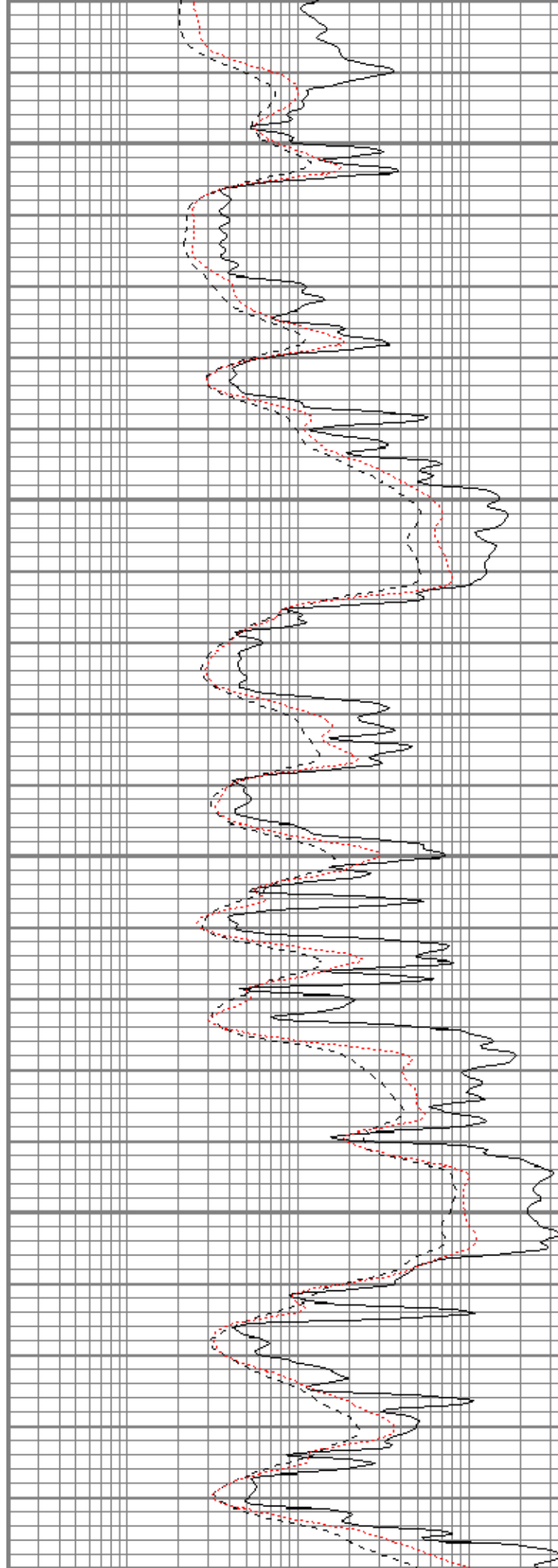
3450

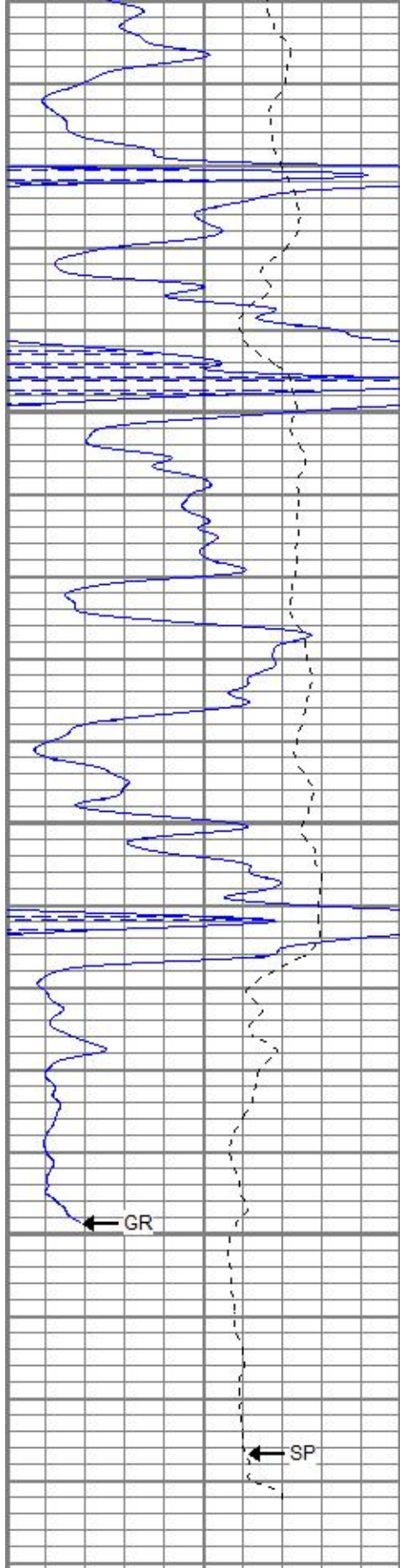
3500

3550

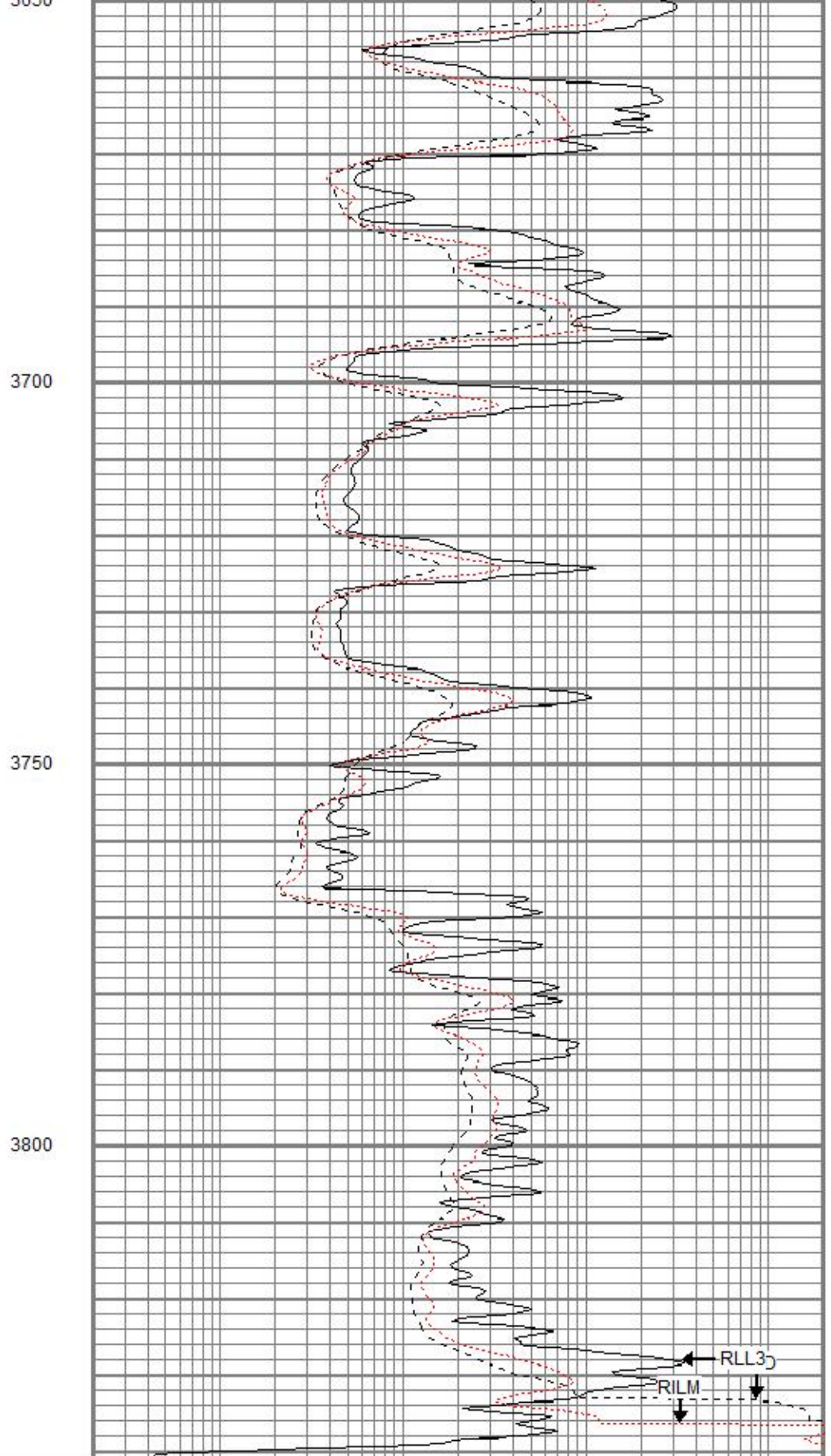
3600

3650





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



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



REPEAT SECTION

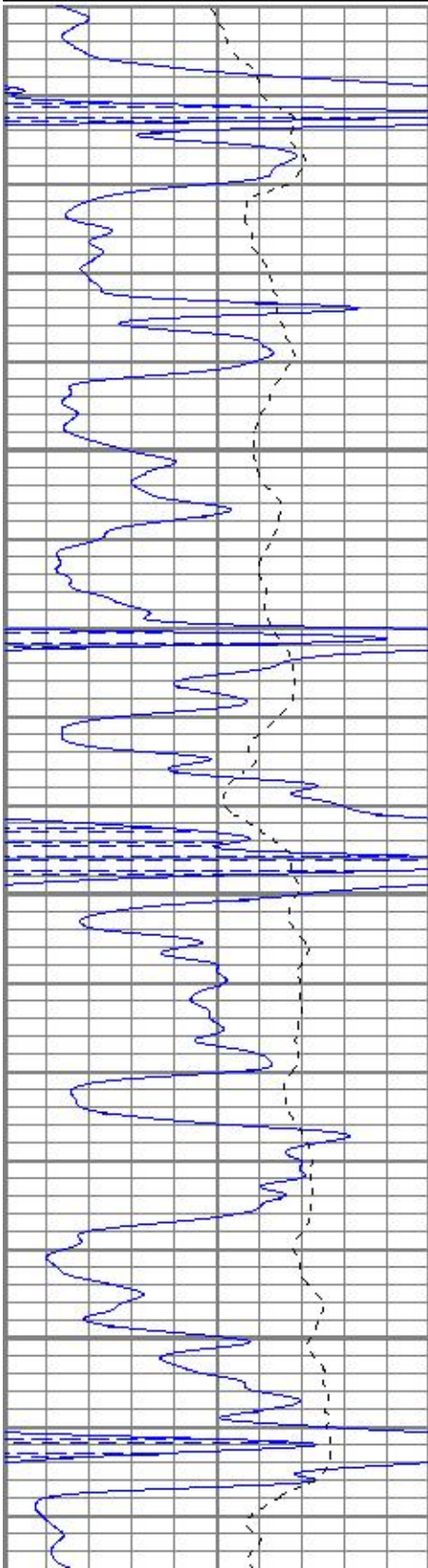


# REPEAT SECTION

Database File aohendrich#2-18oh.db  
Dataset Pathname pass1  
Presentation Format kdil  
Dataset Creation Mon Nov 05 18:29:49 2018  
Charted by Depth in Feet scaled 1:240

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

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

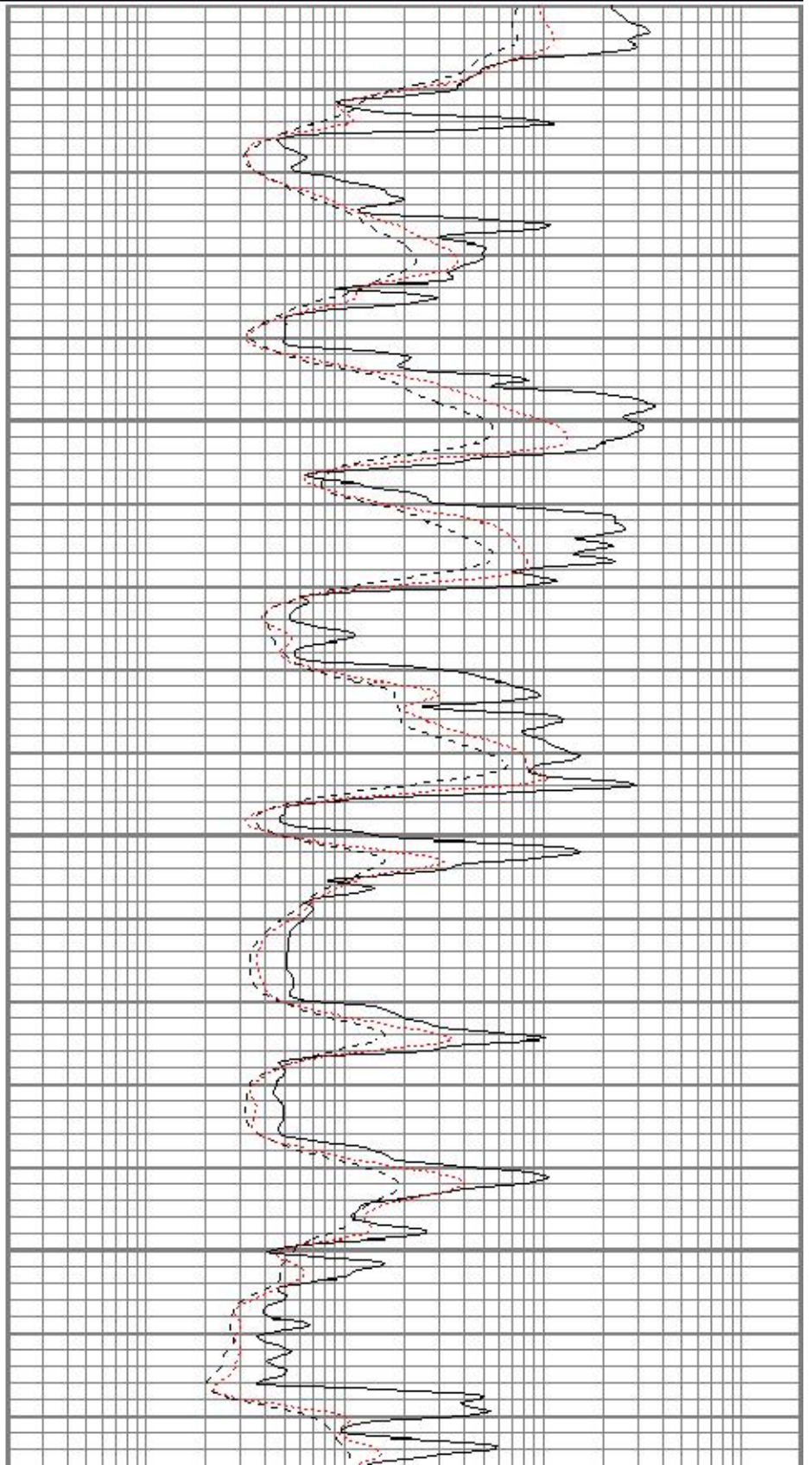


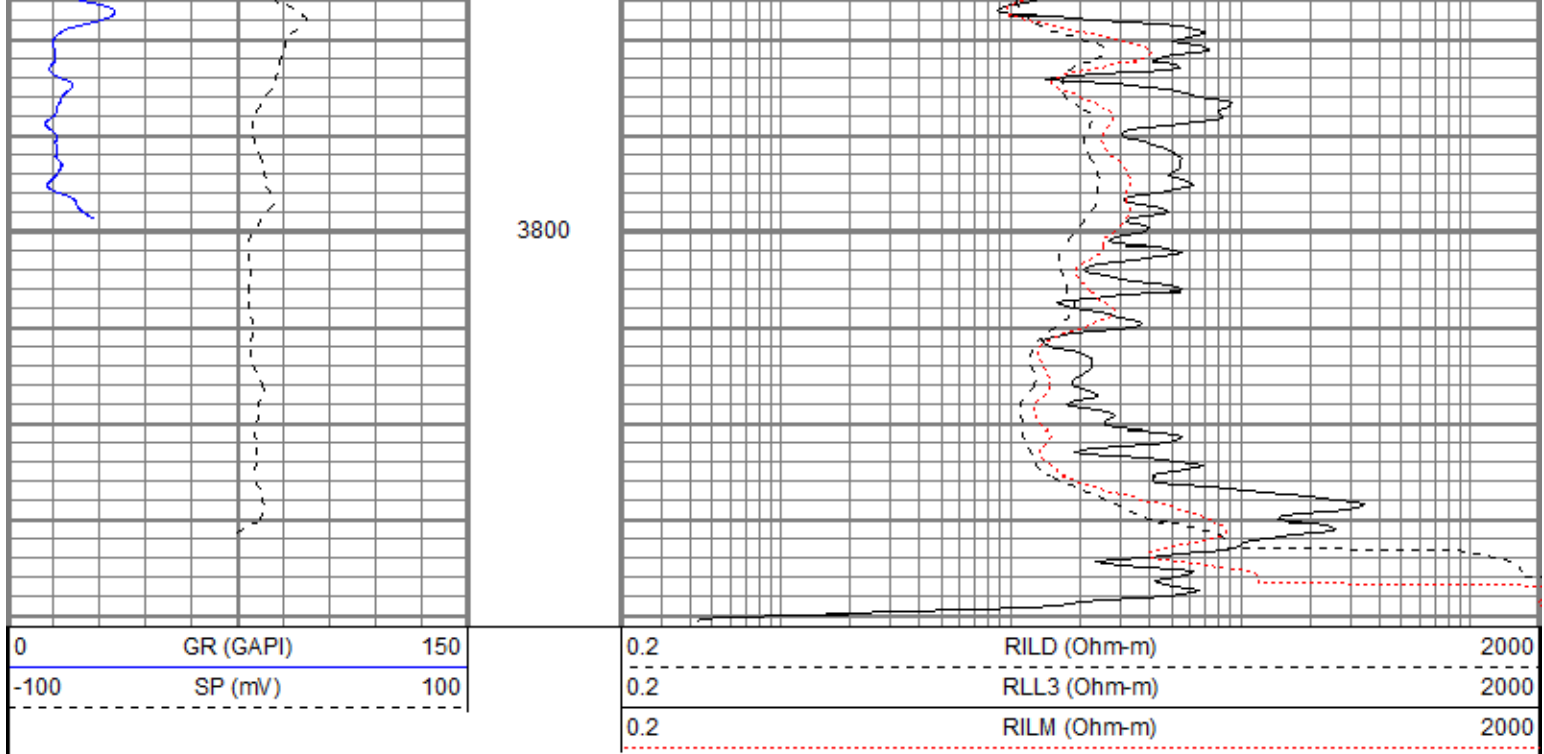
3600

3650

3700

3750





### Calibration Report

Database File aohendrich#2-18oh.db  
 Dataset Pathname pass2.1  
 Dataset Creation Mon Nov 05 19:43:25 2018

### Dual Induction Calibration Report

Serial-Model: 5375-G  
 Surface Cal Performed: Sat Oct 10 08:33:18 2015  
 Downhole Cal Performed: Sat Oct 10 08:33:23 2015  
 After Survey Verification Performed: Sat Oct 10 08:33:27 2015

#### Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.007	0.642	V	0.000	350.000	mmho/m	551.294	-3.816
Medium	0.010	0.728	V	0.000	400.000	mmho/m	556.531	-5.391
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.642	V	0.000	350.000	mmho/m	550.717	-3.768
Medium	0.010	0.729	V	0.000	550.000	mmho/m	764.510	-7.354

#### Downhole Calibration

Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	0.145	350.239	mmho/m	-0.044	350.323	mmho/m	1.001	-0.189
Medium	0.435	400.472	mmho/m	-0.037	400.340	mmho/m	1.001	-0.473
Shallow	2.440	0.018	V	500.000	2.000	Ohm-m	205.553	0.425

#### After Survey Verification

Internal:	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.145	350.239	mmho/m	1.001	-0.189
Medium	0.000	0.000	mmho/m	0.435	400.472	mmho/m	1.001	-0.473
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Neutron Calibration Report

Serial Number: AD5139  
 Tool Model: ADMY5139  
 Performed: (Not Performed)

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps

Temperature Calibration Report

Serial Number: WithMC  
 Tool Model: WMC  
 Performed: (Not Performed)

	Reference	Reading
Low Reference:	0.00 degF	0.00 degF
High Reference:	1.00 degF	1.00 degF
Gain:	1.00	
Offset:	0.00	
Delta Spacing	1	

Inclinometer Calibration Report

Performed: Mon Aug 07 11:02:07 2017

	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	205.00	1843.00	-1.00	1.00	gee
Y Accelerometer	205.00	1843.00	-1.00	1.00	gee
Z Accelerometer					gee

Gamma Ray Calibration Report

Serial Number: WithMC  
 Tool Model: WMC  
 Performed: Mon Aug 07 11:03:41 2017

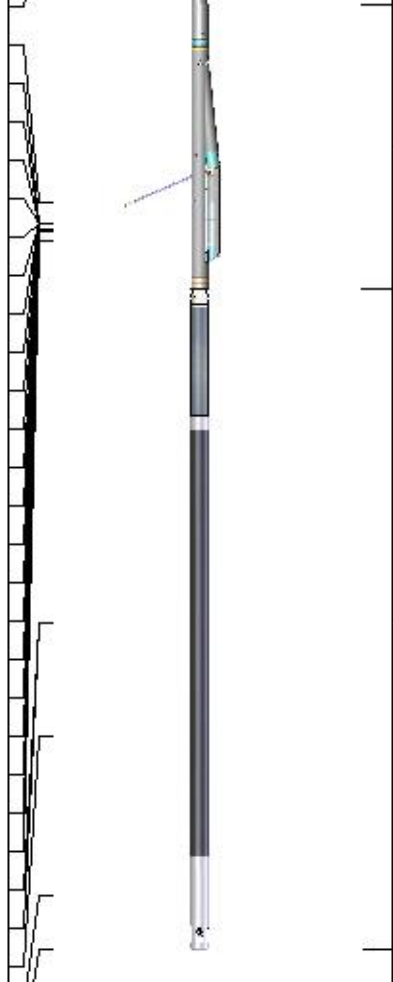
Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.9000 GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.07		CHD-STD	0.50	1.69	1.00
ACCY	38.91		ADT-WMC (WithMC) Admyr Telemetry With Mudcell	4.58	3.50	120.00
ACCX	38.91					
SSTAT	38.49					
PSTAT	37.66					
ASTAT	37.66					
GRD	36.82		NEU-ADMY5139 (AD5139) Admyer NEU DIGITAL	5.65	3.50	50.00
TEMP	36.82					

NEU 32.76  
 LStat 24.30  
 LS8 23.64  
 LS7 23.64  
 LS6 23.64  
 LS5 23.64  
 LS4 23.64  
 LS3 23.64  
 LS2 23.64  
 LS1 23.64  
 LSV 23.64  
 LSD 23.62  
 SSV 23.43  
 SS8 23.43  
 SS7 23.43  
 SS6 23.43  
 SS5 23.43  
 SS4 23.43  
 SS3 23.43  
 SS2 23.43  
 SS1 23.43  
 DCAL 23.37  
 SSD 23.04  
 SP 10.60  
 CILD 10.60  
 CILM 6.89



ADT1LITH-A (1)  
Admyr Litho Density Tool

9.29 3.50 240.00

DIL-G (5375)  
Gearhart

21.47 4.00 345.00

RLL3 1.70  
 TR\_Mon 0.00

Dataset: aohendrich#2-18oh.db: field/well/run1/pass2.1  
 Total length: 41.49 ft  
 Total weight: 756.00 lb  
 O.D.: 4.00 in