



DUAL INDUCTION LOG

Company	James P. Williams, Inc.	Company	James P. Williams, Inc.
Well	Paul H. Williams #2	Well	Paul H. Williams #2
Field	Williams	Field	Williams
County	Rooks	County	Rooks
State	Kansas	State	Kansas
Location:	330' FNL & 925' FWL		Other Services
Permanent Datum	SEC 9	TWP 10S	RGE 18W
Log Measured From	Ground Level	Elevation	2185'
Drilling Measured From	KB 8' AGL	KB	CDNL
Date	8/22/19		
Run Number	One		
Depth Driller	3875'		
Depth Logger	3875'		
Bottom Logged Interval	3873'		
Top Log Interval	210'		
Casing Driller	8 5/8" @ 238'		
Casing Logger	238'		
Bit Size	7 7/8"		
Type Fluid in Hole	Chemical	Chlorides 5000 PPM	
Density / Viscosity	8.8/54		
pH / Fluid Loss	10.0/8.8		
Source of Sample	Pit		
Rm @ Meas. Temp	1.3@70degf		
Rmt @ Meas. Temp	1.0@70degf		
Rmc @ Meas. Temp	1.7@70degf		
Source of Rmf / Rmc	Calculated		
Rm @ BHT	0.9@105degf		
Time Circulation Stopped	9:15 a.m		
Time Logger on Bottom	11:25 a.m		
Maximum Recorded Temperature	103degf		
Equipment Number	T-605		
Location	Hays, KS.		
Recorded By	Casey Patterson		
Witnessed By	Mr. Randy Killian		

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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

South of Plainville,KS to AA RD, Then west on AA RD. to 15 Rd.,
Then 15 RD. North 1 mile to Z RD,
Then Z RD East 1/4 mile South into Location

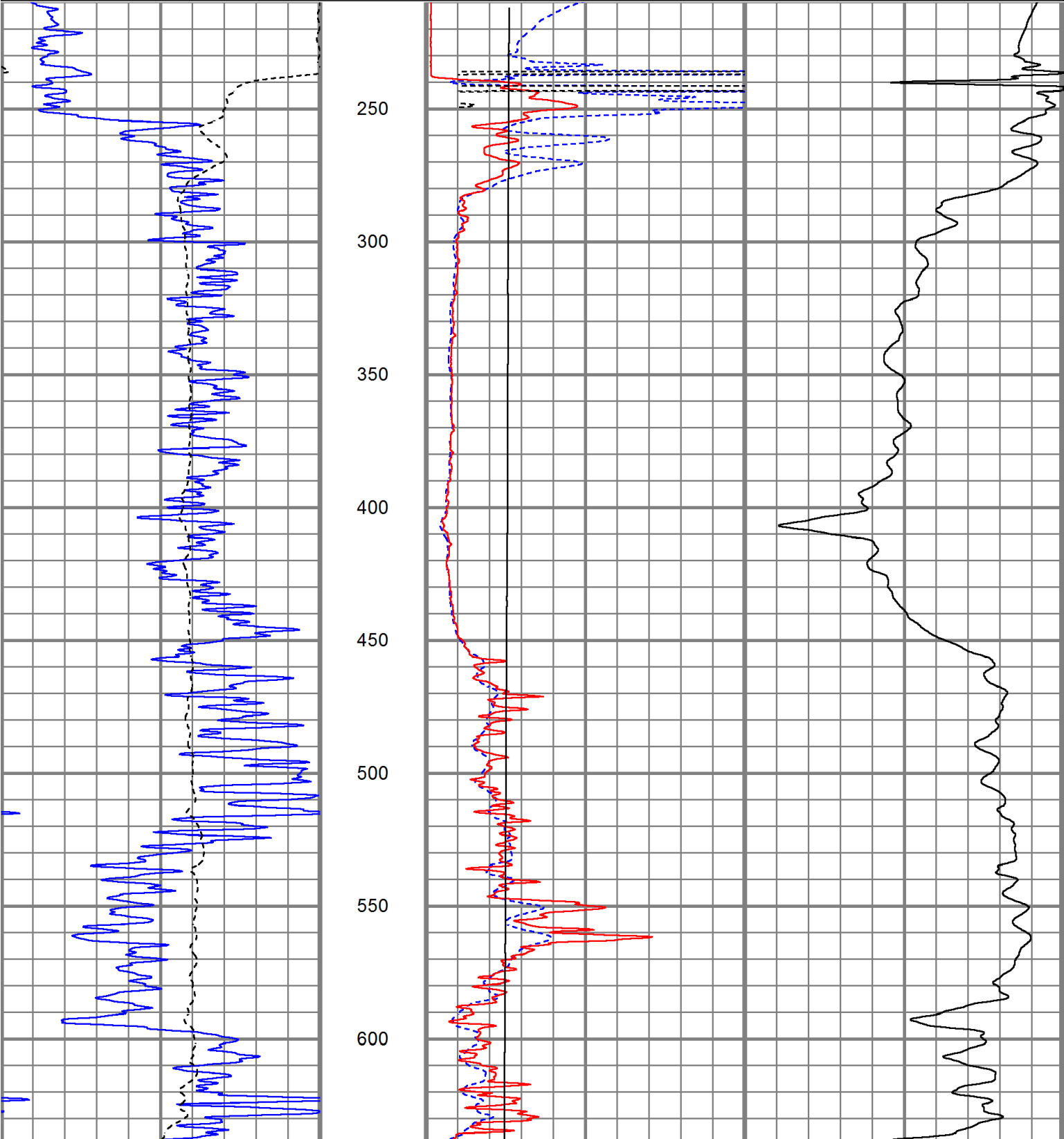
Thanks for using Gemini Wireline LLC
785-625-1182

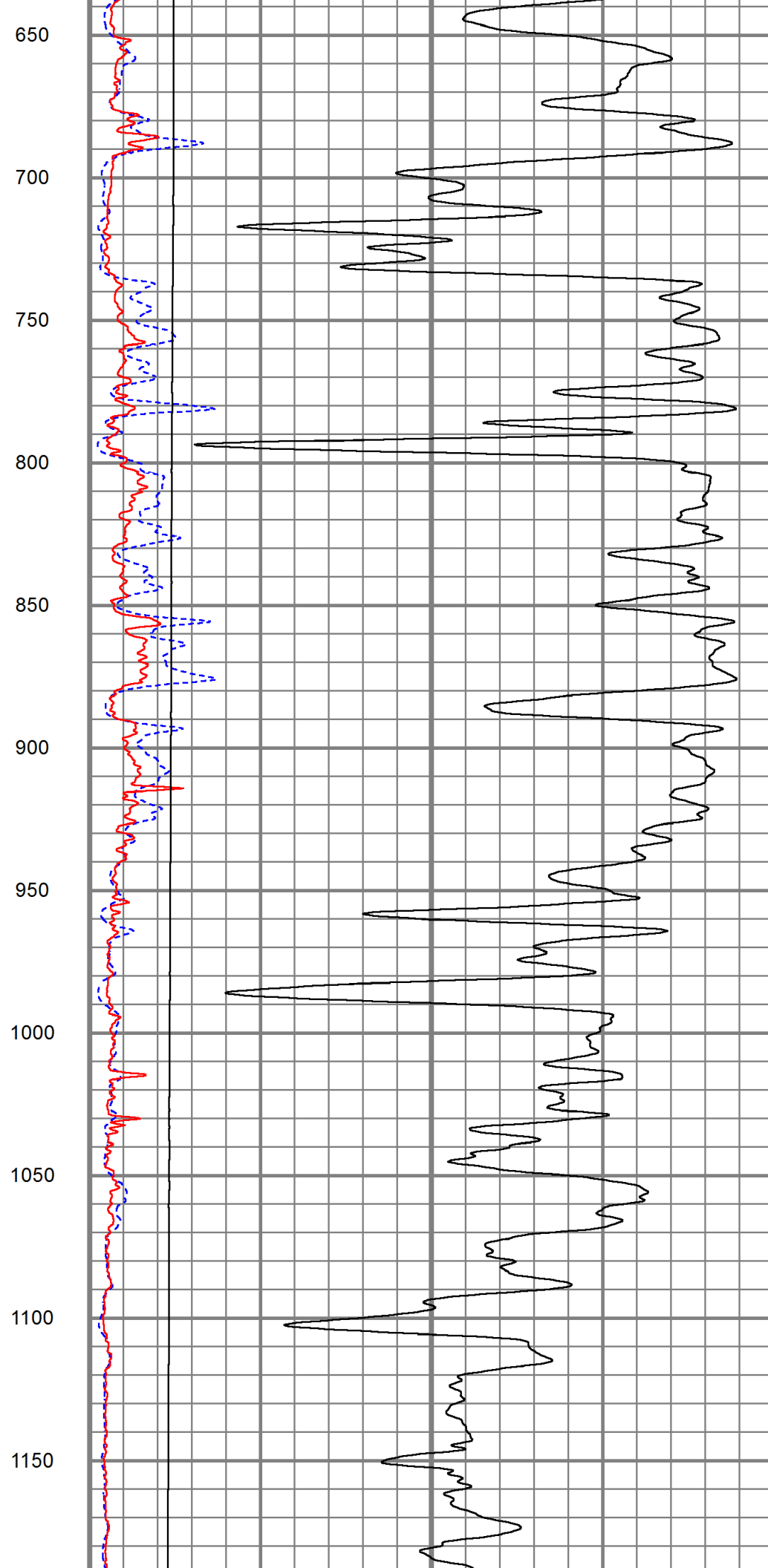
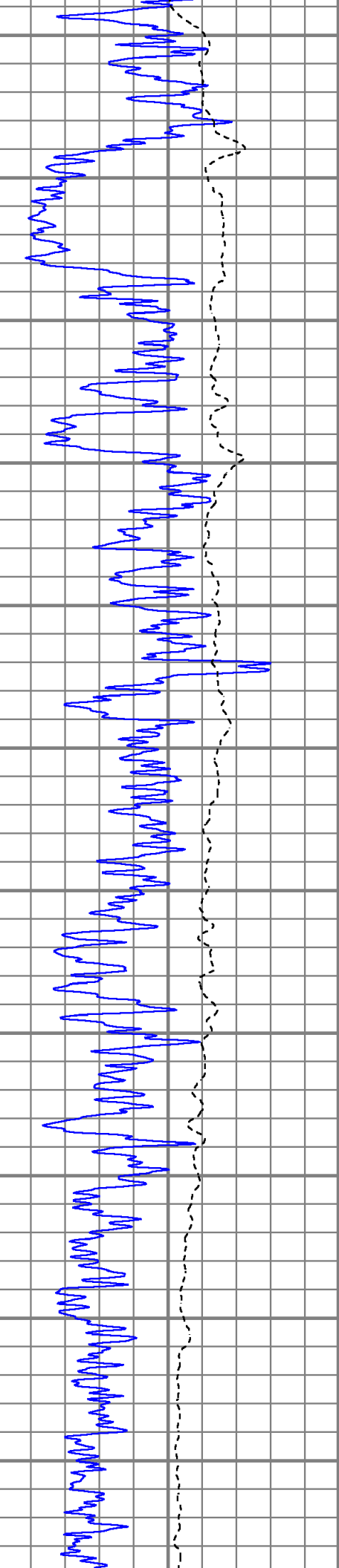


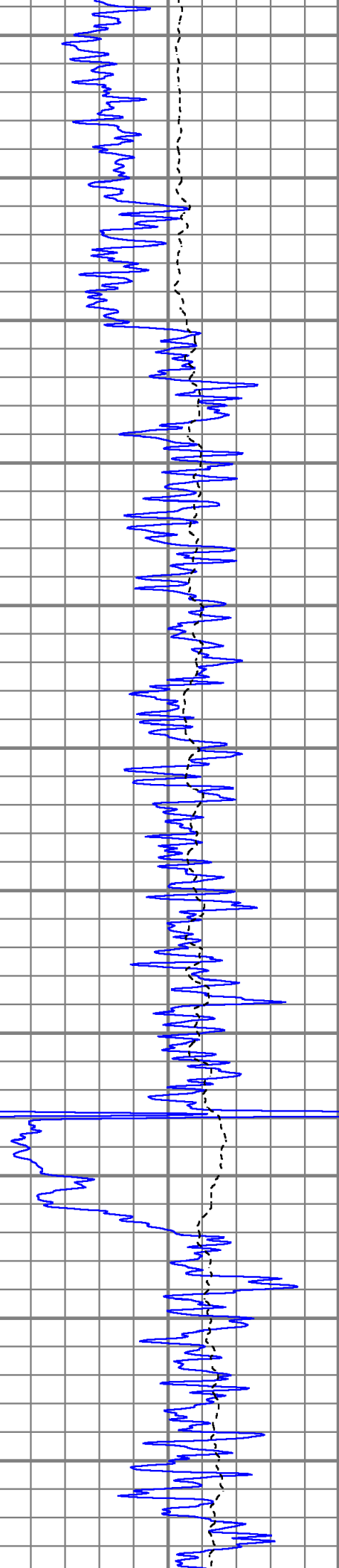
MAIN PASS

Database File	jwpaulhwilliams#2oh.db
Dataset Pathname	pass2
Presentation Format	kdillinn
Dataset Creation	Thu Aug 22 11:46:58 2019
Charted by	Depth in Feet scaled 1:600

0	GR (GAPI)	150	1000	CILD (mmho/m)	0
-100	SP (mV)	100	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







1200

1250

1300

1350

1400

1450

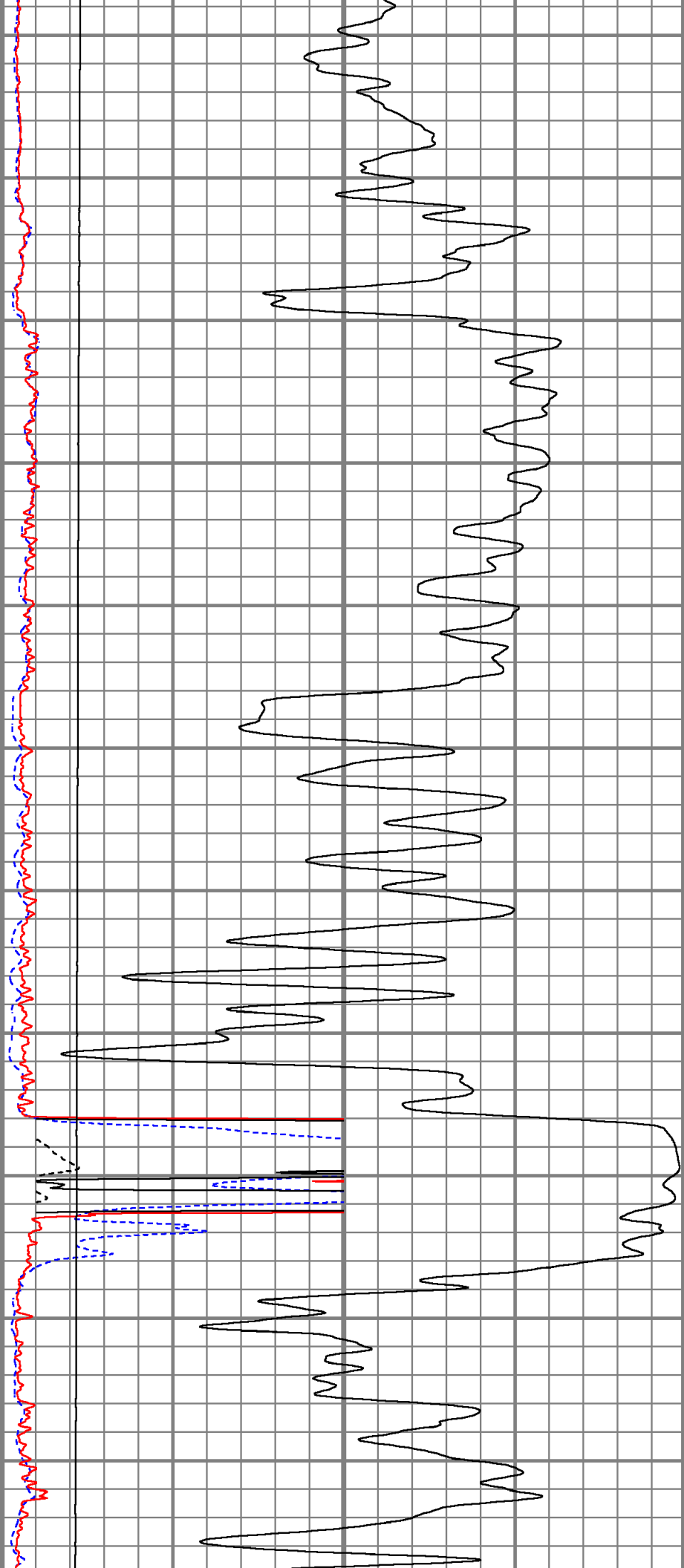
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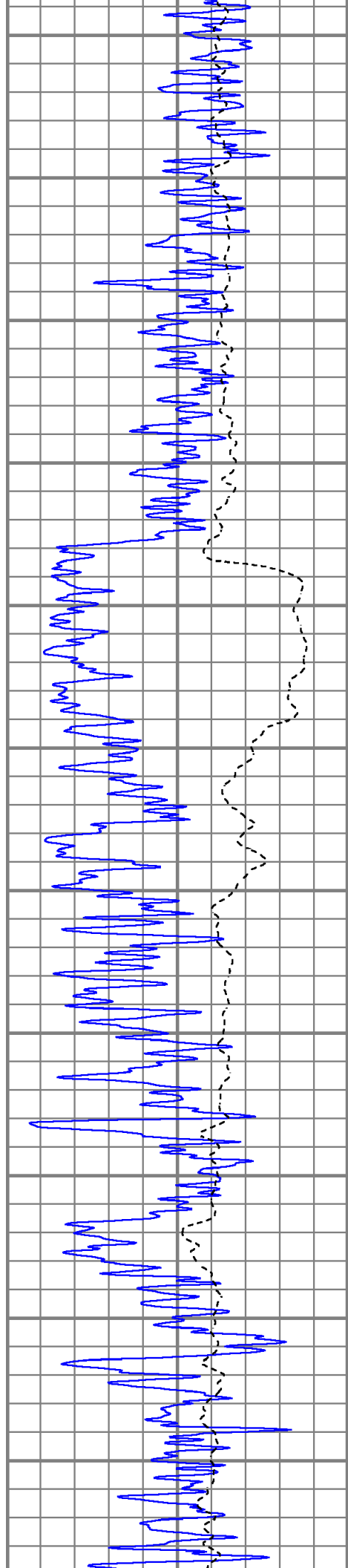
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1600

1650

1700





1750

1800

1850

1900

1950

2000

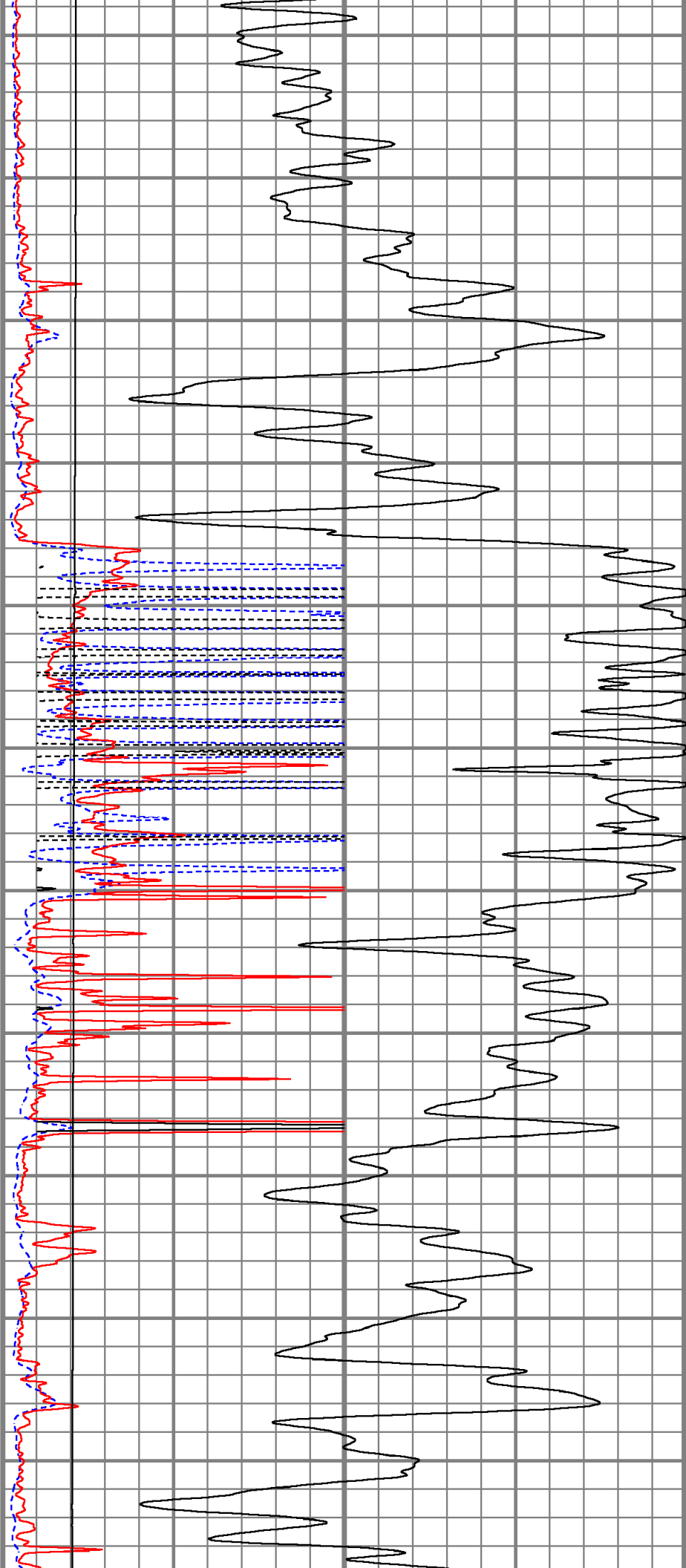
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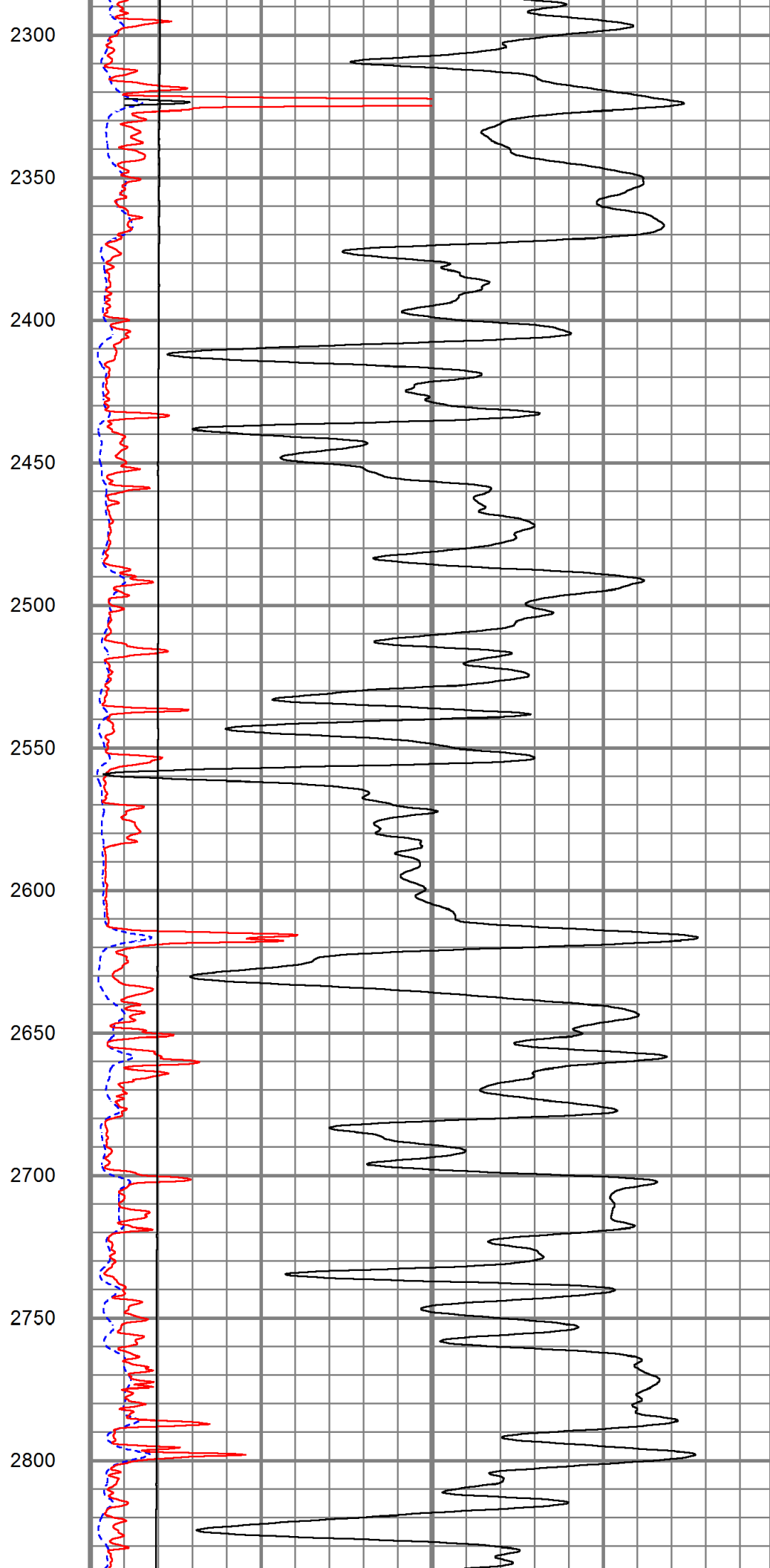
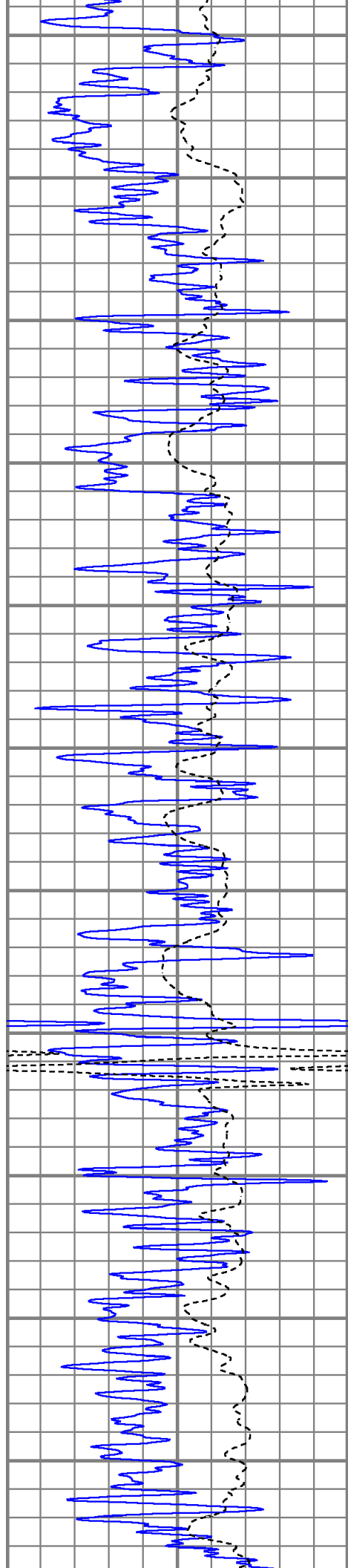
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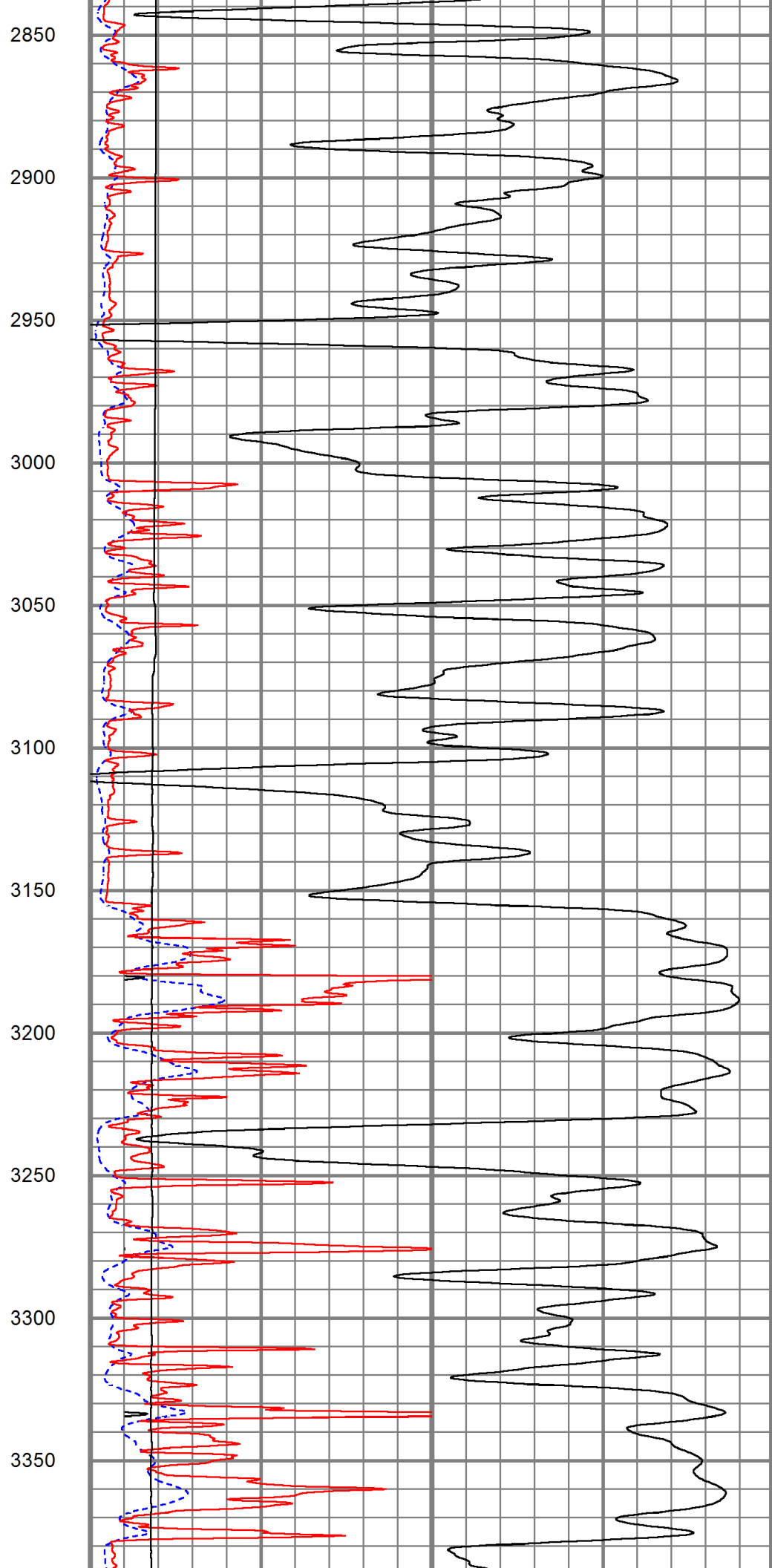
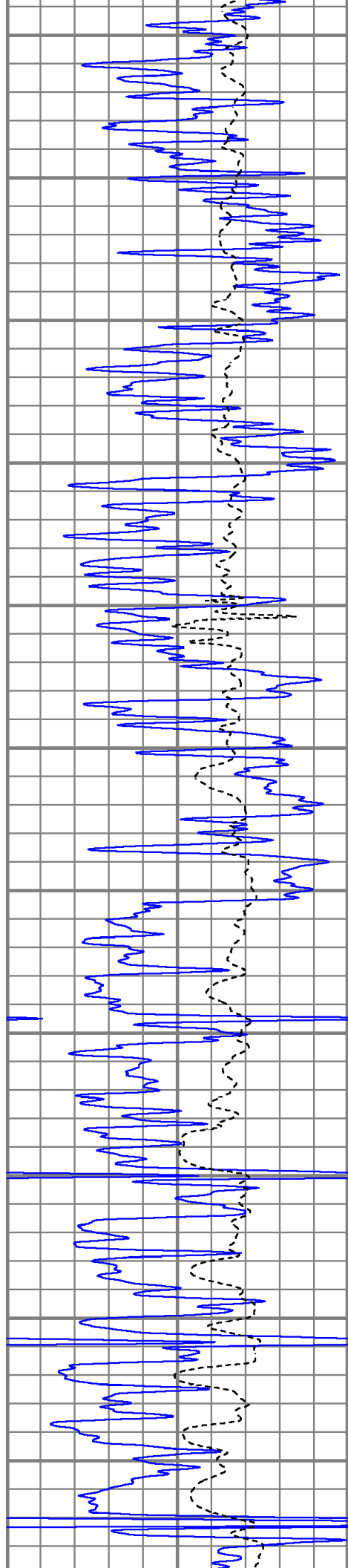
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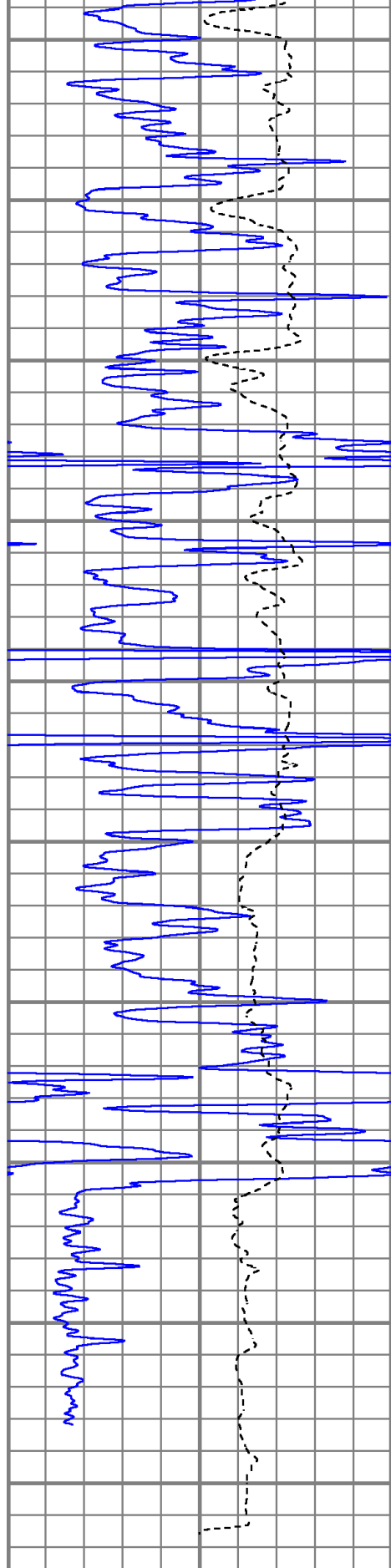
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2250

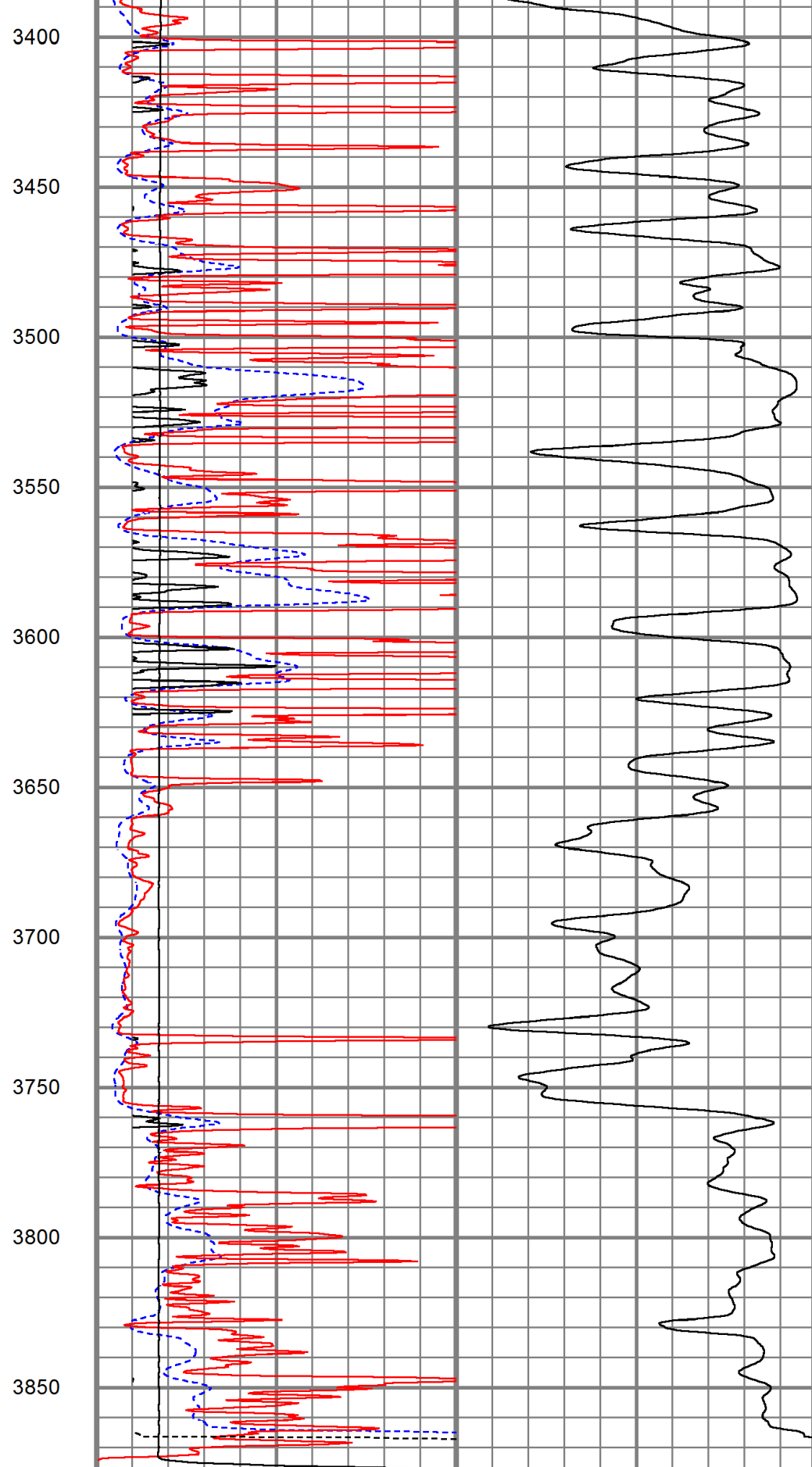








0	GR (GAPI)	150
-100	SP (mV)	100



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

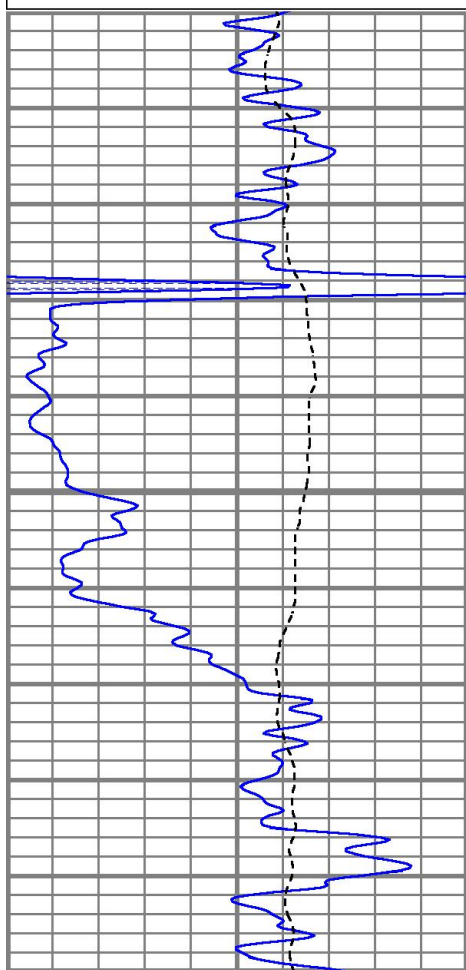


MAIN PASS

Database File jpwpaulhwilliams#2oh.db
 Dataset Pathname pass2
 Presentation Format kdil
 Dataset Creation Thu Aug 22 11:46:58 2019
 Charted by Depth in Feet scaled 1:240

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

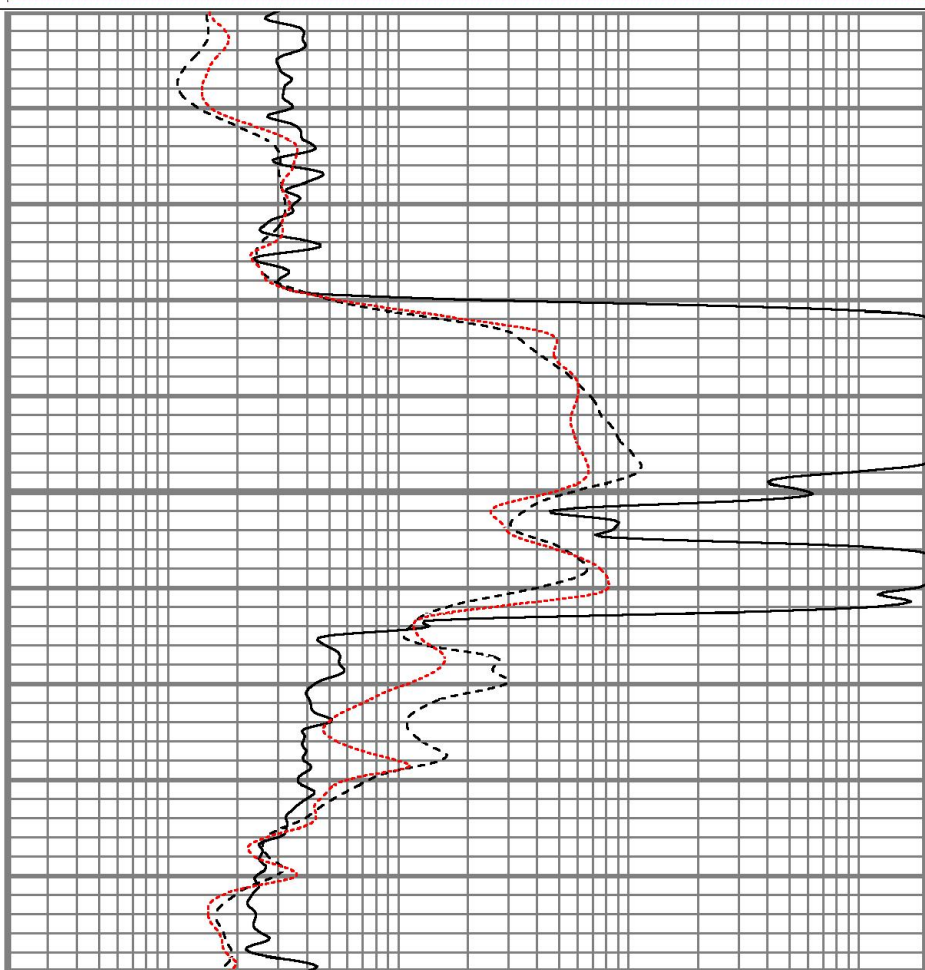
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000



1550

1600

1650



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

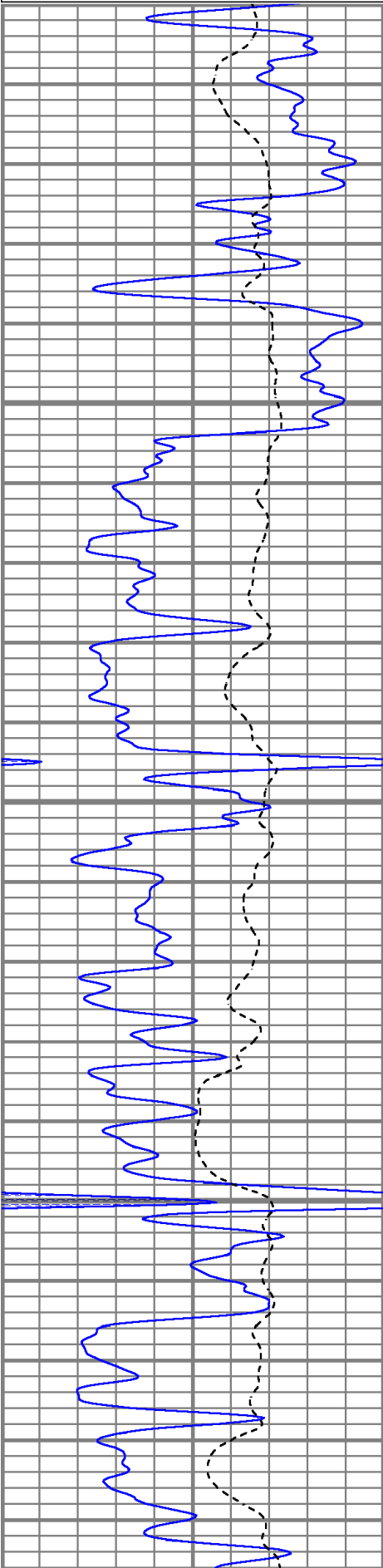


MAIN PASS

Database File jpwpaulhwilliams#2oh.db
 Dataset Pathname pass2
 Presentation Format kdil

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

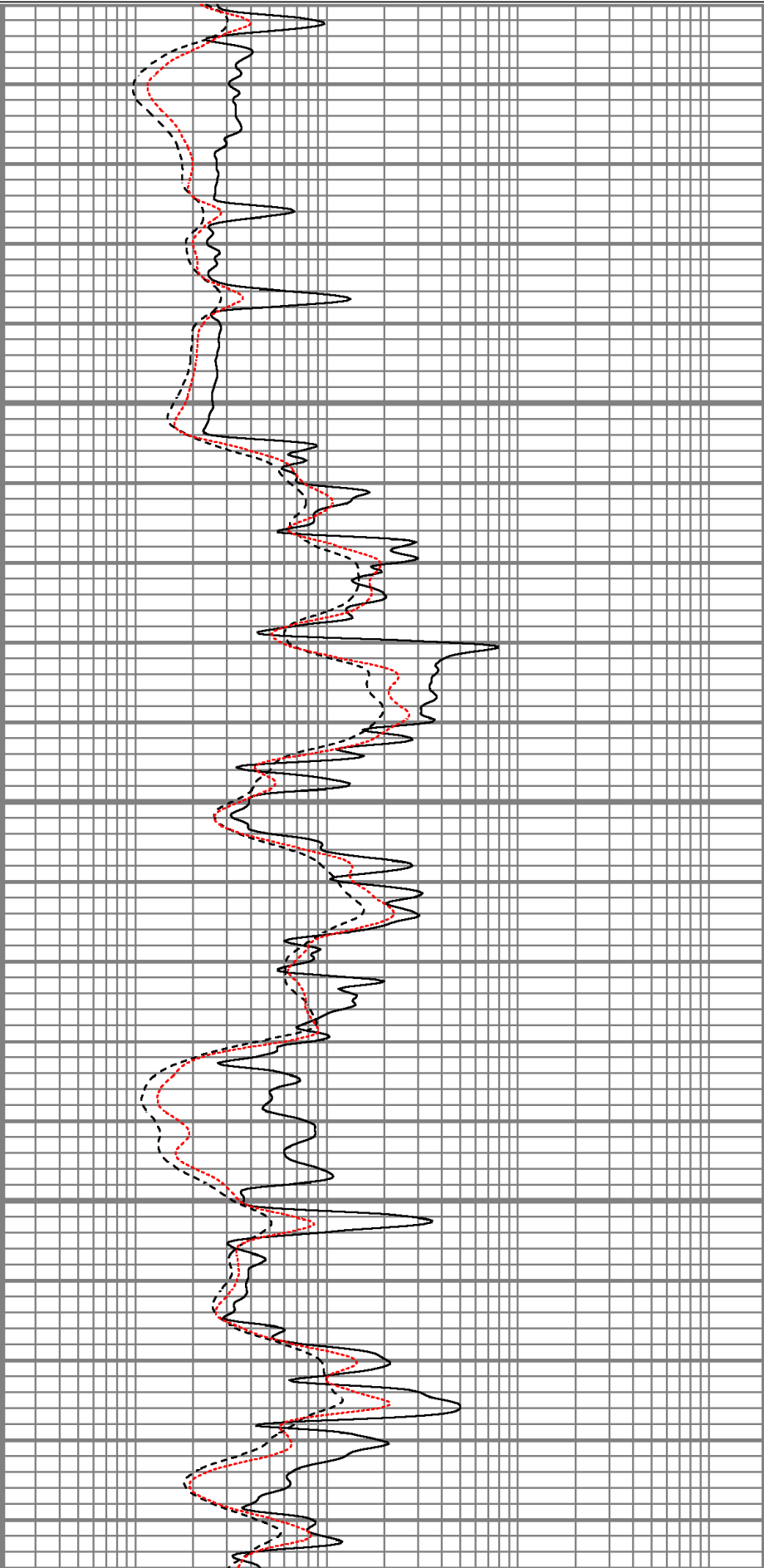


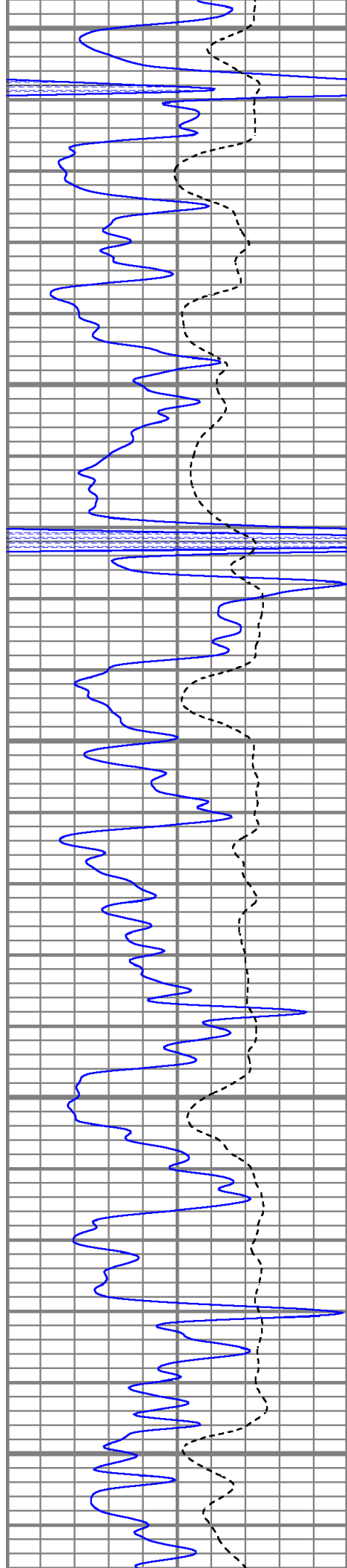
3100

3150

3200

3250





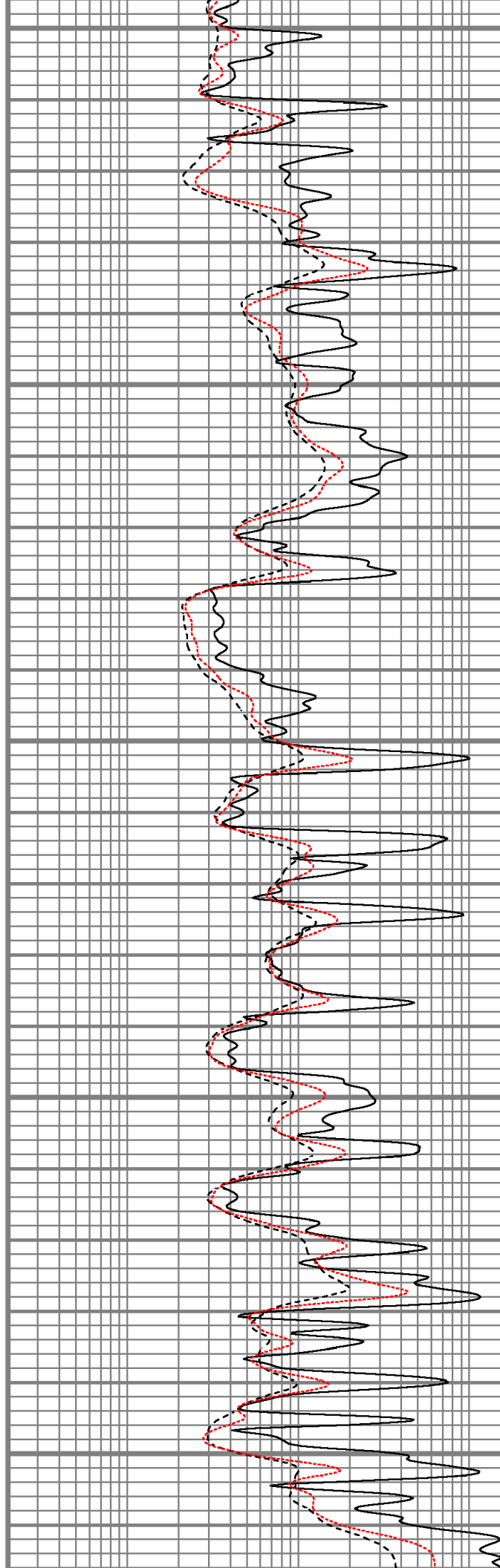
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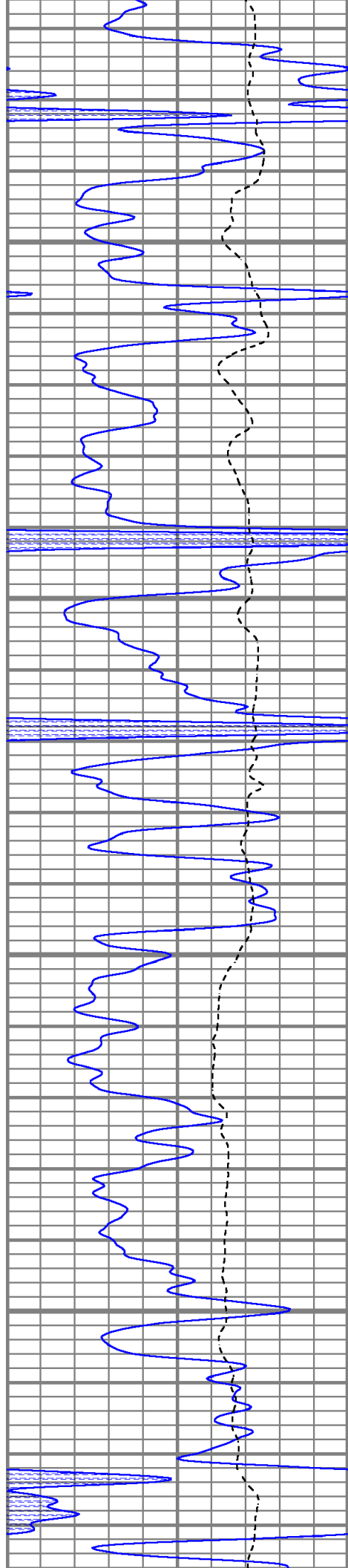
3350

3400

3450

3500



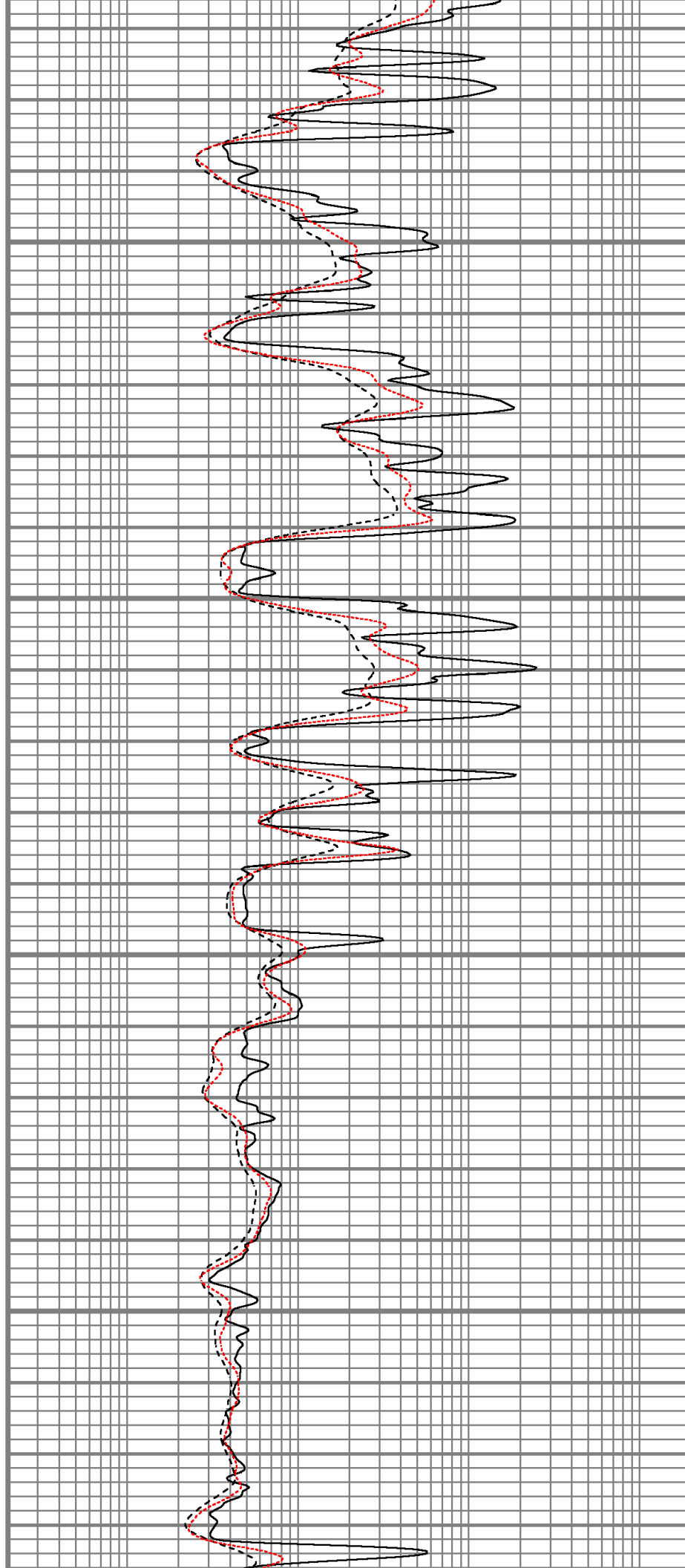


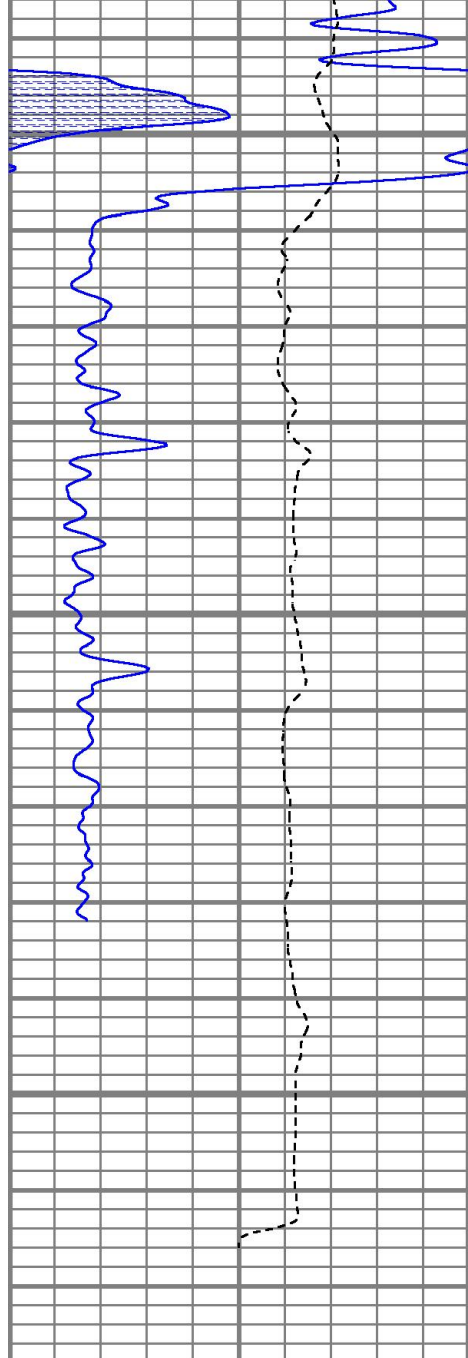
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3600

3650

3700



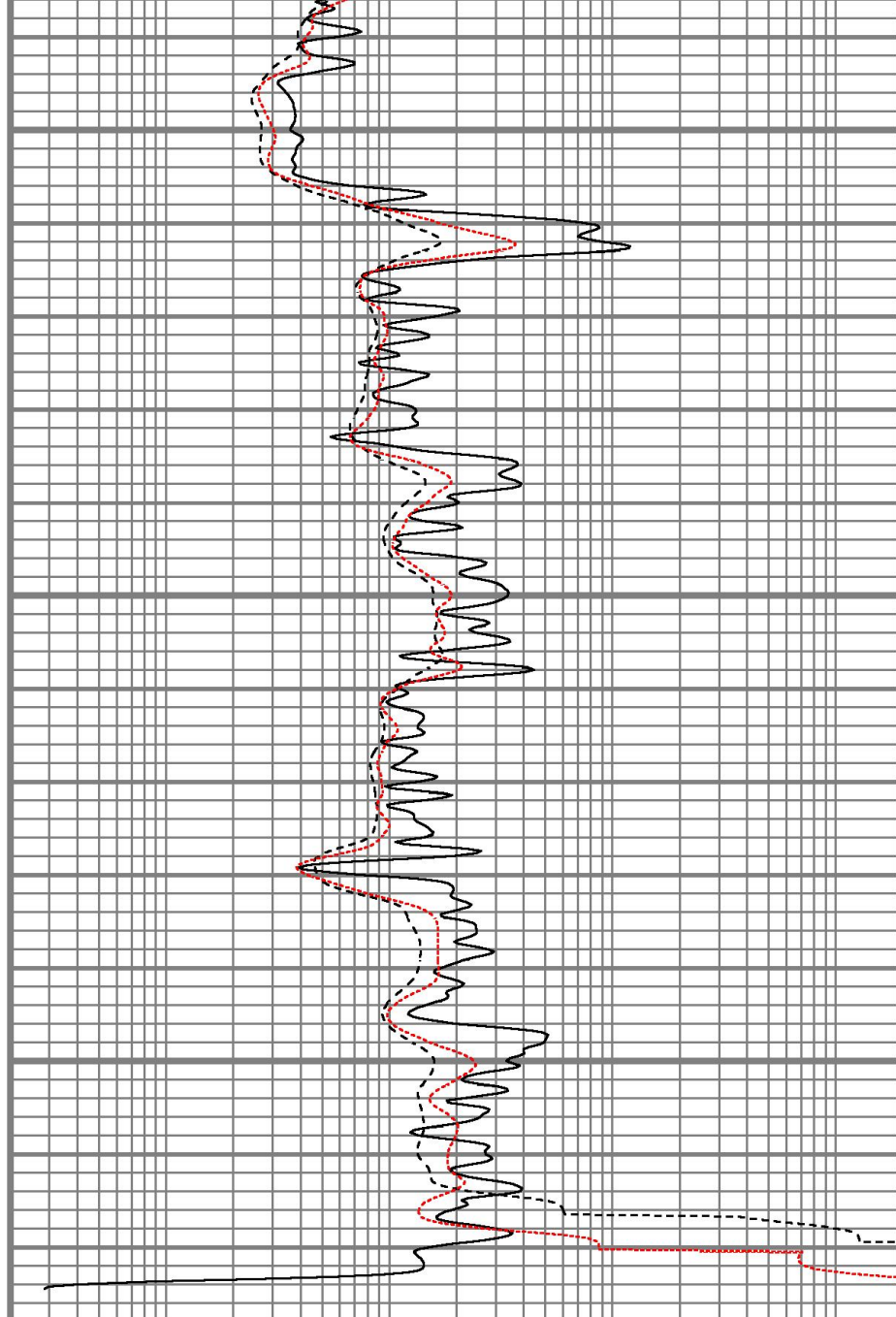


0	GR (GAPI)	150
-100	SP (mV)	100

3750

3800

3850



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

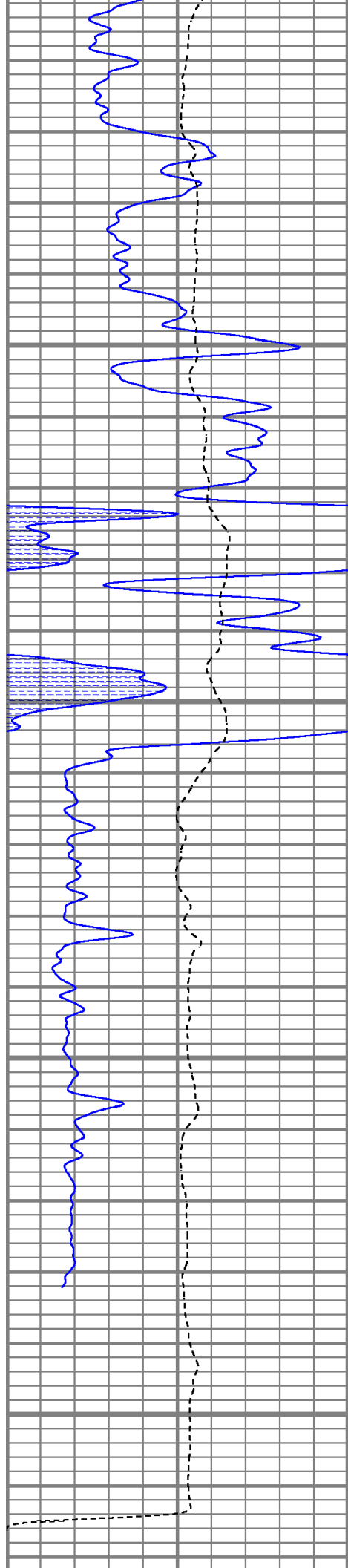


REPEAT SECTION

Database File jwpaulhwilliams#2oh.db
 Dataset Pathname pass1
 Presentation Format kdil
 Dataset Creation Thu Aug 22 11:29:10 2019
 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

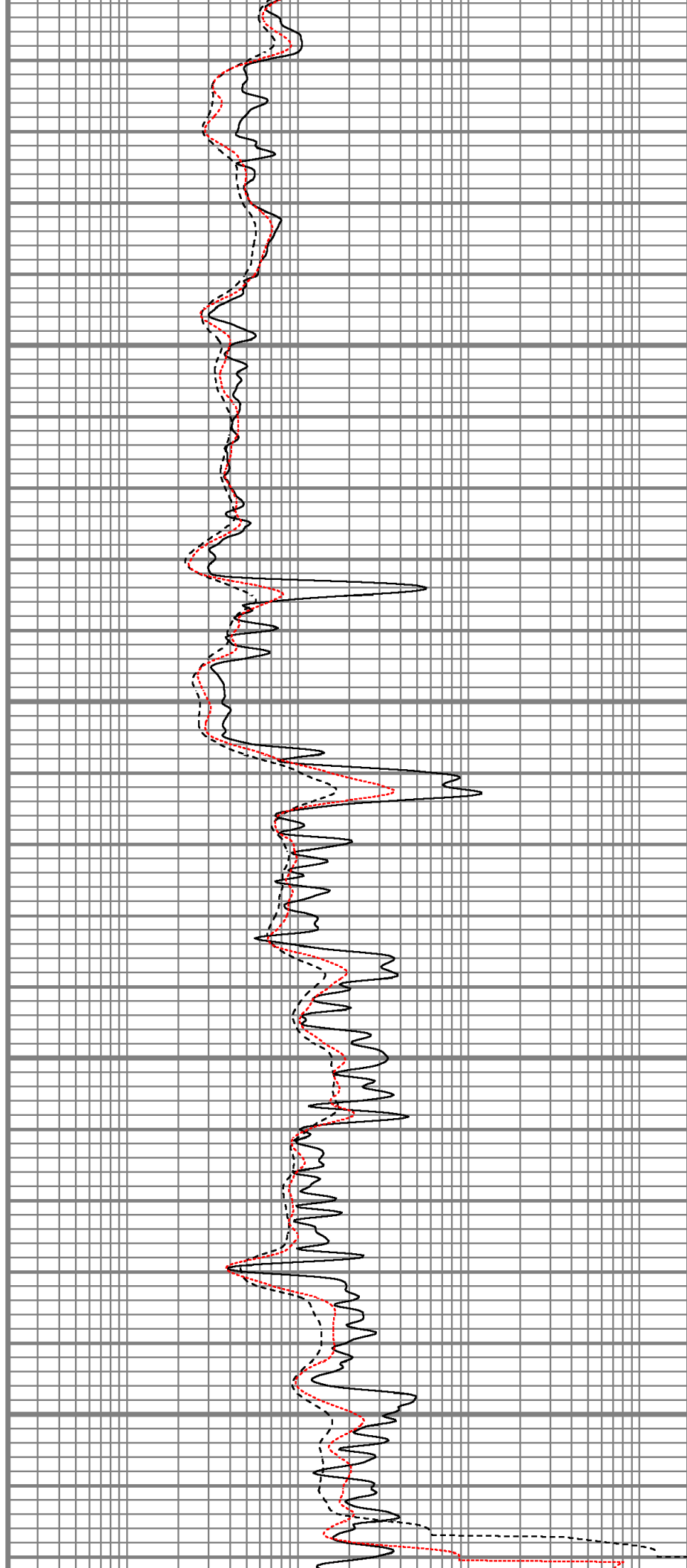


3700

3750

3800

3850



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

Calibration Report		
Database File	jpwpaulhwilliams#2oh.db	
Dataset Pathname	pass2	
Dataset Creation	Thu Aug 22 11:46:58 2019	

Dual Induction Calibration Report		
Serial-Model:	5375-G	
Surface Cal Performed:	Fri Apr 19 12:45:28 2019	
Downhole Cal Performed:	Fri Apr 19 12:45:28 2019	
After Survey Verification Performed:	Fri Apr 19 12:45:28 2019	

Surface Calibration								
Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.002	0.642	V	0.000	350.000	mmho/m	546.631	-1.028
Medium	0.006	0.727	V	0.000	400.000	mmho/m	555.208	-3.897
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.642	V	0.000	350.000	mmho/m	546.502	-0.822
Medium	0.006	0.727	V	0.000	550.000	mmho/m	763.570	-4.829

Downhole Calibration								
Readings				References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	0.000	mmho/m	-0.206	349.877	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	0.014	399.930	mmho/m	1.000	0.000
Shallow	2.429	0.011	V	500.000	2.000	Ohm-m	200.929	0.282

After Survey Verification								
Readings				Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	1.000	0.000
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		
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Serial Number: WithMC
Tool Model: WMC
Performed: Fri Apr 19 12:15:04 2019

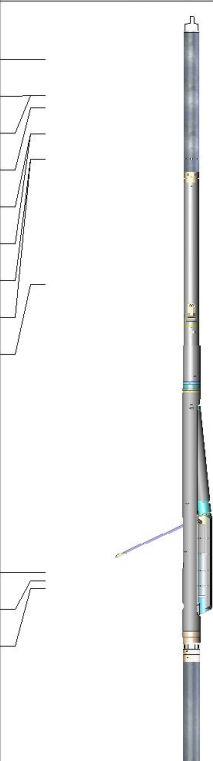
	Reference	Reading
Low Reference:	0.00 degF	0.00 degF
High Reference:	1.00 degF	1.00 degF
Gain:	1.00	
Offset:	0.00	
Delta Spacing	1	

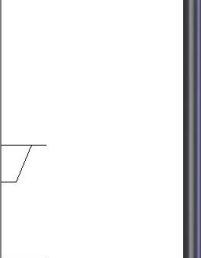
Inclinometer Calibration Report

Performed:	Fri Apr 19 12:14:53 2019				
	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:	Fri Apr 19 12:14:18 2019	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.47		CHD-STD	0.50	1.69	1.00
ACCY	39.30		ADT-WMC (WithMC)	4.58	3.50	120.00
ACCX	39.30		Admyr Telemetry With Mudcell			
SSTAT	38.89			5.65	3.50	50.00
PSTAT	38.05					
ASTAT	38.05		NEU-ADMY5139 (AD5139)			
GRD	37.22		Admyer NEU DIGITAL			
TEMP	37.22			9.69	4.00	240.00
NEU	33.15		CDL-GEARHART (2501)			
LSD	23.78					
DCAL	23.49					
SSD	23.24					

SP	10.60				
CILD	10.60				
CILM	6.89				
RLL3	1.70				

Dataset: jpwpaulhwilliams#2oh.db: field/well/run1/pass2

Total length: 41.89 ft

Total weight: 756.00 lb

O.D.: 4.00 in