



MIDWEST WIRELINE

# DUAL INDUCTION LOG

**Company** Berexco, LLC  
**Well** Weinman #1  
**Field** Dayton  
**County** Phillips  
**State** Kansas

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**Well** Weinman #1  
**Field** Dayton  
**County** Phillips  
**State** Kansas

**Location:** API #: 15-147-20760-00-00  
 620 FSL 1650 FWL  
 SEC 25 TWP 2S RGE 19W  
 Elevation 2129  
 Other Services: CNL/CDL MEL/BHCS  
 Permanent Datum Ground Level  
 Log Measured From Kelly Bushing  
 Drilling Measured From Kelly Bushing  
 Elevation 2139  
 K.B. 2139  
 D.F. G.L. 2129

Date	2/25/2022
Run Number	One
Depth Driller	3650
Depth Logger	3642
Bottom Logged Interval	3641
Top Log Interval	250
Casing Driller	8.625 @ 273
Casing Logger	273
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	800
Density / Viscosity	9.3 57
pH / Fluid Loss	10 8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.9 @ 70
Rmt @ Meas. Temp	.68 @ 70
Rmc @ Meas. Temp	1.22 @ 70
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.56 @ 113
Operating Rig Time	4 Hours
Max Rec. Temp. F	113
Equipment Number	P-24
Location	Hays
Recorded By	C McLaughlin
Witnessed By	Bryan Bynog
	D Schmidt

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline LLC will not 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.

**Comments**

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Phillipsburg  
 5 West to 500 Rd,  
 4 North to Limestone Rd  
 1/4 East, North into

Log Measured From: Kelly Bushing 10 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC  
 785-625-3858

Your Midwest Wireline Crew		This Log Record Was Witnessed By	
Engineer: C McLaughlin	Operator:	Primary Witness: Bryan Bynog	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Operator	Offset (ft)	Depth	Description	Length (ft)	C.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	32.75		GR-M&W (101)	3.00	3.50	50.00
CNLSC CNSSC	29.65 28.90		CNT-M&W (207-MW)	5.00	3.50	100.00
LSD DCAL SSD	20.60 20.58 20.10		CDL-M&W (305-05)	8.50	4.00	250.00
RLL3F RLL3	15.50 15.50		DIL-M&W (501 HT)	18.25	3.50	220.00
CILD	8.33		CILM	4.50		
SP	0.20					

Dataset: berexco\_weinman #1.db: field/well/stack/pass3.10  
 Total length: 34.75 ft  
 Total weight: 620.00 lb  
 O.D.: 4.00 in

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\berexco\_weinman #1.db  
 Dataset field/well/stack/pass3.1/\_vars\_

## Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	113	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	240	10	Off	3642

## Variable Description

A : Cement Factor (a)  
 BOREID : Borehole I.D.  
 BOTTEMP : Bottom Hole Temperature  
 CASEOD : Casing O.D.  
 CASETHCK : Casing Thickness  
 FLUIDDEN : Fluid Density  
 M : Cement Exp (m)  
 MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select  
 PERFS : Perforation Flag  
 SNDERR : Deep Sonde Error Correction  
 SNDERRM : Medium Sonde Error Correction  
 SPSHIFT : S.P. Baseline Offset  
 SRFTEMP : Surface Temperature  
 SZCOR : CN Size Cor. ?  
 TDEPTH : Total Depth



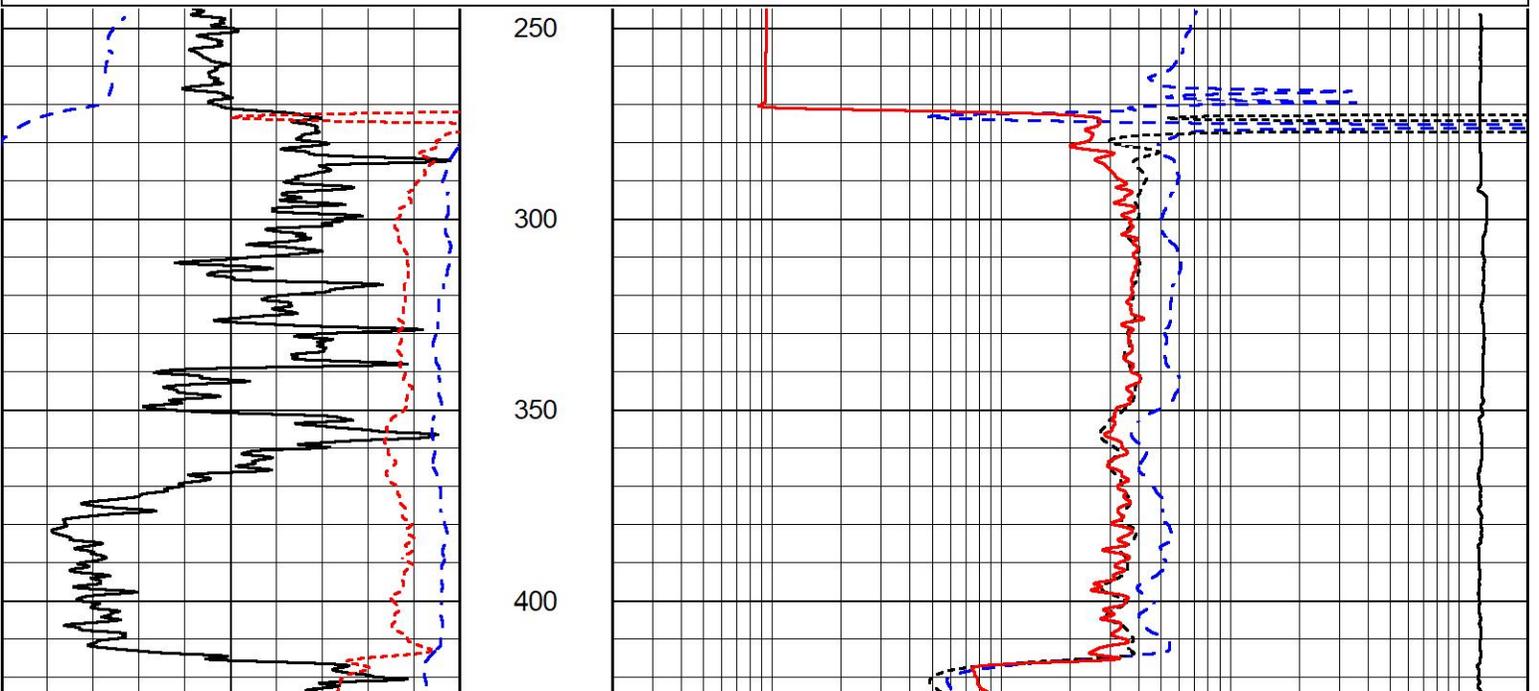
## 2" SCALE RESISTIVITY

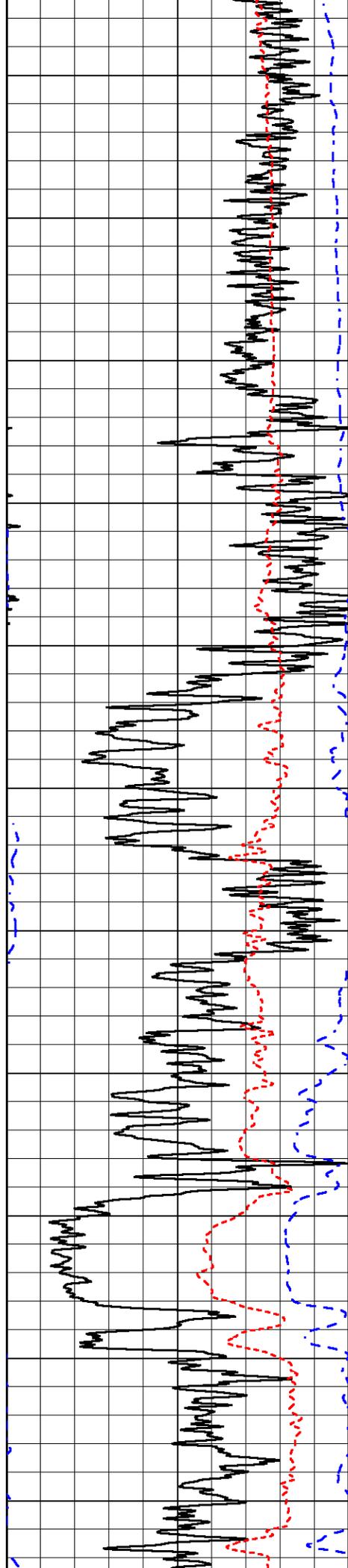
### MAIN PASS

Database File berexco\_weinman #1.db  
 Dataset Pathname stack/pass3.3  
 Presentation Format \_dil2in  
 Dataset Creation Fri Feb 25 22:21:26 2022  
 Charted by Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0





450

500

550

600

650

700

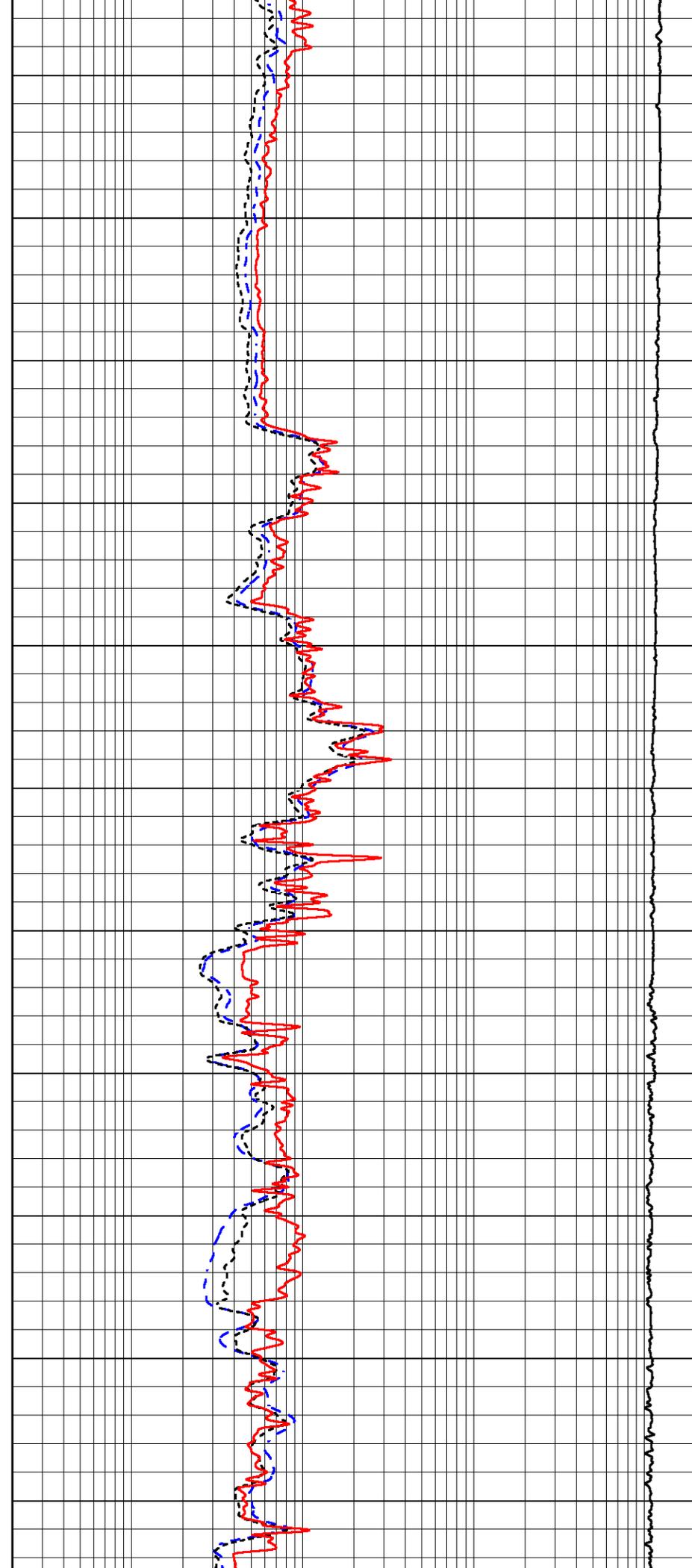
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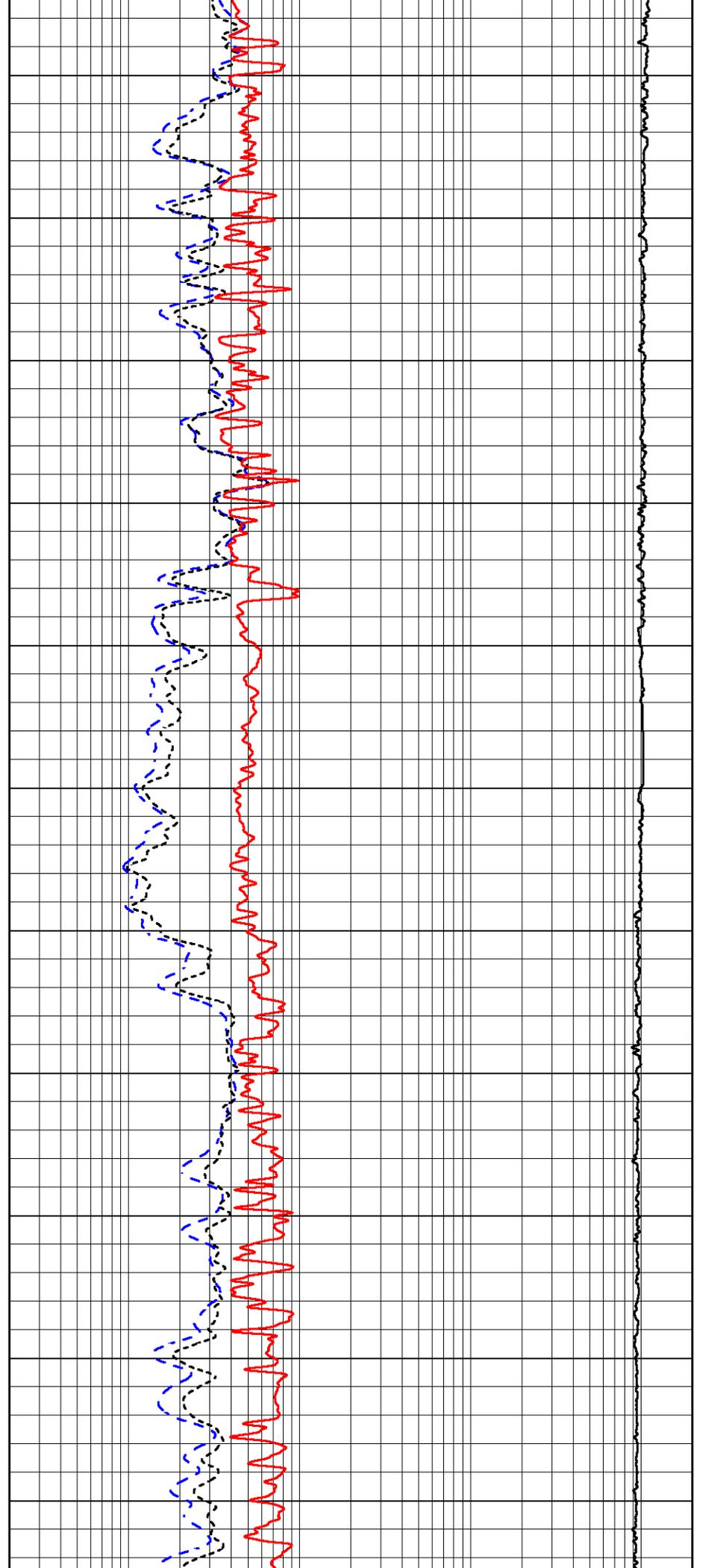
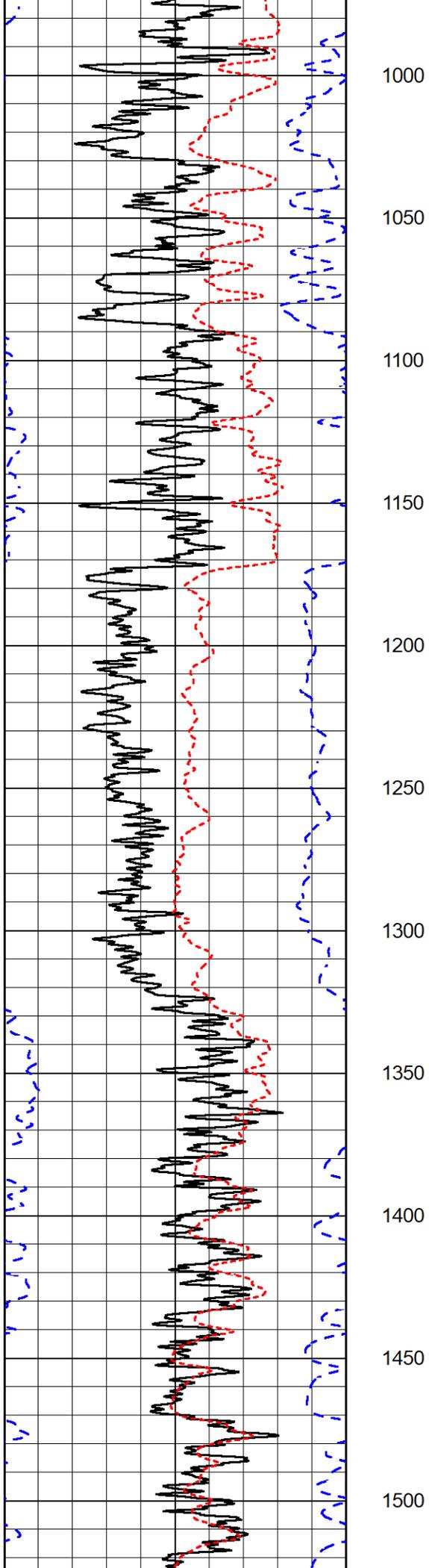
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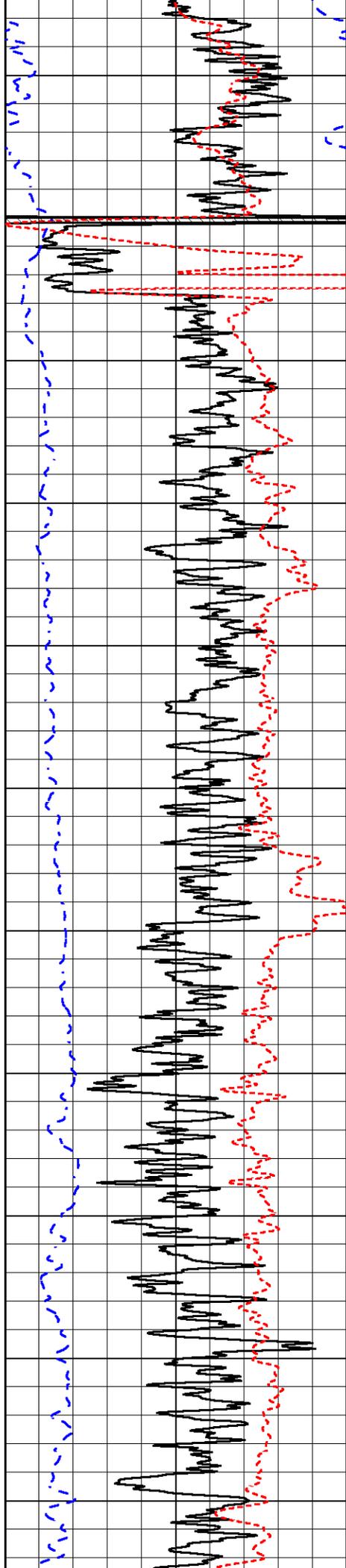
850

900

950







1550

1600

1650

1700

1750

1800

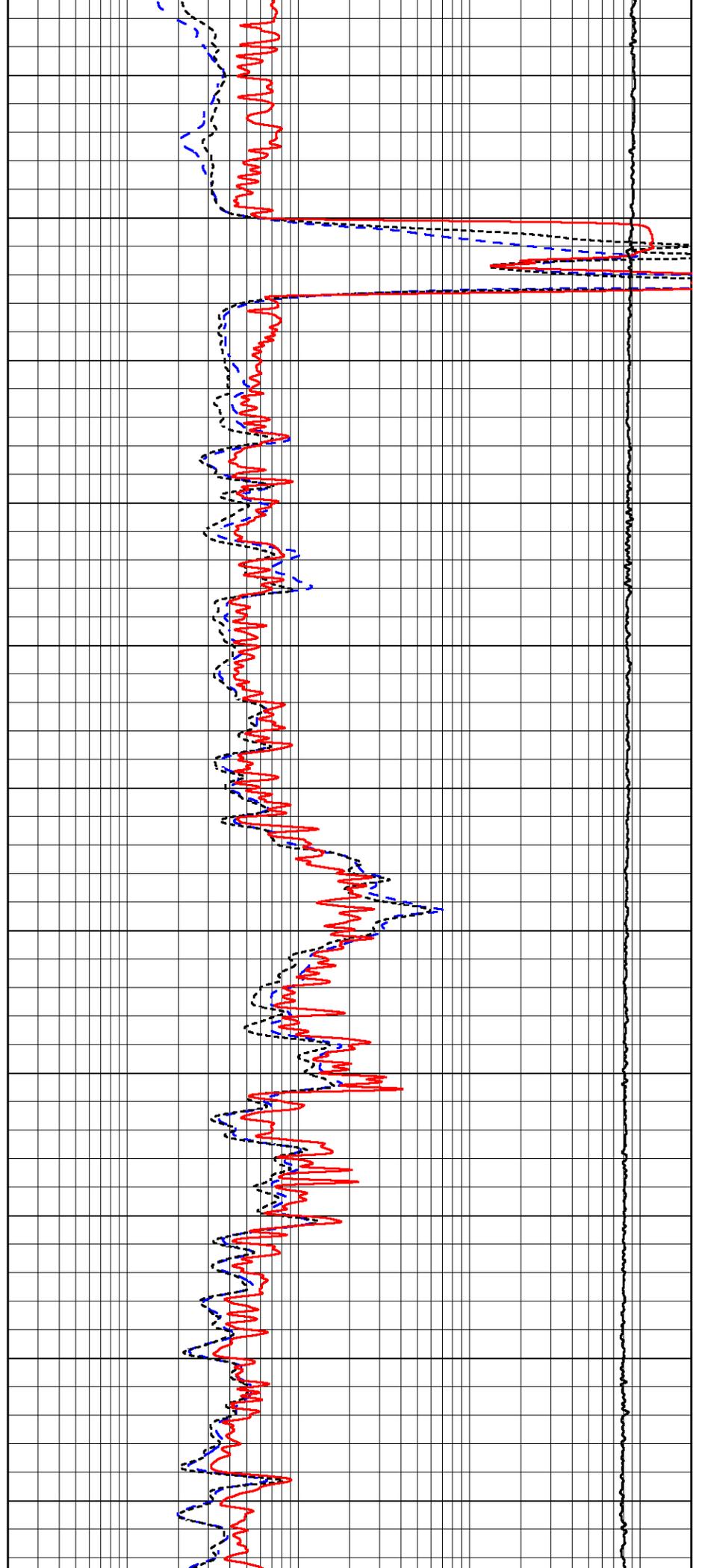
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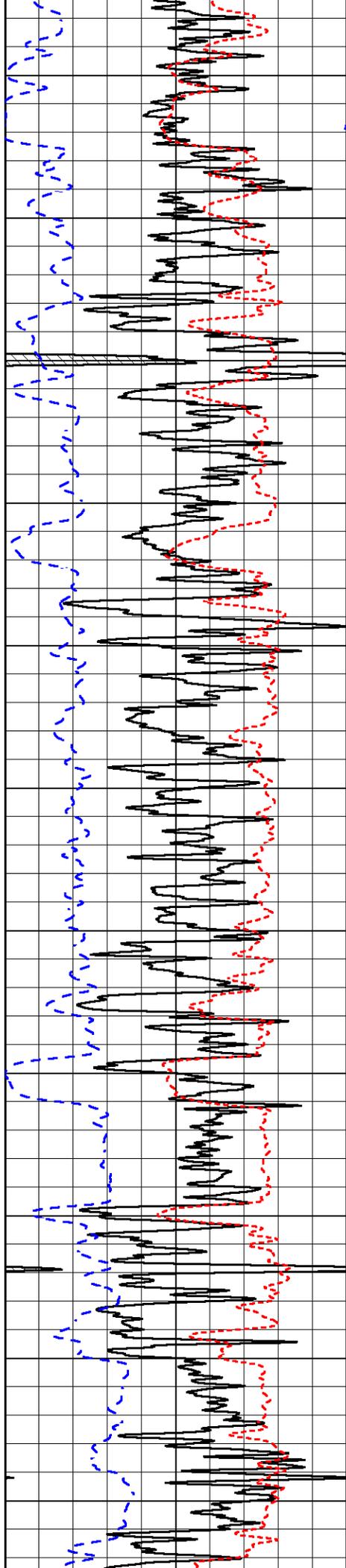
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

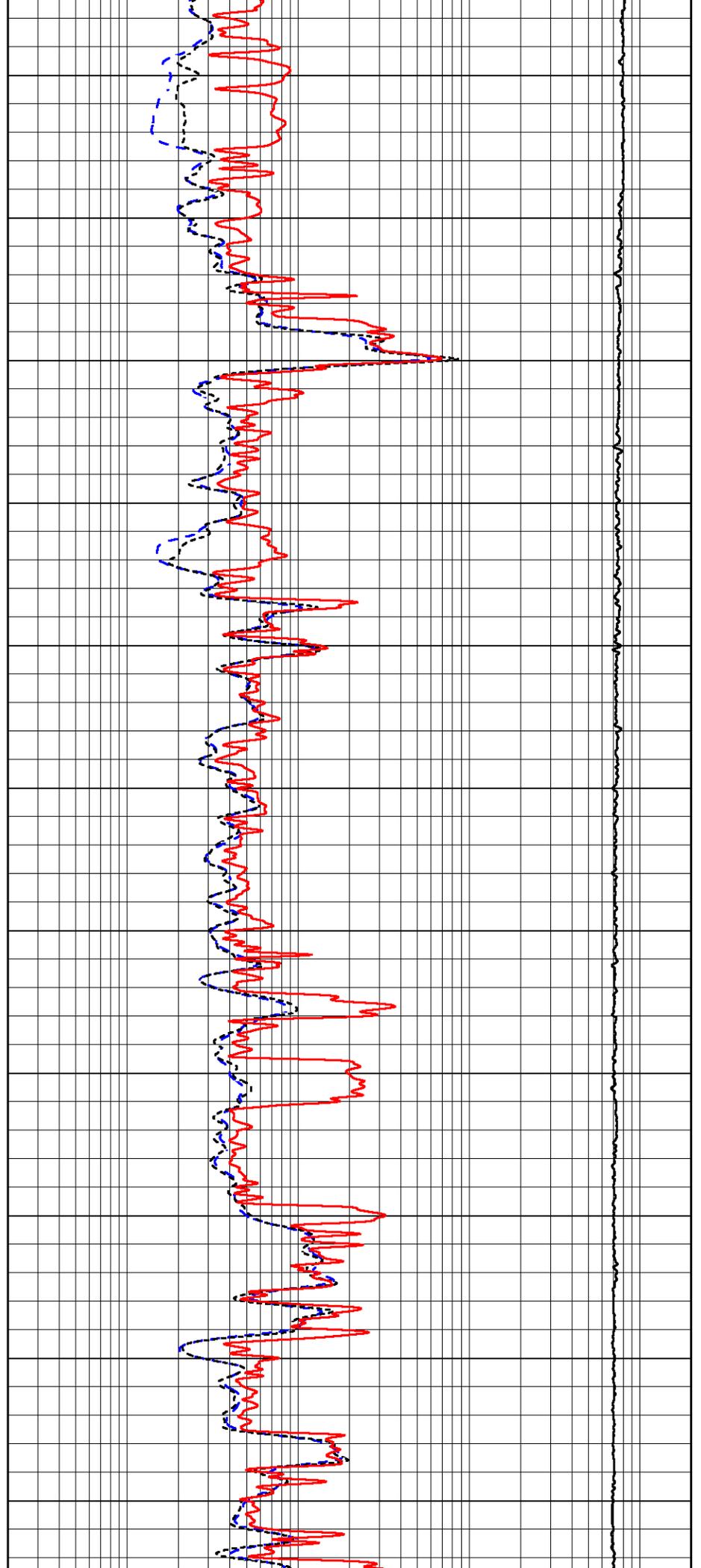
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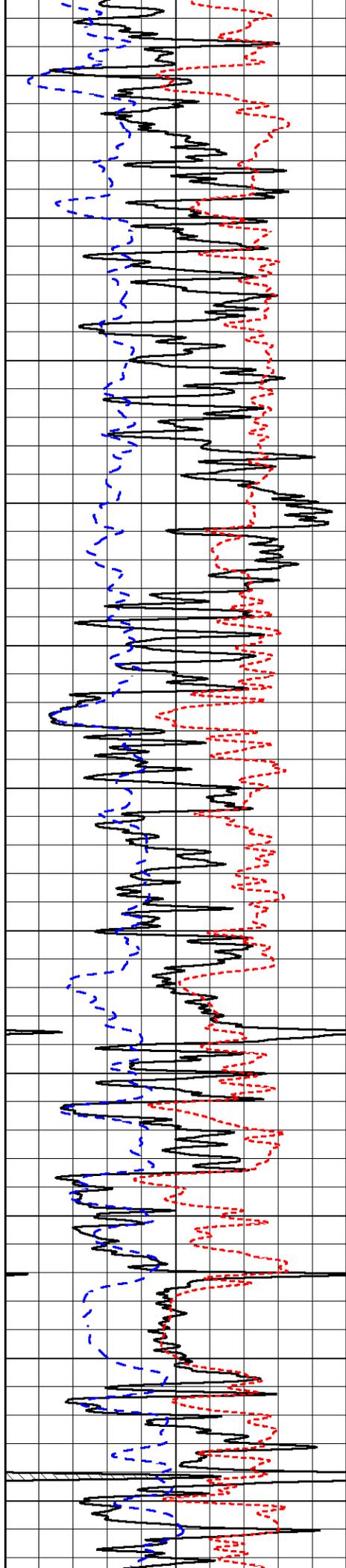
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2500

2550

2600





2650

2700

2750

2800

2850

2900

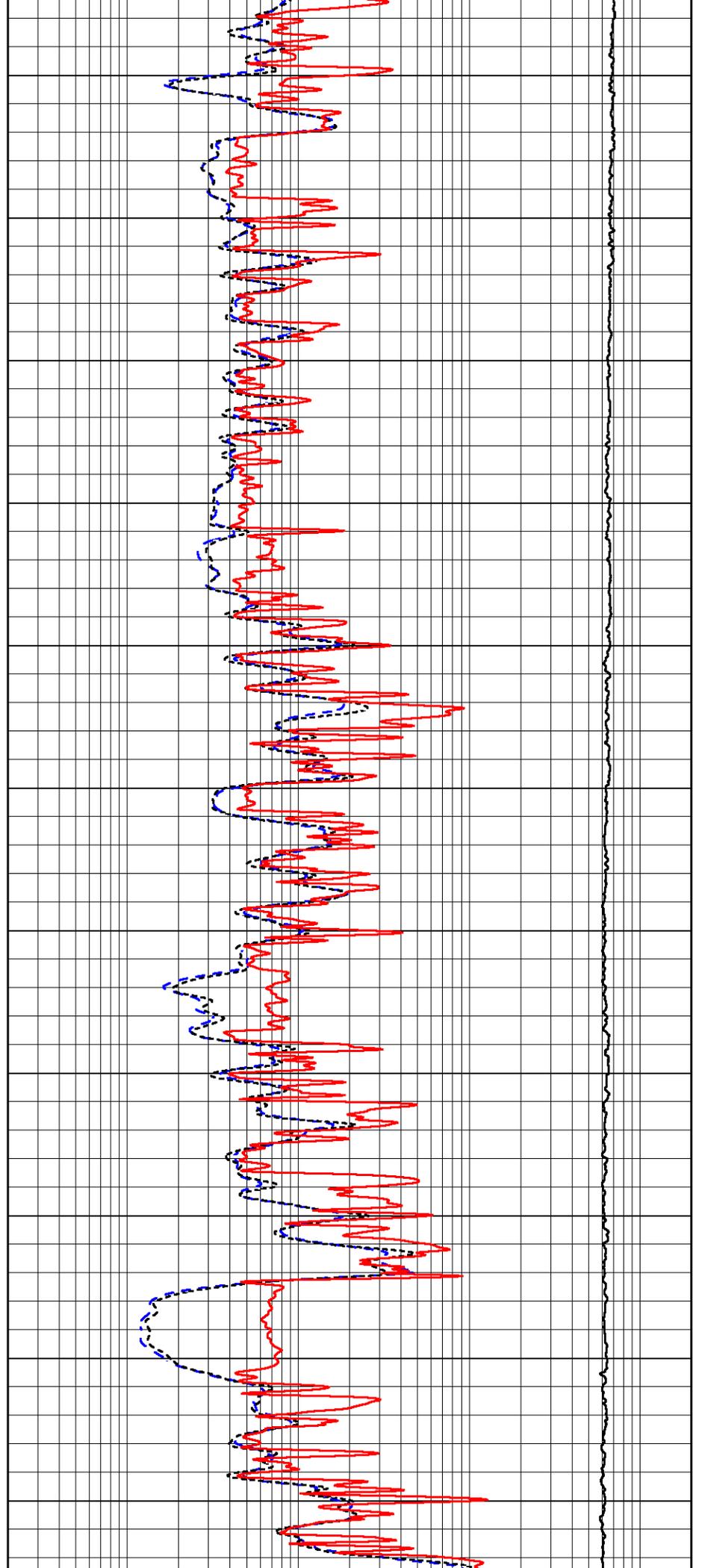
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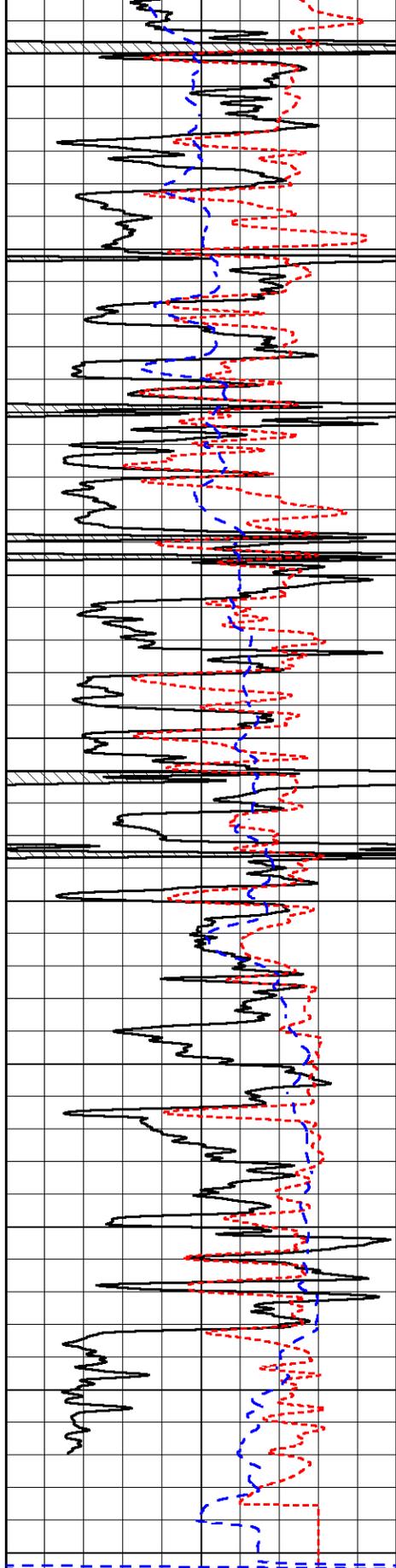
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3050

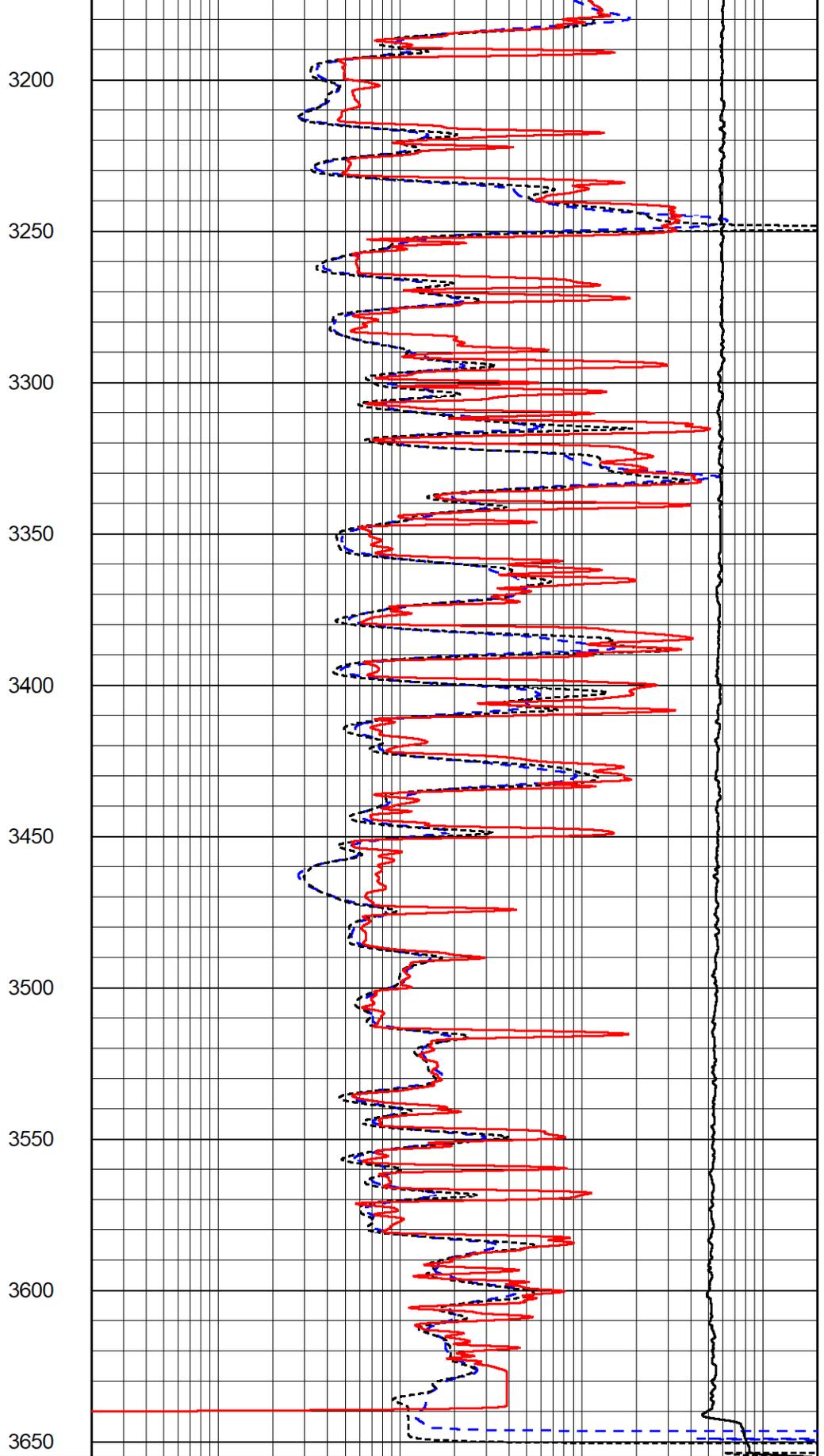
3100

3150





0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0



0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0



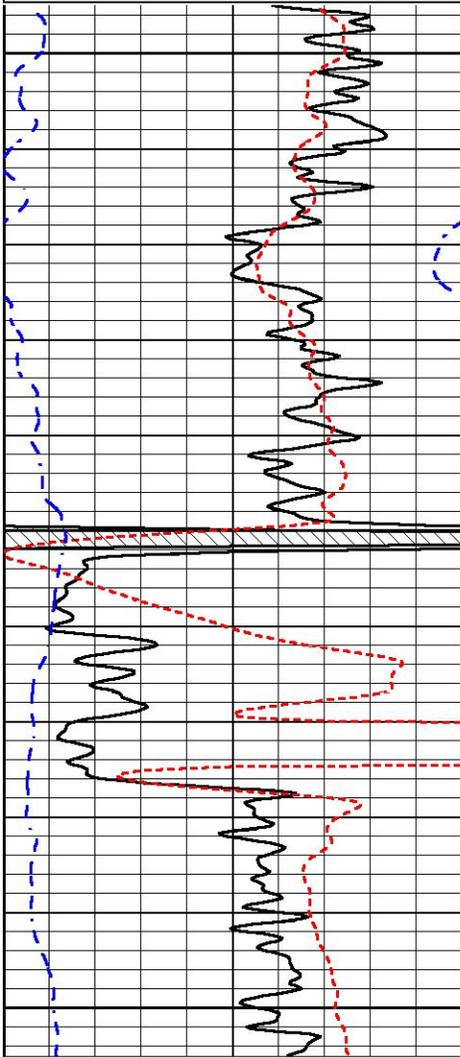
# ANHYDRITE SECTION

## MAIN PASS

Database File berexco\_weinman #1.db  
 Dataset Pathname stack/pass3.4  
 Presentation Format \_dil  
 Dataset Creation Fri Feb 25 22:21:42 2022  
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

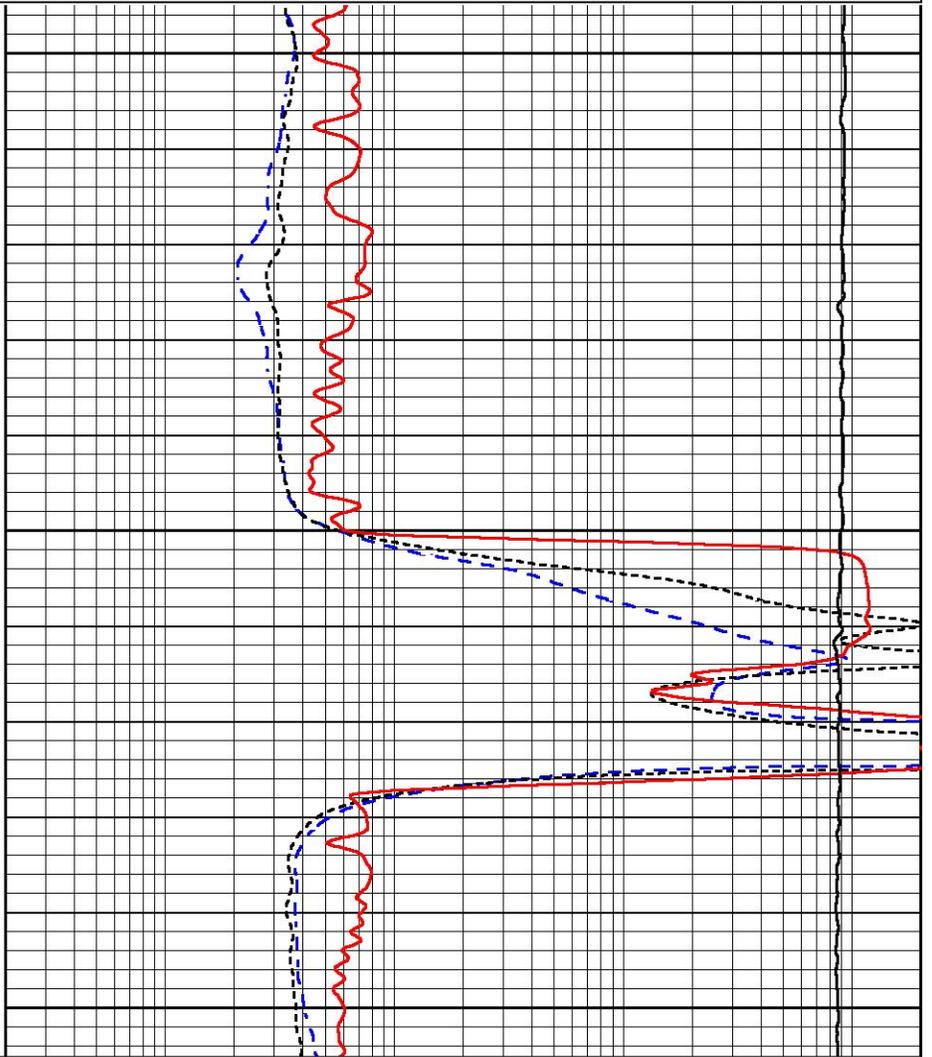
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0



1550

1600

1650



0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0



# DETAIL SECTION

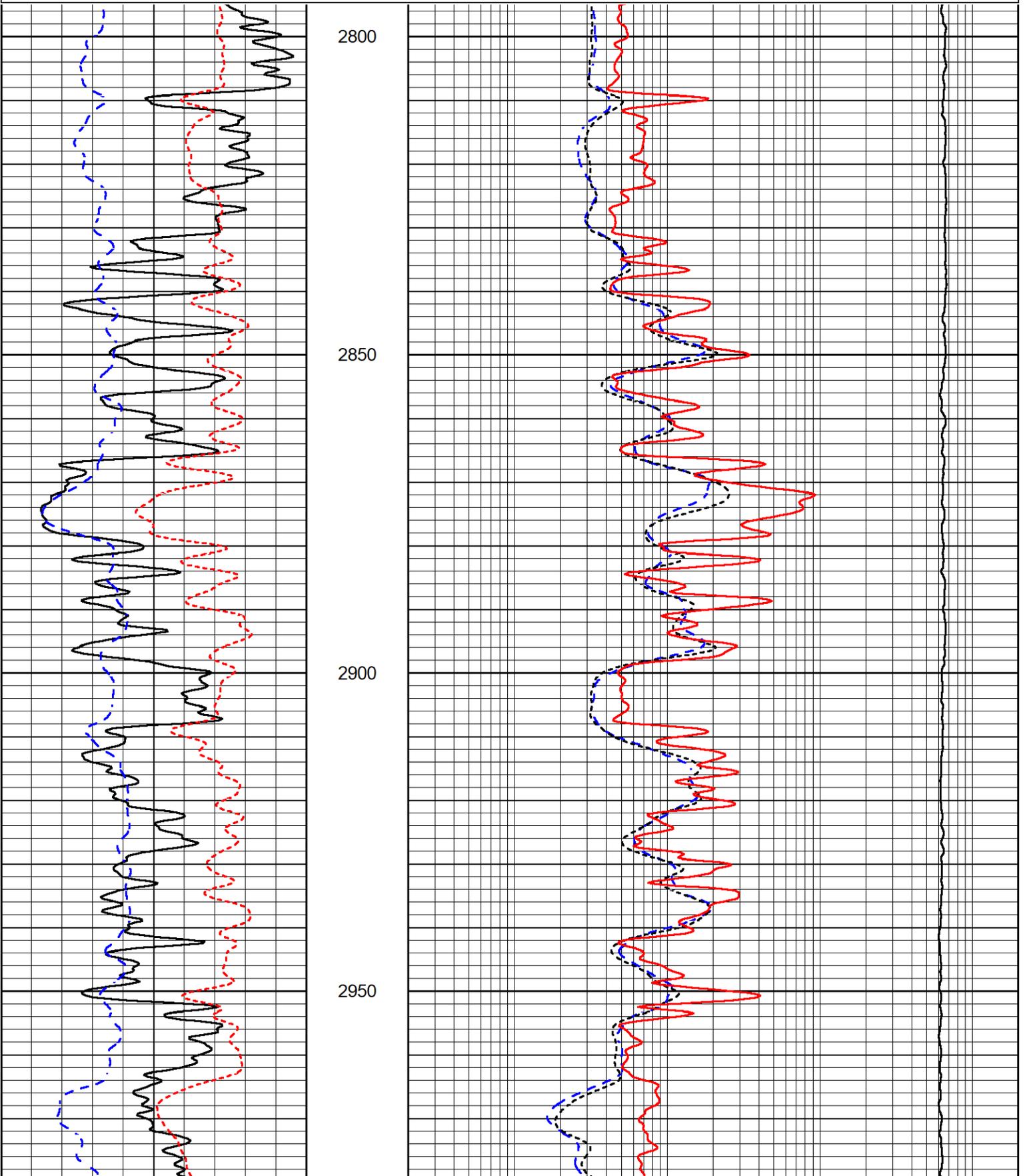
## MAIN PASS

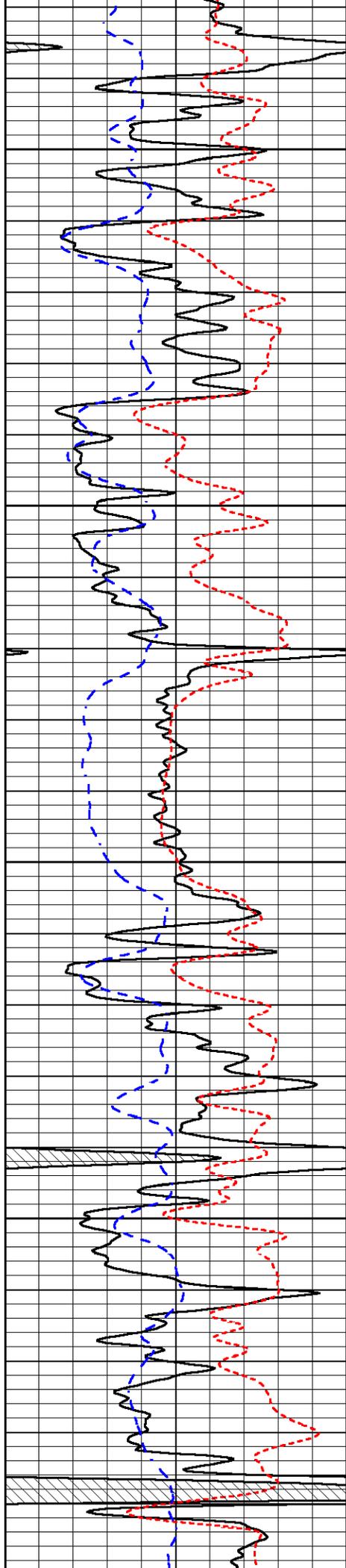
Database File berexco\_weinman #1.db

Dataset Pathname stack/pass3.1  
 Presentation Format \_dil  
 Dataset Creation Fri Feb 25 21:54:39 2022  
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0





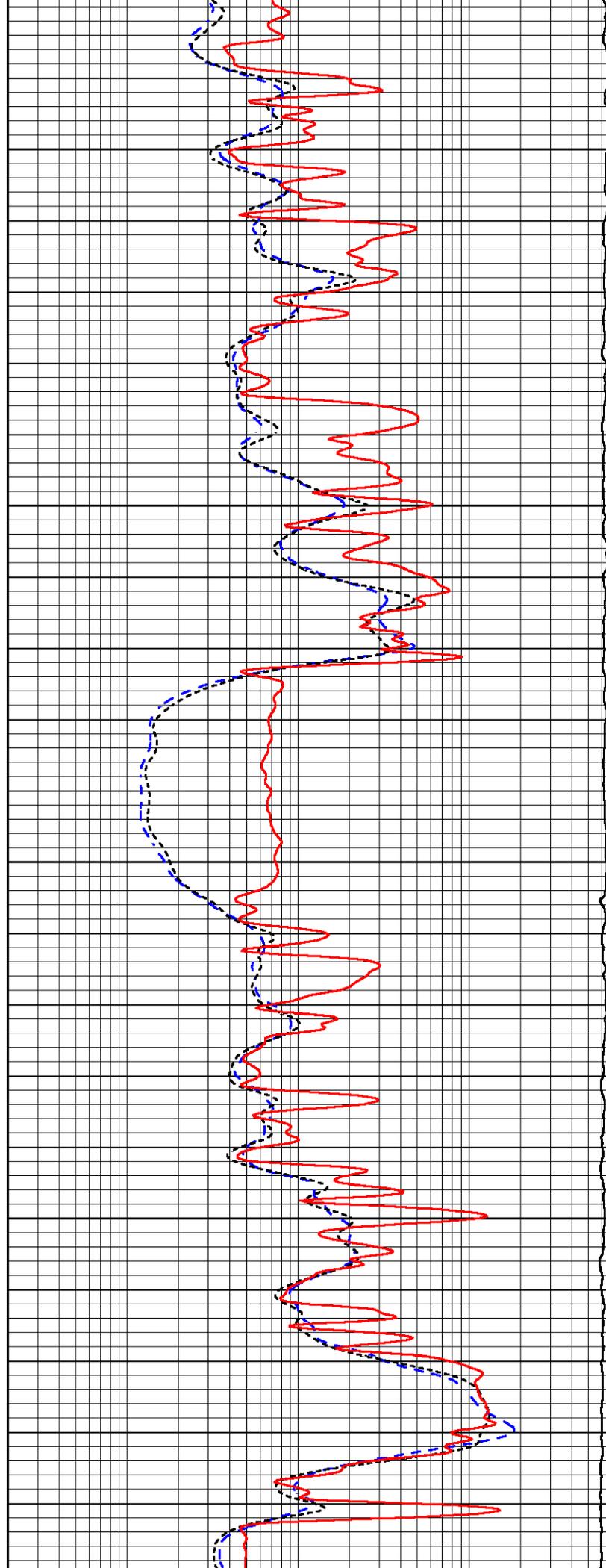
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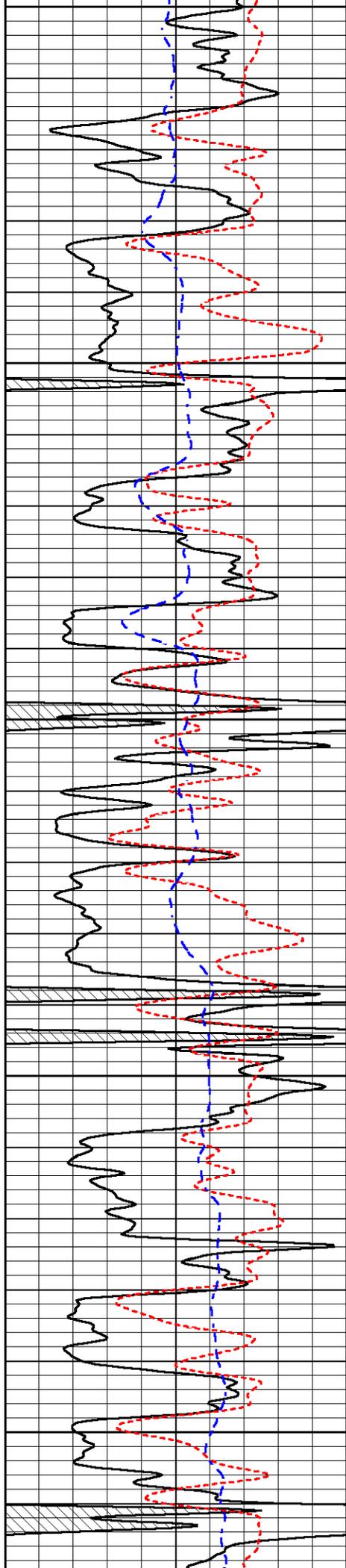
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3100

3150

3200





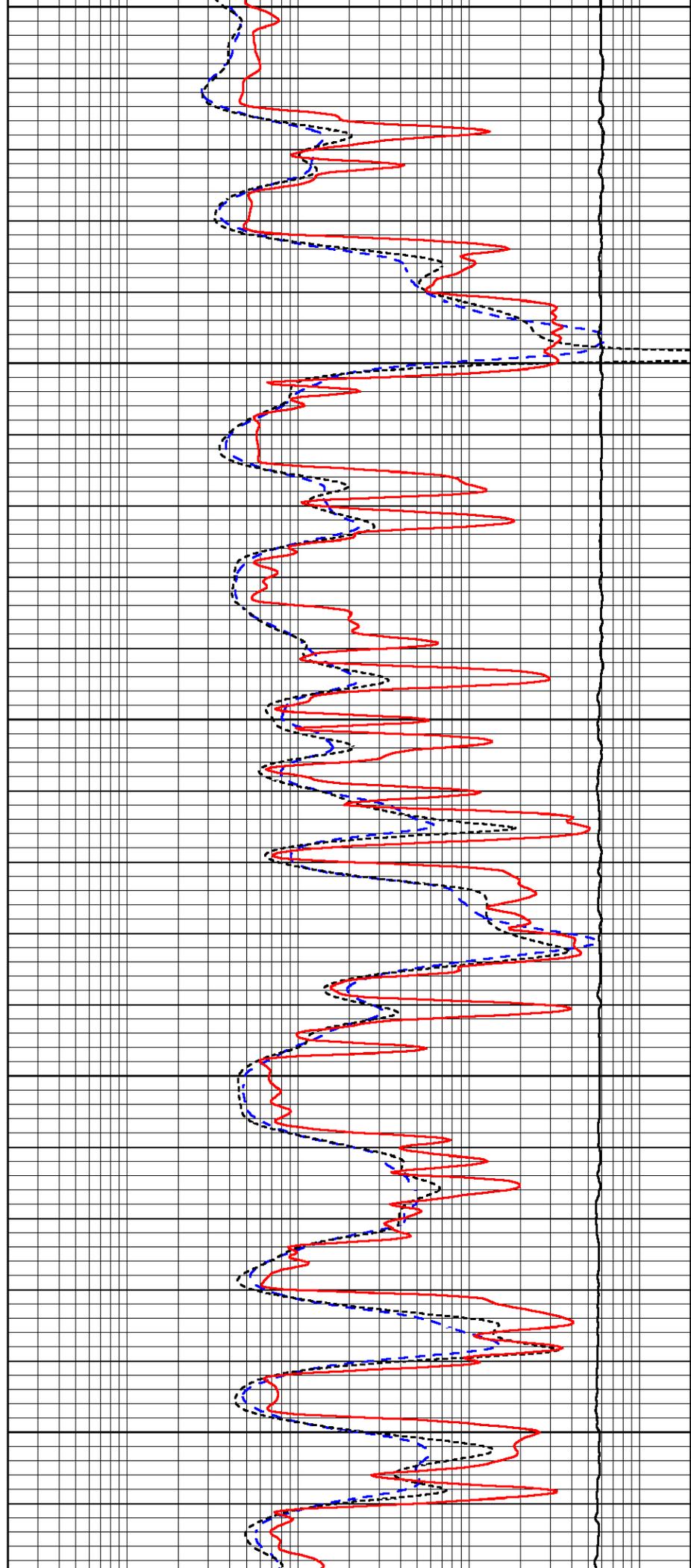
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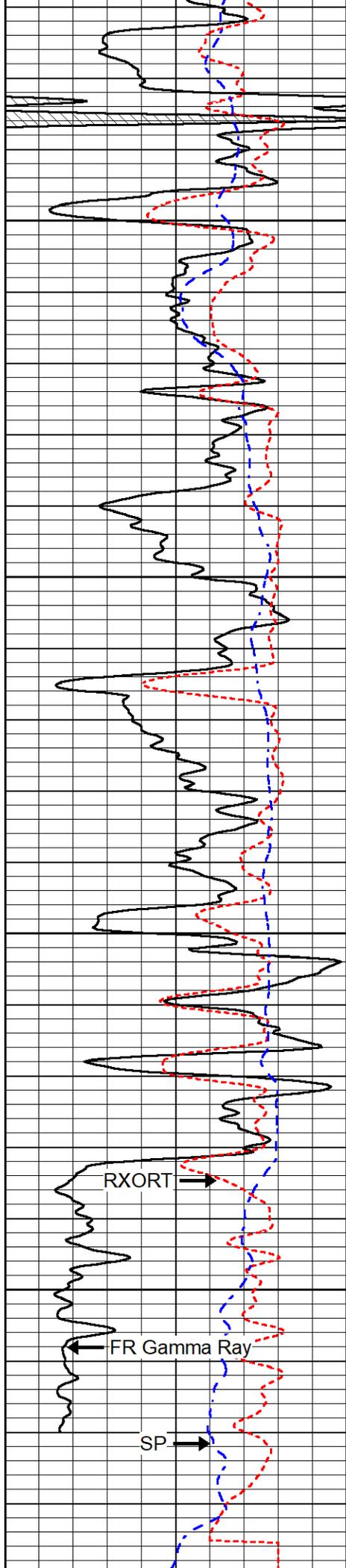
3250

3300

3350

3400





3450

3500

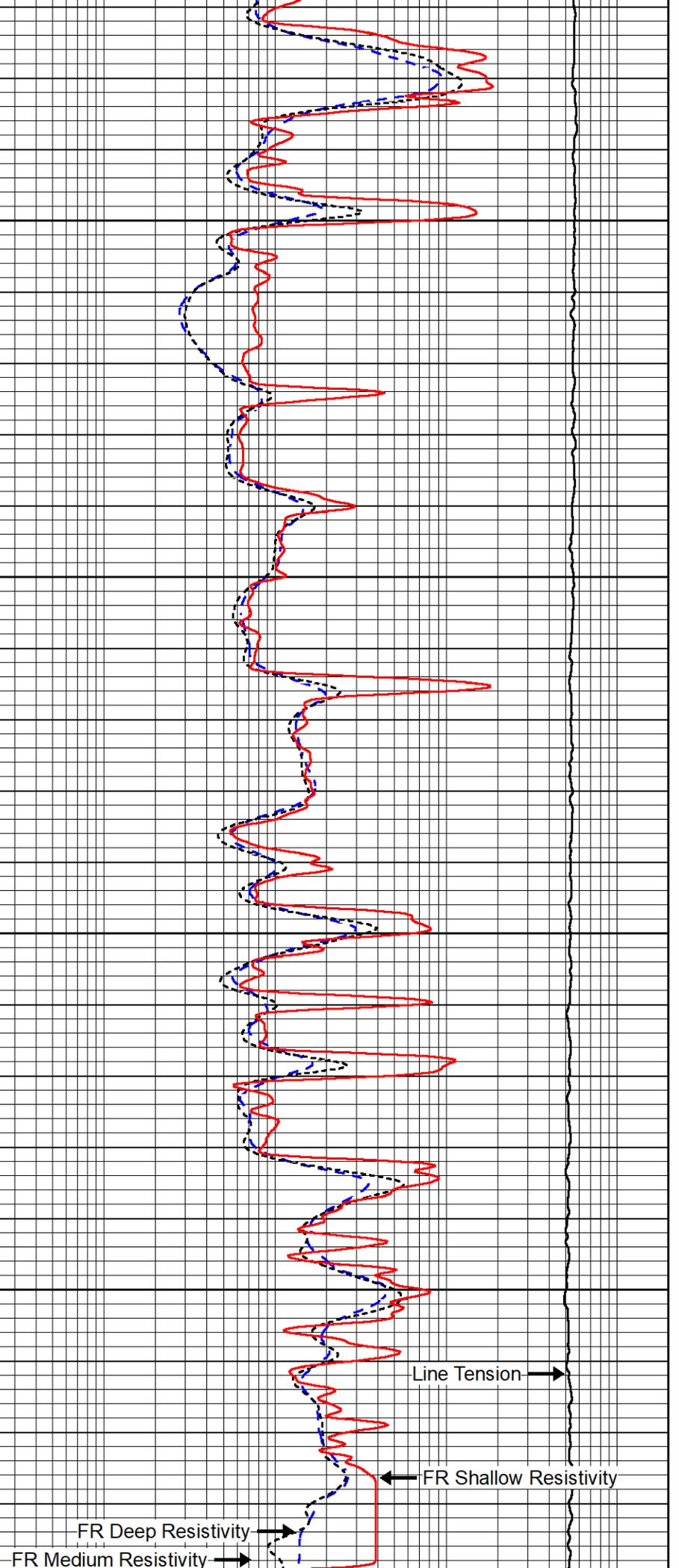
3550

3600

RXORT →

FR Gamma Ray →

SP →

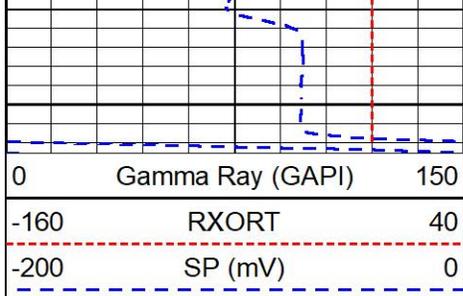


Line Tension →

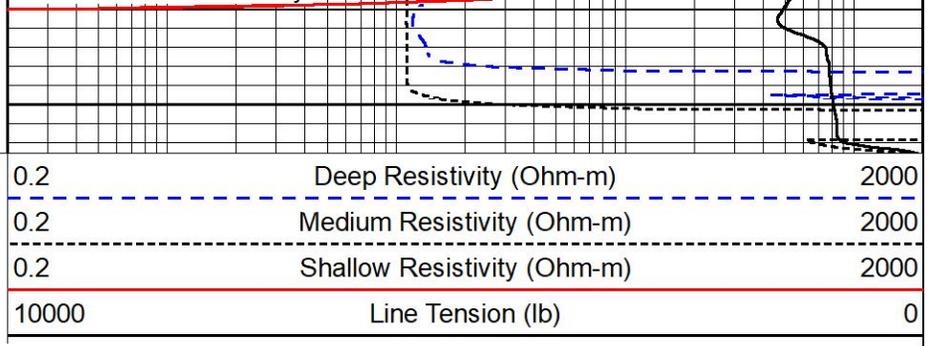
FR Shallow Resistivity →

FR Deep Resistivity →

FR Medium Resistivity →



3650



0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0



MIDWEST WIRELINE

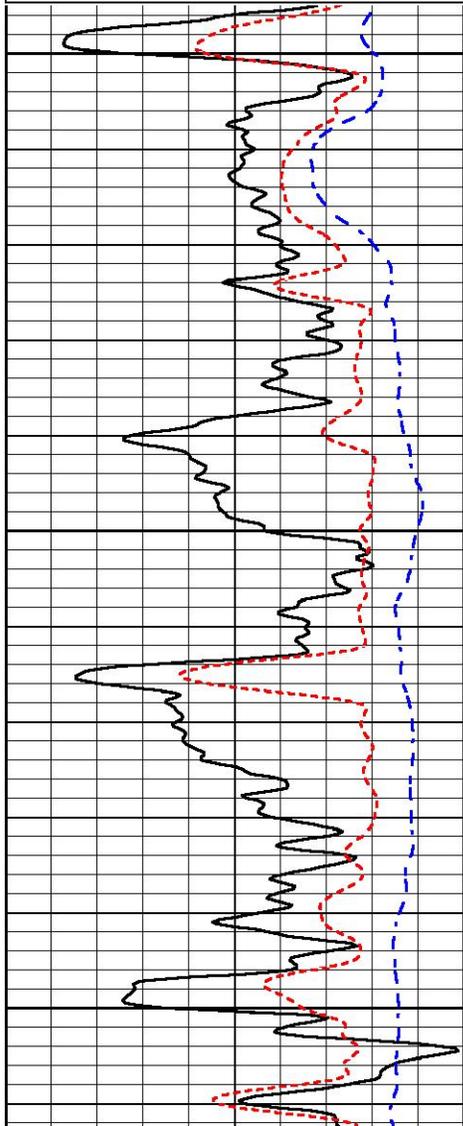
# REPEAT SECTION

## REPEAT PASS

Database File berexco\_weinman #1.db  
 Dataset Pathname stack/pass2.1  
 Presentation Format \_dil  
 Dataset Creation Fri Feb 25 22:19:50 2022  
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

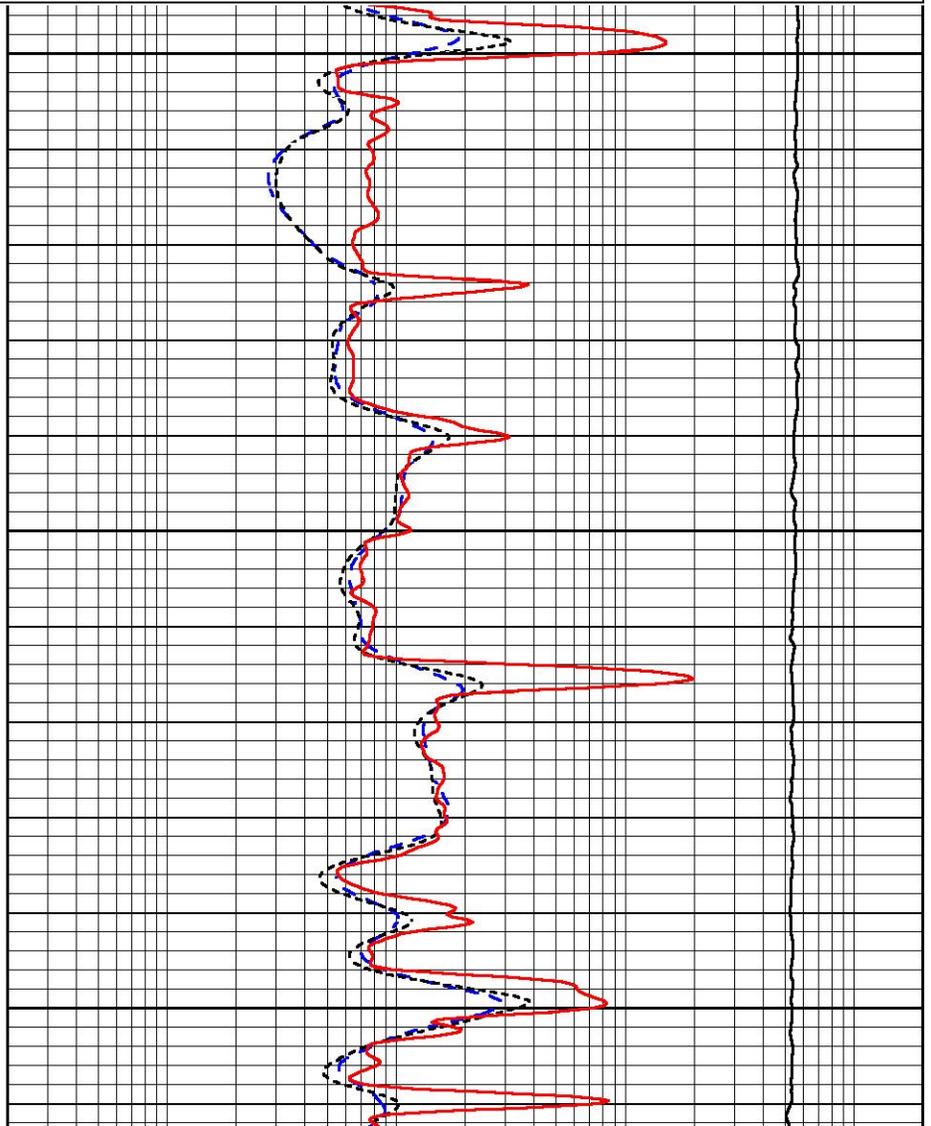
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

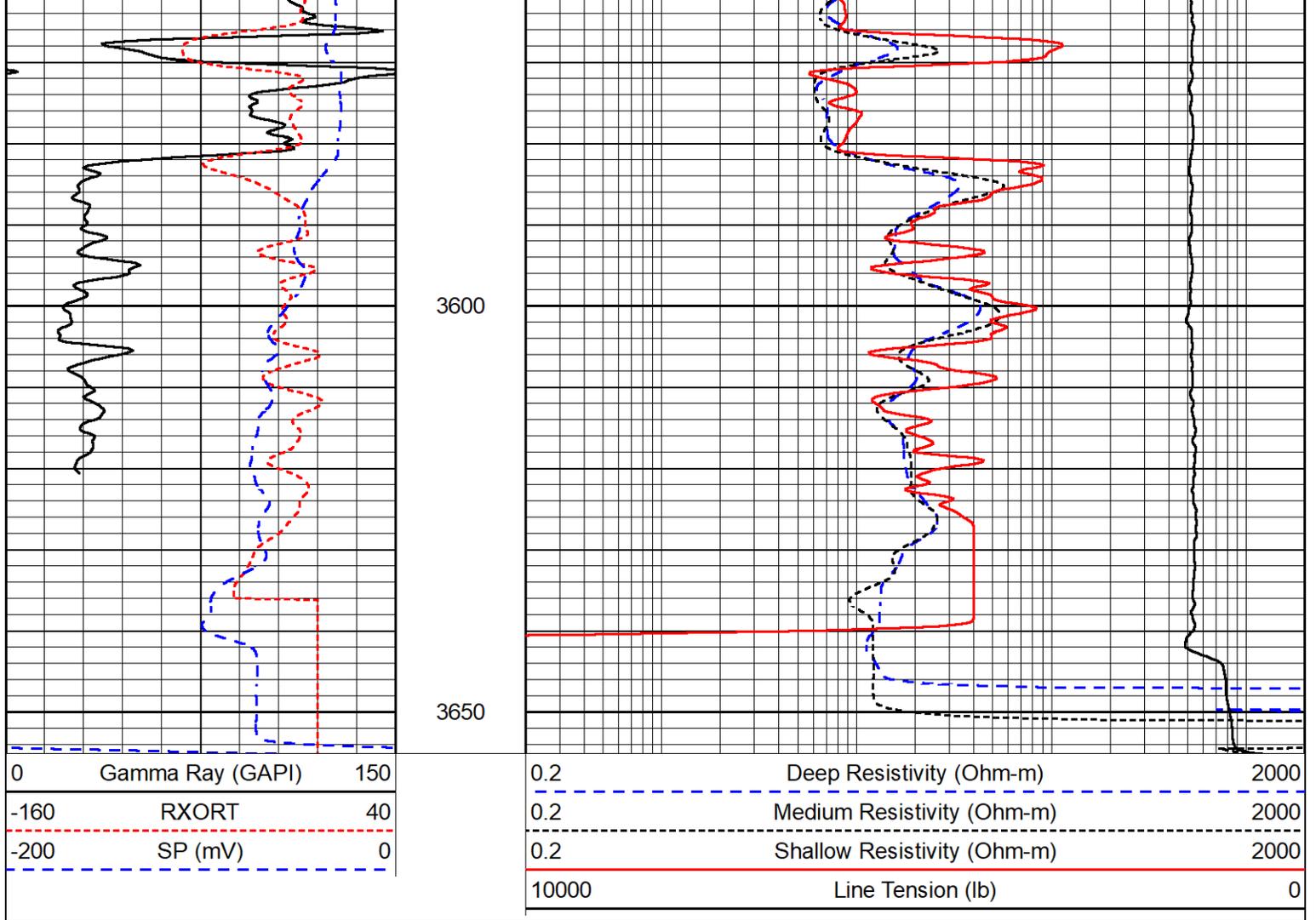


3450

3500

3550





### Calibration Report

Database File berexco\_weinman #1.db  
 Dataset Pathname stack/pass3.1  
 Dataset Creation Fri Feb 25 21:54:39 2022

### Dual Induction Calibration Report

Serial-Model: 501 HT-M&W  
 Surface Cal Performed: Wed Feb 23 19:44:50 2022

Loop:	Readings		References		Results		
	Air	Loop	Air	Loop	m	b	
Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-41.500
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.320	-35.000

### Compensated Density Calibration Report

Serial-Model: 305-05-M&W  
 Source #: 20762B  
 Master Calibration Performed: Mon Jan 24 19:14:33 2022

### Master Calibration

Density

Far Detector

Near Detector

Magnesium	1.755	g/cc	8758.11	9709.36	cps
Aluminum	2.630	g/cc	1513.14	5652.54	cps

Spine Angle = 72.88

Density/Spine Ratio = 0.476

	Size		Reading
Small Ring	4.00	in	1.75
Large Ring	14.00	in	1.38

**Compensated Neutron Calibration Report**

Serial-Model:	207-MW-M&W
Source #:	100046B
Master Calibration Performed:	Mon Nov 29 15:06:24 2021

**Master Calibration**

Detector	Readings	Target	Normalization
Short Space	6240.00 cps	1000.00 cps	1.6025
Long Space	460.00 cps	1000.00 cps	1.9500

**Gamma Ray Calibration Report**

Serial Number:	101
Tool Model:	M&W
Performed:	Mon Jan 24 19:14:46 2022
Calibrator Value:	500.0 GAPI
Background Reading:	24.0 cps
Calibrator Reading:	637.0 cps
Sensitivity:	0.5500 GAPI/cps



Company	Berexco, LLC
Well	Weinman #1
Field	Dayton
County	Phillips
State	Kansas