



MIDWEST WIRELINE

MICRORESISTIVITY  
LOG

|                                     |                 |                                 |              |
|-------------------------------------|-----------------|---------------------------------|--------------|
| Company Griffin Management, LLC     |                 | Company Griffin Management, LLC |              |
| Well                                | Whitley #2      | Well                            | Whitley #2   |
| Field                               | Moffett West    | Field                           | Moffett West |
| County                              | Barber          | County                          | Barber       |
| State                               | Kansas          | State                           | Kansas       |
| Location: API #: 15-007-24414-00-00 |                 | Other Services                  |              |
| SEC 8 TWP 30S RGE 15W               |                 | CNL/CDL<br>DIL                  |              |
| Permanent Datum                     | Ground Level    | Elevation                       | 1977         |
| Log Measured From                   | Kelly Bushing   | K.B.                            | 1982         |
| Drilling Measured From              | Kelly Bushing   | D.F.                            | 1977         |
| Date                                |                 | 5/16/2022                       |              |
| Run Number                          | One             |                                 |              |
| Depth Driller                       | 4834            |                                 |              |
| Depth Logger                        | 4838            |                                 |              |
| Bottom Logged Interval              | 4837            |                                 |              |
| Top Log Interval                    | 2800            |                                 |              |
| Casing Driller                      | 8.625 @ 263     |                                 |              |
| Casing Logger                       | 261             |                                 |              |
| Bit Size                            | 7.875           |                                 |              |
| Type Fluid in Hole                  | Chemical        |                                 |              |
| Salinity, ppm CL                    | 7500            |                                 |              |
| Density / Viscosity                 | 9.5 57          |                                 |              |
| pH / Fluid Loss                     | 9.0 10.8        |                                 |              |
| Source of Sample                    | FLOWLINE        |                                 |              |
| Rm @ Meas. Temp                     | 0.30 @ 70       |                                 |              |
| Rmt @ Meas. Temp                    | 0.23 @ 70       |                                 |              |
| Rmc @ Meas. Temp                    | 0.41 @ 70       |                                 |              |
| Source of Rmt / Rmc                 | CHARTS          |                                 |              |
| Rm @ BHT                            | 0.17 @ 124      |                                 |              |
| Operating Rig Time                  | 3 Hours         |                                 |              |
| Max Rec. Temp. F                    | 124             |                                 |              |
| Equipment Number                    | P-108           |                                 |              |
| Location                            | HAYS            |                                 |              |
| Recorded By                         | D. Schmidt      |                                 |              |
| Witnessed By                        | Charles Griffin |                                 |              |

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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.

Croft,  
South to 110, 1 East, South to county line,  
South to location

Log Measured From: Kelly Bushing      5    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: D. Schmidt       |  | Primary Witness: Charles Griffin |  |
| Operator:                  |  | Secondary Witness:               |  |
| Operator:                  |  | Secondary Witness:               |  |
| Operator:                  |  | Secondary Witness:               |  |



# Log Variables

DatabaseC:\ProgramData\Warrior\Data\griffin\_whitley 2.db  
Dataset field/well/stkml/pass4.10/\_vars\_

## Top - Bottom

|           |        |         |         |          |          |       |          |
|-----------|--------|---------|---------|----------|----------|-------|----------|
| A         | BOREID | BOTTEMP | CASEOD  | CASETHCK | FLUIDDEN | M     | MATRXDEN |
| 1         | in     | degF    | in      | in       | g/cc     | 2     | g/cc     |
|           | 7.875  | 124     | 5.5     | 0        | 1        |       | 2.71     |
| NPORSEL   | PERFS  | SNDERR  | SNDERRM | SPSHIFT  | SRFTEMP  | SZCOR | TDEPTH   |
| Limestone | 0      | mmho/m  | mmho/m  | mV       | degF     | Off   | ft       |
|           |        | 0       | 0       | 460      | 70       |       | 4838     |

## 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



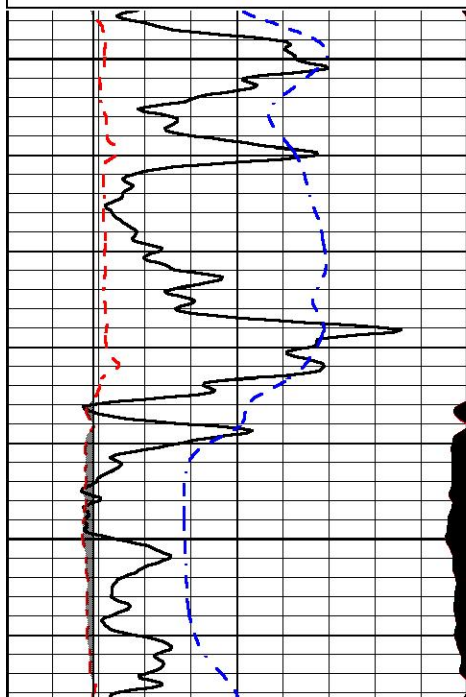
## DETAIL SECTION

### MAIN PASS

Database File griffin\_whitley 2.db  
Dataset Pathname stkml/pass4.1  
Presentation Format \_micro  
Dataset Creation Mon May 16 06:28:49 2022  
Charted by Depth in Feet scaled 1:240

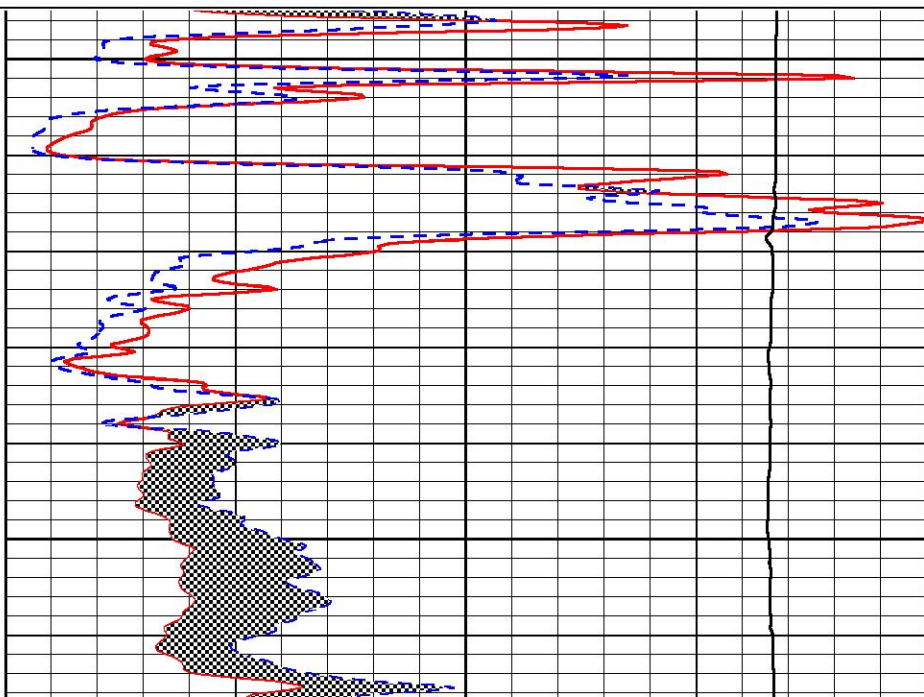
|       |                  |       |
|-------|------------------|-------|
| 0     | Gamma Ray (GAPI) | 150   |
| 6     | Caliper (in)     | 16    |
| 2.875 | mcal (in)        | 7.875 |
| -200  | SP (mV)          | 0     |

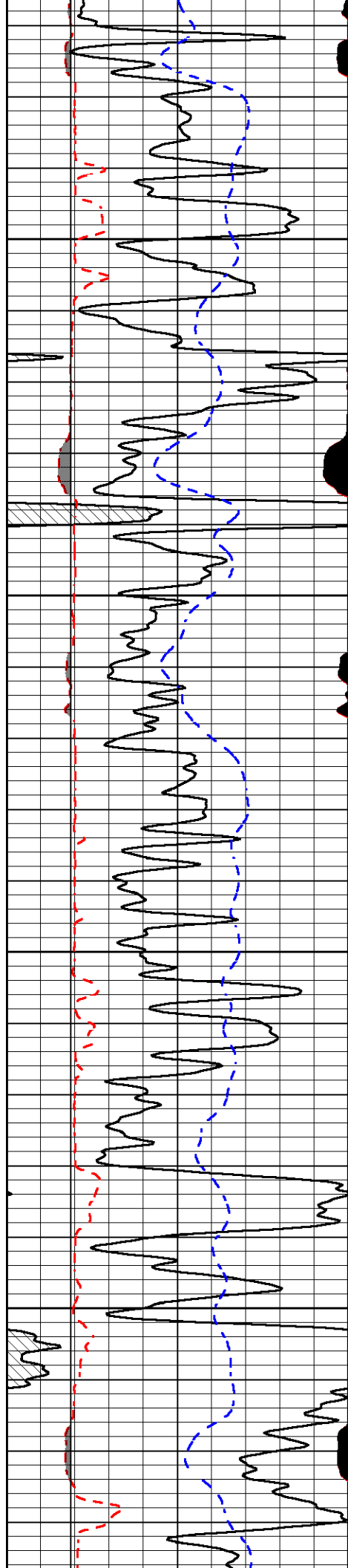
|       |                             |    |
|-------|-----------------------------|----|
| 0     | Micro Inverse 1 X 1 (Ohm-m) | 40 |
| 0     | Micro Normal 2" (Ohm-m)     | 40 |
| 10000 | Line Weight (lb)            | 0  |



2800

2850



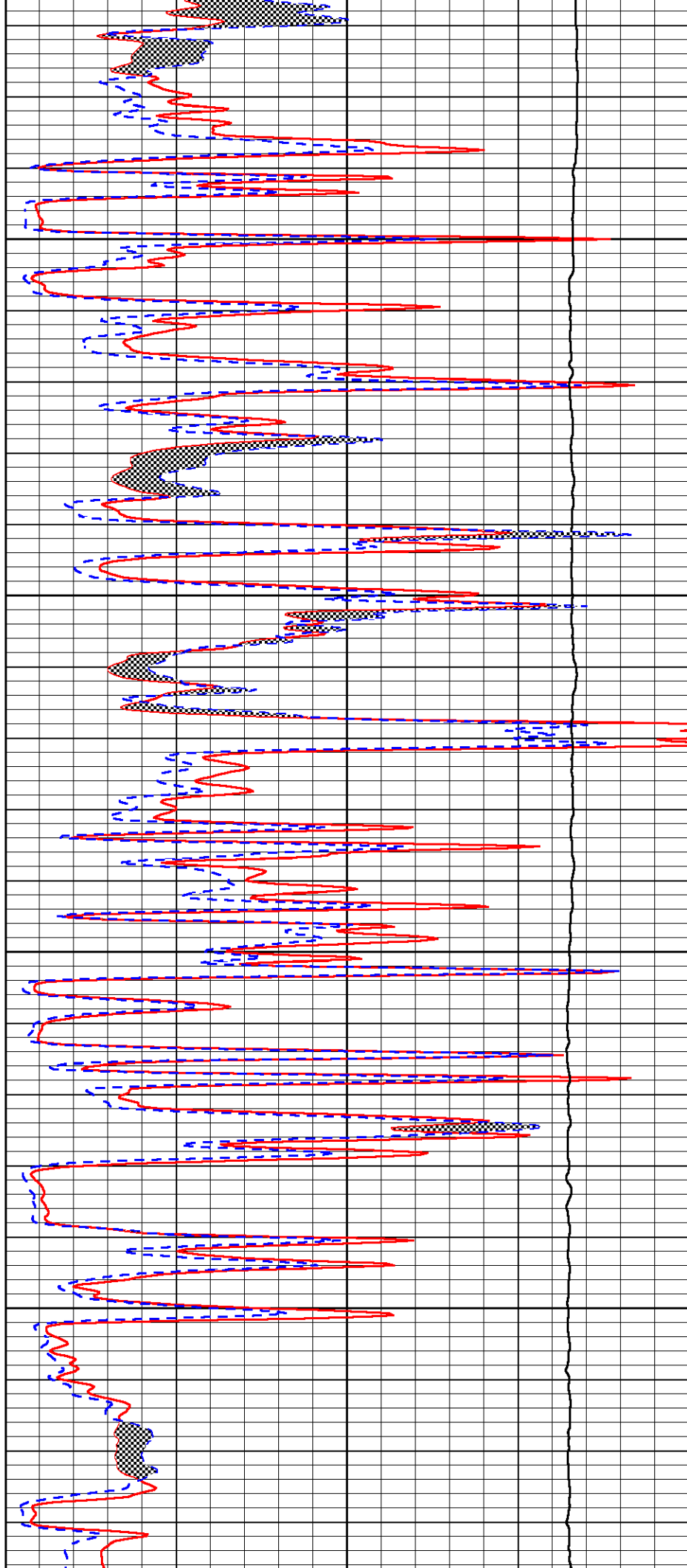


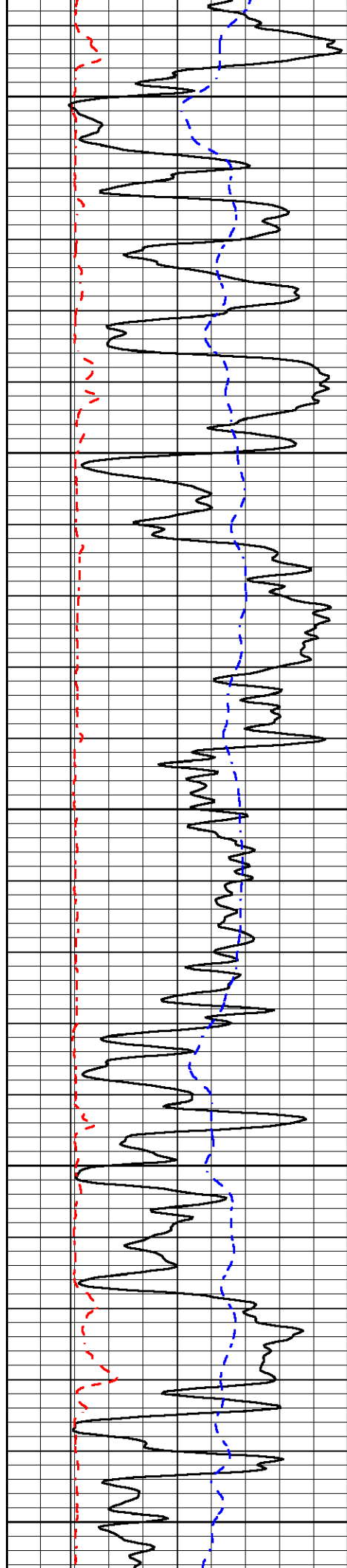
2900

2950

3000

3050





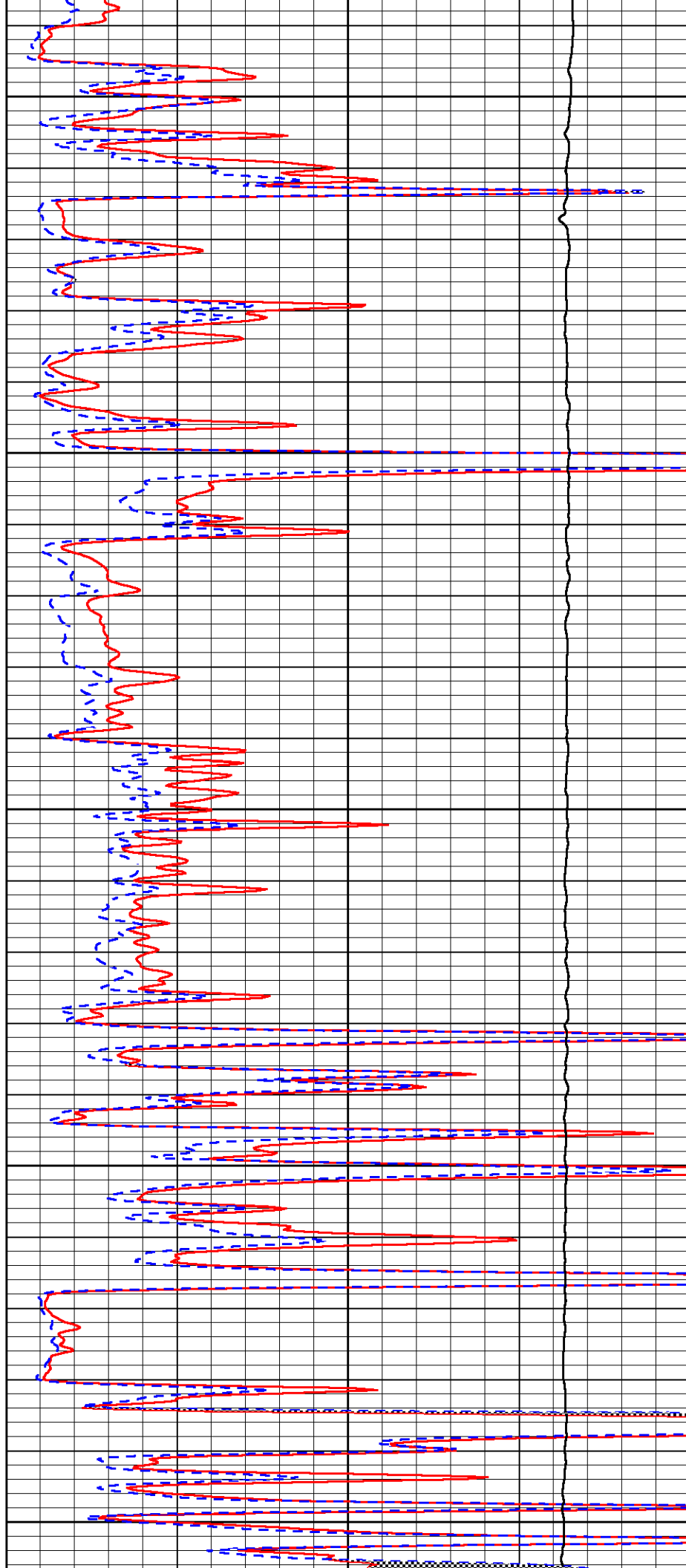
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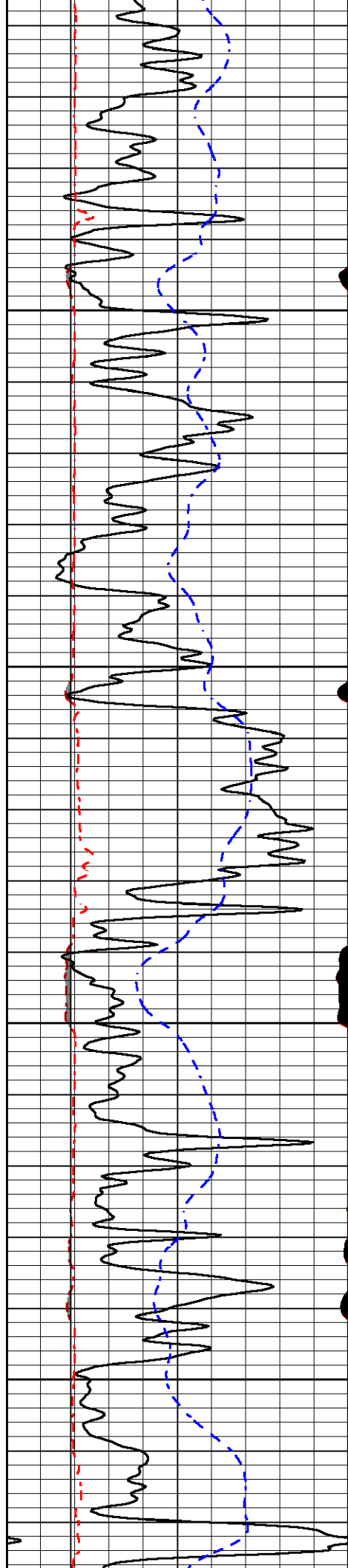
3150

3200

3250

3300



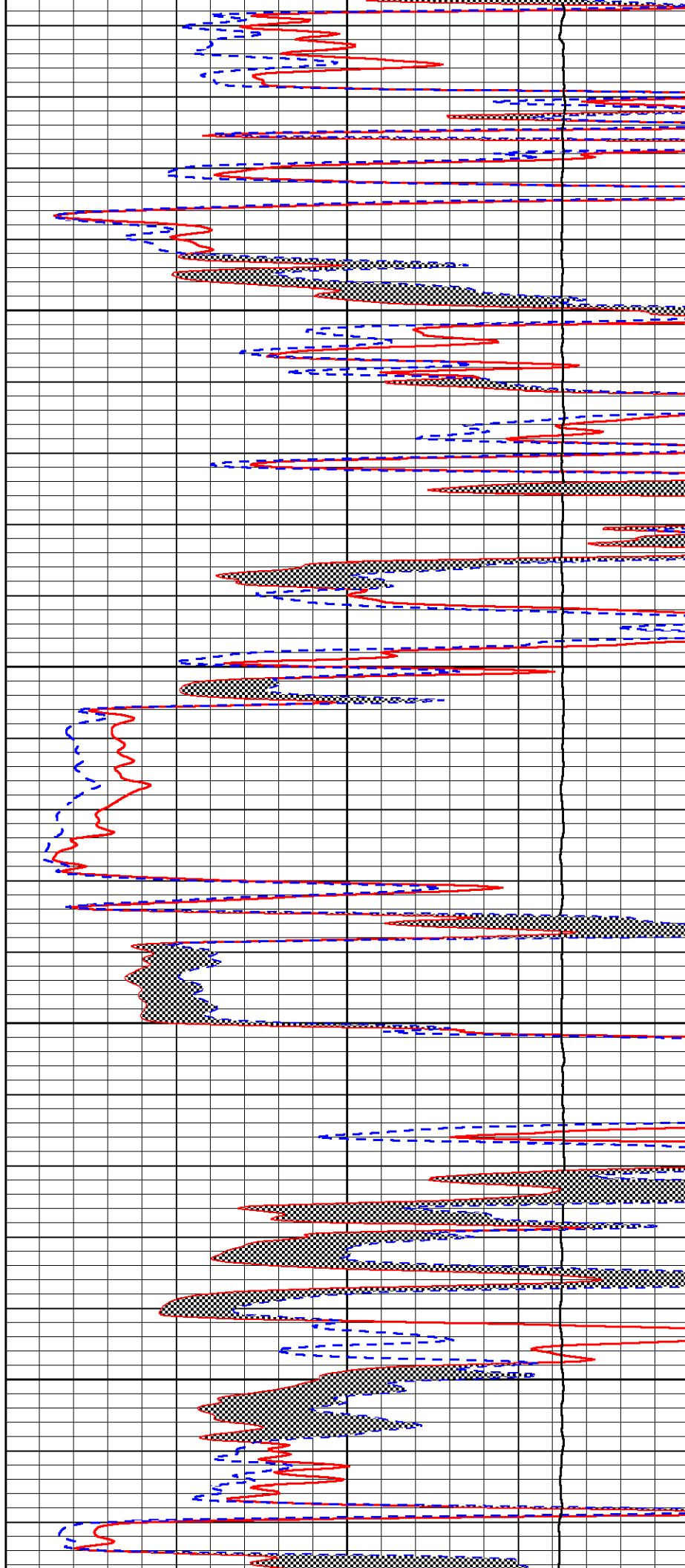


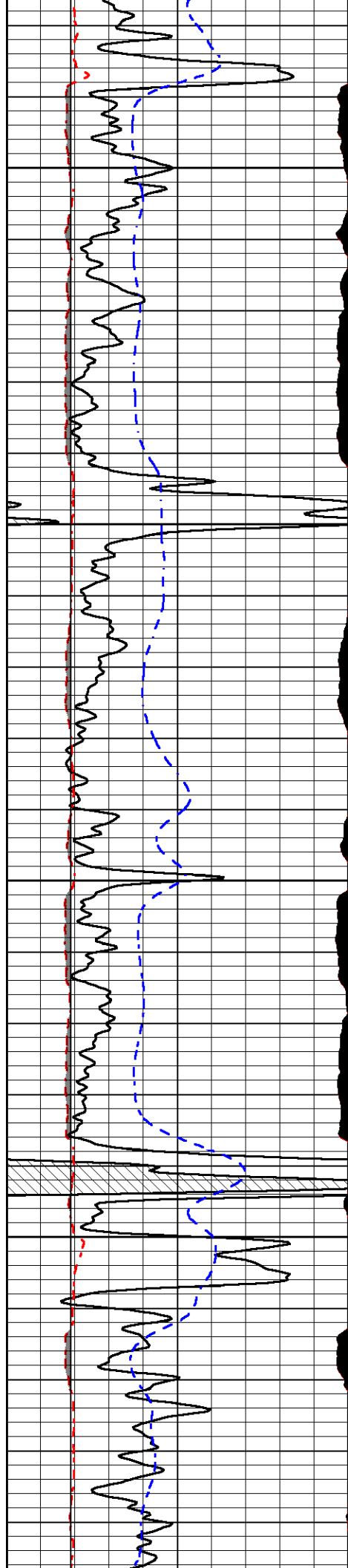
3350

3400

3450

3500



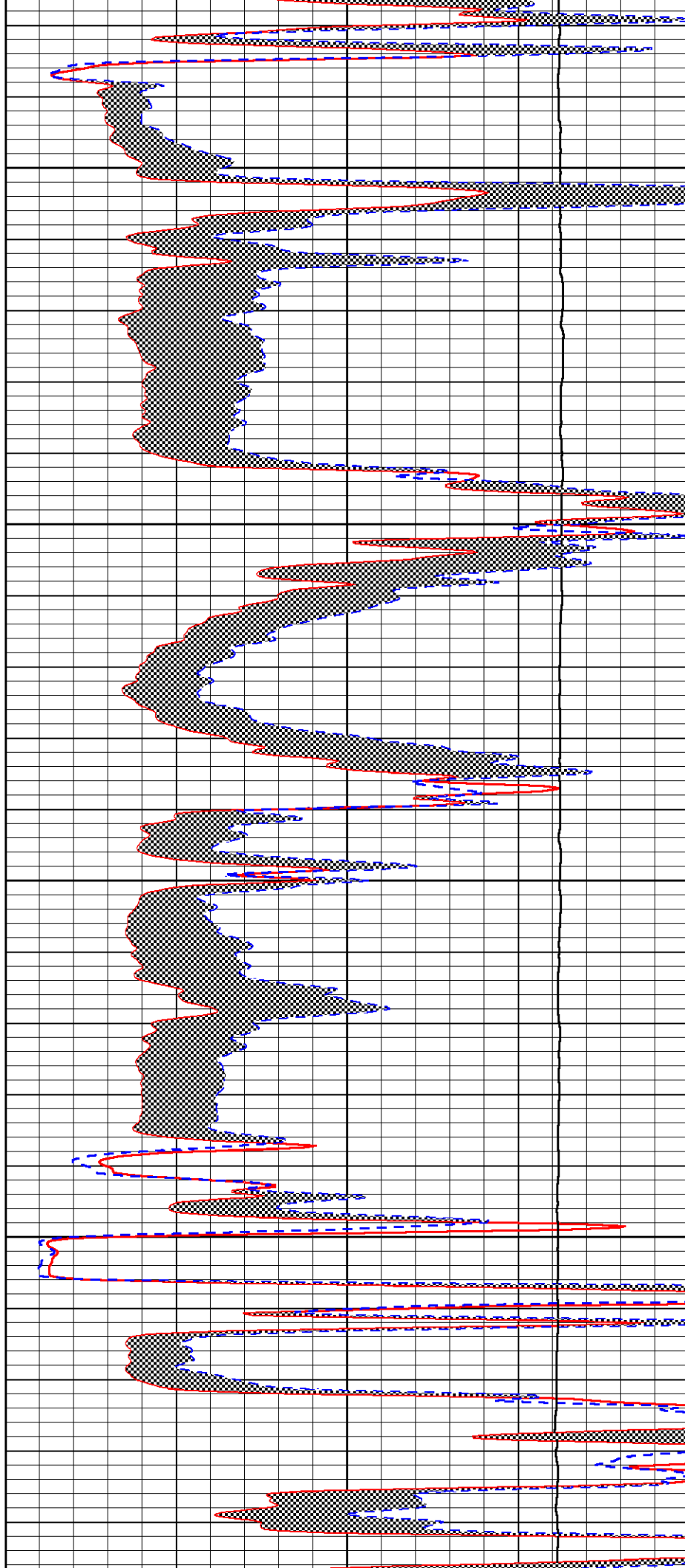


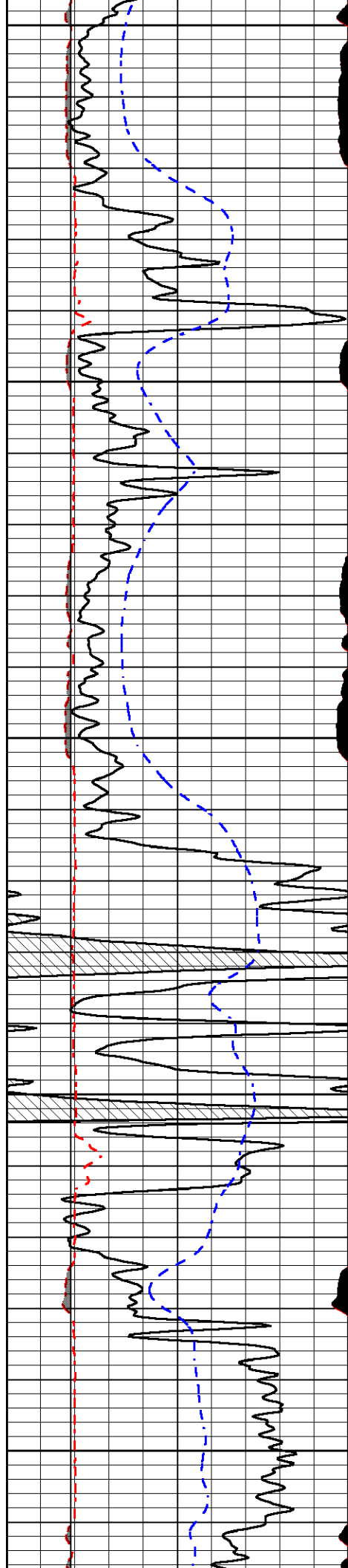
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3600

3650

3700





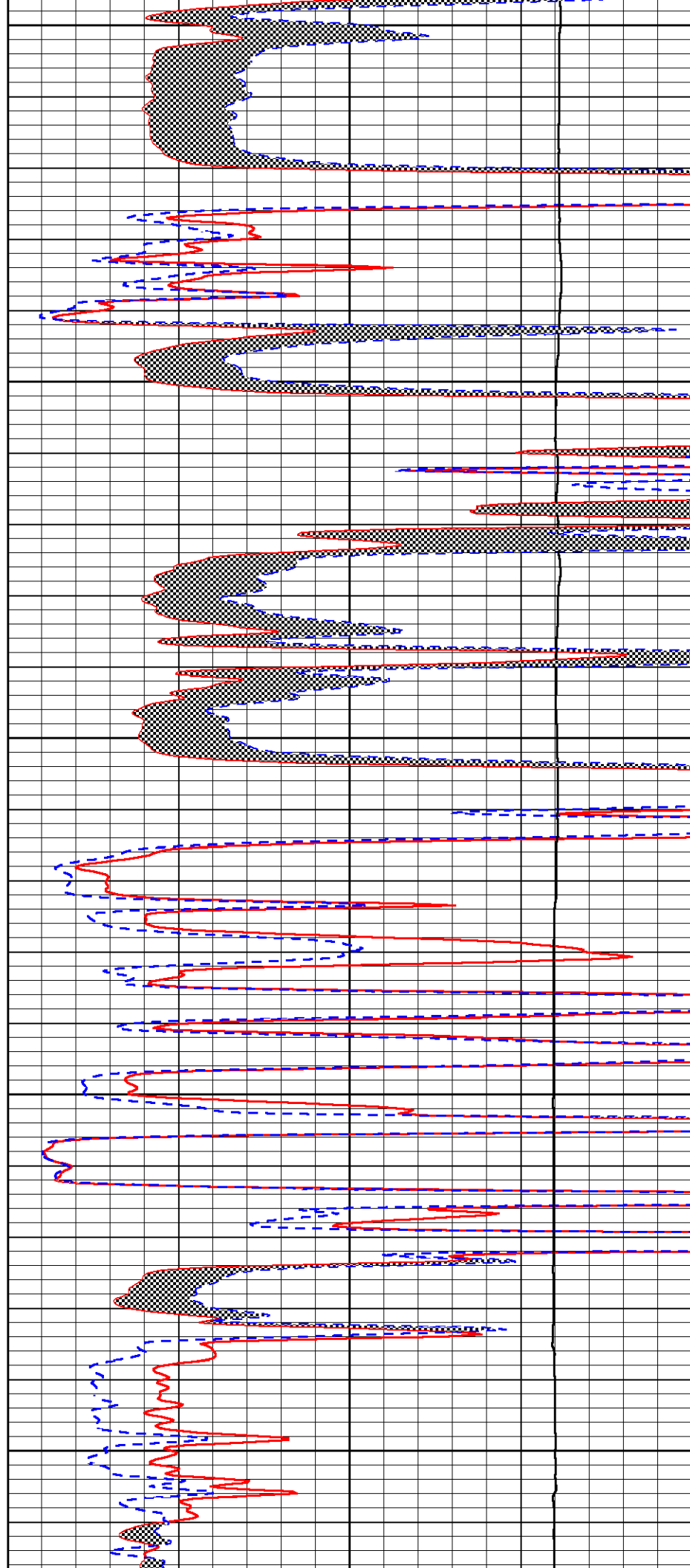
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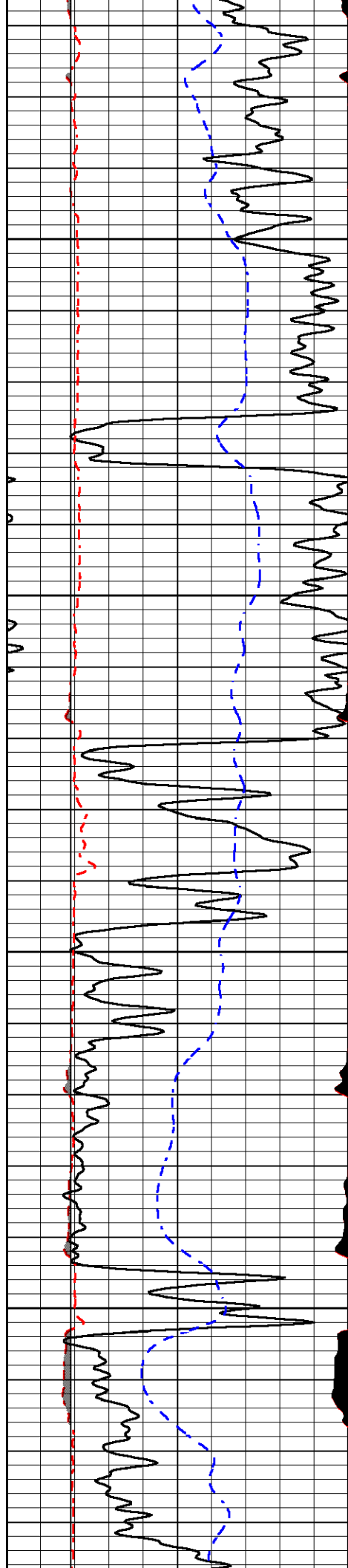
3800

3850

3900

3950



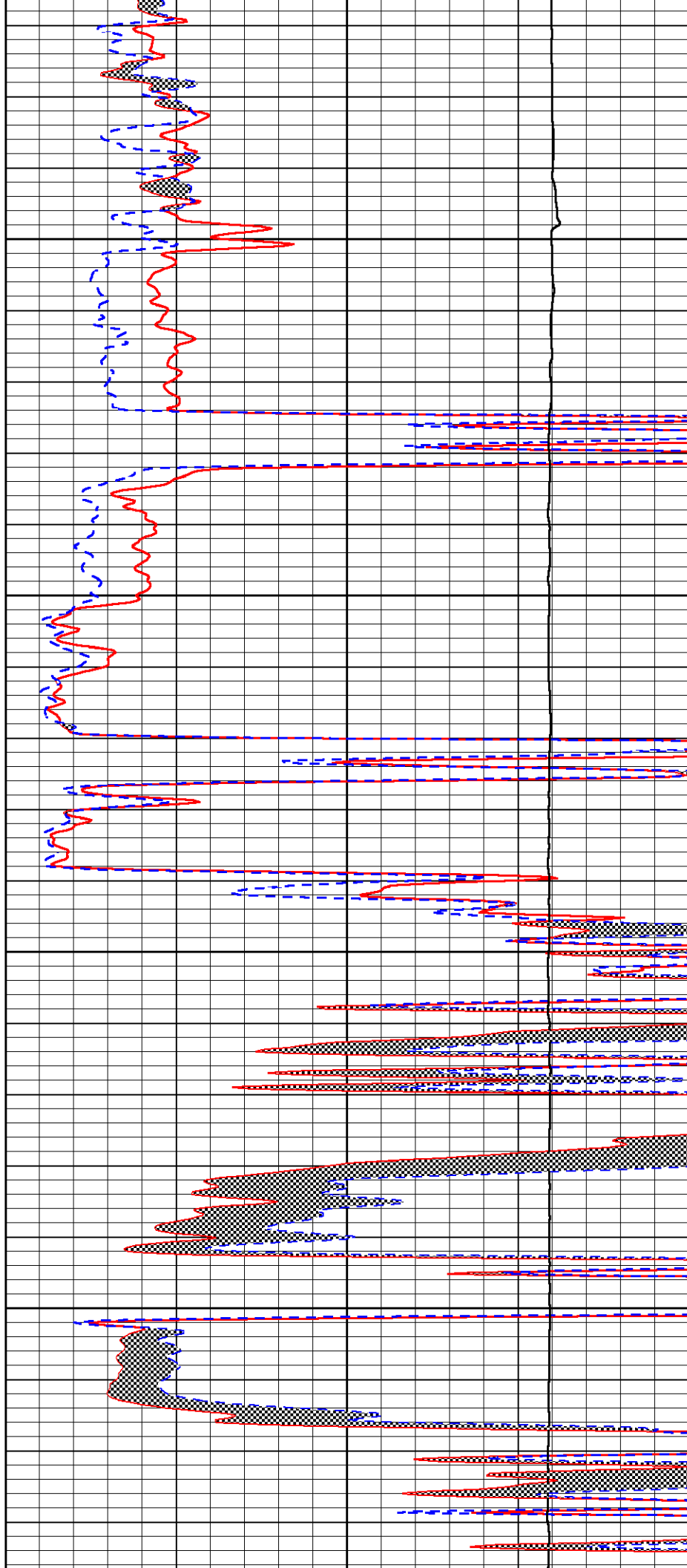


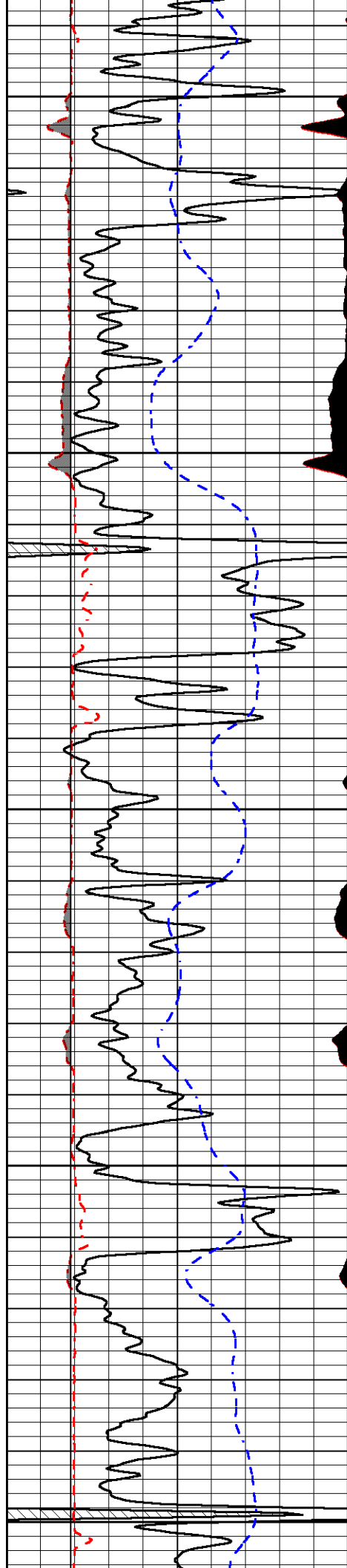
4000

4050

4100

4150





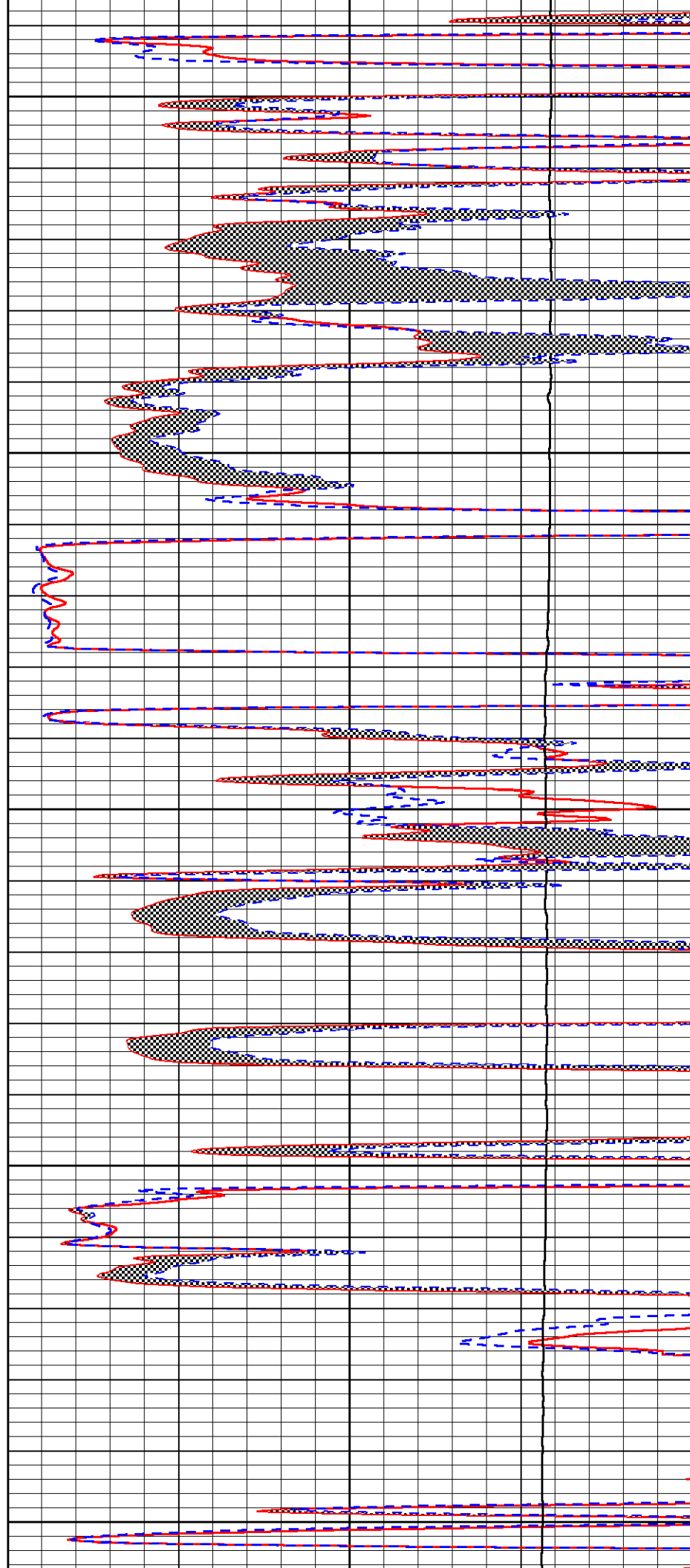
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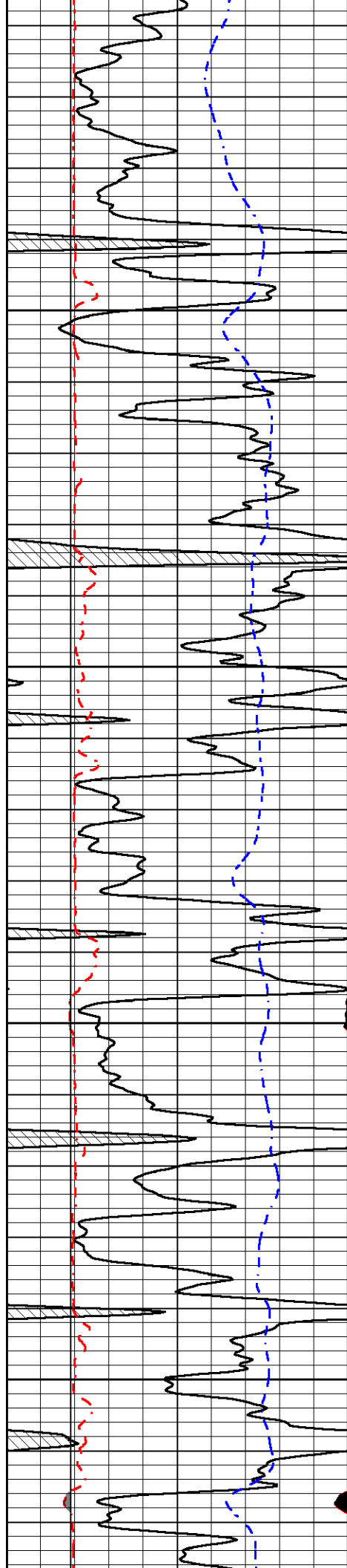
4250

4300

4350

4400



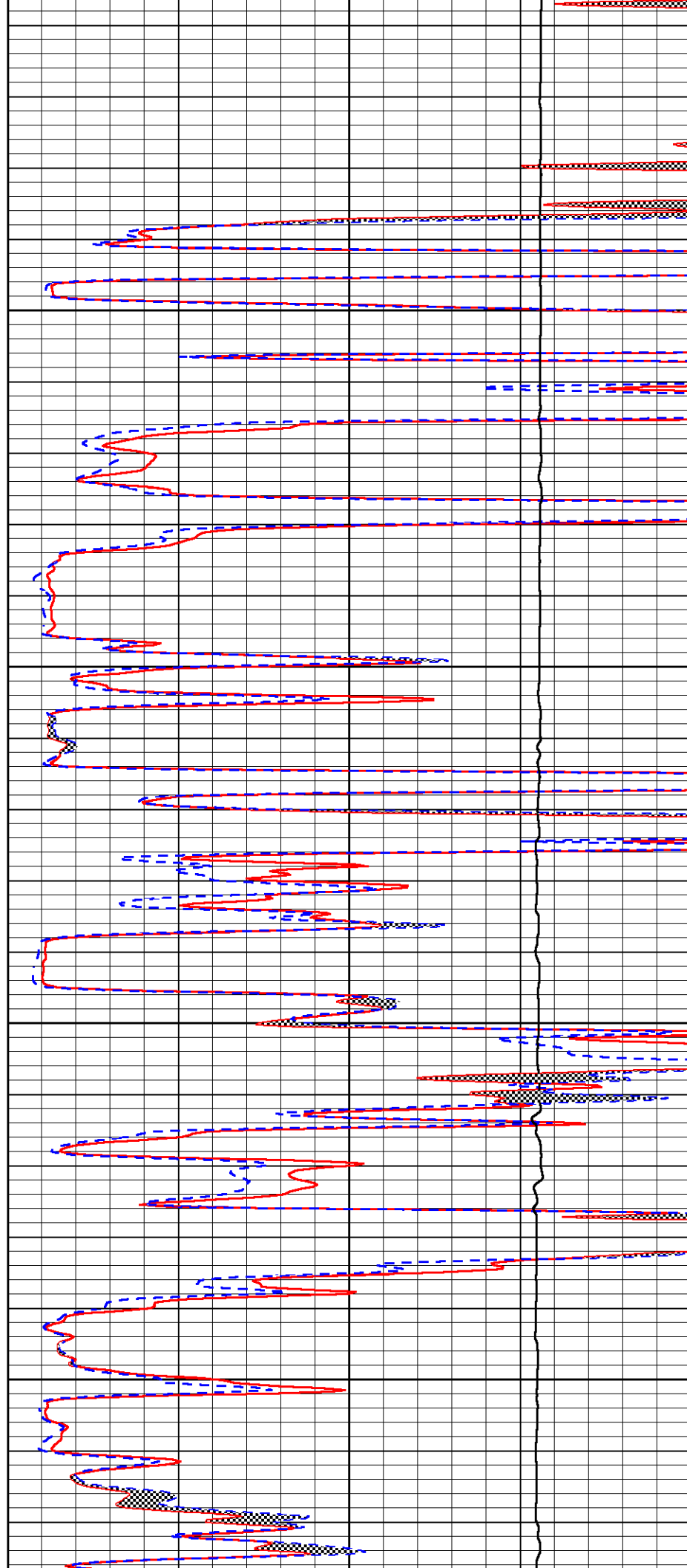


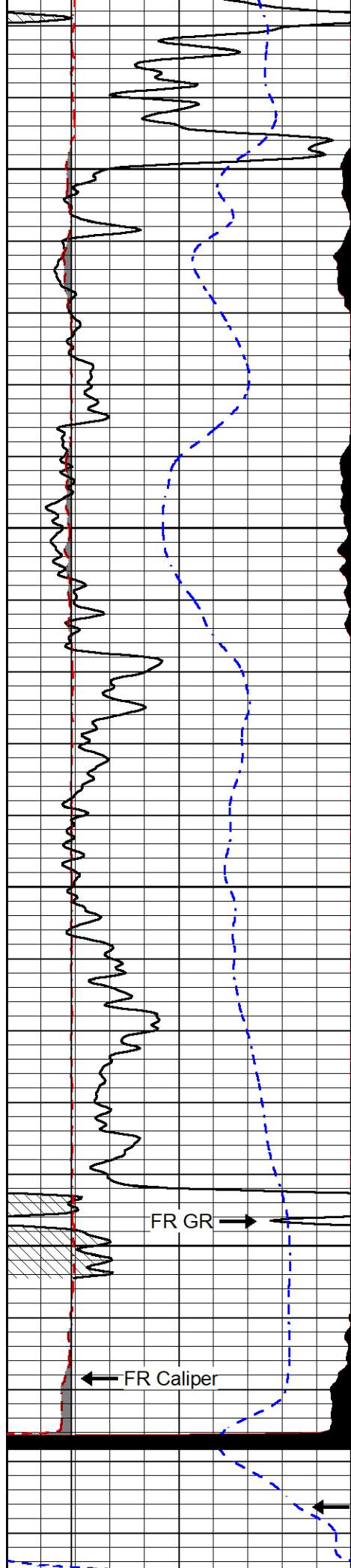
4450

4500

4550

4600





4650

4700

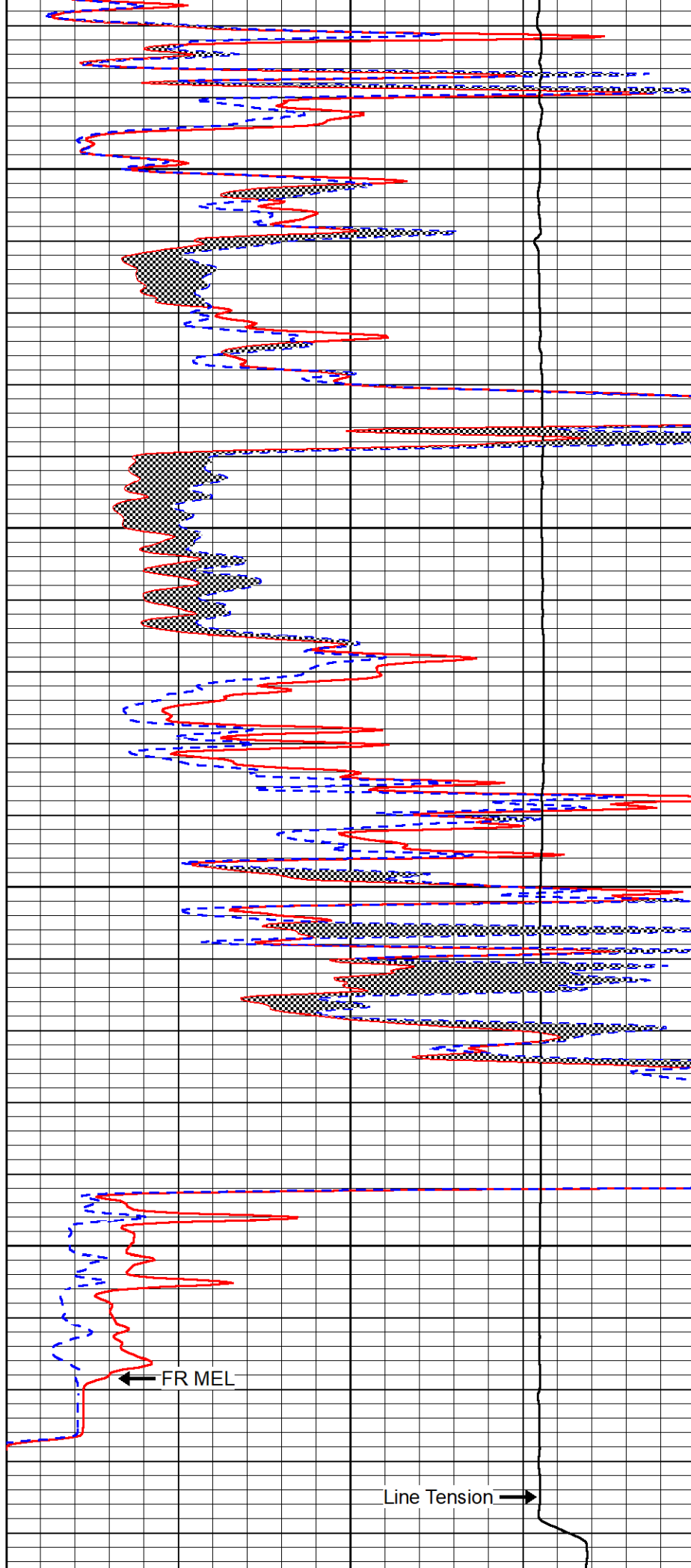
4750

4800

FR GR →

← FR Caliper

← FR SP



← FR MEL

Line Tension →

|       |                  |       |
|-------|------------------|-------|
| 0     | Gamma Ray (GAPI) | 150   |
| 6     | Caliper (in)     | 16    |
| 2.875 | mcal (in)        | 7.875 |
| -200  | SP (mV)          | 0     |

|       |                             |    |
|-------|-----------------------------|----|
| 0     | Micro Inverse 1 X 1 (Ohm-m) | 40 |
| 0     | Micro Normal 2" (Ohm-m)     | 40 |
| 10000 | Line Weight (lb)            | 0  |



MIDWEST WIRELINE

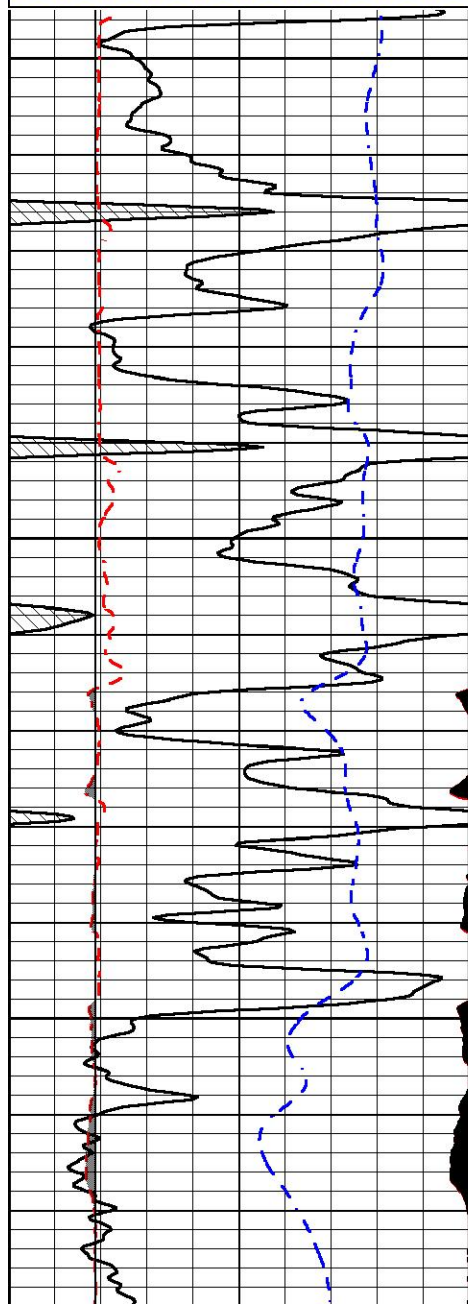
## REPEAT SECTION

### REPEAT PASS

Database File griffin\_whitley 2.db  
Dataset Pathname stkml/pass2.1  
Presentation Format \_micro  
Dataset Creation Mon May 16 05:31:21 2022  
Charted by Depth in Feet scaled 1:240

|       |                  |       |
|-------|------------------|-------|
| 0     | Gamma Ray (GAPI) | 150   |
| 6     | Caliper (in)     | 16    |
| 2.875 | mcal (in)        | 7.875 |
| -200  | SP (mV)          | 0     |

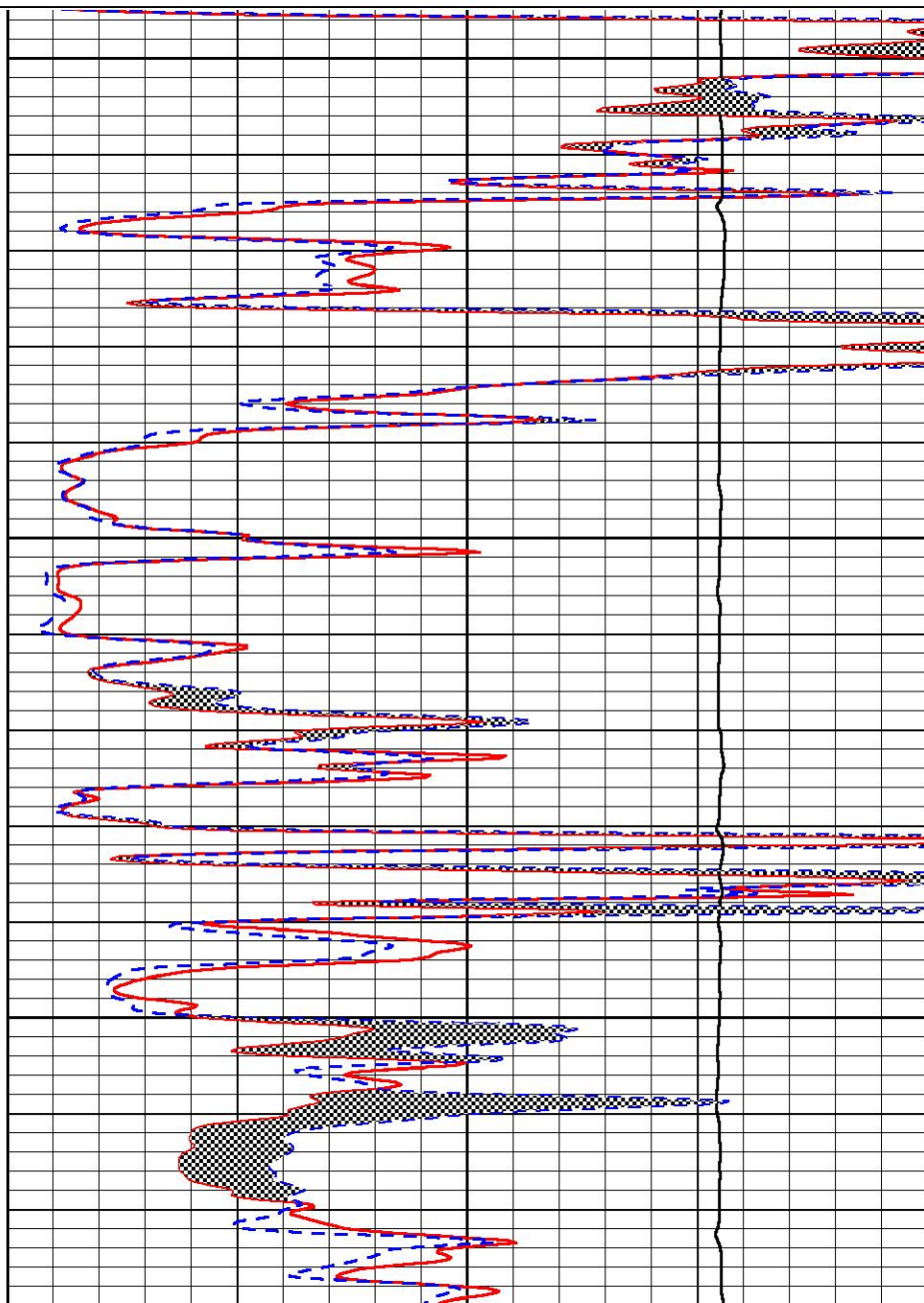
|       |                             |    |
|-------|-----------------------------|----|
| 0     | Micro Inverse 1 X 1 (Ohm-m) | 40 |
| 0     | Micro Normal 2" (Ohm-m)     | 40 |
| 10000 | Line Weight (lb)            | 0  |

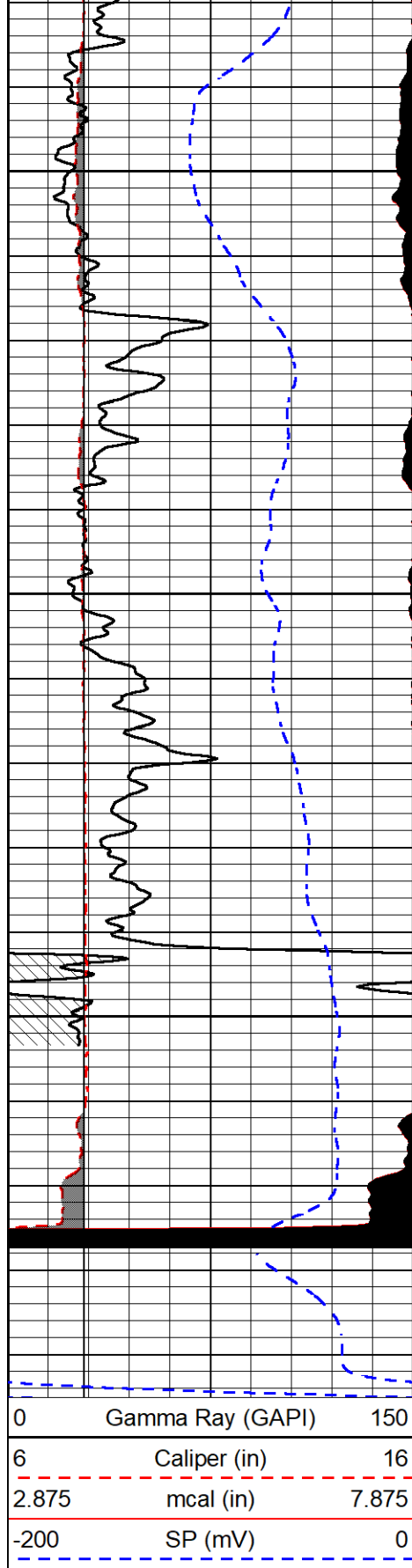


4550

4600

4650

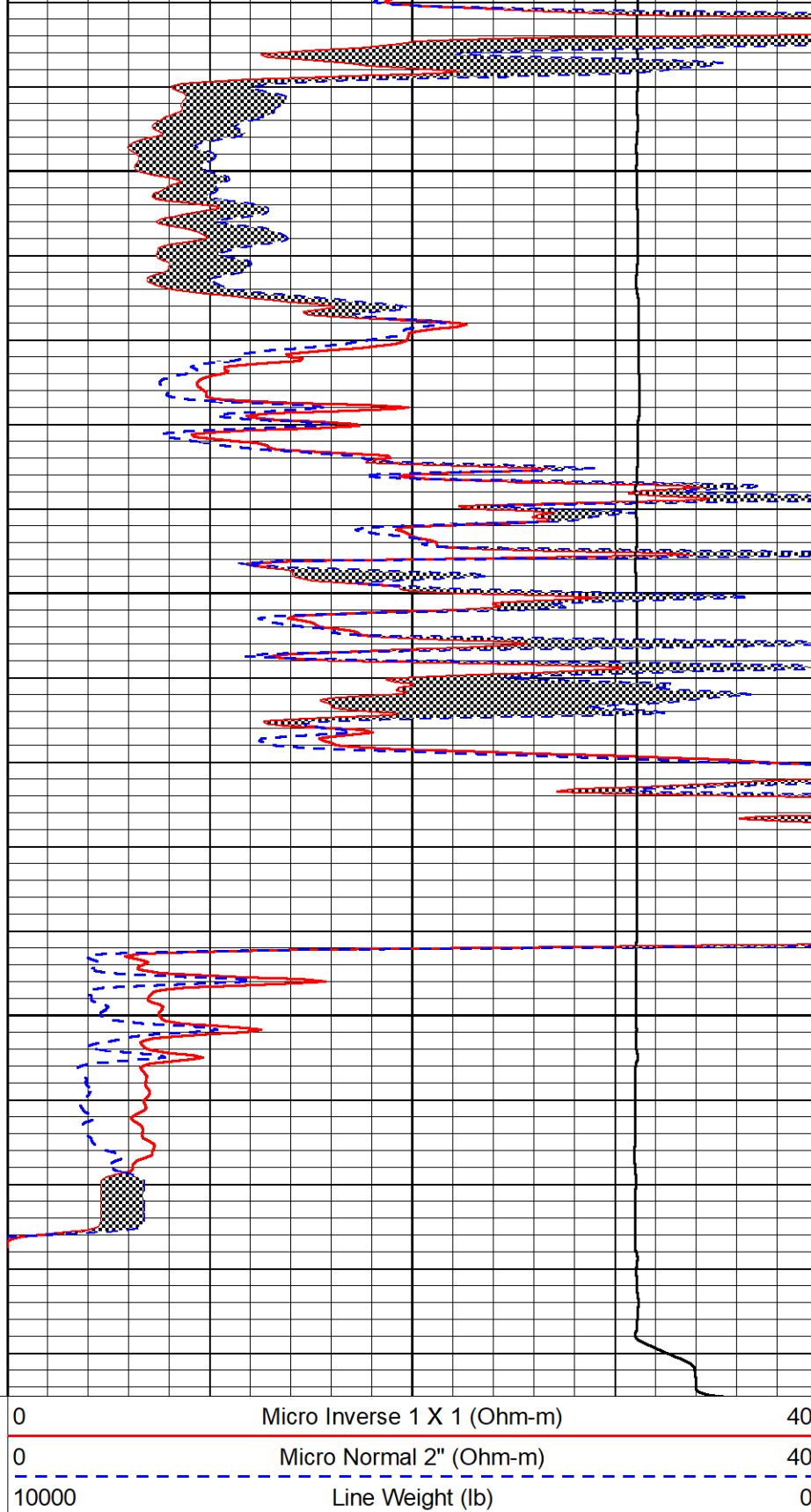




4700

4750

4800



### Calibration Report

Database File griffin\_whitley 2.db  
 Dataset Pathname stkml/pass4.10  
 Dataset Creation Mon May 16 05:26:41 2022

### Dual Induction Calibration Report

Serial-Model:

504 HT-M&W

2.0 for 2.0 D. for 2.0

Th. D. 10.00.00.10.0001

|        |         | Readings |  | References |         |        | Results |         |
|--------|---------|----------|--|------------|---------|--------|---------|---------|
| Loop:  | Air     | Loop     |  | Air        | Loop    |        | m       | b       |
| Deep   | 178.615 | 710.235  |  | 0.000      | 255.800 | mmho/m | 0.650   | -19.000 |
| Medium | 161.982 | 1441.110 |  | 0.000      | 255.800 | mmho/m | 0.450   | -45.500 |

## Microlog Calibration Report

Serial-Model:  
Performed:

402-PSI STKBL ML  
Sat Mar 19 19:10:40 2022

|         |        | Readings |  | References |         |       | Results    |           |
|---------|--------|----------|--|------------|---------|-------|------------|-----------|
|         | Zero   | Cal      |  | Zero       | Cal     |       | m          | b         |
| Normal  | 0.0037 | 0.0043   |  | 0.0000     | 10.0000 | Ohm-m | 18000.0000 | -1.0000   |
| Inverse | 0.1208 | 0.0013   |  | 0.0000     | 10.0000 | Ohm-m | 15500.0000 | 0.0000    |
| Caliper | 1.0020 | 1.0834   |  | 5.5000     | 16.5000 | in    | 135.1520   | -131.2000 |

## Compensated Density Calibration Report

Serial-Model:  
Source #:  
Master Calibration Performed:

303-03-M&W  
21170B  
Thu Dec 16 23:28:34 2021

## Master Calibration

|                     | Density |      |  | Far Detector                | Near Detector |     |
|---------------------|---------|------|--|-----------------------------|---------------|-----|
| Magnesium           | 1.755   | g/cc |  | 3841.78                     | 5151.73       | cps |
| Aluminum            | 2.670   | g/cc |  | 700.98                      | 3068.49       | cps |
| Spine Angle = 73.06 |         |      |  | Density/Spine Ratio = 0.515 |               |     |
|                     | Size    |      |  | Reading                     |               |     |
| Small Ring          | 4.00    | in   |  | 1.17                        |               |     |
| Large Ring          | 14.00   | in   |  | 1.04                        |               |     |

## Compensated Neutron Calibration Report

Serial-Model:  
Source #:  
Master Calibration Performed:

210-M&W  
N-1238  
Fri Dec 3 09:16:24 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: 103  
Tool Model: M&W  
Performed: Fri Dec 3 12:13:24 2021

Calibrator Value: 500.0 GAPI

|                     |        |          |
|---------------------|--------|----------|
| Background Reading: | 28.0   | cps      |
| Calibrator Reading: | 986.0  | cps      |
| Sensitivity:        | 0.5700 | GAPI/cps |



|         |                         |
|---------|-------------------------|
| Company | Griffin Management, LLC |
| Well    | Whitley #2              |
| Field   | Moffett West            |
| County  | Barber                  |
| State   | Kansas                  |