

**QUAD COMBO  
LOG**

----- Fold here -----

|     |    |      |     |   |     |    |     |            |    |     |            |    |     |      |
|-----|----|------|-----|---|-----|----|-----|------------|----|-----|------------|----|-----|------|
| ONE | TD | 5250 | REC | 0 | 150 | 30 | -10 | 47.6 us/ft | 30 | -10 | 2.71 gm/cc | 30 | -10 | LIME |
|-----|----|------|-----|---|-----|----|-----|------------|----|-----|------------|----|-----|------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
| DIRECTIONAL INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
| Maximum Deviation @                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |  |  | KOP @ |  |  |  |  |  |
| Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
| GTET-DSNT-SDLT-BSAT-ACRT RUN IN COMBINATION                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
| CHLORIDES REPORTED AT 1000 mg/L                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
| HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF. |  |  |  |  |  |  |  |  |       |  |  |  |  |  |
| HALLIBURTON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |       |  |  |  |  |  |



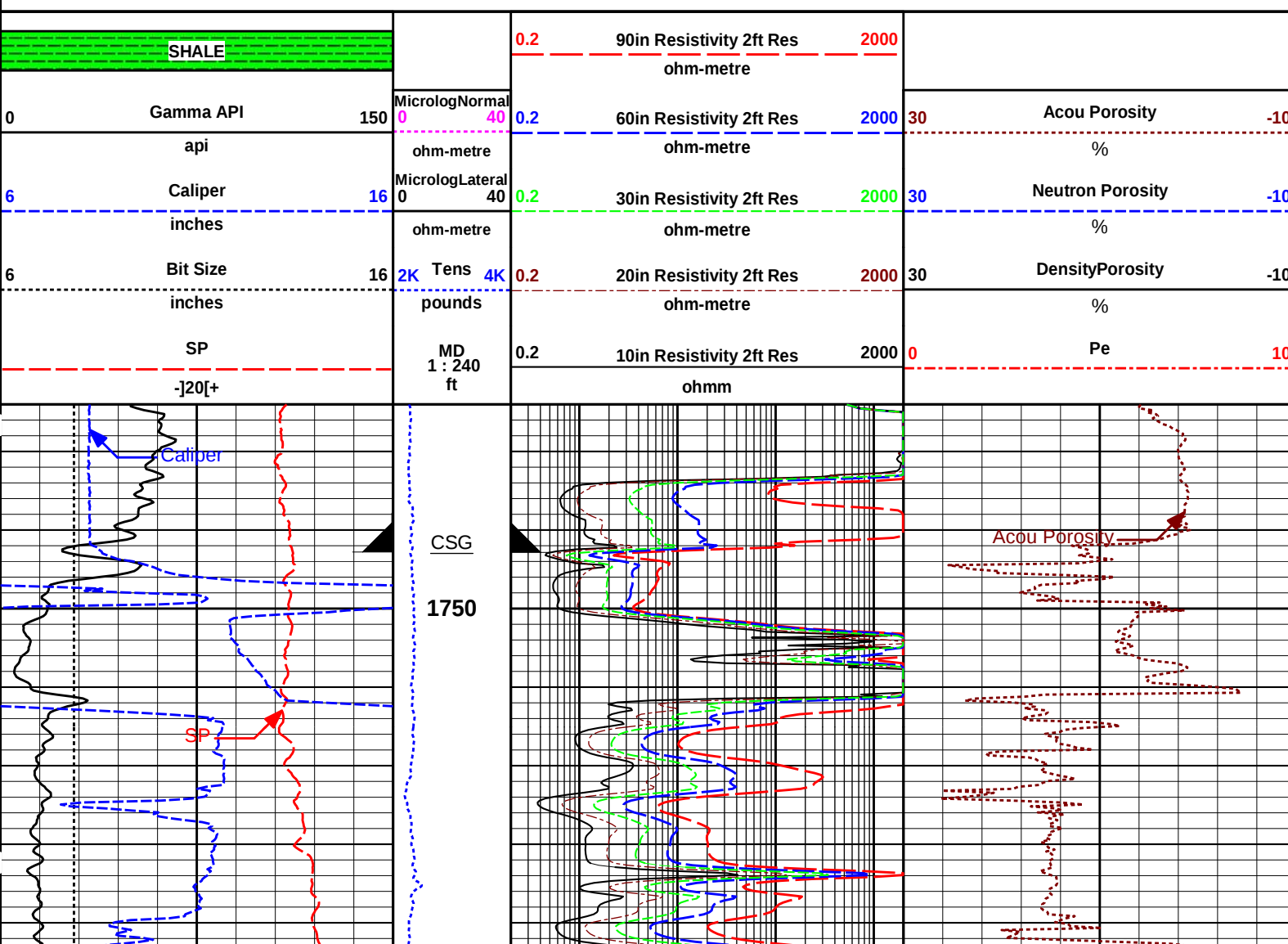
Plot Time: 23-Jan-18 20:19:09

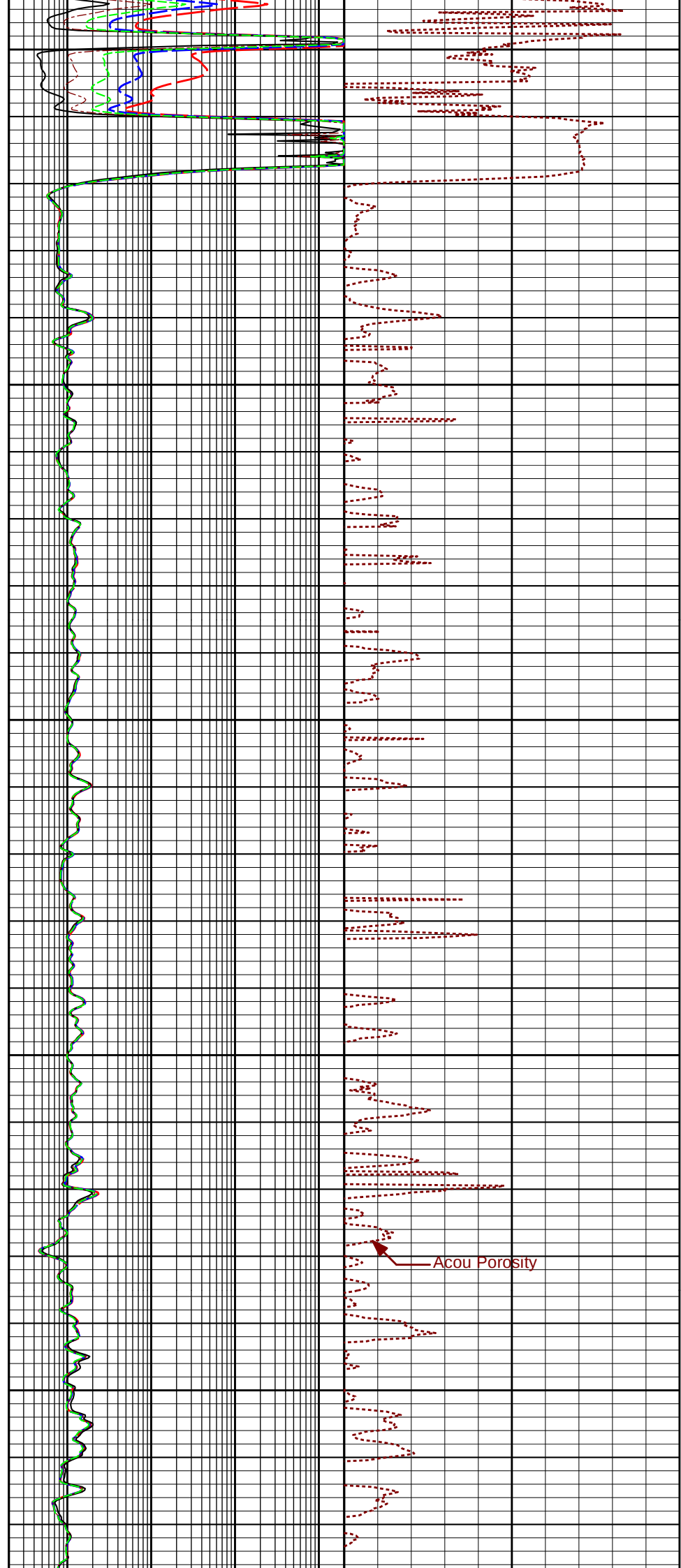
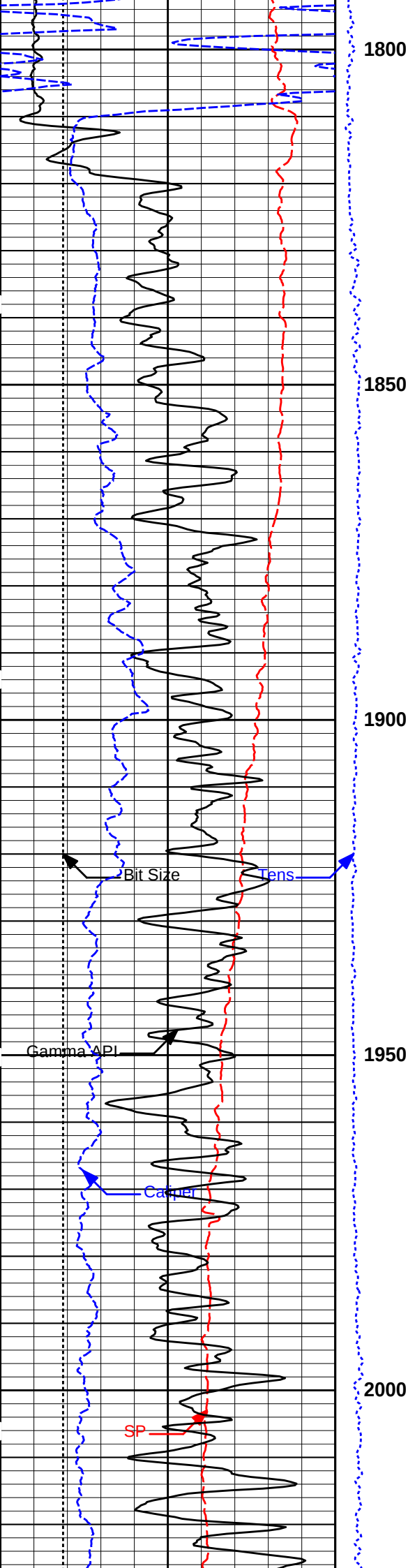
Plot Range: 1724 ft to 5605.25 ft

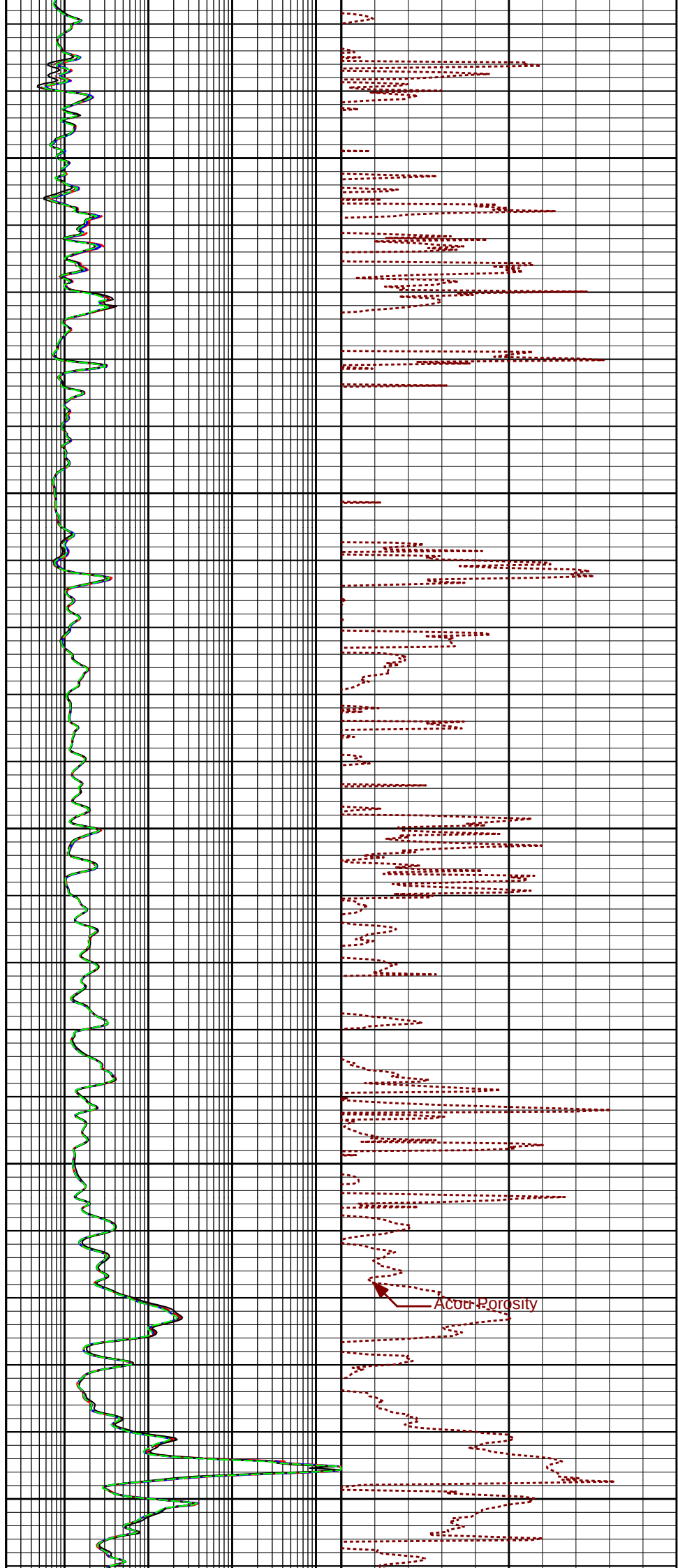
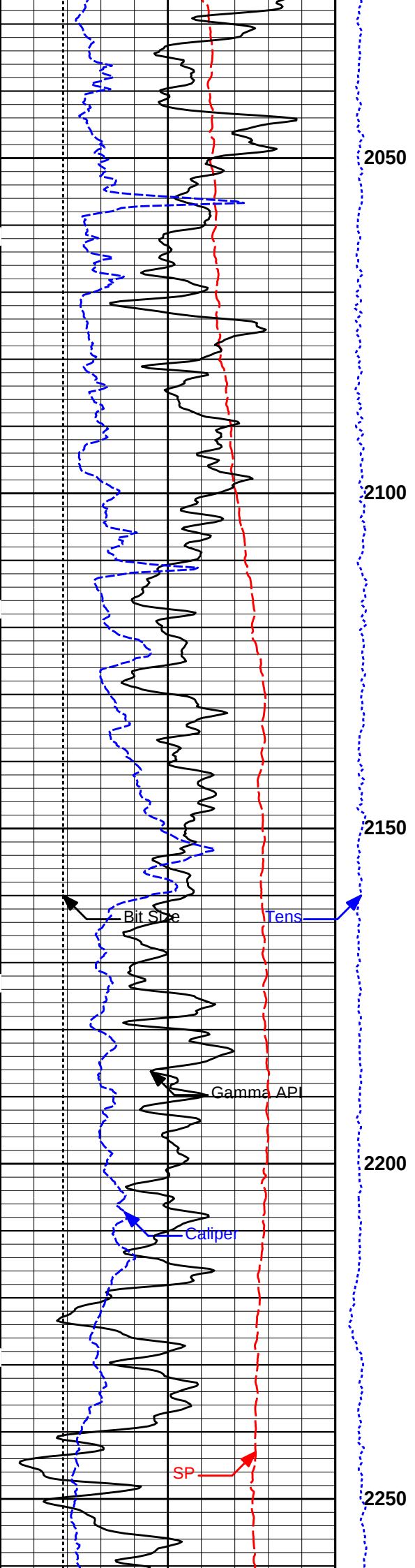
Data: MERIT\_UNRUH1-7\Well Based\MAIN\

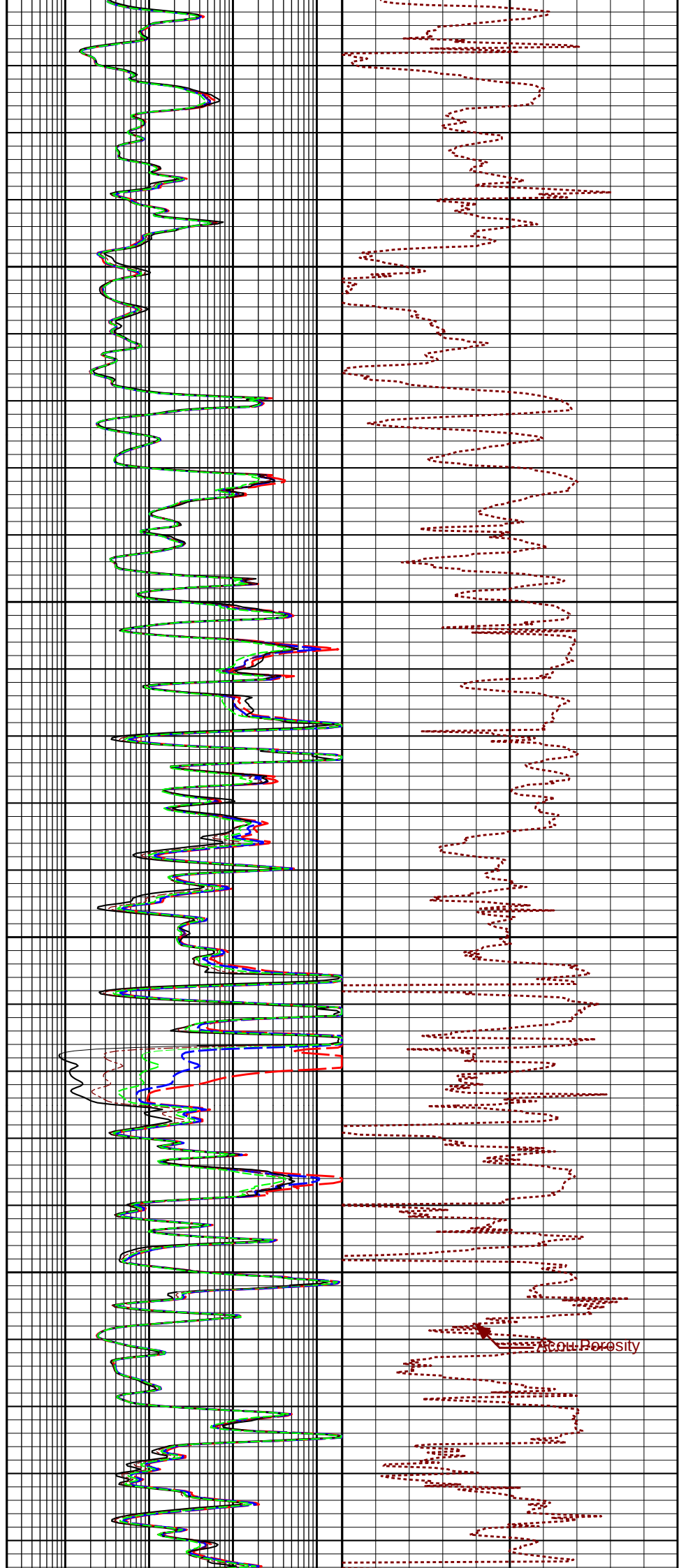
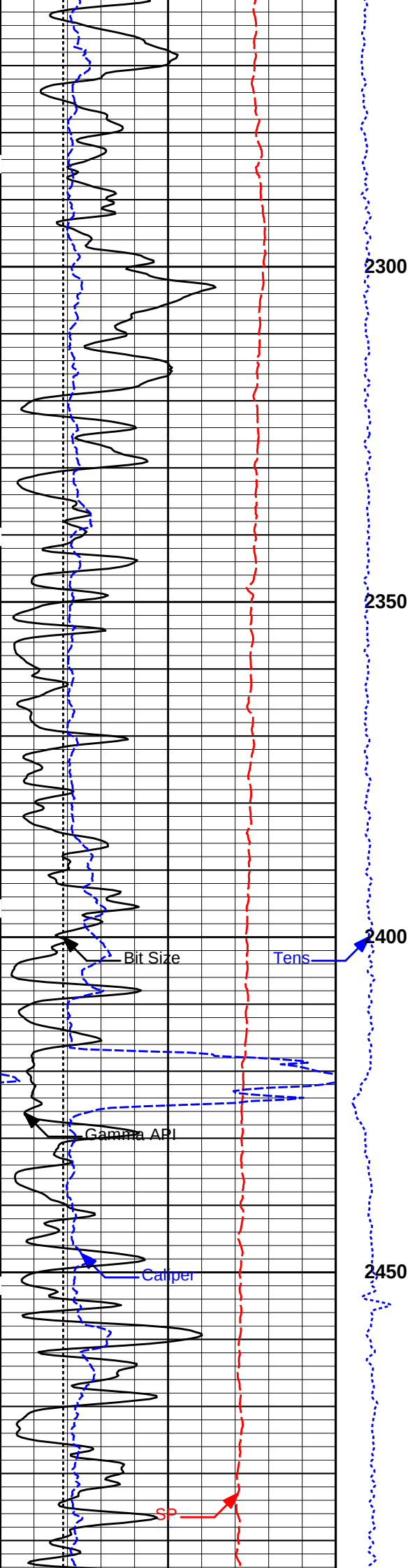
Plot File: \\QUAD\QC\_5\_MAIN

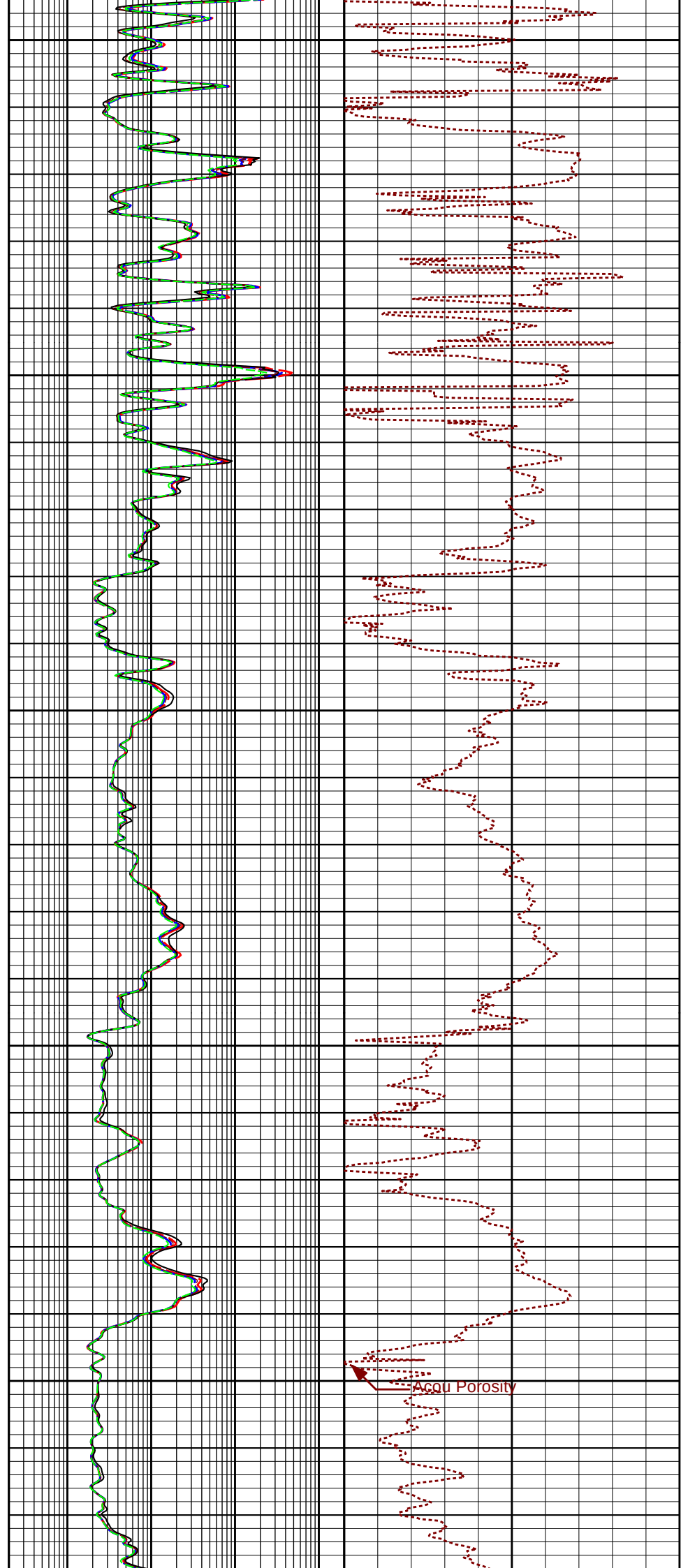
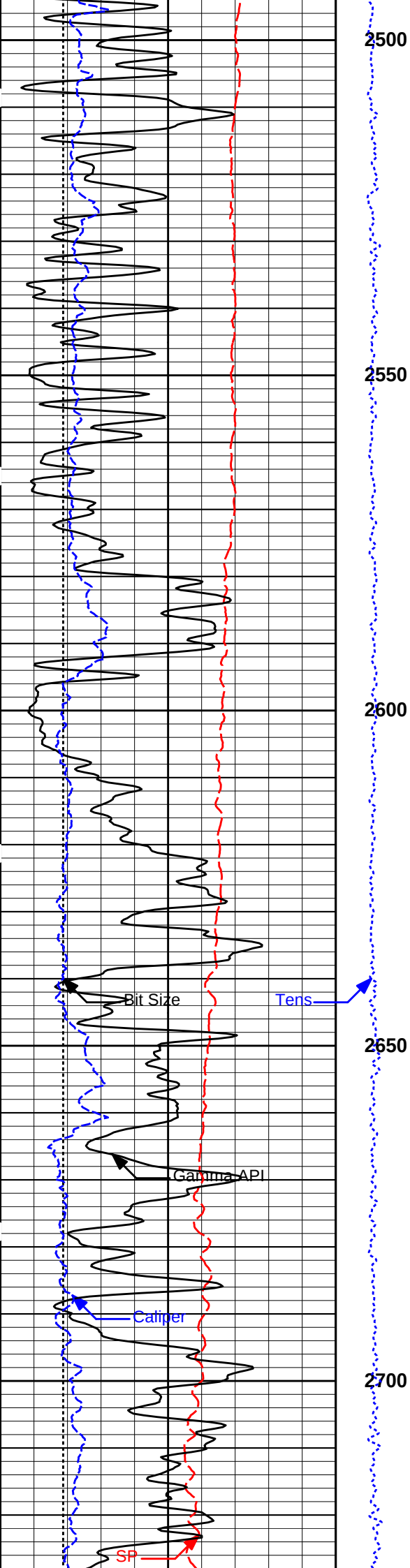
## 5 INCH MAIN LOG

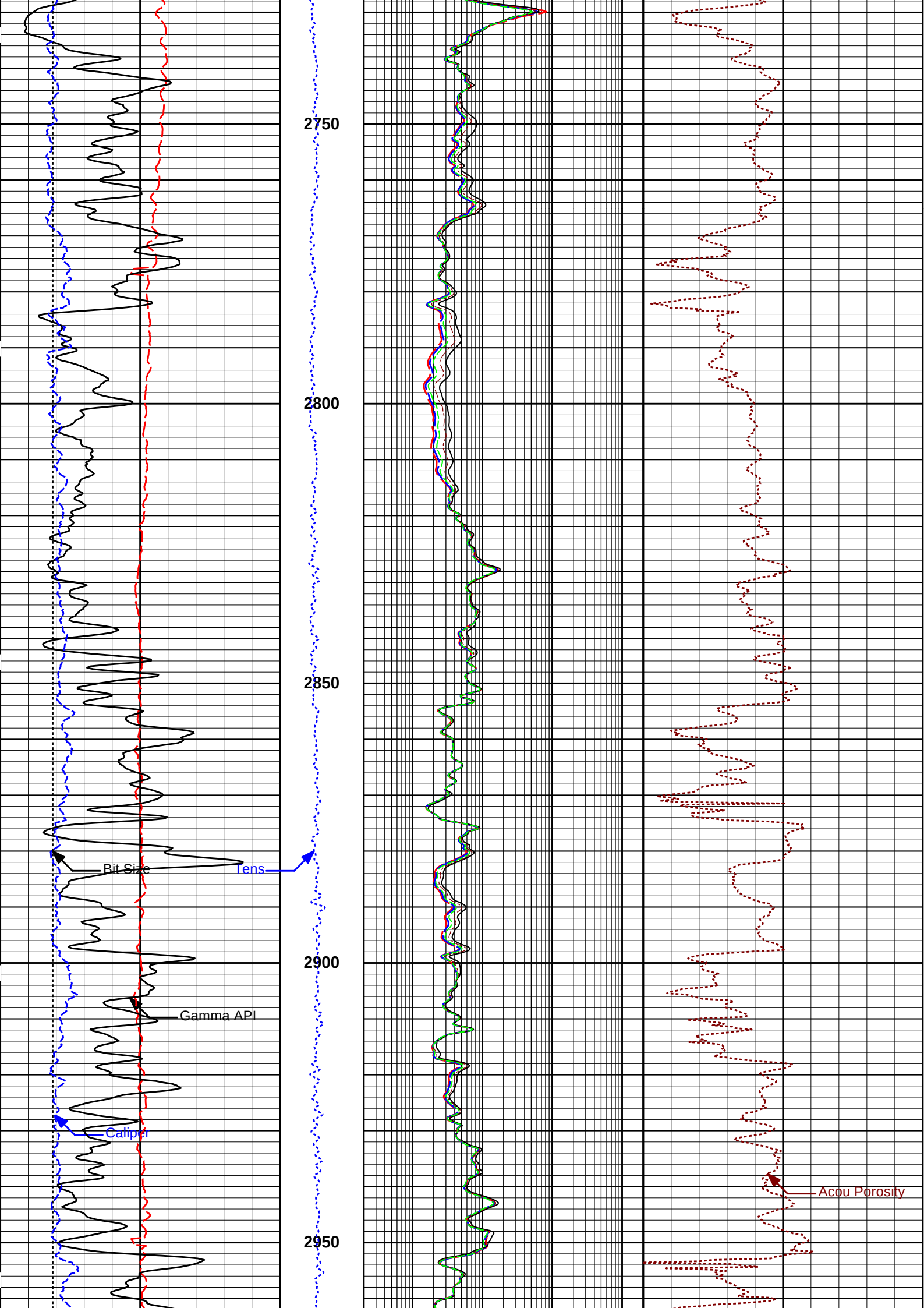












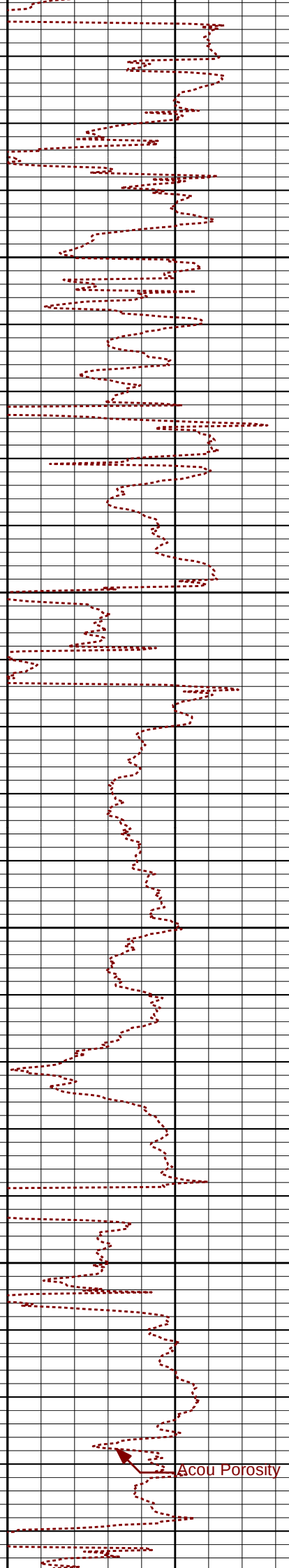
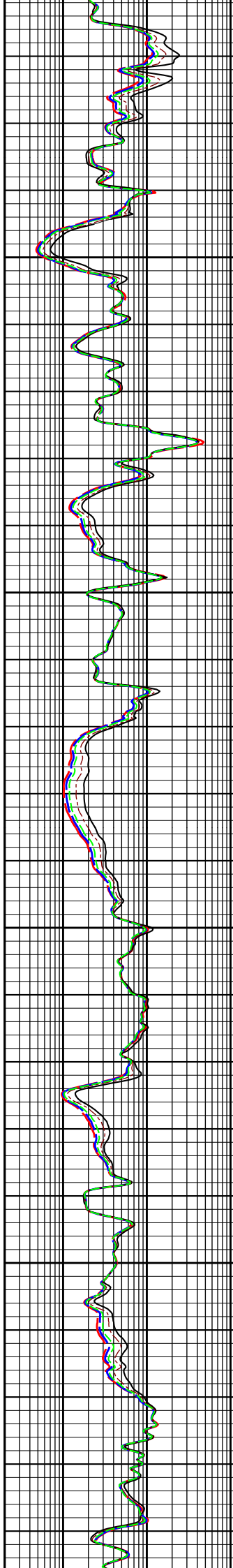


3000

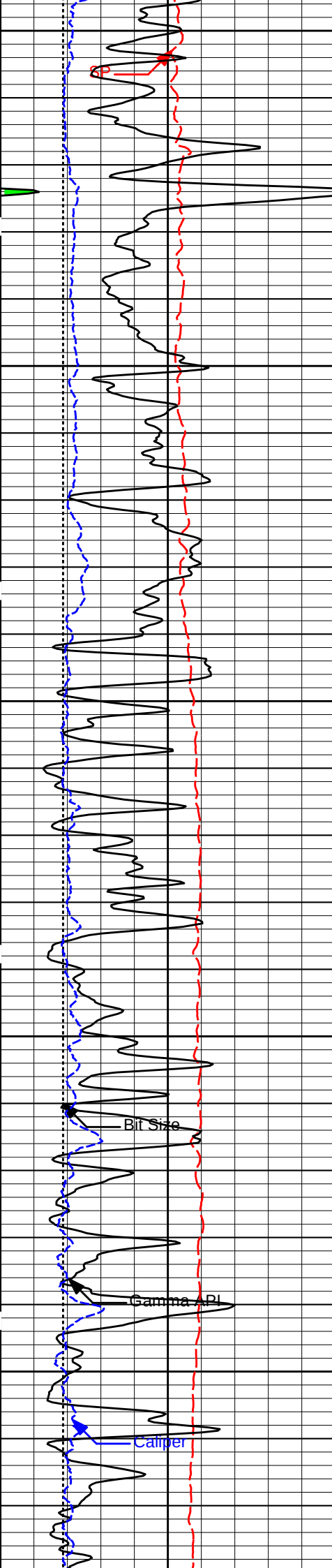
3050

3100

3150



Acou Porosity



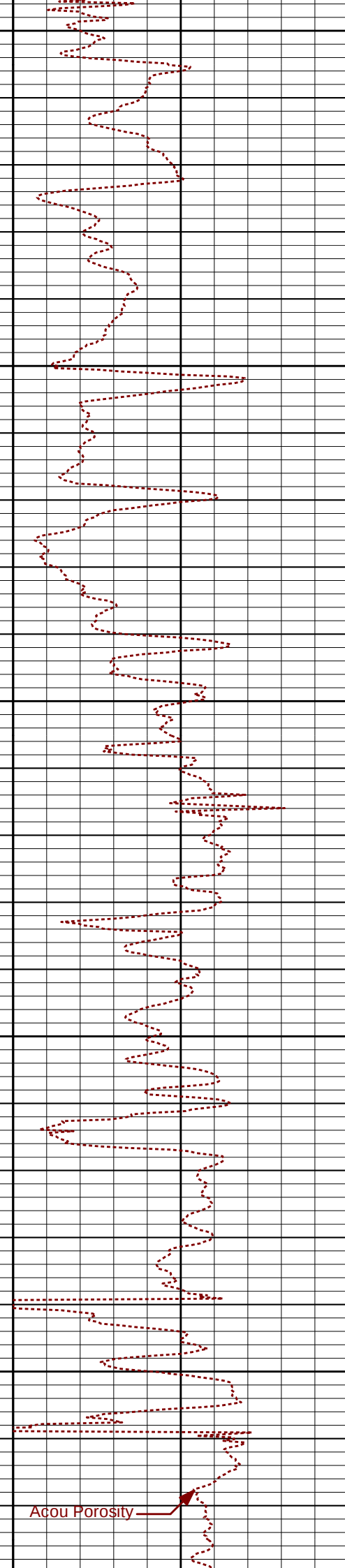
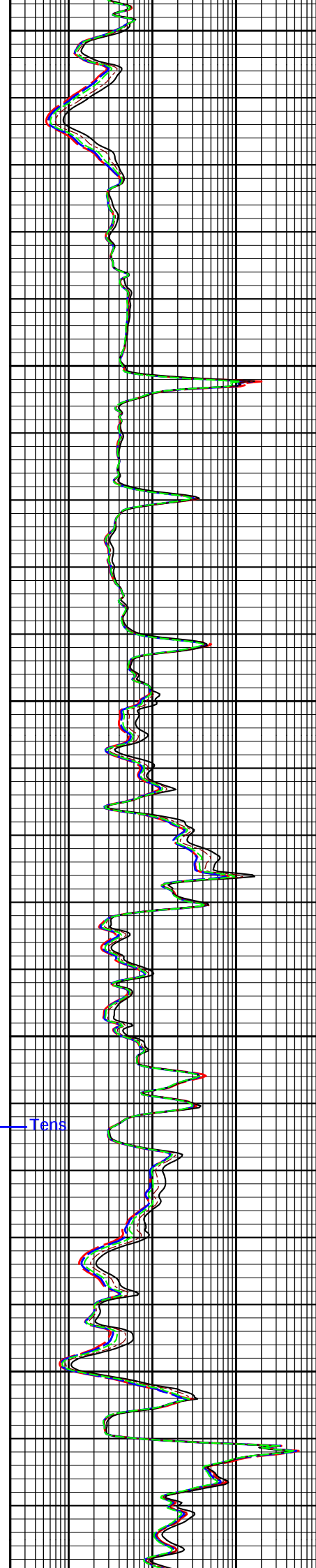
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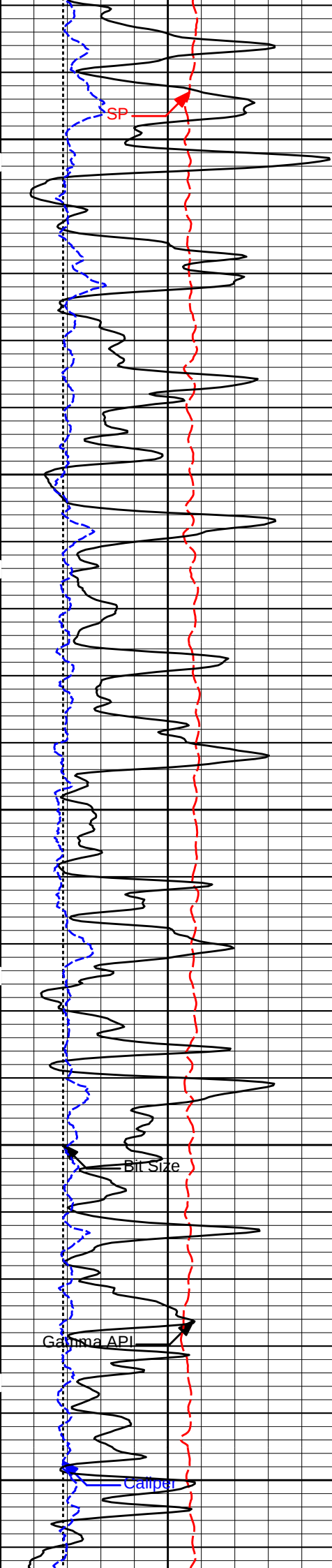
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3350

3400



Acoustic Porosity



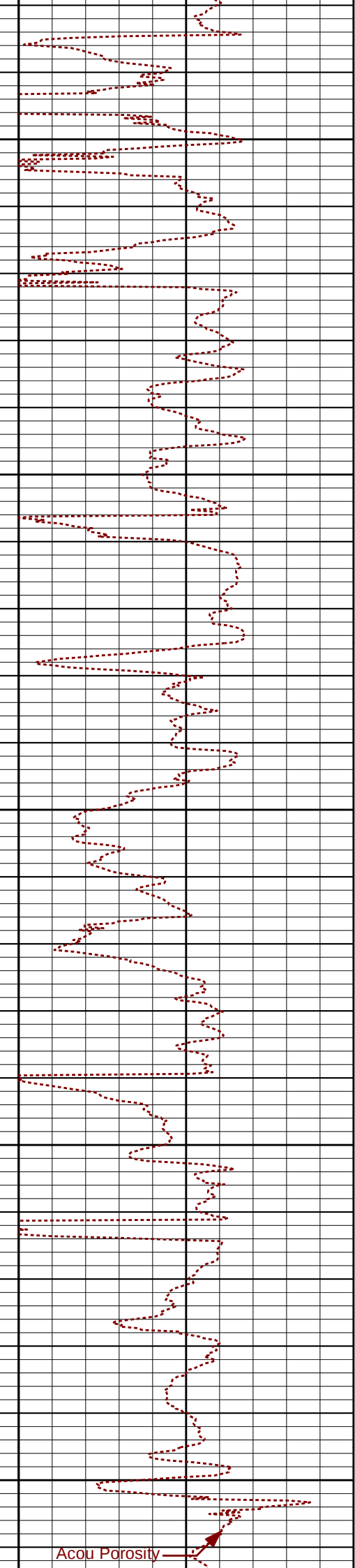
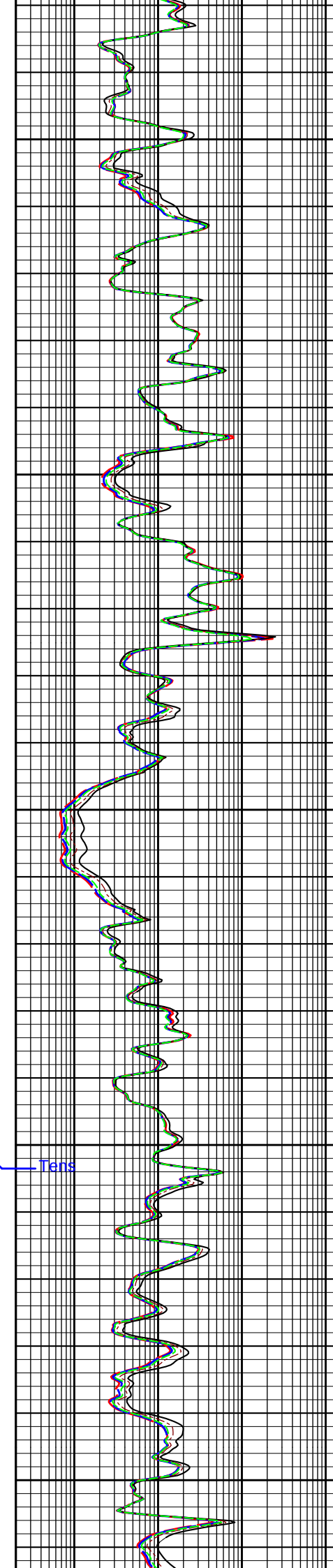
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3500

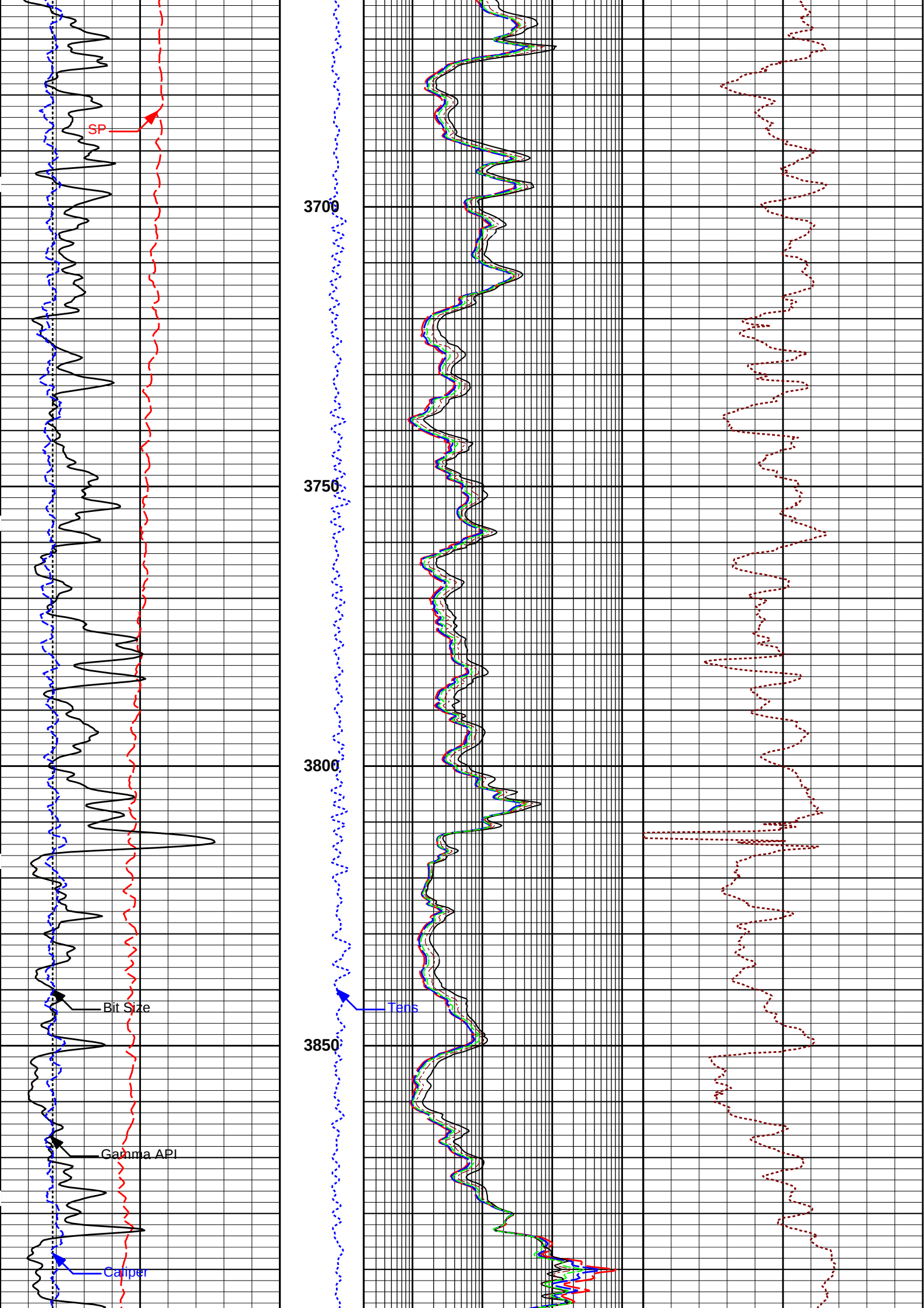
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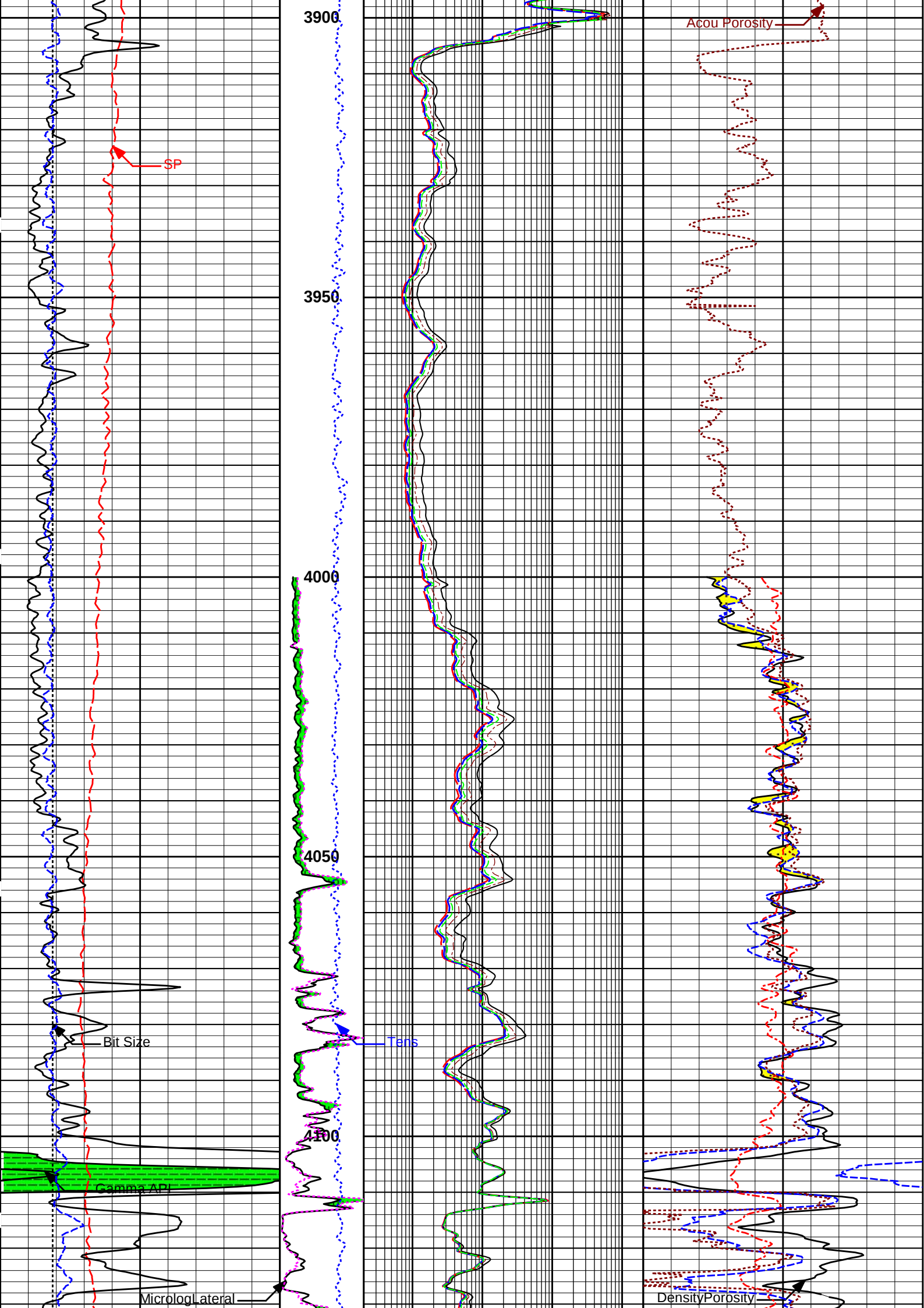
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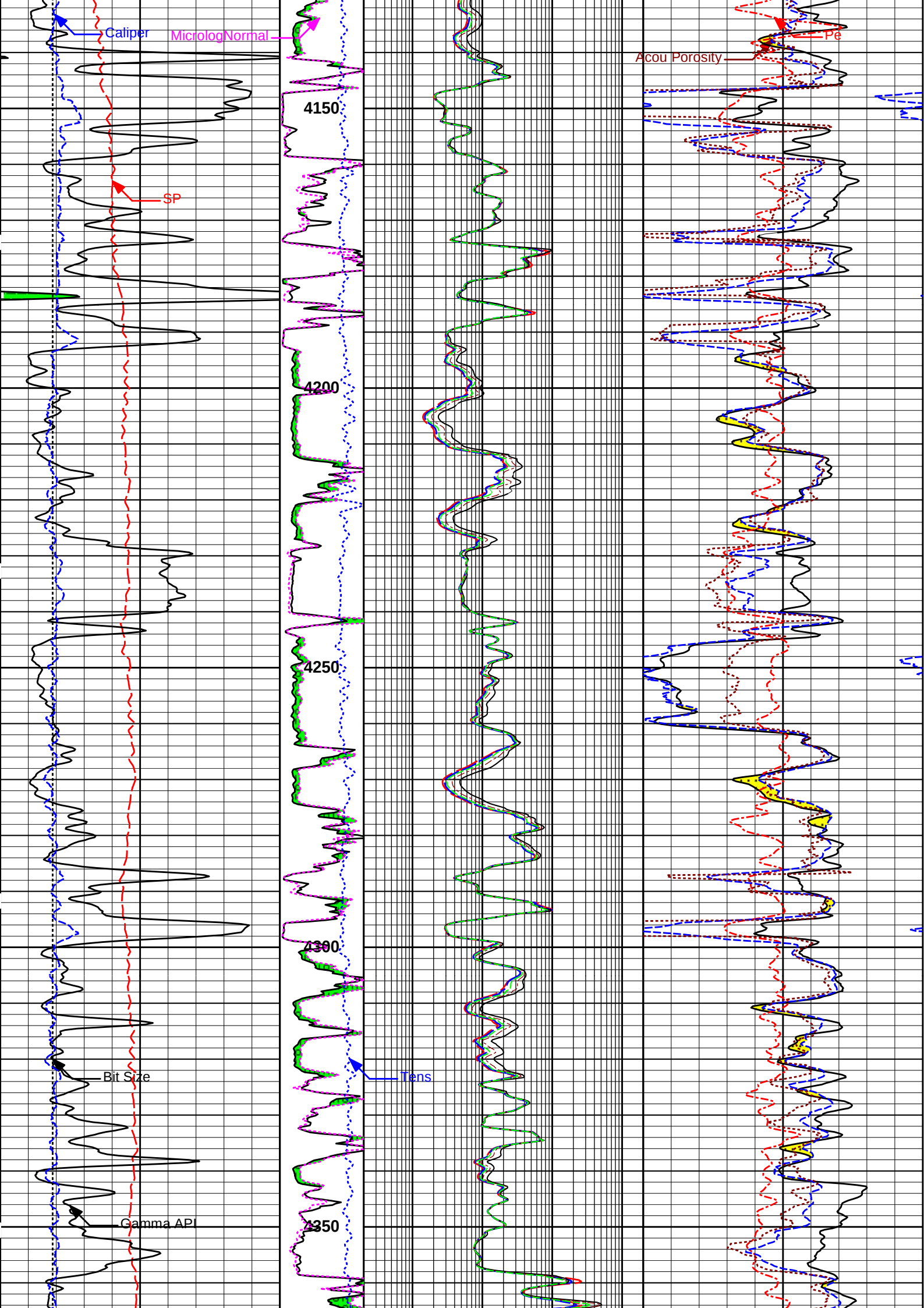
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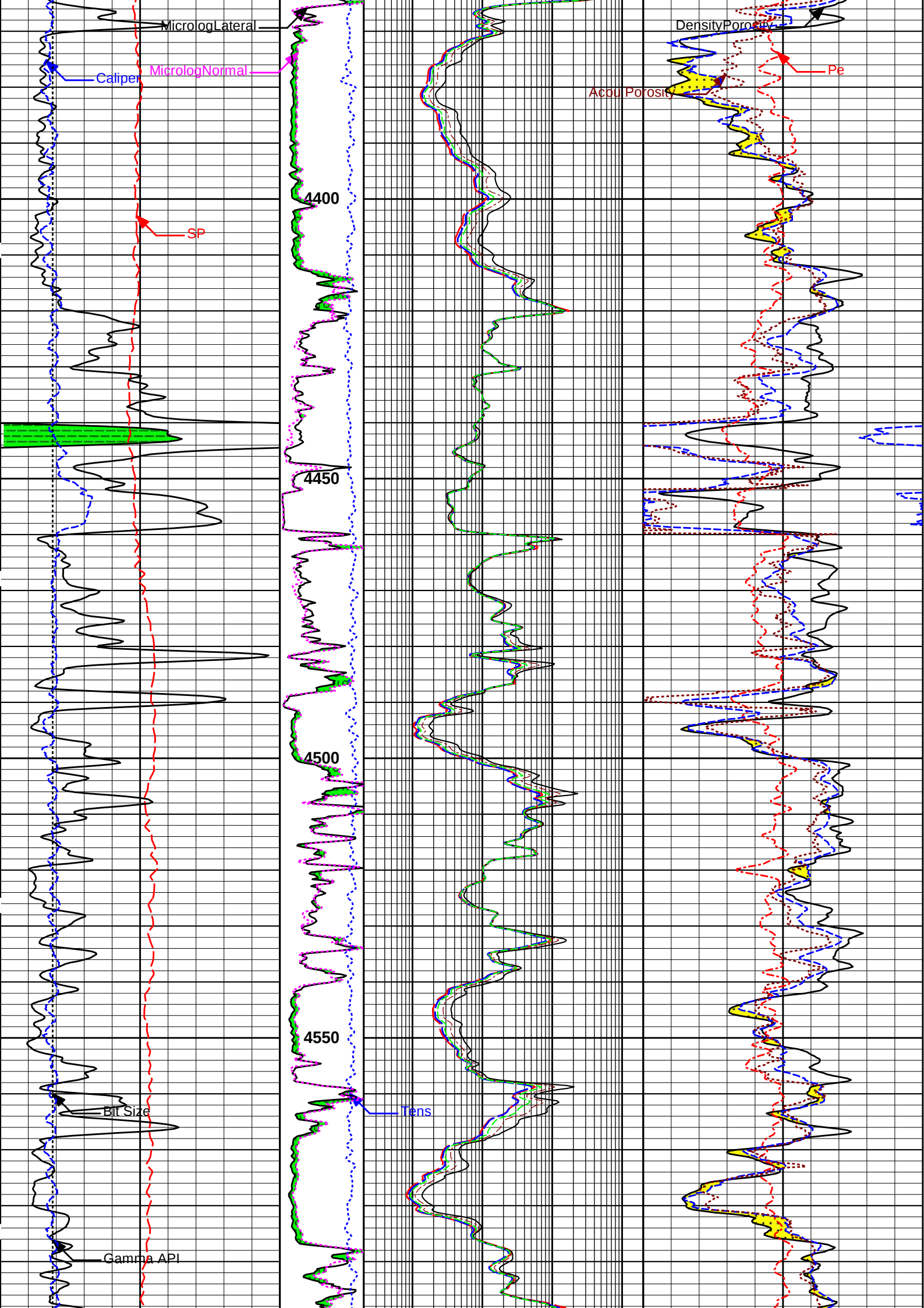


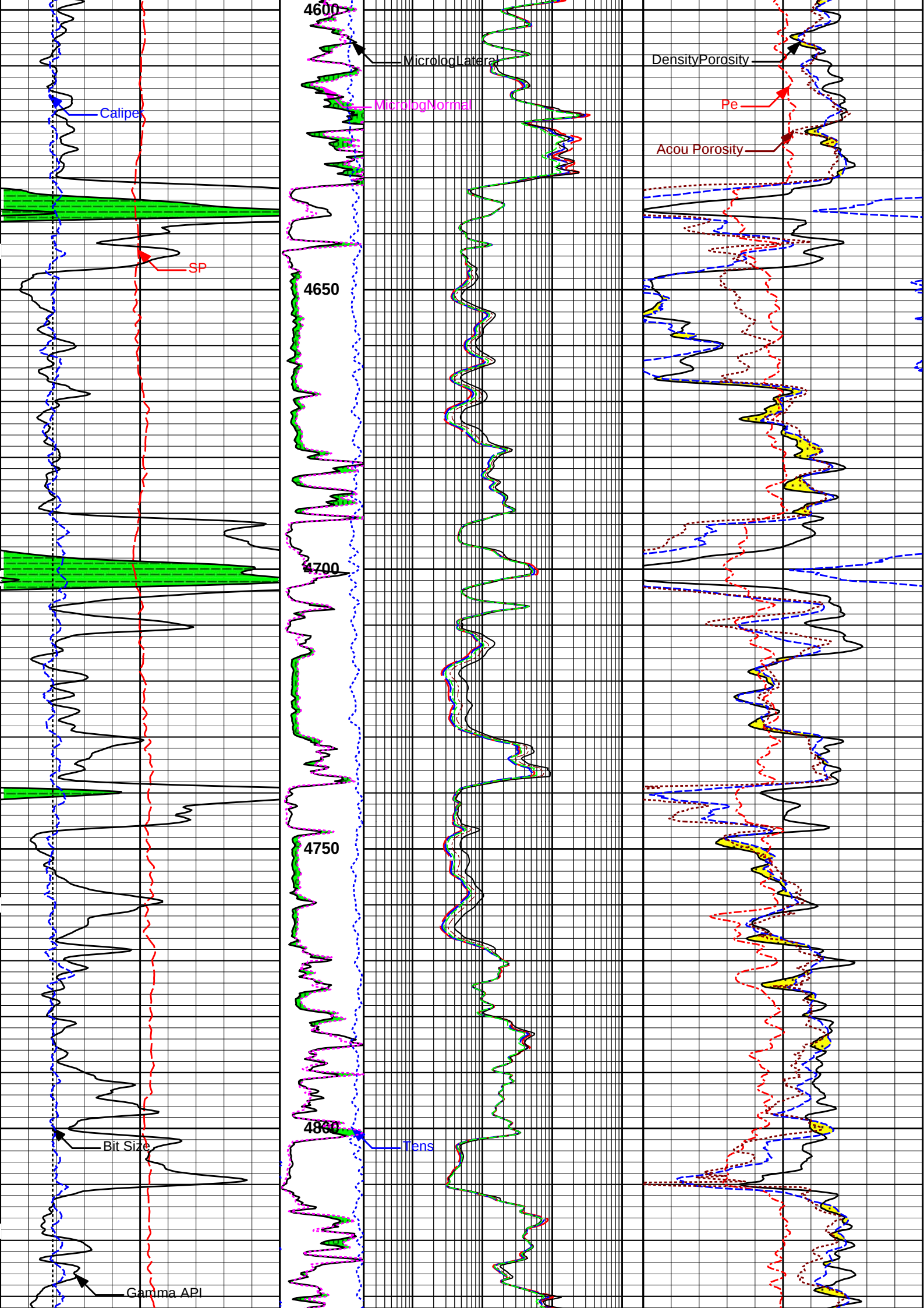
Acou Porosity

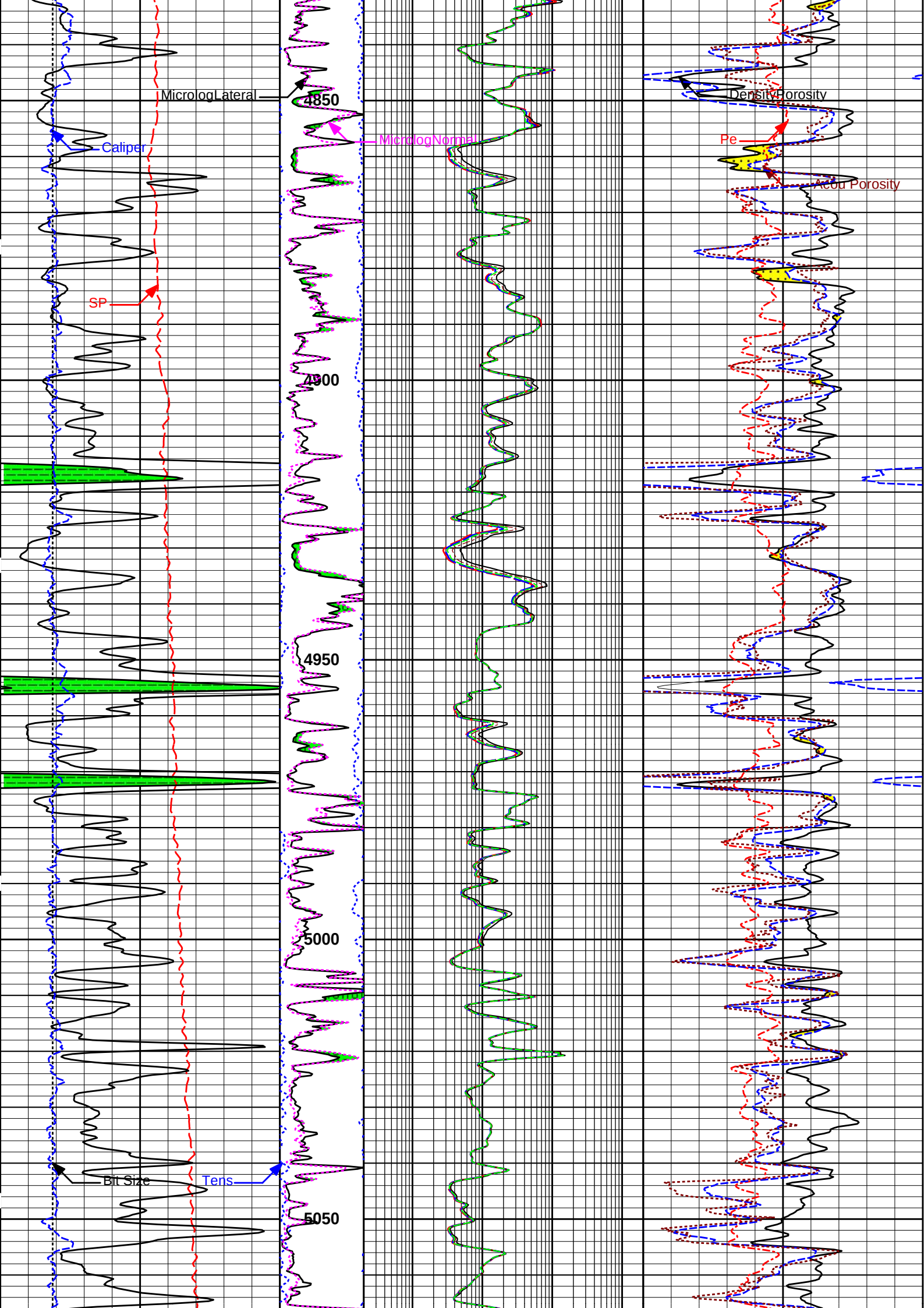


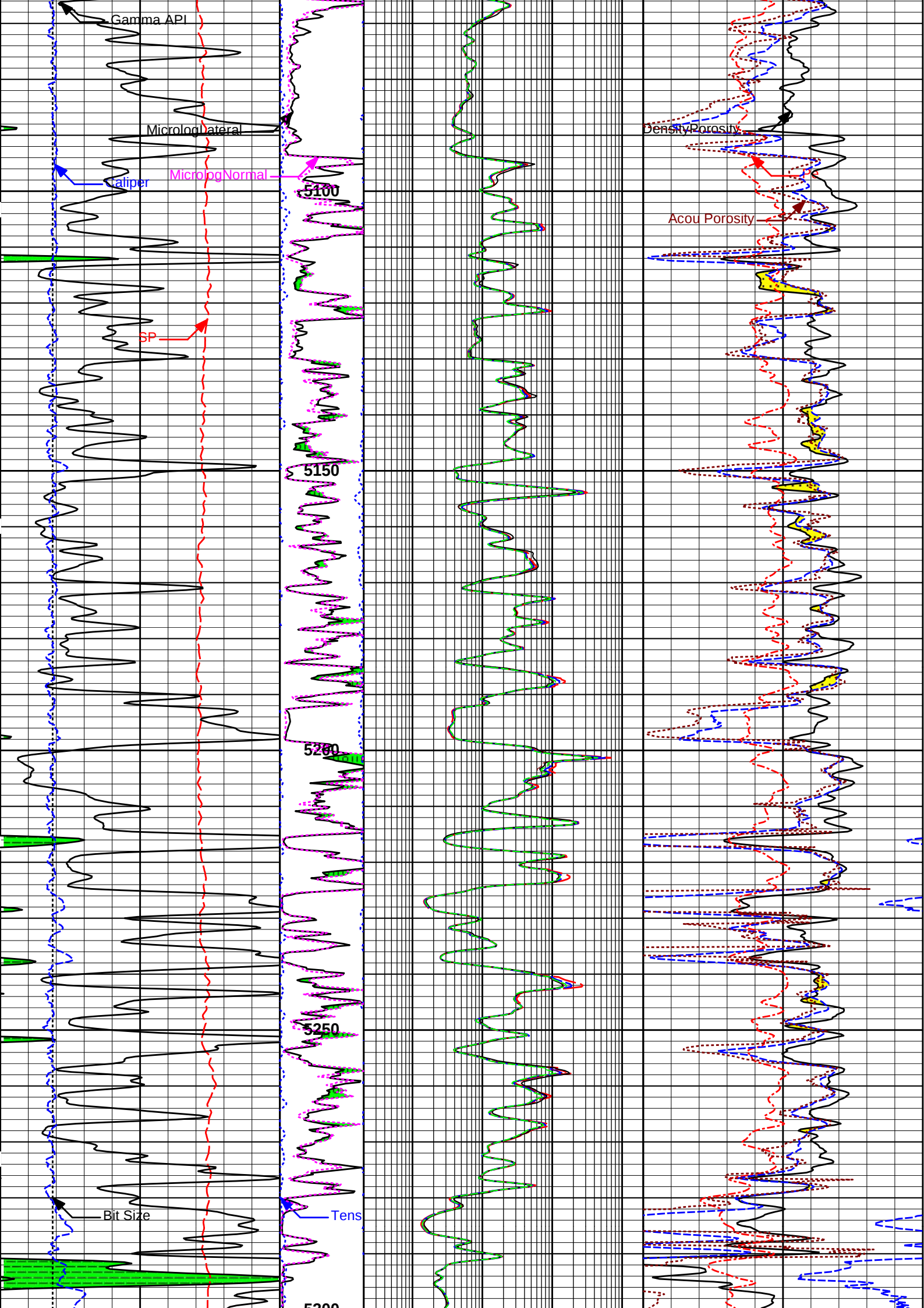


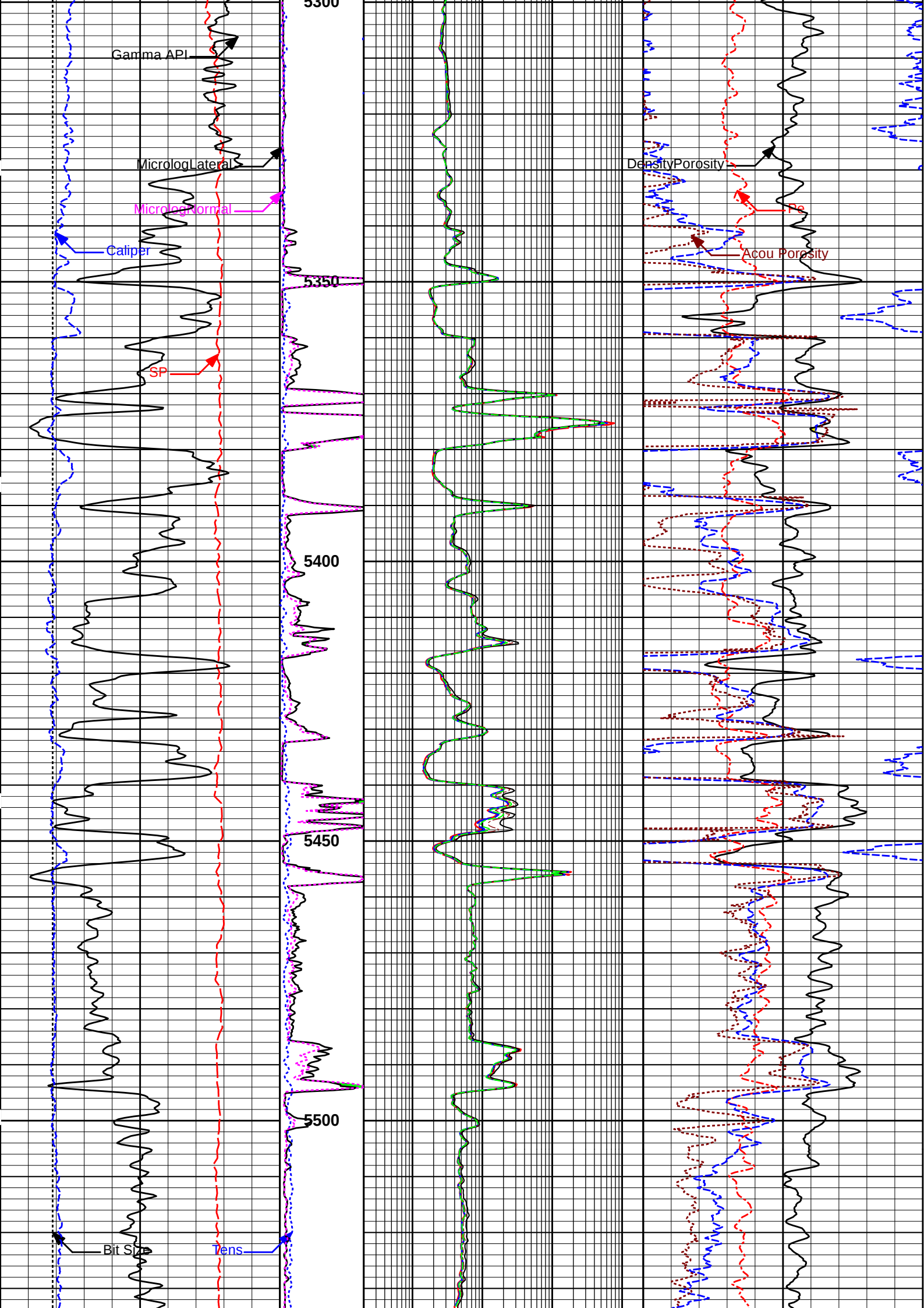


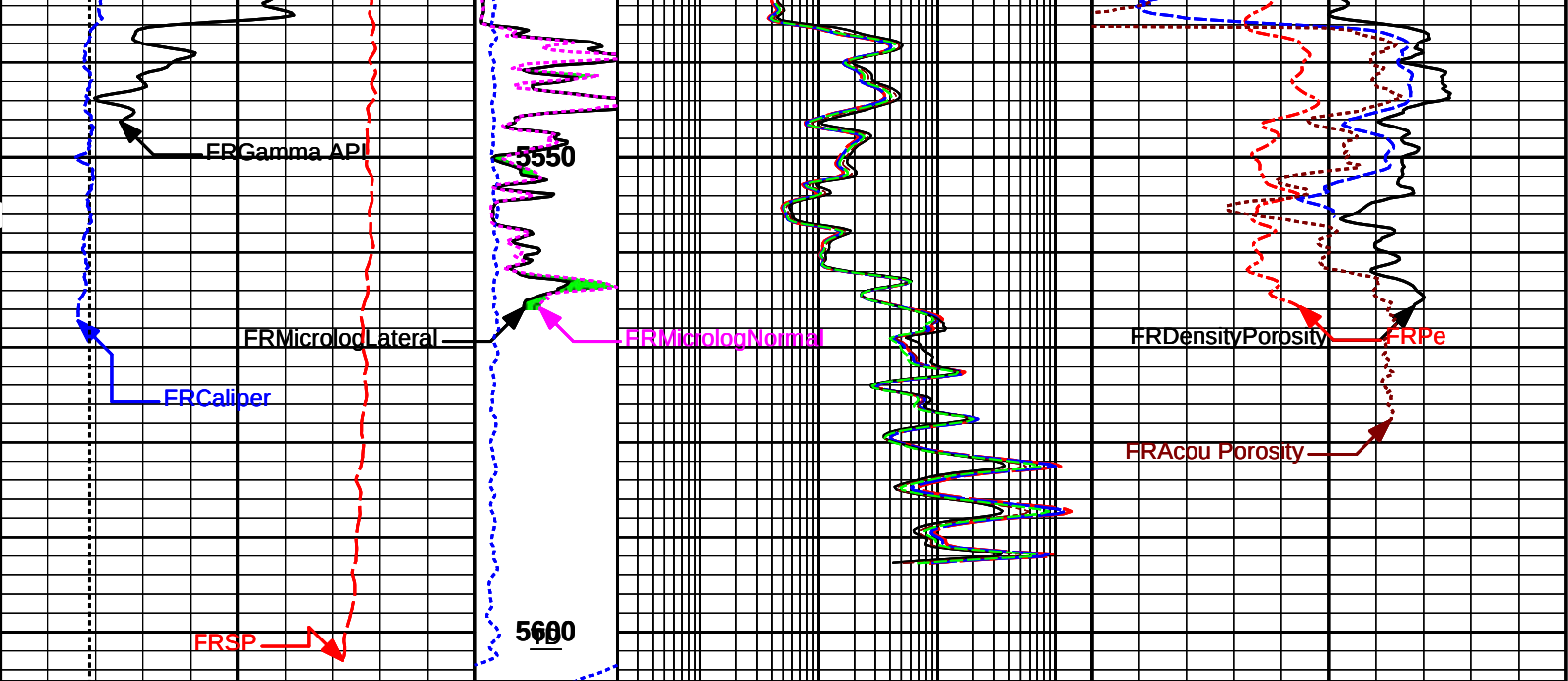












|        |               |                        |                                   |                                   |                   |                      |  |
|--------|---------------|------------------------|-----------------------------------|-----------------------------------|-------------------|----------------------|--|
| SP     |               | MD<br>1 : 240<br>ft    | 0.2 10in Resistivity 2ft Res 2000 |                                   | 0 Pe 10           |                      |  |
| -]20[+ |               |                        | ohmm                              |                                   |                   |                      |  |
| 6      | Bit Size 16   |                        | 2K Tens 4K                        | 0.2 20in Resistivity 2ft Res 2000 | 30                | DensityPorosity -10  |  |
| inches |               |                        | pounds                            | ohm-metre                         |                   | %                    |  |
| 6      | Caliper 16    |                        | MicrologLateral<br>0 40           | 0.2 30in Resistivity 2ft Res 2000 | 30                | Neutron Porosity -10 |  |
| inches |               | ohm-metre              | ohm-metre                         |                                   | %                 |                      |  |
| 0      | Gamma API 150 | MicrologNormal<br>0 40 | 0.2 60in Resistivity 2ft Res 2000 | 30                                | Acou Porosity -10 |                      |  |
| api    |               | ohm-metre              | ohm-metre                         |                                   | %                 |                      |  |
| SHALE  |               |                        | 0.2 90in Resistivity 2ft Res 2000 |                                   |                   |                      |  |
|        |               |                        | ohm-metre                         |                                   |                   |                      |  |

HALLIBURTON

Plot Time: 23-Jan-18 20:19:32  
Plot Range: 1724 ft to 5605.25 ft  
Data: MERIT\_UNRUH1-7Well BasedMAIN  
Plot File: \\QUAD\QC\_5\_MAIN

5 INCH MAIN LOG

|             |                      |                |        |
|-------------|----------------------|----------------|--------|
| COMPANY     | MERIT ENERGY COMPANY |                |        |
| WELL        | UNRUH 1-7            |                |        |
| FIELD       | WILDCAT              |                |        |
| COUNTY      | HASKELL              | STATE          | KANSAS |
| HALLIBURTON |                      | QUAD COMBO LOG |        |