

# MICROLOG

Fold here

|                                         |            |          |        |              |     |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
|-----------------------------------------|------------|----------|--------|--------------|-----|-------------------------|----------------------------|---------------------------|---------|---------------|-----------|-----------------------------------------|-----|----------|--|--|--|
| Service Ticket No.: DUAL904334094       |            |          |        |              |     | API No.: 15081221640000 |                            |                           |         |               |           | PGM Version: WL INSITE R5.0.5 (Build 8) |     |          |  |  |  |
| CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE |            |          |        |              |     |                         |                            | RESISTIVITY SCALE CHANGES |         |               |           |                                         |     |          |  |  |  |
| Date                                    | Sample No. |          |        |              |     |                         | Type Log                   | Depth                     |         | Scale Up Hole |           | Scale Down Hole                         |     |          |  |  |  |
| Depth-Driller                           |            |          |        |              |     |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| Type Fluid in Hole                      |            |          |        |              |     |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| Density                                 | Viscosity  |          |        |              |     |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| Ph                                      | Fluid Loss |          |        |              |     |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| Source of Sample                        |            |          |        |              |     |                         | RESISTIVITY EQUIPMENT DATA |                           |         |               |           |                                         |     |          |  |  |  |
| Rm @ Meas. Temp                         |            |          | @      |              | @   |                         | Run No.                    | Tool Type & No.           |         | Pad Type      |           | Tool Pos.                               |     | Other    |  |  |  |
| Rmf @ Meas. Temp.                       |            |          | @      |              | @   |                         | ONE                        | ACRT                      |         | NONE          |           | CENT                                    |     | N/A      |  |  |  |
| Rmc @ Meas. Temp.                       |            |          | @      |              | @   |                         |                            | I-11055059                |         |               |           |                                         |     |          |  |  |  |
| Source Rmf                              | Rmc        |          |        |              |     |                         |                            | S-11038385                |         |               |           |                                         |     |          |  |  |  |
| Rm @ BHT                                |            |          | @      |              | @   |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| Rmf @ BHT                               |            |          | @      |              | @   |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| Rmc @ BHT                               |            |          | @      |              | @   |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| EQUIPMENT DATA                          |            |          |        |              |     |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| GAMMA                                   |            |          |        | ACOUSTIC     |     |                         |                            | DENSITY                   |         |               |           | NEUTRON                                 |     |          |  |  |  |
| Run No.                                 |            | ONE      |        | Run No.      |     | ONE                     |                            | Run No.                   |         | ONE           |           | Run No.                                 |     | ONE      |  |  |  |
| Serial No.                              |            | 11021139 |        | Serial No.   |     | 10939049                |                            | Serial No.                |         | 10809130      |           | Serial No.                              |     | 11020487 |  |  |  |
| Model No.                               |            | GTET     |        | Model No.    |     | BSAT                    |                            | Model No.                 |         | SDLT          |           | Model No.                               |     | DSNT     |  |  |  |
| Diameter                                |            | 3.625"   |        | No. of Cent. |     | 2                       |                            | Diameter                  |         | 6.1"          |           | Diameter                                |     | 3.625"   |  |  |  |
| Detector Model No.                      |            | GTET     |        | Spacing      |     | 0.5"                    |                            | Log Type                  |         | GAM-GAM       |           | Log Type                                |     | NEU-NEU  |  |  |  |
| Type                                    |            | SCINT    |        |              |     |                         |                            | Source Type               |         | Cs-137        |           | Source Type                             |     | DSN-436  |  |  |  |
| Length                                  |            | 8"       |        | LSA [Y/N]    |     |                         |                            | Serial No.                |         | 5155GW        |           | Serial No.                              |     | DSN-436  |  |  |  |
| Distance to Source                      |            | N/A      |        | FWDA [Y/N ]  |     |                         |                            | Strength                  |         | 1.5 Ci        |           | Strength                                |     | 15 Ci    |  |  |  |
| LOGGING DATA                            |            |          |        |              |     |                         |                            |                           |         |               |           |                                         |     |          |  |  |  |
| GENERAL                                 |            |          |        | GAMMA        |     | ACOUSTIC                |                            |                           | DENSITY |               |           | NEUTRON                                 |     |          |  |  |  |
| Run                                     | Depth      |          | Speed  | Scale        |     | Scale                   |                            | Matrix                    | Scale   |               | Matrix    | Scale                                   |     | Matrix   |  |  |  |
| No.                                     | From       | To       | ft/min | L            | R   | L                       | R                          |                           | L       | R             |           | L                                       | R   |          |  |  |  |
| ONE                                     | TD         | CSG      | REC    | 0            | 150 | 30                      | -10                        | 47.6 us/ft                | 30      | -10           | 2.71 g/cc | 30                                      | -10 | LIME     |  |  |  |

[illegible]**HALLIBURTON**

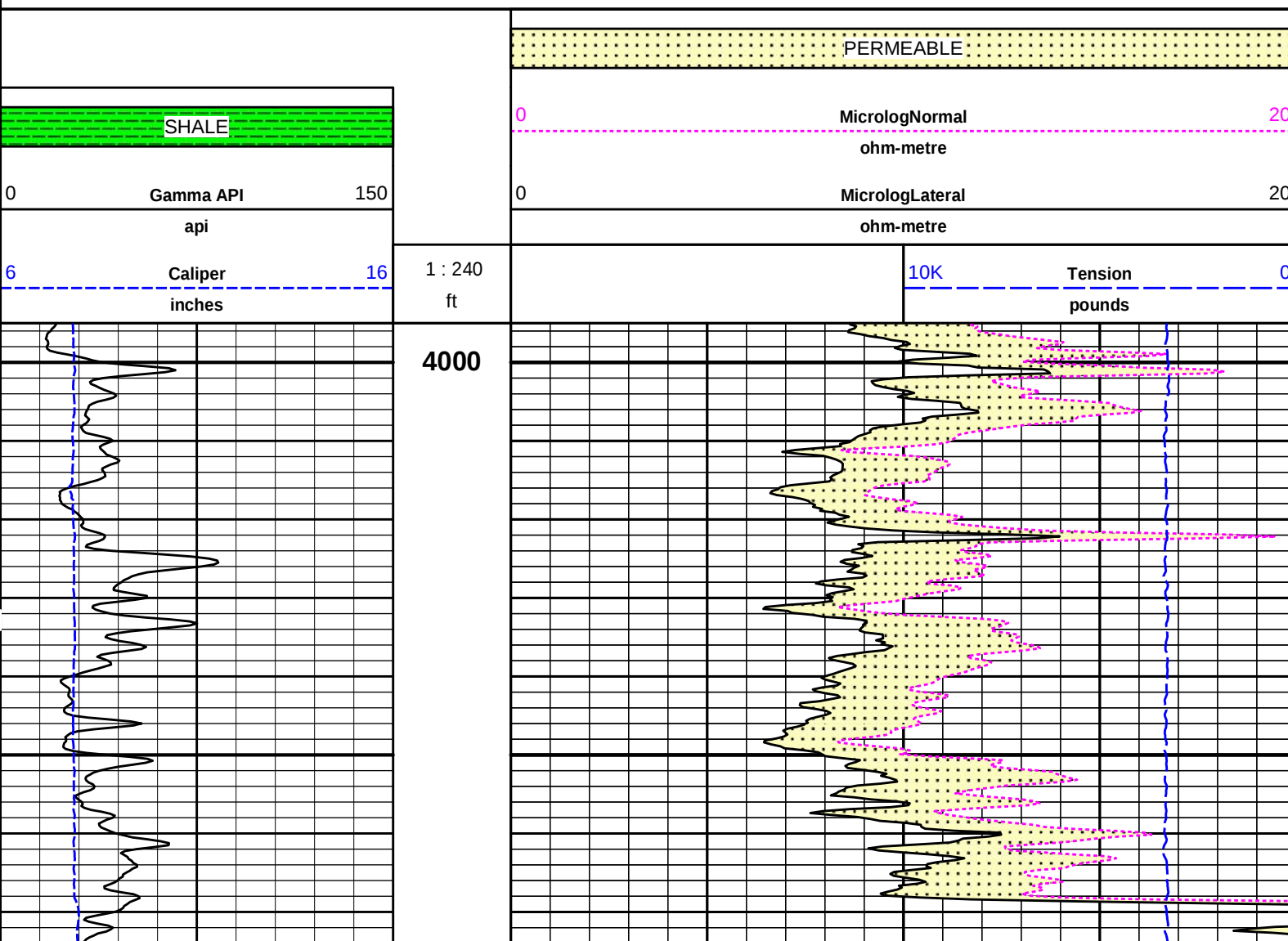
Plot Time: 01-Oct-17 16:01:58

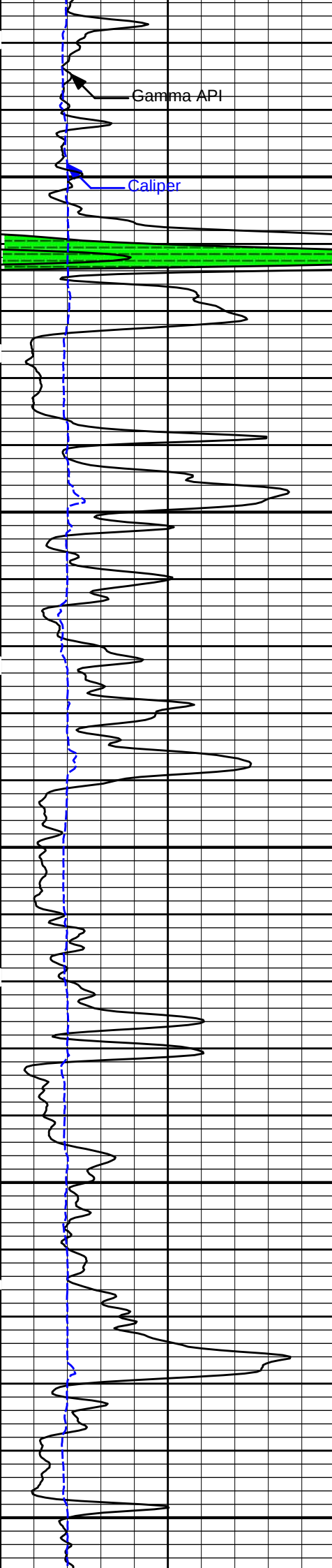
**Plot Range: 3995 ft to 5589.17 ft**

Data: MERIT\_KELLS I-1\Well Based\PORO\

Plot File: \\-LOCAL-\\MERIT\_KELLS I-1\\0001 GTET-DSN-SDL-FLX-BSAT-ACRT\\MICRO\\Microlog\_IQ\_5\_main

## 5 INCH MAIN LOG

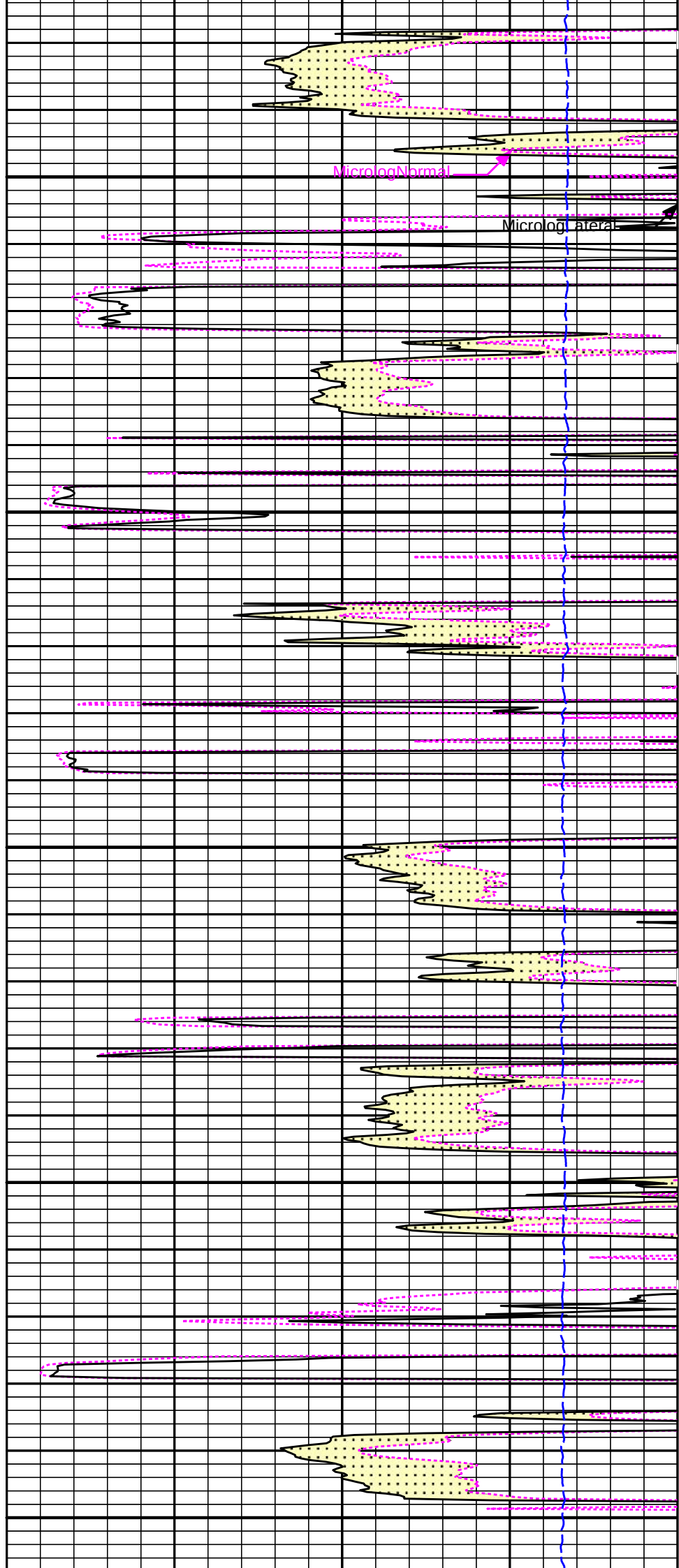


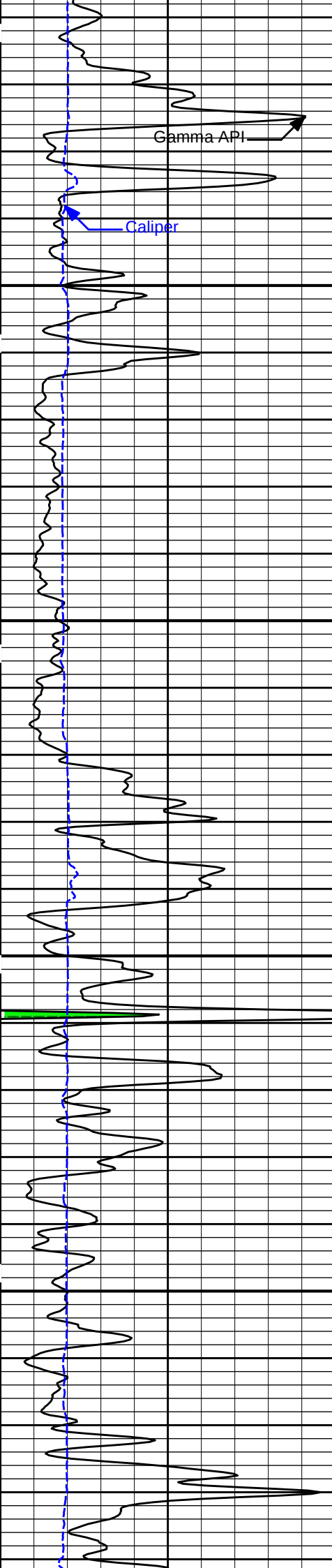


4100

4200

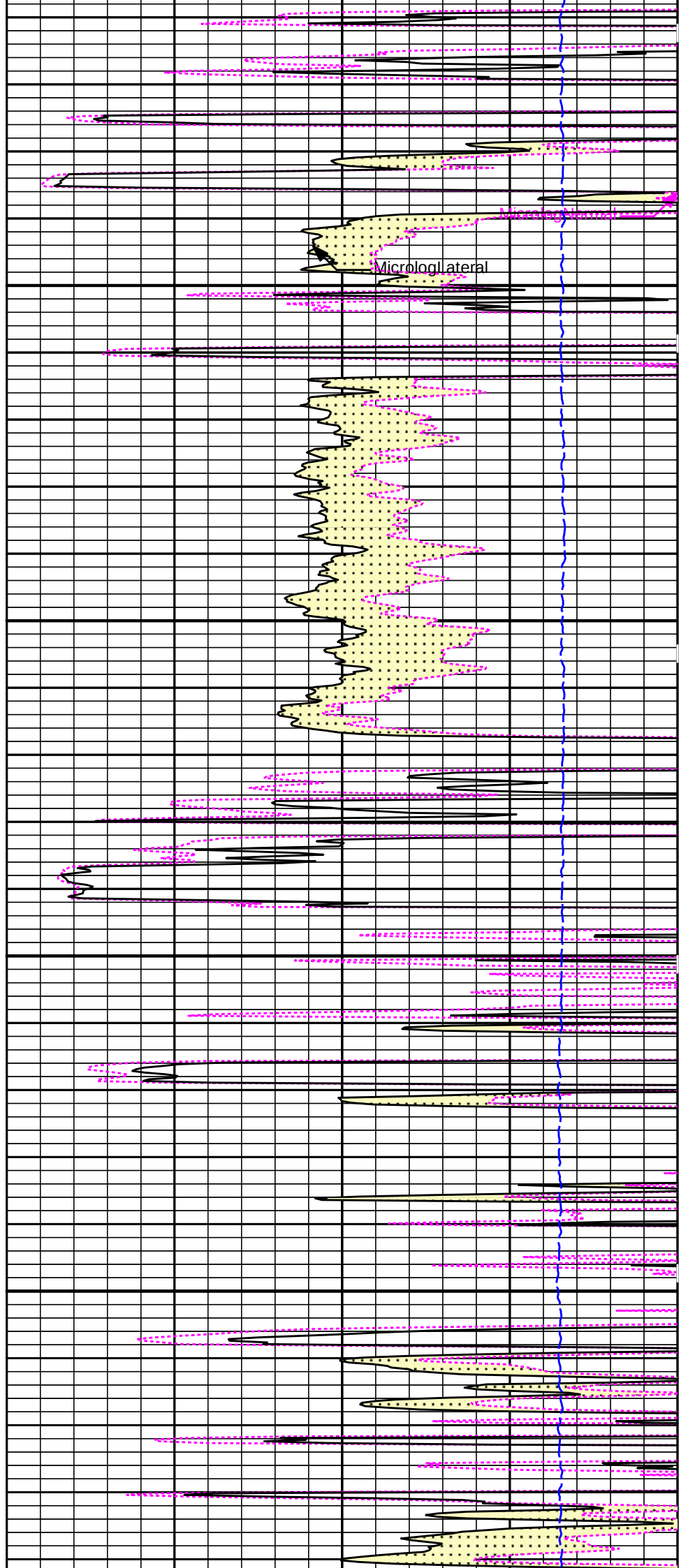
4300

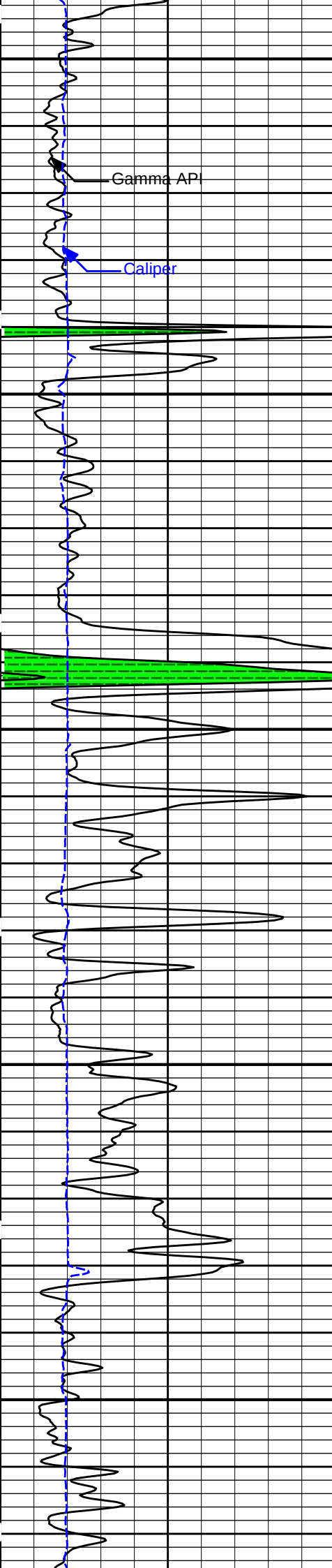




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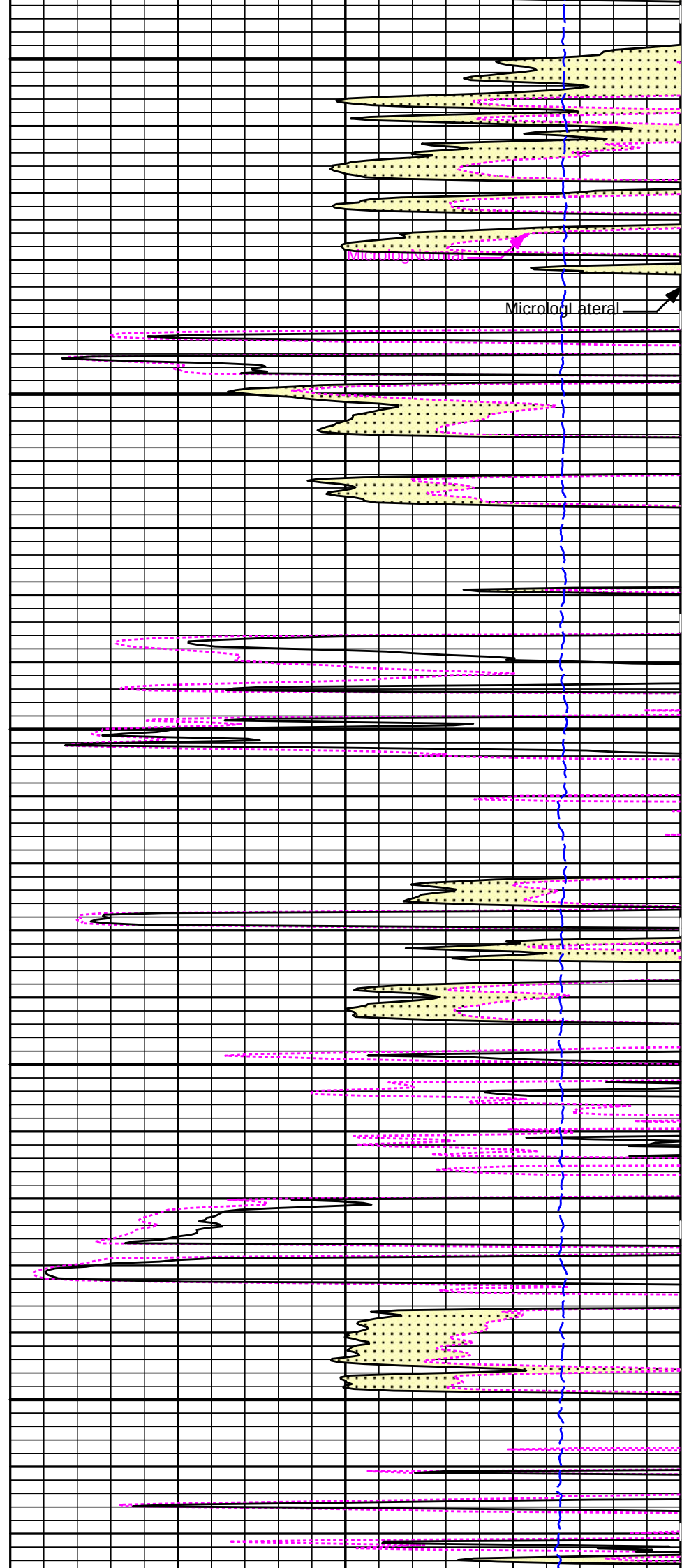
4500

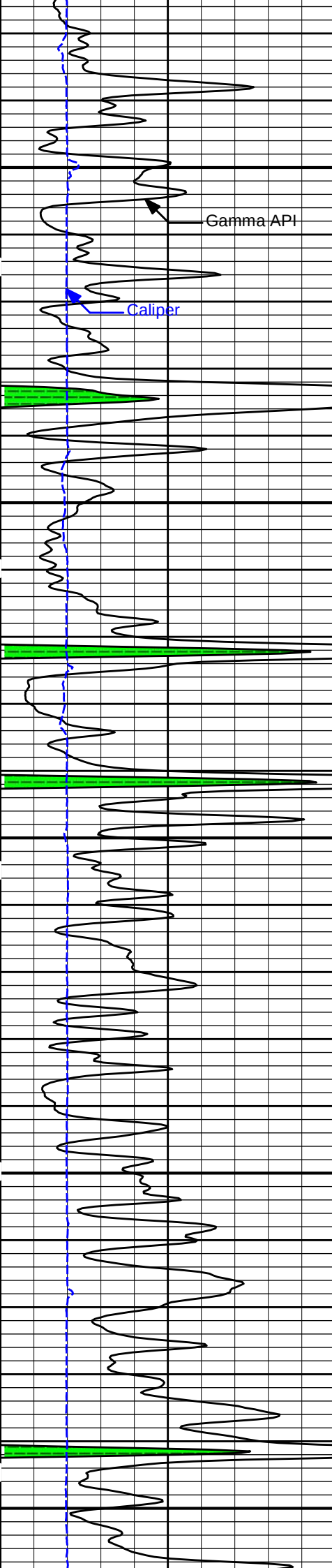




4600

4700





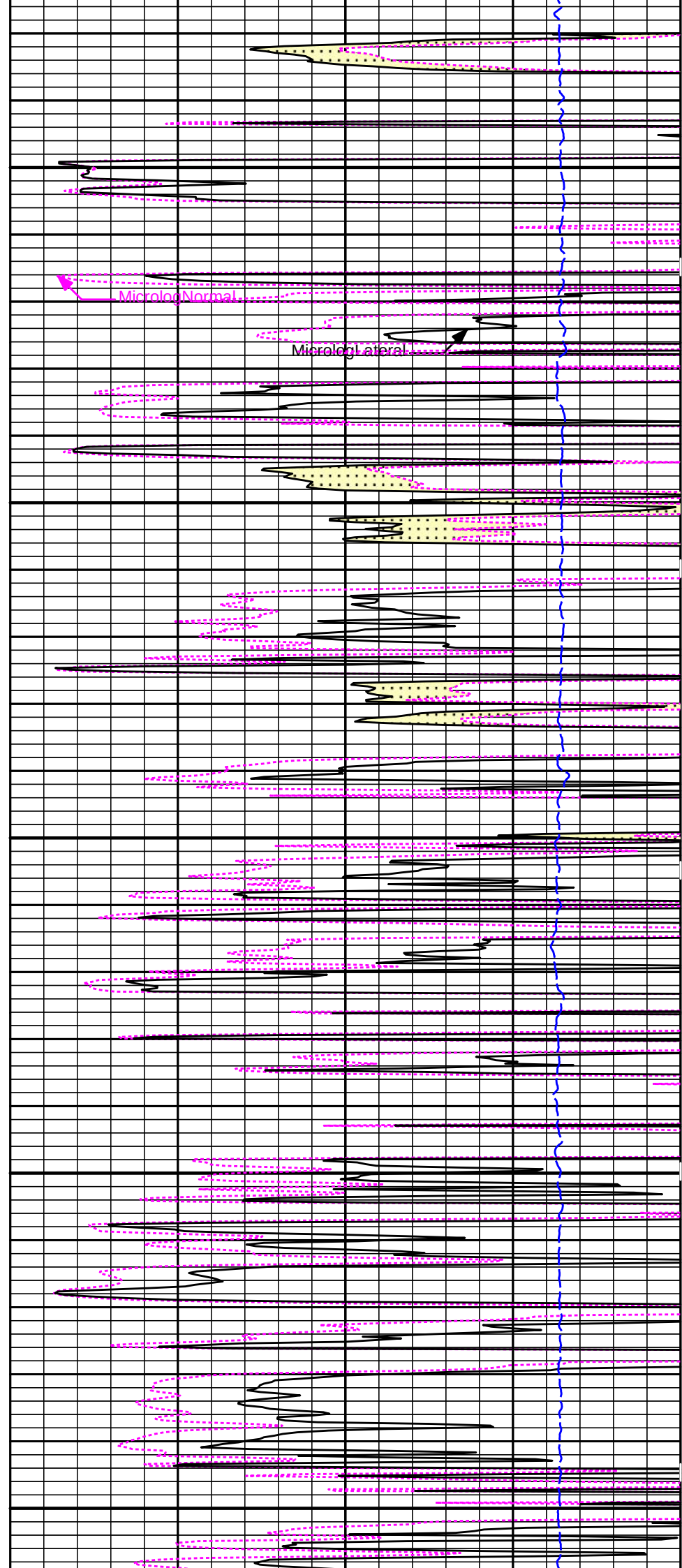
4800

Gamma API

Caliper

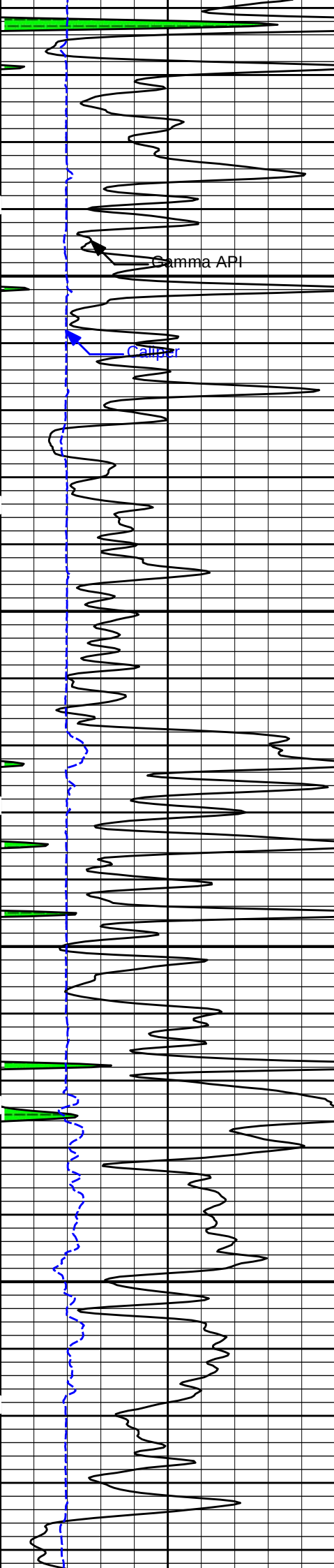
4900

5000



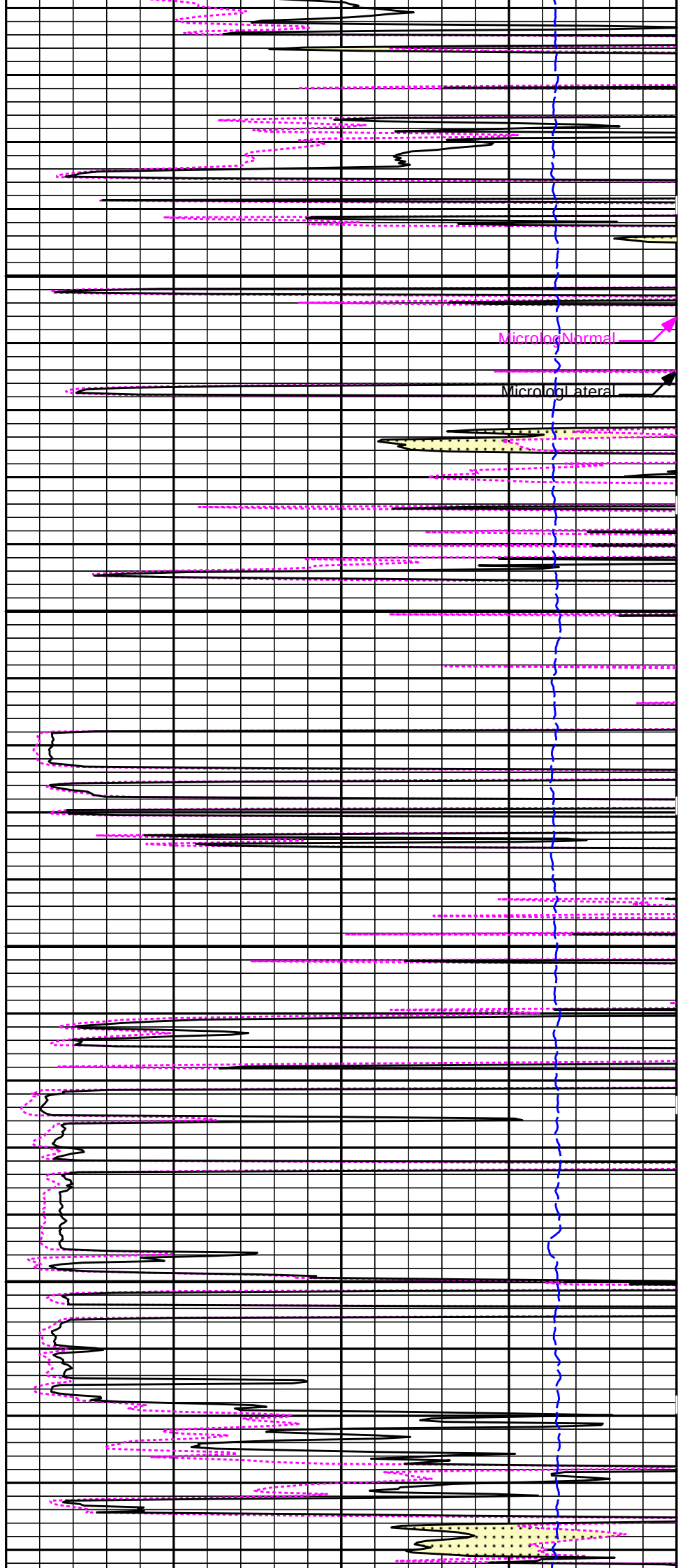
Microlog Normal

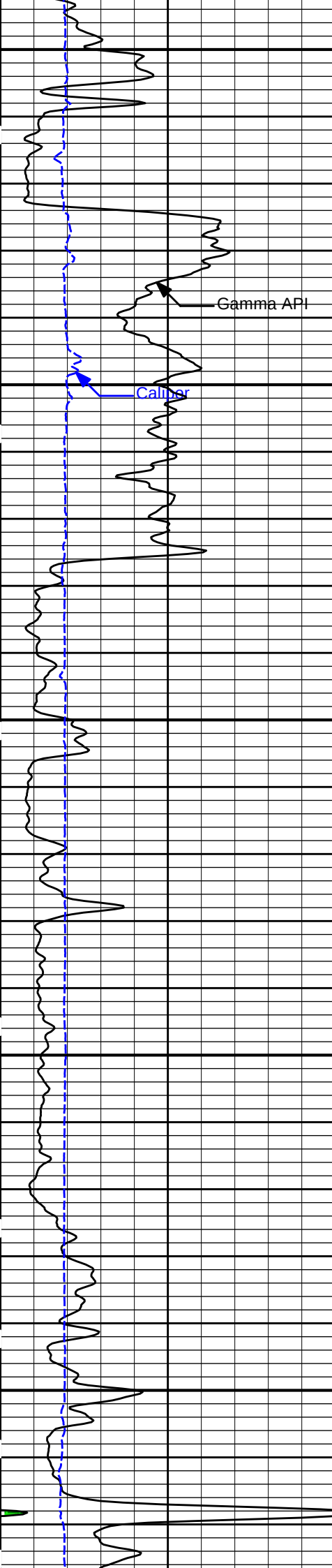
Microlog Lateral



5100

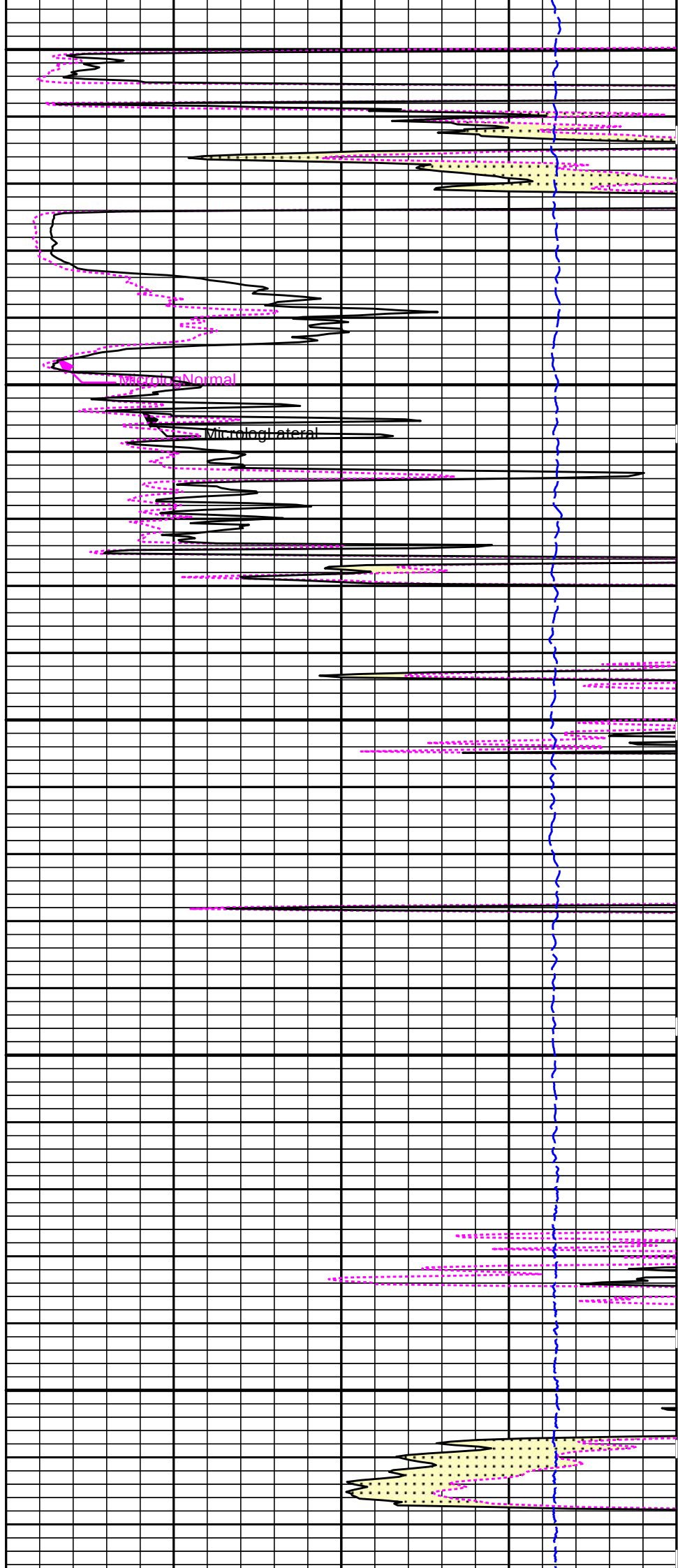
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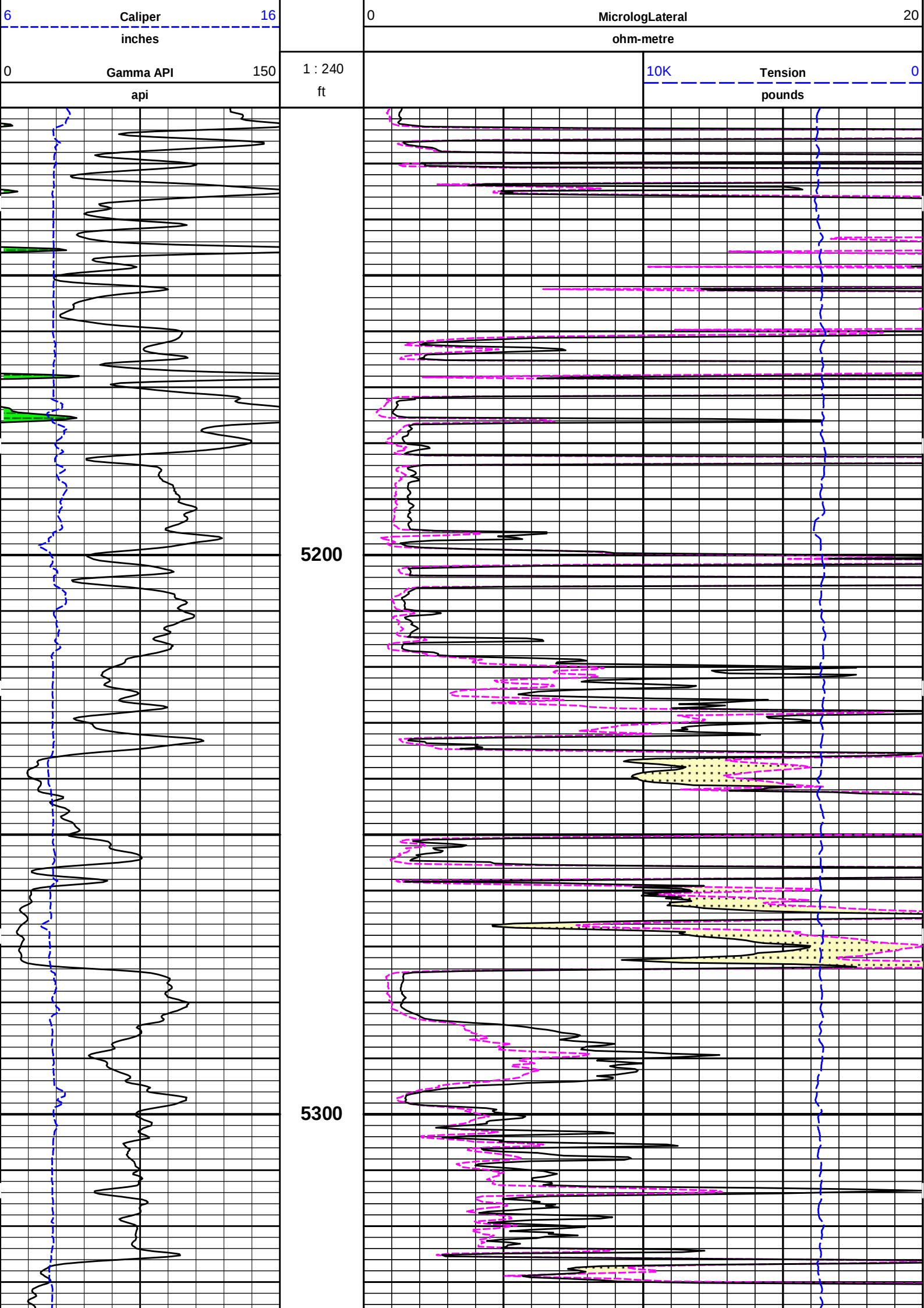


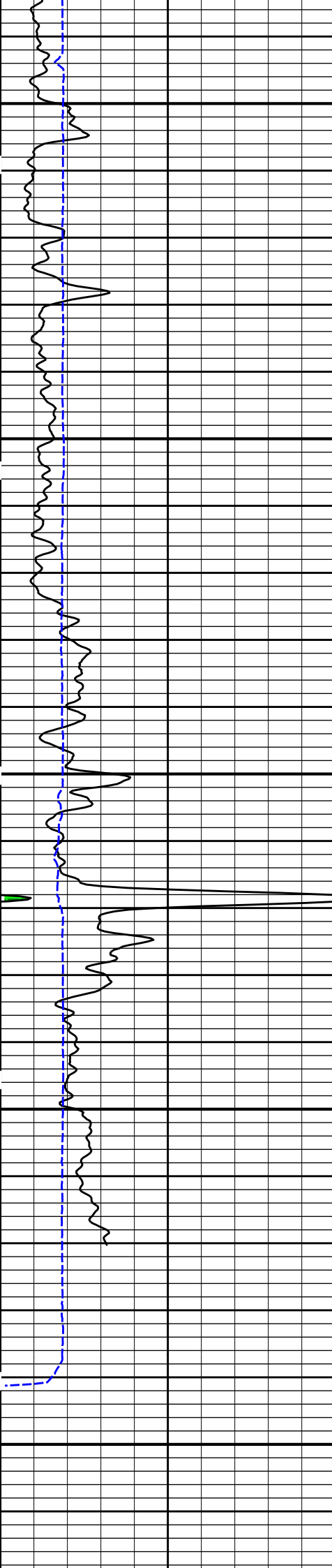
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5400



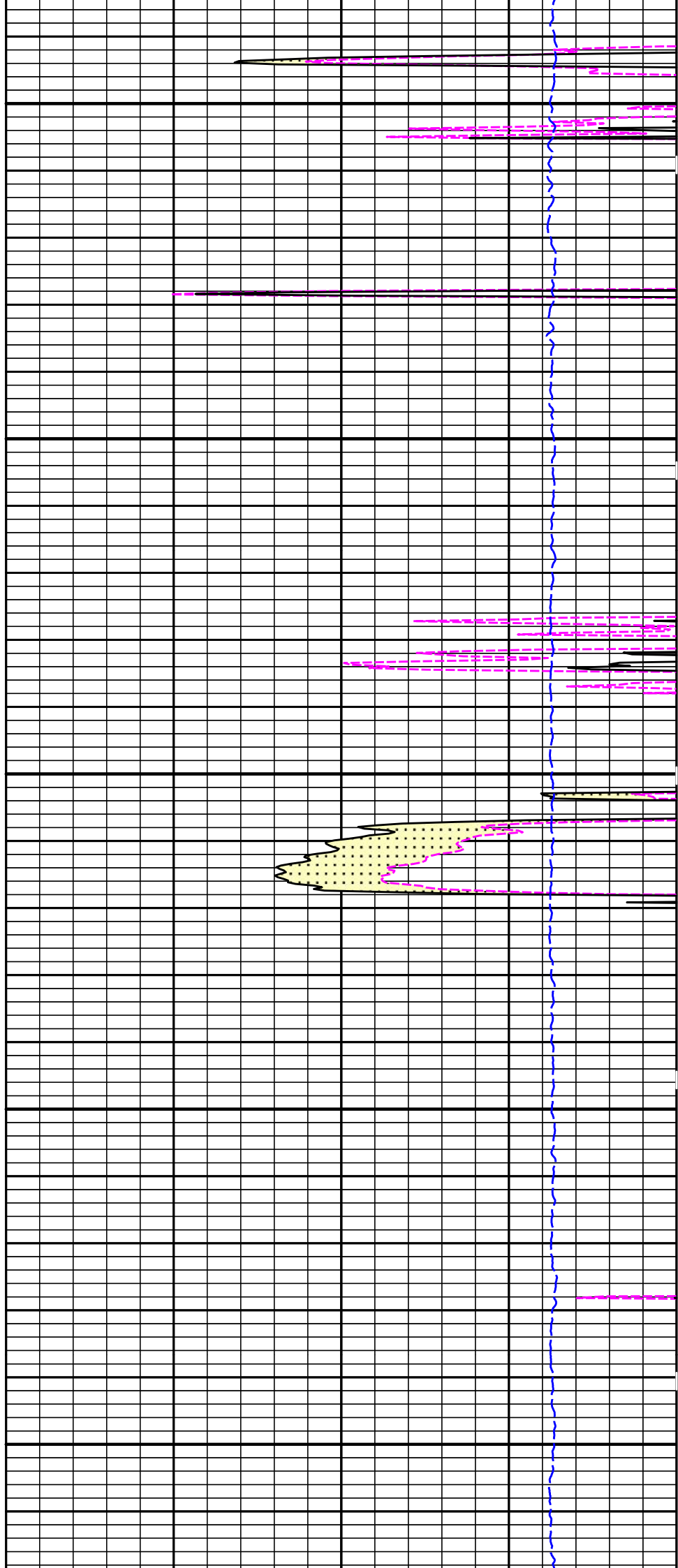


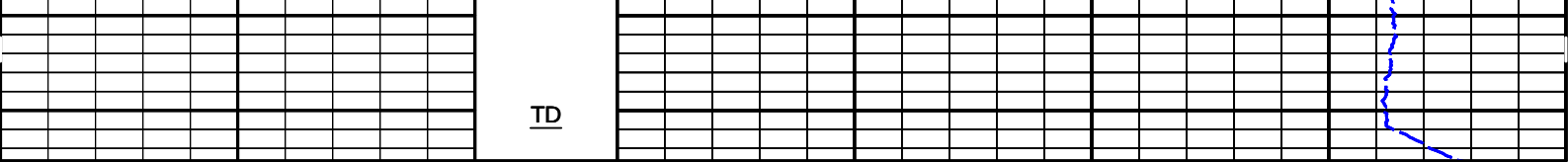




5400

5500





|           |  |  |  |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |
|-----------|--|--|--|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|
| TD        |  |  |  |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |
| 0         |  |  |  |  |  |  |  |  |  | 10K             |  |  |  |  |  |  |  |  |  |
| Gamma API |  |  |  |  |  |  |  |  |  | Tension         |  |  |  |  |  |  |  |  |  |
| 150       |  |  |  |  |  |  |  |  |  | 0               |  |  |  |  |  |  |  |  |  |
| api       |  |  |  |  |  |  |  |  |  | pounds          |  |  |  |  |  |  |  |  |  |
| 6         |  |  |  |  |  |  |  |  |  | 20              |  |  |  |  |  |  |  |  |  |
| Caliper   |  |  |  |  |  |  |  |  |  | MicrologLateral |  |  |  |  |  |  |  |  |  |
| 16        |  |  |  |  |  |  |  |  |  | ohm-metre       |  |  |  |  |  |  |  |  |  |
| inches    |  |  |  |  |  |  |  |  |  | 0               |  |  |  |  |  |  |  |  |  |
| SHALE     |  |  |  |  |  |  |  |  |  | MicrologNormal  |  |  |  |  |  |  |  |  |  |
|           |  |  |  |  |  |  |  |  |  | ohm-metre       |  |  |  |  |  |  |  |  |  |
|           |  |  |  |  |  |  |  |  |  | PERMEABLE       |  |  |  |  |  |  |  |  |  |
|           |  |  |  |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |

HALLIBURTON

Plot Time: 01-Oct-17 16:02:02  
Plot Range: 5120 ft to 5585.33 ft  
Data: MERIT\_KELLS I-1\Well Based\REPEAT\  
Plot File: \\-LOCAL-MERIT\_KELLS I-1\0001 GTET-DSN-SDL-FLX-BSAT-ACRT\MICRO\Microlog\_IQ\_5\_rep

REPEAT SECTION

|             |                           |          |        |
|-------------|---------------------------|----------|--------|
| COMPANY     | MERIT ENERGY COMPANY, LLC |          |        |
| WELL        | KELLS I-1                 |          |        |
| FIELD       | WILDCAT                   |          |        |
| COUNTY      | HASKELL                   | STATE    | KANSAS |
| HALLIBURTON |                           | MICROLOG |        |