

HALLIBURTON

BOREHOLE COMPENSATED  
SONIC POROSITY  
DELTA-T  
LOG

|                                                 |  |  |  |                                   |  |  |  |
|-------------------------------------------------|--|--|--|-----------------------------------|--|--|--|
| COMPANY                                         |  |  |  | OXY USA INC.                      |  |  |  |
| WELL                                            |  |  |  | CORRELL A-1                       |  |  |  |
| FIELD                                           |  |  |  | LEMON NW                          |  |  |  |
| COUNTY                                          |  |  |  | HASKELL                           |  |  |  |
| STATE                                           |  |  |  | KANSAS                            |  |  |  |
| COMPANY                                         |  |  |  | OXY USA INC.                      |  |  |  |
| WELL                                            |  |  |  | CORRELL A-1                       |  |  |  |
| FIELD                                           |  |  |  | LEMON NW                          |  |  |  |
| COUNTY                                          |  |  |  | HASKELL                           |  |  |  |
| STATE                                           |  |  |  | KANSAS                            |  |  |  |
| API No. 15-081-21955                            |  |  |  | Other Services: SDLT/DSNT/ML ACrt |  |  |  |
| Location 2215' FNL & 1110' FWL                  |  |  |  |                                   |  |  |  |
| Permanent Datum GL                              |  |  |  | Elev.: K.B. 2976.0 ft             |  |  |  |
| Log measured from KB                            |  |  |  | D.F. 2975.0 ft                    |  |  |  |
| Drilling measured from KB                       |  |  |  | G.L. 2965.0 ft                    |  |  |  |
| Date 19-Jul-11                                  |  |  |  |                                   |  |  |  |
| Run No. 2                                       |  |  |  |                                   |  |  |  |
| Depth - Driller 5587.00 ft                      |  |  |  |                                   |  |  |  |
| Depth - Logger 4407.0 ft                        |  |  |  |                                   |  |  |  |
| Bottom - Logged Interval 5540                   |  |  |  |                                   |  |  |  |
| Top - Logged Interval 1825                      |  |  |  |                                   |  |  |  |
| Casing - Driller 8.625 in @ 1821.0 ft           |  |  |  | @                                 |  |  |  |
| Casing - Logger 1825.0 ft                       |  |  |  |                                   |  |  |  |
| Bit Size 7.875 in                               |  |  |  | @                                 |  |  |  |
| Type Fluid in Hole WATER BASED MUD              |  |  |  |                                   |  |  |  |
| Density 8.7 ppg                                 |  |  |  | 65.00 s/qt                        |  |  |  |
| PH 10.20 pH                                     |  |  |  | 7.2 cpm                           |  |  |  |
| Source of Sample FLOWLINE                       |  |  |  |                                   |  |  |  |
| Rm @ Meas. Temperature 1.900 ohmm @ 75.00 degF  |  |  |  | @                                 |  |  |  |
| Rmf @ Meas. Temperature 1.40 ohmm @ 75.00 degF  |  |  |  | @                                 |  |  |  |
| Rmc @ Meas. Temperature 2.200 ohmm @ 75.00 degF |  |  |  | @                                 |  |  |  |
| Source Rmf Rmc                                  |  |  |  | CALC                              |  |  |  |
| Rm @ BHT 1.20 ohmm @ 123.0 degF                 |  |  |  | @                                 |  |  |  |
| Time Since Circulation 7.0 hr                   |  |  |  |                                   |  |  |  |
| Time on Bottom 19-Jul-11 05:00                  |  |  |  |                                   |  |  |  |
| Max. Rec. Temperature 123.0 degF @ 4407.0 ft    |  |  |  | @                                 |  |  |  |
| Equipment 11230660                              |  |  |  | PV OK                             |  |  |  |
| Recorded By T. HARRIS                           |  |  |  |                                   |  |  |  |
| Witnessed By A. GARNER                          |  |  |  | B. KEMP                           |  |  |  |
|                                                 |  |  |  | N. HAILEY                         |  |  |  |

API No. 15-081-21955  
Location 2215 FNL & 1110 FWL

Other Services:  
SDLT/DSNT/MIL  
ACR1

Fold here

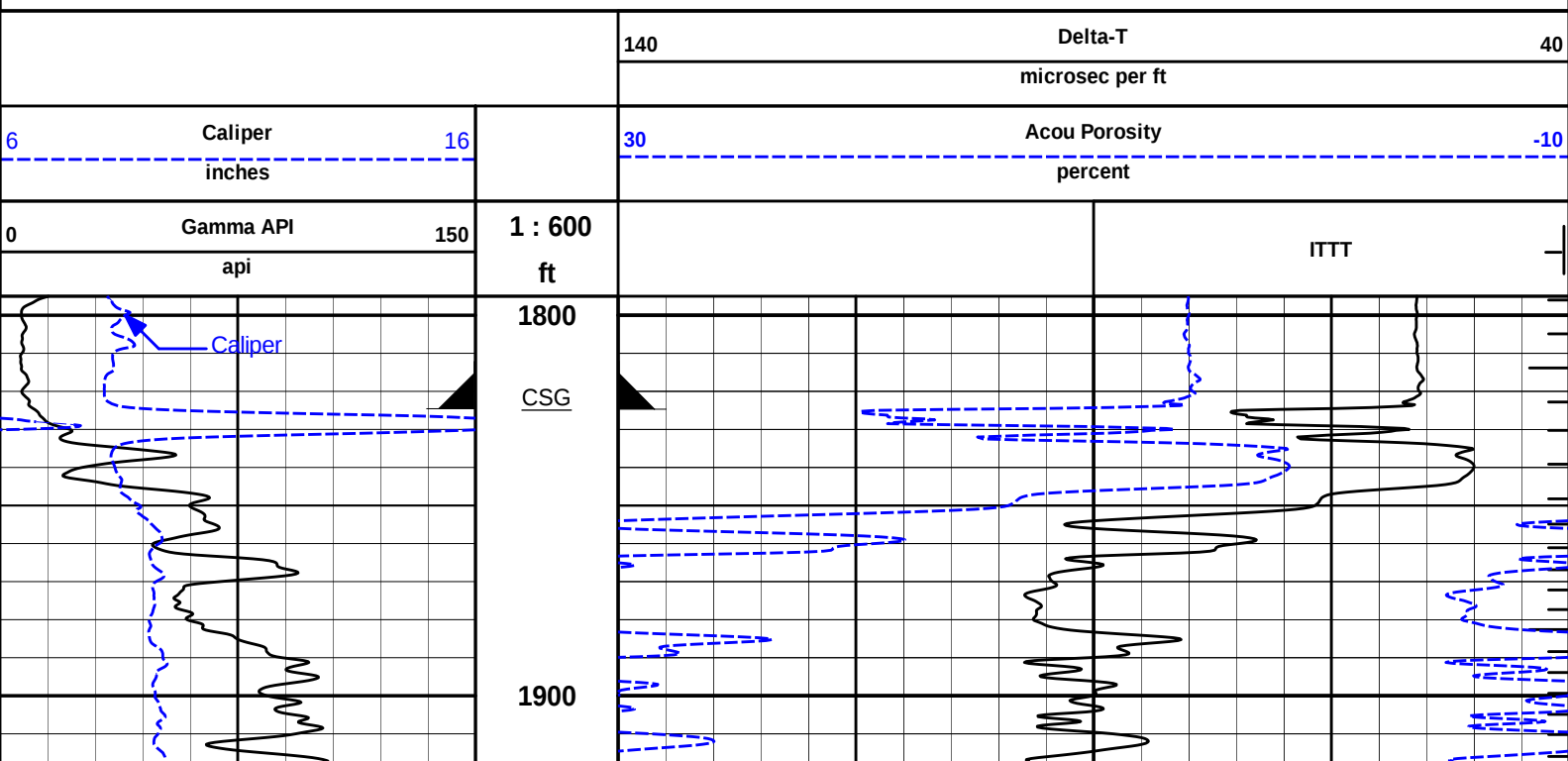
|                                         |  |            |  |   |  |                              |  |          |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
|-----------------------------------------|--|------------|--|---|--|------------------------------|--|----------|--|--|--|-----------------------------------------|--|-----------------|--|---------------|--|-------------|--|-----------------|--|-----------|--|--|--|-------|--|--|--|
| Service Ticket No.: 8334652             |  |            |  |   |  | API Serial No.: 15-081-21955 |  |          |  |  |  | PGM Version: WL INSITE R3.2.3 (Build 5) |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| 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-910-987    |  |               |  | NA          |  |                 |  | 1.5" S.O. |  |  |  | NA    |  |  |  |
| Rmc @ Meas. Temp.                       |  |            |  | @ |  |                              |  | @        |  |  |  | ONE                                     |  | MICROLOG        |  |               |  | SLIM        |  |                 |  | ADJ.      |  |  |  | NA    |  |  |  |
| Source Rmf                              |  | Rmc        |  |   |  |                              |  |          |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| 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.                              |  | 11013114   |  |   |  | Serial No.                   |  | 10939049 |  |  |  | Serial No.                              |  | I15M94P73       |  |               |  | Serial No.  |  | 10993115        |  |           |  |  |  |       |  |  |  |
| Model No.                               |  | GTET       |  |   |  | Model No.                    |  | BSAT     |  |  |  | Model No.                               |  | SDLT            |  |               |  | Model No.   |  | DSNT            |  |           |  |  |  |       |  |  |  |
| Diameter                                |  | 3.625"     |  |   |  | No. of Cent.                 |  | 2        |  |  |  | Diameter                                |  | 4.75"           |  |               |  | Diameter    |  | 3.625"          |  |           |  |  |  |       |  |  |  |
| Detector Model No.                      |  | 102-A      |  |   |  | Spacing                      |  | 2        |  |  |  | Log Type                                |  | GAM-GAM         |  |               |  | Log Type    |  | NEU-NEU         |  |           |  |  |  |       |  |  |  |
| Type                                    |  | SCINT.     |  |   |  |                              |  |          |  |  |  | Source Type                             |  | Cs137           |  |               |  | Source Type |  | Am241Be         |  |           |  |  |  |       |  |  |  |
| Length                                  |  | 8"         |  |   |  | LSA [Y/N]                    |  | Y        |  |  |  | Serial No.                              |  | 20791B          |  |               |  | Serial No.  |  | 382             |  |           |  |  |  |       |  |  |  |
| Distance to Source                      |  | 9.4'       |  |   |  | FWDA [Y/N ]                  |  | N        |  |  |  | Strength                                |  | 1.5 Ci          |  |               |  | Strength    |  | 15 Ci           |  |           |  |  |  |       |  |  |  |

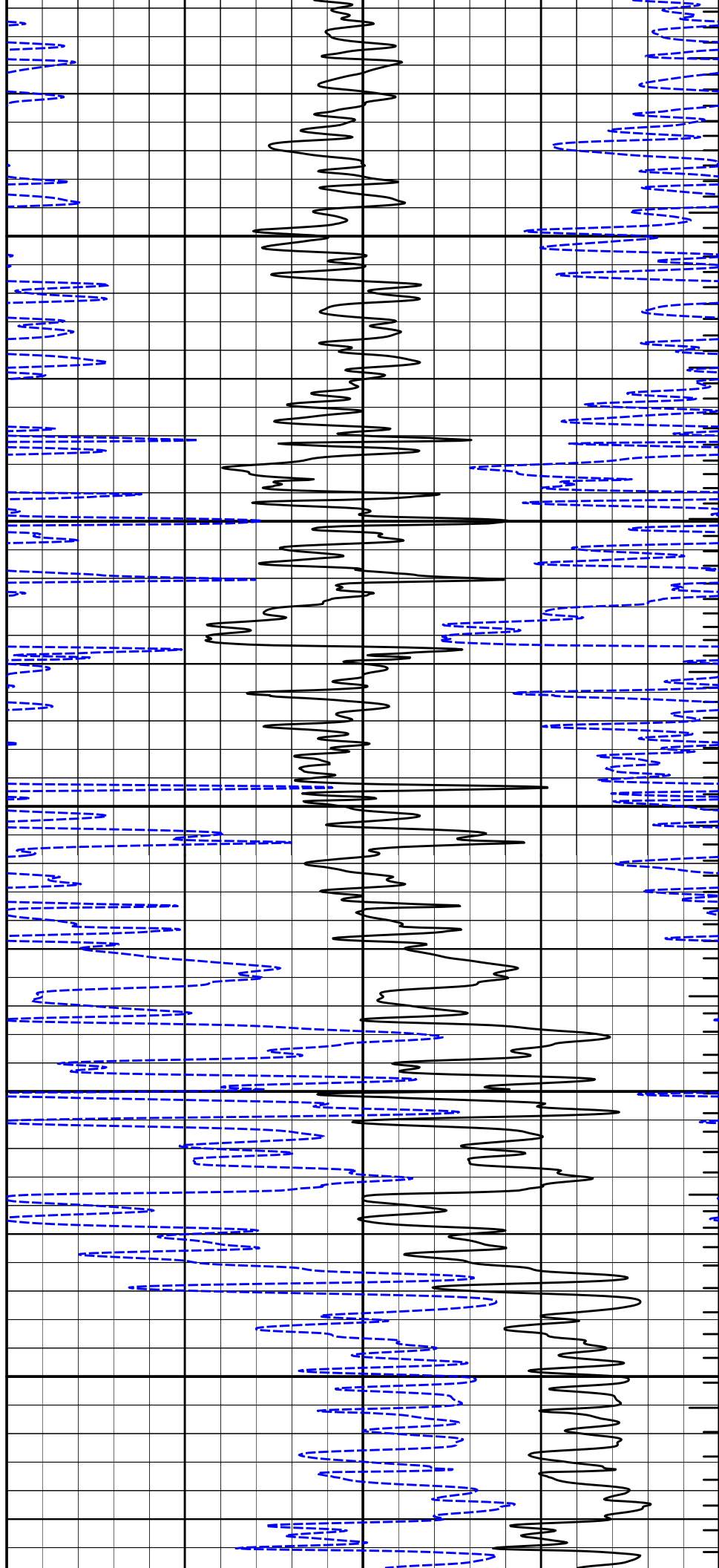
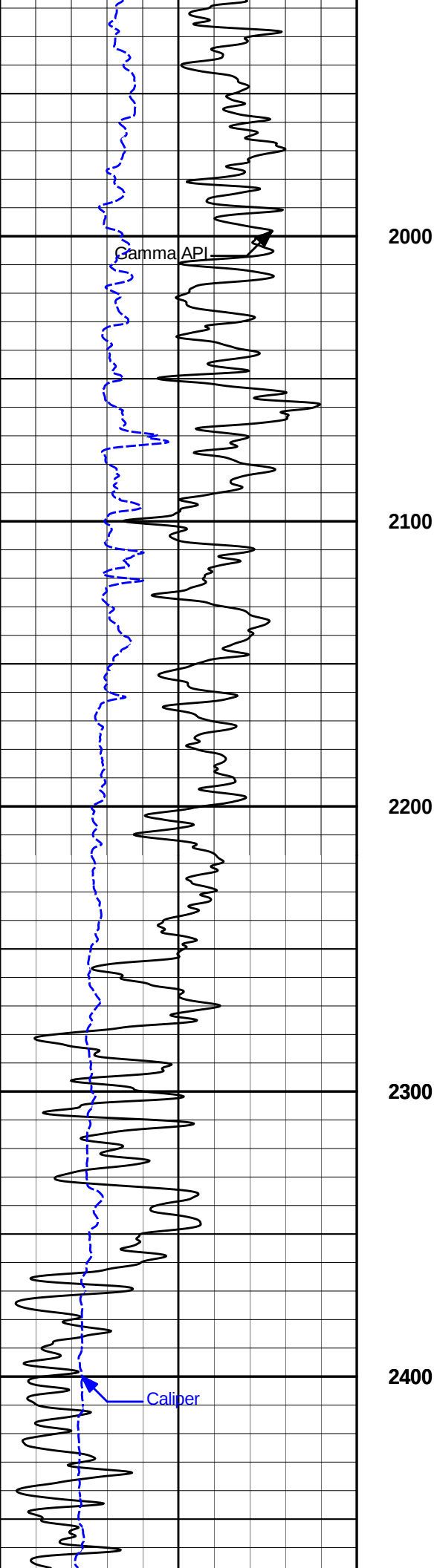
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |     | 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      | 40    | 140     | 47.6   | 30%     | -10% | 2.71   | 30%   | -10% | LIME   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| DIRECTIONAL INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| Maximum Deviation @                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |     |        |       |          |       |         | KOP @  |         |      |        |       |      |        |
| Remarks:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| ACRt, BSAT, SDLT/DSNT/ML AND GAMMA ALL RAN IN COMBINATION; THIS IS THE FIRST RUN IN WELL.                                                                                                                                                                                                                                                                                                                                                                                                               |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| ALL PRESENTATIONS AND LOG INTERVALS PER CUSTOMER REQUEST.                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| CHLORIDES: 1200 ppm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| LOG SPLICED WITH FIRST RUN AT 4330'                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| CREW: NETTLES, SUMNER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| THANK YOU FOR USING HALLIBURTON ENERGY SERVICES.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |       |     |        |       |          |       |         |        |         |      |        |       |      |        |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |     |        |       |          |       |         |        |         |      |        |       |      |        |

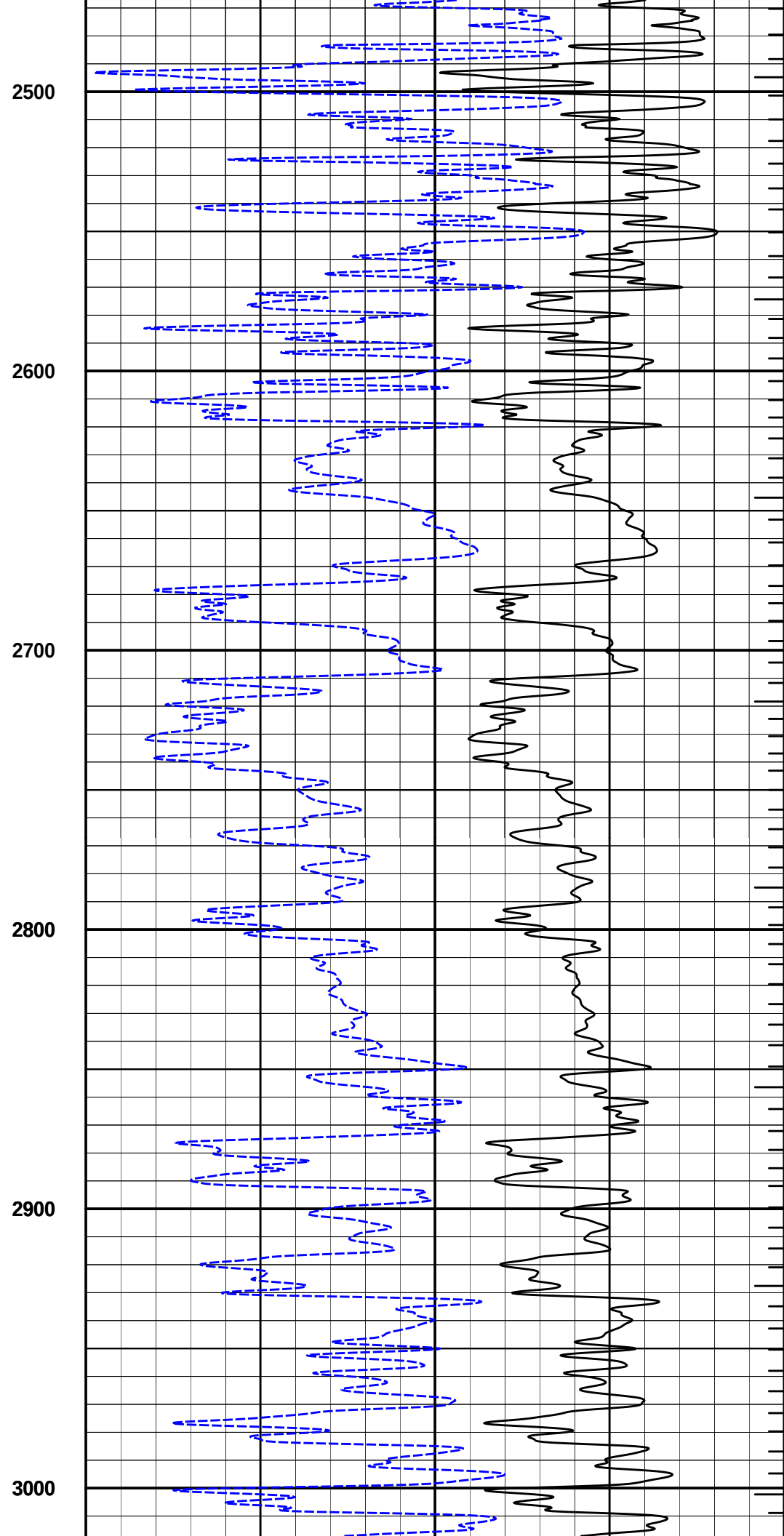
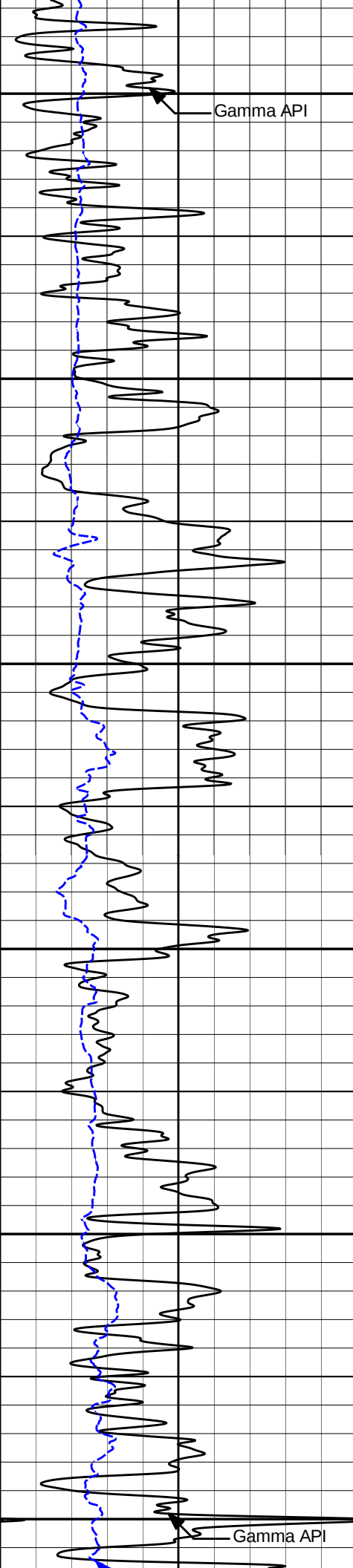
# HALLIBURTON

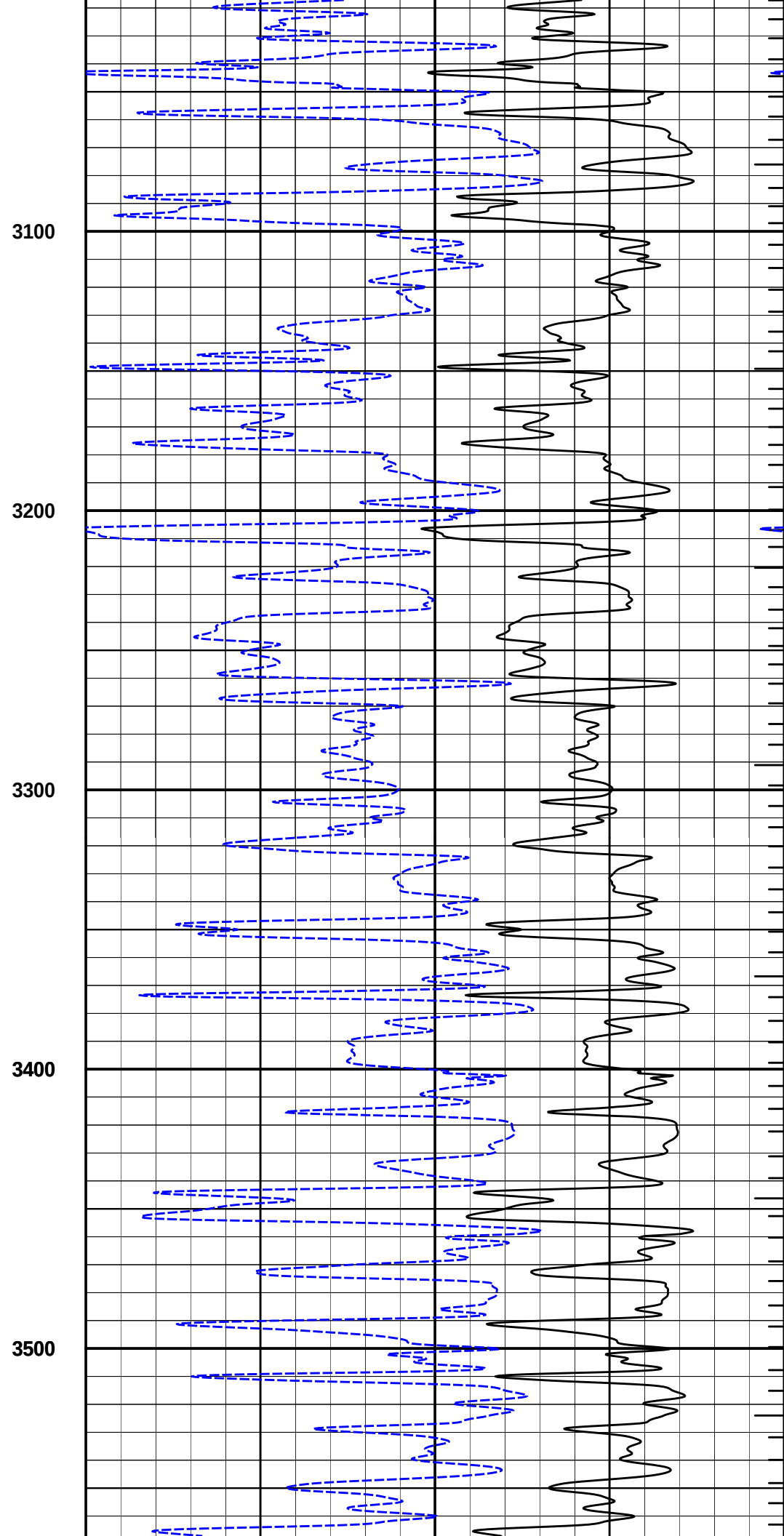
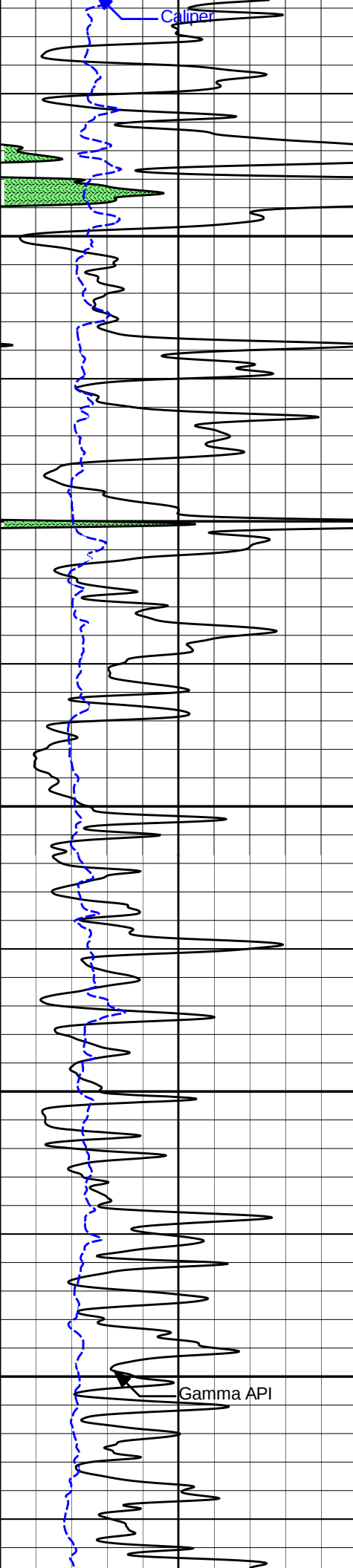
Plot Time: 20-Jul-11 10:30:43  
Plot Range: 1795 ft to 5540.5 ft  
Data: CORRELL\_A\_1\Well Based\MAIN\_SPLICEI  
Plot File: \\BSAT\1\_BSAT\_2.inx

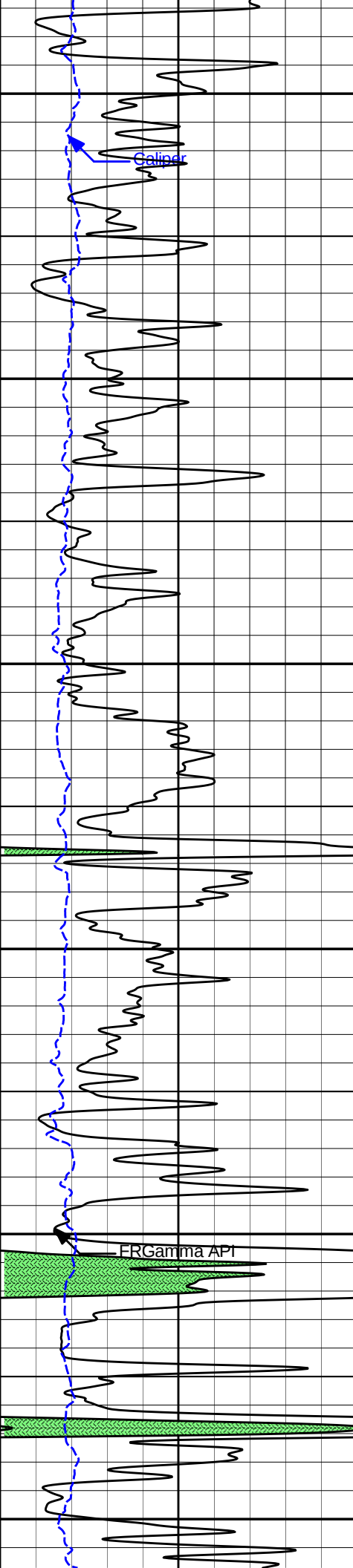
## 2 INCH MAIN LOG











3600

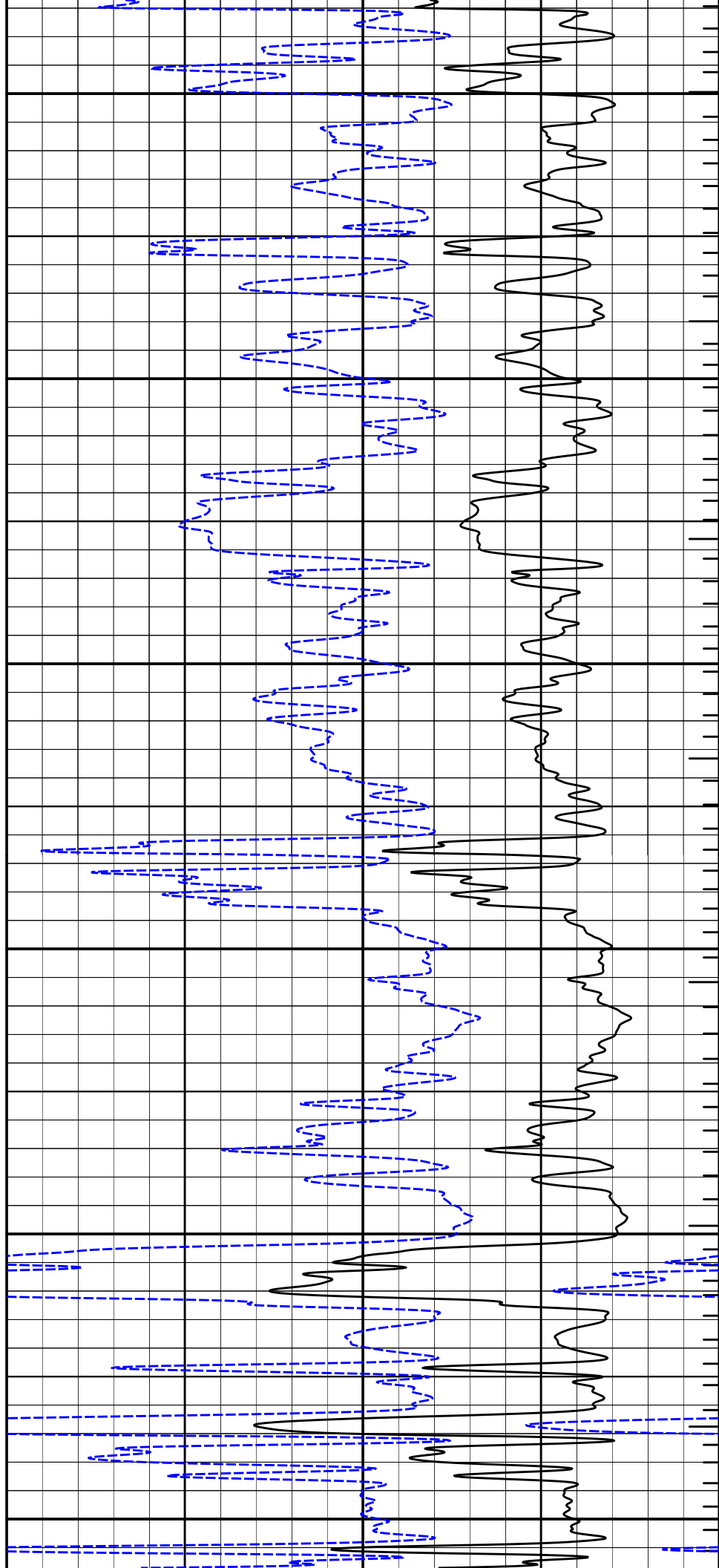
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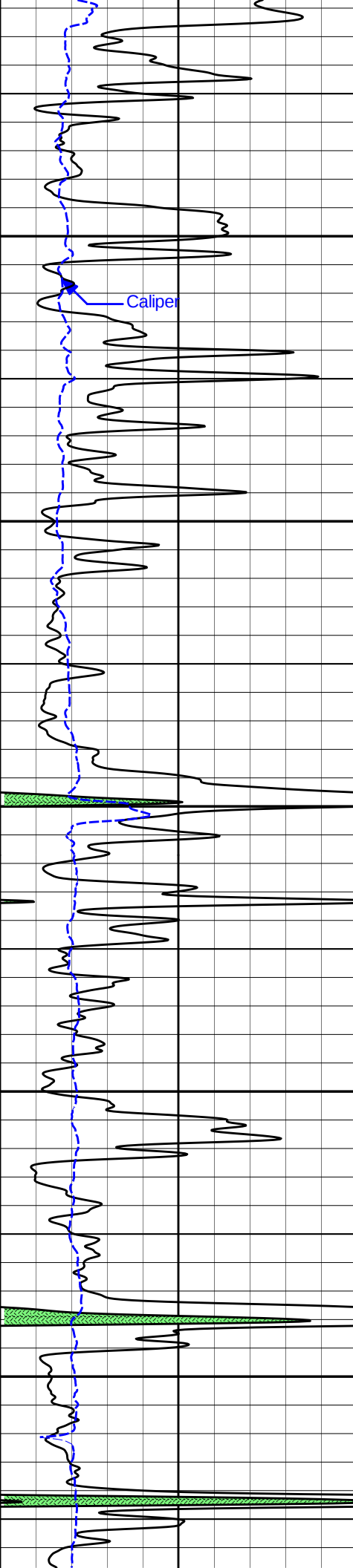
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3900

4000

4100





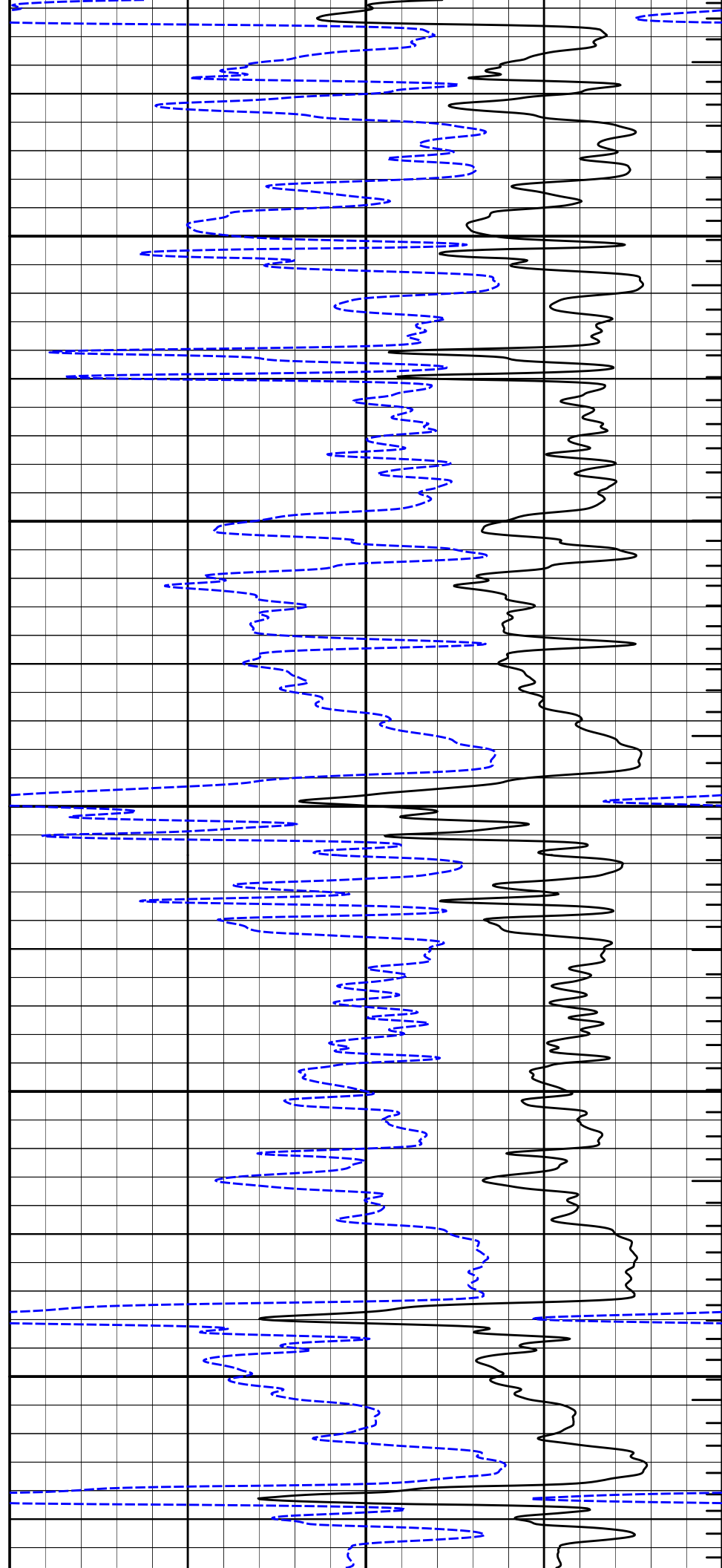
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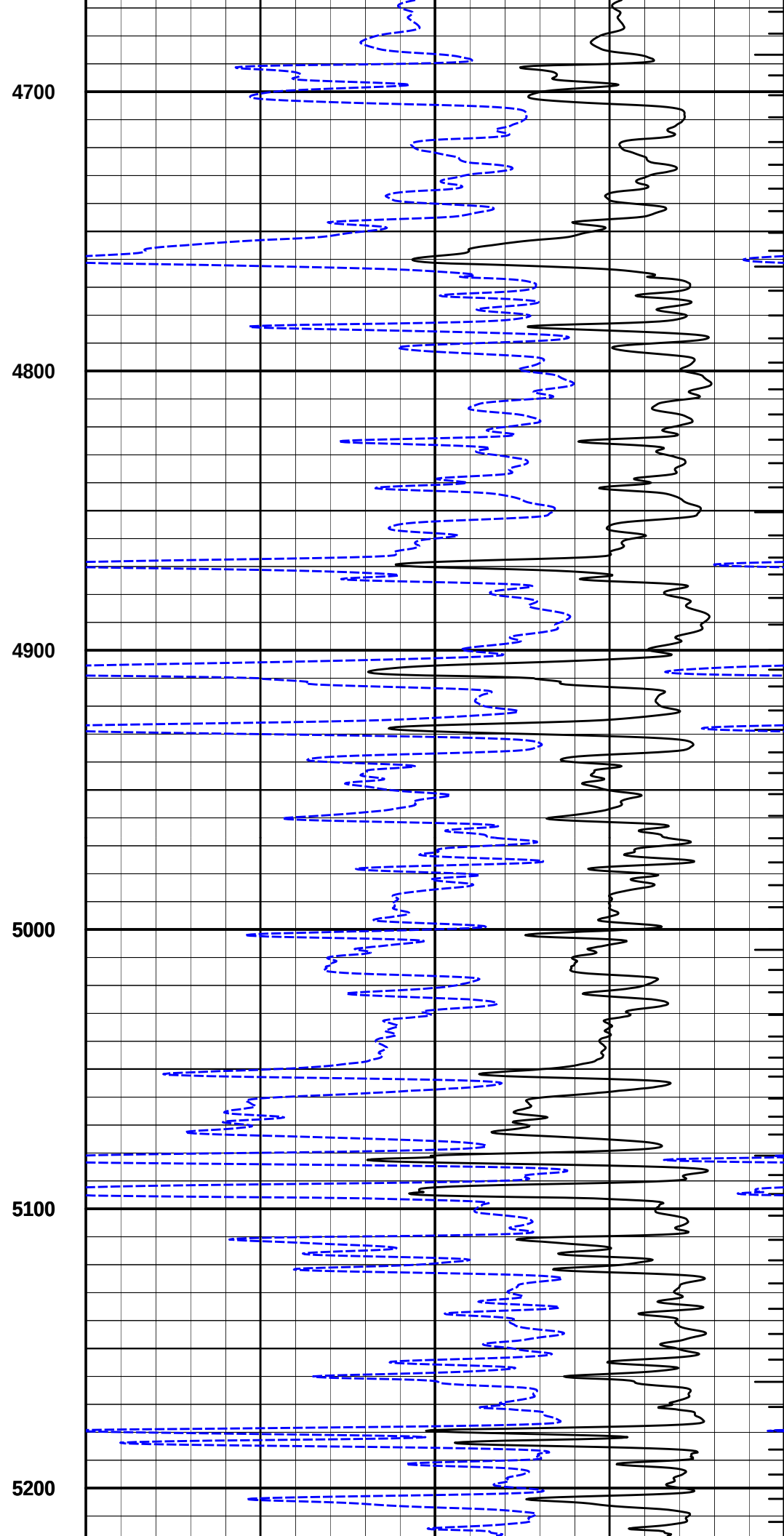
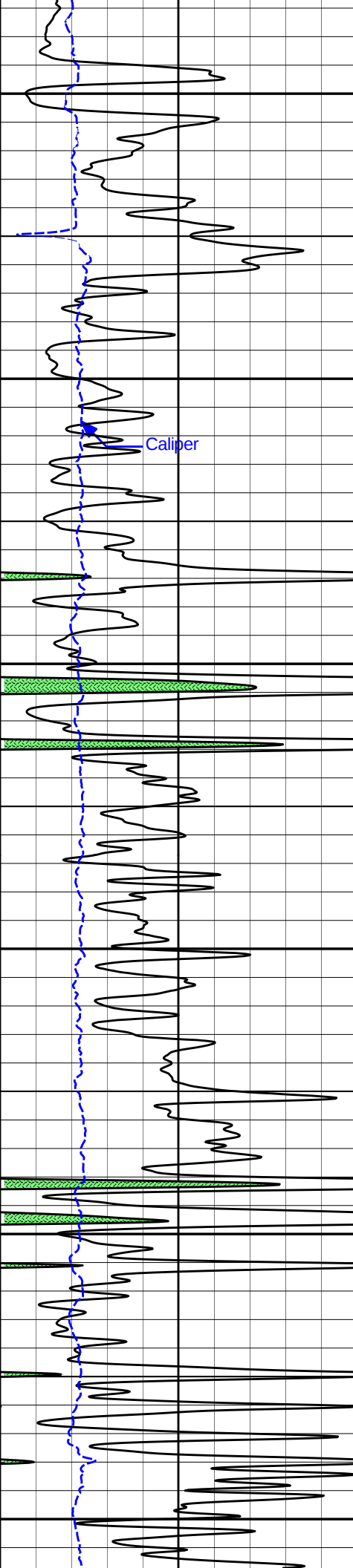
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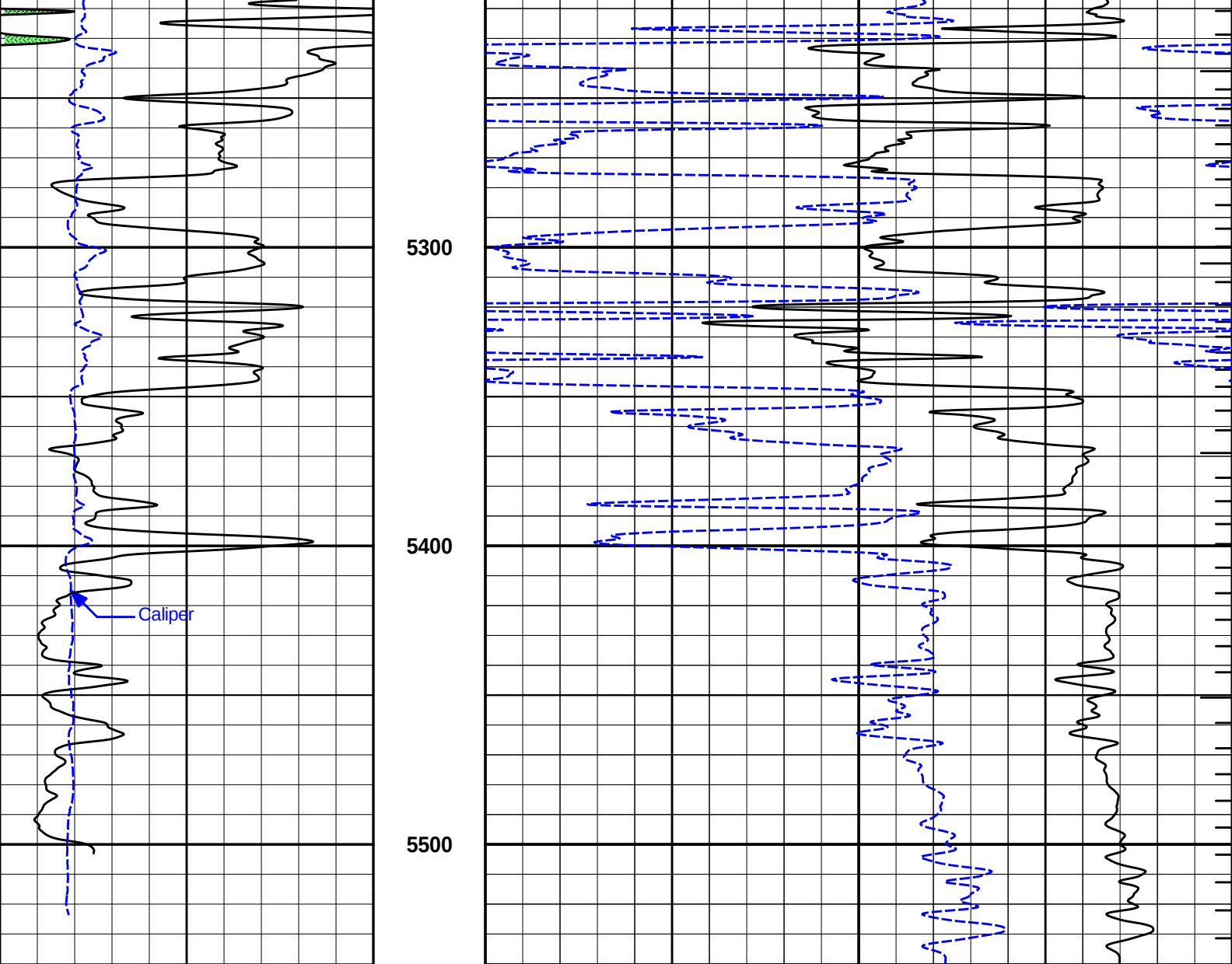
4400

4500

4600







|   |           |     |         |     |                 |
|---|-----------|-----|---------|-----|-----------------|
| 0 | Gamma API | 150 | 1 : 600 |     | ITTT            |
|   | api       |     | ft      |     |                 |
| 6 | Caliper   | 16  |         | 30  | Acou Porosity   |
|   | inches    |     |         |     | percent         |
|   |           |     |         | 140 | Delta-T         |
|   |           |     |         |     | microsec per ft |
|   |           |     |         |     | 40              |

**HALLIBURTON**

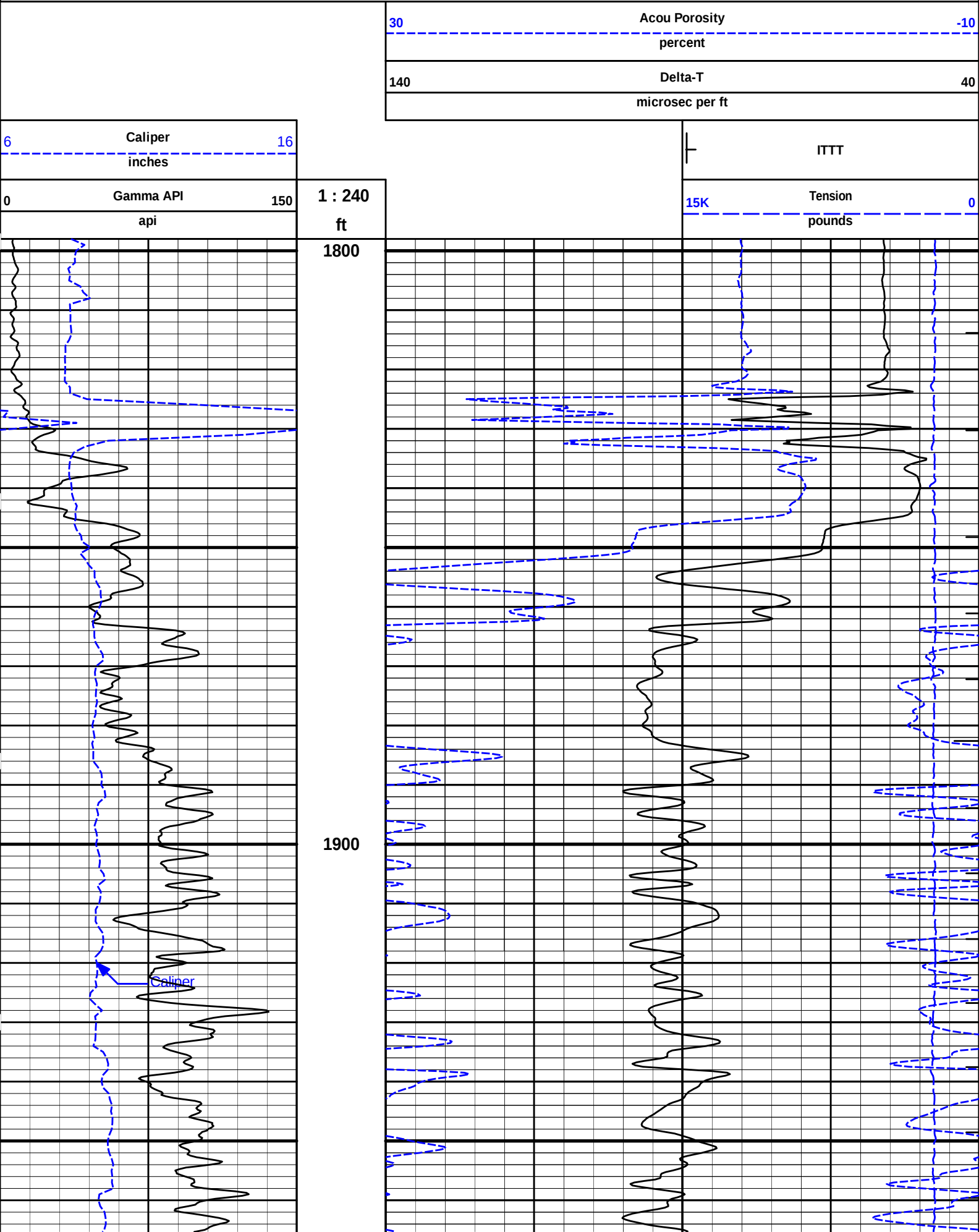
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Data: CORRELL\_A\_1Well Based\MAIN\_SPLICE\  
Plot File: \BSAT1\_BSAT\_2inx

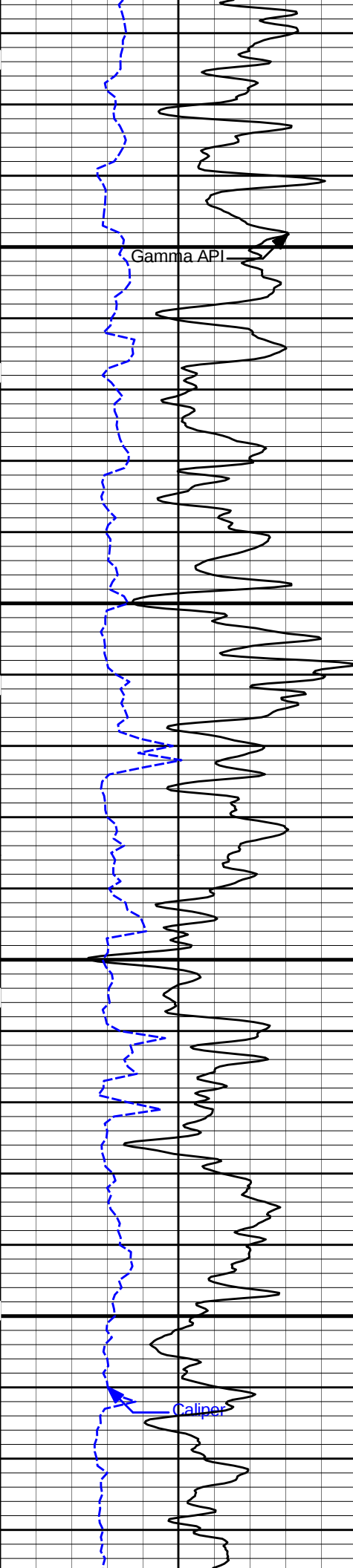
## 2 INCH MAIN LOG

**HALLIBURTON**

Plot Time: 20-Jul-11 10:30:46  
Plot Range: 1798 ft to 5568 ft  
Data: CORRELL\_A\_1Well Based\MAIN\_SPLICE\  
Plot File: \BSAT1\_BSAT\_5\_mainx

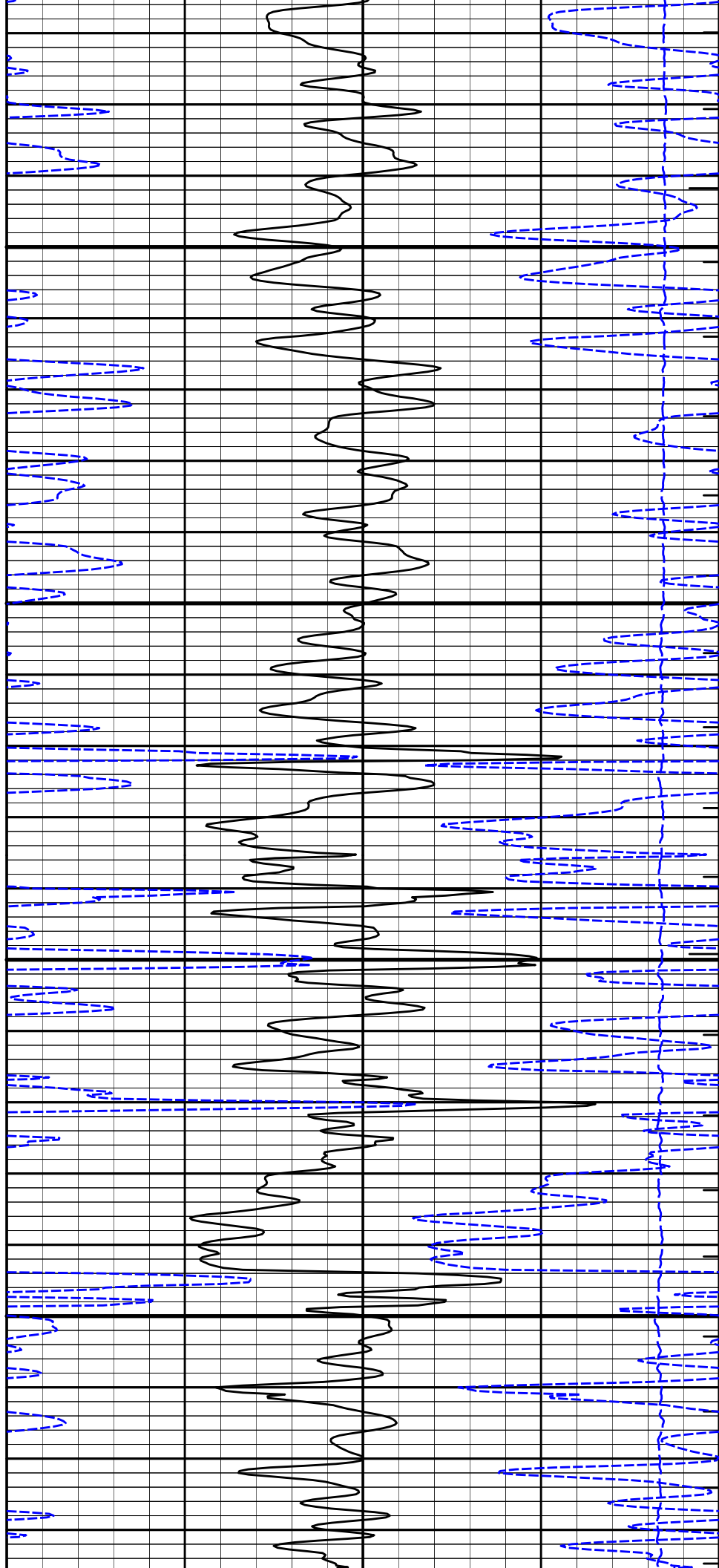
5 INCH MAIN LOG

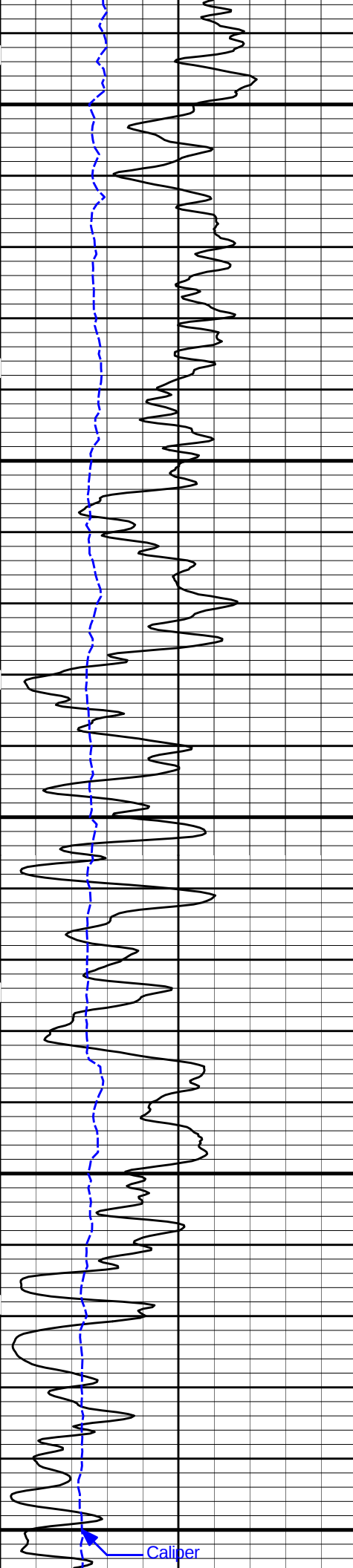




2000

2100



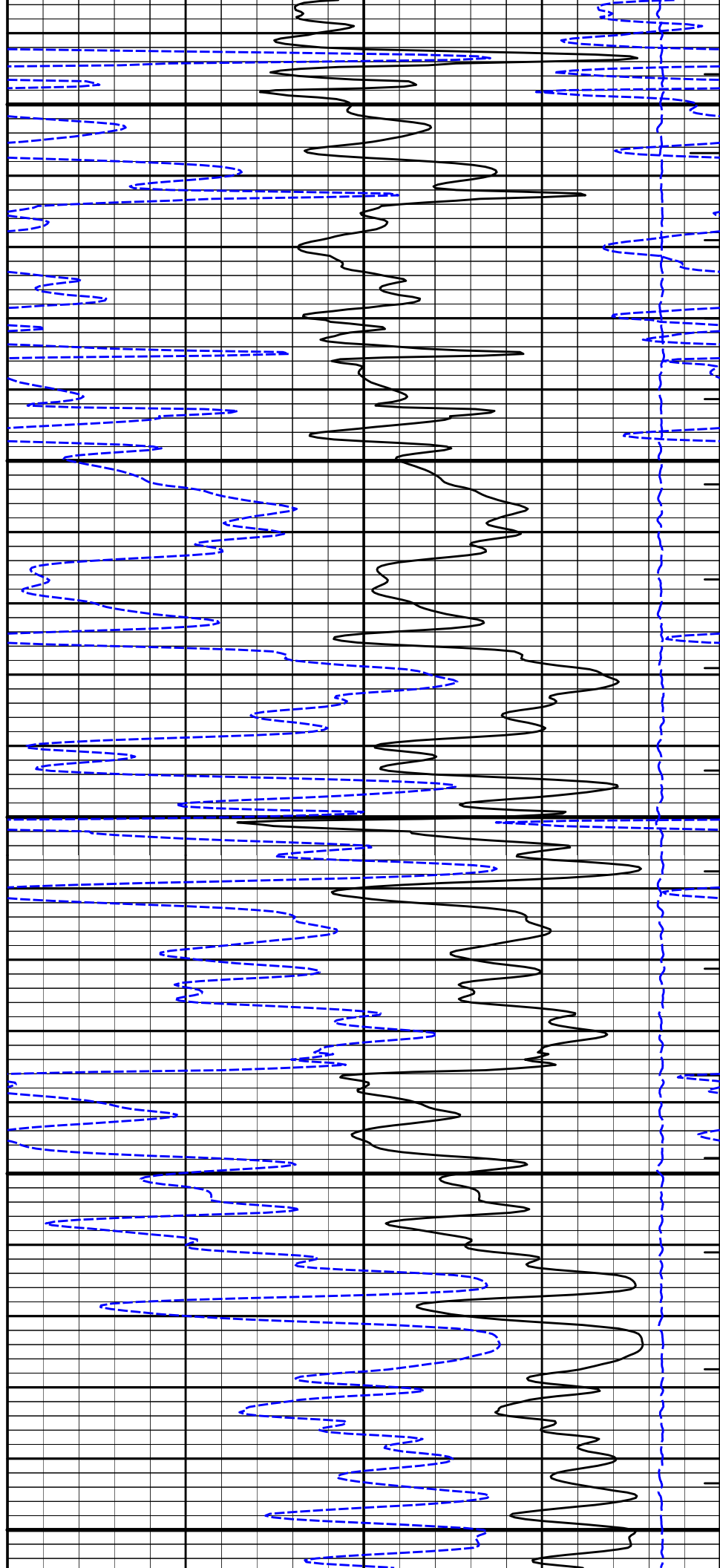


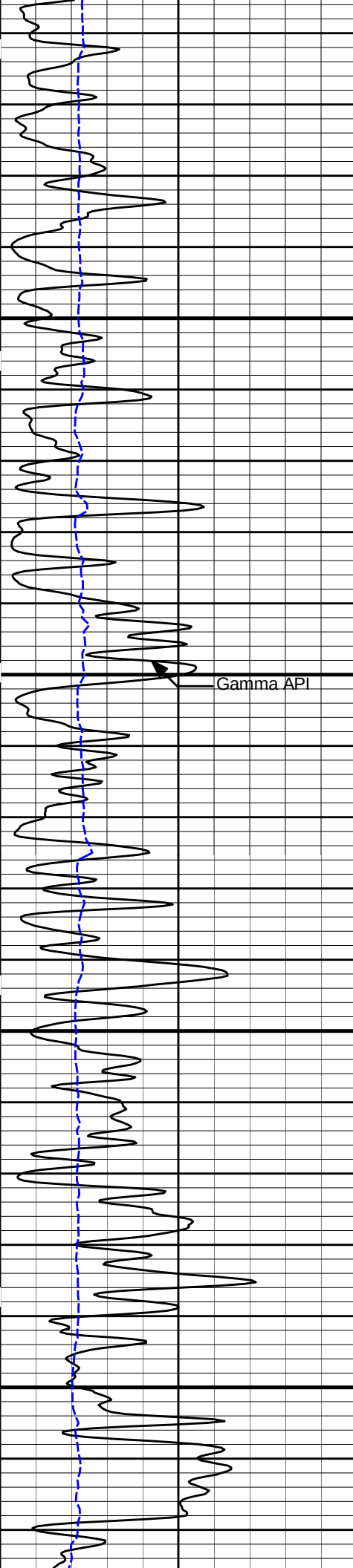
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2300

2400

Caliper

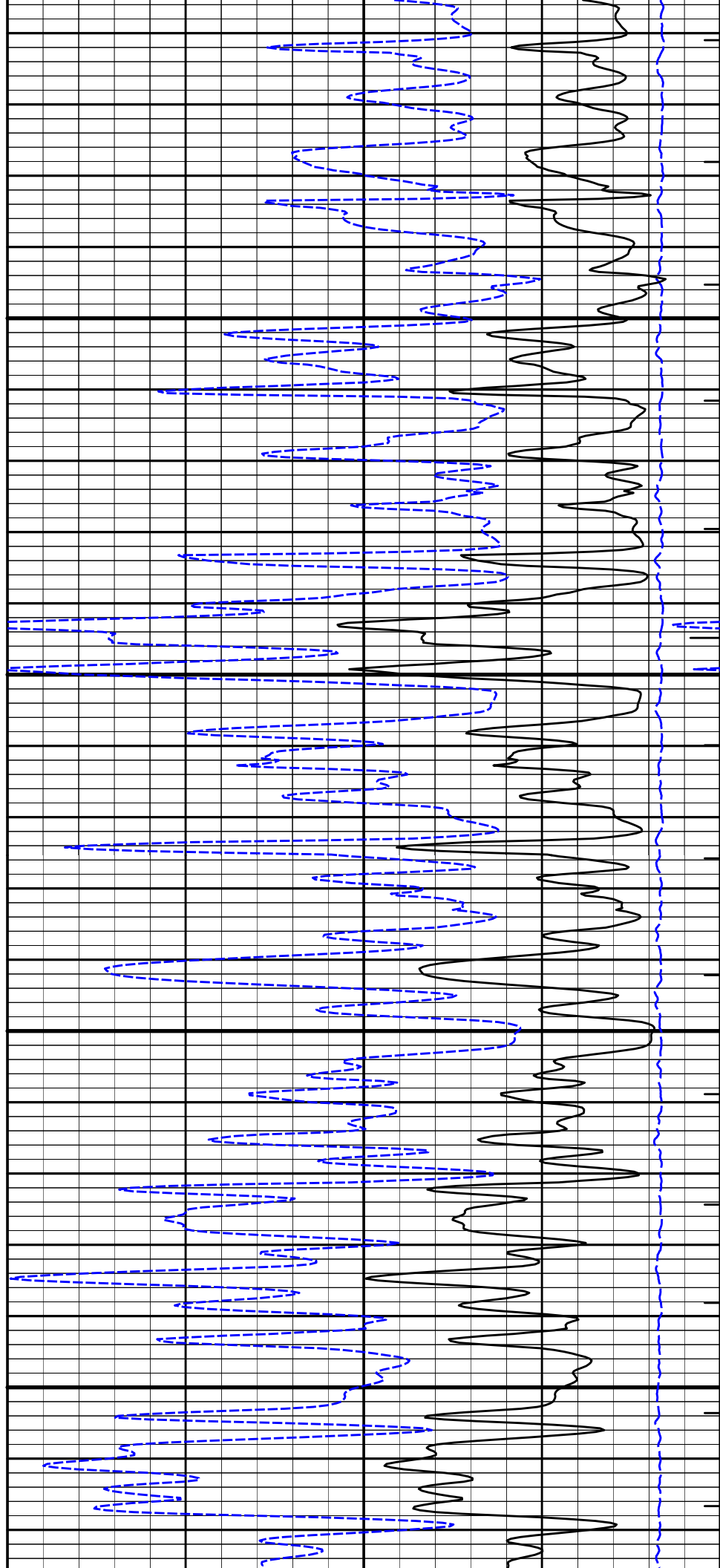


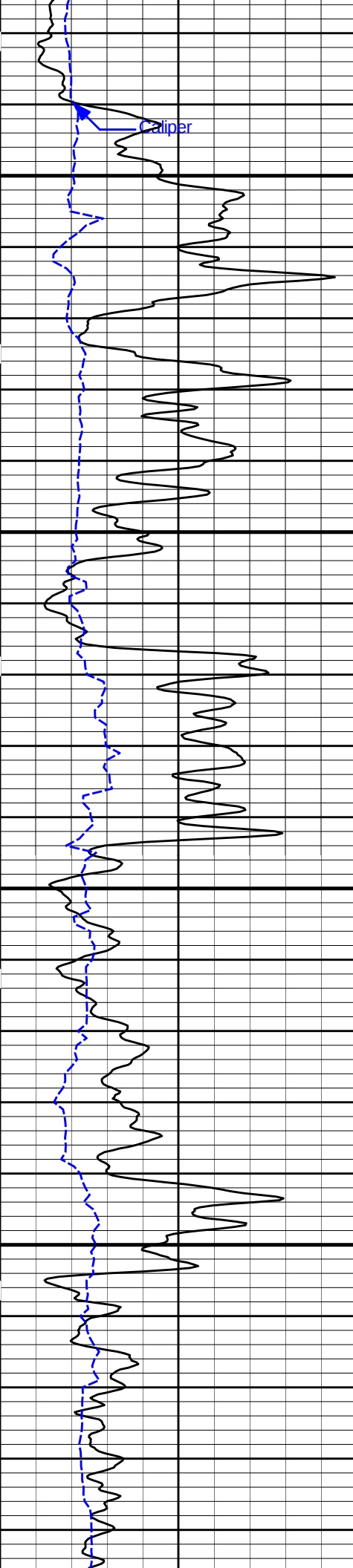


Gamma API

2500

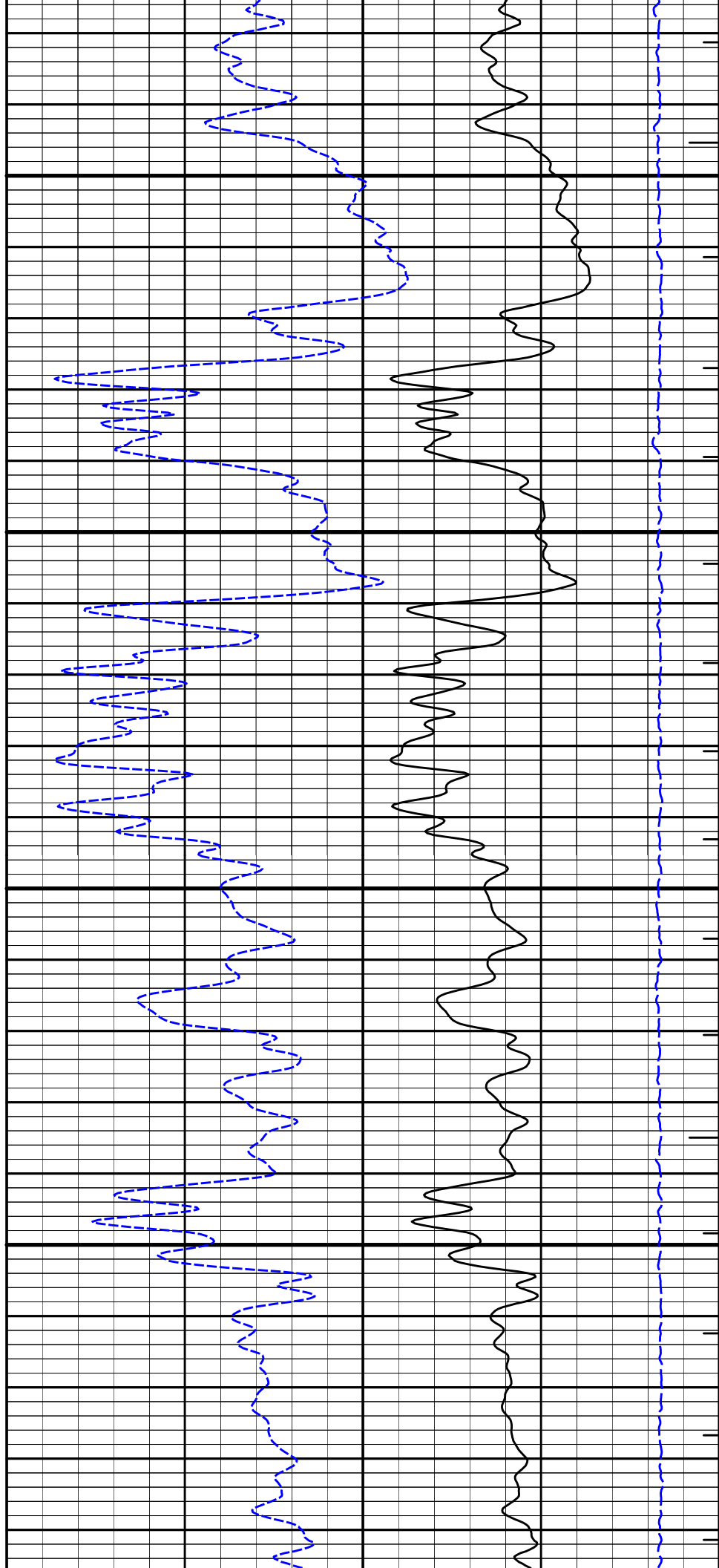
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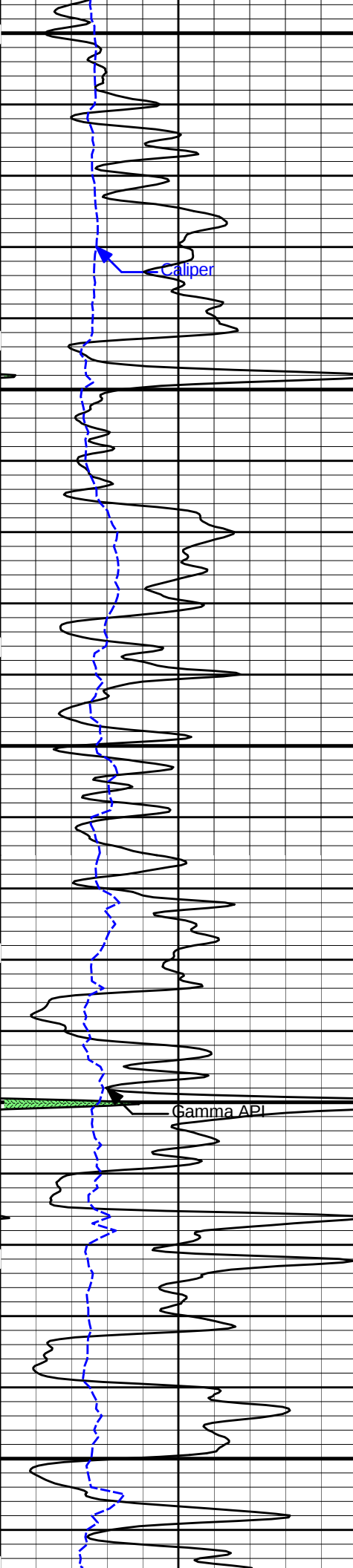




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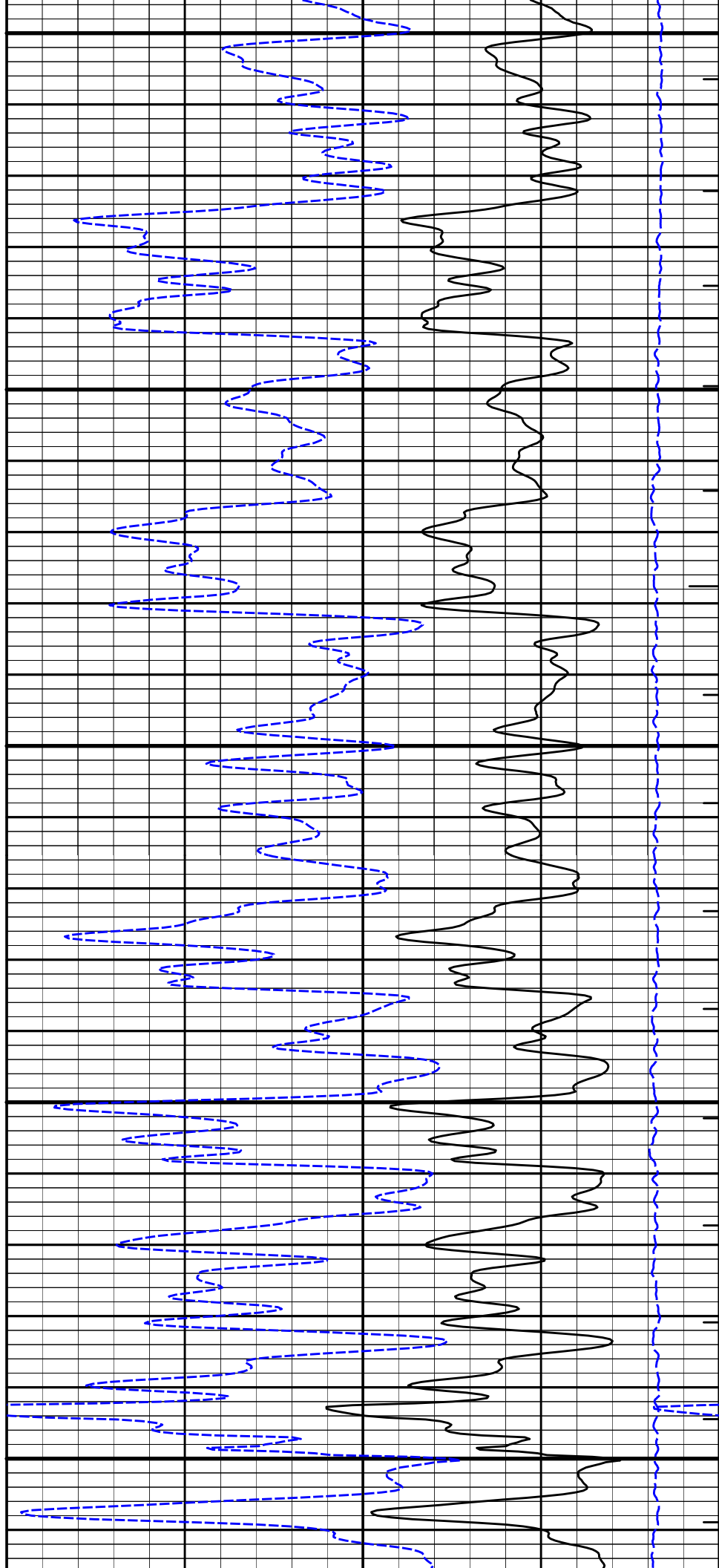
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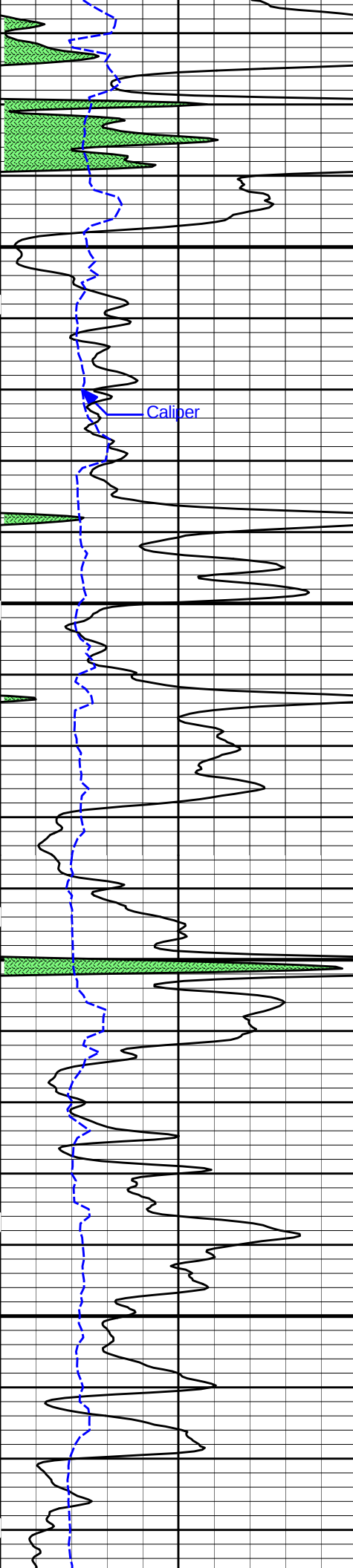




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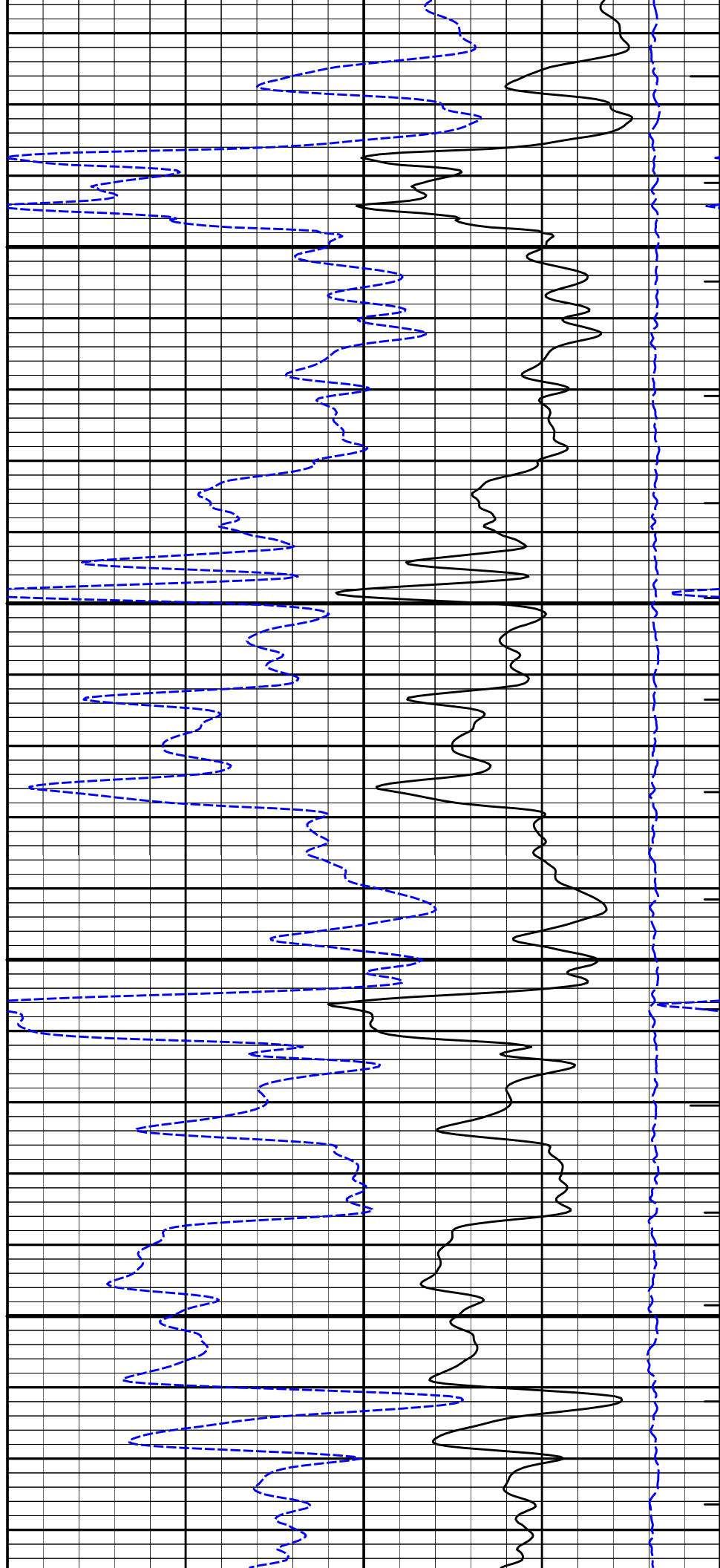
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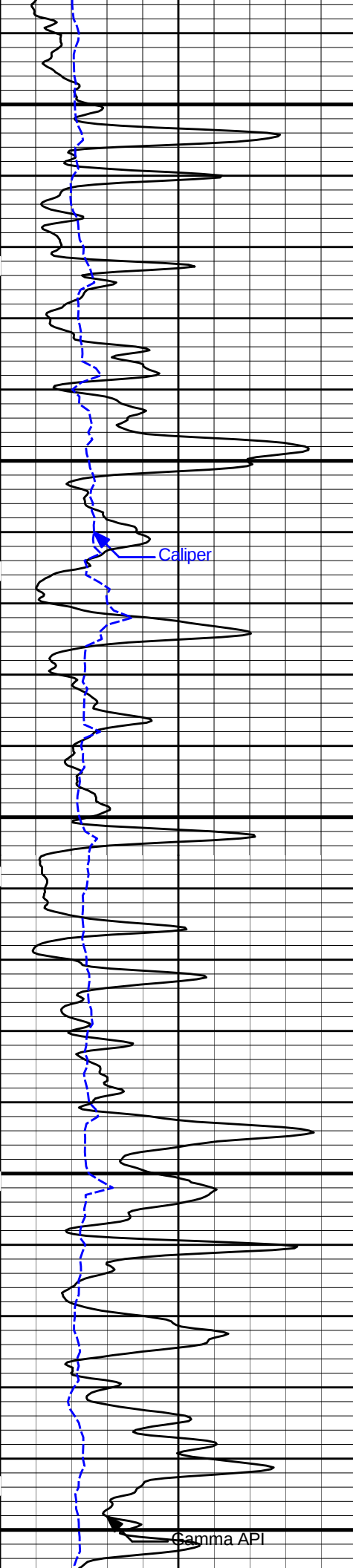




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3200

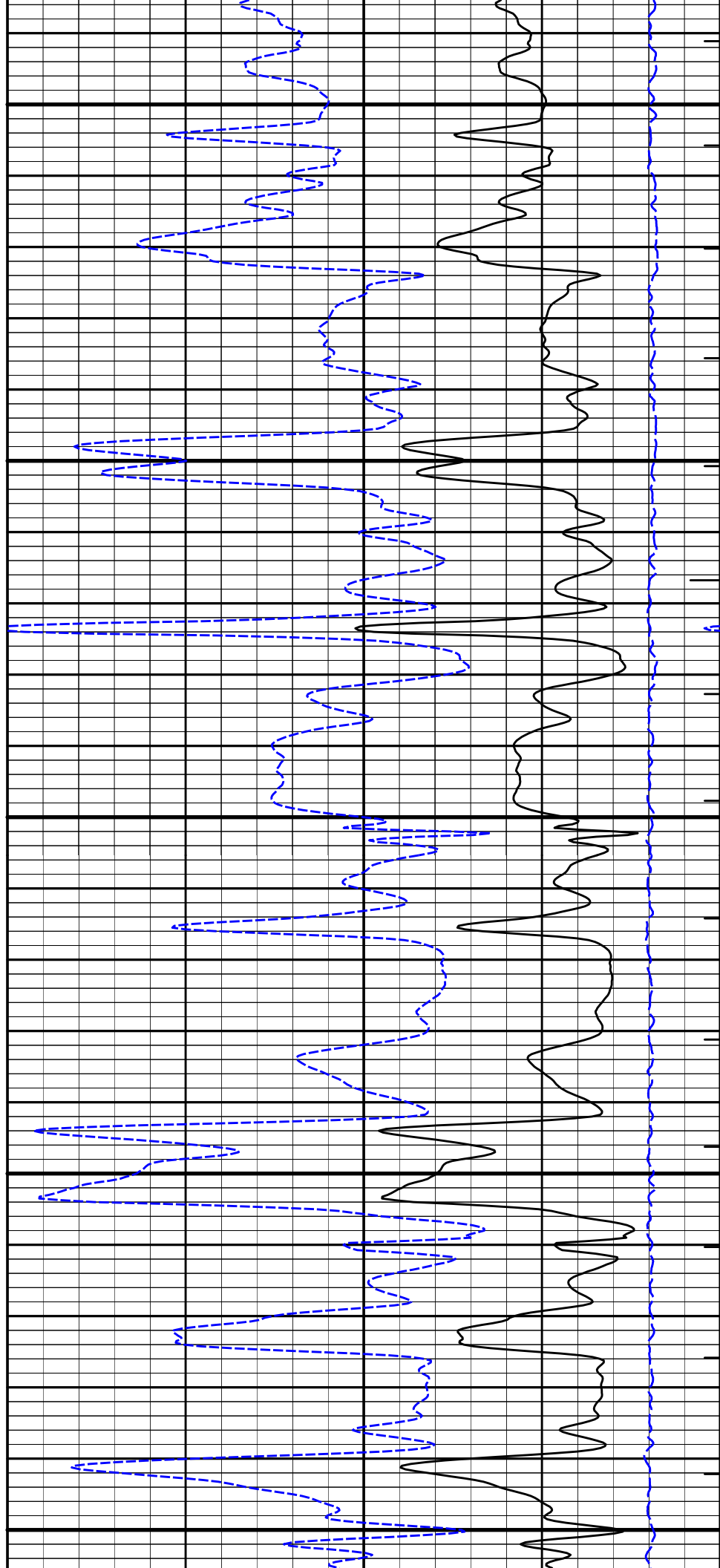


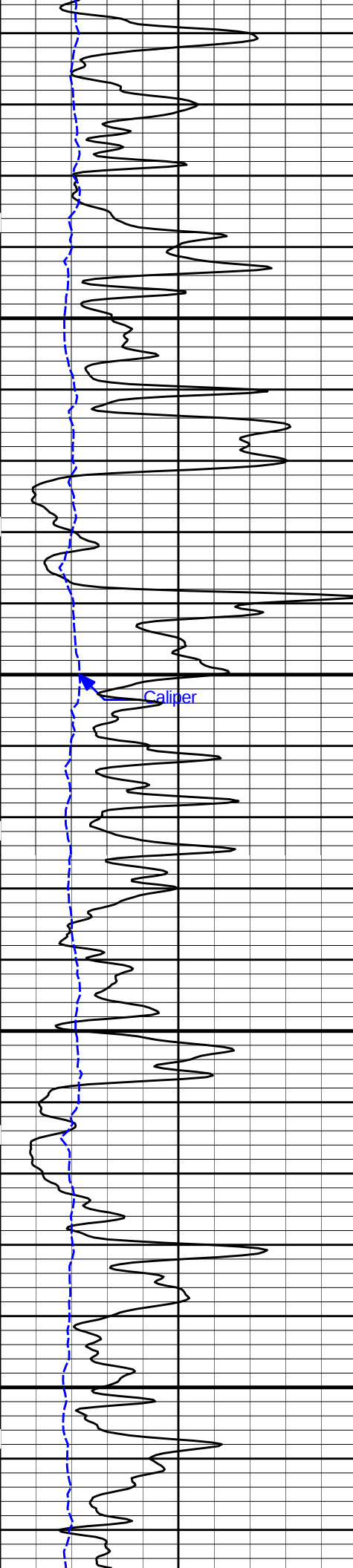


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3400

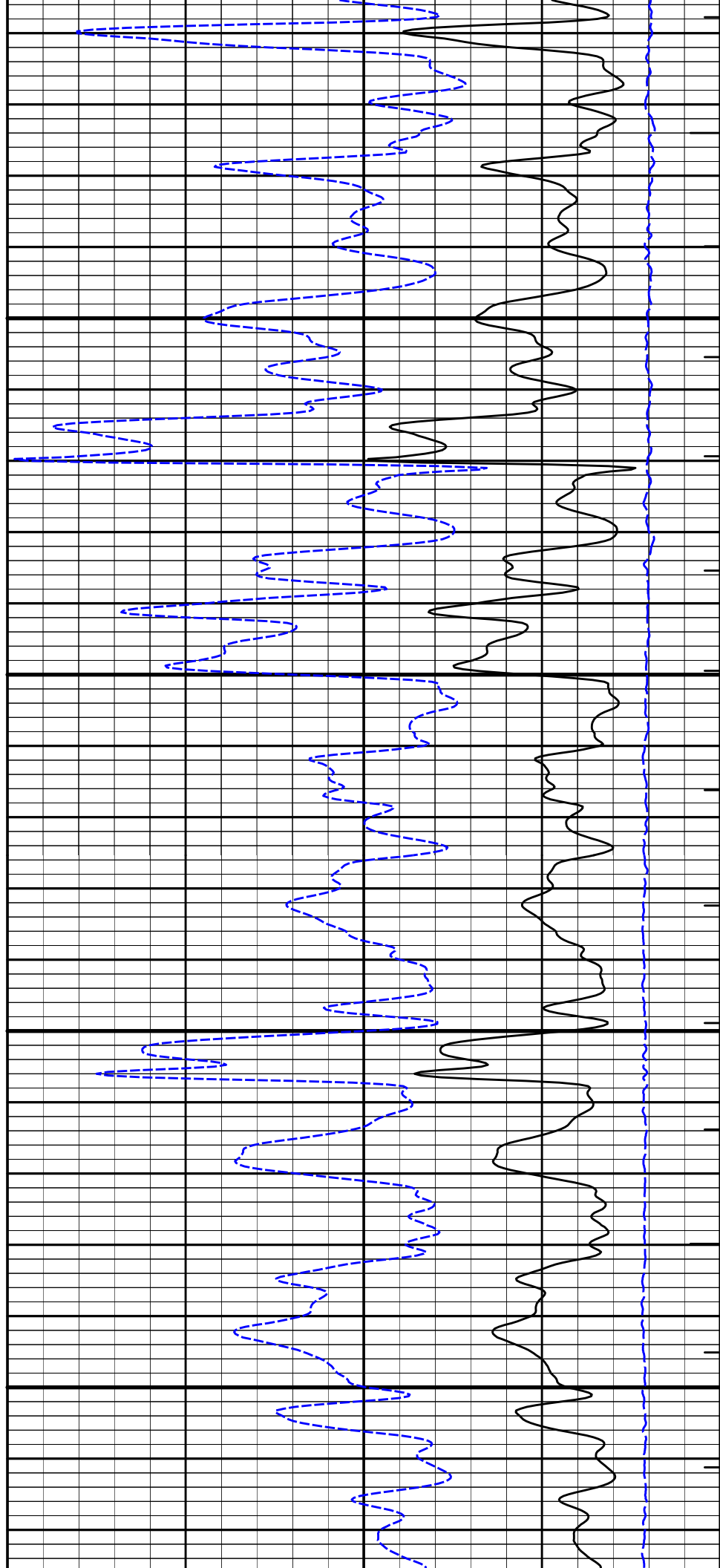
3500

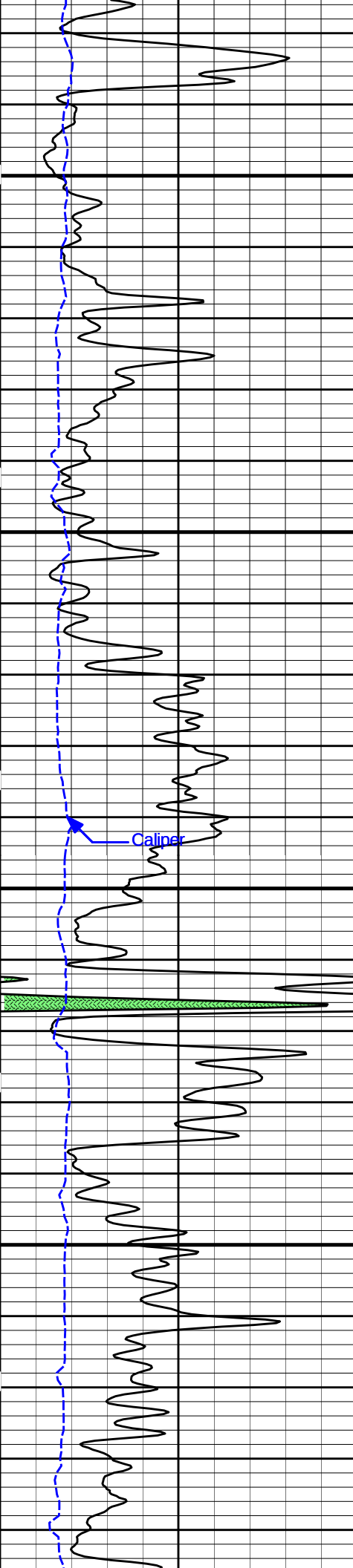




3600

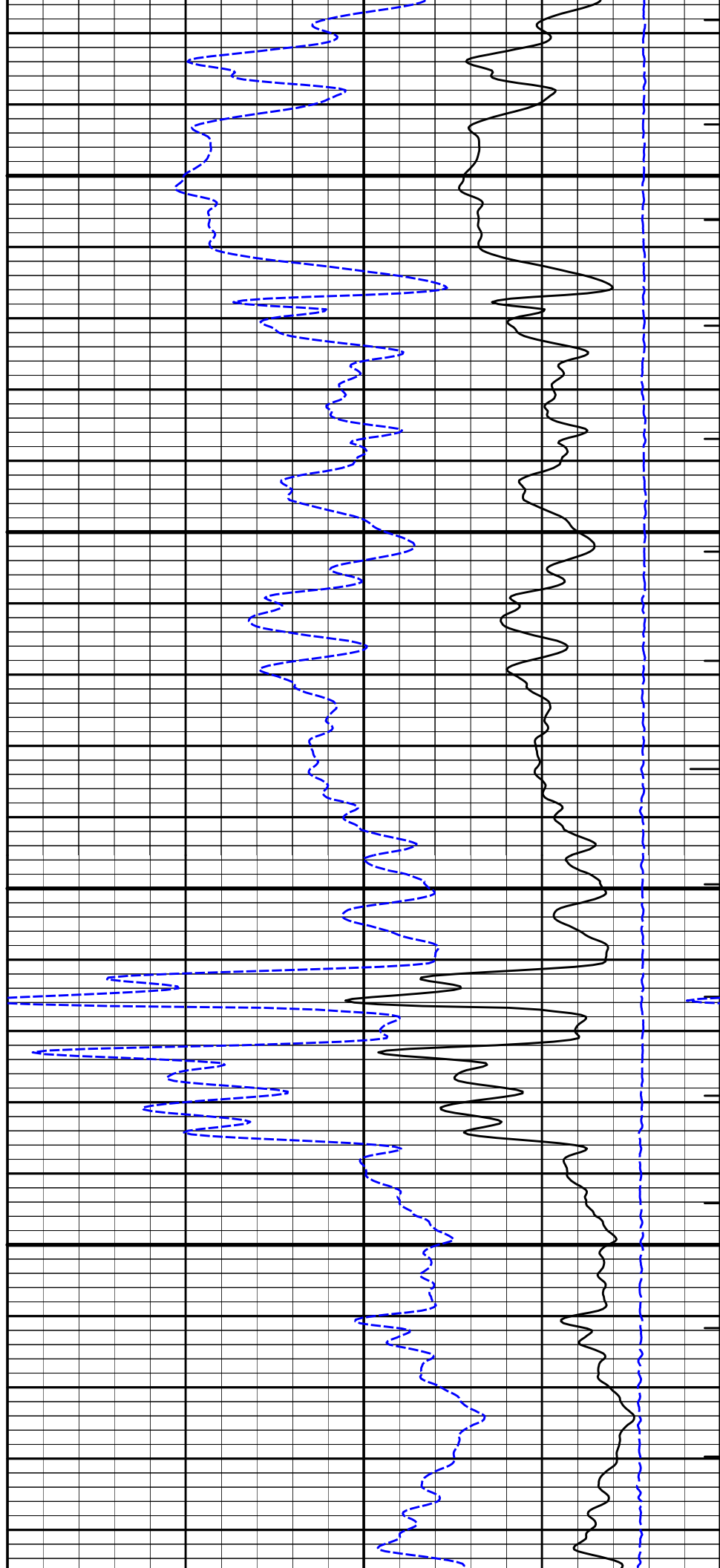
3700

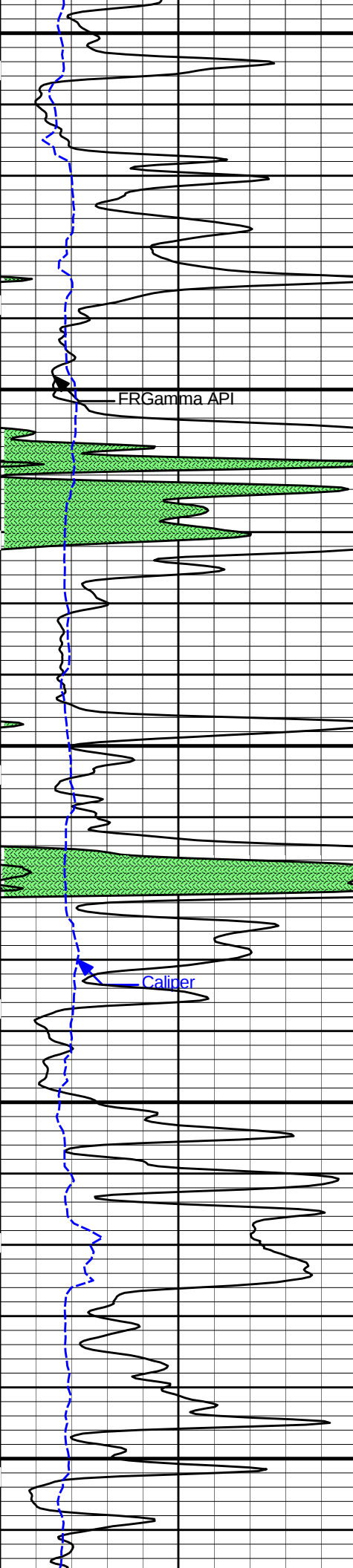




3800

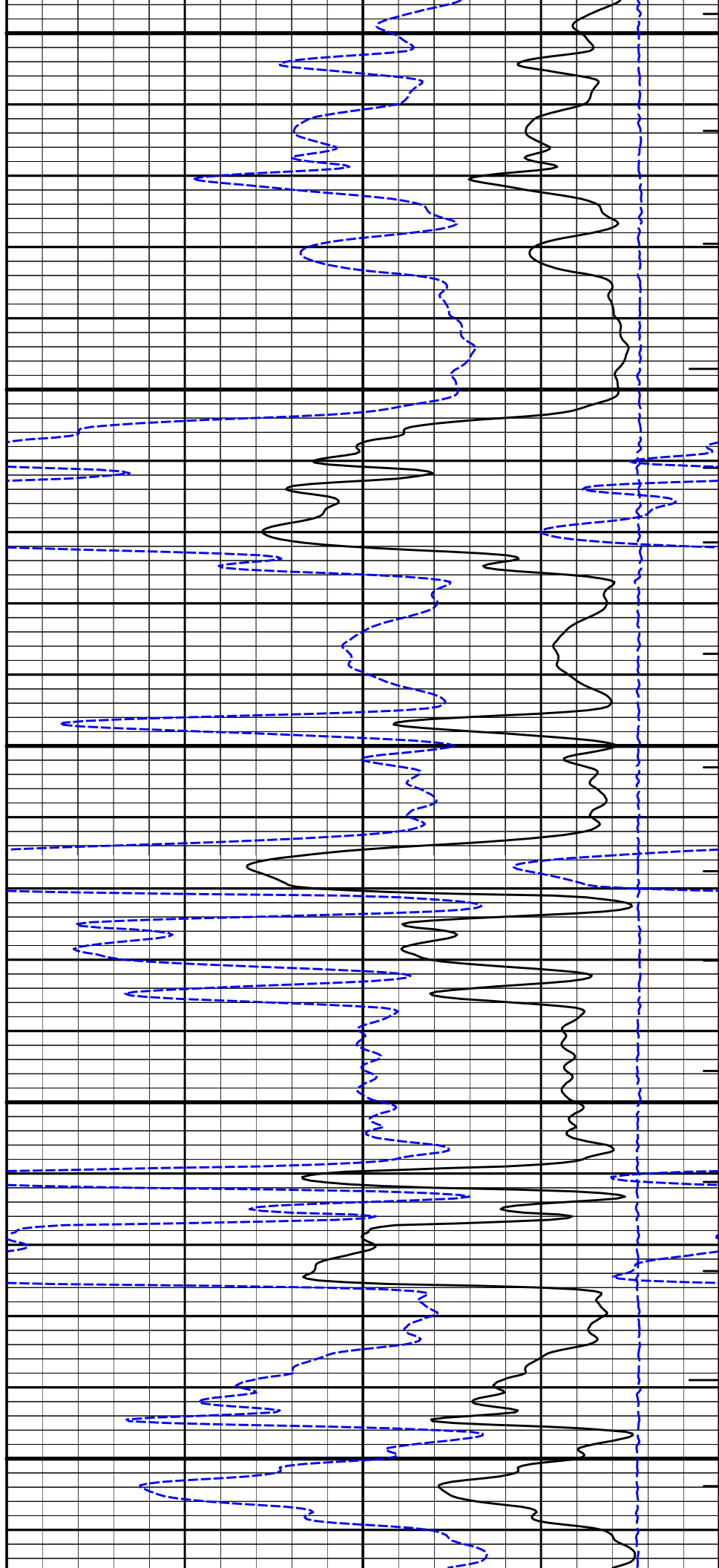
3900

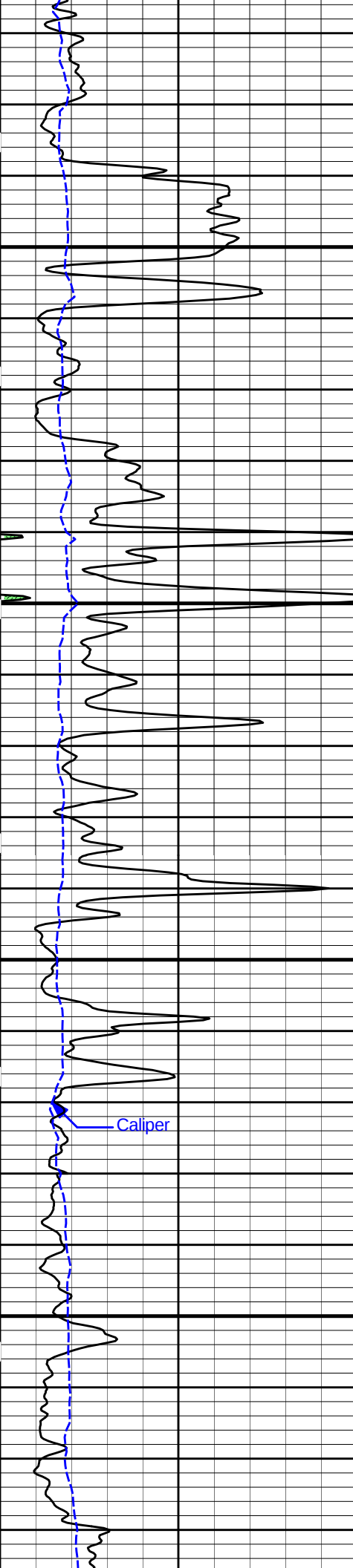




4000

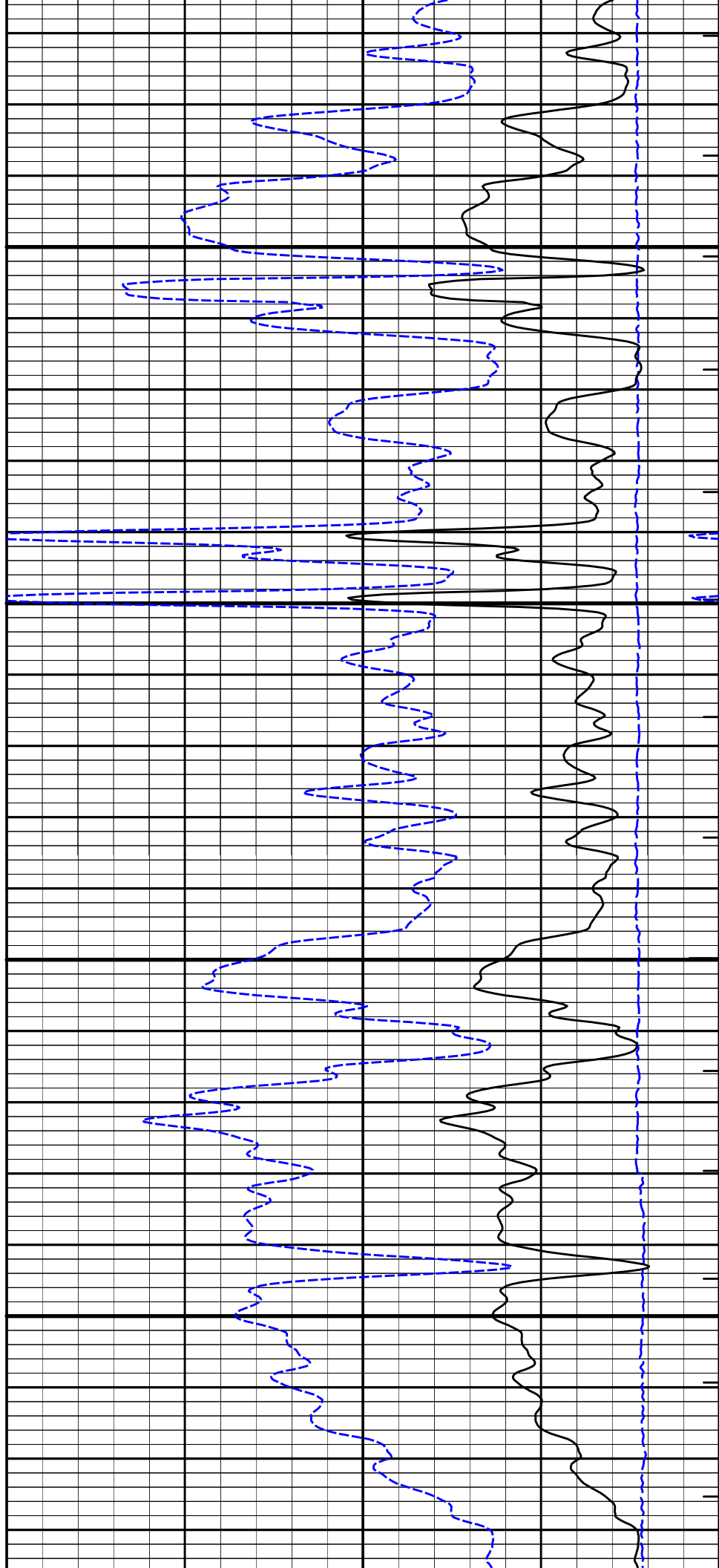
4100

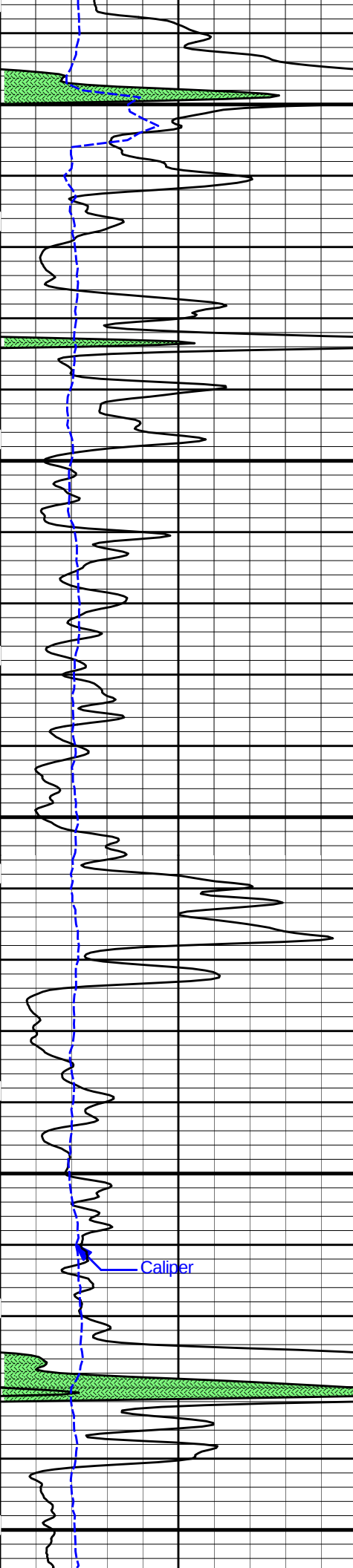




4200

4300

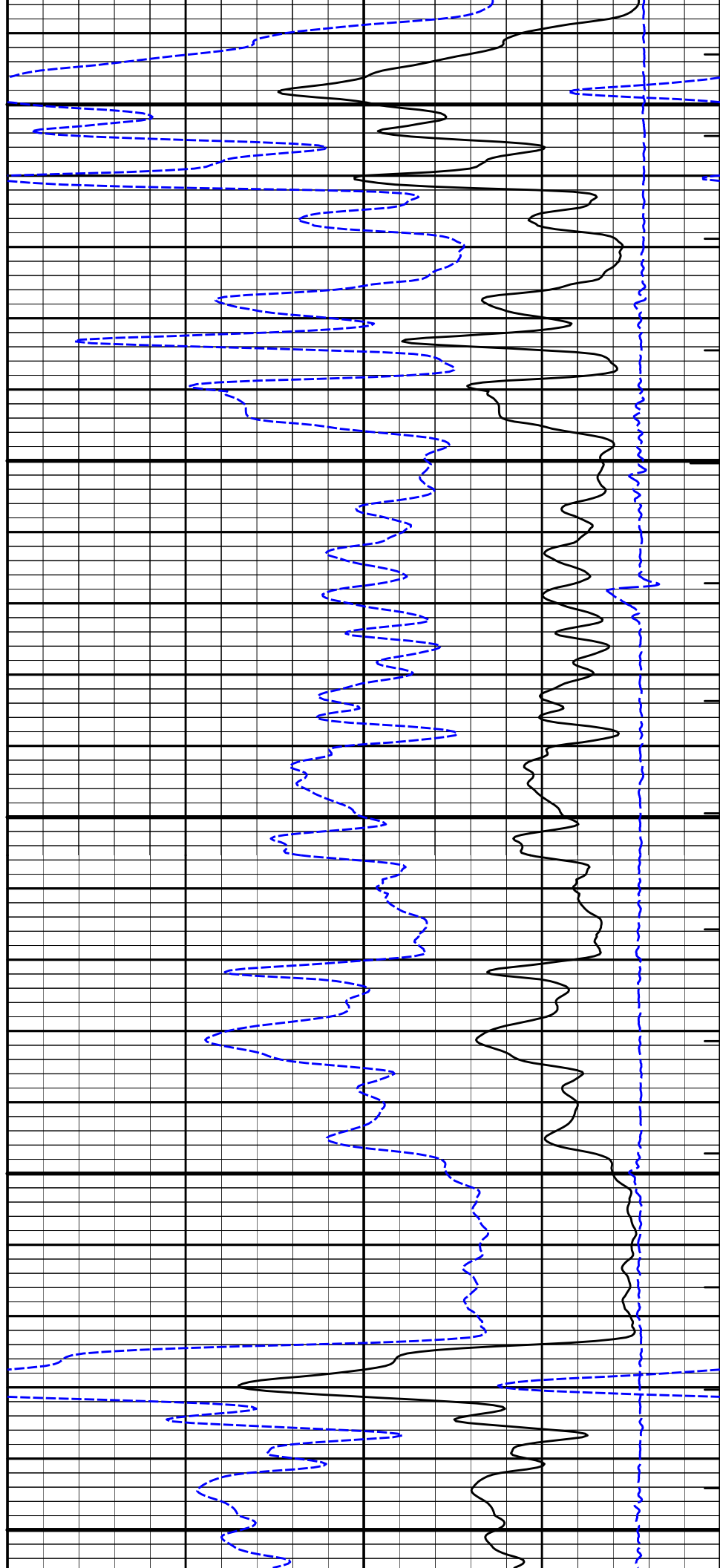


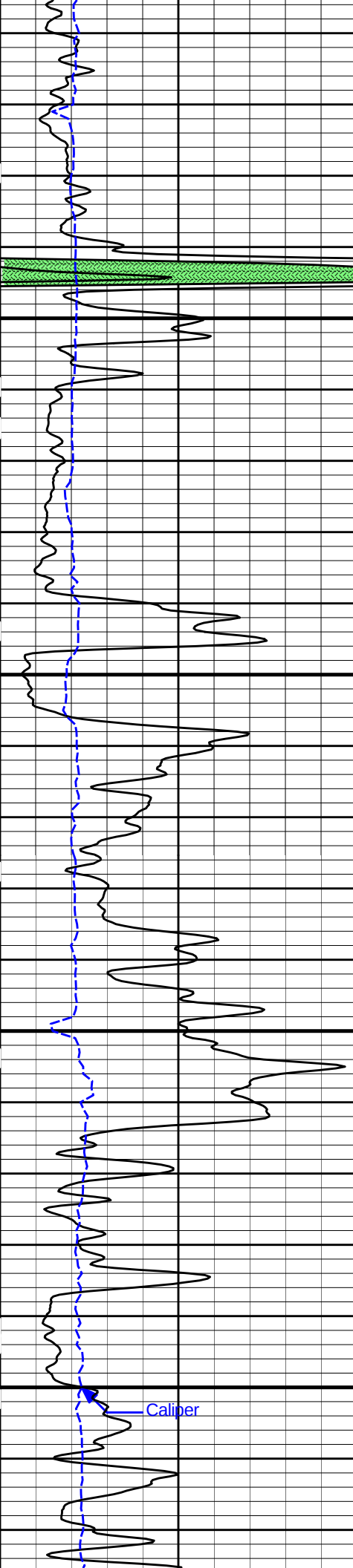


4400

4500

4600

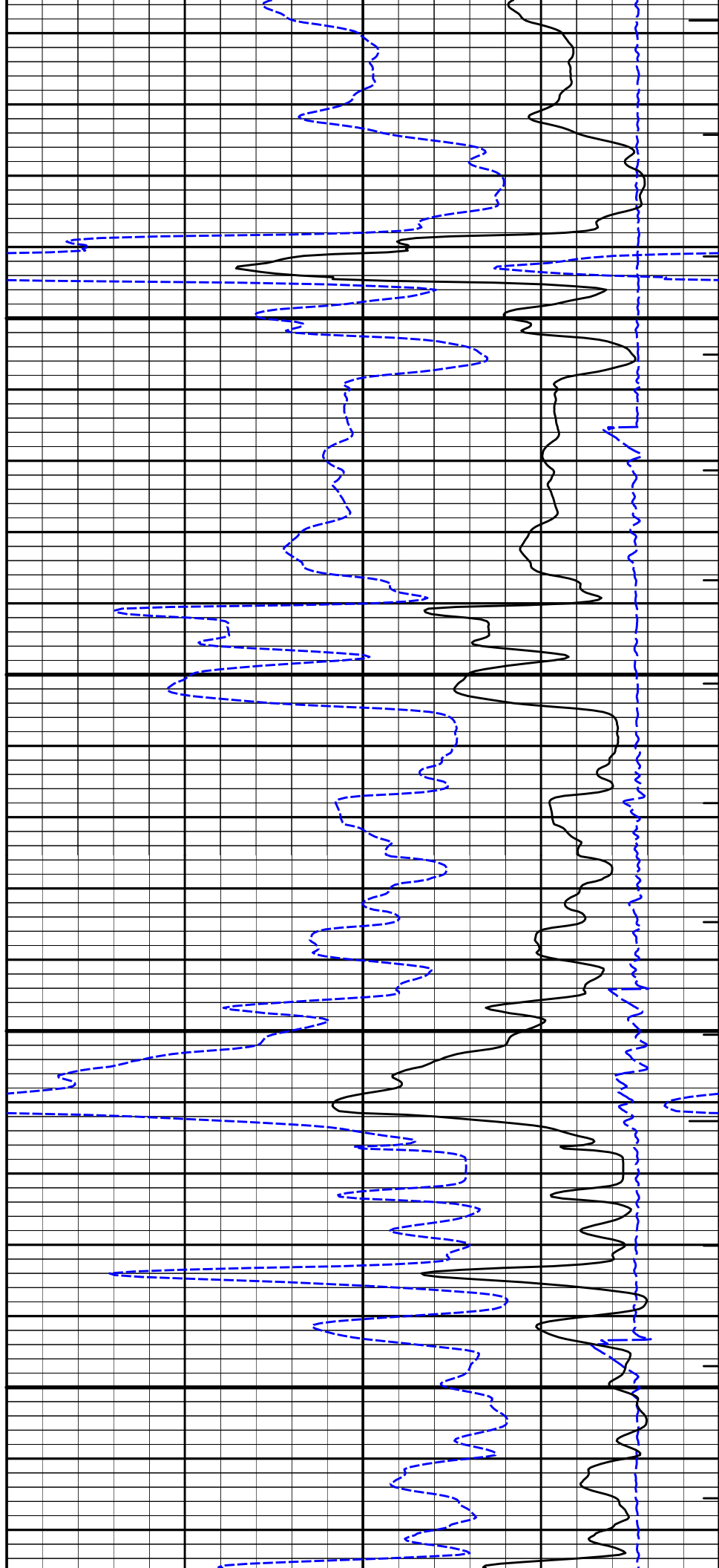


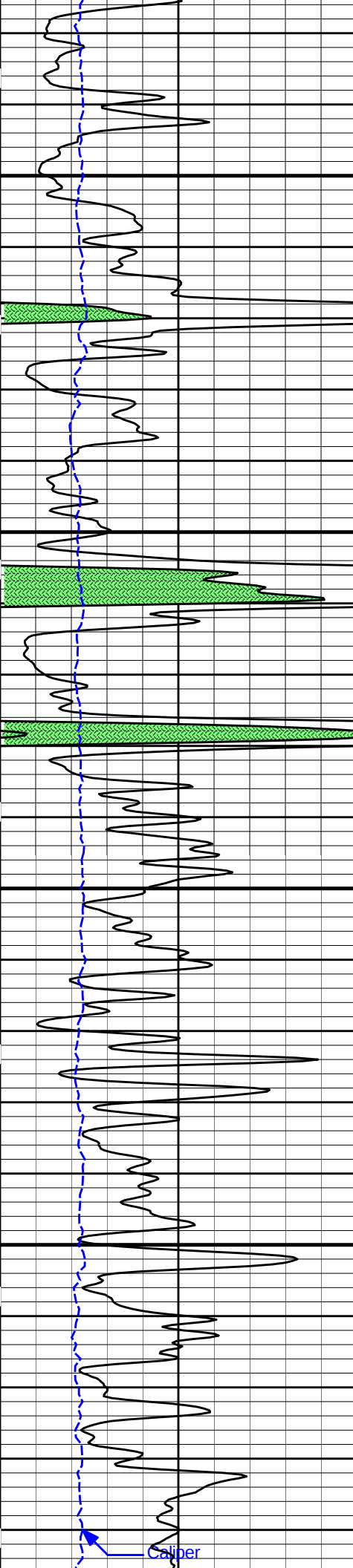


4700

4800

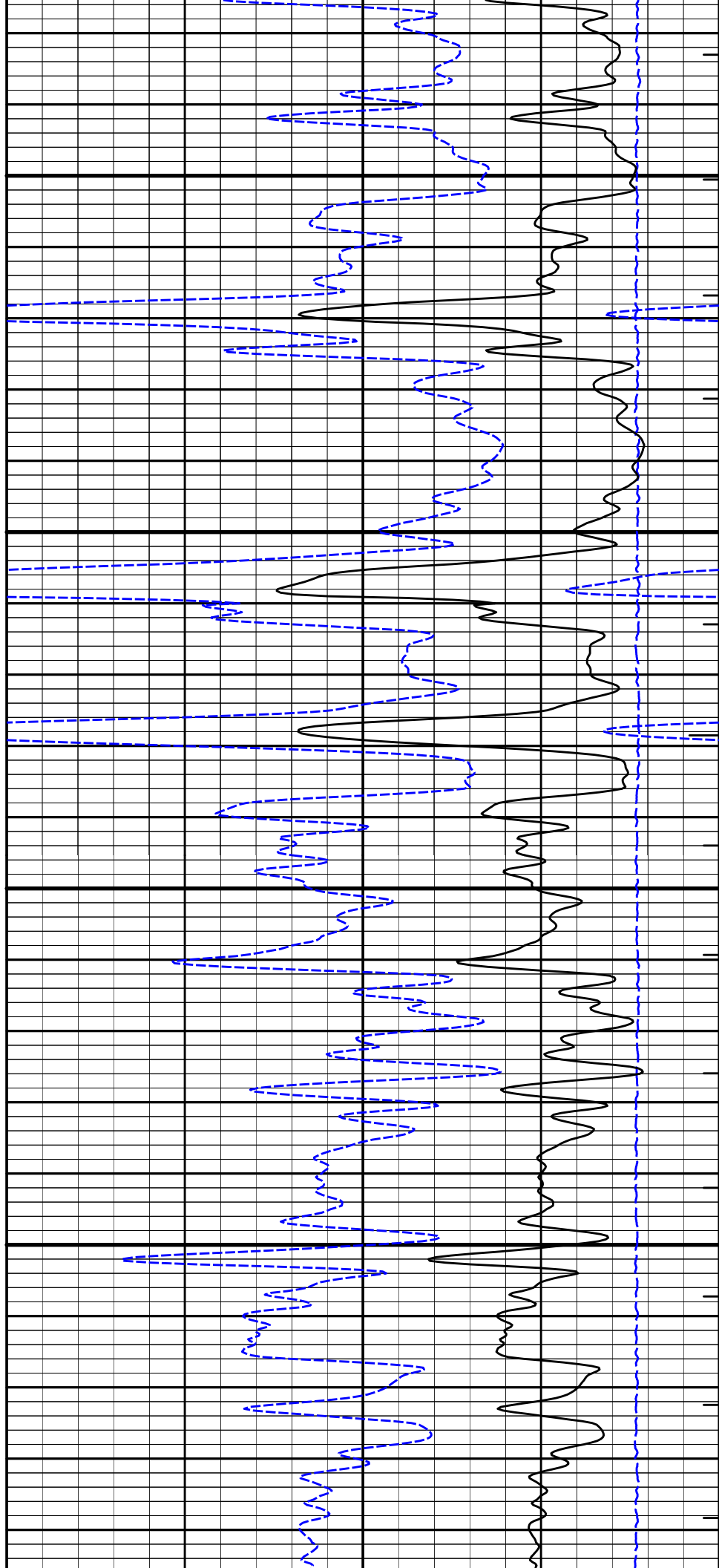
Caliper



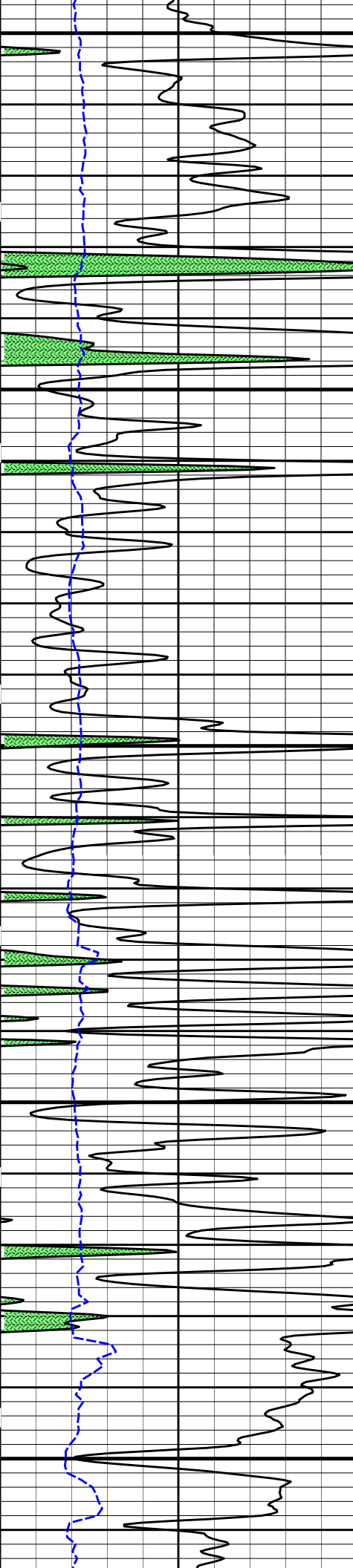


4900

5000

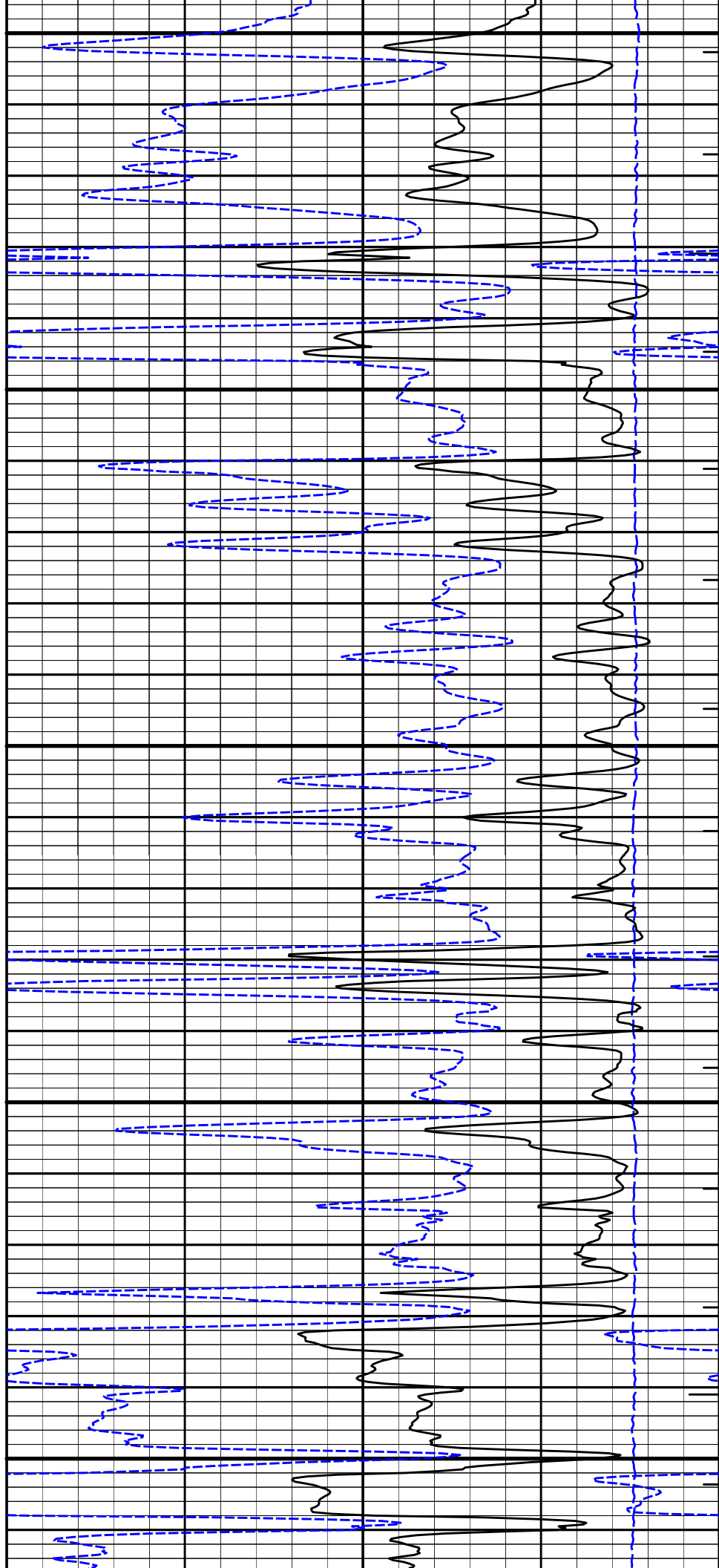


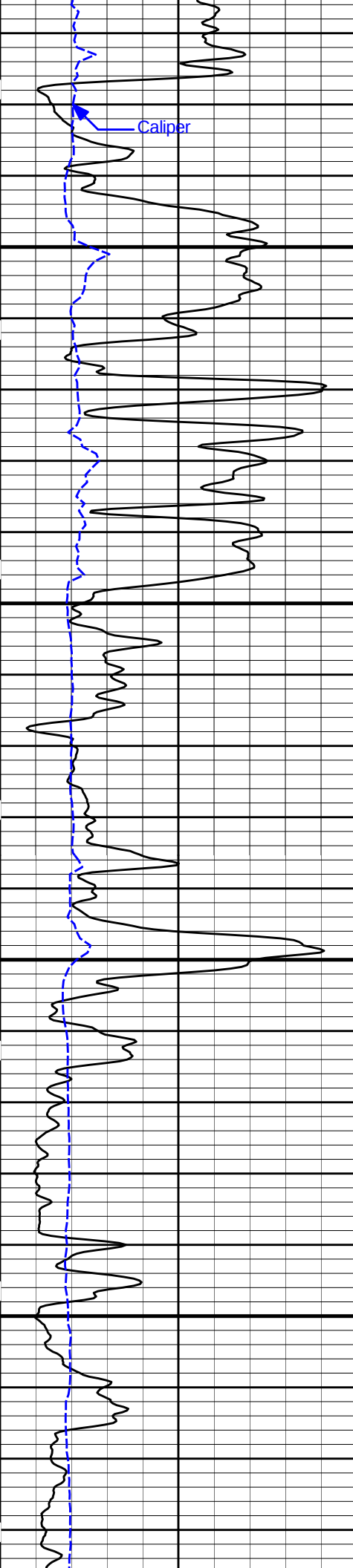
Caliber



5100

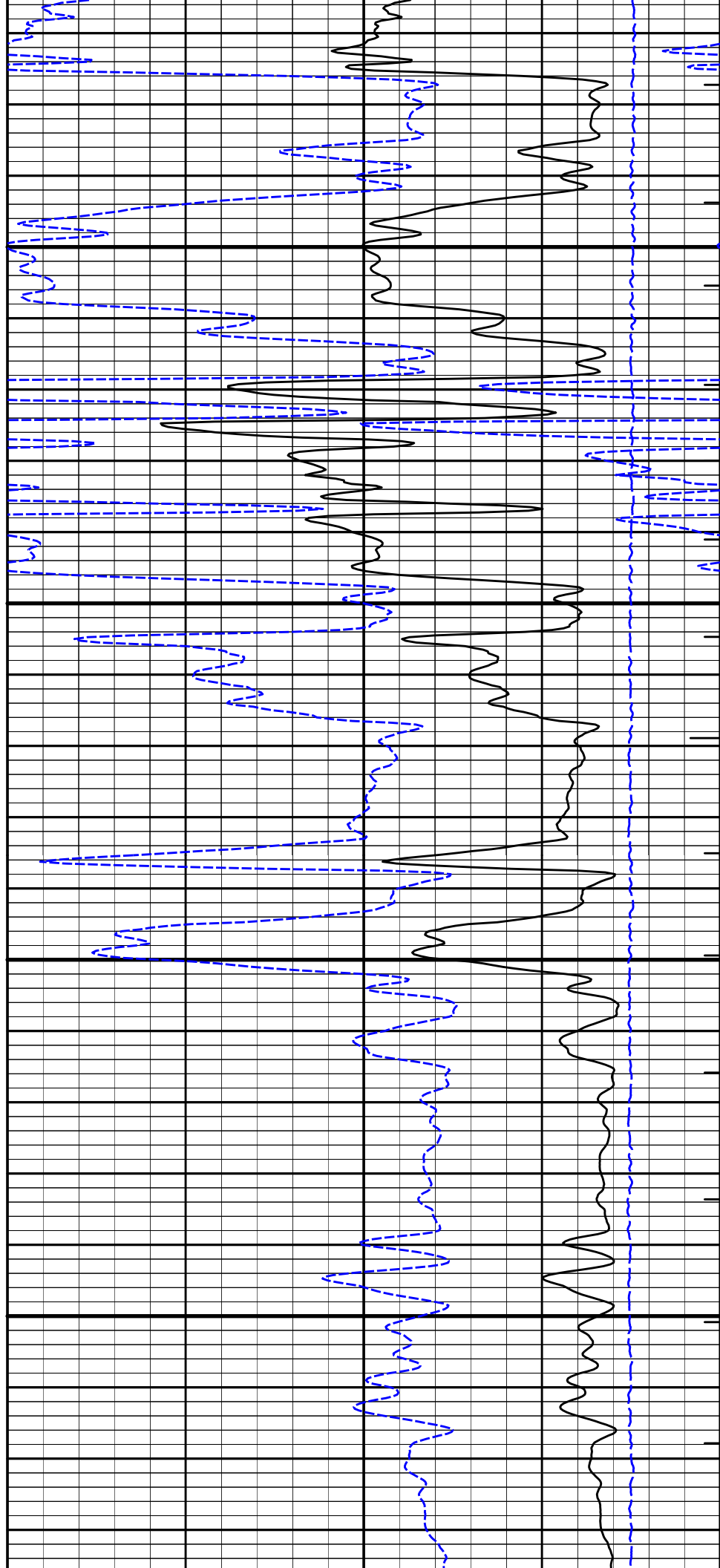
5200

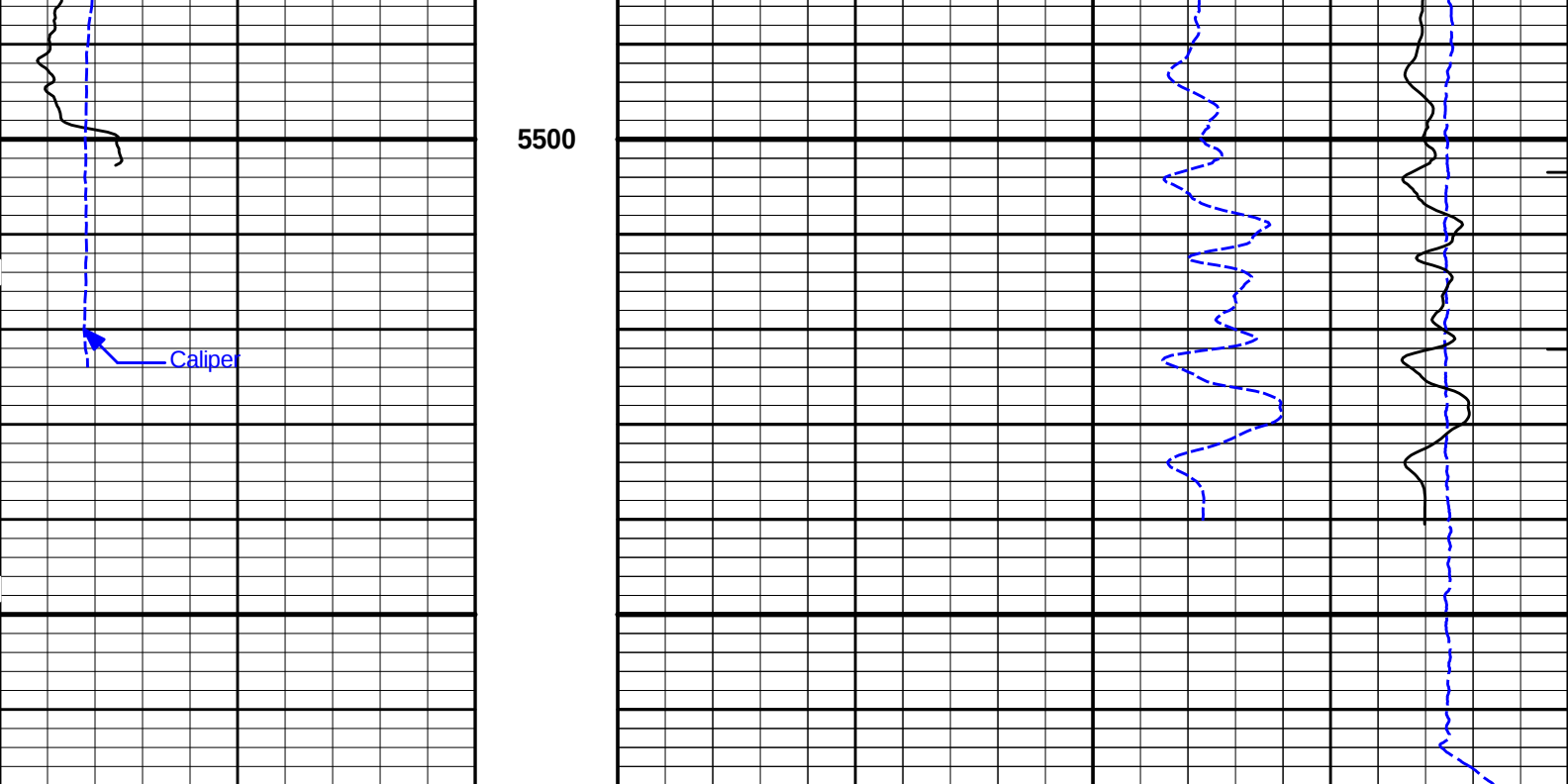




5300

5400





|   |           |     |         |     |                 |     |
|---|-----------|-----|---------|-----|-----------------|-----|
| 0 | Gamma API | 150 | 1 : 240 | 15K | Tension         | 0   |
|   | api       |     | ft      |     | pounds          |     |
| 6 | Caliper   | 16  |         |     | ITTT            |     |
|   | inches    |     |         |     |                 |     |
|   |           |     |         | 140 | Delta-T         | 40  |
|   |           |     |         |     | microsec per ft |     |
|   |           |     |         | 30  | Acou Porosity   | -10 |
|   |           |     |         |     | percent         |     |

**HALLIBURTON**

Plot Time: 20-Jul-11 10:30:50  
Plot Range: 1798 ft to 5568 ft  
Data: CORRELL\_A\_1\Well Based\MAIN\_SPLICE\  
Plot File: \BSAT\1\_BSAT\_5\_mainx

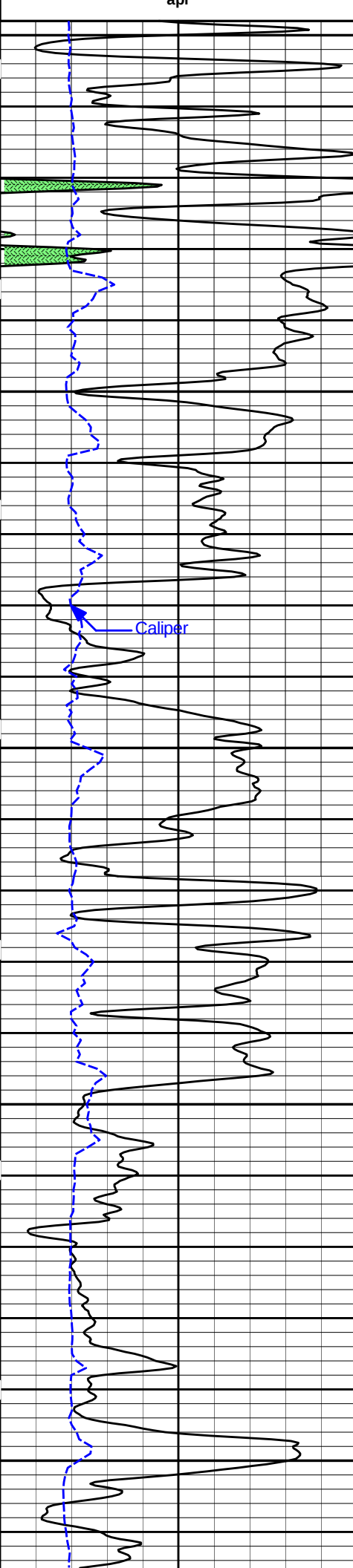
## 5 INCH MAIN LOG

**HALLIBURTON**

Plot Time: 20-Jul-11 10:30:50  
Plot Range: 5198 ft to 5569.83 ft  
Data: CORRELL\_A\_1\Well Based\DAQ-0002-003\  
Plot File: \BSAT\1\_BSAT\_5\_rptx

## REPEAT SECTION

|   |  |           |                 |     |               |         |     |     |  |         |  |   |  |
|---|--|-----------|-----------------|-----|---------------|---------|-----|-----|--|---------|--|---|--|
|   |  |           | 30              |     | Acou Porosity |         | -10 |     |  |         |  |   |  |
|   |  |           | percent         |     |               |         |     |     |  |         |  |   |  |
|   |  |           | 140             |     | Delta-T       |         | 40  |     |  |         |  |   |  |
|   |  |           | microsec per ft |     |               |         |     |     |  |         |  |   |  |
| 6 |  | Caliper   |                 | 16  |               | ITTT    |     |     |  |         |  |   |  |
|   |  | inches    |                 |     |               |         |     |     |  |         |  |   |  |
| 0 |  | Gamma API |                 | 150 |               | 1 : 240 |     | 15K |  | Tension |  | 0 |  |
|   |  | api       |                 |     |               | ft      |     |     |  | pounds  |  |   |  |

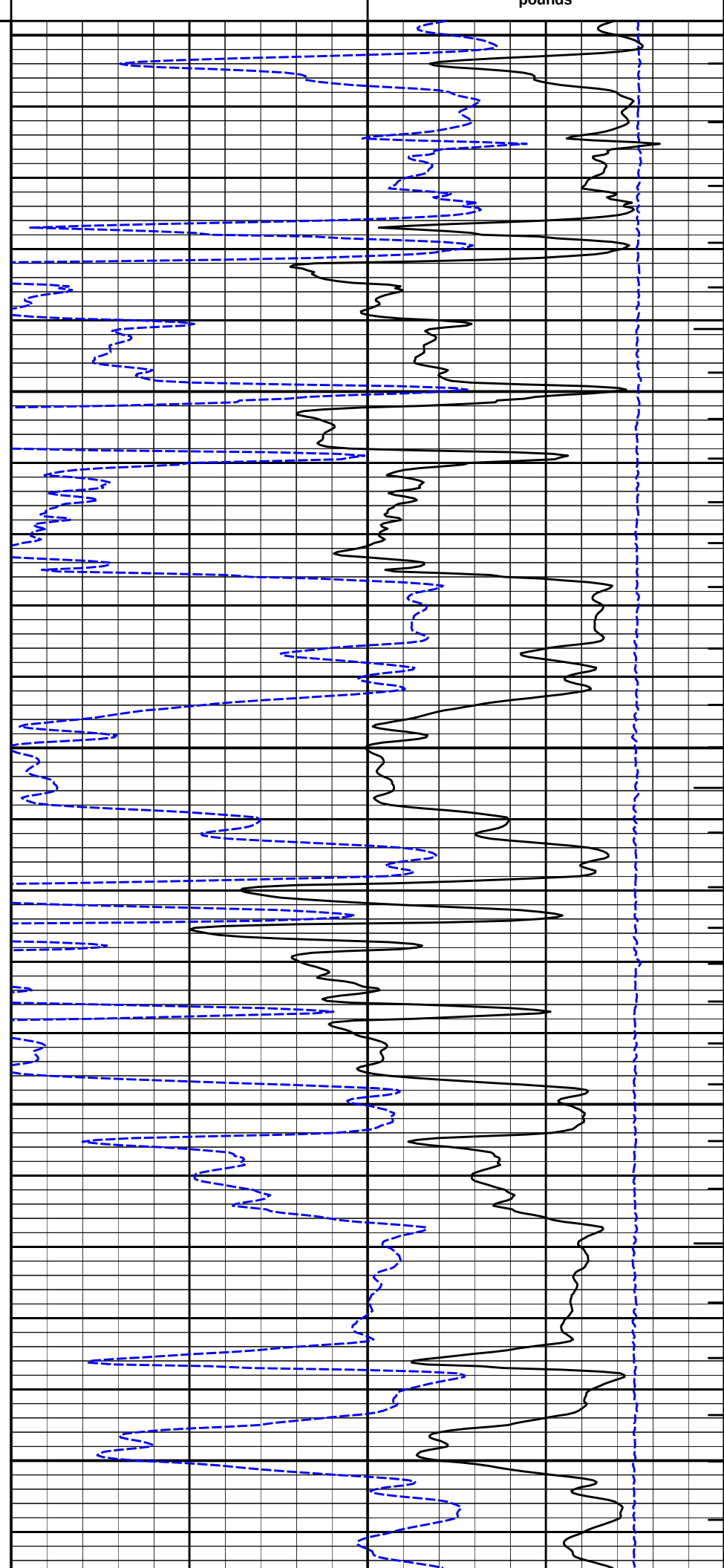


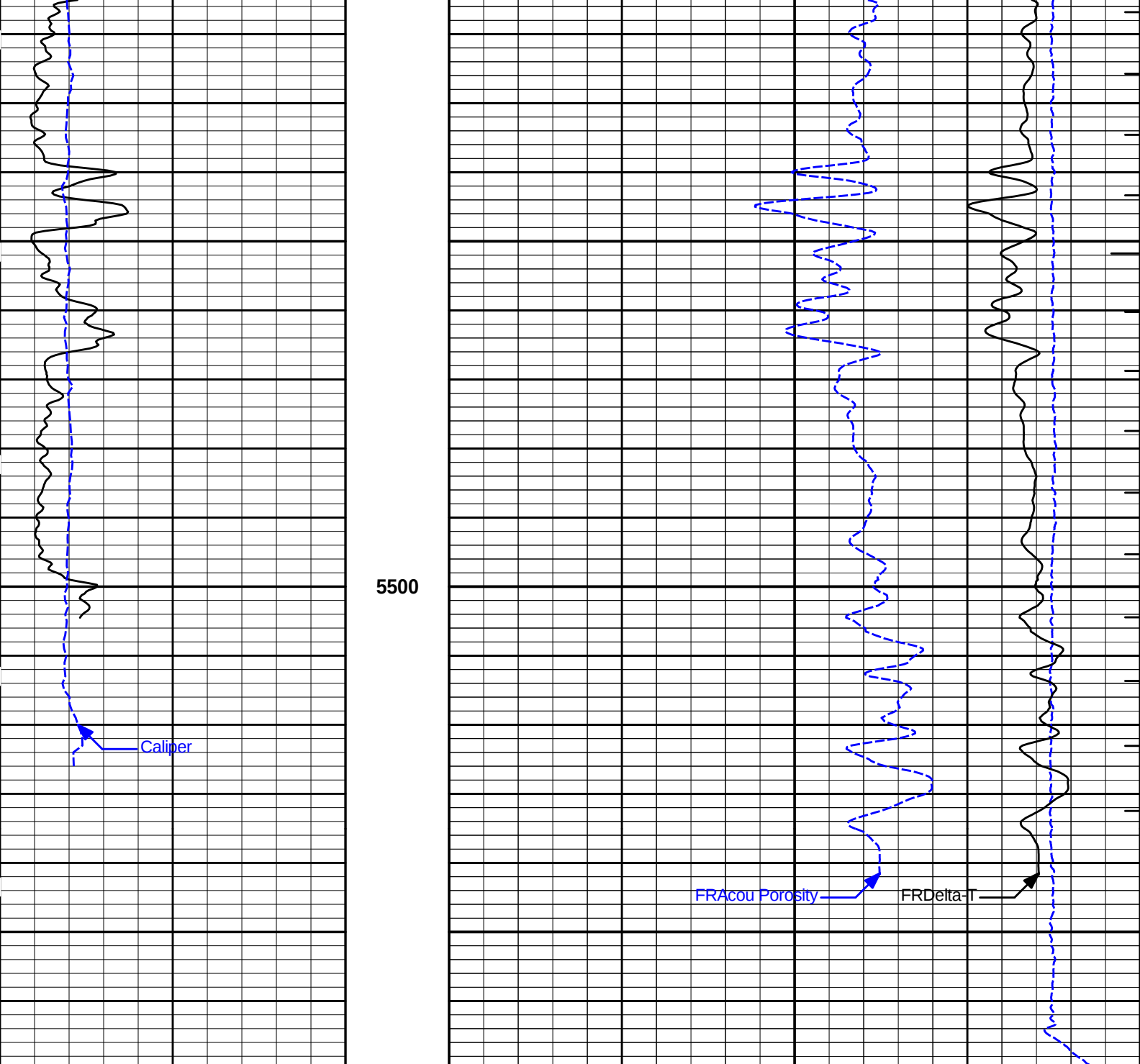
ft

5200

5300

5400





|   |           |     |
|---|-----------|-----|
| 0 | Gamma API | 150 |
|   | api       |     |
| 6 | Caliper   | 16  |
|   | inches    |     |

1 : 240  
ft

|     |         |   |
|-----|---------|---|
| 15K | Tension | 0 |
|     | pounds  |   |
|     | ITTT    |   |

|     |                 |     |
|-----|-----------------|-----|
| 140 | Delta-T         | 40  |
|     | microsec per ft |     |
| 30  | Acou Porosity   | -10 |
|     | percent         |     |

**HALLIBURTON**

Plot Time: 20-Jul-11 10:30:51  
Plot Range: 5198 ft to 5569.83 ft  
Data: CORRELL\_A\_1\Well Based\DAQ-0002-003\  
Plot File: \BSAT1\_BSAT\_5\_rptx

**REPEAT SECTION**

PARAMETERS REPORT

| Depth<br>(ft) | Tool Name          | Mnemonic | Description                                           | Value     | Units |
|---------------|--------------------|----------|-------------------------------------------------------|-----------|-------|
| TOP           |                    |          |                                                       |           |       |
|               | SHARED             | BS       | Bit Size                                              | 7.875     | in    |
|               | SHARED             | UBS      | Use Bit Size instead of Caliper for all applications. | No        |       |
|               | SHARED             | MDBS     | Mud Base                                              | Water     |       |
|               | SHARED             | MDWT     | Borehole Fluid Weight                                 | 8.700     | ppg   |
|               | SHARED             | WAGT     | Weighting Agent                                       | Barite    |       |
|               | SHARED             | BSAL     | Borehole salinity                                     | 1200.00   | ppm   |
|               | SHARED             | FSAL     | Formation Salinity NaCl                               | 0.00      | ppm   |
|               | SHARED             | KPCT     | Percent K in Mud by Weight?                           | 0.00      | %     |
|               | SHARED             | RMUD     | Mud Resistivity                                       | 2.000     | ohmm  |
|               | SHARED             | TRM      | Temperature of Mud                                    | 75.0      | degF  |
|               | SHARED             | CSD      | Logging Interval is Cased?                            | No        |       |
|               | SHARED             | ICOD     | AHV Casing OD                                         | 5.500     | in    |
|               | SHARED             | ST       | Surface Temperature                                   | 75.0      | degF  |
|               | SHARED             | TD       | Total Well Depth                                      | 5587.00   | ft    |
|               | SHARED             | BHT      | Bottom Hole Temperature                               | 200.0     | degF  |
|               | SHARED             | SVTM     | Navigation and Survey Master Tool                     | NONE      |       |
|               | SHARED             | AZTM     | High Res Z Accelerometer Master Tool                  | GTET      |       |
|               | SHARED             | TEMM     | Temperature Master Tool                               | NONE      |       |
|               | SHARED             | BHSM     | Borehole Size Master Tool                             | NONE      |       |
|               | Rwa /<br>CrossPlot | XPOK     | Process Crossplot?                                    | Yes       |       |
|               | Rwa /<br>CrossPlot | FCHO     | Select Source of F                                    | Automatic |       |
|               | Rwa /<br>CrossPlot | AFAC     | Archie A factor                                       | 0.6200    |       |
|               | Rwa /<br>CrossPlot | MFAC     | Archie M factor                                       | 2.1500    |       |
|               | Rwa /<br>CrossPlot | RMFR     | Rmf Reference                                         | 0.10      | ohmm  |
|               | Rwa /<br>CrossPlot | TMFR     | Rmf Ref Temp                                          | 75.00     | degF  |
|               | Rwa /<br>CrossPlot | RWA      | Resistivity of Formation Water                        | 0.05      | ohmm  |
|               | Rwa /<br>CrossPlot | ADP      | Use Air Porosity to calculate CrossplotPhi            | No        |       |
|               | GTET               | GROK     | Process Gamma Ray?                                    | Yes       |       |
|               | GTET               | GRSO     | Gamma Tool Standoff                                   | 0.000     | in    |
|               | GTET               | GEOK     | Process Gamma Ray EVR?                                | No        |       |
|               | GTET               | TPOS     | Tool Position                                         | Centered  |       |
|               | DSNT               | DNOK     | Process DSN?                                          | Yes       |       |
|               | DSNT               | DEOK     | Process DSN EVR?                                      | No        |       |
|               | DSNT               | NLIT     | Neutron Lithology                                     | Limestone |       |
|               | DSNT               | DSNO     | DSN Standoff - 0.25 in (6.35 mm) Recommended          | 0.250     | in    |
|               | DSNT               | DNTP     | Temperature Correction Type                           | None      |       |
|               | DSNT               | DPRS     | DSN Pressure Correction Type                          | None      |       |
|               | DSNT               | SHCO     | View More Correction Options                          | No        |       |
|               | DSNT               | UTVD     | Use TVD for Gradient Corrections?                     | No        |       |
|               | DSNT               | LHWT     | Logging Horizontal Water Tank?                        | No        |       |
|               | SDLT               | DNOK     | Process Density?                                      | Yes       |       |
|               | SDLT               | DNOK     | Process Density EVR?                                  | No        |       |
|               | SDLT               | CB       | Logging Calibration Blocks?                           | No        |       |

|                                                                        |      |                                   |                          |      |
|------------------------------------------------------------------------|------|-----------------------------------|--------------------------|------|
| SDLT                                                                   | SPVT | SDLT Pad Temperature Valid?       | Yes                      |      |
| SDLT                                                                   | DTWN | Disable temperature warning       | No                       |      |
| SDLT                                                                   | DMA  | Formation Density Matrix          | 2.710                    | g/cc |
| SDLT                                                                   | DFL  | Formation Density Fluid           | 1.000                    | g/cc |
| SDLT                                                                   | CLOK | Process Caliper Outputs?          | Yes                      |      |
| SDLT                                                                   | MLOK | Process MicroLog Outputs?         | Yes                      |      |
| BSAT                                                                   | MBOK | Compute BCAS Results?             | Yes                      |      |
| BSAT                                                                   | FLLO | Frequency Filter Low Pass Value?  | 5000                     | Hz   |
| BSAT                                                                   | FLHI | Frequency Filter High Pass Value? | 27000                    | Hz   |
| BSAT                                                                   | DTFL | Delta -T Fluid                    | 189.00                   | uspf |
| BSAT                                                                   | DTMT | Delta -T Matrix Type              | Limestone 47.5           |      |
| BSAT                                                                   | DTSH | Delta -T Shale                    | 100.00                   | uspf |
| BSAT                                                                   | SPEQ | Acoustic Porosity Equation        | Wylie                    |      |
| ACRt                                                                   | RTOK | Process ACRt?                     | Yes                      |      |
| ACRt                                                                   | MNSO | Minimum Tool Standoff             | 1.50                     | in   |
| ACRt                                                                   | TCS1 | Temperature Correction Source     | FP Lwr & FP Upr          |      |
| ACRt                                                                   | TPOS | Tool Position                     | Free Hanging             |      |
| ACRt                                                                   | RMOP | Rmud Source                       | Mud Cell                 |      |
| ACRt                                                                   | RMIN | Minimum Resistivity for MAP       | 0.20                     | ohmm |
| ACRt                                                                   | RMIN | Maximum Resistivity for MAP       | 200.00                   | ohmm |
| ACRt                                                                   | THQY | Threshold Quality                 | 0.50                     |      |
| BOTTOM                                                                 |      |                                   |                          |      |
| Data: CORRELL_A_1\0001 BLACK_QUAD_BSAT\004 19-Jul-11 05:19 Up @4408.5f |      |                                   | Date: 19-Jul-11 06:45:05 |      |

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:

GTET - 11013114

Engineer:

T. HARRIS

Software Version:

WL INSITE R3.2.3 (Build 5)

Reference Calibration Date:

26-Jun-11 01:37:50

Calibration Date:

18-Jul-11 09:18:26

Calibration Version:

1

Calibrator Source S/N: 150

Calibrator API Reference:225.00 api

Equivalent Calibrator API Reference:228.9 api

| Measurement             | Measured | Calibrated | Units |
|-------------------------|----------|------------|-------|
| Background              | 25.2     | 23.4       | api   |
| Background + Calibrator | 268.3    | 248.4      | api   |
| Calibrator              | 223.1    | 225.0      | api   |

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:

GTET - 11013114

Engineer:

T. HARRIS

Software Version:

WL INSITE R3.2.3 (Build 5)

Reference Calibration Date:

18-Jul-11 09:18:26

Calibration Date:

20-Jul-11 06:21:55

Calibration Version:

1

Calibrator Source S/N: 150

Calibrator API Reference:225.00 api

Equivalent Calibrator API Reference:228.9 api

| Field Verification      | Shop  | Field | Units |
|-------------------------|-------|-------|-------|
| Background              | 23.4  | 32.1  | api   |
| Background + Calibrator | 248.4 | 248.8 | api   |
| Calibrator              | 225.0 | 216.7 | api   |

| Shop  | Field | Difference | Tolerance |
|-------|-------|------------|-----------|
| 225.0 | 216.7 | 8.3        | +/- 9.00  |

**DUAL SPACED NEUTRON SHOP CALIBRATION**

|                   |                            |                             |                    |
|-------------------|----------------------------|-----------------------------|--------------------|
| Tool Name:        | DSNT - 10993115            | Reference Calibration Date: | 24-May-11 12:45:30 |
| Engineer:         | J.COTHREN                  | Calibration Date:           | 22-Jun-11 11:00:54 |
| Software Version: | WL INSITE R3.2.3 (Build 5) | Calibration Version:        | 1                  |

Logging Source S/N: DSN-382  
Tank Serial Number: PVOK  
Reference value assigned to Tank: 56.100  
Snow Block S/N: 592\_PV  
Calibration Tank Water Temperature: 85 degF  
Min. Tool Housing Outside Diameter: 3.625 in

| CALIBRATION CONSTANTS |             |           |                            |
|-----------------------|-------------|-----------|----------------------------|
| Measurement           | Prev. Value | New Value | Control Limit On New Value |
| Gain:                 | 0.993       | 0.993     | 0.900 - 1.100              |

| WATER TANK SUMMARY (Horizontal Water Tank) |                                  |                        |        |                         |
|--------------------------------------------|----------------------------------|------------------------|--------|-------------------------|
| Measurement                                | Current Reading (Previous Coef.) | Calibrated (New Coef.) | Change | Control Limit On Change |
| Porosity (decp):                           | 0.2355                           | 0.2358                 | 0.0002 | +/- 0.0020              |
| Calibrated Ratio:                          | 10.55                            | 10.56                  | 0.008  | +/- 0.050               |

| VERIFIER                    |        |                   |
|-----------------------------|--------|-------------------|
| Measurement                 | Value  | Control Limit     |
| Snow-Block Porosity (decp): | 0.0858 | 0.02000 - 0.09000 |

| PASS/FAIL SUMMARY |        |
|-------------------|--------|
| Background Check: | Passed |
| Gain-Range Check: | Passed |
| Snow-Block Check: | Passed |

**DUAL SPACED NEUTRON FIELD CALIBRATION**

|                   |                            |                             |                    |
|-------------------|----------------------------|-----------------------------|--------------------|
| Tool Name:        | DSNT - 10993115            | Reference Calibration Date: | 22-Jun-11 11:00:54 |
| Engineer:         | T. HARRIS                  | Calibration Date:           | 20-Jul-11 06:24:43 |
| Software Version: | WL INSITE R3.2.3 (Build 5) | Calibration Version:        | 1                  |

Logging Source S/N: DSN-382  
Snow Block S/N: 592\_PV

| NEUTRON FIELD-CHECK SUMMARY |        |        |            |                         |
|-----------------------------|--------|--------|------------|-------------------------|
|                             | Shop   | Field  | Difference | Control Limit On Change |
| Snow-Block Porosity (decp): | 0.0858 | 0.0856 | -0.0003    | +/- 0.0150              |

| PASS/FAIL SUMMARY      |        |
|------------------------|--------|
| Block Change Check:    | Passed |
| Snow Block Stat Check: | Passed |
| Temperature Check:     | Passed |

**SPECTRAL DENSITY SHOP CALIBRATION**

|            |                  |                             |                    |
|------------|------------------|-----------------------------|--------------------|
| Tool Name: | SDLT - I15M94P73 | Reference Calibration Date: | 12-Apr-11 11:19:08 |
|------------|------------------|-----------------------------|--------------------|

| Engineer: J.COTHREN                          |                                    | Calibration Date: 22-Jun-11 12:28:40 |               |                            |
|----------------------------------------------|------------------------------------|--------------------------------------|---------------|----------------------------|
| Software Version: WL INSITE R3.2.3 (Build 5) |                                    | Calibration Version: 1               |               |                            |
| Logging Source S/N: 20791B                   |                                    |                                      |               |                            |
| Aluminum Block S/N: 63074                    |                                    | Density: 2.589g/cc                   | Pe: 3.140     |                            |
| Magnesium Block S/N: 632386                  |                                    | Density: 1.683g/cc                   | Pe: 2.594     |                            |
| DENSITY CALIBRATION SUMMARY                  |                                    |                                      |               |                            |
| Measurement                                  | Previous Value                     | New Value                            | Control Limit |                            |
| Near Bar Gain                                | 0.9649                             | 1.0477                               | 0.90 - 1.10   |                            |
| Near Dens Gain                               | 0.9709                             | 1.0254                               | 0.90 - 1.10   |                            |
| Near Peak Gain                               | 0.9616                             | 1.0314                               | 0.90 - 1.10   |                            |
| Near Lith Gain                               | 0.9393                             | 1.0113                               | 0.90 - 1.10   |                            |
| Far Bar Gain                                 | 0.9944                             | 1.0070                               | 0.90 - 1.10   |                            |
| Far Dens Gain                                | 0.9865                             | 0.9955                               | 0.90 - 1.10   |                            |
| Far Peak Gain                                | 0.9791                             | 0.9918                               | 0.90 - 1.10   |                            |
| Far Lith Gain                                | 0.9614                             | 0.9640                               | 0.90 - 1.10   |                            |
|                                              |                                    |                                      |               |                            |
| Near Bar Offset                              | 0.3736                             | -0.3920                              | NONE          |                            |
| Near Dens Offset                             | 0.2975                             | -0.1869                              | NONE          |                            |
| Near Peak Offset                             | 0.3459                             | -0.2439                              | NONE          |                            |
| Near Lith Offset                             | 0.5102                             | -0.1117                              | NONE          |                            |
| Far Bar Offset                               | 0.0467                             | -0.0661                              | NONE          |                            |
| Far Dens Offset                              | 0.1134                             | 0.0319                               | NONE          |                            |
| Far Peak Offset                              | 0.1373                             | 0.0239                               | NONE          |                            |
| Far Lith Offset                              | 0.2188                             | 0.1792                               | NONE          |                            |
|                                              |                                    |                                      |               |                            |
| Near Bar Background                          | 969.63                             | 966.57                               | 700 - 1450    |                            |
| Near Dens Background                         | 316.89                             | 316.84                               | 230 - 480     |                            |
| Near Peak Background                         | 138.70                             | 138.17                               | 100 - 210     |                            |
| Near Lith Background                         | 170.45                             | 169.50                               | 125 - 260     |                            |
| Far Bar Background                           | 549.43                             | 550.24                               | 450 - 900     |                            |
| Far Dens Background                          | 213.50                             | 215.57                               | 175 - 345     |                            |
| Far Peak Background                          | 85.74                              | 85.76                                | 70 - 140      |                            |
| Far Lith Background                          | 89.13                              | 89.50                                | 75 - 145      |                            |
| CALIBRATION BLOCK SUMMARY                    |                                    |                                      |               |                            |
| Measurement                                  | Current Reading<br>(Previous Coef) | Calibrated<br>(New Coef)             | Change        | Control Limit<br>On Change |
| MAGNESIUM                                    |                                    |                                      |               |                            |
| Density (g/cc)                               | 1.673                              | 1.683                                | 0.010         | +/- 0.015                  |
| Pe                                           | 2.477                              | 2.562                                | 0.085         | +/- 0.150                  |
| ALUMINUM                                     |                                    |                                      |               |                            |
| Density (g/cc)                               | 2.583                              | 2.589                                | 0.006         | +/- 0.01500                |
| Pe                                           | 3.021                              | 3.107                                | 0.086         | +/- 0.150                  |
| TOOL SUMMARY                                 |                                    |                                      |               |                            |
| Measurement                                  | Near Detector                      |                                      | Far Detector  |                            |
|                                              | Value                              | Control Limits                       | Value         | Control Limits             |
| QUALITY                                      |                                    |                                      |               |                            |
| Background                                   | -0.0020                            | +/- 0.0110                           | -0.0013       | +/- 0.0140                 |
| Magnesium Block                              | 0.0005                             | +/- 0.0110                           | -0.0021       | +/- 0.0140                 |
| Aluminum Block                               | -0.0012                            | +/- 0.0110                           | -0.0015       | +/- 0.0140                 |
| Resolution                                   | 10.26                              | 6.00 - 11.50                         | 8.70          | 6.00 - 11.50               |

|                                |      |             |        |            |
|--------------------------------|------|-------------|--------|------------|
| Resolution:                    | 1591 | 1200 - 2700 | 941    | 800 - 1700 |
| Internal Verifier(B+D+P+L)     |      |             |        |            |
| PASS/FAIL SUMMARY              |      |             |        |            |
| Background Quality Check:      |      |             | Passed |            |
| Background Range Check:        |      |             | Passed |            |
| Background Resolution Check:   |      |             | Passed |            |
| Background Verification Check: |      |             | Passed |            |
| Magnesium Quality Check:       |      |             | Passed |            |
| Aluminum Quality Check:        |      |             | Passed |            |
| Gains Check:                   |      |             | Passed |            |
| Changes in Calibration Blocks: |      |             | Passed |            |

|                              |                            |  |                             |                    |
|------------------------------|----------------------------|--|-----------------------------|--------------------|
| SPECTRAL DENSITY FIELD CHECK |                            |  |                             |                    |
| Tool Name:                   | SDLT - I15M94P73           |  | Reference Calibration Date: | 22-Jun-11 12:28:40 |
| Engineer:                    | T. HARRIS                  |  | Calibration Date:           | 20-Jul-11 06:17:01 |
| Software Version:            | WL INSITE R3.2.3 (Build 5) |  | Calibration Version:        | 1                  |

Pad Temperature: 94.1 degF

| DENSITY FIELD CALIBRATION SUMMARY |          |          |        |                   |
|-----------------------------------|----------|----------|--------|-------------------|
| Measurement                       | Shop     | Field    | Change | Control Limit +/- |
| Near (B+D+P+L) cps                | 1591.080 | 1585.791 | -5.289 | 16.043            |
| Far (B+D+P+L) cps                 | 941.070  | 935.477  | -5.593 | 16.569            |
| Near Resolution                   | 10.26    | 10.23    | -0.030 | 0.50              |
| Far Resolution                    | 8.70     | 8.92     | 0.220  | 1.00              |

| PASS/FAIL SUMMARY       |        |
|-------------------------|--------|
| Bkg Quality Check:      | Passed |
| Bkg Resolution Check:   | Passed |
| Bkg Verification Check: | Passed |

|                            |                            |  |                             |                    |
|----------------------------|----------------------------|--|-----------------------------|--------------------|
| MICRO LOG SHOP CALIBRATION |                            |  |                             |                    |
| Tool Name:                 | SDLT - I15M94P73           |  | Reference Calibration Date: | 16-May-11 23:27:34 |
| Engineer:                  | T. HARRIS                  |  | Calibration Date:           | 19-May-11 00:24:47 |
| Software Version:          | WL INSITE R3.2.3 (Build 5) |  | Calibration Version:        | 1                  |

| CALIBRATION COEFFICIENT SUMMARY |                  |            |                   |            |       |
|---------------------------------|------------------|------------|-------------------|------------|-------|
| Measurement                     | Micro Log Normal |            | Micro Log Lateral |            | Units |
|                                 | Measured         | Calibrated | Measured          | Calibrated |       |
| Tool Zero                       | -0.05            | -0.09      | -0.00             | 0.00       | ohmm  |
| Calibration Point #1            | 0.04             | 0.00       | -0.01             | 0.00       | ohmm  |
| Calibration Point #2            | 20.25            | 20.00      | 20.22             | 20.00      | ohmm  |
| Internal Reference              | 20.14            | 19.90      | 20.21             | 19.99      | ohmm  |
|                                 |                  |            |                   |            |       |
| Measurement                     | Micro Log Normal |            | Micro Log Lateral |            | Units |
|                                 | Tool Value       |            | Tool Value        |            |       |
| Tool Zero                       | 1.63             |            | -0.04             |            | V     |
| Calibration Point #1            | 25.51            |            | -0.60             |            | V     |
| Calibration Point #2            | 5357.63          |            | 6949.54           |            | V     |
| Internal Reference              | 5329.67          |            | 6946.45           |            | V     |

|                       |                  |  |                             |                    |
|-----------------------|------------------|--|-----------------------------|--------------------|
| MICRO LOG FIELD CHECK |                  |  |                             |                    |
| Tool Name:            | SDLT - I15M94P73 |  | Reference Calibration Date: | 19-May-11 00:24:47 |
| Engineer:             | T. HARRIS        |  | Calibration Date:           | 20-Jul-11 08:11:15 |

|                                              |                    |                  |                        |                   |           |
|----------------------------------------------|--------------------|------------------|------------------------|-------------------|-----------|
| Software Version: WL INSITE R3.2.3 (Build 5) |                    |                  | Calibration Version: 1 |                   |           |
|                                              | Measurement        | Micro Log Normal |                        | Micro Log Lateral |           |
|                                              |                    | Shop             | Field                  | Shop              | Field     |
|                                              | Tool Zero          | -0.09            | -0.10                  | 0.00              | 0.00      |
|                                              | Internal Reference | 19.90            | 19.84                  | 19.99             | 19.92     |
|                                              | Summary            |                  |                        |                   |           |
|                                              | Signal             | Shop             | Field                  | Difference        | Tolerance |
|                                              | Microlog Normal    | 19.90            | 19.84                  | 0.06              | +/- 0.80  |
| Microlog Lateral                             | 19.99              | 19.92            | 0.07                   | +/- 0.80          |           |

|                                  |                            |                             |                    |
|----------------------------------|----------------------------|-----------------------------|--------------------|
| DENSITY CALIPER SHOP CALIBRATION |                            |                             |                    |
| Tool Name:                       | SDLT - I15M94P73           | Reference Calibration Date: | 12-Apr-11 14:06:56 |
| Engineer:                        | T. HARRIS                  | Calibration Date:           | 16-May-11 23:23:00 |
| Software Version:                | WL INSITE R3.2.3 (Build 5) | Calibration Version:        | 1                  |

|                                                                                              |                          |                                   |                         |                            |                            |
|----------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|-------------------------|----------------------------|----------------------------|
|                                                                                              | CALIBRATION COEFFICIENTS |                                   |                         |                            |                            |
|                                                                                              | Measurement              | Previous Value                    | New Value               | Control Limit On New Value |                            |
|                                                                                              | Pad Offset               | -2321.44                          | -2473.16                | -7000.00 - -1000.00        |                            |
|                                                                                              | Pad Gain                 | 0.0003737                         | 0.0003851               | 0.000200 - 0.000600        |                            |
|                                                                                              | Arm Offset               | -282.69                           | -443.16                 | -5000.00 - 3000.00         |                            |
|                                                                                              | Arm Gain                 | 0.0004952                         | 0.0005356               | 0.000300 - 0.000700        |                            |
| Arm Power                                                                                    | -0.000003633             | -0.000006378                      | -0.000010 - 0.000010    |                            |                            |
| The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER |                          |                                   |                         |                            |                            |
| Tool Diameter: 4.50 in                                                                       |                          |                                   |                         |                            |                            |
|                                                                                              | CALIBRATION RINGS        |                                   |                         |                            |                            |
|                                                                                              | Measurement              | Current Reading (Previous Coeff.) | Calibrated (New Coeff.) | Change                     | Control Limit On New Value |
|                                                                                              | PAD EXTENSION:           |                                   |                         |                            |                            |
|                                                                                              | Small Ring (in)          | 2.00                              | 2.00                    | 0.00                       | +/- 0.20                   |
|                                                                                              | Medium Ring (in)         | 3.70                              | 3.75                    | 0.05                       | +/- 0.20                   |
|                                                                                              | RING DIAMETER:           |                                   |                         |                            |                            |
|                                                                                              | Small Ring (in)          | 6.50                              | 6.50                    | 0.00                       | +/- 0.20                   |
|                                                                                              | Medium Ring (in)         | 8.17                              | 8.25                    | 0.08                       | +/- 0.20                   |
|                                                                                              | Large Ring (in)          | 15.05                             | 15.00                   | -0.05                      | +/- 0.20                   |

|                                       |  |        |
|---------------------------------------|--|--------|
| PASS/FAIL SUMMARY                     |  |        |
| Calibration-Coefficients Range Check: |  | Passed |
| Ring-Measurement Check:               |  | Passed |
| PASS/FAIL SUMMARY                     |  |        |
| Calibration-Coefficients Range Check: |  | Passed |

|                                |                            |                             |                    |
|--------------------------------|----------------------------|-----------------------------|--------------------|
| SDLT CALIPER FIELD CALIBRATION |                            |                             |                    |
| Tool Name:                     | SDLT - I15M94P73           | Reference Calibration Date: | 16-May-11 23:23:00 |
| Engineer:                      | T. HARRIS                  | Calibration Date:           | 20-Jul-11 06:18:27 |
| Software Version:              | WL INSITE R3.2.3 (Build 5) | Calibration Version:        | 1                  |

|  |                         |      |       |        |
|--|-------------------------|------|-------|--------|
|  | MEASURED CALIPER VALUES |      |       |        |
|  | Measurement             | Shop | Field | Change |
|  | Pad Extension           | 3.75 | 3.73  | -0.02  |
|  | Ring Diameter           | 8.25 | 8.14  | -0.11  |

|                      |        |
|----------------------|--------|
| Pad Extension Check: | Passed |
| Diameter Check:      | Passed |

|                   |                            |                             |                    |
|-------------------|----------------------------|-----------------------------|--------------------|
| Tool Name:        | ACRt - 90144557-e910-s     | Reference Calibration Date: | 15-Feb-11 15:24:31 |
| Engineer:         | J.COTHREN                  | Calibration Date:           | 12-Apr-11 14:38:06 |
| Software Version: | WL INSITE R3.2.3 (Build 5) | Calibration Version:        | 1                  |

| Subarray | R12KHz |          |       | R36KHz |          |       | R72KHz |          |       |
|----------|--------|----------|-------|--------|----------|-------|--------|----------|-------|
|          | Lower  | (mmho/m) | Upper | Lower  | (mmho/m) | Upper | Lower  | (mmho/m) | Upper |
| A1 (80") | 0.95   | 1.0105   | 1.05  | 0.95   | 1.0122   | 1.05  | 0.95   | 1.0090   | 1.05  |
| A2 (50") | 0.95   | 1.0170   | 1.05  | 0.95   | 1.0211   | 1.05  | 0.95   | 1.0206   | 1.05  |
| A3 (29") | 0.95   | 1.0060   | 1.05  | 0.95   | 1.0091   | 1.05  | 0.95   | 1.0054   | 1.05  |
| A4 (17") | 0.95   | 1.0034   | 1.05  | 0.95   | 1.0052   | 1.05  | 0.95   | 1.0037   | 1.05  |
| A5 (10") | N/A    | N/A      | N/A   | 0.95   | 0.9977   | 1.05  | 0.95   | 0.9957   | 1.05  |
| A6 (6")  | N/A    | N/A      | N/A   | 0.95   | 0.9840   | 1.05  | 0.95   | 0.9817   | 1.05  |

| Subarray | R12KHz |          |       | R36KHz |          |       | R72KHz |          |       |
|----------|--------|----------|-------|--------|----------|-------|--------|----------|-------|
|          | Lower  | (mmho/m) | Upper | Lower  | (mmho/m) | Upper | Lower  | (mmho/m) | Upper |
| A1 (80") | -5     | 0.435    | 2     | -6     | -3.793   | -2    | -8     | -4.886   | -2    |
| A2 (50") | -7     | -2.867   | -1    | -6     | -4.172   | -2    | -7     | -4.053   | -2    |
| A3 (29") | -27    | -13.325  | -9    | -9     | -3.953   | -3    | -7     | -2.699   | -1    |
| A4 (17") | -180   | -100.279 | -60   | -45    | -31.546  | -15   | -39    | -25.059  | -13   |
| A5 (10") | N/A    | N/A      | N/A   | -150   | -93.202  | -50   | -80    | -42.747  | -10   |
| A6 (6")  | N/A    | N/A      | N/A   | 175    | 295.400  | 525   | 90     | 149.285  | 270   |

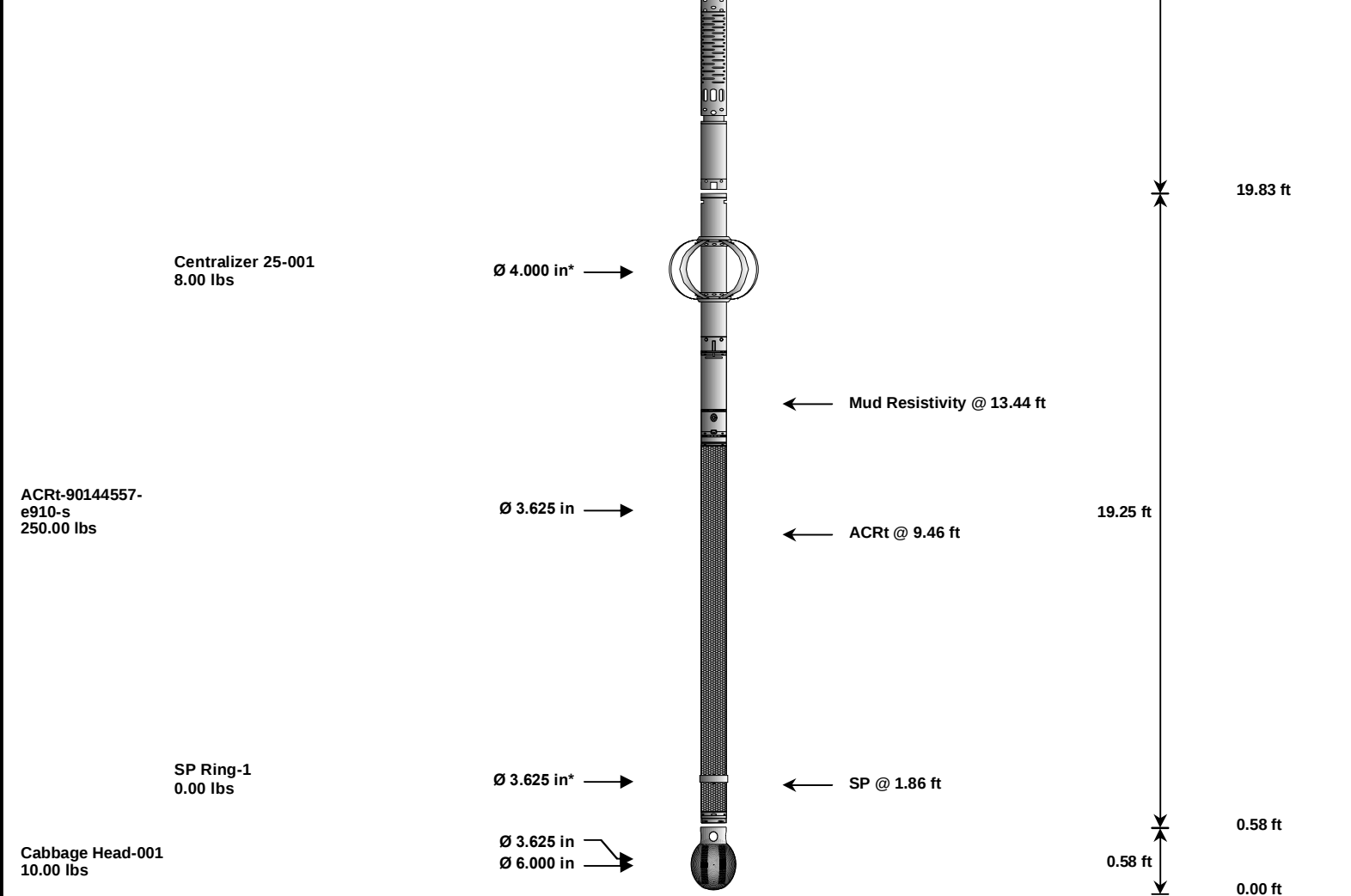
| TRANSMITTER CURRENT GAIN |       |        |       |
|--------------------------|-------|--------|-------|
| Signal                   | Lower | R      | Upper |
| 12K                      | 0.6   | 0.8622 | 1.3   |
| 36K                      | 1.0   | 1.3491 | 2.0   |
| 72K                      | 1.0   | 1.5542 | 2.0   |

| R-MUD VERIFICATION |                  |                     |                  |
|--------------------|------------------|---------------------|------------------|
| Signal             | Lower<br>(ohm-m) | Measured<br>(ohm-m) | Upper<br>(ohm-m) |
| Mud Cell           | 0.95             | 1.001               | 1.05             |

| CALIBRATION SUMMARY  |          |          |       |            |            |       |
|----------------------|----------|----------|-------|------------|------------|-------|
| Sensor               | Shop     | Field    | Post  | Difference | Tolerance  | Units |
| GTET-11013114        |          |          |       |            |            |       |
| Gamma Ray Calibrator | 225.0    | 216.7    | ----- | 8.3        | +/- 9.00   | api   |
| DSNT-10993115        |          |          |       |            |            |       |
| Snow-Block Porosity  | 0.0858   | 0.0856   | ----- | 0.0002     | +/- 0.0150 | decg  |
| SDLT-I15M94P73       |          |          |       |            |            |       |
| Near(B+D+P+L)        | 1591.080 | 1585.791 | ----- | 5.289      | +/-16.043  | cps   |
| Far(B+D+P+L)         | 941.070  | 935.477  | ----- | 5.593      | +/-16.569  | cps   |
| MicroLog Normal      | 19.90    | 19.84    | ----- | 0.06       | +/-0.80    | ohmm  |
| MicroLog Lateral     | 19.99    | 19.92    | ----- | 0.07       | +/-0.80    | ohmm  |
| Pad Extension        | 3.75     | 3.73     | ----- | 0.02       | +/-0.10    | in    |
| Ring Diameter        | 8.25     | 8.14     | ----- | 0.110      | +/-0.15    | in    |
| ACRt-90144557-e910-s |          |          |       |            |            |       |
| Mud Cell             | 1.001    | -----    | ----- | 0.000      | -----      | ohm-m |

TOOL STRING DIAGRAM REPORT

| Description                   | Overbody Description                       | O.D.                          | Diagram | Sensors @ Delays                                                    | Length   | Accumulated Length |
|-------------------------------|--------------------------------------------|-------------------------------|---------|---------------------------------------------------------------------|----------|--------------------|
| CH_HOS-590_BLK<br>37.50 lbs   |                                            | Ø 2.750 in →                  |         | ← Temperature @ 72.30 ft                                            | 3.03 ft  | 73.32 ft           |
| GTET-11013114<br>165.00 lbs   |                                            | Ø 3.625 in →                  |         | ← GammaRay @ 64.23 ft                                               | 8.52 ft  | 70.30 ft           |
| DSNT-10993115<br>174.00 lbs   | DSN Decentralizer-<br>10735144<br>6.60 lbs | Ø 3.625 in* →<br>Ø 3.625 in → |         | ← DSN Far @ 54.84 ft<br>← DSN Near @ 54.09 ft                       | 9.69 ft  | 61.77 ft           |
|                               |                                            |                               |         |                                                                     |          | 52.09 ft           |
| SDLT-I15M94P73<br>360.00 lbs  |                                            | Ø 4.500 in →<br>Ø 4.750 in →  |         | SDL Microlog @ 44.27 ft<br>SDL Caliper @ 44.09 ft<br>SDL @ 44.08 ft | 10.81 ft | 41.27 ft           |
| IQ Flex-592_Blk<br>140.00 lbs |                                            | Ø 3.625 in →                  |         |                                                                     | 5.67 ft  | 35.60 ft           |
|                               | Centralizer 25-002<br>8.00 lbs             | Ø 4.000 in* →                 |         |                                                                     |          |                    |
| BSAT-10939049<br>300.00 lbs   |                                            | Ø 3.625 in →                  |         | ← Sonic Receivers @ 27.09 ft                                        | 15.77 ft |                    |
|                               |                                            |                               |         |                                                                     |          |                    |
|                               |                                            |                               |         |                                                                     |          |                    |



| Mnemonic                                                               |                                    | Tool Name | Serial Number   | Weight (lbs) | Length (ft) | Accumulated Length (ft)  | Max.Log. Speed (fpm) |
|------------------------------------------------------------------------|------------------------------------|-----------|-----------------|--------------|-------------|--------------------------|----------------------|
| CH HOS                                                                 | Hostile Cable Head with Load Cell  |           | 590 BLK         | 37.50        | 3.03        | 70.30                    | 300.00               |
| GTET                                                                   | Gamma Telemetry Tool               |           | 11013114        | 165.00       | 8.52        | 61.77                    | 60.00                |
| DSNT                                                                   | Dual Spaced Neutron                |           | 10993115        | 174.00       | 9.69        | 52.09                    | 60.00                |
| DCNT                                                                   | DSN Decentralizer                  |           | 10735144        | 6.60         | 5.13        | * 55.42                  | 300.00               |
| SDLT                                                                   | Spectral Density Tool              |           | I15M94P73       | 360.00       | 10.81       | 41.27                    | 60.00                |
| IQF                                                                    | IQ Flex tool                       |           | 592_BlK         | 140.00       | 5.67        | 35.60                    | 300.00               |
| BSAT                                                                   | Borehole Sonic Array Tool          |           | 10939049        | 300.00       | 15.77       | 19.83                    | 60.00                |
| OBCEN                                                                  | Centralizer - 25 in. Overbody      |           | 002             | 8.00         | 2.08        | * 32.92                  | 300.00               |
| ACRt                                                                   | Array Compensated True Resistivity |           | 90144557-e910-s | 250.00       | 19.25       | 0.58                     | 300.00               |
| SP                                                                     | SP Ring                            |           | 1               | 0.00         | 0.25        | * 1.86                   | 300.00               |
| OBCEN                                                                  | Centralizer - 25 in. Overbody      |           | 001             | 8.00         | 2.08        | * 16.41                  | 300.00               |
| CBHD                                                                   | Cabbage Head                       |           | 001             | 10.00        | 0.58        | 0.00                     | 300.00               |
| Total                                                                  |                                    |           |                 | 1,459.10     | 73.32       |                          |                      |
| * Not included in Total Length and Length Accumulation.                |                                    |           |                 |              |             |                          |                      |
| Data: CORRELL_A_1I0001 BLACK_QUAD_BSATI004 19-Jul-11 05:19 Up @4408.5f |                                    |           |                 |              |             | Date: 19-Jul-11 06:46:04 |                      |

|         |              |
|---------|--------------|
| COMPANY | OXY USA INC. |
| WELL    | CORRELL A-1  |
| FIELD   | LEMON NW     |
| COUNTY  | HASKELL      |
| STATE   | KANSAS       |

**HAL HUBERTON**

**BOREHOLE COMPENSATED  
SONIC POROSITY**

