

HALLIBURTON

MICROLOG

SANDRIDGE ENERGY
MURPHY SWD 3404 1-18
BLUFF
SUMNER
KANSAS

COMPANY SANDRIDGE ENERGY
WELL MURPHY SWD 3404 1-18
FIELD/BLOCK BLUFF
COUNTY SUMNER
STATE KANSAS

API No. 15-191-22733-00-00
 Location (SHL) 350' FNL & 1559' FEL
 SE-NE-NW-NE
 Sect. 18 Twp. 34S Rge. 4W
 Elev. 1240.0 ft
 12.0 ft above perm. Datum

Other Services:
 ACRT
 DSNT, SDLT
 WAVESONIC
 MRIL
 CSNG
 IDT, ICT

Permanent Datum Log measured from KB
 Drilling measured from KB

| | |
|--------------------------|---------------------------|
| Date | 07-May-14 |
| Run No. | ONE |
| Depth - Driller | 5182.00 ft |
| Depth - Logger | 5172.0 ft |
| Bottom - Logged Interval | 5149.0 ft |
| Top - Logged Interval | 2500.0 ft |
| Casing - Driller | 8.625 in @ 543.0 ft |
| Casing - Logger | 540.0 ft |
| Bit Size | 7.875 in @ |
| Type Fluid in Hole | Water Based Mud @ |
| Density | 9.5 ppq 48.00 s/qt |
| PH | 10.50 pH 4.0 cphm |
| Source of Sample | MUD PIT |
| Rm @ Meas. Temperature | 0.730 ohmm @ 75.00 degF @ |
| Rmf @ Meas. Temperature | 0.66 ohmm @ 75.00 degF @ |
| Rmc @ Meas. Temperature | 0.890 ohmm @ 75.00 degF @ |
| Source Rmf | MEASURED |
| Rm @ BHT | 0.40 ohmm @ 143.0 degF @ |
| Time Since Circulation | 5.0000 hr |
| Time on Bottom | 07-May-14 11:16 |
| Max. Rec. Temperature | 143.0 degF @ 5172.0 ft @ |
| Equipment | 11072142 LIBERAL |
| Recorded By | J. BOLLOW |
| Witnessed By | D. BARLOW |

Fold here

Service Ticket No.: 901329713
API Serial No.: 15-191-22733-00-00
PGM Version: WL INSITE R4.2.0 (Build 2)

| 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 | MICROLOG | RUBBER | ADJ | N/A |
| Rmc @ Meas. Temp. | @ | | @ | | 11014296 | | | |
| Source Rmf | Rmc | | | | | | | |
| Rm @ BHT | @ | | @ | | | | | |
| Rmf @ BHT | @ | | @ | | | | | |
| Rmc @ BHT | @ | | @ | | | | | |

| EQUIPMENT DATA | | | | | | | |
|--------------------|----------|--------------|--|-------------|--|-------------|--|
| GAMMA | | ACOUSTIC | | DENSITY | | NEUTRON | |
| Run No. | ONE | Run No. | | Run No. | | Run No. | |
| Serial No. | 11039640 | Serial No. | | Serial No. | | Serial No. | |
| Model No. | GTET | Model No. | | Model No. | | Model No. | |
| Diameter | 3.625" | No. of Cent. | | Diameter | | Diameter | |
| Detector Model No. | T-102 | Spacing | | Log Type | | Log Type | |
| Type | SCINT | | | Source Type | | Source Type | |
| Length | 8' | LSA [Y/N] | | Serial No. | | Serial No. | |
| Distance to Source | 10' | FWDA [Y/N] | | Strength | | Strength | |

LOGGING DATA

| GENERAL | | | GAMMA | | ACOUSTIC | | DENSITY | | NEUTRON | | |
|---------|-------|------|--------|-------|----------|-------|---------|--------|---------|---|--------|
| Run No. | Depth | | Speed | Scale | | Scale | | Matrix | Scale | | Matrix |
| | From | To | ft/min | L | R | L | R | | L | R | |
| ONE | 5172 | 2500 | REC | 0 | 150 | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING

CHLORIDES REPORTED AT 3,000 MG/L

GTET-DSNT-SDLT-ACRT RUN IN COMBINATION

GTET-CSNG-IDT-ICT-WAVE RUN IN COMBINATION

TODAY'S CREW: F. VILLA & M. GRAHAM

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KS. 620-624-8123

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.

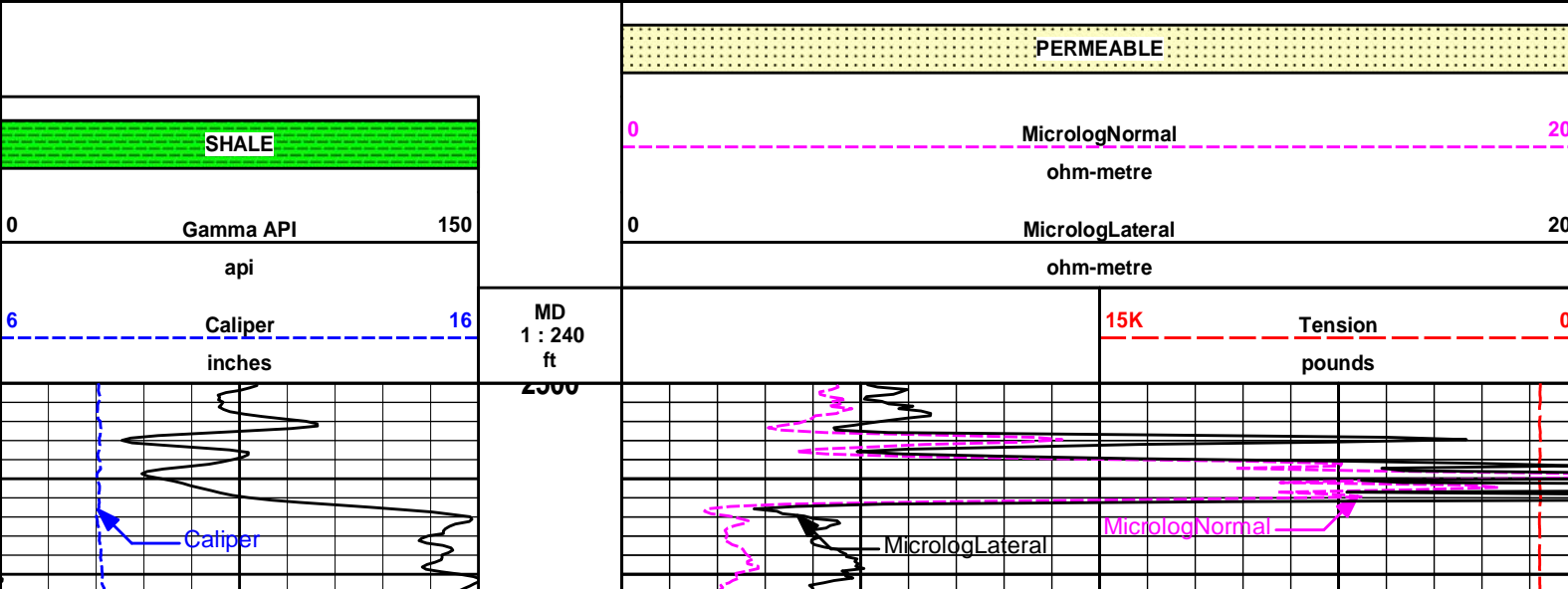
HALLIBURTON

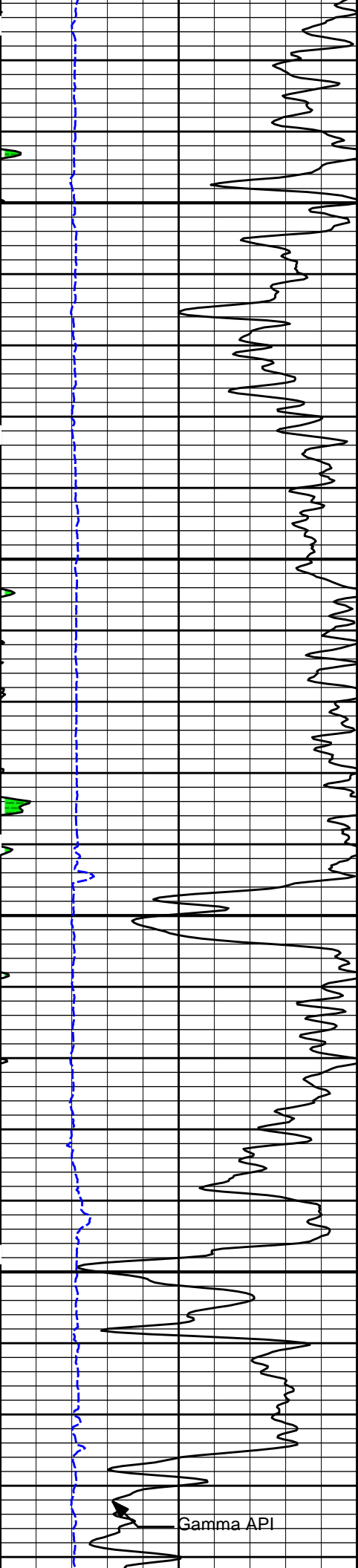
HALLIBURTON

Plot Time: 07-May-14 12:16:24
 Plot Range: 2500 ft to 5174.83 ft
 Data: MURPHY_SWD_3404\Well Based\DETAIL1\
 Plot File: \\LOCAL-MURPHY_SWD_3404\0001 SP-GTET-DSN-SDL-ACRT-BN\MICRO\Microlog_IQ_5_main_lib

5 INCH MAIN LOG

MEASURED DEPTH
 MAIN LOG 5" PER 100'

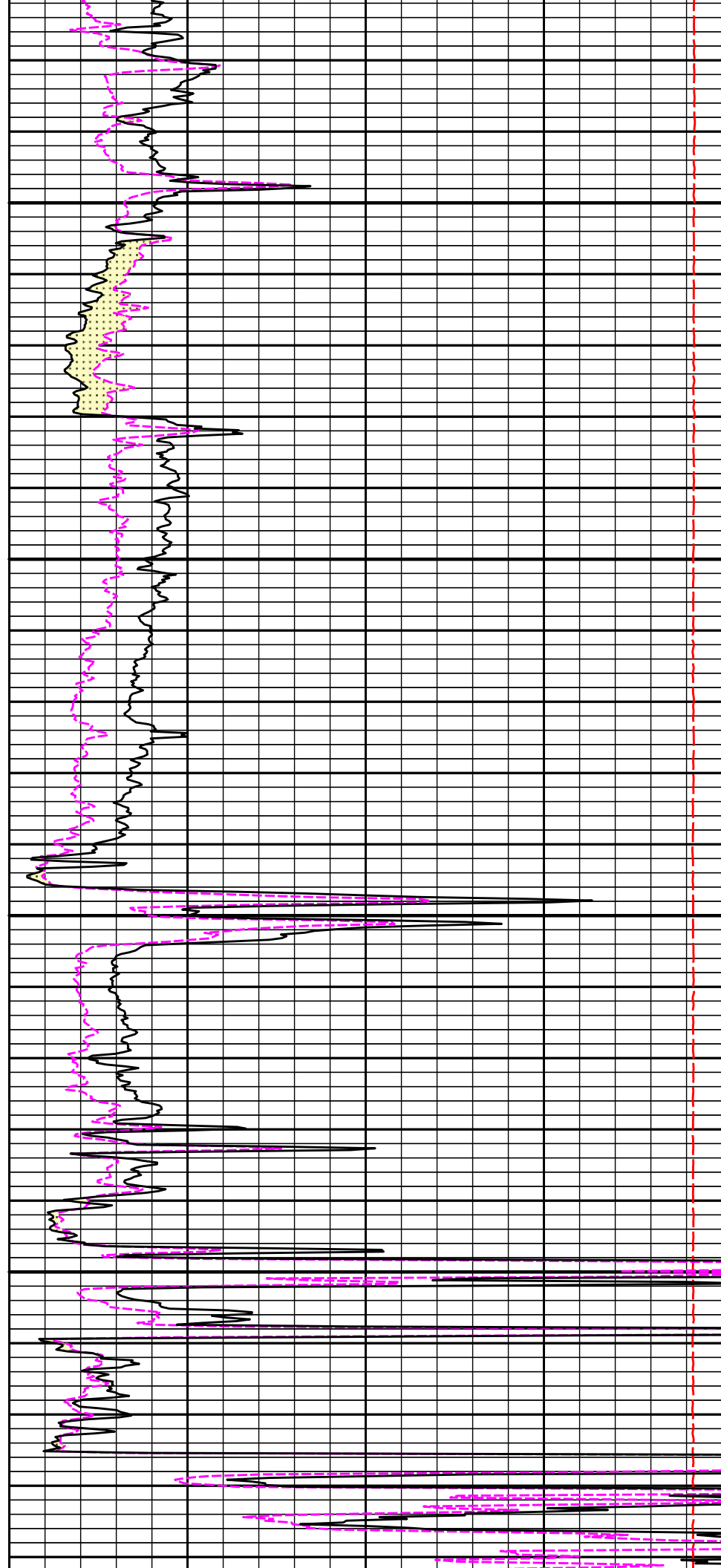


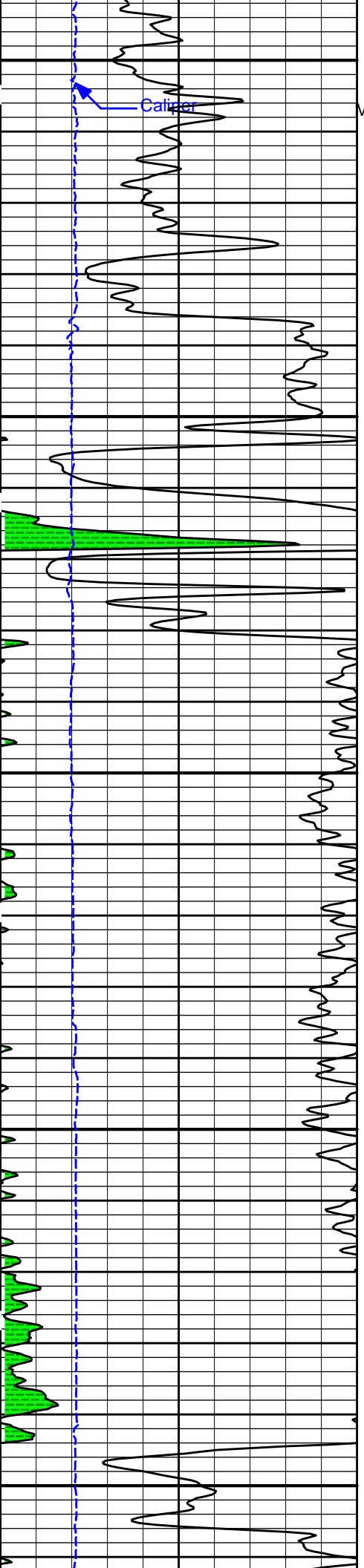


2600

2700

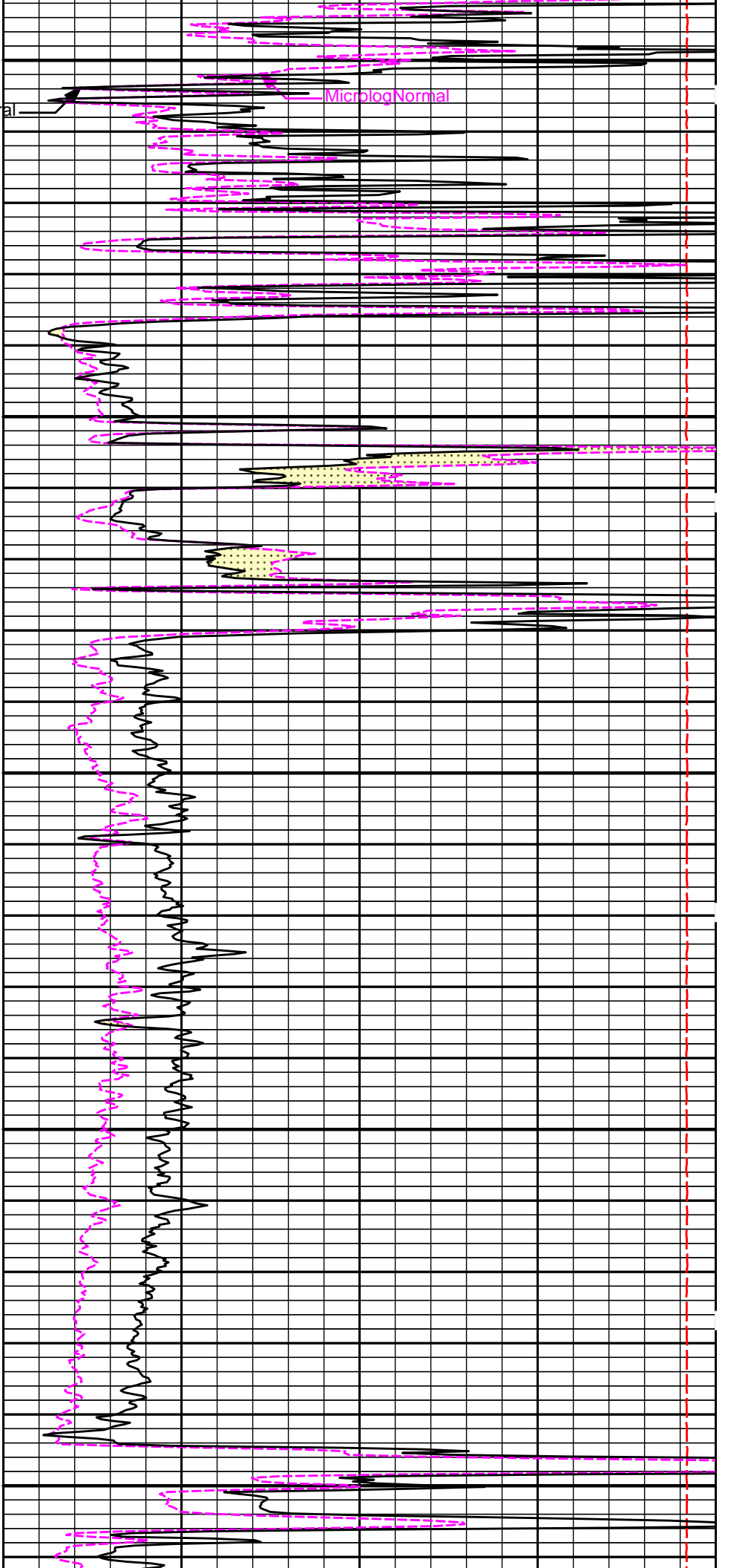
Gamma API



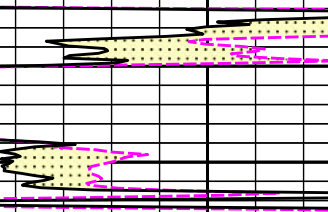


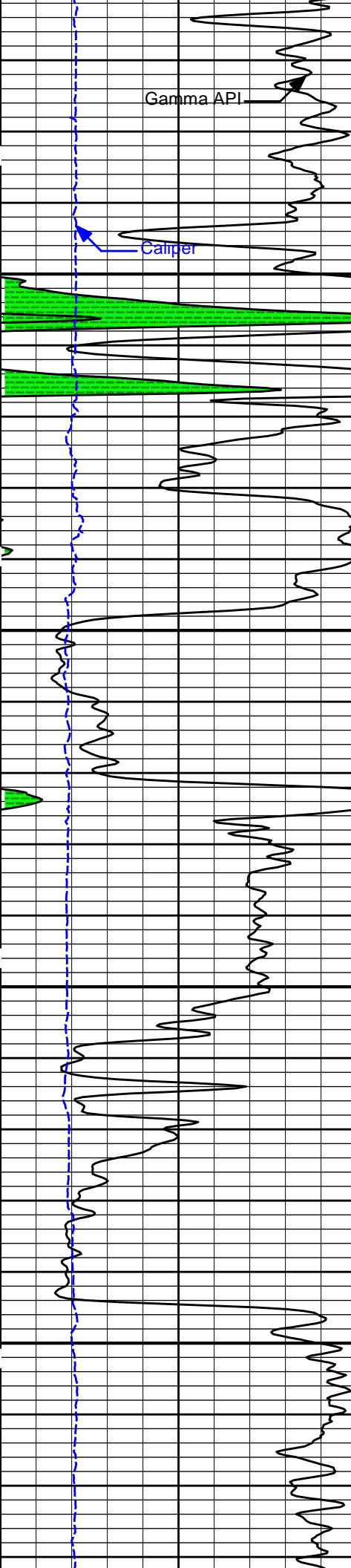
2800

2900



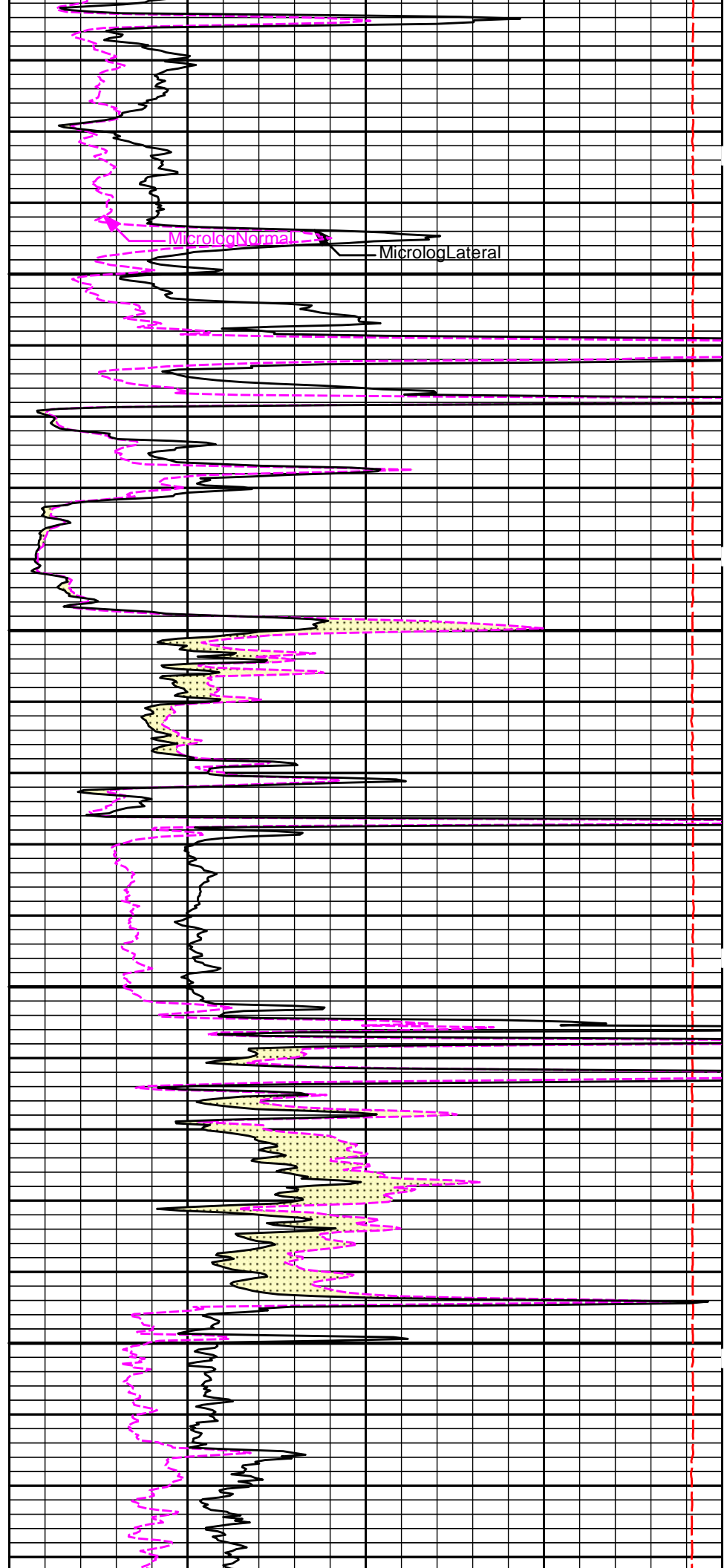
MicrologNormal

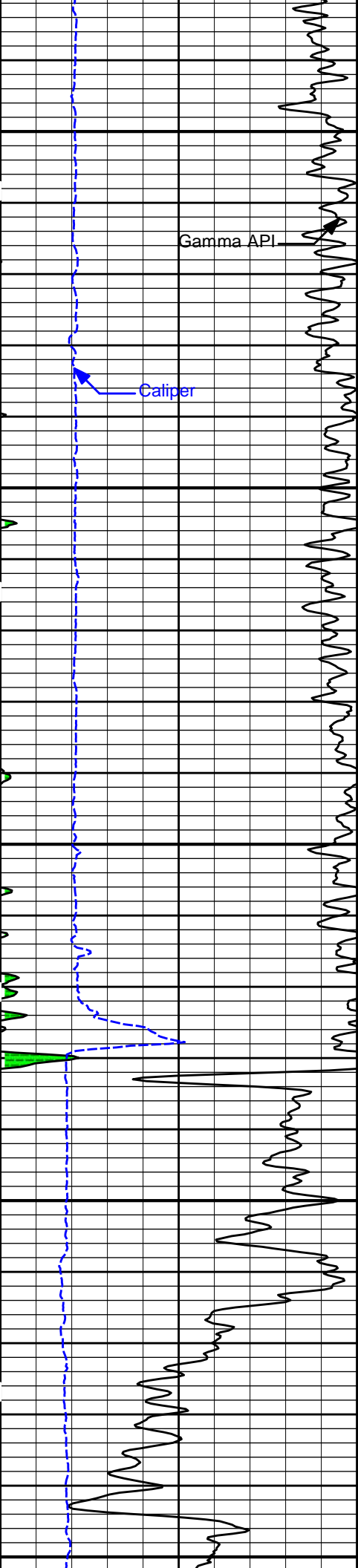




3000

3100





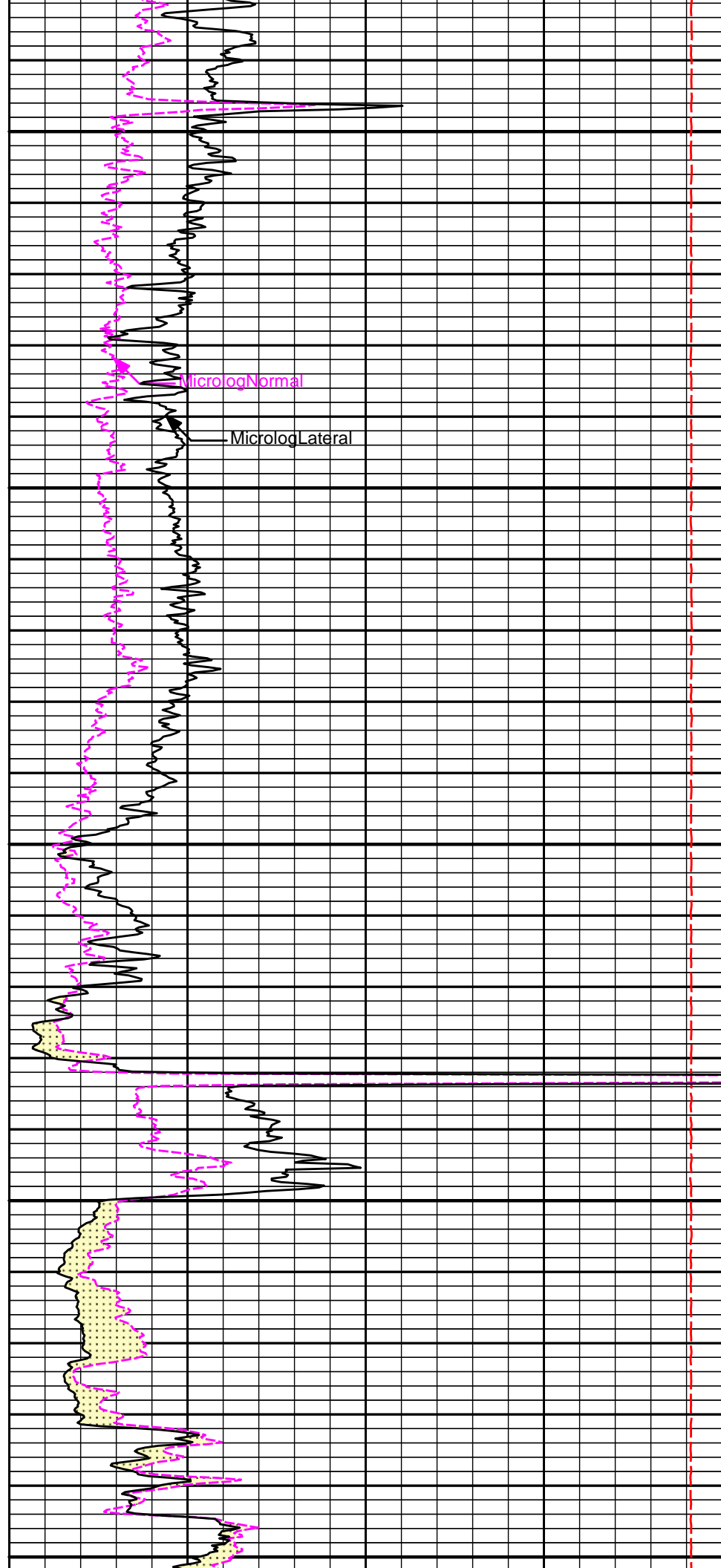
3200

Gamma API

Caliper

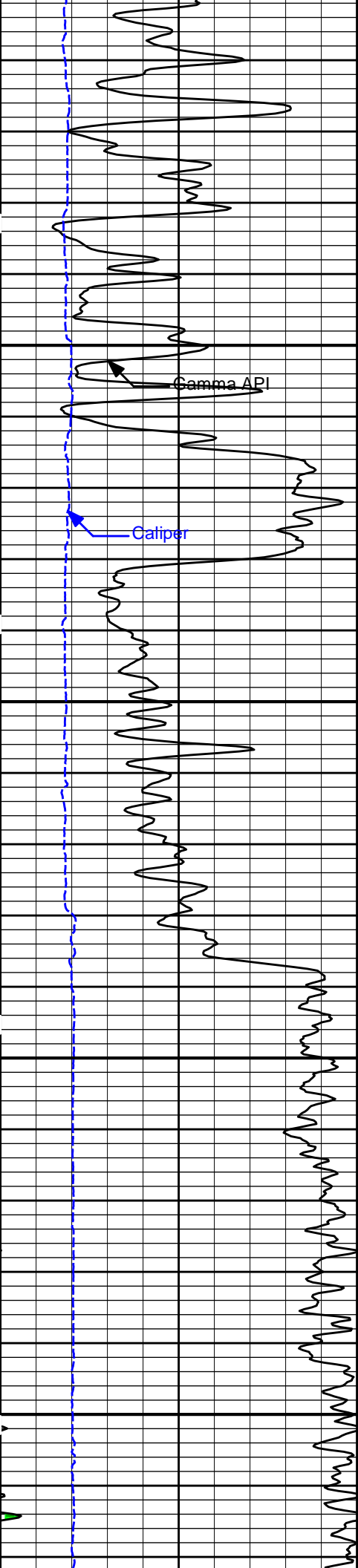
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3400



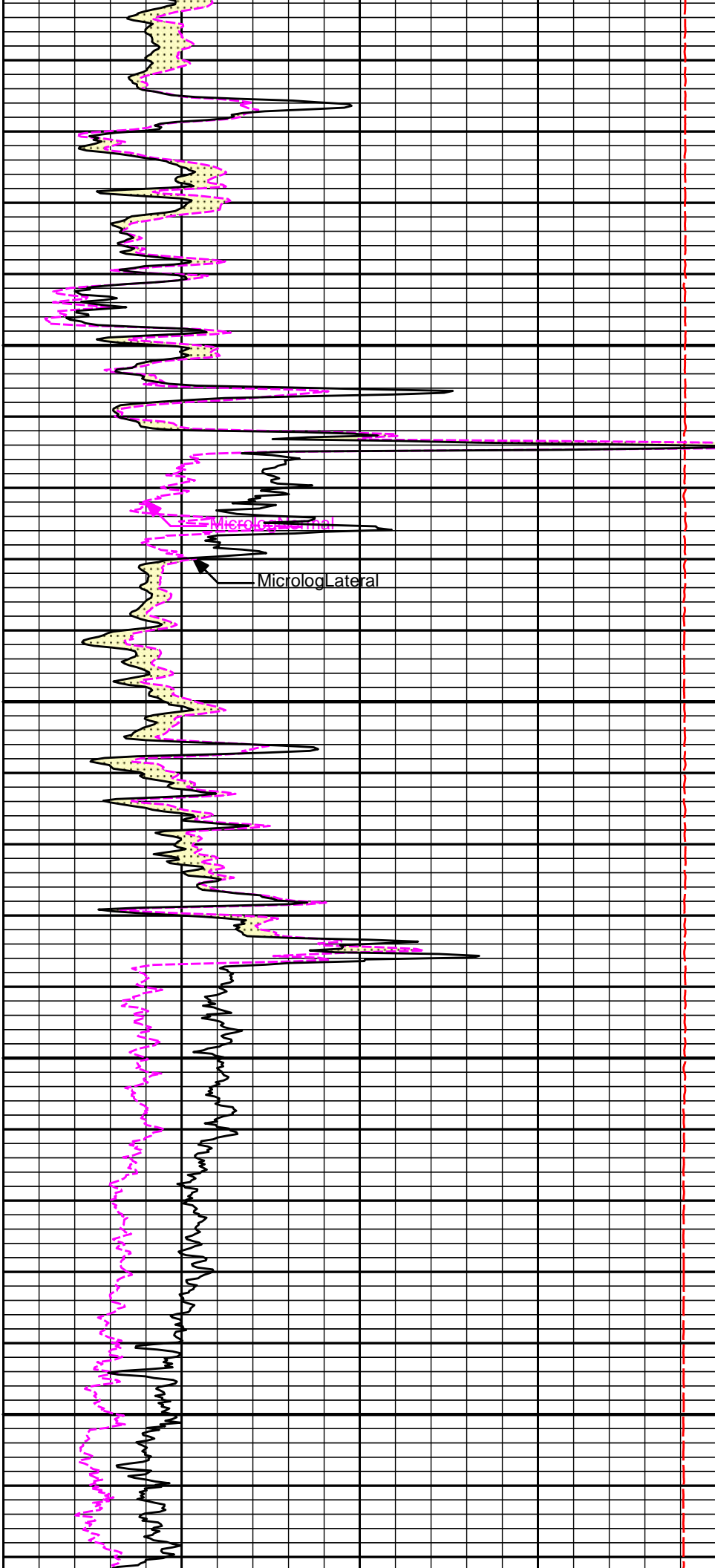
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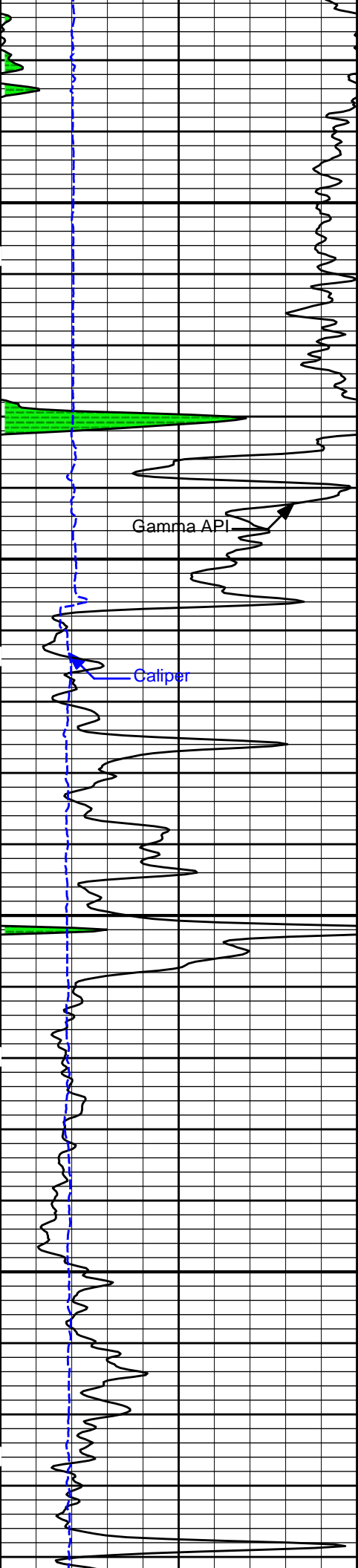
MicrologLateral



3500

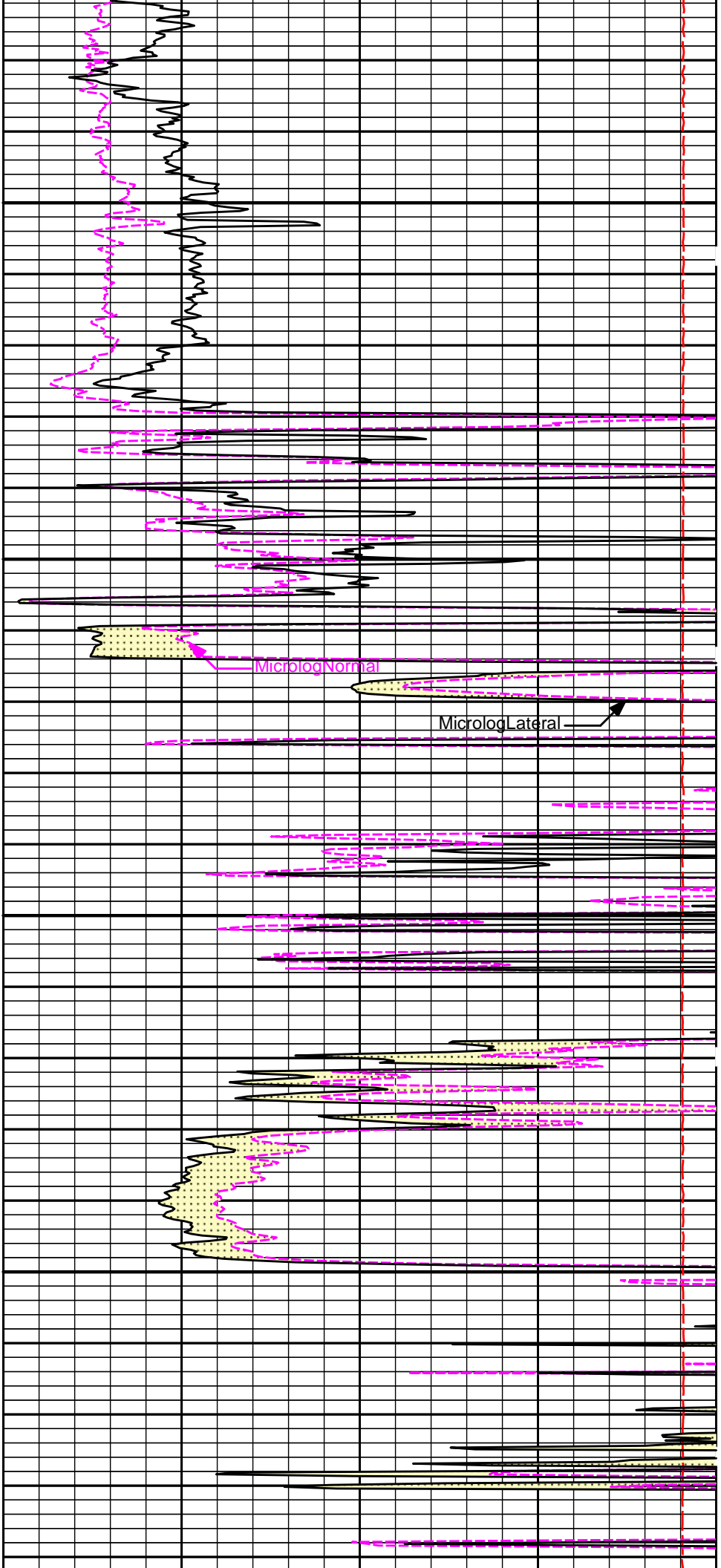
3600

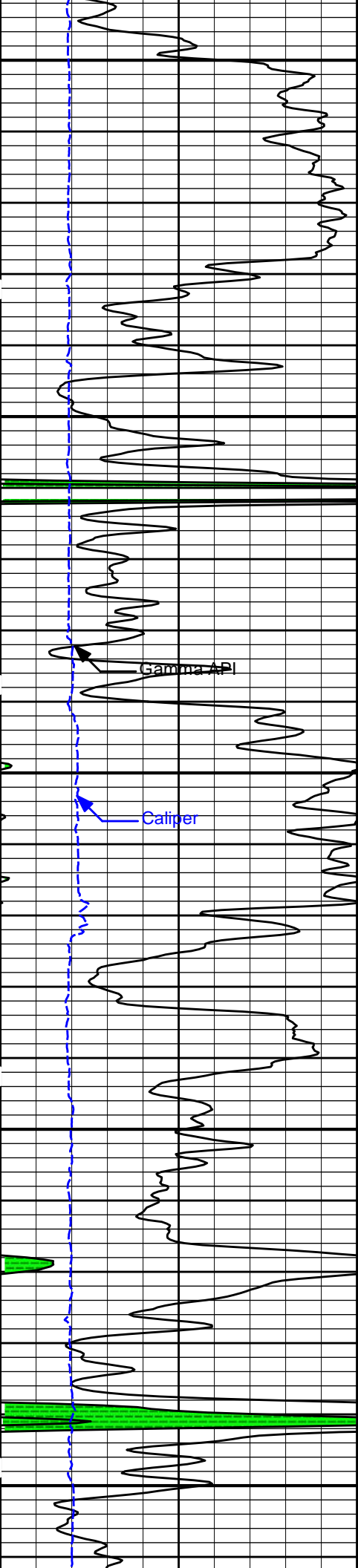




3700

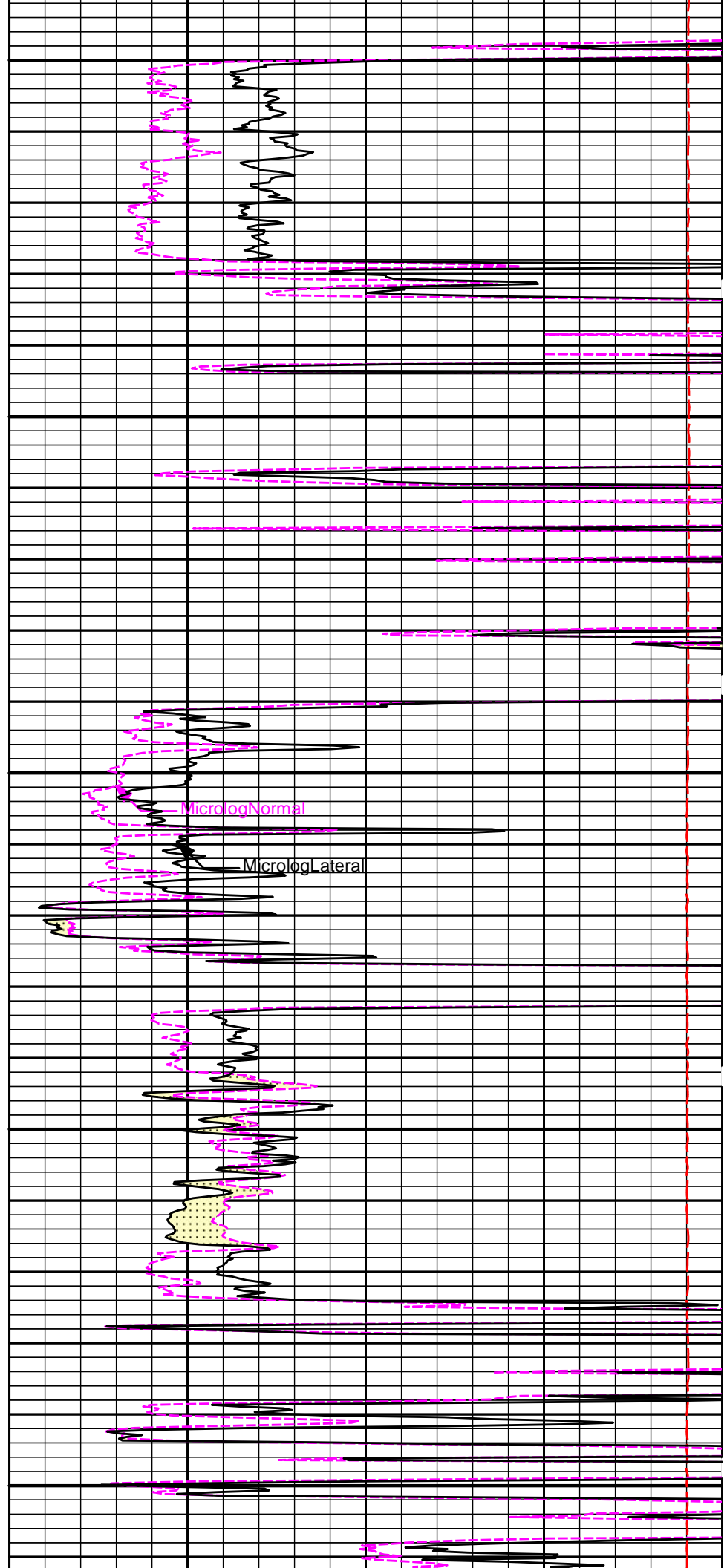
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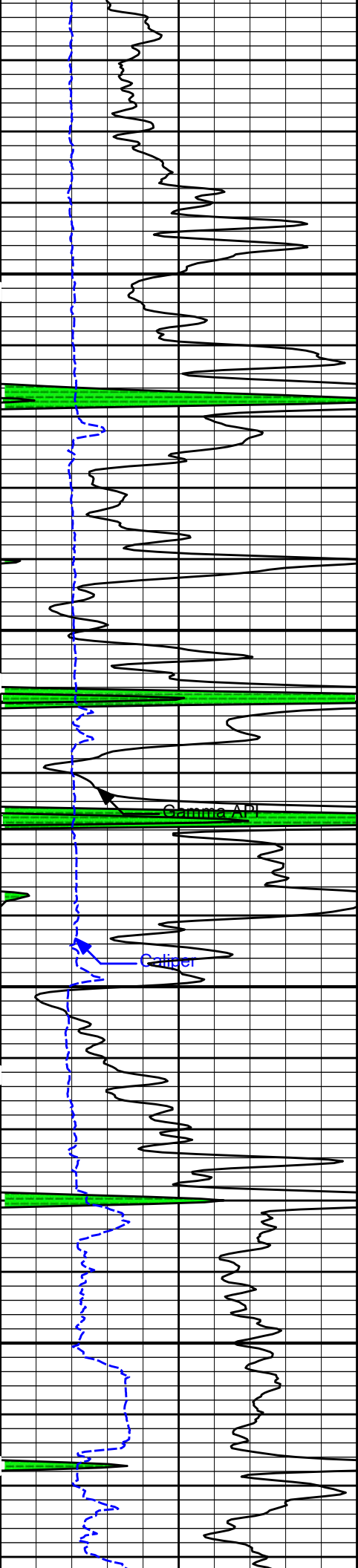




3900

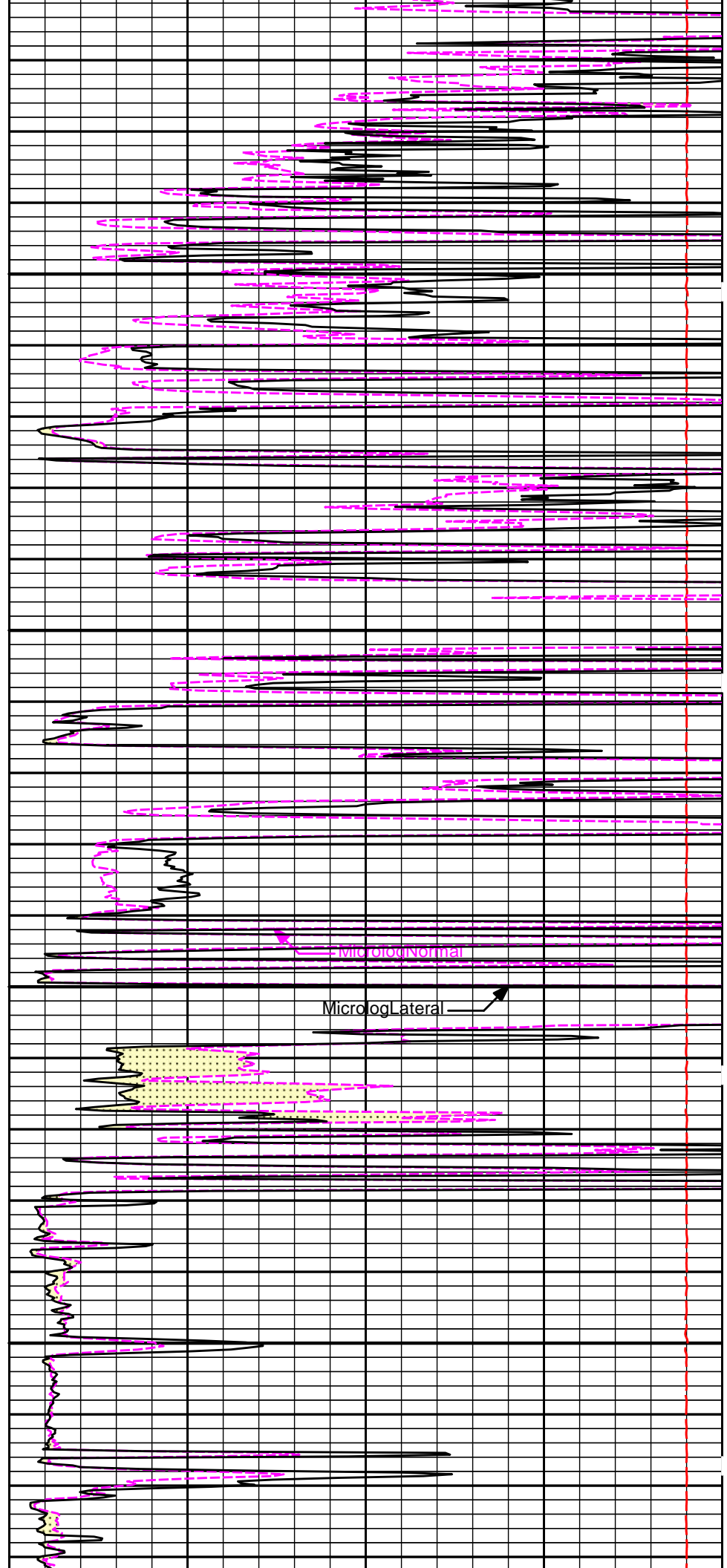
4000





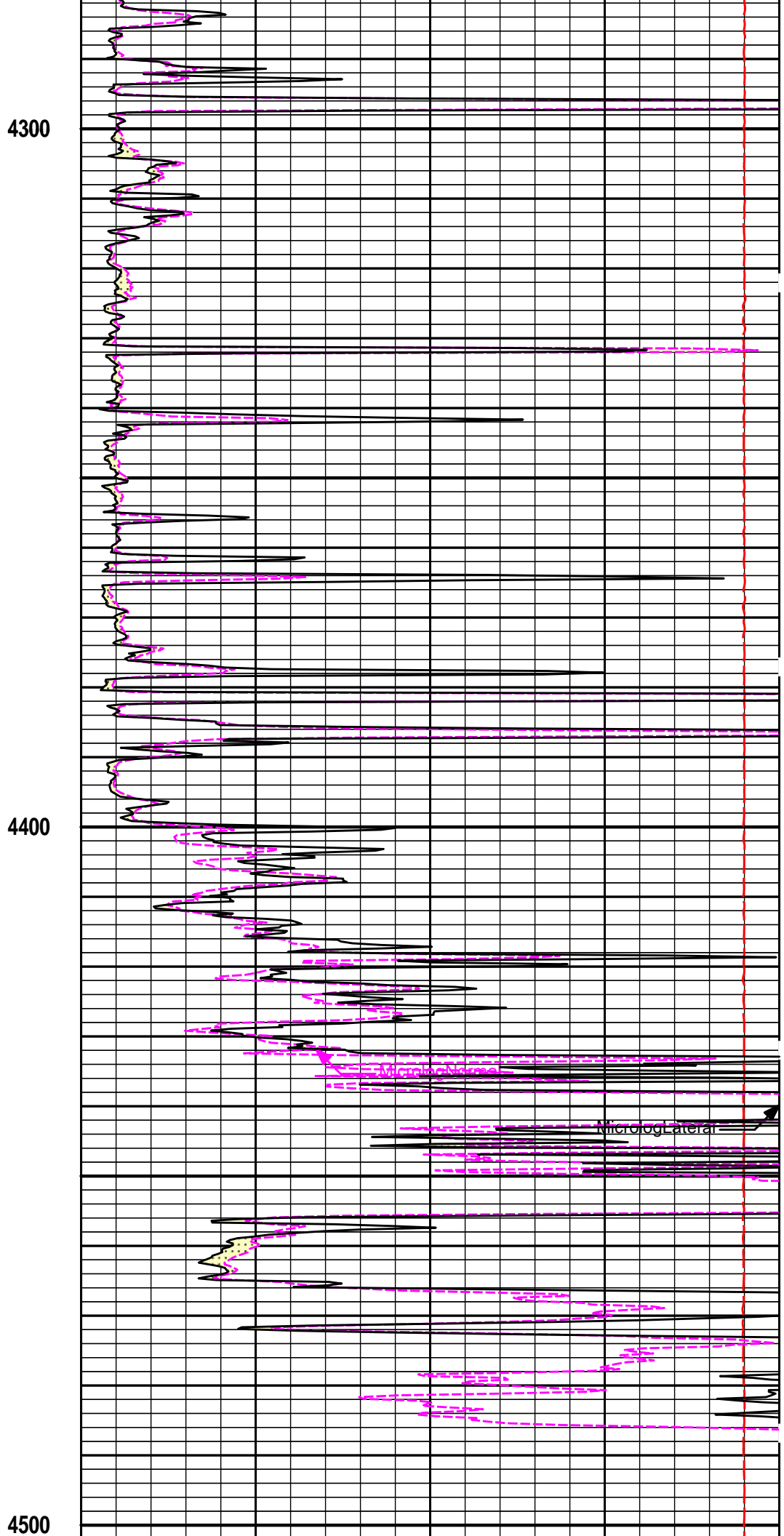
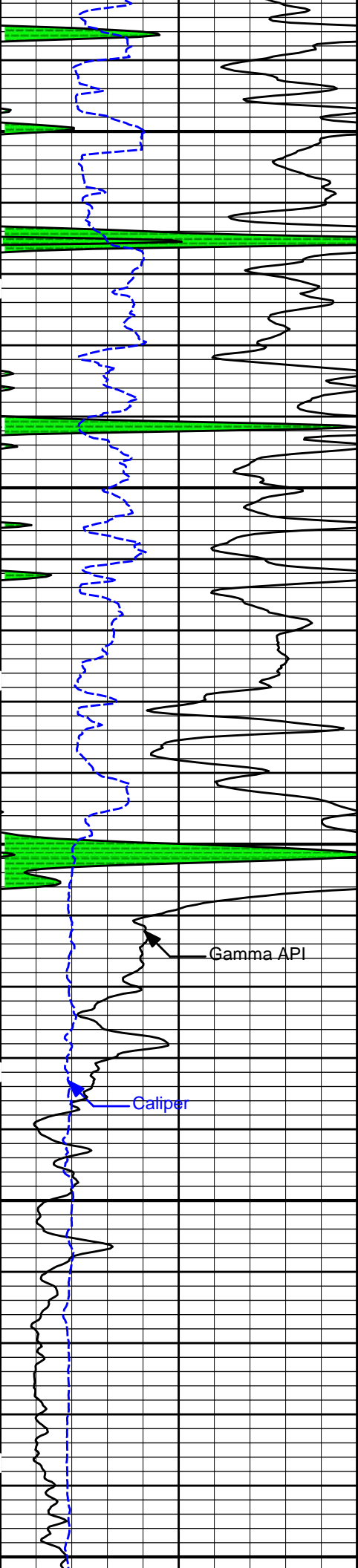
4100

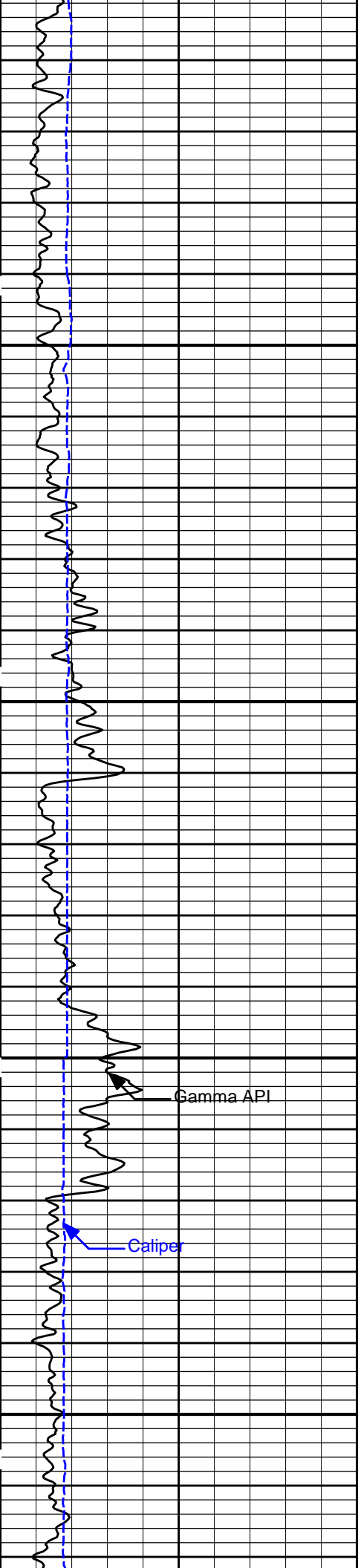
4200



MicrologLateral

MicrologNormal



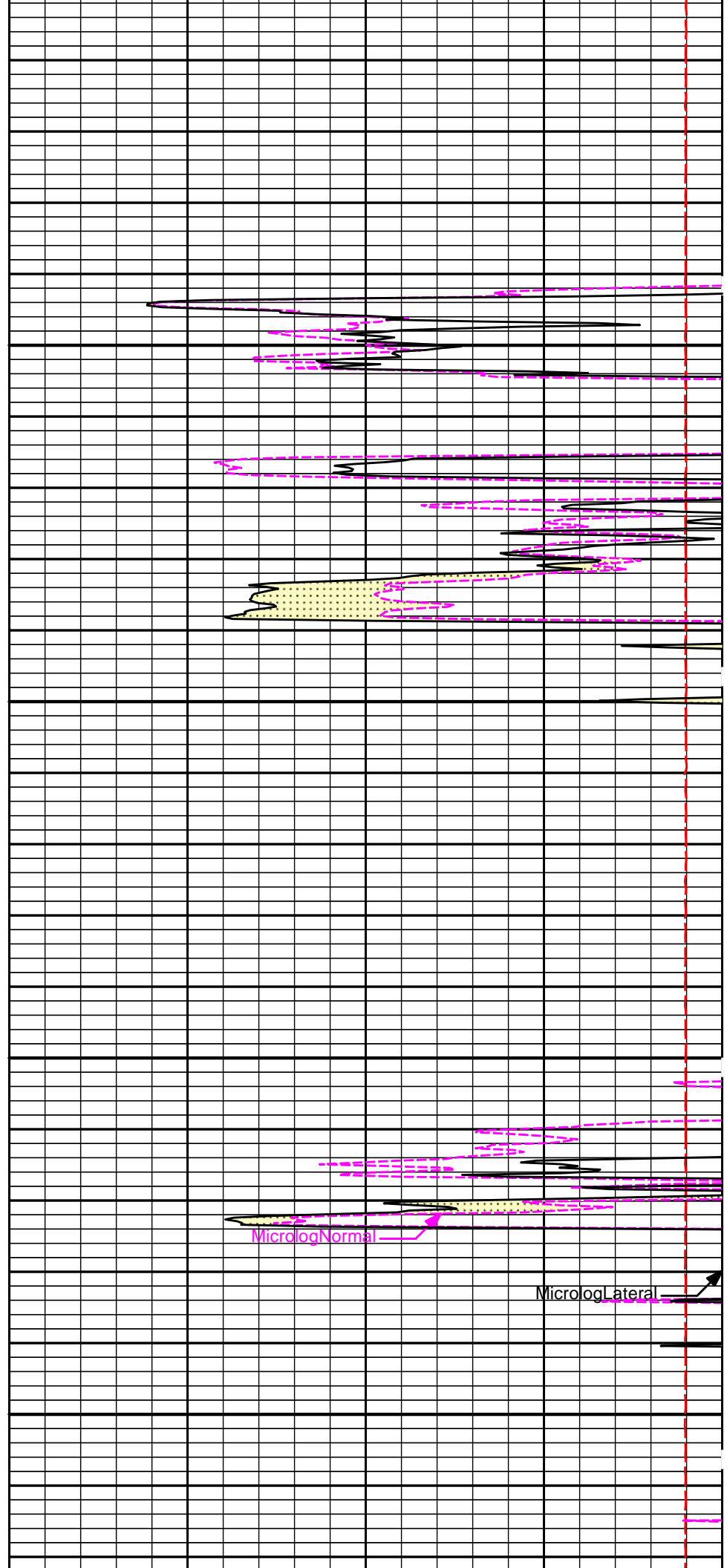


4600

Gamma API

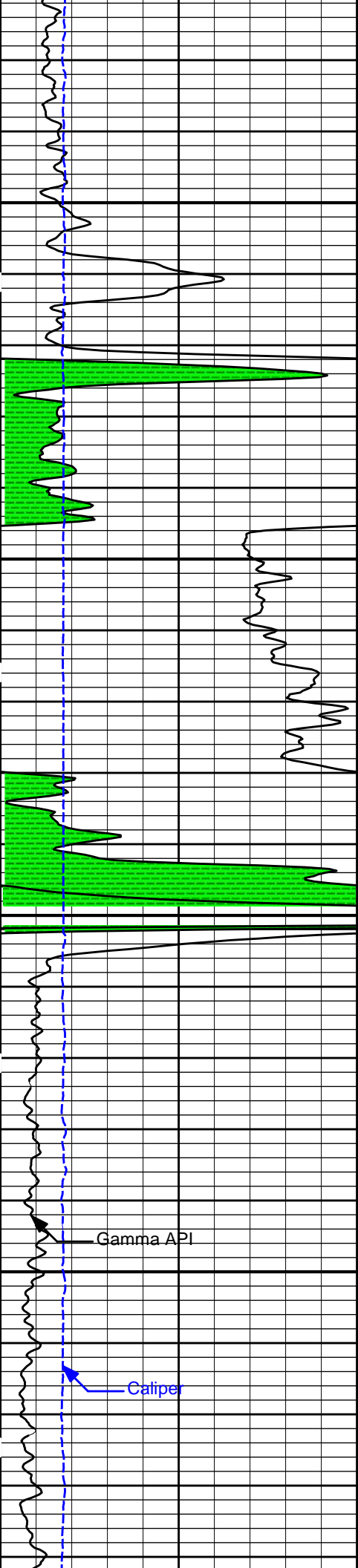
Caliper

4700



MicrologNormal

MicrologLateral

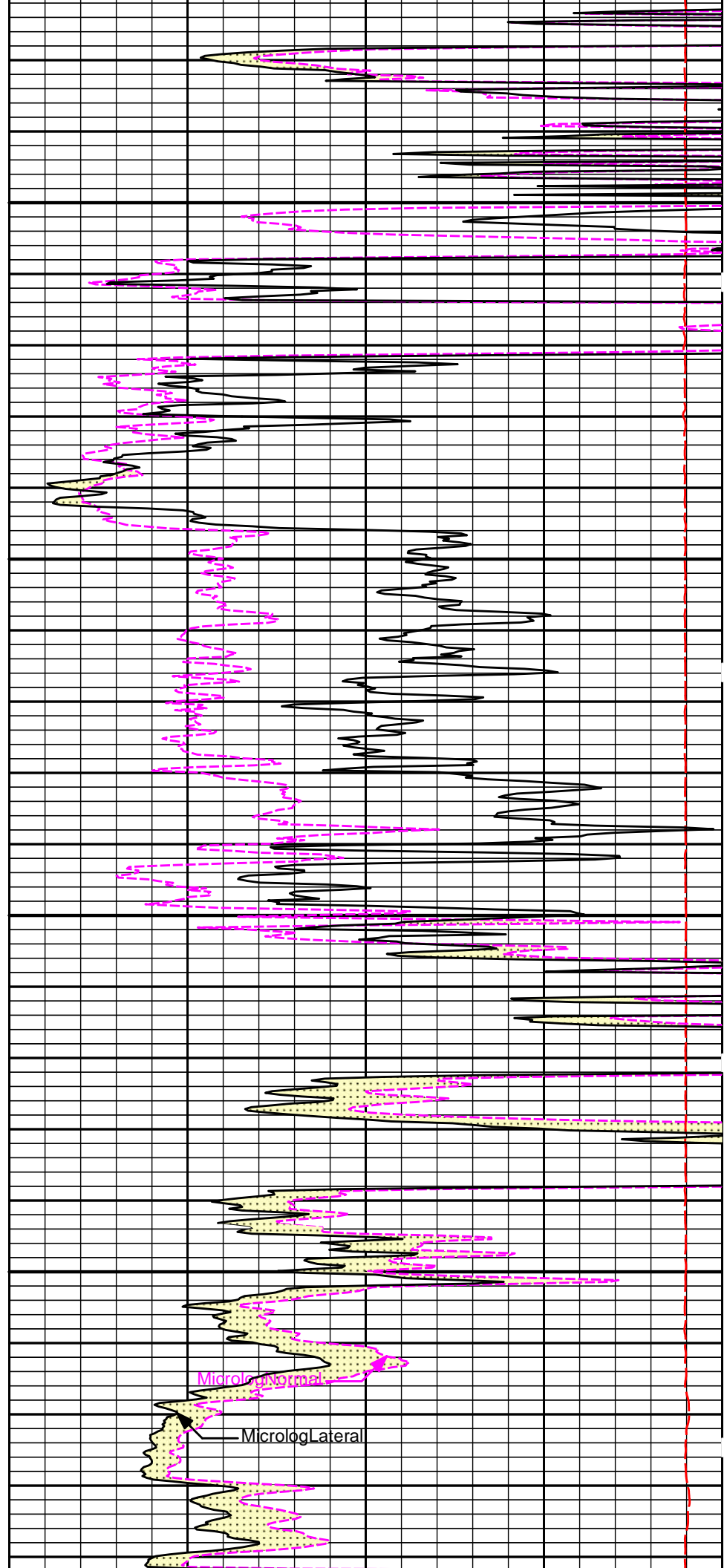


4800

4900

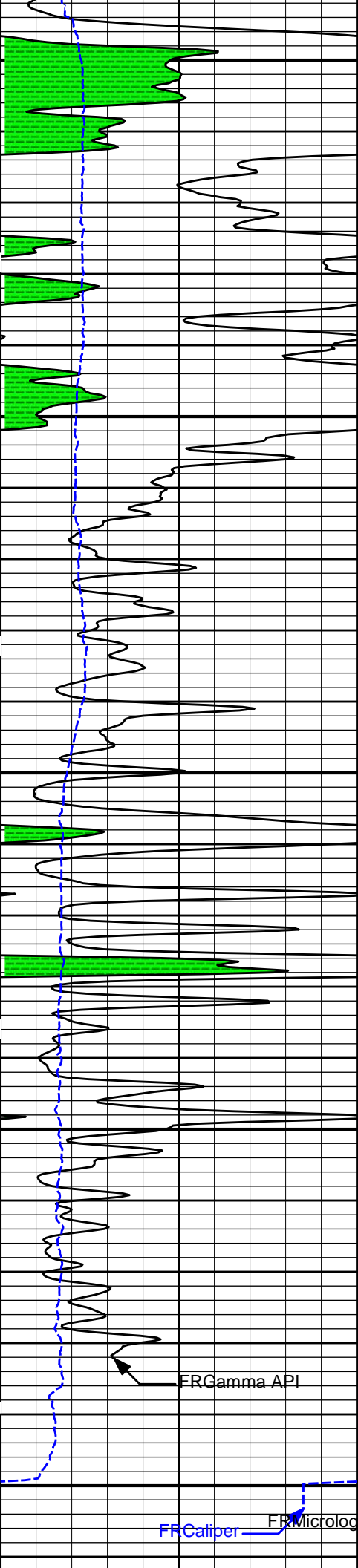
Gamma API

Caliper



MicrologNormal

MicrologLateral



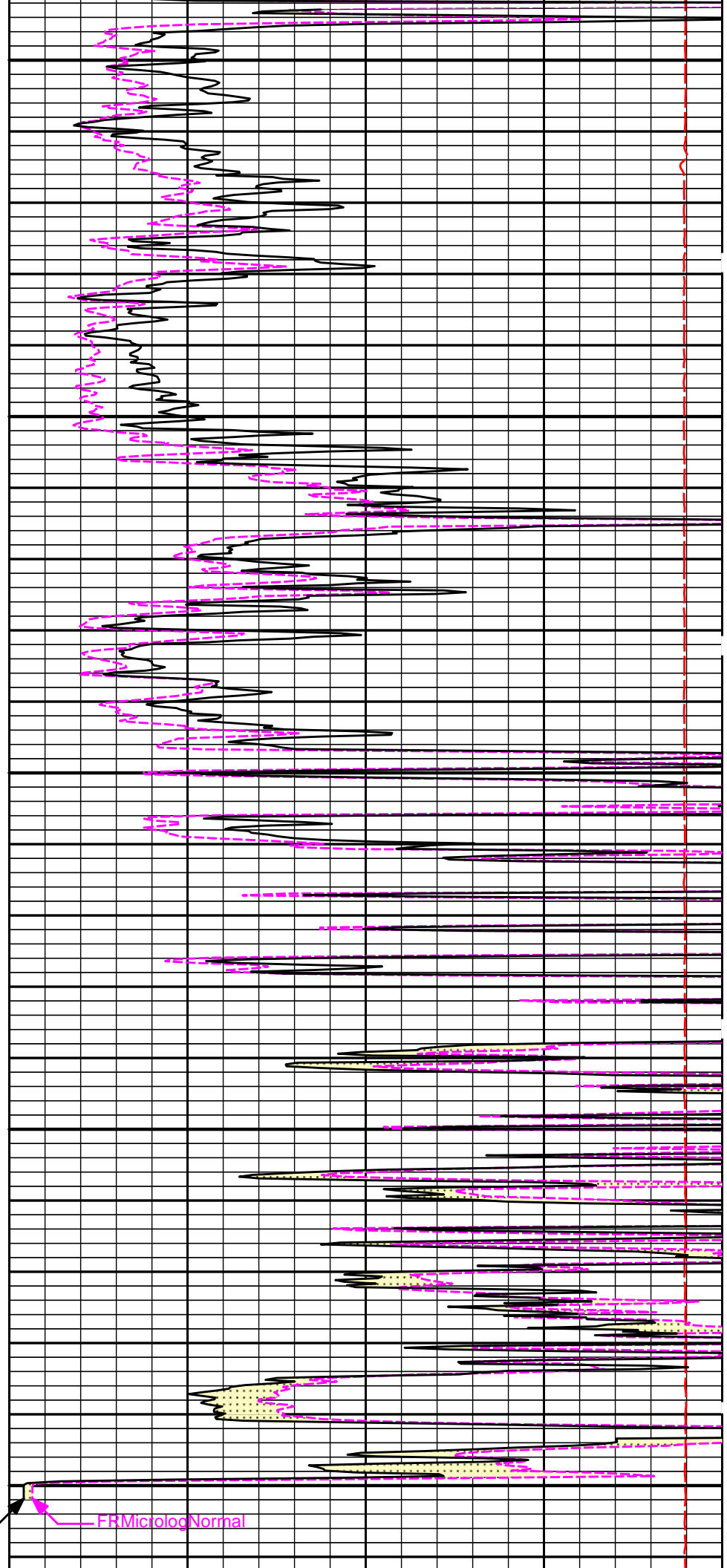
5000

5100

FRGamma API

FRCaliper

FRMicrolog Lateral



FRMicrolog Normal

| | | | | | | | |
|---|--|-----------|-----|---------------------|-----------------|---------|----|
| 6 | | Caliper | 16 | MD 1 : 240 ft | 15K | Tension | 0 |
| | | inches | | | | pounds | |
| 0 | | Gamma API | 150 | 0 | MicrologLateral | | 20 |
| | | api | | ohm-metre | | | |
| | | SHALE | | 0 | MicrologNormal | | 20 |
| | | | | ohm-metre | | | |
| | | | | PERMEABLE | | | |

HALLIBURTON

Plot Time: 07-May-14 12:16:26
 Plot Range: 2500 ft to 5174.83 ft
 Data: MURPHY_SWD_3404\Well Based\DETAIL1\
 Plot File: \\LOCAL\MURPHY_SWD_3404\0001 SP-GTET-DSN-SDL-ACRT-BN\MICRO\Microlog_IQ_5_main_lib

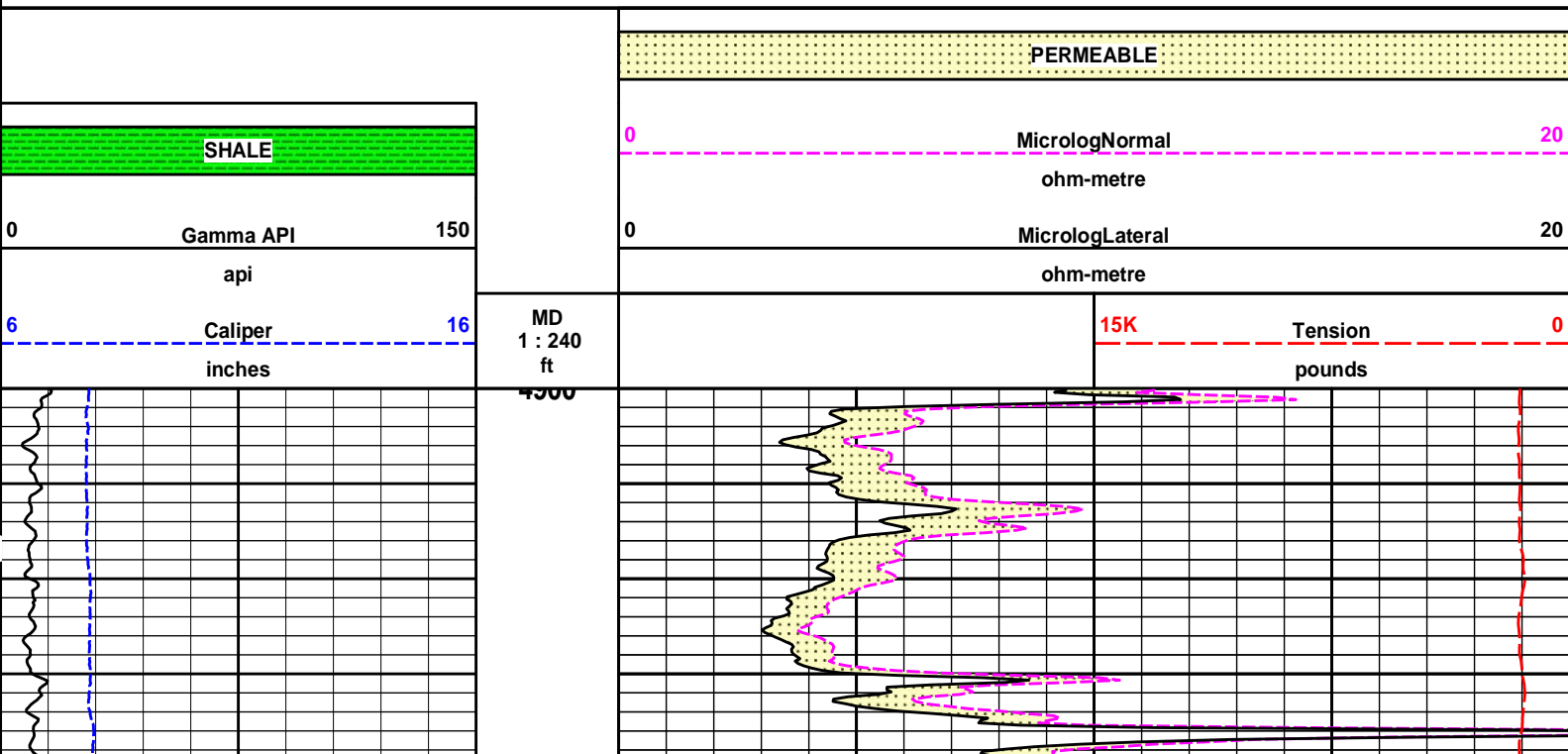
5 INCH MAIN LOG

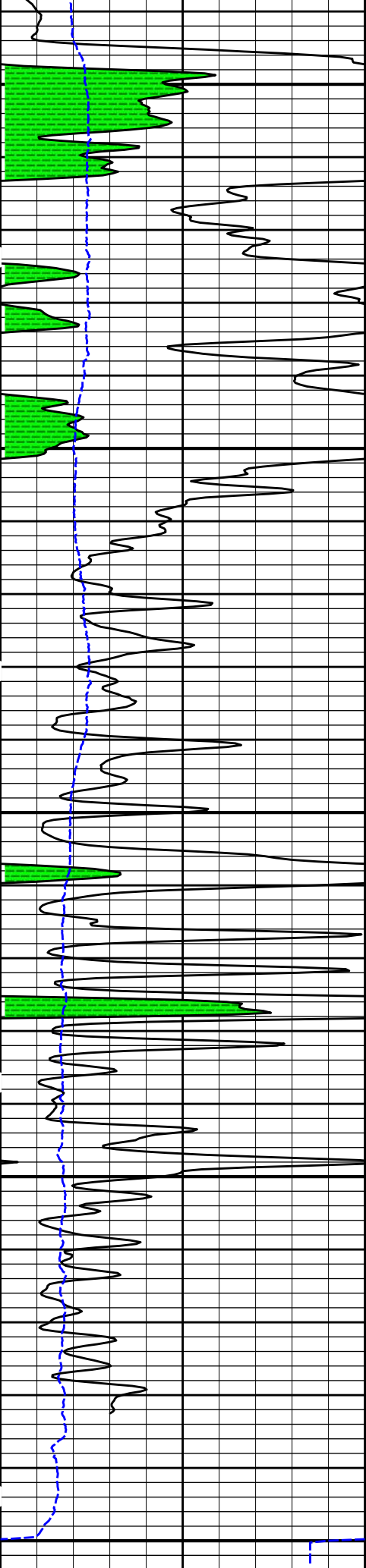
MEASURED DEPTH
 MAIN LOG 5" PER 100'

HALLIBURTON

Plot Time: 07-May-14 12:16:26
 Plot Range: 4900 ft to 5175.67 ft
 Data: MURPHY_SWD_3404\Well Based\REPEAT1\
 Plot File: \\LOCAL\MURPHY_SWD_3404\0001 SP-GTET-DSN-SDL-ACRT-BN\MICRO\Microlog_IQ_5_rep_lib

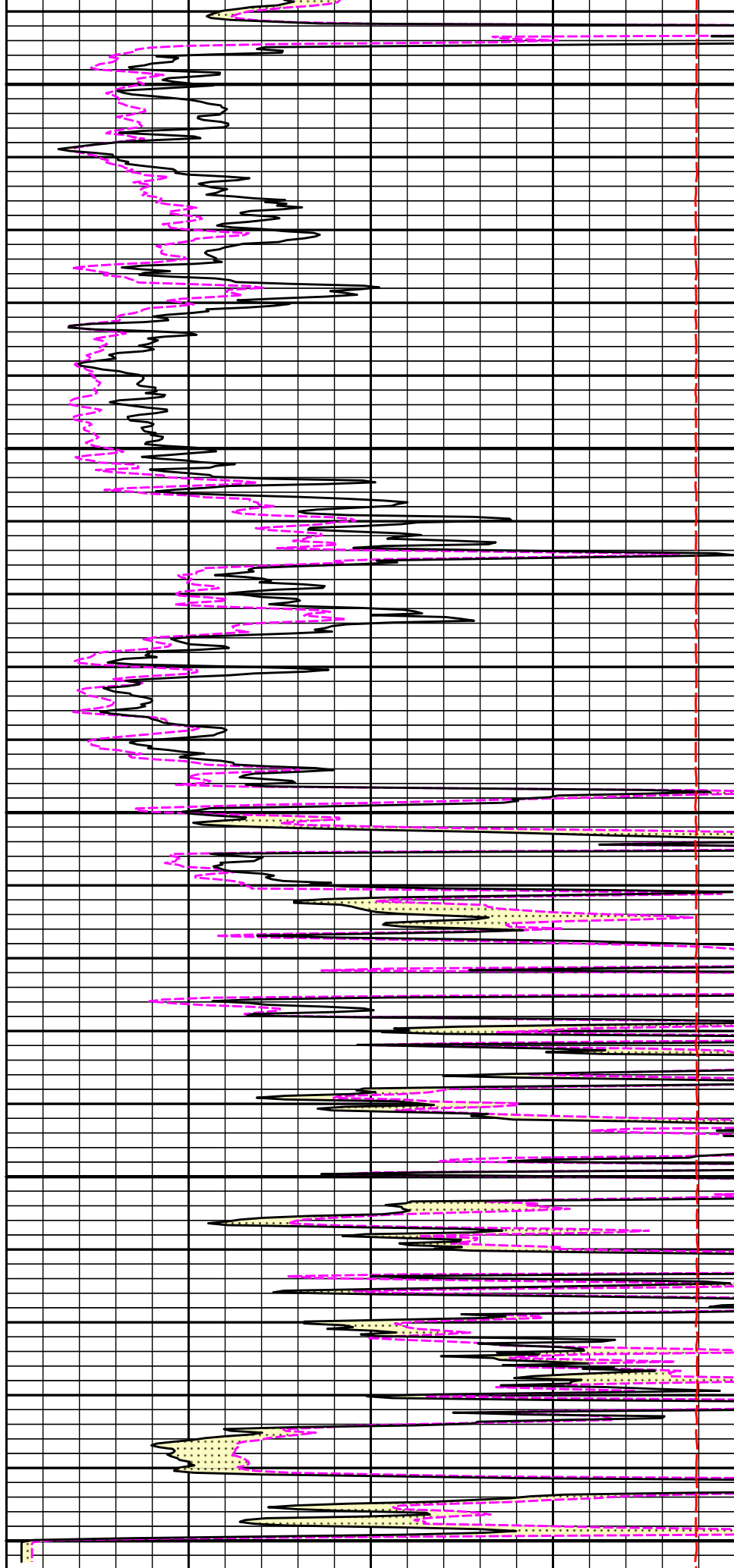
REPEAT SECTION





5000

5100



SDLT-11014296
360.00 lbs

SDLT Pad-10865884
65.00 lbs
Microlog Pad-11014296
8.00 lbs

Ø 4.500 in →
Ø 4.750 in* →
Ø 4.750 in* →

Microlog @ 22.58 ft
SDL Caliper @ 22.40 ft
SDL @ 22.39 ft

10.81 ft

19.58 ft

ACRt Instrument-
11022962
50.00 lbs

Ø 3.625 in →

5.03 ft

14.55 ft

← Mud Resistivity @ 13.19 ft

← ACRt @ 9.21 ft

ACRt Sonde-
11005909
200.00 lbs

Ø 3.625 in →

14.22 ft

Bull Nose-00000001
5.00 lbs

Ø 2.750 in →

0.33 ft

0.33 ft

0.00 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 | CH_696 | 37.50 | 3.03 | 53.29 | 300.00 |
| XOHD | Hostile to Dits Cross Over | 00000001 | 20.00 | 0.95 | 52.34 | 300.00 |
| SP | SP Sub | 12345678 | 60.00 | 3.74 | 48.60 | 300.00 |
| GTET | Gamma Telemetry Tool | 11039640 | 165.00 | 8.52 | 40.08 | 60.00 |
| DSNT | Dual Spaced Neutron | 11055304 | 174.00 | 9.69 | 30.40 | 60.00 |
| DCNT | DSN Decentralizer | 11019643 | 6.60 | 5.13 * | 33.73 | 300.00 |
| SDLT | Spectral Density Tool | 11014296 | 360.00 | 10.81 | 19.58 | 60.00 |
| SDLP | Density Insite Pad | 10865884 | 65.00 | 2.55 * | 21.79 | 60.00 |
| MICP | Microlog Pad | 11014296 | 8.00 | 1.00 * | 22.08 | 60.00 |
| ACRt | Array Compensated True Resistivity Instrument Section | 11022962 | 50.00 | 5.03 | 14.55 | 120.00 |
| ACRt | Array Compensated True Resistivity Sonde Section | 11005909 | 200.00 | 14.22 | 0.33 | 120.00 |
| BLNS | Bull Nose | 00000001 | 5.00 | 0.33 | 0.00 | 300.00 |

Total **1,151.10** **56.32**

* Not included in Total Length and Length Accumulation.

Data: MURPHY_SWD_3404\0001 SP-GTET-DSN-SDL-ACRT-BNIDLE

Date: 07-May-14 09:54:18

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11039640

Reference Calibration Date: 19-Sep-13 09:56:50

Engineer: SHELDON INGERSOLL

Calibration Date: 25-Apr-14 12:27:40

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Calibrator Source S/N: Error

Calibrator API Reference:265.00 api

Equivalent Calibrator API Reference:269.6 api

| Measurement | Measured | Calibrated | Units |
|-------------------------|----------|------------|-------|
| Background | 61.3 | 60.1 | api |
| Background + Calibrator | 336.2 | 329.8 | api |
| Calibrator | 274.9 | 269.6 | api |

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 11039640

Reference Calibration Date: 25-Apr-14 12:27:40

Engineer: J. BOLLLOM

Calibration Date: 06-May-14 04:56:03

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Calibrator Source S/N: Error

Calibrator API Reference:265.00 api

Equivalent Calibrator API Reference:269.6 api

| Field Verification | Shop | Field | Units |
|-------------------------|-------|-------|-------|
| Background | 60.1 | 54.9 | api |
| Background + Calibrator | 329.8 | 321.8 | api |
| Calibrator | 269.6 | 266.8 | api |

| Shop | Field | Difference | Tolerance |
|-------|-------|------------|-----------|
| 269.6 | 266.8 | 2.8 | +/- 9.00 |

MICRO LOG SHOP CALIBRATION

Tool Name: Microlog Pad - 11014296

Reference Calibration Date: 04-Apr-14 13:13:05

Engineer: SHELDON INGERSOLL

Calibration Date: 24-Apr-14 11:23:18

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Host Tool Name: DSNT - 11055304

CALIBRATION COEFFICIENT SUMMARY

| Measurement | Micro Log Normal | | Micro Log Lateral | | Units |
|----------------------|------------------|------------|-------------------|------------|-------|
| | Measured | Calibrated | Measured | Calibrated | |
| Tool Zero | -0.07 | -0.06 | -0.00 | -0.01 | ohmm |
| Calibration Point #1 | -0.01 | 0.00 | 0.01 | 0.00 | ohmm |
| Calibration Point #2 | 18.90 | 20.00 | 20.88 | 20.00 | ohmm |
| Internal Reference | 19.96 | 21.12 | 20.01 | 19.17 | ohmm |

| Measurement | Micro Log Normal Tool Value | | Micro Log Lateral Tool Value | | Units |
|----------------------|-----------------------------|------------|------------------------------|------------|-------|
| | Measured | Calibrated | Measured | Calibrated | |
| Tool Zero | | 0.31 | | 0.66 | V |
| Calibration Point #1 | | 15.73 | | 3.62 | V |
| Calibration Point #2 | | 4996.24 | | 7168.78 | V |
| Internal Reference | | 5273.93 | | 6869.85 | V |

MICRO LOG FIELD CHECK

Tool Name: Microlog Pad - 11014296

Reference Calibration Date: 24-Apr-14 11:23:18

Engineer: J. BOLLLOM

Calibration Date: 06-May-14 04:54:01

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

| Measurement | Micro Log Normal | | Micro Log Lateral | | Units |
|--------------------|------------------|-------|-------------------|-------|-------|
| | Shop | Field | Shop | Field | |
| Tool Zero | -0.06 | -0.07 | -0.01 | -0.01 | ohmm |
| Internal Reference | 21.12 | 21.11 | 19.17 | 19.16 | ohmm |

| Summary | | | | |
|------------------|-------|-------|------------|-----------|
| Signal | Shop | Field | Difference | Tolerance |
| Microlog Normal | 21.12 | 21.11 | 0.01 | +/- 0.80 |
| Microlog Lateral | 19.17 | 19.16 | 0.01 | +/- 0.80 |

CALIBRATION SUMMARY

| Sensor | Shop | Field | Post | Difference | Tolerance | Units |
|------------------------------|-------|-------|-------|------------|-----------|-------|
| GTET-11039640 | | | | | | |
| Gamma Ray Calibrator | 269.6 | 266.8 | ----- | 2.8 | +/- 9.00 | api |
| Microlog Pad-11014296 | | | | | | |
| MicroLog Normal | 21.12 | 21.11 | ----- | 0.01 | +/-0.80 | ohmm |
| MicroLog Lateral | 19.17 | 19.16 | ----- | 0.01 | +/-0.80 | ohmm |

Data: MURPHY_SWD_3404\0001 SP-GTET-DSN-SDL-ACRT-BN\001 07-May-14 10:14 Dn @407.8f

Date: 07-May-14 10:18:33



PARAMETERS REPORT

| Depth (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 | 9.500 | ppg |
| | SHARED | WAGT | Weighting Agent | Natural | |
| | SHARED | BSAL | Borehole salinity | 0.00 | 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 | 5181.00 | 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 | |
| | Rwa / CrossPlot | XPOK | Process Crossplot? | Yes | |
| | Rwa / CrossPlot | FCHO | Select Source of F | Automatic | |
| | Rwa / CrossPlot | AFAC | Archie A factor | 0.6200 | |
| | Rwa / CrossPlot | MFAC | Archie M factor | 2.1500 | |
| | Rwa / CrossPlot | RMFR | Rmf Reference | 0.10 | ohmm |
| | Rwa / CrossPlot | TMFR | Rmf Ref Temp | 75.00 | degF |

| | | | | |
|-----------------|------|--|----------------|------|
| Rwa / CrossPlot | RWA | Resistivity of Formation Water | 0.05 | ohmm |
| Rwa / CrossPlot | ADP | Use Air Porosity to calculate CrossplotPhi | No | |
| Rwa / CrossPlot | BHSM | Borehole Size Source Tool | SDLT | |
| 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 for Gamma Ray Tools. | Eccentered | |
| GTET | BHSM | Borehole Size Source Tool | SDLT | |
| DSNT | DNOK | Process DSN? | Yes | |
| DSNT | DEOK | Process DSN EVR? | No | |
| DSNT | NLIT | Neutron Lithology | Limestone | |
| DSNT | DNSO | 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 | |
| DSNT | BHSM | Borehole Size Source Tool | SDLT | |
| SDLT | CLOK | Process Caliper Outputs? | Yes | |
| SDLT Pad | DNOK | Process Density? | Yes | |
| SDLT Pad | DNOK | Process Density EVR? | No | |
| SDLT Pad | CB | Logging Calibration Blocks? | No | |
| SDLT Pad | SPVT | SDLT Pad Temperature Valid? | Yes | |
| SDLT Pad | DTWN | Disable temperature warning | No | |
| SDLT Pad | DMA | Formation Density Matrix | 2.710 | g/cc |
| SDLT Pad | DFL | Formation Density Fluid | 1.000 | g/cc |
| SDLT Pad | BHSM | Borehole Size Source Tool | SDLT | |
| Microlog Pad | MLOK | Process MicroLog Outputs? | Yes | |
| ACRt Sonde | RTOK | Process ACRt? | Yes | |
| ACRt Sonde | MNSO | Minimum Tool Standoff | 1.50 | in |
| ACRt Sonde | TCS1 | Temperature Correction Source | FP Lwr & FP Up | |
| ACRt Sonde | TPOS | Tool Position | Free Hanging | |
| ACRt Sonde | RMOP | Rmud Source | Mud Cell | |
| ACRt Sonde | RMIN | Minimum Resistivity for MAP | 0.20 | ohmm |
| ACRt Sonde | RMIN | Maximum Resistivity for MAP | 200.00 | ohmm |
| ACRt Sonde | THQY | Threshold Quality | 0.50 | |
| ACRt Sonde | MRFX | Fixed mud resistivity | 2000 | ohmm |
| ACRt Sonde | BHSM | Borehole Size Source Tool | SDLT | |

BOTTOM

Data: MURPHY_SWD_3404I0001 SP-GTET-DSN-SDL-ACRT-BN001 07-May-14 10:14 Dn @407.8f

Date: 07-May-14 10:16:46

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INPUTS, DELAYS AND FILTERS TABLE

| Mnemonic | Input Description | Delay (ft) | Filter Type | Filter Length (ft) |
|------------------------|-------------------|------------|-------------|--------------------|
| Depth Panel | | | | |
| TENS | Tension | 0.00 | NO | |
| Rwa / CrossPlot | | | | |
| TPUL | Tension Pull | 56.32 | NO | |

| | | | | |
|-------------------|---|-------|-----|---------------|
| BS | Bit Size | 56.32 | NO | |
| HDIA | Measured Hole Diameter | 0.00 | NO | |
| CH_HOS | | | | |
| DHTN | Downhole Tension | 0.00 | BLK | 0.000 |
| SP Sub | | | | |
| PLTC | Plot Control Mask | 50.56 | NO | |
| SP | Spontaneous Potential | 50.56 | BLK | 1.250 |
| SPR | Raw Spontaneous Potential | 50.56 | NO | |
| SPO | Spontaneous Potential Offset | 50.56 | NO | |
| GTET | | | | |
| TPUL | Tension Pull | 42.54 | NO | |
| GR | Natural Gamma Ray API | 42.54 | TRI | 1.750 |
| GRU | Unfiltered Natural Gamma Ray API | 42.54 | NO | |
| EGR | Natural Gamma Ray API with Enhanced Vertical Resolution | 42.54 | W | 1.416 , 0.750 |
| HDIA | Measured Hole Diameter | 0.00 | NO | |
| ACCZ | Accelerometer Z | 0.00 | BLK | 0.083 |
| DEVI | Inclination | 0.00 | NO | |
| DSNT | | | | |
| TPUL | Tension Pull | 32.30 | NO | |
| RNDS | Near Detector Telemetry Counts | 32.40 | BLK | 1.417 |
| RFDS | Far Detector Telemetry Counts | 33.15 | TRI | 0.583 |
| DNTT | DSN Tool Temperature | 32.40 | NO | |
| DSNS | DSN Tool Status | 32.30 | NO | |
| ERND | Near Detector Telemetry Counts EVR | 32.40 | BLK | 0.000 |
| ERFD | Far Detector Telemetry Counts EVR | 33.15 | BLK | 0.000 |
| ENTM | DSN Tool Temperature EVR | 32.40 | NO | |
| HDIA | Measured Hole Diameter | 0.00 | NO | |
| SDLT | | | | |
| TPUL | Tension Pull | 22.40 | NO | |
| PCAL | Pad Caliper | 22.40 | TRI | 0.250 |
| ACAL | Arm Caliper | 22.40 | TRI | 0.250 |
| ACRt Sonde | | | | |
| TPUL | Tension Pull | 2.73 | NO | |
| F1R1 | ACRT 12KHz - 80in R value | 8.98 | BLK | 0.000 |
| F1X1 | ACRT 12KHz - 80in X value | 8.98 | BLK | 0.000 |
| F1R2 | ACRT 12KHz - 50in R value | 6.48 | BLK | 0.000 |
| F1X2 | ACRT 12KHz - 50in X value | 6.48 | BLK | 0.000 |
| F1R3 | ACRT 12KHz - 29in R value | 4.98 | BLK | 0.000 |
| F1X3 | ACRT 12KHz - 29in X value | 4.98 | BLK | 0.000 |
| F1R4 | ACRT 12KHz - 17in R value | 3.98 | BLK | 0.000 |
| F1X4 | ACRT 12KHz - 17in X value | 3.98 | BLK | 0.000 |
| F1R5 | ACRT 12KHz - 10in R value | 3.48 | BLK | 0.000 |
| F1X5 | ACRT 12KHz - 10in X value | 3.48 | BLK | 0.000 |
| F1R6 | ACRT 12KHz - 6in R value | 3.23 | BLK | 0.000 |
| F1X6 | ACRT 12KHz - 6in X value | 3.23 | BLK | 0.000 |
| F2R1 | ACRT 36KHz - 80in R value | 8.98 | BLK | 0.000 |
| F2X1 | ACRT 36KHz - 80in X value | 8.98 | BLK | 0.000 |
| F2R2 | ACRT 36KHz - 50in R value | 6.48 | BLK | 0.000 |
| F2X2 | ACRT 36KHz - 50in X value | 6.48 | BLK | 0.000 |
| F2R3 | ACRT 36KHz - 29in R value | 4.98 | BLK | 0.000 |
| F2X3 | ACRT 36KHz - 29in X value | 4.98 | BLK | 0.000 |

| | | | | |
|------|---|-------|-----|-------|
| F2X3 | ACRT 36KHz - 29in X value | 4.98 | BLK | 0.000 |
| F2R4 | ACRT 36KHz - 17in R value | 3.98 | BLK | 0.000 |
| F2X4 | ACRT 36KHz - 17in X value | 3.98 | BLK | 0.000 |
| F2R5 | ACRT 36KHz - 10in R value | 3.48 | BLK | 0.000 |
| F2X5 | ACRT 36KHz - 10in X value | 3.48 | BLK | 0.000 |
| F2R6 | ACRT 36KHz - 6in R value | 3.23 | BLK | 0.000 |
| F2X6 | ACRT 36KHz - 6in X value | 3.23 | BLK | 0.000 |
| F3R1 | ACRT 72KHz - 80in R value | 8.98 | BLK | 0.000 |
| F3X1 | ACRT 72KHz - 80in X value | 8.98 | BLK | 0.000 |
| F3R2 | ACRT 72KHz - 50in R value | 6.48 | BLK | 0.000 |
| F3X2 | ACRT 72KHz - 50in X value | 6.48 | BLK | 0.000 |
| F3R3 | ACRT 72KHz - 29in R value | 4.98 | BLK | 0.000 |
| F3X3 | ACRT 72KHz - 29in X value | 4.98 | BLK | 0.000 |
| F3R4 | ACRT 72KHz - 17in R value | 3.98 | BLK | 0.000 |
| F3X4 | ACRT 72KHz - 17in X value | 3.98 | BLK | 0.000 |
| F3R5 | ACRT 72KHz - 10in R value | 3.48 | BLK | 0.000 |
| F3X5 | ACRT 72KHz - 10in X value | 3.48 | BLK | 0.000 |
| F3R6 | ACRT 72KHz - 6in R value | 3.23 | BLK | 0.000 |
| F3X6 | ACRT 72KHz - 6in X value | 3.23 | BLK | 0.000 |
| RMUD | Mud Resistivity | 12.52 | BLK | 0.000 |
| F1RT | Transmitter Reference 12 KHz Real Signal | 2.73 | BLK | 0.000 |
| F1XT | Transmitter Reference 12 KHz Imaginary Signal | 2.73 | BLK | 0.000 |
| F2RT | Transmitter Reference 36 KHz Real Signal | 2.73 | BLK | 0.000 |
| F2XT | Transmitter Reference 36 KHz Imaginary Signal | 2.73 | BLK | 0.000 |
| F3RT | Transmitter Reference 72 KHz Real Signal | 2.73 | BLK | 0.000 |
| F3XT | Transmitter Reference 72 KHz Imaginary Signal | 2.73 | BLK | 0.000 |
| TFPU | Upper Feedpipe Temperature Calculated | 2.73 | BLK | 0.000 |
| TFPL | Lower Feedpipe Temperature Calculated | 2.73 | BLK | 0.000 |
| ITMP | Instrument Temperature | 2.73 | BLK | 0.000 |
| TCVA | Temperature Correction Values Loop Off | 2.73 | NO | |
| TIDV | Instrument Temperature Derivative | 2.73 | NO | |
| TUDV | Upper Temperature Derivative | 2.73 | NO | |
| TLDV | Lower Temperature Derivative | 2.73 | NO | |
| TRBD | Receiver Board Temperature | 2.73 | NO | |
| HDIA | Measured Hole Diameter | 0.00 | NO | |

SDLT Pad

| | | | | |
|------|---------------------------|-------|-----|-------|
| TPUL | Tension Pull | 22.39 | NO | |
| NAB | Near Above | 22.21 | BLK | 0.920 |
| NHI | Near Cesium High | 22.21 | BLK | 0.920 |
| NLO | Near Cesium Low | 22.21 | BLK | 0.920 |
| NVA | Near Valley | 22.21 | BLK | 0.920 |
| NBA | Near Barite | 22.21 | BLK | 0.920 |
| NDE | Near Density | 22.21 | BLK | 0.920 |
| NPK | Near Peak | 22.21 | BLK | 0.920 |
| NLI | Near Lithology | 22.21 | BLK | 0.920 |
| NBAU | Near Barite Unfiltered | 22.21 | BLK | 0.250 |
| NLIU | Near Lithology Unfiltered | 22.21 | BLK | 0.250 |
| FAB | Far Above | 22.56 | BLK | 0.250 |
| FHI | Far Cesium High | 22.56 | BLK | 0.250 |
| FLO | Far Cesium Low | 22.56 | BLK | 0.250 |
| FVA | Far Valley | 22.56 | BLK | 0.250 |
| FBA | Far Barite | 22.56 | BLK | 0.250 |
| FDE | Far Density | 22.56 | BLK | 0.250 |
| FPK | Far Peak | 22.56 | BLK | 0.250 |
| FLI | Far Lithology | 22.56 | BLK | 0.250 |

| | | | | |
|------|----------------------------|-------|-----|-------|
| PTMP | Pad Temperature | 22.40 | BLK | 0.920 |
| NHV | Near Detector High Voltage | 21.79 | NO | |
| FHV | Far Detector High Voltage | 21.79 | NO | |
| ITMP | Instrument Temperature | 21.79 | NO | |
| DDHV | Detector High Voltage | 21.79 | NO | |
| HDIA | Measured Hole Diameter | 0.00 | NO | |

Microlog Pad

| | | | | |
|------|------------------|-------|-----|-------|
| TPUL | Tension Pull | 22.58 | NO | |
| MINV | Microlog Lateral | 22.58 | BLK | 0.750 |
| MNOR | Microlog Normal | 22.58 | BLK | 0.750 |

Data: MURPHY_SWD_3404\0001 SP-GTET-DSN-SDL-ACRT-BN\001 07-May-14 10:14 Dn @407.8f

Date: 07-May-14 10:16:57

| | | | |
|---------|-----------------------------|-------|---------------|
| COMPANY | SANDRIDGE ENERGY | | |
| WELL | MURPHY SWD 3404 1-18 | | |
| FIELD | BLUFF | | |
| COUNTY | SUMNER | STATE | KANSAS |

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