

MICROLOG

Fold here

Service Ticket No.: 904838655				API No.: 05-073-06739-00-00				PGM Version: WL INSITE R5.6.3 (Build 4)						
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.		@		@										
Rmc @ Meas. Temp.		@		@										
Source Rmf	Rmc													
Rm @ BHT		@		@										
Rmf @ BHT		@		@										
Rmc @ BHT		@		@										
EQUIPMENT DATA														
GAMMA			ACOUSTIC			DENSITY			NEUTRON					
Run No.				Run No.				Run No.						
Serial No.				Serial No.				Serial No.						
Model No.				Model No.				Model No.						
Diameter				No. of Cent.				Diameter						
Detector Model No.				Spacing				Log Type						
Type						Source Type				Source Type				
Length				LSA [Y/N]		Serial No.				Serial No.				
Distance to Source				FWDA [Y/N]		Strength				Strength				
LOGGING DATA														
GENERAL				GAMMA		ACOUSTIC		DENSITY			NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	

DIRECTIONAL INFORMATION																	
Maximum Deviation @									KOP @								
Remarks: 5 1/2" CASING USED FOR ANNULAR HOLE VOLUME MICROLOG EFFECTED BY HEAVY MUD CAKING ON AND AROUND THE MICROLOG PAD																	
CREW: WHITLOCK, RICHARDSON, MANLEY, LANCASTER																	
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: 24-May-18 08:58:28

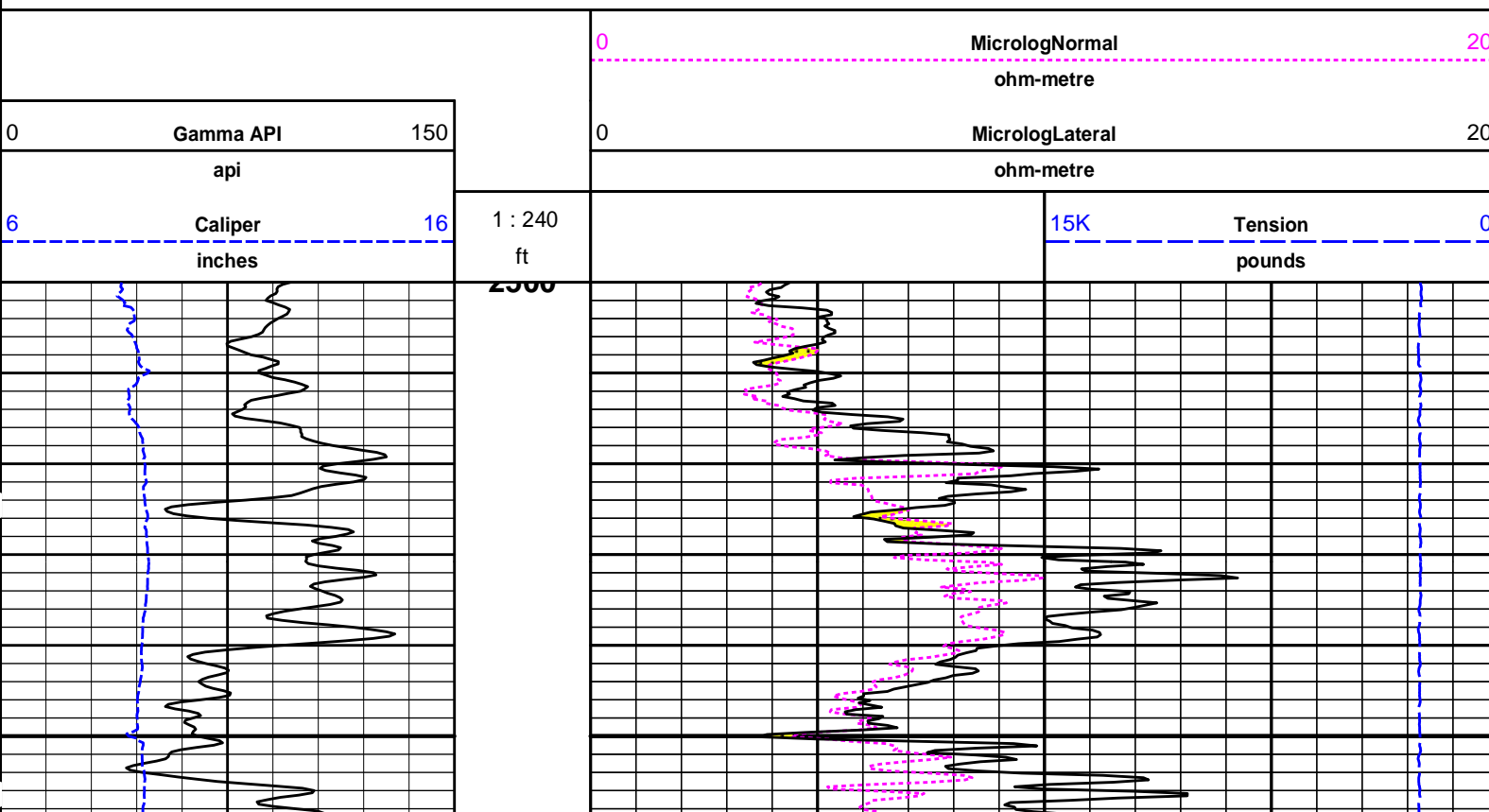
Plot Range: 2500 ft to 7675.5 ft

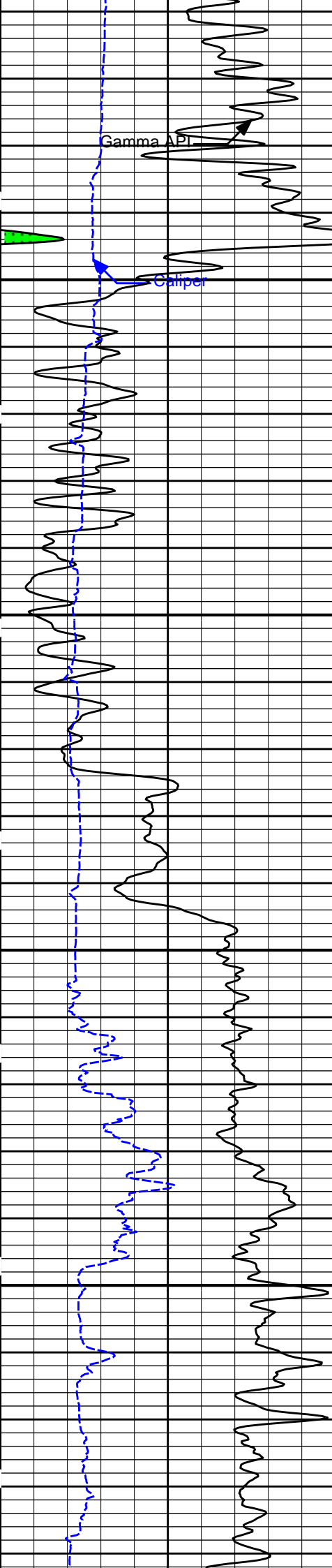
Data: K3_JAMES\Well Based\DAQ-0001-005\

Plot File: \\-LOCAL-K3_JAMES\0001 RWCH_GTET-DSNT-SDLT-BSAT-ACRT\ML\Microlog_IQ_5_main

5 INCH MAIN LOG

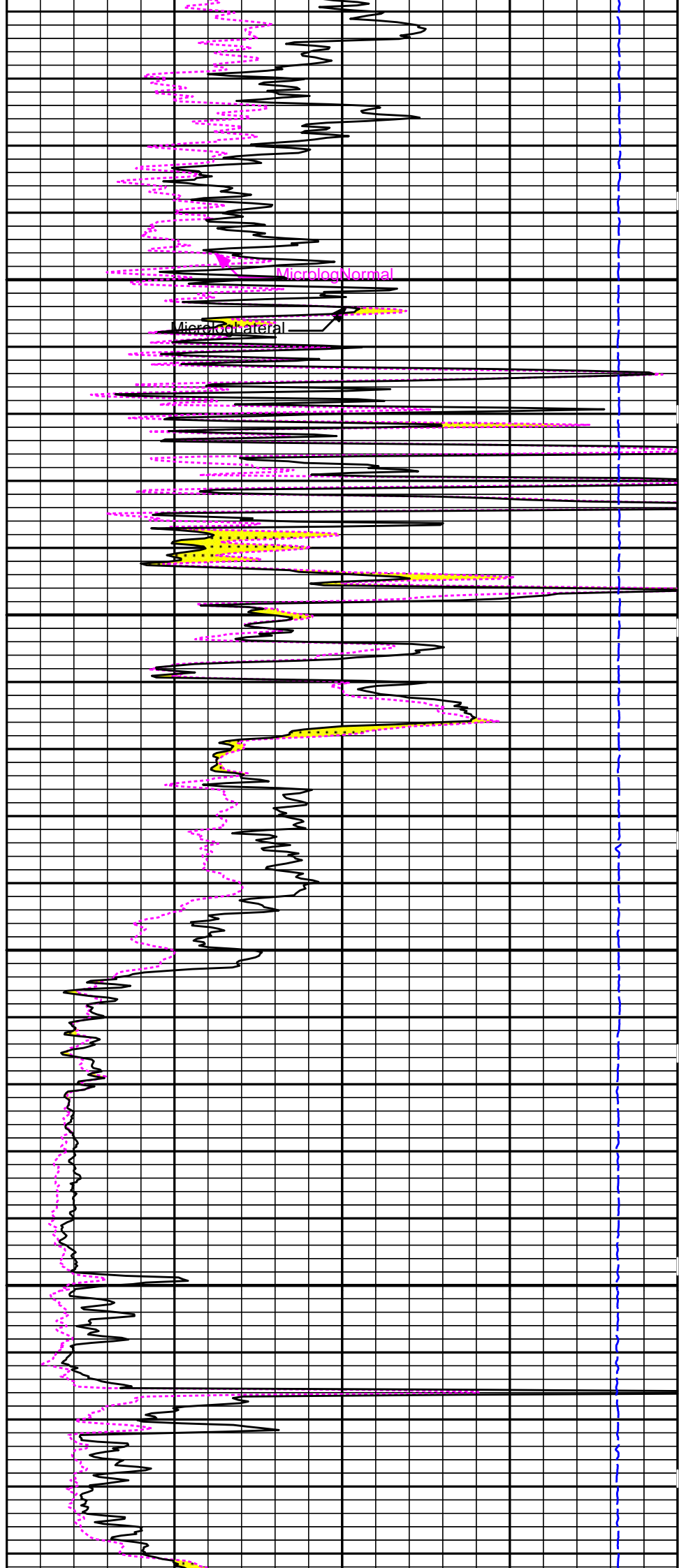
MAIN LOG 5" PER 100'

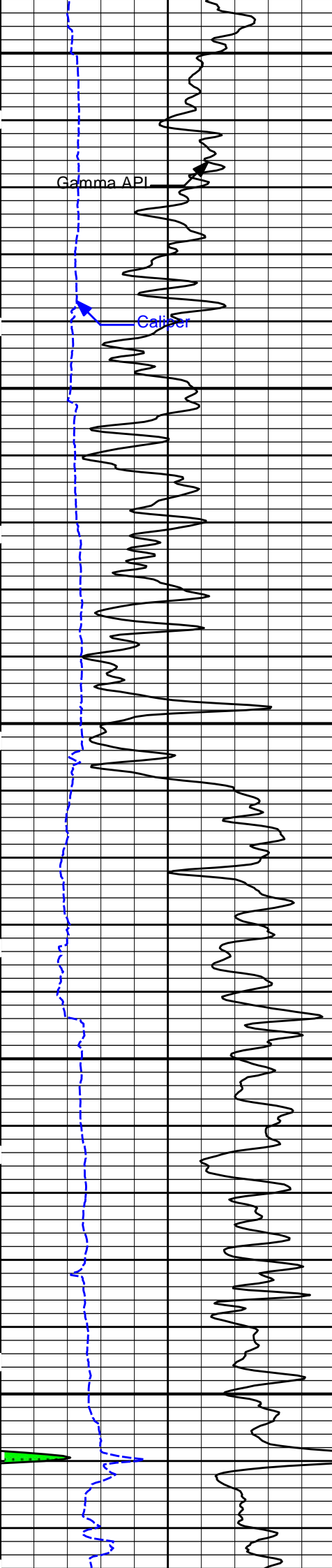




2600

2700





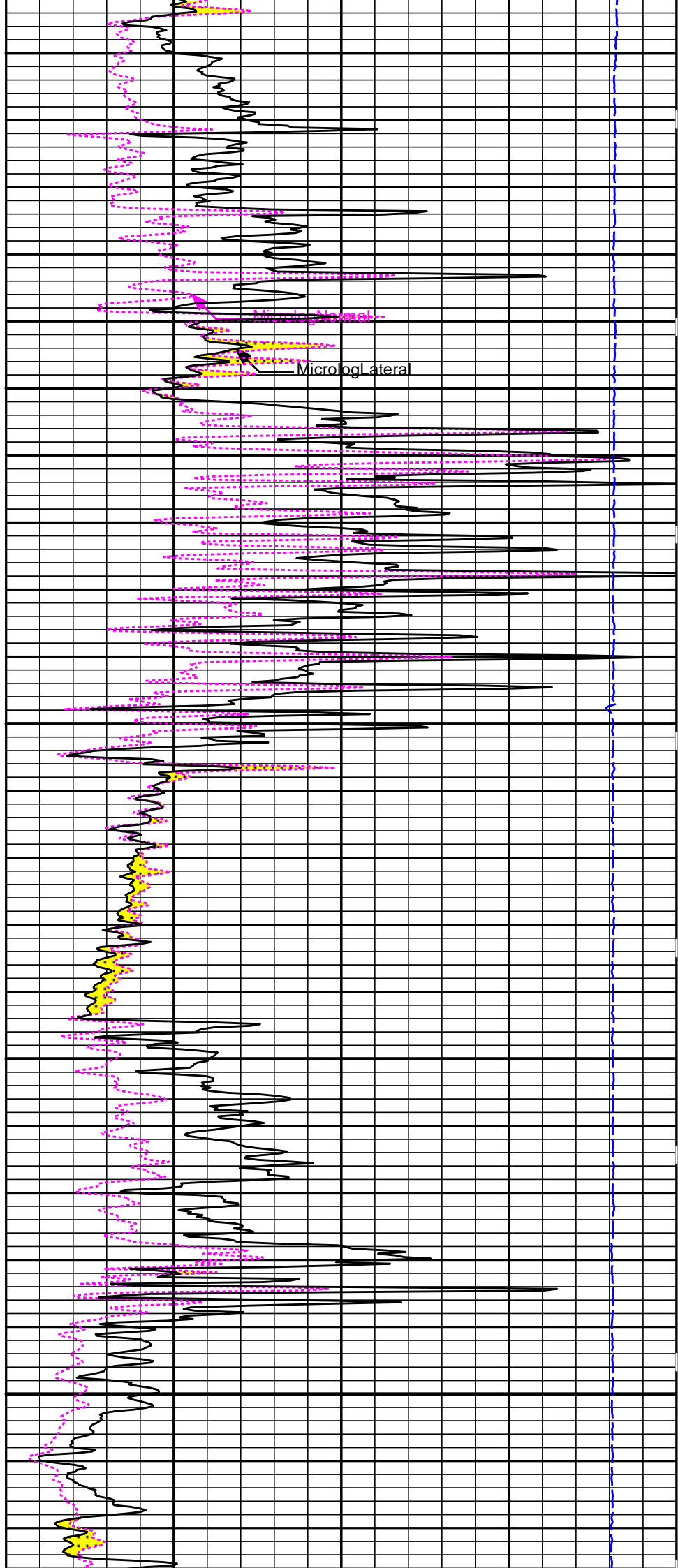
2800

Gamma API

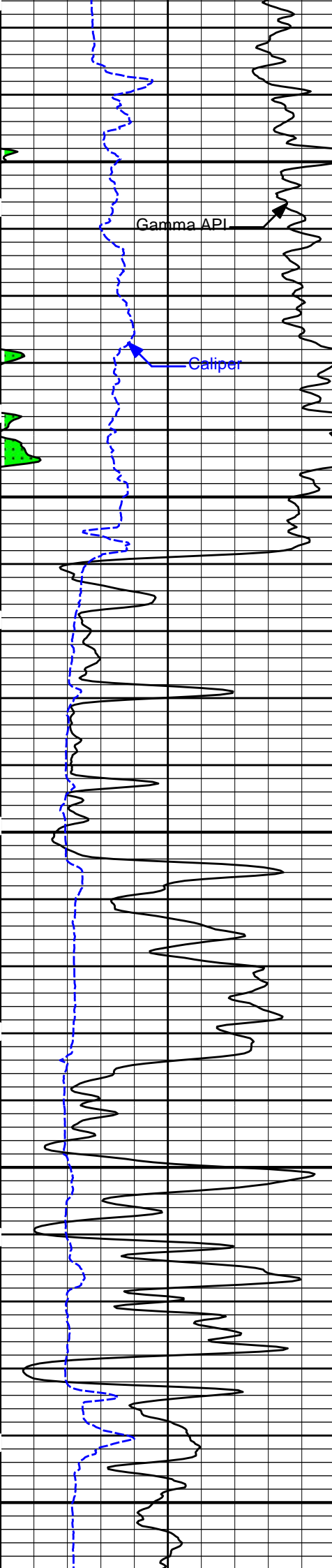
Caliper

2900

3000

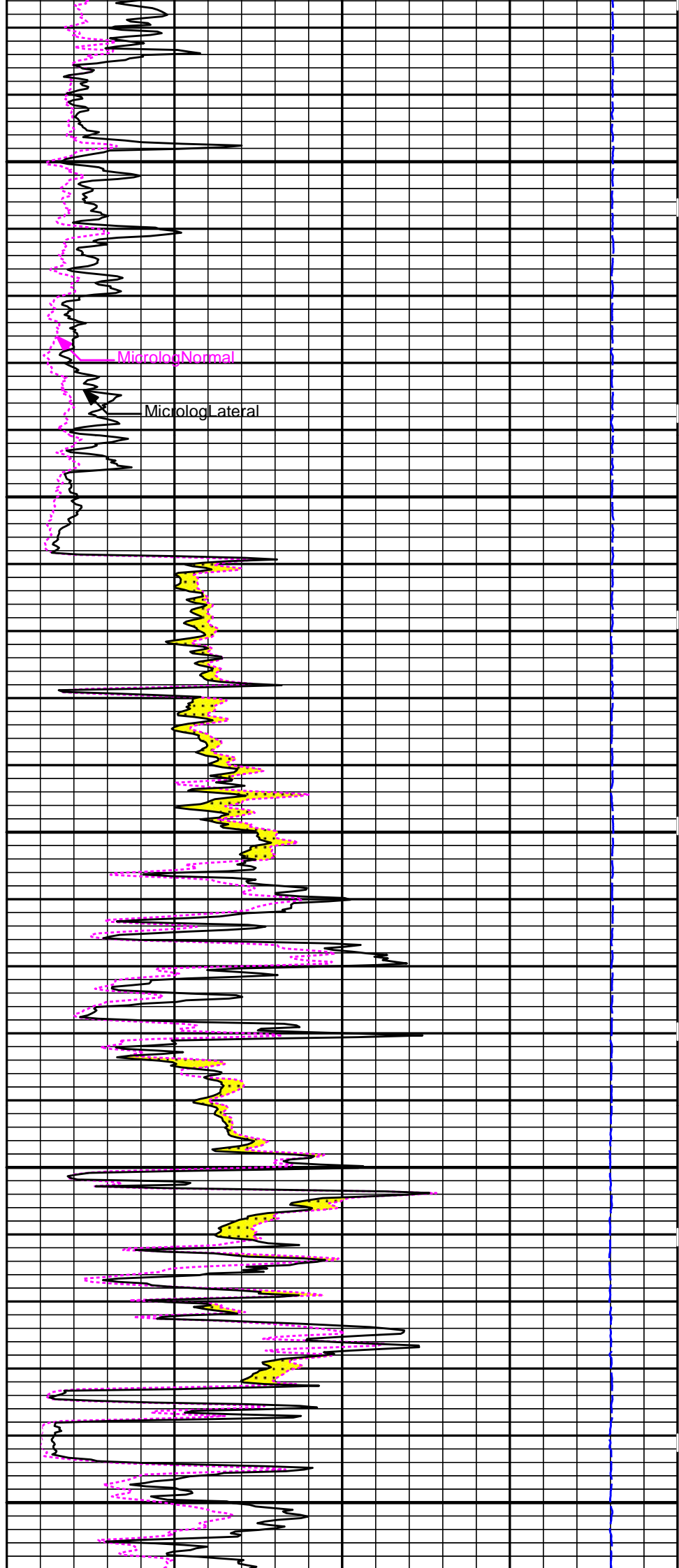


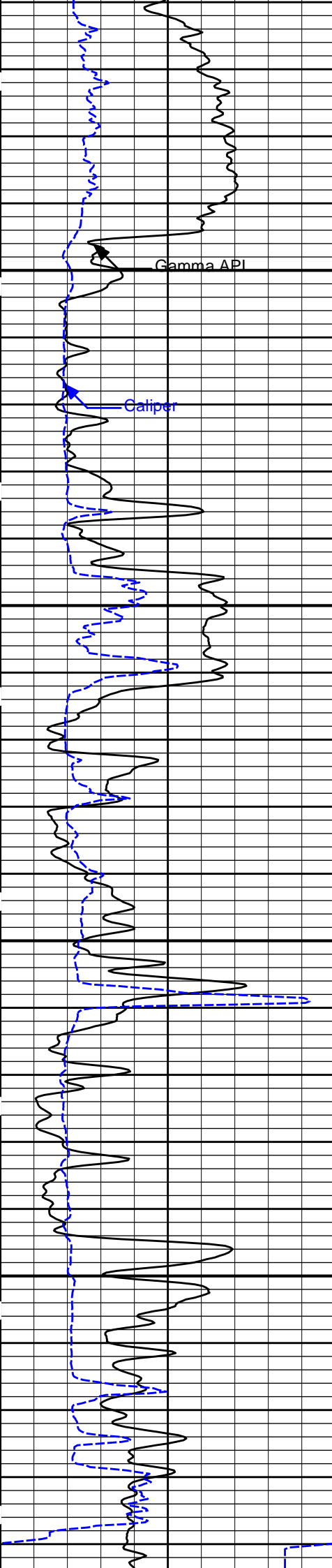
Microlog Lateral



3100

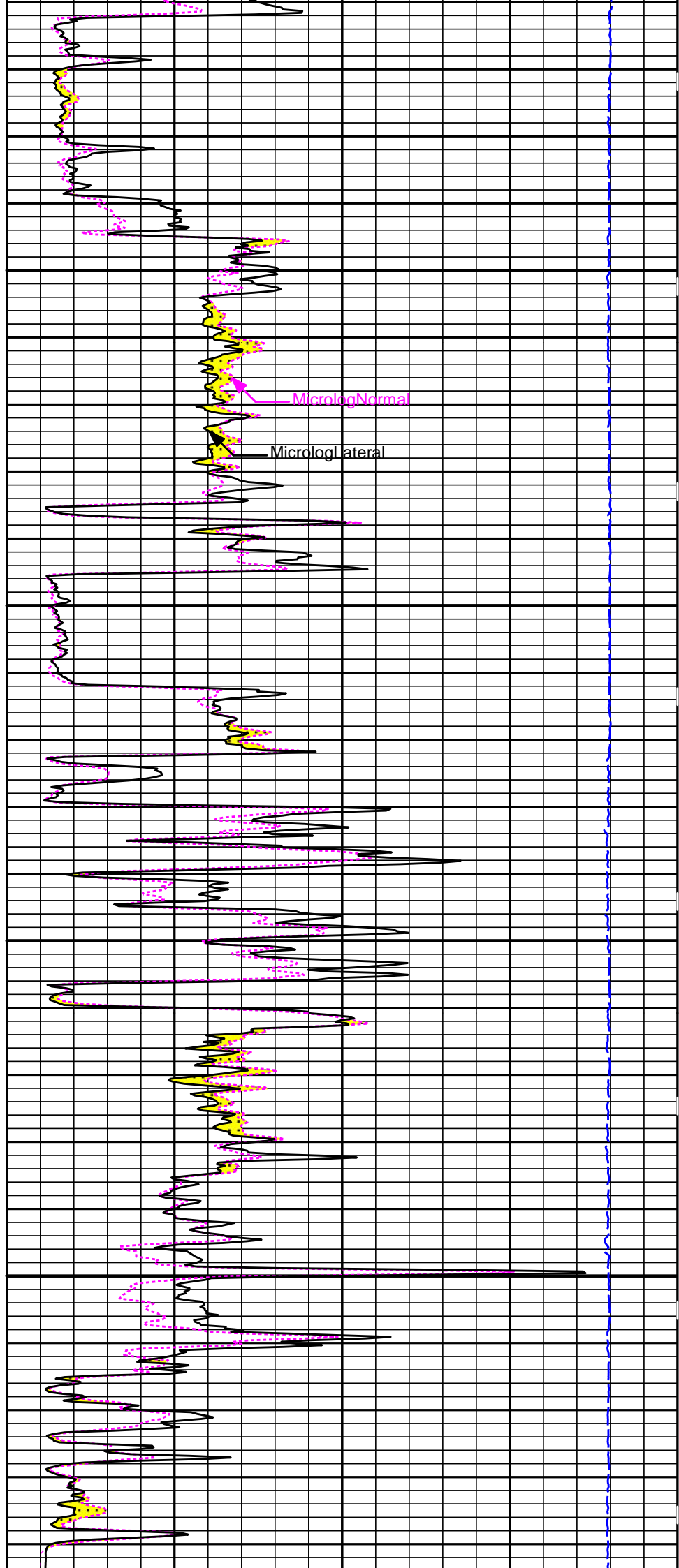
3200

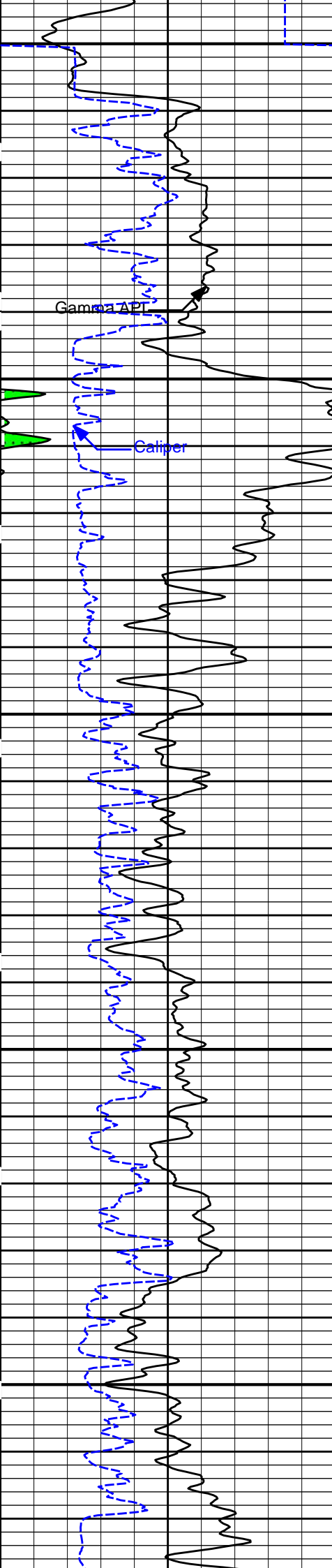




3300

3400

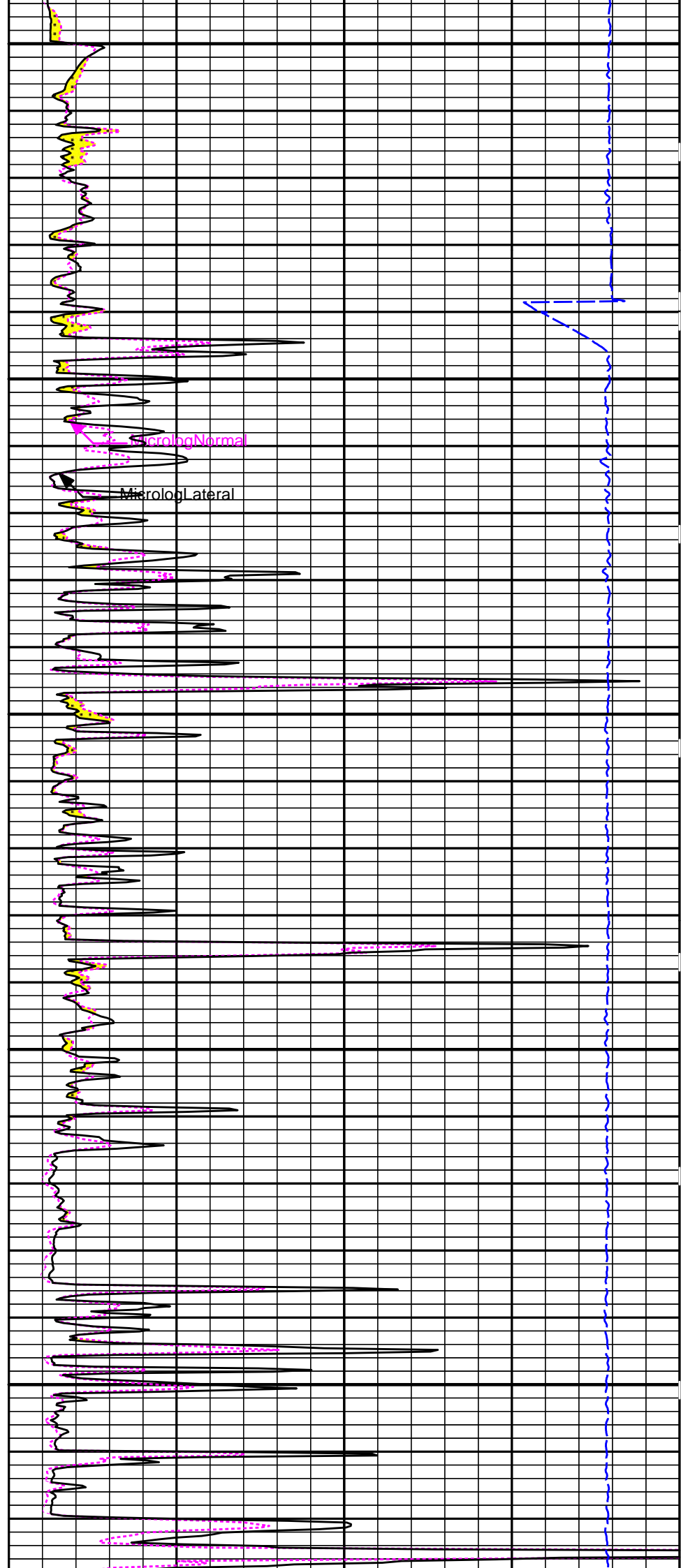


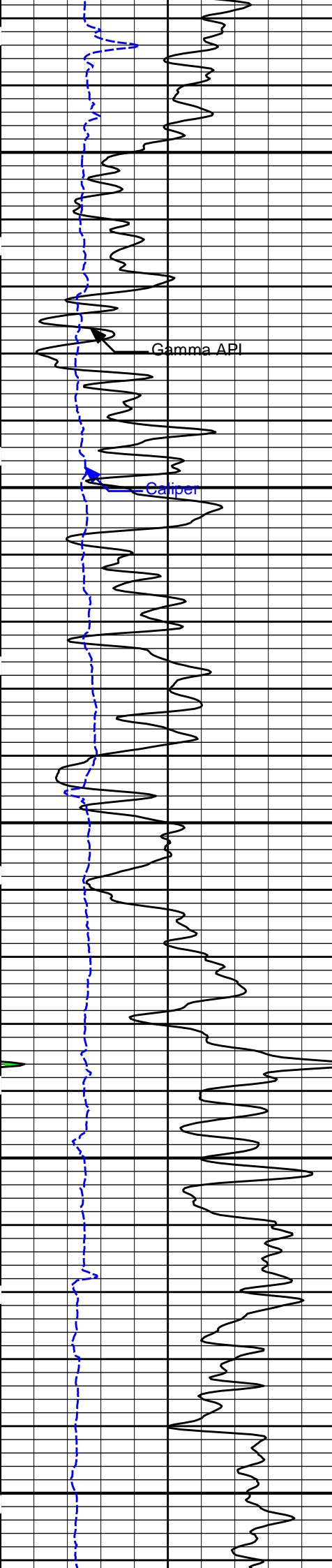


3500

3600

3700



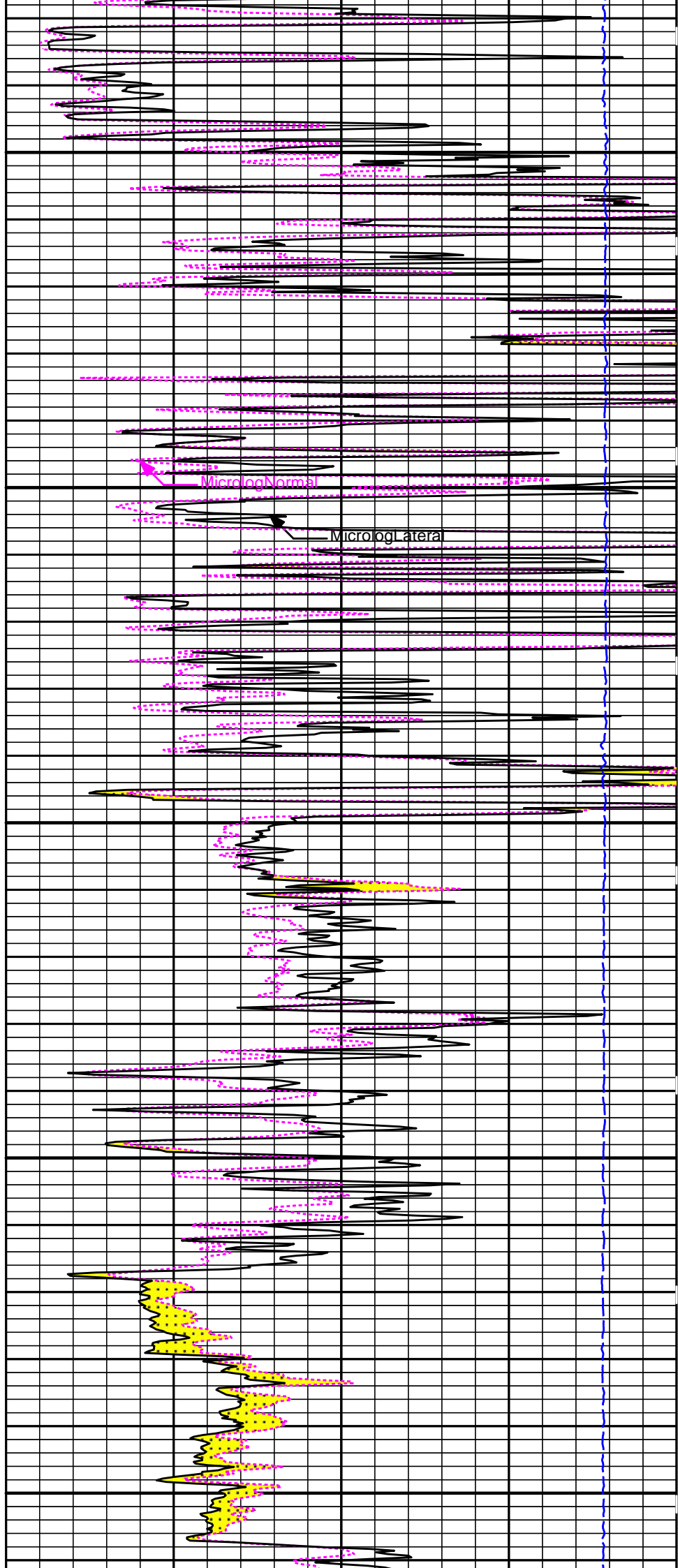


Gamma API

Caliper

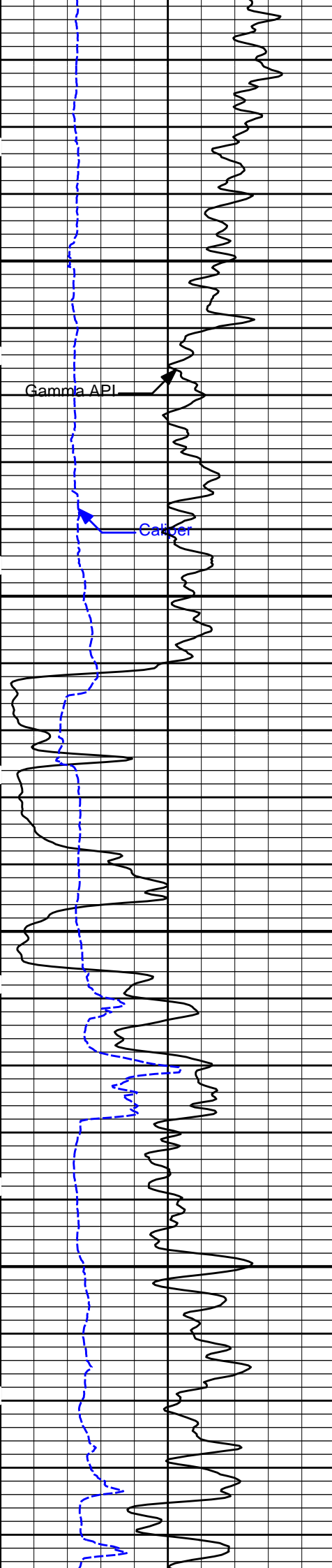
3800

3900



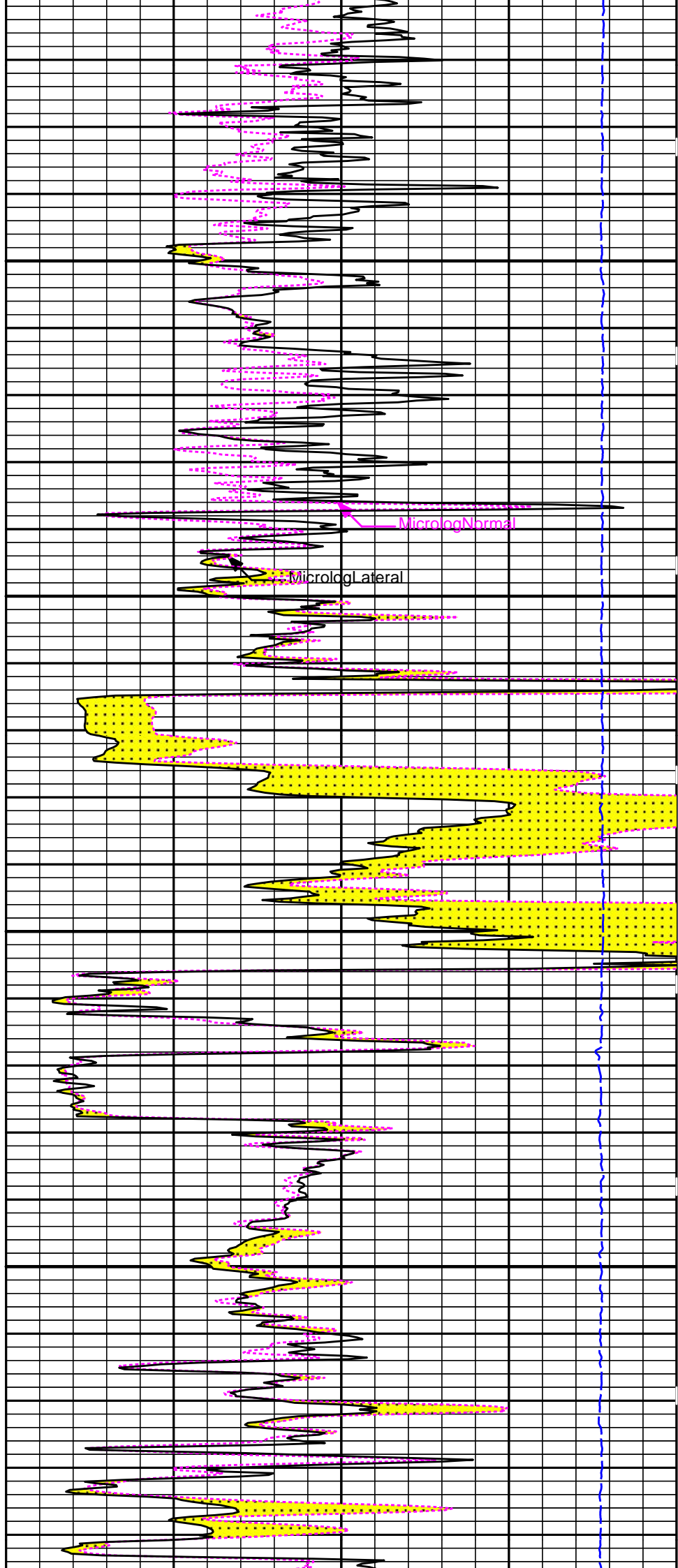
MicrologNormal

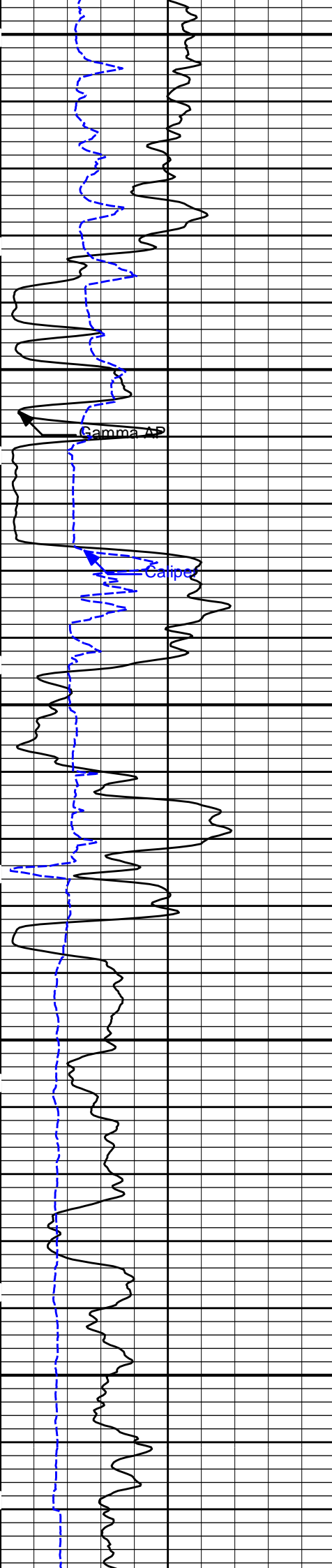
MicrologLateral



4000

4100

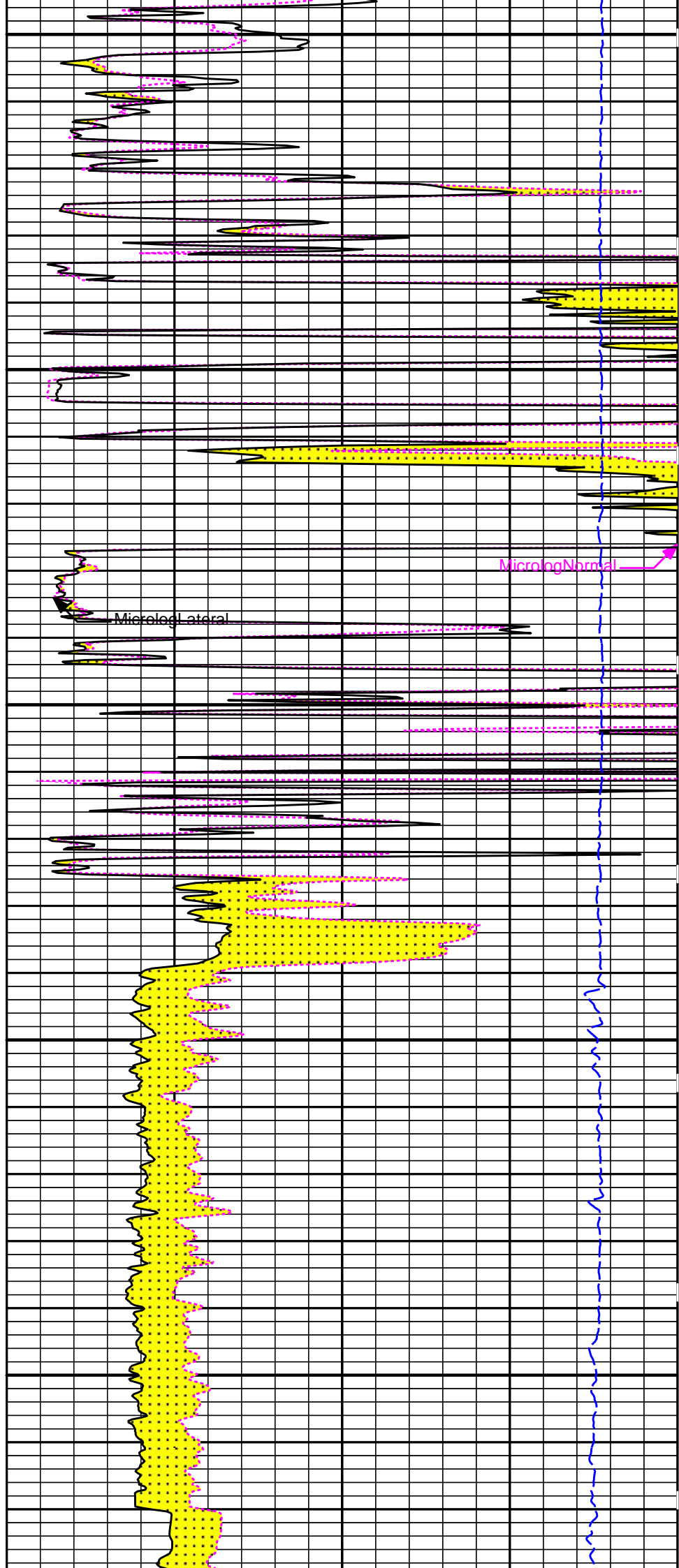


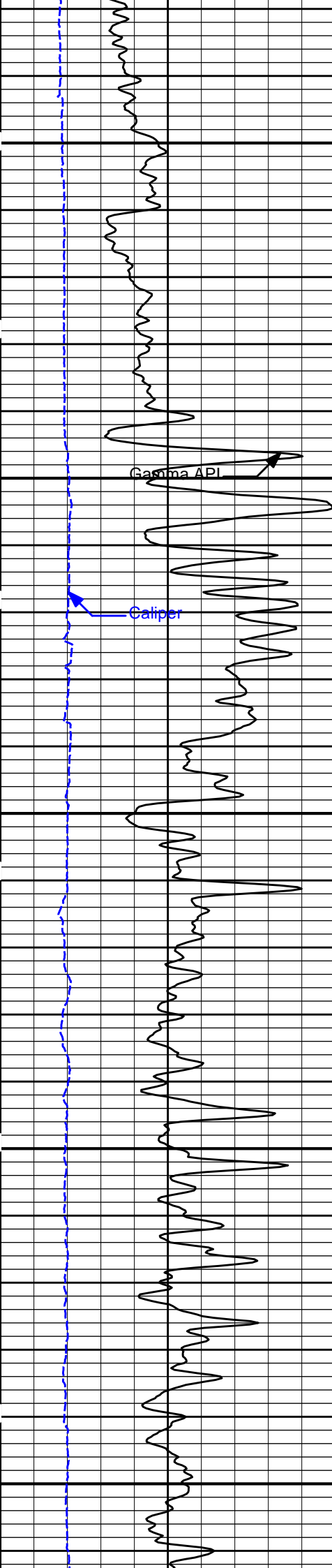


4200

4300

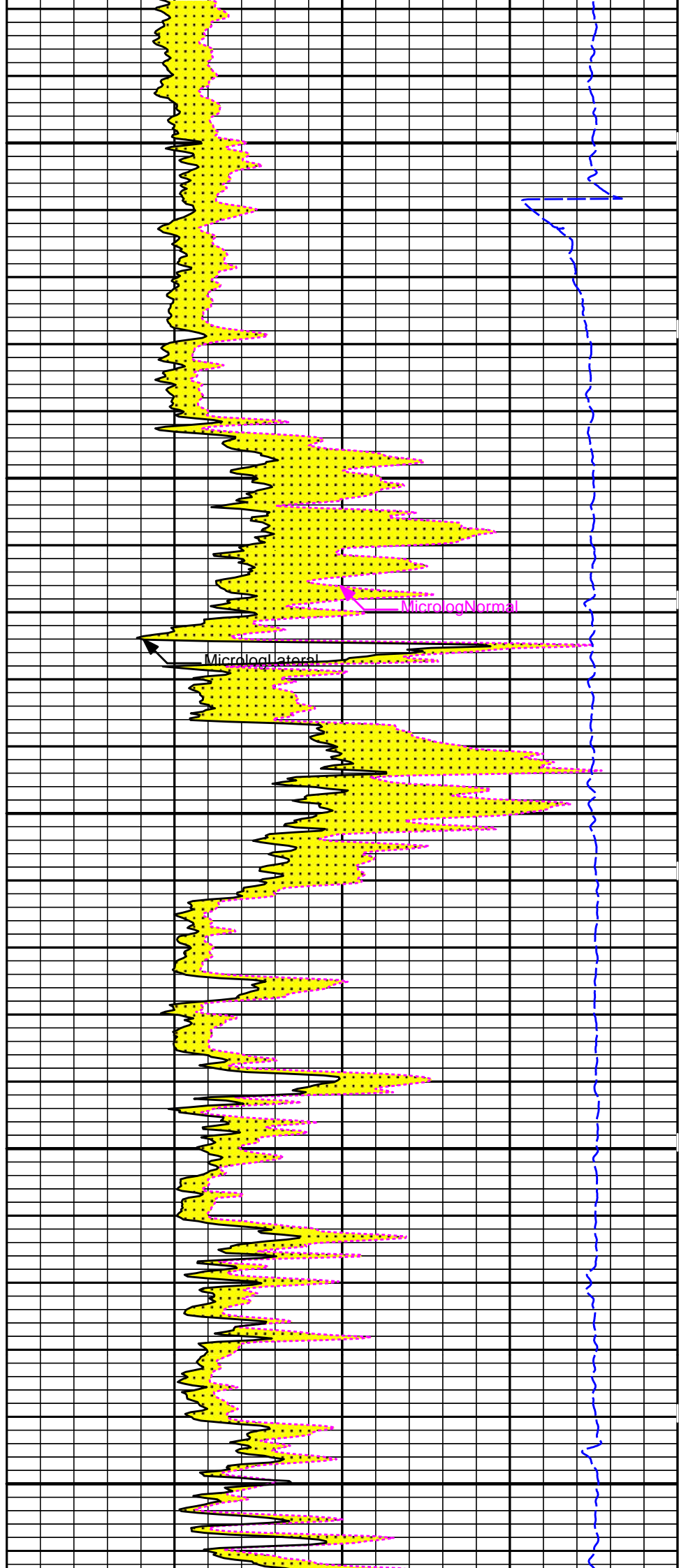
4400

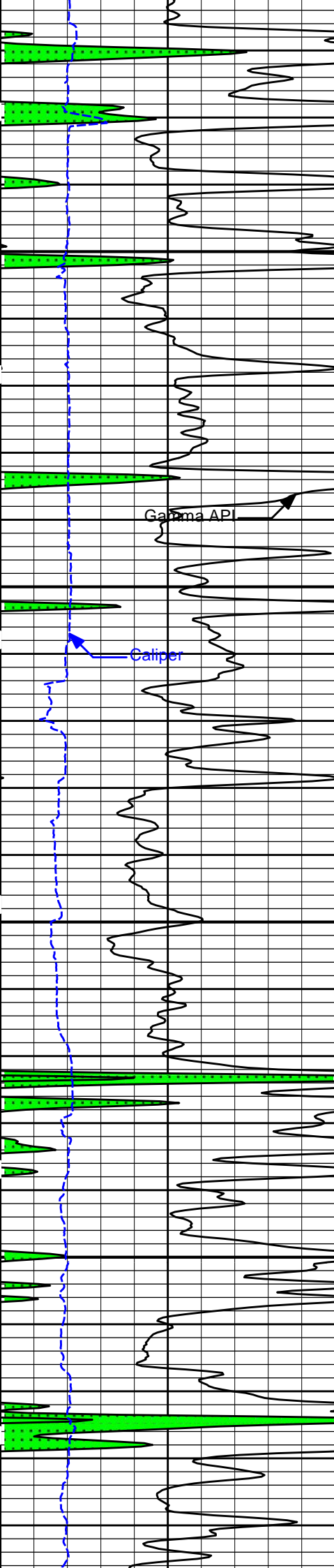




4500

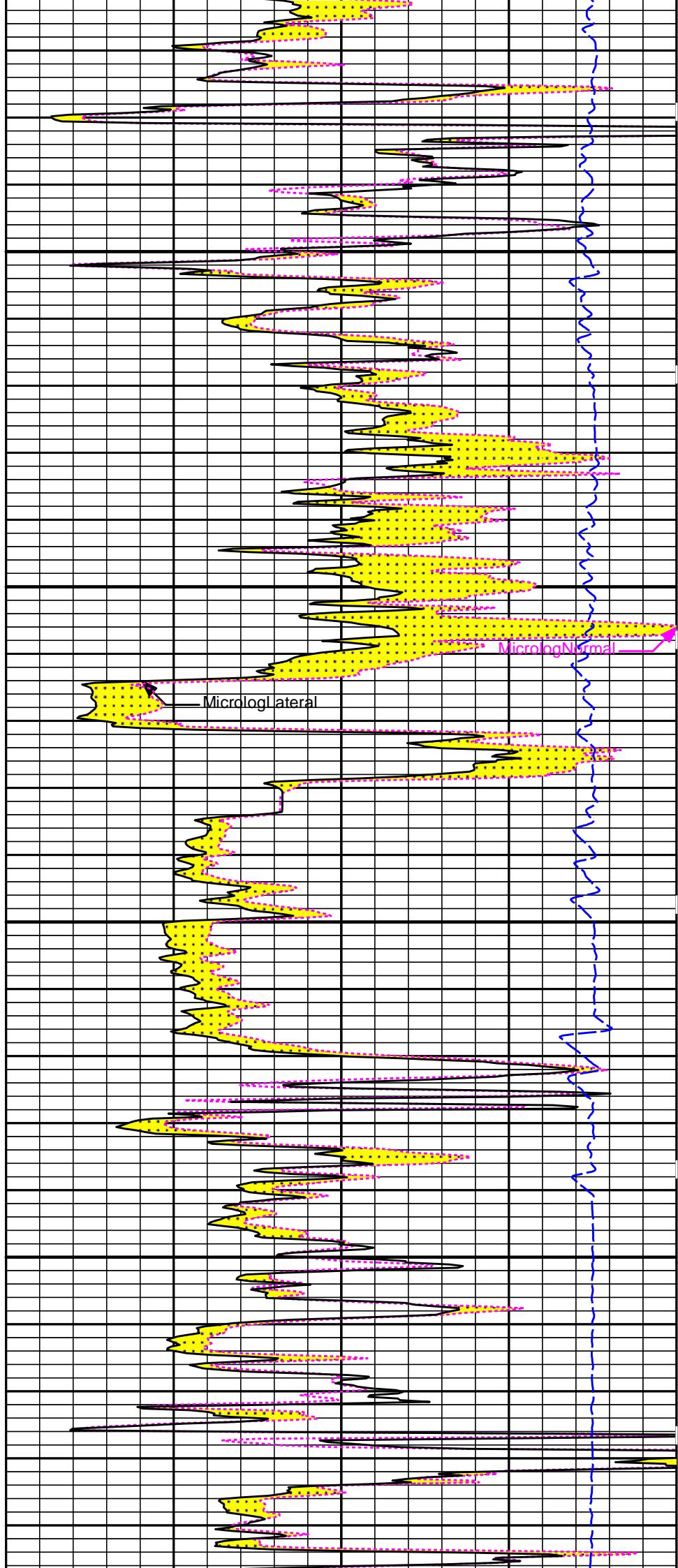
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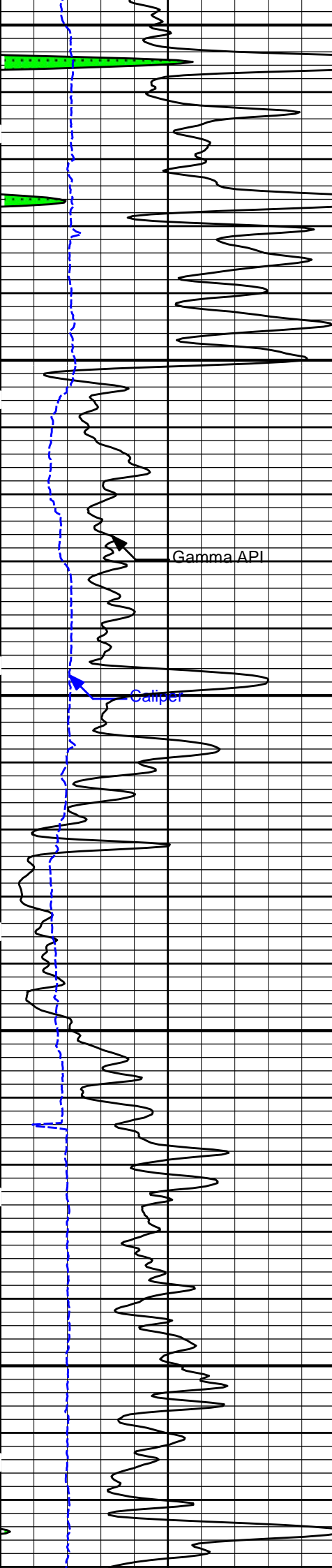




4700

4800

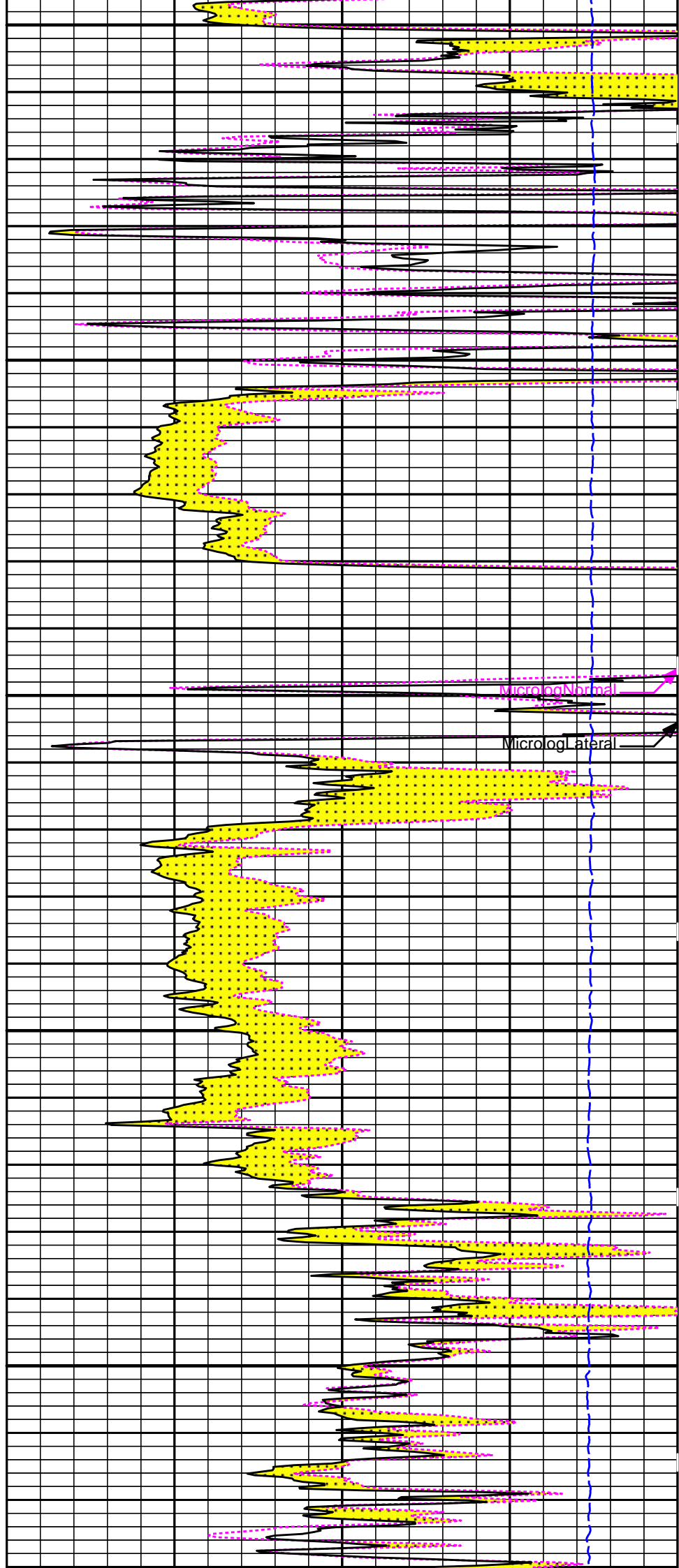


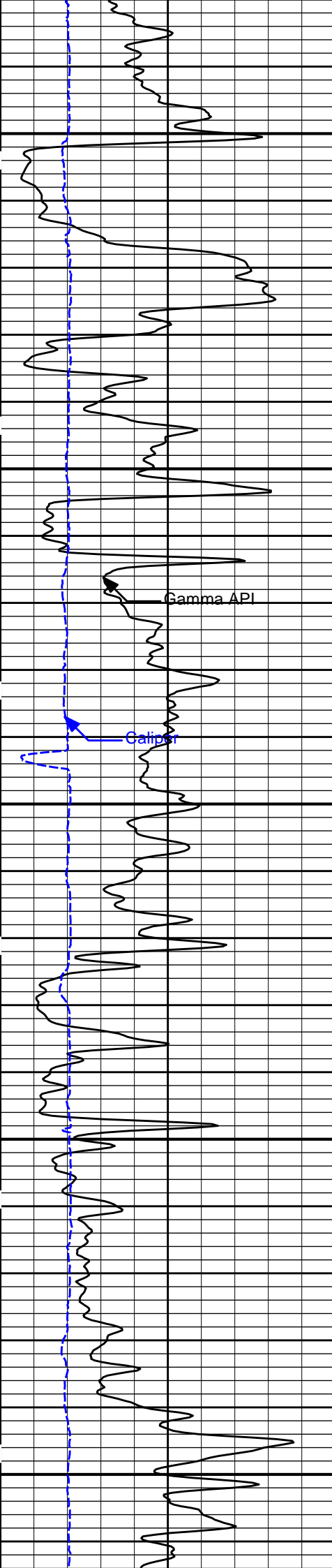


4900

5000

5100



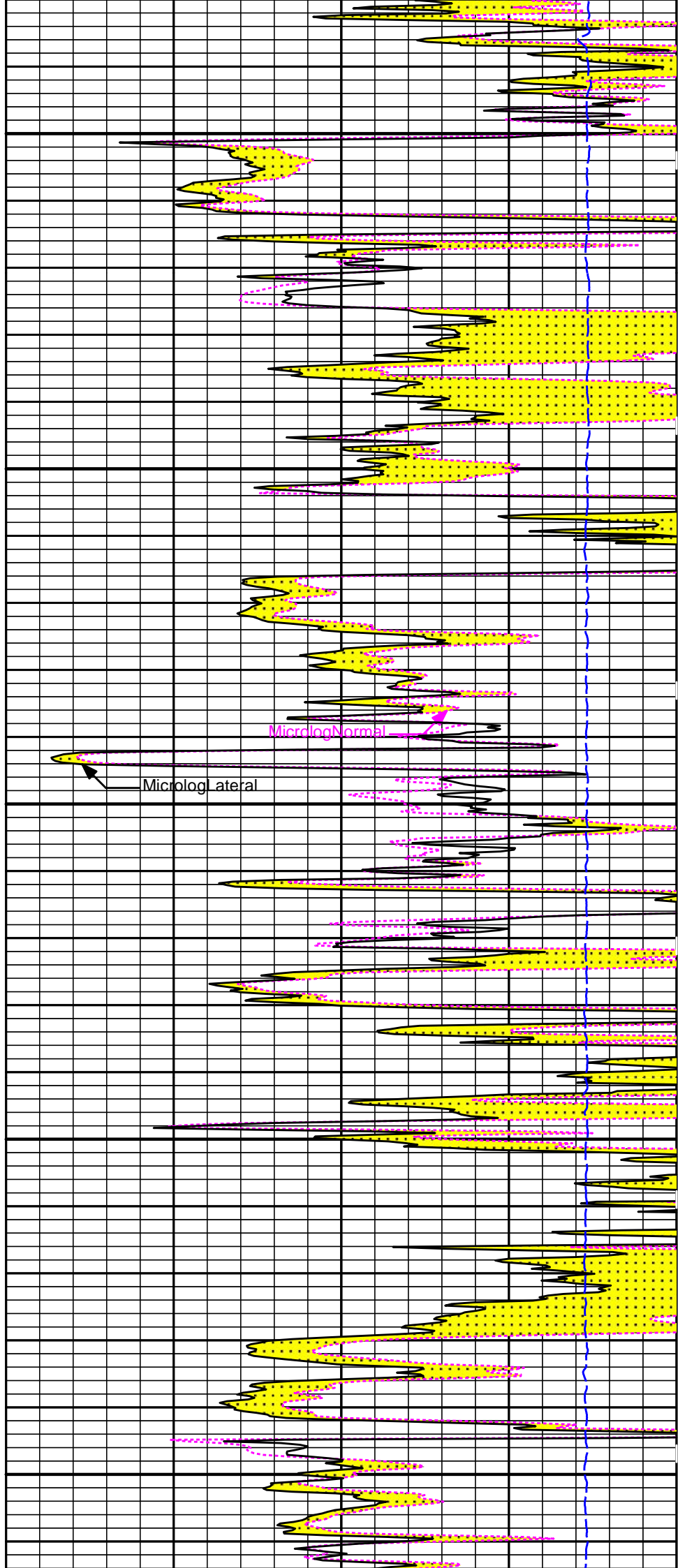


5200

Gamma API

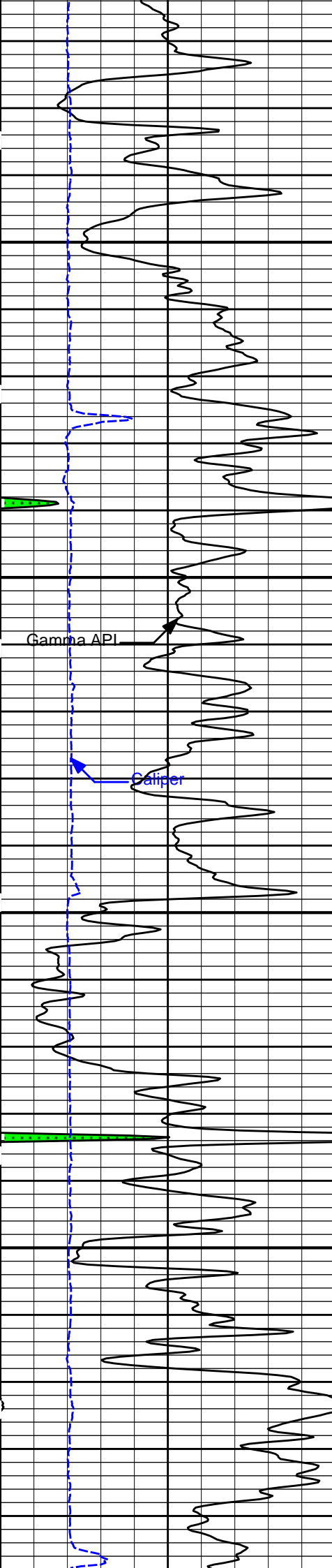
Galipor

5300



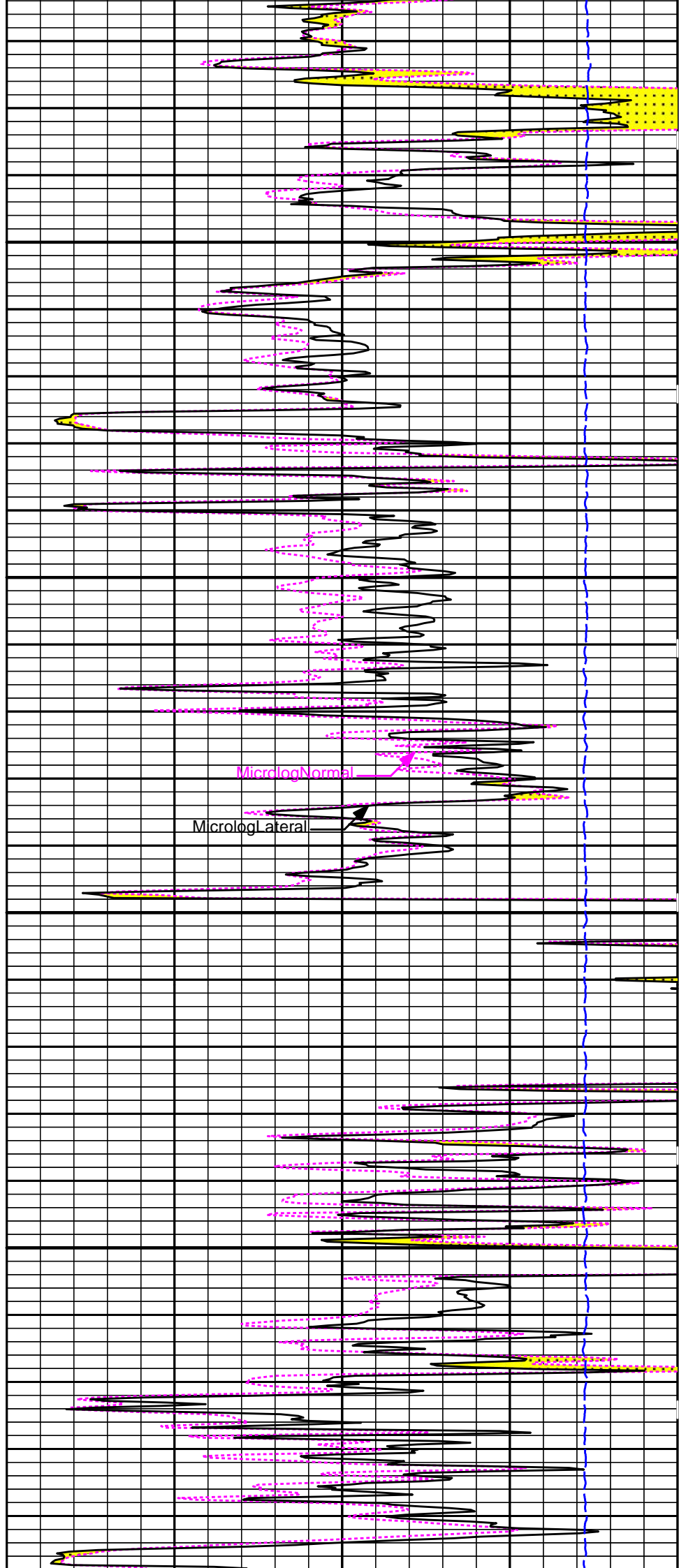
Microlog Normal

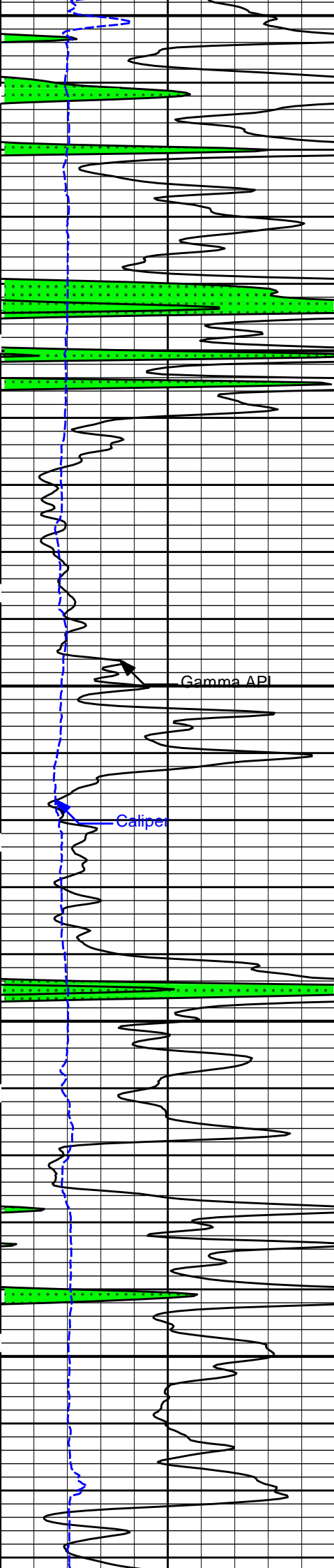
Microlog Lateral



5400

5500

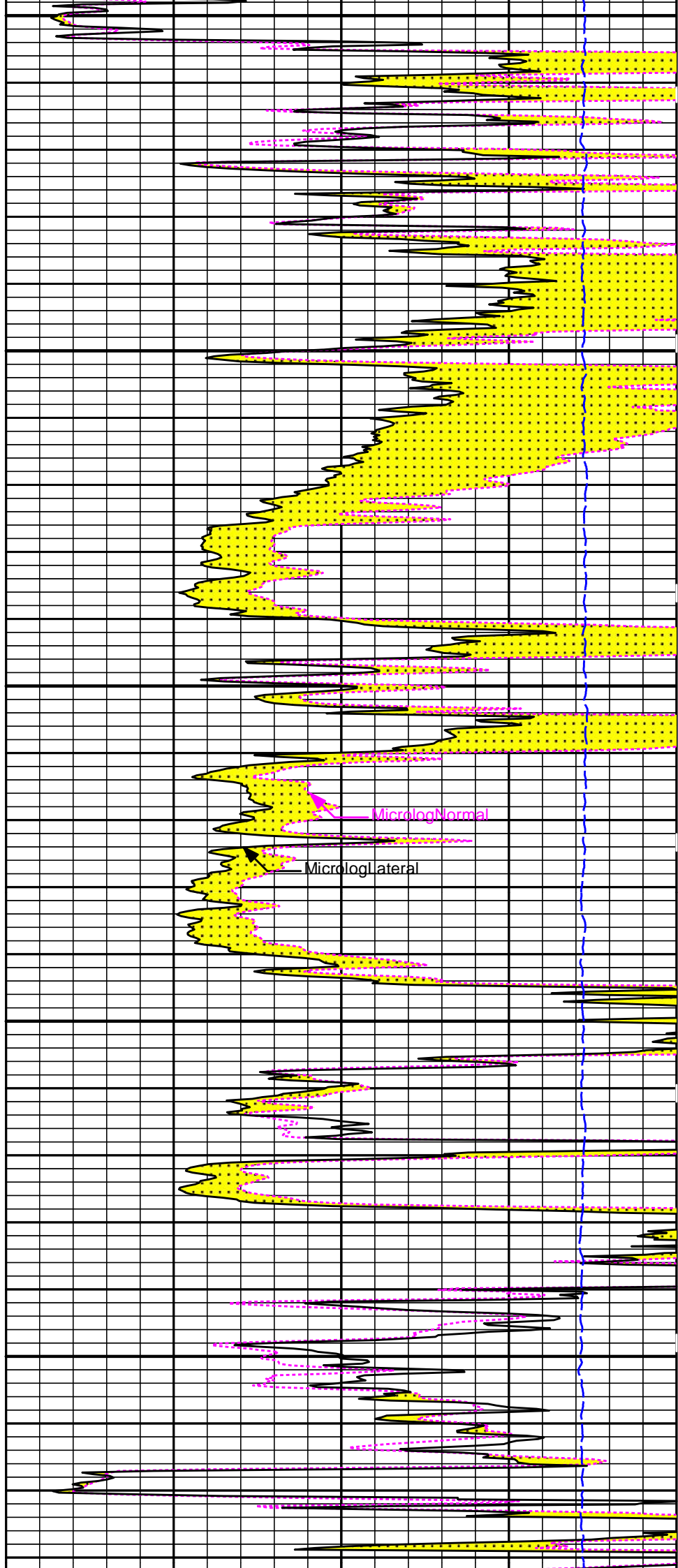


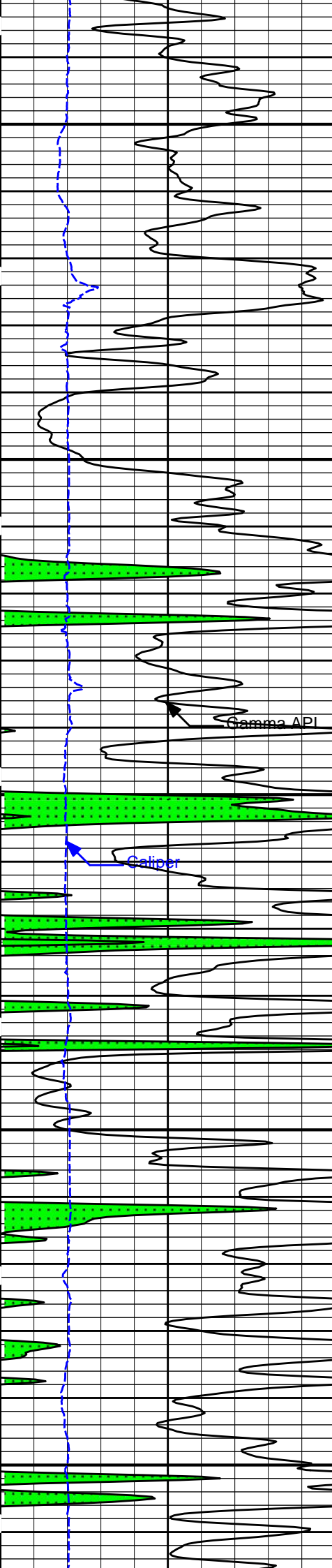


5600

5700

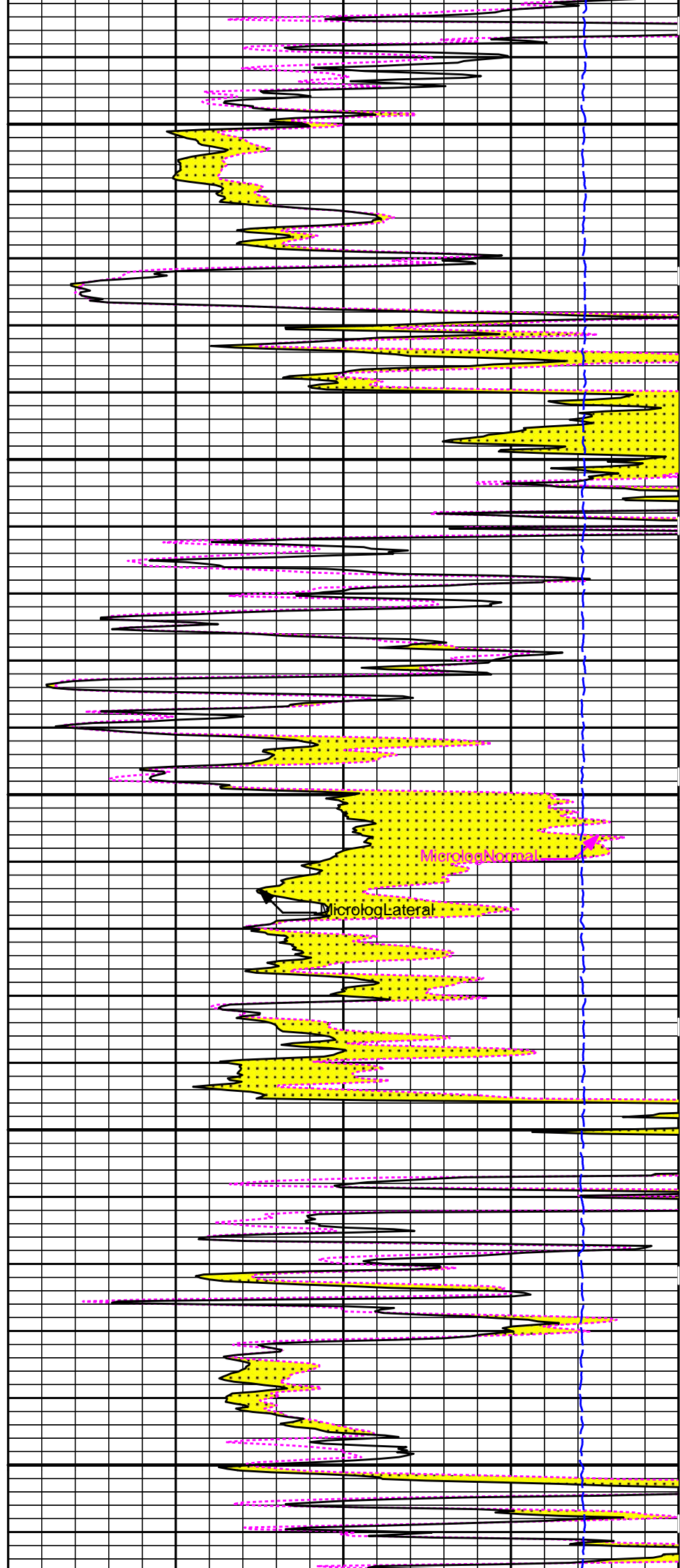
5800

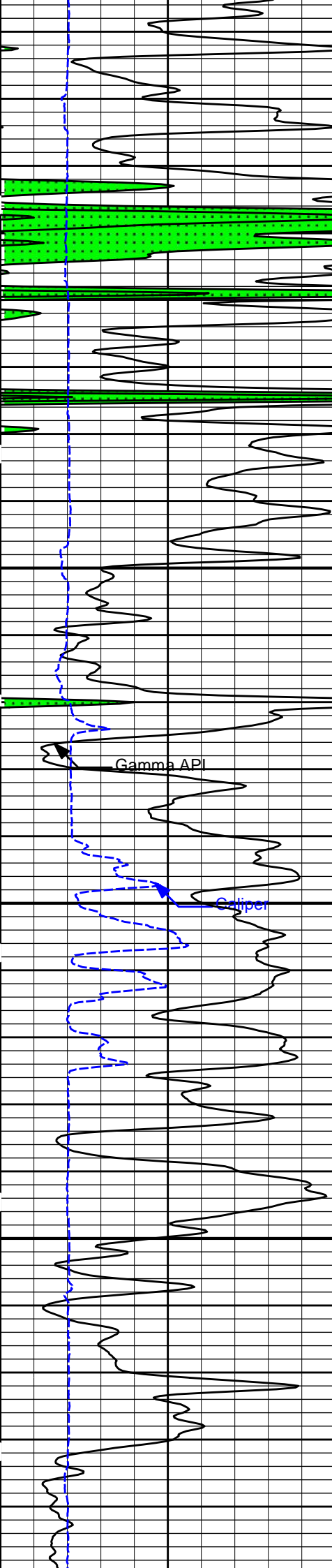




5900

6000



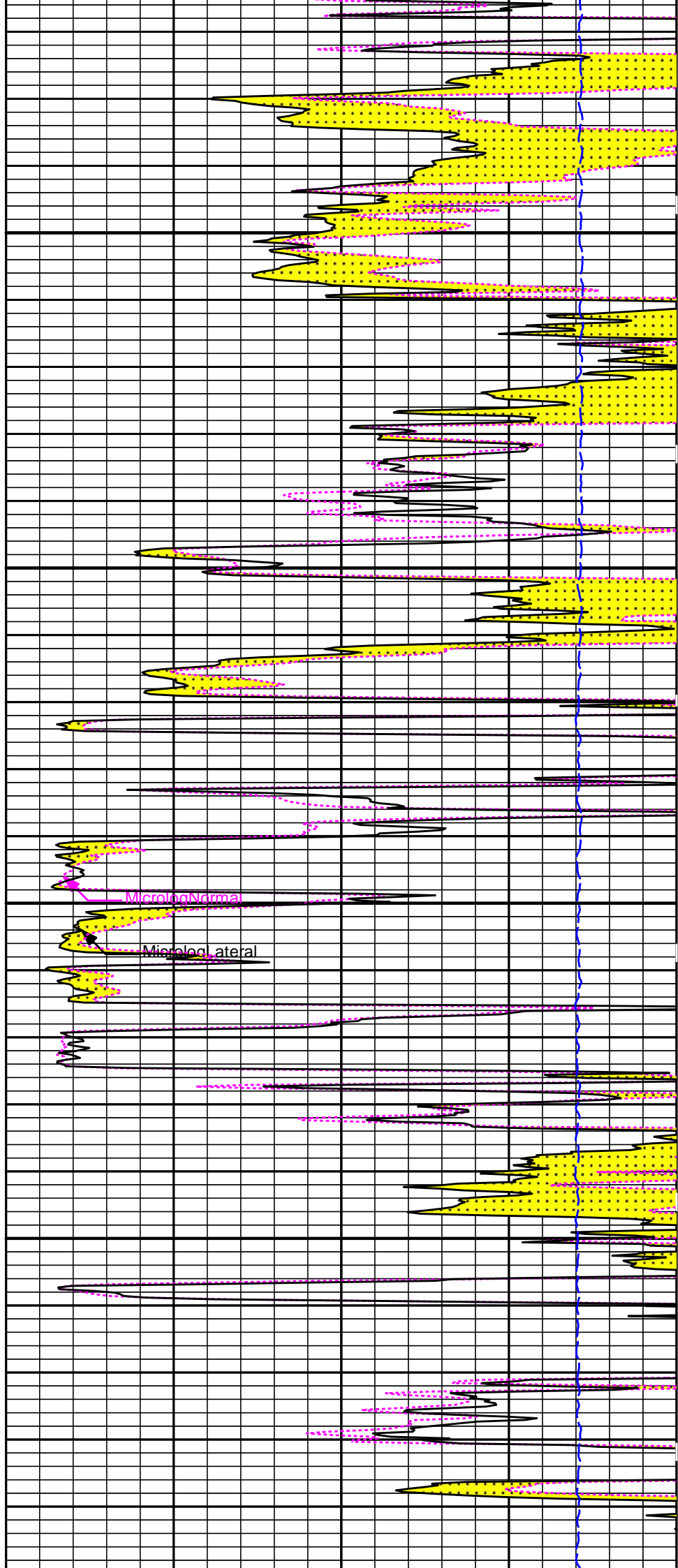


6100

6200

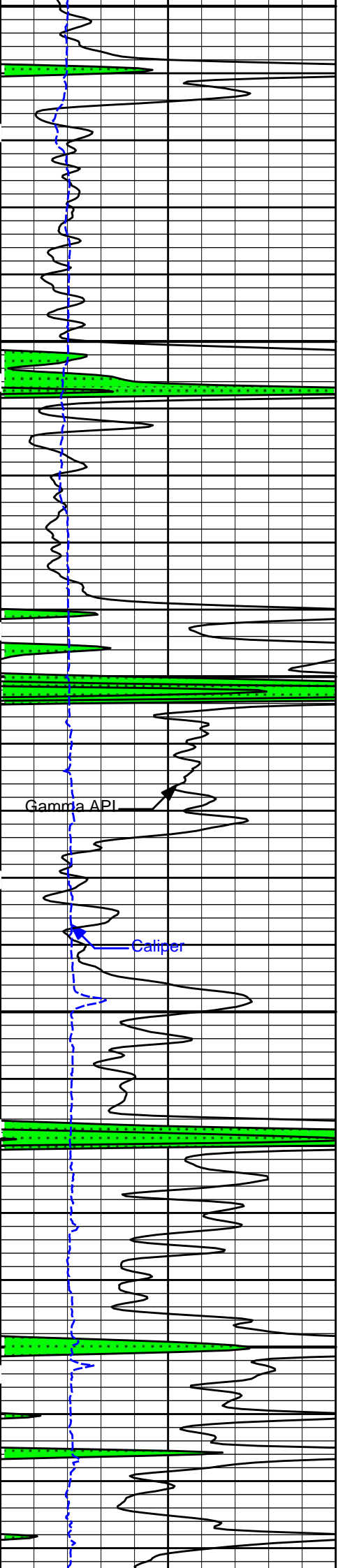
Gamma API

Caliper



Microlog Normal

Microlog Lateral



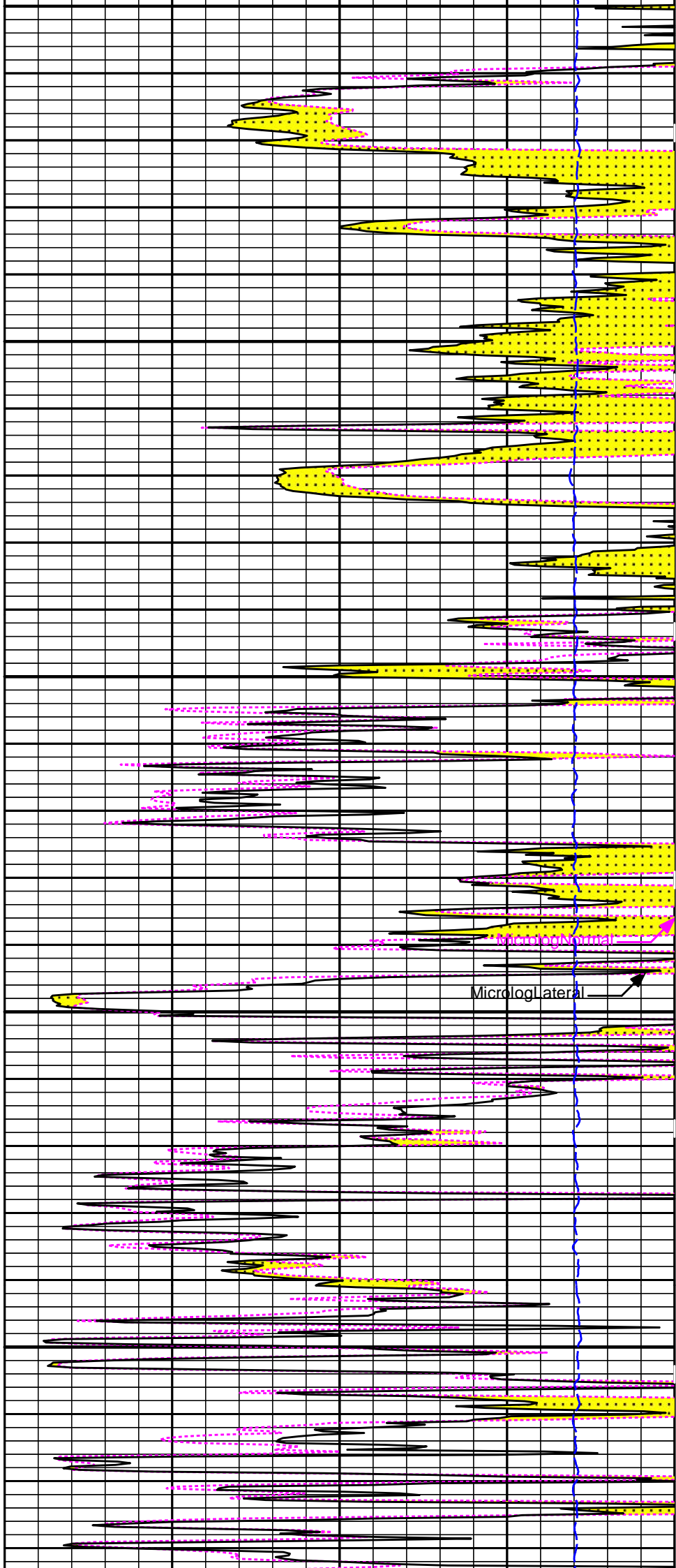
6300

6400

6500

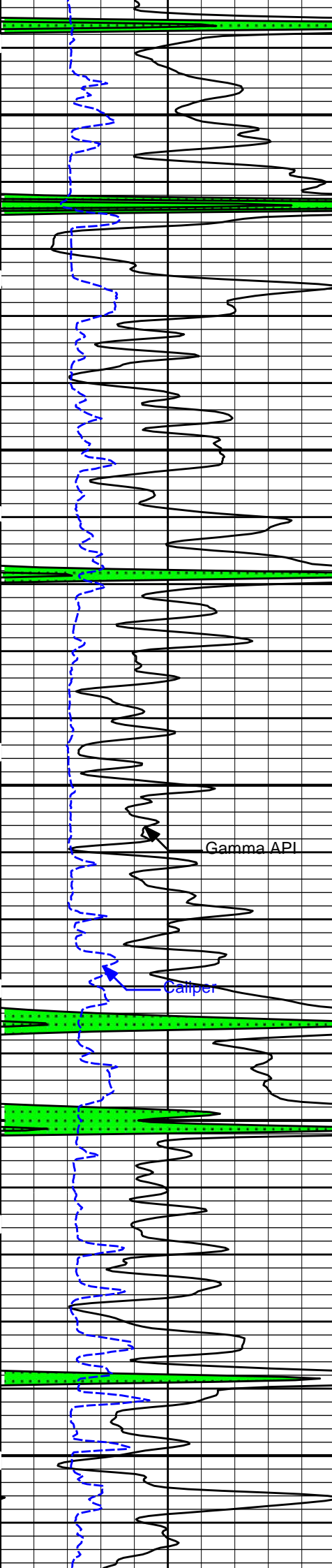
Gamma API

Caliper



Microlog Normal

Microlog Lateral

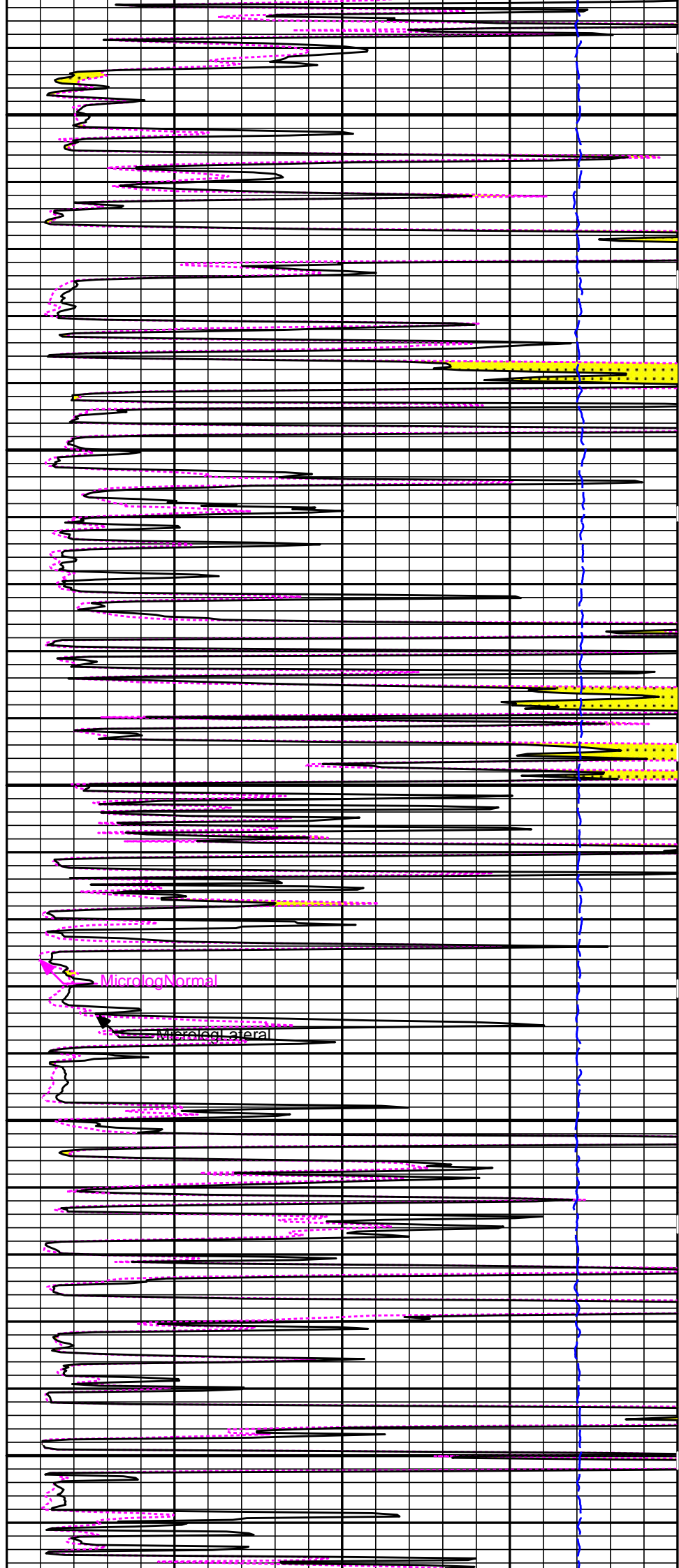


6600

Gamma API

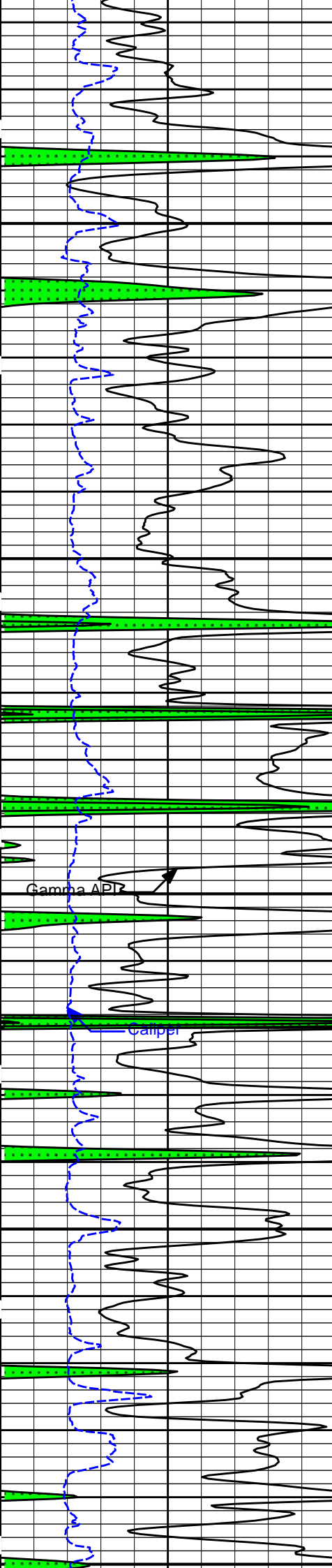
Caliper

6700



MicrologNormal

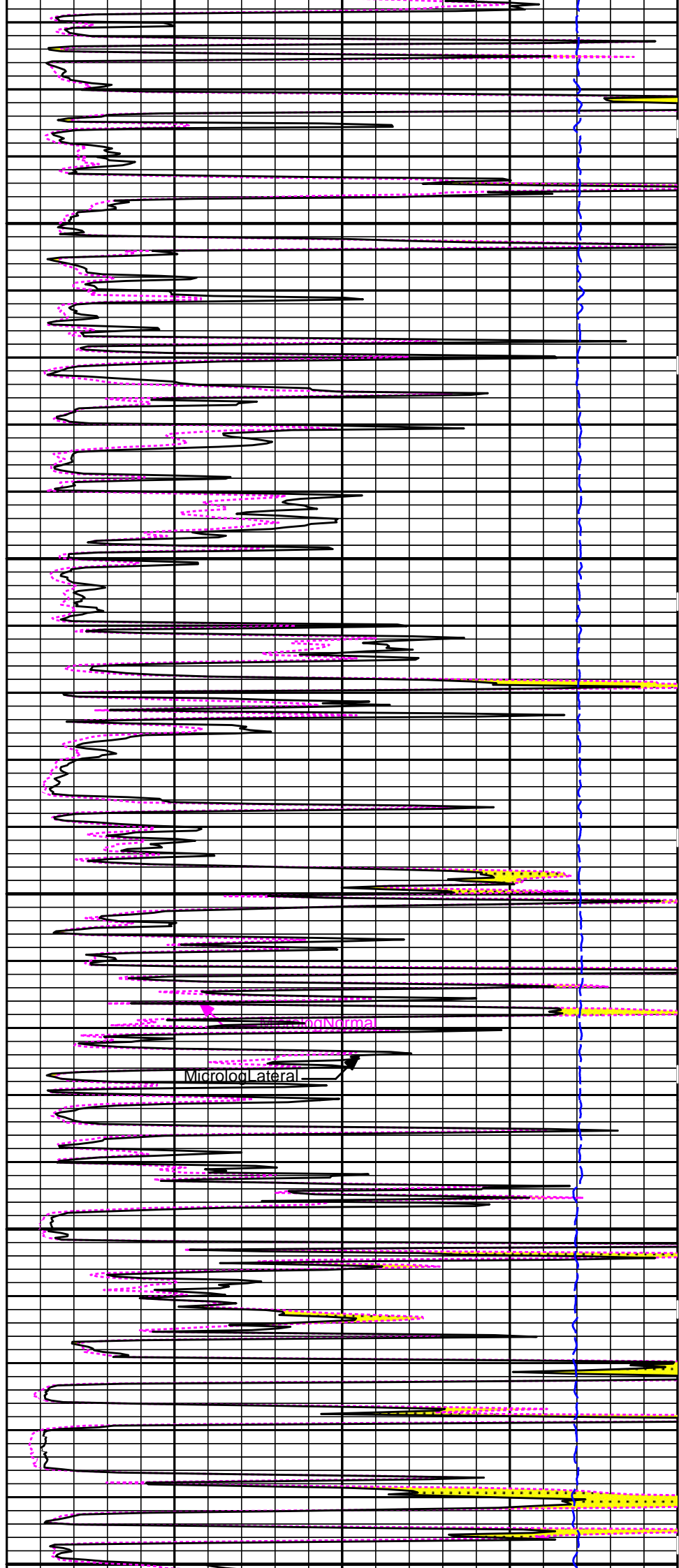
MicrologLateral

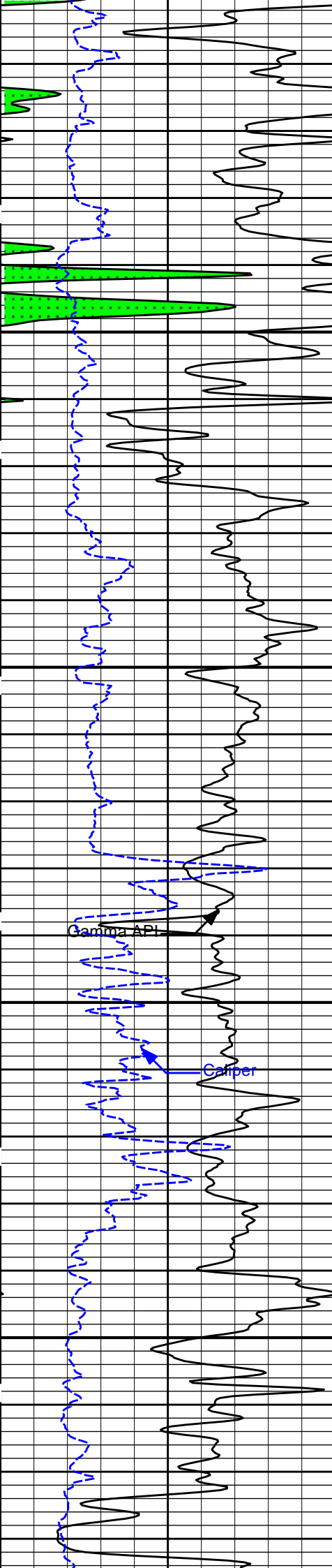


6800

6900

7000

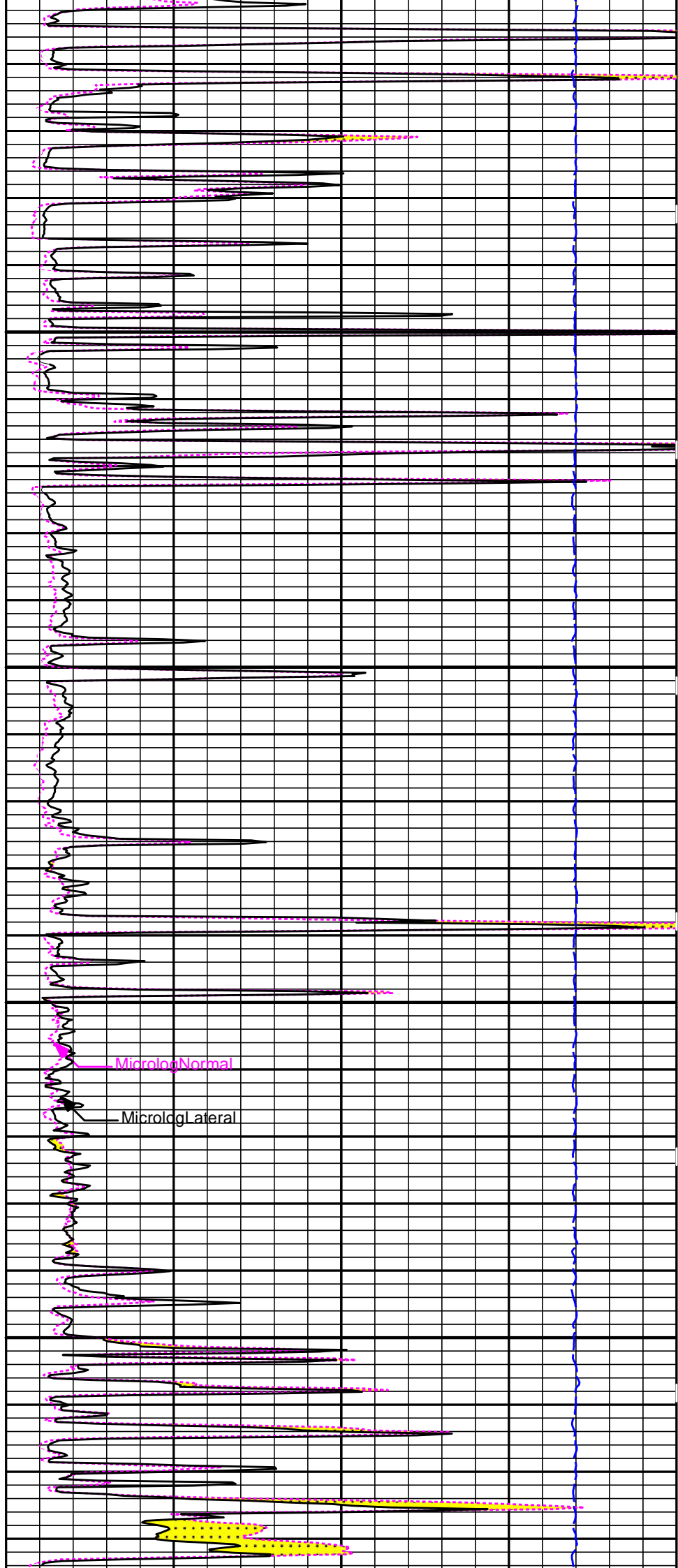




7300

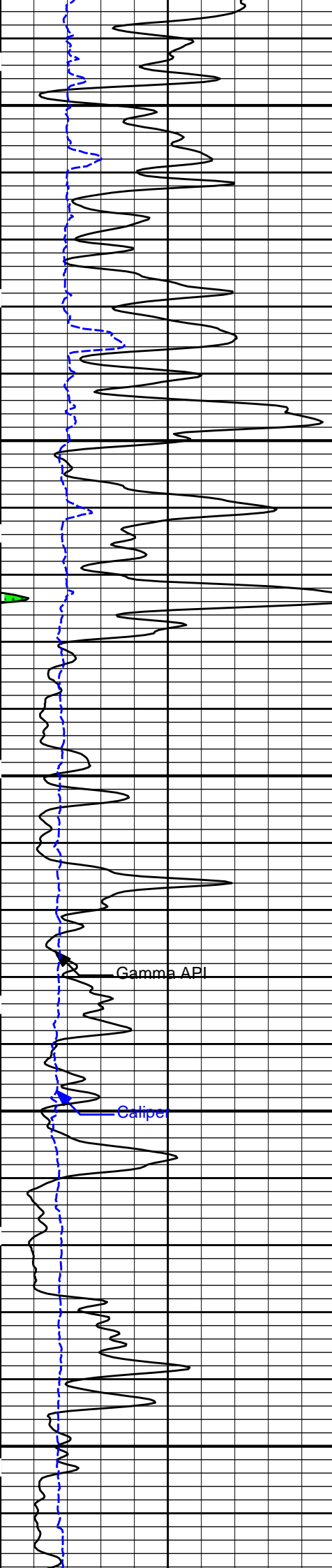
7100

7200



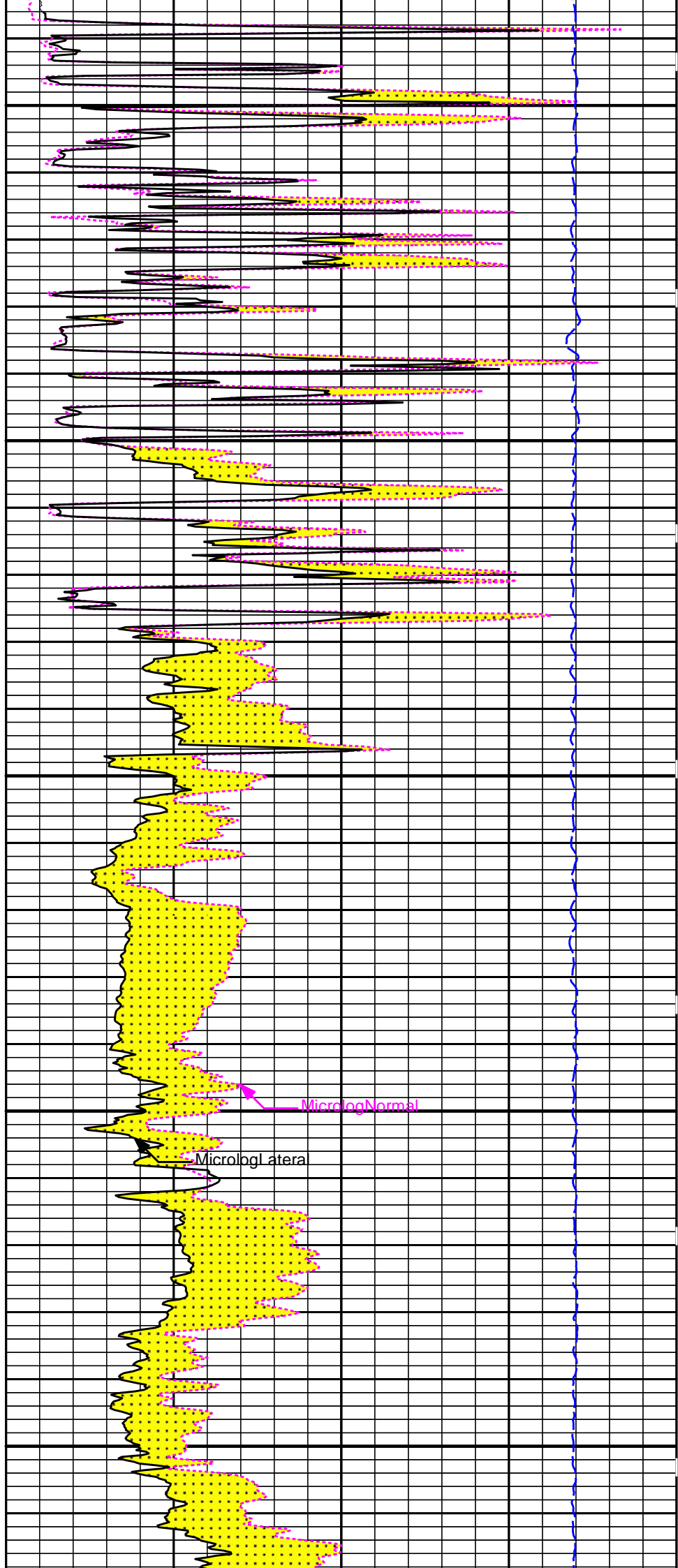
MicrologNormal

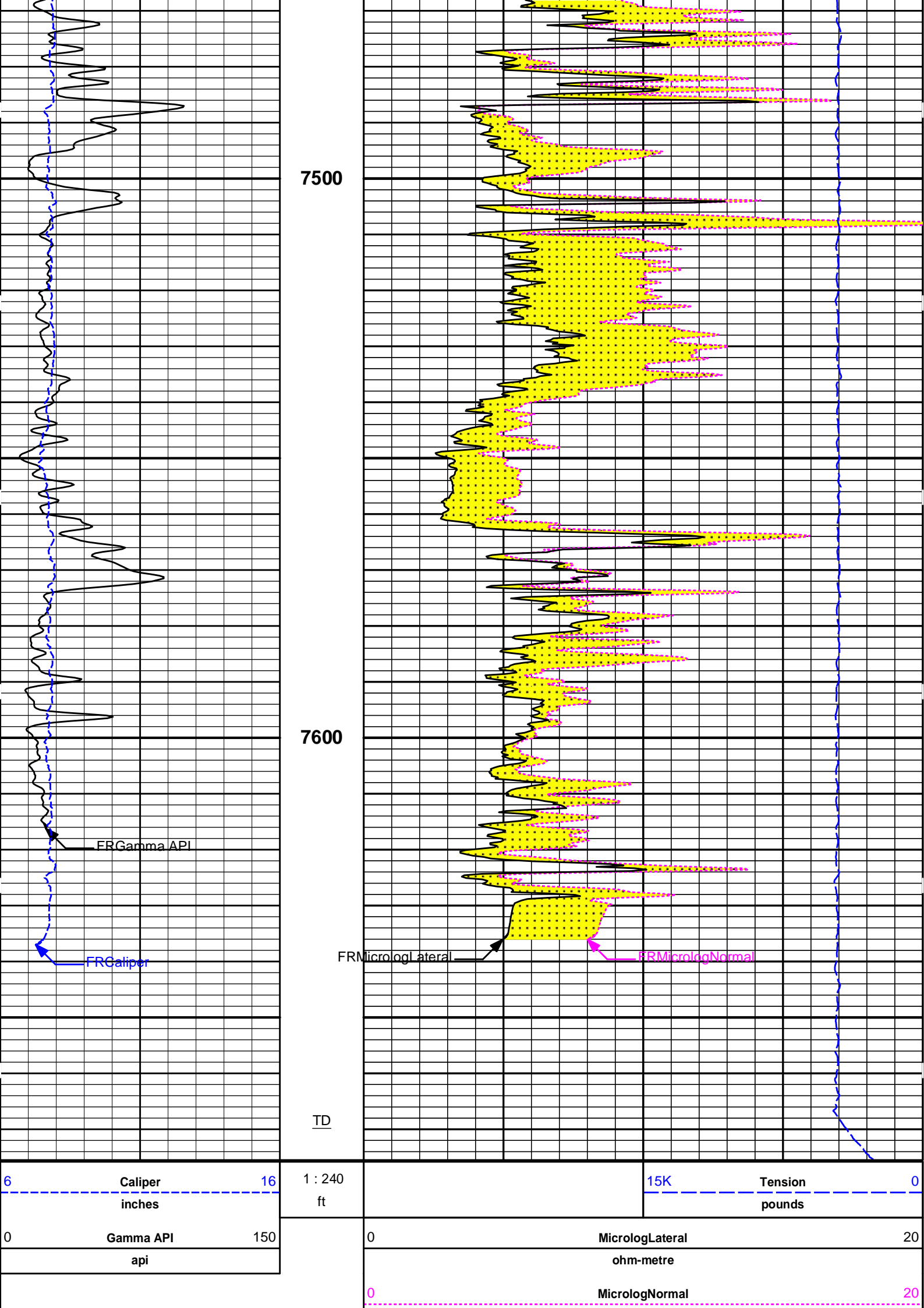
MicrologLateral



7300

7400



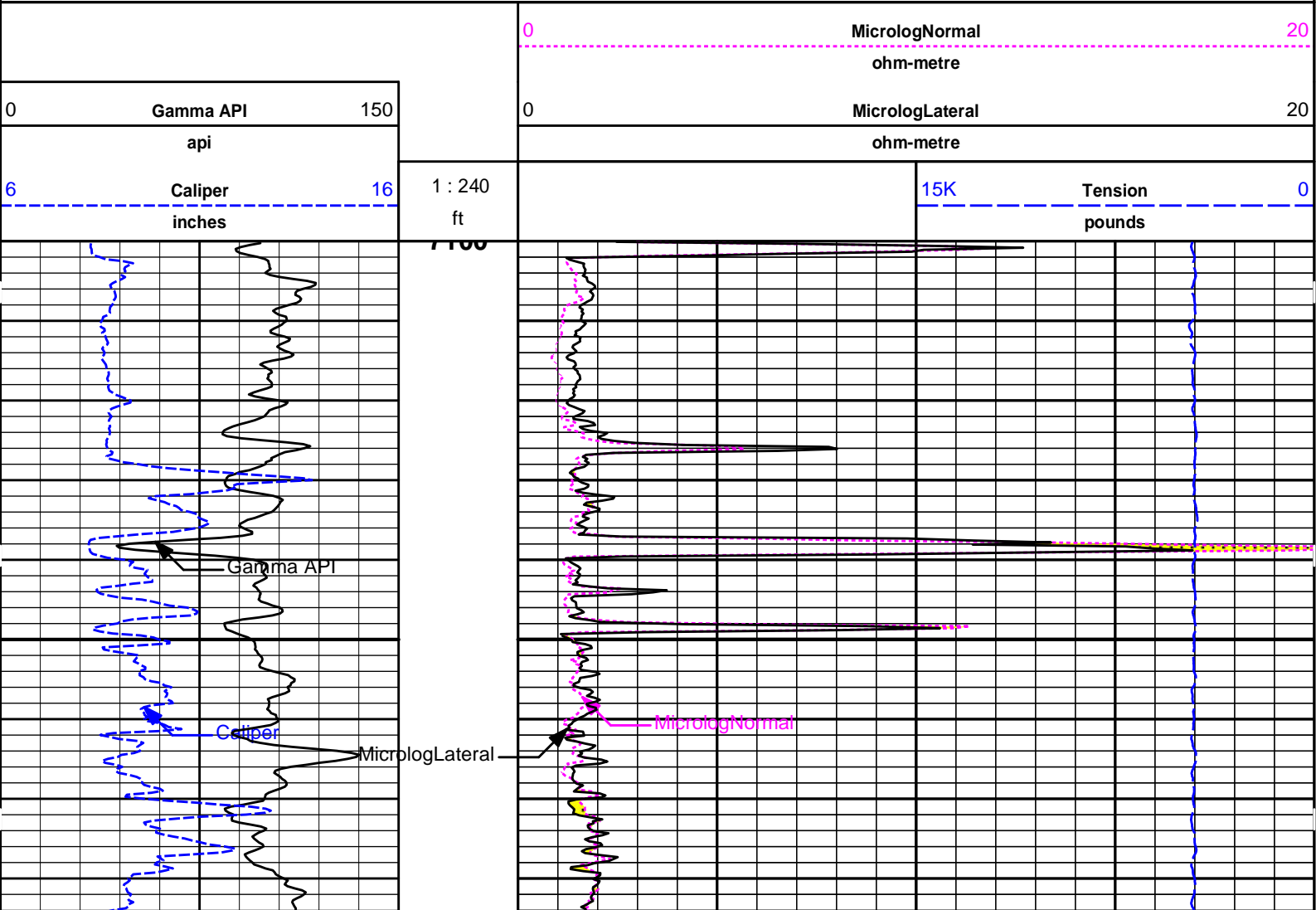


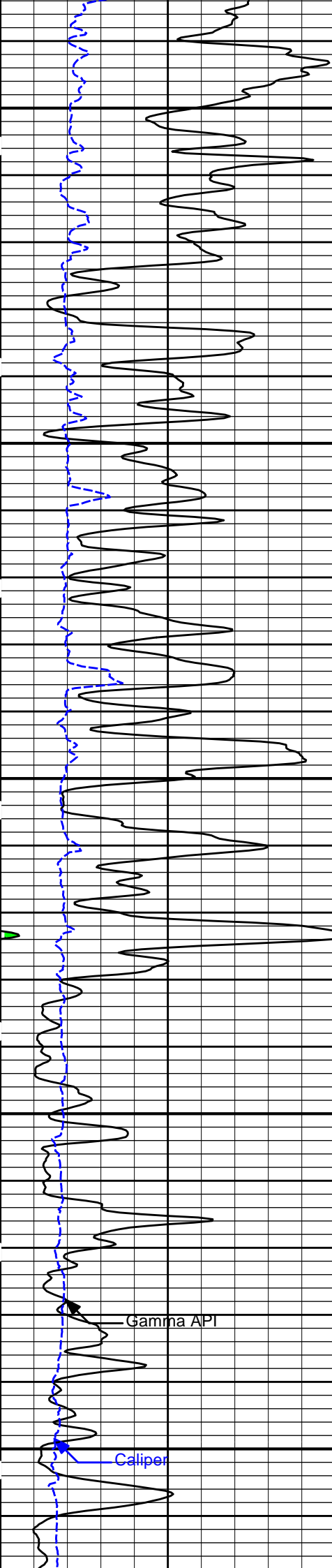
5 INCH MAIN LOG

MAIN LOG 5" PER 100'

REPEAT SECTION

REPEAT SECTION





7200

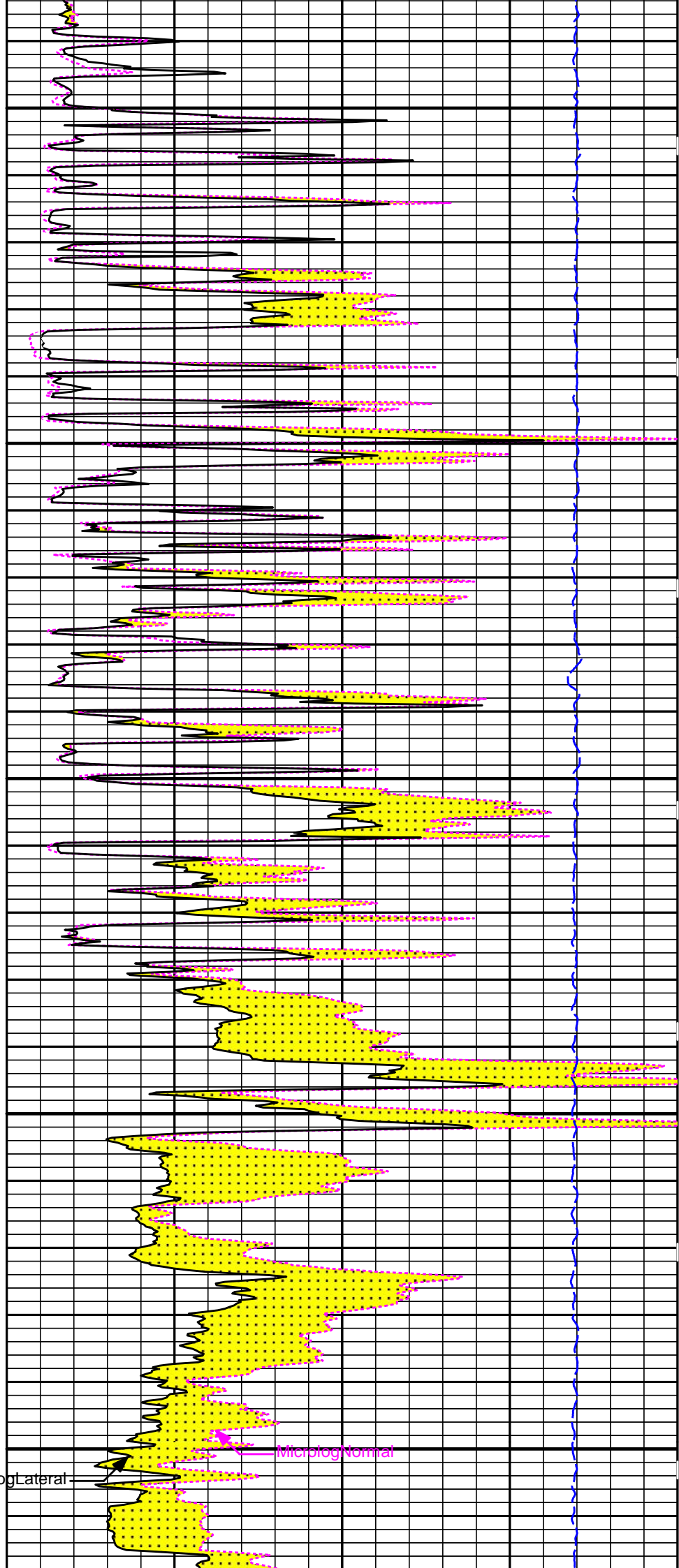
7300

7400

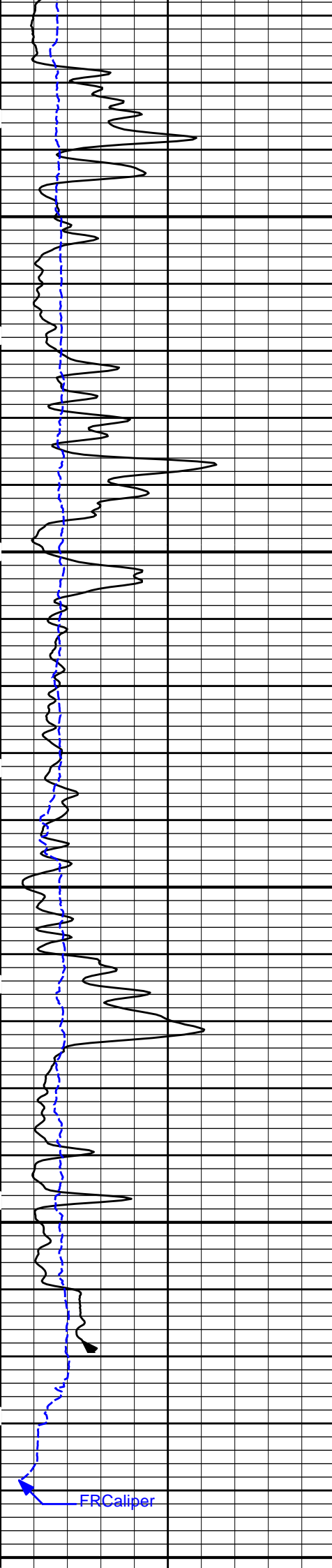
Gamma API

Caliper

MicrologLateral



MicrologNormal

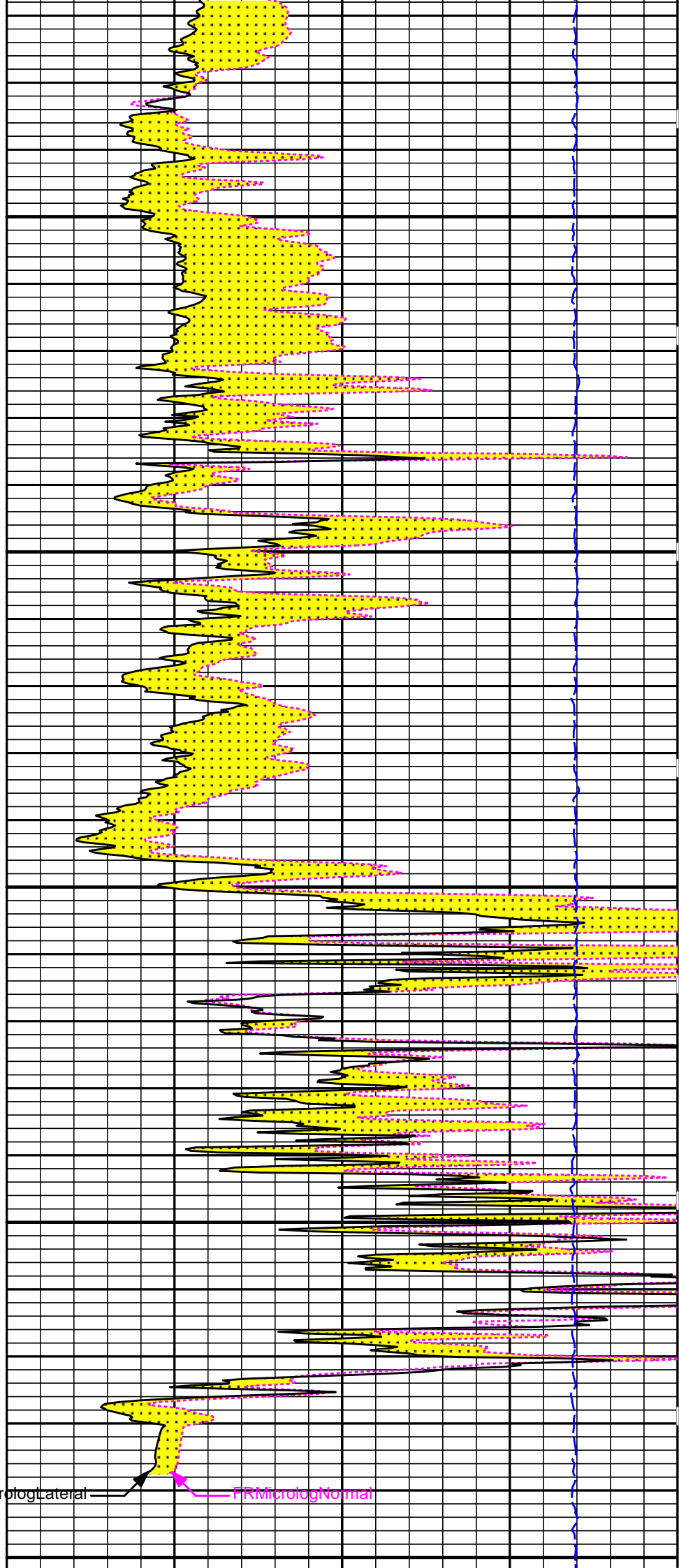


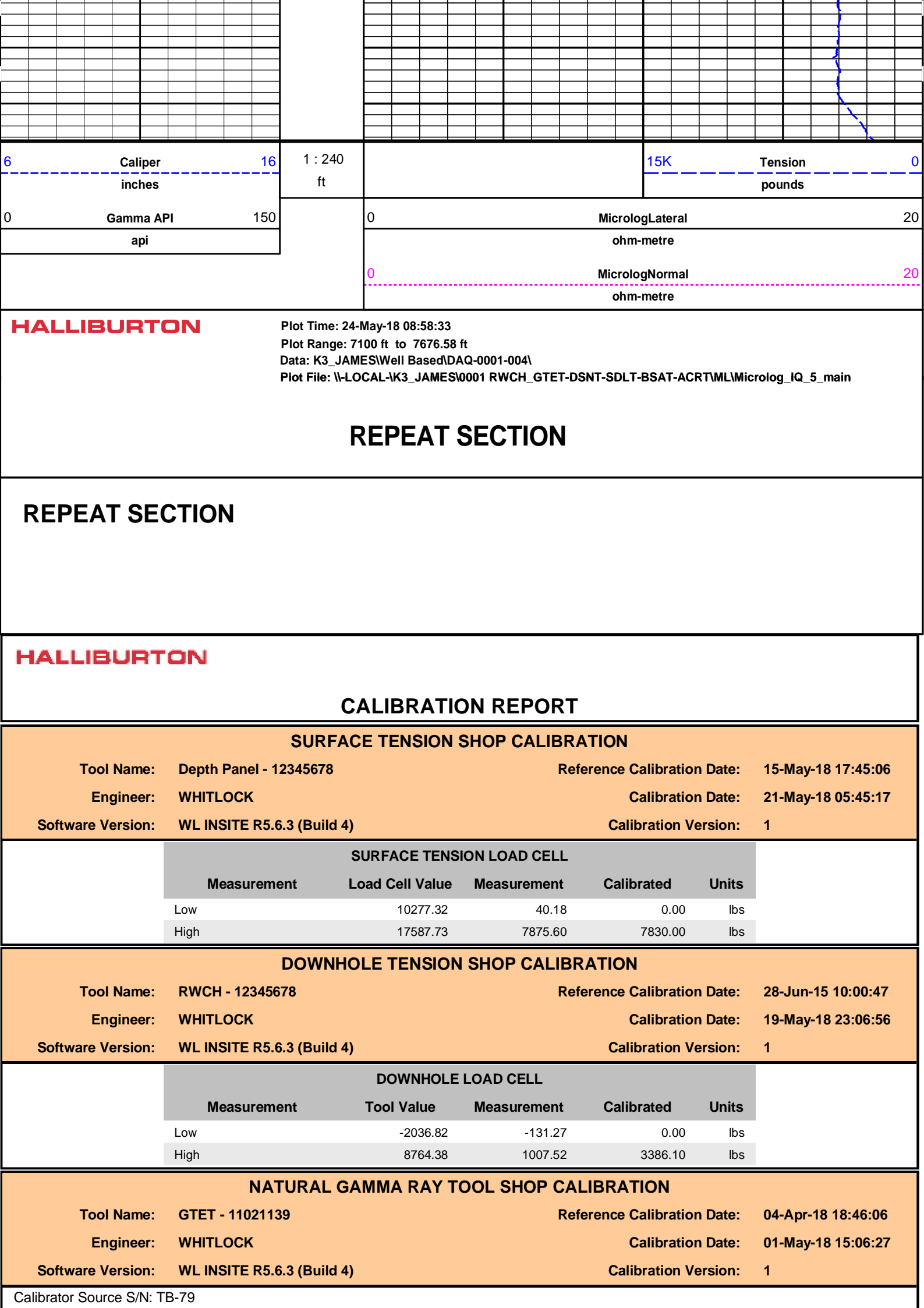
7500

7600

FRMicrologLateral

FRMicrologNormal





6	Caliper	16
	inches	
0	Gamma API	150
	api	

1 : 240
ft

15K	Tension	0
	pounds	

0	MicrologLateral	20
	ohm-metre	
0	MicrologNormal	20
	ohm-metre	

HALLIBURTON

Plot Time: 24-May-18 08:58:33

Plot Range: 7100 ft to 7676.58 ft

Data: K3_JAMES\Well Based\DAQ-0001-004\

Plot File: \\LOCAL-K3_JAMES\0001 RWCH_GTET-DSNT-SDLT-BSAT-ACRTWLMicrolog_IQ_5_main

REPEAT SECTION

REPEAT SECTION

HALLIBURTON

CALIBRATION REPORT

SURFACE TENSION SHOP CALIBRATION

Tool Name: Depth Panel - 12345678

Reference Calibration Date: 15-May-18 17:45:06

Engineer: WHITLOCK

Calibration Date: 21-May-18 05:45:17

Software Version: WL INSITE R5.6.3 (Build 4)

Calibration Version: 1

	SURFACE TENSION LOAD CELL				
	Measurement	Load Cell Value	Measurement	Calibrated	Units
	Low	10277.32	40.18	0.00	lbs
	High	17587.73	7875.60	7830.00	lbs

DOWNHOLE TENSION SHOP CALIBRATION

Tool Name: RWCH - 12345678

Reference Calibration Date: 28-Jun-15 10:00:47

Engineer: WHITLOCK

Calibration Date: 19-May-18 23:06:56

Software Version: WL INSITE R5.6.3 (Build 4)

Calibration Version: 1

	DOWNHOLE LOAD CELL				
	Measurement	Tool Value	Measurement	Calibrated	Units
	Low	-2036.82	-131.27	0.00	lbs
	High	8764.38	1007.52	3386.10	lbs

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11021139

Reference Calibration Date: 04-Apr-18 18:46:06

Engineer: WHITLOCK

Calibration Date: 01-May-18 15:06:27

Software Version: WL INSITE R5.6.3 (Build 4)

Calibration Version: 1

Calibrator API Reference:222.00 api
Equivalent Calibrator API Reference:225.9 api

Measurement	Measured	Calibrated	Units
Background	24.0	24.6	api
Background + Calibrator	244.0	250.5	api
Calibrator	220.1	225.9	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	GTET - 11021139	Reference Calibration Date:	01-May-18 15:06:27
Engineer:	WHITLOCK	Calibration Date:	18-May-18 09:25:19
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1

Calibrator Source S/N: TB-79
Calibrator API Reference:222.00 api
Equivalent Calibrator API Reference:225.9 api

Field Verification	Shop	Field	Units
Background	24.6	24.4	api
Background + Calibrator	250.5	257.8	api
Calibrator	225.9	233.4	api

Shop	Field	Difference	Tolerance
225.9	233.4	-7.5	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 11019643	Reference Calibration Date:	04-Apr-18 20:14:34
Engineer:	WHITLOCK	Calibration Date:	04-Apr-18 20:32:22
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1

Logging Source S/N: DSN-436
Tank Serial Number: EL RENO HWT
Reference value assigned to Tank: 56.100
Snow Block S/N: 12156883
Calibration Tank Water Temperature: 68 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	1.02447	1.02018	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):	0.2371	0.2358	0.0013	+/- 0.0020
Calibrated Ratio:	10.6040	10.5595	0.044	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0652	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 - 11019643	Reference Calibration Date:	04-Apr-18 20:32:22
Engineer:	WHITLOCK	Calibration Date:	18-May-18 09:37:11

Software Version: WL INSITE R5.6.3 (Build 4)		Calibration Version: 1		
Logging Source S/N: DSN-436				
Snow Block S/N: 12156883				
NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0652	0.0776	0.0124	+/- 0.0150
PASS/FAIL SUMMARY				
Block Change Check:		Passed		
Snow Block Stat Check:		Passed		
Temperature Check:		Passed		

DENSITY CALIPER SHOP CALIBRATION				
Tool Name:	SDLT - 12153526		Reference Calibration Date:	01-Jan-70 00:00:00
Engineer:	WHITLOCK		Calibration Date:	22-Apr-18 13:23:29
Software Version:	WL INSITE R5.6.3 (Build 4)		Calibration Version:	1
Host Tool Name:	DSNT - 11019643			

	CALIBRATION COEFFICIENTS			
	Measurement	Previous Value	New Value	Control Limit On New Value
	Pad Offset	-3193.91	-3193.91	-7000.00 - -1000.00
	Pad Gain	0.0003882	0.0003882	0.0002000 - 0.0006000
	Arm Offset	-1699.11	-1699.11	-5000.00 - 3000.00
	Arm Gain	0.0005132	0.0005132	0.000300 - 0.000700
	Arm Power	-0.000004611	-0.000004611	-0.000010000 - 0.000010000
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)	3.75	3.75	0.00 +/- 0.20
	RING DIAMETER:			
	Small Ring (in)	6.50	6.50	0.00 +/- 0.20
	Medium Ring (in)	8.25	8.25	0.00 +/- 0.20
	Large Ring (in)	15.00	15.00	0.00 +/- 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 - 12153526		Reference Calibration Date:	22-Apr-18 13:23:29
Engineer:	WHITLOCK		Calibration Date:	18-May-18 08:13:34
Software Version:	WL INSITE R5.6.3 (Build 4)		Calibration Version:	1

	MEASURED CALIPER VALUES			
	Measurement	Shop	Field	Change Control Limit On New Value
	Pad Extension	3.75	3.75	0.00 +/- 0.10
	Ring Diameter	8.25	8.25	0.00 +/- 0.15
	PASS/FAIL SUMMARY			

Pad Extension Check:	Passed
Diameter Check:	Passed

BSAT FIELD CASING CHECK

Tool Name: BSAT - 10939049

Calibration Date: 30-Mar-17 10:01:32

Engineer: HARRIS

Software Version: WL INSITE R5.0.5 (Build 8)

Calibration Version: 1

Pre-Log Check	Check Depth	Shop	Field	Difference	Tolerance	Units
Delta-T Compensated	147.01	57.00	56.56	0.4400	1.00	uspf

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name: ACRt Sonde - 11038385

Reference Calibration Date: 12-Sep-17 13:58:19

Engineer: JORGE ORLANDO PEREZ

Calibration Date: 26-Mar-18 10:21:56

Software Version: WL INSITE R5.6.3 (Build 4)

Calibration Version: 1

Host Tool Name: ACRt Instrument - 11055059

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0500	1.05	0.95	1.0229	1.05	0.95	1.0048	1.05
A2 (50")	0.95	1.0500	1.05	0.95	1.0261	1.05	0.95	1.0131	1.05
A3 (29")	0.95	1.0472	1.05	0.95	1.0179	1.05	0.95	1.0025	1.05
A4 (17")	0.95	1.0401	1.05	0.95	1.0093	1.05	0.95	0.9956	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0012	1.05	0.95	0.9839	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9883	1.05	0.95	0.9739	1.05

SONDE OFFSET

Subarray	R12KHz	R36KHz	R72KHz
	(mmho/m)	(mmho/m)	(mmho/m)
A1 (80")	1.490	-4.736	-6.418
A2 (50")	-0.183	-4.133	-5.504
A3 (29")	-12.250	-3.671	-3.367
A4 (17")	-109.670	-32.737	-24.656
A5 (10")	N/A	-82.133	-35.124
A6 (6")	N/A	347.353	195.364

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.86	1.3
36K	1.0	1.34	2.0
72K	1.0	1.61	2.0

R-MUD VERIFICATION

Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.00	1.05

PASS/FAIL SUMMARY

GAIN RANGE CHK

PASS

SONDE OFFSET CHK

PASS

TOOL OK TO LOG

QUALITY CHECK SHOP CALIBRATION

Tool Name: ACRt Sonde - 11038385

Reference Calibration Date: 12-Sep-17 14:00:57

Engineer: WHITLOCK

Calibration Date: 15-Dec-17 10:50:30

Software Version: WL INSITE R5.6.3 (Build 4)

Calibration Version: 1

Host Tool Name: ACRt Instrument - 11055059

STANDARD DEVIATIONS

Tool Name: Microlog Pad - 12153526		Reference Calibration Date: 01-May-18 15:03:00	
Engineer: WHITLOCK		Calibration Date: 01-May-18 15:06:12	
Software Version: WL INSITE R5.6.3 (Build 4)		Calibration Version: 1	
Host Tool Name: DSNT - 11019643			

	CALIBRATION COEFFICIENT SUMMARY					
	Measurement	Micro Log Normal		Micro Log Lateral		Units
		Measured	Calibrated	Measured	Calibrated	
	Tool Zero	-0.06	-0.06	0.00	-0.00	ohmm
	Calibration Point #1	0.00	0.00	0.00	0.00	ohmm
	Calibration Point #2	20.02	20.00	20.02	20.00	ohmm
	Internal Reference	19.92	19.91	19.99	19.97	ohmm
	Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units
	Tool Zero		3.81		1.61	V
	Calibration Point #1		20.59		1.69	V
	Calibration Point #2		5315.12		6955.08	V
	Internal Reference		5290.49		6946.14	V

MICRO LOG FIELD CHECK					
Tool Name: Microlog Pad - 12153526		Reference Calibration Date: 01-May-18 15:06:12			
Engineer: WHITLOCK		Calibration Date: 18-May-18 09:22:07			
Software Version: WL INSITE R5.6.3 (Build 4)		Calibration Version: 1			

	Measurement	Micro Log Normal		Micro Log Lateral		Units
		Shop	Field	Shop	Field	
	Tool Zero	-0.06	-0.08	-0.00	-0.00	ohmm
	Internal Reference	19.91	19.89	19.97	19.95	ohmm
	Summary					
	Signal	Shop	Field	Difference	Tolerance	
	Microlog Normal	19.91	19.89	0.02	+/- 0.80	
	Microlog Lateral	19.97	19.95	0.02	+/- 0.80	

SPECTRAL DENSITY SHOP CALIBRATION					
Tool Name: SDLT Pad - 10865881		Reference Calibration Date: 31-Mar-18 12:17:01			
Engineer: MICHAEL RICHTER		Calibration Date: 31-Mar-18 12:34:56			
Software Version: WL INSITE R5.6.3 (Build 4)		Calibration Version: 1			

Logging Source S/N: 5155GW

Aluminum Block S/N: EL RENO

Magnesium Block S/N: EL RENO

Density: 2.581g/cc

Density: 1.687g/cc

Pe: 3.170

Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0004	1.0422	0.90 - 1.10
Near Dens Gain	0.9786	0.9976	0.90 - 1.10
Near Peak Gain	0.9873	1.0060	0.90 - 1.10
Near Lith Gain	1.0231	1.0469	0.90 - 1.10
Far Bar Gain	1.0042	1.0067	0.90 - 1.10
Far Dens Gain	0.9904	0.9957	0.90 - 1.10
Far Peak Gain	0.9886	0.9924	0.90 - 1.10
Far Lith Gain	0.9669	0.9738	0.90 - 1.10
Near Bar Offset	0.4379	0.0618	NONE
Near Dens Offset	0.5880	0.4209	NONE
Near Peak Offset	0.5244	0.3712	NONE

Near Lith Offset	0.2356	0.0435	NONE
Far Bar Offset	0.2451	0.2219	NONE
Far Dens Offset	0.3471	0.2970	NONE
Far Peak Offset	0.3507	0.3169	NONE
Far Lith Offset	0.4844	0.4310	NONE
Near Bar Background	926.31	924.87	700 - 1450
Near Dens Background	309.66	308.97	230 - 480
Near Peak Background	133.93	133.56	100 - 210
Near Lith Background	162.42	164.06	125 - 260
Far Bar Background	597.87	600.80	450 - 900
Far Dens Background	235.10	233.03	175 - 345
Far Peak Background	91.27	91.89	70 - 140
Far Lith Background	95.76	95.30	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.686	1.687	0.001	+/- 0.015
Pe	2.563	2.553	-0.010	+/- 0.150
ALUMINUM				
Density (g/cc)	2.580	2.581	0.001	+/- 0.01500
Pe	3.154	3.125	-0.029	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0006	+/- 0.0110	0.0019	+/- 0.0140
Magnesium Block	-0.0013	+/- 0.0110	-0.0010	+/- 0.0140
Aluminum Block	0.0001	+/- 0.0110	0.0011	+/- 0.0140
Resolution	9.64	6.00 - 11.50	9.00	6.00 - 11.50
Internal Verifier(B+D+P+L)	1531	1200 - 2700	1021	800 - 1700

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 Pad - 10865881	Reference Calibration Date:	31-Mar-18 12:34:56
Engineer:	WHITLOCK	Calibration Date:	18-May-18 09:27:42
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1

Pad Temperature: 82.3 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1531.458	1531.182	-0.276	15.758
Far (B+D+P+L) cps	1021.016	1020.580	-0.436	17.050
Near Resolution	9.64	9.75	0.110	0.50

Far Resolution		9.00	9.03	0.030	1.00	
PASS/FAIL SUMMARY						
Bkg Quality Check:				Passed		
Bkg Resolution Check:				Passed		
Bkg Verification Check:				Passed		
CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
Depth Panel-12345678						
Tension Zero	0.00	-----	-----	0.00	-----	lbs
Tension Cal	7830.00	-----	-----	0.00	-----	lbs
RWCH-12345678						
DH Tension Zero	0.00	-----	-----	0.00	-----	lbs
DH Tension Cal	3386.10	-----	-----	0.00	-----	lbs
GTET-11021139						
Gamma Ray Calibrator	225.9	233.4	-----	-7.5	+/- 9.00	api
DSNT-11019643						
Snow-Block Porosity	0.0652	0.0776	-----	-0.0124	+/- 0.0150	decp
SDLT-12153526						
Pad Extension	3.75	3.75	-----	0.00	+/-0.10	in
Ring Diameter	8.25	8.25	-----	0.00	+/-0.15	in
ACRt Sonde-11038385						
Mud Cell	1.00	-----	-----	0	-----	ohm-m
Microlog Pad-12153526						
MicroLog Normal	19.91	19.89	-----	0.02	+/-0.80	ohmm
MicroLog Lateral	19.97	19.95	-----	0.02	+/-0.80	ohmm
SDLT Pad-10865881						
Near(B+D+P+L)	1531.458	1531.182	-----	0.276	+/-15.758	cps
Far(B+D+P+L)	1021.016	1020.580	-----	0.436	+/-17.050	cps
Data: K3_JAMES\0001 RWCH_GTET-DSNT-SDLT-BSAT-ACRT\IDLE				Date: 23-May-18 12:59:27		

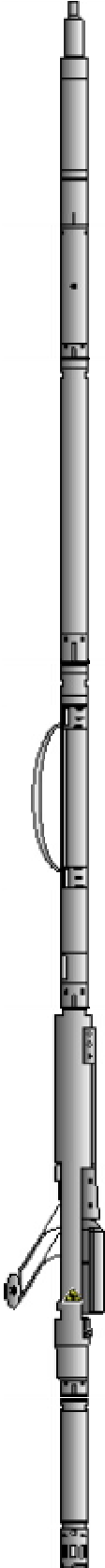
<div>HALLIBURTON</div> <div>PARAMETERS REPORT</div>						
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units	
TOP-----						
	SHARED	BS	Bit Size	7.875	in	
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No		
	SHARED	MDBS	Mud Base	Water		
	SHARED	MDWT	Borehole Fluid Weight	8.900	ppg	
	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	2.250	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	CSTR	Compressive Strength	1000.00	psia	
	SHARED	ST	Surface Temperature	75.0	degF	
	SHARED	TD	Total Well Depth	7670.00	ft	
	SHARED	BHT	Bottom Hole Temperature	152.0	degF	
	SHARED	SVTM	Navigation and Survey Master Tool	NONE		

	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	CBM Temperature Master Tool	GTET	
	SHARED	SOCI	Source of Casing Information	Parameters	
	SHARED	MSAL	Water-base mud filtrate salinity	0.00	ppm
	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	
	Rwa / CrossPlot	ROIN	Input for RO Calculation	Rwa	
	GTET	GROK	Process Gamma Ray?	Yes	
	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	DNTT	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	UCLA	Classic Neutron Parameter utilized?	No	
	DSNT	BHSM	Borehole Size Source Tool	SDLT	
	SDLT	CLOK	Process Caliper Outputs?	Yes	
	Microlog Pad	MLOK	Process MicroLog 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	
	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 Pore Fluid	189.00	uspf
	BSAT	DTMT	Delta -T Matrix Type	Limestone 47.6	
	BSAT	DTSH	Delta -T Shale	100.00	uspf
	BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
	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	RMAX	Maximum Resistivity for MAP	200.00	ohmm
	ACRt Sonde	THQY	Threshold Quality	0.50	

ACRt Sonde	THQ	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
ACRt Sonde	BHSM	Borehole Size Source Tool	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	
BOTTOM-----				
Data: K3_JAMES\0001 RWCH_GTET-DSNT-SDLT-BSAT-ACRT\IDLE			Date: 23-May-18 13:04:29	

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TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						74.37 ft
RWCH-12345678 135.00 lbs		Ø 2.310 in →		← Fishing Neck @ 73.49 ft		
		Ø 3.625 in →		← Load Cell @ 70.68 ft ← BH Temperature @ 70.12 ft	6.25 ft	
	Weak Point 10000 lbs- 12345678 0.01 lbs	Ø 0.010 in* →				68.12 ft
SP Sub-10904995 60.00 lbs		Ø 3.625 in →		← SP @ 66.34 ft	3.74 ft	
				← Z-Accelerometer @ 63.93 ft		64.38 ft
GTET-11021139 165.00 lbs		Ø 3.625 in →			8.52 ft	
				← GammaRay @ 58.32 ft		55.86 ft
	DSN Decentralizer- 11660709 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →			9.69 ft	
DSNT-11019643 174.00 lbs				← DSN Far @ 48.92 ft ← DSN Near @ 48.17 ft		46.17 ft
	SDLT Pad-10865881 65.00 lbs Microlog Pad-12153526 8.00 lbs RAM-Cs137-00005155 1.00 lbs	Ø 4.500 in → Ø 4.500 in* → Ø 4.750 in* → Ø 0.800 in* →		← Microlog @ 38.36 ft ← SDL Caliper @ 38.17 ft ← SDL @ 38.16 ft	10.81 ft	
						35.36 ft

BSAT-10939049
300.00 lbs

Ø 3.625 in →

Receiver Array @ 26.84 ft
Sonic Receivers @ 26.84 ft

15.77 ft

19.58 ft

ACRt Instrument-
11055059
50.00 lbs

Ø 3.625 in →

5.03 ft

14.55 ft

← Mud Resistivity @ 13.19 ft

ACRt Sonde-
11038385
200.00 lbs

Ø 3.625 in →

14.22 ft

← ACRt @ 9.21 ft

Bull Nose-12345678
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)
RWCH	Releasable Wireline Cable Head		12345678	135.00	6.25	68.12	300.00
WP10K	Weak Point 10000 lbs		12345678	0.01	0.01	* 68.92	300.00
SP	SP Sub		10904995	60.00	3.74	64.38	300.00
GTET	Gamma Telemetry Tool		11021139	165.00	8.52	55.86	60.00
DSNT	Dual Spaced Neutron		11019643	174.00	9.69	46.17	60.00
DCNT	DSN Decentralizer		11660709	6.60	5.13	* 49.50	300.00
SDLT	Spectral Density Tool		12153526	360.00	10.81	35.36	60.00
SDLP	Density Insite Pad		10865881	65.00	2.55	* 37.57	60.00
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137		00005155	1.00	0.80	* 37.80	300.00
MICP	Microlog Pad		12153526	8.00	1.00	* 37.86	60.00
BSAT	Borehole Sonic Array Tool		10939049	300.00	15.77	19.58	60.00
ACRt	Array Compensated True Resistivity Instrument Section		11055059	50.00	5.03	14.55	120.00
ACRt	Array Compensated True Resistivity Sonde Section		11038385	200.00	14.22	0.33	120.00
BLNS	Bull Nose		12345678	5.00	0.33	0.00	300.00
Total				1,529.61	74.37		

* Not included in Total Length and Length Accumulation.

Data: K3_JAMES\0001 RWCH_GTET-DSNT-SDLT-BSAT-ACRTIDLE

Date: 23-May-18 13:03:53