

HALLIBURTON

MICRO LOG

COMPANY		OSAGE RESOURCES LLC			
WELL		OSAGE 3314 13-09 SWD			
FIELD		MEDICINE LODGE BOGGS			
COUNTY		BARBER			
STATE		KANSAS			
Permanent Datum Log measured from Drilling measured from	GL KB KB	Sect. 13 Twp. 33S Rge. 14W	Elev. 1875.0 ft 17.0 ft above perm. Datum G.L.	Elev.: K.B. D.F. G.L.	1892.0 ft 1890.0 ft 1875.0 ft
Date	30-Aug-12				
Run No.	ONE				
Depth - Driller	5832.00 ft				
Depth - Logger	5787.0 ft				
Bottom - Logged Interval	5717.0 ft				
Top - Logged Interval	204.0 ft				
Casing - Driller	13.375 in @ 205.0 ft				
Casing - Logger	204.0 ft				
Bit Size	8.750 in		12.250 in @ 1200.00 ft		
Type Fluid in Hole	WATER BASED MUD				
Density	9.3 ppq		55.00 s/qt		
PH	10.50 pH		9.6 cp/m		
Source of Sample	FLOW LINE				
Rm @ Meas. Temperature	0.550 ohmm @ 75.00 degF		@		@
Rmf @ Meas. Temperature	0.45 ohmm @ 75.00 degF		@		@
Rmc @ Meas. Temperature	0.650 ohmm @ 75.00 degF		@		@
Source Rmf	MEASURED		MEASURED		
Rm @ BHT	0.33 ohmm @ 129.0 degF		@		@
Time Since Circulation	8.0 hr				
Time on Bottom	31-Aug-12 00:37				
Max. Rec. Temperature	129.0 degF @ 5787.0 ft		@		@
Equipment	10546696		LIBERAL		
Recorded By	T. HYDE				
Witnessed By	J. DALE				

Fold here

Service Ticket No.: 9785632				API Serial No.: 15-007-23917-00-00				PGM Version: WL INSITE R3.6.0 (Build 3)											
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	MICRO	RUBBER	ADJ.	N/A									
Rmc @ Meas. Temp.		@		@			M489												
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.	11048627			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			

[illegible]**HALLIBURTON**

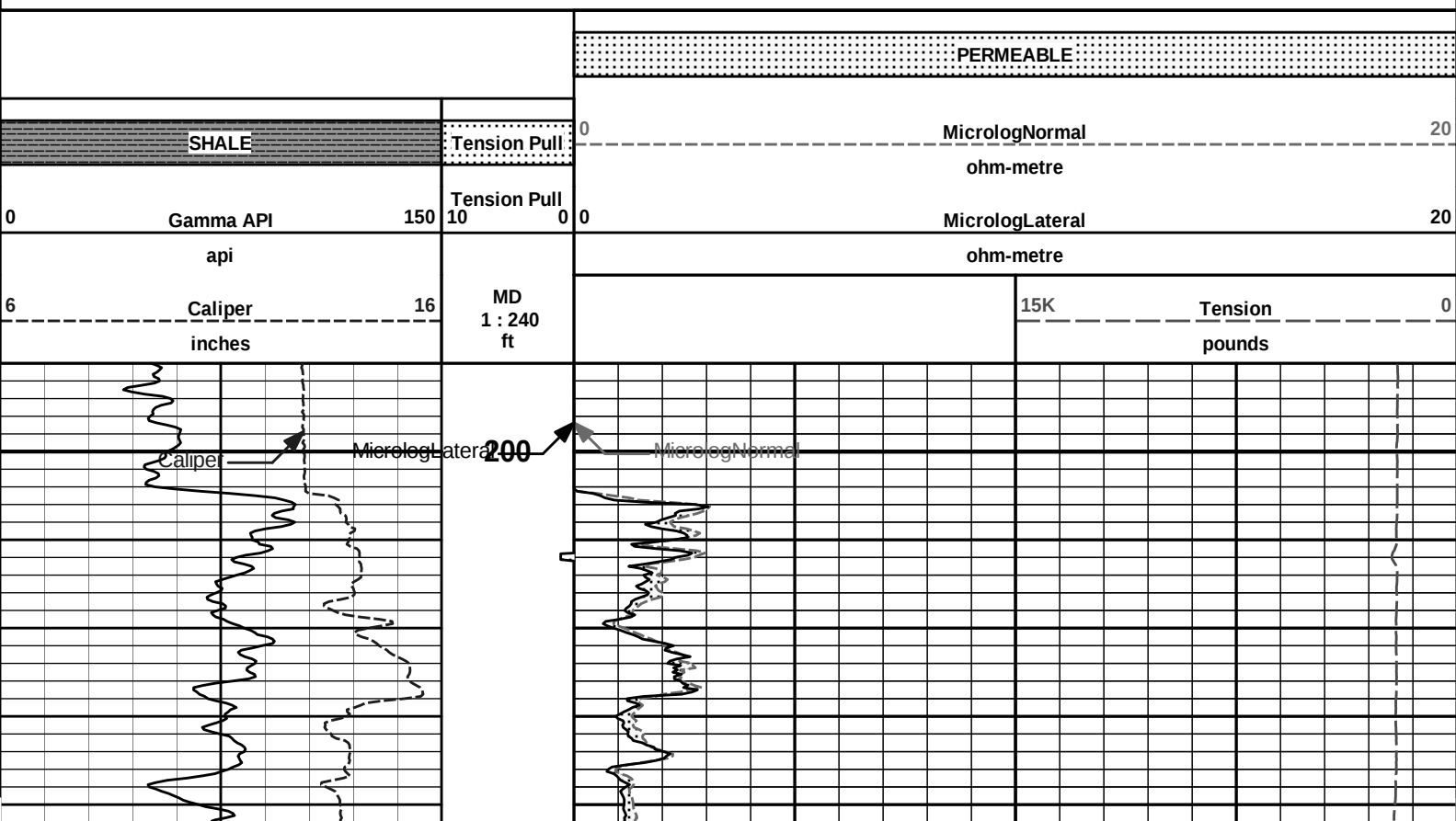
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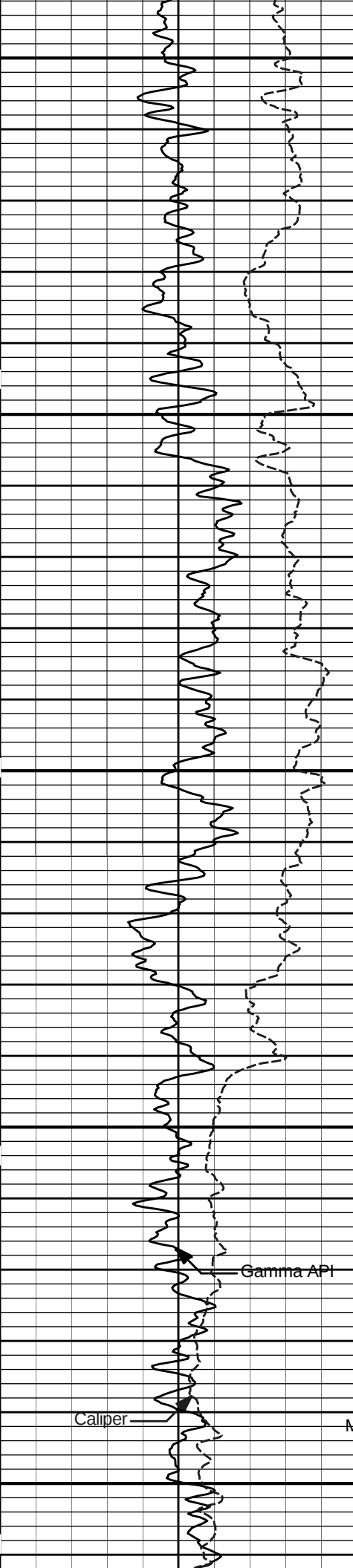
Plot Range: 190 ft to 5787.25 ft

Data: OSAGE_3314_13_0\Well Based\DAQ-0001-006\

Plot File: \\-LOCAL-\\OSAGE_3314_13_0\\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CH\\MICRO\\Microlog_IQ_5_main_lib

5 INCH MAIN LOG





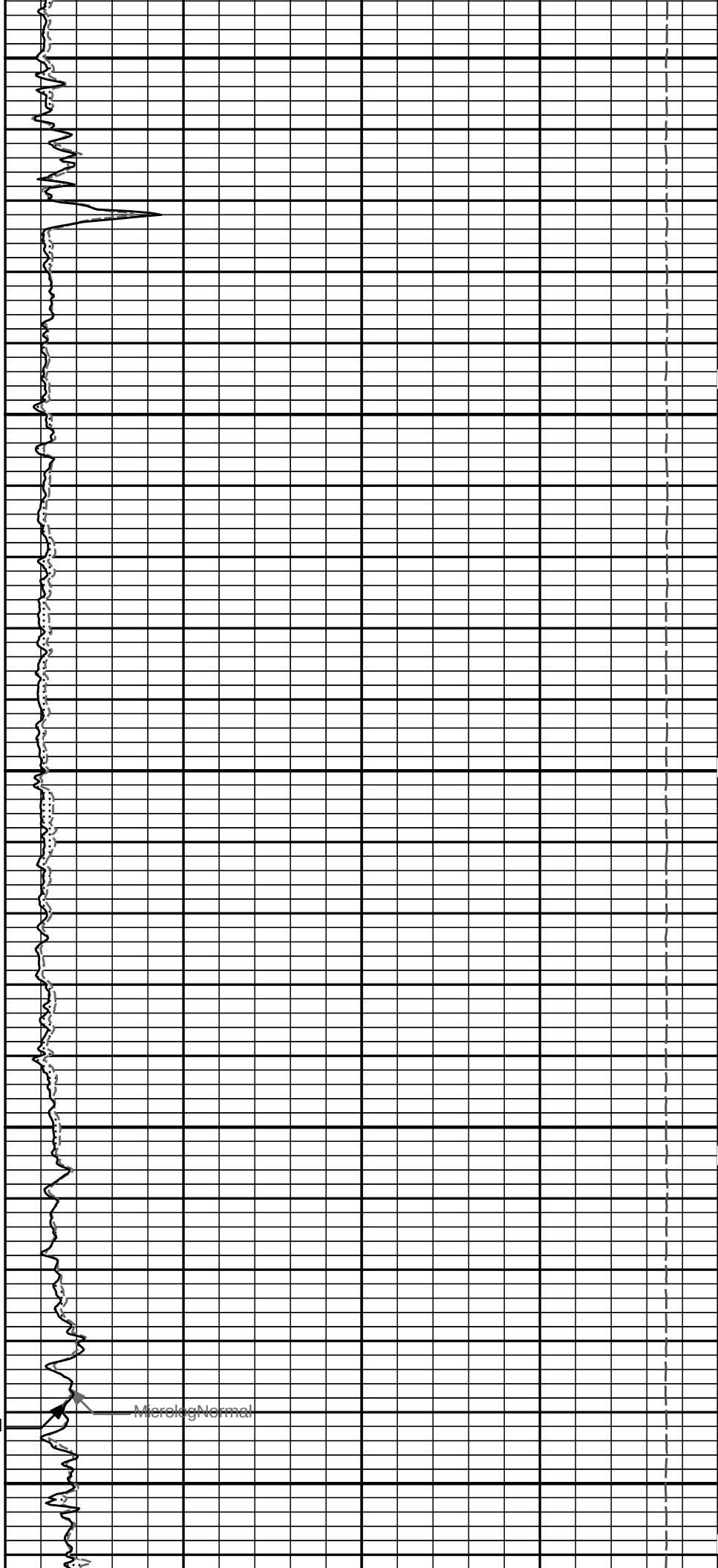
300

400

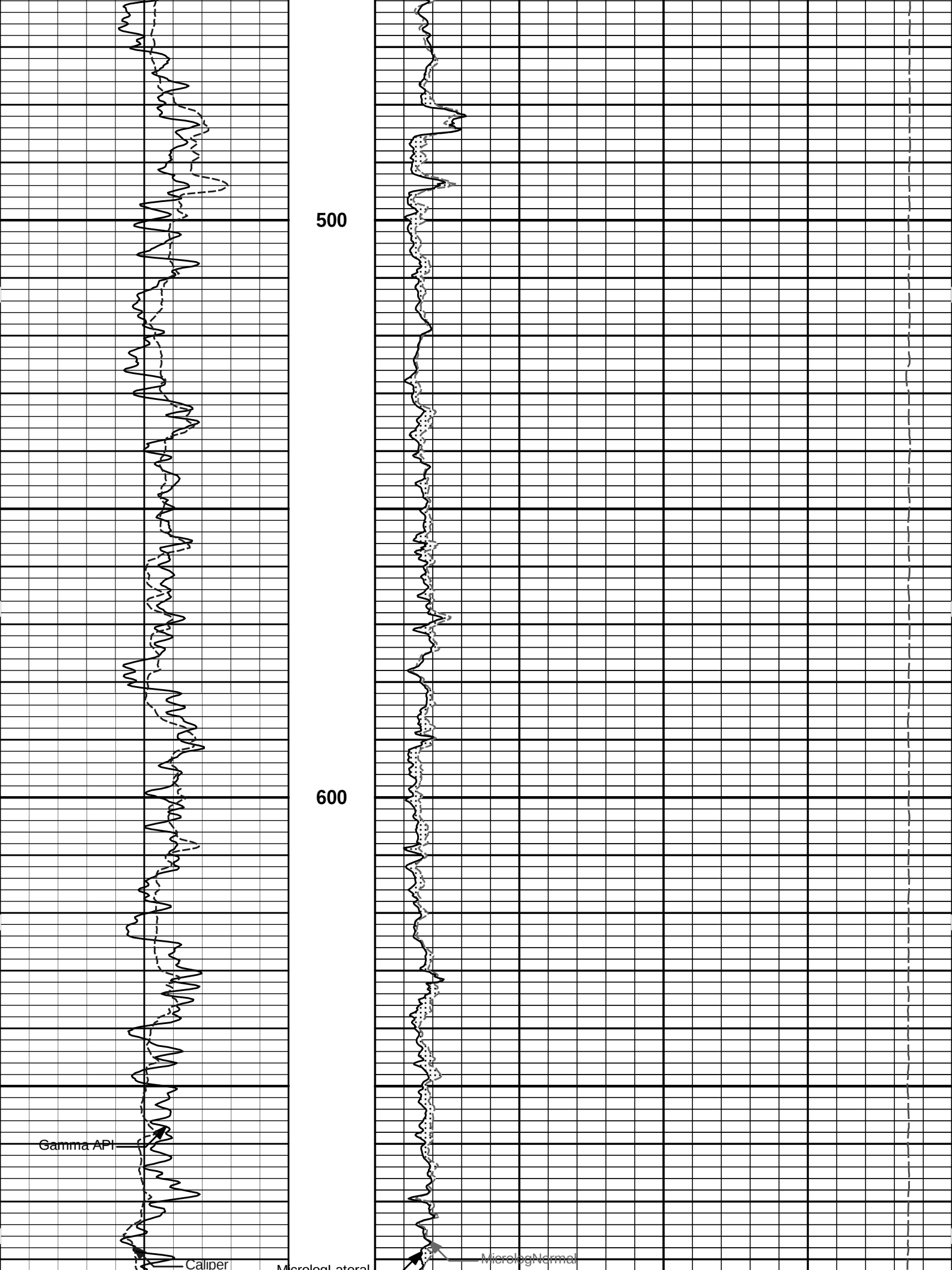
Caliper

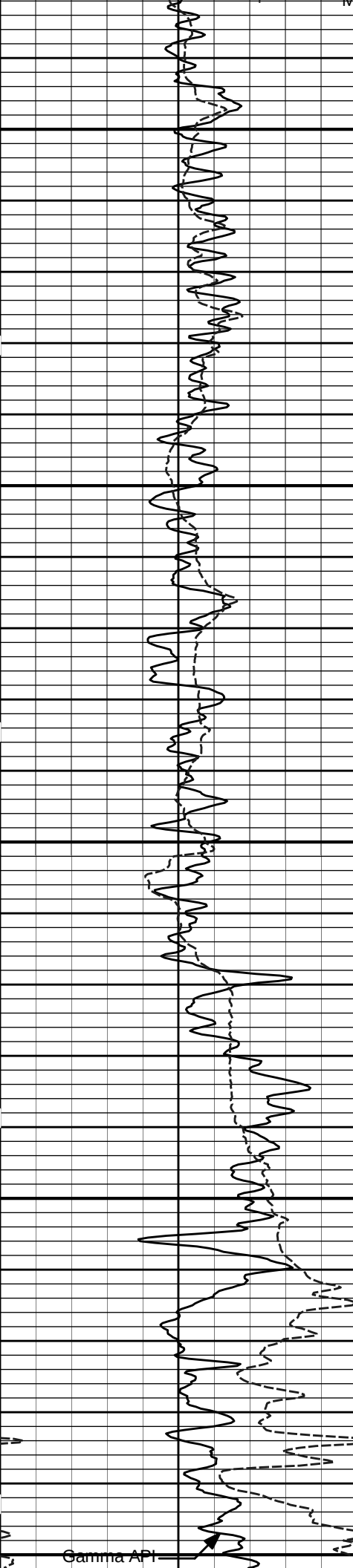
Gamma API

MicrologLateral



MicrologNormal

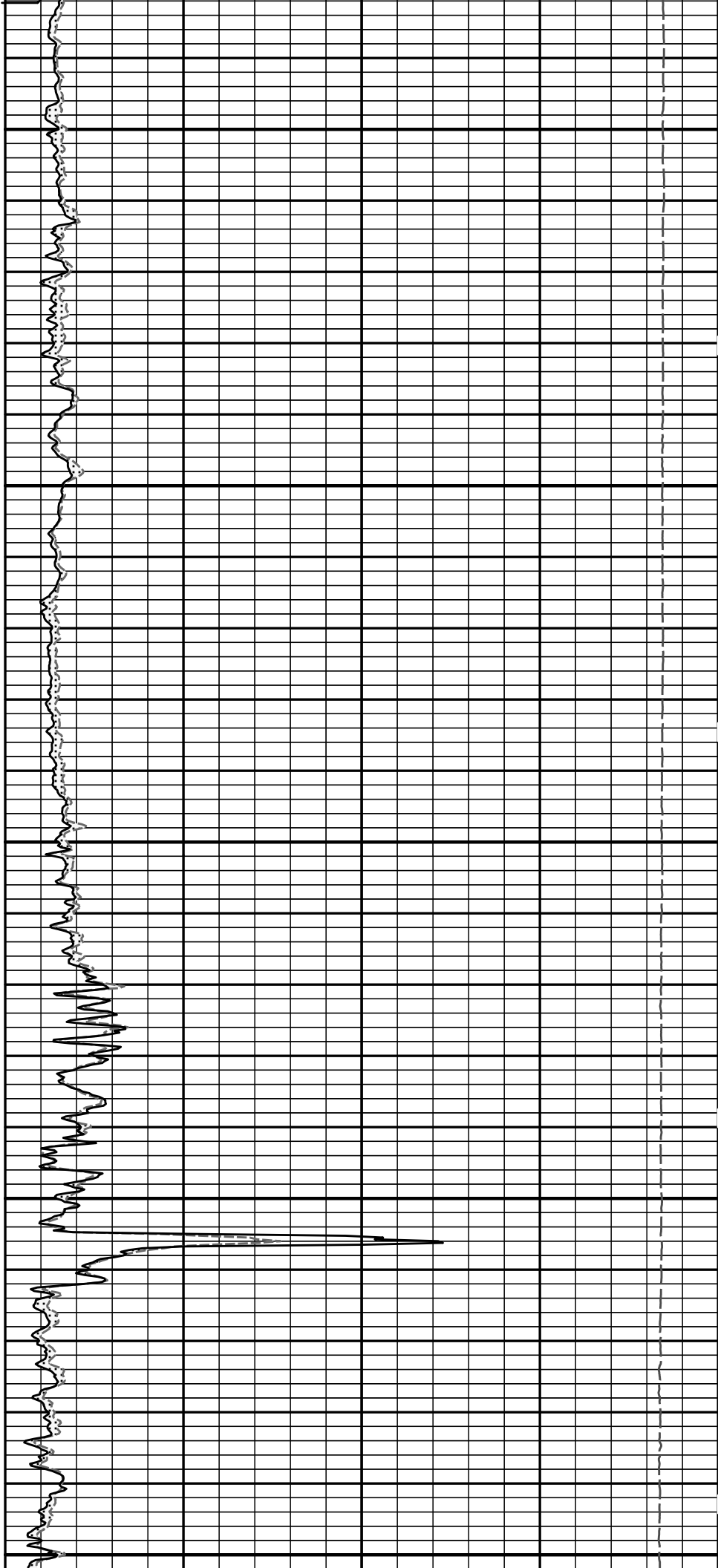


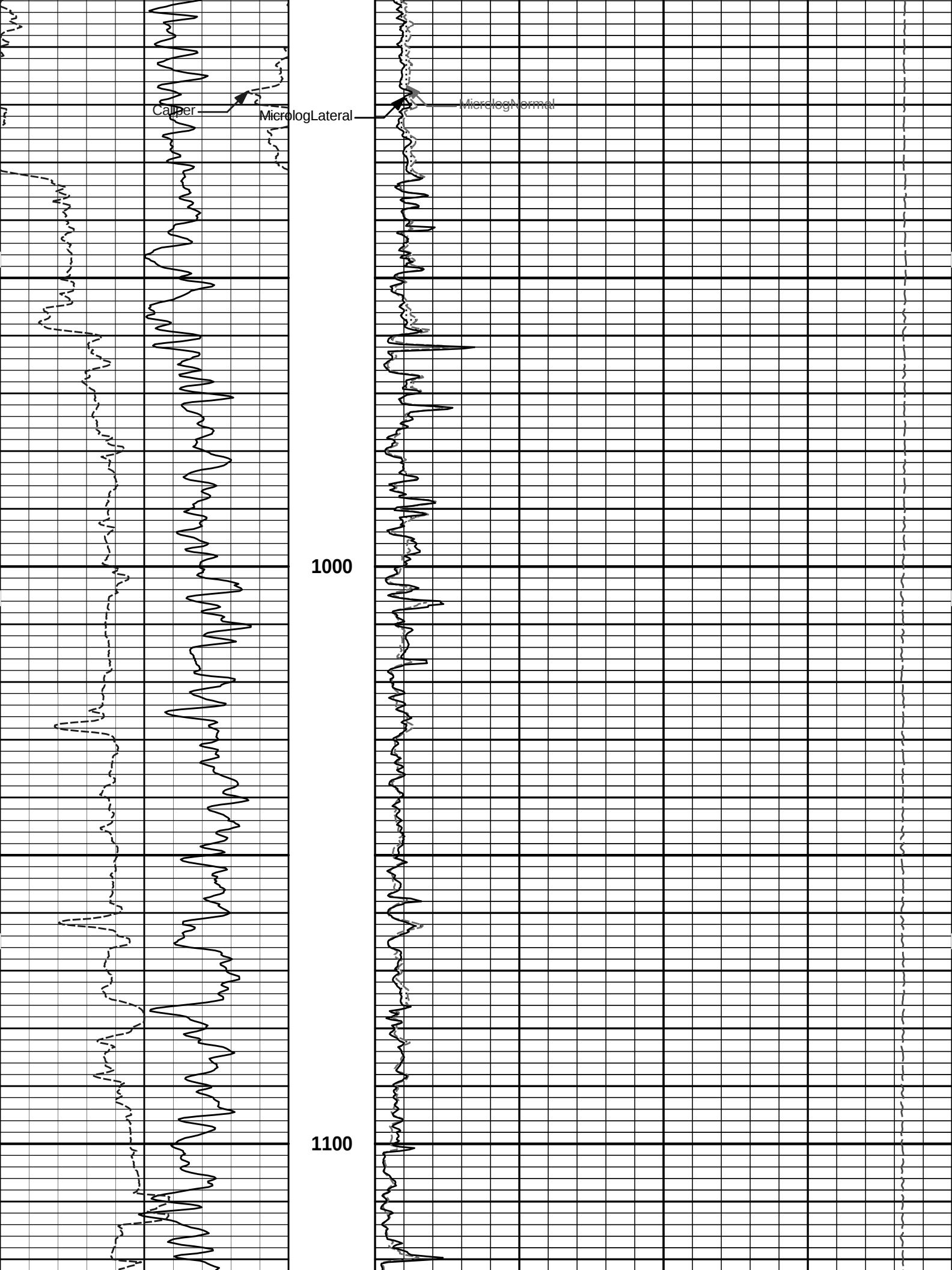


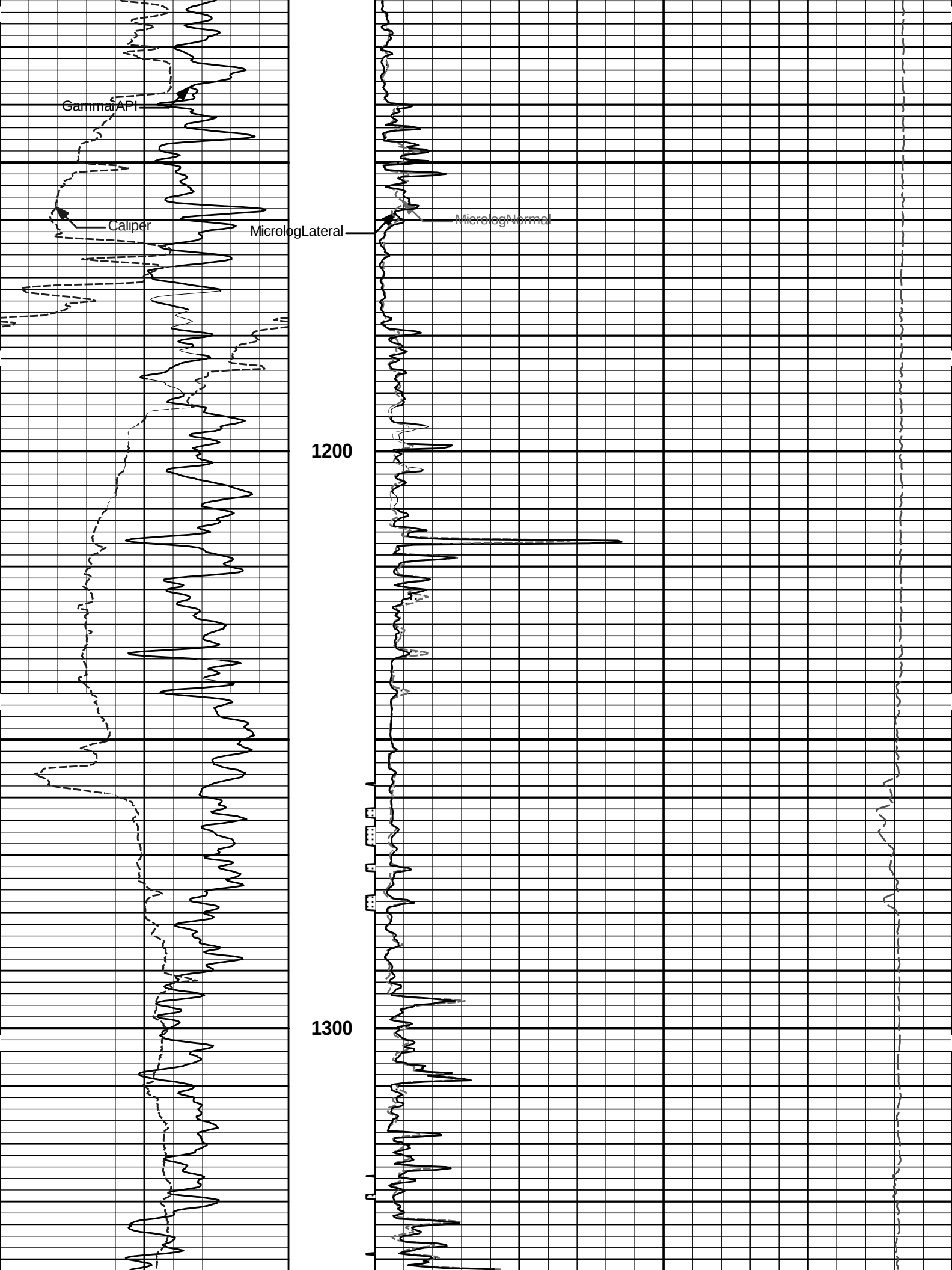
700

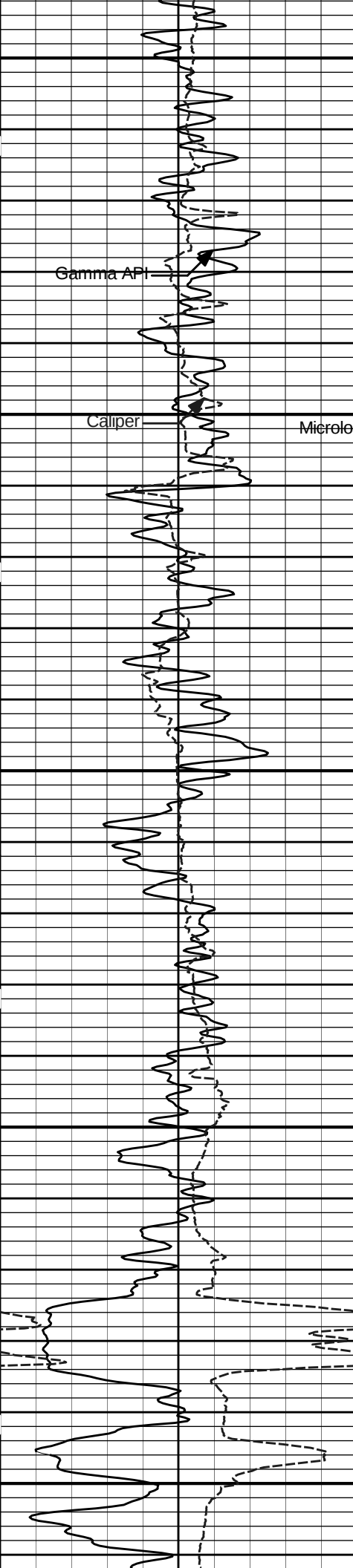
800

900



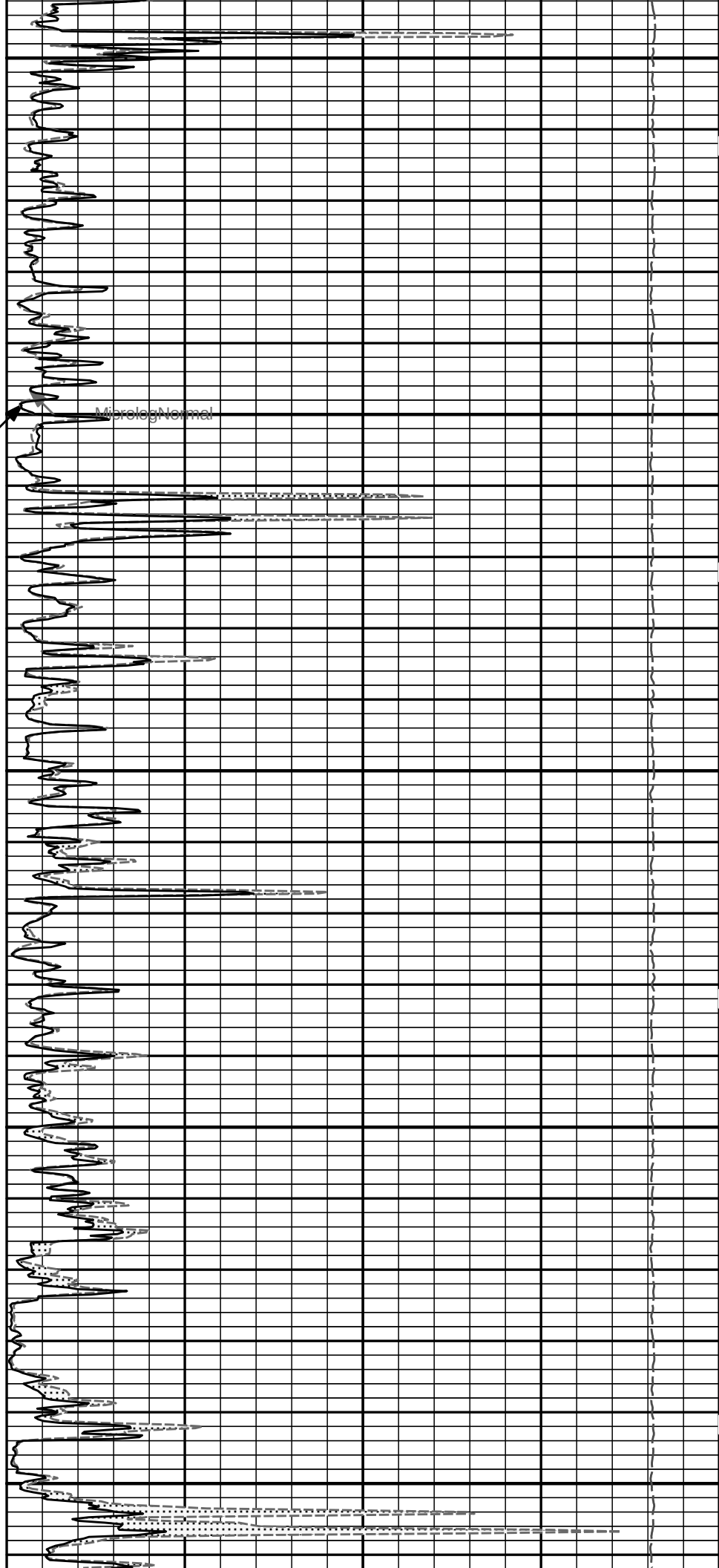


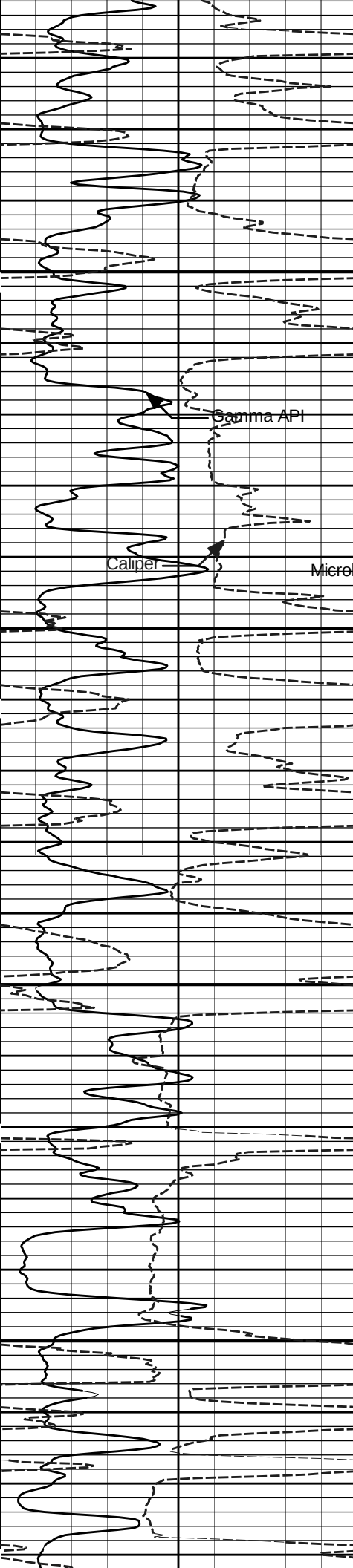




1400

1500





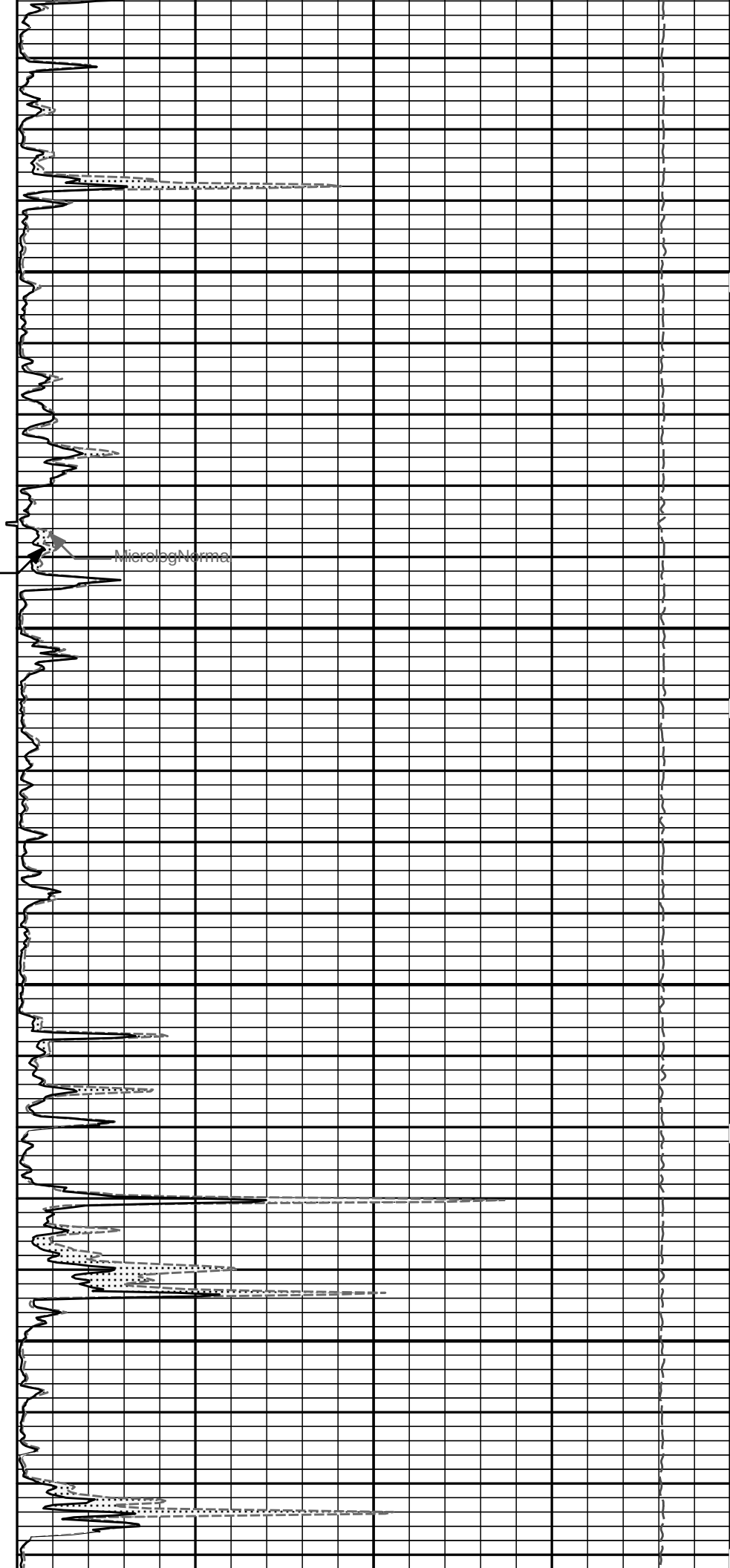
1600

Gamma API

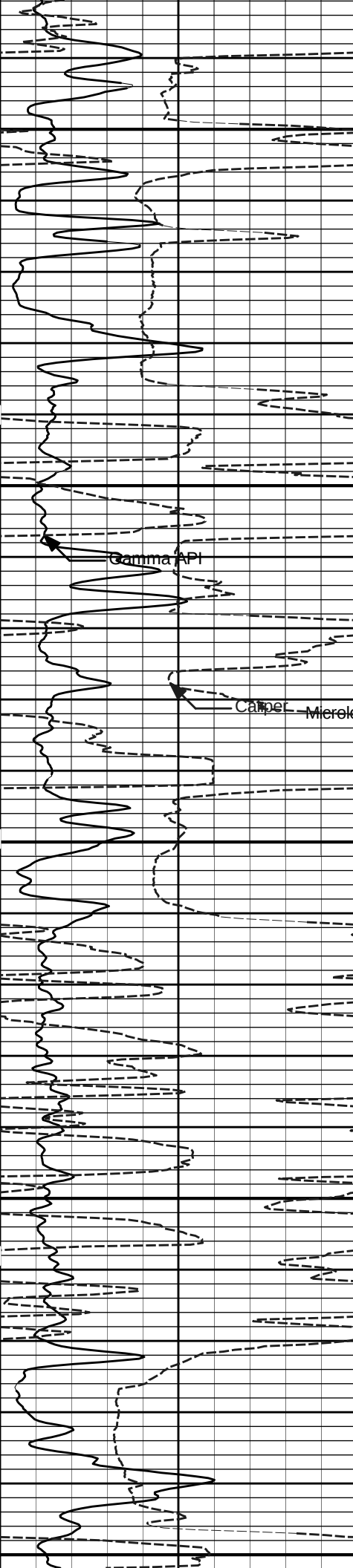
Caliper

Microlog Lateral

1700



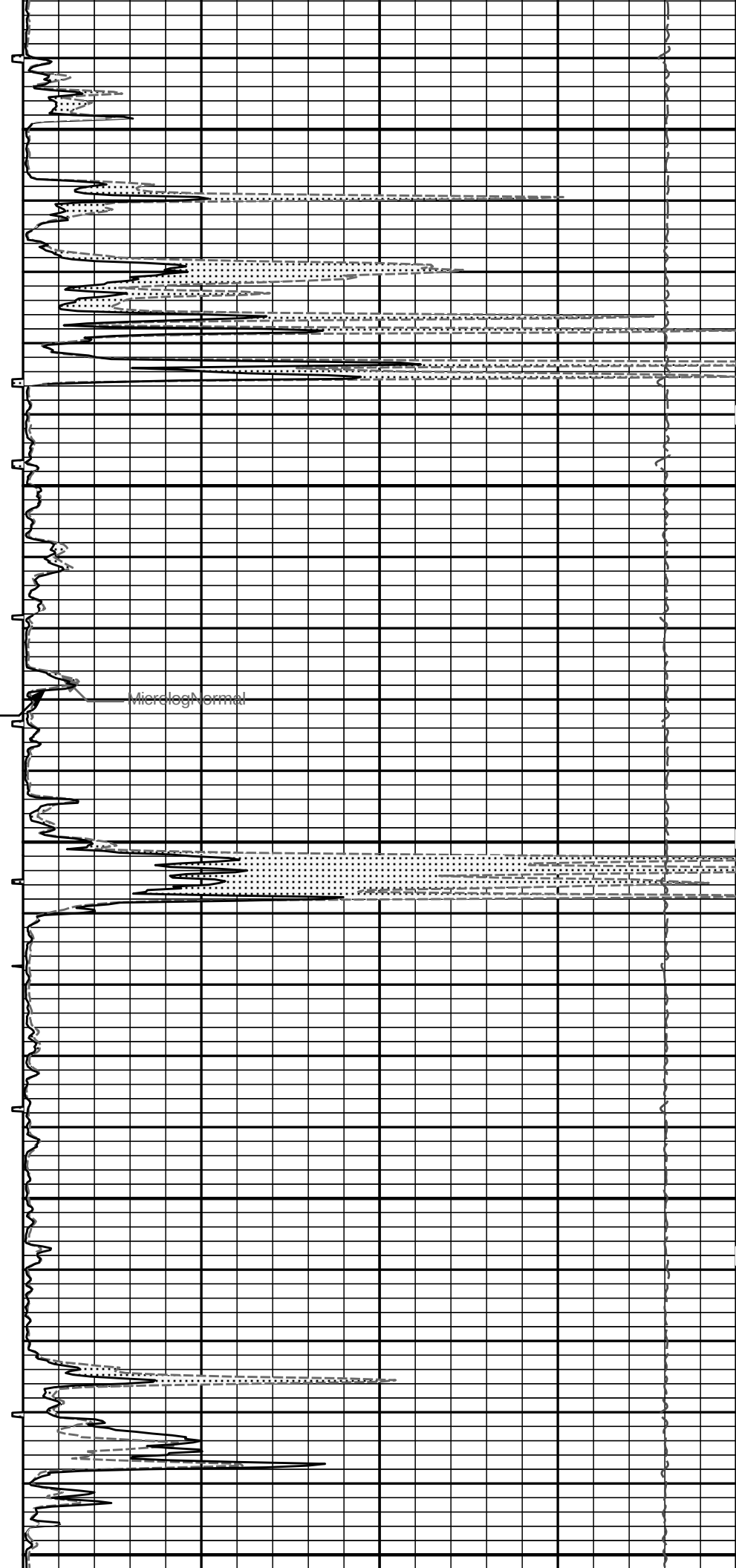
Microlog Normalized



1800

1900

2000

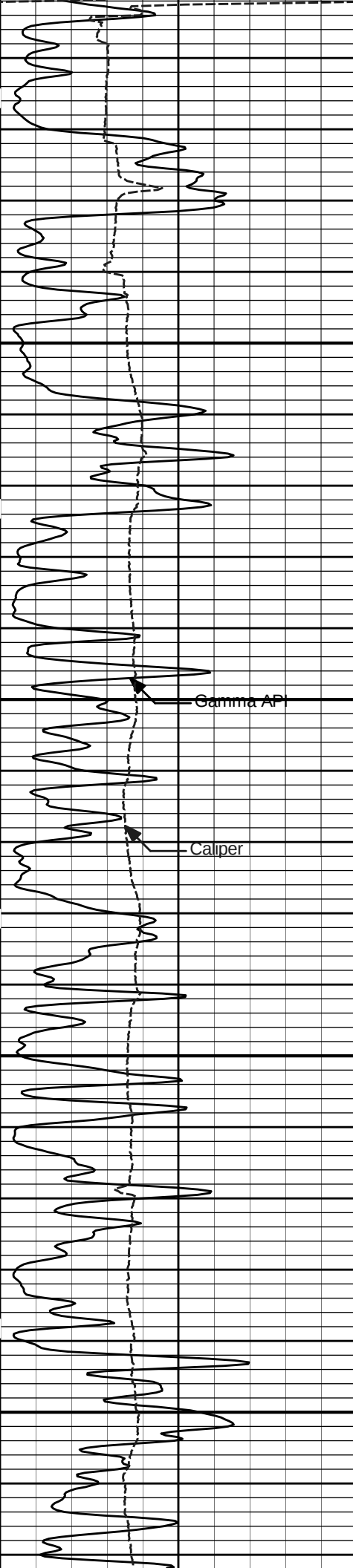


Gamma API

Caliper

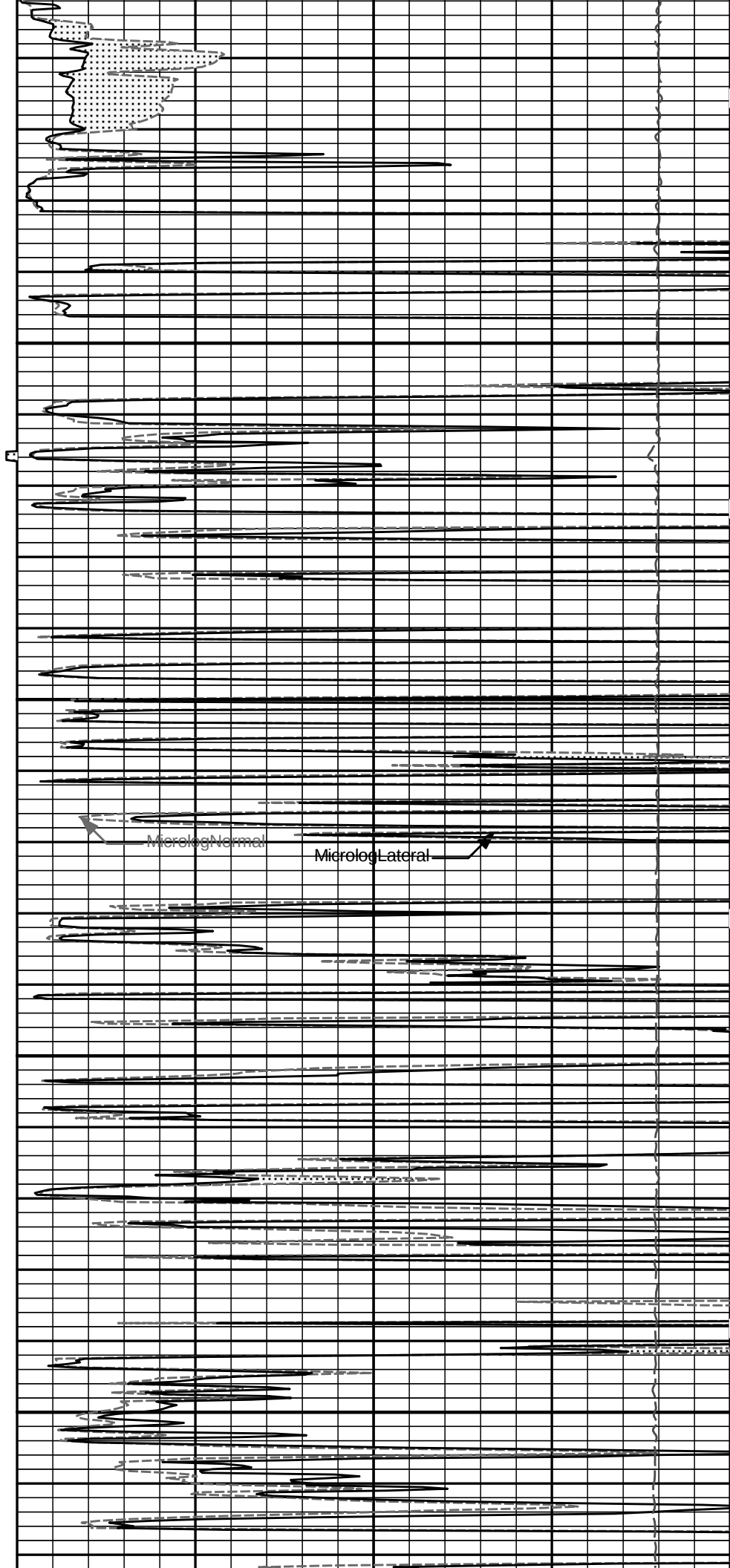
Microlog Lateral

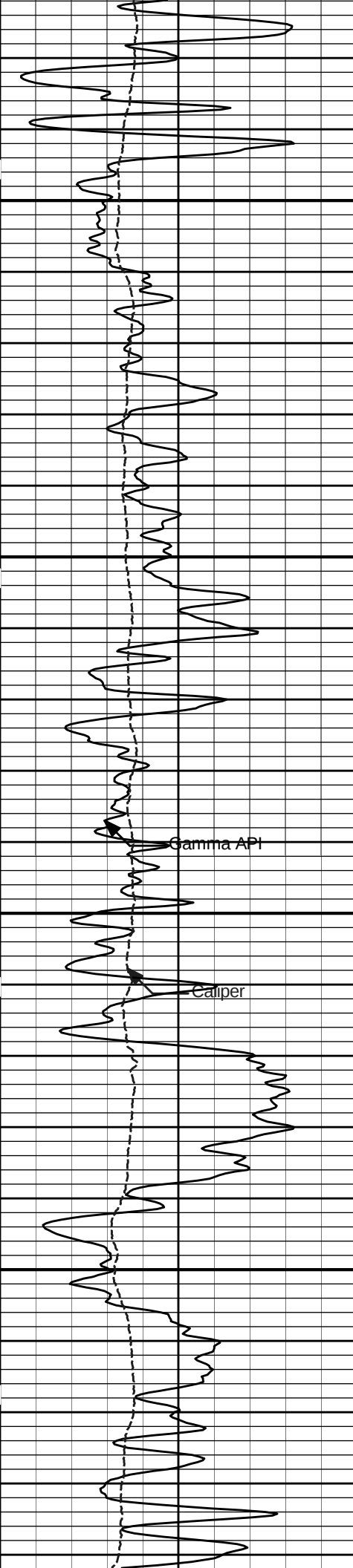
Microlog Normal



2100

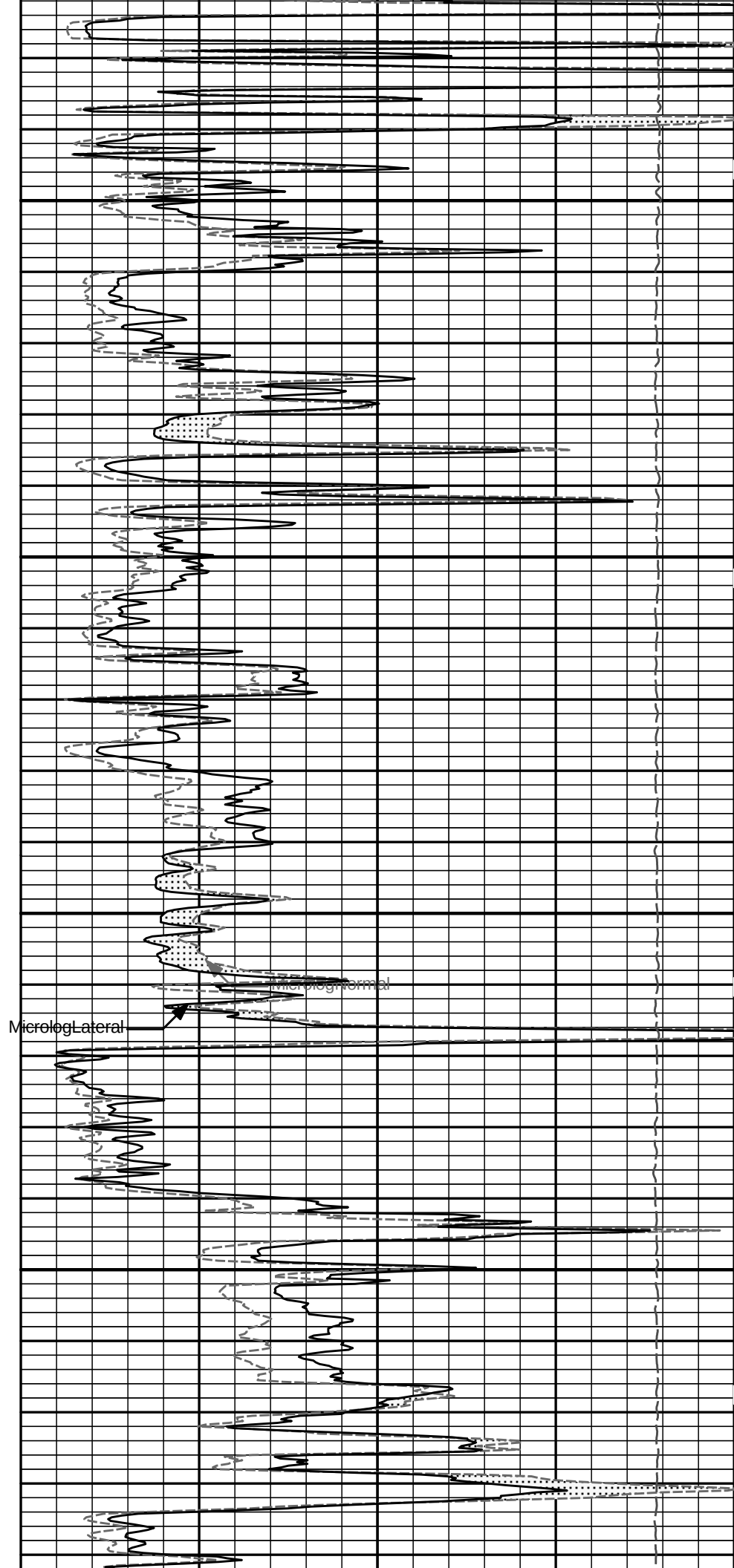
2200

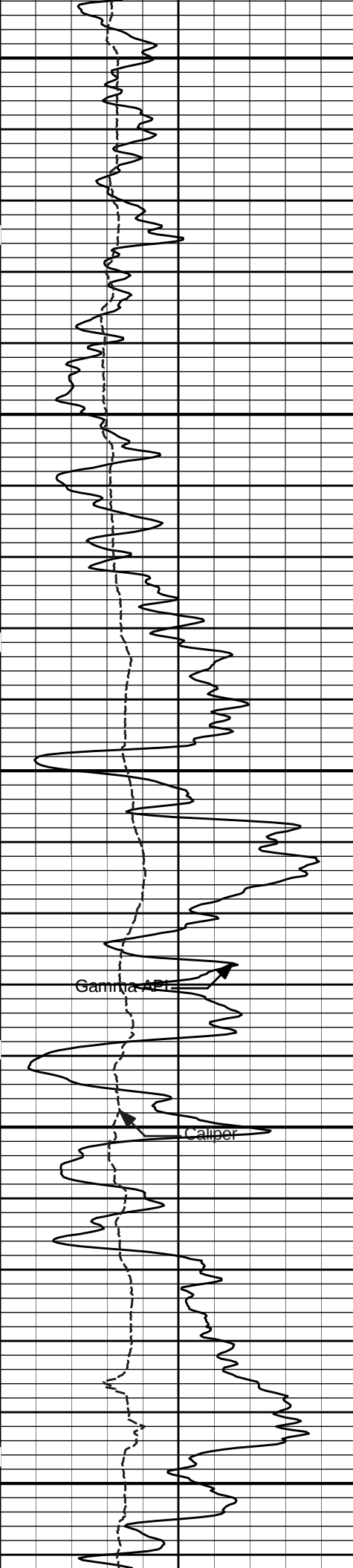




2300

2400

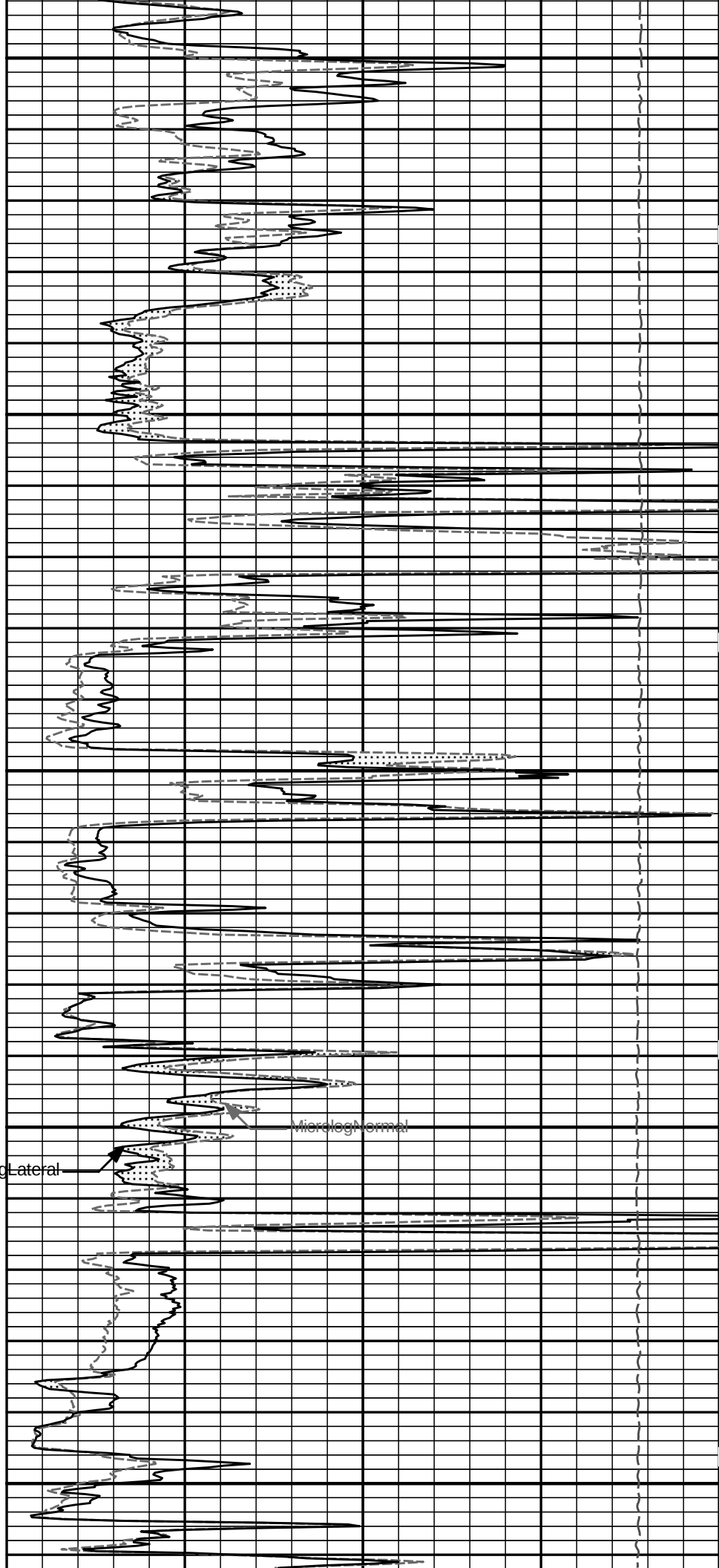




2500

2600

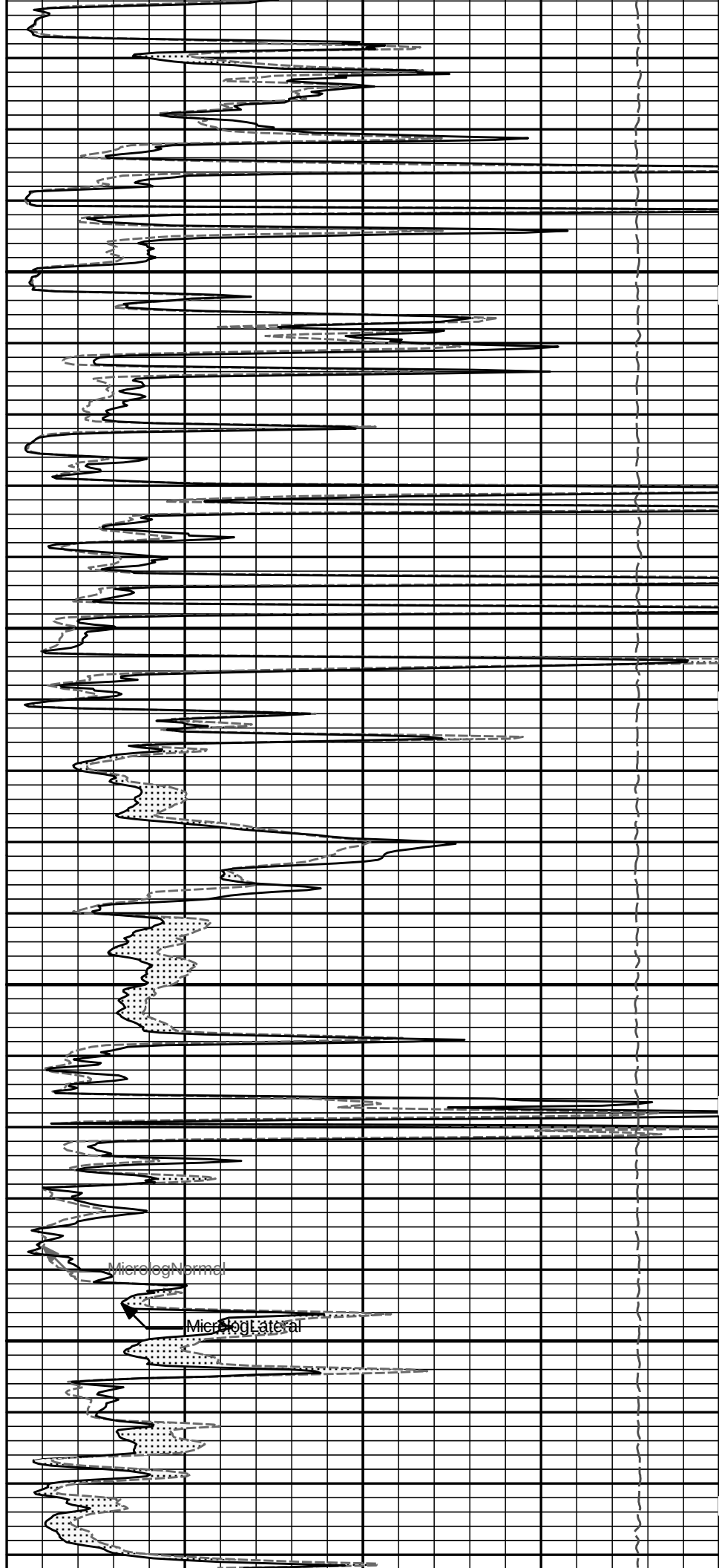
Microlog Lateral

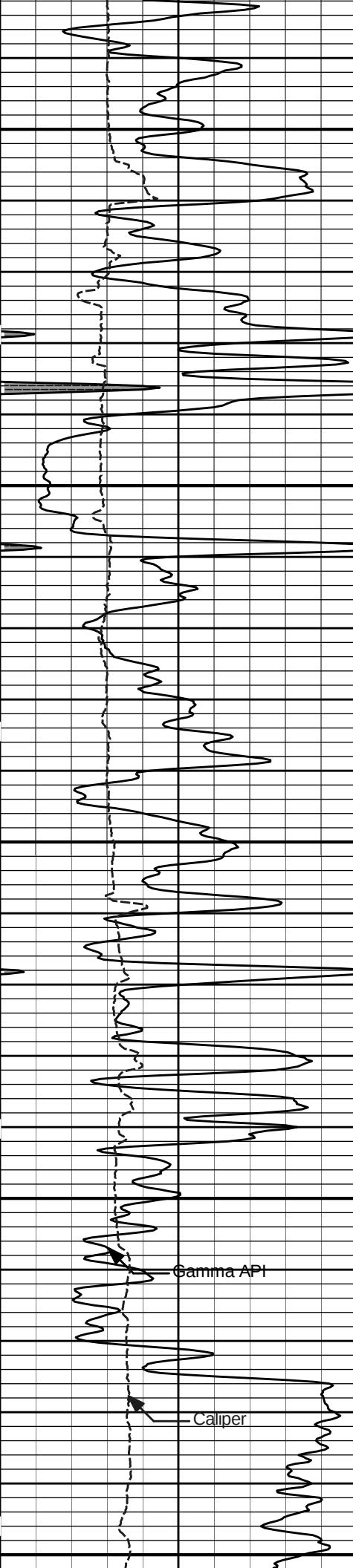




2700

2800

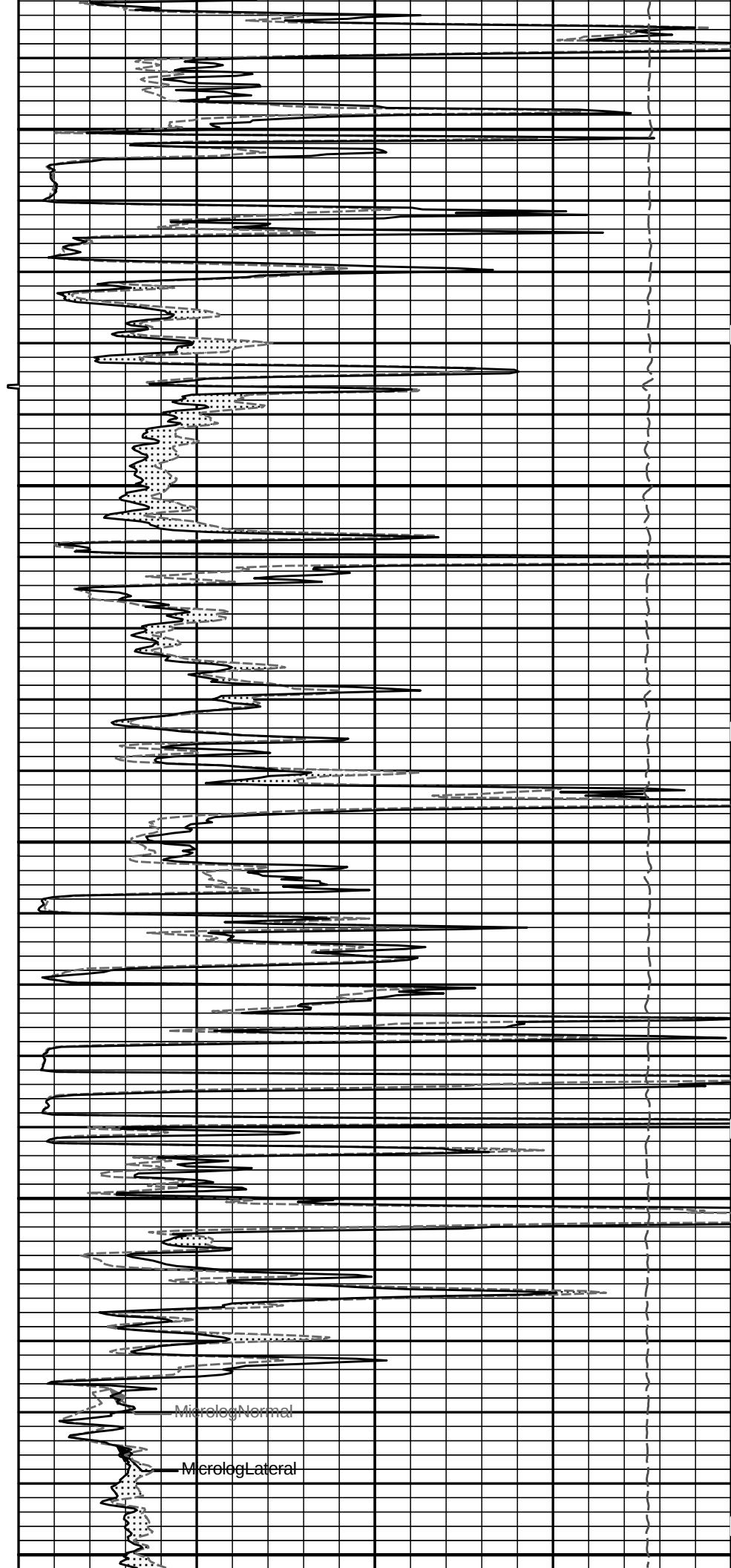


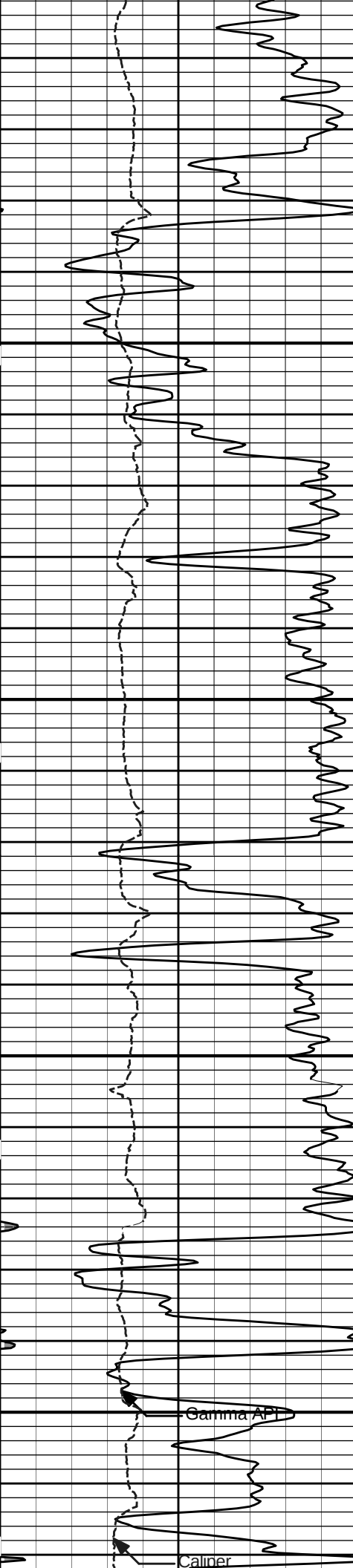


2900

3000

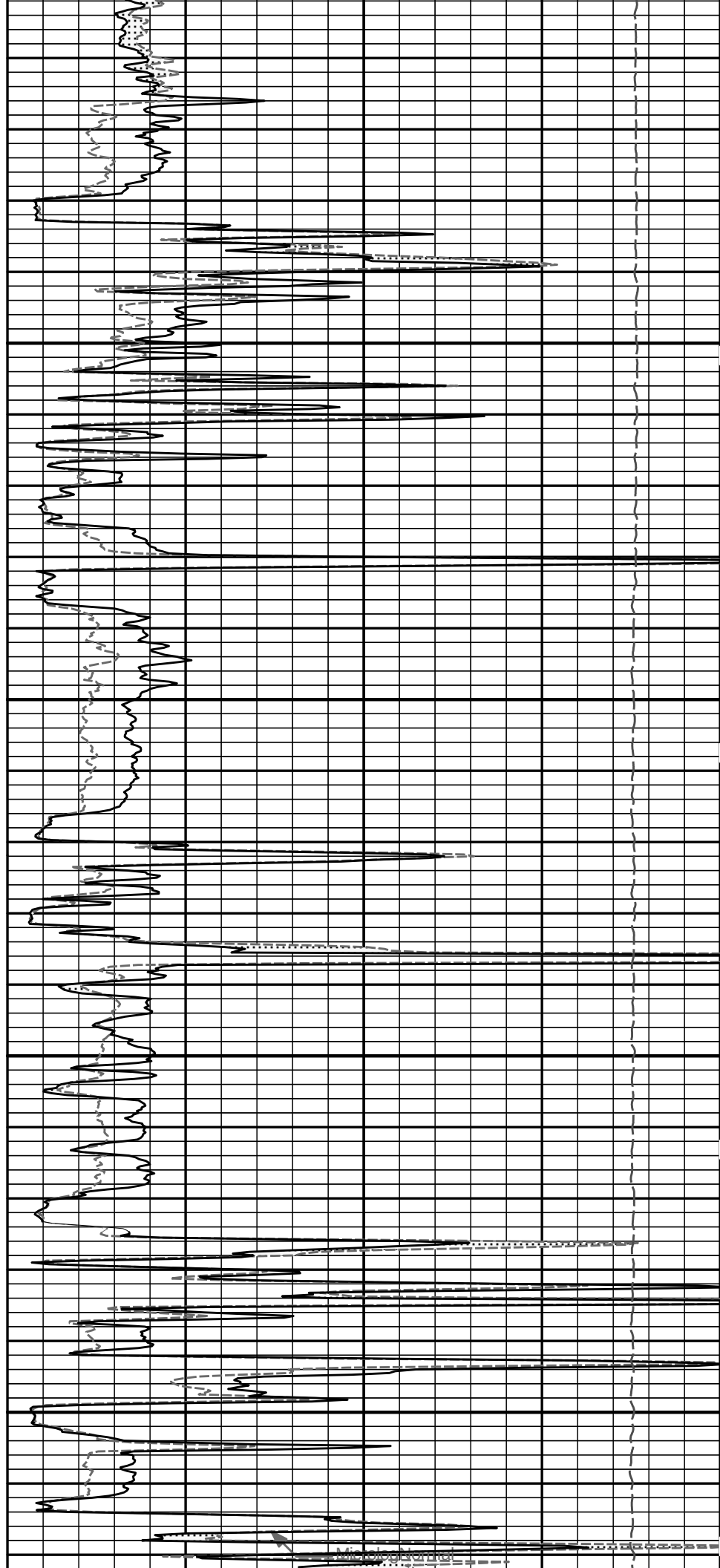
3100



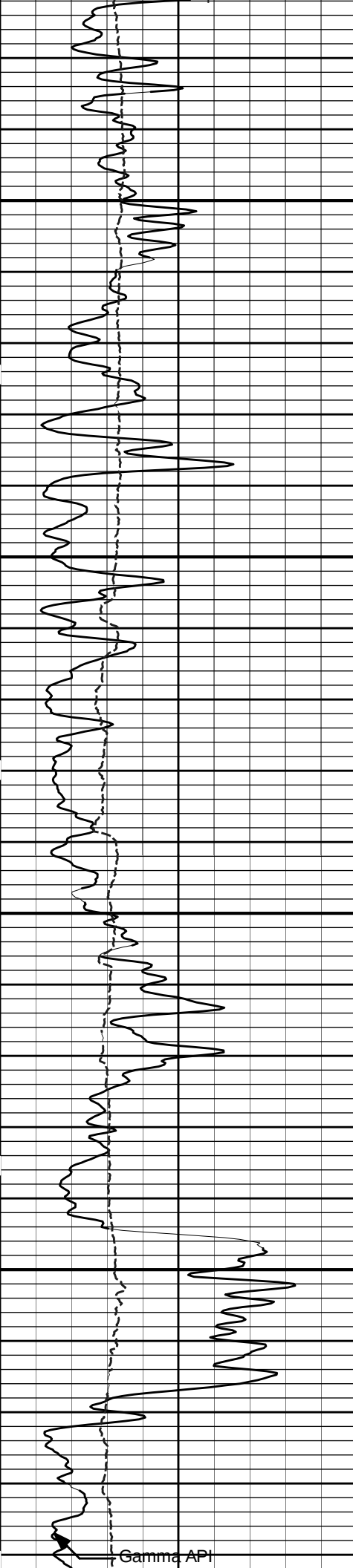


3200

3300

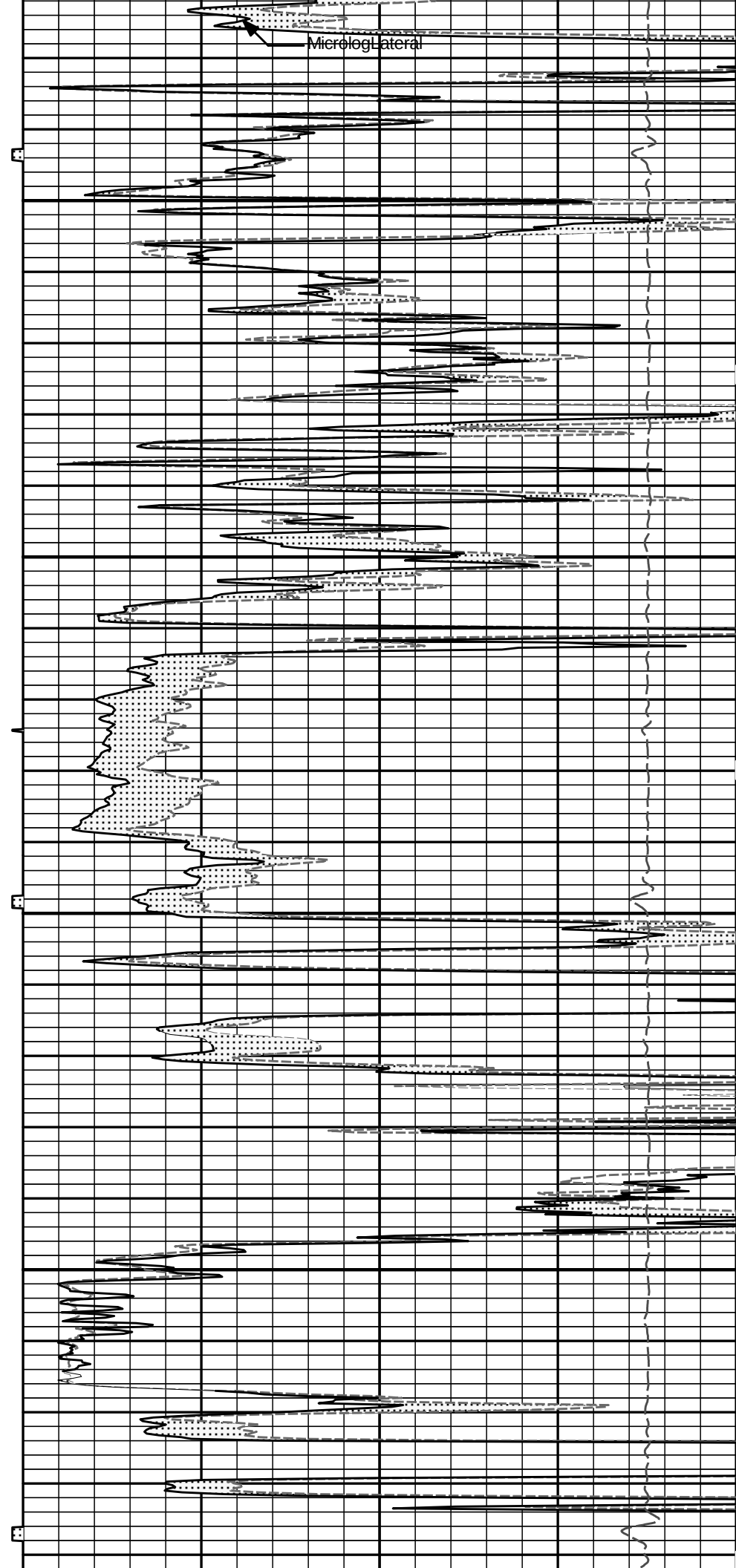


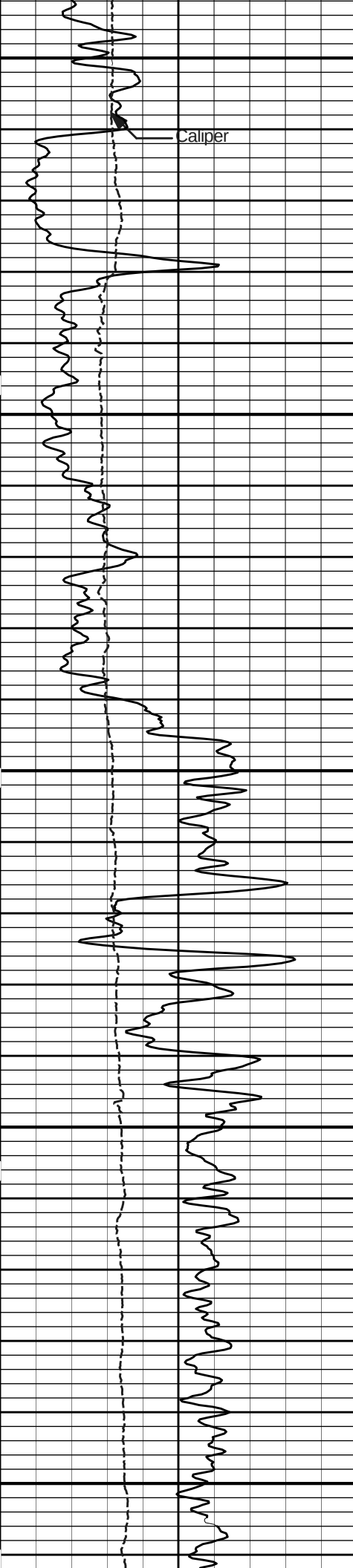
Microlog Normal



3400

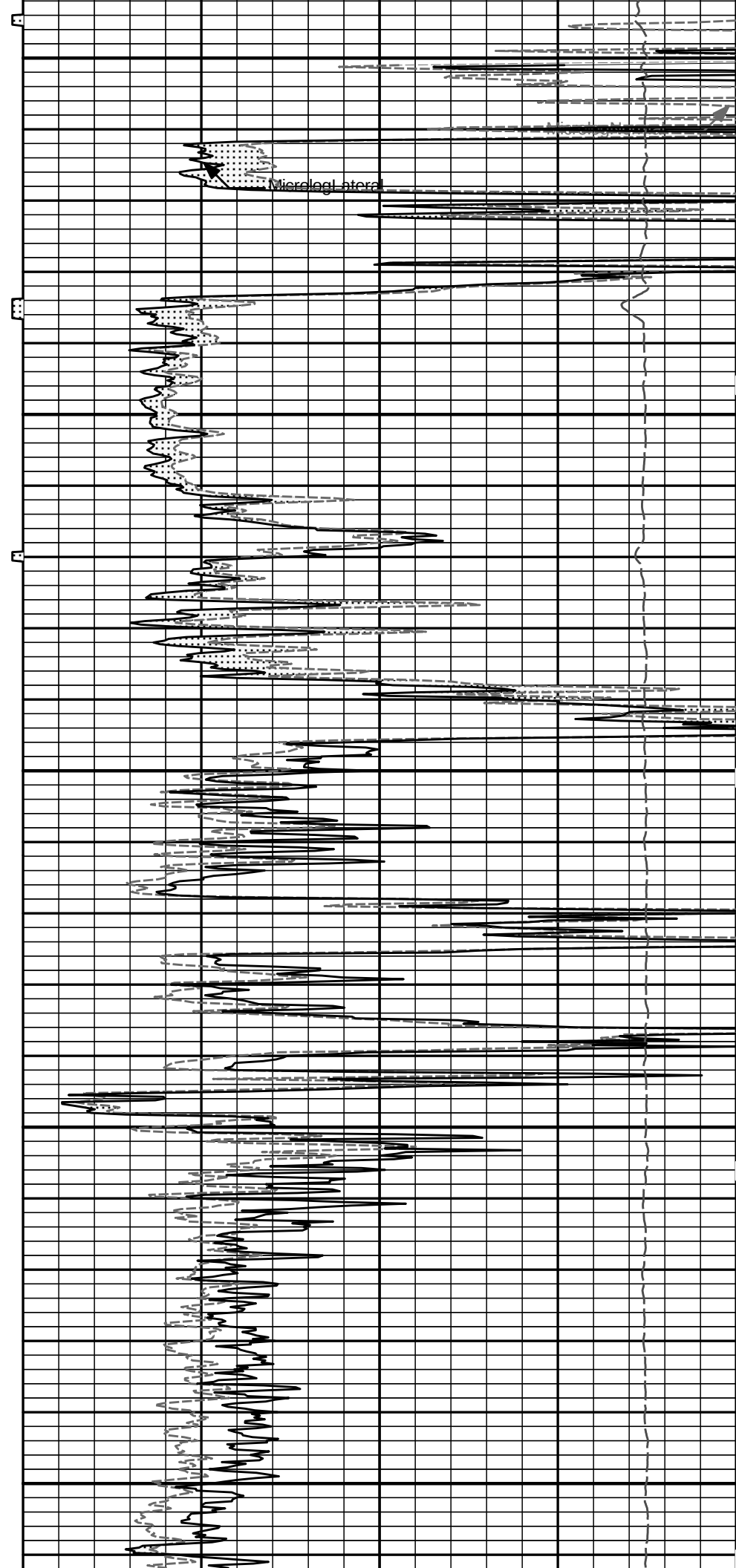
3500

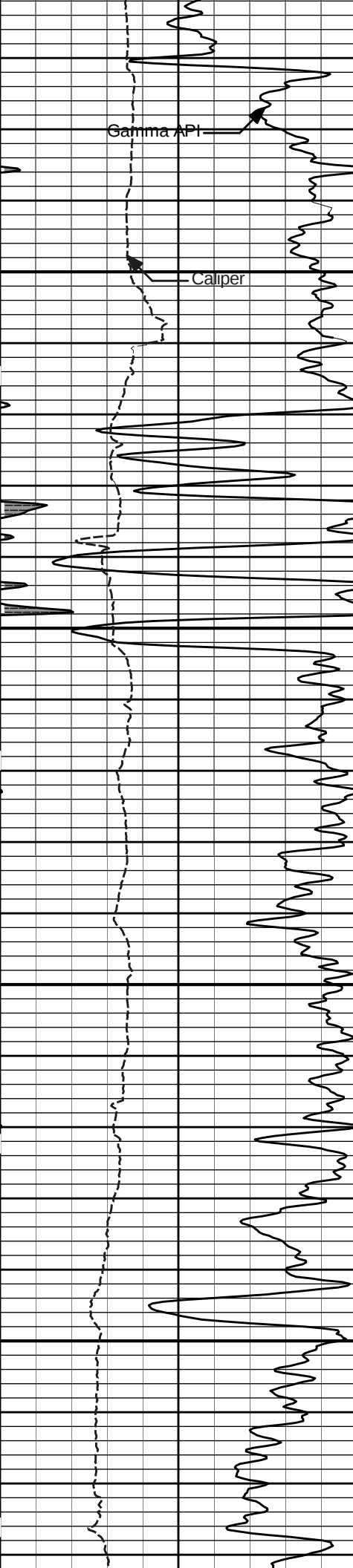




3600

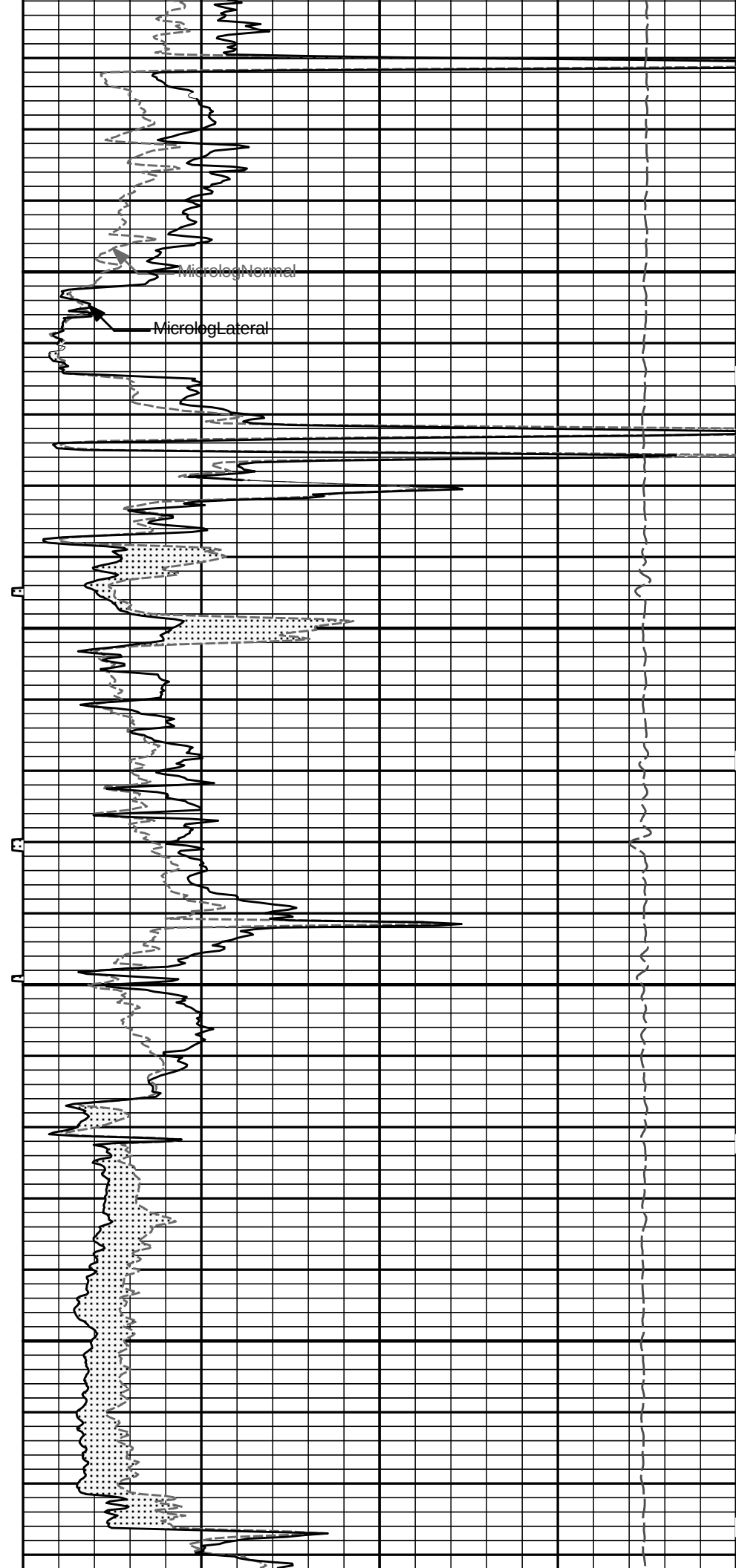
3700

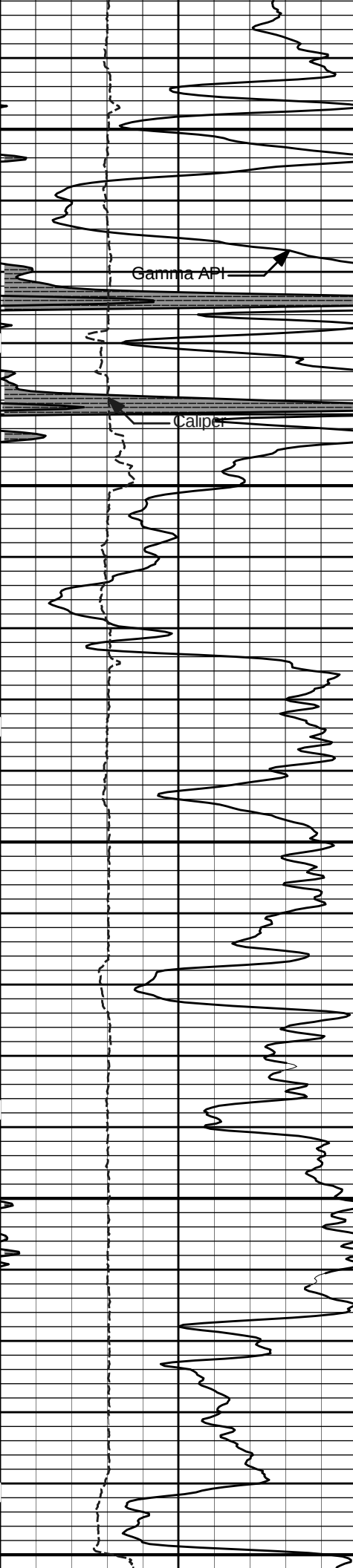




3800

3900





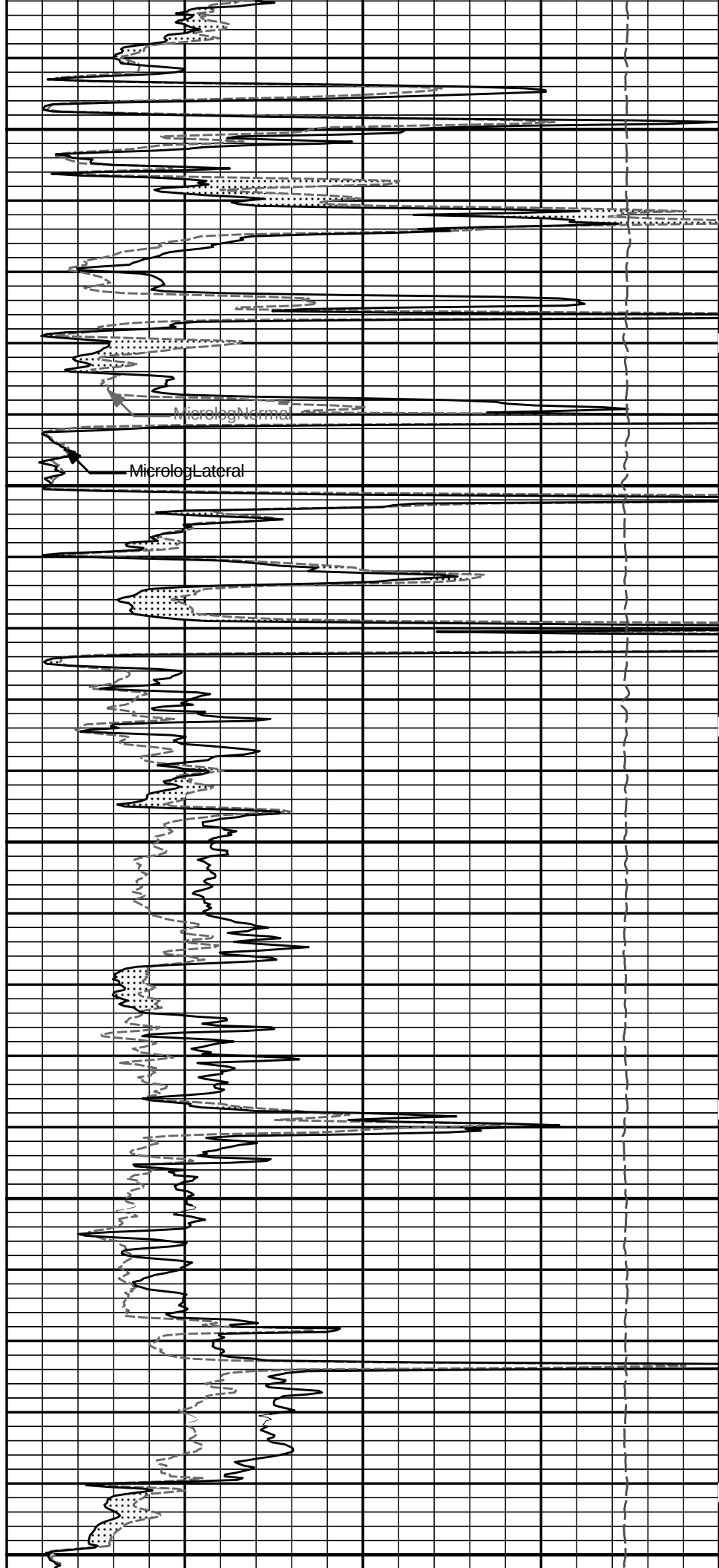
4000

Gamma API

Caliper

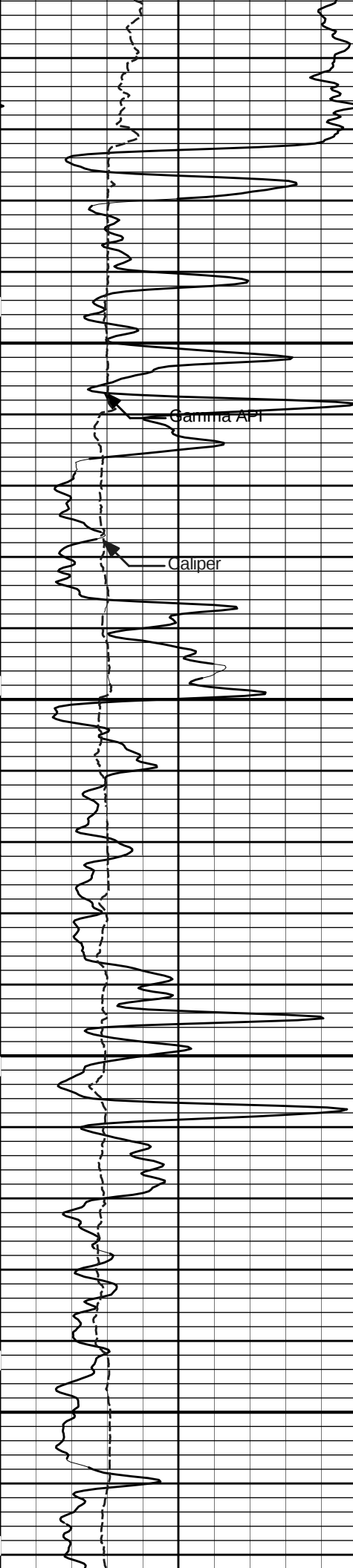
4100

4200



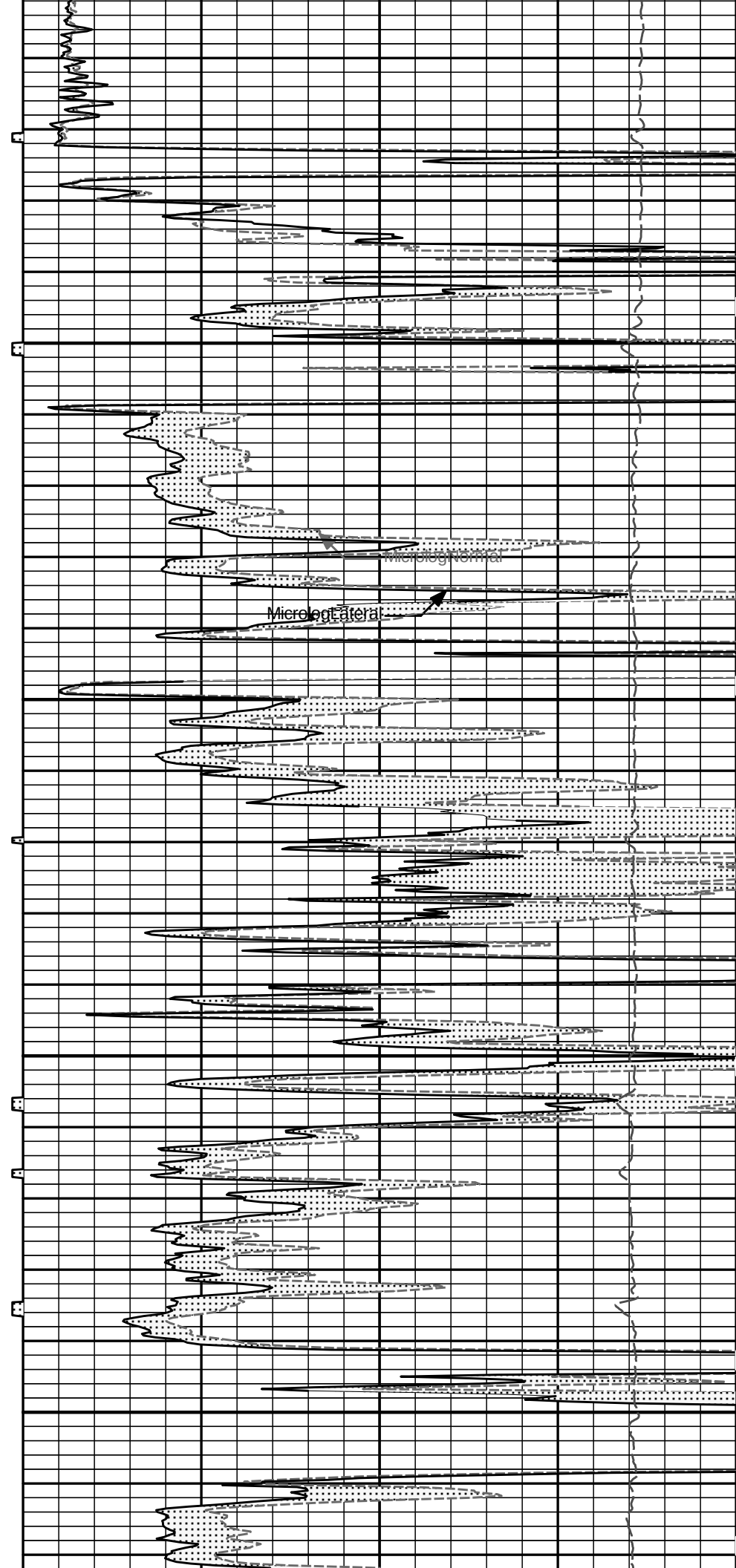
MicrologNormal

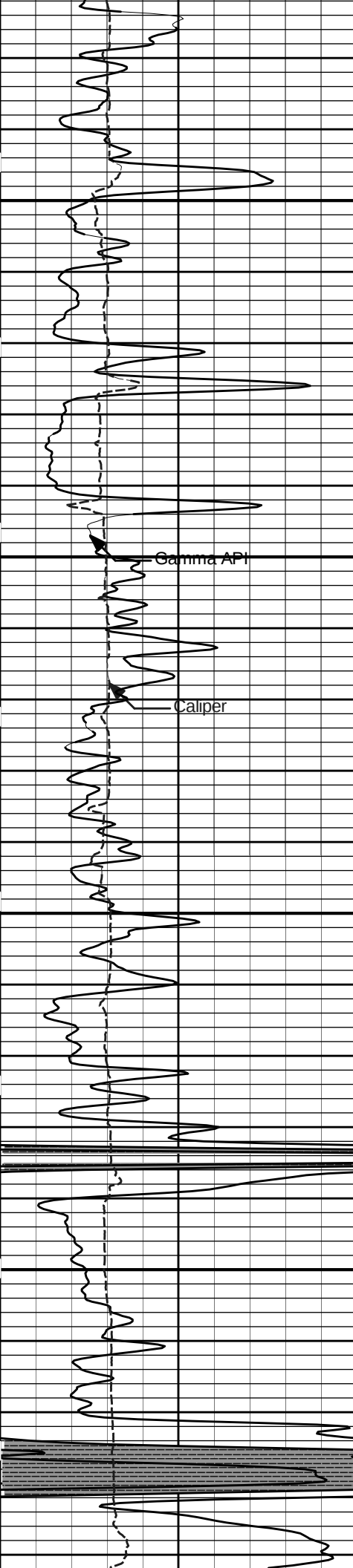
MicrologLateral



4300

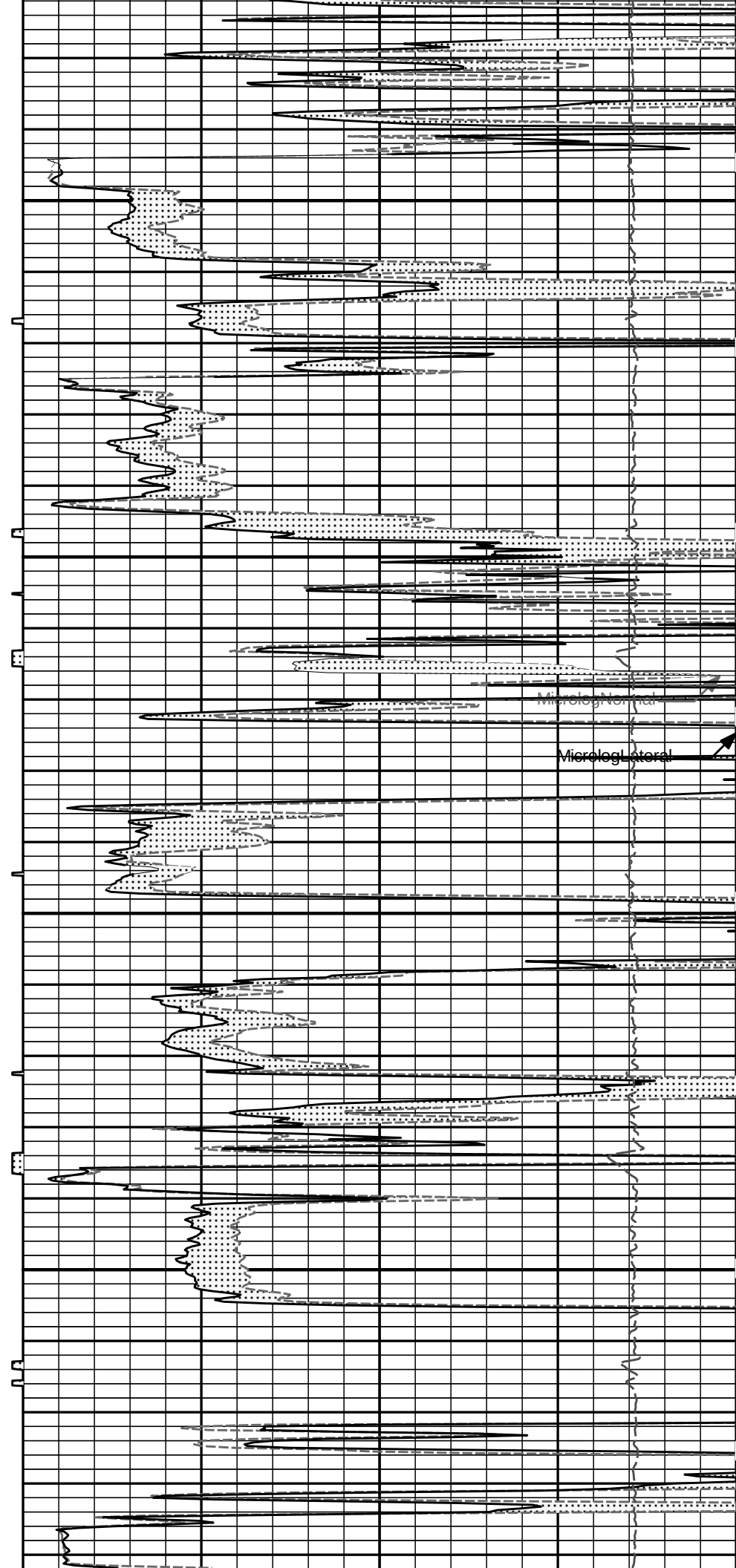
4400

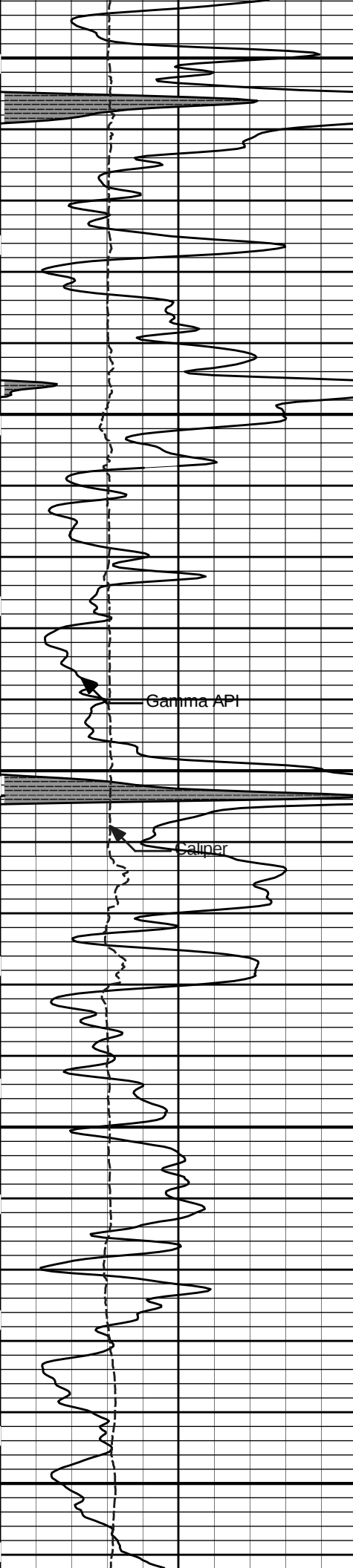




4500

4600



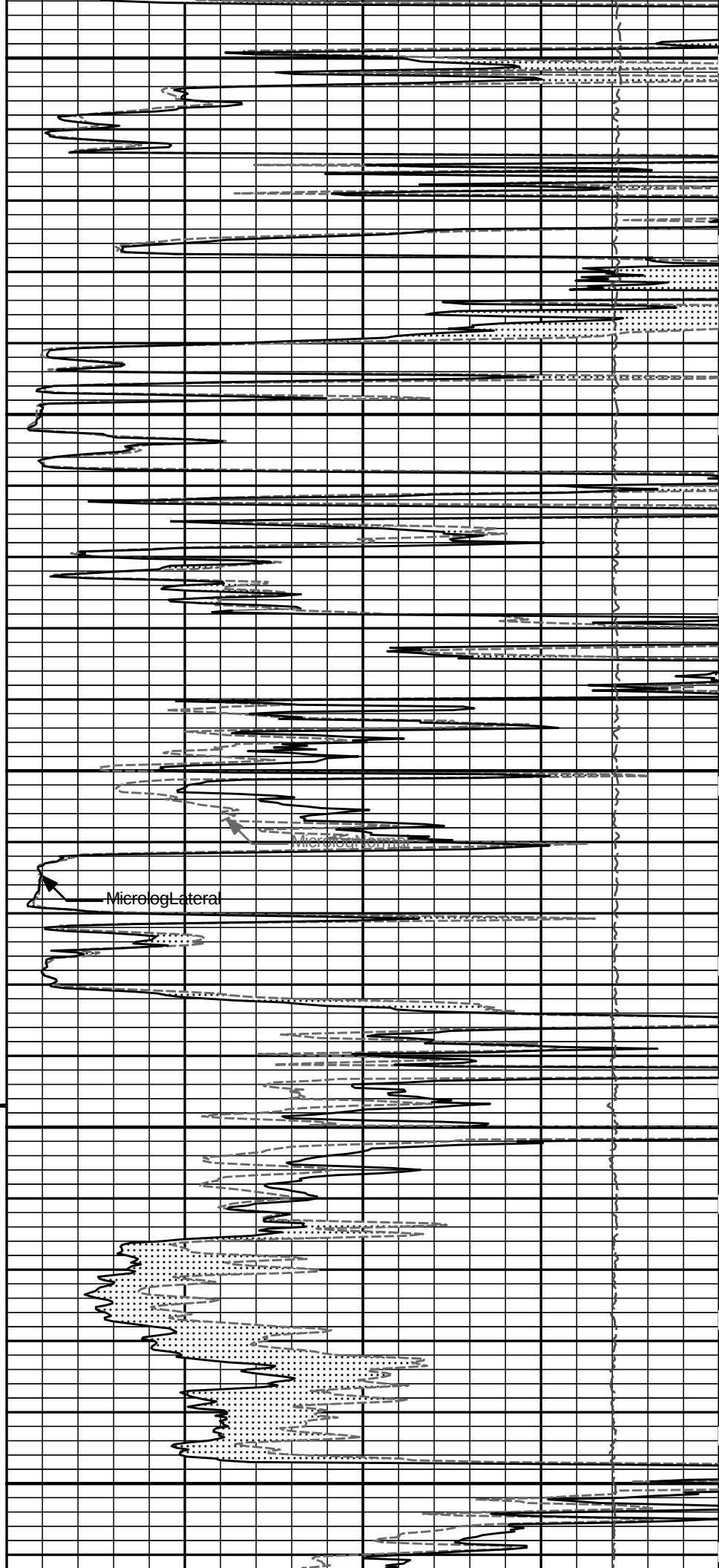


4700

Gamma API

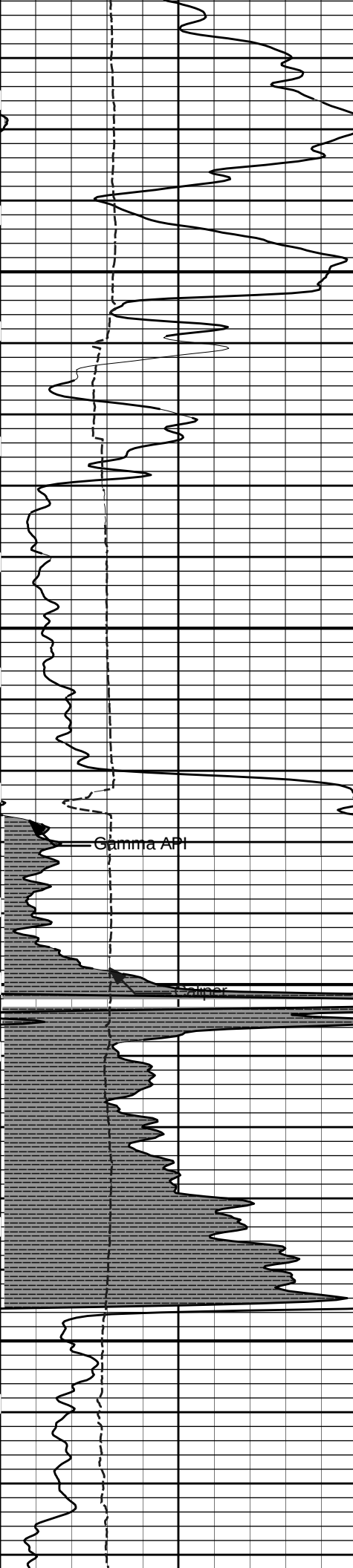
Caliper

4800



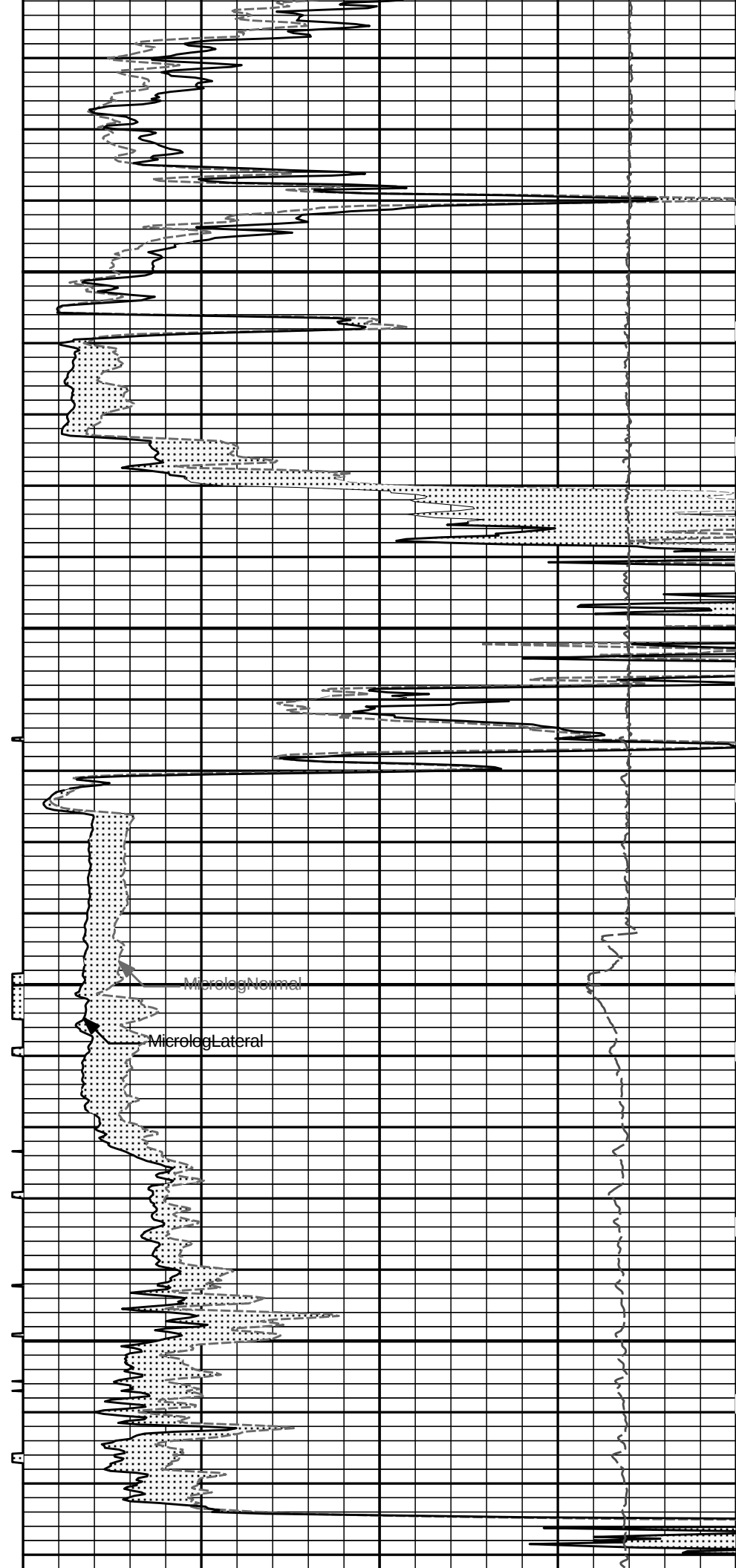
Microlog Lateral

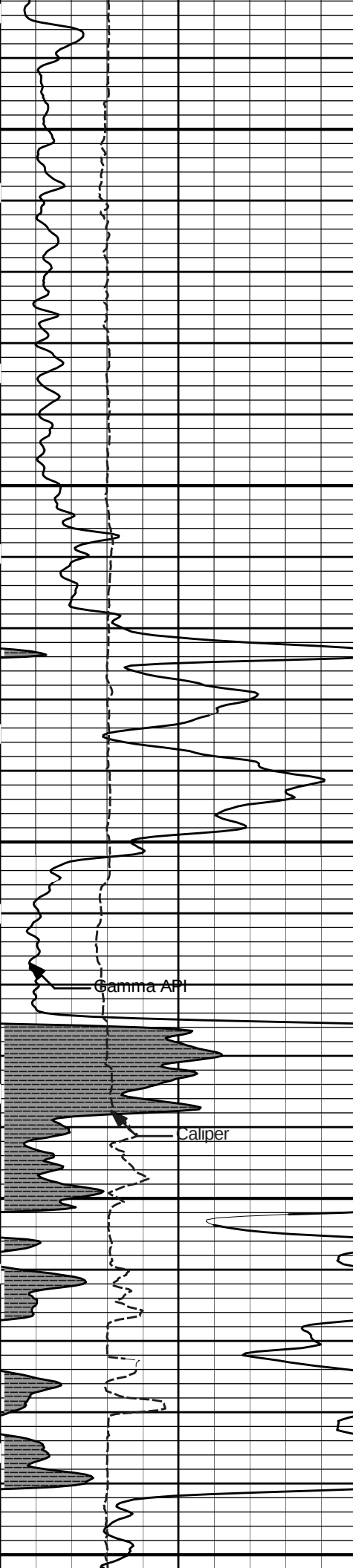
Microlog Thermal



4900

5000

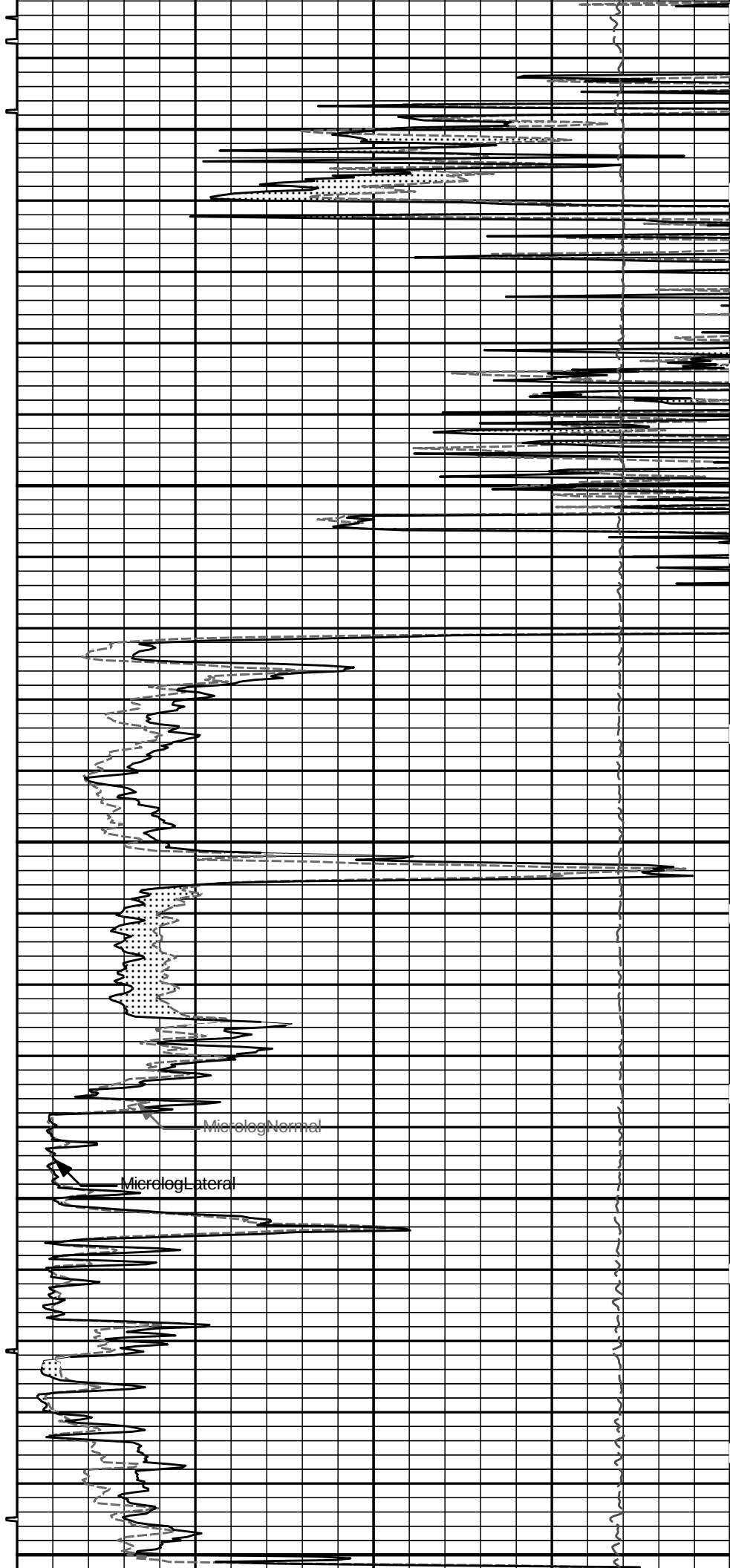




5100

5200

5300



Gamma API

Caliper

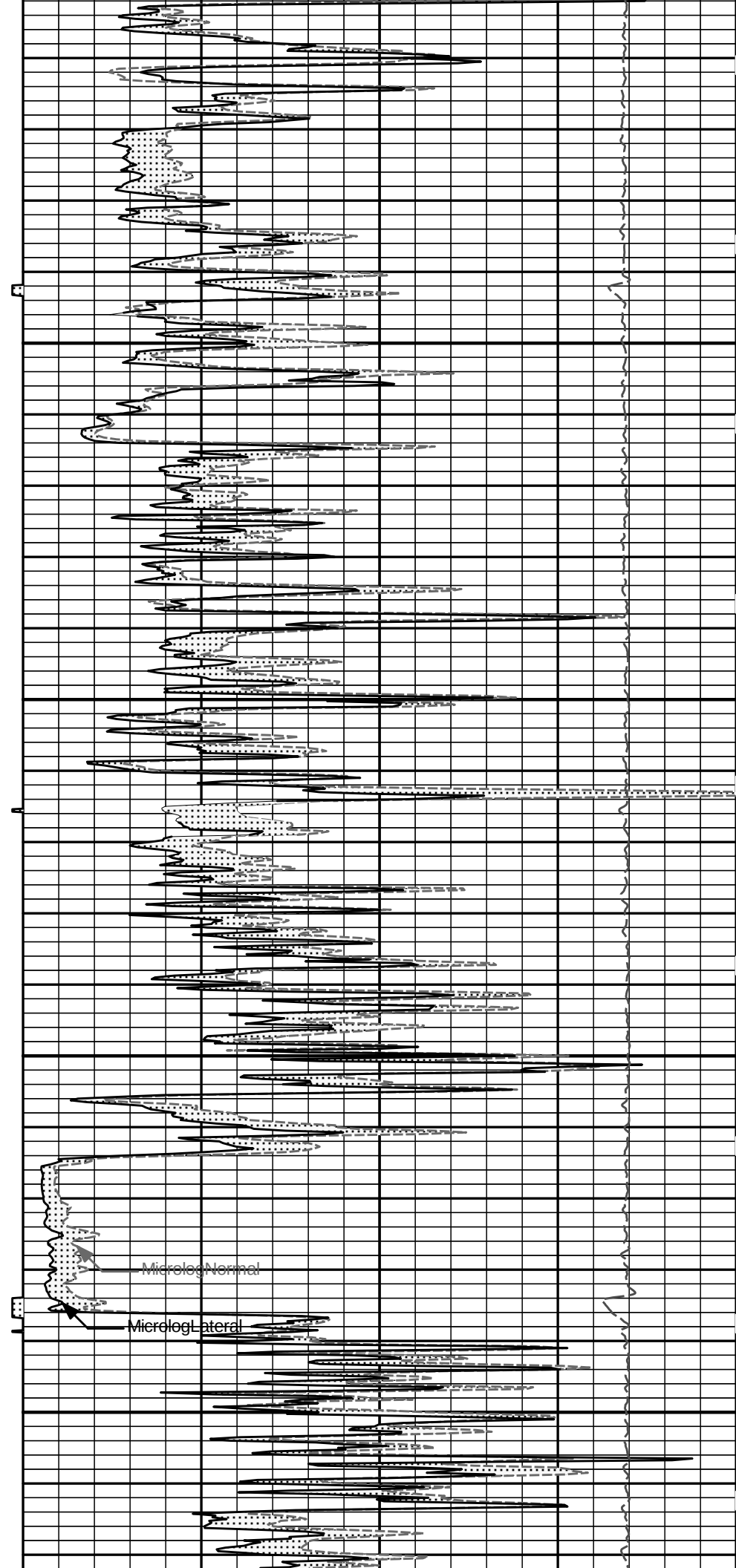
Microlog Normal

Microlog Lateral



5400

5500



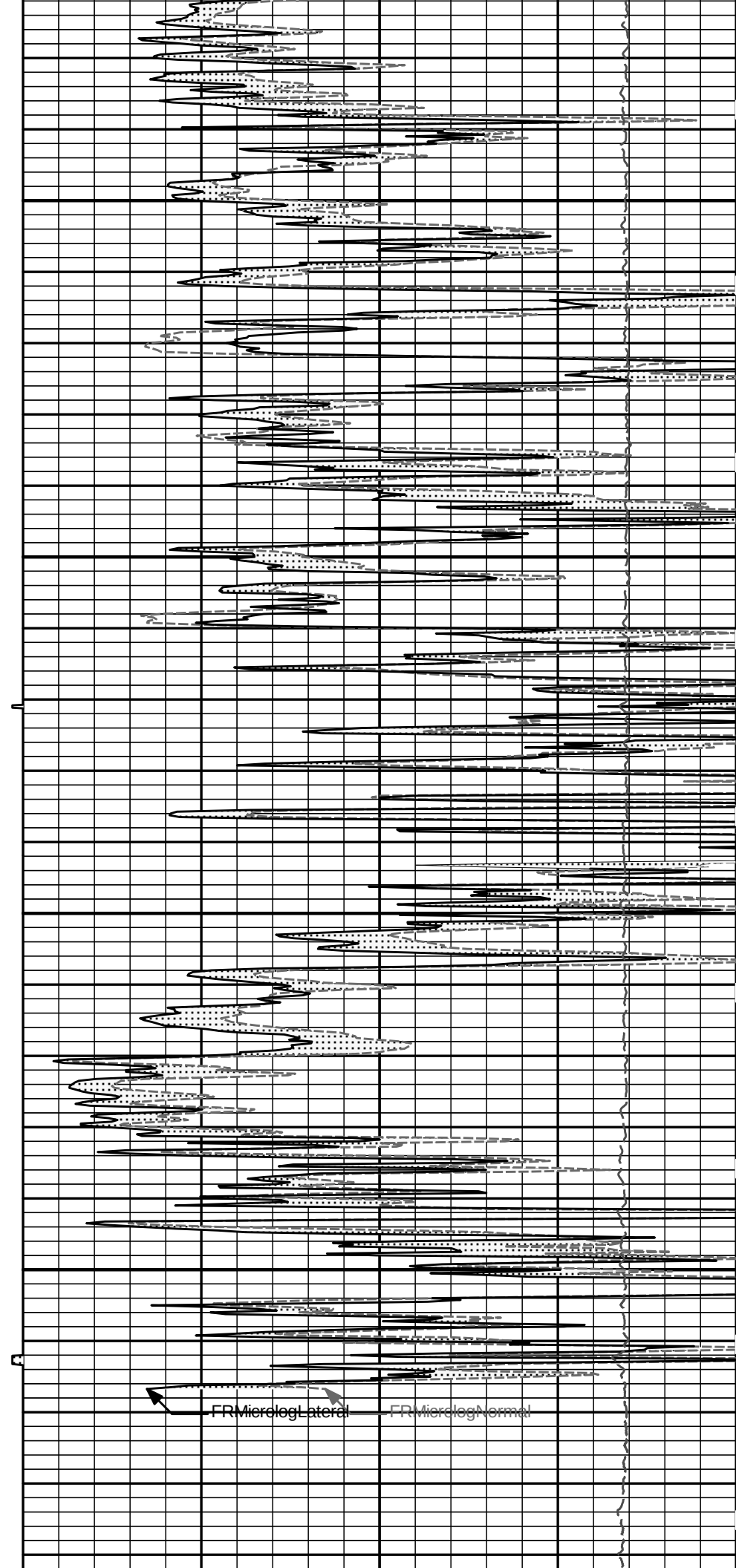
MicrologNormal

MicrologLateral



5600

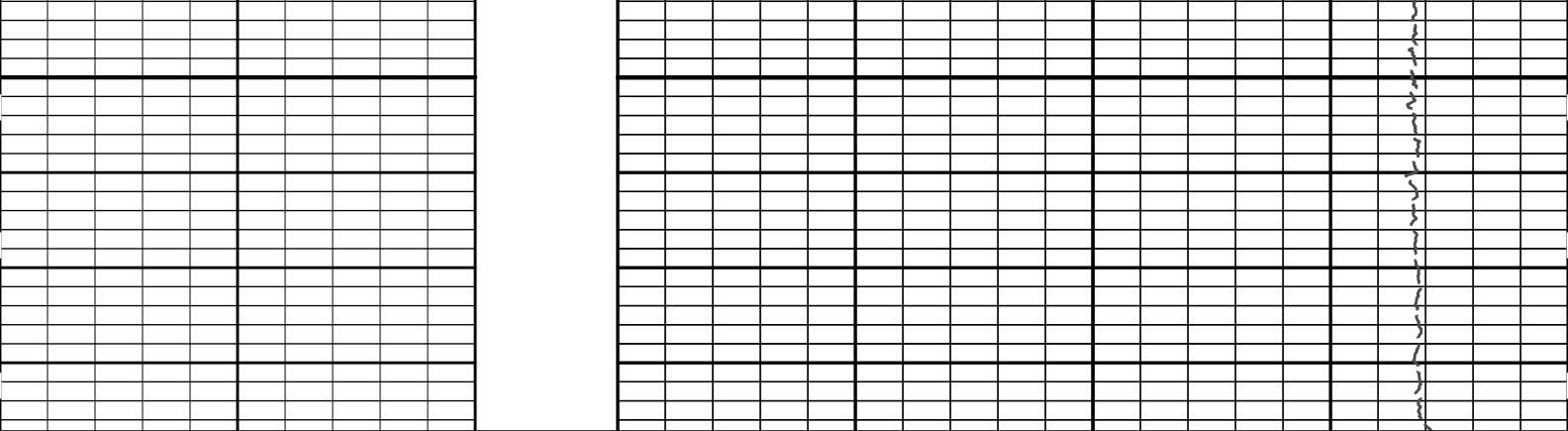
5700



FRCaliper

FRCaliper API

FRCaliper



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

HALLIBURTON

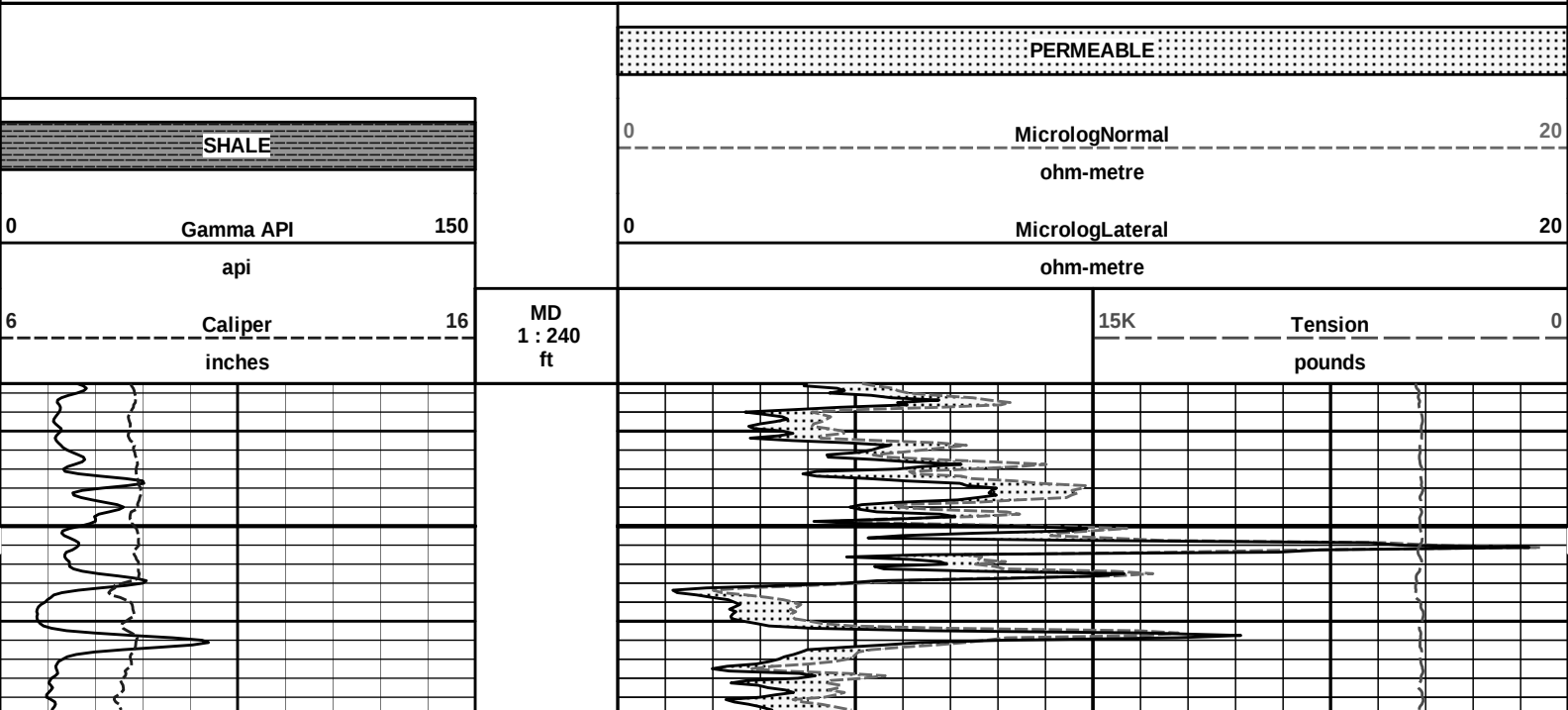
Plot Time: 31-Aug-12 03:13:46
Plot Range: 190 ft to 5787.25 ft
Data: OSAGE_3314_13_0\Well Based\DAQ-0001-006\
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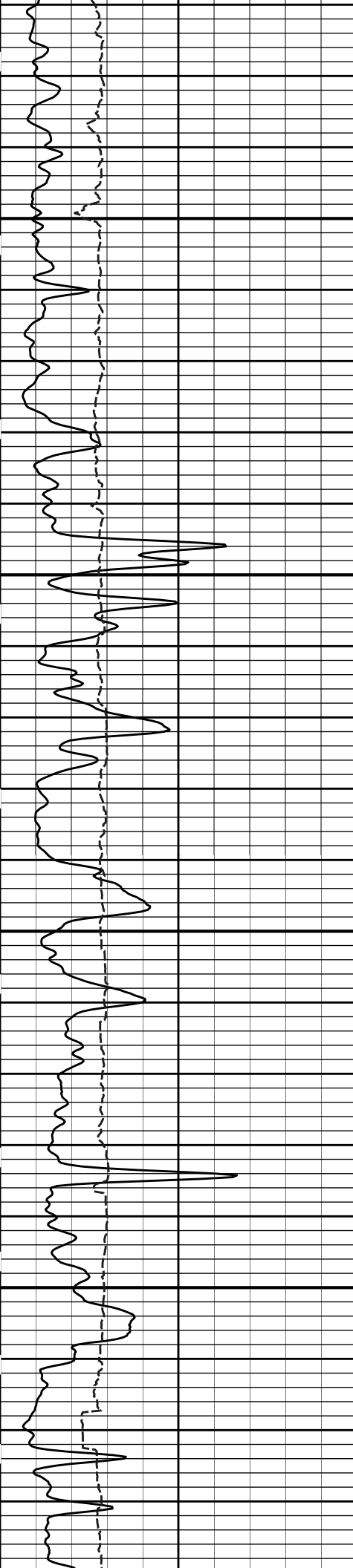
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 31-Aug-12 03:13:46
Plot Range: 5435 ft to 5793 ft
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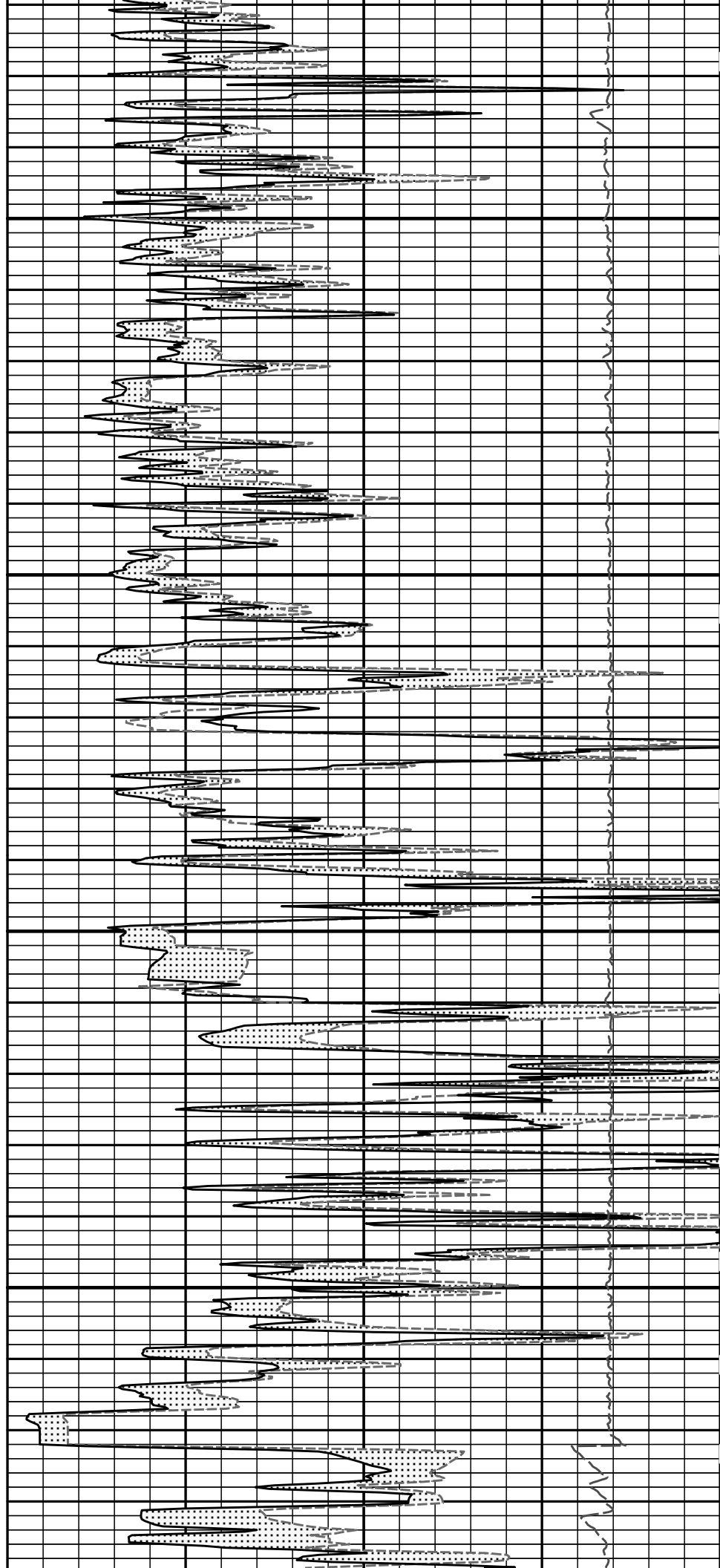
REPEAT SECTION

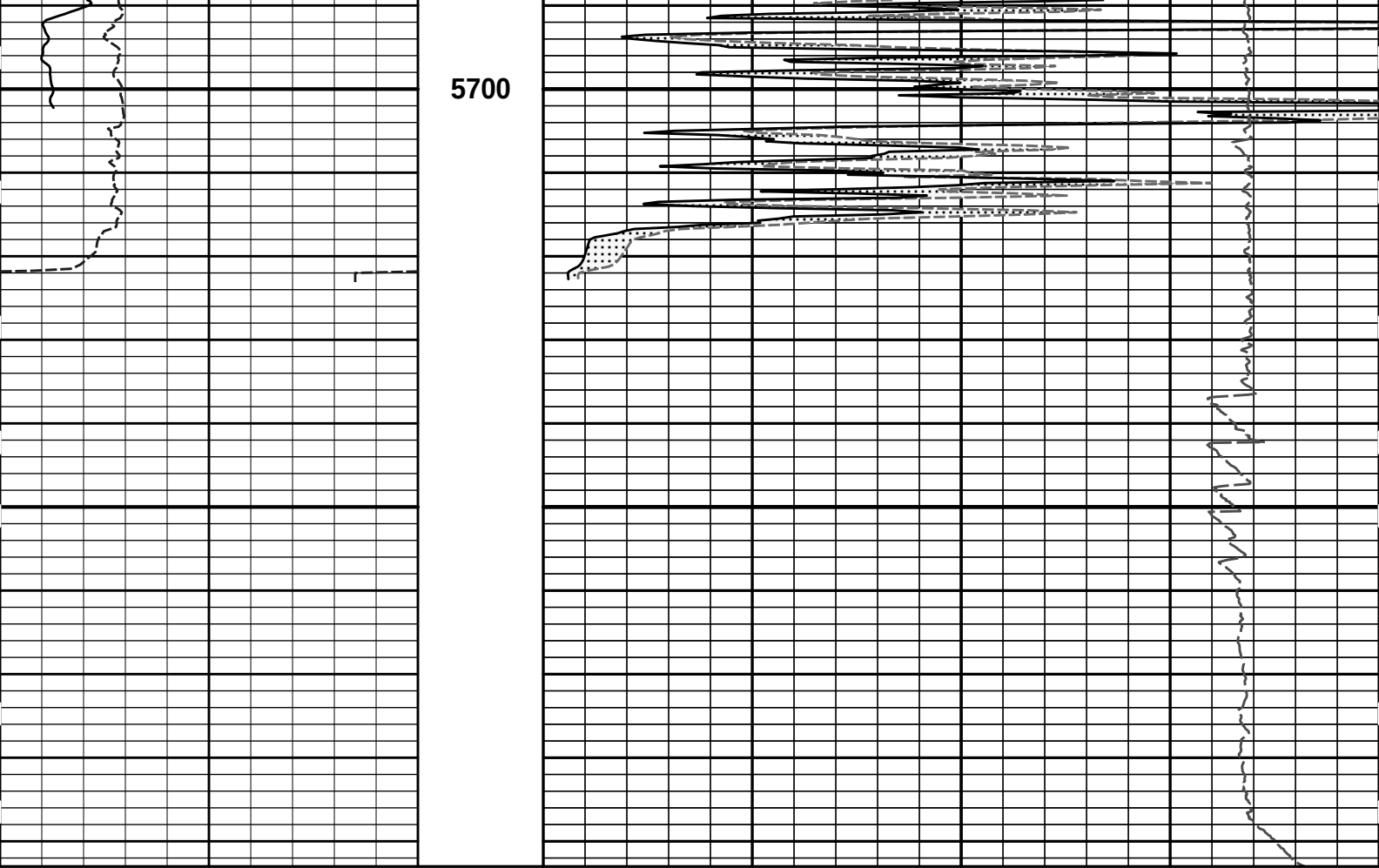




5500

5600





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

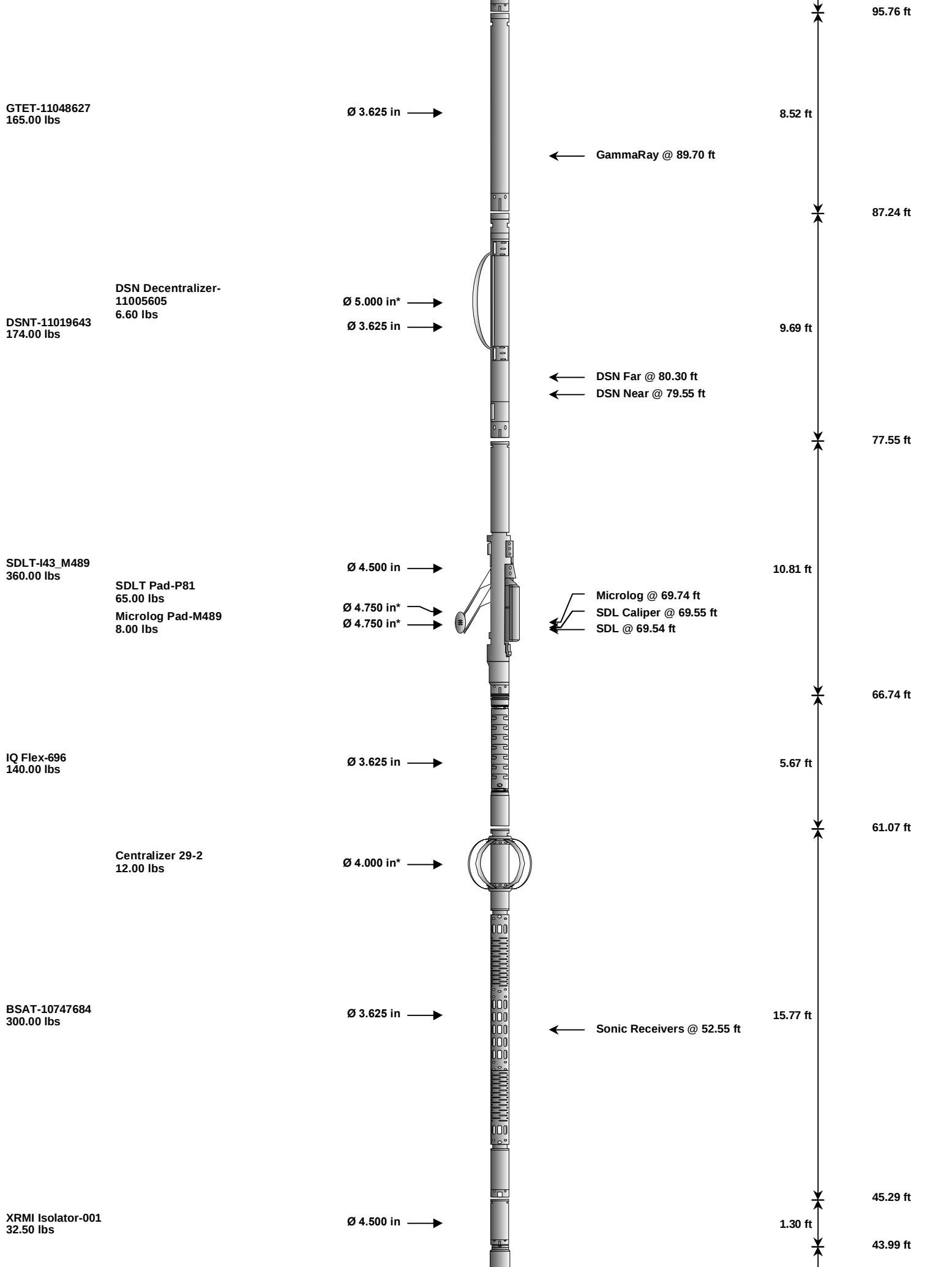
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Plot Range: 5435 ft to 5793 ft
Data: OSAGE_3314_13_0\Well Based\DAQ-0001-005\
Plot File: \\LOCAL-OSAGE_3314_13_0\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CH\MICRO\Microlog_IQ_5_rep_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head- PROT01 30.00 lbs		Ø 3.625 in			1.92 ft	101.42 ft
SP Sub-001 60.00 lbs		Ø 3.625 in		SP @ 97.72 ft	3.74 ft	99.50 ft



XRMI-I Instrument-
262-90296662
290.00 lbs

Ø 4.500 in →

13.00 ft

30.99 ft

XRMI-I Mandrel-
262-90296662
206.00 lbs

Ø 5.000 in →

Ø 4.500 in →

11.16 ft

Pads 2, 4, 6 @ 22.60 ft

Pads 1, 3, 5 @ 22.37 ft

19.83 ft

ACRt Instrument-
I5059_S8385
50.00 lbs

Centralizer 25-002
8.00 lbs

Ø 4.000 in*
Ø 3.625 in →

5.03 ft

Regal Standoff 6_75-1
2.00 lbs

Ø 5.625 in* →

14.80 ft

← Mud Resistivity @ 13.44 ft

← ACRt @ 9.46 ft

ACRt Sonde-
I5059_S8385
200.00 lbs

Ø 3.625 in →

14.22 ft

0.58 ft

Cabbage Head-
TRK696
10.00 lbs

Ø 3.625 in
Ø 6.000 in →

0.58 ft

0.00 ft

Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Standard OH Cable Head		PROT01	30.00	1.92	99.50	300.00
SP	SP Sub		001	60.00	3.74	95.76	300.00
GTET	Gamma Telemetry Tool		11048627	165.00	8.52	87.24	60.00
DSNT	Dual Spaced Neutron		11019643	174.00	9.69	77.55	60.00
DCNT	DSN Decentralizer		11005605	6.60	5.13	* 80.88	300.00
SDLT	Spectral Density Tool		I43_M489	360.00	10.81	66.74	60.00
SDLP	Density Insite Pad		P81	65.00	2.55	* 68.95	60.00
MICP	Microlog Pad		M489	8.00	1.00	* 69.24	60.00
IQF	IQ Flex tool		696	140.00	5.67	61.07	300.00
BSAT	Borehole Sonic Array Tool		10747684	300.00	15.77	45.29	60.00

OBCEN	Centralizer - 29 in.Overbody	2	12.00	2.42	*	58.34	300.00
	Isolator for the XRFMI tool	001	32.50	1.30		43.99	300.00
XRMI	XRMI Navigation - Insite	262-90296662	290.00	13.00		30.99	30.00
XRMI-I	XRMI Imager - Insite	262-90296662	206.00	11.16		19.83	30.00
ACRt	Array Compensated True Resistivity Instrument Section	I5059_S8385	50.00	5.03		14.80	300.00
OBCEN	Centralizer - 25 in. Overbody	002	8.00	2.08	*	16.30	300.00
ACRt	Array Compensated True Resistivity Sonde Section	I5059_S8385	200.00	14.22		0.58	300.00
RSOF	Regal Standoff 6.75in	1	2.00	0.52	*	13.38	300.00
CBHD	Cabbage Head	TRK696	10.00	0.58		0.00	300.00
Total			2,119.10	101.42			
* Not included in Total Length and Length Accumulation.							Date: 30-Aug-12 21:54:38
Data: OSAGE_3314_13_0I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIDLE							

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11048627	Reference Calibration Date:	09-Aug-12 10:44:30
Engineer:	T. HYDE	Calibration Date:	09-Aug-12 10:50:33
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1

Calibrator Source S/N: TB146			
Calibrator API Reference:265.00 api			
Equivalent Calibrator API Reference:269.6 api			
Measurement	Measured	Calibrated	Units
Background	57.5	57.1	api
Background + Calibrator	328.7	326.8	api
Calibrator	271.3	269.6	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 11048627	Reference Calibration Date:	09-Aug-12 10:50:33
Engineer:	T. HYDE	Calibration Date:	30-Aug-12 22:01:40
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1

Calibrator Source S/N: TB146			
Calibrator API Reference:265.00 api			
Equivalent Calibrator API Reference:269.6 api			
Field Verification	Shop	Field	Units
Background	57.1	41.6	api
Background + Calibrator	326.8	316.1	api
Calibrator	269.6	274.5	api
Shop	Field	Difference	Tolerance
269.6	274.5	-4.9	+/- 9.00

MICRO LOG SHOP CALIBRATION			
Tool Name:	Microlog Pad - M489	Reference Calibration Date:	14-Jul-12 14:00:36
Engineer:	T. HYDE	Calibration Date:	10-Aug-12 13:09:32
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1
Host Tool Name:	DSNT - 11019643		

CALIBRATION COEFFICIENT SUMMARY			
Measurement	Micro Log Normal	Micro Log Lateral	

	Measured	Calibrated	Measured	Calibrated	Units
Tool Zero	-0.07	-0.06	-0.05	-0.00	ohmm
Calibration Point #1	-0.01	0.00	-0.05	0.00	ohmm
Calibration Point #2	19.97	20.00	19.25	20.00	ohmm
Internal Reference	19.88	19.92	19.22	19.97	ohmm

Measurement	Micro Log Normal Tool Value	Micro Log Lateral Tool Value	Units
Tool Zero	3.06	1.99	V
Calibration Point #1	20.38	2.11	V
Calibration Point #2	5373.35	7033.97	V
Internal Reference	5350.71	7023.95	V

MICRO LOG FIELD CHECK					
Tool Name:	Microlog Pad - M489			Reference Calibration Date:	10-Aug-12 13:09:32
Engineer:	T. HYDE			Calibration Date:	30-Aug-12 21:58:39
Software Version:	WL INSITE R3.6.0 (Build 3)			Calibration Version:	1

Measurement	Micro Log Normal		Micro Log Lateral		
	Shop	Field	Shop	Field	Units
Tool Zero	-0.06	-0.07	-0.00	-0.00	ohmm
Internal Reference	19.92	19.93	19.97	19.99	ohmm

Summary				
Signal	Shop	Field	Difference	Tolerance
Microlog Normal	19.92	19.93	-0.01	+/- 0.80
Microlog Lateral	19.97	19.99	-0.02	+/- 0.80

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11048627						
Gamma Ray Calibrator	269.6	274.5	-----	-4.9	+/- 9.00	api
Microlog Pad-M489						
MicroLog Normal	19.92	19.93	-----	-0.01	+/-0.80	ohmm
MicroLog Lateral	19.97	19.99	-----	-0.02	+/-0.80	ohmm

Data: OSAGE_3314_13_010001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIDLE	Date: 30-Aug-12 23:25:08
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HALLIBURTON
PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	XRMI-I Mandrel	DIMG	Process XRMI?	No	
4200.00					
	SHARED	BS	Bit Size	8.750	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.300	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	7.000	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	5832.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	XRMI-I Instrument	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	XRMI-I Instrument	
	SHARED	TEMM	Temperature Master Tool	NONE	
	SHARED	BHSM	Borehole Size 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	
	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	
	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	
	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
	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	User define	
	BSAT	DTMA	Delta -T Matrix	47.60	uspf
	BSAT	DTSH	Delta -T Shale	100.00	uspf
	BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
	XRMI-I Instrument	WRTI	Survey Writing Interval	30	ft

Instrument	XRMI-I Instrument	SOPT	Smoothing Option	None
	XRMI-I Mandrel	DIMG	Process XRMI?	Yes
	XRMI-I Mandrel	ROTI	Rotate Image (N-E-S-W-N)?	Yes
	XRMI-I Mandrel	AGN	Use Button Auto Gain?	Yes
	XRMI-I Mandrel	BCLR	Button Auto Gain Color	127
	XRMI-I Mandrel	BFIL	Button Auto Gain Filter	0.020
	XRMI-I Mandrel	BGAN	Button Gain Value	0.001
	XRMI-I Mandrel	BOFF	Button Offset	0
	XRMI-I Mandrel	DIPE	Process Dipmeter Calculations?	Yes
	XRMI-I Mandrel	BHCS	Process Borehole Corrections?	Yes
	XRMI-I Mandrel	CLOK	Process Caliper Outputs?	Yes
	XRMI-I Mandrel	CMAX	Caliper Maximum Limit	100.0 in
	XRMI-I Mandrel	CMIN	Caliper Mimimum Limit	3.5 in
	XRMI-I Mandrel	NAVS	Navigation Source Tool	XRMI-I Instrument
	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	Centered
	ACRt Sonde	RMOP	Rmud Source	Mud Cell
	ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20 ohmm

HALLIBURTON

INPUTS, DELAYS AND FILTERS TABLE

Mnemonic		Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel					
TENS	Tension		0.00	NO	
SP Sub					
PLTC	Plot Control Mask		97.72	NO	
SP	Spontaneous Potential		97.72	BLK	1.250
SPR	Raw Spontaneous Potential		97.72	NO	
SPO	Spontaneous Potential Offset		97.72	NO	
GTET					
TPUL	Tension Pull		89.70	NO	
GR	Natural Gamma Ray API		89.70	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API		89.70	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution		89.70	W	1.416 , 0.750
ACCZ	Accelerometer Z		0.00	BLK	0.083
DEVI	Inclination		0.00	NO	
DSNT					
TPUL	Tension Pull		79.45	NO	
RNDS	Near Detector Telemetry Counts		79.55	BLK	1.417
RFDS	Far Detector Telemetry Counts		80.30	TRI	0.583
DNTT	DSN Tool Temperature		79.55	NO	

DSNS	DSN Tool Status	79.45	NO	
ERND	Near Detector Telemetry Counts EVR	79.55	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	80.30	BLK	0.000
ENTM	DSN Tool Temperature EVR	79.55	NO	
SDLT				
TPUL	Tension Pull	69.55	NO	
PCAL	Pad Caliper	69.55	TRI	0.250
ACAL	Arm Caliper	69.55	TRI	0.250
BSAT				
TPUL	Tension Pull	52.55	NO	
STAT	Status	52.55	NO	
DLYT	Delay Time	52.55	NO	
SI	Sample Interval	52.55	NO	
TXRX	Raw Telemetry 10 Receivers	52.55	NO	
FRMC	Tool Frame Count	52.55	NO	
GMOD	Gain processing mode	45.29	NO	
XRMI-I Mandrel				
TPUL	Tension Pull	22.60	NO	
PAD1	XRMI Pad 1 values	22.36	NO	
PAD2	XRMI Pad 2 values	22.36	NO	
PAD3	XRMI Pad 3 values	22.36	NO	
PAD4	XRMI Pad 4 values	22.36	NO	
PAD5	XRMI Pad 5 values	22.36	NO	
PAD6	XRMI Pad 6 values	22.36	NO	
OD1	EMI Odd Button Values Pad 1	22.36	NO	
OD2	EMI Odd Button Values Pad 2	22.60	NO	
OD3	EMI Odd Button Values Pad 3	22.36	NO	
OD4	EMI Odd Button Values Pad 4	22.60	NO	
OD5	EMI Odd Button Values Pad 5	22.36	NO	
OD6	EMI Odd Button Values Pad 6	22.60	NO	
EV1	EMI Even Button Values Pad 1	22.39	NO	
EV2	EMI Even Button Values Pad 2	22.57	NO	
EV3	EMI Even Button Values Pad 3	22.39	NO	
EV4	EMI Even Button Values Pad 4	22.57	NO	
EV5	EMI Even Button Values Pad 5	22.39	NO	
EV6	EMI Even Button Values Pad 6	22.57	NO	
ITMP	Instrument Temperature	19.83	NO	
EMIM	Tool Mode	19.83	NO	
HAZI	Hole Azimuth	22.11	NO	
HAZI	Hole Azimuth - Down Delay	22.61	NO	
ZACC	Accelerometer Z	22.36	NO	
TPUL	Tension Pull	22.60	NO	
FIR1	Current Button R - Pad 1	22.36	NO	
FIR2	Current Button R - Pad 2	22.60	NO	
FIR3	Current Button R - Pad 3	22.36	NO	
FIR4	Current Button R - Pad 4	22.60	NO	
FIR5	Current Button R - Pad 5	22.36	NO	
FIR6	Current Button R - Pad 6	22.60	NO	
FIX1	Current Button X - Pad 1	22.36	NO	
FIX2	Current Button X - Pad 2	22.60	NO	
FIX3	Current Button X - Pad 3	22.36	NO	
FIX4	Current Button X - Pad 4	22.60	NO	
FIX5	Current Button X - Pad 5	22.36	NO	

FIX6	Current Button X - Pad 6	22.60	NO	
SIR1	Current Slow Button R - Pad 1	22.36	BLK	3.000
SIR2	Current Slow Button R - Pad 2	22.60	BLK	3.000
SIR3	Current Slow Button R - Pad 3	22.36	BLK	3.000
SIR4	Current Slow Button R - Pad 4	22.60	BLK	3.000
SIR5	Current Slow Button R - Pad 5	22.36	BLK	3.000
SIR6	Current Slow Button R - Pad 6	22.60	BLK	3.000
SIX1	Current Slow Button X - Pad 1	22.36	BLK	3.000
SIX2	Current Slow Button X - Pad 2	22.60	BLK	3.000
SIX3	Current Slow Button X - Pad 3	22.36	BLK	3.000
SIX4	Current Slow Button X - Pad 4	22.60	BLK	3.000
SIX5	Current Slow Button X - Pad 5	22.36	BLK	3.000
SIX6	Current Slow Button X - Pad 6	22.60	BLK	3.000
EMMR	Phasor Voltage - Real Part	22.36	NO	
EMMX	Phasor Voltage - Imaginary Part	22.36	NO	
PADV	Pad Voltage	19.83	BLK	0.250
ITMP	Instrument Temperature	19.83	BLK	0.000
CON1	Conductivity Pad 1	22.36	BLK	3.000
CON2	Conductivity Pad 2	22.60	BLK	3.000
CON3	Conductivity Pad 3	22.36	BLK	3.000
CON4	Conductivity Pad 4	22.60	BLK	3.000
CON5	Conductivity Pad 5	22.36	BLK	3.000
CON6	Conductivity Pad 6	22.60	BLK	3.000
UIR2	Current Button R No Delay - Pad 2	22.36	NO	
UIR4	Current Button R No Delay - Pad 4	22.36	NO	
UIR6	Current Button R No Delay - Pad 6	22.36	NO	
UIX2	Current Button X No Delay - Pad 2	22.36	NO	
UIX4	Current Button X No Delay - Pad 4	22.36	NO	
UIX6	Current Button X No Delay - Pad 6	22.36	NO	
TPUL	Tension Pull	22.60	NO	
ARM1	Caliper 1 measurement	22.36	BLK	0.000
ARM2	Caliper 2 measurement	22.36	BLK	0.000
ARM3	Caliper 3 measurement	22.36	BLK	0.000
ARM4	Caliper 4 measurement	22.36	BLK	0.000
ARM5	Caliper 5 measurement	22.36	BLK	0.000
ARM6	Caliper 6 measurement	22.36	BLK	0.000
MOTV	Motor Voltage Monitor 1	22.36	BLK	0.000
PRES	Caliper percentage of total compression of the spring	19.83	BLK	0.000
HAZI	Hole Azimuth	22.36	NO	
RB	Relative Bearing	22.36	NO	
AZI1	PAD1 Azimuth	22.36	NO	
DEVI	Inclination	22.36	NO	
ACRt Sonde				
TPUL	Tension Pull	2.97	NO	
F1R1	ACRT 12KHz - 80in R value	9.22	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	9.22	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.72	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.72	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	5.22	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	5.22	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	4.22	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	4.22	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.72	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.72	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000

F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.47	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	9.22	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	9.22	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.72	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.72	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	5.22	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	5.22	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	4.22	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	4.22	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.72	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.72	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.47	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.47	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	9.22	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	9.22	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.72	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.72	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	5.22	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	5.22	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	4.22	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	4.22	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.72	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.72	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.47	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.47	BLK	0.000
RMUD	Mud Resistivity	12.76	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.97	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.97	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.97	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.97	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.97	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.97	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.97	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.97	BLK	0.000
ITMP	Instrument Temperature	2.97	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.97	NO	
TIDV	Instrument Temperature Derivative	2.97	NO	
TUDV	Upper Temperature Derivative	2.97	NO	
TLDV	Lower Temperature Derivative	2.97	NO	
TRBD	Receiver Board Temperature	2.97	NO	
Microlog Pad				
TPUL	Tension Pull	69.74	NO	
MINV	Microlog Lateral	69.74	BLK	0.750
MNOR	Microlog Normal	69.74	BLK	0.750
SDLT Pad				
TPUL	Tension Pull	69.54	NO	
NAB	Near Above	69.37	BLK	0.920
NHI	Near Cesium High	69.37	BLK	0.920
NLO	Near Cesium Low	69.37	BLK	0.920
NVA	Near Valley	69.37	BLK	0.920
NBA	Near Barite	69.37	BLK	0.920
NDE	Near Density	69.37	BLK	0.920
NPK	Near Peak	69.37	BLK	0.920
NLI	Near Lithology	69.37	BLK	0.920

NEL	Near Lithology	69.37	BLK	0.250
NBAU	Near Barite Unfiltered	69.37	BLK	0.250
NLIU	Near Lithology Unfiltered	69.37	BLK	0.250
FAB	Far Above	69.72	BLK	0.250
FHI	Far Cesium High	69.72	BLK	0.250
FLO	Far Cesium Low	69.72	BLK	0.250
FVA	Far Valley	69.72	BLK	0.250
FBA	Far Barite	69.72	BLK	0.250
FDE	Far Density	69.72	BLK	0.250
FPK	Far Peak	69.72	BLK	0.250
FLI	Far Lithology	69.72	BLK	0.250
PTMP	Pad Temperature	69.55	BLK	0.920
NHV	Near Detector High Voltage	68.95	NO	
FHV	Far Detector High Voltage	68.95	NO	
ITMP	Instrument Temperature	68.95	NO	
DDHV	Detector High Voltage	68.95	NO	
Data: OSAGE_3314_13_010001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CH1DLE				Date: 30-Aug-12 23:27:40

COMPANY	OSAGE RESOURCES LLC		
WELL	OSAGE 3314 13-09 SWD		
FIELD	MEDICINE LODGE BOGGS		
COUNTY	BARBER	STATE	KANSAS
HALLIBURTON		MICRO LOG	