

MICROLOG

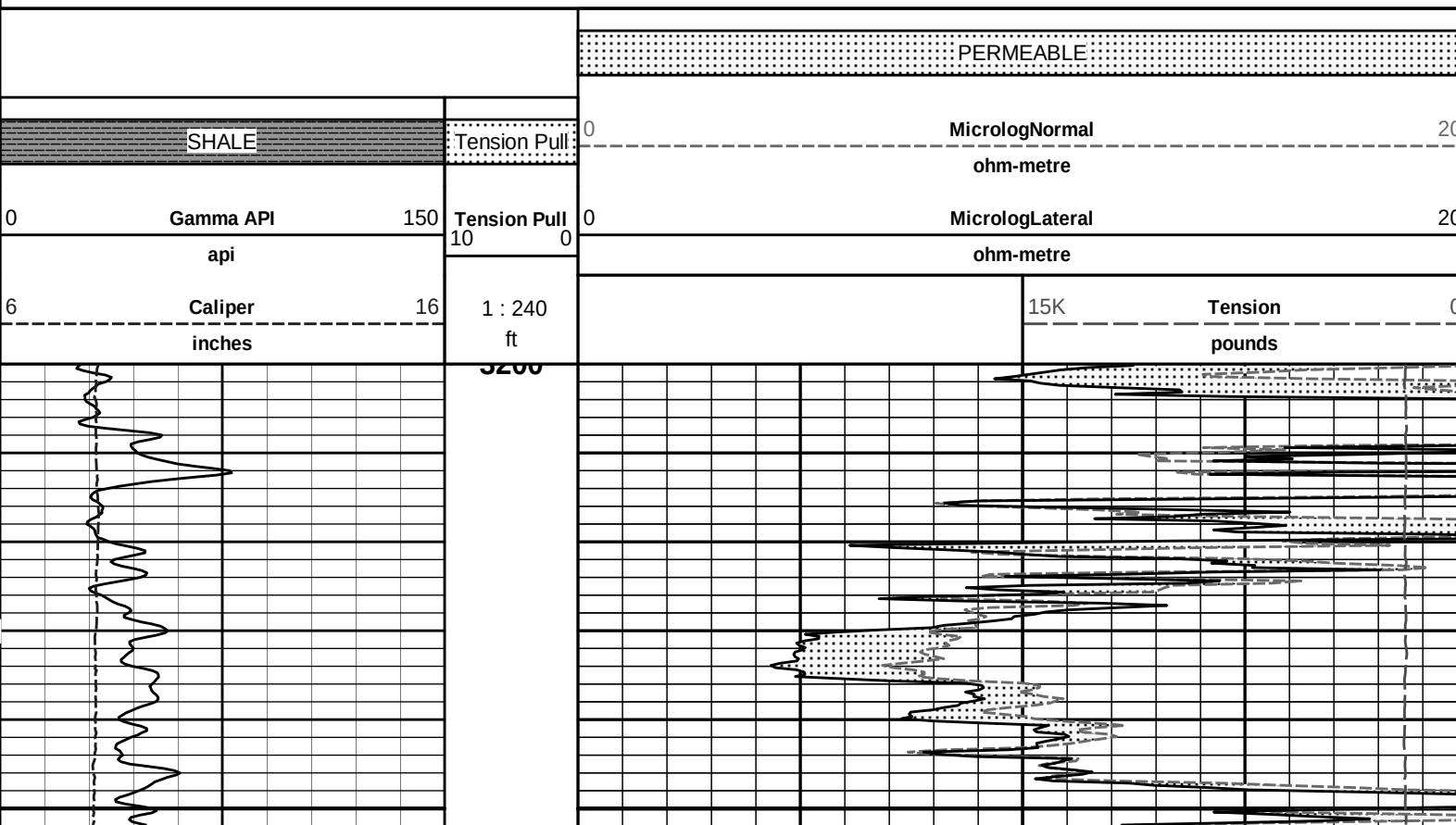
LOGGING DATA				
GENERAL	GAMMA	ACoustic	DENSITY	NEUTRON

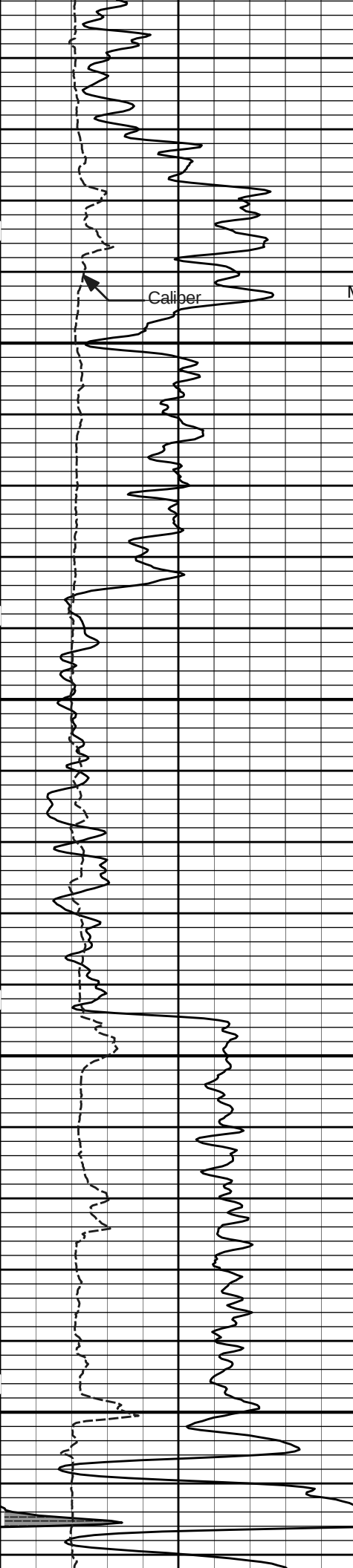
GENERAL			GAMMA		ACOUSTIC		DENSITY		NEUTRON					
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	5227	3200	REC	0	150									
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING														
CHLORIDES REPORTED AT 7000 PPM														
LCM REPORTED AT 14 LB/BBL														
GTET-DNST-SDLT-ACRT RUN IN COMBINATION														
TODAY'S CREW: J. ALBRIGHT & B. TERRELL														
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KS. 620-624-8123														
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Plot Time: 10-Nov-12 01:42:12
Plot Range: 3200 ft to 5233.25 ft
Data: SHIRLEY_NELSON\Well Based\DETAIL\
Plot File: \\-LOCAL-MICRO\Microlog_IQ_5_main.lib

5 INCH MAIN LOG



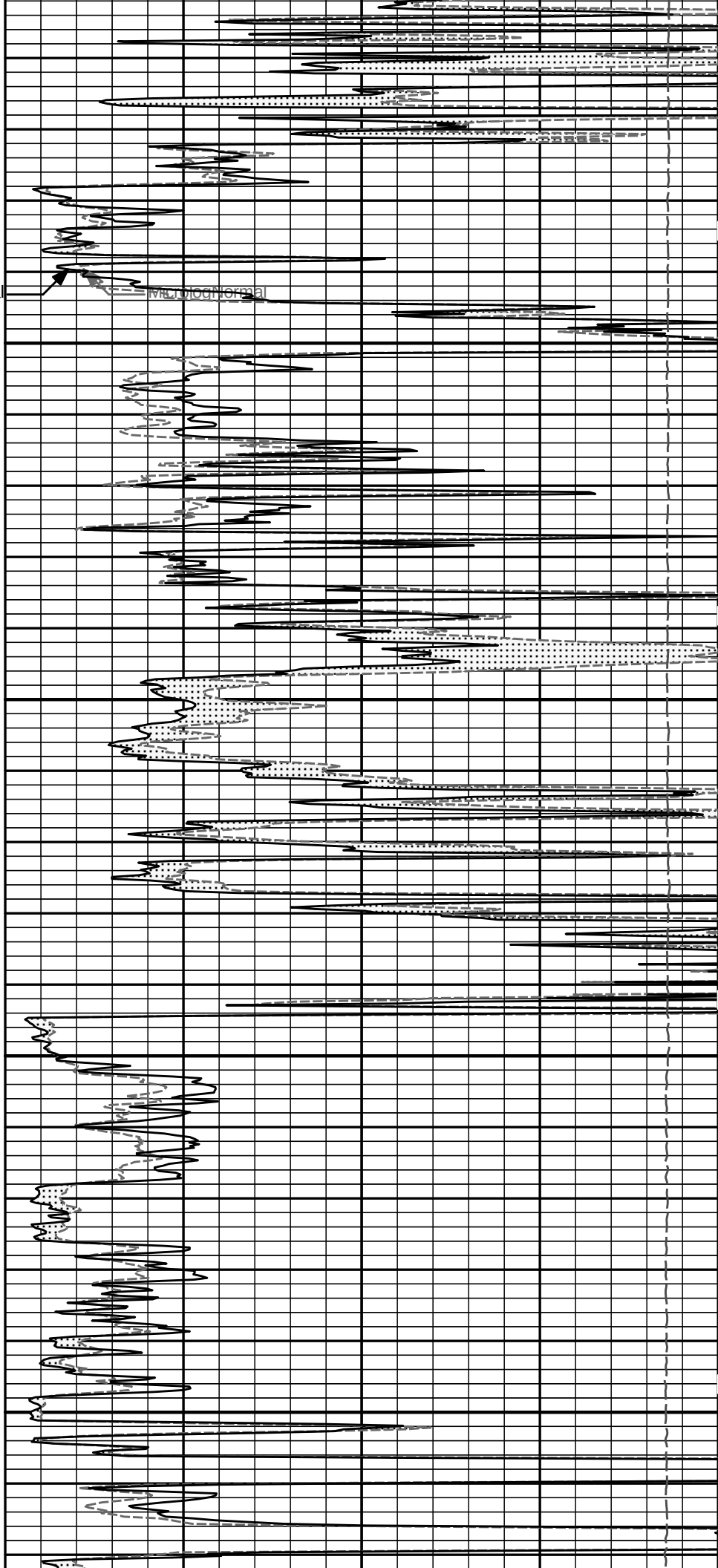


Caliper

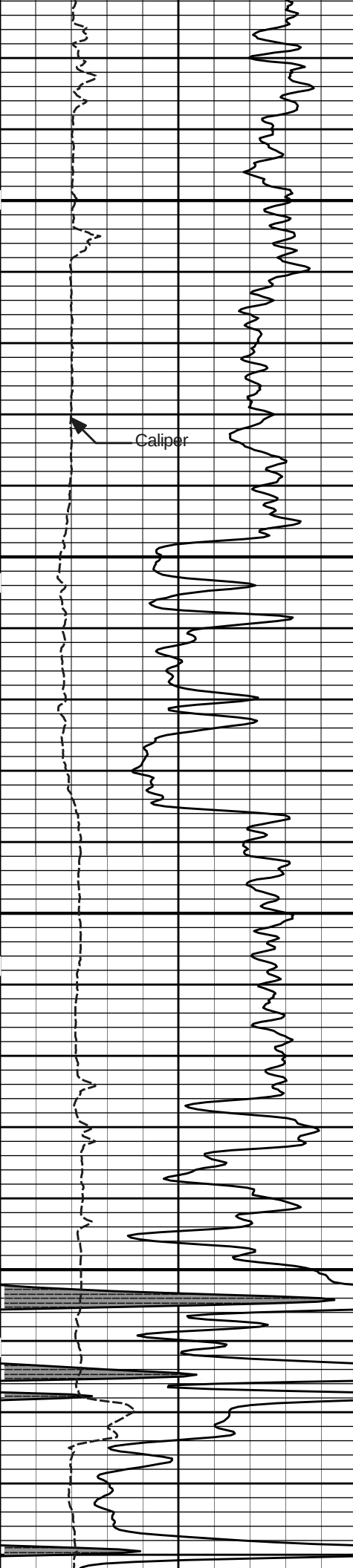
Microlog Lateral

3300

3400



Microlog Normal

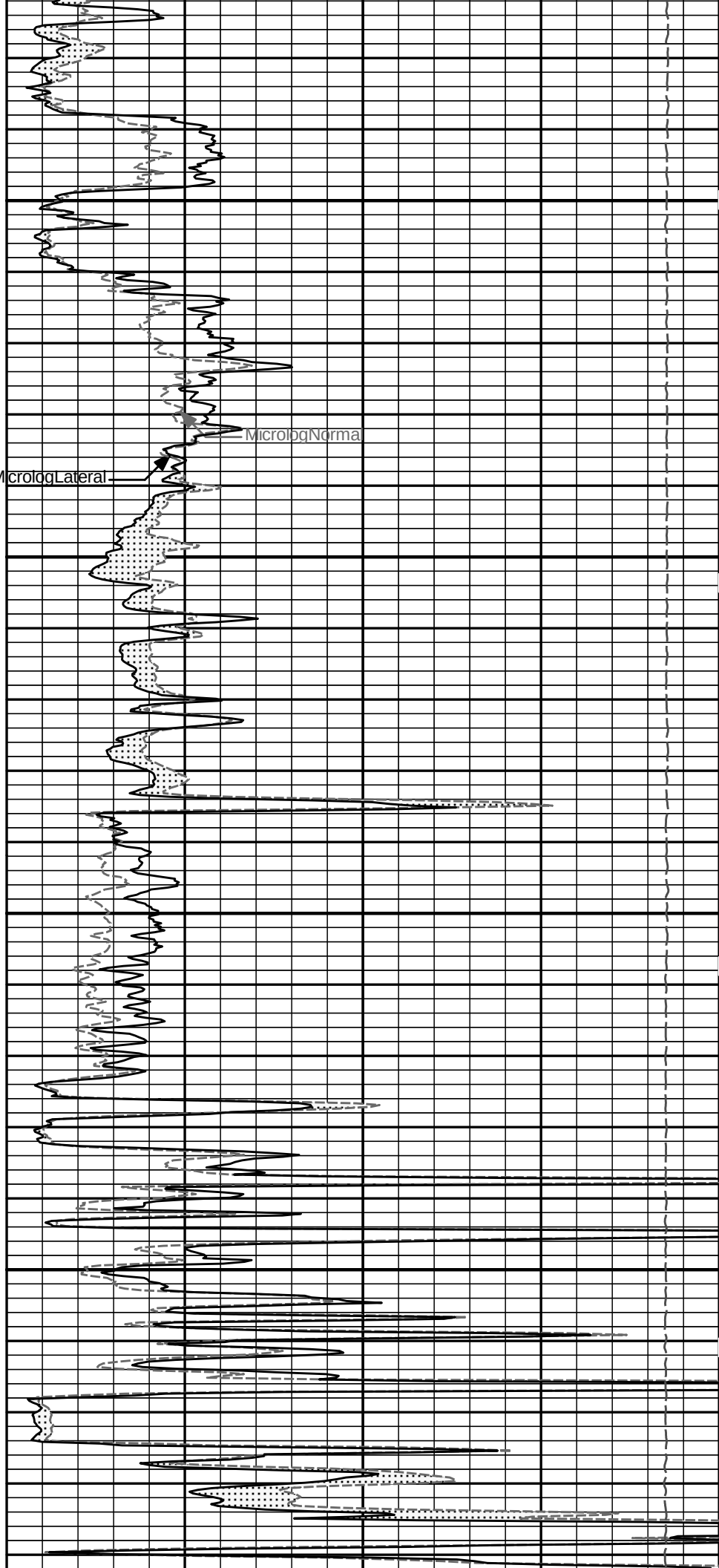


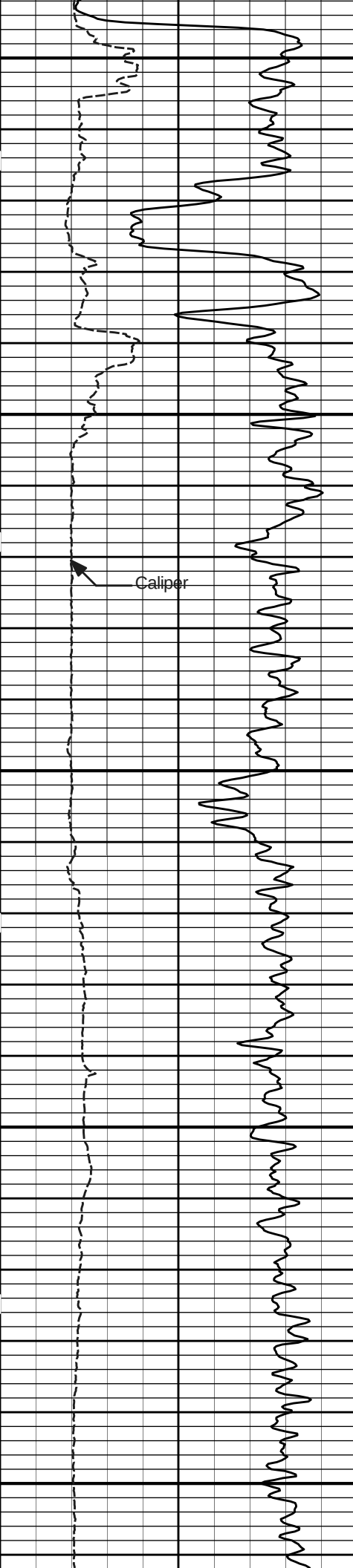
3500

MicrologLateral

MicrologNormal

3600

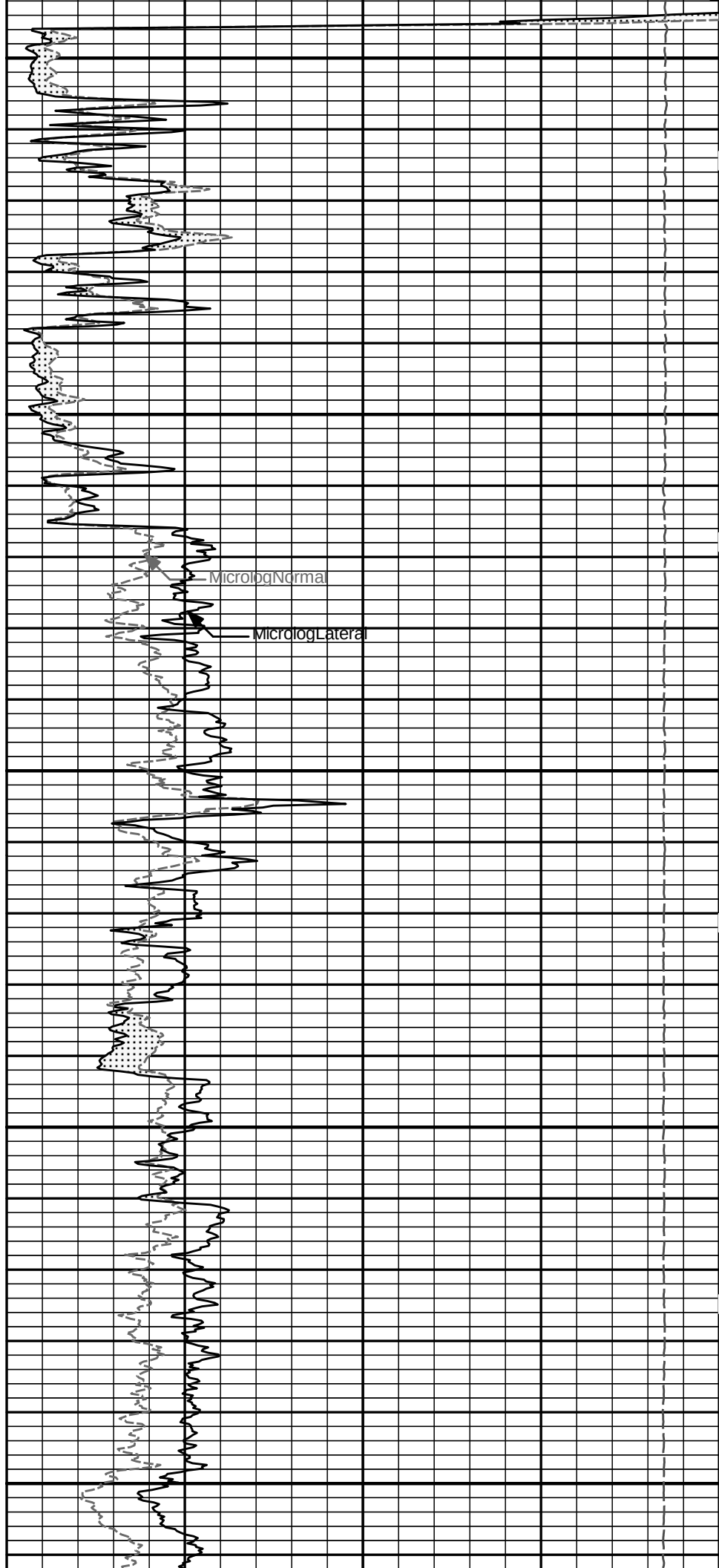




3700

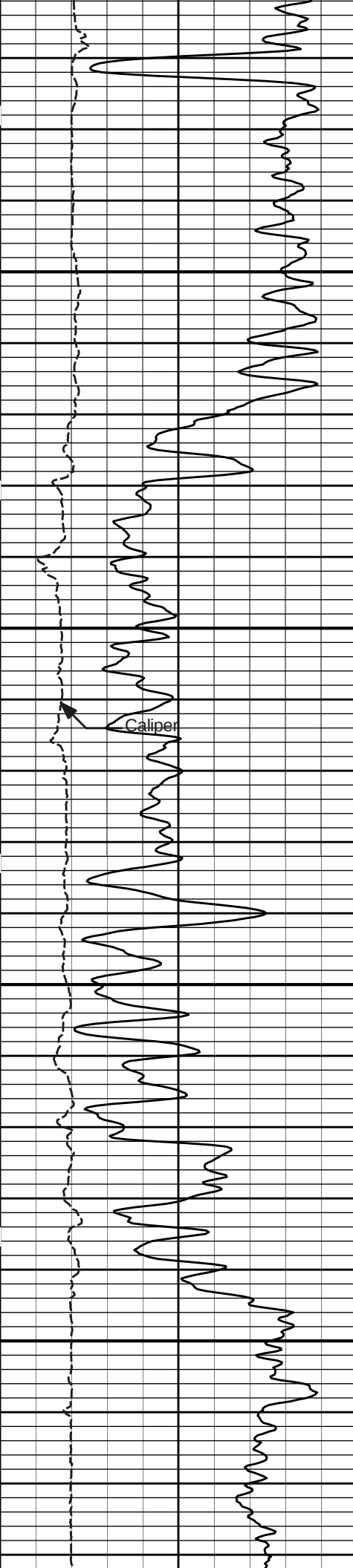
3800

3900



MicrologNormal

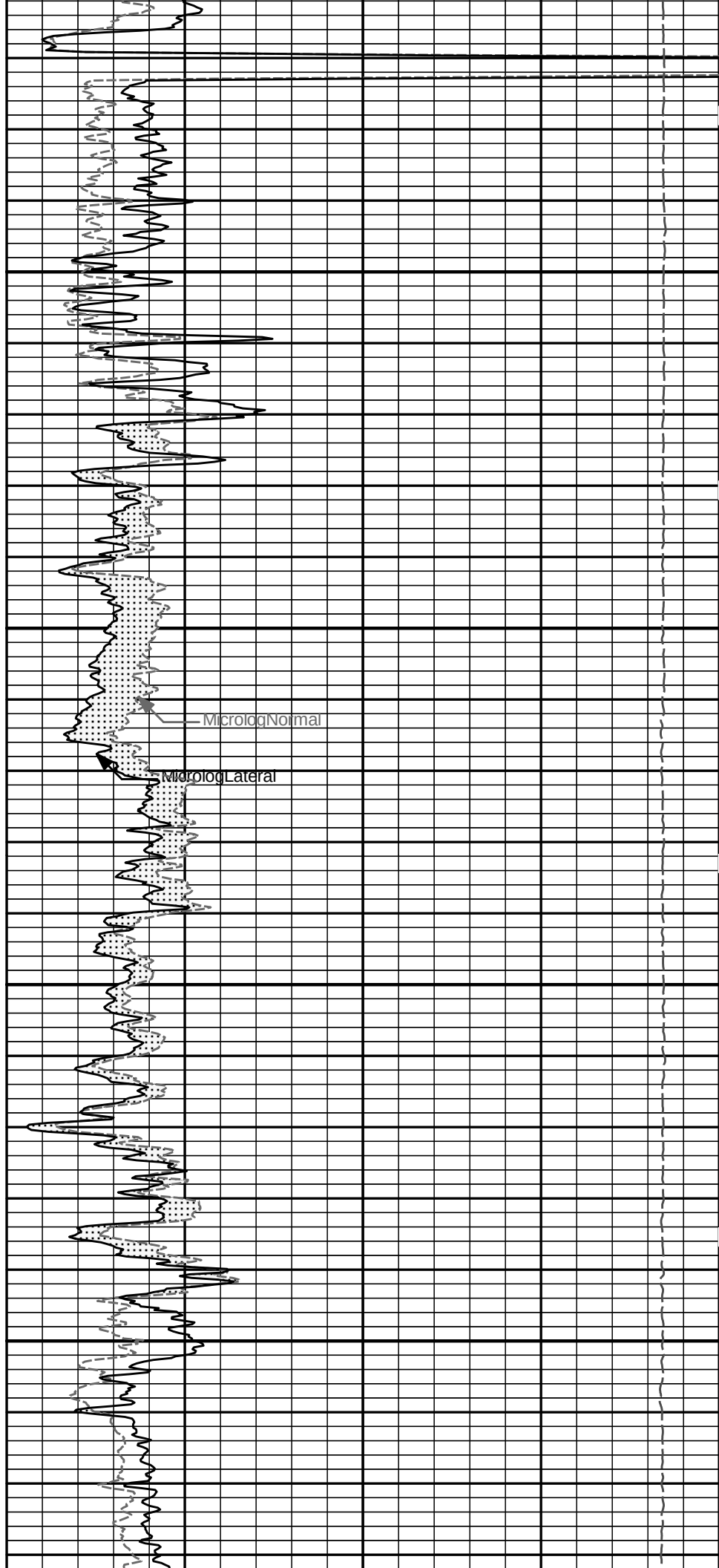
MicrologLateral



4000

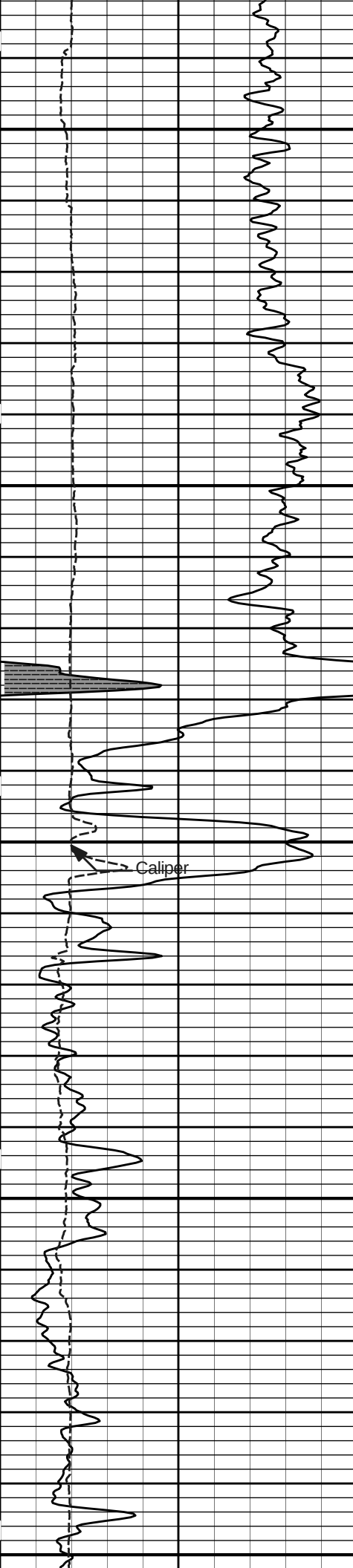
4100

Caliper



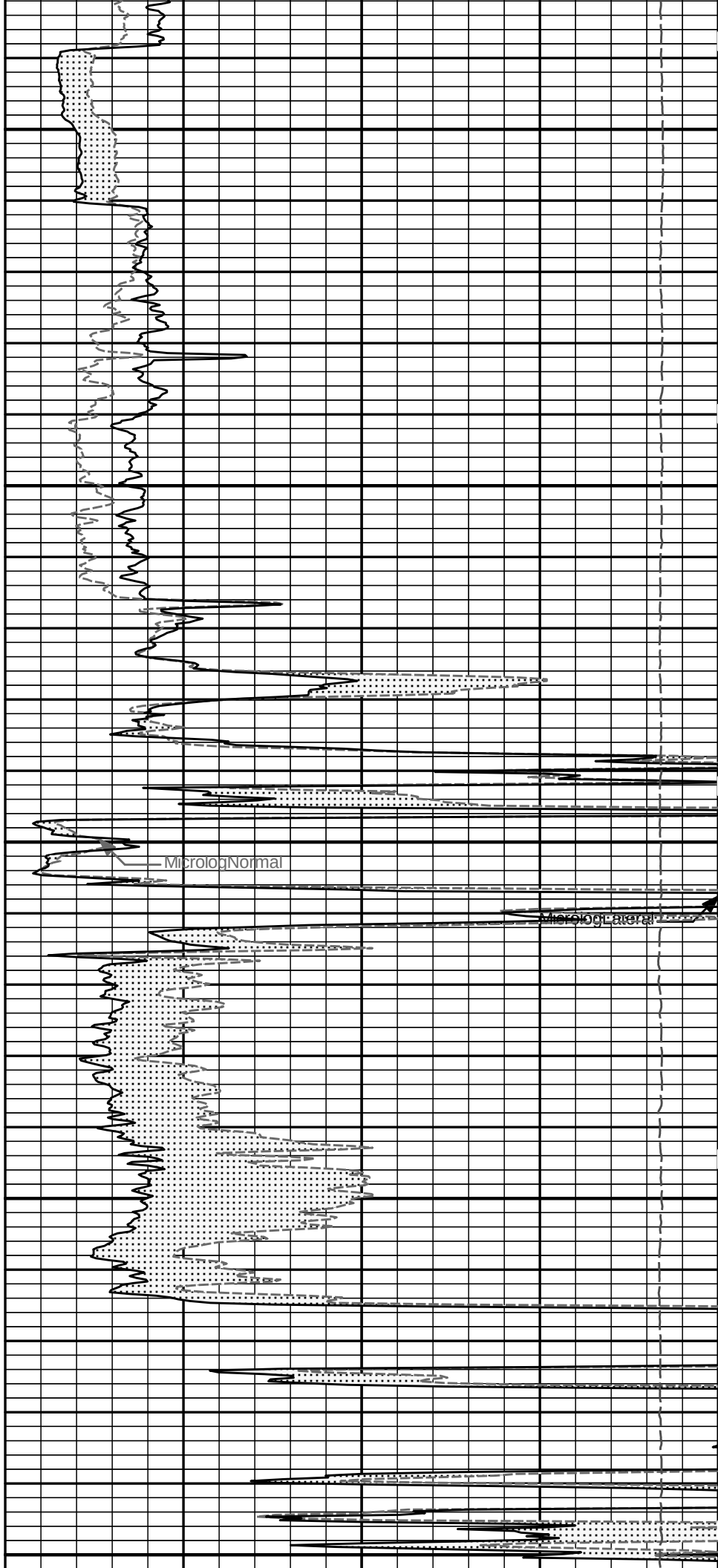
MicrologNormal

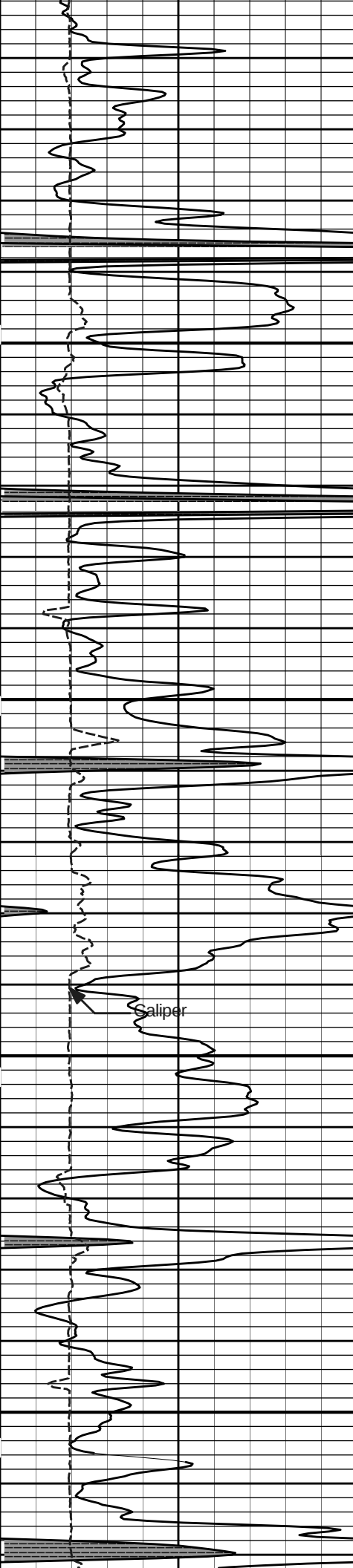
MicrologLateral



4200

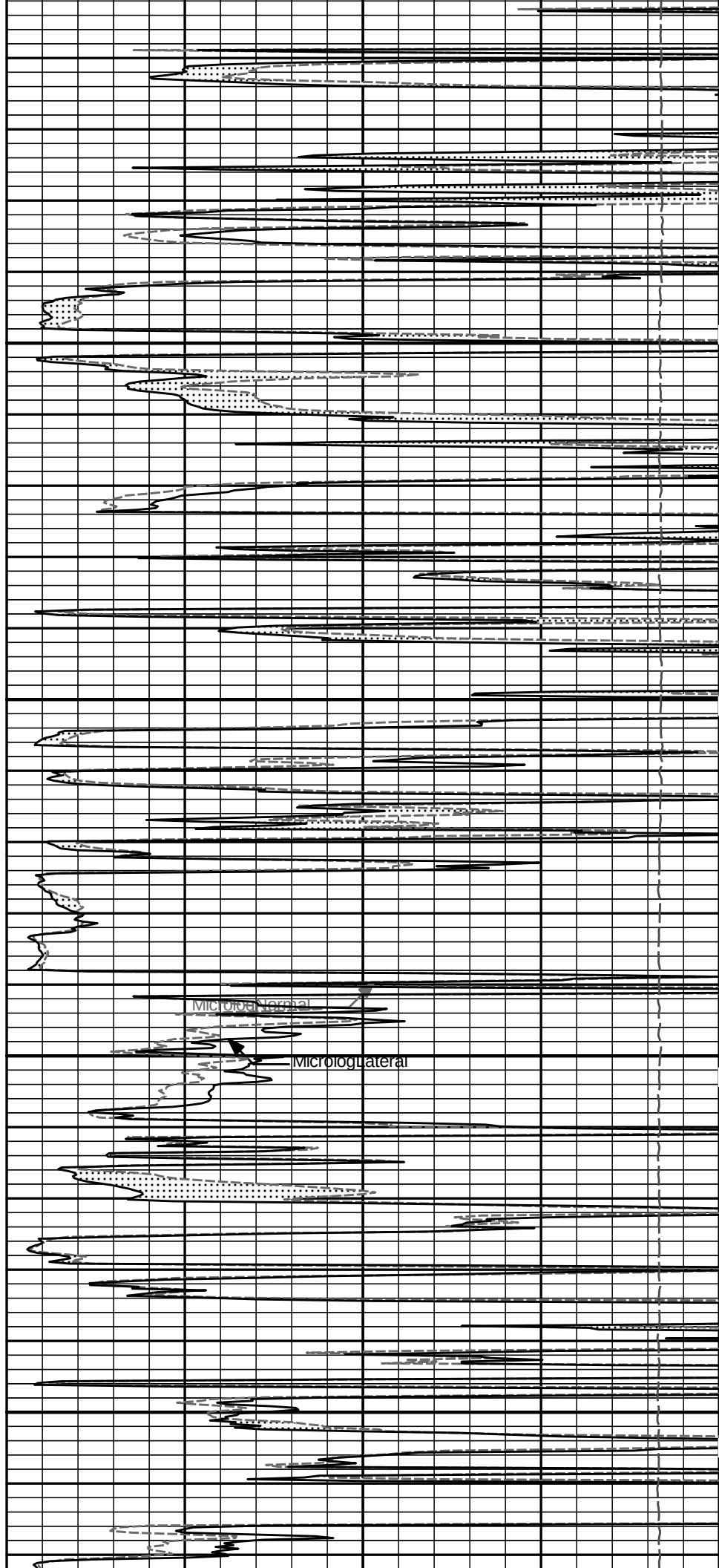
4300





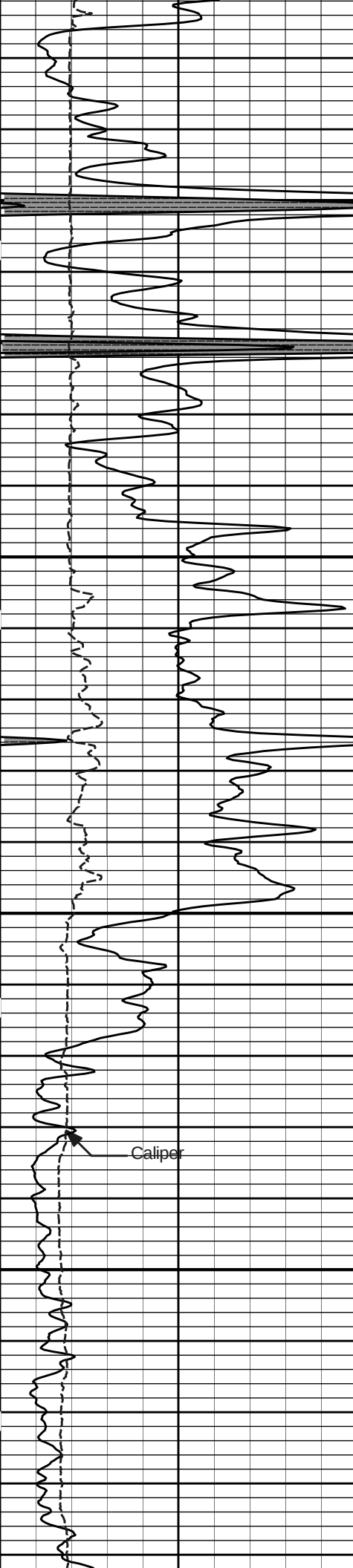
4400

4500



Microglacial

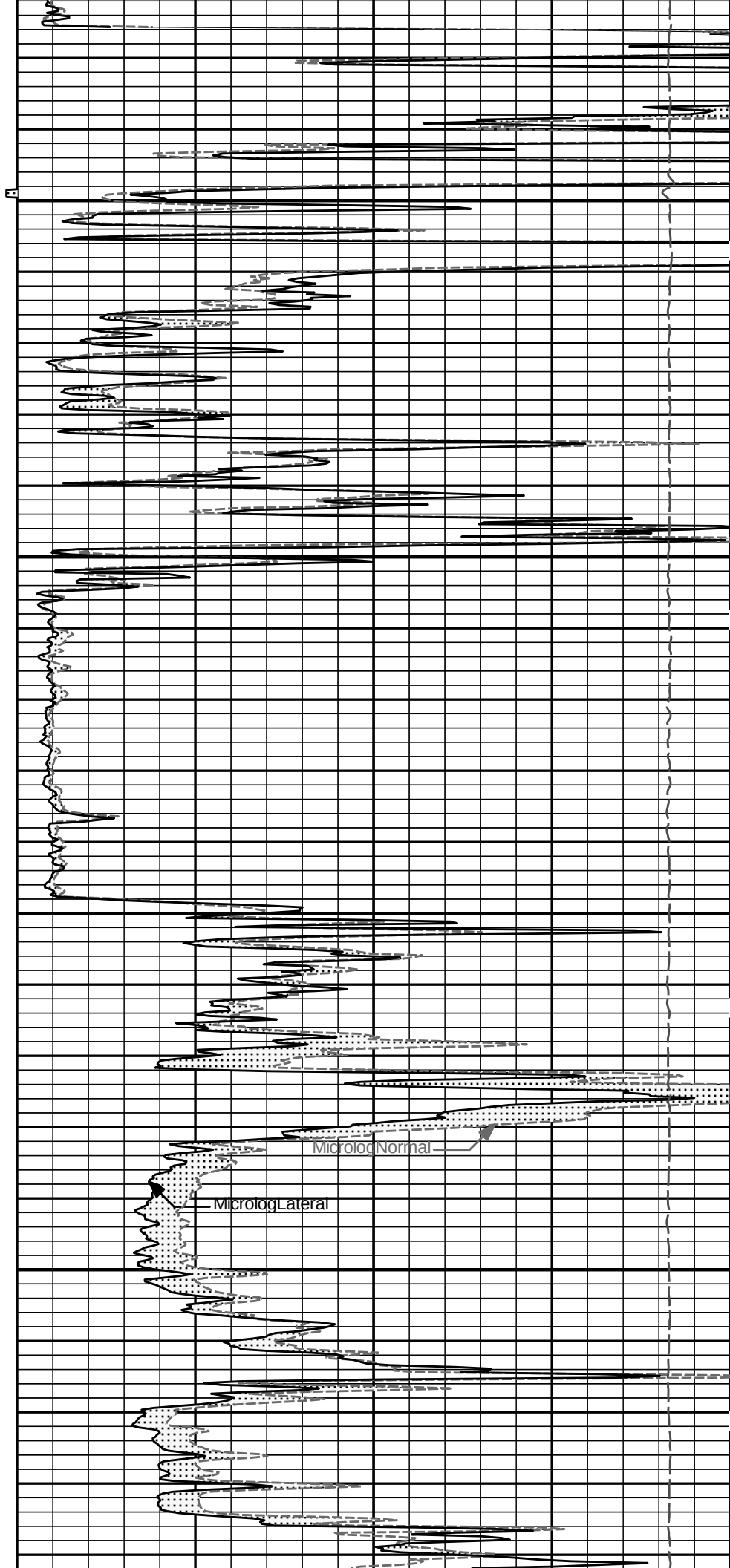
Microglacial



4600

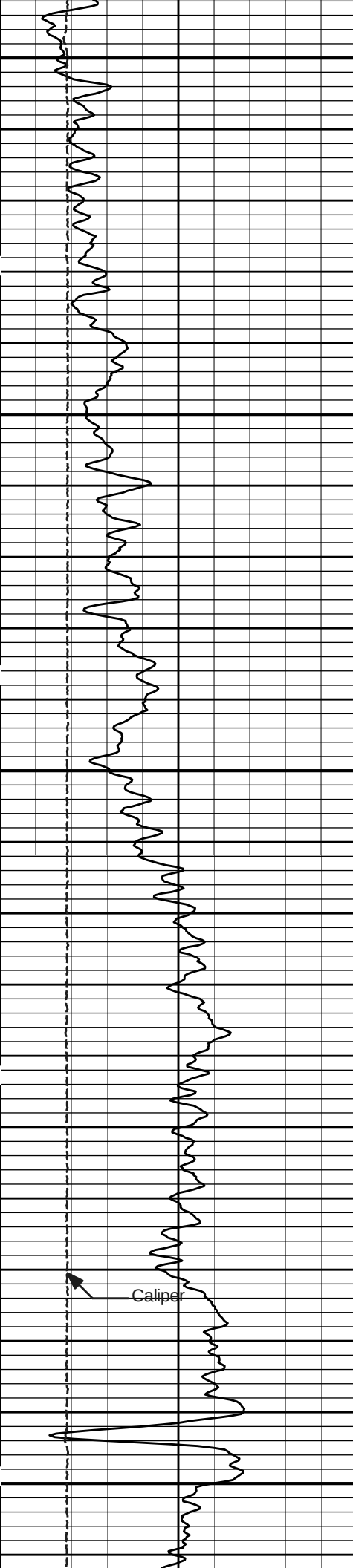
4700

Caliper



MicrologNormal

MicrologLateral

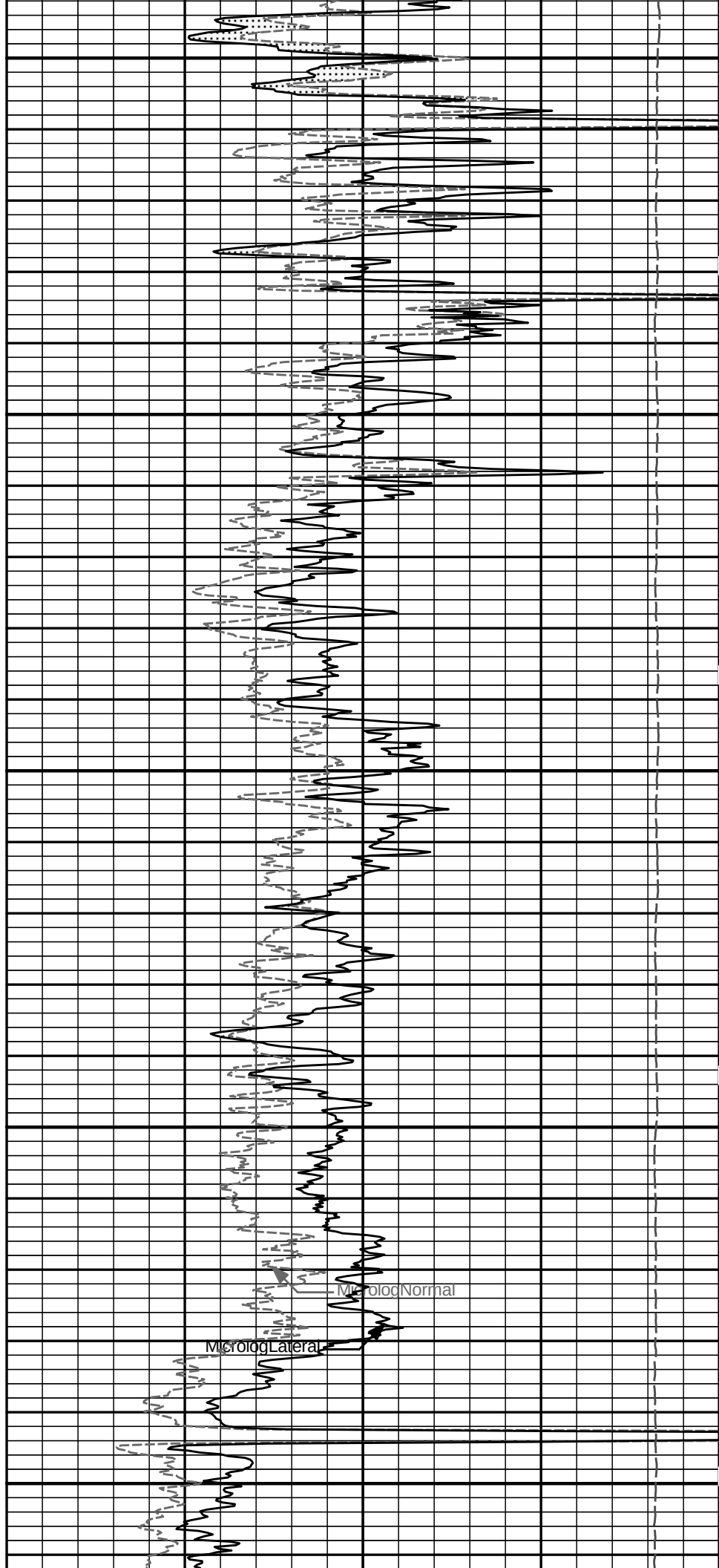


4800

4900

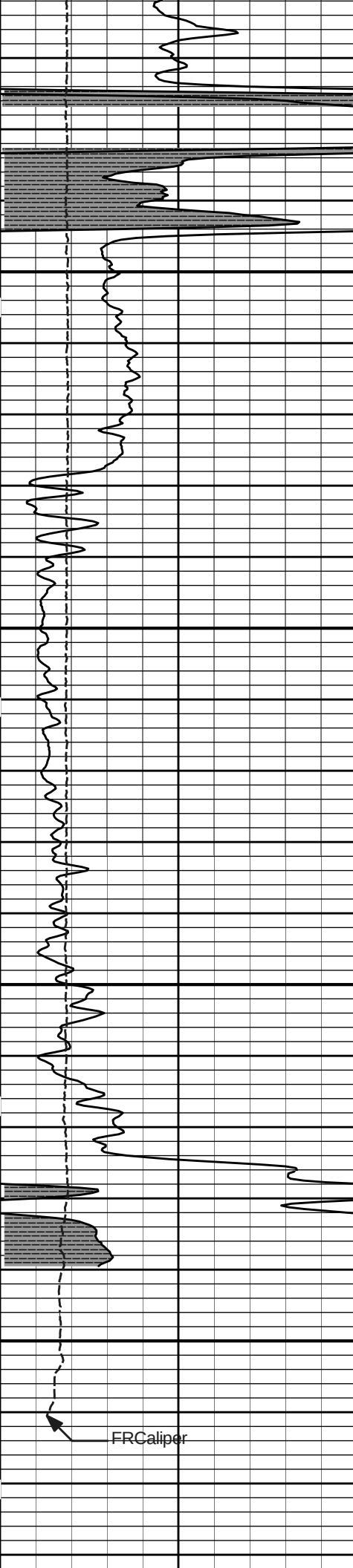
5000

Caliper



MicrologNormal

MicrologLateral



5100

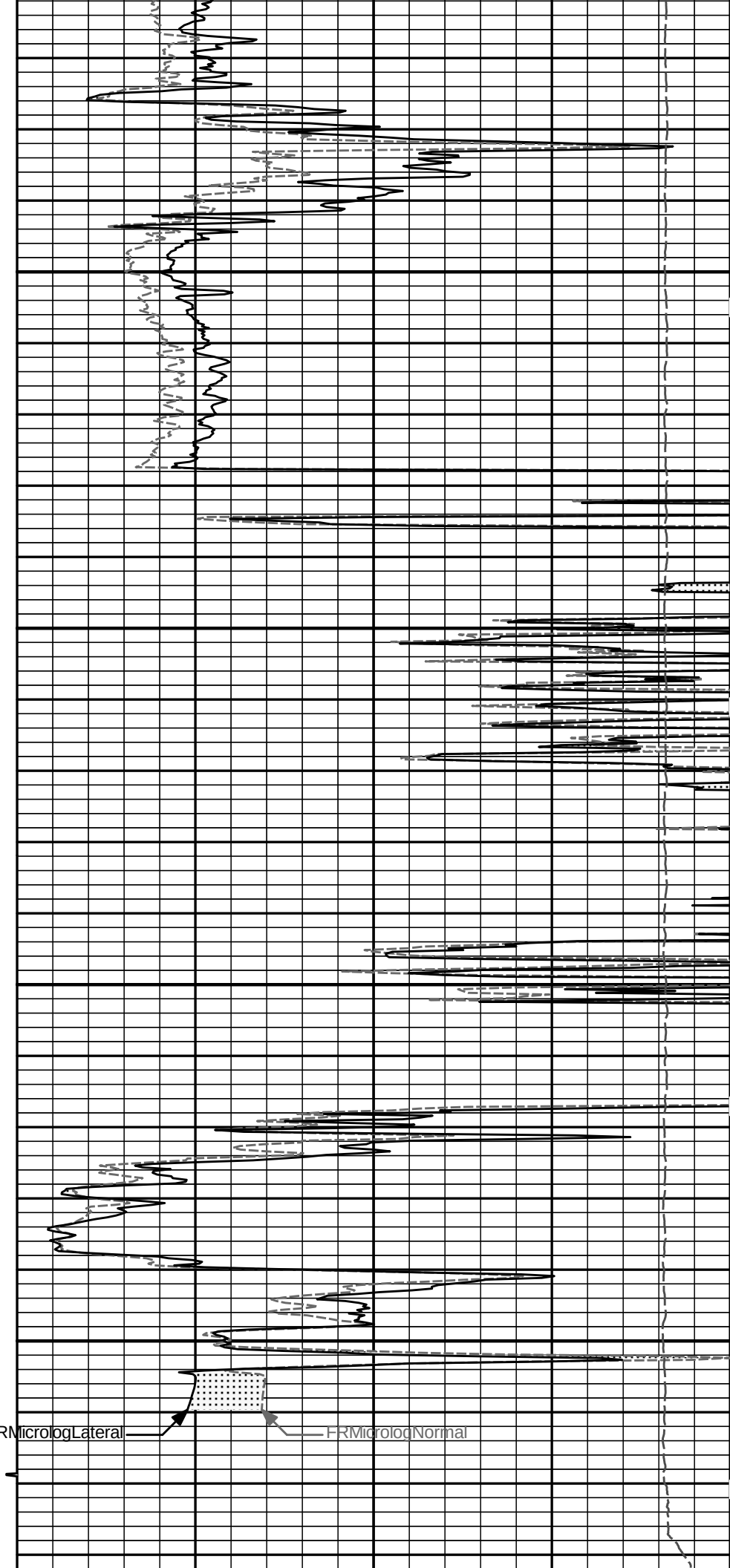
5200

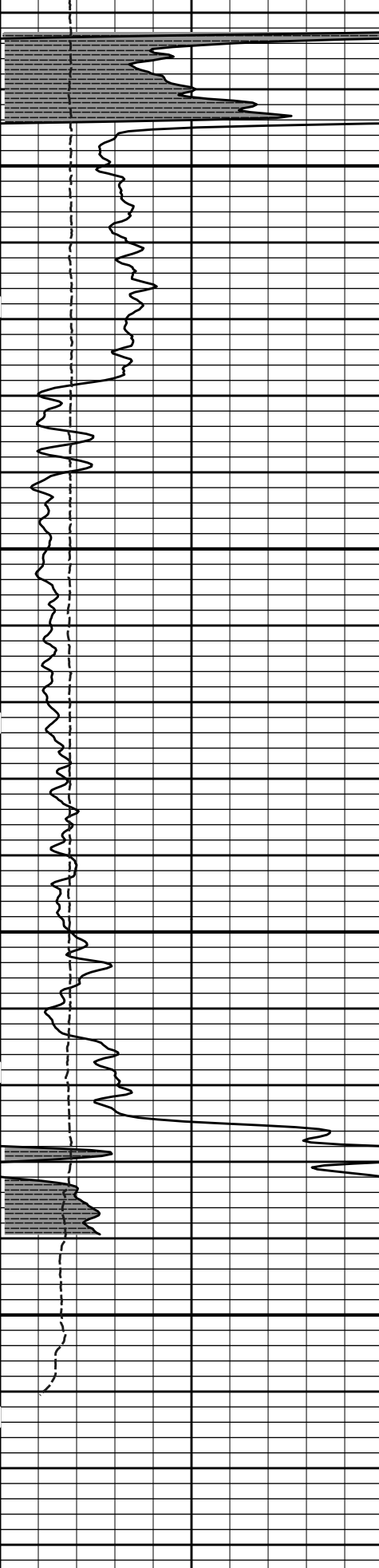
TD

FRCaliper

FRMicrologLateral

FRMicrologNormal



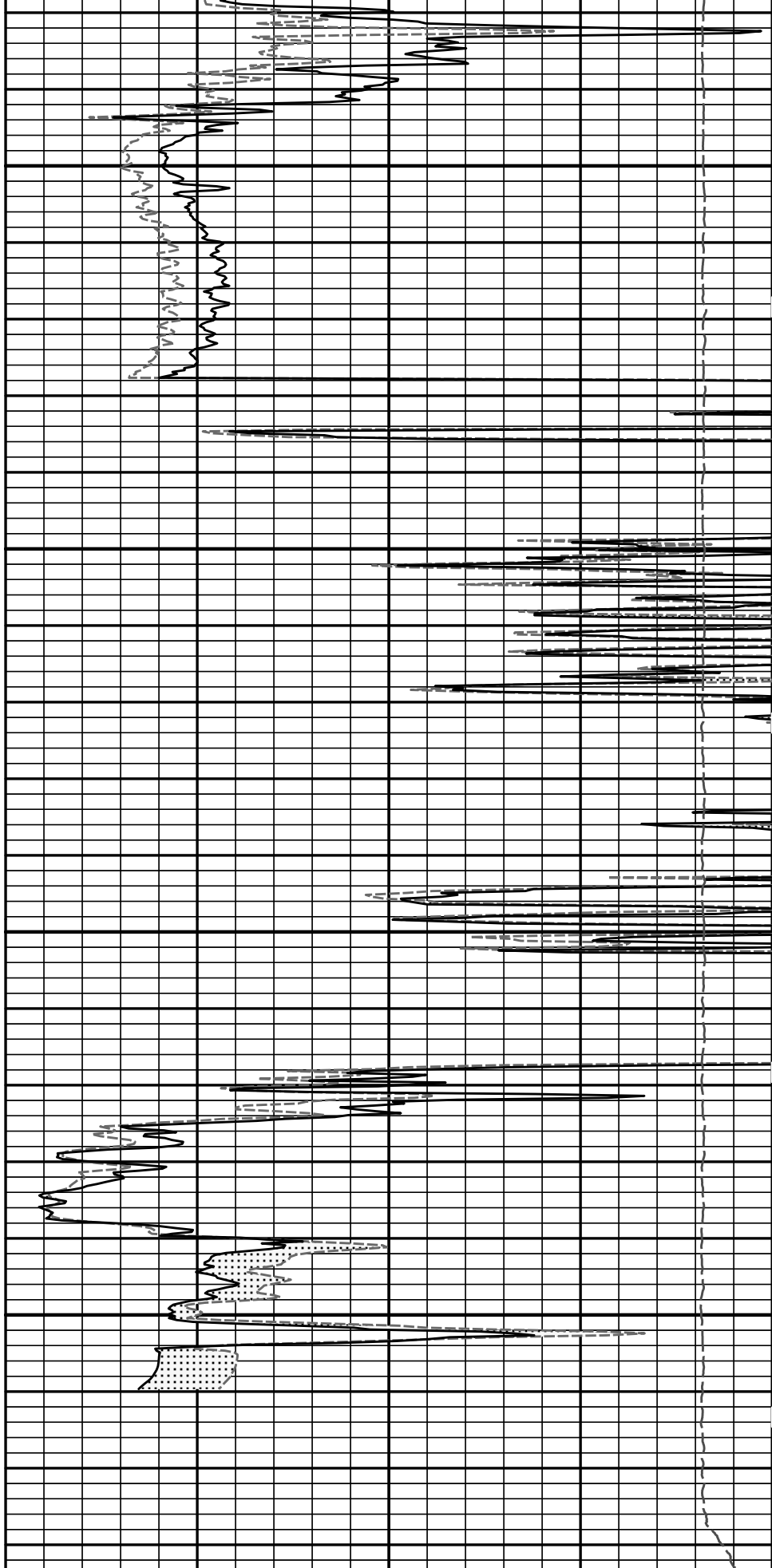


5100

5200

0	Gamma API	150
	api	
6	Caliper	16

1 : 240
ft



15K	Tension	0
	pounds	
0	MicrologLateral	20

inches	ohm-metre
SHALE	0 MicrologNormal 20
	ohm-metre
	PERMEABLE

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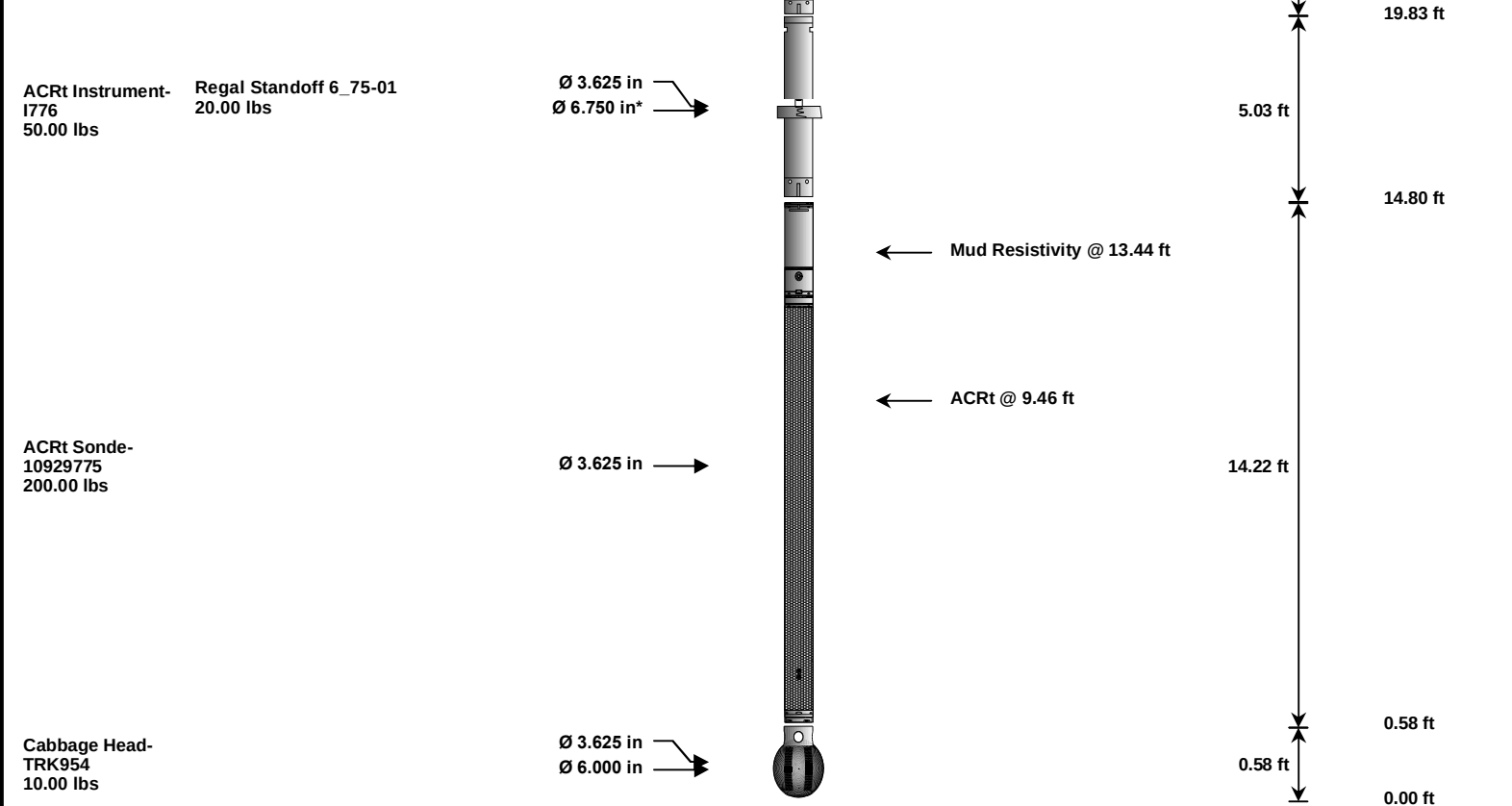
Plot Time: 10-Nov-12 01:42:22
Plot Range: 4950 ft to 5233.33 ft
Data: SHIRLEY_NELSON\Well Based\REPEAT\
Plot File: \\-LOCAL-MICRO\Microlog_IQ_5_rep_lib

REPEAT SECTION

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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	54.51 ft
						52.59 ft
SP Sub-11441709 60.00 lbs		Ø 3.625 in →		← SP @ 50.81 ft	3.74 ft	
						48.85 ft
GTET-10748374 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.79 ft	8.52 ft	
						40.33 ft
DSN Decentralizer- 10755066 6.60 lbs		Ø 5.000 in* →				
DSNT-10735145 174.00 lbs		Ø 3.625 in →			9.69 ft	
				← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft		30.64 ft
SDLT-10673803 360.00 lbs	SDLT Pad-10673790 65.00 lbs Microlog Pad-10673803 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		Microlog @ 22.83 ft SDL Caliper @ 22.65 ft SDL @ 22.64 ft	10.81 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	52.59	300.00
SP	SP Sub		11441709	60.00	3.74	48.85	300.00
GTET	Gamma Telemetry Tool		10748374	165.00	8.52	40.33	60.00
DSNT	Dual Spaced Neutron		10735145	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer		10755066	6.60	5.13	*	33.97
SDLT	Spectral Density Tool		10673803	360.00	10.81	19.83	60.00
SDLP	Density Insite Pad		10673790	65.00	2.55	*	22.04
MICP	Microlog Pad		10673803	8.00	1.00	*	22.33
ACRt	Array Compensated True Resistivity Instrument Section		I776	50.00	5.03	14.80	300.00
RSOF	Regal Standoff 6.75in		01	20.00	0.52	*	17.02
ACRt	Array Compensated True Resistivity Sonde Section		10929775	200.00	14.22	0.58	300.00
CBHD	Cabbage Head		TRK954	10.00	0.58	0.00	300.00
Total				1,148.60	54.51		
* Not included in Total Length and Length Accumulation.							
Data: SHIRLEY_NELSONI0001 SP-GTET-DSNT-SDLT-ACRT-CHIDLE						Date: 09-Nov-12 19:59:58	

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CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 10748374	Reference Calibration Date:	02-Oct-12 10:47:13
Engineer:	S. INGERSOLL	Calibration Date:	02-Nov-12 13:47:38
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1

Calibrator Source S/N: TB-185
 Calibrator API Reference:228.00 api
 Equivalent Calibrator API Reference:232.0 api

Measurement	Measured	Calibrated	Units
Background	38.9	39.2	api
Background + Calibrator	268.7	271.2	api

Background + Calibrator:		229.8	232.0	api	
NATURAL GAMMA RAY TOOL FIELD CALIBRATION					
Tool Name:	GTET - 10748374	Reference Calibration Date:	02-Nov-12 13:47:38		
Engineer:	S. INGERSOLL	Calibration Date:	09-Nov-12 19:48:38		
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1		
Calibrator Source S/N: TB-185					
Calibrator API Reference:228.00 api					
Equivalent Calibrator API Reference:232.0 api					
Field Verification		Shop	Field	Units	
Background		39.2	38.8	api	
Background + Calibrator		271.2	270.8	api	
Calibrator		232.0	232.0	api	
Shop		Field	Difference	Tolerance	
232.0		232.0	0.0	+/- 9.00	
MICRO LOG SHOP CALIBRATION					
Tool Name:	Microlog Pad - 10673803	Reference Calibration Date:	06-Sep-12 18:33:47		
Engineer:	T. HYDE	Calibration Date:	02-Oct-12 10:08:53		
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1		
Host Tool Name:	DSNT - 10735145				
CALIBRATION COEFFICIENT SUMMARY					
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.08	-0.01	0.00	-0.00	ohmm
Calibration Point #1	-0.07	0.00	0.01	0.00	ohmm
Calibration Point #2	20.33	20.00	18.00	20.00	ohmm
Internal Reference	19.83	19.52	19.92	22.14	ohmm
Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units
Tool Zero	1.25		0.77		V
Calibration Point #1	4.21		1.56		V
Calibration Point #2	5506.76		6331.90		V
Internal Reference	5373.49		7008.79		V
MICRO LOG FIELD CHECK					
Tool Name:	Microlog Pad - 10673803	Reference Calibration Date:	02-Oct-12 10:08:53		
Engineer:	S. INGERSOLL	Calibration Date:	09-Nov-12 19:46:53		
Software Version:	WL INSITE R3.6.0 (Build 3)	Calibration Version:	1		
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.01	-0.02	-0.00	0.01	ohmm
Internal Reference	19.52	19.57	22.14	22.20	ohmm
Summary					
Signal	Shop	Field	Difference	Tolerance	
Microlog Normal	19.52	19.57	-0.05	+/- 0.80	
Microlog Lateral	22.14	22.20	-0.06	+/- 0.80	
CALIBRATION SUMMARY					

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10748374						
Gamma Ray Calibrator	232.0	232.0	-----	0.0	+/- 9.00	api
Microlog Pad-10673803						
MicroLog Normal	19.52	19.57	-----	-0.05	+/-0.80	ohmm
MicroLog Lateral	22.14	22.20	-----	-0.06	+/-0.80	ohmm
Data: SHIRLEY_NELSON\0001 SP-GTET-DSNT-SDLT-ACRT-CHIDLE					Date: 09-Nov-12 21:23:57	

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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	8.800	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	5230.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	Temperature Master Tool	NONE	
	SHARED	BHSM	Borehole Size Master Tool	NONE	
	Rwa / 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	
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
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
BOTTOM				
Data: SHIRLEY_NELSON0001 SP-GTET-DSNT-SDLT-ACRT-CHIDLE			Date: 09-Nov-12 20:05:32	

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	50.81	NO	
SP	Spontaneous Potential	50.81	BLK	1.250
SPR	Raw Spontaneous Potential	50.81	NO	
SPO	Spontaneous Potential Offset	50.81	NO	
GTET				
TPUL	Tension Pull	42.79	NO	
GR	Natural Gamma Ray API	42.79	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	42.79	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	42.79	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	32.54	NO	
RNDS	Near Detector Telemetry Counts	32.64	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.39	TRI	0.583
DSNT	DSN Standoff	0.250	NO	

DNTH	DSN Tool Temperature	32.64	NO	
DSNS	DSN Tool Status	32.54	NO	
ERND	Near Detector Telemetry Counts EVR	32.64	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	33.39	BLK	0.000
ENTM	DSN Tool Temperature EVR	32.64	NO	
SDLT				
TPUL	Tension Pull	22.65	NO	
PCAL	Pad Caliper	22.65	TRI	0.250
ACAL	Arm Caliper	22.65	TRI	0.250
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
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	
SDLT Pad				
TPUL	Tension Pull	22.64	NO	
NAB	Near Above	22.46	BLK	0.920
NHI	Near Cesium High	22.46	BLK	0.920
NLO	Near Cesium Low	22.46	BLK	0.920
NVA	Near Valley	22.46	BLK	0.920
NBA	Near Barite	22.46	BLK	0.920
NDE	Near Density	22.46	BLK	0.920
NPK	Near Peak	22.46	BLK	0.920
NLI	Near Lithology	22.46	BLK	0.920
NBAU	Near Barite Unfiltered	22.46	BLK	0.250
NLIU	Near Lithology Unfiltered	22.46	BLK	0.250
FAB	Far Above	22.81	BLK	0.250
FHI	Far Cesium High	22.81	BLK	0.250
FLO	Far Cesium Low	22.81	BLK	0.250
FVA	Far Valley	22.81	BLK	0.250
FBA	Far Barite	22.81	BLK	0.250
FDE	Far Density	22.81	BLK	0.250
FPK	Far Peak	22.81	BLK	0.250
FLI	Far Lithology	22.81	BLK	0.250
PTMP	Pad Temperature	22.65	BLK	0.920
NHV	Near Detector High Voltage	22.04	NO	
FHV	Far Detector High Voltage	22.04	NO	
ITMP	Instrument Temperature	22.04	NO	
DDHV	Detector High Voltage	22.04	NO	
Microlog Pad				
TPUL	Tension Pull	22.83	NO	
MINV	Microlog Lateral	22.83	BLK	0.750
MNOR	Microlog Normal	22.83	BLK	0.750
Data: SHIRLEY_NELSONI0001 SP-GTET-DSNT-SDLT-ACRT-CHIDLE			Date: 09-Nov-12 20:05:09	

COMPANY	VAL ENERGY, INC.		
WELL	SHIRLEY NELSON 2-25		
FIELD	MAYBERRY NORTH		
COUNTY	BARBER	STATE	KANSAS
HALLIBURTON		MICROLOG	