

HALLIBURTON

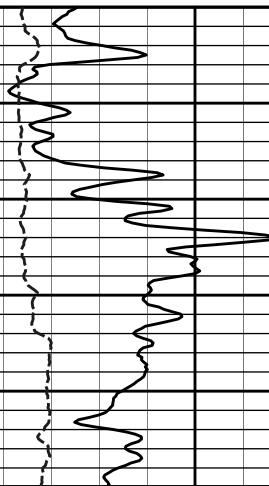
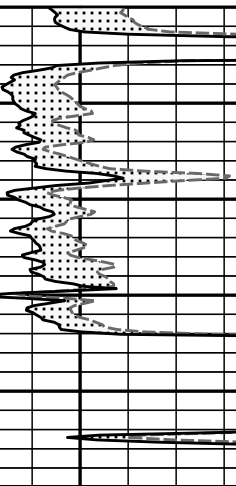
MICROLOG

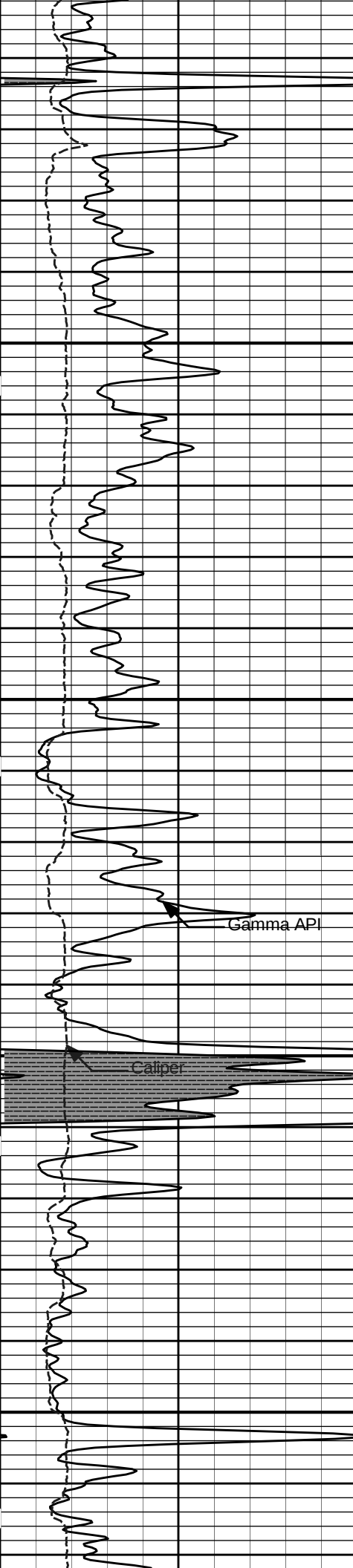
COMPANY				OXY USA INC					
WELL				W.E. PREEDY #7					
FIELD				LEMON					
COUNTY				HASKELL					
STATE				KANSAS					
Permanent Datum		GL		Sect. 33		Twp. 29S		Rge. 33W	
Log measured from		KB						Elev. 2959.0 ft	
Drilling measured from		KB						Elev. 2975.0 ft	
								D.F. 2959.0 ft	
Date		29-Mar-12							
Run No.		ONE							
Depth - Driller		5731.00 ft							
Depth - Logger		5717.0 ft							
Bottom - Logged Interval		5679.0 ft							
Top - Logged Interval		3800.0 ft							
Casing - Driller		8.625 in		@				@	
Casing - Logger		1824.0 ft							
Bit Size		7.875 in		@				@	
Type Fluid in Hole		WATER BASED MUD							
Density		9.5 ppq		49.00 s/qt					
PH		8.00 pH		10.0 cpq					
Source of Sample		FLOWLINE							
Rm @ Meas. Temperature		0.650 ohmm		@				@	
Rmf @ Meas. Temperature		0.53 ohmm		@				@	
Rmc @ Meas. Temperature		0.790 ohmm		@				@	
Source Rmf		MEASURED		MEASURED					
Rm @ BHT		0.80 ohmm		@				@	
Time Since Circulation		20.0 hr							
Time on Bottom		29-Mar-12 23:45							
Max. Rec. Temperature		142.0 degF		@				@	
Equipment		10782954		LIBERAL					
Recorded By		J. BOLLOM						C. HAVERKAMP	
Witnessed By		D. ADAM							

Fold here

Service Ticket No.: 9371896				API Serial No.: 15-081-21956				PGM Version: WL INSITE R3.4.2 (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	P90	RUBBER	ADJ	N/A									
Rmc @ Meas. Temp.	@		@																
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.	10811258			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.	GTET			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			

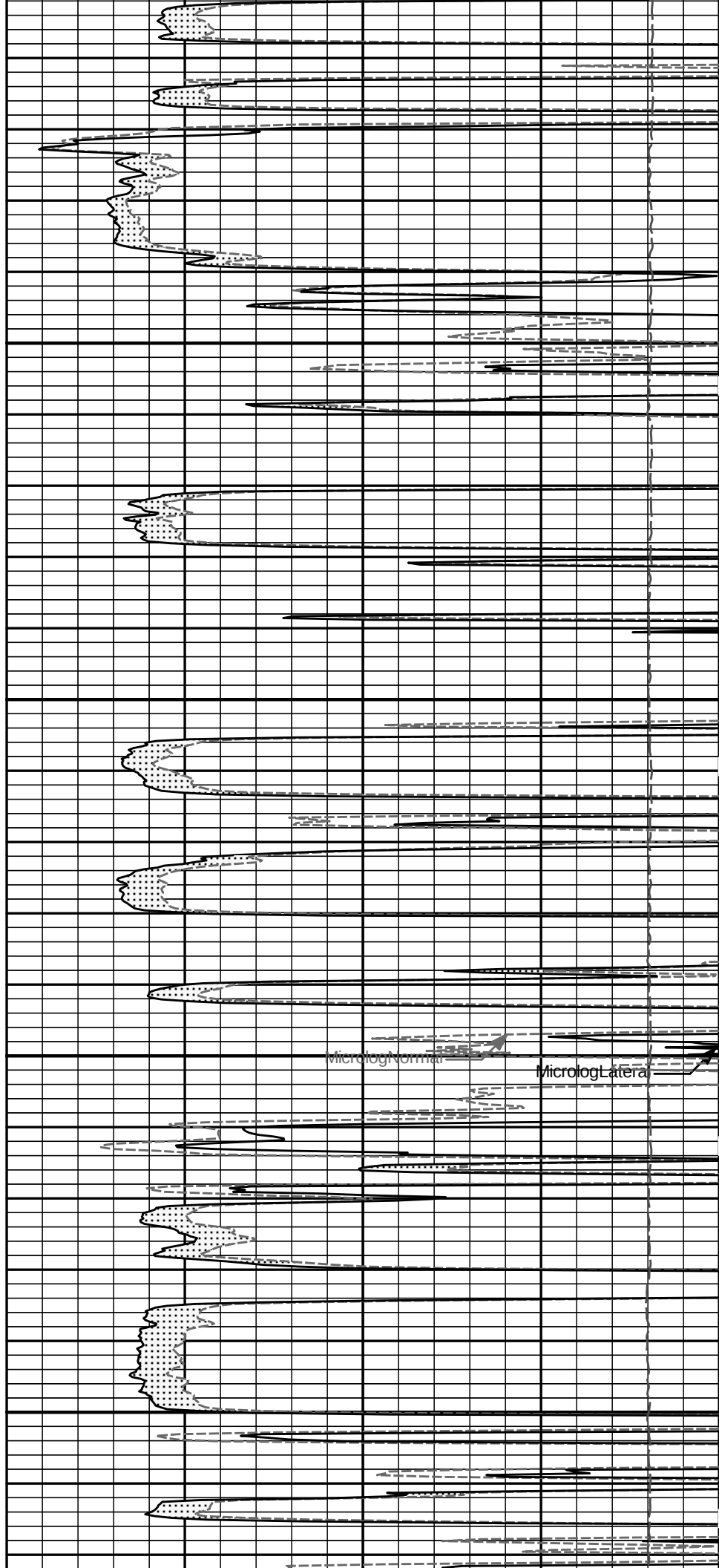
GENERAL			GAMMA		ACOUSTIC		DENSITY		NEUTRON					
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	5717	3800	REC	0	150									
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING														
POST TOOL SURVEYS NOT PERFORMED AS PER CUSTOMER REQUEST														
CHLORIDES REPORTED AT 3000 MG/L														
LCM REPORTED AT TRACE AMOUNTS														
TODAY'S CREW: F. VILLA & B. TERREL														
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														

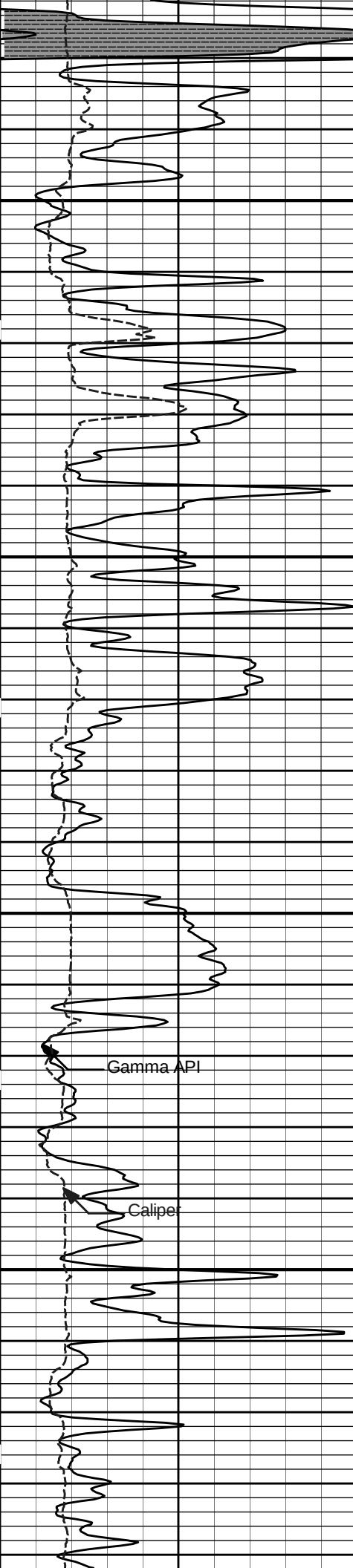
			PERMEABLE		
SHALE		Tension Pull	0	MicrologNormal	20
Gamma API		Tension Pull	0	ohm-metre	
150	api	10	0	MicrologLateral	20
6	Caliper	1 : 240		ohm-metre	
16	inches	ft		15K	Tension pounds
		3000			



3900

4000



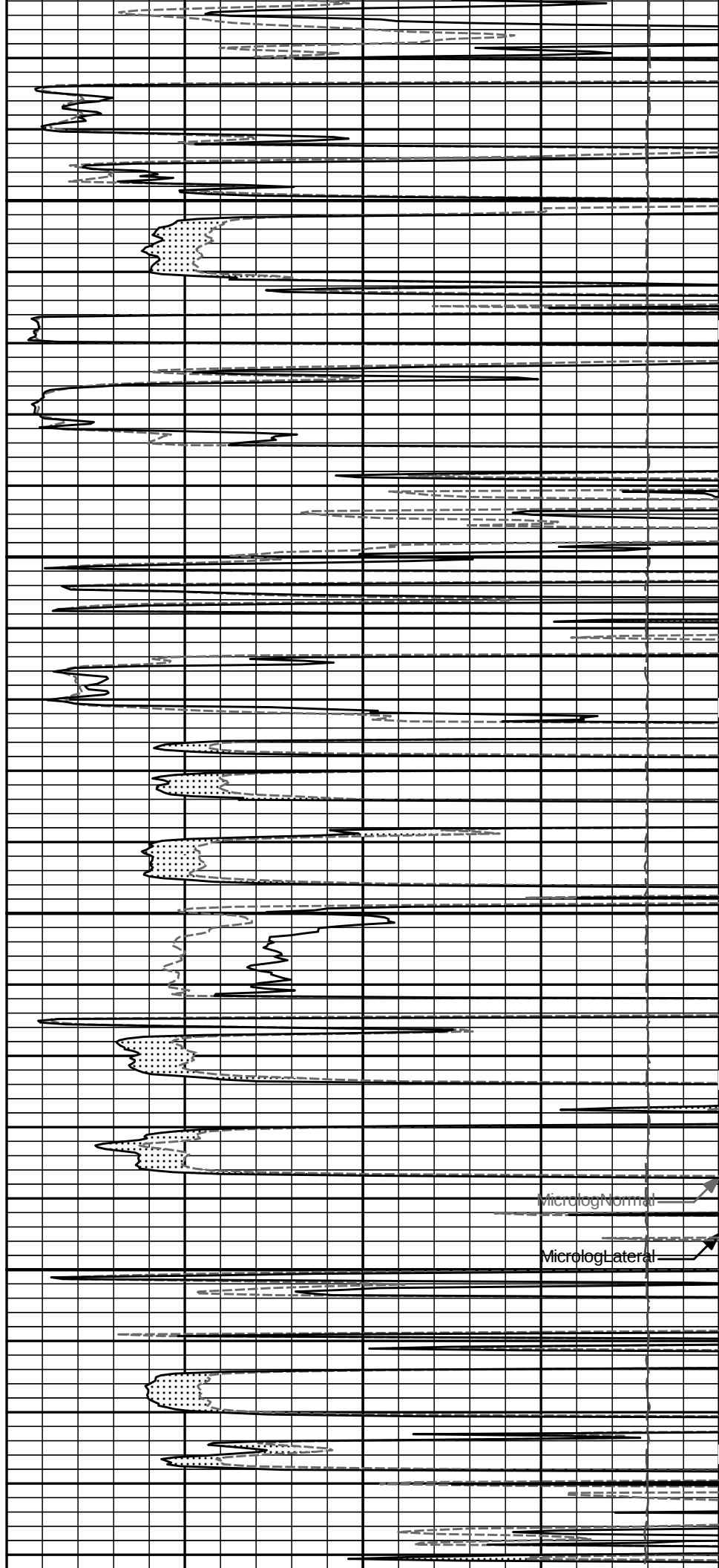


4100

4200

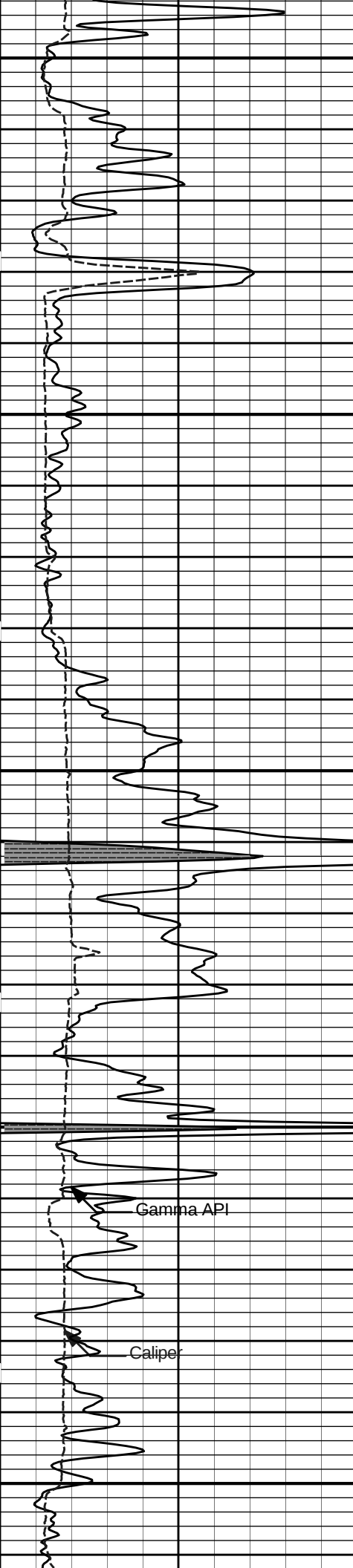
Gamma API

Caliper



MicrologNormal

MicrologLateral



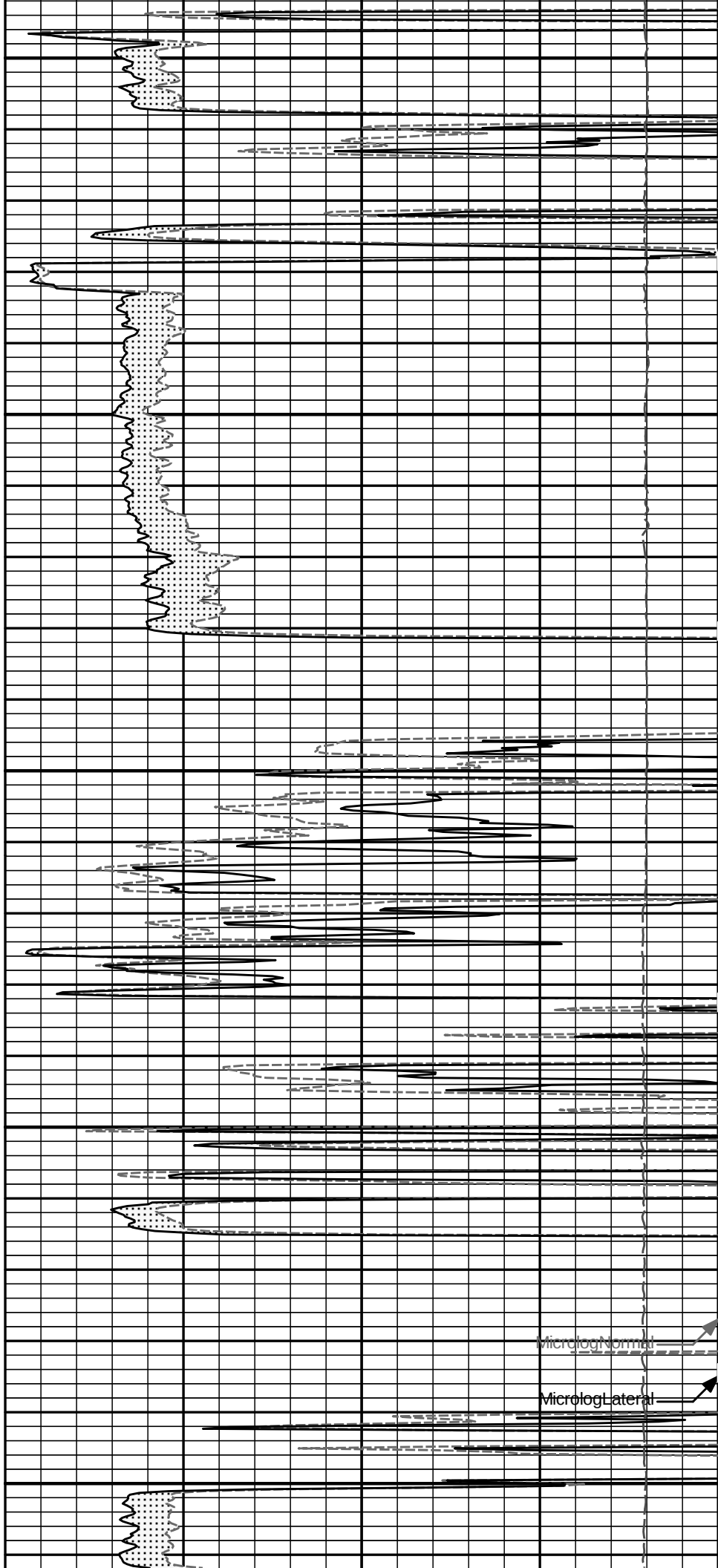
4300

4400

4500

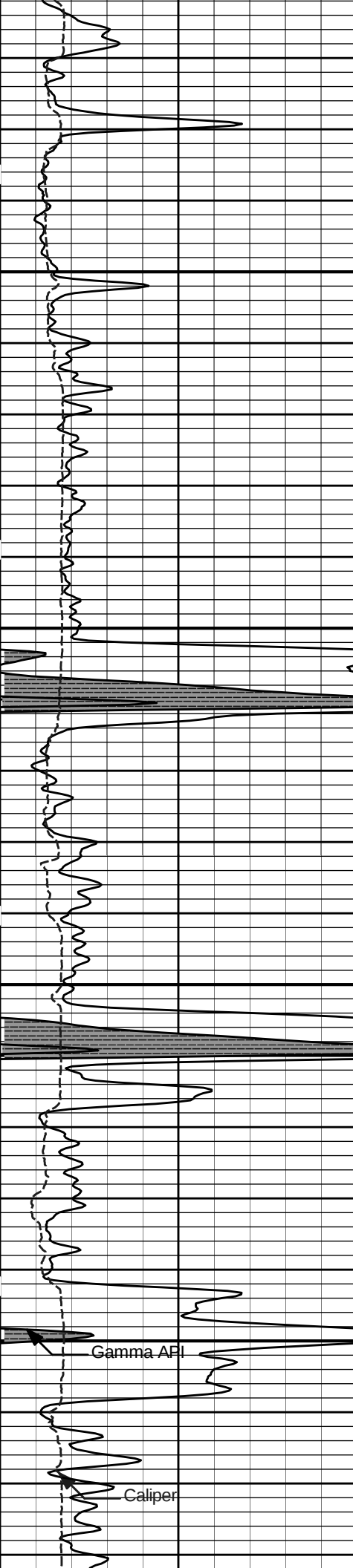
Gamma API

Caliper



MicrologNormal

MicrologLateral

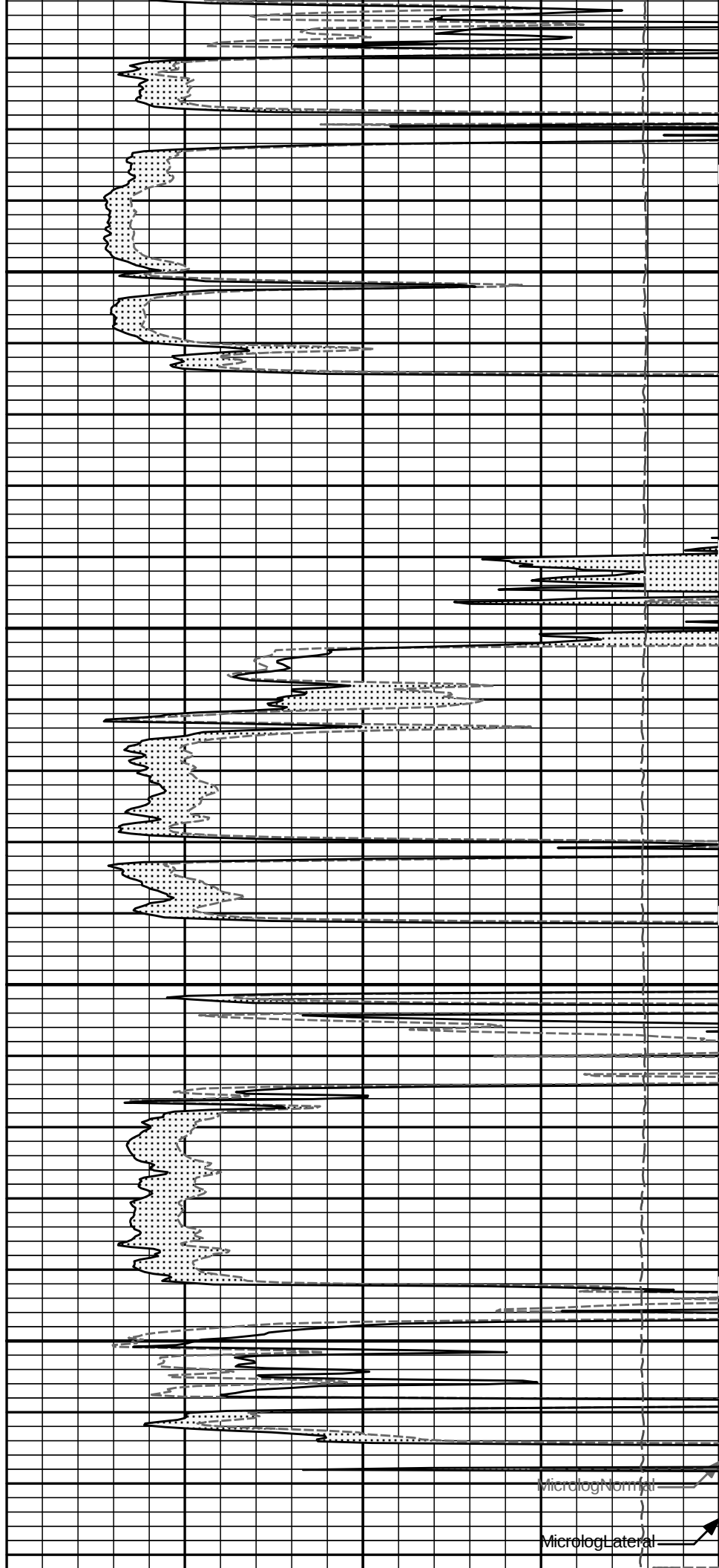


4600

4700

Gamma API

Caliper



MicrologNormal

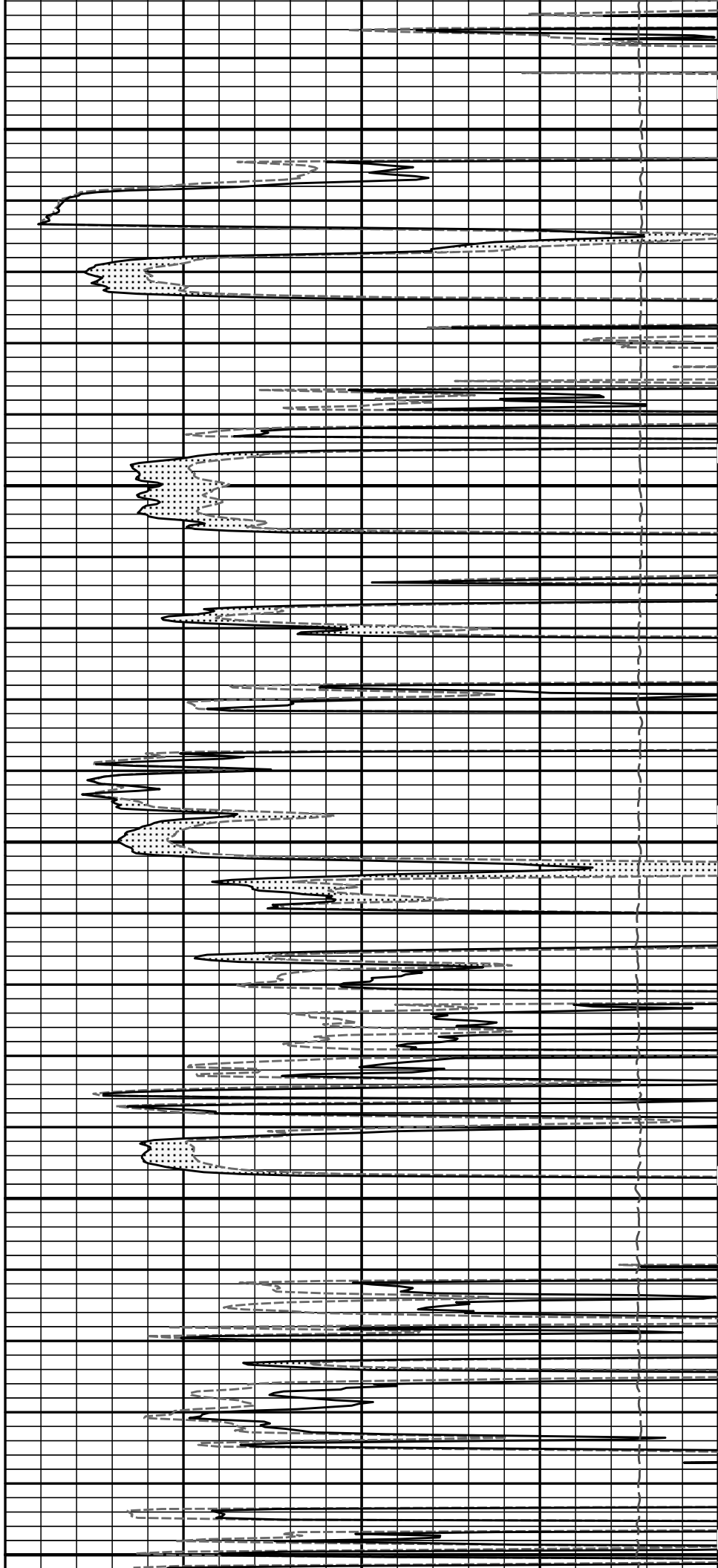
MicrologLateral

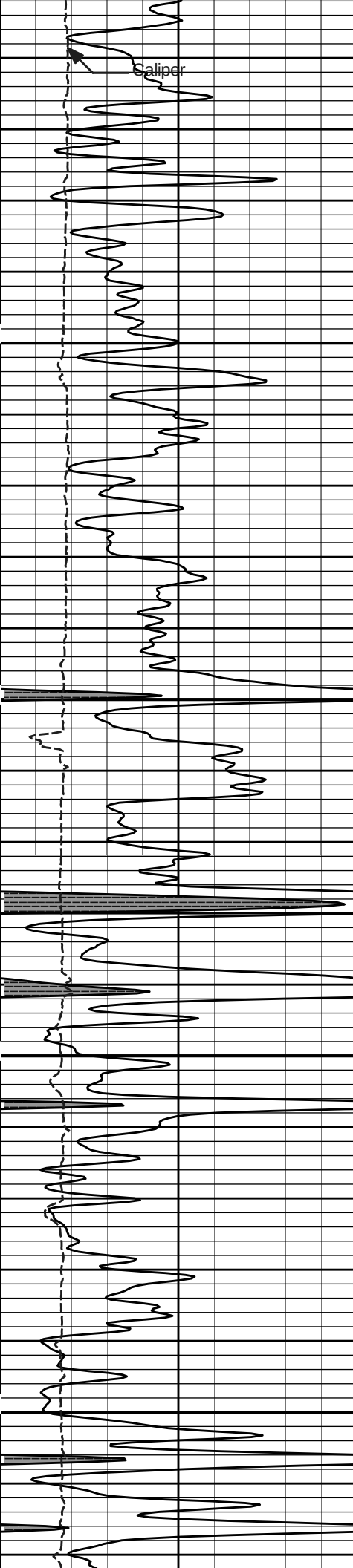


4800

4900

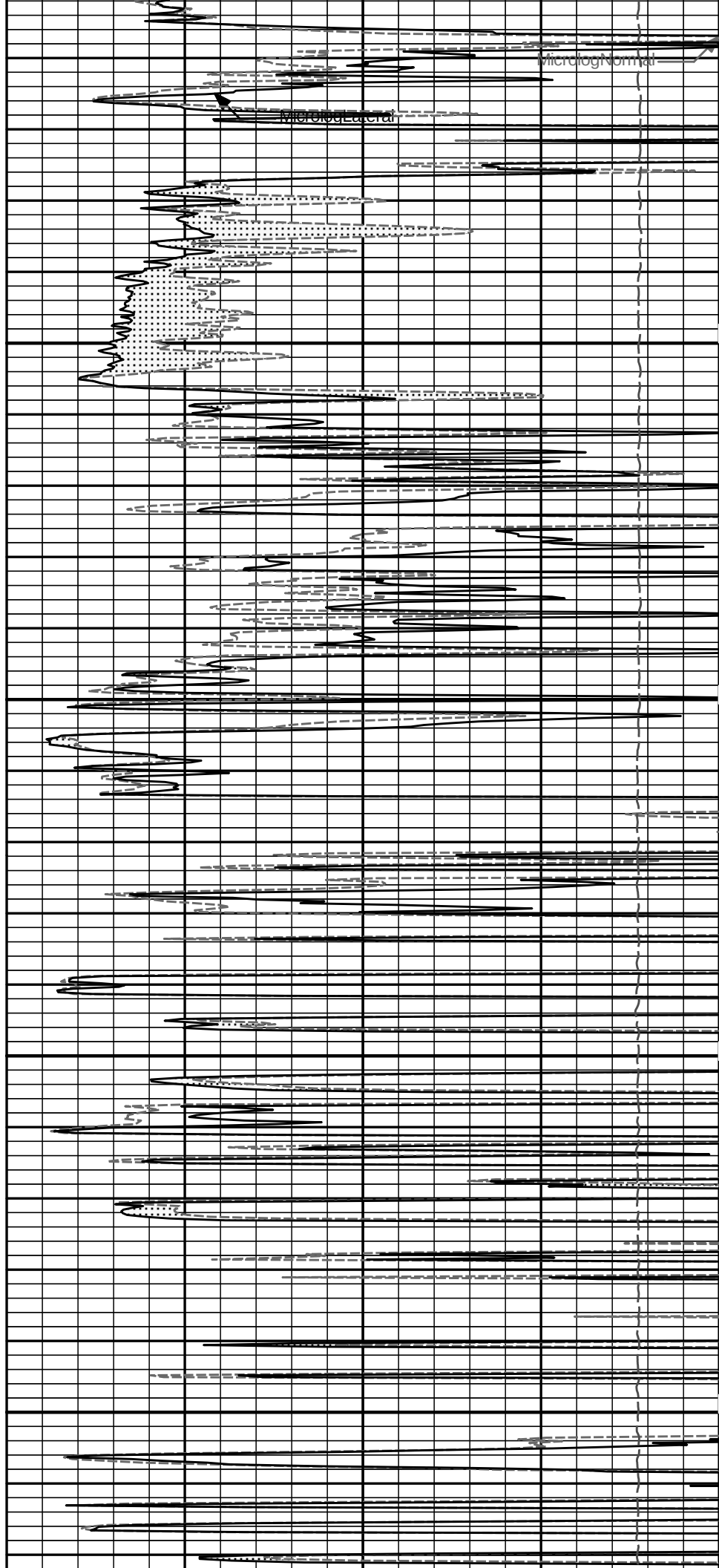
Gamma API

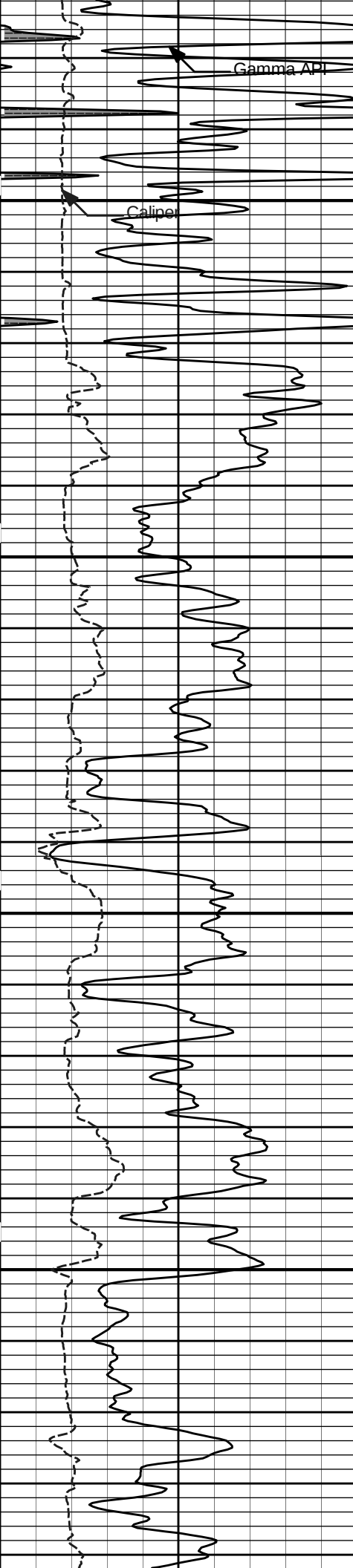




5000

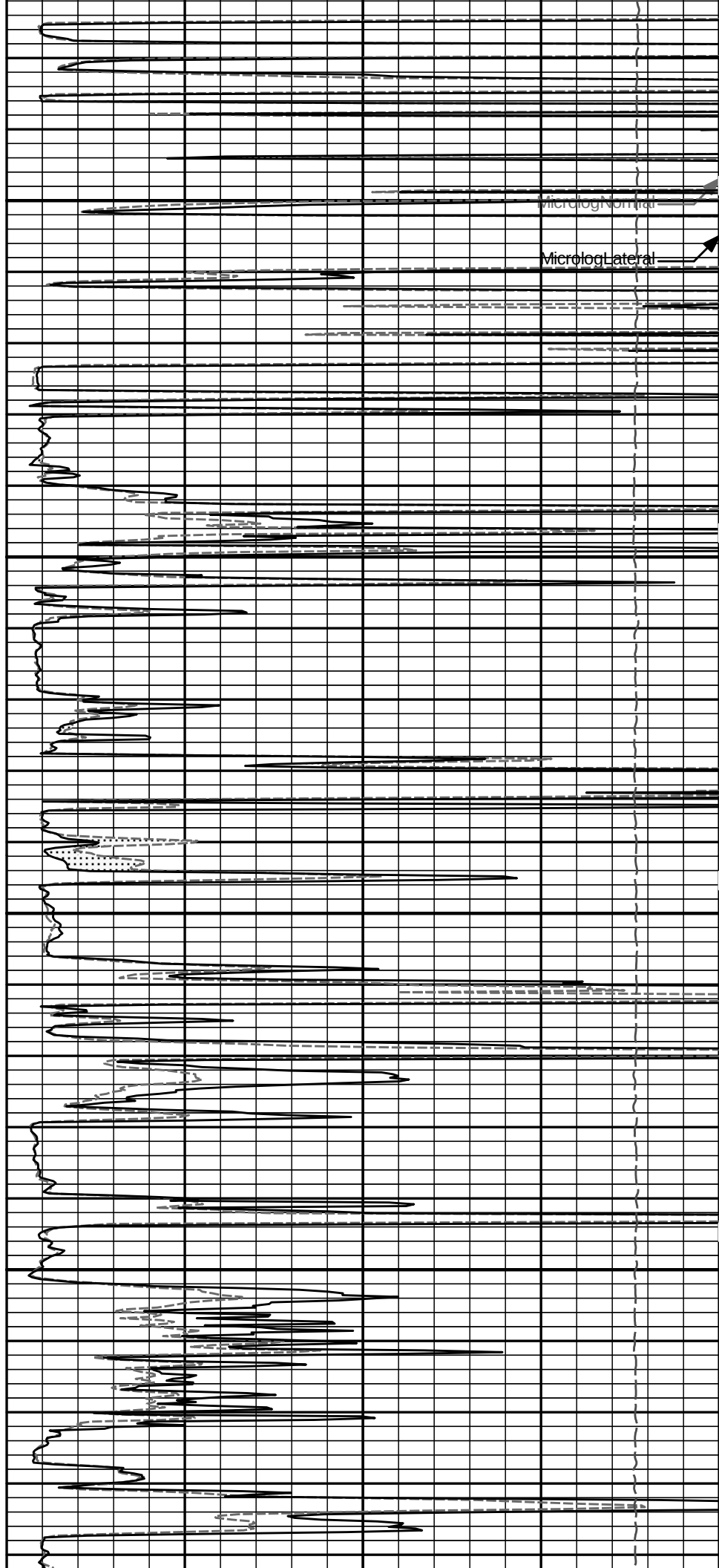
5100

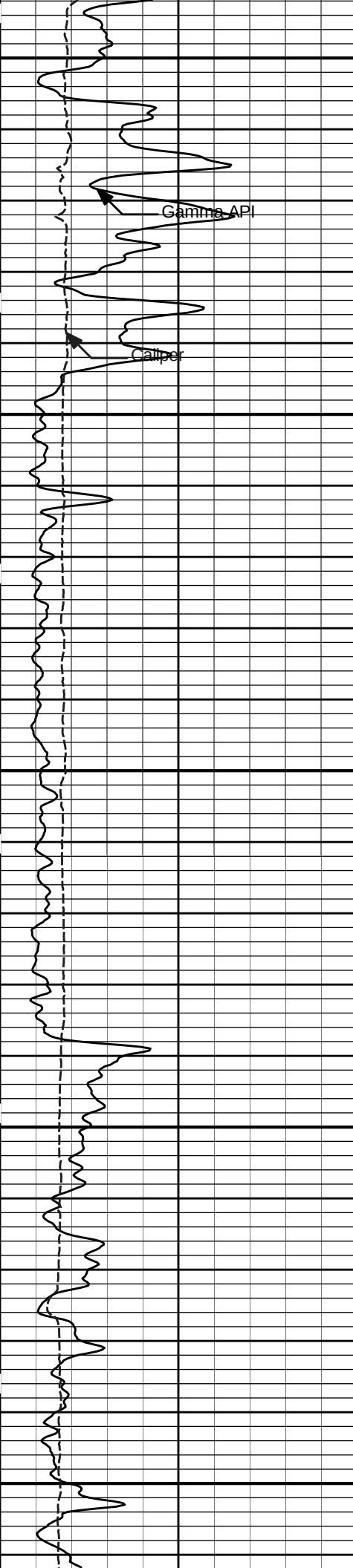




5200

5300





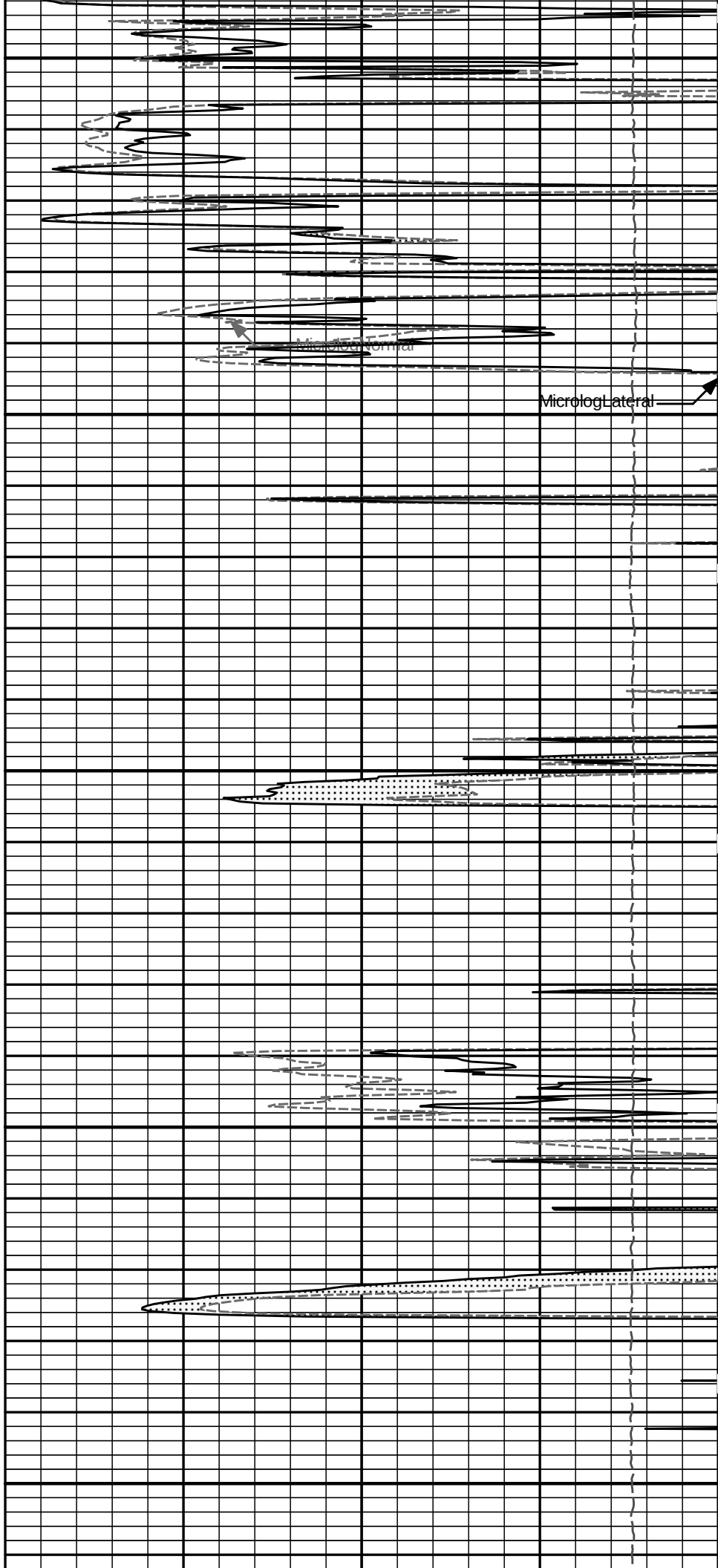
5400

Gamma API

Caliper

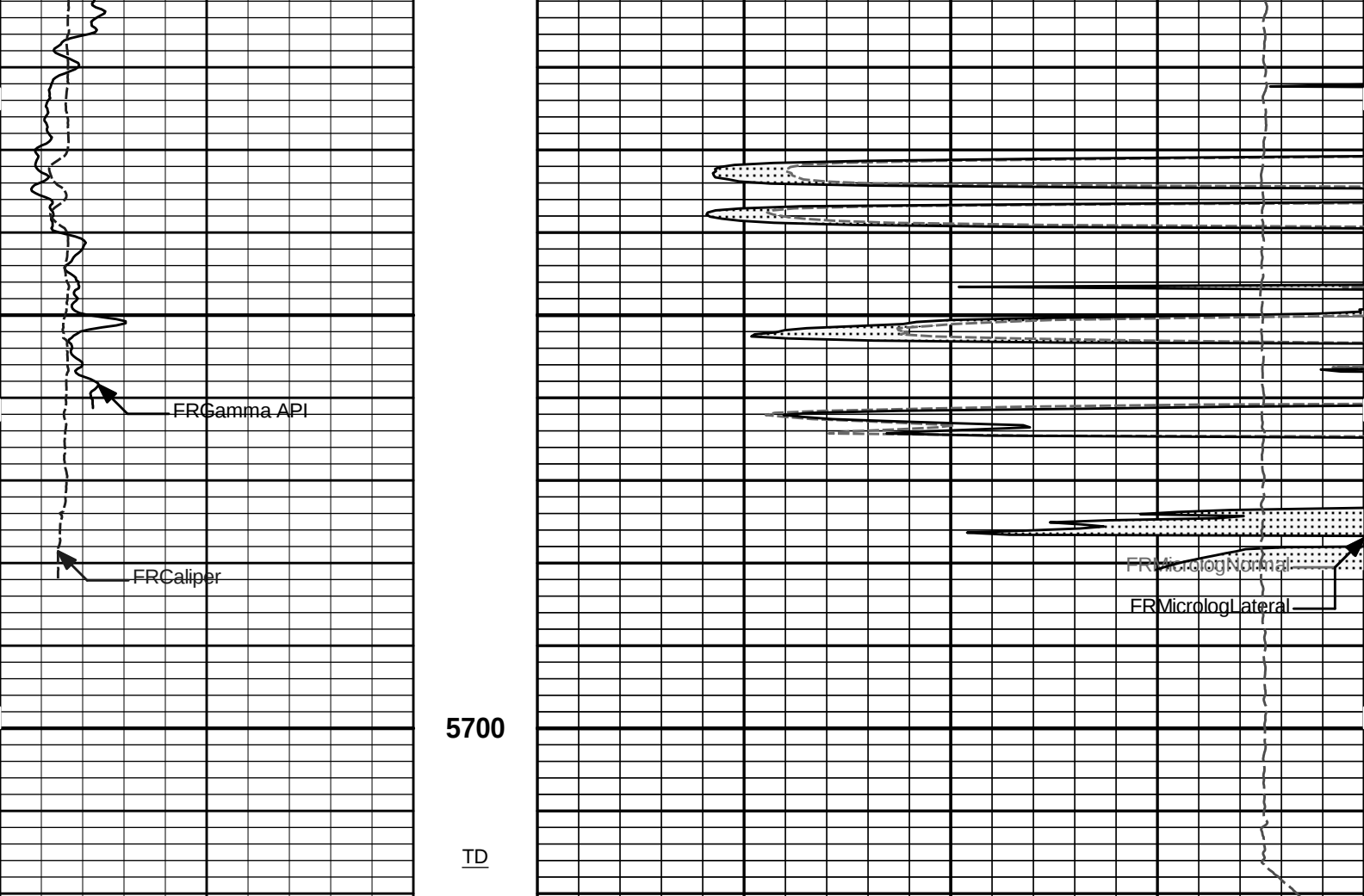
5500

5600



Microlog Lateral

Microlog Lateral



6	Caliper	16	1 : 240		15K	Tension	0
	inches		ft			pounds	
0	Gamma API	150	Tension Pull	0	Microlog Lateral		20
	api		10	0	ohm-metre		
	SHALE		Tension Pull	0	Microlog Normal		20
					ohm-metre		
					PERMEABLE		

HALLIBURTON

Plot Time: 30-Mar-12 02:49:16
Plot Range: 3800 ft to 5720.75 ft
Data: W_E_PREEDY_7\Well Based\DETAIL\
Plot File: \\LOCAL-W_E_PREEDY_7\0001 SP-GTET-DSNT-SDLT-BSAT-ACRT-CH\MICRO\Microlog_IQ_5_main.lib

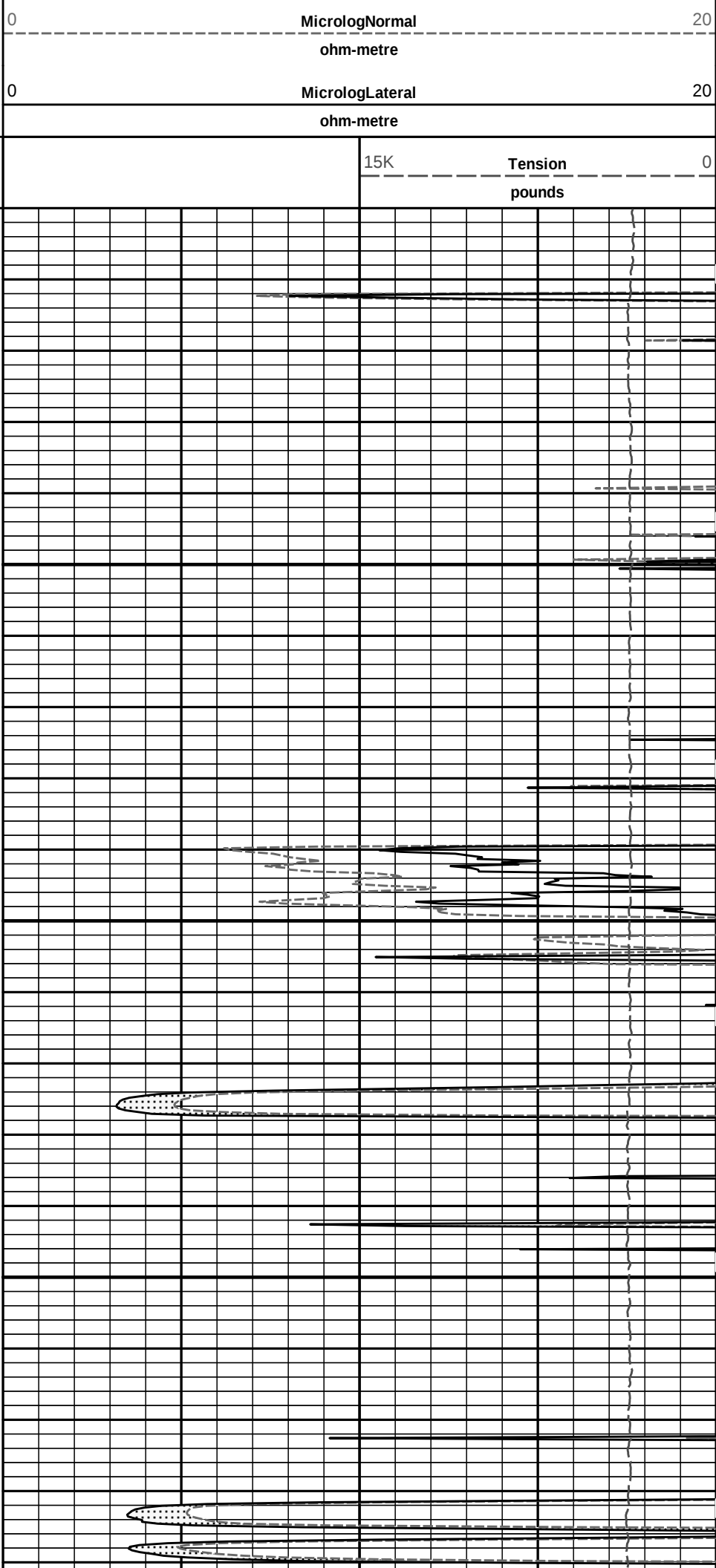
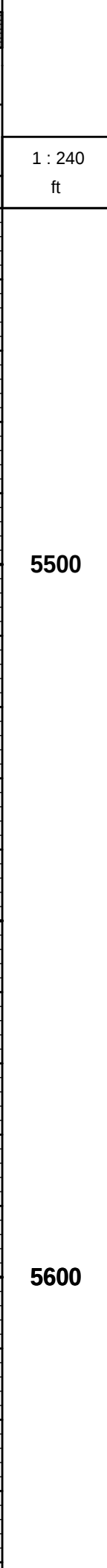
5 INCH MAIN LOG

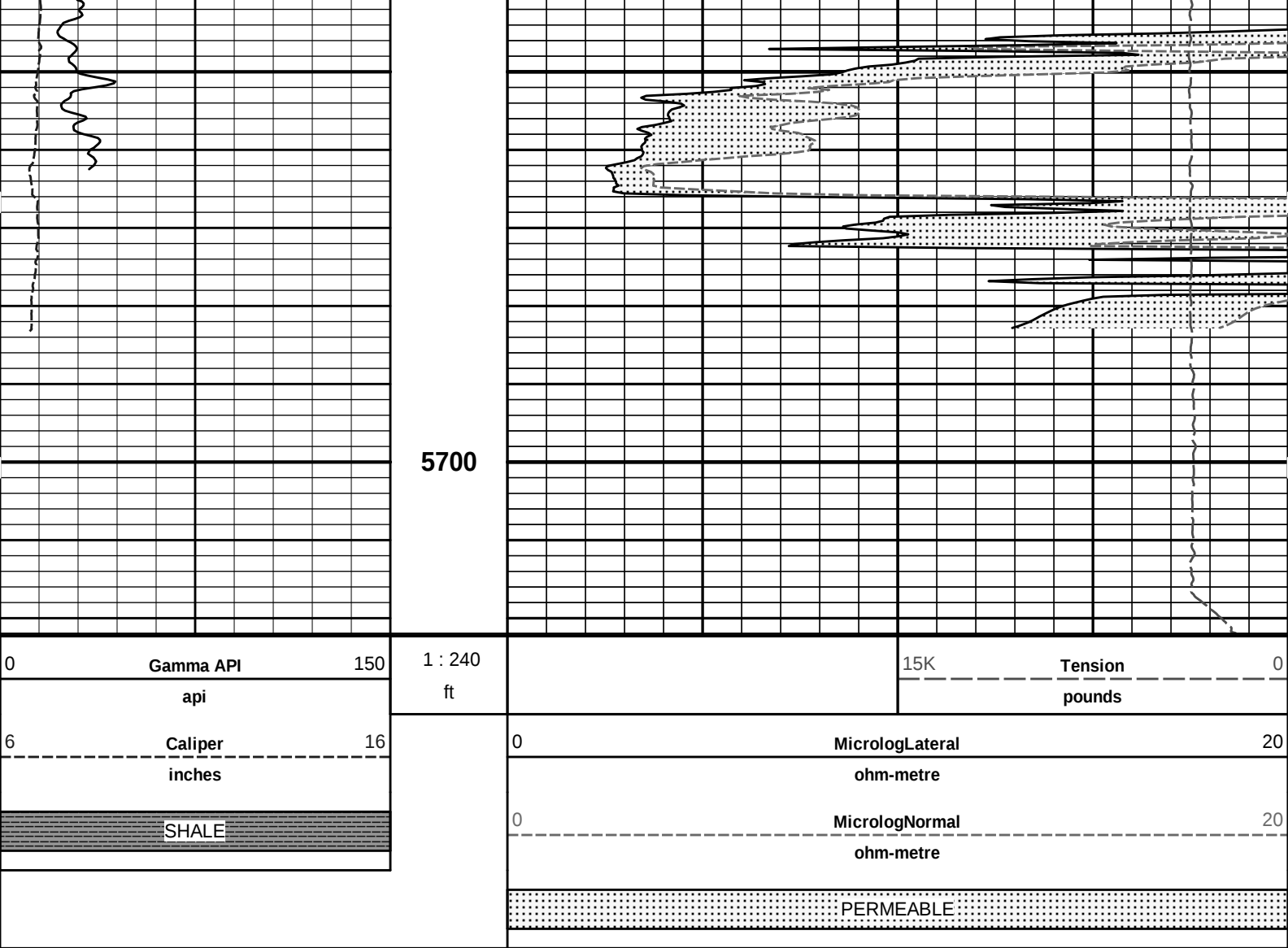
HALLIBURTON

Plot Time: 30-Mar-12 02:49:16
Plot Range: 5450 ft to 5722 ft
Data: W_E_PREEDY_7\Well Based\REPEAT\
Plot File: \\LOCAL-W_E_PREEDY_7\0001 SP-GTET-DSNT-SDLT-BSAT-ACRT-CH\MICRO\Microlog_IQ_5_rep.lib

REPEAT SECTION

					PERMEABLE		
--	--	--	--	--	-----------	--	--





HALLIBURTON

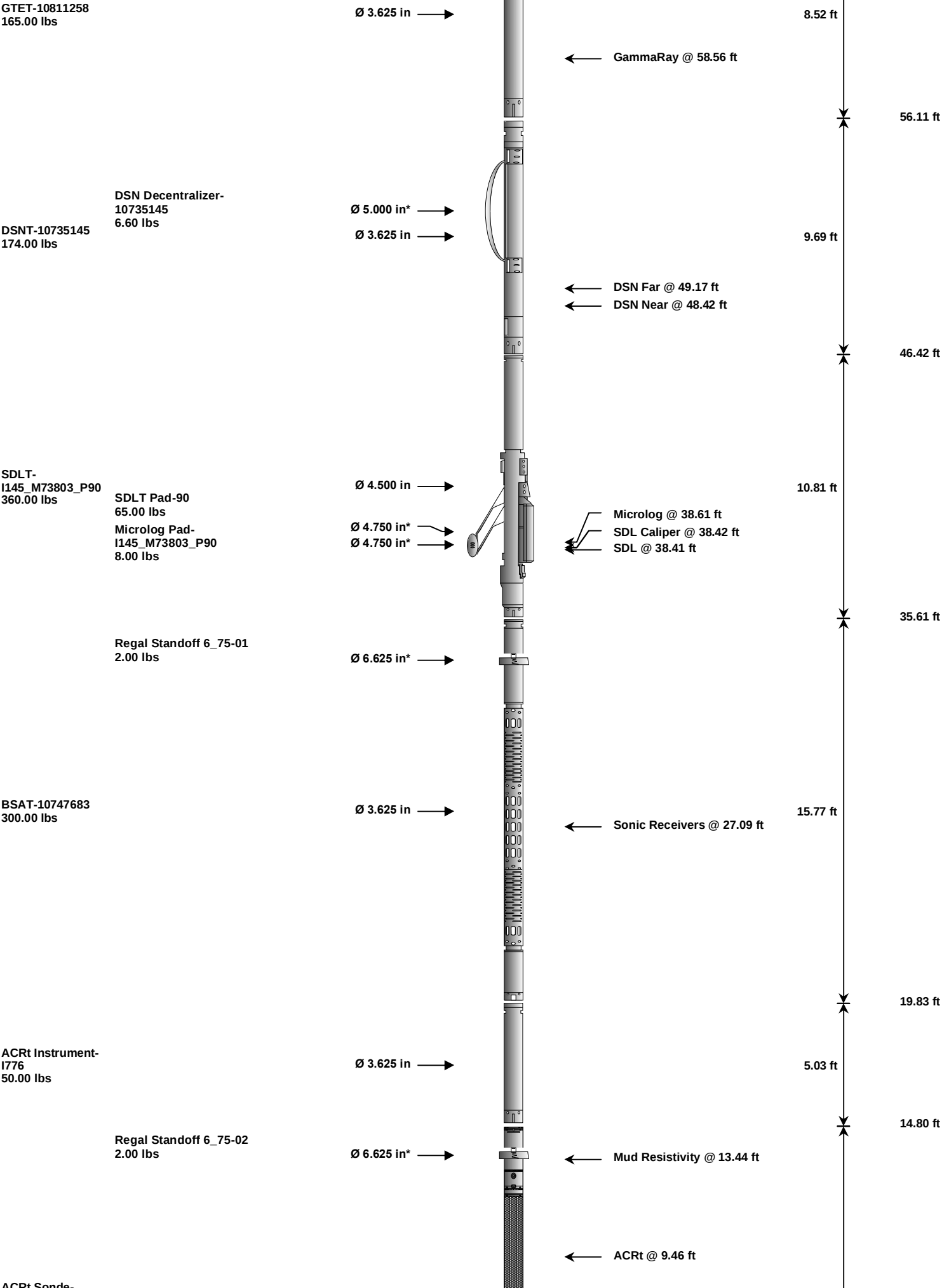
Plot Time: 30-Mar-12 02:49:17
Plot Range: 5450 ft to 5722 ft
Data: W_E_PREEDY_7\Well Based\REPEAT\
Plot File: \\-LOCAL-W_E_PREEDY_7\0001 SP-GTET-DSNT-SDLT-BSAT-ACRT-CHIMICRO\Microlog_IQ_5_rep.lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-954 37.50 lbs		Ø 2.750 in →		← Temperature @ 71.31 ft	3.03 ft	72.34 ft
XOHD-TRK_954 20.00 lbs		Ø 2.750 in → Ø 3.625 in →			0.95 ft	69.31 ft
SP Sub-TRK954 60.00 lbs		Ø 3.625 in →		← SP @ 66.59 ft	3.74 ft	68.36 ft
						64.63 ft



MICRO LOG SHOP CALIBRATION			
Tool Name:	Microlog Pad - I145_M73803_P90	Reference Calibration Date:	13-Jan-12 12:43:35
Engineer:	J. BOLLUM	Calibration Date:	12-Mar-12 08:17:08
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

MICRO LOG FIELD CHECK			
Tool Name:	Microlog Pad - I145_M73803_P90	Reference Calibration Date:	12-Mar-12 08:17:08
Engineer:	R. GONZALEZ	Calibration Date:	29-Mar-12 23:28:59
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10811258						
Gamma Ray Calibrator	232.0	239.2	-----	-7.2	+/- 9.00	api
Microlog Pad-I145_M73803_P90						
MicroLog Normal	19.93	19.98	-----	-0.05	+/-0.80	ohmm
MicroLog Lateral	19.99	20.04	-----	-0.05	+/-0.80	ohmm

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	5731.00	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	DSNO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
	DSNT	DNTP	Temperature Correction Type	None	
	DSNT	DPRS	DSN Pressure Correction Type	None	
	DSNT	SHCO	View More Correction Options	No	
	DSNT	UTVD	Use TVD for Gradient Corrections?	No	
	DSNT	LHWT	Logging Horizontal Water Tank?	No	
	SDLT	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	
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	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
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	
BOTTOM_____				
Data: W_E_PREEDY_710001 SP-GTET-DSNT-SDLT-BSAT-ACRT-CH1DLE			Date: 30-Mar-12 00:22:56	

HALLIBURTON				
INPUTS, DELAYS AND FILTERS TABLE				
Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
CH_HOS				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	66.58	NO	
SP	Spontaneous Potential	66.58	BLK	1.250
SPR	Raw Spontaneous Potential	66.58	NO	
SPO	Spontaneous Potential Offset	66.58	NO	
GTET				
TPUL	Tension Pull	58.56	NO	
GR	Natural Gamma Ray API	58.56	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	58.56	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	58.56	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	48.32	NO	
RNDS	Near Detector Telemetry Counts	48.42	BLK	1.417
RFDS	Far Detector Telemetry Counts	49.17	TRI	0.583
DNTT	DSN Tool Temperature	48.42	NO	
DSNS	DSN Tool Status	48.32	NO	

DSNS	DSN Tool Status	48.32	NO	
ERNDD	Near Detector Telemetry Counts EVR	48.42	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	49.17	BLK	0.000
ENTM	DSN Tool Temperature EVR	48.42	NO	
SDLT				
TPUL	Tension Pull	38.42	NO	
PCAL	Pad Caliper	38.42	TRI	0.250
ACAL	Arm Caliper	38.42	TRI	0.250
BSAT				
TPUL	Tension Pull	27.09	NO	
STAT	Status	27.09	NO	
DLYT	Delay Time	27.09	NO	
SI	Sample Interval	27.09	NO	
TXRX	Raw Telemetry 10 Receivers	27.09	NO	
FRMC	Tool Frame Count	27.09	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
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

IMRCD	Mud Resistivity	12.97	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	38.41	NO	
NAB	Near Above	38.24	BLK	0.920
NHI	Near Cesium High	38.24	BLK	0.920
NLO	Near Cesium Low	38.24	BLK	0.920
NVA	Near Valley	38.24	BLK	0.920
NBA	Near Barite	38.24	BLK	0.920
NDE	Near Density	38.24	BLK	0.920
NPK	Near Peak	38.24	BLK	0.920
NLI	Near Lithology	38.24	BLK	0.920
NBAU	Near Barite Unfiltered	38.24	BLK	0.250
NLIU	Near Lithology Unfiltered	38.24	BLK	0.250
FAB	Far Above	38.58	BLK	0.250
FHI	Far Cesium High	38.58	BLK	0.250
FLO	Far Cesium Low	38.58	BLK	0.250
FVA	Far Valley	38.58	BLK	0.250
FBA	Far Barite	38.58	BLK	0.250
FDE	Far Density	38.58	BLK	0.250
FPK	Far Peak	38.58	BLK	0.250
FLI	Far Lithology	38.58	BLK	0.250
PTMP	Pad Temperature	38.42	BLK	0.920
NHV	Near Detector High Voltage	37.81	NO	
FHV	Far Detector High Voltage	37.81	NO	
ITMP	Instrument Temperature	37.81	NO	
DDHV	Detector High Voltage	37.81	NO	
Microlog Pad				
TPUL	Tension Pull	38.60	NO	
MINV	Microlog Lateral	38.60	BLK	0.750
MNOR	Microlog Normal	38.60	BLK	0.750
Data: W_E_PREEDY_710001 SP-GTET-DSNT-SDLT-BSAT-ACRT-CH1DLE			Date: 30-Mar-12 00:22:24	

COMPANY	OXY USA INC			
WELL	W.E. PREEDY #7			
FIELD	LEMON			
COUNTY	HASKELL	STATE	KANSAS	

