

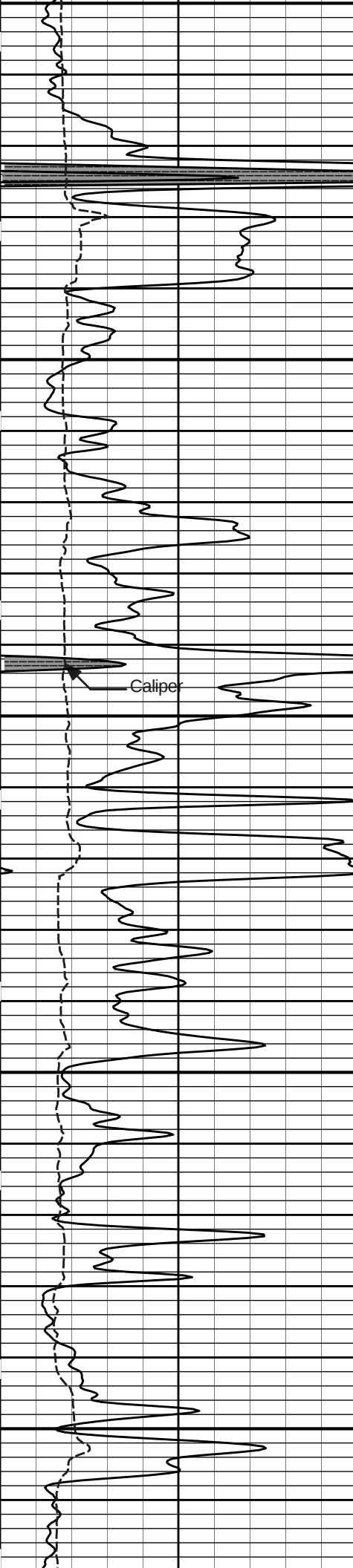
MICROLOG

Fold here

LOGGING DATA

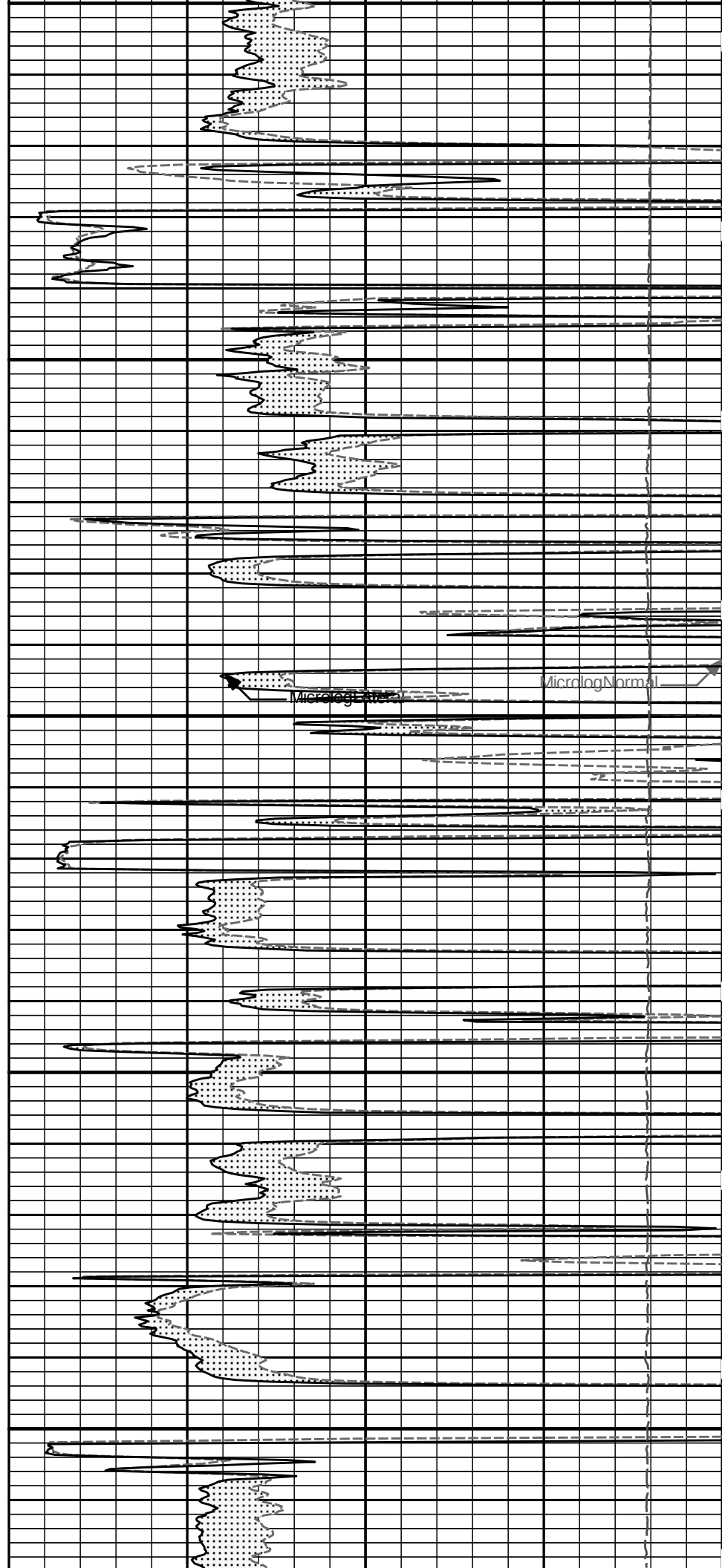
GENERAL			GAMMA		ACOUSTIC			DENSITY			NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	5084	3700	REC	0	150									
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING														
CHLORIDES REPORTED AT 5000 MG/L														
LCM REPORTED AT 3 LB/BBL														
GTET-DNST-SDLT-BSAT-ACRT RUN IN COMBINATION														

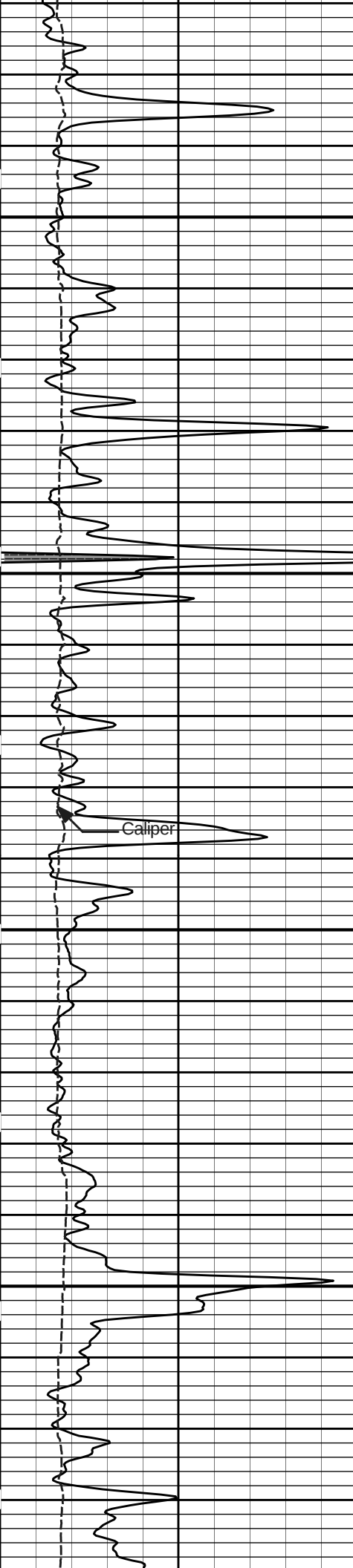
			PERMEABLE		
SHALE		Tension Pull	MicrologNormal		
Gamma API		Tension Pull	ohm-metre		
api		MD	MicrologLateral		
Caliper		1 : 240	ohm-metre		
inches		ft	Tension		
		3700	pounds		



3800

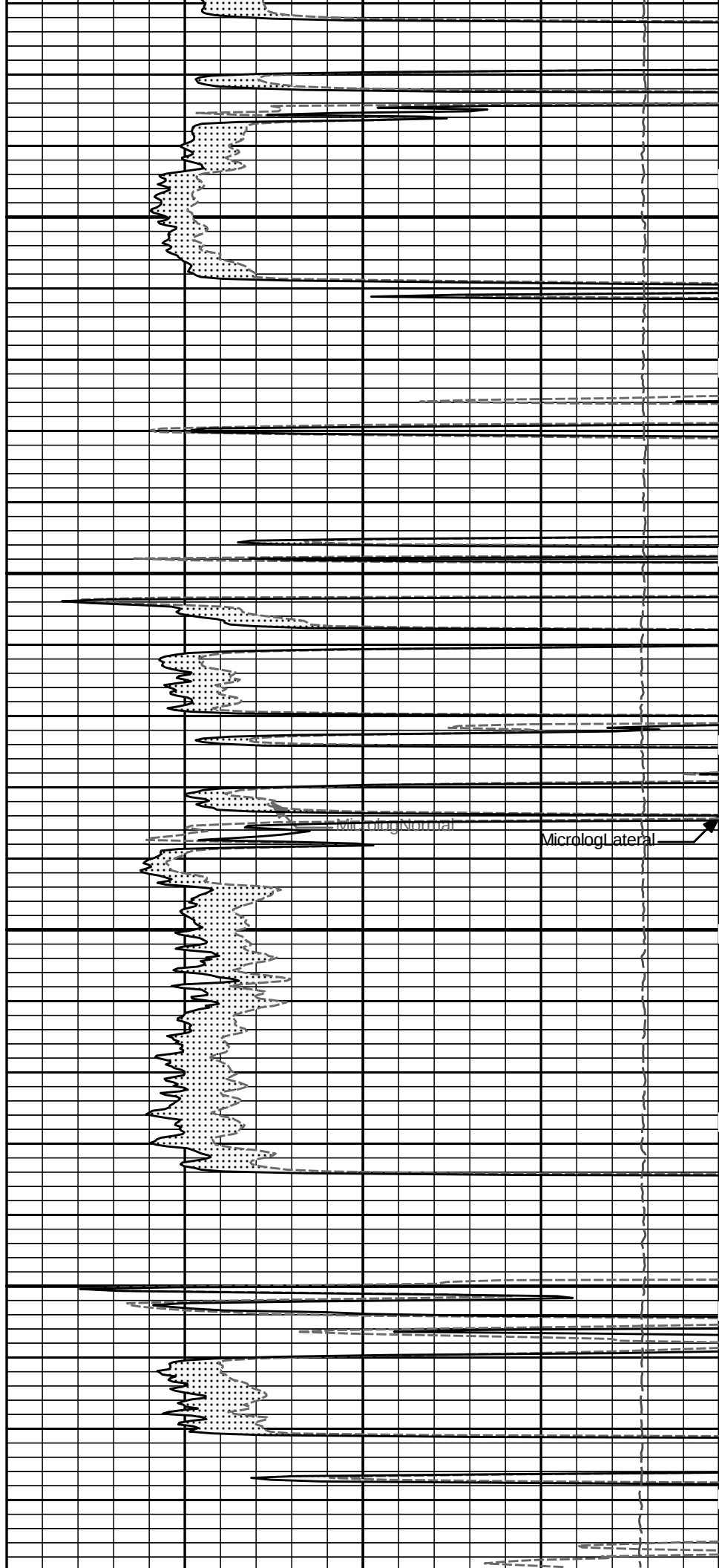
3900

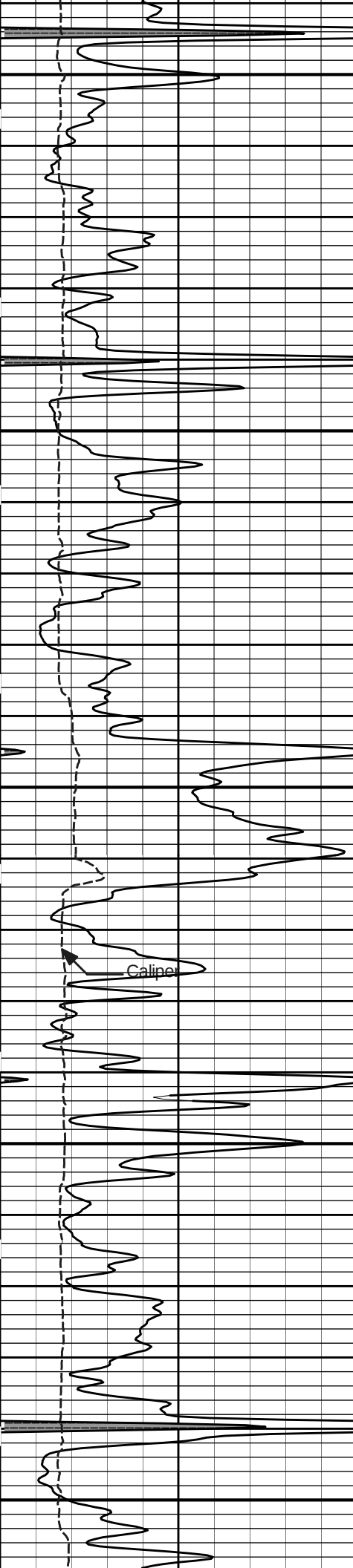




4000

4100

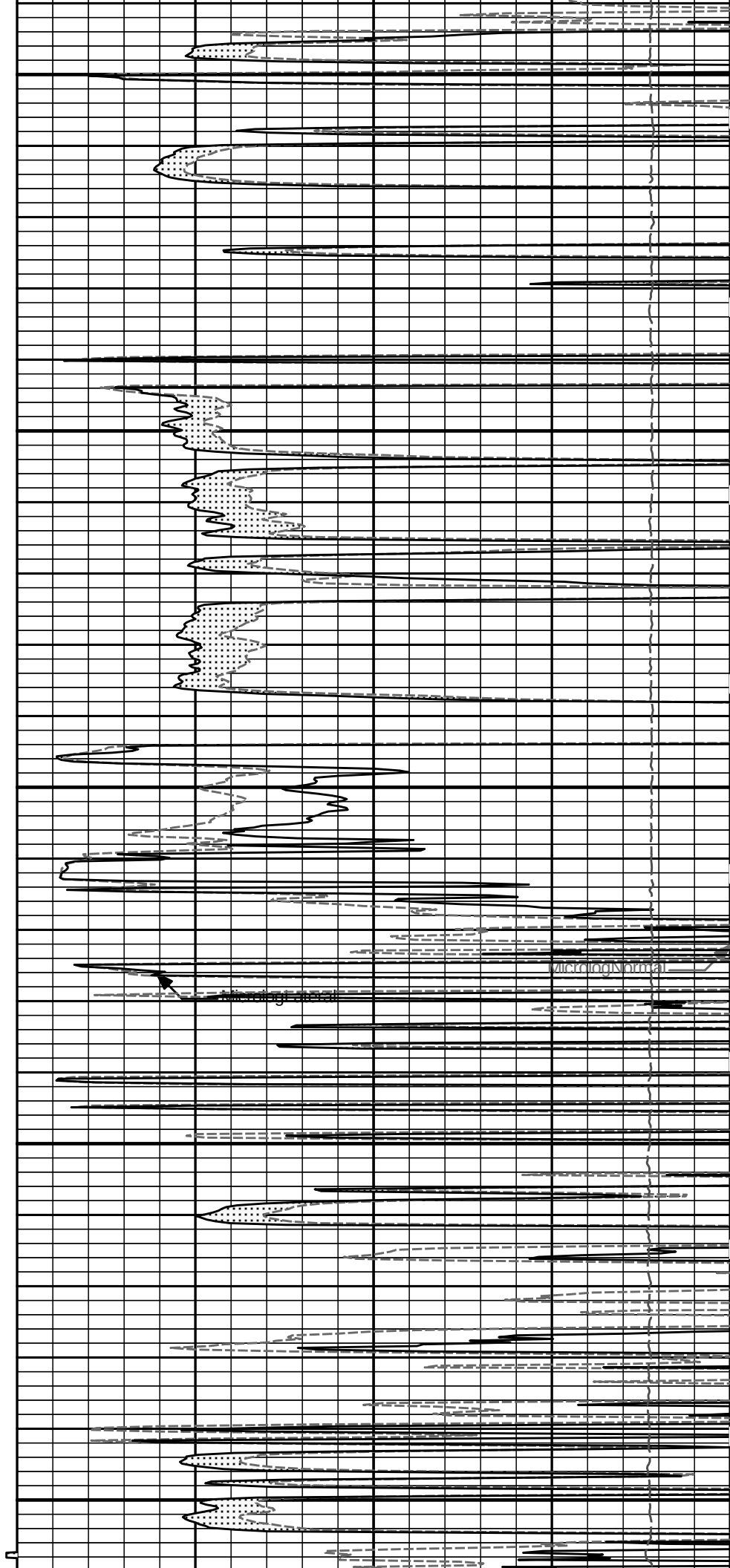


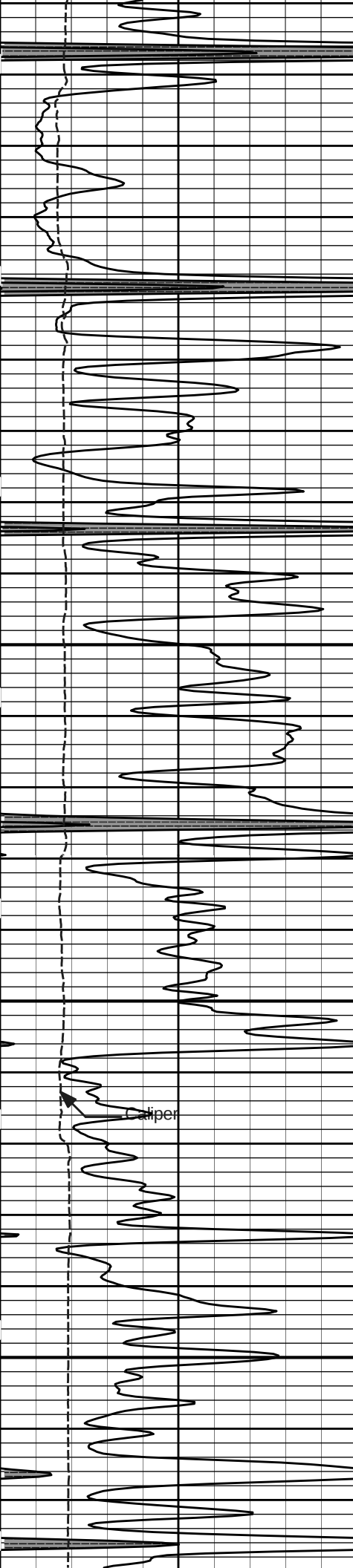


4200

4300

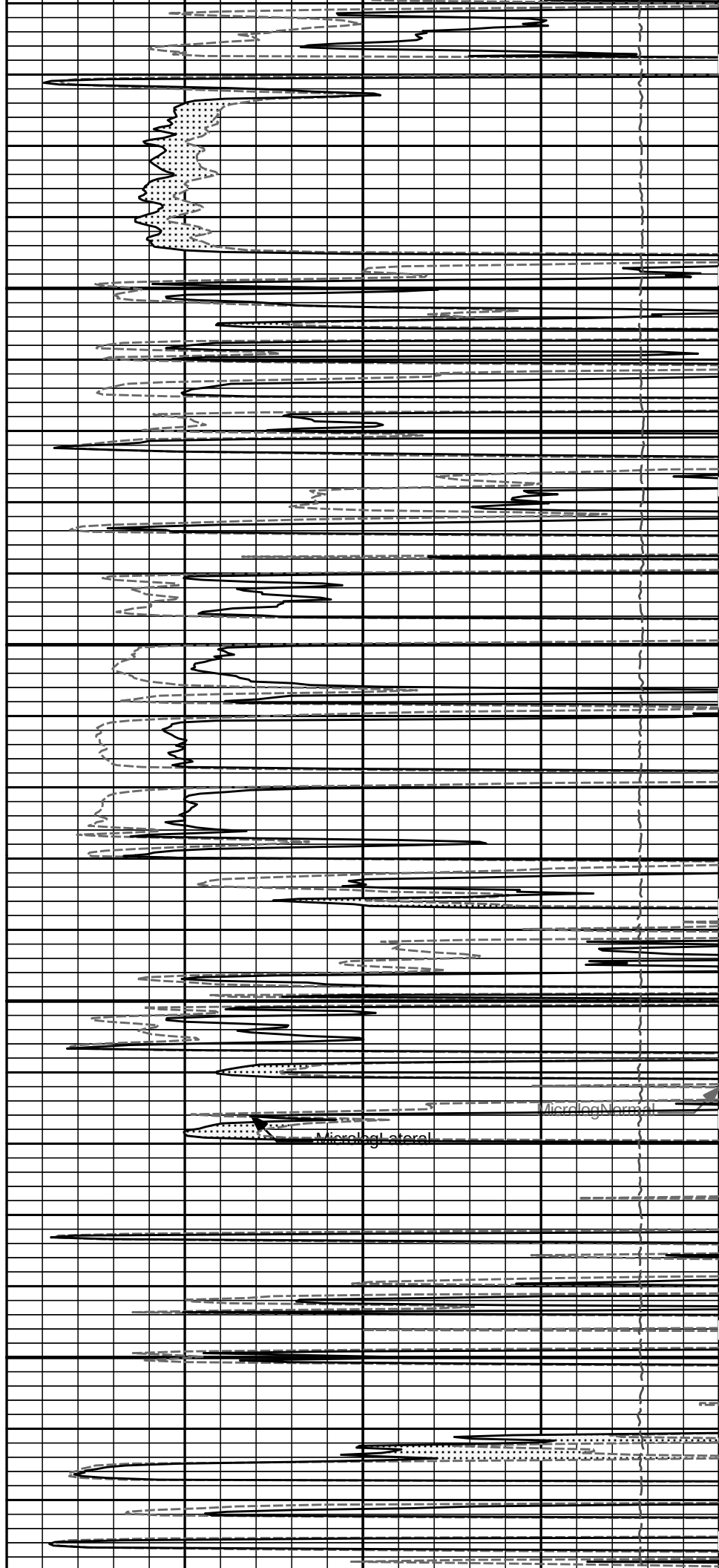
4400

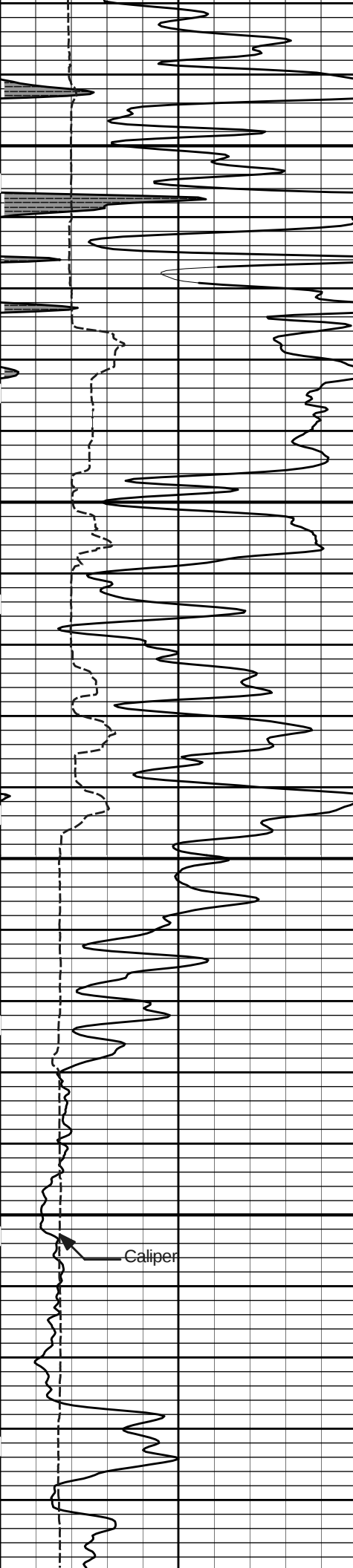




4500

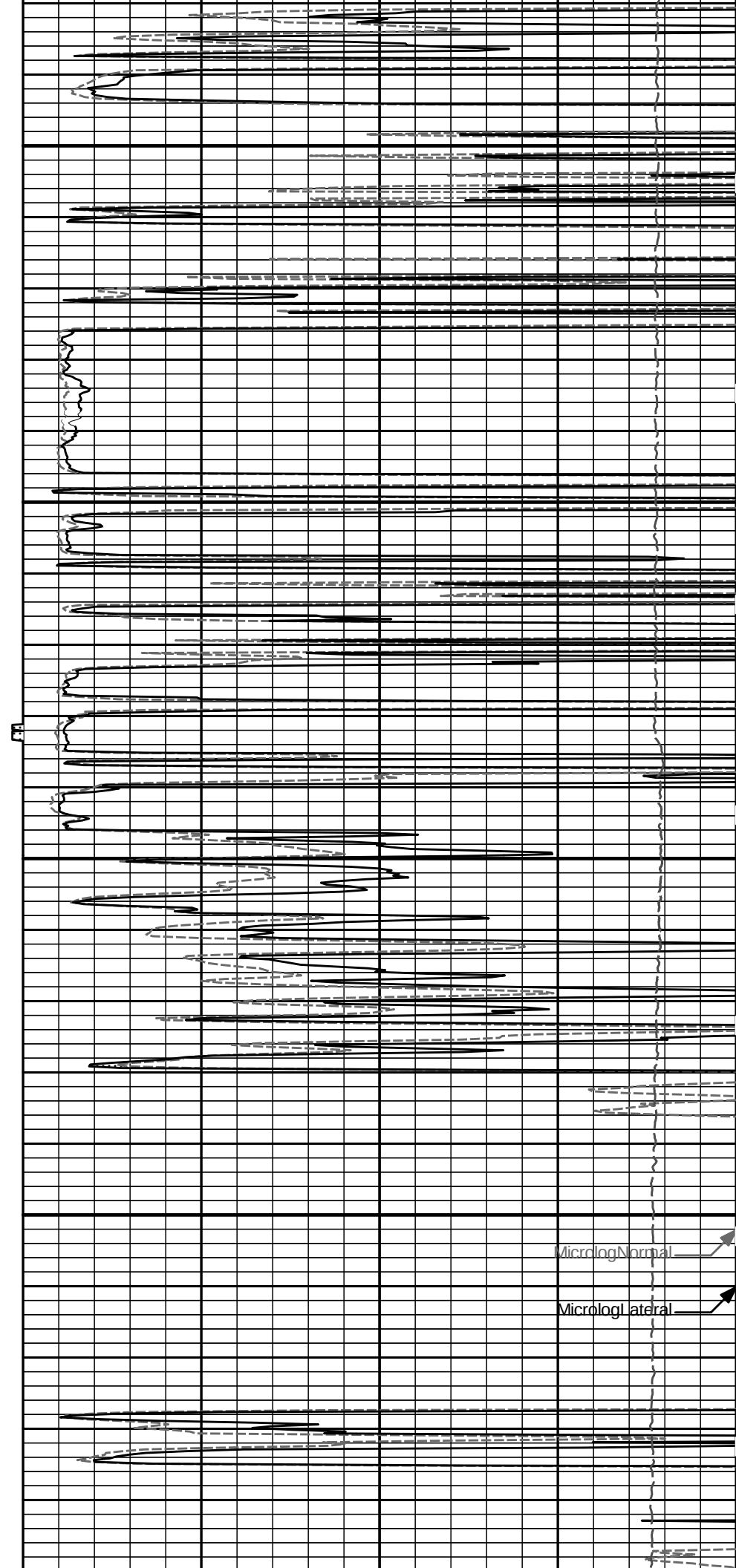
4600

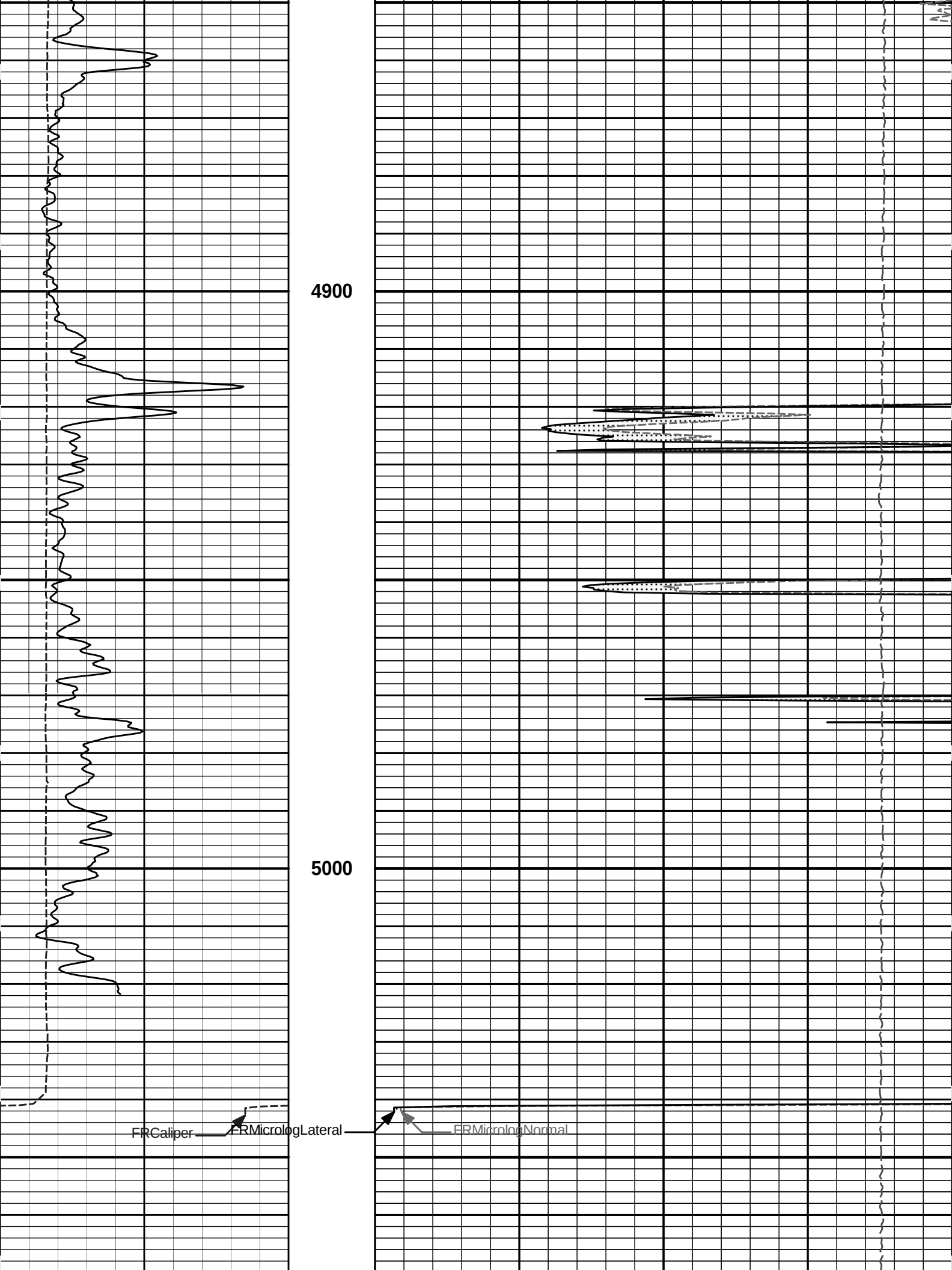




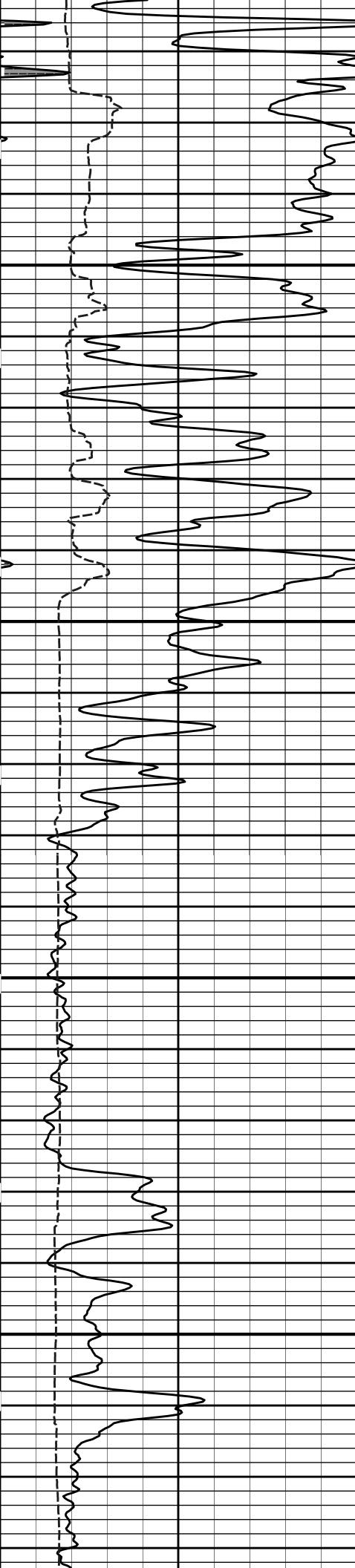
4700

4800



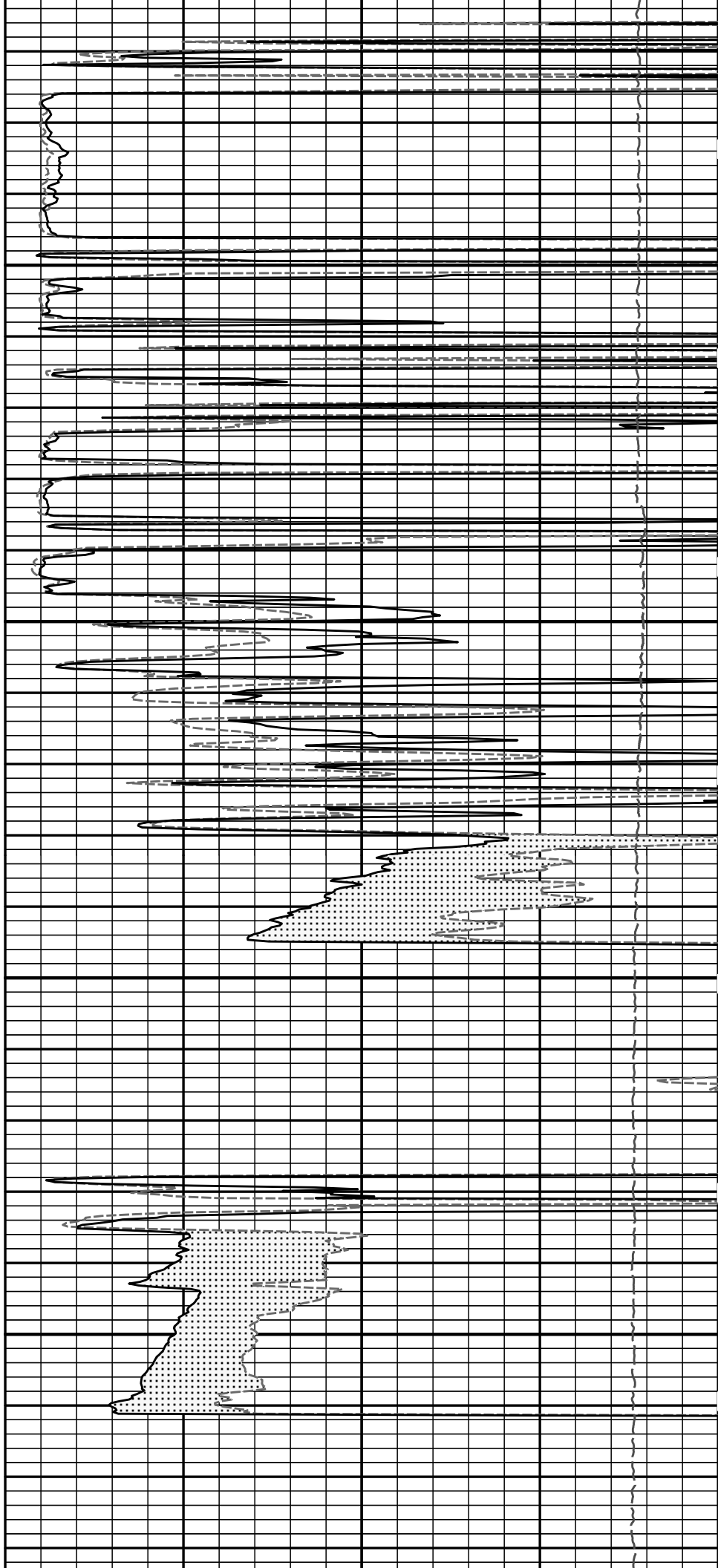


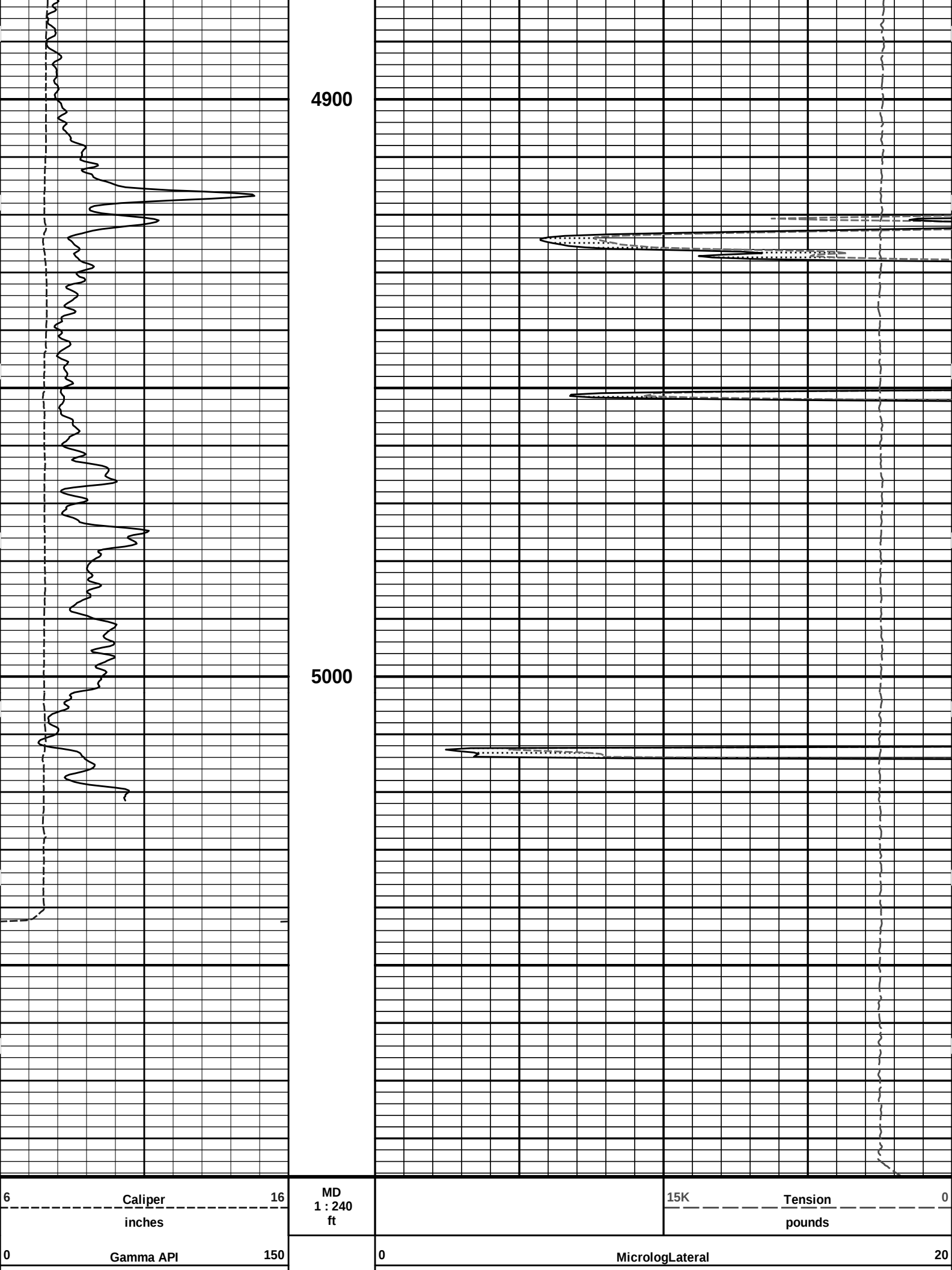
SHALE Gamma API 150 api Caliper 16 inches			PERMEABLE		
			0 MicrologNormal 20 ohm-metre		
			0 MicrologLateral 20 ohm-metre		
			MD 1 : 240 ft		15K Tension 0 pounds

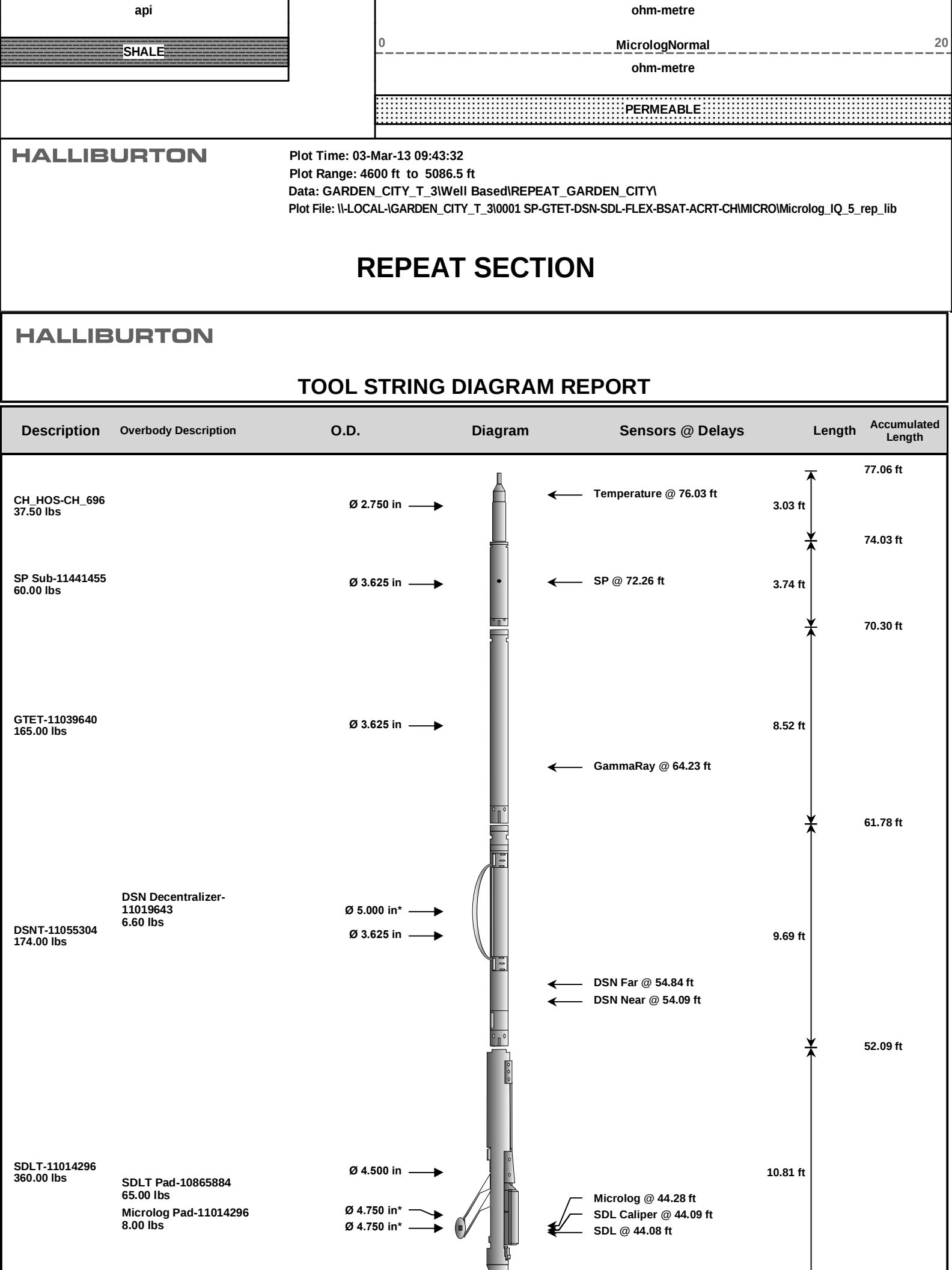


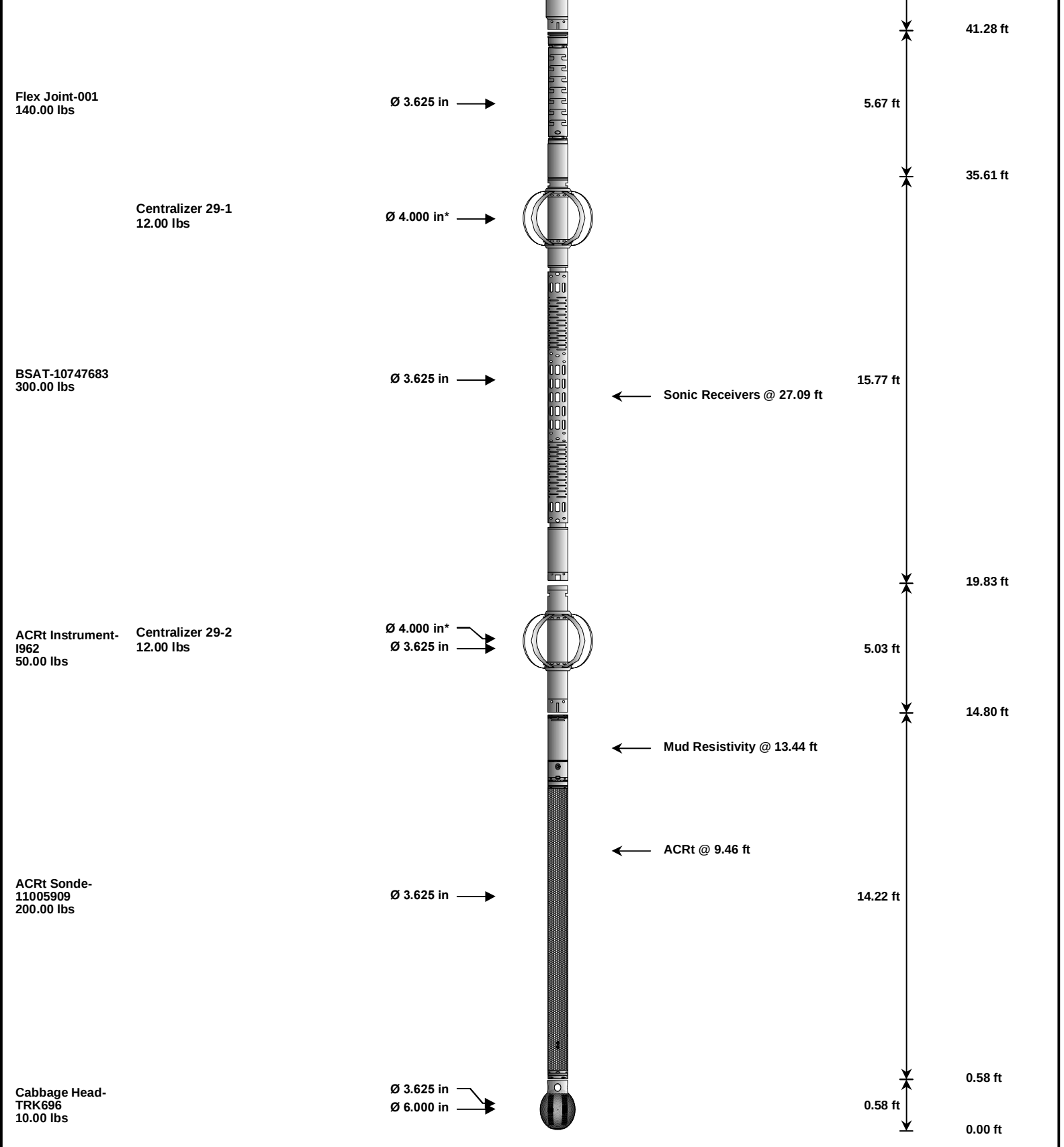
4700

4800









Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell		CH_696	37.50	3.03	74.03	300.00
SP	SP Sub		11441455	60.00	3.74	70.30	300.00
GTET	Gamma Telemetry Tool		11039640	165.00	8.52	61.78	60.00
DSNT	Dual Spaced Neutron		11055304	174.00	9.69	52.09	60.00
DCNT	DSN Decentralizer		11019643	6.60	5.13	* 55.42	300.00
SDLT	Spectral Density Tool		11014296	360.00	10.81	41.28	60.00
MICP	Microlog Pad		11014296	8.00	1.00	* 43.78	60.00
SDLP	Density Insite Pad		10865884	65.00	2.55	* 43.49	60.00
FLEX	Flex Joint		001	140.00	5.67	35.61	300.00
BSAT	Borehole Sonic Array Tool		10747683	300.00	15.77	19.83	60.00

OBCEN	Centralizer - 29 in.Overbody	1	12.00	2.42 *	32.77	300.00
ACRT	Array Compensated True Resistivity Instrument Section	I962	50.00	5.03	14.80	300.00
OBCEN	Centralizer - 29 in.Overbody	2	12.00	2.42 *	16.39	300.00
ACRT	Array Compensated True Resistivity Sonde Section	11005909	200.00	14.22	0.58	300.00
CBHD	Cabbage Head	TRK696	10.00	0.58	0.00	300.00
Total			1,600.10	77.06		
						* Not included in Total Length and Length Accumulation.
Data: GARDEN_CITY_T_3I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHUdle					Date: 03-Mar-13 06:59:08	

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11039640	Reference Calibration Date:	14-Jan-13 11:39:27
Engineer:	J. BOLLLOM	Calibration Date:	13-Feb-13 13:51:32
Software Version:	WL INSITE R3.8.0 (Build 2)	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	77.6	79.8	api
Background + Calibrator	339.7	349.5	api
Calibrator	262.1	269.6	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 11039640	Reference Calibration Date:	13-Feb-13 13:51:32
Engineer:	J. BOLLLOM	Calibration Date:	02-Mar-13 14:13:00
Software Version:	WL INSITE R3.8.0 (Build 2)	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	79.8	50.1	api
Background + Calibrator	349.5	318.0	api
Calibrator	269.6	267.9	api
Shop	Field	Difference	Tolerance
269.6	267.9	1.7	+/- 9.00

MICRO LOG SHOP CALIBRATION			
Tool Name:	Microlog Pad - 11014296	Reference Calibration Date:	04-Jan-13 10:49:34
Engineer:	J. BOLLLOM	Calibration Date:	13-Feb-13 09:47:22
Software Version:	WL INSITE R3.8.0 (Build 2)	Calibration Version:	1
Host Tool Name:	DSNT - 11055304		

CALIBRATION COEFFICIENT SUMMARY					
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.07	-0.14	-0.01	-0.01	ohmm
Calibration Point #1	0.07	0.00	0.00	0.00	ohmm
Calibration Point #2	20.02	20.00	10.05	20.00	ohmm

	Calibration Point #2	20.02	20.00	19.95	20.00	ohmm
	Internal Reference	19.89	19.88	19.94	19.99	ohmm
	Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units
	Tool Zero	-0.64		-0.16		V
	Calibration Point #1	36.40		3.51		V
	Calibration Point #2	5296.44		6860.84		V
	Internal Reference	5263.67		6856.12		V
MICRO LOG FIELD CHECK						
Tool Name:		Microlog Pad - 11014296		Reference Calibration Date:		13-Feb-13 09:47:22
Engineer:		J. BOLLLOM		Calibration Date:		02-Mar-13 14:11:58
Software Version:		WL INSITE R3.8.0 (Build 2)		Calibration Version:		1
	Measurement	Micro Log Normal		Micro Log Lateral		
		Shop	Field	Shop	Field	Units
	Tool Zero	-0.14	-0.14	-0.01	-0.01	ohmm
	Internal Reference	19.88	19.86	19.99	19.97	ohmm
	Summary					
	Signal	Shop	Field	Difference		Tolerance
	Microlog Normal	19.88	19.86	0.02		+/- 0.80
	Microlog Lateral	19.99	19.97	0.02		+/- 0.80
CALIBRATION SUMMARY						
Sensor		Shop	Field	Post	Difference	Tolerance
						Units
GTET-11039640						
Gamma Ray Calibrator	269.6	267.9	-----	1.7	+/- 9.00	api
Microlog Pad-11014296						
MicroLog Normal	19.88	19.86	-----	0.02	+/-0.80	ohmm
MicroLog Lateral	19.99	19.97	-----	0.02	+/-0.80	ohmm
Data: GARDEN_CITY_T_3I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIDLE					Date: 03-Mar-13 07:25:22	
HALLIBURTON						
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		9.300	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		5.500	in
	SHARED	ST	Surface Temperature		75.0	degF

SHARED	TD	Total Well Depth	5102.00	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	
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 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: GARDEN_CITY_T_3\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CHIDLE			Date: 03-Mar-13 07:22:59	

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	72.25	NO	
SP		Spontaneous Potential	72.25	BLK	1.250
SPR		Raw Spontaneous Potential	72.25	NO	
SPO		Spontaneous Potential Offset	72.25	NO	
GTET					
TPUL		Tension Pull	64.23	NO	
GR		Natural Gamma Ray API	64.23	TRI	1.750
GRU		Unfiltered Natural Gamma Ray API	64.23	NO	
EGR		Natural Gamma Ray API with Enhanced Vertical Resolution	64.23	W	1.416 , 0.750
ACCZ		Accelerometer Z	0.00	BLK	0.083
DEVI		Inclination	0.00	NO	
DSNT					
TPUL		Tension Pull	53.99	NO	
RNDS		Near Detector Telemetry Counts	54.09	BLK	1.417
RFDS		Far Detector Telemetry Counts	54.84	TRI	0.583
DNTT		DSN Tool Temperature	54.09	NO	
DSNS		DSN Tool Status	53.99	NO	
ERND		Near Detector Telemetry Counts EVR	54.09	BLK	0.000
ERFD		Far Detector Telemetry Counts EVR	54.84	BLK	0.000
ENTM		DSN Tool Temperature EVR	54.09	NO	
SDLT					
TPUL		Tension Pull	44.09	NO	
PCAL		Pad Caliper	44.09	TRI	0.250
ACAL		Arm Caliper	44.09	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	
GMOD		Gain processing mode	19.83	NO	
ACRt Sonde					

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 Current Raw 12K X Receiver	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				
TPUI	Tension Pull	44.08	NO	

NAB	Near Above	43.90	BLK	0.920
NHI	Near Cesium High	43.90	BLK	0.920
NLO	Near Cesium Low	43.90	BLK	0.920
NVA	Near Valley	43.90	BLK	0.920
NBA	Near Barite	43.90	BLK	0.920
NDE	Near Density	43.90	BLK	0.920
NPK	Near Peak	43.90	BLK	0.920
NLI	Near Lithology	43.90	BLK	0.920
NBAU	Near Barite Unfiltered	43.90	BLK	0.250
NLIU	Near Lithology Unfiltered	43.90	BLK	0.250
FAB	Far Above	44.26	BLK	0.250
FHI	Far Cesium High	44.26	BLK	0.250
FLO	Far Cesium Low	44.26	BLK	0.250
FVA	Far Valley	44.26	BLK	0.250
FBA	Far Barite	44.26	BLK	0.250
FDE	Far Density	44.26	BLK	0.250
FPK	Far Peak	44.26	BLK	0.250
FLI	Far Lithology	44.26	BLK	0.250
PTMP	Pad Temperature	44.09	BLK	0.920
NHV	Near Detector High Voltage	43.49	NO	
FHV	Far Detector High Voltage	43.49	NO	
ITMP	Instrument Temperature	43.49	NO	
DDHV	Detector High Voltage	43.49	NO	
Microlog Pad				
TPUL	Tension Pull	44.28	NO	
MINV	Microlog Lateral	44.28	BLK	0.750
MNOR	Microlog Normal	44.28	BLK	0.750
Data: GARDEN_CITY_T_3\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-CH\IDLE			Date: 03-Mar-13 07:22:40	

COMPANY	OXY USA INC		
WELL	GARDEN CITY T-3		
FIELD	HUGOTON GAS AREA		
COUNTY	FINNEY	STATE	KANSAS
HALLIBURTON		MICROLOG	