

HALLIBURTON

MICROLOG

COMPANY				VAL ENERGY INC.			
WELL				THOM C 3-12			
FIELD				UNKNOWN			
COUNTY				BARBER			
STATE				KANSAS			
Permanent Datum Log measured from Drilling measured from	GL KB KB	Sect. 12	Twp. 34S	Rge. 11W	COMPANY VAL ENERGY INC.		
					WELL THOM C 3-12		
					FIELD UNKNOWN		
					COUNTY BARBER		
					STATE KANSAS		
					API No. 15-007-23871		
					Location 2130' FNL & 495' FWL		
					Other Services: ACRT DSNT, SDLT		
Date	11-May-12						
Run No.	ONE						
Depth - Driller	4750.00 ft						
Depth - Logger	4748.0 ft						
Bottom - Logged Interval	4725.0 ft						
Top - Logged Interval	3400.0 ft						
Casing - Driller	8.625 in @ 223.0 ft						
Casing - Logger	224.0 ft						
Bit Size	7.875 in						
Type Fluid in Hole	WATER						
Density	9.0 ppg						
PH	11.50 pH						
Source of Sample	FLOWLINE						
Rm @ Meas. Temperature	0.460 ohmm @ 75.00 degF						
Rmf @ Meas. Temperature	0.35 ohmm @ 75.00 degF						
Rmc @ Meas. Temperature	0.590 ohmm @ 75.00 degF						
Source Rmf	MEAS Rmc						
Rm @ BHT	0.29 ohmm @ 123.0 degF						
Time Since Circulation	5.0 hr						
Time on Bottom	11-May-12 13:18						
Max. Rec. Temperature	115.0 degF @ 4748.0 ft						
Equipment	336						
Recorded By	J. BOLLOW						
Witnessed By	S. VANBUSKIRK						

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Service Ticket No.: 9504178						API Serial No.: 15-007-23871						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		MICROLOG		RUBBER		ADJ		N/A							
Rmc @ Meas. Temp.				@				@						M315													
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.		11021039		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							

[illegible]**HALLIBURTON**

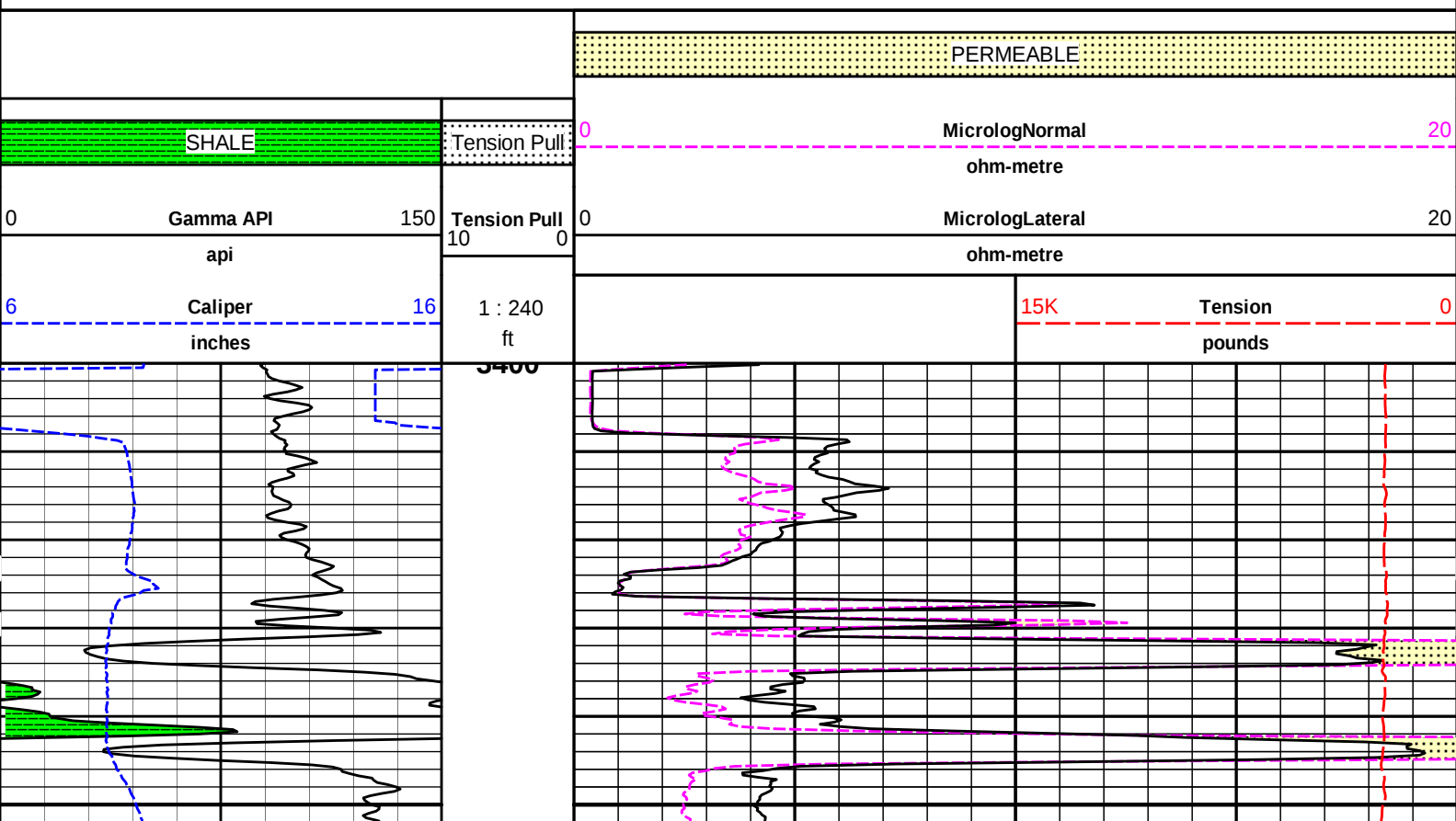
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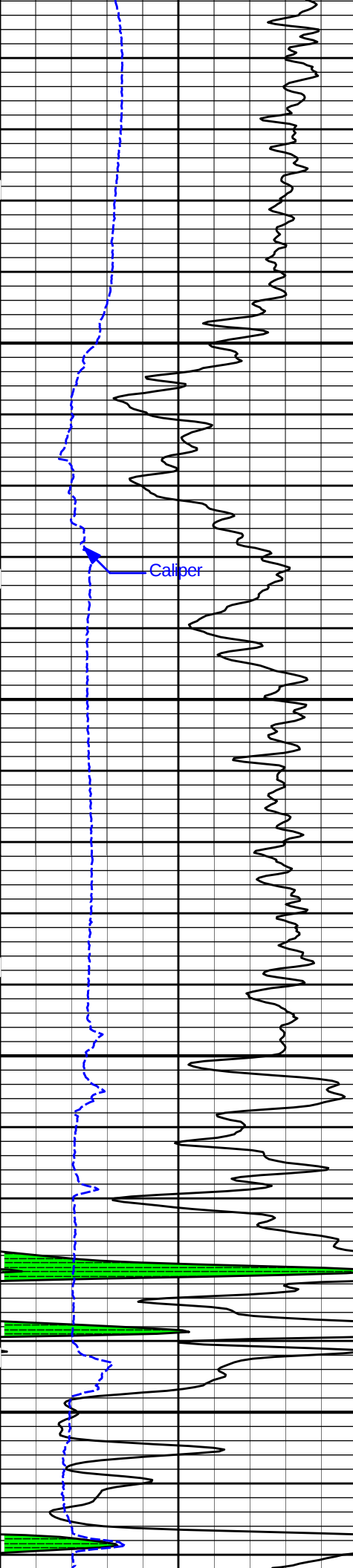
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Data: THOM C 3 12\Well Based\DETAIL\

Plot File: \\-LOCAL-\\THOM C 3 12\\0001 GTET-DSNT-SDLT-ACRT\\MICRO\\Microlog IQ 5 main lib

5 INCH MAIN LOG

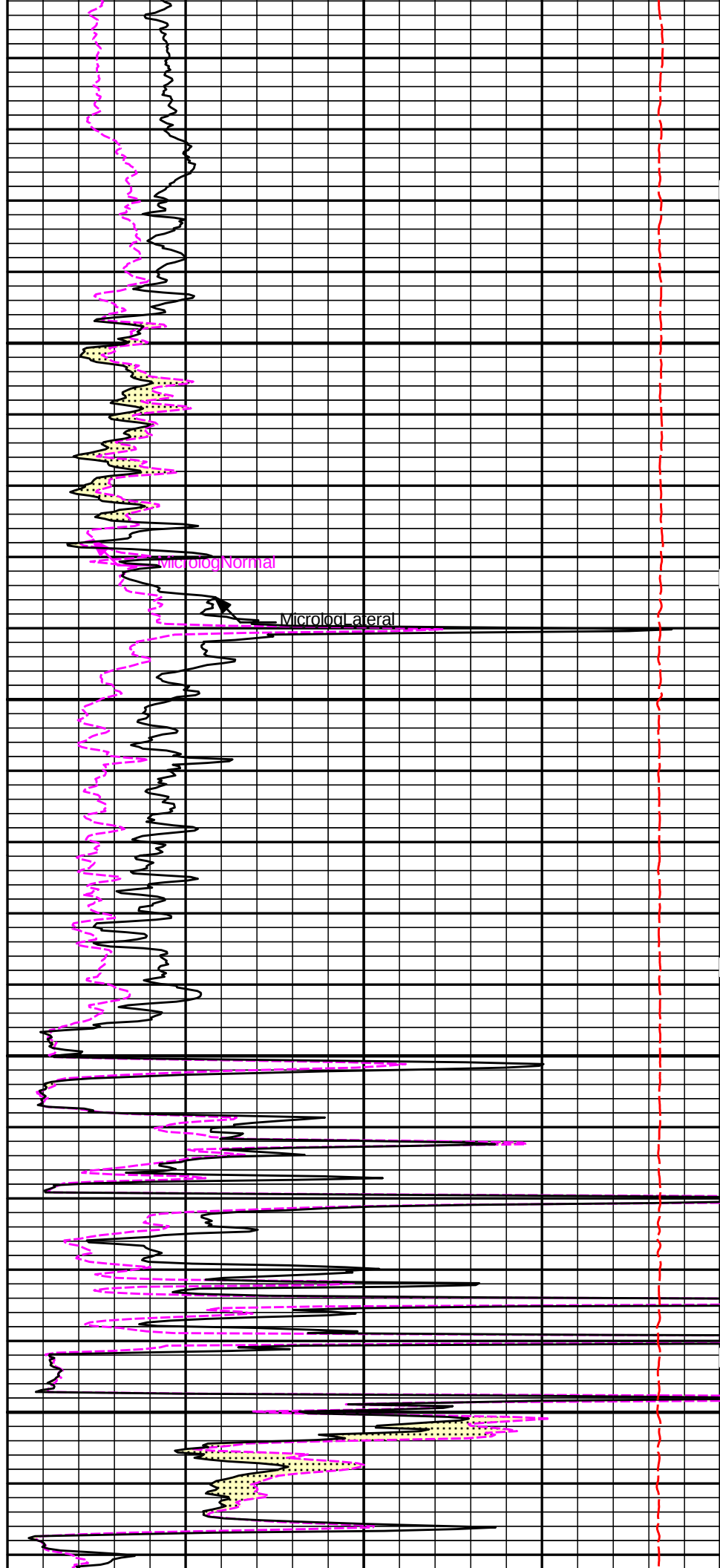




3500

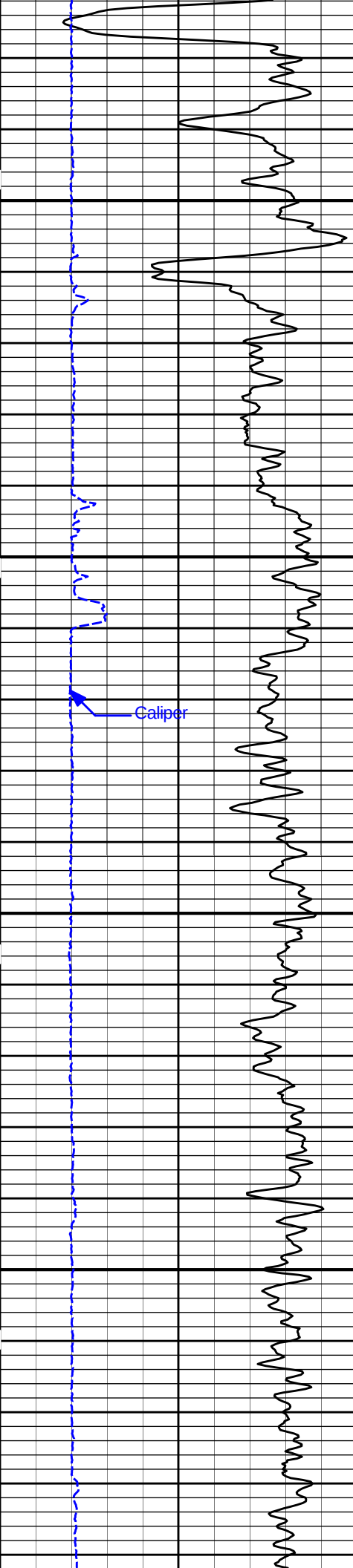
Caliper

3600



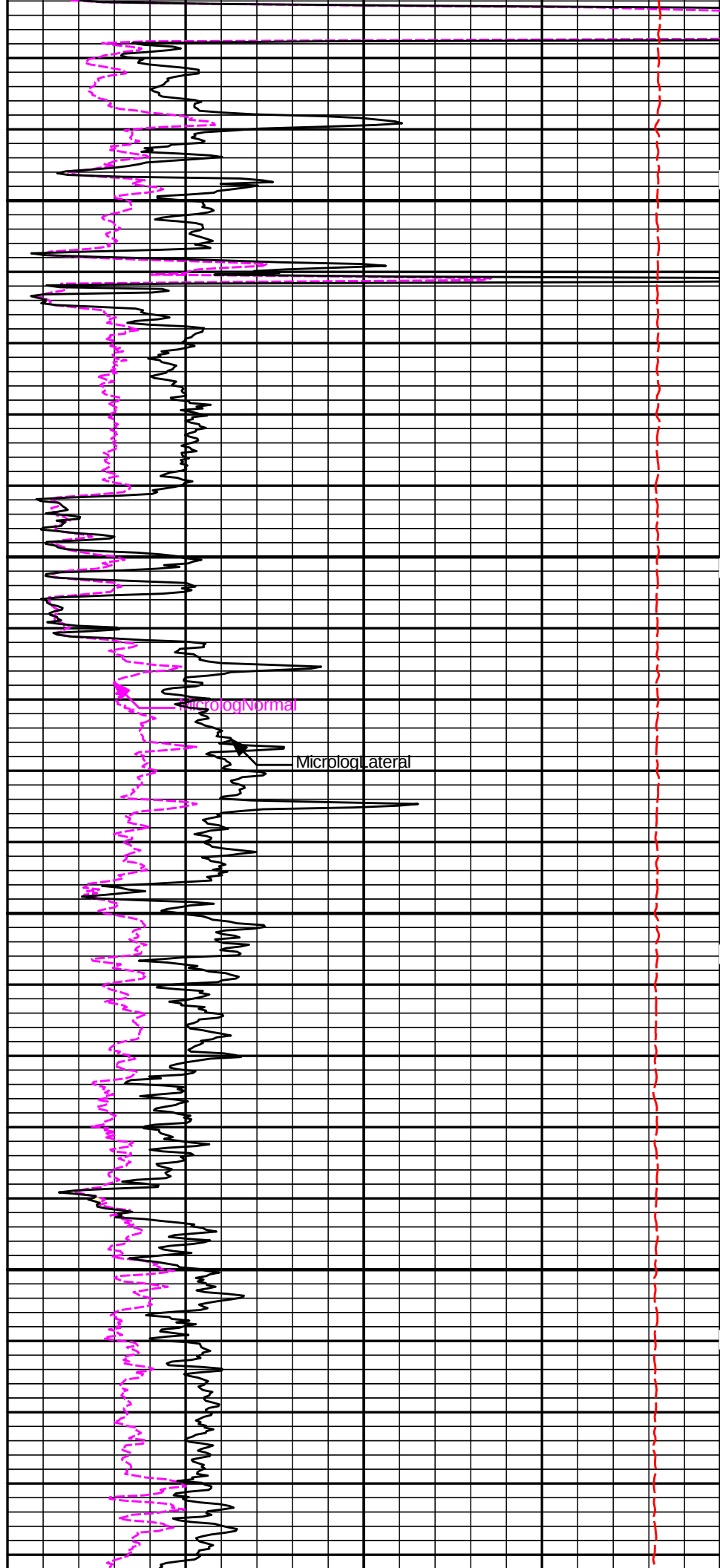
Microlog Normal

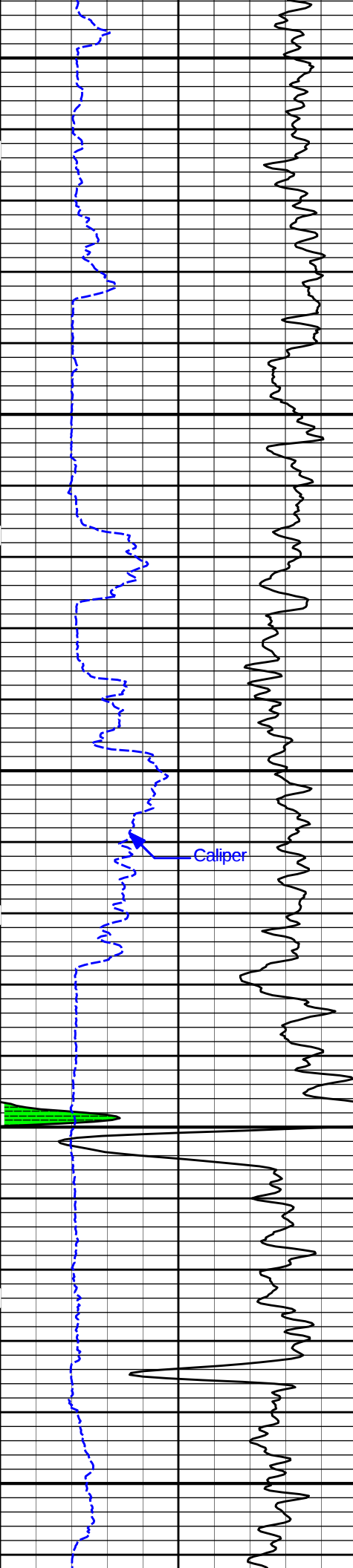
Microlog Lateral



3700

3800

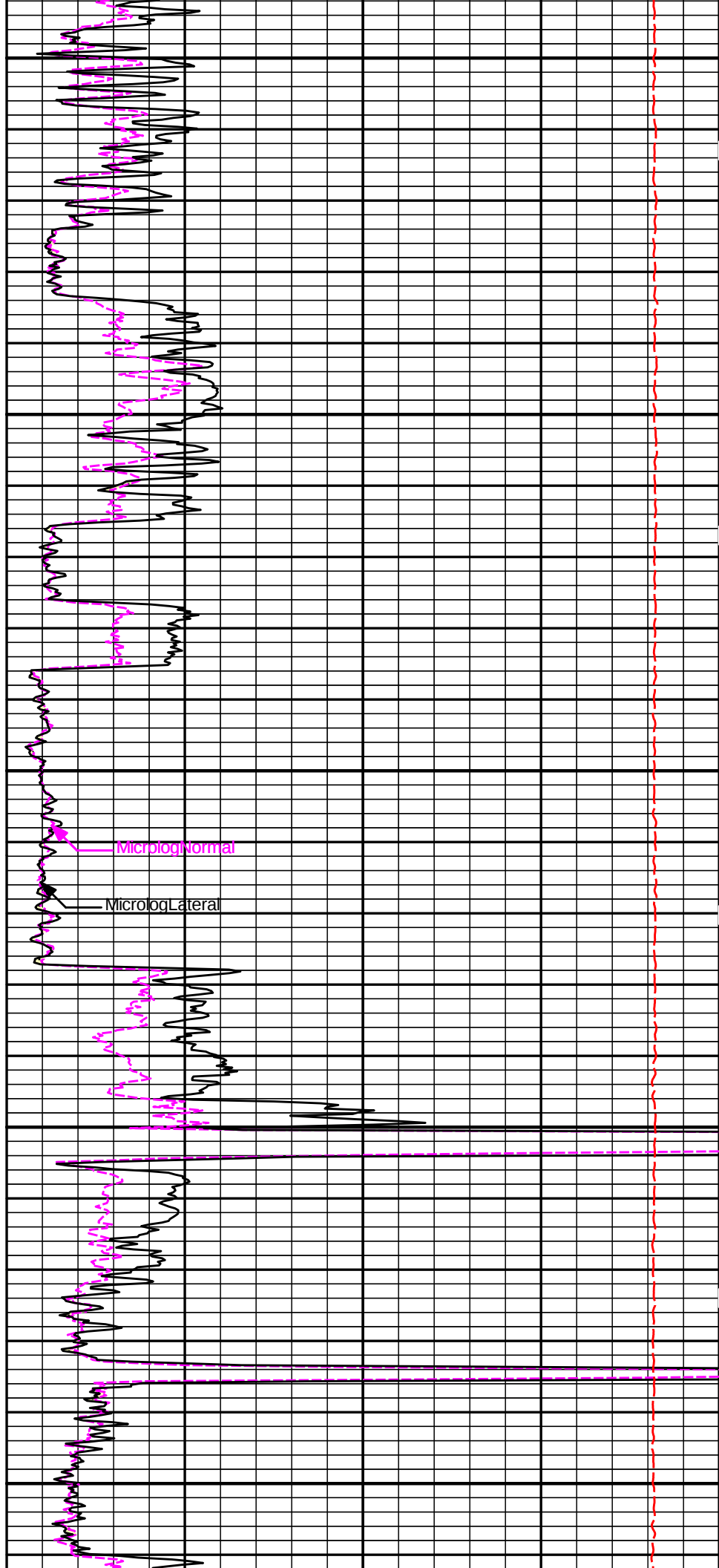


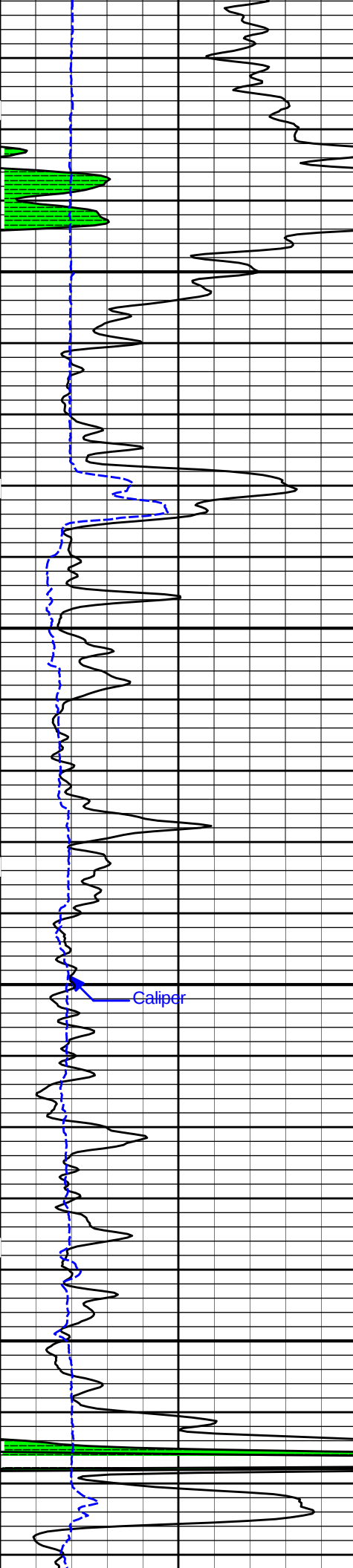


3900

4000

4100

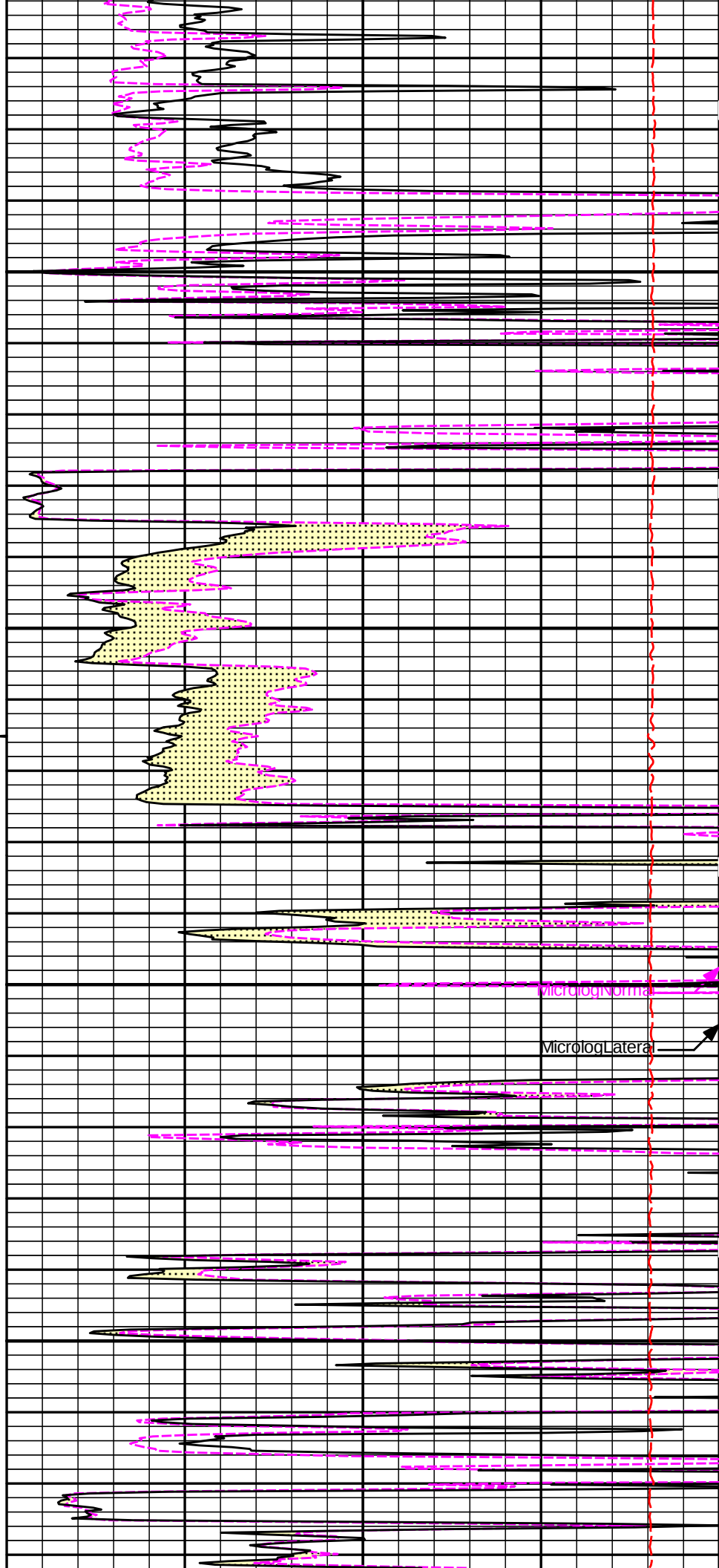




4200

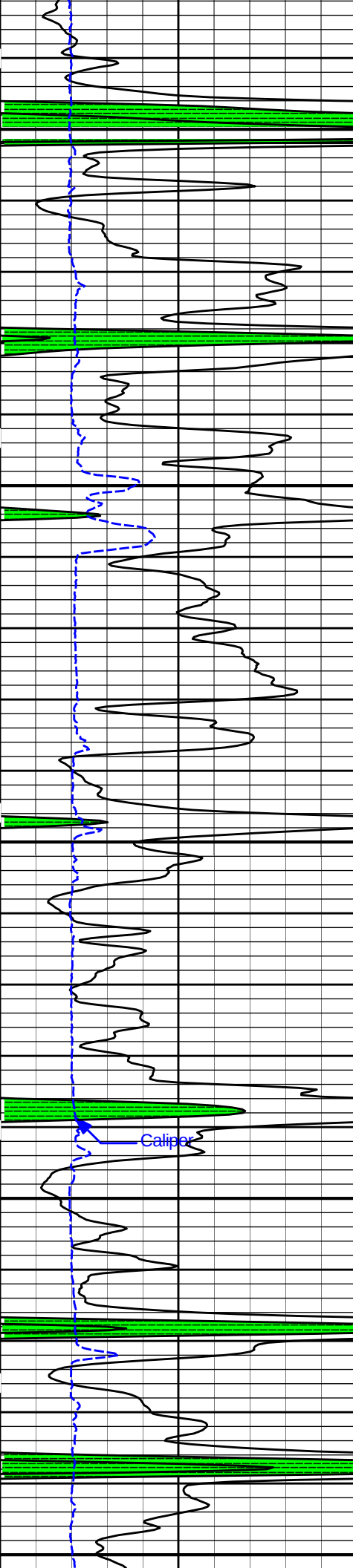
4300

Caliper



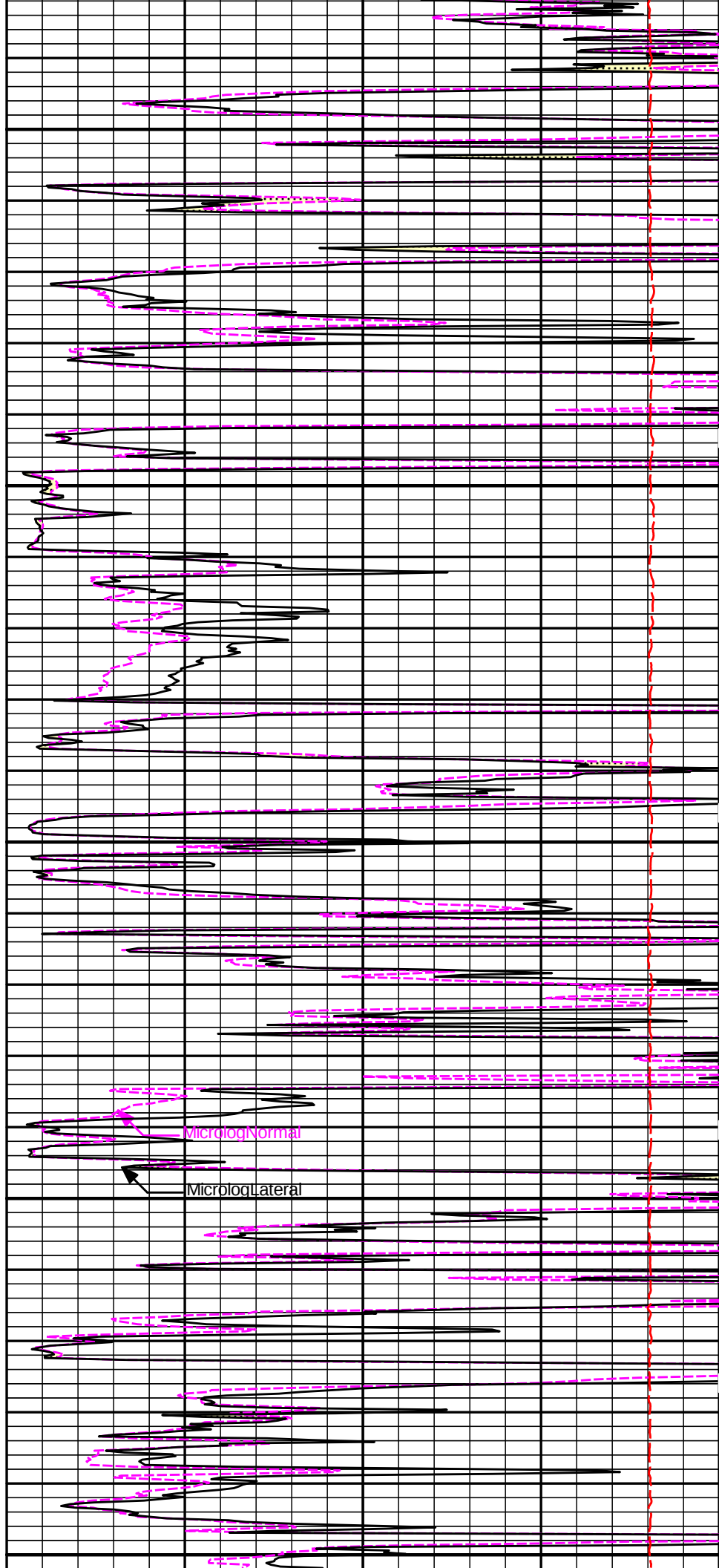
MicrologNormal

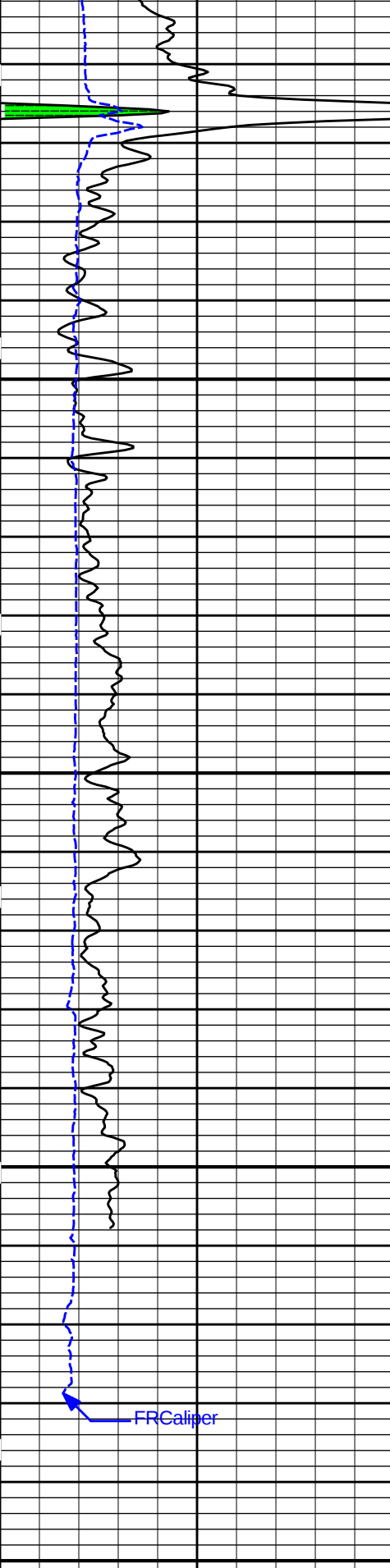
MicrologLateral



4400

4500

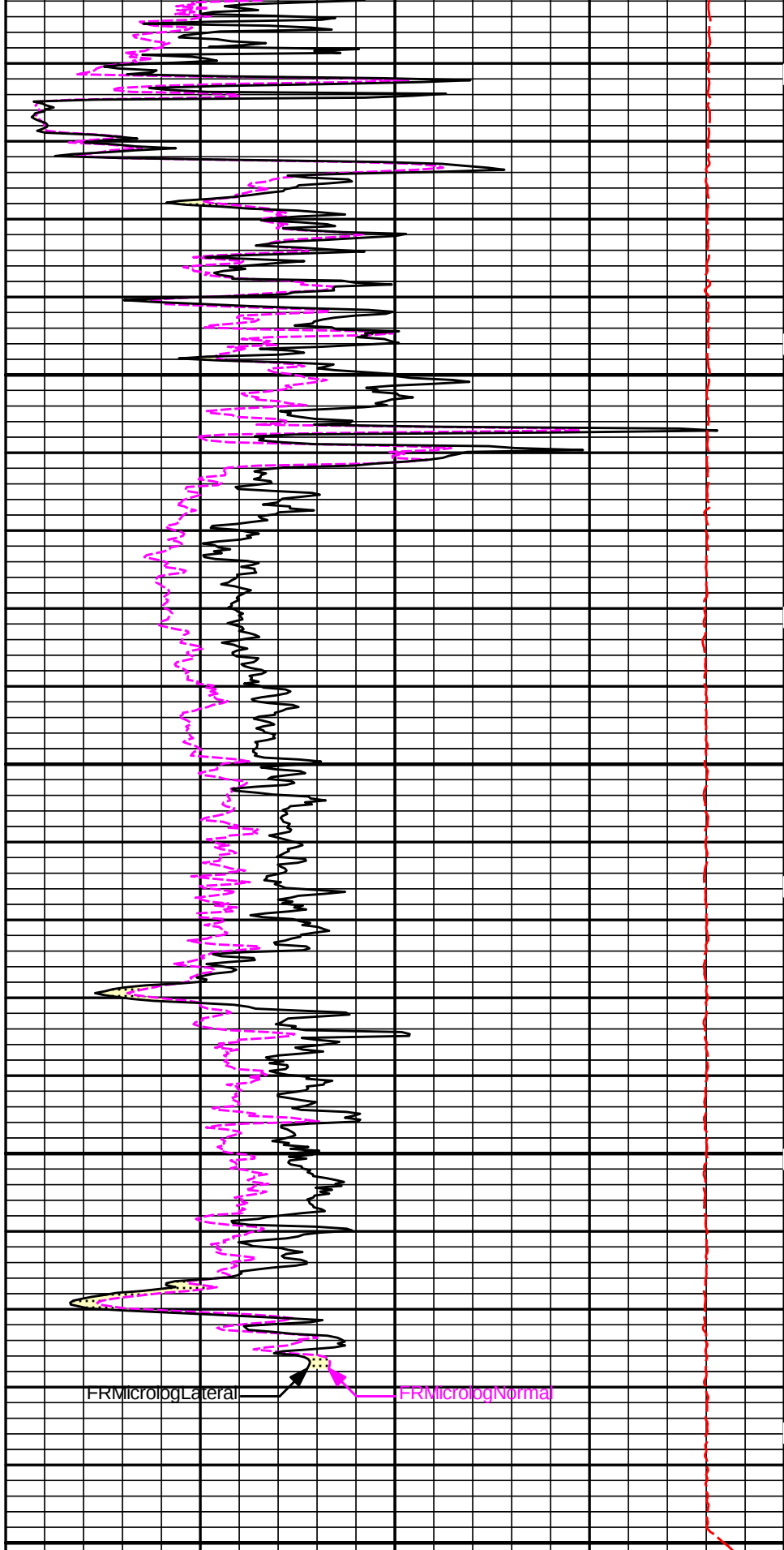




4600

4700

TD



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

The diagram illustrates a wellbore cross-section. The upper section is labeled 'SHALE' and is under 'Tension Pull'. Below this is a 'PERMEABLE' section. A dashed line represents the 'MicrologNormal ohm-metre' scale, ranging from 0 to 20.

HALLIBURTON

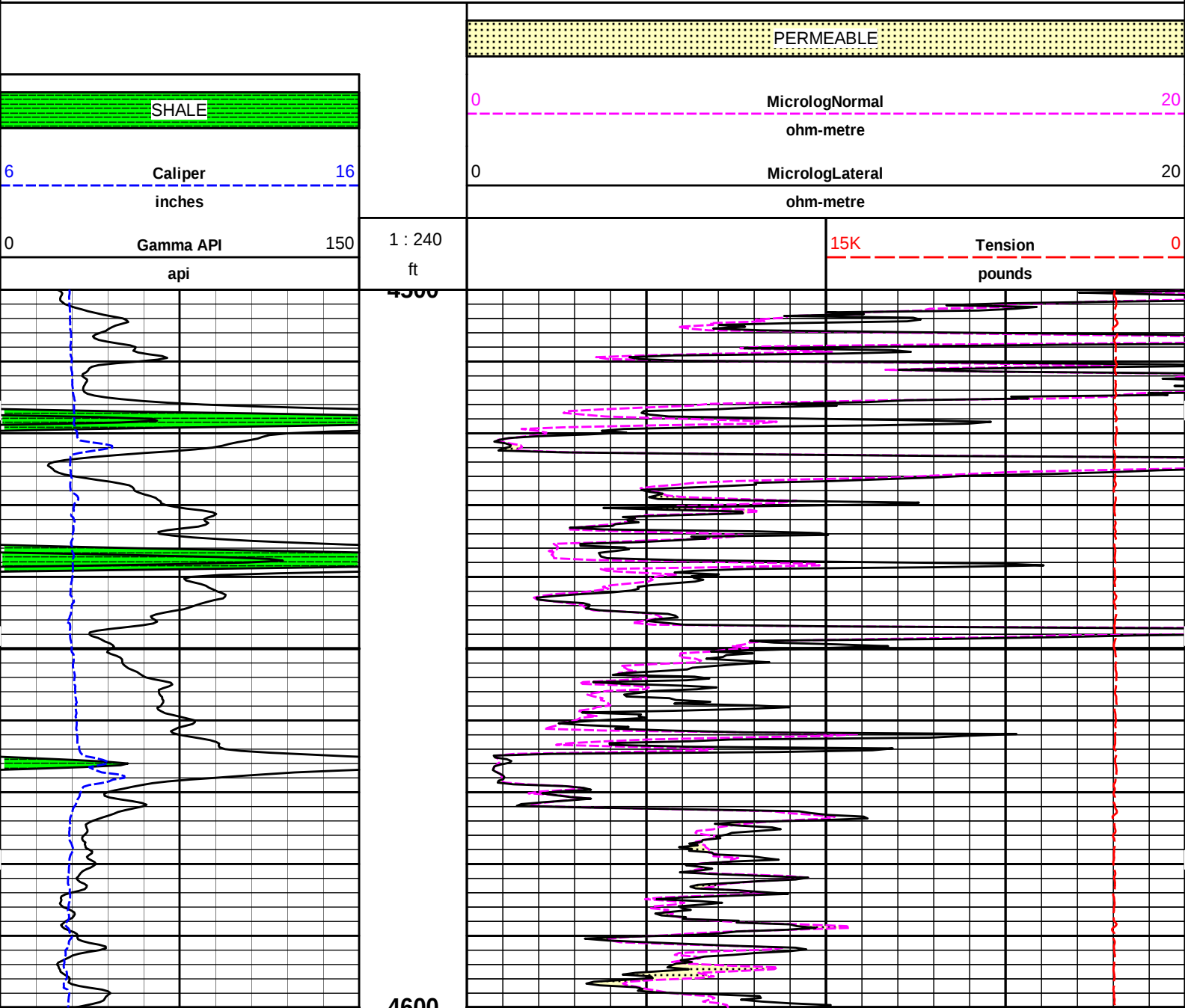
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Plot Range: 3400 ft to 4751.5 ft
Data: THOM_C_3_12\Well Based\DETAIL\
Plot File: \\LOCAL-1\THOM_C_3_12\0001 GTET-DSNT-SDLT-ACRT\MICRO\Microlog_IQ_5_main.lib

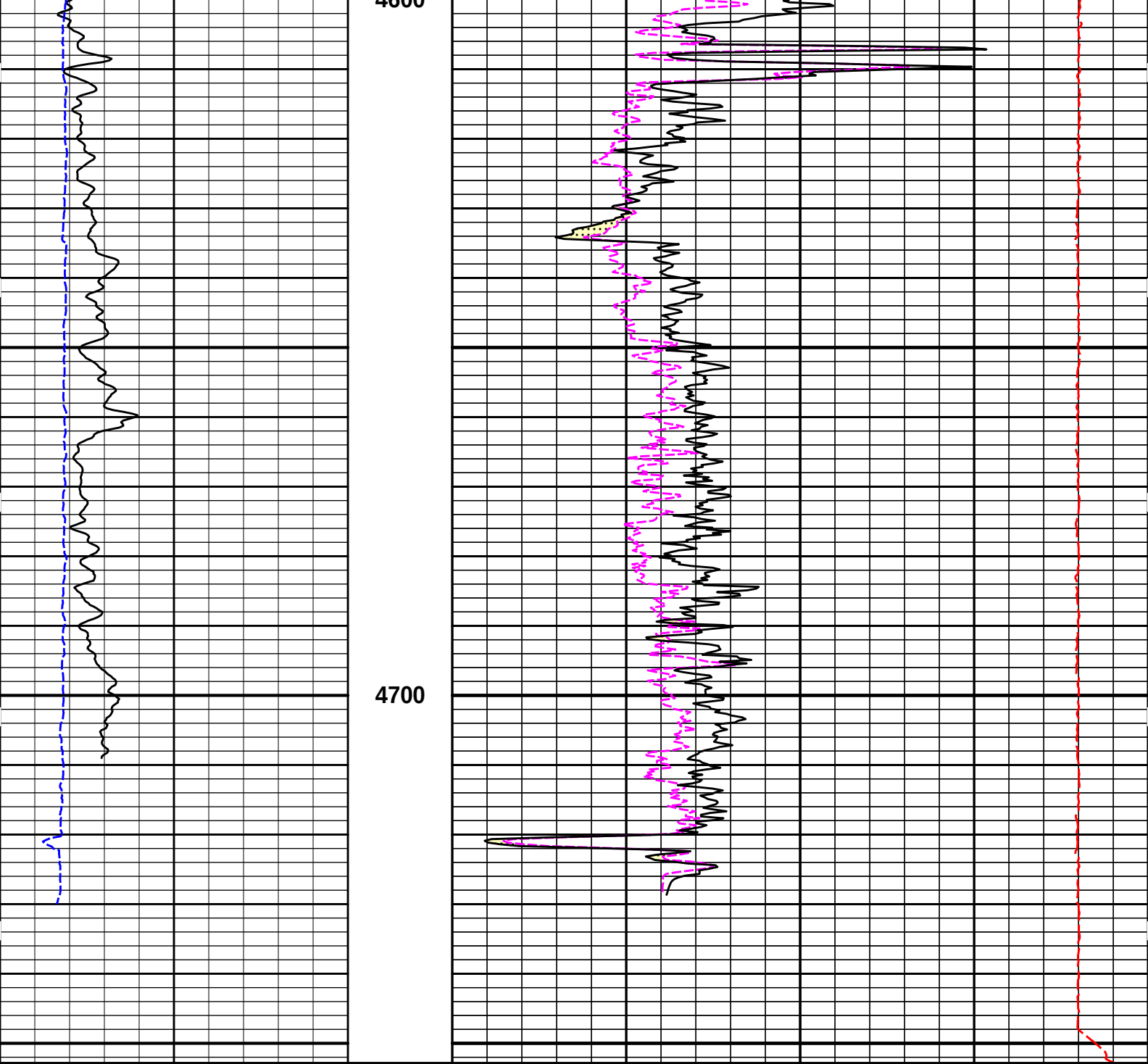
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 11-May-12 16:36:13
Plot Range: 4500 ft to 4752.83 ft
Data: THOM_C_3_12\Well Based\REPEAT\
Plot File: \\-LOCAL-\\THOM_C_3_12\0001 GTET-DSNT-SDLT-ACRT\MICRO\Microlog_IQ_5_rep_lib

REPEAT SECTION





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

HALLIBURTON

Plot Time: 11-May-12 16:36:16
Plot Range: 4500 ft to 4752.83 ft
Data: THOM_C_3_12\Well Based\REPEAT\
Plot File: \\-LOCAL-\\THOM_C_3_12\\0001 GTET-DSNT-SDLT-ACRT\MICRO\Microlog_IQ_5_rep_lib

REPEAT SECTION

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-336-I 37.50 lbs		Ø 2.750 in →		← Temperature @ 50.85 ft	3.03 ft	51.88 ft
						48.85 ft
GTET-11021039 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.79 ft	8.52 ft	
						40.33 ft
DSNT-11023947 174.00 lbs	DSN Decentralizer- PROT01 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft	9.69 ft	
						30.64 ft
SDLT- I947M315P774 360.00 lbs	SDLT Pad-I947M315P774 65.00 lbs Microlog Pad- I947M315P774 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	
						19.83 ft
ACRt Instrument- 095 50.00 lbs		Ø 3.625 in →			5.03 ft	
				← Mud Resistivity @ 13.44 ft		14.80 ft
				← ACRt @ 9.46 ft		
ACRt Sonde- 90148388-e095-s 200.00 lbs		Ø 3.625 in →			14.22 ft	

SP Ring-1 0.00 lbs		Ø 3.625 in* Ø 3.625 in Ø 6.000 in	← SP @ 1.86 ft 	0.58 ft 0.58 ft 0.00 ft	0.58 ft 0.00 ft	
Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	336-I	37.50	3.03	48.85	300.00
GTET	Gamma Telemetry Tool	11021039	165.00	8.52	40.33	60.00
DSNT	Dual Spaced Neutron	11023947	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer	PROT01	6.60	5.13	* 33.97	300.00
SDLT	Spectral Density Tool	I947M315P774	360.00	10.81	19.83	60.00
MICP	Microlog Pad	I947M315P774	8.00	1.00	* 22.33	60.00
SDLP	Density Insite Pad	I947M315P774	65.00	2.55	* 22.04	60.00
ACRt	Array Compensated True Resistivity Instrument Section	095	50.00	5.03	14.80	300.00
ACRt	Array Compensated True Resistivity	90148388-e095-s	200.00	14.22	0.58	300.00
SP	SP Ring	1	0.00	0.25	* 1.86	300.00
CBHD	Cabbage Head	01	10.00	0.58	0.00	300.00
Total			1,076.10	51.88		
* Not included in Total Length and Length Accumulation.						
Data: THOM_C_3_12I0001 GTET-DSNT-SDLT-ACRT\IDLE						Date: 11-May-12 12:55:47

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:

GTET - 11021039

Reference Calibration Date:

24-Feb-12 13:14:31

Engineer:

BOMAR

Calibration Date:

05-Apr-12 15:06:59

Software Version:

WL INSITE R3.4.2 (Build 2)

Calibration Version:

1

Calibrator Source S/N: MP051807-02

Calibrator API Reference:234.00 api

Equivalent Calibrator API Reference:238.1 api

Measurement	Measured	Calibrated	Units
Background	28.9	31.5	api
Background + Calibrator	247.4	269.6	api
Calibrator	218.5	238.1	api

MICRO LOG SHOP CALIBRATION						
Tool Name: Microlog Pad - I947M315P774			Reference Calibration Date: 06-Apr-12 06:17:36			
Engineer: BOMAR			Calibration Date: 22-Apr-12 21:28:26			
Software Version: WL INSITE R3.4.2 (Build 2)			Calibration Version: 1			

CALIBRATION COEFFICIENT SUMMARY						
Measurement	Micro Log Normal		Micro Log Lateral		Units	
	Measured	Calibrated	Measured	Calibrated		
Tool Zero	-0.11	-0.18	-0.01	-0.01	ohmm	
Calibration Point #1	0.07	0.00	0.00	0.00	ohmm	
Calibration Point #2	20.18	20.00	20.08	20.00	ohmm	
Internal Reference	19.98	19.80	20.09	20.01	ohmm	
Measurement	Micro Log Normal		Micro Log Lateral		Units	

Tool Value		Tool Value	
Tool Zero	1.57	-0.83	V
Calibration Point #1	49.66	2.20	V
Calibration Point #2	5346.79	6925.38	V
Internal Reference	5293.72	6928.27	V

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11021039						
Gamma Ray Calibrator	238.1	-----	-----	0.0	+/- 9.00	api
Microlog Pad-I947M315P774						
MicroLog Normal	19.80	-----	-----	0.00	-----	ohmm
MicroLog Lateral	20.01	-----	-----	0.00	-----	ohmm

Data: THOM_C_3_12I0001 GTET-DSNT-SDLT-ACRTIDLE	Date: 11-May-12 13:08:55
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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	9.000	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	4750.00	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	

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
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	
DNDS	Near Detector Telemetry Counts		32.54	BLK	1.417

RNDS	Near Detector Telemetry Counts	32.64	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.39	TRI	0.583
DNTT	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
SP Ring				
PLTC	Plot Control Mask	1.86	NO	
SP	Spontaneous Potential	1.86	BLK	1.250
SPR	Raw Spontaneous Potential	1.86	NO	
SPO	Spontaneous Potential Offset	1.86	NO	
Data: THOM_C_3_12\0001 GTET-DSNT-SDLT-ACRT\IDLE			Date: 11-May-12 12:56:23	
COMPANY	VAL ENERGY INC.			
WELL	THOM C 3-12			
FIELD	UNKNOWN			
COUNTY	BARBER	STATE	KANSAS	

COUNTY	BARBER	STATE	KANSAS
HALLIBURTON		MICROLOG	