

HALLIBURTON										MAIN LOGS QUICK LOOK									
COMPANY					HARTMAN OIL COMPANY INC					COMPANY					HARTMAN OIL COMPANY INC				
WELL					CLARK OCHS 1-17					WELL					CLARK OCHS 1-17				
FIELD/BLOCK					WILDCAT					FIELD/BLOCK					WILDCAT				
COUNTY					LOGAN					COUNTY					LOGAN				
STATE					KANSAS					STATE					KANSAS				
Permanent Datum					GL					Other Services:					GTET DSNT SDLT MICROLOG BSAT ACRT				
Log measured from					KB					Elev. 3147.0 ft					D.F.				
Drilling measured from					KB					5.0 ft above perm. Datum					G.L.				
Date					05-Apr-19														
Run No.					ONE														
Depth - Driller					4800.0 ft														
Depth - Logger					4800.0 ft														
Bottom - Logged Interval					4791.0 ft														
Top - Logged Interval					4000.0 ft														
Casing - Driller					8.625 in					@					@				
Casing - Logger					305.0 ft														
Bit Size					7.875 in					@					@				
Type Fluid in Hole					Water Based Mud														
Density					9.3 ppg					59.00 s/qt									
PH					11.00 pH					7.2 cpm									
Source of Sample					MUD PIT														
Rm @ Meas. Temperature					0.61 ohmm					@ 80.00 degF					@				
Rmf @ Meas. Temperature					0.48 ohmm					@ 80.00 degF					@				
Rmc @ Meas. Temperature					0.73 ohmm					@ 80.00 degF					@				
Source Rmf					MEAS					MEAS									
Rm @ BHT					0.11 ohmm					@ 118.0 degF					@				
Time Since Circulation					03:41 hr														
Time on Bottom					05-Apr-19 20:03														
Max. Rec. Temperature					118.00 degF					@ 4800.0 ft					@				
Equipment					12147634					EL RENO, OK									
Recorded By					SEAN WOLTEMATH														
Witnessed By					KITT NOAH														

Service Ticket No.: 905595092						API No.: 15-109-21569-00-00						PGM Version: WL INSITE R5.8.10 (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	ACRT	N/A	ECEN.	N/A					
Rmc @ Meas. Temp.		@				@					I-12109517								
Source Rmf	Rmc									S-12109515									
Rm @ BHT		@				@													
Rmf @ BHT		@				@													
Rmc @ BHT		@				@													
EQUIPMENT DATA																			
GAMMA				ACOUSTIC				DENSITY				NEUTRON							
Run No.	ONE			Run No.	ONE			Run No.	ONE			Run No.	ONE						
Serial No.	11958947			Serial No.	10747686			Serial No.	10809130			Serial No.	10993115						
Model No.	GTET			Model No.	BSAT			Model No.	SDLT			Model No.	DSNT						
Diameter	3.625"			No. of Cent.				Diameter	5.5"			Diameter	3.625"						
Detector Model No.	GTET			Spacing				Log Type	GAM-GAM			Log Type	NEU-NEU						
Type	SCINT							Source Type	Cs-137			Source Type	Am241Be						
Length	8"			LSA [Y/N]				Serial No.	5471GW			Serial No.	DSN-424						
Distance to Source	10'			FWDA [Y/N]				Strength	1.78 Ci			Strength	15.0 Ci						
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	TD	4000	REC	0	150	20	10	47.6 us/ft	20	10	2.71 g/cc	20	10	TIME					

ONE	ID	4000	REC	0	150	30	-10	47.0 us/ft	30	-10	2.71 g/cc	30	-10	TIME
DIRECTIONAL INFORMATION														
Maximum Deviation @									KOP @					
Remarks:														
GTET-DSNT-SDLT-BSAT-ACRT RUN IN COMBINATION														
ANNULAR HOLE VOLUME CALCULATED USING 5.5 INCH CASING														
CHLORIDES REPORTED AT 4000 ppm														

HALLIBURTON

Plot Time: 05-Apr-19 21:00:53

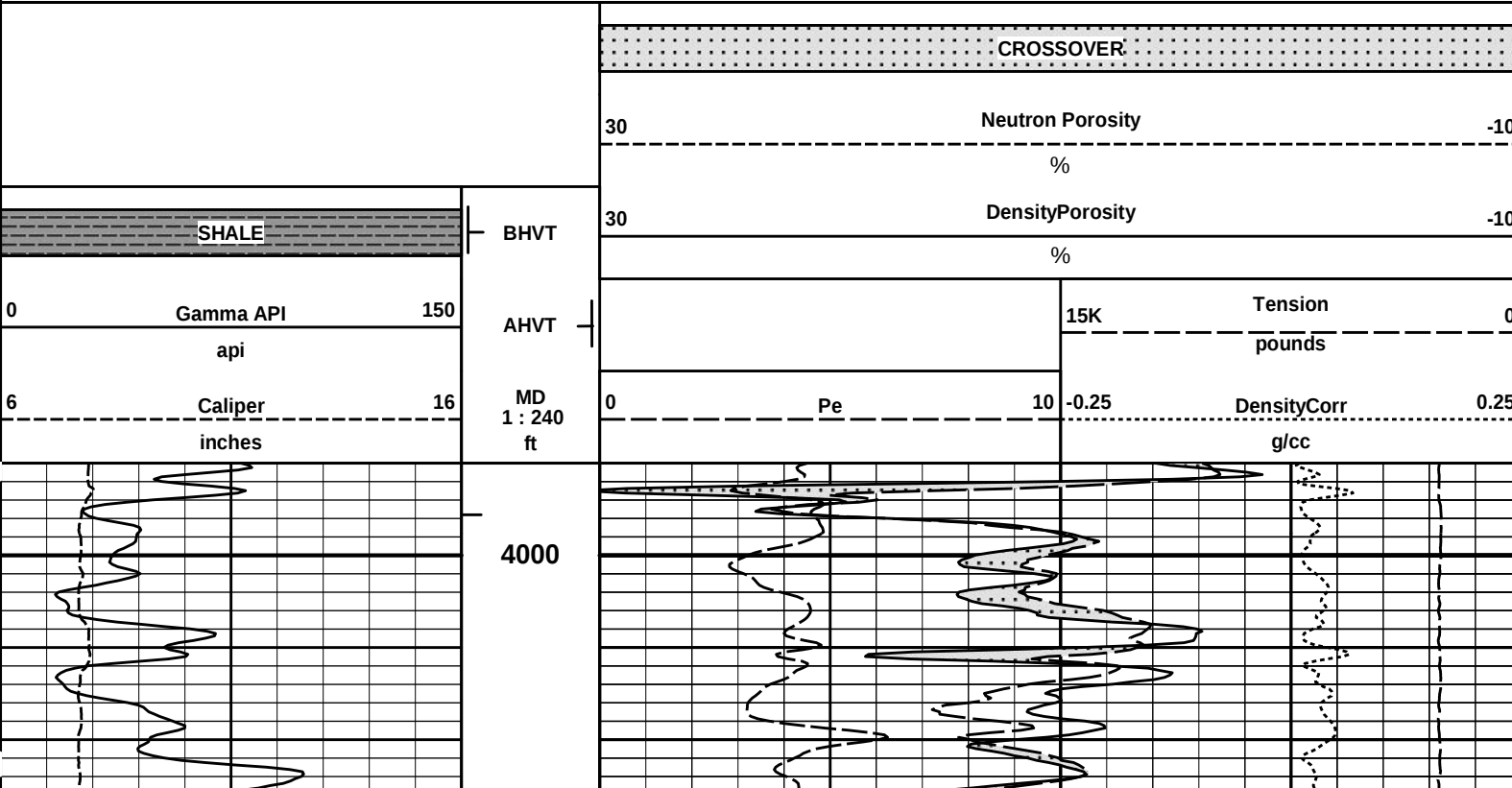
Plot Range: 3990 ft to 4805.5 ft

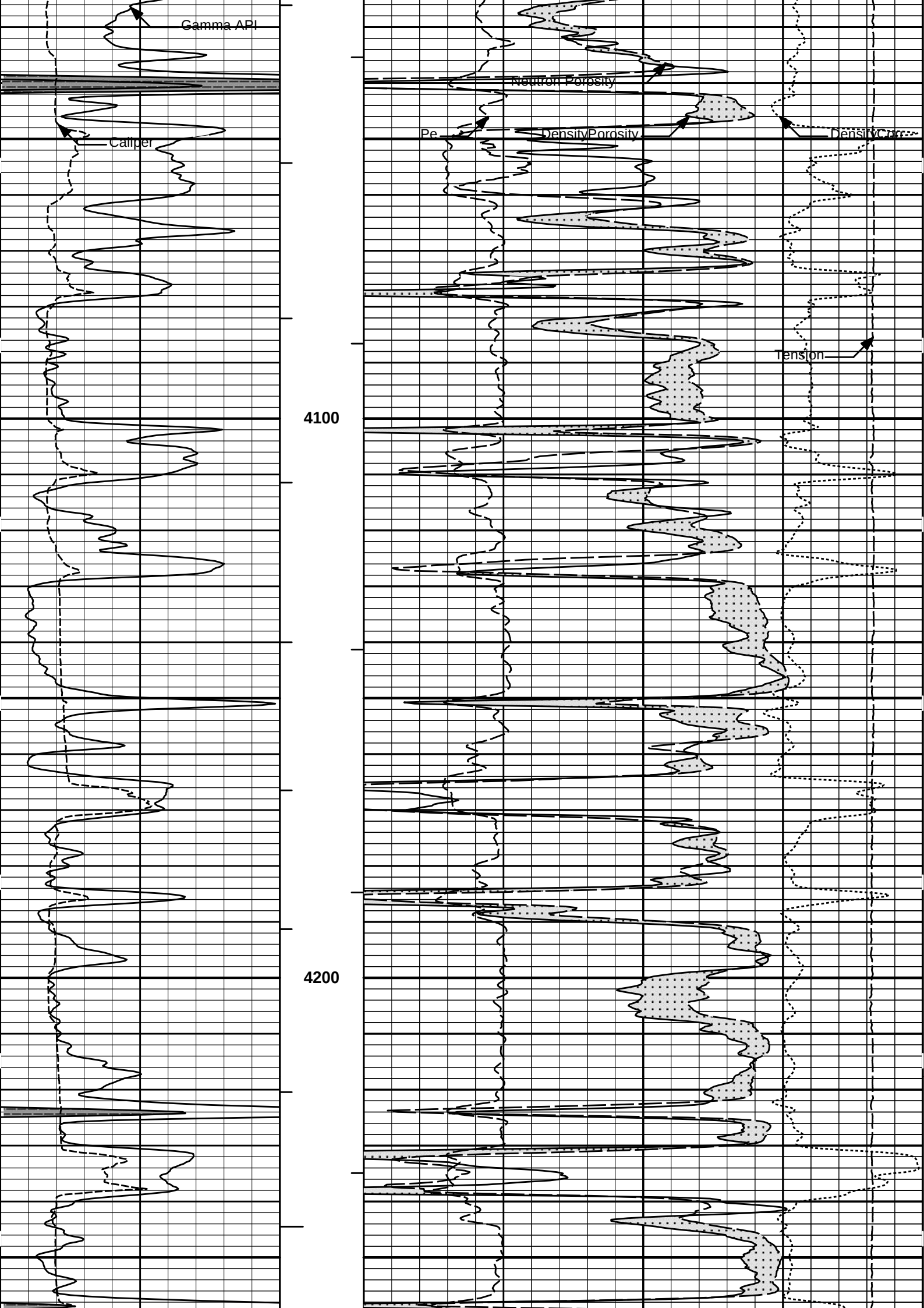
Data: HARTMAN_CLARK17\Well Based\QUICKLOOK\

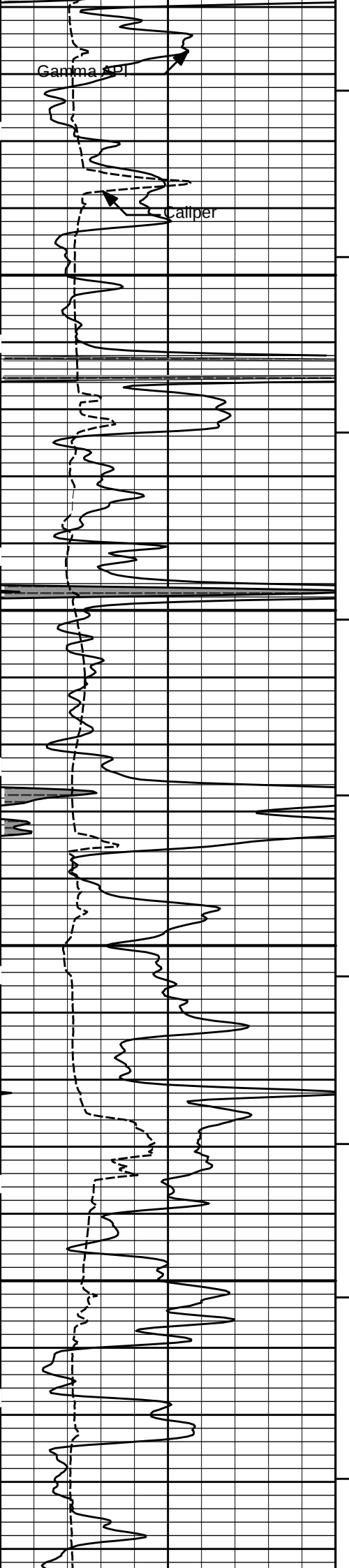
Plot File: \\QUICKLOOK\Porosity_Q_5_MAIN_LIB

5 INCH MAIN LOG

MEASURED DEPTH
MAIN SECTION 5" PER 100'

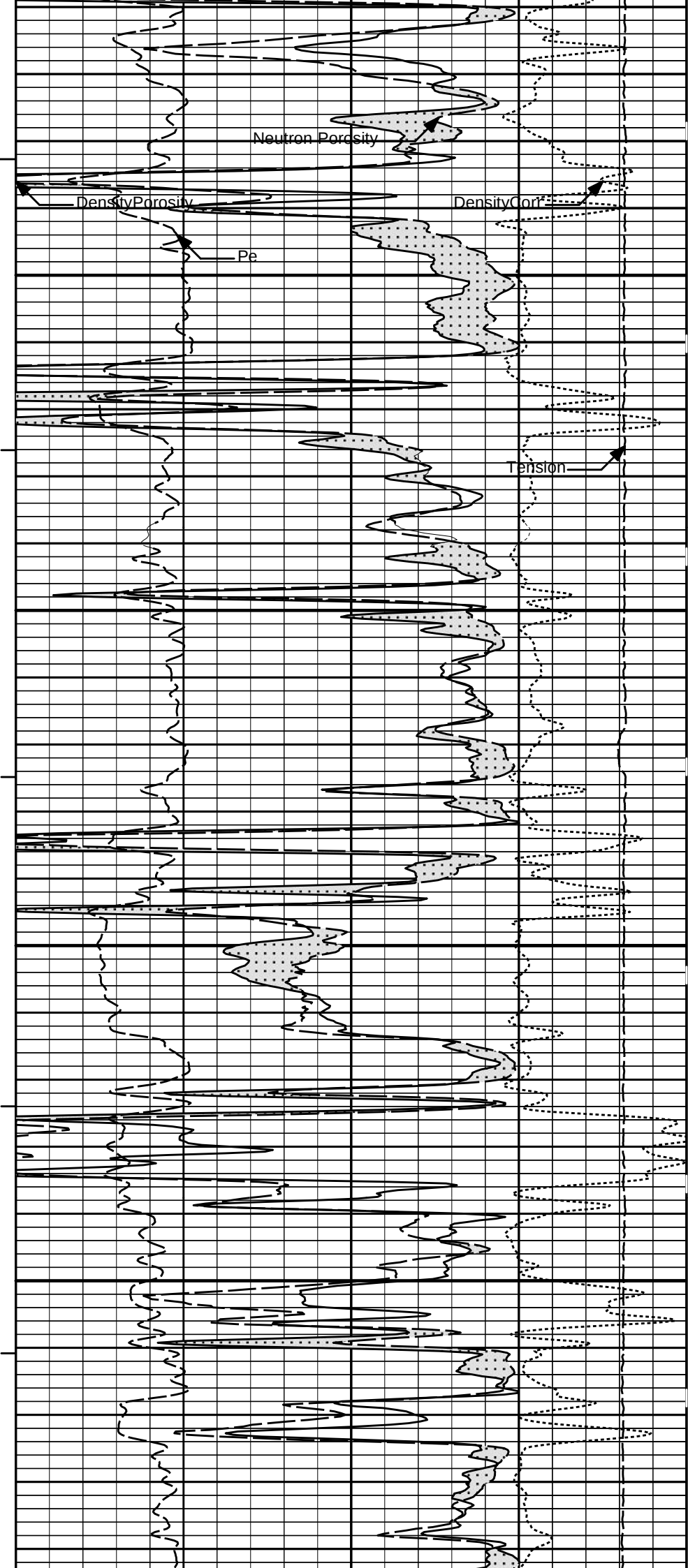


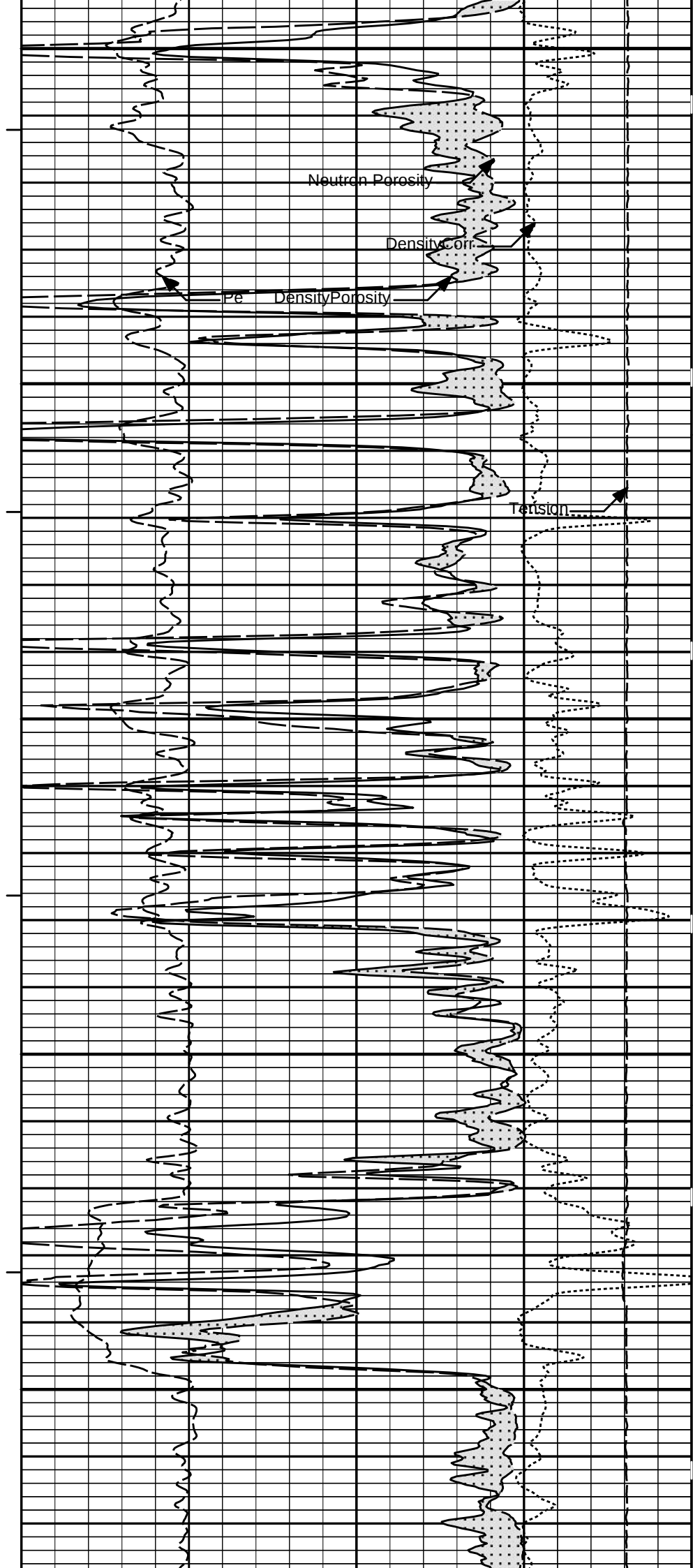
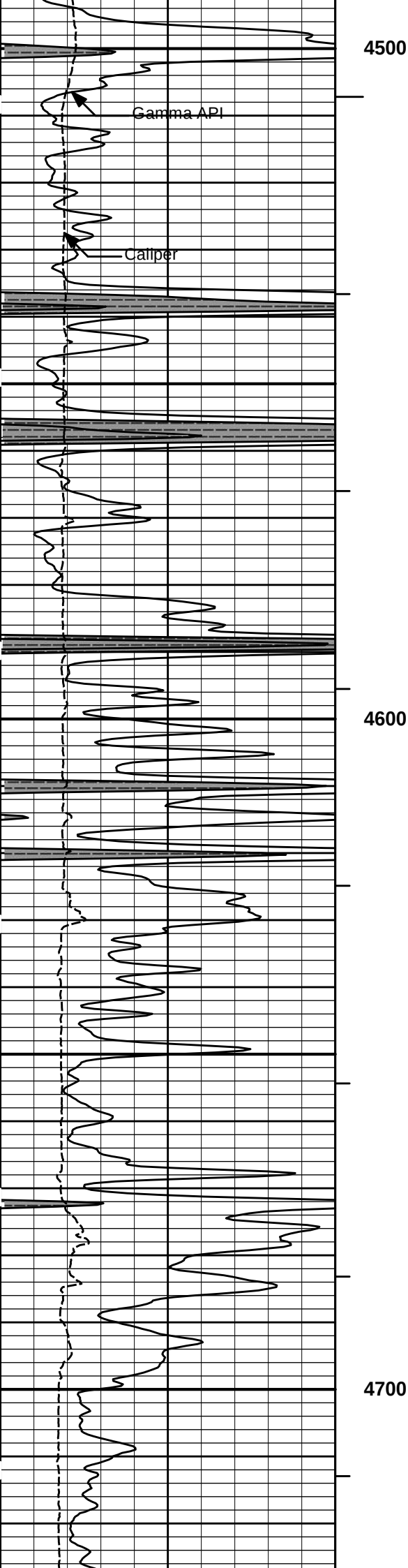


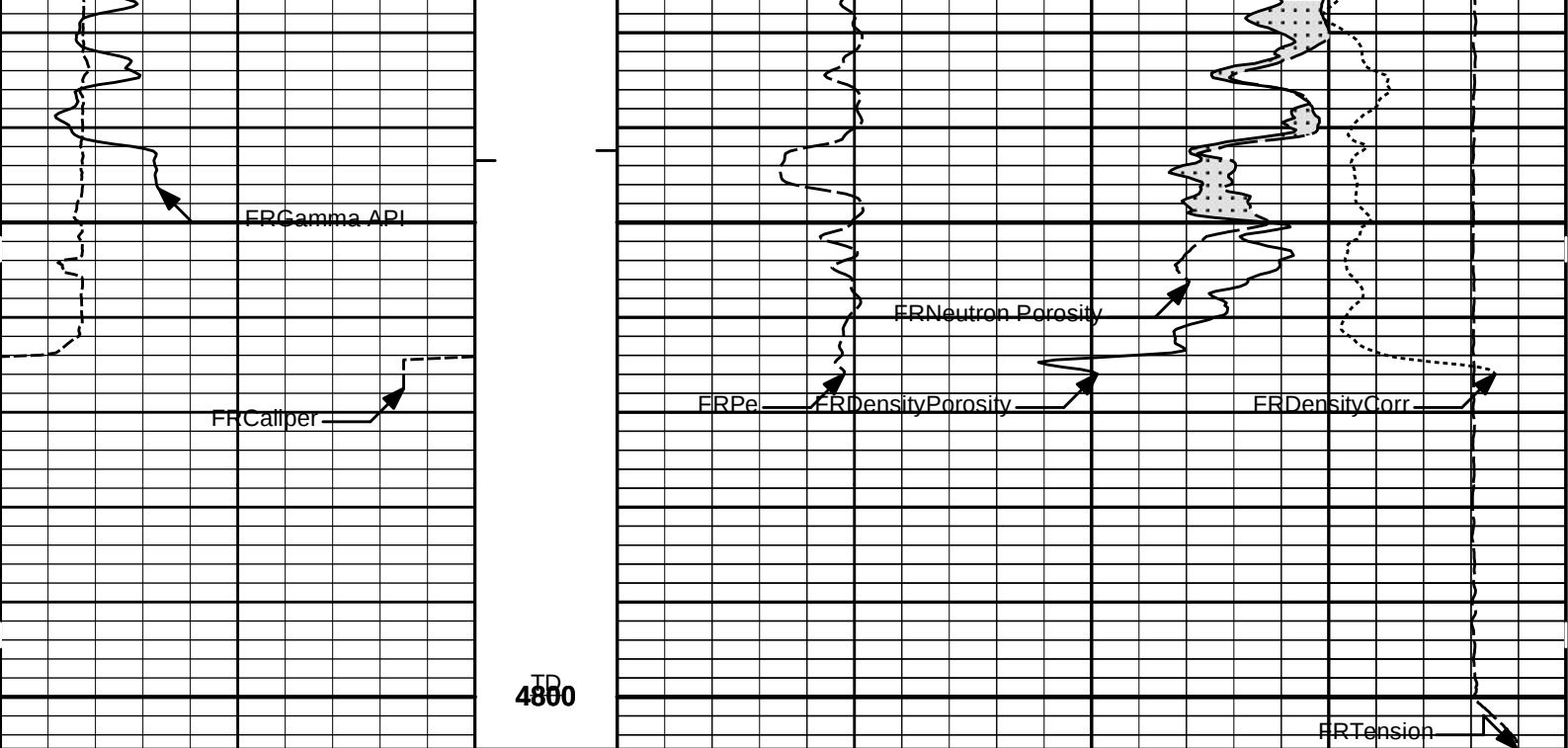


4300

4400







6	Caliper	16	MD	0	Pe	10	-0.25	DensityCorr	0.25
	inches		1 : 240					g/cc	
0	Gamma API	150	AHVT				15K	Tension	0
	api							pounds	
	SHALE		BHVT	30	DensityPorosity				-10
					%				
				30	Neutron Porosity				-10
					%				
					CROSSOVER				

HALLIBURTON

Plot Time: 05-Apr-19 21:00:57
Plot Range: 3990 ft to 4805.5 ft
Data: HARTMAN_CLARK17\Well Based\QUICKLOOK\
Plot File: \\QUICKLOOK\Porosity_Q_5_MAIN_LIB

5 INCH MAIN LOG

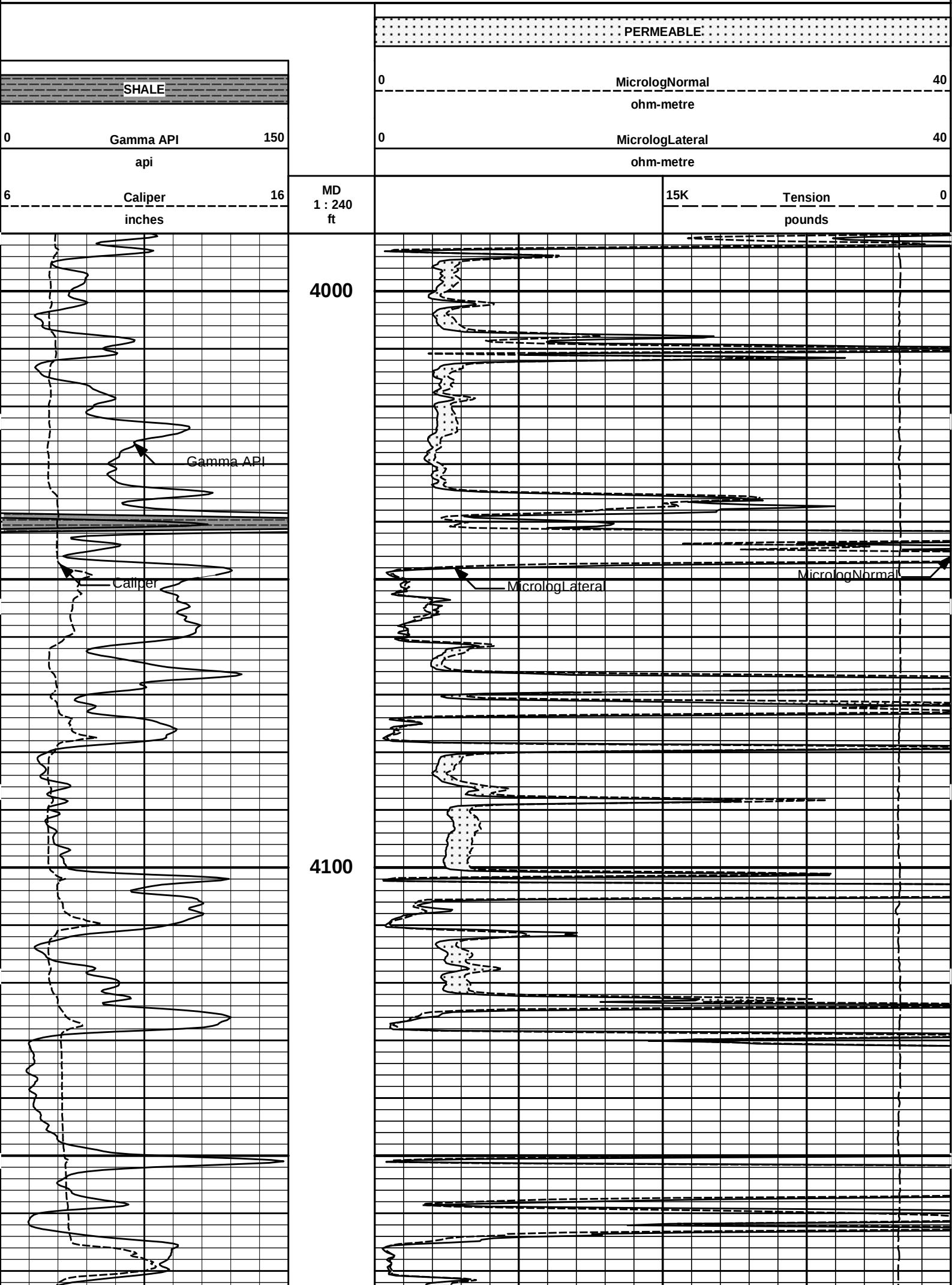
MEASURED DEPTH
MAIN SECTION 5" PER 100'

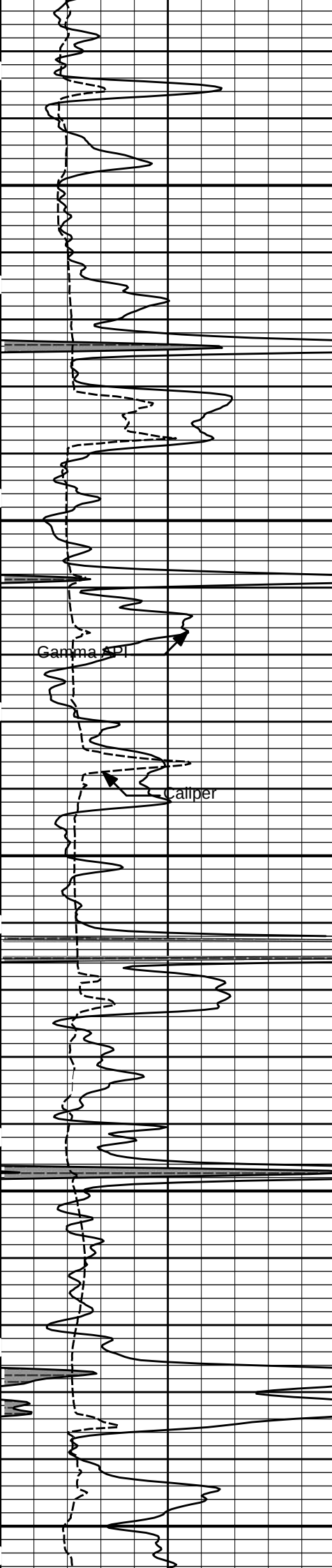
HALLIBURTON

Plot Time: 05-Apr-19 21:00:58
Plot Range: 3990 ft to 4805.5 ft
Data: HARTMAN_CLARK17\Well Based\QUICKLOOK\
Plot File: \\LOCAL\HARTMAN_CLARK17\Well Based\QUICKLOOK\Microlog_IQ_5_main_lib

5 INCH MAIN LOG

MEASURED DEPTH
MAIN LOG 5" PER 100'

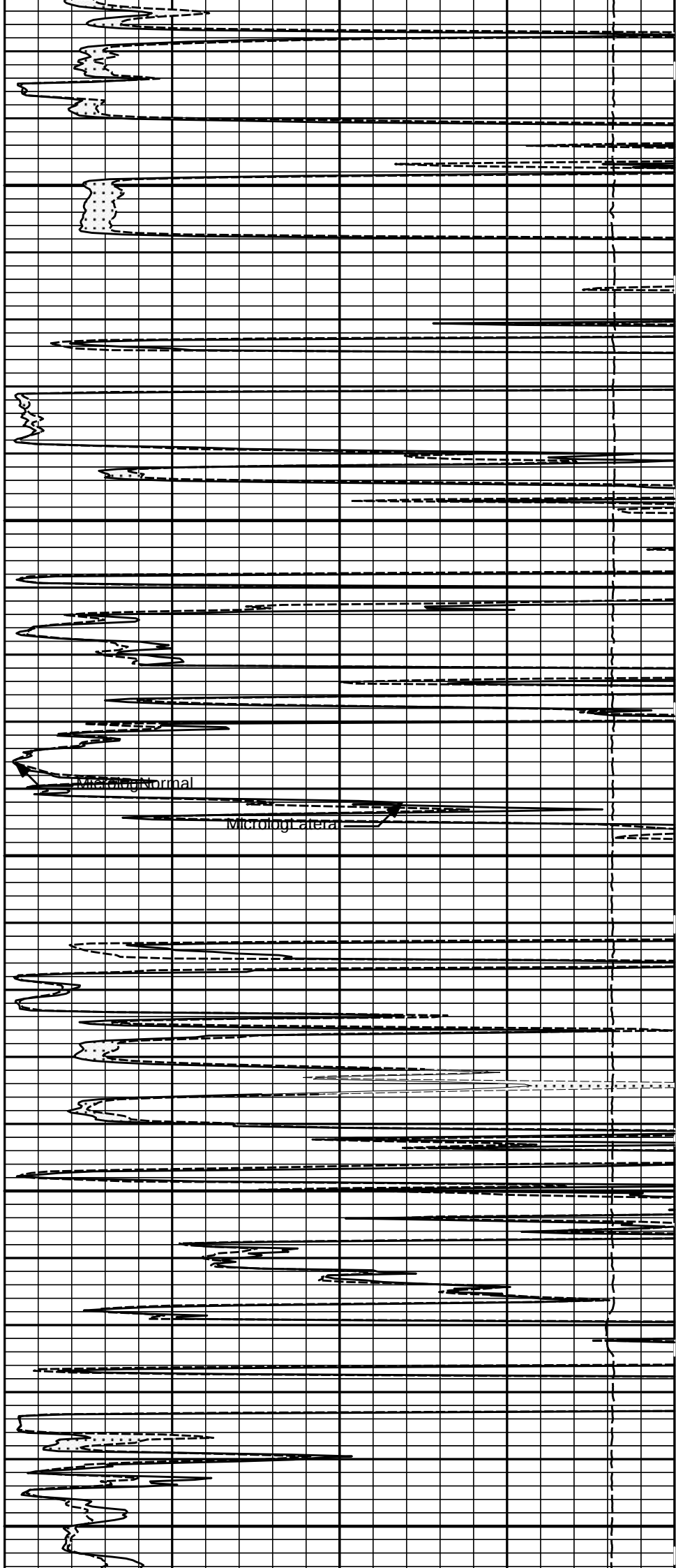


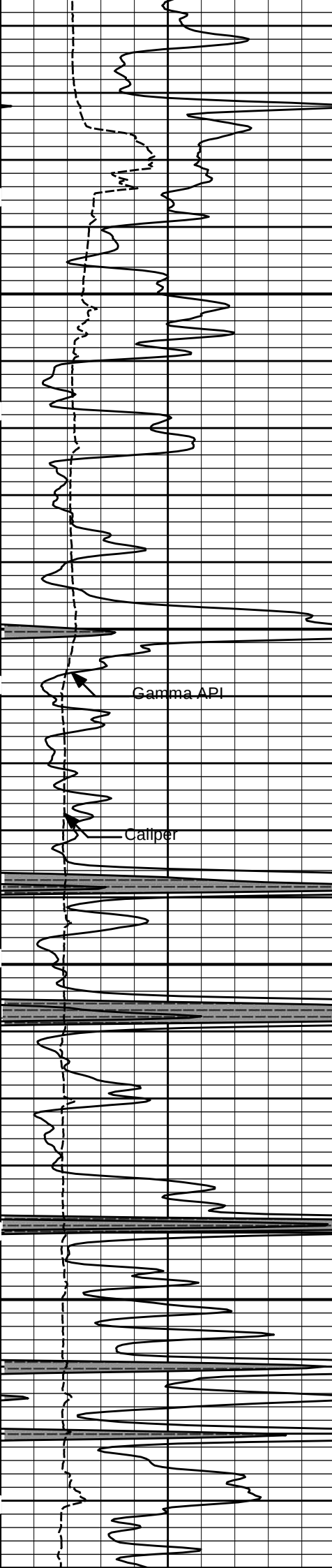


4200

4300

4400



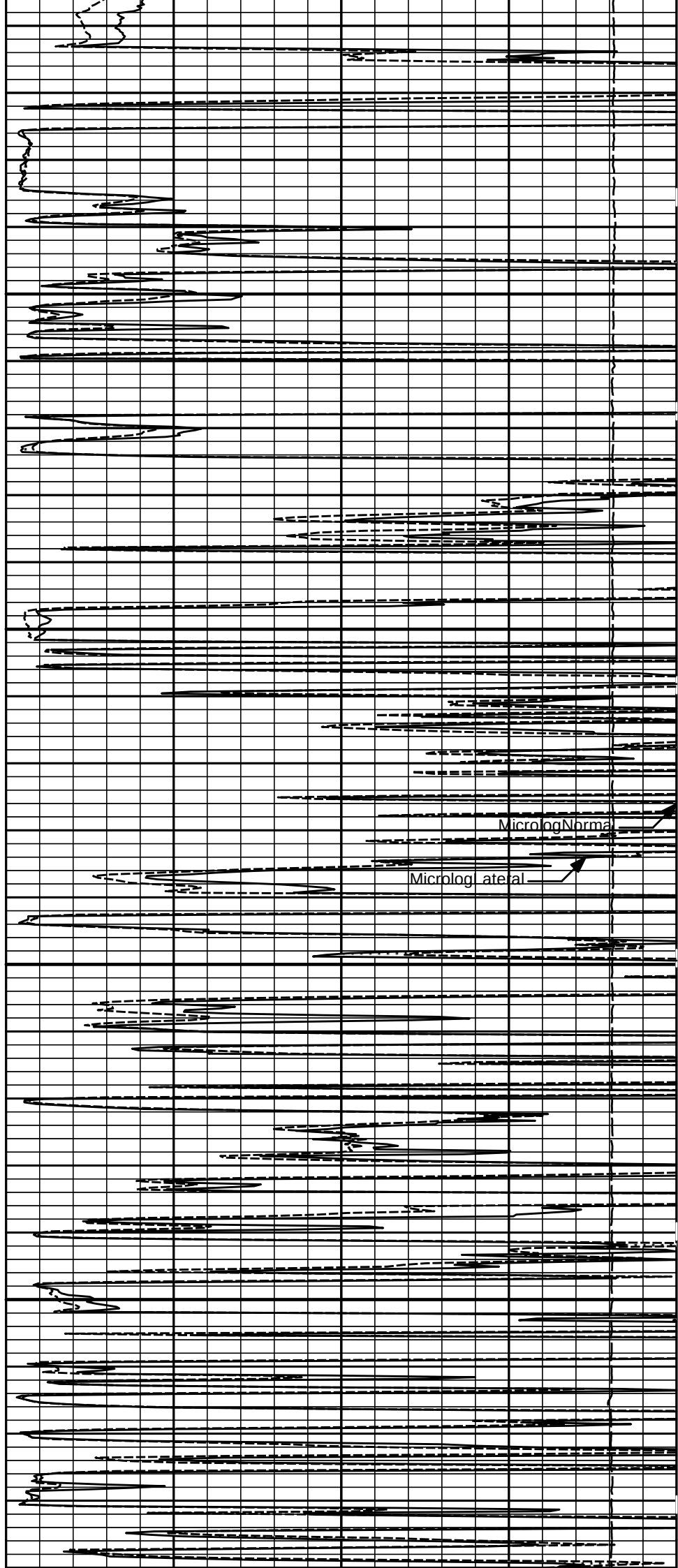


4500

Gamma API

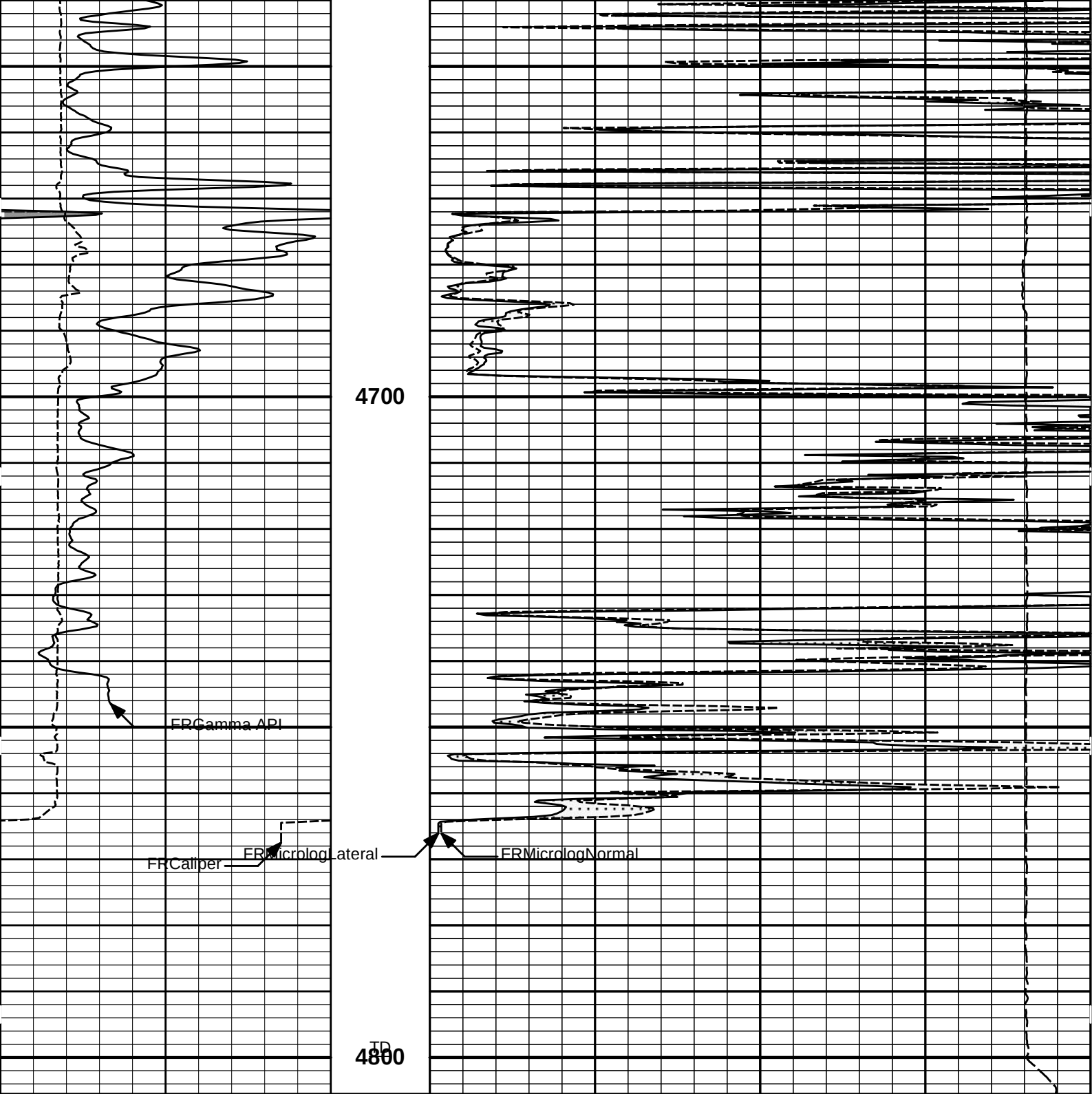
Caliper

4600



Microlog Normal

Microlog Lateral



6	Caliper	16	MD 1 : 240 ft	15K	Tension	0
	inches				pounds	
0	Gamma API	150		0	MicrologLateral	40
	api				ohm-metre	
	SHALE			0	MicrologNormal	40
					ohm-metre	
					PERMEABLE:	

HALLIBURTON

Plot Time: 05-Apr-19 21:01:00
Plot Range: 3990 ft to 4805.5 ft
Data: HARTMAN_CLARK17\Well Based\QUICKLOOK\
Plot File: \\-LOCAL-HARTMAN_CLARK17\Well Based\QUICKLOOK\Microlog_IQ_5_main_lib

5 INCH MAIN LOG

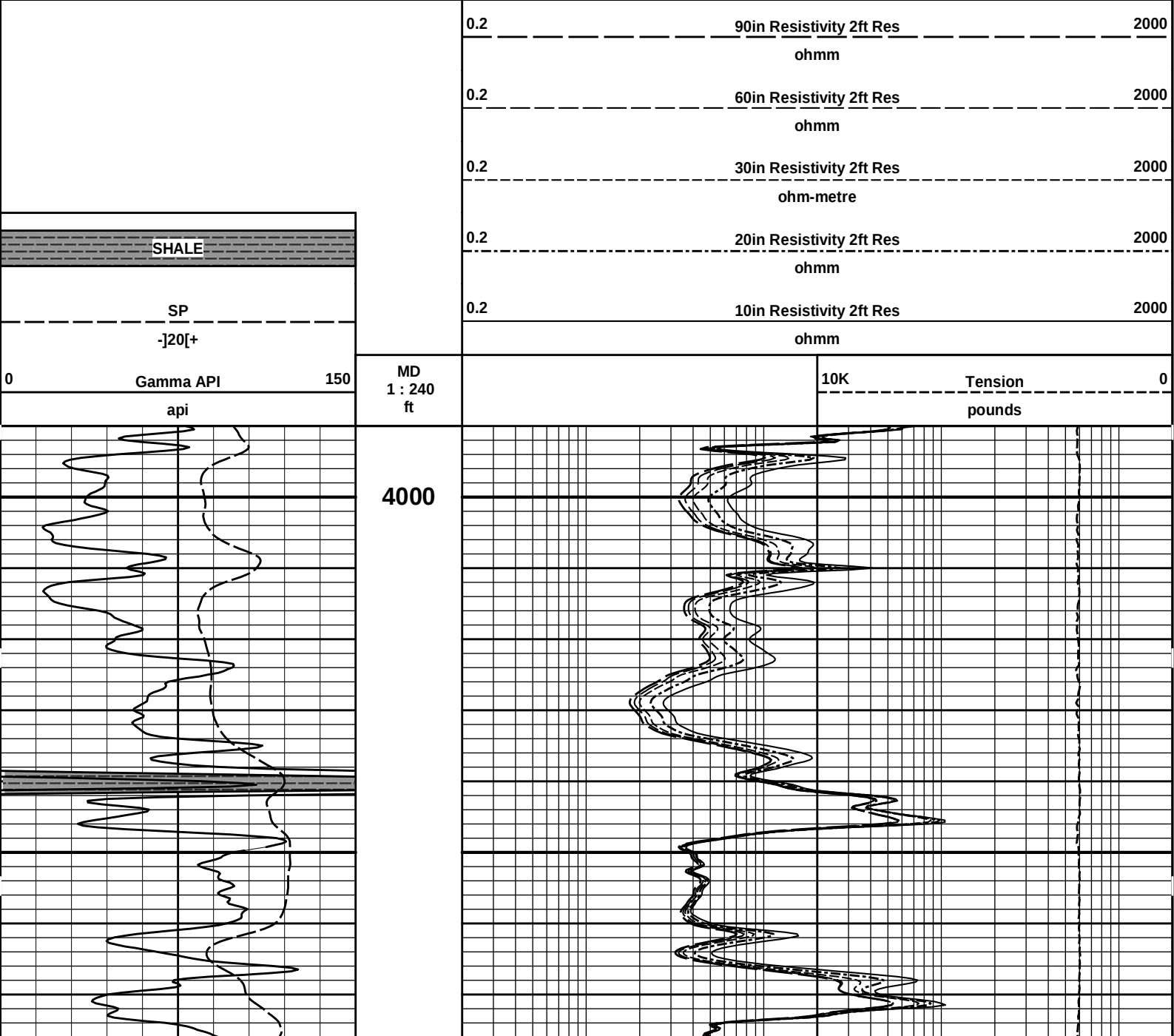
MEASURED DEPTH
MAIN LOG 5" PER 100'

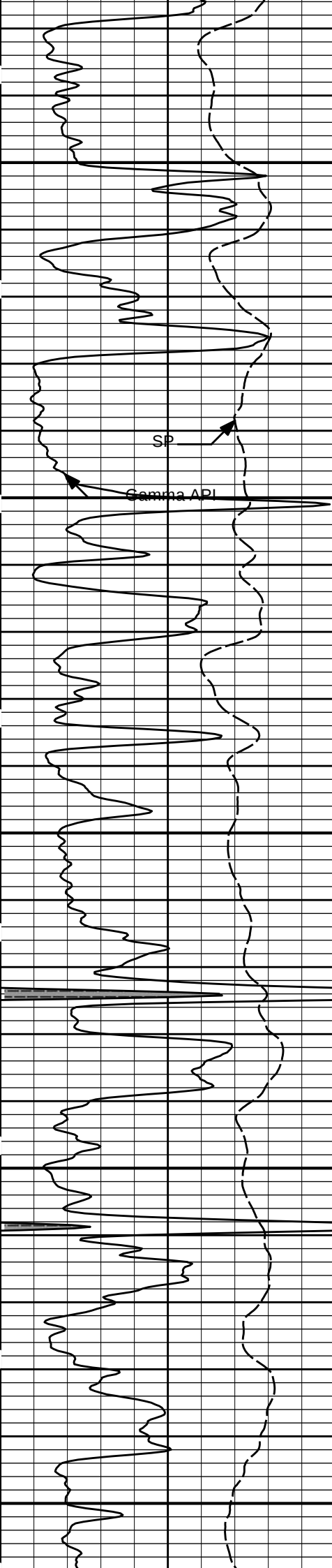
HALLIBURTON

Plot Time: 05-Apr-19 21:01:01
Plot Range: 3990 ft to 4805.5 ft
Data: HARTMAN_CLARK17\Well Based\QUICKLOOK\
Plot File: \\-LOCAL-HARTMAN_CLARK17\Well Based\QUICKLOOK\ACRT_5_main_lib

5 INCH MAIN LOG

MEASURED DEPTH
MAIN SECTION 5" PER 100'

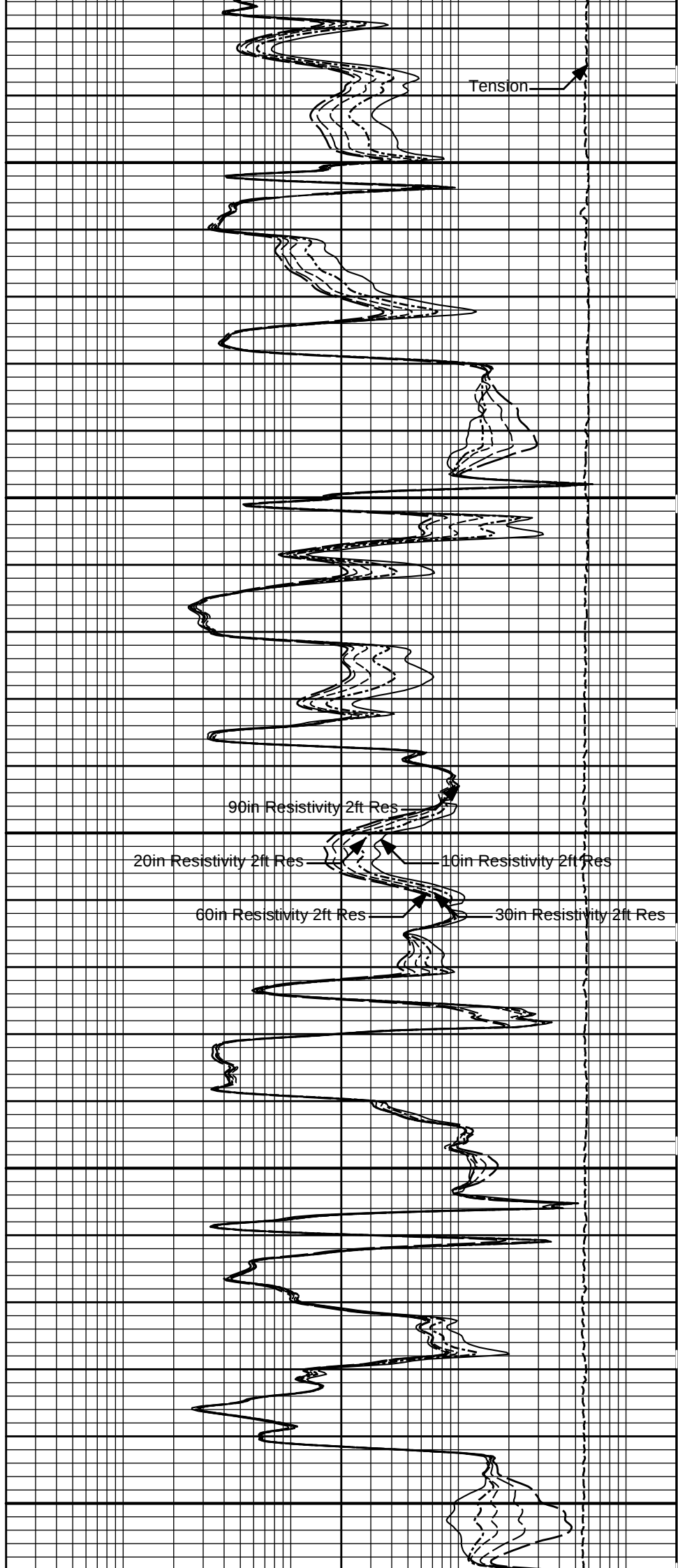


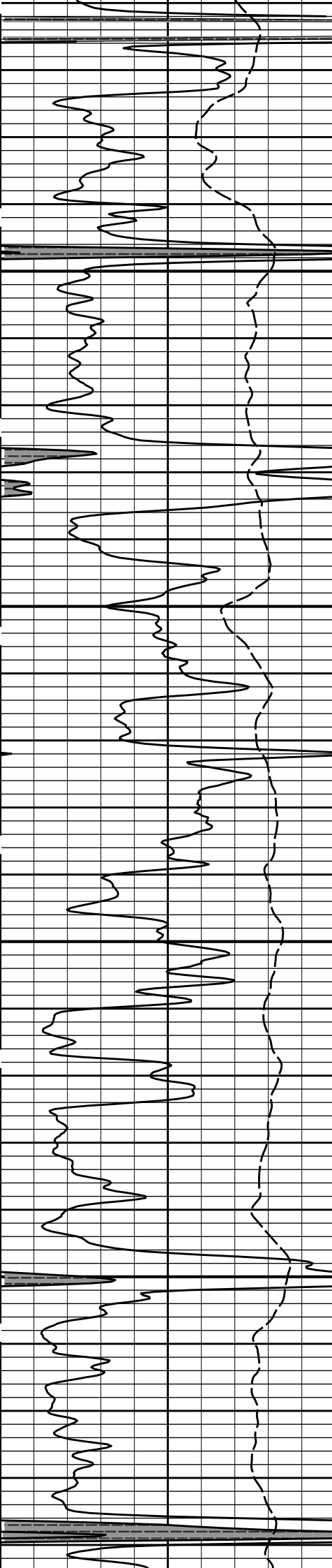


4100

4200

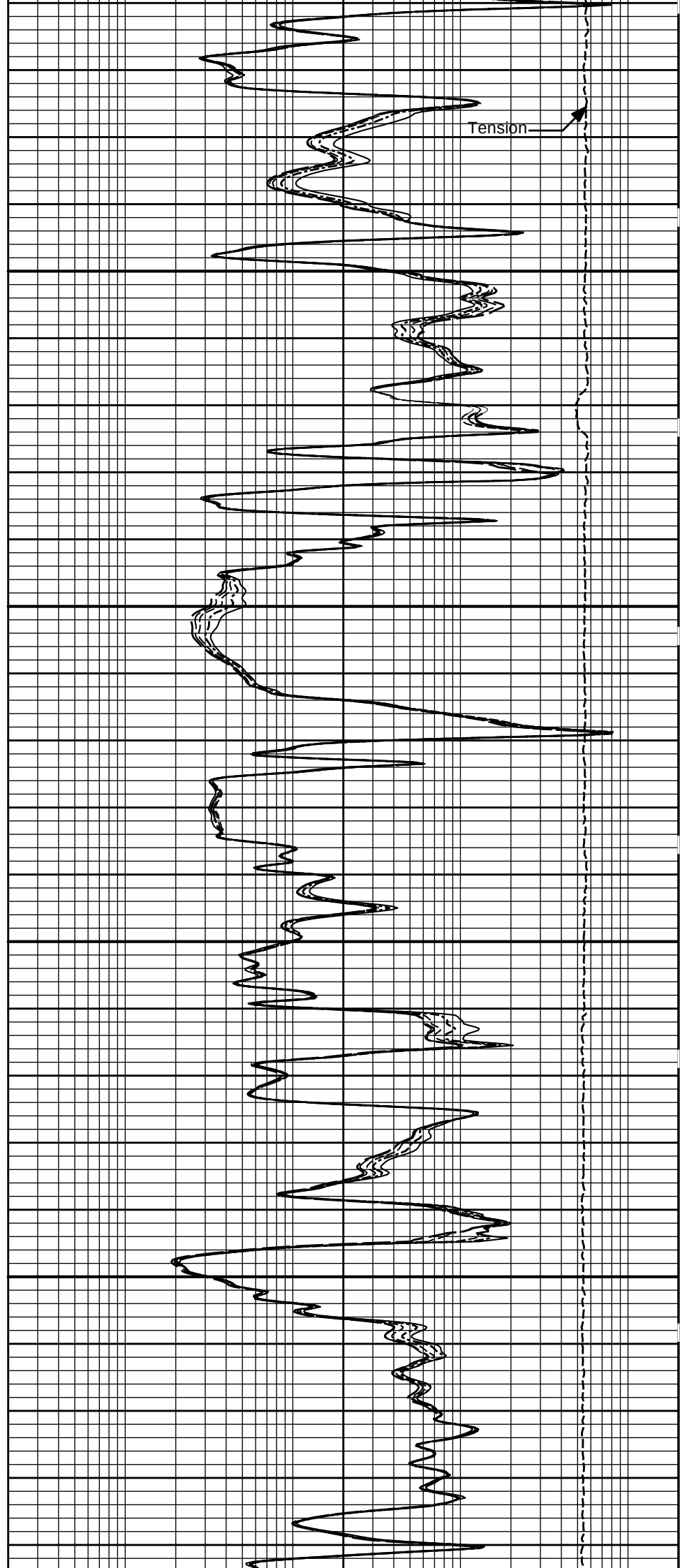
4300

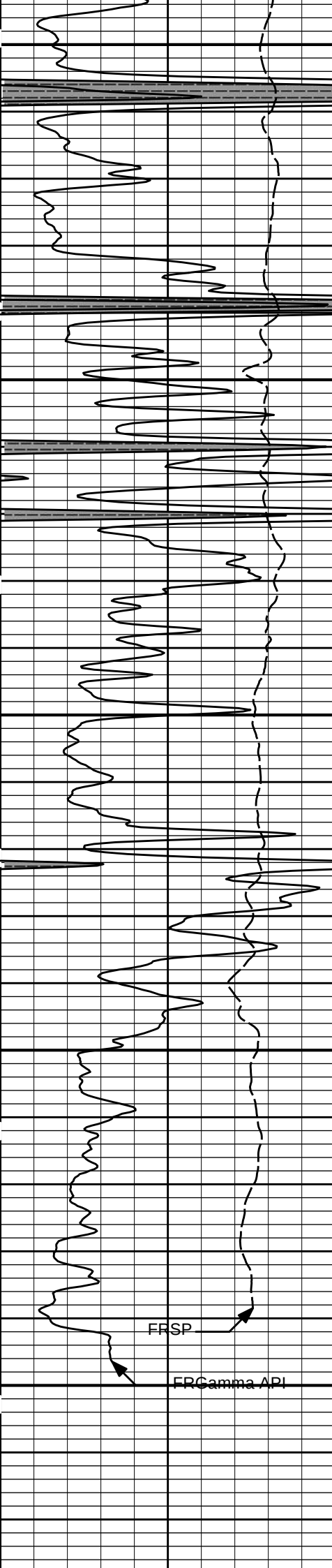




4400

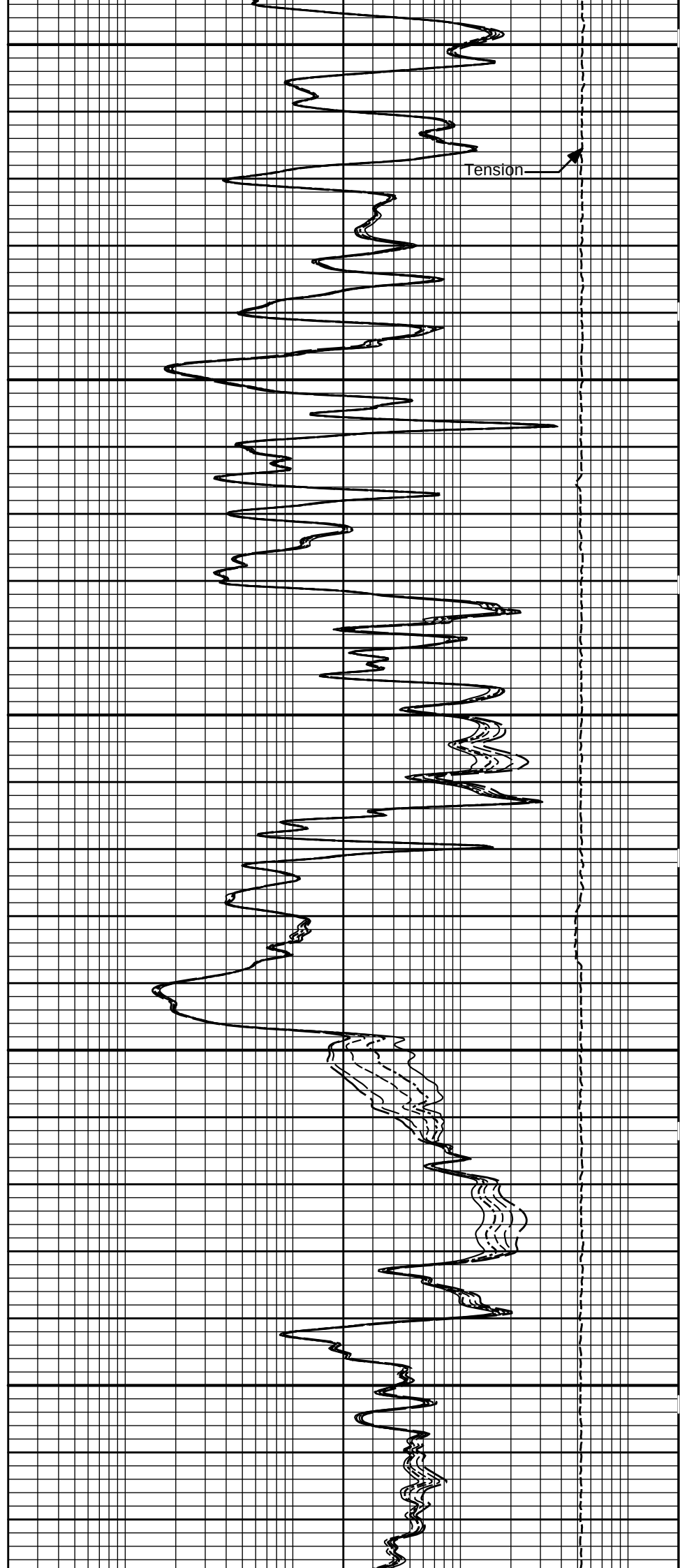
4500

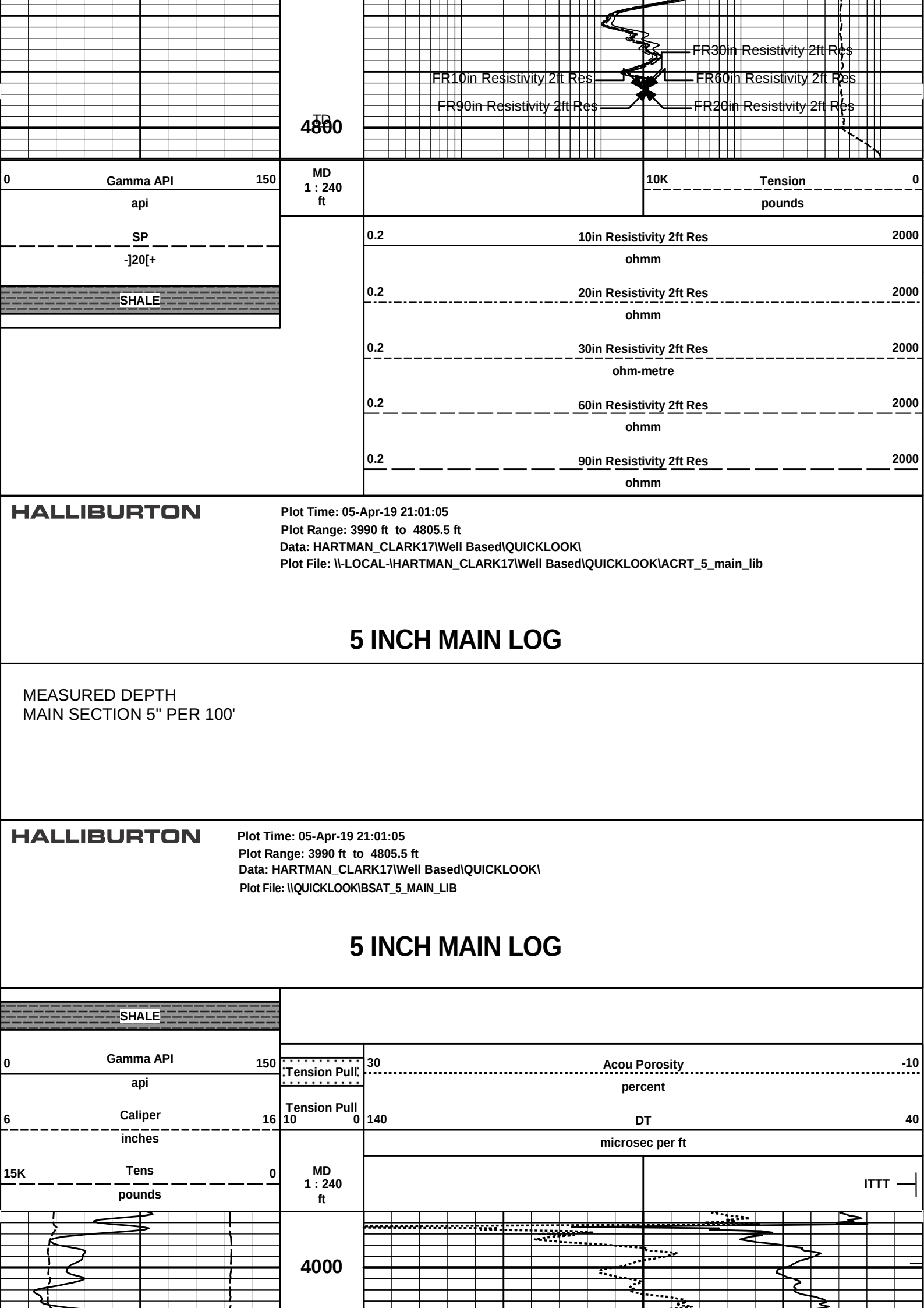


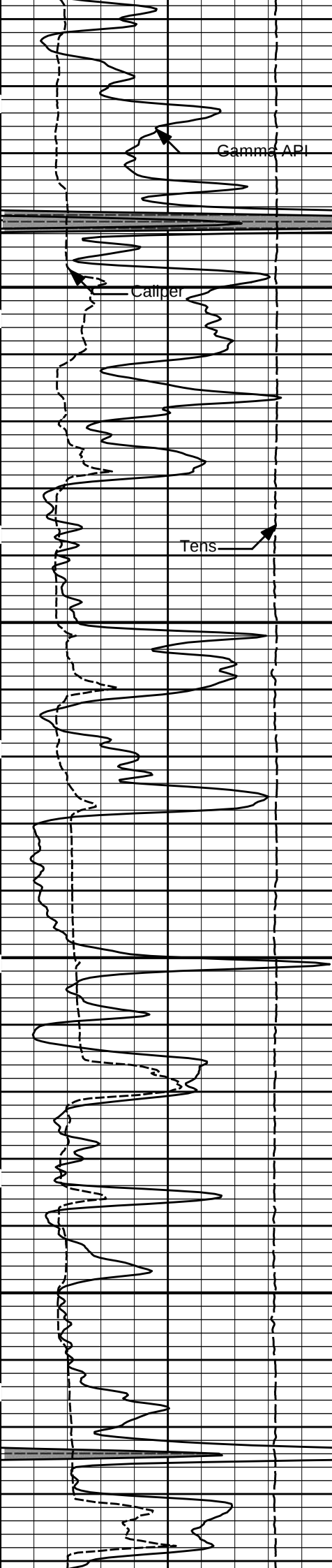


4600

4700

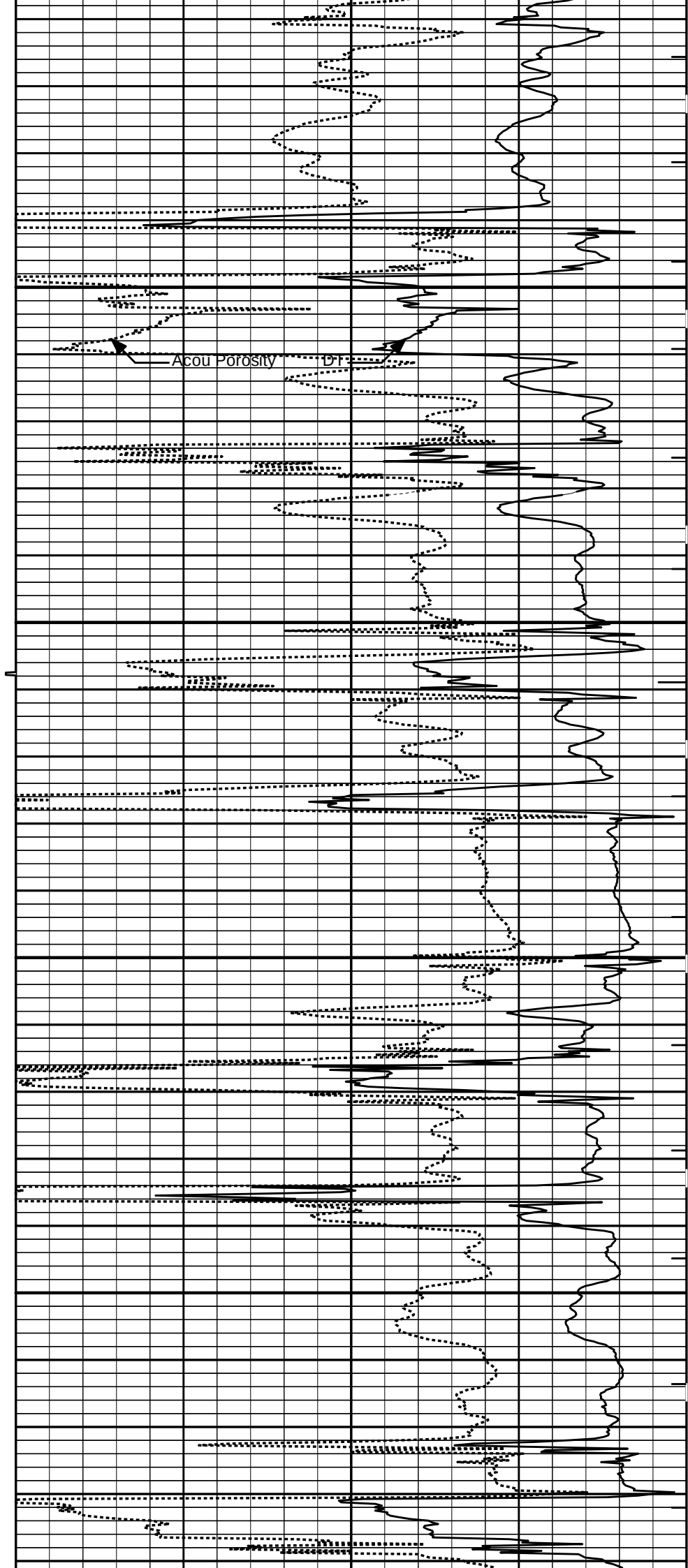


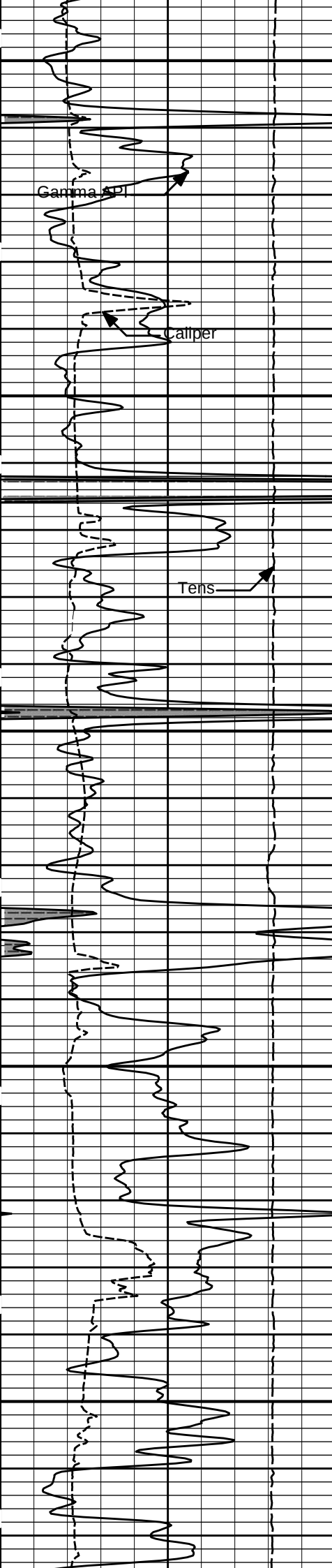




4100

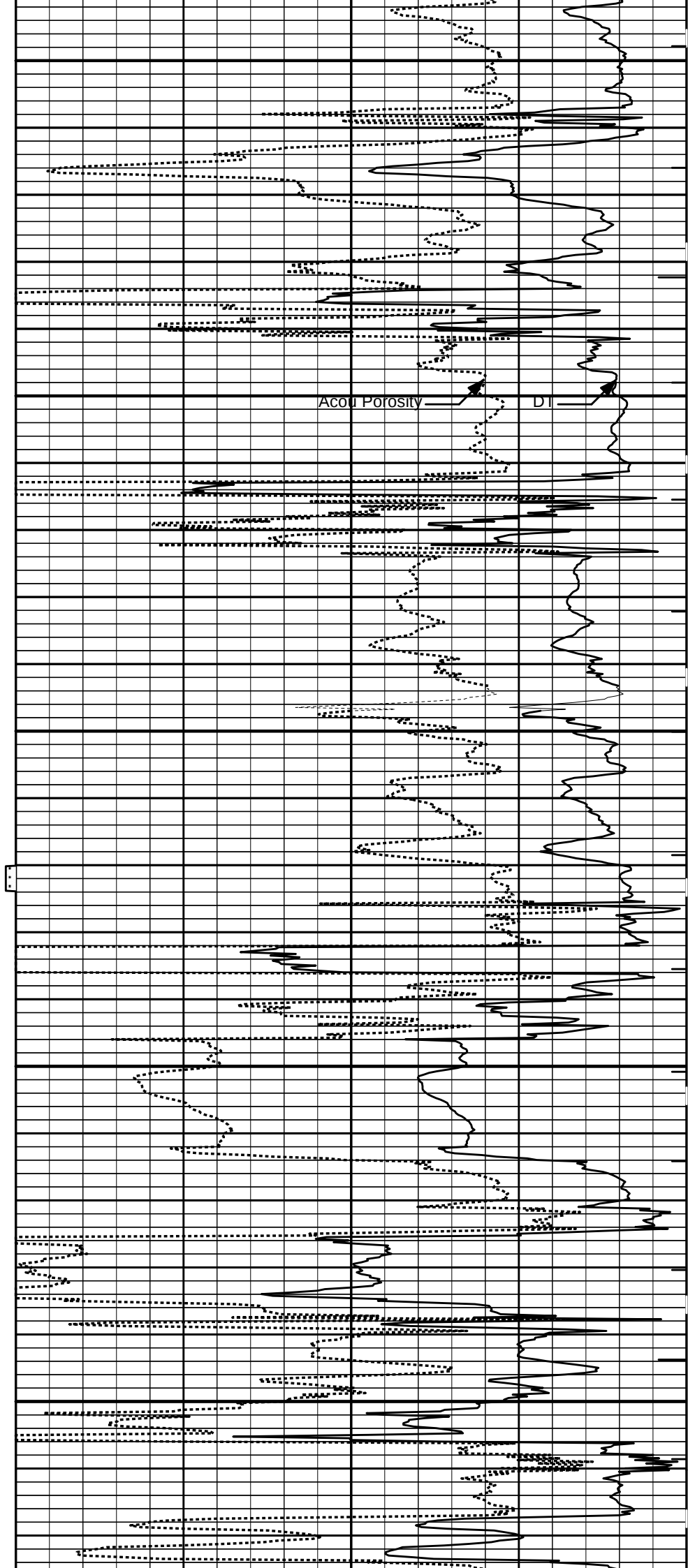
4200

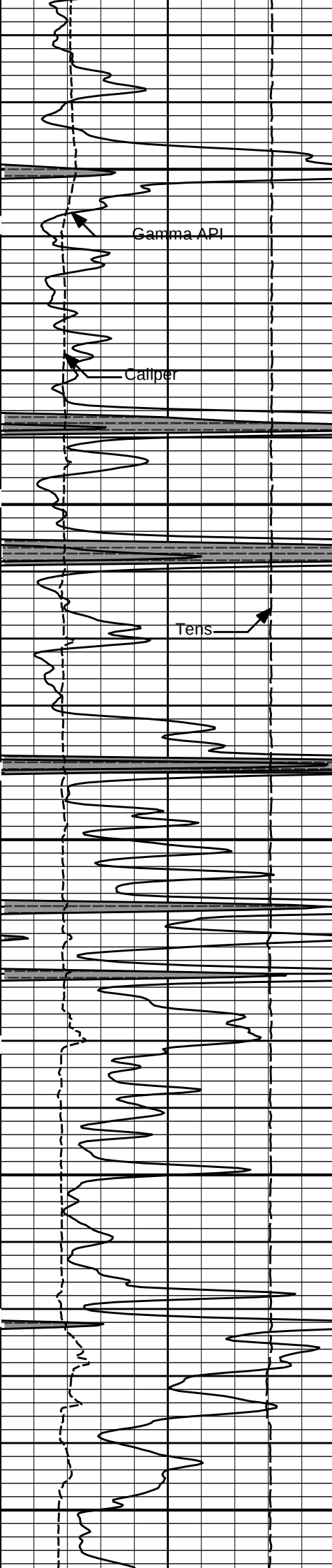




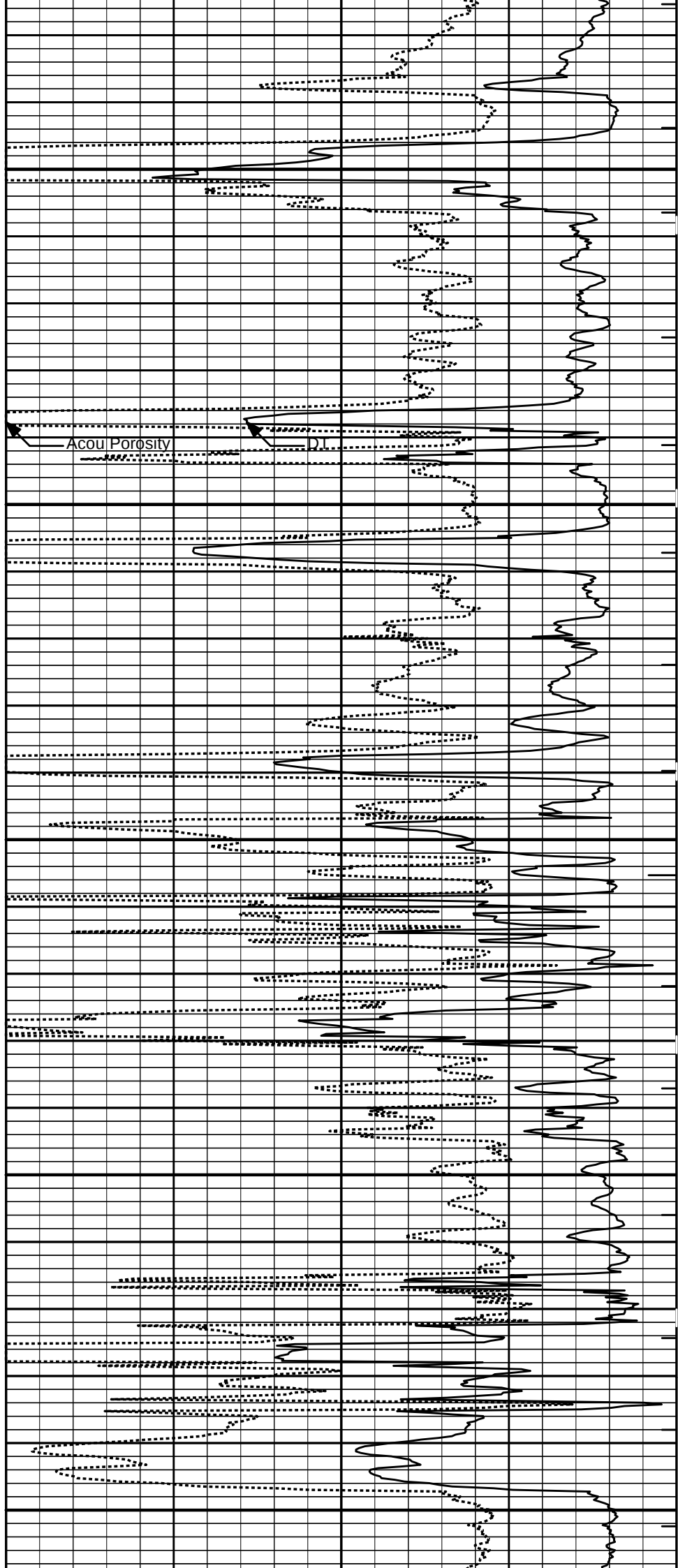
4300

4400



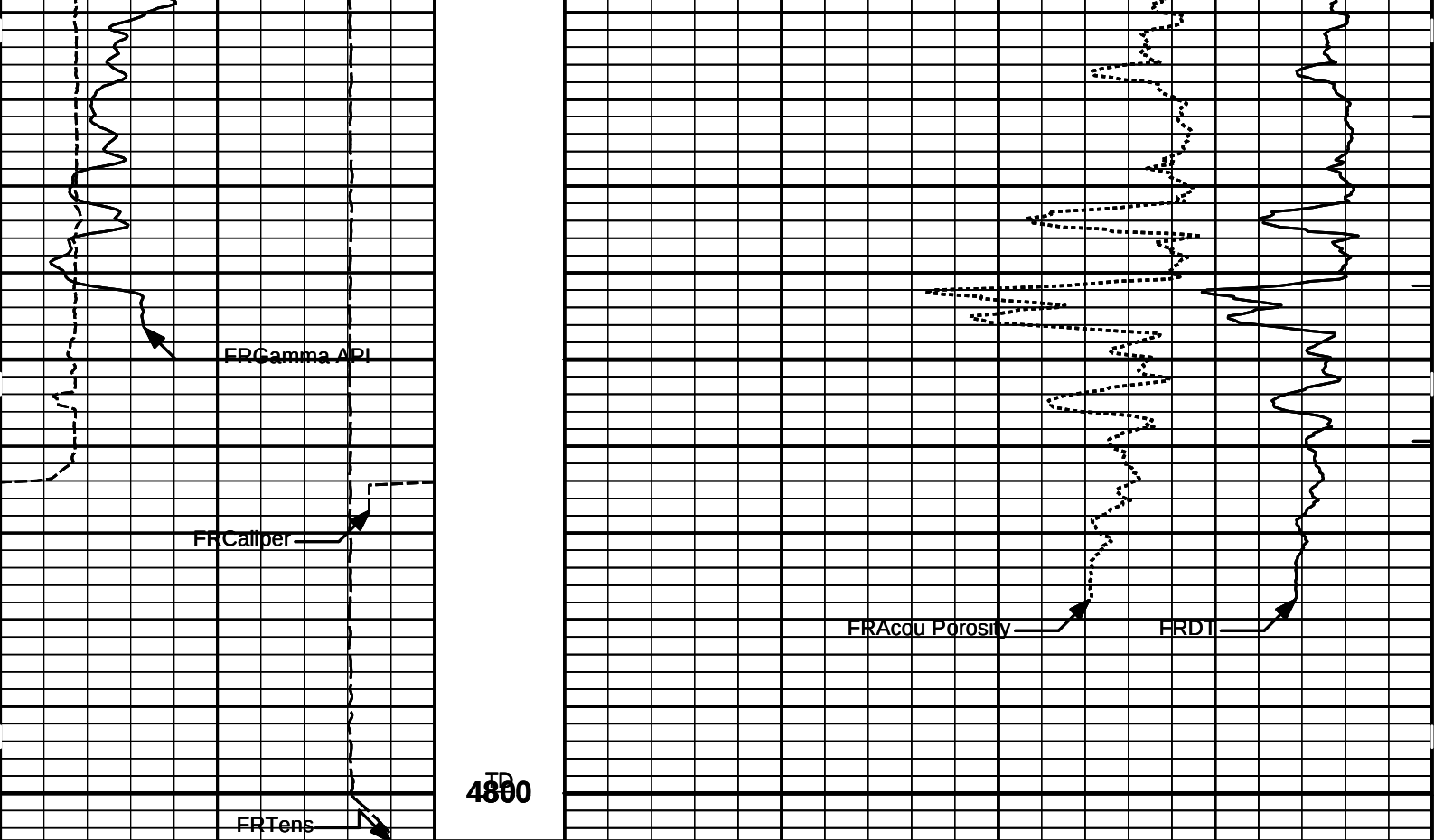


4500



4600

4700



15K	Tens	0	MD		ITTT
	pounds		1 : 240		
			ft		
6	Caliper	16	Tension Pull	140	DT
	inches		10 0		40
0	Gamma API	150		microsec per ft	
	api		30	Acou Porosity	-10
				percent	
	SHALE				

HALLIBURTON

Plot Time: 05-Apr-19 21:01:08
Plot Range: 3990 ft to 4805.5 ft
Data: HARTMAN_CLARK17(Well Based)QUICKLOOKI
Plot File: \\QUICKLOOK\BSAT_5_MAIN_LIB

5 INCH MAIN LOG

COMPANY	HARTMAN OIL COMPANY INC		
WELL	CLARK OCHS 1-17		
FIELD	WILDCAT		
COUNTY	LOGAN	STATE	KANSAS
HALLIBURTON		MAIN LOGS QUICK LOOK	