

# HALLIBURTON

## MICROLOG

COMPANY		QUAIL OIL & GAS	
WELL		STOPPEL 1-8	
FIELD/BLOCK		WISBY	
COUNTY		RENO	
STATE		KANSAS	
Permanent Datum	GL	Sect. 8	Twp. 22S
Log measured from	KB		Rge. 9W
Drilling measured from	KB		Elev. 1725.0 ft
Date	02-Jun-16		Elev.: K.B. 1730.0 ft
Run No.	ONE		D.F. 1730.0 ft
Depth - Driller	3720.0 ft		G.L. 1725.0 ft
Depth - Logger	3718.0 ft		
Bottom - Logged Interval	3718.00 ft		
Top - Logged Interval	324.00 ft		
Casing - Driller	8.625 in	@	
Casing - Logger	324.0 ft	@	
Bit Size	7.875 in	@	
Type Fluid in Hole	Water Based Mud		
Density	9.4 ppg	54.00	sl/qt
PH	11.00 pH	8.8	cp/m
Source of Sample	FLOWLINE		
Rm @ Meas. Temperature	0.51 ohmm	@	95.00 degF
Rmf @ Meas. Temperature	0.43 ohmm	@	70.00 degF
Rmc @ Meas. Temperature	0.63 ohmm	@	70.00 degF
Source Rmf	MEASURED		MEASURED
Rm @ BHT	0.48 ohmm	@	102.0 degF
Time Since Circulation	3.0 hrs hr		
Time on Bottom	02-Jun-16 20:42		
Max. Rec. Temperature	102.00 degF	@	3718.0 ft
Equipment	12156883	EL	RENO
Recorded By	COTHREN		
Witnessed By	WRAY VALENTINE		

Fold here

Service Ticket No.: 903345423				API No.: 15-155-21736-00-00				PGM Version: WL INSITE R5.0.0 (Build 4)			
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 202	N/A	1.5" STANDOFF	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.	138		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.	A-102		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		
Run No.	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	TD	CSG	REC	0	150									

DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks: THANKS FOR USING HALLIBURTON ENERGY SERVICES.

ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.

CHLORIDES REPORTED AT 6500 mg/L

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



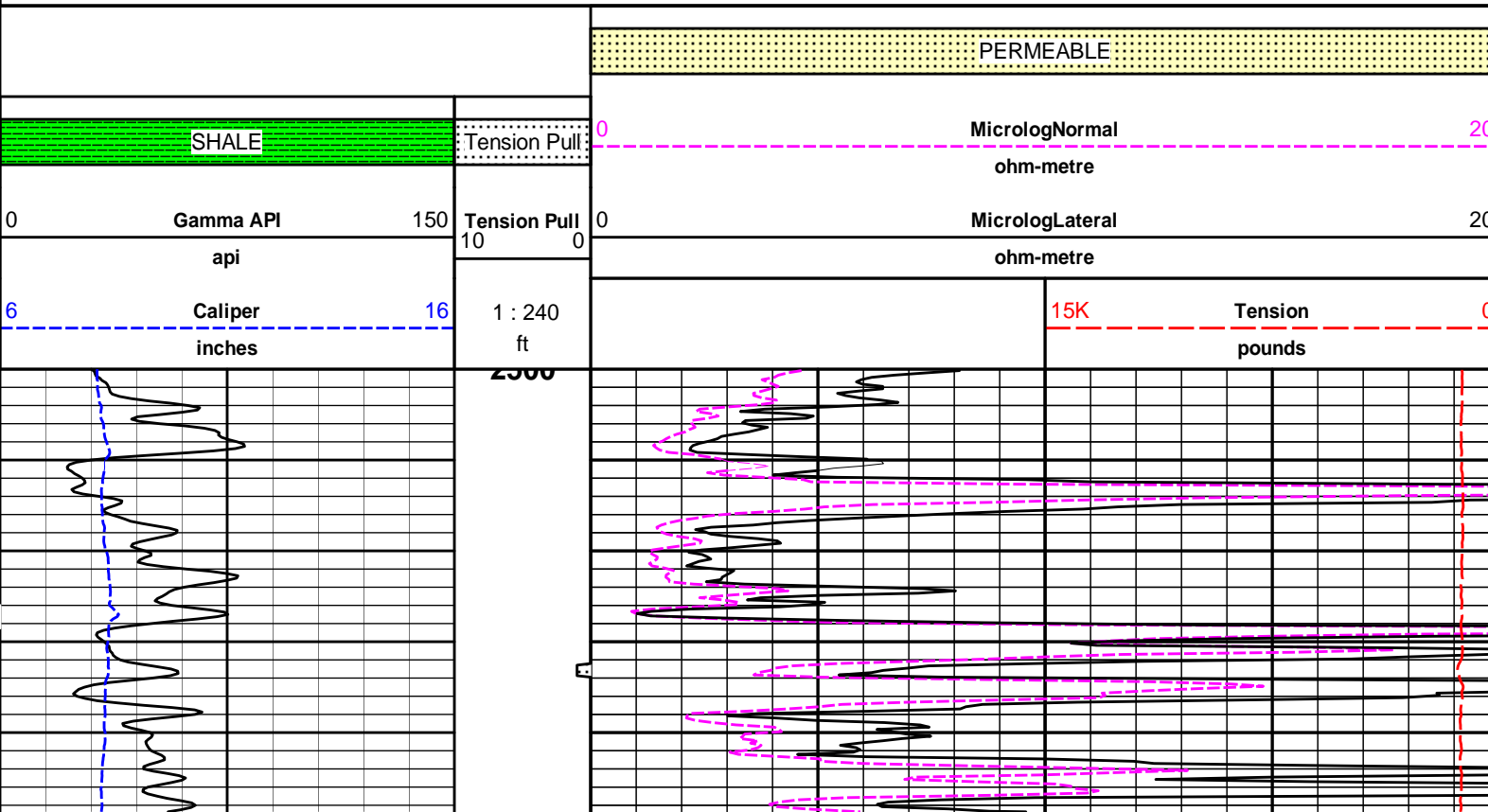
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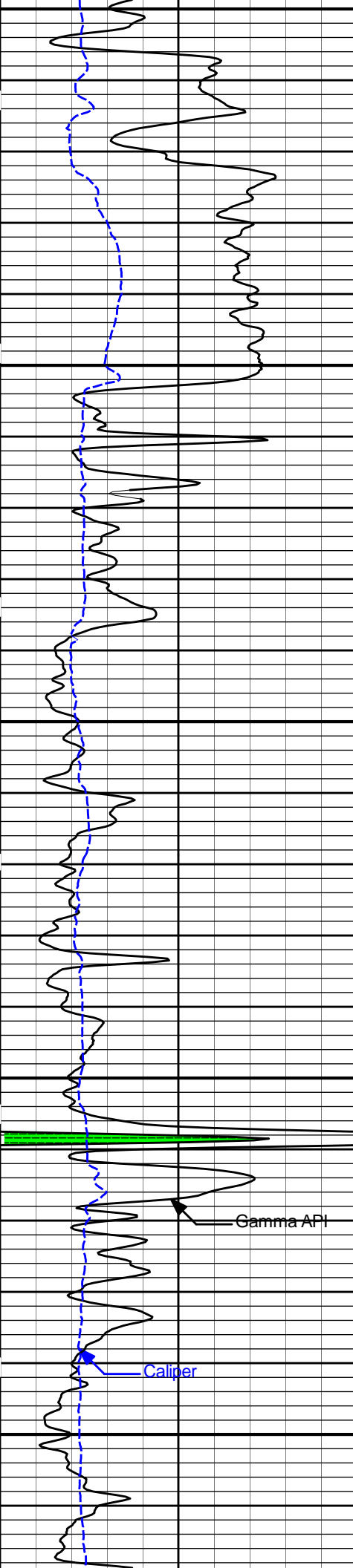
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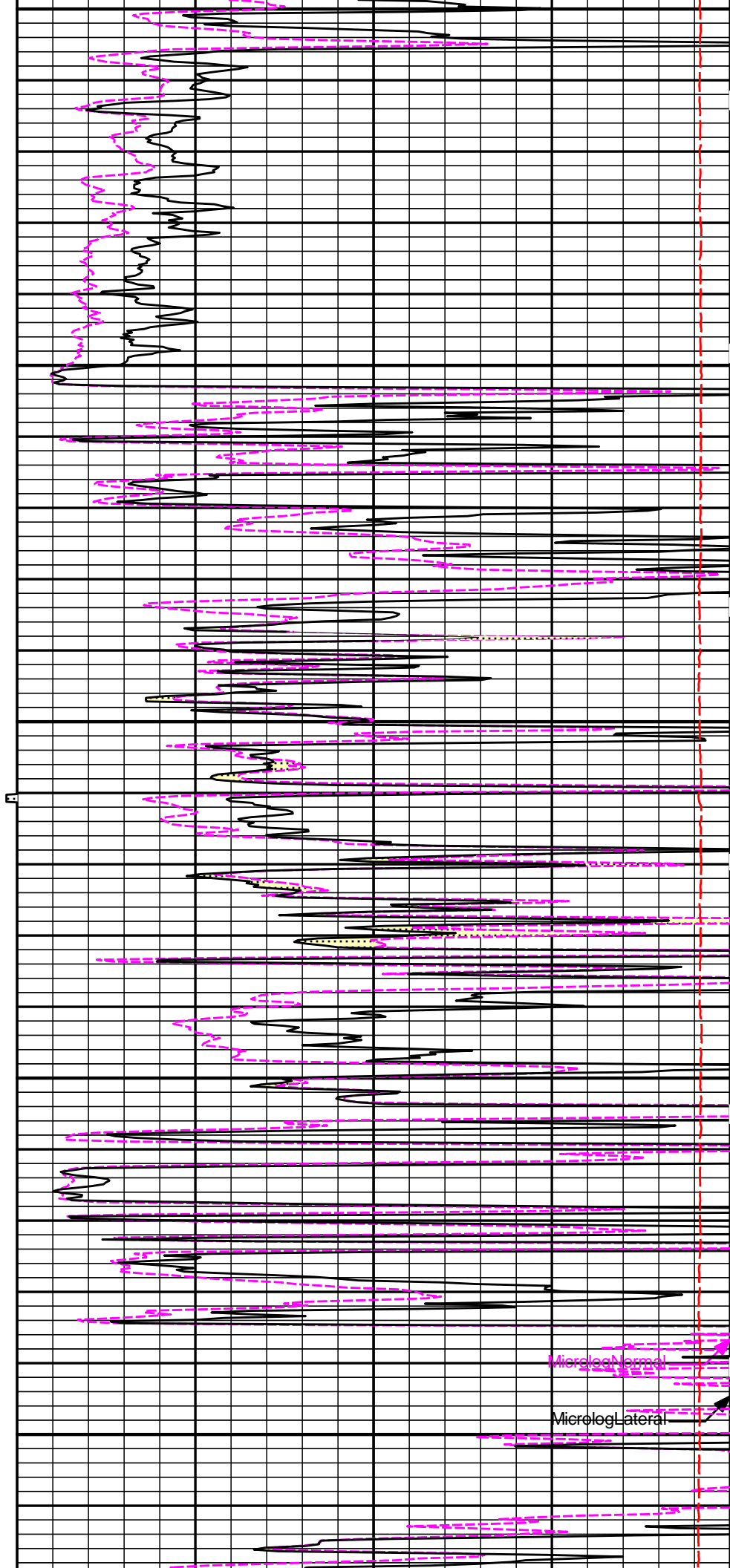
# 5 INCH MAIN LOG





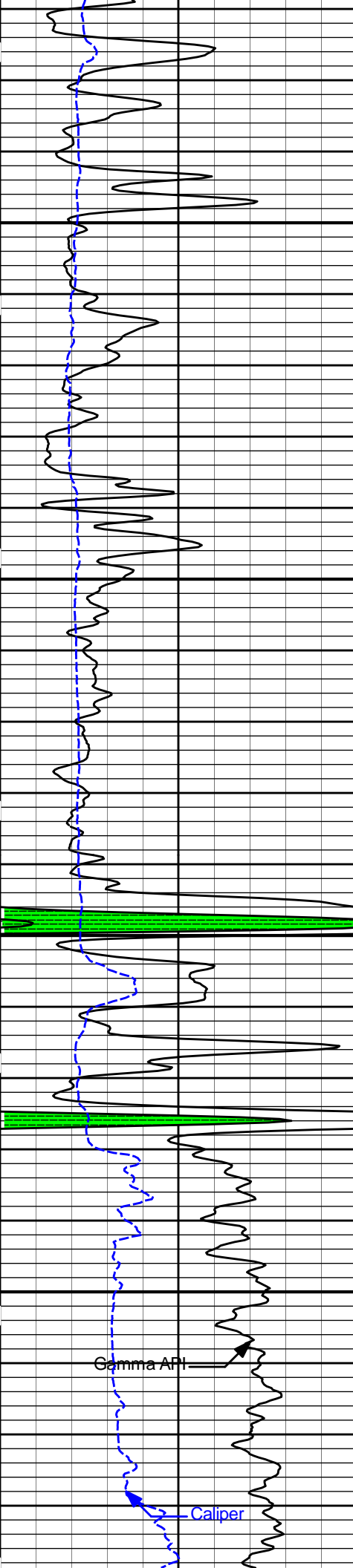
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2700



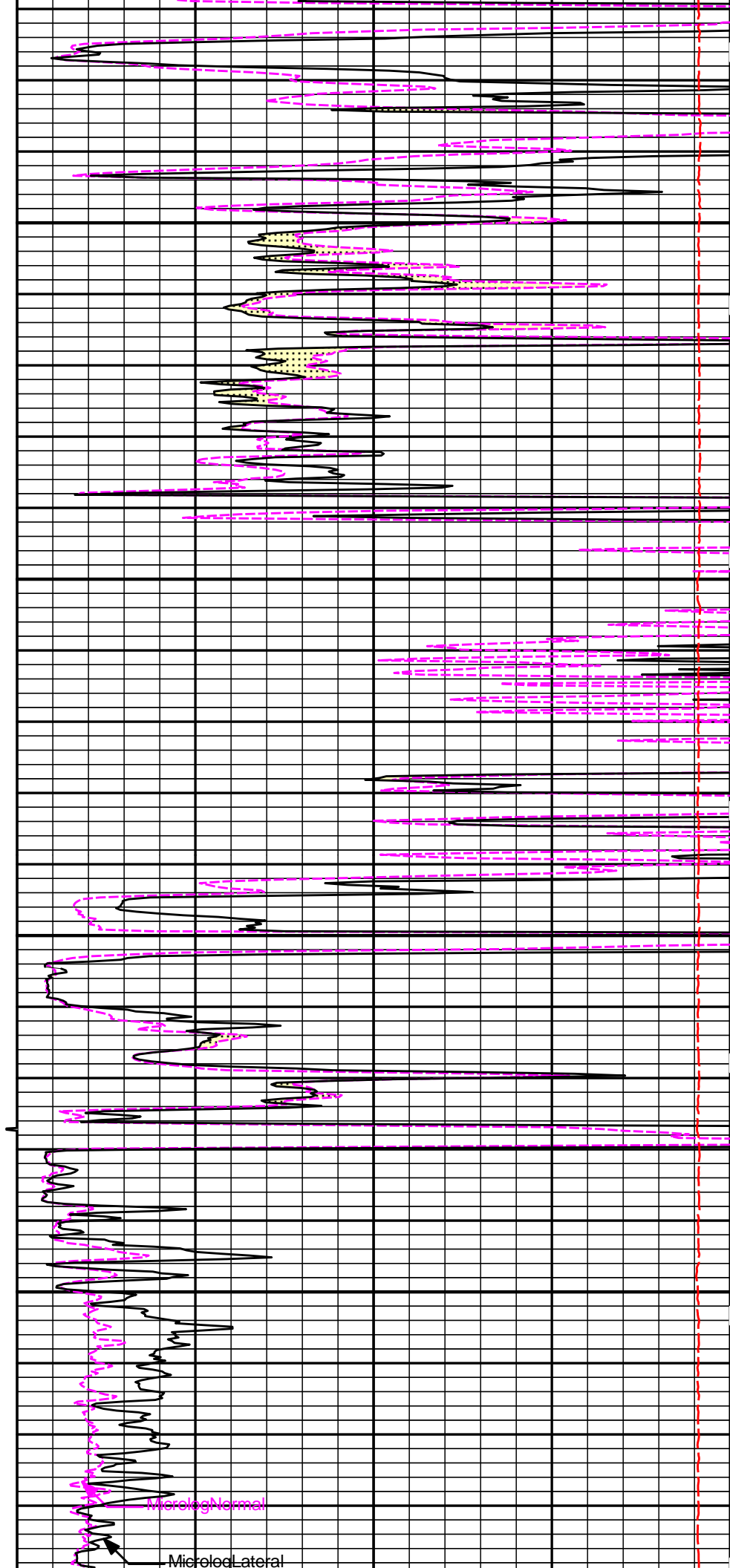
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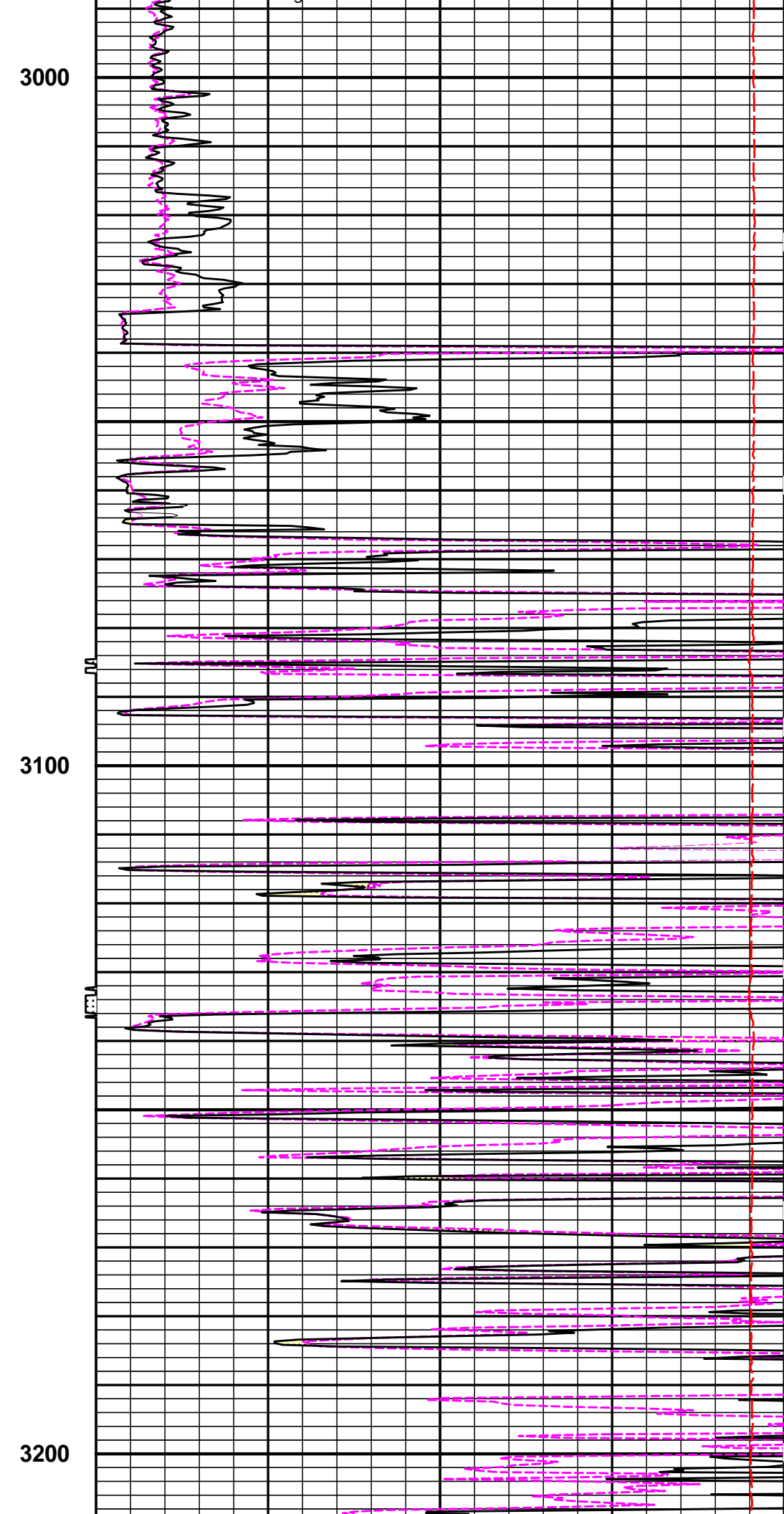
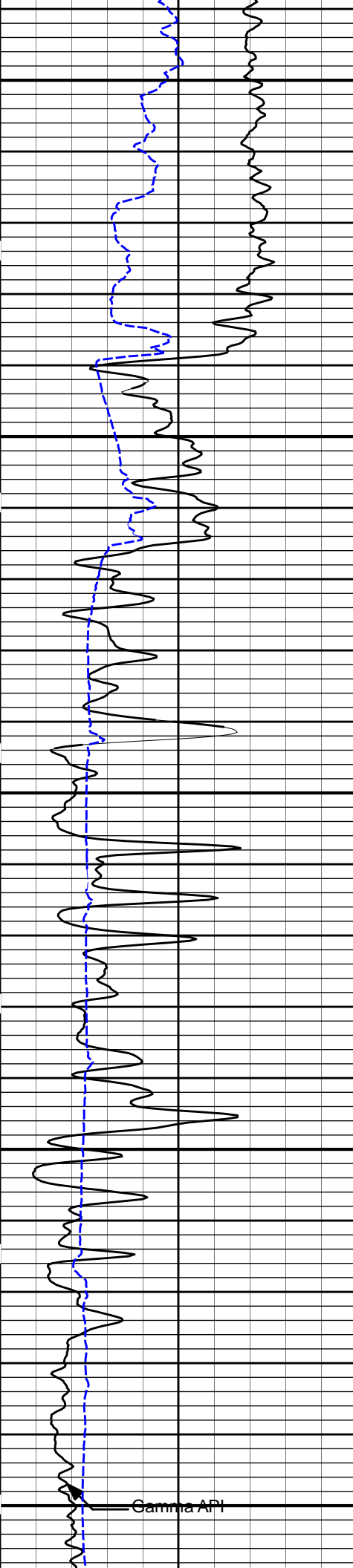
Microlog Lateral

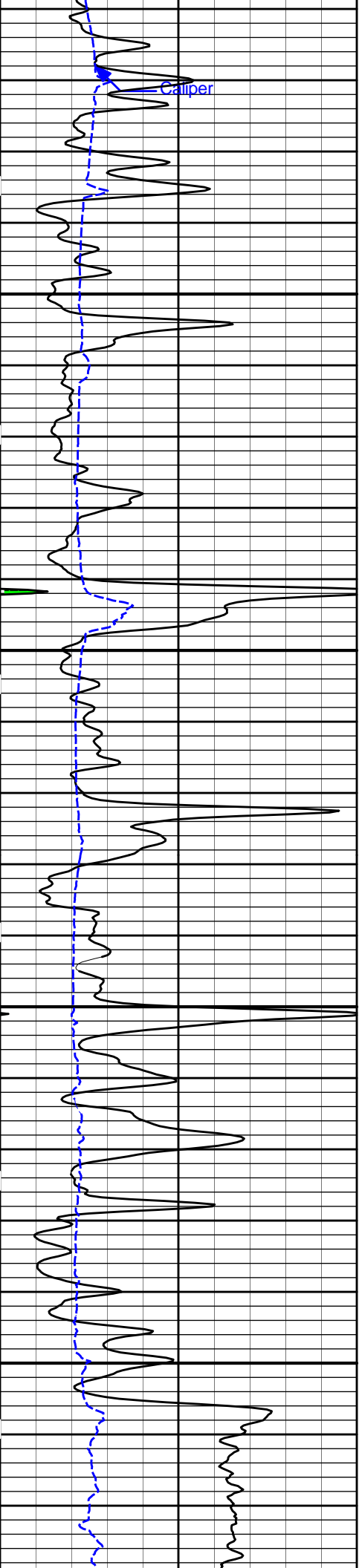


2800

2900

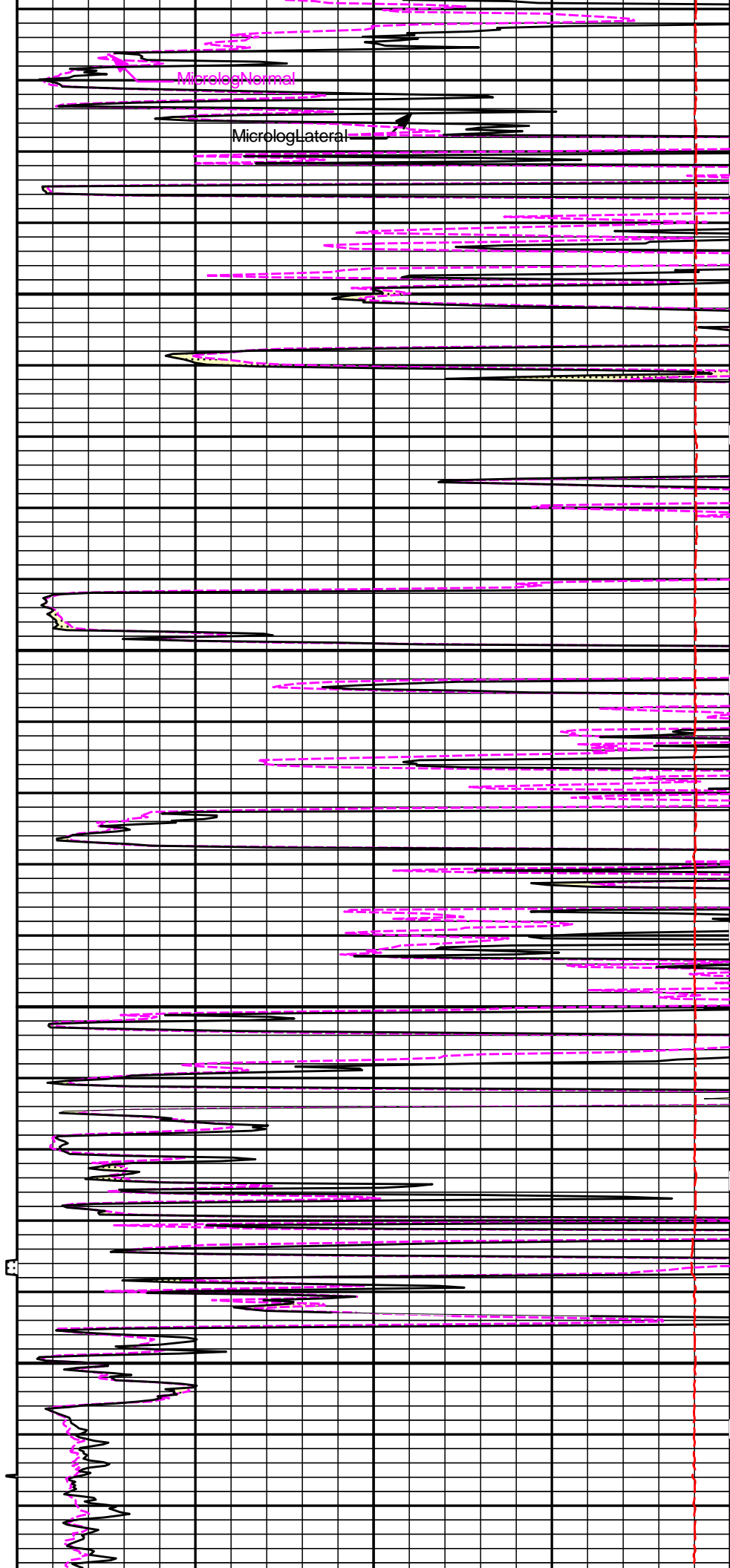


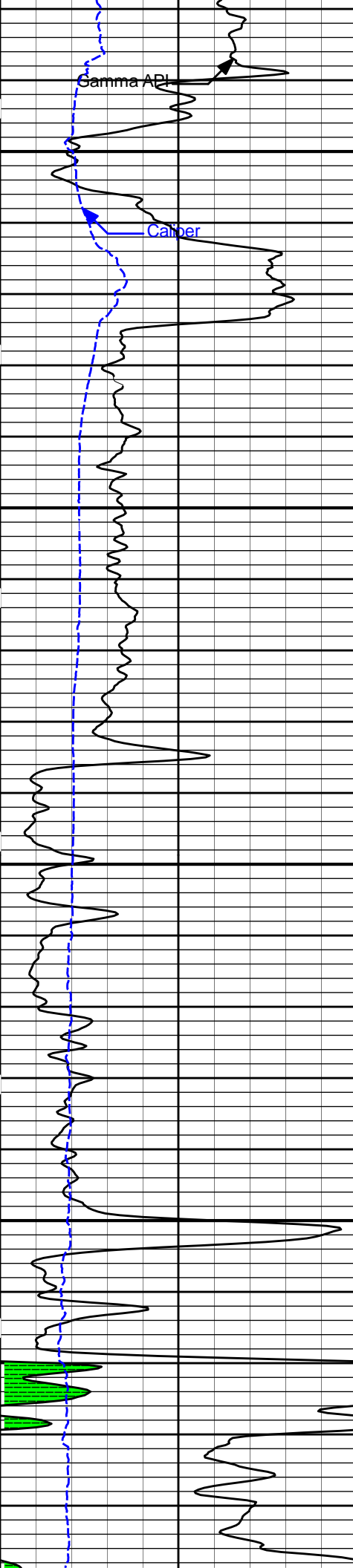




3300

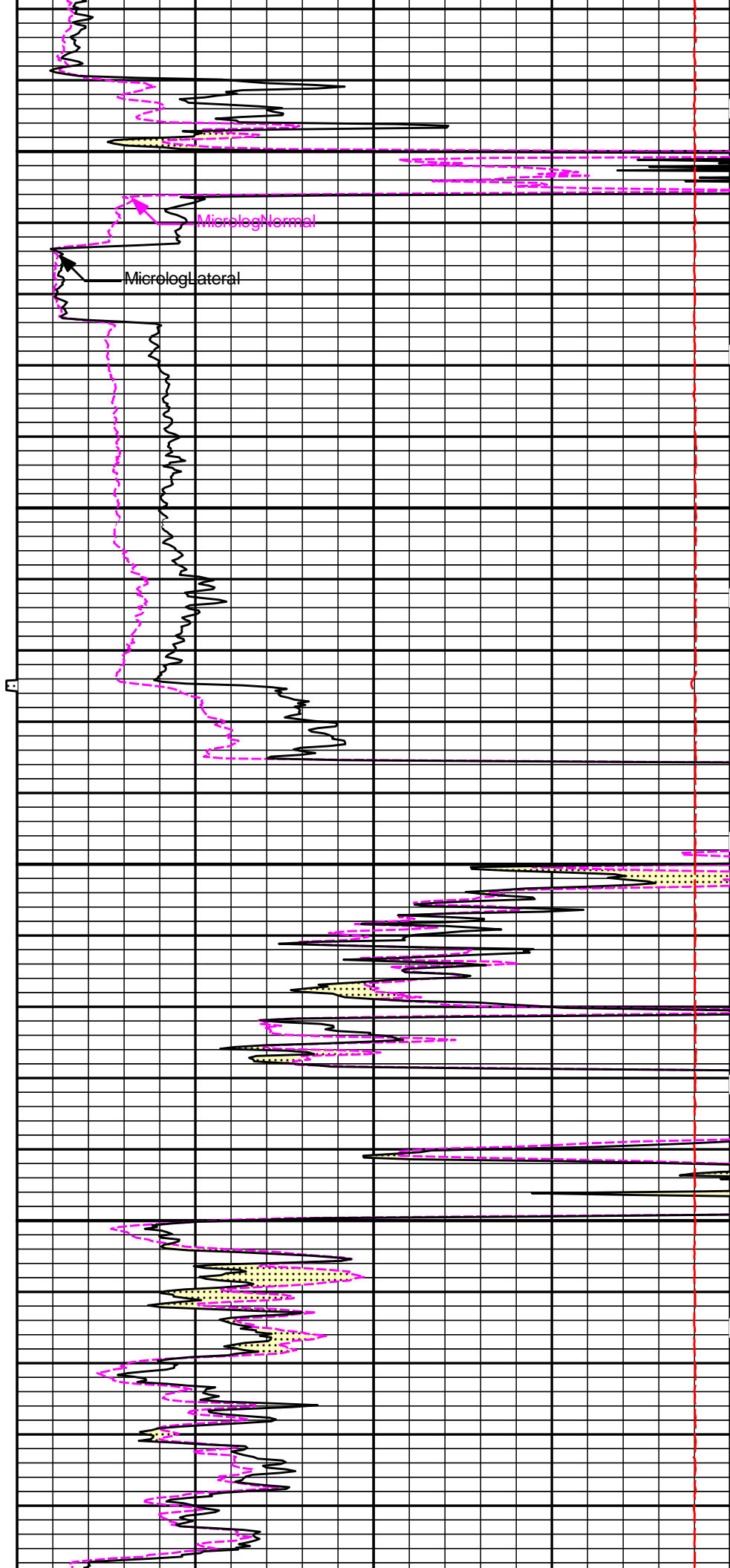
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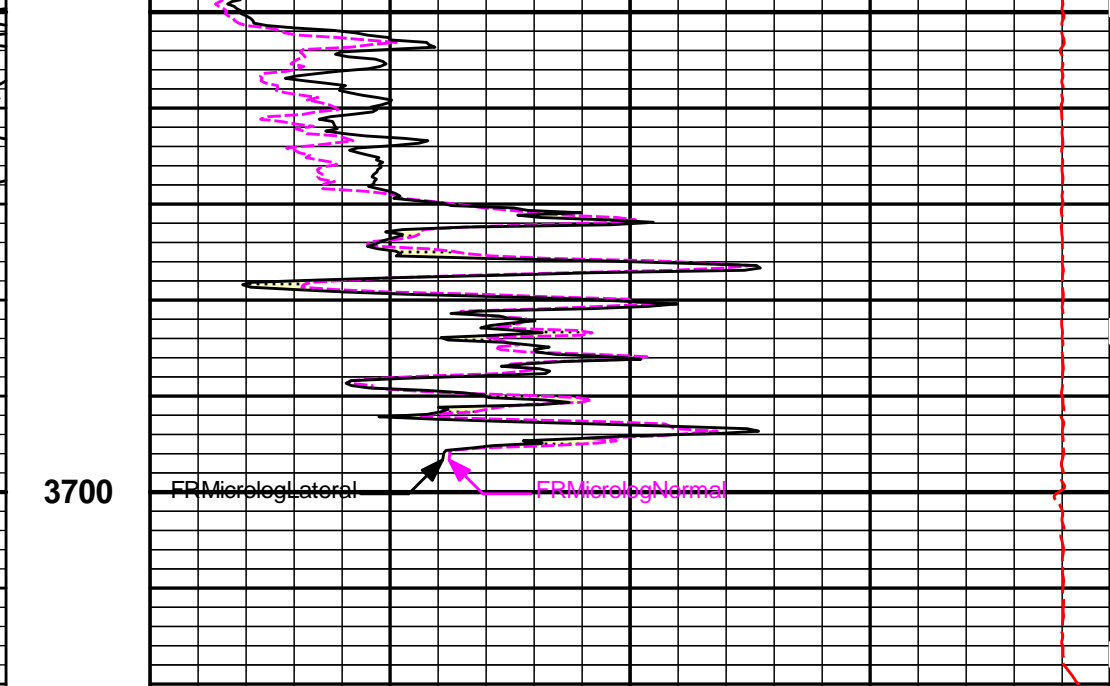
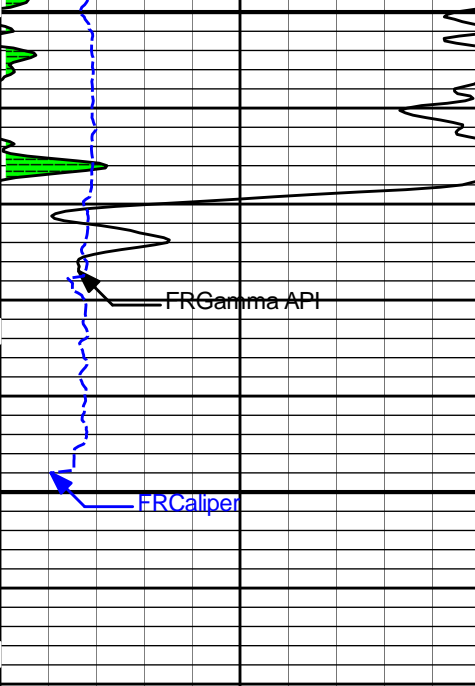




3500

3600





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

**HALLIBURTON**

Plot Time: 02-Jun-16 21:48:20  
 Plot Range: 2500 ft to 3720.83 ft  
 Data: {ActiveWell}\Well Based\DAQ-0001-003\  
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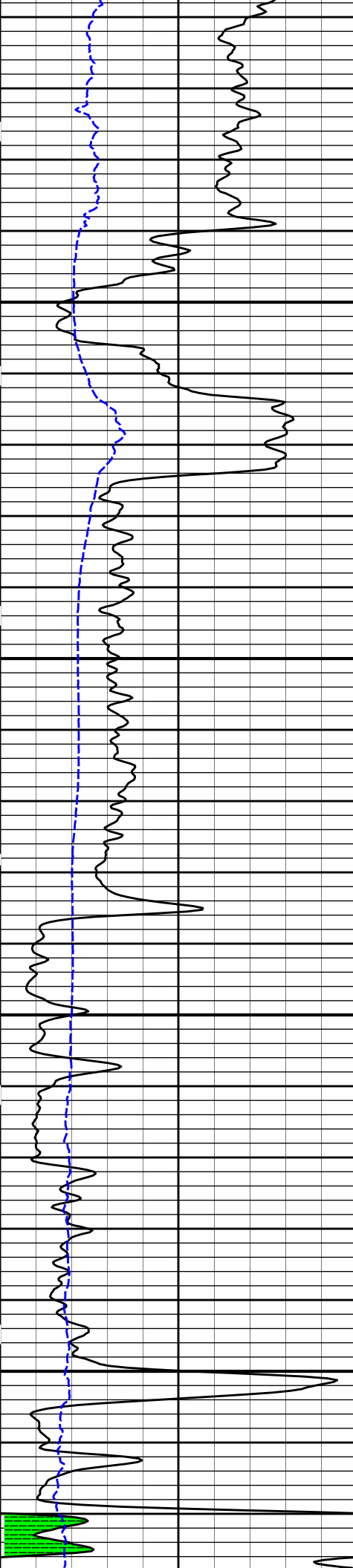
## 5 INCH MAIN LOG

**HALLIBURTON**

Plot Time: 02-Jun-16 21:48:20  
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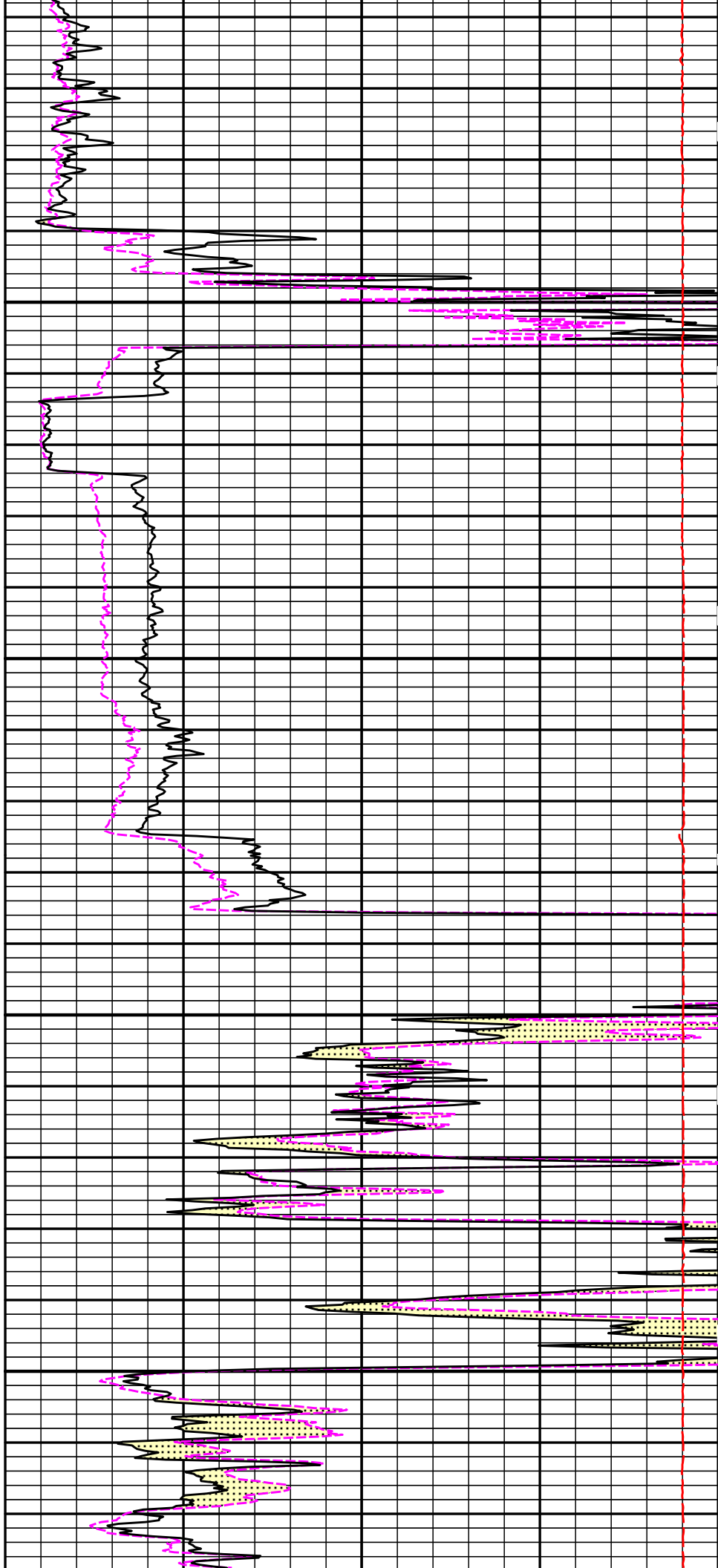
## REPEAT SECTION

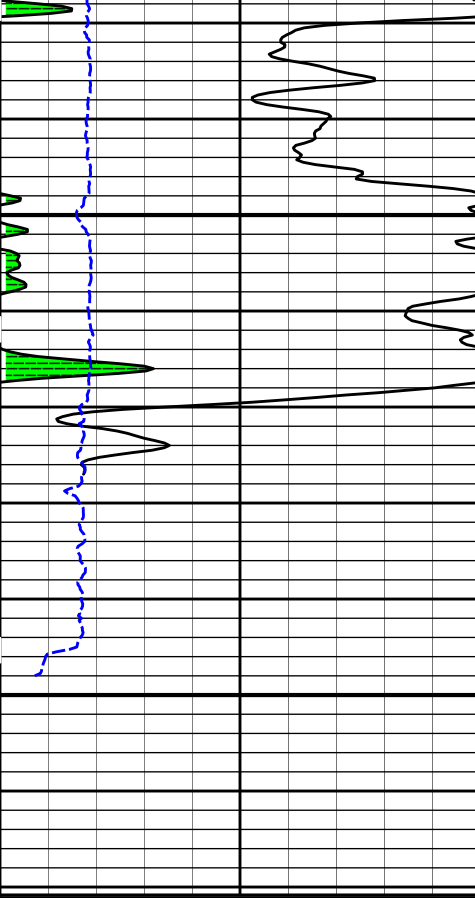
					PERMEABLE	
	SHALE			0	MicrologNormal	20
					ohm-metre	
6	Caliper	16		0	MicrologLateral	20
	inches				ohm-metre	
0	Gamma API	150	1 : 240	15K	Tension	0
	api		ft		pounds	
			3400			



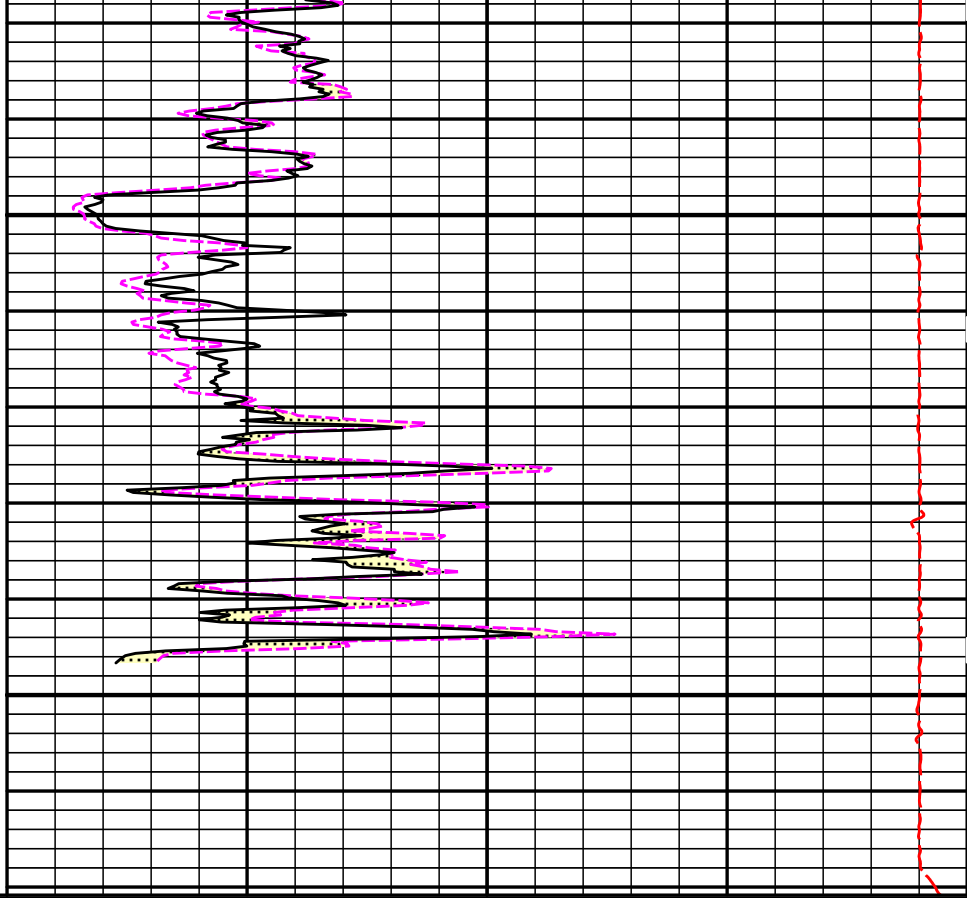
3500

3600





3700



0	Gamma API	150
	api	
6	Caliper	16
	inches	
SHALE		

1 : 240  
ft

	15K	Tension	0
		pounds	
0	MicrologLateral	20	
	ohm-metre		
0	MicrologNormal	20	
	ohm-metre		
PERMEABLE			

**HALLIBURTON**

Plot Time: 02-Jun-16 21:48:21  
 Plot Range: 3400 ft to 3720.83 ft  
 Data: {ActiveWell}\Well Based\DAQ-0001-002\  
 Plot File: \\-LOCAL-1SOPPEL\_1\_8\0001 GTET-DSN-SDL-ACRTMICROLOG\Microlog\_IQ\_5\_rep\_lib

**REPEAT SECTION**

COMPANY	QUAIL OIL & GAS
WELL	STOPPEL 1-8
FIELD	WISBY
COUNTY	RENO
STATE	KANSAS

**HALLIBURTON**

MICROLOG