

HALLIBURTON

ANNULAR HOLE VOLUME

COMPANY				MERIT ENERGY COMPANY			
WELL				BATMAN B4			
FIELD/BLOCK				SANTA FE NORTH			
COUNTY				HASKELL			
STATE				KANSAS			
Permanent Datum		GL		Elev. 2978.6 ft		Elev.: K.B.	
Log measured from		KB		13.0 ft above perm. Datum		D.F.	
Drilling measured from		KB				G.L.	
Date		25-Feb-18				2991.6 ft	
Run No.		ONE				2991.6 ft	
Depth - Driller		5655.0 ft				2991.6 ft	
Depth - Logger		5662.0 ft				2991.6 ft	
Bottom - Logged Interval		5624.00 ft				2991.6 ft	
Top - Logged Interval		1827.00 ft				2978.6 ft	
Casing - Driller		8.625 in		@ 1826.0 ft		@	
Casing - Logger		1827.0 ft				@	
Bit Size		7.875 in				@	
Type Fluid in Hole		Water Based Mud				@	
Density		9.1 ppg		56.00 s/qt			
PH		11.00 pH		6.4 cpm			
Source of Sample		FLOWLINE					
Rm @ Meas. Temperature		1.67 ohmm		@ 75.00 degF		@	
Rmf @ Meas. Temperature		1.51 ohmm		@ 75.00 degF		@	
Rmc @ Meas. Temperature		1.82 ohmm		@ 75.00 degF		@	
Source Rmf		MEAS		MEAS			
Rm @ BHT		0.96 ohmm		@ 135.0 degF		@	
Time Since Circulation		5.0 hr					
Time on Bottom		25-Feb-18 20:45					
Max. Rec. Temperature		135.00 degF		@ 5662.0 ft		@	
Equipment		12147634		EL RENO			
Recorded By		JORGE ORLANDO PEREZ					
Witnessed By		MATTHEW GARVIN		AUSTIN GARNIER			

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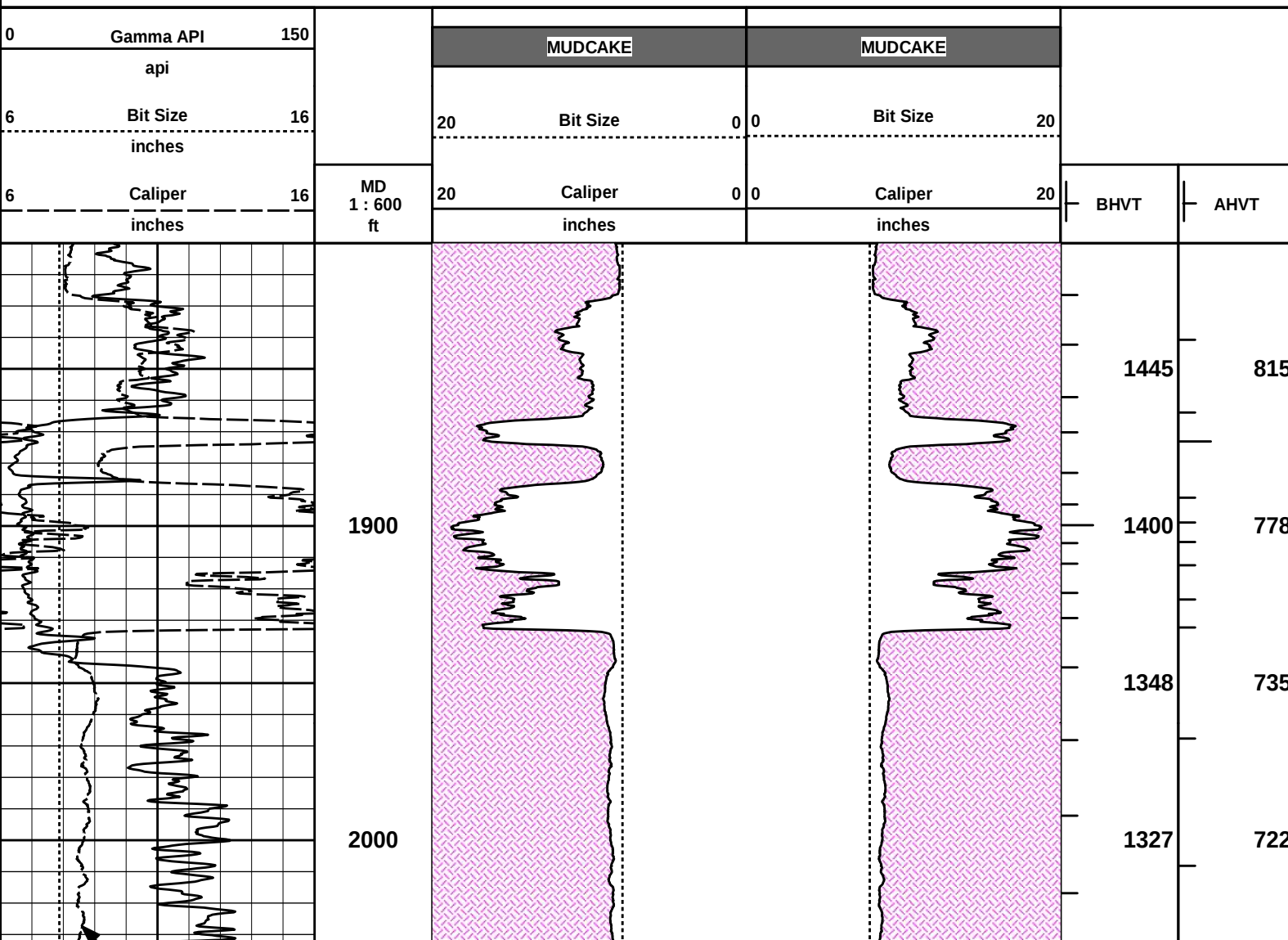
Service Ticket No.: 904653282						API No.: 15081221710000						PGM Version: WL INSITE R5.0.5 (Build 8)							
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE										RESISTIVITY SCALE CHANGES									
Date	Sample No.										Type Log	Depth		Scale Up Hole		Scale Down Hole			
Depth-Driller																			
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		1.5 S.O.		N/A			
Rmc @ Meas. Temp.			@		@		@			I-11026095									
Source Rmf	Rmc									S-11005908									
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.		10747683		Serial No.		10960494		Serial No.		11055304					
Model No.		GTET		Model No.		BSAT		Model No.		SDLT		Model No.		DSNT					
Diameter		3.625"		No. of Cent.		2		Diameter		5.5"		Diameter		3.625"					
Detector Model No.		T-102		Spacing		EVEN		Log Type		GAM-GAM		Log Type		NEU-NEUI					
Type		SCINT						Source Type		CS137		Source Type		AM241BE					
Length		8"		LSA [Y/N]				Serial No.		5168GW		Serial No.		DSN-424					
Distance to Source		N/A		FWDA [Y/N]				Strength		1.5 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	CSG	REC	0	150	30	-10	47.6 uSec/ft	30	-10	2.71 gr/cc	30	-10	LIME					

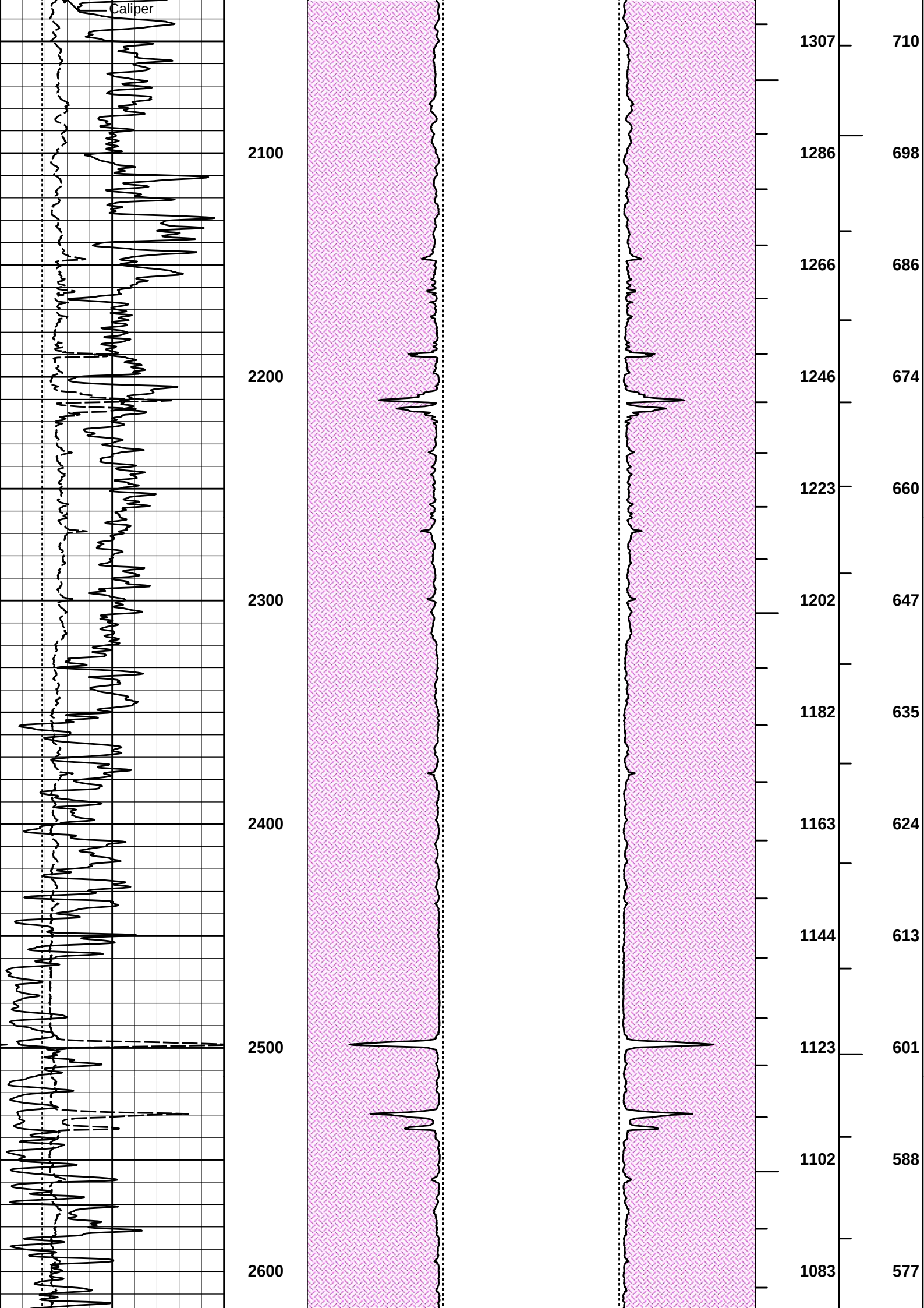
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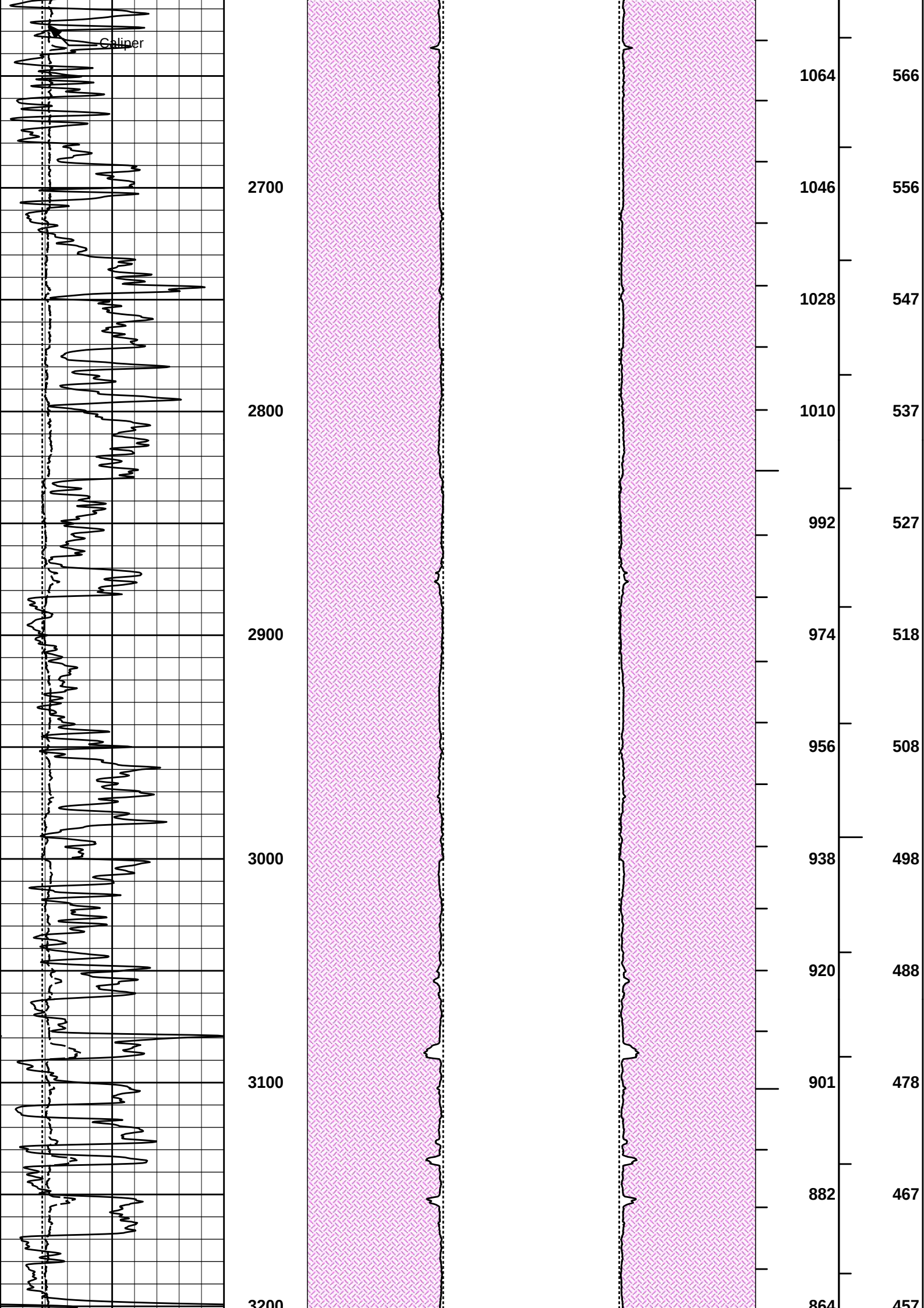
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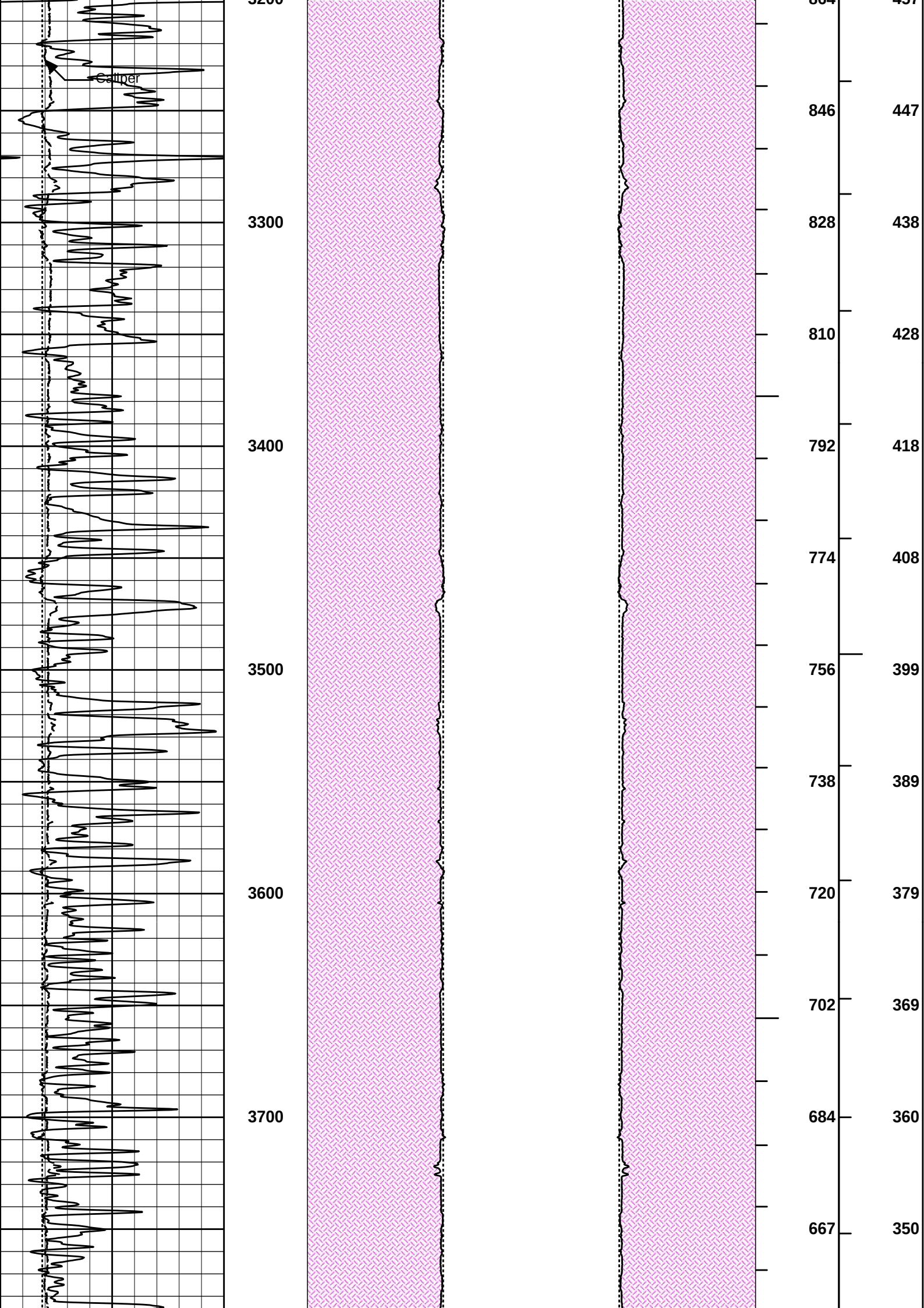
Plot Time: 25-Feb-18 22:11:18
Plot Range: 1810 ft to 5665.42 ft
Data: BATMAN_B4\Well Based\MAIN\
Plot File: \\LOCAL-BATMAN_B4\Well Based\AHV\AHV_2_IQ_LIB

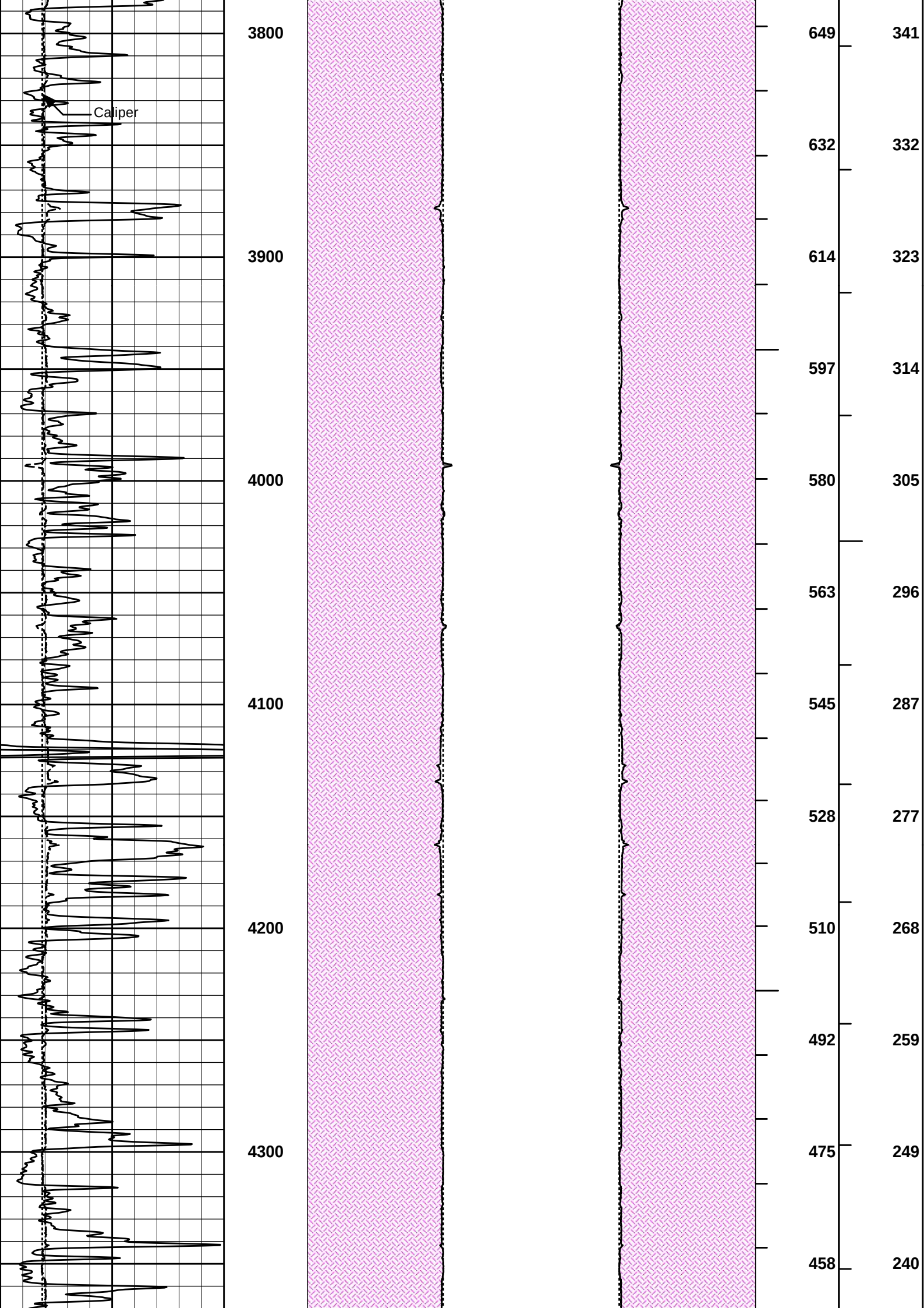
ANNULAR HOLE VOLUME PLOT

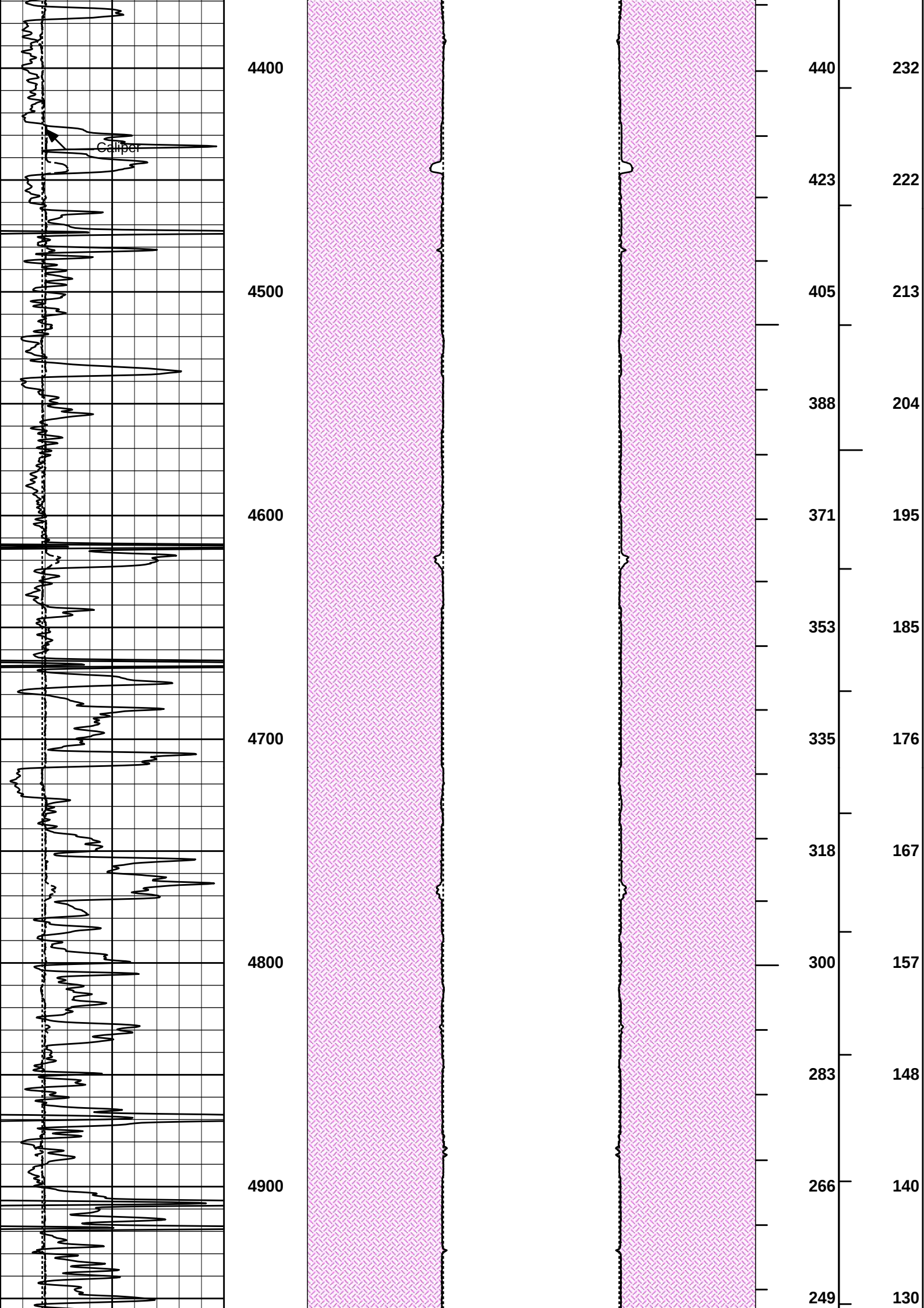


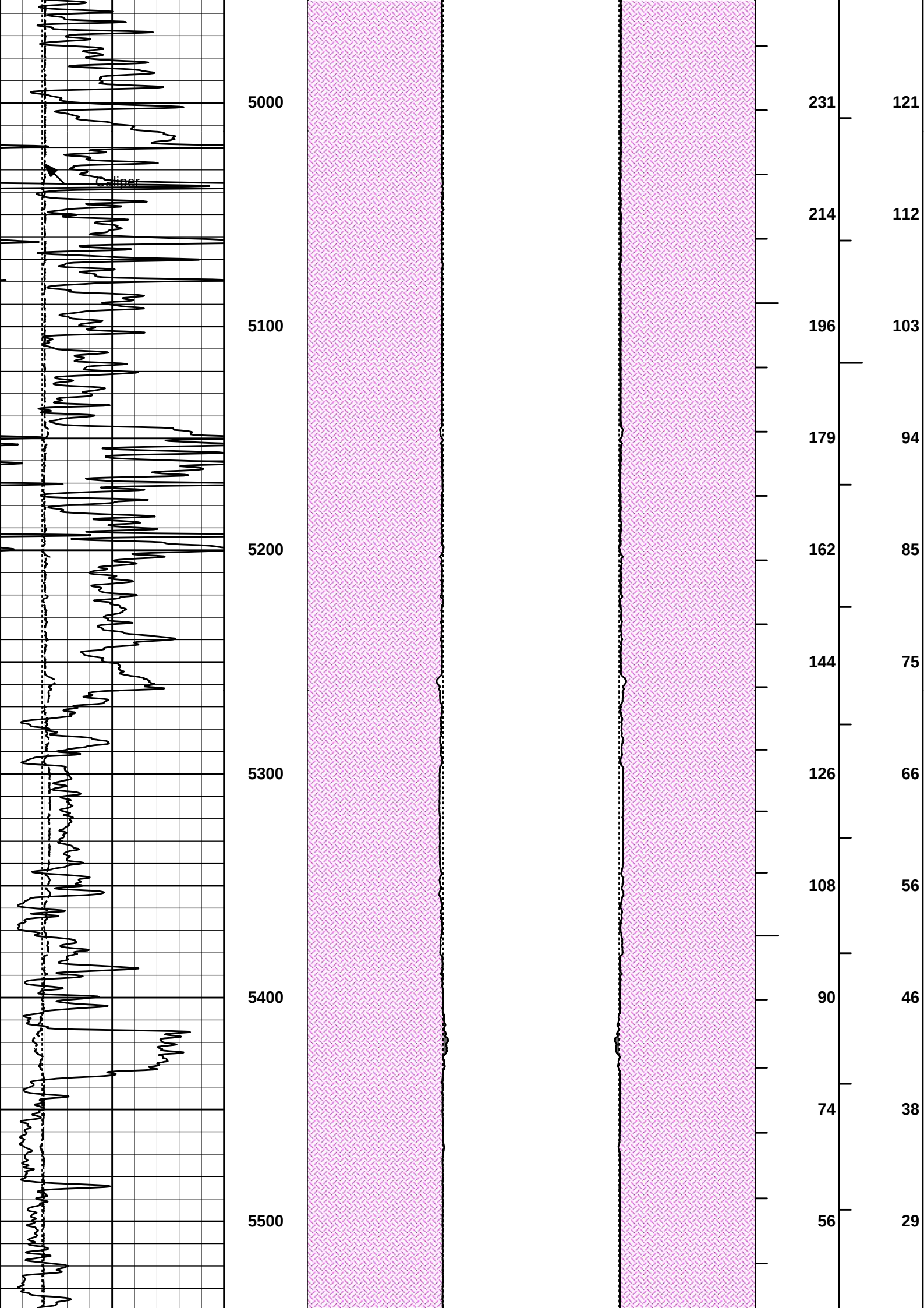


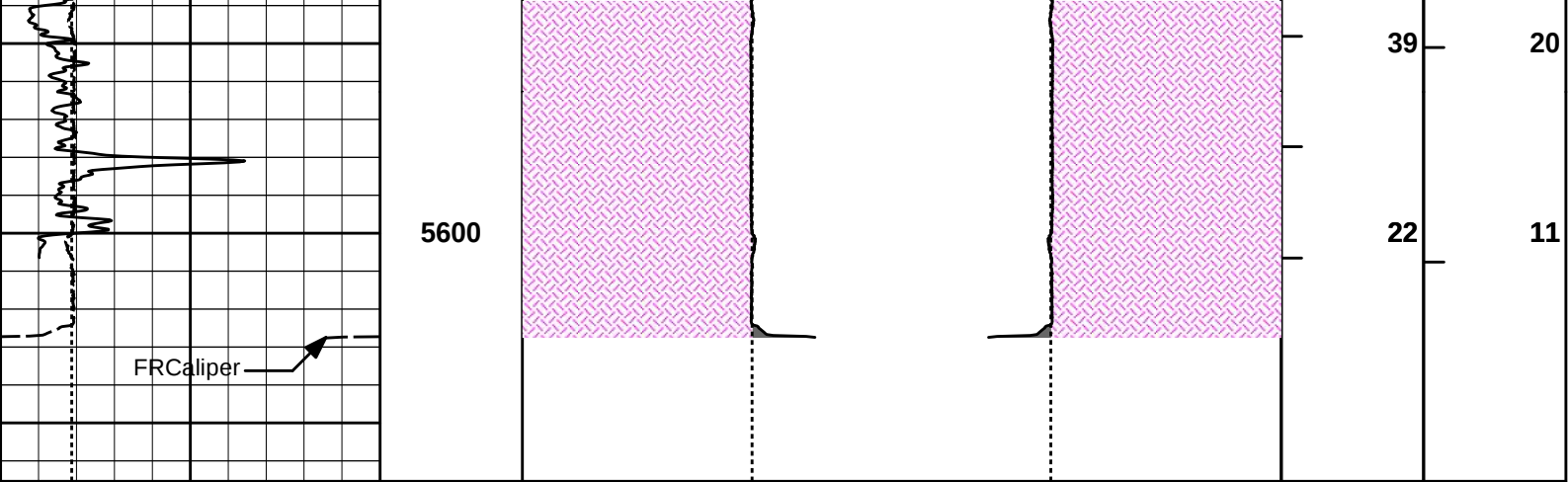












6	Caliper	16	MD 1 : 600 ft	20	Caliper	0	0	Caliper	20	BHVT	AHVT
	inches				inches			inches			
6	Bit Size	16		20	Bit Size	0	0	Bit Size	20		
	inches										
0	Gamma API	150			MUDCAKE			MUDCAKE			
	api										

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Plot Time: 25-Feb-18 22:11:23
Plot Range: 1810 ft to 5665.42 ft
Data: BATMAN_B4\Well Based\MAIN\
Plot File: \\-LOCAL-BATMAN_B4\Well Based\AHV\AHV_2_IQ_LIB

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COMPANY	MERIT ENERGY COMPANY		
WELL	BATMAN B4		
FIELD	SANTA FE NORTH		
COUNTY	HASKELL	STATE	KANSAS
HALLIBURTON		ANNULAR HOLE VOLUME	