

HALLIBURTON

ANNULAR HOLE VOLUME

COMPANY WELL FIELD/BLOCK COUNTY STATE				MERIT ENERGY COMPANY WENU 505 EUBANK NORTH HASKELL KANSAS			
COMPANY WELL FIELD/BLOCK COUNTY STATE				MERIT ENERGY COMPANY WENU 505 EUBANK NORTH HASKELL KANSAS			
Permanent Datum Log measured from Drilling measured from				GL KB KB Elev. 3077.0 ft 12.0 ft above perm. Datum			
Date Run No. Depth - Driller Depth - Logger Bottom - Logged Interval Top - Logged Interval Casing - Driller Casing - Logger Bit Size Type Fluid in Hole Density PH Source of Sample Rm @ Meas. Temperature Rmf @ Meas. Temperature Rmc @ Meas. Temperature Source Rmf Rm @ BHT Time Since Circulation Time on Bottom Max. Rec. Temperature Equipment Recorded By Witnessed By				24-Nov-19 ONE 5580.0 ft 5579.0 ft 5541.00 ft 1750.00 ft 8.625 in @ 1755.0 ft 1750.0 ft 7.875 in @ Water Based Mud 9.20 g/cc 10.50 pH MUDPIT 1.13 ohmm @ 75.00 degF 1.02 ohmm @ 75.00 degF 1.25 ohmm @ 75.00 degF MEAS 0.68 ohmm @ 129.0 degF 4.0 hr 24-Nov-19 16:00 129.00 degF @ 5579.0 ft 12147634 JORG ORLANDO PEREZ MARTIN LANGE			
Other Services: DSNT/SDLT MICROLOG BSAT ACRT				Elev.: K.B. D.F. G.L. 3089.0 ft 3089.0 ft 3077.0 ft			

Fold here

Service Ticket No.: 906120593						API No.: 15081222070000						PGM Version: WL INSITE R6.2.7 (Build 7)							
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-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.		10951315		Serial No.		10993115					
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-NEU					
Type		SCINT						Source Type		CS137		Source Type		AM241BE					
Length		8"		LSA [Y/N]				Serial No.		5471GW		Serial No.		DSN-424					
Distance to Source		N/A		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	CSG	REC	0	150	30	-10	47.6 uSec/ft	30	-10	2.71 gr/cc	30	-10	LIME					

[illegible]

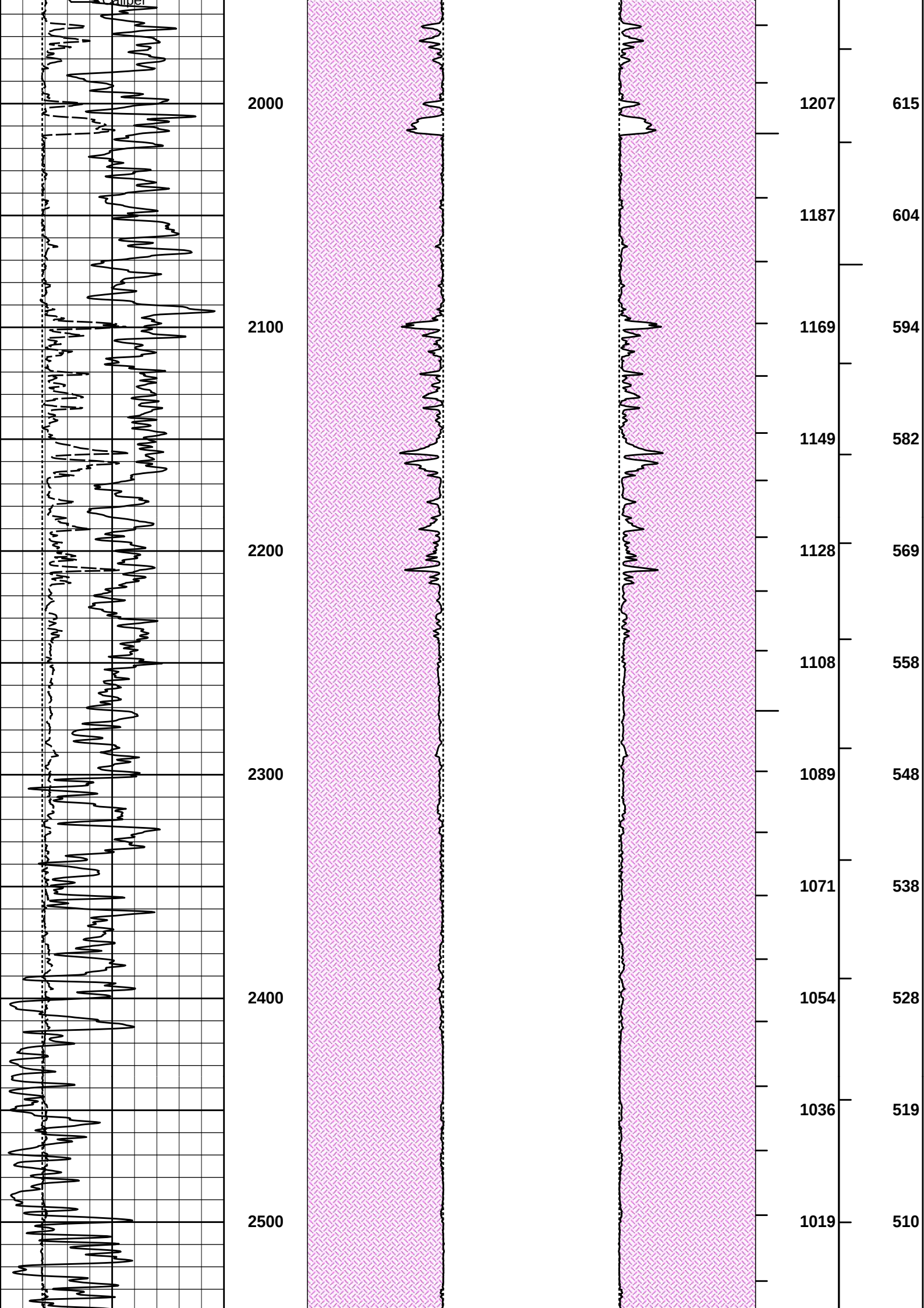
HALLIBURTON

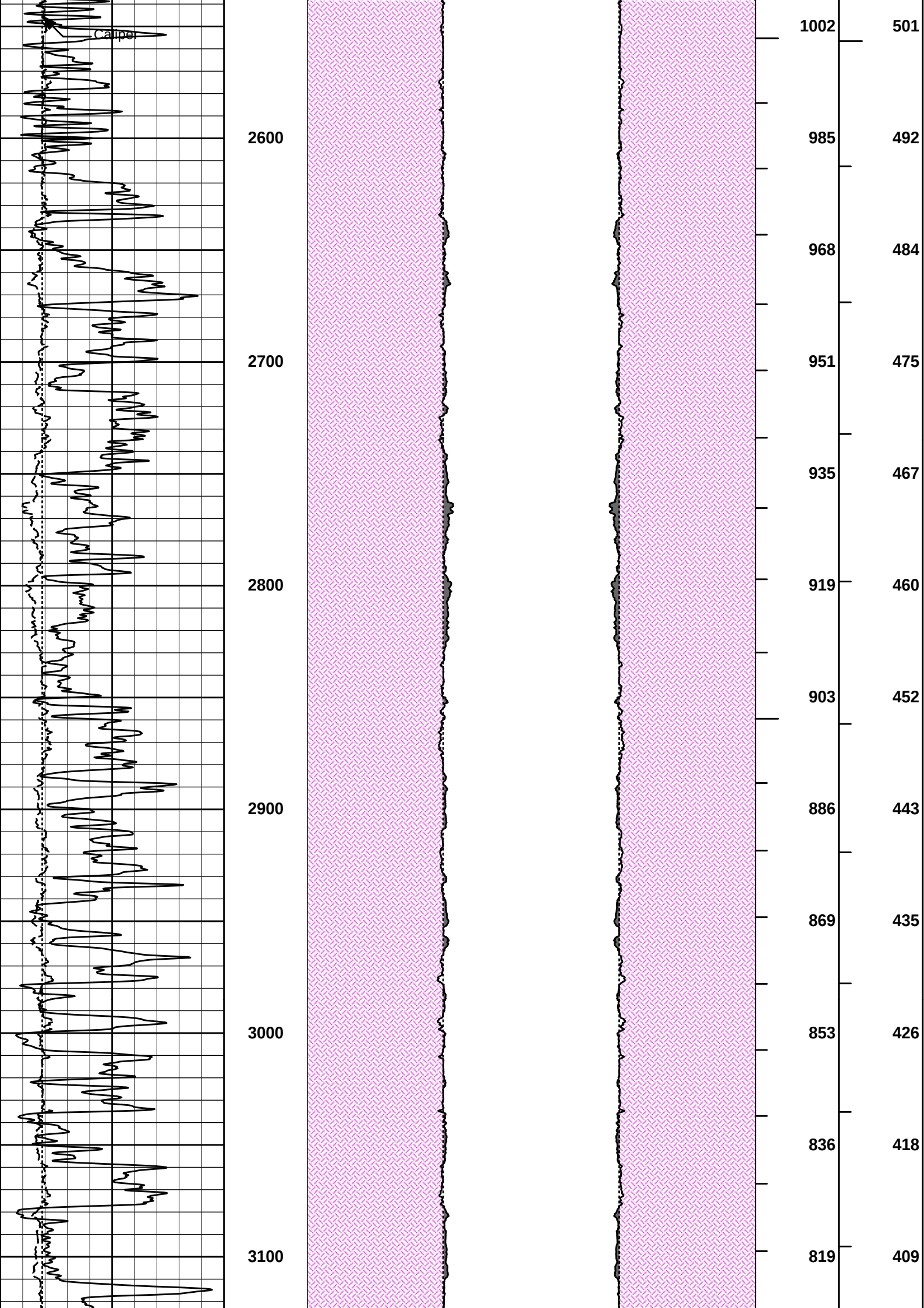
Plot Time: 24-Nov-19 17:55:51
Plot Range: 1740 ft to 5584.25 ft
Data: WENU-505\Well Based\MAIN\
Plot File: \\LOCAL-WENU-505\Well Based\AHV\AHV_2_IQ_LIB

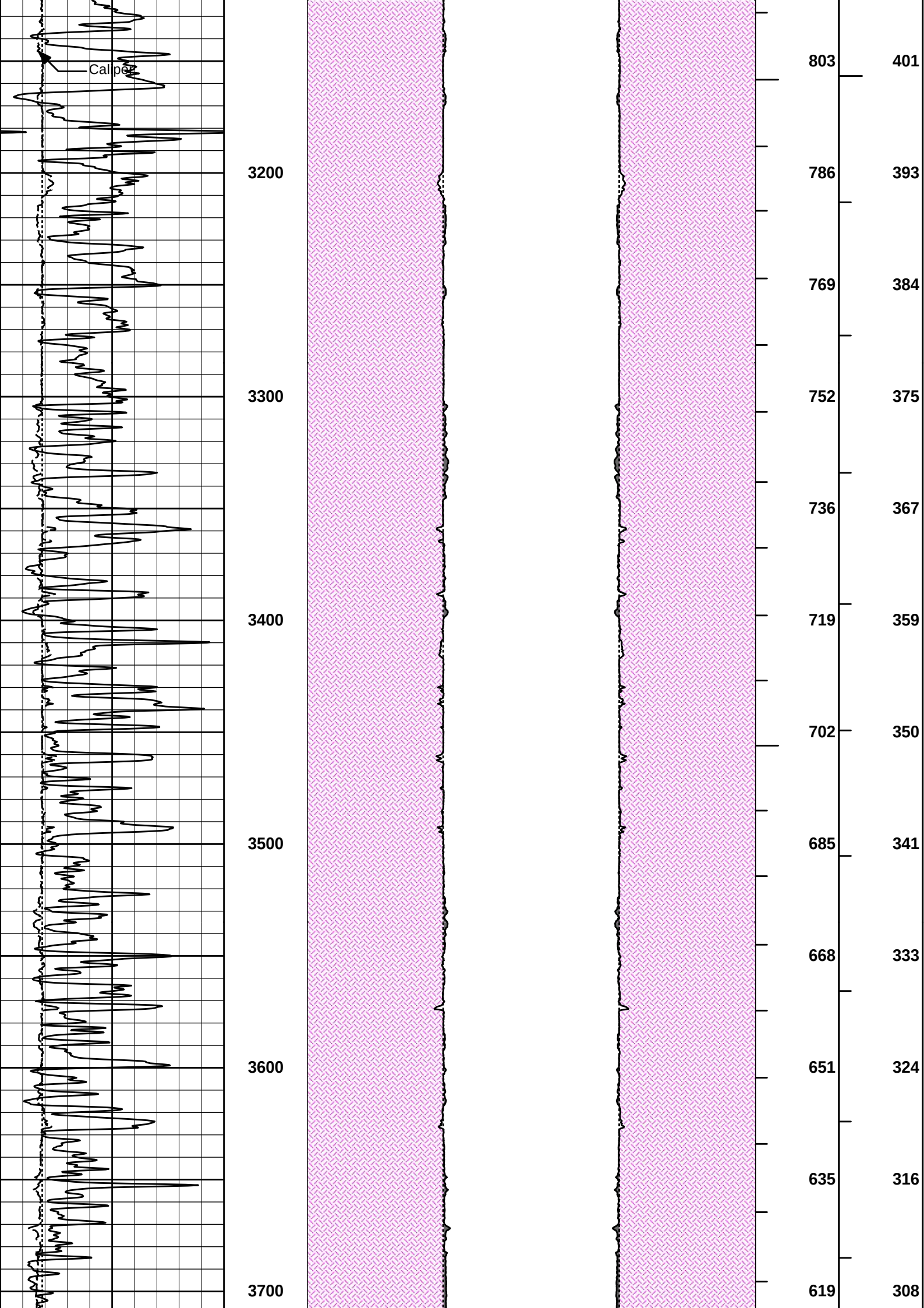
ANNULAR HOLE VOLUME PLOT

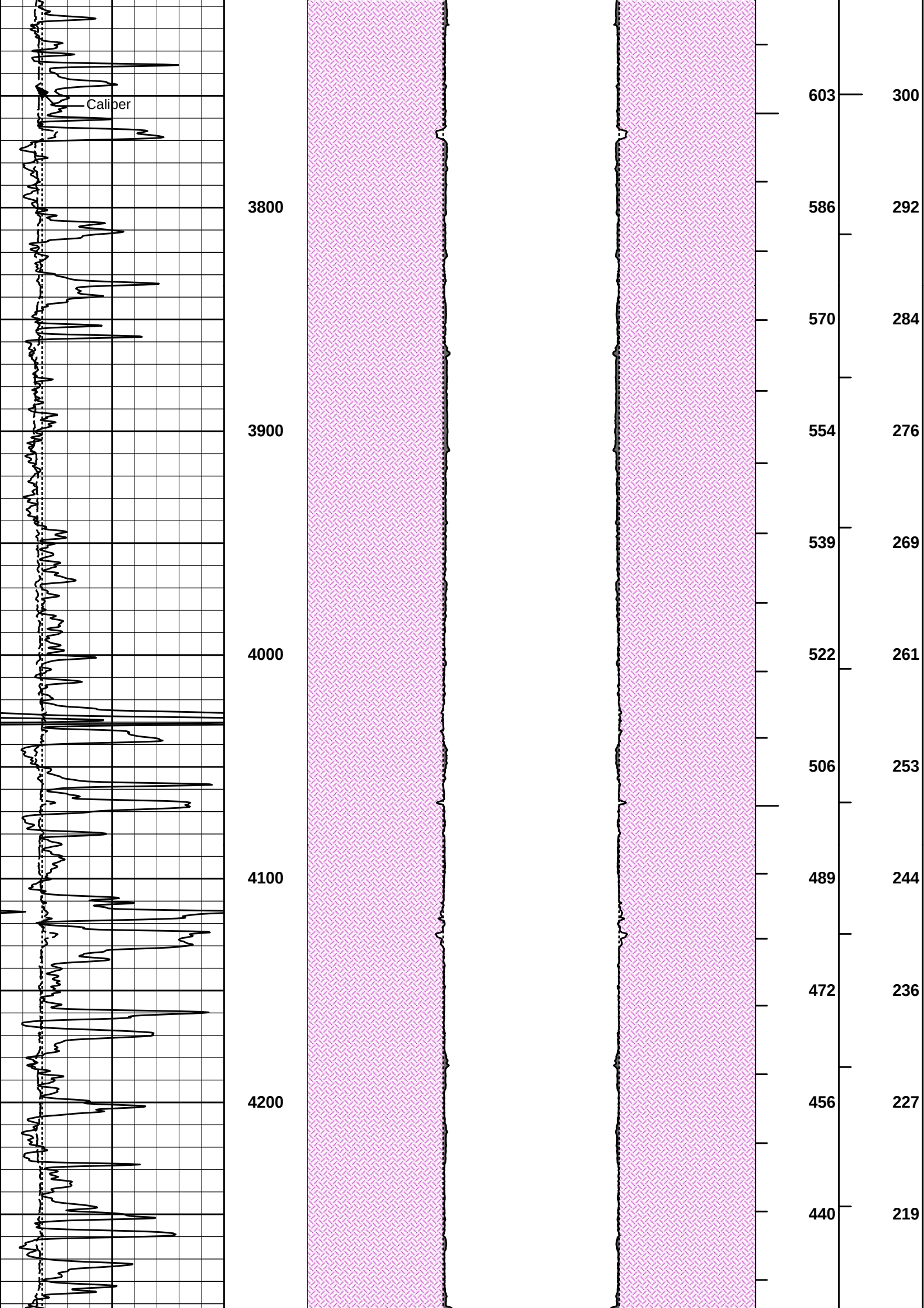
Gamma API				MUDCAKE		MUDCAKE			
api									
Bit Size	inches	MD	Bit Size	Caliper	inches	Bit Size	Caliper	BHVT	AHVT
inches	inches	1 : 600	inches	inches	inches	inches	inches		
150	16	1800	20	20	20	20	20	1348	715
6	6	1900	20	20	20	20	20	1321	696
6	6		20	20	20	20	20	1294	678
6	6		20	20	20	20	20	1254	646
6	6		20	20	20	20	20	1225	626

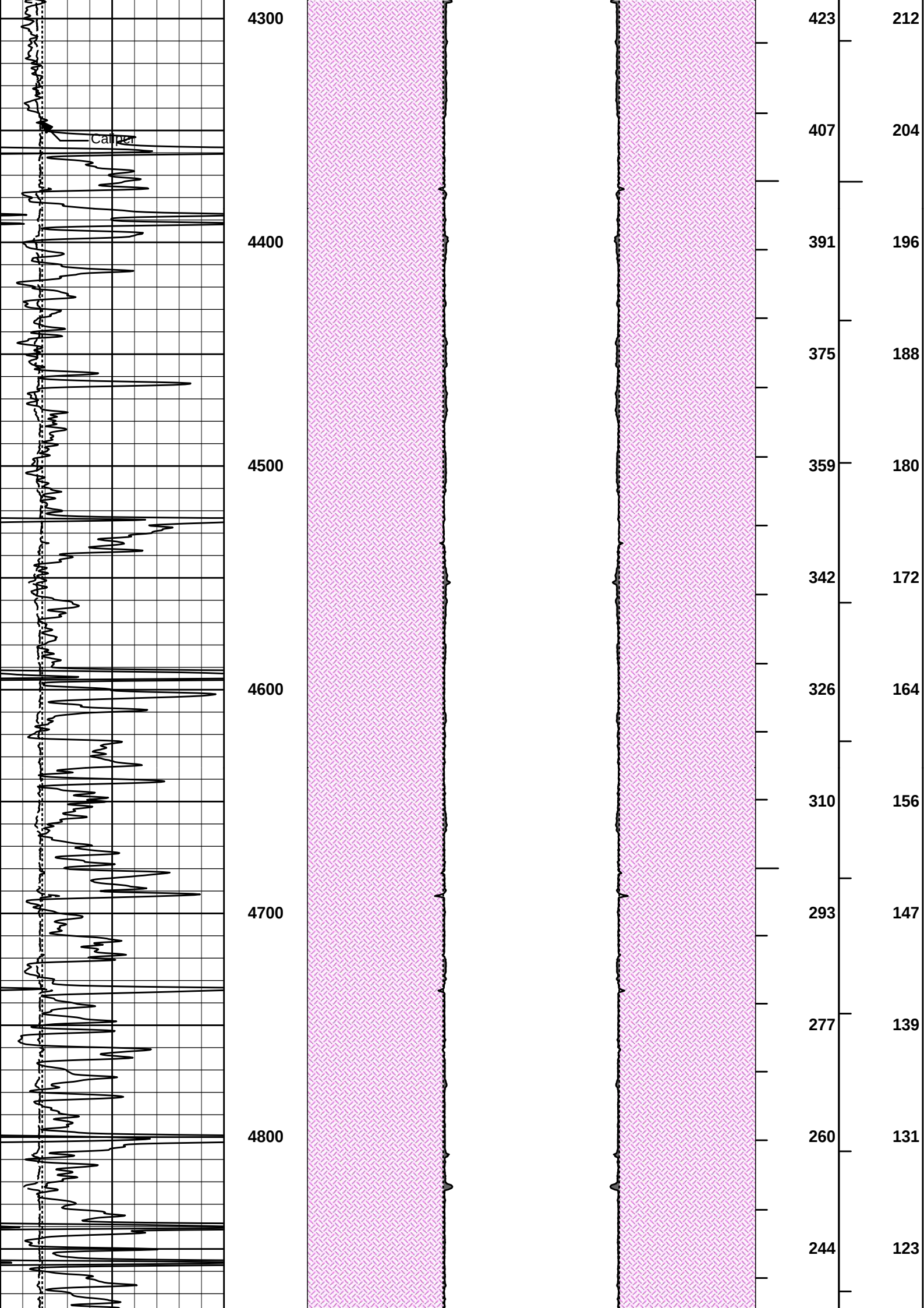
The plot displays several parameters against depth (MD) from 1740 ft to 5584.25 ft. The left side shows Gamma API (0 to 150), Bit Size (6 inches), and Caliper (6 inches). The right side shows BHVT (1348 to 1225) and AHVT (715 to 626). The center section shows Mudcake thickness (MUDCAKE) and its corresponding Bit Size and Caliper.

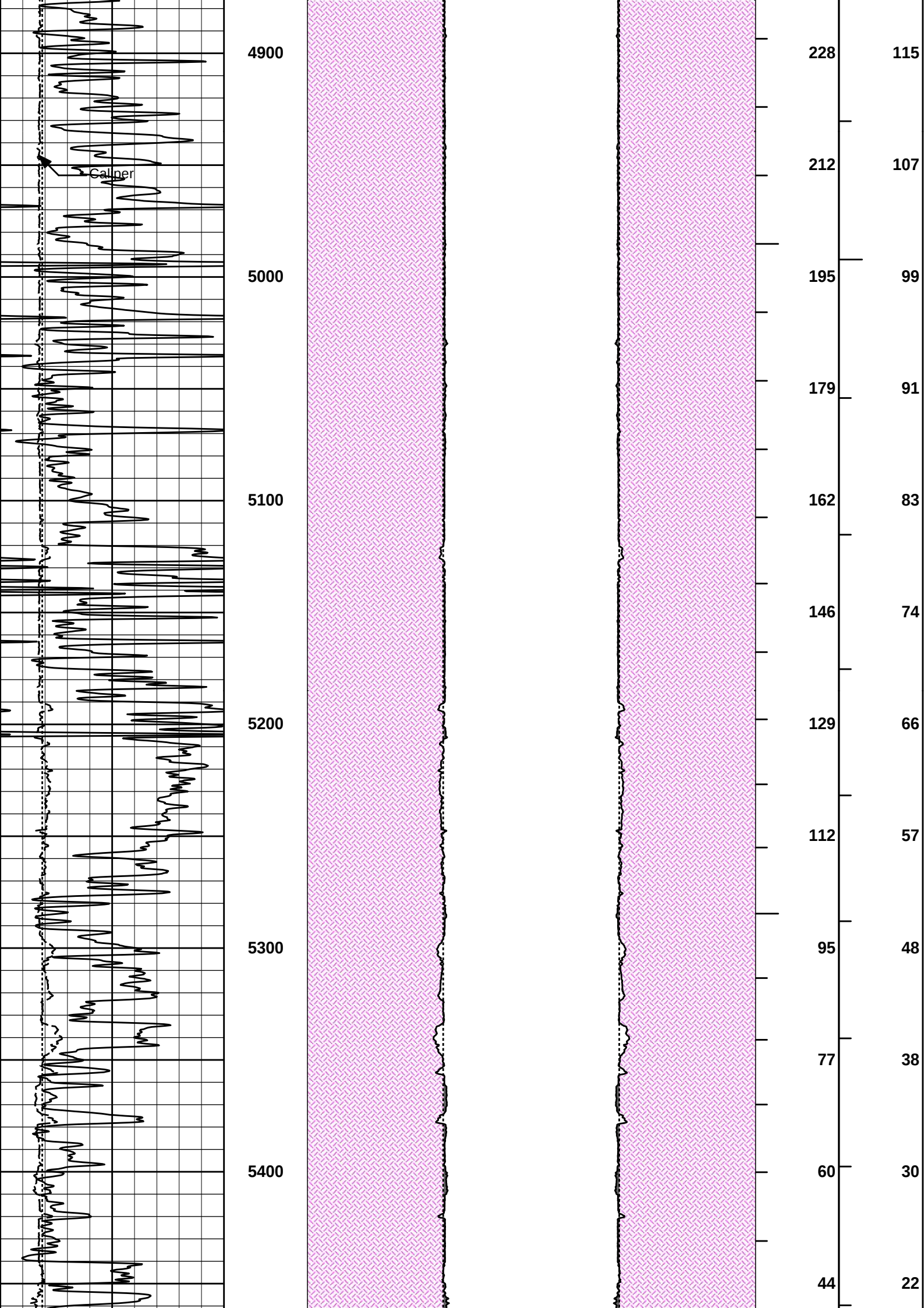


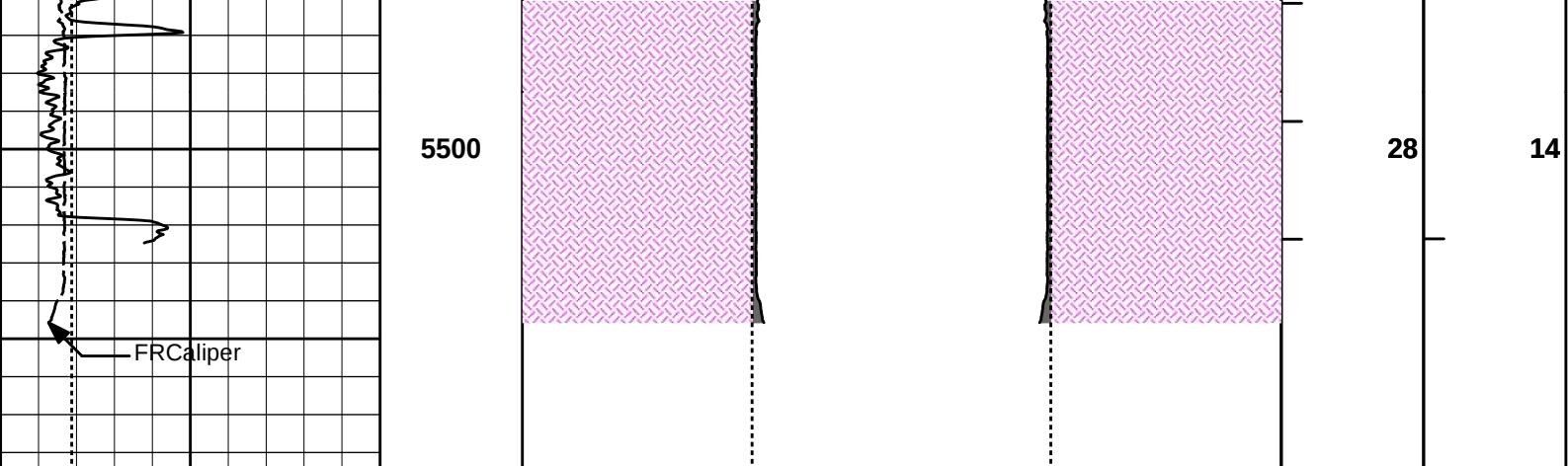












6	Caliper	16	MD 1 : 600 ft	20	Caliper	0 0	20	BHVT	AHVT
	inches				inches				
6	Bit Size	16		20	Bit Size	0 0	20		
	inches								
0	Gamma API	150			MUDCAKE		MUDCAKE		
	api								

HALLIBURTON

Plot Time: 24-Nov-19 17:55:54
Plot Range: 1740 ft to 5584.25 ft
Data: WENU-505\Well Based\MAIN\
Plot File: \\-LOCAL-WENU-505\Well Based\AHV\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	MERIT ENERGY COMPANY
WELL	WENU 505
FIELD	EUBANK NORTH
COUNTY	HASKELL
STATE	KANSAS

HALLIBURTON	ANNULAR HOLE VOLUME
-------------	---------------------