

# HALLIBURTON

## ANNULAR HOLE VOLUME LOG 5 1/2" CASING

COMPANY	RUSSELL OIL, INC.	COMPANY	RUSSELL OIL, INC.
WELL	RUMBACK B #21-2	WELL	RUMBACK B #21-2
FIELD/BLOCK	RUMBACK	FIELD/BLOCK	RUMBACK
COUNTY	LOGAN	COUNTY	LOGAN
STATE	KANSAS	STATE	KANSAS
Permanent Datum	GL	API No.	15-109-21555-00-00
Log measured from	KB	Location	(SHL) NW SW NE NE 952' FNL & 1313' FEL
Drilling measured from	KB	Sect.	21
		Twp.	11S
		Rge.	32W
Date	08-Aug-18	Elev.	3017.0 ft
Run No.	1	Elev.	K.B. 3022.0 ft
Depth - Driller	4690.0 ft	D.F.	3021.0 ft
Depth - Logger	4692.0 ft	G.L.	3017.0 ft
Bottom - Logged Interval	4682		
Bottom - Logged Interval	344		
Casing - Driller	8.625 in		@
Casing - Logger	344.0 ft		@
Bit Size	7.875 in		@
Type Fluid in Hole	Water Based Mud		@
Density	8.90 g/cc		55.00 sl/qt
PH	10.00 pH		6.8 cphm
Source of Sample	FLOWLINE		
Rm @ Meas. Temperature	0.78 ohmm		@ 88.00 degF
Rmf @ Meas. Temperature	0.61 ohmm		@ 85.00 degF
Rmc @ Meas. Temperature	0.96 ohmm		@ 85.00 degF
Source Rmf	Rmc		MEAS
Rm @ BHT	0.55 ohmm		@ 128.0 degF
Time Since Circulation	09:00 hr		
Time on Bottom	08-Aug-18 13:29		
Max. Rec. Temperature	128.00 degF		@ 4692.0 ft
Equipment	12156883		EL RENO
Recorded By	WHITLOCK		
Witnessed By	KITT NOAH		

Fold here

Service Ticket No.: 905046367		API No.: 15-109-21555-00-00		PGM Version: WL INSITE R5.6.3 (Build 4)	
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE			RESISTIVITY SCALE CHANGES		
Date	Sample No.		Type Log	Depth	Scale Up Hole
Depth-Driller					Scale Down Hole
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
Rmf @ Meas. Temp.	@	@			Tool Pos.
Rmc @ Meas. Temp.	@	@			Other
Source Rmf	Rmc				
Rm @ BHT	@	@			
Rmf @ BHT	@	@			
Rmc @ BHT	@	@			
EQUIPMENT DATA					
GAMMA		ACOUSTIC		DENSITY	
Run No.		Run No.		Run No.	NEUTRON
Serial No.		Serial No.		Serial No.	
Model No.		Model No.		Model No.	
Diameter		No. of Cent.		Diameter	
Detector Model No.		Spacing		Log Type	
Type				Source Type	
Length		LSA [Y/N]		Serial No.	
Distance to Source		FWDA [Y/N ]		Strength	
LOGGING DATA					
GENERAL		GAMMA		ACOUSTIC	
Run	Depth	Speed	Scale	Scale	DENSITY
No.	From	To	L	R	Matrix
		ft/min	L	R	L
					R
					Matrix
					L
					R
					Matrix

DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks: 5 1/2" CASING USED FOR ANNULAR HOLE VOLUME

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



Plot Time: 08-Aug-18 15:39:49

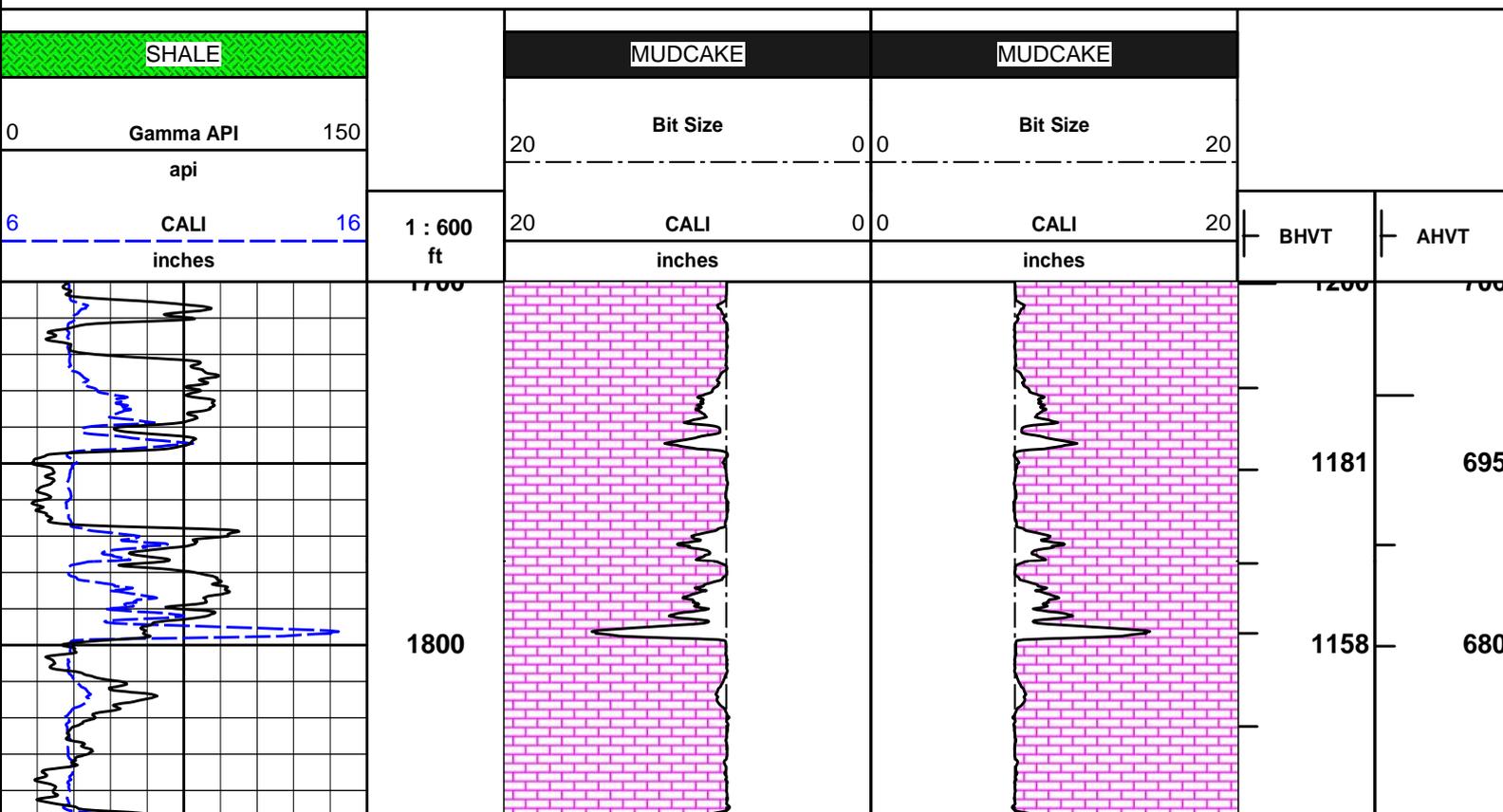
Plot Range: 1700 ft to 4695.58 ft

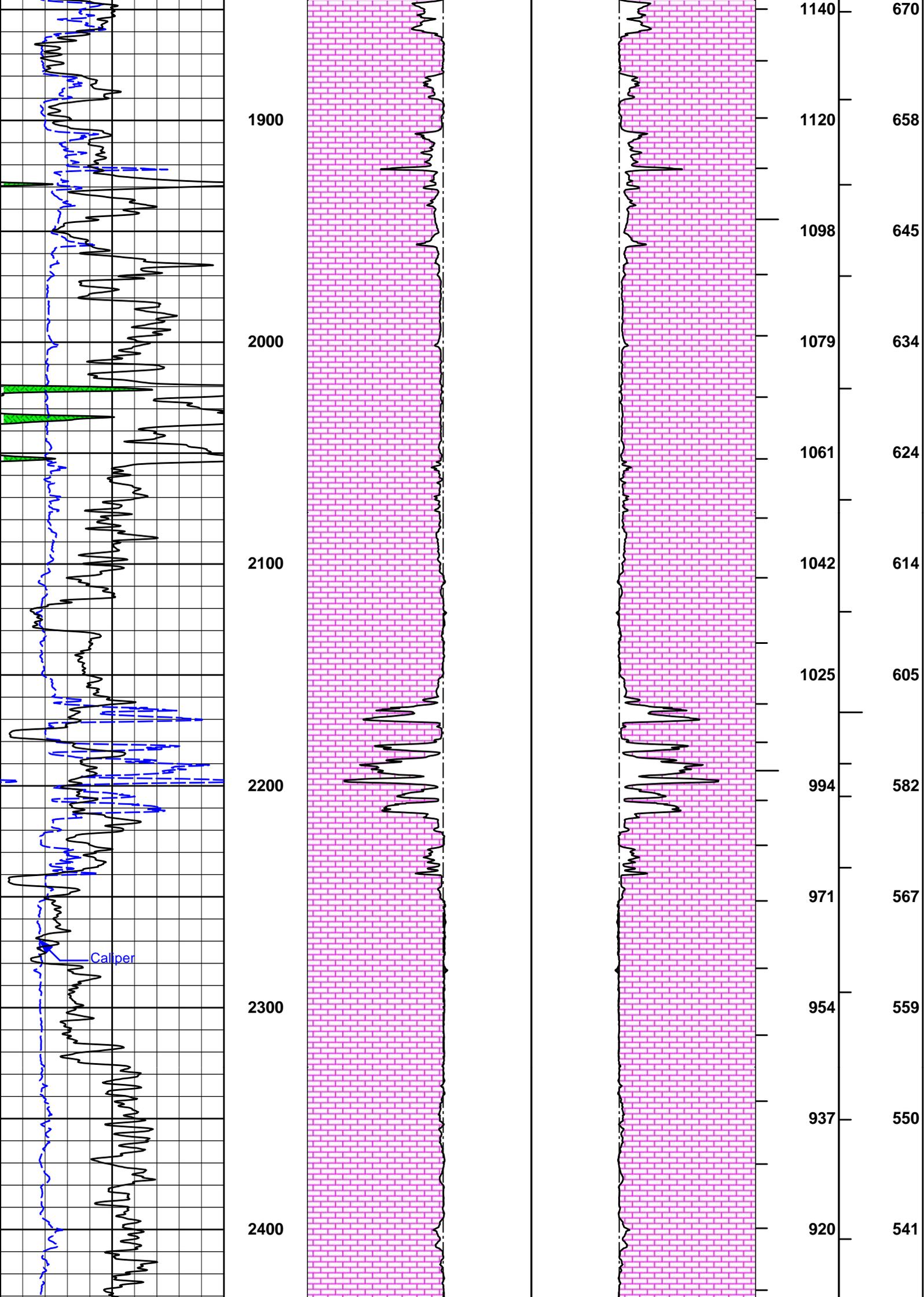
Data: RUSSEL\_RUMBACK\Well Based\DAQ-0001-005\

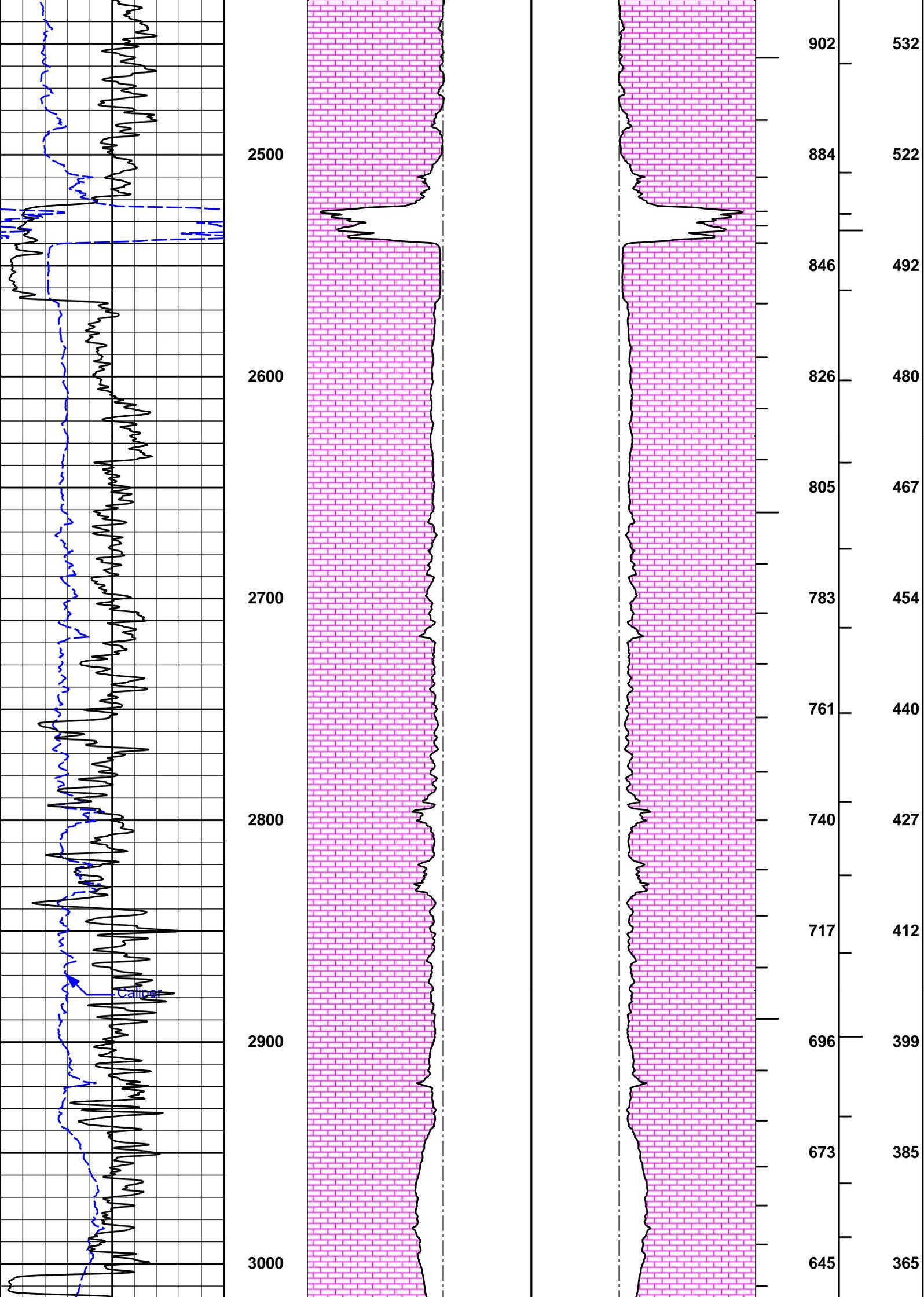
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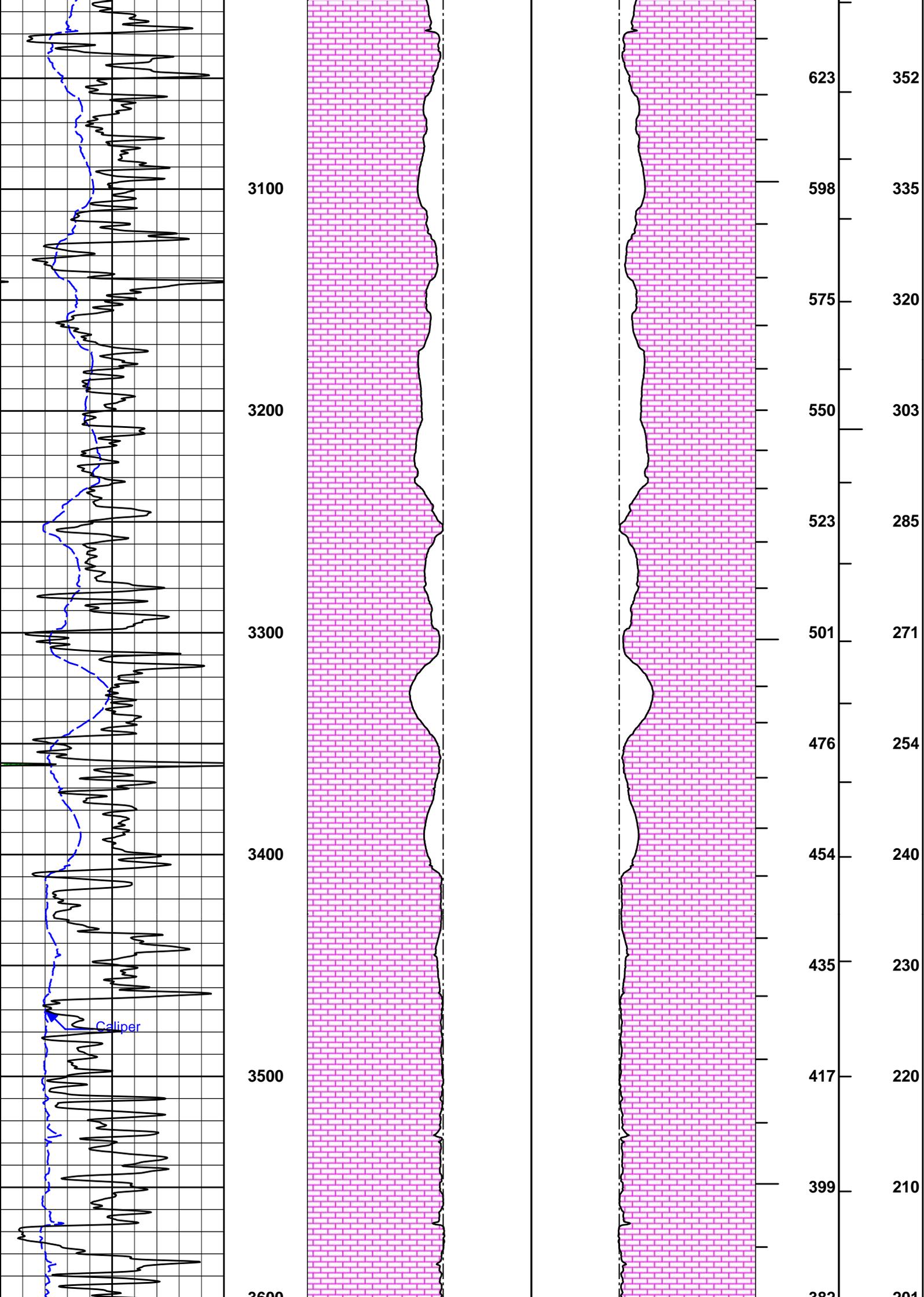
# ANNULAR HOLE VOLUME PLOT

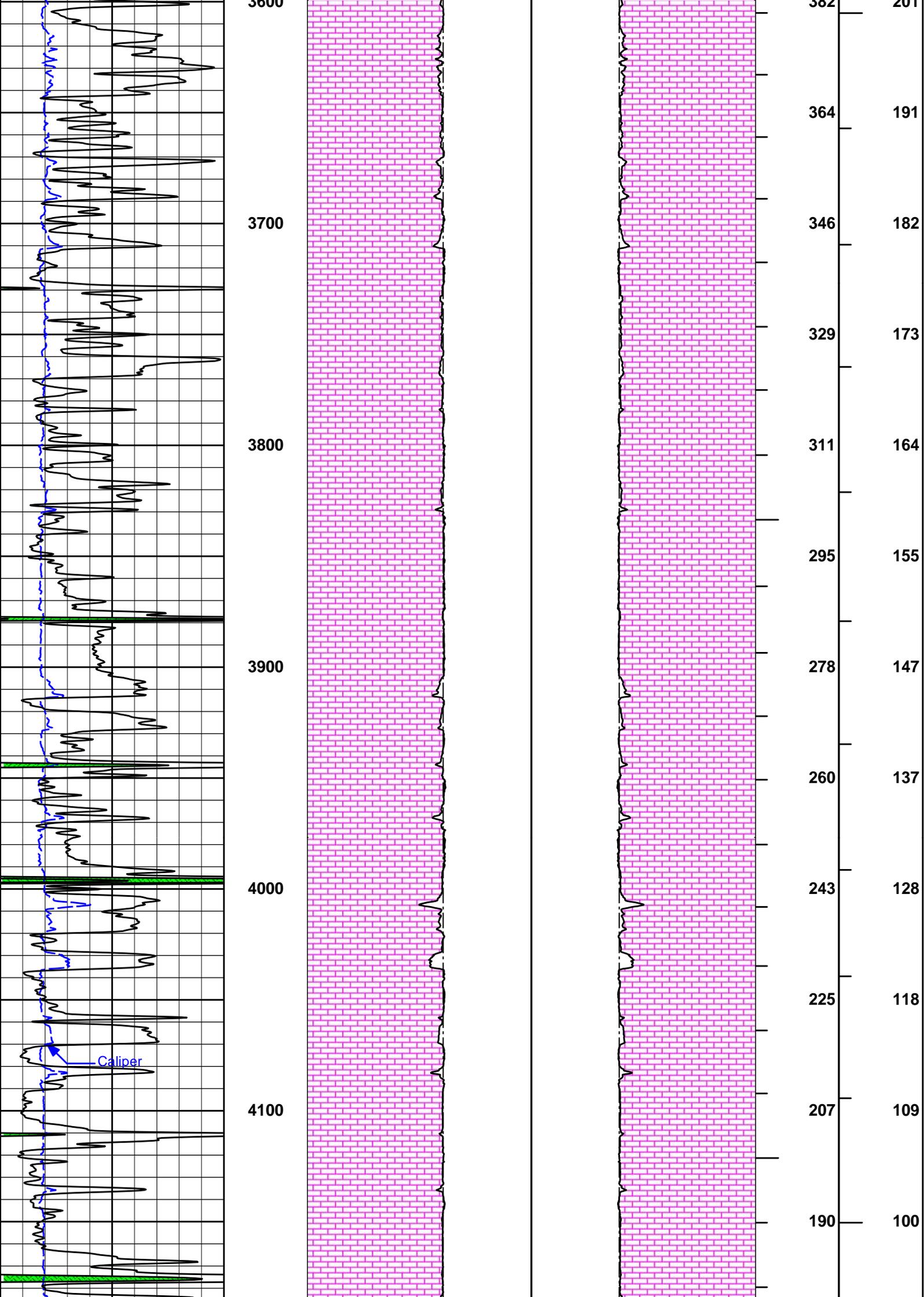
## AHV PLOT CALCULATED FOR 5 1/2" CASING

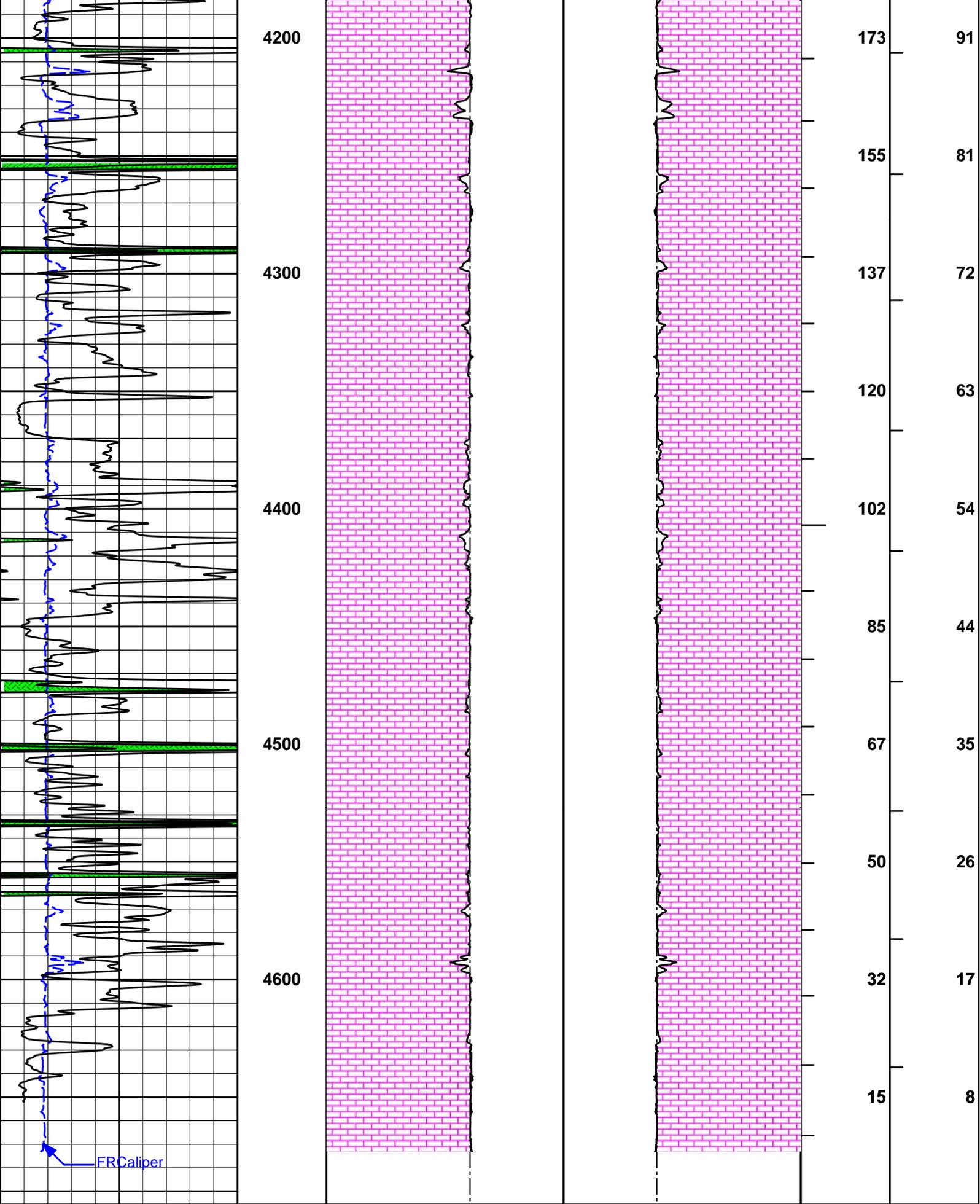












6	CALI	16	1 : 600 ft	20	CALI	0 0	20	BHVT	AHVT
	inches					inches			
0	Gamma API	150		20	Bit Size	0 0	20		
	api								
	SHALE				MUDCAKE				MUDCAKE

## ANNULAR HOLE VOLUME PLOT

**AHV PLOT CALCULATED FOR 5 1/2" CASING**