

HALLIBURTON

BOREHOLE VOLUME
LOG

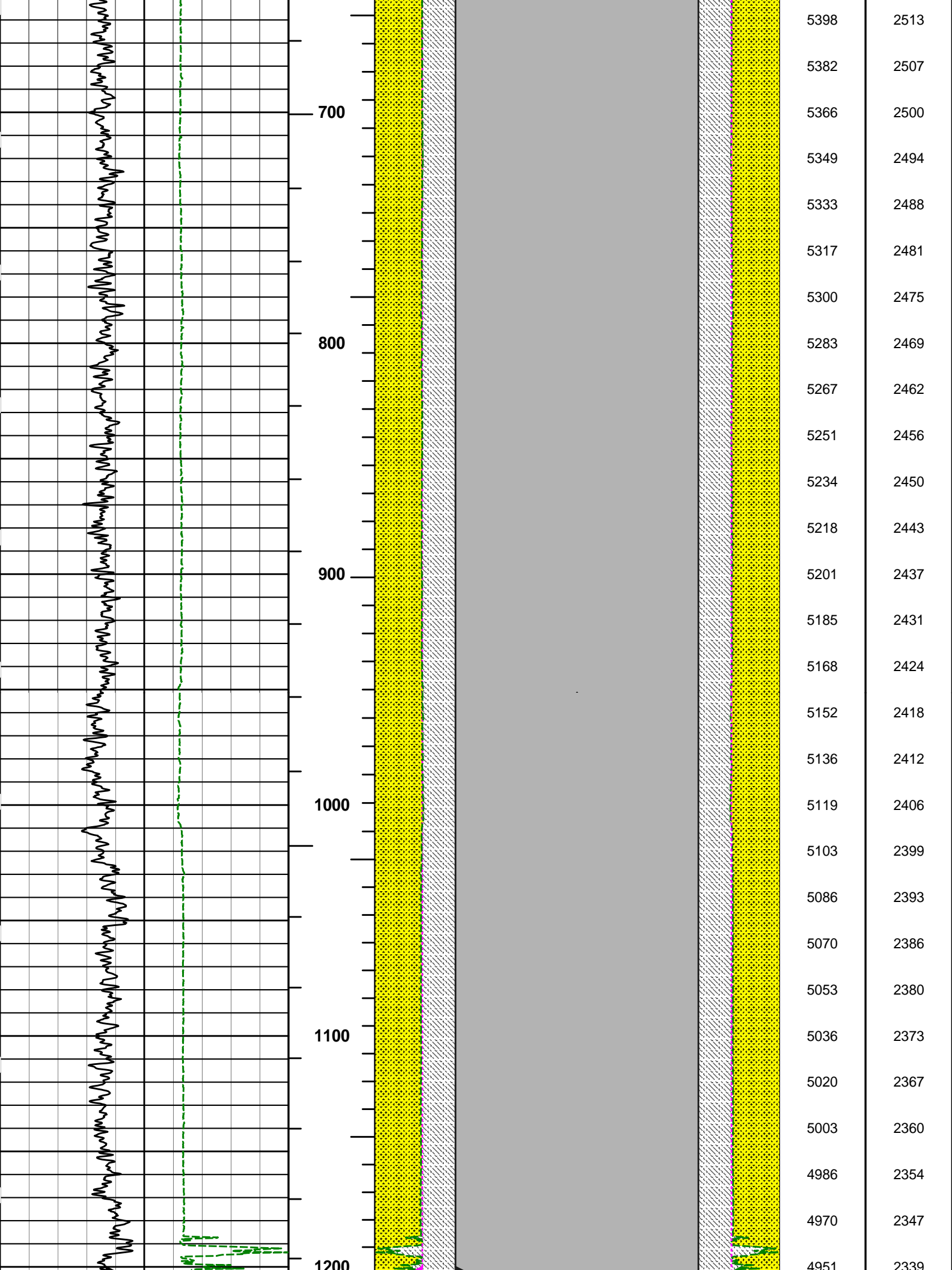
COMPANY		CHAMA OIL & MINERALS LLC	
WELL		SORS-1P	
FIELD/BLOCK		WILDCAT	
COUNTY		WASHINGTON	
STATE		CO	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date		08-Jan-13	
Run No.		1	
Depth - Driller		6385.00 ft	
Depth - Logger		6386.0 ft	
Bottom - Logged Interval		6286.0 ft	
Top - Logged Interval		547.0 ft	
Casing - Driller		13.375 in @ 550.0 ft	
Casing - Logger		547.0 ft	
Bit Size		12.250 in	
Type Fluid in Hole		WATER BASED MUD	
Density		10.5 ppg	
Viscosity		47.00 s/qt	
PH		10.50 pH	
Fluid Loss		5.8 cpm	
Source of Sample		FLOWLINE	
Rm @ Meas. Temperature		0.069 ohmm @ 36.00 degF	
Rmf @ Meas. Temperature		0.02 ohmm @ 75.00 degF	
Rmc @ Meas. Temperature		0.065 ohmm @ 75.00 degF	
Source Rmf		CHART	
Rmc		CHART	
Rm @ BHT		0.02 ohmm @ 179.0 degF	
Time Since Circulation		10.0 hr	
Time on Bottom		08-Jan-13 05:58	
Max. Rec. Temperature		179.0 degF @ 6386.0 ft	
Equipment		11072147 BRIGHTON	
Recorded By		J. WALDEN	
Witnessed By		LARRY KEITH	

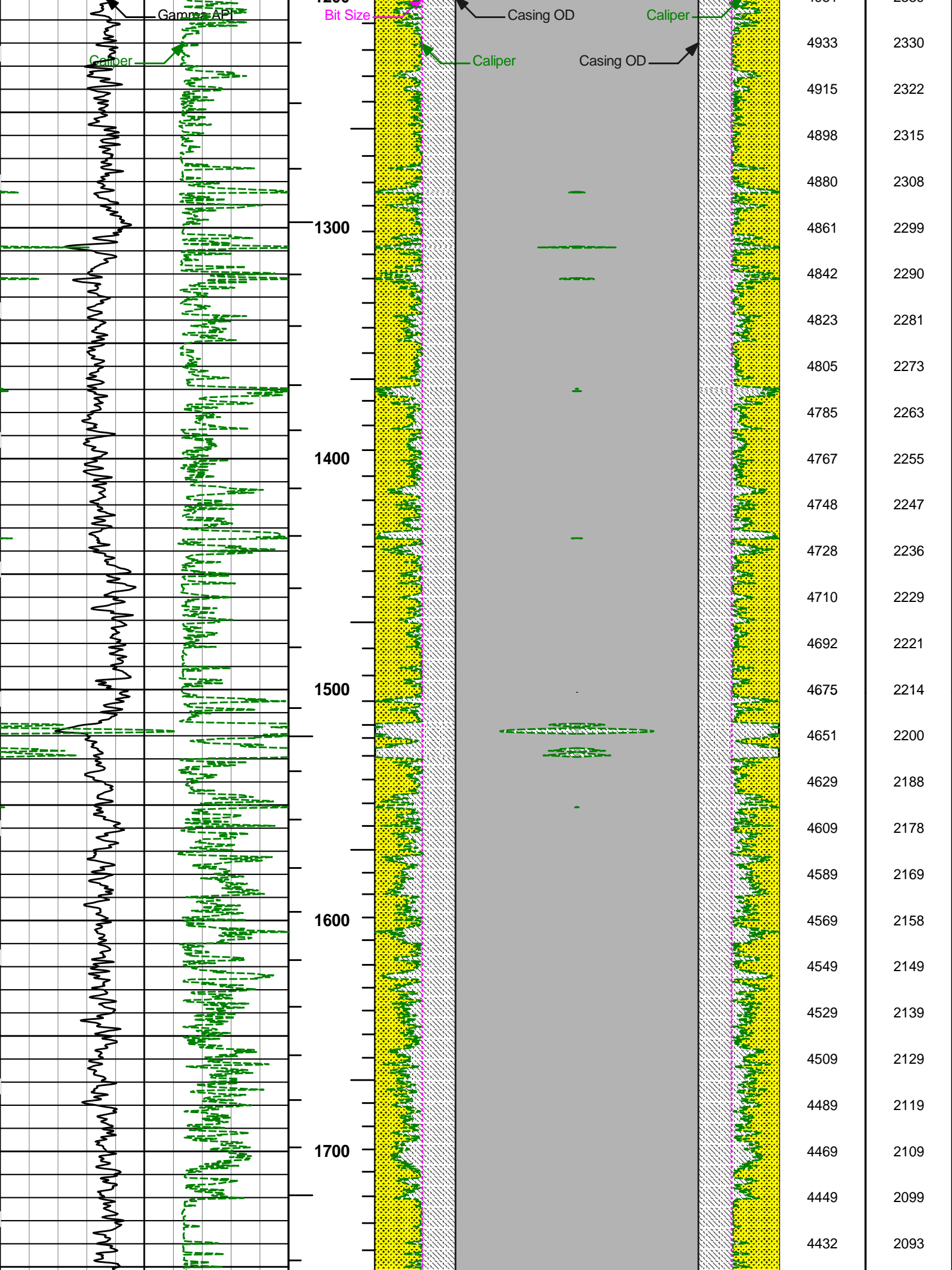
COMPANY	CHAMA OIL & MINERALS LLC
WELL	SORS-1P
FIELD/BLOCK	WILDCAT
COUNTY	WASHINGTON
STATE	CO
API No.	05121110180000
Location	LATITUDE: 40.279391° LONGITUDE: -103.394496° SHL: 650' FSL & 650' FWL SMSW
Other Services:	RWCH DSNT SDLT BSAT DLT MSFL
Sect. 26	Twp. 4N
Rge. 54W	
Elev. 4412.5 ft	
D.F.	4434.6 ft
G.L.	4412.5 ft

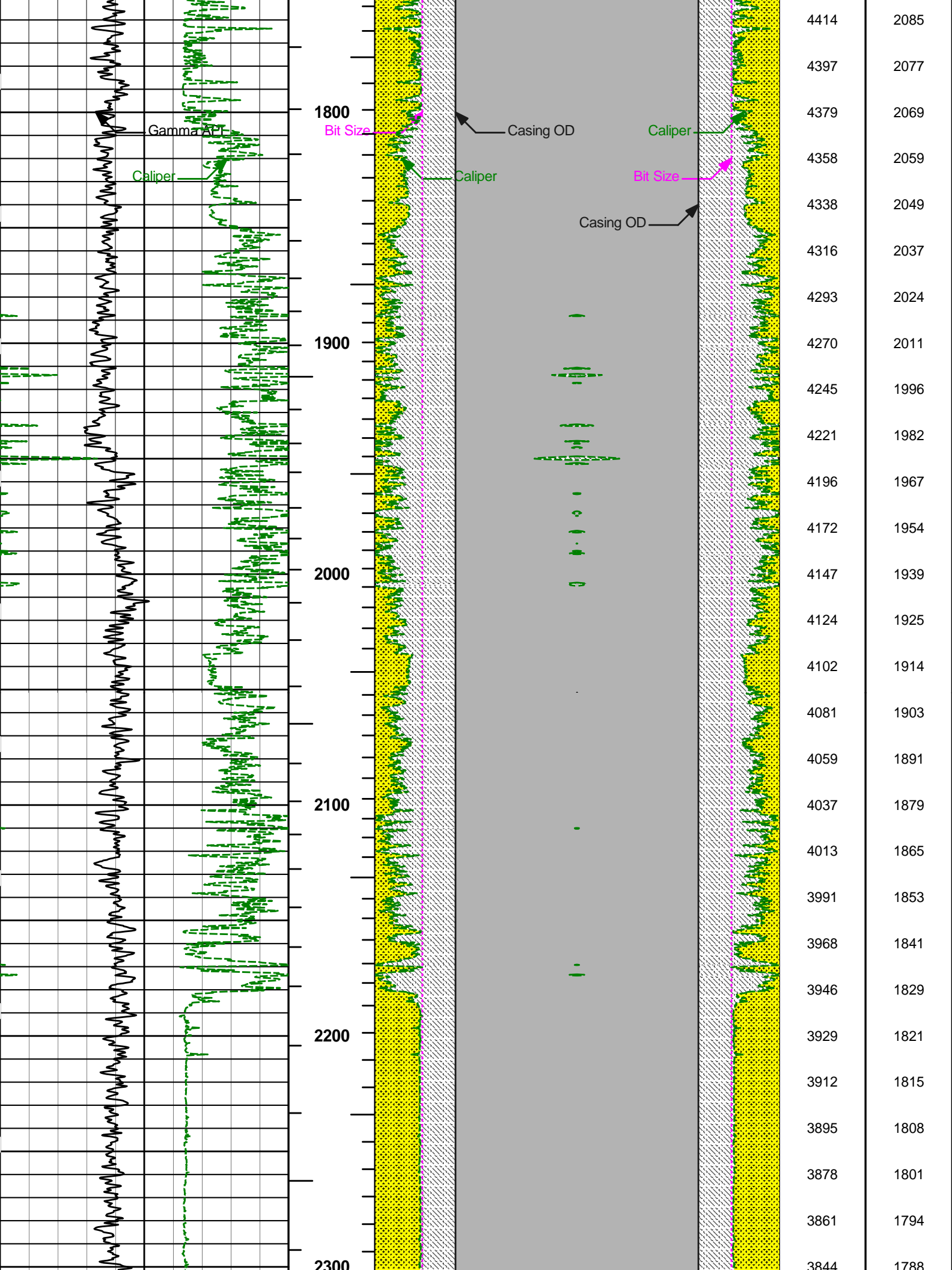
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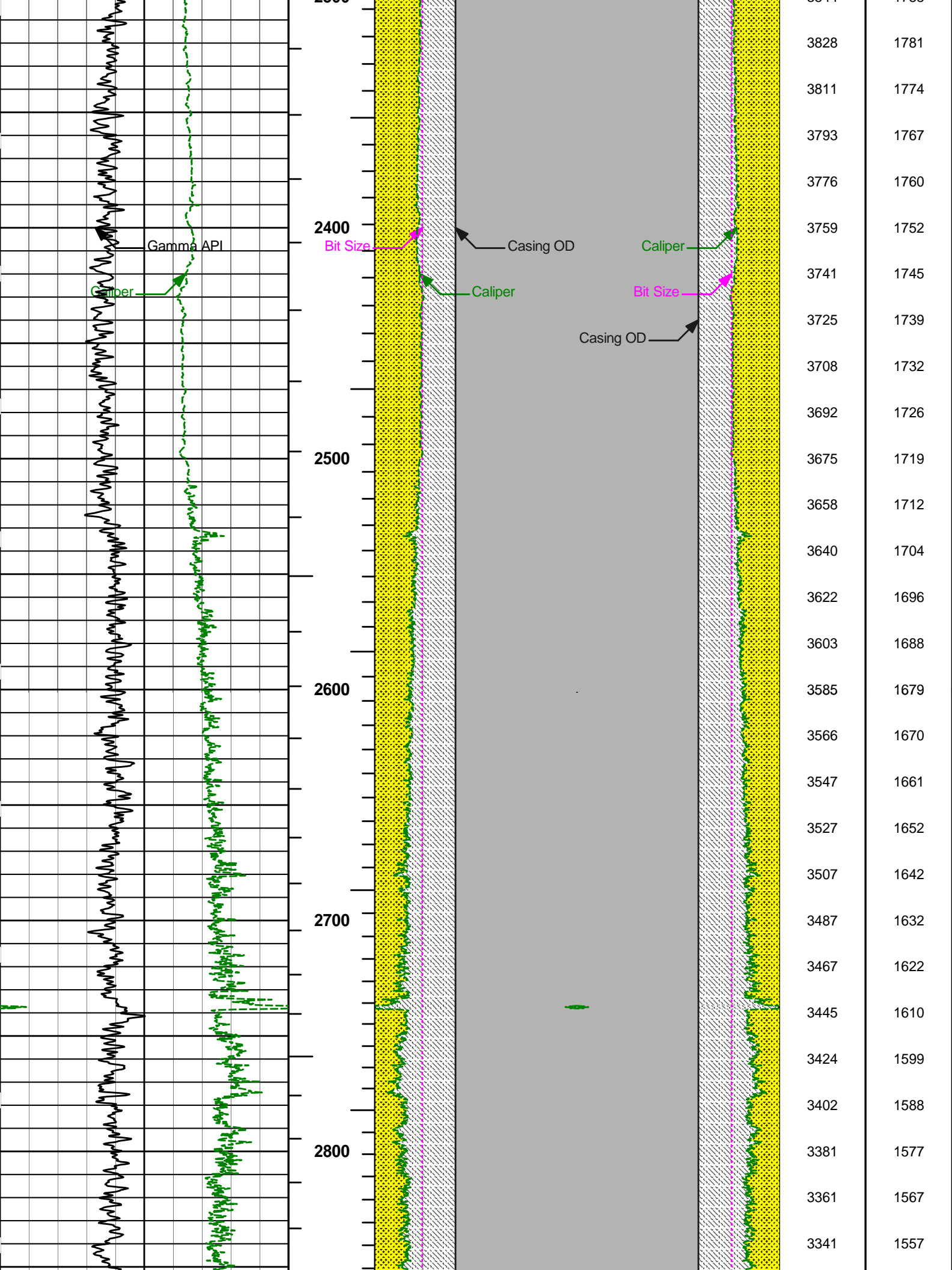
Service Ticket No.:				API Serial No.: 05121110180000				PGM Version: WL INSITE R3.8.0 (Build 2)							
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES									
Date		Sample No.				Type Log		Depth		Scale Up Hole		Scale Down Hole			
Depth-Driller															
Type Fluid in Hole															
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		DLTT		N/A		ECCE.		N/A	
Rmc @ Meas. Temp.		@		@				90277021							
Source Rmf		Rmc				ONE		MSFL		STAN.		ECCE.		N/A	
Rm @ BHT		@		@				11976327							
Rmf @ BHT		@		@											
Rmc @ BHT		@		@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.		ONE		Run No.		ONE		Run No.		ONE		Run No.		ONE	
Serial No.		11958944		Serial No.		11105780		Serial No.		11014271		Serial No.		11219332	
Model No.		GTET		Model No.		BSAT		Model No.		SDLT		Model No.		DSNT	
Diameter		3.625"		No. of Cent.		2		Diameter		4.5"		Diameter		3.625"	
Detector Model No.		GTET		Spacing		2'		Log Type		GAM-GAM		Log Type		NEU-NEU	
Type		SCINT						Source Type		CS137		Source Type		AM241BE	
Length		8"		LSA [Y/N]		N/A		Serial No.		5256GW		Serial No.		DSN430	
Distance to Source		14'		FWDA [Y/N]		N/A		Strength		1.78CI		Strength		15CI	
LOGGING DATA															

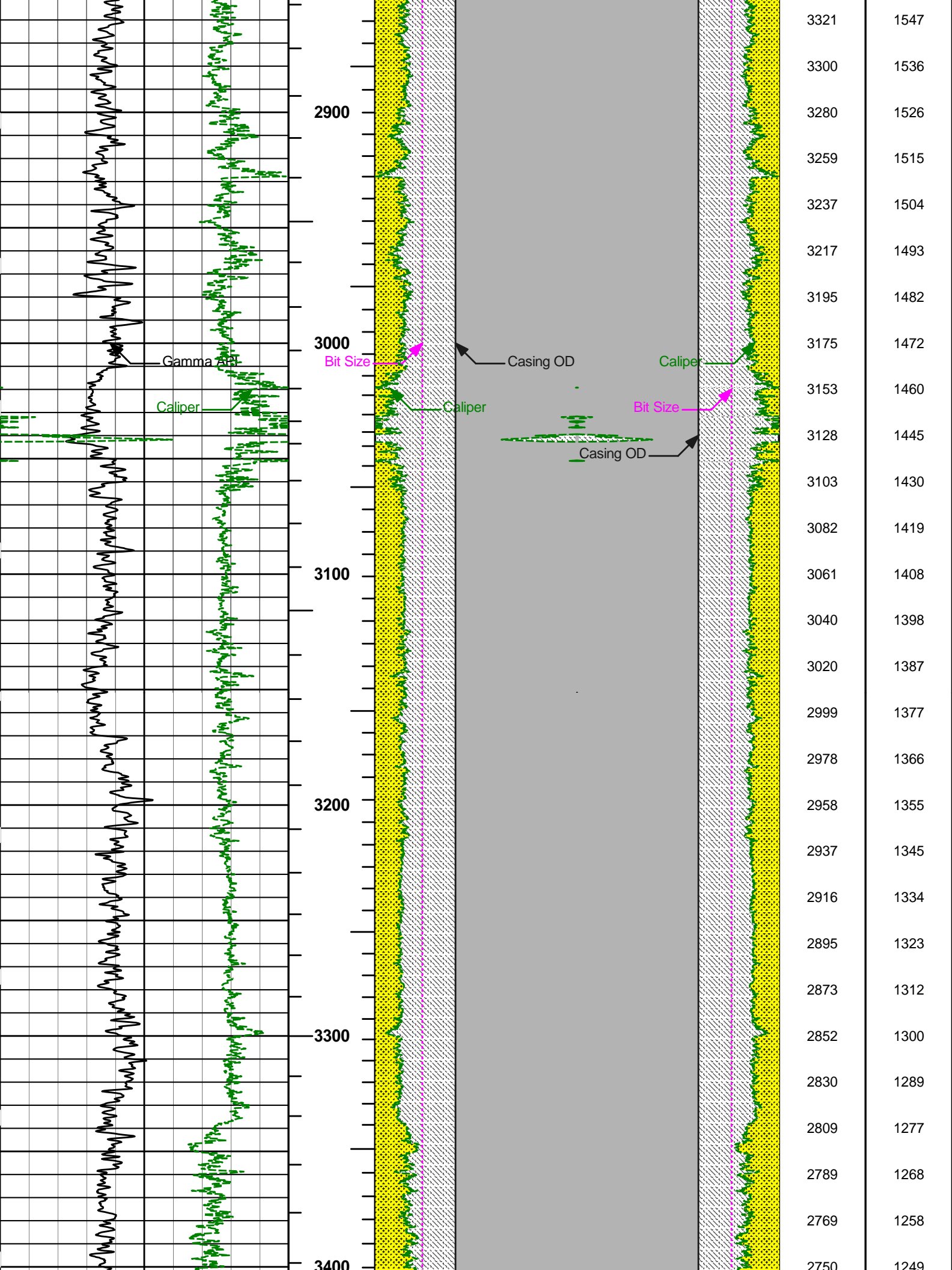
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix	
No.	From	To	ft/min	L	R	L	R		L	R		L	R		
ONE	6366	CSG	REC	0	200	140	40	55.5	30	-10	2.68	30	10	SAND	
DIRECTIONAL INFORMATION															
Maximum Deviation								@	KOP @						
Remarks: RWCH-SP-GTET-DSNT-SDLT-BSAT-IDT-ICT-DLLT-MSFL RUN WITH TWO STANDOFFS FOR DLL AND TWO CENTRALIZERS FOR BSAT.															
WASHOUTS, BOREHOLE RUGOSITY, AND TIGHT PULLS MAY AFFECT LOG RESPONSE.															
YOUR CREW TODAY: A. AXE, M. BURNETT, C. KLEINSASSER.															
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES. BRIGHTON, CO.															
<p>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.</p>															
HALLIBURTON															

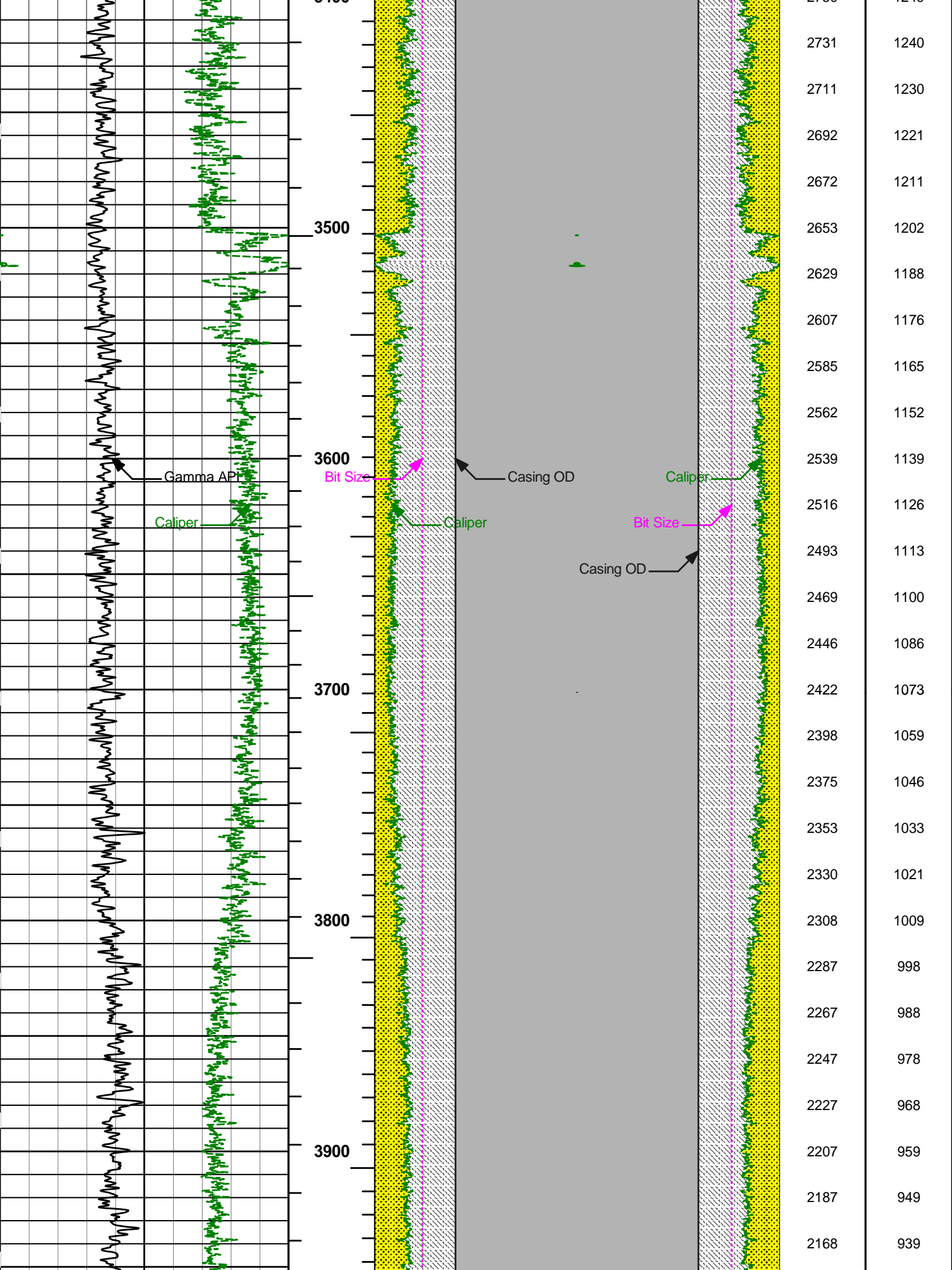


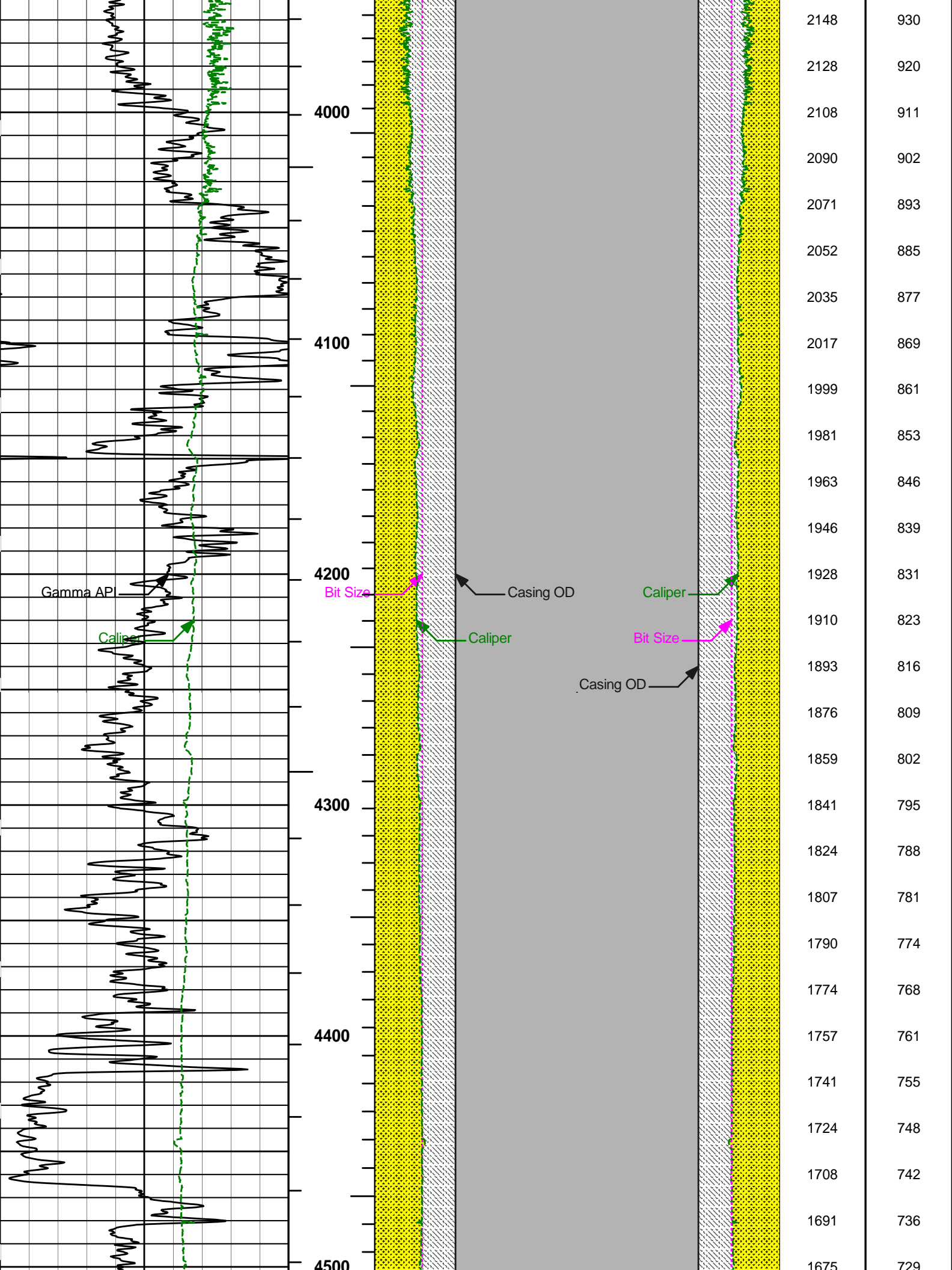


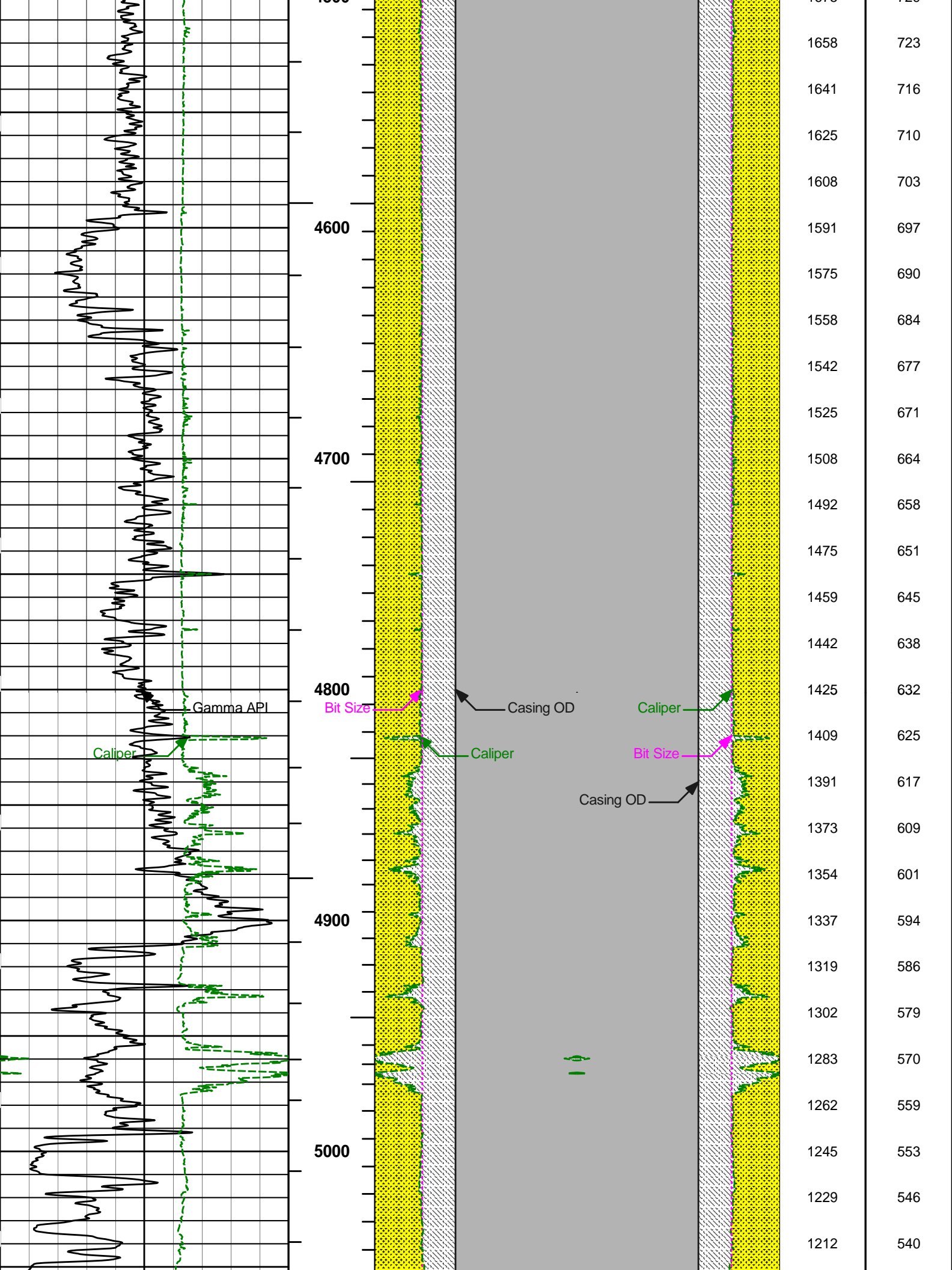


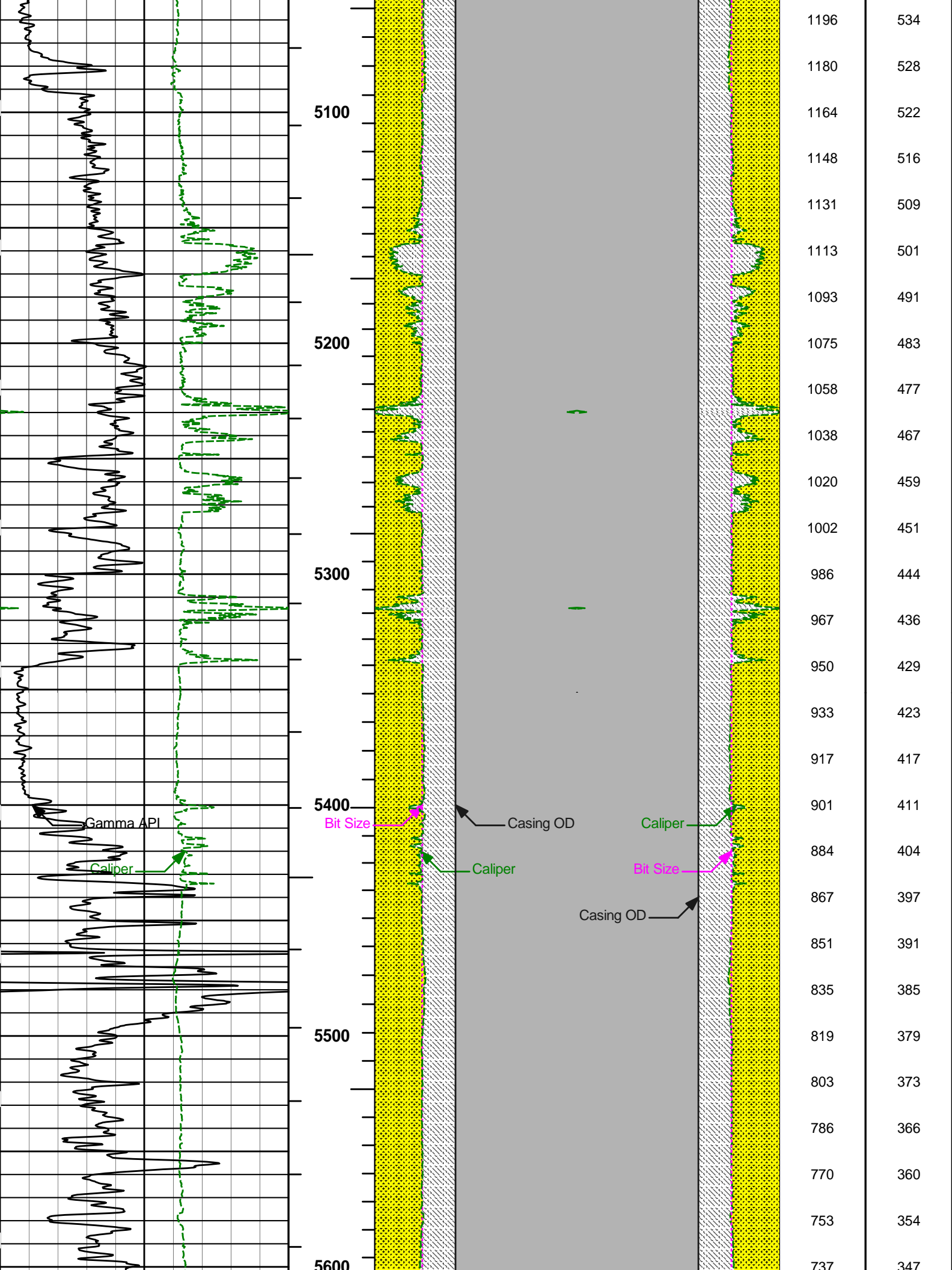


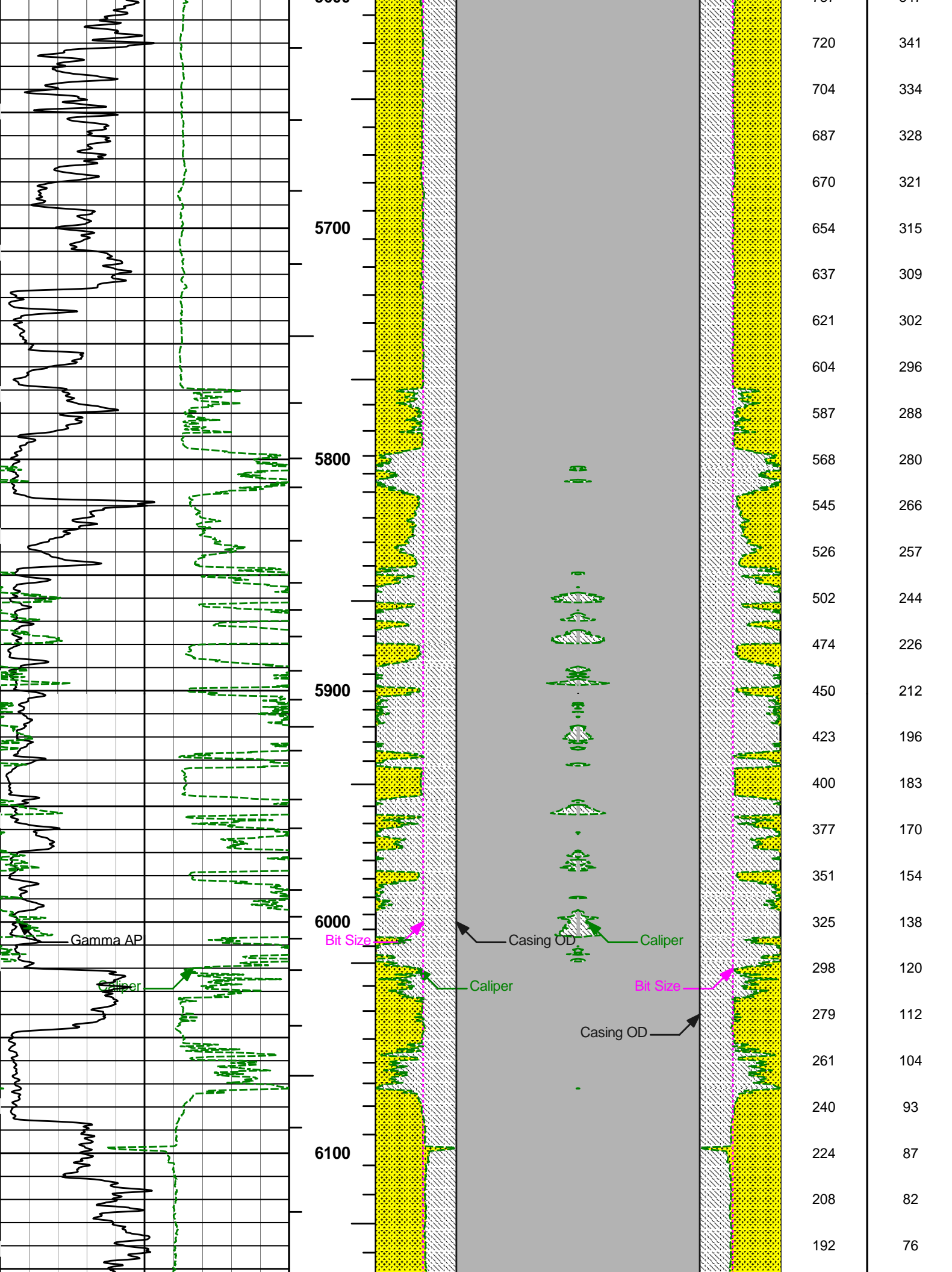


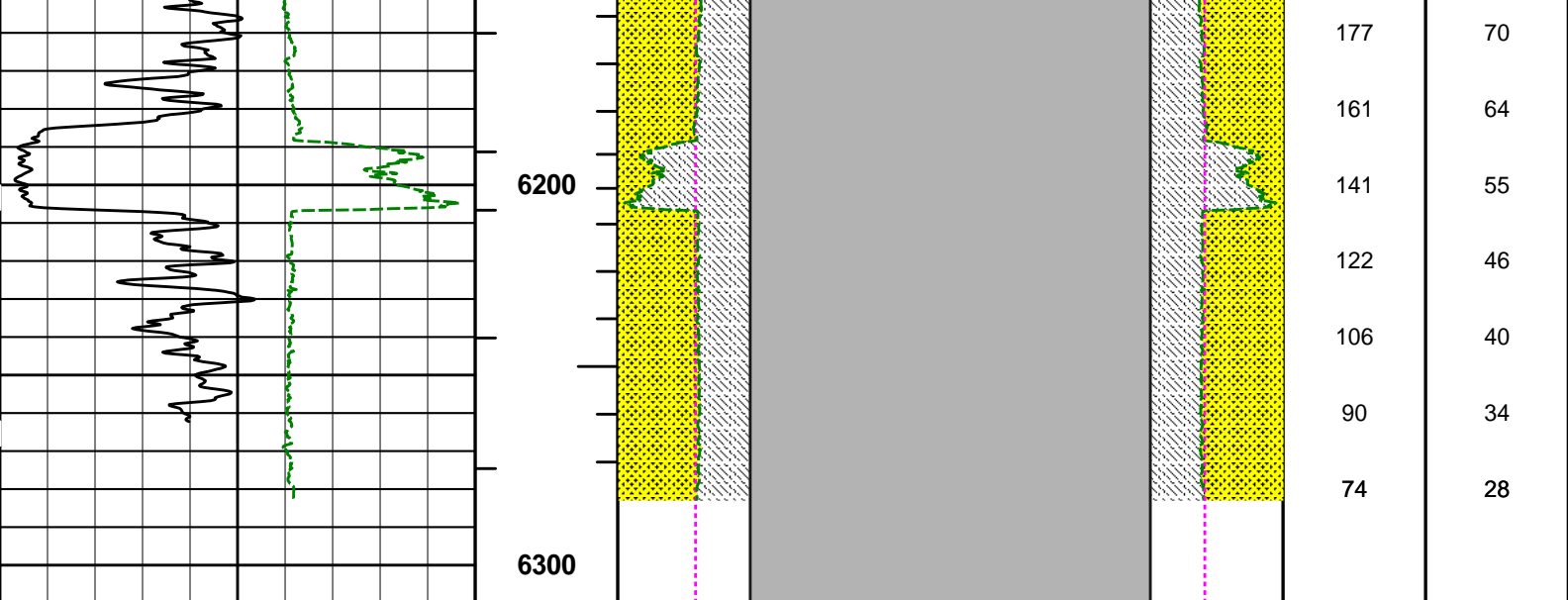












0	Gamma API	200	1 : 600	16	Caliper	0 0	Caliper	16	BHVT	AHVT
	api				inches			inches		
6	Caliper	16	BHVT		Casing OD		Casing OD			
	inches									
			AHVT	16	Bit Size	0 0	Bit Size	16		
					inches			inches		

HALLIBURTON Plot Time: 08-Jan-13 09:39:35
Plot Range: 535 ft to 6310 ft
Data: SORS_1P\Well Based\DAQ-0002-002\
Plot File: \\BHVIQ_BHV_SDL_RM

AHV USES 4.5" CASING

COMPANY	CHAMA OIL & MINERALS LLC		
WELL	SORS-1P		
FIELD	WILDCAT		
COUNTY	WASHINGTON	STATE	CO
HALLIBURTON		BOREHOLE VOLUME LOG	