

HALLIBURTON

BOREHOLE VOLUME PLOT

COMPANY		BAYHORSE PETROLEUM, LLC	
WELL		TRES HOMBRES 1-22	
FIELD/BLOCK		LEFT HAND	
COUNTY		KIOWA	
STATE		CO	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date		22-Mar-15	
Run No.		ONE	
Depth - Driller		4497.00 ft	
Depth - Logger		4497.0 ft	
Bottom - Logged Interval		4497.0 ft	
Top - Logged Interval		75.0 ft	
Casing - Driller		8.625 in @ 436.0 ft	
Casing - Logger		436.0 ft	
Bit Size		7.875 in @	
Type Fluid in Hole		Water Based Mud	
Density		9.2 ppq	
Viscosity		7.6 cpm	
PH		9.50 pH	
Source of Sample		MUD TANK	
Rm @ Meas. Temperature		0.898 ohmm @ 68.60 degF	
Rmf @ Meas. Temperature		1.45 ohmm @ 67.00 degF	
Rmc @ Meas. Temperature		1.450 ohmm @ 67.10 degF	
Source Rmf		MEASURED	
Rmc		MEASURED	
Rm @ BHT		0.49 ohmm @ 131.0 degF	
Time Since Circulation		4.0 hr	
Time on Bottom		22-Mar-15 11:02:20.000	
Max. Rec. Temperature		131.0 degF @ 4497.0 ft	
Equipment		11871076 GJ CO	
Recorded By		P. DIMPLE	
Witnessed By		J. KLIJESSEN	

Fold here

Service Ticket No.: 902244334				API Serial No.: 05061068940000				PGM Version: WL INSITE R4.6.0 (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	N/A	CENT	N/A					
Rmc @ Meas. Temp.	@			@			I: 11585787								
Source Rmf	Rmc						S: 11585797								
Rm @ BHT	@			@		ONE	MICROLOG	MICRO	PAD	N/A					
Rmf @ BHT	@			@			10951300								
Rmc @ BHT	@			@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.	ONE			Run No.	ONE			Run No.	ONE			Run No.	ONE		
Serial No.	11958949			Serial No.	10930054			Serial No.	10865876			Serial No.	10993888		
Model No.	GTET			Model No.	BSAT-I			Model No.	SDLT-I			Model No.	DSNT-I		
Diameter	3.625"			No. of Cent.	2			Diameter	4.5"			Diameter	3.625"		
Detector Model No.	GTET			Spacing	0.5'			Log Type	GAMMA-GAMMA			Log Type	NEU-THERM		
Type	SCINT							Source Type	Cs137			Source Type	Am241Be		
Length	8"			LSA [Y/N]	N			Serial No.	5153GW			Serial No.	DSN-388		
Distance to Source	9'			FWDA [Y/N]	N			Strength	1.5 Ci			Strength	15 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	4497	436	REC	0 API	200 API	30 %	-10 %	47.5 us/ft	30 %	-10 %	2.71 g/cc	30 %	-10 %	LIME
ONE	436	75	REC											
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: RUN ONE: RWCH/GTET/DSNT/SDLT/FLEX/BSAT/ACRT/BN														
BORHOLE RUGOSITY, TENSION PULLS, LCM ADDITIVE, AND WASHOUTS MAY EFFECT LOG QUALITY AND REPEATABILITY														
CHLORIDES REPORTED TO BE 1800 ppm														
ANNULAR HOLE VOLUME CALCULATED USING 4.5-INCH CASING.														
YOU CREW TODAY: J. VIGIL, B. CALDWELL, A. KOBE RIG: H2 1														
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, GRAND JUNCTION, CO (970) 523-3600														
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														

HALLIBURTON

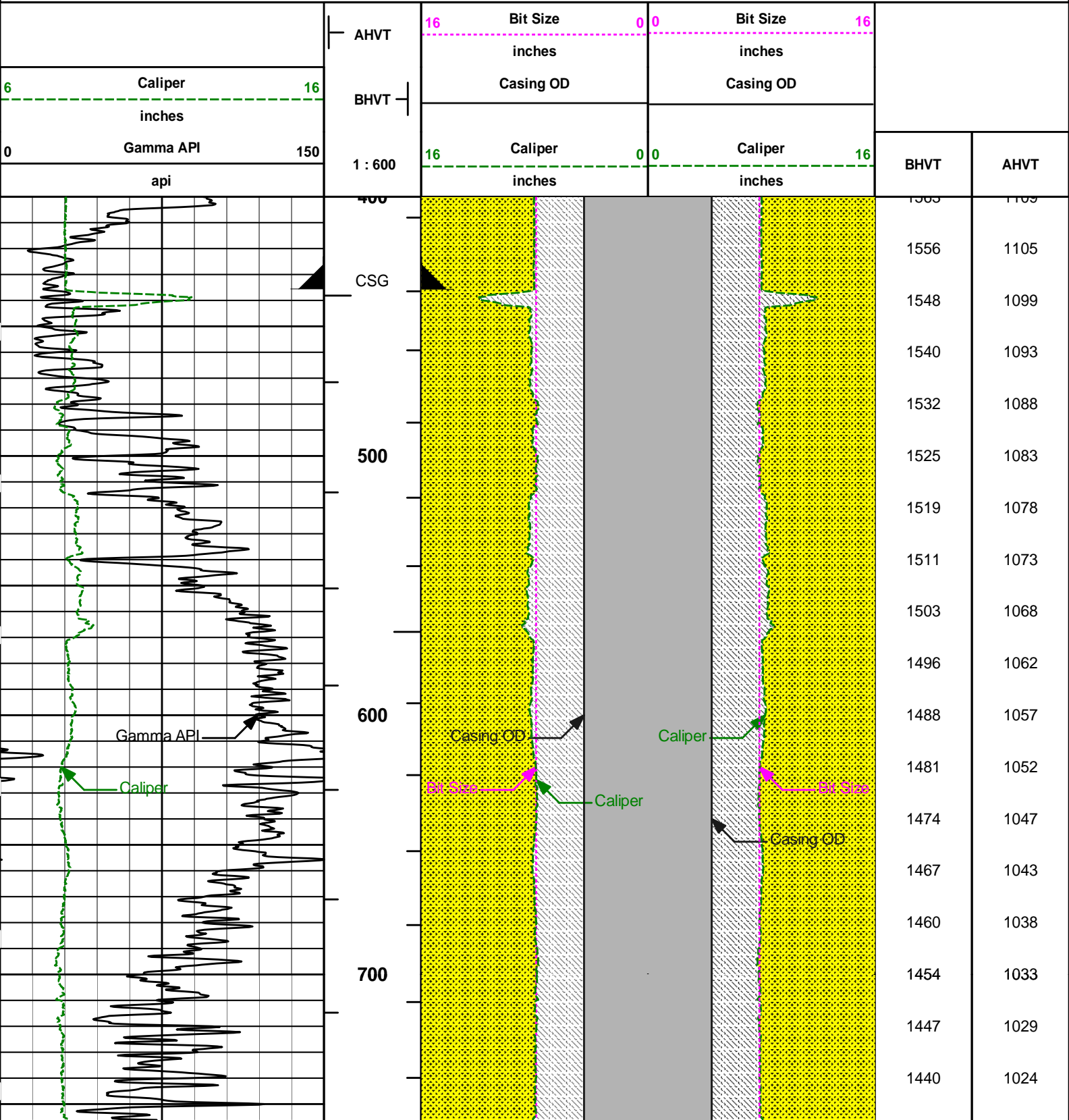
PARAMETERS REPORT

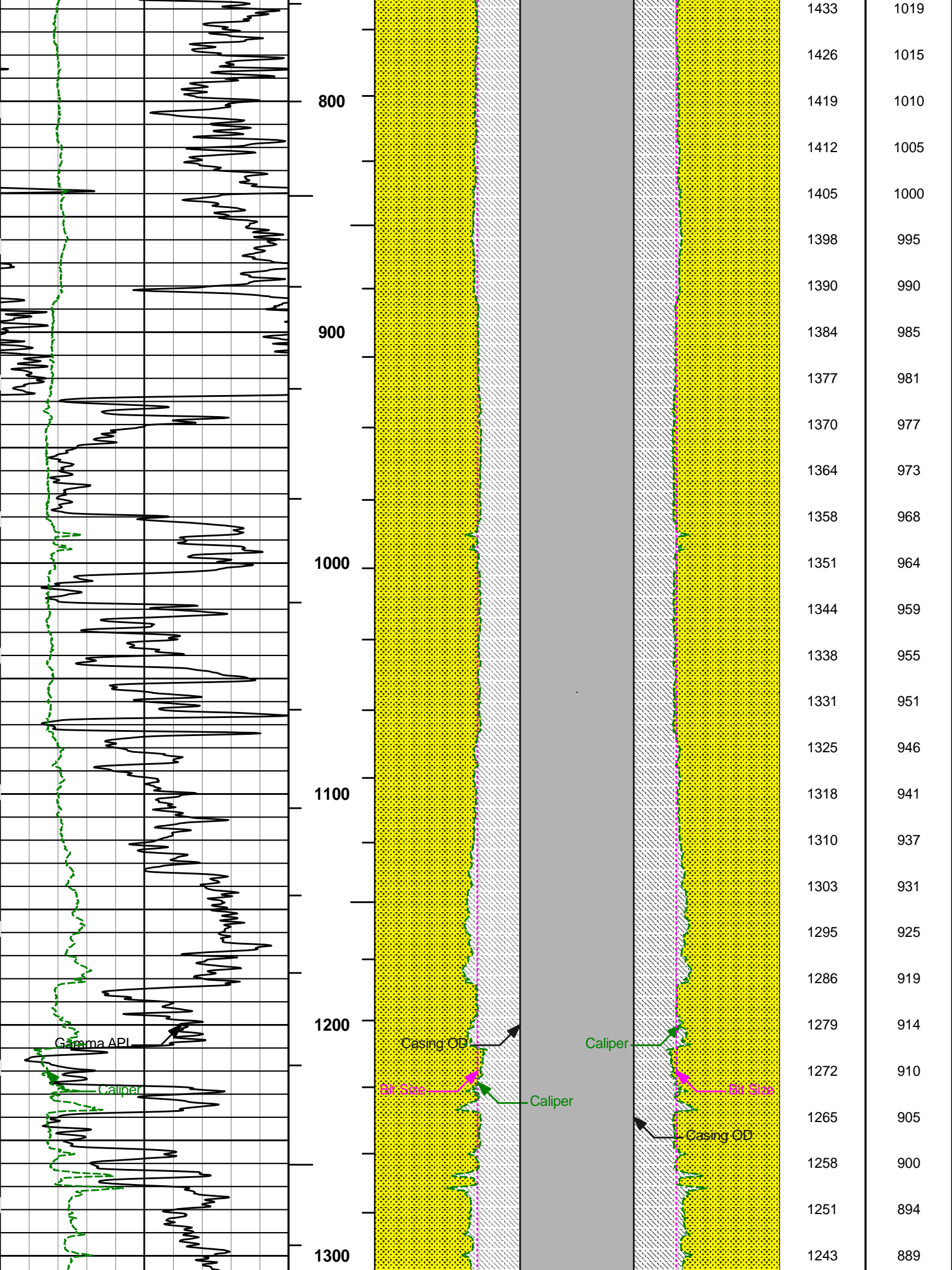
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.200	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	2400.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	0.898	ohmm
	SHARED	TRM	Temperature of Mud	68.6	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	4.500	in
	SHARED	ST	Surface Temperature	60.0	degF
	SHARED	TD	Total Well Depth	4497.00	ft
	SHARED	BHT	Bottom Hole Temperature	150.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	Temperature Master Tool	NONE	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200	

Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
GTET	BHSM	Borehole Size Source Tool	SDLT	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
DSNT	BHSM	Borehole Size Source Tool	SDLT	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	Limestone 47.5	
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
ACRt Sonde	TPOS	Tool Position	Centered	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
ACRt Sonde	BHSM	Borehole Size Source Tool	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	

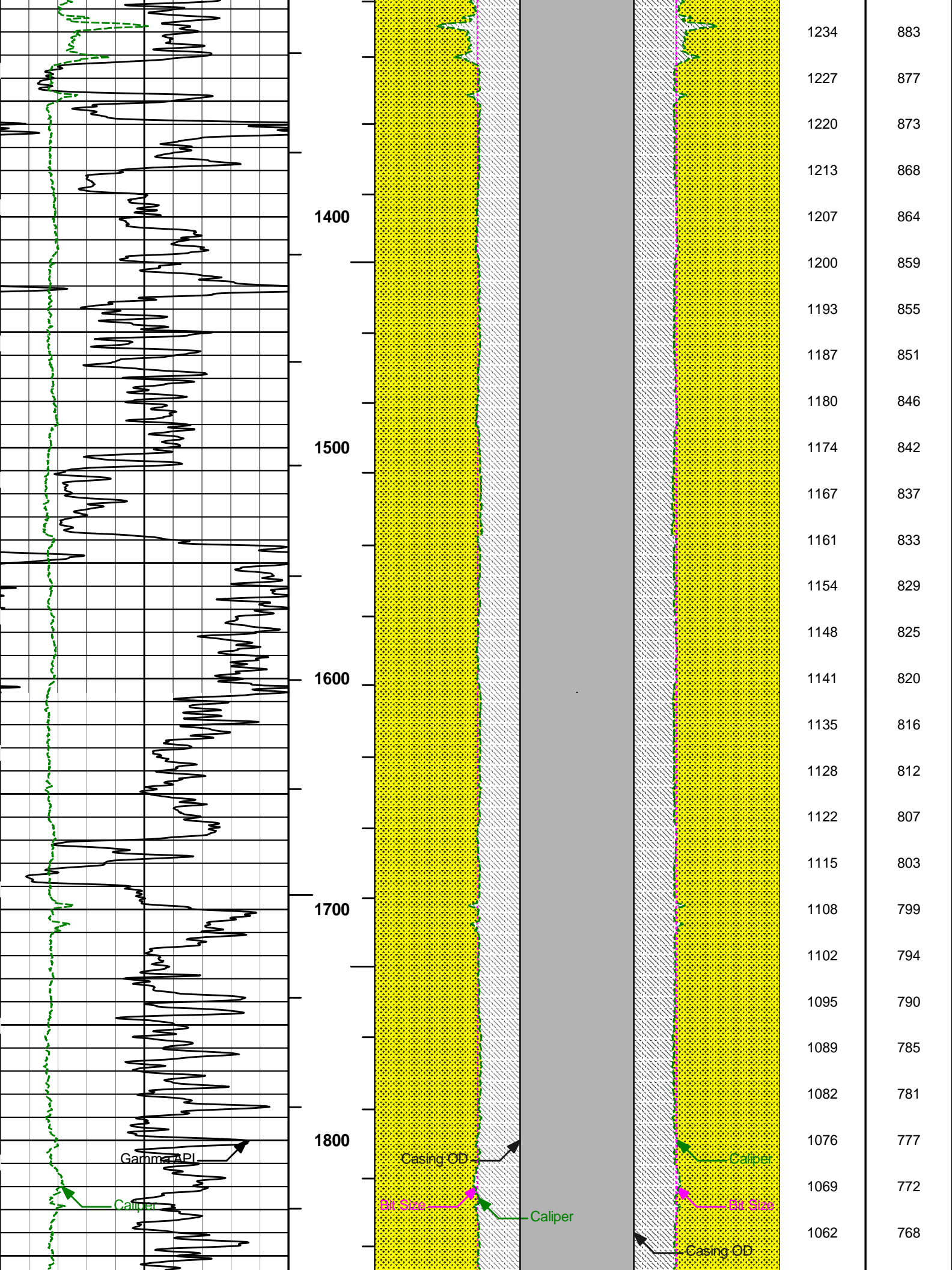
BOTTOM

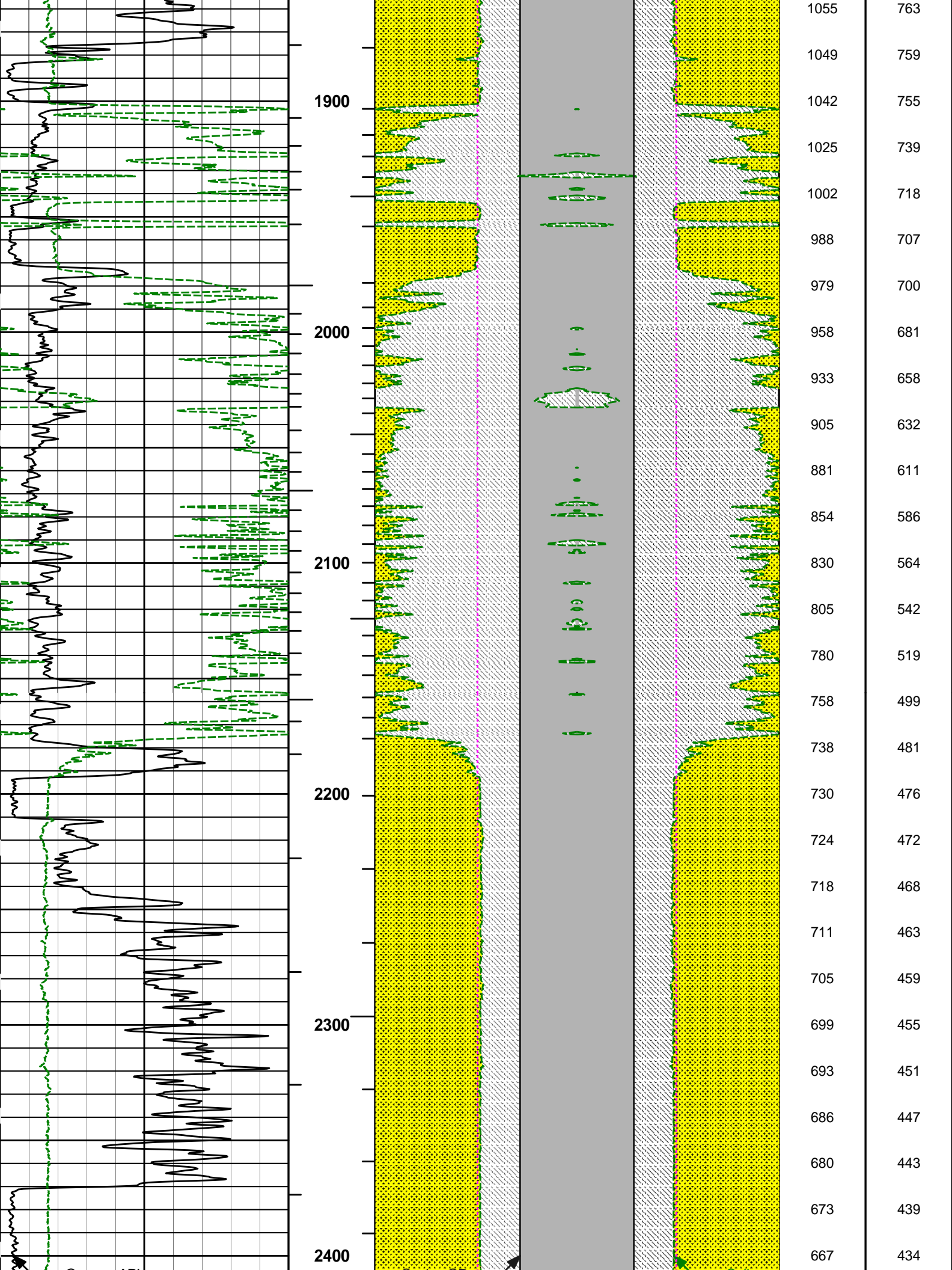
AHV USES 4.5" CASING

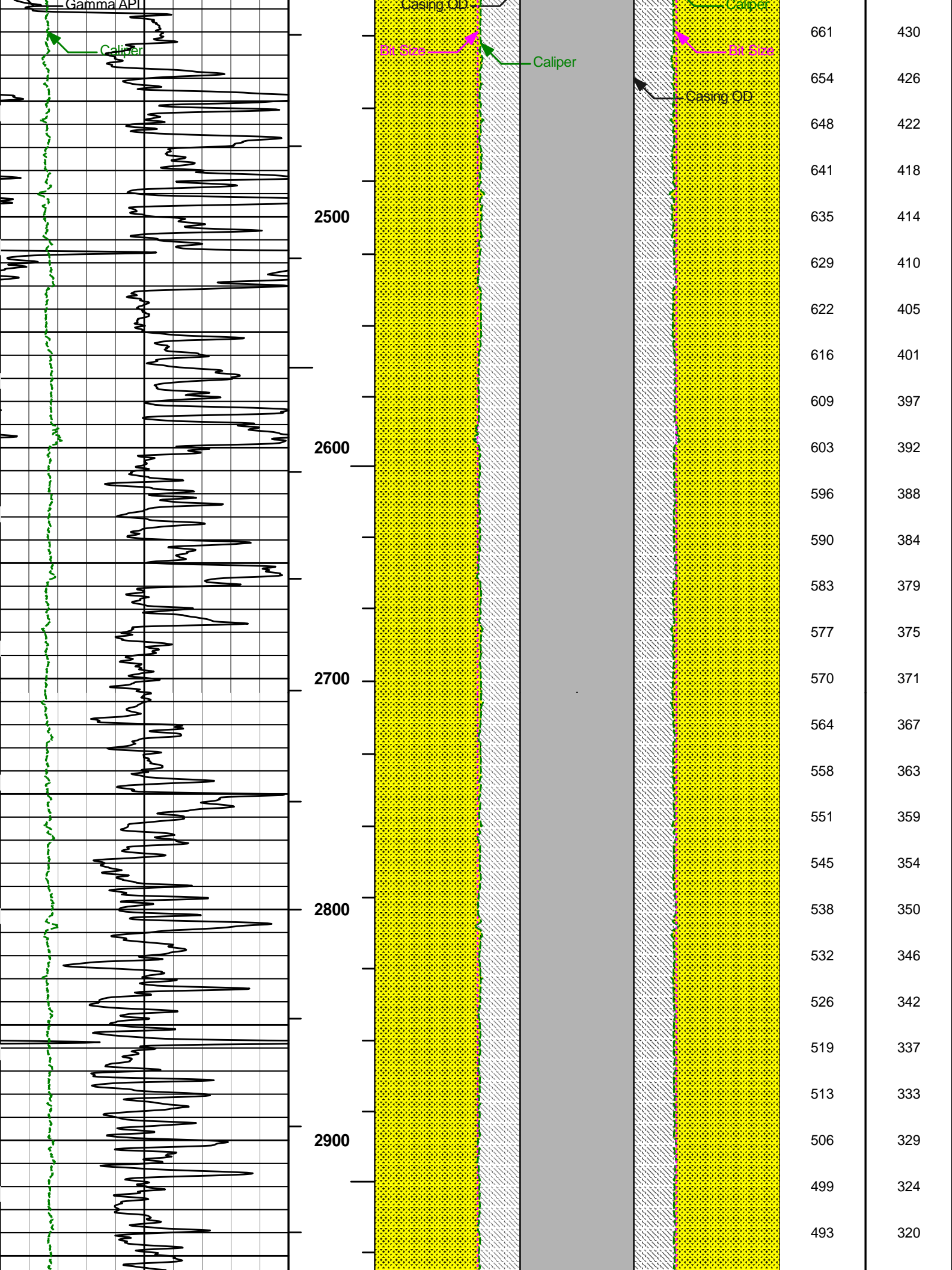


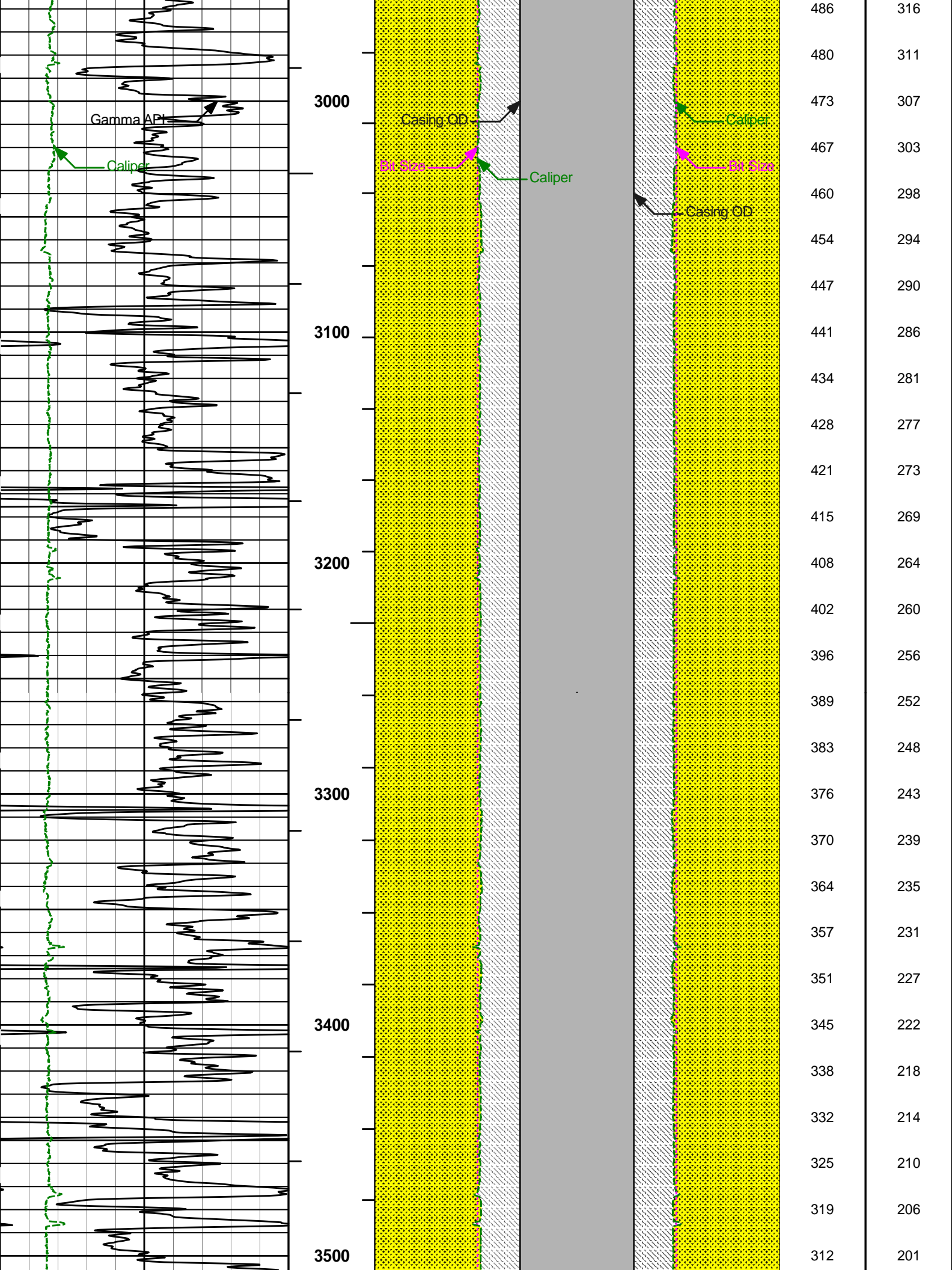


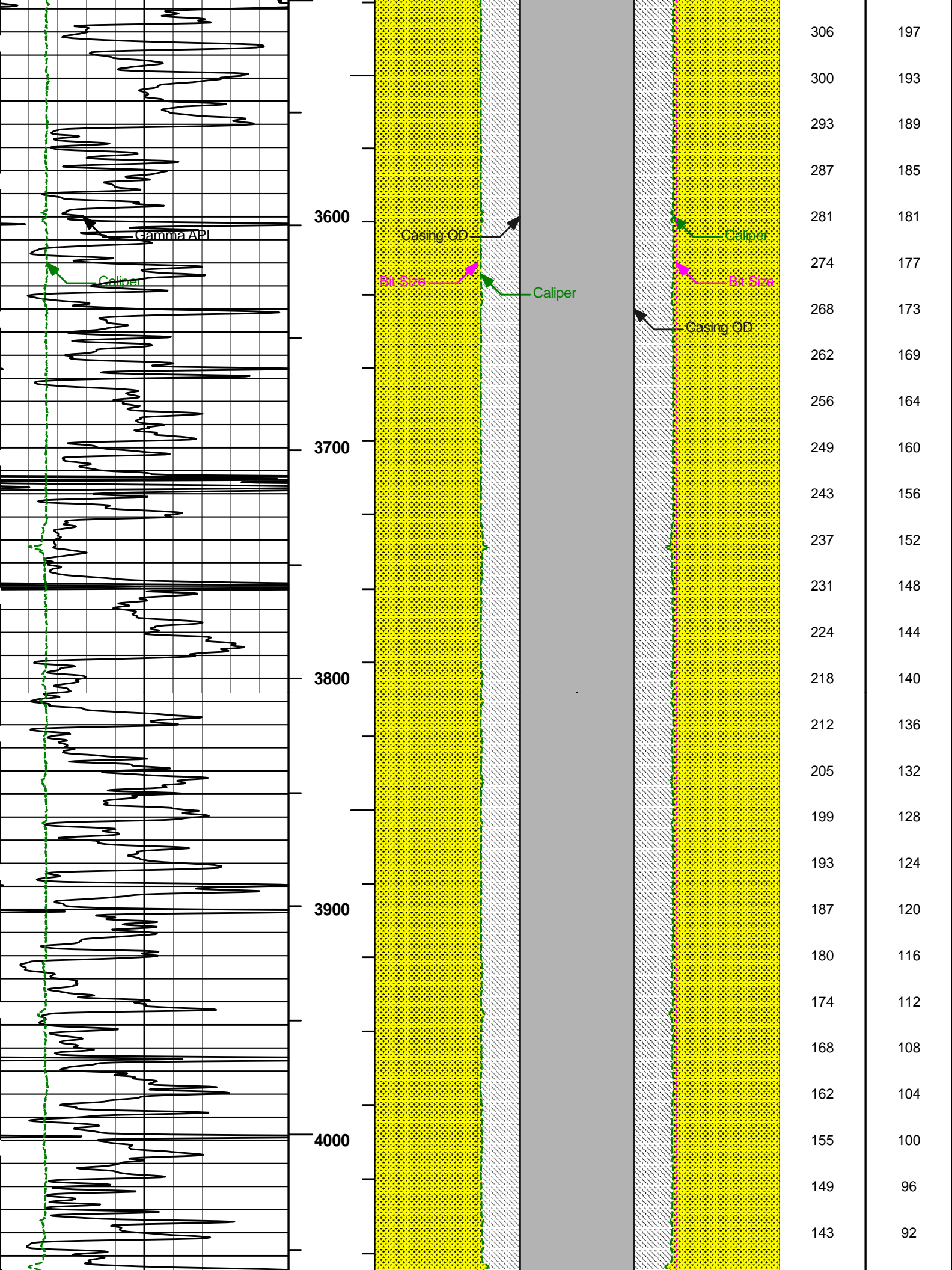
1433	1019
1426	1015
1419	1010
1412	1005
1405	1000
1398	995
1390	990
1384	985
1377	981
1370	977
1364	973
1358	968
1351	964
1344	959
1338	955
1331	951
1325	946
1318	941
1310	937
1303	931
1295	925
1286	919
1279	914
1272	910
1265	905
1258	900
1251	894
1243	889

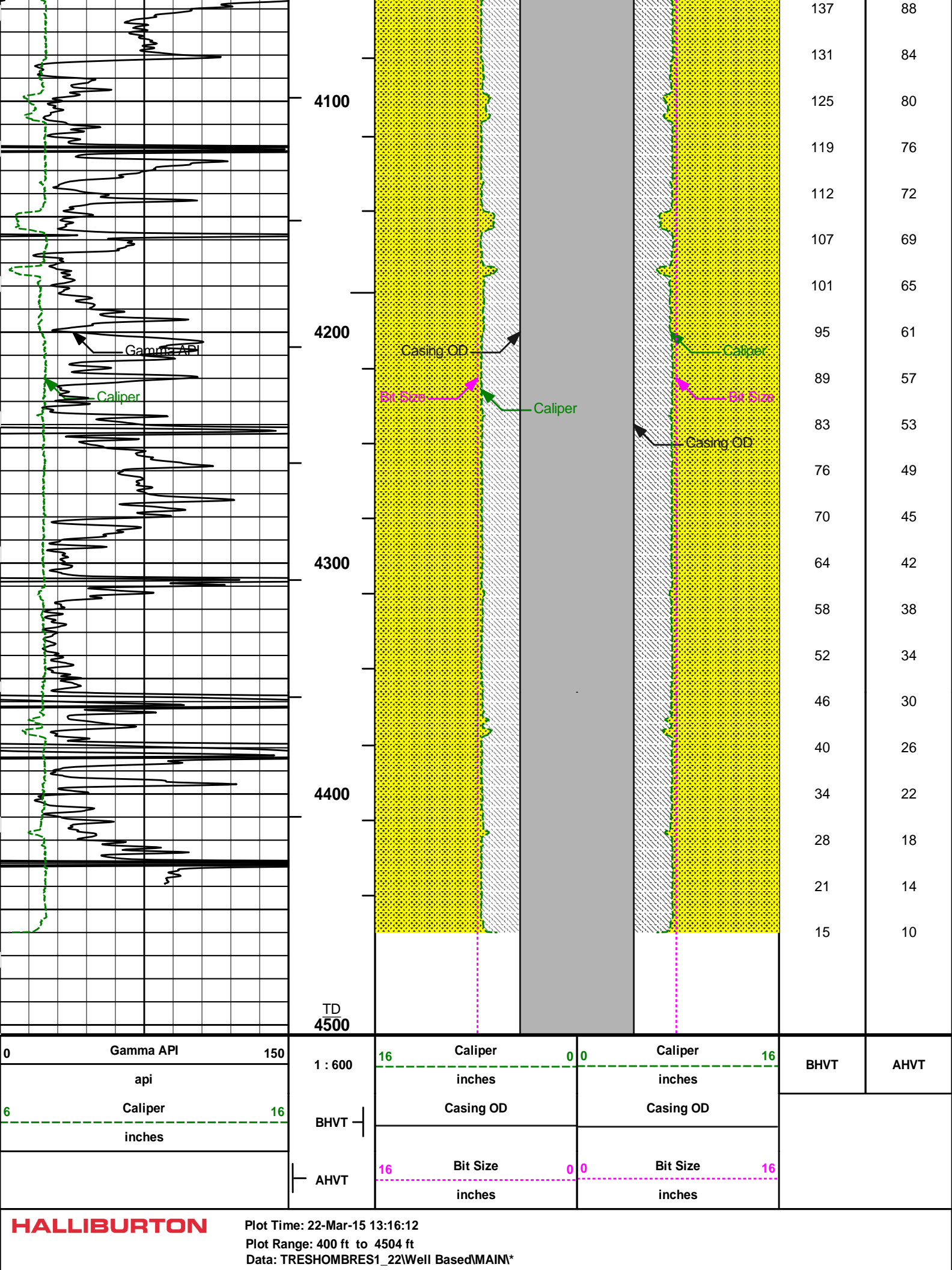








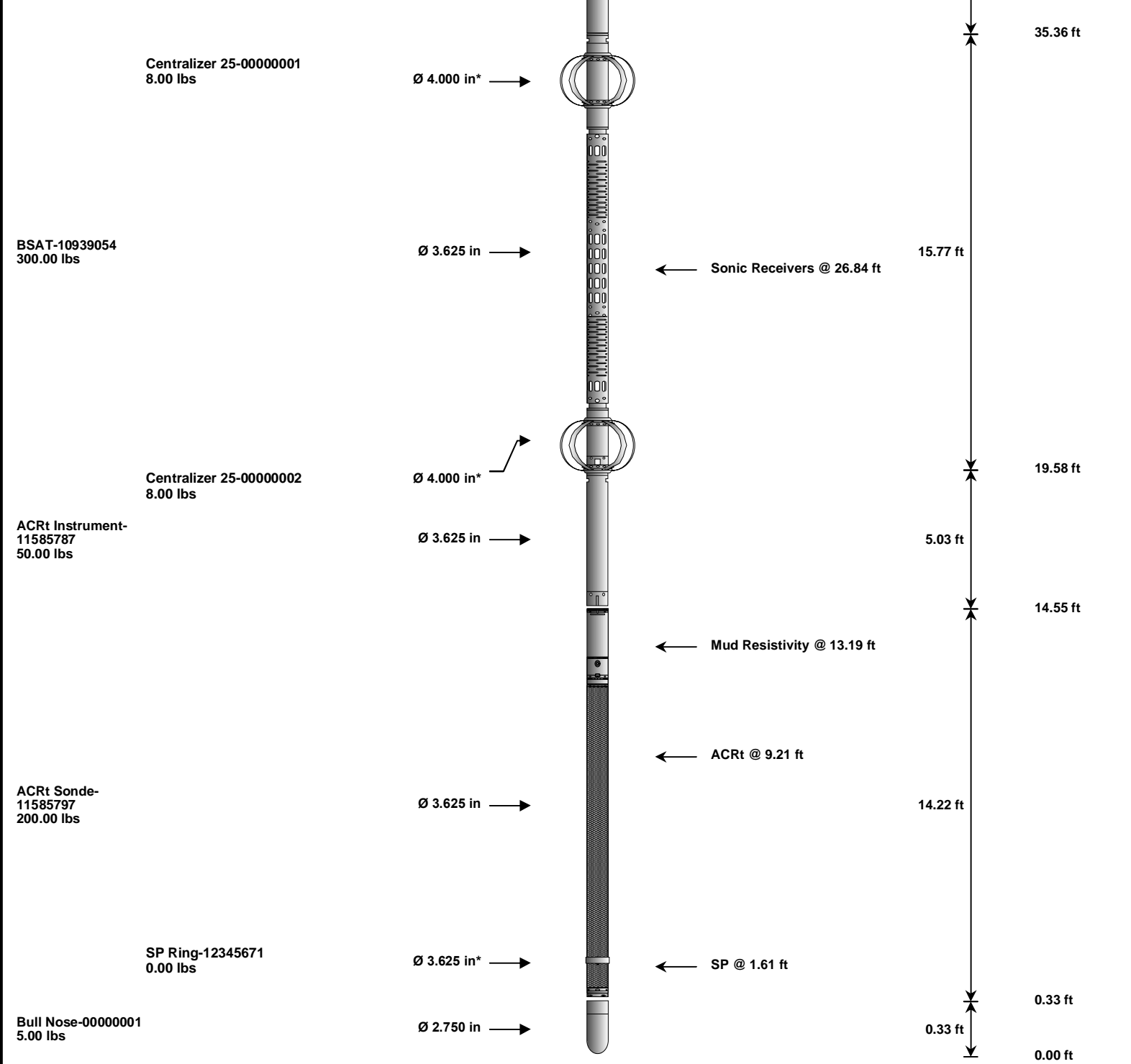




AHV USES 4.5" CASING

HALLIBURTON**TOOL STRING DIAGRAM REPORT**

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-A032 135.00 lbs		Ø 3.625 in →		← Load Cell @ 72.91 ft ← BH Temperature @ 72.35 ft	6.25 ft	76.60 ft
GTET-11958949 165.00 lbs		Ø 3.625 in →		← GammaRay @ 64.29 ft	8.52 ft	70.35 ft
DSNT-10993888 174.00 lbs	DSN Decentralizer- 12026050 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 54.89 ft ← DSN Near @ 54.14 ft	9.69 ft	61.83 ft
SDLT-10951300 360.00 lbs	SDLT Pad-10865876 65.00 lbs Microlog Pad-10951300 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		Microlog @ 44.33 ft SDL Caliper @ 44.14 ft SDL @ 44.13 ft	10.81 ft	52.14 ft
Flex Joint - Pressure Comp- 11208102 140.00 lbs		Ø 3.625 in →			5.97 ft	41.33 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	A032	135.00	6.25	70.35	300.00
GTET	Gamma Telemetry Tool	11958949	165.00	8.52	61.83	60.00
DSNT	Dual Spaced Neutron	10993888	174.00	9.69	52.14	60.00
DCNT	DSN Decentralizer	12026050	6.60	5.13	* 55.47	300.00
SDLT	Spectral Density Tool	10951300	360.00	10.81	41.33	60.00
SDLP	Density Insite Pad	10865876	65.00	2.55	* 43.54	60.00
MICP	Microlog Pad	10951300	8.00	1.00	* 43.83	60.00
FLEX	Flex Joint - Pressure Compensated	11208102	140.00	5.97	35.36	300.00
BSAT	Borehole Sonic Array Tool	10939054	300.00	15.77	19.58	60.00
OBCEN	Centralizer - 25 in. Overbody	00000001	8.00	2.08	* 32.62	300.00
ACRt	Array Compensated True Resistivity Instrument Section	11585787	50.00	5.03	14.55	120.00
OBCEN	Centralizer - 25 in. Overbody	00000002	8.00	2.08	* 19.36	300.00
ACRt	Array Compensated True Resistivity Sonde Section	11585797	200.00	14.22	0.33	120.00
SP	SP Ring	12345671	0.00	0.25	* 1.61	300.00
BLNS	Bull Nose	00000001	5.00	0.33	0.00	300.00
Total			1,624.60	76.60		

COMPANY	BAYHORSE PETROLEUM, LLC		
WELL	TRES HOMBRES 1-22		
FIELD	LEFT HAND		
COUNTY	KIOWA	STATE	CO
HALLIBURTON		BOREHOLE VOLUME PLOT	