444 Marlin- America's Most Versatile Big-Bore Part I

Marshall Stanton on 2001-06-27

When Marlin Firearms Company introduced the .444 Marlin to the shooting community in early 1964, it was the only true big bore lever action offered at the time! The Winchester 1886 had long been discontinued in all chamberings (1935), and the Winchester 71 chambered in .348 Winchester had been discontinued since 1958. During the next eight years until 1972, when Marlin produced their now popular Model 1895SS in .45-70, the Triple-Four was the only big-bore lever action gun available.

Although many embraced the .444 Marlin from its introduction, many were skeptics prophesying a short lived production run for both the new rifle and cartridge. Many "experts" declared the end of an era where big-bore lever guns had outlived their practical hunting usefulness, others simply stated that a cartridge chambered only by one manufacturer, for one model firearm and factory loadings available only from one ammunition supplier was doomed to obsolescence imminently. Too, .444 brass isn't readily formed from other existing brass either, making it a proprietary proposition with one manufacturer for brass cases even for the experienced handloader. Couple these factors with only two bullet weight selections in factory ammunition (now limited to only one factory loading from Remington), a 240 grain and 265 grain soft-nosed jacketed bullet and yet more nay-sayers relegated the .444 to a predicted early retirement.

However, the .444 Marlin had too many good things going for it to die so quickly! Not only could woods-wise hunters not only see, but appreciate the power and flexibility of the new rifle and cartridge, but the familiarity of the Marlin Model 336 in both .30-30 and .35 Remington was retained in the new powerhouse offering from Marlin. Too, the .444 had an eight year head start on the introduction of Marlin's .45-70 in the Model 1895, at which point the Triple Four had established it's place in the game fields on it's own merits.

In this series of articles on the .444 we will take a look not only some of the common merits of the gun and cartridge, but also it's application, sights, accessories, high-end load development, lower velocity load development and applications of those loads, specialty loads for the Triple-Four, and cartridge interchangeability. Long term viability in remote areas or survival situations including cartridge case forming from a surprising array of sources for such uses, and a final overview of the composite picture of all these elements when rolled into one most versatile package called the .444 Marlin.

First off, let us address the perennial .444 vs. .45-70 argument! This long-lived topic of controversy is just about as balanced as the .270 vs. .30-06 feud. The .444 will never throw as large a piece of lead as the .45-70, and using paper ballistics, the 45-70 will always appear as a cartridge with more muscle. Too, the emotional pull of a

cartridge over a century old still doing its job in the game fields, (better today than ever before), sometimes clouds sound reason and judgment when taking an objective view of the .444 Marlin. What most writers, and shooter's compare, are the factory ballistics of the .444 and the .45-70. To the handloader, both cartridges change complexion entirely. When loaded with only factory 240 grain ammo, the .444 appears to be at best a 125 yard deer cartridge. However, when loaded with 300+ grain bullets to well over 2,000 feet per second, and those 300+ projectiles having ballistic coefficients of .239 and greater, the .444 Marlin becomes viable 200+ yard elk, moose and big bear medicine to the extreme! (We will look specifically at these types of loads in Part II of .444 Marlin-America's Most Versatile Big-Bore) The intent here is not to settle the comparison between the two, show one superior over the other in performance, but to finally allow Marlin's Triple-Four to stand in the lime-light on it's own merits, and not in the shadow of the .45-70, and to demonstrate the truly more versatile character of the .444 over the .45-70 in a most definitive fashion.

In looking at the firearms for the .444 Marlin, we have of course Marlin's .444S Model with 336 style semi-pistol grip butstock and tang with 22" barrel, their new Model .444P with straight grip butstock and 18 1/2" ported barrel. (These two firearms are the ones that will be employed in all tests during this series of articles.) We now also have Winchester's Model 94 Big Bore named the Timber Carbine chambered for the .444 Marlin as well as H&R's single shot rifles since Marlin has acquired H&R 1871 Inc. Yes, there are chamberings for the T/C Contender, Encore, and a host of custom and semi-custom revolvers chambered for the .444, but the focus of our attention here is on the Marlin lever action rifles.

As shipped from Marlin, the .444's (both models) carry their customary hooded ramp bead front sight with the usual semi-buckhorn folding rear sight. Both front and rear sights are windage adjustable, the rear sight adjusted for elevation using a traditional stepped sliding wedge. The factory sights are both rugged and serviceable, but to my notion lack the speed of acquisition for fast snap shots in close quarters, as well as being deficit in precision for the longer ranges that the .444 can and does lend itself to performing.

The clean top receiver of these rifles is drilled and tapped for scope mounting, as well as being drilled on the left side of the receiver for receiver sight mounting. The side ejection is perfectly suited to scope use, and many prefer the addition of a scope on their .444's. Here of course is a potential hotspot for controversy, but few will honestly contest the suggestion of a compact straight 4X scope or the addition of a 1.5-5x variable on these rifles for those who choose to use glass optics on their .444 rifle. These lower power scopes offer wide field of view as well as excellent light transmission for low light hunting conditions, yet are compact and relatively light weight, not disturbing to great degree the wonderful balance and pointability of these lever action rifles.

In nearly 20 years having the .444 as my primary long gun afield, it has accounted for more big game than have all my other long guns combined! During those years

of hunting, I have developed some seriously biased opinions concerning sight selection for these fine rifles. (Please be advised, these are MY preferences, and not necessarily the definitive word on the subject in any way!) My hands-down favorite is a receiver sight on the .444. I have both Williams 5D and the very fine Ashley Outdoors sights on my two .444's that go afield.

The Williams sight has lived atop the rear of the receiver of my .444S since day one when it followed me home, and has been exceedingly serviceable, rugged and reliable for nearly twenty years, they point quickly and intuitively and can be employed with the existing factory front sights. For a mere thirty-five dollar investment,. these Williams sights are a vast improvement over the factory open sights in all aspects. When using them in the field however, be sure to remove the screw-in sight aperture and use only the remaining "ghost-ring" of the sight. This allows faster sight acquisition for snap-shots or running shots as well as the ability to shoot in lower light conditions.

The same sight virtues mentioned here would also apply to the Williams Fool-Proof receiver sight, as well as the excellent all steel Lyman receiver sights made for the Marlin. The Lyman sights seem to my notion to be more bulky than either of the Williams offerings, but on the other hand the Williams sights are aluminum rather than machined steel. In the many firearms I own and have used, quite a number wear peep sights of one description or another, many Williams and nearly an equal number of Lyman, none have ever failed to keep their adjustment to point of aim through sometimes very rough and constant use, nor have any ever broken or bent.

The newer .444P Model rifle wears a set of Ashley Outdoors ghost ring sights as its only sighting system. These are by far the most excellent aperture type sights I have ever used. They have a big aperture that lets in lots of light under all conditions, even usable when most inexpensive scopes begin to fail during low light conditions. These too are rugged sights, being milled out of steel, not aluminum, and once set for windage and elevation, nearly impossible to knock out of adjustment without totally destroying the sight. The front sight on the .444 Marlin must be changed in order to use these sights, but Ashley Outdoors sells their sights for these rifles in sets, including the necessary front sight. That front sight included in the set is an excellent sourdough-type flat-topped post, with a very fine white center line inscribed down the center. The white line feature makes this sight very fast to acquire, and exceptionally easy to find in low-light conditions. If I were to find fault with the Ashley sights, it would simply be this: the sights sit up about 1/2" higher than would the Williams series of receiver sights, and as such, you have to "reach" slightly off the comb of the butstock to view the sights. This lifting of the cheek isn't nearly as much as that necessary to use a scope, and many use scopes with perfect satisfaction with the Marlin lever action rifles, but it isn't quite as intuitive as finding the sighting plane as with the Williams or Lyman receiver sights which sit at the same height as the factory sights in relation to the axis of the bore. Having used the Ashley sights on the .444P, I can't think of a better choice for a levergun that uses iron for it's only sight system.

In the accompanying photo, you may see the .444S receiver with both a Weaver scope base mounted as well as a Williams 5D receiver sight. The receiver sight may be used without hindrance when the base is mounted. However, it takes modification of the scope base to accomplish this combination. The Weaver base comes with four mounting screw holes, but by merely cutting off the rearward most hole using either a hacksaw or Dremel cut-off wheel, dressing the end of the mount and blacking the new cut, the stock Weaver scope mount may be employed with a Williams receiver sight when so altered. Why the need for a scope mount and receiver sight? Well, for the simple reason that you can increase the versatility of the .444 in so doing. The addition of a scope can provide a welcomed benefit in precise shot placement, target identification and light gathering benefits in low light conditions, and mounting it in either traditional Weaver type rings or Warne quick-detachable rings will allow a very reasonable return to zero when the scope is removed then remounted. The addition of a simple 4X scope can be a big benefit when sitting on a stand, or hunting in open country. I often times will use the scope for these applications, yet remove it and stow it away in my daypack or fanny-pack when still-hunting in adverse weather or in very brushy or close cover timber, preferring the quickness of the peep sights. Having altered the Weaver base, you have the advantages of both worlds.

Too, using the altered Weaver base, the addition of an inexpensive laser sight such as the pictured BSA is quickly done. Notice the photograph of the altered Weaver base, and there is a drilled indent where the rail-lock screw clamps down on the BSA laser mount. By so indexing the Weaver base, even the laser sight can be installed and removed quickly and without adverse shift in zero of point of impact with the laser, as it always goes back on the rail in the same place with the same orientation. In those states where a laser is legal to hunt with, it can be an excellent tool, especially during low light conditions when hunting from a stand. My purposes are for hunting predators at night. The Triple-Four, with the right load is a superb after dark varmint harvester when coupled with a laser sight. Here again, with the setup described, when the laser comes off, you once again have your ever-ready receiver sights.

By now you should get the idea that I'm biased towards the receiver sight being the primary sighting device for the .444 Marlin. You're right! I've never had a receiver sight fog up on me. Never had a receiver sight so blurred from falling rain or snow that I couldn't see through it. I've never had glare off my receiver sight when shooting into the sun. Further, as mentioned before I've never had one change zero, even through tough, rough use, nor break in any way. The peep sight allows a huge field of vision, as you shoot with both eyes open using a ghost ring, and consequently your peripheral vision picks up not only other game when sighting, but the presence of other shoot/don't shoot factors as well. Too, with both eyes open when shooting, depth perception is greatly enhanced, especially if targeting running or moving game. Finally, a receiver sight allows carrying the rifle at it's balance point, with the hand securely wrapped around the receiver. Receiver sights don't add bulk

to a rifle, and for the practical ranges of two-hundred yards and under in which the .444 is typically employed, it is fully adequate for all shooting needs.

Finally, with the huge number of big game harvested using my .444's, none were taken using anything other than receiver sights. Yes, I have the versatility of a scope or a laser, but I so rarely ever use them that I've not taken a single big game animal with anything but the primary peep sights on the .444 Marlin.

A quick word about the factory front hood on your .444 Marlin rifle. Take it off and throw it into your parts drawer! Although fine in concept, the front hood can, and eventually will cost you a big-game animal. Over the years I've immediately taken them off all rifles that I intend to hunt with. They add bulk, distraction when using the sights (at least the odd-shaped Marlin hoods), and robs valuable light on the front sight in low-light conditions.

Last elk season I was using my then new .444P Outfitter model, and a Williams Fool-Proof receiver sight. Before season I made the (poor) decision to leave the hood affixed to the front sight to protect it in the rifle scabbard while riding my Mule hunting in the high-country. I reasoned that I would prefer the protection to the bead sight afforded by the hood to whatever loss of light might be caused from the front sight hood. What a mistake! My son and I worked our way down a ridge, and I had a perfect frontal shot, a quick snapshot before the critter wheeled and turned, I was in the lead on the trail and took the fast shot. I missed, a clean miss. This was my first missed shot at a game animal in years. In fact, I couldn't believe that I had actually missed, and we looked for nearly two and a half hours for hair, bone, blood or any sign of a wounded animal. The shot was only 65 yards. Finally I went back once again to the place where I had fired from, looking over the sights where the animal had stood... then I saw what had happened. The blue finish on the sight hood had become worn on the leading edges of the hood while riding in and going in and out of the leather rifle scabbard. With the sun being over my shoulder and behind me, the glint off the now shiny rearward edge of the hood stood out brightly when compared with the front sight shaded by the hood, and in my quick sight acquisition for the fast shot, my brain had equated the bright left-hand edge of the sight hood with the actual sight. After realizing my error, we looked where the sights were actually pointing when the gun was sighted using the left edge of the hood as a front sight, and sure enough found the impact of my bullet fully three feet to the right of my intended point of aim! I soon remembered why I had thrown those confounded sight hoods into the parts box for so many years!

Recoil with heavy loads has always been a factor with shooters of the .444 Marlin. The .444S model has always just worn a simple black plastic but-plate (early .444T models with Monte Carlo style cheek-piece stocks and 24" barrels), or more recently a rubber but-plate which did nothing to reduce recoil, but did wonders for securing the but of the gun to your shoulder when shooting. Even now when doing extensive range work with the .444, I still use a twenty-five pound bag of lead shot between my shoulder and the but of the gun to keep from developing a nasty flinch from the gun.

Nope, not a macho practice I suppose, but I don't have a case of terminal flinch when I pull the trigger either! In the field hunting, you'll never know the recoil, but off the bench it can be obnoxious, especially with the 300+ grain bullet loads going full throttle. No one ever said that a well stoked .444 Marlin was pleasant to shoot! However, the addition of a Pachmyer Decelerator Pad makes a world of difference in the pleasantries of shooting your .444 Marlin! A well placed investment if ever there were one when the serviceability of these guns is concerned. On my own guns though, I've still not done that little improvement. I don't notice the recoil in the field, and the gun fits me so well that I haven't messed with success!

The .444P Model from Marlin has two advantages going for it in regard to recoil. First is Marlin's excellent, most effective barrel porting, and a better than average factory recoil pad on the straight stocked but of these short rifles. When I first fired mine, I had installed a receiver sight, and selected some of my more tried and true handloads developed for the .444S, and went to the shop range equipped with targets, ammo, rifle, earmuffs and a twenty-five pound bag of shot to protect my shoulder. I dutifully made all preparations at the bench and downrange then grimaced as I gently applied pressure to the trigger, anticipating the inevitable pain this light, short handy little carbine would unleash on my shoulder and cheek-bone. First shot, not too bad, so I went ahead and shot for a group with the gun, as the first shot was reasonably on target at the initial 75 yard shot. Interestingly, after shooting the fourth shot of a five shot string, I noticed not only a nice neat cloverleaf on the 75 yard target, but that the forend wasn't even rising off the sandbags! I went ahead and fired my fifth and final shot to finish out the group, using the bag of lead shot between the butstock and my shoulder, did a sight adjustment and changed the target. My next five shots were fired without the sandbag, and whoa, it didn't wallop me any more than a stout loaded .30-30 carbine! I laughed out-loud! The porting on this short barreled Outfitter is amazingly effective. I'm sure the recoil pad helps as well, but the main improvement is the porting Marlin is using on these guns. After sighting the rifle to zero, using my favorite load with our 335g LFNGC bullet at over 2100 fps out of the Marlin, I shot forty consecutive rounds at targets 200-250 yards away off-hand and in nothing more than a T-shirt! No discomfort and no subsequent bruising! This rifle is FUN to shoot with any load! Now, this neat little compact model .444P has taken first place in my most useful and fun lever action rifle. I'm afraid that the original .444S will be awfully lonely during most hunting seasons.

A word about the porting on the .444P model here is in order. Many muzzle-brakes and porting processes make the firearm obnoxious to shoot, even in the field hunting without hearing protection. Some brakes, like the BOSS system used on both Winchester and Browning rifles have actually caused permanent hearing damage to shooters with only one shot fired in the field from a prone position without hearing protection. My curiosity about this highly effective brake in this regard was quickly satisfied. I fired about half a dozen of the above mentioned forty off-hand rounds without hearing protection for the sake of satisfying this question. The truth is, that I could detect no higher noise level from the short ported barrel of the Outfitter model than with the same load fired from the standard .444S with 22" barrel. However, the

noise level to bystanders not standing directly behind the shooter is an entirely different story! The amount of blast perceived both by others as well as myself when someone else was shooting was very harsh, and incredibly loud, even with muffs on, when compared to standing in the same exact position when the traditional non-ported model was fired. Do not allow anyone to stand to the side of these ported barrel Marlin rifles when firing, either at the range or in the field, as permanent hearing impairment could take place in just a shot or two! The good news is that when hunting in the field, it is highly unlikely that you would have someone in such close proximity at your side as to cause hearing damage, and the noise level transmitted to the shooter is no more than that of non-ported models.

As we are comparing the .444S and the .444P Outfitter models, the balance of both is superb, and the pointability of both is excellent. However, the fast handling characteristics, and lighter weight of the .444P endears me to it. Although I have hunted for nearly twenty years with a .444S model, the advantages of lighter weight and shorter overall length just make sense on a rifle of this type. The velocity difference (as we will see in subsequent parts of this article) is so negligible in terms of the utility gained, that to my notion, I can't imagine someone not choosing the .444P model if purchasing a new rifle for it's handling, and reduced recoil as well as overall functional performance.

In new production guns both the .444S and .444P now employ a Ballard-style cut-rifled barrel with a 1:20" twist, whereas the older .444's had Micro-Groove barrels with a 1:38" twist. The new style barrels are more forgiving with poorly fit cast bullets, and shoot well with properly fit cast and jacketed bullets as well. However, the older Micro-Groove barreled guns had an undeserved reputation for not shooting cast bullets over 1600 fps. This was and is pure hogwash! The fault lies with the bullet and bullet fit! When these Micro-Groove barrels are properly fit with a well designed. hard, gas checked, with a strong front driving band, cast bullets will rival or even out perform jacketed pills at any velocity range reasonably attained with the .444 Marlin. (More on this in the load development segment of this multi-part article) Both new and old productions .444 Marlins are notorious for their outstanding accuracy potential. Both the original Micro-Groove and the newer Ballard-type barrels will deliver MOA accuracy in nearly all rifles with even modest load development, and throughout a whole host of bullet weights and designs.

Hopefully this introduction to the .444 Marlin has whetted your appetite for some more information with real meat to it in regard to loading data, load development and application of the .444 Marlin in the field. The next several articles will plow ground, much of which hasn't been covered before, and some which has only been addressed superficially by the the syndicated gun-writing press. Too I will be introducing some field proven (perhaps controversial) specialty loads for the .444 as well as other information unpublished up to this point on the .444 Marlin.

.444 Marlin- America's Most Versatile Big-Bore Part II

Marshall Stanton on 2001-07-12

Part II Barrel dimensions, condition and bullet fit.

In the previous section we looked at the Marlin 444S and it's shorter barreled counterpart the .444P "Outfitter" models both chambered for the .444 Marlin. In continuing our look at the .444 Marlin- America's Most Versatile Big Bore, this segment will focus on barrel condition, dimensions and bullet fit for optimum performance in these rifles.

As mentioned in Part I, the .444 Marlin has garnered an undeserved reputation for being a poor to lousy shooter of cast bullets at anything over .44 Magnum velocities. This unfortunate misconception stems from a lack of understanding of bullet fit and barrel dimensions. Couple poor bullet fit with soft bullets lacking strong front driving bands along with the notoriously rough bores of Marlin's Micro Groove Barrels, and indeed you have a perfect recipe for unsurpassed cast bullet failure!

First let us look at those Marlin Barrels. The chambers in both the Micro Groove models as well as the newer Ballard style rifled guns have chambers with fairly generous proportions in the throat area of the chamber. Typically the throats, while being fairly short, are larger than most folks expect, with the diameter running .4325"-.433" on the average in most guns. For best results using cast bullets, that large throat diameter needs to be filled up for best performance, facilitating bullet alignment with the bore prior to ignition of the cartridge. An undersize bullet has the propensity to yaw or tip in the throat before engaging the lands of the rifling, thus causing the projectile to enter the bore off-center.

As mentioned earlier, the Micro-Groove barrels very typically have a generous helping of machine marks in the bore which, for best cast bullet shooting need to be lapped to some degree. Fire lapping is the easiest and most efficient way to deal with this aspect of bore preparation. (Complete instructions for fire lapping are contained in The Beartooth Bullets Technical Manual. Click here for more information!) While the new Ballard style rifled barrels have bores of a much better condition in regard to machine marks, they too need lapping for best results when shooting cast bullets.

Why do those nice new Ballard barrels need to be lapped? Because of constrictions in the bore! Both the Micro-Groove models as well as the new Ballard style rifled barrels have constrictions in them. These constrictions are located under the dovetail cut on the underside of the barrel for the magazine tube hanger, under the dovetail cut for the rear sight and again under the roll-stamp engraving of the barrel markings on the left side at the rear of the barrel. While the severity of constriction varies from one gun to another, they are there none-the-less on all of these big bore rifles (both .444 and .45-70).

Of the two guns used for testing in this article, the Micro-Grooved .444S model rifle was fire-lapped over fifteen years ago, relieving the barrel of not only the bulk of the machining marks in the bore, but all traces of constriction in the locations mentioned above. However, the Marlin .444P "Outfitter" model used for testing in this series had not been lapped, and had seen only cast bullet use. Using a number eight oval egg sinker (see our FAQ pages for instructions on slugging, or Beartooth Bullets Technical Guide for complete instructions. Egg sinkers available click here.) we slugged the barrel of the new .444P. Actually we used several sinkers, and slugged just the muzzle, then drove a sinker as far as the forward dovetail for the magazine tube hanger, then removed it to measure the constriction at that point, then repeated the process from the breach end shoving the egg sinker as far as the rear-sight dovetail and once again removed the slug to determine extent of constriction under the sight dovetail. Finally we inserted another egg sinker and shoved it to the central point under the roll-engraving of the barrel markings at the left rear of the barrel. From the measurements obtained from each of these slugs, the amount and location of the constrictions in the barrel were determined as illustrated below.

Once determined that there was a full .002" constriction as well as a .0015" constriction in the bore, firelapping was the next step before any serious load development could commence. However, in the interest of illustration, we loaded a proven combination used in other .444's, for before and after accuracy testing. Although the load was not worked up to obtain best accuracy with the .444P in its pre-lapped state, the load has proven itself very accurate in other .444's. Twenty rounds were loaded in one session, ten being expended shooting two groups of five before fire-lapping, and the remaining ten after the lapping process was completed, once again in two five shot groups.

In preparation for load development and accuracy testing, the Ashley Ghost Ring rear sight was removed, and a Weaver scope base mounted, along with a 4x scope for shooting groups. The addition of the scope was done before shooting the groups fired prior to fire-lapping. Both rifles used in load development for this series of articles will wear glass optics throughout the load testing portions of these tests.

Lapping loads were prepared in accordance with the instructions found in the Beartooth Bullets Technical Guide, and loaded with 5.5 grains of Bullseye for a lapping charge using Winchester Large Rifle Primers for ignition. Forty-seven lap loads were fired in sequences of five round volleys, slugging between sequences, feeling for constriction reduction. Finally at forty-five rounds, little or no constriction could be felt throughout the bore, two final rounds were fired, and once again the bore was slugged, and all traces of constriction were gone. At this point a polishing

bob was prepared and 200 strokes were given to the bore as a final polish, and the bore broken-in with a conventional break-in sequence before shooting for groups.

Interestingly, the point of impact at 100 yards raised over 5" after fire-lapping when compared to pre-lapping sight adjustment. Typically I chronograph my test load both before and after lapping, but failed to do so on this rifle. My hunch is that the barrel gained some velocity due to a reduction of friction coefficient in the barrel after fire-lapping, thus explaining the elevated point of impact, but since I didn't chronograph the loads prior to lapping, this is of course pure speculation. It might be interesting to note that this is the most significant change in point of impact I have ever encountered by simply fire-lapping a barrel. Once the post-lapping break-in process was complete, the gun shot remarkably tighter groups when compared to those fired before lapping. Keep in mind that this ammo was not developed specifically for this rifle, and that all twenty rounds were loaded on the same press, with the same setting on the powder measure, at the same loading session. They were all fired on the same day, from the same bench, on the same range by the same person. The only difference is that two groups were fired prior to lapping, and two fired post-lapping and break-in. The ambient temperature rose one degree between the initial two groups and the final two groups.

Test Load For .444P "Outfitter" .444 Marlin:
.432"-325g WLNGC/56.0g H335/WLRP/Rem Brass/C.O.L. 2.570"

Test Prior To Fire Lapping

Group I 100 yards
87 Degrees Fahrenheit 2.970" Group Center to Center Group II 100 Yards
87 Degrees Fahrenheit 2.282" Group Center to Center Test After Fire Lapping and Barrel Break-In Procedure

Group III 100 Yards
88 Degrees Fahrenheit 1.186" Group Center to Center Group IV 100 Yards
88 Degrees Fahrenheit 1.159" Group Center to Center

With both test rifles having bores free of constrictions and being equally prepared in terms of scopes and bore conditioning, it is fitting that before doing any serious, meaningful load work-ups that we explore bullet diameters and barrel dimension relationships and how they apply to accuracy and cartridge performance. In slugging both guns we found that the groove diameter of the Micro-Grooved barrel of the .444S measured .4315", and the Ballard Rifled barrel of the .444P had a groove diameter of .4305".

To determine the effect of bullet sizing diameter, we selected the same 44 caliber 325 grain WLNGC bullet as used in the before and after lapping group shooting heat-treated to a BHN 21 and sized to various diameters listed in the table below. All

load components remained the same throughout the tests, for the sole exception of the bullet sizing diameter. All groups were fired at 100 yards from the Beartooth Bullets Shop Range off of sandbags and are the average of two five shot groups measured center-to-center for each bullet diameter, for each gun. The results speak for themselves.

Test Load For .444 Marlin:
.44 Caliber 325g WLNGC/56.0g H335/WLRP/Remington Brass/C.O.L. 2.570"

Bullet Sizing Diameter Group Size Marlin 444S (Micro-Groove) Group Size Marlin 444P (Ballard Cut Rifling) .428" 4.64" 4.28"
.429" 4.26" 3.97"
.430" 3.56" 3.34"
.431" 2.18" 1.87"
.432" 1.22" 1.17"

After examining the results of this test, .432" diameter bullets are the clear choice for use in the .444 Marlin when dealing with cast bullets. Those bullets of smaller diameter will deliver the typical, stereotyped performance that have given Marlin center-fire rifles a bad reputation for cast bullet shooting! Note too that those bullets smaller than .431" left significant lead deposits in the bore, more so in the Micro-Groove barrel of the 444S, and the amount of lead in the bore increased as bullet diameter decreased below .431".

Now, having relieved the constrictions in the barrels of our test rifles, and determined optimum bullet sizing diameter, we are prepared to enter into some serious load development in Part III of .444 Marlin- America's Most Versatile Big-Bore.

444 Marlin- America's Most Versatile Big-Bore Part III

Marshall Stanton on 2001-08-05

Heavy Bullets & Loads In The Triple-Four

Previously in this series: The .444 Marlin- America's Most Versatile Big-Bore, we have examined the historical background of the cartridge and it's rifles, and explored the dimensional characteristics of those firearms, and the unique requirements necessary to extract top performance from these guns.

In this segment, our focus shifts specifically to development of heavy bullet loads for the .444 Marlin. The emphasis here is on bullets over 300 grains in weight, and their application in this most interesting and versatile big-bore cartridge. In previous years, prestigious publications have explained the absolute uselessness of bullets over about 290 grains in the .444 Marlin, and have gone so far as proclaim that the 1:38" twist of the Micro-Groove barrels positively won't stabilize bullets over 310 grains in weight. The data presented here speaks for itself, and necessitates no defense, the resultant tests revealed some startling surprises and insightful observations.

As described in Part II, both test rifles are equipped with scopes for the purposes of load testing, barrels have been fire-lapped and polished and the triggers on both tuned to break crisply at near three pounds pressure. All test groups were fired on the Beartooth Bullets Shop Range off of a covered bench rest and sandbags at 100 measured yards. All shooting temperatures were recorded at the time of testing and are noted in the data. Too, all shooting was accomplished over a period of several day's range sessions, waiting for zero wind conditions. Loads were chronographed utilizing a Chrony, Alpha model chronograph set up fifteen measured feet from the forward edge of the shooting bench, and listed velocities are a composite of two separate and distinct series of shots using the same load, then the averages of the two series reported. Those group sizes reported are measured center to center using a stainless steel dial caliper, and in those cases where there was an obvious flyer, the reported group is a measurement of the remaining clustered shots, but in no case was more than one shot factored out for any reason.

A quick note about the group sizes and accuracy of these big-bore lever action rifles. The .444 Marlin is a heavy hitter in all respects, and develops some severe recoil with these heavy loads. In light of the extreme number of test rounds fired through these guns for this article, we employed the use of a twenty-five pound bag of lead shot positioned between the but of the rifle and the shooter's shoulder. This, in an

effort to report the true accuracy potential of a given load rather than try to quantify the flinch coefficient of the shooter!

It is interesting the potential accuracy of these .444 Marlin rifles. No, they aren't benchrest guns, nor are they anything that has been accurized through glass bedding, or other bench rest shooting accurizing techniques.

In examining the group sizes reported through these tests, please bear in mind the intended purpose for these guns and their loads in regard to accuracy, and the suitability of a given bullet and load combination in actual field hunting scenarios. It's interesting in looking back over the writings of some of our more seasoned and respected shooting sages, that I find this quote by Ken Waters in his January 1979 "Pet Loads" write-up of the .375 Winchester model 94 Big-Bore concerning hunting accuracy and reasonable expectations from these types of firearms:

"What sort of accuracy am I talking about here? Well, with a light hunting rifle such as this with its short sight radius, I look for loads that will put five successive shots in four inches at one hundred yards using the issue open sights, or three and a half inches with a receiver-mounted peep sight."

Once the barrels are lapped and conditioned, and fed the right combination of bullets and powder, these .444's far exceed such mediocre expectations from a hunting carbine! In fact, these Marlin lever actions with the proper load combinations behave much like a well tuned target rifle! It is rather like engineering pinpoint accuracy when directing a locomotive's impact.

Now, for the bullets. As we explored in Part II these .444 Marlins thrive on .432" diameter bullets, delivering their tightest accuracy and best ballistic uniformity with bullets of this dimension. For the purposes of this segment, all bullets tested are BHN 21, as all we are interested in at this point is high-velocity and heavy weight projectiles. All bullets employed in these tests were used with our newly developed blue lube, and are of gas-checked design. The photograph below illustrates all of the gas-checked bullets available from Beartooth Bullets employed in tests for this series of articles on the .444 Marlin.

Powders best suited to the heavier weight bullets in the Triple-Four are those in the Medium to Medium-Fast burning rates. For the heavy bullet testing for Part III of these articles, we used the following commercial canister powders:
Hodgdon Varget, Hodgdon H332, Hodgdon H335, Alliant RL-7, Accurate AA 2015 and IMR 3031.
Although there are a number of other powders that fit within this burning rate range, the powders listed were selected by merit of their performance specifically with heavy bullets in the .444 Marlin. Performance criteria included ballistic uniformity,

accuracy, pressure vs. velocity, muzzle flash and uniformity of performance over temperature extremes.

Reloading equipment for these tests were basics: RCBS Rockchucker press, Lee Auto-Prime priming tool, Pact Digital powder/bullet scale, Forster case trimmer, MTM case loading blocks, Midway case deburring tool, RCBS primer pocket uniformer, RCBS flash-hole deburring tool, reloading dies from Redding, RCBS, Lee and Hornady, micrometer from Central Tools and a Sterret dial caliper.

As a side interest during this test, we ran accuracy tests employing three brands of reloading dies, and one time-proven accuracy load, with the intention of beginning another Tech Note, detailing the accuracy differences incurred simply by employing different reloading dies. The surprising, and great news is this: there was absolutely zero measurable difference in the accuracy, either at the range, or in measured run-out of loaded ammo, between the ammunition loaded with the various manufacturer's dies! This is a real testimony to the exceptionally high quality standards of manufacturing our shooting and handloading equipment manufacturers adhere to in all phases of production.

In handloading for the .444 Marlin, a firm, well placed crimp is essential for this high-energy, stout recoiling cartridge! Interestingly, there are very few bullets that have crimping grooves or cannelures properly placed for crimping when loading for the Triple-Four. In Beartooth's line-up, there is only one bullet with an appropriate crimp groove for the .444 Marlin, and that is the 44-405g WLNGC bullet. However, there is a simple, expedient and highly efficient cure to what might be viewed as a stumbling block to the handloader of the .444 Marlin. That answer lies in the Lee Factory Crimp Die! It is a truly excellent tool for this purpose. The Lee die allows positive crimping where there is no crimp groove present, both on cast and jacketed bullets. For the .444 handloader, this die is an absolute MUST have item to open the doors of load diversity and bullet selection.

It operates on a compressed-collet type system in which four fingers of a collet are firmly, and positively pressed against the case mouth, against the bullet, thus either making a very positive crimp in an existing crimping groove, or literally creating its own crimp groove by the ingenious design of the die's fingers being compressed, as seen in the photo below. These bullets are both .432"-290g LFNGC's, the one on the left is as manufactured by Beartooth Bullets. The bullet on the right is the same bullet, after having been crimped into a .444 Marlin case using the Lee Factory Crimp Die, and then pulled with an inertia-type bullet puller to illustrate the "crimp groove" created by the factory crimp die.

Throughout the range of testing done for this series, scores of loads have been tested both with a simple roll crimp tucked over the front of the ogive of the bullet, and the exact same load utilizing the Lee Factory Crimp, and in each and every instance, those loads employing the factory crimp have grouped significantly smaller on paper, and recorded notably smaller extreme spreads and standard deviation results over the chronograph. Presumably due to the more uniform start pressure of the factory crimped loads. In any case, the .444 Marlin necessitates a firm crimp both to prevent bullets from moving in the tubular magazine during intense recoil, and for uniform start pressures to enhance ballistic performance.

Bullet seating depth is another issue of great and far reaching concern in this particular cartridge. Not only is the maximum cartridge overall length (C.O.L.) limited by the action of the Marlin and Winchester actions, and what will feed through cycling the lever actions, the throat length in the chamber also plays a vital role in limiting the maximum C.O.L., as these guns have relatively short throats, and those bullets with strong front driving bands may require deeper seating than simply making the C.O.L. determination by the actions cyclic abilities. Two such bullets are the LFN and WFN profiles that Beartooth markets. Ideally you want to seat the bullets such that when chambered, there is slight felt resistance as the lever is closed the last eighth of an inch or so, and that the rifling in the throat actually engraves the bullet to a slight degree. By no means should the bullet be seated out such that it is difficult to extract a loaded round due to the rifling being so heavily engraved on the bullet upon chambering. There is a fine balance here, but the ideal seating depth for both these profiles is a point where noticeable rifling engagement may be viewed on the bullet when an unfired loaded round is extracted from the chamber as seen below.

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Notice the factory crimp applied to both these loaded cartridges. It is firm and positive, while insuring against bullet setback in the case during recoil in the tubular magazine, it also provides excellent uniformity of start pressure. When using the factory crimp die, there is no chance of a bulged or collapsed case in the crimping operation, as opposed to using the standard roll-type crimp feature built into all other .444 Marlin seating dies.

Now, having explained the criteria for determining optimum seating depth for the LFN and WFN profile bullets in the .444 Marlin, we'll look at specifics lengths employed by the two test rifles for development of the data presented. Although the .444S (22" Micro-Groove) barrel has a throat that is 0.100" longer than that of the 444P "Outfitter" (18.5" Ballard Cut-Rifled) barrel, all bullets for this series of tests

were seated to the same depth for each firearm and those dimensions are listed below.

.444 Marlin Load Development Tests
Cartridge Overall Length (C.O.L.) For Test Bullets (All .432" Dia.) In .444 Brass
Bullet Wt. & Nose Profile C.O.L.
250g LFNGC 2.582"
265g WFNGC 2.494"
280g WFNGC 2.494"
290g LFNGC 2.582"
300g LMNGCDCG 2.570"
325g WLNGC 2.570"
325g LCMNGC 2.570"
330g LFNGCDCG 2.582"
355g WLNGCDCG 2.570"
405g WLNGCGDCG 2.520"

Keep in mind that the C.O.L.'s listed above were appropriate for the two test rifles, the only way to insure that your individual rifle will feed, function and perform properly is to adjust the C.O.L. accordingly to your specific rifle. While these dimensions listed represent loading lengths which function, feed and eject well from several .444 Marlin firearms, specific tuning and tailoring may be necessary for individual rifles.

The reloading data presented in the accompanying table was safe in the firearms in which it was developed. This data is presented for information only and because individual loading practices and conditions are beyond the control of Beartooth Bullets,. we take no responsibility for its use, misuse, application or abuse. Nor is Beartooth Bullets, its agents, owners, management or affiliates responsible for, or to, any direct, indirect, consequential or incidental injury or death resulting from the use of this data.

The following data was developed using Winchester Large Rifle Primers and Remington Brass Cases in all loads tested and resultant data listed.

.444 Marlin Heavy Cast Bullet Load Development

All Loads Listed Below Developed Utilizing Bullets Of .432" Diameter Beartooth

Bullet	Powder	Charge	Test Gun	Av Vel	E.S.	S.D.	TEMP	Group
325g WLNGC	H322	49.0	444 S	2153	24.76	11.35	78 F	1.479"
325g WLNGC	H322	49.0	444 P	2067	45.04	20.61	78 F	2.832"
325g WLNGC	H322	51.0	444 S	2251	39.71	15.81	78 F	1.094"

325g WNGC	H322	51.0	444 P	2122	39.81	16.73	78 F	1.189"
325g WLNGC	H335	54.0	444 S	2191	62.92	28.87	78 F	1.043"
325g WLNGC	H335	54.0	444 P	2057	36.48	13.85	78 F	0.997"
325g WLNGC	H335	56.0	444 S	2249	64.15	32.00	78 F	1.343"
325g WLNGC	H335	56.0	444 P	2170	38.86	19.51	78 F	1.844"
325g WLNGC	AA2015	49.0	444 S	2085	26.87	11.48	72 F	1.646"

325g WLNGC AA2015 49.0 444 P 2060 29.63 15.68 72 F 0.939"
325g LCMNGC H322 49.0 444 S 2201 50.52 24.94 72 F 0.514"
325g LCMNGC H322 49.0 444 P 2072 36.82 18.76 72 F 1.494"
325g LCMNGC H322 51.0 444 S 2284 11.74 8.48 72 F 1.194
325g LCMNGC H322 51.0 444 P 2143 11.41 6.40 72 F .0.868"
325g LCMNGC VARGET 51.0 444S 1976 N/A N/A 84 F 1.254"
325g LCMNGC VARGET 51.0 444P 1829 31.00 15.26 84 F 0.441"
325g LCMNGC VARGET 53.0 444S 2016 9.93 2.44 84 F 1.472"
325g LCMNGC VARGET 53.0 444P 1896 13.18 8.89 84 F 0.541"
325g LCMNGC AA 2015 50.0 444S 2238 72.97 37.72 84 F 0.149"
325g LCMNGC AA 2015 50.0 444P 2130 32.54 16.52 84 F 0.736"
325g LCMNGC AA 2015 52.0 444S 2285 24.79 12.56 84 F 1.108"
325g LCMNGC AA 2015 52.0 444P 2163 56.51 38.28 84 F 2.352"
325g LCMNGC IMR 3031 46.0 444S 2015 64.68 35.00 82 F 1.805"
325g LCMNGC IMR 3031 46.0 444P 1929 71.41 40.70 82 F 1.285"
330g LFNGCDCG H335 54.0 444 S 2176 11.04 6.40 72 F 0.784"
330g LFNGCDCG H335 54.0 444 P 2080 15.91 8.06 72 F 1.886"
330g LFNGCDCG H335 56.0 444 S 2244 3.16 2.29 67 F 0.344"
330g LFNGCDCG H335 56.0 444 P 2080 32.50 16.79 67 F 1.566"
330g LFNGCDCG H322 48.0 444 S 2171 11.63 9.76 67 F 0.339"
330g LFNGCDCG H322 48.0 444 P 2024 31.46 15.22 67 F 1.448"
330g LFNGCDCG H322 50.0 444 S 2204 50.74 25.96 67 F 1.111"
330g LFNGCDCG H322 50.0 444 P 2113 9.67 6.40 67 F 1.969"
330g LFNGCDCG VARGET 50.0 444 S 1952 57.86 32.04 64 F 3.472"
330g LFNGCDCG VARGET 50.0 444 P 1806 21.67 11.91 64 F 0.318"
330g LFNGCDCG VARGET 52.0 444S 2027 7.98 7.64 79 F 1.039"
330g LFNGCDCG VARGET 52.0 444P 1919 17.84 8.71 79 F 0.924"
330g LFNGCDCG VARGET 54.0 444S 2100 11.75 8.90 79 F 0.863"
330g LFNGCDCG VARGET 54.0 444P 1977 8.28 9.89 79 F 1.209"
330g LFNGCDCG RL-7 45.0 444 S 2157 42.15 21.00 68 F 1.832"
330g LFNGCDCG RL-7 45.0 444 P 2050 31.52 15.55 68 F 0.555"
330g LFNGCDCG RL-7 47.0 444 S 2190 N/A N/A 68 F 1.786"
330g LFNGCDCG RL-7 47.0 444 P 2007 28.86 14.37 68 F 1.630"
355gWLNGC H322 43.0 444S 1974 10.07 5.29 81 F 0.978"
355gWLNGC H322 43.0 444P 1914 83.17 43.00 81 F 0.914"
355gWLNGC H322 45.0 444S 2034 25.94 13.60 81 F 1.588"
355gWLNGC H322 45.0 444P 1927 33.69 16.79 81 F 1.020"
355gWLNGC RL-7 43.0 444S 2063 39.83 20.09 81 F 0.752"
335gWLNGC RL-7 43.0 444P 1986 16.76 8.60 81 F 1.363"
355gWLNGC RL-7 45.0 444S 2154 61.45 30.99 81 F 0.762"

355gWLNGC RL-7 45.0 444P 2059 19.12 9.89 81 F 1.228"
355gWLNGC VARGET 49.0 444S 1887 50.99 26.34 80 F 0.802"
355gWLNGC VARGET 49.0 444P 1761 16.27 8.18 80 F 0.671"
355gWLNGC VARGET 51.0 444S 1964 73.29 39.35 80 F 1.813"
355gWLNGC VARGET 51.0 444P 1836 17.96 8.30 80 F 0.671"
405gWLNGC RL-7 37.0 444S 1837 N/A N/A 79 F 7.025"
405gWLNGC RL-7 37.0 444P 1794 16.34 8.48 79 F 2.284"
405gWLNGC VARGET 43.0 444S 1771 N/A N/A 79 F 5.942"
405gWLNGC VARGET 43.0 444P 1635 51.42 26.09 79 F 2.604"

The series of tests resulting in the above data are the compilation of enormous numbers of man-hours in both bullet production and load development and assembly, culminating in this information after firing under very controlled conditions and tabulation, then recalculation of data. All results listed above may be readily reproduced by the individual user of this data. All hard-copy targets and load data sheets are on hand for verification of results and confirmation of validity.

Keep in mind, that the data supplied here in this table was entirely safe for the guns in which it was developed, and in no case were the loads listed here absolutely maximum in our test firearms. Too, none of these loads were specifically "fine tuned" for either test rifle. These test loads are representations of normal working pressure ranges for the bullet and powder combinations listed, and as such are intended only as an informational platform from which to develop loads for your individual rifle. We were totally shocked by the accuracy delivered by many of the loads in the accompanying table.

Unlike some previous data released by Beartooth Bullets, all these tests were conducted primarily between 65 degrees and 80 degrees fahrenheit. By performing load development at this temperature range, results reflect more closely the average temperatures the majority of handloaders will experience when performing load work-ups. Be advised that the data developed in this temperature range greatly differs from some of that data developed and reported in below freezing temperatures.

When loading the ammunition resulting in the above data, all bullets used were of current production Beartooth Bullets products, as run, from normal off-the-shelf stock. In no instance were bullets hand picked, sorted, weight segregated or otherwise culled prior to testing. The results presented represent actual shooting performance of the listed loads, using bullets of normal production runs as they are customarily shipped to our clients

Brass for these loads was from a single lot of bulk brass, purchased specifically for developing the loads listed. Primer pockets were uniformed, flash-holes deburred

and cases trimmed to 2.215" then lightly deburred inside and out. All brass was trimmed after every loading (although not really necessary as it stretched little or any) just to assure uniformity. Brass was not weight segregated however, but used at random as it came from the distributor in bulk form.

Powder charges for all loads used in testing and development of the accompanying data were each hand weighed on a Pact digital powder scale. In no case were charges thrown by a powder measure, without being weighed on the digital scale, and the last few tenths of a grain trickled in by hand to "top off" each load. All powders loaded in these tests were from single production lots within each brand and type of powder used.

Primers were all Winchester Large Rifle Primers, for standard or magnum rifle loads. All test charges were loaded with primers from lot # CHL168G943. There was no variance of primer manufacturer or type throughout the range of tests, although it is entirely possible that by altering primers in some loads, results may have changed dramatically. This set of tests did not encompass the variables introduced by changing primer types and manufacturers. Past experience and reams of previous loading data concurred that ballistic uniformity tended to be at its best when the .444 is loaded with these Winchester primers, so rather than introduce yet another variable, we concentrated on bullets and powder selection.

As this data was developed, many unexpected results emerged. The first surprise being that the short ported barrel of the .444P model rifle seemed to deliver more uniform extreme spreads and standard deviation results, across a broad spectrum of bullet and powder combinations when compared to the longer barreled 444S with it's 22" tube. Another pleasant surprise was the small loss of velocity in the 18.5" ported barrel when compared to the 22" barreled version, all other factors being equal.

The individuality of these two rifles is quite evident in examining the resultant data from our tests. There are several instances where one rifle or the other will shoot sub MOA groups with a load, and its counterpart developed a severe dislike for the same load. Another interesting note, is that most of the loads tested indicated tighter accuracy overall as loading pressures neared the upper end of the pressure envelope, although there were exceptions to that observation, still the prevailing trend indicated tighter groups at the higher end of the pressure spectrum.

Interesting too, is the difference in performance between the two test guns with different weight bullets and changes in powders and charges. The .444P "Outfitter" model with its 18.5" ported, Ballard-Style cut rifled barrel, digested just about every load with acceptable hunting accuracy. Sure, some loads I certainly would work upon in the accuracy department, but nearly every load tested would bring home venison if shots were kept under 150 yards. However, its real shining attribute is this: its point of impact never changed more than three and a half inches at 100 yards throughout the range of bullets, powders and velocities tested throughout this investigation! Too, those changes were solely in elevation! Never, with all the

different powders, charges, bullets and velocity ranges encountered, did the point of impact shift to the left or right more than three-quarter's of an inch! A complete comparison of this phenomenon including sub-three-hundred grain bullets will appear in Part IV of this series.

Conversely, the .444S with its 22" Micro-Groove barrel was extremely load sensitive. Not only did loads shift as much as eight inches vertically with changes in velocity and bullet weights, but shifts of up to seven inches in horizontal dispersion in point of impact was experienced with changes in powder and bullet weights as well. The 444S is VERY picky about the loads that it will shoot to the same point of impact with one point of aim! Although the point of impact changed dramatically with several loads, many of those loads still shot sub MOA groups, just not anywhere near point of aim! The reasons for such a difference between the performance of the two rifles we don't pretend to understand, instead we just report what we've found.

Recoil from these heavy loads when fired through the 444S 22" barreled version can be described as nothing short of fearful and extreme! These high intensity loads put new meaning to recoil. The fore-end of the rifle typically rose between three and five inches off of the front sandbags when firing the 325 grain plus loads. Without added shoulder protection when shooting from a bench-rest a shoulder is sure to receive a colorful albeit painful change in coloration. The integral Marlin Porting on the 444P "Outfitter" model with its 18.5" ported barrel is a whole different critter. This gun, even with the stoutest of loads only rises less than an inch off of the front sandbags upon recoil. The sensation of recoil is different as well, being more a concentrated push, rather than an excruciating jab.

Both guns stabilized all bullet weights equally at the velocities represented in the accompanying data table. In no case was there ever a bullet that failed to deliver acceptable to superb accuracy in both guns except for the 44-405g WLNGC. Most times this accuracy level was achieved with differing powder charges and or powder selections, but none the less, no bullet performed to a less than acceptable level... for the exception of the .44-405g WLNGC bullet. This particular bullet stabilized just fine at all tested velocities in the 444P "Outfitter" model with its 1:20" rifling twist; however, in the 444S model with it's 22" Micro-Groove 1:38" twist barrel failed to stabilize the 405g WLNGC bullet at all velocities that were developed within uniform safe operating pressures. At velocities under 1950 fps. this long bullet tumbled and keyholed in the .444S's 1:38" twist barrel in every instance. However, once velocities exceeded the 1950 fps. threshold, the bullet remained stabile out past 100 yards, in order to generate these velocities pressures exceeded the limits of safe and sane operation for the .444 Marlin in these guns, and that data will not under any circumstances be made available. The 444P "Outfitter" model with 1:20" twist in its 18.5" ported barrel stabilized the bullet very well, and it remained so out to a distance of over 200 yards!

For a rifle conceived as a short-range brush buster with 240-265 grain pistol bullets, this .444 Marlin cartridge certainly thrives on long, heavy bullets, and does so with

target-rifle type accuracy to boot! I think it safe to say that the notion of .444 Marlin rifles not being capable of stabilizing any bullets over 310 grains, not being able to shoot cast bullets over 1600 fps. and being capable of "gallon jug" accuracy at a hundred yards can all be definitively and finally put to rest as mythology! For the woods wise hunter who limits himself to 200 yard shots at big game, this .444 Marlin cartridge, loaded with any of the above listed bullets is MORE than capable of harvesting anything in North America cleanly and decisively. The first time, every time, with properly placed shots.

In examining the tabulated results of this extended investigation, I note two particular loads that gave good to exceptional performance in both rifles, and are outstanding loads for anything that walks on the North American continent (and most in Africa if put to the test). First is my tried and true, all time most used game load:

.432"-330g LFNGCDCG/56.0g H335/WLRP/Rem Brass/2.582" C.O.L

Second place winner would have to be this load:

.432"-325g LCMNGC/50.0g AA2015/WLRP/Rem Brass/2.570" C.O.L.

In the beginning of this segment of our look at the .444 Marlin, we detailed the preparation of these guns for the tests to be run, in terms of lapping and polishing the bores. Most gun-scribes and loading manuals decry the propensity for leading in these fine guns. Just for the sake of argument, all these tests conducted to compile the data for Part III of this series, the heavy bullet/high velocity load development phase of shooting was done WITHOUT EVER CLEANING THE BORE ONCE TESTING BEGAN!!! That's right, NOT ONCE did we even touch the inside of the bores of these guns with anything other than the bullets being fired! On a couple of occasions there was a light gray wash in the bore, but never a lead build-up, and never did the accuracy potential of either of the test guns deteriorate in any way from leading or lead deposits! This was done purposefully, not as a stunt, but to once and for all lay aside the notion that these guns won't handle high velocity cast bullets without woeful inaccuracy, or resultant leading requiring extreme measures and hours of cleaning to remove. Yes, another misconception relegated to the mythology books! Just for the record, yes, now that the shooting for this segment has been completed, each gun received a couple of tight fitting patches on a jag, and saturated with Ed's Red, then dry patched two passes with plain dry patches. They are both clean as a hound's tooth!

Sure, we all know that there are tons of venison harvested annually with much less gun than the .444 Marlin. After all, there's only so much penetration and killing necessary on a skinny little whitetail deer! However, there's something very reassuring and special when heading afield with the confidence KNOWING that you can take ANY animal offered, in ANY situation, from ANY angle with complete and total knowledge that when you pull the trigger, the game's over! Also a satisfaction knowing that regardless of the tough angles, that you have both the power and

precision bullet placement at your disposal for a clean, one shot kill on any game you hunt in North America. Those of us afield in places where grizzly and moose are commonplace appreciate that reassuring knowledge that our rifle has more than enough potential for any situation that may occur. Big heavy bullets with wide, flat meplats dictate consistently deep penetration, large wound channels and guaranteed exit wounds. The familiar 336 Marlin or 94 Winchester platform for these guns insures quick handling, instinctive shooting and intuitive pointability. Couple these proven handling characteristics with outstanding knock-down power and accuracy, and you've got the recipe for years of satisfying and successful hunting success.

In summation, I would add that once loaded with bullets over 300 grains, the .444 Marlin begins to shine brightly as a superb big game rifle. Loaded with any of these loads, it would be a most welcomed camp companion when traveling in grizzly or moose territory, and gives up little in terms of stopping power or penetration to either the .45-70 Govt. or the new Marlin .450M. The accuracy potential of this gun over a wide variety of both bullet weights and nose designs lends it to remain America's Most Versatile Big-Bore!

Part IV will focus on loads utilizing cast, gas-checked bullets from 250-300 grains, their loads, powders, applications and performance.