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buffalo
 One of Us

posted 06 March 2010 13:19 [Hide Post](#)

That sounds FANTASTIC.

Thanks Michael

I will send you some PBP 300 and 390 grs bullets in .416" you can test in your 416`s as well. 390 is quite long but 300 - I think - could perform well in your B&M..

Posts: **873** | Location: **Denmark** | Registered: **04 January 2005**

Bike Rider
 One of Us

posted 07 March 2010 03:15 [Hide Post](#)

DEEP Penetration tests results are in!!! Which one is it going to be? Drum roll please.....

500 MDM with 550gr?
9.3 B&M with 320gr?
6.5x53R with 154gr?

Mad scientist McCurry to provide full report shortly 😊

BR

Posts: **243** | Location: **USA** | Registered: **20 August 2002**

michael458
 One of Us

posted 07 March 2010 04:27 [Hide Post](#)

Hey Guys! Bike is right, we had a big day today doing lot's of things. I started pretty early at around 7 am or so this morning, Bike and Buddy Sam showed up at around 8 am and we gave things a good go until about 2:30 this afternoon. Some very interesting things today. However, there is so much to put together in a proper report to you, it's going to be Monday morning before I can get a chance to get it all in proper form. In the meantime you might do some speculating. I am not giving it out until I have it in proper form, photos taken, the works as there are some things I cannot explain and we will have to work on it as a team, everyone out there! Team effort! So hold on a bit until I get things sorted out from the range to the lab and all data recorded and accounted for.

We simply had a "Mad Scientist" day here! Also have plans for new and upcoming things with Bike and New Buddy Sam! Sam has been a lurker here for some time, found out Bike actually new the mad man, me, so he is now involved and will be a great contribution to efforts from here on out! Has also become a B&M fan as of today, and new owner of a brand spanking new 50 B&M Super Short! Sam's the man, he can shoot the damn thing too. Oh and Boomy, we were doing the old drink beer and shoot better trick today, I think Sam drank more beer than me? No worries, I will sort that out on our next test session for sure! HEH!!!!!!!!!!!!

You know, come to think of it, I ain't real sure if some of those bullets actually were unstable, or if it was just too much beer and maybe the bullets just looked crooked? Hmmm? It was hard to follow those back and forth, side to side, snake bullets? Or was that just me going from side to side? Oh well...it was a hell of a day regardless!

Michael

<http://www.b-mriflesandcartridges.com/default.html>

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**

Phatman
 One of Us

posted 07 March 2010 05:59 [Hide Post](#)

Damn, sounds like you guys had the thunder rolling in old SC today 🤖

I'm probably wrong but I think the 9.3 will be the winner. If not it will make a strong showing.

John 🤖

Give me COFFEE and nobody gets hurt

Posts: **1608** | Location: **San Antonio, Texas** | Registered: **04 January 2010**

someoldguy
One of Us



posted 07 March 2010 13:11

[Hide Post](#)

quote:

DEEP Penetration tests results are in!!! Which one is it going to be? Drum roll please.....
500 MDM with 550gr?
9.3 B&M with 320gr?
6.5x53R with 154gr?

Tough call!
I'll say the 9.3 by a nose.

quote:

have it in proper form, photos taken, the works as there are some things I cannot explain and we will have to work on it as a team, everyone out there! Team effort! So hold on a bit until I get things sorted out from the range to the lab and all data recorded and accounted for

Team effort! You got it!
I'll contribute something, even if it happens to be confusion.



Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



Bike Rider
One of Us

posted 07 March 2010 14:56

[Hide Post](#)

Without giving away the winner, I will say that two of the three calibers made it out of the first box 🍷

BR

Posts: **243** | Location: **USA** | Registered: **20 August 2002**



buffalo
One of Us

posted 07 March 2010 15:42

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quote:

Originally posted by Bike Rider:
DEEP Penetration tests results are in!!! Which one is it going to be? Drum roll please.....
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6.5x53R with 154gr?

Mad scientist McCurry to provide full report shortly 😊

BR

Michael.

Why didnt you include your 458 Lott with the 500 grs Barnes Banded solids in this little competition??? As far as I can see, they have been some of the very best penetrators of all so far.. They zipped right through your test box at 2160 f/s impact as well as 1780 f/s impact

Would be very interesting to compare with the above mentioned bullets...

Posts: **873** | Location: **Denmark** | Registered: **04 January 2005**



buffalo
One of Us

posted 07 March 2010 16:09

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Here is a little reminder from the very first page of the best thread on AR ever!!!
Michael please put this 2200 f/s load with the 500 Barnes Banded FN in the above contest... 🍷
And by the way - did you ever try the mentioned 1500 f/s load with this bullet to keep the bullet in the box and prove that Garret was wrong..????

quote:

Originally posted by michael458:
Todays test work! I was spurred on a bit to do a couple of tests, actually repeat some with 458 Lott, and add some with the 458 B&M. The goal was to use some big bore solids at different velocities, which we did, but really did not prove a whole lot, except once again to confirm some prior data gathered on these particular bullets anyway.

I wanted to test a 500 gr Woodleigh from 458 Lott--was hoping for 2200 fps or so, but only got 2100 fps with the load I used. I wanted to also compare this velocity to a lower velocity in the 458 B&M. Not as low as I wanted, but 1827 fps was what I got. In addition the 500 gr Barnes Banded FN Solid in 458 Lott at 2209 fps and the same bullet in 458 B&M at a reduced 1815 fps. In addition to these tests I wanted to test the new Barnes 330 gr Solid made for the 458 Socom in the 458 B&M. POI for this solid is the same as all 350 gr bullets I use in the 458 B&M and would make a good addition for those loads.



The rifles used are shown below.



The shooting was done at the 25 yd bench, actual impact was 22 yds. Velocity was recorded at the front end, and then again at impact.





The test medium was fresh and soaked well, 62 inches of mix in the box.



First up was the 458 Lott with the 500 gr Woodleigh FMJ and the 500 gr Barnes Banded FN, both loaded with 82/RL 15. Muzzle velocity was lower with the Woodleigh at 2100 fps and 2051 fps impact at 22 yds. Muzzle Velocity was 2209 fps with the Barnes, and 2160 fps at impact.



If you see the phone books on top of the box that is to prevent the Woodleigh from leaving the top of the box when it veers off course. Yes, I already know what the Woodleigh is going to do, as I have tested them before. Maybe I can prevent damage to the range!

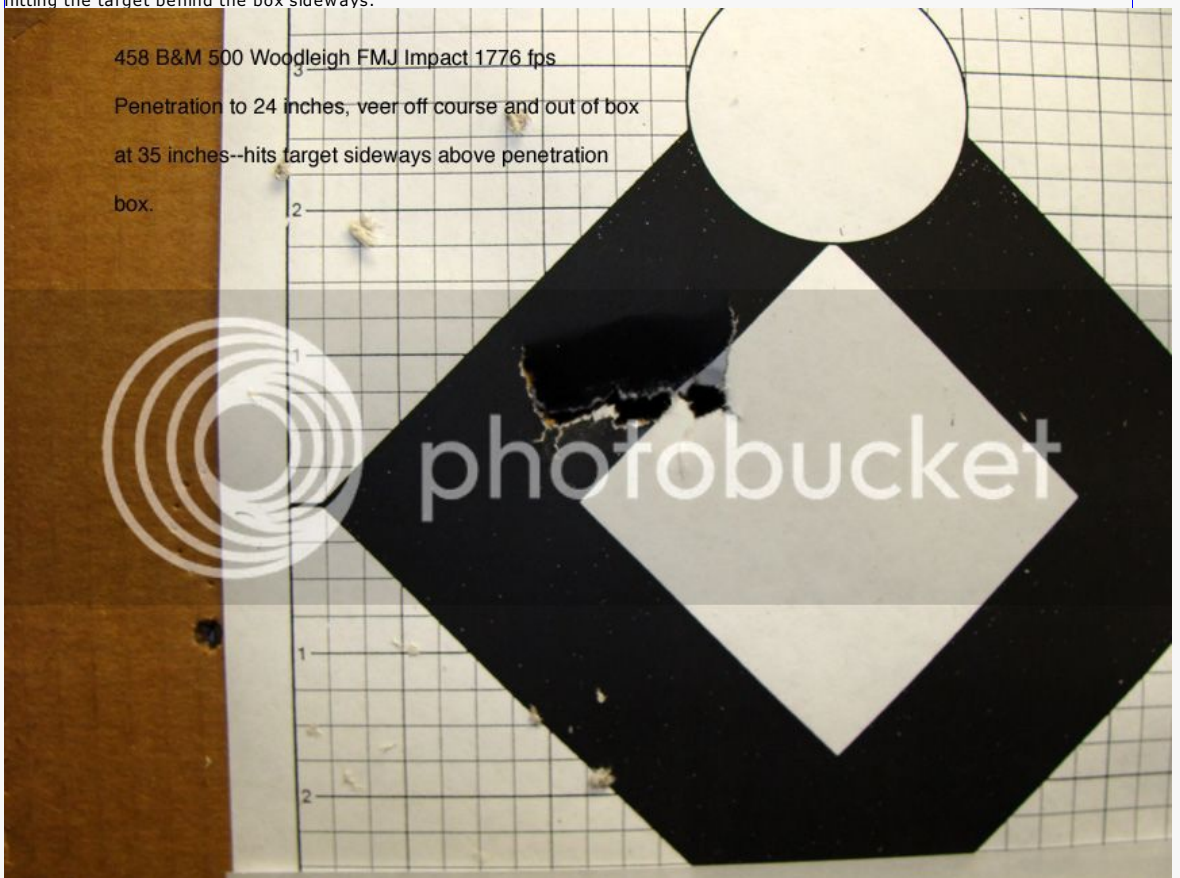
As expected the 500 Woodleigh started to veer off course at 31 inches exiting the medium to the side of the box at 35 inches as you can see below.



The 500 Barnes Banded FN zipped thru the entire 62 inches of test medium and exited the back of the box, 2X6 and into the impact berm not recovered. Penetration was straight through and through.



Now for the reduced loads in the 458 B&M. the 500 gr Woodleigh with 63/AA 2520 gave 1827 fps at the muzzle and at impact 1776 fps. It went to 24 inches before it started to veer off course, it found a void down the side of the box and out the top at 35 inches, hitting the target behind the box sideways.



The 500 Barnes Banded FN at 1815 fps at the muzzle and 1780 fps at impact once again drilled straight completely through the 62 inches of medium, exiting the back of the box and into the berm behind, not recovered. I was somewhat surprised, I expected it to come up a bit short, but was wrong. I do believe that had velocity been lower it would have stopped in the box, as it was just making it's way through with little disturbance at the end.

The last test was in the 458 B&M with the 330 Barnes Banded FN solid. With 72/RL 10X it started at 2331 fps and impacted at 2281 fps. They drove straight and true to a total penetration of 50 inches. Not bad for a little bullet and far better than the 500 Woodleigh FMJ.

Now what did this tell us? Something most of us already know, once again--Nose Profile is everything! The 500 Woodleigh becomes unstable, veers off course, and penetration is severely effected. We also learned that the lower velocity it penetrated much less, before going off course, a little more velocity kept it going a little further. Proving that with this RN design, more velocity will keep it stable longer. With RN bullets this challenges the "garrett" tests seriously.

Of course the 500 Barnes Banded FN far exceeded the 500 Woodleigh FMJ RN, this comes as zero surprise and has been repeated many times. The 500 Barnes fired from the 458 Lott hit with far more authority at 2209 fps than from the reduced load in the 458 B&M at 1815 fps. Both penetrated straight, both exited box. It is my belief that even lower velocity that the box would have contained it. I will most likely attempt lower velocity in the near future to also challenge the "garrett" tests. I am pretty positive that if I can get down in the 1500 fps range the bullet will be recovered in the box, and for sure putting the nix on garrett.

Of little surprise, but none the less pleased with the results is the 330 Barnes banded solid. At 2331 fps it did far better than the 500 gr Woodleigh. With a small Sectional Density of only .225 as compared to the mighty 500 Woodleigh FMJ RN with an SD of .341 the little Barnes exceeded the Woodleigh by an easy 35-38% increase in penetration. What is the most important aspect of SOLID PENETRATION? NOSE PROFILE---NOSE PROFILE---NOSE PROFILE! All other factors including Sectional Density--Velocity--barrel twist--construction and materials, are in the back seat, being driven by Nose Profile!

Michael

Posts: **873** | Location: **Denmark** | Registered: **04 January 2005**



eezridr
One of Us



posted 07 March 2010 16:57

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I guess Jack Carter figured this out 35 years ago. I recall talking to him at his office near the Astrodome in Houston in the 80's about his bullets. He was a very nice man. His slegehammers had a flat nose profile and pretty pronounced one that. There may have been others before him that explored this concept. I might add that I think I asked Jack about the flat nose and why; as I recall he said they penetrated better. I thought it was all marketing and sales. Jack was a salesman but would sit and talk to you all day in his office.

EZ

Posts: **3256** | Location: **Texas** | Registered: **06 January 2009**





quote:

Here is a little reminder from the very first page of the best thread on AR ever!!!
Michael please put this 2200 f/s load with the 500 Barnes Banded FN in the above contest...
And by the way - did you ever try the mentioned 1500 f/s load with this bullet to keep the bullet in the box
and prove that Garret was wrong..????

Buffalo

Thanks for bringing that to the front again. You are of course correct. The 500 Barnes Banded is one of the deepest divers, straight line penetration, that I have tested, and that is so consistent, even at the lower velocities. Having tested that in only 1 of the penetration boxes and both exiting, I was more than satisfied with those results, and had not really thought about doing it again with the two boxes together to trap the 500 Barnes. I think for sure, it will equal anything in the deep diving department.

Yesterday involved some work that Bikerider wanted to do with the 6.5 and some I wanted to catch up on with the 9.3. Throwing the 500 MDM in the mix with it's 550. Which I think I am beginning to realize some things between the 510 and the 550 that are coming to light now, you know, that little "Light Bulb" that sometimes comes on, but most of the time stays in off mode? Yes, something like that.

I am working on the reports now and hope I can get photos posted and reports posted on yesterdays work here in a couple of hours or so. Lot's to do with just getting the reports logged in, data recorded, photos, the works.

I will check, but I think I can run these tests Monday again with the 500 Barnes, and yes, I will try and slow one down to 1500 fps or so, maybe even less in the 458 B&M and see what happens! Thanks for the reminder, as there is so much going on around here daily, I promise I forget things!

EZ

I am no history expert for anything, but I would CREDIT Jack with a proper design Flat Nose solids that we have today for sure. I have a lot of Finn's articles, and book, and recall him and Jack testing extensively the trophy bonded bullets with different mixes of phone books, wet/dry, but I don't recall reports of them testing the Sledgehammers? I know they did, and I may have easy missed that somewhere. Anyone got anything on Finn and Jack testing the sledgehammers and the reports they gave????? It would be interesting to see what they had for results 20-30 yrs ago!

Back to work now!
Michael

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OK I think I can put this together for you now. BikeRider, Sam and myself had a great day, as stated before, we had lot's of fun, and I think we learned some things about the bullets we were testing and playing with. So I will get started on some of the things we did yesterday.

First I will start with the 156 gr Military FMJ 6.5 caliber bullets that Bike pulled from old military loads from the 1950s as I understand it. Now if I get off course, Bike, straighten me out, as this is more your project and I am just the reporter of and recorder of. If it means anything I did notice these bullets had an "A" stamped into the lead base of the bullet? I suppose the arsenal from whence they came? Who knows, I don't.

I am posting this as having some relevance to what we are doing, this is in Big Bores, I do not consider 6.5 as such obviously. But in the old days, folks and some famous folks did in fact use similar bullets to do heavy work. Even though results are incredible, not something I would recommend. Of course one finds themselves sometimes in the bush with a small caliber rifle with intents of other actions, when in fact one finds themselves confronted with an issue or problem in which they might NOT be prepared for, and their loads and bullets not prepared for a heavy mission! So if a heavy rifle or caliber not available, I suspect it is a good notion to investigate a proper bullet to handle lot's of unpredictable situations, and have a few of those in the back pocket would add to ones confidence in the field. Very much the same thing as Tanzan has brought up concerning the 250 Barnes Banded 338 caliber bullet, while hunting in unpredictable country! Well that need not be limited to a particular caliber or cartridge I think!

Anyway Bike pulled these bullets and reloaded them into two other cartridges, a 6.5X53R Dutch, and a 6.5 Remington Magnum. Not having any experience myself with either cartridge, if anyone has questions concerning these direct them to BikeRider. And of course I would leave that to him to discuss those matters.

First up!



OK I also wish to point out that over time I now only concern myself with STRAIGHT LINE PENETRATION--not total penetration. This is all I can count on for sure is to the point in which any bullet might veer off course. At a low impact velocity of 2177 fps this one did very well at 68 Inches of straight line penetration. That is tremendous with a bullet of this type I think. I would not give two hoots in hell for the nose profile, so everything else must have lined up for this, twist rate, velocity, SD, length of bullet for caliber and the penetration gods looking in?

Michael

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Now moving this bullet to a different format, the 6.5 Remington Mag and it's higher velocity.

**6.5 Remington Mag
1:8 Twist
156 Military FMJ
Muzzle Velocity 2595 fps
22 yd Impact Velocity 2555 fps
71 Inches Total Penetration
Veering Slightly off course 1.5
Inches. Nose Flattened at this
velocity.**



We could not tell a particular point in which this bullet began to veer any, but it was not very far off course in the length of 71 inches of penetration, and I don't believe far enough off course to make any real world practical difference. Velocity was right at the beginning of showing itself as you can see the flattened nose.

**71 Inches Total Penetration
Veering Slightly off course 1.5
Inches. Nose Flattened at this
velocity.**

6.5 Military FMJ





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jwp475
One of Us



posted 07 March 2010 19:09

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Perhaps the penetration king? Over 300 FPS more velocity and only 3 inches more in straight line penetration

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

Posts: **5077** | Location: **USA** | Registered: **11 March 2005**



michael458
One of Us



posted 07 March 2010 19:11

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It did not take much more velocity to cause the bullet to literally start going to pieces!
My suspicions are that these bullets were made in the 1950s, who knows what sort of metal the jacket is, brittle, age, metal fatigue, thin, or any number of factors like this would be suspect, and velocity tore them to pieces.



More Velocity--Vaporized!



If kept at low enough velocity, these did very well in the penetration department. While we did not test for such, I would be somewhat concerned about putting these through heavy bone, because of the probable metal fatigue factor.

Now these do pose some very interesting questions however. No doubt, there is great potential for a 6.5 caliber to penetrate long and deep! While not a small bore fan, I do have interest in 6.5 caliber, and in the future I might just investigate having a proper bullet made and doing a little research on that. I really have not seen any 6.5 solids on the market, but have not looked that much either. What could be done with a proper flat nose design and a bullet of 150+ grains, with fast twist rates? Interesting to say the least!

Michael

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Moving up in caliber we look at the mysterious 9.3 320 Woodleigh FMJ! As tested before, it once again did very well in the straight line penetration arena!



One thing that must be noted is that the higher velocity of only 123 fps at impact did not produce more penetration, and in fact a good bit less penetration than the lower velocity bullet. Now in days past this was a concept that I believed had great merit! But when we right here started some very serious test work at different velocities, with many different nose profiles, and twists and distances and so forth, I began to think different, nearly all our Flat Nose profiles penetrate deeper with added velocity, almost always! Now, this vastly different profile bullet, a "Rounded Flat nose" if you will permit, does the opposite?

I think one must be very careful making "blanket Statements" about solid projectiles--they tend to make a fool of you time after time it seems!

This is a fantastic bullet and one I will for sure put in my back pocket for those days in the bush with my 9.3 B&M! I would like to test it in the future against some rhino board in the T'Rex box. Would hate to see it bend or break in the field without testing it proper!

Michael

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jwp475
One of Us



posted 07 March 2010 19:37

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I have been called an "Idiot" before, because I always countered the "more velocity" means more penetration with solids, by saying "not necessarily"

A bit of testing is all one needs to know that those blanket statements are not accurate 100% of the time.

Great job Micheal458 🍻🍻🍻🍻🍻🍻

You got 2 thumbs up and a toast, Touche'

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

Posts: **5077** | Location: **USA** | Registered: **11 March 2005**



465H&H
One of Us



posted 07 March 2010 20:13

[Hide Post](#)

It does appear that there is a lot more to the penetration response of bullets than just nose profile.

465H&H

Posts: **5686** | Location: **Nampa, Idaho** | Registered: **10 February 2005**



michael458
One of Us



posted 07 March 2010 20:18

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quote:

Originally posted by 465H&H:
It does appear that there is a lot more to the penetration response of bullets than just nose profile.
465H&H

465

Yep! There is more to it for sure! But, I still will and always will contend that Nose Profile remains the lead factor overall. Not always, but overall. As we drop below let's say 400 caliber as just a breaking point, other things begin to happen. And not sure nose profile is king down below! Possibly length for caliber? Possibly the rounded flat nose profile of the 9.3 and 358 caliber woodleights? But that don't account for the 6.5 bullet? I don't know, something that one can put more study into for sure. We continue to strive for knowledge, maybe one day we will get a better handle on it, eh?

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**





Now as we move on to the 9.3 caliber 286 Barnes Banded Solid! I rarely call a bullet a total failure, but if there ever was a so called "solid" designed to penetrate and could not complete the mission, this is it and I would say this is the most dismal failure of it's sort I have ever tested in my penetration tests! All of you know, I am a Barnes Solid fan in all the 416s, and especially 458s, and most others of larger bore, but this bullet is just terrible. Can't blame it on twist rate, 1:12 does fantastic with the 320 Woodleigh! SD has nothing to do with it. Velocity high or low has nothing to do with it, as we have tested it at 9.3X62 velocities around 2300 or so I recall, same story. So I figure this, poor nose profile design. Tiny meplat, 48% of caliber. Cannot stabilize itself! Any other thoughts I am willing to listen. I figure its not really even a good Limited Penetration Solid, as you can't count on it to be consistent, even with poor performance!



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OK now we are back to my beloved .500 caliber rifles, and the 550 SSK Solid. Well I think I am beginning to catch on to a few things these days. Not near as dense as I once was. In designing the 500 MDM and it's extra power over the 50 B&Ms and other .500s, I figured it should be done with a 550 gr Solid of the same design as the 510 that has been so successful. Well I believe in the end it's ok and makes little difference, but I am disappointed that in many tests now it seems that right at the end of penetration, last inch or two, the 550 loses stability and therefore does not penetrate much better, if any at all than the 510 version at nearly any velocity. Which the 550 can be run to 2250 fps in the 500 MDM, and 2250 does provide a tad bit more penetration, a couple of inches or so. Not really enough to make much difference in the end. Now all .500s are 1:12 twists since my tests in 2006. That has been perfect for 510s and less given 100% dead straight penetration to 62-64 inches penetration. Damn, the 550 should do much better, eh? But it does not! Why? I think twist rate for this longer heavier bullet should be 1:10! That's what I think, and I think then the 550 would come to life!

Here is the issue, still 60 plus is more than enough to accomplish any mission on the planet, included TRex himself! I have two 500 MDMs now both with 1:12, and 3 more in the works, all at 1:12. It's really not worth the effort to go to 1:10 and the expense, for a little more penetration, just not practical. However, when I build gun #6, bet your ass I am going to 1:10. Until then, I think I can get by at 1:12 and 63 inches of straight penetration, and shoot more 510s anyway!



That's it boys! We did test a few other things, some smaller caliber expanding bullets. But I have already crossed the big bore line with what I have posted today anyway. So no need to push the issue eh?

Tomorrow time permitted I will do us a 458 test again, with the 500 Barnes Banded Solid, with two boxes together, and one at very low velocity as buffalo suggests. Should be interesting to get, as I like buffalo, believe that this bullet is about as good as it gets for intended mission!

Later
Michael

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michael458
One of Us



posted 07 March 2010 20:47

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quote:

Originally posted by jwp475:
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A bit of testing is all one needs to know that those blanket statements are not accurate 100% of the time.

Great job Micheal458 🍷👍👍🍷🍷🍷🍷

You got 2 thumbs up and a toast, Touche!

Thanks JWP

Damn what a ride this has been, we prove some things, disprove others, and all the time find out something new each week!

I think one of the biggest things I have learned is that sometimes there is way more to it than 1 factor alone, better take lot's of things into consideration before making a blanket statement, or come out with mud on your face I think. Also, each bullet seems to have it's own set of rules to follow, and those rules are not always visible to the naked eye, takes a bit of investigation to learn the rules! Then of course, turn right around and the rules make a fool of you!

Lot's left to learn! We Endeavor to Persevere!

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



Gerard
one of us



posted 07 March 2010 20:55

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Hi Michael,

Thanks for the twist rate you gave me for the 9.3B&M. It brings up an interesting point regarding something you mentioned about a comparison you made between the 9.3B&M and a 9.3x62. I cannot find it now but did the B&M not go deeper and more straight than the 9.3x62?

Looking at the 6.5 tests above, the 1:7 twist generated a SF of about 2.15 and the 1:8 twist gave a SF of 1.62. Despite the extra speed and the flattening of the nose (both should increase penetration), total penetration of the lower SF was less. May I suggest that SF 1.62 is too low, the bullet probably yawed through an "s" shape. The indefinite curve start position of the 6.5 from the Rem Mag suggests this. A repeat with the Rem Mag may produce sideways bullets.

The Woodleigh 9.3 320gr solids from the 1:12 twist have a SF of 2.25. Given the impact speed of around 2250fps, that would start getting a good result. As speed increases it would need an increased SF for the result to remain good. Failing more SF (twist) the result reduces.

The 286gr Barnes banded with a SF of 2 confirms this very well.

All nice and logical and in line with what we know.



Posts: **2848** | Registered: **12 August 2002**



michael458
One of Us



posted 07 March 2010 21:12

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quote:

Originally posted by Gerard:

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All nice and logical and in line with what we know.



Hi Gerard

Hope things are well on your side of the pond?

As for the 9.3X62 that belongs to BikeRider, at the time we only tested the 286 Barnes Banded in it. Bike might kick in with a twist rate, I don't know it. But it was dismal penetration results also with the 9.3X62. It did a bit better to 25 inches of straight penetration at 2377 fps and 25 inches at 2223 fps in the 9.3X62. In the B&M it was terrible tumbling at 14 inches. This again was the 286 Barnes Banded.

We did not test the 320 FMJ in the 9.3X62, it was only tested in the 9.3 B&M at 1872 fps and 2200 fps all going completely through 63 inches and exiting the box at the time.

Thanks for the 🍷 I appreciate it!

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



buffalo
One of Us



posted 07 March 2010 21:19

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quote:

Originally posted by michael458:

Tomorrow time permitted I will do us a 458 test again, with the 500 Barnes Banded Solid, with two boxes together, and one at very low velocity as buffalo suggests. Should be interesting to get, as I like buffalo, believe that this bullet is about as good as it gets for intended mission!

Michael

Yep, will be interesting to see how far a 2200 -2300f/s load will make it in the 458 Lott and as well how good a low velocity load will be..

Again Michael - amazing work and effort you put into this.. I almost cant wait for more. More. MORE!! I think I am getting addicted to this thread... 😊

Posts: **873** | Location: **Denmark** | Registered: **04 January 2005**



RIP
one of us

posted 07 March 2010 22:19

[Hide Post](#)



Bravo Doc M and Gang,
Shining through all this is the fact that it is hard to get too much twist for inside of 100 yards penetration of your test medium.
Slow twist limits your bullet selection.
Fast twist broadens the workable bullet selection for sure.

I prefer SF > 5.0 for my most trusted penetrators, 😊
and I want an FN solid of brass
about 75% meplat
and SD of 3.0 +/- 0.1
and MV of about 2500 fps, 2300 fps min to 2700 fps max

Can someone calculate the SF for a .510-caliber bullet
of 535 grains,
guessing bullet length will be about 1.450" 1.400" for this brass solid,
MV of 2500 fps in 1:10" and 1:9" barrels, and
MV of 3000 fps for starters, in 1:15" twist 50 BMG?
Even the brass FN is prone to bulge and flatten slightly at MVs over 2700 fps.
Near 3000 fps might it start to splinter, especially on heavy bone?
Something like this one: 😊

Sorry.

This Image is currently
Unavailable

photobucket

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



Macifej
One of Us

posted 07 March 2010 23:02

[Hide Post](#)

quote:

guessing bullet length will be about 1.450" for this brass solid

1.40"

Posts: **13301** | Location: **On the Couch with West Coast Cool** | Registered: **20 June 2007**



RIP
one of us

posted 07 March 2010 23:30

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Shorter is better! 1.400"!

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



someoldguy
One of Us



posted 07 March 2010 23:40

[Hide Post](#)

Another Five Star report, Michael. Thank you.



quote:

Moving up in caliber we look at the mysterious 9.3 320 Woodleigh FMJ! As tested before, it once again did very well in the straight line penetration arena!

Do I see a sort-of flat nose on that thing from the picture or do I just want to see one? 🤔

quote:

Now as we move on to the 9.3 caliber 286 Barnes Banded Solid! I rarely call a bullet a total failure, but if there ever was a so called "solid" designed to penetrate and could not complete the mission, this is it and I would say this is the most dismal failure of it's sort I have ever tested in my penetration tests!

I agree, that's a failure!
And it seemed to have everything going for it: Twist, flat nose, velocity.
But do my eyes deceive me or is the 286 grain actually the longer bullet than the 320 grain? Also, I noticed the 320 grain worked better at a much lower velocity.

Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



Gerard
one of us

posted 07 March 2010 23:58

[Hide Post](#)

RIP,
Approximately
1:9" = SF 15.1
1:10" = SF 12.3
1:15" = SF 5.5

Posts: **2848** | Registered: **12 August 2002**



Is this bullet slightly bent too?
465H&H take note!
Small meplat, ogived FN, "almost an RN--failed Nursing School,"
long for caliber and weight:



My mind is bogging still over Doc M's spread sheet, and adding all the latest to it is going to boggle me more!

Maybe High velocity (>2000 fps impact) rifle meplats work well with less than 75%, regarding penetration, but with lower velocity (handgun or << 2000 fps), penetration is improved all the way up to 78% meplat?

Maybe at higher velocity the impact is sufficient with the smaller meplat to sling the tissue/medium aside, without too much increase in resistance by larger meplat, yet enough meplat contact for shoulder-stabilization-steering to be maintained?

The slower bullet meets less resistance, impeded less for size, and requires the larger meplat for best efficiency at getting the tissue/medium to clear out in a radial direction from bullet path?

Faster twist does not interfere with any of that. Just a little bit of extra stabilization in that cavity around the bullet's sides and backside. If dealing with cast lead boolits, maybe you have to go as slow as possible with twist, but with the brass and copper FN's, no stripping worries.

Posts: 28032 | Location: KY | Registered: 09 December 2001



quote:

Originally posted by Gerard:
 RIP,
 Approximately
 1:9" = SF 15.1
 1:10" = SF 12.3
 1:15" = SF 5.5



Now we are talking stability factor to spare!!!
Not for 1000-yard shooting through air only, eh?
That bullet in my fast twists will keep pointing forward parallel to the bore of the gun, good for straight penetration at close range, not for lobbing at 1000 yards!
Thank you very much, Gerard!

Posts: 28032 | Location: KY | Registered: 09 December 2001



someoldguy
One of Us



posted 08 March 2010 01:38

[Hide Post](#)

quote:

Is this bullet slightly bent too?

It does look bent! There appears to be a slight curvature towards the base.

Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



Macifej
One of Us

posted 08 March 2010 01:57

[Hide Post](#)

quote:

Near 3000 fps might it start to splinter, especially on heavy bone?

I'll replace 2 for 1 any of our bullets which splinter on a non metallic target. We've tested on much tougher media than animal bone.

Posts: **13301** | Location: **On the Couch with West Coast Cool** | Registered: **20 June 2007**



RIP
one of us

posted 08 March 2010 02:10

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Oh yeah, I forgot, those .338's went to +3000 fps in the IWBB, no splintering or shattering, just bulging and shortening and the occasional banana bend, with those funky, long, skinny ones. These compact for caliber and weight .510/535 grainers of .294 SD should be impervious to 3000 fps. Peddle to the metal, and it just gets better. Especially with a fast twist.

Tough brass balls, er, bullets. 🤔

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



Macifej
One of Us

posted 08 March 2010 02:19

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Is the IWBB still in hibernation ..?? Might be interesting to compare Michaels sopping cellulose tests to an agua based test ...



Posts: **13301** | Location: **On the Couch with West Coast Cool** | Registered: **20 June 2007**



RIP
one of us

posted 08 March 2010 02:35

[Hide Post](#)

Yes,
"IWBB" is still out to pasture.
Grazing on free range.
I will resurrect it with SIM-TEST, when the time is right.
It will then be called the "STAB."

SIM-TEST ARTIFICIAL BUFFALO.

Step by step on my limited budget.
Wife is looking forward to a new refrigerator.
Plan to have 4"x4"x8" bricks of SIM-TEST lined up in the Iron Buffalo skeleton, with 8-foot-long planks of pine forming sides and top and bottom covers for the bricks of SIM-TEST.
FNs only allowed, three shots per brick.
2 inches of space between impact points and sides of brick, all around.
Valid uniformity for 3 shots in one setup.
25 yard range impact point.
I can shoot the nads off a gnat at that range with anything. 😊

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



Macifej
One of Us

posted 08 March 2010 02:51

[Hide Post](#)

Looking forward to your BMG STAB test ... 🤖

IWBB - Internally Wet Bullet Buster

Posts: **13301** | Location: **On the Couch with West Coast Cool** | Registered: **20 June 2007**



buffalo
One of Us

posted 08 March 2010 17:40

[Hide Post](#)

quote:

Originally posted by michael458:
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Michael

Hope you get the time you need soon Michael.. 😊 I am waiting very unpatiently.. 🤖🤖🤖

Posts: **873** | Location: **Denmark** | Registered: **04 January 2005**



michael458
One of Us



posted 08 March 2010 18:13

[Hide Post](#)

Walking to the range right now, was on the way out when the phone rang. Have to test some 500s in the 458 B&M to get velocity down in the 1500s, then it's hit the box for sure. Give me a little time, I will getter done this morning, morning my side of the pond!

Michael

<http://www.b-mriflesandcartridges.com/default.html>

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



buffalo
One of Us



posted 08 March 2010 18:20

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