

# THE ACCURATERELOADING.COM BIG BORE FORUMS



Moderators: GeorgeS

Go New Find Notify Tools Reply

## Terminal Bullet Performance

[Login/Join](#)



**capoward**  
One of Us



posted 31 December 2009 23:25

[Hide Post](#)

quote:

There is some mistake here!

Alf,

Your metaplat percentages are off for the Superpenetrators:  
.28 / .458 = .61135 or 61%  
.279 / .416 = .67067 or 67%

Also the SST 550gr bullet is .500" diameter, not .510" as you show, and I believe the metaplat diameter is .350" or 70% of major diameter...though I believe most of the bullets are actually .499" in diameter @ 550gr, at least the few that I possess are, with a .350" diameter metaplat so I guess that would be 70%.

Jim   
"Life's hard; it's harder if you're stupid"  
John Wayne

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**

**ALF**  
one of us

posted 01 January 2010 00:40

[Hide Post](#)

Posts: **7852** | Registered: **16 August 2000**

**Con**  
one of us

posted 01 January 2010 01:56

[Hide Post](#)

quote:

Originally posted by ALF:  
So here we go again ! what are we to deduct from all of this if anything.

That in the year 2010, we are spoilt for choices! Use what gives you confidence as there are many fine choices for the discerning hunter.

Is it possible to say that the lighter weight monolithic is as good a choice as a traditional weight conventional solid?

Michael ... you really need to put a 325gr Woodleigh from a 45/70 through your test box. That will get us all hot and flustered.   
Cheers...  
Con

Posts: **2198** | Location: **Australia** | Registered: **24 August 2001**

capoward  
One of Us



posted 01 January 2010 02:04

[Hide Post](#)

quote:

Originally posted by Con:

quote:

Originally posted by ALF:

So here we go again ! what are we to deduct from all of this if anything.

That in the year 2010, we are spoilt for choices! Use what gives you confidence as there are many fine choices for the discerning hunter.

Is it possible to say that the lighter weight monolithic is as good a choice as a traditional weight conventional solid?

Michael ... you really need to put a 325gr Woodleigh from a 45/70 through your test box. That will get us all hot and flustered. 🤔

Cheers...

Con

+1

Alf, not quite sure what you're attempting to determine from your chart.

However, I can see two items that are missing from your data capture that in the end would likely have an impact upon any assumption(s) that could be drawn from such a chart. You need additional columns to capture:

- 1) Actual bullet major diameter aside from the caliber. And,
- 2) Twist rate of rifle used in the testing.

Jim 🤔

"Life's hard; it's harder if you're stupid"  
John Wayne

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**



ALF  
one of us

posted 01 January 2010 04:41

[Hide Post](#)

Posts: **7852** | Registered: **16 August 2000**



jwp475  
One of Us



posted 01 January 2010 05:02

[Hide Post](#)

quote:

or does an incredible SD of .911 at impact of a 500 gr 458 superpenetrator with a

I don't think the SD is that high

-----  
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**



Macifej  
One of Us

posted 01 January 2010 05:38

[Hide Post](#)

quote:

Originally posted by DWright:



Now my biggest fear in all of this is that the charging Elephant or Buff may not be able to read. . . . .



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



capoward  
One of Us



posted 01 January 2010 06:08

Hide Post

Alf,

quote:

Originally posted by ALF:  
I'm not trying to prove anything, it you guys who are coming to or making conclusions with these tests.

You obviously are again trying to prove that you are the only individual with any knowledge regarding bullet performance... after all it is your chart and with your pseudo sectional density computation.

Had you paid closer attention, Gerard obviously considers twist rate to impact the stability of his bullets:

quote:

Originally posted by Gerard:  
Thank you for proving what I first said in 2001 and many times since then. "Also rather use the 380 gr FN than the 410 gr FN. A couple of PHs twisted my arm to produce the 410 and, after they tested both, no one is buying the 410 for the 416 Rigby or the 416 RM."

The 410 works in Ulriks 416 because it has the tighter twist.

So why should I not believe that Gerard understands his bullets better than you.

quote:

Originally posted by ALF:  
You see physically paper is a woven composite, not much different to Kevlar ( bar off course the tensile properties of Kevlar) ... and to my knowledge pointed projectiles penetrate kevlar better than bluff nosed or flat meplat penetrators ? So where to now?

A pointed thin blade penetrates Kevlar best of all. So what? I don't recollect anyone except you comparing stacked new papers and magazines to Kevlar.

RIP has stated that you really know your stuff and asked that you be given some slack; I now wonder if he was just pulling my leg. To date you've only pissed on the legs of everyone regarding the work that Michael458, plus any other individuals, who have done bullet testing and bullet penetration test and have presented their findings on this forum. Unfortunately you've forgotten to look at your own feet as you're soaked from the zipper down...

As I've previously stated, I do not have the experience and bullet performance knowledge that many on the AR forum have from their many years of hunting and shooting. I participate on the AR forum, as well as others, to learn from those willing to share their knowledge and experiences and to offer what little bit of knowledge or information that I may possess.

If you truly are a sage of ballistics, bullet wounds, and bullet performance on game of varying sizes in the Western Hemisphere and throughout Africa then it's time for you to initiate your own thread and produce the evidence of your words. Let all forum participants see the documentation and photographs to support your claims. I look forward to reading your thread, I truly do. And I promise not to piss on your leg while you're presenting your evidence.

However, should you only continue to poo poo everyone else's work efforts and comments then I'll have to consider that you truly have nothing of value to present to forum participants, specifically to me, and I'll just put you on ignore as an individual having nothing fruitful to add to a discussion.

Hope you have a safe and happy New Year.

*Edited to correct spelling. DWright has quote of original spelling*

Jim 🙄

"Life's hard; it's harder if you're stupid"  
John Wayne

Posts: 4954 | Location: Central Texas | Registered: 15 September 2007



DWright  
One of Us

posted 01 January 2010 06:47

Hide Post

Original posted by Capoward:  
RIP has stated that you really know your stuff and asked that you be given some slack; I now wonder if he was just pulling my leg. To date you've only pissed on the legs of everyone regarding the work that Michael458, plus any other individuals, who have done bullet testing and bullet penetration test and have presented their findings on this forum. Unfortunately you've forgotten to look at your one feet as you're soaked from the zipper down...



Well spoken Capoward!



Bravo!

I for one truly enjoy and have learned a bit from Michaels testings. And just because he is not too fond of any .375, (my favorite cartridge), well, that's OK to. I'm pretty sure he was dropped on his head as a young child, so cut him some slack! I'm personally willing to head up a new charity for the 'Michael foundation', to help cure his Super big Bore fixation, and that nervous tic in his right shoulder, as well as his studder problem. Now I would like to hear more from Michael's testings, so if anyone has anything contrary to say that may cause him to stop sharing his findings, then this is for you!



Now, since my Ex wife always said that I was the epitomy of this 'Sexual Density' thing, then I for one would like to learn more about it!  
Cheers all, and have a great new year.

<http://www.mazamasportingggoods.com>

Posts: 1324 | Location: Oregon rain forests | Registered: 30 December 2007



ALF  
one of us

posted 01 January 2010 07:12

Hide Post

.

Posts: 7852 | Registered: 16 August 2000



**someoldguy**  
One of Us



posted 01 January 2010 07:15

[Hide Post](#)

I'm also a student of terminal ballistics and I have to say that this is truly one of the most engrossing threads that I've read here so far. Thanks for the great work, Michael458.

But of terminal ballistics I'm only a student. I'm not an expert, a scientist, a professor, and I'm certainly no engineer. Heck, I've only ridden a train one time that I remember. 🚂

So I'll go back to lurking now, where I belong. 😊

-----  
Glenn

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



**capoward**  
One of Us



posted 01 January 2010 07:33

[Hide Post](#)

Alf,

Michael458 has written up his hunts, shown the pictures and shown the retrieved bullets. He's conducted bullet tests in his personal laboratory, shown the pictures, and has shown the bullets side-by-side retrieved from game animals and paper test materials. All of this at his own expense, for his personal knowledge, and we've been fortunate enough that he willingly shares it with AR Forum participants.

So far these past few months you've poo poed it all, you've quoted other individuals books and dissertations, and yet when asked on a number of occasions you still fail to present the results of your personal hunting efforts, your personal test results, all supported by photographs... though I've asked you to do so on multiple occasions in more than one thread.

I also asked you to present us with the shape and composition of the "be all to end all" bullet from your wealth of knowledge and experience; this is now at least the second time that I pose that question to you. Do you have an actual answer?

Extract yourself from your exacerbated professor to a room full of illiterate students and start your own thread, give us the facts and photographs of your tests supported by your hunting results...you can even summarize your perception of your findings but I'm sure we'll all draw our own conclusions. Again, I promise to be supportive. It's a new year, well a few more hours to go for me but perhaps not for you. Give it a go.

Cheers.

*Edited to correct spelling*

Jim 🤔  
"Life's hard; it's harder if you're stupid"  
John Wayne

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**



**someoldguy**  
One of Us



posted 01 January 2010 11:07

[Hide Post](#)

quote:

meplats

I don't know how significant this is to the rest of you, but from my own independent studies I've found that the meplat diameter of flat-nosed bullets is generally in the range of .13 and .18 less than the bullet diameter. This is for calibers of about .375 on up. So a .458 caliber bullet generally will have a meplat of about .328 to .279 inch, etc. However, one of the wetpack penetration tests I've read elsewhere don't really favor bullets with meplats much greater than .15, like I might have expected.

Admittedly, the only bullets that I've looked into were between .375 and .500 caliber. This general tendency may not apply to bullets greater than .500".

Anyway, I thought this trend was interesting.

-----  
Glenn

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



**ALF**  
one of us

posted 01 January 2010 16:55

[Hide Post](#)

Posts: **7852** | Registered: **16 August 2000**



**michael458**  
One of Us



posted 01 January 2010 18:51

[Hide Post](#)

Whew, I see it was a busy night last night! I hardly know where to start! Jim has done as always, an excellent job of getting to the bottom of most things in my absence, in most cases I think even better than I could myself! So there is very little I can add to what he and DWright, Con, and our new man, someoldguy (get to you later, but welcome, and glad you came out from the lurking stage), however there are a few points I am going to cover and go over because of my experiences in this area of concerns. I will try to go over them point by point to keep things in order.

But let me not be rude of course, Top of the day to you Alf boy! Since most of the questions originate from your end, the following will address you directly!

First to address, From Alf  
"How do you conclude based on the tests how twist and stability pre impact has anything to do with the outcome?"

Well Alf, I have stated this before I am sure, but in 2006 when attempting to come up with proper solid bullets for my .500 caliber rifles I ran deep into twist and stability issues. Our first .500s were 1:18 twist rates from PacNor. Wonderful accuracy with nearly any sort of .500 caliber bullet at the time. Tests with all expanding bullets in the wet print mix were great, really no stability issues at all with those during terminal penetration. But when I first started testing some of the round nose brass and copper solids I started working with, terminal stability was horrendous. One could not get straight line penetration at all, curve, veer, tumble off course! No confidence at all in these. Well, not enough time to redesign and wait, I had a shooting trip to RSA to give the first 50 Prototype a go. Make no mistake, it was a shooting murdering spree to test bullets and had crap to do with hunting. 4 days, 18 animals on the ground from impala to giraffe, including several wildebeast, zebra, eland, along the way. At velocities I was running in the 50 and 1:18 twist barrels all expanding bullets performed exactly as expected, and exactly as they did in the wet print tests before hand. In addition to that, so did the

round nose solids, I watched them curve and tumble in animal tissue, sometimes even taking a 90 degree turn and exit the animal at an impossible angle. Even shot one eland from the rear and saw the bullet exit the top of it's back and hit a tree limb above it! I knew at that point something had to be done! I was offered a deal on 4 elephants while I was there on this trip, but refused them because I knew for a fact that I did not have an adequate load or bullet with me on this trip!

When I returned from this we set to work in a fury. I went from brass to copper alloy, increasing the weight by 6%. I added length to the bullet to get it up to 512 grs in .500 caliber. Testing I was able to get them to 2100 fps in the finished current 50 B&M. In two weeks time we had a new 1:12 twist barrel to test. Now I can go and look up exact numbers for you, this is stated somewhere, I think even in this thread, but since I am not in a research mood this morning I am not doing that again. Instead what I will tell you is that terminal stability increased dramatically with that sorry assed designed RN solid! It increased direct straight line penetration substantially, somewhere I recall 30% or more. For a fact I can tell you that straight line penetration in 1:12 went to 90% of it's total penetration, as compared to 50-60% with 1:18. So without doubt at all, twist rate has a tremendous amount to do with terminal stability. Extremely important fact especially concerning RN designs! I will bet my left N\*T right now, that in my 458s if I had a faster twist rate in the barrel, the 500 Woodleigh FMJ RN would do better too!

From that point on we flattened the nose on that same bullet to a .300 caliber meplat, it came out from 512 grs down to 485 grs, and then penetration increased once again far exceeding that of the 512 gr RN solid, and 100% straight dead line penetration. Along with this we worked with 3 other designs and weights, and while I keep all of them on hand, and have used all of them on buffalo, and other animals, I like our final 510 gr and 550 gr .500s that have a Barnes like profile with a .350 caliber meplat. I have tested these on a very limited basis in 1:18 twist guns and penetration is very good, and 90% straight line penetration, indicating to me that in some cases the flat nose profile can help over come some twist stability concerns. Very limited test however that I have not got back to to 100% confirm. In a recent test with some GS Customs tested in 416 Rigby and my own 416 B&M these 410 gr GS Customs seemed to be stable in the Rigby, but not so in the B&M. The B&M has a 1:14 Twist, and according to Gerard, RIP and others, that is the stability issue, and I concur with that 110%. As it seems they do stabilize in 1:12. The lighter weight .416 370 gr North Forks gave excellent penetration in the 1:14 twist, just as Gerard recommends his own 380 gr version as having that same stability, it seems to be 100% correct on that point.

So Alf, it seems to me it is very obvious to me as a student only of terminal ballistics that twist rate is indeed an important factor.

Second Question to Address;

"How do you conclude that a certain meplat size has anything to do with the outcome?"

It is my conclusion that meplat size on the lower end to establish terminal stability, with all other factors being corrected, is around, close to, or at 60% of diameter of said bullet. How do I conclude that? From the test work of course. Is that correct or not? Well it seems to be so in the test work, and it also seems to be so in the field on buffalo, elephant and said critters! One bullet that comes to mind that meets this exact criteria is the Hornady DGS with it's small for diameter meplat. While this bullet does not test so well, it is and does seem to be more stable than without the meplat. In the field I have not used it, but 465HH just a couple months ago used it on elephants with great success, and as best he could determine did in fact get good straight penetration from them. The meplat, best as can be measured is 60% of diameter on the 458 caliber versions, which are the only ones I have dealt with. Based on this information, currently until proven otherwise I maintain that for my purposes bottom end size of meplat for reasonable and good penetration should be at 60% of diameter. I believe that below that mark stability that is enhanced by a flat nose meplat is decreased to the amount of not being a factor at all.

My largest meplat/diameter ratio is 70% with my .500 caliber solids mentioned above. It is wonderfully superb in terminal penetration, all those that come in at 65%-68% of diameter show great terminal stability right up to the end. I think the new Woodleigh Monos that Con sent to test have a meplat that is 73% of diameter, and penetration was fantastic with a light for caliber bullet! So from my experience getting close to 70% meplat of diameter is performing extremely well. My experience with above that is limited. However, JWP475 and Whitworth have a tremendous amount of experience with meplats above 70% of diameter and they state that a bullet that has a meplat of 80% of diameter is the top end, above that mark that penetration actually starts to decrease, if I understood that correctly. So based on that, I conclude that 80% is the top end of that issue. I have complete confidence that Whitworth and JWP have that covered and I will bank on that!

So Alf, I think meplat size makes a difference. For me, I like somewhere around 65% to 70% or better of diameter, makes me all warm and fuzzy inside! As long as it feeds and functions through the firearm proper. With that in mind, I think one can drop that to 60% and still be good to go!

NEXT on Alf's List is;

"So here we go again ! what are we to deduct from all of this if anything."

From the "almost" halfway correct data that is mine, my numbers, that you have so wonderfully put together and posted you ask what we deduct or "conclude" from that data alone. As you notice, all these bullets are basically FN designs, different nose profiles, and all perform better than any RN design. That is #1 Conclusion. The #2 Conclusion is that they all perform very close to each other and if twist rate of the barrel is correct then in most cases there really is not a lot of difference in the designs. We can conclude many things from this data, but those are two that are the most important in my mind. A wonderful example is to look at the two .458 caliber 450 gr bullets, North Fork and Barnes Banded. Both radically different nose profiles, some small differences in meplat size, velocity the same or close, terminal penetration, exactly the same. Conclusion, both designs work proper! That's easy to discern? What is the problem with that?

Next;

"Does this mean that Norbert's 458 is no good but the 416 is? do GS customs actually tumble as shown? All very confusing would you not say?"

Obviously you did not comprehend what I wrote and stated above. No, the design is good, I think it is a problem with QUALITY CONTROL and possibly bullet material. They appear to be soft, even giving some compression before and after. I think bearing surface is soft, and in the case of the 458 undersized at .456, as I recall. I thought I made that clear? Obviously not or you would have seen that? I think it is a stability issue that has nothing to do with the design at all.

Next;

Now it starts to get fun, eh Alf?

"Oh what's that about twist rate and stability at 22 yards from the target?"

Oh Alf, boy, this is one I have been waiting to get to! Yes, what about testing at short range? What the hell value is testing at 20 feet, or 22 yards got to do with anything?

Well Alf, boy, showing your ignorance now concerning big bore rifles and hunting dangerous game, which is lion, bears, elephant, buffalo, hippo and probably a few more.

Alf, one does not shoot dangerous game at 100 yds or 300 yds! What is the point in that? To be honest with you, I think a fellow that shoots beyond 50 yards may be committing a "Sin"! Now I am not perfect, and there have been a couple of occasions that I have killed dangerous game beyond 50 yds, but that is a very very small percentage of my overall record! And the only reason for doing so at all was in all instances my time was getting short, and my "Blood Lust" was getting very high! I have shot lions at 12 yards, I have shot buffalo as close as 15 yards, I have shot bears as close as 6 feet, I have shot elephant as close as 9 yards, I have shot hippo as close as 6 yards! I love to start off with buffalo well under 30 yards if at all possible and have done this on many occasions!

So you ask why test this at 22 yards? Jesus H man, 22 yards is getting to be LONG RANGE for dangerous game! So testing at all various SHORT RANGE has tremendous validity in this sort of business!!!!!! Hell I like doing the tests at a matter of feet instead of yards, because in the field one may very well need to know what is going on with ones bullets at very very close range!

I have this in Big Bores, because that is my primary interest in terminal ballistics, bullets, firearms! I use Big Bores far more than anything under .400 caliber. My own personal statistics show me that 64% of all the animals I have ever shot are with caliber from 416 up. 27% with calibers between 338 and 358 caliber. Only 9% with calibers below 338. Now in all my

big bore days, I work at 50 yards. Load data, accuracy tests, some bullet tests, but most of them are at 22 yards and less, and have done so for years and years! Very little point in shooting big bore rifles past 50 yards except for fun and giggles! They will shoot well, and I have done some accuracy tests at 100 yds and beyond for fun. But the very use of a big bore rifle is for up close encounters with nasty critters that bite you, bump you and stomp you! Only a cowardly bastard goes with the intent of shooting these fine creatures beyond a reasonable close range encounter! What is the point? Of course, "blood Lust" can take over sometimes, but one must try to control oneself on occasion! I did murder 1 bear one time at a longer range, and I did murder a poor buffalo once at 90 yds. Shame on me, and yes I committed a sin as far as I am concerned, but I always want to be close if at all possible! I shoot better for one thing when things are close! I am able to control the situation better if I am close! Less time for animal to get away or not get a couple more shots in if I am close. So the very point of testing our bullets close is EXTREMELY VALID--AND of THE MOST IMPORTANCE!

You also miss the very jest of test work itself! One does not wish to test our bullets and be easy on the bullet? Why would one do so? We must test under the worst circumstances possible, not the best of conditions! We must determine at what point our bullet will fail, that may be the very point we run into in the field! It is of great importance we put stress on our bullets to test in worst case scenarios. This should be obvious and logical. To do anything else is foolish, and a waste of energy and time!

NEXT;

"As I say very very confusing or perhaps an indication that somehow, just somehow these paper tests whilst affording us with entertainment are literally not worth the paper they are tested on?"

I suppose the very fact that you state you are confused would say all that needs to be said. If you are unable to see validity in any of this, then there really is not much hope of getting you set straight, of course that is assuming that is truly your goal, or your agenda, which right now I am actually beginning to wonder what your exact agenda is? While it might seem "entertainment" to you, which I am glad you get something from it, it's real world to me. As I have more than proven over many years shooting, the tests have validity. I have also stated, the tests are not animal flesh an not attempting to be, but it sure is funny how what works in the tests sure does work on animal flesh! Hmmm? Point to ponder! Any fool can see that, don't have to be rocket science! So Alf, on this statement, I confront you direct and hard, "Your statement is nothing but Bull Sh\*t" End of story! Not sure what your agenda is, but it has no worth here with me. Jim is right you know, RIP gave you a pass, and on RIPS recommend you got a pass, but you go too far. No pass, no more, with me!

"416 beats out the 458 on penetration depth.."

Totally taken out of context. This is explained with the Super Penetrators. When comparing apples with apples, twist rate proper, nose profile same a 400 to 410 gr 416 at 2300 fps or so, and a 500 gr 458 at 2150-2250 fps penetrate about the same in case after case. Same with 416 caliber 350-370s when compared with 458 caliber 450s! What you twist around is just some recent tests with some GS Customs and Super Penetrators, and make a general statement of that, BS again!

\*\*\*\*\* Another stacked paper shooter was one Mike Lagrange, quite an accomplished elephant shooter of yore so I'm told by those we know him or knew him..... his stacked paper tests actually showed quite the thing, that a solid fired from a 30-06 actually outdoes the whole lot here and the 375 follows hot on it's tail, beats out all the big bores..... what now ?\*\*\*\*\*

And what the hell sort of point is that Alf? So what? What does that mean? I believe it! Wow, now what? Look dumbass, I tested recently a 320 gr Woodleigh FMJ 9.3 caliber bullet that went completely through 62-64 inches of material, including 2X6 at the back, drove another 20 yards and stuck dead straight into the concrete block wall, so much so it took me 30 minutes to dig it out proper! Extremely deep, straight and powerful penetration! I would be a good design 30/06 220 gr bullet that is stabilized would do the same! We also tested some 6.5 caliber 156 gr FMJ RN designs that drove completely through the test box too! What is your point? In many many cases this beats the hell out of a lot of, or most of the big bore bullets, so what the f\*\*\* is your point? Pointless is the point!

Now let me explain over and over and over, our point here is to give us some sort of idea of how a bullet will perform in an equal test medium against other bullets. We have in fact learned a great deal with this work, good enough to take it to the field with GREAT SUCCESS, each and every single time.

Now since this is big bore, I try to abide by that, since 6.5 and 9.3 do not qualify for that, it is not included. It has been posted, but not really included as such. And since this is big bore, and my interests are buffalo, hippo, and elephant, I won't be including it, as I do not ever intend to hunt any of these with 6.5 or 9.3 for that matter. Now since I might be caught out in the bush chasing a kudu or such with a 9.3, I might very well have some of those wonderful 9.3 caliber, 320 gr Woodleigh FMJs in my pocket, JUST IN CASE! And the same might apply to 338 and 358, and I have done exactly that with both those calibers, JUST IN CASE!

Now, as stated, your grace period is over, I think with most on here and for me in particular. While you have seemed to attempt to contribute, I now think you must have a separate agenda, what that might be I don't have a clue, nor do I really give a sh\*t! Now if you don't agree with what I do, I don't have a problem with that, that's your opinion, and we all have one and we must carry on with what we do one way or the other. But what I won't abide by, is half lies, half twists, and half BS that you spouted the last couple of days to do little but attempt to discredit the work done. Being a Southern Gentleman, as much as possible, I see that as being rather "RUDE" on your part, and do take offense to "Rudeness" in individuals. Now if your agenda is to do little but try to upset me, then you have really failed on that part, while you may think I am upset over this, you would be incorrect. While I do my best not to be rude, I must say Alf, that really when we get down to it, what you think, or your opinion, it really does make little notice to me. It's almost as if it really does not make a hill of beans, one way or the other to me. You see, I have little regard for your kind, it's almost as if you never existed, and mean nothing. So with that said, please do not attempt to apologize, should you feel the need, as there is nothing to apologize for, I am not upset at all. Offended by rudeness yes, upset, angry, not in the least! Either you are a fool, or you have some other sort of agenda, and Alf, even though I have little regard for you and your words, I really do not think you are a fool! If you wish to take that as a compliment, you may do so! But otherwise, your agenda does not really concern me. Now, I could be wrong about this, and if so then I in fact apologize to you, but from some of your off comments I can only conclude that you have another agenda. So be it. Have fun! I am!

Now, enough time wasted on this I think! Oh wait, just one more thing, Alf, you eluded above something along the lines of data getting processed into some sort of publication. I in fact have been asked about a publication, but have refused such on the basis that I really have a poor command of the "Written English Language" and even more so, since those things can be fixed, I refuse on the basis I would not wish to appear as some sort of "Self Proclaimed" expert like so many of today's BS gun writers! I would rather have a little more "dignity" than that, and would hate to be compared in that light with my fellow peers! And even if I were to have that agenda in mind, why would I share all this wonderful data with you? No, I won't be doing a book thank you, or even an article on the subject! Just not my style you see!

Thank You

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"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

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



**michael458**  
One of Us



posted 01 January 2010 19:04

[Hide Post](#)

Whew, now that stupidity has been addressed and sorted out, on to more fun and play I say!

First on my agenda (MY DAMN THREAD---MY DAMN AGENDA) end of story!

someoldguy

WELCOME to the thread and so happy for you to join and come out of the shadows! Thank you for your comments! I love the comment about the train and engineer, Great!

I am pleased you are no longer a "lurker" and think you just might be able to contribute quite a bit.

In fact, all Lurkers out there, please feel free to join in! All those other testers out there, I am sure you are there! Please join in with some of your results too, does not matter the medium, or methods, there are things to learn from any sort of tests done. Observations on animal tissue, I am sure there is lot's of that, I would love to hear it! Bullet performance on animal tissue, very very much needed, wanted, and welcomed. Please add to the thread for us all! You are welcomed to do so!

Thanks to All

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"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

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



**DWright**  
One of Us

posted 01 January 2010 20:14

[Hide Post](#)

Come on Michael. . . . tell us what you really think!



<http://www.mazamasportinggoods.com>

Posts: **1324** | Location: **Oregon rain forests** | Registered: **30 December 2007**



**michael458**  
One of Us



posted 01 January 2010 20:48

[Hide Post](#)

DWright

Very little gray area with me (unless you spell it "Grey" as in Goose) HEH!!!!!!

Did you think I forgot about you? Not on your life, going up to your last post now and going to reply to your smartass too!

OK so you have been digging in a little family history I see! Who told you that my dad dropped me on the head, down the brick stairway when I was little? WHO told you this, I demand to know? That was a family secret and not to be shared! I was dropped on the 3rd stair down, I bounced to all the way to the 7th, and hit it so hard it knocked me back up to the 5th one! Now can you see the correlation between this incident, very early in my childhood, and the way I feel now? I do take drugs for this affliction, and that is the only thing that keeps me calm these days! Drugs and Grey Goose slow the stutter somewhat, but still have the shoulder tic! Doc says that is here to stay! Along with the horrible incident on the brick stairs. OK, the secret is out now! What next?

I'd like to learn more about this ""Sexual Density" thingy too! Let me go see if my beautiful sexy much younger than myself wife has any ideas about that?? HEH HEH!!!!!!



Boys, it's a good thread and I have and do and will continue to enjoy, I hope we learn, I am. Detractors, well what do you expect, pay it little attention. I have to address it, but it truly is a waste of time, and time that could be spent in a more meaningful manner for sure! I also very much appreciate all the positive support given, not only on the thread itself, but from an unbelievable amount of PMs and private support behind the scenes of this thread that have not been made public. Much work has been done by all. I can tell you this from real world experience, these tests can and have assisted me over the years with making the right choices, every single time a bullet does well, succeeds in the tests, it will also succeed in the field! 100% of the time! I have had some failures in the tests, and those same failures have showed up in the field, and at times have been costly! So these days I pay a little more attention to the test work than 15 yrs ago, and I collect more data than then too. Valid? I believe it is so! Animal Flesh? No it is not as no test medium is other than live test animals, it seems I do both. A reasonable medium in which to test bullets for what we intend to do later in the field? Yes!

Thanks

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"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

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



465H&H  
One of Us



posted 01 January 2010 21:41

[Hide Post](#)

It appears to me that most on here really don't understand where Alf is coming from and why. Obviously he comes from a scientific background, probably a research background. Consequently, he looks at tests as scientific research. Few on here have any knowledge of the Scientific Method of testing for observed differences. First of all it usually requires hypothesis testing. You come up with a hypothesis such as "As meplat size increases penetration also increases". Then you take the Null hypothesis meaning the opposite of your hypothesis and test it. Next you must determine the sample size necessary to eliminate random error affecting your results. The simplest test involve a single variable such as meplat size. All other potential variables must be eliminated. Among others that means the same projectile velocity, caliber bullet weight etc, etc, etc. After all of that the results are evaluated using statistical techniques appropriate to the test protocol. This ends up giving you an estimate of the odds that the result you observed is not due to random chance and also sets some confidence limits on those estimates. Usually the confidence limits at the 95% level but sometimes 99% is used. If you use the 95% CI then what you are saying is that if you repeat this experiment twenty times you will see this result 19 times.

All of our tests whether in live game or test media are suspect because we do not use true scientific tests. That doesn't make what we do worthless but it should admit that we could be wrong and possibly very wrong.

465H&H

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



someoldguy  
One of Us



posted 01 January 2010 22:52

[Hide Post](#)

quote:

WELCOME to the thread and so happy for you to join and come out of the shadows!

Thanks for the kind words and the welcome, Michael. I've actually been rather in awe of your thread. Your thoroughness is amazing.

Further proof that I'm no engineer: I also confess that I fail to understand why they call it a train "whistle" when it's so damn loud! Gee whiz! 🤔

A few thoughts about some of the matters at hand.  
Bullet twist rate makes sense to me when it comes to terminal performance. Because if the bullet isn't going to stabilize in air because of an unsuitable twist rate, it obviously isn't going to stabilize within your target. About a possible "drilling" effect of the bullet within the target, I just couldn't say.

Sectional density (as opposed to "sexual density", which must pertain to another kind of "penetration" 😊) I believe that the usual simple formula which we all know just won't do if we're trying to relate sectional density to terminal performance. I think we should be concerned about the surface area of the penetrating surface of the bullet. For instance, we know that the "popular" sectional density of a 500 grain .458 bullet is 500/7000/.458/458 or about .341. This is really meaningless because a bullet's penetration surface isn't square shaped. And we know how some bullets are shaped, don't we?  
They're sometimes round nosed, much like half a sphere, and they're sometimes flat nosed, like the top part of a cylinder (the top of the can.)

And these are just a few of my thoughts so far. I may have more, as long as Michael doesn't run me off. 🍷🍷🍷

-----  
Glenn

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



capoward  
One of Us



posted 01 January 2010 23:25

[Hide Post](#)

Alf,

Good morning to you also and I wish you health and prosperity in the new year.

I believe Michael458 has responded to all of your comments so I'll not undertake that endeavor.

Ok, you have nothing but your recollection; I understand. Perhaps as 465H&H suggests you dislike Michael458's efforts as they are "unscientific".

I believe Michael's hypothesis could be summarized as, "*Flat Nose (FN) monometal bullets having a metaplat between 60% and 80% of the bullet's major diameter when fired in a rifle having the proper twist rate to stabilize the bullet can reliably be expected to maintain straight line penetration in test media comprised of a combination of news print and magazines to a greater depth than Round Nose (RN) monometal or traditional-solid-construction bullets, and that this bullet performance successfully transitions to comparable straight line penetration performance within heavy boned dangerous game.*"

Perhaps the simple solution to this dilemma, if 465H&H is correct, is for you to establish the appropriate testing methodology to prove or disprove Michael458's hypothesis. And then for you, at your personal expense, to conduct the entire testing process in accordance with your testing methodology and to then periodically post the results of your tests in a thread that you initiate on the AR Forum for all to read and follow your progress. Obviously at the conclusion of your testing you will have either proven or disproven Michael458's hypothesis.

Michael I hope this suggestion is ok with you as I didn't ask your permission before hand.

Alf, there it is. That's what I'd like you to do so that we can properly resolve whether Michael is correct or incorrect.

Jim 🤔  
"Life's hard; it's harder if you're stupid"  
John Wayne

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**





Con  
one of us



posted 01 January 2010 23:34

[Hide Post](#)

quote:

Originally posted by 465H&H:  
All of our tests whether in live game or test media are suspect because we do not use true scientific tests. That doesn't make what we do worthless but it should admit that we could be wrong and possibly very wrong.

465H&H

This is true enough and a valid point to make. But damn it would be an expensive and possibly futile endeavour when you start considering 'real animals' and the variety of targets they present in that species vary in their composition, where hit etc etc... The variables are infinite.

Michael stated the following: "We have in fact learned a great deal with this work, good enough to take it to the field with GREAT SUCCESS, each and every single time."

I agree with the above in that the thread has shown what can be taken to the field with a greater degree of CONFIDENCE. In a situation filled with infinite variables, it's a source of confidence that equipment variables and in particular the projectile which will do the final job is being decreased.

Cheers...

Con

Posts: **2198** | Location: **Australia** | Registered: **24 August 2001**



<Mike McGuire>



posted 02 January 2010 00:30

quote:

Originally posted by Con:

when you start considering 'real animals' and the variety of targets they present in that species vary in their composition, where hit etc etc... The variables are infinite.

And the average shooter only shoots a few animals so exposes himself to very few of the variables.

So what is needed:

- 1) A method of testing that is fast.
- 2) Several shooters, based on the testing, take the bullets into the field.

On the other hand, if you went with the Alf method by the time testing was complete the bullet manufacturer would have changed the bullet so the results would be useless. 🤖

The Alf method has things arse about. The real testing is in the field and the "laboratory" should only provide an "educated guess" that is good enough so people will try the bullet.



465H&H  
One of Us



posted 02 January 2010 00:35

[Hide Post](#)

quote:

I believe Michael's hypothesis could be summarized as, "Flat Nose (FN) monometal bullets having a metaplat between 60% and 80% of the bullet's major diameter when fired in a rifle having the proper twist rate to stabilize the bullet can reliably be expected to maintain straight line penetration in test media comprised of a combination of news print and magazines to a greater depth than Round Nose (RN) monometal or traditional-solid-construction bullets, and that this bullet performance successfully transitions to comparable straight line penetration performance within heavy boned dangerous game."

This hypothesis would be nearly impossible to prove as it includes too much to be tested. We need to break the problem down into testable chunks (yeah, chunks is a scientific term).

A testable null hypothesis is that "Flat nosed mono-metal solids will penetrate deeper and in in test media than round nosed mono-metal solids". The rest of the earlier hypothesis is not needed. That is why we need to include someone familiar with the scientific method to help us design our test protocol and statistical evaluations.

465H&H

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



**465H&H**  
One of Us



posted 02 January 2010 00:41

[Hide Post](#)

quote:

Originally posted by Con:

quote:

Originally posted by 465H&H:  
All of our tests whether in live game or test media are suspect because we do not use true scientific tests. That doesn't make what we do worthless but it should admit that we could be wrong and possibly very wrong.

465H&H

This is true enough and a valid point to make. But damn it would be an expensive and possibly futile endeavour when you start considering 'real animals' and the variety of targets they present in that species vary in their composition, where hit etc etc... The variables are infinite.

Michael stated the following: "We have in fact learned a great deal with this work, good enough to take it to the field with GREAT SUCCESS, each and every single time."

I agree with the above in that the thread has shown what can be taken to the field with a greater degree of CONFIDENCE. In a situation filled with infinite variables, it's a source of confidence that equipment variables and in particular the projectile which will do the final job is being decreased.

Cheers...  
Con

You are quite right that the testing on live animals would be difficult due to differences in where the bullets hit and what they encounter but it can be done having a sufficient sample size. For instance if we were comparing two bullets with different nose profiles and we shot 100 elephants with each using frontal brain shots, we could make the assumption that the average difficulty of a bullet through to the brain would be equal. That is one reason why I give so much credence to the collective experience of hunters over the years.  
465H&H

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



**DWright**  
One of Us



posted 02 January 2010 01:12

[Hide Post](#)

I suppose this would be a good time to mention, that I once kill a horse 'graveyard dead', with a .22 CB cap!

Happy new year all!!!!!!!

<http://www.mazamasportinggoods.com>

Posts: **1324** | Location: **Oregon rain forests** | Registered: **30 December 2007**



**chuck375**  
One of Us



posted 02 January 2010 03:13

[Hide Post](#)

I've learned an awful lot from this thread. Now if we could start a parallel thread comparing the premium expanding bullets (North Fork Soft Point, TSX, Swift A-Frame, Woodleigh, Nosler Partition) in big bore calibers, that would be awesome.

Happy New Year All,

Chuck

Regards,

Chuck

"There's a saying in prize fighting, everyone's got a plan until they get hit"

Michael Douglas "The Ghost And The Darkness"

Posts: **4571** | Location: **Colorado Springs** | Registered: **01 January 2008**



michael458  
One of Us



posted 02 January 2010 03:29

[Hide Post](#)



Something like that above?  
☺

Chuck\*&%

Hi Chuck, I apologize for not being able to type the rest of your handle, something about the end numbers I just can't bring myself to touch, it's this thing that happened to me in early years I suppose!

Thanks Chuck, I am very happy you are getting something out of it. Me too! This thread is getting to be rather cumbersome, and so much back and forth between different bullets it is hard to keep up with. I agree, I wish I had started several threads on all the totally different bullets, would have been easier to keep up with in the long run. Hind sight is wonderful, eh? But we are sorta stuck now I think. Separate thread could be done. But now I think it would get lost in the shuffle I am afraid.

We have done a lot of premiums in the past, but it would be different calibers, weights, velocity, and many different variables. If you have a particular bullet that you might be interested in, chances are if it is 416-510 I may either have some on hand (I have lot's of bullets on hand) or I might have tested it and not listed or posted it. Make a request if you want. If it has anything to do with the end of your "Chuck\$&\*" then we might have a problem? LOL

Thanks again too!

HAPPY NEW YEAR TO ALL----AND I WONDER WHAT NEW BULLETS 2010 WILL BRING US?

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"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

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



capoward  
One of Us



posted 02 January 2010 05:32

[Hide Post](#)

quote:

Originally posted by 465H&H:

quote:

I believe Michael's hypothesis could be summarized as, "Flat Nose (FN) monometal bullets having a metaplat between 60% and 80% of the bullet's major diameter when fired in a rifle having the proper twist rate to stabilize the bullet can reliably be expected to maintain straight line penetration in test media comprised of a combination of news print and magazines to a greater depth than Round Nose (RN) monometal or traditional-solid-construction bullets, and that this bullet performance successfully transitions to comparable straight line penetration performance within heavy boned dangerous game."

This hypothesis would be nearly impossible to prove as it includes too much to be tested. We need to break the problem down into testable chunks (yeah, chunks is a scientific term).

A testable null hypothesis is that "Flat nosed mono-metal solids will penetrate deeper and in test media than round nosed mono-metal solids". The rest of the earlier hypothesis is not needed. That is why we need to include someone familiar with the scientific method to help us design our test protocol and statistical evaluations.

465H&H

465H&H, I don't disagree with you but I also don't totally agree with you either.

Alf's proposition has been that there is zero correlation between Michael's indoor test mule and real world hunting regarding bullet performance. Michael firmly believes that he sees a direct correlation between bullet performance within his test mule and in the real world of hunting thick/tuff boned dangerous game. I believe I've correctly paraphrased their respective stances; Alf and Michael can step in and correct me, there'll be no hurt feelings on my part.

I agree with your proposition that the elephant needs to be eaten one bite at a time...again here I'm paraphrasing your proposition so also feel free to correct me...however I do not believe that laboratory test results should be separated from field hunting results...I mean why test it it'll have zero impact upon hunting...this forum is after all a hunting forum not a target shooting forum.

How about this, rather than eliminate the hypothesis as stated, acknowledging that it's my perception of Michael's work product (and yes he can certainly tell me I'm blowing smoke out the wrong orifice), instead take one chunk out of the big bore caliber world and fully test a single caliber bullet in Michael's testing environment and also within the field.

This would require that a single bullet caliber be selected, that multiple manufacturers bullets of both FN and RN solid and monometal design be utilized in tests against Michael's indoor mule and then again in real world hunting.

Obviously should Michael agree that his indoor laboratory can be used for this testing then Forum participants should be very liberal in sending ammunition components as well as factory ammunition for his use in testing; after all so far he's done this out of his own pocket and we collectively enjoy the results of his efforts. And yes I do acknowledge the few individuals who have recently sent Michael some bullets for testing.

I'll even propose a caliber for consideration, that being .475" caliber bullets; traditional RN solids and new FN monometal bullets are readily available in this caliber. This caliber is available in traditional double barrel and bolt action cartridges.

Heck, if Michael is appropriately plied with bribery items maybe he'll even let some of the DRSS folks participate in the testing in his lab.

Jim

"Life's hard; it's harder if you're stupid"  
John Wayne

Posts: 4954 | Location: Central Texas | Registered: 15 September 2007



Indy  
one of us


posted 02 January 2010 07:04 [Hide Post](#)

In reading the above, the "simplified" hypothesis seems to have been proven by Michael's experiments. Nevertheless, I have several questions:

1. WHY is the large flat meplat such a good shape? Military penetrators are sharp and pointed, not flat or even round nosed. Of course, the military is trying to penetrate metal, not live animals or newsprint.
2. What results would be obtained in the same test media by pointed full metal jacket bullets? I have some 172 grain .308 national match fmjbt bullets you can try. These were originally loaded to 2640 fps.
3. What about large velocity swings? Some PHs claim that the .460 Weatherby actually penetrates less than lower velocity .458s unless it is loaded way below it's potential.
4. Is there any correlation between test media? For instance, if bullet "A" penetrates 80% as far as bullet "B" in stacked newsprint, is the 80% ratio maintained with wet newsprint, ballistic jelly, stuff with boards every two feet or so, etc?

Indy

Life is short. Hunt hard.

Posts: **1181** | Registered: **06 January 2002** 

someoldguy  
One of Us



posted 02 January 2010 07:16 [Hide Post](#)

Here is the site of another shooter/hunter/researcher whose findings closely agree with Michael's:


<http://www.rathcoombe.net/sci-...istics/wounding.html>

-----  
Glenn

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

ALF  
one of us

posted 02 January 2010 09:48 [Hide Post](#)

Posts: **7852** | Registered: **16 August 2000** 

someoldguy  
One of Us



posted 02 January 2010 12:14 [Hide Post](#)

quote:

Now I see Someoldguy bring up a website that supposedly concurs with the findings in these tests, good site lots of info but sadly some of the info is not true

There is no similitude between the so called Schuchetti tests and real life deer shot as he claims. Sorry but the graphs so beautifully presented do not fly ! Wetpack does not give the same wound profile as live tissue ! no matter how wonderful the tests are and how well it is presented all that wetpack is , is a cheap bullet trap.... the only inferences made from it is to compare one bullet to another when fired under the same conditions it does not even hold up under all conditions. ! it does not support the unversally accepted standards of simulation.

Alf, no one here is disputing the fact that wet newsprint testing is definitely not the same as live tissue!

Michael himself has said the exact same thing on page 1:

quote:

Again, for those who cannot comprehend the written word---No Test Medium Exactly Duplicates Animal Tissue!


I think we can get past these obvious shortcomings of the wetpack tests now, for bringing them up again is not just beating a dead horse, but a horse's skeleton!

Would this not be the similar to the use of ballistic gelatin? Few people would dispute the fact that ballistic gelatin is not the same as living tissue either. Yet ballistic gelatin still seems to be the norm, especially in the realm of testing handgun bullets. And I haven't heard the same amount of disdain for ballistic gelatin tests. What's the deal? Is it because ballistic gelatin is much harder to prepare than soaked newsprint and this gives gelatin tests supposedly more validity? It would seem that there is more likelihood that ballistic gelatin testing would be more prone to give invalid results if the preparation wasn't according to the exacting standards required.

My old friend Mr. Obvious asked me: "Wouldn't wet newsprint behave differently physically than simple paper newsprint?" Obviously, you have added water, which would clearly change the density of the newsprint. Paper will float on water until it is soaked, then it will sink down because the paper-water mix is denser than both water and paper by themselves. I thought everyone has observed this. (Not that watching paper sink is one of my favorite hobbies, but there have been occasions when I've had too much time on my hands. ☺)

Yes, that website I showed does have some faulty information at times, but his ballistic testing in wetpack comes to similar conclusions as Michael. I could really care less whether the author believes in the Schuchetti tests or not. It's his testing of flat-nosed bullets that caught my attention. His belief in the Schuchetti tests wouldn't necessarily invalidate the wetpack testing. Aren't these apples and oranges?

-----  
Glenn

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

Con  
one of us



posted 02 January 2010 12:16

[Hide Post](#)

quote:

Originally posted by michael458:  
This thread is getting to be rather cumbersome, and so much back and forth between different bullets it is hard to keep up with.  
Michael

Cumbersome my butt! This is one of the most interesting threads (for me) run for quite awhile ... who said a free education was dead!

There's been a bit of frustrations and name calling along the way ... but I'm valuing everyone's contributions. I just wish they made some of the bullets more brunette-ish.

Cheers...  
Con

Posts: **2198** | Location: **Australia** | Registered: **24 August 2001**



Warrior  
One of Us



posted 02 January 2010 13:15

[Hide Post](#)

quote:

Obviously you did not comprehend what I wrote and stated above. No, the design is good, I think it is a problem with QUALITY CONTROL and possibly bullet material. They appear to be soft, even giving some compression before and after. I think bearing surface is soft, and in the case of the 458 undersized at .456, as I recall. I thought I made that clear? Obviously not or you would have seen that? I think it is a stability issue that has nothing to do with the design at all.

Michael,

You site a number of issues here regarding quality control:

1. Material appear to be too soft
2. Under-sized bullet by .002"

In a drive-band design, where only the band is supposed to engrave, .002" would create serious bullet slop. It is reasonable then that one could expect bullet stability problems.

Was the whole lot of bullets under-sized or just some?

This must have been a dud run, because this is not normal. Question remains valid ... how did it pass QC? I am sure GSC would supply replacement bullets to get a more equitable comparison.

Happy new year !!!

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



Warrior  
One of  
Us



posted 02 January 2010 13:44

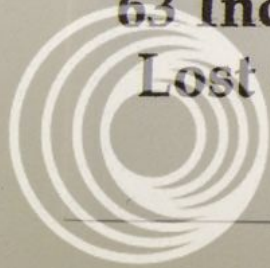
[Hide Post](#)

quote:

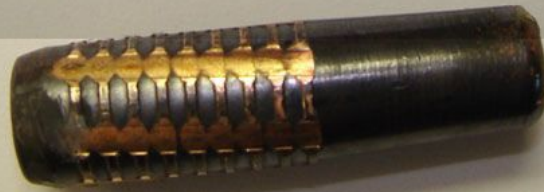
Originally posted by michael458:

Today I worked with the 416 caliber 410 gr GS Custom bullets that Buffalo was so kind to send, and I promised to give them a go at high velocity and low velocity. For the high I only had 416 Rigby to work with, which worked out just fine. For the low velocity I used a starter load in the 416 B&M, which also did fine, giving a difference of a tad over 400 fps. Results below.

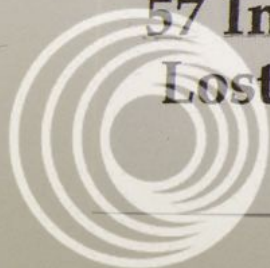
**416 Rigby**  
**410 GS Custom Solid**  
**Impact Velocity 2527 fps**  
**63 Inches Total Penetration**  
**Lost Stability at 60 inches**



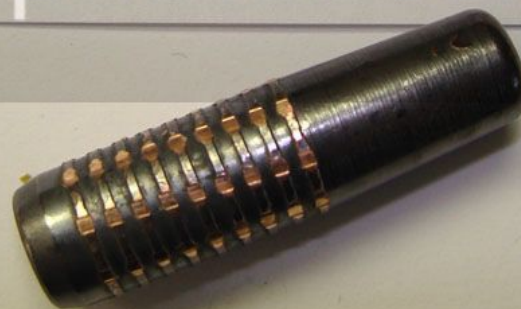
photobucket



**416 B&M**  
**410 GS Custom Solid**  
**Impact Velocity 2108 fps**  
**57 Inches Total Penetration**  
**Lost Stability at 55 Inches**



photobucket



Next in 416 Caliber I have some 370 North Fork Solids. This fell pretty much in line with what I have tested with the 350 Barnes FN Solid in the past. No big surprises here.



Michael

How bad can this be in terms of penetration?

a) 410 gr GSC-FN Solid @ 2,527 fps = penetration of 63 inches and become unstable at 60 inches  
 $Mo/Xsa = 148.0/.1730 = 855$

b) 410 gr GSC-FN Solid @ 2,108 fps = penetration of 57 inches and become unstable at 55 inches  
 $Mo/Xsa = 123.5/.1730 = 714$

Anything over 50 inches is basically moot, and thus for close range DG-hunting I would pick the lower velocity in favour of the undue recoil at high velocity.

The lower velocity did not give much away, and in a practical situation on buffalo the difference is not even an issue.

The lower velocity bullet achieved a total penetration of 57 inches against 63 inches at higher velocity - that represents 90.5%.

In terms of the Mo/Xsa statistic the ratio is  $(714/855)$  83.5%.

That means clearly that at higher velocity we have more drag and as a result penetration will suffer.

In this case by  $(90.5 \text{ minus } 83.5)$  7 percentage points.

However, the 410 gr solid is too long imo for a .416 caliber and would agree that the 380 grainer is the better option.

A 380 grainer at say 2,250 fps would be more pleasant to shoot and as ideal as can be for buffalo.

Also a whole lot less chamber pressure and stress on the rifle.

Recoil of 410 gr @ 2,527 fps is some serious recoil - do the sums and compare.

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**







Whew, you guys get busy late at night! Me, sleeping away like a baby!

A few things I need to and wish to point out. First, I love numbers, statistics, good science. I run a small company base here in SC. This is 25 yrs in my business. While it is a small business with only around 200 employees, we are considered the best there is in our business, and we are the largest in what we do. Our reputation has zero blemishes on it. We work throughout the SE US, and even started a small company in Canada last year. We do things by the book, with the book, and in fact over 25 years, we wrote the book. But this is my job, it's what I do.

As far as my tests with terminal ballistics, I am the first to admit, it comes up very short of being true scientific data! It is not. I am not attempting for it to be that. That was never my goal, and most likely will never be my goal. That's not what I do it for. I do this for me, as stated many times. In some cases I am interested in Why-What-How - and so forth, in most cases I really don't care, it either "does" or it "does Not". That is good enough for me, and what I wish to accomplish.

In some cases with the solids I give you meplat size, and some other measurements, only in an attempt to compare one FN solid against the other, nothing more. The FN solids pretty much all do about the same with other factors being equal. There really is not a lot of difference between them. All giving plenty of penetration to take the heavies, elephant, buffalo, hippo. Even the RN solids and FMJs do this, so I personally have no need to worry too much further in depth with it.

It is not my job, I don't get paid for it, so those that are not happy because I don't have true "Scientific Data" on these results, then go ahead and give me a grant for about \$1 Million and then we can talk "Scientific Data". I will get it for you. I will hire a staff, we will work with several different sorts of medium to test in, we will have proper base lines and we can start gathering data. I think I already have the proper facilities to do such work in, plenty of computing power on site, and most of the larger expenditures out of the way, so we can spend the entire amount of the grant on staff to assist, different set ups for medium and those sorts of things. But until that point please realize that the reason I do this is for my personal knowledge, I just decided to share it with you, most are happy to learn, some wish for more, some just wish to detract from.

So be it. Nothing is perfect here, there are no perfect test medium for bullets, even live or dead animal tissue is not perfect. 465HH is correct, shoot a 100 elephants to get a base line! Now in my opinion, this has to be 100 bull elephants, not smallish tuskless, cheap shooting! To gather proper data in this manner we need big heads! Let's just say we get a damn good deal in Zim, book for a 100, but these need to be bulls, let's just say \$12'000.00 each, we keep the ivory of course! Opps, need a little more grant money! Even at half price of that, need a little more grant money. Tell you what, I will donate all my time and efforts, get me the grant money, I make the deal for the elephants, I will even do the shooting! What more can you ask for! 😊

No, being serious now, there are many ways to do a better job than what I have been doing, no doubt. But that is not what I need. For my part, it does not need to be complicated, it just needs to be simple! It either "DOES" or it "DOES NOT"---Keeping simple!

Every thing I have tested in the past has been for me, bullets I am going to, or intend to take to the field to shoot animals with! That simple! Many times I go above and beyond to see what will make that bullet fail, if it is possible. What might I run into in the field? Maybe I have to shoot thru a tree, small tree, by accident or by design? Maybe I can learn the limitations of my bullet, lower, upper velocity?

FOR THE 1000th TIME---MY WET PRINT MIX DOES NOT SIMULATE ANIMAL TISSUE! My opinion, no test mix does this. Talk about elastic this, visco that, all the little math formulas, aeroballistics, this, that, the other, on and on and on and on, all you wish to do so, you are not wrong, but what it all boils down to even then, It Either "DOES" or it "DOES NOT"! Simple.

I don't believe this, I KNOW THIS FROM PERSONAL EXPERIENCE, 15 years of shooting big bores in this mix, and shooting animals in the field, solids, expanding, premiums, and what have you, recently NonCons. MY TEST MIX IS NOT ANIMAL FLESH! It's tougher! It's more Solid! YES, ALF, it's a solid, animal tissue is not, animal flesh has air, voids, organs, muscle, bones, and fluids! No shit BuckWheat? Duuuuh! Who do you think you are talking too?

It's tougher, because I want it that way! Duuuuhhhh! I want that stress on that bullet, I WANT TO MAKE IT FAIL----I WANT TO KNOW AT WHAT POINT IT DOES FAIL! I WANT TO KNOW IF I REACH THAT POINT, IS IT POSSIBLE I WOULD EVER IN MY LIFE OF SHOOTING FIND THAT POINT IN THE FIELD! One runs into many variables in the field, far too many to ever test for everything, this is the reason that even fantastic bullets SOMETIMES fail! It will happen, we have all seen it if you have shot enough! What we wish to seek out is the bullets that continue to pass the "TOUGHER THAN LIFE TESTS". Again, stated this before, a reasonable medium must be used to test for your own end goals. If you are testing armor piercing bullets, then don't test in gelatin, test steel. If you are hunting, I know NO elephants or buffalo that wear armor, so no need to shoot steel! Simple simple simple!

What I have done works. Yes, it does. I have done it too much, I know. What works here on the range, works in the field. The End. Failures I have had on the range, when I didn't pay attention to my work on the range and took that to the field, guess what? It also failed in the field! This applies more to expanding bullets than solids. Solids are funny things. I have used RN solids in the field on elephant and buffalo, success. All Barnes RN solids in my early shooting career. Dead Elephant Dead Buffalo. So if that works and is sufficient, then a bullet that penetrates straighter and further in the mix, t I figure it will do great in the field? Guess What? I does and has!

So remember, this is not my job! I am not trying to prove anything to you. I am not an engineer, or a scientist, nor do I wish to write an article or book, I very simply wish to know if it "DOES" or "DOES NOT", so that I might apply that to what I do in the field. Been doing it for a long time, never been let down. Now if one considers hunting elephant, buffalo, lions, bears, or hippo dangerous, called Dangerous Game Hunting, as I recall many times (myself to be honest, I figure getting in the truck and driving to Wally World is far more dangerous). But if we collectively decide that we need some adventure and it just happens to be what is called, or termed as, Dangerous Game Hunting, and in fact in our minds it is, then what I have done is "Bet my Life" on my work here on the range and doing the tests. Now, please, cut me some slack here, I really think there are far far more dangerous things to do, and I really never consider even getting a scratch in the field while hunting. I did get the hell hammered out of me on the back of the cruiser one night, I failed to see a 4 inch diameter limb, didn't duck, knocked me completely out of the truck and gave me quite a knock on the head! Damn, I looked bad for a day or so! But it was worth it, you can't believe all the attention I got from my wife, Ohhhh My!!!! But that is about as dangerous as I really consider it. But if you consider it more dangerous than that, then I put my money where my F\*\*\*%% mouth is and do it! And will continue to do so. All I need to know is whether "IT DOES" OR "IT DON'T" I will leave the formulas and math to you guys that desire to do so, I don't have time for that, I have shooting to do!

Thank You

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"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.



michael458  
One of Us



posted 02 January 2010 17:13

[Hide Post](#)

Now I must move on to more important matters, and that is to address those comments that need addressing, would be rude to do otherwise! In order please.

Indy

Your #1 ??--I don't have a definitive answer, there are others far more qualified than I for that. However, your last part I think answers a large part of this.

#2.. I have not paid much attention to pointy FMJ bullets in the past, since I don't use such on anything. Since I know without testing they will penetrate soft 2 legged critters, I have not tested in a serious manner. I have plenty of those sorts of bullets, but seems some years ago I put them in the mix playing around, I recall they veer off course in this mix.

#3...Since I don't have many cartridges that are capable, if any, of running really high velocity big bore bullets--2600 + or so, then I can only theorize about that. I think nose profile has much to do with how and how much, low and hi velocity. But since most of what I do is between 2100 and 2300 fps with solids, it seems to be a sweet spot.

#4...Not that I am aware of, if one had different mediums to work with you could get that info. I have correlation data between the wet print mix I use, and animal tissue. Is it exact? Of course not, variables in the field change things, close, rule of thumb sort of thing, Yes!

Thanks Indy and good questions!  
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"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

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



michael458  
One of Us



posted 02 January 2010 17:28

[Hide Post](#)

Glenn

Thanks for the link to the other website, have not had time to look much at it, but will do so, and I have it bookmarked.

I happen to think that gelatin is a little soft on bullets, maybe not quite enough stress on them. I think most of you are familiar with Jack Carter and Finn Aagaard, when they were testing and Jack designing the Trophy Bonded bullets with Finn's assistance they used several combinations of wet and dry "PHONE BOOKS". The reason they did this was to put more stress on the bullets, or at least that's what was said. Dry puts more stress on the bullet than wet! I use wet because I think that is more of a reasonable medium, but still tough on the bullet. If I need or desire tougher, then I can insert some dry up front, or as I have done insert 2X4s to add stress!

Come to think of it, if this sort of testing was good enough for Jack Carter to design and make the Trophy Bonded bullets, and Finn Aagaard not only "CONDONED" this, but used this sort of testing for all his work, then it is sure good enough for me.

Sciuchetti? Don't know of him. Will have to look that up I suppose so I don't appear totally ignorant!

Thanks  
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"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

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



michael458  
One of Us



posted 02 January 2010 17:29

[Hide Post](#)

Thank You Alf for your contribution, all is noted!

Top of the morning to you and hope you are having a great beginning for the new year!

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"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

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



Powered by Social Strata

Page 1 ... 6 7 8 9 10 11 12 ... 304

[Reply](#)

Community Statistics

Statistics for the last 30 days

New Posts	5275
New Members	24
Page Views	2743857
Visits	504208
Newest Member	<a href="#">RedRaider4400</a>



[Visit our on-line store for AR Memorabilia](http://www.arbaterialsociety.com)