

This topic can be found at:

<https://forums accuratereloading.com/eve/forums/a/tpc/f/4711043/m/2861098911>

416Tanzan

15 August 2014, 03:13

Terminal Bullet Performance

Michael,

yes, I consider 300 and 400 yards to be long range. It is part of the hunter's training.

Let me philosophize briefly.

Most bullets will kill an animal with a well-placed shot. Core-lokt, CEB, Nosler, Barnes, a good shot with any will dispatch an animal.

But we all know that SOMETIMES problems will arise, and for those marginal times we search for the perfect bullet. What kind of difference will the bullet make? 2%, 5%, 10%, or 20 and more % recovered animals than without the better bullet? It is very difficult to accurately appraise "what ifs". As hunters we pledge to do the best that we can, so we plan, test, practice, and tinker in order to gain whatever per cent that we can. The same is true of calibre choices. There is a small margin of difference in calibre influence on game taken. It is hard to quantify the difference, but we know that it is there, and also that it must be balanced with the ability to accurately handle whatever calibre and rifle design is chosen.

All of this relates to long range shooting, too. What percent of opportunities comes knocking on the hunter's door between 260-400 yards? Probably under 20%, and quite a bit lower if the cut-off is set at 300 yards and Africa is the setting. But there still remains that 2-5% of cases when an animal can be cleanly taken if the rifle's accuracy, the shooter's skill, and ammunition's testing has been fully explored. In the same way that we may search for the best bullets and plan for the best calibres and rifles, we may also plan for those opportunities that occasionally land between 260 and 400 yards.

We may decide not to take the shot, but the all-around hunter can plan to be prepared for dropping a 300-yard hartebeest, zebra, or tommy, DRT. I was probably as happy with the oribi at 200 yards and the 416Rigby a couple of years ago as the buffalo. No, I was happier with buffalo, but the rifle and I were ready for both.

+++++

"A well-rounded hunting battery might include:

500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

capoward

15 August 2014, 04:16

quote:

yes, I consider 300 and 400 yards to be long range. It is part of the hunter's training.

Let me philosophize briefly.

I'll play...

My buddy Dennis up in Oregon has a Ruger M77 Alaskan in .375 Ruger with a few minor changes. He replaced the Hogue stock with one of the old Ruger 'paddleboat' style synthetic stocks - and he cut the barrel down to 17" with no iron sights...

Dennis purchased the rifle for use against black bear in the Oregon forests where the shooting can be 'up front and personal' or 300+ yards away and quickly made the stock change due to the lack of stability of the factory Hogue stock. He made the barrel length change after shooting one of Michael's little 50 B&M SS rifles with 16 1/4" barrel and sampling the 'handiness' of the little carbine length rifle - figured it'd make his Ruger a bit handier in the trees.

Anyway, while we were on our shooting outing Dennis chronographed his 300gr RN Hornady loading - first time with his 17" barrel (cut the prior day) - at 2406fps (for 3-shot average) at our first target shooting spot. The rifle was a joy to shoot with very little felt recoil and accurate to boot with the little Leupold 2x fixed power rifle scope.

Later we moved to a cross canyon shooting location with the target at 325yds (previously laser length established) from our shooting spot. I was shooting Michael's 416 B&M with AI walnut stock and Leupold 1-4x20 variable scope, loads using both 300gr and 350gr Barnes TSX bullets. After running a few shots with each bullet weight to dope the breeze blowing through the canyon, I was able to keep my shots in the killing zone on the target - which I thought was pretty good as 300yds was my previous personally imposed limitation and I'm shooting "game killing accurate" at 325yds across a canyon with a rifle completely new to me. My secret - very simple, Michael had already accomplished the accurate load development and the AI walnut stock is a very stable platform which does nothing but enhance the rifle's accuracy.

Dennis however, having shot in the location previously, was "on target" with the first shot and then proceeded to put multiple magazine loadings into the killing zone of the target. Obviously Dennis had previously developed an accurate loading as well as tuning his rifle for accuracy; once accomplished he only had to become familiar with the combination to become very accurate at 325yds with a RN pumpkin ball for a bullet.

I later shot one of Michael's 50 B&M rifle, also with AI walnut stock, using Hornady 500gr XTP bullets that had been run through a pointing die (gave a nose not quite semi-spitzer shaped with the exposed lead) and iron sights (no scope was included). I don't recollect the exact velocity but they were loaded somewhere 1950fps-2150fps range - regardless, shooting offhand they were extremely accurate at both 25yds and 50yds. I then moved to the 200yd round metal plate (worn out heavy duty saw blade), fired one spotting shot then put 5 rounds (including a reload) into less than a 6" circle. Again it was easy to do with an accurate platform with accurate loadings. Basically what I'm saying is this. Once the rifle has been tuned to a stable and accurate platform, and once accurate hunting loads are developed (with Michael's rifles that seems to be a rifle/cartridge-load combination that shoots either one-hole or cloverleaf groups at 25yds and 50yds) it becomes very easy to shoot accurately at longer distances because you only have to worry about doping the breeze and bullet drop to deliver "game killing accuracy". Practice at long range with the loading to be used makes mentally doping the breeze and necessary drop accomplished quickly and easily - Dennis proved this to me with his cross canyon 325yd shooting.

Wife just delivered a bowl full of watermelon so I'm eatin now... 🍉

Jim 🍷

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

John Wayne

michael458

15 August 2014, 15:10

Tanz....

When we first started working with the BBW#13 Profiles, both solid first, followed by the now Raptor HP, there was not a thought of longer range than 50 yards, DG Bullets, and that was really all I was interested in to be honest.... And, most of my attention still dwells in that direction, even going to some of the other smaller calibers for Zombie Eradication Duties.... LOL..... In my hunting career I have taken 300-350 yard shots with success in years gone by with various cartridges like 338 Winchester, 358 STA and even 416 Remington a couple of times.... I think my numbers at one time on those shots were very low, likely less than 5%, I am just not a long range guy, as we all know....

The BBW#13 was just not designed to do that sort of thing, nose profile is not so great for BC, we all realize that, but the Talon Tips that can be added to the various Raptors and ESP Raptors makes a big difference, coupled with their amazing accuracy puts most of them easily in reach of 300 yards. Remember some of the 375s at 600 yards shooting 4 inch groups.... And so forth....

Dan and Trap, they are long range guys, extreme long ranges and regularly shoot 1000+ yards... They have put much efforts into other nose profiles that meet those requirements, and great efforts to meet hunting requirements with different various shaped bullets. I have not tested or worked with any of these bullets myself, and more or less fairly content to let CEB do the terminals and what have you with those.

Personally I really like the brass bullets in any of the calibers, and I will be staying with that type bullet for anything that I might do, other than the tremendous work done with the various handgun PHD bullets, which are all copper.... I think that Dan and the boys have made big strides forward with getting most of the Copper to shear similar if not exactly like the brass Raptors, in particular the Copper Raptors..... These other designs, I am not sure about other than the .500s that Jim and RIP had done, which perform very good.....

You guys are a little out of my area doing the longer range work..... I do know this, Trap and Dan, the boys, have been very busy with the Oehler Acoustic System working with all the bullets at 600+ yards to get really tight BCs on the various designs.... When they publish a BC, its been tested at these longer ranges more than once and they are getting extremely good data..... I went over to the site a couple of weeks ago and saw lots of new data there that I did not have, all downloadable in pdf format, which I did and have a copy of it for reference.....

M

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

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michael458

15 August 2014, 15:36

Many of you may or may not view threads or subjects downstairs on doubles, I rarely would myself other than the fact that many good friends (Sam) and many others are double guys, and doubles are mostly big bore, and we like big bore bullets, so double or bolt or other, makes little difference to me in that regard.... Not to mention that Sam and I have done tons of research here in this area for him, and the double guys..... Much bullet design has been devoted so they would work well in doubles as well in bolt guns and other big bore actions too..... But just in case you don't get downstairs that often, and might miss something related directly to big bore bullet terminal performance, I wanted you to see this for yourselves.....

This is posted by Wowo (Leon).... Leon is a PH in Africa and uses a beautiful double rifle, I have a photos he sent to Sam, and of course Sam sent to me, as for particulars on it I can leave to Sam.... It is 577 Nitro, and Wowo carries this rifle for his work..... Like MANY MANY of our modern day PHs, Leon has recognized the need for properly designed bullets, and desires such for his work. He joins many today that understand and know just how important it is to have not only a reliable platform (rifle) but to have the very best choice of bullets that will allow him to be not only more successful in his endeavors, but to prevent dangerous situations from becoming deadly situations, which is an all too true possibility anytime any of us go to the bush..... Leon joins the ranks of many that I can name, Philip A. (here on AR), Andrew500, Sam's PH Cliff Walker, which I understand carries the sister rifle to Wowo, another friend and PH Richard Cooke, and many more I have talked to over the last few years, and some I am sorry I can't recall all the names.... These guys now have a choice, that PHs only a short time ago, 10-20 years ago did not. GSC has been around longer, but it takes a great deal of time to get the word out..... Only in the last 10 years has there been a major shift to various better designed solid bullets.....

In many other threads here we have been fighting the battles, useless nonsense..... RN vs FN..... Accuse of all sorts of things, and will be over and over again in the future, as many just will not listen to what is actually said..... Its all about the POTENTIAL of a particular bullet having the POTENTIAL to fail, or another bullet having a higher POTENTIAL success rate because of various design features..... Not that one is a

100% Failure and the other is 100% Success..... Its all about proving various POTENTIAL to fall into one or the other categories..... It is my strong belief, and probably what gets other people upset with me, that a properly designed FN Solid has far far far more Potential to be a success, than to be a failure..... I strongly believe that any RN Solid has a far more potential to fail than a PROPERLY designed FN Solid..... I have a hard basis for that strong conviction, not just one that I cooked up out of the air somewhere..... From the time I joined AR in 2008 I have always stated POTENTIAL..... even though many have said otherwise.....

Below, posted by Wowo down on the 577 Exploration thread;

<http://forums accuratereloadin...861072302#6861072302>

Here is some of that "Potential" showing up..... As it has in many many other cases.....

quote:

Wowo
one of us
posted Aug 13, 2014 3:03 AM Hide Post



L-R 3x .577 750gr Woodleigh FMJ (recovered from elephant); 2x .577 750gr Woodleigh SN (frontal brain on a buffalo recovered 6" under skin behind the head, mangled the brain and spine..) eland; last one is .500NE 570gr Woodleigh FMJ.

Reason I don't like woodleigh solids too much in .577.

Not to hijack the thread but to support the CEB/GS Custom explorationWink Thanks again to Sam Michael458 and others for all the "hard" work.



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Seasons44

15 August 2014, 20:00

quote:

Originally posted by Seasons44:
[QUOTE]Originally posted by michael458:

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yards to get really tight BCs on the various designs.... When they publish a BC, its been tested at these longer ranges more than once and they are getting extremely good data..... I went over to the site a couple of weeks ago and saw lots of new data there that I did not have, all downloadable in pdf format, which I did and have a copy of it for reference.....
M

A few weeks back I had the opportunity to make it out to see Dan and Trap to do some testing, could not ask for better conditions we tested .308, 338, 375 bullets for BC, and busting clay's at 600 is always fun!



Simply, Elegant but always approachable

tanks

20 August 2014, 23:31

I recently finished a bear hunt. I was using the 500MDM with 335gr tipped Raptors at 2800 ft/secs. At 5833 ft.lbf of energy a bit of an overkill but I wanted to use this gun.

Here are the results. First the entrance wound, as you can see already expanded.



Exit wound after the petals have shed. As you can see it is a smaller hole as now the remains of the bullet is a solid.



Then, just under the hide the entry point. Even more expansion.



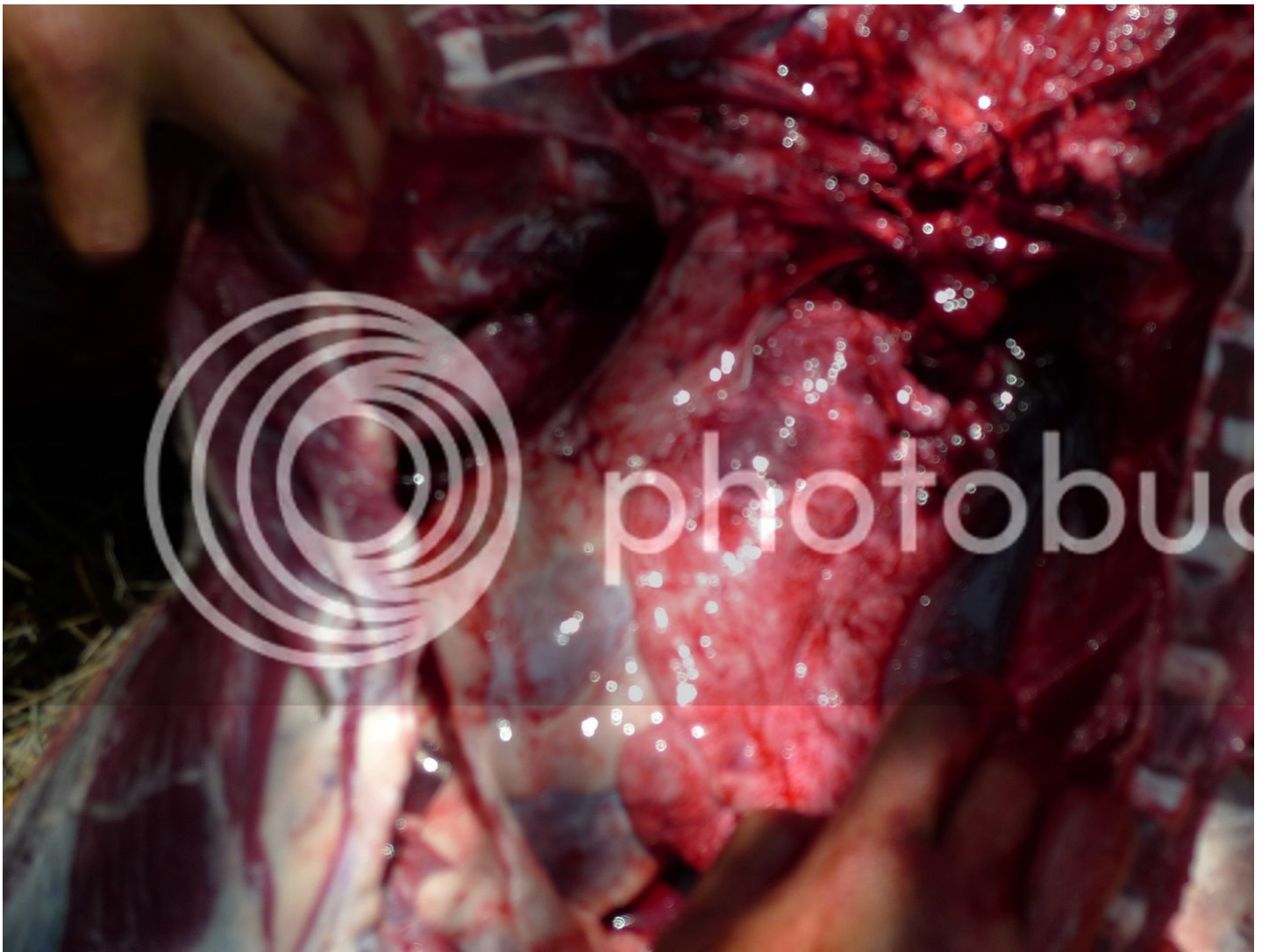
We did find one of the petals that had separated. It looks exactly as various tests.



Looked for the heart as I wanted to see the star pattern. It was soup, no recognizable pieces.



And another view of remains of heart.



Overall the bullet performed as advertised. I wouldn't hesitate to use this bullet for any game with the exception of elephants where one needs solids.

416Tanzan

21 August 2014, 00:16

Hey, Andy,

way to go! Nice job.

Tanz

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

michael458

21 August 2014, 04:23



Man, that's UGLY..... Bear never new what hit him.....

M

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pagosawingnut

21 August 2014, 05:07

Michael,
While in Zim, using my .375 H&H (I know a rat gun) I took an impala at about 340 yards with the 275 gr noncon. I don't think there is a problem with accuracy at all. Maybe a little overkill but that's the smallest caliber I took.

Whitworth

21 August 2014, 06:27

Let's see the bear, tanks!

"Ignorance you can correct, you can't fix stupid." JWP

If stupidity hurt, a lot of people would be walking around screaming.

Semper Fidelis

"Building Carpal Tunnel one round at a time"

tanks

21 August 2014, 06:47

quote:

Originally posted by Whitworth:
Let's see the bear, tanks!



Whitworth

21 August 2014, 06:54

Very nice, tanks! Thank you! 🍷🍷🍷

"Ignorance you can correct, you can't fix stupid." JWP

If stupidity hurt, a lot of people would be walking around screaming.

Semper Fidelis

"Building Carpal Tunnel one round at a time"

capoward

21 August 2014, 08:00

Really like the color...

Jim 🍷

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

John Wayne

Sean Russell

21 August 2014, 08:51

Nice--very very nice.

Congratulations on a great trophy.

"The rule is perfect: in all matters of opinion our adversaries are insane." Mark Twain
TANSTAAFL

www.savannagems.com A unique way to own a piece of Africa.

DSC Life
NRA Life

prof242

21 August 2014, 12:34

Beautiful bear, Tanks. Have to agree about the color, too.
My problem, similar to yours, is that everything turns to jello inside so that I can't get a star picture of the wound damage.

.395 Family Member
DRSS, po' boy member
Political correctness is nothing but liberal enforced censorship

416Tanzan

21 August 2014, 17:00

Lady Tanz agrees that it is a beautiful bear. Me, too.

+ + + + +

"A well-rounded hunting battery might include:
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coyote wacker

21 August 2014, 17:47

tanks....that is a beautiful bear...CEB's and hearts...CEB wins everytime...

michael458

23 August 2014, 16:09

MORE SOLIDS.....

Despite what 1/2 dozen here on AR have to say concerning modern FN Solids, I not only continue to believe, I continue to KNOW how superior they are to anything that we have had in all our history of solids or FMJ, either RN or former and some new FN Solids... As stated many times, only Properly Designed FN Solids NEED APPLY..... A Flat Nose Solid that is missing some of the 8 Factors of Solid Penetration, is no better than any RN Solids for deep and straight penetration, and in many times much worse than some RN Solids..... Just because it has a Flat Nose, don't make it good..... What are the 8 Factors? Again and Again.....

#1 Meplat Percentage of Caliber

#2 Nose Profile

#3 Construction & Material

#4 Nose Projection

#5 Radius Edge of Meplat

Above Factors are in Bullet Design

#6 Velocity

#7 Barrel Twist Rate

#8 Sectional Density

Currently the # of Manufacturers of Properly designed FN Solids is rather smallish..... Of course as most know, we have worked close with both North Fork and Cutting Edge Bullets to get some designs done, primarily for my personal purposes and use, but these have now become standard by both companies and of course available to all and are proving themselves in the field weekly.....

Recently I contacted my good friend "North Fork John" about changing up some North Fork bands. I wanted to see a wider band system incorporated at the top of the bullet to guide the bullet into the bore, perhaps giving the rifling a bit better grip and improving accuracy and consistency of the North Forks... North Fork John, being a good sort of chap told me I was full of it, but we would work on it anyway... HEH HEH.....

After a couple of back and forth designs, we settled on shortening the Nose Projection some, from .700 down to .600 above the top band, and .650 above the groove at the bottom of the top band... We know that Nose Projection is part of depth of penetration, with all other factors equal, a very short Nose Projection will continue to drive dead straight, but depth of penetration is less.... However I cannot find a major difference that I can point to between .700 Nose Projection, and .600 Nose Projection. Many of the #13s of various designs have a .600 Nose Projection and provide extreme depth of penetration. The big difference comes from the .600-.700 Nose Projections, and the Lever Gun Projections of .425-.450....

So, I think with a .600 Nose Projection above the top band, we do not sacrifice any noticeable depth of penetration, but we increase the versatility of where we can seat and use the bullet in different magazines and cartridges.....

The "NEW", and John keeps saying "ITS NOT NEW ANYMORE", Nose Profile of the North Fork FPS is excellent, and the "NEW" FPS incorporates a good driving band at the bottom of the bullet to increase accuracy and consistency. Now for my purposes, we added two bands at the top, .050 bands, and incorporated a .075 groove in between for cartridges that require a good crimping area, or for folks that like to crimp. In my 458 B&M it does not require crimp at all, but it does give me more versatility in where I can seat the bullet to..... Bottom band, in the groove, or on the top band if so desired....

Here is what it looks like.... It is a DAMN GOOD LOOKING BULLET.....



450 gr 458 Caliber



New North Fork
450 FPS

450 #13 Solid

450 South African

Here you see the North Fork 450s compared with the 450 #13 next to it, and then some sort of South African bullet that I grabbed off of Dawid when I was at his shop in South Africa..... The South African knockoff is multi banded, and the meplat is much smaller, running 58% Meplat of Caliber, North Fork at 68% and the #13 at 67%.....

John sent 10 of these in .458 caliber for me to confirm before the larger order is done... I really do not have enough bullets to put them to a proper test, so I will just confirm consistency and accuracy and then we will make a run of them for further test work.....

The order consists of not just the .458 450 grs, but a .416 350, and a 450 gr .500 caliber bullet as well..... Once everything is in house here, we will start conducting all sorts of tests, from accuracy, to terminals, pressure comparisons, and maybe even some barrel strain comparisons in .458 caliber as well..... We are very much looking forward to these 3 new bullets.....

Will North Fork incorporate this into their standard line? I don't know, I have no say in that, but what I can say and do have control of is this, if this works to my satisfaction, then all my new North Forks will consist of this design..... Ya'll have to do what you gotta do..... I have mine, how'd you make out?

LOL

Busy here as always, just started some new pressure work yesterday in 45/70 for both North Fork and CEB current bullets that can be used and are designed for use in 45/70.... Not sure anyone is interested, but I am... Just curious.....

Michael

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Gerard 23 August 2014, 19:17

Michael,
There is more than just one particular way to arrive at a given result. Although I agree with you on many points, there are others on which there is some difference. When the goal is deep and straight penetration in animals, reliability of feeding and bullet integrity, there is more than one way to achieve it. Nothing wrong with that difference of course, as long as it is recognised.

MJines 24 August 2014, 00:05

quote:

Originally posted by Gerard:
When the goal is deep and straight penetration in animals, reliability of feeding and bullet integrity, there is more than one way to achieve it.

A lot of wisdom in that statement . . . and no single bullet type or profile holds the answer.

Mike

michael458 24 August 2014, 17:23

quote:

Originally posted by Gerard:
Michael,
There is more than just one particular way to arrive at a given result. Although I agree with you on many points, there are others on which there is some difference. When the goal is deep and straight penetration in animals, reliability of feeding and bullet integrity, there is more than one way to achieve it. Nothing wrong with that difference of course, as long as it is recognised.

Gerard.....

Absolutely correct, and do forgive me for not making mention of GSC in this regard. I have learned much over the last few years from you, and GSC, and it is much appreciated. I do believe, no bad choice of words, I know that GSC is devoted to making proper designed bullets, and I do know that GSC has accomplished this over and over in the field and been a tremendous success. I know that GSC has led the way for many many years now, and done everything in attempt to educate shooters and hunters on what is required, what is desired, and how to achieve those goals. I know that you have fought many battles over the years in attempt to bring better performance to us all, and it is appreciated. Every test I have done with GSC bullets has been a success, and before anyone mentions the one time with a 416 caliber 410 I believe that had some difficulties being fully stable all the way to the end of penetration, this has nothing to do with the design of the bullet, but everything to do with the twist rate and related to 416 caliber, of which both of us agree needs to be a faster twist to 1:12 to fully stabilize ANY 416 caliber 400 or heavier solid. And also we are in agreement that 416 caliber is better served with a 350-380 gr bullet instead of 400+. We spoke on this after this particular test. All other GSC bullets have tested successful here and no doubt are successful in the field and are of good design. Even though my direct experience with GSC bullets is limited, mainly because of availability of when I was testing so much. Now that is not a problem with GSC now in the US....

There are many ways to achieve our goals and the mention of feeding and reliability is always taken into account, along with performance. This is the very reason that the #13 Solid has a 67% meplat instead of a 70% meplat. This is the very reason that all the new North Fork Solids have a 68% meplat of caliber, instead of their older designs which had 70% to 73% meplat. At 70%-73% in various calibers would not feed or function, even in my Winchester M70s, dropping the meplat size down to 68% meplat allowed them to feed like butter, without compromising integrity of performance, and the same with the CEB #13 Solids at 67% meplat of caliber, which I believe as I recall the GSC bullet falls within these constraints as well..... Or close.....

Your contributions to a new beginning (many years ago) in terminal performance of solids is very much recognized by anyone with any reasonable concept of terminal performance. I believe that GSC was absolutely the very first to bring us a properly designed solids, that incorporated many, if not all the factors I state above. While others were attempted before, and many after, none had reached that goal until the last few years. As stated, I have learned much from you and GSC, and without that knowledge many would still be walking around in the dark, thank you.....

Michael

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Biebs

24 August 2014, 19:21

Page 300 ?????? Michael, you're a Rock Star! :-)

chuck375

24 August 2014, 20:29

quote:

Originally posted by tanks:

quote:

Originally posted by Whitworth:
Let's see the bear, tanks!



Hi all, myself and my two sons were on the same trip with Andy, he was a pleasure to hunt with. I went as an observer since I had already gotten my brown bear and my boys each wanted a bear too. Eric used his puny 375 Weatherby shooting 300g A-Frames (I think Andy called it a rabbit gun lol) to take his bear.

Here's a link to our hunting report and a picture of Eric's bear .

<http://forums accuratereloadin...8321043/my7411095302>



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"

michael458

24 August 2014, 22:19

Hey Chuck, damn nice looking bear your boy Eric got there... I am sure it was a struggle to get him down with one of those "Little Rat" guns.... But he did very well, even handicapped by caliber.....

Just funning with you of course..... Well done, fantastic bear, and a Swift is a fine bullet, used many a Swift in my days afield in many calibers, and even some "Rat" guns too..... LOL.....

M

<http://www.b-mmfilesandcartridges.com/default.htm>

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capoward

25 August 2014, 00:07

Nice bear Chuck. Congradulations to you and your boys!

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

michael458

25 August 2014, 22:21

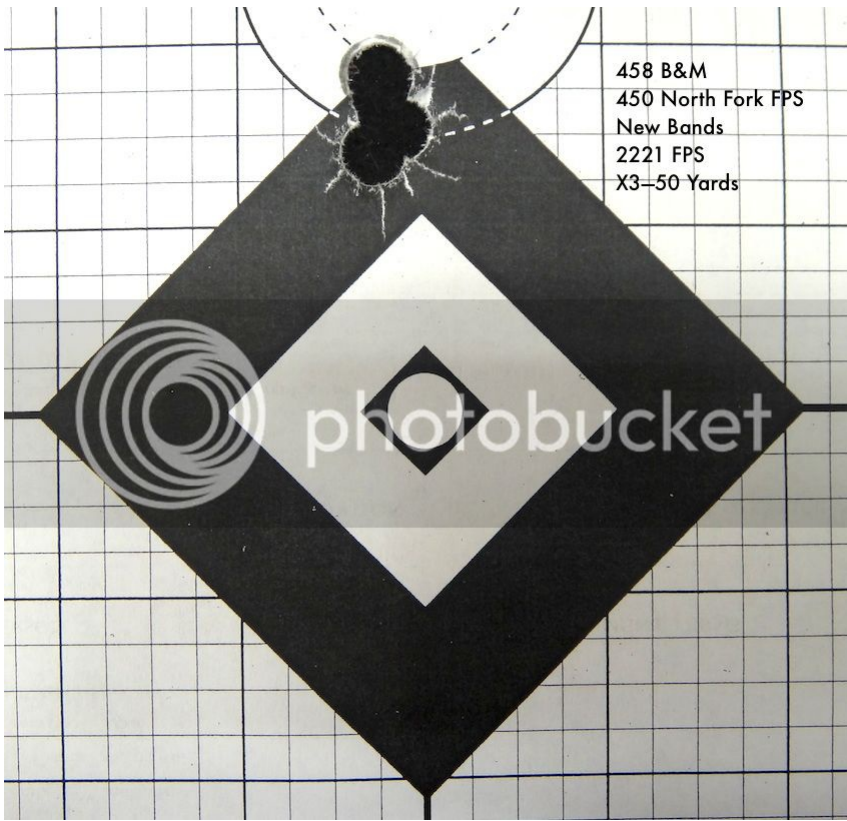
Test work today doing some pressures and load data 45/70 as stated last week.... Going well with that...

However, #1 Priority this week is to test this new 450 gr 450 North Fork FPS.. With the new bands. Two things today, pressures and accuracy. Accuracy and consistency is what brought us to the two new top bands, and my desire to improve both.....

As for pressure, the same load in the 458 B&M, 76/TAC 450 #13 Solid gives a steady 62000 PSI at 2280 fps in 20 inches of barrel. The exact same load with the new North Fork 450 gives us 54500 PSI and 2221 fps. Which is GOOD, and was what we were hoping for. Our hopes were that the two bands would not add pressures, the fact that pressure is lower, and velocity slower, with the same load is also logical, as the 450 North Fork is shorter, and is less compressed than the 450#13 Solid, so all is following along perfectly. One or two more grains of TAC, the 450 North Fork will be up to velocity and pressures of the #13, all will equal out, and the bands added nothing to the pressure. I have not measured or done any ciphering, but I imagine the two .050 bands are about equal to the number of normal NF Bands removed.... So, it should equal out, or be very close.....

Accuracy... YES..... With these 3 rounds I will be giving North Fork John the go ahead for production, which will give me enough bullets to do a lot of testing with over the next few months...

Funny..... The first two rounds are the two lower ones. At first, I decided to QUIT... Even walked down to retrieve the target... Got down there, felt guilty, I knew I needed 3, had to have 3... So I fussed at myself, called myself stupid, walked back to the rifle to fire the 3rd round. There was no doubt in my mind I was going to screw the pooch and the 3rd round go all to hell, but I had to have that 3rd round..... The 3rd round was the point of the entire exercise, but I knew I was going to screw it up. I only have 10 prototype bullets, I had already used 3 for pressure, this would only leave me 4 total left, and I want terminals too..... Damn..... But, I managed to not screw it up too bad, so I am very pleased, I think this is going to work the way I want it to.....



458 B&M
450 North Fork FPS
New Bands
2221 FPS
X3-50 Yards



450 gr 458 Caliber

New North Fork
450 FPS

450 #13 Solid

450 South African

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capoward

25 August 2014, 23:27

Michael,

Certainly a very decent group and good information. Definitely looks like a good design for the NF FPS.

Unfortunately to truly identify true pressure and velocity differences plus your stated primary concern of enhanced accuracy I perceive a simultaneous triple test using 450gr .458 Solids in 1) the original NF FPS banding, 2) the MDM modified NF FPS banding, and finally and most importantly compared to 3) a CEB Safari Solid also cut from copper.

I included the CEB Copper Safari Solid to use as an "interim standard" in an effort to better evaluate the nuances of the NF FPS original and MDM banding.

Though I truly reckon that only the two NF FPS bandings require testing...

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

Sean Russell

25 August 2014, 23:55

i am going to be very curious as to what Michael finds in the new NF 416's. The reduced length of added powder capacity might be fascinating.

"The rule is perfect: in all matters of opinion our adversaries are insane." Mark Twain
TANSTAAFL

www.savannagems.com A unique way to own a piece of Africa.

DSC Life
NRA Life

michael458

27 August 2014, 00:23

And the Newer... HEH... North Fork FPS performs as good as it shoots.....



This is 15%-20% deeper than the old nose profile penetrates in this same test medium....

Photos are not so great, studying the bullet, the rifling is getting a perfect grip on the larger top bands and no sign of any slippage at all.... Very excellent.....

Also, increased velocity by going up one grain today, to 2252 fps for 55400 PSI... Can still move up, remember, this is a 65000 PSI MAX Case, but I like 62000-63000 Max Safe..... Might bust 2300 without much issue...

M

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capoward

27 August 2014, 00:54

That's most excellent performance at a gentile pressure.

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

michael458

27 August 2014, 02:38

Jim

.600 from the top of the upper band.....

Very good performance..... I am very pleased with this.....

Michael

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LionHunter

27 August 2014, 04:20

Michael-

We would have gladly field tested these new NF bullets on Ele, Hippo, Lion and Leopard beginning next week, however it's a bit late now! 😊

As you are aware, we're going with our CEB 450gr solids and 420, 370 and 250 grain Raptors; all in 458B&M caliber. We already know they will work. Sounds like the new NF will as well. 😊

Thanks for all your R&D and help. If you would turn on your cell phone I would be able to text you from the Zambezi Valley with updates! 😊

Mike

DSC
DRSS (again)
SCI Life
NRA Life
Sables Life
Mzuri
IPHA

"To be a Marine is enough."

capoward

27 August 2014, 04:53

quote:

600 from the top of the upper band..... Very good performance..... I am very pleased with this.....

Thanks Michael. I re-read your introduction post and noted that you identified all the pertinent information. My bad! LOL...

I agree, very good performance especially at that pressure/MV level. Plenty of room to move upwards...

Jim 🇺🇸

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

michael458

27 August 2014, 05:27

quote:

cell phone

Cell Phone??? Hmmmm, I know I have one somewhere? I think I had it a year or so ago?



Do you have the number? If so, what is it? 😊

As for the bullets, you are "well heeled" with what you have..... I want to tweak this North Fork into a big hammer..... Not that it needed much, but I really like this band system.... Of course you all know where it is coming from, the work on the CEBs.... Incorporated into the North Fork I think it adds a good bit to the consistency.... The new profile already in place, which I think is giving some more depth of penetration than the #13, maybe 5% or so from what I have seen with this bullet and the new .500s.

I have a decent order of these 450s being done. Along with 350 gr 416s, and 450 gr .500s... With what I have coming we will be doing a lot more work with them in all areas..... Once that is satisfied John and I will be working on CPS versions, Expanding Cup Point Solids.... Maybe ECPS.. This nose profile should be very conducive to a ECPS type bullet, these are deep penetrators....

Mike....

Shoot some things with that 370 Raptor I have for you.... I think that is going to be wicked too... Plenty of bullet there for buffalo.....

M

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Sean Russell

27 August 2014, 05:36

I am curious about the properties of copper v brass when hitting bone---

No opinion--just curious. Which is more apt to deform or shatter?

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TANSTAFL

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DSC Life
NRA Life

capoward

27 August 2014, 07:04

quote:

I am curious about the properties of copper v brass when hitting bone---No opinion--just curious. Which is more apt to deform or shatter?

Sean,

It doesn't really answer your question - but during Michael's "T'Rex Block Test" testing copper solids deformed more than brass solids but neither shattered.

From back on page 102:

quote:

Old T'Rex and Ball Joints can make a mess of a bullet!



I like the CEB BBW #13, the profile seems to hammer hard and maintain!



From page 104:

quote:



Real life experience from page 110:

quote:

Originally posted by srose:

This is my BBW cup point brass bullet recovered from warthog. Bullet shattered jaw and teeth then went through back of skull and lodged behind shoulder.





Hope these photos help to answer your question.

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

capoward

27 August 2014, 07:30

For those of you who think our 465H&H is strictly a Woodleigh RN Solid guy - enjoy this from page 111:

quote:

Originally posted by 465H&H:
I have just returned from an elephant hunt in Zimbabwe where I took three elephant. One tusksless cow, one tusked cow and one old bull with very small ivory.





I used the Woodleigh 500 grain .474 diameter Hydro from a 470 Nitro at 2,145 fps. on the tusks. The shot was very unusual as she was slightly quartering away from me and she raised her head and trunk very high. Therefore, the bullet entered about 3" above her right ear slit. She went down with the typical brain shot head raise and crashed down. We thought she was dead on bullet contact. We went after a second tusksless cow in the herd but she got away and returned to the first carcass after about 15 minutes. Much to our surprise she was gurgling and vebling moving her trunk tip. Another shot centrally to her forehead gave us the rear leg death kick. She was in a very favorable location to get the Cruiser up to her so we took the head back to camp to more thoroughly examine the skull. We skinned the head and then sawed it in half to follow the bullet paths. We removed both halves of the brain and saw that the rear part of the brain was mostly bloodshot mush. What was most amazing is that the first bullet left an entrance hole through the skull the size of a 50 cent piece. This bullet penetrated the brain cavity centrally and angled forward slightly to exit the brain cavity about half way forward. Again the holes in the brain cavity were very large and the amount of coagulated blood was awesome. We tried to recover the bullet which we knew had to be somewhere in the left portion of the skull to no avail. But we do know that it did not exit the head. If it had exited it would have amounted to 27" of penetration. The frontal shot also penetrated the brain but higher and that bullet exited the skull 3" above the first shot's entry hole and was also the size of 50 cent piece. The bone between the two holes was broken out leaving a hole about 4" by 1/12". Amazing destruction the skull. The second bullet then penetrated the neck and was found behind the shoulder blades in the loin meat. That amounted to a little over 40" of penetration.

On the bull I used the CEB 13 deg. .474 500 grain bullet also out of my 470 Nitro. The bull mock charged us at around 10 yards then took a couple of paces towards us and dropped his head as if to charge. I lined up for a frontal just above the eye line but as I squeezed the trigger he raised his head and the bullet hit way too low for a brain shot. He whirled and I lined up for a hip shot as was running directly away from us. Just before I fired he turned 90 degrees to the right and ran behind some brush. I could only see the top third of his back and I placed a bullet just forward of the right ham intended for the spine. I got lucky and broke the spine. He went down in the rear end and tried to pull himself forward dragging his paralysed hind end. He was down as we approached but swinging his head wildly and trumpeting loudly. I placed a bullet into the neck that missed the brain due to his moving his head. It went over the brain and exited the trunk below the eye line, about 34" of penetration. Another bullet was placed directly into the ear slit and killed the bull. That bullet did not exit although it should have exited somewhere in the left cheek area. If it had exited it would have penetrated around 36". We could not get the vehicle close enough to recover the head so no post mortem in it. We did recover the bullet that broke the spine in the opposite shoulder bone. Around 39" of penetration.

The tusks cow was also shot with the CEB 470 bullet. She was around 20 yards away and quartering to my left. I placed the bullet about 4" behind the left eye just above the zygomatic arch. She went down instantly dead at the shot. An insurance shot was then placed into her forehead from around 8 yards. Again we were unable to recover the head for post mortem. The first bullet should have exited the head near the right ear hole but didn't. If it had it would have penetrated 29". The insurance shot should have exited in the throat region but didn't. If it had it would have been 31" of penetration.

So here was what I learned. But before I go into it I want to say that I try to have an open mind and will change my opinion when new data comes forward. The following is just my opinion based on my experiences in shooting elephant with a pretty wide variety of calibers and bullets.

1. Elephant heads are extremely difficult for a bullet to fully penetrate on shots that angle through the head. That is the case no matter what type of solid that you use.
2. Frontal shots that miss the tusk sockets or teeth are much more likely to fully penetrate the head and depending on the type of bullet will be found somewhere in the neck or between the shoulder blades.
3. The cup point of the Woodleigh Hydro seems to make much larger holes than either RN or FN solid in head bones. Typically, the RN and FN solids make holes in the skull bones of caliber or slightly larger size. The Woodleigh Hydro made holes in the skull 1 1/2 to 2" in diameter.
4. The small cup on the end of the Hydro seems to cause much more blood trauma than other designs.
5. Both bullets gave similar amounts of penetration but not all could be measured.
6. We have now proven that an elephant can be hit in the brain and the rear portion of the brain at that, without killing the elephant.

Recoverd Woodleigh and CEB solids from elephant.



465H&H

Note: IMG corrected in original post.

Very nice report H!

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

michael458
Sean.....

27 August 2014, 15:39

Regardless of material brass or copper, both can flow and move if hitting heavy bone material.. I have seen some really messed up bullets that hit ball joints along the way, or points of shoulders on buffalo, things like that. I hit the ball joint on the shoulder of a lion back years ago with a 458 caliber Swift A Frame, and that was the most messed up A Frame I had ever recovered..... With both solids in copper and brass, hitting heavy bone like the ball joints, the nose can flow, this is one good reason to have a strong nose profile too.... I Have recovered copper solids after going thru and hitting bone and look great, reload and go again, same with brass.... but hitting just the right bone can mess both up too..... All this is where Factor #3 comes into play, Construction and Material that the solid is made of....

Last year when I used the 50 B&M AK lever gun on that buffalo & hippo, and filled them full of holes with that 405 #13 Lever Solid, a couple that were recovered had hit some bone along the way, and there was some flow and movement going on there....

None of them shatter, unless there could be a void or something in the metal inside the bullet when it was made and then I am not sure it would shatter.... They shatter when coming in contact with 1 inch cold rolled hardened steel, I can attest to that.... LOL.....

M

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michael458

27 August 2014, 17:08

Talking about those 405 solids I used last year, here they are and you can see where they took a beating.... Copper would have been the same in this situation as well, possibly even more distorted I think....????
Regardless thereof, both would have done the job intended and these did in fact accomplish the mission.....



**50 B&M Alaskan
1:12 Twist Rate 18" Barrel
7/2013**

**405 BBW#13 Solid
Muzzle Velocity 2120 fps
Hippo 15 yards**

X3--Estimated 4-5 feet



photobucket



photobucket

In fact Sean.... I have a photo of one of your solids that took a beating on your buffalo

**416 B&M
1:14 Twsit Rate
9/2012
350 BBW#13 Solid
Muzzle Velocity 2450 fps
Rear Buffalo Shot
Heavy Bone Pelvis-Spine**

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michael458

27 August 2014, 17:10

Turned yet another page..... Want to show you the difference between the Old North Fork and the New North Forks.....

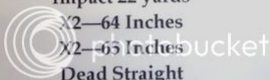
458 B&M
1:14 Twist Rate
450 North Fork FPS
72% Meplat
Muzzle Velocity 2266 fps
22 yd Impact Velocity 2177 fps
56 Inches Dead Straight line
Penetration



photobucket



458 B&M
1:14 Twist Rate 20" Barrel
8/26/2014
450 North Fork New Profile
MDM Bands
.600 Nose Projection
Muzzle Velocity 2252 fps
Impact 22 yards
X2—64 Inches
X2—63 Inches
Dead Straight



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