

This topic can be found at:

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

michael458

28 August 2014, 15:27

Terminal Bullet Performance

OK, how about some .500 caliber solids.....

I had a couple of solids that I did some time ago that I never got around to testing... I had a pretty good idea that they would work, so while in the back of my mind, I did not put immediate priority on the mission...

Testing the North Forks was required, so while I had two boxes of test medium I decided to go ahead with the two .500 caliber solids, a 475 gr #13 and a 525 gr #13 Solid... Both of these also with .600 nose projections above the top band.

My thoughts here was the 475 #13 mostly for the 50 B&M & 500 B&M, something between the 450 North Fork and 450 #13 Solid, and the 525#13 Solid for the 500 MDM..... The more we learn about this nose profile the lighter we can go, hell for that matter I think the 375 gr .500s in #13s and North Forks will do anything one might do, with the larger bullets just giving you more choices for shots that might not be so good. The little 350 gr #13 in .474 proved that a couple of months ago exiting side brain shot on Mark Davids bull elephant..... But anyway... I do not believe at all in the BS of over penetration.....





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Biebs 28 August 2014, 19:39

That's what I'll be using, for sure!

michael458 29 August 2014, 14:02

quote:

Originally posted by Biebs:
That's what I'll be using, for sure!

Truth is, any of the solids for the .500s will do a number on anything. From the 450s to the 550s, they accomplish anything you want. I too am impressed with the 525, its an ass to nose bullet for sure..... We know that a 500 #13 will go from head to hip on elephant, and the 525 has 10%-12% more depth..... Because of the velocity, the 475 #13 goes about the same distance as the 500s..... The 450s only slightly behind those..... All hit very hard up front.....

M

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capoward 30 August 2014, 01:10

Dang on my iPad right now so not easy to search the *TBP* thread. So will have to go off recollection for what that's worth.

Michael,
I seem to recollect that Sam cut some 510gr solids pre-BBW#13 nose shape that penetrated in the upper 60's. Then there was that long hollow-base BBW#13 trial bullet (540grs I think) that ran deeper still.

This has me wondering if there's an "optimum weight range" with the .500 caliber BBW#13 nose shape that affords maximum depth penetration even when velocities are a bit lower than with lighter bullets. For that meter, if yes with the .500 caliber then I perceive it'd be the same with other calibers.

Also thinking about the clammer for needing limited penetration solids (herd shooting you know)... I perceive little need to revert to a RN traditional construction solid should I need to limit "over penetration" 'cause I can always use a lighter weight proper shaped FN solid or use a Cup Point solid to reduce penetration while still maintaining reliable penetration and trauma.

Just some thoughts...

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

michael458 30 August 2014, 14:57

Jim
In the beginning with the .500s of course I had Lehigh make some big 510 gr Solids based on the Barnes FN, a good design and profile. These were consistent to 60-62, later I had Dan do a run of these with his banding, and pretty much the same thing. I did not care for those bands. But had not yet figured out what to do about those... This nose profile does not react all that much with velocity change, unless of course it is very low. Penetration about the same in 500 MDM at more velocity, as the 50 B&M with some less velocity.... I think once I got the velocity pretty high in the 500 and had them go through the box but only a short way through.....

The angled nose profile reacts with velocity to a much greater degree.... Pun....

These were rather impressive..... And as you can see very close to about the same as the 525#13s I did a few days ago....



As for "Over Penetration", of course I do not buy into that, nor would I adhere to such, there is no such thing as "Over Penetration"..... In the case of buffalo, if one is so concerned about over penetration, then the only way to come to terms with that is with a very low SD NonCon, or a lighter soft point for caliber. Most any sort of limited penetration solid is going to exit any broadside buffalo. These are great bullets, but even with limited penetration when compared to a solid like the #13s or North Forks, they still provide a great deal of penetration. For a NonCon, or #13 Raptor, the SD would need to be around .200 to have the best chance of not exiting a broadside buffalo, but yet enough penetration of the remaining slug to make it to the far side hide. For a soft point, some of the large expanding woodleigh softs. I have shot a few buff with 500 .458 Woodleighs and not had one exit, but I am not so sure I would count on that 100% of the time. I have also not had any .458 450 Swifts exit, but again, would not count on it all the time... Anytime you start trying to limit penetration on something like this, you are very likely also have to compromise just as much on the other end....

I hear the argument that over penetration and having a 50 inch bull with something behind it and miss taken the shot because of over penetration. Well, if you move in the opposite direction, limited penetration, you may very well compromise your terminals to the point that you have to wait for the perfect broadside shot to insure your limited bullets penetration, and you may very well loose out anyway.... So WTF is that about? One can cook up all sorts of phony BS Scenarios in attempt to justify ones position on such things..... Personally, I will never ever waiver on the point of Over Penetration, I much rather have that on my side, as I believe that opens up all sorts of options far beyond limiting my terminal abilities.....

But anyone that is over concerned about over penetration has options by going with less terminal performance.....

Michael

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capoward

30 August 2014, 21:46

Michael,

Thank you - yes that 536gr BBW#13 HB was one of the bullets I was thinking of in my earlier post. Very sleek bullet with awesome performance.

I'll dig around on my PC in a few minutes and see if I can find the other bullet I was thinking of.

Over penetration.

I believe I poorly stated my musing in the earlier post.

I completely agree with your comments and definitely should have noted that I was only thinking of elephant with my comments when I left out the Raptors.

Obviously my interest runs towards solids such as the pictured 536gr .500 BBW#13 Hollow Base solid with 74" penetration in the bullets box so limited penetration is not on the list.

But I have boxes of 500gr .500 CEB BBW#13 Solids (now CEB Safari Solids) so I guess I'd be using solids running 62-64" in the bullet box.

LOL... I guess I am in a sense using a limited penetration solid when a greater penetrator is available. BUT - humorous or not, that wasn't my intent. So let me try again.

Elephant...
There are now properly designed/constructed monometal FN solids that turn 'marginal or underperforming' cartridges into definite elephant killing cartridges. For this I'll stay with levers and we have the 450 Alaskan, the 470 and 475 Tumbulls, the 500 B&M Alaskan, and the 500 Alaskan. In the past the rifle/cartridge combos were acknowledged "thin skinned DG" killers and perhaps as adequate for "thick skinned DG" but definitely inadequate for elephant. However with today's properly designed FN monometal solids these rifle/cartridge combos are more than adequate for of cleanly taking elephant. The only change between then and now is the use of properly designed light weight FN monometal bullets.

So basically I was proposing for those individuals overly concerned with penetration depth to use lighter weight properly designed FN solids rather than reverting the traditional FMJ solids.

Buffalo...
Buffalo are a definite Raptor or Cup Point with solids following for the potential fleeing butt shot. I will say though that someone that can properly crank the bolt or lever that I perceive they'd be better served with a Raptor/Cup Point in the chamber and 1st round in the magazine followed by two solids.

Anyhow... That's it... Not sure this post is any clearer than my earlier one...

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

capoward

30 August 2014, 23:54

Following up on my earlier post.
A refresher on Michael's bullet box and his original .500 SST/Lehigh solid...

quote:

Originally posted by michael458:
I'm Back!

Hey Guys, finally back up and running this week! Beginning to catch up a bit and get some shooting done. Today was Solid Day! First time using the second box to catch those big flat meplat bullets. Only a couple got all the way thru today however!



----- Edited -----

And since these have traditionally gone thru box one and out, the 500 MDM and the 550 gr SSK Solids. They penetrate the first box, but not too far into the second!



If you look at today's test work you see all the bullets lost stability once they had nearly come to the end of penetration. This is something I have not experienced before with any of the FN Solids I have worked with in the past. Almost all the time they are all found nose forward in the mix. Well I suspect the big difference today is that I pulled the boxes up to the chronograph, all impacts were at 17 FEET--not 20-22 yards as I normally do. So all impacts are nearly right out of the muzzle. Now someone tell me, is it possible that the bullet has not fully stabilized at this point yet??? If impact distance is increased to say 20 yards stabilization is probably a bit better? Need some professional opinions on this please.

Now regardless thereof, this is pretty much worst case scenario in the field, having to shoot at feet, not yards. All the bullets stayed dead straight until that last couple of inches, 95% or better of the total penetration. Also anytime you pass that 35-40 inch area in this mix you are plenty adequate for anything you would do with a solid. And all of these are well past that mark.

Michael

Some of Sam's creations...

Not quite what we were talking about - but another Sam creation:

quote:

Originally posted by michael458:

I have a couple of things to share today! No test work, but none the less good stuff, at least to me!

As most know I like .500 caliber, have developed now at least 5 cartridges in .500 caliber to fit nearly every rifle action you can think of. I have tested and worked with a lot of .500 caliber bullets. I have taken the .500s to the field a lot over the last 4 yrs and they have been very successful on every endeavor.

There are a couple of bullets made by our manufacturers Hornady and Sierra, for the 500 S&W that have turned out to be outstanding rifle bullets too. The 400 Sierra and the 500 gr Hornady. While designed for the 500 S&W I have tested and shot animals with these bullets beyond what they are designed for. If one keeps the 400 Sierra to 2000-2100 fps muzzle velocity it will hold together for extreme performance on animals up to the size of wildebeast for sure. The 500 gr Hornady is a very tough bullet, and I have tested it to 2100 fps and it holds together. I have shot game with it, wildebeast, zebra, giraffe and a few other things and it is a hammer. Hit with this if they go at all, they don't go far. The furthest was a zebra and he went 20 yds, giraffe down in 10 yds, wildebeast on the spot. That was at 1900 fps. These are perfect for the 50 B&M Alaskan, in the lever guns, flat lead meplats and perfect performance.

However, in the bolt guns that lead meplat wants to catch on the bottom of the feed ramp. So while a few guns will feed them, sometimes, it is not a sure thing.

As we know Sam visited last week and we did some test work. At some point I must have mentioned something about this to him, but I don't remember it, but he did. So he brought it up, and just said I will make you a form die and round the nose off! Just like that, no big deal! WHAT? Well I sent him home with a hand full and in a few days here come in the mail a form die and some extra parts!

Hmmmm? Well Sam had already told me I would have to use this in a single stage press, which I don't even have anymore, I run 4 Dillon presses and that is it. But I could not wait of course to get my hands on a single stage press, even though it would have only been a couple of days. Patience is not in my vocabulary. So I kinda snuck around and played with the die a little, finally figured it out, sorta and made it work with a Dillon. And I now can run these bullets thru my bolt guns slicker than.....well, you get the idea.

This is a photo Sam sent to me.



So ok, don't be telling Sam this, but this is what I did today with the 500 gr Hornady.



To refresh some memories below is a test I did recently in the 50 B&M AK with these two bullets. Trauma inflicted on test medium was substantial.

**50 B&M Alaskan
500 Hornady
Muzzle Velocity 1933 fps
22 yd Impact Velocity 1867 fps
13 Inches Total Penetration
Extreme Trauma Inflicted to 7
Inches of Penetration
Retained Weight 400-337 grs**



**50 B&M Alaskan
400 Sierra
Muzzle Velocity 2051 fps
22 Yd Impact Velocity 1971 fps
10 Inches Total Penetration
Extreme Trauma Inflicted to 5
inches of Penetration
Retained Weight 397-371 grs**



OK OK, I know, it took me a little bit to figure it out, but I got there in the end. Man I am like a kid at christmas, new bullets that will work now in my bolt guns! Hammers too!

Michael

510gr .500 SAM Multi-Groove FN Solid 67° Meplat:

quote:

Originally posted by michael458:
Now the Corbin Prototypes.

500 MDM
1:12 Twist Rate
512 2 Groove Solid
SSK Copy
67% Meplat

Muzzle Velocity 2219 fps
22 yd Impact Velocity 2127 fps
64 Inches Straight Penetration



22 yd Impact Velocity 2127 fps
64 Inches Straight Penetration



500 MDM
1:12 Twist Rate
510 Multi Groove Solid
67% Meplat
Muzzle Velocity 2251 fps
22 yd Impact Velocity 2177 fps
70 inches Straight Penetration



70 inches Straight Penetration



OK today side by side in the exact same test mix, the multi groove penetrated a good bit deeper than the standard 2 groove design. Once again in the 500 MDM giving 30 fps faster with the exact same load. This is not a top load by the way. This is 85/H322 top end is 89/H322 for well over 2300 fps with the standard grooved bullet.

Both excellent performance, the multi groove bullet being very impressive.

Jim, both you and North Fork are right once again. I think Corbin and I are going to get a price on the multi groove, and give this guy some business. I would also like to look into some lighter brass versions of this same nose profile with the multi grooves!

Excellent, just Excellent!

Michael

506gr .500 BBW#13 FN Solid - 67° Meplat:

quote:

Originally posted by michael458:

13 has always been a good number for me, and that continues to this day, not that I am superstitious or anything. But the Big Boy .500 caliber #13s are a tremendous success!

This Nose Profile has to go right up with the #1 Best Nose Profiles For Solids Ever! I reckon JDJ knows what the hell he is doing, as I suspected all along. I only have one bullet in this profile, the 455 JDJ in .500. Regardless of whether tested in the 50 B&M Super Short at 1850 fps, the 50 B&M AK at 1900 fps, the 50 B&M At 2200 fps, or the 500 MDM at 2450 fps this nose profile drives dead damn straight time after time after time. Velocity changes the depth of penetration, that's it. I tested 2 some time ago in .458 caliber in the 458 B&M, at 2140 fps 64 inches and out the box, and it weighed only 475 grs! It penetrated as well as a 500 Barnes Banded out of the lott at 2250. All nose profile!

I gave some samples of these to Sam, and of course he came up with all the different angles, most very good, except the #20s. But these #13s sure are consistent. Please recall a few weeks ago we tested #13s with a sharp edge 65% or 66% meplat, dead straight to 63 Inches. Two had rounded edge meplats that went out of the 64 inch box and lost, but they were a bit off course with the rounded edge meplat down to 62%. But penetration increased substantially, just not quite as stable at 62%.

Well these new samples Sam made are a perfect radius 67% meplat, weighing in heavy at 506 grs, let me introduce the 506 BBW/#13--In the left corner!





I did not notice until I actually took the photos, but Sam might have made two different rounded meplats for me to test, if so, then I tested them, and they are the same, made no difference. Both look good, kinda like that one on the left I think! Both did the same, DEAD STRAIGHT And out the back of the box, hit air, hit the second box to 66 Inches total, 100% straight line, nose forward!

A couple of days ago I did a post explaining how no solid can induce or inflict as much trauma as a expanding or Non Conventional expanding bullet, remember, page 89 now! Well, these #13s have another bonus factor, Tremendous Trauma transfer, the most I have EVER tested or seen in ANY solid ANYWHERE.

For solids I put the witness cards in at every 10 inches throughout the medium. They are placed 1 inch away from the right side of the box and bottom edge at the bottom of the box so that thru the box they are even. Now from time to time in repacking the medium one gets a 1/4 one way or the other, this is pretty easy to see. The witness cards are nothing but card stock from Wally World, laminated in 3 mil sleeves. What has been an added bonus on the witness cards is a permanent cavity that is left from the bullet inflicting trauma to the target. This can be measured, studied, and cataloged for future reference. Easy to store, and easy to study.

For expanding bullets I place the Witness cards every 4 inches within the medium, trauma normally starts to show very seriously at 4 inches, tapering down at 8, and not too much beyond 10 inches. This is pretty much the same with solids, after 10-12 inches there is not much trauma to be noticeable, and at 20 inches it's gone.

The trauma I am going to show you was at 10 inches inside the test medium, I have never witnessed this much trauma inflicted with any solid flat nose meplat bullet and then especially as deep as 10 inches. There was more trauma at 20 inches with this bullet than I normally would see at 10 inches with other solids! I have never seen trauma inflicted out to 20 inches!



What are my plans for this? I tell you what they are, Tuesday samples of these go to CEB, I want a 500 gr .500 caliber solid EXACTLY like these, with a 67% meplat. I want a 400 gr BBW/#13 also in .500 caliber. I am keeping these exact same bands too.

Then when the .500s are sorted out, I want .458s, a 450 gr version and a 325 gr version.

Then when the .458s are sorted out, I want a 360 gr .416 caliber version

Then when the .474 B&Ms come in I want a 450 gr version and a 350 gr version of them!

ALL BBW/#13s as they are now known! Hell I might even have a 9.3 version done too!

Great Job Sam, Just great!

Michael

540gr .500 BBW#13 FN Solid - 68° Meplat:

quote:

Originally posted by michael458:

Sam made some heavy samples of the BBW #13 in .500 caliber to test in the 500 MDM. So I really wanted to see if we were going to break any new records in the test medium, we didn't, but we got very close!



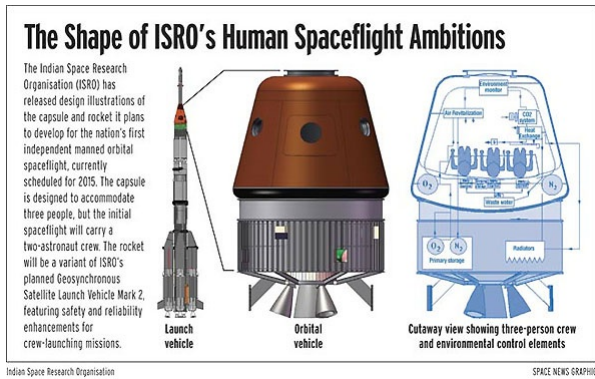
I reckon the sum total of this long post is that there are nose profiles/weights that work, nose profiles/weights that work better, and nose profiles/weights that work awesomely!

For those who are wondering, I've intentionally not address the >.500 caliber because I was addressing Michael's and Sam's work in the .500 caliber void. I do however acknowledge the awesome penetration results with the proper FN shape and profile including Rob's Crayola nose bullets...

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

boom stick

31 August 2014, 00:26



Has anyone noticed the similarity of space capsules and the BBW13 nose profile?

577 BME 3"500 KILL ALL 358 GREMLIN 404-375

we band of 45-70ers (Founder)
Single Shot Shooters Society S.S.S.S. (Founder)

416Tanzan

31 August 2014, 00:35

The solid testing at 10-20" inches raises other questions, too.

I am interested in learning something of the trauma and wound channel in the 10-20" area of expanding bullets and non-cons. What is the wound-channel characteristic of the remaining cylinder in a Raptor as it sails through 10" to 20" wet-medium?

For example, do any of the raptors show any trauma beyond their diameter in the main wound channel between 10" to 20" inches?

Do any of the premium conventionals (Swift, Barnes TTSX, TSX) show wider wound channels in the 10"-20" range?

Thanks,

+ + + + +

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

michael458

31 August 2014, 02:06

quote:

For example, do any of the raptors show any trauma beyond their diameter in the main wound channel between 10" to 20" inches?

Tanz..... Some of the bigger bore Raptors show trauma up to 10-12 inches, .500s.... In particular the 450s at velocity 2450 fps or better, they are absolutely wicked, with massive trauma to that point. Not many of the other show trauma beyond 8 inches or so, and also depends on how fast they are going. There is no upper limits with these, and the more velocity the more trauma inflicted, and deeper the penetration of the remaining solid. After the trauma its pretty much a full caliber cut the rest of the way through.

quote:

Do any of the premium conventionals (Swift, Barnes TTSX, TSX) show wider wound channels in the 10"-20" range?

Again, all depending on the characteristics of the bullet and velocity. We start seeing trauma from 3-4 inches up to 8-10 in the bigger bores, 458+, then the wound channel narrows down from that point on to whatever the caliber is of the mushroom, maybe a little less as they more or less push through instead of cut, pushing material to the side on its passage..... Really don't see massive upset much past 8-10 inches or so at most, and only then depending on caliber, characteristics of the bullet and velocity.... Actually with most all conventionals the more velocity run the less penetration you get, but more trauma up front, but still slows down at 8-10 inches and little beyond that....

In animal tissue you will see disruption past these points.....

That help a little?

M

Guys, I had forgot just how much damn work it is to do terminals! The other day, I only test 8 bullets, which is X2 each test, so 4 tests.... Damn, I was worn out, sweating, and beat. I am not so sure I could keep up the pace we did up to a year or so ago, now.... Whew.....

M

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capoward

31 August 2014, 04:11

quote:

Guys, I had forgot just how much damn work it is to do terminals! The other day, I only test 8 bullets, which is X2 each test, so 4 tests.... Damn, I was worn out, sweating, and beat. I am not so sure I could keep up the pace we did up to a year or so ago, now.... Whew.....

M

Uh oh... Is age setting in? Did we wear him out??

Take Labor Day off, enjoy, rest up, let the boys barbeque for you...

Yes I know, very magnanimous of me. LOL...

Seriously, take it easy!

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

michael458

31 August 2014, 04:21






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capoward

31 August 2014, 04:44


Ah... I was thinkin more like     

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

capoward

01 September 2014, 02:54

Oops...  good - I glanced at the mirror... 



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

michael458

01 September 2014, 16:02

quote:

Originally posted by capoward:

Oops...  good - I glanced at the mirror... 

Yep, I know the feeling... All too well I am afraid.....

There were many generations Sam and I went through to get the bullets we have today, the #13s. North Fork also moved that direction, for a reason people, not haphazardly. And believe it or not, to the best of my knowledge we were working totally separately and came up with near the same thing in the end..... That speaks volumes to me..... And here we are.....

Probably my love for good solids has put us today with a #13 or North Fork Solid for every caliber, cartridge combination I can think of, or have need of..... I could very easy get by the rest of my hunting career and use nothing but these solids, and in most cases I think they inflict as much trauma as many conventional, if not most conventional soft points out there, not to mention their absolute dependability to get to where they need to be, or at the very least, the most dependability that can be had to accomplish the mission.....

Going through the .500s, I pulled all the ones we currently have in .500 caliber that is available now..... There should be a few that will work in any .500 cartridge out there today.....



50 B&M Alaskan
1:12 Twist Rate 18" Barrel
11/3/2012

405 BBW#13 Solid
Muzzle Velocity 2095 fps
48 Yd Impact Velocity 1904 fps
X3--42 Inches
X1--43 Inches
Dead Straight



photobucket



500 MDM

1:12 Twist Rate 21" Barrel
1/18/2013

450 BBW#13 Solid
Low Pressure Reduced Load
Muzzle Velocity 2208 fps
X4--56 Inches



photobucket



50 B&M

7/3/2012

1:12 Twist Rate
450 North Fork FPS

New Nose Profile
Muzzle Velocity 2235 fps
Impact Velocity 2163 fps

22 Yd Impact

X1--60 Inches

X1--61 Inches

Dead Straight Penetration



photobucket



500 MDM
1:12 Twist Rate 21" Barrel
8/26/2014
475 #13 CEB Solid
.600 Nose Projection
Muzzle Velocity 2475 fps
Impact 22 yards
X2—62 inches
Dead Straight



photobucket

500 MDM
1:12 Twist Rate 21" Barrel
1/18/2013
500 BBW#13 Solid
Low Pressure Reduced Load
Muzzle Velocity 2220 fps
X4--61-62 Inches



photobucket



Remember, one must look beyond just the bottom line depth of penetration. Even within these bullets you will see the difference velocity, range, and other factors at work, if you pay attention to the details.....

Michael

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michael458

01 September 2014, 16:47

I am sure that many of you guys have seen the thread just below;

"The Best expanding dangerous game bullet take 2"

<http://forums accuratereloadin...4711043/mv7811095302>

Of course I have been following, its got to do with bullets, dangerous game, big bores, and these are the things that interest me.... I am sure that some have noticed I have not posted on the thread, but what would be the point, I am sure you know what I am going to say before I say it.....

Most all the bullets listed are great bullets, I don't give a damn about a partition however, so to me it does not even belong with the others.... I have used Woodleighs of various types and calibers with great success, and love some of them, I have used a lot of Swift A Frames, and they have always performed great and with success every single time. Today I would trade the Swift for the North Fork for various reasons, including terminals.... I have used the Barnes TSX with incredible success as well, but todays Barnes is not the Barnes that I used. Have not used GSC in the field, but would have confidence in that bullet as some have been tested here with good results. Never used a A-Square or Trophy Bonded.... So really can't say much about them one way or the other.....

What I can say is this, I have used a hell of a lot of CEB Raptors, or #13 HPs and have studied the results very closely. I am of the opinion that I have never seen as much internal damage in my hunting career as what I have seen with these bullets. Get one in the front end, and there is zero chance of survival for anything that one would use them on. Sometimes even a poor shot (which I have done) has ended up fatal as well, even without immediate vitals being touched! Fact is, I have made a few poor shots, and fact is every single one of those were recovered quickly and close..... I have made poor shots in the past, wherre recovery was long long long, both in time and distance, with other very good bullets that are on this list as well..... We all make mistakes and I have made a few.... A Raptor will assist greatly when one does make a mistake.....

Currently I have shot some 75-80 buffalo with Raptors, including a lot of Australian buffalo and some cape buffalo.... I have seen another 40-50 buffalo shot with these bullets in addition to the ones I have shot. Of course not all buffalo drop to the shot, and all buffalo are not easy regardless of the bullet. Zero doubt, these bullets have caused the most internal damage of any bullet I have ever seen on buffalo. Caliber plays a role too, on buffalo no matter how good the bullet is, you can't make a 9.3 or 375 into a 500..... While you may be at the very best a 9.3 or 375 can be, it is still a 9.3 or 375 no matter..... And these will just not hammer buffalo on a continuous basis like a larger caliber does..... Yes, you might get one here and there to DRT, but not as much as you will with larger calibers and the Raptors.....

I have also taken some 60+ or more plains game with these bullets. Once again, never ever seen as much internal damage as what these bullets can cause. All mine have been with 9.3 to .500 caliber and its impressive.... I have watched another 40+ plains game sort of animals shot with these bullets, and the story is always the same.....

So no, there is really not a point for me to post on that particular thread... What does surprise me somewhat is the fact that currently the CEB Raptor is at the top, has the most votes by a fair margin. I suppose as time tracks forward more and more are using them, and not only just using them but have taken enough time to do a bit of study as well..... If one does not study the effects inside, its hard for some to realize the difference.... It appears more of us are using them than I thought.....

Next in line, Barnes TSX, Swift A, North Fork and Woodleigh.... All good choices too.

I can and do choose anything I want, I choose a CEB Raptor above everything else, regardless of caliber and or mission, as they will work proper on everything..... But I might choose a different Raptor for a particular mission over another Raptor within the same caliber.... For instance, take a 500 MDM and we are going to hunt buffalo... I choose the 450 #13 Raptor at 2400-2450 fps for that. Lion, I will take the 335 LG Raptor with Talon Tip at 2800 fps for that mission. Same bullet with leopard. In other calibers, there are those same options available in various weights..... On a multiple hunt, then that 450 Raptor will hammer anything from impala to buffalo..... There are some amazing choices within caliber one can make with the Raptors.....

There is one that is not on the list, YET, and that is the ECPS.... ECPS? WTF is that you say? HEH HEH.... Not to many years from now, you will come to know that as the North Fork "Expanding Cup Point Solid".... North Fork has not yet entirely embraced this as much as I have, but this is a tremendously good and reliable bullet, performing the role of a big soft point, yet retaining incredible penetration abilities, which should not be discounted when it comes to increased trauma inflicted. Logically thinking people know that the deeper a bullet penetrates the more tissue that is being destroyed in the process. Exits are great, blood pumping out, while air slipping in, not a good combination for survival..... A ECPS expands very well in the process of penetration, then in most cases, depending on velocity, that expansion begins to fold back around, which decreases caliber some, but increases the amount of penetration. I have shot a few buffalo with these, and they have great effect upon the animal taking the bullet, lots of damage in between, and they exit to allow blood out, air in.... Once my little bit of work is done with the North Fork solids and my new bands, then John and I are going to work on a similar project with some ECPS bullets.....

Then the new combination might be a Raptor first shot, followed by a ECPS, then followed by either #13 Solids or NF FPS..... I say fill 'em full of holes, plug up the results later.....

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Live Outside The Box of "Conventional Wisdom"

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416Tanzan

01 September 2014, 17:04

quote:

Tanz..... Some of the bigger bore Raptors show trauma up to 10-12 inches, .500s.... In particular the 450s at velocity 2450 fps or better, they are absolutely wicked, with massive trauma to that point. Not many of the other show trauma beyond 8 inches or so, and also depends on how fast they are going. There is no upper limits with these, and the more velocity the more trauma inflicted, and deeper the penetration of the remaining solid. After the trauma its pretty much a full caliber cut the rest of the way through.

quote:

Do any of the premium conventionals (Swift, Barnes TTSX, TSX) show wider wound channels in the 10"-20" range?

Again, all depending on the characteristics of the bullet and velocity. We start seeing trauma from 3-4 inches up to 8-10 in the bigger bores, 458+, then the wound channel narrows down from that point on to whatever the caliber is of the mushroom, maybe a little less as they more or less push through instead of cut, pushing material to the side on its passage..... Really don't see massive upset much past 8-10 inches or so at most, and only then depending on caliber, characteristics of the bullet and velocity.... Actually with most all conventionals the more velocity run the less penetration you get, but more trauma up front, but still slows down at 8-10 inches and little beyond that.....

In animal tissue you will see disruption past these points.....

That help a little?

Yes, that helps.

So a copper monolithic that keeps its petals (GSC and Barnes under 2600fps impact) will make a smaller initial major-damage bubble than a raptor but will have a somewhat larger cylinder of destruction through the potential second half of the animal, where it may or may not be needed and may or may not still be within the animal.

This may relate to an older debate on hunting forums over the past decade or two. Why the small exit hole of many monolithics, despite massive trauma and quick animal death? (You may remember the 90's with reports of higher numbers of DRT's.) It would appear that many of the smaller calibre monolithics were shedding their petals (with or without some minor outward radiation of secondary trajectories), and the remaining blunt cylinder, still relatively effective, was exiting. It looks like both GSC/Barnes and CEB raptors would tend toward the small-hole exit, unless still giving off some of the massive trauma in the first-half of the initial wounding pattern.

(PS: Barnes has/used-to-have a video that explained the small hole exits as "having given up almost all of their energy." I think that that was an incorrect analysis in order to encourage the use of a very effective bullet. It would seem that the bullets were truly producing massive trauma and effectively killing deer and elk, but the exit holes were probably only the remaining blunt cylinder. I think that most of the traditional-lead nay-sayers were also mistaken in analysis, by claiming that no expansion had taken place when a small exit was seen. More likely, most of those animals experienced massive trauma, something that I had noticed myself back in the 90's despite small exit holes.)

And all of the solid testing is comforting, even though I have very rarely hunted an animal with a solid. Hopefully, NorthFork will give a thought to BC in their EXPS if they want to produce a hybrid "expanding blunt solid" for first-shot use. I still need a flat, 300 yard bullet in my chamber.

+ + + + +

"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

01 September 2014, 20:57

quote:

This may relate to an older debate on hunting forums over the past decade or two. Why the small exit hole of many monolithics, despite massive trauma and quick animal death? (You may remember the 90's with reports of higher numbers of DRT's.) It would appear that many of the smaller calibre monolithics were shedding their petals (with or without some minor outward radiation of secondary trajectories), and the remaining blunt cylinder, still relatively effective, was exiting. It looks like both GSC/Barnes and CEB raptors would tend toward the small-hole exit, unless still giving off some of the massive trauma in the first-half of the initial wounding pattern.

Tanz.....

It absolutely goes back to the 90's in this debate. I concur with you. I would have been part of that debate, and I would have been on the "Wrong Side" of it at that time. No one actually took the time to study, understand, and define what was actually going on here. With the older Barnes bullets, petals (not blades) would shear off during penetration. Copper that has not been annealed in some way to retain the petals, will shear at higher terminal velocities. Copper does not shear all at once, being much more malleable than brass, but it shears along the wound channel, and you are correct, it does not radiate far from the wound channel. But, during this process it is devastating within the wound channel. Back in those days no one put enough effort into trying to study this, this is obvious, or they would know what we know now about this. There was such an outcry from "Conventional Beliefs" and I was well in that camp at that time, that all efforts were put into finding a way that the petals would remain on the bullet, in more of a conventional style we were all used to, and understood.

Absolutely, as those petals sheared, the remaining bullet continued to penetrate, and would penetrate deeper because it did not have that "Parachute" of petals slowing it down..... Now here is the kick in the ass, we as hunters would always state this "The bullet did not work, it just penciled through, not expanding"... This is because we did not dig deep enough, had we been very serious about understanding this, we would have dug through blood and guts, and we would have seen and understood this wound channel, and we would have found "Petals" within the wound channel as well. But most only looked at the caliber hole going in, the caliber hole going out, and in our infinite wisdom we decided the bullet did not do its job, it did not open and just "Penciled Through"..... For Barnes, or GSC, or anyone else making monos at the time, this would have been a MONUMENTAL task to convince those of the time anything different than conventional wisdom told these hunters.... It would have been near impossible to get us, them, to understand this.

It may have very well been, the Barnes X of old, just might have been a better bullet in the terminal sense of things than it is today. I have zero issues with today's Barnes TSX, or maybe I should say the TSX of a few years ago, not today as Barnes is not the same company it used to be..... Starting in 2005-2006 I was moving rapidly to all Barnes TSX, and had it not been for .500 caliber I may have very well been in the Barnes Camp today? But, .500 caliber saved me and taught me much, as I had a need that could not be satisfied by Barnes or any other common bullet company.....

quote:

(PS: Barnes has/used-to-have a video that explained the small hole exits as "having given up almost all of their energy." I think that that was an incorrect analysis in order to encourage the use of a very effective bullet. It would seem that the bullets were truly producing massive trauma and effectively killing deer and elk, but the exit holes were probably only the remaining blunt cylinder. I think that most of the traditional-lead nay-sayers were also mistaken in analysis, by claiming that no expansion had taken place when a small exit was seen. More likely, most of those animals experienced massive trauma, something that I had noticed myself back in the 90's despite small exit holes.)



Today, we understand much better what is going on here, and why..... We are seeing things we have never seen before with these bullets..... Even today I question what is actually the best, if there is such a thing, copper that sheds petals along the way and stay within wound channel, or the brass that shears all at once ripping and tearing flesh with massive entrance and wound channel for 4-5 inches after shear, then the blades themselves becoming secondary projectiles... ??? I have had serious results with copper that does not shear, but all my experience with that is .500 caliber too, and caliber makes a hell of a difference in anything..... I suppose I lean more so to the shear and blade effect, that has now been duplicated in copper by CEB.... To extreme effects, although I have only seen test work in gel, I have not tested those here and have not used them in the field. But seeing the gel effects is good enough. But for me, I will stick with the brass #13s and such for my purposes.....

Sometimes I scout around the hunting reports upstairs.... I am really bad, the only thing I care about at all is what bullet they used! LOL.... Truth is, if they say something common, I don't even read the rest of the report, I move on. If they say something about using a North Fork or CEB, then I will continue reading to see what they have to say. I don't know many of these folks and have never had a conversation with them... Once and awhile I run across something interesting up there, and did so this morning... Good enough to repeat here, hopefully someone won't think I am stealing something, or behaving inappropriately by doing so..... Perhaps many of you are like myself in this regard..... ????

I am not going to mention names.....

quote:

Guns used
Winchester Mdl 70 300wm TSX 180 gr/ CEB 130 gr

This fellow had a great safari, taking leopard and some other things, but his mention of the CEB did not come until he shot a hyena.

quote:

I was shooting the CEB bullets for this animal. They work perfectly. I had been using the same bullet on the bait impalas and the leopard. All the animals were one shot kills. Most of the impalas were shot in the neck and any bullet would have worked for that. I did shoot one impala just in front of the rear leg and ran it into the opposite shoulder. When we picked it up there were extra holes in it. They were scattered all over the front end of the impala. I have read all the reports of the devastation on larger DG animals but had not heard much about the smaller calibers. They do work great. I think they are a little light for caliber but for the right animal they worked great.

Currently there was no more mention of anything, while the hunter did shoot zebra, he did not state what with?

Just more FYI.....

Michael

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416Tanzan

01 September 2014, 22:20

FTR, I think that the first X-bullet that I ever used was a warthog around '95 in a little 270 calibre. Lady Tanz was with me on a long afternoon walkaround hunt in a small-game area within a few kilometers of a village and near a river.

We came to a clearing and out about 180 yards were two warthogs about 30 yards from the grass at the far side of the clearing (200x300yards). They hadn't seen us. I sat down and a local guy with us asked if I didn't want to get closer. And said no, since to do so would have exposed us in the open and the pigs would have run. So with two knees as a rest I drilled one and it just lay down right there. The second warthog ran in a little thirty-yard circle back to the far grass (6-7 ft tall), being quite confused, probably from echoed sound and the fact that his friend didn't follow. He walked back to his friend and started feeding.

The local guy (who had only seen shotgun-hunting) then asked if I wanted to get closer for the second warthog. I asked him if he understood what he had just seen. I said that we would do it again the same way. With the knees steady and a light, crisp squeeze, the second warthog seemed to jump in the air and do a back flip landing next to his friend without moving. Lady Tanz asked what in the world would do that? I suggested a heart shot, since I've seen crazy jumps before from heart-shot animals. We walked out to look over the warthogs and four of us would carry them back to the village. The second warthog was definitely a heart shot, maybe the first one too. Bullets were .277" 130 grains, probably around 3000-3100fps [55gn IMR4350], Barnes X-bullet. What puzzled me was that neither one seemed to be a spine shot, which I had assumed for the first animal. Both animals were 'Dead Right There', but most puzzling, neither seemed to have a broken spine. I assumed, rightly or wrongly, that a piece of the bullet might have glanced up and ticked the spine. We didn't do a major autopsy, just gutted the animals and carried them back. Later, when I read about higher incidences of "DRT" with these new-fangled bullets (pretty much pre-internet days), I tended to believe the good side, since that is what I had seen. Yes, the exits were rather small, and not more than a third up the body. Later, I also read about 'copper-fouling,' but I suppose I didn't shoot enough. I tended to use few bullets on a hunt, maybe 1-3 sighters, and a bullet for an animal. Then a gun-cleaning. BTW, the 270 was a great spur-wing goose gun.

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

01 September 2014, 22:28

I'm on my iPad so won't be digging up photographs for this aspect of the discussion.

Copper bullet shearing petals...

Antidiotally from another forum, an African PH was tracking .308 caliber Barnes TSX performance on plains game over a 4-5 year period fired from their camp 30-06 rifle. Anyway, the 180gr TSX was dropped after the first year because it had a tendency at 30-06 impact velocities to either not expand or only minimally expand. This was deduced not from recovered bullets but from tracking the bullet path through the game which revealed to often for the PH's comfort a wound path too similar to a solid bullet with little additional trauma.

The second year the PH used 165gr TSX bullets with much more reliable expansion results than then 180gr TSX with the only issue being soft tissue impacts at longer ranges which would occasionally leave a through and through wound channel without the additional trauma indicative of full petal expansion.

The 3rd year the 150gr TSX bullet was used with great success as all wound channels indicated the extra trauma from expanded petals.

The 4th year saw the continued use of the 150gr bullets but an issue arose - at least an issue to the PH - where some higher velocity impacts where bone was encountered resulted in the petals shearing from the shank lessening (the perceived) wound channel trauma.

Edits: I believe the 4th year also included some use of the 165gr TTSX bullet.

The 5th year the PH continue with the 165gr TTSX bullet as the best compromise of reliable expansion and bullet integrity (lack of petal shearing).

Today would be the 9th or 10th year tracking the 30-06 TSX bullet performance but I've not visited that forum or thread for many years.

Saeed has posted multiple photographs comprising 200-300 or so recovered Barnes X bullets indicating various levels of petal expansion. I don't recollect any with fully sheared petals, perhaps are some pictured, but most shots were taken at longer to long distances so impact velocities likely weren't sufficient to over stress the petals to shear.

Gerard has stated the GSC HV bullets are designed to retain their petals folded back towards the shank *except* for high high velocity impact where the extra stress would shear the petals. I seem to recollect this would take place around 2600-2700fps impact velocity which would relate to a close range high velocity impact.

Inversely the CEB Copper Raptors - along with my CEB MTH MB bullets - are designed to shear their petals at around 1600fps which would relate to a longer range lower velocity impact. As my CEB MTH MB bullets are identical to other MTH bullets, except for having the FBH banding added to the shank, I perceive they also have a petal shear velocity around 1600fps.

That's my contribution for the day...

Jim 

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

Dogleg

20 September 2014, 06:10

I suppose I can add my own observations on this thread.

I did a little water buffalo cull in August, in the Australian NT. Seeing it as probably the best opportunity that I am ever likely to get I tried a few different loads. A .458 Win was the weapon of choice.

- 1) The "control load" was 450 Grain A-Frames at 2200 fps. I have used that one a fair bit and sort of knew what to expect from it.
- 2) The same bullet at 2350 fps, with a stiff load of 2230. That should at least give a Lott a run for its money.
- 3) 420 grain CEB Safari Raptors at 2350 fps
- 4) 350 grain TSXs at 2650 fps.

First off, there isn't a bit of scientific method involved. Nothing but observation of how hard buffalo appeared to be hit and how fast they went down.

To put 112 buffalo in a nutshell:

Close range: there was no question that the A-Frames at 2350 fps were hitting and rocking buffalo better than anything else. The 2200 fps A-Frame did as they always do. The CEBs did well, but not one bit better than anything else. The light little TSX did surprisingly well, with perhaps its higher speed making up for its lighter weight. The light recoil was a relief when the round count was getting into the hundreds. It didn't seem to have the close range smack of the heavier bullets.

Almost every recovered bullet looked like an ad picture. There was one TSX with the fins tore completely off. A-Frames always came out at 100% expansion. One that had pounded through a lot of bone had 20 grains smeared off it. Exits with any of the bullets were unheard of on adults. There was one CEB that pounded through a bull that I distinctly remember but that's about it. An observation about the CEBs that seems worth mentioning is that trees eat them. Several buffalo had petal wounds in the skin on the entrance side.

Long range: Due to the nature of a cull hunt I had no issues with shooting out to 200 yards, though most shots were closer. There were lots at 150 yards. Anything that the little TSXs gave up at powder burn range they made back at 200. The A-Frames stayed right in the game at the longer distances too. Whether any meaningful difference could be observed is un-certain. The CEBs got lameass at the longer ranges. Sorry, but speed counts and the Raptors lose speed like a hard thrown bag of leaves.

A summary of my thoughts is that at close range none of them would affect the success or failure of your hunt. The faster A-Frame load would suggest that a Lott would hit harder than a Win Mag, but that isn't breaking any new ground. With the few shots taken on a trophy hunt I'll just stick with them. I was hoping that the CEBs would have a buffalo cut and wrapped but that didn't happen. Its a good bullet but I couldn't see any magic. At the close range that buffalo hunting is usually done at it would be as good as anything but no better. Stretch the range and it comes up short. The little TSX did very well, and on an extended cull I would take it for the lighter recoil if nothing else. I was curious about a light bullet in the .458 that could tread into .375 country while still being buffalo worthy. It sure looks like it'll do that.

I shot 26 pigs on the same hunt, and every bullet flattened those about the same. Straight down is straight down.

Shot placement is still king; no surprise there either.

416Tanzan

20 September 2014, 11:13

Wow, thank you, Dogleg.

112 buffalo on one hunt is a lot of hunting!

Some questions rise, of course.

You say that a 2350 fps A-Frame (over 5000ftlb muzzle energy) hits noticeably harder than a 2200fps (under 5000 ftlb muzzle energy)? We all like to think that the extra-recoil that we may feel on a bench is being directly transferred to an animal on the field. And it does. And it feels good on a bench. The question comes from field conditions. Animals are not all standing the same distance away and 150fps is not so much that varying distances might not blur the results.

The 'bullet-eating' trees could use a little more explanation. Were these shots that went through a little sapling so that the petals opened up and still printed on the buffalo skin? Or were the petals involved in some sort of rebound force inside the buffalo? I've seen pictures of huge entry wounds where bullets (TSX in this case) somehow knock the skin off from around an entry. Could your observations be related? I wonder if some of the 350gn TSX might not do that, too?

Back to the distance questions. It sounds like impact energy is directly related to visible impact effect. At 150-200 yards a bullet that has lost its energy did not provide a 'smack effect'. So BC is important, and running bullets over 5000ftlb muzzle energies seems good advice, too.

Anyway, thank you very much for the report. Nice to shoot big bores.

+ + + + +

"A well-rounded hunting battery might include:
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Dogleg **20 September 2014, 15:56**

What I saw was several buffalo that had little wounds in the hide, just deep enough to bleed a bit. I thought that they had hit unseen saplings or twigs and sheered before they got there. If they got there.

150 fps isn't much when you add it, but there's been about 70 years of arguing about how ineffective the .458 is when it doesn't show up? Something that I do know from previous trips were more bullets were cut out is that the little extra speed is enough to get the A-Frame double bulge happening.

Practically everything in the "test" was subjective but it becomes a "I know what I saw" thing. I also had the guide giving his observations as well and I usually didn't tell him what I was loading that day. The three bullets hit close enough together that I could use them interchangeably out to 200. That made things easier.

I left home with confidence in the A-Frames, high hopes for the CEBs and curiosity about the light TSXs. I came home with the same confidence in the Swifts (and a decision made to run my Lott reamer into it), a ho-hum thought on the CEBs and an warm fuzzy feeling about the TSXs. When I go back, I'll take predominately TSXs and the same rifle converted to .458 Lott and fitted with modified S and ten shot AI mags. Its a different sort application and firepower would have made more difference than bullet choice. I was surprised that they were close enough that the lighter recoil was even a consideration.

On a "normal" buffalo hunt where someone is micro managing your every move the bullets wouldn't have made a difference in the success of the hunt. At longer distances there was enough difference that I'd leave the CEBs at home. Some claim that energy doesn't matter, but its hard to ignore the difference between 2200 and 3500 foot pounds at 200.

416Tanzan **20 September 2014, 18:15**

Thank you, that is helpful.

As someone who frequently takes 200 yard shots (though not on buffalo!) I probably rate BC higher than many big bore shooters. I don't have a .458 at the moment, but for .510", the balance between weight, velocity, and BC makes the 450 gn GSC HV a very pretty bullet. Yes, beauty is in the eye of the beholder. When and if CEB does a run of MTH's with a .7" nose and .400BC, then I would consider them, too. For .416" bore, we currently have quite a few rounds of 350TTX with their .444BC, so we are probably good for the rest of the decade. But we can keep testing and looking, and could even replace bullets if we found a compelling reason for all the hassle.

+ + + + +

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Conserving creation, hunting the harvest.

MJines **20 September 2014, 23:12**

quote:

Originally posted by Dogleg:
The CEBs did well, but not one bit better than anything else.
I came home with . . . a ho-hum thought on the CEBs . . .

Heresy, absolute heresy . . . statements such as that are likely to result in a serious torching.

Mike

465H&H **20 September 2014, 23:42**

I am surprised to say the least. I would have thought that the CEB Raptors would have done better than that.

465H&H

rose **20 September 2014, 23:54**

Well you were still using the best three expanding bullets available. You said you found petals or blades in the hide or small holes. Was there a big hole also where the base kept going? The CEB #13 was never designed to be a long range bullet even with a tip. I am surprised that you are so HO HUM on the CEBs, you are the first.

capoward **21 September 2014, 00:43**

quote:

An observation about the CEBs that seems worth mentioning is that trees eat them. Several buffalo had petal wounds in the skin on the entrance side.

Michael has noted on previous hunts that the Raptors will commence expansion and shear their petals if striking any hard or aqueous object in front of the game. He believe he also demonstrated this during his "wood branch fronting the bullet box" simulation testing at his indoor range. The Raptors are just not designed to expand through multiple targets.

Very interesting though though that you had the blades penetrating the skin in a radius around the shank on the entrance side of the buffalo. Definitely proves the petal shear/blade radius design of the Raptors.


quote:

The CEBs got lame as at the longer ranges. Sorry, but speed counts and the Raptors lose speed like a hard thrown bag of leaves.

Yep, they've a very low BC bullet designed for close range work. It appears your rifle/cartridge combo didn't allow the use of the Talon Tips with the Raptors as the tips do almost double the bullets BC increasing their usable range.

I don't believe it has been demonstrated yet in the field or in the "wood branch fronting the bullet?bullets box" simulation testing, but it would be interesting to determine if using the Talon Tips might prevent the early petal expansion and shear if the bullet strikes an object fronting the intended target game - unless the object was "center punched"...

Regardless, thanks for your report, it was very interesting. And, congratulations on a successful cull hunt.

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

Dogleg **21 September 2014, 02:01**

quote:

Very interesting though though that you had the blades penetrating the skin in a radius around the shank on the entrance side of the buffalo. Definitely proves the petal shear/blade radius design of the Raptors.

Actually I never saw any petals following the radius of the shank, just a few random petals that broke the skin.

I have some tips on order, but they are in a combined shipment from reloading international and never arrived in time.

Dogleg **21 September 2014, 02:54**

quote:

Originally posted by MJines:

quote:

Originally posted by Dogleg:
The CEBs did well, but not one bit better than anything else.

I came home with . . . a ho-hum thought on the CEBs . . .

Heresy, absolute heresy . . . statements such as that are likely to result in a serious torching.

I heard that witch burning was making a come-back. 🙄

Notice that I never said they were bad? Just that they weren't any better than a couple of great bullets, and in one notable situation (longer ranges) not as good. Since I can't see any improvement at close range to make up for it, I'm happy just keep on doing what I was doing before.

I am quite pleased with the way the 350 grain TSXs worked out, and will get some extra use out of the 45 cal with it.

capoward

21 September 2014, 09:56

quote:

Originally posted by Dogleg:

quote:

Very interesting though though that you had the blades penetrating the skin in a radius around the shank on the entrance side of the buffalo. Definitely proves the petal shear/blade radius design of the Raptors.

Actually I never saw any petals following the radius of the shank, just a few random petals that broke the skin.

I have some tips on order, but they are in a combined shipment from reloading international and never arrived in time.

I understand.

Jim 🙄

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

416Tanzan

21 September 2014, 10:44

I checked the BC on the Barnes TSX. It was only .271. The tipped CEB should probably do about that, too.

It would be nice to have something at least into the .3's if not close to .4 if planning to shoot over 200 yards.

+ + + + +

"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.

boom stick

21 September 2014, 11:36

It seems game response has been better with the Raptor bullets above 2,300 impact velocity. Raptors love velocity. Were most of your shots shoulder shots?

577 BME 3"500 KILL ALL 358 GREMLIN 404-375

we band of 45-70ers (Founder)
Single Shot Shooters Society S.S.S.S. (Founder)

Dogleg

21 September 2014, 18:59

Most of the initial shots were, but follow-ups were in the "take what you can get" class. With shots taken at heads, neck and spine it didn't matter what bullets were used.

The CEBs did their best at high speed (close range). So did everything else. If all shots were close it wouldn't have made any big difference. There still wasn't any advantage to using them.

I started out with high hopes for the CEBs. I wanted them to work, simply because I'll take any improvement I can get. They do work, just not any better than the TSX at close range and not as well as the A-Frame at any range.

.458 Only

23 September 2014, 19:07

In regard to the 350 TSX: I spoke with Dave at Barnes in 2007 re the 350gr FXB in .458, and he said it was to be replaced in '08 with the TSX and that ALL of the "X-Bullets" would be down graded in B.C. He gave me the results of their testing for all TSX bullets in .458". The 350gr was .284 B.C.

When they finally got around to producing their #4 Manual, most had a B.C. significantly less than what was quoted to me. The 350gr TSX, as listed in the manual, was .271.

However, as tested in my Ruger No.1, .45-70 (with a long throat), it worked out to well OVER .300, about .365 B.C. in calculations based on trajectory at 100, 200 and 300 yards. I phoned Barnes and spoke with Ty. The message I got was that B.C. could vary as much as .075 on any given day depending on a lot of variables such as ambient temp, humidity, the bore of the rifle, elevation, etc.

So, it is true, which I've verified for myself, that where we hunt, when we hunt and the rifle we might be using, determines in the end the actual B.C. of bullet flight and impact velocity. Other factors, such as rifle twist rate and condition of bore, equally affect positively or negatively the B.C. of the bullet used under the above conditions.

Incidentally, I've used that bullet (350 TSX in .458) extensively in a CZ550/.458 Win as well. It has a 1 - 14 twist rate while my Ruger No.1 has a 1 - 20 rate, which lessens pressure and may improve B.C. The number I use for that bullet in my No.1 is .318. And that's conservative from that rifle. The only way to know for certain any bullet's B.C. in rifles is to test them ourselves.

The B.C. of the 350 TSX may work out to be LESS than .271 in some rifles under particular conditions.

Shortly after I spoke with Ty, I phoned Barnes again and they had "officially" upgraded the 350 TSX to .278 B.C. 😊

Bob

www.bigbores.ca

"Let every created thing give praise to the LORD, for he issued his command, and they came into being" - King David, Psalm 148 (NLT)

Gerard

23 September 2014, 21:35

BC is a difficult subject because every manufacturer uses their own numbers and there is no set standard between manufacturers. Some manufacturers seem to suck the numbers from their thumbs, some use BC numbers as an advertising tool and some make a genuine effort to get as close to the truth as they can - and then the weather changes.

The final word is as .458 Only has said: The most reliable numbers are the drop tables that you do yourself.

After much back and forth, GSC has decided that we should be no different and we publish numbers from a system that no other manufacturer uses. It is derived from research done by the US Military at Aberdeen Proving Grounds.

The GSC position is that when a G1 profile is used, it is meaningless to have a single BC. Change the speed and the BC will change. The question then is that different cartridges launch at different speeds so what BC does one use? Ballistic programs give an incorrect result when only one G1 BC is used. Most ballistic programs require (when a G1 profile is used) three speeds coupled to three BC's to determine the correct trajectory. Sierra often gives more than one value and Berger uses a G7 profile and with this a single value is usable.

GSC now publishes a bullet profile that [looks like this](#). Previously we used a different format that contains similar information but was perhaps more difficult to read. In time all the profiles will change to the new one and we hope that this will help those who need and care about having this information.

tanks

28 September 2014, 16:27

Just a quick observation from my Zim hunt, I will post a picture of the bullets (no distortion whatsoever) later on. They are 500gr CEB solids loaded to 2350 fps, shot from 500 MDM.

Elephant number 1: Head shot from 15 meters (more of a self-defense snapshot as the elephants burst from the trees), the bullet travelled through and lodged in the middle of the spine, target dropped instantly. At least 6 feet of penetration.

Elephant number 2: Quartering shoulder shot from 55 meters, the bullet travelled through the shoulder, and was found in the opposite hip, did not measure the penetration, but over 6 feet definitely. Other elephants kept trying to hold it up, but eventually the elephant dropped. The PH did not want me to shoot during that time period as he was afraid the bullet would pass through and I'd hit another elephant, sure enough, the insurance shot when the elephant was trying to get up was through the heart/lung area (35 meters), and was through and through with an exit hole on the other side and the bullet was not found.

416Tanzan

28 September 2014, 16:36

Very nice job, Tanks.
congratulations.

+ + + + +

"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.

MJines

28 September 2014, 19:42

quote:

Originally posted by tanks:

The PH did not want me to shoot during that time period as he was afraid the bullet would pass through and I'd hit another elephant . . .

Hard for me to see how that is a good thing.

Mike

tanks

28 September 2014, 20:42

You think he should have risked shooting another elephant?