This topic can be found at:

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

capoward 15 December 2010, 06:18

## **Terminal Bullet Performance**

auote:

Buffalo

I think Jim has figured a way to get it into a pdf format? Heh!

Ulrik,

Yes I have a running pdf file of the entire thread...I add a new page is added to the pdf file as a page is completed and a new page started on the thread. I've actually split the pdf file into parts...50 thread page increments...and I'm now on Part 3 through thread page 112. The pdf file is currently 280mb in size which equates to 2,542 8½" x 11" printed pages. I'm certainly willing to share what I have...just give me a pm if you're interested.

Jim 🕮

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

John Wayne

jeffeosso 15 December 2010, 06:29

мм

on the strain gauge -- you aren't using your "shallow" rifling 470 capstick as the benchmark, are you?

i'll call you tomorrow!

#dumptrump

opinions vary band of bubbas and STC hunting Club

Information on  $\boldsymbol{Ammoguide}$  about

the<u>416AR</u>, <u>458AR</u>, <u>470AR</u>, <u>500AR</u>

What is an AR round? Case Drawings 416-458-470AR and 500AR.

476AR,

http://www.weaponsmith.com

srose 15 December 2010, 07:17

Jeffeosso,

All of the 470 tests have been fired through the right barrel of my Chapuis 470NE double.

No we didn't use Michael's overbore Crapsticks.

Sam

jeffeosso 15 December 2010, 07:47

thanks Sam --

#dumptrump

opinions vary band of bubbas and STC hunting Club

Information on **Ammoguide** about

the<u>416AR</u>, <u>458AR</u>, <u>470AR</u>, <u>500AR</u>

What is an AR round? Case Drawings 416-458-470AR and 500AR.

<u>476AR</u>,

http://www.weaponsmith.com

rose 15 December 2010, 17:15

Shot a big doe yesterday with a 50 B&M using the new deep hole BBW#13 425 grain Non con made by CEB. Bullet entered deers chest frontally at 5 yards and the 2 large petals were found between the hams. I could not find base of bullet but it did not exit. Looked like it should have been somewhere close to the hams from the damage. This bullet is a grenade! Deer dropped in its tracks. Bullet looks just like the one Michael tested!

Sam



michael458 15 December 2010, 17:18

quote:

Originally posted by jeffeosso:

MM,

on the strain gauge -- you aren't using your "shallow" rifling 470 capstick as the benchmark, are you?

i'll call you tomorrow!

Jeffe

Those two damned Capsticks I have are only good for .477 caliber bullets. The only thing they can be used for with normal .474s is to test Expanding or NonCons, as they will stabilize good enough for those. Not for solids and a barrel strain would be useless on them. Not even sure you would get a reading on barrel strain with those guns.

With the coming of the 475 B&Ms I won't need or desire to mess with the Capsticks anyway regardless. They can just sit and look pretty about all they are good for.

Μ

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michael458 15 December 2010, 17:27

Sam

Excellent. The design as it is will work, no doubt about it, these things are trauma inflicting hammers!

Once we get the standard CEBs off and running then we will work more on this bullet and continue with it until we get the exact formula on it. Right now I think those big petals are hanging too long to the bullet and staying within the wound cavity pretty much. Which I can't fault at all, this is a horrendous wound channel and great amounts of trauma inflicted as well. This is what the copper NonCons would do that I used on buffalo in Australia-- and the effects are incredible, buffalo drop at the shot!

I am thinking if we can get those BIG BLADES moving AWAY from wound channel, then one would have 7 different wound channels going in 7 different directions! 6 big long blades--remaining bullet in the center wound channel. Do we think this is MORE TRAUMA inflicted???? It may be a moot point, and one that can only be understood with shooting lot's of critters to determine--I volunteer to do the shooting! HEH HEH HEH!

Incredible--either way, but I am stubborn and always looking!

Michael

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srose 15 December 2010, 17:32

Shooting buffalo might get boring if we start dropping them in their tracks with the first shot.

michael458 15 December 2010, 17:43

quote:

Originally posted by srose:

Shooting buffalo might get boring if we start dropping them in their tracks with the first shot.

JHC--I have not thought about that? Did you have to bring that up? Well, maybe I can shoot them first time with a standard premium bullet, second with a NonCon, and finish with a #13 Solid? I do like to shoot them a lot--good practice, maybe get close enough and at least get two in him before he drops, maybe? I don't know, I wish you had not said that? OK--then only start shooting in herds then--and have 3 picked out to pick a fight with! That should do!

Ok, problem sorted out!

Michael

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michael458 15 December 2010, 19:01

OK, how about some T'Rex Test reports? Everyone up for that?

OK most all this was done with Sam's 470 Nitro, conducted one test with the 50 B&M and the new brass 500 gr CEB BBW #13--I will save it for last since that qualifies as major caliber-Heh!

First out of the gate, 470 Nitro 500 gr Woodleigh Hydro.



Next up is the 470 Nitro 500 gr North Fork



The 470 Nitro 500 gr CEB BBW #13 Copper





The 50 B&M and the 500 gr CEB BBW #13 Brass Solid



Now just so you remember and know how things compare! And some people like to Hunt Dangerous Game Animals with CHEAP bullets!







Total penetration 23 inch



458 Lott
500 Woodleigh FMJ
Muzzle Velocity 2225 fps
Concrete Block T'Rex Test
5 Inches Wet Print
1.5 Inch Concrete Block

15 Inches Wet Print
1.5 Inch Concrete Block

Remainder Wet Print #1. Through first block to 15 nches straight, tumbling to the

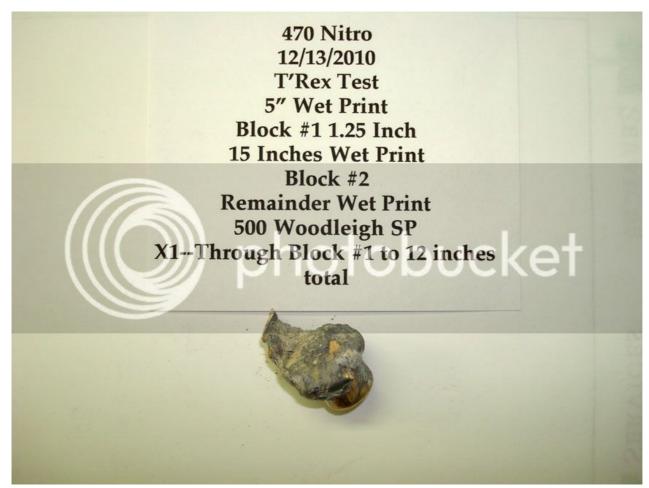
left missing second block.
#2. Through first block to 12
inches straight, veered down
missing second block.







Normally I reserve the T'Rex test for solids, however Sam and I just had to try a NonCon and a Woodleigh Soft point.





And last but not least of the terminals the .474 caliber 470 CEB BBW #13 Copper NonCon in normal test medium.



The mono bullets passed the test as far as I am concerned and did very well.

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capoward 15 December 2010, 20:48

Michael & Sam...Very interesting T-Rex tests.

I'd say the tests with the 500gr .475 CEB BBW #13 FN brass solid and 500 gr .500 CEB BBW #13 FN brass solid should put the rest the sectional density factor - .317 SD vis-a-vis .286 SD. - 26" total penetration vis-a-vis 28" total penetration.

I'd say the 470gr .475 CEB BBW#13 HP Copper did just fine with 18" total penetration in the T-Rex! I wonder if the composition were brass would the nose have deformed less resulting in greater penetration?

But, mear monometal construction doesn't mean a successful test result. The NF did superbly in the T-Rex tests while the Woodleigh Hydro did very poorly. As we've learned with the BBW #13 testing...design is more important than composition.



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

465H&H 16 December 2010, 00:52

#### quote:

Originally posted by capoward:

Michael & Sam...Very interesting T-Rex tests.

I'd say the tests with the 500gr.475 CEB BBW #13 FN brass solid and 500 gr.500 CEB BBW #13 FN brass solid should put the rest the sectional density factor - .317 SD vis-a-vis .286 SD. - 26" total penetration vis-a-vis .28" total penetration.

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A sample of one doesn't a comparative test make.

465H&H

michael458 16 December 2010, 01:32

## quote:

Originally posted by 465H&H:

# quote:

Originally posted by capoward:

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I'd say the tests with the 500gr .475 CEB BBW #13 FN brass solid and 500 gr .500 CEB BBW #13 FN brass solid should put the rest the sectional density factor - .317 SD vis-a-vis .286 SD. - 26" total penetration vis-a-vis 28" total penetration.

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A sample of one doesn't a comparative test make.

465H&H

## 465HH

How true, you are correct, one sample don't make it so. It is merely an indicator of things to come under most circumstances. T'Rex is not an easy one to set up, nor do, and it's a one shot deal. Over time, enough samples will be done to firm things up, but it will take time to get through those.

Actually in my mind set any bullet that gets through the second block is great success. What it does after the second block is really not all that important, getting to that second block straight and then through it, is quite an accomplishment I think.

I set this up as a test of construction mostly, while it can't simulate anything we might find in the field, I figure chances are pretty darn good that if a solid passes through both of these blocks straight then it stands a pretty good chance of doing some tough work in the field.

What I have been able to determine from these tests is this--Copper Solids seem to be tougher than most lead core FMJs--Brass solids seem to be tougher than either copper or lead core FMJ. The steel jacket Woodleigh is tougher than the Hornady.

There are many bullets I still need to put through the T'Rex just to see how they do, but have not had time to get this done yet, but in time I will get through them, and over time I want to be able to put together a data base with all of them. But that is going to be awhile down the road!

Ν

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capoward 16 December 2010, 01:39

auote:

A sample of one doesn't a comparative test make.

This is true. But until additional tests prove otherwise it is a bullet I would have reservation over using.

Edit added: Let me be more clear regarding my thinking. The Woodleigh Hydro is not an inexpensive bullet at \$33.98 for a box of 10 (Huntingtons) - \$3.398 each. The NF CPS and FPS bullets are \$119.25 for a box of 50 (CPS) - \$2.385 each or \$117.00 for a box of 50 (FPS)... \$2.34 each. The NF bullets are \$1 cheaper per bullet and provide full straight-line penetration which the Hydro didn't. I'm not being a cheapskate but why purchase the more expense Hydro when the less expensive CPS/FPS bullets perform better.



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

byf42 16 December 2010, 11:38

quote:

Originally posted by capoward:

quote:

A sample of one doesn't a comparative test make.

This is true. But until additional tests prove otherwise it is a bullet I would have reservation over using.

Edit added: Let me be more clear regarding my thinking. The Woodleigh Hydro is not an inexpensive bullet at \$33.98 for a box of 10 (Huntingtons) - \$3.398 each. The NF CPS and FPS bullets are \$119.25 for a box of 50 (CPS) - \$2.385 each or \$117.00 for a box of 50 (FPS)... \$2.34 each. The NF bullets are \$1 cheaper per bullet and provide full straight-line penetration which the Hydro didn't. I'm not being a cheapskate but why purchase the more expense Hydro when the less expensive CPS/FPS bullets perform better.

True, they are expensive, but with the time and money invested in a hunt that requires bullets of this caliber (no pun intended) whats 200 or 300 dollars for trusted reliability/ Thank you for doing these tests, I will be following your progress, and thanks to 465H&H for pointing me here.

**⊕**@ **@**•⊕

\*We Band of 45-70er's\*

"Far better it is to dare mighty things, to win glorious triumphs even though checkered by failure, than to rank with those poor spirits who neither enjoy nor suffer much because they live in the gray twilight that knows neither victory nor defeat." -Theodore Roosevelt-

michael458 16 December 2010, 14:09

byf42

Big Welcome to the thread byf42!!!!!!! It's my hope that you will not only follow the thread, but contribute as well! While sometimes we all do not agree 100% on one small factor or another, we are all here for one purpose in mind--To search for proper bullets that we take to the field, to enhance our success rates in the field!

We are not here to find bullets that are long range paper punchers, we are not here to find good bullets to explode watermelons, we are not here looking at squirrel bullets, we are here to study "big bore" buffalo, hippo, elephant, lion, bear and big game bullets in general! This is our purpose, our mission. And I think we have made great strides in understanding how and why bullets do what they do!

Please do go back through some of the pages and see many of the things we have worked on, it is fairly wide ranging. We have in depth studied "solid technology" and identified the factors involved with achieving reliable straight line penetration. We have studied most all of our premium big game expanding bullets in depth, we have experimented with many different concepts of what we have termed as "NonCons", or non-conventional expanding bullets. We have done lot's of areas of study here, and I have not been alone in this study, many have joined me in the last year and I really think we have made great advancements in the studies of "Terminal Performance".

This one test, the T'Rex test, that you have come in on is but a very small portion of the other work done. All these bullets you see done in the T'Rex have been tested in our normal operations test medium to collect other data as well. In addition many different calibers have been tested

as well--most from 416 even up to .620, and most available bullets have been tested. In fact I don't know of a solid or expanding bullet made that we have not looked at if it was available and or suitable at all for big game.

In addition one must really understand how to interpret the information also. For example, in the normal test medium where we test solids, for the most part a solid will perform better in the field than it does in this test medium, and that is the very purpose of the test--to test one bullet or design against other bullets and designs in a test medium that will allow one to either fail consistently, or to be successful consistently, in a consistent environment. And what I have learned "CONSISTENTLY" over the years is that if a bullet is SUCCESSFUL in the test work--It Will be Successful in the field! I have yet to ever see a bullet that was successful in the test work-fail in the field. I have seen bullets that fail the test each and every time, be successful in the field. What does this mean? It means that if a bullet fails the test every time consistently---there is a possibility that it can fail in the field. Any bullet can fail a mission, even one that has been successful in the tests! Things happen in the field that we cannot control, therefore the reverse is true, because a bullet is successful once in the field, does not mean it will be successful each and every time either!

We do the best we can, we test, we interpret, we gather data, and we go to the field with the best information that we can get. It may not always be 100%---but it is better than going to the field without that knowledge. The field is not the place to BEGIN Test Work---It is the place to END TEST WORK!

Michael

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buffalo 16 December 2010, 15:28

quote:

Originally posted by michael458:

There are many bullets I still need to put through the T'Rex just to see how they do, but have not had time to get this done yet, but in time I will get through them, and over time I want to be able to put together a data base with all of them. But that is going to be awhile down the road!

ľ

I damn shame that I dont have the opportunity to just drop by your place and send a 750 grs brass .585" BBW#13 from my 577 TRex through your T`Rex test box at 2600 fps 👦 💮

Just to see how your T`Rex looked like afterwards..

Would also like to see how it would perform in the penetrationbox of yours compared to the ones Sam shot at 1900-2000 fps.

Would have been great fun..

michael458 16 December 2010, 15:45

Buffalo

Whew, might not be a box left after that??? Having visions of concrete block spewing in all directions at high velocity!!!!!!!!!!

Penetration would be deep, I can assure you, might even bust Corbins little 6.5 pill!

HEH

On another note;

I placed an order vesterday for a new run of the first "Nitro Express" designated bullets.

For 450 NE I ordered a 480 gr CEB BBW #13 Solid and NonCon HP in .457 caliber

For 470 NE I ordered 500 gr CEB BBW #13 Solid and NonCon HP in .474 caliber

These will have the very slightly wider spaces between the top three bands, and they will be brass.

Not sure on delivery, especially right now this close to Christmas?

FYI

Μ

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capoward 16 December 2010, 22:59

quote:

Originally posted by byf42:

quote:

Originally posted by capoward:

quote:

A sample of one doesn't a comparative test make.

This is true. But until additional tests prove otherwise it is a bullet I would have reservation over using.

Edit added: Let me be more clear regarding my thinking. The Woodleigh Hydro is not an inexpensive bullet at \$33.98 for a box of 10 (Huntingtons) - \$3.398 each. The NF CPS and FPS bullets are \$119.25 for a box of 50 (CPS) - \$2.385 each or \$117.00 for a box of 50 (FPS)... \$2.34 each. The NF bullets are \$1 cheaper per bullet and provide full straight-line penetration which the Hydro didn't. I'm not being a cheapskate but why purchase the more expense Hydro when the less expensive CPS/FPS bullets perform better.

True, they are expensive, but with the time and money invested in a hunt that requires bullets of this caliber (no pun intended) whats 200 or 300 dollars for trusted reliability/ Thank you for doing these tests, I will be following your progress, and thanks to 465H&H for pointing me here.

byf42 Welcome to the thread!

Please don't misunderstand my earlier comment or the following. My comment relative to the Woodleigh Hydro was that it hasn't proven itself to be a deep straight penetrating bullet in Michael's full range of testing...at least yet...perhaps it will, perhaps it will not. I do understand that the Hydro's are reported to perform as required in the field against DG; but as Michael has stated on numerous occasions "if a bullet fails in the lab it can fail in the field". Inversely, the NF bullets have proven themselves to be deep straight penetrating bullets in multiple calibers in Michael's full range of testing as well as in the field against DG. My gut leans towards the NF bullets due to their performance in the lab and in the field. The Hydro's overall performance, to date, does not justify the expenditure of an additional few hundred dollars just for sighting in, practice, and potential hunting vis-à-vis the already proven NF bullet.

I realize an African hunting is easily in the 5-figure bracket before trophy fees are paid. I have no issue with spending an extra few hundred dollars here or there to assure a successful hunt. I've not hunted Africa but intend to do so one of these days, just as I intend to hunt Asian buffalo in Australia...it'll just be a few years down the road before that happens. When I do finally embark on these hunts it'll be with the absolute best proven bullets that are available in the calibers that I'll be using.

Towards that goal I am waiting delivery of an additional 42 boxes of .500 caliber CEB BBW #13 bullets in FN solid, HP solid, and HB solid to go along with the 6 boxes of #13 FN (already sitting in the safe). Why the CEB BBW #13 bullets you ask? Very simple...they perform as well as or better than the very best of the DG bullets on the market having passed all of Michael's lab testing as well as proving themselves in recent African hunts. And even better yet; being the cost conscious individual that I am, they're even cheaper per bullet than NF bullets!

Jim 🕮

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

Macifej 16 December 2010, 23:30

quote:

42 boxes of .500 caliber

That's a lot of bullets ...



jorge 17 December 2010, 01:03

Michael can you help me out? I need penetration data on the following:

520gr 458 cal (or thereabouts) hard lead bullet@ ~ 1350 fps

500gr 458 cal solid @ 2300 fps

400gr 416 cal solid @ 2400 fps

also if you have any data on the 460 Weatherby with solids and penetration. thanks!

USN (ret) DRSS Verney-Carron 450NE DSC Life Member NRA Life Member

capoward 17 December 2010, 01:54

quote:

Originally posted by Macifej:

quote:

42 boxes of .500 caliber

That's a lot of bullets ...



Hum...yes and no. If they were 50 bullets per box would definately be alot of bullets. The CEB's are packed 18 .500 caliber bullets per box in a nice foam insert so its not quite as many as it sounds...only 756 bullets. I do have another 252 #13 HP Spitzers on order (14 boxes) so guess that'll make the majic 1K on a bullet order.



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

I Bin Therbefor 17 December 2010, 02:37

#### quote:

Right now--Today--brass has EVERYTHING going for it, barrel strain, NonCon performance, tougher construction, and price to boot! There is no downside as long as barrel strain remains equal in the very near future test work, which we will be doing again within the next week or so to CONFIRM this beyond doubt.

A lot longer ago than I care to remember, the .395 threads indicated that S&H Super Precision came up with the same decision on bullet material using a different approach.

I don't have the funds to acquire some of the S&H Super Precision solids and HPs for testing. If anyone out there has some in the appropriate calibers, please consider providing testing bullets to michael.

michael458 17 December 2010, 03:13

quote:

Originally posted by jorge:

Michael can you help me out? I need penetration data on the following:

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500gr 458 cal solid @ 2300 fps

400gr 416 cal solid @ 2400 fps

also if you have any data on the 460 Weatherby with solids and penetration. thanks!

jorge

Yep, I think we can help with some of your questions! We have some data on all that you are asking for, and in the morning I will try and gather some things up for you.

However, all solids are not created equal, it will help a great deal if you can be a bit more specific about what sort of solid you would like to use?

We did some work with cast for Sharpshooter some time ago, and I think I can dig that up and it will help you out.

Another thing that would also help get a direction, what is it you wish to accomplish? Buffalo? Elephant? Or just plain curious?

I am sorry, one thing we don't have is work done with bullets from a 460 Weatherby, however we can make some very good estimates on that as well.

Michael

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michael458 17 December 2010, 03:23

quote:

Originally posted by I Bin Therbefor:

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IBT

I asked Mac if he had any .474s left, and he did not. I too would have liked to do some barrel strain with those S&H Bullets---I have a very good idea they would have been down on the low end of that scale. I would like to test any .474s that are out there.

Jim

Don't take those bullets out of the box and pile them in the floor to roll naked in! They are very difficult to get them all back in the boxes, and it takes forever! I still have some missing?





Μ

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jorge 17 December 2010, 04:50

## quote:

Originally posted by michael458:

auote:

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I am sorry, one thing we don't have is work done with bullets from a 460 Weatherby, however we can make some very good estimates on that as well.

Michael

Thanks Michael, here is the premise: I need to try and explain and show to my BP friends that a 458 solid bullet and let's just call it of "average" design say like the old fashioned Hornady Steel solids at speeds of over 2100 and above or the same bullet design out of a 416 @2400 plus will outpenetrate a 500gr 20:1 lead bullet from a 45-110@ 1350 fps especially if bone is encountered on the way in. I shot a buffalo last week with a 45-110 Sharps and it went right down. Spined it but the spine stopped the bullet. Had that been a 458 or 416 solid at the speeds mentioned would have gone clean through and then some! Those old BP bullets penetrate well but there is just no comparison!

USN (ret) DRSS Verney-Carron 450NE DSC Life Member NRA Life Member

Macifej 17 December 2010, 04:59

You could make it easier on yourself by explaining to them that if comparing two bullets of equal caliber, weight, and velocity, the superior form and material will outpenetrate the inferior.

Ideally yes but what I am also trying to impart is the velocity factor and penetration.

USN (ret) DRSS Verney-Carron 450NE DSC Life Member NRA Life Member

465H&H 17 December 2010, 06:04

jorge,

A couple of weeks ago I shot a running bull elephant just in front of the right hind leg. The bullet broke the spine continued on and we found it in the rear edge of the shoulder blade on the off side. Now a bull elephant is quite a bit bigger than a bison. The bullet was a CEB #13 from a 470 Nitro, at 2,145 fps. It was pristine except for rifling marks.

465H&H

michael458 17 December 2010, 17:43

quote:

Originally posted by jorge:

Thanks Michael, here is the premise: I need to try and explain and show to my BP friends that a 458 solid bullet and let's just call it of "average" design say like the old fashioned Hornady Steel solids at speeds of over 2100 and above or the same bullet design out of a 416 @2400 plus will outpenetrate a 500gr 20:1 lead bullet from a 45-110@ 1350 fps especially if bone is encountered on the way in. I shot a buffalo last week with a 45-110 Sharps and it went right down. Spined it but the spine stopped the bullet. Had that been a 458 or 416 solid at the speeds mentioned would have gone clean through and then some! Those old BP bullets penetrate well but there is just no comparison!

#### Jorge

You are 100% correct and spot on. In reality in the field, a cast bullet really cannot do the work of most any solid. The limiting factor is construction on this as I see it. While a good cast bullet will do a good job on critters, it in no way can compare with the construction of any FMJ or Solid. I have never worried with a cast bullet on the T'Rex test, I figure little point in that, but that one thing alone I am 100% sure would prove your point.

In the normal test medium the nose profile will take effect, a round nose solid just will not do, and even a cast in many cases may out penetrate those. But, if we move to nearly any sort of flat nose with a decent meplat and radius, then it's game over for the cast. This may be where some of your guys have picked up that the cast is better, and it's really a "false/Positive" effect, and a way that a cast bullet person can justify the position. Right or wrong. But there are many factors that come into play.

 $Let's \ now \ take \ a \ look \ at \ some \ comparisons, \ as \ I \ still \ have \ the \ results \ of \ the \ cast \ bullets \ from \ Sharpsguy \ to \ look \ at.$ 



Browning 1885
Sharpsguy Black Powder Load
540 Cast FN 69/3F
#1 1249 Muzzle 1223 22 Yds Impact
#2 1260 Muzzle 1230 22 Yds Impact
#1-Lost Stability 14" turned
Sideways found at 19"-Nose
Deformed on 1 side.
#2-30" Dead Straight
Retained Weight 534/533 grs







Now in all of the above cast or lead bullets we see deformation of the bullet, and that is the limiting factor of these. Increase in velocity would only cause these bullets to penetrate less, as there would be much more deformation found. We see the deepest penetration is with a few of the bullets is in the low 30 inches. But lot's of inconsistency within the same bullet because of deformation.

 $If we take \ velocity \ up \ with \ a \ hard \ cast \ bullet, \ such \ as \ the \ Cast \ Performance \ line \ of \ bullets \ this \ is \ what \ happens;$ 



As you can see velocity has hurt us a lot, simply because of velocity and construction.

While I don't consider the barnes buster an optimum bullet because of it's small meplat, in the same two rifles it does far better than it's cast cousins--construction.

45/70 1885 45/70 **400 Barnes Buster** Marlin Guide 2061 fps Muzzle 400 Barnes Buster 48 yd Impact 1908 fps 1828 fps Muzzle 38 Inches Straight Line 48 yd Impact 1698 fps Penetration--Veer off course to 28 Inches Straight Line Penetration-Veer to 36 Inches 46 Inches and leaves top of box No Recovery Found 4 Inches off course

A far better bullet with a proper nose profile and meplat size is even the smaller 330 Barnes Banded



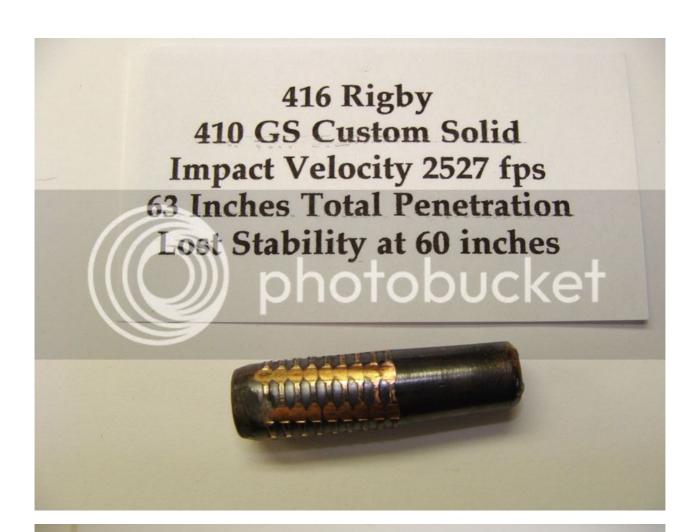
So even much smaller bullets within caliber and even poorer twist rates will do better than the cast bullets.

Now when you get to proper big bore solids, there is zero comparison between the two--almost any big bore solid will penetrate much deeper and straighter than any compared cast bullet.









458 Lott
500 Nosler FN Solid
21 yd Impact 2181 fps
62" Straight Line Penetration
Turned off Course Right at 62"
Found at 65" a full 2" off course
DOIOLOCKET













Now none of this is to say that a good cast bullet can't do the job and do a really good job of it. But I don't know of any cast bullet that can come close to comparing with any proper made big bore solid. The limiting factor being "construction". Velocity is a factor in both--more velocity is an issue with cast degrading the bullet or causing deformation, you may actually get better penetration with much less velocity than more. With a FMJ or Mono solid of proper meplat then in MOST cases more velocity is deeper penetration. I believe (but don't have the capability to prove) that at some point even with FMJ or Mono solids that you reach a point of diminishing returns with extreme velocities. Right now, 2400 fps gives more penetration than 2000 fps with proper meplat solids, but the difference is sometimes not really worth the effort. If we look at 458 Lott for instance, we see we might get a bit more penetration at 2300-2350 fps than we do at 2200-2250 fps, a matter of a few inches. But even down at 2000 fps penetration is MORE THAN ENOUGH to get any job or mission completed that you would embark upon. For 458 Lott I have always settled somewhere between 2200 and 2250 fps and been very successful. While 2500 fps may give me more penetration-it will also give me more of everything else too, recovery time for second shots being something to look at, more trauma inflicted with higher velocity, but is the smaller gain in penetration worth the effort? Each of us have to answer that for ourselves.

Well, this is a rather long post and heavy to photos for comparison, I hope this begins to answer some questions that you will be able to convey to your BP guys?

Michael

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jorge 17 December 2010, 17:52

Excellent! thank you! jorge

USN (ret) DRSS Verney-Carron 450NE DSC Life Member NRA Life Member

Cross L 18 December 2010, 04:38

Just out of curiosity does any one make a decent solid in .338. Not that you would use it deliberately but a few solids might be comfoting while out rambling through the bush meat hunting.

michael458 18 December 2010, 05:51

Cross

Yes--The 250 Barnes Banded is excellent. I tested these in both 338 Ultra and 338 Winchester and as I recall 60 inches was normal, dead straight. At this moment I have spent about 30 minutes looking through 1400 photos for a photo of the 338s, can't find it--and the problem is, I saw it this morning when looking thru bullet photos for the post for jorge!

Ву	the	way	jorge,	you	are	welcome,	hope	it	helps	you

I saw the damned things this morning!

Still looking.....

You are spot on, I never leave home without some solids, and today I use more solids than ever. My whole hunting philosophy has changed since 2006, no matter what I am hunting I back it up with solids.

Now, with these brass #13 Hollow Points, I may have to change again, as there will be little chance to have second shots? Hmmmmmm?

If I run across the photo of the 338s I will post? Can't imagine, driving me insane looking for them now!

OK, been through 1480 photos a few times, I cannot find the photo of the 250 Barnes Banded 338s.

Michael

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michael458 18 December 2010, 06:00

This is not the 338s I was looking for, this is a test of the same bullet SXS at different velocities in the Ultra. But this will give you an idea anyway.



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capoward 18 December 2010, 06:30

#### quote:

Originally posted by Cross L:

Just out of curiosity does any one make a decent solid in .338. Not that you would use it deliberately but a few solids might be comfoting while out rambling through the bush meat hunting.

I think the .338 calibers were covered back around page 14.



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

416Tanzan 18 December 2010, 08:04

#### auote:

Originally posted by michael458:

This is not the 338s I was looking for, this is a test of the same bullet SXS at different velocities in the Ultra. But this will give you an idea anyway.



# For Cross L,

The Barnes 250 grain Flat Nose solid will produce about 2700fps in a 338 WinMag. That means that the equivalent velocities as these pictures will be produced at 35 yards and 165 yards. Just about perfect as expected shots walking a forest. Those penetration statistics of 60" and 48" will take care of everything except rear-end elephant or rhino, which one shouldn't be hunting with a 338 anyway.

I happen to be partial to the 338 for a light rifle. We shot some guinea fowl at 100 yards with one in October and it did really well. Got three from one covey with three shots of the 338. Where the 338 starts to excel is longer range antelope and we took a nice hartebeest at 250 yards with the 225 TTSX.

The only reason for bringing this up is the long yardage question. Would a solid be the best followup shot at 300 yards? A solid in 338 will drop 14.5" at 300 yards (2" high at 100) and will only be travelling 1550 fps, dropping to 1280 fps at 400. I'm thinking that I would rather have some 225 grain TTSX's for the 250-400 yard range.

338 solids are for walking in the forest where follow up shots may even go through a small tree on the way. Solids should also be good for buffalo though I've only shot one with a 338 and that was a long time ago with the Nosler partition 250gr. Anchored him, breaking both legs and taking out the lungs. Nice memory. He turned in his mud hole, wanted to charge, but couldn't run and got a third eye. Just a little 338.

Anyway, if something like that experience ever repeats itself I would like to have a few 338 flatnose solids in my back pocket. Good bullet, good calibre.

These tests have been comforting on that. And confidence is also part of the overal hunting equation.

+-+-+-+-+-+

"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 18 December 2010, 15:59

I will never, ever, not once ever, be caught in the field again without a good solid, or several! I can give you a very good example of being caught out and missing a great opportunity because I did not have a solid with me.

Many years ago, early in my field career I was sitting in a high stand in Namibia watching Kudu, impala, warthogs, and such coming to a water hole. I caught a glimpse of something sneaking in from my right side, I turned, and just on the other side of a home made fence, tightly woven with 3-4 inch sticks was a damned "Spotted Devil", at first I thought cheetah--but as it moved down the other side of this little homemade fence I could clearly see from the front muscle structure it was the "Devil"! WOW---I had just spent 14 days sitting in blinds, all night long waiting for one of these, and here it was 4 pm in the afternoon, LAST DAY of the hunt and just on the other side of this little fence was what I was there for!

I had a 338 Winchester, had been using 250 gr Nosler Partitions, and had seen some really crappy terminal performance on a few animals, and I was not as confident as maybe I should have been with this bullet combination. I waited, was very sure he was going to pop out in the clear as he neared the end of the fence. I was on him, he was only 30 yds out, easy shot, except for that damned fence! Knowing how hard some of these sticks were, I was not quite confident that my bullet would go through this and hit where I wanted it to? I waited, seemed forever, and in fact even slinged up, my arms started getting weak from holding the rifle in position. It started waivering and I knew I did not have long before I had to drop the rifle down, I eased my knee up under the rifle to support it. He had come to the end of the fence and laid down, within inches of putting his nose in the clear! I thought about shooting through the fence, and I wished with all my might I would have had a solid to get through the fence without destroying bullet integrity! I thought very hard about this, and in the end I decided I did not trust the Nosler Partition to do this, and the last thing I wanted was a wounded leopard! I waited some more. To my great disappointment he stood, crouched, turned and disappeared back the way he had come so silent, so quick, I still wonder sometimes whether it was real or not? But the opportunity was gone forever. And looking back, afterwards I spent 8 yrs and nearing 80 nights in blinds before getting the chance again! I hate leopards!

But if I had a solid, I would have taken the shot through the fence without hesitation, it was an easy shot. Yes, the Partition would have most likely done it, but I was not willing to take the chance, and kept hoping he would take that 1 last step just out in the open for a second! But he didn't, and I didn't have the solid, and I did not have the confidence in the bullet I was using! So as we move through life, we hope we learn something from our experiences, and if possible, maybe we can be more successful, Next Time?

There are many many many reasons to have a good solid where you can put your hands on it, regardless of caliber or cartridge! And NO REASON AT ALL--NOT TO HAVE ONE!!!!!!

Michael

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eezridr 18 December 2010, 17:19

Michael,

Do you take time to cycle these loads through your action? I am curious if some of them cycle without issue and some hang up. I believe we all recognize through your testing the benefit of the flat meplate solids and it would appear the best choice for a double rifle. How about a bolt action which I know you preference towards the mod 70. Any of these tested not reliable for positive feeding?

ΕZ

michael458 18 December 2010, 18:15

ΕZ

Feed and function are primary and most important. You see, the reason I love big bore rifles is the fact that I have more interest in DG than anything else. So there are many factors involved in playing this game, Rifle handling qualities, Feed/Function, bore size, bullet performance, and the list goes on.

With the one exception of doing Pressure Traces, I always load 3 down and hammer the bolt back and forth with great vigor when doing test work of any sort, load data, terminals, sighting in rifles and other duties. Not only must they feed and function, they must retain as well. With the Winchesters that are modified to 500 MDM, 50 B&M, and 458 B&M we have taken rifles that were designed to use bottleneck cartridges with tiny little "Rat Pills" stuffed in them, light in the front. Now we are stuffing 450-550 gr Pills up front, front end heavy cartridges, and unless a tiny bit of work is done, they like to spill out the top as a bolt is dragged across them. First and foremost this must be sorted out to retain all 3 down and not spill. This is not a big job, but a job for an expert, SSK is just that. Easy to sort out.

Now, feeding the big meplats is for sure a very serious issue with the flat nose solids. I will tell you from my experience with the Winchester M70s--as that is about all I have experience in. The .500s in 500 MDM, 50 B&M, and 50 Super Short are the worst offenders. All nose profiles are easy for them to feed as long as one does not exceed that 67% to 68% meplat for caliber. Kept at 65% like the Barnes Banded, and 67% as the CEB BBW #13s, and 67/68% like the North Forks there are no issues with 9 of 10 guns at all with zero feeding modifications.

Now, when we ran the prototype North Fork .500 caliber bullets North Fork did those in 70%-71% meplat, best as I could measure. The very edge of this bullet would catch on the bottom of the feed ramp, and come to a DEAD STOP! Since we were working with prototypes I asked North Fork to go down in meplat size to at max 68% of caliber, they did without issue, and now they feed slicker than.....well, lets just say they feed 100% now without issue in all the rifles.

Currently the CEB BBW #13s are designed with a 67% meplat, My 500 MDMs eat them up without even a bump. 4 of 5 50 B&Ms just eat them up as well, not a bump. But I have one 50 B&M that bumps them a little as they ride up. This is the one I have the pressure trace currently hooked up too, and I have not messed with this rifle because of that. In a Winchester, the position of the follower normally solves these bumps, without worry of doing anything else, but since this rifle is hooked up with a very sensitive strain gage I dare not mess with anything until I am finished with PTs. I suspect locking that follower down to the correct position will solve this minor issue.

Dropping to my 458 B&Ms, 416, 9.3, there are zero issues, these have a shoulder, bullets in the cartridge sit up a tiny bit higher, and I have never had an issue with any of them feeding anything.

Now in other Winchester M70s--416 Remington, 458 Winchester, 458 Lott and the 470 Capsticks I have never had an issue of any sort with any of the bullets I have tested, most being 65% meplat or less. Feed and Function tested thoroughly! I have not shot or messed with the #13s in these rifles, but will, I don't think there will be problems there.

Other Generic "Off Brand" rifles I cannot attest to as I own none of which I would take to the field as a DGR. The one ruger M77 I have in 510 Wells won't feed anything with a flat meplat.



HEH. Duck behind a couch before the Off Brand Bunch starts throwing rocks!

I hope you did not look for a simple yes or no answer from me! HEH

quote:

Any of these tested not reliable for positive feeding?

Answer: Every single one of them EXTENSIVELY if I plan to take it to the field, and if it's a Winchester, sooner or later, it's going to the field to do a job! A very Big YES.

Michael

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jwp475 18 December 2010, 20:02

THe Great Caliber Debate

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

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