RIP **09 November 2009, 23:47**

Terminal Bullet Performance
JPK, repetitively states, Quote:

"Also other simply false assertions, like slow solid bullets penetrate game less than faster similar solid bullets..."

JPK,
This bullet waterboarder has told you that ain't so, by my tests.

Where is the quote where anyone said that, except in referring to softpoint/expanding bullets?

It ain't so with a nonexpanding FN solid.

Maybe with roundnose FMJs?
I gave up on those before finding out.

DRG says: "Kiss my liberal grits!"

ALF **10 November 2009, 00:07**

.

MikeBurke **10 November 2009, 00:17**

Would it make any sense to fabricate a panel using 1 1/2 or 2" oak dowels and placing the panel about 18" inside the trough to simulate bone. I know the oak density is different than bone but oak is pretty hard. Maybe two rows with spaces the same diameter as the dowel between each dowel that way you would be certain to hit one each shot. Just curious if it would work.

michael458 **10 November 2009, 00:20**

Mike

Absolutely makes good sense! If you will see my post above at 12:43 PM--I talk about just those sort of things.

And I have mentioned that in earlier posts too.

Yes, it does work and adds another stress factor in my opinion.

Michael

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

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

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michael458 **10 November 2009, 00:27**

Hey Alf

You pose a very interesting question, has peaked my curious nature! I will take a stab at it.

Now the fact is, that I don't know the facts, just taking a "stab" at it, pun intended!

I do trust that you will give us the answers later???

Ok, kevlar, penetration with the knife because it cuts the material, not compresses the material. By compression the material has a chance to gather it's strength, one might say, to offer resistance. The knife on the other hand slices thru the material therefore penetrating it.

To penetrate this mechanism, kevlar,or composite material I would suggest that it is a function of high velocity. I would think like steel or armor, that penetration is reliant upon velocity as the number one factor involved. Nose Profile? Hmmmmm, I think I would chose a pointy, high sectional density bullet at high velocity!

OK OK OK OK--Am I close???? Or way out in left field? Like a kid here you know!

Thanks Alf, good question, and interesting too!

Michael

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MikeBurke **10 November 2009, 00:33**

I saw the post about the 2" by 4" or 4" by 4" at an angle. I was thinking smooth, round, hard, and reasonably consistent.

I need to reread the entire thread, it is all quite interesting.

capoward **10 November 2009, 00:41**

Alf,

I don't have the documents any longer nor do I recollect a velocity threshold, but do seem to recollect that lacking a ceramic (knife) insert that any thin-shape-sharp-pointed instrument such as an ice pick, knife point, or a goodly number of the hunting arrow points would penetrate the Kevlar vest as if it did not exist.

Also though it takes a ballistic ceramic or metal insert to stop a standard rifle round from penetrating a Kevlar vest, I imagine that the super pointy VLD style bullet fired at revolver velocities just might also penetrate the Kevlar vest as if it didn't exist.

Much as Michael noted, I seem to recollect that the shape of the thin pointed instrument moved the Kevlar weave strands aside which prevented the mash from resisting or preventing the penetration Revised to add: and the sharp cutting edge of a knife or hunting arrow will most definitely sever Kevlar thread so yes once the sharp point has moved the thread aside while moving through the Kevlar mash the now sharp cutting edge (edges) will slice through the encountered threads like a hot knife through butter.

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

capoward **10 November 2009, 00:51**

Mike…You may be correct with the round smooth hard surface giving a difference performance result than a flat sided rough or smooth hard surface.

Let me throw this one into the ring. How about a slightly coned shape round smooth hard surface wood pieces rather than straight circular diameters, would that perhaps better simulate the taper of thick shoulder bones so that potential bullet deflection would be exacerbated and therefore more noticeable?

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

JPK **10 November 2009, 01:06**

quote:

> Originally posted by capoward:
>
> quote:
>
> > Originally posted by Mike70560:
> >
> > I posted on another thread that you guys have way too much time on your hands.
>
> My wife would agree with you…at least too much to do what I want to do and not enough allocated to appropriately take care of her honey-dos.
>
> quote:
>
> > Originally posted by Mike70560:
> >
> > However after reading most of this thread and even understanding a little of it, I am ordering some FN solids from Northfork. I have been told they are safe in the doubles. So now I have about 10 months to find a good load and continuing practicing before my next elephant hunt.
>
> I've talked to them and yes the CUP point and FN solids are both bore riders with bands only riding the grooves. I talked to them about .410"ers and they recommended that I slug the bore – in your case bores – so that they could assure that their solids were perfect for my rifle.
>
> In your case you have two barrels to deal with so you'd want to assure the bullet's shank diameter is fitted to the lesser bore diameter of the two barrels as the shank will not squeeze down to fit the bore as will even a steel jacket C&C solid such as the Woodleigh. My presumption here but I'd think you'd be fine with the band diameter of the bullet matching the greater of the groove diameters between your two barrels as the bands fold back into the bullet grooves. Give them a call and see what they have to say.

quote:

> Originally posted by Mike70560:
>
> So the point of the post is to thank those who do all of the testing and share their findings even though there are differences of opinion. A reasonable person should be able to read the information and make an educated decision.

+1 One of the best comments yet.

Capoward, Mike 70560,

I have fired hundreds of North Fork FN solids in my .458" double rifle without any problems. The shank does not engrave, only the driving bands.

I would rather fire 20 NF's than one Woodleigh solid as far as wear and tear on my rifle, its barrels and their lands and grooves.

Mike 70560, you ought to consider a Steel Jacketed solid for the first shot, since they are better at penetrating heavy bone on frontal or side brain shots.

Then go with NF FN's for subsequent shots, since they penetrate flesh better, to the tune of ~40%, in my experience.

JPK

Free 500grains

capoward **10 November 2009, 01:45**

JPK,

I understand that the North Fork cup point and FN solids are designed as bore riders; i.e., to not engrave the shank, and that NF manufacturers their bullets to fit within either CIP or SAAMI bore and groove specifications for the specific caliber…just as are the GS Custom' hollow point and FN mono-metal bullets.

I hadn't seen Mike's question in the Double Rifle Forum or I might have posted something there. As Mike is using a modern manufacture Merkel in 470 NE I imagine that Merkel has manufactured their barrels to the same specifications that NF is manufacturing their .475" bullets.

However, if a question exists regarding the quality of barrel production then I would still follow NF's recommendation to slug the barrel for exact bore and groove dimensions, in this case both barrels, so they can assure the bullets are not improperly bore sized for the rifle to be used as per them, "continuous use of NF solids having a shank diameter larger than the barrel bore size will definately case damage to a double rifle's barrels due to their thinner barrel walls but may not cause damage to a single barrel rifle due to its typical thicker barrel walls."

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

capoward **10 November 2009, 02:36**

Hey Michael,

…are we getting close to the next topic of discussion, I think it was "non-conventional bullets"?

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

michael458 **10 November 2009, 03:50**

Hey Jim

Yeah I think so, it was delayed a day. I think we will move to non conventional in the morning. Non Conventional, that is my term for these for a lack of a better one. With no further delays I will kick us off in the morning.

Michael

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capoward **10 November 2009, 04:15**

Sounds good...look forward to the discussion.

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

Bike Rider **10 November 2009, 06:00**

Michael,

I like the curved box! Maybe we can hook those Woodleigh into the second box

How about I load up some of those 156gr 6.5mm bullets and we give them a try in the super box. I can load them from 1800 to 3300fps. Should be interesting. Any bets on how deeeeeeeeeeeeeeep they will go? Are you available this Sunday?

Bike Rider

eezridr **10 November 2009, 07:11**

Why dont we get Speer to re introduce their grand slam solid with their tungsten carbide insert with a nice frontal meplat about like the Barnes and bands like a north fork so you might shoot them out of a double rifle.
Some of you fellows with deep pockets and time on your hands should make this a reality.

EZ

michael458 **10 November 2009, 14:01**

Hey Bike Rider

I like the curve box too--adjustable. Hey not sure we can catch those little 156 gr pills or not, for that matter the 9.3 320s either, even with the long box??? Not me, I was fooled the first time, so no bets!

No will be out until Monday. Have to be on the road starting Thursday thru Sunday. Send me an email.

Hey EZ

I think those are pretty expensive bullets, tungsten is on the high side now as I hear. Since I don't shoot doubles, will have to be someone else to worry with that one.

Michael

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michael458 **10 November 2009, 15:30**

Non Conventional Bullets?

This area of discussion is concerning Non Conventional bullets, primarily brass and copper bullets that have petals that shear off when put under stress. But not limited to that, as I have a bullet that would fit into the non conventional class that is a solid.

I am a little behind on this concept and others have gone before me with great success. RIP being one of those that I know for sure, and I am sure there are others.

My story with these bullets starts with my search for a dependable, and proper bullet for my .500 caliber rifles for either thin skinned dangerous game and or buffalo. JD (JD Jones) has been working with these sort of bullets for some time now and he and David Fricke have come up with several versions, in most calibers. JD even designed several versions for the Whisper line, a much needed bullet for sub sonic purposes. JD sent down a few samples both in brass and copper for the .500s, most of these first versions light for caliber 320 gr bullets. I did not have enough of them to do much test work with, other than some accuracy and load development. Accuracy is fantastic with all these CNC bullets. There was a round nose version HP that opens up into 6 blades, at 380 grs. I figured to add weight of course for the 50 B&M, my first step was to add to the base to get it up to 426 grs. Still light for caliber, in my mind anyway, it turned out to be a fantastic bullet. They are the copper version, 5-6% heavier than the brass version. Of course being a novice in this area, I wanted the weight. I found I could run the velocity up with these to around 2250 fps before the petals started to peel off. At first I did not care for that, considered it a failure, but there was something I was not catching on too yet about these bullets that took me a little while to get my mind into it.

For a long time my mind set had been anytime an expanding bullet starts loosing weight, breaking up, shedding jackets and cores, this is a failure. Penetration becomes limited, erratic, and even non existent! This is what we are taught in Bullet Class 101! In doing quite a bit of test work with these bullets I was seeing that when the petals came off there was a tremendous amount of "trauma transfer" to the mix, large wound cavities, and the remaining slug continued to penetrate, FURTHER than a bullet in which the petals retained, and the remaining slug continued to penetrate in a straight line? This defied Bullet Class 101???

Still, could not quite get around old Bullet Class 101. I wanted heavier bullets, so another step up to 470 gr. In my 50 B&M I calculated I could run it in the 2200-2250 fps range and the petals would not peel at that velocity! WRONG--I could run it to those

velocities, where the 426 would not peel at 2200 fps or so, the 470 did? Oh, I forgot the extra MASS of the slug behind the petals, that tended to put more momentum behind the petals, shearing them off! OK, well sorted that out. In the meantime using the 426 at 2200 fps or so I shot one cape buffalo with it. Yes, light for caliber, I had some concerns. But it worked great, slight angle, penetration was sufficient, 2 petals peeled, buffalo goes 20 yds and piles up stone cold!

Back to the heavy 470! Soon after the 500 MDM came into existence and it could push some velocity. I soon had a load with the 470 in 1 rifle at 2420 fps +- and the other rifle over 2450 fps. Now petals peeled consistently and the remaining slug continued on it's way. Finally it hit me--Tremendous trauma, energy transfer up front, petals sheering off from 4 inches of penetration up to 12 inches of penetration in the test medium, remaining slug continuing to penetrate up to or around 24 inches or so in the medium, straight line penetration. This was about 6 inches or so extra penetration beyond a bullet that is run slower where all the petals retained! This means more animal tissue being destroyed!

I had seen this on some finishing shots and test shots on buffalo in 2007 with the 426 HP, but it had not hit home until the 500 MDM came along.

Another area of study, that we will take a look at later in greater detail is "Transfer of Energy and Trauma"----that phenomena we have all seen where when a animal is hit with certain bullets you can see the transfer of trauma and the animal drops on the spot! I started seeing this a long time ago with 458 Winchester and a 400 Swift A frame, and several loads, calibers, bullets since. Then with some bullets it does not happen, even within caliber.

I was seeing tremendous transfer of trauma/energy to the test medium, it stood reason that this would occur in animal tissue also, at least to a degree. Finally it was time to learn, and without doubt I had the best opportunity for something like this in the world with a culling/herd reduction shoot in Australia for buffalo. I had 20 buffalo on my ticket, with options for trophy bulls extra. This would be a fantastic opportunity to test these non conventional bullets on game where it counted in the field!

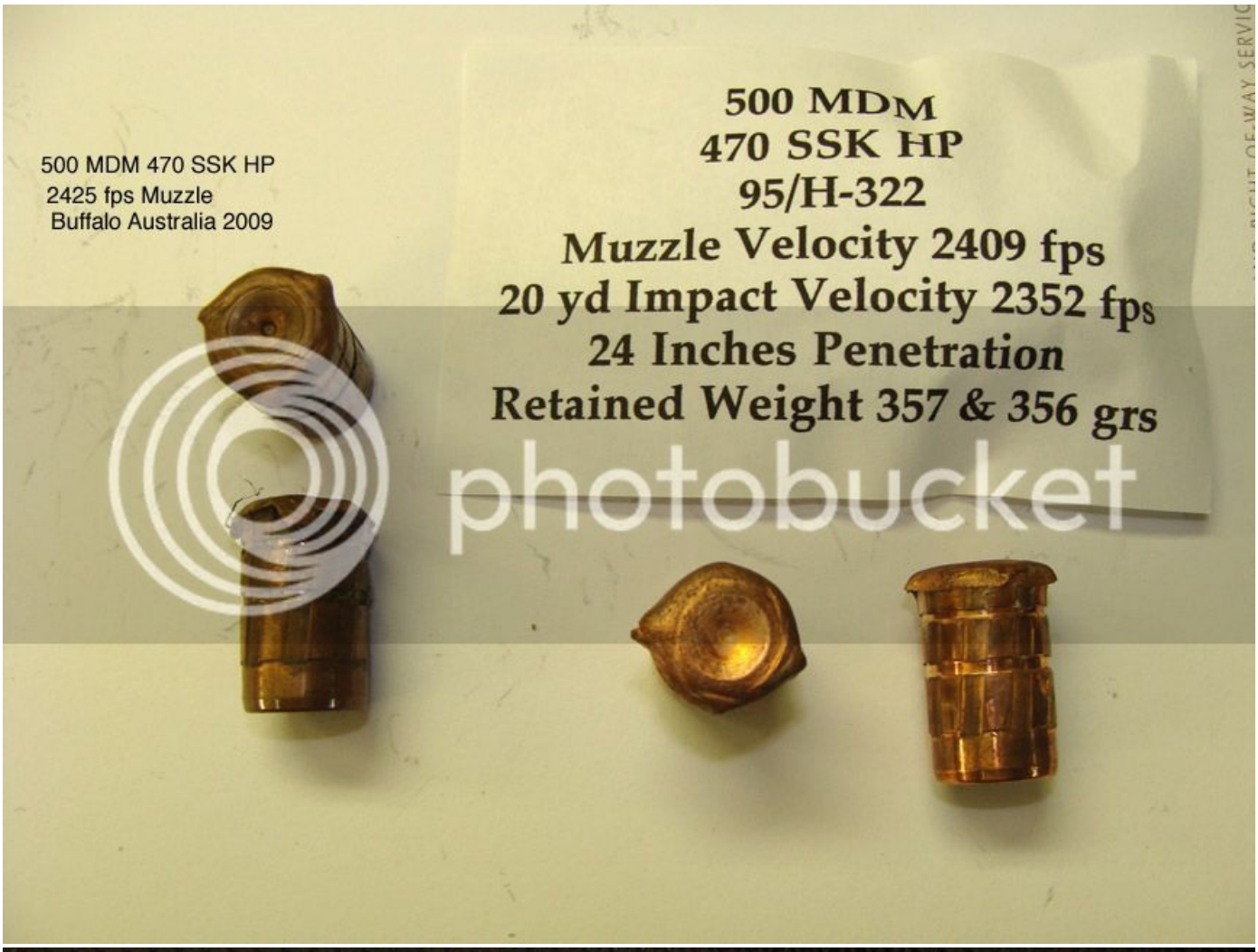
All bovine are big, tough, and very hard to impress with mere bullets. I had shot several cape buffalo with 45/70, 458 Winchester, 458 Lott, 416 B&M and 50 B&M, and even a couple of bison, all very hard to impress! After seeing a few big prime bulls on the way into camp in Australia, I really began to wonder if 470 grs of bullet was too light for caliber. I actually thought to myself as soon as I get home, going to 510 gr HP for the 500 MDM, I had not fired a round as of yet, and decided that!

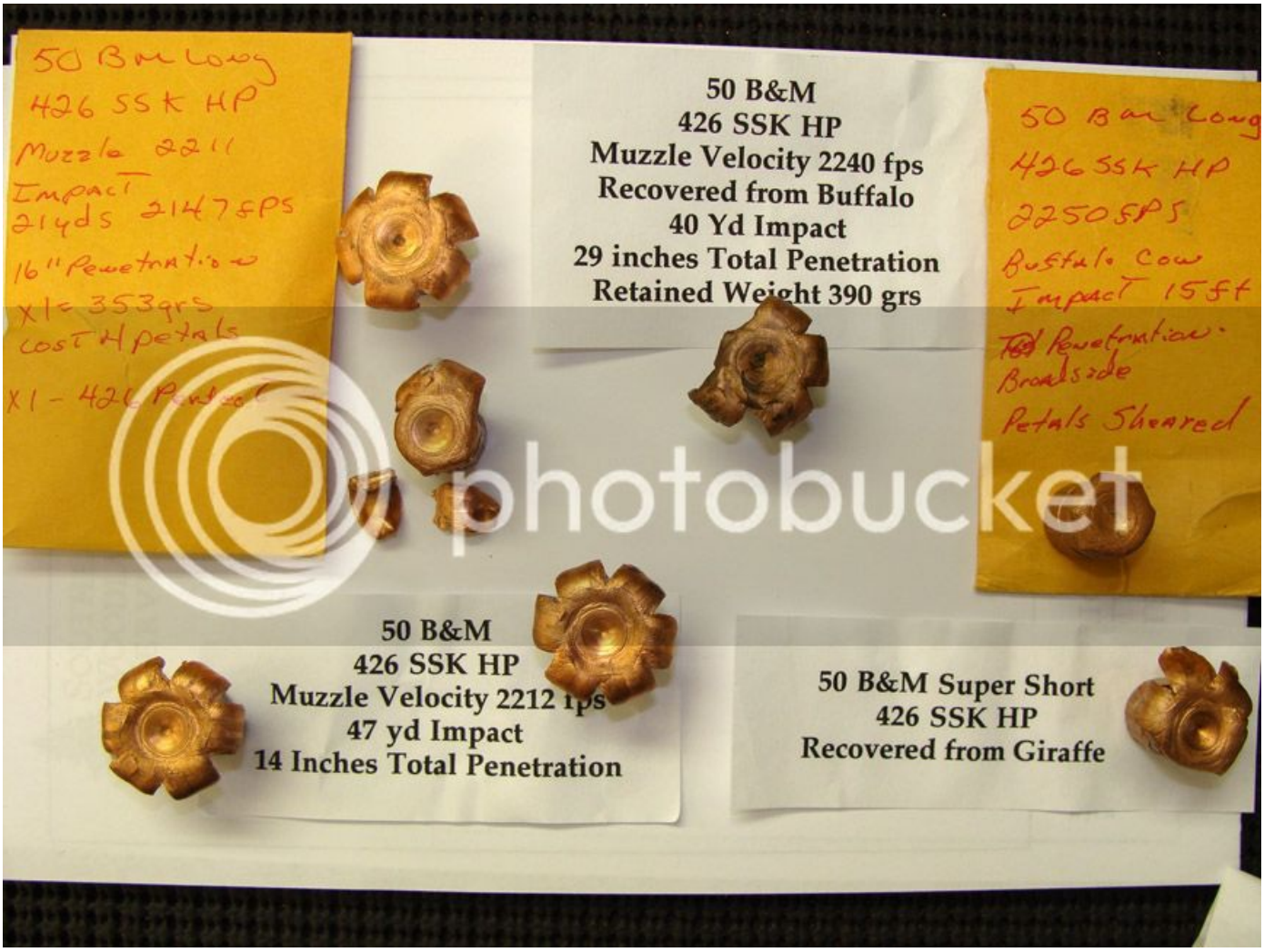
The very first buffalo to drop to the 500 MDM and the 470 HP was a great old bull, about 25 yds. At the shot the transfer of trauma/energy was unbelievable, it was readily visual, the bull did not take one step and dropped where he stood. A finishing shot, and inspect, the 470 had transfered it's energy to target, petals peeled and slug exited. Pretty much the end of the story. Taking herd reduction cows, and poor genetics, for 11 more buffalo, the story was all the same when the 470 HP was used, they dropped on the spot, trauma and energy transfer was tremendous and seen by myself, Paul Truccolo, my wife, and hunting partner. The last buffalo shot with the 500 MDM was a huge big prime bull. A beast for sure. First shot with the 470 HP he dropped where he stood, then up again on his feet, a 510 gr solid up the rear, he turned to me, another 510 thru the shoulders, he dropped again, I loaded the magazine back up, by that time he had struggled to his feet again and was running from right to left in front of me, hit him again thru the shoulders and down for the count. This is the only buffalo that moved after the first shot with the 470 HP. It had done it's job, transfered the trauma, slug exited, but this big boy decided he was not quite finished yet! Of course the 510 Solids did their work perfectly too. Hitting hard, driving deep, and exiting too.

I was sold from that point on and still am on these Non Conventional bullets, and their extreme performance! 13 buffalo with the 500 MDM--and a few others of my hunting partners screw ups. All but 1 dropped for the count on the spot! Energy/trauma transfer was a sight to behold, penetration was tremendous, most exiting and not recovered, a couple were recovered, and was exactly as the test medium and prior test work in the lab had predicted.

In the near future I will be having some of these bullets for all my B&M series rifles. The 458 B&M--416 B&M--even the 9.3 B&M. I am not saying by any stretch that we abandon our traditional excellent performers like Swift, Woodleigh, Barnes TSX, but this is another addition we can add to our tool bag for a lot of different applications, and missions at hand!

Brass or Copper?? I don't know, I have not tried the brass bullets on animal tissue so I can't say, but I can say the test results in medium is pretty much the same as the copper bullets on the limited basis I have tested. The only thing I see is that the brass petals tend to shear off quicker, the copper tends to hold on for longer. Limited test work, also indicates that the brass will penetrate deeper because the petals shear off quicker. I don't know, good topic for discussion I think. I will tell you this, I decided that I did not need a heavier bullet at all in the .500 caliber rifles, 470 HPs were plenty and more than enough. I also would not hesitate to take copper or brass versions to the field for all thin skinned dangerous game, lion/bear in particular as from what I have seen on buffalo these bullets would absolutely turn these species inside out! This being an area where energy transfer and trauma transfer being extremely important, especially at close range! These would be and will be my #1 choice for this sort of work in the future!


500 MDM 470 SSK HP
2425 fps Muzzle
Buffalo Australia 2009
500 MDM
470 SSK HP
95/H-322
Muzzle Velocity 2409 fps
20 yd Impact Velocity 2352 fps
24 Inches Penetration
Retained Weight 357 & 356 grs
photobucket


50 B&M Long
426 SSK HP
Muzzle 2211
Impact
21yds 2147fps
16" Penetration
X1 - 353grs
Lost Petals
X1 - 426 Recovered
50 B&M
426 SSK HP
Muzzle Velocity 2240 fps
Recovered from Buffalo
40 Yd Impact
29 inches Total Penetration
Retained Weight 390 grs
50 B&M Long
426 SSK HP
2250fps
Buffalo Cow
Impact 15ft
Penetration:
Broadside
Petals Sheared
photobucket
50 B&M
426 SSK HP
Muzzle Velocity 2212 fps
47 yd Impact
14 Inches Total Penetration
50 B&M Super Short
426 SSK HP
Recovered from Giraffe

50 B&M Super Short
380 SSK HP
Impact Velocity 2057 fps
15 Inches Penetration
Retained Weight 380 grs

500 MDM
380 SSK HP
Impact Velocity 2502 FPS
25.5 Inches Penetration
Retained Weight 255 grs

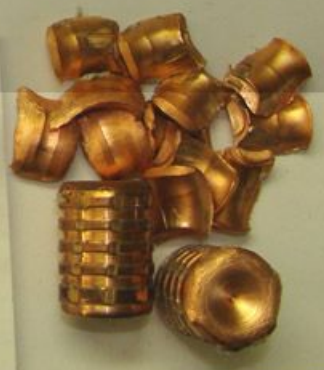
50 B&M Long
380 SSK HP
Impact Velocity 2280 fps
17.5 Inches Penetration
Retained Weight 380 grs

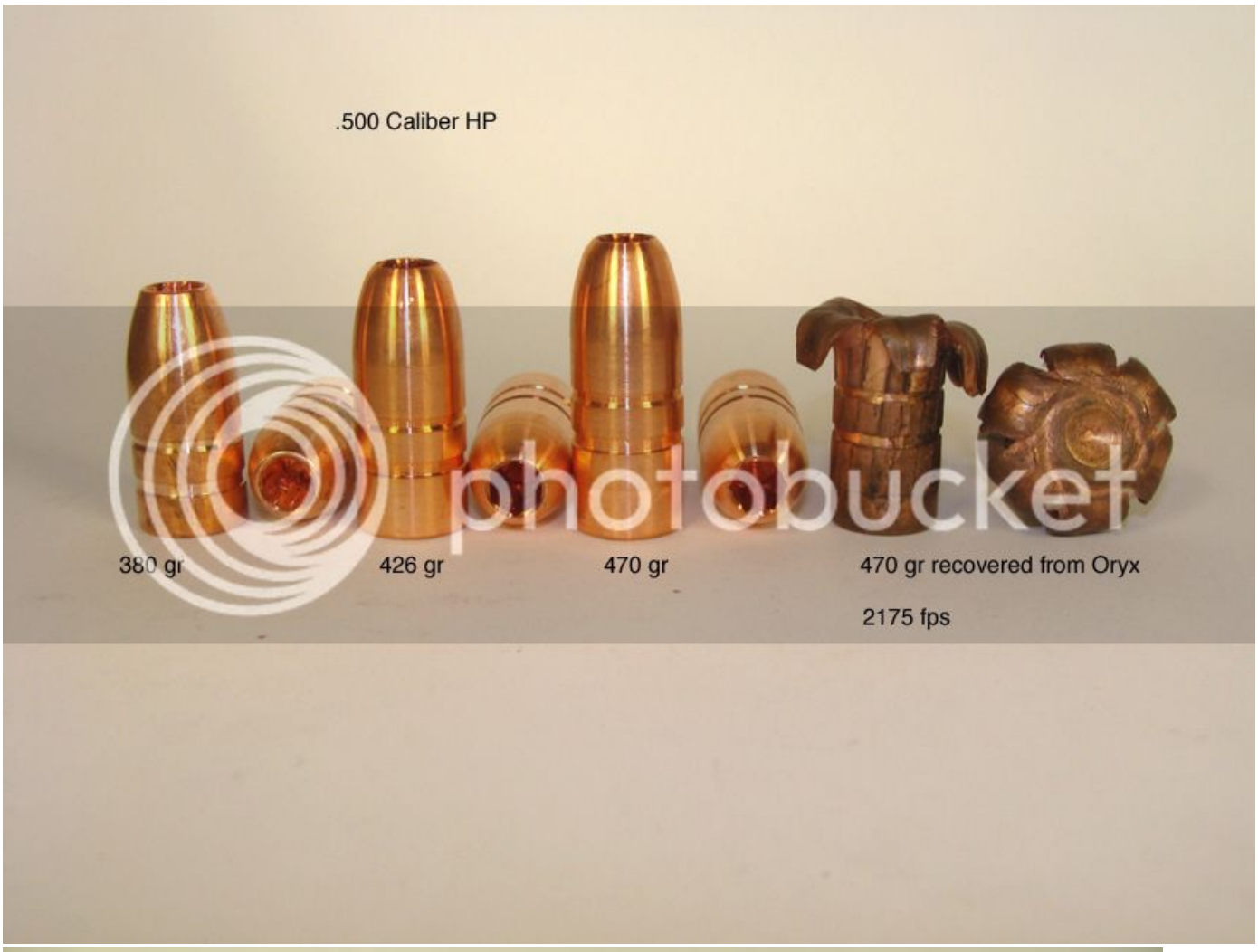
458 B&M
428 SSK HP Brass
65/RL 10X
Muzzle Velocity 2223 fps
21 yd Impact Velocity 2165 fps
24 inches Penetration
Retained Weight 340 grs

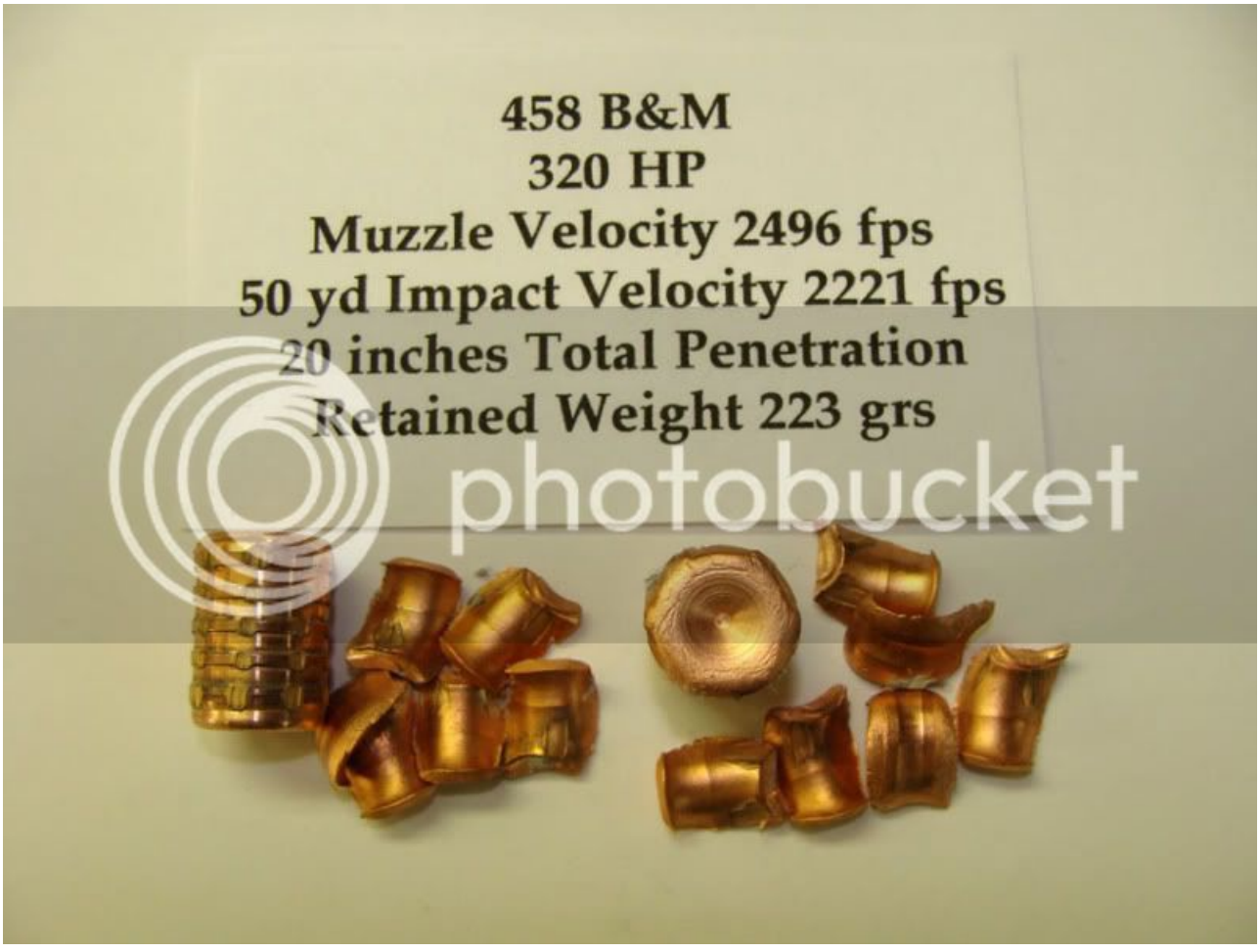
458 B&M
305 Brass HP
Muzzle Velocity 2560 fps
20 yd Impact Velocity 2452 fps
All petals broke off during penetration. Remaining slug penetrated 20 inches.
Retained weight 207 grs.

Non Conventional Bullets!

458 B&M
320 HP
Muzzle Velocity 2496 fps
50 yd Impact Velocity 2221 fps
20 inches Total Penetration
Retained Weight 223 grs

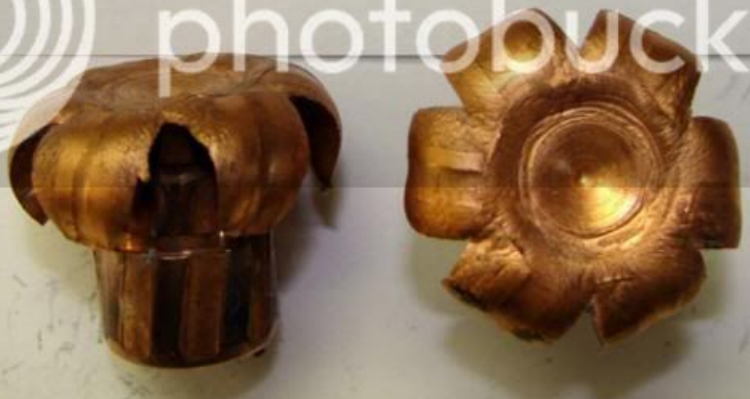


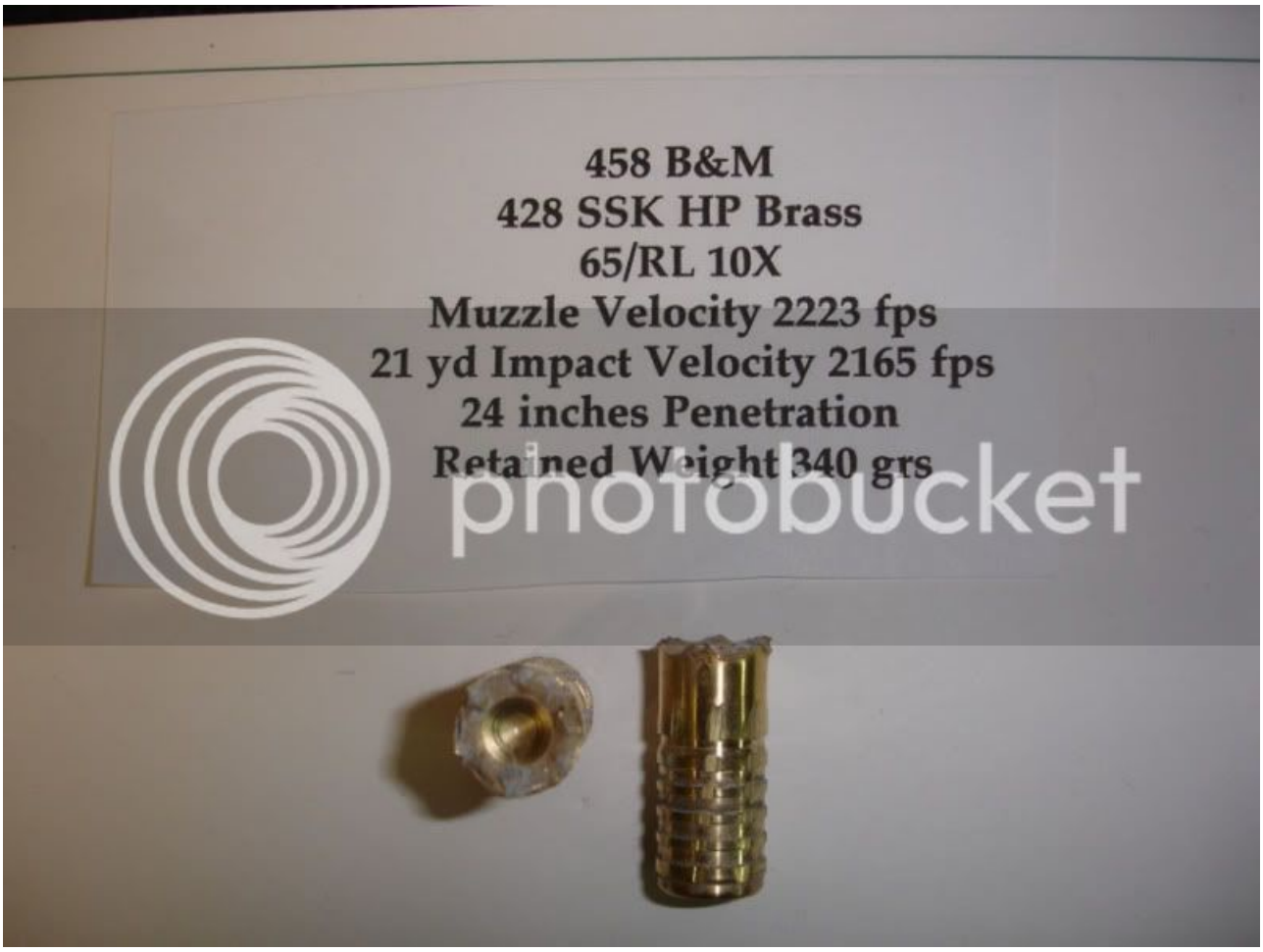

.500 Caliber HP
380 gr
426 gr
470 gr
470 gr recovered from Oryx
2175 fps


458 B&M
320 HP
Muzzle Velocity 2496 fps
50 yd Impact Velocity 2221 fps
20 inches Total Penetration
Retained Weight 223 grs

458 B&M
305 Brass HP
Muzzle Velocity 2560 fps
20 yd Impact Velocity 2452 fps
All petals broke off during penetration. Remaining slug penetrated 20 inches.
Retained weight 207 grs.

50 B&M
426 SSK HP
Muzzle Velocity 2212 fps
47 yd Impact
14 Inches Total Penetration





I know this is a bit to absorb, and a lot to consider, but I really think that it is worth the effort and time to give this some serious thought! Before moving on to another non conventional bullet we will try and stay with these for the time being.

RIP has a great deal of experience with this sort of bullet and will be able to work with us for more understanding. Others, I am not sure about, if anyone has some experience with these please step up!

You can also see more about the buffalo shoot here if interested.

http://forums.accuratereloadin...3981035711&f=4711043

Michael

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

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RIP **10 November 2009, 18:37**

Michael,

Thanks for doing the testing, complete with wetpack comparison to Australian buffalo cull bullet recoveries. Bravo!
Priceless.

I was fortunate enough to venture into the NON CON bullets when I was desperate for .395-caliber bullets. Thanks to Jay Schroeder, Mr. S&H himself.

After the superb results of his .395/330-grain FN brass solid, which drills to hell and back (China?),at 2800 fps,
he offered a .395/310-grain SHarcc-gilled brass hollowpoint of his design.
I call it the "VeloHex."
It is a six-rayed death star.

Member prof242, Max, killed an elk with a one shot bang-flop using it in the .395 Ruger Max.
I killed a deer with it using the .395 Tatanka.
One shot pass through and dead on the run. A bang-skid.
The .395 Ruger Max can get it up to 2600 fps.
The .395 Tatanka gets it over 2800 fps.

I tested it it in 5 gallon water buckets from 1600 to 2600 fps.
Three buckets with sealed lids laid end-to-end will catch the bullet in the bottom of the third bucket, leaving a dent in the bottom.
It lets loose all 6 petals at 1600 fps or 2600 fps impact (in water, not recovered in game yet), but it passes through on thin-skinned big game body shots so far.

Another NON CON is the .510/450-grain GSC HV in copper.
I get that going over 2800 fps in the 500 Mbogo.

Shucks ... gotta get back to work ...

Extremist458 **10 November 2009, 19:14**

Michael458, Thank you! That last post was very enjoyable. Those are the very findings I have seen using the GS HV's and the slight expantion of the FN's. You say it better then I do, and thank you for showing the tests!

I would only like to add that my findings with brass were, as you have seen, less then great! Brass brakes up too quickly and therefor does not induce as much shock and trauma. Also to note, you do want all the petels to sheer at the same time. If a bullet keeps some and loses others, it will veer. Just my findings.

quote:

> Originally posted by eezridr:
> Why dont we get Speer to re introduce their grand slam solid with their tungsten carbide insert with a nice frontal meplat about like the Barnes and bands like a north fork so you might shoot them out of a double rifle.
> Some of you fellows with deep pockets and time on your hands should make this a reality.
>
> EZ

Be carefull what you ask, you just might recieve. This is very much what I am currently doing, only improved. Not for sale, just developing and testing...and they are better then ever!

-Extremist
"Pain is weakness leaving the body" -Instructor
Victory in life is dying for what you were born to do.
"I hope you live forever" -300
"Never judge an enemy by his words, he might turn out to be a better shot then a writer"
http://www.gscustomusa.com

RIP **10 November 2009, 19:34**

Classes of NON CON bullets?

1. Light for caliber hollowpoints of copper or brass designed to lose all petals for initial large wounding followed by deep penetration and a blowhole on both sides.

2. What else does Michael have up his sleeve?

Asymmetric petal loss:
Might make it tumble and lose the other petals in the process, then proceed base first out the other side.
The process of the tumble is also a greater wounding, a big energy dump, greater even than a conventional symmetrically expanded soft.

Some high speed video slo-mo in ballistic gelatin is needed.
Maybe the witness cards in the wet pack could tell something?

A hexagonal hollowpoint is machined at 60-degree arcs to split into 6 petals.
If every-other petal is undercut to weaken it, that would encourage three to break off immediately, leaving a three-pointed thresher to proceed a little further, yet still concentric and balanced, might be interesting to see what that does ...

Back to Jupiter:

Extremist458 **10 November 2009, 20:01**

RIP, tried a lot of those designs, and not with as good a result as what we are using now. 3 is better then 6, no undercutting, and with the 3 breaking and 3 remaining, it would do very little more then what is already going on, and would be very specific of IMPACT velocity. One thing most people don't factor in is that there is a great difference in impact velocity vs muzzle fps. A bullet needs to adapt somewhat, especially in expanding bullets. FN's, not so much, but here we have to consider the great variable of speed. If low, you don't want it to lose the petels, if high, you want it to spend more of it's energy, all while staying in straight line. A bit more then that, but that's the just of it.

-Extremist
"Pain is weakness leaving the body" -Instructor
Victory in life is dying for what you were born to do.
"I hope you live forever" -300
"Never judge an enemy by his words, he might turn out to be a better shot then a writer"
http://www.gscustomusa.com

michael458 **10 November 2009, 20:31**

RIP

You are welcome, thanks for the Bravos, much appreciated. You were on to this long before me I think, but I am 100% on board with the concept. It is hard to describe watching buffalo take hits with this! In fact, I cannot describe it, it must be seen for yourself. We do not plan a trip to Africa until 2011 again, but at the top of the list will be these sort of bullets in the 500 MDM, and any other of the B&M cartridges. I am planning a series of these bullets for each cartridge and caliber. I intend to also use some brass versions.

The brass versions I find shear at lower velocities too, the copper being softer will resist shearing to a point. It would be interesting to try some of these at lower velocity, in particular some .458 caliber versions in 45/70 say? It could enhance energy/trauma transfer for that cartridge, possible?

Extreme

You are welcome.

Does the brass break up too soon? My initial thoughts were yes, they do. However, I won't go so far as to say that is bad, still a lot of trauma tranfer, and from what I can tell, limited tests, most of the brass is shearing up front, closer to entry at least in the test medium. Still the remaining slug continues on and is doing damage too.

The copper bullets shear from around 4 inches to 12 inches in the medium. Not all at once either, 1 or 2 here, another midway or so, with the last being at or around 12 inches. So far, I can't detect any veering off course or tumbling at all! The remaining slug is found nose forward in every case? I would have thought they would tumble too. The transfer of trauma and wound channel is enormous however, and I could not tell without finding them nose forward.

I also detect no tumbling or veering off course with the brass that I have tested, which again I have only had a few sample bullets to work with. But they appear to travel straight, and found nose forward. No, I don't know?????

RIP

What else? You seen it, but still I will wait on that one a little later, I think we have much to discuss here for a bit.

Witness Cards!!!! Need to get on that ASAP!!! Also have to get some more news print. Seems we will be chewing a hell of a lot of paper shortly!

I like the 6 blades we have been using, or petals.

I think it is hard for guys to get past Basic Bullet Class 101 on this stuff, I know it was for me.

One thing about this type bullet, velocity is a key element of performance and the energy dump, transfer of trauma! Now certainly it does not have to be hyper velocity, but there is a big difference in the copper bullets from impacts of 2000-2300 fps. Muzzle velocity in the 500 MDM is 2400 fps--same bullet in the 50 B&M at 2200 fps. While the 50 B&M does great, if range gets out to say 50 yds you are down to 2100 fps or so, petals may not shear at that velocity. With the 500 MDM at 25 to 50 yds petals do shear, and it's explosive. Much beyond that they have slowed down to act as a conventional bullet, and that is not a loss at all, so it really is a win win situation, either way, and that is rather rare for bullets!

Now, the brass will shear even at low velocity, so this might bear investigating a little further, as the brass is not so velocity dependent? I will get some photos of some of the Whisper bullets which are brass, but JD has had some slits cut in them to allow for better break up at very low sub sonic velocity. Giving an energy dump even at sub sonic!

Lot's of neat, new things to discover with this technology I think! At least for me for sure! I am excited about these!

Michael

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

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Live Outside The Box of "Conventional Wisdom"

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DWright **10 November 2009, 20:35**

Exellent report Michael!

http://www.mazamasportinggoods.com

Whitworth **10 November 2009, 20:49**

Keep it coming, Michael!

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

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

Semper Fidelis

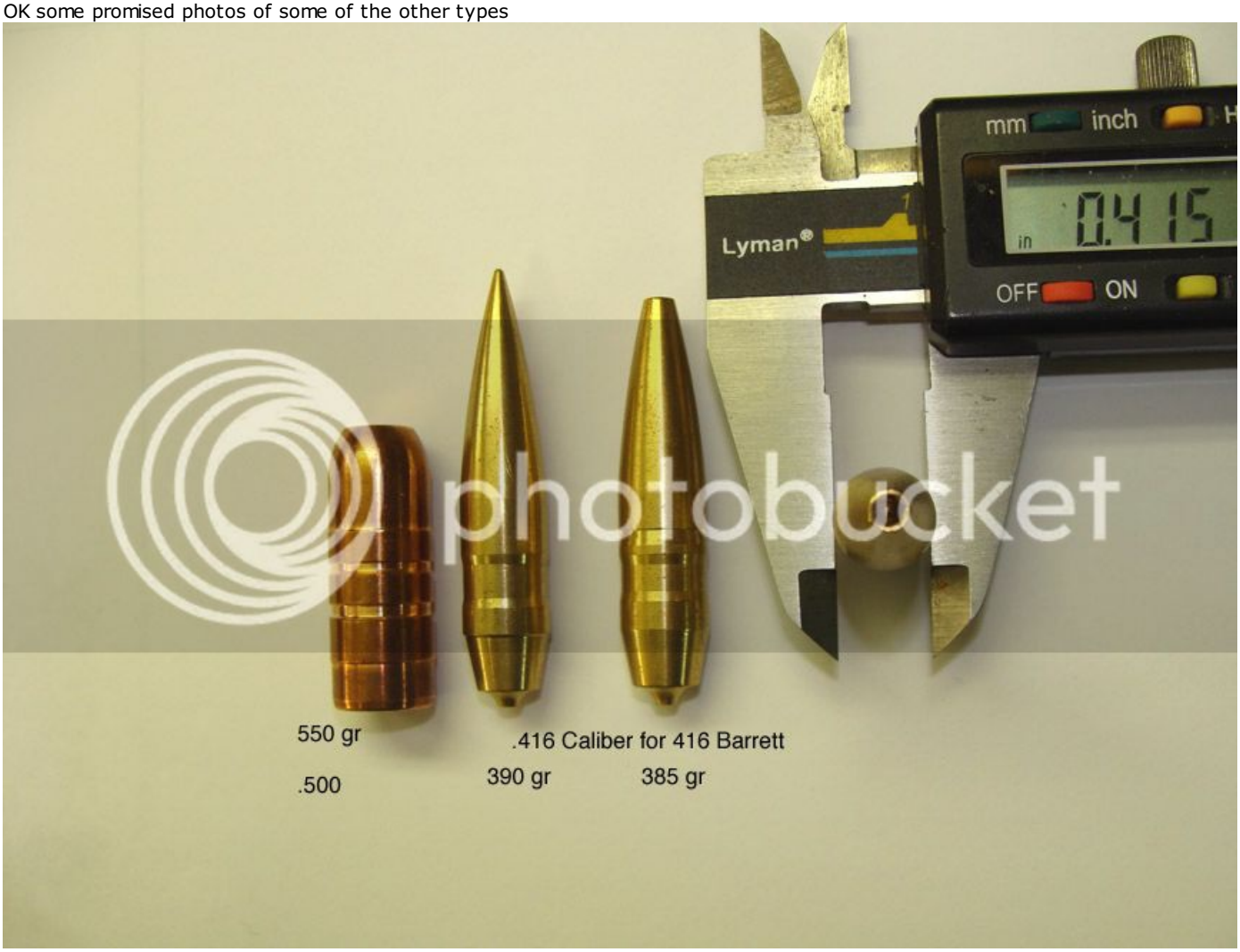
"Building Carpal Tunnel one round at a time"

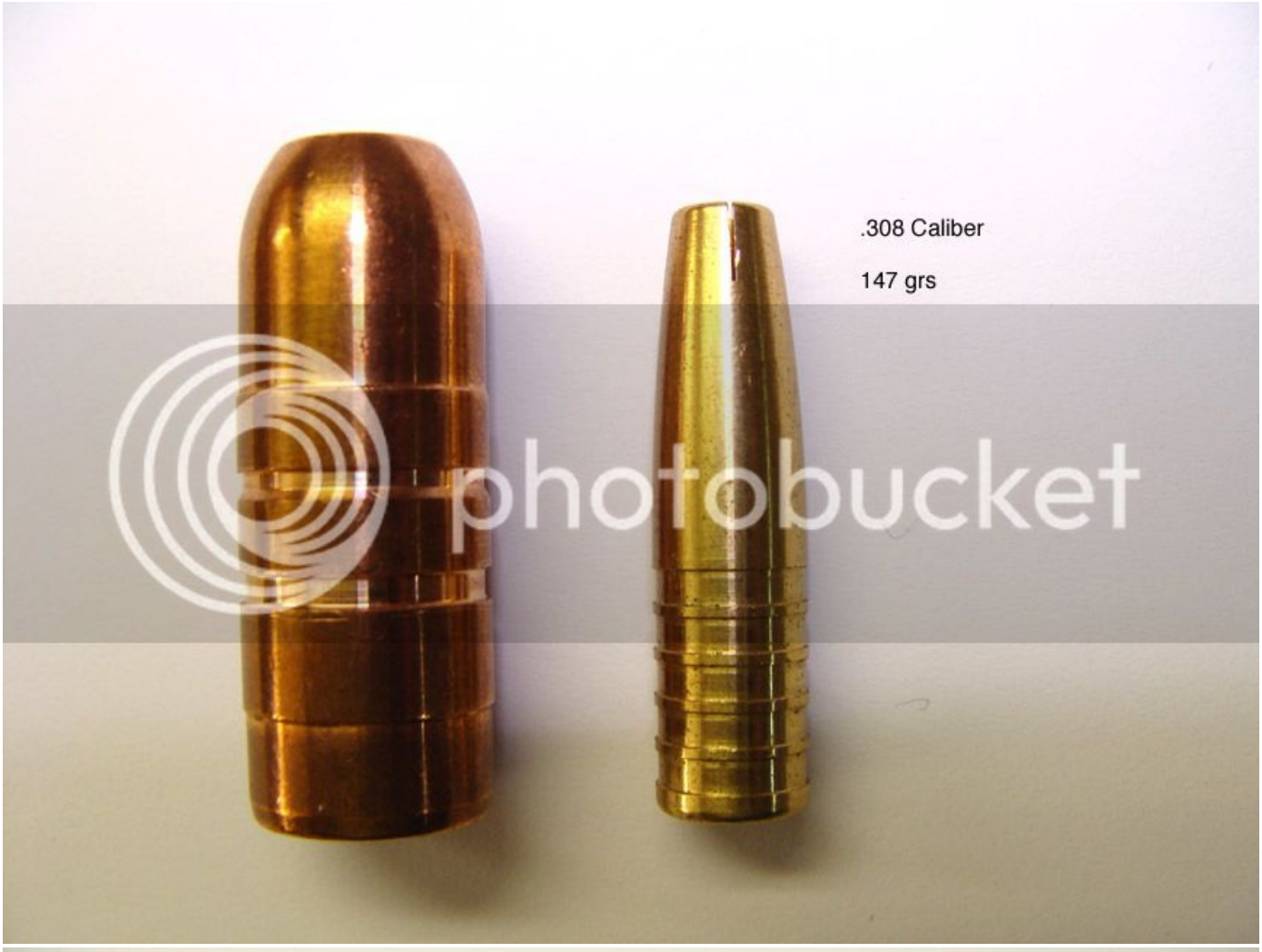
michael458 **10 November 2009, 21:32**

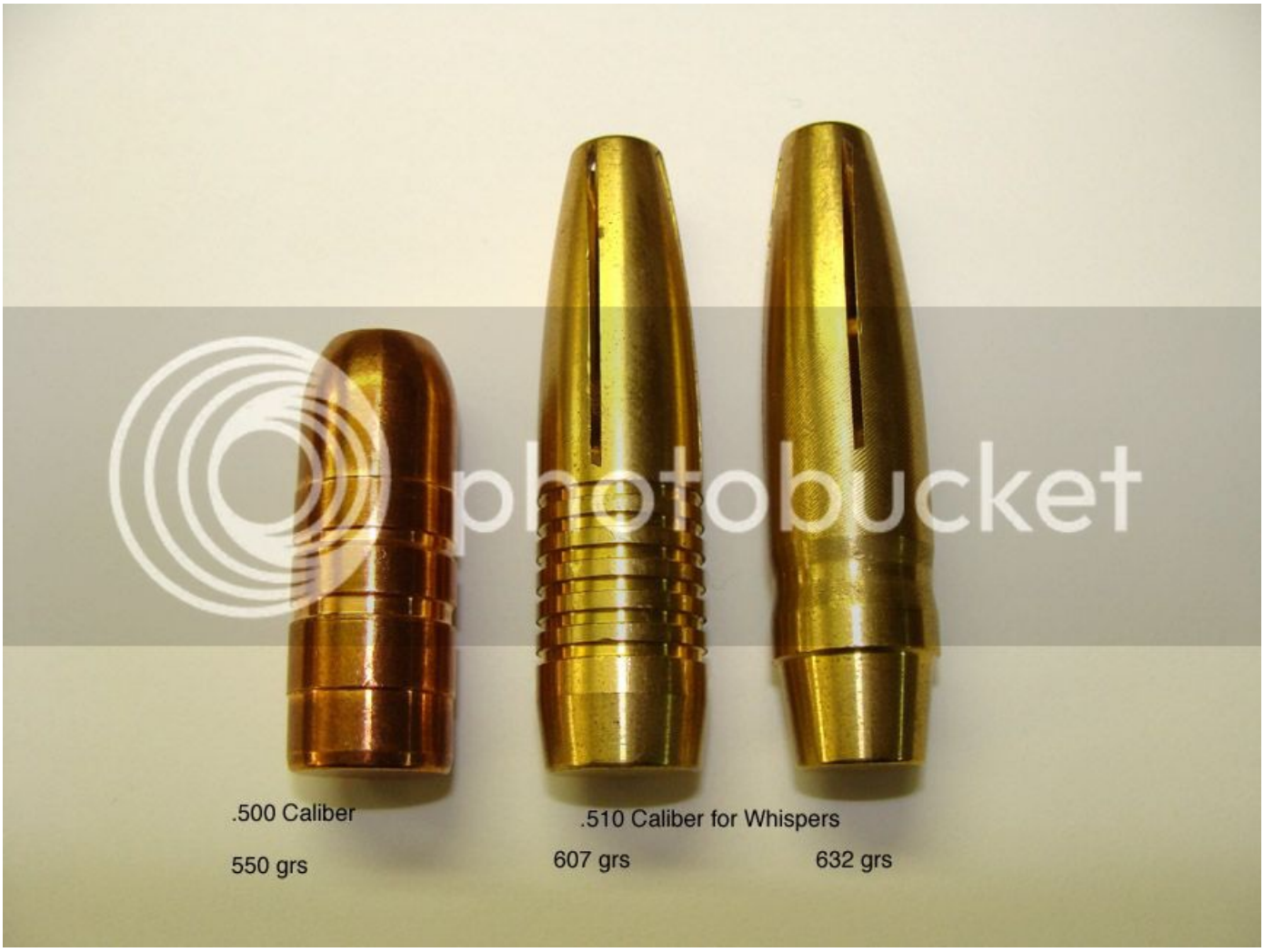
Thanks guys---But I can't keep it coming forever, about to run out of new things! About, not quite completely, but getting close!

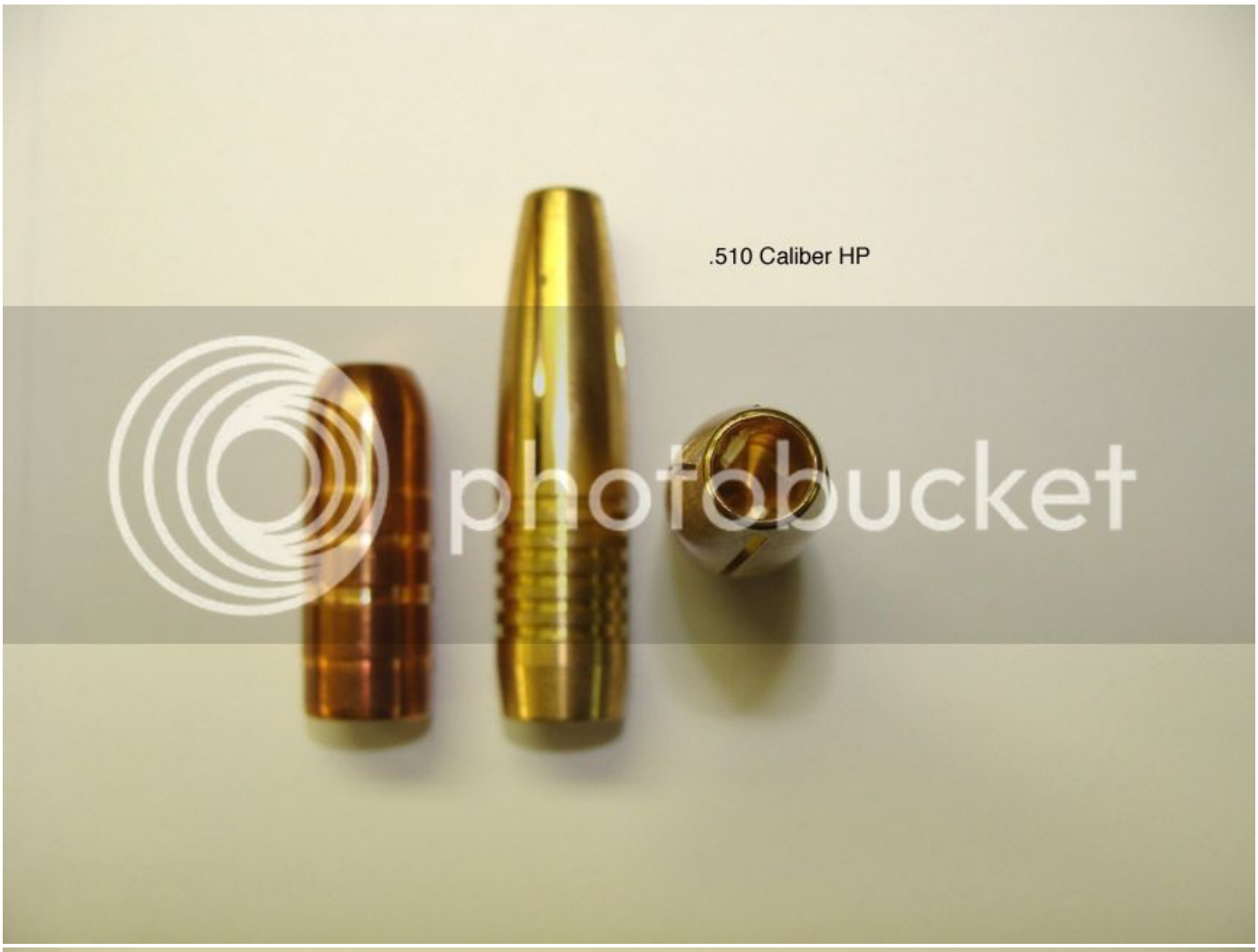
Dwright, Whitworth??? Opinions, thoughts about these?

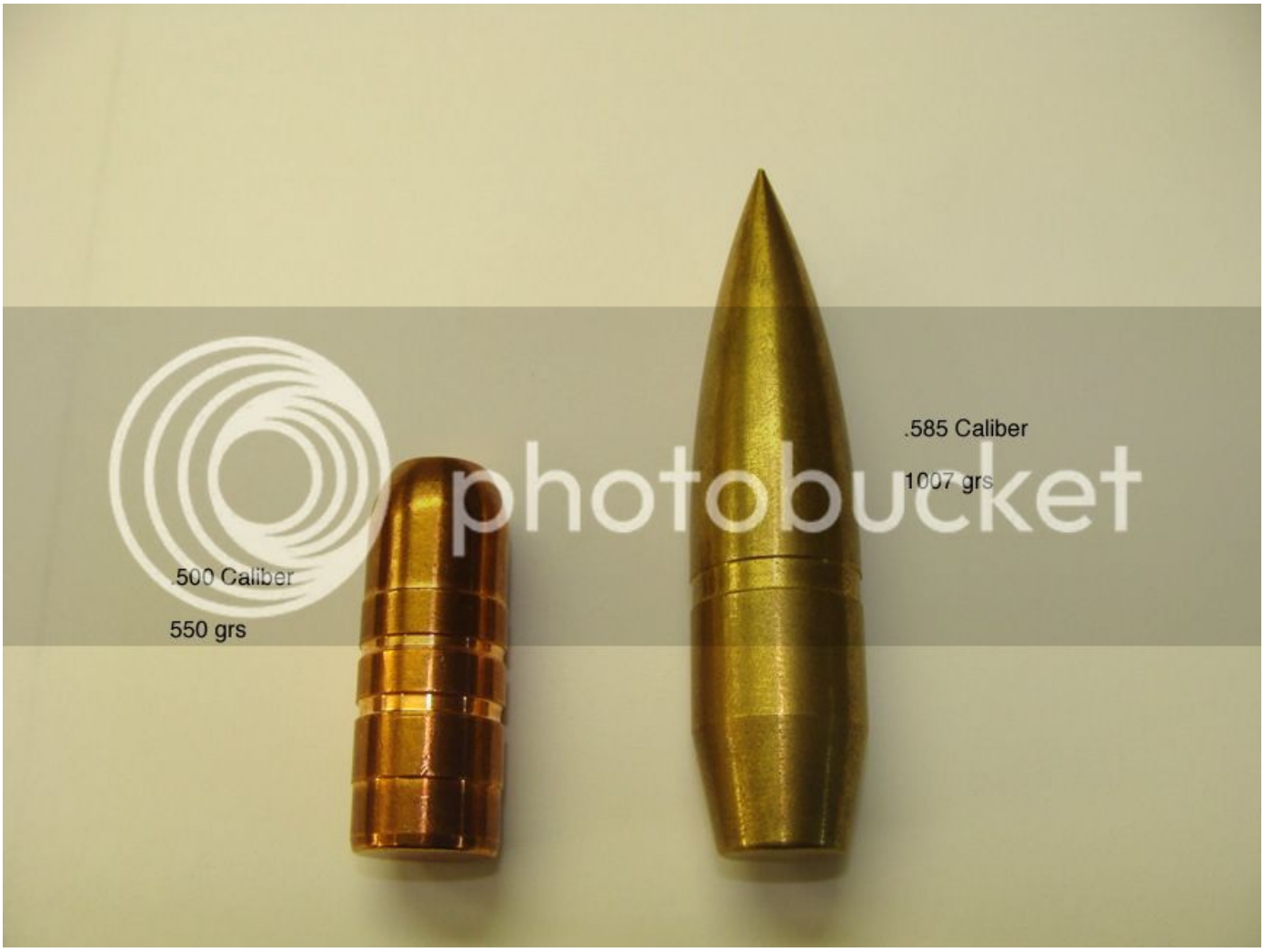
OK some promised photos of some of the other types




.308 Caliber
147 grs


.500 Caliber
550 grs
.510 Caliber for Whispers
607 grs
632 grs


.510 Caliber HP


.585 Caliber
1007 grs
.500 Caliber
550 grs

No reports on these, only samples of some things JD sent to me. On some of the ones designed for the Whispers you see the slits cut into the .510s and shorter slits in the .308 to facilitate shearing at sub sonic velocity.

Michael

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capoward **10 November 2009, 21:59**

Being a neophyte in this arena, this raised a question that I'd like to pose:

> quote:
>
> Does the brass break up too soon? My initial thoughts were yes, they do. However, I won't go so far as to say that is bad, still a lot of trauma transfer, and from what I can tell, limited tests, most of the brass is shearing up front, closer to entry at least in the test medium. Still the remaining slug continues on and is doing damage too.
>
> The copper bullets shear from around 4 inches to 12 inches in the medium. Not all at once either, 1 or 2 here, another midway or so, with the last being at or around 12 inches. So far, I can't detect any veering off course or tumbling at all! The remaining slug is found nose forward in every case? I would have thought they would tumble too. The transfer of trauma and wound channel is enormous however, and I could not tell without finding them nose forward.

Would the physical composition of the hunted game perhaps dictate whether brass or copper hollow points would perform best? Say, brass bullet composition with its faster shearing of petals being more advantageous for speed goats, deer, elk, and less heavily structured African plains game and lion while copper bullet composition with its slower shearing of petals be more advantageous for all heavier boned game where deep penetration is most desirable such as Africa's largest plains game and buffalo?

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

capoward **10 November 2009, 22:14**

I'll take a shot. That .416" diameter 385gr HPBT looks like it just might cause good damage at 300yds and longer distances depending upon how well it opens up at both high impact speed and low impact speed. It seems one of the biggest criticisms relating to the Barnes TSX and TTSX is their failure to open at lower impact speeds.

I wonder whether the bullets designed for the Whisper could be slightly redesigned as true bore rider; i.e., groove diameter bands and bore diameter shank, with the slits or slit depth altered to allow the petals to open at slow impact speeds while still allowing say 4"-6" of bullet penetration at high impact speeds before the petals would shear off? If so that design would be great for antelope, deer, and perhaps elk.

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

Canuck **10 November 2009, 22:35**

> quote:
>
> Originally posted by RIP:
> Classes of NON CON bullets?
>
> 1. Light for caliber hollowpoints of copper or brass designed to lose all petals for initial large wounding followed by deep penetration and a blowhole on both sides.

Do Saeed's Walterhogs qualify, even though they are not light for caliber? (300gr .375)

2009 Tanzania Hunt Report

My 2000 to 2009 "Decade in Review" Slideshow

capoward **10 November 2009, 23:16**

> quote:

> Originally posted by Canuck:
>
> > quote:
> >
> > > Originally posted by RIP:
> > > Classes of NON CON bullets?
> > >
> > > 1. Light for caliber hollowpoints of copper or brass designed to lose all petals for initial large wounding followed by deep penetration and a blowhole on both sides.
>
> Do Saeed's Walterhogs qualify, even though they are not light for caliber? (300gr .375)

I've heard of Saeed's Walterhogs but don't recollect ever having seen one...can you post photo(s) of fired and perhaps recovered bullets?

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

RIP **11 November 2009, 00:13**

Canuck,
Good point.
Saeed's bullet (THE WALTERHOG) is a NONCON too, but only because he makes it himself from copper lightning rod grounding stakes,
that have been documented to have been properly heat treated by one African lightning strike. Lab verified.

Seriously, his is a NONCON *LOAD* because he drives it faster than 375 H&H velocities.

Even the GSC HVs and various copper X-bullets routinely loose petals when impacting water starting around 2500 fps.
All petals may be lost around 2600 fps impact.

Water is hard at high speed.
Water jets are used to cut various metals in some industrial milling machines.

Lots of pictures of THE WALTERHOG can be found posted by Saeed.

I've got some saved somewhere ... back to Planet Farside for a bit ...

capoward **11 November 2009, 01:29**

> quote:
>
> > Originally posted by RIP:
> > Lots of pictures of THE WALTERHOG can be found posted by Saeed.

I performed an advanced search and after searching the multiple pages of postings was able to find three photographs of the Walterhogs, all posted by Saeed, though one was a flat of CNC machined FN bullets rather than HPs so they might not be called Walterhogs. Also it appears that the majority of Saeed's bullets were shown within your posts and the "photobucket" indicates the images have been moved or deleted. I found what I needed though. Thanks,

And I agree also, Walterhogs fit within the non-conventional bullets discussion as would the S&H VeloSharks (I think that was the correct name???)...

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

michael458 **11 November 2009, 05:06**

Got some catching up to do, actually had to do some real work today!

Jim

As for the physical composition of the game, well, maybe, yes and no. The deal is, both still have the remaining slug continuing to penetrate, same as ever, even on heavy game. I see what you are getting at, but I am not sure it much matters, big difference I see is that the brass shears off quicker, copper retains, brass shears at low velocity.

Brass bullets, say light ones at 300-325 grs in 458 caliber might be a damn good option for 45/70 shooters! I tested a 305 gr Brass version, 458, in the 458 B&M at 2452 fps, remaining slug weighed 207 grs, penetrated 20 inches. For an expanding bullet, 20 inches of penetration is a lot--example--458 cal 500 gr Woodleigh Soft--around 20 inches! A 428 gr brass version went to 24 inches at an impact velocity of 2165. I would definitely shoot buffalo with the 428 gr version with that sort of penetration.

The 416 bullets are designed for the 416 Barrett. Of course it's mission is life is not hunting or "animal tissue". I suspect that it will

do damage at far greater distances, especially for the target intended. Remember seeing the Taliban guys exploding like prairie dogs, well something like that I suspect.

JD wanted me to do some research with them when I was across the pond in 2007. I loaded them up in the 416 B&M to 2350 fps, of course they are way too long for the magazine, but shot very well indeed. Did some test work on downed buffalo, and damage was pretty ugly, and of course impact was within feet, not yards. I wish now I had hit some live buffalo with these, knowing now what I did not know then. I have no doubt they would have been very effective, but still in November of 2007 I had not got past Bullet Class 101 yet. I am just now getting in Bullet Class 102.

I've heard of the Walterhog, but that is as far as it goes, know nothing about it at all.

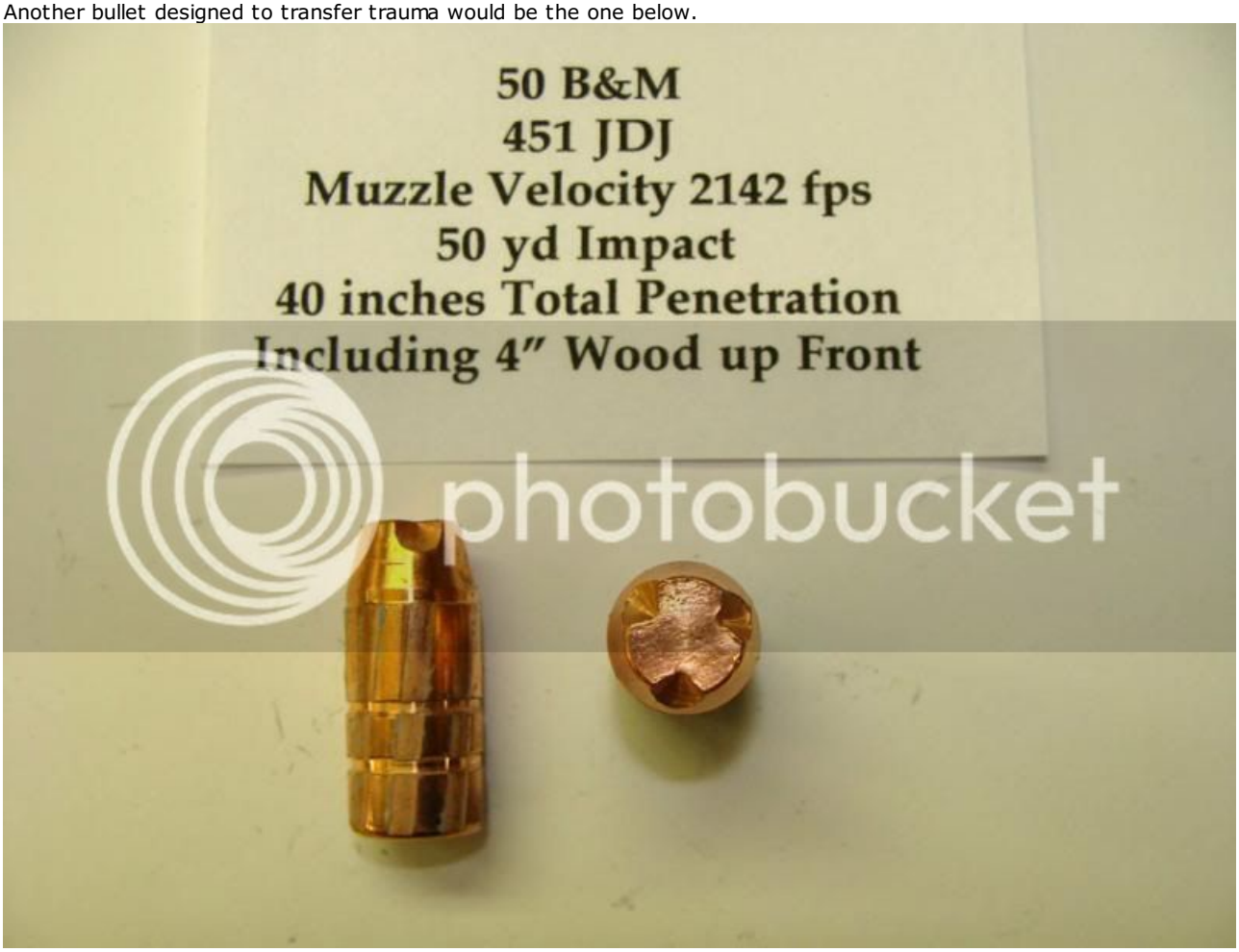
RIP is very correct, NONCON bullets are out there, I believe that the GSC HVs classify as such, some of the Barnes TSX at the high velocity would qualify, and others. Barnes TSX is getting to be a slight stretch because I am sure they are annealed and the petals are not easily broken, these days anyway! In the old days it was somewhat normal for the petals to break, and I don't think back then anyone had got past Bullet Class 101 at all. Or at least none I know of.

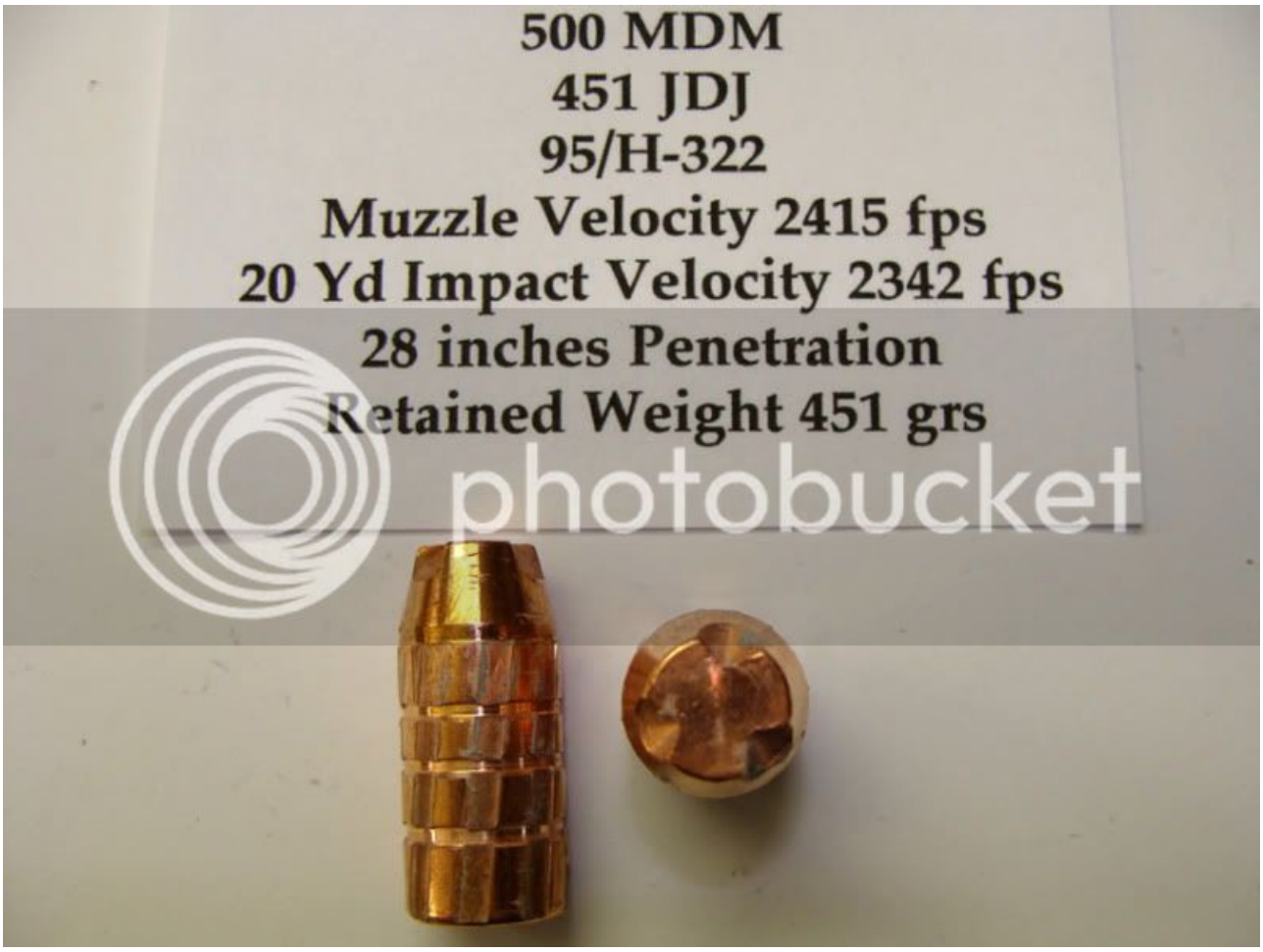
Jim a redesign of any of these bullets is very much a possibility to do anything your mind can imagine! CNC, unbelievable what can be done today! With enough test work anything can be done I think. JD has been working on the Whispers very hard recently with the game department guys, sub sonics culling deer in towns, sub devisions things like that. They use 30s, not the 510s of course, but JD is doing a lot of research in other areas too in sub sonics. Some of these bullets are a product of that.

I would classify a NONCON bullet as any bullet designed to transfer trauma and energy to a target, in a non conventional manner, not being a traditional lead/jacket expanding bullet, nor a traditional solid designed to penetrate.

Most common NONCON bullet are the ones we have already discussed above, petals shearing off to transfer trauma.

Another bullet designed to transfer trauma would be the one below.





With the two bullets listed above would anyone care to speculate upon the difference in penetration between these two tests?

Full discussion starting in the morning.

Michael

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DWright **11 November 2009, 07:49**

http://www.mazamasportinggoods.com

capoward **11 November 2009, 07:49**

Michael,

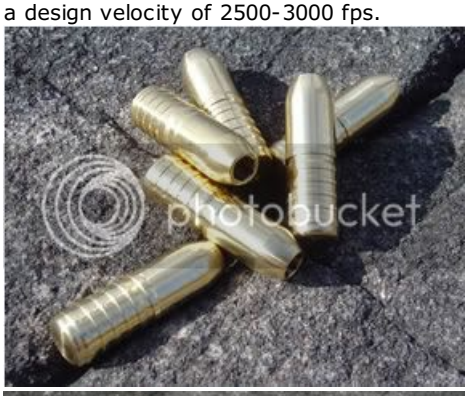
Ok, I've digested this for awhile…yes I bet the .416 HP does provide exploding Taliban depending upon the distance at impact.

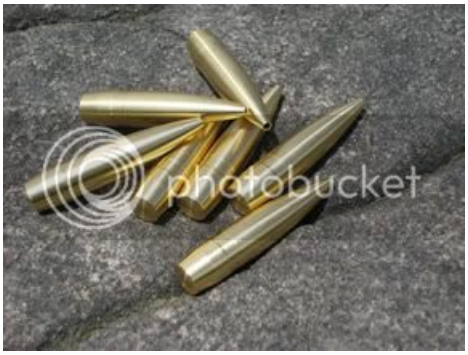
Let me throw this out into the mix. Assume 1st off that the bullet is of the appropriate weight and construction for the game being hunted; the typical C&C bullets will may blow apart with iffy penetration at high impact speeds yet stay together, mushroom very nicely and penetrate through the kill zone at slower impact speeds. Bonded core bullets will typically stay together at high impact speeds and will typically expand high and low impact speeds but the amount of expansion is controlled by speed…a lot at high impact speed and perhaps minimal at low impact speed. Then we throw into the mix the current Barnes X bullets and their evolution which, while typically staying together regardless of impact speed may well not expand at low impact speed if only soft tissue is encountered.

Here in the whacko zone of the West we're required to use bullets without lead for all licensed hunting within the "giant vulture" zone. And the U.S. government is considering expanding this to a major chunk of Arizona as well as anywhere else the Condor "might" fly over. I mean geez…you'd think these things were a goat with all the junk they've found in the digestive system of the few deceased Condors that lead their "renown scientists" to determine that the Condors had died by ingesting the lead from bullets that hunters have used in the Condor's feeding range.

So with consideration to the nut zone and the “lead in deer” scares of last hunt season in the northern mid-west…should consideration be given to the development of the perfect (or as near as we can get it) design and composition of non-conventional bullets individually for speed goat, whitetail and mule deer, and elk…plus bear, etc. understanding their will likely be overlay between animal types. So how’s this, Western high desert mule deer with a hunting range requirement of 25 yards (yep shot my first at that distance) to say…400 yards. So bullet requirement is mono-metal, aerodynamic shape for velocity retention at 400 yards, and a requirement to penetrate sufficiently in soft tissue before expansion stress shears the petals for close range/high speed impact yet reliably expand sufficiently while penetrating at long range slower speed impact.

Perhaps splitting the design of these two bullets; the 1st bullet has a design velocity of 1600-2600 fps while the second bullet has a design velocity of 2500-3000 fps.





So…how’s that for noodling? Close to impossible??? Hey I already know the design of the 470gr .500 diameter HP SST will work out to 200yds with a 175yd PBR in the 50 MDM.

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

ALF **11 November 2009, 11:17**

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michael458 **11 November 2009, 14:05**

Jim

Good morning all--at least on my end of the world. Just before 5 am and lot's of rain here!

For the far Left Side (take a look at the map of the US) NONCON (RIP named our bullets, I sorta like it) bullets have a great advantage for sure. I don't know, but I think that you have your answer in the photos you put up of some of Davids bullets!

I may give Brian a call this morning and see what sort of samples he has in the shop. But at any rate I will get some samples of everything I can get my hands on, in the calibers I shoot and start some work on this. I too am interested in some smaller caliber things, in particular some 9.3 caliber NONCONs. Also very interested in seeing some low velocity work with the brass bullets.

With the coppers low velocity means the petals retain. As stated before that is ok with me too. Penetration is good, as you see expansion is 6 blades and wide and the bullet turns into "conventional" at that point. For me in the .500s that is almost a no downside situation. The only issue is when you get down to the 50 B&M Super Short, where velocity, even with the 380 version is not high enough at all for shearing. I think that a brass version may need to be done for the benefit of the 50 Super Short.

I think I must get a list going today of what I need to test and work with, and get some of these bullets on the way in different calibers, weights.

Michael

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michael458 **11 November 2009, 14:26**

Alf

Just where are you in the world? Your post shows here at 2am. That is way too late to be sorting this stuff out!

I agree with you, concerning energy transfer and trauma. Extremely complex, far beyond what test work in the lab can provide. It can provide wound channels, it can describe some things that are going on--in comparison to other bullets and how they react. But it cannot begin to tell us how an animal will react to being the recipient of said "energy & trauma transfer" as I term it, for a lack of better description. Now said many times, I am not talking about Kinetic Energy of a bullet--a totally useless number that has no meaning whatsoever when it comes to anything practical as far as I am concerned, this is not what I am talking about.

I have no issues, if we discuss energy/trauma transfer it will be observations we have made 1st upon animal reactions when first hit--2cd actually trauma observed in the body cavity. No, one cannot set up any valid rules for this, just not possible, and unless one has seen it on several animals it is not valid to say that one bullet will do this or will not do this. What one must realize is that shooting 1 animal of 1 species is no real indication of how all the animals of that species is going to react to that bullet, of said caliber. While one animal may drop on the spot, the next one may show far different reactions. To begin to have an understanding one must shoot a few animals of said species. How many? I would guess somewhere 5-10 of said animals you might "BEGIN" to get some ideas. No matter what you are shooting, I think there will always be a few that don't give in so easy, and especially true of "buffalo".

Michael

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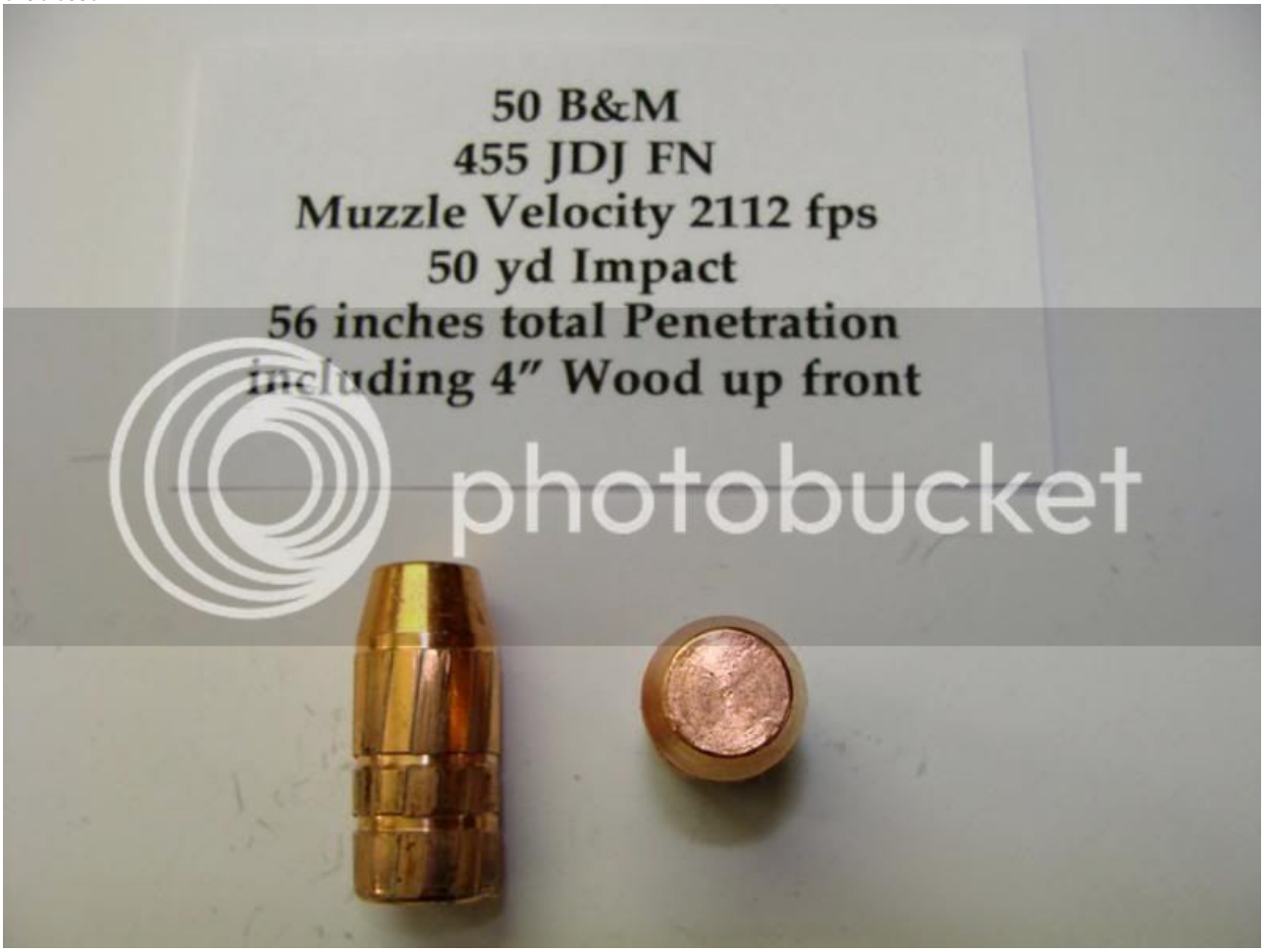
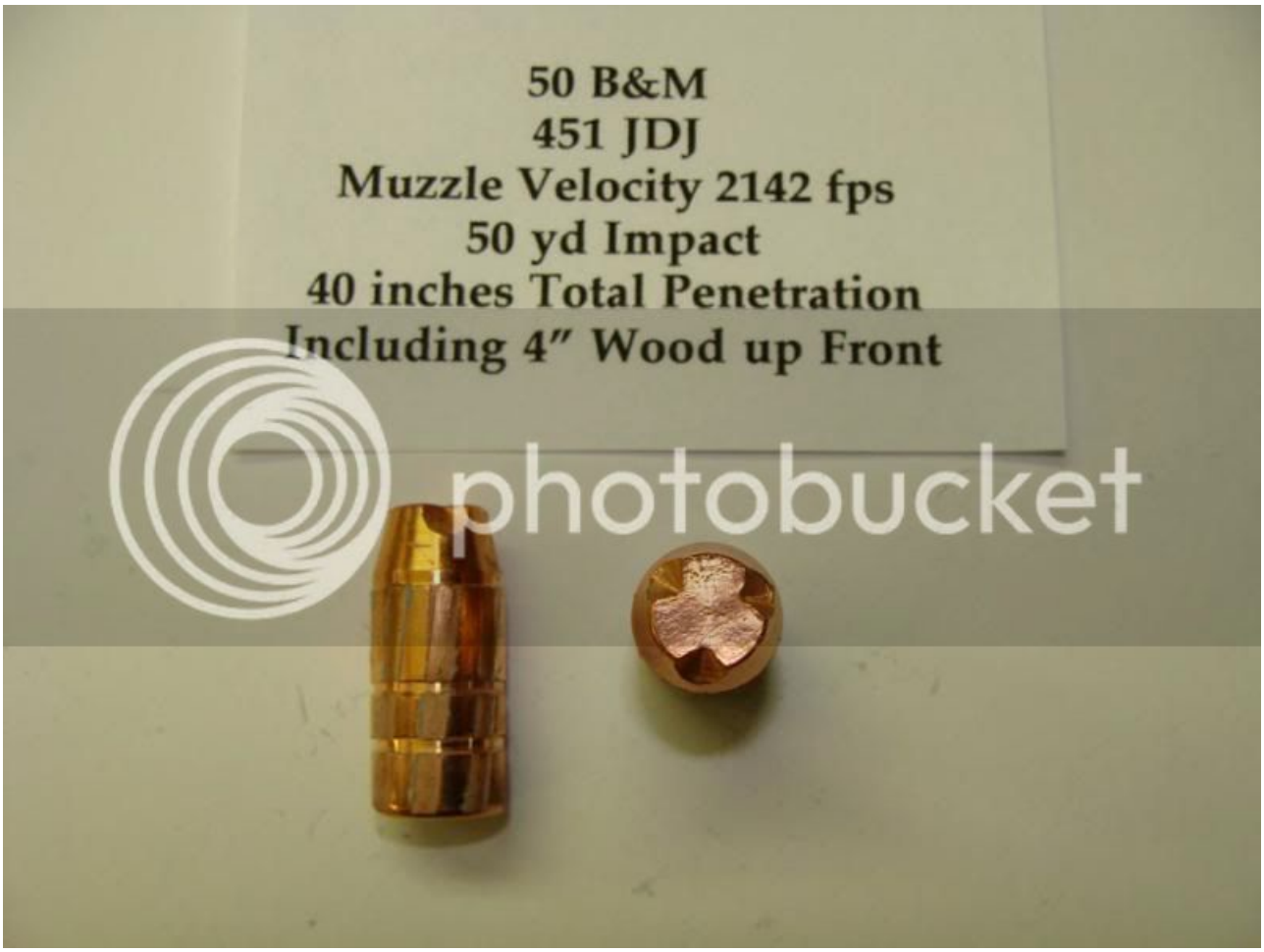
michael458 **11 November 2009, 17:28**

The other NONCON bullet.

From the photos below and the ones above in my last post last night you see a solid bullet, flat meplat (of course) with 3 cuts made in the meplat around the edge. Now JD slipped these in with a bunch of other samples he sent and never said a word about them. Odd looking things I thought, and trying to figure out what that was all about?

So I tested these along with other versions, and then a 455 gr version exactly the same, without the cuts. A sample below from that test.





As you can see this was the same medium, same 4 inches of wood inserts up front, about 2-3 inches inside the medium in the front. You will see the normal FN penetrated to 56 inches and the bullet with the cuts in the meplat only penetrated to 40 inches. Both close to the same velocity, and the same 50 yd impact. Yet one out penetrated the other by a very large margin--16 inches! What was also very different was the wound cavities! The normal 455 FN caused a good bit of trauma to the medium, about an inch or little better before it started to slow down. The 451 gr with the cuts in the meplat caused twice as much trauma to the medium-2-2.5 inch wide wound channel for some distance until it started to slow down. The 455 FN stayed 100% straight line penetration for the entire length of penetration. The 451 with the cuts lost stability during the last 10% of it's total penetration, and at times was found sideways in the medium at the end!

Yes, both solids! But two very distinctly different missions! The 451 gr bullet was designed to move fluid away from the bullet, much like a propeller when it spins. Attempting to induce hydrostatic shock I suppose would be the proper term. While the 455 FN is just a normal solid doing what solids are supposed to do, penetrate and penetrate straight.

JD explained the concept a little further and told me he had been a student of fluid movement for some time. Great, could have told me to begin with, but sometimes JD lets me learn on my own, it tends to stick better that way I assume!

Anyway, it works in the medium, and at the time still looking for a proper buffalo bullet, expanding bullet, for the 50 B&M I thought I had it in this bullet. Sure looks good anyway.

Well in 2007 it was time to put it to the test. I had hoped for some thin skinned critters for these, but late November none were on quota, not even damn zebra. So I was limited to buffalo only. At or around 2150 fps or better the bullet did perform well. It did it's job, penetration was adequate, and animal reactions were good. From buffalo I had shot with the 458 Lott reactions with these and the 50 B&M did not appear much different. I will say I was a little disappointed because it just did not bowl them over where they stood, but it still killed hell out of them regardless. So I was ok with them, and wished I could have tried some on thinner skinned game, zebra and wildebeast being my favorite test subjects, tough, resilient, but more easily impressed than buffalo.

I decided later that this bullet would perform better and transfer more trauma at higher velocities. Fit perfect in with the 500 MDM at 2400 fps +. So I hit some buffalo in Australia with these, and was correct, it did hit them hard, and the ones I shot went down on the spot. A good bit of trauma/energy transfer was apparent. The biggest problem is that side by side comparisons with the 470 gr HP and shearing petals was a detriment to the 451 JDJ. While the 451 JDJ did extremely well, it paled in comparison to the 470 HP and the energy/trauma transfer that occurred with it!

Had it not been for the 470 HP then the 451 JDJ would have been more impressive in the eye of the beholder. None were recovered, all penetrated completely.

The mission of this particular bullet falls into the same category of an expanding bullet, not as a solid. Designed to move fluid, induce trauma, and transfer energy to target. In that mission it is successful, but in my opinion overshadowed by other NONCON bullets we have been discussing. Penetration is great with this bullet, and does better than the other NONCON petal shearers! Or at least the ones I have been able to work with.

Again I think if one desired to enhance this particular bullet it could be done. First I think for it's mission and the velocities I am capable of running in the cartridges I have, I would reduce the weight from 451 to around 350 grs or so in .500 caliber. I could increase velocity in the 500 MDM to probably around 2700 fps or so, which this bullet would be able to inflict a higher degree of

trauma to target, move fluid much faster. Maybe, maybe not???? I think that would be my first step to attempt. Of course the 50 B&M would be able to run it upwards of 2350 or 2400 fps too. I think penetration would be more than adequate for it's mission at hand.

Michael

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

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

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capoward **11 November 2009, 21:36**

Alf,

I'd love to set a fully vetted academic study that identifies the bullet composition, shape from base to tip, metaplat size, HP vis-à-vis soft point, etc. that opens fully at 1000fps while staying together without fragmentation with full bloom at 3200fps specific to each set of game animal worldwide. I just don't believe that will happen during my lifetime…

The way I look at things, had it not been for the tinkerers of the world we'd likely not have the variety of C&C, bonded core, and now mono-metal bullets that we do. Leave the factories to their own testing world and most likely have a very small set of calibers with an even smaller set of bullet designs available to us.

So we do what comes natural to some…we tinker looking for a mousetrap perhaps not that much better and occasionally worse than the readily available factory mousetrap… but still we tinker while searching for a mousetrap, or mousetraps, that truly sets well with us and that we eventually call our own. Good…bad…or otherwise…that's what we do.

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

Warrior **11 November 2009, 21:55**

quote:

> Based on intuition we would assume that once a HP ogived monometal has shed it's petals (if it does) the shank that is left behind based on it's form (now a Flat ended cilinder) would be stable yes because it's now a FN solid, not so?
>
> They are not !
>
> High speed photography of a varied assortment of currently available monometal HP's and expanders have shown that all, without exception turn in target after the shedding of the petals and in most the actual expansion and shedding of the forepart happens almost directly after impact.

Alf,

Interesting observation you made. It seems to suggest then, that the loss of petals seldom happens at the same time evenly, and thus not in an asymmetrical fashion, and hence tumbling is induced.

If this is so, then it underscores the fact that it is more desirable to shoot a HP mono-metal bullet at a velocity that would keep the bullet's petals intact in an evenly/asymmetrical expanded form , ie within its threshold strength, as I have always advocated.

Warrior