

This topic can be found at:
<https://forums accuratereloading.com/eve/forums/a/tpc/f/4711043/m/2861098911>

michael458

25 August 2013, 15:52

Terminal Bullet Performance

quote:

Originally posted by RIP:
 Need to shoot those Cup Points faster and make them expand some!

Is North Fork Copper (FPS and CPS) "full hard" instead of only "half hard" like a GSC FN solid?

Heat treating difference or is the North Fork alloyed with some trace metals, not pure copper?

Does the Cup interfere with cavitation at the leading nose surface of the bullet and thus make for more drag and tissue destruction?
 Yes that would be another way of saying it causes a greater surface contact at the nose ...
 Alf might say more wetting of the nose? 😊

RIP.....

🙏 Oh man, you are con-figuring and ciphering to the max.... Far more than I can bear without being far more intoxicated than I am this early in the morning..... 🍷

Suffice to say, first statement quoted is true, more velocity would cause a bit more upset. However, do keep in mind, that both .500 caliber and .474 caliber North Fork CPS that I requested "Expanding CPS" in which John designed the cup a little deeper, and a little wider at the top to allow this..... Penetration is just incredible with these bullets, and the ones I have used hit hard. I am hoping to have time to get POI on some of these. Matthew used the .500 375 gr North Fork CPS on his big Aussie bull... with his 50 B&M Super Short, and later I used the 425 gr .474 caliber on my biggest ever Aussie bull, both with great success, the 425 .474s penetrated completely.





The other "Expanding CPS" are the lighter .458s.... 325 and 350s, and they perform excellent in this area.

I have been after John for a couple of years to make the CPS an Expanding CPS... I think a better fit for the CPS myself, rather than a "Limited Penetration Solid"..... Both do very well, I just think myself that the "Expanding CPS" has a better niche to fill than the "LPS"....

Michael

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buffalo 25 August 2013, 17:45

Just did a test of a few 570 grs Banded Banded Solids (570 grs) - vel of 2380 fps - no shank-abrading issues like in the 1,25" throated version earlier - they penetrated very straight and to a depth of an impressive 82"... As far as I remember Michael458 also tested the 570grs Barnes Banded to be one of the "deepest divers" he ever tested, so results correspond quite well...

But the best penetrator of all is the new design North Fork FPS in .416" caliber / 430 grs weight. In my 416 Wby I drove it to 2710 fps and it penetrated to 95" !!!!

One more thing to test is the 750 grs .585" CEB BBW#13 solid at around 2600 fps.. Will not be today though...

RIP 26 August 2013, 09:32

Size of cup relative to caliber. 🙄

cnm123 26 August 2013, 19:22

Leaving Wednesday for 3weeks with SSG in Zimbabwe after Elephant and multiple Buffalo
Looking forward to using my 50 B&M with North Fork solids and CEB safari raptors
Thanks to Michael,Brian at SSK and Ken at Ceb for helping me sort out my rifle and this thread for all the great information
Will post my report when I get back
Chris

michael458 26 August 2013, 23:01

quote:

Originally posted by cnm123:
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Thanks to Michael,Brian at SSK and Ken at Ceb for helping me sort out my rifle and this thread for all the great information
Will post my report when I get back
Chris

Good Going and Safe travels Chris..... We will be awaiting word on your success.....

I think Brent and Paul are leaving tomorrow with their B&M rifles and CEB bullets too..... So we are going to have 3 guys in Zimbabwe for the next couple of weeks +..... This is going to be very good.....

I have been shooting POIs the last few days, and pretty much got what I am looking for in 416 B&M and 500 MDM..... Getting ready for Australia in few weeks..... Should have some great field reports over the next 4-6 weeks.....

Safe travels to our brothers going across the pond!!!!!!

Michael

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brent ebeling 27 August 2013, 00:12

Yeah, Paul, myself, and our ladies fly out tues. Paul is doing buff, his very first time on African soil kudos to him, on,y shot a couple deer in his entire life. Needless to say he is a bit excited. I am doing tuskless and buff.

At the last minute though we changed rifle. We both went out and bought 375 CZ's. and have some factory remington round nose solids to shoot. Leaving the mighty 500 MDM and the other B&M's at home



LionHunter 27 August 2013, 00:36



Brent - Have a great safari and best of luck to all.

Mike

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

"To be a Marine is enough."

michael458 27 August 2013, 01:45

quote:

Originally posted by brent ebeling:
At the last minute though we changed rifle. We both went out and bought **375 CZ's**. and have some factory remington **round nose solids**. Leaving the mighty 500 MDM and the other B&M's at home



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jwp475 27 August 2013, 04:47

quote:

Originally posted by brent ebeling:

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home 

WHY!!!!

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

brent ebeling

27 August 2013, 06:50


quote:

Originally posted by jwp475:

quote:

Originally posted by brent ebeling:

At the last minute though we changed rifle. We both went out and bought 375 CZ's. and have some factory remington round nose solids to shoot. Leaving the mighty 500 MDM and the

other B&M's at home 

WHY!!!!

Because long barreled rifles handle and shoot better!!!

Awww you guys know I drink the B&M koolaid. Taking the 500 MDM and the all new 458 B&M SA. That little guy is going to be fun to carry for sure. Gonna tear up something with it. First up is hyena for it. Got Paul loaded up with 420 non cns and 450 solids. Same POI at 50 yds. Gonna be a blast

michael458

27 August 2013, 16:06

quote:

Originally posted by buffalo:

Just did a test of a few 570 grs Bamed Banded Solids (570 grs) - vel of 2380 fps - no shank-abrading issues like in the 1,25" throated version earlier - they penetrated very straight and to a depth of an impressive 82"... As far as I remember Michael458 also tested the 570grs Barnes Banded to be one of the "deepest divers" he ever tested, so results correspond quite well...

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One more thing to test is the 750 grs .585" CEB BBW#13 solid at around 2600 fps.. Will not be today though...

Buffalo....

Looking back at my data I was getting 62-63 inches with the 570 Barnes banded in my test medium. But, there are two huge differences in our tests.... One, I think yours is straight wet newsprint, and I have those magazines mixed in to around 35% of the test medium. Two... Velocity, I tested at 2200 fps. With these two factors involved, it is easy to see the difference between your test, my test, regardless of depth, straight line penetration is the key.

And with the new design North Fork at high velocity... Absolutely it is a DEEP DIVER.....

Velocity is playing a huge role in your tests.... How about the mass destruction up front? HEH..
M

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buffalo

27 August 2013, 16:16

Hi Michael - pls take a look at

<http://forums accuratereloadin...381005231#2381005231>

Scroll down and you'll see your data for the 570 BBS at 2200 fps in your 510 Wells: - 74" penetration !!!

You are excused not to be able to remember - you have made such a large amount of testing after all... And you're also becoming an old man eh??   

michael458

27 August 2013, 16:31




quote:

Originally posted by buffalo:

Hi Michael - pls take a look at

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Scroll down and you'll see your data for the 570 BBS at 2200 fps in your 510 Wells: - 74" penetration !!!

You are excused not to be able to remember - you have made such a large amount of testing after all... And you're also becoming an old man eh??   



Yep, I found it in my data.... I have two sets of data, one with ALL .510 caliber bullets, softs/solids, then one set of data with nothing but solids.... The data test you show is 100% spot on, I have that in my main data sheet with ALL the .510s... But, it did not get over to the Solid only data sheet.... ???? Yep I am getting old, and for sure forget.... AND even forget to move data too.... But at least I did have it, just did not know where. LOL.....

M

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buffalo

27 August 2013, 16:40

michael458

27 August 2013, 22:22

quote:

Originally posted by brent ebeling:

Because long barreled rifles handle and shoot better!!!

Awww you guys know I drink the B&M koolaid. Taking the 500 MDM and the all new 458 B&M SA. That little guy is going to be fun to carry for sure. Gonna tear up something with it. First up is hyena for it. Got Paul loaded up with 420 non cns and 450 solids. Same POI at 50 yds. Gonna be a blast

Yeah, he was probably drinking my Apple Pie!!!!!!! I suppose they are off by now on their way.

M

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416Tanzan

28 August 2013, 14:45

what is the comparison of penetration for non-con 50 calibre (either .500" or .510")?

Specifically, I would like to know the difference in the core penetration of the 350 grain "lever-gun" non-con all the way through the higher weight non-cons. (Yes, this is somewhere in the thread, but I didn't find it through simple searching.)

I'm back to my old pasttime of trying to decide on a single expanding hunting bullet that would be a first-choice bullet for buffalo.

+ + + + +

"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

02 September 2013, 22:39

Tanz

Looking through data sheets..... Both .500 and .510....

I was able to put this together for you.....

Terminal Performance .500--.510 NonCon HPs						
Cartridge	Bullet	Impact Velocity	FPS	Penetration Inches	Retained Weight	Penetration
.500 Caliber						
300 BBW#13 HP Short	Nose W25 --Designed for seating deep use					WTip in the magazine
500 MDM 300 #13 HP		2991 fps		2824 fps	48 yds	18 inches
50 B&M 300#13HP		2476 fps		2332 fps	48 Yds	16 Inches
335 BBW#13 HP Short	Nose W24 --Designed for seating deep use					WTip in the magazine
500 MDM 335 #13 HP		2896 fps		2759 fps	48 yds	20 inches
50 B&M 335#13HP		2409 fps		2270 fps	48 Yds	17 Inches
50 BMAK 335 #13 HP		2240 fps		1988 fps	48 yds	18 Inches
350 ESP Raptor						
500 MDM 350 Raptor		2757 fps		2602 fps	48 yds	21 Inches
	W-Tip					
	Solid	2701 fps		2434 fps	48 yds	39 Inches
365 BBW#13 HP LG Lever Gun						
50 BM AK 365 #13 HP		2172 fps		1947 fps	48 yds	20 Inches
410 #13 NonCon HP						
50 B&M 410#13 HP		2348 fps		2269 fps	27 yds	20 inches
		2308 fps		2343 fps	22 yds	24 inches Talon Tip
450 BBW#13 NonCon HP--Wide Cavity--W20						
50 B&M 450#13 HP		2208 fps		2021 fps	48 yds	27 Inches
.510 Caliber						
350 #13 Lever Raptor	HP... Seat Deep, use Talon Tip					
510 Wells 350#13 HP		3007 fps		2848 fps	48 yds	22 inches
50 AK 350#13		2175 fps		2070 fps	22 yds	18 inches
475 BBW#13 NonCon HP--New Wide Cavity						
50 AK 475 #13 HP		1563		1451	48 yds	20 Inches
50 AK 475 #13 HP		1684		1557	48 Yds	23 Inches
530 BBW#13 NonCon HP--NEW WIDE CAVITY						
50 AK 530 #13 HP		1620		1514	48 yds	23 Inches
535 BBW#13 HP						
510 Wells 535 #13 HP		2363 fps		2333 fps	22 yds	29-30 Inches
510 Wells 535 #13 HP		2107 fps		2072 fps	22yds	27 Inches

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416Tanzan

03 September 2013, 10:50

Thank you, Michael, that is a nice table.

The lightweight bullets seem to get around 20" depending on velocity, and the heavier bullets get several more inches. the first is good on buffalo and latter is just wonderful. This is about what I remembered.

My only lack at the moment in .510" is a solid around 390-400 grains to match the 'lever raptor'. It seems that .500" has this covered but not the .510's.

+ + + + +

"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.

srose

03 September 2013, 11:33

I used a 100 grain 6.5 CEB Raptor yesterday on my first Roe deer. Rifle was a 260 AI Winchester model 70. Deer was shot at about 100 yards at a very steep angle and it was running. Hit him just behind the shoulder high and exit was at back of ribs low on off side. Little sucker ran 60 yards maybe after the shot. Bullet did just as many of the big bores have done. Found one petal in hide on off side about 4 inches from the exit wound. Entry hole was about 1 inch in diameter and you could clearly see a star shape in the rib cage. Hope to try them on larger Red deer today. Oh by the way I'm hunting in Norway.

Sam

srose

03 September 2013, 11:41

Michael,

You should fire up that 510 Wells with some 475's and see just how fast you can push them. Might be interesting to see the penetration at higher speeds.

Sam

michael458

03 September 2013, 14:51

quote:

Originally posted by srose:
Michael,

You should fire up that 510 Wells with some 475's and see just how fast you can push them. Might be interesting to see the penetration at higher speeds.

Sam

Yes, one of MANY things that I put on the burner to do, but just have not had time to get to it. The 475 in .510 is kick ass.....

I also loaded up some of the .264 Raptors for my buddy John yesterday in his 6.5 WSM.... Good luck on the red, keep us posted.

Tanz.....

Well there is a reason the .500s are covered pretty nicely..... LOL.... I am headed to Australia in a couple of weeks. One of my rifles is a 19 inch 500 MDM.. I have been experimenting with the lighter bullets, but in some cases have actually slowed the velocity down some from full speed. I will be taking several of the .500 Raptor NonCons, lighter. One of the main ones is the 335 #13 HP seated to work with the tip in the magazine. I am only running 2650 fps, along with this bullet I have a few 350 ESP Raptors left 2690 fps, 365 LG Raptor 2540 fps, 375 #13 Solid at 2535 fps and a 410 HP Raptor at 2420 fps..... All of these close POI at 50. Most of what I am doing is herd and genetics, so mostly cows. I am not sure I will even shoot any bulls this trip, but I figure if I do, I will have a few of those solids around to back whatever NonCon. I won't be taking many solids this trip, just a few.

Michael

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michael458

03 September 2013, 17:23

quote:

Originally posted by 416Tanzan:

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Well look what our boys sent me this morning..... I do believe this solves that issue!!!!!!!!!! Tanz, You Lack No More.....



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srose

05 September 2013, 02:22

OK I know its not a big bore but it sure acted like one. My friend Oyvind shot a Red deer today at 215 meters With a 300 Win Mag using the CEB 145 grain Raptor. I've never seen anything like was his comment. Where have we heard that before. Now the shot was less than ideal hitting thr front of the chest in the dulap if you can Call it that on a deer. Blew a 4 inch hole in the skin and as best we can tell nothing went into the chest or spine. Deer dropped in its tracks and didn't move. Can't figure out how it did it. So far we have two Raptor kills one With 6.5 100 grain and one With 30 cal 145 grain.

Sam

416Tanzan

05 September 2013, 02:33

quote:

Originally posted by michael458:

quote:

Originally posted by 416Tanzan:

My only lack at the moment in .510" is a solid around 390-400 grains to match the 'lever raptor'. It seems that .500" has this covered but not the .510"s.

Well look what our boys sent me this morning..... I do believe this solves that issue!!!!!!! Tanz, You Lack No More.....



Very nice.

Thank you for this update. Now I will have a real accuracy challenge to work through in November. Will it be the GSC 450 gn HV and 510 grain FN? Or will it be the CEB 350 grain and 400 grain FN? I just need to replace the cracked stock on my 500 ARNyati and enjoy the testing. It doesn't get much better than this. Win win.

+++++

"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

05 September 2013, 03:07

quote:

Blew a 4 inch hole in the skin and as best we can tell nothing went into the chest or spine. Deer dropped in its tracks and didn't move. Can't figure out how it did it.

Don't ask me, I don't know either? Damn deadly bullets, maybe just died because it got scared.. LOL...

quote:

Or will it be the CEB 350 grain and 400 grain FN?

I know what mine would be.. at least today!

Loaded my 500 MDM up today for Australia.... 335s, 350s, 365s, 375s..... Did not even bother with anything heavy. We will see if I am right or full of..... 😊

Michael

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boom stick

05 September 2013, 05:13

Sam, was there a possibility the bullet hitting anything like a twig/branch before hitting the deer?

[577 BME 3"500 KILL ALL 358 GREMLIN 404-375](#)

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

srose

05 September 2013, 10:50

Boomstick, No bullet didn't hit anything before it hit deer. Deer was shot in an open Field. I'm going to do some autopsy work this morning and see if I can find out where petals went.

srose

05 September 2013, 12:28

Did a little more poking around and found one of the petals had traveled almost 90 degrees to the wound channel and went up into the spine. If this would have been a conventional bullet I'm thinking there would have been a long tracking job instead of a drop in its tracks kill. Will post photos when I get back into the US.
Sam

416Tanzan

05 September 2013, 15:19

Michael,

I'll be ordering some of the 400 grain .510" as soon as they come up on their website.

In the meantime, CEB have been developing some pretty exciting stuff in rat calibres.

They now have an all-copper, bore-riding, high-BC set of bullets in .338", 225 grain, 250 grain, 275 grain, and 300 grain.



Maybe the 225 grain will fit in a 338WinMag magazine, we'll see, but they can all be single fed. Since the 338 is not a Dangerous Game rifle I don't mind single feeding, I can keep some TTSX or flatnose solids in the magazine for backup. But imagine a 225 grain .338" bullet at over .600 BC and that blows off three copper petals into curls that act like raptors and that has a blunt center core that keeps right on penetrating !!!

Here is a picture of what to expect:



Yes, I think that Dan is true to the interests of those who want to be ready for a 400 eland shot. This is a bullet that is finally merging the results of the Terminals testing with true high BC design and denser copper, but without copper fouling.

By extrapolation, the following table suggests about a .600BC to .630 BC for the 225grain .338 Lazer.



Yeah, I'd probably shoot a buffalo with such a bullet, too, if it's penetration tests out as deeply as I am suspecting (over 20", maybe 25"?).

Michael, are you up to testing these like in days of yore?

+ + + + +

"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

05 September 2013, 15:42

Tanz

Yes, absolutely, Dan and crew have been extremely busy with lots of higher BC bullets in the rat calibers. I think I even have a few laying around... That I was going to test, but just have not worked up enough energy to load and mess with them... I swear, I have such a hard time getting interested in small bore, it gets worse each year. Not long ago I was speaking with Dan, he was telling me about these rat bullets, and I told him I would leave the terminals to them for those.

I will look at what I have.. I think it was .308 or something, been a LONG time ago.... If I have any of those 338s I will see what I can do.. If I don't, I will see if I can get a few to test.....

Pretty much however, I am retired from testing rat calibers.... I just can't work up enough interest in them to put much effort into it.....

But, I do have something that came in yesterday that I am going to test..... Suffice to say, these meet my minimum caliber for interesting..... Since my Australia rifles are ready to go, ammo is loaded, next week or so I will be working on some other things, and I have two new bullets that I am going to see what is what on them.

One is a .452 I think, copper Raptor. 240 gr. I will be working with this in a M94 lever gun, load down, load up, and do some terminals at different velocities.....

Top Priority however starting today, will be a 180 gr .416 caliber brass nonCon.. Yes, you heard correct, 180 gr .416 caliber!!!! This is new, a bullet that our buddy Daryl in Australia requested for some wildcat thing he is working on, based I think on 308 Win up to .416... I think! Anyway, rifle is designed to be a very short pig type rifle only, and these are designed to be pig like bullets... But I suspect they may be able to do much more than pigs, so I want to find out starting today just what I can run them too in an 18 inch 416 B&M, and where POI is compared with the 225s I am taking to Australia.. Now if I can sort that out, I will be taking a few of these 180s to see how they do on cow buffalo, just for giggles and grins... Will show some photos and more about this little bullet in the next few days..... Currently I don't believe at all this is a buffalo bullet by any stretch.. But for smaller game, even up to maybe kudu??? Test work will show what it might be capable of, and then maybe some live tissue tests.....

Michael

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416Tanzan

05 September 2013, 16:14

They're going to do one of these copper Lazars in .416, too.

Imagine, a longrange, bore-riding, copper, three-petal non-con in .416" with a BC out the wazoo. That will make a formidable, all-purpose, plainsgame and buffalo bullet. I'm going to pick up another 416Rigby so that I can do load development in the US and shuffle some rounds over to Africa.

+ + + + +

"A well-rounded hunting battery might include:
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Conserving creation, hunting the harvest.

OK, let me tell you about this little 180 gr CEB Raptor in .416. As I mentioned somewhere, Daryl had these done for a special .416 project he is working on, and if I am not mistaken its a 308 Win up to .416, basically straight, and used in control feed guns. Short barrel, Daryl's intentions are for shooting pigs and such size critters only. Naturally, not much gets by me, Ken let me know about it, and now I have some, being the bullet hog I am I could not resist of course.

Now, couple of things about this bullet. It is not a BBW#13 Nose Profile. It's a little bit sleeker I suppose, and the 180 gr includes the tip as well.. so that weight is the total package. One issue I ran into with the 416 B&M is that the Nose Projection above the top band is longer than the #13 profile. So, seated in 416 B&M standard case length at 2.240 inches, the overall length of the cartridge is too long to fit in the magazine. So, Michael starts chopping off the neck, I take it from 2.240 down to 2.180. And everything is happy. Short necks are not really a big issue, just an adjustment to get this bullet to feed and function out of the magazine. I doubt there would be other issues with other cartridges..????

Here is what I ended up with, and in comparison to the 225 #13 Design...



I started off working with the 18 inch gun I am taking to Australia in a couple of weeks, then yesterday I did some pressure traces in a 20 inch gun. I got to 75/H-4198 for 52000 PSI... In the 20 inch 416 B&M I got 3340 fps, and in the 18 inch gun 3190 fps, a loss of 150 fps, but not a surprise at these velocities. I find that once we drop to 416 caliber in the B&Ms we start loosing that big bore efficiency with lighter bullets. At 380-400 grs it is still nearly even between 18-20.

Something else about this bullet is the cavity is only about .250 deep, where the #13s and standard NonCons are .400 deep. This leaves more blunt trauma base, and therefore increases "Retained SD" and this increases penetration. And it worked as far as I can tell. I have a major issue here, and I cannot find the 225 BBW#13 HPs I tested some months ago????? These bullets are always put away in their proper place, but I can't find them, and I also can't find a few of the 250 .458 tests either? I am thinking I might have sent them to CEB for study???? I don't remember? I have the data, but no bullet samples of the test???? I wanted to weigh the blunt trauma base of the 225 to see what the retained SD was, and that would have told us some more about it.

At any rate, the 225s penetrated to 21 inches as I recall at 2900 fps, this 180 penetrated to 18 inches in two separate tests, which is rather substantial. Blades are smaller, produce lots of trauma from 1.5 to 2 inches at shear, to around 8-10 inches, all found blades were at 4 inches in.

Very nice little bullet, and will open doors for lots of things in .416 caliber.... I was only going to take 5-6 of these with me to Australia to test, but with this information now I think I will take at least 10 of them, I think they will actually do rather well on this herd reduction mission, in which we will only be shooting poor genetics and cows and such... Not big brawny bulls....

It also shoots great.... I tested 2 each 5 different powder charges of H-4198 total 10 rounds. I was not taken very close care in this shooting, far more interested in just gathering data, when I looked up and saw that 10 rounds had made a ragged hole at 50 yards, and I was not really even trying, it was obvious this bullet will shoot far better than what I was shooting!!!!!! Both below from my 18 inch 416 B&M.



This was final load of 75/H-4198....



POI is close enough for me to work with, the 225 load at 2850 fps is 1 inch high, these are around 2.5 inches high, if careful I can work with these....



Have a good weekend all...

Michael

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boom stick

08 September 2013, 01:32

Pretty sweet. I can see a similar bullet for the 400 Whelen/405 Win/450/400NE being quite useful.

[577 BME 3"500 KILL ALL 358 GREMLIN 404-375](#)

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

RIP

08 September 2013, 04:58

quote:

Originally posted by boom stick:
Pretty sweet. I can see a similar bullet for the 400 Whelen/405 Win/450/400NE being quite useful.

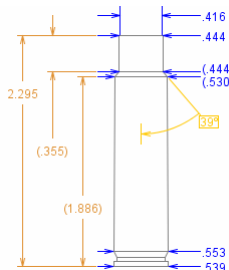
Yes, a .411 like that would add versatility to the 400 Whelen and 405 Winchester.

Outstanding performance from that little .416 in overdrive. 🤖

I could size the .416 down to .411 in two steps for starters,
but of course a custom .411 order would be best.
Couldn't go wrong with a case full of H4198 Extreme in any case smaller than the .416 B&M, might have to use pistol powders.

Questions for Doc M if I don't find answers myself before he gets back, or for "sumbuddy else who know":

- 1) What is the full length .416 B&M gross case capacity in water? Shortened one could be calculated from that.
- 2) What is the bullet diameter between the bands on that new CEB .416/180-grainer?
- 3) What is the length of that new CEB .416/180-grain bullet with the Talon Tip installed?
- 4) How long is the nose projection when seated and crimped as shown in the .416 B&M, with Talon Tip installed?



www.ammoguide.com

Case Capacity (est):
90.2 gr. water for the .416 B&M at 2.295" case length.
74.3 gr. water for the 400 Whelen Petrov.
Just for rough comparison using this "estimator":

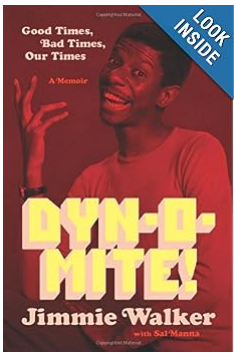
The .416 B&M is 21% bigger than the 400 Whelen in case capacity, and has slight bigger-bore-cross-section-area advantage too.
Or the 400 Whelen is 17.6% smaller than the .416 B&M.
But DocM was using a shortened case that might abate the total advantage of the .416 over the .411, for rough estimation purposes.

Very roughly let us say the 400 Whelen has a 20% case capacity disadvantage, and ignore the rest, for "one-quarter-rule-of-thumb" calculating.

The 400 Whelen will get roughly 5% (one quarter of 20%) less velocity than the .416 B&M with same bullet weight, very roughly:

$$0.95 \times 3195 \text{ fps} = 3,035 \text{ fps}$$

DYN-O-MITE!



The 400 Whelen might get some advantage from 24" barrel length. 6 extra inches of barrel could add about 180 fps, might make up for the smaller .411's bore area versus the .416. 3000 to 3200 fps with 180-grainer in the 400 Whelen?

Might be that the 24"-barreled 400 Whelen could be nipping at the heels of the 18"-barreled .416 B&M, and burning less powder to do it. 😊

michael458

08 September 2013, 15:26

quote:

Might be that the 24"-barreled 400 Whelen could be nipping at the heels of the 18"-barreled .416 B&M, and burning less powder to do it.

Probably correct RIP at the expense of 6 inches of barrel... MUSKET... HEH....

quote:

2) What is the bullet diameter between the bands on that new CEB .416/180-grainer?

.394.....

quote:

3) What is the length of that new CEB .416/180-grain bullet with the Talon Tip installed?

1.098.....

quote:

4) How long is the nose projection when seated and crimped as shown in the .416 B&M, with Talon Tip installed?

.800 seated on that top band... NOT CRIMPED.... The only B&Ms that get any crimp are 500 MDM and 50 B&M AK.... Seated to the crimp groove would put right around .835 or so out of the case, or nose projection.

For your 400 Whelen I believe it worth it to have CEB do some bullets for it, but probably would make sure of nose projection and things like that to your specs... Which more than likely would work with most other things in that caliber.

For this 416 180 I am sure Daryl and Ken calculated for his 308 type action and rifle.... Just so happens a little long for the B&M case and WSM action.... I was extremely pleased with the performance....

Michael

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RIP

08 September 2013, 20:45

Thanks, Doc M,
That nose profile would be perfect in the 400 Whelen "muskets."
Either the "400 Whelen Petrov of 2003" or the "400 Whelen Berry of 2013."
Max brass is 2.494" + 0.835" (crimped) = 3.329", an easy fit in a 3.4" box for 30-06.
A custom order would request reducing the major diameter from .416" to .411"
and extend the base length enough to make it 180 grains, maybe just a very short boat tail. 🙄

michael458

08 September 2013, 23:44

RIP...

No thanks needed. I think a similar bullet in .411 would enhance your 400s greatly.

We live in incredible times for bullets/cartridges/rifles. If you can dream a bullet, damned if Dan can't make it for you.

Extremely reasonable to enhance a cartridge far beyond anything it was capable of before.

M

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

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michael458

09 September 2013, 23:33

quote:

Something else about this bullet is the cavity is only about .250 deep, where the #13s and standard NonCons are .400 deep. This leaves more blunt trauma base, and therefore increases "Retained SD" and this increases penetration. And it worked as far as I can tell. I have a major issue here, and I cannot find the 225 BBW#13 HPs I tested some months ago????? These bullets are always put away in their proper place, but I can't find them, and I also can't find a few of the 250 .458 tests either? I am thinking I might have sent them to CEB for study??? I don't remember? I have the data, but no bullet samples of the test???? I wanted to weigh the blunt trauma base of the 225 to see what the retained SD was, and that would have told us some more about it.

OK OK.... The mystery of the missing 225 gr #13 HPs in 416 has been solved. I did in fact send these to CEB some time ago. Got an email from Ken this morning stating that while I am close, I have not completely lost my mind.

Now, I was looking for them because normally I don't put down retained weight on many of the NonCon type bullets, it just is not all that relevant to me. But, in this particular case between the 180 CEB and the

225 #13 HP, I wanted to see what retained weight was with the 225 as to compare the Retained SD to show the difference in penetration, and make a decent comparison between the two....

Ken says the BTB... "blunt trauma base"... of the 225s I tested weighed 155.6 grs which would leave a "Retained SD" of .128 compared to the 180 Retained SD of 113. The 180 would have been much less if the cavity was as deep as the 225s.. Therefore, less penetration than it currently has.....



Michael

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

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michael458

10 September 2013, 00:22

Last week CEB finally sent some of those handgun bullets, the 45 caliber 240 gr HPs.... Many years ago I decided I did not need a variety of big bore revolver calibers/cartridges, so I chose 45 Colt, and have several revolvers all in 45 Colt, nothing else. I managed to add some lever actions in that cartridge as well. I don't shoot, or own 44s or 41s or 47s or 50s, just 45 Colt.

I also don't shoot many heavy handgun loads anymore either, I have a sprained thumb and I don't think it will ever heal, when I shoot heavy handguns it hurts for days afterwards. Today however I dragged out a couple of things to play with this 240 gr CEB Handgun Raptor.... Ken sent some of his photos, and they have tested it in Gel as well.....



Of course I had to see what I could do in my Winchester M94 in 45 Colt... I have run some pretty wicked things through that little gun in the past, and even had it in Africa a few times as a camp rifle, very handy it is, and I like having those 8 rds of 45 Colt in that tube, makes you feel warm and fuzzy riding around in the more urban areas you might say. After today's test I think I am going to give these or maybe some of the others in .452 a very hard look!

I also pulled out my Dan Wesson, and put it's big heavy 8 inch barrel on for the handgun part. It had a scope on it, so was hoping that still worked as it has been several years since I had even picked it up! A few quick adjustments and it was ready to go. I can't even begin to remember what it was sighted in for anyway.....



I looked up some loads I had used in the little rifle before, which I always liked 2400 for 45 Colt anyway, so I just used some of those loads. Starting with 20/2400 going all the way to 24/2400... 24/2400 was getting very interesting in the Winchester at 1830 fps! A little too interesting! 🤖

I settled on 20/2400 for the Dan Wesson and 22/2400 in the Winchester for todays testing.....

45 Colt
DW 8 Inch Barrel
9/9/2013
240 CEB

Muzzle Velocity 1340 fps
22 Yard Impact
Blades 4-5 Inches
X4-- 13 Inches



45 Colt
Win M94 16 Inch Barrel
9/9/2013
240 CEB

Muzzle Velocity 1716 fps
22 Yard Impact
Blades 5-6 Inches
X4-- 17 Inches



These are pretty good results.... I am rather impressed. I think they have a 200 gr .452.. ??? I would like to get some of those to play with in these two guns...

CEB is sending some other things this week, I think one of those is the 150 gr .451 Handgun bullets, that will be interesting as well I think. Use those in 45 ACP.....

Michael

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Seasons44

Nice work Michael! 😊👍😊

10 September 2013, 04:09

Simply, Elegant but always approachable