

This topic can be found at:

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

michael458

17 January 2011, 06:16

**Terminal Bullet Performance**

quote:

Originally posted by rose:

WOW! You guys have done so much in the few days I've been offline its going to take me a week to catch up. Great stuff!

Sam

I have been wondering where the hell you have been? I was thinking I must call tomorrow if I had not heard from you!

M

<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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**RIP**

17 January 2011, 06:37

Doc M,

The "black labs" are easy to come by, so I will send two, for wash and wear.

Now, as for the "sheep skin" you have earned, well, first I must kill the sheep and skin it ...

Just for token of appreciation, have I spelled your name correctly on this fake diploma? The real one will not be so silly, nor so easy:



**RIP**

17 January 2011, 06:47

BTW, from the shape of that bullet hole in the heart (way too small for buffalo, small antelope of some sort), it appears to be the exit-side wound of the heart, and its oblong shape/profile seems to indicate the bullet was tumbling straight through where it was meant to go. Thickness of the myocardium indicates left ventricle.



A most excellent "bullet failure" by the NonCon Walterhog 300-grainer from the .375/404 Jeffery Sheikh Saeed.

capoward

17 January 2011, 06:49

quote:

Originally posted by michael458:

Now moving on to more productive thoughts.

Been talking to Dan, and we figure a really good way to get the best of both worlds is to have a "Bullet Kit"!

Little story;

I remember many years ago Billy B and I were on our way to the Charlotte gun show, early one Saturday morning. We stopped by a Bojangles, he ordered a "Chicken Biscuit". Drive through, got the order, hit the road. He is opening the bag, and here is a piece of chicken and a biscuit? The chicken was not between the biscuit of course, so we figured that was their "Chicken Biscuit Kit"! LOL

So Dan and I are thinking a "Hi BC Bullet Kit"---- 😊

OK OK--If he can sort out the plastic tips that are supposed to give you guys a higher BC, and they fit in the #13s, then we think we can provide the tips, and if you want a higher BC then you put the tip in yourself. DON't need the higher BC, then no worries. This will be much more reasonable than anything else, and less costly than CEB doing it as that is another step in the bullet production.

While this is a great idea and a very simple solution for some, it may also be somewhat of an issue with the current bullets. The addition of the plastic BC tip may make the bullet too long overall to fit in the magazine properly with most magazine rifles and cartridges. The addition of a tip with any of my B&Ms and the CURRENT bullets will make OAL too long for magazines. Some other cartridges and rifles, maybe not. This will be the only hitch in that system.

Not a big deal to over come however, in most cases a lighter, shorter bullet can be made in all calibers that could easy work in that capacity.

I told Dan to get some tips to me to begin test work with them. Regardless of fitting out in the mag or not, the concept can be tested, BCs can be determined, and terminals can be tested in all areas, including low velocity to simulate longer range, 250 to 300 yds for instance. I am quite sure the #13 NonCon will do very well. I have noticed over and over that in most circumstances the #13 does very well and better than most in BC to begin with, although that is mostly done at short range, 22 yds to get impact velocities, but it has not been losing much velocity, and far less than some other bullets we have tested at the same range.

So we see what we see.

Any of you with a program can take my muzzle velocity and impact velocity and come up with a pretty close BC. I am not so trusting of my program in that capacity right now, so if someone would like to give that a shot do so and lets see what we come up with.

Once we confirm this is a viable, we may just make some runs of lighter bullet weights, #13 NonCons in several calibers and see what we get. I need some #13 NonCons anyway for the Super Shorts. .458, .474, and .500.

Michael

Michael,

I think the "Hi BC Bullet Kit" is the perfect solution...just need to make sure the .500 caliber tips are BLACK!

Jim 🤔

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

**michael458**

17 January 2011, 06:53

RIP

VERY EXCELLENT---Thank You.....Yes, the spelling is correct.

I am honored, and appreciative of all this, although not so sure I am deserving of such!

WOW!

Thank You!

M

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**srose**

17 January 2011, 07:21

Boy I sure started something again with those plastic tips.

Michael,

I told you I was going to be gone, thanks for worrying about me. I'm back and maybe we can make a plan for later in the week.

Sam

**someoldguy**

17 January 2011, 11:44

Just a small detour here.

After looking at that well-placed heart wound that RIP showed, I wonder has anyone noticed any evidence of cauterization or burns from gunshot wounds? I've long heard that the energy from a bullet creates heat inside a body. I don't know if I buy that completely when it comes to the bullet's energy being dissipated.

Glenn

**416Tanzan**

17 January 2011, 12:32

Since we are back to pictures of heart shots, I'll repeat a 'compromise bullet' picture from Oct 2010.



This was a Barnes 225 grain TTSX moving through a hartebeest heart after a 250 yard travel (lasered by a Leica Geovid [not mine!]) from a 2800 fps muzzle velocity (assumed, from chronographed sight-in the day before of several shots). The bullet appears to have hit just below mid-height on the heart and done massive trauma. Bullet entered from the inside left foreleg, penetrated the heart and exited the right side/flank. The impact velocity was probably about 2385 fps, as calculated by JBMballistics. Since 2385 is significantly below the estimated petal-loss threshold of 2600-2800 fps, and no petals were found in the animal and no bone fragments were found in the heart, I assume that we are seeing 'conventional' trauma by a monolithic expanding bullet, whose main claim to fame is guaranteed penetration beyond where cup+core bullets may have stopped due to weight loss. The hartebeest stumbled and ran/flopped about 25-40 yards, max. In any case, the trauma speaks for itself.

In a sense, this is where 'the bar' is for me. Great ballistic coefficient, excellent transfer of trauma, and excellent (presumed) bullet integrity. The 338 is light for buffalo, of course, though I've done that back in the day of Nosler Partitions ('80s).

What we are testing here, of course, is the potential of RAISING the bar. That is and will be taking some time. Apparently Michael enjoys shooting bullets, so time is not a bad thing in this case.

And as Alf has aptly pointed out (hey guys, Alf makes some good points and we want to keep listening), older cup and core bullets would 'explode', too. The question is whether the explosion of lead or of petals will ALSO penetrate a buffalo heart from all front and side angles. The verdict is still out, I think, so we need another year of testing. In the meantime, we have both 'traditional' Barnes triple-X and Swift A-frame type penetration with bullet integrity as a high bar to cross, AND we have the guaranteed penetration of petal-shearing non-cons as a worthy challenger. Let the hunt continue.

+ + + + +

"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.

**Warrior**

17 January 2011, 15:24

416 Tanzan,

A nice balanced reply.

Some credence is given here to the bullet that Mr Barnes designed for us, as an expanding bullet providing maximum bullet integrity. In fact I like the recipe of the Barnes-X, offering:

Max weight retention  
Double expansion of caliber  
Concentric expansion of its petals  
Resisting petal loss by getting thicker towards the bottom of the drilled hole

It is the best compromise between penetration and creating a larger hole.  
Everything is a trade-off.

The brittle NonCon mono-metal bullet works in a different way, and we have the choice which one to opt for based on our experience and what we believe to be the best way to kill.

Warrior

**ALF** 17 January 2011, 17:21

**RIP** 17 January 2011, 20:00

Someoldguy,  
Great reply by Alf, with references. 👍  
We have also done this calculation of kinetic energy transformed to heat energy.  
Even if most of the kinetic energy of the bullet was turned into heat energy, as when a nondeforming bullet comes to rest in a deep water tank or swimming pool, it raises the water temperature a miniscule fraction of a degree, hard to measure so infinitesimal.

5000 ft-lbs of kinetic energy = 6780 Joules = 1614.3 calories (with a small "c")  
1 ft-lb = 1.356 Joules  
1 calorie = 4.2 Joules

1500 lb buffalo = 681.8 Kg = 681,800 grams

A calorie raises the temperature of 1 gram of water by 1 degree C.

Applying 5000 ft lbs of energy to 1500 lbs of water will raise the water temperature by 0.002368 degree C.

The fractional kinetic energy of the bullet that is transformed into heat energy inside the buffalo is infinitesimal.

**michael458** 17 January 2011, 20:33

quote:

The question regarding thermal injury caused by the friction of a penetrating bullet or the heat energy contained in the bullet because of the internal combustion event and subsequent passage through the barrel often comes up in wound mechanics discussion.

Alf and Glenn

Believe it or not, I have something I can add to this from a very personal experience! I truly believe in this "Thermal Heat Energy" concept as I have experience in this arena.

Many years ago, in my youth, and when I was still playing "tactical" things, one morning I decided to make a few speed runs with a Browning Hi Power, close range, 5 yds, steel plates! I used to shoot a lot of steel, but I was a tad close, and my steel had become some dimpled in places. Of course I wore glasses, but I was shooting some 115 FMJ 9mms. Along about middle of the string--3 targets across from me, one of those 9mm FMJ made it's way directly back at me, hitting just above the belt, and below the belly button. It drove through a outer shirt, and T-shirt and stuck in my belly fat about 1/2 inch in! OUCH! Well, this thing happened pretty fast, and I could feel it burning--snatched my shirts up, dug in my belly for the bullet, got it between my thumb and finger, burned my finger tips, I dropped it on the ground and headed in the house for "Medical Attention". HEH HEH HEH! I did my best to get some mileage out of that with wife #2 but it was moot! 😊

quote:

The fractional kinetic energy of the bullet that is transformed into heat energy inside the buffalo is infinitesimal.

RIP, I can attest that while a buffalo might not pay one bit of attention to that heat energy--it was not so with Michael- I paid it a lot of damned attention!



What a hoot! I swear, some of the things we do!

I went back after some medical attention, finished up my exercise, but changed the loads out from the FMJs, and stepped back two steps! I looked for my bullet but never did find it! Wish I could find that one! After digging it out of my belly fat (thank goodness I had some) I saw it between my finger and thumb very briefly as it was HOT, it was fully intact. HEH HEH! Yep, I reckon there is something to that Heat Energy thing after all!

Michael

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**DWright** 17 January 2011, 20:43



9mm. . . . . 🍌


<http://www.mazamasportinggoods.com>

**michael458** 17 January 2011, 20:52


quote:

Originally posted by DWright:



9mm. . . . . 

I figured ya'll were due a good laugh this morning, seems that little experience of mine fits right in with the discussion concerning "thermal heat energy".

Myself.....  as well! All true however!

M

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**Cross L** 17 January 2011, 21:09

RN solids--so thats why you started looking for something w/more penetration.




wife #2? you are a glutton for punishment-



SSR

**buffalo** 17 January 2011, 21:14

quote:

Originally posted by michael458:  
I dropped it on the ground and headed in the house for "Medical Attention". HEH HEH HEH! I did my best to get some mileage out of that with wife #2 but it was moot!   
Michael



**michael458** 17 January 2011, 22:05

quote:

Originally posted by Cross L:  
RN solids--so thats why you started looking for something w/more penetration.



wife #2? you are a glutton for punishment-



SSR

CrossL

Absolutely, well there it is, you see that 115 gr FMJ veered off course, came straight back and hit me in the belly! Proof in and of itself that FMJ bullets do CRAZY things! HEH HEH--Not sure if that was a Woodleigh or not????? LOL

Yes glutton for punishment--But fortunately I "Found the Light", and I ain't like that No More! I am on the straight and narrow path with #3 and would not have it any other way! Gotta go through a few before getting a good one you know!



Buffalo

Yeah, me too!



M


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**RIP** 17 January 2011, 22:43

Forget kinetic energy, lets rate terminal ballistics by thermal energy, call it thermal-terminal ballistics, rating bullets by BTUs at the muzzle.  
1 BTU is 1055 joules ...

Just kidding ... 

**Cross L** 17 January 2011, 22:48

Michael,

Thanks for the chuckle.

What would you think of the North Fork in 416 in 350gr - all three bullet types? This would give a bit more velocity in the B&M and both a conventional for fast expansion and the CUP for noncon.

BTW I just settled w/#1--cost me a ranch

SSR


**Cross L** 17 January 2011, 22:54

quote:

Originally posted by RIP:  
Forget kinetic energy, lets rate terminal ballistics by thermal energy,  
call it thermal-terminal ballistics, rating bullets by BTUs at the muzzle.  
1 BTU is 1055 joules ...

Just kidding ...



 We could get Will to run the figures-IIRC has a Professor in thermodynamics or a related field and likes big bullets in light weapons.



SSR

**someoldguy** 17 January 2011, 23:33

Thanks for the explanations, RIP and ALF.

It had already occurred to me that the bullet when it leaves the barrel isn't exactly cool. 😊

So if I understood correctly we can pretty much put the notion to bed that heat energy plays a significant part in terminal ballistics.

quote:

Believe it or not, I have something I can add to this from a very personal experience!

All right, from this anecdote, I think I can write the First Law of Ballistic Testing:

"Do not perform ballistic testing on yourself! You will likely get hurt!"



But, ouch! Don't do that again, Michael!

And I've also gotta say, like DWright:

A 9mm?



Glenn

**michael458** 17 January 2011, 23:44

quote:

Originally posted by Cross L:  
Michael,

Thanks for the chuckle.

What would you think of the North Fork in 416 in 350gr - all three bullet types? This would give a bit more velocity in the B&M and both a conventional for fast expansion and the CUP for noncon.

BTW I just settled w/#1--cost me a ranch

SSR

CrossL

Oh man, we must sit back and remember some of the stupid things we have done in our past, and have a good chuckle on ourselves from time to time! It's healthy!

A ranch eh! Well, I have never been more happy to pay to get rid of one! Might pinch a bit, but after awhile I just figure I got a bargain! In April I will be through paying for #2, I am sure I could have bought a ranch for what that cost, but I can tell you that I don't if I had to take #2 back and get all my money plus triple interest, I'd just say keep both, I don't want the money either! LOL 😊 I got a deal to get rid of her regardless of cost. Some things one just can't put a price on--HEH!

Now, what do I think about 350 gr 416s from North Fork?????

Here is what I think about that! I think that North Fork should make a NEW 350 gr 416 caliber series of bullets! I think they should make a new more bolt friendly solid 350 grs 67% meplat either copper or brass. I think that the current CPS Cup Point should have just a tiny bit more depth in the cavity and give some more expansion and come in at 350grs, and a 350 gr conventional premium to match.

Here comes the problem with all that. North Fork is pretty smart--Even smarter these days, they chose the "Middle Road" with a 370. They knew there was issues with 400s and terminal stability and twist rates, therefore, a 370 that works. In 416 by those that are NOT IN THE KNOW, they still demand a 400--so now NF has to make a 370 and 400. While one could easy go and get by with nothing but the 370s across the board, the addition of the 400 now is not taking the Middle Road--They might as well drop the 370 and go the 350 weight, and the 400s.

This is what I have done with CEB bullets---In fact I think the "Brown Bus Man" just dropped a load of heavy 416s at my door! I am going to go open that box and see what is in there?

Finishing up my North Fork order---anyone want anything from North Fork? I have a rather large order going in.

Michael

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**someoldguy**

17 January 2011, 23:47

quote:

However, in regards to that, your "faith" in the tests, and what they represent means more to me than you can imagine.

Thanks for that Michael. 😊

But by faith I don't mean I'm going to start a church, unless you're going to declare yourself a prophet. 🙄

Glenn

**ALF**

18 January 2011, 01:11

**boom stick**

18 January 2011, 02:17

If the non con hex bullets do more damage and penetrate more why use lead softs?

[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**

18 January 2011, 02:31

quote:

Originally posted by boom stick:  
If the non con hex bullets do more damage and penetrate more why use lead softs?

You're catching on!

**ALF**

18 January 2011, 02:50

**capoward**

18 January 2011, 02:55

quote:

Here comes the problem with all that. North Fork is pretty smart--Even smarter these days, they chose the "Middle Road" with a 370. They knew there was issues with 400s and terminal stability and twist rates, therefore, a 370 that works. In 416 by those that are NOT IN THE KNOW, they still demand a 400--so now NF has to make a 370 and 400.

It seems that NF tried to stay around .305 SD with all of their DG bullets...which in the case of the .416 caliber equates to 370grs. But I perceive that you are correct in that if they're going to make the 400gr bullets then they may as well drop the 370gr down to 350gr as it'd do just as well.

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

**boom stick**

18 January 2011, 02:56

A tumbling bullet is a crapshoot if you are aiming at vitals

[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)

**ALF**

18 January 2011, 03:04

**srose**

18 January 2011, 03:10

quote:

Originally posted by michael458:  
Sam and Con

Before I discovered how good the brass non conventionals were I was using the copper non cons. These were great, but the petals always shear within the wound cavity and not in a pattern like the brass does. Since the brass is more brittle the blades or petals shear easy and in a consistent manner. Almost all of them in the test medium shear at 2-3 inches, and the 6 blades move away from center in a star pattern. Penetration was incredible with these blades, going from the point of shearing to 7-9 inches-actual penetration being at least 5-6 inches in the test medium, I have had 38 specials not penetrate that deep!!!!

Moving away from center with this sort of penetration had to be devastating! I figured that the bullet would actually shear just about the time it entered the body cavity, exploding the blades away from center and tearing at organ tissue in six different directions, while the remaining slug continued to penetrate--straight. Seems I was pretty close on this one.

Here is some of the test work on these exact bullets.

50 B&M Super Short  
350 SSK Brass HP  
Impact Velocity 2190 fps  
Total Penetration 18 inches

50 B&M 350 SSK HP  
Impact velocity 2472 fps  
Total Penetration 20 inches



As you can see on the 4 inch witness card the star pattern as the blades have sheared at 2-3 inches and moving outward away from center.



Devastating, and no shortage of penetration. Penetration increases after the blade shear.  
Here is Sams Deer and showing some of the petals or blades exiting the deer body. Amazing!







Michael

Alf,

Here is a photo of deer I shot with a non con, I don't think many conventional softs would have seven exit holes.

Sam

**michael458**

18 January 2011, 03:32

Alf

Good questions! And rightfully so. These are questions I have asked myself as well, before taking some of these type bullets to the field for field tests, meaning shooting hell out of animals and in particular my favorite, buffalo, which I am doing once more this year with the brass noncons, and the North Fork CPS in .500 that we did.

Now, I have gone to the field with many such bullets over the last few years, some were a disappointment, some were totally incredible, which has led me to where I am today with these.

I think I can answer some of these questions.

quote:

And more importantly, what is more lethal a Solid FN that penetrates deep and straight vs a conventional RN that tumbles arse over end in the target ?

Let's talk buffalo on this one. In 2005 I started hammering buffalo second shots + with flat nose solids. In previous years I had always used a round nose, barnes for this duty. Buffalo are not impressed with the old barnes round nose at all, hardly a flinch when hit. Same with elephant body shots, not much reaction to taking them. In 2005 in Tanzania I was using 500 gr Barnes Banded for the first time. Back then, I was an ignorant bastard, never even thought about the flat nose, penetration, what it would do, nothing, it was solid, drilling a hole is all I figured. The first buffalo I shot as a second shot reacted as if he had been hit by a train! Hmmm? The second buffalo was standing still after taking a 500 Swift, hit him with the flat nose barnes and he dropped immediately? Hmmm, Again? Third buffalo standing the same as #2, took the barnes and he dropped like a rock? Hmmm--3 times now? I needed to study this some more--here we are today. Elephant react the same, they take body shots of the flat nose much harder than what I have ever seen with the round nose. I believe from the experience I have seen that a tremendous amount more trauma is inflicted on animals with a FN Solid than a RN solid. A visible difference in every case I have seen on all species I have shot with the FN solids.

quote:

Do they actually do more damage than a conventional expanding bullet ?

Making the assumption you are talking about NonCon vs Conventional. OK remember what I have determined the methods of NonCon operations. ONE--Shear and blades move away from center wound channel. Two--Shear and blades remain within wound channel. 3--No shear, North Fork Expanding Cup Point, deep penetration.

I have experience with the copper Noncon, shear and blades remain in the wound cavity. More Damage than conventional? Unequivocally YES--they produce a tremendous amount of trauma to target animal, very large, damaged, torn, ripped, plain ugly wound channel, more blood released than anything I have ever seen in my life. In a word--Wicked and deadly. This was with a 470 gr lehigh copper HP in the 500 MDM at 2425 fps. When impacting less than 50 yds the shear would occur consistently and remain in the wound channel, remaining bullet continuing to penetrate. I recovered only a couple of these bullets from severe angles. If it was broadside, it would exit 100% of the time. No doubt in my mind that these bullets hit harder, done more damage than anything I had ever used in the past, and transferred more trauma to target than anything I had ever used.

Will the brass NonCons do the same--Better?? That is a question I intend to answer this year, as are quite a few folks. 1 year from now, we will know! My best guess based on my limited knowledge today is that they will be very good.

I was telling my buddy 450NE this morning this very thing. It goes like this;

What are the two reasons most quoted for having a "failure" in the field??

#1 without question is Poor Shot Placement! Without any doubt, this is and will always be #1 on this list!

#2 Bullet Failure! OK, how can a bullet fail? Failure to PENETRATE--did not make it to the vitals! You have to destroy vital organs and tissue, or CNS hits! If you don't do that, you will fail! PENETRATION!

The Brass NonCons CANNOT fail, with proper bullet placement! WHAT? HOW SO? PENETRATION is why! All the NonCons penetrate deeper than all the conventional premiums. Let's revisit the Expanding and NonCon data sheet I have on 458 caliber. With penetration, one cannot fail.

458 Caliber--- Terminal Performance of Expanding Conventional and Non-Conventional Bullets						
Bullet	Muzzle Velocity	Impact Distance	Impact Velocity	Retained Weight	Straight Penetration	
260 SSK/Lehigh Brass NonCon	NA	17 Feet	2760	NA	19	
300 Barnes TSX	2513	22	NA	300	16	
305 SSK/Lehigh Brass NonCon	2560	22	2452	207	20	
305 SSK	NA	17 Feet	2725	207	24	
305 SSK	1305	48	1216	207	16	
320 SSK/Lehigh Copper NonCon	2490	48	NA	NA	20	
325 Hornady F NA	NA	17 Feet	2462	190	10	
325 Hornady F NA	NA	17 Feet	2302	220	14	
325 Hornady F NA	NA	17 Feet	2175	240	16	
325 North Fork Cup Point	2842	22	2731	NA	26	
325 North Fork	2672	22	2571	325	26	
325 North Fork	2219	22	2118	325	21	
350 North Fork Cup Point	2780	22	2670	NA	28	
350 North Fork	2489	22	2410	350	24	
350 North Fork	2170	22	2086	350	23	
350 Swift A	2448	50	NA	335	16	
350 Barnes TSX	2458	22	2402	350	18	

350 North Fork Bonded Core	2360	50 NA	346	17
350 North Fork	2464	22 NA	335	18
350 Speer	2343	22 22.69 NA		15
400 Swift A	2351	21 22.94	396	15
400 Woodleigh	2147	22 21.12	400	13
400 Woodleigh	2225	22 21.85	400	11
400 Hawk	2308	22 22.18	329	13
420 CEB BBW #13 Brass HP	2259	22 21.95	327	29
428 SSK/Lehigh Brass HP	2223	22 NA NA		24
450 Swift A	2156	50 NA	417	20
450 North Fork Bonded Core	2225	22 21.78	430	24
450 North Fork	2117	22 20.58	430	19
480 Hornady DGX	2117	21 NA	400	19
500 Woodleigh	2240	25 NA	487	21
500 Swift A	2260	25 NA	494	24
500 Nosler Partition	2246	22 22.11	465	19
550 Woodleigh	2140	22 21.00	539	22

Pick your favorite buffalo bullet--and compare them?

The question will remain about trauma transfer to animal tissue, limited field work looks great so far, test work looks great so far--I have a very strong feeling that we are going to learn a great deal in 2011 from field operations.

Michael

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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**

18 January 2011, 03:35

quote:

And more importantly, what is more lethal a Solid FN that penetrates deep and straight vs a conventional RN that tumbles arse over end in the target ?

The more lethal bullet is the bullet that reliably penetrates deep and straight to impact the internal organ(s) that must be penetrated for a quick humane kill.

A properly designed FN solid will only rarely deviate from a deep and straight path during penetration.

Conversely I believe the only thing one could truly say about the penetration of a conventional RN solid is that it is reliably unreliable. A conventional RN solid does not always tumble arse over end post impact; instead it may just become unstable and veer off from a straight path, and on a rare occasion it may actually drive deep and straight during penetration.

Jim 🤖

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

**michael458**

18 January 2011, 03:36

A new run of 416 caliber bullets came in and are available now

400 gr CEB BBW #13 Solids and matching 370 gr CEB BBW #13 NonCon HP---both brass.



And currently this is the 416 CEB Lineup.



Sam, I know you need some of these 400s for your guy at SCI--let me know what you need and I will get it out tomorrow.

M

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**srose** 18 January 2011, 03:41

Michael,

Thanks, but hold off I might come down this week if we can find a day that works for you. I need maybe 4 boxes of each heavy .416.

Sam

**someoldguy** 18 January 2011, 03:51

quote:

The mechanical properties of targets are what determines how the target will react to ballistic insult.

That is why state of matter is critical in understanding how a bullet will behave in target and more importantly how the target is going to react when penetrated by the bullet and the bullet's kinetic energy is transferred to the target

I couldn't agree more, ALF. I'm thinking the target's density and it's tensile or compressive strength are the main two important factors. I'm guessing also elasticity with certain kinds of materials.  
When it comes to kinetic energy, I'm thinking that what counters penetration is the resisting force. But one thing that might make me scratch my head concerning kinetic energy, is this statement from Wikipedia:

quote:

In classical mechanics, the kinetic energy of a **non-rotating object** of mass  $m$  traveling at a speed  $v$  is  $mv^2/2$ .

[http://en.wikipedia.org/wiki/Kinetic\\_energy](http://en.wikipedia.org/wiki/Kinetic_energy)

(bolded fonts are mine for emphasis)

But a bullet is undoubtedly a rotating object. So can we accurately apply the concept of kinetic energy to bullets at all? Makes me wonder.

However, maybe I just don't understand correctly. Won't be the first time!

Glenn

**michael458**

18 January 2011, 03:55

quote:

Originally posted by srose:  
Michael,

Thanks, but hold off I might come down this week if we can find a day that works for you. I need maybe 4 boxes of each heavy .416.

Sam

Sam

What ever you can plan that works for you--I WILL MAKE MY Schedule fit that. So you sort your end out. Bring the 470 and some of the brass BBWs, to retest the barrel strains if possible. I also may have to go out tomorrow and get a half ton of news print.

M

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**capoward**

**18 January 2011, 04:01**

quote:

What does more damage, a NONCON vs a conventional expanding cup and core?

And does more damage a FN solid straight and true vs that old RN solid that flips arse over end in the target?

Forget about getting to the vitals, say our animals are made up of just a huge solid chunk of steak, no bones nothing else. Just a chunk of steak

Alf,

This is not a valid question, "Forget about getting to the vitals, say our animals are made up of just a huge solid chunk of steak, no bones nothing else. Just a chunk of steak" as one must always address the animal that one intends to shot when selecting the bullet to use.

So let me answer you in this manner...

A properly designed FN solid or a conventional RN solid...HECK NO give me that nose light 303 British FMJ spritzer for human targets as they WILL reliably tumble arse over end post impact in the torso where the FN and RN solid will typically only make a nice round hole from entrance to exit.

Change this shot to an arse end shot on a shot but rapidly departing buffalo and of the three bullets noted in the foregoing paragraph...ONLY the properly designed FN solid will reliably reach the internal organs from this angle and may take out heavy leg bones on the way.

Want to make it a side-angle shot (heart/lung area) on a 600lb elk and I want a bullet that is more sturdily constructed than the expanding bullet used for the same angle of shot on a 200lb mule deer. Now between a conventional expanding bullet and a NonCon, I'll take the evolving NonCon bullet vis-à-vis a conventional C&C lead core expanding bullet... but then we need to discuss muzzle velocity and distance to target don't we.

So...it can't be as simple as a slab of steak sans bone can it.

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

**srose**

**18 January 2011, 04:17**

Michael,

I think Thursday might work for me, I'll let you know tomorrow.

Sam

**465H&H**

**18 January 2011, 04:38**

quote:

Change this shot to an arse end shot on a shot but rapidly departing buffalo and of the three bullets noted in the foregoing paragraph...ONLY the properly designed FN solid will reliably reach the internal organs from this angle and may take out heavy leg bones on the way.

Quote from capoward:

What data do you have to prove this statement? I guess I am saying prove it!

465H&H