

This topic can be found at:

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

**michael458**

25 June 2010, 05:04

Terminal Bullet Performance

quote:

Originally posted by DWright:  
Heh Michael, I'm looking forward to reading that one. Can I get it on line?

I don't have a clue. I really have not looked for that, maybe we should do a search, I think it's called Australian Shooter.

A little search I found this

<http://www.ssaa.org.au/shooter/shooter.html>

500N

Thanks! Man I am itching to get back down under and hammer buffalo! If I can't get enough quota in Zim or Mozambique next year I am coming back to shoot with Paul. Had an offer of 1 buff and 2 cows, a tuskless in Zim, turned it down, told my man I would not even get on the plane for that little shooting. I am totally spoiled now getting to do the herd reduction with Paul! Hell I could shoot 50 buffalo there for what they wanted for those measly 3 and a little tuskless. I am building a 500 MDM and a 458 Lott for Paul, he is going to hammer some buff with those.

Michael

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**500N**

25 June 2010, 05:25

Michael

Like you, I suffer from the same thing, having culled a few.

The biggest and the best is not always the mostest !!!! LOL

Nothing like wading into a herd of anything with a rifle, especially a bigger bore (375+), it really keeps you on your toes.

It's all the hard work afterwards cutting them up and packaging the meat that kills you in 35+ degree heat but them's the breaks.

And with Paul, I reckon he would be good value out bush, always like talking to him.

.

**michael458**

25 June 2010, 05:37

500N

Yes my man, nothing like getting into a small herd and hammer down. Best shoot I have ever been on, big fun.

I consider Paul Truccolo a fine mate! I look very much forward to getting back there. He was home for a couple of days and headed back out tomorrow. Hell, it might be tomorrow there, or is it today, or yesterday? Aussie time keeps me confused! HEH..

M

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**500N**

25 June 2010, 05:58

quote:

Originally posted by michael458:  
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M

Mike

The easy way to remember the time is that we are always ahead of the US and so you are always behind and playing catch up !!! LOL

Tin foil hat on, incoming alert activated 

.

**michael458**

25 June 2010, 15:35

500N

Yep, I thought so, always tomorrow there, yesterday here! What a mess!

I have to show off some Sam bullets! Sam sent these yesterday. The little one (heh) is the .510 Barnes Banded, the big Barnes is 577 and then a photo of one Sam made up!





06/24/2010 15:30





Sam

The bullet you made is incredible. With a meplat of nearly 83% of caliber. Notice the sharp edges for cutting. This bullet cannot veer off course. It may not drive as deep as the Barnes, but it will travel deep enough and for sure 100% dead straight. Now if you can make samples of this bullet in the different meplat sizes that would work just fine for the meplat size test we have been talking about. Bands and grooves are sharp, well defined, this is just a superb looking bullet! Job well done! Too much meplat to feed in a bolt gun, but in that double it has to be a hammer when it hits! I think you would be dangerous if you had more than a bastard file to work with! HEH!

We must make a plan to get some of these tested when you get a break! Damn it is hot, even on the range at the benches it is 80-83 degrees, but going down to the end of the range it is hotter and don't take long to break out in sweat, it pours off me. Yesterday I just did the 9.3 tests and was ringing wet! Looked like I had been dipped in the pool. If I were shooting outside, our test work would come to a dead stop until about October!

Michael

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**srose**

25 June 2010, 16:12

Michael,

Thanks for posting the photos. The Barnes bullets look good but I do like a BIG FLAT NOSE on a bullet. So what if it limits the penetration by 10 inches or so. It really should be a hammer. Corbin had a good idea of making the first band wider to prevent skidding as I have seen on most of the banded bullets like Northfork and GSC. I will make a few more and will probably make you them in .500 so we can ramp them up to higher velocity. My plans are to do like you said and go with 60% to 85% in maybe 5% steps. Go ahead and get some AC put in your range. I can't believe you don't already have that. I've been suffering in the heat too as my packing facility is kept at 60 degrees and then to go out in the fields at 100+ degrees is awful. I should be able to break away pretty soon to do some testing I hope.

Sam

**michael458**

25 June 2010, 16:27

Sam

You are correct, larger meplat, some less penetration, but still MORE than enough for the mission of the solids. Hit's extremely hard, yes a big hammer.

Ok, for the meplat size test, .500 is perfect. Weight wise something between 450 and 500 as a base weight is fine. We can test in the 50 B&M, and we have a couple of older 1:18 twists that can be tested too in the 50. The rest in 1:12.

5% increments is perfect, even better, but I did not want to put too much on you, working with that bastard file of yours can be tough I know! That's the only tool they let me have and man I can destroy some things with that. If you drop a few to a 55% and 50% meplat that would be good too, no need really to go below that point.

I have a good window unit AC built in at the 50 yd bench, but it is not big enough to cool much past that little area up front. Maybe something at 25 too? Need to look into that.

Michael

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**srose**

25 June 2010, 16:33

OK Michael I'll make you some little pointed bullets noses down to maybe 50% meplat. Yeh my hands are getting sore using that file.

Sam

**Dave Bush**

**25 June 2010, 17:12**

The tests with the 9.3 solids has me thinking, thinking, thinking. Maybe 465 H&H is right and maybe the 9.3 tests give strong support to his idea that while nose profile is indeed important maybe the thing that really determines the depth of penetration with a solid is the conclusion that we started with that all bullets, whether they be soft of solid, penetrate best when they have long, parallel sides which translates into high sectional density.

Dave  
DRSS  
Chapuis 9.3X74  
Chapuis "Jungle" .375 FL  
Krieghoff 500/.416 NE  
Krieghoff 500 NE

"Git as close as y can laddie an then git ten yards closer"

"If the biggest, baddest animals on the planet are on the menu, and you'd rather pay a taxidermist than a mortician, consider the 500 NE as the last word in life insurance." Hornady Handbook of Cartridge Reloading (8th Edition).

**michael458**

**25 June 2010, 17:47**

Dave

You thinking too much, just like 465HH. The issue is not SD, it's the fact that the 9.3 Barnes are not stable during terminals. They do not have enough meplat to stabilize themselves. Remember, with solids, during terminals, the "nose does the driving" not SD. I bet today that if the meplat size of the 9.3 Barnes was 65% of caliber, or close, that we would not even be having this discussion at all. As it stands it measures under 50% meplat of caliber, not enough to stabilize, and even worse than many round nose designs.

In the case of the Woodleighs, neither 9.3 is a standard round nose design. Both have a rounded flat nose, as best I can describe it. When the 320 drives to 70 inches straight, and the 286 can't get past 30 inches, that is not SD doing the driving.



Now the 320 is not a fluke either, Corbin, Sam and myself have tested the 320 several times now and at different times. So it is consistent.

I do not have a proper answer for why the 286 wants to veer off course, and the 320 does not. When looking at the nose, both appear to be the same to me. The answer to this question is above my pay grade, but the answer I know is not SD.

SD can only come into play if all things are equal with the exception of SD. Nose profile must be equal, construction, velocity, meplat. The problem we have here is that the 286 veers off course and is not stable during terminals, while the 320 is. Stabilization issue, not SD.

I think this is a perfect example of SD at work;





All of the above 458 caliber, same nose profile, same meplat size, same construction, different velocities at impact, but SD is showing here very easy. Now speaking of velocity and how it is a factor try this;



Everything dead equal except velocity!

We also can look at twist rates, but we will save that one.

SD is not a factor with none of the 9.3s in this test.

Michael

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**Dave Bush**

**25 June 2010, 19:01**

Michael:

I am going to take some of those 250 grain 9.3 banded solids down to my gun guy and have in make the meplat bigger and shoot them side-by-side with the stock ones and see if it makes a difference.

Dave  
DRSS  
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**416Tanzan**

**25 June 2010, 19:07**

These are helpful comparisons and tests.

Once the penetration is straight, it seems that sectional density seems only part of the penetration prediction. Calibre size/or/overall weight seems to help.  
Notice the following:

.338 250 gr BS were straight penetrating.  
SD is .313  
The 2020fps impact was only 48".  
The 2550fps impact was 60". (This last bullet will be pretty close to our 338 backup bullets this September, so I have a personal stake in these tests.)

However, the .458 450 grain has a  
.306 SD, less than the 338, but at an impact velocity of only 1950 fps (calculated from Michael's picture data) yet it still penetrated 57".  
Then the 500 grainers with a SD of .331 were able to penetrate 66" with impact velocities of around 2140.

Especially note the slow 338. Its impact velocity 2020 was faster than the .458 450 (1950 fps) and the 338 SD of .313 is better than the 458 SD of .306. Yet penetration was "only" 48" compared to 57" by the 458. Now both of those should give comfortable margins of penetration for anything on the planet, except rearend pachyderm and I wouldn't even be sure to recover them in a rearend buffalo shot.

The point is that the 338 needed to be driven to considerably faster speeds in order to match the penetration of the .458 450 grain solid.  
Since the 338 had a greater SD, it shouldn't have needed the extra 400-500 fps to overtake the 458. But apparently there is a penetration efficiency factor that increases for a SD as its overall calibre and weight increase. It's not a huge factor, maybe in the vicinity of 20% penetration increase per percent of increased overall weight. Increase the bullet weight an extra 80% while the meplat and SD remain the same and one can expect a penetration increase in the 15-20% realm.

Hope that makes sense. It obviously would need quite a bit of testing before its 'factor percentage' would be known.

+ + + + +

"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**

**25 June 2010, 19:16**

quote:

Originally posted by Dave Bush:  
Michael:

I am going to take some of those 250 grain 9.3 banded solids down to my gun guy and have in make the meplat bigger and shoot them side-by-side with the stock ones and see if it makes a difference.

Dave

I almost did that here, but the problem is I have tried that before with my simple tools, grinder, bastard file and so forth to no avail. It must be exacting and precise and absolute. If done so, then the larger meplat will stabilize the bullet. Get it to around 65% to 70% of caliber.

Tanzan

Yes, I understand where you are going. Also take into consideration the actual physical caliber of the two meplats. While the same in percentage of caliber, different in actual size. I suspect that is a factor to a point.

Excellent thinking too!

Michael

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<Andrew cempa>

25 June 2010, 19:43

I follow these posts with interest, but a few nagging considerations keep me wondering...

You test a bullet at several varying velocities in a fairly uniform medium (but certainly not scientifically uniform) and some bullets penetrate much better than others-a given. Varying the meplat, shoulder form etc all seem to be factors in performance (that being defined as straight penetration, I think). I assume you do not adjust twist rate to insure that impact velocity is the only variable you are tweaking? Do you care?

So, how are you guys assessing the change in rotational velocity (I know this is a moot concern to some in terms of stabilization-that's not my point, kind of). In my accuracy testing, some loads seem to "settle down" much better/sooner than others and this settling down (perhaps a function of spin rate, CG/CB and construction uniformity-all affecting the bullets capability to track nose first (low(er/est) angle of repose) generally equals better accuracy.

Have you guys considered this in your experiments?

Hatcher indicates that an M2 ball round penetrates about (I forget the actual numbers, but they are significantly different) 18" at 100 yards, but 33" at 300 of hardwood, and attributes this to bullet stability (lower angle of repose/yaw).

As to construction- I completely agree that a pointy FMJ bullet (rearward CG will always tend to yaw rapidly upon penetration into a target medium and often (by design) break apart due to forces acting on the bullet as it is resisted by the medium. I assume a homogen-solid of similar shape will simply yaw around and travel base first until it runs out of momentum.

Thoughts?

capoward

25 June 2010, 21:59

quote:

Originally posted by Andrew cempa:

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Thoughts?

AC, Ignore Hatcher, Ackley, Whelen, etc. various studies WHEN they relate to military bullet ballistics data. We've had some fairly lively discussions within this thread regarding these issues but I'll try to resize them into a nutshell. The British military had a very difficult time designing a spire point FMJ bullet for the 303 round...reason???...very simple, Geneva convention countries are required to utilize FMJ bullets when conducting war against each other. FMJ rounds punch nice little holes straight through a solders body with very little trauma unless a vital organ is hit. Therefore the workaround the convention agreement is to design a bullet that is stable in flight...don't recollect the distance but I believe it was in excess of 800yds while still impacting enhanced trauma on a body by becoming unstable within the body mass. Brits had a hell of a time getting their new spire point bullet to become unstable within the body mass at close range while maintaining stable bullet flight at extreme ranges. US had similar difficulties with its spire point 30-06 round. So while these studies are really good reading and do have their place for long range ballistics...it's just best to ignore them when your start discussing big bore cartridges and hunting bullet performance.

Now twist rate impact upon bullet within mass terminal performance. Yep we've had that discussion also...go back to page 18 and begin reading forward...specifically regarding the performance of the .458 caliber 400gr Barnes Buster bullet. Bullet was used in two 45-70 lever action rifles...I believe the twist rates were 18" and 20" as well as the 458 B&M with...I think a 14" twist rate. There definitely was a difference in within mass terminal performance with the faster twist rate winning. However as this thread was deemed as "unscientific" by some so this real world example was basically poo-pooed.

Biggest problem that big bores face is the lack of fast 10" twist rates unless the military has been involved in testing that caliber for long range sniper work or unless a specific popular cartridge's designer specified a fast twist rate for the cartridge...read here the 470 Capstick with its spec 10" twist rate...otherwise you'll get a twist rate established at the turn of the 20th century during the beginnings of the C&C bullet days.

Myself, I've recently run into the issue of trying to get a barrel manufacturer to modify their "spec" barrel even when they note that for a slight extra charge that they'll do it. I could get the spec 18.5" twist rate changed to a 10" twist rate but they refused to change their spec #10 contour barrel to a #6 contour barrel...even when they offered the #6 contour barrel in calibers both smaller and larger than the caliber I was interested in...even then it would take a minimum of 6 months for delivery for a barrel that didn't fully meet my needs...so no joy there.

OK, I'll leave it at that.

Jim 🍌

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

michael458

25 June 2010, 22:55

Hey Andrew

Glad you are following with, and even more glad you are pitching in! Thanks!

For solids, yes, performance is measured in straight line penetration, correct. Adjust twist rate? No, all the tests are done with real rifles and unless we have a rifle built with a particular twist rate then we are sorta stuck with what we have. For instance, most 45/70s are at 1:18 to 1:20 or so, while most 458 Big Bores are at 1:14. Yes, twist rate is a major factor when meplat size of the bullet is at 55% or so and cannot stabilize itself. So yes we care very much about twist rate and it is a factor.

Rotational velocity, really not so sure that is much of a factor or not in what we are looking at, you are correct, as far as accuracy and Hatcher is correct as to the fact of better stability at the longer range. Of this I have no issue. I know you already know this, but just to point out we are testing "big bore" rifle bullets (mostly with a few 338s and 9.3s thrown in), anything related to studies of this sort really has little to do with our project, if anything. I do test close to some standards, there are reasons for this. First, I am on an indoor 50 yd range, benches at 25 and 50. It is pretty much a test facility as far as I am concerned, lot's of load data for my various cartridges, bullet testing, 50 yd accuracy testing, things like that. I personally have not tested too much at longer ranges in many years, sight in at 50 has been very successful for me, and about the smallest bore rifle I have taken to the field in years has been a 416. A few times 10-12 yrs ago 338 and 358 calibers, most all the rest have been 416 and up. The last time I had a small bore in the field was probably 2004 that being a 358 STA.

Now I probably use more solids than any shooter or hunter for sure in the field, I use them to back up everything nearly and it works great for me. Not just solids for use with 2cd shots on buff, first on elephant and hippo, but I use solids to back up on most other things such as plains game, bear and what have you. But our primary use for solids is large, thick skinned game, buffalo, hippo, elephant. One does not shoot those animals at 300 yds. It is most of the time close, I know I have started things off as little as 6 yds before, in one case with a bear it was 6 ft. But elephant are very much a lot of the time under 20 yds. Buffalo and hippo mostly under 50. I did have to murder one buffalo at 90 yds once, it was awful, but he was a fine old bull and I could not help myself! The point being testing at close range has more of an impact on what we do with big bore rifles and bullets, and has more validity than to even consider a 100 yds. If we have issues at close range, this is where we will have a problem. We want to sort those problems out long before going to the field, and that is exactly what we have been doing.

As for a "pointy FMJ or Solid" yes, absolutely correct, it don't take long for it to turn ass to the front and become unstable. I tested some pointy 200 gr 338s not too long ago with exactly those results. I would have to look up that, but I have it.

Thanks for the input, much appreciated! Stay with us and don't run off!

Michael

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**srose** **25 June 2010, 23:01**

Bullets tend to penetrate better at longer distance after the bullet has settled down and stopped yawing. These solid tests are to show what a bullet does at close range where they are used on dangerous game. I think this is why Michael likes a fast twist to make the bullet more stable at close distance. Michael, please correct me if I'm wrong. I also think it would be an interesting test to see just what some of these good penetrating bullets would do at 150 to 200 yards in the same test media. Years ago I did some tests with a 338 win mag and found that soft point bullets would penetrate much deeper at 300 yards than 100 yards in pine logs.

Sam

**michael458** **25 June 2010, 23:04**

Jim

How correct you are, getting a fast twist rate on some of our big bores is an issue. I was extremely lucky to get the 1:12 twist rate barrels for the .500s as standard. A 1:12 can be had in 416 without a problem, all mine are 1:14. Wish I had known 5 yrs ago that twist rate was so important, now my 416 B&Ms have a terrible time trying to stabilize 400 gr solids at 2300 fps or so. I have zero issues with 350-370 gr solids in them. All my 458s are 1:14, but not having any stability issues with 458 B&Ms at all at 1:14. I would rather have 1:10 or 1:12, but I don't. The new upcoming 410 B&M is stuck at 1:14, but the new 457 B&M and the Super Short are both going to be 1:10 from PacNor.

Of course we are all looking forward to RIP getting going with his very special 1:10 458 B&M and working with the marginal meplats of bullets like the Barnes Buster (perfect bullet for testing twists as we have already seen in both 458 and 500 caliber) It's marginal meplat size of 55-54% requires a fast twist to get better performance. Had that meplat been 65% it could stabilize itself during terminals.

As far as I am concerned we are dead spot on the twist rate issue, we have too much evidence backing that information.

Twist is a major factor just behind nose profile/meplat size, which is NUMBER 1!

Michael

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**michael458** **25 June 2010, 23:08**

quote:

Originally posted by srose:

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Sam

Sam

Spot on my friend! You will have to do the long range test work at 200 yds, I can't see that far! HEH.

Take a look back on all the 338 work we did on this thread and you will see that velocity and expansion has a lot to do with penetration. Almost in every case the slower velocity of the 338 Winchester penetrated deeper than the same bullets out of the 338 Ultra. With the exception of the great Barnes Banded solid, which likes a little extra velocity! Made me wonder why I even bothered with a 338 Ultra?

Michael

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**srose** **25 June 2010, 23:23**

I think it was Pope that showed how a bullet yawed in flight and settled down as it got further away from the muzzle.

**Dave Bush** **26 June 2010, 21:07**

I did some bullet testing of my own this morning and I wanted to pass on the results. My testing is not as scientific as Michael's but I think it was pretty probative.

I was shooting from the bench at 50 meters. The media was two copy paper boxes filled with wet phone books. There was a total of 36-38 inches of phone books. The bullets tested were 400 grain .458 Barnes Buster bullets and 250 grain 9.3 Barnes Banded Solid. Rifles were a Marlin 45/70 guide gun with an 18.5 inch barrel (1:20 twist) and a Blaser 9.3X62 with a 22.7 inch barrel (1:14 twist). I also shot a 250 grain 9.3 TSX and a 286 grain Woodleigh RN into the media as well when I was done with the solids. Here is what I found out:

1. Although I really, really wanted Michael to be wrong about the 9.3 banded solids, I got exactly the same results that he did. The first one into the box gave about 18 inches of straight line penetration but then it went down for about 8 inches and out of the second box. The second one went straight for about 18 inches then went up and right for about 6 inches and out of the second box. Neither bullet was recovered. Muzzle velocity was +/- 2500 fps. They just don't stay on course.

2. However, with respect to the 9.3, all the news was not bad. I also shot a 250 Barnes TSX into the same media and got 24 inches of straight penetration, a picture perfect mushroom and I am guessing 100% weight retention. Muzzle velocity was +/- 2500 fps. **Excellent bullet!** Finally, I shot a 286 grain Woodleigh RN into the media, got about 17 inches of penetration. The recovered bullet had three nice petals folded back to the crimping groove. Velocity was 2350-2400 fps. Good bullet as well.

3. I also shot two Barnes Buster bullets into the box. Velocity in my little guide gun is about 1900 fps. Both went in the front and out the back. Penetration was dead straight for about 36-38 inches. Barnes says these bullets will shoot shoulder-to-shoulder on a bison. They are not kidding. **Excellent bullet!**

As an aside, I pulled my Blaser 9.3X62 out of the case this morning, put it together and put on the scope. I fired one shot at the range to set the scope and then, shooting from the bench, it was exactly where it was when I last took the scope off. If you are interested in a take down gun with a superb trigger that will shoot like it had eyes right out of the box, **get a Blaser R93 now!**

P.S. I need to add a short post script here. I also shot some 300 Barnes TSX flat base bullets from my 45/70. They were running between 1900-2000 fps out of my guide gun. One was shot at 50 meters. I found a piece of it and thought maybe my shot was badly placed so I moved up to about 20 meters and put another one in the box. When I was cleaning up a chunk of it fell out on the ground. It had pretty much disintegrated. My advice would be to stay away from them.

Dave  
DRSS  
Chapuis 9.3X74  
Chapuis "Jungle" .375 FL  
Krieghoff 500/.416 NE  
Krieghoff 500 NE

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**I Bin Therbefor** **27 June 2010, 06:47**

I really, really wish Elmer Keith was still with us. I'd be willing to bet that there would be some interesting dialog going on. 🍷🍷🍷

**michael458** **27 June 2010, 15:34**

Dave

Well your test is just fine, there are many who say mine aren't very scientific either, but results speak for themselves, and are repeatable whether I do it or you do, or Mike, or RIP or whomever. The problem is that if someones favorite bullet does not do well in the tests, then the tests must be flawed. This is bullet against bullet, but some have a hard time with that concept.

1. Sometimes I wish I was wrong, I have been very disappointed MANY times myself. Just when I thought I was getting close to getting it right, the tests said different, and it's back to the drawing board again. With the .500 caliber solids I went through 6 generations of different bullets before getting there. And that can take a lot of time.

2. I am in 100% agreement with you, for what I want a 9.3 for the 250 Barnes TSX is my go to bullet! Not just Excellent----Extremely Excellent!

But I also must add this, I have found almost no bad 9.3 Bullets! I have been extremely pleased with nearly all the expanding 9.3s I have tested. Bullets that I would not use in lesser calibers, same bullet in 9.3 has been superb. I really like 9.3, even though I have never been to the field with it, I have high levels of confidence it will do what I ask of it.

3. I think the buster will be just dandy. It is not as good as the banded solids, because of the meplat size, but that is not it's intention either. A faster twist helps it tremendously. But for what it was designed for it will do the job and give plenty of penetration. For all North American work it will be a great bullet. I have to do some accuracy tests with it, my 458 B&M did not like the only accuracy test I have done at 50

yds. But that was just one go, I must do some more with it.

Tell me more about the 300 Barnes TSX? Was that the flat nose HP for the 45/70 lever guns? Or the pointy bullet? Actually I have had pretty good luck with both of those in the past. Will have to look up those?

Back to the 9.3 solids. Sam is all over this. Yesterday between Corbin and I we got Sam busy on a few 9.3s to test. I asked for a 65-70% meplat of caliber size, and Sam came in dead on the money with a 68% meplat. He has 3 to test, the short one on the left is 230 grs, the middle is 260 grs, and the long on the right is 318 grs. All with 68% meplat. Now what do you reckon will be the outcome of these?



Also, I have a box of 9.3 286 North Fork solids on the way! I hope to have them next week, and be testing them next week for sure. Starting Monday I hope, we will be back on the North Fork CPS bullets too!

Now, if we can't find a proper 9.3 solid, if Barnes won't change the design, and the North Forks don't work either (I am sure they will with the meplat) damn if I won't get some made probably using one of Sam's designs most likely. I am not going to be without a proper solid for any sort of work, even a 9.3 medium caliber. Oh, and Sam is not in the bullet making business either, just has the capability to make a few as it is time consuming. Both he and I and Corbin would use that design if successful, and works not only good with penetration, but has to feed in my Winchesters, then we would take that to our bullet making guys for a similar bullet. Just to clear that, don't want anyone thinking Sam is competing with bullet business or anything, he is a shooter and very talented with his bastard file. In fact I am quite sure he has worn out his bastard file making these bullets, I will get him a new one when he visits next!

Michael

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**michael458**

**27 June 2010, 15:36**

In the meantime Sam also made a couple of .500s that weigh in at 500 grs, another 9.3 in the middle, and on the end is a 6.5 that Corbin is stuck on! Nice work Sam!



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**michael458**

27 June 2010, 15:40

quote:

Originally posted by I Bin Therbefor:

I really, really wish Elmer Keith was still with us. I'd be willing to bet that there would be some interesting dialog going on. 😊👍😊

IBT

Me too! I think Elmer would be all over the concept of the flat meplat! After all, he damn near invented it for the handguns. At least he set things in motion to get to where we are today I suppose!

465HH actually spent some time with Elmer, maybe they discussed some of this--465???

Michael

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**buffalo**

27 June 2010, 16:09

Much interesting tests to look forward to...

.577, .500, 9,3mm... 🤔

I am going on holiday for two weeks with the hole family the coming friday.. Will be walking/hiking in the mountains of France. No internet unfortunately, I know I will suffer severely from not being able to follow this thread... A lot to read up when I get back home I suppose (hope)...

Ulrik

**michael458**

27 June 2010, 16:19

Ulrik

Yes, it seems we always find something to work with. I suppose in two weeks time you will have to take some time to catch up with us! Have a great time!

Michael

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**Dave Bush**

27 June 2010, 17:26

"Tell me more about the 300 Barnes TSX? Was that the flat nose HP for the 45/70 lever guns? Or the pointy bullet? Actually I have had pretty good luck with both of those in the past. Will have to look up those?"



Michael:

Barnes makes .458 250 and 300 grain TSX "flatnose" bullets for the 45/70. They have a very pronounced hollow point. They may work okay on deer and such but the phone books were just too tough for them. I only found a few shards of copper and then one large chunk of copper fell out on the ground when I was cleaning up.

I had forgotten how much work this is. It was hot as hades here yesterday and man, I was bushed when I got home. I have found that after a hard day of bullet testing, spending about an hour or so in the in the lazy boy with a big glass of Knob Creek really does perk one up 😊

Dave  
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Krieghoff 500/.416 NE  
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**RIP** **27 June 2010, 17:53**

"Just to clear that, don't want anyone thinking Sam is competing with bullet business or anything, he is a shooter and very talented with his bastard file. In fact I am quite sure he has worn out his bastard file making these bullets, I will get him a new one when he visits next!

Michael!"



Yep, sure is nice this time of year to have others doing the science ... 🚗🚗

**michael458** **27 June 2010, 21:25**

Dave

Yes, while I have not messed with the 250s, I have a decent supply of the 300 flat nose HPs for the 45/70. I don't have info in front of me, but I am sure I tested those some years ago and had really good results as I recall. I might look into that this week too, a little more extensively. One thing let's point out, and not forget about.

Non Conventional! Barnes is probably the first in Non Conventional. I remember years ago during many terminal tests that the petals would break off, leaving a solid slug to continue to penetrate. Well way back then, not many of us could understand the concept of Non Conventional. We (including myself) would have considered and did consider that a failure, because it was breaking up, losing petals, weight, and we had been taught that was bad. So it was, as we understood. Of course none of this was thought out carefully, and Barnes improved the annealing of the bullets to make the petals stay on during penetration, also later doing the bands, and we have now what I consider one of the very finest expanding, deep penetrating and accurate bullets we can possibly have. But remember we are understanding a lot more about non conventional bullets, and to be honest it took a bit for me to catch on too. Losing those petals at higher velocity and that slug continuing to penetrate is not a bad thing! This is why I have gone to the brass HPs to insure the petals shear at lower velocities. I am convinced this is an enhancement in trauma transfer to animal tissue. And, penetration is deeper than any conventional expanding bullet. Penetration is never a bad thing! With Non Conventional if we loose our petals or shear, we get deeper penetration than if they hang on! I am a penetration freak, as we all know. Deeper penetration means we are touching and destroying tissue that otherwise would not be destroyed. This can't be bad. So before we consider that petals peeling is bad, let's look a little closer.

Now when a conventional lead/jacket bullet starts to breakup we get the opposite effect, we get less penetration than if it holds the weight together or does not separate from the core. This is our conventional wisdom for a 100 yrs. And it's true, I will always consider a breakup of a conventional bullet a failure, even if it kills time after time. Of course in some circumstances this is very desirable in missions in which penetration is not an issue, because intense trauma is inflicted.

Yes, this past week with just a little test work I looked like I had been in the pool afterwards.

It is wicked hot here the last few days, 95-100 and near matching humidity. Range is staying around 80-83, but humid. I have a new portable air unit on the way for down range, hoping that will take some of the heat out.

RIP

THat Sam is busy as a beaver with a bastard file eh? HEH. By the way, I thought you were going to start test work as soon as it warmed up some and the snow melted? That was the last story I heard anyway. Waiting on warmer weather to get started. OK, well I think it's warmed up now, so how about it?

HEH

Michael

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**michael458** **27 June 2010, 21:29**

Oh and I forgot to mention that Friday I ordered some of those blue tipped Barnes 300 gr .458s to try out. That might just be the ticket for the little 458 B&M Super Short, if Hornady ever gets some dies done. I also saw that Combined Tech has a 300 gr Ballistic tip silver tip thing 458, got a box of those too on the way, so you know we will be testing those too soon as they arrive, Tuesday I suspect. Many of these bullets are going to be great in the little SS.

M

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**capoward** **27 June 2010, 22:21**

Geez, a guy goes shooting for a day and we get another page on the thread!

Michael...All I can say is that Corbin's Sam's "bastard file" bullets are works of art; performance will be excellent and if the sharp edge meplat feeds properly from the magazine they'll be the "go to" bullets.

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

**michael458** **27 June 2010, 23:21**

Jim

76 pages, 3000 posts, and over 51000 views, and no end in sight, we keep coming up with new things to work on.

Sam's bullets are great looking eh. Feeding, will have to see. It looks like we are going to have to make some 9.3 solids since it appears no one can really come up with one that is suitable. But with two makers now that will not be an issue. North Fork 9.3s will be fine I am sure, but feeding could be an issue with the bolt guns. We will see. I have already decided with great assets in hand we will be making the 470 bullets we need for the B&Ms coming too.

Michael

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**Dave Bush** **27 June 2010, 23:21**

Michael:

Just one point about those Barnes 300 grain .458 TSX flat base bullets. Here is the problem as I see it. They are homogenous bullets with a very, very deep nose cavity so they are really long, even longer than a Speer .458 flat nose. With the limited capacity of the 45/70, I would rather shoot the Speer flat nose or maybe even a 350 grain Hornady. You can drive them just as fast and the extra 100 grains of bullet is going to give you much better penetration on a big animal and who cares whether they will open up on a deer. Drive a .45 caliber bullet through a deer and he is yours. I just think the heavier bullets are a better choice.

Dave  
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**michael458**

27 June 2010, 23:27

Dave

Good point too. I have used the 350 Hornady since it hit the market way back. We know it's tough right up into 2400 fps that 458s can run it. Below 1600 fps it has problems opening up, but who cares, like you said, it's already 458 caliber. I used to run the 350s at 1950 fps or so in the guide guns. 50 grs RL 7. Some guns a tad more, some a tad less. We tested the Speer the other week remember, it did very very good in the 458 B&M at 2200 fps. I was impressed with it.

I will look into the Barnes again this week. I have a guide gun set up, load a few and see too. I would also like to test the 350 Speer in the 45/70 at that velocity too.

I played with the pointy 300 458 and it did very good in the 458 B&M. But my favorite light bullet in the 458 B&M is the 350 TSX. It is excellent.

M

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**capoward**

28 June 2010, 01:40

quote:


Originally posted by michael458:  
Jim

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Sam's bullets are great looking eh. Feeding, will have to see. It looks like we are going to have to make some 9.3 solids since it appears no one can really come up with one that is suitable. But with two makers now that will not be an issue. North Fork 9.3s will be fine I am sure, but feeding could be an issue with the bolt guns. We will see. I have already decided with great assets in hand we will be making the 470 bullets we need for the B&Ms coming too.

Michael

Boy I must still be tired from the round-trip drive to the H&S yesterday...I'm screwing up everyone's names today! Brian should be able to tweak the rails and ramp to make Sam's bullets feed properly is there are issues.

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

**RIP**

28 June 2010, 05:03

Regarding the little 10-twist .458 B&M:  
that's the beef.  
As Clara would say: "Where's the beef!?"

**michael458**

28 June 2010, 05:11

quote:

Originally posted by RIP:  
Regarding the little 10-twist .458 B&M:  
that's the beef.  
As Clara would say: "Where's the beef!?"

I don't know??? I had a call in Friday, Brian was out Friday??? I will see if I can call up tomorrow and find out what the deal is. I wish you would get it too. I want to see it in action!

M

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**PWS**

28 June 2010, 10:52

Sorry if this has been hashed already but the 320grain 9.3mm Woodleigh is the deepest penetrator tested so far? 80" and out of the box, right?

Also, anything deeper than 60" straight is PFG?

Do you have a quick description of a bullet's recommended use in light of test penetration; i.e. 20"=deer, 40"=buff, 60"=whatever you want?

Thanks

**500N**

28 June 2010, 10:55

I want more than 40" on Water Buffalo - if I do a follow up ass end shot (i aim for and break the hip but want the bullet to penetrate as far as possible), one of the reasons I use heavy for calibre bullets like the 320gn Woodleigh in 9.3's.

Just my HO