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Terminal Bullet Performance

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jeffeosso

Moderator



posted 06 February 2010 17:45

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quote:

Originally posted by ALF:
I am confused:

>....

So Now I am attacked for questioning this notion, snide remarks about 100% certainty and hunting

Utterly WRONG -- you are being called out for revising and deleting the content of your previous posts, replacing that with a "." and PRETENDING that you never said anything .

You are being called out for being disengenious ... you are being laughed at for trying to make up preposterous tests to prove yourself wrong

these are 2 different issues

#dumptrump

opinions vary band of bubbas and STC hunting Club

Information on **Ammoguide** about the [416AR](#), [458AR](#), [470AR](#), [500AR](#)
[What is an AR round?](#) Case Drawings [416-458-470AR](#) and [500AR](#).
[476AR](#),
<http://www.weaponsmith.com>

Posts: **37020** | Location: **Conroe, TX** | Registered: **01 June 2002**



Warrior

One of Us

posted 06 February 2010 17:45

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quote:

That weird school you went to that taught you to write but not read has come back to bite you, big time.

Here is the page for the 375270FN. Now let me teach you how to read it. 375H&H rifles were made in two twist rates: One in 14" and one in 12". See the little chart above the bullet illustration? Look at the line of the graph that runs from 14 to 12 on the horizontal axis. At 14 it is a fraction over 2.5 on the vertical axis (left) and at 12 it is almost at 3.5.

Rasputin,

You are still not making any sense with your double talk, no matter how you want to obscure the real issues of this debate.

1. Please note, just above the graph of the .375" 270gr FN you say ... "**S/F greater than 2.0 is required**. A S/F of 2.5 is desirable for faster calibers. There is no upper limit to the S/F here."

2. Now this is what you said before ... "With FN bullets we recommend a stability factor **in EXCESS of 2.5** for reliable linear penetration. The 300gr FN has a stability factor of 2.39 to 2.44 from 2000fps to 3000fps. Again not ideal." Can you actually see the double talk?

3. When shown that your 9,3 mm bullet penetrated straight at SF = 2.04, you quickly back-peddled by saying hat that was only for the 9,3 and not for the .375 H&H due to velocity differentials and increased stagnation pressure. Now you say that a SF of 2.0 is also OK for the 375 H&H. What has changed in the meantime, incorrect interpretation of the first observations or new observations since then?

4. I am bewilderd at your logic that when a 378 Wby Mag is engaged (with higher velocity) over a .375 H&H, the SF must go up, but when we bring the .375 H&H down to the same SF value of 2.0 for the 9,3 x 62 mm the velocity differential is of no significance, eh? Your incoherent and non-sensical attempt to explain velocity jumps from a 9,3x62 to a .375 H&H and then to a .378 Wby Mag as to how different SF values are needed does not make your theory anymore plausible or does it?

Perhaps you are right Gerard, but it is just that you cannot find the words to explain it - it seems we are opposites, eh? You can't write and I can't read. 😊 But to bamboozle, a virtue of yours, is not finding the spot. Alf has offered Munks's formula as the best possible explanation that we have, but throwing Munk at you is like throwing electrons at a negatively charged plate - it will never connect.

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



416Tanzan
One of Us



posted 06 February 2010 18:00

[Hide Post](#)

quote:

All are in agreement that faster twist gives better penetration by yaw control on transition from air to target medium.

Actually, in my testing inexperience, I am not sure of this statement.

Michael had bullets that went straight for 20-30" and then veered.

It would seem to me that they entered the medium without yaw and that somewhere along the medium, they threw out their gyroscope and went rogue.

What caused that?

On the other hand, bullets with faster twist went past the 30" line before going rogue. What gave them the stamina to keep plowing straight in the medium?

Now I accept that bullets continue to spin in the medium, as is abundantly clear by highspeed photos of bullets in gelatin with spiral temporary cavitation.

It appears to me that within an air pocket of cavitation, the more gyro-stable bullets seem to continue transversing the medium when the less stable veer off. This difference does not happen when entering the medium but well along in the medium. There is where the problem lies.

This needs some explaining by all concerned, assuming that the effect is real.

+--+--+--+

"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.

Posts: **4253** | Registered: **10 June 2009**



Back to this statement that is being propagated "It has been proven that a high velocity flat fronted cylinder (FN bullet) shape will leave a larger primary wound channel than a slower, double caliber mushroom."

It is important that we get to the bottom of this, my opinion is that it is a lie promotional hype.

Here are some pictures to illustrate ...

1. A .510/540 gr GS FN Solid going through the heart:



2. A.375/380 gr Rhino Soft expanding going through the heart of a buffalo shot by Doctari:



Solids by their very design is to penetrate deeper by virtue of a smaller wetted surface, as opposed to a CEB's to open up and have a bigger frontal wetted surface.

Warrior

michael458
One of Us



posted 06 February 2010 18:30

[Hide Post](#)

quote:

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It would seem to me that they entered the medium without yaw and that somewhere along the medium, they threw out their gyroscope and went rogue.
What caused that?
On the other hand, bullets with faster twist went past the 30" line before going rogue. What gave them the stamina to keep plowing straight in the medium?

Tanzan

Now I am assuming this concerns the 400 Barnes Buster test with twist the other day. It is my opinion that what you saw was the effect of nose profile taking over at that point. The 400 Barnes Buster has a 56%-58% meplat of caliber which in my opinion is just below the threshold of 100% terminal stability--In this Test Medium!!! Clear, In this Test Medium!
Now, lets exam the 330 Barnes Banded, designed for the 458 Socom. It has, again best as I can measure around 65% meplat of caliber which has in every test been 100% stable in the 1:14 twist guns. I will have to look, but I think I tested it also in the 45/70 with the slower twist and it once again was stable. So here we have nose profile and meplat size taking over where twist leaves off! And in the case of the 330 Banded 65% meplat, meplat size and nose profile is showing higher priority. In the case of the 400 Barnes Buster not quite enough meplat to be stable. I also see this in a 480 gr Hornady 458 DGS, just not quite enough meplat for stability, in this test medium! This is what I think you are seeing.

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



Warrior
One of Us

posted 06 February 2010 18:38

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Here is a .458/500 gr Rhino Solid Shank bullet that was retrieved from Gary Bauer's buffalo shot at 58 meters, a broadside shot through the chest and lungs, and was recovered in the skin on the far side. Muzzle velocity was 2,230 fps. It stands to reason that the larger expanded frontal area causes accelerated bleeding by punching a larger hole than a Solid FN. And this is why most PH's and hunters prefer today CEB's bullets on buffalos.



Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



ALF
one of us

posted 06 February 2010 19:40

[Hide Post](#)

Posts: **7852** | Registered: **16 August 2000**



Gerard
one of us

posted 06 February 2010 20:06

[Hide Post](#)

[I am sorry Michael, I did not think he would have the good manners to take it here.](#)

At least we know now what the connection and motive is for all this, given his last picture post.

Posts: **2848** | Registered: **12 August 2002**



Warrior
One of Us



posted 06 February 2010 20:26

[Hide Post](#)

Rasputin,

The only ties I have are those that I wear with my suits. Your paranoia is showing - we debate the principle here and not a specific bullet per se. Jumping to wild conclusions is not supporting your theory one bit. You are still advancing a lie.



Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



Gerard
one of us



posted 06 February 2010 20:39

[Hide Post](#)

[Here.](#)

Posts: **2848** | Registered: **12 August 2002**





Warrior

The Rhino bullet you show, is that the same folks that made the Rhino solids I tested? I would think it is, but just curious is all. It's a good looking bullet.

Gerard

No apology needed my friend!

Now to my buddy Alf!

Alfy

No, you are correct, wet print mix is not animal tissue, but neither is any other test materials, none of them are. Calibration to human tissue with a BB???? Out of the ball park, either you or me one, I know nothing of calibrating humans with BBs? First I have seen of that, or heard of that, unless I have missed something? I have heard of calibrating ballistic gelatin with BBs, but not humans? One can very easy correlate data between reasonable test medium and animal tissue, but that takes experience with both test medium and animal tissue to do. I have a good bit of data that does in fact correlate between the two. Naturally of course not with every bullet on the market, yet anyway, I continue to strive for that!

Alf, you make one very good point that I have thought of and have been trying to come up with a solution for. Consistent Compression! I know how, I just don't have a way yet. This is an issue that gives me concerns as it is difficult to judge and difficult to do. Now to be 100% perfectly honest, I really don't think it will make a hill of beans difference, but this is one thing I would like to have a better handle on myself, and there has to be a very simple tool I can use that would do this for me, and I am looking for it!

IF and I do mean a big F(%*ing "IF" there was anything that my mix might come up short on, it would be Consistent Compression. Now this would have zero to do with the end results, every single solid would react the same, every expanding or NonCon would continue to perform the exact same, and the only single possibility that could change would be some minor penetration depth from one time to the next. A round nose solid would not suddenly become stable, a FN solid would not suddenly become unstable, and expanding bullets would not suddenly stop expanding! There would be ZERO major changes in what you see. What you would see is that today a particular solid that penetrated 57 inches today would still penetrate 57 inches tomorrow and not 55 or 56 inches, or maybe 58 inches! This is the difference you would see, which is good and would be a more consistent number for penetration, but that is all it would do.

Now if we were in a proper lab, and someone else was footing the bill on this, we had all the time in the world in which to work with this daily, and we did not live in the real world, where I have far more to accomplish, like running a company, and keeping the family happy, and doing a lot of other things, then you might have a point. If this is all we did in life then we could do whatever we wanted. But we live in the real world Alf, or at least I do.

As for ALL of the other Bull Shit it is very very apparent that you do not live in the real world, but live in a world of academia in which you do not have to produce anything, you need not be productive, and in your world someone else pays your bills for you while you sit and think up Bull Shit to blame on the rest of the world and why your problems are never solved quite to your satisfaction. While everyone else is out doing a job, producing something the rest of us need, you are sitting around worried about things that will have no bearing on the end results at all. The difference in doing things in the real world, and in your world is this. Your way we would still be over on page 2 of this thread and only test 5 bullets so far, not 5 different bullets, 5 of the same bullets! My way, we have tested a 100 different bullets and we are on page 25 and moving forward. Either way, the results are the same!!!!!! No, it is very obvious where you are coming from, and it is also very obvious you have not done any test work of your own. I challenge you today, put the F*&K UP, or Shut the F*&K up! Go show me a test your way! And I will do it my way! And if the results are so far different, then I will Shut the F*&K up! But heres the kick in the ass---I don't trust you to report proper results, as I trust no academia to not skew the results to suit their own purposes, so there has to be a witness, that witness is me!

So pack your bags Big Dog, bring your test equipment, I provide materials, water, and a place in which to work! Best figure out a way to do US measurements too, we don't play cubic meters and I have nothing to measure liters, meters, or centimeters here, it's yards, inches and gallons!

So unless you are ready to put up and get to work, I don't care much more about hearing any bull shit from you, it's time to show and prove and forget theory! I am like the good ole boys from Missouri, as I understand, sometimes you just gotta show me. Now Alf buddy, I really am not being ugly with you, and certainly not upset or angry, it's just this is the real world out here, and we don't live in a theory, we have to produce results, real results and move on. While we have to produce results in life, we don't ever ever sacrifice quality! In my work we have to be productive, we have to produce. We don't produce, forget it, we go broke! However, neither can we sacrifice QUALITY! Without Quality, we don't work next year! For 25 years I have had a motto that every single guy in the field hears constantly from me, "We Work this Year, For Next Year". Now that means we do a good job, good quality work for a reasonable price, but we have to be productive for us to make money! No productivity, I go to work at McDonalds flipping burgers! One must understand the point between Quality, Productivity, and Reasonable Price to be successful!

So what is your point Alf? If you don't believe in the tests, is it your mission to discredit me and the tests? Is that it? What exactly is the point of all this concern you have? Alf, I am not an exact perfectionist, but I must tell you I do things right! I don't half ass do anything in my entire life. No, I won't weigh the test medium to get a weight per cubic yard (no meters here), that is a waste of energy, time, and efficiency in my opinion. Remember, I am not doing an article for Scientific Journal Of Terminal Penetration of Rifle Bullets! Also remember, no one is paying me for this either! Take one of your formulas and tell me how much difference this would make, to weigh for cubic yards--to not weigh for cubic yards (In Massachusetts it's pronounced "Yads"). No, not going to measure for density per cubic yard either. My test medium has over night for drip out, so I don't think that's much of an issue, it's a box made of 2X6s (inches-not meters), it leaks like a sieve, takes only a few minutes to drain! And the point is, If I really thought, believed that any of this would make a MAJOR difference in the end, then I would either do it, or I would not waste my time with any of it! My time is Mine---And it is very expensive, and it is more than you can afford I can promise you that! I won't waste my time in something I don't believe in. In the real world, the type of tests you want done are really not worth the extra expense, time, nor effort that it would involve, and it would not produce any different results, that would be meaningful. In fact, to be honest, it would be a waste of resources.

Tell me what you do Alf? What rifles do you shoot? Do you hand load? How often do you shoot?

Michael

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Warrior
One of Us



posted 07 February 2010 00:02

[Hide Post](#)

quote:

Warrior

The Rhino bullet you show, is that the same folks that made the Rhino solids I tested? I would think it is, but just curious is all. It's a good looking bullet.

Michael,

Yes, that is indeed the same person making them; his name is Kobus van der Westhuizen. Here is a photo of some 9,3 bullets that I fired into a wetpack some years back when I was doing some comparative testing, just like you are doing now. The Rhino bullet can be seen at the far right.



From left to right: CDP, Lapua Mega, PMP ProAmm, Stewart (Std) and Rhino Solid Shank

The Rhino bullets gain popularity here in SA, as it is a reasonably good hunting bullet, not without its shortcomings, but cheaper than imported CEB's such as Swift A-frame and so forth. Swift A-Frames sell roughly for double the price here locally.

Wish we could get some NF bullets here in SA.

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



MikeBurke
One of Us



posted 07 February 2010 00:34

[Hide Post](#)

About a week ago I posted that I built a test box and would start testing. The only test I ran before today was shooting 5 woodleighs in my test rig.

The test consist of shooting through a piece of 1/4" luan, 12" of saturated newspaper, 1 5/8" of a 2 by 6 and then 60" of saturated newspaper.

My test today is to compare a 500 grain Woodleigh solid at 2150 versus a 500 grain Northfork solid at 2150.

The Woodleigh performed the same as the 5 I previously fired which is once it hits the 2 by 6 it goes astray. The angle today was about 30°. It exited the box about 12-15" past the 2 by 6.

The Northfork had straightline penetration through the entire box. I pulled it out of the 2 by 6 in the back of the box. Absolute perfect performance.

I want to shoot more test but I was so excited with the first one I wanted to share it. Pictures and more test to follow.

If I keep testing Northforks I will need way more newspaper.

Posts: **2939** | Registered: **26 March 2008**



michael458
One of Us



posted 07 February 2010 01:25

[Hide Post](#)

Warrior

Rhino bullet looks pretty good, a deep diver! The Stewart looks a little soft, but that can be good, depending on the mission!

I have played a bit with the North Forks and they are good, very comparable to the Swifts. Excellent bullet!

MIKE

I know you are excited, and rightfully so, I know you are having a blast, but are these 500gr bullets 470s or 458s? Just curious, results speak for themselves!

Sounds like you are getting nearly exactly the same results as I have been getting here! Hmmm, I wonder how academia can respond to that? Oh, it might be an inch or two difference here and there, but the end results are the same!

Now don't waste time here, go back out to the box and get busy, it's getting dark outside! Do you have lights close to the box? If so, you can test all night long that way? LOL

Excellent work Mike, keep us posted! Those North Forks are good eh? Now Mike, I must ask a small question, when you go back to the field for buffalo, let's say you leave today, this very minute, are you going to load up the Woodleighs or the North Forks????? Now we both know the Woodleighs will work, that is not the question I am asking! Just curious is all!

Good work, very good work! I understand completely your being a little excited!
Thanks
Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



MikeBurke
One of Us



posted 07 February 2010 02:11

[Hide Post](#)

The tests are conducted with my 470 Nitro Krieghoff.

What would I use for buffalo, do not know but elephant as of today, Northforks. I do need to see how they regulate.

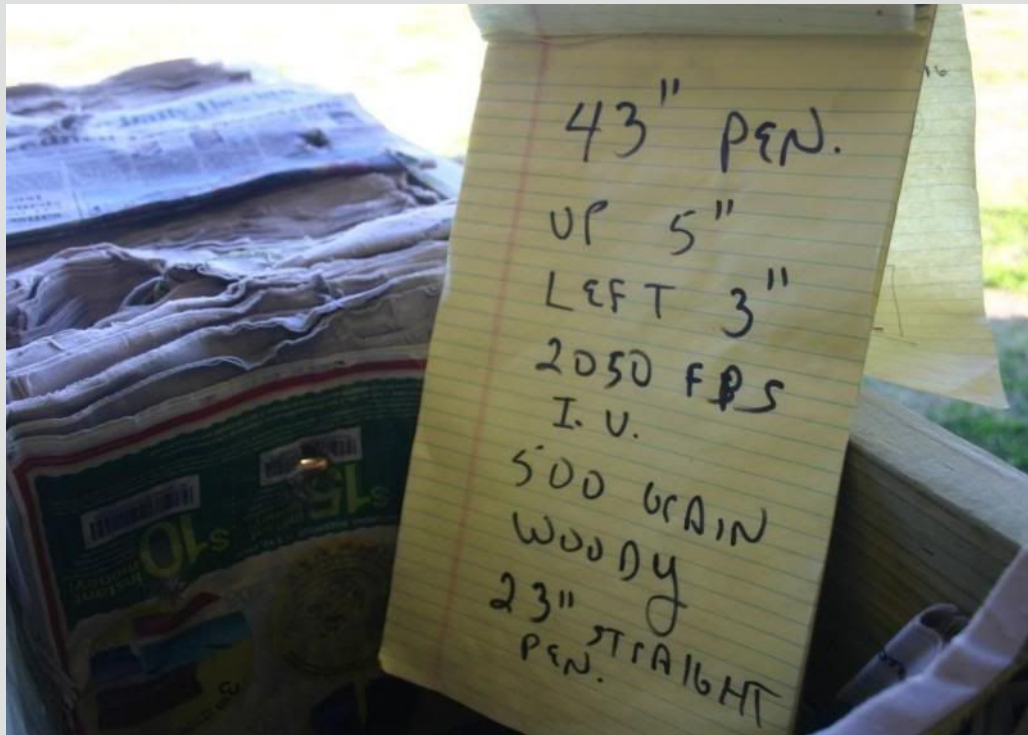
I shot another test.

Same set-up as before.

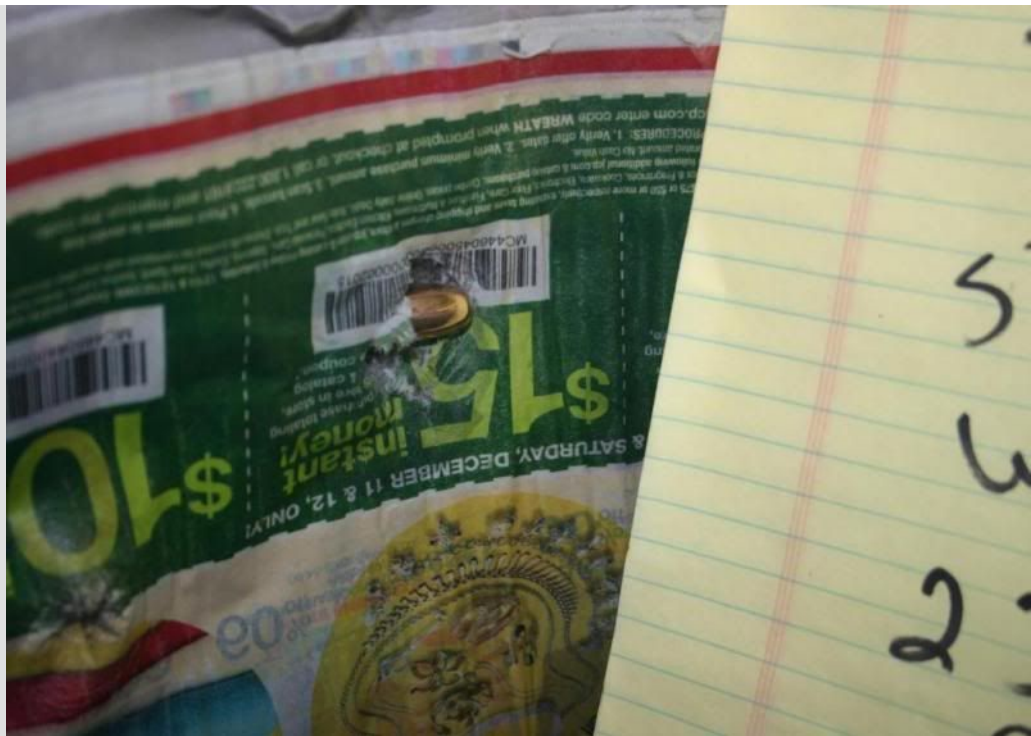
Woodleigh: 23" of straight penetration, 43" total penetration, Bullet shifted 5" up and 3" to the left. Found sideways in the paper.

Northfork: 72" of straight penetration. Stopped in the back board of box. The bullet shifted 0" vertically and 1" to the left. I will need a punch and hammer to remove it.

I am trying to be consistent in the set-up as possible. As stated before I use a laser level to center the rifle on the box. I am firing only two shots before changing the media. One Woody and one NF. If there are any inconsistencies between set-ups at least both bullets are seeing the same inconsistencies, if that makes sense.



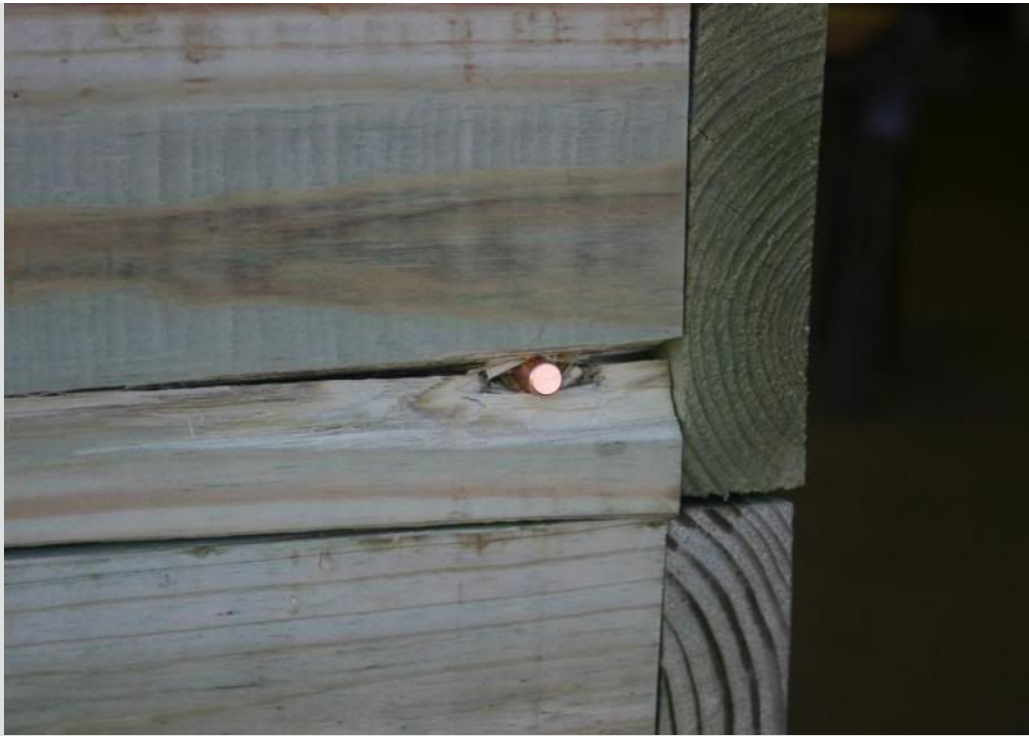
Typical result for Woodleighs so far, 470 Nitro 500 Grain



Same test bullet sideways



First test with 470 Nitro Northfork 72" of straight penetration. Bullet found stuck in 2 by 6 (perfectly straight).



Second test with 470 Nitro 500 Grain Northfork, went 1" further than the previous test. bullet perfectly straight again.



Rifling engraved in 470 Nitro

Posts: **2939** | Registered: **26 March 2008**



ALF
one of us



posted 07 February 2010 03:14

[Hide Post](#)

Posts: **7852** | Registered: **16 August 2000**



michael458
One of Us



posted 07 February 2010 04:36

[Hide Post](#)

Mike

Excellent again! Yes, the North Forks would be my choice of the two also!

Great performance, get those North Forks regulated and you will be good to go!

No, you are going above and beyond to be as consistent as possible! You may repeat the test a 100 times, you may even get a difference of a couple inches here and there, but the end result will be the same.

I have a few holes in the back of my box too. I have stuck a few of those 510 gr .500 caliber solids of mine in the box the same exact way! That's a pretty good feeling, and a pretty good confidence builder in that load and bullet too, eh?

Thank you! Great job.

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



michael458
One of Us



posted 07 February 2010 04:42

[Hide Post](#)

Alf

I am not upset buddy! You need not be concerned, but I appreciate the concern none the less. I simply pointed out show me.

I suggest very very strongly that you gather up yourself, your scientists, and all the engineers that have refuted anything, tote your asses down here to me for a week and I promise to enlighten you and your group on reality. That is all!

Until then, I stand firm and strong on what is being done. It works here, and it works on elephant, buffalo, hippo, lions, and all sorts and manner of other creatures.

Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



DWright
One of Us

posted 07 February 2010 06:06

[Hide Post](#)



I got nothin!

Posts: **1324** | Location: **Oregon rain forests** | Registered: **30 December 2007**



VWarrior
One of Us

posted 07 February 2010 11:12

[Hide Post](#)

quote:

Bullets fired from tight twist barrels penetrate deeper than similar bullets fired from slower twist barrels
Is this in fact a true statement yes or no?

A Kind Soul is walking down a street late one evening. He sees a Drunk on all fours searching for something under a lamp post. He goes over and says: "Hey buddy, have you lost something?" Drunk replies: "I bought my girlfriend an engagement ring and I have been working up the courage to go pop the question, now I have gone and dropped the ring and I can't find it." The Kind Soul gets down on all fours and helps searching under the lamp post. After a while he says: "I do not see it either. Where exactly were you when you dropped it?" Drunk replies: "I was over there, opposite the alley, three doors down but it is so dark there, I rather searched here where I can see better."

VWarrior

Posts: **127** | Location: **South of the Zambezi 2** | Registered: **22 March 2008**



416Tanzan
One of Us



posted 07 February 2010 11:50

[Hide Post](#)

Warrior-

You already know that twist is not a direct factor and no one on this thread is calling it a direct factor. So why the specious question?
But bullet stability seems to be a factor and that is indeed related to twist.

We do want data, and we do want to know why some bullets penetrate 20" straight in one test while in another test the same bullet does 30+" straight.

It might be inconsistent test media, but if repeated, that becomes less and less likely.

+++++-----

"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.

Posts: **4253** | Registered: **10 June 2009**



Warrior
One of Us

posted 07 February 2010 13:01

[Hide Post](#)

quote:

It appears to me that within an air pocket of cavitation, the more gyro-stable bullets seem to continue transversing the medium when the less stable veer off. This difference does not happen when entering the medium but well along in the medium. There is where the problem lies.

416Tanzan,

I am not on the same page with you buddy. Could you elaborate please and tell me what this 'air pocket' thing is and how it is formed. Do you use this term as synonymous with supercavitation or is it something else?

I agree with you that we do need to delve deeper into the subject to find the truth. Some things that have been rejected in the past is today accepted as common sense. The process to get there is the painful part, but the journey is worth it. And so we make adjustments and revise our beliefs.

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



Warrior
One of Us

posted 07 February 2010 13:13

[Hide Post](#)

Michael458.

Just a leading question that flashed through my mind Would the results at say 25 yds be same (in congruence) relatively speaking to 100 yds. Reason being to assess the possibility of differing yaw angles after the bullet has gone to 'sleep'.

Then further more and on the same basis, this could be done by shooting through different twist rate barrels to see relative correlations or diverging results.

Say we use the .458 caliber as an example and we use a 14", 12" and a 10" twist barrel with the same load and bullet.

What do you think?
Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



416Tanzan
One of Us



posted 07 February 2010 13:15

[Hide Post](#)

quote:

Originally posted by Warrior:

quote:

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I agree with you that we do need to delve deeper into the subject to find the truth. Some things that have been rejected in the past is today accepted as common sense. The process to get there is the painful part, but the journey is worth it. And so we make adjustments and revise our beliefs.

Warrior

The air pocket or cavitation is what I assume allows a bullet to go straight in a 'denser-than-air' medium. In a denser than air medium a bullet does not have gyro-stability and mathematically it should tumble, but it doesn't tumble in most cases.

+++++

"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.

Posts: **4253** | Registered: **10 June 2009**



Warrior
One of Us

posted 07 February 2010 13:22

[Hide Post](#)

416Tanzan,

Is the bullet tumbling in flesh not because of the the force of the bullet being greater than the drag force of the flesh (bullet still going straight) and when the bullet is being slowed over distance (losing momentum) by the target drag, and the drag of the target gets bigger than the force of the bullet and that then activates tumbling? At some point then the geometry of the bullet takes over (CG point, geometric measurements, mass distribution around CG) and veering takes place and ultimately tumbling.

The other thing that we need to consider is that how many spins does the bullet do in the target distance during this nano second time duration? 3 times ... 4 times ... even a bit more? Perhaps a bullet from a faster twist rate barrel could manage 1 more spin in the animal? Any opinion on this?

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



michael458
One of Us



posted 07 February 2010 15:28

[Hide Post](#)

Mike

Doing the test work can be a very enlightening experience! I can go on and on about some moments in time when the "light Bulb" came on for me! Sometimes in the field, a lot of times, in fact most times in the test work.

Some have heard this from me, but quickly I will repeat, back in I think either 2006-2007 I was testing hard for a solid for my .500s, that would do for elephant, hippo, buffalo. Starting with a RN and getting very disappointed with it. I requested 4 FN samples to test. Well, there was some confusion and the bullets came in light for caliber, much lower SDs than I wanted. I was still on SD as being the driving force at that time. Well, I had bullets that weighed between 440 grs to 467 grs, all .500 caliber. Do the SD math, a little short when thinking is conventional. To my great surprise, these light for caliber bullets were driving deep, straight, and far out penetrating their SDs!!!! I was astounded at this? Test after test, same story. The round nose was soon dropped. I could not for the life of me choose only one design out of the 4 sent, so I ordered 500 of all of them! Now all of them have been tested and worked hard in the field, all have been 100% successful on buffalo and elephant. There is Zero doubt in my mind what we do here is valid.

Yes, I think you are a reasonable, practical, intelligent fellow, if the North Fork regulates, there is no doubt the bullet you will choose for your next mission! And, I will tell you another thing, you will be very happy with your choice in the field! Of this I am 100% certain, I have done it too many times!

Now for the academia out there, how can it be possible that we now have two testers and end results being the same? How can this be possible, it certainly does not "compute"? A little dose of reality I suppose. I have no worries that academia will kick in with an explanation of said event, maybe a mathematical formula will explain how this phenomena cannot possibly occur? Ohhhhh? But wait, it has occurred, two testers, different part of the country, never met or laid eyes on each other, same end results? No my man, cannot compute that so it did not happen, academia, please ignore this, it has to be a figment of the imagination, since it cannot be explained!!!!

Very easy to explain, this is the real world! But Mike and I are not doing anything new! This has been done before us, we are just hard heads like some others, and we have to prove it to ourselves, but unlike others we are not so pigheaded we cannot learn from it! We learn from it, and enhance our success in the field doing the ultimate test work! And that is what it boils down to eh?

Good work Mike--Hope you don't mind, but I will be adding your work to my data also, I will note the tester too!

Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



michael458
One of Us



posted 07 February 2010 15:41

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VWarrior---Excellent story, I think very fitting, thank you! LOL!!!!!!!

Tanzan, did you read what I wrote to you above, twist, meplat size, that???

Warrior

100yds. A reasonable question. I really don't have a good answer for that, it is my feeling that there would be little difference with the particular bullets that we are working with. There could be some major differences with other bullets. Something that comes to mind is a recent test over at Bs with 50 BMG and some heavy steel plates. At 100 yds 50% of the time the big 50 does not penetrate the steel completely--at 300 yds it is 100% successful, a product of the bullet settling down, or going to sleep!

To be perfectly honest I think with a proper meplat 65% of caliber, then it really is a moot point. If anything, penetration might be better? But also with these you start to lose a lot of your velocity at 100 yds, so it could be an equaling factor too?

If using marginal bullets 100 yds might make a difference, but it would be even across the board, still I think a 1:14 would out perform a 1:20. While both might do better across the board, a 1:20 I don't believe would out perform the 1:14 because you moved to 100 instead of 50.

Now, with other types of bullets I can't even speculate.

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



Warrior
One of Us

posted 07 February 2010 15:55

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quote:

To my great surprise, these light for caliber bullets were driving deep, straight, and far out penetrating their SDs!!!!

Michael,

I get the drift of what you are saying, but the words you use are not fundamentally correct.

Lighter bullet can also penetrate well, and it is a relative thing (balancing act) based on momentum (mass x velocity) and the exposed or wetted frontal area combined with the mass distribution around its CG point of that specific bullet and here the size of the flat meplat also comes into play as it will shift the whole balance of the bullet. For example a lighter bullet in .338 can out penetrate a .458 bullet. And in the same caliber when different shape bullets are used, penetration will also vary. However, SD can never be divorced from the penetration event; it is ever present. SD is intrinsically linked in the Mo/Xsa equation. When SD is used in its correct context then wrong deductions cannot be made.

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



Warrior
One of Us

posted 07 February 2010 16:06

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quote:

To be perfectly honest I think with a proper meplat 65% of caliber, then it really is a moot point. If anything, penetration might be better? But also with these you start to lose a lot of your velocity at 100 yds, so it could be an equaling factor too?

Michael,

I share your views. Based on this then, using the same bullet with a meplat of 65%, the variation in yaw by virtue of using marginally different twist rates becomes then a non event, not so?

The premise must always be that we start off with perfect concentric bullets that would not induce an inherent inclination to wobble, as we are focussing on the principle and not the bullet per se.

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



michael458
One of Us



posted 07 February 2010 16:11

[Hide Post](#)

Warrior

SD is always important, but nose profile is in the drivers seat with Solids! 458 caliber, I can take a 330 gr Barnes Solid meplat 65% of caliber and it will out penetrate a 500 gr RN solid all day long, every single time, time after time. Where is SD in this situation? SD is in the Back seat, that is where! While Nose Profile is doing the driving!

Now, take two exactly same nose profiles, say a 500 gr Barnes Banded Solid 65% meplat of caliber, and the same 330 gr Barnes Banded Solid 65% meplat of caliber, then SD is in the front seat doing the driving and the 500 gr bullet will out penetrate the 330 each and every time, all day long, time after time! So where is SD now? In the drivers seat!

So no, I do not and will not accept that SD is ALWAYS doing the driving, as it is not. Only if all other factors is 100% equal, except for SD. Then SD does the driving.

Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



michael458
One of Us



posted 07 February 2010 16:18

[Hide Post](#)

quote:

Michael,

I share your views. Based on this then, using the same bullet with a meplat of 65%, the variation in yaw by virtue of using marginally different twist rates becomes then a non event, not so?

Warrior

I believe at this point nose profile takes over, yes. While twist rate may increase the penetration of the same bullet, in tests here the 65% meplat drives straight and stable even in the slow twist!

This was why the 400 barnes buster was such a good bullet to test twist with, it's nose profile being 56-58% meplat of caliber is marginal, therefore much better in the faster twist.

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



michael458
One of Us



posted 07 February 2010 16:31

[Hide Post](#)

Another good point concerning SD is right here on this page with Mike's test yesterday!

Two .474 caliber bullets, both 500 grs, both with exactly the same SD. One drives 72 inches virtually straight--the other drives to 23 inches straight before going off course. SD is again, in the back seat, while Nose Profile is doing the driving.

Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



VWarrior
One of Us

posted 07 February 2010 16:57

[Hide Post](#)

quote:

Just a leading question that flashed through my mind

Must have been a very short trip.

quote:

when the bullet is being slowed over distance (losing momentum) by the target drag, and the drag of the target gets bigger than the force of the bullet and that then activates tumbling?

When drag is greater than momentum, the bullet stops. At least that is what cars do. Imagine when the line of cars all come to a stop at a traffic light and suddenly they all flip over on their roofs.

quote:

The other thing that we need to consider is that how many spins does the bullet do in the target distance during this nano second duration? 3 times ... 4 times ... even a bit more? Perhaps a bullet from a faster twist rate barrel could manage 1 more spin in the animal? Any opinion on this?

Yes, I have an opinion on this.



quote:

I get the drift of what you are saying, but the words you use are not fundamentally correct.

Careful now. He is going to start telling you what his favourite crackbrained harepot theory is.

quote:

I share your views. Based on this then, using the same bullet with a meplat of 65%, the variation in yaw by virtue of using marginally different twist rates becomes then a non event, not so?

Tread warily, he is setting you up to prove that twist is not a factor in penetration. He will claim you said it.

He appears very logical and reasonable today but tomorrow he will be back to quote you all from his warped perspective and to pick a fight with what you said and did not say, according to his interpretation.



VWarrior

Posts: 127 | Location: South of the Zambezi 2 | Registered: 22 March 2008



michael458
One of Us



posted 07 February 2010 17:22

[Hide Post](#)

VV

I will do my best to keep us on a straight course, I will do my best to be a Big Bore, FN Solid in that respect! Pun Intended! I will vow to not be "twisted" (Pun Intended) nor turned or veered off course! Again pun intended! 😊

Cheers to those on the great Dark Continent, in which I have many friends there! But while y'all are playing soccer this year, I will only return spring of next year.

I am thinking of a great shoot with the NonCon bullets! A noncon field trail you might say! And follow up with some buffalo and the 500 MDM, maybe an ele or two in 2011.

Michael

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

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Posts: 8426 | Location: South Carolina | Registered: 23 June 2008



michael458
One of Us



posted 07 February 2010 17:29

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The agenda for this week!

Mike, what have you on your schedule to be tested in the next few sessions?????

Here, I must give Sharps and his loads a go at 50 yards, actually by the time the box is in front it is more like 48 yds. This has top priority right now, and in the mix I want to throw some of Clints HPs at a lower velocity to see how they react also. Since doing 45/70 might as well get the jest of it. If mix is left over maybe even a couple of other bullets in 45/70.

I have the 305 Noncons in 458 caliber, I would like to see what they do at very low velocity, around a 1000 fps or so impact, to see if the petals shed at such low velocity.

Then with some chewed up medium by then, I want to play T'Rex some more! T'Rex is just nothing but pure fun!

That may be Tuesday before I can get to any of this however, as I played sick at work most of last week, have a desk full of horror facing me in the morning! My boss is liable to fire me for this! Oh well, if the bastard fires me tomorrow, most likely hire me

back pretty quick! He is a real ass sometimes! 😊

Michael

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

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Posts: 8426 | Location: South Carolina | Registered: 23 June 2008



jeffeosso
Moderator



posted 07 February 2010 19:08

[Hide Post](#)

MM
that boss of yours .. tell him 'i retire" the next time he gets mouthy ... just make certain you are alone, or people will think you are talking to yourself!

#dumptrump

opinions vary band of bubbas and STC hunting Club

Information on **Ammoguide** about the [416AR](#), [458AR](#), [470AR](#), [500AR](#)
[What is an AR round?](#) Case Drawings [416-458-470AR](#) and [500AR](#).
[476AR](#),
<http://www.weaponsmith.com>

Posts: **37020** | Location: **Conroe, TX** | Registered: **01 June 2002**



michael458
One of Us



posted 07 February 2010 19:22

[Hide Post](#)

Jeffe



Every time I look in the mirror at that bastard sometimes I just want to slap him!



If he gets mouthy with me I will fire him? Hmmm? or He fires me? Not sure, little confused now! Wait, he is me, or I am him, something like that?



Hammerheads yet? Be sure and give exact instructions of how you want it done! This will be fun I think! Might have to save one for the T'Rex?

And the other day I have been talking to myself, my wife pointed out!

Michael

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



MikeBurke
One of Us



posted 07 February 2010 19:36

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This week I plan to run a couple of more test that I ran on Saturday. Woody solids vs NF solids at 470 Nitro velocity. The test so far have been consistent in results so I will shoot a few more just for verification.

As soon as I confirm load data I am planning on testing the same bullets at around 1700 FPS to either prove or disspell the idea of a slower solid penetrates further.

Waiting on more Woody's, hopefully they will arrive on Monday.

After that I want to test Woodleigh softs at different velocities. I also want to try the NF cup point. It would seem to be the "perfect" buffalo bullet.

And all this from the guy who posted all you need to do is load some Woodleighs, practice, and go shoot an elephant.

Posts: **2939** | Registered: **26 March 2008**



RIP
one
of
us

posted 07 February 2010 20:56

[Hide Post](#)

Several years ago, I posted some testing in the IWBB.

I tested some CUP points from North Fork, compared them to the North Fork FP solid (an FN) and the North Fork soft point "SP", .458 450-grainers and .475/500-grainers.

There has been some variation between .474" and .475" in the beginning of the North Fork. Did they settle on .474"?

Anyhow, I found the CUP solid/semisolid to go about 75% to 80% as far as the FP FN-solid, and stayed just as straight. They obviously dump more energy per unit length of linear travel.

The North Fork "SP" softs went half as far as the "FP" solids, therefore dumping twice the energy per linear unit of travel.

The "CP" CUP points went half again as far as the softs.

On a scale of penetration:

FP: 100%

CP: 75%

SP: 50%

Two years ago I tested some prototype softs from Andre'. The pictures were posted before, but have been wiped out.

I propose to revive the IWBB by packing the 7.5" thick, flat-sided buckets with wetpack.

6" of newsprint, 1.5" of glossy paper "catalogs" or journals.

Leave out the boards between buckets.

Just wetpack.

10 buckets in a row on 10" centers. Ignore the air between the buckets and add up wetpack travel only, bucket walls as witness.

75" total of wetpack possible in 100" of IWBB.

Rhino boards could be inserted for something denser and tougher than plywood. Angled boards could go in the buckets and/or normal board placement behind each bucket. 😊

Or the IWBB could be rebuilt to have 8" compartment depth, and hold 12 buckets with no board between.

That would give 90" of wetpack in 96" of IWBB.

Just change the angle-iron bracket spacing.

The stainless steel square tubes and structural strength elements would stay the same:

1"-centers-pre-drilled holes make it a giant "Tinker Toy Erector Set." 😊

The wetpack should contain the explosive water force well, making the buckets less likely to shatter.

Warmer temperatures than below freezing will make the bucket walls less brittle, more "readable."

I busted ice on a pond/strip pit, and dipped water with 5 gallon buckets for this one:



Even though Andre's prototype 550-grain copper Cup Point for his 500 Jeffery were more undersized than the Barnes XLC .509"/570-grainer, they were more accurate.

The GSC .510"/570-grain FN was full diameter, and most accurate of all three.
I tested the GSC FN and Barnes XLC 570-grainers on live and dead bison.

The Andre' Cup Point 550-grainer was tested only in the IWBB, with its toughest format:

7.5" of water and 1.5" of plywood per compartment. 10 compartments of 10" depth each.

The Andre' Cup Point made it to the backside of the 5th compartment where exited the fifth waterbucket backside and dented deeply the backing boards, (3 "half-inch" plywood boards in a sandwich) then fell to the ground beneath the IWBB.

It stayed straight into the 5th bucket where the wobbling started.



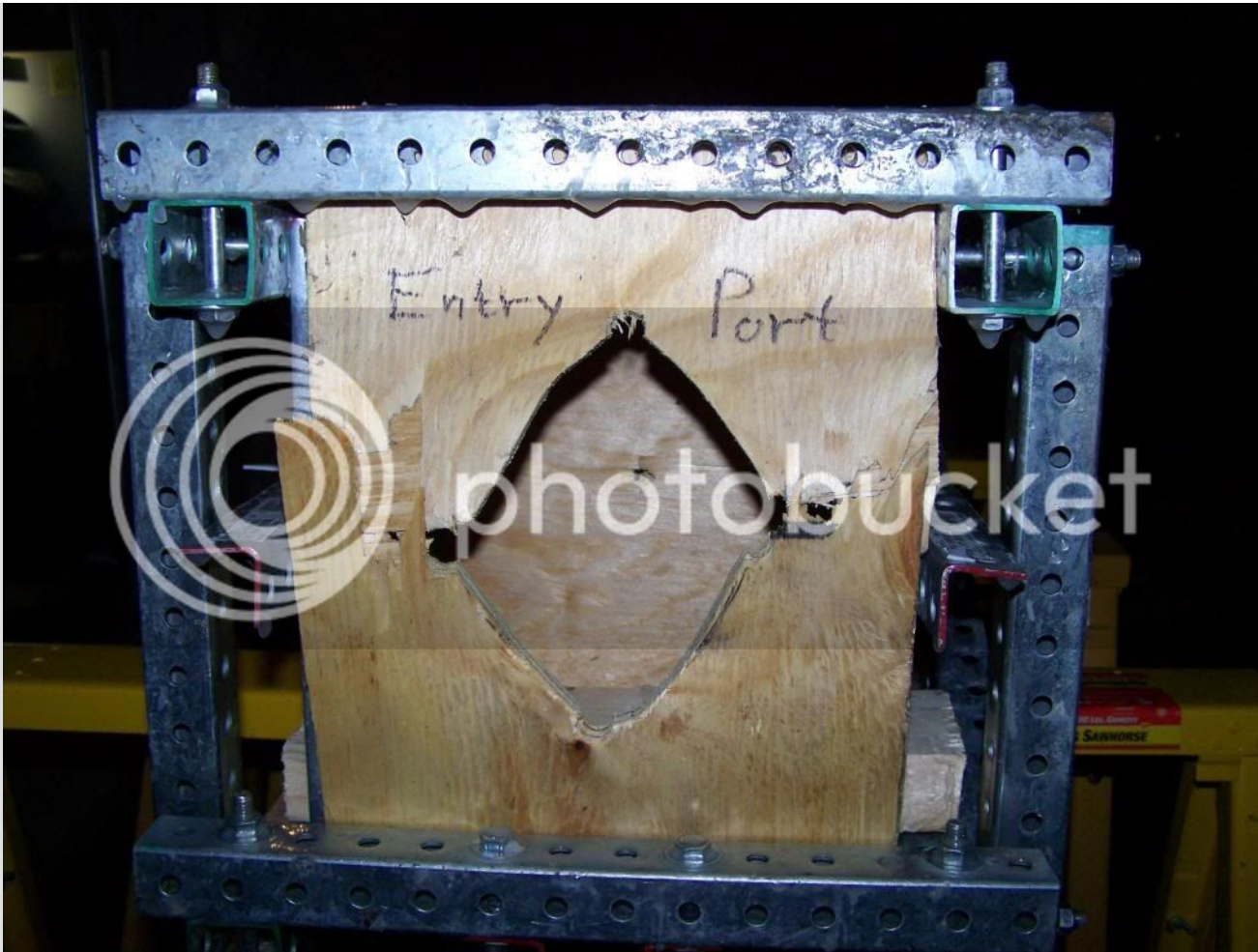




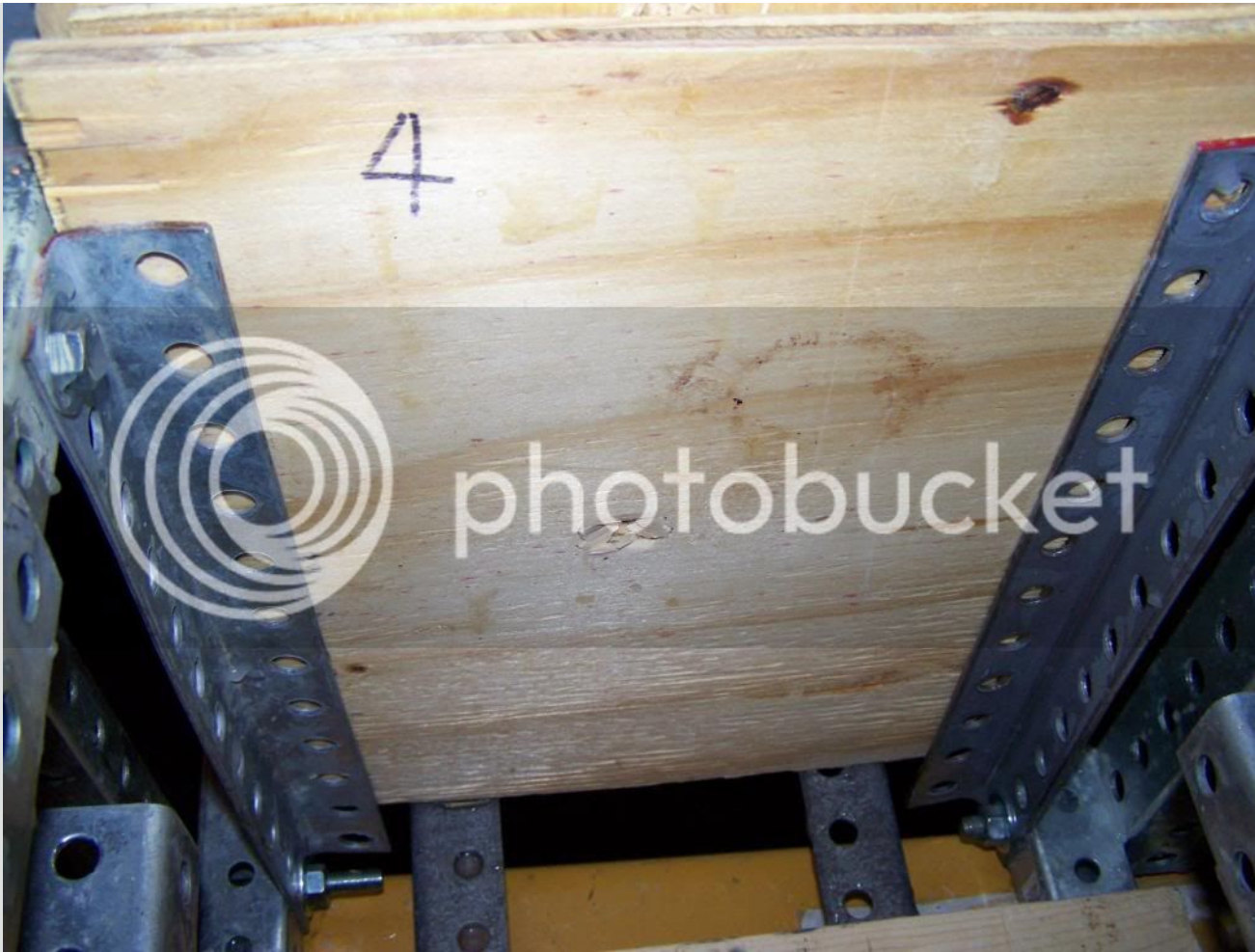
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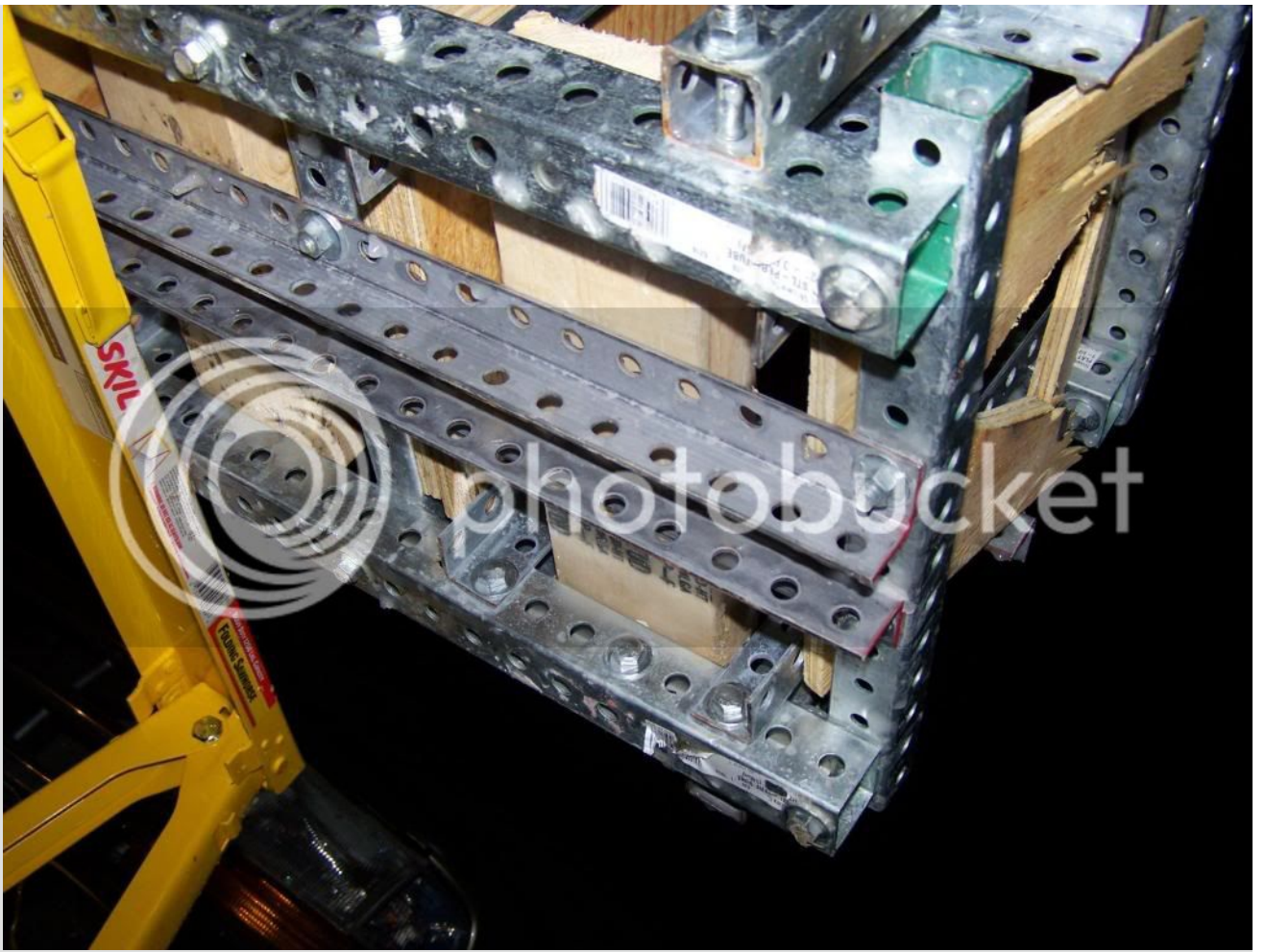
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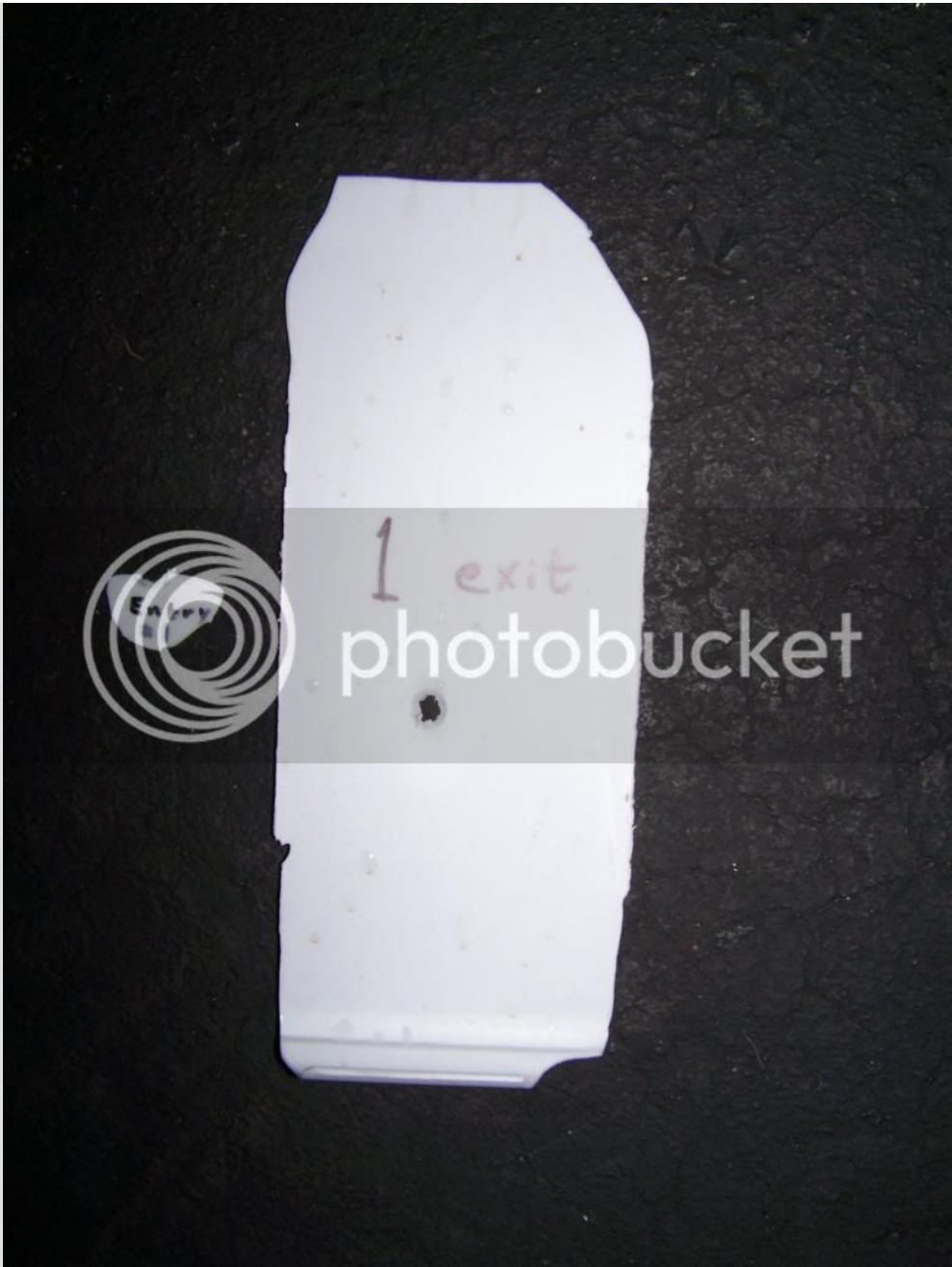














Three 5-gallon plastic waterbuckets end-to-end will stop almost any soft point. It might take a 50 BMG to get into the 4th bucket with a 570-grain monometal expander.
A Woodleigh .510/570-grainer at 3000 fps would vaporize inside the first bucket.

Just for stressing softpoints to see at what velocity they start opening up, and at what velocity they "over-expand," a simple waterbucket will do.

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Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



MikeBurke
One of Us



posted 07 February 2010 21:08

[Hide Post](#)

With my caliper the Northforks measure .4735"



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