

223 Remington Part 2

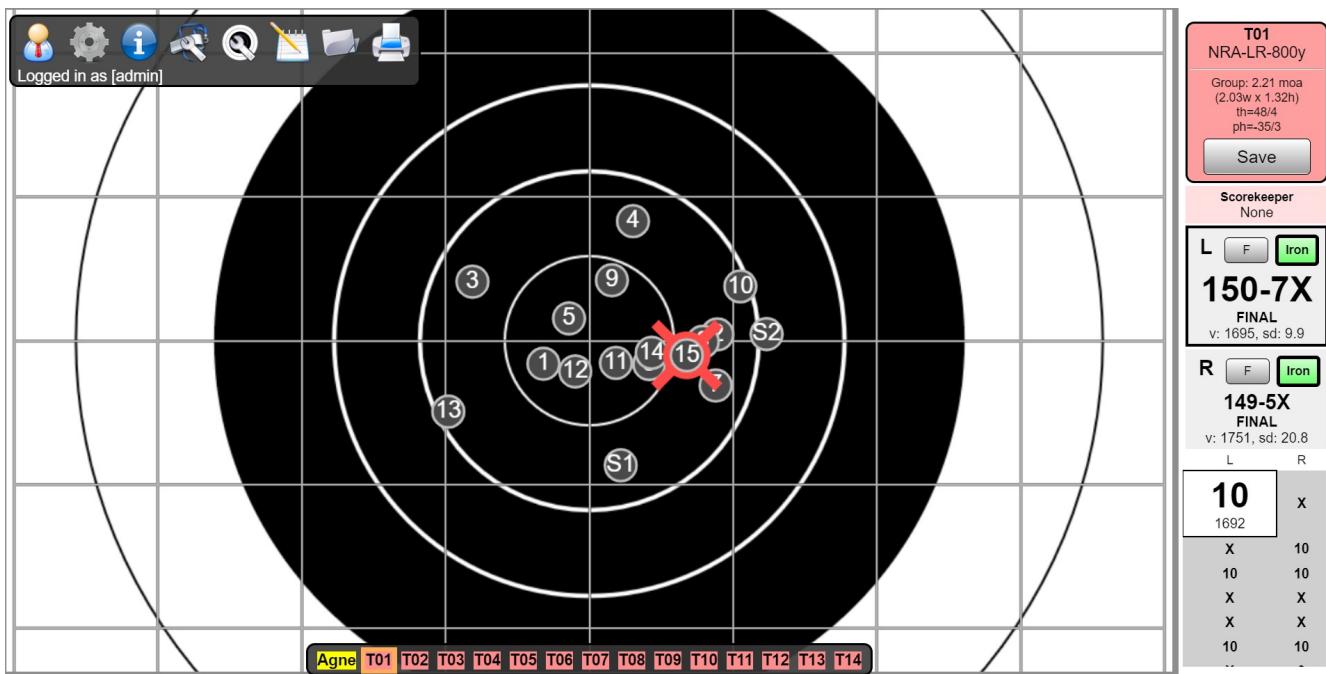
No worries at Long Range

In the first article on the 223 I had not shot it as much at 800-1000yd. At that time my load was questionable. After further shooting I wanted to give an update on the Long Range performance

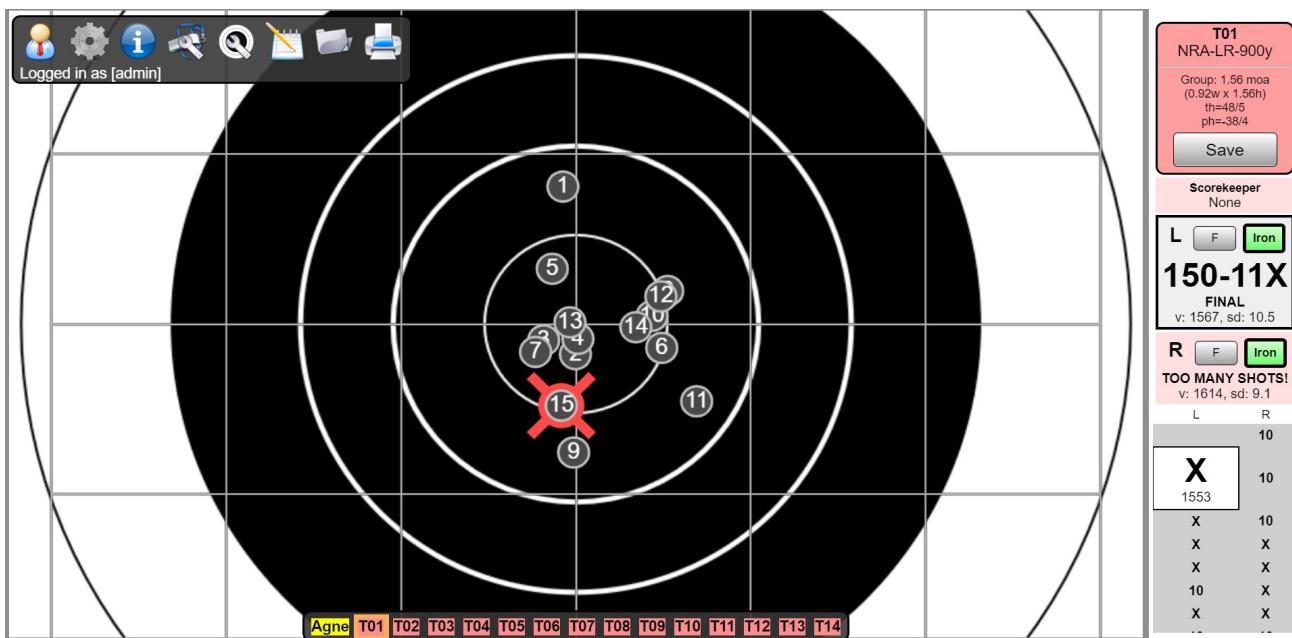
When the first article was written I had primarily shot the 90gr SMK and shot the Berger 90VLD some at 800 and beyond. At that time I was not as pleased with the 223 at 800-1000yd as I was my 308 Palma gun. It had shoot good at 800-900 but at the few times it shot 1000yd the score and vertical was not as good as my 308 palma gun. I was attributing this to the 223 but part of the issue was the two matches where it was being shot there were in April and October when the weather wasn't the greatest. The fullbore regional was moved into June in 2019 so with better weather the cartridge was able to show what it can do.

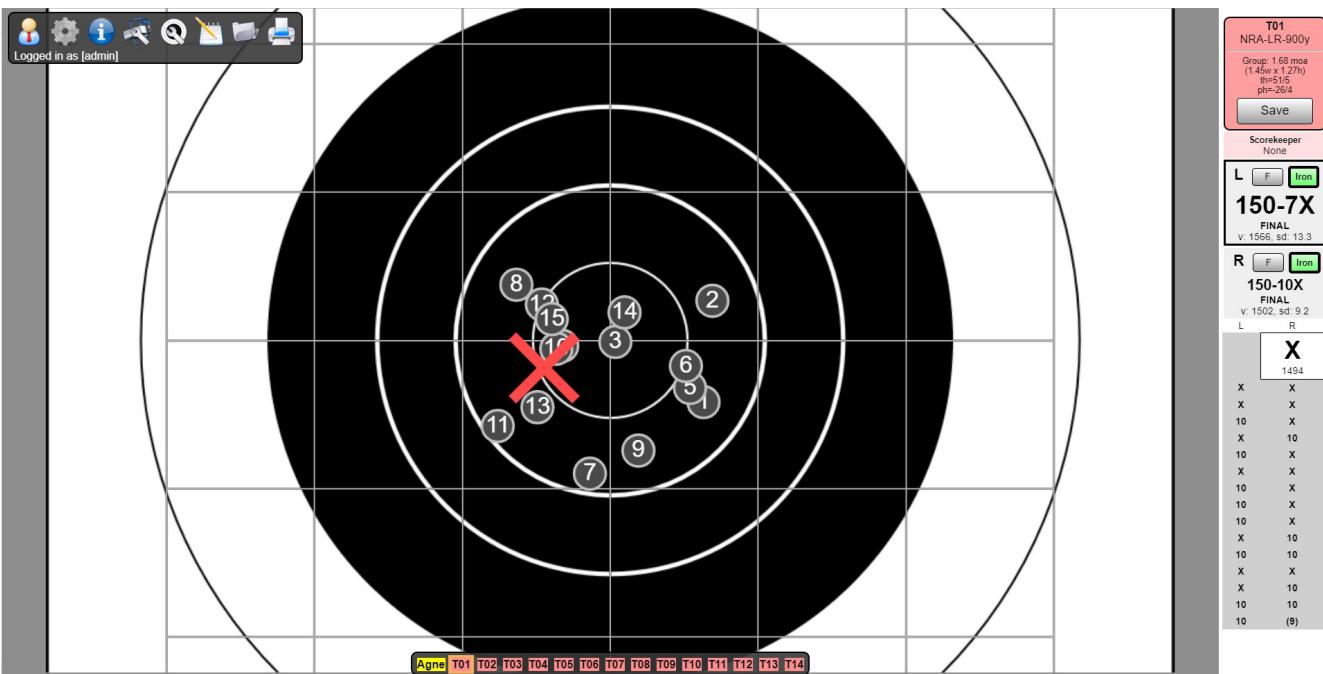
I also had made two changes. First, I switched from Varget to N140, while the varget load shot well the N140 load had better vertical and SD on the target. Second I removed the molly. With the limited case capacity of the 223 the molly was keeping it from getting pressure and thus speed.

Below is the 800yd target from June of 2020

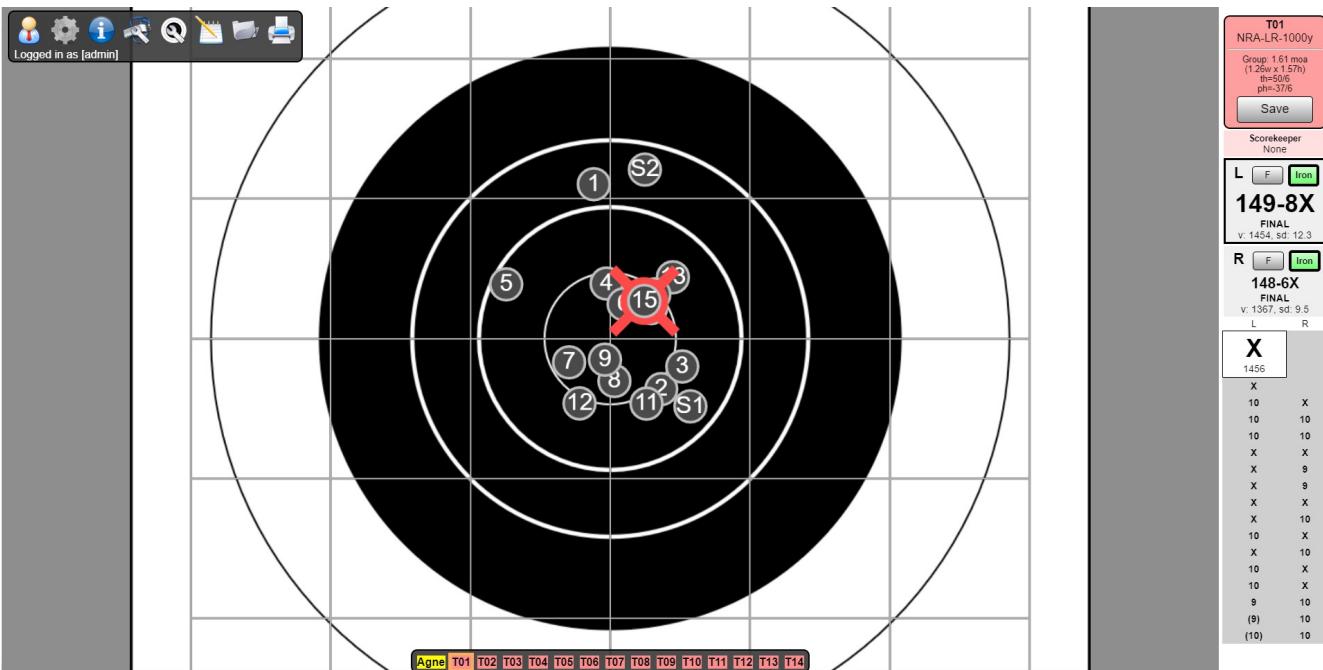


Here are the two 900yd targets





Here is the 1000yd target



1000yd I didn't call S1 low, and I dialed up and broke S2 good. I was afraid of dialing down

and taking a 9 or 8 out the bottom and not knowing where I was at. So I verified S2 with shot #1.

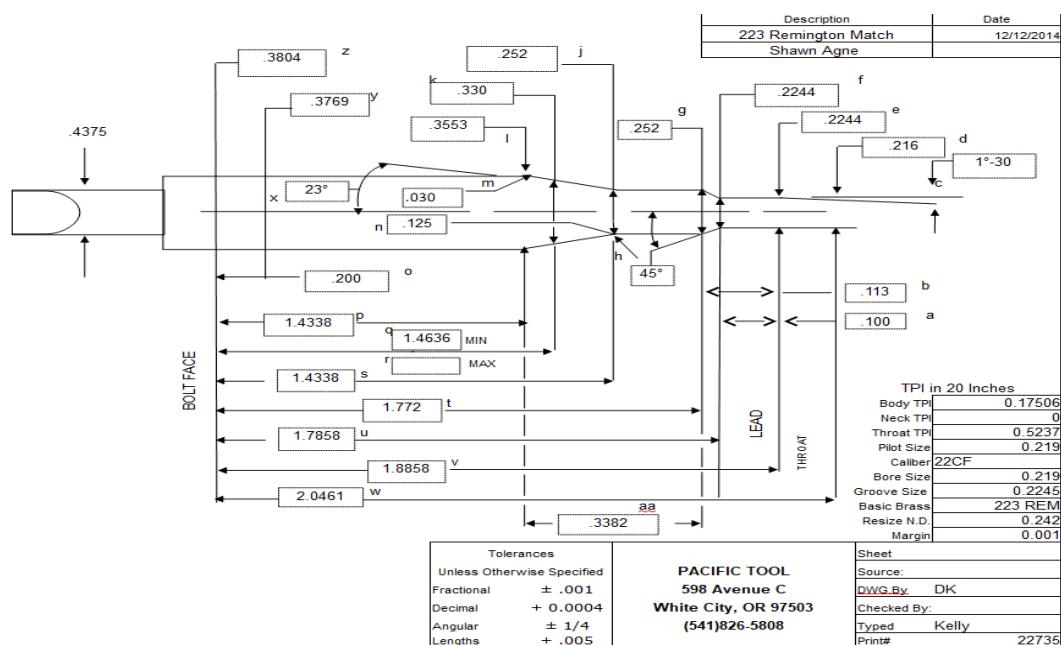
After that I dialed down and never touched the elevation.

As you can see the gun easily held X ring at all the yardlines. The second 900 and 1000yd target I was pair firing with a 308 shooter and as expected his SD was lower. BUT even with an SD of 12 at 1k, it was holding X ring elevation. Having seen this it completely sold me on the 223 for long range and even as a primary palma rifle. Now this opinion hasn't come about with just a single performance in one match here are the other reasons.

Bullets

Since the original article there have been several additional bullets come out that are very good choices for 1000yd. Hornady's 80gr ELD has been proven to shoot very well at 1k, with Bob Gill coming within 1 point of winning the Long Range National championship with that bullet. The Hornady 88gr ELD gives performance of the Berger 90gr VLD but at a much cheaper price. Nosler has an 85gr RDF which shows to be a very nice bullet ballistically. Then you have the much over-hyped new kid on the block, the Berger 85.5gr Hybrid.

Reamer



My reamer works well for me (print below) and is the reamer I will continue to use.

However others have played with reamers and have found with longer throats such as the F-T/R reamer with .169 freebore or even the new Ray Gross-Manson reamers they're able to get speeds around 3,100fps with the Berger 85.5. All of this research has helped further develop down range performance of the 223.

Powder

I started out with Varget, but have found N140 which is slightly quicker burning has shot better. N135 is showing to be an even better choice. It is quicker so requires less powder, but also is cooler burning providing better barrel life.

Statistically

Bullet	avg (fps)	low x (FPS)	high X (fps)	Range
155 Hyb	3100	3077	3123	46
90Md	2880	2861	2900	39
168 Hyb	2920	2905	2940	35
185 Hyb	2750	2733	2767	34
200x	2620	2604	2634	30

This is addressed in the article on vertical shrinkage but statistically the 223 should be the better palma rifle shooting a heavier bullet vs. an 308-155 gun. If you look at the chart below you will see what the speed range from the average velocity listed can be for the gun to statistically hold the X ring. With a velocity spread of 39 that means statistically a SD of 10 will allow a probability of 99.7% of your shots to be mid ring 10 or better. As long as your SD is better than 13, statistically 99.7% of your shots will be 10 ring or better at 1000yd. If you look at the 1000yd target the SD is 12.3 and the rifle is X ring. This is because other factors are involved and sometimes errors will cancel out. If the 85.5gr Berger is as good as advertised and it can be consistently ran at speeds of 3050-3100fps, then the statistics are even more in the 223 favor. There are ways of running 155's close to 3,300fps, which would give the 308s better ballistics but that is aypical.

Windage wise the 90VLD at that speed is shooting with to inside the 155,168, and 185 Hybrid and only .3 MOA outside of the 200gr 20X bullet. So ballistics are on the side of the 223 as far as windage. Also over a long match or a multi-day match the 223 is going to have less recoil, which means the shooters position will not get beaten down as much and the shooter is less likely to flinch.

Final Thoughts

My opinion now on the issue is, if you don't have a palma gun, build yourself a 223 first. Another VERY experienced palma shooter in the IN/KY area has also said he doesn't see any reason to shoot a 308 anymore. Recoil is on the side of the 223. Ballistics are on the side of the 223. Expense is on the side of the 223. The only thing holding it back is the years of experience shooting the 308 for palma and opinions are hard to change.

For long range service rifle, I still haven't shot the AR15 enough to give a good opinion and I don't have any AR10 experience to compare it to. But at this time I would tend to say for all the reasons I've mentioned the 223 in a Palma gun vs. the 308 would hold true in a service rifle also. I will say that N135 definitely helps out the AR rifles on the ballistics side as the pressure is getting built up quicker and there is thus more barrel length left for the bullet to accelerate in.