# Rebarreling A Remington Model Seven With A Shaw Barrel: Where Accuracy Meets Economy

By John Antanies

**The author tried the Rancho Safari 3D Shaggie Ghillie suit for calling coyotes. This photograph was taken in bright daylight, at a very close range.**

**This closeup of the Shaw barrel shows the deep and lustrous, but not shiny, blued finish.**

As much as we gun cranks love to buy new rifles, whether factory new or used, eventually we think about screwing on a custom barrel, either to reclaim accuracy lost, obtain accuracy expected but never realized, or perhaps just to shoot a different caliber. For example, there is no shortage of .308 Winchester rifles, but finding one chambered in .358 Winchester could be a problem. Or suppose you wanted a Remington Model Seven in .221 Fireball? Rebarreling solves both of these problems.

I recently decided to replace the barrel on my .308 Winchester Model Seven. The rifle, with its 18½" barrel, has never been a varmint rifle, and my intention was to simply replace the accuracy I had before — 1" to 1¼" groups at 100 yards. I have seen Shaw barrels advertised over the years, but never had ordered one. As wonderful as Shilen barrels are, I decided to try a barrel from E.R. Shaw, mostly because I wanted to use this rifle for a red stag hunt in Scotland and Shaw promised that they could have the rifle back to me in four weeks, leaving me a month to develop loads and get ready for the hunt. Also, I was a bit curious, and I thought readers might be as well, as to how these "econo" barrels would perform — after all, with the exception of the rebarreling options available with a Savage, it is difficult to think of a less expensive means to screw on a new barrel than E.R. Shaw.

After a few discussions with Carl Behling, the owner of E.R. Shaw, I sent the barreled action to his company with a note detailing what I wanted. Carl told me that they could match Remington factory contours, which I thought might eliminate the requirement to re-bed the rifle. Even though my 18½" inch barrel seemed to get impressive velocities, I opted for a 20" barrel. An additional 1½" seemed to hold more promise than problem. Besides, the rifle would still be as trim as before the change. The Remington Model Seven is one of the "shortest" short actions available. I ordered a chrome moly barrel as well.

As the month of August rolled by and no brown UPS truck showed up at my doorstep, I became increasingly nervous. I already had applied for my UK gun permit for the .308, and while I could use the estate rifle for my stag hunt, I really did not want to do that. Three weeks before I was to leave for my hunt, the barreled action arrived. I unwrapped the package and carefully in-

**This group was shot from the sitting position at a range of 200 yards, and measures 3/8 inch.**

spected the contents.

The bluing job was wonderful — deep and lustrous, but not shiny. I had stripped the screw heads on the scope base, and was pleased to see Shaw had replaced them. I mounted a 1.75-6x Leupold scope on the rifle after reattaching the stock, which did not appear to need any re-bedding. I checked by coating the barreled action with old lipstick, which works wonderfully as a marking agent. To do this, I coat the bottom of an action, then carefully insert it into the stock and tighten the action screws. Next, I loosen the action screws, take off the stock, and inspect the action. If the lipstick is not smeared evenly on the metal (it will have a "puckered" texture where it has contacted the stock), then the bedding needs work. If that is the case, these days I just rebed the whole action using Brownell's Steel Bed bedding compound. But I didn't have to do this; the barrel contour matched the original perfectly, at least for the first 1 1/2". Past this point the barrel was floated.

In .308 I prefer 150- or 165-grain bullets. Since I had a box of 165-grain Hornady BTSPs, I started with them. I have long preferred ball powders for the .308 for the same reason I prefer them for the .223 Remington — they meter easily, and when you shoot a lot of cartridges that is important. I started with Ramshot's TAC and Hodgdon's H335.

To say my initial results were disappointing would be an understatement; the rifle grouped anywhere from 2 to 3 inches. I tried other bullets, moving up to 180-grain weights and trying Sierras as well. I also included extruded powders such as Varget. Nothing seemed to work. Finally, in desperation, I removed the scope and checked the scope base mount screws ... the one that E.R. Shaw had so graciously fixed. It was loose. I banged my head on the loading bench three times for assuming the mount was firmly attached. I removed the mount, degreased the screws, and reattached the base. I headed back to the loading bench and worked up some new loads.

Voila! Group size shrank like the market cap of a dot com company. Sierra 165s were good, but Nosler 180-grain Ballistic Tips on top of 44.2 grains of Varget were outstanding.

After a few very sub-moa groups off the bench, I loaded up a couple of dozen cartridges and headed to the desert for some field practice. I put a cardboard box 200 yards away. The wind was blowing slightly to the right and varied as I squeezed off three shots from the sitting position with a tight sling. My first shot hit 2 inches to the right of center; the next two were dead on. I fired three more shots and could not believe my eyes when I saw that five of my six shots were right on the money, clumped into a 2" group, no less. Muzzle velocity was just a shade under 2,600 fps.

A few days later I headed back out for some more practice. That day I shot my best ever three-shot 200-yard group from the sitting position with a tight sling — an unbelievable 3/8" group. Of course, this was totally lucky, as this translates into a group in the 1s at 100 yards. My next step was to move out to 300 yards.

One of the virtues of Leupold Vari-X III scopes is the amount the Duplex reticle subtends from post to crosshair: It is always 8 inches at 300 yards when the scope is cranked to its maximum power (with the exception of the 6.5-20x). This is necessary because one of the attributes of this scope is its range estimation reticle — as the power ring is turned, one can estimate the range to a 16-inch deep target by bracketing the top of the lower vertical post to the crosshair intersection. In addition to the scope magnification, the power ring indicates the range at which this 16" subtension occurs. These numbers range from two to six, which correspond to ranges from 200 yards (at the lowest power) to 600 yards (at the highest power). At maximum power, the post to crosshair subtension is 16 inches at 600 yards, or 8 inches at 300 yards.

And therein lies the beauty of these scopes, because the world is full of cartridges that drop about 8 inches at 300 yards when zeroed at 200 yards. Most 55-grain .224 bullets at 3,200 fps drop 8 inches, as do most 180-grain bullets at 2,900 fps. My .308 Winchester, firing Nosler BTs at 2,600 fps, drops only 1 inch more, or 9 inches, at 300 yards. I can compensate for this by either zeroing for 220 yards (which results in an 8 inch drop at 300 yards) or by simply realizing the bullet strikes slightly lower than the post tip at 300 yards. Hitting a target at 300 yards is as simple as getting the range, cranking the scope to 6x (its maximum), and planting the post of the Duplex right where I want the bullet to hit. After a few practice sessions at 300 yards, I moved out to 400 yards, more out of curiosity than necessity. You see, in Scotland the head gamekeeper, or stalker, will not let you shoot much beyond 200 yards. After all, that is why it is called stalking.

At 400 yards from the sitting position with a tight sling, I had no trouble at all keeping my shots inside 4 inches, at least in calm conditions. In fact, the last time I shot this way at 400 yards I shot a three-shot group that measured less than 3 inches! After lots of practice, I can hit a clay pigeon nearly every time from a sitting position at 400 yards, providing the wind is not too strong (5 mph or less).

The results of my stag hunt are really outside the scope of **The VARMINT HUNTER Magazine®**, but let's just say the rifle performed flawlessly. I shot four stags and all succumbed rather quickly to the 180-

grain bullet. A few weeks later I took the rifle with me to Minnesota and shot a very nice nine point (Eastern count) whitetail buck from 40 yards. I had a chance to shoot a doe as well, but just as I was ready to pull the trigger on a nice fat one on the last day of the season she caught my scent and quickly bolted.

Following the close of the big game hunting season, I began to wring out this rifle at ranges beyond 400 yards. In a nutshell, it is quite simple to hit targets out to 600 yards. At 700 yards, the wind becomes such a factor that hitting a pie plate with any consistency is difficult with even a moderate wind. After all, the bullet drifts 4.6 inches for every 1 mph of wind at that range! In other words, a dead-center hold on a paper plate can blow completely off of the plate with a wind that is virtually undetectable. I love shooting one bullet each at 400, 500, 615, and 700 yards — it simply is great practice.

I also went back to the bench to see what kind of accuracy I could get out of other loads. I had no trouble getting Sierra and Hornady bullets to shoot sub-moa groups, but nothing to match the incredible accuracy of the 180-grain Nosler BT over 44.2 grains of Varget. Incidentally, I now use Varget in my .220 Swift, .308 Winchester, and the .300 SAUM. I use a Redding BR-30 to throw charges for the .308 and an RCBS automatic dispensing system for the other two cartridges, but I must say, the accuracy of the charges thrown with the Redding BR-30 is outstanding.

I love this "new" .308 Winchester so much it has become my constant companion for practice sessions. It now is my "walking varminter" not so much for the cartridge as for the rifle. Just yesterday I headed out to the desert for some rock shooting. I fired one shot each at 500, 615, and 700 yards, all from the sitting position with a tight sling. The bullet at 615 would have killed a prairie dog, while all three would have killed a deer.

How happy am I with this barrel? Very happy, to say the least. That is not to say I will never use other barrels, because I will. But super accurate barrels, such as Shilen, cost more than Shaw barrels, and may not fit the budget of every reader. For those who need to screw on another tube at an affordable price, Shaw seems to hold promise. And while one barrel is hardly statistically significant, remember that Norm Johnson wrote about Shaw barrels recently and was similarly impressed.

### Hunting with Rancho Safari and the "new" Model Seven

The Remington Model Seven is such a handy rifle that I decided to try using it on coyotes. In many parts of Arizona, setting up in desert flats results in fast shooting at short range, and I thought this rifle would be just about perfect (actually, I think a Remington Model Seven in .243 Winchester is a perfect close-in calling rifle). After spending the morning shooting (other rifles, different story), I came home, mowed the lawn, showered, and headed east of Phoenix. Chris Webb (Webb's Outfitting — www.webbsoutfitting.com) previously had shown me some varmint calling hot spots that I was itching to try.

The terrain I was hunting was flat and covered with cholla, prickly pear, organ pipe, and saguaro cacti. Desert flats are great to walk through — while there are plenty of cacti, there is lots of open, hard ground. The problem with hunting the flats is visibility — you just cannot see that far. Consequently, I set up on a small hill that gave me some visibility. It was about 45 minutes before sunset. I put on my Rancho Safari 3D Shaggie Ghillie suit and proceeded to call. I could hear some yipping coyotes, which quieted up when I called back. I let things go silent, and then called again about 15 minutes later. I was set up expecting them to come from my downwind side. I had hardly finished calling when a coyote appeared less than 15 yards from me. He stared at me. He knew something was not quite right, but he couldn't figure it out. It was unbelievable — I could almost touch him — and, sports fans, I was not using any scents at all. He started to yip and bark, then ran behind some prickly pear and continued to yip and bark. He was joined by another. I had my rifle trained into the clump of prickly pear, but just couldn't see any dogs. I called again, and they yipped and barked, but eventually they gave up and left me. I didn't get that coyote or his brother, but I was really impressed with this camouflage suit. I used the Rancho Safari 3D Shaggie Ghillie suit with gaiters, a knee-length jacket, a face mask, a hat, and a wrap for my rifle. When you put this suit on, you simply become invisible. Readers can contact Rancho Safari at their Web site (www.ranchosafari.com) or call them at 1 (800) 240-2094. How can you beat hiding from a coyote within 15 yards?

**The author used this rebarreled Rem-ington Model Seven on four stags.**

If readers have any comments about this article or otherwise want to correspond, they can contact the author via e-mail at: Antanies@citlink.net. Have fun shooting!