

American HUNTER

January 2021

KNOW-HOW

PARTNER UP
TO KILL MORE
COYOTES

USE HIGH-TECH
TO BAG HIGH-
STRUNG DUCKS

FOCUS ON
FOOD FOR LATE-
SEASON DEER

NRA Official Journal of the National Rifle Association

THE FLOODED TIMBER OF BEAVER DAM LAKE

Hunting in Nash
Buckingham's
Shoes on the
Mississippi Flyway

**WHY ONE DEER HUNTER
KNOWS THERE'S NO
PLACE LIKE KANSAS**

**IF YOU'VE NEVER
BEEN TO SPAIN
(YOU'LL KINDA LIKE
THE HUNTING THERE)**

HARDWARE

AllTerra Carbon Rifle

Weatherby 18i Waterfowler

Meopta Optika5 Rimfire Riflescope

Yamaha Wolverine RMAX2 XT-R

Great Layers for Cold Hunts



AllTerra Carbon Rifle

By Ron Spomer, Field Editor

The AllTerra Carbon bolt-action rifle is an object lesson in tolerance. Not the kind of tolerance in which you put up with bad service or noisy neighbors—AllTerra tolerance is the kind that results in $\frac{1}{4}$ MOA groups. Guaranteed.

The AllTerra carbon is a new push-feed, dual-lug, bolt-action centerfire rifle with a patented action. And that action, while appearing rather ordinary, is a big part of the reason why AllTerra Arms can offer one of the most unusual guarantees in the business: $\frac{1}{2}$ MOA with premium factory ammunition, $\frac{1}{4}$ MOA with AllTerra custom ammunition.

Even more astounding is AllTerra's 90-day guarantee: If after 90 days you aren't satisfied with your rifle, you can return it for another or your money back.

That's a surefire way to go bankrupt, unless you can deliver. And the 6.5 PRC Carbon rifle we tested gave us no reason to take advantage of AllTerra's unique return policy. This rig performs.



Working from a solid Stukey portable bench with Hornady 143-grain ELD-X factory loads, I fired six three-shot groups at a 100-yard target. They measured from .270 inch to .750 inch with an average muzzle velocity of 2978 fps. I then cleaned the barrel and loaded three rounds of AllTerra's custom ammo pushing the same 143-grain ELD-X bullets. The first three shots huddled .252 inch at an average velocity of 3154 fps. The next three clustered .232 inch. Zero that load to strike 2.5 inches high at 100 yards, and it doesn't drop 4 inches below point of aim until 340 yards.

Yes, to truly define any rifle's precision, one should test five-shot, if not 10-shot groups, but the Carbon is a 6.5-pound hunting rifle. The last time I needed to shoot 10 times at game was 1970 while trying to get a .22 Long Rifle to catch up to a fleeing jackrabbit. Any

centerfire that can put three consecutive shots inside a half-inch circle is putting venison in my backpack.

Consistent concentricity is the secret behind this accuracy. AllTerra builds this by holding tight tolerances in its patented action with double-ended bolt alignment plus double-tenon barrel seating. The action patent hinges on what AllTerra describes as an elliptical raceway. Instead of being uniformly rounded, each lug is slightly humped or coned to glide freely before rotating into tight contact with not just the usual locking recesses, but also the interior receiver ring impinging on the top of the lugs. This secures the bolt face up and down as well as fore and aft to hold each cartridge in perfect alignment to the center of the bore. There is no room for the slightest wobble or cant. You can see the top and bottom receiver ring contact areas as shiny spots atop each lug.

As if that square lockup weren't enough, at the rear of the bolt body is another slightly oversized section (.0025 inch wider) just in front of the integral bolt handle.

This secures another perfectly aligned, wiggle-free position that secures the back of the bolt as tightly and straight as do the lugs up front. The result is a bolt aligned perfectly straight in the receiver. But this precision alignment is only as good as the bore alignment itself. AllTerra uses match-grade, carbon-wrapped Proof Research barrels. They mate that precision barrel to their receivers with two barrel tenons sandwiching the 20-pitch threads used to screw the barrel to the receiver ring. The tolerance between tenons and mortises is held to .0005 inch. An oversized recoil lug is integral to the receiver, milled from the same block of steel.

AllTerra carries its fixation on concentricity to the firing pin. They machine an oversized, fluted, "floating" firing pin that is not stressed or pushed laterally by the tensioned coil spring driving it. The result

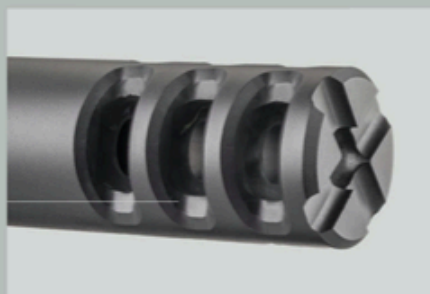
is straight, drag-free firing pin travel for fast, consistent lock time.

This kind of tight, benchrest-rifle tolerance is welcomed by target shooters, but not necessarily hunters. Dust, grass, snow and ice have a way of turning "tight" into "jammed," but not with the AllTerra action. Between the fore and aft lockup contact points, the bolt body is slightly undersized and widely fluted, providing plenty of room for debris. The self-scouring conical lugs slide freely and smoothly on the receiver rails, tightening and centering the bolt only when turned into lockup.

So as not to compromise all this precise concentricity, AllTerra nestles the barreled action in its hand-laid carbon stock via aluminum pillars at the tang and front receiver ring. The 1:8-inch-twist, 24-inch-long barrel with 2-inch muzzle brake floats. The stock's comb climbs dramatically toward the butt and rolls gently into a raised cheekpiece to provide a secure cheek weld. Recoil pushes the comb down and under your cheekbone rather than up and into it. The fore-end is flat with rounded edges turning into a bit of tumblehome that, along with molded stippling, provides good grip. A palm swell on the grip aids lateral stability.

One option that came with the rifle that I don't like is the front Picatinny rail with flush sling stud hole. A GrovTec QD push-button swivel mount attached quickly and securely to the hole, but the 3-inch rail fell right under my hand. The edges were sufficiently rounded to prevent tearing, but I'd prefer the simple flush stud hole for my style of hunting. Similarly, I could have done without the optional muzzle brake. It does an excellent job of moderating barrel flip and recoil, but the negative comb and ¼-inch buttpad seem more than sufficient for a light-kicking 6.5 PRC. The optional brake can be replaced with a knurled cap or, I assume, an aftermarket suppressor.

In keeping with its hunting theme, the Carbon covers the trigger and box magazine with a one-piece aluminum hinged floorplate. The magazine box is a generous 3 inches for fitting long, high-ballistic coefficient bullets like the 143-grain ELD-X without compromising powder space. The recessed bolt face includes dual plunger ejectors and a miniature M16-style extractor hook. A TriggerTech Primary trigger



broke at 2.5 pounds. Its integral two-position safety snapped off and on decisively but did not lock the bolt. Seating the fat 6.5 PRC cartridges through the tight loading port was a bit of a challenge, but once down and level, they fed smoothly and ejected strongly.

As delivered, the AllTerra Carbon came fitted with a Nightforce NX8 2.5X-20X-50mm F1 scope in Talley one-piece rings. I found this an odd choice for a 6-pound, 5-ounce "lightweight" rifle. The powerful zoom certainly offers the reach to take full advantage and then some of the 6.5 PRC's ballistic potential, but at 28.3 ounces this scope sinks lightweight right to the bottom of the pool. On the other hand, one could look at the minimum mass of the rifle as an opportunity to employ a top-drawer, long-range scope like this while keeping total weight well inside that of traditional hunting rifles. Not a bad option.

Having hunted extensively with a wide variety of ultralight rifles weighing 6 pounds scoped, slung and fully loaded, I wasn't looking forward to humping Idaho's deep canyons with this 8-pound, 13-ounce AllTerra/Nightforce setup. Nevertheless, I did it and can honestly report the exercise was not onerous. The rifle did not unduly impinge upon my neck or shoulders. I was able to spin it up and into action smoothly and quickly without fumbling or struggling. Yes, the big Nightforce did make the rifle a bit top heavy, but with its ZeroStop turret plus Mil-Radian ballistic reticle, I had in hand the tools and confidence to



Accuracy Results* AllTerra Carbon 6.5 PRC

Load	Weight (grs.)	Velocity (fps)	Group Size (inches)		
			Smallest	Average	Largest
Hornady ELD-X	143	2978	.270	.526	.783
AllTerra Custom Hornady ELD-X	143	3154	.236	.268	.30

* Outdoors | Sandbags | 100 Yards | 3-Shot Group

ALLTERRA CARBON

allterraarms.com

- **Type:** bolt-action centerfire rifle
- **Caliber:** 6.5 PRC (tested)
- **Barrel:** Proof Research; 24"; carbon-fiber-wrapped; 1:8" RH twist; free-floated
- **Magazine:** internal, hinged floorplate
- **Trigger:** Trigger Tech Primary; 2.5-lb. pull weight
- **Sights:** none, drilled and tapped for optics (optics-ready models available)
- **Safety:** two-position toggle
- **Stock:** AllTerra Carbon Hunter
- **Metal Finish:** Cerakote
- **Overall Length:** 45.25"
- **Weight:** 6.5 lbs.
- **MSRP:** \$5,825 (base price)

shoot cross-canyon to 600 yards if necessary. Alas, no bucks gave me the green light to shoot at any distance.

Were I gearing up for an extended mountain hunt, I'd fit the AllTerra Carbon with something like Leupold's 13-ounce VX3i 4.5X-14X-40mm on a 1-inch main tube. That should provide all the reach needed for targeting sheep, mule deer, even pronghorn and coyotes to 600 yards while keeping package weight a few ounces over 7 pounds. At that weight the AllTerra Carbon should really strut its stuff.

Carbon-wrapped barrels and stocks have become increasingly common in a number of custom and semi-custom rifles from boutique manufacturers. The AllTerra, however, is the only rifle I'm aware of with all the accuracy-enhancing features outlined here. At roughly \$5,800 it's no impulse buy, but for a serious hunter who appreciates the ultimate in field accuracy wrapped in a practical carrying package, the AllTerra may be unique. And you have 90 days to test-drive it, risk-free. *dh*