The Original Model 89 prototype Part One

The genesis in 2007 for Big Horn Armory was to create a lever gun chambered in 500 S&W Magnum. The idea being that the 500 S&W was a great revolver cartridge and helped Smith & Wesson reclaim the most powerful handgun in the world title, but it was a gun that few people cared to shoot. The cartridge had too much power for a revolver, regardless of how heavy they made the gun. It begged for chambering in a long gun.

A number of companies had been working on this problem. Since the 500 S&W is a rimmed cartridge, the obvious choice for a long gun platform is the lever gun. Lever guns are uniquely suited to rimmed cartridges because of their tube magazines where a rimmed cartridge is an advantage, rather than the hindrance the rim causes in a box magazine.

These companies had tried chambering Henry's and Marlin's in 500 S&W. While they could be made to cycle, the design and metallurgy of these guns denied the use of the more powerful 500 S&W loadings.

Enter Big Horn Armory. BHA originally tried to use Marlin actions. We quickly discovered that existing actions would not hold up to the maximum 500 S&W pressure of 60,000 psi. They are generally limited to about 36,000 psi.

After bending a few of these, we thought about increasing the metal strength of the bolt and locking bolt. We discovered that the contact area between the bolt and locking bolt on the Marlin's was just too small to work with the higher pressures of the 500 S&W.



Note the fancy forend tip on this photo of testing the Marlin action.

At this point Big Horn Armory was left with a choice, abandon the idea of using existing lever actions for the 500 S&W or design a new action. BHA resolved to create a new action capable of handling the 60,000 psi pressure of the 500 S&W Magnum.

Continued in Part One and a Half.