bcc: E. S. McCawley
J. D. Hunter

July 29, 1963

Mr. Pierre F. Hartshorne
249 El Conejo
Los Alamos, New Mexico

Dear Mr. Hartshorne:

Thank you for your reply concerning the Model XP-100 Pistol, Serial No. 1411. I think the best approach to the answering of your letter would be to take each paragraph in its proper sequence.

In the third paragraph of your letter you mentioned the reduction of muzzle velocity in the barrel when using a standard 222 Remington case. Actually, there is more variation in velocity up or down affected by the bore bullet fit than there would be in one or two inches of barrel length. In some instances if you followed the actual curves of the 222 cartridge you would find that the velocity would drop somewhere in the neighborhood of between 2000 fps and 2300 fps, and depending upon the type of bullet you use, its dimensions and the bore dimensions, this velocity could vary considerably. So the actual measurement would have to be made with the proper combinations and all we can do to answer your question is to speak of the averages of what we might expect. Several of our customers have had the same idea as you, one including a friend, Charles Askins, a famous sports writer, all of whom have been very disappointed in making this alteration. You probably remember that I had mentioned that the 221 had been designed specifically for the short 10 1/2" barrel.

In your fifth paragraph you mention the sight radius and ask the question how to fasten the rear sight to the rear receiver ring with only one screw. Not being in the sight business we are in hopes that some of the sight manufacturers will realize the need for providing more versatile sights for potential customers and they probably will produce such a combination for this pistol. One combination which I have proposed is a continuous rib device that mounts on top of the present rib and extends clear back over the receiver breech ring. An adjustable micrometer type open sight then can be designed to mount on this rib and any sight radius can be accomplished. For those who shoot better with a short sight radius one could use such a sight with a radius shorter than the one we

have on the present gun. Others who like a long sight radius could extend the bar and sleeve back and beyond the rear receiver breech ring. I am sure that in the near future you will find such devices will be encouraged and possibly manufactured by sight manufacturers and then all of the individuals and their peculiarities can be accommodated.

In your next paragraph you seem to question the authenticity of the target that was shown in the Du Pont Magazine. I am not ashamed of that target; I thought it was a pretty good one. However, there have been some that were exceptionally better. Les Bowman, for example, has fired five shots at 100 yds. under .400". Another shooter has commented that he has several groups under .5". We have had some in the factory here - machine rest groups - well under one half inch. Our standards with this pistol are well within the limits of our varmint rifles and in many cases will outshoot the varmint rifle at 100 yds. The reason we did not show some of these real tight groups in the Du Pont magazine is that we felt we should show an average group rather than a very excellent tight group. I can't imagine your problem with misalignment of the rear sight. Perhaps you are right and I hesitate to comment without actually seeing your pistol. If the studs are not in alignment the rib would be very much out of line. I feel that perhaps there might be some incorrect mounting of the rear sight. You are right that of course this pistol cannot be fired rapidly but does get quite hot in the event of continued shooting of 20 to 40 rounds.

In explaining the function of the rib you will find that the rib contains elongated holes or recesses that float around the stud. Under compression of approximately .005" the sights will rest directly upon the top of these studs. You are probably well aware of the creep effect of any of the plastic materials when under continuous load; therefore, you can imagine that if the rib is .005" thicker than the height of the stud that upon screwing a sight or rib screws down on the stud a creep effect will take place and the stud will eventually support the sight or the screw directly. Any expansion or contraction of the barrel can then take place without interference of the nylon rib because of the elongated slot.

I trust by this time you have had time to make a fair comparison between the 221 and the Rem Jet in the Smith & Wesson and others. I would be interested in your reaction.

The "Bull Pup" would probably be a hot one and the idea has presented itself many times over the years. I doubt that this would sell in volume but certainly would be interesting for some.

Thanks, Mr. Hartshorne, for your fine letter. Have fun shooting your XP-100.

Very truly yours

W. E. Leek, Mgr. Firearms Design & Devel.
Ilion Research Division

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