Remington Confidential

Memorandum

DATE: May 20, 1999

TO: Jay M. Bunting
Tim J. McCormick

FROM: Dale R. Danner

SUBJ: M/700 Titanium Investment Cast Receivers

Gentlemen,

Several months ago Jay Bunting and I had a brief discussion around lightweight centerfire rifle products and the acquisition of Ultra Lite Arms by Colt Manufacturing. This in turn caused me to again see if we could develop a lower cost version of the titanium cast M/700 receiver that was developed in 1998 by Glen Sietsema as a research endeavor here in Elizabethtown.

The research program was focused principally on demonstrating that there was no strength or galling issues with the Titanium alloy (Ti-6-4 – Titanium 6% Aluminum 4% Vanadium) with little focus paid to production cost. This effort was completed successfully and a final report on that effort is available.

The principle obstacle to transitioning the concept to a product was the high cost of finish machining and specifically the finish machining required on the interior of the receiver. Wire EDM was the method of choice during the research effort with costs approaching $500 / piece. Through recent discussions with the casting vendor a broaching house has been identified with the background and capability required to broach titanium. To broach this investment casting alterations will be required to the mold. Given that the mold will have to be changed anyway I would propose further altering the exterior dimensions of the receiver to yield a "very near" netshaped part.

The resultant incoming receiver blank will require the following finish machine operations to complete the receiver.

- Feed Well Cuts / Magazine Opening (BDL or DM dependent)
- Fire Control Detail (including the cross pins)
- Bolt Stop Release Slot
- Drill and Tap all Threaded Holes
- Squaring and Thread Cut for the Barrel
- Roll Mark / Engrave / Serialize
- Minor Exterior Cleanup and Polish