

July 1, 1993

TO: K.W. Soucy  
FROM: W.A. Warren, Jr.

PROGRESS REPORT June 1993

M700 VS. Long Action "Sendero Special"

Samples for the second Trial and Pilot test (these are the requested .300 Win. Mag.) were obtained by the Test Lab on 6-30-93. A minor design improvement to the magazine follower, the need for which was identified in the first T&P, was transmitted the week of 6-8-93.

I estimate my work on the 1993 version as now more than 95% complete and will follow-up any technical issues thru successful 300 Win. Mag. T&P testing.

1994 Modification: fluted barrel (PI-2 5-18-93)

This adds six cut longitudinal flutes in the barrel. The purpose of these is to reduce weight and enhance appearance. This will be done on the "Sendero Special" in a way that maintains the ultimate strength of the current Magnum barrel; flute depth will not extend below the current Magnum profile. Maximum weight reduction can be obtained by "contouring" flute depth (reducing the depth of cut as it extends toward the receiver) using an existing vertical spindle CNC mill with workpiece rotation. ATO Rifle Engineering is making up a catalog sample to this specification with the new crown.

BASIC RESEARCH-RELEASE MECHANISMS

Measurement Apparatus: All but one of the major or long lead time purchased components have arrived. The force transducer system was due June 8. Vendor has now indicated delivery will be July 9.

<u>Status:</u>	<u>Percent complete</u>
o specifying and purchasing major components	80
o purchasing, designing and fabricating small components	10
o learning the operation and setup of the force transducer	0
o " " " " " " " displacement "	5
o linking above to the Tektronics transient data capture device	10
o learning the programming and operation of the motor-driven motion control system	5
o integrating the components and debugging their operation	0

NBAR: I have completed study of a two-volume reference on analysis of bolt action rifle actions. This has also been a useful source for identifying patents dealing with bolt action fire controls. I have requested copies of several of these for review.

DESIGN-RELATED

On an ongoing basis, I am assisting M. Keeney with his NBAR process-design integration program.

SAFETY

R&D safety committee: 17 hours. Current committee members have recommended that the one year term of service be shortened. The benefit will be to provide a more equal balance between new ideas and energy vs. experience. I have been asked to propose a charter for this committee.

TRAINING

This month I have completed taking 24 hours of classroom instruction on Geometric Dimensioning and Tolerancing.

END