## MEMORANDUM

**DATE:** August 26, 1998

**TO:** Jim Rabbia **FROM:** Mike Santillo

**RE:** M/710 Rev 2 High Spot Estimate Review meeting -

8/26/98

CC: J Mead, D. Diaz, M. Keeney, J. Swanson, W. Zarnoch, M. LeMay, J. Parkhurst 3, 81

The following is a synopsis of the brainstorming meeting held on August 25, 1998, in High premise of the meeting was to review the original high-spotestimate done by Ilion on 6/9/98, identify potential cost savings and to review the proposed design concept for changes. The goal is to lower the manufacturing cost to the target range of \$100-\$106. Below are the items discussed with significant points pertaining to each. Each term is then summarized with a path forward.

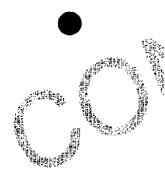
#### **Barrel - Summary**

- Cold Forge of rough chamber and/or locking lugs as a possibility
- Concern expressed around selective Heat Treat of breech end Needs Clarification
- Defined secondary machining of locking notches
- Elimination of threads @ hub end Press fit with receiver
- No spin polish matte finish (Express Finish)
- No finish heading Interchangeable bolts @ Ass'y
- Mayfield to quote button rifling & machining for product differentiation

<u>Path Forward:</u> Ilion is to provide a rev 2 high spot estimate to machine the barrel complete with the afore mentioned design changes, including capital money required

## Receiver - Summary

- Alter design to round receiver with straight thru-hole to accommodate use of 1010/1018 steel tubing w/ .005 total tolerance I.D. - No Tang
- C'bore breech end to press fit on barrel
- Possibility of need for secondary staking of receiver to barrel To be determined by design acceptance testing
- Defined secondary machining operations to be performed:
  - Magazine well opening
  - Ejection Port same as M/7600
  - Cam Screw Hole



Scope Holes

#### Receiver (continued)

- Discussed alternate processing Laser lower cycle times, cleaner cuts, etc.
- Integration of tang with receiver pinned/screwed to receiver, combine with stock mold
- No polish matte finish
- · No heat treat

**Path Forward:** Ilion is to provide a rev. 2 high spot estimate to machine the receiver complete with the afore mentioned design changes, including capital money required.

## Bolt Assembly - 2 Piece Bolt Body Ass'y - Summary

#### **Bolt Plug**

- Synthetic mold Textured for matte finish
- Need to evaluate strength of Ilion Task Force samples with intentional abuse testing. Dave Findlay
- Need qualification to bolt body ass'y

Path Forward: Ilion is to provide test results for determine if synthetics can withstand pressures in order to determine feasibility

#### **Bolt Body**

- Design to be une diameter with straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing Notice at the straight this hole to accommodate use of 1010 steel tubing 
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- Defined secondary machining of cam cut, cocking notch & bolt plug recess
- No polish matte finish

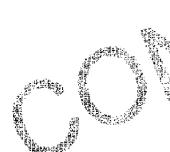
#### <u>Bolt Head</u>

- Sala lock-up system
- Defined secondary machining of lugs integrating 45° camming surface
- Feasibility of Seiko extraction system
- Possibility of all bolt heads machined to magnum diameter & inserted with snap spring for regular calibers - Only used in conjunction with Seiko extraction system
- Need qualification to bolt body ass'y Press fit & pinned

#### **Bolt Handle**

- Screw machine part vs. Casting
- Method of attachment to bolt body ass'y dependent upon handle type and design

**Path Forward:** Hion is to provide a rev. 2 high spot estimate to machine and assemble the bolt assembly complete with the screw machined bolt handle screwed to the bolt body assembly, including capital money required



#### Fire Control - Summary

- Rev 1 high spot estimated cost increase due to tight tolerancing, nickel-teflon coating of components, MIM vs. PM components
- Possible alternatives include Current M/700, M/700 synthetic housing (1 or 2 piece) with current internal components, Complete re-design (DW2)
- Integrate with tang & attach to receiver To be determined by design
- 3-position safety using cantilever spring, no detents

<u>Path Forward:</u> Ilion is to provide a rev 2 high spot estimate of a synthetic housing with current components integrating the tang, including capital money required.

#### **Stock - Summary**

- Integrate tang/fire control ass'y To be determined by design
- Integrate tang & Fire Control To be determined by design
- Use of alternate material
- Butt Plate vs. Recoil Pad
  - Butt Plate for all ?
  - Recoil pad for use on magnims only?
  - Can mold be adapted to provide both ? Need definition

Path Forward: Hon is to provide answers as to the ability of incorporating proposed design changes, including capital money required.

# Magazine Box - Summary

- Current Plan is to add-use the M/7600 with possible replacement by Met-Gar in the future
- Integrate box to stock as in XP-100 Linkage system
- 3-position safety using cantilever spring, no detents

### Sights - Summary

- Current Plan is to add-use the M/700 with future replacement by synthetic components
- Use Savage system as a guide for synthetics

Path Forward: E'town is to provide direction for the sight system.

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