

Expenditure and Force

"Chart XVI shows the Machine Development expenditure forecast, divided between Research and Development and Assistance to Production.

"Chart XVII shows the current technical force by location. Support personnel such as designers and draftsmen are assigned as required and are not included in these numbers.

Allocation of Resources

"The distribution of resources by product line (Chart XVIII) shows continued strong support in shotshell. There is increased emphasis in center fire because of the cost improvement opportunity which exists in that manufacturing operation. The forecasted 1981 budget allocation is essentially in this same ratio. 83

Overview of Machine Development Programs

"A brief overview of essentially all equipment development programs follows.

"First are the shotshell programs in the Commitments category (Chart XIX).

"At the top of the list is a study which funds the technical manpower required to monitor shotshell improvement activities and help develop a modernization plan. It is the basis for all shotshell programs which follow.

"The next four programs are significant because of the potential for large cost reductions.

"The uni-body process has already been reviewed, and I would like to point out that we have the equivalent of three people assigned full time to this work. The forecasted 1981 effort will be reduced as the first full-scale machine system gets phased into production.

"Shotshell cap assembly and primer assembly are both high cost operations which offer attractive improvement possibilities. The two programs shown, shotshell assembly modernization and primer assembly mechanization, are directed at these areas. Effort during 1980, however, is limited because of priority programs such as the paper-covered flash hole primer, new uni-body process, 21MM seismic and a few others.

"We are planning to increase effort on both programs in 1981, as manpower assigned to other priority work becomes available.