



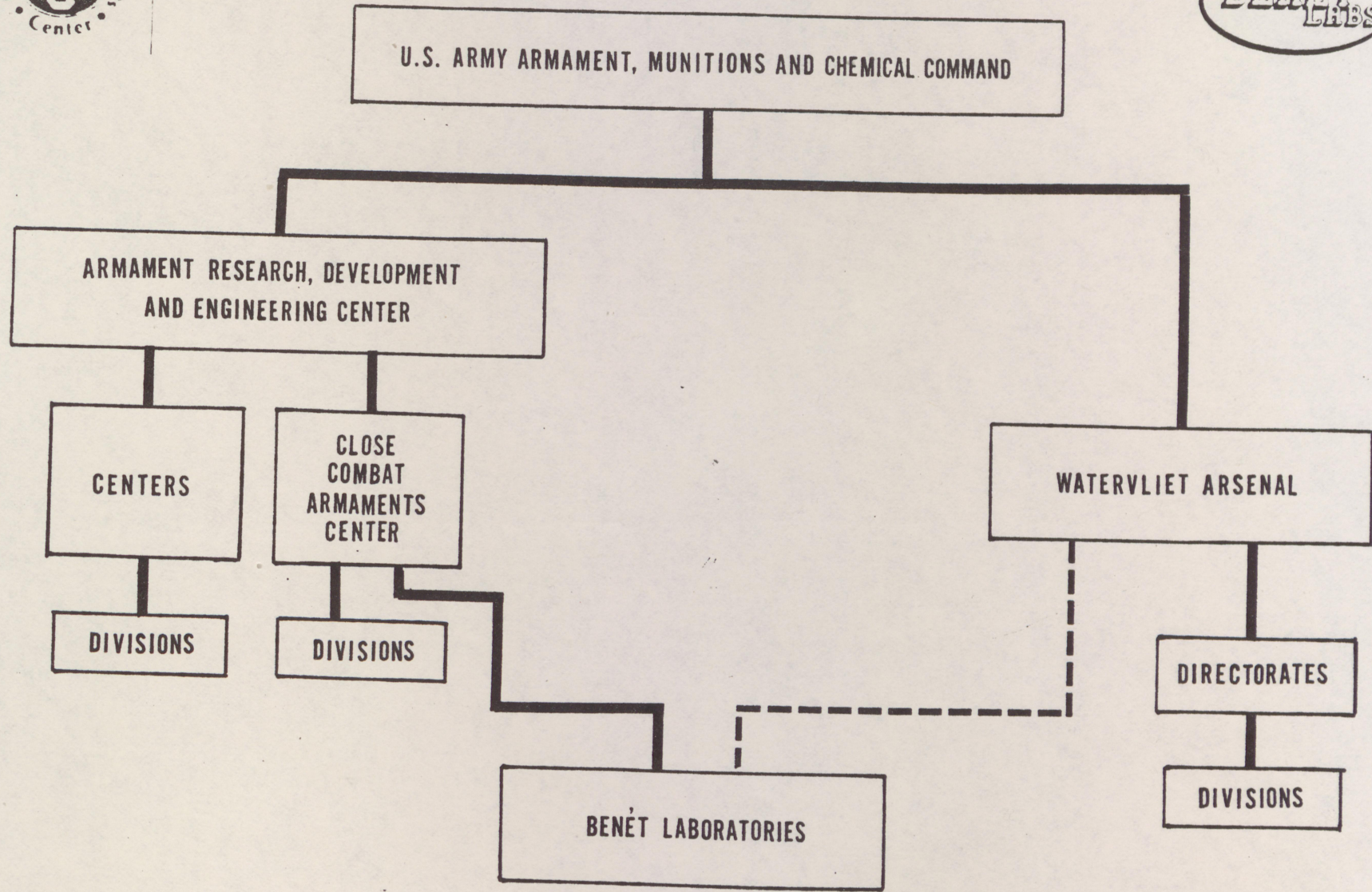


**BENET LABORATORIES**

**A DIVISION OF**

**CLOSE COMBAT ARMAMENTS CENTER**

**US ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER**





BENET LABORATORIES

MISSION & FUNCTIONS



<u>MISSION ITEMS</u>	<u>APPLIED RESEARCH</u>	<u>CONCEPTUAL DEVELOPMENT</u>	<u>PRODUCIBILITY ENGINEERING</u>	<u>ENGINEERING SUPPORT TO PRODUCTION</u>	<u>ENGINEERING SUPPORT TO FIELD</u>
TANK CANNON/MOUNTS/RECOIL MECHS	UNIQUE	UNIQUE	UNIQUE	YES	YES
TANK TURRET COMPONENTS		YES	YES	YES	YES
ARTILLERY CANNON	UNIQUE	UNIQUE	UNIQUE	YES	YES
MORTARS	UNIQUE	UNIQUE	UNIQUE	YES	YES
RECOILLESS RIFLES	UNIQUE	UNIQUE	UNIQUE	YES	YES
TANK AUTOLOADERS	UNIQUE	UNIQUE	TBD	TBD	TBD

"UNIQUE" - DENOTES UNIQUE FUNCTION WITHIN ARMY

"YES" - DENOTES SHARED FUNCTION

"TBD" - DENOTES TO BE DETERMINED

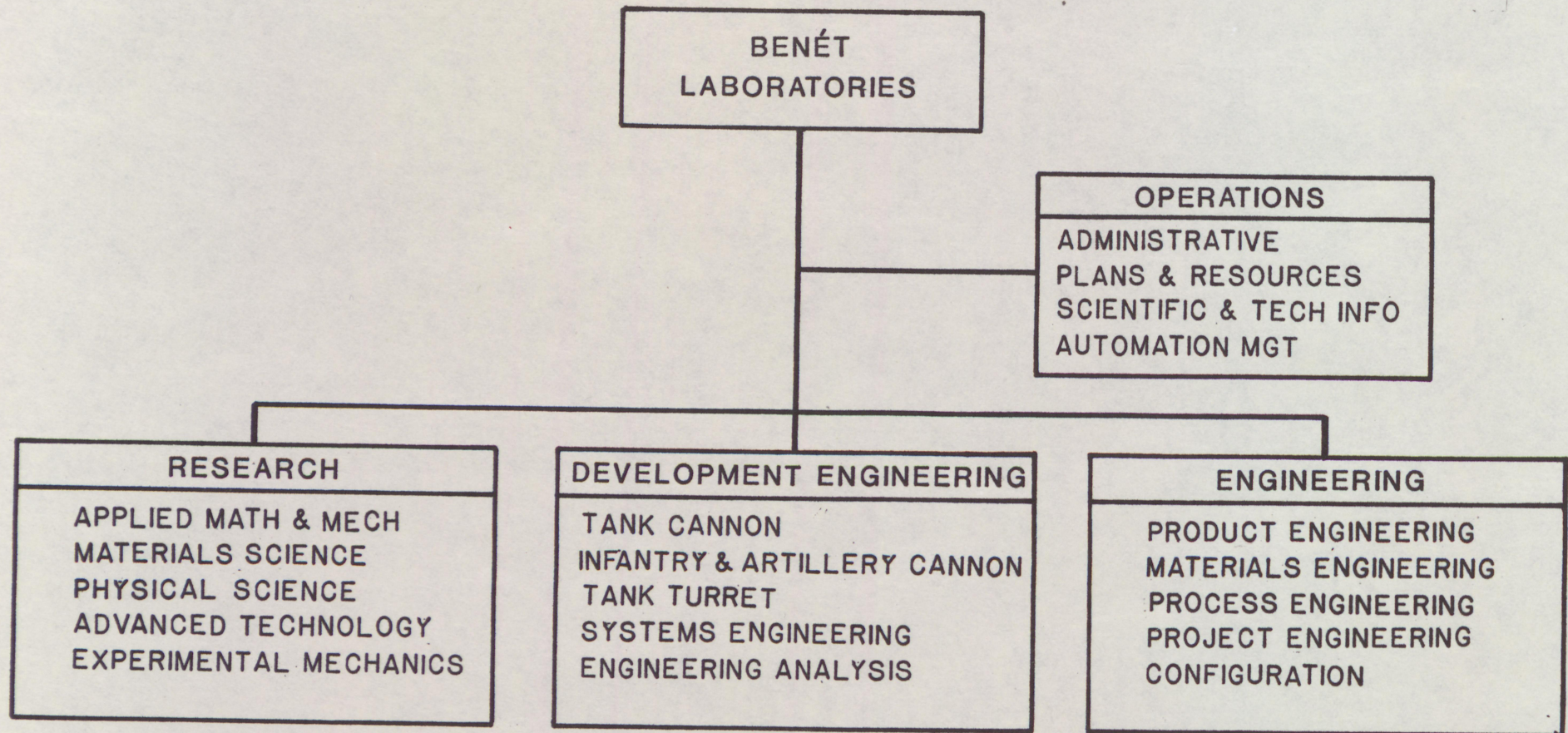


BENET LABORATORIES



UNIQUE TALENTS/CAPABILITIES

- ONLY LARGE CALIBER CANNON GOVERNMENT EXPERTISE IN THE USA.
- GUARANTEED PRODUCIBILITY OF DESIGN BY COLOCATION AND DAILY INTERACTION WITH THE ONLY CANNON MANUFACTURER.
- ONLY TANK AUTOLOADER GOVERNMENT EXPERTISE IN THE USA.
- ONLY FULL SCALE FIRING SIMULATION CAPABILITY IN THE FREE WORLD.
- UNIQUE ABILITY TO RAPIDLY DIAGNOSE AND CORRECT FIELD PROBLEMS BY JOINT PARTICIPATION OF RESEARCH, DESIGN AND ENGINEERING TALENTS.
- SUCCESSFUL TRACK RECORD OF APPLICATION OF RESEARCH TECHNOLOGY TO MEET CRITICAL ARMY NEEDS.



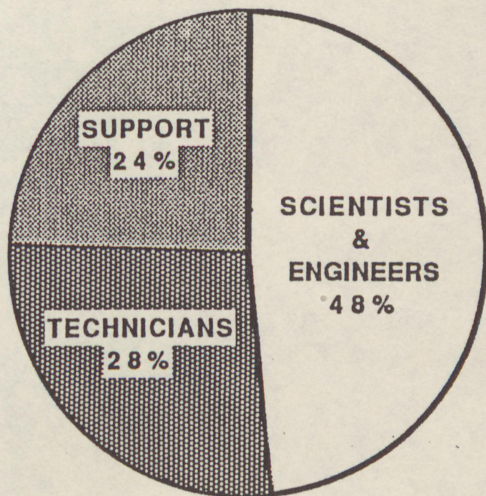


BENET LABORATORIES

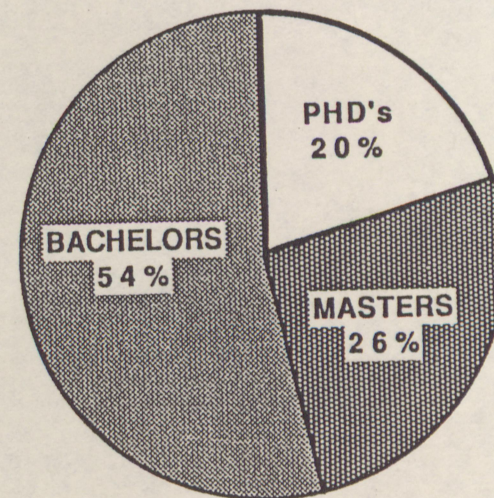


TOTAL STAFFING = 325

SKILL MIX

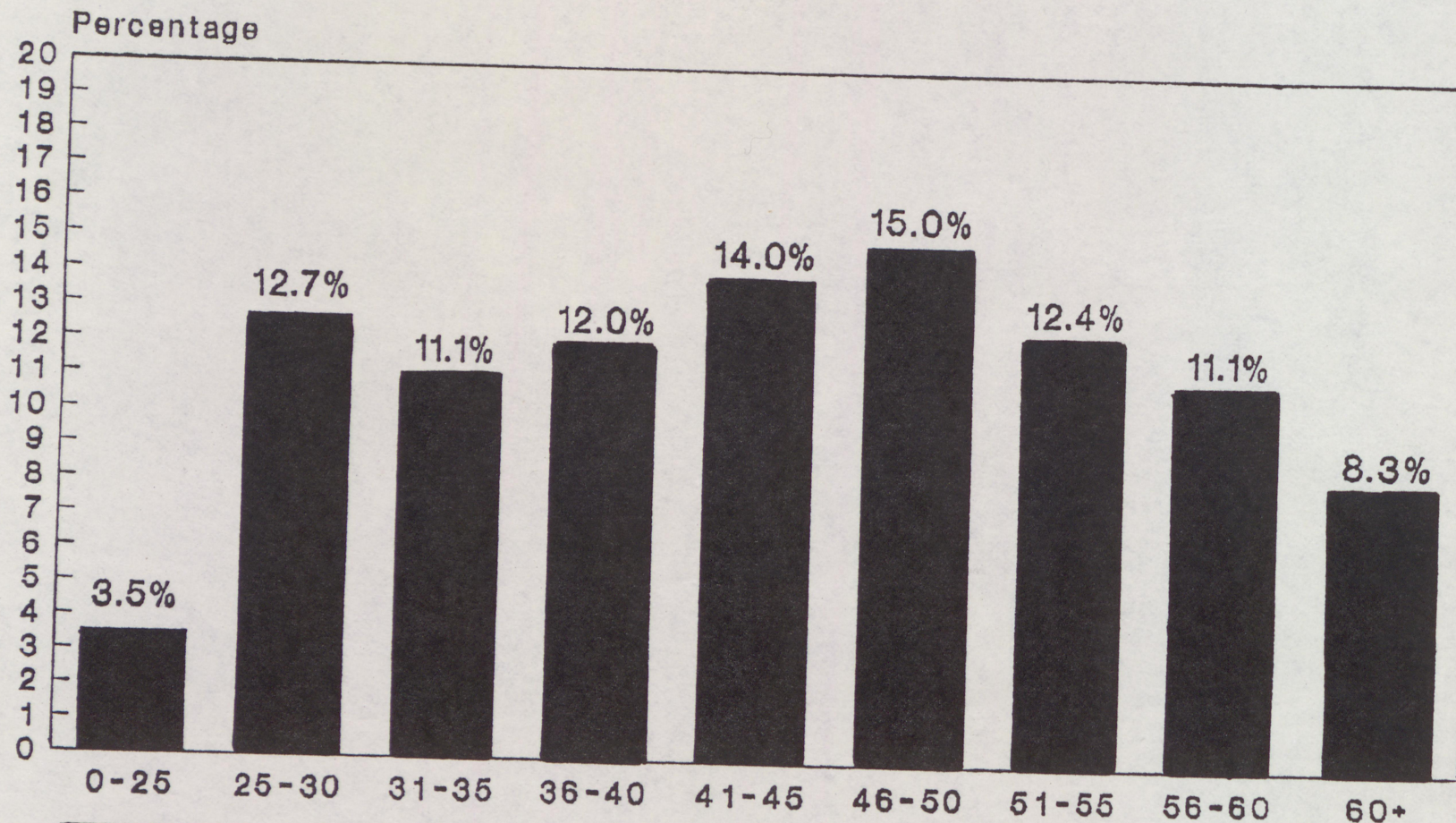


S&E MIX





# Benet Laboratories Age Distribution



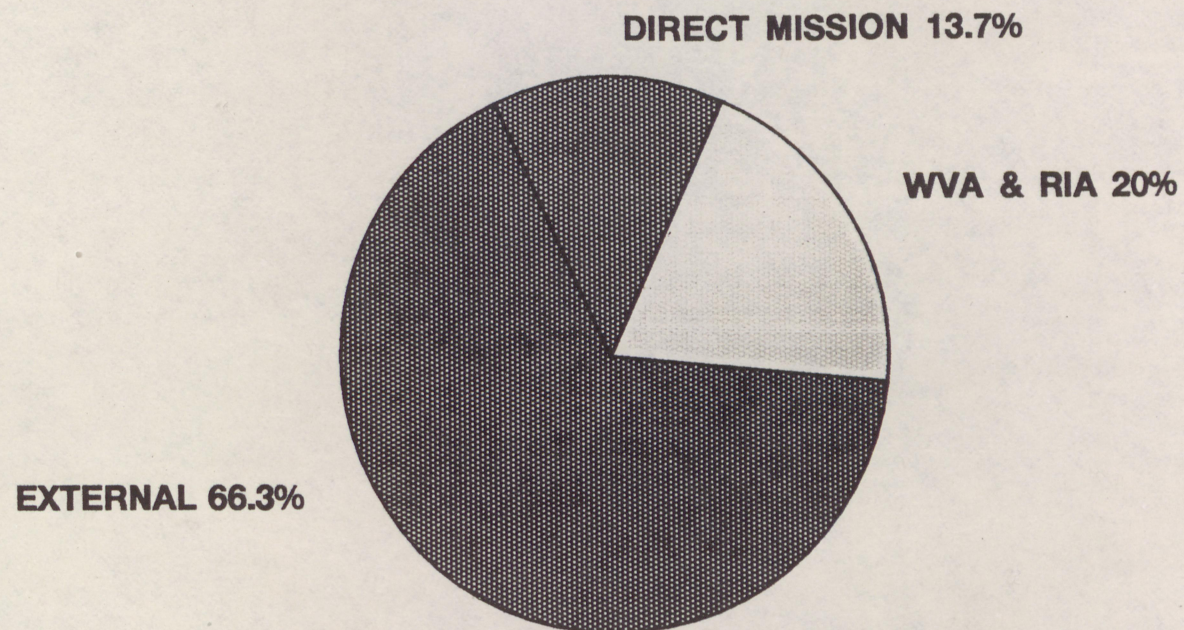
<i>Length of Service</i>			
<i>0-10 yrs</i>	<i>10-19 yrs</i>	<i>20-29 yrs</i>	<i>29+ yrs</i>
<i>33.5%</i>	<i>25.5%</i>	<i>24.0%</i>	<i>16.9%</i>

<i>Average age of all employees</i>	<i>43</i>
<i>Average age of all Supervisors</i>	<i>49</i>





## ***BENET LABORATORIES PROGRAM***



FUTURE TANK ARMAMENTS

DR. J. ZWEIG

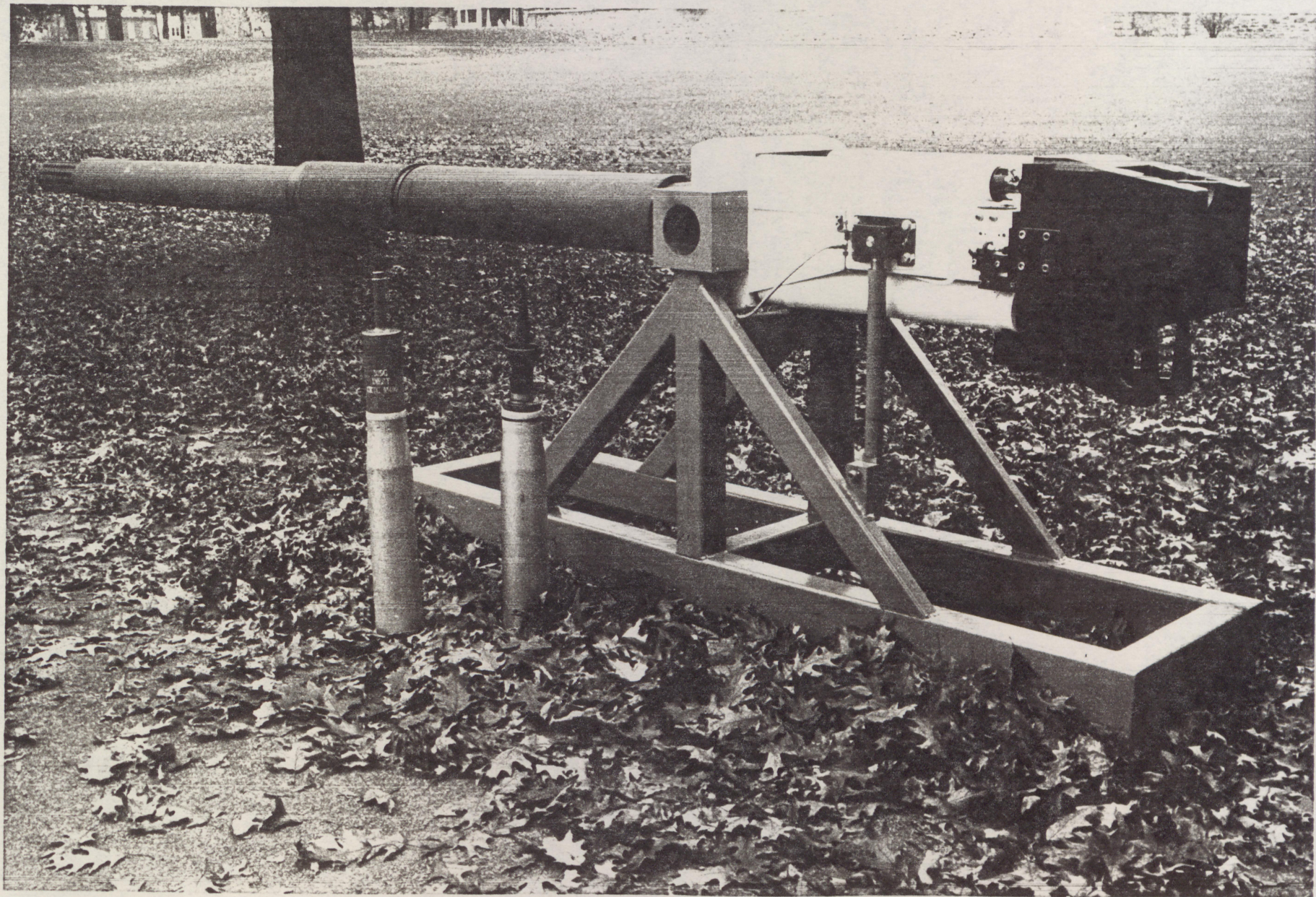
# FUTURE TANK ARMAMENTS

- EX35 (BACKGROUND)
- GUN - ATACS, XM291, FTMA
- AUTOLOADER

# EX35

## FOR LIGHT VEHICLE APPLICATION

- OVER 40 PERCENT LIGHTER THAN M68
- SMALLER SIZE
- 21% LESS IMPULSE
- LESS THAN ONE HALF THE PEAK RECOIL FORCE OF THE M68



# ATACS GUN

## GOALS

PROVIDE TANK WITH MAXIMUM POWER ON TARGET  
WITHIN ACCEPTABLE BURDENS

PROVIDE DECISION MAKERS MAXIMUM LATITUDE

## OBJECTIVES

DETERMINE GUN PARAMETERS WHICH MAXIMIZES KE  
ON TARGET FOR 4.8 TO 10.8 KG PENETRATORS

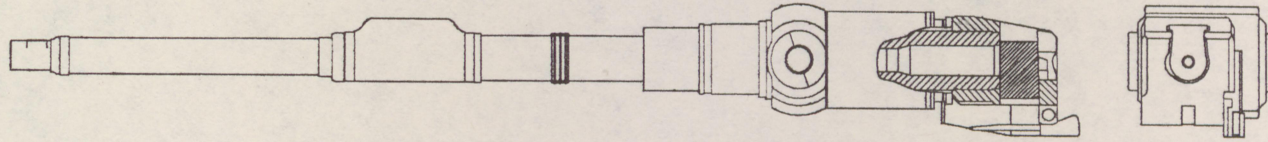
OBTAIN QUADRILATERAL AGREEMENT ASSURING  
FUTURE INTEROPERABILITY

DESIGN FUTURE GUN COMPATABLE WITH  
NON-CONVENTIONAL PROPULSION

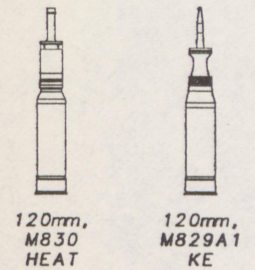
ASSURE BACKWARD INTEGRATION

# BACKGROUND - WHY

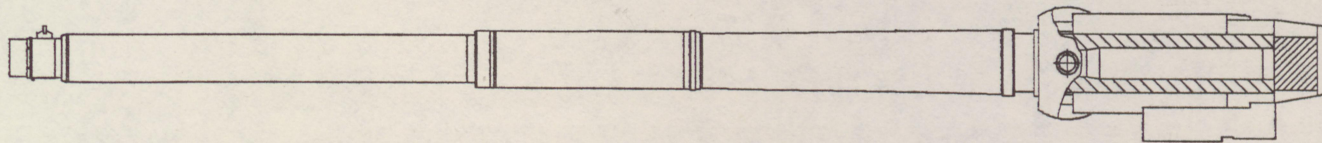
## CURRENT



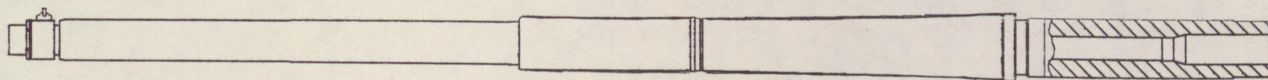
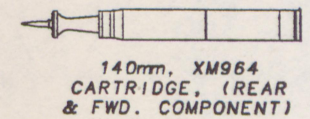
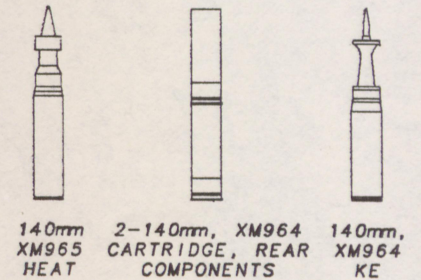
CURRENT 120mm  
9-15 MEGAJOULES



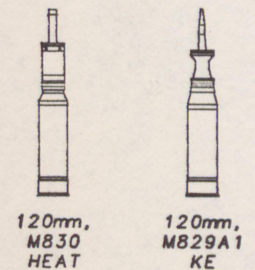
## ATACS

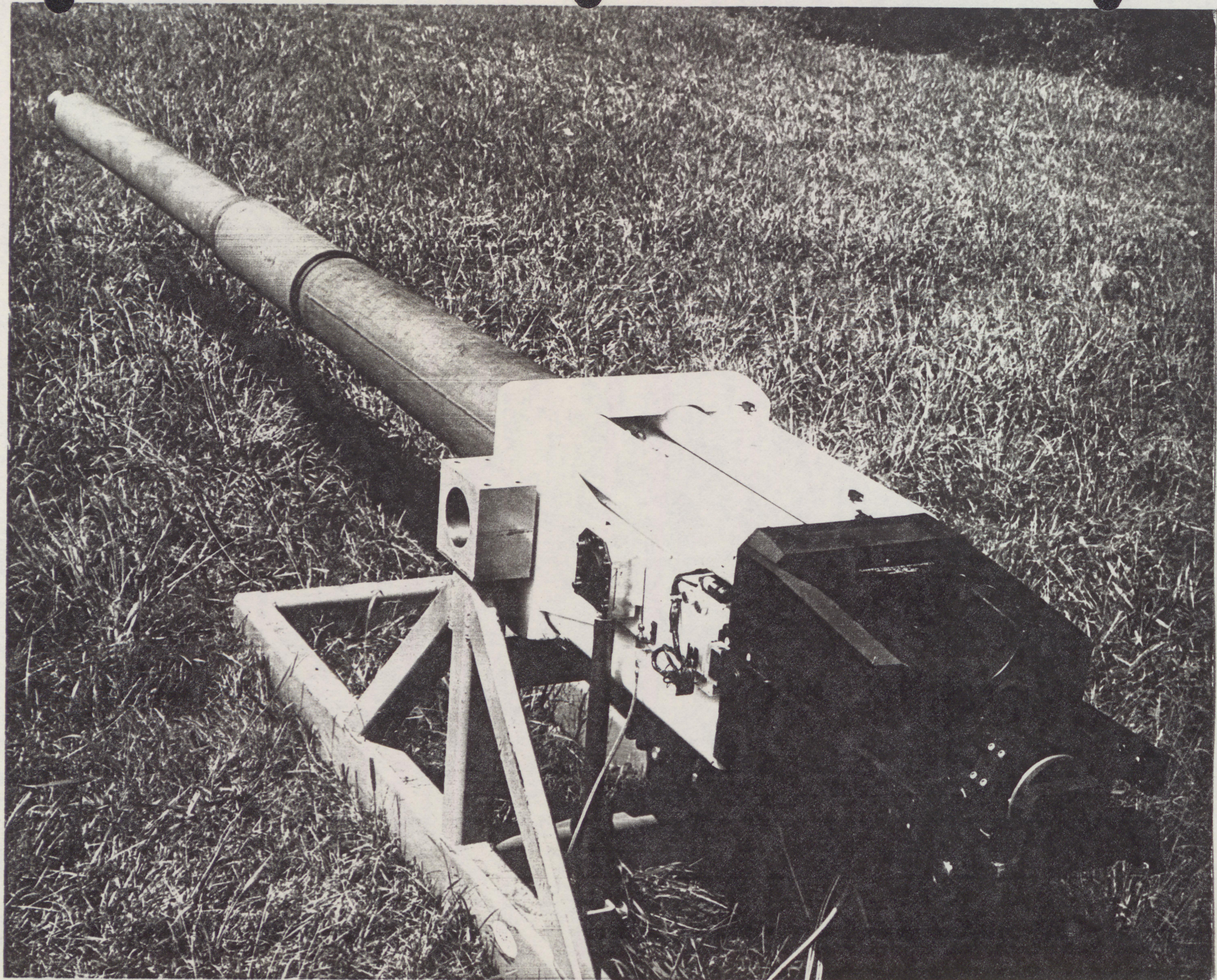


CURRENT 140mm  
18-25 MEGAJOULES

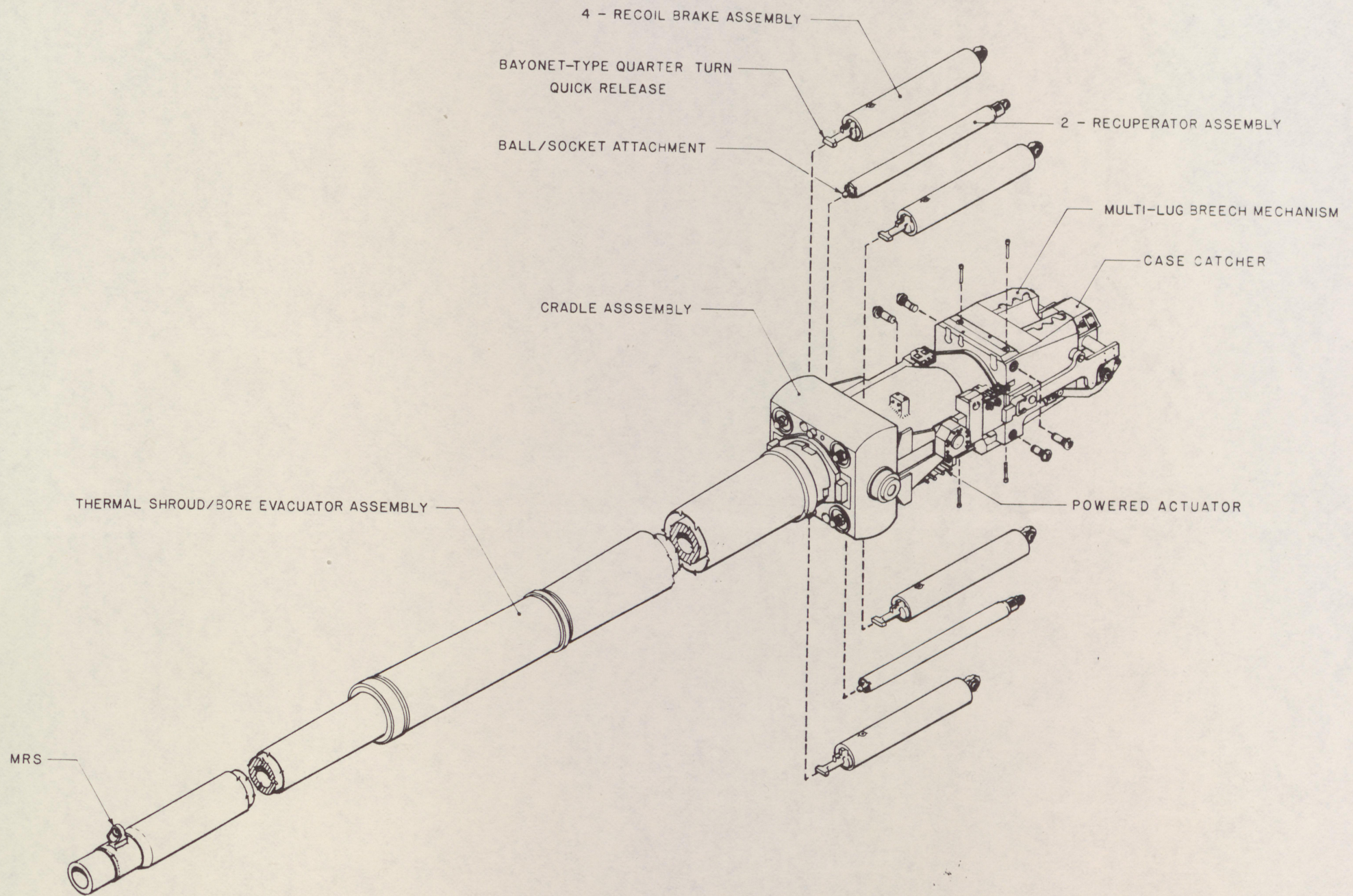


CURRENT 120mm  
9-20 MEGAJOULES, ADDITIONAL GROWTH/INSURANCE/DECISION LATITUDE







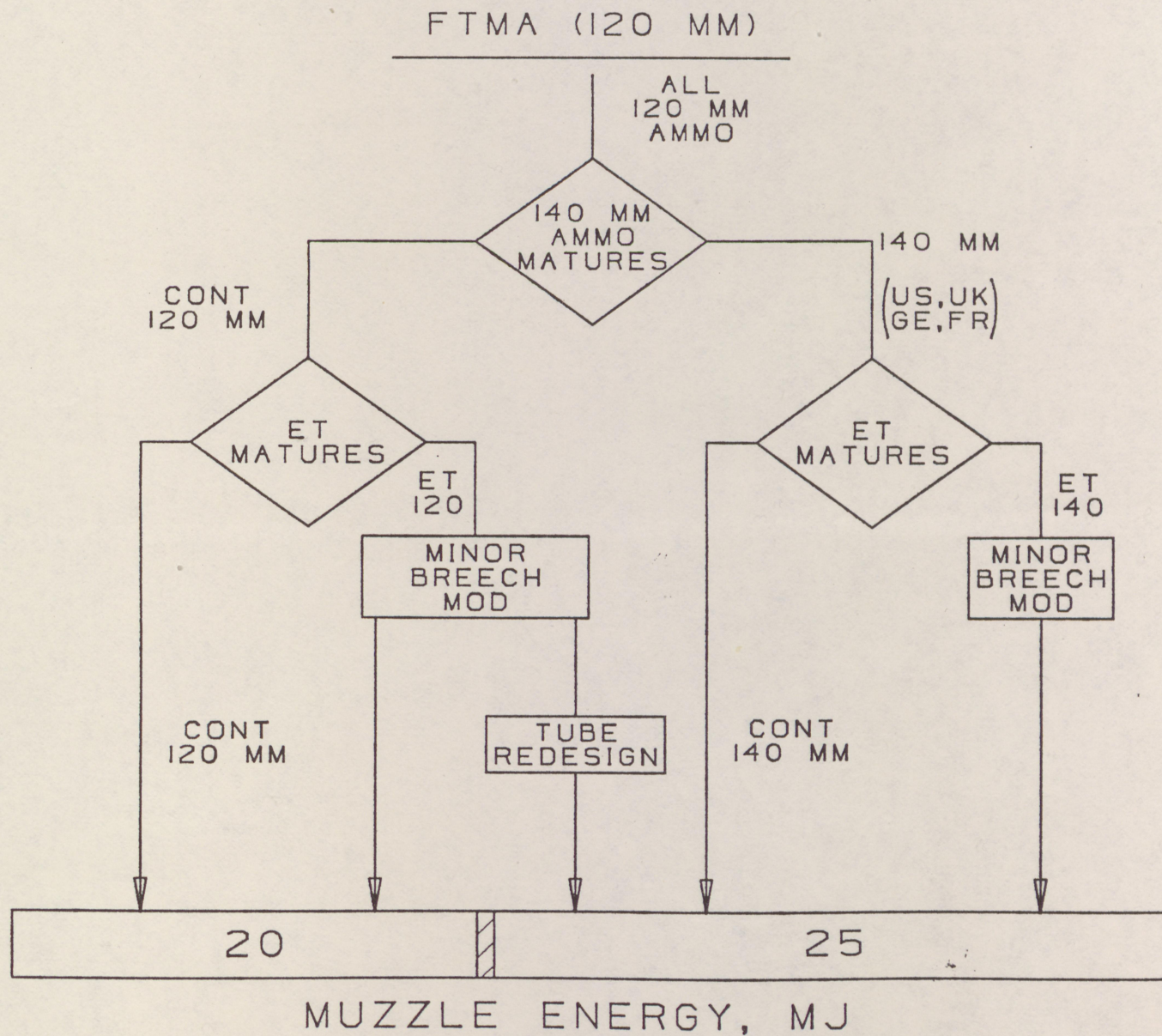


BENÉT LABS XM291 GUN  
(DOWN OPENING BREECH)

## XM291 GUN - GENERAL FEATURES

- APPROXIMATELY SAME SIZE & WEIGHT AS 120mm GUN USED IN M1A1 TANK
- DOUBLES CAPACITY OF 120mm GUN
- FIRES 140mm OR 120mm AMMUNITION WITH SIMPLE TUBE CHANGE
- DESIGNED TO INSTALL ASSEMBLED GUN INTO TURRET THROUGH FRONT ROTOR OPENING

# FUTURE TANK MAIN ARMAMENT (FTMA) A FLEXIBLE DESIGN FOR FUTURE APPLICATIONS



## AUTOLOADER PROGRAM GOALS AND OBJECTIVES

### GOALS

- DEVELOP SMART BUYERS
- DEVELOP SMART SELLERS

### OBJECTIVES

- EARLY PROBLEM IDENTIFICATION
- TARGET TECHNOLOGIES
- DEVELOP / DEMONSTRATE SOLUTIONS
- DATA / SYSTEM DUMP TO INDUSTRY

## GENESIS

### CONSUMER REQUIREMENTS

- RATE OF FIRE
- RATE SUSTAINMENT
- UNLOAD / DOWNLOAD
- ETC,

### LITERATURE / MARKET SEARCH

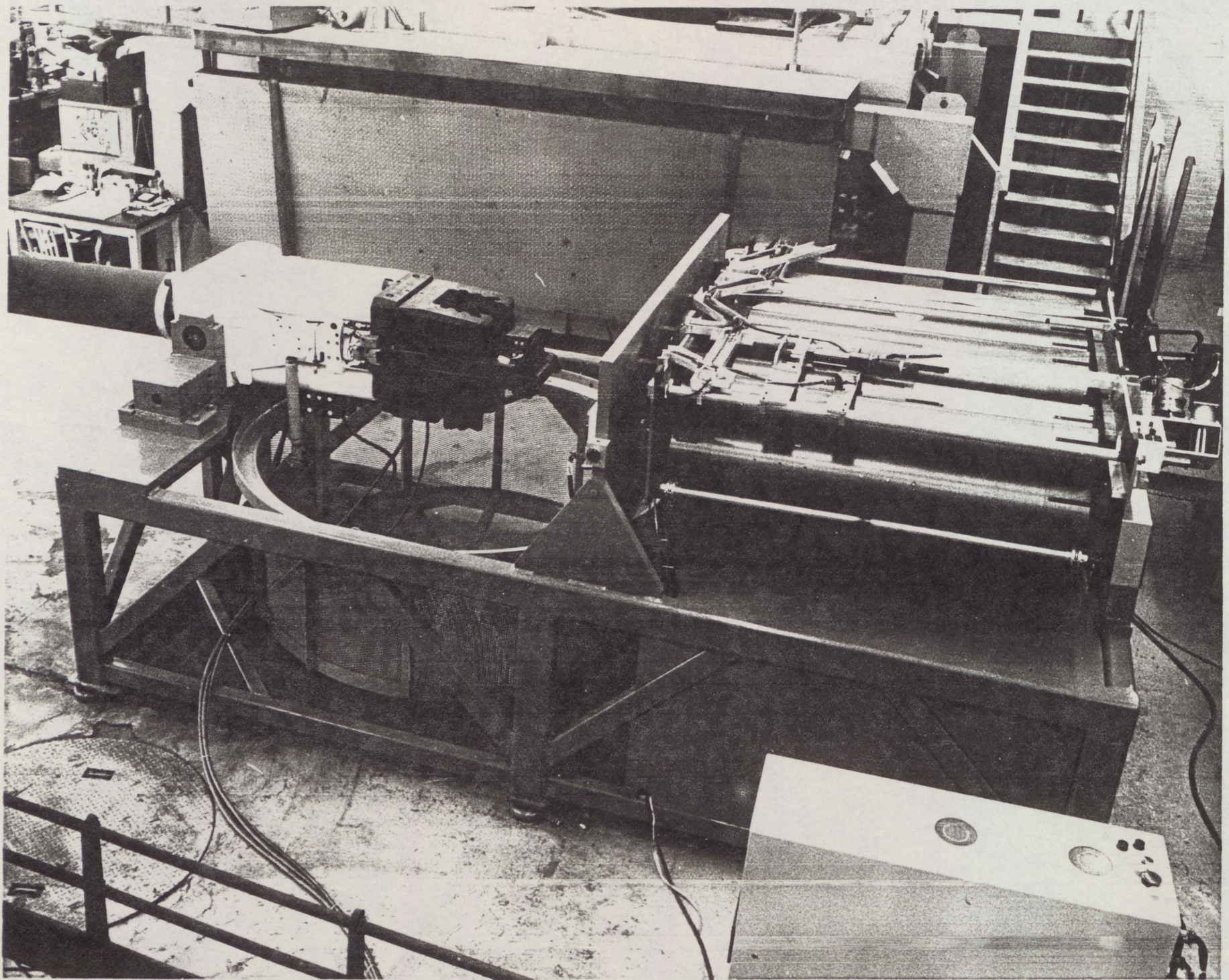
- US, UK, FR, GE, JN
- USSR

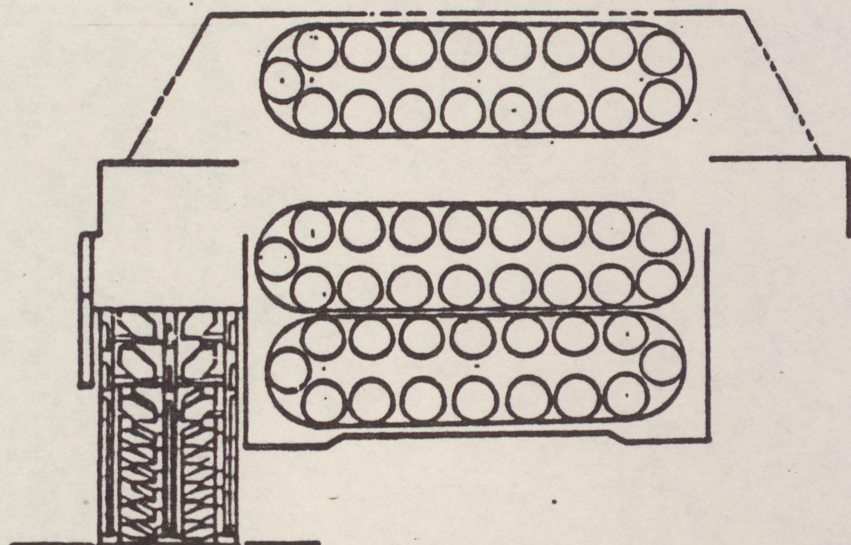
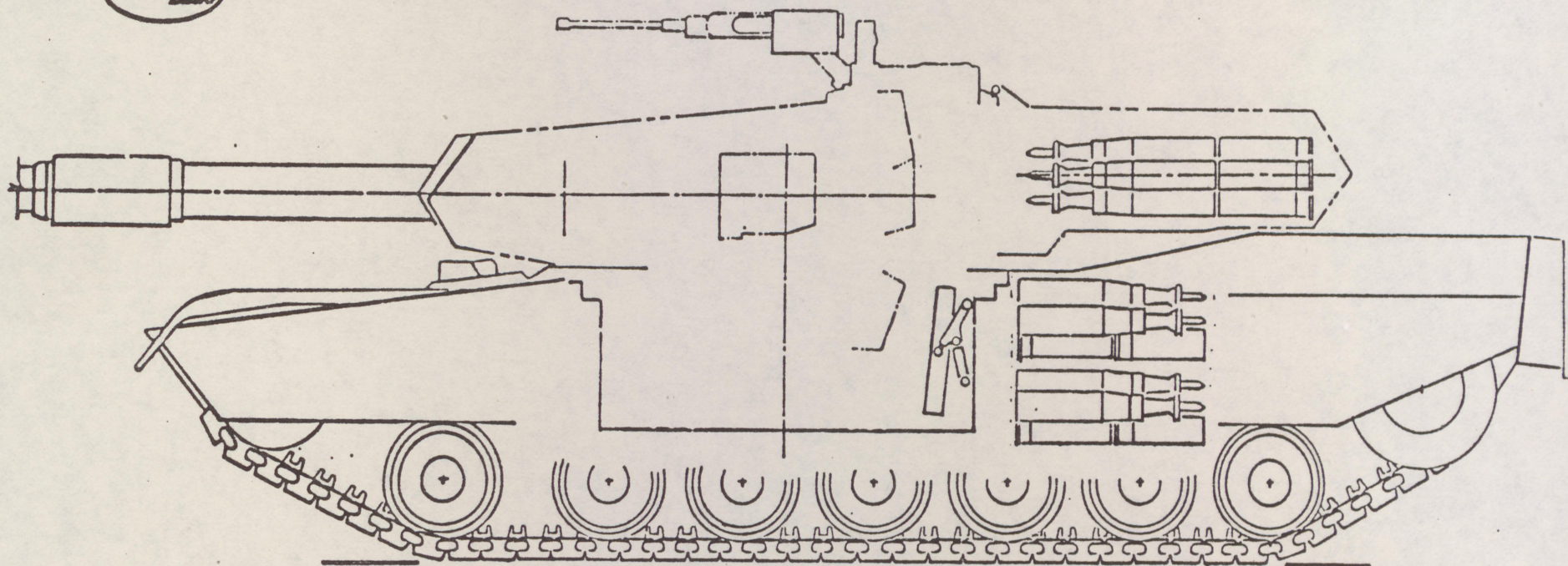
### CONCEPT DEVELOPMENT

- TAGOM, BRL, HEL, ARDEC
- FT. KNOX, PM's
- 8 CONCEPTS

### EXECUTION

- SYSTEM
- SUBSYSTEM
- SYSTEMS

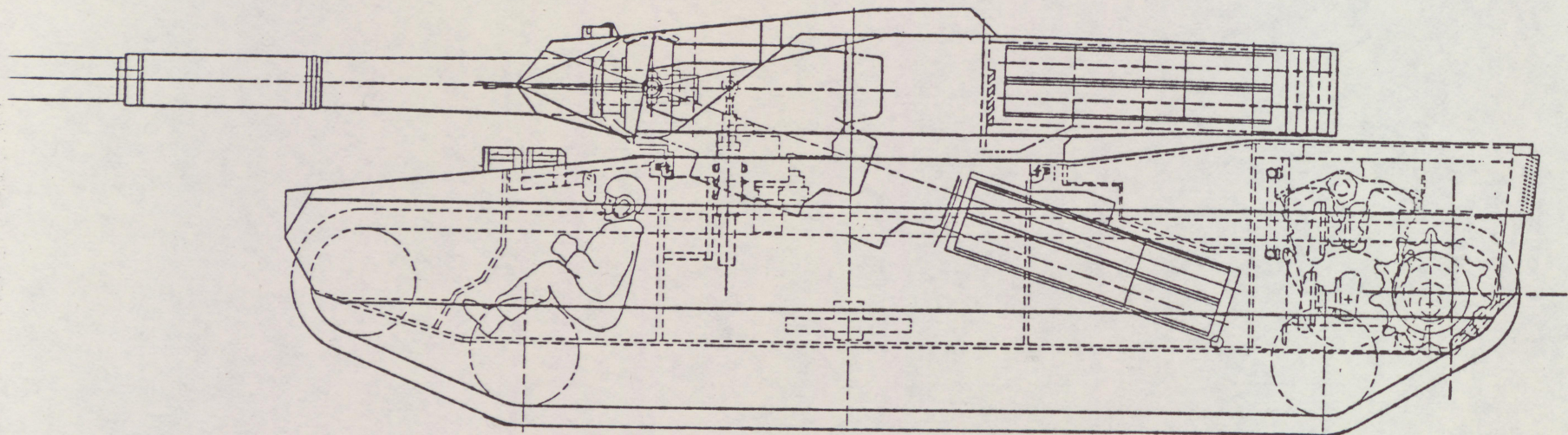




## DESIGN FEATURES

- 39 STOWED ROUNDS  
-17 READY RDS. IN BUSTLE
- 10/12 ROUNDS PER MINUTE
- AUTOMATED VEHICLE UPLOAD
- AUTOMATED READY RD. RESUPPLY

# CATTB VEHICLE AUTOLOADER SYSTEM CONCEPT





SENECA ARMY DEPOT  
Romulus, New York 14541-5001

ITINERARY  
FOR

GENERAL WILLIAM G.T. TUTTLE  
COMMANDING GENERAL OF AMC

07 October 1991

<u>TIME</u>	<u>ACTIVITY</u>	<u>ACTION</u>
0830	Arrival - Seneca Army Airfield (NOTE 1)	COL Cross
0830-0855	Riding Tour of Lake Housing and Travel Camp (MISSION 7-FUNCTION 5)	COL Cross Mr. Struzik
0900-0915	View & Receive Briefing on Emergency Opns Center (EOC) Bldg. 701 (MISSION 1-FUNCTION 8)	Mr. Smith
0915-0930	Reserve Component Training Briefing (MISSION 6-FUNCTION 9)	MAJ Baker
0935-1005	Special Weapons Area (NOTE 2) . Bldg. 813/814-Care & Preservation Complex (Remodeled facility, General Tuttle will cut ribbon to open facility) (MISSION 1-FUNCTION 5) . Ride-Through Balance of Area (MISSION 1-FUNCTION 3)	LTC Beck/ Mr. Orndorff
1005-1015	Travel to South End of Depot	COL Cross
1015-1025	Tour of Warehouse #343 (Hazardous Material Conforming Storage) (MISSION 1-FUNCTION 4) (MISSION 6-FUNCTION 6)	Mr. Wells
1025-1030	Travel to Headquarters, Bldg. 101	COL Cross
1030-1135	Topical Briefings, Conference Room (NOTE 3) . Conventional Ammunition (MISSION 1-FUNCTIONS 1, 3, 10) .. Desert Storm .. Capacity .. Workload	Staff Mr. Lankford

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Topical Briefings (cont'd)

- . Financial Management (MISSION 7-FUNCTION 6) Mr. Windle
- . Environmental Concerns (MISSION 7-FUNCTION 4) Mr. Kittell
- . TQM (MISSION 7-FUNCTION 3) Mr. Frank
- . Safety Program (MISSION 7-FUNCTION 6) Mr. Stincic
- . EEO Program (MISSION 7-FUNCTION 5) Mrs. Buther
- . Civilian Personnel Status/Training Issues (MISSION 7-FUNCTION 7) Mr. Mack
- . FECA/COP (MISSION 7-FUNCTION 6) Mr. Mack

1135-1145 Travel to Seneca Army Airfield via Gate 5 and Gate 16 COL Cross

1145 Wheels Up

NOTES:

NOTE 1: COL Cross, Mr. Struzik, and CSM Heleg-Greza will meet visitors. Appropriate transportation and drivers will be available. CSM will have honor guard in place.

NOTE 2: MAJ Noble will vouch CG and other visitors through Post 7. Van and driver will be prepositioned inside "Q" Area to transport party.

NOTE 3: Attendees at briefings will be COL Cross, Mr. Struzik, Briefers, and DPA, DSup, DSW, and CSM.

OTHER SPECIFIC INFORMATION: Accompanying General Tuttle will be:

- COL Philip Schrock, Executive Officer
- MAJ Ray Mason, Aide-de-Camp
- CPT Jimmie Norris, Assistant SGS

SPECIAL INSTRUCTIONS: Dry Run of all briefings for visit will be at 1330 on 02 Oct in Conf. Rm., Bldg. 101. Briefing text and visuals should be ready at least in draft by then. Briefings will not exceed 5 minutes "talk time."

DISTRIBUTION:

- CDR/CEA/CSM
- Trp CDR (Mr. Evan Smith)
- DMPCA
- DAO
- DSW & Deputy
- DRM
- DEH
- Mr. Frank
- PAO
- DCP
- DSup
- C, General Supply
- Safety Manager
- EO Officer

- CF:
- DIM Badge Ofc
- DLES C, Sec Div
- DPA Vis Info
- DLog
- CI Div

32A252

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27 Sep 91

SUBJECT: Community Counseling Center (CCC)

PURPOSE: Implementation of the one-stop counseling center

FACTS:

- . Seneca Army Depot's Community Counseling Center incorporated the Drug and Alcohol, Family Advocacy, Health Promotion and Community Mental Health Programs to allow for a one-stop prevention, education and counseling service to better meet the needs of our soldiers, family members and civilian employees.
- . Health Services Command at Fort Drum credentialed the CCC staff to perform clinical treatment services. AMC approved the consolidation of the CCC concept subsequent to a one year successful trial period.
- . Since the consolidation of the CCC it has been commended in the following areas:
  - . 2nd place in DoD wide competition for Military Services Community Drug Awareness Award.
  - . Commended by Mr. James Gray, AMC Family Advocacy Program Manager for a quality Family Advocacy Program.
  - . Commended by the NWTI team for developing a creative program to more adequately meet soldier needs.
  - . Commended by Colonel Mindrum, DESCOM Surgeon, for developing a quality innovative program to better meet community needs.
  - . During the GAO inspection held 13 - 17 May the inspection team commended the CCC for development of a "smarter" way to do business.
  - . All safety, surety and clinical inspections have resulted in outstanding reviews and comments.

RELEASED BY: ANTHONY J. STRUZIK  
GM 15  
Civilian Executive  
Assistant  
41771

ACTION OFFICER: BROOKE L. BREWER, PhD  
GS 12  
Chief, Community  
Counseling Center  
30319