

AD-A242 705



2

TACTICAL BREACH OPERATIONS IN MODERN WARFARE

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

DTIC
LECTURE
C

by

Eric D. Hutchings, MAJ, USA
B.S., Virginia Military Institute, 1977

Fort Leavenworth, Kansas
1990

Approved for public release; distribution is unlimited.

91-15996



9004622

01 11 90 02*

REPRODUCED FROM
BEST AVAILABLE COPY

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 1 June 1990		3. REPORT TYPE AND DATES COVERED Masters Thesis, Aug 1989 to Jun 1990
4. TITLE AND SUBTITLE Tactical Breach Operations in Modern Warfare			5. FUNDING NUMBERS	
6. AUTHOR(S) Major Eric D. Hutchings				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and Staff General College Attn: ATZL-SWD-GD Fort Leavenworth, KS 66027-6900			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited			12b. DISTRIBUTION CODE A	
13. ABSTRACT (Maximum 200 words) This thesis assesses the capability of mechanized and armored battalion task forces to breach obstacles in support of offensive operations. The study gives particular emphasis to analysis of the planning of breach operations at the battalion task force level. This study seeks the base cause for the high number of breach operation failures at NTC. The study analyzes recent NTC after action reviews to determine that cause. Examination reveals there is a considerable shortfall in the planning abilities of numerous battalion task force staffs and commanders. This shortfall has a particularly detrimental affect on breach operations. The basis of this shortfall is a lack of knowledge and adherence to the tactics, techniques, and procedures governing the planning of such operations. Compounding this problem are limited engineer and reconnaissance assets within the task force, as well as an insufficient engineer presence on the staff. Investigation reveals that the actions required to rectify the current shortfall in breaching capability within the battalion task force are attainable and relatively inexpensive.				
14. SUBJECT TERMS Analysis of the area of operation and enemy, planning, confirmation and denial of enemy template, infantry cross trained as engineers			15. NUMBER OF PAGES 102	
17. SECURITY CLASSIFICATION OF REPORT Unclassified			18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	
19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified		20. LIMITATION OF ABSTRACT RM		

The Report Documentation Page (RDP) is used in announcing and cataloging reports. It is important that this information be consistent with the rest of the report, particularly the cover and title page. Instructions for filling in each block of the form follow. It is important to *stay within the lines to meet optical scanning requirements.*

Block 1. Agency Use Only (Leave blank).

Block 2. Report Date. Full publication date including day, month, and year, if available (e.g. 1 Jan 88). Must cite at least the year.

Block 3. Type of Report and Dates Covered. State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g. 10 Jun 87 - 30 Jun 88).

Block 4. Title and Subtitle. A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

Block 5. Funding Numbers. To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C - Contract	PR - Project
G - Grant	TA - Task
PE - Program Element	WU - Work Unit Accession No.

Block 6. Author(s). Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

Block 7. Performing Organization Name(s) and Address(es). Self-explanatory.

Block 8. Performing Organization Report Number. Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es). Self-explanatory.

Block 10. Sponsoring/Monitoring Agency Report Number. (If known)

Block 11. Supplementary Notes. Enter information not included elsewhere such as: Prepared in cooperation with...; Trans. of...; To be published in.... When a report is revised, include a statement whether the new report supersedes or supplements the older report.

Block 12a. Distribution/Availability Statement. Denotes public availability or limitations. Cite any availability to the public. Enter additional limitations or special markings in all capitals (e.g. NOFORN, REL, ITAR).

DOD - See DoDD 5230.24, "Distribution Statements on Technical Documents."
DOE - See authorities.
NASA - See Handbook NHB 2200.2.
NTIS - Leave blank.

Block 12b. Distribution Code.

DOD - Leave blank.
DOE - Enter DOE distribution categories from the Standard Distribution for Unclassified Scientific and Technical Reports.
NASA - Leave blank.
NTIS - Leave blank.

Block 13. Abstract. Include a brief (*Maximum 200 words*) factual summary of the most significant information contained in the report.

Block 14. Subject Terms. Keywords or phrases identifying major subjects in the report.

Block 15. Number of Pages. Enter the total number of pages.

Block 16. Price Code. Enter appropriate price code (*NTIS only*).

Blocks 17. - 19. Security Classifications. Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

Block 20. Limitation of Abstract. This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.

TACTICAL BREACH OPERATIONS IN MODERN WARFARE

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

by

Eric D. Hutchings, MAJ, USA
B.S., Virginia Military Institute, 1977

Fort Leavenworth, Kansas
1990

Accession For
 Date: 06/01/1961
 By: [illegible]
 Location: [illegible]
 Justification: [illegible]
 By: [illegible]
 Distribution: [illegible]
 Availability: [illegible]
 [illegible]
 Date: [illegible]
 [illegible]
 A-1

Approved for public release; distribution is unlimited.



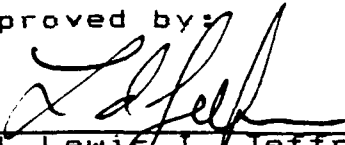
MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

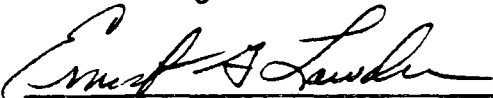
Name of candidate: MAJ. Eric D. Hutchings,
U. S. Army

Title of thesis: Tactical Breach Operations in
Modern Warfare

Approved by:


COL Lewis I. Jeffries, M.S.

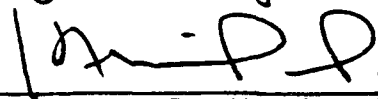
Thesis Committee Chairman


Ernest G. Lowden, Ed.D.

Member, Graduate Faculty

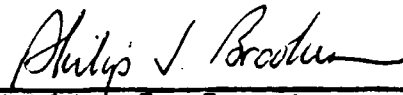

MAJ John Campbell, M.A.

Member, Graduate Faculty


MAJ Kurt F. Weiland, M.A.

Member, Graduate Faculty

Accepted this 1st day of June 1990 by:


Philip J. Brookes, Ph.D.

Director, Graduate Degree
Programs

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

TACTICAL BREACH OPERATIONS IN MODERN WARFARE, by Major Eric D. Hutchings, USA, 73 pages.

This thesis assesses the capability of mechanized and armored battalion task forces to conduct the breaching of obstacles in support of offensive operations. The study gives particular emphasis to analysis of the planning of breach operations at the battalion task force level and the difficulties encountered by units currently in the field.

This study seeks the base cause for the high number of breach operation failures at NTC. The study analyzes recent NTC after action reviews for mechanized and armor battalion task forces to determine that cause.

Examination reveals there is a considerable shortfall in the planning abilities of numerous battalion task force staffs and commanders. This shortfall has a particularly detrimental affect on breach operations. The basis of this shortfall is a lack of knowledge and adherence to the tactics, techniques, and procedures governing the planning of such operations. Compounding this problem are limited engineer and reconnaissance assets within the battalion task force, as well as an insufficient engineer presence on the battalion task force staff. Further investigation reveals that the actions required to rectify the current shortfall in breaching capability within the battalion task force are attainable and relatively inexpensive.

ACKNOWLEDGEMENTS

This thesis is the result of the efforts of many people. Of critical importance were the members of the thesis committee: Colonel Lewis Jeffries, Dr. Ernest Lowden, Major John Campbell, and Major Kurt Weiland. Their time and effort were greatly appreciated. Valuable assistance was also provided by Captains Tom Baltazar, and Joe Torres, at the Center for Army Lessons Learned, who assisted me in locating necessary files to support research. Most of all, a special thanks is extended to my wife, Janine, who greatly augmented my meager typing abilities.

TABLE OF CONTENTS

TITLE PAGE.....	i
APPROVAL PAGE.....	ii
ABSTRACT PAGE.....	iii
ACKNOWLEDGEMENTS.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
CHAPTER I INTRODUCTION.....	1
CHAPTER II REVIEW OF RELATED LITERATURE.....	19
CHAPTER III RESEARCH METHODOLOGY.....	28
CHAPTER IV ANALYSIS OF DATA.....	33
FINDINGS.....	45
CHAPTER V RECOMMENDATIONS AND CONCLUSIONS.....	50
CONCLUSIONS.....	50
RECOMMENDATIONS.....	51
IMPLICATIONS.....	56
RECOMMENDATIONS FOR FUTURE RESEARCH.....	57
ENDNOTES.FOR CHAPTER I.....	59
ENDNOTES FOR CHAPTER II.....	60
ENDNOTES FOR CHAPTER IV.....	61
BIBLIOGRAPHY.....	62
INITIAL DISTRIBUTION LIST.....	65

LIST OF TABLES

Table	Title	Page
3-1	Breach planning shortfalls.....	30
4-1	Estimate components.....	34

LIST OF FIGURES

Figure	Title	Page
4-1	Linkage of breach planning shortfalls to poor analysis of area and enemy forces.....	38

CHAPTER I

PRESENTATION OF THE PROBLEM

"Airland Battle is a battle of maneuver. It requires initiative, agility, depth, and synchronization--all of which are closely concerned with friendly freedom to maneuver. Terrain conditions and threat offensive and defensive tactics present fire, maneuver, and obstacles to stop this maneuver."

FM 90-1-13 1

This study analyses the capability of a combined arms battalion task force to conduct breaching operations, primarily for maneuver. The specific focus is the ability of battalion-level commanders and staff to plan and affect the integration of assets to conduct the breach operations required to allow maneuver.

At NTC in 1989-1990, the army units participating in training did not effectively conduct breach operations. Over fifty percent of the breach operations conducted by units during this period failed.² These disturbing statistics resulted in the primary research question for this study: What was the predominate reason causing those units to fail in the conduct of breach operations?

BACKGROUND

The ability of U.S. forces to breach obstacles has been a subject of increased concern to our military

leadership in recent years. The assessment of the military capabilities of the Soviet Union and their surrogates drive this concern. The Soviets place a major doctrinal emphasis while in the defense on the widespread use of minefields and obstacles. The Soviets use these minefields and obstacles to canalize and destroy attacking forces into predetermined kill zones (called "fire sacks"). With the advent of Airland Battle doctrine the U.S. Army transitioned from a defensive doctrine that had little emphasis on offensive action to a maneuver based doctrine. This new emphasis on maneuver in army doctrine brought a requirement to breach Soviet style minefield and obstacle systems to support that maneuver. FM 100-5 Operations, which is the Army's keystone warfighting manual and the document that articulates the tenets of Airland Battle states:

"[The engineer system] preserves the freedom of maneuver of friendly forces...."

FM 100-5 further states later on the same subject the necessity for the actions of the engineers to be integrated with the force structure:

"The engineer plan must be coordinated with the plans for maneuver and fires." ³

The implementation of Airland Battle doctrine presents the U.S. Army with several problems when related to the current Soviet and surrogate forces

threat. Historical data on breach operations also shows the high cost associated with mission failure.

The U.S. Army has already taken some steps in an attempt to come to grips with these problems. One significant step taken by the Army was to borrow a training technique used previously by the Israeli Army.

Before the 1967 war, the Israeli Training Command evolved counter-tactics against their Soviet trained Arab opponents. The Israelis did this by constructing Soviet style fortifications and then conducting full scale maneuvers against those fortifications and dispositions. This allowed the Israelis to discern enemy defensive weakness and to test the viability of their doctrine, tactics, and techniques.⁴

A similar U.S. Army training program has been in effect since 1982 at Ft. Irwin, California called the National Training Center or (NTC). At this facility U.S. Army mechanized and armor battalion and brigade task forces rotate through field problems of 14 days duration. The training consists of force on force exercises against a simulated Soviet style opponent. The opposing force use Soviet doctrinal dispositions, tactics, fortifications, and obstacle systems to battle the rotating U.S. Army battalions. The lessons learned at NTC by units exercising against Soviet style

opposing forces are the base of this study on tactical breaching operations.

The focus of this study is twofold. First, the planning of breach operations at battalion task force level is analyzed for common shortfalls. Second, recommendations are put forth for any shortcomings identified by analysis.

STATEMENT OF THE PROBLEM

Over 50% of attempted breach operations conducted at NTC by battalion task forces fail. This study is devoted to finding out the base cause of these breach operation failures through the analysis of NTC after action reports. In particular, the planning of breach operations at the NTC will be analyzed.

The Army recognizes this problem in breaching as well as shortfalls in some other engineer tasks. To offset these shortfalls the U.S. Army has an ongoing engineer initiative called "E-force".

"E-force" would augment engineer capability and therefore breaching ability at the battalion and brigade level. The "E-force" proposal would realign existing engineer units to make them more responsive to maneuver commanders. This proposal would also require certain new equipment for implementation. There is little doubt the new equipment proposed by "E-force" would augment breaching capability at battalion task force level. Yet, "E-force" would not solve the

breaching problem. First, the funding of the equipment required for "E-force" may never occur due to the current environment of force reduction and budget cuts. Second, even though the current engineer equipment on hand is not optimal for breaching, it is still capable of reducing Soviet style obstacles and minefields.

For some reason the maneuver battalions still regularly fail to breach obstacles in spite of this. The problem in the conduct of breach operations must reside outside the technical realm of equipment.

HISTORY OF BREACH OPERATIONS

As long ago as the end of World War I the German Army developed tactical doctrine that facilitated breach operations. The Germans learned to synchronize combat power to attack at a decisive point; all the while, confusing the enemy and minimizing the exposure of the attacking force. With this doctrine the Germans could make headway for the first time against the fortifications, trenchworks, and obstacles of the Western Front.

The experiences of the German Army have been readily available for subsequent generations of military leaders to implement or ignore. Whereas, the U.S. Army has so far suffered mildly for its historical inattention, other armies have not been so fortunate. Many examples abound of armies that were unable to follow the German experience and learn the "riddle of the trenches".

FINLAND-1939

One prominent historical example of the failure of a breach operation occurred with the Soviet Army's advance into Finland in December of 1939. Soviet forces ran into a defensive belt called the Mannerheim line. This belt stretched ninety miles and consisted of sixty-six concrete machine gun nests supported by various anti-personnel and anti-tank obstacles built out of barbwire, tree stumps, and boulders.⁵

Soviet forces greatly outnumbered the Finns and the Soviets had overwhelming superiority in armor and artillery. Yet, the Soviets were unable to synchronize the available combat power and bring it to bear against the Finnish defense. The commander of the Finnish forces, Marshall Mannerheim, compared the Soviet attack to a "badly conducted orchestra in which the instruments played out of time."⁶

The Finns caught wave after wave of attacking Soviets in amongst the obstacles and kill zones of the Mannerheim line. Because of this battle, the Finns destroyed two Soviet divisions. Soviet losses included four thousand soldiers killed and significantly more soldiers wounded or unaccounted for. The Soviets also incurred two hundred thirty-nine tanks losses, and over a dozen or so tanks captured by the Finns. In comparison, the victorious Finns lost only six hundred

thirty dead and one thousand three hundred twenty personnel wounded.⁷

THE GOODWOOD OFFENSIVE-1944

Another noteworthy historical example of the failure of a breach operation was the offensive that the British Army conducted against the German Army Group B in July of 1944. The British directed this offensive against German forces who were defending along a seventy mile front near Caen, France. Operation Goodwood was the code name of this offensive.

The Germans organized their forces into five defensive belts. These defensive belts anchored upon strong points made out of the many small villages in the region. Anti-tank guns supported the strong point defenses. The Germans positioned a powerful mobile reserve five miles to the rear of the defensive belts to counterattack against penetrations.⁸

The British and their allies clearly had the necessary numerical superiority to succeed in the attack. They had overwhelming superiority especially in armor, artillery, and aircraft. In a prelude to the ground attack, seven thousand eight hundred tons of bombs were dropped on German positions. A total of one thousand six hundred British and American heavy bombers augmented by four hundred medium bombers dropped this bombardment. An artillery preparation by over seven

hundred twenty field pieces followed this unopposed bombardment.⁹

In spite of the viciousness of this onslaught, a British exploitation of this massive preparation did not evolve. British forces attacked piecemeal into the battle, only one-third of British armor entered the action during the crucial two to three hours following the preparation. This allowed the German defenders to recover and reorganize. The leading British armor quickly out ran the supporting artillery. The death of the sole forward air controller for the lead division negated the tremendous close air support available. There was also a severe shortage of infantry with forward armor.¹⁰

Because of the inability to coordinate combined arms against the German defenses the attacking armor became trapped in the obstacle belts without infantry support. Vicious anti-tank fire from the fortified strong points destroyed the exposed British armor.

The subsequent losses incurred by the British inability to synchronize combined arms in this offensive and breach the German defenses were disastrous. The two corps leading the attack had incurred over five thousand four hundred casualties. The combined tank losses amounted to thirty-six percent of British tanks on the entire continent of Europe.

This offensive stalled after a mere seven mile advance.¹¹

ANALYSIS OF HISTORICAL FAILURES

The failures of both these breach operations serve to illustrate the extreme price paid in human lives and resources as a result. The U.S. Army cannot afford losses of this kind on the modern battlefield and expect to win.

Successful breach operations can be conducted with minimal casualties even against defensive dispositions as formidable as the Soviets. In the 1967 Arab-Israeli War the Israeli army conducted just such a breach operation against the Egyptians.

ABU AGHEILIA-1967

Before the 1967 war the Egyptians fortified the crossroads at Abu Agheila on the Sinai frontier according to the latest Soviet concepts of linear defense. The Egyptians constructed three parallel trench systems across the main approach to Abu Agheila. In front of the first line of these trenches the Egyptians emplaced a large minefield. The Egyptian anchored their defenses between large sand dunes to the north of Abu Agheila and jagged foothills to the south.

The Egyptians defended this trench system with an entire Egyptian brigade complete with a mobile reserve of eighty tanks. The Egyptians positioned this reserve armor force a mile behind the trenches to

counterattack against any Israeli penetration. Eighty 122mm. and 130mm. artillery pieces provided indirect support for Egyptian defenders. A perimeter of outposts provided this substantial Egyptian defense with early warning of the approach of Israeli forces.

The mission of seizing Abu Agheila fell to the Israeli Southern division under the command of B.G. Ariel Sharon. The capture of Abu Agheila would open an axis of advance into the Sinai for the Israelis.

The Israelis faced quite a dilemma as the numerical strength of the Egyptian defenders almost equaled their own. Additionally, the Egyptian artillery outranged the Israeli artillery.

The Israelis did not have the offensive to defensive 3 to 1 force ratio usually considered sufficient to conduct such an attack against prepared positions. Their plan of battle would have to emphasize other means for victory, such as concentration of forces, surprise, and maneuver.

The Israelis decided to attack at night to negate the advantages of the Egyptian prepared positions. The Israelis sought to first blind the Egyptian forces by seizing all forward outposts during daylight. The Israelis then created a deception about their intentions by first attacking an Egyptian position north of Abu Agheila. In this manner the Israelis could not only deceive the Egyptians on their

main effort but forces would be positioned to interdict Egyptian reserves.

At H-hour, which was 2200 hours local time, the Israeli attack began. Infantry air assaulted directly onto Egyptian artillery positions to neutralize the Egyptian superiority in indirect fire. In concert with this air assault all available Israeli artillery targeted the Egyptian trench system. Dismounted infantry that had infiltrated through the northern sand dunes then entered the trench system and assumed control of the trenchline. After this an Israeli tank brigade (led by a flail tank to clear mines) punched directly through the Egyptian minefield in front of the trenches.

These synchronized Israeli actions broke the Egyptian defense. In the midst of this confusing night battle, the Israelis passed a tank brigade through Abu Agheila to exploit further into the Egyptian held Sinai. The Israelis cleared Abu Agheila of significant Egyptian resistance by eleven o'clock the next morning.

Israeli losses in this battle were insignificant. The Israelis lost forty soldiers killed and one hundred and forty wounded. Conversely, the Egyptian sustained severe casualties. The Egyptians lost over a thousand soldiers killed. Egyptian equipment losses amounted to seventy tanks destroyed.

one hundred guns taken out of action, and three to four hundred trucks and armored personnel carriers destroyed. 12

COMMITMENT OF UNITED STATES FORCES

The U.S. Army has for some time faced the possibility of confrontation with the military forces of the Soviet Union and Warsaw Pact in Western Europe. A far more likely possibility for confrontation exists outside Europe. Such a confrontation could occur between the U.S. Army and any number of Soviet aligned or supplied surrogate forces in a regional conflict. Soviet supplied and trained forces probably would fight according to Soviet doctrine.

In the Far East the North Koreans still sit ready to invade South Korea and their forces follow the Soviet template and doctrine. The Peoples Army of Vietnam (PAVN) is no longer configured as most Vietnam veterans would recall. Since the 1975 armored invasion of South Vietnam the PAVN has augmented its forces with captured U.S. equipment and has increasingly mechanized. This mechanization has made its force structure heavier and aligns it more closely to the Soviet template. The PAVN heavier force structure has paid dividends in conflicts over the last 10 years with the Chinese and Khmer Rouge. Any future U.S./PAVN military confrontation would markedly differ from the guerrilla style fighting of the early 1970's.

In the Middle East and North Africa the radical Arab states of Libya, Syria, and Iraq all use Soviet style doctrine. Additionally, these states are major purchasers of Soviet military equipment. These countries have fought major desert battles in recent years and have a wealth of combat experience in mobility and counter-mobility operations. Also the country of Iran, although not aligned with the Soviet Union, has throughout the Iran-Iraq War proven capable at counter-mobility operations. Iran is definitely an enemy and a continued threat to the United States. Armed conflict with Iranian forces is always possible for the U.S. military.

In Central America the Marxist Sandinistas have a Soviet style mechanized force larger than all other neighboring military forces combined. Since the downfall of the Somoza regime the Sandinistas have been fighting an insurgency against Contra rebels. With the assistance of Warsaw Pact and Eastern Block advisors, the Sandinistas fortified a good deal of the Nicaraguan countryside. Any incursion of U.S. forces into Nicaragua would have to contend with these obstacles and fortifications.

In the Caribbean, the Cuban Army closely adheres to the Soviet template force structure. The Cubans remain a belligerent opponent of the United States. They have proven a willingness to provide advisors to

opponents of the United States. Additionally, the Cubans are not hesitant to commit their ground forces and equipment in direct combat against Americans. With such widespread proliferation of Soviet equipment and Soviet trained forces the U.S. Army can expect to encounter Soviet style obstacles in almost any future military confrontation. Recent Glasnost ventures cannot undo this proliferation of tactics and equipment. Countries which have purchased this equipment and have trained with these tactics are likely to use them on the battlefield.

The preceding pages of this chapter have detailed the parameters of the breaching problem facing the U.S. Army. To recap, the following factors contribute to this problem:

1. Emerging Airland Battle doctrine requires maneuver and therefore a capability to breach obstacles to assist maneuver.
2. The major opponents of the United States and their surrogates, have a doctrine and supporting force structure that places a major emphasis on countermobility operations.
3. The U.S. Army forces rotating through the NTC in 1989 failed in fifty-seven percent of attempted breach operations

against Soviet style obstacle systems.

4. Significant improvement in U.S. Army engineer equipment designed to assist mobility is unlikely in the near future.
5. Throughout history poorly synchronized breach operations have resulted in catastrophic personnel and equipment losses for an attacking force.
6. Soviet obstacle systems can and have been successfully breached in combat with few losses incurred by the attacking force.

These factors raise several questions that must be addressed to determine why over fifty percent of attempted breach operations at NTC fail. These questions are:

1. Do the Army's various field manuals provide effective techniques, tactics, and procedures to guide the planning and conduct of breach operations at battalion task force level?
2. Are units in the field applying the techniques, tactics, and procedures put forth in these field manuals?

ASSUMPTIONS, DELIMITATIONS, AND LIMITATIONS

This analysis infers some assumptions, delimitations, and limitations. Assumptions imposed on the study include:

1. The conduct of breach operations by the U.S. Army in the future is both possible and likely.
2. Recent historical experience in breach operations is a major factor to consider in arming, organizing, and training contemporary forces.
3. The current engineer equipment available to the battalion task force, although ageing and in less quantities than desired, is physically capable of breaching Soviet style obstacle systems.
4. The recent performances of battalion task forces at the NTC are indicative of the U.S. Army's tactical breaching capability throughout the force.

This study imposes the following delimitations:

1. Historical analysis is limited to modern warfare where the full array of

responsive mass casualty producing weapons are present.

2. The analysis considers only the breach operations of mechanized and armored battalion task forces participating in evaluations at the NTC.

Limitations for research on this topic are due to the following restrictions:

1. Only the most recent NTC files, (1988 to present) have been computer stored. Files previous to this date have been stored in a haphazard fashion prohibitive to timely research.
2. Narrative comments on NTC performances by observer-controllers are often subjective and lacking in thorough detail, thus some degree of interpretation is required in analysis.

DEFINITIONS

Several terms are used frequently throughout this study which may require definition for the reader. The following terms are provided for definition:

IPB: Intelligence preparation of the battlefield.

IPB is a systemic and continuous process of

analyzing the enemy, weather, and terrain in a specific geographic area. This approach integrates enemy doctrine with the terrain and weather, the mission, and the specific battlefield environment. IPB helps determine and evaluate enemy capabilities and vulnerabilities.

NTC: National training center located at Ft. Irwin, California.

PIR: Priority intelligence requirements.

Intelligence questions provided by a higher headquarters to subordinate units to focus the intelligence collection on the enemy and prioritize the collection effort.

Recon: abbreviated term for reconnaissance

R&S: abbreviated term for reconnaissance and surveillance activity

Template: The process or description of the activity in which the enemy is located by first taking his doctrinal dispositions and then applying them logically to the terrain in the area of operations.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to identify literature available for practitioners of breach operations at the battalion task force level. Specifically focused upon is the literature available to members of battalion task forces rotating through the NTC during the last several years (1987-1990).

The U.S. Army packages literature on doctrine and tactics in field manuals (FMs) or field circulars (FCs). The field manual indicates a completed Army document. Army wide consensus on the viability of a document's subject denotes a field manual.

The term, field circular, refers to an Army document that is still in transition. The field circular may later become a field manual or a future field manual of broader scope may incorporate the specifics of a field circular. Field manuals and field circulars are the primary documents that drive the tactical operations of the Army's battalion task forces.

In this chapter the literature on breach operations found in the form of field manuals and circulars, is analyzed. Analysis focuses on the determination of sufficient content within these

manuals to allow battalion task forces to plan and execute successful breach operations. Screening of these field manuals and circulars will show which branch of the Army is proponent for the document. This facilitates determination of the target audience. This analysis also will indicate whether any documents contradict other Army literature on the subject.

FIELD MANUALS AND CIRCULARS

FM 71-2 J (coordinating draft) The Tank and Mechanized Infantry Battalion Task Force, dated December 1984, is probably the document used to guide the tactical planning and employment of most of the task forces rotating through the NTC until late 1988. The proponent for FM 71-2 J is The Army Training and Doctrine Command (TRADOC) with joint input from both the Armor and Infantry Schools. FM 71-2 J addresses engineer employment in the offense and breaching operations in three separate areas in the field manual. First, FM 71-2 J addresses the battle field operating systems in Chapter I and touches briefly on mobility operations stating:

"The engineers provide additional mobility, counter mobility, and survivability support to the task force. They construct obstacles, emplace and clear minefields, prepare demolitions, improve roads, provide bridging (including AVLBs), and dig fighting positions for combat vehicles." 1

Although FM 71-2J discusses breach operations in detail, several key shortfalls in the context arise.

First, the manual makes no mention of the critical interface of the staff engineer in the intelligence preparation of the battlefield (IPB) process. The manual does not discuss the use of engineers to assist the recon effort.

Second, although FM 71-2J spells out the conduct of breach operations, the manual makes no mention of the fundamentals of breaching. Manuals produced by the Engineer school always refer to these fundamentals of breaching (suppress, obscure, secure, reduce) as instrumental to mission success.

A substantial revision of FM 71-2J resulted in September 1988 with FM 71-2, The Tank and Mechanized Infantry Battalion Task Force. This document states in its preface:

"This manual describes the doctrinal and tactical employment of the tank and mechanized infantry battalion task force on the Airland Battlefield....This manual reflects and supports the Army's Airland Battle doctrine as stated in FM 100-5." 2

FM 71-2 provides an entire chapter on the topic of obstacle reduction. This chapter mentions methods of breaching, organization of the battalion task force to conduct breaching, and techniques for conducting a breach.

The chapter further emphasizes marking of breach lanes, and the peculiarities of the hasty breaching of log obstacles and tank ditches. Numerous schematic

drawings complement the narrative. FM 71-2 devotes an entire section to Engineer support. This section states that the Brigade commander will normally allocate an engineer platoon to a task force.

Further information is given on engineer mobility capabilities, a small amount of information is provided on key engineer equipment, and also a narrative is provided in the use of engineers as infantry. A paragraph within this section is devoted to engineer employment considerations such as command and control to facilitate various engineer tasks as well as guidance to handle resupply problems.

This manual devotes 19 pages to the command and control process (troop leading procedures) and intelligence preparation of the battlefield. Yet, the manual neglects the vital link of the staff engineer working with the S-2 to template enemy obstacles. FM 71-2 does not discuss necessary engineer augmentation of recon efforts either. As with its predecessor, FM 71-2J, this manual has a significant shortfall in that it fails to address the fundamentals of breaching.

FC 71-50 Attack and Assault on a Complex

Obstacle Strongpoint, dated November 1983, states in its introduction:

"The tactics and techniques described in this text reflect the Infantry School's position for the conduct of a mounted attack and breaching and assaulting complex obstacles and strongpoints....The techniques described will give commanders at brigade, battalion, and company level an idea of considerations and details that must be addressed in the conduct of planning and training for such an operation." ³

This field circular discusses the Soviet defenses from fighting position up to company sized strong point and provides detailed techniques for entering trenchlines and knocking out enemy bunkers. FC 71-50 places great emphasis on task organization of the battalion task force and subordinate companies performing breach, support, and assault roles. This field manual provides the technical nuances of various engineer equipment and demolition devices. Obviously the Infantry school published FC 71-50 as an interim fix to the perceived breaching problem. The field circular claims to give commanders an idea of considerations that must be addressed in the conduct of planning such operations. Yet, there is no focus on the necessary compressed troop leading procedures and backward planning required to integrate engineers and other combined arms into planning. The "How to" for

staff planning at battalion task force level is not present in FC 71-50.

FC 5-71-2 Engineers in the Tank and Mechanized Task Force, dated July 1980, is a document written by the Army's Engineer school. FC 5-71-2 states in its preface:

"This coordinating draft describes how the heavy division engineer platoon, as a member of the Combined Arms Task Force, provides synchronized mobility, countertermobility, and survivability support on the Airland battlefield." 4

The three target audiences specified by FC 5-71-2 include:

1. The Task force commander, staff, and subordinate company team leaders.
2. The Task force engineer/platoon leader.
3. The engineer battalion chain of command. 5

This field circular details how to devise engineer support relationships based on mission, and methods for avoiding logistic resupply problems within the task force. FC 5-71-2 stresses the importance of the staff engineer knowing how the enemy (Soviets) will fight. This knowledge allows the staff engineer to advise the task force S-2 and commander on anticipated engineer missions.

Of particular importance, this manual focuses upon the intricacies of the planning process at battalion task force level. The field circular discusses in detail the importance of one-third to two-third planning. FC 5-71-2 also emphasizes staff engineer interface with the course of action development, engineer participation with the leaders recon, and engineer attendance at task force warning and operation orders.

This field circular delineates the staff engineer's responsibility to review the mobility role specified in paragraph 3A of the task force operation order. FC 5-71-2 provides necessary guidance to the engineer platoon sergeant on preparations of the engineer platoon while the platoon leader continues in the staff role.

This circular devotes an entire 24 page chapter to the specifics of planning engineer operations within the task force. This information provided in FC 5-71-2 is vitally important to the battalion task force commander and staff.

As a field circular, FC 5-71-2 lacks the same wide distribution a field manual receives. In its preface the field circular contains this comment:

"It [FC 5-71-2] is not available through the U.S. Army Adjutant General Publication Center. Major Army Commands (MACOMs) are encouraged to reproduce and distribute this field circular." 6

This comment is probably an indicative of the limited dissemination and readership of this manual throughout the force structure.

FM 90-13-1 (Coordinating Draft) Combined Arms Breaching Operations, dated April 1989, is the premiere military document on this subject. It is all encompassing in its scope and covers every facet of obstacle reduction. It is a condensed and more precise derivative of FC 5-71-2. Of particular note is the data that this field manual provides on engineer interface with reconnaissance and the templating of enemy forces. FM 90-13-1 states:

"Reconnaissance is a combined arms activity. Scouts include engineers when collecting OBSTINTEL [obstacle intelligence]...OBSTINTEL gathered through coordinated effort by scouts, engineers, and other resources is reported through both maneuver and engineer channels. The force engineer is the critical OBSTINTEL link. He must assist the staff in processing the data, updating the DST [decision support template], and recommend changes, if necessary, to the scheme of maneuver." 7

This field manual furnishes all the necessary pertinent data to conduct breach operations. For example, this manual provides a format for an obstacle report that rapidly streamlines the flow of recon information back to mission planners. The manual also provides critical planning figures such as an estimate on how fast Soviet artillery can respond to a breach operation:

"Preplanned fires can arrive on target seven minutes from the time the fire is called and can be adjusted onto the breach location in an additional five to ten minutes." 8

FM 90-13-1 is the one source document on training, planning, and execution of obstacle reduction. It is a recent addition to the Army "how to fight manuals" and probably will take some time for the force structure to read and absorb thoroughly. The vast majority of the information in FM 90-13-1 contains materials put forth in previous references. It remains to be seen how well the Infantry and Armor branches will follow the procedures of this manual, as the proponent for FM 90-13-1 is the Army Engineer school.

To recap, the force structure has available sufficient information and guidance to plan and conduct breaching operations. Albeit, until most recently several field manuals and circulars had the necessary data although in varying piecemeal detail. Still, the fact remains that the information has been reasonably accessible to practitioners down in the battalion task force..

CHAPTER III

RESEARCH METHODOLOGY

This chapter outlines in detail the specific methods and techniques employed in conducting this research. Included in this chapter are the procedures used to collect and refine data for this study, and a description of the criteria used for assessment of that data.

DESCRIPTION OF PROCEDURES

The statement of the research problem indicated that over fifty percent of attempted breach operations conducted at NTC in 1989-1990 failed. Possible base causes considered for these breach failures are listed below:

1. Inadequate engineer equipment
2. Weakness in engineer collective training
3. Insufficient tactics, techniques, and procedures
4. Inability to correctly use procedures for the planning and orchestration of assets to conduct the breach

As mentioned in Chapter I, the analysis assumed away several of these possible causes. To recap, the engineer equipment available to the battalion task

force (although limited) proved capable of reducing Soviet style obstacles. Additionally, NTC after action reports didn't suggest a particular weakness in the engineer's capability to reduce obstacles, provided they survived to reach the obstacle. The review of related literature in Chapter II showed that tactics, techniques, and procedures for breaching obstacles were consistent and viable. These deductions left the planning arena as the focus for the base cause of these breach failures.

The data surveyed to discern specific inadequacies in the planning of breach operations included NTC after action reports collected over a two year period (1988-1990). These after action reports were the narratives from twenty-two battalion task force rotations. Each of these rotations consisted of a fourteen day exercise of a force on force nature. Over the course of these twenty-two rotations, one hundred and fifty-three battalion task force offensive missions required breach planning to achieve mission success. For this study's purposes, the following battalion task force missions required breach planning:

1. Movement to contact/hasty attack
2. Deliberate attack
3. Night attack
4. Counter attack

Analysis determined seven categories of breach planning shortfalls. The single category accruing the most adverse comments was selected as the focus of interpretation. Survey of the breach planning shortfalls produced the following figures:

<u>BREACH PLANNING SHORTFALLS</u>	<u>% ADVERSE COMMENT</u>
Estimate of the situation	70%
Time management	39%
Command and control	39%
Task organization	38%
Staff Integration	36%
Application of breaching fundamentals	29%
Flexibility	21%
Order issuing procedures	20%

TABLE 3-1 BREACH PLANNING SHORTFALLS

This study scrutinized only armored and mechanized battalion task forces. The study excluded cavalry squadrons because of their slightly different force structure and command and control. The breach planning at brigade level was also discounted from analysis.

The computer files of the Center for Army Lessons Learned (CALL) maintained NTC after action reports pertinent to this study. The study used the most recent two years of NTC after action reports

because of the standard formatting provided. Files before 1988 were not yet fully computerized and were still being recorded. Additionally, files previous to 1988 used varying formats. For research purposes, earlier NTC files proved too difficult to recover and hard to collate.

In spite of the inaccessibility of NTC files before 1988, the retrievable two years of files built a sufficiently valid statistical base. In fact, the vastness of the data surveyed was considered an inherent strength of this methodology.

Each NTC after action report categorized the training missions by type of battalion task force (mechanized or armored). The after action reports broke every mission into a concept of the operation and then into comments on battlefield operating systems. Portions of the after action report narratives scrutinized for input were the summaries of execution for mobility, countermobility, and survivability (M, C, & S) and comments on lessons learned. The summary of (M, C, & S) provided what the battalion task force intended to occur as well as mission planning and execution. The portion on lessons learned distilled (M, C, & S) shortfalls into bulletized comments and general trends of the battalion task force.

Using these NTC after action reports provided some difficulty to research. A variety of NTC

observer/controllers (O.C.s) wrote these narratives over a two year period. Each narrative reflected the various writing style of that particular author. Although there was overt criteria for mission success or failure, the narratives were the historical data kept on file and were somewhat subjective in nature. In spite of this subjectivity, general trends and shortfalls did become apparent through narrative analysis.

Chapter IV of this study interprets and discusses the tabulated results of the NTC after action reports. This chapter focuses on the predominate reoccurring breach planning shortfalls discerned from analysis. The chapter examines base causes for breach planning shortfalls and any factors that contribute to their development.

Chapter V presents recommendations to rectify identified planning shortfalls. In line with these recommendations, this chapter identifies related areas for further inquiry that can expand upon the conclusions drawn.

CHAPTER IV

ANALYSIS OF DATA

The assessment of breach planning shortfalls indicated adverse comments concerning the estimate of the situation in 70% of the rotations surveyed. Not only were shortfalls in the estimate of the situation notable predominate in the assessment, but these shortfalls were also 30% more numerous than the next highest category of planning shortfall identified. Because of these factors, shortfalls in the estimate of the situation were considered markedly significant in causing overall breach planning failures.

According to FM 101-5 Staff Organization and Operations dated 1984, the following describes the purpose of the estimate of the situation:

"to collect and analyze relevant information for developing within the time limits and available information, the most effective solution to a problem." 1

For the purposes of better assessing the base cause for breach planning failures, the estimate of the situation was broken down into three major discernable components. These components were:

1. Mission analysis, which was defined as the synthesis of information to form the commander's restated mission statement.

2. Analysis of characteristics of the area of operation, enemy situation, and enemy capability.
3. Analysis of own situation and relative combat power, to include the husbanding of limited key assets for use at the critical time.

Upon establishing these three components of the estimate, survey of the NTC rotations again commenced. The survey discerned which of the three components accrued the most negative comments from the observer controllers, and produced the following rank order:

<u>COMPONENTS OF THE ESTIMATE</u>	<u>% ADVERSE COMMENT</u>
Analysis of Area and Enemy.....	49%
Analysis of own Situation and Combat Power	33%
Mission Analysis	11%

TABLE 4-1 ESTIMATE COMPONENTS

Here again within the three components of estimate assessed, one component surfaced with considerably more adverse remarks than the others. Analysis of Area and Enemy, with 49% of all offensive missions receiving adverse O.C. comments, led the other components. Analysis of area and enemy had 16% more critical comments than the nearest other component of the estimate. (Analysis of Own Situation and

Capabilities with 33% adverse remarks). With 11% adverse remarks the mission analysis component of the estimate was considered insignificant in terms of breach planning shortfalls and was determined to lack enough adverse remarks to constitute a viable recurring weakness. Such limited adverse comment disqualify this category from any future discussion in this assessment.

ANALYSIS OF AREA AND ENEMY

As noted above, negative comments on the analysis of area and enemy dominated the summaries of breach operations. Representative of the many adverse remarks on the analysis of the area and the enemy by observer/controllers were the following narrative excerpts from the assessed NTC rotations:

"Mobility planning for this operation was not in the detail necessary to conduct a successful operation. The S-2 and engineer did not closely coordinate and develop an obstacle template to determine the mission requirements for this operation. Additionally, no PIR's were identified to determine hard intel on the obstacle system even though intel indicated the enemy could be in prepared positions.... During the battle, they encountered a doctrinally three belt defensive position and were not able to penetrate any further than the outer belt."
ROTATION 3-88

"The task force engineer had little or no input into the initial plan....The plan outlined the breach of a single obstacle belt even though multiple belts were templated by the S-2."
ROTATION 13-88

"No engineer recon forces accompanied the scouts , and an R&S plan to confirm or deny obstacle locations was not integrated into the overall R&S plan." ROTATION 3-89

"The task force did not develop an R&S plan to confirm or deny (enemy) obstacle locations. Engineer assets were not used to compliment the scout effort." ROTATION 5-89

"The mobility threat was severely underestimated. The task force believed the enemy had 2 hours to prepare his defense. They also believed that obstacles would not be extensive and could be easily countered. Intel from the brigade indicated that the enemy had in fact sufficient time to emplace an extensive obstacle system and that he would be in prepared positions." ROTATION 14-89

"Planning was based on a flawed (enemy) template....R&S planning was not focused on finding enemy obstacles, even though they were identified as PIR." ROTATION 14-89

"The task force engineer began his planning by developing an obstacle template in coordination with the S-2 and complimented the DST. The S-3 and task force commander , however , did not use this template to assist in developing the scheme of maneuver. Therefore, detailed actions at obstacles were never discussed at either task force or team level. The obstacle template also was not fully integrated into the DST: the obstacle locations were not reflected on the S-2 DST. The task force R&S plan did not integrate the template either. NAI's were not established on templated obstacles along the task force axis that would focus intel collection assets on confirming or denying the enemy's defensive disposition." ROTATION 14-89

The recurrent theme in these observer controller remarks was that the disposition of the enemy defenses

was either not fully included in planning, incorrectly assessed, or accepted forthwith without any attempt to confirm or deny dispositions. These failures in analysis of the area and enemy forces had a pronounced influence on the other breach planning shortfall categories.

In particular, the success of analysis of the area and enemy had a direct effect on three other categories of breach planning shortfalls (see illustration 4-1). Those categories were:

Time Management

Staff Integration

Analysis of Own Capabilities and Combat Power

TIME MANAGEMENT

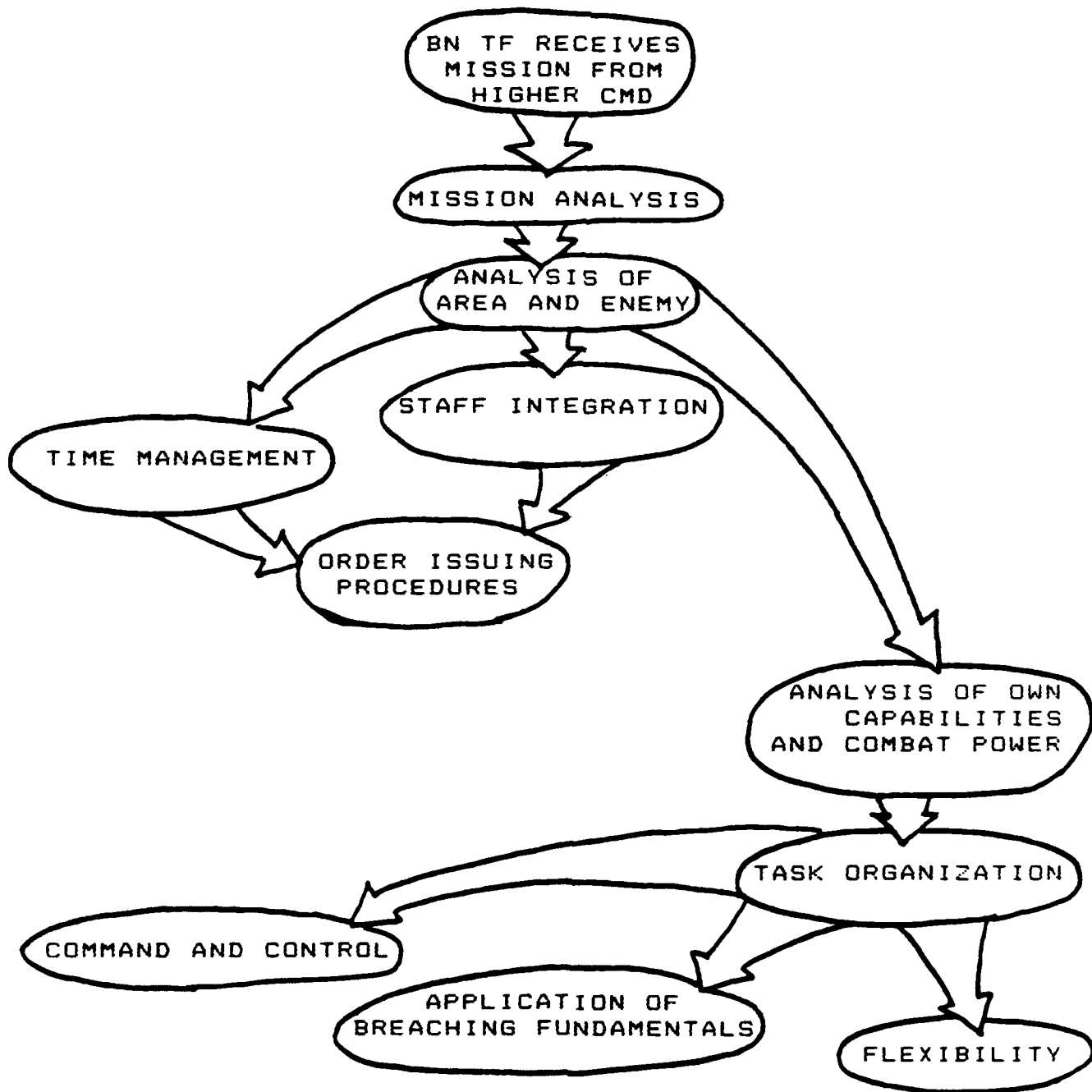
Confirmation or denial of the enemy's dispositions, defenses, and strengths drove the ability of the staff to begin and complete effective planning in a timely manner. FM 71-2, The Tank and Mechanized Task Force states:

"The foundation of Airland Battle doctrine at the task force level is classical maneuver warfare. In its simplest form, maneuver warfare involves using a part of the force to find, then fix or contain the enemy, while the remainder of the force attacks his weakest point." ²

In order to commence planning to find and attack the enemy, the battalion task force staff requires first a framework of enemy dispositions to formulate courses of action. When confronted with an unknown

FIGURE 4-1

LINKAGE OF BREACH PLANNING SHORTFALLS
TO POOR ANALYSIS OF AREA
AND ENEMY FORCES/CAPABILITIES



disposition of enemy forces, the staff correctly tends to delay production of the battalion task force order until intelligence on the enemy disposition solidifies. When this does not occur satisfactorily or occurs late within the interval available for troop leading procedures, a ripple effect occurs forcing further abbreviation of necessary planning staff actions. This commonly referred to "time crunch" develops whereby subsequent staff actions are undertaken incompletely or not at all in an effort to conduct the operation at the time specified by the higher headquarters. This time crunch has a disproportionately adverse effect on the battalion task force engineer. The attached engineer platoon leader usually performs double duty as the task force engineer. The myriad of duties burdening the one person holding both these responsibilities frequently results in a reduced performance at both these critical positions.

STAFF INTEGRATION

The success of the attempt to accurately analyze enemy dispositions has a pronounced effect on staff integration. The battalion task force staff (engineer, S2, FSO, S3, etc) have numerous duties during planning most of which are predicated on first knowing enemy dispositions.

If the enemy dispositions at the onset of planning are unclear and appear that they will remain

clouded for the near term, the inclination of the staff is to conduct other pressing duties. For example, the task force engineer must assist the S2 in templating enemy obstacles and make recommendations on task organization and engineer employment to the S3. The engineer must additionally prepare and give an order to his subordinates within the engineer platoon. The FSO must coordinate targets amongst the companies dispersed along the battlefield. All members of the staff as well as the commander must participate in recons and pre-battle inspections.

If accurate intelligence on the enemy disposition cannot be provided early on in planning, the staff disperses to continue its manifold duties without a common focus. In this situation, the coordination of one staff element might completely contradict another. Once these circumstances have begun mutual coordination between the staff erodes.

ANALYSIS OF OWN CAPABILITIES

AND COMBAT POWER

Friendly combat power must be assessed against enemy combat power. Accurate knowledge of enemy dispositions provides the framework for determining what forces must be mustered to defeat the enemy. This is especially important when considering the limited engineer assets available to the battalion task force to conduct breaching operations. Frugal handling of

scarce engineer assets ensures availability for employment at the decisive place and time. Infantry cross trained in basic engineer skills and prepared to execute breaching SOPs alleviates some of the manifold demands upon limited engineer resources.

ORDER ISSUING PROCEDURES

Order issuing procedures are greatly influenced by two planning categories previously mentioned: time management and staff integration. Thus analysis of the area and enemy effects order issuing procedures in a secondary manner. The nature of the staff work undertaken to support the battalion task force operation requires centralized guidance to the staff followed by execution that for the most part must be decentralized. Updates on the enemy situation that widely fluctuate from the original incomplete assessment require the recall of staff personnel to react to adjusted frag orders, rehearsals, inspections, and briefbacks.

Since the staff is usually dispersed conducting their duties, the full and timely recall of personnel is greatly inhibited. Situations such as this cause the frequent absence of key personnel at critical briefings, orders, and rehearsals and thus greatly degrade the order issuing procedures.

TASK ORGANIZATION

Task organization is an outgrowth of matching the analysis of own capabilities and combat power against the analysis of area and enemy. Analysis of area and enemy influences task organization as the staff planning an operation attempts to match friendly strength against anticipated enemy weaknesses. At the same time the staff configures forces to protect unit vulnerabilities. Proper task organization is vitally important in the conduct of breach operations. Employment of limited assets (i.e. engineer breaching equipment) at the critical time requires a force tailored to protect those assets long enough to complete their mission.

APPLICATION OF BREACHING FUNDAMENTALS

Doctrinally, four breaching fundamentals are required to successfully conduct a breach. Those fundamentals are:

1. Suppress
2. Obscure
3. Safeguard
4. Reduce

In order to accomplish these four fundamental missions and effect the breach the appropriate forces must be on hand at the breach site. Task organization provides the necessary configuration of forces to efficiently conduct these four fundamentals. The

analysis of area and enemy effects the application of breaching fundamentals in the following circuitous manner:

- the analysis of area and enemy influences
the analysis of own capabilities and combat power
- the analysis of own capabilities and combat power influences construction of task organization
- task organization supports the capability to apply the breaching fundamentals

Task organization to support the battalion task force breach must translate into capability to conduct the breaching fundamentals. Forces must suppress the enemy defenders in vicinity of the breach site with direct and indirect fires for the duration of the breach operation to protect the force attempting to reduce the obstacle. Obscuration provided through timely and accurate indirect fires or through ground emplaced smoke pots must mask the exact location of the reduction. Forces must secure the breach site from counterattack for the duration of passage of forces through the obstacle belt, this should include air defense assets to protect against air attack. The ability to reduce the obstacle determines the success of the breach operation. As the engineer assets required to conduct a breach are scarce at battalion

task force level, they must carefully be emplaced in the task organization to effect the breach at the critical place and time. The possibility of breach failure increases considerably without those assets.

COMMAND AND CONTROL

Task organization facilitates effective command and control. Of course, analysis of area and enemy greatly influences the task organization, and therefore indirectly affects command and control. Key leaders with critical roles in the execution of the operations rely on determination of the main effort and the decisive point of attack as a guide for their appropriate positioning to oversee and influence the battle. If the main effort is incorrect, if the decisive point is in fact a strong enemy position instead of a weak area; mission critical assets are squandered. Opportunities that might present themselves elsewhere on the battlefield remain beyond the influence of the misplaced commander or key personnel.

FLEXIBILITY

Flexibility depends on task organization. An accurate analysis of the area and enemy, allows the task organization to construct a force based on known enemy dispositions. Flexibility occurs by organizing for the known and configuring the remaining available

forces to offset against possible unknown enemy dispositions and forces remaining.

Planners can easily provide flexibility when a good deal is known about enemy dispositions and capabilities. If little can be determined about the enemy and the terrain he holds, flexibility is much harder to build for a plan.

The difficulty of obtaining plan flexibility also increases under circumstances requiring scarce assets for a critical mission. Limited engineer assets within the battalion task force make flexibility of breach planning harder to achieve. In an instance such as this, there is limited room for recovery if an incorrect intelligence assessment is made and scarce assets are committed in the wrong location. This condition can be offset by equipping and training infantry on breach SOPs for just such contingencies.

FINDINGS

The discussion and analysis provided in the preceding chapters makes it possible to answer the two questions asked in Chapter I.

1. Do the U.S. Army's various field manuals provide effective techniques, tactics, and procedures to guide the planning and conduct of breach operations at battalion task force level?

2. Are the units in the field applying the techniques, tactics, and procedures put forth in these field manuals?

Chapter II, The Review of Related Literature responded to the first question. The assessment conducted of pertinent field manuals and circulars in that chapter led to the determination that the force structure had sufficient information to plan and conduct breach operations. Tactics, techniques, and procedures were assessed as viable. No significant shortfall appeared in the available literature.

The focus of the breach problem centered around the second research question. Lack of adherence by key leaders and staff to the tactics, techniques, and procedures specified in U.S. Army literature to govern such operations caused the high failure rates of breach operations at NTC.

The complete and thorough assessment of all categories of breach planning shortfalls pointed to one central problem. The accrued data indicated faulty analysis of area and enemy as the very crux at which breach planning came unhinged. All other planning categories were influenced directly or indirectly by the quality of this analysis and the ability to confirm or deny its correctness.

The failure of the analysis of area and enemy, and its adverse effect on other areas of breach planning, could be likened to a catalyst that initiates a series of domino-like planning shortfalls. This domino affect permits the adverse influencing of the entire decision making process at battalion task level.

The cause and affect noted in breach planning with regards to analysis of the area of operation and enemy and other planning areas is not confined solely to breach planning. This cause and affect applies to the whole myriad of offensive and defensive missions conducted by the battalion task force, yet it is more noticeable in breach operations.

At NTC breach operation failure frequently creates a greater signature than the failures of other missions conducted by battalion task forces. Because of limited engineer personnel and equipment within the battalion task force, greater skill and capability by the staff is required in planning the employment of these frugal assets. Under these circumstances, the likelihood of failure is accordingly greater and thus more frequent.

Another aspect of this larger signature is enemy doctrine. Enemy mobile obstacle detachments have a capability to rapidly construct obstacles and minefields in areas previously reconnoitered and cleared.

The enemy often uses obstacles to channelize friendly forces into pre-determined kill zones. Thus, the enemy employs a significant amount of combat power overwatching their obstacle systems. This results in rapid enemy response when breach operations go askew.

On these occasions, the battalion task force suffers numerous losses in terms of personnel and equipment. Engineers committed elsewhere on the battlefield cannot respond and infantry on the scene are untrained or unprepared to act to reduce obstacles. This is indicated in the following NTC narrative:

"The task force did not have the necessary equipment to breach the emplaced ditch within the (designated breach) unit nor were they equipped to breach the minefields"

ROTATION 3-88

Often losses sustained by the battalion task force in preliminary contact with the enemy during the breach, prohibit accomplishment of the primary mission.

The battalion task force jeopardizes mission accomplishment when it encounters an unforeseen obstacle and has to expend considerable combat power and assets forcing an unplanned or ill-timed breach. High expenditure of assets in terms of time , munitions, personnel, and equipment can bring the battalion task force to a premature culminating point as the forces available have been attrited to the degree they can no longer advance. The operation fails to reach the intended objective. Under these

conditions continuation of the assigned mission is impossible and a hasty defense or withdrawal must be ordered.

In these instances where the friendly concept of operations, to include necessary breaching, is built by the staff based on faulty or incomplete knowledge of the enemy, the planning process has been already dangerously crippled. Results of such a process generate operation orders without flexibility and task organized with no regard for the threat. Successful execution of a plan developed in this manner, especially a difficult breach operation, occurs only through the greatest circumstances of chance.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The objective of this analysis was to discern the base cause for the high failure rate of breach operations at the NTC. Breach failure primarily resides in the inability of the battalion task force staff to correctly use the procedures governing analysis of the area of operation and the enemy during planning.

This problem develops during battalion task force missions in several different ways. Sometimes, templating of enemy doctrinal dispositions by the staff does not occur. Occasionally, the staff develops faulty enemy templates or templates are applied incorrectly to the terrain. Frequently, templating of enemy forces occurs by the staff, but insufficient reconnaissance is pushed forward for confirmation or denial of the enemy template and disposition. The engineer platoon leader acting also as the task force engineer is often unable to dedicate the time and effort to identify and close these planning loopholes. Usually, the plan developed depends entirely upon engineers to reduce obstacles. Thus, when unanticipated obstacles are encountered in the absence of engineers, the infantry is unprepared to respond.

Several recommendations evolve from the basis of this study. Any or all of these recommendations would go a ways towards reducing the high failure rate of breaches within the battalion task.

These recommendations are listed in priority of their importance to the breaching problem and the necessity of their implementation. The most important recommendations are listed first. The recommendations fall into two categories. The first category of recommendations deals with training. The second category of recommendations concern organization within the battalion task force.

RECOMMENDATIONS

1. Implement a series of evaluated CPXs for battalion task force staffs. This would be an outstanding forum to exercise the correlation between analysis of the area of operation and enemy, and the difficult breach operations. These CPXs would exercise the staff on the numerous other battalion task force missions as well. This process would force the education of the battalion task force staff and commander on U.S. Army doctrinal planning procedures. These CPXs would operate in the following manner:

- At these evaluations the battalion task force staff would be presented with tactical scenarios similar to NTC missions. Solely the planning of the task force would be evaluated. The training and evaluation focus would be on staff preparation of fragmentary and operation orders under realistic time constraints. Special attention would be paid to staff interface and the problems associated with analyzing the area of operation and enemy. Battalion task force assets would be attrited according to the dexterity of the staff in dealing with the situation presented.

- Upon completion of each order the planning process and order would be assessed. An immediate after action review would follow to discuss shortfalls.

- CPX evaluations would commence one year prior to NTC rotation, with perhaps three to four evaluations occurring prior to the rotation. This would allow the battalion task force staff to maintain their battle focus and continually maintain staff capabilities within the band of excellence.

- Evaluations would not be resource intensive. Involvement would be limited to the battalion task force staff and commander. Great savings would be accrued as task force staffs would arrive at NTC trained. Thus, time, munitions, and fuel would not be squandered in the education of the staff at the expense of the entire task force out at NTC.

- Evaluations would last several days. An evaluation cell operating under the auspices of NTC would arrive to conduct this external evaluation. The brigade staff could monitor and observe as required.

2. Emphasize infantry cross training on engineer tasks and equip them accordingly so they can reduce obstacles. This allows battalion task force engineers to be massed and employed at the most likely obstacle locations. This also greatly facilitates planning flexibility.

3. Add a permanent staff engineer to the battalion staff. This would provide the battalion task force staff a dedicated expert on breaching operations. Currently the battalion staff engineer and the

platoon leader of the task force engineer platoon are one and the same.

Engineer planning requirements within the battalion task force are significant enough to warrant a permanent billet on the staff. Likewise, engineer platoon leader duties are numerous enough that additional requirements thrust upon the engineer platoon leader acting also as staff engineer insures an overload of work and reduced performance at both positions.

A dedicated staff position within the task force similar to the artillery's fire support officer would greatly enhance engineer planning ability and hence breaching capability.

4. Augment engineer assets available to the battalion task force. Although additional engineer assets forecast under the "E- force" proposal appear to be targeted for budget cuts, other assets are available. Currently, the inactivation of several heavy divisions and at least one corps are planned for the near future. The engineer assets from those inactivated units could be cross leveled through out the U.S. Army's remaining heavy divisions.

More assets available to battalion task force would facilitate planning flexibility and reduce the level of expertise required to employ the limited engineer assets now on hand.

5. Increase the size and composition of the scout units available to the task force. This would provide task force planners with a readily available resource to not only confirm or deny enemy dispositions along the route of the task force main effort but the route of the supporting effort as well. This would greatly reduce the number of surprise obstacles encountered by the task force enroute to the objective.

6. Permanently attach base support slices to maneuver battalions i.e. air defense, artillery, engineer, etc. This could be conducted in the same manner that currently exists in separate brigades. Permanent attachment of this kind would better facilitate close staff interaction and also cooperation of combined arms within the task force. This greater cooperation within the task force would

enhance the interface required to plan and execute successful breach operations.

IMPLICATIONS

Currently formal schooling on this subject is being imbued throughout the force structure in a bottoms up manner. Unfortunately the decision makers are at the top level of the battalion task force.

Although analysis of the area of operations is now taught (as part of the IPB process) in most of the advanced and basic officer courses, as well as the command and staff college, the mid level field grade officers have received little or no formal schooling on this subject. Thus, if officers in this category do not keep up with the tactics, techniques, and procedures provided by the current field manuals and circulars, their capabilities supervising the employment of the same understandably suffers.

For battalion staff and commanders, just a working knowledge of these critical breach planning tactics, techniques, and procedures is insufficient. These are perishable individual and collective skills that erode without constant training and exercise. Breach planning and the associated analysis of the area of operations and enemy, as with any other skill, requires repetition to achieve performance within the band of excellence.

A battalion task force staff should not reach this level of planning competency on the last mission of an NTC rotation. This level of competency should be maintained cyclicly.

The conduct of breach operations would significantly improve with the acceptance of the recommendations put forth in this chapter. All recommendations could be implemented with minimal cost other than time and effort.

RECOMMENDATIONS FOR FUTURE RESEARCH

Several recommendations for future research would refine and expand upon the conclusions drawn in this study. The following recommendations would prove fruitful for further research in this area:

1. Initiate battalion task force CPX evaluations on a limited test basis for several units scheduled to attend the NTC. Monitor the NTC results of such units to determine any change in staff interaction and task force breach capability.
2. Augment the staff of select battalion task forces rotating through NTC with a dedicated staff engineer. Monitor NTC performance to determine if battalion task force breaching capabilities improve.
3. On a trial basis augment the engineer capability of select battalion task forces

rotating through NTC. Observe NTC performance to discern any change in breach ability.

4. For select battalion task forces rotating through the NTC, experiment with their intelligence gathering capability. This could be accomplished by providing them larger and more capable scout units to better allow the confirmation and denial of enemy dispositions and obstacles. The results could be monitored to discern cause and effect between reconnaissance ability and successful obstacle reduction.

CHAPTER I ENDNOTES

1. U.S. Army, FM 90-13-1, (Coordinating Draft), Combined Arms Breaching Operations (Ft. Leonard Wood, Missouri: U.S. Army Engineer School, 1989), p. 1-1.
2. Briefing on the National Training Center by The Center for Army Lessons Learned, June 1989.
3. U.S. Army, FM 100-5, Operations, (Washington, D.C.: Headquarters, Department of the Army, 5 May 1986), p. 50.
4. Luttwak, Edward and Horowitz, Dan. Israeli Army. (1975): pp. 213-214.
5. Engle, Eloise and Paananen, Lauri. The Winter War. (1973): p. 74.
6. Blumenson, Martin. Battles for Scandinavia. (1981): p. 27.
7. Ibid: p. 29.
8. Blumenson, Martin. Liberation. (1978): p. 48.
9. Ibid: p. 48.
10. Dick, Charles, J. "The Goodwood Concept-Situating the Appreciation". Journal of the Royal United Services Institute for Defense Studies. (March 1982): p. 23.
11. Blumenson, Martin. Liberation. (1978): p. 51.
12. Chanoff, David and Sharon, Ariel. Warrior, the Autobiography of Ariel Sharon. (1989): pp. 189-198.

CHAPTER II ENDNOTES

1. U.S. Army, FM 71-2 J, (Coordinating Draft) The Tank and Mechanized Infantry Battalion Task Force (Washington D.C.: Headquarters Department of the Army, December 1984), p. 1-35.
2. U.S. Army, FM 71-2, The Tank and Mechanized Infantry Battalion Task Force (Washington, D.C.: Headquarters, Department of the Army, 27 September 1988), p. iv.
3. FC 71-50, Attack and Assault on a Complex Obstacle Strongpoint (Ft. Benning, Georgia: U.S. Infantry School, November, 1983), p. 1.
4. FC 5-71-2, Engineers in the Tank and Mechanized Task Force (Ft. Belvoir, Virginia: U.S. Engineer School, July 1986), p. i.
5. Ibid: pp. i-ii.
6. Ibid: p. iii.
7. FM 90-13-1: p. 2-7.
8. Ibid: p. 1-6.

CHAPTER IV ENDNOTES

1. U.S. Army, FM 101-5, Staff Organization and Operations (Washington D.C.: Department of the Army, 25 May 1984), p. 5-2.

2. FM 71-2: p. 1-3.

BIBLIOGRAPHY

BIBLIOGRAPHY

Government Publications

- FC 71-50 Attack and Assault on a Complex Obstacle Strongpoint. Ft. Benning, Georgia: 1 November 1983.
- FC 5-71-2 Engineers in the Tank and Mechanized Task Force. Ft. Belvoir, Virginia: July 1986.
- FM 90-13-1 (Coordinating Draft) Combined Arms Breaching Operations. Ft. Leonard Wood, Missouri: April 1989.
- FM 100-5 Operations. Washington, D.C.: 5 May 1986.
- FM 101-5 Staff Organization and Operations. Washington, D.C.: 25 May 1984.
- FM 71-2J (Coordinating Draft) The Tank and Mechanized Infantry Battalion Task Force. Washington, D.C.: December 1984.
- FM 71-2 The Tank and Mechanized Infantry Battalion Task Force. Washington, D.C.: 27 September 1988.

Books

- Blumenson, Martin. Battles for Scandinavia. World War II, Vol. 28. Chicago: Time-Life Books, 1981.
- Blumenson, Martin. Liberation. World War II, Vol. 14. Chicago: Time-Life Books, 1978.
- Engle, Eliose and Paananen, Lauri. The Winter War. New York: Charles Scribners Sons, 1973.
- Luttwak, Edward, and Horowitz, David. The Israeli Army. New York: Harper and Row, 1975.
- Sharon, Ariel, and Chanoff, David. Warrior: The Autobiography of Ariel Sharon. New York: Simon and Schuster, 1989.

Articles

Dick, Charles J. "The Goodwood Concept-Situating the Appreciation." Journal of the Royal United Services Institute for Defense Studies, Vol. 127, No. 1, March 1982.

Thesis, Dissertations, Papers, Briefings

Briefing on National Training Center by the Center for Army Lessons Learned, June 1989.

INITIAL DISTRIBUTION LIST

1. Combined Arms Research Library
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas 66027-6900
2. Defense Technical Information Center
Cameron Station
Alexandria, Virginia 22314
3. COL Lewis I. Jeffries
DAO, USACGSC
Fort Leavenworth, Kansas 66027
4. Ernest G. Lowden, Ed.D.
DES, USACGSC
Fort Leavenworth, Kansas 66027
5. MAJ John Campbell
DSRO, USACGSC
Fort Leavenworth, Kansas 66027
6. MAJ Kurt Weiland
CAL, USACGSC
Fort Leavenworth, Kansas 66027
7. Commander
National Training Center & Fort Irwin
Fort Irwin, California 92310
8. Commander
CAC & Fort Leavenworth, ATTN: ATZL-SWD-DL
Fort Leavenworth, Kansas 66027
9. Commandant
USAIS, ATTN: ATSH-B-ID
Fort Benning, Georgia 31905
10. Commandant
USA Air Defense School
ATTN: ATSA-DTT-D (Engineer Instructor)
11. Commandant
USA Armor School
ATTN: ATZK-CSD (Engineer Instructor)
Fort Knox, Kentucky 40121

12. Commandant
USA Field Artillery School
ATTN: ATSF-TCM-EN (Engineer Instructor)
Fort Sill, Oklahoma 73503
13. Commandant
USACGSC, ATTN: Dept. of Tactics (Engineer)
Fort Leavenworth, Kansas 66027
14. Commandant
USA Infantry School,
ATTN: ATSH-B (Engineer Instructor)
Fort Benning, Georgia 31905
15. Commandant
USA Intelligence School,
ATTN: ATSI-CD-CS-S (Engineer Instructor)
Fort Huachuca, Arizona 85613
16. Commandant
USASC, ATTN: ATZH-DOT (Engineer Instructor)
Fort Gordon, Georgia 30905
17. Commandant
USAWC, ATTN: AWAC
Carlisle Barracks, Pennsylvania 17013
18. Commander
US Army Engineer Studies Center
Fort Belvoir, Virginia 22060