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ISRAELI COMBINED ARMS EMPLOYMENT
UM KATEF, 1967; SUEZ CANAL, 1973

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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

CHARLES L. WEEKS, MAJ, USA
B.A., University of Arizona, Tucson Arizona, 1977

Fort Leavenworth, Kansas

1991

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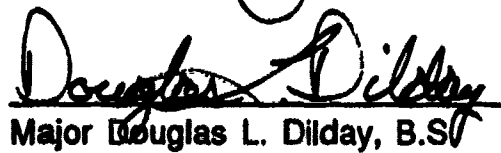
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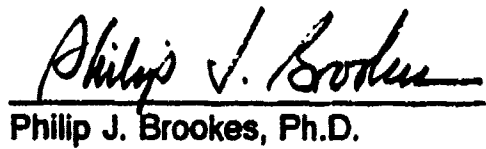
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the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

ABSTRACT

ISRAELI COMBINED ARMS EMPLOYMENT, UM KATIF, 1967; SUEZ CANAL, 1973 by Major Charles L. Weeks, USA, 175 pages.

The next desert war the United States fights could be against an enemy more comparable to us in training, motivation, and technology than the recent conflict in the Persian Gulf. The Middle East is a dangerous part of the world where we have limited experience in the use of high technology weapons, or in large-scale combat even given the recent war against Iraq. Since we have limited experience in these areas, this thesis analyzes two of the most recent historical examples of such combat from the 1967 and 1973 Arab-Israeli Wars to reveal conclusions useful to U. S. warfighters.

This thesis examines the Battle of Um Katef, Abu Ageila from the 1967 War, and the Sinai Campaign from the 1973 War. They were examined primarily from secondary sources, using the U. S. Army battlefield operating systems, as the framework to evaluate success or failure. The resulting keys to success or reasons for failure were then further evaluated against the four tenets of U. S. Airland Battle Doctrine (Agility, Initiative, Depth, and Synchronization).

The result of this investigation is a number of conclusions regarding modern combined arms combat. These conclusions are categorized as strengths or weaknesses and presented as lessons learned. Surprisingly enough, none of the lessons learned proved to be environment specific.

ACKNOWLEDGMENTS

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CHAPTER 1

INTRODUCTION

The primary question that this thesis seeks to answer was generated by an interest in the unfolding of current events in Iraq, Kuwait, and Saudi Arabia after 2 August 1990. The potential and, later, actual employment of American combined arms forces in Iraq, Kuwait, and Saudi Arabia provided an urgent reason to study high-intensity desert warfare. At the start of research for this thesis, the United States (U. S.) Army did not have recent experience in combined arms warfare in a desert environment. As events in Southwest Asia unfolded, the U.S. Army fought and, subsequently, defeated the Iraqi Army. Although both sides may have been comparable in terms of the number of men and the amount of equipment employed, the allies enjoyed a distinct superiority in technology. The next desert war the U.S. Army fights could be against a more comparable enemy. The Middle East is a dangerous

part of the world where we have little experience, even given the recent war, in the use of high technology weapons or in large-scale combat. Since we have limited experience in the use of high technology weapons or in large-scale combat in the Middle East, we must examine the few historical examples we have. The most recent historical examples of large-scale combat available to us involve conflict between the Israelis and the Arabs in the 1967 and 1973 Wars.

Israel provides an example of a country that has had recent experience in desert combat operations against enemies that were equipped with comparable technology. It is of vital importance, therefore, to examine the methodologies of employment that Israel has used with such success. Conclusions, framed by the U. S. AirLand Battle tenets, could be invaluable to U.S. commanders called upon to fight a future war in the desert.

This thesis seeks to answer one primary question and two major subordinate questions. The primary question is "What conclusions regarding desert combat can be drawn from selected Israeli operations in the Sinai that would be useful to U. S. forces?" The two major subordinate questions form two areas of analysis, and establish the basic parameters of the thesis. The two major subordinate questions are: 1) What conclusions regarding desert combat can be drawn from the Battle of Um Katef, in the 1967 Arab - Israeli War?, and 2) What conclusions regarding desert combat can be drawn from the Battle for the Suez Canal in the 1973 Arab - Israeli War?

In addition to the two major subordinate questions presented above, several lesser subordinate questions also require answers. They provide the background necessary for the reader to become familiar with each of the operations examined, and provide the information necessary for the analysis.

There are four lesser subordinate questions that pertain to the Battle of Um Katef in the 1967 Arab-Israeli War. How the Israeli combat forces were employed in the Sinai during this battle is the first. Second, what were the initial Israeli and Egyptian orders of battle? Next, how were the combat forces of both sides positioned just prior to the Battle of Um Katef? Lastly, how were the Israeli combat forces employed in the Battle of Um Katef? Answers to these lesser subordinate questions provide the background necessary to analyze this important battle of the 1967 War.

With regard to the Battle for the Suez Canal in the 1973 Arab-Israeli War, there are again several lesser subordinate questions that must be answered. First, what were the Israeli and Egyptian orders of battle? Second, how were the Israeli combat forces positioned in the initial defense of the "Bar Lev" Line(*)? Next, how were the Israeli combat forces employed in the operations that followed until the 24 October ceasefire?

The above questions define the nature and scope of the thesis. Detailed answers will enable the reader to understand and analyze the battles.

*This and other terms are listed in APPENDIX A, GLOSSARY.

THESIS STRUCTURE

The research for this thesis focused on a historical analysis of the employment of Israeli combat forces in the Sinai during the 1967 and 1973 conflicts. It examined the employment of Israeli combat forces in one battle of the opening phase of the 1967 War, (the Battle of Um Katef, Abu Ageila, 1967), and in the Sinai Campaign of the 1973 War.

The Battle of Um Katef, Abu Ageila was a key battle that opened the central route through the Sinai for the Israelis in the 1967 War. This thesis first examined the battle in the operational context of the Sinai Campaign in the 1967 War. The battle was then examined primarily at the tactical level.

The Sinai Campaign of the 1973 War was examined from the stand-point of three phases. The first one was the Israeli counterattacks against the Egyptians, 6 - 8 October 1973. The Egyptian attack on 14 October 1973, was the second phase, and the Israeli counteroffensive on 16 October 1973 was the third phase.

A synchronization matrix was used to examine these battles in relation to the U.S. Army battlefield operating systems (BOS). The four tenets of AirLand Battle Doctrine (Agility, Initiative, Depth and Synchronization) were then incorporated into a separate matrix with the battlefield operating systems to facilitate the analysis of the battles. As a result, conclusions could then be drawn regarding desert combat that would prove useful to U.S. Forces operating in a future desert environment.

PURPOSE OF THE THESIS

The primary purpose of this thesis is to determine whether or not U.S. Airland Battle Doctrine can be successfully applied in a desert environment against an enemy with comparable technology or skill. The United States has not had recent combat experience in the desert against an enemy with technological parity. The operations of the Israeli Defense Force (IDF) against the Egyptians in 1967 and 1973 furnish examples of modern combat where both sides had relatively equal military technology. It is obvious from the recent Gulf War that U.S. Airland Battle Doctrine can be applied successfully when we hold the technological edge.

ASSUMPTIONS

For this research to proceed, it was necessary to make certain assumptions at the outset. If these assumptions prove incorrect, then the end product may be of questionable value. It is, therefore, vital that these assumptions are valid. This study was undertaken with a reasonable degree of confidence in the validity of these assumptions.

The first assumption is that Israeli combat operations can be usefully examined in terms of the U. S. battlefield operating systems, which will be defined shortly.

The second assumption is that Israeli principles of war are sufficiently comparable to U. S. principles of war to allow an

analysis from the perspective of the tenets of Airland Battle. The Israelis recognize both primary and secondary principles of war. The primary principles are: 1) Adherence to the mission according to the goal, 2) Economy of force, 3) Initiative and offensive, and 4) Deception /Trick /Surprise. The secondary principles are: 1) Mass, 2) Depth of reserve, 3) Continuity, 4) Security, 5) Spirit/Morale of the troops, and 6) Logistics.¹

DEFINITIONS OF TERMS

The following terms are essential to the thesis. This section provides the meaning that each of these key terms will have in the thesis.

These definitions will provide a common basis for understanding how these terms are used in the thesis.

Employment will be defined as the tactical aspects of the use of combat forces.

Combined Arms will be defined as two or more arms mutually supporting one another.

Agility is defined as the ability of friendly forces to act faster than the enemy.²

Depth is the extension of operations in space, time, and resources.³

Synchronization is the arrangement of battlefield activities in time, space, and purpose to produce maximum relative combat power at the decisive point.⁴

Initiative is setting or changing the terms of battle by action.⁵

The U. S. *battlefield operating systems* (BOSs) are Intelligence, Maneuver, Fire Support, Mobility/Counter mobility/ Survivability, Air Defense, Command and Control, and Combat Service Support.⁶

Deception includes those actions which intentionally "mislead enemy decision makers by distortion, concealment, falsification of indicators of friendly capabilities, or dispositions."⁷

LIMITATIONS

This research was undertaken with the knowledge that, due to time constraints, interviews of individuals with firsthand knowledge of the operations studied would not be possible.

Similarly, due to time and resource constraints, a personal visit to the battlefields was not possible.

Additionally, firsthand accounts from Israeli and Egyptian military archives were not available for study.

DELIMITATIONS

This research was limited to the opening phases of the 1967 and 1973 Arab-Israeli Wars. The research for this thesis focused on the historical analysis of the employment of Israeli combat forces in the Sinai during the 1967 and 1973 conflicts. It examined the

employment of Israeli combat forces in one battle of the opening phase of the 1967 War (the Battle of Um Katef, Abu Ageila), and in all phases of the Sinai Campaign of the 1973 War. The first phase of the Sinai Campaign was the Israeli counterattacks against the Egyptians, 6 - 8 October 1973. The second phase was the Egyptian attack, 14 October 1973. The third, and final, phase was the Israeli counteroffensive, 16 October 1973.

These operations most closely correspond to conditions the U. S. Army is likely to encounter in future desert operations. First, the Battle of Um Katef, Abu Ageila, 1967 is an example of a combined arms attack against a Soviet-style defense. Many of our potential opponents either have now, or have had, close ties with the Soviet Union. As a result, they have been influenced, to some degree, by Soviet military doctrine. The Sinai Campaign in 1973 is an example of a force defending outnumbered by the enemy. The Israeli 1973 Sinai Campaign developed into a combined arms mobile defense and counteroffensive that could be analogous to future U.S. defensive operations.

The tenets of AirLand Battle Doctrine were used to examine the Israeli operations. The battlefield operating systems that are key to the success or failure of the selected battles were used as a framework for the examination. Some battlefield operating systems were more influential on the outcome of the battles than were others. Likewise, the impact of the tenets of Airland Battle Doctrine was more important on some battlefield operating systems

than on others. This study focused on the relationships between the Airland Battle Doctrine tenets and the most important battlefield operating systems of each battle examined.

This thesis did not examine combat service support as a battlefield operating system. A study of the Israeli combat service support operations of these campaigns would certainly deserve consideration as a separate thesis subject. The analysis of combat service support operations is, therefore, well beyond the scope of this thesis.

The research has been limited to unclassified sources primarily for two reasons. First, this would allow the widest possible circulation of the thesis, and, second, it would impose the fewest constraints on where the research for the thesis would be conducted and on where the thesis would be written.

The Israeli principles of war were not used in the analysis of the operations. The inclusion of the Israeli principles of war would have resulted in a loss of focus. The analysis of the operations using the Israeli principles of war would deserve to be treated as a separate thesis.⁸

SIGNIFICANCE OF THE STUDY

The results of this study should furnish valuable information to American commanders who might have to fight a combined arms war in the desert against an enemy with comparable technology. The U.S. Army training at the National Training Center at Fort Irwin, California does a good job of replicating combined arms warfare

against a Soviet-style enemy, however, this is not combat experience. The U.S. Army has recent combat experience in the Middle East against Iraq, although the U.S. Army's technology, superior organization, training, and morale provided overwhelming superiority on the battlefield. Against a technologically comparable enemy, we do not have any recent combined arms combat experience in a desert environment. This study should certainly provide significant, useful conclusions regarding the employment of a modern, combat-tested, combined arms force, within the framework of our AirLand Battle Doctrine. The review of the conclusions provided by this study should prove useful to commanders, who may have to fight under such conditions in the future.

NOTES

¹Avi Harari, Israel Defense Force, interview by author. 8 February 1991, Fort Leavenworth. Note provided by Harari.

²U.S. Department of the Army, Field Manual, FM 100-5, Operations (Washington: Department of the Army, 1986), 16.

³FM 100-5 (1986), 16.

⁴FM 100-5 (1986), 17.

⁵FM 100-5 (1986), 15.

⁶U.S. Department of the Army, Student Text 100-3, Battle Book, Center For Army Tactics. (Fort Leavenworth: CGSC, 1989), 1-2.

⁷U.S. Department of the Army, Field Manual, FM 90-2, Battlefield Deception (Washington: Department of the Army, 1988), 1-2.

⁸Harari Interview note.

CHAPTER 2

REVIEW OF THE LITERATURE

GENERAL

A review of the literature revealed that most works are historical descriptions of the conflicts. They describe, in detail, the conflicts and role of the IDF. They neither compare nor contrast the 1967 and 1973 Wars, nor do they employ a framework of AirLand Battle Doctrine as a methodology. This study has attempted to distill the important conclusions from these works within the framework of AirLand Battle Doctrine. There are many works available that deal with the 1967, and 1973 Arab-Israeli Wars. Most are written from the Israeli perspective. An important task, was to include works that cover the 1967, and 1973 Wars from the Arab perspective. Another important task was the review of other research papers and studies that have examined these conflicts. (See Bibliography.)

The various works of literature have been categorized according to how useful were to the research. The books and articles that comprised the most important source material have been categorized as "Most Valuable." Those works that provided good background, or furnished an interesting insight but lacked the detail or depth to be of major importance, were simply categorized as "Useful." Works that were lacking in detail or depth of analysis, or did not cover the operations selected for the study, were categorized as being of "Limited Value."

MOST VALUABLE WORKS

The following books and articles have proven to be quite helpful thus far and were, therefore, categorized as most valuable:

Chaim Herzog's The War of Atonement October, 1973 has been of great help. The War of Atonement October, 1973 not only provides an overview of the 1973 War, but also provides a vivid picture at both the operational and the tactical levels of war. It contains the detail necessary for a thorough examination of the 1973 War. Herzog's work provides a very helpful look at the stress in the Israeli command and control hierarchy caused by the dilemma of either rescuing the defenders of the Bar-Lev Line strongpoints, or of focusing on driving the Egyptians back across the canal.¹

Another book by Chaim Herzog, The Arab Israeli Wars, is an authoritative work that addresses the Arab-Israeli conflicts from the 1948 War of Independence to the 1982 Lebanon operation. As

with The War of Atonement October 1973; this book provides good detail for comparison with, and substantiation of, other sources.

On the Banks of the Suez by Avraham Adan is a superb account of the fighting on the Suez Canal front during the 1973 War. Avraham Adan commanded a division that was engaged from 7 October until the ceasefire on 24 October 1973. Adan's division first saw action in the northern sector of the front and then fought its way across the Suez Canal. By the 24 October ceasefire, Adan's division had encircled Suez City. His book provides a very detailed firsthand account of the fighting, and proved very valuable to the research.

Another excellent chronicle of the Arab-Israeli Wars is Colonel Trevor N. Dupuy's Elusive Victory. Colonel Dupuy's book is an excellent description of the Arab-Israeli conflicts through the 1973 War. Colonel Dupuy provides good detail at both the tactical and operational levels of war of both the Israeli and Egyptian forces. Elusive Victory was also helpful in its description of the functioning of Israeli operational command and control and the problems caused by the failure to establish consistent unity of command.

Yet another valuable source has been Gunther E. Rothenberg's The Anatomy of the Israeli Army. This work provides a good overview of both the 1967 and the 1973 Wars and provides the tactical and operational detail necessary for analysis. Rothenberg's observations were also valuable for the discussion regarding the debate over Israeli tactical doctrine. Rothenberg points out that the "all tank" fighting doctrine was not universally accepted by the IDF. Critics of

the "all tank" fighting doctrine within the IDF cited 1967 War experiences as showing the need for more combined arms operations.²

Lieutenant General Saad el Shazly's book The Crossing of The Suez is a good account of the 1973 War from the Egyptian perspective. Shazly was the Chief of Staff of the Egyptian Armed Forces and the chief architect of the planning and execution of the crossing of the Suez Canal in October 1973. Shazly's account examines not only the Egyptian success, but also its failures and their causes. The Crossing of The Suez provides good detail and was valuable for comparison with other sources.

Dr. George Gawrych's Key to the Sinai: The Battles for Abu Ageila in the 1956 and 1967 Arab - Israeli Wars has also been quite helpful. This work contains a very detailed examination of the Battle for Abu Ageila (Um Katef) in 1967. Dr. Gawrych presents a very well-balanced discussion of the Egyptian and Israeli preparations and operations.

Edgar O'Ballance's The Third Arab - Israeli War also provides a summary of the political and diplomatic events prior to the outbreak of the 1967 War. O'Ballance provides interesting information regarding the Egyptian Army's equipment, training and command structure. He also provides both Egyptian and Israeli dispositions in the Sinai. The Third Arab-Israeli War contains an in-depth examination of the Battle of Abu Ageila, Um Katef that proved very valuable in analysis of the operation.

Selected Readings in Tactics. The 1973 Middle East War, prepared by the U.S. Army Command and General Staff College, is a thorough study of the 1973 conflict. This work presents a short introduction that covers the establishment of the State of Israel and a brief summary of the 1956 and 1967 Wars and the events leading up to them. It also provides a balanced look at the Israeli and Egyptian preparations and the Sinai and Golan Heights operations.

A good summary of the 1973 War was presented by Charles Wakebridge in his article "A Tank Myth or a Missile Mirage," which appeared in the August 1976 issue of Military Review. Wakebridge presents a good summary of the 1973 War on the Suez Canal front. The author credits change in Egyptian doctrine to their initial success in repelling Israeli counterattacks against their positions east of the Suez Canal. Wakebridge also discusses changes to Israeli tactics that evolved in response to initial setbacks.³

"Middle East Tank Killers (in the Yom Kippur War)," Jac Weller's article, which appeared in the December 1974 issue of the Journal of the Royal United Services Institute for Defence Studies, is a very good analysis of antitank guided missile (ATGM) and tank action on the Suez Canal front during the 1973 War. The article emphasizes that changes to Israeli tactics were able to counter the effectiveness of ATGMs. According to the author, the ATGMs did not make the tank obsolete; rather, it was a well-integrated, Egyptian combined arms defense that defeated the Israeli tanks.⁴

A. J. Barker's article "Israel after the Yom Kippur War: Zahal Reflects on the Lessons," published in the June 1974 issue of the Journal of the Royal United Services Institute for Defence Studies, is a good

article that provides an interesting perspective on the effects of ATGM employment on battlefield mobility. Based upon the initial Israeli failure in counterattacking the Egyptians on the Suez, the author concludes that mobility on the battlefield is a thing of the past. "If the freedom of action of both aircraft and tanks is curtailed . . . it looks as if the next war is unlikely to be one of movement unless some novel means of restoring mobility is evolved."⁵

"Zahal Blitzkrieg: The Sinai Campaign of 1967 Exemplified Modern Warfare," Lieutenant Colonel Sewall H. Menzel's article, which appeared in the November/December 1986 issue of Armor, is a good examination of Israeli operations in the Sinai. Lieutenant Colonel Menzel's article includes an examination of the major battles and a discussion of combined arms employment. The author compares both the Egyptian and the Israeli orders of battle in his work. He also praises Sharon's attack on Um Katef as an excellent example of combined arms operations.⁶

USEFUL WORKS

The following works either provided good background for the research or furnished interesting insights. However, they generally lacked the detail or depth to be of major importance to the study.

Israeli Defense Forces Since 1973 by Sam Katz provides good information regarding the causes of the failure of Israeli intelligence services to properly assess the Arab military threat to

Israel prior to the 1973 War. Katz' book also examines the findings of the Agranat Commission, which was responsible for the investigation of Israel's state of readiness up to the second day of the war. The Israeli Defense Forces Since 1973 provided a good overview of the doctrinal changes implemented by the IDF as a result of their experiences during the 1973 War. Katz relates that the Israeli defense and intelligence communities had been exhausted from a previous 18-month operation against the "Black September" organization. The author also argues that the Israeli military intelligence had gravely underestimated the Arab threat since the 1967 War.⁷

October 1973: The Arab-Israeli War by Frank Aker is a good presentation of the circumstances leading up to the 1973 War, Arab planning and execution of the attack, and the course of the fighting against Syria and Egypt. Aker also presents the order of battle for the Israelis, Syrians and Egyptians.

Zeev Schiff's A History of the Israeli Army (1870 - 1974) provides a good operational level overview of the 1967 and 1973 Wars. Schiff also discusses the four elements of Israeli strategy that guided Israeli defense planning in 1967 and 1973. The author also furnishes a good analysis of the failure of Israeli intelligence to anticipate the 1973 War and attributes the intelligence failure to a failure of analysis. In retrospect, previous Egyptian military concentrations in December 1972 and May-June 1973 were seen as attempts to accustom Israel to situations of alert along her borders.⁸

The Lessons of Modern War, Volume I by Cordesman and Wagner is devoted to the Arab-Israeli conflicts beginning with the 1973 War. The Lessons of Modern War, Volume I provides a good chronology of both the Golan Heights and Sinai Campaigns and includes lessons learned in a number of different categories. The work focuses on the lessons learned and does not offer a detailed exposition of the campaigns. The chronology was useful, however, for cross-checking sources. The lessons learned provide material for study.

"The Arabs and Israel in Perspective," an article by Captain John E. Knight, appeared as a series of articles in the Marine Corps Gazette, January, February, and June of 1974. The first article deals with the creation of Israel and the 1948 War of Independence. The second article focuses on the 1956 and 1967 Wars. The third article is devoted to the 1973 War. This series of articles provides a good overview of the 1967 and 1973 Wars, however, its examination is primarily at the operational, rather than the tactical, level.

Historical Evaluation and Research Organization's Analysis of Factors That Have Influenced Outcomes of Battles and Wars: A Data Base of Battles and Engagements, published in 1983, is an excellent data base that covers all of the major battles of the 1967 and 1973 Wars. The data base contains a concise summary of the engagements. It also contains such information as the orders of battle, major commanders, personnel, armor and artillery strengths, air sorties flown, battle casualties, and armor, artillery, and aircraft losses during these wars. This data is presented in tabular form for each engagement.

The Six Day War by Randolph S. and Winston S. Churchill provides an excellent discussion of the political and diplomatic events prior to the outbreak of the 1967 War. The Six Day War also contains a good description of the action at Abu Ageila. The Israeli commander Ariel Sharon provides his comments regarding the Battle of Um Katef, Abu Ageila.

The Israeli Army: 1948 - 1973 by Edward N. Luttwak and Daniel Horowitz contains a good explanation of the Egyptian defensive tactics on the Sinai front during the 1967 War. Luttwak and Horowitz also provide a good description of the Egyptian defense and the Israeli Army during the Battle of Um Katef, Abu Ageila. This book does not address the 1973 War.

Jonathan M. House's Toward Combined Arms Warfare: A survey of 20th-Century Tactics, Doctrine, and Organization contains a good summary of the history of the Israeli Army from 1948 to 1973. Although there are few pages devoted to the Israeli Army, House provides the reader with a good introduction to the Israeli Army. The author also compares the evolution of Israeli armor doctrine with that of the German Army from World War I to 1945. He concludes that Israeli armor doctrine development mirrored that of the German Army.

WORKS OF LIMITED UTILITY

The following material was either lacking in detail or depth of analysis or did not cover the operations selected for this study.

The Ramadan War, 1973 by Hassan El Badri, Taha El Magdoub, and Mohammed Dia El Din Zohdy is written from the Arab perspective. This source is interesting but not very helpful, as it focuses primarily on Egyptian successes and lacks a detailed discussion of Israeli tactics and operations.

Arnold Sherman's account of the 1973 War When God Judged and Men Died provides a view of the war from the perspective of the soldiers that fought it. Sherman provides an overview of the action on the Golan Heights and in the Sinai and follows up with examples of how the action was experienced by the Israeli soldiers. Sherman provides numerous accounts by soldiers who experienced the battles firsthand. He does not, however, provide a detailed account of the tactical and operational maneuver of the forces involved.

"Growth and Change In The Israeli Defense Forces Through Six Wars" is a study project by Karl Farris. It is a general overview of the performance of the IDF with associated lessons learned. It has been of some assistance even though it neither examines the Battle of Um Katef, 1967 nor examines Israeli operations in the Sinai, 1973 in any depth.

The research report "Do We Debrief Successful Wars The Same Way We Debrief Failures? The Six - Day War" by Israel Krieger and Paanan Falk has also been of some use. It contains a good overview of the 1967 and the 1973 Wars, although it does not examine the Battle of Um Katef, 1967 or the 1973 Israeli operations in the Sinai in depth.

Major Geoffrey G. Prosch's article "Israeli defense of the Golan" appeared in the October 1979 issue of Military Review. This article provides keen insight into the command and control of a unit in combat. The basis of this article is an interview with Brigadier General Avigdor Kahalani, IDF, who commanded a battalion on the Golan Heights during the 1973 War. Although this article was written about the actions fought in the Golan Heights in 1973, it is useful because it provides a good detailed discussion of the views of an Israeli tank unit commander. Brigadier General Kahalani discusses combat at night, as well as insights on defense, training, and command and control.

"Some lessons from the Israelis," an article by Major William C. Fite which appeared in the September 1980 issue of Marine Corps Gazette, outlines some broad, general lessons drawn from the Arab - Israeli Wars from 1948 to 1973. The article is of limited value for my research, as Fite primarily discusses how the U. S. Marine Corps can benefit from applying those lessons learned.

Jeffrey Record's article "The October War: Burying the Blitzkrieg," published in the April 1976 issue of Military Review, is interesting but does not present a very in-depth analysis of the battles fought. The author concludes that the October 1973 War represented the end of the blitzkrieg and the return of the tactical defense to dominance on the battlefield. This article is of limited value to this research, as Jeffrey Record fails to support his conclusions with a thorough study and discussion of the engagements. The author misses the point that the main axis of the German attack in 1940 maneuvered around the Maginot Line. The

Egyptian defense east of the Suez Canal in the 1973 War was an integrated combined arms defense that did not appear to the Israelis to offer an open flank. The Israelis successfully maneuvered into the depth of the Egyptian defenses when they were able to take advantage of an avenue between the Egyptian 2nd and 3rd Armies. The German success would have been questionable had they attempted to penetrate the Maginot Line with their main effort rather than maneuver around it.

Robert W. and John P. Forsyth's article "The Cheap Shot: The lessons of the October War and its Impact on NATO," which appeared in the August/September 1974 issue of Nato's 15 Nations, credits Egyptian use of ATGMs in defeating Israeli counterattacks. Based on their conclusions regarding the effect of the ATGM on tanks in the 1973 War, the authors recommend that NATO adopt inexpensive, lightweight, missile-firing vehicles. The article is of limited value for this research, as it fails to examine the engagements in depth from either the Israeli or the Egyptian perspective.

"Israel Defense Forces: Transition," David Eshel's article published in Defense Update International, is a two-part article. Part 1 appeared in volume 58, 1985, and is primarily a discussion of the military aspects of Middle East geography. Part 2 appeared in volume 59, 1985, and deals with strategic options of attack against Israel by its Arab neighbors. This article is of limited value for this research, as there are very few references to the 1967 or 1973 Wars.

NOTES

¹Chaim Herzog, The War of Atonement October, 1973 (Boston: Little, Brown and Company, 1975), 181.

²Gunther Rothenberg, The Anatomy of the Israeli Army (New York: Hippocrene Books, Inc., 1979), 160.

³Charles Wakebridge, "A Tank Myth or a Missile Mirage," Military Review, LVI (August 1976): 10.

⁴Jac Weller, "Middle East Tank Killers (in the Yom Kippur War)," Journal of the Royal United Services Institute for Defence 119 (December 1974): 35.

⁵A. J. Barker, "Israel after the Yom Kippur War: Zahal Reflects on the Lessons," Journal of the Royal United Services Institute for Defense 119 (June 1974): 30.

⁶Sewall H. Menzel, "Zahal Blitzkrieg: The Sinai Campaign of 1967 Exemplified Modern Warfare," Armor, November/December 1986, 30.

⁷Sam Katz, Israeli Defence Forces since 1973 (London: Osprey Publishing, LTD., 1986), 3.

⁸Zeev Schiff, A History of The Israeli Army (1870-1974) (San Francisco: Straight Arrow Books, 1974), 284.

⁹Jeffrey Record, "The October War: Burying the Blitzkrieg," Military Review, LVI (April 1976): 19.

CHAPTER 3

RESEARCH METHODOLOGY

The primary research methodology used to complete this thesis involved the examination of secondary sources. Primary sources were used when they were available. These secondary sources constitute considerable historical analysis of both the 1967 and 1973 Arab-Israeli Wars. The investigation of this body of literature has been narrowed to one major battle of each war.

The Battle of Um Katef, Abu Ageila from the 1967 War, and the Battle of the Suez Canal in the 1973 War were examined using the U.S. Army battlefield operating systems (BOSs), as the framework to evaluate success or failure. The resulting keys to success that were identified were then evaluated against the four tenets of current AirLand Battle Doctrine (Agility, Initiative, Depth, and Synchronization). The result of this intensive examination and analysis is a number of conclusions regarding modern, combined arms combat in a desert environment.

A synchronization matrix (Figure 1)¹, was initially used to organize the material regarding these battles.

<u>OPERATION</u> TIME	H-HOUR	H+1	H+2	H+(Extends to end of battle)
THREAT ACTION				
DECISION PTs				
INTELLIGENCE				
MANEUVER				
Security				
Deep				
Close				
Rear				
Reserve				
FIRE SUPPORT				
MOB/CTRMOb/SURV				
AIR DEFENSE				
CMD & CONT				

Figure 1. Sample synchronization matrix

The synchronization matrix lists threat actions and the U.S. Army BOSs along the vertical axis and time along the horizontal axis. For both battles, each major action or decision was first examined to determine when it occurred. Next, the action or decision was categorized under one of the battlefield operating systems. This process allowed the entire operation to be viewed in a single matrix, which related the actions or decisions to our BOSs.

The examination of the operations using the synchronization matrix yielded a detailed picture of each battle, which greatly facilitated the investigation of source material. This synchronization matrix helped to provide answers to the lesser subordinate thesis questions for each battle and greatly simplified the task of evaluating success or failure.

An Airland Battle/BOS matrix (Figure 2), was then used to examine this information, but this time in terms of the four tenets of Airland Battle Doctrine.

<u>OPERATION</u>	AGILITY	INITIATIVE	DEPTH	SYNCHRONIZATION
INTELLIGENCE				
MANEUVER				
FIRE SUPPORT				
MOB/CTRMOB/SURV				
AIR DEFENSE				
CMD & CONT				

Figure 2. Sample Airland Battle/BOS matrix

The Airland Battle/BOS matrix organized the data and facilitated the analysis of the information for each battle. The analysis of this information yielded conclusions regarding the successful application of Airland Battle Doctrine to combined arms combat in a desert environment.

The Airland Battle/BOS matrix was used to organize information on both the 1967 Um Katef operation and the 1973 Suez operation. The matrix provided an effective method to examine these battles in terms of the tenets of U. S. AirLand Battle Doctrine. The examination and analysis of the Um Katef operation is presented in chapter 4. The Suez Canal operation of the 1973 War is presented in chapter 5. The most significant strengths and weaknesses are presented as conclusions in chapter 6.

The following example shows two conclusions derived from this process after analyzing the initial Israeli counterattacks against the Egyptian crossing of the Suez Canal between 6 and 8 October 1973:

AGILITY (Airland Battle Tenet)

Command and Control (BOS)

Israeli leaders were extremely effective in motivating their units in the counterattacks. They were slow, however, to realize the ineffectiveness of their tactics, and continued their operations in

the face of extremely heavy losses. Israeli leaders failed to sense the futility of their counterattack operation until more than 400 tanks had been destroyed.

INITIATIVE (Airland Battle Tenet)

Command and Control (BOS)

Although Israeli small unit leaders took the initiative and conducted counterattacks in accordance their defense plan, the senior Israeli leaders failed to use their initiative in a timely fashion to terminate their self-destructive counterattacks. The indecisive use of armor reinforcements was a major Israeli failing. A decision to either concentrate on linking up with the fortifications or to repel the Egyptian crossings was not made early enough to be effective.² Israeli brigade commanders were faced with two incompatible missions. Efforts to link up with the sixteen encircled fortifications involved a dispersion of available combat power. Repelling the Egyptian crossings required the massing of available combat power to roll up the flanks of the Egyptian bridgeheads. The delayed decision to repel the Egyptian crossing resulted in the piecemeal employment and resulting destruction of Israeli combat power.

NOTES

¹Synchronization matrix based on U.S. Army Command and General Staff College synchronization matrix, 25 June 1990.

²Chaim Herzog, The War of Atonement October, 1973 (Boston: Little, Brown and Company, 1975), 163.

CHAPTER 4

UM KATEF, 1967 WAR

SECTION 1

INTRODUCTION

This chapter is organized into four sections. Section 1, the introduction, discusses the organization of the chapters and outlines the other four sections.

Section 2 features a short description of the terrain features of the Sinai Peninsula and a description of the terrain of the Um Katef, Abu Ageila area.

Section 3 presents the operational context in which the battle was fought and an examination of the Battle of Um Katef using the synchronization matrix discussed in chapter 3 under methodology. The Um Katef synchronization matrix lists Egyptian actions and decisions, as well as the U.S. Army BOSs as they apply to the Israeli Army, along the vertical axis. Time is depicted along the

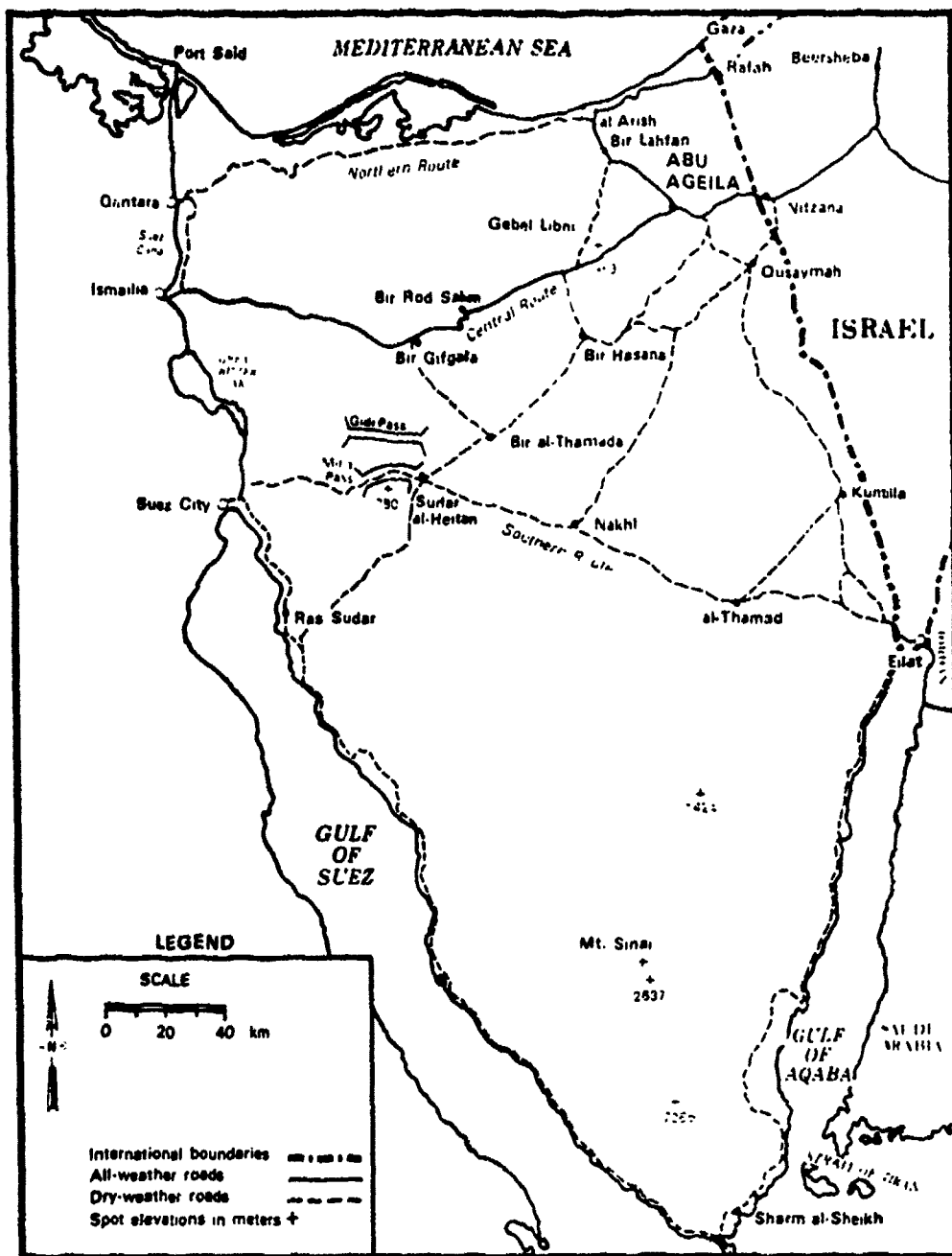
horizontal axis of the matrix. Each major action or decision was first examined to determine when it occurred. The Israeli actions or decisions were then categorized under one of the battlefield operating systems. This process allowed the entire operation to be viewed, piece by piece, in a single matrix. Viewing the battle this way facilitated determination of which BOSs were key and demonstrated how the BOSs were interrelated. The additional examination of the operation provided answers to the four lesser subordinate thesis questions that pertain to the Battle of Um Katef in the 1967 Arab - Israeli War. These questions are: 1) How were the Israeli combat forces employed in the Sinai during this battle? 2) What were the initial Israeli and Egyptian orders of battle? 3) How were the combat forces of both sides positioned just prior to the Battle of Um Katef? 4) How were the Israeli combat forces employed in the Battle of Um Katef?

Section 4 uses the Airland Battle/BOS matrix to examine the dissected information in the synchronization matrix in terms of the four tenets of Airland Battle Doctrine. This process is a vehicle for discussion of the key BOSs and their relationship to the Airland Battle tenets. The examination of the battle, using the Airland Battle/BOS matrix, provided an answer to the major subordinate question for this battle, that is, what useful conclusions could be drawn regarding combined arms combat in a desert environment.

SECTION 2

GEOGRAPHY OF THE SINAI

The Battle of Um Katef took place in the northeastern portion of the Sinai Peninsula (see Map 1). The Sinai comprises 22,000 square miles. The Peninsula stretches 240 miles from the Mediterranean coast to the southern tip near the port of Sharm el Sheikh, where the Gulfs of Suez and Akaba meet in the Red Sea.¹ The Sinai is formed of three regions: the northern, central, and southern. The northern, the coastal plain, consists of sand seas, areas of hard sand, and low hills and rock formations. The central region is formed by a long plateau, which provides the best east-west trafficability across the peninsula. The southern region is the least trafficable, with mountains, narrow passes, and deep ravines that severely restrict movement.² There are several major routes through the Sinai. The northern route stretches from Khan Yunis in the Gaza, through Al Arish, to Romani, and, finally, to Kantara on the Suez Canal. The central route runs from Nitzana in Israel, to Abu Ageila, on to Bir Gifgaga, then to Ishmailia on the Suez Canal. The southern route begins at Kusseima, runs to Bir Hassana, then to Bir Thamada through the Giddi Pass, and, finally, to the eastern shore of the Great Bitter Lake. The fourth route, known as the Pilgram's Way, begins at Taba on the Gulf of Akaba. It passes through Ras el Nagev, to Thamed, on to Nakhel, and, finally, through the Mitla Pass to Port Tewfik on the Gulf of Suez.³



Map 1. The Sinai Peninsula

The Abu Ageila area has three major terrain features. In the north, there is a large expanse of sand dunes. In the south, there are two mountains; Jebel Dalfa, which is 418 meters high, and Jebel Hilal, which is 914 meters high.⁴ Um Katef, the third main terrain feature, is a narrow north-south ridge of firm, high ground that rises to a height of over eighty feet. Um Katef is flanked by sand dunes to the north and by the low, rocky hill masses Jebel Dalfa and Jebel Hilal to the south. The Um Katef Ridge (the main defensive position in the Abu Ageila defensive complex), is located just twenty kilometers from the Israeli border.⁵

The crossroad at Abu Ageila is important because it sits astride the most trafficable route across the Suez Canal. Roads from Abu Ageila lead north to Bir Lahfan and Al Arish (the northern route), and south to Kusseima (the southern route). Control of Abu Ageila would give the Israelis access to this avenue and would allow a deep penetration into the Sinai.

SECTION 3

EXAMINATION OF THE BATTLE OF UM KATEF, 1967

Operational Context

Knowledge of the operational context in which the Battle of Um Katef was fought is necessary for a full understanding of the

battle. Israeli war plans were primarily concerned with Egypt, however, the IDF anticipated that the Syrians would come to the assistance of the Egyptians. The Israelis planned to take advantage of interior lines of communication to employ an economy of force on the Syrian and Jordanian fronts, thus allowing them to concentrate their forces against the Egyptians.⁶

The Egyptians could afford to keep their large, regular army deployed for long periods of time on the border with Israel. The Israelis, with the largest proportion of their army composed of reservists, would have to mobilize to counter a large Egyptian force. Any large-scale mobilization of long duration would place a considerable strain on the Israeli economy. In the event of a crisis with no expected diplomatic solution, the Israeli Army would be forced to attack to avoid additional damage to their economy.⁷

There were two plans proposed for the campaign. The first plan, known as the "small" plan, focused only on the defeat of the Egyptian and Palestinian forces in the Gaza and northern Sinai. The "small" plan was a countermeasure to the Egyptian closing of the Gulf of Aqaba and to the removal of United Nations Forces from Sharm el Sheikh. The second, or "large" plan, was introduced later, after the size of the Egyptian forces in the Sinai had increased. The IDF commanders became convinced that it would be necessary to defeat the entire Egyptian Army in the Sinai before they could hope to open the Gulf of Aqaba and the Strait of Tiran; thus the need for the "large" Plan.⁸

The Israeli concept of operations for the "large" plan in the Sinai called for the rapid defeat of the Egyptian Army to preclude fighting on two fronts. The objective was to be reached by penetrating to the center of the Sinai in three phases. Phase one of the concept called for a breakthrough of the Egyptian defense. Phase two included the penetration of Israeli armor into the depth of the Sinai, blocking the important passes and cutting the lines of communications for the major Egyptian forces in the eastern Sinai. Phase three included the destruction of the Egyptian Army.⁹

The campaign in the Sinai was preceded by a complex Israeli deception operation that encompassed both the strategic and operational levels.

The strategic deception was primarily designed to regain the element of surprise, as the IDF had been mobilized for two weeks prior to the start of the war. The strategic deception plan was also intended to gain sufficient time for the campaign to succeed before the intervention of the superpowers would probably force a ceasefire. The element of surprise was regained by newly-appointed Defense Minister Moshe Dayan's efforts to suggest to the world that Israel was still willing to attempt to resolve the crisis through negotiations and that it was too late for a quick military response to Egypt's closure of the Strait of Tiran and the Gulf of Aqaba.¹⁰ Moshe Dayan is credited with the "great befuddle" plan. He planned to ban announcements of Israeli victories and withhold or obscure news of the war. He also hoped that this would increase the time the IDF had available to complete their campaign prior to the intervention of the superpowers. The Arabs unwittingly assisted the

Israelis in this effort by announcing victories that never took place. According to Zeev Schiff in his book A History of the Israeli Army, Egyptian President Gamal Abdel Nasser found out about the fate of his air force eight hours after it had been destroyed.¹¹

The operational deception plan specifically targeted Field Marshal Abd el Hakim Amer, Commander of Egyptian Forces in the Sinai. The Israeli deception story aimed to convince the Egyptians that the main effort would be in the south. The plan portrayed an armor brigade in the vicinity of Kuntilla. This brigade actually consisted of a number of wooden tanks and dummy vehicles. When the Egyptian intelligence began to report that Israeli troops were concentrating in the south, Field Marshal Amer decided that additional troops were needed there. Additional Egyptian troops were deployed to the south away from the Israeli main effort.¹²

The fighting at Um Katef, Abu Ageila began 5 June 1967 as the Israeli Air Force attacked the Egyptian and Syrian Air Forces. The resulting success of the Israeli Air Force attack provided critical air supremacy for the conduct of the remainder of the 1967 War.

The Abu Ageila crossroad was important to the movement of the Israeli Army. The Egyptian defensive positions at the Abu Ageila crossroad were too strong to be ignored and would represent a major threat to the flank of a deep Israeli penetration into the Sinai.¹³

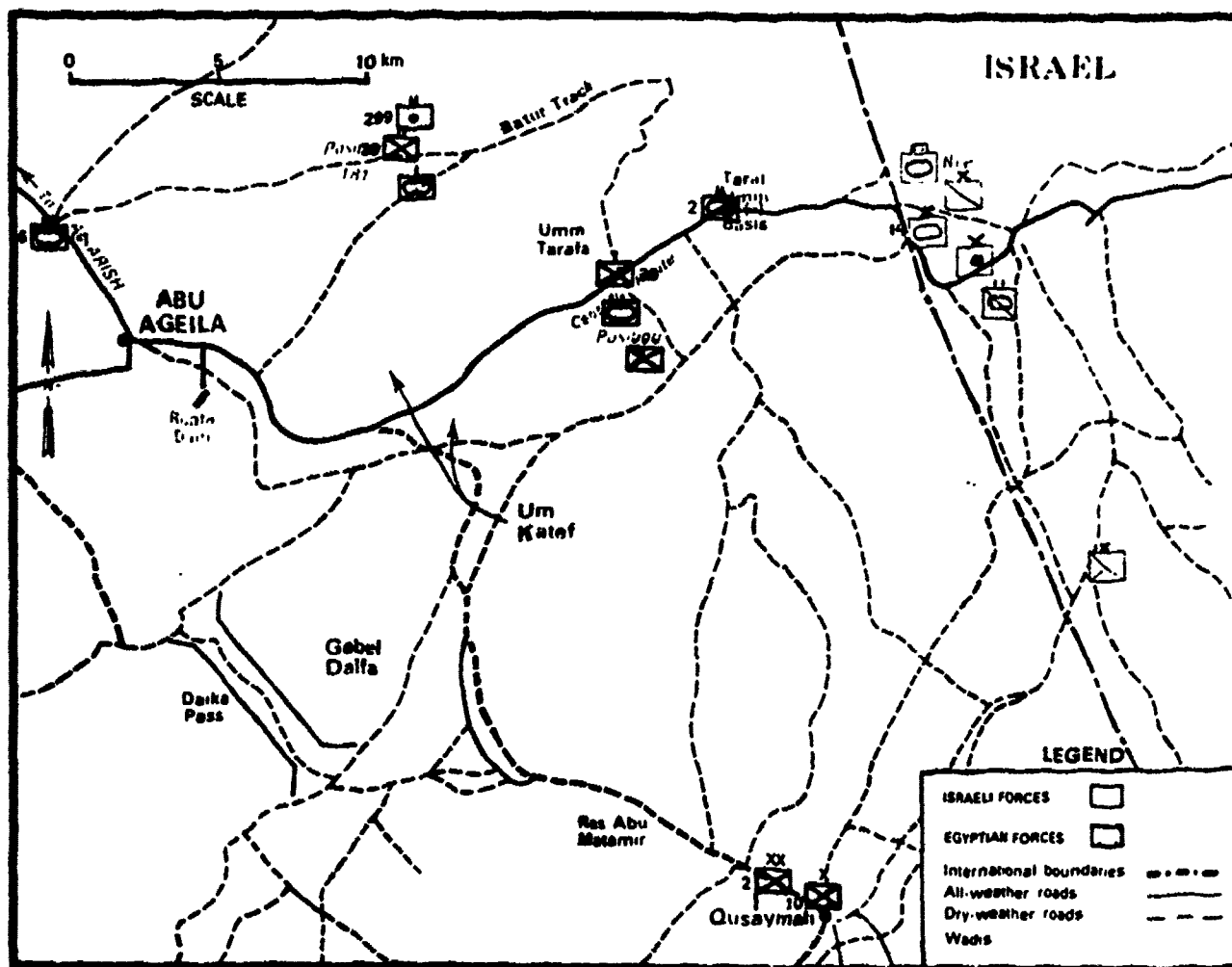
The Egyptian defenses at Um Katef consisted of parallel trenches extending five kilometers in length and one kilometer in depth. East of the Um Katef position, there were extensive

minefields and barbed wire entanglements, as well as two Egyptian outposts.¹⁴ The easternmost position was Tarat Um Basis, situated on a low hill approximately five kilometers from the Israeli-Egyptian border. There was another Egyptian outpost, Um Tarpa, ten kilometers west of the Tarat Um Basis position. This outpost was located on a small piece of high ground, approximately two kilometers east of the main Um Katef position. A third Egyptian position was located on Hill 181, along a camel track that ran through the sand dunes north of the Um Katef position. A fourth Egyptian position near the Ruafa Dam was located west of Abu Ageila and Um Katef.¹⁵

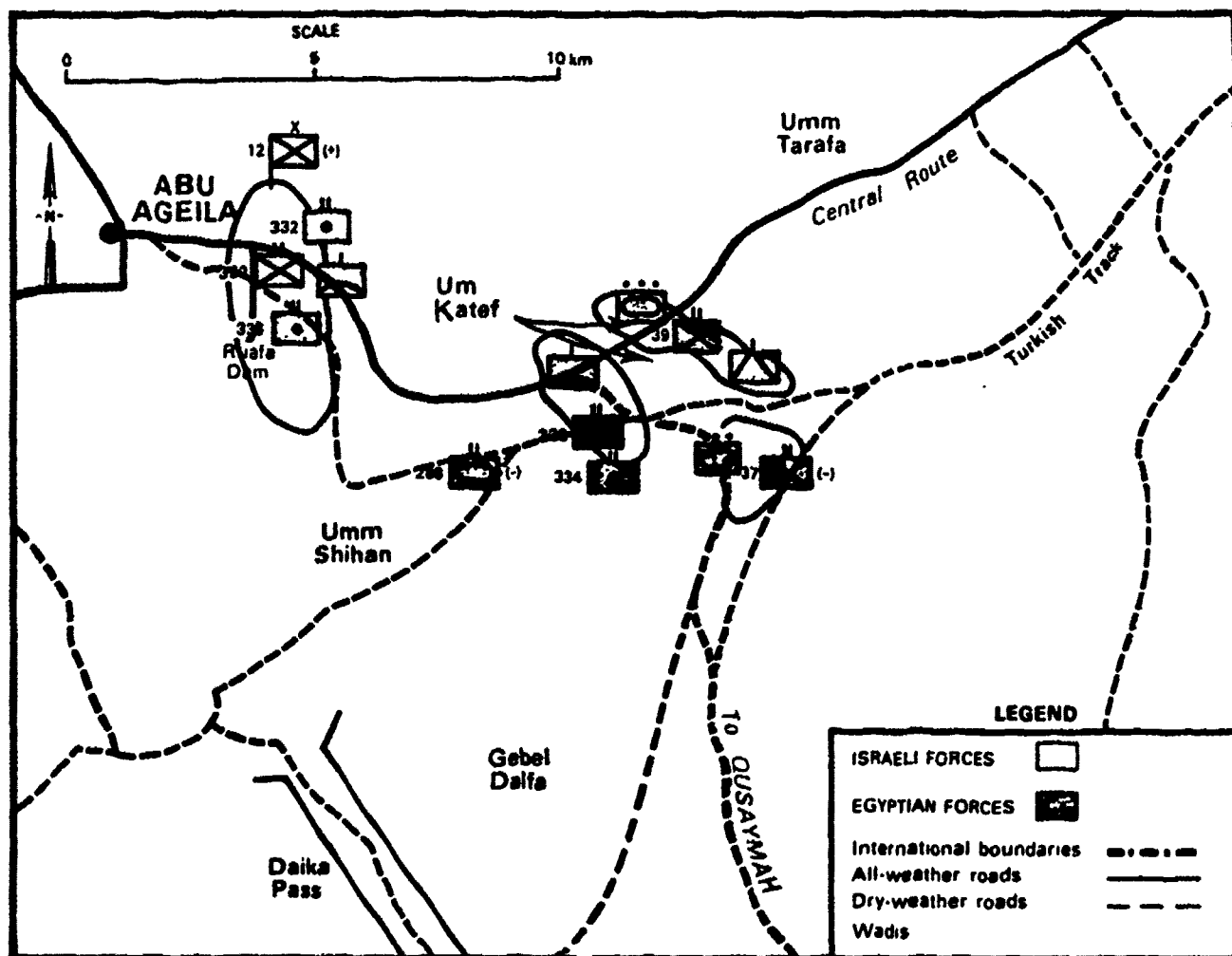
During the 1956 War, the Egyptians and Israelis considered the sand dunes to the north of Um Katef to be impassable. Israeli studies following the 1956 War showed that both infantry and armor could move in the dunes.¹⁶ Additionally, Israeli Command and Staff College graduates were familiar with the Abu Ageila area, as " . . . a major map problem in the Israeli Command and Staff college each year was an attack on the Abu Ageila position."¹⁷ A thorough knowledge of the terrain would play an important part in the success of the Israeli attack.

Brigadier General (BG) Ariel Sharon, the Israeli commander, believed that the Abu Ageila position was held by only one infantry battalion. Two days prior to the start of the war, additional Egyptian forces had been moved into the defense, undetected by the Israelis.¹⁸ There were, in fact, two brigades of the Egyptian 2nd Infantry Division that occupied the Abu Ageila defenses. One brigade

manned the Um Katef position, one brigade manned the other outposts and positions.¹⁹ Each trench line in the Um Katef position was held by an infantry battalion. An artillery park, containing seventy guns, was positioned west of the trench lines.²⁰ A tank brigade of ninety tanks formed the reserve in the Ruafa Dam position. A company of T-34 tanks was located at Tarat Um Basis.²¹ The Egyptian outpost on Hill 181 was held by an infantry company, tank company, and an artillery unit.



Map 2. Egyptian deployments around Abu Ageila
and initial Israeli positions.



Map 3. Egyptian positions at Um Katef.

Sharon's plan called for centralized control and decentralized execution of a combined arms battle. Sharon's division consisted of the 14th Armor Brigade, an independent tank battalion (ITB), a reconnaissance force, an infantry brigade, a paratroop brigade of two battalions, six artillery battalions, an infantry brigade (minus), and an engineer battalion.²²

Sharon prepared his own deception plan for the operation. The target of the deception was the commander of the Egyptian 2nd Infantry Division. The deception story was intended to focus the enemy commander's attention away from the Abu Ageila area by positioning forces opposite Kusseima, south of Um Katef. The deception story was effective partly, because the Israelis had bypassed Um Katef during the 1956 War through the Kusseima crossroads. The Israeli operational deception, that the main attack would occur in the south, reinforced Sharon's own deception story.²³

Sharon's plan called for the Centurion-equipped, independent tank battalion, reinforced with a mechanized infantry company, to conduct a frontal attack against the Um Katef positions. In the event that the frontal attack failed, the battalion was to move north of the Um Katef position along the camel track and attack the Abu Ageila and Ruafa Dam positions from the west, the Egyptian rear. The 14th Armor Brigade was to conduct a holding attack against the front of the Um Katef position. The infantry was to move through the sand dunes to attack the north flank of the Um Katef position. They were specially equipped with colored flashlights, red, green, and blue, one color for each trench line, to enable the supporting

tanks and artillery to provide fire support forward of the advancing troops.²⁴ A battalion of the 14th Armor Brigade was to follow and support the advance of the infantry.

Description of the Battle of Um Katef

The examination of the material using the Um Katef synchronization matrix shows that the course of the battle was remarkably similar to Sharon's operational plan. The Battle of Um Katef is presented below by battlefield operating system. Only the BOSs that played a significant role in the battle during each time period are included.

0815 Hours, 5 June 1967

Threat Action

The Egyptians made contact with the Israelis from the Tarat Um Basis hilltop. The Egyptian position, surrounded by a minefield, was manned by a company of T-34 tanks. This action delayed the IDF for two hours.²⁵ The Egyptians cratered the central road in the vicinity of Um Tara and reinforced the crater with a minefield.

Intelligence

The IDF intelligence indicated that the Um Katef position was held by only one infantry battalion. The position was actually held by a reinforced brigade.²⁶

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Security. Sharon's division crossed the frontier with Egypt in the vicinity of EL Auga and Nitzana. A Centurion-equipped, independent tank battalion, reinforced with an attached mechanized infantry company, led the attack into the Sinai.

The first contact with the Egyptian Army occurred at 0815 hours, 5 June 1967. A company of T-34 tanks opened fire at 0815 hours from the Tarat Um Basis hilltop to initiate contact. This tank company managed to delay the IDF advance for two hours and then withdrew.²⁷

Close. Sharon's force bypassed the Egyptian position at Tarat Um Basis and continued the attack west. Two companies of the independent tank battalion seized Um Tarpa. The ITB continued its advance west. As the ITB reorganized, it received fire from the main Um Katef position. The battalion commander sent one of his companies along the camel track bypass to the north. Two other companies occupied covered positions facing Um Katef. The battalion attempted a frontal assault once the fourth company had arrived. The attempted assault was unsuccessful. The commander then ordered the remainder of his battalion to follow the camel-track bypass north of the Um Katef position.²⁸

The ITB had been moving along the camel track north of the Um Katef position, where at 0920 hours, it succeeded in destroying an outpost along the camel trail.²⁹

Rear. The infantry and paratroop brigades remained in Israel in the vicinity of the departure area.

Reserve. Sharon's reserve at this stage of the battle was the infantry brigade and the paratroop brigade which remained in the vicinity of the departure area in Israel.

Fire Support

The preparatory fires on the Um Katef position began at 0815 hours with deep air and artillery strikes.³⁰

Israeli artillery fired against the Egyptians in the vicinity of Tarat Um Basis.³¹

Mobility/Counter mobility/Survivability

The lead elements of the ITB ran into a minefield when they attempted to drive around a large crater in the road. The ITB lost seven Centurion tanks when it forced its way through the minefield.

Air Defense

The Israeli Air Force employed offensive counterair strikes beginning at 0754 hours, 5 June, which succeeded in destroying the Egyptian Air Force within the first three hours of the war.³² The Egyptian Air Force was not a factor during the rest of the battle.

Command and Control

Sharon's division had been training during the two weeks since mobilization. This training period allowed the Israelis to prepare mentally and physically for the battle. The Israelis also used this opportunity to train at night for the assault on the Um Katef trenches.³³

Sharon's command group consisted of his own halftrack, a communications halftrack, and the command post halftrack for the artillery. Other vehicles in the command group included four jeeps, two mounting machineguns, and the supply command car. Sharon's command group followed the armor in the advance and then took up a position near Um Tarpa, where he could see the battlefield.³⁴

The 14th Armor Brigade was divided into two forces for the movement to Um Katef. One armor battalion and one mechanized infantry battalion attacked in a direction parallel to the central route to Abu Ageila. The other armor and mechanized infantry battalions guided on the Turkish track that ran south of the central route. The engineer battalion followed both to clear routes for the artillery battalions and for the following infantry and paratroop brigades.³⁵

1100 Hours, 5 June 1967

Threat Action

Egyptian artillery, firing from within the Um Katef positions, pinned down the IDF tank force in the vicinity of Um Tarpa.³⁶

The Egyptian combined arms force on Hill 181 consisted of an infantry battalion, an artillery battalion, and a tank company ³⁷

Intelligence

The IDF had very little information regarding the enemy force on Hill 181.³⁸ Lieutenant Colonel Nir, commander of the ITB, therefore, did not anticipate an intense fight for Hill 181.

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcatagories are security, deep, close, rear, and reserve. Only the subcatagories that apply to this time period are discussed.

Security. By 1500 hours, the IDF reconnaissance battalion had reached the Al Arish-Abu Ageila highway north of Um Katef, where it established blocking positions.³⁹ The IDF reconnaissance battalion overran Darb el Turki, which connected the Egyptian positions at Um Katef and Kusseima.⁴⁰ Israeli control of the Darb el Turki position isolated the Abu Ageila area from Egyptian reinforcements from Kusseima.

Close. The ITB continued its movement along the camel track until 1100 hours, when it began to receive fire from Hill 181. As a result, the ITB was forced to stop and seek covered positions. At 1500 hours, the ITB attacked, supported by close air support (CAS) that dropped napalm on Hill 181.⁴¹ The ITB captured the hill and sent one company to Awlad Ali to occupy a blocking position on the road between al Arish and Abu Ageila. The battle for Hill 181 cost the ITB a company commander, several platoon commanders, and eight Centurion tanks.⁴² Sharon radioed directions to Colonel Nir, the ITB commander, to bypass the Egyptian position at Awlad Ali and proceed to Abu Ageila. Colonel Nir positioned one company on Hill 181 to protect the paratrooper's flank and proceeded to Abu Ageila with the remainder of his force.

The Sherman-equipped battalions of the 14th Armor Brigade followed the ITB and occupied the positions facing the Um Katef defense. The Sherman battalions conducted a frontal attack, supported by artillery and air strikes, to break through the Um Katef position. The attack by the Sherman battalions failed, and the tanks were forced to take up covered positions facing Um Katef. Sharon realized that his plan for a hasty attack of the Um Katef position had failed, and he began to prepare for a combined arms night assault.⁴³ The line of departure time for the night attack was set for 2300 hours.

Reserve. At 1300 hours, 5 June, the infantry brigade moved forward on civilian buses from positions in Israel. The infantry arrived at Tarat Um Basis at 1400 hours. It then marched to the vicinity of Um Tarpa and on to its line of departure.⁴⁴

Fire Support

The Israeli artillery moved forward and engaged the Egyptian positions at Um Katef until 1400 hours.⁴⁵

At 1500 hours, the ITB attacked again, this time supported by close air support that dropped napalm on Hill 181.⁴⁶

Mobility/Counter mobility/Survivability

The sand dunes, some as tall as forty feet, caused a delay for the 150 paratroopers making the attack on the Egyptian artillery.⁴⁷ They were in position by 2330 hours.

Air Defense

Not a factor.

Command And Control

A frontal attack against the Um Katef position was not feasible because of accurate Egyptian artillery and direct fire against the Israeli positions at Um Tarpa. BG Sharon realized that Um Katef could not be taken by a hasty attack and decided to assault at night.⁴⁷ Since the Egyptian artillery, which had been providing accurate fire support, outranged the Israeli artillery, Sharon decided

that the Egyptian artillery must be silenced for the attack to succeed.⁴⁸ The paratroop brigade was given the mission to attack the Egyptian artillery.⁴⁹

Colonel Nir, commander of the ITB, used a helicopter provided by Sharon to view the Egyptian positions on Hill 181.⁵⁰

1800 Hours, 5 June 1967

Threat Action

The Israeli helicopters that were transporting the paratroopers were observed by the Egyptians.⁵¹ The Egyptian mortars targeted the IDF paratrooper landing zone and forced the helicopters to move away for safety.

Intelligence

Not a factor.

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Security. The company sent to occupy the blocking position at Awlad Ali returned after defeating an Egyptian counterattack.⁵²

BG Sharon moved a tank company southeast to cover Kusseima. He then repositioned the reconnaissance unit to the vicinity of Jebal Dalfa to overwatch the Daika Pass.⁵³

Close. The ITB reached the Al Arish-Abu Ageila road at dusk and waited there until H-hour.⁵⁴

The paratroop brigade was picked up by civilian buses at their assembly area inside Israel, and the paratroopers were taken as far forward as Tarat Um Basis. They then marched from Tarat Um Basis to their pick-up zone in the vicinity of Um Tarpa, arriving prior to 1900 hours. Although Sharon had been promised twelve helicopters by Southern Command only six arrived. The helicopters lifted the 150 paratroopers in three lifts to a landing zone in the sand dunes north of the artillery park. The original landing zone was to have been Jebal Dalfa, so that the paratroopers could attack downhill. The landing zone was changed at the last minute, perhaps because the artillery park was over a mile behind the trench line, or perhaps because, as the Egyptians claim, the Jebal Dalfa landing zone was receiving Egyptian mortar fire. The exact reason that the landing zone was changed from Jebal Dalfa to the sand dunes in the north is unclear.⁵⁵

Reserve. At 1800 hours, a paratroop brigade crossed the Israeli-Egyptian frontier in civilian buses on their way to Tarat Um Basis. The paratroopers marched on foot from Tarat Um Basis to their Um Tarpa pick-up zone.⁵⁶

Fire Support

Not a factor.

Mobility/Counter mobility/Survivability

Not a factor.

Air Defense

Not a factor.

Command and Control

The infantry was equipped with flashlights with lenses that had been painted red, green, and blue.⁵⁷ The supporting armor and artillery knew where to place their fire because the infantry used the flashlights to mark their progress through the trenches.

2300 Hours, 5 June 1967

Threat Action

The Egyptians occupied their bunkers in the trenches to obtain shelter from the Israeli artillery preparation and from direct fire.

Hand-to-hand fighting developed between the Egyptians and the IDF as the Israeli infantry attack progressed through the trenches.

The commander of the Egyptian 288th Tank Battalion prepared a defensive line against the Israeli Sherman tanks.

Intelligence

Not a factor.

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Close. The ITB arrived at Abu Ageila at approximately 2400 hours. A small detachment was left to warn of any Egyptian counterattacks from the direction of Al Arish. The remainder of the battalion moved to conduct an attack against the Ruafa Dam position.⁵⁸

The sand dunes, some as tall as forty feet, caused a delay in the movement of the paratroopers. By 2330 hours they were in position.⁵⁹

The Israeli attack began as the paratroopers stormed the Egyptian artillery park. After the paratroopers drove the Egyptian artillery crews from their guns, they destroyed the ammunition and vehicles. The paratroopers then continued their attack towards the Ruafa Dam.⁶⁰

The Israeli infantry brigade attacked the northern flank of the Egyptian trenches at 2330 hours. One battalion attacked down each trench line. A Sherman battalion from the 14th Armor Brigade followed and supported the infantry attack. By 0001 hours, 6 June, hand-to-hand fighting had developed in the trenches. By 0100 hours,

the infantry had cleared down to the central road. The Israeli infantry captured the Egyptian colonel in charge of the Um Katef position in their advance through the trenches. The Israeli infantry brigade commander committed his reserve battalion to the clearing operation as the central road was reached.

Fire Support

At 2330 hours, Sharon's artillery began preparatory fires in direct support of the infantry brigade commander. The Israeli artillery fired six thousand shells in the preparation that lasted only twenty of the scheduled thirty minutes. The preparatory fires were cut short by the infantry brigade commander, who felt that twenty minutes was sufficient.

Mobility/Counter mobility/Survivability

As the Israeli infantry occupied an area, the engineer battalion would move forward and clear the minefields. By 0230 hours, the engineer battalion had cleared a route through the main Um Katef minefield.

As soon as a route had been cleared through the minefield, the order was given for the Sherman battalion to pass through it. After only a company (minus) had passed through the lane, a tank hit a mine, effectively blocking the lane. The commander of the tank company that had partially passed through the lane continued the attack with only part of his company. The remainder of the Sherman battalion was not able to pass through the minefield until 0400 hours.⁶¹

Air Defense

Not a factor.

Command and Control

Sharon delayed the line of departure time for the operation to 2330 hours when the paratroopers and the ITB were in position. At 2300 hours, Sharon was told that he would not receive air support for the night attack. Brigadier General Yeshayahu Gavish, GOC Southern Command, urged Sharon to postpone the attack until the next morning when the Air Force would be available for support. Sharon decided to continue the attack as planned.⁶²

The use of colored flashlights carried by the infantry was an effective method of control that marked their progress in the trenches. This method allowed the artillery and Sherman tanks to provide effective fire support a safe distance ahead of the advancing troops.

At 2300 hours, the ITB received direct fire from the Ruafa Dam positions. After the ITB had seized the Ruafa Dam, it came under the operational control of the 14th Armor Brigade commander, Colonel Mordechai Zippori.

Zippori received word that the ITB and the Sherman battalion were approaching each other. Both battalions reported receiving fire, and Zippori, concerned that the Centurions and Shermans might be engaging each other, ordered the Sherman battalion to cease

firing. The ITB reported that it continued to receive fire. Zippori, confident now that the two battalions were engaging Egyptian tanks, ordered the Shermans to resume firing.

0330 Hours, 5 June 1967

Threat Action

The Israelis surrounded the Egyptian tanks by 0400 hours, and the armor battle continued until 0600 hours. Near dawn, the Egyptian armor was forced to withdraw, having suffered a loss of about forty tanks.⁶³

Intelligence

Not a factor.

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Close. The Israeli tanks completed the encirclement of the Egyptian tanks. The close-range tank battle continued that night from 0400 to 0600 hours.

Fire Support

Not a factor.

Mobility/Counter mobility/Survivability

Not a factor.

Air Defense

Not a factor.

Command and Control

Not a factor.

The Battle of Um Katef ended with Israeli losses of thirty-two killed in action, and nineteen tanks destroyed. The Egyptians lost forty tanks and an unknown number of soldiers.⁶⁴

SECTION 4

ANALYSIS OF THE BATTLE OF UM KATEF, 1967

General

The Airland Battle matrix facilitated the identification of some major strengths and weaknesses of the Um Katef operation in relation to the four tenets of Airland Battle Doctrine. This section presents a discussion of the key BOSSs and their relationship to the

Airland Battle tenets. It also provides answers to the major subordinate question for this battle, that is, what useful conclusions could be drawn regarding combined arms combat in a desert environment.

Knowledge of the Terrain

The facts that the Israelis studied the terrain of the Abu Ageila area after the 1956 War and that the Israeli Command and Staff College used the Abu Ageila area as the focus of a major yearly map exercise, undoubtedly contributed to the agility with which the Israelis were able to rapidly focus their combat power on this battlefield. The map exercises were an opportunity to reduce the "friction" of the battlefield through thorough preparation. A detailed knowledge of the area of operations allowed the Israelis to plan a fast-paced, offensive operation. This planning enabled them to act more quickly than the Egyptians.

This thorough knowledge of the area was also key to the ability of the Israelis to gain and maintain the initiative. The Israelis' synchronized attacks from unexpected directions never allowed the Egyptians to concentrate their defense against the Israeli attacks. Not only were the Egyptians forced to react to attack from unexpected directions, which would, in itself, pose a problem to the synchronization of their defenses but they were also faced with attack from three different directions at the same time.

The Egyptian commander, unable to concentrate his forces against the Israeli attacks, lost the ability to wrest the initiative from the Israelis.

The Israelis had a knowledge of the terrain that attacking forces rarely achieve. Usually, knowledge of the terrain is an advantage that the defender enjoys almost exclusively. In the case of the Abu Ageila area, the Israelis negated this advantage for the Egyptians by their own thorough acquaintance with the area. This knowledge supplied the Israelis with a key to the Egyptian defense. It allowed the Israelis to effectively conduct a deep attack against the Egyptians by ground maneuver elements. Colonel Nir's attack against the rear of the Abu Ageila defenses greatly reduced the ability of the Egyptian commander to defend his position. It effectively forced him to confront attacks throughout the depth of his defense, and from multiple directions, simultaneously.

This complete knowledge of the area of operations allowed the Israelis to attack the front of the Um Katef defense from the most vulnerable direction, from the sand dunes north of the trenches to the south. During the 1956 War, both the Egyptians and Israelis considered the sand dunes to the north of Um Katef to be impassable. The Israeli studies following the 1956 War showed that both infantry and armor could move in the dunes.⁶⁵ The Israeli attack against the unsecured northern flank of the main Egyptian trenches greatly reduced the number of Israeli casualties that would have been taken in a frontal assault and forced the Egyptians to fight in three different directions.

The Israeli plan capitalized on their knowledge of the terrain to maneuver their forces along unlikely avenues of approach and to exploit weaknesses in the Egyptian defense. This knowledge of the terrain provided the Israelis an increase in their mobility relative to the Egyptians. The work of the Israeli engineers in clearing paths through the minefields helped maintain the momentum of their advance into the Egyptian positions.

Israeli knowledge of the area of operations, as discussed earlier, greatly facilitated the fast-paced, offensive operation that attacked the Egyptians throughout the depth of their defenses. This knowledge of the area was critical to the ability of the Israelis to synchronize their attack. Planning for most offensive operations is limited by the information available on the area of operations. The Israelis were, however, able to use the information they obtained following the 1956 War to accurately plan their attack. Armed with this knowledge, Sharon proceeded to plan an operation that required mechanized maneuver over difficult terrain. Sharon's plan would have contained a greater element of risk without his knowledge of the terrain. This intelligence regarding the area of operations was key to the successful maneuver of the ITB and to the synchronization of the deep and close battles.

Risk

A force that would act with agility must be prepared to take prudent risks. The Israelis took such a risk when they launched the

Um Katef operation. The Israeli commander, Brigadier General Ariel Sharon, believed that the Abu Ageila position was held by only one infantry battalion. He did not know that, two days prior to the start of the war, additional forces had been moved, undetected, into the defense.⁶⁶ He launched the operation with the best information available to him. Sharon could not afford to wait until every scrap of intelligence was examined. Had he requested additional air reconnaissance, he might have compromised his deception plan and the entire Sinai campaign. The fact that two brigades of the Egyptian 2nd Infantry Division occupied the Abu Ageila defenses (one brigade manned the Um Katef position, one brigade manned the other outposts and positions), would probably not have made any difference to the operation had Sharon known about the additional forces.⁶⁷ The risk that Sharon took by attacking with less than accurate intelligence was prudent, based upon the Israelis' otherwise careful preparations and their campaign plan.

Similarly, the attack along the camel track north of the Um Katef position is another example of prudent risk-taking in the interest of surprise, that is, by attacking the Egyptians from an unexpected direction. The decision to attack along the camel track without a thorough reconnaissance of Hill 181 was fully justifiable in light of the tremendous benefits to be gained. Future U.S. Army battles may also be fought without the most complete information. Enemy electronic warfare, antisatellite weapons, or a failure to establish air superiority could force American commanders to risk battle without full information regarding the enemy or terrain.

Unlikely Avenues of Approach

The use of unlikely avenues of approach facilitated the rapid concentration of Israeli strength against Egyptian weaknesses. Sharon's plan called for the ITB and a mechanized infantry company to conduct a frontal attack against the Um Katef positions. In the event that the frontal attack failed, the battalion was to move north of the Um Katef position along the camel track and attack the Abu Ageila and Ruafa Dam positions from the west (the Egyptian rear area). During the 1956 War, both the Israelis and Egyptians considered the sand dunes to the north of Um Katef to be impassable. After the 1956 War, Israeli studies concluded that both infantry and armor could move in the dunes.⁶⁸ The Israeli use of the camel track through the sand dunes allowed Sharon to attack from an unexpected direction against the rear of the Um Katef position. This attack kept the Egyptian commander from concentrating his strength against the attack to his front. The ITB's attack contributed to the agility of the entire Israeli operation. The Egyptian commander, distracted by Colonel Nir's attack against his rear, was less able to act with agility. The Israelis, whose offensive operation was much better synchronized than the Egyptian defense, benefited from the Egyptian's lack of concentration and must have appeared even more agile to the Egyptians as a result.

The Israeli use of unlikely avenues of approach was key to the success of their deep maneuver attack. The ITB's attack along the camel track north of the Um Katef position put them in position

to attack the Abu Ageila defenses from the rear. Although the Egyptians positioned a strong force on Hill 181, it seems probable that they did not anticipate that the Israelis would attempt to attack along the camel track with such a large force. The Israeli deep ground attack against the Egyptian rear was only possible due to their use of an avenue of approach that the Egyptians considered to be unsuitable for armor forces.

See the Battlefield

The location of the commander on the battlefield is important. A forward location enables him to better control his forces and synchronize his total combat power. Sharon positioned himself where he could literally "see the battlefield." During the advance, he followed the armor and took up a position near Um Tarpa where he could observe the battlefield.⁶⁹ From the Um Tarpa position, Sharon could watch the artillery preparation and follow the progress of the infantry through the trenches. He was located where he could "feel the pulse" of the battle and affect its synchronization.

Colonel Nir, the commander of the ITB that Sharon sent along the camel track to envelop the Egyptian rear, faced an unexpectedly strong force on Hill 181. The Egyptian combined arms force that occupied Hill 181 consisted of an infantry company, twelve artillery pieces, and a tank company.⁷⁰ Colonel Nir's first attack was repulsed. He must have realized that, in order to be successful, he had to have a better understanding of the Egyptian disposition on Hill

181. Colonel Nir requested a helicopter from Sharon and used it to survey the Egyptian defenses. The helicopter gave him a better opportunity to "see the battlefield." Once Colonel Nir was able to read the battlefield, he was able to quickly formulate a plan and synchronize his combat power to restore agility to the battle.

Fire Support

Israeli fire support played a major role in improving the relative agility of Sharon's attack. Israeli artillery and close air support kept the Egyptians pinned down at crucial points in the battle, thereby increasing the IDF's agility relative to the Egyptians.

Israeli fire support also assisted the Israeli forces to respond to unanticipated situations on the battlefield. Close air support that dropped napalm on the Egyptian positions greatly assisted Colonel Nir's struggle against the Egyptian force on Hill 181. This fire support was flexible because it allowed the quick concentration of fire power. Fire support contributed to the agility of the entire operation by assisting the success of an important aspect of the plan.

The largest artillery preparation ever fired by the IDF began at 2330 hours, 5 June. The Israeli artillery fired six thousand shells in a preparation that lasted only twenty of the scheduled thirty minutes. The artillery was in direct support to the infantry brigade commander, who felt that twenty minutes of preparation was

sufficient. This artillery preparation helped Sharon preserve the initiative of his attack by reducing the Egyptian's ability to react and by disrupting the Egyptian command and control.

The Egyptians also provided an insight into the use of artillery to limit freedom of action and initiative. During the afternoon of 5 June, the Israelis experienced very accurate Egyptian artillery fire. This artillery fire effectively pinned down the Israeli tanks in the vicinity of Um Tarpa. The Egyptian artillery, which had been providing accurate fire support, also outranged Sharon's artillery. Sharon realized that the Egyptian artillery must be silenced for his attack to succeed. The attack of the paratroopers against the Egyptian artillery positions helped to regain the Israeli initiative.

There were two points in the battle where the Israelis were in danger of losing their momentum and the initiative. The first occurred during the initial stage of the Israeli advance, when the Israelis were held up by the Egyptian outpost at Tarat Um Basis.⁷¹ The second occurred when Colonel Nir's ITB was involved in a fight against the Egyptian forces on Hill 181. On both occasions, fire support was critical. On the first occasion, artillery fire assisted the Israelis to overcome Egyptian opposition at Tarat Um Basis. On the second, close air support from the Israeli Air Force helped Colonel Nir and his ITB take the critical Egyptian positions on Hill 181. In these instances, the fire support BOS proved critical to the Israelis as they fought to maintain momentum and initiative. Failure of the swift continuation of the Israeli advance in the

vicinity of Tarat Um Basis would have resulted in a delayed attack against the main Um Katef position. A major delay in the opening of the Abu Ageila line of communication would have had a significant impact on the success of the entire Sinai campaign. A failure of the Israeli attack against Hill 181 could have resulted in the failure of Sharon's entire attack against Um Katef, or at the very least, would have exacted a much higher price for success.

Close air and artillery fire support were important in facilitating the in-depth attack on Egyptian forces. Israeli fire support played a major role in supporting Sharon's attack throughout the depth of the Egyptian position. Israeli close air support assisted Colonel Nir's attack on Hill 181, thereby facilitating the deep attack against the Egyptian rear at Ruafa Dam. The artillery preparation against the Um Katef position assisted the infantry's attack against the trench lines, and indirect and direct fire support assisted the infantry's advance through the Egyptian trenches. Fire support during these crucial points in the battle was essential to the maintenance of the Israeli offensive momentum against the Egyptians.

Egyptian artillery at the Battle of Um Katef outranged the Israeli artillery. This fact, plus the preoccupation of the Israeli Air Force with offensive counterair strikes against the Egyptian Air Force, mitigated the role that fire support could have played for the Israelis. Nevertheless, the Israelis incorporated fire support into their operation to the extent that it was possible. Additional fire support would probably have reduced Israeli casualties. The

available fire support was used effectively. The most notable Israeli fire support demonstrated during the Battle of Um Katef was against the Egyptian positions at Tarat Um Basis, the close air support for Colonel Nir on Hill 181, and the artillery preparation against the Um Katef position itself. Fire support effectively supported the Israeli advance and the attacks in depth against the Egyptian positions.

The role Israeli fire support played in supporting Sharon's attack throughout the depth of the Egyptian positions was important. Given the limited Israeli fire support, synchronization of fires was absolutely critical. The preparatory fires against the Um Katef position prior to the infantry's assault on the trenches and the indirect and direct fire support of the infantry's assault on the trenches were well synchronized. Fire support was also responsive during crucial points in the battle. A lack of intelligence regarding Egyptian dispositions, however, prevented synchronized fire support to Colonel Nir's ITB. The unexpected, stubborn, Egyptian opposition from Hill 181 caught the Israelis by surprise. Better intelligence would have allowed well-synchronized indirect fires to support Colonel Nir's first attempt to take the hill. When Hill 181 was finally taken, air support played a significant role.

The direct and indirect fire support for the infantry assault on the trenches was well synchronized. The assaulting infantry was equipped with flashlights having either red, green, or blue lenses, one color for each trench line. This enabled the supporting tanks and artillery to provide safe and accurate fire support forward of the

advancing infantry.⁷² The use of the colored flashlights carried by the infantry was a Sharon improvisation to mark the infantry's progress in the trenches and to enable the artillery and Sherman tanks to provide safe and effective fire support. The improvised use of colored lights is a good example of a synchronization mechanism that does not depend on radio communication for its effectiveness.

Mobility

Decisive movement in desired directions without the loss of momentum is essential for agility and synchronization.⁷³ The Israeli engineer battalion provided the support that Sharon's force needed to maneuver from the Israeli-Egyptian border through the critical Um Katef position. The engineer battalion's hard work greatly decreased the time that would have been required for the Sherman battalion's unassisted penetration of the Um Katef minefields and for the attack of Nir's ITB. Overall, the engineer battalion greatly contributed to the agility of Sharon's operation.

The efforts of the Israeli engineer battalion to clear the minefields as the infantry moved forward was indispensable to synchronization of the attack. By 0230 hours, the armor brigade had been provided with a cleared route through the minefield. This allowed the armor brigade, which was attacking from the east, to link up with Colonel Nir's ITB, which was attacking from the west. Together they encircled the Egyptian armor in the Abu Agelia

position. The mobility work of the engineer battalion helped to maintain the momentum of the attack and facilitated the final synchronized attack against the Egyptian armor.

Initiative is also critical to agility and synchronization. The Israeli engineer battalion provided the support that Sharon's force needed to maneuver from the Israeli-Egyptian border through the critical Um Katef position. The engineer's capability to enhance mobility directly contributed to Sharon's ability to maintain the initiative.

Air Defense

Neither suppression of enemy air defense (SEAD) nor air defense played a major role in the Battle of Um Katef at the tactical level. The reason that SEAD and air defense were not factors was the effectiveness of Israeli Air Force offensive counterair strikes, which began at 0754 hours, 5 June. These strikes effectively destroyed the Egyptian Air Force within the first three hours of the war.⁷⁴ There is no doubt that the air defense BOS could have played an enormous role if the Israeli Air Force had failed to destroy the Egyptian Air Force. Due to a lack of tactical transportation, the Israelis were forced to move significant combat power forward from their assembly areas in Israel to the Um Katef battlefield by civilian busses. These busses would have been extremely vulnerable to Egyptian Air Force strikes if the Egyptian Air Force had any offensive capability remaining.

Although SEAD nor air defense played a major role in the Battle of Um Katef at the tactical level, it is interesting to speculate that the air defense BOS would certainly have played a greater role had the Israeli Air Force failed to destroy the Egyptian Air Force.

An Israeli failure to destroy the Egyptian Air Force would have forced the Israelis to move their vulnerable unarmored combat power forward from their assembly areas in Israel to the Um Katef battlefield at night to avoid Egyptian air attack. At the very least, this would have resulted in a delay of the attack and could have conceivably resulted in a much less effective attack, in depth, against the Egyptian positions.

The Israelis had no dedicated air defense systems at the Battle of Um Katef. As there were no dedicated air defense units in Sharon's force, it seems likely that the Israelis would have had to rely entirely on the defensive counterair support available from the Israeli Air Force as their only method of air defense, apart from small arms or passive measures. It is also reasonable to postulate that, had the Egyptian Air Force been able to establish even air parity over the battlefield, the Israelis would have found it very difficult to maintain the momentum or the synchronization of their attack against the depth of the Egyptian defenses. At best, the result would probably have involved a delay in overcoming the Um Katef defenses and, at worst, a failure of the Israelis to concentrate combat power. If the Egyptians had established air parity, the Israelis would certainly have been forced to move their infantry

forward during hours of limited visibility. With Egyptian air parity, the Israeli infantry would have almost certainly not been in position to make the assault against the Egyptian trenches the night of 5-6 June 1967.

The lack of an Israeli Army air defense system at Um Katef placed the entire responsibility for air defense on the Israeli Air Force. If the Israeli Air Force had not succeeded in eliminating the Egyptian Air Force, and the Egyptian Air Force had managed to establish at least air parity, then the Israeli fire support system would have suffered much, as did that of the Egyptians. The Israeli Air Force would then have been much too preoccupied with their probable first priority, defensive counterair missions, to be responsive to calls for close air support. Without air superiority, the lack of an Israeli Army air defense system would have effected the fire support available for the important battle for Hill 181 and, consequently, for Sharon's entire plan at Um Katef.

Deception

Israeli deception operations were very successful. The Israeli deception operations contributed to the agility of the campaign, in general, and to the Um Katef operation, in particular, by increasing Egyptian vulnerability to the Israeli attack. The operational deception plan convinced the Egyptians that the main effort would be in the south. The deception plan caused Field Marshal Amer to conclude that additional troops were needed in the south, which was actually away from the Israeli main effort.^{7 5}

Sharon's deception plan focused the enemy commander's attention away from the Abu Ageila area by positioning forces opposite Kusseima, south of Um Katef. The deception story was effective, in part, because the Israelis had bypassed Um Katef during the 1956 War through the Kusseima crossroads. The effectiveness of the deception effort increased the agility of the Israeli forces by reducing the size of the force opposing them. This reduced enemy presence eliminated the need for repetitive maneuver that could have distracted Israeli attention from the attainment of their operational and tactical objectives. This, in turn, also reduced the demands on Israeli command and control.

The Israeli operational and tactical deception operations also increased the probability that they would be able to maintain the initiative throughout the campaign. This is particularly true during the Battle of Um Katef. The deception operations reduced the size of the Egyptian force that the Israelis confronted at Um Katef. The smaller Egyptian force was less likely to wrest the initiative from the Israelis.

The deception operations played an important role in the deep attack of the Egyptian defenses by reducing the size of the Egyptian force in the positions. The deception plan attacked the depth of the Egyptian force just as effectively as if attacked by more conventional means. The net result, at both the operational and tactical levels, was a reduction of the resources available to the Egyptian commanders, thus allowing Israeli maneuver into the depth of the Egyptian defenses.

The Israeli operational deception, in general, and Sharon's tactical deception, in particular, were mutually supporting and, in effect, synchronized. Sharon's plan supported the operational deception that the main effort would be in the south. Egyptian Field Marshal Amer's belief that the main effort would be in the south was probably communicated to the commander of the Egyptian 2nd Infantry Division in Sharon's area of operation. This is supported by the Egyptian 2nd Infantry Division commander's decision to move his headquarters south to Kusseima as Dr. George Gawrych states in his work Key to the Sinai: The Battles for Abu Ageila in the 1956 and 1967 Arab-Israeli Wars.⁷⁶ The synchronization of Israeli deception plans resulted in a significant reduction in the Egyptian forces that could be brought to bear in the Battle of Um Katef.

Maneuver

In Sharon's plan, maneuver was the essential BOS for establishing and holding the initiative. Sharon's plan called for the ITB to conduct a frontal attack against the Um Katef positions. In the event that the frontal attack failed, the battalion was to bypass the Um Katef position along the camel track to the north and attack the Abu Ageila and Ruafa Dam positions from the west, against the Egyptian rear. The 14th Armor Brigade was to conduct a holding attack against the front of the Um Katef position. The infantry was to move through the sand dunes to attack the north flank of the Um Katef position, supported by a battalion of the 14th Armor Brigade,

which followed the infantry attack.⁷⁷ The paratroopers were included in the operation to eliminate the Egyptian artillery.

FM 100-5, Operations, states that "The defender is not given the time to identify and mass his forces or supporting fires against the attack because of the ambiguity of the situation presented to him and the rapidity with which it changes."⁷⁸ Here, Sharon provides a classic example of this idea. The Egyptian commander was forced to confront a well-synchronized, combined arms attack against his forces. The attack began with a tremendous artillery preparation that shocked and disoriented the Egyptians in the Um Katef position. Next, the paratroopers attacked the Egyptian artillery. It was very disconcerting to the Egyptians in the Um Katef trenches to hear fighting going on to their rear.⁷⁹ Simultaneously, the Egyptian commander's position in the Ruafa Dam was attacked from the west, or rear. This served to distract the Egyptian commander's attention from the overall battlefield situation.⁸⁰ The Egyptians were unable to take the initiative from Sharon because they were unable to synchronize their defense. Each position was forced to fight a separate battle against the Israelis.

Sharon used his paratroopers to conduct a vertical envelopment against the Egyptian artillery, thus actively changing the battlefield situation. The paratroopers' attack against the Egyptian artillery park drove the artillery crews away from their guns and destroyed the Egyptian ammunition stocks and vehicles.⁸¹ The paratroopers' attack helped to ensure that the Israeli attack

maintained its momentum and that it continued to carry the initiative by eliminating the Egyptian artillery as a force to be reckoned with on the battlefield.

The paratroopers' vertical maneuver capability also gave Sharon added flexibility in attacking the depth of the Egyptian defenses. The paratroopers' attack against the center of the Abu Ageila position, combined with the attack by the ITB against the rear of the Um Katef defenses and the infantry attack against the forward trench lines, allowed Sharon to engage the Egyptians throughout the entire depth of their defenses. The Egyptian commander, faced with these competing demands for his resources, was unable to synchronize his defense or concentrate his combat power to defeat the Israeli attacks.

The paratroopers' vertical maneuver made possible the critical attack against the Egyptian artillery. Without this added mobility, the Israelis, whose own artillery was outranged by the Egyptian artillery, would have been hard pressed to silence the Egyptian guns. Sharon took advantage of the mobility of the paratroopers to facilitate the neutralization of a key Egyptian combat system.

The maneuver of the Israeli armor, infantry, and paratroopers was synchronized to produce the maximum impact on the Egyptian defenses. This synchronization produced a synergistic effect. By themselves, the separate attacks would not have had the same effect on the Egyptians. However, once synchronized, the effect was dramatic. The depth of the Egyptian defenses was attacked simultaneously from multiple directions. As a result, the

Egyptian command and control failed to effectively counter the Israeli attack. It was totally unable to concentrate its available combat power effectively. Sharon's well-synchronized plan precluded a synchronized Egyptian response.

Command and Control

The ability to act without hesitation, based upon a knowledge of the battle, is inherent in agile command and control. Sharon provided an excellent example of this ability when he changed his planned line of departure time for the operation to 2330 hours, 5 June 1967 because neither the paratroopers nor the ITB was in position. Sharon recognized that the timing was critical to preserve the synchronization of his attack. At 2300 hours, 5 June 1967, Sharon was told that he would not receive air support for the attack. Sharon was urged by Brigadier General Gavish, GOC Southern Command, to postpone the attack until the morning when the Air Force would be available for support. Sharon decided to continue the attack as planned.⁸² In The Six Day War by Randolph and Winston Churchill, Sharon remarked:

I had a very real anxiety about the lives of our soldiers. I felt that even with air support it would be too big a job to take such a heavily fortified position by day. I had seen the lines of our soldiers marching forward across the dunes earlier in the day. I had seen

the confidence in their faces and knew they were ready to go. I could not keep them waiting. I was sure we could take it.⁸³

Sharon's decision was based on his understanding of his soldiers. In this instance, he provided another example that acting without hesitation, based upon a knowledge of the battle, is inherent in agile command and control.

Once the Israeli attack began, Sharon's plan never allowed the Egyptians to react effectively. The Egyptians were forced to confront simultaneous attacks from multiple directions. Sharon's command and control maintained the initiative during this complicated operation. He did so through a well-conceived plan that required decentralized execution by subordinate commanders who understood his intent. Colonel Nir, for example, knew how important his mission was to the overall success of the Um Katef operation. This knowledge motivated him to accomplish his mission despite the serious opposition from Hill 181.⁸⁴ Sharon was forced to rely on his subordinates for execution due to the scope of operation. He could not effectively control the different operations himself due to the distance between them and his inability to personally see the separate battlefields. Forced to rely on his subordinates for the execution of his plan, Sharon's key contributions to success were the plan itself and his overall orchestration of the attack.

There was a 2-week period between the time the IDF mobilized and the start of the 1967 War. Sharon's division had been training during the two weeks since mobilization. This training

period gave the Israeli soldiers the opportunity to prepare mentally and physically for the battle.⁸⁵ This training period was also important to the synchronization of the Israeli operation, as they used this opportunity to train for and rehearse the operation. In their book The Six Day War, Randolph and Winston Churchill quote Sharon as stating:

I had a sand-table made of the whole area and went over it with every one of my officers so that each one had a clear picture of it in his mind and knew exactly what had to be done - this was most important since we were to attack at night.⁸⁶

The Israelis took advantage of this period before the battle to ensure that their operation was well rehearsed and that every officer understood his role. The Israelis fought the Battle of Um Katef with soldiers that were well trained and well rehearsed. The Israeli leaders understood not only their own roles, but their commander's intent, as well. This preparation was key to the Israeli's ability to synchronize their operation.

An example of effective command and control is when Sharon gave operational control of the ITB to Zippori after the ITB seized the Ruafa Dam positions. Colonel Zippori received word that the ITB and the Sherman battalion were close to each other. Both units reported that they were receiving fire. Zippori, concerned that the Centurions and Shermans might be engaging each other, ordered the Sherman battalion to cease firing. The ITB reported that it was continuing to receive fire. Zippori, confident now that the two

battalions were engaging Egyptian tanks, was able to safely order the Shermans to resume firing. This transfer of control to Zippori allowed the senior commander closest to the action to control the converging forces and prevented fratricide as the two forces converged.

Sharon attacked with the resources necessary to overcome his opposition. Without the paratroopers and helicopter support, Sharon probably would not have been able to eliminate the Egyptian artillery. Without sufficient armor, he might not have been able to attack the rear of the Abu Ageila position. A reduction in the available artillery would have resulted in less support for maneuver, in general, and a much harder time for the infantry in their attack against the trenches, in particular. Although it may seem too obvious to comment on, it was, nevertheless, crucial for Sharon to have been allocated sufficient combat and combat support power to accomplish his mission. Lack of sufficient resources greatly reduces a commander's ability to add depth to an operation. FM 100-5, May 1986, states that "Exploitation of depth in operations demands imagination, boldness, foresight, and decisiveness in leaders."⁸⁷ Sharon exemplified that prescription at the Battle of Um Katef. He used his available assets to conduct a rapid attack along avenues of approach, unanticipated by the enemy. He accepted risk in the unsupported maneuver of the ITB to exploit the benefits of surprise and to attack the depth of the Egyptian positions. Sharon

acted decisively in orchestrating the overall operation, foreseeing the cumulative effect of the application of combat power in depth against the weaknesses of the Egyptian positions.

Sharon employed all of his available combat power to attack throughout the depth of the Egyptian defenses. He exploited his knowledge of the terrain to fashion his attack against the Egyptian weaknesses. He capitalized on the vertical maneuver capability of his paratroopers to eliminate the Egyptian artillery. He employed his armor in a deep attack against the Egyptian rear and in support of the infantry's attack against the trenches. Sharon's fire support assisted his maneuver forces in their attack. In short, he focused all of his resources to dismantle the structure of the Egyptian defenses. Sharon's plan destroyed the coherence of the Egyptian defenses by forcing them to confront simultaneous attacks from multiple directions. The Egyptian command and control could not cope with the demands that Sharon forced upon it. By attacking throughout the depth of the Egyptian positions, Sharon forced the defense to collapse.

The Israeli synchronization of command and control and other key BOSs produced a synergism that overwhelmed the Egyptian defense and reduced Israeli casualties.

NOTES

¹Edgar O'Ballance, The Third Arab-Israeli War (Hamden, Conn.: Archon Books, 1972), 87.

²George W. Gawrych, Key to the Sinai: The Battles for Abu Ageila in the 1956 and 1967 Arab-Israeli Wars (Fort Leavenworth: U.S. Army Command and General Staff College, 1990), 5.

³O'Ballance, 88.

⁴Gawrych, 9.

⁵O'Ballance, 120.

⁶Zeev Schiff, A History of the Israeli Army (1870 - 1974) (San Francisco: Straight Arrow Books, 1974), 160.

⁷Randolph S. Churchill and Winston S. Churchill, The Six Day War (London: William Heinemann, Ltd, 1967), 53.

⁸Schiff, 180.

⁹Churchill, 105.

¹⁰Ibid., 74.

¹¹Schiff, 159.

¹²Gawrych, 78.

¹³Trevor N. Dupuy, Elusive Victory (New York: Harper and Row, 1978), 257.

¹⁴Ibid.

¹⁵Ibid., 258.

¹⁶Ibid., 259.

¹⁷Ibid., 258.

¹⁸Ibid., 121.

¹⁹Ibid., 258.

²⁰O'Ballance, 121.

²¹Dupuy, 258.

²²Gawrych, 92.

²³Ibid., 93.

²⁴Dupuy, 259.

²⁵Ibid., 258.

²⁶O'Ballance, 121.

²⁷Dupuy, 258.

²⁸O'Ballance, 121.

²⁹Gawrych, 104.

³⁰O'Ballance, 122.

³¹Ibid.

³²Churchill, 85.

³³Gawrych, 91.

³⁴Ibid., 103.

³⁵Ibid., 100.

³⁶Ibid., 102.

³⁷Ibid., 103.

³⁸Ibid.

³⁹Dupuy, 258.

⁴⁰Dupuy, 259.

⁴¹Accounts differ regarding the results of CAS against the Egyptian position on Hill 181. Dr. Gawrych states in Key To The Sinai, p. 104, that the Israeli Air Force dropped napalm in support of Nir's attack on Hill 181. Churchill states in The Six Day War, p. 119, that although the Israelis requested CAS, the Israeli Air Force was unable to find Hill 181 due to sandstorms in the area. O'Ballance mentions in The Third Arab Israeli War, p. 123, that a dust storm erupted about 1400 hours, but he says nothing regarding CAS support for Nir's attack.

⁴²Gawrych, 104.

⁴³O'Ballance, 123.

⁴⁴Ibid., 124.

⁴⁵Ibid., 123.

⁴⁶Gawrych, 104.

⁴⁷O'Ballance, 125.

⁴⁸Gawrych, 99.

⁴⁹O'Ballance, 124.

⁵⁰Ibid., 104

51 Ibid., 125.

52 Gawrych, 104.

53 O'Ballance, 125.

54 Dupuy, 260.

55 Gawrych, 104.

56 O'Ballance, 124.

57 Churchill, 121.

58 Gawrych, 104.

59 Ibid., 105.

60 Gawrych, 107.

61 Accounts differ regarding when the Sherman battalion was able to break through the Egyptian minefields. Dupuy states 0330 hours on p. 260 in Elusive Victory. O'Ballance (p. 132) and Gawrych (p.114) both state 0400 hours.

62 O'Ballance, 125.

63 Dupuy, 261.

64 Gawrych, 117.

65 Ibid., 74.

66 O'Ballance, 121.

67 Dupuy, 258.

68 Ibid., 259.

69 Gawrych, 103.

70 O'Ballance, 121.

71 Ibid., 122.

72 Ibid., 126.

73 U.S. Department of the Army, Field Manual, FM 5-101, Mobility (Washington: Department of the Army, 1985), 1-1.

- 74 Churchill, 85.
- 75 Schiff, 166.
- 76 Gawrych, 91.
- 77 Dupuy, 259.
- 78 U.S. Department of the Army, Field Manual, FM 100-5,
Operations (Washington: Department of the Army, 1986), 15.
- 79 Gawrych, 109.
- 80 Ibid., 116.
- 81 Ibid., p. 107.
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- 83 Churchill, 120.
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- 85 Ibid., 91.
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- 87 FM 100-5 (1986), 16.

CHAPTER 5

THE SINAI, 1973 WAR

SECTION 1

INTRODUCTION

Chapter 5 is organized into four sections. The first section introduces the chapter and discusses the organization and presentation of the other three sections. The second section presents a short description of the important terrain features of the western Sinai Peninsula, and a description of the terrain of the Suez Canal area. The third section provides the operational context of the battle and describes the battle using the format of a synchronization matrix. Chapter 4 examines each major action or decision to determine when it occurred. The U. S. Army BOSs helped in the examination of the Israeli actions or decisions. Viewing the battle this way helped determine which BOSs were key, and demonstrated how they were interrelated. The subsequent examination and

analysis of the operation provided answers to the three lesser subordinate questions: What were the Israeli and Egyptian orders of battle? How were the Israeli combat forces positioned in the initial defense of the "Bar-Lev" Line? And, how were the Israeli combat forces employed in the operations that followed until the 24 October ceasefire?

As in chapter 4, the fourth section of chapter 5 features an analysis of the key BOSs, and their relationship to the Airland Battle tenets using the Airland Battle/BOS matrix as the framework for the examination. The analysis and discussion provided an answer to the major subordinate question for this battle, that is, what useful conclusions could be drawn regarding combined arms combat in a desert environment.

SECTION 2

THE AREA OF OPERATION

The 1973 Sinai Campaign took place in the western third of the Sinai Peninsula. The Suez Canal borders the Sinai Peninsula for a distance of 160 kilometers. The canal has an average width of 150 meters and an average depth of fifteen meters.¹ The tides change frequently, the difference in the water level varying between sixty centimeters in the north to two meters in the south. The current varies from eighteen meters per minute in the north, to ninety

meters per minute in the south.² Chaim Herzog quotes General Dayan as describing the Suez Canal as "one of the best anti-tank ditches available."³

East of the canal, the Israelis had constructed a network of roads that facilitated the movement of forces in all directions. Parallel to the Suez Canal, from just north of Kantara to Port Tewfik in the south, is a road code-named "Lexicon."⁴ Eastward from the canal, the desert rises to a line of sandy hills and then runs back to a dune ridge ten to twelve kilometers from the canal. This ridge provides good observation of the level terrain east of the canal. The Israelis constructed a north-south road, called the Artillery Road, just east of the dune ridge to allow lateral displacement of their artillery. A second, higher ridge, thirty kilometers east of the first ridgeline, runs north and southeast of a large sea of dunes. The Israelis constructed a lateral road along the second ridgeline to facilitate movement of forces from one sector to another. The sea of sand dunes continues seventy kilometers east to the mountainous areas of the Mitla Pass, and to the Gidi Pass farther to the south.⁵ The primary terrain feature of the northern area is a salty marsh area, which extends roughly from Kantara to Port Said. A thin layer of sand covers the swamps. The Israelis have also constructed several roads through this area.⁶

There are three major types of terrain in the Sinai: the mountainous region in the south, the plateau area in the center, and a coastal plain in the north and west. The Suez Canal area bisects the coastal plain that runs from Gaza, in Israel, across the canal into

Egypt. Elevations range from sea level near the Mediterranean to three hundred meters in the south near the plateau area.⁷ The east bank of the canal is desert. The west bank, opposite the Bitter Lakes, has a cultivated belt running from Ismailia to Suez City.⁸

Israeli engineers had established an earth rampart built upon the berm created as a result of digging the canal and from subsequent dredging operations. The Israeli rampart was as high as twenty-five meters in vital areas.⁹ Egyptian engineers on the west bank of the canal built sand shelters for protection from Israeli fire, and for concealment from observation.¹⁰ The Egyptians constructed ramparts on the west bank that were forty meters high and allowed them to look down into the Israeli fortifications on the east bank. The Egyptians built firing positions on the ramparts to allow tanks and antitank guns to overwatch the crossing.¹¹

SECTION 3

DESCRIPTION OF THE SINAI CAMPAIGN, 1973

Operational Context

During the late spring of 1973, Israeli Intelligence observed an increase in Egyptian activity. They also saw signs of Syrian preparations for war. At the same time, some IDF commanders and junior intelligence officers did not believe the official intelligence estimates of a low likelihood of war. The warnings that they

provided, however, were mostly ignored by the senior commanders and the government.¹² In May, junior members of the Intelligence branch asserted that war was a genuine possibility. Major General Eliyahu Ze'ira, Director of Military Intelligence, did not agree with his subordinates. He did, however, advise the government that a partial activation of the reserves and other measures should be taken.¹³ During the summer, signs continued to show that war was likely. The Egyptians integrated new missiles into their units and shifted their forces forward to the canal area. The Syrians began large-scale exercises and established an integrated air defense system. Contrary to these signs, the Israeli and American intelligence systems continued to forecast a very low likelihood of war.¹⁴

Several times over the years just prior to 1973, the Arabs had moved large forces to Israel's borders. The Israelis took action in December 1972 to prepare for war, based on intelligence indications that war was likely. The Arabs did not attack. Again, in May of 1973, indications showed that the Arabs were preparing for war. The Israelis observed the Egyptians moving missiles forward and preparing fording equipment. Again, nothing happened. This time, Israeli intelligence postulated that the Arabs were not yet ready and, therefore, would not attack. The Israeli Chief of Staff, David Elazar, was not of the same opinion and took action to increase preparedness and alertness. The Arabs did not attack. This raised the confidence of the Israeli Intelligence, and caused a corresponding increase in the faith placed in Israeli Intelligence assessments.¹⁵

Israeli Intelligence assessments that the Egyptians would not start a war gained credibility each time the Egyptians prepared for war but did not attack.¹⁶ U.S. Army Field Manual 90-2 states that one of the goals of battlefield deception is to " . . . condition the enemy to particular patterns of friendly behavior that are operationally exploitable at the appropriate time."¹⁷ The Egyptians conditioned the Israelis to believe that the build-up of large forces in the vicinity of their borders and an increase in Arab preparedness were not threatening. The Egyptians also effectively followed Magruder's Principles--The Exploitation of Perceptions:

It is generally easier to induce an enemy to maintain a pre-existing belief than to present notional evidence to change that belief. Thus, it may be more useful to examine how an enemy's existing beliefs can be turned to advantage than to attempt to change his beliefs.¹⁸

The Israelis fell into a trap that they, themselves, helped to construct. Their overconfidence led them to incorrect conclusions regarding Arab intentions.

Saad el Shazly relates that Egyptian planning for the 1973 War began as early as 1968 with the implementation of the Egyptian Armed Forces annual strategic exercises. The first aggressive Egyptian plan, code-named "Granite," called for limited Egyptian raids into the Sinai. With his appointment as Chief of Staff in May 1971, Shazly began work on plans for a large-scale Egyptian attack across the canal. After an examination of Egyptian military

capabilities, Shazly concluded that, realistically, the Egyptians could only plan to cross the canal, destroy the Bar-Lev Line, and occupy defensive positions.¹⁹ This plan came to be known as "The High Minarets." Another, more ambitious plan, initially called "Operation 41," entailed an attack across the canal with the objective of seizing the Sinai passes. The Egyptians eventually gave "Operation 41" the code name "Granite Two." "The High Minarets" plan was more realistic. It was based upon Shazly's concern for the limited ability of the Egyptian Air Force to provide ground support or air cover, on a shortage of mobile surface-to-air missiles (SAMs) to support an Egyptian ground advance, and on the vulnerability of Egyptian transport to air attack.²⁰

General Ahmed Ismail Ali became the Egyptian Minister of War in October of 1972. He soon received a briefing on the status of Egyptian war plans, and set the spring of 1973 as the target date to launch "The High Minarets."²¹ There were six important aspects to "The High Minarets," according to Shazly. First, five infantry divisions, each reinforced with an armor brigade, extra ATGMs and portable SAMs, would cross the canal at five crossing points, each three miles wide. Second, the Bar-Lev Line would be destroyed and Israeli counterattacks would be defeated. Third, the bridgeheads would be expanded to a depth of five miles and a width of eight miles by H+18 to H+24 hours. Fourth, by H+48 hours the divisions were to link-up, forming Army-size bridgeheads, which, by H+72 hours, were to form one consolidated bridgehead extending between six and nine miles east. Fifth, the Egyptian Army would assume

defensive positions, and sixth, airborne and seaborne units would be used to delay the arrival of the Israeli reserves.²² The Egyptians began planning for "Granite Two" in April of 1973 to convince the Syrians to join in the war against Israel. The Minister of War told Shazly that "Granite Two" would not have to be executed "except under the most favorable conditions."²³

In September, the Egyptians set 6 October as the date for the attack. The Egyptians changed the code name for the operation from "The High Minarets" to "Operation Badr" to commemorate Mohammed's first victory in AD 624.²⁴

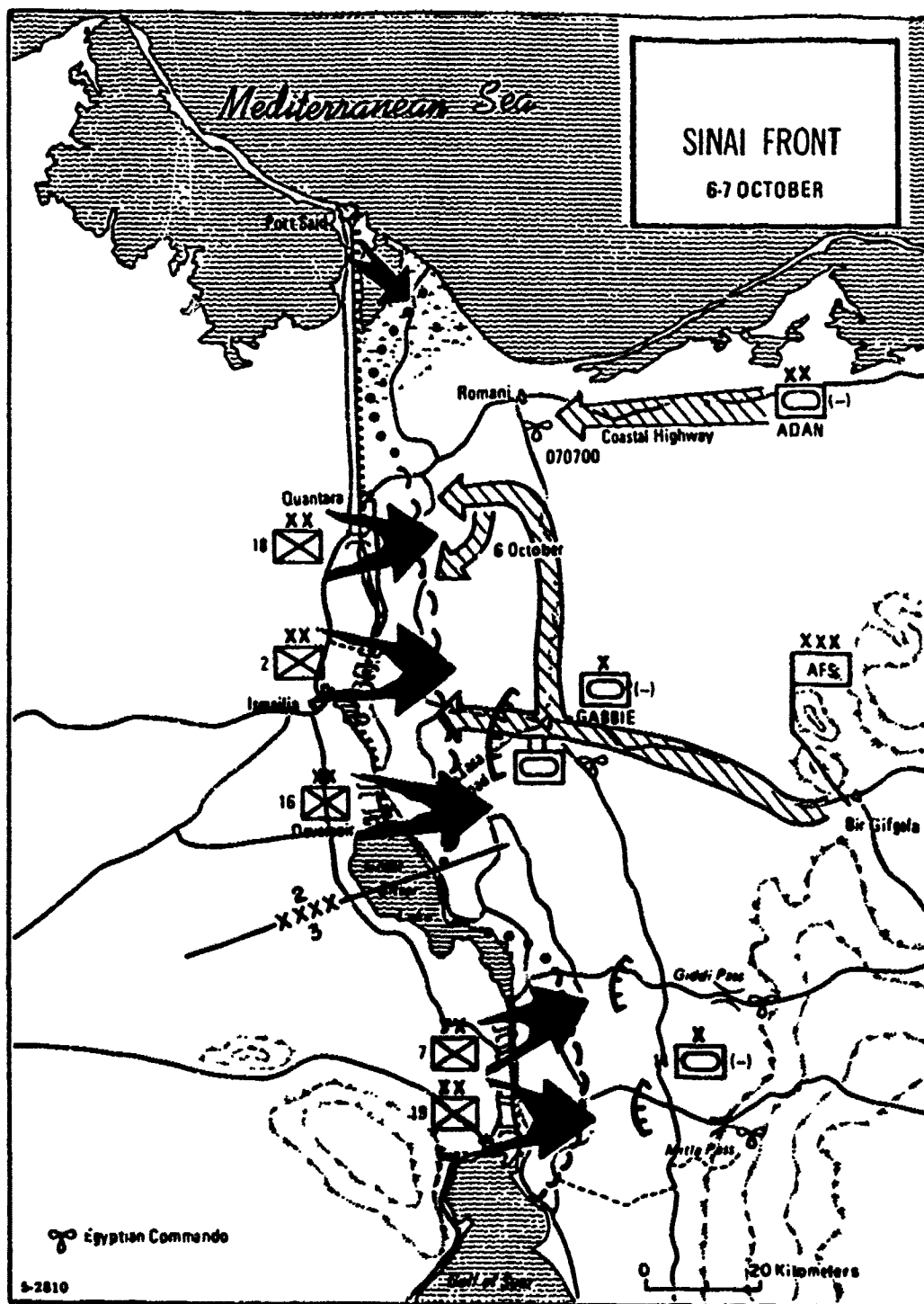
The Israeli Sinai defense plans required sufficient advance warning to allow the mobilization of reserves and their movement forward. The Israelis had two plans for the defense of the Suez canal: "Shovach Yonim" and "Sela." The Israeli regular forces provided the basis for the "Shovach Yonim" defense plan. Designed to counter Egyptian incursions into the Sinai, it depended on reserves that would be mobilized in the event of a major war. "Shovach Yonim" included plans for infantry, armor, and artillery to reinforce the regular Sinai Division (Major General Mandler's division). The "Shovach Yonim" plan did not include the mechanized infantry companies organic to the tank battalions of the Sinai Division because they were reserve units. The three brigades of Mandler's division were responsible for the entire Suez Canal area.²⁵ Mandler's division contained 276 tanks. A total of forty-eight guns in twelve artillery batteries provided fire support.²⁶ Each brigade was responsible for the protection of the strongpoints in their

sectors. Strongpoints that took longer than fifteen to thirty minutes to reach received an attached tank platoon. Two or three tank companies from each brigade, stationed on the Artillery Road, had the mission to reach the canal in thirty minutes to stop any Egyptian crossing. Farther back, each brigade kept a tank battalion in reserve in the vicinity of the Lateral Road, thirty kilometers from the canal. The tank battalions had the mission to reach the strongpoints within two hours. A fourth armor brigade was to be positioned in the center of the sector as a reserve and counterattack force against the Egyptian main effort. The "Shovach Yonim" plan required the few regular forces in the area to block or delay a crossing, and then to serve as the forward element of the Israeli forces that would be deployed under the "Sela" plan.²⁷

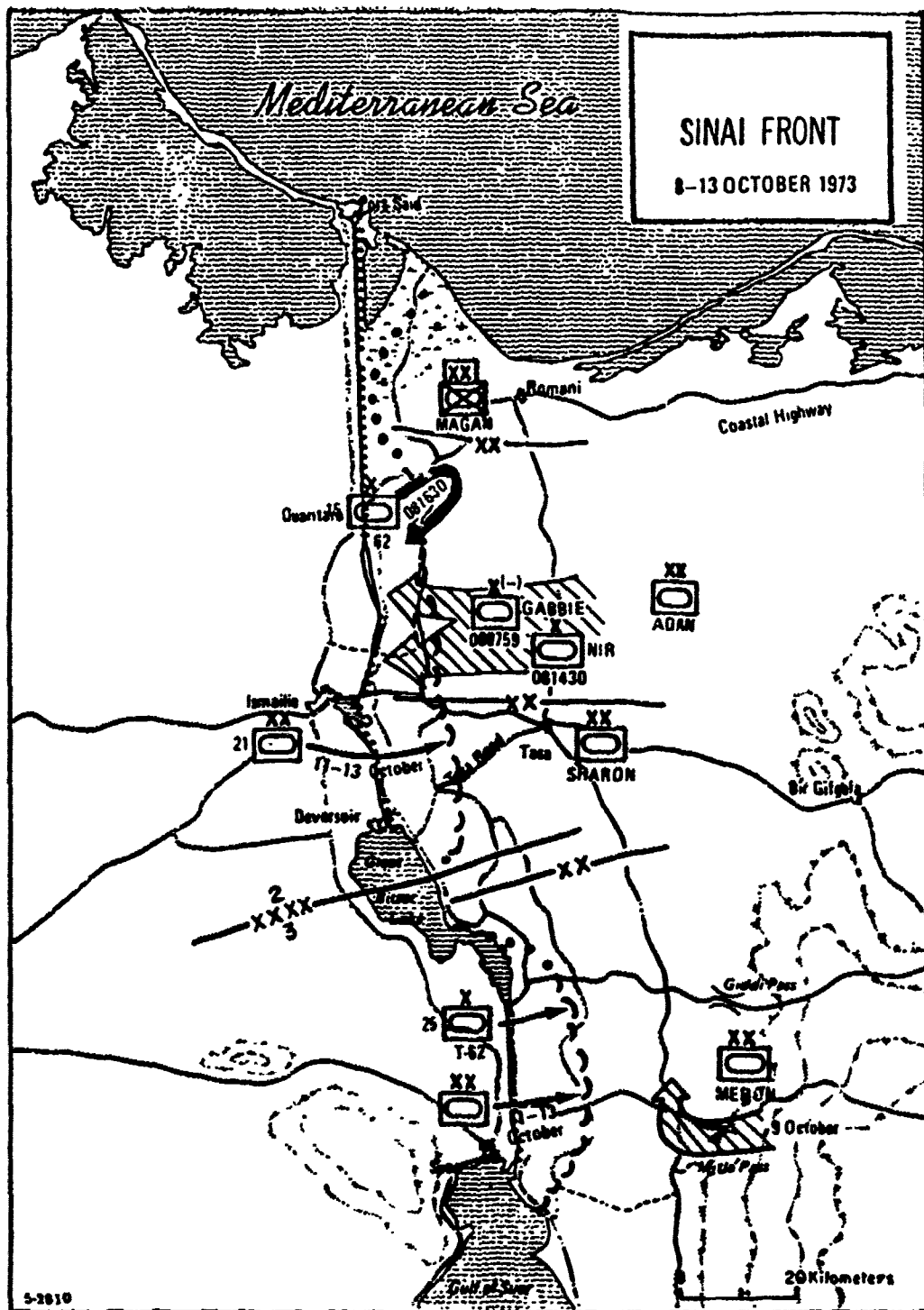
The "Sela" plan was to be used in case of a major war. It provided forces to defend the canal, and allowed a rapid shift to the offense. The plan called for two reserve armor divisions to be positioned behind the forward-deployed units to reinforce the defense. They were then to conduct a counterattack across the canal. The Israelis counted on the Air Force to maintain air superiority over the battlefield and to provide close air support for the army.²⁸

Elements of the 16th (Jerusalem) Brigade, a reserve infantry unit deployed for annual training, manned the Bar-Lev Line. The 16th Brigade was only at seventy-five percent strength due to Yom Kippur holiday leaves.²⁹

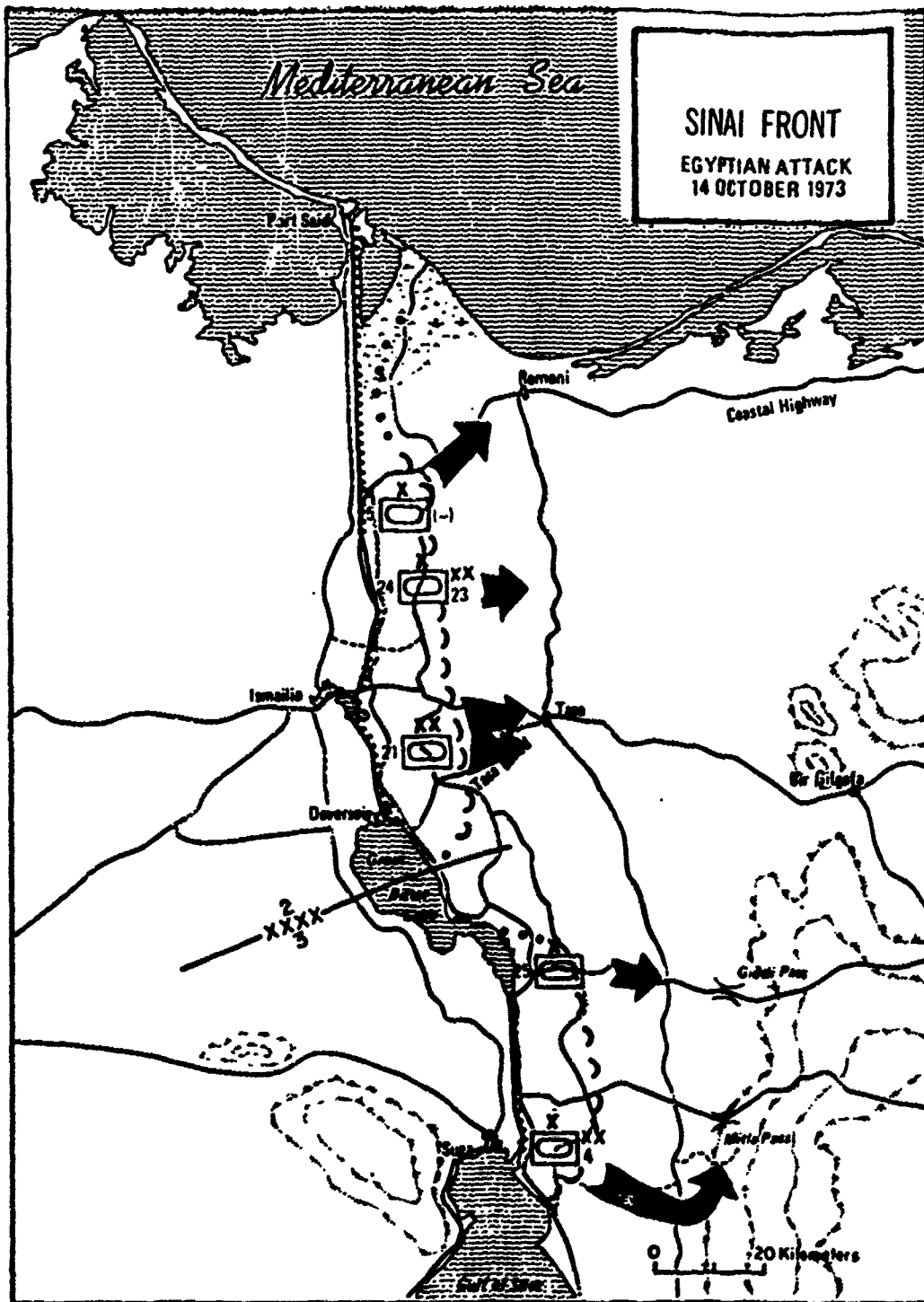
Reference Maps are presented on the following four pages.



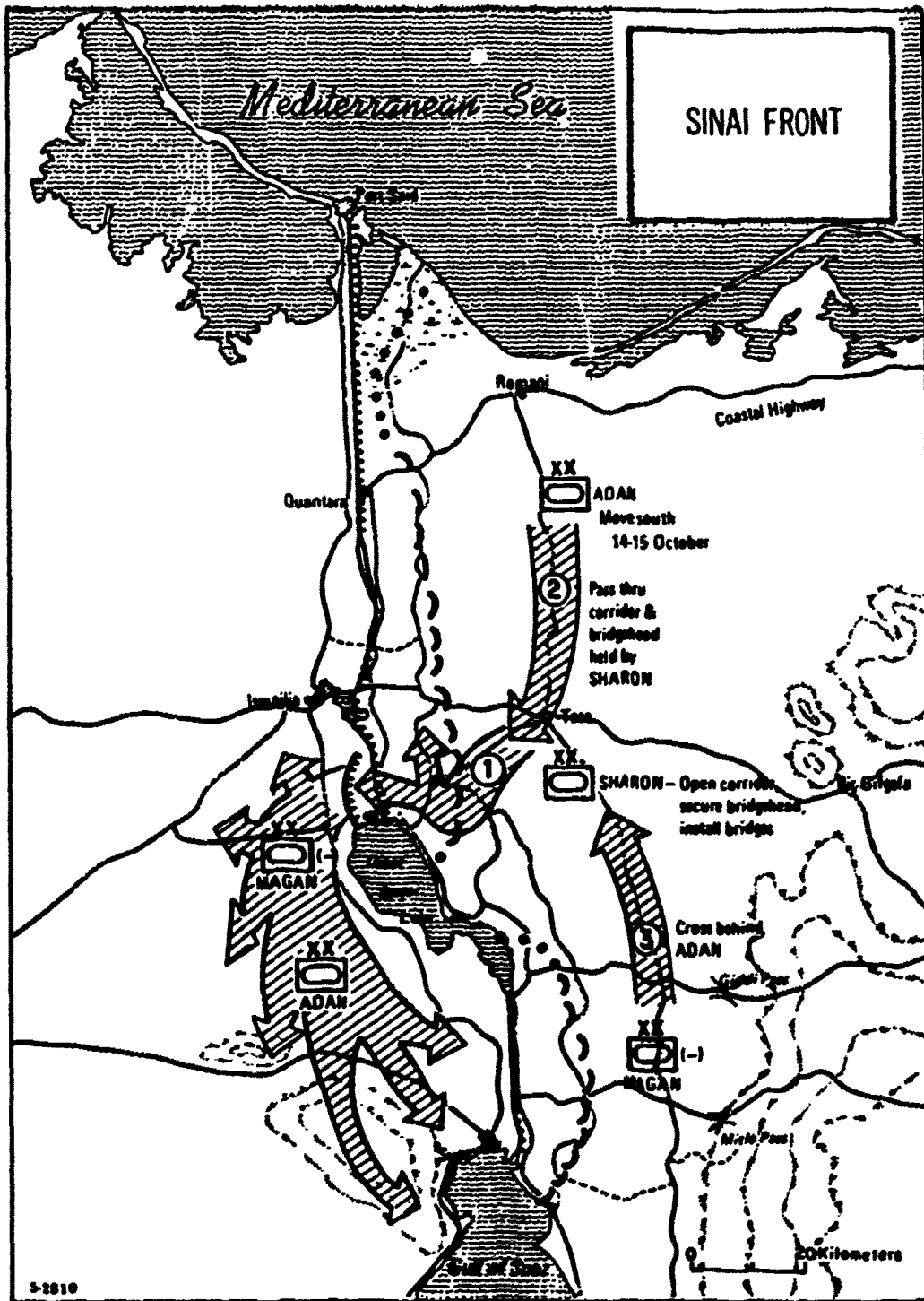
Map 4. Initial situation 6 to 7 October



Map 5. Initial Israeli counterattacks 8 to 13 October



Map 6. Egyptian attack 14 October



Map 7. Israeli cross-canal offensive 16 to 23 October

Description of the 1973 War in the Sinai

The examination of the material using the Sinai 1973 synchronization matrix provided a look at the influences of the BOSs on the course of each battle. This examination included only the key BOSs of each battle.

1405 Hours, 6 October 1973

Threat Action

The Egyptian Army began their attack with air and missile strikes. The Egyptians opened fire with four thousand weapons. Egyptian aircraft flew 250 battlefield air interdiction strikes. The fire of 1,850 artillery pieces, one thousand tanks and one thousand antitank guns began the preparatory fires, in which the Egyptians fired 10,500 artillery shells.³⁰ At 1420 hours, four thousand Egyptian soldiers of the first assault wave began their attack across the canal. The Egyptian soldiers used 720 rubber boats in the first wave.³¹ They attacked on a wide front in five division sectors. They assaulted on a wide front to prevent the Israelis from massing their armor in a concerted counterattack.³² The first wave crossed the canal in seven minutes. It did not stop to attack the strong points, but moved one kilometer east to establish firing positions for their ATGMs against the anticipated Israeli counterattacks.³³ The Egyptian engineers quickly began their hydraulic attack against the Israeli sand rampart using high pressure water hoses to force

gaps in the rampart. The Egyptian plan allowed the engineers five to seven hours to complete this mission.³⁴ The first gap was opened in only four hours. At 1730 hours, Egyptian commando units moved by helicopter to the vicinity of Ras Sudar and Abu Ruedis.³⁵ Before midnight, the Egyptian Army had fifty ferries in operation, and within the first nine hours, had established twelve bridges in the Egyptian 2nd Army sector. The Egyptian 3rd Army, due to the nature of the soil in their sector, was unable to establish any bridges until 0700 hours, 7 October.³⁶ The 130th Brigade of the Egyptian 3rd Infantry Division, equipped with PT-76 amphibious tanks, crossed the Great Bitter Lake and moved toward the Mitla and Gidi Passes.³⁷

Intelligence

The Israeli Defense Force Intelligence failed to predict the Arab attack.³⁸ The Israeli Army thought that the Egyptians would require one and a half to two days to break down gaps in the Suez rampart.³⁹

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Security. The Bar-Lev Line was too weak to defend the canal, and the Israelis had positioned too many soldiers in static positions for the Bar-Lev Line to serve solely as a tripwire.⁴⁰ Local

Israeli counterattacks encountered ATGM fire originating from positions they had planned to occupy in order to fire against the crossing attempt.⁴¹

Deep. The Israeli Air Force flew seventy sorties of F-4 and A-4 aircraft against the Egyptian crossings.⁴²

Close. Colonel Dan Shomron's brigade from Mandler's division, equipped with M-60 and Centurion tanks, defeated the Egyptian 130th Amphibious Brigade west of the Gidi Pass.⁴³ Major General Shmuel Gonen, Commanding General of Southern Command, refused to let Major General Avraham Mandler move forward until 1400 hours.⁴⁴ The Egyptians occupied the positions intended for the Israeli tanks to fire against the crossing. Tanks and antitank guns from the Egyptian ramparts on the west bank of the canal overwatched the Egyptian infantry in the first waves. The infantry in the first waves carried man portable ATGMs and SAMs.

Rear. As the IDF mobilized, its reserve forces became available to deploy to the Northern and Southern commands. Two Israeli reserve divisions began movement to the Sinai by 2359 hours, 6 October.

Reserve. On the morning of 6 October, General Mandler asked General Gonen to allow him to move his two reserve brigades forward. Gonen initially refused. Gonen finally gave Mandler permission to move his brigades forward at 1600 hours.⁴⁵

Fire Support

The Israeli Air Force reacted quickly to the Egyptian crossing of the canal. The well-integrated, Egyptian air defense system inflicted fifty percent losses on the Israeli Air Force as it flew in support of the strongpoints on the canal.

Mobility/Counter mobility/Survivability

The IDF depended on the canal and the Bar Lev Line to act as the ultimate antitank ditch. The Israelis thought that it would take from one and a half to two days to force gaps through the sand rampart. Using water cannons purchased from the British and Germans, the Egyptians established a training standard of two hours to force a gap through the sand rampart.⁴⁶

Air Defense

The IDF used antiaircraft artillery (AAA) and the Israeli Air Force for air defense.⁴⁷ The Israeli Air Force shot down a number of attacking Egyptian aircraft and twenty (fourteen by other accounts) helicopters that were carrying Egyptian commandos.⁴⁸ The Egyptians established a mix of long-, medium-, and short-range SAMs and AAA. This mix, consisting primarily of SA-2s, SA-3s, SA-6s, SA-7s and ZSU-23-4s, destroyed half of the Israeli aircraft in the first attack.⁴⁹

Command and Control

By 0200 hours, 7 October, it had become clear to Colonel Shomron, Mandler's brigade commander in the south, that the crossing was an actual attack by the Egyptians. Colonel Shomron asked Mandler to evacuate all of the Israeli strongpoints along the canal. Mandler replied that he could not give permission for the evacuation of the strongpoints. The Israelis were being forced to choose between repelling the Egyptians and supporting the strongpoints. Each time the Israeli tanks moved from their attacks against the crossing sites to respond to requests for support from the strongpoints, they were forced to fight through the Egyptian infantry, armed with rocket-propelled grenades and ATGMs. At 1100 hours on 7 October, Colonel Shomron contacted Mandler and insisted on a decision to either hold the strongpoints or to fight a mobile defense. He finally received permission to break contact with the strongpoints and concentrate on holding the Egyptian advance.⁵⁰

7 October 1973

Threat Action

By 0001 hours, 7 October, fifty Egyptian ferries were in operation. T-54s with mine plows were the first to cross on the ferries. Kantara East fell during the night of 6-7 October. Egyptian

air defense continued to be very effective.⁵¹ The Egyptians had eight hundred tanks on the east side of the canal by 0100 hours, 7 October.⁵²

Intelligence

Not a factor.

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Close. Mandler reported only ninety tanks operational of an initial starting total of 276. On the morning of 7 October, Colonel Shomron launched a spoiling attack at suspected Egyptian troop concentrations preparing to expand their bridgehead. His brigade's combat power amounted to only thirty tanks. His three battalions attacked using long-range fire, and maneuvered to avoid decisive engagement.⁵³

Rear. The Egyptian commandos were airlifted into position at dusk on 6 October. Egyptian commandos ambushed Major General Adan's division near Romani at 0700 hours, 7 October. The Egyptian attack slowed down the arrival of Adan's division by about an hour, but caused Israeli reinforcements to move more cautiously, delaying

their arrival.⁵⁵ Two platoons of PT-76s of the Egyptian 130th Amphibious Brigade attacked the Bir El Thamada Air Base at 1010 hours, 7 October.⁵⁶

Reserve. Sharon's and Adan's reserve divisions were ordered to move to the Sinai. They reached the Suez Canal area of operations early on the morning of 7 October.⁵⁴

Fire Support

Israeli 175-mm guns fired against the Egyptian bridge sites across the canal. The artillery fire killed Brigadier General Hawdi, the Engineer Officer of the Egyptian 3rd Army.⁵⁷ Shomron's brigade had three batteries of artillery for support.⁵⁸

Mobility/Counter mobility/Survivability

Not a factor.

Air Defense

A combination of Israeli antiaircraft fire and Air Force interceptors flying defensive counterair destroyed between eight and thirty Egyptian aircraft (the Egyptians admitted losing eight, the Israelis claimed thirty).⁵⁹

Command and Control

At 1100 hours, 7 October, Colonel Shomron insisted on a decision from General Mandler. He received permission to break contact with the strongpoints and to concentrate on holding the Egyptian advance.⁶⁰

Major General Gonen assigned the newly-arrived divisions, commanded by Major Generals Sharon and Adan, responsibility for the central and northern sectors, respectively. General Mandler had responsibility for the southern sector.⁶¹

General Gonen conducted a command conference attended by Major Generals Mandler, Adan, Ben Ari (Gonen's Chief of Staff), and Lieutenant Generals Elazar (IDF Chief of Staff), and Rabin (former IDF Chief of Staff). The conferees discussed what was to be done regarding the strongpoints, what the Egyptian Army's plans were, and how the IDF would take the initiative. Discussion included an Israeli crossing to the west bank of the canal. The conference resulted in a decision that the strongpoints would have to hold out. The conferees also planned a limited counterattack for 8 October to capture a bridge, if possible.⁶² General Elazar's plan for the counterattack envisioned an attack by Adan from north to south in the vicinity of Kantara. He wanted Sharon's division to be held in reserve, and should Adan enjoy success, Sharon was to attack the Egyptian 3rd Army in the Great Bitter Lake area and then move south. General Mandler was to hold in the south, ready to support Sharon. In The War of Atonement, Herzog relates that General Elazar clearly stated that the counterattack was to avoid the canal rampart because of the antitank weapons there.⁶³

8 October 1973

Threat Action

The Egyptian Army continued to consolidate their bridgeheads. The 2nd Army bridgehead extended from Kantara to Deversoir in the south. The 3rd Army bridgehead included the Bitter Lakes in the north to Port Tewfik in the south.⁶⁴ The Egyptian 2nd Infantry and 18th Infantry Divisions repelled the Israeli counterattacks.⁶⁵

Intelligence

Lack of Israeli reconnaissance units made it difficult to maintain contact with the Egyptians and obtain intelligence information regarding their intentions.⁶⁶

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Security. Only four strongpoints remained in Israeli hands on the morning of 8 October.

Close. General Adan's brigades were ready with 121 tanks for the counterattack at 0600 hours. Adan planned to attack with two brigades (Nir's and Amir's) from north to south, with Karen's

brigade in reserve.⁶⁷ Nir's brigade contained seventy-one tanks; Amir's brigade had fifty tanks; Karen's brigade was still awaiting the arrival of its battalions.⁶⁸

General Adan ordered his reserve, Karen's brigade, to move forward. By this time it had all of its battalions, a total of sixty-two tanks. Adan gave the order to attack at 0753 hours, 8 October. Since Nir's brigade was already in contact in the vicinity of Kantara, Adan changed his plan and attacked with Amir's and Karen's brigades. At 0806 hours, Adan reported to Gonen that he was receiving artillery and ATGM fire. Gonen reminded him not to get too close to the canal. In his book On The Banks Of The Suez, Adan mentions that Gonen would later claim that Adan's attack on the canal was entirely Adan's responsibility.⁶⁹

Amir's brigade attacked with two battalions, losing twenty tanks in the attack. Amir pulled back, and Karen's brigade attacked in the vicinity of Kantara with two battalions abreast. Under heavy fire, the battalion on the right withdrew, as the battalion on the left, commanded by Lieutenant Colonel Assaf Yaguri, continued to attack. Yaguri's battalion entered an Egyptian kill zone, and only four tanks survived.⁷⁰

At 1020 hours, Gonen told Sharon to be prepared to move south and attack northwest from Suez.⁷¹ Sharon failed to support Adan's request for the attachment of one battalion from Sharon's division to Adan's division, even though General Gonen had approved it.⁷² At 1145 hours, Sharon received the order from Gonen to move. Sharon protested that both of his brigades were in heavy contact. Gonen repeated the order. Sharon withdrew from his positions at

about 1300 hours, leaving no one to occupy his now vacant sector except a reconnaissance unit. He was told by Gonen that Adan would occupy the sector.⁷³

By 1530 hours, Adan was in a very desperate situation. His brigades had suffered severe losses with little success. He had called Gonen requesting air support and additional forces. He called a meeting with Colonels Nir and Amir to discuss the situation. At 1630 hours, Adan met with his two brigade commanders. During the meeting, both Nir's and Amir's units called their commanders to report that the Egyptians were counterattacking in great force. Both brigade commanders returned to their units and reported to Adan that they did not think that they could stop the Egyptian counterattacks. At about 1700 hours, Adan ordered a retreat to avoid penetration by the Egyptians.⁷⁴

Fire Support

Adan requested air support for his attack. Gonen assured Adan that the Air Force would support his attack.⁷⁵

Israeli Air Force aircraft attacked the Egyptians and Adan's division. Adan requested that his forward air controllers control the CAS, since they were with the attacking ground forces. Southern Command turned down the request.⁷⁶

Mobility/Counter mobility/Survivability

The Egyptian Army made good use of the defensive positions that the Israelis had constructed on the east side of the canal. The

Egyptians occupied the Israeli ramparts and the supporting tank firing positions with their tanks and ATGM teams. These positions afforded protection and concealment from ground observation by the Israelis.

Air Defense

At 0700 hours, Adan's division came under attack by Egyptian fighters.⁷⁷

Frank Aker reports in October 1973: The Arab-Israeli War that the Israelis shot down many Egyptian aircraft by using a high volume of small arms fire, primarily machinegun fire.⁷⁸

Command and Control

Adan used a "creeping deployment" technique to move his force forward in preparation for the counterattack. "Creeping deployment" required the force to ". . . organize on the move, deploying stage by stage into the desired disposition, thus saving considerable time." Adan moved to a position between his two brigades on terrain that afforded good him observation.⁷⁹ His command post consisted of three armored personnel carriers and two halftracks.⁸⁰

At 0354 hours, Gonen, who had been unable to reach Adan (possibly due to Egyptian jamming), contacted Brigadier General Magen. Gonen told Magen that Adan was to link up with strongpoints "Milano" and "Mifreket," near Kantara, and with strongpoints "Hizayon" and "Purkan," near Ismailia and the Firdan Bridge. Magen

told Gonen of the difficulties involved with the operation, and that Adan had already issued orders to his brigade commanders. Again, Gonen attempted to contact Adan. Still unable to contact Adan, he called Magen back at 0413 hours. Gonen had yet another change in the operation; Adan was to cancel the crossing at Firdan, and cross in the Bitter Lake area. He was to establish a defensive line, and then attack with one brigade into Egyptian territory. Gonen suggested to Magen that Adan ". . . just call the brigade commander who will cross the canal and brief him."⁸¹ Gonen finally made contact with Adan at 0430 hours. Gonen thought that Adan was familiar with the changes in the operation, and asked him questions about crossing the canal and linking up with several strongpoints. Adan believed that Gonen was simply asking questions about the execution of the plan briefed earlier at the command conference.⁸² Adan related that, at 0400 hours, 8 October, Chief of the Operations Department and his aides had examined the orders arriving from the territorial commands: "They noticed that Southern Command's overlay order failed to coincide with the directives of the chief of staff. They discussed the matter, but no steps were taken."⁸³

Adan and Gonen experienced considerable command and control problems regarding Adan's counterattack. Adan never understood what Gonen wanted him to accomplish, and Gonen never clearly articulated to Adan what he expected. Adan's attack resulted in heavy losses and no success. Adan appealed to Gonen for air support and additional forces, and Gonen assured Adan that he would have support. No support materialized. Adan, faced with strong

Egyptian counterattacks, and overextended across a broad front, decided to break off the attack to avoid a penetration by the counterattacking Egyptians.

Eventually, Gonen began to understand the gravity of the situation in Adan's sector. Gonen recalled Sharon from the south at approximately 1500 hours. Sharon's division occupied positions stretching for thirty kilometers along the Lateral Road south of Tasa. Gonen "asked" if Sharon could send one of his brigades to support Adan. Sharon told Gonen that he thought that sending Adan one of his brigades would weaken his own forces, without accomplishing a thing.⁸⁴ While the discussion between Sharon and Gonen was taking place, Adan, who felt that he had stabilized the situation, interrupted the conversation and recommended that Sharon attack in the vicinity of Ismailia. Gonen disapproved the recommendation and decided not to commit Sharon.⁸⁵

Adan relates in his book On The Banks Of The Suez how difficult it was to maintain control of his division:

I was compelled to disperse over a broad expanse so that it was difficult to maintain control. Despite my excellent observation point, I could see only two of my brigades. . . . Communications were terrible.⁸⁶

9 to 13 October 1973

Threat Action

The Egyptian bridgeheads varied from seven to ten kilometers in depth. By 9 October, the Egyptians had moved eight hundred tanks, and ninety thousand troops across the canal.⁸⁷

The Egyptians conducted local attacks on 9 October to expand their bridgehead. The Egyptian Air Force continued to fly in support of the operations, but the Israelis reported fewer sorties.⁸⁸

At approximately 1630 hours, 11 October, General Ahmed Ismail Ali contacted General Shazly to begin planning for a continuation of the offensive to the Sinai passes.⁸⁹

The Egyptian Army already had 1,020 tanks across the canal by 11 October. There were 330 tanks in their operational reserve and an additional 250 tanks in their strategic reserve.⁹⁰

The Egyptian 21st Armor Division completed the canal crossing during the night of 12-13 October. During the night of 13-14 October, fourteen Egyptian SAM battalions crossed the canal.⁹¹

Intelligence

The Egyptian Army's plan to break out from their bridgehead was a primary concern of the IDF. Israeli ignorance of the Egyptian Army's plans affected Israeli planning for their cross-canal offensive.⁹²

Sharon sent his reconnaissance battalion to the north shore of the Great Bitter Lake. The reconnaissance battalion encountered no serious resistance.⁹³

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Security. Only two strongpoints remained in Israeli hands on the morning of 9 October: "Budapest" on the Mediterranean, and "Quay" opposite Suez City. "Quay" surrendered on 13 October.⁹⁴

Close. The Egyptian Army attacked across the Artillery Road on 9 October. Colonel Shomron positioned his battalions three abreast. The Egyptians conducted a frontal attack against Shomron's center and northern battalions. They then attempted to bypass to the north. In response, Shomron maneuvered his center battalion to the right flank of his northern battalion. After the Egyptians were engaged with these two battalions, Shomron counterattacked into the exposed right flank of the Egyptians with his southern battalion.⁹⁵

Fire Support

The Israeli Air Force supported Colonel Shomron's defense as the Egyptian 19th Division attacked toward Ras Sudr on 9 October.⁹⁶

Shazly reports in his book The Crossing of the Suez that just before sunset on 10 October, the Egyptian 1st Infantry Brigade suffered ninety percent losses from Israeli Air Force attacks when they advanced beyond the cover of their SAM umbrella.⁹⁷

Mobility/Counter mobility/Survivability

Not a factor.

Air Defense

Not a factor.

Command and Control

Sharon reported the results of his reconnaissance battalion's move to the Great Bitter Lake to Gonen. Sharon requested permission to attack and cross the canal near Deversoir. Gonen refused this request. Sharon radioed directly to Tel Aviv in an attempt to override Gonen. Gonen requested that General Elazar relieve Sharon, but he refused. Elazar did, however, ask Lieutenant General Bar-Lev to return to active duty as Commander of Southern Command. Gonen protested this action, and Bar-Lev became the Special Representative of the Chief of Staff instead. In this command relationship, Gonen made the decisions, after checking with Bar-Lev.⁹⁸ Adan disputes this account in his book On The Banks Of The Suez. Adan states that after a conversation with Bar-Lev, Gonen informed his staff that Bar-Lev was now the front commander.⁹⁹

Bar-Lev held a conference with the division commanders at 2000 hours on 10 October. Bar-Lev began the meeting by briefing the current situation on the Syrian front. The division commanders then reported on their areas of operation. The meeting then turned to what operational plans the Israelis should adopt. Sharon proposed an immediate division-strength attack through the gap between the Egyptian 2nd and 3rd Armies. Gonen proposed that the canal crossing take place at Dersvoir, but that the attack should be postponed until the Israelis could increase their tank strength. Gonen would support an immediate attack across the canal only if a ceasefire was imminent.¹⁰⁰

At a command conference on 11 October, Bar-Lev approved Gonen's plan for three reasons: First, one flank of the Israeli attack would be protected by the Great Bitter Lake. Second, the terrain near Dersvoir was conducive to an armor attack. Third, the Dersvoir area was the boundary between the Egyptian 2nd and 3rd Armies.¹⁰¹

Egyptian shelling on 13 October killed Major General Mandler. Brigadier General Magen received a promotion to Major General and assumed Mandler's command. Brigadier General Sasoon Yzhaki assumed Magen's former command in the north.¹⁰²

14 October 1973

Threat Action

At 0600 hours, 14 October, the Egyptian Army's offensive to capture the Sinai passes began with an artillery preparation. An

armor brigade and a mechanized battalion attacked to seize the Mitla Pass, and a mechanized brigade attacked to seize the Gidi Pass. Two armor brigades attacked in the direction of El Tasa, and one armor brigade attacked toward Ballouza.¹⁰³

All of the Egyptian attacks were stopped by Israeli tanks and ATGMs firing from well-concealed, defilade positions. The Egyptian Army lost 250 tanks by 1200 hours.¹⁰⁴

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Close. Sasoon's and Adan's divisions defended against the Egyptian attack in the north. Sharon's division defended from the high ground and allowed the Egyptians to close before opening fire. Engagements occurred at ranges as close as one hundred meters. The Egyptians conducted a frontal attack, but as they moved into an Israeli kill zone, Sharon used his reconnaissance unit, reinforced with a tank company, to counterattack into the Egyptian flank. Sharon's division destroyed ninety-three tanks of the Egyptian 1st Mechanized Brigade. Meanwhile, Adan and Yzhaki destroyed fifty tanks and forced the Egyptians to withdraw in sector to their start point. Magen's division in the south defended the Mitla and Gidi Passes. After initial Egyptian successes, Magen's division counterattacked, destroying sixty Egyptian tanks. Dan Shomron's brigade and Israeli paratroopers, guarding the Mitla Pass, defeated

an attempted Egyptian envelopment. Shomron's brigade and the paratroopers also destroyed most of the 3rd Armor Brigade of the Egyptian 4th Armor Division.¹⁰⁵

Fire Support

Close air support helped repel the Egyptian offensive. Israeli artillery fire was effective in disrupting Egyptian ATGM fire.¹⁰⁶

Mobility/Counter mobility/Survivability

Not a factor.

Air Defense

Not a factor.

Command and Control

Gonen ordered Adan's division that had been withdrawn in preparation for the Israeli attack across the canal to assume responsibility for its old sector.¹⁰⁷

The Israelis had anticipated the time and place of the Egyptian attacks. The IDF positioned their forces in V-shaped defensive positions that opened in the direction of the Egyptian attack. As a result, Israeli commanders took full advantage of opportunities to attack the flanks of the advancing Egyptian formations.¹⁰⁸

15 to 16 October 1973

Threat Action

General Shazly requested that the Egyptian 21st and 4th Armor Divisions return to the west bank of the canal so that they would be in position to counterattack any Israeli crossing. General Ismail reportedly replied that the withdrawal might panic the troops, and denied Shazly's request.¹⁰⁹

The Egyptian 2nd Army defended against Israeli attacks on its right, conducting local counterattacks.¹¹⁰

The Egyptian High Command realized that the IDF had crossed the canal during the middle of the morning on 16 October.¹¹¹ The Egyptian 2nd Army conducted counterattacks throughout the 16th of October. The Egyptian 21st Armor Division and the 16th Infantry Division attacked to cut the Israeli line of communication to the canal. The Egyptian 25th Armor Division, 3rd Army attacked the southern flank of the Israeli line of communication beginning late in the afternoon of 16 October.¹¹²

Intelligence

The Egyptian Army was present in the Tirtur-Akavish Road area in much greater strength than the Israelis expected. The Egyptians also fought with greater resolve than the Israelis anticipated.¹¹³

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Security. For over 24 hours, the Egyptians thought that the Israeli objective was to roll up the flank of the Egyptian 2nd Army.¹¹⁴ As a result, Sharon's feint against the right flank of the Egyptian 2nd Army was very successful.

Deep. Sharon had a battalion of Israeli 175-mm artillery ferried across the canal prior to 1200 hours, 16 October. He used the battalion to fire SEAD missions against Egyptian SAM sites on the east bank of the canal.¹¹⁵

Close. Southern Command issued the order for Operation "Abirei-Lev" (Operation Valiant) during the night of 13-14 October. At 2240 hours on the 14th, Southern Command issued an oral order directing that the crossing commence at 1700 hours, 15 October. The objective of the Israeli attack was to unhinge the Egyptian bridgeheads on the east bank of the canal. The Israelis planned to cross, secure and expand their bridgehead, then attack south and north to cut the lines of communication of the Egyptian 2nd and 3rd Armies.¹¹⁶

The plan tasked Sharon's division to lead the crossing of the canal. Adan's division was to follow Sharon's division. Sasoon's and Magen's divisions were to initiate holding attacks in the north and south, respectively. Additionally, Magen's division was to be

prepared to cross the canal on order. Sharon also had the additional tasks of widening and holding the gap between the Egyptian 2nd and 3rd Armies by capturing the high ground, code-named "Missouri," and the Chinese Farm. If there was difficulty in widening and holding the gap, Adan's division was to cross immediately, following Sharon's assault force. Sharon was then to concentrate on holding the Israeli line of communication open.¹¹⁷

By this time, Sharon's division included his three organic brigades and a brigade of paratroopers, reinforced with tanks from Colonel Haim Erez' brigade.¹¹⁸ Sharon's plan for the crossing called for the paratroopers to cross the canal during the night of 15-16 October. Once the Israelis had established the bridgehead, bridges were to be brought forward. The paratroopers were to expand the bridgehead a minimum of four kilometers north and south of the bridges to prevent Egyptian direct fire against the main crossing. The remainder of Sharon's division was to secure the line of communication to the bridgehead and conduct a feint attack against the southern flank of the Egyptian 2nd Army.¹¹⁹

The diversionary attack was effective. Colonel Amnon Reshev's brigade seized the Bar-Lev Line strongpoint "Matzmed," encountering little resistance. Reshev also launched battalion-size attacks against the southern flank of the Egyptian 16th Infantry and 21st Armor Divisions. The paratroop brigade, which was following Reshev's brigade, reached the canal after 2400 hours, 15 October, and began crossing at 0135 hours, 16 October. Sharon and his headquarters followed the paratroopers across the canal.¹²⁰ The paratroopers and their tank support completed crossing the canal by

dawn.¹²¹ The crossing continued until 1200 hours when Bar-Lev ordered Sharon to halt the crossing.¹²² The Egyptians had cut Sharon's line of communication at the Chinese Farm, Tirtur-Akavish-Lexicon Road junction areas.

Gonen warned Adan before dawn on the 16th that he might have to fight his way to the canal.¹²³ Gonen ordered Adan to open the line of communication with Sharon over the Tirtur, and Akavish Roads. Gonen also charged Adan with the responsibility to move the prefabricated bridge and the pontoons forward. Adan's division encountered heavy Egyptian fire in the vicinity of the Tirtur, Akavish, Lexicon Road networks and the Chinese Farm.¹²⁴ Adan requested the additional combat power of Karen's brigade (Southern Command reserve), but Gonen refused. He did, however, assign a paratroop brigade to Adan that attacked to clear these routes at 2330 hours, 16 October.¹²⁵

Reserve. Erez' brigade was Sharon's reserve, and was responsible for towing the prefabricated bridge to the crossing site.

Gonen detached Karen's brigade from Adan's division to Southern Command as the reserve.¹²⁶

Fire Support

Sharon called for artillery to fire against the west bank of the canal in preparation for the crossing.¹²⁷ Artillery also fired SEAD missions.

Mobility/Counter mobility/Survivability

The Israelis began to assemble crossing equipment on the 13th of October. The roller bridge was assembled and a tank company was designated to train for pulling the bridge. The Israelis moved eight mobile, uni-float bridges and other crossing equipment forward from Refidim to the Lateral Road. The Israelis also towed twelve additional rafts from Baluzato, in Sharon's sector, on 15 October.¹²⁸

The Israelis had not foreseen having to tow the rafts and the prefabricated bridge twenty kilometers to the canal. They had planned to assemble the bridging equipment in the vicinity of the Lexicon Road, two or three kilometers east of the canal.¹²⁹

Air Defense

Sharon sent tanks on a SEAD raid from the bridgehead on the west bank of the canal. The tanks destroyed three SA-2s and forced one SA-6 to displace.¹³⁰

Command and Control

Sharon realized that he could not conform to the timetable outlined in the operation order. He felt that he had three choices: postpone the attack until the next night; limit the attack on the 15th to clearing the east bank crossing area, and thus crossing on the 16th; or not to worry about the timetable and carry out the attack on the 15th. Sharon chose to attack on the 15th, and adjusted the operation as required.¹³¹

Adan, whom Gonen had given the responsibility to open the Akavish and Tirtur Roads, requested the release of Karen's brigade from Southern Command reserve duties to provide additional combat power. Gonen refused Adan's request, but sent a brigade of paratroopers commanded by Colonel Uzi Ya'iri instead. The paratroop brigade reached Adan at 2200 hours, 16 October.¹³²

17 October 1973

Threat Action

The Egyptian attack continued through the night. The Egyptian 3rd Army attacked north with the 25th Armor Brigade beginning at 0600 hours, 17 October.¹³³ The 21st Armor Division continued its counterattack south, as the 116th Infantry Brigade attacked east against the Israeli bridgehead on the west bank.¹³⁴ Shazly reported that the Israelis had destroyed the 25th Armor Brigade by attacking from the north, east, and south.¹³⁵

Intelligence

Adan received an intercepted Egyptian radio message regarding the movement of the 25th Armor Brigade.¹³⁶

Magen reported the movement of an Egyptian column moving north from Botzer. Reshev confirmed the report with his sighting of a column of dust, indicating the approach of an Egyptian force attacking north from the Egyptian 3rd Army.¹³⁷

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Close. At dawn on 17 October, Adan regained contact with Sharon and moved the bridges forward.¹³⁸

Adan reacted to the news of the Egyptians advance from the south by asking Bar-Lev to release Karen's brigade from Southern Command reserve. Bar-Lev agreed to this request. Adan positioned his forces to attack the Egyptian 25th Armor brigade from three directions. A company from Reshev's brigade was positioned in front of the advancing Egyptians. Adan positioned Nir's brigade to attack the right flank of the Egyptian column, and directed Karen's brigade to get behind and cut off the Egyptian route of withdrawal. The battle lasted from 1445 to 1600 hours, and resulted in the almost complete destruction of the Egyptian 25th Armor Brigade.¹³⁹

Fire Support

Not a factor.

Mobility/Counter mobility/Survivability

The Israelis continued to move the pontoon bridge and the prefabricated bridge toward the canal. The Israeli engineers completed the pontoon bridge over the canal at approximately 1600 hours, 17 October.¹⁴⁰

Air Defense

Not a factor.

Command and Control

The Israelis held a command conference in the vicinity of Adan's command post at approximately 1300 hours, 17 October. Present at the meeting were Dayan, Sharon, Bar-Lev, Adan, and Elazar. The meeting included a discussion of how the crossing operation would proceed. Sharon recommended that Adan's division take over responsibility for the bridgehead and the line of communication, while Sharon's division broke out of the bridgehead. Adan was in favor of continuing with the original plan, where Sharon was to consolidate the bridgehead, while Adan's division crossed and conducted the breakout. Bar-Lev proposed a compromise that would place part of Sharon's force and part of Adan's force under the command of Brigadier General Dov Tamari, Adan's second-in-command, while the remainder of Sharon's and Adan's divisions conducted the breakout. Elazar, after listening to the proposals, decided that the crossing would proceed as planned. Sharon would consolidate the bridgehead and Adan would conduct the breakout.¹⁴¹

Adan's division began its crossing of the canal during the night of 17-18 October. Karen's brigade was again withdrawn to Southern Command as the reserve. As Adan's division began the crossing, Reshev's brigade reverted to Sharon's control. Adan's division completed the crossing by dawn on the 18th.¹⁴²

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Close. On 19 October, Adan's division attacked south along the canal in the direction of the air base at Fayid. Sharon attacked north in the direction of Ismailia. Magen's division crossed the canal on the evening of 18 October, passed through the rear of Adan's division, and attacked west and south on Adan's right flank.¹⁴⁶

Adan's attack on the 19th secured the Geneifa Hills, key terrain overlooking the southern portion of the Israeli bridgehead. Magen's attack developed west in the direction of Maktsera.¹⁴⁷ Sharon's attack north made little progress toward Ismailia.

Fire Support

Israeli operations against the SAM sites had opened the area of the canal to the Israeli Air Force. As a result, the Israeli Air Force was able to fully support Adan's attack on the 19th.¹⁴⁸

Mobility/Counter mobility/Survivability

Israeli engineers constructed two more bridges while under Egyptian artillery and air attack.¹⁴⁹ The prefabricated bridge arrived on the east bank of the canal at 1700 hours, 18 October. The bridge was positioned at 2300 hours on the 18th, and completed an hour later.¹⁵⁰

Sharon did manage to get approval for a change to the crossing plan on the night of 17-18 October. He received permission to attack north in the direction of Ismailia, but had to continue to guard the bridges.¹⁴³

18 to 19 OCTOBER 1973

Threat Action

The Egyptians counterattacked the Israeli bridgehead with the 23rd Armor Brigade on the morning of 18 October . The Israelis repelled the attack, inflicting heavy losses on the Egyptians. After the failed Egyptian counterattack against the Israeli bridgehead on the 18th, only two armor brigades were available for employment on the west bank of the canal. The Egyptian High Command announced to the media that the Israeli presence on the west bank amounted to only seven tanks.¹⁴⁴

The Israelis were operating inside of the Egyptian decision cycle. Shazly reported that the President of Egypt and the Minister of War were not keeping pace with the Israeli buildup on the west bank. In a conference with Ismail at 1400 hours, President Sadat approved the withdrawal of only one brigade from the 3rd Army bridgehead. The President and Ismail failed to realize that such a small force would be unable to destroy the Israeli bridgehead.¹⁴⁵

Intelligence

Not a factor.

Air Defense

Gonen asked Adan to attack the SAM sites positioned west of the canal. Adan sent two battalions twenty kilometers on a SEAD raid west and northwest against Egyptian SAM sites. The raiding battalions destroyed three SAM sites and returned to the bridgehead.¹⁵¹

Command and Control

Adan reported to Gonen during the night of the 18th that he expected to break out the next morning. Adan requested that Southern Command release Karen's brigade, the reserve, and return it to his control. Gonen approved this request, bringing Adan's tank total to 250 for the attack on the 19th.¹⁵²

20 to 21 October 1973

Threat Action

Shazly states in his book The Crossing Of The Suez that the Egyptian situation on the west bank was getting increasingly worse. The Egyptian infantry and paratroopers continued to fight hard, defending their positions with small arms and ATGMs. He also contends that the Egyptian failure to withdraw forces from the east bank in sufficient strength to eliminate the Israeli bridgehead was a fatal blunder by Sadat and Ismail.¹⁵³

Intelligence

Not a factor.

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Close. Sharon continued his attack north against Ismailia with his paratroopers on the right and his armor on the left. Sharon's 3rd Brigade held the Israeli line of communication east of the canal.¹⁵⁴ Adan's division set up a roadblock on the Cairo-Suez Road. This battalion was withdrawn during the night so that it would not be cut off.¹⁵⁵ Magen's division continued to protect Adan's right flank, advancing to the south and west parallel to Adan.

Rear. Southern Command directed Sharon to attack and seize "Missouri" to widen the corridor between the Egyptian 2nd and 3rd Armies. Sharon attacked at 1500 hours with only limited success.¹⁵⁶

Fire Support

On 21 October, the IDF artillery fired against the traffic on the Suez-Cairo Road.¹⁵⁷ The Israeli Air Force continued to provide effective close air support for the IDF on the west bank of the canal. This effective close air support played a major role in Adan's advance and encirclement of the Egyptian 3rd Army.¹⁵⁸

Mobility/Counter mobility/Survivability

Not a factor.

Air Defense

Not a factor.

Command and Control

Southern Command ordered Sharon to reinforce his forces east of the canal in support of attacks to widen the corridor to the canal. Southern Command wanted to seize "Missouri" in order to eliminate it as a threat to the Israeli line of communication to the bridgehead. Sharon's attack began at 1500 hours, and Southern Command soon received word that the attack was having difficulty. Gonen was unable to reach Sharon on the radio until the evening of 21 October. When he was finally able to reach Sharon, Gonen ordered him to transfer forces back to the east and to attack again. Sharon replied that he did not have enough forces to comply. Bar-Lev then gave Sharon a direct order to transfer forces back to the east and attack again. Sharon transferred five tanks back across the canal. The Deputy Chief of Staff Major General Israel Tal, contacted Bar-Lev fifteen minutes after Bar-Lev's conversation with Sharon to relay an order from Dayan not to attack "Missouri."¹⁵⁹

Adan and Magen monitored each other's radio nets to facilitate the command and control of their respective units that were attacking parallel to each other.¹⁶⁰

The Israeli leadership held a conference at midnight on the 19th and early on the morning of the 20th in Tel Aviv. During this meeting, Dayan told Elazar that due to Soviet and U.S. efforts to arrange a ceasefire, there might be no more than three days of combat remaining. The conference set the overall aim of the remaining operation as the expansion of the west bank area to the north and south.¹⁶¹

22 October 1973

Threat Action

The Egyptians halted Sharon's attack against Ismailia by 1900 hours.¹⁶² The Egyptian Army continued to defend against Adan's and Magen's attempts to encircle the Egyptian 3rd Army.

Intelligence

Not a factor.

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcategories are security, deep, close, rear, and reserve. Only the subcategories that apply to this time period are discussed.

Close. Adan issued orders for his division to attack south. He recognized that the ceasefire was to be effective at 1852 hours, 22 October so he attacked south to clear the shores of the Little

Bitter Lake. Bar-Lev ordered Adan to concentrate his attack against Asor. At 1600 hours, Adan's division started its charge to the canal.¹⁶³ By 1852 hours, advance elements of Adan's division had reached the main Suez-Cairo Road, where it established blocking positions.¹⁶⁴

Despite the fact that Sharon continued his attack against Ismailia with three brigades, the Egyptian defenders successfully defended the town.¹⁶⁵

Fire Support

Following the successful SEAD raids, the Israeli Air Force provided superb CAS on the west bank. Artillery also provided excellent support for the Israelis on the west bank.¹⁶⁶

Mobility/Counter mobility/Survivability

Not a factor.

Air Defense

Not a factor.

Command and Control

Gonen and Bar-Lev urged Adan and Magen to push as hard as possible to reach the Suez Canal south of the Bitter Lakes, and to move as close as possible to Suez City.

Magen's division relieved Nir's brigade which allowed Adan to concentrate all three of his brigades for his 1600 hour attack south.¹⁶⁷

Southern Command issued orders that authorized Adan and Magen to continue their attack in the event that the ceasefire did not take affect.¹⁶⁸

23 to 24 October 1973

Threat Action

Shazly states in his book The Crossing Of The Suez that the Egyptian Army had only two Armor brigades west of the canal; one of the brigades was defending against Sharon's drive toward Ismailia, the other brigade was defending in the south. The Israelis fixed the southern Egyptian brigade in position with an attack that allowed the Israelis to maneuver and encircle Suez City.¹⁶⁹ Despite the Israeli encirclement, the Egyptians repulsed the Israeli attempt to take Suez City.¹⁷⁰

Intelligence

Not a factor.

Maneuver

General. The maneuver BOS is subdivided to allow a more detailed examination of the action. The subcatagories are security, deep, close, rear, and reserve. Only the subcatagories that apply to this time period are discussed.

Close. When the ceasefire failed to take affect, and since he had prior approval to do so, Adan continued his attack south on the 23rd to capture and isolate Suez City. Magen continued to attack south and west of Adan's division to capture the village of Adabiya, ten kilometers south of Suez City.¹⁷¹

Adan's attack, which began at 1500 hours, broke through the Egyptian defenses and encircled Suez City. Colonel Shomron's brigade of Magen's division reached the village of Adabiya. There his tanks fired upon and sank two torpedo boats that attempted to escape into the Gulf.¹⁷²

Adan requested and received permission to attack Suez City on the morning of 24 October. Karen's brigade led the attack, supported by a battalion of paratroopers. As Karen's lead tank battalion entered the city, the tanks came under fire from infantry in the buildings. The Egyptians quickly killed twenty of twenty-four tank commanders as they commanded their tanks from open hatches.¹⁷³ Adan's attack subsequently failed to secure Suez City.

Fire Support

Accurate artillery and air support for Adan's attack against Suez City was very difficult as the exact positions of the Israeli units within the city were not clear.¹⁷⁴

Mobility/Counter mobility/Survivability

Not a factor.

Air Defense

Not a factor.

Command and Control

Both Adan and Magen maintained good coordination during their attacks south on 23 and 24 October.

Adan formed the reinforcements that had arrived from the Syrian front into a provisional infantry brigade commanded by his second-in-command Brigadier General Dov Tamari. He equipped the provisional brigade with Egyptian Armor personnel carriers captured during the fighting.¹⁷⁵

SECTION 4

ANALYSIS OF THE KEY BOSs OF THE SINAI CAMPAIGN 1973

General

The Airland Battle/BOS matrix facilitated the identification of some major strengths and weaknesses of the 1973 Sinai Campaign in relation to the four tenets of Airland Battle Doctrine. This section will present the key BOSs, their relationship to the Airland Battle tenets, and the answer to the major subordinate question for this battle, that is, what useful conclusions can be drawn regarding combined arms combat in a desert environment.

Intelligence

The failure of Israeli intelligence to give adequate warning of the impending Egyptian attack reduced Israeli agility and delayed their ability to take the initiative. The Israeli intelligence failure made it extremely difficult for them to act faster than the Egyptians. The Egyptians were merely executing their well-planned attack. The Israelis were forced to contend with stopping the Egyptian advances and to provide relief to their surrounded strongpoints. As a result, the Israeli agility suffered. The rapid Egyptian crossing of the canal capitalized on the effects of surprise, which also constrained the Israeli's ability to act quickly. The effect that the size of the Egyptian crossing force had on the Israelis, the broad crossing front, and the small size of the Israeli force west of the Sinai Passes, all allowed the Egyptians to take and maintain the initiative. The Israelis were unable to seize the initiative until they had built up a sufficiently large force to give them some additional options and greater flexibility.

The Egyptians attacked on a wide front in five division sectors to prevent the Israelis from massing their armor in an effective counterattack.¹⁷⁶ The operations plan demonstrated that the Egyptians had an excellent knowledge of the Israeli defense plan for the canal. The Egyptians correctly anticipated that the Israelis would try to counterattack immediately against every crossing. The Egyptian plan thus took advantage of the resulting lack of depth in the Israeli defense.

Maneuver

Colonel Shomron, brigade commander in the south, regrouped his brigade after he received permission to break contact with the outposts and to concentrate on holding the Egyptian advance. Most of the Egyptian 3rd Army opposed Colonel Shomron's brigade. His brigade consisted of three battalions of ten tanks each. He estimated that he was facing a possible, massive attack, and took the initiative to launch a spoiling attack.¹⁷⁷ One battalion conducted a feint attack west toward Lituf, while the remaining two battalions attacked in the direction of Mafzeah on the canal. The brigade generally used long-range fires and fire and maneuver to avoid decisive engagement. Colonel Shomron launched a successful spoiling attack by achieving a high degree of surprise and by successfully massing his forces. His attack succeeded in harassing and disrupting the Egyptians.

The Egyptians launched an attack of two mechanized brigades across the Artillery Road on 8 October. Colonel Shomron initially positioned his battalions to defend three abreast. When he observed the Egyptians' attack against his center and northern battalions, and their attempt to bypass his force to the north, Colonel Shomron quickly maneuvered his southern battalion to the northern flank of his brigade. When the Egyptians became involved in attacks against the northern two battalions, Colonel Shomron counterattacked into the southern flank of the Egyptian forces with his southernmost battalion.¹⁷⁸ He succeeded in defeating the

Egyptian attack by acting faster than the enemy. He quickly countered the Egyptian attempt to bypass his units, and launched a well-timed and effective counterattack operating within the enemy's decision cycle.

The Bar-Lev Line was too weak to defend the canal, and, yet, the Israelis had positioned too many soldiers in static positions for the Bar Lev Line to serve as just a tripwire.¹⁷⁹ The Bar-Lev Line became a great impediment to Israeli initiative. Israeli concern for the soldiers in the Bar-Lev Line strongpoints caused them to react to the Egyptian attack rather than to seize the initiative early with a concentrated and effective counterattack.

The Israeli defense plan called for tanks to occupy prepared defense positions within direct fire range of the canal. This caused the Israelis to disperse their tanks along a one hundred mile front, thus preventing them from using their tanks in mass. Israeli leaders employed their tanks in small, piecemeal counterattacks as a result of this faulty initial disposition.¹⁸⁰ These counterattacks failed, having no effect against the Egyptian crossing. The Israelis simply failed to mass their forces effectively. Had the Israelis employed their forces in a concentrated counterattack, they might have destroyed or disrupted at least one of the five, initial Egyptian bridgeheads. This would have seriously affected the synchronization of the Egyptian crossing operation. As it was, however, by employing their available forces piecemeal, the Israelis greatly reduced their resources and, therefore, the depth of their counterattack.

Adan's destruction of the Egyptian 25th Armor Brigade is a superb example of the synchronization of maneuver. Adan positioned his forces to attack the Egyptian 25th Armor brigade from three directions. The ensuing battle lasted from 1445 to 1600 hours, and resulted in the almost complete destruction of the Egyptian 25th Armor Brigade.¹⁸¹ Adan synchronized all of his combat power and focused it on the destruction of the Egyptians.

Major General Sharon's actions were, at times, a threat to the synchronization and the success of the Israeli campaign. His actions on 8 October, in failing to support Major General Adan's request for the attachment of a battalion approved by Major General Gonen, were nothing short of insubordinate. His action on 21 October in failing to give his full support to the attack against the Egyptian positions on "Missouri," and then going over the head of his superiors to the Minister of Defense to get the order rescinded, was also insubordinate. In the first instance, had the Egyptians pressed Major General Adan harder and followed up their success, the Israeli defense would have been in serious jeopardy. In the second instance, had the Egyptians focused their combat power to cut the Israeli line of communication to their bridgehead, the survival of the Israeli forces on the west bank would have been threatened. Synchronization and agility depend on the timely execution of orders, and on commanders who can be relied upon to operate within the higher commander's intent. Sharon's actions jeopardized the campaign and should not have been tolerated by his superiors.

Fire Support

The success of the Egyptian air defense system greatly reduced the agility of Israeli fire support. The Israelis relied heavily on their Air Force to provide fire support. The Egyptian air defenses made fire support by the Israeli Air Force very hazardous. Only after the Israeli Army had forced the Egyptian SAMs to displace away from the canal, was the Air Force again able to provide timely support to the ground maneuver.

The Israelis were too reliant on CAS for fire support. The Egyptian air defense system succeeded in suppressing the Israeli Air Force, which greatly hindered the contribution of fire support to take or maintain the initiative. Israeli fire support suffered after the Egyptians suppressed the Israeli Air Force, as the Israeli artillery alone could not fill the requirement for fire support.

Israeli artillery, positioned near the important Mitla and Gidi Passes, could not fire in support of Israeli counterattacks.¹⁸² Artillery, CAS, and infantry were not used to suppress the tank hunter teams on the Israeli objectives. Israeli fire support failed to contribute to the agility of their attack. Israeli artillery and CAS should have been used to pin down the Egyptians, and isolate Israeli counterattack objectives from Egyptian reinforcement. The artillery and CAS could also have contributed to the initiative of the Israeli attacks by disrupting the Egyptian command and control, thus reducing their ability to react.

The Israelis did not integrate mechanized infantry into their operation until the Egyptian attack of 14 October. The lack of mechanized infantry in the Israeli attacks greatly reduced their ability to suppress Egyptian ATGM teams, and directly contributed to the failure of their counterattacks.

Centralized control of CAS at Southern Command detracted from the agility and synchronization of Adan's attack. Adan reports in his book On the Banks of the Suez that he experienced difficulty in coordination of CAS support:

As dawn broke, our airplanes started attacking the enemy in my sector. From time to time, unfortunately, they also attacked Natke's [Colonel Nathan "Natke" Nir] brigade. Natke reported seeing enemy tanks 2 km west of him. I was trying to coordinate and establish physical contact between my two brigades on the common boundary line that defined their sectors. I also . . . was begging Southern Command to let my own forward air controllers coordinate the air strikes in my sector, since they were with the attacking forces and could handle it the best; but headquarters did not accede to this request.¹⁸³

Southern Command should have given Adan control of the CAS in his sector. Had Adan controlled his own CAS, he could have avoided a situation of potential fratricide, and would have been able to better synchronize the CAS with his other direct and indirect fires.

Mobility/Counter mobility/Survivability

The Israeli bridging equipment was too cumbersome and unwieldy. The Israeli Army was forced to detail an entire tank company to tow the prefabricated bridge to the canal. The Israelis never anticipated having to move their bridging equipment twenty kilometers to the canal. The difficulty of moving the bridging equipment could easily have caused a major problem in executing the crossing operation. As it was, the slow movement of the equipment detracted greatly from the agility of the Israeli attack.

Chaim Herzog quotes General Dayan as describing the Suez canal as ". . . one of the best anti-tank ditches available."¹⁸⁴ This statement by General Dayan typifies the complacent Israeli attitude regarding the security afforded by the canal. The canal, coupled with the Bar-Lev Line fortifications, lulled Israel into a false sense of security. The Bar-Lev Line fortifications helped to reinforce this attitude because they had reduced the number of casualties Israel suffered during the War of Attrition. In retrospect, the Israelis put too much confidence in the canal as an obstacle. Although the canal and the Bar-Lev Line were sufficient protection during the War of Attrition, not so this time. The Israeli strongpoints were too weak and too few to effectively cover the canal by fire. As constructed, they were insufficient to prevent a major Egyptian crossing of the canal. The Suez Canal became a classic example of the principle that ". . . obstacles that are not covered by fire are little more than a nuisance to the enemy's leading elements."¹⁸⁵

Air Defense

Air defense was primarily the responsibility of the Israeli Air Force. The Israeli Air Force asserted itself beyond the Egyptian SAM umbrella. However, Egyptian air defense was effective in reducing the role of the Israeli air over the Egyptian bridgeheads and crossing sites. After the Israelis crossed the canal, they were able to send maneuver forces on SEAD raids that eventually forced the Egyptians to reposition their SAMs to avoid destruction. Following the success of the SEAD raids, the Israeli Air Force was able to assert itself over the combat area on both sides of the canal.

Command and Control

There was no unanimity among the senior IDF officers as to the best method of defending the Sinai and Suez Canal. Major General Gavish, Commander of the Southern Command during the construction of the Bar-Lev Line, favored a defense on the canal to delay the Egyptians until infantry and armor brigades disposed farther in depth, could stop them. Major General Adan, head of a team appointed by Lieutenant General Bar-Lev to study the defense of the canal, favored a series of strongpoints along the canal, backed up by armor brigades positioned within striking distance. Major General Sharon, Director of Training, General Staff, and Major General Tal, attached to the Ministry of Defense, proposed a mobile defense taking advantage of the depth of the Sinai.¹⁸⁶ Lieutenant General Bar-Lev approved Adan's proposal for the defense of the

Sinai. That decision had grave consequences for Israel during the 1973 War. As a result, the Israeli outposts along the canal were too weak and too widely dispersed to prevent an Egyptian crossing of the canal in force. On the other hand, they were too strongly manned to serve solely as warning and observation outposts.¹⁸⁷ Israeli commanders were torn between rescuing the men trapped in the strongpoints, or halting the Egyptian crossing. This dilemma caused a major problem in the synchronization of initial Israeli defense efforts.

Adan's defense plan depended on sufficient warning to move reinforcements to the Sinai to contain an Egyptian attack, and to begin an Israeli counteroffensive. The surprise with which the Egyptians were able to launch their attack prevented the Israelis from the timely reinforcement of the Sinai. By attacking before the Israelis could mobilize, the Egyptians greatly reduced the available Israeli resources and, therefore, the depth of their defense. Although the canal and the Bar-Lev Line were sufficient protection during the War of Attrition, the strongpoints too few and too dispersed to stop an Egyptian crossing of the canal in force. The alternative to a canal-based defense would have been a mobile defense using strong armor forces. The Israeli mobile reserve was too small to effectively counter the Egyptian attack. The Israelis created a shallow defense by positioning their armor reserves of three hundred tanks along a one hundred mile front. Follow-on Israeli reserves, located east of the Mitla and Gidi Passes, were too far away to participate in the initial counterattacks.¹⁸⁸

Israeli leadership was extremely effective in motivating their units in the initial counterattacks. However, leaders were slow to realize the ineffectiveness of their tactics, and continued their operations in face of extremely heavy losses. The Egyptians destroyed four hundred Israeli tanks before Israeli leaders sensed the futility of their counterattack operation.

The indecisive use of armor reinforcements was a major Israeli failing. Israeli leaders had a mixed record of achieving and using initiative during the initial phase of the Egyptian attack. Small unit leaders took the initiative and conducted counterattacks according to their defense plan. Senior leaders, on the other hand, failed to decide to terminate their self-destructive counterattacks in a timely fashion. The Israelis failed to act with agility; they took too long in deciding to either concentrate on linking up with the fortifications, or to repel the Egyptian crossings. As a result, the Israelis forfeited the initiative to the Egyptians.

From the early hours of the attack, the Egyptians forced the Israelis to choose between repelling the Egyptian crossing or supporting their strongpoints. Every time the Israelis moved from their attacks against the crossing sites to respond to requests for support from the strongpoints, the Israeli tanks were forced to fight through Egyptian infantry, armed with rocket-propelled grenades and ATGMs. After repeatedly requesting permission to evacuate the strongpoints, Colonel Shomron contacted his commander, Major General Mandler, at 1100 hours, 7 October, and insisted on a decision to either hold the strongpoints or to fight a mobile defense. He

finally received permission to break contact with the strongpoints and to concentrate on holding the Egyptian advance.¹⁸⁹ Major General Mandler had been unable, in turn, to secure permission from Major General Gonen to evacuate the strongpoints. FM 100-5, Operations, points out that the defender must act rapidly [author's emphasis] to negate the attacker's initial advantage of choice of time and place of attack.¹⁹⁰ Major General Gonen forfeited an early opportunity to take the initiative by failing to make a decision to concentrate on repelling the Egyptian crossing in its early stages.

The Israeli tank forces backing up the strong points received conflicting missions to relieve pressure on the Israeli outposts, and to repel the Egyptian crossing. The Israeli commanders failed to maintain a single objective. As a result, the Israelis could not synchronize their initial operations, and they failed, both in relieving pressure on the outposts, and in repelling the Egyptian crossings.

Major General Adan states in his book On The Banks Of The Suez that at 0400 hours, 8 October, the Chief of the Operations Department and his aides noticed that Southern Command's overlay order failed to coincide with the directives of the Chief of Staff. They failed to take any action to notify the Chief of Staff of the difference.¹⁹¹ This failure directly contributed to the Israeli problems with the synchronization of their 8 October counterattack. The Chief of the Operations Department had a responsibility to ensure that the Chief of Staff was fully aware of Southern Command's operation plan. This failure of coordination shows that

each staff officer has a responsibility to use his or her initiative to do everything possible to ensure the synchronization and success of the operation.

The Sinai Campaign demonstrated that the IDF possessed a remarkable ability to recover from a severe operational and tactical setback, take the initiative from the Egyptians, and isolate their 3rd Army. The IDF was also remarkably able to change its tactics in the middle of the campaign, and restore mobility to the battlefield.

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CHAPTER 6

CONCLUSIONS

SECTION 1

RELATION TO PREVIOUS RESEARCH

Although many works have been written regarding the 1967 and 1973 Wars, to my knowledge there has not been a study of these conflicts from the perspective of the U. S. Army BOSs or the tenets of AirLand Battle Doctrine. Most of these works are historical narratives of the conflicts. They neither compare nor contrast the 1967 and 1973 Wars, nor do they employ a framework of AirLand Battle Doctrine as a methodology. This thesis primarily used such secondary sources to analyze the Battle of Um Katef, 1967 War and the Sinai Campaign, 1973 War, two historical examples of high-intensity combat in a desert environment.

SECTION 2

SUGGESTIONS FOR FURTHER STUDY

This thesis was necessarily restricted in scope. The research however, uncovered several areas that would merit further study. The first would be a study of the Golan/Syrian Campaign of the 1973 War. It would be interesting to see if, using the same methodology as this thesis, similar lessons learned might follow from such a study. The second area would be a study of the combat service support operations of the 1967 and 1973 Wars. A variation of the methodology used in this thesis could be applied to these conflicts. The key Airland Battle Doctrine sustainment functions (manning, arming, fueling, fixing, transporting, and protecting) could be used to dissect these conflicts. The resulting information could then be further analyzed based on the Airland Battle Doctrine sustainment imperatives (anticipation, integration, continuity, responsiveness, and improvisation) to derive useful lessons learned.

The results of the suggested studies would provide a very thorough examination of the 1967 and 1973 Wars and additional valuable lessons learned for contemporary warfighters based on U. S. Airland Battle Doctrine.

SECTION 3

LESSONS LEARNED

Airland Battle Doctrine Works Anywhere

Although the primary question of this thesis was "What conclusions regarding desert combat can be drawn from selected Israeli operations in the Sinai that would be useful to U. S. forces?", surprisingly enough, none of the lessons learned proved to be environment specific. The lessons learned from this study can be applied in any theater of operations and have a universal application for mid- to high-intensity combat.

Seize and Maintain the Initiative

The Israeli intelligence failure to predict the Egyptian attack during the Sinai Campaign made it extremely difficult for the Israelis to act faster than the Egyptians. Agility is to a great extent dependent upon having the initiative. A force that has the initiative will be able to dictate the circumstances of battle and the course of a campaign. Initiative gives a force an advantage to act faster than the enemy. It is imperative that the U. S. Army seize the initiative from the outset and never relinquish it.

Initiative Requires Sufficient Force

The effects of the size of the Egyptian crossing force, the broad crossing front, and the small size of the Israeli force west of the Sinai Passes allowed the Egyptians to take and maintain the initiative during the Sinai Campaign. The Israelis were unable to seize the initiative until they had built up a sufficiently large force to give them additional options and greater flexibility. The most dangerous period of a campaign would certainly be the initial stage when the U. S. has its fewest forces on the ground. During such a period, our forces would be very vulnerable to a spoiling attack by the enemy. Such a spoiling attack would probably allow the enemy to seize the initiative, thus forcing us to react. The U. S. should ensure that we have sufficient combat power, be it ground, air or naval power, to forestall such a spoiling attack.

Don't Be Predictable

The Egyptian operations plan in 1973 demonstrated that they had an excellent knowledge of the Israeli plan for the defense of the canal. The Egyptians correctly anticipated that the Israelis would try to counterattack immediately against every crossing. The Egyptian plan took advantage of the lack of depth in the Israeli defense and the formula approach of Israeli doctrine. The U. S. should be wary of predictability. We should anticipate that many

countries, not all friendly to the U. S., will be studying our success in Iraq and Kuwait. Our enemies could also profit from a lessons-learned analysis, as did the Egyptians after the 1967 War.

Integrate Fire Support

The fire support BOS was critical to the Israeli maintenance of momentum and initiative in the 1967 Battle of Um Katef. Fire support provided the flexible assistance that the maneuver forces needed to continue their advance. Sharon's force in 1967 contained artillery sufficient to provide adequate support. The Israeli artillery provided excellent fire support during the climactic night attack when the Israeli Air Force could not provide support.

During much of the 1973 Sinai Campaign, Israeli fire support was ineffective. Artillery was not integrated into maneuver operations, and the Air Force was constrained for much of the campaign by the Egyptian SAM umbrella. Fire support provides a commander the flexible assistance that his maneuver forces need for success. However, fire support should not be limited to only one type. All fire support means should be incorporated into the overall plan. By incorporating all means of fire support, a commander provides himself redundancy and increases the likelihood that he will receive effective support when he needs it. His fire support effectiveness would also benefit from the synergism of the multiple systems.

Maintain a Single Objective

The Israelis failed to maintain a single objective in their response to the Egyptian crossing of the Suez Canal in 1973. As a result, the Israelis failed to act with agility. They took too long to make a decision to either concentrate on linking up with the strongpoints or to repel the Egyptian crossings. They were unable to seize the initiative from the Egyptians and to synchronize their initial operations. Thus they failed both in relieving pressure on the outposts and in repelling the Egyptian crossings. U. S. commanders must be careful to assign missions commensurate with the capability of the forces available to them. Failure to maintain a focus on a single objective could result in the dissipation of combat power on conflicting missions and a failure to accomplish all missions required.

Staff Officers Must Use Initiative Too

Major General Adan relates that the Chief of the Operations Department and his aides noticed that Southern Command's overlay order failed to coincide with the directives of the Chief of Staff. The Chief of the Operations Department failed to take any action to notify the Chief of Staff of the difference. This failure directly contributed to the Israeli problem with the synchronization of their 8 October counterattack. This is a clear illustration of the important responsibility of the staff officer. Every staff officer

has a responsibility to use his or her initiative to take every action required to ensure the synchronization and success of the operation.

Know the Terrain

A thorough knowledge of the area of operations in 1967 allowed the Israelis to plan a fast-paced, offensive operation that allowed the Israelis to act more quickly than the Egyptians. U. S. forces should strive to achieve maximum knowledge of the terrain in the area where they will fight. It is too late to develop this knowledge once the forces are in the theater of operations. Commanders, staffs, and soldiers should be prepared and familiar with their area of operations before they are deployed. Once deployed, every effort must be made, using all sources available, to become knowledgeable of the area of operations. Otherwise, the enemy will be able to exploit our ignorance of the battlefield.

Use Unlikely Avenues of Approach

Sharon's use of unlikely avenues of approach at Um Katef, 1967 facilitated the rapid concentration of Israeli strength against Egyptian weaknesses. During the 1956 War, both the Egyptians and Israelis considered the sand dunes to the north of Um Katef to be impassable. The Israeli use of the camel track through the sand dunes allowed Sharon to attack from an unexpected direction against the rear of the Um Katef position. We would also profit from looking at avenues as expected or unexpected, as opposed to looking at

avenues as infantry or armor avenues. In addition to injecting surprise into our operations, we would also enhance our ability to attack into the depth of the enemy's defenses, thus avoiding his strongest positions. An attack using an unexpected avenue of approach may be the lever needed to gain the tactical and operational initiative.

Synchronize Maneuver

Sharon's maneuver at Um Katef in 1967 forced his Egyptian counterpart to confront a well-synchronized, combined arms attack against the entire depth of his defenses. The Egyptians were unable to wrest the initiative from Sharon because they were unable to synchronize their defense. Each part of the Egyptian defense was forced to fight a separate battle against the Israeli attack. U. S. commanders must strive to synchronize their combat power as well, if not better, than Sharon did at Um Katef. The maximum effect of our combat power, air, ground, and naval, is not achieved unless it is properly synchronized.

Adan's destruction of the Egyptian 25th Armor Brigade during the Sinai Campaign provides a superb example of the synchronization of maneuver. Adan's destruction of the Egyptian 25th Armor brigade resulted from his ability to focus all available combat power in a synchronized attack from three directions. The result was a classic battle of annihilation.

Integrate Engineers

The ability to move forces decisively in desired directions without the loss of momentum is a prerequisite to preserve or take the initiative. To ensure this ability, Sharon fully integrated his engineers into his operation plan for the Battle of Um Katef. The engineers decreased the time that would have otherwise been required for Sharon's Sherman tanks to penetrate the Um Katef minefields and support the attack of Colonel Nir's ITB. The support of the engineers directly contributed to Sharon's ability to maintain the initiative. U. S. commanders would do well to emulate Sharon's integration of engineer support. He did not neglect to include engineers in training or fail to include realistic mobility and countermobility training in our field training exercises.

Training and Rehearsal Pay Off

The Israelis fought the Battle of Um Katef with soldiers that were well trained and well rehearsed. As a result, the leadership understood both its role, and the senior commander's intent. This thorough preparation was key to the Israelis' ability to synchronize their operation. We must prepare our soldiers equally as well for combat. There will certainly be occasions when time constrains our training and rehearsal. Nevertheless, we must take every opportunity to train and rehearse to the extent possible before every operation.

Deception Works

Both the Israelis and the Egyptians owe much of their success in the 1967 and 1973 Wars to the effectiveness of their deception plans.

The Israelis, in 1967, even after having been mobilized for two weeks, were able to achieve surprise against the Egyptians through their well-planned deception operations. Additionally they probably reduced their casualties by avoiding a battle of attrition against the strength of the Egyptian defense. Likewise, the successful Egyptian crossing of the Suez Canal in 1973 (against an enemy that includes deception as one of its principles of war) was largely a result of superb Egyptian deception planning. The Israelis also used deception effectively in the 1973 War. They employed a feint against the right flank of the Egyptian 2nd Army to focus Egyptian attention away from their counteroffensive across the canal. The 1967 and 1973 Wars provide clear evidence that deception is an important combat multiplier. Commanders should include deception in their tactical and operational plans.

Israeli success in the Battle of Um Katef is a tribute to their excellent prior planning and execution. The 1973 Sinai Campaign reflects the ability of the IDF to recover from a tremendous disadvantage to wrest the initiative from the Egyptians, cross the canal, and threaten the destruction of the Egyptian 3rd Army. Both accomplishments were paid for in blood. This thesis has attempted to provide the reader with an insight to those lessons and an opportunity to profit from them without paying a similar price.

The American soldier deserves every chance for success. Perhaps by studying and applying these lessons, we can ensure that success.

APPENDIX A

APPENDIX A

GLOSSARY

Abu Ageila. Egyptian positions at Abu Ageila and the ridge line to the east, Um Katef, controlled the the Central Route prior to the start of the 1967 War.

Ali, Ahmed Ismail, General. General Ali was Egyptian Minister of War during the 1973 War.

Amer, Abd el Hakim, Field Marshal. Field Marshal Amer was the Chief of the General Staff of the Egyptian Armed Forces during the 1967 War.

Bar-Lev Line. The Bar-Lev Line was constructed in 1969 during the War of Attrition. The defensive line was named after the Israeli Chief of Staff at that time, Lieutenant General Bar-Lev. The Bar-Lev Line consisted of sixteen strongpoints at the time of the 1973 War.

Centurion. A medium tank of British manufacture, used by the IDF in the 1967 and 1973 Wars.

Dayan, Moshe, Israel Defense Minister. Moshe Dayan was a former IDF Chief of Staff and Israeli Defense Minister during the 1967 and 1973 Wars.

Gavish, Yeshayahu, Brigadier General, GOC Southern Command. Brigadier General Gavish was the Sinai Front Commander during the 1967 War.

Independent Tank Battalion. A task force commanded by Lieutenant Colonel Natke Nir during the 1967 Battle of Um Katef. The task force consisted of three tank companies, one mechanized infantry company, one reconnaissance company, an engineer platoon, an antitank platoon, a company of 120 mm mortars, a maintenance platoon and a supply section.

Mandler, Avraham, Major General. Commanded an Israeli division in the Sinai at the start of the 1973 War until killed in action 13 October 1973.

Nasser, Gamel Abdel, Egyptian President. Served as Prime Minister of Egypt from 1954 until his election as president in 1956. Nasser was President of Egypt at the time of the 1967 War.

Sharon, Ariel, Brigadier General. Commanded the Israeli division that attacked Abu Ageila during the 1967 War. Later, he was promoted to Major General and commanded a division in the Sinai during the 1973 War.

Shazly, Saad El, Lieutenant General. Chief of Staff of the Egyptian Armed Forces from 16 May 1971 until 12 December 1973. Shazly led the planning of the October 1973 crossing of the Suez Canal.

Sherman. The Sherman is a medium tank that was originally manufactured in the United States. The Israelis up-gunned the Sherman to 105 mm. The Israelis used the Sherman during the 1967 War.

U. S. Principles of War. The U. S. Principles of War as defined in U. S. Army Field Manual 100-5, Operations, May 1986 include: Objective, Offensive, Mass, Economy of Force, Maneuver, Unity of Command, Security, Surprise, and Simplicity.

Ze'ira, Eliyahu, Major General, Director of Military Intelligence. Director of Israeli Military Intelligence during the 1973 War.

Zippori, Mordechai, Colonel. Commanded an armor brigade in Sharon's division during the 1967 attack on Abu Ageila, Um Katef. Chief Armor Corps officer at Israeli General Headquarters during the 1973 War.

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