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Technical Memorandum 11-79

MOBA

MILITARY OPERATIONS IN SELECTED LEBANESE

BUILT-UP AREAS, 1975 - 1978

AD B040213

Paul A. Jureidini
R.D. McLaurin
James M. Price

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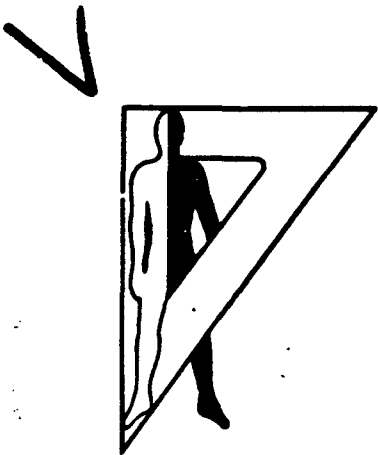
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Over the last decade, increasing numbers of military analysts in the United States and Europe have come to realize that the nature of the combat environment in Europe has changed due to massive urbanization. Moreover, with the revolution in communication and transportation of the last two decades, towns and villages previously isolated have grown toward, then to, then across lines of communication, such as roads. The result is urbanization of much of what was the "countryside" of Europe.

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The military significance of the urbanization of European terrain can hardly be overemphasized. We have not fought a war in Europe for over 30 years, yet American forces remain stationed in and are fundamental to the defense of Western Europe. These forces, even together with their European allies, confront a Warsaw Pact force very substantially larger. This study analyzed the recent fighting in and around Beirut in an effort to increase the experience base for MOBA planning.

The value of Beirut for such a study lies in its resemblance to European cities of its size. Beirut's structures are for the most part similar to those of France, reflecting the period of the French Mandate (1921-1943) in architecture, city planning, and most aspects of civil engineering. Newer buildings tend to show American design influence.

The study, based on interviews with key participants in the conflict, focuses on weapons usage, tactics, and communication. In general, AAA weapons systems (especially when mobile, as when mounted on jeeps), recoilless rifles, and Rocket Propelled Grenade (RPG) launchers such as those found in Eastern Bloc countries, were found extremely useful in MOBA. Also effective were armored cars such as the M-113 APC, the Panhard, and the Staghound.

Despite the emphasis literature concerning communications in MOBA places on problems such as interference of buildings with line-of-sight transmissions and dead spots, the data collected discloses little concern over communications problems in Lebanon, especially on the part of the Christian forces. Equipped with AN/PRC-77s, ANVRC-46s and -47s, CB radios, GE portable UHF radios, as well as telephones, the Christians carefully deployed communications assets in advance with an eye toward effective netting. Syrian forces relied heavily on land lines (consistent with their practice) eliminating reception problems entirely and making it more difficult for their transmissions to be intercepted. However, Syrian transmissions over land lines were frequently intercepted by tapping.

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Technical Memorandum 11-79

MILITARY OPERATIONS IN SELECTED LEBANESE

BUILT-UP AREAS, 1975 - 1978

Paul A. Jureidini
R.D. McLaurin
James M. Price
Abbott Associates, Inc.
(FR22400)

June 1979

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Aberdeen Proving Ground, Maryland 21005

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EXECUTIVE SUMMARY

There is substantial reason to believe that any major war in which the United States may participate in the future will involve extensive city fighting or MOBA (military operations in built-up areas). The present report is the result of an analysis of the current conflict in Lebanon from a MOBA perspective. It is based on extensive open-ended interviews of participants using questions developed by the research team in cooperation with staff of the U.S. Army Human Engineering Laboratory, Aberdeen Proving Ground.

Lebanon is a small, predominantly Arab country located on the eastern Mediterranean shore. It is heavily Westernized, and the capital, Beirut (pop. about 800,000 to 1,000,000), is very much a French city in many ways. Beirut's structures are for the most part similar to those of France, reflecting the period of the French mandate (1921-1943) in architecture, city planning, and most aspects of civil engineering. The structures of this period tend to be four- or five-story sandstone. Newer buildings show American design influence, with many 30- to 40-story hotels, and with extensive use of reinforced concrete with glass or cinderblock curtain walls.

The war in Lebanon can be divided into three phases--the domestic conflict phase (spring to fall 1975), the pre-Syrian phase (fall 1975-June 1976), and the Syrian phase (June 1976-). The first phase was a true civil conflict, but the latter two periods were in many respects a regional war fought in Lebanon. Constraints on the nature of fighting derived from the Israelis' willingness to intervene. Consequently, there was no effective use of air power at all. Nor were chemical or biological elements used. Flame was generally eschewed in the fighting for cultural reasons, and no fighting took place in the sewer systems for the same reasons.

Equipment employed by the forces involved included relatively modern (though not generally first-line) materiel of France, the United States, and the Soviet Union. It ranged from small weapons to tanks, APCs, heavy artillery, and even missiles. Communications gear included U.S. and French equipment. (The Syrian Army used land lines to a large extent.)

In Beirut as in other recent examples of urban warfare, the advantages that accrue to the defense from the effective use of urban characteristics

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were reaffirmed. The logistics support necessary to sustain the offense in MOBA presents an attractive target profile if the offense does not have, or has only intermittent, control of the air. The asymmetry of the combatants and their tactical objectives and guidelines in Beirut prevented Ashrafiyeh's defenders from disrupting Syrian supply lines.

Tunneling at the first-floor level was widely used in Beirut by all parties. Contrary to the experience in other conflicts, tunneling was found to be an extremely important tactic. Sniping was also extremely effective. Used by Palestinians/Muslims/leftists, Christians, and the Syrian Army, sniping frequently tied down large numbers of opposing troops.

In the Beirut fighting, both sides found AAA a particularly effective weapon when used in direct-fire roles. The systems most frequently commended were the U.S. M-42, the Soviet ZU-23 and ZU-57, the Swiss Oerlikan 37, and the Hispano-Suiza 30. Although all are towed except the M-42, an SP 40mm, they were mounted on trucks. These weapons were employed against outside walls with devastating effect; they denuded structures with their high volume of firepower. In addition, used in a direct-fire capacity by firing the length of streets, AAA was a strong deterrent to assaults. It is strange—both because of the degree of effectiveness and because of its ubiquity among modern armed forces—that AAA has been neglected as artillery in previous MOBA studies.

The Soviet man-portable AT rockets, RPG-6 and RPG-7, were also found to be extremely useful both against armor, as they were designed to be employed, and against barricades and walls where they served as portable artillery. Valued as multipurpose weapons, the 106mm recoilless rifle and its Soviet counterpart, the B-10, were used extensively to make holes in walls. HE shells proved themselves against hewn rock or older, sandstone walls, while HEAT rounds employed against first-floor level (generally reinforced concrete) structures exploded with devastating effect.

By contrast with rockets and recoilless rifles, mortars smaller than 102mm were generally ineffective instruments in the Lebanese conflict. However, medium artillery, e.g., 130mm and 155mm howitzers, were used to penetrate buildings to destroy equipment. Explosions following penetration generally demolished pieces of the building. Even greater cratering was seen on the streets. Both the M-113 APC and the Panhard armored car

operated effectively in Beirut. The ease with which the Panhard is
driven and repaired, and the absence of tracks, provide the mobility
desirable in an urban environment.

The literature concerning communications in MOBA has focused on
problems of communicating in cities where buildings interfere with line-
of-sight transmissions and where dead spots abound. VHF--generally,
tactical--communications are seen in the literature as particularly
susceptible to interference inherent in the cityscape.

Our interviews and survey of available data disclosed little concern
over communications problems in Lebanon. Christian forces had the best
equipment available to the Lebanese Army, as well as experienced signal
personnel, and carefully deployed communications assets in advance with
an eye to effective netting. Tactical communications by the Christians
utilized AN/PRC-77, ANVRC-46 and -47, CB radios, and GE portables, as well
as telephones, but decentralization of command significantly reduced the
need for extensive contact. Syrian forces, consistent with their practice,
laid and relied heavily on land lines as soon as possible. In addition
to eliminating radio reception problems, Syrian land lines were intended
to preclude Christian intercepts of Syrian communications. (Christian
forces were active in intercepting and even altering and retransmitting
Muslim and Palestinian communications.) The fact we do not encounter
statements of problems in this area, even in response to explicit questions,
leads us to note that communications did not present a major problem to
the combatants in Beirut.

It should be noted, however, that Syrian communications over land
lines were frequently intercepted by tapping. Land lines are relatively
secure in most types of warfare, but, as Beirut proved, singularly insecure
in an urban environment.

Throughout much of the warfare in Beirut the telephone was a valuable
military communications resource. Both the commercial telephone system
and the Lebanese Army phone system were used for artillery forward
observation, tactical communications, and relay.

A wide variety of communications equipment was used from citizen
band radio to relatively low-level communications intercept equipment.

One of the most effective units was the General Electric hand (portable) radio. Light, it could be carried by soldiers who were also manning and firing weapons.

Finally, the Beirut fighting showed over and over again that individuals who were intimately familiar with cities, who had grown up or lived much of their lives in cities, were far more able to optimize urban warfare resources. Their mobility was far greater, and their instincts more refined. By contrast, the less sophisticated, the rural, those unaccustomed to city structures, were unable to exploit these same city characteristics and were, indeed, often victimized by them.

CONTENTS

ABBREVIATIONS

AAA	Anti-Aircraft Artillery
AT	Anti-Tank
ADF	Arab Deterrent Force
ALF	Arab Liberation Front
APC	Armored Personnel Carrier
ARMA	Army Attache
BLU	Bande Lateral Unique
C^2	Command and Control
C^3	Command, Control, and Communications
COMINT	Communications Intelligence
COMSEC	Communications Security
DARPA	Defense Advanced Research Projects Agency
DPFLP	Democratic Front for the Liberation of Palestine
FSI	Force de Securite Interieur
HE	High Explosive
HEAT	High Explosive Anti-Tank
HEL	Human Engineering Laboratory
LAA	Lebanese Arab Army
MOBA	Military Operations in Built-Up Areas
MOUT	Military Operations in Urbanized Terrain
NLP	National Liberal Party
NCO	Non-Commissioned Officer
PLA	Palestine Liberation Army
PLO	Palestine Liberation Organization
PSP	Peoples Socialist Party
POL	Petrol, Oil, and Lubricants
PFLP	Popular Front for the Liberation of Palestine
PFLP-GC	Popular Front for the Liberation of Palestine--General Command
PSF	Popular Struggle Front
RR	Recoilless Rifle
RPG	Rocket Propelled Grenade
SIGINT	Signal Intelligence
SSNP	Syrian Social Nationalist Party
UHF	Ultra-High Frequency
USDR&E	Under Secretary of Defense for Research and Engineering
VHF	Very High Frequency.

PREFACE

Since the late 1960s an increasing number of analysts has noted with concern the changing profile of the potential conflict environments in which U.S. forces might be required to fight in the event of a large-scale European conflict. The plains, valleys, and passes of Europe, for example, have become the suburbs of European cities. Traditional invasion routes have become much more heavily populated, and concomitant with the increase in people has come the growth of urban and suburban structures, fundamentally affecting military factors such as mobility, communications, and fields of fire. It is argued by some that these basic changes--the urbanization of Europe--provide great new potential military advantages; by others, that inattention to the implications of these changes constitutes a new and telling Western Achilles Heel. Yet, no one who has taken due account of the magnitude of the process and effects of urbanization can fail to agree that factors affecting military operations in built-up areas (MOBA) may have significant and far-reaching implications for the effectiveness of U.S. and Western tactical doctrine (both offensive and defensive), weapons systems, and overall military capabilities.

On the face of the growing recognition of the importance of MOBA planning, a dearth of data presented itself. Instances in which modern or current-generation systems have been employed by trained personnel are virtually non-existent. The battle for Hue could have been an excellent example, but the forces were quite mis-matched, and the battle itself too brief. By contrast, Beirut, the principal battlefield of the Lebanese conflict, offers a number of advantages: (1) a more European-style city; (2) more evenly matched forces; (3) a variety of battles; (4) a prolonged period of hostilities; and (5) diversity of weapons. Thus, this report is based upon a study of Beirut as a case of military operations in built-up areas.

The significance of Beirut as a case study was apparent to Paul A. Jureidini, one of the authors, partly because he is intimately familiar with Beirut and more because of his growing conviction in 1975 that the fighting in Beirut had diverged from his expectations in some important ways. He was convinced that the Beirut battles may hold some major lessons for the United States. He received a sympathetic hearing from Robert Basil, the Assistant Director, International Programs, USDR&E, who encouraged the authors to seek support for research on the subject. DARPA had recently transferred its MOBA support and leadership responsibilities to the Army, and the U.S. Army Human Engineering Laboratory at Aberdeen Proving Ground had taken over the primary role in this regard.

Don Egner of the Human Engineering Laboratory immediately evinced interest in the project. From the moment of our first telephone call to the completion of this report, in the face of a number of hurdles, the support and encouragement of the Laboratory, in general, and of Don Egner, specifically, have been unflagging. We are deeply grateful for these efforts.

In addition to the support of Robert Basil and Don Egner, several other individuals have provided significant assistance during the course of this work. Walt McJilton of U.S.A. HEL has been involved since soon after our first conversation with the Laboratory. He has consistently provided in great measure the kind of logistical and administrative aid a project such as this must have to succeed. Eilsworth Shank and Brenda Thein, both also of U.S.A. HEL, Aberdeen Proving Ground, have provided

insights from their own knowledge of and data concerning MOBA; these
perspectives have been of great help in conceptualizing the problems,
formulating research questions, and understanding our own data.

George Schechter of Analytics, Inc., encouraged us to use MORS
as a forum to spread the MOBA word. Major Charles Hoskinson of DIA
discussed some of his observations during his stay in Beirut; these
reconfirmed the credibility of some of our data. He also introduced us
to a new and helpful Lebanese source of information. Chuck Pilliteri of
FIO, Aberdeen Proving, reviewed some materials for us that we ended by
not using or even seeing, on his recommendation. He also facilitated
certain administrative arrangements connected with the project. Major
Wallace Deen of Army medical intelligence discussed his own work which
assisted us in the development of a research approach to medical aspects
of the conflict. Lt. Col. John Hambric provided details of the port and
hotel battles, as well as an account of the engagements in Sidon, later
confirmed by Lebanese sources.

Gerald Sullivan of USDR&E has since the initiation of the work
shown constant interest. His own familiarity with, and recognition of
the importance of, urban military operations, have infused others with
a greater attentiveness to MOBA and, therefore, interest in MOBA in Lebanon.
His efforts are deeply appreciated.

Colonel Paul Slater, Office of the Assistant Secretary of Defense
(International Security Affairs), has been acutely aware of the significance
of the Beirut story, since he is the desk officer for Lebanese affairs
in the Pentagon. Colonel Slater provided invaluable aid in introducing
us to people who could provide data.

We wish to express our appreciation to two present and one former
Lebanese military officers who participated in the conflict and have very
significantly contributed to this study. Colonel Antoine Barakat, currently
Lebanese military attache in Washington, D.C., provided unique and valuable
information on a number of battles over the course of several interviews.
Jean-Claude Samaha, former major in the Lebanese Army, was also the source
of numerous insights and much factual information on C^3, artillery target-
ing, and related issues.

To Captain Adonis Nehme, Lebanese Army, more than any other single
individual, must go our gratitude for the content of this report. In
addition to the countless hours Captain Nehme spent with us--and with
our endless questionnaires--he provided films and literally hundreds of
photos, some of which appear in the text of the report. Beyond all this
help, Captain Nehme introduced us to numerous other Lebanese Army sources
and collected data from yet others.

There are a number of additional Lebanese military officers who made
extra efforts to assist us both by providing important data and by identi-
fying other sources of information. To these officers we are indebted,
even though they have asked--for understandable reasons--to remain anonymous.
The "respondents"--the officers and enlisted personnel in the Lebanese
Army, and the militia members--including those we have already named as
having provided special assistance, in the final account provided through
our interviews the content of this report.

Finally, we thank Cathie Love who typed the report and patiently
managed us as we endeavored to arrive at some consistency in transliterating
Arabic names.

METHODOLOGICAL PREFACE

The present report is an account essentially based on interviews
with participants.   The purpose of this preface is to provide information
on the methods used by the research team to compile relevant data and
prepare the report.

From the outset, it was clear that the only feasible approach--travel
to Lebanon was not permitted--was to interview many of the participants
in the key battles and try to secure photographic support from Lebanese
contacts. Thus, the research staff formulated an extensive list of subjects
based upon ﹢ reading of the literature on MOBA and upon discussions with
individuals at U.S.A. HEL.

The subjects were turned into questions, and became part of a draft
questionnaire to be used with Lebanese respondents. Review of the question-
naire by agencies and offices interested in MOBA led to some modificat! ﹢ns
of the instrument--mostly additions, but some useful language changes as
well. These questions were then used to prepare a final data collection
matrix/questionnaire that was employed with Lebanese respondents.

The systematic pattern of responses to our interviews and questionnaires
shows that questions dealing with specific examples--holes, barricades,
and the like--were difficult to answer weeks, months, or years after the
event. The situations were too emotional, too dramatic, too all-involving
for individuals to reliably recall such details. (An exception was noted,
however. When shown photographs of specific damage, some personnel did
recall the details when they had personally been involved in the specific
action.)

The diverse data (largely notes from interviews) were collected and
reviewed and a matrix of available and missing data was created. It
became apparent at an early date that medical data, information on the
Palestinian and leftist forces, and the types of data we have indicated
were not generally recalled by interviewees, were lacking, as were data on
communications and C^3. Although we were able to find sources for.C^3 and
especially for communications, we were unable to fill the other empty cells.

The final report is written largely on the basis of the interviews,
although chronological information and some standard, similar details of
engagements were collected from careful perusal of newspapers, books, and
journals in Arabic, English, and French.

It is important for the reader to be aware that, apart from chrono-
logical information, facts and conclusions reported in this volume reflect
the perceptions of the interviewees.

I. INTRODUCTION

The two incidents precipitating the Lebanese civil war took place on April 13, 1975. The first event involved unknown gunmen firing on a Maronite church; the second, a retaliatory attack, was directed against a busload of Palestinians passing through Ain al-Rumaneh. However, these incidents were simply triggers. The underlying causes of the Lebanese civil war were already well established--the substantial presence of armed Palestinian forces in Lebanon, and the inability of the Lebanese government to control them, especially in accordance with the provisions of the 1969 Cairo Accord and the Melkart Accord of 1973.

In April 1973 an Israeli raid into the heart of Beirut, which resulted in the death of three prominent Palestinian leaders, brought about an armed clash between the Lebanese Army and the Palestinian forces in Lebanon. As a result, on the one hand, of Arab pressure and, on the other, of domestic Muslim reticence to support the army operation, the Lebanese government soon brought the hostilities to a conclusion. Since then the army has been virtually paralized in the midst of continued Palestinian and Christian militia clashes.

Some Christian Lebanese Army officers and most of the Lebanese political parties representing the Maronites of Lebanon reacted to the inability of the Lebanese government to deal with the Palestinians by forming new militias (Tanzim and the Defenders of the Cedars), and by increasing the size of those already in existence (those of the Phalangist Party and the National Liberal Party). From April 1973 until the outbreak of the civil war the Maronite political parties recruited, trained, and procured weapons for their militias in preparation for the inevitable confrontation. During that time the weapons acquired by the militias came from Eastern Bloc as well as from Western sources. Most were light --AK-47s, M-16s, 50mm machine guns, DU12.7s, 80 and 81mm mortars, RPG-6s,* and RPG-7s.

Once the Lebanese Army disintegrated in the first quarter of 1976, the weapons belonging to the army were seized by or made available to the different factions--leftist, rightist, Christian, and Muslim. Lebanese Army barracks located in predominantly Christian areas fell to Christian elements of the army, while those barracks located in Muslim areas fell to the (overwhelmingly Muslim) Lebanese Arab Army. Equipment in the barracks was also captured by the respective factions. Soldiers of the minority faith within each barracks were allowed to reach their co-religionists in other areas. For example, the normal strength of the Sarba barracks (next to Jounieh), which was estimated prior to the civil war at 2,600 men, swelled to 4,000, while at Fayadiyeh the forces grew from 700 to 1,500 in strength. It should be noted, however, that the commanders of these two barracks had no real control over the remnants of other Lebanese formations which came from different military districts. Instead, special arrangements were often concluded between officers commanding these remnants and the barracks' commanders. It also should be noted that troops belonging to either faction were made available to different militia organizations as part of an overall agreement concluded between barracks' commanders, commanders of remnant forces, and militia leaders.

The disintegration of the Lebanese Army--notwithstanding its important consequences for the nature and outcome of the war--did not lead to participation by all army personnel in the conflict. About three quarters

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*By RPG-6s our sources seem to mean RPG-2s and/or PGN-60s.

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of those in the army, whether officers or enlisted, sat out the war along
with the majority of Lebanese civilians. In fact, Christians from the
army who did participate in the war only did so in battles that pitted
Christians against Palestinians, or in cases when the Christians were
on the verge of a major defeat, as in the port area battle. They did not
participate in fighting along static lines such as along the green line
in Beirut. Muslim personnel from the Lebanese Army, though they main-
tained a more continuous role in the conflict, had a less significant
impact on the outcome of the war than did their Christian counterparts.

During the same period, as the civil war became more of a regional
war, new links to outside support evolved for the various factions: on
the leftist side, Iraq and Libya; on the Christian rightist side, Israel.
Too, heavier weapons were introduced. The Muslim population, seeing and
fearing the growth of Lebanese Christian militias, and already distrusting
the impartiality of the Lebanese Army, adopted the Palestinian forces
as its principal protector and began to form new militias (Murabitoun,
Amal) and strengthen existing (Peoples' Socialist Party—PSP—and Syrian
Social Nationalist Party—SSNP) forces. This apparent split in Lebanese
society as to how best to deal with the Palestinian issue brought to the
surface latent political, social, and economic factors which had hitherto
been buried. The political issues even touched the National Pact of 1943,
as the Muslim community sought both greater representation in the political
system, and greater power vis-a-vis the president and army commander (both
of whom are Maronite Christians) through a concomitant increase in the
role of the prime minister (a Sunni Muslim). On the social plane, the
Lebanese civil war brought to the forefront the plight of the Shi'a
community, in general (the least represented minority), and, specifically,
the situation of the Shi'a inhabiting southern Lebanon who suffered the
most as a result of Palestinian raids on Israel and the subsequent Israeli
retaliatory raids into Lebanon. The economic issues centered on the
relative power of the Christians and their extremely high standard of
living as contrasted with that of the Sunni and Shi'a communities. The
conflict further raised the issue of how best to restructure the entire
Lebanese political, social, and economic order, an issue taken up largely
by the ideologically secular and left-of-center parties: the Communist
Party of Lebanon, the PSP, and the SSNP. For their part, the Palestinians,
specifically the PLO leadership, found themselves caught in a dilemma: to
openly intervene in the Lebanese civil war in support of the Muslim and
leftist elements could bring about Israeli involvement; and to refrain
from taking a role might mean loss of popular support among a large portion
of the Lebanese community, loss of support as well from certain Arab
states, and loss of the last Palestinian sanctuary. In addition, a defeat
could subject the Palestinian movement to further fractionalization,
since it was clear that at least on an ideological basis the PFLP and the
DPFLP had to support such Lebanese parties as the Communist Party, the
PSP, and the SSNP.

The multi-faceted complications and problems related to the Lebanese
conflict are an accurate reflection of the complex and fragile political
environment of modern Lebanon. Conflict reportage in the press has tended
to simplify intricate relationships by referring to the "Christian right,"
the "Muslim left," and the "Palestinians" (who are also often referred to
as "leftists"). The use of the first two terms is often misleading.
"Left" and "right" as political terms are not easily or precisely trans-

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ferred from American or even European politics (where they are often vague anyway) to the political environment of Third World states; nor are all the Christians or all the Muslims fighting on the same side.[2] In each of the battles discussed below the participants are clearly identified. The terms "left" and "right" will sometimes appear in discussions of opposing forces to prevent unnecessary repetition of militia and party names and for lack of better unifying terms. The "right" or "Christian right" in Lebanon refers to those individuals or groups who supported the Phalange and National Liberal Party in the conflict. The "left" or "Muslim left" refers to Lebanese and Palestinian forces opposing them. It does not refer to the Syrians.

This study focuses on built-up area military operations (MOBA) in Lebanon. The war can be viewed in terms of two discrete periods--the pre-Syrian phase and the Syrian phase. The first phase is characterized by relatively low-intensity warfare, the use of irregulars, and the use of light weapons. In the Syrian phase, tanks, artillery, and rocketry have been brought to bear with telling effect.

There is a tendency to treat the Lebanese civil war in its pre-Syrian and Syrian phases as a series of eruptions of varying intensity with no continuity. In addition, another pattern of reportage and even analysis concentrates on the fighting in and around Beirut, with little attention paid to activities taking place in other parts of Lebanon. However, the Lebanese civil war constituted, in effect, one continuous battle with lulls and periods of intense activity. Battles in other parts of Lebanon can be justifiably neglected only on the premise that control of Beirut (a city of close to one million people, one third the population of Lebanon) means control of the country. Therefore, battles that took place in other parts of Lebanon are important inasmuch as they represent an attempt by Muslim and leftist militias in the pre-Syrian phase to gradually tighten the noose aroung the Christian heartland, control of which would ultimately mean control of Beirut. Due to the nature of Beirut (the major hub of activities in Lebanon) and due to the breakup of Lebanon into several fiefdoms under the control of major militia leaders, the media and the military attaches of the various embassies accredited to Lebanon found accessibility to battle areas to be poor and data pertaining to the battles difficult to obtain.

For the purpose of this study, Beirut, and the battles that were fought in it, are of primary importance. The layout of Beirut resembles that of any major French city of its size, although its topography resembles that of San Francisco and its climate that of San Diego. Beirut grew and developed during the French Mandate (1921-1943), and the impact of French city planning, architecture, civil engineering, and sewer systems remains up to the present time. Recently, American-inspired architectural designs (using concrete and glass) have begun to change the general appearance of the city, including its skyline, with 30- and 40-story hotels, office buildings, and housing complexes. Likewise, the street networks of Beirut have undergone tremendous change in the last 20 years; major two-lane streets were expanded to four lanes, and a network of overpasses, throughways, bridges, and beltways began to be built. Thus, Beirut is a mixture of both an old city, with narrow streets and four- to five-story buildings built mainly from sandstone (the center of town), and a new city, with modern buildings composed of reinforced concrete with glass and/or cinderblock curtain walls (new Beirut) as well as sewer systems, water and electricity supplies, telephones, telexes, modern port, and airport.

Demographically, Beirut is evenly divided into three areas: east
Beirut (Ashrafiyeh) is predominantly Christian; southwest Beirut (Basta,
Mousaitbeh, Tariq, al-Jadeeda, Sabra, Shatila) is predominantly Muslim;
and northwest Beirut (Ras Beirut) is evenly balanced between Christians
and Muslims, and is the area where most foreigners used to reside.

II. PRE-SYRIAN BATTLES

HOTEL AND PORT DISTRICTS

The Hotel District

The major hotels over which fighting took place were the 31-story
Holiday Inn, the 20-story Phoenicia Hotel, and the St. Georges Hotel.
Associated with the hotel district battle was the battle for the Murr
Tower, an uncompleted 40-story office complex, as yet without walls,
windows, or elevators. The Murr Tower was lost by its Phalangist
defenders on October 23, 1975, during the battle for the Kantari district
(not covered in this study), was recaptured on December 16, 1975, as
part of a ceasefire agreement, but was soon taken over by the leftists
once again.

Fighting in the hotel district began on April 15, 1975, near the
beginning of the conflict, and continued at varying levels of intensity
until May of 1976. However, the battle to control the hotel district
did not begin in earnest until the last week of October 1975. On
October 26, fighting between the Muslim left and the Christian right in
Kantari spread into the hotel district, and on October 27 the Phalangists
moved into the Holiday Inn and the Phoenicia, while militiamen of
Camille Chamoun's National Liberal Party (NLP) moved into the St. Georges
Hotel. The Christians also attempted to take the Murr Tower from its
leftist defenders (the Murabitoun) in Kantari without success. Fighting
continued until a ceasefire, arranged by Prime Minister Rashid Karami,
went into effect on November 3. The ceasefire began to break down ten
days later as sporadic and occasionally heavy fighting erupted throughout
the country the rest of November. There was, however, little activity
in the hotel district until December 8.

On December 8, 1975, Muslim/leftist forces launched a major two-
pronged offensive to capture the Christian-held Mediterranean seafront
(of which the hotel district is a part) and central Beirut; in some cases
there was door-to-door fighting. The Lebanese Army moved into the
Parliament and central post office areas, thus blunting the leftist drive
toward central Beirut. Fighting continued in the hotel district, however,
with the St. Georges and Phoenicia hotels falling to the leftists on
December 8. The Holiday Inn remained in Christian hands.

On December 9, the army launched an attack on the Phoenicia and
St. Georges Hotels, initially capturing the Phoenicia. Pressured by the
army and the Christians who were working together, the Murabitoun called
on the Palestinians for aid and received it. The Phoenicia and St. Georges
changed hands several times during the night. On December 10, Lebanese
Prime Minister Rashid Karami announced another ceasefire, and Lebanese
security forces separated the combatants in the hotel district. The
Murabitoun were forced from the St. Georges and Alcazar Hotels after
heavy bombardment by the army with the aid of the Phalangists. The cease-
fire was ignored by leftist leaders until December 11. However, even on
that date fighting continued in the hotel district as the leftists
retook the Phoenicia and St. Georges, forced the army out of the area,
and launched an unsuccessful assault on the Phalangist-held Holiday Inn.

On December 16, another ceasefire, declared two days previously,
began to take hold. By nightfall, Lebanese security forces had replaced
militiamen in all the hotel positions.

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On January 1, 1976, the Christians set up a blockade cutting off supplies to Tel Zaatar and surrounding Muslim shantytowns. The Muslims retaliated on January 5 by launching an offensive in the southern and eastern sectors of Beirut. By January 10, fighting had spread to the hotel district as the Phalangists occupied the Holiday Inn and the leftists took the Phoenicia. The following day leftists moved back into the Murr Tower. No important changes in real estate control within the hotel district took place until the last phase of the battle. Then, on March 21, the leftists took the Holiday Inn. Although they lost it again the following day, the Holiday Inn was definitively recaptured by them on March 23.

March 23 marks the start of the battle for the port area. Immediately after seizing the Holiday Inn the leftists advanced and captured the Starco building. Five days later (March 28), the Hilton and Normandy Hotels fell to their control. On May 3, fighting for control of the Fattal building, which dominates the port area, began. Although fighting continued for some time, the area around the Fattal building represented the farthest advance by the Muslim/leftist forces. Shortly thereafter, the battle lines in Beirut stabilized. No further real estate changed hands in the Beirut area until the fall of Tel Zaatar on August 12, 1976. The war had become static.

Combatants

On the Christian side the principal militias involved in the hotel district combat were the Phalangists (Holiday Inn and Phoenicia) and the forces of the NLP (St. Georges). When the St. Georges fell, the NLP withdrew from the seafront district, leaving the fighting to the Phalangists. In the battle for the port area, Christian dissident elements of the Lebanese Army gradually took over and were instrumental in stopping the Muslim/leftist advance. The Christian militias of the Phalange and NLP committed no more than a total of 300 men in the battle for the hotel district, with a maximum of 60 taking part in the battle on any given day. Indeed, the Murr Tower was defended by a squad of 15 men, and the defenders of the Holiday Inn numbered 16 when it finally fell. In the battle for the Fattal building and the adjacent port area, the number of Christian Lebanese Army dissidents numbered approximately 60, supported by no more than 300 Phalangist militiamen.

On the Muslim/leftist side, the Murabitoun undertook the main burden of the fighting, and, like the Christian militias, their number is reported to have been about 300 of which 60 were committed on any given day. As the intensity of the fighting grew with the launching of the Muslim/leftist offensive to capture the hotel and port districts, the Murabitoun was assisted by Fatah, PFLP, Saiqa, and later by elements of the Lebanese Arab Army, representing some of the Muslim members of the Lebanese Army.

Weapons

Christian militias and Christian Lebanese Army dissidents:
- U.S.-made M-16s
- Belgian FNs
- West German G-3s

- 80 and 81mm mortars
- AMX-13 tanks w/ 105mm cannon
- Panhard armored cars w/ 90mm cannon
- Jeep-mounted 106mm recoilless rifles
- Jeep-mounted B-10 (Soviet) recoilless rifles
- U.S. M-42s
- Thompson-Brandt heavy mortars
- British Lee-Enfield rifles (for sniping)
- a variety of U.S. and Soviet light and heavy machine guns
- French-made 155mm howitzers

Muslims/leftists/Palestinians, and Lebanese Arab Army:
- AK-47s
- 12.7 Soviet-made heavy machine guns
- RPG-6s and RPG-7s
- 80mm and 81mm mortars
- M-42s
- M-113s w/ heavy machine guns
- Katushia rocket batteries
- 120mm mortars
- 106mm jeep-mounted recoilless rifles
- B-10 jeep-mounted recoilless rifles
- 85mm field guns (Soviet)
- Panhard armored cars with 90mm cannon
- Grad rockets

Tactics and Weapons' Effects

When the conflict broke out, neither side was well armed or well manned. Nor had either side recruited professional officers or NCOs. These became available later on, when the Lebanese Army disintegrated and when units of the Palestine Liberation Army (PLA) moved into Lebanon. This manpower shortage explains, in part, why the hotels, with the exception of the St. Georges, suffered minimal damage during the spring and summer of 1975. It also must be noted that both the Holiday Inn and the Phoenicia were owned by Persian Gulf interests, and that both parties were loath to inflict greater damage on these structures and risk the wrath of the sheikhdoms of the Gulf. The St. Georges itself, however, was owned by a Lebanese Christian family.

Since the period of April 1975 through March 1976 was in essence one of static and positional warfare, there was little need for fire and maneuver. Moreover, such tactics were also avoided in order to minimize casualties. Instead, both sides tunneled extensively at the first-floor level to be able to reinforce and resupply without exposing themselves to enemy fire, especially sniping.

Sniping was employed extensively as it exploits the cover afforded by the cityscape for surprise and anonymity, and especially since sniping tended to scatter advancing combatants. The weapon favored by snipers was the British World War II-vintage Lee-Enfield 303 rifle.

Positional warfare and sniping dictated that fighters take elevated positions to get a clear line of fire. Most of the Holiday Inn defenders were located on the 29th floor. The main entrance and ground floors were generally sandbagged and defended by a handful of men. In both the

Holiday Inn and the Phoenicia, electricity was not cut off during the early fighting, and the defenders were therefore able to use the elevators to move heavy machine guns, ammunition, and personnel from floor to floor, quickly reinforcing the ground floor when attackers neared. Later on, when electricity was cut off, this force-multiplier option was denied to defenders who then chose to stay mainly on the higher floors. The absence of an elevator in the Murr Tower prevented the Murabitoun from moving heavy weapons to the higher floors, and limited the arms used in the tower to light mortars and machine guns.

Since the Murr Tower was the highest building in Beirut, it gave the Murabitoun a stronghold from which they could observe movement in the Christian area of Ashrafiyeh, interdict resupply from Phalangist head-quarters in al-Saife direct fire at the Holiday Inn, and mortar Ashrafiyeh. The Christian militiamen, in turn, attempted--with little success--to silence and reduce the Murr Tower by directing small arms fire at it from the Rizk Tower and Ashrafiyeh.

In this initial period, and until professional cadres joined the various militias after the Lebanese Army disintegrated, most combatants tended to concentrate fire on one target--one enemy soldier or vehicle at a time--leaving other targets free to move. Also, it appears that Christian militiamen were better equipped to use tall buildings, especially the hotels, than their Muslim/leftist counterparts. Most of the Christian militiamen came from the middle or upper classes which tend to reside in high-rise districts, whereas the Muslims/leftists came for the most part from the lower class and from areas where high-rise buildings were few. Moreover, the Christian militiamen were more familiar with the specific hotels, where the fighting took place, since they frequented these places during the pre-civil war period, while the lower-class Muslims and leftists were denied these facilities for financial as well as religious reasons. The offensive in MOBA fighting must generally accept heavier casualties than the defending forces, and when the attackers are not familiar with the district or building it is likely that their casualties will increase dramatically. Thus, in the hotel district battles the Muslims/leftists took much higher casualties than the Christian defenders.

Because heavy weapons were not used in the initial phase of fighting in the hotel district, and because a deliberate attempt was made by combatants on both sides to avoid damaging the Holiday Inn and the Phoenicia Hotel, these two skyscrapers escaped heavy damage. The St. Georges was burned deliberately, while the Murr Tower escaped 155mm fire because it was owned by an influential Christian who contributed financially to both sides and thereby "insured" his building.

Small arms fire (rifles and light machine guns) pockmarked the Holiday Inn and the Phoenicia without penetrating their cinderblock and thin, white rock curtain walls. RPG-6s and RPG-7s striking from both 90° angles and at sharp angles from above, penetrated the curtain walls, but did not affect the inner walls. It is frequently difficult to determine the size of the original holes since Christian militiamen tended to en-large these holes to use them for sniping.

Since small arms fire and RPG-6s and RPG-7s were the only rounds aimed at these two structures, little rubble resulted, and this small amounted of debris was quickly removed during lulls in the fighting.

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Broken glass, which abounded, seems generally to have resulted from deliberate breakage by the defenders who sought to use windows for firing and who were also attempting to reduce the shatter effect.

Little damage was caused by 80mm and 81mm mortar rounds, which fell on the roofs (generally reinforced concrete) of the buildings adjoining the hotels. Only the 120mm rounds appeared to have penetrated the roofs. Mortar rounds that fell on the streets (mostly asphalt topping with rock and crushed rock underneath) had relatively little effect, generally creating a small crater two-to-three inches deep. By contrast, 155mm rounds created much larger craters, but since not more than 15 rounds fell during this phase, the craters were quickly filled with rubble and hard-topped during lulls.

A fire that gutted the St. Georges Hotel was deliberately set. The fire that burned and ruined the upper three or four floors of the Holiday Inn, however, resulted from tracers fired at the Holiday Inn from the Murr Tower. The tracers incinerated mattresses and stuffed furniture. Both sides often prevented firemen from putting out blazes by directing weapons fires at them if the conflagration was in an enemy-owned or -held building.

The Port Area

In the battle for the port of Beirut, the decisive week was that of May 1, 1976. Most of the fighting centered on the Fattal building and the adjoining area which comprised one of the main entrances to the port itself and the first pier. Fresh from success in capturing the hotel district area, the Muslim/leftists hurled themselves at the port area in an attempt to take advantage of the Phalangist retreat. At this point, Christian elements of the now-disintegrated Lebanese Army joined the battle and repulsed the Muslim/leftist advance. Once blunted, the Muslim/leftist offensive against the port of Beirut was never again attempted, although pressure on its Christian defenders was maintained throughout the summer and ended with Syrian Army columns entering the city of Beirut and the port area on November 15, 1976.

Although the port battle was neither extensively covered by the media nor given its proper weight as compared with other battles in Lebanon, it is nonetheless one of the most important and significant for the following reasons:

● The Lebanese Army having disintegrated, officers and the rank-and-file, now joined either side, taking with them their weapons, support equipment, and experience.

● This is the first battle in which soldiers rather than militiamen faced each other and, therefore, more closely resembles a battle in a European city.

● Armor faced armor, and jeep-mounted 106mm recoilless rifles were used extensively by both sides against a variety of targets, including armor, buildings, and barricades, as well as in an indirect role.

● Rubble that ensued was used for barricades. These barricades were either erected to block off streets and, therefore, avenues of approach, or were used as bulwarks from which combatants could fire. In the latter employment, armored cars could use their 90mm cannon behind the barricades which provided some safety from incoming 106mm armor-piercing ammunition and RPG-6s and RPG-7s.

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● In certain instances, at the direction of professional military officers, wings of buildings abutting on roads were expertly blown up to create the necessary barricades and obstructions.

● The fighting capability of both parties improved tremendously when professional soldiers began to direct the combat. This change was especially apparent in the effectiveness with which lines of fire were achieved and troop movements coordinated.

● As a result of the use of armor and the 106s (in certain cases at point-blank range) against buildings, and as a result of the deliberate dynamiting of other buildings, the level of damage suffered by the port area was exceeded only by Syrian shelling of Ain al-Rumaneh and Ashrafiyeh at a much later stage.

Combatants

As in the hotel district battles, it is difficult to give the exact number of combatants on either side on any one day. Much depends on the intensity of the fighting in the area. Thus, during the week of May 1, 1976, the Christian side consisted of about 200 Lebanese Army regulars and 200 Phalangists. On the Muslim side, there is reason to believe that the number of troops committed during that decisive week did not exceed that of the Christian defenders. Again, during that week, it is hard to estimate total number of men committed to the battle in general since artillery was used extensively by both sides to support the fighting raging around the Fattal building. When fighting subsided, the number of men on the Christian side dwindled to about 40 army regulars and 40 Phalangists. On the Muslim side the number of combatants also dwindled to low levels.

On the Christian side, the army elements involved were primarily armored units dispatched from barracks at Fayadiyeh and, to a lesser extent, Sarba. They were supported by a few infantry squads manning Yugoslavian-made ZU-23s. The Phalangists supporting the army were the remnants of the hotel district battles. Although more seasoned than some of the Phalangist forces, they lacked proper military training. On the Muslim side the elements of the Lebanese Arab Army appeared to have come predominantly from armored units, while their militia supporters were largely those that had seen action in the hotel district. This is the first instance in which regular officers on either side took charge of operations; the role of the militias was reduced to mere support.

Weapons

Christian militias and Christian Lebanese Army dissidents:
● U.S. M-16s
● Belgian FNs
● West German G-3s
● 80mm and 81mm mortars
● Panhard armored cars
● Staghounds w/ 75mm cannon
● .50 caliber heavy machine guns
● 155mm and 122mm field artillery
● Yugoslav ZU-23s
● jeep-mounted 106mm RRs
● RPG-6s and RPG-7s

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Muslims/Leftists/Palestinians/Lebanese Arab Army:
- Soviet AK-47 assault rifles
- Soviet 12.7 heavy machine guns
- RPG-6s and RPG-7s
- 80mm and 81mm mortars
- 106mm jeep-mounted recoilless rifles
- B-16 jeep-mounted recoilless rifles
- 75mm field guns (U.S.)
- U.S. M-41 tanks
- British Charioteers
- Grad rockets

Tactics and Weapons' Effects

When the Christian officers of the Lebanese Army took over command in the port area, half of the district contained Muslim/leftist/ Palestinian/Lebanese Arab Army positions. The Fattal building was then being held by about five Christian Phalangists. At the military council involving commanders of the Fayadiyeh barracks, the Sarba barracks, and the Phalangist commanders, it was decided that nine Staghounds from the Fayadiyeh barracks, three Panhards from the Sarba barracks, the three two-barrel truck-mounted ZU-23s (from Fayadiyeh) would be used in an attempt to throw back the attackers and stabilize the front at Allenby Street. Next, it was decided to use Phalangist militiamen (pulled back to defend the Phalangist headquarters) for the defense of the port area at the Socomex building. The militias were to help drive the attackers from the side streets that paralleled the main avenue the Lebanese Army was to use in its advance along the water front. Finally, it was decided that upon reaching Allenby Street, barricades composed of blown-up buildings and concrete embankments would be used as the outer limit of the defense perimeter of the port area.

The Staghounds and Panhards spearheaded the Lebanese Army advance, while the truck-mounted ZU-23s moved on to the port piers to cover the advance of the Panhards. Indirect artillery and mortar fire was also used to cover the armored advance.

Once they reached Allenby Street the Christians implemented their plan to erect concrete embankments and rubble barricades. The joint command of the Christian forces then decided that the front could be held with three Panhards, one ZU-23, a small number of jeep-mounted recoilless rifles, and front-line troops equipped with light automatic weapons and RPG-6s and -7s.

In the advance toward Allenby Street the Panhards used primarily HE rounds against fortified buildings and HEAT rounds against the reinforced concrete first-floor foundations of those buildings both with devastating effect. The ZU-23s, firing from piers in the port area, were employed against the curtain walls of target buildings. The high volume of fire that the ZU-23 can concentrate on a building made it an ideal weapon. Curtain wall after curtain wall, from floor to floor, quickly crumbled as ZU-23 fire was directed at it. The combined use of ZU-23 and HE rounds quickly denuded buildings surrounding and overlooking the port area, rapidly reducing them to their reinforced concrete frameworks. The use of HEAT and later of RPG-6 and RPG-7 rounds against the reinforced concrete first floors of these buildings reduced their effectiveness as bunkers and pill boxes.

Although the leftist forces brought up their M-41 and Charioteer
tanks to try to counter the Christian advance, they soon found that the
rubble created by the Christian ZU-23 and HEAT rounds made the narrow
streets surrounding the port area through which they had to maneuver
almost impassable. The only vehicles that seemed able to maneuver in
those narrow streets were 106mm and B-10 jeep-mounted recoilless rifles.
Even though HEAT and armor-piercing ammunition was used by the leftists
to try to knock out Christian armor, the weapons proved ineffective
against the reinforced concrete embankments the Christians had built to
protect the Panhards and Staghounds. These rounds lost their effective-
ness after piercing the concrete embankments. The flutter effect was not
sufficient to knock a Panhard or Staghound out of commission. HE rounds
just bounced off the concrete embankments without causing damage.

The placing by the Christian forces of ZU-23s on the piers gave them
an unimpeded line of fire against the tall buildings and prevented the
leftist forces from using these buildings to fire RPG-6s and -7s downward
at Christian armor.

Sniping was not used extensively in the port area because the narrow
streets and tall buildings did not provide attackers and defenders with
clear lines of fire. Also, due to first-floor tunneling, combatants
could move in and out of the area without exposing themselves to sniper
fire.

THE BATTLE OF TEL ZAATAR

The taking of Tel Zaatar, a heavily fortified Palestinian camp east
of Beirut, was part of a Christian campaign to rid their heartland of
enemies and potential enemies. Tel Zaatar, along with another Palestinian
camp, Debayyeh, was principally inhabited by Palestinians, most of whom
belonged to the radical wing of the PLO. The camps of Jisr el-Basha,
Sin el-Fil, Nabaa, and Karantina were inhabited by a mixture of Lebanese
Muslims and Palestinians. Debayyeh, which was somewhat removed from the
others and largely populated by Christian Palestinians, fell quickly on
January 14, 1976, after three days of fighting. It had not been heavily
fortified. The camps of Tel Zaatar, Sin el-Fil, Jisr el-Basha, Karantina,
and Nabaa formed a string of mutually reinforcing strongholds of which
Tel Zaatar, by virtue of the ideology of its defenders, its strategic
location, and weapons (many of which were captured—see weapons list),
was the most important. It sat astride one of the principal road links
from the mountain heartland to Beirut. The stronghold at Jisr el-Basha
threatened the main road from Beirut to Damascus, and posed a threat to
the Christian defenders of the Furn ash-Shubbak/Shiyah/Ain al-Rumaneh area.
The strongholds at Sin el-Fil, Nabaa, and Karantina surrounded the
principal links between east Beirut (Ashrafiyeh) and the Lebanese Christian
north in terms of both the coastal and mountain roads. These three camps
threatened lines of supply and reinforcement to east Beirut and occasionally
shelled the Christian sector of the city. Thus, the camps were a key
element in the Christian strategy.

In the early stages of the civil war Christian action against these
strongholds was constrained by two factors: the unwillingness (at that
stage) of the Christians to take actions that would precipitate open
Palestinian intervention in the war; and Christian militia manpower and
weapons shortages (some of which were brought about by the necessity to
deploy these resources elsewhere, principally in Beirut itself).

Once the Muslim strategy of seizing the port area and encircling east Beirut became clear, Christian resource priorities changed and manpower and equipment were more available, but on a selective basis. Karantina was the first camp to fall (January 18). The decision to capture it was based on two factors: the camp was inhabited mostly by Lebanese Muslims, so taking it would not necessarily bring on Palestinian intervention; and Karantina sat astride the main road the Christians needed to resupply and reinforce their positions in the hotel and port districts.

By blunting the Muslims' two-pronged attack aimed at the port of Beirut and the suburbs of Shiyah and Ain al-Rumaneh, the battle lines stabilized and, therefore, the remaining strongholds of Tel Zaatar, Jisr el-Basha, Nabaa, and Sin el-Fil no longer posed a threat to east Beirut. Thus, from a strictly military point of view, the Christians could have refrained from taking these strongholds. However, a number of other factors intervened which sealed the fate of Tel Zaatar and the surrounding camps. First, Tel Zaatar had become psychologically important to the Palestinians and their Muslim/leftist allies, and, therefore, to the Christians. The Palestinians had begun to refer to Tel Zaatar as Stalingrad. Thus, in a sense, it was a challenge to the Christians. Second, the Muslims/leftists had retaliated for Karantina by overrunning and leveling the Christian town of Damour with the open aid of the Palestinians. Thus, revenge interjected itself as a factor, especially for Camille Chamoun's NLP, since the town of Damour had been one of his principal strongholds. It was the NLP that launched the attack on Tel Zaatar. The third factor was the disintegration of the Lebanese Army, which meant that the required expertise, equipment, and manpower were available for a major battle. Fourth, the Palestinians likewise had now come openly into the conflict on the side of the Muslim left, mooting the Christian fear of precipitating Palestinian involvement. Finally, the decision to take Tel Zaatar occurred at a critical juncture after several major political developments had radically altered the likely alignment of forces.

● Syrian attitudes towards the Palestinians and their Muslim/leftist allies had changed in the wake of Kamal Jumblatt's rejection of the constitutional reforms prepared jointly by Presidents Hafez Assad and Suleiman Franjieh which had been agreed to by the Christian right.

● Kamal Jumblatt was unwilling to accept further Syrian mediation or Syrian-sponsored ceasefires.

● Consequent upon the changing Syrian attitude, the opening of a serious breach between Saiqa, the Syrian-sponsored group, and most of the other guerrilla groups belonging to the PLO was increasingly evident. In fact, Saiqa forces in Tel Zaatar left the camp and were allowed to escape by the Christian attackers in deference to the new Syrian role.

The Christians first laid siege to Tel Zaatar on January 1, 1976. This first siege was limited to a blockade of food and medical supplies. In a sense it was an attempt by the Christians to force the Muslims into redeploying their forces which at that time were heavily engaged in the hotel and port areas. Since the Christians were then hard pressed in the hotel district, central Beirut, Ain al-Rumaneh, and Shiyah, little more than a blockade of food and medical supplies could be considered. Once the battle lines began to stabilize, around the end of March 1976, the Christians were able to begin to mass for the eventual takeover of Tel Zaatar and its sister strongholds. However, a serious disagreement

between the Phalangists and the NLP, the spring Muslim/leftist/Palestinian offensive in Mount Lebanon (around Ain Toura and Mtein) to cut the Christian supply route to Zahle and Faraya, and a series of Syrian-sponsored ceasefires and mediation agreements culminating in the massive intervention of the Syrian Army on June 1, 1976, delayed the implementation of plans to take Tel Zaatar.

Tel Zaatar, a refugee camp of about 3,000 dwellings, held approximately 20,000 inhabitants prior to the beginning of the Lebanese conflict. In the period from January 1, 1976, through June 22, 1976, a number of families, fearing the worst, escaped. As tensions between Saiqa and other Palestinian groups grew and often erupted into warfare, Saiqa fighters began to evacuate Tel Zaatar. Conversely, however, the PLO began to reinforce the camp, and large amounts of ammunition, weapons, foodstuffs, and medical supplies were stored for the approaching battle.

The camp had an area of approximately 74 acres and was predominantly composed of temporary dwelling units built of concrete and stone with corrugated steel roofs. The southern perimeter of the camp abutted on an industrial area where the buildings were constructed primarily of reinforced concrete frameworks with concrete roofs and cinderblock or hewn rock curtain walls. These buildings were generally two to three stories high. On its western perimeter the camp adjoined a high-density residential apartment area. In the main, these apartment buildings were six to seven stories high and were built of reinforced concrete frameworks with cinderblock or sandstone. An occasional two-story villa built on a reinforced framework with hewn rock curtain walls could be found among the apartments.

To the north and east the camp was overlooked by a series of sparsely inhabited hills covered with umbrella pines, olive trees, and scrub brush. These heights form the foothills of Mount Lebanon which in this area quickly rise to an altitude of 2,400 to 5,800 feet.

The west and northeast of Tel Zaatar could be approached by a four-lane highway. On the east-west axis Tel Zaatar was accessible by a two-lane road which is a major link between Beirut and the Christian heartland. In the north-to-northeast area the hills overlooking Tel Zaatar were served by tertiary roads some of which were hard-topped and others little more than dirt tracks.

The camp itself had electricity and running water but in insufficient quantities to supply the 20,000 or so residents. Moreover, a large number of the camp dwellers could not afford electricity and running water even if it had been available, and therefore, relied on kerosene lamps and stoves and on a communal water supply fountain. The camp possessed an adequate first-aid station and dispensary, and was linked to other UNRWA (United Nations Relief and Works Agency)-sponsored medical facilities run by the Palestinian Red Crescent for the handling of more serious cases. Although no public transportation system served the camp, residents relied principally on private cars, jitneys, and buses for transportation.

Combatants

The Christian attackers of Tel Zaatar numbered approximately 1,800--500 from the Phalange, 500 from the NLP, 300 from the Lebanese Army, along with about 400 others coming from the Tanzim and the Defenders of the Cedars. The number of combatants varied, however, from day to day depending upon the intensity of the fighting and headquarters' perceptions of the need for reinforcements in other areas. Only the Lebanese Army

was exceptional in this regard--its members kept up a constant fight during the 51 days of siege. (The army figures are exclusive of the soldiers of the Fayadiyeh barracks and those manning and defending the communications center at Deir Mar Shaya and the artillery coordinating center at Deir Mar Roukuz.)

The Palestinian defenders totalled approximately 1,500 at the beginning of the battle. Their numbers decreased drastically through casualties, Saiqa defection, as well as from the mass escape that took place during the final two weeks of the siege. On the day Tel Zaatar fell it is estimated that the camp was defended by about 300 guerrillas and contained no more than 4,000 civilians.

The Christian attacking force, then, combined regular army combatants, disguised regulars (Tanzim), some seasoned militiamen, and some fairly green and undisciplined militiamen. On the Palestinian side, the defending force that remained after the defection of Saiqa and Syrian regulars disguised as Saiqa forces, was composed of some seasoned guerrillas belonging to the Arab Liberation Front (ALF), the Popular Front for the Liberation of Palestine (PFLP), and the Popular Front for the Liberation of Palestine--General Command (PFLP-GC), and, allegedly, volunteers from Arab countries supporting the PLO. Once the battle started every able-bodied man and adolescent male was pressed into combat. Thus, in terms of members and degree of professional competence, the attackers were evenly matched with the defenders at the start.

Within the first ten days of the battle, the attacking Christian force had achieved most of its objectives which were translated into a six-pronged attack. (See map.) Jisr el-Basha and Nabaa fell on June 29, 1976, to a combined force of Lebanese Army regulars and Phalangist and NLP militiamen. The attackers thus blocked the southern and western approaches to Tel Zaatar. Within the same period the northern approach at Dekwaneh/Sin el-Fil was blocked by a force principally composed of Phalangists. To the east a combined force of about 100 soldiers, 200 Tanzim, 400 NLP militiamen, and 100 Defenders of the Cedars launched a two-pronged attack and quickly approached the outer perimeters of the camp, reaching the el-Moukalles industrial area on the main road from the heartland to Beirut, and Deir Mar Roukuz along the tertiary road serving the hills directly to the north of the camp. Thus, the capture of Tel Zaatar and Nabaa, and the operations in Sin el-Fil and Dekwaneh area were merely blocking operations--blocking escape and reinforcement. The attack clearly was to come from the east on an east-west axis, since the avenue of approach on that axis was at a higher elevation than Tel Zaatar itself. The attacking force thus would be shooting down at Tel Zaatar while the defenders would be forced to shoot upwards at the attackers.

In launching the attack, 155mm and 122mm field artillery pieces were used in indirect fire, Super Shermans, Panhards, AMXs, APCs, M-42s, and Staghounds were employed to convey and protect the advancing troops, while 12 Panhards from the Fayadiyeh barracks provided direct fire against the industrial southern perimeter buildings of el-Moukalles. (See weapons list).

Without field artillery, the defenders did have four tanks mounting 75mm cannon. Nonetheless, they were able to mount indirect counter-battery fire by using 36 Grad and 4 Katushia rocket launchers, and direct counter-battery fire with a combination of recoilless rifles. Both sides made heavy use of mortars and anti-aircraft weapons. (See weapons list.)

Weapons

Christian militias and Lebanese Army Christian forces:
- 155mm howitzers
- 122mm field artillery
- AMX-113s
- APCs
- M-42s
- Super Shermans
- Staghounds
- 80mm and 81mm mortars
- 120mm mortars
- ZU-23 and 57mm AAA
- B-10s
- 106mm recoilless rifles
- Panhards

Palestinians:
- tanks and 75mm cannons
- 80mm and 81mm mortars
- 120mm mortars
- ZU-23 and -57mm AAA
- AK-47s
- other small arms

Military Considerations Affecting the Siege

Discipline among the militias left much to be desired. They failed in many instances to remain in their positions, frequently leaving their posts for overnight trips home. Thus, the defenders could retake lost positions, hindering the Christian advance. The militiamen often refused to take suitable cover, and thus took inordinately high casualties. This slowed the advance, as wounded had to be evacuated and replaced—maneuvers that could only be performed under cover of darkness.

The attackers found the camp to be much better fortified than expected and not seriously affected by the shelling and mortaring. Honeycombed with underground tunnels and bunkers, which allowed the defenders to reach and withdraw from the outer perimeters as needed without being seen or taking heavy casualties, the camp also had tunnels through many of its buildings' first-floor walls, permitting defenders extensive safe freedom of movement.

Although sniping was used by both sides, it was a far more formidable tool in the hands of the defenders since they tended to fire from behind cover provided by buildings at attackers in the open who in some cases refused to take cover or observe fire-and-maneuver tactics.

Within a week of the Christian attack on Tel Zaatar leftist forces in the north of Lebanon aided by Palestinians from the camps surrounding Tripoli massed for an attack on the Koura region, ultimately taking Chekka on July 5. This offensive forced the Christians to temporarily divert some of their forces from Tel Zaatar to repel the Muslim attack and recapture the region. The Christians were able to retake Chekka on July 7, but had to keep a large force in place to defend the region from further attacks.

As in the Beirut fighting, the Christians were quite anxious to minimize their losses at Tel Zaatar. Heavy casualties would have had an adverse effect on the Christian population, and would have led to questions about the wisdom of taking Tel Zaatar in a situation in which the lines had been stabilized and the Syrians had entered. Moreover, significant casualties could have seriously lessened the ability of the militias to recruit additional manpower.

Political Aspects of the Siege

The taking of Karantina and the worldwide coverage it received taught the Christians a valuable lesson: rather than launch an all-out offensive which could have resulted in high civilian casualties and strains on relations with some friendly Arab countries, the attackers instead opted for a war of nerves. Intermittent shelling and mortaring of Tel Zaatar with the deliberate opening of escape avenues encouraged a large number of the camp's civilian population to leave. The siege of Tel Zaatar prepared Arab and Muslim public opinion for the camp's eventual defeat, and thus its eventual fall was much less a shock and surprise than the Karantina episode had been. Another reason for the intermittence of the battle was the decision to allow Saiqa defenders and their families to leave. Christians saw this approach as a means, first, of placating Syrian public opinion (which, on the whole, did not support the thrust of the Syrian intervention in Lebanon); second, of assisting the Syrians who were cooperating with the Christians at this time; and third, and most obviously, of reducing the firepower and manpower of the camp's defenders.

Tel Zaatar became a pawn in the political activities that accompanied the Syrian intervention. As long as the Muslim/leftist/Palestinian bloc refused to accept, and in fact resisted, the Syrian intervention in Lebanon, Tel Zaatar could be used psychologically to sap their morale. It was widely believed that the Muslim/leftist/Palestinian alliance could not accept the psychological loss of the capture of Tel Zaatar. The Christians repeatedly offered Yasser Arafat the peaceful surrender of the camp and the safety of its inhabitants and combatants presumably in exchange for some other strategic concessions on the part of the Palestinians.

Preparation for the final Christian offensive against Tel Zaatar started on August 5, 1976; the offensive itself began on August 10. In the period between the first and final offensives a number of developments occurred that made the outcome of the final attack inevitable:

● The first series of developments had to do with the Syrian advance into Lebanon. The Syrian Army had occupied all of the Bekaa Valley, reached the outskirts of Sofar on the main east-west highway linking Beirut and Damascus, entered the environs of Ain Toura, and advanced on Sidon. In the north, the Syrian Army had also reached Tripoli and the major Palestinian camps of Bared and Baddawi. The Syrian advance had thus cut the major lines of communication between Muslim/leftist/Palestinian forces operating in the Bekaa Valley, Sidon, and Tripoli. It was therefore clear that Beirut was to be the next major target. Therefore, the Muslim/leftist/Palestinian offensive against the Christian heartland which had been launched in the spring had to be abandoned as the leftists had to concentrate their forces to blunt the Syrian advance on Sidon, Tripoli, and Beirut. The Christians were then able to concentrate their forces on

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Tel Zaatar, after recapturing Chekka and closing the Koura area to Muslim/leftist/Palestinian forces. The Christians were also able to bring some of their forces from Beirut to Tel Zaatar, since the battle line in Beirut further stabilized as the Palestinians girded for the showdown with the Syrians.

     ● There is every indication that the final offensive on Tel Zaatar occurred with the tacit approval of the Syrian Army in Lebanon. In fact, Syrian officers observed the assault from the vantage points of various Christian headquarters. Also, in the few weeks prior to August 5, a number of Saiqa combatants and civilians evacuated Tel Zaatar.

Tactics and Weapons' Effects

During the initial phase of advance, which took place during the first two weeks, 155mm and 122mm field artillery pieces were used along with mortars (see map) to keep the defenders pinned down. Most of the temporary dwellings collapsed and some of the industrial buildings were heavily damaged. The attacking forces on the two axes were able to advance to the outer perimeter of the camp with ease. It was only after they reached the southern perimeter of the camp that severe fighting broke out that stalled the attack for political as well as military reasons.

The final battle was a Lebanese Army operation. A communication network was established by signal officers of the Lebanese Army for the purpose of coordinating the attack and artillery support. Armored cars from the Fayadiyeh barracks were positioned to provide direct fire support, and two of the three columns of attack were led by Lebanese Army officers. The third column was a blocking-and-dividing operation taken up by the Phalangists in the Dekwaneh sector.

The advance on Tel Zaatar was made through two main corridors—on the main road from Beirut to Beit Meri/Ain al-Rumaneh, and on tertiary roads that connect Burj Hammoud to Beit Meri/Ain al-Rumaneh. Both corridors run in a generally east-west axis.

The offensive was preceded by an artillery and mortar barrage from Lebanese implacements in the higher hills overlooking Tel Zaatar. Under the cover of artillery and mortar barrages, the Christian attackers were able to advance south rapidly and reach the inner defense perimeter of Tel Zaatar. Attacking soldiers were provided cover by APCs, armored cars, and tanks which spearheaded the offensive. It was only when the attacking forces reached the inner perimeter that fierce fighting occurred. Using nine Panhards (armored cars with 90mm cannon) positioned at Fayadiyeh and Super Shermans (tanks with 76mm cannon) in direct fire, the Christians were able to breach the inner defensive perimeter, which, as described above, consisted mainly of two- to three-story industrial buildings. Once inside the camp, it was up to the infantry, with some support of B-10s and 106mm recoilless rifles, to take buildings, bunkers, and reinforced positions.

Since the attackers were predominantly Christian soldiers and officers of the Lebanese Army, fire-and-maneuver was observed in the advance. When an element came across a fortified position on the second or third story of a building, direct fire from the Panhards and Super Shermans was used.

When an advancing element reached heavily fortified and sand-bagged positions at a first-floor level, B-10s, 106s, and RPG-6s and -7s were most frequently used, with telling effect. In certain cases drums full of jellied gasoline and explosives were rolled up to the sand-bagged or

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reinforced concrete walls and detonated by either time fuses or remote control devices. In most cases, the detonated barrels not only breached[3] the wall but also sprayed the defenders with burning jellied gasoline. This, more than anything else, had a deep psychological effect on the defenders in the camp. It led the Palestinians to claim that the Christian attackers were resorting to gas warfare, and it reinforced an idiosyncratic Arab fear of fire and death by fire. It was not long before defenders began to run when they saw a barrel (whether or not it in fact had gasoline inside) being rolled toward their positions.

Once inside the camp, where direct fire from Fayadiyeh could not be brought to bear and where advancing Super Shermans could not maneuver, the attackers, using ANPR-77s and small UHF radios, called for artillery and mortar fire, giving the artillery coordinating center (see map) the proper coordinates of the position to be shelled. This generally resulted in relatively accurate fire, causing serious damage.

In certain cases, as pictures and films confirm, buildings were actually blown up. It is difficult to determine, however, which buildings were blown up during the course of the battle and which as part of the Christian campaign to totally raze Tel Zaatar after the camp fell.

An estimated 8,000 rounds of ammunition from 155s, 122s, and a variety of mortars fell on the camp during the course of the battle. Buildings were hit time and again by a variety of rounds. Therefore, it is impossible to describe the effect of the different rounds on different buildings. Only in the outer southern and western perimeters (the industrial and residential areas described above) can one clearly see the effects of the different types of rounds. The picture that emerges suggests these buildings withstood the shelling with medium to light damage. In other words, they could have continued to provide defenders with adequate cover had they chosen to stand and fight. Moreover, the buildings could have been easily repaired and reinhabited.

Rubble in the outer perimeter area does not appear to be extensive, and did not prove to be an obstacle to the advancing columns. Mines, which were planted by the defenders at the edge of the inner defense perimeter and in the camp as they retreated, were a factor deterring the use of armor inside the camp. Another factor that deterred the employment of armor there was the amount of rubble (most of the temporary buildings having collapsed from artillery shelling) encountered. It may also have been feared that the remaining civilian inhabitants, who were attempting to flee, might have inhibited armor movement.

Civilians were both a positive and a negative factor for the camp's defenders. Food, water, and medical supplies would have lasted the defenders longer had the camp been evacuated of its civilians earlier. Similarly, the dispensary was overtaxed because of the high number of civilian casualties. From a morale point of view as well, the presence of civilians was a detriment to the fighters. They were quickly informed of casualties in their immediate and extended families, and were there-fore caught between having to defend the camp and find safe escape routes for their families. Toward the end of the siege, fear of retribution by the Christian attackers against the families of those commandos or guerrillas who continued to defend the camp became an important psychological factor.

On the other hand, the presence of the civilians and the Inter-
national Red Cross culminated in agreements between the Christians and
the Red Cross preventing a general massacre. The International Red Cross
was instrumental in securing the safe evacuation of civilians and the
wounded on several occasions. During these evacuations, certain fighters
and wounded commanders were evacuated.

The presence of the Red Cross helped focus international public
opinion on the plight of the civilian inhabitants of Tel Zaatar. The
camp's defenders were quick to take advantage of this by preventing a
total evacuation of civilians from the camp. In other words, as long as
the International Red Cross was on the scene and as long as there were
civilians in the camp, it was certain that the defenders would not be
massacred. They even had the opportunity to escape by dissimulating
their true identity and passing themselves off as civilians.

Christian casualties were evacuated in open trucks to small hospitals
five to ten miles away. Ambulances were either unavailable or not used.
The risks to those seriously wounded may have been considerably enhanced,
and their chances of survival substantially reduced, by the use of open
trucks where adequate preliminary treatment was not available. Further-
more, evacuation routes were along hilly, narrow, and uneven roads which
must have complicated problems for those with broken bones or necks.

Trucks were also used by the International Red Cross to evacuate
Palestinian casualties, so the same reservations concerning treatment of
evacuees applies to both sides. However, some of the Palestinians were
treated at the camp dispensary where adequate care and preparation for
the evacuation took place.

On the day of the offensive, Christian troops reached the inner
perimeter of the camp, occupying PFLP headquarters. On the 11th, they
captured the camp's last remaining water source and penetrated into the
camp capturing a key hill known as General Command Hill. On that day the
defense perimeter of the camp was reduced to between 200 x 500 yards and
400 x 800 yards. The camp's defenders by then numbered only about 300.
Tel Zaatar was finally captured on the morning of August 12, 1976.
Mop-up operations took place the entire afternoon to subdue scattered
resistance from Palestinian commandos trapped in some of the buildings.

THE FIRST BATTLE OF FAYADIYEH

The Fayadiyeh barracks sit astride the main Beirut-Damascus highway
some ten kilometers east of the capital. It is principally known as the
home for the Lebanese Army Military Academy. However, housed within
Fayadiyeh were a commando battalion, a military police battalion, signal
elements, internal security forces (FSI) and an infantry recruit training
facility. Prior to the civil war the Fayadiyeh barracks commander was
charged with providing the Beirut garrison with necessary support whenever
needed, protecting the Lebanese Ministry of Defense at Yarze, providing
the army detachment (presidential guards) assigned to the presidential
palace at Baabda with necessary support, and protecting a principal army
ammunition dump not far away. During the conflict, the Fayadiyeh barracks
was tasked with providing support for the presidential palace in case of
attack and for NLP combatants in the Shiyah/Ain al-Rumaneh axis, as well
as for a mixed Christian force in the Gallerie Samaan area of Beirut.

(At a later date the men of Fayadiyeh were to provide direct support
for the attack on Tel Zaatar and participated in the taking of Jisr el-
Basha.)

From a strategic point of view, Fayadiyeh not only controlled the
main Beirut-Damascus road, but could also control the main Sidon-Beirut
road and all secondary roads that branched off from these main roads.
These secondary roads also serviced other major arteries leading into
and out of the city.

Just prior to the disintegration of the Lebanese Army, the Fayadiyeh
barracks (excluding the military academy) housed some 1,500 men. After
the Muslim defections that number dwindled to about 700. However, it
soon rose back to about 1,500 as Christian army remnants (see discussion
of port battle) affiliated with the Christian garrison at Fayadiyeh.

Equipment and materiel located at the barracks once the battle
started, on or about the first of March, consisted of 33 Staghounds,
24 ZU-23s, 6 ZU-57s, 30 mortars of various calibres, and a large number
of anti-tank and anti-personnel mines of all makes.

As the battle evolved over several months, ending with the Syrian
advance, the Fayadiyeh barracks could use 155mm and 122mm field artillery,
and 120mm and 160mm mortars that became available. Moreover, four M-42s
and two 106mm recoilless rifles available from the presidential palace
reverted to the barracks' use when President Franjieh abandoned the palace
on March 25, fleeing to Jounieh.

Combatants

On the Christian side most of the combatants were regulars of the
Lebanese Army. In certain instances civilians from the main villages
surrounding Fayadiyeh were trained by the men of Fayadiyeh to man the
ZU-23s and to assist the army in its defense perimeter. The commando
battalion and military police battalion were considered elite units of
the Lebanese Army. The FSI elements, which manned the Staghounds, were
army-trained, but not considered to be as proficient as the other two
units.

On the Muslim side, the main force was composed of Kamal Jumblatt's
PSP militia and some elements of the Lebanese Arab Army, mainly armored
units. A number of Palestinians from various PLO elements joined these
units later, but their main purpose appears to have been stopping the
Syrian advance rather than joining in the battle against Fayadiyeh.
Thus, the leftist forces were principally made up of irregulars.

Weapons

Lebanese Army:
- Staghounds
- ZU-23s
- SU-57s
- various calibre mortars
- anti-tank and anti-personnel mines
- 155mm and 122mm field artillery
- M-42s
- 106mm recoilless rifles

- M-16s
- RPG-6s and -7s

Muslims:
- Panhards
- AMX-13s
- 105mm field artillery
- Grad rockets
- Katushia rockets
- B-10 and 106mm recoilless rifles
- RPG-6s and -7s
- AK-47 assault rifles
- 12.7mm heavy machine guns

Tactics and Weapons Effect

The leftist attack on Fayadiyeh was launched from five directions:
along the main road from Aley through Kahale to Fayadiyeh, and on
secondary roads through Araya, Bsousse, Bdedoun, and Bsaiba.

To defend these positions and provide the necessary support for
other operations, the tactics employed combined both static and mobile
warfare. The 23 Staghounds and 30 ZU-23s and -57s were deployed as
follows: 3 Staghounds at Araya, 5 at Kahale, and 3 each at Bdedeoun,
Bsousse, and Bsaiba. The remainder of the Staghounds constituted a
mobile ready-reserve as well as a strike force that could quickly move
to reinforce any of the above positions depending on the intensity of
the fighting in a particular sector.

The ZU-23s and -57s were mounted on tracks and provided the Staghounds
and defenders of the above positions with the necessary cover during an
attack. The Staghounds were parked along buildings and in the shadow of
others to provide cover against incoming artillery rounds. A mixture
of soldiers and army-trained civilians was then deployed around the Stag-
hounds to provide them with cover against advancing enemy soldiers.
Moreover, the army then mined the main avenues of approach with antitank
and anti-personnel mines of all makes. The army also mined the fields
and forests adjoining the mined roads with anti-personnel mines to protect
the mixed infantry/civilian forces against attack and to provide an early
warning system since most fighting took place at night. The bridge at
Kahale on the main Beirut-Damascus road was also mined as a precautionary
measure and would have been blown up had Kahale fallen.

When the intensity of fighting increased in a particular sector
artillery support was called for from Christian positions in the Ain al-
Rumaneh/Beit Meri area, and mortars were fired from around Deir Mar Shaya
and Deir Mar Roukuz. When it appeared that the defenders of a particular
sector were about to be overrun, defenders from other sectors and some
elements of the presidential guard were used to reinforce the position.
In fact, in one particular battle in the Kahale/Araya sector when it
appeared that the attackers would overrun their position despite the
commitment of all available ready-reserve troops, the cadets of the
military academy were used to stem the tide.

With the exception of the attack in the Kahale/Araya district, in
which hand-to-hand combat took place, most of the fighting was limited to
probes and long-range shelling between attackers and defenders. As a
matter of fact, the attackers never did press the defenders on all five
fronts, although they appeared to enjoy a 9-to-1 superiority in manpower,
and a 7-to-1 advantage in armor. 22

In the Kahale/Araya area the attackers lost over 1,000 men in the decisive battle, most of the casualties due to small arms and light and heavy machine gun fire. In the Gallerie Samaan area and on the Shiyah/ Ain al-Rumaneh axis, the elements from Fayadiyeh provided a second line of defense and support. The ZUs and mortars that were brought to bear proved lethal against human-wave attacks. It is reported by more than one source that in the repeated fighting in the Shiyah/Ain al-Rumaneh-Gallerie Samaan areas the leftist attacks took more than 500 casualties. In the fighting around the five villages mentioned above, the army and the army-trained civilians lost 90 men and an undetermined number of wounded. Most of the casualties were the result of small arms fire. In only one case were casualties the result of artillery, a 122mm round which scored a direct hit on a Staghound.

In general, the area around Fayadiyeh suffered light artillery damage and, with the exception of a few buildings in Kahale, the area escaped relatively unscathed. Christian countershelling of Aley and the head-quarters of Kamal Jumblatt was also light. There seemed to exist a tacit agreement between the parties to inflict as little damage as possible. The 20 AMX-13s, which the leftists possessed as a result of the mutiny of Muslim troops in the Albah barracks, and which could have turned the tide in the Kahale area, were not used because of breakdowns and the absence of proper maintenance. In fact, one AMX-13 and three Panhards that were used in the Kahale/Araya battle were abandoned by the leftists because of mechanical difficulties, and were captured by the Christians.

The inability of the leftists to bring their superior arms to bear is also a principal reason damage in the area was limited.

III. THE SYRIAN PHASE

BACKGROUND

After repeated Syrian efforts to secure a ceasefire in Lebanon, halt the leftist offensive against the Christian heartland, and bring about leftist adherence to the constitutional revisions concluded by Franjieh and Assad that the Christians had already accepted, the Syrian Army entered Lebanon on June 1, 1976. Ultimately, Syrian forces were to number 30,000 troops with 500 tanks and other armored vehicles.

The pretext for the Syrian intervention in Lebanon was an appeal by the Christian inhabitants of the villages of Qubayyat and Andakhat for Syrian assistance in repulsing the leftist offensive against their villages.

In the north the Syrians sent two columns into Lebanese territory. One column, composed of a Syrian regiment of 200 troops and 60 T-62 and T-54 tanks, crossed the Lebanese border into the Akkar region to relieve the leftist siege of the two villages of Qubayyat and Andakhat; the other column of about the same strength crossed the border on route two, occupying the Lebanese Air Force base at Kleiat and ultimately reaching the outskirts of Tripoli on the 11th of June.

In central Lebanon a regiment with 25 tanks advanced on route one breaking the leftists' two-month blockade of Zahle and ultimately reaching Deir al-Baydar on June 6.

In Sidon Syrian forces in Saiqa uniforms withdrew from the city after fierce fighting with other PLO units and occupied the American oil refinery at Zahrani. In Beirut after intense combat between Saiqa-Syrian soldiers and PLO units in the Sabra and Shatila refugee camps, Saiqa withdrew and occupied the Beirut International Airport.

On June 13, a Syrian armored brigade with 40 tanks supported by infantry and artillery travelling on route six overran Palestinian bases in the Arkoub region and cut the Arafat trail.

On June 8, two armored columns which had originated at Deir al-Baydar moved south toward Jezzine and attempted to enter Sidon. Another column moved northward from Deir al-Baydar towards the leftist-held towns of Ain Toura and Mtein. On July 11, a Syrian column travelling north from Zahle on route four overtook the Lebanese Air Force base at Riyaq and began shelling Palestinian positions around Baalbek.

During the next several months the towns of Baalbek (July 15), Ain Toura (September 29), Bhamdoun (October 17), Beirut (November 15), Sidon, and Tripoli (November 21) fell as the Syrians brought all warring factions under control.

SYRIAN OBJECTIVES

It is clear that the principal Syrian objectives were to prevent the leftists (over whom they no longer had as much influence) from overrunning the Christian positions in Lebanon and to prevent the leftists from thus establishing control over the entire country. Either of the two cases could have provided Israel with a pretext for invading Lebanon. Israel had by then advanced its claim to be protector of the Christians, not only in Lebanon but throughout the Arab world. Israeli officials also made it clear they would not tolerate a radical regime in Lebanon that might threaten their northern border.

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Given the widespread support the Palestinians and their Muslim and leftist supporters enjoyed in the Arab world, the Syrians realized that an outright attempt to crush these elements would adversely affect the Syrian position in the region. Thus they adopted a policy combining conciliation and force. Force was used sparingly—only when conciliation efforts failed to dissuade the Palestinians and leftists from impeding the Syrian advance in Lebanon. This policy explains why the Syrian Army took about five months to achieve its objectives, and why Lebanese towns such as Bhamdoun, Sidon, and Tripoli were spared an outright Syrian assault. In the cases of these three towns the Syrians chose limited application of military power (usually by entering a town and then pulling out several times) to convince the defenders to evacuate these towns or at least not to resist Syrian forces.

During this five-month process the Syrians were able to enlist the support of other Arab nations, such as Saudi Arabia, Libya, and Algeria, to pressure the Palestinians and leftists into acquiesence. Also, Damascus was able to use the good offices of Arab nations such as Saudi Arabia and Jordan to enlist U.S. support for the Syrian role in Lebanon to ensure Israeli neutrality. By the time Beirut, Tripoli, and Sidon had fallen, the Syrian role in Lebanon had been legitimized in the Arab world and had become equally acceptable to the Israelis.

The Syrians had two main *military* objectives. First, they wanted to cut the supply lines supporting the Palestinian-leftist offensive against the Christian heartland; then, the Syrians would attempt to divide the country into several more manageable areas.

The occupation of Zahle, Sofar, Ain Toura, and the northern Bekaa effectively reduced the ability of the Palestinians and leftists to sustain their two-pronged offensive in the Mount Lebanon area. Syrian operations around Baalbek and Tripoli brought several important Palestinian camps under control (Wavell near Baalbek, and Baddawi and Bared near Tripoli). The seizure of these camps prevented the Palestinians from reinforcing their Muslim and leftist allies in the Bekaa and Tripoli areas, which in turn helped break the siege of Zahle and relieved pressure on the fiefdom of former President Franjieh in Zghorta and Chekka.

By moving south and occupying the Arkoub and the Merj Uyyoun area, the Syrians neutralized Palestinian forces in the region, preventing them from launching a raid on Israel which would have provided Israel with a pretext to invade Lebanon. Sidon's strategic value lay in its being an important supply center for the Palestinians and their leftist allies. The oil refinery at Zahrani, just south of Sidon, provided the Palestinians and leftists with all the petroleum, oil, and lubricants (POL) they needed for their operations, and the refugee camps around Sidon and Nabatiyeh constituted an important manpower reservoir for the Palestinians and leftists.

The seizure of Beirut and the main Beirut-Damascus road split the country in two, which seriously hampered the ability of the Palestinians and leftists to reinforce their fighters in Beirut from Sidon or from and through Tripoli and the Bekaa. The two important camps of Shatila and Sabra could be more easily controlled with a Syrian hold on the lifelines.

By November 21, Lebanon was divided into five distinct regions: Tripoli and the Akkar, Mount Lebanon, the Bekaa Valley, the Shuf, and a no-man's land between the Litani River and the southern border of Lebanon. The Syrians occupied not only all of the major towns in the region but sat astride all major roads linking one region to another.

Sofar-Bhamdoun-Aley

In a quick thrust Syrian forces crossed the Bekaa and raced up Mount Lebanon, seizing the two posts of Mdeirij and Deir al-Baydar on the Beirut-Damascus highway by June 6. Initially, there was little leftist resistance. It was only when Syrian troops moved into Sofar that the opposition resisted actively. However, Sofar fell to the Syrians on June 7, and they moved on to Bhamdoun where their advance was slowed.

On June 9, the forward elements of the Syrian armored columns entered Bhamdoun only to withdraw. This Syrian maneuver coincided with similar actions in both Sidon and Tripoli. Advanced units of the Syrian Army entered the towns and withdrew. Had the Syrians so desired, they could have captured all three cities. It appears, however, that the Syrians had both political and military reasons (discussed above) for their apparent hesitancy. By moving into all three cities at once the Syrians demonstrated their awesome advantage over, and the relative weakness of, the combined leftist forces. This demonstration was designed to enhance the process of conciliation. At the same time, it forced the combined left to choose the places for, and types of, battles. Clearly, since Beirut was the nerve center of Lebanon, the Syrians hoped that their opponents would mass their forces around Bhamdoun and Aley for a major confrontation, leaving Tripoli and Sidon, the northern and southern flanks of Beirut, respectively, open to a Syrian blitzkreig. Instead, the combined leftist forces opted to defend all three cities with a combination of rearguard and guerrilla activities. Although some elements were rushed to help defend the Bhamdoun/Aley axis, the disposition of the combined left forces remained intact in Tripoli and Sidon.

During the succeeding three months, the Syrians resorted to conciliation through direct negotiations and an Arab League conference. Meanwhile, they maintained pressure, actually a virtual stranglehold, on Bhamdoun, Tripoli, and Sidon, and proceeded with mop-up operations in the Bekaa, Mount Lebanon, the Shuf, and the Arkoub area. The combined leftist forces were then limited to a small pocket around Tripoli and a triangle composed of Beirut, Bhamdoun, and Sidon.

In anticipation of the Riyadh Conference, which took place in the middle of October 1976 and was supposed to bring about a stable peace agreement, the Syrians resumed their attack on Bhamdoun and began an advance on Sidon. On October 17, as a result of King Khaled's intervention, the Syrian Army observed a ceasefire after overrunning Bhamdoun. The Syrian objective in capturing Bhamdoun on the eve of the Riyadh Conference was to underline to the conference's participants both Syria's determination to carry out its mission in Lebanon regardless of the conference outcome, on the one hand, and the weakness of the combined leftist forces, on the other.

Bhamdoun

The Syrian advance on Bhamdoun on June 7 was led by a battalion of tanks with little infantry support. The absence of infantry support suggests that the Syrian advance was either a probe, or that the Syrian Army had not trained adequately for MOBA. U.S. officers who were in Lebanon during that period suggest that it was a combination of both.

The Syrian force that entered Bhamdoun on October 13 was a combined armor unit of tanks, infantry, and artillery. The attack began at 9:30 a.m., preceded by a medium to heavy artillery barrage combined with Grad missiles. The Syrians attacked Bhamdoun from three directions, and captured two strategic hills overlooking the city. On the following day at 4:00 a.m. Syrian artillery opened up again, and at 5:30 tanks supported by infantry launched the final assault on the city itself. In heavy house-to-house fighting, the Syrians forced the defenders to retreat from the main Beirut-Damascus highway and pushed on to Aley. Mopping up continued until the ceasefire went into effect on the 17th.

Initially the combined leftists fought the Syrians in a rear-guard action, conceding territory as they regrouped in other areas. Once the Syrians pushed through, the combined left resorted to ambush and hit-and-run guerrilla tactics.

Syrian armored elements involved in the Bhamdoun fighting were from the 5th armored division, equipped principally with T-55s and with a number of T-62s. In the Bhamdoun battle of October the Syrians threw in an estimated 100 tanks supported by an infantry regiment. 122s and 130s were reportedly used, along with Grads and Katushias.

The combined left was composed of elements of the Lebanese Arab Army, Jumblatt's PSP, and PLO guerrilla units. Their principal armament was the jeep-mounted 106mm recoilless, and its Russian equivalent the B-10, along with the anti-tank RPG-6s and -7s. Moreover, the combined leftists used anti-tank land mines in both Sofar and Bhamdoun, disabling at least one tank and several trucks.

In the June 7 probe of Bhamdoun four tanks were destroyed, at least one from an RPG-7 and one from a mine.

On October 13, a column of 15 tanks came under 106mm recoilless rifle fire which destroyed 4 tanks. Two trucks were disabled by mines.

The U.S. Army Attache (ARMA) in Beirut who visited Bhamdoun after the June 7 probe reported little sign of damage. It must be noted that Bhamdoun, a typical Lebanese village, combines two-story villas and four-to five-story apartment houses. Both types of structures have reinforced concrete basements, frameworks, and curtain walls made of hewn rock about eight to nine inches thick. Thus, light weapons (machine guns, AK-47s) are totally ineffective against these buildings, as is armor-piercing tank ammunition. RPG-6 and -7 rockets can breach these walls but do not seem to have been used by the Syrians. No reporting is available on the effect of the artillery barrages laid down by the Syrians in advance of the October 13 assault. However, reports of untrained observers passing through the main routes indicate very little damage.

Sidon

On June 7, 1976 the Syrian Army began its attack on Sidon, simultaneously blocking the port area of the city which was the primary supply center for the leftists. The Syrian force attacking Sidon is estimated to have numbered about 4,000. Prior to the assault, the Syrians launched an artillery barrage at the Zahrani oil refinery, setting some storage tanks on fire; on the Ain Hilwe refugee camp in the city's outskirts; on Sidon itself; and on Sidon's port area. BTRs, with the assistance of some T-54s and -55s, spearheaded the drive toward the center of town where the Syrian advance stalled. After vicious fighting the Syrians were repulsed.

Sidon was defended by Lebanese Arab Army units, Palestinian guerrillas, and their leftist supporters. The LAA used its Charioteers and recoilless jeep-mounted 106s while the Palestinians and leftists used RPG-6s and -7s. The leftists were not only familiar with the city--most of them lived there--but also had time to erect defensive positions along the Syrian line of advance. Armor and 106s fought Syrian armor at street level while defenders perched on roof tops fired PPG-6s and -7s at the advancing Syrian column. The leftists had also mined the streets, which hindered the attacking forces. On June 7 the Syrians lost seven tanks and a number of armored vehicles. It appears that at least one Syrian tank was knocked out by a British-made Charioteer. The devastated Syrian armor was so burned that it was difficult to tell the difference between the tanks and the APC. A Syrian tank's gun turret perched on a fifth floor balcony attested to the success of the leftists.

The Syrians advanced without infantry into the city on the main Sidon-to-Beirut highway after a reported agreement had been reached between the Syrian and leftist command to allow the Syrians to pass unimpeded. However, their agreement broke down and the Syrians were caught in a crossfire in the middle of a city with which they were unfamiliar.

After the battle, the Syrians withdrew to the Jezzine-Rum heights and continued sporadic shelling of Sidon, the Zahrani refinery, the port area, and the Ain Hilwe camp--shelling that continued throughout the summer. On September 2, the Syrians began to reinforce their concentrations in the Jezzine area bringing in more rocket launchers and artillery. On October 12, after heavy artillery bombardment, about 3,000 Syrian troops, supported by two armored battalions, launched another attack on Sidon. One column took the Jezzine-Rum axis, while the other took the Jezzine-Jbaa axis, thus executing a pincer movement around Sidon. On the 16th the Syrians were just a few miles from Sidon and began shelling the town. Roads were heavily mined and barricaded by the city's defenders and artillery pieces as well as rocket launchers and RPGs were moved into position on office building roofs to fire on armor attempting to move through the streets of the city. On the same day, at the request of King Khaled of Saudi Arabia, the Syrian Army began to observe a ceasefire. It was not until November 21 that the Syrians entered Sidon--this time peacefully.

Although the inhabitants of the city of Sidon are estimated to number roughly 150,000, it is extremely difficult to give exact figures because the last census was taken in 1932, and because the large influx of Palestinians swelled the population of the two camps of Ain Hilwe and Al-Miyamiyyeh. The city itself is old with very narrow roads and two- to three-story sandstone homes. The port is used principally as a fishing facility although coastal steamers do make stopovers there. During the civil war it became the principal supply port for the leftists as goods were transhipped in Cyprus from ocean-going vessels to coastal steamers. The exception in terms of roads and structures is to be found on the part of the main Beirut-Tyre highway that passes through Sidon. There the road was broadened to a four-lane highway with median strips and traffic circles. Office buildings five- to seven-stories high were built on either side of the road and it is through this avenue that the Syrian armor could travel. Thus, in the June fighting the Syrians found themselves unable to circumvent the defensive positions erected on this part of the Beirut-Tyre road. In the October assault a Syrian column moved

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north on the same road towards Sidon and another column which had come
down from the mountains north of the city split with one section heading
south toward Sidon on the main Beirut-Tyre highway, and the other headed
northward on the same highway toward Beirut.

In Sidon and possibly for the first time in the Syrian intervention
in Lebanon, regular units of the Syrian Army were opposed by regular
units of the Muslim faction of the Lebanese Army, some PLA units, some
seasoned guerrilla units who had fought the Israelis farther south, and
some irregulars. The defenders were familiar with and used the city
structure to advantage. In addition, both the Lebanese Army and the
Palestinians as part of their pre-civil war training activities had
trained to defend the city against Israel and to deny the city to each
other in situations that pitted the Lebanese Army against the Palestinians
in 1969 and 1973.

The Syrians by contrast were unfamiliar with the city and had their
mission further complicated by the necessity of having to use the main
road rather than being able to maneuver through other streets or avenues.

THE SECOND BATTLE OF FAYADIYEH

The second battle at Fayadiyeh started on February 7, 1978, as a
result of an altercation between Lebanese soldiers at the Fayadiyeh barracks
and Syrian soldiers manning the barracks' main gate. The Syrian position
at the main gate had been a subject of discussion between the Lebanese
Army command and the command of the Arab Deterrence Forces (ADF) for two
weeks preceding the incident. The checkpoint had been removed and set up
again several times prior to the actual fighting. Tensions between
Lebanese soldiers at the barracks and Syrian soldiers in the vicinity were
increasing as the debate over the checkpoint continued. Growing doubts
among the Lebanese population in general concerning the overall role
of the ADF and Syrian intensions in Lebanon contributed to the ill will
between Lebanese and Syrian troops.

The battle technically lasted for several weeks, although the major
fighting took place on the 7th, 8th, and 9th of February. The Syrians
continued to besiege the barracks after the 9th until a political settle-
ment could be worked out between Beirut and Damascus.

Combatants

The Lebanese units at the Fayadiyeh barracks numbered approximately
1,500: 300 cadet officers at the military academy, 700 to 800 recruits
who were in training or had recently completed the training program, 200
military police, and 40 officers. The cadets were second lieutenants
who had not yet been officially promoted due to the events in Lebanon;
some of them had seen action during the first battle of Fayadiyeh (described
above).

In the chain of command, the cadet officers and recruits undergoing training were under the control of the Ministry of Defense. However, the commander of the barracks exercised direct control over all units housed there as far as actual defense of the barracks and the surrounding district was concerned. Thus it was the commander of the Fayadiyeh barracks who exercised full command and control when fighting broke out on the 7th.

On February 7, 1978, the Syrian forces in and around the Fayadiyeh barracks consisted of an infantry regiment positioned at Jamhour, some two miles east of Fayadiyeh on the main Beirut-Damascus road; a headquarters and a combined artillery, armor, and infantry regiment at Sin el-Fil to the northwest of Fayadiyeh; and an emplacement of four 122mm field guns and two ZU-23 anti-aircraft guns 100 to 150 yards from the main gate of the barracks on the road from the barracks to the village of Fayadiyeh. During the night of February 7 and the following morning, total Syrian strength around Fayadiyeh was increased to four reinforced regiments totalling 12,000-15,000 men. At the checkpoint facing the main gate of the barracks, the Syrians positioned one rifle company, a T-55, and a supporting jeep-mounted Soviet-made 106. At Has Iye, west of the barracks on the main Beirut-Damascus road, the Syrians moved in a motorized regiment reinforced by a special forces battalion of about 500 men. To the north at el-Moukalles and at Tel el-Mir, the Syrians positioned another regiment with artillery, armor, and anti-aircraft weapons. Finally, during the heavy fighting of the 8th, the Syrians moved three special forces battalions totalling about 1,500 men to reinforce the checkpoint in front of the main gate of the barracks. With the exception of the special forces units, most of the Syrian elements around Fayadiyeh consisted of reservists and lesser-trained regulars; this was to limit the Syrians in tactics and use of weapons.

Weapons

Lebanese Army:
- M-16s,
- 7.62 (caliber .30) machine guns
- .50-caliber machine guns
- 6 M-42 "Dusters"
- 2 AMX-13s with 105mm cannon
- 1 AMX-13 with 75mm cannon
- a large number of RPG-7s
- an undetermined number of Staghounds
- an undetermined number of truck-mounted anti-aircraft weapons (Yugoslav Hispano-Suiza twin 20mms, Soviet twin ZU-23s, Swiss Oerlikon triple-barrelled 30 and 37mms, and Soviet ZU-57s)
- 3 122mm Soviet-made field guns

Syrians:
- AK-47s
- PRG-7s
- jeep-mounted B-10s
- 120mm mortars
- 122mm field guns
- T-55s
- 13 BTRs
- ZU-23s and 57s

Tactics and Weapons Effect

On the first day of fighting all soldiers within the barracks were
ordered to seek shelter during the daylight hours in the first floors of
the barracks buildings to protect themselves against direct fire from
tanks, rifles, and RPG-7s. In the buildings facing the main street,
soldiers were moved to the second floor to give them clear lines of fire
against the Syrian positions facing them on the road to the village, and
to enable them to sweep the main Beirut-Damascus road with fire in
anticipation of a Syrian advance. Heavy 50-caliber machine guns were
positioned on the second floors in sandbagged positions two to three
meters away from a window or door. Positioning a machine gun in such a
manner gave soldiers manning it additional protection against incoming
RPG-7 and B-10 rounds, and masked the muzzle flash making it more difficult
for the Syrians to detect the emplacement.

Additional 50-caliber machine guns were positioned on rooftops of
strategically located buildings, and were sandbagged for extra protection.
Each machine gun nest was reinforced with riflemen and a soldier carrying
an RPG-7. Farther inside the barracks and on the parade ground the three
122s were positioned in such a way as to provide direct fire against any
armored thrust coming in either direction on the main Beirut-Damascus road.
Staghounds were then interspersed between the buildings to provide additional
fire support for the machine guns and to assist against a Syrian attack.

To further insure against a Syrian threat, the defenders established
a forward position 150 meters from the barracks on the eastern side of
the Beirut-Damascus road. The position consisted of two AMX-13 with 105mm
cannon reinforced with an infantry platoon.

An enveloping movement was then attempted against the Syrian position
facing the main gate of the barracks. About 80 infantry men equipped with
M-16s, 30-caliber machine guns, and RPG-7s first moved towards the forward
positions and then took the high ground directly south of the barracks
between the barracks and the village of Fayadiyeh. These soldiers neutral-
ized the Syrian position facing the main gate during the first day of the
fighting and kept the 1,500 special forces men from reinforcing that
position on the second and third days while inflicting heavy casualties.

Another enveloping movement was attempted on the second day west
of the barracks on the main Damascus road with the hope of first establish-
ing a fortified forward position and then catching the Syrian position
facing the main gate in a pincer movement. The enveloping movement
attempted to link up with the Lebanese soldiers on the high grounds over-
looking the barracks. The attempt was unsuccessful due to stiff Syrian
resistance, largely from reinforcements who arrived in the area on the
second day of fighting. Nevertheless, the high ground overlooking the
barracks was in Lebanese hands and the barracks was secure.

During the night of the first day of battle Lebanese soldiers were
moved out of their buildings and positioned against the wall surrounding
the barracks. This was done for two reasons: darkness gave the Lebanese
soldiers cover therefore minimizing casualties; and the proximity of
Syrian special forces, especially on the western side of the Beirut-Damascus
road (less than 400 meters separated the combatants) meant that the
defenders had to be on guard against commando-type raids.

On the second day of fighting, as the Syrians began to besiege the
barracks and move units into the el-Moukalles/Tel el-Mir area, the Lebanese
defenders reacted by positioning an assortment of anti-aircraft weapons
and Staghounds to face them. Since the Fayadiyeh barracks was on higher
ground vis-a-vis el-Moukalles and Tel el-Mir, and since the distance between
the two forces was less than 2,000 meters, the effect of the high rate of
fire from the anti-aircraft weapons and direct fire from the Staghounds
would have been devastating. Thus, the Syrian units in that vicinity
were in effect neutralized.

The western perimeter of the Fayadiyeh barracks, defended mainly by
recruits, worried the barracks commander most of the second day. The
Syrians had brought in a regiment with a battalion of special forces and
the Lebanese commander was not confident that his freshly trained recruits
would be able to hold out against a determined Syrian attack. As it turned
out, the Syrians chose not to attack.

By the third day the fighting began to subside as a political formula
was being concluded between Beirut and Damascus, a formula that, because
of the intensity of the fighting and the high Syrian casualties, necessitated
the dispatch of former President Suleiman Franjieh to negotiate with his
close friend, Syrian President Hafiz Assad.

The Syrians appear to have been caught off guard by the fighting and
reacted angrily to its intensity. Although they should have anticipated
a fire-fight between their troops and the Lebanese as a result of establish-
ing the checkpoint in front of the main gate, they did not take adequate
measures to reinforce the checkpoint, nor did they expect the units at
Fayadiyeh to put up such a determined fight. The Syrians either under-
estimated the fighting capability of the units at Fayadiyeh or chose to
believe that, because of the preponderant Syrian presence in and around
Beirut, the Lebanese would not dare fight. In all fairness it should be
pointed out that any kind of battle between regulars of the Lebanese Army
and the ADF posed a delicate political problem for Damascus. The ADF
after all was tasked with separating militia combatants and working with
Lebanese security forces to maintain order. A fight between Lebanese
and Syrian forces would cast the ADF in the role of a conquering rather
than a peacekeeping force. There is also every reason to believe that

the Syrian reaction on the second day may have been the action of the
local commander rather than the result of an approved plan initiated by
the Ministry of Defense in Damascus. The fighting on the first day had
not been severe enough, nor had Syrian losses been so high, as to
necessitate the kind of punitive action that the Syrian military moves
during the night of the 7th indicated were going to take place. Indeed,
it seemed that the incident had been adequately contained. The Lebanese
garrison at Fayadiyeh, which had captured a five-man Syrian parliamentary
delegation, about 40 Syrian soldiers, and the building across the street
from the main gate, released its prisoners with full honors, even allow-
ing the soldiers to return with their full battle gear, and evacuated the
building. The Lebanese Army was attempting to show that it had acted in
self-defense and did not intend to take offensive action.

When the Syrians nonetheless moved during the night of the 7th, the
high ground overlooking the Fayadiyeh barracks had already been captured
and other Lebanese Army defensive dispositions clearly put the Syrians at
a disadvantage. The element of surprise was gone, and most of the Lebanese
positions with the exception of the western approach to the Fayadiyeh
barracks added to the Syrians' disadvantage. A determined Syrian attack
would undoubtedly have overrun the barracks, but the casualty tolls
would have been high and clearly unacceptable; the political repercussions
could also have been disastrous.

The large number of reserve and undertrained units that made up most
of the Syrian forces around the Fayadiyeh barracks on the second day
limited the options of the Syrian command. Poorly trained and poorly led,
these forces in the main refused to attack when so ordered because of the
accuracy of the Lebanese fire. Syrian artillery which ringed the barracks
could not be brought to bear as the artillery men were so badly trained
that they could easily have ended up shelling their own units in proximity
to the barracks. Thus, the Syrians were limited to the use of tanks in
providing artillery support for their troops. However, since most of
these tanks carried armor-piercing ammunition, they proved ineffective
against the barracks buildings, most of which were built of solid sandstone
approximately ten inches thick with thick, reinforced concrete floors and
roofs. Nor could tanks advance to provide cover for an attacking force
without risking hits from RPG-7 rockets and exposing themselves to direct
fire from the three 122s, the 105s, the AMXs, and the Staghounds.

The RPGs appear to have been the best weapons in the close fighting
that took place at the main gate and on the western approaches to the
Fayadiyeh barracks. On the second day of fighting, a direct hit from an
RPG on a T-55, which had been moved into position during the night to
reinforce the Syrian position facing the main gate, knocked the tank out.
The RPG round was fired at the tank from a second-story window and hit the
tank on the top of its turret. A jeep-mounted B-10, which then moved in
to provide cover for soldiers in that position, was similarly put out
of action by an RPG.

Syrian fire on the Fayadiyeh barracks knocked holes in most of the
buildings, but only in one case did a wall crumble as a result of direct
fire from a Syrian tank. Syrian mortars proved ineffective against the
roofs of the Fayadiyeh barracks, although fire from Syrian ZU-23s and -57s
using tracers started fires in two of the buildings, leaving them gutted.

Most of the Syrian casualties around the main gate seem to have been the result of rifle and machine gun fire from the barracks itself and the high ground overlooking the Syrian positions. In fact, on the first day of the fighting, Syrian gunners in that position abandoned their weapons when rifle fire from Lebanese soldiers on the high ground killed the Syrian troops manning the ZU-23. The rest of the casualties were the result of the assortment of Lebanese truck-mounted anti-aircraft weapons.

BEIRUT FIGHTING: JULY 1, 1978-OCTOBER 7, 1978

After the fighting around Fayadiyeh ended in March 1978, there was a lull in large-scale fighting until July 1, 1978. However, during that interval forces were at work that led to heavy fighting in July and October and that were to have a direct bearing on the Lebanese situation at present. Further, the fighting which erupted in July and October has many potential lessons for students of MOBA in terms of purely military matters (tactics, weapons' effect), political concerns (which can affect tactics), and psychological considerations, principally with respect to a city's defenders.

A brief discussion of events in Lebanon between mid-March and July 1 is a prerequisite for our analysis of the Syrian-Lebanese clashes that followed.

On March 14, 1978, Israeli forces invaded Lebanon ostensibly in response to a recent terrorist attack. Within a week they controlled southern Lebanon up to the Litani River. The Israeli advance, whatever its motives, underlined Syrian President Hafiz Assad's awkward military position vis-a-vis Israel. As one diplomat put it, "Syria was over-extended, overexposed, deeply involved in a situation that it did not control. . .His [Assad's] basic vulnerability was in Lebanon, and that is what [he wanted] to correct first."[4] Syrian forces were spread throughout Lebanon, except in the south, and were bogged down keeping the belligerent Lebanese factions apart. Furthermore, the Lebanese government under President Elias Sarkis was unable to assert itself forcefully enough to help bring the Lebanese militias under control. The Syrians felt that a weakening of Sarkis, Syria's choice for the presidency of Lebanon, meant a weakening of their own position. The Syrians viewed the Christian militias as the prime cause of instability in the country, resented their open alliance with the Israelis, were perplexed by their own negotiations with the Christians, and were receiving bad press concerning their role in Lebanon. The Syrians were also hesitant to enter into conflict with Christians from the Lebanese Army, and as in Fayadiyeh, were unwilling to take the losses necessary to bring army elements under control. As a result of these factors, two days before the heavy shelling of Beirut began, and two weeks after Tony Franjieh was killed, a large group of men in civilian clothes rounded up thirty Phalangists suspected of participating in the attack on Franjieh's home and killed them. The Christians charged the Syrians with the killings. Tension in Beirut was very high the next two days. Few people were surprised when the shelling began.

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When the Syrians started shelling Beirut on July 1, they had several
objectives, in addition to strengthening Sarkis: the Syrians wanted to
extend their presence into militia-held territory, obtain a more balanced
ratio of Muslims to Christians in the Lebanese Army, dismiss Christian
officers who cooperated with Israel, and secure military facilities for
defense against the Israelis. These goals could only be accomplished by
weakening the militias. The fighting began on July 1 and continued through
the fall, but was intense only in the first week of July and about the
first week of October.

Weapons

Christians:
- M-16s
- AK-47s
- 106mm recoilless rifles (jeep mounted)
- G-3s
- RPG-6s and -7s
- light mortars
- 155s
- Panhards
- Staghounds
- AMX-13s
- ZU-23s and -57s
- Sneb missiles

Syrians:
- T-54s, T-55s, T-62s
- 81mm, 82mm, 160mm and 240mm mortars
- Grad rockets
- 120mm field artillery
- Stalin Organ rocket launchers

Tactics and Weapons' Effects

When fighting began on July 1, 1978, the Syrians had between 15,000
and 20,000 troops in a circle around the Christian area of Beirut and
its suburbs. Concentrations of Syrian troops with armor, artillery, and
mortars were located in Bir Hasan, Sin el-Fil, Jamhour, Deir al-Baydar,
Al-Awazai, Shiyah, Jisr el-Basha, and also in several positions within
the port area. They also held the 40-story Rizk Tower which dominates
Ashrafiyeh.

On the first day of fighting, the Syrians bombarded the Christian
suburb of Ain al-Rumaneh with tank fire and heavy mortars. The Syrians
had ringed the district, allowing no one to enter or leave, and then
opened up their assault from all sides. They made no attempt to penetrate
the suburb, as they did not wish to risk heavy casualties. Instead, tanks,
field artillery, rocket launchers, and mortars encircling the area
launched a five-hour barrage so intense that more damage was done to Ain
al-Rumaneh that day than during the entire civil war. Shelling was
indiscriminate, killing 35 Lebanese, wounding 88. Most of the casualties
were civilian, as opposed to belonging to the militias. The defenders of
Ain al-Rumaneh were able to offer only limited resistance.

Ain al-Rumaneh was chosen as the first target due to recent skirmishes with Muslims in the neighboring community of Shiyah. The attack on Ain al-Rumaneh served notice to the Christians that the Syrians were ready to destroy the influence of the militias, and allowed Syrian artillery men to practice their skills before the east Beirut siege, which would require much more precise shelling, began.

On July 2, the Syrians began shelling the city itself. First, the market area was lightly shelled to encourage the many Muslim merchants there to leave for their homes in west Beirut. Then heavier fighting broke out with the Syrians attempting to destroy both the Phalangist headquarters at Saife, and the NLP headquarters near the Ministry of Defense. Heavy shelling also resounded throughout Ashrafiyeh in an attempt to break the will of its Christian civilians and defenders. Intensive fighting continued through July 6, causing heavy damage to parts of east Beirut, killing 160 and wounding over 500 Lebanese, mostly civilians. Syrian losses were not reported but appear to have been greater than the Syrians had anticipated. Fighting stopped on July 6, after President Elias Sarkis, upset over Syrian actions undertaken partially on his own behalf, made it clear he would resign if the fighting continued; Israeli jets buzzed Beirut the same day as a warning to the Syrians.

Despite the intensity of the shelling (250 to 500 metric tons of ordnance fell on Ashrafiyeh each day during the shelling), the destruction and loss of life in East Beirut were less than they might have been. Damage to and rubbling of buildings were lessened as a result of the ineffectiveness of Syrian artillery personnel. Heavy mortar shells usually exploded on impact with walls, causing rubble to form within buildings, lessening damage to buildings as a whole, and reducing casualties inflicted on those within the building or room the shell struck. By setting the shells to explode 1/500 of a second after impact, the rubble would have blown outward onto the streets, damage within the buildings would have been more substantial, and casualties would have been greater. It is possible that the Syrians either did not have the delay fuses or did not wish to use them. However, judging from the volume of fire leveled at east Beirut, the Syrians were trying to inflict as much damage as possible.

The Syrians were still unable to aim their fire with any great precision, hindering their efforts to destroy Christian strongholds such as the Phalangist and NLP headquarters which remained in operation through- out the assault. In fact, there was a saying among Beirut's Christians to the effect that one was lucky if the Syrians were trying to hit his house, for it would be in that case the least likely residence to be hit. The Syrians did not employ forward artillery observers which further reduced accuracy of fire.

Despite the virtual encirclement of east Beirut, overwhelming Syrian firepower, and Syrian control of the Rizk Tower, the Syrians were unable to inflict heavy casualties on the Christian militia defenders. This was due not only to their inefficient use of artillery, but also to the first-floor tunneling networks the Christians had set up. Militiamen could move freely under the very guns of Syrians in the Rizk Tower without being seen. Furthermore, militia leaders exercised great caution in the use of their forces. Heavy losses sustained by the militias could make recruiting difficult.

When President Sarkis made it clear that he would resign if the shelling did not cease, and when Israeli war planes buzzed Beirut the same day as a warning to the Syrians, the fighting soon stopped and a ceasefire was declared. However, the Syrian desire to force the militias to submit to Sarkis remained.

With the exception of July 22 and 23, the rest of July was relatively calm in Beirut and its suburbs, as the Christians resupplied themselves with food, water, arms, and ammunition.

During August, fighting in Beirut was mainly between the various factions within the city. There were murders, kidnappings, and small-scale street fights. The Syrians occasionally shelled or fired on selected neighborhoods, but for the most part kept a low profile in the city in order to placate Sarkis and the Israelis. However, Syria was still determined to neutralize the power of the Christian militias and began trying to disarm militiamen in the mountains north of Beirut. By the end of August the Syrians had swept through the Batroun region, controlling the hills that overlook northern Lebanon's major road network, and were in a position to completely sever supply lines between the port of Jounieh and east Beirut. However, despite the tensions created by Syrian actions in the mountains, numerous small clashes in and around Beirut between Christian militiamen and Syrian troops, and even some occasional Syrian shelling of east Beirut from September 8 through 12, the Syrians maintained a holding pattern during the Camp David negotiations in September.

The Camp David agreements contained no pleasant surprises for the Syrians, nor for the Christians. On September 30, less than two weeks after the accords were announced, the heaviest fighting of the entire Lebanese conflict broke out between the Syrians and the Christian militias in and around Beirut. While there was a large amount of seemingly indiscriminate shelling during this round of fighting, the battle focused primarily in and around Ain al-Rumaneh, the militia headquarters in Ashrafiyeh, the Karantina bridge, and the Beirut River Bridge.

The four to five hours of fighting on September 30 were the fiercest of the entire Lebanese conflict to date. The Syrians launched artillery, rocket, and mortar barrages on the city and its suburbs; there were also fighting in the mountains and street battles in al-Hadath. A ceasefire went into effect about mid-afternoon which lasted for about 12 hours. Fighting then resumed and continued through October 7.

During the eight days of fighting, the Christians made several attempts to take the Karantina and Beirut River bridges. The Karantina bridge was the more important of the two, as it linked east Beirut with the Christian supply port of Jounieh 15 miles north. None of the Christian attempts to take the bridges was successful. The Christian failure was due as much to a lack of concentrated effort as to Syrian opposition. While the Christians could have benefitted from holding the bridge by importing arms, ammunition, and food from the north, they were able, even with the bridge closed, to unload ammunition in the port area near the electric building and wend their way through the streets to the party headquarters of the Phalangists. Due largely to the Syrian presence in the Rizk Tower, however, the militiamen had to exercise great caution when making these ammo runs. They could not bring in larger items, principally

arms, through the rubbled streets without running grave risks. Nor could large numbers of civilians flee toward the north by going through the ammunition supply routes. As a result several attempts were made to take the bridge. None was successful, however, as the Christians were unwilling to accept the casualties necessary to take the bridge. Those that made the effort came from the Burj Hammoud area, toward the Karantina bridge; they were driven off by Syrian troops in strategic buildings near the bridges, and by fire from the Rizk Tower. The very heavy artillery barrages into east Beirut and the surrounding suburbs severely restricted movement in the streets and contributed to the Christian inability to launch a large-scale assault on the bridges, as did the Syrians in the Rizk Tower who had, among other weapons, "Stalin Organ" multiple rocket launchers in its upper floors. The command over east Beirut which the position in the tower gave the Syrians made it extremely difficult for the Christians to maneuver in the streets below. Most movement near the tower had to be done through the first floors of buildings.

Besides holding onto the bridges, the Syrians' main military objectives were to destroy the headquarters of the NLP and Phalangist militias, bog down the militiamen in rubble, and weaken their morale. During the eight days of fighting, the Syrians bombarded the eastern part of the city with heavy mortars, artillery, and rockets. For the first time the Syrians used 240mm mortars, which could penetrate the top two or three floors of buildings, and which left craters several feet deep when they exploded in the street.

The heavy shelling kept most of the 20,000 to 30,000 remaining residents of east Beirut indoors in their homemade and well-stocked underground shelters, prevented the Christians from launching anything resembling a true counter-offensive, and caused considerable damage to selected areas, particularly around the NLP and Phalangist headquarters. Thousands of buildings were damaged, and a number of buildings were blackened by fires caused by incendiary shells. Damage was more severe in Dora, Jadeedah, and Burj Hammoud than in Ashrafiyeh itself. Fire had been concentrated on Burj Hammoud in particular, to prevent Christian militiamen from threatening the Syrian-controlled bridges, principally the Karantina bridge.

Among the most effective weapons for the Syrians was the 240mm mortar whose weight and explosiveness, combined with a steep trajectory, were ideal for destroying the top two to three floors of buildings and for making craters in the streets. Had the Syrians set a 1/500-second delay on those shells, their destructive power could have been considerably increased. Also highly effective was the "Stalin Organ" multiple rocket launcher which was very effective when launched from the Rizk Tower toward buildings below.

Within east Beirut, the most heavily damaged areas were the approaches to the bridges, the headquarters of the Christian militias, and the areas surrounding them. The Phalangist headquarters itself was hit by two 240mm mortar shells. However, none of the 20 men inside the building was injured when the shells hit the building. The top two to three floors of the NLP headquarters were destroyed by fire from Soviet-built Syrian tanks positioned at Sin el-Fil. The Syrians changed from artillery to tank fire on the NLP building due to the inaccuracy of Syrian artillery fire.

Despite the severe damage in some areas, entire streets and neighborhoods in east Beirut were virtually untouched. In fact only about 3,000 buildings were damaged in the east Beirut shelling (about ten to twenty percent of the total).

Total Christian casualties during the October fighting numbered about 800 dead and 3,000 wounded. Seventy .o one hundred of those killed were militiamen. First-aid men wo.ke' around the clock to keep shelters for wounded supplied. In some cases un 'erground springs were found by those hiding in the basements of apartments, which according to one doctor, averted a catastrophe, as water was often cut off and food difficult to obtain.

When the fighting stopped on October 7, the Syrians still held the bridges, but they had neither broken the will of the militias, nor inflicted inordinately heavy casualties upon militiamen, nor levelled much of east Beirut. Furthermore, while reliable figures on Syrian casualties are unavailable, our sources indicate that the Syrians were not happy with the magnitude of their losses. The futile Syrian attempt to bring Ashrafiyeh to its knees attests to the usefulness of the urban environment as a force multiplier. More importantly, the fact that the Syrians estimated that their own losses would exceed 3,000 casualties should they invade Ashrafiyeh (an area of six square kilometers), and their decision not to do so, also attest to the value a small but well-trained force can have in a MOBA environment. In fact, two Christian innovations prevented the Syrians from taking Ain al-Rumaneh. These innovations are discussed in detail in the chapter on innovations. Briefly, one involved attaching a camera to a ZU-57 and connecting it to a television monitor. The zoom lens allowed Christian gunners to focus in on buildings and windows of buildings where the enemy was located. At distances from four to eight kilometers the ZU-57 proved very effective.

Another innovation involved the use of the Sneb missile as a surface-to-surface rocket. Launched from a pipe that had been cut vertically in half, the Sneb was extremely effective against Syrian armor. Christians in Ain al-Rumaneh had between 600 and 900 Sneb rockets, which they feel played an important role in keeping the Syrians from taking the suburb.

IV. COMMAND, CONTROL, AND COMMUNICATIONS

INTRODUCTION

The cultural factors influencing command, control, and communications (C^3) in the Lebanese conflict were the fluidity of alignment and the irregular status of most of the combatants. Shifting alliances precluded the emergence of an effective command/control (C^2) system for either the Christians or the Muslim/leftist/Palestinian forces. Similarly, the fact that the parties were not regular armies meant communications media were at best haphazard.

When the Lebanese Army broke apart, the Christian Lebanese Army personnel who moved to support the militias were unable to impose order or organization on the militias, although the improvement of intra-Christian communications, which was also a direct result of the army schism, had the effect of increasing coordination and organization. Similarly, when the Syrians entered the battle to halt the Muslim/leftist offensive, and again when they moved against the Christians, the size and fire power of the Syrian force dwarfed those of their allies. Again, the effect was not so much one of improving the coordination of allies as one of mooting the issue by arrogating to Syria the mantle of leadership of the forces opposed to Christian victory.

We have briefly discussed some communications subjects and issues in the course of battle accounts, particularly the fire-control coordination in certain cases. In this chapter we tie the communications to such C^2 as existed and present an overview of the entire C^3 picture. Unfortunately, most of the data we have been able to collect is from Christian militia and Lebanese Army officers. Consequently, the chapter does not present as much data on the other sides.

COMMAND/CONTROL

Christian C^2 was and remains complex, encumbered largely by the non-hierarchical structure of alignments. Each of the militias was the coequal of the others; none could dictate the scope, level of participation, strategy, or tactics to the others. When Lebanese Army soldiers and officers joined the militias, either regularly or discretely, they too acted as militia members or army personnel—and on a more or less coequal standing. (In fact, the far more professional bearing and more highly developed expertise of the Lebanese Army officers often placed *de facto* leadership in their hands.) Thus, assistance by one group to another, including transfer of manpower or equipment, was inefficient and cumbersome. Moreover, militiamen participated or withdrew as they saw fit, and were therefore undependable.

The Muslim/leftist forces were even less centralized. Composed of several rival Palestinian resistance groups (some of which were largely Palestinian in name only), a *soi-disant* "regular" army of Palestinians, and leftist forces supporting the Palestinians, the alignments shifted dramatically with Syria's entry into the war. Saiqa, the second most important "Palestinian" resistance organization, was in fact directed by —and largely staffed by—Syrians. The PFLP-GC and DPFLP were also under substantial Syrian influence. By contrast, the ALF and PFLP were extremely anti-Syrian. The Lebanese leftists, though alleredly motivated by pro-Palestinian objectives, were in fact largely impelled to fight by the nature of Christian politics and personal considerations. This is also

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true to a large extent of the Lebanese Arab Army, a predominantly-Muslim faction of the Lebanese Army.

During the first months of the war, and to some extent into the spring of 1976, the DPFLP, the PFLP-GC, PLA, and, especially, Saiqa reacted to Syrian direction. After the spring, and particularly after the Syrian intervention in June, the DPFLP and PFLP-GC fragmented between pro-Syrian elements and those opposed to Syria's policy. Primary organization among all these groups was limited, and their principal concern was consistently communication internal to their own groups. The PFLP and ALF, as well as Lebanese leftists (after the fall of 1975), resisted all forms of coordination with Syria.

Tactically C^2 was simplified and complicated by the nature of the war. It has been widely recognized that urban warfare creates special problems for C^2 of tactical units. Control is lost due to the visual impediments of urban structures, the radio signal channeling effect of tall buildings, and the noise caused by urban magnification of the sounds of war. At the same time, the static nature of the war reduced the difficulty of control, and the unprofessional character of Christian forces was appropriate to decentralized control. (Indeed, urban operations have traditionally called for decentralization of C^2.) Units operated with substantial autonomy, and the blurred lines of authority tended to accentuate the independence of small units. These observations applied to virtually all Lebanese forces, Muslim/leftist as well as Christian.

By contrast, Syrian Army units operated under the stricter control established by rank and traditional lines of military authority. Relatively less freedom of action and initiative was shown by Syrian armed forces personnel in city combat, but the effects of this weakness were also attenuated by the static nature of the fighting.

Overall Syrian C^2 was organized on two different levels. The Syrian Army established a subordinate or field headquarters for Lebanese operations at Ryak/Shtaura. This subordinate headquarters in turn established smaller command headquarters for specific areas of operation within Lebanon. The command headquarters for Beirut was at Sin el-Fil/Hirsh-Tabet. A second and totally separate chain of command existed for Syrian special forces units in Lebanon. These units reported directly to Damascus, and operated with virtually complete independence from—and in a manner sometimes at odds with—the regular Syrian Army.

COMMUNICATIONS

Christian Forces

When the civil war started combatants on either side had not properly weighed the importance of organizing an effective and secure communication network. This in part was due to the fact that all parties expected the conflict to be of short duration. Moreover, expert advice and communications specialists were not readily available. Thus, during the first seven to eight months of the civil war, both sides resorted to the telephone as a medium of communication. Only after the fall of the Ministry of Post, Telephone, and Telegraph, did the Christians begin to earnestly attempt to set up a communications network of their own, including the importation of the necessary equipment when it was available. Most of the imported equipment consisted of UHF radios of U.S., German, and Belgian make.

The beginning of a Christian attempt to set up an efficient communications network coincided with the early signs of the disintegration of the Lebanese Army. Since most of the signal officers of the Lebanese Army were Christians, this much-needed expertise became available to the Christian side. As the Lebanese Army disintegrated most of its U.S.-made equipment was either allowed to fall into the hands of the various militias or was made available to these militias with the necessary personnel to man and operate the equipment. Gradually, it was the Christian officers of the Lebanese Army who took over the communication network for all Christian forces and developed it into a most efficient and secure system.

The Lebanese Army equipment that fell into the hands of the Christians included ANPRC-77s, ANVRC-46s, -47s, -49s, and ANGRC-106s, and -160s. The army also possessed a Fairchild Goniometer interceptor with an automatic search capability, a British-made readiphone with a manual search capability, a number of French-made Bande Lateral Uniques (BLU) with 400- and 500-watt capacities; and operated a Westrex (French-made) civil defense system throughout Lebanon. Moreover, the Lebanese Army had its own telephone network and switchboard, whose lines were laid independently of the civilian systems or in some cases piggy-backed on the civilian lines.

In 1975, a main communication center was set up by Christian officers for the use of the Christian militias. It was operated mainly by Lebanese officers but included representatives of the main Christian militia forces. This communications center was located at Deir Mar Shaya, some 15 miles east of Beirut in the vicinity of the resort towns of Beit Meri and Broumana. In it were the readiphones, a BLU with a 500-watt capacity, and a number of ANVRC-46s, -47s, and ANPRC-77s. The readiphone was used to monitor leftist/Palestinian communications and was backed up unofficially by the Fairchild Goniometer located at the Ministry of Defense at Yarze, ten miles east of Beirut. A BLU was then placed in the houses of the major militia leaders--former President Camille Chamoun, in Dehr el-Qamar; former President Suleiman Franjieh at Zghorta; and Pierre Gemayel at Bikfaya. These BLUs were moved with the leaders whenever they changed residences. One BLU was kept in readiness to accompany important militia leaders when they travelled regionally and outside of Lebanon. Finally, a BLU was placed in Cyprus, as that island became an important trans-shipment center for both Christians and leftists.

ANVRC-47s were then located at all important Christian military head-quarters and operation rooms in Beirut and elsewhere in the Christian heartland. Similarly an ANVRC-46 was located at the Christian artillery fire and control center at Deir Mar Roukuz, as were UHF hand-held radios. Dissident Christian army infantry and armor units were then equipped with ANPRCs, as were militia formations, during battle. Subheadquarters, important checkpoints, squad-sized military units, and artillery spotters in any given battle were equipped with hand-carried UHF radios predominantly crafted by General Electric Corporation of the United States.

Signal officers at Deir Mar Shaya provided militia leaders with intercept communication intelligence and prepared daily schedules which listed hours for frequency changes and frequencies to be used. All operations at the center were provided with and adhered to the schedules.

This network provided the combined Christian forces with the means
to communicate with each other effectively especially during battles in
Beirut, Tel Zaatar, Jisr al-Basha, etc., and must be considered an
important force mutliplier especially in the fighting in Beirut. The
hand-held GE proved its worth, in that small units operating in different
city blocks could not only keep in touch with each other as they maneuvered
but could call their major headquarters whenever reinforcements and supplies
were needed. Observers along the line were also able to report important
enemy movements from their perches in the tallest buildings of the capital.

Their communications network gave the Christians an efficient and
secure means of communication in spite of its redundancy and overlap.
It enhanced their intelligence and reactive capabilities. In fact, in
certain instances they were able to "cook" (intercept, alter, and retrans-
mit) communication intercepts which caused the leftists to shell their
own positions.

The location of the communications center at an elevation of about
2,500 feet proved ideal. It provided line-of-sight transmission with the
equipment in Beirut and allowed clear signals to reach the houses of
then-President Franjieh and NLP leader Camille Chamoun some 50 miles
north and 40 miles south of the center, respectively, without interference
from the hilly terrain.

The BLUs were an important component, as high-ranking Christian
leaders were able to remain in touch with these headquarters during
visits to Israel. Likewise reports from the BLU in Cyprus gave the
Christians exact schedules and information on transshipment to the ports
of Byblos (Jubail), Jounieh, Sidon, and Tyre.

The ANPRC-77s and ANVRC-46s and -47s in Beirut were either set up in
the upper floors of strategically located tall buildings with a long
antenna or were located in smaller buildings with a specially designed
antenna that enabled them to overcome interference from other buildings.
In most cases, however, communication between headquarters and the center
was on clear lines of sight.

The ANPRC with a flex antenna was quite valuable in the battle of
Tel Zaatar. There was virtually no interference, since the maximum
distance between the attackers and the communications center was ten
kilometers. Furthermore, clear line-of-sight was also established since
most of the buildings in the camp itself were one or two stories in height;
the taller buildings, which could have caused interference, were located on
the western perimeter.

One of the most useful pieces of equipment employed by the Christians
was a GE hand-held UHF radio. Its range was sufficient in open terrain
such as around Tel Zaatar, and in the city it was powerful enough to
carry from block to block. Its lightness and simplicity proved ideal in
terms of training, repair, and use of batteries. Combatants carrying the
radio were able to shoulder their weapons (West German-made G3s) pocketing
the radios only when they had to fire. Its relatively low cost also made
it attractive and allowed the Christians to purchase a quantity sufficient
to distribute the radios down to the squad level.

The ANPRCs' major problems were with repair and acquisition of the
specially designed batteries. According to our informants no significant
problems were encountered in training militiamen to operate the units; it
only took about one hour to familiarize a militiaman with the equipment.

Problems did arise, however, when militiamen forgot to turn off the power during the period the radio was not in use, thus exhausting the batteries, and when militiamen forgot to switch to the proper frequencies. In these cases, militiamen tended to discard the units on the assumption that something serious had gone wrong within the radio. Signal officers continuously had trouble getting militiamen to turn in their radios before discarding them.

The specially designed batteries posed a problem for the signal officers. They were expensive and difficult to obtain in the open market. Purchasing missions sent abroad encountered difficulties in purchasing them; and attempts to obtain them through radio dealers in Europe tipped off the governments in those countries as to the true nature of the missions. Nonetheless, our respondents unanimously praised the ANPRC-77s and the ANVRC-46s, -47s and -49s, as highly efficient signal devices for MOBA. Since there was virtually no fire and maneuver except in Tel Zaatar, the ANPRC-77 was not fully tested as to its strength and weaknesses in actual assault operations.

Muslim/Leftist/Palestinian Forces

Communications assets and patterns of the Muslim/leftist/Palestinian forces are largely unknown. Nor is much known concerning Syrian communications.

The Muslims/Lebanese leftists did not benefit in communication from the dissolution of the Lebanese Army, as the Christians benefitted, because the communications field was an almost exclusively Christian preserve and because pre-conflict planning ensured Christian control and exploitation of communications assets once the war began. Moreover, as diverse and schismatic as the Christians were, they had a much greater tradition of cooperation and far more highly developed channels of communal interaction than the Muslims/leftists.

Palestinians more closely resembled Christians in their intra-group communication, but were far more deeply divided. Most important, however, the Palestinians had no access to sophisticated communication facilities. Their radios are believed to have come from Syria (Saiqa, PLA) and from such open market sources as could be arranged (PFLP, DPFLP, Fatah). Thus, the degree of compatibility of communications gear is unclear.

It is known that the Palestinians, and believed that some Muslim/ leftist groups, used citizen band (CB) radios. These radios were imported into Lebanon specifically for communication during the conflict. It is not known whether or to what degree they served their purpose.

The Muslim/leftist groups and the Palestinians were not highly trained in communications, and were almost totally inattentive to communications security (COMSEC). As a result, Christian communications and signal intelligence (COMINT and SIGINT) was extremely productive. Substantial quantities of COMINT were analyzed and used for tactical purposes. The Christians were able to "cook" communications in some cases, aided by the primitive state of their enemy's communications assets.

Syrian Forces

Syrian forces have traditionally relied upon land lines as much as possible. Land lines were therefore laid almost immediately after (perhaps concurrent with) the Syrian intervention in June 1976. Following the

establishment of the Syrian operational headquarters at Chtoura, land lines were used between Chtoura and specific areas of operations (e.g., Sin el-Fil/Hirsh-Tabet for Beirut), and to a surprising extent tactically between operating units and operational headquarters. Theatre headquarters at Ghtoura used VHF and land lines to communicate with Damascus GHQ.

Syrian special forces units reported through wholly separate channels. Their authority derived from Damascus, as they operated under Rifaat Assad, brother of Syrian President Hafiz Assad, and the special forces communicated directly back to Rifaat Assad's separate headquarters.

Syrian COMSEC was, on the whole, only slightly better than that of the Muslim/leftist/Palestinian forces. Although land lines are used to ensure security, they are singularly vulnerable in an urban environment. The Syrian lines were frequently tapped by the Christians, and Syrian communications personnel did not seem particularly concerned about security, as the lines were strung quite visibly and with little apparent attention to their vulnerability.

THE BATTLES

Hotel District

In the early phases of the battle for the hotel district the principal medium of communication for the defenders was the civilian telephone system--surprisingly, the lines had not been cut! Moreover, the phone system was used for tactical purposes by Christian agents in the area under leftist control to report back the effects of the Christian shelling of the area and to spot for the artillery fire-control center the location of shell bursts. In the latter phases of the hotel district battle an ANPRC-77 was used by the defenders as the telephone system began to break down.

Port Area

When Christian elements of the Lebanese Army took over command of the battle in the Beirut port they used equipment at their disposal--the army telephone system to communicate with the ministry of defense, high ranking officers and politicians, and the army barracks at Fayadiyeh and Sarba; the ANVRC-46 to communicate with the fire-control center; the ANVRC-47 to report to the major communications centers; and UHF to communicate with Phalange units operating in conjunction with the Lebanese Army units in the port area. It appears that no attempt was made to use the ANVRC-47 to communicate directly with the headquarters of the militias. Rather, all messages back and forth were relayed through the main communication center at Deir Mar Shaya.

Tel Zaatar

The Christians made heavy use of a relatively sophisticated communications network in the taking of Tel Zaatar. The army infantry and armor units that participated were equipped with ANPRC-77s, and reported directly to Deir Mar Shaya.

Artillery spotters attached to the units operating in the vicinity of Tel Zaatar used the portable GE UHF radios as a means of communicating with the artillery fire-control center; the artillery fire-control center, in turn, communicated with Deir Mar Shaya by means of an ANVRC-46.

It appears that communications at Tel Zaatar was used for support purposes (requests for artillery fire, or for additional ammunition or reinforcements) rather than for command and control. This anomaly is partially explained by the fact that the assault on Tel Zaatar was made by army elements who were trained in joint maneuvers, while the militia were relegated to blocking operations.

Isolating the artillery fire-control center from direct communication with operating units (with the exception of the artillery spotters) was also necessary because militia units tended to call too frequently for artillery support even though they were in a defensive mode. By forcing these militia units to relay their requirements for artillery fire and other support through the main communication center, battle planners were better able to decide on how best to allocate resources.

Fayadiyeh I

Communication between the barracks commander, the president, the ministry of defense, and other military officers for the first Fayadiyeh battle was carried out through the army telephone system. The barracks commander communicated with his units in the five strongpoints making up his defensive perimeters by using messengers or radio equipment present in the Staghounds and Panhards. Communication with Deir Mar Shaya for artillery support or for coordination with militia units operating in the Hasmiye-Ain al-Rumaneh-Shiya area was accomplished with an ANVRC-47.

Fayadiyeh II

In Fayadiyeh II communication between the barracks commander and the Lebanese ministry of defense was effected through the army telephone system, as was communication with other army units in the vicinity. Communications with units manning the defense perimeter was made by messenger. The barracks commander realized that Syrian forces had probably tapped the army line, and therefore used the army telephone to provide erroneous information. In his discussions with the ministry of defense, the barracks commander tried to suggest that he was in a defensive posture and exaggerated his losses in an effort to ease the Syrian's humiliation as their losses grew. The use of messengers also reflected the commander's appreciation of Syrian intercept capability. Use of signal equipment could have given the Syrians a clear idea of not only the defensive dis-positions but also intent. Moreover, possible Syrian tapping of signal communications could have been used in hearings which followed the conflict to prove that the Lebanese commander's actions were not purely defensive.

V.   IDIOSYNCRACIES AND INNOVATIONS

IDIOSYNCRACIES

Every war is unique; each has its special blend of cultural, geographical, political, economic, and other factors that influence the course of combat, sometimes ensuring victory or defeat. The war in Lebanon is no exception. A limited war, a quintessentially political war from the outset, the Lebanese conflict, its course, and its lessons must be seen against the backdrop of these idiosyncratic variables. Most are of incidental importance to this study; several are fundamental.

The limited nature of the Lebanese conflict resulted from the determination of two principal participants that casualties and resources expended must be limited. From the Christian standpoint, limited manpower and ammunition, particularly at the outset, compelled planners to minimize human and materiel losses. The Syrians were similarly constrained. When Syria openly entered the fray, the Syrian Army confronted the Palestinians, a very controversial and unpopular position in Syria. For this reason, and because Syria consequently wanted to maintain as low a level of visibility as possible, Damascus, too, sought to minimize casualties. Moreover, overly active Syrian participation was thought to risk an Israeli intervention until the two countries were able to reach an informal understanding on the limits of the Syrian role. Thus, political issues surrounding the conflict forced straitened limits on the participants.

One particular facet of the limitations deserves special mention. Due in part to the Syrian desire to avoid Israeli intervention and in part to Syria's attempt to maintain as low visibility as possible and to adhere to the appearance of a "peacekeeping" force, Syrian air power was never employed. Once the Syrians became engaged in city fighting in Beirut their air power would not have been useful in CAS, anyway, since Syrian pilot capabilities in such areas as air-to-ground gunnery and bombing are very poor. Yet, the siege of Ashrafiyeh might certainly have proceeded quite differently had air power been employed.

Apart from sharp constraints imposed by political considerations on the level of fighting, materiel shortages, as we have indicated, also affected the conflict. Throughout much of the most intensive fighting the Christian militias had relatively little ammunition, and both sides possessed such diverse stocks that spares were often unavailable and maintenance frequently inadequate.

One idiosyncracy of the Lebanese conflict, reflecting the limited direct involvement of Lebanese in the civil war in 1975 and 1976, was the fact that electricity and telephone lines remained operable in many sectors relatively late into the conflict. Rarely did the Lebanese try to cut off major supplies of power or communications even when doing so would have been very beneficial to one of the parties. International as well as local telephone calls into Beirut continued to be possible until the fall of 1978 after which telephone service was sporadic. Electricity continued—with frequent interruptions—for the duration of the civil war.

That the nature of the combatants also affected the fighting is clear: alignments shifted and participants proliferated. The Muslim/ leftist/Palestinian forces included Christians and Druze, many Lebanese, as well as the Syrians; the Christian/rightist group included Muslims and

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radicals, and the Syrians, too. Had there been a hierarchical unity to these "sides," the nature of combat might have been quite different. Under the circumstances, however, command/control on both sides was frequently non-existent. The Syrians had no real control over their allies of either the right or the left. Nor had the Lebanese Army operational control over militias cooperating with it. The Palestinians, politically fragmented, not only were disunited, but, moreover, ended in fighting on two sides, as the "Palestinian" Saiqa was aligned with Syria. The DPFLP and PFLP-GC also changed sides or equivocated at various times in the fighting. The result of the proliferation of participants, fluidity of alignments, and independence of forces was a virtually complete lack of systematic command/control. Each participant relied on its allies but could not be certain they would remain in the battle or, in many cases, would even remain allies.

Additional considerations that influenced the nature of the fighting were cultural variables. Flame, for example, is a widely accepted weapon in the Western and developed world that is morally rejected in the Middle East. Consequently, one might reasonably expect very limited use of flame in the intra-Arab Lebanese conflict. And in fact use of fire was less common than would probably occur in European or even East Asian theatres.

Much of the fire that gutted many buildings in Beirut was the result of tracers igniting flammable materials inside the buildings. Structure fires were not intentionally set. Moreover, the desire to limit property damage in some sectors created strong disincentives to the employment of flame.

The several exceptions to eschewal of flame should be noted. Of these exceptions, the most remarkable for its clear-cut reliance on the psychological effect of fire itself was the Christian recourse to barrels of jellied gasoline during the siege of Tel Zaatar. Factors inducing the Christians to rely on such means included the intention to destroy Tel Zaatar at the inevitable conclusion of the battle and the deep-seated Christian feelings about and resentment toward the Palestinian role in Lebanon before the war.

A second notable exception to avoidance of flame in military operations occurred in Syrian attacks on Christian-held areas in 1977 and 1978. During the bombardment of Christian areas, the Syrians used incendiary shells with some frequency.

Another typical example of an idiosyncracy of Beirut life that helped save the lives of many Lebanese Christians during the periods of intense Syrian shelling in 1978 was the habit of many to store large quantities of food in their basements. When shelling began, civilians immediately headed for their basements where they were well stocked in comestibles. By contrast, water had always been in short supply. Although some were fortunate enough to have underground springs in the basements of their apartments, most were not so blessed and therefore had to undergo risks to secure water. Yet, the absence of dependably potable water in the pre-war era had accustomed people to boiling water before using it. This peacetime habit undoubtedly saved many lives during the conflict, when water for drinking or medical purposes was commonly polluted.

Recognizing the Arab distaste for sewers, it is hardly surprising that the sewers were used little if at all by any forces involved in the conflict. That sewers were unsuitable for combat was a feeling Lebanese thought was as practical as it was cultural. Weapons, men, and munitions,

they felt could not be transported quickly or efficiently through the
sewer systems. The nature of the sewers not only made military operations
difficult but would leave men in extremely vulnerable positions for hand
grenades or sniper fire, as they emerged from underground. It appears
that for these reasons--all based on cultural prejudice--none of the
combatants gave serious thought to the employment of sewers, which have
been of use for certain types of operations in other environments.

Urbanized environments in the West, particularly in the United States,
are often characterized by individual psychological isolation. This
Western trait is strikingly different from Lebanon. Beirut has long had
an atmosphere favoring intensive communication and the close family ties
more typical of the Middle East, where kinship (rather than nationality)
is often the primary focus of loyalty. The result of these culturally
based ties was the absence of crowd management problems in city fighting.
Beirutis often knew (through the extremely effective informal communication
links) in advance when fighting might erupt, where, and what its nature
would be. The civilian populace moved accordingly, usually finding refuge
with close or distant relatives. In general, military operations were
unimpeded by crowds.

An unusual factor in the Lebanese conflict relates directly to
structure damage. Due to laws regulating apartment rental in Lebanon,
some landlords found it economically advantageous to have buildings they owned
demolished and leveled. Once an apartment was rented to a tenant, it was
virtually impossible to have the tenant legally removed from the premises
even in cases of long-overdue rental payments. If a landowner wanted to
move a tenant, the former was required to find alternative housing and pay
an inordinate sum to the tenant to cover the cost of renting the new
apartment. Thus, in certain cases, collapsed buildings represent a
Lebanese form of "urban renewal" rather than damage inflicted during
military operations.

INNOVATIONS

In any armed conflict unanticipated situations often occur that
require creativity on the part of participating troops. The Lebanese
conflict was no exception. Our research has revealed several innovations
on the part of the Christian side of the conflict, at least one of which
played a decisive role in a major battle.

In the fall of 1978, just before the Syrians resumed their heavy
shelling of east Beirut, Christian military commanders took notice of
the 600 to 900 Sneb air-to-ground missiles in their munitions stocks which
had gone unused during the entire conflict. Until that time no one had
considered using the French-made rockets, which are designed to be fired
from Mirage fighter planes. It occurred to the officers in charge of
munitions at Ain al-Rumaneh that the Snebs may be useful against the
Syrian Army's Soviet tanks. The Christians tested their idea by setting
up a situation in which a Syrian tank was drawn into the open. A Sneb
fired at the tank from a distance of 300 to 400 meters blew the
Soviet-made T-54 into four separate pieces. Satisfied with the results,
the Christians made extensive use of the Sneb missile during the heavy
Beirut fighting in October 1978. The missiles were placed in steel pipes

that had been cut in half vertically. The pipes were usually placed on piles of rock in more or less open environments. Twenty-eight volt batteries were used to fire the missiles. The Snebs had a maximum range of almost 1,200 meters but were used most often at distances approximating 350 meters. The Christians were extremely pleased with the accuracy of their fire and the destructive effect of the Snebs on armored vehicles. Also, the back blast from the missiles was relatively mild, affecting an area from five to seven feet directly behind the launching tube. Soldiers merely stepped aside after priming a missile for firing. The Christians credited the Sneb with playing a major role in preventing the Syrians from successfully invading Ain al-Rumaneh in October.

Another very effective innovation involved the Soviet-made ZU-23 and ZU-57mm anti-aircraft guns. As discussed in other sections of the report, both sides found the ZUs to be extremely effective weapons in a MOBA environment. The Christians then tried mounting the weapons on jeeps or APCs (principally Staghounds), allowing greater flexibility in assaults on buildings. The most interesting innovation involving the ZUs, however, was in its employment as a stationary and moderately long-range (for MOBA) weapon. Phillips cameras (of unspecified design) were mounted on the ZU-57s and were bore-sighted. The cameras were attached to small screens marked with hairlines. Gunmen manning the ZUs were thus able to focus their sites on specific windows or rooms where either an enemy military position was located, or a meeting of opposing officers was taking place. At distances of up to eight kilometers, direct fire from the ZUs with the camera mounts was extremely accurate, despite the normal drop in the trajectory of fire over such a distance.

Another on-the-spot innovation was developed in the siege of Tel Zaatar. Christian forces needed a safe method for breaching the walls of buildings holding snipers and machine-gun positions. Barrels filled with Napalm-like substances were rolled down hills toward targeted buildings where they exploded as a result of detonation by electronic devices or time fuses. The explosion of just one of these barrels was usually enough to breach walls or sandbagged positions and often sprayed the defenders with burning jellied gasoline. The psychological aspects of this innovation as we have noted were extremely important. Defenders sometimes fled their positions when they saw these barrels tumbling toward them—occasionally the barrels were empty.

The armored cars available to the Christians were generally light weight, which led to a very practical innovation—increasing the armor plating of the AMX-13s and Panhards. Increasing the armor on these cars had an effect as important psychologically as it was physically: Christian officers had begun to experience difficulty ordering men to man the lightly armored cars.

Although tunneling is hardly a Lebanese innovation, it has not been common practice in previous urban conflicts. Tunneling on the first-floor levels of buildings was a widespread practice throughout the civil war. Although its effectiveness has been questioned by others in previous situations, those interviewed regarding the Lebanese situation stated that the tunnels provided an effective means of troop and light supply movement. Tunneling was employed by all sides during the "civil war period" (April 13, 1975-November 15, 1976) in Beirut, was extensively used by the Palestinians in Tel Zaatar, and provided the Christians with their most effective means of movement during the Ashrafiyeh fighting in 1978 when the Syrians held the Rizk Tower.

VI. FINDINGS AND CONCLUSIONS

INTRODUCTION

It is always tempting to caveat findings on the basis of situational factors. Certainly, the Lebanese civil war is characterized by plethoric considerations unique to that conflict. Yet, in spite of these situational factors that must be kept in mind in distilling lessons learned, it must also be recognized that Beirut is a large city, constructed along European lines, and that the fighting in Beirut was carried out by forces whose capabilities easily surpass those of most developing countries. Most weapons employed are in the current American, Soviet, and French inventories.

In Beirut as in other recent examples of urban warfare, the advantages that accrue to the defense from the effective use of urban characteristics were reaffirmed. Perhaps the best example was the Syrian siege of Ashrafiyeh. Apart from the months of intermittent conflict, there were approximately three weeks of intensive artillery shelling. Yet, throughout this period ten percent or fewer of the buildings in the Ashrafiyeh district were seriously damaged or destroyed. And in those three weeks, as in the months of less intense shelling, the Lebanese Christian defenders of Ashrafiyeh continued to both control their area and to resist Syrian demands and objectives. Indeed, some measure of the strain that attacking fortified built-up areas places on military logistics may be evident in the fact that 50-120 trucks carrying 250-500 metric tons of artillery ammunition daily were required for what proved to be the futile Syrian siege. Equally revealing is the Syrian estimate that the capture of the 6 square meter area of Ashrafiyeh would entail 3,000 casualties.

The logistics support necessary to sustain the offense in MOBA presents an attractive target profile if the offense does not have, or has only intermittent, control of the air. The asymmetry of the combatants and their tactical objectives and guidelines in Beirut prevented Ashrafiyeh's defenders from disrupting Syrian supply lines.

WEAPONS

In the Beirut fighting, both sides found AAA a particularly effective weapon when used in direct-fire roles. The systems most frequently commended were the U.S. M-42, the Soviet ZU-23 and ZU-57, the Swiss Oerlikan, and the Hispano-Suiza 30. Although all are towed except the M-42, a SP 40mm, they were mounted on trucks. These weapons were employed against outside walls with devastating effect; they denuded structures with their high volume of firepower. In addition, used in a direct-fire capacity by firing the length of streets, AAA was a strong deterrent to assaults. It is strange that AAA has been neglected as artillery in previous MOBA studies, both because of the degree of effectiveness and because of its ubiquity among modern armed forces.

The Soviet man-portable AT rockets, RPG-6 and RPG-7, were also found to be extremely useful both against armor, as they were designed to be employed, and against barricades and walls where they served as portable artillery. Valued as multipurpose weapons, the 106mm recoilless rifle and its Soviet counterpart, the B-10, were used extensively to breach walls. HE shells proved themselves against hewn rock or older, sandstone walls,

while HEAT rounds employed against first floor level (generally reinforced concrete) structures exploded with devastating effect. Unfortunately, the 106mm RR is being widely replaced with the TOW which is widely believed to be less effective in breaching urban structures.[5] While, current and future U.S. infantry anti-tank/assault weapons have a substantial backblast, recent studies suggest that they can still be used in a MOBA environment.[6]

By contrast with rockets and recoilless rifles, mortars smaller than 120mm were generally ineffective instruments in the Lebanese conflict. However, medium artillery, e.g., 130mm and 155mm howitzers, were used to penetrate buildings to destroy equipment. Explosives following penetration generally demolished pieces of the building. Even greater cratering was seen on the streets. Both the M-113 APC and the Panhard[7] armored car operated effectively in Beirut. The ease with which the Panhard is driven and repaired, and the absence of tracks, provide the mobility desirable in an urban environment. The Staghound was also given extremely high marks; one source even stated it was the most effective armored vehicle available. The Staghound's air pocketed tires rendered it much more resistant to flat tires induced by mortar rounds exploding nearby.

COMMUNICATIONS

The literature concerning communications in MOBA has focused on problems of communicating in cities where buildings interfere with line-of-sight transmissions and where dead spots abound. VHF--generally, tactical--communications are seen in the literature as particularly susceptible to interference inherent in the cityscape.[8]

Our interviews and survey of available data disclosed little concern over communications problems in Lebanon. Christian forces had the best equipment available to the Lebanese Army, as well as experienced signal personnel, and carefully deployed communications assets in advance with an eye to effective netting. Tactical communications by the Christians utilized AN/PRC 77, AN/VRC 46 and 47, CB radios, and GE portables, as well as telephones, but decentralization of command significantly reduced the need for extensive contact. Syrian forces, consistent with their practice, laid and relied heavily on land lines as soon as possible. (In addition to eliminating radio reception problems, Syrian land lines were to preclude Christian intercepts of Syrian communications. Christian forces were active in intercepting and even "cooking" Muslim and Palestinian communications.) The fact we do not encounter statements of problems in this area en in response to explicit questions, leads us to note that communications did not present a major problem to the combatants in Beirut.

It should be noted, however, that Syrian communications over land lines were frequently intercepted by tapping. Land lines are more secure in most types of warfare, but, as Beirut proved, singularly insecure in an urban environment. Similarly, Palestinians, who used CB radios extensively, were regularly intercepted by Christian forces.

Throughout much of the warfare in Beirut the telephone was a valuable military communications resource. Both the commercial telephone system and the Lebanese Army phone system were used for artillery forward observation, tactical communications, and relay.

A wide variety of communications equipment was used from citizens band radio to relatively low-level communications intercept equipment. One of the most effective units was the General Electric hand (portable) radio. Light, it could be carried by soldiers who were also manning and firing weapons.

CONCLUSIONS

The degree to which one can transfer lessons of the combat in Beirut to other environments is, as we have noted, limited by the nature of the conflicts involved. Yet, some of the more important findings and implications of this study certainly could bear on other MOBA environments such as Europe.

Too little attention has been devoted until recently to weapon versatility and backblast. Many of our most advanced weapons, and current generations of older systems, have significant backblasts although they could if necessary be employed in MOBA warfare. Moreover, signatures, minimum arming ranges, and similar factors render others impractical for MOBA.[9] They are often unable to shift from one type of ammunition to another. Ammunition versatility is an important asset in MOBA, and weapons such as 90mm RRs, the old B-10 and B-11s, and U.S. jeep-mounted 106mm RRs have potentially valuable roles to play.

Even apart from weapons, some tactics and techniques employed in the Beirut fighting appear to merit further study as possible resources or dangers for MOBA in other regions and circumstances. For example, sniping was extremely effective. Used by Muslims/leftists/Palestinians, Christians, and the Syrian Army, sniping frequently tied down large numbers of opposing troops. The Lee-Enfield was the preferred sniping weapon, and the model M-16 available to Beirut combatants was not well thought of because of the tumbling effect many Lebanese officers believed it had.

Weapons were sometimes carefully sandbagged back from immediate window openings. While this technique reduced fields of fire, it was an effective protection against sniping, reduced enemy detection possibility, and diminished incoming fragment effects on weapons operators.

Evacuation/retreat should be undertaken with systematic destruction of transport and communications resources specific to cities. In Beirut, for example, elevators were used to carry weapons to upper floors of buildings and, generally, for mobility within city structures. Telephones, electricity, and plumbing—all these are building resources without which military operations are complicated inside structures. Thus, in retreat these resources should be denied the enemy. Elevators should be destroyed, power lines to the buildings cut, and so forth.

Pre-planning for MOBA required considering building resources differently from the past. Perhaps elevators should have a reserve power supply in order to safeguard this valuable troop and equipment mover. Buildings might, similarly, have safe, reserve water supplies. Telephone and power systems could be sector-based, so that these resources can be denied to a district once it is evacuated.

Decentralization of command among MOBA units facilitates communications, since it reduces the volume of traffic C^3 nets must carry. We have indicated some particularly effective radio types in Beirut. Light, man-portable radios are ideal, especially if they do not preclude carrying

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weapons. Communications should, of course, be established on high ground, and communications points in buildings on the higher stories.

Medical kits should be made more widely available. In MOBA situations, medical evacuation is often impossible so that wounded personnel must be treated by others in their units.

Finally, the Beirut fighting showed over and over again that individuals who were intimately familiar with cities, who had grown up or lived much of their lives in cities, were far more able to optimize urban warfare resources. Their mobility was far greater, and their instincts more refined. By contrast, the less sophisticated, the rural, those unaccustomed to city structures were unable to exploit these same city characteristics and were, indeed, often victimized by them. Ideally, this suggests the formation of MOBA units from urban personnel. If this is not feasible, at least our findings reaffirm the importance of exhaustive and realistic training for MOBA.

VII. NOTES

[1] Although small in number, the Tanzim is particularly interesting inasmuch as it was the secret creation of high ranking Christian Lebanese Army officers and represents the beginning of the disintegration of the Lebanese Army.

[2] A significant number of Christians from the Greek Orthodox and Greek Catholic communities in particular, fought on the predominantly Muslim side largely for two reasons: (1) their ideologies converged with those of the Muslim/leftist/Palestinian groups; and (2) these Christians had coreligionists in surrounding Arab countries who could conceivably have faced persecution if the Lebanese members of their churches appeared to be united against Lebanon's Muslim and Palestinian populations.

On the other hand, some Muslims fought on the predominantly Christian side. Often these Muslims desired to maintain Lebanon as an independent nation within the Arab world; too, some of them had benefitted from the country's social and political structures, and desired to prevent abrupt changes in the status quo.

[3] In military language a wall is <u>breached</u> or a <u>breach</u> is formed when a hole has been made in a wall that a soldier can crawl through. This definition is sometimes vague as soldiers come in different sizes and sometimes carry bulky equipment. The term <u>breach</u> in this report refers to the crumbling of a wall or the creation of a hole so large as to make a position behind the wall virtually indefensible.

[4] Michael Parks, "Syria's Lebanese Moves Linked to Own Stability," *Baltimore Sun*, July 6, 1972, p. 2.

[5] The U.S. Army Berlin Brigade has been known to retain the 90mm RR for its unique, largely urban warfare role.

[6] Recent studies at Aberdeen Proving Ground and elsewhere suggest that, while backblast continues to be a pronounced problem when firing from enclosures, the extent of the backblast problem has been exaggerated. Most weapons otherwise suitable for such use have disagreeable but tolerable backblast effects.

[7] After experiencing difficulties with the Panhard's tires, which were subject to puncture from shrapnel, the Christians later mounted air-pocketed tires similar to those on Staghounds, on the Panhards.

[8] C.S. Delgrosso, *Concepts of Operations for Landing Forces in Urban Environments in the Mid-Range* (Washington, D.C.: Headquarters, U.S. Marine Corps, 1977), Vol. I, pp. 7-18, 7-19.

[9] Other studies (e.g., ibid.) and papers have made this point. Recent research and experiments show that some of the strong and widely held views about system deficiencies in MOBA environments are exaggerated, however.

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APPENDIX A.

TABLES

Table 1.
Overview of Battles in Lebanese Conflict

Battles	Dates	Area	Participants	Force Size	Weapons	Commun. Equip.	Casualties	Precipitated by	Types of Fighting	Results
Hotel district/ port area	26 Oct 75– 7 May 76	Beirut	Militias of NLP & Phalange. Christians from Leb. Army v. Murabitoun, Palestinians, & Leb. Arab Army	as many as 400 on any given day	European & US small arms, 80mm, 81mm mortars ZU-23s, 122mm fld artillery, howitzers, M-42s, Grad rockets, Katushia rockets, Stag-hounds, AMX13s, Panhards, jeep-mounted RRs, RPG-6s & -7s	civilian phone sys., CB radios, ANVRC-46, -47, ANPRC -77	2,000 killed 6,000 wounded	Muslim & Palestinian desire to encircle Christian sections of Beirut.	small arms combat in streets w/ use of mounted weaponry	Muslims & Palest. capture hotel district, but are unable to take port area.
Tel Zaatar	22 Jun 76– 12 Aug 76	outskirts of Beirut	militiamen from NLP, Phalange, Defenders of the Cedars, & Tanzim v. Palestinians of ALF, PFLP, PFLP-CC & other volunteers.	3,300 at peak	small arms, 155mm how., 122mm fld art. 80,81mm mortars, ZU23,-57s, 106mm jeep-mounted RRs, M-42s, AMX13s, Panhards, Soviet tanks, Super Shermans, RPG-6s, -7s.	ANPRC-77, GE port-ables, ANVRC-46, CB radios	4,000 killed 12,000 wounded	Christian desire to eliminate Palest. presence from Christian heartland of Lebanon	artillery barrages, cut off of supplies, (attrition) sniping, use of flame, fire & maneuver, use of small units	Tel Zaatar was overrun & totally destroyed.

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Battles	Dates	Area	Participants	Force Size	Weapons	Comm. Equip.	Casualties	Precipitated by	Types of Fighting	Results
Fayadiyeh I	Mar 76-May 76	village of Fayadiyeh & surrounding cities	Leb. Army v. PSP militia & Leb. Arab Army	over 4,000	small arms, 155mm fld art. & 122mm fld art., ZU-23,-57s, M-42s, 106mm RRs, RPG-6, -7s, Staghounds, Panhards, 127mm heavy mach. guns, B-10s, Grad & Katushia rockets, AMX13s, 105mm fld art.	army phone sys.,ANVRC -47	over 1,000 killed, many more wounded	Strategic location of Fayadiyeh	Most fighting was in open areas, some MOBA operations around the barracks, anti-tank warfare involving mines took place along some of the major roads	The Muslim forces were repelled.
Bhamdoun	13 Oct 76-17 Oct 76	city of Bhamdoun in Mount Lebanon	Syrian Army v. PLO guerrillas, PSP militia, Leb. Arab Army		small arms, anti-tank mines, T-55s, T-62s, 122mm, 130mm fld art., B-10s, 106mm jeep-mounted RRs, Grad rockets, RPG-6,-7s			Impending ceasefire	Mainly tank warfare in MOBA	Bhamdoun was overrun by the Syrians.
Sidon	7 Jun 76- 12-16 Oct 1976	Sidon	Syrian Army v. PLO units & Leb. Arab Army	over 5,000	small arms, 122mm, 155mm fld art., 106mm jeep-mounted RRs, RPG-6,-7s, BTRs, T-54,T-55s, Charioteers			Sidon was a major supply port for leftists & Palest., Syrians sought to shut it down.	Tank & anti-tank warfare, long-range use of artillery	Syrians were repelled in June. October fighting was indecisive. However, the Syrians occupied Sidon as a result of the ceasefire.
Fayadiyeh II	7-9 Feb 78	Fayadiyeh barracks	Syrian Army v. Lebanese units at Fayadiyeh	about 15,000	small arms, M-42s, AMX13s, Staghounds, RPG-6,-7s, 122mm, 120mm fld art.; BTRs, ZU-23,-57s, Swiss Oerliken 30mm,37mm, B-10s	army phone sys. land lines.	600 killed, 2,000 wounded	Syrian check-point in front of Fayadiyeh barracks	Siege warfare, artillery, tank warfare	Syrians were repelled.

Battles	Dates	Area	Participants	Force Size	Weapons	Comm. Equip.	Casualties	Precipi-tated by	Types of Fighting	Results
Ashrafiyeh	1-6 Jul 78, 30 Sep - 7 Oct 78	East Beirut	Syrian Army v. NLP & Phalange militias, & Christians from Leb. Army	over 20,000	small arms, 106mm jeep-mounted RRs, light & heavy mortars, Panhards, Staghounds, T-54s, T-55s, T-62s, RPG-6,-7s, Grad rockets, 120mm fld art., Stalin Organ rocket launchers, ZU-23, -57s, Sneb missiles	ANPRC-77, ANVRC-46, -47, civ. phone sys., GE portable radios	Christians-over 800 killed, 3000 wounded, only 70-80 killed were combatants	Syrian desire to contain the militias.	heavy shelling	Indecisive

Table 2.
Participants in the Lebanese Conflict

Participants	Estab.	Basis	Leaders	Battles	Force Size	Weapons	Commun. Equip.	Allies	Opponents
Phalange Party militia	1936	rel./pol.	Pierre Gemayel	1,2,7		small arms, mortars, RPGs, access to wpns from Christian elements of Lebanese Army listed below.	ANPRC-77s, ANVRC-46,-47, portable GE radios, civilian phone lines	NLP, Tanzim, Defenders of the Cedars, Christians from Leb. Army	PLO, PSP militia, Murabitoun, LAA, Syrian Army
National Liberal Party militia	late 1960s	rel./pol.	Camille Chamoun	1,2,7		same as above	same as above	Phalange militia, Defenders of the Cedars, Tanzim, Christians from Leb. Army, Israel	all of above
Defenders of the Cedars	c1974	rel./pol.		2	750	same as above		Phalange militia, NLP militia, Tanzim, Christians from Leb. Army	all of above
Tanzim	c1974	rel./pol.		2		same as above		Phalange militia, NLP militia, Defenders of the Cedars, Christians from Leb. Army	all of above

Participants	Estab.	Basis	Leaders	Battles	Force Size	Weapons	Commun. Equip.	Allies	Opponents
Christian elements of Lebanese Army	separated from regular army in spring 1976	rel./pol.		1,2,3,6,7		small arms, mortars, RPGs, Stag-hounds, Pan-hards, AMX-13, 106mm RRs, 155mm, 122mm field artillery ZU-23, -57mm, Swiss Oerlikon 30 & 37mm. M-42s. B-10s	ANPRC-77s, ANVRC-46,-47, portable GE radios, civilian phone sys., BLU, Fair-child inter-ceptor, army phone system	Phalange militia, NLP militia, Defenders of the Cedars, Tanzim, Israel	PLO, Mura-bitoun, PSP militia, LAA, Syrian Army
Murabitoun	c1974	rel./pol.	Ibrahim Koleiat	1	300	small arms, light mortars, M-113s w/ heavy machine guns, Katushia rocket batteries & weapons from LAA listed below		PSP militia, other Muslim militias, LAA, PLO forces, sometimes Syrian Army	Phalange militia, NLP militia, Defenders of the Cedars, Tanzim, Christians from Leb. Army, sometimes Syrian Army
Peoples Socialist Party (PSP) militia	c1955	rel./pol.	Kamel Jumblatt	3,4	7,000	same as above		Muslim militias, LAA, PLO forces, sometimes Syrian Army	same as above
Lebanese Arab Army (LAA)	separated from Leb. Army in spring 1976	rel./pol.	Ahmed al-Khatib	1,3,4,5		same as above, ZU-23s, jeep-mounted 106mm RRs, RPGs, B-10s, 85mm field guns, Grad rockets, Charioteers		Muslim militias, PSP militias, PLO forces, sometimes Syrian Army	same as above

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Participants	Estab.	Basis	Leaders	Battles	Force Size	Weapons	Commun. Equip.	Allies	Opponents
Palestine Liberation Organization (PLO) forces*	1964	pol.	Yasir Arafat*	2,4,5		small arms, light mortars, M-113s w/ heavy machine guns, Katushia rocket batteries & weapons from LAA listed above		Muslim militias, PSP militia, sometimes Syrian Army	Phalange militia, NLP militia, Defenders of the Cedars, Tanzim, Christians from Leb. Army, sometimes Syrian Army
Syrian Army	circa 640 A.D.	natl.	Hafiz Assad	4,5,6,7	30,000	same as above, T-54, T-55, T-62, 240mm mortars, Stalin Organ rocket launchers	Syrian land lines, radio equipment similar to ANPRs	Muslim militias, PSP militia, PLO forces (occasionally)	Phalange militia, NLP militia, Defenders of the Cedars, Christians from Leb. Army, Tanzim (occasionally)

*Several groups belonging to the PLO participated in the conflict including al-Fatah, PFLP, DPFLP, PFLP-GC, ALF, and the PSF.

Battles:
1 - hotel district/port area
2 - Tel Zaatar
3 - Fayadiyeh I
4 - Bhamdoun
5 - Sidon
6 - Fayadiyeh II
7 - Beirut Battles (July 1-6, 1978 and September 30-October 7, 1978)

Table 3.
WEAPONS

Weapons	Battles Employed	Purposes/Effects	Problems	Defense/Counter Measures
M-16	1,2,3,6,7	sniping, open area & street fighting	not good for sniping --tumbling effect	cover behind walls, bullet-proof vests
Belgian FN	1,2,3,6,7	sniping, open area & street fighting. Better than M-16 for sniping	unknown	cover behind walls, bullet-proof vests
W. German G-3	1,2,3,6,7	same as Belgian FN	unknown	unknown
Lee-Enfield 303	1,2,3,6,7	sniping, open area & street fighting. Considered best sniping weapon.	unknown	unknown
80mm, 81mm mortars	1,2,7	creation of holes & rubble in buildings & streets; cover fire for advancing troops; created small holes, little rubble.	unknown	cover in buildings, armored vehicles
120mm mortars	2,3	creation of holes & rubble in buildings & streets; cover for advancing troops; made larger holes than 80mm & 81mm but still not highly effective	unknown	cover in buildings, armored vehicles
160mm mortars	3,7	effective weapon for damaging buildings, creating craters & rubble; made sizable holes in some surfaces	unknown	cover in buildings, armored vehicles

Weapons	Battles Employed	Purposes/Effects	Problems	Defense/Counter Measures
240mm mortars	7	creation of holes & rubble in buildings & streets; cover for advancing troops; penetrated top 2 or 3 floors of some buildings; created much rubble, craters several feet deep.	unknown	cover in buildings or underground
122mm field artillery	1,2,3,4,5,6	to pin down defending troops, provide cover for advancing troops, create holes & rubble in buildings & streets, create large holes in some surfaces.	unknown	cover in buildings
155mm Howitzers	1,2,3, 6,7	same as 122mm field artillery only more effective	unknown	cover in buildings
T-54	5,7	shelling of buildings & tanks, provide cover for advancing troops, knock out enemy positions in buildings	unknown	RPGs, mortars
T-55	4,5,6,7	same as T-54	unknown	same as T-54
T-62	4,7	same as T-54	unknown	same as T-54
106mm recoilless rifle (jeep-mounted)	1,2,3,4,5,7	used to breach walls & knockout forces in first floor levels of buildings	provides little protection for users	RPGs, mortars, machine gun fire
B-10 (jeep-mounted)	1,2,3,4,6	same as 106mm RR	same as 106mm RR	same as 106mm RR

Weapons	Battles Employed	Purposes/Effects	Problems	Defense/Counter Measures
ZU-23 AAA (vehicle mounted)	1,2,3,6,7	to spray streets & open areas with fire, crumble walls; very effective at killing & scattering troops in the streets & at crumbling walls.	unknown	RPGs, mortars, machine gun fire
Panhards	1,2,3,7	shelling of buildings, tanks; provide cover for advancing troops, knock out enemy positions in buildings	90mm cannon not powerful enough; 105mm cannon made Panhard unstable; air-inflated tires subject to puncture, lightly armored.	mortars, RPGs
Staghounds	1,2,3,4,6,7	same as Panhard	cannon not very powerful	same as Panhard
AMX-13	2,3,6,7	same as Panhard; 105mm cannon was effective	unknown	same as Panhard
M-41	1	same as Panhard	unknown	same as Panhard
Charioteer	1	same as Panhard	unknown	same as Panhard
Super Sherman	2	same as Panhard; considered effective	unknown	same as Panhard
ZU-57mm AAA	2,3,6,7	same as ZU-23 AAA but caused more damage	unknown	same as ZU-23
Swiss Oerlikon triple barrel 30mm & 37mm AAA	6	same as ZU-23	unknown	same as ZU-23
Hispano Suiza twin barrel 20mm AAA	6	same as ZU-23	unknown	same as ZU-23

Weapons	Battles Employed	Purposes/Effects	Problems	Defense/Counter Measures
RPGs	1,3,4,5,6,7	Penetrate walls, destroy tanks; very effective against tanks, penetrates some walls	heavy, hard to carry	cover behind thick walls & barricades or sandbags
Grad rockets	1,3,4,7	used in indirect counter battery fire	unknown	same as RPGs
Katushia rockets	1,3,4	same as Grad rockets	unknown	same as RPGs
Stalin Organ rocket launchers	7	used in direct fire from high buildings to pin down troops & vehicles; very effective	unknown	same as RPGs
Sneb missiles	7	used as an anti-tank weapon; very effective in destroying tanks	unknown	same as RPGs

Battles Employed:

1 – hotel district/port area
2 – Tel Zaatar
3 – Fayadiyeh I
4 – Bhamdoun
5 – Sidon
6 – Fayadiyeh II
7 – Beirut Battles (July 1-6, 1978 and September 30-October 7, 1978)

Table 4.

COMMUNICATIONS EQUIPMENT

Equipment	Battles Employed	Purposes	Problems	Defense/Counter Measures
civilian phone system	1	command, control (C^2) support	lines were subject to cutting & tapping	
ANPRC-77	1,2,3,7	C^2, support	batteries are bulky, hard & expensive to replace	intercept/interference
ANVRC-46, -47	1,2,3,7	C^2, support	batteries are bulky, hard & expensive to replace	intercept/interference
Readiphone	1,2,3,7	monitoring	batteries are bulky, hard & expensive to replace	intercept/interference
BLU	1,2,3,7	used for long distance communications by militia leaders	unknown	unknown
Goniometer interceptor	1,2,3,7	monitoring	unknown	unknown
Portable GE radios	1,2,3,7	squad level communications	none	unknown
CB radios	1,2,3,4,5	C^2, support	easily interfered with, intercepted	intercept/interference

Battles Employed:
1 - hotel/port area
2 - Tel Zaatar area
3 - Fayadiyeh I
4 - Bhamdoun
5 - Sidon
6 - Fayadiyeh II
7 - Beirut battles, 1978

APPENDIX B.

A MILITARY CHRONOLOGY OF THE CIVIL WAR

A MILITARY CHRONOLOGY OF THE CIVIL WAR

1975

April 13, 1975
Forces: Palestinian guerrillas v. Phalangists
Sector: Ain al-Rumaneh
Weapons: Phalangists used M16s; nothing mentioned for Palestinians
Outcome: 20 guerrillas killed, 20 wounded; 3 Phalangists killed, several
         wounded.
Comment: Phalangists are led by Pierre Gemayel and they oppose Palestinian
presence in Lebanon. Each side accused the other of starting the battle.
The guerrillas charge that the battle started when Phalangists ambushed a
busload of Palestinians travelling through Ain al-Rumaneh (a Christian
stronghold), killing 26, wounding 20. The ambush was in revenge for the
killing of a Phalangist a few days earlier. This battle is cited as the
start of the civil war. It is estimated that there are 10,000 armed
irregular guerrillas in Lebanon.

April 14, 1975
Forces: Palestinian guerrillas v. Phalangist militiamen
Sectors: Mainly Ashrafiyeh, Shiyah, and Phalangist offices in Beirut. Also
         in French market in Old City.
Weapons: machine guns, exploding rockets
Structures: Shops, filling station, factory--blown up.
Comment: Under cover of early morning darkness Palestinians attacked offices
of Phalangists, blew up shops and a Christian-owned factory, and fired
rockets into Phalangist center of Ashrafiyeh. This battle is a continuation
of yesterday's strife.

April 15, 1975
Forces: Palestinians and leftists/Muslims v. Phalangists
Sectors: Shiyah (Muslim); Ashrafiyeh (Phalangist); Tel Zaatar (refugee camp);
            Ras Beirut (mixed); and the port area (Phalangist).
Weapons: small arms, rockets, bombs
Outcome: Over 100 killed since April 13
Comment: Banks, schools, and offices have been closed in Beirut since the
fighting began on April 13. Phalangists have escalated conflict by firing
rockets into crowded housing in Tel Zaatar possibly in an effort to force
the Lebanese Army into the conflict. The Palestinians want the Lebanese
Army to stay out. A ceasefire was arranged late on April 16.

April 17, 1975
Forces: Palestinians and leftists/Muslims v. Phalangists
Sectors: Several areas in Beirut, most notably the area around St.
          Georges Hospital, Ain al-Rumaneh, and Dekwaneh
Weapons: automatic weapons and rockets
Structure: A 40-story building near St. Georges Hospital
Outcome: 14 killed (total since April 13 is 135)
Comment: The conflict began when unidentified snipers started firing to
disrupt the ceasefire. At night, rockets and machine guns were heard in
north Dekwaneh area. Phalangists killed seven armed men when they tried
to overtake a tall building near St. Georges Hospital which overlooks
Ashrafiyeh. Property damage so far is estimated at $100 million. Rockets
have caused much of the damage, as well as sabotage of property owned by
Phalangists, particularly in Ain al-Rumaneh where explosions wrecked stores
and large homes. Palestinians are concentrating on destroying Phalangist
property since that is "what hurts the Phalangists most."

May 5, 1975
Forces: Phalangist terrorists v. Pro-Palestinians (newspaper al-Moharrer)
Sector: Beirut
Weapons: Time bomb
Structure: The front of the newspaper (al-Moharrer) building
Outcome: 4 newspaper workers injured
Comment: The newspaper al-Moharrer supports the Palestinians. The head
of the PLO office in Beirut, Shafik al-Hout, is a contributing editor.
The newspaper had recently reported the Phalangists had received large
quantities of weapons. Reports now indicate 300 people have been killed
in the fighting since April 13. A truce was arranged by the Secretary
General of the Arab League. A committee representing both sides was
formed to keep the truce.

May 20, 1975
Forces: Phalangists v. Palestinians
Sector: Tel Zaatar, Dekwaneh
Weapons: rockets, mortars, machine guns
Comment: Phalangists fired rockets into Tel Zaatar camp, killing 2 and
wounding 20. Phalangists are still trying to bring in the Lebanese Army,
which they feel will side with them.

May 22, 1975
Forces: Lebanese Security Forces v. (Palestinians v. Christians)
Sector: Tel Zaatar, Dekwaneh
Weapons: light weapons, machine guns, 81mm mortars
Outcome: 20 killed since May 20
Comment: Fighting raged the entire day until the Lebanese Police Force
stepped in. The Phalangists approached the government about a ceasefire.
A formula was agreed upon but not announced. On May 23, President
Suleiman Franjieh formed a military government. Martial law was not
declared. Small arms fire continued for several days.

May 27, 1975
Forces: Palestinian guerrillas v. Christian rightists
Sector: Beirut
Weapons: small arms
Comment: The military cabinet resigned yesterday. It appears Franjieh
will have to appoint Sunni strongman, Rashid Karami, as prime minister.
Scattered shooting resounded throughout Beirut after dark. Several
people were killed. Seventy have been killed so far this week, 200 wounded.

May 30, 1975
Forces: Unidentified snipers v. Lebanese Security Forces
Sector: banking district of Beirut
Outcome: 1 person wounded
Comment: Sniper fire was used in an attempt to disrupt a four day old
truce. It emptied the downtown area and left the city tense. Lebanese
Security Forces, reinforced with sharpshooters, searched office buildings
and wounded one sniper. The snipers were probably Christians.

May 31, 1975
Forces: Phalangists v. leftwing Muslims
Sector: Beirut and road to Sidon
Weapons: rockets and machine guns
Outcome: 3 killed. The following day the head of Camille Chamoun's
           military forces was killed on the road to Sidon.
Comment: Shooting died down around noon. However, a dynamite blast
shattered an ITT office in Beirut. Chamoun headed another Christian
rightist party, the National Liberal Party (NLP), who are allied with
the Phalangists in the conflict. Anyone can now find an automatic rifle
on the contraband market. Kalishnikov assault rifles (commonly used by
Palestinains and leftists) are being sold for $300.

June 23, 1975
Forces: Phalangists v. leftists/Muslims
Sector: Ain al-Rumaneh and Shiyah
Weapons: small arms
Comment: Fighting had been at a very low level since the end of May.
Renewed fighting on a larger scale began today when two Iraqi men tried
to pick up a 16 year old Lebanese Christian girl. Her family and friends
attacked the Iraqis, which set off the shooting. The violence led to
roadblocks and the closing of beaches. The fighting lasted two days with
4 killed, 20 wounded. It ended with a truce. The conflict is taking on
an increasing Christian v. Muslim tone. The Palestinians in the PLO,
under Arafat's direction, are attempting to remain aloof.

June 26, 1975
Forces: Lebanese Security Forces v. (Phalangists and NLP v. PFLP,
           leftists/Muslims, Baathists)
Sector: Ain al-Rumaneh and Shiyah
Weapons: mortars and rockets
Comment: The truce of yesterday lasted one hour. Lebanese Security Forces
were called in, however, fighting spread. 10 killed, 35 wounded in past
3 days.

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June 27, 1975
Forces: Phalangists and NLP v. Palestinians, leftists/Muslims, Baathists
Sector: Ain al-Rumaneh and Shiyah
Weapons: mortars, rockets, machine guns
Outcome: 50 killed in past 5 days
Comment: Three rockets landed on Phalangist headquarters in Beirut on
night of June 26. The party mobilized its militia, who set up barricades
to block northern and eastern entrances to Beirut. Armed men drove
through Beirut firing machine guns into the air to keep people indoors.
Downtown Beirut was deserted. The Phalangists also dug trenches.

June 28, 1975
Forces: Phalangists, NLP, Front for the Protection of the Cedars v.
           leftist Muslims, Palestinians v. Lebanese Security Forces
Sectors: Ain al-Rumaneh, Shiyah and much of Beirut
Weapons: machine guns, mortars, bazookas, rockets, grenades launched by
           rockets. The Lebanese Army used M16s.
Comment: About 800 have been killed since April 13. There were explosions
in the Hamra district, sniper fire in the banking district, Martyr's Square,
and Debbas Square. Along with the major groups involved in the conflict
Nasserites (led by Ibrahim Koleilat), Baathists, and Lebanese Communists
are also involved. These groups all oppose the rightwing Christians and
are largely supplied by Libya and Iraq. Others are settling old scores
amidst the violence. Fighting continued. As of July 1, 150 people have
been killed. Libya had been charged with supplying leftist snipers, who
fired at both sides whenever fighting subsided. Bombs were planted by
both sides. The entire city was a battle zone.
        Prime Minister Karami formed a cabinet, but the violence prevented
it from formally taking office. Camille Chamoun was named Defense Minister.
He heads the NLP, an ally of the Phalange.
        Combatants fought for rooftop positions, street corner barricades,
and places from which to fire antitank rockets and heavy mortars. The
PLO tried to keep its members out of the conflict. Palestinians involved
in the combat generally belong to the Popular Front for the Liberation of
Palestine (PFLP), led by George Habash.
        On July 2, Lebanese Security Forces rolled into Christian and
Muslim neighborhoods to quell fighting. They met no resistance. This was
the fourth ceasefire since April 13. The Shi'a were now behind the
Palestinians and leftists. Many Shi'a moved from southern Lebanon and the
Bekaa Valley due to Israeli raids. They are a very poor minority. Imam
Musa Sadr organized a political movement called "Deprived" which had a
Shi'ite base; leftists were gravitating toward it. He also organized a
paramilitary wing called "Hope," which he claimed would help defend southern
Lebanon against Israeli attacks.
        Things remained relatively quiet until September, except for the
burning of the U.S. Embassy on August 2. Reports did not indicate who was
responsible.

September 7, 1975
Forces: Rightwing Christians v. Leftwing Muslims (reports indicate that
          the PLO was not involved)
Sectors: Tripoli, Zghorta
Weapons; machine guns, mortars, grenades
Comment: The week before a Christian was killed in Tripoli by a Muslim
taxi driver. In retaliation, an armored Christian group ambushed a bus
from predominantly Muslim Tripoli and machine gunned its occupants,
killing 12. Fighting then became intense between Tripoli and Zghorta.
Police could not reach wounded due to the intensity of the fighting. The
fighting had been going on for a week despite a recent ceasefire.
          On September 8, fighting raged. Hundreds of men armed with
submachine guns, rocket-propelled grenades, and mortars advanced from
Tripoli and Zghorta. The government considered bringing in the army. 200
were killed in the past 8 days.

September 11, 1975
Forces: Lebanese Army v. (leftist Muslims v. rightist Christians)
Sector: Tripoli, Zghorta
Weapons: Soviet-made AK-47 assault rifles (leftist Muslims)
Outcome: Fighting cooled down.
Comment: The army blocked the road going back to Tripoli. Returning
leftist Muslim fighters and the army engaged in battle. The army won,
killing 12. In retaliation, Muslims in Tripoli seized several police
stations, capturing 20 gendarmes. The Muslims in Tripoli were divided on
the issue of fighting the Christians, and things appeared to be cooling
down.

September 12, 1975
Forces: Lebanese Army v. (Christians v. Muslims)
Sector: Tripoli, Zghorta, Akkar region
Weapons: machine guns, grenades
Outcome: 10 killed in Tripoli
Comment: Fighting continued despite the presence of Lebanese troops.
Lebanon's Muslim leaders voiced support for the limited military role, but
Christians wanted a much stronger military role. As of today, the army was
not allowed to move into Tripoli or Zghorta; it must remain outside the
towns. Earlier, Muslims set fires near Tripoli. The army moved in and
killed 13. Those killed owed allegience to Farouk Mokaddem. Their
colleagues captured police stations in Tripoli as a result. Several
kidnapped police were still unaccounted for. Mokaddem turned over some
police to Palestinian commandos for their protection.

September 19, 1975
Forces: Phalangists (Pierre Gemayel) v. leftists/Muslims
Sector: Beirut (entire city); much conflict in center of town; intense
           in Martyr's Square
Weapons: small arms, bombs, fire, machine guns, mortars, grenades,
           incendiary grenades
Outcome: 20 killed
Comment: Gemayel sent his forces from their mountain training camp
into Beirut to start action in an effort to force Franjieh and Karami
to bring in the military. Fighting rages. 200 Saiqa members were sent
in by Syria with Lebanese approval.
           A ceasefire was declared the next day, largely negotiated by
Syrian official Abdel Halim Khaddam. Fighting erupted in Zahle, where
fires were being set. Although the ceasefire was declared on September 20,
and was generally holding up, sniper fire continued, killing 13 people.
Explosions and major shooting incidents occurred in the suburbs. Phalangists
started their own radio show called the Voice of Lebanon. It plays
Phalangist military marches.
           September 24, a new ceasefire was declared. Prime Minister
Karami called for removal of militias and announced formation of a 20-man
Committee of National Dialogue with representatives from all the warring
factions to insure peace. Lebanese Army units were to replace militias.
Palestinians played a small role in the fighting. They were to assist in
taking down leftist barricades.

September 26, 1975
Forces: Christians v. Muslims
Sector: Several areas in Beirut, including Ashrafiyeh and Karantina
Weapons: rockets, mortars, and machine guns
Outcome: 15 killed
Comment: The ceasefire started to break down. Ashrafiyeh Christians
exchanged fierce rocket, mortar, and machine gun fire with Muslim Karantina.
Snipers worked in Hamra.

October 15, 1975
Forces: Phalangists v. Palestinains
Sectors: Dekwaneh and Tel Zaatar
Outcome: 23 killed
Comment: Christians battled with Palestinians in Tel Zaatar.

October 26, 1975
Forces: leftists/Muslims v. Phalangists
Sector: Kantari
Weapons: fire, heavy machine guns, rockets, rocket-propelled grenades
Structure: Holiday Inn, Phoenicia Hotel, Hotel St. Georges, Murr building
Comment: Kantari is a Muslim section but was regarded as a no-man's land
militarily. Phalangists had been using flying roadblocks to kidnap people.
The Muslim forces invaded in retaliation. No part of Beirut is safe.

October 27, Phalangists moved into the Holiday Inn, Phoenicia International, and the NLP moved into Hotel St. Georges. In Ashrafiyeh, Phalangists attempted to get back the 40-story Murr building (uncompleted) lost to leftists. They fired recoilless rifles and machine guns at it. The leftists installed heavy machine guns, mortars, and snipers on the building's upper stories, which overlooked Kantari. Palestinian guerrillas were involved in the fighting. Al Fatah occupied Hamra. Heavy street fighting took place in most suburbs of the city. For the first time, the street fighting appeared organized; units of gunmen fought each other under commanders' maneuvering their forces to take territory. Much larger units were deployed than last spring.

October 28, Phalangists laid down a ring of fire around the Murr building to cut off supplies. Thousands of Muslims besieged Christian-held hotels. They used jeep-mounted artillery. Muslims and Christians routinely fired at firemen putting out fires, if the fire was in an opposing section. Fighting spread north and south of the city; most major roads had been cut. The Holiday Inn was repeatedly hit by rocket and mortar fire.

October 29, 1975
Forces: (Christians v. Muslims) v. Lebanese Security Forces
Sector: Ain al-Rumaneh and Shiyah
Weapons: rockets, mortars
Comments: Vast areas of Ain al-Rumaneh and Shiyah were covered with flames due to attacks. Heavy fighting was reported in a number of districts, including a densely populated refugee camp. Internal security forces in armored cars broke through rightist and leftist barricades to rescue civilians trapped in the Holiday Inn and the Phoenicia. Fighting resumed with a new intensity. Both sides brought in reinforcements. Rockets continued to pour into the Holiday Inn, while rightist mortars were shelling attacking leftists non-stop. Many buildings in the area were set afire. The leftists assaulting the rightwing strongholds in the hotel district demonstrated their strength by firing six mortar shells in neat lines on each side of the Hotel St. Georges, where Christians prepared their last stand. The leftist members of the Independent Nasserite Movement gave them until nightfall to withdraw.

A ceasefire was declared on November 3. Leftists left the Murr building, turned it over to the PLO. However, fighting did continue. Phalangists left St. Georges and the Phoenicia. Phalangists used American-made submachine guns, mortars, and grip-mounted recoilless rifles. They also had Kalishnikovs bought from Hungary several years ago.

November 13, 1975
Forces: Saiqa forces v. Army commandos
Sector: Beirut Airport
Outcome: 2 Palestinians killed
Comment: There was a rash of kidnappings the same day in Beirut. 17 people had been kidnapped by nightfall. Kidnappers were from both sides. Police said it appeared militia leaders and guerrilla captians were unable to control their own gunmen. The 10-day old ceasefire seemed to be breaking down. Also, the Christian Rejection Front was formed by a small group of extremists. It advocated partition of the country into Christian and Muslim sections.

November 21, 1975
Forces: Christians v. Muslims
Sectors: Two-thirds of Beirut, Tripoli
Weapons: mortars, rockets, heavy machine guns
Outcome: 26 killed, 76 wounded, 150 kidnapped
Comment: In Baalbak, 500 Muslim militiamen attacked the town.

December 5, 1975
Forces: Phalangists v. leftists/Muslims
Sectors: Several areas of Beirut, including the port area and Kantari;
            also Aley and Zahle
Weapons: artillery, mortars
Outcome: 60 killed
Comment: Fighting began by artillery and mortar barrages between Druze
mountain town of Aley and Christian Zahle. Later, the bodies of five
Phalangist militiamen who had been murdered were found near Beirut. Within
hours, Christian gunmen started shooting Muslim workers in part of Beirut.
Muslim gunmen then set up flying roadblocks in central Kantari, where
they executed several Christians in a passing car. There was sporadic
shooting in the center of the city. By nightfall, leftist gunmen closed
the Associated Press office in Kantari. Shooting was in all parts of the
city by then.

December 6, 1975
Forces: Christians v. Muslims
Sectors: Ain al-Rumaneh, Shiyah, and Zahle
Outcome: 90 killed
Comments: The fighting tended to lull at the end of each month so banks
could open to cash paychecks. Christian extremists were still calling for
partition. Many left Beirut, mainly the rich, for their summer homes in
the mountains.

December 8, 1975
Forces: Phalangists v. leftists/Muslims
Sectors: hotel district, Ashrafiyeh
Weapons: mortars, rockets rocket-propelled grenades, automatic weapons
Structure: Hilton Hotel, St. Georges Hotel, Murr Building, Holiday Inn
Comment: The Muslims launched a major offensive to capture Christian-
held Mediterranean seafront. Leftists moved in a broad arc across central
Beirut, pushing Christians towards the sea. The Christians took up door-to
-door defense in heavy street fighting. There was hand-to-hand fighting
as leftists sought to take the Phoenicia Hotel. The Lebanese Army moved
into the parliament central post office to keep it from leftists. Muslims
took St. Georges Hotel. Christians held the Holiday Inn. The Muslims
moved through Kantari, many of whose residents fled. Beirutis stayed
indoors even in areas removed from the shooting. Each side sought to
establish local positions in other parts of the city in anticipation of
wider conflict. Rightists tried to direct leftist forces from the central

Beirut battlefront. Chamoun ordered Lebanese commandos to clear Phoenicia and Riad Solh Square from fighting. The Phalangists left the Holiday Inn in an agreement with the army. They had received a heavy battering the whole day from leftists. The Muslims were given an ultimatum from the army to evacuate St. Georges. They refused and a battle ensued.

December 9: The army was able to slow down the offensive, capturing the Phoenicia from the Muslims. However fighting escalated. Christians mounted a counter-offensive, halting broad advance of leftists through Christian strongholds in central Beirut. The army supported the rightists. The army took two hotels in an attempt to drive a wedge into Muslim forces. Rightist reinforcements were sent in overnight to the hotel district. They fought earlier in the day for the Holiday Inn and the Phoenicia. Leftists called upon Palestinian guerrilla groups for aid. Control of the hotels changed several times as leftists and rightists attacked and counterattacked. Nasserites, well armed and well trained, tried to push Christians into the sea.

December 10: Karami announced a ceasefire. Security forces were to separate combatants. The Nasserites were forced from the St. Georges and Alcazar hotels after heavy bombardment by the army, with the aid of the Phalangists, using rockets, mortars, and grenades, causing large fires in both buildings. Ibrahim Koleilat headed the Nasserite forces which has spearheaded the leftist drive. The army moved behind tanks and other armored vehicles and undertook a building-to-building drive to push leftists from the hotel district. The rightists pushed the leftists back in downtown Beirut, which the leftists yesterday had threatened to sweep across in a broad advance that had now been turned back by the army and the rightists. (The army used helicopters, tanks, armored cars, and mortars in the hotel district.) The rightists, resupplied and reinforced, moved back into the Holiday Inn. In the neighborhoods around the U.S. Embassy on the seafront, members of the militia of the Peoples Socialist Party (PSP) set up machine gun and recoilless rifle positions anticipating a rightist surge into west Beirut. The hotel district battle began with the Phalangists killing 100 Muslims several days ago.

December 11: Leftists accepted a ceasefire after ignoring it for 24 hours. 250 people have been killed in the last 4 days. The PLO and Syria had much to do with the leftist acceptance of the ceasefire. However, fighting still raged in the hotel district. The leftists were then in control of the Phoenicia, the Phalangists were counterattacking it. The leftists were attacking rightists in the Holiday Inn at nightfall. The Hotel St. Georges, which the leftists also held, was a charred shell. The leftists forced the army out of the hotel district but were unable to retake the Holiday Inn. The Holiday Inn and the Phoenicia were of great tactical importance since they dominated an apprach to central Beirut, which the leftists were trying to seize. In their attack on the Phoenicia last night, leftists used 122mm rockets, 20mm cason, rocket-propelled grenades, heavy machine guns, and other weapons in their successful attempt. Heavy explosions, mostly of Christian-owned stores, shook fashionable sections of west Beirut, as the fighting threatened to engulf the last remaining peaceful district.

December 12: Black smoke poured out of hotels as a rocket barrage rekindled fires started yesterday. House-to-house fighting raged on all fronts. Muslim forces had the upper hand in the battle for downtown Beirut. They were clearly reluctant to ease their pressure on besieged Phalangists in the Holiday Inn until their decisive victory. Stained with soot and full of holes, the hotel was then more a symbol than a strategic asset. Its Christian defenders were hemmed in on three sides by the Muslims, and the entire district was dominated by Muslim gunners in the 40-story Murr Tower.

December 14: A new ceasefire was declared.

December 16: The latest ceasefire was beginning to take hold. In the hotel district the major hotels were occupied by Lebanese Security Forces and militiamen of one of the two major sides. Neither side would completely pull out of its hotel until the other did. The ceasefire was the product of Syrian and Saudi efforts. The Saudis had initiated an anticommunist drive in Lebanon. Kamal Jumblatt was under heavy Syrian and PLO pressure to stop the fighting. By nightfall, all militiamen had moved from hotel positions. It appeared that 25,000 Lebanese lost their jobs because the places they worked in had been destroyed. 40,000 more are out of work because factories were shut down. Some were then joining militias to earn money.

December 22, 1975
Forces: Palestinians v. Christians and the Lebanese Army
Sectors: Zahle, Tripoli, al-Mansurriyah
Weapons: mortars
Comment: Palestinian guerrillas from Syria moved into Muslim towns surrounding Zahle. In Tripoli, the Christians fought Muslims. The Muslim governor of north Lebanon was recently assassinated. Fighting between Christians and Muslims was heavy in al-Mansurriyah.

December 23: The Lebanese Army defended Zahle from continued shelling from PLA units. The Air Force used helicopters to pinpoint sources of fire. According to Phalangists, 6,000 men assaulted Zahle; the assault was repelled with 70 attackers killed. According to other Phalangist sources, the attacking troops belonged to the PLA. The PLO denied this. Leftists said the attackers were Muslim militiamen from Baalbak.

December 25: Mortars, rockets, and machine gun fire rocked Shiyah, Ain al-Rumaneh, Sin el-Fil, Nabaa, Ashrafiyeh, and Basta. Bomb blasts rocked Ras Beirut as leftists tried to destroy Christian shops on Hamra St. 100 people were kidnapped in Beirut. Saiqa troops tried to prevent kidnappings. Palestinian guerrilla police cooperated with Lebanese police. A new political agreement was reached today.

1976

January 3, 1976
Forces: Muslim militiamen v. Lebanese police
Sector: Sir Dinniyyeh prison on the outskirts of Tripoli
Weapons: rockets and machine guns (Muslims)
Outcome: 34 Muslim inmates escaped
Comment: The attack by 400 armed Muslims was to free Muslim inmates in the jail. They succeeded. The attackers possibly were members of Farouk Mokaddem's October 24 Movement.

A bomb exploded in a car outside the east Beirut headquarters of the Phalangist party, inflicting heavy casualties--16 dead, 30 injured. The blast devastated an area more than 1,500 feet in diameter and destroyed 15 cars. The bomb weighed between 110 and 220 pounds. The blast occurred on Akkawi St. in Ashrafiyeh. (The car struck was parked at a gasoline station.)

January 4, 1976
Comment: Muslim gunmen killed five people in a hit-and-run raid in east Beirut. Christians claim to have captured them, finding explosives in their car and files belonging to a Communist Action organization.

January 5, 1976
Forces: Muslims and Palestinians v. Christians and Lebanese internal
             security forces
Sector: east Beirut and Tel Zaatar
Comment: Palestinians and Muslim forces pushed through eastern Beirut forcing a corridor to the sea in an attempt to break a Christian blockade at Tel Zaatar. Thousands of Muslim militiamen and Palestinians battled their way west and north of Tel Zaatar and captured several Christian positions. A fierce battle was underway as Christians tried to regain lost ground. The offensive by the Muslims was launched to break a five day old blockade cutting off supplies to Tel Zaatar and surrounding shanty-towns of Muslims. Losses were reported to be heavy. Since April 13, 1975 8,050 people have been killed, 17,050 wounded.

January 6, 1976
Forces: Christians v. Muslims
Sector: Tel Zaatar, east suburbs of Beirut
Weapons: rockets, mortars, machine guns
Comment: The conflict began when Christian gunmen ambushed two trucks carrying flour to Tel Zaatar. By nightfall there was heavy fighting in the eastern suburbs of Beirut. Tel Zaatar, its surrounding Muslim shanty-towns, and the Shia-populated Nabaa quarters, had long been irritants to Phalangists in the predominantly Christian area of eastern Beirut. Due to the influx of Muslims, some Christians were forced to relocate, causing further irritation to Christians.

January 7, 1976
Forces: Palestinians / leftists / Muslims   v. Christians
Sector: eastern suburbs of Beirut
Weapons: rockets, mortars
Comment: After a bombardment of Christian positions by rockets and
mortars, Palestinian guerrillas and leftists opened an offensive in the
eastern suburbs of Beirut. They took over Hirsh Tabet quarter, occupying
two hospitals and a millionaire's villa. Hirsh Tabet was a high ground
overlooking Tel Zaatar. It had been held by Lebanese security forces.
Palestinians said the attack was defensive--designed to break the blockade
of food imposed by the Christians. Hundreds of armed men were thrown
into the battle in the suburbs between the Beirut River and hills to the
east. Christian Sin el-Fil was under intense shelling. Muslims appeared
to be trying to link Tel Zaatar area with Muslim Nabaa, which lies on
the other side of Sin el-Fil. Muslims advanced from Shiyah into Ain al-
Rumaneh. Christians moved into Karantina.

January 9, 1976
Forces: Palestinians and Muslims v. Christians
Weapons: mortars, rockets, grenades, machine guns
Outcome: 74 dead, 152 wounded
Comment: The heaviest fighting of the civil war raged during the night
and today. Mortars or rockets were fired on an average of one every
three minutes during the night. Thousands of Palestinian guerrillas
and their leftist allies were locked in house-to-house fighting with
Christians for control of the approach roads to Tel Zaatar. The battle
moved west across the Beirut River into the high-rise district of eastern
Beirut by dawn. An attack by 1,000 Palestinians and leftists in Shiyah was
repulsed by the Phalangists. The Lebanese Army moved its headquarters
from Beirut to Naqoura. The army was going to take a more active role.

January 10, 1976
Forces: Palestinians and Muslims v. Christians
Sector: hotel district, suburbs
Weapons: mortars, rockets, machine guns
Outcome: 86 killed, 100 wounded
Comment: The hotel district was again engulfed in the conflict. Rightist
Christians reoccupied the Holiday Inn; Muslims took the Phoenicia. The
U.S. Embassy on the edge of the hotel district was under intense sniper fire.
Savage hand-to-hand fighting erupted in the suburbs. The ten day Christian
blockade of Tel Zaatar and Jisr al-Basha continued. The Christians
repelled a Palestinian attempt to break the blockade. The guerrillas
claimes the Lebanese Army brought in 40 tanks and armored cars and
assisted the Christians in containing the camps. The army denied the claim.
Half of the casualties were noncombatants who were hit by snipers and
shrapnel.

January 11, 1976
Forces: leftists / Muslims / Palestinians   v. Christians
Sector: hotel district
Outcome: 50 killed, 100 wounded
Comment: Karami's cabinet could not agree on whether to ask for a
ceasefire. The government ceased to function. The hotels were only
shattered hulks. Two truckloads of PLA troops crossed from Syria
into Lebanon. Government sources said measures were being taken to
prevent them from going to Beirut. Christian militiamen sent massive
reinforcements to upper floors of the Holiday Inn. Leftists retaliated
by taking the Murr Tower.

January 12, 1976
Forces: Muslims and Palestinians v. Christians
Sector: Jisr al-Basha, eastern Beirut
Weapons: rockets, mortars, armored cars
Comment: Encircling Christian forces battled yard by yard towards Jisr
al-Basha using armored cars. They drove another 100 yards southeast to
the outskirts of Jisr al-Basha and Tel Zaatar. The Christians blockaded
Debayyeh in retaliation for its attacks on a nearby Christian village.
          The Phalangists' drive to cut off the refugee camp from food,
arms, and ammunition, was to remove a threat to free movement between the
capital's Christian neighborhoods and the Christian-controlled areas in
the north of the country. The Palestinians sought to relieve pressure on
the three camps by seizing the Charles He'lou Bridge that crossed the
Beirut River. From there, they fired at another bridge 100 yards south.
Both bridges were important for movement between Christian-held areas.
          The Phalangists' escalation of the conflict was politically
motivated by their desire to embarrass the PLO just when it had won the
right to present its case to the UN Security Council. Militarily, the
Christians were still trying to force the Lebanese Army into the conflict.
The PLO had yet to put its full military force into the conflict.

January 13, 1976
Forces: Muslims and Palestinians v. Christians
Sector: Jiye, Damour, Aley, Zahle, Tripoli, Zghorta, Beirut
Outcome: 40 dead, 70 wounded
Comment: Heavy fighting spread to wide sections of Lebanon. Leftists
and Palestinians overran Jiye, a small Christian village in the Sidon
area. They also heavily shelled Damour, a stronghold of the NLP Interior
Minister Chamoun. The Druze village of Aley was involved in sharp clashes
with neighboring Christian villages. There was fighting in Zahle,
Tripoli, and Zghorta. The escalation of the fighting by the Palestinians
and leftists was aimed at easing the pressure on the three encircled camps
by spreading the rightists "all over the country."

January 14, 1976
Forces: leftists / Muslims / Palestinians v. rightwing Christians
Sectors: Debayyeh, hotel district
Structure: Holiday Inn
Outcome: refugee camp was overrun by Christians
Comment: was a Palestinian refugee camp, composed mainly of
Christians. Rightwing control of the camp allowed the Phalangists and
the NLP unimpeded lines of land communications between Christian neighbor-
hoods in eastern Beirut and the Christian hinterland north along the sea
coast and east in the mountains. Tel Zaatar and Jisr al-Basha were still
under siege. However, the Phalangists were in danger in central Beirut
where leftist troops of Ibrahim Koleilat's Independent Nasserite Movement
and a force of Palestinian commandos threatened the lifeline between
Ashrafiyeh and the Holiday Inn two miles to the west. In fierce street
fighting, leftists and Palestinians gained control of several strategically
important blocks. They controlled the Fine Arts Institute where they
were in striking distance of the unfinished Hilton Hotel, an important
staging area for the seaside supply route to the Holiday Inn.   In
southern Lebanon, there was a massive deployment of Druze tribesmen loyal
to Kamal Jumblatt, the titular head of the Lebanese left.

January 20, 1976
Forces: leftists / Muslims/ Palestinians v. (Christians and PLA v.
            Lebanese Army)
Sector: Damour
Weapons: rocket-propelled grenades, machine guns, tanks, artillery
Outcome: Damour was overrun
Comment: Palestinians and leftist Muslims ended a week long siege of
Damour by storming the city and massacred its inhabitants. Isolated police
ports in northern and eastern areas of the country were also overrun.
In Damour the conquering troops methodically cleared the inhabitants from
house after house, firing rocket-propelled grenades and machine guns into
their homes. Casualty figures ranged from 150 to 350 killed within the
previous 48 hours. 1,200 to 2,000 of the invading troops crossed into
Lebanon from Syria. Israeli sources indicated that those Palestinians
who crossed into Lebanon from Syria were reinforcements and did not con-
stitute Syrian military involvement. Later reports indicated that 4,000
troops of the Syrian-based PLA crossed into Lebanon and linked up with
4,000 Palestinians and leftist Muslims massing around Chatoura in the
Bekaa Valley. The PLA troops clashed with the Lebanese Army during the
night at the Maksi crossroads. Heavy exchanges of artillery took place
and the army withdrew another mile into the Mount Lebanon foothills.
Zahle was under heavy shelling. Most buildings in Damour were set on fire
by the Muslims as they looted the city.

January 21, 1976
Forces: Palestinians and Muslims v. Phalangists
Sector: Nabaa, hotel district, Sidon
Comments: Christian forces, who recently captured Karantina, launched an
offensive on Nabaa. In the hotel district heavy fighting took place. In
Sidon, leftist forces shot their way into the government buildings.
Syrian officials were in Lebanon attempting to negotiate another ceasefire.

January 22, 1976
Forces: Phalangists v. Palestinians, Muslims, the Yarmouk Brigade
Sector: Zahle
Weapons: 155mm mortars, Soviet Grad missiles
Comment: Muslim forces have tried to capture Zahle since April 1975.
The city was without telephone service, its major road to the outside
was cut, and there was no gasoline. Phalangists controlled most of the
city's military operations. The Christians were not heavily armed,
although they did have 155mm mortars which they had recently acquired.
The Lebanese Army had artillery batteries dug into the hills above the
city, commanding an unimpeded field of fire below. The Palestinian
commandos, who harrassed Zahle for months, did not have heavy fire power,
but the Syrians and the Syrian-trained Yarmouk Brigade did. The Zahle
situation was tense, its parliament was going to bring in the Lebanese
Army, which did nothing to prevent the fall of Damour. Another Syrian-
moderated ceasefire was declared.

March 6, 1976
Forces: Muslims v. Christians
Sector: Qubayyat
Outcome: 7 killed
Comment: Muslim fighters charged the Christian town of Qubayyat, 80
miles north of Beirut. A Christian army battalion in Jounieh mutinied
the day before when its commander would not allow it to assist the
Christians in Qubayyat. The PLA moved in to lift the siege. The Muslim
attack was led by a renegade Muslim lieutenant who accused the army of
siding with the Christians. Most of the Christian enlisted men in the
army were from Qubayyat
            March 7: The PLA brought a halt to the fighting by creating
a buffer zone between the city and the attackers.

March 8, 1976
Forces: Muslim troops in the Lebanese Army mutinied
Sector: Beaufort Castle, 5 miles from Israeli borders
Weapons: none used
Structure: Beaufort Castle
Outcome: Mutiny was successful. 50 mutineers occupied the castle.
Comment: Beaufort Castle was a Crusader castle which the Lebanese Army
converted into an anti-aircraft battery, ostensibly for use against Israeli
aircraft. According to the leader of the mutineers, Sergeant Hassan Jaber,
the anti-aircraft guns had never been used. Sgt. Jaber announced that he
and his followers belonged to the Lebanese Arab Army, a rebel group from
the army led by an army deserter, Lt. Ahmed Khatib. The takeover was
peaceful. Those who wished not to join were allowed to leave the castle.
Jaber's men were armed with M-16s.

March 9, 1976
Forces: Muslim Lebanese Army members mutiny
Sector: Rachaya, Beirut
Outcome: The mutiny was successful.
Comment: The Muslims took over a garrison at Rachaya and joined the
Lebanese Arab Army (LAA). 300 men were involved. Lt. Khatib, head of
the LAA, was supported by al-Fatah. In Beirut, despite the ceasefire,
a wave of kidnappings took place. About 30 people were kidnapped in the
past few days. Syrian Foreign Minister, Abdul Khaddam, and Syrian Air
Force Commander, Haji Jamil, were in Beirut again trying to maintain peace.

March 10, 1976
Forces: Muslim forces mutinying against Christian officers
Sector: Araman, Merj Uyyun, Khiyam
Outcome: All three mutinies succeeded.
Comment: The forces mutinying at the barracks in Araman, Merj Uyyun,
and Khiyam all joined the Lebanese Arab Army. Disturbances took place in
army garrisons in Nabatiyeh and Sidon. The Lebanese Army offered amnesty
to all deserters. Lebanon was in a state of near de facto partition.
Muslim forces controlled the eastern and souther flanks of the country.
The army made attempts to recapture. The LAA supported the leftist Muslims.
The revolt spread.

March 11, 1976
Comment: Muslim Brigadier General Abdel Aziz Ahdab declared himself
military commander of Beirut. He demanded that President Suleiman
Franjieh resign within 24 hours. He also called on parliament to elect a
new president within seven days.

March 17, 1976
Comment: L'Orient le Jour kept track of the various factions. It listed
3 armies, 2 police forces, 22 militia groups, 42 political parties, and
9 Palestinian organizations.

March 19, 1976
Forces: Phalangists v. leftists/Muslims
Sector: hotel district, Tripoli, Zghorta
Weapons: mortars, recoilless rifles
Structure: Holiday Inn, Murr Tower
Comment: Phalangists in the Holiday Inn fought with leftists in the
Murr Tower. Fighting was reported to be heavy between Tripoli and Zghorta.
The ceasefire arranged in January was on the verge of complete collapse.
Fighting was heavy in the mountains above Beirut.

March 21, 1976
Forces: leftists/Muslims (headed by LAA) v. Phalangists
Sector: hotel district
Weapons: artillery, recoilless rifles, armored vehicles
Structure: Holiday Inn
Outcome: Muslims took the Holiday Inn.
Comment: Hundreds of Muslims, backed by armored vehicles, attacked
and took the Holiday Inn from the Phalangists. The final assault on
the hotel was led by an armored personnel carrier, which crashed into
the entrance and blasted the last functioning mortar crew at the
building's southern edge. 16 rightists were left in the hotel when it
was taken. After the Holiday Inn was taken the Christians unleashed
shelling along the confrontation line that ran from the hotel through the
downtown section, out the Damascus highway, to Franjieh's mansion at
Baabda.
        Kamel Jumblatt mobilized his 7,000-man private army in the
mountains above Beirut and vowed a "total and irreversible" military
campaign against the Phalangists and the NLP."

March 22, 1976
Forces: leftists/Muslims v. Phalangists
Sector: hotel district
Weapons: heavy artillery, mortars, 105mm and 155mm artillery fire
Structure: Holiday Inn
Outcome: 100 killed in the past 24 hours
Comment: Supported by heavy artillery fire, rightwing Christian militia-
men counterattacked in a day-long bid to recapture the Holiday Inn. At
nightfall, close-quarter fighting was still going on. It was not clear
who was holding the hotel. This was the fiercest night shelling of the
civil war. Some sources indicated that Phalangists entered the hotel
disguised as Palestinian military police. Others said the rightists
never entirely cleared the building. By nightfall, due to Palestinian
commando support, the leftists took the upperhand. This was the first
time 105mm and 155mm artillery had been used in Beirut.

March 23, 1976
Forces: Leftists/Muslims v. Christians
Sector: Monteverdi, hotel district
Structure: Holiday Inn, Starco building, Hotel Normandy, Hilton Hotel
Comment: Kamal Jumblatt's forces pushed into the posh suburb of Monteverdi,
only a few miles from Beit Meri where Phalangist 155mm artillery pounded
targets in Beirut since early March 22. In Beirut, the leftists, aided by
more rebel armor and Palestinian commandos, swept back overnight into the
Holiday Inn. Then, the leftists moved 500 yards and captured the Starco
building, a Phalangist stronghold, moved north threatening Phalangists in
the seafront Hotel Normandy and the unfinished Hilton Hotel. Fires burned
out of control in the Byblos Hotel, the Holiday Inn, the Vatican Diplomatic
Mission, and port warehouses. An anti-Syrian feeling built up among
leftists/Muslims/Palestinians; battles erupted between Saiqa forces,
al-Fatah, and rejection front groups. The leftists won and rejected
Syrian efforts to negotiate peace. It was possible that Jumblatt's forces
linked up with the Syrian Peoples Party (SPP) units farther up in the
mountains in Dour Esh-Shooeir. The SPP is a left wing, largely Christian
movement, with goals not far from those of Jumblatt's Socialist Party.

March 24, 1976
Forces: Jumblatt's Druze supporters v. rightwing Christians; leftists/
            Muslims v. Phalangists
Sectors: Beit Meri, Beirut
Comment: The previous day's claim by Jumblatt to have entered Beit
Meri turned out to be inaccurate. Jumblatt now called the operation a
"raid" on Beit Meri. Jumblatt asked for time to consult his allies.
The Syrians, speaking through Saiqa, warned Jumblatt to cool down his
operation against the Christians.
            In Beirut, fires in the port area raged out of control due to
continued Muslim and Christian shelling. There was a tense sniper
battle going on for key positions on the city's seafront.
            Jumblatt's forces were armed with AK47s, American M-16s, and
some French World War II bolt action rifles. They had rockets which were
sent to the Lebanese Army by Anniston Army Depot in the United States.

March 25, 1976
Forces: Rebel Muslim forces, leftists/Muslims, Palestinian commandos
            v. rightwing Christians
Sector: Beirut
Weapons: 105mm and 155mm artillery
Outcome: Franjieh fled his presidential palace, 200 killed
Comment: Rebel Muslim forces shelled the presidential palace forcing
Franjieh to move his headquarters to Jounieh. After the shelling, Franjieh
directed a counter-barrage at western Beirut, hitting American-favored
areas in an attempt to force the U.S. Sixth Fleet to land marines. Jumblatt
and the leftists defied Syria and the Phalangists by refusing anything
short of Franjieh's immediate resignation. They refused the ceasefire
Syria recently tried to enforce. 1,000 people have been killed in the
past two weeks. 15,000 have been killed since April 1975.

March 26, 1976
Comment: Fighting continued to rage in Beirut. An-Nahar labelled
recent fighting "a war of genocide." 30 people killed, 70 wounded in
Beirut. 32,000 wounded since April 1975.

March 27, 1976
Comment: Fighting raged on all fronts. In Beirut's hotel district,
leftists pounded Christians who were holed up in the Hilton Hotel, the new
Christian bastion since losing the Holiday Inn. Artillery and mortar shells
splattered residential areas in Muslim and Christian sections of the city.
A mortar bomb exploded 20 feet from the U.S. Embassy. Fighting continued
in Mount Lebanon, Tripoli, and Zghorta. In Beirut, neither side made any
significant territorial gain in the past 24 hours. The death toll is
averaging 90 per day, 200 wounded. Syria was in contact with the Christians,
and contemplated strong action to end the fighting.

March 28, 1976
Comment: The Hilton Hotel fell to the Muslims.

March 29, 1976
Forces: leftists / Muslims/Palestinians v. Phalangists
Sector: hotel district
Outcome: 200 killed
Comment: Leftist guerrillas, from the Hilton Hotel through alleys and
back streets in house-to-house fighting, moved to within 500 yards of the
Phalangists' headquarters, despite sniper fire from retreating Christians.
Jumblatt appeared determined to achieve a military victory before giving
in to Syria's ceasefire agreement. His troops attempted to flatten the
Phalangist's headquarters and seal off Ashrafiyeh.

March 31, 1976
Forces: leftists/ Muslims/Palestinians   v. rightwing Christians
Sector: Kahale, Beirut
Weapons: heavy mortars, field cannon, anti-aircraft guns
Comment: Muslims shelled Kahale intensely. Jumblatt hoped to take the
city before he would agree to a ceasefire. In Beirut, shelling decreased,
however, Muslims continued their pressure east of the hotel district in
hopes of capturing the Phalangist headquarters at Saife.
            The most important events on this date were political. Jumblatt
said Syria concentrated 17,000 troops on its border with Lebanon. He
accused the Syrians of blocking supplies to his forces and to Palestinians.
Al-Fatah replaced Saiqa as the moderating force of leftist alliance, probably
under Syrian pressure.

April 2, 1976
Forces: leftists/Muslims/Palestinians   v. Christians
Sector: Beirut, Ain Toura
Comment: In the mountains northeast of Beirut, Jumblatt's forces,
spearheaded by rebel army units, claimed to have recaptured the burned out
remains of Ain Toura. Rightist Christians claimed to have cut off Jumblatt's
forces. Fighting continued well after the truce deadline of noon. The
truce agreed to was scheduled to last ten days in order to allow parliament
to elect a new president. Artillery and mortar duels continued between
Kahale and Aley. Kahale controlled a hairpin turn on the Damascus-Beirut road.
The Phalangists and other Christian allies were on the brink of a military
defeat.

April 7, 1976
Comment: Syria imposed a blockade on Lebanon's coast to prevent military
and other supplies from reaching leftist/Muslim forces. The blockade helped
keep peace during the truce agreed upon on April 2. The Syrians began
blocking supplies a few days earlier when they surrounded the Zahrani oil
refinery at Sidon disguised as Saiqa forces. Saiqa forces clashed with
leftist forces in Beirut in the past few days. During the current ceasefire,
Beirut was plagued by looting, kidnapping, robbery, and murder. Bank
robbing became a fad. All factions ran motorized armed patrols supposedly
acting as police forces. Most often they used jeeps with a Chinese-made
Doushka .50 cal. machine gun mounted in the rear. The death toll since
the April 2 truce is 50 per day.

April 9, 1976
Comment: Syrian troops entered Lebanon, however reports varied as to
their number and location. Some reports indicated that only 200-400
troops were involved and that they moved to within 35 miles of Beirut.
Other sources reported the number at 1,000 and that they moved into a
customs port inside Lebanon to "keep the lid on" events in-country.
Diplomatic sources in Washington reported that previously Syria had 1,200
troops in Lebanon disguised as Saiqa guerrillas. Syria lifted all local
blockades to besieged areas, Muslim and Christian alike.

April 10, 1976
Comment: Parliament met and amended the constitution to allow it to
elect another president before Franjieh's term expires.

April 26, 1976
Comment: Although a ceasefire was still in effect, fighting continued
at a lessened but steady pace during all of April. During the previous night,
75 were killed and 200 wounded. Prices were steep everywhere, however,
they were considerably worse in the very hard-pressed Christian areas.
Christians pay $6.00 per gallon for gasoline; Muslims pay $1.50. Many
goods were plentiful on the Black Market, especially cigarettes and
whiskey. Kidnappings took place at the rate of 12 per day in Beirut.

April 30, 1976
Comment: Lebanon's Speaker of the House, Kamal Asaad, announced a one
week postponement of presidential elections. Immediately after the
announcement, prolonged heavy shelling of noncombatant neighborhoods in
eastern and western sections of Beirut took place. 100 killed. 400 rocket
and mortar rounds fell on the Christian side of Beirut. The shelling
stopped at dawn and resumed the next evening.

May 2, 1976
Forces: leftists/Muslims/Palestinians   v. rightwing Christians
Sectors: Beirut and suburbs
Weapons: tanks, armored cars, heavy artillery, mortars
Outcome: 200 killed, 420 wounded
Comment: Although Jumblatt and other leftists agreed to an extended
truce, raging artillery and mortar battles took place in Beirut and its
suburbs. Both sides launched repeated attacks and counterattacks.
Several shops and office buildings caught fire in the downtown area where
fighting was heaviest. In the past 24 hours, 1,600 shells fell on Beirut,
according to Phalangist radio reports. 350 of them exploded in the
commercial district. The death toll since April 1975 was estimated at
18,500 killed, 40,000 wounded.

May 3, 1976

Forces: leftists/Muslims v. rightwing Christians
Sectors: Port of Beirut, Beirut, countryside, Beirut Airport
Weapons: heavy artillery, tanks
Structure: Fattell building
Comment: Fighting for possession of the Beirut port continued. Leftists
using the heavily damaged and virtually deserted commercial neighborhood
immediately adjacent to the port as their base of attack kept very heavy
pressure on Christians in the port area. The leftists immediate objective
was the 12-story Fattell building which dominates the port area. They
appeared close to winning control of the building. To compensate for
leftist pressure, Christians in hilltop positions in and near Baabda
shelled the Muslim-held Beirut Airport in the morning and late afternoon.
One shell hit the roof of the terminal building, another the eastern
runway just as a Boeing airliner landed 250 yards away. The western
runway was hit earlier. Most foreign airlines cancelled their flights
into Beirut for the rest of the day. However, Middle East Airlines,
whose employees were mostly Christians, maintained its flights as it did
throughout the war except for a few days in January. A number of tanks
belonging to Army Colonel Antoine Barakat, who openly sided with the
Christians, appeared behind the port area to stem the leftist advance.

May 5, 1976

Comment: A new ceasefire took hold in Beirut. The Muslims halted their
drive during the night into the port area in response to the ceasefire
worked out by the Syrian-Lebanese-Palestinian truce committee. 1,000 PLA
troops in steel helmets set up scores of sandbag positions to form a 100
yard wide buffer zone along much of the two mile line between the Muslim
and Christian sections. In the mountain towns overlooking Beirut, there
were heavy artillery duels between Jumblatt's forces and rightwing
Christian defenders. 36 were killed, 50 wounded in these clashes.

May 8, 1976

Comment: The Lebanese Parliament elected Elias Sarkis president, as
mortar shells thudded into the street outside and automatic small arms
fire raked the approaches to the meeting place. The streets of Beirut
were deserted. PLA soldiers and leftwing Muslim militiamen clashed in
front of the Carlton Hotel. 4 killed, 3 wounded. Jumblatt, opposing
Sarkis, called on his supporters to continue fighting.

May 9-10, 1976

Comment: Sarkis played a crucial role in calming the fierce battles
in the mountains outside Beirut. The fighting there claimed over 500 lives
in the past week. Rightist Christians around mountain towns of Ain Toura
and Mtein pushed forward with tanks and heavy artillery in a drive to
dislodge leftists from a road leading to Zahle. They also used helicopters.
Beirut's streets remaind empty due to Jumblatt's threats to renew open
warfare. Leftist gunners led a barrage of mortar fire into the downtown
area.

May 13, 1976
Forces: Phalangists v. Muslims and Palestinians
Sectors: mountains by eastern Beirut, Beirut, Tripoli
Weapons: tanks, heavy artillery, automatic weapons
Outcome: 300 killed in 24 hours
Comment: The Palestinian units fighting in the mountains belonged to the
PLA. However, they were from a unit recently stationed in Egypt, and were
not under Syrian control. In Beirut, Saiqa units clashed with ALF forces
guarding the Iraqi Embassy, exchanging heavy automatic fire. The clash
spread to a nearby Palestinian refugee camp. In the mountains east of
Beirut, Christian forces threw an unusually large force of several
thousand men at leftist-taken towns, blocking the rightists' supply line
to Zahle. The fighting was ferocious, 500 killed in the Christian assault.
Fatah intervened on behalf of the leftists/Muslims. In Tripoli, a raging
battle took place between Palestinian militiamen (al-Fatah) and pro-Syrian
guerrillas (Saiqa). The fighting was so intense that PLA buffer forces
were ordered to withdraw from the city. Arafat called on Syria to remove
all roadblocks from Lebanon and lift its land and sea weapons blockade.
Arafat accused the commander of the PLA of participating in the attack on
the leftists/Muslims in Tripoli. The PLA commander-in-chief was known to
be pro-Syrian. 200 killed in 24 hours in Tripoli.

May 15, 1976
Forces: Christian v. leftists/Muslims, Lebanese Arab Army (LAA)
Sectors: Shiyah, Ain al-Rumaneh, commercial district, port area, other
             suburbs, Mount Lebanon
Weapons: mortars
Outcome: 85 killed, 150 wounded
Comment: Another ceasefire ended after only 12 hours. During the night
gunmen swapped fire across Beirut's jagged battle line. Leftists pounded
rightwing strongholds with long-range artillery. Mortar barrages took
place across the no-man's land between Muslim Shiyah and Christian Ain al-
Rumaneh. Fighting took place also in the port and commercial districts.
In Mount Lebanon, LAA units shelled Christian strongholds.

May 16, 1976
Comment: Muslims and Christians fought one of the most savage rocket
and artillery duels of the war late during the night and early morning.
221 killed, 383 wounded overnight. Scores of highrise apartment buildings
were blasted in downtown Beirut and the suburbs.

May 17, 1976
Forces: Muslims v. Christians
Sectors: Beirut, mountains
Weapons: mortars, artillery, tanks
Outcome: 1,200 killed or wounded in 2 days.
Comment: Fighting, which began May 15, continued to rage in port and
commercial districts as well as the mountains east of Beirut. In the
two districts, the two sides engaged in house-to-house fighting. There
was heavy shelling throughout the city and intense sniper fire. In the
mountains leftists and rightists battled with tanks, heavy artillery, and
armored vehicles. No territory changed hands in the port or commercial
districts during the current fighting. PLA peacekeeping troops closed the
main road across the green line separating east and west Beirut, due to

heavy sniper fire. Libya intervened diplomatically between Syrian
and PLO leaders. Most casualties in this recent fighting were civilians.

May 21, 1976
Comment: Fighting continued but lessened since May 17. There were
three armed clashes in various parts of Beirut on the 20th between Fatah
and Saiqa forces. 1 soldier killed, 6 wounded.

May 25, 1976
Sectors: Beirut, Sidon, Zahle, Faraya
Outcome: 74 killed, 140 wounded
Comment: Several days of relative calm was ended by the assassination
attempt on Raymond Edde at a roadblock north of Beirut. Unidentified
gunmen fired on Edde's car without warning and chased it for several
miles firing machine guns at it. The car was riddled by over 100 bullets.
Edde was hit in the leg. The ambush took place at Nahr Ibrahim. Fighting
flared in the areas mentions above. A crucial battle for Faraya took
place. Faraya was held by Christians and was a gateway to their heartland
north of Beirut.

June 1, 1976
Comment: Syria sent 4,000 troops into Lebanon with 85 tanks to rescue
2 Christian towns beseiged by Muslim forces. A regiment of 2,000 Syrian
troops with 60 Soviet T-62 and T-54 tanks rolled into the Akkar region of
Lebanon to lift the seige on Qubayyat and Andakhat (on May 31). Another
regiment with 25 tanks advanced into east Bekaa Valley and broke a two-
month Muslim blockade around Zahle. They took up positions 20 miles east
of Beirut. Some reports said that 4,000 troops moved into the Bekaa Valley.
Syrian troops took control of the harbor at Sidon occupying the American
oil refinery in order to safeguard its oil supply before sending troops
to Beirut. Syrian troops stopped at Dehr al-Baydar, about 20-25 miles
from Beirut. There were heavy leftist fortifications there.

June 4, 1976
Comment: Syrian troops from the Bekaa Valley advanced into Mount Lebanon.
They were only 4 miles from Ain Toura and Mtein, where fighting continued
between leftists and Palestinians v. Christians trying to recapture the
towns.

June 6, 1976
Comment: Fighting picked up in Lebanon. In Beirut, Muslim gunmen,
mainly from the PFLP, battled Saiqa forces in the streets of west Beirut.
The Saiqa forces were losing badly. At Mdeirij, LAA troops clashed with
Syrian soldiers, halting the Syrian advance. The leftists claimed they
destroyed 4 Syrian tanks and captured 2 others. At the airport, mortar
and machine gun fire turned the area into a no-man's land. Western Beirut
was hit by mortars, rockets, artillery shells, and ground-to-ground
missiles—some whose low-pitched scream had not been heard before—slammed
into the streets and highrise apartment complexes. Leftists charged
that missiles, audible for 40 seconds before they hit, were fired by Syrian-
Saiqa forces south of Beirut. They said hundreds of Palestinians were
killed or injured in shelling of Borj Barajni, Sabra, and Shatila refugee
camps.

June 7, 1976

Forces: Syrian and Saiqa forces v. Palestinians and Muslims
Sectors: Beirut, Bhamdoun
Weapons: jet fighters, rockets, mortars
Comment: Jet fighters, either Syrian or supporting the Syrian cause in
Lebanon, bombed and rocketed Beirut for the first time in the civil war.
The aerial attack killed and wounded about 100 in 3 Palestinian refugee
camps on the outskirts of the city. Saiqa forces, driven from Beirut on
the 6th, rained rockets into the camps from hillside positions. The
Syrians had 200 tanks and several thousand soldiers positioned on the
approaches to the city. All roads leading west out of Beirut were closed
by fighting. Several tanks approached Bhamdoun but were pushed back
after several were destroyed.

            The front line was just east of Sofar, with the Syrian command
post in Deir al-Baydar. It was uncertain how many planes were involved in
the attack, estimates varied from 2 to 6. They were believed to have been
Syrian Migs or Lebanese air force jets flown by Syrian supporters. (One
reporter said he saw Syrian markings on them.) The planes were shot at by
artillery pieces and machine guns stationed on roofs and on tanks. The
planes used 250-pound bombs. The Syrian tanks travelling to Bhamdoun
were ambushed by men hidden in passageways between tall stone houses and
armed with Soviet-made RPG-7s (a shoulder-held weapon that fires a long,
thin armor-piercing rocket). One of the tanks had its turret blown off
and was completely blackened by fire. One Syrian tank hit a mine. Two
other tanks were destroyed.

June 8, 1976

Comment: Syrian troops held Beirut in a stranglehold as Syrian armored
columns advanced toward the capital. The movement was two pronged: one
column travelled west along the Damascus-Beirut highway; the other moved
north toward Ain Toura (a leftist-held, key mountain town). Pro-Syrian
forces around Khalde spread toward the capital. A large force of Syrian
troops, armor, and artillery were reported to have moved into Lebanon.
(This could have raised the number of Syrian troops to 12,000.) Two
Syrian armored columns entered Sidon overnight. Eight of their Soviet-
made vehicles were destroyed. Shelling and fighting continued in the
heavily Muslim neighborhoods of Beirut, and a cloud of black smoke rose
from the Palestinian camp of Bourj Brajhe, shelled by pro-Syrian forces.
Syrian tanks were reported to have penetrated Bhamdoun for the second
consecutive day. However, the column fell back to the western fringes of
Russet Sofar. Syrian Mig-17s buzzed positions in Aley, Jumblatt's stronghold.
No telephones, electricity, or running water operated in Beirut. The Syrian
attack on Sidon culminated in a vicious street battle in which the LAA
repulsed the Syrians. Defenders shot rockets, some from launchers on
roofs of office buildings. Some streets were mined. Telephone poles and
wires were down in Sidon, building gutted by blasts. Some of the devastated
Syrian armor was so burned that it was impossible to tell the difference
between tanks and armored personnel carriers. Broken tank treads and parts
littered the main street as did two Syrian army trucks.

June 9, 1976
Forces: Syrian forces v. Lebanese leftists and Palestinians
Sectors: Tripoli, Bhamdoun, Sidon, Beirut
Comment: Fighting was heavy between Syrian forces and Palestinians and
leftists in and around Tripoli. Syrian troops were reported to have pushed
into the city and engaged in house-to-house fighting. Beirut continued
to come under shelling. 12 shells landed on or near the Ministry of
Information building where leftist Beirut Radio broadcasts. The station
went off the air during the bombardment. Several thousand pro-Syrian
Saiqa commandos, who were driven out of Beirut, continued to hold the
airport and the area around it. They were surrounded by leftists.
Syrian armored columns remained stalled in their advanced toward Beirut--
one column east of Bhamdoun, the other east of Sidon. The Syrian force
in Lebanon was estimated at 12,000. Syrian troops holding Beirut Airport
and a key junction at Khalde blockaded the Muslim sections of Beirut.
Western Beirut was in an increasing state of siege. Black market gasoline
sold for $8 per gallon. L'Orient le Jour said Beirut was threatened by
famine. The siege was a Syrian method of bringing western Beirut to its
knees, something troops and armor had not been able to do.

June 10, 1976
Comment: The first units of the Arab League's symbolic peacekeeping
force arrived.

June 11, 1976
Forces: Syrians v. Muslims and Palestinians
Sectors: Sidon, Beirut Airport, Tripoli, Rachaya
Comment: Fierce clashes took place during the night between Syrian and
pro-Syrian forces v. leftists at Beirut Airport and in Sidon. Syrian
troops advanced to the center of Sidon amid heavy street fighting.
Syrians fought in Tripoli and Rachaya.   The heavy fighting shattered
another ceasefire agreed to hours earlier.

June 13, 1976
Forces: Syrians v. Palestinians
Sectors: mountains, Arkoub region
Weapons: tanks, armored vehicles, artillery
Comment: Palestinians charged that Syrian troops advanced west and
south across Lebanon in an attempt to take more territory during truce
negotiations. The Syrians struck in two columns from bases in the eastern
Bekaa Valley, west to leftist outposts in the rugged Mtein region, and
southeast into the Arkoub. A Syrian armored brigade with 40 tanks and armored
cars, supported by infantry and artillery units, overran two Palestinian
bases on the western slopes of Mount Hermon, cutting the "Arafat Trail"--
the supply route to the Arkoub. For some time, Palestinians and Lebanese
leftists occupied towns like Ain Toura and Tarchish in the Mtein region,
putting them between Syrian forces in the east and south and rightist
forces in the west. The Syrians and Christians tried to surround the
Palestinian-leftist forces in the Mtein region by cutting off their lines
of supply from Bhamdoun and Aley to the southwest. The Syrians launched

at least three attacks in this effort. The Syrians advanced with bull-
dozers as well as with tanks and troops. They had not yet linked up with
the rightists pushing from the other direction. In the Arkoub region,
Syrians had the city of Rashaya al Wadi under seige (occupied by LAA).
Syrians took Dair el-Ashazir. More Syrian regular army forces moved
into Lebanon in the past two days. Syria's 225th Mechanized Infantry
Battalion joined other Syrian forces in the mountains east of Sidon on
June 11. Sidon was held by the LAA. The Syrian navy prevented ships
from reaching Sidon (the main leftist port in Lebanon). In northern
Lebanon, Syrian forces occupied the Lebanese air base at Quleiat after
shelling it. However, after fierce street fighting, pro-Syrian forces
were driven out of Tripoli. Despite some shelling and sniper fire, Beirut
remained relatively quiet. The Khalde section, including the airport,
was held by either Syrian forces or Saiqa commandos. Syrian regular
troop strength in Lebanon was estimated at 15,000-20,000.

June 14, 1976
Comment: After a week of resistance, Palestinian guerrillas and
renegade Muslim soldiers pulled out of Rachaya under heavy Syrian artillery
fire. There was fierce fighting before the pullout.

June 15, 1976
Comment: After capturing Rachaya, Syrian tank forces advanced toward
Merj Uyyun, six miles from the northeast tip of Israel. The Syrians moved
100 more tanks and armored vehicles into Lebanon in the past 24 hours to
reinforce the drive into the Arkoub (estimated 450 tanks in Lebanon).
The Syrians were within 2 1/2 miles of the Israeli border, having swept
through the Arkoub, cleaning out remaining pockets of Palestinians and
leftist resistance. Syrian tanks on hillsides above Sidon shelled ships
approaching the port. Similar blockades were reported at Tyre and Tripoli.

June 16, 1976
Comment: U.S. Ambassador to Lebanon, Francis E. Meloy, Jr. and his
economic counsellor, Robert O. Waring, were reported killed by unidentified
gunmen.

June 17, 1976
Comment: The PLO announced it captured three men who confessed to the
killings noted above. The PLO refused to identify the suspects or the
group to which they belonged.

June 21, 1976
Comment: A Syrian-Libyan peacekeeping force took over the international
airport. This is the first contingent of a 1,000-man Arab League peace-
keeping force. Fighting during the night was heavy and a new ceasefire
was declared. The force moved into Beirut consisted of 500 men, half
the size of the peacekeeping force who were to separate the Syrian Army
from the leftists and Palestinians.

June 22, 1976
Forces: leftists/Muslims/Palestinians v.   Christian rightists
Sector: Tel Zaatar, Nabaa, Dekwaneh, Sin el-Fil
Weapons: artillery, rockets, and heavy machine guns
Comment: The most recent ceasefire broke down as the Christians launched
major attacks on Tel Zaatar and Nabaa. With the Syrian-leftist ceasefire
halting most of the fighting on battlefronts in the north, south and in
central Lebanon, the rightists were free to concentrate their forces
against these two camps. The Christians assaulted Tel Zaatar and Nabaa
with artillery rockets and heavy machine guns. Shells fell on the camps
at a rate of three per minute at times. Syrian forces and Saiqa forces
controlled by Syria left the Khalde area, including the airport, ending
their partial blockade of the city. Fighting between the Muslim and
Christian sectors of Beirut began. The Christians charged that Muslims
entered Dekwaneh and Sin el-Fil. Artillery, rocket, and mortar fire con-
tinued the entire day between east and west Beirut.

June 24-25, 1976
Forces: leftists / Muslims /Palestinians v. Christians
Sectors: Shiyah, Ain al-Rumaneh, the cross point between east and west
            Beirut, port area
Comment: In order to relieve pressure on Tel Zaatar and Jisr al-Basha,
leftists/Muslims and Palestinians launched attacks at recently quiet battle
lines. Leftist-Palestinian forces a mile east of Shiyah began an assault
toward the camps through Ain al-Rumaneh, gaining 200 yards after a day of
vicious combat. Leftist forces, near the cross point between east and
west Beirut, advanced across the street from the National Museum to the
long-abandoned Ministry of Justice building.

June 26, 1976
Forces: Christians v. Palestinians
Sectors: Tel Zaatar, Jisr al-Basha, mountains east of Beirut
Weapons: artillery, mortar, machine guns
Outcome: high casualties for Palestinians; 50 Christians killed, 135
            wounded
Comment: Christians launched fresh assaults on Tel Zaatar and Jisr al-
Basha, in one of the biggest battles of the civil war. The past five days
left the hillside zone littered with bodies. The camps were under a thick
cloud of black smoke from raging fires. Muslims and Palestinians attacked
Christian positions in the mountains eight miles east of Beirut. There
were artillery, mortar, and machine gun duels. In Beirut, missile duels
set dozens of apartments on fire. The city was without electricity, water,
or telephones and telegraph communications for three days. The duels sent
an estimated 10,000 Kutushia rockets and American 155mm shells
across the city. The power lines to Beirut were between Tel Zaatar and
the Christian area of Manourieh. Tel Zaatar was able to withstand the
heavy shelling due to a network of underground bunkers and tunnels built
months ago during combat lulls. The rightists attacked the camp with 4,000
men, some tanks, and considerable artillery support. Members of the Libyan
peacekeeping force were charged by the Christians with aiding Palestinians.

June 27, 1976
Forces: Christians v. Muslims and Palestinians
Sectors: southeast Beirut (Tel Zaatar, Jisr al-Basha), Beirut Airport,
             Ain al-Rumaneh
Weapons: 155mm howitzers, artillery, mortars, rockets
Outcome: 200 killed, 300 wounded
Comment: Fighting continued in southeast Beirut, principally around
the cities mentioned above, for the sixth day. The last 24 hours were
among the worst in the entire civil war. A Christian radio station in
Beirut reported that rightists repulsed a Palestinian-leftist attempt to
penetrate the harbor, the adjacent Martyrs' Square, and the Bab Idris
quarter. A Boeing 707 passenger liner was blasted by artillery and burned
during bombardment of the airport.' The plane had landed and was sitting
on a runway 300 yards from the main terminal. On board was a crew of
three, no passengers. The pilot was killed, the other two wounded. A
155mm howitzer shell opened a 30-foot gap in the roof of the terminal
building. Abu Iyad, commander of the Palestinian forces, said he and his
allies accepted a truce arranged by Jalloud during the night. Muslims
and Palestinians still pushed into Ain al-Rumaneh from Shiyah in an attempt
to relieve pressure on the the two refugee camps under attack. The attack-
ing troops advanced about 200 yards across Sidon street. They had one
more mile of inhabited neighborhoods to go through (fighting was often
house-to-house).

June 28, 1976
Forces: Christians v. Muslims
Sectors: Tel Zaatar, Ain al-Rumaneh, Deir al-Qamar, Jounieh
Weapons: rockets, mortars, machine guns
Comment: Heavy fighting continued for the seventh day. Rightist force
captured the high ground overlooking Tel Zaatar. The camp's fall was
imminent. The rightist attack force was estimated at 6,000 men and was
reinforced by Phalangist units under Gemayal, who stayed out of the battle
until the 27th in order to encourage truce talks. The improving prospect
of success in the siege stiffened rightist resistance to an immediate
ceasefire agreement. Leftists shelled the port city of Jounieh in retalia-
tion for shelling the airport. The city's waterworks were destroyed. The
LAA led the shelling. An estimated 13,000 Syrian troops in Lebanon did
nothing to stop the fighting. Palestinian sources reported that Syria
moved 4,000 more men and supporting tank columns into Lebanon. They said
the main body of the new force laid siege to the Muslim town of Hermal and
one battalion attacked the leftist town of Arsal. Amin Gemayal, Pierre
Gemayal's son, was personally directing the attacks on the these camps.
Christians also shelled western Beirut.

June 29-30, 1976
Forces: Christians v. Muslims and Palestinians
Sectors: Tel Zaatar, Jisr al-Basha, Ain al-Rumaneh, Al-Hadath, Sidon
Outcome: Jisr al-Basha overtaken; 300 Palestinians killed
Comment: The night of June 29, Jisr al-Basha was overrun by Christian
forces. Nabaa was also overrun by Christians. They were intensifying
their attack on Tel Zaatar. Leftist forces attacked Ain al-Rumaneh and
Al-Hadath. Syrian troops advanced on the southern part of Sidon under an
umbrella of artillery shelling and surface-to-surface 107mm rockets.

July 1, 1976
Forces: Christians v. Muslims and Palestinians
Sector: Tel Zaatar
Comment: Tel Zaatar continued to hold out against the siege. However,
it was a grim situation. The Palestinians charged that the Christians
massacred 500 people when they took over Jisr al-Basha. The leftists
and Palestinians appeared to be unable to launch a large scale retaliatory
attack at it was feared the Syrian Army would clash with them. Tel Zaatar
was completely encircled by the rightists. The rightists said that Tel
Zaatar was not a refugee camp but an armed fortress.

July 2, 1976
Forces: Christians v. Palestinians and Muslims
Sector: Tel Zaatar
Weapons: artillery, mortars, machine guns, tanks
Outcome: The outskirts of Tel Zaatar were overrun by Christians
Comment: Lebanese Christian forces overran the outer defenses of Tel
Zaatar. The Palestinians stepped up their attack on Christian areas in
the southern suburbs of Beirut and in the eastern mountains, pounding them
with artillery and rockets. Guerrilla leaders rejected an offer for a
peaceful surrender of Tel Zaatar that promised the remaining fighters
to be able to leave camp unharmed. A ceasefire was reached but entirely
ignored.

July 3, 1976
Comment: Christians continued to shell Tel Zaatar.

July 4, 1976
Forces: Christians v. Palestinians and Muslims
Sector: Tel Zaatar
Comment: Rightist forces reported capturing Tel Zaatar. Their reports
were inaccurate. The Red Cross was allowed to enter Tel Zaatar and evacuate
the wounded. Abu Iyad charged the Christians with receiving tanks and
other weapons from Israel.

July 5, 1976
Forces: Christians v. Palestinians and Muslims
Sector: Tel Zaatar, Chekka, Amchit
Weapons: tanks, artillery, mortars, machine guns
Outcome: 259 killed, 237 wounded in 24 hours (mostly in Chekka battle)
Comment: Christians put heavy pressure on Tel Zaatar, firing artillery
and mortar shells at close range. Only a devastated central section of a
74 acre shantytown remained in the hands of the Palestinians. The renewed
fighting prevented an International Red Cross convoy from evacuating 300
wounded. About 1,200 guerrillas and leftists were believed to have
conducted a defense from a maze of underground redoubts. Tel Zaatar had
no resupply of food, medicine, or arms for more than a week. The camp's
commander, Abu Haytham, was wounded and asked the Palestinians if he should
surrender. He was told to continue fighting. In retaliation for the Tel

Zaatar siege, leftist forces stepped up attacks on Christian areas. Leftists and guerrillas in north Lebanon occupied Chekka, a Christian town, and cut off escape from the south. The invaders held the ᴀn for 36 hours. There was little damage to buildings; 100 civilians were killed with bayonets or knives rather than rifles. The insides of many buildings, generally homes, were ransacked and looted. Along the escape route to the south, Palestinians stopped cars and shot the occupants. Fighting continued on a dozen fronts around the Christian heartland as well. Muslim forces advanced to within 4 miles of Amchit, the site of a Christian-controlled radio station. The Muslims attacked from the west and mountains and destroyed 30 of its defender tanks and other military vehicles. A string of Christian towns were also captured on the Mediterranean coast between Batrun and Byblos. In Tel Zaatar, the Palestinian perimeter shrunk to a few multistory buildings around the core of refugee homes. The Palestinians appeared to be abandoning most of their mortars and anti-aircraft guns as they retreated building by building through holes in the walls.

July 6, 1976
Forces: Christians v. Muslims and Palestinians
Sectors: Chekka, Tel Zaatar, and nearby villages
Weapons: antitank guns
Outcome: 200 killed in 24 hours, Christians captured 3 villages
Comment: Heavy fighting in northern Lebanon as Christians started to drive the Muslims from the area. The Palestinians charged Syrian troops with helping the Christians in the counterattack. Christians then re-captured Hamat, Salata, and Amyun. Hundreds of Christian reinforcements were seen in trucks and busses accompanied by jeeps carrying antitank guns, headed north through Batrun. Some rightwing militiamen still held on in Chekka. In Tel Zaatar, defenders dug in at the center of the camp and no longer fired back with mortars or anti-aircraft weapons. They used only sporadic vollies of automatic light weapons fire. The PLO agreed to turn over suspects in the murder of Meloy and Waring to the Arab League.

July 7, 1976
Forces: Christians v. Palestinians and Muslims
Sectors: Chekka, Tel Zaatar
Outcome: 300 killed
Comment: The Christian counterattack in Chekka, led by Amin Gemayel, re-sulted in its recapture and a 10 mile advance past their original lines at the north edge of the 800 square mile enclave. New armored cars carrying Christian forces headed north. In Tel Zaatar, the Palestinians and leftists used tall buildings to hold off a final Christian conquest of the camp. About 60 percent of the camp was destroyed by Christian shell fire. The Christians brought in mortars to pound the defenders from close range. The number of defenders of the camp is between 500 and 1,200. Three columns of rightist forces pushed towards the last Palestinians, who were without water for 48 hours.

July 8, 1976
Forces: Christians v. Palestinians
Sectors: Enfe, Tel Zaatar
Comment: Christian forces in northern Lebanon attacked the leftist
town of Enfe, 10 miles south of Tripoli. The Christians were determined
to take the town to insure the defense of Chekka. The Palestinians
charged the Syrians with using tanks to shell the northern and southern
edges of Tripoli in an attempt to prevent Palestinians and leftist
reinforcements from moving south.

July 10, 1976
Comment: The Christian advance on the two Palestinian camps was supplied
with new American rifles and Soviet armored cars not previously seen in
Lebanon. The Damascus radio said the death toll for the last three days
was 3,866. Some estimates were 32,000 killed since April 1975. As many
as 1 million of Lebanon's 3 million people left the country. No more
gasoline was available in Beirut for private use due to the damage of
the Zahrani oil refinery by Syrian artillery fire.

July 11, 1976
Forces: Christians and Syrians v. Palestinians and Muslims
Sectors: Tripoli, Enfe, Tel Zaatar, Sidon, Baalbek
Comment: Lebanese rightist troops and Syrian infantry were reported to
have overrun two Palestinian camps near the northern part of Tripoli.
The Christians captured Enfe and pushed the leftist line back toward
Tripoli. They claim they took Tel Zaatar, which appeared to be false.
Syrian artillery shelled refugee camps around Sidon and Baalbek. The Arab
League Foreign Ministry was scheduled to meet July 12 to design a peace.
The recent Christian attacks were probably to gain as much ground as
possible before the meeting took place. The Syrians shelled the refinery
of Zahrani, the only one in Muslim-controlled territory. It was afire and
inoperative for two days. Two camps overrun near Tripoli were Nahr al-Bared
and Baddawi.

July 12, 1976
Forces: Syrians and Christians v. Muslims and Palestinians
Sector: Tripoli
Comment: Syrian troops were dug in near the three main Palestinian-
leftist strongholds west of Beirut, Sidon, and Tripoli, stifling operations
by the Muslims while Lebanese Christians continued to push north from their
800 square mile enclave north of Beirut. Syrian troops shelled Nahr al-Bared
and Baddawi on the edge of Tripoli and refugee camps near Baalbek and Sidon.
The Christians continued their heavy assault on Tel Zaatar. Christians
came within "hand-grenade throwing" distance of Tripoli, entered Bahsas, a
suburb of the city.

July 13, 1976
Sectors: Baalbek, Tel Zaatar
Comment: Rightist soldiers were reported to be using gas, poisons,
and fire to kill Tel Zaatar's defenders who were cut off from resupplies
of water, food, and ammunition. In Sin el-Fil, from where the rightists
launched their attack on Tel Zaatar, many buildings were damaged, many by
fire, or filled with shell holes. Jisr al-Basha was only rubble. A
hospital in Tel Zaatar was filled with shell holes and many American,
Soviet and French-made shell casings were found on the floors.
          A Syrian tank column entered Baalbek and appeared to be part
of an effort to gain complete military control of eastern Lebanon before
making concessions to Arab demands for a withdrawal of troops closer to
Beirut and on the Mediterranean coast south of the capital. Some Syrian
troops overlooking Sidon began a limited withdrawal.
          William Hawi, a principal military strategist for the Christians,
was killed outside Tel Zaatar. He was the head of the military council of
the Phalangists, and was killed while supervising the surrender of a
group of persons who were leaving the camp under a white flag. His death
was expected to lead to an intensification of fighting around Tel Zaatar.
          100 Syrians were reported to be storming Baalbek, backed by
artillery and armored vehicles and engaged in hand-to-hand fighting but
met with stiff resistance.

July 14, 1976
Comment: Four more Syrian battalions withdrew from strategic hills
surrounding Sidon. Syrian troops were reported to have increased their
pressure on Tripoli and Baalbek.

July 15, 1976
Forces: Syrians v. Muslims; Christians v. Muslims and Palestinians
Sectors: Baalbek, Tel Zaatar
Comment: Syrian troops captured Baalbek. Christian militiamen continued
a 24-day old seige of Tel Zaatar, however, the level of firing dwindled to
occasional sniper shots. A nurse inside the camp reported that about 1,000
wounded were trapped inside without medicine or running water and that
about 400 to 600 died in the camp during the siege.

July 16, 1976
Forces: Syrians and Christians v. Palestinians
Sector: Ain Toura, Tel Zaatar
Comment: Fresh Syrian troops and 30 tanks crossed into Lebanon, some
went to positions at Sofar and others to leftist outposts around Ain Toura.
The troop movements appeared to support the Christian offensive against
Ain Toura and Tel Zaatar. Heavy fighting raged inside Tel Zaatar, with
both sides claiming advances in house-to-house fighting. Day-long rocket
blasts and machine gun bursts raked rubble-choked streets in Beirut's port
and downtown districts. The U.S. Embassy announced an evacuation scheduled
for the 17th by road convoy to Damascus.

July 17, 1976
Forces: Christians v. Palestinians
Sector: Tel Zaatar
Outcome: 100 killed in 24 hours
Comment: Lebanese rightist Christians launched another assault on Tel
Zaatar. The defenders claimed they repulsed the attack. U.S. officials
warned that Christians were preparing for a heavy attack on west Beirut.
Leftists charged that the scheduled American evacuation was part of a
coordinated plan to include a major Syrian and Christian attack on west
Beirut, partition of Lebanon, and entry of Israel into the civil war.

July 18, 1976
Forces: Rightwing Christians v. leftwing Palestinians
Sector: Tel Zaatar
Comment: Christian rightists launched another attack on the city.
The rightist-controlled radio station reported that many defenders surrendered
and the rest were driven into one corner of the camp. Palestinian sources
reported that two rightist attacks, involving 600 men and armor, were
repulsed, and that several hundred reinforcements reached the camp.
Residential areas in west Beirut were shelled in retaliation for the shell-
ing of Christian areas outside Tel Zaatar. Syrian reinforcements headed
toward Ain Toura. The PLO expected the next decisive battle to be fought
there.

July 19, 1976
Forces: Syrians v. Palestinians; Christians v. Palestinians
Sectors: Sofar, Ain Toura, Tel Zaatar
Weapons: armored vehicles, rocket launchers, artillery
Outcome: 15 killed in 24 hours
Comment: Syrian reinforcements, backed by armored vehicles, rocket
launchers and other artillery, moved up from the Bekaa Valley towards
leftist positions in the central mountains at Sofar and Ain Toura. The
Syrians attempted to clean out the remaining pockets of leftist and
Palestinian strength in the central mountains. At Tel Zaatar, Christian
militiamen battled defenders inside the camp. In Beirut, rocket and mortar
duels took place across the city's no-man's land. The evacuation convoy
was delayed due to clashes in the central mountains and the Damascus highway.

July 21, 1976
Forces: Saudi Arabian members of the Arab peacekeeping forces v.
            Christian militiamen of the NLP
Sector: the museum at the crossing point in Beirut
Weapons: small arms
Structure: the museum
Outcome: Saudi forces took their positions at the cross point on the
            side of the Muslims.
Comment: This was the first action by the Arab peacekeeping force, who
were trying to keep the cross point area safe. The agreement for moving
in the Saudi troops and for a 7 hour ceasefire at Tel Zaatar was worked
out under the auspices of General Mohammed Hassan Ghoneim of Egypt, the
Commander of the Arab League force, a representative of the Palestinian
military command, and the Phalangists. Camille Chamoun and his party,

the NLP, rejected the agreement and tried to destroy it by maintaining
a heavy artillery barrage at Tel Zaatar and by shelling and sniping at
the crossing area in Beirut. Chamoun wanted to take Tel Zaatar, Nabaa,
and drive Muslims and Palestinians from their positions at Ain Toura
and Mtein. The Saudis had West German-made G-3 assault rifles and
French-made armored cars, trucks, and jeeps, and 150 men. A crowd of
civilians gathered near Barbir Hospital to watch the Saudi advance.
Mortar shells fired by NLP forces burst amid the crowd, killing several
and wounding 20.

July 22, 1976
Comment: NLP forces continued harassing Saudi peacekeeping forces by
firing mortars into the 800 yard stretch between the Barbir Hospital
and the National Museum. 9 Saudi soldiers were wounded. Heavy fighting
at Tel Zaatar made it impossible for the Red Cross to evacuate 100 of
the most seriously wounded. Further attempts were cancelled.

July 23, 1976
Forces: Christians v. Palestinians /leftists/Muslims
Sector: Tel Zaatar
Weapons: machine guns, mortars
Comment: The Red Cross attempted to send 3 officials into Tel Zaatar
to see if an evacuation of the wounded were possible. A temporary truce
was declared, however it broke down immediately when Christian officers
claimed the Palestinians were taking advantage of the truce to bring in
reinforcements. The three officials made it to safety just as the
Christians opened their assault with deafening bursts of machine gun and
mortar fire. The Christians launched an average of two assaults a day,
starting usually in mid-morning after a mortar bombardment to soften the
defenses. The defenders, who lost their own heavy guns, remained still
during the barrage, then ambushed the Christian assault party. Originally,
the Palestinians held outlying positions in factories, tall buildings,
and hills that surrounded Tel Zaatar, which had 3,000 refugee dwellings,
mostly concrete huts with iron roofs, now smashed. The defenders were
forced back to the inner defenses--a British-style square of 4 blockhouses
which were largely underground bunkers with mutually supporting fields of
fire from ground level. Hundreds of shells fell per day into the camp,
however, the defenders probably could only be wiped out by costly man-to-
man combat. The camp was a former British military base from the Allied
campaign against the Vichy French during World War II.

July 24, 1976
Comment: A new ceasefire was reached between the Phalangists and the
Palestinians in the presence of Arab League envoy, Dr. Hassan el Kholy.
However, the ceasefire was already in jeopardy due to reports that as
many as 500 civilians were trapped in Tel Zaatar in an underground shelter
which collapsed during shelling. Gaping holes appeared in most of the
roof tops in Tel Zaatar which had been hit with tank fire, recoilless
rifle fire, 105mm mortars and 120mm guns. Fighting raged in Tel Zaatar
and Nabaa.

July 25, 1976
Forces: NLP v. Sudanese peacekeeping forces
Sector: The Green Line
Weapons: mortar, machine guns
Outcome: 2 Sudanese soldiers killed
Comment: The Sudanese troops attempted to cross the green line to the
Christian side. They were repelled by NLP forces. Palestinians reported
that Christian forces shelled the collapsed bunker where 500 civilians
were trapped, preventing rescue, in Tel Zaatar. The ceasefire, scheduled
to take effect in the early morning, failed. It was the 52nd ceasefire
of the civil war.

July 26, 1976
Comment: It was estimated that Syrian forces number   25,000 in Lebanon.
The rightists number   between 10,000 and 15,000. The Palestinian
command runs between 10,000 and 15,000 also; and the leftists/Muslims were
10,000. Before Syria moved into Lebanon in June, the Palestinian-leftist
alliance controlled 75 percent of the terrain. At this date, Syria
controlled 50 percent, the Palestinians/leftists 35 percent, and the
Christians 15 percent. Palestinians reported the rightwing Christians
cut off the water supply to Tel Zaatar.

July 27, 1976
Comment: The U.S. Sixth Fleet completed its mass evacuation of U.S.
citizens from Beirut, under the protection of the PLO, using an unarmed
landing craft.   300 were evacuated including other foreign nationals,
30 U.S. newsmen, then-acting-Ambassador Talcott Seelye, and 25 U.S.
Embassy personnel. Meanwhile, there was tension mounting between
Phalangist and NLP forces. A traffic accident set the stage for a pitched
battle between them in Jounieh; 20 were killed.

July 29, 1976
Comment: Libyan Premier Abdul Salam Jalloud announced a new ceasefire
agreement between Syrian forces and the PLO. The PLO denied having
reached an agreement with the Syrians. The dispute was based on an anti-
Egyptian clause that was added to the contract at the last minute.

July 31, 1976
Comment: The Red Cross cancelled its most recent evacuation plans for
Tel Zaatar when Christian military leaders refused to let them enter the
center of the camp. It was reported by a doctor inside the camp that 1,400
died in Tel Zaatar in July.

August 2, 1976
Comment: Under the guidance of Kholy and Jean Hoefliger, the rightists
agreed to a Red Cross evacuation of wounded from Tel Zaatar on August 3.
100 were scheduled to leave. If the first attempt succeeded, later convoys
would be scheduled to remove the rest of the victims.

August 3, 1976
Comment: A Red Cross convoy of 9 trucks and 2 ambulances evacuated
91 wounded in a 7 hour operation from Tel Zaatar. The ceasefire was
largely respected.

August 4, 1976
Comment: 243 more wounded were evacuated from Tel Zaatar.

August 5, 1976
Forces: rightwing Christians v. leftists/Palestinians/Muslims
Sectors: Tel Zaatar, Nabaa
Weapons: artillery, mortars, machine guns
Comment: A ceasefire agreed to late August 4 was well observed throughout
the country except in Tel Zaatar and Nabaa where heavy combat continued.
In Nabaa, rightist troops broke through the main defense line. Three
Muslim leaders attempted to negotiate a surrender by offering to give up
their weapons and have Nabaa policed by a neutral group. The rightists
demanded unconditional surrender, but fighting continued all day. The enclave
was badly battered. Shells hit Tel Zaatar every five minutes. The Arab
League has arranged the ceasefire.

August 6, 1976
Forces: Christians v. Palestinians
Sectors: Tel Zaatar, west Beirut, Nabaa
Weapons: mortars, machine guns, tanks
Comment: In Tel Zaatar, the Red Cross was forced to cancel its evacua-
tion of wounded when Christian snipers shot and killed several wounded,
injuring 30 more, as they attempted to leave the defense perimeter and
head towards an open field where the trucks were loading. Rifle fire was
primarily directed at the wounded lying on stretchers on the ground and
in the first truck.
            In west Beirut, shells landed at the airport, falling within
200 yards of a Red Cross plane.
            In Nabaa, Christians attacked with tanks and other heavy
weapons during the night and in the morning. They announced they had
conquered the area. Palestinians said they had sent in reinforcements.
Later, reports on Nabaa indicated that the Muslims were crushed and many
prisoners were taken.

August 7, 1976
Comment: Two prisoners held by Christians said they were Iraqi soldiers--
part of a 150-man unit Iraq sent into Lebanon to fight alongside the
leftist/Palestinian forces. Saeb Salam crossed into Ashrafiyeh and con-
ferred with Pierre Gemayel to discuss unifying Lebanon.

August 8, 1976
Forces: Christians v. Muslims
Sectors: the commercial center of Beirut, Tel Zaatar, Shiyah, Ain al-
            Rumaneh, Aley
Weapons: artillery, rockets
Comment: Heavy fighting raged in the commercial center; rocket and
artillery battles took place in Tel Zaatar, Shiyah, Ain al-Rumaneh.
Leftist/Palestinian leaders accused Syrians of delaying efforts to
carry out a ceasefire, which was announced for earlier in the week, to
enable rightists to occupy more territory.

August 9, 1976
Comment: Leftist sources reported that Christian forces were massing
on two fronts to launch new attacks. At al-Jamhour, rightist forces
gathered 100 military vehicles and a large number of militiamen. The
troops were reported to be moving toward al-Louiya to attack Palestinian
and leftist strongholds in the southern outskirts of Beirut to open the
road to the Beirut airport. A large rightist concentration was in the
Zghorta area, said to be planning an attack on Tripoli. Chamoun said
that 16 Mirages arrived from Libya for use by leftist forces to be
assembled by a team of French technicians.

August 10, 1976
Forces: Christians v. Palestinians/leftists
Sector: Tel Zaatar
Weapons: artillery
Comment: Christian forces began a new attack on Tel Zaatar. The
offensive was launched from three points around the camp. Christian troops
gained new positions, occupying PFLP headquarters. Defenders of the camp
were not able to get reinforcements so they resorted to shelling Christians
surrounding the camp. This action brought on the attack. As many as
3,000 families fled the camp in the past three days. Cypriot shipowners
had to discontinue freighter trips to Tyre and Sidon as a result of the
sinking of a Greek Cypriot ship at Tyre on August 9.

August 11, 1976
Comment: On the second day of the newest Christian offensive on Tel
Zaatar, rightist forces captured the camp's last remaining water source
and pushed defenders off a key hill inside the camp. Christians called
this "Tel Zaatar Week." Shortly after noon, Christians launched a determined
infantry attack accompanied by a steady barrage of artillery. 100 tanks
were used in the attack coming from several directions. A Syrian jet flew
overhead, possibly to take aerial photos to assist the Christians. The
hill taken was called "General Command Hill." The defense perimeter was
between 200x500 yards to 400x800 yards. Only 300 fighters remained in
the camp with thousands of civilians.

August 12, 1976
Comment: Tel Zaatar fell after 51 days of siege. Thousands of
inhabitants fled, charging Christians with murdering hundreds. An
accurate death count was impossible. Casualties were very high. At
9:00 a.m., rightists overwhelmed the last defenders of the camp and by
afternoon there was only scattered resistance from defiant Palestinian
commandos trapped in buildings. A total of 12,000 evacuated the camp.

August 13, 1976
Comment: Syria closed its borders with Lebanon.

August 15, 1976
Sectors: Mount Sannin, Ain Toura, Mtein
Comment: Artillery exchanges in these areas continued for several
months and intensified in the past 24 hours as a result of a military step-
up on all fronts since the fall of Tel Zaatar. There was continued heavy
shelling in the Muslim and Christian sectors of Beirut. Heavy fighting
took place in Shiyah. The rightists were determined to push Palestinian
and leftist forces out of the Mtein region. Israeli navy patrols main-
tained an almost total blockade of the ports of Sidon and Tyre--although
food supplies were admitted, weapons were not.

August 17, 1976
Comment: The PLO and its Muslim and leftist allies began to recruit
men in preparation for the major battles in the eastern mountains. The
PLO opened recruiting stations in Muslim areas of Lebanon where youths
were urged to join the "army of popular liberation," the formation of which
was called for by Kamal Jumblatt. Rocket and artillery clashes occurred
in the mountains. Christian rightists shelled Palestinian positions in
Ain Toura. Christian and Palestinian leaders, with General Ghoneim of
Egypt, negotiated for Palestinian withdrawal from the mountains.

August 19, 1976
Comment: Christian forces hurled 155mm shells into Muslim residential
areas of Beirut from their positions in the eastern hills. Palestinian
guerrillas retaliated by firing Soviet-made surface-to-surface missiles
into rightist areas of east Beirut. These actions put an end to an
agreement not to shell residential areas arranged during the night by
Saeb Salam and Pierre Gemayel. Jumblatt made a fiery speech the day before
to his Druze followers calling them to report to the front lines in the
hills of Sannin, Ain Toura and Mtein.

August 21, 1976
Comment: Palestinian commando organizations began military conscription
and set up roadblocks to check identity cards. Conscription took place
in Sidon. Christian claimed to have captured Alma, six miles east of
Tripoli. They were also attacking Deir al-Ain and Ras Maska, five miles
southeast of Tripoli.

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August 22, 1976
Comment: Two American Foreign Service officers, Robert Houghton
and David Mack, arrived in Jounieh for consultation with rightist
leaders. Meanwhile, rightist Christians were believed to be massing about
4,000 men and a number of tanks and armored cars for an attempt to drive
out Palestinians and leftist troops from Sannin, Mtein, and Ain Toura.
The Palestinians and leftists were backing up as well.

August 23, 1976
Forces: Christian militias v. Muslims and Palestinians
Sectors: west Beirut, Khandik al-Gamik, Ain al-Rumaneh, Tripoli
Comment: Christians struck into west Beirut and Palestinians and Muslim
reinforcements were rushed in by jeep. The attack was on Khandik al-
Gamik. The leftists repulsed the attack and mounted pressure against
Ain al-Rumaneh. Christians continued their offensive in villages east of
Tripoli. These Christian attacks were to divert Muslim and Palestinian
forces from the mountains. Other reports indicated a major rightist
offensive to take Tripoli, supported by Syrian armed forces. Rightists
assaulted Tripoli from the east, south, and north, capturing strategic
hills. Telephone lines from Tripoli were cut for almost a year. The
Syrian Navy screened ships entering al-Mina, an adjacent port town.
Syrian forces were lending only artillery support.

August 24, 1976
Sector: Beirut
Comment: Heavy shelling of residential sections in Beirut continued
during the night and early morning. Major General Ghoneim arranged an
accord to stop shelling, which declined during the day.

August 25, 1976
Sector: commercial center of Beirut
Comment: Rightist and leftist gunmen fought house-to-house battles in
downtown Beirut. In the ruins of the commercial district, the gunmen
pounded each other's dug-in positions with rockets, mortars, and machine
guns, the length of the capital's four mile confrontation line. Residential
shelling subsided. In Damour, Muslim refugees and Palestinian refugees
repopulated the town.

August 27, 1976
Comment: Shelling and machine gun fire continued in the same areas.

August 30, 1976
Comment: Shells and rockets fell on residential areas as fighting stepped
up on most fronts. Leftist forces on the top of the 32-story Murr Tower
used anti-aircraft guns against rightist positions in the Rizk skyscraper
in Ashrafiyeh. The rightists fought back with rockets. Between these two
buildings lies the devastated commercial center.

September 2, 1976
Comment: Palestinian forces battled Syrian troops in the mountains
of southern Lebanon. Syria moved more troops into the Jezzine area,
and also moved more rocket launchers into the central mountains.

September 3, 1976
Comment: Artillery exchanges were reported in the mountain towns east
of Beirut, using 155mm field pieces. Rocket and machine guns fired back
and forth across the green line. 150 killed, 210 wounded.

September 4-5, 1976
Sectors: mountains east of Beirut, commercial district, Tripoli
Comment: Heavy shelling in the mountains east of Beirut took place
as clashes raged during the night in the devastated business section of
Beirut and its southern suburbs. There was also shelling around Tripoli.
Syrian troops shelled Rum.
            Abu Hassan Salamah, head of the security wing of al-Fatah,
met separately with Sarkis, Gemayel, and Patriarch Antonius Khoreish (the
spiritual head of Lebanon's Maronites) in an effort to end the fighting
in Lebanon. The long-awaited mountain war has not yet broken out. For
Christian forces to win such a conflict, Syrian troops on the Beirut-
Damascus highway would have had to cut the supply lines of the Palestinians
anu leftist forces at Ain Toura and Mtein.

September 11, 1976
Sectors: Beirut, Tripoli
Comment: Palestinian leftists claimed to have repulsed an attempt
during the night by Christian troops and armor to break into west Beirut.
The attack was repulsed in night-long, close-range combat and street
battles which were m unted after a savage attack of mortar and artillery
fire. Heavy fighting was reported in Tripoli. 123 killed, 150 wounded
during the night.

September 18, 1976
Sectors: west Beirut, the green line, southern suburbs, eastern mountains
Comment: Muslim quarters of west Beirut were shelled by Christians during
the day. The heaviest escalation came in the museum area and fighting
intensified in the eastern mountains.

September 20, 1976
Comment: Heavy fighting erupted in Beirut and in the central mountains
as a peace effort broke down. Syrian artillery and tanks near Sofar
shelled Palestinian and Muslim positions in the area of Ain Toura. There
was also a clash between Franjieh and Chamoun forces against Phalangists
over the command of a key military barracks--Sabra barracks near Jounieh.
This attack involved rocket and machine guns. The Phalangists controlled
the barracks before the attack.

September 28, 1976
Comment: Syrian and Lebanese Christian troops launched an all-out
offensive in the mountains east of Beirut. It was a four-pronged assault
which began at dawn after a night-long artillery and rocket barrage.
Battles raged along a six mile front, 12 miles east of Beirut. Syrian
infantry were involved for the first time, as well as tanks and artillery.
Syrian forces struck Palestinian positions from east and south and moved
west from the Bekaa Valley city of Zahle against Palestinian units holding
the mountain road to Tarchish and Ain Toura. Syrian units also moved from
Sofar aimed at Hammana and Ain Toura.

September 29, 1976
Comment: Syrians, led by tanks, drove Palestinian forces out of most
key mountain positions, including the town of Ain Toura.

October 12, 1976
Forces: Syrian troops v. Palestinians
Sector: Sidon
Comment: Syrian forces advanced toward Sidon, launching a major offensive
in southern Lebanon less than 24 hours after a draft peace agreement was
reached. The Syrian troop movement involved an estimated two battalions
of Syrian armor. The advance came 30 miles south of Beirut against
Palestinian positions 12 miles east of Sidon. Palestinian sources
reported that the Syrians were launching heavy artillery bombardment.
Later reports indicated the Syrian tanks and troops launched their attack
from Jezzine. One column reached Rum, another went through Haitura to
Jbaa. It was estimated that 3,000 Syrians were involved. Heavy random
shelling took place in downtown Beirut soon after the news of the ceasefire
was announced.

October 13, 1976
Sector: Bhamdoun
Comment: Syria expanded its offensive in the southern mountains,
battling all day with Palestinians and Lebanese leftist forces for Bhamdoun.
Syrian tanks and infantry accompanied by one of the most intense artillery
barrages of the war failed by afternoon to force the defenders out of
Bhamdour. Syrian troops attacked from three directions, captured two
hills only 200 yards from the town. They used heavy and medium artillery,
tanks, and Grad missiles which exploded in clusters of six. Despite the
intense attack, Syrian tanks and infantry had difficulty advancing against
the defenders of Bhamdoun's thick stone buildings and other well-fortified
positions. The defenders had 106mm recoilless rifles, and RPGs. The
Syrians started artillery attacks at 9:30 a.m. and by noon 15 tanks headed
towards Bhamdoun on the road from Sofar. Four of the tanks were hit, some
soldiers in them fled. At 2:00 more tanks arrived, this time backed by
infantry. Two trucks were blown up by mines. At 4:00 a.m. the following
day, Syrian artillery started pounding again. At 5:30 a.m. a heavy attack
came with many more soldiers. By noon the Syrians forced most of the
defenders to retreat. There was heavy house-to-house fighting.

October 14, 1976
Comment: Another Syrian column pushed past Aley.   Also, Syrian forces
resumed their advance on Sidon.   A tank column reached Abra, four miles
east of the city.   Arab League troops stationed there pulled out.

October 15, 1976
Comment: Syrian troops and Palestinians fought fiercely for Aley.
The armor-led Syrian forces bulldozed forward meeting stiff resistance.
Saudi Arabia announced it would hold a conference with Assad, Sadat, Sarkis,
and Arafat in Riyadh on October 16.

October 16, 1976
Comment: Syrian   forces were only a few miles from Sidon and at 4:30 p.m.
began shelling the town. Roads into Sidon were heavily mined and barricaded
by the defenders.   Artillery pieces were mounted on office building roofs
to fire on any tanks approaching through the streets.
                     In Bhamdoun, the Syrians occupied the southeast half of the
village in heavy house-to-house fighting.   At the request of King Khalid,
Assad ordered his troops to ceasefiring.

October 17, 1976
Comment: Syrians completed the capture of Bhamdoun.

October 23, 1976
Comment: Christian forces used Israeli tanks and armored cars to
capture al Khiyam and Ebel El Sakis, threatening the 55th ceasefire of
the war.

October 26, 1976
Comment: Christian forces, armed by Israel, ignored the ceasefire in
southern Lebanon.   This week they captured Merj Uyyun.

November 3, 1976
Comment: Muslim and Christian forces battled in Beirut in the heaviest
outbreak of fighting since the ceasefire started two week ago.   15 killed,
20 wounded.

November 4, 1976
Comment: The fighting continued in the no-man's land of Beirut and
residential quarters were under artillery attack.   41 killed.   Sarkis
appointed a Muslim officer of the Lebanese Army, Colonel Ahmed Al-Hajj,
as commander of the Arab Peacekeeping Force.

November 10, 1976
Comment: Syrian troops and tanks moved into Beirut.   A column of 50
tanks, 12 armored personnel carriers, and 12 truckloads of heavily armed
troops rumbled in Galerie Samaan.   Syrian forces entered the city from
three directions.

November 11, 1976
Comment: Sniping and machine gunning flared up again in Beirut and a
machine gun assassination attempt on Raymond Edde occurred.   Christian
shelling of a crowded market in Beirut killed several civilians (the
market was a Muslim sector).   The Lebanese Arab Army vowed revenge if
Syrian troops did not halt the Christian shelling.

November 15, 1976
Comment: Syrian troops, in full battle gear, swept into Beirut at dawn.
One column took up positions overlooking the port of Beirut.   Another
column pushed into the city along the road to the airport.

November 21, 1976
Comment: Syrian forces took control of Tripoli and Sidon, meeting no
resistance.

1977

February 11, 1977
Forces: Syrian troops v. "Rejection Front" Palestinians
Sectors: Palestinian camps (Sabra)
Weapons: Tank artillery, mortars, machine guns
Comment: Syrian peacekeeping troops pounded Palestinian camps in the southern section of Beirut with tank artillery, mortars, and machine guns. This was the second straight day of conflict between Syrian troops and "Rejection Front" Palestinians. The battle centered around the Sabra Palestinian camp and involved primarily Saiqa forces against the Iraqi-backed Popular Struggle Front (PSF). The battle started when Saiqa forces tried to enter the PSF office in the camp. The Syrians did not send tanks or troops into the camp during the battle. By the afternoon, the resistance was crushed.

February 19, 1977
Sector: al-Khiyam
Comment: Christian forces overran al-Khiyam, reportedly killing many civilians.

February 28, 1977
Sector: Arkoub
Comment: For the past ten days, the Arkoub region became a battlefront between Palestinians, who control it, and Phalangists, Syrians, and Israelis. The heavy shelling of Arkoub villages sent thousands of villagers fleeing to the north. In Rachaya al-Frekhas, recent shell holes, 18 inches wide, gouged into streets and houses in the village center.

February 27, 1977
Sector: Tallet el-Mafaddin
Comment: Phalangist militiamen advanced on leftist-held positions in Tallet el-Mafaddin, four miles from the Israeli border.

March 16, 1977
Comment: Kamal Jumblatt was assassinated on a mountain road near Beirut. The news of the killing caused a sense of panic in Beirut; the city's streets became empty.

March 17, 1977
Comment: Reports of violence on the mountain region where Jumblatt was killed resulted in 4,000 Syrian troops being sent there to restore law and order. 56 Christians were killed by Jumblatt supporters in the Muktara area. Some estimates said that 200 Christians were killed in revenge.

April 2, 1977
Sector: southern Lebanon
Comment: Large scale fighting erupted in the south. Rightist militia-
men, supported by Israeli artillery, pushed ahead with a major offensive
aimed at capturing the entire region along the frontier with Israel.
There was also fighting for Taybeh and artillery duels across the Litani
River near the Beaufort Crusader Castle and the towns of Merj Uyyun and Kleiat.

April 3, 1977
Comment: Fighting continued in the south. The Christians tried to take
Taybeh as it controls one of the few remaining roads to Bint Jbail.

April 4, 1977
Sector: Taybeh
Comment: Palestinian forces launched a major counterattack against
Christian militiamen, gaining ground in the area of Taybeh. They also
attacked in the direction of Kleiat, Merj Uyyun, and Khiyam. It appeared
that the operation was carried out with Syrian consent. Some sources
indicate Syrian troops were engaged in the attack, using heavy artillery
to bombard Merj Uyyun. In the fierce midnight-to-dawn battle, Palestinian
forces, reinforced over the weekend by fresh troops from camps near Beirut,
recaptured Taybeh. Palestinian commandos engaged in house-to-house fight-
ing in Merj Uyyun after the defenses of the town had been softened by a
long artillery and rocket barrage in the afternoon.

April 5, 1977
Sector: south Lebanon
Comment: Palestinian and leftist forces held off a Christian counter-
attack on Taybeh. They also fired artillery barrages into Israel to try
to cut off supplies to Israeli-backed Christians. Rightist gunmen fired
200 heavy artillery shells into Taybeh. The rightists were reported to
have withdrawn in disarray.

April 6, 1977
Comment: Palestinians and leftists kept their pressure on Christian
forces near the Israeli border.

April 7, 1977
Comment: Palestinian and leftist forces captured Khiyam.

April 10, 1977
Comment: Palestinian commandos suspended their offensive in southern
Lebanon pending the outcome of political talks between Syria and Christian
leaders in Beirut.

April 31, 1977
Comment: Fighting stepped up in southern Lebanon on the 11th and 12th
but tapered off on April 31 after Israeli threats to intervene.

May 25, 1977
Comment: Fighting erupted for the second time in five days in southern
Lebanon between Palestinian guerrillas and Israeli-supported rightists.
Four persons were killed and eight injured in clashes between Palestinians
and rightists in Khiyam, Ebel as-Saqi, Blat, Taybeh and Christian militia-
men in Merj Uyyun and Kleiat. Israeli artillery bombarded the Palestinian
positions in Nabatiyeh.

July 1-7, 1977
Comment: Artillery duels and increased tension in southern Lebanon.

July 8, 1977
Comment: Palestinians broke into the defense lines of the Lebanese
Christians at £in Ebel. The guerrillas strength in southern Lebanon is
about 5,000 men.

July 30, 1977
Comment: Syrian soldiers set up positions around Sabra and Shatila, two
major Palestinian refugee camps. Similar plans were going to be carried
out near the rest of the camps within 15 days. The movement was part of
Syrian-Lebanese-PLO agreement on restoring peace to southern Lebanon.

August 4, 1977
Comment: Clashes continued in the southern area near the Israeli border.
The Christian forces had 155mm Howitzers that fell into their hands when
the Lebanese Army collapsed.

August 21, 1977
Comment: In the village of Brih (Shuf district), 11 Maronites were killed
and 26 wounded in clashes with Muslims. Ten were killed as they left
church, by fire from nearby roofs.

August 22, 1977
Comment: Syrian forces moved into the Shuf district and restored peace.

August 26, 1977
Comment: Fighting continued in southern Lebanon. Mayor of Bint Jbail was
killed in the fighting.

August 27, 1977
Comment: Lebanese Christian leaders issued a statement calling for
withdrawal of Palestinian forces from the area near the border with Israel,
expressing disenchantment with the role of the Syrian troops, and warned
they would reconsider their support of Sarkis if security conditions
continued to deteriorate.

August 31, 1977
Comment: Fighting flared again in southern Lebanon, killing 10 and
wounding 20. Israeli troops joined in shelling Nabatiyei, Bint Jbail,·
and Hasbaya, using 155mm and 175mm field guns.

September 16, 1977
Comment: Heavy fighting broke out in southern Lebanon. Christian
forces entrenched at Merj Uyyun and Kleiat pounded Palestinian positions
at Nabatiyeh, Ebel al Saqi, Khiyam, and the Khardaly bridge with heavy
artillery and Israeli-supplied tanks. The fighting was described as
more extensive than the artillery duels in which the rival factions had
engaged in for some time on an almost daily basis. 300 Israeli troops
crossed into Lebanon with tanks and armored personnel carriers.

September 17, 1977
Comment: Rightwing Christian forces continued their advance in southern
Lebanon backed by Israeli artillery and air support. Fierce fighting took
place on the approaches of Palestinian-held Khiyam. The rightists moved
into Kafr Shuba and Kafr Hamam on the 16th with Israeli tanks under cover
of Israeli artillery.

September 19, 1977
Comment: Palestinians claimed to have blunted the recent Christian
offensive which was targeted for Khiyam. Rightist forces claimed the
objective was the hills overlooking Khiyam and in driving the Palestinians
back, the Christians broke the siege of Merj Uyyun. Palestinian reinforce-
ments arrived. According to witnesses, neither side made a major advance.
Israeli military forces in the north were put on alert.

September 20, 1977
Comment: Fighting continued amidst reports that Israeli mobile units
crossed into Lebanon to aid the Christians.

September 21, 1977
Comment: Lebanese security sources charged that Israelis occupied six
hills across the border. The Israelis kept up heavy shelling of Khiyam.
M-68 tanks were used against the Palestinians, who claim they were operated
by Israelis.

September 22, 1977
Comment: Khiyam was reported to be under heavy gunfire. The fire
came from a hill on the Lebanese side of the border, captured by Israeli-
supported Christians last week.

September 25, 1977
Comment: Southern Lebanon fighting continued.

September 26, 1977
Comment: The Lebanese and Israeli governments and Yassir Arafat agreed
to a truce in Lebanon arranged by the United States. The truce took
effect. Israeli forces had two companies of infantry plus armored personnel
carriers and super-Sherman tanks in southern Lebanon.

November 9, 1977
Comment: Israeli fighter-bombers flew heavy bombing raids over southern
Lebanon, killing 110 civilians, and levelling two farm villages in the
vicinity of Tyre. The Israelis also bombed Tyre and the refugee camps
of Burjal Shemali, Reashidiye, and al-Bass.

November 11, 1977
Comment: Israeli fighter-bombers raided southern Lebanon, wounding 14.

1978

January 24, 1978
Forces: Christians v. Muslims
Sector: Ain al-Rumaneh and Shiyah
Comment: The most recent ceasefire was put under strain as fighting
raged between Christian Ain al-Rumaneh and Muslim Shiyah. The battle
lasted two hours with each side blaming the other for starting it. 102
people were killed. Karami withdrew his resignation as the Syrian-
controlled PLA brought order to Beirut. The PLA controlled looting in
west Beirut. The Lebanese Army and police meanwhile had a heavy desertion
problem. Real power in Lebanon at this time lies with the Syrian-Lebanese
-Palestinian committee entrusted with keeping peace.

February 7, 1978
Comment: Lebanese soldiers clashed with Syrian peacekeeping forces as
the Syrians sought to set up a new check point near a Lebanese Army
barracks. Fighting continued for about one hour. The gunfight took
place in Fayadiyeh. The streets were deserted as a result of the clash.

February 8, 1978
Comment: The previous day's gun battle erupted into a major confronta-
tion between Syrian soldiers and Lebanese Christian forces in Beirut. Heavy
fighting between Lebanese soldiers and Syrian Army regulars erupted at the
Fayadiyeh barracks and spread into Beirut's eastern Christian sector.
There were day-long rocket, mortar, and cannon exchanges in which 13 Syrians
and 20 Lebanese were killed. After the clash on the 7th, the Christians
turned their eastern Beirut enclave into an armed camp, throwing up road-
blocks and taking sniping positions on roofs. At nightfall, Syrians
shelled Ashrafiyeh.

February 9, 1978
Comment: Ali Aslan, the commander of the Syrian peacekeeping forces
ordered his troops to cease their attack on Lebanese Army regulars and
Christian militiamen. Fighting stopped. Well over 100 Syrians and
Lebanese have been killed since this battle began. Syrian troops and tanks
Pounded the Fayadiyeh barracks and militia strongholds in east Beirut
where house-to-house fighting was reported. The Christian army regulars
number 600. Some sources indicate the Fayadiyeh troops had been running
guns to Christians factions and that the Syrian effort to set up a check
point was to stop it.

February 10, 1978
Comment: Syrian peacekeeping troops began firing before noon on Christian
militia positions in Ain al-Rumaneh and Ashrafiyeh. Christians returned
fire with machine guns. Since the fighting began on the 7th, 150 have
been killed and 250 wounded.

February 11, 1978
Comment: Sarkis met with Syrian Foreign Minister Khaddam to set up a
truce. Leaders of Lebanese Christian parties and Lebanese and Syrian
military leaders took part. Syria and Lebanon agreed to a joint
military tribunal to investigate the fighting. The Lebanese Army unit
was fully integrated with Christian, Muslim, and Druze soldiers who
fought as a unit. The army was solidly behind the troops. "They all
resent the Syrians lording it over them," one observer said. "When
Syrian troops began frisking Lebanese troops at the Fayadiyeh check point
it all broke out." After taking the roadblocks, the Lebanese troops
overran a Syrian artillery battalion seizing 12 122mm guns as the Syrian
troops fled. Then, they shot up a Syrian convoy coming down the main road.
(The army had not, however, cooperated with Christian attacks around the
Christian sector.) Syrian reinforcements came in and tried to storm the
barracks. Some were killed.

March 4, 1978
Sector: Marun al-Ras
Comment: Marun al-Ras was overtaken by Palestinians and leftist as the
Christian defenders suffered heavy losses, including 14 dead. They took
a truckload of villagers as hostages. The "Joint Forces" of Muslims and
Palestinians captured an American-made Sherman tank, two half-trucks with
Hebrew markings, machine guns, Israeli automatic rifles, American-made
M-16s, a 52mm mortar with Israeli shells, and ammunition boxes with Hebrew
lettering.

March 14, 1978
Comment: Israeli forces invaded Lebanon ostensibly in retaliation for
a terrorist attack last week. Israel sent a force of 20-28,000 into
southern Lebanon.

March 17, 1978
Comment: Lebanon went before the UN Security Council to demand the
immediate withdrawal of Israeli forces.

March 20, 1978
Comment: Israeli forces completed their takeover of southern Lebanon up
to the Litani River but deliberately side-stepped the city of Tyre.

March 21, 1978
Comment: The vanguard of the UN peacekeeping forces moved into southern
Lebanon.

April 11, 1978
Comment: Israeli troops began a partial withdrawal from Lebanon as a
first step toward compliance with a UN Security Council call for a full
Israeli withdrawal, as they moved back from Rashaya al Fukhar.

April 12, 1978
Comment: Fighting broke out in Beirut between Christian militiamen
and leftist Muslims. Syrian forces intervened to try to stop the
conflict. The intervening troops bombarded Ain al-Rumaneh with rocket
and artillery fire after heavy exchanges of fire between Muslims and
Christians in Shiyah.

April 14, 1978
Comment: After five days of fighting, rival Lebanese factions and Syrian
troops reached a ceasefire. 82 people were killed and 267 wounded since
a weekend fight between Christian and Muslim militiamen in Ain al-Rumaneh
and Shiyah. Israeli forces completed the second stage of their withdrawal
as they withdrew from 25 square miles of the 500 they occupied.

June 12, 1978
Sector: Ehden
Comment: 800 militiamen from the Phalangist party shelled Tony Franjieh's
home at Ehden, killing him, his wife and his two year old daughter. 35 men
of the Phalangist and Franjieh's Giant Brigade were killed in the fighting.

June 13, 1978
Comment: Israeli troops completed their withdrawal from southern Lebanon.
They handed a border strip, six miles deep, to Christian militiamen
instead of to UN forces. The Christians were led by Major Saad Haddad.

June 28, 1978
Comment: Gunmen raided four Christian villages in the Baalbek area in
retaliation for the Ehden attack in which Tony Franjieh was killed. They
killed 22. It was not known if the attackers were Franjieh's followers.

July 1, 1978
Comment: Syrian peacekeeping troops launched a furious attack with tanks
and mortars on Christian positions in Beirut, setting more than a dozen
apartments ablaze. At least 35 Lebanese civilians were killed, 88 wounded.
Phalangists in Ain al-Rumaneh returned fire with machine guns, mortars, and
rocket-propelled grenades. Syrian troops ringed the district and blocked
all access to the area. Bombs and shrapnel filled the air and hit a
number of buildings. The fighting died down in midevening, five hours
after it began.

July 2, 1978

Comment: Heavy fighting again. Artillery fire landed in the market place to force Muslim merchants to leave. Reinforcements of Syrian troops soon moved in and a battle broke out. Ain al-Rumaneh itself was fairly quiet, however, tension rose as Murabitoun militiamen moved reinforcements and set up mortar positions in Shiyah in the evening. 400 cars were hit by Syrian shells.

July 3, 1978

Comment: Syrian forces encircled Christian strongholds. After a lull in fighting in the morning, Syrian troops hit Christian positions with heavy mortar shells, machine gun fire, and rockets, and moved in reinforcements to tighten the circle. 100 civilians, mostly Christian, have been killed in the fighting so far. 300 have been wounded.

July 4, 1978

Comments: Syrians continued shelling Christian sections when Camille Chamoun rejected Syrian terms for a ceasefire. There had been a 17-hour lull in the fighting. The NLP headequarters was severely damaged and abandoned.

July 6, 1978

Comments: Seven Israeli warplanes buzzed Beirut. The Syrians had just given the Christians one of the heaviest bombardments Beirut has had. 1,260 Soviet Grad and Katushia rockets smashed into six residential neighborhoods and the port area. The bombardment set at least 40 buildings on fire and collapsed several others. Hundreds of burned out cars and downed electric power poles littered the streets of east Beirut. Elias Sarkis threatened to resign as president in an effort to get the Syrians to stop. Syrian shelling killed 200. An undeclared ceasefire took effect after Sarkis threatened to resign. Camile Chamoun had to leave his top floor apartment in Ashrafiyeh due to the shelling. In Ashrafiyeh, the six days of shelling left nearly every building at least pock-marked by shrapnel or machine gun fire, and many were scarred by gaping holes and blackened by fire. In some buildings, entire floors collapsed under repeated direct hits. The destruction in Ashrafiyeh from the shelling was greater than that suffered in the entire civil war.

July 16, 1978

Comment: BBC reported that during the height of the Syrian shelling of Ashrafiyeh, 600 artillery, mortar and rocket rounds landed in the Christian sector per hour.

July 22-23, 1978
Comment: Syrian forces using rocket launchers and artillery pounded
Christian positions and residential areas in Al-Hadath. The tension
began on July 21 when two Syrian soldiers were wounded by snipers. Two
bodies of Syrian soldiers were also found near the NLP headquarters in
al-Hadath.

July 25, 1978
Comment: The Syrians resumed shelling of Al-Hadath. 15 were killed
since shelling began.

July 26, 1978
Comment: Syrians heavily bombarded Al-Hadath during the night and
beseiged Christian forces in the sector.

September 30, 1978
Forces: Christian militias v. Syrian Army
Sectors: Ashrafiyeh, al-Hadath, Mount Lebanon
Weapons: mortars, tanks, artillery
Comment: Syrian troops surrounding Ashrafiyeh began an intense artillery
shelling of the city. Street battles took place in al-Hadath. In Mount
Lebanon, Syrian gunners attached Christian positions. After four or five
hours a ceasefire was declared.

October 1, 1978
Forces: Christian militias v. Syrian Army
Sector: Ashrafiyeh
Weapons: mortars, tanks, artillery
Comment: The truce put into effect the day before lasted 12 hours.
Each side blamed the other for the renewed fighting. The Christians
reported that the new fighting began when Syrian troops tried to establish
new positions in Christian districts. So far, it is estimated that 70
Lebanese were killed and 300 wounded. Christian militia sources said 55
Syrian troops were killed.

October 2, 1978
Comment: The Syrian shelling continued the entire night. The Syrians
did not attempt to move into the sector, although they did hold a
position in the Rizk Tower where a Stalin Organ rocket launcher was
placed. 32 Lebanese killed, 200 wounded.

October 6, 1978
Comment: The fighting between the Syrian Army and the Christian militias
in and around Beirut continued unabated since October 1. The Syrians
heavily shelled Ashrafiyeh but made no attempt to take the area.
Israeli gunboats shelled a Syrian position in Beirut as a warning to the
Syrians.

October 7, 1978
Comment: The attack the day before on a Syrian position by Israeli
gunboats led to increased Syrian shelling of Ashrafiyeh during the night
and continued during the day. 800 Lebanese killed, 3,000 wounded since
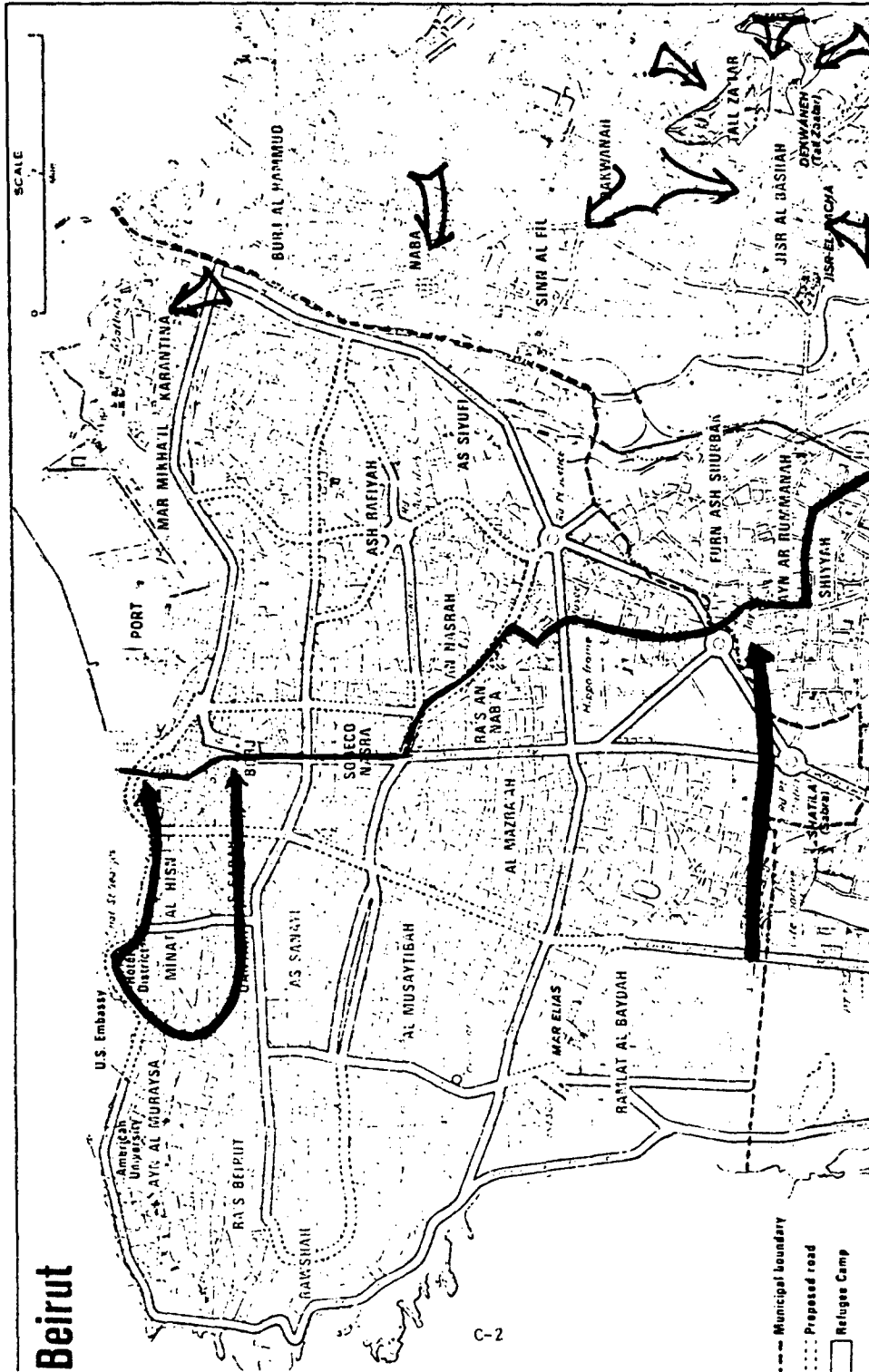the fighting began September 30. Most of the casualties were civilians.

October 8, 1978
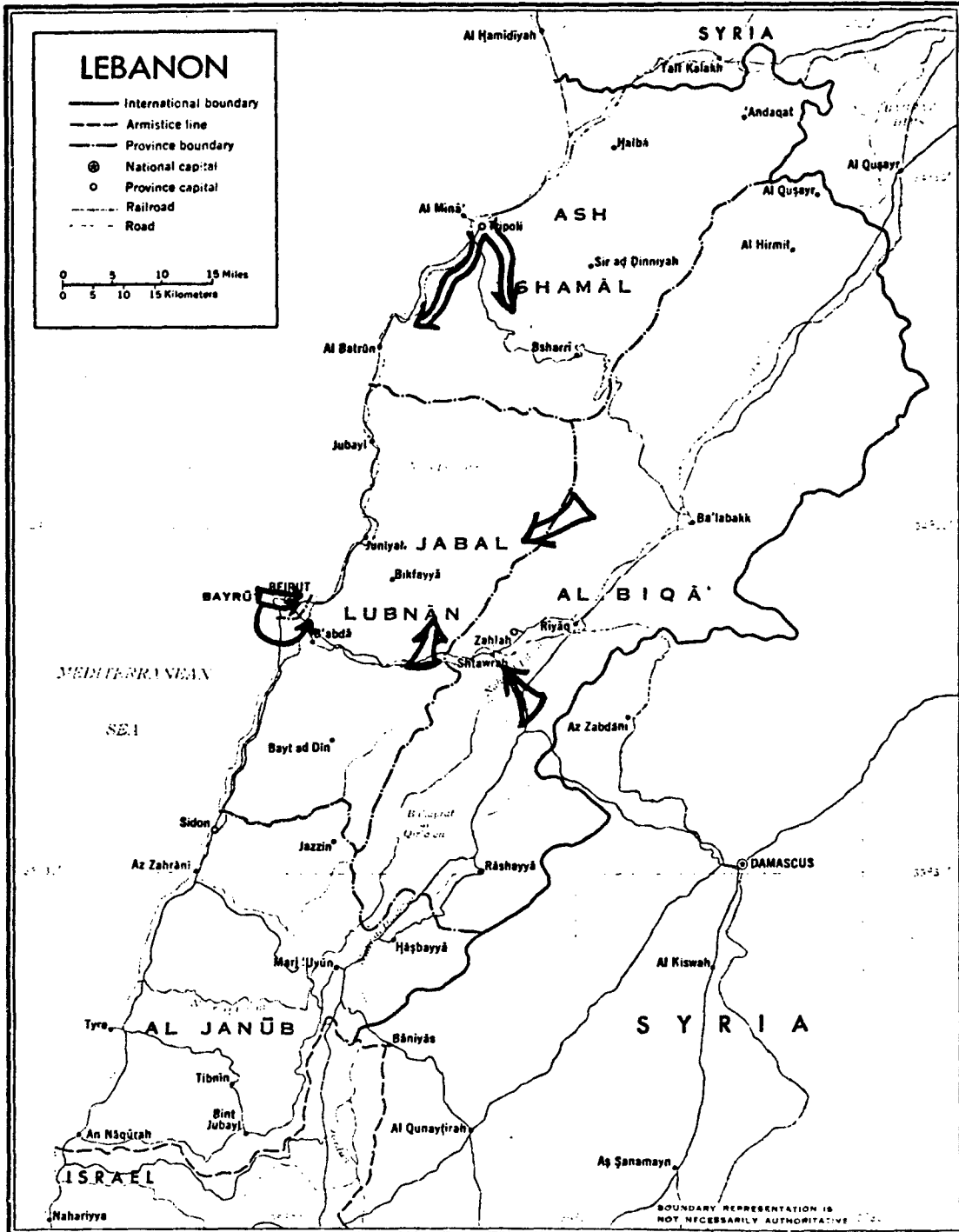Comment: A ceasefire was declared.
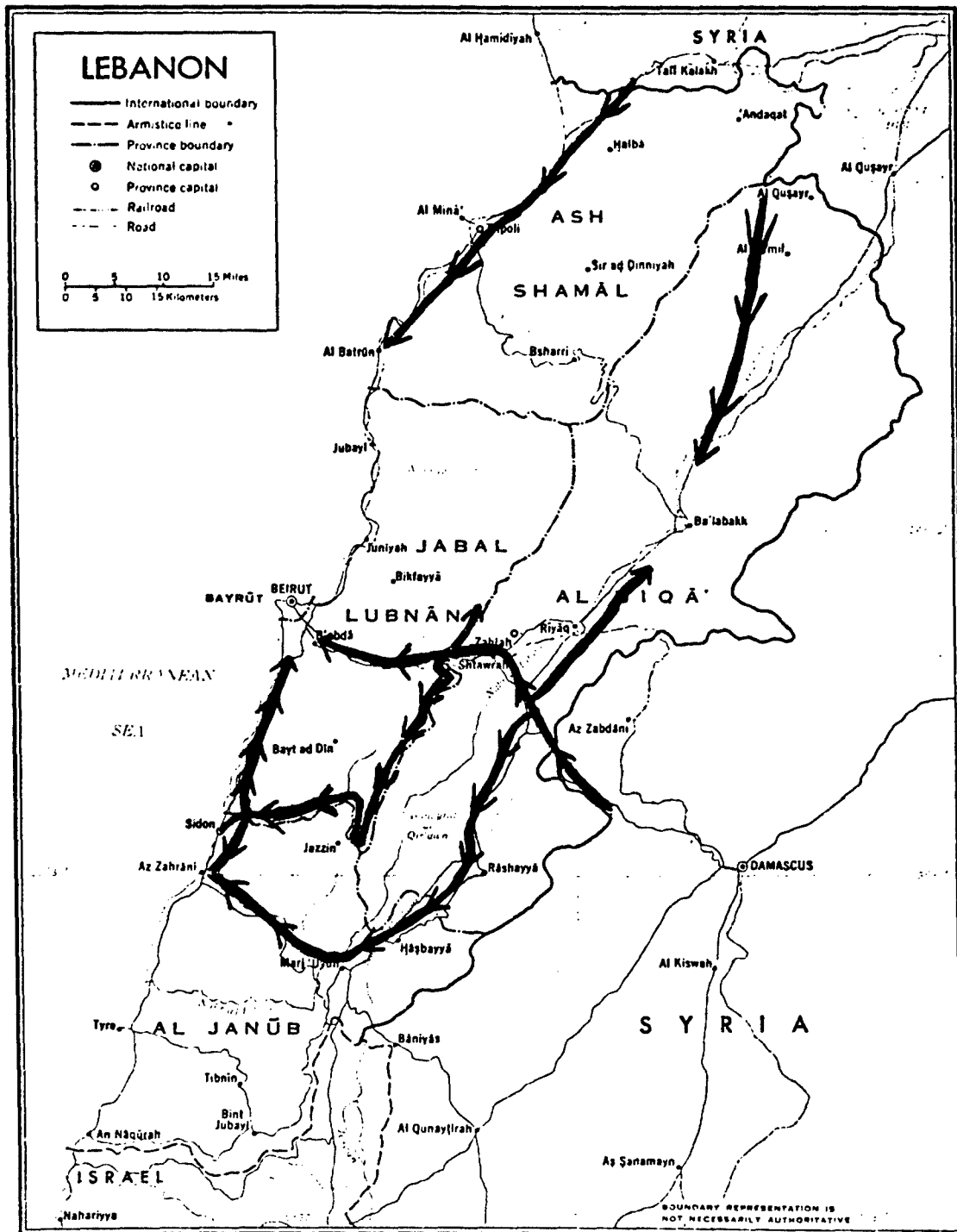
APPENDIX C.

MAPS

Beirut

SCALE

U.S. Embassy

American University

AYN AL QURAYSA

Hotel District

MINA' AL HISN

RA'S BEIRUT

RAWSHAH

AS SANAH

AL MUSAYTIBAH

RAMLAT AL BAYDAH

MAR ELIAS

AL MAZRA'AH

SODECO NASRA

RA'S AN NAB'A

AJ NASRAH

ASH RAFIYAH

AS SIYUFI

MAR MIKHA'IL KARANTINA

PORT

BURJ AL HAMMUD

NABA

SINH AL FIL

HAKWANAH

TAIL ZA'AR

JISR AL BASHAH

DEKWANEH (Tal Zaatar)

JISR-EL-BASHA

AYN AR RUMMANAH

FURN ASH SHUFBAH

SHIYYAH

SHATILA (Shabra)

C-2

Municipal boundary
Proposed road
Refuge Camp

LEFTIST/MUSLIM/PALESTINIAN DRIVES IN BEIRUT, FALL 1976-SPRING 1976: AND RIGHTIST ATTACK ON LEFTIST/MUSLIM/PALESTINIAN POSITIONS IN CHRISTIAN AREA OF BEIRUT, 1976
Solid line: Leftist/Muslim/Palestinian advance during hotel district/port area battle.
Hollow Arrows: positions of rightist forces during Tel Zaatar phase.
Solid line dividing Beirut is the "green line."

LEFTIST/MUSLIM/PALESTINIAN OFFENSIVE   FALL 1976

LEBANON

———— International boundary
—·—·— Armistice line
——·—— Province boundary
⊕ National capital
○ Province capital
········· Railroad
–·–·– Road

0   5   10   15 Miles
0 5 10 15 Kilometers

Base 78465 6-71

THE SYRIAN ADVANCE INTO LEBANON JUNE–OCTOBER 1976

APPENDIX D.

PHOTOGRAPHS

Truck-mounted AAA M-55. Yugoslav manufactured Hispano Suiza
tri-tube 20mm gun.
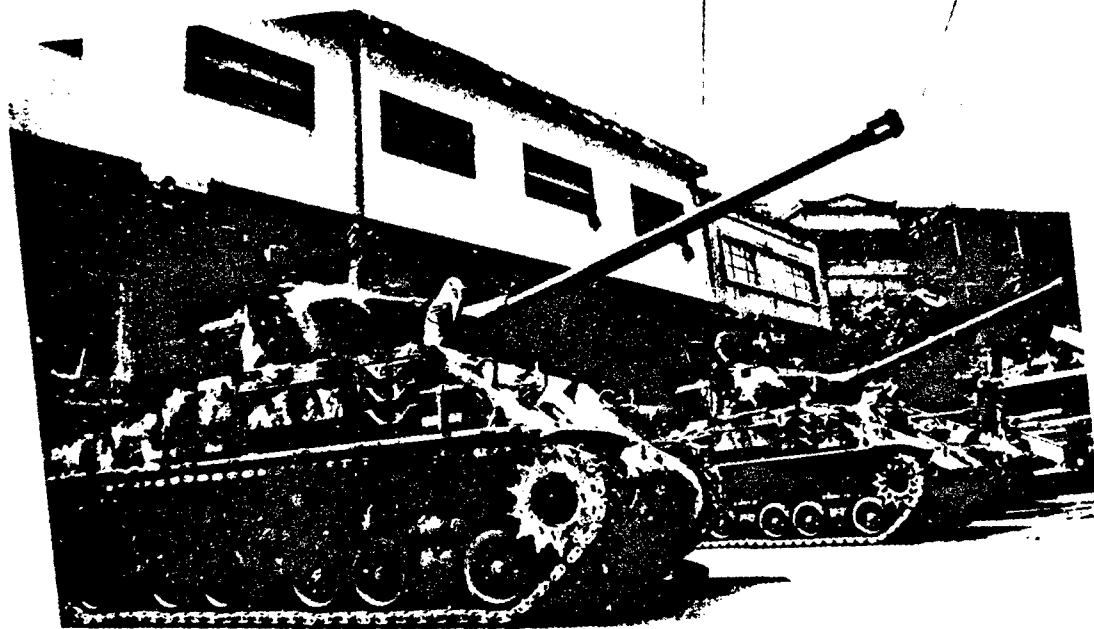
Israeli-supplied Super Shermans somewhere in Ashrafiyeh.
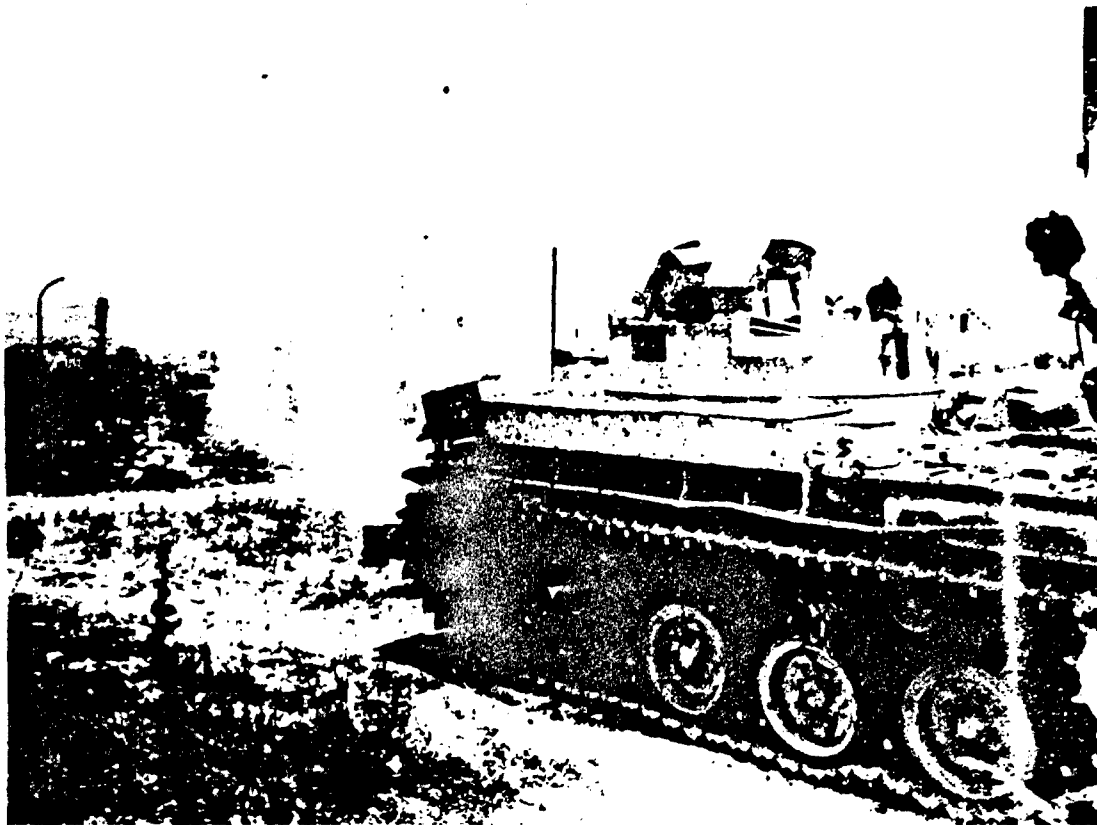
M-42 in action at Tel Zaatar. This World War II vintage
anti-aircraft weapon was considered to be one of the most
effective weapons used in a direct-fire role.
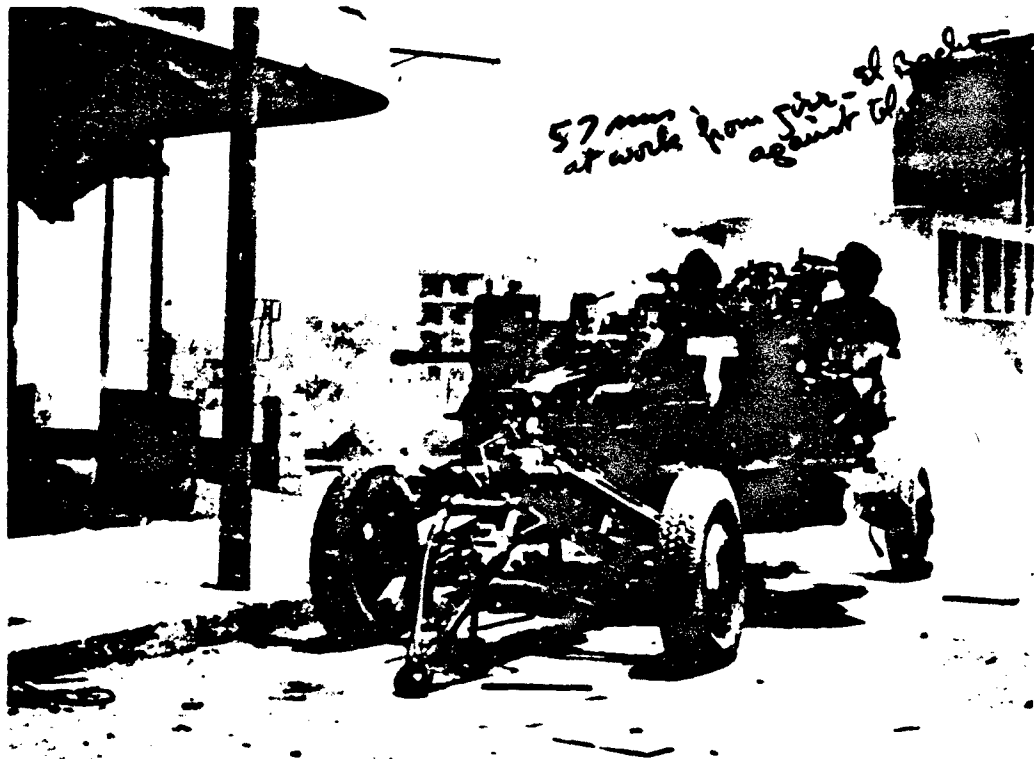
A 57mm automatic AAA gun S-60 firing from Jisr al-Basha against
Tel Zaatar. This is another AAA weapon judged to be most
effective in a direct-fire role in a MOBA environment.
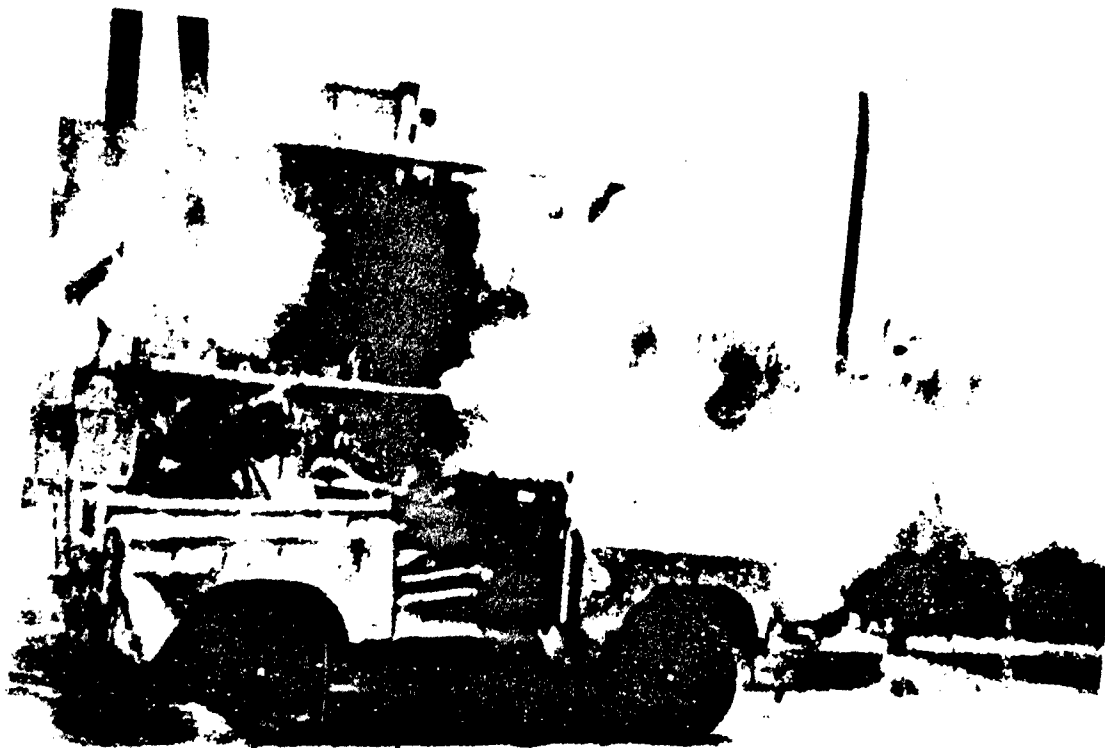
at work against
Tel el zaatar

B-10 mounted on a Landrover in action at Tel Zaatar. This,
with its American equivalent--the 106mm, jeep mounted RR--
was judged to be an excellent weapon in a MOBA environment.

Staghound, considered by majority of respondents as combining
the essential features of fire power--thicker armor and
mobility--for a MOBA environment.

Unexploded but armed Syrian mortar shells in Ashrafiyeh.

Unexploded and disarmed 160mm Syrian mortar shells recovered
in Ashrafiyeh.
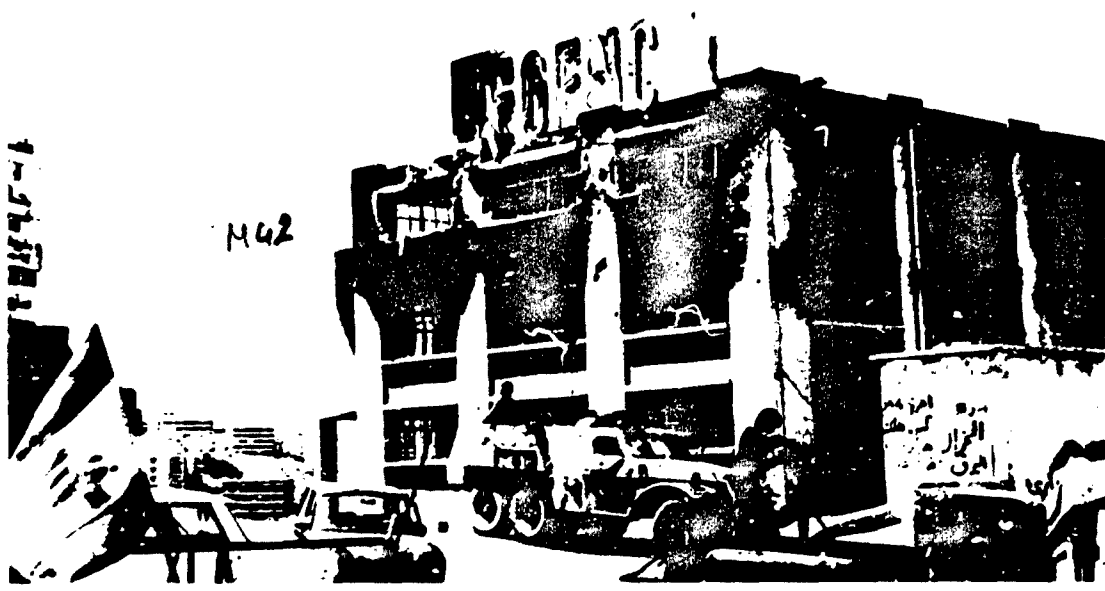
The burned out hulk of a factory in the Moukalles/Tel Zaatar
area. Pock marks on columns allegedly caused by 40mm shells
from an M-42. Note Soviet-made BTR-152.
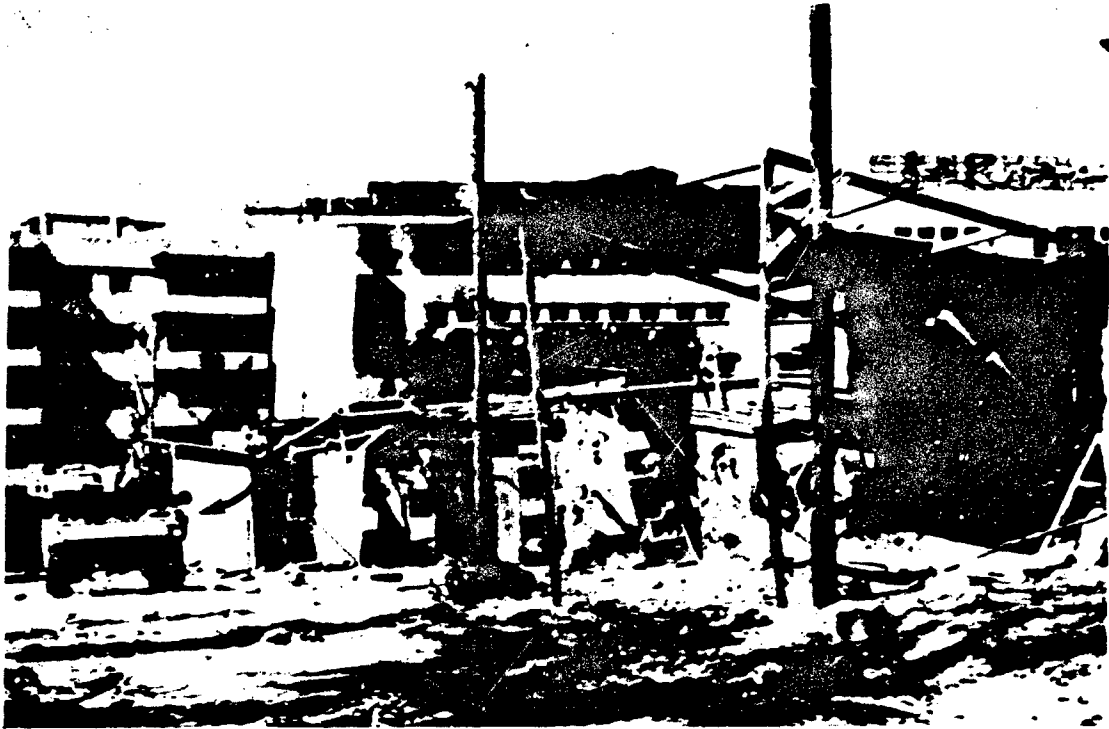
Damage to structures caused by Panhards with 90mm cannon.
Arrow points out a Panhard in action.

General view of the camp of Tel Zaatar and the vicinity of
Sin el-Fil. Picture was taken immediately after Tel Zaatar fell.
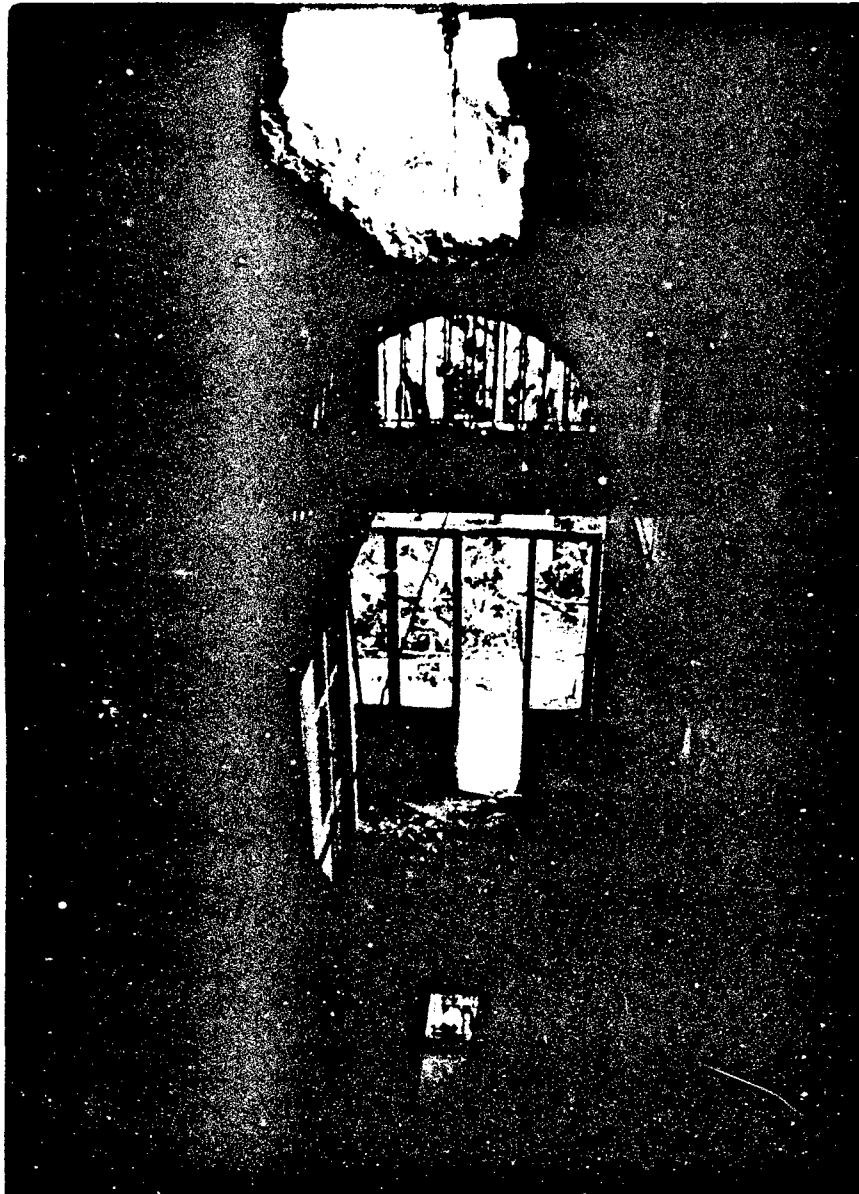
Hole created from Syrian 122mm field artillery. Note rubble
blown inward indicating absence of delay fusing.
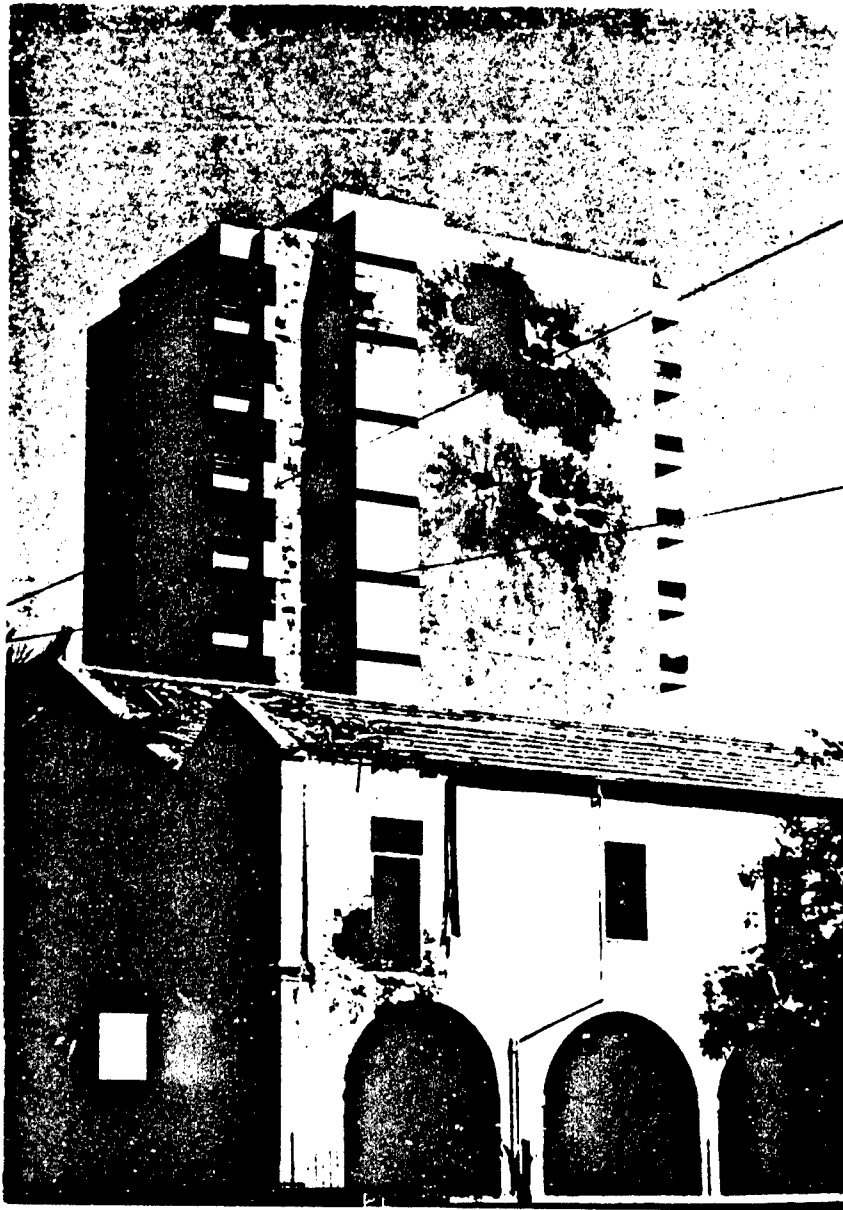
Holes in wall of building created by direct fire from Soviet-supplied Syrian T-54s and T-55s.

Hole created in roof top by 122mm shell (Syrian)

Rubble on road in Ashrafiyeh created by 160mm mortar shell.
Note overturned automobile and other vehicle destroyed by same
shell.

Crater filled with water as a result of 160mm mortar
shell hitting water main in Ashrafiyeh.

Weapons' effect on building at Tel Zaatar. Front of building
damaged by 90mm cannon on Panhard fired from Fayadiyeh.
On side of building top larger hole created by AMX-13 105mm
cannon, lower hole by 40mm cannon on M-42.

Rubble barriers and sandbagged position in Ashrafiyeh.
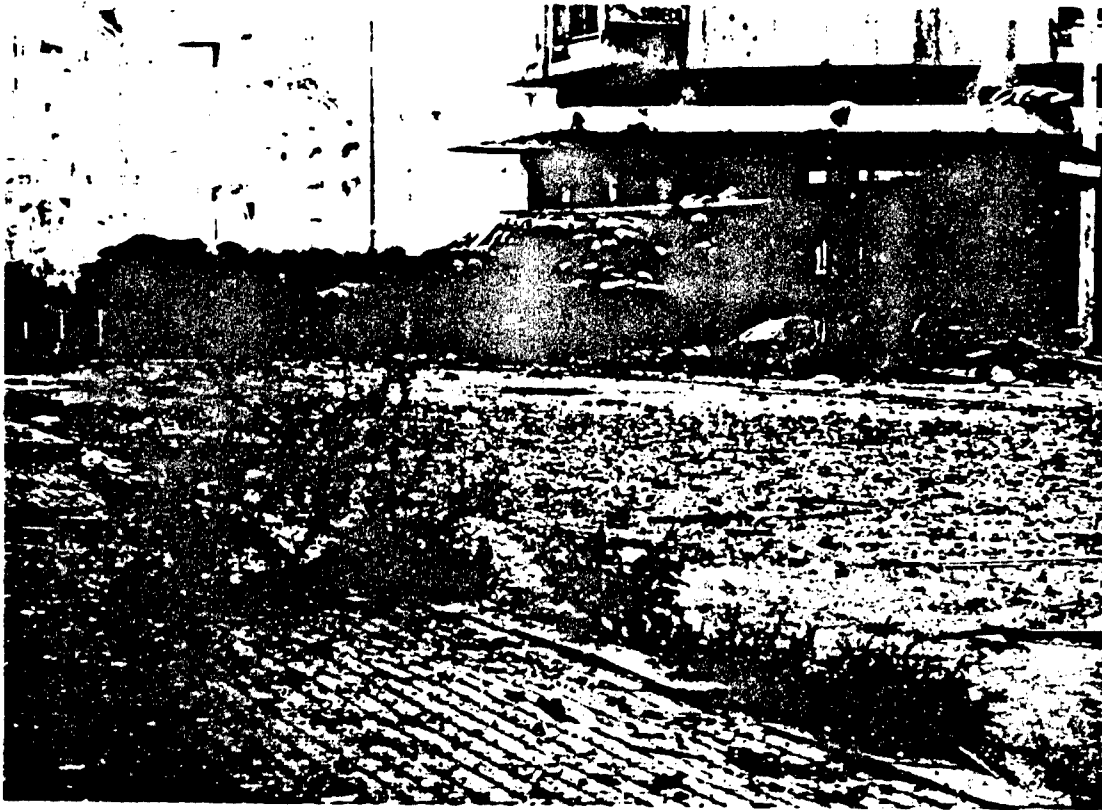
Sodeco area of Beirut. Note barricade made of barrels filled
with rubble and sandbags piled on top.

A soldier firing through shell holes in cinderblock wall.
Note he is wearing a helmet, unlike most militiamen who
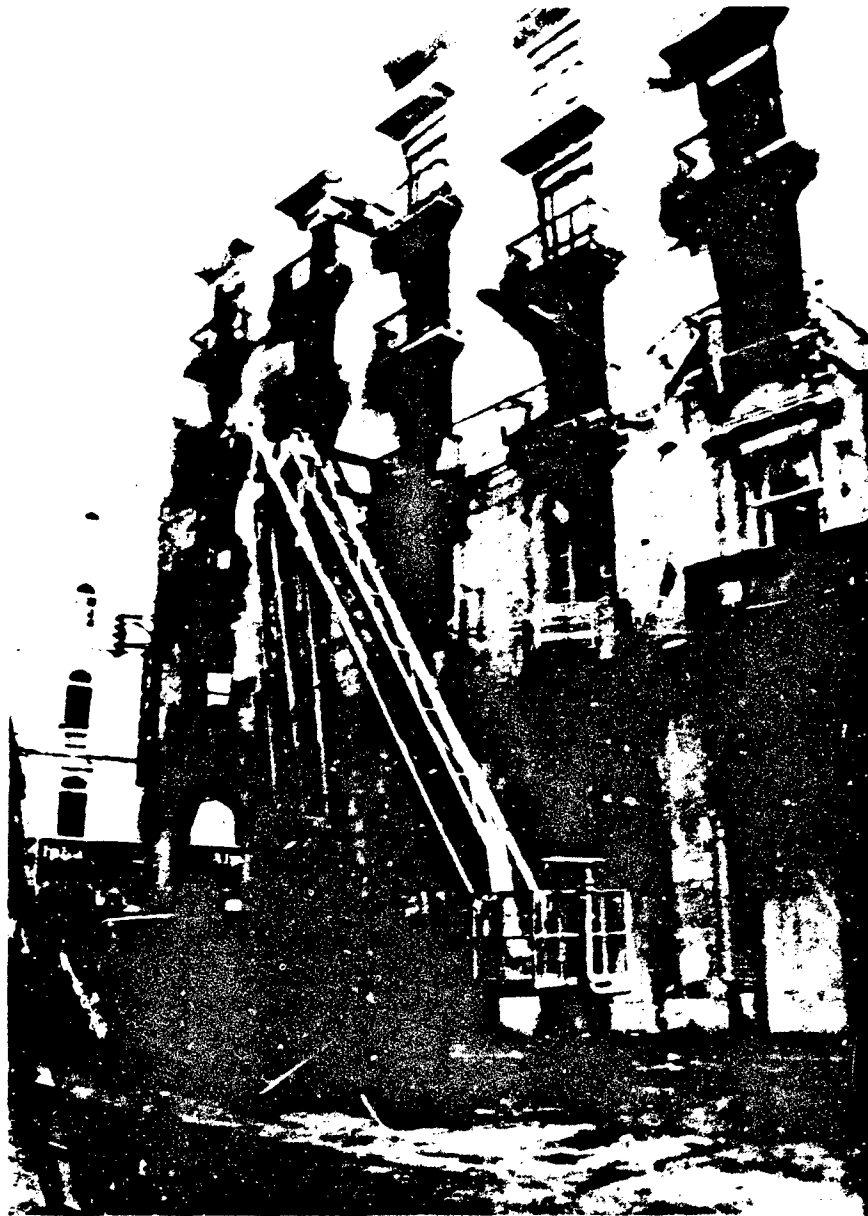refused to wear one.

Patrol operating in the el-Hazmiye area. Note militiaman
carrying an ANPRC-77.
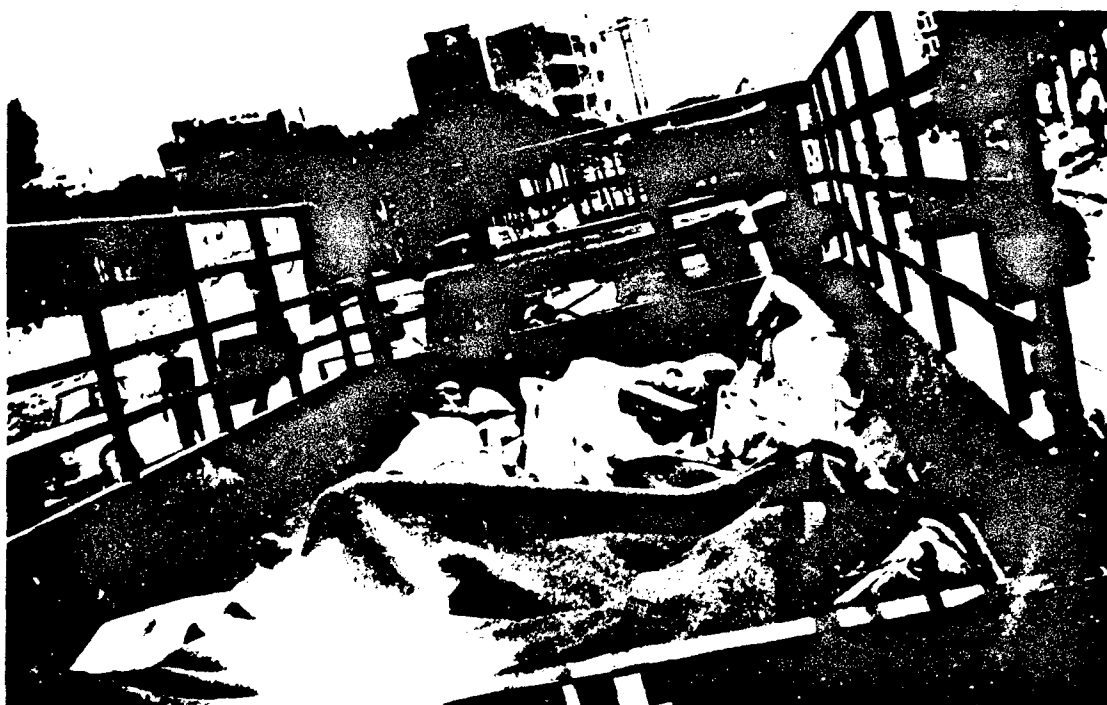
Evacuating wounded militiamen in the battle of Tel Zaatar.

Trash burning in Beirut.

Firemen in action in Rue Ma'arad in downtown Beirut. The building
was typical in architectural and structural design of those found
in the older commercial/business district of Beirut. Note, that
when fully extended, cherrypickers could reach the top floors and
could be used to help resupply and evacuate in the absence of
elevators.
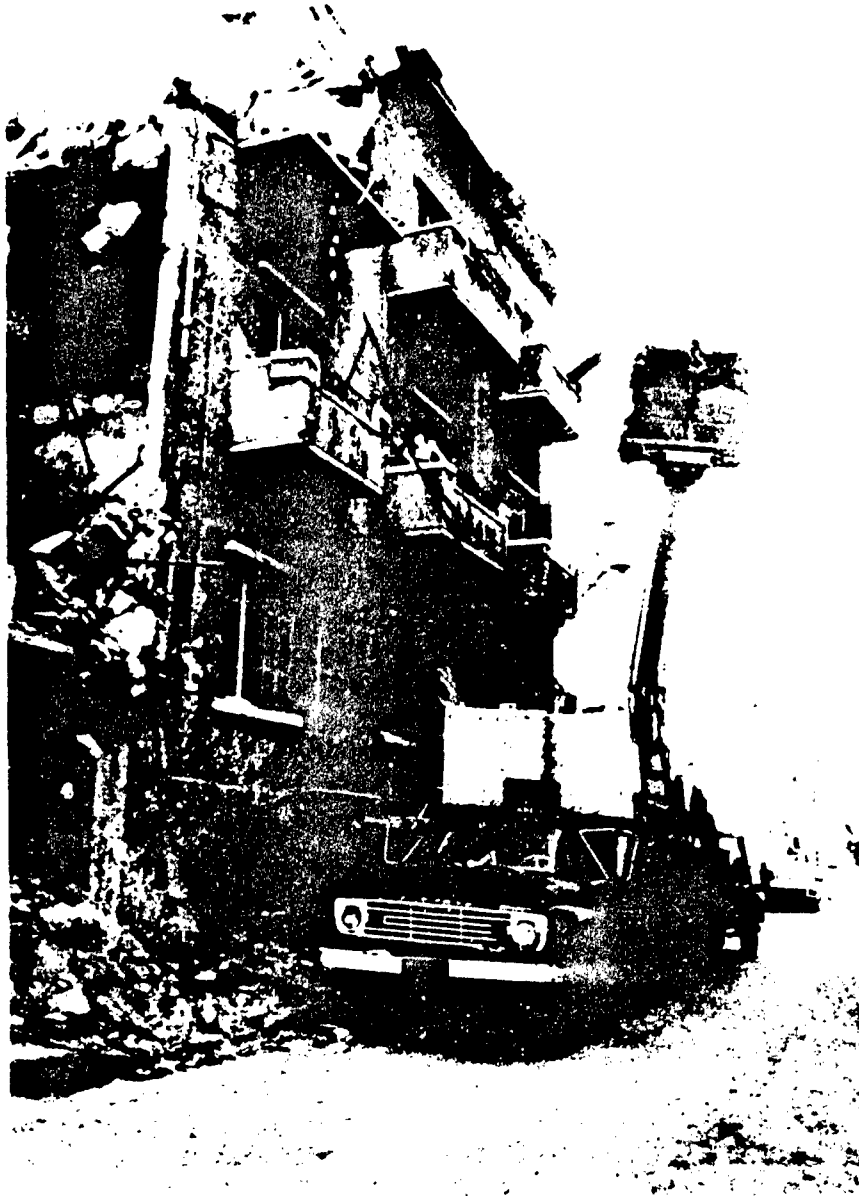
Innovation during the war. Use of cherrypicker to evacuate
third floor of building. Note this method could be used to
resupply troops in high floors when elevators are unavailable.

APPENDIX E

LIST OF QUESTIONS FOR RESEARCH AND ANALYSIS

MOBA: Lebanon

I. Creation of holes

   A. What weapon(s) was (were) used?
   B. Why was that weapon used? (What was the purpose?)
   C. What happened? (What was the result?)
   D. If a hole was made, how big was it?
   E. What type of wall was it? Variables include composition, thickness, size, room size.
   F. What type of structure was it? Variables include composition, size, age.
   G. What was the range from which the shot was fired?
   H. Was the shot straight or angular?
   I. How long did the operation take?
   J. How was the hole used?
   K. What happened to those inside the structure? Outside?
   L. Photos should be both close-up and perspective shots and some should show inside.
   M. What measures were taken for troop (manpower) safety by those inside? Outside?

II. Rubble

   A. How was the rubble created (e.g., artillery, air strikes, RR, explosives)?
   B. If created by buildings, how high were the buildings?
   C. What types of material created the rubble (composition, thickness, size)?

III. Smoke, chemicals, the role of armor, and human factors

   A. Were buildings used in any novel ways?
   B. What special tools, devices, or weapons were used other than regular army issue?
   C. What modifications were made to enhance weapon effectiveness for MOBA?
   D. What modifications were made in armor at mechanized infantry operations because of the urban environment?
   E. How were barricades used and what was their composition?
   F. Did personnel try to shoot through apertures?
   G. Was smoke used? How? (e.g., to try to remove people from buildings?)
   H. Were chemicals used? How?
   I. How were noncombatants controlled? Did they get in the way?

IV. Snipers

   A. How and what extent were snipers used?
   B. How and to what extent were snipers integrated into defense?
   C. How were snipers attacked or defended against?

V. Use of streets (cf. II)

   A. How were streets used?
   B. How were topographical features used?
   C. How trafficable were streets after artillery?

(Continued)

APPENDIX E (Continued)

VI. Firing from enclosures

A. Were AT weapons fired from enclosures?
B. What happened to the room and to the men?
C. What were the circumstances in terms of room size, ventilation, number of rounds, ear protection (available or used)?
D. The same questions should be applied for other weapons as possible.

VII. Other personnel considerations

A. How did people move (both vertically a n horizontally)? What types of vehicles were employed?
B. What was the distribution or deployment of combatants within buildings?
C. What floor did people tend to fire from?
D. What tactical organizations were employed?

VIII. Medical

A. Were medical units used?
B. How were medical units configured?
C. What relationship existed between medical configuration and combat conditions?
D. What expedients were adopted in transportation, drugs, communications, hygiene, treatment of wounded and dead, evacuation, etc.?
E. How and to what extent did disease degrade operations?
F. Describe the C^2 of medical units.
G. How were casualties identified?
H. Breakdown wound types (flesh v. serious, facial v. thoracic, etc.)
I. Identify cause of wounds. In particular, note secondary wound effects.
J. What precautions were taken to guard against secondary wounds?

IX. Communications

A. What equipment was used for communication purposes?
B. What frequencies (number, range) were used?
C. How much power did communications equipment have?
D. What were notable successes, failures, distances and locations involved, and lessons learned relative to communications from the perspectives of the combatants?
E. What signals were employed?
F. What was the nature of netting?
G. Were scrambling or encrypting used?

X. Other

A. Were night vision devices used? With what effect? What were they (brand, model, etc.)?
B. What differences arose, if any, between day and night operations?
C. What was the rate of ammunition expenditure, and how was resupply effected?
D. What sociological factors affected the nature of combat?

(Concluded)