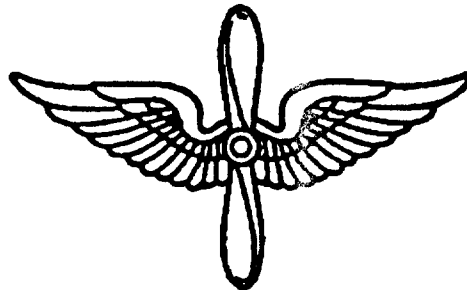


**UNITED STATES ARMY AVIATION  
IN THE GULF WAR**

ADA 269764

**THE UNITED STATES ARMY  
AVIATION CENTER AND FORT RUCKER  
DURING OPERATIONS  
DESERT SHIELD & DESERT STORM**

*ADDENDUM TO THE 1991 ANNUAL COMMAND HISTORY*



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*by*

*Burton Wright III, Ph.D.*

**OFFICE OF THE AVIATION BRANCH HISTORIAN**

**UNITED STATES ARMY  
AVIATION WARFIGHTING CENTER  
FORT RUCKER, ALABAMA**

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## REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED		1b. RESTRICTIVE MARKINGS None	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION/AVAILABILITY OF REPORT  UNLIMITED DISTRIBUTION	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE			
4. PERFORMING ORGANIZATION REPORT NUMBER(S)		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION Aviation Branch History Office, USAAVNC		6b. OFFICE SYMBOL (If applicable) ATZQ-MH	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (City, State, and ZIP Code) Aviation Branch History Office ATTN: ATZQ-MH Fort Rucker, Alabama 36362		7b. ADDRESS (City, State, and ZIP Code)	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION U.S. Army Aviation Center Ft. Rucker, Alabama	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State, and ZIP Code) U.S. Army Aviation Center Fort Rucker, Alabama 36362		10. SOURCE OF FUNDING NUMBERS	
	PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
			WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) The United States Army Aviation Center and Fort Rucker During Operations DESERT SHIELD and DESERT STORM			
12. PERSONAL AUTHOR(S) Burton Wright III, Ph.D (sole author)			
13a. TYPE OF REPORT Historical	13b. TIME COVERED FROM 1990 to 1991	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT 264
16. SUPPLEMENTARY NOTATION None			
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB-GROUP	History of mobilization operations at USAAVNC Fort Rucker during OPERATION DESERT SHIELD/ DESERT STORM
19. ABSTRACT (Continue on reverse if necessary and identify by block number)  The United States Army Aviation Center and Fort Rucker During Operations DESERT SHIELD and DESERT STORM cover the mobilization of both active and reserve units at the U.S. Army Aviation Center, Fort Rucker during Operation Desert Shield/Desert Storm. Chapters cover the various functions of mobilization (i.e., logistics, training, medical, etc.) and individual units and post directorates contributions to the mobilization are highlighted. The book closes with a series of lessons learned that tie together the collective experiences of mobilization at Fort Rucker. The operations of FORSCOM units stationed at Fort Rucker and sent to SWA are also part of the narrative.			
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL Burton Wright III, Ph.D	22b. TELEPHONE (Include Area Code) AV-255-3875	22c. OFFICE SYMBOL ATZQ-MH	

ABSTRACT:

The United States Army Aviation Center and Fort Rucker During Operations DESERT SHIELD and DESERT STORM cover the mobilization of both active and reserve units at the U.S. Army Aviation Center, Fort Rucker during Operation Desert Shield/Desert Storm. Chapters chronicle the various functions of mobilization (i.e., logistics, training, medical, etc.) and individual units and post directorates contribution to the mobilization are highlighted. The book closes with a series of lessons learned that tie together the collective experiences of mobilization at Fort Rucker.

## THE AUTHOR

Dr. Burton Wright III was born February 23, 1942, Ancon, Canal Zone, Republic of Panama. He was graduated from Creighton University with a Bachelor's Degree in History in 1966, and commissioned a Second Lieutenant of Infantry. A three-year tour of active duty followed with assignments as a company commander with the 7th Infantry Division in South Korea, and as an instructor at the U.S. Army Infantry School, Fort Benning, Georgia. After release from active duty, Dr. Wright attended graduate school at Florida State University, Tallahassee, Florida, receiving a Master's Degree in American History in 1982. After graduation, Dr. Wright worked as a college textbook representative for several major publishing houses, and later as deputy director, Public Affairs Office, South Georgia College. At that point, Dr. Wright re-entered active duty to attend the Command and General Staff College, Fort Leavenworth, Kansas, and upon graduation, was posted to be an Assistant Professor of Military Science, Missouri Western State College. After a four-year tour of duty, Dr. Wright again left active duty and worked as an associate editor with Harcourt, Brace, Jovanovich of Orlando, Florida. In 1987, Dr. Wright became a historian with the U.S. Army Center for Military History working with the Field and International Division as an action officer and branch chief. In 1990, Dr. Wright left the U.S. Army Center for Military History to become the deputy historian, Aviation Branch History Office, Fort Rucker, Alabama. Dr. Wright is also a Lieutenant Colonel in the U.S. Army Reserve, and assigned to the 2071st U.S. Army Reserve School as a command and general staff instructor.

## FOREWORD

When Operation DESERT SHIELD began, the Aviation Branch command historian was preparing to write a fiftieth anniversary history of Army Aviation. While this much needed monograph is underway and scheduled for publication during 1993, the Aviation Branch historians have devoted a large part of their time and effort to capturing the history of Operations DESERT SHIELD and DESERT STORM since the fall of 1990. Branch History Office personnel collected and organized approximately 12 linear feet of documents and conducted and processed 76 oral interviews relating to the Persian Gulf conflict.

During 1991, the Aviation Branch historians planned and began researching and writing two monographs on Operations DESERT SHIELD and DESERT STORM. The two works focus respectively on the U.S. Army Aviation Center (USAAVNC) and the Army Aviation Branch in the operations. During the summer of 1992 the Branch History Office assumed responsibility for a third DESERT SHIELD/DESERT STORM project: the completion of a study begun and published in draft form by Captain Kevin Smith of the USAAVNC Aviation Planning Group. Branch History Office personnel have made significant progress on all three of these projects, and two of them are near completion.

The current volume, written by Dr. Burton Wright III, the deputy historian, is the first of the planned monographs and is being published by the USAAVNC as both a monograph in the three-volume Aviation Branch History Office series on DESERT SHIELD/DESERT STORM and as an addendum to the 1991 Annual Command History. This monograph describes and analyzes the contributions of the USAAVNC to Operations DESERT SHIELD and DESERT STORM.

The final version of the work begun by Captain Smith will be published as a book of readings on aviation operations in DESERT SHIELD and DESERT STORM, with introductory and explanatory material provided by the Branch History Office. The second Branch History Office monograph on DESERT SHIELD and DESERT STORM, the narrative and analytical account of Army Aviation operations, is scheduled for publication later in fiscal year 1993. This second monograph is listed in the U.S. Army Training and Doctrine Command (TRADOC) Historical Publication Plan and is scheduled to be published as a volume of the TRADOC Historical Monograph Series, as well as the third volume in the Branch History Office DESERT SHIELD/DESERT STORM series.

JOHN W. KITCHENS, Ph.D.  
Command Historian  
U.S. Army Aviation Center

## INTRODUCTION

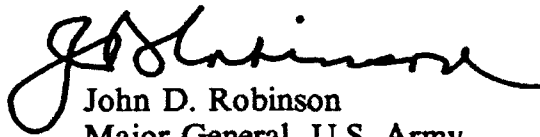
In 1991, the United States and its allies gained an overwhelming and historically unique victory over Saddam Hussein and his well-equipped, million-man army. As the mass media emphasized, our technology was vastly superior to that of the Iraqis. What has been all too often given only passing mention, or even completely ignored, is that this victory was a team effort. Further, the victory had a long history from those who devised the technology, constructed the weapons systems and trained men and women in their use, to the men and women who devised plans for moving soldiers and equipment nywhere in the world on short notice.

It was the high level of professionalism characteristic of the aviation community in general which helped U.S. Army aviation units provide outstanding support to the other members of the Combined Arms Team in Southwest Asia. The AH-64 Apache helicopters and their successful deep penetration missions during Operation DESERT STORM were not simply fortuitous. That superb weapons system and its crews were molded into a single, fighting team long before Operation DESERT STORM was so much as envisioned.

When mobilization began, Fort Rucker's military and civilian members responded to the emergency in a remarkable manner. Many personnel, the U.S. Army Aviation Center (USAAVNC) family as it were, put in long hours to prepare regular and reserve units for deployment. Not only were people and materiel moved expeditiously to the combat area, but our soldiers were given some basic knowledge about the people indigenous to Southwest Asia. A small matter, perhaps, but it is noteworthy to remember that there was very little friction between American and Saudi Arabian citizens.

Although I was not privileged to command the USAAVNC during Operation DESERT STORM, I know that the aviation units in action deeply appreciated the hard work and quick response to their problems and needs by the military and civilian professionals whose dedication and hard work contributed to victory. There have already been a number of books and hundreds of articles published on Operation DESERT STORM, most of which are concerned with military actions. While giving credit to our warriors who daily risked their lives, this monograph is intended to emphasize the team, which included not only our fighting soldiers, but all those behind them. In other words, the often ignored other side of victory.

*The United States Army Aviation Center and Fort Rucker during Operations DESERT SHIELD & DESERT STORM* constitutes a modest attempt to set forth the accomplishments of the entire Fort Rucker family. I trust that you will find it both interesting and informative.



John D. Robinson  
Major General, U.S. Army  
Commanding Officer

## PREFACE

What an army is, what it has been, and what it will become are inexorably bound in history—sometimes unhappily. For example, because of the bloody lessons of World War I, the French constructed the Maginot Line in hopes of both bottling up Germany and keeping French losses low. When the German Army invaded France in June 1940, the Maginot Line played virtually no part at all in World War II. In contrast, the strategy and tactics used to bring about the ignominious surrender of the Iraqi Army in Southwest Asia were based upon a far more intelligent reading of military history from Hannibal's defeat of the Romans at Cannae to the German *Blitzkrieg* in World War II.

The amount of historical material on fighting in a desert environment is staggering. One lesson which certainly emerged, judging from the success of Operation DESERT STORM, is that an army cannot prevail unless it can be supplied...not merely with soldiers, tanks, ammunition, and food, but with plentiful aviation assets. There are very few historical instances when an army or smaller unit prevailed, however well they fought, against superior numbers and massive materiel.

There are other lessons to be learned from history, including the conflict in Vietnam. It is noteworthy to consider that President Bush left the business of preparing for and fighting the war mostly in the hands of military professionals. Unlike former President Johnson and former Secretary of Defense McNamara, President Bush and Secretary of Defense Cheney did not grossly interfere with the military; they concerned themselves with providing whatever assistance, political or otherwise, that was needed. The debacle in Vietnam (in contrast with the overwhelming victory in Southwest Asia) provides eloquent testimony that reading, understanding, and acting on the lessons of history are not merely important, but critical.

Providing the necessary manpower is, rather obviously, a matter of mobilizing the necessary military forces to assure victory. With respect to mobilization, Fort Rucker and the USAAVNC were heavily involved. Thanks to the dedicated work of both civilian and military professionals, thirty U.S. Army Reserve and National Guard units were mobilized, and most reached Saudi Arabia in time to play roles in the victory. How this was accomplished should be of consuming interest to those who have to do the work in any future conflict.

There is, unfortunately, almost nothing here to excite the interest of the media, which are concerned only with the dramatic or what the media consider newsworthy. Men and women of the U.S. Army and all the civilians involved in the monumental, yet often mundane, tasks of mobilization rarely excited much media interest.

Implicit in this monograph is the notion that the many facets and problems underlying effective mobilization are crucial. Insofar as Operation DESERT STORM was concerned, the efficiency and dedication required to move to Saudi Arabia thousands of



soldiers plus materiel, not to mention food and other necessities, are critically important. The history of mobilization, how it was accomplished, the mistakes which were made, as well as other matters, should provide a rich historical "lode to mine" for future contingencies.

Mobilization has changed greatly in this century. Some may remember how mobilization was accomplished in Ethiopia under Emperor Haile Selassie. All fighting men were ordered to report fully equipped by a certain date. Any man found not reporting was summarily executed. We might well envy the Israelis. Orders to mobilize are broadcast over their mass media which, of course, results in very rapid mobilization.

Our problems in this vast country are much different and far more complex. Unless future planners are fully cognizant of how we mobilized for Operation DESERT STORM, valuable lessons will be ignored and the same mistakes, whether of commission or omission, will be made. It is the purpose of this monograph to chronicle the experiences of the USAAVNC and Fort Rucker in mobilizing its assigned regular and reserve units and to provide the historical information which will make future mobilization even more efficient and effective.

Fort Rucker, Alabama  
November 1992

Burton Wright III, Ph.D.  
Deputy Branch Historian  
U.S. Army Aviation Center

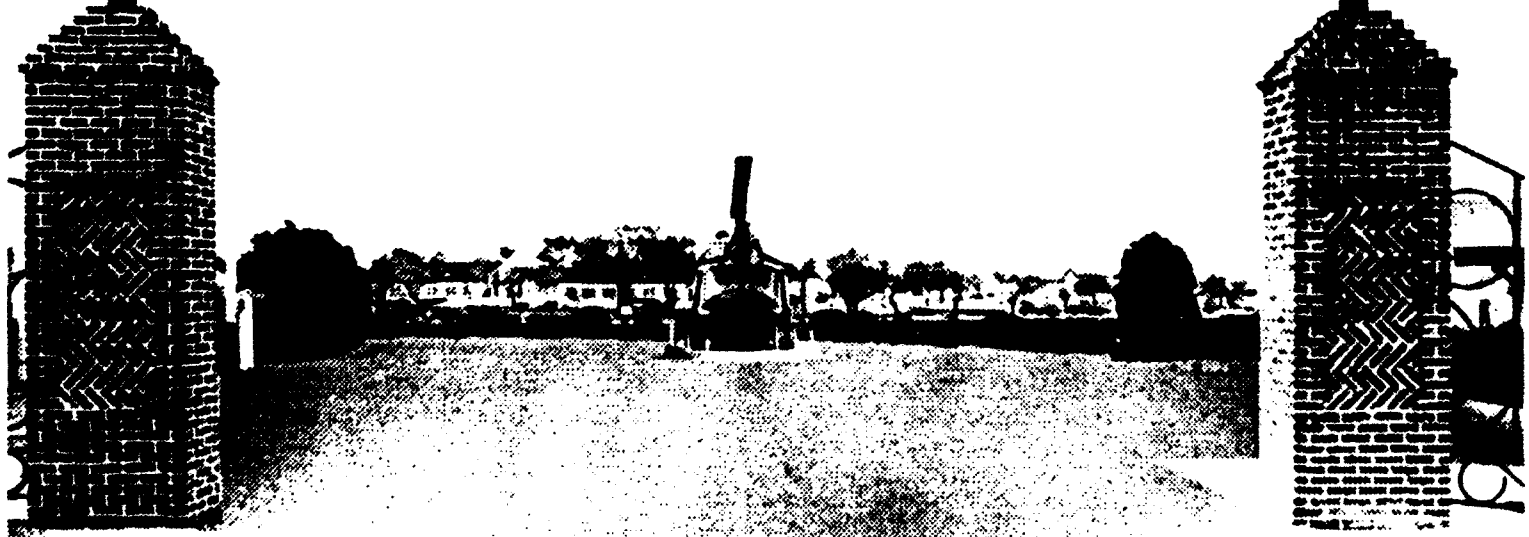
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**U.S. ARMY**  
**AVIATION CENTER**  
FORT RUCKER, ALABAMA



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## **CHAPTER ONE**

### **A LINE IN THE SAND**

#### **Once Upon A Time**

Those who spend much time reading history are sometimes taken with the notion that a country's actions are often strongly influenced by its past. Iraq and Kuwait are two countries whose historical disputes led to an invasion by one and massive intervention by an international coalition of armies to save the other.<sup>1</sup>

#### **World War I's Dark Legacy to the Middle East**

The aftermath of World War I forever changed the face of the Middle East, with a number of new states being created out of the remains of the Ottoman Empire. Even before the end of World War I, the Middle Eastern possessions of the Ottoman Empire were divided between the British and the French. When President Woodrow Wilson left for the Versailles Conference at the end of World War I, he took with him experts on the population, culture, and history of Eastern Europe and the Middle East. It was his plan for the new states created by the Versailles Conference to draw boundaries based on population, culture, and the wishes of the people living there. His French and British allies had a different agenda. In the end, Wilson had to bow to their pressure when the maps of Eastern Europe and the Middle East were drawn. The British got Palestine, Iraq, and the Hejaz. The French took Syria. Iran was basically shared by the British and the French, with some influence by the Russians and, to a lesser degree, the Germans. Because their boundaries were not drawn based on ethnicity, culture, and history, but on political expediency, these fledgling states (not surprisingly) spent the

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<sup>1</sup> *Conduct of the Persian Gulf War, Final Report to Congress, Chapters I - VIII, (April 1992), Aviation Branch History Office, USAAVNC, Fort Rucker, AL, pp. 27-31.*

years between World War I and World War II arguing over borders.<sup>2</sup> In the case of Iraq and Kuwait, the British Foreign Office in London determined the shape of these countries by arbitrarily "drawing a line in the sand."

One dynasty, for example, was set up in the new country of Iraq. The British merely placed King Faisal, one of the sons of the Hashemite Emir, Sherif Hussein, on the throne and controlled the country through him.<sup>3</sup>

The British saw oil as another (yet selfish) reason for attempting to dominate the Middle East. After World War I, the world's navies converted their ships from coal to oil. Any power that controlled a source of oil was in a particularly strong position to acquire great wealth. Using diplomacy and occasional force, Britain presided over a Middle Eastern empire that was both profitable and reasonably peaceful. Political realities, however, have a way over time of changing the world.

The emergence of Arab nationalism was an unwelcome by-product for the British at the end of World War II. Countries under Britain's control and protection wanted independence. When they achieved the desired break with Britain, these countries fashioned a Middle East that was continually at odds with itself—marking the end of the fragile equilibrium previously maintained by the British.

Iraq was one of the first of these countries to partially break free of Britain's control. Thereafter a British ambassador represented Britain's interests in Baghdad,

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<sup>2</sup> Christine Moss Helms, *Iraq: Eastern Flank of the Arab World*, (Washington, DC: The Brookings Institution, 1984), pp. 44-45.

<sup>3</sup> David Fromkin, *A Peace to End All Peace: Creating the Modern Middle East 1914-1922*, (New York: Henry Holt and Company, 1989), p. 560. Sherif Hussein's son, Faisal, had been one of the strongest supporters of the Arab revolt against the Turks, and had worked closely with Lawrence of Arabia to conduct guerrilla operations. This dynasty for his son was Sherif Hussein's reward for cooperating in the betrayal of the Arabs at the Versailles Conference. See: T.E. Lawrence, *The Seven Pillars of Wisdom*, (New York: Dell, 1935), p. 2.

rather than a high commissioner. Prior to Iraq's split with Britain the British Foreign Office redrew the boundaries of Iraq, thereby establishing a separate country named Kuwait. Previously during the rule of the Ottoman Empire, the area now known as Kuwait had been an independent city-state and had only been considered part of Iraq since after the fall of the Ottoman Empire. Eventually, Kuwait also achieved some independence from Britain.

### Oil and the Rise of Arab Nationalism

During World War II, a number of Middle Eastern countries attempted to sever ties with the West. Even before the rise of Nasser in the 1950s, many young and well-educated Arabs wanted a government that would speak for them and not for a foreign country. The Germans found a large number of Arab officers who believed in pan-Arabism. Iraq was one of the principal successes for German agents in fomenting this type of revolution. Syria, controlled by the French, was another. Western nations, particularly Great Britain, were not yet willing to give these countries their total independence. In Iraq, in 1941, the British quashed a German-inspired coup attempt which involved a number of young Iraqi army officers who had been motivated by the German-implanted idea of a Moslem-controlled Holy Land.<sup>4</sup>

It was not politics or independence movements that truly turned the Middle East upside down, but an inevitable shift of power and influence brought about by growing demands for oil, triggered by global conflict.

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<sup>4</sup> Because of this coup attempt, the Gran Mufti of Jerusalem fled to Germany to avoid being arrested. As one of the most influential "holy men" in the Middle East, he continued to broadcast inflammatory propaganda under the watchful eye of the Germans. His work provided little help to the Germans because throughout most of World War II, the Middle East remained quiet.



Before World War II, the United States was the largest producer of oil in the world, with only five percent of world oil supplies being pumped by the countries of the Middle East. With the great demands for oil brought on by the war, a significant shift in energy economies from Europe to the Middle East was virtually inevitable.

Post-World War II also saw the founding of the state of Israel. With the creation of the Jewish state, a tide of Arab nationalism rose up with consequences so far-reaching that its total impact has yet to be calculated.<sup>5</sup> Given strength by the rise of Israel, Arab nationalism sparked continual political and social problems which are still occurring throughout the Middle East.<sup>6</sup>

For example, a revolt led by mid-level officers of the Iraqi Army overthrew the regime of King Faisal in 1958 and installed General Abdul Karim Qassim. Just over a year from the time he gained power, General Qassim was himself overthrown and murdered by other army officers; however, he had pointed Iraq down the road to repressive dictatorships built on pan-Arabism and revolutionary change.

The revolutionary rulers of Iraq believed that radical change was both important and necessary, but not with the social "baggage" of the West that often accompanied modernization. Many of the young Arab officers liked the ideas of democracy, but not the relaxed social morals of the West. They also wanted to return to a political and governmental system modeled on the Koran. The Moslem Brotherhood was but one of the small, somewhat radical, student groups that began about this period.

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<sup>5</sup> The origins of the state of Israel lie in the Balfour Declaration after World War I. The then-prime minister of England, David Balfour, promised to Chaim Herzog a separate Jewish state in Palestine. This was not implemented, however, until 1948.

<sup>6</sup> This incipient nationalism gave rise to extremist organizations like the Arab Brotherhood, who believe that foreign influence in the Middle East should be destroyed by any means possible. The current rise of Islamic fundamentalism is a similar outgrowth of this ethnocentric trend.

One of the numerous political parties that emerged from this political and social ferment was the small Ba'th Party of Michael Aflaq, who was later exiled from Syria and lived his remaining years in Iraq. Although the Ba'th began in Syria, Iraq quickly sprouted a branch which developed its own agenda and philosophy, and split from its Ba'th brethren in Syria.

One of the first Iraqi adherents to the radical social and political programs of the Ba'th was an obscure army officer from the town of Tikrit: Saddam Hussein.<sup>7</sup> Rising rapidly to power, he came to dominate the Ba'th Party. Hussein used every means at his disposal to gain power, from bribery to murder.

### The Iran-Iraq War and the Rise of Saddam Hussein

By the late 1970s, Saddam Hussein was a powerful force within the Ba'th Party. In 1979, he took control of Iraq and purged those members of the party he did not trust. To Saddam, "purged" meant execution. Saddam was a realist. He well knew that exiled politicians can cause considerable trouble at home.

By 1980, Saddam had consolidated his power. At the same time, a fundamentalist Shiite named Ayatollah Khomeini came to power in Iran when the government of Shah Reza Palavehi, America's ally in the region, was overthrown.

With the overthrow of the shah, this changed the relationship between Iraq and Iran, which had often involved border disputes and localized fighting. The leaders of both countries eventually reached agreements to settle these disputes before they escalated into war. Shortly after coming to power as the new rules of Iran, Khomeini made it

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<sup>7</sup> One of the reasons that Saddam has survived for so long against a sea of enemies (both in and out of Iraq) is that extended family members from Tikrit are employed as bodyguards. Successful rulers tend to surround themselves with people whose interests, even survival, are tied to their own. See: *Conduct of the Persian Gulf War, Final Report To Congress*, p. 5.

clear that he had no intention of honoring the shah's agreements with Sunni-dominated Iraq. One of the agreements overturned by the Iranian revolution was a withdrawal of Iranian support for Shiites fighting for independence in Iraq. The other was the Kurdish people, who were later the subject of a considerable amount of U.S. Army support in northern and southern Iraq after the Persian Gulf war, during Operation PROVIDE COMFORT.

Iran began sending inflammatory propaganda across the border to Iraq and soon stirred up trouble. A concerned Saddam Hussein pondered possible ways to end the problem. One way was a military challenge to the Iranian government. Saddam's reasoning seemed plausible that this might be a good time to intervene because of the continued political and economic problems in Iran. The government of Iran was learning much too slowly that a semi-modern nation of nearly 90 million people cannot be governed by an inexperienced religious leader. Iran seemed to be in a state of perpetual chaos. This situation was an open invitation for Saddam to settle old scores by force.<sup>8</sup> Early in the summer of 1980, a series of minor but persistent border violations, assassination attempts, and military skirmishes broke out between Iran and Iraq. In just a few weeks, military tension had escalated to war. Saddam and his generals calculated that their army (supplied, trained, and equipped by the Soviets) would make short work of an Iranian army that seemed nonexistent.<sup>9</sup> Saddam, however, badly miscalculated.

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<sup>8</sup> In the days when the Shah was a regional power, he and Iraq fought over the Shatt al-Arab waterway. Iraq had never been happy with the terms of the treaty that ended the affair. Saddam wanted Iraqi control of that vital waterway. A majority of the early Iraqi attacks were aimed at securing a buffer zone and to move the Iranians away from the waterway.

<sup>9</sup> The Iranian army had been trained and equipped by the United States. The shah was literally given (largely by the Nixon administration, who wanted to make the shah a regional power to protect the Persian Gulf) all he asked for in the way of the most

(continued...)

After some initial Iraqi territorial gains, the Iranians stopped further penetration. During the first years of the war, Saddam Hussein showed that he was not only an incompetent strategist but also a poor field commander.<sup>10</sup> Plans were often arbitrary and executed without any real strategic objectives in mind. Commanders learned not to tell Saddam unpleasant truths or advocate strategy at odds with his concepts, but only to tell what they thought he wanted to hear. Considerable territory was given up by Iraqi units retreating in the face of "human wave" attacks by Iranian forces, which were poor in technology but rich in manpower.<sup>11</sup>

The Iran-Iraq war slowly evolved into large-scale attacks that rarely changed the front lines. As the months of fighting drifted into an eight-year conflict, both sides settled down to a strategic stalemate.

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<sup>9</sup>(...continued)

modern weapons the U.S. produced. Fighter jets, the F-14 Tomcat, never before sold to a foreign country, were sent to Iran. In many instances, the Iranian military obtained some of the first production models of the best U.S. weapons even before America's own military. When the shah was overthrown, the mullahs executed most of the top Iranian commanders. At the time the war began, the Iranian army was led at senior levels by officers who, in the shah's army, had not risen higher than the rank of captain.

<sup>10</sup> The Iraqis were largely on the defensive from 1982 to 1986. They dammed the Euphrates River and created a lake to prohibit Iranian attacks in the south. The Iranians made quick work of that by developing skiffs powered by outboard engines and they began to move quite freely throughout this man-made lake. In fact, the Iranian coup of taking the Majnoon Islands at the entrance of the Shatt al-Arab was one outgrowth of this new amphibious innovation. See: *Conduct of the Persian Gulf War, Final Report to Congress*, pp. 10-11.

<sup>11</sup> Many Iranian soldiers were children as young as 13 years of age. The Iranians looked upon the war as a "holy war," and thousands of Iranian soldiers sent against Iraqi fortifications carried sheets of paper reading generally, I have the Imam's [Khomeini's] permission to enter paradise.

During 1987 and 1988, the Iraqi way of war changed. Saddam gave up some of the tactical decision making, and the Iraqi Army began to be more flexible in its attacks making maximum use of its armor, artillery, and air power, which was superior to that of the Iranians.<sup>12</sup>

In the end, the utter and mutual exhaustion of both sides ended the conflict. Iran and Iraq had suffered thousands of casualties and spent billions of dollars fighting each other—and neither had accomplished much.<sup>13</sup> Saddam Hussein ended the war where he had begun, but with one critical difference. Whereas Iraq had been very wealthy in 1980, the country was now on the verge of bankruptcy just eight years later. It was a lack of cash in the Iraqi treasury more than ancient grudges that brought about the dispute with Kuwait and subsequent invasion by Iraq.

Many of the gulf states, Kuwait included, supported Iraq during the Iran-Iraq war. Some of these states had sizeable Shiite minorities and did not favor a powerful Iran. Their reasoning for supporting Iraq was that Iraq was a stable state which could check the political and religious ambitions of a revolutionary Iran; ambitions which continue to this day. These gulf states had collectively pledged billions of dollars to support Iraq during the war, but many did not fulfill their verbal pledges—one of which was Kuwait.

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<sup>12</sup> Heretofore, the Iraqis had used their tanks as supports for the infantry. The more experienced Iraqi generals were now allowed to use armor in a more independent role. Without an adequate supply of anti-tank weapons to counter the more aggressive use of Iraqi armor, the Iranians had to fall back, and were on the verge of defeat when a mutual weariness brought an end to the war.

<sup>13</sup> Iran suffered the largest number of casualties by war, however Iran has a population base four to five times larger than Iraq. By the end of the war, almost all of the male population of Iraq over the age of 18 had participated in the war as a combatant. Its nearly eight years of war and its ability to mobilize combat experienced reserves was one of the reasons that the Iraqi Army was given such high marks.

## A Too Rich and Too Weak Neighbor—Saddam and Kuwait

Saddam Hussein based his dispute with Kuwait on two questionable issues: one, Kuwait was selling more oil than was allowed under current OPEC agreements which, of course, denied Iraq desperately needed profits; and two, that Kuwait was illegally pumping oil from Iraqi wells near the Kuwaiti border (which again took money away from Iraq). The Emir of Kuwait denied these claims, but offered to negotiate. This time, however, they chose not to pay Saddam the nearly \$5 billion he demanded.<sup>14</sup>

Realizing that they faced potential invasion, Kuwait's leaders desperately searched for allies, even opening negotiations with Iran. At the time of the Persian Gulf war, the foreign population of Kuwait was more than half of its census.<sup>15</sup> This did not give the Emir a large manpower pool from which to develop an army. At the time of the Iraqi invasion, the army of Kuwait was at 30,000 men, trained and commanded by British contract personnel. Much of the equipment used came from a variety of countries, including the United States.<sup>16</sup> However, the Kuwaiti people did not realize how serious a situation they faced, nor, for that matter, did Saudi Arabia or the United States.

The Defense Intelligence Agency, with satellite imagery, photographed the Iraqi Army as it approached the Kuwait border, but intelligence experts were divided on whether the Iraqis were preparing to attack. The satellite images were so clear that the

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<sup>14</sup> Iraq's debts were considerably in excess of that figure, but Saddam needed immediate cash to restart his oil production. The fighting with Iran had damaged Iraqi port facilities that were used to pump oil; these facilities needed to be repaired before full production could begin.

<sup>15</sup> Kuwait's population: 39% Kuwaiti, 39% Other Arabs, 9% Iranian, and 4% Other. From: "Kaleidoscope, Current World Data," (Santa Barbara, CA: ABC, Inc., 1989), Aviation Technical Library, USAAVNC, Fort Rucker, AL.

<sup>16</sup> *Conduct of the Persian Gulf War, Final Report to Congress*, pp. 1-2.

photograph interpreters could easily identify the markings on the vehicles and accurately develop an order of battle. When the first Iraqi units approached the border, they positioned themselves in a herringbone pattern favored by the Soviets before attacking. Intelligence analysts from the United States could not determine if the Iraqis were engaging in "saber rattling" or truly meant to attack.<sup>17</sup> On August 2, 1990, the Iraqis settled the question when they invaded Kuwait with nearly 100,000 troops. The world was shocked, and U.S. intelligence embarrassed.<sup>18</sup>

However, Iraq had again miscalculated. Saddam Hussein thought the world would little care if he invaded a small, neutral, and not terribly popular country. He was wrong. The specter of Iraq having a strangle hold on most of the oil reserves of the world was too serious a matter for the industrialized, oil-dependent West to simply ignore. Having this strangle hold was, in fact, the long-range goal of Saddam. He wanted to send a message to the Gulf states that Iraq was the strongest, and that they should follow his nation's guidance on availability and pricing of oil. The invasion and subsequent rape of Kuwait was to serve as a warning to others.

Saddam's army was now on the border of Saudi Arabia, and the Saudi government knew that its own military, the Saudi Royal Army and the Saudi National Guard, would not be able to prevent an Iraqi invasion. Help was therefore needed.<sup>19</sup> As Prince Bandar bin Sultan, the Saudi ambassador to the United States stated during a television interview, "we have powerful friends." The United States government had a four-decades-old relationship with Saudi Arabia. The United States government did not

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<sup>17</sup> Bob Woodward, *The Commanders*, (New York: Simon and Schuster, 1991), pp. 205-206, 210-211, 219.

<sup>18</sup> *Ibid.*

<sup>19</sup> *Conduct of the Persian Gulf War, Final Report to Congress*, p. 45.

know if Saddam intended to move out from Kuwait and take the eastern part of Saudi Arabia where all the big oil fields and refineries are located. Taking control of this portion of Saudi Arabia would have given Saddam Hussein a strangle hold on much of the proven reserves in the Middle East—an intolerable state of affairs from Washington's perspective. The United States and Saudi Arabia have had an understanding for nearly a quarter of a century that the United States would come to the aid of Saudi Arabia if that country was threatened by a stronger, outside force.

### **Enter the United States**

In the United Nations, a resolution sponsored by the United States was passed condemning Iraq's invasion of Kuwait. The American government began to build a coalition of "anti-Saddam" nations which agreed to send military forces both to defend Saudi Arabia and liberate Kuwait. The first U.S. forces were on the way to Saudi Arabia two days after the invasion of Kuwait.<sup>20</sup>

The stage was set for a military confrontation between the United States and its allies, and Iraq. Since the Iraqi Army could presumably mobilize nearly one million combat-tested men with thousands of tanks and armored personnel carriers, the American commanders had to deploy comparable combat power in a very short time.<sup>21</sup>

For the U.S. Army to send the necessary combat power to defeat so large an army, a partial mobilization of forces was necessary. Messages were dispatched from the Pentagon setting the mobilization machinery into motion. One of the messages was addressed to the U.S. Army Aviation Center (USAAVNC), Fort Rucker, Alabama.

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<sup>20</sup> These consisted of units of the 82d Airborne Division and the 101st Airborne Division and U.S. Air Force tactical fighter units.

<sup>21</sup> Michael R. Jacobson, "The Iraqi Army - Armor in the Desert," monograph, on file with the USAAVNC Aviation Technical Library, Fort Rucker, AL, (1990).



As with the rest of the U.S. Army, the USAAVNC strove to understand the geography and potential problems that would be encountered when forces were sent to Kuwait. Geographically, Kuwait did not present a pleasant picture.

### **The Geography of Kuwait**

Kuwait is "bounded to the east by the Persian Gulf and to the north by the Euphrates Basin. Along the gulf coast, the ground consists of very fine, powdered sand that tends to move with the prevailing winds."<sup>22</sup> Temperatures during most of the year average in the high 80s; temperatures at night could drop below 40 degrees Fahrenheit.

In crossing Kuwait, people noted the "lack of terrain features further inland. Traditionally, this caused unsolvable problems for [anyone] attempting to move across the inland deserts."<sup>23</sup>

Although largely a desert, Kuwait does receive a small amount of rainfall. However, the only major examples of vegetation can be found to the north near the Mesopotamian Basin and the Euphrates River. "Each year, during January-February, a series of wind storms known as 'shamals' continue for a period of weeks."<sup>24</sup> These wind storms often preclude travel, especially by air. The Kuwait desert has plant and animal life, but the only humans that regularly call it home are oil prospectors and occasional Bedouins. It was to this area that those who worked during the long days and nights of mobilization prepared to send regular and reserve units.

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<sup>22</sup> U.S. Army Aviation Center, "Army Aviation in DESERT SHIELD/DESERT STORM," draft monograph, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, (June 8, 1992), p. 4.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

### Fort Rucker Becomes a Mobilization Base

The USAAVNC was home to three active U.S. Army units that were immediately alerted for deployment to the Persian Gulf. The 2-229th Attack Helicopter Battalion (the "Flying Tigers") was an AH-64 battalion and normally assigned as part of the XVIII Airborne Corps. The 46th Engineer Battalion was a general purpose unit that performed "1001" construction and engineer tasks for Fort Rucker. The 256th Signal Support Company belonged to the U.S. Army Forces Command and performed critical maintenance for air traffic control systems. These three units were the first from Fort Rucker to be sent to Southwest Asia.

Fort Rucker was also notified that it would be responsible for mobilizing an unspecified number of reserve units. Personnel at the USAAVNC rolled up their sleeves and set to work on priority one: getting the active units mobilized and off to Southwest Asia.

## **CHAPTER TWO**

### **FORT RUCKER UNITS DEPLOY**

**Desert warfare is unique and probably the hardest type of battle to fight because there is no place to hide.**

**Lieutenant Colonel William H. Bryan  
2-229th Attack Helicopter Battalion  
Commander**

#### **The "Flying Tigers" 2-229th Attack Helicopter Battalion**

At the time of Operation DESERT SHIELD, the 2-229th was an attack helicopter battalion equipped with AH-64 Apache, OH-58C Kiowa, and UH-60 Black Hawk helicopters stationed at Fort Rucker, Alabama, but assigned to the XVIII Airborne Corps. At the time of Operation DESERT SHIELD, the battalion consisted of three AH-64 Apache companies (A, B, and C), a support company, and a battalion staff led by the battalion commander, Lieutenant Colonel William H. Bryan.

As far as technology goes in the U.S. Army aviation community, the "Flying Tigers" were one of the best-equipped and best-trained attack helicopter battalions in the world. The mission statement of the "Flying Tigers" was a simple one: "...be prepared for worldwide deployment to destroy enemy armored and mechanized forces by using aerial firepower in combined arms operations."<sup>1</sup>

When Saddam Hussein's army crossed into Kuwait, severed the country, and moved up to the border of Saudi Arabia, it was only a matter of time before U.S. troops

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<sup>1</sup> John W. Kitchens, USAAVNC 1987 Annual Historical Review, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 41.

would be committed to the area. Those troops would, of course, be supported by all the aviation assets the United States could muster.

The "Flying Tigers" knew something was up as early as August 7, 1990.<sup>2</sup> The battalion was alerted two days later to prepare for deployment to Saudi Arabia.<sup>3</sup> From the moment of notification, the "Flying Tigers" worked day and night to prepare themselves, their equipment, and their aircraft for movement.

Captain Perry Wiggins, a company commander in the 2-229th Attack Helicopter Battalion, described the preparations for movement this way: "First we did an inventory of all equipment. We made a list of what equipment we thought was necessary to take over there because we wanted to travel light. We didn't know exactly how we were going to travel at first. So, we tried to prioritize equipment. I also prepared my men to make sure they took care of any personal things...prior to their departing, getting the families taken care of, and then made sure they all had their personal equipment serviceable and ready to go."<sup>4</sup>

Captain Wiggins also ordered a check of the airborne communications and electronics (ACE) equipment to insure that it was operational.<sup>5</sup> Most expert maintenance for the battalion was performed by civilian contractors.

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<sup>2</sup> CPT Wiggins, company commander, 2-229th, transcript of an oral interview conducted May 28, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

<sup>3</sup> Fort Rucker Public Affairs Office, News Release No. 92/96/ahe (May 21, 1992), Media Memo folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>4</sup> CPT Wiggins, interview, p. 1.

<sup>5</sup> Ibid., p. 2.

DynCorp pulled all the necessary phase maintenance on the battalion's aircraft and, by working overtime, completed the project by August 15, 1990. While DynCorp was working on the aircraft, the "Flying Tigers" were concurrently training, zeroing weapons, and issuing desert-related equipment.<sup>6</sup> They received detailed briefings about the geographical, cultural, and political climate of the Middle East along with a detailed threat briefing on the capabilities of the Iraqi forces. The unit also received information on health-related issues peculiar to the Saudi desert.

The 2-229th Attack Helicopter Battalion was short of a full complement of personnel. The Directorate of Training and Simulation (DOTS), the Directorate of Evaluation and Standardization (DES), and the 1st Aviation Brigade's 1st Battalion, 10th Aviation (1/10th Aviation Regiment), provided the necessary military occupational specialties to the 2-229th prior to unit departure.<sup>7</sup> By departure time, the "Flying Tigers" were ready for the fight to come.

Because of the necessity of getting anti-tank capability to Saudi Arabia in the fastest possible time to support the deployment of the 82d Airborne Division and the 101st Airborne Division, the 2-229th had to conduct a simultaneous air-ground deployment.

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<sup>6</sup> LTC Bryan (AFFR-BAH-O), memo for the record, subj: Operations Desert Shield and Desert Storm After Action Report (AAR) for 2-229th AHR, (May 17, 1991), 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, pp. 1-2. (Hereafter referred to as 2-229th AAR.)

<sup>7</sup> John W. Kitchens and Burton Wright III, USA AVNC 1990 Annual Historical Review, (June 1991), Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 157.

When the 2-229th Attack Helicopter Battalion was finally airlifted to Southwest Asia, cargo planes were used to transport the aircraft and those items deemed of critical importance.<sup>8</sup> One of the most important was ammunition.

Since it was thought at the time that the battalion might be in combat from day one, half of the battalion's load of ammunition was prepared for deployment.

The battalion moved their wheeled vehicles by convoy to the port at Jacksonville, Florida, and a team prepared them for deployment to Southwest Asia. Several key vehicles and a majority of the battalion's personnel deployed via C-141 or C-5A cargo planes from Lawson Army Air Field, Fort Benning, Georgia.<sup>9</sup> All the battalion's aircraft (consisting of 18 AH-64 Apache, 13 OH-58C Kiowa, and 3 UH-60 Black Hawk helicopters) were flown to the port at Jacksonville, Florida, on August 15.<sup>10</sup> Once there, they were broken down for shipment, shrink-wrapped, and loaded onboard a fast cargo ship. The battalion's personnel departed on August 24, 1990.<sup>11</sup>

When the battalion arrived in Saudi Arabia, the first order of business was to prepare its aircraft for combat operations. If the Iraqi Army had decided to attack, the 2-229th and other AH-64 Apache battalions would have been a critical factor of the XVIII Airborne Corps' anti-tank capability. It took just a few days to prepare all the aircraft for flight and to check systems to insure the sea voyage had not damaged any critical parts.

For the first weeks of the deployment to Southwest Asia, home for the "Flying Tigers" was the partially completed King Fahd International Airport. The battalion's

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<sup>8</sup> CPT Wiggins, interview, p. 3.

<sup>9</sup> Ibid., p. 2.

<sup>10</sup> Fort Rucker Public Affairs Office, News Release, No. 92/96/ahe.

<sup>11</sup> Ibid.

aircraft were parked out on the flight line, with quarters for soldiers consisting of spaces in a multi-level parking garage. "Each person was assigned a parking space that gave people enough [room for]...some private area. We then set up cots, lived on cots for awhile, ate MREs [meals ready to eat] strictly because our MKT [mobile kitchen trailer], or portable kitchen, was still en route via ship."<sup>12</sup> Shower facilities consisted of what the troops called the "Pagonis Shower." Said to have been designed by Lieutenant General William (Gus) Pagonis ("Mr. Logistics" for Southwest Asia), the device used a big water tank that is up high, with tubes that run down with very little water pressure. Each tank provided about 500 gallons of water.<sup>13</sup>

By August 26, the 2-229th Attack Helicopter Battalion established a tactical command post at King Fahd International Airport and began executing operations in support of the 101st Airborne Division.<sup>14</sup> The 2-229th and the other assigned AH-64 Apache battalions were the division's only highly-mobile, anti-tank protection. Had the Iraqi Army attacked (with its thousands of main battle tanks), the "Flying Tigers" would really have had their hands full.<sup>15</sup>

The 2-229th soon discovered that they shared one thing in common with a majority of the aviation units that would eventually deploy to Southwest Asia—a lack of

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<sup>12</sup> CPT Wiggins, interview, p. 4.

<sup>13</sup> Ibid., p. 5.

<sup>14</sup> 2-229th AAR, p. 2.

<sup>15</sup> The 82nd Airborne Division had Sheridan light tanks, and TOW (tube-launched, optically-tracked, wire-guided) missiles organic to the division, but it was very likely that these light anti-tank weapons would not have been enough to totally stop Iraqi armor. Some of the members of the 101st Division surmised that they would end up as "speed bumps for the Iraqi Army." The AH-64 Apache gave both divisions that heavy highly-mobile, anti-armor "punch." See: *Conduct of the Persian Gulf War, Final Report to Congress*, pp. 46-51.

experience flying in the desert. To remedy this deficiency, the battalion developed and implemented an intensive training program focused on flying in a desert environment during both daytime and nighttime using night vision systems and night vision goggles (NVG) and also with a full ordnance load.<sup>16</sup>

Captain Wiggins described the training program developed at King Fahd as being "...conducive to the [desert] environment. The enemy is dangerous, but the environment could also be just as dangerous. The OH-58s went out...and set up [a nap of the earth] route using NVG so they could train without any obstacles or hazards and know what was...around King Fahd...to get us accustomed to landing in the sand dunes and "brown-out" conditions, getting everybody comfortable with the environment knowing in the back our minds that at any time we could launch forward and engage the Iraqi Army."<sup>17</sup>

Pilots of the 2-229th Attack Helicopter Battalion had to learn different ways of flying. They had to learn to get behind the sand dunes and see the terrain to mask and unmask, use valleys for cover and movement, come in and land with power to keep the dust back, and not to hover to decrease the prospects of "brown-outs."<sup>18</sup>

One of the first major, flying-related problems experienced by the battalion involved airspace control. Air traffic control functions and procedures were not yet in place in Saudi Arabia, and all use of airspace in the country was tightly controlled by the Saudi government through its system of regional governors.<sup>19</sup> To get permission to fly often involved considerable prior coordination before flights could be made. One of the

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<sup>16</sup> 2-229th AAR, pp. 3-4.

<sup>17</sup> CPT Wiggins, interview, p. 6.

<sup>18</sup> Ibid.

<sup>19</sup> 2-229th AAR, pp. 3-4.



problems involved the local populace. Training flights involved low-level flying, and this frightened some of the many nomadic Bedouin living in the desert. They complained to their government representative, and so on. Eventually, blanket permission was finally granted, and this problem was effectively eliminated.

Another problem dealt with wear and tear on the aircraft. Captain Wiggins described the principal problem as "...erosion in the rotor blades. Rotor blades, when you have every AH-64 Apache battalion in the U.S. Army's inventory over there, are a hard commodity to get, so we learned to tape the blades and how to fly in that environment to save blades."<sup>20</sup>

Flying at night was particularly scary at first. As one AH-64 Apache pilot put it: "At night you used the radar altimeter to make sure that you were indeed above the ground, and you learned to adjust your airspeed in order to avoid seeing a void.... You had to learn to go slow. We called it the "crawl, walk, and run concept...." At night things were slower; people were being more cautious, and I think over a period of time you learned how to fly in that environment just as well as [in the U.S.], even at night because you learned what to look for."<sup>21</sup>

Training also involved getting to know the enemy. Pilots needed to know what anti-aircraft artillery (AAA) capability the Iraqis had, and what the necessary stand-off range was. In addition, the pilots had to incorporate into their flight planning any known enemy and AAA locations. "The maps we were using were not very descriptive of the terrain, but when you flew you could see the terrain relief, and you could at least stay down in the low lying areas and stay off the high terrain.... One thing that we did was to stay very low and go very, very fast if we were trying to get from point A to

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<sup>20</sup> CPT Wiggins, interview, p. 7.

<sup>21</sup> Ibid.

point B because by the time they saw you most of the time, you could already be past them and be gone."<sup>22</sup>

The first mission assigned to the 2-229th Attack Helicopter Battalion was to support the defense of a forward operating base (FOB) designated FOB Bastogne.<sup>23</sup> This base was situated so as to protect northeastern Saudi Arabia and its oil fields. The battalion conducted an aerial reconnaissance of the base area on September 5, 1990. Two days later a command and control element, a forward arming and refueling point (FARP) package, and one attack company were physically deployed to FOB Bastogne.<sup>24</sup>

In some early operations of the "Flying Tigers," OH-58C Kiowa helicopters proved to be a problem in the desert. The "C" model OH-58 has several problems as compared to the AH-64 Apache: it is far slower and has neither a built-in night vision system, nor any onboard navigation equipment. To solve this problem, the 2-229th consolidated all their "C" models into a single team named "Team WARHAWK." In referring to using OH-58s in combat, Lieutenant Colonel Bryan noted in an interview, "The OH-58s worked air support taking the burden off the AH-64s...; they fired artillery when...in range.... They also provided [combat air patrol]..., and maintained a communications link.... We would just drop OH-58s on the way...and maintain radio relay station[s].... This proved extremely beneficial because if you did not do that you would...have lost command and control with your battalion...or...higher headquarters."<sup>25</sup>

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<sup>22</sup> Ibid., p. 9.

<sup>23</sup> Named for the famous town in Belgium where the 101st Airborne made the epic stand during the Ardennes Offensive. See: S. L. A. Marshall, *Bastogne—The First Eight Days*, (Washington, DC: Office of the Chief of Military History, 1955).

<sup>24</sup> 2-229th AAR, p. 4.

<sup>25</sup> LTC Bryan, commander, 2-229th, transcript of an oral interview conducted May 14, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 14.

This team concept allowed the OH-58 Kiowas to provide command and control communications platforms, FARP traffic control, and aerial security when armed with the Stinger air-to-air-missile system (ATAS).<sup>26</sup> Normally ATAS-equipped OH-58s were used on the flanks of formations to provide protection from possible Iraqi fixed- and rotary-wing assets. During the intense training program, other problems were also detected.

For example, when the battalion had earlier trained at the National Training Center (NTC), they had been introduced to relatively easy desert navigation because the NTC had terrain features that allowed for in-flight navigation even under night vision goggles. The crews were surprised to discover that the Saudi desert was virtually featureless, which greatly increased the hazards of flying at night. The shifting sands of the desert caused other difficulties.

The sand composition at the NTC is a coarse grain, and that of Saudi Arabia is a very fine grain. When helicopters took off, the rotor blade prop wash raised dust clouds. At NTC, this dust did not normally impede vision as the aircraft took off or landed, nor did it create any significant problems with particles being sucked into the engines.

In the Saudi desert, so much sand was raised during take-offs and landings that often the crews experienced what is referred to as a "brown-out," a condition where vision is almost totally blocked. Such hazardous flying conditions increased the risk of mid-air collisions.

Flying during the hours of darkness under night vision goggles also increased the risk for accident. The goggles greatly reduce the pilot's sense of depth perception, which

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<sup>26</sup> 2-229th AAR, p. 5.

interferes with the pilot's ability to judge the height and closeness of the ground and surrounding terrain. This caused an abnormally high number of accidents. In spite of the mounting number of problems associated with desert operations, there were still some bright moments experienced during training.

During one training mission, OH-58C Kiowas of the 2-229th Attack Helicopter Battalion discovered a downed UH-60 Black Hawk from the 101st Airborne Division. They summoned aid and provided security so the crew could be safely evacuated.<sup>27</sup>

Its mission completed at FOB Bastogne, the 2-229th moved to FOB Tranquility (a new forward operating base which was named "Tranquility" because the desert terrain reminded the commander of what the surface of the moon must be like).<sup>28</sup> Once at FOB Tranquility, the 2-229th coordinated operations with an Omani infantry battalion. If the Iraqis attacked, the "Flying Tigers" would have performed close air support missions throughout its engagement area. Once American infantry forces arrived, the 2-229th's AH-64 Apaches would work the flanks and take on any mission assigned.<sup>29</sup>

While the battalion was moving from one base to another, training continued. The battalion conducted a joint exercise with the U.S. Air Force, October 16 through October 18. Night, close-air support missions were also part of the training scenario as AH-64 Apaches identified targets for the Gatling guns and Maverick missiles of Air Force aircraft.<sup>30</sup>

In addition to working with U.S. Air Force units, training for the "Flying Tigers" involved working with U.S. Army artillery units. In early December, the 2-229th

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<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

conducted training missions during an artillery combined-arms live-fire exercise with the 1/17th Field Artillery, a self-propelled, 155mm Howitzer battalion.<sup>31</sup>

In January, the 2-229th Attack Helicopter Battalion was recognized by Lieutenant General Gary E. Luck, XVIII Airborne Corps commander, and Major General J. H. Binford Peay, III, 101st Airborne Division commander. The following highlights the outstanding performance of the 2-229th: "From October 16 to November 15, the regiment maintained an operational readiness rate of 94 percent, 'while supporting 975 flying hours during operations in the harsh desert environment.'"<sup>32</sup> Just before the stand down prior to Operation DESERT STORM, the "Flying Tigers" moved yet again—this time to provide defensive assistance for the airfield at Al Qaysumah.

Had the Iraqis attacked, the 2-229th would have flown with a part of the 1st Cavalry Division in support of Saudi Arabian, Kuwaiti, Egyptian, and Syrian forces. The U.S. Central Command was concerned that Iraqi forces might conduct an attack down the Wadi al-Batin before VII Corps could fully deploy.<sup>33</sup>

In early February 1991, the 2-229th was removed from control of the 2nd Brigade, 101st Airborne Division, and moved farther to the west. The "Flying Tigers" flew night reconnaissance missions along the Iraq-Saudi Arabia border. At that time all AH-64 Apache helicopters were operational, even though the battalion had flown hundreds of hours in a harsh desert environment. Only tireless work by the maintenance personnel and civilian contractor support kept the aircraft operational.<sup>34</sup>

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<sup>31</sup> Ibid.

<sup>32</sup> Staff Reports, "Rucker Unit Recognized for Readiness in Desert Operation," *Dothan Eagle* [Dothan, AL] (January 18, 1991): p. 8A.

<sup>33</sup> 2-229th AAR, p. 6.

<sup>34</sup> Ibid., pp. 6-7.

On February 2, the Saudis abandoned their border posts within the 101st Airborne Division's sector. The stage was set for implementation of cross-border combat operations in support of the oncoming Operation DESERT STORM.<sup>35</sup>

From February 17 to February 23, the "Screaming Eagles" (three attack battalions including the "Flying Tigers") conducted day and night reconnaissance operations. The AH-64 Apache is a very useful reconnaissance platform because it has a recording capability. "This system worked out to be an excellent tool because then you could go back...and show the air assault aircraft exactly where they were going, what the route looked like, and what to expect along the way."<sup>36</sup> Missions were normally flown by a group of four AH-64 Apache helicopters. As the aircraft scouted an area, one would go down to check the hardness of the ground and the other three would "fan out" to insure that the one on the ground was not compromised. The aircraft were using a global positioning systems (GPS) to give them the exact coordinates of the positions.<sup>37</sup>

One of the first missions flown by pilots of the 2-229th Attack Helicopter Battalion had an interesting twist as Lieutenant Colonel Bryan related in an interview: "At first [the Iraqis] exhibited no fear at all as they stood there, looking and pointing, and talking amongst themselves... out in clear view...figuring out what [the Apaches] were. It was obvious...that it never dawned on them enemy helicopters were 150 kilometers inside their country. After we had seen what we needed to see...we lobbed a few 2.75" rounds in their direction and they got the message real fast that we weren't friendly."<sup>38</sup>

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<sup>35</sup> Ibid.

<sup>36</sup> CPT Wiggins, interview, p. 11.

<sup>37</sup> Ibid., p. 12.

<sup>38</sup> LTC Bryan, interview, p. 51.

Most of the first missions flown turned up no enemy. However, on February 17, 1991, two Iraqi platoons were located by the 2-229th. Fifty-seven enemy prisoners of war were taken by the battalion and successfully evacuated.<sup>39</sup>

The Apaches of the 101st Airborne Division were used more and more for deep reconnaissance missions. Doctrinally, the AH-64 Apache is a tank killer. But, with its forward looking infrared radar (FLIR) capability and ability to fly both day and night, it proved to be a superior reconnaissance platform in the desert and nearly every AH-64 Apache battalion there drew these types of missions frequently. Some missions were more than 200 miles into Iraq. As part of the reconnaissance plan, the "Flying Tigers" were ordered to fly the routes the 2d Brigade, 101st Airborne Division would take to enter Iraq on G-day. For four days prior to G-day, Company C, 2-229th, executed that mission. For the most part, the missions were routine with no contact—that is until Company B located what was assumed to be a small Iraqi outpost.<sup>40</sup>

The next day, the Iraqis were attacked by the 3-301 (101st Airborne) using rockets and Hellfire missiles. A U.S. Air Force A-10 strike also hit the Iraqi position. When the 3-301 had expended its missile ordnance, the 2-229th Attack Helicopter Battalion replaced them. After several missile and rocket firings struck the position, a psychological operations team from division appeared and requested the Iraqis to surrender. The position was not a small outpost, but a battalion defensive position, and hundreds of Iraqis began appearing from the few visible entrances. A total of 476 Iraqis

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<sup>39</sup> 2-229th AAR, p. 7.

<sup>40</sup> Ibid.

surrendered, including many in civilian clothing.<sup>41</sup> Several days later, an armed reconnaissance mission of the 2-229th yielded another 13 enemy prisoners of war.<sup>42</sup>

On February 2, at 2030, two AH-64 Apache helicopters of the 2-229th acted as escort for three UH-60 Black Hawk helicopters from the 2-17 Cavalry (101st), which were conducting the insertion of a long-range surveillance detachment (LRSD) 135 kilometers into Iraq. This was to be the first successful deep insertion.

The AH-64 Apache's mission was to provide security for the UH-60 Black Hawks, clear the proposed landing zones, and establish security for the proposed forward operating base. During the second insertion, aircraft instruments registered that the helicopters had been acquired by enemy radar at least four times. These locks were broken by use of chaff and aircraft maneuvers.

The next day, the same team flew from FOB Cobra all the way to the Euphrates River to insert several more LRSDs.<sup>43</sup> Up until the beginning of Operation DESERT STORM, personnel of the 2-229th had suffered hardly a scratch. Unfortunately that changed during the first days of the attack into Iraq.

During the first few days of Operation DESERT STORM, the 2-229th Attack Helicopter Battalion did not sustain any serious casualties until the battalion was given a mission to rescue a downed F-16 pilot who was assigned to the 363d Tactical Fighter Wing (TFW). One UH-60 Black Hawk (with a crew of eight volunteers) and two AH-64 Apache helicopters acting as escorts were in the air and on the way in minutes. As the

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<sup>41</sup> Included in that total of Iraqi soldiers was a battalion commander and his staff. Fort Rucker Public Affairs Office, News Release, No. 92/96/ahe.

<sup>42</sup> 2-229th AAR, p. 7.

<sup>43</sup> Fort Rucker Public Affairs Office, News Release, No. 92/96/ahe.



three ships sped toward the beeper signal of the downed pilot, they stumbled into what was thought to be the *Al Faw* Division of the Iraqi Republican Guard.

The anti-aircraft fire was so intense that the UH-60 Black Hawk was shot down immediately and the two escort AH-64 Apaches sustained multiple hits, but managed to return to base. Five of the eight onboard the Black Hawk were killed and the remaining three, including a female flight surgeon and two Pathfinders, were captured.<sup>44</sup>

One other member of the "Flying Tigers" was wounded when he stepped on a multiple rocket launcher system (MLRS) dual purpose improved conventional munitions (DPICM) bomblet on February 28, 1991.<sup>45</sup>

### THE BATTLE OF THE CAUSEWAY

When the allied forces began their attack into Iraq, maneuver forces comprised of the 3d Armored Cavalry Regiment, 24th Infantry Division (Mechanized), 82d Airborne Division, 101st Airborne Division, and the French Dauge Light Division, quickly moved in on the Iraqi flank. The Joint Surveillance and Target Attack Radar System (JSTARS) detected a movement of Iraqi units to the north and west away from the allied sweep and out of Kuwait to apparent safety in Iraq. As Brigadier General Tony Tolin, who was in the tactical control center of the JSTARS on the night of February 25, stated, "It was the

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<sup>44</sup> The three survivors were accorded a hero's welcome on March 14, 1991, when more than 1000 personnel and the CG, MG Ostovich welcomed MAJ Rhonda L. Cornum and SGT Troy A. Dunlap to Fort Rucker. SSG Daniel J. Stamaris was still hospitalized at Walter Reed Hospital. The day before, General Carl Vuono pinned the Purple Heart Medal, Prisoner of War Medal, and National Defense Service Medal on the three. Michael C. Westerfield, "POWs Greeted with Hero's Welcome," *Army Flier* [Fort Rucker, Ala.] (March 21, 1991): p. 1. Also see: Fort Rucker Public Affairs Office, News Release, No. 92/96/abe.

<sup>45</sup> 2-229th AAR, p. 8.

mother of all retreats going north."<sup>46</sup> Because of the deteriorating weather, only F-15E Eagle fighter jets and AH-64 Apache helicopters could deliver attacks against the masses of retreating Iraqis.<sup>47</sup>

When the 24th Infantry Division blocked the enemy's passage over Highway 8, the Iraqis had only one way to retreat—across a causeway that spanned Al Hammar lake. The XVIII Airborne Corps was given responsibility to block the causeway over Al Hammar. Thousands of enemy vehicles, largely from Iraqi Republican Guard divisions, quickly clogged the southern approaches to the causeway.

The V Corps was preparing to turn and move east directly into the fleeing Iraqis, but the closest blocking force, the 24th Infantry, was still three days away from the area. U.S. Army aviation forces would have to do the job of blocking the retreat of Iraqi forces. Only the AH-64 Apache battalions of the XVIII Airborne Corps had the sufficient range and firepower to do the job. As a member of the XVIII Airborne Corps "Apache Club" the 2-229th Attack Helicopter Battalion prepared for a fight.

On the morning of February 27, portions of the 101st Airborne Division moved to FOB Viper, among them air and ground elements of the 2-229th. At that time, the bulk of the VII Corps was 30 miles in front of Task Force VIPER, heading into Iraq. FOB Viper was "an Iraqi airfield, very clandestine...improved dirt strip.... There was nothing permanently stationed there, but it was an alternate recovery field that they had done an extremely good job of selecting."<sup>48</sup> The wheeled elements of the battalion had departed on February 26 to move to FOB Viper ahead of the aircraft to prepare the field for the

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<sup>46</sup> For further information on the development of the Iraqi retreat and the U.S. response to it, see: Douglas Waller and John Barry (principal authors of a special report), "The Day We Stopped the War," *Newsweek* (January 20, 1991): pp. 16-25.

<sup>47</sup> Ibid.

<sup>48</sup> LTC Bryan, interview, p. 2.

battalion when it flew in.<sup>49</sup> The division moved quickly to cut off routes that the Iraqi Army was using to escape from the oncoming allied forces. Lieutenant Colonel Bryan related that on the way to FOB Viper, he flew over numerous Iraqi soldiers eager to give themselves up; at that time, the 2-229th Attack Helicopter Battalion did not have the time to burden themselves with enemy prisoners of war.<sup>50</sup>

Apache battalions, including the "Flying Tigers," and U.S. Air Force units flocked to the scene. Upon the arrival of the 2-229th at FOB Viper, the crews were briefed by Colonel Garrett, commander of the 101st Aviation Brigade.<sup>51</sup> Their mission was to conduct an attack on Iraqi forces northwest of Al Basra.<sup>52</sup> Company commanders quickly briefed their crews so that everyone knew where they would be at the final position, who would be on their left and right, and priority of targets.<sup>53</sup> Friendly vehicles in the area of operations were to have special vehicular markings. For example, "everyone was supposed to have an inverted "V" on the side and orange panels on the top."<sup>54</sup> Visibility on the flight up was generally good but worsened in the target area. "Generally, it was partly cloudy, plenty of sunshine, temperature was pleasant...a fairly good day.... Wind was calm...probably less than 10 knots. However, when we began closing in on the causeway, it was like going into darkness. There were just so many oil

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<sup>49</sup> Ibid., p. 4.

<sup>50</sup> Ibid., p. 7.

<sup>51</sup> Ibid.

<sup>52</sup> CPT Wiggins, interview, p. 16.

<sup>53</sup> Ibid., p. 21.

<sup>54</sup> LTC Bryan, interview, p. 10.

fires burning from the oil wells north of Basra and Kuwait."<sup>55</sup> Even smoke from burning oil wells could not obscure an environment so rich with targets.

Lieutenant Colonel Bryan elected to fight the battle with a team of four AH-64 Apache and three OH-58 Kiowa helicopters, even though there are six Apaches in each company. "Four gives you two teams of two and also gives you the flexibility to bring two down if you have maintenance problems. The other thing that drove that decision to fight a four-bird fleet is that it puts twelve in the fight, leaving six back, assuming the best that they are all up, that leaves one company-sized force in reserve. The last thing you have to remember is that when we started this fight it was like starting to run a marathon, you did not know if it was a mini, a full or an ultra. That was also in the back of my head, to conserve some combat power."<sup>56</sup>

The 2-229th Attack Helicopter Battalion arrived on station near the causeway at 1625 and proceeded to engage the hundreds of Iraqi tracked and wheeled vehicles, most of which appeared abandoned. The flanks and rear of the companies were protected by the battalion's OH-58s. They acted as the "eyes and ears" of the battalion, and kept the crews updated on any threats.<sup>57</sup> Because the FARPs were not all in position, the first company was late reaching their area because of the bottleneck caused by using five FARPs to refuel two attack battalions (plus).<sup>58</sup>

Smoke from burning oil wells created a twilight aspect in the area, causing difficulty in targeting the Hellfire missiles, which must maintain laser lock on the target while in flight. Drifting smoke caused several of the missiles to break laser lock.

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<sup>55</sup> Ibid., p. 21.

<sup>56</sup> Ibid., p. 13.

<sup>57</sup> CPT Wiggins, interview, pp. 14, 23.

<sup>58</sup> LTC Bryan, interview, p. 11.

Another problem was bugs. Since the AH-64 Apache helicopters were flying close to the "deck" and near marshy areas, they ran into considerable insect activity which eventually obscured much of the canopy of the aircraft and accumulated on the seeker heads of the Hellfire missiles. For example, of the Hellfire missiles on Lieutenant Colonel Bryan's AH-64 Apache, only two-thirds of the missiles fired struck the intended target.<sup>59</sup>

As each company expended their ordnance, they left as a group and returned to the FARP to reload. Their place was taken by a freshly rearmed and refueled company allowing the destruction along the causeway to continue. The battalion referred to this part of the battle as "Hammer Time" (in reference to the M.C. Hammer music video) because the battalion was launching everything they had at the enemy. The "Flying Tigers" destroyed more than 80 vehicles against little opposition.<sup>60</sup> Company C attacked the target first, followed by Company B. Company A did not get into the fight as it was assigned search and rescue missions.<sup>61</sup>

When the first company of the "Flying Tigers" arrived on station, some AAA was encountered. Lieutenant Colonel Bryan remarked: "This SA-6 strobes and then locks on to us...he was only about 600 to 700 meters in front of us. Captain Wiggins... shot him with a 30mm.... We are still not sure if he actually launched or [CPT Wiggins'] engagement caused the launch, but anyway an SA-6 came off the rail...and landed in front of us. So we continued to hose him down, but his radars were still active so we finished him off with 30mm."<sup>62</sup>

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<sup>59</sup> Ibid., pp. 20, 33.

<sup>60</sup> 2-229th AAR, p. 8. For a first-hand account of the action from the perspective of an AH-64 gunner, see: CPT Wiggins, interview, p. 16.

<sup>61</sup> Ibid., pp. 24, 26, 34-36.

<sup>62</sup> LTC Bryan, interview, p. 23.

One of the reasons for the superior performance of the battalion during combat operations was because by the time of the Basra battle, the battalion had become, in the words of one veteran crewman of the fight, a "honed working machine, and you can basically tell what people are going to do at the time because of the team work that is associated.... Once you get to that point where you are in a battle position, then it is a team thing as far as the aircraft are concerned."<sup>63</sup>

Lieutenant Colonel Bryan was right on the line with the rest of his Apaches. He flew as the "front seater" in the 19th aircraft of the battalion, a "float" aircraft lent to the battalion by XVIII Airborne Corps. Lieutenant Colonel Bryan felt strongly that the Apache was the natural command platform for an AH-64 commander. "The only place in my view that a commander could effectively fight his battalion was up there in an AH-64 Apache."<sup>64</sup> No other helicopter has the speed and the target acquisition capability of the Apache, and the commander needs both. The "Flying Tigers" helped to block one of the few escape routes for the Iraqi Army. With one end of the causeway blocked, XVIII Airborne Corps could now move in more attack helicopter battalions to destroy Iraqi traffic that had not already crossed to the north."

The 2-229th Attack Helicopter Battalion sustained only minimal damage to two AH-64 aircraft.<sup>65</sup> During the action, the 2-229th found that "...Mark 66, multi-purpose sub-munitions, were extremely accurate [compared to] the Mark 40 rockets. Those rockets, the Mark 66, were very accurate almost to be a point weapons system. Because of the burning oil, it was hard to see through the obscurance and the smoke to get a solid constraints box, and the Hellfire [missiles] were a very accurate and very devastating

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<sup>63</sup> CPT Wiggins, interview, p. 22.

<sup>64</sup> LTC Bryan, interview, p. 16.

<sup>65</sup> Ibid., p. 40.

weapons system on the targets that we were employing them against."<sup>66</sup> Lieutenant Colonel Bryan attempted to go "light" on the 30mm ammunition as a conservation measure, even though the 30mm was often the weapon of choice to engage soft targets. Also, the battalion had only 600 rounds of 2.75" Hydra-seventy DPICM. Conservation was important because as Lieutenant Colonel Bryan noted, "...we had very good luck with 30mm and with Hydra-seventy DPICM on soft- and thin-skinned targets."<sup>67</sup>

While engaged in destroying large parts of the Iraqi armor on the causeway, the crews of the "Flying Tigers" were treated to the spectacle of Iraqi soldiers waving white flags on one side of the road while they were taking fire from the other side.<sup>68</sup> One Apache gunner aptly described it as a "weird situation."<sup>69</sup> In the marshy area along the causeway, Iraqi soldiers were seen "low-crawling" in the mud, and also swimming in the river to get out of the area.

During the battle of the causeway, the AH-64 Apache units were the only U.S. Army aviation forces in the area. Ground units were nearly 75 kilometers to the rear. The causeway battle was one of the first major helicopter battles of history. In an interview, Lieutenant Colonel Bryan stated, "This was purely a helicopter fight. First of all, the U.S. Air Force had nothing they could fly and fight in 300-meter visibility, and there was no other piece of equipment that can fly that distance that fast.... So this was clearly a classic, armed-helicopter mission especially with the FLIR system...."<sup>70</sup> Had the Apaches not been available, much of the Iraqi Army would have probably made

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<sup>66</sup> CPT Wiggins, interview, p. 12.

<sup>67</sup> LTC Bryan, interview, p. 27.

<sup>68</sup> Ibid.

<sup>69</sup> CPT Wiggins, interview, p. 19.

<sup>70</sup> LTC Bryan, interview, p. 29.

it across the causeway to safety. It would be three days before significant U.S. forces reached the area, as the 24th Infantry Division did not arrive until March 2, 1991.<sup>71</sup>

On March 10, 1991, a memorial service was held for the five crew members lost in the UH-60 Black Hawk crash. Just two days later, along the Euphrates River, the battalion flew its last mission in support of the 3d Brigade, 101st Airborne Division.<sup>72</sup>

Because of the fear Iraqi troops had for Apaches, the 2-229th Attack Helicopter Battalion flew several days of reconnaissance missions along the Euphrates as a show of force—a mission that would not have been envisioned for the AH-64 prior to Operation DESERT STORM. The last support mission was flown on March 24, 1991.<sup>73</sup>

During combat operations, a number of friendly personnel were accidentally killed or wounded by their own. For their part, the 2-229th went to extraordinary measures to insure that only enemy targets were engaged. In an interview, a company commander of the 2-229th noted that "...it takes visual recognition and actual confirmation to make sure what the target is before you launch to reduce fratricide because you have hot vehicles. [The AH-64 Apache has] FLIR system. It picked up heat if you were under FLIR. We were under FLIR at that time but...using the FLIR system I could pick up the targets. It is a problem because a hot truck looks like a hot truck...; before you launch anything, if you have 'friendlies' in the area, you do not launch that missile [unless you have confirmation that it is the enemy]. That's just the rule of the road."<sup>74</sup>

After receiving a well-deserved order to "stand down," the advance party of the "Flying Tigers" departed for the United States on April 8, 1991, and arrived the next day

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<sup>71</sup> Ibid., p. 38.

<sup>72</sup> 2-229th AAR, p. 9.

<sup>73</sup> Ibid.

<sup>74</sup> CPT Wiggins, interview, p. 15.



at Pope Air Force Base. The main body of personnel departed just five days later for Lawson Army Air Field in Georgia. A welcome ceremony at Fort Rucker began at 1700 the same day, with the commanding general and other dignitaries in attendance. The 2-229th had returned home having met the enemy in battle and emerged with high honor.<sup>75</sup>

In June 1991, the 2-229th held a victory picnic to celebrate their homecoming to Ft. Rucker and the total team victory together. Referring to the 2-229th performance during the Persian Gulf war, Lieutenant Colonel Bryan remarked with justifiable pride, "I think the record speaks for itself. This battalion flew almost 3000 Apache hours and maintained an operational readiness rate in excess of 90 percent. Had it not been for the efforts of these soldiers and the support of the Fort Rucker community, we could never have done it."<sup>76</sup>

On May 29, 1992, the 2-229th Attack Helicopter Battalion was the first unit from Fort Rucker to be awarded its battle streamer. The streamer labeled "DESERT STORM" will be proudly borne on the colors of the battalion from now on. The "Flying Tigers" were also awarded the Valorous Unit Award for gallantry in action during Operation DESERT STORM (this award is the unit equivalent to the Silver Star). It was presented to the battalion by Lieutenant General Gary E. Luck, XVIII Airborne Corps commander, in a ceremony at Fort Rucker.

Although not in direct combat as was the 2-229th, the 256th Signal Support Company performed its vital work in support of Operations DESERT SHIELD and

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<sup>75</sup> 2-229th AAR, p. 13.

<sup>76</sup> Michael R. Pandol, "Flying Tigers get 'Organized'," *Army Flier* [Fort Rucker, Ala.] (June 27, 1991): p. 3A.

DESERT STORM with equal dedication. Any aircraft that flew did so in safety thanks to the 256th Signal Support Company.

### The 256th Signal Support Company

At the time of Operation DESERT SHIELD, the 256th Signal Support Company was a separate company with a strength of 26 soldiers under the direction of Joint Staff Operations, Aviation Branch, U.S. Army Forces Command. Its mission at the time was to provide direct and general support and limited depot maintenance for the U.S. Army's Tactical Air Traffic Control System.<sup>77</sup>

The 256th left the United States on September 18, 1990, and upon arrival in Southwest Asia faced two basic missions: 1) to complete its coordination with Company I, 159th Aviation Battalion for support; and 2) to reacquire its vehicles and equipment. The company also had to become acclimatized to the environment, and company leaders made every effort to insure that each soldier consumed at least six liters of water each day.<sup>78</sup>

Because of its critical importance, the 256th Signal Company was allowed to use a civilian delivery firm by the name of DHL to ship critical parts to Southwest Asia (DHL provided services similar to Federal Express or United Parcel Service). This service was immediately put into operation, but it took time to develop a system that delivered critical parts in the shortest time.<sup>79</sup>

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<sup>77</sup> David A. Anderson (AFFR-SSC), memo, subj: Unit Accomplishments, (April 25, 1991), Appendix A "Operational Highlights," 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>78</sup> David A. Anderson (AFFR-SSC), memo, subj: After Action Report "Operation Desert Shield," (October 5, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>79</sup> David A. Anderson (AFFR-SSC), memo for CW2 Hays and Mr. Register, subj: High Priority Movement of Repair Parts, (September 27, 1990), 256th Signal Support  
(continued...)

A schedule to visit all the air traffic control (ATC) sites in Southwest Asia was immediately set up when the vans and equipment of the company arrived. This was a difficult order as most sites were 1000 or more miles apart. The remoteness and distance between sites greatly hampered initial repair efforts.<sup>80</sup>

October 8 was a significant day for the 256th Signal Support Company because the unit received its 2.5-ton truck and, more importantly, the generator it towed. This generator immediately supplied needed power for the 256th's shop vans.<sup>81</sup> With a much needed addition to its available electrical power, the 256th could begin repair work in earnest. Much of the early work concentrated on beacons and flight coordination centers (TSC-61 vans). A memorandum written by the 256th's commander, Captain Anderson, noted that "the equipment is holding up well considering the conditions."<sup>82</sup>

One of the few, constant problems for the company was the unreliability of air-conditioners to cool shop vans. Without cooling, the vans rapidly became intolerable places in which to work. The air conditioners that deployed with the company were obsolete and underpowered to keep the vans cool in the high heat of Saudi Arabia.

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<sup>79</sup>(...continued)

Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>80</sup> David A. Anderson (AFFR-SSC), memo for CW2 Hays, subj: Weekly Update, (October 10, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>81</sup> David A. Anderson, letter to CW2 Hayes, (October 8, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>82</sup> David A. Anderson (AFFR-SSC), memo for LTC Carmichael, subj: Command Channels, (October 1, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

In an effort to aid the overworked air conditioning units, parachutes were used to shade the vans.<sup>83</sup>

At the end of October, the 256th Signal Support Company sent a mobile maintenance contact team to support the 2-58th Air Traffic Control Battalion. The TSC-61B (flight coordination center) which allowed the 2-58th to control air traffic for the 1st Cavalry Division was off the air.<sup>84</sup>

The 256th had received a total of 56 work orders by November 1, of which 36 had been completed.<sup>85</sup> In early November, two mobile maintenance contact teams were deployed to Thadj and King Fahd airfields because the ATC radars at both locations were experiencing problems.<sup>86</sup> The number of work orders totalled 98 by the end of November 1990.<sup>87</sup>

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<sup>83</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Weekly Update, (October 15, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>84</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, October 19-26, 1990, (October 26, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>85</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, October 26 - November 1, 1990, (November 1, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker.

<sup>86</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, November 1-8, 1990, (November 8, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker.

<sup>87</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, November 22-28, 1990, (November 29, 1990), 256th Signal Support Company folder,  
(continued...)

As the company commander, Captain Anderson looked for new ways to rapidly get equipment and needed parts; consequently, he coordinated an agreement with the Area Maintenance Support Facility, Europe. This organization was responsible for repairing ATC equipment, in addition to other numerous duties. Manned largely by British technicians, the facility was to be one of those the 256th Signal Support Company used for quick return time of ATC-peculiar items that could not be repaired on-site.<sup>88</sup>

In addition to this constant quest for better ways and means to obtain parts and give assistance, Captain Anderson did not neglect his soldiers. To give the soldiers an understanding of Saudi Arabia and its culture, he arranged for two Saudi professors from King Fahd University to brief the company. For nearly two hours, they spoke and answered questions on Saudi history and culture.<sup>89</sup>

In the history of ATC operations, there had never been so much distance between ATC operations than during Operations DESERT SHIELD and DESERT STORM. Because of these great distances, the 256th received authorization to begin installation of the VRC-86 high frequency radio in the AN/TSC-61B flight coordination centers.<sup>90</sup>

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<sup>87</sup>(...continued)

DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker.

<sup>88</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, November 8-15, 1990, (November 15, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>89</sup> Ibid.

<sup>90</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, November 28 - December 6, 1990, (December 6, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

Communication difficulties of another sort were also experienced. The Saudi telephone system was heavily used by personnel of the 256th for all sorts of coordination; however, a telephone line could not be dedicated solely for their use. The company commander attempted for days to acquire a line, because the company could then make calls not only to Europe or elsewhere but also back to the home station.<sup>91</sup>

During December, the 256th Signal Support Company completed the task of installing the VRC-86 radios in air traffic control centers. An additional five conversion kits were needed to modify VRC-86 radios coming from Europe. By mid-December, a total of 118 work orders had been processed by the company.<sup>92</sup>

When VII Corps arrived in Southwest Asia, this involved an increased workload for the 256th. The company checked VII Corps' ATC equipment before it went to the field.<sup>93</sup> By late December, the company had processed a total of 143 work orders and completed 109 of them.<sup>94</sup>

During the course of Operations DESERT SHIELD and DESERT STORM, the company dispatched a total of 44 mobile maintenance contact teams around the country

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<sup>91</sup> Ibid.

<sup>92</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, December 6-13, 1990, (December 13, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>93</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, December 13-20, 1990, (December 20, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>94</sup> David A. Anderson, (AFFR-SSC), memo for CW2 Hays, subj: Mission Highlights, December 20-27, 1990, (December 27, 1990), 256th Signal Support Company folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

and, in the process, travelled thousands of miles. The two-person supply section processed a total of 2063 requisitions, and the company completed 260 high-priority work orders.<sup>95</sup>

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<sup>95</sup> David A. Anderson, (AFFR-SSC), memo, subj: Unit Accomplishments, (April 25, 1991), 256th Signal Support Company folder: DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.



### **The 46th Engineer Battalion**

At the time of Operation DESERT SHIELD the 46th Engineer Battalion, commanded by Lieutenant Colonel William F. Reyers, was a combat-heavy engineer battalion assigned to Fort Rucker.<sup>96</sup> Although the battalion was versatile in the type of mission it could perform, its heavy equipment was not easily transported. Since the 46th's normal mobilization mission was to move to Europe, much of the battalion's necessary heavy equipment was pre-positioned overseas. On REFORGER (return of forces to Germany) exercises, the unit supported the 18th Engineer Brigade.<sup>97</sup> Only about 60 percent of the battalion's equipment could be moved by organic assets. As the battalion prepared to depart, a large number of tractor-trailers had to be contracted for in order to move the remaining 40 percent of the 46th Engineer's equipment. Much of the equipment consisted of cranes, most of which were wheeled, but the 46th had a crawler tractor that was also a crane. In addition to this particularly large crane, there were considerable attachments and accessories. Some equipment took one or two flat-bed trailers merely to move the parts. In moving the unit to port 80 to 90 civilian tractor-trailers were contracted for, many involving oversized loads.<sup>98</sup>

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<sup>96</sup> The battalion was allowed 90 percent of what is on the authorization document. The "go-to-war" strength of the battalion would be 700, but the battalion was authorized 634. At the time of alert, the battalion stood at 534 personnel, or roughly 100 short of authorized strength. One of the battalion's companies (Company C) was not at Fort Rucker, but at Fort McClellan; however, the company did deploy to Saudi Arabia along with its parent unit. See: CPT Berczek, S-1, 46th Engineer Battalion, transcript of an oral interview conducted May 30, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

<sup>97</sup> *Ibid.*, p. 5.

<sup>98</sup> *Ibid.*, p. 9. See also: Kitchens and Wright, USAAVNC 1990 Annual Historical Review, p. 159.

The 46th Engineer Battalion was alerted for movement on August 17, with an initial in-country date of September 5, 1990.<sup>99</sup> Several personnel from the construction section were immediately dispatched to Fort Bragg and then to Saudi Arabia to act as liaison for the battalion's arrival.<sup>100</sup> Because of delays in shipping, the report date was moved to October 20.<sup>101</sup>

Before the 46th Engineers departed, the battalion had to complete a series of construction projects begun before the alert order. One project was completed just four days before deployment.<sup>102</sup>

Captain Berczek, the battalion's adjutant, immediately contacted the adjutant general and other personnel for the preparation for overseas movement (POM) process, and the battalion's FOM site was set up in the recreation center across the street.<sup>103</sup> Each of the battalion's soldiers was processed to insure that all records, wills, powers of attorney, and pay and allotments were completed. Medical screening checks were performed to certify that all personnel were fit for deployment to Saudi Arabia. Of the 650 personnel in the 46th Engineers, only 34 failed to qualify.<sup>104</sup> By the end of

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<sup>99</sup> CPT Berczek, interview, p. 1.

<sup>100</sup> Ibid.

<sup>101</sup> LT Owens (AFFR-BEB-S3C), 46th Engineer Battalion Annual Historical Report, (February 8, 1992), 46th Engineer folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 2. (Hereafter referred to as 46th AHR.)

<sup>102</sup> Ibid.

<sup>103</sup> CPT Berczek, interview, p. 2.

<sup>104</sup> 46th AHR.

September, all the necessary administrative preparations had been completed.<sup>105</sup> Prior to movement, the battalion received equipment sustainment training from Fort Rucker's Army Materiel Command (AMC) Logistic Assistance Office. This training was to be of considerable importance to the battalion when they began construction in Saudi Arabia.<sup>106</sup>

During its preparation for movement, the 46th made a concerted effort to insure that its primary load list was overstrength. This was a costly safeguard as the battalion's after action report noted that over one million dollars of force modernization funds were spent by the battalion during this period.<sup>107</sup> Unit personnel did some research to determine what parts would be most needed when the unit arrived in Saudi Arabia. These parts were obtained and shipped along with other equipment of the battalion. The passage of time demonstrated this to have been a most fortunate move. The large inventory of spare parts used by the battalion not only made possible the repair of its own equipment, but also the equipment of other battalions who did not have the foresight of the 46th Engineer Battalion.<sup>108</sup>

Shortages of equipment could sometimes be dealt with in one way or another, but not shortages in personnel. The most significant shortage in the battalion was in the military occupational specialty (MOS) of 51B (carpenter). Since the shortage in this

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<sup>105</sup> CPT Berczek, interview, p. 3.

<sup>106</sup> AMC Logistic Assistance Office (AMXLA-C-E-RU), memo for USAAVNC Historian, subj: AMC Logistic Assistance Office Historical Report 1990, (January 10, 1991), AMC Logistic Office folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>107</sup> 46th AHR.

<sup>108</sup> LTC Reyers, commander, 46th Engineer Battalion, transcript of an oral interview conducted June 1, 1992, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 24. See also: 46th AHR.

MOS was Army-wide, the 46th Engineer Battalion was not able to obtain help. There was also a critical shortage in the MOS of 51G (soil analyst). Since one of the major missions of the 46th was road building (and a mission they would frequently perform in Southwest Asia), the lack of a full complement in the MOS of 51G was very critical. Only one was assigned, and this greatly limited the type of surveyor work that the battalion could do before beginning work on roads. No relief could be provided from Fort Rucker units, since that specialty is unique to engineer units.<sup>109</sup>

The unit received one nuclear, biological, and chemical (NBC) specialist from Fort Rucker assets, as well as personnel to augment shortages in medical specialties. The battalion remained stable when the Department of the Army canceled permanent change of station orders for 25 to 30 of the unit's personnel who had been slated for transfer. These personnel would now remain with the 46th and deploy with the battalion to Southwest Asia. No individual ready reservists had been assigned to the battalion prior to their arrival in Southwest Asia.<sup>110</sup>

Intelligence reports indicated that the Iraqi Army possessed significant chemical weapons capability. The 46th Engineers placed special emphasis on NBC threats in their preparations for movement. The battalion's after action report read, "Everyone's protective mask was inspected and tested in a gas chamber to ensure its serviceability. Each soldier was issued new filters for their mask, two new chemical protective overgarments, decontamination kits, and nerve agent antidotes."<sup>111</sup>

On September 26, 1990, the battalion's vehicles were driven to the port in Jacksonville, Florida. Heavy equipment was transported by tractor-trailers at that time.

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<sup>109</sup> CPT Berczek, interview, p. 5.

<sup>110</sup> Ibid.

<sup>111</sup> 46th AHR.

The last ship loaded with battalion equipment left on October 13. "The battalion engineer equipment maintenance officer, Captain Malcolm E. Earles, organized teams of mechanics to travel on the ships with equipment." A majority of the units that mobilized through Fort Rucker and that had equipment shipped by sea routinely sent small groups of personnel to maintain the equipment during the sea voyage.<sup>112</sup>

An advance party lead by Major Foxx departed Fort Rucker on October 15, for assignment to work with the XVIII Airborne Corps construction office. In the words of the adjutant, the construction office had "[lined] up projects for us.... We had a bird's eye view of what was expected of us and what to expect of the area, too."<sup>113</sup> The remainder of the unit followed on October 20 and October 21.<sup>114</sup> The entire 46th Engineer Battalion finally assembled in Saudi Arabia on October 22, 1990.<sup>115</sup>

Upon arrival in Saudi Arabia, the 46th was assigned to the 20th Engineer Brigade (Airborne) and was the sixth engineer battalion and first heavy construction battalion to arrive in-country.<sup>116</sup> Between November 3 and November 5, the battalion's equipment began arriving, with the balance coming during the rest of the month. To take up the equipment slack, civilian equipment was contracted for and used for the first missions until the unit's equipment arrived.<sup>117</sup>

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<sup>112</sup> Ibid.

<sup>113</sup> Ibid.

<sup>114</sup> Ibid.

<sup>115</sup> CPT Berczek, interview, p. 7.

<sup>116</sup> 46th AHR. The 20th Engineer Brigade was an airborne unit. Its largest piece of engineering equipment weighed only 10 tons. The 46th had dozers weighing 33 tons, and road scrapers weighing 64 tons. See: CPT Berczek, interview, p. 8.

<sup>117</sup> CPT Berczek, interview, p. 12.

The 46th Engineer Battalion was ready for work upon arrival in Southwest Asia. Since the weather had been warm in Alabama, the need for acclimatization was greatly reduced, and the battalion had no heat-related injuries.<sup>118</sup>

On October 23, 1990, Company B received directions to build a theater ammunition supply point at King Fahd International Airport. The project called for building 50 ammunition holding pads (each 400' x 400') with 15 miles of road network to access the supply point. As the 46th Engineer's after action report reads, "This mission was critical to theater logistics; in the event of an initiation of hostilities there was no immediate area to stockpile the ammunition that was sitting on ships at the Daman and Dhahran ports."<sup>119</sup>

The other companies of the 46th were given general construction missions ranging from repairing poor shower drainage to building motor pools to constructing roads. Company A was moved 110 miles west to build heliports for the 1st Cavalry Division.<sup>120</sup>

Company B spent a good amount of its time erecting clamshells on King Fahd International Airport. Company C worked on the construction of a K-span building at King Abdul Aziz Air Base.<sup>121</sup> "The K-span building was a unique building concept, fairly new to the region. It consisted of processing sheet metal strips through a forming

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<sup>118</sup> Ibid., p. 14.

<sup>119</sup> 46th AHR, p. 9.

<sup>120</sup> Ibid., p. 10.

<sup>121</sup> This particular K-span building was to be used for postal operations. See: CPT Berczek, interview, p. 15.

machine, which grooved, seamed, and molded the steel so that long strips could be spot-welded together and erected in sections with a crane."<sup>122</sup>

After spending nearly two months at a fixed base, the 46th Engineer Battalion moved to King Khalid Military City (KKMC) to support the XVIII Airborne Corps displacement. This was a short-range move of only 400 miles to the northwest.<sup>123</sup>

Upon arrival in the KKMC area, the battalion was attached to the 265th Engineer Group. It was given the mission of constructing a main supply route (MSR) named "Yellow" (a total length of 35 kilometers) leading to Tapline Road and LOG Base Charlie (a logistical base).

While waiting to begin the road building mission, the battalion performed a number of smaller engineering jobs for units in the area of KKMC to include helipads, access roads, force protection mission, and ammunition holding areas.<sup>124</sup>

As the battalion worked on MSR Yellow and completed smaller construction projects, the air war against Iraq began. The onset of hostilities changed the battalion's situation. Scud missile alerts became nightly problems, and unit members suddenly realized that they could soon be in a shooting war. "Each mission and project took on added urgency and significance."<sup>125</sup>

On January 23, 1991, the battalion was notified that they would be moving to a position along Tapline Road. On January 25, 1991, the 46th Engineer Battalion assembled 85 miles northwest at TAA Willow, a tactical assembly area.<sup>126</sup>

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<sup>122</sup> 46th AHR, p. 14.

<sup>123</sup> Ibid., p. 15.

<sup>124</sup> Ibid., p. 18.

<sup>125</sup> Ibid., p. 20.

<sup>126</sup> Ibid., p. 21.

An important element of the battalion which provided critical parts was local purchase teams. Since much of the 46th's engineering equipment comes from civilian manufacturers, the local purchase teams were sent out and they bought everything needed "from feminine hygiene products to spare tires to dozer parts."<sup>127</sup> The success of these local purchase teams was summed up by the battalion's after action report. "Only by purchasing needed parts from local distributors could a unit such as ours remain mission capable in-country."<sup>128</sup>

While at TAA Willow, the battalion engaged in the type of engineer work they do exceptionally well—road building. Roads ranging in length from 12 to 17 kilometers were built for the 24th Infantry Division. Construction of these roadways was completed between January 28 and February 3.<sup>129</sup> The battalion built between 260 and 300 miles of roads while in Saudi Arabia.<sup>130</sup>

One interesting mission performed by a platoon of Company C was the construction of a mobile post exchange (PX) for the battalion. The battalion's after action report read, "The PX was built inside a civilian van, thus giving it mobility.... The PX was completed in early February and was stocked with sundries, stationery, tobacco, soda and junk food. The availability of these luxuries was a great morale boost.... Word of the 46th's PX quickly spread to surrounding units, and within a few days they were lining up...waiting for their opportunity to shop in the mini-exchange."<sup>131</sup>

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<sup>127</sup> Ibid., p. 22.

<sup>128</sup> Ibid.

<sup>129</sup> Ibid., p. 23.

<sup>130</sup> CPT Berczek, interview, p. 17.

<sup>131</sup> 46th AHR, p. 25.



As G-day approached, training in weapons and tactics intensified. "Individual and crew-served weapons were checked and test fired. Extensive training was conducted on the new anti-tank weapon, the AT-4. Training in NBC refresher classes, as well as practicing company decontamination, [were] emphasized because of the strong possibility of Iraq utilizing its chemical and biological weapons."<sup>132</sup>

During the ground war, the battalion would be performing an important engineering function. The mission "primarily consisted of horizontal work, relying on the earth movers to rapidly construct the corps' main supply route, MSR X-ray, and to support the maneuver units to our front."<sup>133</sup>

On February 22, the 46th Engineer Battalion learned that G-day would be at 0400, February 24, 1991. Lieutenant Colonel Reyers ordered the battalion to prepare for combat. "The battalion significantly lightened its loads in preparation for crossing the [line of departure]. All nonessential items were stored with the trains.... The battalion was 100 percent mobile...and moved to a tactical holding area 12 miles south of the Iraqi border. The battalion convoyed to its position on February 23 and established a tight triangular battalion perimeter for [the] brief stay."<sup>134</sup>

During its stay in the holding area, the battalion prepared for its entrance into combat at G plus 1. "Loads were resecured, checked, and double-checked. During that afternoon [February 23, 1991], Lieutenant Colonel Reyers and Chaplain Perry briefed each company on what they might see or encounter the next day. The battalion put on

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<sup>132</sup> Ibid., p. 26.

<sup>133</sup> Ibid.

<sup>134</sup> Ibid., p. 28.

fresh chemical protective overgarments and went to MOPP [mission-oriented protective posture] level 2, pending the offensive."<sup>135</sup>

The movement into Iraq was generally uneventful except that one of the ammunition containers burst open and scattered munitions in the road. Fortunately, the rear elements of the battalion gathered up the ordnance as they passed.<sup>136</sup>

After moving into Iraq, the 46th Engineer Battalion quickly proceeded to its segment of MSR X-ray to begin construction of the center 60 kilometers of the main supply route. All three companies quickly set to work with road graders to prepare the surface. Company C began construction of the southern section of the route.

As the battalion labored to complete its section of the main supply route, the rains came. In some places roads were turned into mud as deep as three feet. When the main supply route portion was finally completed, Company C "marked the final location of the main supply route. Painted pickets were placed every 500 meters and signs and flashing lights were placed at 1000-meter intervals."<sup>137</sup>

Companies A and B received orders at 1300, February 27, to move to a follow-on mission 93 miles northwest to construct MSR Utah. This main supply route "would enable rapid support and reinforcement for maneuver units as they tightened the flanking movement on Iraqi units."<sup>138</sup>

By March 2, Company B completed two trafficable lanes and their portion was the first finished. The rest of the main supply route contained some steep hills and rolling sand dunes which made road construction particularly difficult. In order to

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<sup>135</sup> Ibid., p. 30.

<sup>136</sup> Ibid., p. 32.

<sup>137</sup> Ibid., p. 35.

<sup>138</sup> Ibid., p. 38.

complete the work on MSR Utah, Company C had to employ "two water distributors, six 20-ton dump [trucks], and a 5-yard bucket loader...."<sup>139</sup>

Although they had not finished their section of MSR Utah, Company C was sent back south to MSR X-ray. The heavy rains that followed the sand storm of March 5 pounded MSR X-ray until it was nearly impassable. A portion of Company B was sent to MSR Virginia to repair damage while the rest remained at MSR Colorado. On March 8, the 46th Engineer Battalion suffered its only injuries of the war.<sup>140</sup> "Sergeant Balue, from Company B's maintenance platoon, stepped on an Iraqi cluster bomb along MSR Virginia. Both he and SGT Sarafin, also of the maintenance platoon, were injured. They were [transported by a medical evacuation aircraft] shortly after 1700."<sup>141</sup>

Water in the desert was a scarce commodity. Most believe water is used for drinking, vehicles, and limited personal hygiene. To engineers, however, water has another and equally important purpose: it is used to create marl, which regenerates roads that have been pounded dry by constant traffic. In working on MSR X-ray, Company C faced a critical shortage of water. The battalion discovered a nearby well and got the well's pump system operating. The battalion's 6000-gallon water distributors were filled, but it rapidly became obvious that one source of water would not be enough. Another well was located and, by March 17, it was in operation giving the battalion two sources of water for road work. The crisis had eased, but had not ended.<sup>142</sup>

As the war finished, Company C was moved to the port of Al Jubayl with the mission "to construct a series of vehicle staging areas where units could clean their

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<sup>139</sup> Ibid., p. 40.

<sup>140</sup> Ibid., p. 42.

<sup>141</sup> Ibid., p. 43.

<sup>142</sup> Ibid., p. 44.

equipment prior to being loaded on ships. The rest of the battalion was still engaged in engineer operations in Iraq. The last units of the 46th Engineer Battalion left Iraq on March 23, 1991. This was the time for all XVIII Airborne Corps units to be out of Iraq."<sup>143</sup>

Before returning, the battalion faced a mammoth job—to do a complete inventory of equipment and clean everything before the unit could be shipped home. "Complete inventories were conducted to identify all equipment that was lost during combat through the desert. Then every tool, shovel, and spare part was scrubbed.... Using anything available...fire hoses borrowed from the fire fighters...decontamination equipment, and everything else that they could beg, borrow, or acquire...the platoons cleaned their vehicles. All elements of the battalion worked around the clock, preparing for redeployment."<sup>144</sup>

The battalion returned to the United States on April 14, 1991. The weeks following the homecoming provided the unit with a time to both celebrate and reflect on their excellent performance in Saudi Arabia. On August 17, 1991, the 46th Engineer Battalion gathered to celebrate with a victory picnic and organization day. The unit had much to be thankful for and to be proud of during Operation DESERT STORM. Lieutenant Colonel Reyers commented in the *Army Flier* that "some 60 Bronze Stars, 300 Army Commendation Medals, and 300 Army Achievement Medals [would be]

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<sup>143</sup> Ibid., pp. 46-47.

<sup>144</sup> Ibid., pp. 49-50. Units who did not prepare their equipment for movement were pulled from rotation.

awarded to the men and women of the 46th."<sup>145</sup> A fitting conclusion to outstanding performance.

Mobilizing and deploying the 2-229th Attack Helicopter Battalion, the 256th Signal Support Company, and the 46th Engineer Battalion was a team effort by those at Fort Rucker. In a memorandum dated August 16, 1990, Major General Rudolph Ostovich III wrote, "The long hours and hard work have paid off because these units are deploying from Fort Rucker 100 percent mission capable and prepared to successfully accomplish their missions. Your efforts and performance are unequalled throughout the entire Army and are greatly appreciated by our deploying soldiers."<sup>146</sup>

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<sup>145</sup> Kathy Morrow, "46th Engineers Enjoy Victory Picnic," *Army Flier* [Fort Rucker, Ala.] (June 13, 1991): p. 3A. These medals were awarded to members of the 46th Engineer Battalion in the fall of 1991.

<sup>146</sup> MG Ostovich (ATZQ-CG), memo for See Distribution, subj: Fort Rucker Support for Deploying Forces, (August 16, 1990), Commanding General's folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

## **CHAPTER THREE**

### **THE TRAINERS**

**"It helps the guy when he rolls in after driving across two states, and he needs to know where Building 4506 is and where his billet is located. Someone can show him and have keys for his room—that kind of thing."<sup>1</sup>**

**Lieutenant Colonel Bert L. Lennon,  
1/10th Aviation Regiment  
Commander**

#### **The 1st Aviation Brigade**

When reserve units arrived at the front gate of Fort Rucker after a long and sometimes tiring drive, someone had to be there to welcome them, to give directions, and assist in their settling in on post. This was accomplished effectively and efficiently by units of the 1st Aviation Brigade. Their hard work and dedication in no small way assisted in the smooth transition of U.S. Army Reserve and National Guard units to active status and deployment.

The mobilization process as executed by the 1st Aviation Brigade was divided into three phases. Phase I consisted of five events: inspection of weapons, vehicles and communications equipment; processing for overseas movement; NBC training; personal and crew-served weapons firing; and mandatory information briefings. Units were validated for deployment upon completion of Phase I and when all the logistical

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<sup>1</sup> LTC Lennon, commander, 1/10th Aviation Regiment, transcript of an oral interview conducted February 4, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 8.

requirements were met.<sup>2</sup> Phase II consisted of unit and collective leadership training. Phase III involved special types of training peculiar to conditions in Southwest Asia.<sup>3</sup>

In fulfilling its mission, the 1st Aviation Brigade was the command and control element for more than 25 mobilized National Guard and U.S. Army Reserve units totalling more than 2500 personnel.<sup>4</sup>

Although the 1st Aviation Brigade originally had ample personnel assigned to it, the 2-229th Attack Helicopter Battalion and the 46th Engineer Battalion had already departed for Saudi Arabia, thereby depriving the brigade of nearly 800 personnel. Enough soldiers remained, however, to insure that the mission of helping to mobilize U.S. Army Reserve and National Guard personnel, plus doing everyday work, was accomplished. With the 2500 reserve personnel added to the 1st Aviation Brigade, the total number of personnel assigned to the brigade reached 7504 during Operations DESERT SHIELD and DESERT STORM.<sup>5</sup>

The units within the 1st Aviation Brigade that shared the "nuts and bolts" work of handling reservists and guardsmen were Headquarters and Headquarters Company (HHC), and companies A and B, 1st Battalion, 10th Aviation Regiment (1/10th). They were responsible for the Uniform Code of Military Justice actions, rations, and administration of the 2500 reserve personnel assigned to the 1st Aviation Brigade.

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<sup>2</sup> CPT Baker (ATZQ-BDE-T), memo for EOC, subj: After Action Report Operation Desert Shield/Storm - Phase I, August 9, 1990 - February 28, 1991, (May 13, 1991), 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>3</sup> Ibid.

<sup>4</sup> 1st Aviation Brigade, 1990 Historical Report, 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>5</sup> Ibid.

Headquarters and Headquarters Company, 1/10th, was also responsible for and provided support to the rear detachments of the 46th Engineer Battalion and the 2-229th Attack Helicopter Battalion, and was responsible for the continued operation of the 46th Engineer Battalion's dining facility after the engineers departed for Southwest Asia. In addition, all non-deployable personnel of both active and reserve component units were the responsibility of the 1/10th.

The 1/10th Aviation Regiment was the logical choice from units within the 1st Aviation Brigade to handle incoming units, and it was alerted during the week of August 2, 1990.<sup>6</sup> Its mission as part of the USAAVNC mobilization plan was "to provide command and control for mobilizing reserve component units."<sup>7</sup> The 1/10th Aviation Regiment was the only unit after the departure of the 2-229th Attack Helicopter Battalion and the 46th Engineer Battalion that possessed a standard chain of command.<sup>8</sup>

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<sup>6</sup> The battalion consisted of eight companies or detachments. The normal assigned strength fluctuated between 1300 to 1400 prior to Operation DESERT SHIELD/DESERT STORM. The Headquarters Company of the 1/10th contained personnel from the brigade because that unit did not have a headquarters company. Military personnel from some of the major directorates on post were assigned to companies A and B. Many military personnel not directly involved in flight-line operations were also assigned to either company A or B. Company C, 509th Parachute Infantry, handles Pathfinder duties on post and Company D runs the air assault training. The 98th U.S. Army Band and the field artillery detachment are also part of the battalion. The last company is Company A, Military Police Activity. LTC Lennon, interview, pp. 2, 4.

<sup>7</sup> Ibid., p. 5.

<sup>8</sup> CPT Warren (ATZQ-BDE-A), memo for the record, subj: After Action Report - Mobilization, (October 24, 1990), 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 4. (Hereafter referred to as 1/10th AAR - Mobilization.) Some organization has to provide UCMJ, administration, a military address, etc., for mobilizing units. See: LTC Lennon, interview, p. 5.



Lieutenant Colonel Bert L. Lennon, set the tone when he took command of the 1st Battalion, 10th Aviation Regiment on January 4, 1990, and pledged as the commander to build an "environment free of micro-management and needless bureaucracy.... Commanders were given a free hand to make crucial decisions without fear of second guessing from above."<sup>9</sup> This management system was to stand the test of mobilization well.

Preparing to mobilize reserve units did not bring about any major reorganization of the unit. Lieutenant Colonel Lennon and his staff simply analyzed what they were required to do and made the necessary changes. They quickly realized that in one area they needed to make some immediate plans. When units showed up at Fort Rucker, the 1/10th Aviation Regiment had to have a plan to greet these units, brief them, and settle them into barracks.<sup>10</sup>

Prior to the arrival of the first reserve and guard units, Lieutenant Colonel Lennon and his staff contacted key directorates on Fort Rucker. "We started...working with the installation staff, primarily the Emergency Operations Center, the Directorate of Logistics and the Directorate of Engineering and Housing because those were the main agencies that had all the things that we would need."<sup>11</sup>

During its support of Operations DESERT SHIELD and DESERT STORM mobilization, the 1/10th Aviation Regiment was to become one of the largest, single battalions in the U.S. Army. At its peak, October 14, 1990, more than 1200 reserve

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<sup>9</sup> 1st Battalion, 10th Aviation Regiment, 1990 Yearly History, 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>10</sup> LTC Lennon, interview, p. 6.

<sup>11</sup> Ibid., p. 7.

component soldiers were under the control of 1/10th (in addition to its normal strength of 1300), for an overall total of 2500 soldiers.<sup>12</sup>

Strength would have been higher, but the 1/10th, like a number of other USAAVNC units, lost personnel to mobilizing units. Many obstacles had to be overcome. For example, the 2-229th Attack Helicopter Battalion did not have a fire support officer (FSO), so Lieutenant Colonel Lennon provided them with his artillery battery commander to be their FSO. Lieutenant Colonel Lennon also provided his noncommissioned officer from his operations section, who had an artillery MOS, and attached him to the 2-229th to assist the FSO. The 1/10th also provided vehicle support that deployed with the FSO team.

When the 2-229th Attack Helicopter Battalion needed Pathfinders, the 1/10th provided a five-man Pathfinder team, along with transportation assets. Even the 98th U.S. Army Band provided a generator mechanic to the 2-229th.

The 1/10th Aviation Regiment provided numerous weapons and equipment that the 2-229th needed and also provided 62 personnel to fill various positions needed in Saudi Arabia.<sup>13</sup> A number of the personnel came from the 1/10th's personnel and administration center (PAC), which caused serious problems for the 1/10th. As the missions of the battalion increased, its administrative overhead (normally handled by the PAC) also increased. The 1/10th PAC personnel that were transferred to provide support for mobilizing units were not replaced. As Lieutenant Colonel Lennon remarked, "...that really hurt bad. That made it tough. I think we were working as smart as we could and

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<sup>12</sup> CPT Warren, (ATZQ-BDE-A), fact sheet, subj: 1/10th Mobilization Support (October 15, 1990), 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

<sup>13</sup> LTC Lennon, interview, pp. 9-11.

all we could do was work harder and longer." The 1/10th had simply not realized the magnitude of the situation until it was too late.<sup>14</sup>

As the mobilization progressed, the 1/10th Aviation Regiment learned that there was no set schedule as to when the reserve units would arrive on post. According to Lieutenant Colonel Lennon, the initial reserve unit arrived on August 29, and the 1/10th Aviation Regiment was notified five days prior. That initial unit was the 1207th Quartermaster Detachment from Wetumpka, Alabama, a small, 16-soldier organization commanded by a staff sergeant. When they showed up, the 1/10th Aviation Regiment had no plan in place to receive them—no billeting, rations, training, etc.

The Fort Rucker Mobilization Plan was predicated on the idea that the U.S. Army Forces Command units on post would already be gone when reserve units began to arrive on post. In the case of Operation DESERT SHIELD, some units had not yet left for Southwest Asia, and this created some serious problems as to where to billet arriving units. Lieutenant Colonel Lennon turned to the Directorate of Engineering and Housing for assistance and, with their help, things worked out.<sup>15</sup>

Because of the small size of the 1207th Quartermaster Detachment, assigning them to Company C, 509th Parachute Infantry Regiment worked very well. The airborne company took the small detachment under its wing and became responsible for preparing the 1207th for deployment.<sup>16</sup>

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<sup>14</sup> During normal times, the PAC cared for the 1400 people assigned to the battalion. However, at the beginning of Operation DESERT SHIELD, LTC Lennon considered the PAC to be understrength even before people were taken away. At any one time during the mobilization, the understrength PAC had to care for up to 2000 records. See: LTC Lennon, interview, p. 13.

<sup>15</sup> Ibid., p. 18.

<sup>16</sup> 1/10th AAR - Mobilization, p. 5.

During the early weeks of mobilization, the 1/10th Aviation Regiment experienced considerable changes in many areas because of new requirements that were always coming down from higher echelons. "There were requirements...that these units were to receive training on this, had to do this and had to do that, and then they had deployability criteria they had to meet, which was the medical standards. We knew when we started—and that was like December 8, the day after Pearl Harbor, because nobody knew what was going on—the interest rate was high and there was a big push because nobody knew how long these people had here."<sup>17</sup>

As the mobilization procedures matured and experience was gained, the 1/10th initiated "background information memoranda" for each arriving unit.<sup>18</sup> When a unit's advance party arrived at the front gate, they would be met and in-briefed by representatives of the 1/10th Aviation Regiment. When the main body arrived and settled into its billets, representatives or sponsors would meet with the unit every day at 1600 to discuss problems, issues, and answer any questions. Where necessary, the 1/10th Aviation Regiment followed up on any issues or questions from the units that they could not answer or resolve within the unit.<sup>19</sup>

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<sup>17</sup> LTC Lennon, interview, p. 20.

<sup>18</sup> Many examples of background information memorandums on units that mobilized at Fort Rucker can be found in the files of the 1/10th. They provide pertinent information such as address, commander, first sergeant, home station, makeup of unit (occupation), mailing address, type, etc. See: 1/10th folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>19</sup> LTC Lennon assigned active component commanders within the battalion as sponsors for reserve component units or detachments. These sponsors guided reserve component commanders around post and in their dealings with installation agencies and programs. CPT Marchbank, (ATZQ-BDE), memo for CDR, 1st Avn Bde, subj: Operation Desert Shield Lessons Learned and After Action Review, (January 29, 1991),  
(continued...)

This meeting was also duplicated at higher levels. A daily status report meeting was initiated to discuss issues, questions, and problems at the brigade level. Generally, the 1/10th Aviation Regiment's operations officer opened the meeting to discuss important operational issues, and the supply officer and adjutant then gave their particular area's informational input. Next, it was the turn of the various reserve component unit representatives to brief Lieutenant Colonel Lennon, and representatives from the 1st Aviation Brigade staff using the unit daily status report as a guideline. As with the meeting at the unit level, this system also worked well.<sup>20</sup>

During the first weeks of the mobilization, responsibility between and among post units directly involved in the mobilization process was not clearly defined. The case of the interaction between 1/10th Aviation Regiment, 1st Aviation Brigade headquarters, and the Second U.S. Army Mobilization Assistance Team (MAT) is an example.<sup>21</sup> A mobilization assistance team's mission is to assist in the mobilization, activation, reception, training, equipping, validation, and deployment of activated reserve component units. The team consisted of an administration section, operations section, and assistants for battalion and company units.

Both the 1st Aviation Brigade and the Second U.S. Army MAT were issuing instructions to mobilizing reserve units, some of which were either confusing or

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<sup>19</sup>(...continued)

1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 2. Also see: 1/10th AAR - Mobilization, p. 1.

<sup>20</sup> Ibid., p. 21.

<sup>21</sup> Fort Rucker Mobilization Assistance Team, information briefing conducted October 22, 1990, slide copies, 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

contradictory, and the units did not know which to follow. Confusion reigned. Something had to be done to straighten out who did what for whom.

A meeting was held to discuss differences, and a consensus was reached at its conclusion. Thereafter, the 1/10th Aviation Regiment was to give all operational instructions to the units, the 1st Aviation Brigade would assist with funding of training and coordinating events through the Directorate of Plans, Training, Mobilization, and Security, and the Second U.S. Army MAT would render assistance as needed. This system functioned well for the remainder of the mobilization.<sup>22</sup>

As soon as the reserve units were billeted, the 1/10th Aviation Regiment tasked them to develop and then brief their own training plans to Lieutenant Colonel Lennon, 1/10th commander, and Colonel Webb, the Second U.S. Army MAT commander. During the briefing, the unit had to explain its mission, list its mission essential task list, status of equipment, outline its training plans, training objectives, administrative requirements, and means of assessing the effect of training.<sup>23</sup>

Some of the units arriving early had problems developing their own training plans; a unit sponsorship program was created to assist units as they struggled to develop their training plans.

For example, Company B, 1/10th Aviation Regiment, sponsored five of the arriving reserve component units. Company B had all the necessary expertise and experience within its ranks to assist the reserve units in developing training plans and worked with the units while they were at Fort Rucker rendering assistance and guidance

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<sup>22</sup> 1/10th AAR - Mobilization, p. 9.

<sup>23</sup> CPT Hanson (AFKD-RR-MAT), memo for Mobilizing Unit Commanders, subj: Training Briefing, (December 16, 1990) 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

(i.e., who to see, where a particular building or range was located, liaison with post directorates and offices, which U.S. Army regulations to use, what forms to use, how to set things up, etc.).

Many of the mobilized reserve and guard units had never been to Fort Rucker. Having a point of contact who knew where to go and whom to contact was very important in getting mobilization accomplished. Although the reserve units had to develop their own training plans, someone else had to do the training.

As the unit with primary responsibility to prepare units for deployment, the 1/10th Aviation Regiment quickly became trainers. The 1/10th immediately took direct responsibility for weapons instruction. This training consisted primarily of the use of the M16 rifle, including assembly/disassembly, and familiarization with loading and reducing stoppages. In addition to direct training, the 1/10th provided range safety personnel and opened the ranges. The 1/10th also supplied administrative needs from fire extinguishers to targets.<sup>24</sup> In some cases, units were totally unfamiliar with the weapons they would have to take to war.

One instance was related by Lieutenant Colonel Lennon: "I remember one Sunday on Matteson Range. We were doing weapons checks on .50 calibers and I was there to watch...and no rounds were going down range. I asked if any of the guys knew how to do this. The reply was no. They had never been issued those weapons before they got here.... I found out that I [had] the most recent experience...so there I was, the battalion commander, sitting there with the gauges setting head-spacing and timing...so they could fire their weapons."<sup>25</sup>

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<sup>24</sup> 1/10th AAR - Mobilization, p. 24. See also: LTC Lennon, interview, p. 23.

<sup>25</sup> LTC Lennon, interview, p. 24.

In another instance, one-third to one-half of a unit was not out on the firing range. The absent soldiers had visited the dental clinic the day before and had extractions or major dental work performed. They were back at the barracks resting and taking pain medication. Lieutenant Colonel Lennon reached an agreement with the dental activity that dental procedures would occur only after important field training, such as range firing.<sup>26</sup>

The 1/10th Aviation Regiment could provide training in the basic soldier skills and common task training, but some specialty units such as water or fuel pumping organizations had to be certified as trained and ready by the readiness group. No one at the 1/10th possessed that sort of esoteric expertise to provide refresher training.<sup>27</sup> The 1/10th Aviation Regiment also provided advice on what equipment to take to Saudi Arabia.

Many of the mobilizing units had no idea which equipment should be packed for deployment to Southwest Asia. The 1/10th Aviation Regiment prepared and then supplied to units a general equipment list based on the experiences (feedback) of the 2-229th Attack Helicopter Battalion and the 46th Engineer Battalion when they deployed to Southwest Asia.<sup>28</sup>

Other companies of the 1/10th provided important training. Company D (Air Assault), 1/10th Aviation Regiment, assisted in physical training, common task training, and sling load operations training for 500 reserve personnel.<sup>29</sup>

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<sup>26</sup> Ibid., pp. 21-22.

<sup>27</sup> Ibid., p. 25.

<sup>28</sup> 1/10th AAR - Mobilization, p. 22.

<sup>29</sup> 1990 Yearly History, 1st Battalion, 10th Aviation Regiment.



Company C, 1/10th Aviation Regiment, provided instruction to 26 reserve component units in marksmanship, land navigation, and nuclear, biological, and chemical training.<sup>30</sup> The company also provided 28 personnel for fatigue details and five-man Pathfinder teams to assist in training reserve units in sling load operations.<sup>31</sup>

No training item needs, large or small, were ignored by the 1/10th Aviation Regiment. Small things often make the difference in training. A majority of the arriving units had little or no safety equipment such as road guard vests, flash lights, safety goggles, and ear plugs. To support their needs, the 1/10th internally reallocated resources.<sup>32</sup>

Doing all they could to train reserve and guard units was not enough for the 1/10th Aviation Regiment. They also helped in planning and executing unit movements to the port of embarkation. To assist the movement officer of the Directorate of Logistics in coordinating all movements to the port of embarkation, the 1/10th's operations officer wrote orders and submitted all convoy clearances in conjunction with the Emergency Operations Center and the installation movement officer.<sup>33</sup>

The 1/10th Aviation Regiment was often commended by the reserve units who had mobilized under its control. One commander wrote: "1/10th Aviation Regiment support was...outstanding...and helped...[to get us] trained on an organized schedule."<sup>34</sup>

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<sup>30</sup> Ibid.

<sup>31</sup> 1/10th AAR - Mobilization, p. 3.

<sup>32</sup> Ibid., p. 17.

<sup>33</sup> Ibid., p. 10.

<sup>34</sup> CPT Rielley, memo, 1/10th Aviation Regiment, subj: After-Action Reports, Mobilization, (October 9, 1990), 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

### Directorate of Plans, Training, Mobilization, and Security (DPT)

The Directorate of Plans, Training, Mobilization, and Security (DPT) had a series of multi-faceted missions given to it at the beginning of Operation DESERT SHIELD. They were as follows: to provide full service and quality installation support to all mobilizing units; to receive, train, validate, and deploy mobilizing units; coordinate tri-state installation support; to expand USAAVNC training; and to expand health services support.<sup>35</sup>

Of the mobilization centers in the southeast (i.e. Fort Benning, Fort Gordon, Fort Jackson, Fort Knox, and Fort McClellan), Fort Rucker mobilized the largest number of reserve and active units—44 units and 6710 personnel.<sup>36</sup>

The Resource Management Division of the DPT received a total of \$348,000 for use in training and training support for Operations DESERT SHIELD and DESERT STORM and U.S. Army Forces Command funds in the amount of \$1,511,000 for contracting, supplies, and equipment for mobilized U.S. Army Reserve and National Guard units.

The Security Division of the DPT was responsible for the coordination with the Defense Investigative Service and the Directorate of Contracting to obtain security clearances for contract employees. Some contracts required access to classified information, and those who bid for such contracts had to have their employees cleared for access. The division also coordinated a total of 15 security clearances for regular civilian and military employees which involved 60 local records checks. The division also issued a total of 18 courier cards so that personnel could hand-carry classified material.

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<sup>35</sup> COL Hiatt (ATZQ-DPT-P), memo for Aviation Branch Historian, subj: Historical Report for January 1991, (February 19, 1991), DPTMSEC folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>36</sup> Ibid.

The U.S. Army Training and Doctrine Command was consulted for clearances to move classified material overseas.<sup>37</sup>

During mobilization, the Resident Training Management Division of the DPT inprocessed 184 students for mobilization station inprocessing with follow-on training. The division also furnished ammunition for the training of four National Guard units that deployed.<sup>38</sup>

One of the most important sub-units of the DPT was Detachment 9, 5th Weather Squadron. In August 1990, this unit, in addition to providing its normal weather reporting services to ongoing training at Fort Rucker, also deployed two weather forecasters to Southwest Asia, two observers to the U.S. Central Command, and two more weather forecasters to augment the 197th Infantry Brigade from Fort Benning.<sup>39</sup>

As the action agency for much of the work of mobilization, the DPT was also directed to plan for an expected rotation of units from Southwest Asia. The plan, as first envisioned, kept units in Saudi Arabia for a period of six months before rotation.

Phase II rotations would involve units leaving their heavy equipment in Southwest Asia and rotating back to Fort Rucker with just weapons and personal equipment. These rotations were to take place within the February-May 1991, time frame. Replacement units would overlap with returning units for up to seven days.<sup>40</sup>

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<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> COL Hiatt (ATZQ-DPT-P), memo for Aviation Branch Historian, subj: Staffing of 1990 Annual Historical Review, (May 9, 1991), DPTMSEC folder, 1990 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 10.

<sup>40</sup> MAJ Taylor (ATZQ-DPT-P), report, subj: Sustainability of Fort Rucker's Desert Shield Operations and BASEOPS Mission, (October 25, 1990), Aviation Training Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

The plan also called for returning units to remain at Fort Rucker for up to three days for out-processing and two days at their home station. Deploying troops would train and mobilize at Fort Rucker for 14 days.<sup>41</sup> However, events in Southwest Asia and decisions in Washington negated this plan.<sup>42</sup>

If Fort Rucker had been required to implement the plan, problems would have immediately surfaced. Fort Rucker's previous planning had been predicated on the supposition of a full call-up of 200,000 personnel, not a partial one. Under a partial call-up, Fort Rucker would not receive the supplementary personnel they would have under a full mobilization plan.

This lack of reserve personnel impacted on almost every major directorate on post. For example, the amount of work required to handle the dental problems of reservists would have overwhelmed the DENTAC if rotation had taken place.<sup>43</sup>

The DPT, anticipating a possible implementation of the rotation policy, requested individual mobilization augmentee (IMA) personnel for most of the critical directorates on post.<sup>44</sup>

#### Emergency Operations Center

If there was a nerve center, a controlling point, of the Fort Rucker mobilization effort, it was the Emergency Operations Center. This small organization belonged to the Directorate of Plans, Training, Mobilization, and Security, and was activated only on order. Mr. Don Ford, as the chief operating officer of the Emergency Operations

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<sup>41</sup> Ibid., p. 2.

<sup>42</sup> The Secretary of Defense, Mr. Cheney, and Chairman of the Joint Chiefs of Staff, General Powell, made the decision that units would not be rotated, but would stay for the duration.

<sup>43</sup> MAJ Taylor, memo, October 25, 1990, pp. 2-3.

<sup>44</sup> Ibid., p. B1.

Center, held one of the most responsible jobs at Fort Rucker during Operations DESERT SHIELD and DESERT STORM.

The Emergency Operations Center was activated because it was the mobilization and planning organization for Fort Rucker. As Mr. Ford remarked in a post-mobilization interview, "I am the mobilization planner. As such, I am the only full-time planner that Fort Rucker has."<sup>45</sup> It was not that mobilization was unknown at Fort Rucker. Far from it.

As the planning agency, the Emergency Operations Center ran what was called an emergency deployment readiness exercise, or EDRE, every two years. Aside from validating all the deployment information and concepts for Fort Rucker, the Emergency Operations Center also had to motivate the various participants. "During peacetime it is hard to get people motivated to practice for mobilization. As a matter of fact, last July if you'd talked mobilization to anybody they'd say what are you talking about. It's hard to get people motivated... everybody has got their plate full during peacetime and we operate about 17 to 21 days, 24 hours a day...doing these exercises."<sup>46</sup>

Many of those who played significant parts during Operations DESERT SHIELD and DESERT STORM had not participated in an EDRE in the past. Their lack of practice and knowledge was a source of concern for those at the Emergency Operations Center. As Mr. Ford remarked, "They don't understand all of the mechanics and tend sometimes to make decisions before they acquire that knowledge of what we have in place to support. You know, it is simple to...call...and say you need a C-141 for something.

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<sup>45</sup> Mr. Ford, chief operating officer, EOC, transcript of an oral interview conducted September 24, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

<sup>46</sup> *Ib. id.*, p. 50-51.

You might be able to do that in peacetime for someone, but during this operation you sure couldn't do it."<sup>47</sup>

When the Emergency Operations Center was opened, all sides united to provide support. During the mobilization, a briefing was held each day at the Emergency Operations Center. Eventually, things smoothed out and meetings became fewer. "First it was seven days a week, then five days, then three days and then once a week towards the end."<sup>48</sup> The briefing participants were normally briefed on the situation by the Corps Data Center on Intelligence, but that information was often 24 to 48 hours old because Fort Rucker was not in the chain to receive more current information.<sup>49</sup>

The Emergency Operations Center normally operated on a continuous basis. As to personnel, Mr. Ford remarked that his staff often operated without a full complement. "When [the Emergency Operations Center] started out there were six of us that were full time. One person left in September [1990] and another one left in November [1990], so we ended up with only four of us full-time...and we worked shifts. We did bring in some outside people from post, casual officers and that sort of thing."<sup>50</sup>

The majority of the information used by the Emergency Operations Center during mobilization came through messages. A system was set up so that Fort Rucker organizations and other units could check their distribution box for messages each day.<sup>51</sup>

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<sup>47</sup> Ibid., pp. 51-52.

<sup>48</sup> Ibid., p. 33.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid., p. 34.

<sup>51</sup> Ibid., p. 34.

Since the Emergency Operations Center was the literal nerve center of Fort Rucker's mobilization effort, it was frequently contacted directly by Department of the Army and other Department of Defense agencies. Frequently these calls dealt with assignments to other agencies on post, and the Emergency Operations Center had to act, as it were, as the middleman. This added to the already heavy burden of the few at the Emergency Operations Center.<sup>52</sup> Each day during mobilization, the message traffic would often bring information that another unit was to be activated and would mobilize at Fort Rucker. This always triggered actions at the Emergency Operations Center.

When alerted that a unit would be mobilizing at Fort Rucker, the Emergency Operations Center would "get on the telephone and give them what we call closing instruction, last minute preparations."<sup>53</sup> The unit would already be in the process of preparing according to a set plan outlined in the "Reserve Component Commanders Handbook." This publication "[gave the commander] a very detailed check list of exactly what do, when to do [it] and how to do it."<sup>54</sup>

The welcoming drill for units arriving at Fort Rucker began to assume a definite pattern. "Each unit sent an advance party. The normal progress was that a unit would mobilize on a Thursday, their advance party would arrive here on Friday, and the main body on Saturday or Sunday. Now, when I got on the telephone to give them closing instructions, there were several things that I told them. Number one, no privately owned vehicles. Number two, bring your rifle racks because we don't have any. Number three,

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<sup>52</sup> Ibid., p. 35.

<sup>53</sup> Ibid., p. 16.

<sup>54</sup> Ibid.

you are going to have to close any classified material you have and store it while you are here."<sup>55</sup>

When the advance party arrived, personnel arranged for the unit's billets and attended briefings on what they would be doing while at Fort Rucker. These briefings were attended by representatives from all the principal staffs at Fort Rucker.

When the main body arrived, they were met at the gate, directed to their motor park, and allowed to settle into their billets. Since the advance party had already been briefed on operations, the rest of the unit, as Mr. Ford put it, "fell right in."<sup>56</sup>

The Emergency Operations Center deployed units on what is called a troop program field deployment (TPFD). There are two distinct types of TPFD. One, the troop program field deployment list (TPFDL) and, two, the troop program field deployment data (TPFDD). The former is the list by time for the deployment of named units. The latter is the data on that unit which includes number of personnel, type of equipment, number of aircraft loads, etc. Both types of TPFD depend upon up-to-date information, but they were not always accurate and were subject to frequent changes depending on decisions made in Washington, DC or Southwest Asia.<sup>57</sup> These sudden changes made planning especially difficult. Other difficulties also arose.

The Emergency Operations Center had to plan for and execute actions to insure that the "three war stoppers for deployment" were handled. The first was a panoramic dental x-ray (PANOREX); the second, an AIDS test; and the third, NBC overgarments. Many units had NBC overgarments, but they were old and would not protect the wearer. New garments had to be obtained (to include the overgarment itself, shoes, and gloves).

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<sup>55</sup> Ibid., p. 17.

<sup>56</sup> Ibid., p. 18.

<sup>57</sup> Ibid., p. 25.



In one instance the Emergency Operations Center delivered gloves to a unit that was in the process of boarding their plane bound for Southwest Asia.<sup>58</sup> The Emergency Operations Center could not have provided much of the services it did without the help of not only all the directorates at Fort Rucker, but certain outside organizations.

The Redstone Arsenal Mobilization Assistance Team (MAT), from Wetumpka, Alabama, provided vital assistance. Although the normal strength of this unit is 130, they averaged only 15 to 20 personnel at Fort Rucker at any one time. Their job was to assist in mobilizing and validating reserve units. Fort Rucker often lacked the experts to validate a specialized unit (i.e., a water pumping unit).<sup>59</sup> The Redstone Arsenal MAT possessed the type of experts that can validate a unit for deployment, and the Redstone Arsenal MAT did so by working with the mobilizing units and with almost every organization on post.<sup>60</sup>

In addition to being the nerve center for mobilization and deployment, the Emergency Operations Center also had responsibility for the re-deployment back to Fort Rucker. "The first welcoming ceremony officially was at Fort Benning.... We would put them on buses...we had an individual up there with a cellular phone and he would keep us in contact. When they arrived here, they would have a ceremony. It didn't make any difference if it was two o'clock in the morning or four o'clock in the afternoon, we had a ceremony, and that guy on the cellular telephone would keep us informed where they were along the route...."<sup>61</sup>

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<sup>58</sup> NBC overgarments were such an important item that the Emergency Operations Center had to send a message every day to DA listing the number of items they had in stock and the number needed for their mobilizing units. Mr. Ford, interview, p. 30.

<sup>59</sup> Ibid., p. 6.

<sup>60</sup> Ibid., p. 11.

<sup>61</sup> Ibid., p. 42.

All of the units that had mobilized through Fort Rucker on their way to Saudi Arabia demobilized here, as well as the 386th Personnel Service Company (which had mobilized at Camp Shelby, Mississippi).

### **Directorate of Training and Simulation (DOTS)**

At the beginning of Operation DESERT SHIELD, Colonel Thomas A. Green, the director of the Directorate of Training and Simulation (DOTS), was sent to Saudi Arabia to be the aviation officer of the XVIII Airborne Corps. Thereafter, the DOTS continued on without its experienced director.<sup>62</sup> Colonel Green developed a smooth-functioning team before he abruptly left, which performed all that was asked of it and more.

During Operations DESERT SHIELD and DESERT STORM, the DOTS prepared several important doctrinal manuals to aid units in Southwest Asia. The first was entitled U.S. Army Aviation Desert Operations, Tactics, Techniques, and Procedures (Southwest Asia Focus). "It contained information gathered from numerous sources including field manuals, training circulars, technical documents, studies, after action reports from Operation BRIGHT STAR, and lessons already learned from Operation DESERT SHIELD."<sup>63</sup> This publication provided aviation units with the latest in desert warfare doctrine—information they put to good use during Operation DESERT STORM.<sup>64</sup>

Intelligence information gathered from forces in the desert and experience gleaned from the Iran-Iraq war showed that the Iraqi Army possessed significant anti-aircraft

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<sup>62</sup> LTC Thomas (ATZQ-DOT), memo for Commander, USAAVNC, subj: January 1991 Historical Report, (February 15, 1991), DOTD reports folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>63</sup> Kitchens and Wright, USAAYNC 1990 Annual Historical Review, p. 168.

<sup>64</sup> LTC Thomas, memo, February 15, 1991.

artillery (AAA) capability. To provide maximum doctrinal information, the DOTS prepared U.S. Army Aviation Operations, Tactics, and Procedures for Aircraft Survivability Equipment (ASE). This monograph detailed to aviation units the information necessary to fully employ all aircraft survivability equipment in the aircraft.<sup>65</sup>

In addition to providing doctrinal assistance and publications to units in Southwest Asia, five DOTS personnel were attached to the 2-229th Attack Helicopter Battalion prior to deployment and served with the "Flying Tigers." Other directorate personnel were sent to Saudi Arabia to do a detailed lessons learned appraisal for aviation tactics and doctrine for the future.<sup>66</sup>

Shortly after a majority of aviation units reached Saudi Arabia (October 1990 time frame), a need for left-seat-qualified aviators for the OH-58D helicopter became critical.<sup>67</sup> The DOTS dispatched a mobile training team to Saudi Arabia, and they trained (academics only) fourteen pilots in three days. They were trained in mast-mounted sight operations, airborne target handover systems, and artillery missions with the data link system. Simulator training was not followed by actual cockpit training due

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<sup>65</sup> Ibid.

<sup>66</sup> 1990 DOTS Historical Report, DOTS folder, USAAVNC, 1990 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, Chapter VII, p. 16.

<sup>67</sup> Normally, a pilot and an observer occupy the cockpit of the OH-58D. However, the USAAVNC pushed for two fully-rated pilots to fly in Saudi Arabia. The left-seat training was a necessity to qualify pilots to perform observer duties. This was a critical factor because by December 1990, over half the Army's inventory of OH-58D aircraft were in Southwest Asia. Kitchens and Wright, USAAVNC 1990 Annual Historical Review, p. 169.

to lack of airframes and other factors.<sup>68</sup> The training was marginally adequate. Classroom Systems Trainer (CST) lessons could not be provided as no training devices were located in Southwest Asia.<sup>69</sup>

#### Directorate of Training and Doctrine (DOTD)

"You can't beat the North with arrogance," wrote Margaret Mitchell in her novel *Gone With the Wind*. Rhett Butler, a character in the novel, attempted to educate his hot-headed Southern friends about the reality of fighting battles. He pointed out, unsuccessfully, that one cannot win battles on bravery alone. History has shown, time and again, that there are certain components to every successful battle. One of the principal components needed to insure victory in battle was training. The USAAVNC's Directorate of Training and Doctrine (DOTD) was one of the key players for aviation training in the U.S. Army during Operations DESERT SHIELD and DESERT STORM. Under its control were the various organizations that prepared and evaluated training, and taught during the period of conflict in Southwest Asia. Along with the DOTD, the Aviation Technical Library began book collections so that a steady stream of information could be sent to the Fort Rucker units already in Southwest Asia.

To train follow-on aviators for those already sent to the desert, the simulators at Fort Rucker were working overtime. As related by Colonel James W. Beauchamp, director of the DOTD, "We were running these cockpits five to six days a week, 16 to 18 hours a day. You need to schedule time for maintenance. What we found was necessary was that we had to go to Fort Campbell for part of our training. We sent crews...to

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<sup>68</sup> CW4 Anderson (ATZQ-DOT-AS), memo for Director, DOTS, subj: Trip Report, Saudi Arabia Left-seat Academic Training, (October 23, 1990), DOTS folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>69</sup> Ibid.

Kentucky to use their simulators to augment training time...." Since the aviation elements of the 101st Airborne had been sent to Saudi Arabia, the CH-47 Chinook and UH-60 Black Hawk simulators at Fort Campbell, Kentucky, were under-utilized.<sup>70</sup>

The DOTD made attempts to obtain more simulators for Fort Rucker, but were "relatively unsuccessful."<sup>71</sup> However, the over-utilization of the simulators at Fort Rucker allowed the USAAVNC to ask for and receive a new AH-64 Apache and UH-60 Black Hawk simulator. Because of the experiences of air crews in Southwest Asia and feedback to Fort Rucker, simulators at Fort Rucker were programmed to create "a desert environment so that our pilots could actually start to train in a simulated desert environment before they deployed."<sup>72</sup> Pilots that deployed and flew with the 2-229th Attack Helicopter Battalion came back to Fort Rucker with their experiences before the conflict began and the DOTD asked them to look at the new desert simulation visuals. The pilots reported that it was very close to the type environment in which they had been flying.

During initial flight operations in Southwest Asia, a rash of accidents occurred when helicopters flew into sand dunes. Programming this problem into the simulator was given a high priority. "We did not have the visual effects at that time to do that. Now, we have asked to have that type of data added...[to a contract] that is being worked by PM Trade out of Orlando, Florida, to give us that type capability."<sup>73</sup>

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<sup>70</sup> COL Beauchamp, director, DOTD, transcript of an oral interview conducted December 20, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 10.

<sup>71</sup> Ibid.

<sup>72</sup> Ibid., p. 11.

<sup>73</sup> Ibid., p. 12.

Another problem that needed to be addressed by simulation was the "brown-out" effect when taking off and landing. Again, contracts went out to software companies to re-create this environmental anomaly. In a post-Operation DESERT STORM interview, Colonel Beauchamp revealed: "Those models are supposed to be delivered here shortly and we will incorporate into the next upgrade blowing sand, blowing dust, [etc.]. Whichever environment you want to use, it is the same model, just the color/texture is different so that the pilots begin to experience those sensations in the device and then we can record how well the pilots do. One good thing is that...we have never had a death in the simulator yet."<sup>74</sup>

Simulators were also used in other ways to help aviators prepare for combat. DOTD worked on two simulator solutions for AAA training. One type simulator was a desk-top computer system that would allow a pilot to "test all of his aircraft survivability equipment and to actually work in a desert environment against an Iraqi threat. We sent that to all the units over there...."<sup>75</sup> With this type system, the pilot can choose the aircraft type, location of the flight, and the threat which he or she wants to fly and train against to defeat—all on a simulator.

At the time of mobilization, the DOTD was working on a new aircraft survivability equipment system that could be mounted in the aircraft, and would allow the pilot to train on the ground in his or her aircraft with the computer controlling all the avionics gear, and give feedback to the pilot as the program is running.

Because of feedback from Southwest Asia, the USAAVNC planned to develop and implement improved programs on aircraft survivability equipment training. One of

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<sup>74</sup> Ibid.

<sup>75</sup> Ibid., p. 13.

the weaknesses that surfaced early in Southwest Asia was the fact that aircraft survivability equipment training in general was very poor.<sup>76</sup>

Because of the great need for simulators in the desert, the DOTD attempted to determine how much it would cost the USAAVNC to move an AH-64 Apache simulator to the desert. As Colonel Beauchamp remarked, "...the cost to move one would...[be] about six million dollars and take about four months to [deliver]."<sup>77</sup>

An Apache simulator, for example, would have been very helpful in the desert. The front-seat operator has to make roughly 1096 separate switch combinations in order to remain proficient.<sup>78</sup> A simulator allows this type of training to reach its maximum potential.

Computer software that supported the simulators underwent changes during Operations DESERT SHIELD and DESERT STORM. The software writers in the DOTD developed a unique program. "We had a program called Desert Stars...we had the database built that re-created Kuwait City. We built it so that we could fly AH-64s and UH-60s and fly off the ships or fly out in the desert. We could fly into the actual terrain that they would have encountered in Kuwait City."<sup>79</sup>

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<sup>76</sup> Ibid., p. 16.

<sup>77</sup> Ibid., p. 17. The USAAVNC is currently developing a portable AH-64 Apache simulator that can be transported in a C-141.

<sup>78</sup> COL Beauchamp, interview, p. 18.

<sup>79</sup> Ibid., p. 19.

The Iraqi radar site, which was the target of Team NORMANDY, was re-created in the data base and its radar emissions duplicated. Pilots could then fly against it to test their skills in executing a similar mission.<sup>80</sup>

Operations DESERT SHIELD and DESERT STORM pointed out the need for collective simulation. As Colonel Beauchamp remarked, "We don't fight as individual cockpits but that is the way our simulation is designed."<sup>81</sup> The current AIRNET system used at the USAAVNC is a first step in that direction. Follow-on systems will enable multiple crews to practice a single mission—together. "The distance between reality and simulation grows closer and closer every day."<sup>82</sup>

In addition to working with simulation, the DOTD was also responsible for instruction. During past mobilizations, combat training was often rushed. This time, however, instruction was not cut, according to Colonel Beauchamp. He said, "We do not cut down the training. It is simply that we go to longer days and training...six days a week."<sup>83</sup>

When U.S. Army Reserve and National Guard units arrived at the USAAVNC to mobilize, the DOTD provided support. "We let them use our learning center, to come over and study those things for aviation and provided them a quiet place...."<sup>84</sup>

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<sup>80</sup> CPT DeVito, 1/101st Aviation Battalion, transcript of an oral interview conducted April 10, 1991, Oral Interview File, Aviation Branch Historian Office, USAAVNC, Fort Rucker, AL, p. 10. According to CPT DeVito, those that flew the mission practiced on a mock-up of the site so they could easily recognize it, and he attributed the excellent results of the mission to the ability to practice against a simulated target.

<sup>81</sup> COL Beauchamp, interview, p. 19.

<sup>82</sup> Ibid., p. 23.

<sup>83</sup> Ibid., p. 26.

<sup>84</sup> Ibid., p. 27.



As in the case of the 2-229th Attack Helicopter Battalion, the DOTD provided those U.S. Army Reserve and National Guard units with the same type of intelligence data and helpful information. Also, the DOTD provided these units with access to a reference library of U.S. Army and U.S. Army Forces Command regulations.<sup>85</sup>

Some of the DOTD's time was occupied with the Iraqi chemical threat. The directorate helped "with expediting the fielding of the new M43 mask for the Apache crews."<sup>86</sup> The DOTD sent personnel to the chemical school at Fort McClellan for a quick course, and then went on directly to Southwest Asia to expedite fitting of the M43 for all AH-64 Apache pilots.<sup>87</sup>

Although not primarily involved with instructor pilots (IPs), the DOTD is directly involved in their training. One of the nagging problems throughout Operations DESERT SHIELD and DESERT STORM was that the requisite IPs would not have been available had the war continued for any length of time and had there been heavy losses. Since aircraft or simulators were not always available, this type of training lagged behind. Colonel Beauchamp expressed the view that "...the biggest problem in gearing up aviation very quickly is you first have to train the IPs to train the additional students. So, we have to get smarter about having that pool of IPs. We need to invest in our pre-mobilization...where we have an over-abundance of IPs."<sup>88</sup>

In every war the U.S. Army has fought, there were efforts to capture all the important lessons learned and incorporate them into the training. Since the Middle East is an area of great uncertainty, there is always a possibility that the lessons of Operations

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<sup>85</sup> Ibid., p. 28.

<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid., p. 32.

DESERT SHIELD and DESERT STORM will be used again. So that these lessons need not be relearned, the USAAVNC began to change programs of instruction to reflect this experience.<sup>89</sup>

One area of the DOTD that immediately contributed to mobilization was the Aviation Technical Library. At the time the 2-229th Attack Helicopter Battalion prepared for deployment, it was discovered that a considerable amount of data about the area would be needed. "[The Aviation Technical Library] gathered information...on climate, insects, people, size of armies, weapons you could expect to see, etc. Within three days this information was in the hands of the soldiers of the 2-229th."<sup>90</sup>

The Aviation Technical Library is part of the DOTD and provides expert historical and technical data to post directorates and aviation students. It continued to provide the same data during Operations DESERT SHIELD and DESERT STORM.

Under the direction of Beverly Hall, the library, in support of Operation DESERT SHIELD, "published or distributed over sixty different items including maps, information packets, technical reports, bibliographies, and other special documents. These materials were supplied to Fort Rucker staff, students, permanent party personnel, and the reservists processed through Fort Rucker. The Aviation Technical Library distributed a total of 30,000 printed items."<sup>91</sup>

In addition, the library used its computers to perform literary searches and "scanned all incoming documents, periodicals, and other materials for useful information

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<sup>89</sup> Ibid., p. 34.

<sup>90</sup> Ibid., p. 9.

<sup>91</sup> 1990 DOTD Historical Report, DOTD folder, USAAVNC 1990 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, Chapter VI.

relating to Operation DESERT SHIELD."<sup>92</sup> As a result of this process, the Aviation Technical Library now possesses a comprehensive archival holding on that subject—a considerable resource for the future. The expertise in the library also helped with training by providing beneficial information on past experiences. However, visits to the actual area provided the up-to-date data that history lacked.

The Individual and Unit Training Division of the DOTD sent personnel to Saudi Arabia to observe ongoing operations. They contacted personnel in aviation units who in turn responded with information.

In May, 1991, CW3 McHenry, assigned to Company A, 3rd Battalion, 101st Aviation Regiment, wrote a "lessons learned" critique based on his personal experience in that unit dealing with training, cockpit organization, reliable navigation aids, aircraft survivability equipment for the OH-58A/C Kiowa helicopter, crew-issued personal weapons, and chemical suits and masks. CW3 McHenry wrote: "New equipment came...into the desert at an unbelievable rate; unfortunately, you do not fix a problem with equipment. At some point, one must train its operators.... A problem arose [with]...the AN/ARC164 Have Quick radios...there was no... reference material available to us.... If not for the tireless efforts by one of the junior warrant officers in the battalion, we would never have had any operating instruction."<sup>93</sup>

To support Operations DESERT SHIELD and DESERT STORM, the DOTD had to accelerate training schedules. In order to reduce overall course length, the programs of instruction were modified to expedite the training cycle with flight periods increasing to 1.5-hour sessions, versus the 1.2-hour session flown in peacetime training. The changes

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<sup>92</sup> Ibid.

<sup>93</sup> CW3 McHenry (ATZQ-TDI-F), memo thru Dir, DOTD, for DOTS, subj: Lessons Learned, (May 8, 1991), DOTD folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

were successful and resulted in an average of 3 to 4 days being administratively removed from each flight program of instruction."<sup>94</sup>

One of the drawbacks to accelerated training during Operations DESERT SHIELD and DESERT STORM was that "training standards had to be relaxed to meet deployment schedules. [UH-60 Black Hawk] pilots graduated without final flight and academic tests, and gunnery tables were not completed."<sup>95</sup>

The DOTD provided considerable help and assistance in a number of training areas. One of the most critical areas was aircraft survivability equipment. Because of the perceived Iraqi AAA threat, this training was on the mind of every crew in Southwest Asia.

Reports coming from the field indicated that the M130 chaff/flare dispenser was being improperly loaded. The DOTD supplied "a handbook...to AH-64 and other units, including those deployed to Operation DESERT STORM, with aircraft equipped with the M130. This handbook gave step-by-step procedures for operating, loading and unloading the system."<sup>96</sup> Sometimes, there was a frequent lack of training equipment.

When aircraft survivability equipment training was curtailed because of lack of equipment in the aircraft, the "DOTD provided these units with videotapes on the... systems...and also provided pertinent handouts on the [aircraft survivability equipment] systems."<sup>97</sup>

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<sup>94</sup> CPT Laporte, report, subj: Accelerated Aviation Training for Deployment, DOTD folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>95</sup> Ibid.

<sup>96</sup> Ibid.

<sup>97</sup> Ibid.

The DOTD developed special courses of instruction on the operation and employment of aircraft survivability equipment and the Iraqi AAA threat. Helicopters, such as the AH-64 Apache, AH-1 Cobra, CH-47 Chinook, UH-60 Black Hawk, UH-1 Huey, and the OH-58A/C Kiowa, and specially equipped aircraft were the subject of these courses.<sup>98</sup> In addition to a lack of courses, there was often a lack of trained personnel in the areas of aircraft survivability equipment and electronic warfare.

Many units in the desert did not have an aircraft survivability equipment/electronic warfare officer assigned, and as a consequence, training in this critical area lagged. The DOTD and the project manager for aircraft survivability equipment arranged for "three [aircraft survivability equipment/electronic warfare] officers to be sent to [Southwest Asia]. Using the Aircraft Survivability Equipment Trainer II (ASET II) programs, these officers travelled to front-line units and conducted aircraft survivability equipment/electronic warfare training. They also conducted threat update briefings."<sup>99</sup> To capture the aviation experiences and insights gained by aviation personnel in Southwest Asia, the DOTD initiated "training questions and issues that [needed] to be addressed to returning units...[and would] use this information to evaluate, modify, and develop training, training devices, simulations, and simulators."<sup>100</sup>

#### **U.S. Army Aviation Logistics School (USAALS)**

A very important member of the USAAVNC team that was not physically located at Fort Rucker during mobilization was the U.S. Army Aviation Logistics School (USAALS) located at Fort Eustis, Virginia. This school provides the aviation community with the balance of its logisticians and aircraft maintainers. Given the

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<sup>98</sup> Ibid.

<sup>99</sup> Ibid.

<sup>100</sup> Ibid.

criticality of logistics and maintenance during Operations DESERT SHIELD and DESERT STORM, the USAALS-trained personnel were a critical part of the backbone for U.S. Army aviation assets in the desert.

When the USAALS received the alert notification, they immediately implemented both mobilization training and an accelerated work schedule of 10-hour days, six days a week, and maintained that schedule throughout Operations DESERT SHIELD and DESERT STORM.<sup>101</sup>

Like any other major organization in the U.S. Army, the USAALS contributed its share of expert personnel to the mobilization effort. "A total of 13 [noncommissioned officers from the Department of Aviation Trades Training alone] were assigned to temporary duty with units deployed to Saudi Arabia during the period December 1990 to August 1991."<sup>102</sup>

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<sup>101</sup> LTC Cahill (ATSQ-LES-E), memo for Assistant Commandant, subj: Desert Shield Lessons Learned, (March 7, 1991), USAALS folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL. (Hereafter cited USAALS AAR.) In the MOS 67Y10, the normal academic hours were 432, but USAALS was required to compress it into a 40-hour block of instruction for incoming reserve students. See: LTC Jones (ATSQ-LTD-H), memo for PMO, subj: 1991 Historical Reports, (March 25, 1991), USAALS folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>102</sup> USAALS AAR. Ten of those personnel taken from the division were instructors in the following: MOS 68B, MOS 68D, MOS 68F, and MOS 68G. See: LTC Wilcox (ATSQ-LTD-T), memo for PMO, subj: 1991 Historical Reports, (February 28, 1991), USAALS folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL. Two more NCOs were sent in mid-February to Southwest Asia. See: SGM Wall (ATSQ-LAL-T), memo for C, SSD, subj: Desert Storm Monthly Activity Report Update, (March 5, 1991), USAALS folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

Because of its excellent relations with the U.S. Army Reserve and National Guard, the USAALS could obtain replacements for those personnel it lost during the early months of mobilization. A total of 31 reserve personnel were brought on active duty and placed at the USAALS to assist in operations and training. A number were given quick refresher training. Without them, the USAALS would have been hard pressed to maintain their high level of training. The USAALS also supported training elsewhere. When the USAAVNC needed an OH-58 Classroom Systems Trainer, the USAALS sent one on loan for the duration of the emergency.<sup>103</sup>

The USAALS also greatly accelerated its courses, and planned more iterations to handle arriving reserve personnel. Although scheduled to train 490 Individual Ready Reserve (IRR) soldiers, only 65 percent of those 490 reported, thus easing the training burden.<sup>104</sup> The USAALS had to continue its normal training while also handling such mobilization overflows.<sup>105</sup> The Department of Aviation Systems Training developed a special diagnostic test to determine the training needs of RT-12 students. (The RT-12 designation refers to a soldier who has been released from active duty within 12 months or less before recall.)<sup>106</sup>

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<sup>103</sup> USAALS AAR.

<sup>104</sup> This was also a serious problem because 23 percent of those that did arrive had already been eliminated from the service for various reasons prior to being recalled. Processing these personnel took scarce assets away from the mission. See: LTC Cahill (ATZQ-LES-E), fact sheet, subj: USAALS Desert Shield/Desert Storm Lessons Learned (Personnel), (April 24, 1991), USAALS folder, DESERT SHIELD/ DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>105</sup> USAALS AAR.

<sup>106</sup> MAJ McKissack (ATSQ-LTD-S), memo for Chief, Program Management Office, USAALS, subj: Staff Historical Report for February 1991 Historical Report, (March 20, 1991), USAALS folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

Equipment used at the USAALS but potentially needed elsewhere was identified and shipped out (i.e., AH-1 Cobra aircraft, 20-mm cannon, engine turbines, hub assembly main rotors, servo cylinders, and elevator horns).<sup>107</sup>

Like "robbing Peter to pay Paul," the AH-64 Apache helicopters used for training at the USAALS supplied critically needed parts in Southwest Asia (for example some item shipped were laser transmitter units (AH-64 LTU), intermediate gearboxes, and tail rotor gearboxes).<sup>108</sup>

Within the USAALS are the U.S. Army Aviation Branch's best and most-experienced personnel on the critical areas of aviation logistics and repair. Personnel at the USAALS provided information and expert assistance to mobilizing units and those already in Southwest Asia on emergency battlefield repair, downed aircraft recovery, and electronic vibration analysis equipment.<sup>109</sup>

The USAALS expertise was greatly in demand during the Persian Gulf war. As the center of all things maintenance, the USAALS had the knowledge to provide important input into the development of changes to the L-Series Table of Organization and Equipment (TOE). This series had been conducted under the Army of Excellence program whose central core was that the U.S. Army was going to be reduced in personnel over the next few years.

The number of personnel in aviation intermediate maintenance areas was understated in the L-Series TOE. Units already in the Gulf, and those preparing for movement, requested the USAALS to help determine which military occupational skills were truly needed. Experience in Southwest Asia had shown that the mix of

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<sup>107</sup> USAALS AAR.

<sup>108</sup> Ibid.

<sup>109</sup> Ibid.



occupational skills in maintenance and line units was not conducive to the maintenance problems that were being encountered.<sup>110</sup>

Key directorates within the USAALS provided support to the mobilization. The Material Logistics Systems Division advised both the USAAVNC and the Aviation Systems Command on the larger issue of identifying and supplying new aircraft ground support equipment.<sup>111</sup>

The USAALS provided, for example, input into the process that produced the following: aviation intermediate maintenance non-divisional shop sets, mobile army oil analysis system programs, battle damage assessment and repair kits, "clamshell" maintenance shelters, and aircraft vibration analyzers.<sup>112</sup>

In addition to expert advice on the above subjects, the USAALS also assisted in the testing and development of all of the following: U-Mark Sling System for main rotor head removal, filter systems for the aft avionics bay, canopy cover system to protect aircraft cockpits, camouflage net system for the entire aircraft, and NBC protection system for aircraft cockpits.<sup>113</sup>

Ask any aviator who flew in Southwest Asia. They will tell you that maintenance was both critical and outstanding. The personnel that repaired and serviced the AH-64 Apache, UH-60 Black Hawk, and CH-47 Chinook helicopters were the unsung heroes of the war. Without their untiring efforts to keep the fleet flying, critical parts of the plan for Operation DESERT STORM would not have been executed.

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<sup>110</sup> Ibid.

<sup>111</sup> Ibid.

<sup>112</sup> Ibid.

<sup>113</sup> Ibid.

The U.S. Army Aviation Logistics School was directly responsible for the professionalism and high level of training of U.S. Army aviation maintenance personnel. Even though they fired not one shot nor moved not one pound of cargo, they SERVED!

### Enlisted Training Battalion (ETB)

When Individual Ready Reserve enlisted personnel arrived at Fort Rucker for refresher training, the Enlisted Training Battalion (formerly the Department of Enlisted Training) was responsible for preparing them for their forthcoming deployment to Saudi Arabia. Like many of the departments and directorates on Fort Rucker, the Enlisted Training Battalion got the job done.

The Enlisted Training Battalion "experienced few problems during RT-12 soldier MOS certification."<sup>114</sup> The soldiers were "received in a manner that allowed...[pursuit of] the training strategy coordinated with USAALS."<sup>115</sup>

During Operations DESERT SHIELD and DESERT STORM, the Enlisted Training Battalion certified a total of 96 soldiers (out of 100 arrivals) in MOS 67N, 98 soldiers (out of 100 arrivals) in MOS 67V, and 3 soldiers (out of 3 arrivals) in MOS 93C. These soldiers had good qualifications coming in. More than 90 percent had been school trained, and 1987 was the median graduation date for their training. On the average, 52 percent of these soldiers had between two and five years of experience in their MOS. More than 60 percent of those soldiers tested received a "go" on their end-of-course test. However, there were some slight problems during training. For example,

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<sup>114</sup> Center for Army Lessons Learned (CALL), newsletter, No. 9202, (February 1992), "Mobilization of the Reserve Components (RC) For Operations Desert Shield and Desert Storm," U.S. Army Combined Arms Command, Fort Leavenworth, Kansas, p. vi.

<sup>115</sup> SGM Broder (ATZQ-DET), memo for Director, DPTMSEC, subj: RT-12 Mobilization Training - After Action Report, (March 14, 1991), DOET folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

"the incomplete information on soldier qualifications made the determination of training  
eds difficult or inaccurate in some cases. When inaccuracies were detected, immediate  
steps were taken to provide the necessary additional training." This individual treatment  
was necessary because "[the Enlisted Training Battalion personnel] were assured that [the  
soldiers] left qualified and confident in their ability to serve in an aviation maintenance  
assignment."<sup>116</sup>

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<sup>116</sup> Ibid.

## *CHAPTER FOUR*

### *THE LOGISTICIANS*

#### Directorate of Logistics (DOL)

For untold centuries armies in the field lived off the land, taking what they needed from the local inhabitants. Gradually as warfare became more complex and armies larger, more thought and planning was given to the matter of supplying armies with what food, munitions, etc. that was needed. The early history of the United States makes clear that General George Washington had numerous problems with obtaining needed supplies, not the least of which was obtaining support from the Continental Congress.

During the Civil War, commanders from both the North and the South devoted some strategic and tactical thinking not only to keeping their own forces supplied, but in interdicting supplies of the enemy. Logistics has now become an overriding concern for all military operations.<sup>1</sup> With complex weapons systems, which use extraordinary large amounts of spare parts and ammunition, commanders find that movement and mobilization are tied more than ever to what logistics can or cannot supply.

In the case of mobilization at the USAAVNC, the Directorate of Logistics (DOL), under the direction of Mr. Jerry Leavis, performed efficiently to insure that lack of logistical support did not handicap our forces. From mobilization to deployment and

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<sup>1</sup> For an appreciation of the importance of logistics in military history, see: Martin Van Crevald, *Supplying War - Logistics from Wallenstein to Patton*, (New York: Cambridge University Press, 1977), p. 112.

back again, the DOL met challenges—large and small. Throughout mobilization, their motto was "C 'V-F" (coordinate, anticipate, validate, and follow up).<sup>2</sup>

In a commercial activities study completed in 1983, the DOL projected how many personnel it would need to handle a mobilization. The number required totaled 550 and was a mixture of civilians and U.S. Army personnel. In 1983, the actual number of DOL employees was near 500. By the time of Operations DESERT SHIELD and DESERT STORM, the number of employees had dropped to between 365 and 370, even though in the opinion of the DOL's director, "we were at our most efficient organization."<sup>3</sup>

The USAAVNC's mobilization plan tasked the DOL to supply and service both individual mobilization augmentee personnel, entire table of distribution and allowances units, and their equipment. Since the full mobilization plan would not be implemented, instructions given to DOL personnel by its director were short, "[The] basic instructions the first day of mobilization were...do the job...do it well, use whatever assets [are necessary]...."<sup>4</sup>

The mobilization would have to be accomplished with fewer personnel because some key DOL civilian personnel were also reservists who were mobilized. For example, three individuals in the maintenance division were called to active duty (one of them happened to be the chief of simulator maintenance). The loss of these people was made up by reassigning personnel.<sup>5</sup>

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<sup>2</sup> Mr. Leavis, director, DOL, transcript of an oral interview conducted October 8, 1991, Oral Interview File. Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 49.

<sup>3</sup> Ibid., p. 1.

<sup>4</sup> Ibid., p. 6.

<sup>5</sup> Ibid., p. 34.

One of the early discussions at the Emergency Operations Center was to determine what requirements for additional personnel (either individual ready reservist or individual mobilization augmentee) would be needed by post organizations to assist the mobilization. The U.S. Army Training and Doctrine Command could not supply any immediate assistance because "[it] did not want to take away any of the members from the war fighting capabilities of the [commander-in-chief] in Southwest Asia and [the Department of the Army] was looking at a 200,000 ceiling."<sup>6</sup>

The DOL did receive some assistance from reserve personnel in October and November, but the individual mobilization augmentee personnel who arrived at Fort Rucker did so for their annually scheduled two-week tour of active duty and not as a result of a mobilization. Referring to these personnel, Mr. Leavis commented, "They were of some use to us, but it was very minimal. When you brought them up to speed on what we were doing, they were gone."<sup>7</sup>

During the first weeks of mobilization, the principal problem was not enough hours in the day. "Supply and maintenance had some people [who] worked extremely long hours."<sup>8</sup> During critical periods, it was possible to cross-level personnel. "If we needed someone in the Central Issue Facility (CIF), we would send...[warehouse personnel]...to the CIF. Folks that worked in the woodworking shops and the upholstery shops... did work as mechanics and mechanics helpers. We just reallocated resources within the DOL and then each one of the division chiefs reallocated within his own organization to meet the basic requirements at that particular time."<sup>9</sup>

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<sup>6</sup> Ibid., p. 1.

<sup>7</sup> Ibid., p. 2.

<sup>8</sup> Ibid., p. 7.

<sup>9</sup> Ibid.

Although reallocation often helped particular parts of the DOL handle periods of increased workload, it could not cover all the possibilities of the increasing time spent drawing equipment. Sometimes units had to spend more time at the Central Issue Facility.

The DOL handled the problem of longer hours very simply—to tell it like it was. The DOL warned the units that a greater amount of time would be necessary. Before units entered the Central Issue Facility, they were informed that it might take them a bit longer because the facility was sometimes short-handed. This pre-briefing system worked well because units then knew the problems beforehand and were willing to take that extra time.<sup>10</sup>

Almost every morning the director and division chiefs of the DOL would meet to discuss potential problems and decide where help was needed. Decisions were made concerning who got what help and when.

The DOL began mobilization with a thorny problem of a critical procurement. When they arrived, many Fort Rucker active, reserve, and guard units lacked desert camouflage battle dress uniforms. Many hours were spent by DOL personnel calling all over the country in order to find a direct source, or attempting through official channels to obtain the needed uniforms.

Their hard work paid off as few units departed without having their desert battle dress uniforms in hand once the DOL found a reliable source.<sup>11</sup> In some cases, though,

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<sup>10</sup> Ibid., p. 38.

<sup>11</sup> Mr. Leavis (ATZQ-DOL), after action report for the DOL - Desert Shield/Storm, Phase I August 9, 1990 - February 28, 1991, (May 29, 1991), Aviation Branch History Office, USAAVNC, Fort Rucker, AL. (This AAR is set out by divisions of the DOL and is hereafter referred to as "AAR-DOL," with the specific division identified.)

it was a near thing. More than once a truck was backed up to an aircraft so that DOL personnel could issue desert battle dress uniforms to the unit waiting on board.<sup>12</sup>

Other items of military clothing also had the DOL scrambling. For example, the Fort Rucker Army and Air Force Exchange Service (AAFES) clothing store supplied the various types of military boots that were in short supply. As Mr. Leavis remarked, "We got an awful lot of support and there are a lot of unsung heroes...AAFES was one of them. What we did was to go over to their clothing store and get boots and clothing from them, we swapped sizes with them, too."<sup>13</sup>

Through practice, the DOL developed a system that took the unit from its initial entry into Fort Rucker through all of the mobilization stages and then back out the front gate on the way to Saudi Arabia. This enabled representatives of the DOL to know what was needed by the unit at the earliest possible time. When a unit arrived at Fort Rucker, it was met by representatives of the DOL.

The Alabama National Guard would send from its state headquarters a representative versed in mobilization. He or she would assist the unit in its preparation for mobilization, and this attention to detail showed when the Alabama units arrived at Fort Rucker. Most of the units which mobilized at Fort Rucker had previous contact with the USAAVNC and the DOL through their mobilization exercise conducted every two years. This was invaluable experience as good working relationships were created by this face-to-face communication through the years.<sup>14</sup> Upon arrival, any requests for supplies would be accepted and also a time was set for the maintenance inspectors to

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<sup>12</sup> COL Hiatt, COL Roy, COL Belinge, et. al., transcript of an oral briefing conducted June 17, 1991, for BG Konitzer, subj: DESERT SHIELD/DESERT STORM, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 16.

<sup>13</sup> Mr. Leavis, interview, p. 16.

<sup>14</sup> Ibid., pp. 13, 24.



look at the unit's equipment, as many units did not have a properly authorized stockage list prior to deployment. According to the command sergeant major for the chief of U.S. Army Reserve, Command Sergeant Major Douglas E. Murray, "One company had 6000 requisitions on order to handle their mission (of which 850 was their normal load)."<sup>15</sup> At that time, the unit was also furnished with a reference sheet with all major divisions of the DOL with names, phone and building numbers to call or visit for assistance; the Emergency Operations Center was also included.<sup>16</sup>

For those supplies needed, an appointment was made for the unit at the DOL's Supply and Services Division. "Looking at equipment and weapons was a high, high priority. As soon as it got looked at, then we could work on the equipment there with or without the unit and move it over to our shops."<sup>17</sup>

The purpose for this operation was to get the DOL requirements and other details out of the way early so that the unit could concentrate the balance of its time at Fort Rucker on training. Sometimes a schedule of appointments for the unit would be completed in as little as 30 minutes.

During the unit's mobilization time at the USAAVNC, representatives of the DOL, including the director, made visits to the units. Regarding his visits to these units Mr. Leavis remarked, "I made it a point that I went around every day. I got out of the office and spent all of my time out there with the units."<sup>18</sup>

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<sup>15</sup> CSM Murray (DAAR-ZC), memo for MG Ward, subj: CSM, OCAR ODS Travel Report, 29 Dec 90 through 12 Jan 91, (January 14, 1991), ATB Lessons Learned folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>16</sup> Mr. Leavis, interview, p. 13.

<sup>17</sup> Ibid., p. 10.

<sup>18</sup> Ibid., p. 14.

Many times, this practice paid off. For example, some units had not checked the various heights of their equipment to insure that it would fit under bridges that would be on their route to the port of embarkation. Others did not check the road weights of their vehicles so that if it was overweight they could obtain waivers from the state concerned. All this had to be corrected before the convoy could depart. Such problems had everyone working hard to get things done right.<sup>19</sup>

During mobilizations, some things cannot always be anticipated. For example, the Iraqi chemical threat. Most units had protective masks for their personnel; however, many did not fit properly or individuals did not have the proper optical inserts.<sup>20</sup> Other masks had dry-rotted while in storage. This could not normally be determined until the unit passed through gas chamber exercises.<sup>21</sup> In the gas chamber a number of masks failed for one reason or another, and had to be replaced. Requests for replacements had to be short-fused.<sup>22</sup> Much of the DOL's operations involved just keeping track of things—like money, for example.

Mobilizations by their nature are very expensive. Recording the disbursement of funds for present and future planning required precise knowledge of what was spent and what was acquired. As the units arrived and funds were required to support that unit, the DOL established a system to track money from beginning to end.

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<sup>19</sup> Ibid., p. 15.

<sup>20</sup> Protective masks are not designed to fit over glasses, but do have the capability to install prescription inserts. Few reserve units until mobilization had ever bothered with obtaining inserts.

<sup>21</sup> Units perform gas chamber exercises with tear gas to check the fit and screening ability of the mask. Personnel are given briefings, and properly fit their mask before entering the chamber.

<sup>22</sup> Mr. Leavis, interview, p. 12.

The Resource Management Division of the DOL established more than 150 accounting processing codes to identify and track Operations DESERT SHIELD and DESERT STORM costs. All active, reserve, and guard units which mobilized at Fort Rucker established accounts with the DOL and were provided fund cites as necessary.<sup>23</sup>

The Plans and Operations Division of the DOL maintained all the logistics-related mobilization data for the 30 U.S. Army Reserve and National Guard and 3 active U.S. Army units that mobilized at the USAAVNC. The division maintained unit equipment readiness information for deployment, and coordinated the movement of the equipment from Fort Rucker to the port of embarkation. The division operated continuously at the Emergency Operations Center to handle any last minute problems or emergencies.<sup>24</sup>

In addition to providing assistance to active and reserve units, the DOL also supported individual ready reservists. The Supply and Services Division of the DOL provided personnel for DOL-operated preparation for overseas replacement sites to issue all the necessary clothing and equipment for each individual reservist who was processed through Fort Rucker.

Included in the issue were much of the individual soldier's equipment, uniforms, and other military issue items not in possession upon arrival.<sup>25</sup> The Central Issue Facility provided personnel within the Individual Ready Reserve 352 full issues of clothing and 110 full issues of flight uniforms.<sup>26</sup>

Another vital service provided by the Supply and Services Division was ammunition. The National Guard and U.S. Army Reserve units at Fort Rucker not

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<sup>23</sup> AAR-DOL, RMD Division.

<sup>24</sup> AAR-DOL, POM Division.

<sup>25</sup> AAR-DOL, SSD Division.

<sup>26</sup> Ibid.

only needed to take ammunition with them to Southwest Asia, but also to have a supply of ammunition for training conducted during mobilization.<sup>27</sup> The Supply and Services Division's ammunition supply points obtained basic load ammunition, as well as what was needed by the unit to train.<sup>28</sup>

Ammunition problems surfaced. As Mr. Leavis commented in a post-mobilization interview, "Some units came in here that [the DOL] did not support.... [These units] had some problems with their ammunition."<sup>29</sup> The principal problem was that the units which had not before been associated with the USAAVNC brought only their basic load of ammunition, and no additional ammunition for training purposes. Fort Rucker kept only enough ammunition on hand for summer training requirements for the reserve units for which it was responsible.

Mobilization greatly increased the need for training ammunition supplies nationwide.<sup>30</sup> Some of these new units contemplated using part of their basic load for training which was a distinct "no-no." By scouring the supply system, the DOL was able to keep up with this throughout mobilization. Equipment was another problem.

Arriving reserve units brought all equipment with them. In many instances, this equipment was not up to U.S. Army standards. The Maintenance Division of the DOL operated well past closing time while units were passing through Fort Rucker to Southwest Asia.

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<sup>27</sup> U.S. Army Reserve and National Guard units do not stock a basic load of ammunition in their armory or home station. Most lack the necessary storage and security. For training and mobilization, they have to draw ammunition from other sources.

<sup>28</sup> AAR-DOL, SSD.

<sup>29</sup> Mr. Leavis, interview, p. 32.

<sup>30</sup> Ibid.

Because of the critical importance of their job, the Maintenance Division set high standards. As Mr. Leavis related, "If it looked like it needed it, looked like it had seepage, things that might be perfectly acceptable for a REFORGER exercise, I said no. I wanted them replaced and I wanted to make sure that everything was 100 percent tip top. My instructions were to fix it like your life depended on it because some of the kids' lives might depend on it."<sup>31</sup>

The DOL changed over 1000 tires on unit vehicles. If the tire even seemed like it might cause problems, it was changed. Many of the tires needed changing because the vehicle had not been driven for a long time, and dry-rot had set in.

The problem was that these tires were special cross-country tires made for the military, so the DOL could not go to the nearest truck tire store. It was the same for similar rubber products. Many had been stored for so long that when they were finally brought out and checked prior to movement to Fort Rucker, they were inoperative.<sup>32</sup>

The DOL's Maintenance Division provided 100 percent inspections to all individual and unit equipment, and repaired them, processing 69,045 separate parts requests. All inspections were done according to established standards so that the equipment was fully deployable when the unit left Fort Rucker.<sup>33</sup> The DOL also cared for the unit's weapons.

A total of 1247 individual and crew-served weapons were inspected and repaired by the Maintenance Division of the DOL. Those that could not be repaired at Fort Rucker were sent to more complete facilities at Fort Benning and returned prior to the

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<sup>31</sup> Ibid., p. 9. (REFORGER: Return of Forces to Germany)

<sup>32</sup> Ibid., p. 17.

<sup>33</sup> AAR-DOL, Maintenance Division.

unit's departure.<sup>34</sup> Weapons were not the only critical item that the DOL checked and fixed.

A unit which cannot communicate is a unit that cannot perform its mission. All radios and communications gear of mobilizing units was checked by the Electronics and Communication Branch, Maintenance Division, DOL. A total of 1189 radios and 1592 night vision goggles were checked and/or repaired.<sup>35</sup> Unit equipment was not the only responsibility for the DOL. Individual soldiers mattered as well.

In addition to entire units, the DOL also carried some responsibility for supporting Individual Ready Reserve and retiree personnel. In addition to providing the necessary gear, the DOL had to set up a transportation system using military buses to transport individuals. Since personnel were billeted in Daleville and Enterprise, Alabama, buses had to be sent to pick them up, bring them to post, and return them to their billets at night.<sup>36</sup>

The DOL inspected and repaired rotary-wing aircraft which was to be deployed to Southwest Asia. Most of the aircraft belonged to the "Flying Tigers" of the 2-229th Attack Helicopter Battalion. The majority of the detailed maintenance on the 2-229th's AH-64 Apache and UH-60 Black Hawk helicopters was performed by DynCorp under contract with the DOL.

From August 9 through September 4, 1990, DynCorp worked nearly around the clock on the 2-229th's aircraft. They completed major phase inspections on two AH-64 Apache and four OH-58C Kiowa helicopters in less than three days. A normal phase inspection of an AH-64 Apache takes eight to ten days.

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<sup>34</sup> Ibid. Also see: Mr. Leavis, interview, p. 29.

<sup>35</sup> AAR-DOL, Maintenance Division, Electronics and Communications Branch.

<sup>36</sup> Mr. Leavis, interview, p. 28.

DynCorp also established a training program for 2-229th Attack Helicopter Battalion personnel to assist them in preparing their aircraft. The contractor also set up a maintenance support cell on the airfield to provide instant, expert assistance on a continual basis.<sup>37</sup> DynCorp personnel worked 1220 man hours to prepare the 2-229th for deployment to Saudi Arabia.<sup>38</sup>

The DOL did not merely service active aviation units. National Guard and U.S. Army Reserve aircraft were also inspected and repaired by DynCorp. Elements of the U.S. Army Reserve's 33d Aviation Group (Combat), headquartered at Knox Army Airfield, Daleville, Alabama, benefitted from contractor expertise. The UH-60 Black Hawk helicopters of that unit were prepared and serviced prior to deployment overseas.<sup>39</sup> When all the inspections and training were completed, equipment and their users had to be transported by the DOL to where they were needed in Saudi Arabia.

Once individuals and units finished their mobilization training, the Transportation Division of the DOL took charge and provided 956 bus runs and 81 cargo runs during the mobilization, driving a total of 93,761 miles carrying 48,828 passengers.<sup>40</sup>

Shipping entire units and their equipment to Saudi Arabia was the responsibility of the DOL's Transportation Division, Unit Movements Branch. This branch was directly responsible for shipping 3,296 unit members and 14,098.2 short tons by air and

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<sup>37</sup> AAR-DOL, DynCorp.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid. In addition, DynCorp also serviced the aircraft of Detachment 1, 6/159th Aviation Battalion, and those of Company B, 224th Aviation Battalion of the Virginia National Guard.

<sup>40</sup> AAR-DOL, Transportation Division.

sea respectively. In addition, a total of 24,000 pounds of other equipment was shipped by air.<sup>41</sup>

Flexibility was vitally important in the Uni. Movements Branch's mission. Normally, shipping schedules were laid out in two-week periods, "but yet there was no average because [it depended] on what the [commander-in-chief's] requirements were and what the call forward requirements were, and...the availability of shipping."<sup>42</sup>

One unit, a water purification company, had problems because their equipment was already packed in depot-built crates. "The size of the crates was too big to load on a pallet to go on a C-130 aircraft. Therefore, the equipment had to be broken down into smaller packages and loaded on the aircraft."<sup>43</sup>

To support the Units Movements Branch, the DOL set up a cell of two personnel at Lawson Army Airfield, Fort Benning, Georgia, to help "because we wanted to insure that the folks that were leaving out of here went out...to be sure all of the pallets were up there, that there were no problems with weapons, that arrangements had been made for food, sleeping, [etc.]."<sup>44</sup>

A similar cell of three to four personnel was also set up at the port of Jacksonville, Florida, where equipment was being loaded on ships for movement to the Persian Gulf. When Mr. Leavis visited the port he found problems. "There was so

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<sup>41</sup> Mr. Leavis (ATZQ-DOL), memo for DPTMSEC, ATTN: POMD, subj: Lessons Learned from Operation Desert Shield, (May 29, 1991), DOL folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>42</sup> Mr. Leavis, interview, p. 19.

<sup>43</sup> Ibid., p. 20.

<sup>44</sup> Ibid., p. 3.



much equipment coming in from so many different locations that they were overwhelmed."<sup>45</sup>

Other problems had to be handled such as vehicles breaking down during the movement to the port. Since they were not ready for shipment with the unit's other materiel, the vehicles would have to be repaired (by DOL personnel), and then sent on another ship. It was imperative to keep track so that the unit in Saudi Arabia would know which ship contained its missing vehicles.<sup>46</sup>

These cells would work with each unit as it moved to its port of embarkation. When one unit was loaded, the cell would return to Fort Rucker to assist the next unit to deploy and move with them to the port of embarkation.

Many of the directorates on Fort Rucker not only had to support the mobilization, but perform their normal day-to-day functions. The DOL was no exception. At the same time the DOL was assisting in the departure of units from Fort Rucker and assisting at Camp Shelby, it was also shipping National Guard equipment to Panama. This necessitated the formation of another action cell at the port of Mobile, Alabama.<sup>47</sup>

To ship equipment required, the Unit Movements Branch would schedule either military trucks or hire civilian tractor-trailers to take the equipment to the port. In some instances, they had to get permission from states through which the convoys passed to move large equipment to the port (this applies mostly to the states of Alabama, Georgia and Florida).<sup>48</sup> Individual reservists who traveled to bases within the United States or

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<sup>45</sup> Ibid., p. 3.

<sup>46</sup> Ibid.

<sup>47</sup> Ibid., p. 4.

<sup>48</sup> AAR-DOL, Unit Movement Coordinator.

to Southwest Asia were the responsibility of the Personnel Movements Branch of the DOL. During the mobilization period, this branch requested 1265 port calls, processed 411 passport requests, and prepared 4092 travel documents. The branch also was responsible for the movement of 2824 passengers by chartered bus and 263 by air.<sup>49</sup>

To support Operations DESERT SHIELD and DESERT STORM, the DOL spent a total of \$18,028,517. These funds purchased repair parts, supplies, petroleum, oil, lubricants, and equipment to support all of the various parts of the DOL's contribution to mobilization.<sup>50</sup>

When many of the civilian personnel worked beyond the normal eight hours, they were paid overtime. For example, the simulators were used overtime to prepare pilots for flying in the area of the Persian Gulf. "In addition to the school house hours we provided just under 4000 hours of extended training, which is overtime. The contractor was paid overtime for these hours."<sup>51</sup>

Because of the pressures of mobilization and the lack of backup personnel, some support provided to Fort Rucker had to be curtailed or stopped altogether. "It was like command supply discipline program. Things like the forestry equipment...we did not have time to do that so we just did not do it. When we had a lull, we would...help support the installation, but from our standpoint we were on a wartime footing so we just continued to press and some of the things that we would have normally done we just didn't do and we put our assets where the requirements were."<sup>52</sup>

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<sup>49</sup> AAR-DOL, Personnel Movement Branch.

<sup>50</sup> AAR-DOL, Resource Management Division.

<sup>51</sup> Mr. Leavis, interview, p. 27.

<sup>52</sup> Ibid., p. 36.

In the final analysis, mobilization was a "total U.S. Army effort. The Alabama and Mississippi National Guard...[helped] in anyway in recovering or getting any piece of equipment to us. They did an excellent job."<sup>53</sup> The same could be said of the U.S. Army Reserve. The ultimate importance of logistics is best summed up by a sign outside the 82d Airborne Division Support Command, "Try to Fight a War Without Us."

One of the hard lessons of modern logistics was the fact that the task was great and involved so much equipment, spare parts, and money that some type of accounting had to be kept. The organization at the USAAVNC that tracked the expenditures of the DOL, as well as other mobilization components of the USAAVNC that supported Operations DESERT SHIELD and DESERT STORM, was the Directorate of Resource Management. They faced a herculean task.

#### **Directorate of Resource Management (DRM)**

During Operations DESERT SHIELD and DESERT STORM, the U.S. Army Aviation Branch battled on two fronts: one against the Iraqi Army in Southwest Asia; the second right at Fort Rucker. Prior to Operations DESERT SHIELD and DESERT STORM, the U.S. Army had begun downsizing in response to congressional mandates and reduced funding authorizations. While money was made available to support Operations DESERT SHIELD and DESERT STORM missions at Fort Rucker, other operations were cut.

Guidance from the U.S. Army Training and Doctrine Command on future funding was not encouraging, stating that it had "stripped all possible funds from [headquarters] withholdings to pay bills. This reduced the amount of additional decrement to the field by 45 percent, but also eliminated [headquarters'] capability to

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<sup>53</sup> Ibid., p. 22.

address unfinanced requirements."<sup>54</sup> Fort Rucker was also ordered to cut travel by 25 percent, and apply a 2 percent reduction to civilian pay.<sup>55</sup>

In the arena of training, "Chief of Staff, Army guidance is to execute initial entry training, [noncommissioned officer] education system and leader development training.... Funding distributed to the field is generally sufficient to support this guidance, consistent with fiscal year 1990 level of effort. Funds are not available to support new or enhanced training."<sup>56</sup>

One of the cornerstones of U.S. Army Aviation, the Directorate of Combat Developments, absorbed a funding cut without changing mission. A memorandum for the U.S. Army Training and Doctrine Command expressed it this way. "Although the combat development mission has not changed and the [concept-based requirement system] process is still valid, the reduction in overall funding will decrease the level of effort that can be afforded for...products [both contract and in-house capability]. We must focus on what is most important to the [U.S. Army Training and Doctrine Command] mission."<sup>57</sup>

In the area of requirements for Operations DESERT SHIELD and DESERT STORM, the Directorate of Resource Management had to keep track of all funding used specifically to support mobilization and deployment of units and equipment to Southwest Asia.

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<sup>54</sup> MG Hagwood (ATRM-BF), memo for SEE DISTRIBUTION, subj: FY 91 Appropriation Budget and Manpower Guidance, (December 21, 1990), DRM folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

<sup>55</sup> Ibid.

<sup>56</sup> Ibid., p. 3.

<sup>57</sup> Ibid., p. 7.

At regular intervals, the DRM was required to submit reports consisting of the following information:

- a. actual obligations with explanation for each;
- b. revised fiscal year 1991 Operation DESERT SHIELD cumulative cost estimate with explanations; and
- c. revised annual cumulative savings available for withdrawal.<sup>58</sup>

Much of the financial planning for Operations DESERT SHIELD and DESERT STORM required the Department of the Army and its subordinate agencies (one of which is the U.S. Army Training and Doctrine Command) to project costs over a long period of time. As a consequence of this, in a message dated December 5, 1990, the U.S. Army Training and Doctrine Command required Fort Rucker to "report on...[fiscal year] 1991 actual cost through December 1990, projected cost through March 1991, projected cost through September 30, 1991, and projected savings through September 30."<sup>59</sup>

Although the funds being disbursed by Fort Rucker in support of Operations DESERT SHIELD and DESERT STORM were basically coming from Fort Rucker allowances, these financial transactions had to be budgeted and planned as separate items. Since Operations DESERT SHIELD and DESERT STORM were combat operations being funded from Department of Defense appropriations and from outside

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<sup>58</sup> MAJ Cole, PROFS message, subj: Desert Shield Message #15 (December 5, 1990). DRM folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>59</sup> LTC Whitson (ATZQ-R), after action report for DRM (1991), see U.S. Army Training and Doctrine Command message cited in chapter VII - Appendix I, Finance and Accounting Division section of the 1991 DRM AAR, DRM Folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 4.

contributions, it had to be planned for, tracked, disbursed, and accounted for separately because these funds would be reimbursed.

For example, Fort Rucker received from the U.S. Army Training and Doctrine Command, in a funding authorization document, a total of \$5,197,000 in reimbursement for Operations DESERT SHIELD and DESERT STORM costs. A total of \$116,000 of this was withdrawn as a "result of reported Operation DESERT SHIELD/DESERT STORM savings."<sup>60</sup> Funding for the mobilization of reserve personnel (i.e., pay and allowances) did not come from the U.S. Army Training and Doctrine Command, but from U.S. Army Forces Command funds, along with \$15,513,300 used for Operation DESERT SHIELD costs.<sup>61</sup>

The Finance and Accounting Division of the DRM maintained the pay records of 1000 deployed soldiers and Department of the Army civilians, while also absorbing the added administrative burden of 6166 U.S. Army Reserve and National Guard soldiers.<sup>62</sup> The size of the Finance and Accounting Division totalled only 28 military and 104 civilians to handle all records.

The workload peaked rapidly because, in addition to individual pay records, soldiers who needed advanced pay and entitlements had to be processed as well. This required the soldiers and civilians in the Pay and Exam Branch and the Quality Assurance Branch to work a considerable amount of overtime.<sup>63</sup>

To support the expanded finance effort at Fort Rucker, the 210th Finance Support Unit of the Mississippi National Guard was called to active duty. "This unit

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<sup>60</sup> Ibid., p. 5.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid., p. 1.

<sup>63</sup> Ibid.

contributed greatly to this effort so that mobilization for Operation DESERT STORM was accomplished with minimum adverse effect on normal operations."<sup>64</sup>

Travel pay was another area of maximum effort. During normal times, the Travel Section can manage all the travel vouchers of personnel at Fort Rucker. However, when thousands of U.S. Army Reserve personnel are involved (many of whom have to travel to their next duty station or to Southwest Asia), along with the normal workload, a considerable amount of overtime is needed. The Finance and Accounting Division, in a manuscript written by them after Operations DESERT SHIELD and DESERT STORM, described travel in the following words, "There was a dramatic shift from routine, mission-related travel to travel in support of DESERT STORM. Travel support consisted of advanced pay for temporary duty when individuals were needed at another installation. The Travel Section's support of DESERT STORM also included payments for personnel from several directorates who were sent to Camp Shelby, Mississippi."<sup>65</sup>

Individual soldiers had to be paid for travel and their duty, as well as contractors and other agencies outside of Fort Rucker that supplied goods and services. The section that was responsible for insuring payment was the Accounts Payable Section. "Specifically, an extra 150 purchase orders and 65 blanket purchase agreements, as well as additional imprest fund payments and increased requests for postage, were processed in the section. Activated and deployed soldiers required an increased number of payments for storage and movement of household goods. Uniforms, meals, and other necessities were purchased for...soldiers as they were transported...."<sup>66</sup>

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<sup>64</sup> Ibid., p. 2.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid., p. 3.

The Finance and Accounting Division, through its Disbursing Branch, not only dispersed money to soldiers and individuals, but also caused money to be paid on support vouchers from other directorates on post—most notably the Directorate of Logistics. "The Disbursing Branch received and disbursed thousands of vouchers produced by other branches. There was a 21 percent increase in the number of payments made in January over December...[creating] the need for approximately 1000 extra accounting processing codes to capture detailed cost data associated with Operation DESERT STORM."<sup>67</sup>

What the Finance and Accounting Division was doing to support Operations DESERT SHIELD and DESERT STORM was being mirrored all over the country. Since money and requirements was often shifted from one post to another, the U.S. Army's computerized finance system assisted in this. The Standard Finance System and the Standard Army Financial Inventory Accounting and Reporting System provided other installations with "listings of each Department of Defense activity address code (DODAAC) and the dollar amount transferred by fiscal year. Seven transfers involving more than 100 DODACCs, each...individually researched..., were processed."<sup>68</sup>

As of March 31, 1991, total Operations DESERT SHIELD and DESERT STORM expenditures of funds supplied by the U.S. Army Training and Doctrine Command totalled \$13,025,719 with a further increase of \$6,797,778 expended after March 31. The USAAVNC expended a total of \$21,148,320 in U.S. Army Forces Command funds.<sup>69</sup>

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<sup>67</sup> Ibid.

<sup>68</sup> Ibid., p. 4.

<sup>69</sup> Ibid.



*CHAPTER 5*  
*THE MEDICS*

**U.S. Army Aeromedical Center (USAAMC)**

In addition to handling normal workloads of patients, the U.S. Army Aeromedical Center (USAAMC) was also tasked to provide all medical support and perform physicals on the thousands of reserve component personnel mobilizing at Camp Shelby, Mississippi. The principal part of the USAAMC which handled this task was U.S. Lyster Army Hospital.

Although the deputy commander for clinical services, Colonel Roland "Bud" Weisser had his hands full taking care of the Fort Rucker mobilization process, he was called to assemble a team to deploy to Camp Shelby to ready the Mississippi National Guard for participation in Operation DESERT SHIELD.

**U.S. Lyster Army Hospital**

For U.S. Lyster Army Hospital, Operation DESERT SHIELD came at an inopportune time. When the army of Saddam Hussein marched into Kuwait and the United States government responded by alerting the 82d Airborne Division and the 101st Airborne Division, Colonel Kreutzmann, the U.S. Lyster Army Hospital commander, had some immediate concerns. "Before Operation DESERT SHIELD started, we had just gone through our summer shortage. We had several new physicians in the Flight Surgeons Course scheduled to work here. The other ones were those rotated, going to specialties, and leaving the U.S. Army."<sup>1</sup>

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<sup>1</sup> COL (Dr.) Kreutzmann, commander, U.S. Army Lyster Hospital, transcript of an oral interview conducted December 17, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

It was on a Saturday night when Colonel Kreutzmann was contacted and directed to provide three flight surgeons to the 101st Airborne Division no later than the following afternoon for deployment to Southwest Asia. Colonel Kreutzmann remarked, "I got hold of the three flight surgeons, all after nine o'clock on Saturday night, asked if they had heard of the professional officer filler system, and told them that they were going to Fort Campbell and on to a probable conflict."<sup>2</sup>

The next morning, all three surgeons completed the preparation for overseas replacement processing, and said goodbye to their families. The hospital commander, in his personal Mooney 231 aircraft, flew the three flight surgeons to Fort Campbell, Kentucky, in time to deploy with the 101st Airborne Division.<sup>3</sup> Although the hospital was already shorthanded, the loss of the three physicians was not catastrophic. The situation was, however, to worsen.

The following week, U.S. Lyster Army Hospital was asked to provide an additional five flight surgeons, since most of the U.S. Army's active flight units deploying to the Persian Gulf required aviation medical support. Dr. Powell (MAJ, MC/FS), Lyster's chief of medicine, was assigned as the commander of Headquarters and Support Command, 326th Medical Battalion, 101st Airborne Division (Assault) leaving from its home at Fort Campbell.

While mobilizing units were decimating Lyster's medical staff, units from Fort Rucker were deploying at the same time and needed medical screening prior to departure. These units were somehow accommodated. The "can do" spirit fostered by Colonel Kreutzmann continued because Lyster provided the 2-229th Attack Helicopter Battalion

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<sup>2</sup> Ibid., p. 2.

<sup>3</sup> Ibid.

with nearly \$18,000 in medical supplies, as well as medical books and other medical items.<sup>4</sup>

When the 46th Engineer Battalion was preparing to deploy, another U.S. Lyster Army Hospital physician, Dr. Robert Rudin (Captain, Medical Corps), was assigned to that battalion. To exacerbate the situation, word reached Lyster that National Guard and U.S. Army Reserve units would soon be mobilizing not only through Fort Rucker, but also at Camp Shelby, Mississippi, and would be in need of medical screening.

Colonel Kreutzmann was in a quandary. Although the USAAVNC had a mobilization plan, that instrument would take effect only for a full mobilization, not the partial one that was ongoing. At first, Lyster had no back-up personnel. As Colonel Kreutzmann said, "the post took a lot of it out of their hide."<sup>5</sup>

Before long, lines of mobilized reservists appeared at Lyster for overseas processing and needed hearing evaluations, blood tests, immunizations, urinalyses, chest x-rays, and physical exams. If the reservist had a problem, he or she was immediately routed to the appropriate specialist for evaluation of suitability to deploy to Southwest Asia.<sup>6</sup>

As mobilization continued, more of the Lyster staff was taken away from the hospital and sent to other areas or overseas. Reserve medical personnel had to be activated to take their place. In a post-Operation DESERT STORM interview, Colonel Kreutzmann related the importance of reservists to medical care at Fort Rucker. "We had...187 out of 230 or so of our military people replaced by reserve people, mainly the 3344th General Hospital.... All but 13 or 14 of our physicians were replaced by reserve

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<sup>4</sup> Ibid.

<sup>5</sup> Ibid., p. 46.

<sup>6</sup> Ibid., p. 4.

physicians...recalled to active duty. In fact, we had six physicians that liked what they saw when they came on active duty...and applied and we accepted for active duty."<sup>7</sup>

Colonel Kreutzmann found the reserve medical personnel to be exceptional. "It only took them a short time to learn our system.... I would say that reservists gave us some skills that we don't normally have.... We had some very good reservists.... People liked them, and, in fact, the problem [began] when we sent them back home."<sup>8</sup>

With the twin problems of supplying medical personnel to mobilizing units and conducting medical screening for hundreds of reserve personnel arriving daily, mobilization did not relieve the U.S. Lyster Army Hospital from caring for those military personnel who remained at Fort Rucker, their dependents, the dependents of those who deployed, the dependents of reserve personnel called to active duty, nor retirees. Through the mobilization, Lyster "maintained about 40 to 50 people on the wards.... We probably [had] 15 to 20 outpatient surgeries a day."<sup>9</sup>

Some patients were cured without surgery because Lyster possessed special equipment which obviated the need for surgery. Lyster is one of only four hospitals in the Department of Defense system that has a hyperbaric chamber. This particular medical system saved limbs of two soldiers wounded in the Persian Gulf who would have otherwise needed amputation. The two wounded soldiers were sent to Lyster from the Eisenhower Medical Center. Both had stepped on land mines, and their "injuries were such that they had infection and their skin flaps had broken down. Below the knee amputations were being considered." The two were treated in the hyperbaric chamber,

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<sup>7</sup> Ibid., p. 6.

<sup>8</sup> Ibid., p. 7.

<sup>9</sup> Ibid., p. 8.

and the infection was eliminated in a matter of days.<sup>10</sup> "They got better, and they walked home with no cane or crutches."<sup>11</sup>

To further support medical needs in the Persian Gulf, U.S. Lyster Army Hospital began a blood collection drive to support Operation DESERT STORM. "Since January, about 500 units [were] given at the blood donor center." Luckily, blood transfusions were not widely needed by the troops during combat, but Lyster stood ready to help supply the need.<sup>12</sup>

It has been said that the "umbilical cord never breaks." This was certainly true in the case of Lyster physicians sent to the Gulf and their relationship with the USAAVNC. They would pick up the phone and call back to Colonel Kreutzmann with medical information and requests for assistance. Lyster had hard-to-get medical supplies and also considerable experience in determining medical flight status. "A lot of flight surgeons would call the Army Aviation Medical Activity (AAMA) of the USAAMC and ask if they could put someone on flight status based on one problem or another. They would ask for supplies. I know I sent medical supplies to our physicians who couldn't get them over in the desert, but who knew that we had them in our supplies. So, I would send care packages."<sup>13</sup>

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<sup>10</sup> The two soldiers were put in the chamber under 2.5 atmospheres or more of pressure and 100 percent oxygen. This allows the oxygen to diffuse through tissues that are injured or crushed despite the circulation. The chamber kills the infection and promotes healing.

<sup>11</sup> COL (Dr.) Kreutzmann, interview, p. 11.

<sup>12</sup> Wanda Reynolds, "Blood Program Response Good," *Army Flier* [Fort Rucker, Ala.] (February 28, 1991): p. 4A.

<sup>13</sup> COL (Dr.) Kreutzmann, interview, p. 16.

One of the important missions of the USAAMC was to insure that all personnel were healthy and capable of deployment to Saudi Arabia. In all active and reserve units that mobilized at both the USAAVNC and Camp Shelby, Mississippi, there were some personnel who were medically unfit to deploy with the unit. Personnel assigned to the medical hold company proved to be a continuing problem. They were soldiers who "[had] an injury or an illness and [were] not able to perform in their unit that [needed] a medical evaluation board and a physical evaluation board to decide if they [were] fit for duty or [were to be] given a disability."<sup>14</sup>

During the mobilization, individuals in this category would be returned to their units, and the unit commander would be advised by U.S. Lyster Army Hospital personnel that the individual was "not fit for active duty in accordance with U.S. Army regulation [number] 4501."<sup>15</sup> These soldiers were then released from active duty and sent home. Most reservists who were declared to be medically unfit for deployment were very unhappy as they wanted to go with their unit to Southwest Asia.

One sergeant first class, who was critical to his unit, had a severe prostate problem. He wanted to go and his commander supported him. Strictly on medical grounds, he should not have deployed. For this soldier and others like him, Colonel Kreutzmann said, "...we pulled him out of the line up, treated him and fixed him the best we [could] and then put him back in the game."<sup>16</sup> Being soldiers as well as physicians,

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<sup>14</sup> Ibid., p. 42.

<sup>15</sup> Ibid., p. 45. This is the chapter which describes the fitness for and individual to be mobilized or to be brought on active duty. U.S. Lyster Army Hospital used the retention chapter of the regulation because the Department of Defense never said the Army was mobilizing.

<sup>16</sup> Ibid., pp. 48-49. COL Kreutzmann's office received numerous calls from unit commanders requesting that a particular individual, who was on medical hold, be taken  
(continued...)

the USAAMC staff knew the feeling of soldiers left behind when their unit departed for the front. The U.S. Lyster Army Hospital was not the only medical facility that was experiencing problems in mobilization. Fort Rucker's Dental Activity was having parallel successes and problems.

#### U.S. Army Dental Activity (DENTAC)

The U.S. Army Aviation Medical Activity was not the only medical operation on post that was strained to the limit during Operations DESERT SHIELD and DESERT STORM. The USAAVNC Dental Activity (DENTAC) also experienced problems.

The authorized table of distribution and allowances for the DENTAC was 30 military and 30 civilian personnel. At the time of Operation DESERT SHIELD, 12 of the 30 military personnel were dentists.<sup>17</sup>

The "U.S. Army DENTAC commenced operations in support of [Operations DESERT SHIELD and DESERT STORM]" on August 9, 1990.<sup>18</sup> The mission of the DENTAC during mobilization was "to take care of what mobilization occurs here at Fort Rucker, and additionally, a mission at Camp Shelby, Mississippi."<sup>19</sup> The operational concept was "to provide dental exams to all soldiers, ensure all PANOREXs

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<sup>16</sup>(...continued)

with the unit—a one-of-a-kind technician, etc. It was very difficult to make the commanders understand why this individual could not go.

<sup>17</sup> COL (Dr.) Childress and LT Tanner, U.S. Army Dental Activity, transcript of an oral interview conducted January 30, 1992, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

<sup>18</sup> LT Tanner (HSBZ-DD), memo for SEE DISTRIBUTION, subj: After Action Report (Narrative) for Operation Desert Shield/Storm, Phase I - August 9, 1990 to February 28, 1991, (May 15, 1991), DENTAC folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>19</sup> COL (Dr.) Childress and LT Tanner, interview, p. 1.

were current and confirmed, and to eliminate dental classification three (Class 3) conditions."<sup>20</sup> It was not expected at the time that personnel from Fort Rucker would have to travel to assist at Camp Shelby, as it was planned that mobilized dental units would handle mobilization there with minimal help from the USAAVNC.

When he took command, Colonel (Dr.) Childress became familiar with the DENTAC's mobilization mission and made it a priority to visit Camp Shelby to inspect their dental facilities. After visiting Camp Shelby, Colonel (Dr.) Childress came to the conclusion that there was no way the USAAVNC's DENTAC could take care of mobilization at both the USAAVNC and Camp Shelby. The DENTAC did not possess the necessary equipment to perform both missions.<sup>21</sup>

Colonel (Dr.) Childress was quite surprised, then, to get a call saying that his unit would now have to support Camp Shelby as the dental reserve units he had expected to arrive there would not be coming.<sup>22</sup> After a flurry of phone calls concerning potential reserve support for his unit, and then some "stand down, then go" orders, Colonel Childress acted to prepare the DENTAC for both missions. "We purchased eight off-the-shelf, portable dental units and all the stuff that goes with that. We were given the funds to do that and basically we worked with our portable equipment."<sup>23</sup>

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<sup>20</sup> LT Tanner, memo (May 15, 1991). A Class 3 dental condition is an acute problem that will require the soldier to undergo major dental care which will result in some loss of duty time in the next 12 months.

<sup>21</sup> COL (Dr.) Childress and LT Tanner, interview, p. 2.

<sup>22</sup> The Operation DESERT SHIELD mobilization was ONLY a partial call-up. Across the Army, plans developed for this type of a contingency were predicated on a FULL mobilization. Only under those circumstances could support units such as those dental activities slated for Camp Shelby.

<sup>23</sup> COL (Dr.) Childress and LT Tanner, interview, p. 3. Also see: LT Tanner, memo (May 15, 1991).



However, equipment was only part of the equation. Personnel from the U.S. Army Reserve were needed, primarily for Camp Shelby, and needed immediately. The U.S. Army Reserve dentists called to active duty did so at some cost to themselves and their private practices. In an interview, Colonel (Dr.) Childress spoke of the problems of reserve dentists. "The guys in private practice did bear some hardship and that was a concern for them...some of them managed it better than others."<sup>24</sup>

An immediate problem that quickly surfaced was the difference in dental health between regular army and reserve forces personnel. Reserve personnel had far more Class 3 dental problems than did regular army personnel. Reserve personnel are not reimbursed by the government for dental visits, so many had not seen a dentist for years. There were, however, exceptions.

One reserve unit, according to Colonel (Dr.) Childress, had a low Class 3 rate. The DENTAC commander talked to the unit's first sergeant and asked him about this low rate. The first sergeant replied, "I consider having good dental health as a part of readiness and I have emphasized it to my unit. Even though as reservists we don't have dental benefits from the military, I have emphasized this and made sure that they got their work done. I think that a lot of the people in the unit...had a dental plan [with their civilian employer]."<sup>25</sup> When problems occurred during mobilization, there was only one way the DENTAC could handle them—solve 'em!

One of the quickest ways during the mobilization to make problems disappear was establishing good coordination between the DENTAC and all the Fort Rucker directorates. Overall, Colonel (Dr.) Childress was well pleased with the cooperation he received from the 1st Aviation Brigade, 1/10th Aviation Regiment, the Directorate of

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<sup>24</sup> COL (Dr.) Childress and LT Tanner, interview, p. 6.

<sup>25</sup> Ibid., p. 15.

Plans, Training, Mobilization, and Security, the Directorate of Logistics, the U.S. Lyster Army Hospital, and the Adjutant General, to name a few.<sup>26</sup>

Cooperation and team spirit were vital in the early days of mobilization when the DENTAC's personnel and facilities were swamped by mobilizing reservists, as well as regular army personnel and dependents, waiting for dental examinations and care.

The DENTAC had to find innovative ways to prevent overcrowding. Reservists were handled by setting up "[the] dental mobilization station wherever they were doing mobilization...[whether] at the old youth activities building or at the recreation center. We would take our portable equipment, our lights, and all the admin stuff that we would need and go over and do the exams there."<sup>27</sup>

Flexibility in moving dental facilities wherever the mobilization center was located had unanticipated side benefits. As Lieutenant Tanner stated, "Troops tend to get lost the more that you move them.... I became a 'favorite son' at [Emergency Operations Center] meetings because I would say that whatever they wanted me to do, I [could] support [them] and so the DENTAC was not a burden."<sup>28</sup>

This attitude carried over when training requirements and dental exams coincided. Colonel (Dr.) Childress simply sat down with Lieutenant Colonel Lennon and worked out what days were good for training, and when dental exams could be scheduled.<sup>29</sup> This system was standard operating procedure for the rest of the mobilization.

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<sup>26</sup> Ibid., p. 18.

<sup>27</sup> Ibid., p. 21.

<sup>28</sup> Ibid., p. 22.

<sup>29</sup> Ibid., p. 30.

During the mobilization phase of August 1990 to January 1991, the DENTAC at Fort Rucker processed a total of 8618 personnel. Of these, 2191 had Class 3 dental problems, of which 2185 were remedied. During demobilization (beginning March, 1991), the DENTAC at Fort Rucker did not process any personnel.<sup>30</sup>

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<sup>30</sup> LT Tanner, memo (May 15, 1991).

## *CHAPTER SIX*

### *THE EXPERTS*

Historians are by no means immune to the exciting, the dramatic or, indeed, matters of human interest. The pages of history, ancient and modern, are filled with accounts of the activities of political leaders, general battles and, in the main, matters which provoke the interest and attention of readers. Very little attention is given by historians to rank-and-file soldiers or sailors. There are some exceptions of course, as in accounts of the Battles of Crecy and Poitiers in which the English bowmen come in for some recognition. Unfortunately, we only rarely find any detailed information on how the English bowmen and the French knights reached the battlefields. Nor do we learn such mundane matters as how the opposing warriors were fed and housed, cared for when they were wounded, or even anything about the manufacture of armor and swords—much less the long bows and arrows used by English bowmen.

Historical attention, then, is focused almost exclusively on the warriors engaged in battle. However, the fighting men were not alone on the battlefield. Even in bygone times, behind those engaged in actual combat were numerous unsung individuals (some of them quite expert indeed) who saw to such routine matters as training, transportation, equipment, and the feeding of armies. The tools of victory are used by warriors. Everything used in combat is supplied by others, including the training in the use of weapons.

Over thousands of years, the infrastructure needed to prepare soldiers for victory has vastly increased. For example, in modern times a whole new corps of experts has been added. That is, those competent in the use of computers and related software. These ingenious machines not only provide for numerous improvements in training, but speed up communications, furnish orderly information in the area of logistics and, in a

way, reverse a previous trend in the direction of more support personnel. By providing for an orderly and rapid storage and retrieval of information, computers do away with the need for thousands of clerks who, in the past, did much the same thing but in a vastly slower and admittedly less efficient manner.

### **Directorate of Information Management (DOIM)**

Computers and the information they provided were the life blood of the mobilization for Operation DESERT STORM. The Directorate of Information Management (DOIM) was the organization at Fort Rucker directly responsible for installing and supporting this valued mobilization partner. For example, to speed mobilization the DOIM added computer systems to Building 6007, which was used for inprocessing mobilized reserve component personnel. Additional computer work stations were added to handle the increased information workload. Much of the critical information about mobilization involved the large amount of data generated each day. That information had to be captured by the computer. The computer was the only system that could not only keep track of the information, but provide it in any form desired.

The Data Processing Facility (DPF) of the DOIM processed Operation DESERT SHIELD information. Each day, computerized reports were dispatched from the DPF to higher headquarters. Much of the large-scale planning and decisions made during Operations DESERT SHIELD and DESERT STORM were based on the information provided by the computer systems of all U.S. Army mobilization facilities, including Fort Rucker.

Part of the DOIM's responsibilities involved the development of new computer programs or databases. During Operation DESERT SHIELD, the DOIM developed a database to support the tracking of Operations DESERT SHIELD and DESERT STORM

casualties and to assist families. A local area network (A/LAN-PROFS) sub-net was installed by the DOIM at the Family Assistance Center. The telecommunication center realigned from a five-day, two-shift schedule to a seven-day, three-shift schedule which involved more than 144 hours of overtime by personnel manning the center. As a whole, DOIM personnel logged over 1059 overtime hours in the first three months of 1991 alone.<sup>1</sup>

The Logistics Support Division of the DOIM worked 82 hours of overtime to install WATTS and Class A telephone lines in a number of offices.<sup>2</sup> Communications, of which computers are a part and assist greatly with, were pivotal to mobilization at the USAAVNC and, indeed, over the entire country.

Another group of experts was seeing to the Air Traffic Control needs of Operations DESERT SHIELD and DESERT STORM.

#### Air Traffic Control Activity (ATCA)

Another group of experts provided air traffic control (ATC) specialists who insured the skies in Southwest Asia were safe and well- controlled. During the Persian Gulf war, the number of aircraft flying in the confined space of northeastern Saudi Arabia ran into the thousands each day, all which had to be controlled to prevent accidents.

One of the key activities at Fort Rucker engaged in direct support for Operations DESERT SHIELD and DESERT STORM was the Air Traffic Control Activity (ATCA).

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<sup>1</sup> LTC Levy (ATZQ-IR), memo for Aviation Branch Historian, subj: January Historical Report, (February 19, 1991), DOIM folder, 1991 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>2</sup> LTC Levy (ATZQ-IR), memo for Aviation Branch Historian, subj: March Historical Report, (April 8, 1991), DOIM folder, 1991 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

Given the hundreds of fixed- and rotary-wing aircraft operating in Saudi Arabia daily, some form of integrated air traffic control was essential to minimize accidents. It did not take long for the Department of the Army to request ATCA to evaluate air traffic control in Southwest Asia. In an interview, Colonel Melvin J. MacLemore, the director of ATCA remarked, "Back in November 1990, the [U.S. Central Command] sent a message to the Army Deputy Chief of Staff, Operations (DCSOPS), that they had a significant requirement and heavy workload that dealt with air space in Southwest Asia. They needed some folks to come over and help them with: 1) an assessment of what they truly needed to assist them in resolving their problems and; 2) based on that assessment, to meet some of the needs. With that in mind, DCSOPS tasked this activity to provide such an assessment."<sup>3</sup>

Colonel MacLemore, Lieutenant Colonel Carmichael from Third U.S. Army, and Lieutenant Colonel Lucas from the National Guard Bureau departed the United States in mid-November en route to Southwest Asia. The group visited tactical units to make an assessment of the most pressing needs. Some glaring problems were quickly found.

Few officers in echelons above corps were specifically trained in air space management. Nor did it appear any would be tasked to perform that mission any time soon. The one air traffic control battalion already operating in-theater functioned well enough, but made do with vintage, non-securable, and non-automated ATC equipment.<sup>4</sup>

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<sup>3</sup> COL MacLemore, director, ATCA, transcript of an oral interview conducted February 21, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, pp. 1-2.

<sup>4</sup> Ibid, p. 3.

A report incorporating all of the problems was prepared and briefed to higher authority. Portions of the ATCA's written input were included in the U.S. Central Command's own situation report "[which sent]...it forward to request a solution...."<sup>5</sup>

When used by multiple services during Operations DESERT SHIELD and DESERT STORM, the U.S. Army, U.S. Air Force, U.S. Navy, and U.S. Marines all operated fixed- and rotary-wing aircraft in Saudi, Iraqi, and Kuwaiti airspace. The air space in Southwest Asia was controlled by the air component commander who was an Air Force general officer. His staff handled U.S. Air Force traffic from what was called a tactical air control center (TACC). The TACC then integrated with U.S. Army air traffic control organizations such as an ATC group.<sup>6</sup> In the early days of Operation DESERT SHIELD, the U.S. Army lacked a controlling element for its air traffic. This was the principal reason why the 29th ATC Group (National Guard) was activated.<sup>7</sup>

The 29th ATC Group was to provide "subject matter experts, staffing, and a staff overwatch for the deployed XVIII Airborne Corps ATC battalion and the incoming VII Corps ATC battalion from Europe."<sup>8</sup> The 29th ATC would also have the personnel and expertise to plan for future operations and provide assistance throughout the

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<sup>5</sup> Ibid.

<sup>6</sup> The amount of integration needed is enormous. Under CINCENT (General Schwarzkopf), there are CENTCOM, CENTAL, MARCENT, NAVCENT, the Royal Saudi Air Force, French aircraft, and even units of the Kuwaiti air force. Also, any special operations forces are likewise in the net. Some of the actions that need to be synchronized are: flight operations, artillery fire, naval gunfire, surface-to-air missiles, and moving aircraft from one sector to another. See: COL MacLemore, interview, p. 6.

<sup>7</sup> Ibid., p. 5.

<sup>8</sup> Ibid.



command to resolve any deficiencies and communication problems.<sup>9</sup> The 29th ATC would be the planning cell for future operations, and the focal point for any new equipment.

Assisting in air traffic control in the Southwest Asia theater was a very important task. All flights had to be tied into a common system. Given the hundreds of aircraft sorties each day, the U.S Air Force system had to be a rigid one. To minimize problems with control, the Air Force uses pre-planned sorties on a day-to-day basis. The U.S. Air Force air traffic controllers knew the types of aircraft being flown, departure and arrival points and times, types of missions being flown, and which routes were being followed.

To educate everyone in-theater on control of air traffic patterns, the Air Force published a classified document which was, in effect, "the base plan for air tasking orders and air space control."<sup>10</sup> Although this was the principal document which guided all general ATC activities, each country and branch of service had their own special procedures.

For development of its air traffic control patterns, U.S. Army aviators use the Aviator Procedures Guide. Colonel MacLemore summarizes a portion of this guide as "...generally the procedures that [pilots] will operate with. For instance, you will not go above...two or three hundred feet unless you have express permission and authority to do so. That was one of our control methods over there, that says the U.S. Army never operates their helicopters above 500 feet unless they are back in the rear zone, but if they're forward they're down into (nap of the earth)."<sup>11</sup>

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<sup>9</sup> Ibid.

<sup>10</sup> Ibid., p. 7.

<sup>11</sup> Ibid.

Like all ATC plans, the "Aviator Procedures Guide" had vital information about how to deal with foreign air space management and their "identification friend or foe" (IFF) systems. The IFF systems were vital because, as Colonel MacLemore noted in an interview, "...if you were to go into an allied area of operations, perhaps into the Syrian or Egyptian sector, and had not re-coordinated you could be considered hostile and be engaged by a ground system [surface-to-air missile] before you went in."<sup>12</sup>

Air defense and air traffic control are multi-layered and must work very closely together. "It starts at the lowest level of division, moving up through the corps to the land component commander and tying into the joint air component commanders and the systems that make that work."<sup>13</sup>

The system of air traffic control used in Saudi Arabia was not unlike that which currently functions in the United States. Air traffic control centers were established in various locations around the country, and collocated with them was a U.S. Air Force control reporting center. They were, of course, electronically connected and dealt with air traffic operating in their sectors, as well as aircraft passing through.

The next higher level involved the TACC, which was coordinated with the Saudis and the alternate command post. This center was electronically tied into the sector control centers. The Saudis were not located in the ATC area by accident. By prior arrangement, "as long as we were not hostile [in combat], the Saudis would be controlling all of their own air space."<sup>14</sup> A ground forces cell was also located and tied into the TACC. All the ground forces and their air defenders and air support were represented. This positioning allowed for synchronized air operations.

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<sup>12</sup> Ibid., p. 8.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid., p. 9.

In combat, there are always elements which cannot be predicted. Therefore, a set series of procedures was developed and agreed upon by all sides. When aircraft were forward of a divisional area, they flew their missions to a pre-agreed set of parameters. Since controllers were not able to monitor each and every plan, it was imperative that aircraft followed this system. If not, they were liable to be engaged by air defense elements.

For example, pilots knew that there were certain corridors of access into their operational area, and certain corridors out of their area. Staying on this "safe" route kept the aircrews from having to worry about friendly fire and allowed them to concentrate on enemy situations.<sup>15</sup>

Once in an area of engagement, pilots were under air traffic control normally from a TACC team in a vehicle positioned with the forward elements. Communication between pilots and ground control elements was relatively simple across the allied forces. Because English is the international language for air traffic controllers in civilian systems, it was also used throughout the theater by all the allied nations.

The expertise of joint air traffic control operations in Southwest Asia was used to assist in training. The USAAVNC and the ATCA are responsible for the training of U.S. Army air traffic controllers. Because of the air traffic situation and the absence of accidents, new techniques and training are being readied which could be used in future joint operations.

Operation DESERT STORM raised some significant questions about the future of ATC in air-land battle. What would be the mission? The role? One way to insure that the preceding questions are accurately defined is to educate U.S. Army aviators in ATC operations. The U.S. Air Force has provided considerable help by creating a school for

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<sup>15</sup> Ibid., p. 10.

its own aviators, plus sister service officers that lacked ATC planning. This type of inter-service training paid considerable dividends in the desert.

Many of the 29th ATC's personnel were trained in Air Force ATC systems. Called the Air Ground Operations School, U.S. Army officers learned how to deal with battle staffs and the complicated nature of joint airspace planning. Operation DESERT STORM pointed out the need to insure U.S. Army aviators also attend this school to help sharpen their abilities to join with other services in planning efficient use of air space.

Another area of improvement for air traffic control was in the arena of secure and reliable communications. This was a continual problem in Saudi Arabia, and the ATCA acquired several types of radios used by U.S. Air Force controllers in order to minimize the problem.<sup>16</sup>

ATC operations depend on a variety of communications. The volume of information passed is enormous. One way to pass that much information is through the use of a secure teletype system. This type of a system for passing important ATC information did not exist in Southwest Asia in the early weeks of Operation DESERT SHIELD. It had to be created from off-the-shelf components.

Between ATCA, Fort Monmouth, and the Aviation Systems Command, a computer was uncovered that was then in use at the U.S. Central Command which was sturdy and reliable.<sup>17</sup> A high-speed printer was also found which could print information fast enough to be useful, and would be compatible with the computer.

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<sup>16</sup> Ibid., p. 20.

<sup>17</sup> Located in New Jersey, Fort Monmouth was the research arm for the Signal Corps, which performs large numbers of sophisticated experiments in various types of communication. Aviation Systems Command is headquarters in St. Louis. This organization does testing and acquires various aviation systems.

This ad hoc system could easily be tied into land lines, that is, if they were available. An alternative communication medium had to be available. After some discussion among experts, high frequency radios were deemed to be the answer, and high frequency radios already in the U.S. Army inventory were modified to take modems that could handle information rates of 2400 bauds per second.<sup>18</sup> This system was sent to Southwest Asia, and worked well in transmitting the needed ATC information to all the necessary addressees.

Since ATC systems are as sophisticated as any other equipment operating in Southwest Asia, they, too, suffered from problems caused by the extremes of the desert. Take, for example, the ATC radar system. Normally, they were not used that far forward, but at airfields far behind the front. "You might well imagine the heat that can shut down any kind of system...but the critical part was how long the electronics operate in 120 to 130 degrees fahrenheit...not very long."<sup>19</sup> Modification work orders were prepared to either add air conditioners to radar vans where none had been before, or add new and more powerful air conditioners where older and less powerful systems were used.

Given the large number of fixed- and rotary-wing aircraft in Saudi airspace, all air traffic control systems quickly became an item of some concern to the U.S. Central Command.<sup>20</sup> The Systems Integration Division of the Air Traffic Control Activity at

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<sup>18</sup> For a fuller explanation of the development of this system see: COL MacLemore, interview, p. 21.

<sup>19</sup> Ibid., p. 23.

<sup>20</sup> The U.S. Army alone had more than 1000 helicopters in theater. Although Saudi Arabia is a large country, the air space used was largely confined to the northeastern corner of the country. No aircraft of any U.S. service was lost due to collision with other aircraft. ATC worked, and worked well.

Fort Rucker supported Operation DESERT SHIELD operations by expediting modifications to the AN/TSQ-71B landing control and the AN/TSC 61B flight operations control radar systems which helped to improve air movement control.<sup>21</sup> The ATCA also assisted in the fielding of equipment to provide communication and control tower facilities capable of high-density operations.<sup>22</sup>

Also, in mid-November 1990, the U.S. Central Command sent Colonel MacLemore to Southwest Asia to assess ATC operations. "The team consulted with... Brigadier General Robert S. Frix, and visited all the tactical units deployed...at that time. One...problem was the lack of echelon-above-corps personnel with the expertise to deal with U.S. Army air space matters. Another problem was that the only deployed tactical air services battalion was equipped with antiquated, non-securable equipment."<sup>23</sup>

A report on the finding of the trip was submitted through channels to the Department of the Army in December 1990. Recommendations included additional personnel and equipment for ATCA units in theater, as well as modification to air space command and control interfacing, capabilities, utilization and operations.<sup>24</sup>

The report recommended, in part, that an ATCA group be activated in Southwest Asia. "The U.S. Army concurred in the USAATCA recommendations."<sup>25</sup> The 29th

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<sup>21</sup> COL MacLemore (ATZQ-ATC), 1990 Historical Report for USAATCA, (January 23, 1991), ATCA folder, 1991 AHR files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>22</sup> Ibid.

<sup>23</sup> COL MacLemore, director, USAATCA, transcription of an oral interview conducted February 27, 1991, Oral History File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 2.

<sup>24</sup> COL MacLemore, 1990 Historical Report for USAATCA, January 23, 1991.

<sup>25</sup> COL MacLemore, interview, pp. 1-4.

ATC Group headquarters was immediately activated and by late December 1990, its personnel were in Southwest Asia. New equipment was also shipped to Southwest Asia that enabled the ATC community to log millions of hours of accident free flying. No friendly aircraft ever met by mistake during Operations DESERT SHIELD and DESERT STORM.

New and different systems come into the U.S. Army inventory nearly every day. They do not suddenly appear, but are the product of careful considerations as to cost, effectiveness, and doctrine, as well as how they will be used. Combat developments have, historically, been very useful to successful armies.

#### **Directorate of Combat Developments (DCD)**

In U.S. Army aviation, Fort Rucker has a group of experts to provide assistance to the aviation community—the Directorate of Combat Developments (DCD).

"With the start of [Operation] DESERT SHIELD in August, the [Combat Aircraft] Branch quickly focused on those actions which would improve aviation's ability to fight in the desert."<sup>26</sup> When aviation units began to fly and train in Saudi Arabia, equipment became a problem. One problem was with high frequency radios. The great distances in the desert required high frequency systems for ease of communications.<sup>27</sup> If you cannot talk, you cannot fight. This problem had a great impact on many aspects of combat.

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<sup>26</sup> COL Sendak (ATZQ-CD), 1990 Historical Review, DCD, Combat Aircraft Branch, DCD folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>27</sup> COL Sendak (ATZQ-CD), memo for Aviation Branch Historian, subj: 1991 Historical Reports, Issue #263-01, (February 19, 1991), DCD folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

Since the Iraqi AAA threat was thought to be considerable, UH-60 Black Hawk pilots were naturally concerned about the lack of chaff dispensers for their aircraft. Another related problem was the perceived threat of Iraqi chemical and biological weapons; this threat made the acquisition and testing of aviator protective masks a high priority.<sup>28</sup>

Other problems were less esoteric, but equally important. Pilots learned that navigation in the desert was no easy matter. The featureless deserts of northern Saudi Arabia and the long distances involved demonstrated a need for some sort of navigation device that could give aircraft their exact location using six- or eight-digit grid coordinates, and then help guide them to that location. Hand held global positioning systems were needed very rapidly.<sup>29</sup>

To help with navigation, the DCD arranged for 500 small, lightweight, hand-held global positioning systems (or, as they were known, "sluggers") to be shipped to Southwest Asia. One thousand more were ordered from the U.S. Army Communications/ Electronics Command, and 500 were obtained on loan from the U.S. Navy and U.S. Air Force. In the blink of an eye, air and ground units had global positions systems available. They were to prove their worth before and during Operation DESERT STORM.<sup>30</sup>

In line with the Iraqi air defense threat, the importance of aircraft survivability equipment training assumed greater importance.<sup>31</sup> Systems were scheduled to be sent to

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<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> The Iraqi threat consisted of a mix of various systems ranging from Soviet to American. The system had not been heavily used by Iraq due to the Iranian's inability  
(continued...)



Southwest Asia no later than November 30, 1990. A team deployed to Southwest Asia in mid-November to insure that units met security requirements before system fielding.<sup>32</sup>

In addition to briefings on Iraqi threats, the DCD worked on initiatives to make aviation performance and maintenance easier. One example was the UH-60 Black Hawk particle separator/barrier filter tests.

With excessive damage being done to UH-60 Black Hawk engines in Southwest Asia, a need for a filtration system became both evident and immediate. The Aviation Systems Command initiated an immediate project to develop a filter kit system that could be installed quickly in the desert. Civilian helicopter industry experts, some with decades of experience, cooperated to find solutions.

The Sikorsky Company developed an engine air particle separator that was tested in Yuma, Arizona, February 12 and 13, 1991. Results of the test were excellent. A prototype barrier filter was also tested at the same time. Although the barrier filter performed well, the DCD considered it to be less desirable than the engine air particle separator and eventually these kits were sent to Saudi Arabia and installed on UH-60 Black Hawk helicopters.<sup>33</sup>

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<sup>31</sup>(...continued)

to mount much of an air threat. Iraq's aircraft had little trouble penetrating Iranian airspace to perform their mission because the Iranian Army had American systems that had not been properly maintained and were not working at full capacity. This made an accurate assessment of the true threat less accurate. See: *Conduct of the Persian Gulf, Final Report to Congress*, pp. 14-15.

<sup>32</sup> COL Sendak, memo, February 19, 1991, Issue #255-01.

<sup>33</sup> COL Sendak (ATZQ-CDM-C), memo for Aviation Branch Historian, subj: UH-60 Particle Separator -- Engine Inlet Barrier Filter, (February 21, 1991), DCD folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

During Operations DESERT SHIELD and DESERT STORM, the DCD considered a host of initiatives ranging from aircraft survivability equipment training to 20mm Phalanx ammunition used in the M-197 cannon to UH-60A/L Hover Infrared Suppression Subsystem (HIRSS) material failures.<sup>34</sup> The DCD did not neglect the human side of the equation. How aircrews survived in the environment of the Saudi Arabian desert counted as high as did the equipment for aircraft survivability equipment training.

At the end of combat operations in Southwest Asia, the DCD circulated a study conducted by the U.S. Army Chemical Center to determine the long-term effects of use of MOPP equipment on aircrew performance. This was based on problems in Southwest Asia when personnel had to spend considerable time in MOPP gear because of the threat of Iraqi chemical attacks. Titled Physiological and Psychological Effects of the NBC Environment and Sustained Operations on Systems in Combat, or P<sup>2</sup>NBC<sup>2</sup>, this study will provide the U.S. Army Aviation Branch with precise information about aircrews wearing MOPP equipment.<sup>35</sup> Equipment and logistics are not the only army operations in need of experts.

A careful study of military history reveals that armies from the dawn of civilization have had to wrestle with administrative details. After several thousand years of trying, some armies developed experts in the administration of military systems. Never glamorous or heroic, the paperwork of a military organization is as vital to its

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<sup>34</sup> COL Sendak, memo, February 19, 1991, Issue #255-01, #255-03, and #256-01.

<sup>35</sup> BG Orton (ATZN-CM-CT), memo for SEE DISTRIBUTION, subj: Physiological and Psychological Effects on the NBC Environment and Sustained Operations on Systems in Combat (P<sup>2</sup>NBC<sup>2</sup>), (March 8, 1991), DCD folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

success as any weapons system. Fort Rucker's administrative experts go by the name of "adjutant general."

### **Adjutant General (AG)**

Lieutenant Colonel John T. Planchon, the adjutant general (AG), as noted in an interview, was responsible "...for all the enlisted and officer military personnel support to the community...."<sup>36</sup>

The AG Division also had a Personnel Operations Branch handling casualties, a Strength Management Branch involved in assignments, a Reenlistment Branch and a Retirement Branch. The AG also operated, under the control of the Personnel Processing Branch, the Welcome Center (buildings 6606 and 6607).<sup>37</sup>

Fortunately, Fort Rucker's AG Division had considerable experience in mobilization. In past years, units from Fort Rucker had taken part in emergency deployment readiness exercises (EDREs).

Of this, Lieutenant Colonel Planchon stated, "We are always prepared, as people move out, to go to exercises. We were involved in checking the individuals' records to see if they were correct, if they were qualified and met any of the overseas requirements...[and] we were responsible, as the personnel agency on post, to coordinate with other activities on post.... [Mobilization] was similar to what we do during EDREs except that it was much more extensive, and in this case, it was for real."<sup>38</sup>

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<sup>36</sup> LTC Planchon, Adjutant General, transcript of an oral interview conducted September 23, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 19. Also see: LTC Planchon (ATZQ-PAG-M), memo for DPTMSEC, subj: After Action Report/Lessons Learned for Operation Desert Shield/Storm - Phase 1, (May 20, 1991), AG folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>37</sup> LTC Planchon, interview, p. 20.

<sup>38</sup> Ibid., p. 1.

The AG Division was also responsible for handling the records of mobilizing U.S. Army Reserve and National Guard units. These units had been activated, and their records were now the responsibility of the U.S. Army. "The difference came in the units not being here locally at that particular point. Their records were brought to us prior to the units arrival by an advance party. Mr. Joe Wesley was responsible for that. He would coordinate with the unit technicians on the advance party and we would then prepare to receive the unit."<sup>39</sup>

Adding to the workload of the AG was a directive from higher headquarters that required issuing an active duty identification card to each and every reservist who processed through Fort Rucker. Thousands of these identification cards were issued during Operation DESERT SHIELD.<sup>40</sup>

The workload on the AG was extremely heavy. Not only did the AG have to maintain the files of those reservists and guardsmen who mobilized through Fort Rucker, but also the personnel files of active duty personnel who remained at Fort Rucker throughout the emergency.

Unfortunately, since Operation DESERT SHIELD was a partial mobilization, the individual ready reservist assistance that would normally have been available was not. The AG kept asking for some support and "eventually, [the U.S. Army Training and Doctrine Command] sent the 478th Personnel Service Company (PSC) out of Chicago, Illinois. They actually came in and were able to help us with our mission, but mostly with demobilization."<sup>41</sup>

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<sup>39</sup> Ibid., p. 3.

<sup>40</sup> Ibid., p. 5.

<sup>41</sup> Ibid., p. 6. For exercises, the AG had worked with the 1146th PSC out of Enterprise, AL. However, that company was not made available to the AG, and the PSC from Chicago was brought in. See: Ibid., p. 17.

The Personnel Automation Branch (PAB) of the Adjutant General played an important part in the mobilization as this was the first time the Standard Installation Data Personnel System (SIDPERS) database was used during a mobilization.<sup>42</sup> The "PAB accessed approximately 8000 soldiers into the active army databases. Accessions included U.S. Army Reserve and National Guard units mobilized at Fort Rucker and at Camp Shelby, Mississippi. Other categories of personnel accessed were retiree recalls, Individual Ready Reserve, etc."<sup>43</sup> This was also the first time a network of computers was used to assemble, process, detail, and deploy the U.S. Army to war. Computers at the AG worked overtime during the mobilization.

Mobilizations of the past were "pencil and paper" operations with little automation. Operation DESERT SHIELD was the first mobilization the U.S. Army has conducted that made critical use of computers. The AG leaned very heavily on computers to accomplish its mission.

Lieutenant Colonel Planchon remarked, "We were...able to procure through Operation DESERT STORM funds...automation equipment that was needed for us to do our [mobilization] and [demobilization] missions, mostly in the arena of personnel.... I think we got eight computers. We bought three lap top [computers] that were needed to

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<sup>42</sup> The SIDPERS system is a computer generated program that enables the U.S. Army to track their personnel and to be able, on short notice, to provide pertinent assignment information based on a soldier's personnel file. In mobilization, the SIDPERS system was vital to the accurate assignment of personnel to positions in mobilizing units or bases located in the United States. SIDPERS had been utilized during Fort Rucker mobilization exercises to develop a personnel data base. The AG division was quite familiar with it prior to mobilization. LTC Planchon, interview, pp. 8-9.

<sup>43</sup> LTC Planchon (ATZQ-PAG-M), memo for DPTMSEC, Plans Div, subj: After Action Report/Lessons Learned for Operation Desert Shield/Storm - Phase 1, (May 20, 1991), AG folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

set up a system for [demobilizing] the folks at Camp Shelby which...had minimal automation support."<sup>44</sup>

The U.S. Army Training and Doctrine Command provided Fort Rucker with a new system called TRANSLAN (Transition Point Local Area Network) which operated much like the current local area network system. It had user-friendly software to create forms and other types of documents. This system was also interfaced to Camp Shelby, and could link both stations with the newest, updated version of forms and instructions.<sup>45</sup>

One of the first persons any reserve or guard soldiers met upon reaching Fort Rucker was a representative of the AG. The AG had to take charge of their records to insure that they were current and contained all the necessary forms to enable the soldier to deploy to Southwest Asia.

Each individual's record had to be accurate because every soldier is entitled to all the benefits and training available through honorable military service. An accurately maintained record made that happen.

As part of the records screening process, the Personnel Services Branch of the AG provided support for deployment of more than 4000 personnel. Branch members insured that emergency data cards and life insurance beneficiary designations were current.<sup>46</sup> The Branch also had to outprocess from active duty over 100 U.S. Army Reserve and National Guard personnel who were declared non-deployable.

Since how many people arrived and were mobilized was so important to the overall management process, the Personnel Strength Management Branch of the Military

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<sup>44</sup> LTC Planchon, interview, p. 44.

<sup>45</sup> Ibid., p. 45.

<sup>46</sup> Ibid., p. 8.

Personnel Division logged over 70 hours of overtime when they processed two active and 25 Reserve Component units.<sup>47</sup> All of the necessary paperwork was generally accomplished in a routine manner. Still, some problems did crop up.

Written orders are vitally necessary to move personnel from one unit to another or overseas. This is one area of mobilization that proved to be a problem for the AG. "[AG] had never practiced...actual preparation of orders. This became a massive workload for people...there were a lot of questions before we learned to do it right."<sup>48</sup>

One continuing problem that began with the departure of the first units to Saudi Arabia was what to do with the nondeployables. The mission of the AG was "to get them into a deployable status and get them sent overseas."<sup>49</sup>

Although the AG was technically responsible for the nondeployables, the 1/10th Aviation Regiment had to house and control them. Everyday at 1500, a meeting was held that involved the AG, 1/10th Aviation Regiment, and U.S. Lyster Army Hospital. The business of the meeting was to control the nondeployables. By the time this meeting became standard, there were a large number of nondeployables on post. "It was command and control and the housekeeping of them...housing that large number of folks was the problem."<sup>50</sup> There was a large number of nondeployables with the percentage in arriving units varying from 7 to 12 percent. Over 90 percent of nondeployables were the result of medical problems.<sup>51</sup>

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<sup>47</sup> Kitchens and Wright, USAAVNC 1990 Annual Historical Review, p. 162.

<sup>48</sup> LTC Planchon, interview, p. 9.

<sup>49</sup> Ibid., p. 21.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid., p. 22.

From the beginning of mobilization, it became rapidly apparent that a dedicated mobilization site had to be created. To this end, buildings 6602 and 6603 were renovated to handle mobilization of U.S. Army Reserve units. These buildings were not being used, and more importantly, had a large amount of parking space around them. Although the buildings were immediately put to use, it took the AG "three weeks to a month...with super help from the engineers on post to make [renovation] possible."<sup>52</sup> Thereafter, units and individuals were processed at this location.<sup>53</sup>

Another problem for the AG was the recall to active duty of retired aviators during Operation DESERT SHIELD. As Lieutenant Colonel Planchon related, "The problem started...with the fact that retired aviators don't have a qualification system. Some had been put out of the service for flying reasons, yet they were still maintained and called up on the [U.S. Army Reserve Personnel Center] records as being an aviator in a certain aircraft."<sup>54</sup>

This was never completely resolved as the administrative system had not anticipated this problem. The Aviation Training Brigade (ATB) suffered because many of these retired pilots did not have records with them, and ATB had to begin completely re-qualifying them while attempting to obtain the individual's personnel records to make a determination on what training was actually needed.<sup>55</sup> Look at it this way. Would you allow someone to fly a \$4 million UH-60 Black Hawk solely on verbal assurance that he or she was a qualified pilot?

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<sup>52</sup> Ibid., p. 23.

<sup>53</sup> LTC Planchon, memo, May 20, 1991.

<sup>54</sup> LTC Planchon, interview, p. 25.

<sup>55</sup> LTC Planchon, memo, May 20, 1991.



When all those units and individuals mobilized had been processed, the AG maintained many records until the individual's return from Southwest Asia. The demobilization phase had as many problems as the mobilization. Lieutenant Colonel Planchon related, "[With] the demobilization problem...there was conflicting guidance, [i.e.] OK, Fort Rucker you are going to assist them. No, Fort Rucker you are not going to. That went back and forth and it was hard for us to get needed equipment or lay out plans and we did not have the manpower...."<sup>56</sup>

Guidance on such items as the Certificate of Release or Discharge from Active Duty (DD Form 214) also changed a number of times before demobilization began. The final decision to demobilize units at Fort Rucker was made about a week before units began to arrive. The 478th PSC still had a 25-man composite team to assist, but that was not enough. Help was needed and found in an unusual place.

"During the period December 20, 1990 through January 19, 1991, it was determined to be necessary for Fort Rucker to have a mass casualty contingency plan specifically for Operation DESERT SHIELD. This decision was made as a result of the extensive deployment of our [U.S. Army Forces Command] and U.S. Army Reserve and National Guard units in support of Operation DESERT SHIELD."<sup>57</sup>

The system that had to be set up was a mass casualty center to assist families, etc., if losses were heavy in Persian Gulf fighting. Happily, when that did not occur, a number of dedicated retirees who had volunteered to give the AG a hand in that connection were switched over to demobilization duties. "One in particular, CW3 Eddie Burnett, who had retired and came back on [active duty] was very versed in the transition

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<sup>56</sup> LTC Planchon, interview, p. 41.

<sup>57</sup> LTC Planchon, memo, May 20, 1991.

point where the DD 214 forms have to be prepared. If it had not been for Mr. Burnett and his experience and being able to help us, we would have had big problems."<sup>58</sup>

In an after action report, the AG also noted the need for "...a significant increase in the number of trained and ready officers for the purpose of notification, casualty assistance, and summary court actions was identified commensurate with the approval of the contingency plan. A detailed training session...was conducted for a total of 265 officers by the AG Casualty Section, Mortuary Office, Staff Judge Advocate, and Patient Administration Branch of Lyster Army Hospital."<sup>59</sup> In addition to the administrative experts, there are other army experts who provide administrative services to soldiers.

All good things must come to an end. The last organized unit that was mobilized at Fort Rucker was demobilized on July 23, 1991. This unit was the 638th Personnel Service Company, which had been activated to assist the AG in the mobilizing/demobilizing duties. The last individual ready reservists were demobilized during the month of December 1991. The absolutely last Operation DESERT SHIELD and DESERT STORM soldier demobilized by Fort Rucker's AG was Lieutenant Carl Petty of the 851st Combat Support Company. He departed active duty on September 24, 1992.<sup>60</sup>

Historically, mobilization has always heightened the interest in making wills and powers of attorney. Soldiers preparing to deploy to Saudi Arabia looked to the experts at the Staff Judge Advocate for assistance.

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<sup>58</sup> LTC Planchon, interview, p. 43.

<sup>59</sup> LTC Planchon, memo, May 20, 1991.

<sup>60</sup> SGT Hilton, AG Strength Division, phone conversation conducted October 2, 1992 with Dr. Wright, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

### Office of the Staff Judge Advocate (OSJA)

The Legal Assistance Division of the Office of the Staff Judge Advocate (OSJA) provided support in processing active and reserve personnel during mobilization. "From August through December 1990, the division processed approximately 1070 active duty soldiers.... The OSJA also briefed deploying National Guard and U.S. Army Reserve soldiers regarding the Soldier's and Sailors' Civil Relief Act."<sup>61</sup>

History relates that throughout its existence, the United States government has attempted, sometimes unsuccessfully, to explain to the public what it does and why it does things through an organization specifically created for that purpose. What the U.S. Army does in this respect is the domain of the USAAVNC's experts in person-to-person relationships—the Public Affairs Office.

### Fort Rucker Public Affairs Office (PAO)

As one would imagine, the Fort Rucker Public Affairs Office (PAO) experienced a 60 percent increase in media inquiries during the period of Operations DESERT SHIELD and DESERT STORM. Half of the inquiries dealt directly with ongoing military operations.

For example, a large number of inquiries were regarding the AH-64 Apache. An investigative report on the Apache, which was aired on the CBS television network program "60 Minutes," painted the aircraft as trouble-prone and over-priced.<sup>62</sup> The Fort Rucker PAO insured that the other side of the story was also made available to interested citizens.

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<sup>61</sup> Kitchens and Wright, USAAVNC 1990 Annual Historical Review, p. 163.

<sup>62</sup> Mr. Holder (ATZQ-PAO), memo for the Command Historian, subj: Public Affairs Historical Report 1990, (March 11, 1991), PAO folder, 1990 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

While Fort Rucker had experts who communicated with interested citizens and keep them well informed, there was another, vastly different organization, doing the same thing. However, this group of experts informed the aviation community in detail, and the public in general, about the potentials of their enemy.

### Threat Support Office (TSO)

The Threat Support Office (TSO) executed the age old maxim of the Chinese military philosopher Sun Tzu: "Nowhere neglect the use of intelligence."<sup>63</sup> Knowing your enemy is one of the prime concerns of the military and has been so since the beginning of history.

During Operations DESERT SHIELD and DESERT STORM, the chief of the Threat Support Office, Lieutenant Colonel Delma C. Hendricks, and one of his subordinates, Captain Callan, usually briefed the Emergency Operations Center five times weekly on the Iraqi situation.<sup>64</sup> Briefings were also provided to participants in the pre-command course.<sup>65</sup> Since U.S. Army aviators were about to face the Iraqi Army, one of the most important priorities for the Threat Support Office was to develop a detailed assessment of the Iraqi air defense capability. This was continually updated as more information was developed from intelligence channels.<sup>66</sup>

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<sup>63</sup> R. L. Wing, *The Art of Strategy - A New Translation of Sun Tzu's Classic THE ART OF WAR*, (New York: Doubleday, 1988), p. 167.

<sup>64</sup> COL Sendak (ATZQ-CD), memo for Aviation Branch History Office, subj: 1991 Historical Report for April 1991 on Desert Storm, DCD folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>65</sup> COL Sendak (ATZQ-CD), memo for the Aviation Branch Historian, subj: 1991 Historical Report, (March 8, 1991), DCD folder, 1991 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>66</sup> COL Sendak, memo, March 8, 1991.

Information for these updates was developed from a variety of sources such as the Defense Intelligence Agency, Central Intelligence Agency, State Department, and the U.S. Central Command, to name a few. All these sources provided an enormous amount of data which the analysts at the Threat Support Office had to read, understand, and synthesize.

The Threat Support Office also was involved in writing and updating system threat assessment reports and threat test support packages. "The [Threat Support Office]...had a role in the DCD 'hot topics' briefings to key USAAVNC leaders during 1990. In September, Lieutenant Colonel Hendricks briefed the group on all of the major threat projects being addressed by the [Threat Support Office] action officers at that time."<sup>67</sup>

The Threat Support Office helped to inform the aviation community about the Iraqi enemy so that when combat was joined, pilots could remain safe and alive while Iraqi pilots were not. Before the onset of Operation DESERT STORM, there was Operation DESERT SHIELD.

While attempting to insure the U.S. Army prepared, deployed, and used the most lethal weapons possible, there was another side considered—safety in all training operations. U.S. Army aviation personnel flew hundreds of training hours in preparation for combat in relative safety because the USAAVNC was home to the experts who helped to insure those training hours (and life in general on and off U.S. Army military posts) were safe—the U.S. Army Safety Center.

Question: How many Class A accidents during Operations DESERT SHIELD and DESERT STORM? Answer: Too many. Throughout its distinguished history, the U.S. Army has always stressed safety in everything that it did. Mobilization and deployment

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<sup>67</sup> Ibid.

to Southwest Asia was to be no exception. Aviation safety was uppermost in the minds of the aviation units that deployed to Southwest Asia. While any accidents are "too many," the rate would have been much higher without the work of those concerned with safety.

#### **U.S. Army Safety Center (USASC)**

From the standpoint of aviation and from the army in general, the U.S. Army Safety Center (USASC) at Fort Rucker was directly responsible for both the development of safety consciousness within the U.S. Army community and investigations of accidents when they occurred. Shortly after the first aviation units arrived in Southwest Asia and began to fly and navigate in Saudi desert terrain, a series of Class A accidents occurred which quickly became the concern of the highest levels of U.S. Army leadership. The USASC strove to find ways to eliminate aviation accidents, as well as all other accidents.

During Operations DESERT SHIELD and DESERT STORM, the USASC developed an electronic mail operation for units preparing for, deploying, and already located in Southwest Asia. This served as a conduit for immediate information on safety procedures, and lessons learned.<sup>68</sup>

A task force under the USASC's Directorate of Force Integration was created which worked to develop reliable and rapid communications between the theater and the USASC.<sup>69</sup>

The USASC established a subject matter expert point of contact on safety procedures and published that fact throughout the U.S. Army. From a safety point of

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<sup>68</sup> Annual Historical Report, U.S. Army Safety Center, USASC folder, 1990 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, pp. 2-3.

<sup>69</sup> Ibid.

view, the USASC also established a list of clothing and equipment for personnel deploying to Saudi Arabia.<sup>70</sup>

The career management office of the USASC for safety-qualified personnel implemented a plan to obtain volunteers to deploy to Southwest Asia to assist with unit plans and execute an overall safety program. More than 100 safety personnel volunteered for this program. Using many of these volunteers, the Directorate of Investigations, USASC, deployed a team to Southwest Asia on a rotating basis.<sup>71</sup> As a result, safety violations were brought down to low levels. While there were those experts who were preaching safety in Southwest Asia, there were other experts dealing with the matter of making life unsafe for the enemy.

#### U.S. Army Training and Doctrine Command Project Office - TPO Apache

In 1778, a soldier of the Continental Line fired a smooth bore musket that was wildly inaccurate beyond 100 yards. Today, the modern army soldier has equipment that can reach out great distances with startling accuracy.

One of the brightest performers in a galaxy of outstanding sharpshooters in Saudi Arabia was the AH-64 Apache. During the hours of darkness, Iraqi tanks were hit and Iraqi soldiers killed by aircraft they could neither see nor hear.

A weapons system with this capability is very complex. The USAAVNC experts who provided advice to those who flew the Apache in the desert came from a U.S. Army Training and Doctrine Command project office (TPO) that handles all aspects of this lethal aircraft—TPO Apache.

During the Persian Gulf war, the TPO performed yeoman service insuring that all available information reached AH-64 Apache units everywhere. "The [TPO] for Apache

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<sup>70</sup> Ibid.

<sup>71</sup> Ibid.

edited and distributed 13 user flashes on desert lessons learned and contractor-supplied information/procedures pertaining to the Apache and weapons systems to all AH-64 units."<sup>72</sup>

The TPO Apache also sent a team to Fort Hood, Texas, to provide briefings and updates to five AH-64 battalions, and to AH-64 battalions in the National Guard of the states of North Carolina, South Carolina and Florida. All these units were provided with the latest information, data, and lessons learned from Operations DESERT SHIELD and DESERT STORM.<sup>73</sup>

### **Finance & Accounting Office**

Throughout history, there are two things traditional soldiers cannot do without—mail and pay. In ancient times, pay took the form of taking whatever they wanted from the defeated. Today, soldiers in the U.S. Army are paid a specific wage for practicing their profession of arms. The U.S. Army has experts to insure that prompt payment is made to every soldier and in the exact amount specified. Today, receiving pay is often the simple electronic transfer of funds from the government to a soldier's bank account. Direct cash payment by officers in the field is becoming rare.

The Finance and Accounting Office at the USAAVNC was directly responsible for insuring that soldiers, both regular and reserve, received their pay at the appropriate time during Operations DESERT SHIELD and DESERT STORM and, during the weeks of mobilization and deployment, performed the following functions:

- a. Provided financial services for those soldiers who were mobilized at on-site locations.

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<sup>72</sup> U.S. Army Training and Doctrine Command, "TRADOC Project Office Makes Contribution to Desert Storm," *Army Flier* [Fort Rucker, Ala.] (July 11, 1991): p. 5A.

<sup>73</sup> *Ibid.*



- b. Maintained close contact with reserve units to ensure advanced payments were ready when the unit arrived.
- c. Worked with banks in the Fort Rucker area along with major credit unions to provide representatives to assist mobilizing soldiers with their Sure-Pay options.
- d. All transactions at Fort Rucker for Operations DESERT SHIELD/DESERT STORM were processed through Finance and Accounting so as to capture obligations and expenditures.<sup>74</sup>

Paying soldiers and being responsible for the upkeep of their pay records is one of the most responsible and painstaking jobs in the U.S. Army. The Finance & Accounting Office accomplished all that was required of it during Operations DESERT SHIELD and DESERT STORM, but not without problems.

For example, it took some weeks to get a unit enrolled in the master military pay file, and a soldier's pay records could not be entered with new data unless it appeared in the master file. As a result, some payments were slow or inaccurate.<sup>75</sup>

Another problem was paying soldiers based on the large variety of mobilization orders that were being issued. Confusion existed because some were being issued with movement designator codes when the intent was to place the soldier in a per diem status. The only way to clarify this was to check message traffic and telephone the headquarters concerned to clarify the actual status of individual soldiers.<sup>76</sup>

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<sup>74</sup> MAJ Frankl (ATZQ-RFA), lessons learned narrative, subj: After Action Report for Operation Desert Shield/Desert Storm - Phase I, AG folder (F&A), DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>75</sup> MAJ Frankl (ATZQ-RFA), lessons learned narrative, (submission by SFC Peralta).

<sup>76</sup> MAJ Frankl (ATZQ-RFA), lessons learned narrative (submission by Mr. Fayard).

As in many other organizations, payments to soldiers have to be accounted for. They must come from a specific budget so that their payment can be charged against that budget. One problem facing the Finance & Accounting Office was that the "majority of orders [either] mobilizing, attaching, [or] demobilizing personnel were issued by AG (not on travel orders, DD Form 1610), no accounting classification and funds were cited."<sup>77</sup>

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<sup>77</sup> MAJ Frankl (ATZQ-RFA), lessons learned narrative (submission by Ms. Klingenstein).

## **CHAPTER SEVEN**

### **BUILDERS AND PROVIDERS**

In the early history of the United States Army, the premier branch was always the Engineer Branch. Only the top students in each class of the military academy were allowed to enter the Engineer Branch. It was no accident that graduates of the U.S. Military Academy received a Bachelor of Science in Engineering. In peacetime, U.S. Army engineers have provided critical skills in many areas of repair and construction of roads, dams, and other similar projects. In war, they have been critical elements in battle. Even the enemy has paid American combat engineers compliments. For example, SS Standartenfuhrer (Colonel) Piper became very angry during the Battle of the Bulge (December 1944) when U.S. Army engineers blew up a critical bridge in the face of his advancing Tiger tanks and he exclaimed, "Those damned engineers!"<sup>1</sup> Engineers helped the USAAVNC mobilize during Operations DESERT SHIELD and DESERT STORM.

#### **Directorate of Engineering and Housing (DEH)**

Certainly one of the busiest directorates on Fort Rucker during the mobilization was the Directorate of Engineering and Housing (DEH). The DEH coordinated billeting for more than 2200 U.S. Army Reserve and National Guard personnel in addition to their normal billeting operations. This was accomplished only by the extensive use of World War II-era wooden barracks, many slated for early demolition, and housing vacated by Fort Rucker units that had already deployed to Southwest Asia.<sup>2</sup>

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<sup>1</sup> John S. D. Eisenhower, *The Bitter Woods*, (New York: G. P. Putnam & Sons, 1969), p. 248. Also: Charles B. MacDonald, *A Time for Trumpets - The Untold Story of the Battle of the Bulge*, (New York: William Morrow and Company, 1985), pp. 224-244.

<sup>2</sup> LTC Norton (ATZQ-DEH-DS), memo for DAC, subj: Historical Report, Operation Desert Shield/Desert Storm, (June 6, 1991), DEH Folder, DESERT

(continued...)

Originally, the plan had been to seal up the barracks of the departing units, but that decision was quickly overcome by events. Significant problems surfaced when these buildings were put to use. The DEH's expert in housing reserve units, Mr. Bill Lee, noted "The [1st Aviation Brigade], who controlled these two units, had allowed the individuals to leave their personal gear in the rooms banded in wall lockers.... What the brigade had to do was go back in there, break the banding on all the wall lockers, inventory all the goods after the soldiers were gone... and store it elsewhere so that they could make those rooms available for use by the reserve components."<sup>3</sup>

The normal billeting plan created for mobilization quickly proved to be inadequate. "The mobilization plan...planned prior to DESERT SHIELD/DESERT STORM...[was] found to be extremely rigid and really unusable. It was predicated on a full mobilization scenario and, of course, not going to full mobilization, but piecemeal, moving from a 200,000 call-up to a partial mobilization.... There were problems in the command chain to take the steps that were necessary to free up spaces."<sup>4</sup>

Many commanders, quite understandably, did not want their unit areas used to house mobilized units. They wished the areas to remain just as they had left them. Also, some commanders did not want to disrupt the normal 90-square feet of living space per soldier. Mobilization standards allow for as little as 54-square feet of living space as a temporary expedient. However, full-time personnel were still billeted in these areas.

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<sup>2</sup>(...continued)

SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>3</sup> LTC Norton, director, DEH, and staff, transcript of an oral interview conducted November 14, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, pp. 1-2.

<sup>4</sup> Ibid., p. 3.

The first billets to be used to house incoming units were those in the area which were normally used to billet reserve units on annual training. This area as well as bachelor/visiting officer quarters quickly became overfilled. Some arrivals had to be billeted in civilian motels in the neighboring cities of Daleville and Enterprise, Alabama.

Troop quarters became so scarce that one entire unit was billeted in the skating rink. To provide adequate accommodations in this building, the DEH had to modify the plumbing and also had to find 482 beds for the facility. To do so, work crews labored sometimes until twelve o'clock at night and on weekends.<sup>5</sup> Three hundred and sixty-two of the needed beds came from the 46th Engineer Battalion and the 2-229th Attack Helicopter Battalion. A further 120 were obtained from the 1/13th Aviation Regiment.<sup>6</sup> A sudden crisis was averted, but only for a short time.

The system soon overloaded again, and more and more soldiers were billeted in substandard quarters. Congressional inquiries and initially low unit morale resulted before things turned around.<sup>7</sup> The crisis approached a "no solution" scenario, but fortunately did not quite reach it. The DEH had not been excused from supporting reserve units that came to Fort Rucker to perform their annual training. That type of training did not stop for Operations DESERT SHIELD and DESERT STORM. Billets had to be found and prepared for these units as well.

Referring to those hectic times, Lieutenant Colonel Norton, Fort Rucker's director of the DEH, commented, "We never got to those decision points. We kept backing into a mobilization and when we got to 1400 reservists on post...[that] is when we started

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<sup>5</sup> Ibid., p. 8.

<sup>6</sup> LTC Norton, memo, June 6, 1991.

<sup>7</sup> LTC Norton and staff, interview, p. 4.

getting scared, because if we had gotten another major unit in, that is when we would have been in trouble."<sup>8</sup>

If all of the permanent billeting facilities had been exhausted, a plan had been developed to erect a tent city to house overflow units.<sup>9</sup> Fort Rucker had a number of possible locations to construct such a facility with running water and port-o-potties. This plan, however, was a "no-go" at its inception because of two factors. "First, we could not find the tents. The tents were not available in the United States. They had all been shipped to Saudi Arabia. Second, we ran right up to the limit and then the units quit [arriving]."<sup>10</sup>

The DEH did go through the entire planning process, however, and prepared contracts to build extensive water and sewage lines to support the tent cities. Had the war been prolonged and the tent cities had been necessary, the DEH was ready to put in all the necessary engineering infrastructure for that type of operation.<sup>11</sup>

In addition to overseeing the maintenance and preparation of billets for mobilizing units, the DEH also assisted in constructing shipping containers for departing units. A total of 1,200 crates of various sizes were constructed by the DEH consuming 60,500 cubic feet of lumber.<sup>12</sup>

When the Family Assistance Center (FAC) needed a home, the DEH set to work and renovated Building 4505 as the operational area for the FAC. The renovation took just a few days to complete and the FAC became operational shortly thereafter.

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<sup>8</sup> Ibid., p. 7.

<sup>9</sup> Ibid., p. 30.

<sup>10</sup> Ibid., p. 16.

<sup>11</sup> Ibid.

<sup>12</sup> LTC Norton, memo, June 6, 1991, p. 3.

The DEH also renovated buildings 6602, 6603, and 6617 as an in/out processing center for reserve units and individual ready reservists.<sup>13</sup>

In addition to providing support for the mobilizing units, the DEH still had to perform its normal daily duties. The DEH should have had full manning levels to do the job; however, that was not the case. In an interview, Lieutenant Colonel Norton said "That was somewhat of a horror story because when it first happened,...we were at about 90 or 95 percent, but the [reduction in force] continued even as the war was going on. It was just like...this will be over in six weeks and at the same time, the troops were working overtime to try and pull off this DESERT STORM support. We were being [affected by the reductions], and I think we took about 50 space cuts during that period of time."<sup>14</sup>

To make mobilization work, the various directorates on post had to cooperate—and cooperate they did in an exemplary manner. The DEH was greatly dependent upon the Directorate of Plans, Training, Mobilization, and Security for example, for information on the "who, what, when, where, and why" of incoming units. The Directorate of Logistics provided information on transportation for the unit and requirements for packing and crating equipment.

It is difficult to fathom, but demobilization occasioned more difficulties than mobilization. "Demobilization actually became more critical...because the 229th and the 46th were scheduled to come back. That is over 1000 people, plus we had the reserve units coming back. As the reserve units came back, we tried our best to demobilize them within four or five days, but you had the medical holds, those that you couldn't clear right away for some reason, and then on top of that we had the annual training cycle

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<sup>13</sup> Ibid. Also see: LTC Norton and staff, interview, p. 8.

<sup>14</sup> Ibid., p. 9.

coming in. A conscious decision was made that we were not going to stop the annual training cycle."<sup>15</sup>

Since the 2-229th Attack Helicopter Battalion and the 46th Engineer Battalion were the first to return, they reoccupied their barracks, and this removed those billeting spaces from use by either annual training units or returning reserve units. The 46th and 2-229th did not go back into their billets under the smaller mobilization living space allocation, but under the far larger peacetime space allocation.

The tent city idea was again resurrected in case the number of returning units exceeded billeting space and a number of units were informed that they might have to spend a few days in tents upon returning from Saudi Arabia. That idea died quickly because tentage still wasn't available.<sup>16</sup> When informed that units may have to live in tents, several units diverted to other bases. For example, "One engineer battalion, which was our biggest issue, was this 600-man engineer battalion, and they did go to Eglin [Air Force Base] instead of going to Fort Rucker when they found out that they may have to go into tents."<sup>17</sup>

Because that battalion was diverted to Eglin Air Force Base, the DEH lost the services of the unit to help with engineer projects at Fort Rucker. "They did send us a couple of platoons or a company to do one small project for us, but they commuted between Eglin and Fort Rucker to do it."<sup>18</sup>

This engineer battalion was doubly important because no U.S. Army Reserve or National Guard engineer battalions were activated to support the mobilization at

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<sup>15</sup> Ibid., p. 16.

<sup>16</sup> Ibid., p. 17.

<sup>17</sup> Ibid., p. 18.

<sup>18</sup> Ibid.



Fort Rucker, even though such a unit would have been very helpful. The only units the DEH supported that were mobilized specifically for Fort Rucker were those associated with the hospital and the administrative company that assisted the Adjutant General.<sup>19</sup>

The Directorate Engineering and Housing, like many of the other directorates on post, mixed both military and civilian in its work force. During mobilization, both segments were subject to call-up and this did cause some problems in the area of fire protection at the various staging fields used by the USAAVNC, which was a direct responsibility of the DEH. "All of the crash and rescue and fire protection is our responsibility, too. When the mobilization occurred we had a base of about 60 military fire fighters that augments the 200 and some odd civilian fire fighters. All of those were subject to being mobilized also. We have a steady draw down of our military fire fighters that were shipped out. We had some, not too many, of our civilian fire fighters activated."<sup>20</sup> Still, this unsettling situation caused some knotty problems because the military personnel lost were largely in one particularly important area. Lieutenant Colonel Norton explained: "We increased the training and we took the training on through Christmas. We did have to hire fire fighters on a temporary basis to replace the military fire fighters that were lost (these are crash and rescue people), so that we could continue training because you can't train on the field without having the crash and rescue service available. You have to have the service available 24 hours a day."<sup>21</sup>

The DEH spent over \$12,000 in overtime for these fire fighters so that training could continue. Even though temporary personnel could be hired, the DEH was still

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<sup>19</sup> Ibid., p. 19.

<sup>20</sup> Ibid., p. 21.

<sup>21</sup> Ibid.

anticipating budget and manpower cuts in the coming years. As Lieutenant Colonel Norton remarked, "We had to make do with what we had."<sup>22</sup>

Luckily, some of the most important facets of the DEH were not that greatly affected at the time by manpower cuts or Operations DESERT SHIELD and DESERT STORM (i.e., electrical distribution, water, sewage, trash pick up, maintenance of air conditioners, and grounds maintenance).

One of the considerable number of the DEH functions most affected by Operations DESERT SHIELD and DESERT STORM (and where some of the most serious problems occurred) was in transient housing. The DEH was responsible for staffing, maintaining, and upkeep for all the various transient facilities on Fort Rucker. It was these facilities that were strained to the utmost during mobilization.

Keeping up with housing for incoming personnel was almost a "no win" proposition. Lieutenant Colonel Norton commented about problems and potential problems: "To house your hospital units that were brought into Lyster... we had to go to double bunking them in...a private bedroom, sitting room, a little kitchen and a bathroom.... We had to tell those folks [they were] going to get double-bunked and they had to share a room over in the permanent party side while on the transient facility side, we tried to keep one man per room. Another thing that we had to keep in mind was had there been mass casualties, Building 308 would have become an addition to the hospital."<sup>23</sup>

Because of the overflow in billeting, the DEH had to negotiate with local motels for rates which were reasonably priced. Quite naturally, the motels wanted commitments on rooms, but the DEH couldn't give them commitments because it did not know how

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<sup>22</sup> Ibid., p. 22.

<sup>23</sup> Ibid., p. 24.

many were coming at any one time. The local area hotels and motels began to compete with each other on rates, and politics entered the picture. Daleville, Alabama, was the preferred area to use for billeting because it was convenient, especially so for the bus service that was activated by the DOL to transport officers/noncommissioned officers (NCOs). Eventually the plan had to be scrapped, principally for political reasons. The officers and senior NCOs were told to go off-post and negotiate their own rates.<sup>24</sup>

In the area of billeting, one can never please all of the people. As Lieutenant Colonel Norton remarked, "You had all these...[recalled retirees] walking in demanding first-class treatment, and you give them a statement of nonavailability to go downtown. Some of these even wrote the President that they were unhappy with the way that they were treated."<sup>25</sup>

The off-post billeting situation was exacerbated by the often changing guidance from higher headquarters. Lieutenant Colonel Norton explained, "...we had notification from [the U.S. Army Training and Doctrine Command] that non-availability statements were not an option for units that were mobilizing. Then finance said, no, all these people are really [on temporary duty] and...eventually they are going to get paid [temporary duty] funds.... There were constant mixed signals."<sup>26</sup>

To support all aspects of mobilization, the DEH expended \$1,064,000 which included all repairs on buildings needed to house troops, overtime for civilian personnel, and lumber used to make packing crates for departing units.<sup>27</sup> In addition to the builders of Fort Rucker, there were also equally dedicated personnel who provided

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<sup>24</sup> Ibid., p. 25.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid., p. 26.

<sup>27</sup> Ibid., p. 32.

assistance during mobilization. If engineering dealt after a fashion with the health of the soldiers, the Chaplains' Office dealt with the spiritual health of soldiers during Operations DESERT SHIELD and DESERT STORM.

### **Chaplain's Office**

Throughout its long and proud history, the Chaplain Corps of the U.S. Army has been helping soldiers with personal and spiritual problems of every description. The saying "tell it to the Chaplain" had considerable reality during the Persian Gulf conflict.

During Operations DESERT SHIELD and DESERT STORM, the Chaplain's Office at Fort Rucker performed in a manner fully in line with chaplains from the past. A total of seven chaplains who ministered to reserve units that mobilized at Fort Rucker were given assistance by the Chaplain's Office. This involved not only training, but also equipping them prior to deployment.<sup>28</sup> "Our concern at the time was to take a look at our mobilization plan, bring it out and be ready to execute it...to make sure that it was adequate to meet the needs of what we thought that we would be responsible for doing."<sup>29</sup>

The Chaplain's Office became immediately involved with the Family Life Center "because dealing with families of those who are being deployed and the possibility of people being deployed throughout the state is our area of responsibility using Fort Rucker as a base of operations."<sup>30</sup>

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<sup>28</sup> Kitchens and Wright, USAAVNC 1990 Annual Historical Review, p. 166.

<sup>29</sup> COL (Chaplain) Vickers and staff, transcript of an oral interview conducted December 19, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

<sup>30</sup> *Ibid.*, p. 1.

When the Emergency Operations Center required a coordinator from the office, Chaplain Shirey was "given the responsibility as the resource manager and deputy for all practical purposes in coordinating our efforts with the [Emergency Operations Center], and we were involved directly with them in their meetings."<sup>31</sup>

In addition to working directly with the Emergency Operations Center, the Chaplain's Office also communicated with Chaplain Bernie Ensore, the National Guard's chaplain for Alabama. Through this contact, the Chaplain's Office could identify National Guard units that would be deployed out of state and "determine if they had chaplains and chaplains' assistants...."<sup>32</sup>

If a unit lacked a chaplain or a chaplain's assistant, Fort Rucker would contact the U.S. Army Forces Command or U.S. Army Training and Doctrine Command to attempt to provide the missing personnel. "We also had contact with some National Guard and U.S. Army Reserve units in Mississippi, [and] in Florida...."<sup>33</sup>

Mobilization always goes smoother when coordination pre-dates the mobilization. In the case of the USAAVNC's Chaplain's Office, Chaplain (Colonel) Vickers and staff members attended a National Guard training session and met many of the chaplains assigned to units that would mobilize through Fort Rucker.<sup>34</sup>

When relatives were serving in Southwest Asia, the chaplains of Fort Rucker were directly involved in all types of family support group activities, and provided any

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<sup>31</sup> Ibid., p. 2.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

assistance and counseling required for the Family Life Center, and the Family Assistance Center.<sup>35</sup> The Family Assistance Center concept first originated at Fort Campbell after the "Gander crash" that wiped out an entire company of the 101st Airborne Division. All the types of assistance for this situation were brought together in one building, along with chaplains. The concept was so successful that the entire U.S. Army began to look at the Family Assistance Center as a good way to look after those left behind when units deploy for war. In fact, Fort Rucker sought out the after action reports of the Fort Campbell experience and shared the information with others. This was, in effect, the birth of the Family Assistance Center at USAAVNC.<sup>36</sup>

Before Operation DESERT STORM began, it was not known what the level of casualties would be, so the Chaplain's Office assisted in training for the handling of mass casualties and the notification process for next-of-kin.<sup>37</sup>

The Chaplain's Office also helped to deploy U.S. Army Reserve and National Guard chaplains. "We were able to offer them help that we had in forms of literature and Bibles, that sort of thing, and in some cases the rosary and other information that was necessary for them because a lot did not have it."<sup>38</sup> Many of the U.S. Army Reserve and National Guard chaplains did not have complete ministry kits. Many of

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<sup>35</sup> Ibid., p. 20.

<sup>36</sup> Ibid.

<sup>37</sup> COL (Chaplain) Vickers (ATZQ-CH), memo for Fort Rucker Historian, subj: 1991 Historical Report, (March 14, 1991), Chaplain Folder, 1990 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>38</sup> COL (Chaplain) Vickers and his staff, interview, p. 9.

these chaplains were well trained, and came from good religious backgrounds, but were nervous about what would be expected of them in Saudi Arabia.<sup>39</sup>

Chaplains were present at all preparation for overseas movement sites, and furnished Bibles and provided spiritual counseling upon request. The office also trained a total of 32 National Guard chaplains in the proper conduct of military funerals.<sup>40</sup>

Several of Fort Rucker's assigned chaplains were attached to mobilizing units, and deployed with them to Saudi Arabia. One of these was the USAAVNC's Chaplain (Captain) Perry, who was assigned to the 46th Engineer Battalion. He participated in all the necessary training and administrative preparation before the 46th Engineers deployed to Saudi Arabia.

As the battalion's chaplain, Chaplain Perry spent much of his time, when not training, helping to insure that a family support infrastructure was left behind. Chaplain Perry described this task as "...trying to coordinate to make sure that we had a strong family support system set up before we left. The...wives took care of that mainly..., the soldiers...spent most of [the] time with last minute training."<sup>41</sup>

When the unit arrived in Saudi Arabia, Chaplain Perry discovered that his work had just begun. "Our unit became splintered. A lot of us went in different directions because of the mission.... There were a lot of projects that consisted of only platoon-size units or company-size projects. So, now as far as my job, I stayed very busy."<sup>42</sup>

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<sup>39</sup> Ibid.

<sup>40</sup> COL (Chaplain) Vickers, memo, March 14, 1991.

<sup>41</sup> COL (Chaplain) Vickers and his staff, interview, p. 10.

<sup>42</sup> Ibid.

Chaplain Perry and his assistant logged between 10,000 and 12,000 highway miles. "Every day there was some place to go to visit with troops. One of the things that I tried to do, and made it a goal, was to see every soldier at least twice a week."<sup>43</sup>

Part of the ministry involved devotion to Bible study. Given the situation in Saudi Arabia, many soldiers spent time reading their Bibles. Chaplain Perry related that: "I tried to have some type of devotion or Bible study...every day, but...key areas at least once a week. One of the main subjects that soldiers were concerned about was the Book of Revelations, the end times.... There was a lot of discussion there because we were in an area that the Bible speaks of quite a bit. We found ourselves in Basra, a place that was called Ur (actually situated in Southern Iraq, northwest of Basra) in the New Testament, a place where Abraham came from."<sup>44</sup>

While working his ministry in the desert, Chaplain Perry was asked one question more than others: "Do you think we are going to war?"<sup>45</sup> "They were concerned about the war, the use of chemical weapons—everybody knew that was a real possibility. Of course there were questions about family and so on..., but I think most soldiers kept things in perspective."<sup>46</sup>

The soldiers of the 46th Engineer Battalion were, of course, concerned about their families and they continually pressed Chaplain Perry for reassurance. He told them that "the families were being taken care of and [that they] had to concentrate on [the] mission and staying alive."<sup>47</sup> Chaplain Perry also spent time building confidence in the troops.

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<sup>43</sup> Ibid., p. 11.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid., p. 12.

<sup>46</sup> Ibid.

<sup>47</sup> Ibid.



Many were concerned by the rumors they had heard that their NBC equipment would not work and the chaplain had to assure them that "there [were places]... to go and get...masks checked by professional people."<sup>48</sup>

During the Christmas season, thousands of Americans sent gifts and cards to soldiers in the desert. "The support from schools and churches...came in by the truck load. Gifts around the holiday season...[soldiers] received gifts from people that they didn't even know. That meant a lot, it meant a lot to the soldiers."<sup>49</sup>

One thing that Chaplain Perry noticed was devotion to the integrity of the unit. "Even soldiers with serious illness in the family, most of those soldiers were willing to stay. They didn't really want to leave. They felt obligated to stay with their men. A few soldiers whose wives had had babies while they were gone felt an obligation to stay with their companies. Very few soldiers wanted to leave before the situation was over."<sup>50</sup>

When the 46th Engineer Battalion returned to Fort Rucker from Saudi Arabia, Chaplain Perry continued to minister to the needs of the unit. Although all had gone well in the desert, there was a downside to the conflict. Chaplain Perry noted that "[there have been] quite a few divorces since we returned. We had a few that were divorced within just a few days of returning."<sup>51</sup>

The chaplains also provided help and support for those individual ready reservists who mobilized through Fort Rucker. Chaplain (Captain) Shoemake was one who spent a great deal of time meeting with these reservists. "I would talk to them and make sure

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<sup>48</sup> Ibid.

<sup>49</sup> Ibid, p. 13.

<sup>50</sup> Ibid., p. 15.

<sup>51</sup> Ibid., p. 18.

that they didn't have any problems that we needed to be aware of.... I made sure that they had a Bible if they wanted it and that they knew where the church services were in this area. Some of them had situations where we had to get the AG involved and see about getting their orders...[which brought]...them on active duty...[canceled]."<sup>52</sup>

One of the biggest problems faced by the chaplains here at Rucker and in the desert was that many of the reserve soldiers were fearful of losing their civilian jobs at home, or of needed college credits if they were going to school at the time of mobilization. Many soldiers, the chaplains discovered, had not planned for any long-term separation from their family. "They did not plan to have to leave to go to war."<sup>53</sup>

The above problems were especially acute among the individual ready reservists because, unlike the U.S. Army Reserve and National Guard units, they had no available support structure.<sup>54</sup>

Like other offices and directorates on post, the Chaplain's Office had three individual mobilization augmentee slots, but no one was assigned to them. Repeated requests eventually managed to generate two retired chaplains who were inbound to Fort Rucker when the war ended in late February. They were stopped at the last minute. The Chaplain's Office made do with what it had; but, there were, of course, some difficult times.

Operation DESERT STORM did result in casualties, and Fort Rucker had five of its own to deal with.<sup>55</sup> Chaplain Vickers remarked: "Right at that particular point we had five casualties that we were deeply involved with. We had a unit ministry team basically

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<sup>52</sup> Ibid., p. 23.

<sup>53</sup> Ibid., p. 24.

<sup>54</sup> Ibid., p. 26.

<sup>55</sup> Ibid., p. 32.

assigned to each of those...but it took all of our time to do what we felt would be adequate to include the funeral and meeting with the families. Had we gone any further or the war gone on any longer, we wouldn't have been able to accomplish our mission in dealing with the casualty load that was anticipated—even if we could have been able to muster the number of National Guard and Reserves...."<sup>56</sup>

The mass casualty plan called for students attending the officers advance course to be used as casualty assistance officers. But, even with that help, there "would have been no way in the world that ten chaplains would have been able to support that effort."<sup>57</sup> The area to be covered by the Chaplain's Office at Fort Rucker was large. "Fort Rucker is responsible to the Georgia line, all the way to the Mississippi/Louisiana line and the panhandle of Florida and north of Montgomery."<sup>58</sup>

At one point, some funeral directors were telling families that if you wanted a bugler, rifle squad, and pall bearers, you had to request a chaplain. As soon as possible, the Chaplain's Office put out the correct information that it was not necessary to do this in order to get the full funeral detail. Reserve units would supply the needed personnel through the casualty assistance office. In many memorial services, the presence of one of the military chaplains was not necessary.<sup>59</sup>

To be more responsive to requests, several of the chaplains bought cellular phones using their own money. As Chaplain Vickers remarked, "That pager is an anvil around your neck in one respect, but...that was a good thing to help us."<sup>60</sup>

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<sup>56</sup> Ibid., p. 28.

<sup>57</sup> Ibid., p. 29.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid., p. 33.

<sup>60</sup> Ibid., pp. 32-33.

Because the American Red Cross was not adequately staffed, and thus overloaded, the Fort Rucker Chaplain's Office, as well as similar offices all over the nation, helped to deliver personal messages sent through Red Cross channels. "The chaplaincy became a network of information for those messages that the Red Cross could not give and that taxed us again to be able to do that. We delivered a lot of official/unofficial messages worldwide...."<sup>61</sup>

One chaplain found a unique way to get messages from families at Fort Rucker to loved ones in Southwest Asia. Using his home computer and a software program called "Prodigy," Chaplain Williamson was able send unofficial messages. "[Prodigy] came out with a direct line that you could send as many messages as you wanted to soldiers. It didn't cost you a dime and I wouldn't send anything official, but whenever a soldier's wife would say she needed to tell her husband this, I was able just to go home and type a few of these messages in and send them and a teletype was cranking somewhere in Southeast Asia when I hit the enter button. I really enjoyed that service."<sup>62</sup>

In addition to ministering to families of soldiers in the desert, the Chaplain's Office also provided help and support to the nearly 400 personnel on medical hold at Fort Rucker. A Mississippi National Guard chaplain was mobilized, and ended up in the medical hold company on post. He provided assistance to these soldiers in "all sorts of ways."<sup>63</sup> This was necessary because there is no hospital chaplain on this post, nor is there an authorized slot for one. The Chaplain's Office has the additional responsibility to minister to those at the U.S. Lyster Army Hospital.

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<sup>61</sup> Ibid., p. 34.

<sup>62</sup> Ibid., p. 35.

<sup>63</sup> Ibid., p. 36.

The medical hold personnel had some unique problems. Not only were many sick, but they had pressure from their families and jobs to return as quickly as possible. Some personnel took months to resolve their medical problems before they could be released from active duty. Since there was a lack of housing for long-term mobilized personnel, a number of the medical holds were placed in two-story barracks in the heat of summer with only a few fans for cooling. Since everyone at Fort Rucker pulled together, these problems were effectively confronted and solved.<sup>64</sup> Perhaps the most unique organization for family assistance was the Family Assistance Center. Although the Chaplain's Office was involved, they were not, by far, the only ones.

### Family Assistance Center

In one important respect, Operations DESERT SHIELD and DESERT STORM were unique as compared with past conflicts in this century. In World War I, World War II, Korea, and South Vietnam, the families of service personnel who took part were, in effect, on their own.<sup>65</sup> Some did receive assistance, but most families, particularly the spouse who remained, had to handle everything from paying the bills to supervising the children while the other spouse was overseas.

There are a number of good reasons for establishing family support groups and the Family Assistance Center, as a pamphlet from the Center for Army Lessons Learned pointed out. "Family separation creates psychological stress for both the deploying

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<sup>64</sup> Ibid., pp. 37-38.

<sup>65</sup> However, in the recent past, units have tested that capability when they deployed on no-notice exercises. For example, the 226th Attack Helicopter Battalion, stationed at Fort Rucker in 1987, deployed during an exercise called "PENNY ANTE." The surprise deployment "provided valuable feedback." John W. Kitchens, USAAVNC 1987 Annual Historical Review, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 43.

soldier and the family left behind.<sup>66</sup> Soldiers who feel their families can manage without them are better able to concentrate on mission tasks."<sup>67</sup>

Some of the major concerns expressed by families of deployed service personnel are as follows: uncertainty, child care, family management, rumors, denial, fear of war, finances, and loneliness.<sup>68</sup> It was the Family Assistance Center's task to deal with these problems in an up-close and personal way.

At Fort Rucker and across the nation, organizations were created that offered needed help and assistance to families of U.S. Army personnel deployed to Saudi Arabia. The Family Assistance Center not only furnished information on the family member, but also provided assistance in the areas of medical care, transportation, administrative details, and schools to dependents of active U.S. Army, National Guard and U.S. Army Reserve personnel. What made it possible was the cooperation and spirit of those at Fort Rucker. The Family Assistance Center was supported by a number of key Fort Rucker directorates.

#### **Directorate of Personnel and Community Activities (DPCA)**

As a social grouping, Fort Rucker can be likened to a city. A small one, perhaps, but nonetheless a city. It was the responsibility of those in authority at Fort Rucker to see to the community activities of those who lived or mobilized there. The organization on post that sees to personnel and community activities goes by the brevity code "DPCA."

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<sup>66</sup> For a complete list of U.S. Army regulations that govern family assistance, see: Center for Army Lessons Learned, special bulletin, no. 91-2, (June 1991), "The Yellow Ribbon -- Army Lessons from the Home Front," Fort Leavenworth, Kansas, p. A-1.

<sup>67</sup> Ibid., p. 4.

<sup>68</sup> Ibid., p. 29.

The Directorate of Personnel and Community Activities (DPCA) was led during Operations DESERT SHIELD and DESERT STORM by Colonel Clarence Belinge, and oversaw a host of related activities. In addition to the adjutant general function, which generally supplied the personnel part of the DPCA, the community-side contained "officers, [noncommissioned officers], and enlisted member clubs, the golf course, the physical fitness center, the child development center, Army Community Service-type operations, the post library, the various recreation centers, and operations of the dependent school system."<sup>69</sup> Luckily, DPCA was manned at around 90 percent of its allowed personnel at the beginning of Operations DESERT SHIELD and DESERT STORM. The DPCA would need every one of its personnel and more.

One of the functions the DPCA oversaw was the development of an overall mobilization processing center which previously had not existed at Fort Rucker. This necessitated some artful moving of personnel and facilities. Colonel Belinge related, "As far as the AG processing went, we used the recreation center. We bounced between the recreation center and other activities on post. We used a vacant mess hall at times...and we finally took over a complex that the [2-229th Attack Helicopter Battalion] vacated..., and did some renovations turning it into a mobilization center."<sup>70</sup>

Another area of DPCA responsibility concerned the related areas of family and casualty assistance. These operations were centralized in December 1990, when the DPCA created a Family Support Center in an area vacated by the 46th Engineer Battalion. "We...planned to bring in the people that provide casualty assistance operations and to set up places for them. We set up a computer system, phone lines

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<sup>69</sup> COL Belinge, Director, DPCA, transcript of an interview conducted November 20, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 2.

<sup>70</sup> Ibid., p. 4.

direct to [the U.S. Army Training and Doctrine Command] and the [Department of the Army] Casualty Center so that we would have direct communications for any casualty information coming back from Saudi."<sup>71</sup>

Although the basic outlines of the Family Assistance Center were not unique, setting up all the various agencies that help families in one way or another in the same place was unique. The Family Assistance Center was under the direction of the DPCA's Family Support Division chief, Ms. Joanne Blanks, with considerable help and assistance from Lieutenant Colonel Planchon, the AG. The Family Assistance Center, according to Colonel Belinge, was based on "...the anticipated needs of the families and what services should be available to the families to help in any kind of emergency situation or just an information-type situation. In that facility, of course, we had 24-hour telephone operations. You could call in and ask questions and we would work on getting a response back within a 24-hour period. We had five phones set up and had gone so far as to set up a toll-free number so that we could get calls in from anywhere throughout the United States."<sup>72</sup>

The Family Assistance Center, since it operated on a continual basis, needed volunteer assistance as the number of military personnel remaining on post could not support that type of an operation. The DPCA set up an installation volunteer coordinator, Ms. Barbara Lindsey, who "could work with the volunteers.... We had a significant number of volunteers who came to participate."<sup>73</sup> Through the efforts of

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<sup>71</sup> Ibid.

<sup>72</sup> Ibid., p. 5

<sup>73</sup> Ibid., p. 6.



Ms. Lindsey, the response was tremendous. In fact, many came without being solicited and asked to assist in any way they could.<sup>74</sup>

When the Family Assistance Center was operating, one of the most common requests, yet one of the hardest to deal with was from parents inquiring about the well-being or whereabouts of a son or daughter. Many units in Southwest Asia were moving around quite often, and since their location was normally classified, it was very hard to pinpoint the location of the unit and contact them.

At the beginning of Operation DESERT SHIELD, the amount of messages allowed into the theater was kept to a minimum. The American Red Cross was not permitted to send messages unless it was an "absolute emergency, a life or death situation."<sup>75</sup>

After a time, the types of questions asked by those who contacted the Family Assistance Center began to assume some definite patterns, and standard answers were developed for some of the most frequently asked questions. For example, "if they were having a problem with pay, [there was] a response of whom to contact, where to go, or what to do."<sup>76</sup>

The Family Assistance Center was the focal point for many of the problems of families that had not been resolved when units deployed. One of the areas of constant problems was pay. Many soldiers had not made arrangements for their pay to go to the family. Some could be handled through the Finance and Accounting Office on post, while others required Army Emergency Relief loans.<sup>77</sup>

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<sup>74</sup> Ibid., p. 7.

<sup>75</sup> Ibid.

<sup>76</sup> Ibid.

<sup>77</sup> Most of these loans were later converted to grants and did not require repayment.

The family support activities on post which are part of the DPCA were busy sending out information sheets and questionnaires to families to determine what services or help would be required. Personal letters were also sent to families "to let them know what was going on and what was available within their area...[and what] family assistance phone numbers were for particular areas. There were family assistance centers set up throughout the United States within the National Guard and U.S. Army Reserve structure. [They were informed of] installations in close proximity and [were given] a packet full of information of people that they could contact."<sup>78</sup>

The key to the family support system was the spouses' support chain and the rear detachments for those Fort Rucker units that mobilized and deployed. These agencies served as a conduit through which agencies such as Army Community Services, Community Mental Health, local churches, local business, and individuals provided help and support for those in Southwest Asia and their families at Fort Rucker.<sup>79</sup>

The Family Support Division of the DPCA developed several programs to assist families of servicemen and women in Saudi Arabia. The Relocation Assistance Program "extracted pertinent facts from service members' deployment/demobilization information sheets and entered it into a computer database for future reference and statistics, and participated in two demobilization sessions for the month of August for a total of 100 soldiers processed. The program also assisted 50 soldiers with demobilization processing on an individual basis."<sup>80</sup>

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<sup>78</sup> COL Belinge, interview, p. 10.

<sup>79</sup> MAJ Schado (ATZQ-BDE-T), memo for DPTMSEC, subj: DS Lessons Learned, (June 3, 1991), 1st Aviation Brigade folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>80</sup> Ms. Norman (ATZQ-PAC-FS), memo for FSD, subj: 1991 Historical Report-August 1991 (Operation Desert Storm), (September 5, 1991), DPCA folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

The Family Advocacy Program "coordinated and delivered anger management and couples communication classes to elements of the 46th Engineer Battalion because of the increased need of reducing stress and strengthening relationship skills."<sup>81</sup>

Networking helped. Networking "involves innovation and imagination, but more commonly just observance or awareness. People in the local communities are anxious to help in a cause of this magnitude; those involved must just recognize this and ask. It is accomplished by all interested parties from the lowest enlisted soldier of the rear detachment to the wife living alone in Enterprise, Alabama. The key is talking with people."<sup>82</sup>

Family support groups generally held meetings once or twice per month. As the groups matured with meetings, membership was expanded to include fiancées and girl friends, as well as spouses in the local area, many of whom were not affiliated with Fort Rucker units, but who had family members in Saudi Arabia.

During these meetings, information was provided by key speakers who lectured to the group on topics of interest such as stress management, Army Community Services programs, and Community Mental Health resources to name a few. The meeting also provided fellowship and strength through camaraderie, and also a forum for ideas and questions.

The kickoff for the family support meetings occurred when the 2-229th Attack Helicopter Battalion left for Southwest Asia. The "intensity and frequency [of family

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<sup>81</sup> Ibid.

<sup>82</sup> MAJ Schado, memo, June 3, 1991.

support meetings] increased with hostilities in the Gulf and as needed throughout the deployment."<sup>83</sup>

To assist with adjustment when the troops returned from the Persian Gulf, the DPCA developed a mailing packet entitled Homecoming: Reuniting Families. Accompanying that packet was a reunion packet from the U.S. Army Community and Family Support Center. Both publications were directly intended to insure that there was a smooth transition from families being separated for a long period of time to normal daily family relationships.<sup>84</sup>

During the Persian Gulf deployment, some organizations provided their members with informative publications. Several of the units created newsletters. For example, the 2-229th Attack Helicopter Battalion published "Tiger Tales" twice a month. Distribution varied according to the information in each of the issues, but for the most part, information contained pertained "to all areas affecting the health, welfare, and morale of family members/friends of deployed [soldiers]."<sup>85</sup>

To enhance each unit's ability to contact their loved ones and receive messages, a unit data base was maintained by the rear detachment. This data base contained the soldier's full name, rank, social security number, unit of assignment, and MOS. A family data base was also maintained that contained the "most current information on their location (including short day trips), home and work phone number, mailing addresses, relatives, friends, neighbors, and number and names of the children. The primary

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<sup>83</sup> Ibid.

<sup>84</sup> Copies of both can be found in the Aviation Branch History Office, DPCA folder, DESERT SHIELD/DESERT STORM Files, USAAVNC, Fort Rucker, AL.

<sup>85</sup> MAJ Schado, memo, June 3, 1991.

purpose was to keep an accurate means of contacting all concerned in the event of an emergency and to disseminate routine information."<sup>86</sup>

During the deployment, a number of deployed soldiers' families had to go on trips; some for a short period, others for longer periods. The family data base was always updated. "Through the cooperation of the detachment, wives' 'chain of concern,' and the family support group, the currency of the data base was maintained through phone calls, personal visits to the rear detachment, or completing a family information sheet and noting changes."<sup>87</sup> The ability to communicate such important information to those overseas was important. On Fort Rucker there was a reasonably quick and no-cost method to send messages.

One U.S. corporation set up a communication system and pledged more than one million dollars for its operating expenses simply to help improve morale and to speed the delivery of messages to service personnel. Fort Rucker personnel benefitted from this system as did thousands in the armed forces.

American Telephone and Telegraph (AT&T) set up a "Desert Fax" system that allowed families at home and soldiers in Saudi Arabia to contact each other. Messages or drawings could be sent from 60 military bases across the nation and 400 phone centers.<sup>88</sup>

Local businesses also responded positively with help and assistance from the beginning of the deployment. They were eager to provide support for families of deployed personnel, but did not know what type of support was needed. The family

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<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

<sup>88</sup> Around Rucker, "Desert Fax Helps Families Keep in Touch," *Army Flier* [Fort Rucker, Ala.] (November 29, 1990): p. 15.

support chain and the rear detachments provided information on what type of support was needed. To help with these needs, Video Etc. in Daleville, Alabama, provided free copying of the videotapes that members of the 46th Engineer Battalion sent to their spouses; Ozark Mini Golf in Ozark, Alabama, provided free games of golf to 46th Engineer Battalion families.<sup>89</sup>

Support also came from local military organizations. For example, the Fort Rucker's Officers Club donated 18 pounds of ground coffee, 2300 hot dogs and buns, 3438 cokes, and 40 gallons of brewed coffee. The Fort Rucker Post Exchange donated 1000 hot dogs and buns, 3000 cokes, and 1000 discount coupons honored by Burger King. The DPCA used all of the above to provide help and support.<sup>90</sup>

While the family support system worked very well, it was not without problems. This was especially true with respect to the rear detachments. Many of the rear detachment personnel did not have an MOS normally associated with the functions of a rear detachment. They were not prepared or trained to "deal with the associated stresses involved with hostility and ungratefulness directed towards them and the detachment by distraught family members and friends." Some staff duty personnel were not properly briefed to access the appropriate alert roster when family members called.<sup>91</sup>

The rear detachment was also left out of the notification chain between the Department of the Army Casualty Center and the American Red Cross. In many instances, the first time the rear detachment had any notification of a problem was when a family member called the rear detachment for confirmation. All of these problems

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<sup>89</sup> MAJ Schado, memo, June 3, 1991.

<sup>90</sup> ATZQ-PACO-FS, memo for DPCA, subj: 1991 Historical Report, (February 7, 1991), DPCA folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>91</sup> MAJ Schado, memo, June 3, 1991.

were addressed when known, and in the main, fixed by coordination with appropriate authorities.<sup>92</sup>

Another problem also occupied the time of the rear detachments. A number of the spouses of service members stationed in Southwest Asia could not drive a car, nor did they own one. They could not legally be transported by members of the rear detachment in military vehicles, nor did the detachments have the personnel to provide such services. Because of business laws, military officials could not legally provide transportation where taxis were operating. When a spouse mentioned the idea of a post shuttle to the Commanding General, a shuttle bus was provided to transport people around post five days a week. When the service was later under-utilized, military taxis were employed.<sup>93</sup>

There was, in a backhand way, a first for instantaneous communication in the history of the U.S. Army. In no war previously fought was telephonic communication so readily available as in Operations DESERT SHIELD and DESERT STORM. This fact greatly assisted family support personnel, as well as the rear detachments. The after action report of the 1st Aviation Brigade reads "telephonic communication with the deployed unit was the fastest and most accurate means of communications."<sup>94</sup>

This type communication, however, did not come easily. When the 46th Engineer Battalion first deployed, the rear detachment could not contact the unit except by relaying messages through the 2-229th Attack Helicopter Battalion, which was stationed

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<sup>92</sup> Ibid.

<sup>93</sup> Ibid.

<sup>94</sup> Ibid.

nearly one hour away. The battalion was later able to call the rear detachment collect from Southwest Asia.<sup>95</sup>

In all cases, the rear detachment received the most timely and accurate information from the unit itself as opposed to the Emergency Operations Center channels, etc. It was found that the Emergency Operations Center's information was "normally at least 24 hours old, but usually exceeded two days."<sup>96</sup>

There was, in effect, another form of electronic communication that brightened the lives of both the soldiers in the desert and their families at home. The large number of video cameras taken by soldiers to Southwest Asia, and the availability of VCR recorders to view the films, made the exchanging of tapes one of the best ways to send messages to loved ones.

Several video stores in the local area helped to make copies of tapes sent to soldiers and maintained a file of them for families. The rear detachments also maintained copies. Some units used VCRs to record news programs and other similar shows so that they could keep up with current news and world events. It seems likely that "morale VCR tapes" will become a staple of family communication in the future when U.S. forces are deployed.<sup>97</sup>

In direct caring for families of deployed soldiers, a number of agencies did outstanding work. One of them was Army Community Services (ACS). As the 1st Aviation Brigade's after action report read, "ACS provided additional services to support the families of deployed soldiers. While ACS was very accommodating to provide these

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<sup>95</sup> Ibid.

<sup>96</sup> Ibid.

<sup>97</sup> Ibid.



services, the ideas for these services came from the rear detachments and the family support groups."<sup>98</sup>

The ACS provided the following services exclusively to families of deployed soldiers:

- a. four hours per month of free child care for each child;
- b. free child care to families who could not normally afford child care;
- c. opening of child care services on nights when it was not usually available; and
- d. free skating for teenagers every Monday night. (Volunteer workers manned the skating rink to oversee the children.)<sup>99</sup>

One the most common problems that the Family Support Center had to tackle was that some of the soldiers did not have their pay deposited into joint accounts with their spouses. As many spouses discovered, a power of attorney was not always honored by financial institutions. In a number of instances, the rear detachment had to write a memo verifying that the husband was deployed and that this was, in truth, his spouse so that the family could have access to the bank account.<sup>100</sup>

All of the post family and personal service organizations supported all who mobilized at Fort Rucker. Once the regular units had departed, they were quickly replaced by U.S. Army Reserve and National Guard units. In fact, the reserve component provided the balance of mobilized personnel.

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<sup>98</sup> Ibid.

<sup>99</sup> Ibid.

<sup>100</sup> Ibid.

## *CHAPTER EIGHT*

### *THE RESERVE COMPONENT*

The Reserve Component played an important part in the mobilization and deployment to Saudi Arabia. In a speech delivered to the Kiwanis Club of Ozark, Colonel Clifford Massengale, the director of Reserve Component Support, remarked, "When the Vietnam War ended in 1973, it was decided to cut the strength of the U.S. Army. In order to get more of the indigenous population involved in case of a national emergency, it was decided to put more structure in the National Guard and U.S. Army Reserve. That way, if and when they were called to active duty, nearly every person living in the United States would be at least indirectly involved."<sup>1</sup>

A majority of those soldiers mobilized during Operations DESERT SHIELD and DESERT STORM came from the ranks of the organized reserves. Individuals and units from the U.S. Army Reserve and the National Guard converged on Fort Rucker to be brought to active duty status.

During the early weeks of the mobilization, the Reserve Advisor's Office concentrated on assisting and preparing U.S. Army Reserve units and individual ready reservists for deployment to Saudi Arabia. One critical area of concern for the reserve advisor was obtaining instructor pilots for increased flight training at Fort Rucker.

With the pace of training rapidly increasing due to Operation DESERT SHIELD, large numbers of instructor pilots were needed. It would have been almost impossible to find the 128 qualified civilian flight instructors needed for the increased training on such

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<sup>1</sup> Sarah Gilbert, "Reservists Important Ingredient of Today's Military Force in Saudi Arabia, Ozark Kiwanians Told," *The Southern Star* [Ozark, Ala.] (January 16, 1991), p. 10.

short notice. "By the end of November, the [Reserve Component Support Office] had identified 233 retired military instructor pilots [who could] be placed on...mobilization orders to assist in the expanded Fort Rucker mobilization training if and when necessary."<sup>2</sup>

A request for instructor pilots was sent to the U.S. Army Reserve Personnel and Administration Center (ARPERCEN) to place qualified retiree personnel on orders in case they were needed. However, no retired personnel were activated during 1990.<sup>3</sup> This problem had been noted before and preparations made to handle it.

A special unit was created prior to Operation DESERT SHIELD for just such a need for instructor pilots. The Reserve ATB (AUG) had just been activated as a formal unit when mobilization was announced. It was at the right place and at the right time.

During total mobilization, many of the experienced personnel from the training side of Fort Rucker would be relocated elsewhere. A training base expansion was deemed necessary to insure that the number of training aviators would not be lacking during mobilization. This directly led to the Reserve ATB (AUG) organization.<sup>4</sup> As Colonel Terry McDowell, the Reserve ATB (AUG) commander stated, "We had two ideas to both augment the school for a partial mobilization and be the nucleus for a training base expansion if we went to full mobilization and air space constraints dictated that we reactivate a place like Fort Wolters, Texas, or Hunter Army Airfield."<sup>5</sup>

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<sup>2</sup> Kitchens and Wright, USAAVNC 1990 Annual Historical Review, p. 165.

<sup>3</sup> Ibid.

<sup>4</sup> COL McDowell, commander, Reserve ATB (AUG), transcript of an oral interview conducted September 24, 1991, Oral History File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 1.

<sup>5</sup> Ibid.

The Reserve ATB (AUG) was configured to have a headquarters, a training battalion composed of four companies (one for each type of aircraft), and a support battalion composed of two companies for general aviation support of the aviation school.<sup>6</sup> The full complement of the brigade totalled 546 personnel.

As a formal entity, the Reserve ATB (AUG) was a brand new organization. As Colonel McDowell related in an oral interview, "It took about a year to get from the concepts stage to [U.S. Army Training and Doctrine Command] approval on the mobilization [allowances], which we obtained in October 1990. November and December were spent filling the personnel to the brigade. We were mobilized in January of 1991."<sup>7</sup>

During mobilization, the Reserve ATB (AUG) activated only part of its total strength. The first increment arrived at Fort Rucker on January 30, 1991, and the second on February 4, 1991. Another increment was to be brought on active duty in March, but that call-up terminated at the conclusion of Operation DESERT STORM. A total of 62 reservists were mobilized during Operations DESERT SHIELD and DESERT STORM.<sup>8</sup> The cadre were instructing students as early as the afternoon of February 4, and every one of the rated pilots had completed all required evaluations by February 15.<sup>9</sup>

Prior to mobilization, members of the unit had trained at Fort Rucker, but never as a full unit. The U.S. Army Reserve has an Individual Ready Reserve Aviation Sustainment Training Program managed by ARPERCEN. This allows the instructor pilots of the Reserve ATB (AUG) to train reserve pilots in UH-1 Huey helicopters while

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<sup>6</sup> Ibid., p. 2.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid., p. 25.

they are performing their active duty training at Fort Rucker. Members of the brigade also performed active duty training prior to mobilization to maintain their proficiency in their assigned aircraft.

Prior to mobilization during Operations DESERT SHIELD and DESERT STORM, the only problem that arose was the difference in how active duty and reserve components looked at pilot currency.<sup>10</sup>

The brigade maintained some personnel on full-time active duty under the Active Guard/Reserve (AGR) Program. Unfortunately, the AGR cell of three personnel and the brigade as a whole did not have the luxury of, say, an emergency deployment and readiness exercise prior to Operation DESERT STORM. When they mobilized, it was for real.<sup>11</sup>

One of the initial problems was the differences between what the active army and the reserves considered a current pilot. Prior to Operation DESERT SHIELD, personnel from the Reserve ATB (AUG) flew in excess of 2500 hours in all types of aircraft. Upon mobilization, many of these same officers' flight status was not fully accepted by the Aviation Training Brigade.

In effect, the reserve pilots were required to, as Colonel McDowell put it, "go out and demonstrate to the Directorate of Evaluation and Standardization (DES) and the Aviation Training Brigade that these people are competent."<sup>12</sup> Eventually, a compromise was worked out; however, according to Colonel McDowell, "it took Fort Rucker training assets away from carrying students."<sup>13</sup>

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<sup>10</sup> Ibid., pp. 4-5.

<sup>11</sup> Ibid., p. 6.

<sup>12</sup> Ibid., p. 7.

<sup>13</sup> Ibid.

During the process of creation, the Reserve ATB (AUG) was envisioned to operate and train as a unit. During mobilization, however, the assets that arrived were quickly decentralized to "virtually every battalion under the Aviation Training Brigade. So, we augmented the school rather than plant the flag and...[were] tasked to do a specific mission. Our people were used as filler personnel."<sup>14</sup>

Members of the Reserve ATB (AUG) did a multiplicity of tasks for the USAAVNC. "We had people working as flight instructors...carrying...students and conducting advance instruments, tactics, contact.... Across the board we had people doing virtually everything that is done from a training standpoint with the exception of fixed-wing."<sup>15</sup>

Pilots from the Reserve ATB (AUG) also provided support to the U.S. Army Ranger School at Fort Benning, Georgia, and also at Eglin Air Force Base, Florida, plus flight engineering support for CH-47D training.<sup>16</sup>

Total flight time for personnel from the Reserve ATB (AUG) in support of training approached 9000 accident- and incident-free hours.<sup>17</sup> The cost for individual ready reservist/retired pilot refresher training expressed in costs for aircraft maintenance, much of which was provided by personnel from the Reserve ATB (AUG), totalled \$577,632.<sup>18</sup> Personnel within the Reserve ATB (AUG) had extensive flight experience

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<sup>14</sup> Ibid., p. 8.

<sup>15</sup> Ibid., p. 9.

<sup>16</sup> U.S. Army Reserve Aviation Training Brigade (Augmentation), "Augmentation Concept Fielded in Desert Storm," *Army Flier* [Fort Rucker, Ala.] (July 11, 1991): p. 5A.

<sup>17</sup> COL McDowell, interview, p. 9.

<sup>18</sup> Desert Shield/Desert Storm Cost Savings Audit, Fort Rucker, Exit Conference (April 24, 1991), briefing slides, DRM folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker.

prior to Operation DESERT SHIELD. One battalion commander had in excess of 13,000 hours and the overall average for pilots was 6,000 hours.<sup>19</sup>

In addition to supporting training at the USAAVNC, the Reserve ATB (AUG) also sent a U.S. Army Reserve team to Saudi Arabia on May 6, 1991, to talk with reserve aviation units there to provide feedback for the Center for Army Lessons Learned.<sup>20</sup>

One of the early lessons learned is that planning has to be more flexible. As with a majority of mobilization plans at Fort Rucker, the Reserve ATB (AUG) had planned based on full mobilization. As with other key directorates and offices at the USAAVNC, it was extremely difficult for the Reserve ATB (AUG) to mobilize just a part of the unit. Missions multiplied, but the people to handle them did not.<sup>21</sup>

Although small in numbers, the Reserve ATB (AUG) provided important instruction during the mobilization. The high number of pilots with thousands of hours of flying experience helped to provide the maturity and expertise to train the aviation leaders and pilots for potential combat and for the future.

Other reserve units were also mobilizing. Fort Rucker had to support the fielding of the 155th Armored Brigade from the Mississippi National Guard.

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<sup>19</sup> COL McDowell himself had 12,800 hours. COL McDowell, interview, p. 21.

<sup>20</sup> The team returned on May 25, 1990.

<sup>21</sup> COL McDowell, interview, p. 24.

**CHAPTER NINE**  
**MOBILIZATION AT CAMP SHELBY**

**On 22 August 1990, pursuant to Title 10,  
U.S.C. 673b, the President of the United  
States authorized the Secretary of Defense  
to order units...of the Selected Reserve to  
active duty.**

**Center for Army Lessons Learned  
Newsletter, February 1992**

"The 155th Armored Brigade, Mississippi Army National Guard, received the alert notification on November 15, 1990, and entered federal active duty on December 7, 1990. It mobilized at Camp Shelby...."<sup>1</sup> This was not the first mobilization at Camp Shelby.

Camp Shelby was built to support the mobilization of the U.S. Army during World War I and was activated in 1917 and was named for Isaac Shelby, an indian fighter and Revolutionary War hero, who was also the first governor of the state of Kentucky. In 1934, the state of Mississippi purchased Camp Shelby for use as a summer training area for its National Guard.

In 1940, it was reopened as a federal installation and was, incidently, the site of the largest tent city in the world. It became home to the famous 442d Regimental Combat Team.<sup>2</sup> The camp was also a prisoner of war installation for German soldiers

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<sup>1</sup> Center for Army Lessons Learned (CALL), newsletter, no. 92-2, (February 1992), "Mobilization of the Reserve Components (RC) for Operations Desert Shield and Desert Storm," U.S. Army Combined Arms Command, Fort Leavenworth, Kansas, p. v.

<sup>2</sup> The 442nd was a regiment made up of Nisei (second generation Japanese-Americans) who had originally been interned in camps in the United States at the

(continued...)



of the *Afrika Korps*. At the end of World War II, Camp Shelby was again returned to state control, and has provided training facilities for almost 100,000 National Guard and U.S. Army Reserve personnel nearly every year.<sup>3</sup> Camp Shelby, Mississippi, has been described as a "remotely-located, state-owned facility, with insufficient and antiquated facilities."<sup>4</sup> Camp Shelby is also a mobilization station which was the responsibility of the USAAVNC. Although the base was manned by full-time personnel, it did not possess the support facilities and personnel to conduct mobilization for a brigade-sized unit such as the 155th Armored Brigade. The 155th Armored Brigade was a much newer entity than its mobilization station.

The 155th Armored Brigade was constituted on March 16, 1951, as Headquarters and Headquarters Company (HHC), 108th Armored Cavalry Group in the Mississippi National Guard and federally recognized April 12, 1951. Until early 1968, the 155th Armored Brigade carried the designation of 108th Cavalry. On February 15, 1968, it was re-designated as HHC, 1st Brigade, 30th Armored Division. It was again reorganized and redesignated as HHC, 155th Armored Brigade on November 1, 1973, and made a separate brigade.

At the time of Operation DESERT SHIELD, the 155th Armored Brigade was an armor brigade with over 4000 assigned personnel and was armed with the latest in main

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<sup>2</sup>(...continued)

beginning of World War II, and who volunteered to fight. The unit motto was "Go for Broke" and in Italy (they were not allowed to fight in the Pacific), they established a reputation for fighting ability and valor not matched by any other American unit.

<sup>3</sup> W. A. Evinger, *Directory of Military Bases in the U.S.*, (Phoenix, AZ: Oryx Press, 1982), p. 93.

<sup>4</sup> LTC Norton, director, DEH, transcript of an interview conducted November 14, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 13.

battle tanks and wheeled vehicles. To move the 155th Armored Brigade to and from Camp Shelby required a minimum of five railroad trains loaded with 642 pieces of equipment, three convoys with 809 wheeled vehicles, and 58 buses.

Because of the size of the 155th Armored Brigade, Fort Rucker had to supply a large number of personnel to assist those of the state of Mississippi in preparing the brigade for deployment.<sup>5</sup> During the course of several months, 4200 personnel of the 155th Armored Brigade were processed.<sup>6</sup> Fort Rucker, being a fully active U.S. Army Training and Doctrine Command post itself, was required during mobilization to provide to Camp Shelby the assistance and personnel needed to make the mobilization possible. One area of personnel and support provided by the USAAVNC was in the area of engineering and housing.

True, Camp Shelby had its own Directorate of Engineering and Housing (DEH), but that organization had a limited capability. Camp Shelby's DEH asked Fort Rucker's DEH "for advice and financial support."<sup>7</sup> Since Mr. Leavis, director of the Directorate of Logistics (DOL), Fort Rucker, was in general charge of the support operation at Camp Shelby, Ft. Rucker's DEH sent a noncommissioned officer on temporary duty to assist DEH and DOL operations at Camp Shelby.

During the mobilization of the 155th Armored Brigade, it was necessary for Fort Rucker to allocate monies for needed engineering projects. For example:

a. During mobilization, Fort Rucker paid \$67,000 for utilities reimbursement. This was for electricity and gas, and during the demobilization the utilities paid were \$47,000.

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<sup>5</sup> Kitchens and Wright, USAAVNC 1990 Annual Historical Review, p. 163.

<sup>6</sup> Ibid.

<sup>7</sup> LTC Norton, interview, p. 11.

b. Miscellaneous repairs were \$130,000. These funds were spent on minor "fix-up" repairs all over Camp Shelby.

c. Costs to repair rail sites and installation of security lighting totalled \$66,000.<sup>8</sup>

All the funds that were used by Fort Rucker's DEH came out of current funding; these were, however, eventually replaced by Operation DESERT STORM funds.

The Fort Rucker DEH provided \$271,300 in funding for construction at Camp Shelby. This level of building was funded to provide security lighting, some new utilities, and miscellaneous repairs to some of Camp Shelby's older buildings. In addition to funding, DEH personnel also assisted Camp Shelby in developing review and audit procedures to cost-out projects such as rail head lights, range lighting, rail crossing sites, and drainage system head walls.<sup>9</sup> Fort Rucker's DEH provided only part of the help Camp Shelby needed.

A number of other Fort Rucker directorates and offices also dispatched expert assistance to Camp Shelby. The health of soldiers was always a prime concern of U.S. Army leadership. One portion of the total health care picture at Camp Shelby centered on dental care. The USAAVNC Dental Activity (DENTAC) was alerted to assist in the mobilization at Camp Shelby at 0740, November 30, 1990, by its higher headquarters, the Health Services Command. The DENTAC responded quickly.

The advance party of the USAAVNC's DENTAC arrived at Camp Shelby December 5, 1990. Within two hours of arrival, the dental facility was prepared to

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<sup>8</sup> Ibid., p. 12.

<sup>9</sup> LTC Norton, (ATZQ-DEH-DS), memo for DAC, subj: Historical Report - Operation Desert Shield/Desert Storm, (June 6, 1991), DEH folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

receive patients and by 1600 that day, soldiers were being treated. Still, the DENTAC faced some serious roadblocks in accomplishing their mission.

A 72-foot Temper tent was set up outside the permanent clinic at Camp Shelby in order to protect the ten sets of portable dental chairs and equipment. A 100,000 kilowatt generator was set up to provide power. Personnel were needed to handle the expected dental work involved with mobilizing more than 4000 personnel. As Colonel Childress, the DENTAC commander remarked, "I established what I needed for staffing [at Camp Shelby] and gave it to Health Services Command and they tasked five or six DENTACs to send people there. When we actually deployed to Camp Shelby, we had some of our people...[and] a combination of reserve and active duty coming in that had never worked together before and they put it together fairly well and fairly quickly."<sup>10</sup>

To keep track of the temporary duty, reserve, and active personnel orders, the DENTAC had to establish an orderly room. "We essentially had what we called Fort Rucker DENTAC West."<sup>11</sup>

Unfortunately, the permanent dental facility at Camp Shelby was not up to par. Colonel Childress described the existing dental clinic as "...a fairly rundown facility. The stuff is not very modern. Not maintained very well."<sup>12</sup> The DENTAC incurred considerable expense to bring the facility up to normal standards.

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<sup>10</sup> COL (Dr.) Childress, commander, DENTAC, and LT Tanner, transcript of an oral interview conducted January 30, 1992, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 3.

<sup>11</sup> Ibid., p. 4.

<sup>12</sup> Ibid., p. 12.

Merely to get the dental clinic operating required an initial investment of \$80,000 to buy off-the-shelf equipment which Camp Shelby lacked.<sup>13</sup> Taking care of the dental needs of a population of over 4000 requires many personnel and considerable equipment. The total amount spent for equipment was \$140,000 and an additional \$40,000 was spent for supplies.<sup>14</sup>

Some help was near at hand. Camp Shelby was home to a deployable medical system (DEPMEDS) facility. Their support was vital to the successful operation of the DENTAC at Camp Shelby. Whenever they were called upon for assistance, they responded.

It was fortunate that the dental operations at Camp Shelby were crafted by Fort Rucker for a large-scale operation. The dental condition of personnel of the 155th Armored Brigade required considerable overtime work on the part of the USAAVNC DENTAC team. "The [dental condition of the 155th] was generally poor.... A lot of them were in the Reserves and that was their only source of income...."<sup>15</sup>

The average soldier in the 155th Armored Brigade was in his or her early 30s with a "number of missing teeth, number of badly decayed teeth, possibly some abscesses."<sup>16</sup> A number of the soldiers had never seen a dentist.

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<sup>13</sup> COL Childress (HSBZ-DA), memo for Aviation Branch History Office, subj: Staffing of 1990 Annual Historical Review, April 2, 1991, DENTAC folder, 1990 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>14</sup> COL Childress (HSBZ-DA), memo for Commander, USA Health Professional Support Agency, subj: After Action Report (Camp Shelby Operation), (February 13, 1991), DENTAC folder, DESERT SHIELD/DESEET STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>15</sup> COL (Dr.) Childress and LT Tanner, interview, p. 8.

<sup>16</sup> Ibid.

U.S. Army regulations required soldiers to obtain a panoramic dental x-ray (PANOREX) to be placed in their health records.<sup>17</sup> One of the largest amounts of funds used at Camp Shelby by the DENTAC was to develop PANOREX records for the 155th Armored Brigade.

Before the mobilization, Colonel Childress attended a planning conference at Camp Shelby and asked the 155th Armored Brigade about the number of PANOREX records required. The response was only about 5 percent of the unit, roughly 250 to 300 personnel. The DENTAC commander later planned for double that number. When the brigade completed its mobilization and deployed to Fort Hood, 1400 PANOREX records had been established by the DENTAC.<sup>18</sup> When the x-ray machine at Camp Shelby could not handle the work load, a portable x-ray machine was purchased; it arrived within 30 hours and was operational two hours later. "Additional PANOREX film was flown in from Fort Gordon, Fort Rucker, Fort Meade, and obtained through local purchase."<sup>19</sup>

At full operating capacity, Camp Shelby's dental clinic had a staff of 17 officers and 34 support personnel. This severely strained dental resources since the USAAVNC's dental needs at Fort Rucker also had to be met. There was a limit to the number of support personnel that could be sent from Fort Rucker to Camp Shelby. Help was definitely needed. A call went out!

The DENTACs from Fort Lee, Fort Meade, Fort Jackson, Fort Gordon, Fort Benning, and the area dental laboratory at Fort Gordon soon joined the Camp Shelby

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<sup>17</sup> This change in regulations was as the result of the Gander crash in Newfoundland when it was so hard to identify the remains.

<sup>18</sup> COL (Dr.) Childress and LT Tanner, interview, p. 9.

<sup>19</sup> COL Childress, memo, February 13, 1991.

team to provide personnel and/or support.<sup>20</sup> During mobilization of the 155th Armored Brigade, the DENTAC processed 3993 personnel. Of those, 1210 were Class 3 dental conditions. Of these 1035 were remedied and returned to duty. During demobilization, 3591 soldiers were processed with a total of 41 Class 3 conditions identified, and 24 were resolved allowing personnel to demobilize.<sup>21</sup> Although dental operations required considerable support from Fort Rucker, the larger health care needs of Camp Shelby were not neglected.

The U.S. Army Aeromedical Center (USAAMC) was tasked to assist mobilization of elements of the Mississippi National Guard at Camp Shelby. Their mission was to insure that each soldier was medically qualified to mobilize and deploy to Southwest Asia.

As with most partially staffed posts, Camp Shelby maintained only minimal medical capabilities. With a full armor brigade of over 4000 personnel mobilizing, U.S. Lyster Army Hospital had to send a staff to Mississippi to reinforce the medics already at Camp Shelby. Colonel Kreutzmann, Lyster's commander, remarked in an interview that "...we had Colonel Weisser, [several physicians, three or four nurses, a couple of lab technicians, and x-ray technicians. We probably sent 25 to 35 people.... We hauled a lot

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<sup>20</sup> COL Childress (HSBZ-DA), memo for Aviation Branch History Office, subj: Staffing of 1990 Annual Historical Review, (December 10, 1990), DENTAC folder, 1990 AHR Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>21</sup> LT Tanner (HSBZ-DD), memo for SEE DISTRIBUTION, subj: After Action Report (Narrative) for Operation Desert Shield/Storm - Phase I August 9, 1990 to February 28, 1991, (May 15, 1991), DENTAC folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

of our equipment from this hospital [to Camp Shelby and]...we bought a lot of supplies."<sup>22</sup>

During summer training, Camp Shelby operated "a health clinic to screen sick calls and triage to adjoining hospitals."<sup>23</sup> Unlike the dental clinic, the basic medical facilities at Camp Shelby were excellent. "The clinic is really well designed to handle the sick call, one- to two-day triage.... The equipment to set up a mobile field hospital was already there so what we couldn't get from our own resources or from contractor/leased equipment for a short time period, we pulled the DEPMED sets and outfits into the hospital."<sup>24</sup>

Like the dentists, Fort Rucker medical personnel also used the DEPMED training facility at Camp Shelby. "It made a perfect facility for mobilization because it was huge, almost like a basketball gym."<sup>25</sup>

During mobilization the USAAVNC staff, working side-by-side with the National Guard, processed 4500 soldiers, and provided approximately 50 percent of the medical support personnel for Camp Shelby. Medical assistance was also provided to Camp Shelby from Redstone Arsenal, Fort McClellan, Fort Carson, Fitzsimmons Army

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<sup>22</sup> COL Kreutzmann, interview, p. 9.

<sup>23</sup> MAJ Charles Ward, U.S. Lyster Army Hospital, medical logistics officer, transcript of an oral interview conducted December 17, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, pp. 21-22. No inpatient facilities normally existed at Camp Shelby, and those requiring more extensive treatment were sent to local hospitals.

<sup>24</sup> Ibid., p. 27.

<sup>25</sup> Ibid., p. 28.



Hospital, Fort Polk, Fort Campbell, Fort Benjamin Harrison, Fort Bragg, Fort Gordon and Fort Lewis. Even the Presidio of San Francisco sent personnel.<sup>26</sup>

The USAAMC quickly established a forty-bed hospital that operated continuously each day. Medical services provided by this facility included pharmaceuticals, orthopedics, internal medicine, audiology, ophthalmology, radiology, and immunization. Many of the necessary laboratory tests and x-rays were transported by air to Fort Rucker on an almost daily basis.<sup>27</sup>

Considerable integration and logistical work had to be done to prepare the medical facilities and staff for mobilization. The U.S. Lyster Army Hospital "provided all the medical supplies and equipment to open up not only a triage area, but to treat patients on an inpatient basis...."<sup>28</sup>

A nucleus of between 20 and 30 medical personnel came in from Madigan Army Medical Center, Fort Lewis, Washington, and were bussed from New Orleans, Louisiana, to Camp Shelby. They joined the Fort Rucker personnel as the 155th Armored Brigade began mobilizing and training.

During the mobilization the USAAVNC's medical team had little contact with the medical personnel of the 155th Armored Brigade, with the exception of the brigade's surgeon. Medical personnel of the brigade were busy doing their own mobilization

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<sup>26</sup> HSXY-CSD, memo for Aviation Branch Historian, subj: 1991 Historical Report, (March 7, 1991), USAAMC folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>27</sup> COL Kreutzmann, interview, pp. 6-9.

<sup>28</sup> MAJ Ward, interview, p. 21.

training and were not able to assist in the medical screening.<sup>29</sup> Reserve medical personnel and those who came in from other hospitals to assist at Camp Shelby were quickly integrated into the team.

Some of the medical personnel brought excellent qualifications for specialty treatment. "We had a medical staff for the mobilization process that would equal some medical centers. It was unbelievable. We had a cardiologist, an emergency room doctor (that does nothing but train in emergency medicine), hematologist (who deals with blood disorders), an orthopedic surgeon...and a general surgeon. We had the whole gamut of specialties. There was not a whole lot that we had to refer out because we had the specialty already there."<sup>30</sup>

The first medical personnel from Fort Rucker started the mobilization process "going with shot records...but then we had to follow-on and establish the health clinic because as we were seeing these people, we started getting injuries and sicknesses and they started finding reasons for hospitalization."<sup>31</sup>

In order to adequately support Camp Shelby needs, U.S. Lyster Army Hospital was required to logistically support the enlarged medical program. "What we [had] to do [was] not only provide medical supplies to the hospital, but to the mobilization site as

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<sup>29</sup> COL Weisser, transcript of a telephonic interview conducted December 17, 1991, Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 56. The medical problems of personnel of the 155th Armored Brigade were partly as a result of National Guard personnel who should have never been enlisted in the first place. Given the small amount of time and money that the state of Mississippi can afford to allow their own physicians to do health checks, this was inevitable.

<sup>30</sup> MAJ Ward, interview, p. 38.

<sup>31</sup> Ibid., p. 22.

well because there were two different facilities. One was doing shots, providing the vaccines and syringes as well as the blood tubing...etc. We were providing the hospital with the things it needed to include the pharmaceuticals the soldiers needed."<sup>32</sup>

U.S. Lyster Army Hospital's medical logistics officer, Major Charles Ward, noted that, "A brigade like that in wartime would contact a medical supply office either in a corps level [medical command] or division to be resupplied. They showed up [at Camp Shelby] with their equipment, but not any expendable items in their sets, kits and outfits because the state wouldn't allow them to keep them...so, we were supplying that. Then you have the normal, day-to-day preventive medicine items that the units have to go to train with like foot powder, lip balm, sun lotion...those various and sundry type of things we had to supply."<sup>33</sup>

Certain equipment was not available at Camp Shelby and could not for one reason or another be brought from the USAAVNC. For example, all personnel over 40 years of age were required to get an electrocardiogram (EKG). Major Ward contracted with Marquette Electronics for an EKG machine that cost the government \$10,000.

In that medical process, the EKG is only part of the program. The soldiers were required to fill out forms, provide risk histories, blood tests, and blood pressure screening. If any soldier showed some problems on the EKG, he was put on a treadmill for a stress test.<sup>34</sup>

During the mobilization and training of the 155th Armored Brigade, there were a few times when personnel required medical treatment or medical facilities that were not available at Camp Shelby. "With a problem that needed to be dealt with immediately, in

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<sup>32</sup> Ibid., p. 23.

<sup>33</sup> Ibid., p. 24.

<sup>34</sup> Ibid., p. 33.

most cases the patient went downtown to Forest General [Hospital] in Hattiesburg. If this patient needed immediate care and we weren't able to provide it, [they were transported by] helicopter...ground ambulance and then to Forest General. If, in fact, it was a problem that needed to be dealt with and we couldn't handle it there, but we had some hours to deal with in taking care of it, the patient was air or ground evacuated to Keesler Air Force Base which was about an hour and fifteen minutes by ground south."<sup>35</sup>

After several months of intensive training, during which the U.S. Lyster Army Hospital provided medical services, the 155th Armored Brigade packed up and moved to Fort Hood, and then later to the National Training Center at Fort Irwin, California.<sup>36</sup> During that time, the majority of the medical personnel were returned to their home stations. However, the clinic created at Camp Shelby continued to operate. Major Ward noted, "You have to understand that as part of the National Guard's operation of Camp Shelby, they have [approximately] 69 medics on full-time National Guard status that do weekend drills in the summer. They are actually full-time service; they have 'x' number of hours that they work a month. Those people took over running the clinic in the interim time.... We provided...normal medical resupply and backup support."<sup>37</sup>

As the brigade was completing its final training and testing at the National Training Center, the war in the Persian Gulf ended and the unit was returned to Camp Shelby for demobilization. Again, U.S. Lyster Army Hospital personnel had to set up

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<sup>35</sup> Ibid., p. 29.

<sup>36</sup> There were no major accidents in the 155th during training except for twisted ankles. One soldier died of a heart attack after physical training and his condition was the result of cardiovascular disease. One officer had his hand mashed by a tank hatch during training at Ft. Irwin. COL Weisser, interview, p. 58.

<sup>37</sup> MAJ Ward, interview, p. 30.

the mobilization process, but this time, in reverse. It was a somewhat easier time as Major Ward related. "We...identified most of the problems and then the only thing that we are dealing with on demobilization is what has occurred while on active duty for the most part. I mean we are not doing HIV testing, the initial diagnostic screening...."<sup>38</sup>

During the demobilization, some problems were discovered that medical personnel had missed during initial mobilization. One soldier could not raise his arm above his shoulder as he had no shoulder joint. Another soldier had a .22-caliber bullet in his body where his wife had shot him, and another was discovered to have a very rare disease that would probably not have been found until it was too late.<sup>39</sup>

A unique problem surfaced early in the demobilization. When the 155th Armored Brigade packed up and returned to Camp Shelby, many units did not keep track of where they put their medical records. No outprocessing could be conducted until the medical records were available. Some units had to wait until all their equipment arrived at Camp Shelby to locate the footlockers containing their records.<sup>40</sup>

Official paperwork had to be prepared for each individual of the 155th Armored Brigade. Like many other of the USAAVNC directorates, the Adjutant General (AG) of Fort Rucker had maintained contact with Camp Shelby well prior to the mobilization. Lieutenant Colonel Planchon, at that time the AG, noted in a post-mobilization interview that "Camp Shelby is Fort Rucker's area of responsibility, so we have always...worked with them and tried to keep points of contact about what to do for mobilization."<sup>41</sup>

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<sup>38</sup> Ibid., p. 31.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid., p. 37.

<sup>41</sup> LTC Planchon, AG, transcript of an oral interview conducted September 23, 1991. Oral Interview File, Aviation Branch History Office, USAAVNC, Fort Rucker, AL, p. 39.

Unlike Fort Rucker, Camp Shelby "had a personnel service company which was brought on duty to help them mobilize; their installation support unit...was mobilized because they have some [AG] slots..., so they had a full staff. We went over [to Camp Shelby] much in an advisory status."<sup>42</sup>

Because Camp Shelby was in such good administrative shape, Fort Rucker did not have to station any of its AG personnel there on a full-time basis.

Demobilization was, however, another matter. Fort Rucker's AG "spent some \$70,000 dollars in temporary duty funds to actually [demobilize] there. The physical set up...was really a massive problem until it got ironed out...we were having to shuttle [AG personnel] back and forth [between Fort Rucker and Camp Shelby] based on where the next big unit was coming in."<sup>43</sup> Administration is vitally important in another area of the USAAVNC assistance given to Camp Shelby—logistics.

The USAAVNC's Directorate of Logistics (DOL) was very familiar with Camp Shelby. Mr. Jerry Leavis, director of the DOL, remarked in a post-mobilization interview, "We have had a number of exercises and mobilization meetings...with Camp Shelby. There was a very large mobilization plan that was put together. When I say large...probably 800 to 900 pages..., but that was for full-scale mobilization. There were no plans for how Camp Shelby was going to handle partial mobilization."<sup>44</sup>

Prior to the call-up of the 155th Armored Brigade, Mr. Leavis and members of his staff flew down to Camp Shelby. Although the personnel at Camp Shelby were unsure

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<sup>42</sup> Ibid., p. 40.

<sup>43</sup> Ibid., p. 43.

<sup>44</sup> Mr. Leavis, interview, p. 2.

as to whether the call-up would indeed take place, they pitched in and the meeting was very productive.<sup>45</sup>

One of the first problems to be confronted involved jurisdiction. The state of Mississippi owned Camp Shelby and the current inter-service support agreement didn't cover everything. Camp Shelby had facilities on-site that would be used to mobilize the 155th Armored Brigade into federal service, but how would reimbursement be handled? For example, in the area of packaged petroleum, oil, and lubricants there were two possibilities: reimburse the state for expenditures or replace-in-kind.

Because of the press of mobilization matters all across the country, Second U.S. Army, for example, could provide little assistance. It was up to the mobilization site to provide all the support necessary to mobilize the 155th Armored Brigade.

The USAAVNC's DOL had a total of five days to prepare before the 155th Armored Brigade actually arrived at Camp Shelby. Some things had to be set up immediately. "For instance, food service, the [Troop Issue Subsistence Activity] and stuff like that for ration breakdown. Some supplies...we would start immediately that we were going to need, like copiers, facsimile machines, things like that."<sup>46</sup>

When they arrived, the 155th Armored Brigade personnel had some initial problems themselves. Since they performed their annual training at Camp Shelby every summer, they were well-drilled in the necessary administrative details, yet "...once they became federalized, they were just like new employees. They had no idea about documentation flow or the requirements...on the active side."<sup>47</sup>

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<sup>45</sup> Ibid., p. 3.

<sup>46</sup> Ibid., p. 33.

<sup>47</sup> Ibid., p. 6.

National Guard units dealt directly with their state's National Guard headquarters, and then through the National Guard Bureau who, in turn, forwarded information to the U.S. Army (the federal system) and down to the U.S. Army Forces Command. The U.S. Army Reserve units had less problems in these areas because they normally operated in the federal system.

This problem impacted in a number of important ways. For example, states had different rules regarding how materiel and support were procured. When federalized, state personnel assisting in the mobilization adhered to AR 600-50, Standards of Conduct for Department of the Army Personnel. These two different systems, while not working at cross purposes, did force Fort Rucker's DOL into making changes in standard operating procedures to get the job done.

As Mr. Leavis put it, "I was looking at it from the standpoint of accomplishing the mission at least cost."<sup>48</sup> One way that money was saved during the mobilization was to send troops by bus to Fort Hood at night so that they could eat their evening meal at Camp Shelby, travel all night, and arrive at Fort Hood for breakfast. If the buses had been sent during the day, this would have involved significant cost for lunch and dinner on the road.<sup>49</sup>

The USAAVNC's DOL developed its own rules of engagement in procurement operations. They were: "a) does it pass the common sense test; b) is it legal; c) is it cost beneficial; d) will it accomplish the mission; and e) can accountability be maintained?"<sup>50</sup>

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<sup>48</sup> Ibid., p. 7.

<sup>49</sup> Ibid., pp. 7-8.

<sup>50</sup> Ibid., p. 8.



To insure that all purchases and contracts met with federal specifications, Mr. Leavis took personnel from the USAAVNC Inter-Review and Audit Compliance Office (IRAC). "They became integrated into the mobilization team, looking at accountability to make sure that we had a good auditable trail. Remember, we [were] using state-owned assets, and we were going to have to reimburse them."<sup>51</sup>

For many items which had to be reimbursed, an easy way that was used involved simply paying the difference. For example, the amount of money paid for electricity during a normal month was compared with charges incurred for Camp Shelby during mobilization. The difference between the two amounts was what the government paid.<sup>52</sup>

At the end of the month, three piles of bills were created. One pile was strictly state charges, one strictly mobilization charges, and one a combination of both. These bills were discussed between the USAAVNC DOL and the Camp Shelby DOL and compromises reached. Describing this process, Mr. Leavis remarked that it was "very, very equitable, trying to insure that the federal [government] didn't pay for something that the state should pay, and the state didn't pay for what the federal [government] should."<sup>53</sup>

Another interesting directive developed by Mr. Leavis and the DOL at Camp Shelby was, "don't let the regulations get in the way of accomplishing the mission."<sup>54</sup> One area where this worked was in the procurement of automated data processing (ADP) equipment.

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<sup>51</sup> Ibid.

<sup>52</sup> Ibid., pp. 8-9.

<sup>53</sup> Ibid., p. 9.

<sup>54</sup> Ibid.

Units of the 155th Armored Brigade had ADP equipment at their home station, but that equipment belonged to the state, and was not taken by the unit to its mobilization site. Normally, obtaining computers wasn't generally a problem, but it took time—time the brigade did not have. A shortcut had to be found. After some problems with bureaucracy, the DOL bought computers with mobilization funds.<sup>55</sup>

One of the reasons that mobilization, by and large, went well at Camp Shelby was the personal relationships built between the USAAVNC and Camp Shelby mobilization teams. As Mr. Leavis put it, "We came to what I would call a very trusting relationship on a hand shake."<sup>56</sup>

One big project involved some advance thinking. Since the 155th Armored Brigade was thought to be slated for duty in the Persian Gulf, its tanks and wheeled vehicles would have to be loaded onto train cars to be moved to the port of embarkation. Unfortunately, the loading areas of Camp Shelby did not have lights to allow work to continue after sunset. "With no lighting along the railroad strip [the DOL] decided to [determine the] cost for renting lights."<sup>57</sup>

It was quickly determined that portable lighting costs would be exorbitant. Poles with lighting arrayed on them could easily be put up, but federal money would have to be used to build a permanent fixture on a state-owned installation. Technically, it could not be done. "Rules and regulations say [the DOL] cannot do that. However, this way was much cheaper. We [could] put the poles up and light it for probably less than it would take to rent mobile lighting for two weeks. We would have them for whenever we needed them...from a common sense, get the mission done, save money approach, that

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<sup>55</sup> Ibid., p. 10.

<sup>56</sup> Ibid., p. 11.

<sup>57</sup> Ibid., p. 13.

was a prudent way to do it."<sup>58</sup> That was the approach taken to get the job done, and Camp Shelby now has permanent lighting for use in future mobilizations or deployments should it be needed. One of the principal reasons for being able to do this is because auditors were used all the time to "find other, more cost-effective ways."<sup>59</sup>

The DOL instituted cost analysis for contracts and purchases. This system would answer the important question, "Is it cheaper to lease or buy?"<sup>60</sup> Analyses were also done on travel, other types of procurement, and transportation where large sums of money were involved. All funds expended to support the mobilization were looked at "very, very closely. [The DOL] wanted to make sure [there was] a system to capture the costs."<sup>61</sup>

In addition to the DOL personnel in the areas of supply and services, transportation, maintenance, and resource management, there was USAAVNC support from the Directorate of Plans, Training, Mobilization, and Security in the area of financial planning and management because of the different types of money being used at Camp Shelby. The DOL itself provided needed heavy equipment on-site such as busses, fork lifts, and ambulances.<sup>62</sup> Because of the amount of federally purchased supplies being brought to Camp Shelby, the DOL also provided warehouse personnel to assist those at Camp Shelby.

Although Camp Shelby was the mobilization station for the 155th Armored Brigade, it was also a National Guard training center, and units not activated for

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<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

<sup>60</sup> Ibid., p. 14.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid., p. 15.

Operations DESERT SHIELD and DESERT STORM came to the facility for annual training. "We were running a dual operation...to support the normal training. They had other units that were down there training during that same period that the state was supporting.... The state of Mississippi bent over backwards to help us."<sup>63</sup> As a result, the training and mobilization at Camp Shelby went smoothly.

The amount of travel and shipment of required supplies from Fort Rucker to Camp Shelby was cut down considerably by going to the U.S. Physical & Finance Office (USP&FO) to check to see if they had the necessary items in stock (i.e., repair parts, organizational clothing and individual equipment) before making a new purchase. The state would then be reimbursed or the equipment, etc., replaced-in-kind.<sup>64</sup> All this support needed personnel.

An entire armored brigade of 4500 personnel required a considerable amount of civilian support personnel to assist in the aspects of mobilization. The state had a limited number of personnel available, and a choice had to be made. Either set up a satellite office of the Fort Rucker Civilian Personnel Office at Camp Shelby for hiring temporary personnel, or allow the state to hire them, and reimburse the state. The latter system was used throughout the mobilization. "[Mississippi's] labor rate was significantly less than the federal rate helping us cut costs, but using the state personnel was a big bonus for them [by] keeping the money in the state. It provided [Camp Shelby] additional funds to hire people out of the local community."<sup>65</sup>

The local community around Camp Shelby supported the mobilization in other ways. "There were individuals who supplied...office equipment...[for] a very good price.

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<sup>63</sup> Ibid., p. 17.

<sup>64</sup> Ibid.

<sup>65</sup> Ibid., p. 18.

Once the individuals started to leave, they allowed us to terminate the contracts/leases without any penalties, thus reducing the cost. Even though contractually we owed them more money, they, as patriots, realized what the situation was and were very supportive of the mobilization effort."<sup>66</sup>

The Persian Gulf war mobilization was truly unique in history for at least one reason: mobilization attempted to fully use the power of the computer to accomplish portions of the mission. This was a problem at Camp Shelby for the simple reason that the state of Mississippi used a specific type of software that didn't interface with the federal system. Also, most systems operators in the 155th Armored Brigade and at Camp Shelby were not familiar with the software. This put great pressure on those who were. Mr. Leavis remarked, "There were one or two operators and we wore them out the first two weeks of mobilization because they weren't getting any time off. They were very, very tired. The error rate and the problems with the system went up because the individuals were tired."<sup>67</sup> This was a particular problem in clothing requests.

A National Guard or U.S. Army Reserve soldier must have certain equipment. When activated, the soldier is supposed to get more equipment before deployment. When multiplied by a 4500-person brigade, the requests for military clothing and equipment can become staggering.<sup>68</sup>

This also impacted on the ability of both the USAAVNC's DOL and the state of Mississippi to track financial costs. "In war, financial accounting goes up, but after the war you've still got to account for the dollars. You know, [during] mobilization...we still

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<sup>66</sup> Ibid., p. 20.

<sup>67</sup> Ibid., p. 22.

<sup>68</sup> Ibid., p. 40.

need to follow the dollars and tell them how much money we have spent, and we spent large sums of money."<sup>69</sup>

Fort Rucker's Internal Review and Audit Compliance Office (IRAC) sent a contingent of auditors to assist the USAAVNC's DOL operations and insure they were in compliance with established procedures. The auditors from the IRAC "...furnished responsible officials with timely recommendations to correct deficiencies noted in areas of procurement, controls over assets, cost controls and management proposals. The auditors identified ways to reduce cost...for procurement of services, material and equipment and made appropriate recommendations...which resulted in a total estimated monetary savings of \$1,333,387."<sup>70</sup>

The necessity to avoid potential conflicts of interest was uppermost in the minds of the IRAC auditors. The IRAC also initiated a meeting for all personnel with blanket purchase authority, and "explained how the system is designed to function and the limits of their authority. Copies of AR 600-50 were distributed to attendees."<sup>71</sup>

The IRAC was very useful to the DOL in attempting to find the least cost solution. For example, "The auditors reviewed a proposed expenditure of \$1,632,510 for the purchase of 153 new cargo containers. After completing a "lease versus buy" analysis and obtaining costs of alternative actions, [IRAC] recommended the purchase of

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<sup>69</sup> Ibid., p. 22.

<sup>70</sup> Mr. Farrington (ATZQ-IRO), memo for Command Historian, subj: Desert Storm Monthly Reports for January and February 1991, (March 14, 1991), IRAC folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

<sup>71</sup> Mr. Farrington (ATZQ-IRO), memo for Chief of Staff, subj: Operation Desert Shield—Mobilization of the 155th Armored Brigade, Mississippi Army National Guard, (February 5, 1991), IRAC folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAAVNC, Fort Rucker, AL.

reconditioned, instead of new, cargo containers at a total cost of \$393,121. [IRAC] estimated total savings accruing to this recommendation of \$1,239,389."<sup>72</sup>

The IRAC also assisted the DOL in six other high cost areas (i.e., contract meals, temporary duty travel, etc.) which saved the government \$1,333,387.<sup>73</sup>

When the 155th Armored Brigade prepared to demobilize, the IRAC was there, and was directed to send one auditor "during the outprocessing of the 155th Armored Brigade, Mississippi Army National Guard."<sup>74</sup> This proved to be a most interesting problem. Since the 155th Armored Brigade was returning to peacetime, an inventory had to be conducted to determine what they had acquired for Operations DESERT SHIELD and DESERT STORM, and what they needed to return to normal duty. This analysis showed that "...the [155th Armored Brigade] had acquired \$13.3 million in property and supplies.... During meetings with representatives of the 155th Armored Brigade and Mississippi National Guard, the auditors determined that the state of Mississippi had furnished the brigade with about \$8.5 million of the \$13.3 million.... National Guard officials agreed to request final disposition instructions on about \$4.8 million in excess property and supplies from [U.S. Army Forces Command]."<sup>75</sup>

The 155th Armored Brigade reported for mobilization with all its trucks and tanks. However, the unit could not perform the normal maintenance and repair functions because they were "going through the mobilization process of having to fire

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<sup>72</sup> Ibid.

<sup>73</sup> Mr. Farrington, memo, March 14, 1991.

<sup>74</sup> Mr. Farrington (ATZQ-IRO), memo for Command Historian, subj: Desert Storm Monthly Report for April 1991, (May 10, 1991), IRAC folder, DESERT SHIELD/DESERT STORM Files, Aviation Branch History Office, USAFVNC, Fort Rucker, AL.

<sup>75</sup> Ibid.

their weapons, getting personnel clearances, NBC training, shots...they have to do all these things and it is very difficult for them to continue to do maintenance."<sup>76</sup>

To provide maintenance while the 155th Armored Brigade prepared and trained, the DOL mobilized repair assets at Camp Shelby and the USAAVNC at Fort Rucker. "We had the combined support maintenance shop (CSMS), mobilization training equipment site (MTES), the equipment concentration sites (ECS), contract maintenance, and also the support out of the installation."<sup>77</sup>

In one area, the expertise of state personnel was vital. Although Fort Rucker had many skilled mechanics and maintenance personnel, they had little or no experience with tracked vehicles (tanks, armored personnel carriers). As one DOL maintenance expert commented, "If we had not had the state [personnel] to help us, we would have really been in a bind."<sup>78</sup>

Paying the mechanics was an interesting study in financial understanding as the state of Mississippi did not allow its civilian mechanics any overtime. For eight hours of the day, the state of Mississippi paid the wages and the federal government paid for any overtime.<sup>79</sup>

There was quite a bit of work for the mechanics to do. The National Guard used its equipment only during weekend drills and two weeks of annual training per year. For much of the year, vehicles sat idle. Experience showed vehicles that are not used can develop far greater mechanical problems than vehicles that are frequently used.

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<sup>76</sup> Mr. Leavis, interview, p. 23.

<sup>77</sup> Ibid., p. 24. The MTES provided the unit-level maintenance, the CSMS provided the direct support-type maintenance to Mississippi National Guard units.

<sup>78</sup> Ibid., p. 24.

<sup>79</sup> Ibid., p. 25.



During peacetime, maintenance was relatively easy. If the vehicle broke down in training, there was plenty of time to repair it before it was used again. Not so in mobilization. A mechanical problem with a critical vehicle or system could cost lives in Southwest Asia. Once the vehicles were repaired, the unit then had to move them to training sites at Fort Hood.

Another problem area involved a common practice among National Guard and U.S. Army Reserve units in which units frequently do not take all of their equipment for summer training, but use what was set up or available. For years, their lister bags, batteries, fuel bladders, weapons, and tools were in storage at the armory.

As units of the 155th Armored Brigade arrived at Camp Shelby, they discovered that seals on their equipment had dry-rotted, that batteries couldn't hold a charge because they were so old, and "some weapons...lacked tools and gauges needed to do everything from operator maintenance to direct support maintenance." Many vehicles in units had not been used for months, even years.<sup>80</sup>

Military vehicles are moved on specially constructed flat cars. Some railway cars are double-decked so that they can carry double the number in the same amount of horizontal space. However, the price (\$3800 each) was the same for a single- or double-deck car. When the first trains were ordered to move the 155th Armored Brigade, mistakes were made in the composition of the trains. Only single-deck flat cars were ordered, and double the number had to be ordered, so the government had to pay a considerable sum of money it normally would not have had to pay.

Thereafter, the correct mix of cars was ordered with the proper amount of blocking material and chains. If a main battle tank shifted during the trip, an accident of great proportions could have resulted. A special ramp for loading double-deck rail

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<sup>80</sup> Ibid., pp. 47-48.

cars was constructed at Camp Shelby and remains there today for future mobilizations.<sup>81</sup>

Since the National Guard did not normally transport their vehicles to a location by train, the unit was unaware that once a train is loaded, there is a requirement for security guards to remain with the cargo until taken over by the railroad. At that point, security is provided by the railroad.<sup>82</sup> Given the pace of mobilization and many military personnel working twenty hours a day, the morale factor of having to pull guard duty in addition to normal duty had to be considered.

Camp Shelby had a continuing requirement for military vans throughout mobilization. A new military van was usually priced at \$10,000 each. However, by calling around the United States, the DOL located a company in New Jersey that quoted a price of \$2,400 plus transportation. Requirements for nearly 152 vans had been identified with 100 being sent to Camp Shelby and the remaining 52 to Fort Hood. To further cut the costs of transportation, the vans were ordered and delivered only when needed, thus saving the cost of dual transportation.<sup>83</sup>

Feeding the 155th Armored Brigade and other mobilization personnel at Camp Shelby was also a DOL responsibility. Throughout the post, there were nearly 60 separate, company-sized dining facilities plus three contract dining facilities that were full food service. In an oral interview about Camp Shelby's mobilization, Mr. Leavis remarked that, "The reason we established that was to feed the cadre, the advisors, the folks out of Second U.S. Army that were there, the installation support unit...plus, it

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<sup>81</sup> Ibid., p. 28.

<sup>82</sup> Ibid.

<sup>83</sup> Ibid., p. 29.

gave us the flexibility that when the cooks had to go for certain units, we could fall in on one of the contract dining facilities."<sup>84</sup>

In a number of instances, troops arrived so quickly and in such numbers that the food supplies could not keep pace. "For example, at night when the soldiers ate cakes and sandwiches and things like that, we just didn't have the food there quickly enough. What we did was to go to the local communities. One night we [arranged for] Pizza Hut to deliver about 30 pizzas for...the kids that were loading the trains."<sup>85</sup>

Running that many separate facilities was difficult in itself, but there was also the problem with food advisors. The state had fully qualified food advisors available, but they were accustomed to two-week training cycles, and were not familiar with food service operations beyond that time. "They did a good job, but, again, it was a lack of experience. I mean they worked hard, they fed good meals...but it was a question of becoming familiar with the active system and getting up to speed on it."<sup>86</sup> There was, conversely, a learning on the DOL side as well.

Laundry provides an example. With thousands of military personnel on post, there was a need for the laundering of clothing. The DOL provided contract laundry service to the troops with a 72-hour turn around time. This conflicted with the system that had been in operation for many years. Civilian vendors would drive directly onto the post, and offer door-to-door cleaning services at prices cheaper than that provided in the contract laundry service set up by the DOL. As the director of the DOL stated in an

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<sup>84</sup> Ibid., p. 30.

<sup>85</sup> Ibid., p. 39.

<sup>86</sup> Ibid., p. 31.

interview, "If I had to do it again I would not have done a laundry contract. I would have looked for local vendors to come on the post."<sup>87</sup>

Although Camp Shelby was a large post in a general sense, it possessed only a small post exchange (PX) because only a skeleton organization was normally on post at any time, and units that came there during the summer training season usually arrived at regular intervals. When the 155th Armored Brigade arrived, they put a great strain on the PX facilities. "The AAFES manager was very, very proactive in getting material in. The soldiers would...[buy] out [the little PX].... They would [restock] the shelves at night, and the next morning the [soldiers] would go in and clean it out because these kids were coming in here very quickly without anything. Another area, a big morale area, was Class VI, AAFES (which sold alcoholic beverages)."<sup>88</sup>

When the 155th Armored Brigade departed for Fort Hood after its mobilization and initial training, the nearly 300 support personnel (both state and federal) had a chance to catch up with paperwork and breathe a sigh of relief. At that point, the post returned to its normal cycle of reserve training at a somewhat more sedate pace. Contracts were closed out, and the books put in order. It was not expected that the 155th Armored Brigade would be back through Camp Shelby, so the USAAVNC support personnel from the DOL returned to Fort Rucker.

Those who had come from Fort Rucker could look back on a job well done. Some had performed beyond requirements. "A good example is the chief of supply over at the hospital. He worked three days straight without sleeping because he was busy getting equipment in, working to get the doctors in, getting them transportation and

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<sup>87</sup> Ibid., p. 32.

<sup>88</sup> Ibid., p. 46.

finding them someplace to stay, putting tents up so when the brigade showed up they would be able to do the physicals and dental work."<sup>89</sup>

Fort Rucker was also responsible for assisting in the spiritual mobilization of the soldiers at Camp Shelby. The Chaplain's Office at the USAAVNC sent a unit ministry team (UMT) to Camp Shelby. As Colonel Vickers, the USAAVNC's chaplain, related in an interview, "We had the responsibility of Camp Shelby in Mississippi to give it logistical support...along with the decision made out of our office to supply a UMT. Chaplain Rominger...went over to Camp Shelby and supplied them with a UMT.... Chaplain Rominger...had extensive computer experience and as a result of that they were able to go over and set up for Camp Shelby...administrative and management functions...."<sup>90</sup> The USAAVNC's Chaplain's Office helped to provide many UMTs for units of the 155th Armored Brigade even though they did not deploy to Southwest Asia.

The mobilization of the 155th Armored Brigade was a success story. All personnel ranging from state employees to USAAVNC personnel brought to Camp Shelby cooperated to get the job done. It was that kind of spirit that could be found all over the country as the U.S. Army flexed its muscles in Southwest Asia. For future mobilizations, should they be required, the "can do!" spirit of those who toiled at Camp Shelby must be kept alive!

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<sup>89</sup> Ibid., p. 39.

<sup>90</sup> COL (Chaplain) Vickers and staff, interview, p. 6.

## *CHAPTER 10*

### *CONCLUSION*

There has been much general satisfaction with Operations DESERT SHIELD and DESERT STORM, as there well should be. Faced with an aggressive dictator intent on gaining control over massive amounts of oil, the United States, along with other members of the coalition, drove Saddam Hussein and his million-man army from Kuwait and forced the Iraqis to accept surrender terms. This victory was accomplished, in company with our coalition partners, by bringing sufficient human power, weapons, ammunition and other necessary items to Saudi Arabia and using our forces skillfully to overcome the Iraqis. Yet, as the preceding pages of this monograph indicate, we ought not to be resting on our laurels.

Historically speaking, we can perceive some similarities between Operation DESERT STORM and the two world wars. In each instance, the United States had time to prepare to bring our human power and industrial might into these wars. In World War I, the vast distances between our country and Europe furnished a bulwark behind which we could arm and prepare to move forces to Europe.

As history makes clear, the same was true for Europe in World War II. With respect to the Japanese, that aggressive country was virtually powerless to launch any significant attack on the continental United States. Looking back, it is interesting to remember that a Japanese carrier strike on the Panama Canal was regarded as a likely possibility. Today, we know that Imperial Japan had no such intentions. The surprise attack on Pearl Harbor was possible. Once alerted and at war, it was unlikely that a Japanese force capable of taking and holding the Panama Canal could have crossed thousands of miles of the Pacific Ocean undetected and unmolested.

Operations DESERT SHIELD and DESERT STORM appear to be harbingers of any future armed conflicts. While recognizing that some of the new so-called "Russian Republics" retain some nuclear and hydrogen attack capabilities, it seems unlikely that this country has much to fear. However, it would seem advisable to keep in mind that the possession of such weapons by any foreign country or group makes the world an uneasy place. For example, if Saddam Hussein had managed to procure by whatever means some nuclear capability, can we imagine that this power-hungry dictator would not have used such weapons?

Curiously, after moving into Kuwait Saddam made no further aggressive moves. Although we immediately began moving some forces into Southwest Asia, it seems accurate to state that an Iraqi invasion of Saudi Arabia in all probability would have been successful. We cannot get inside the mind of Iraq's dictator, thus we will never know why he gave us the time to mount Operation DESERT SHIELD—a necessary prelude to Operation DESERT STORM. To put the matter succinctly, the actions of aggressive leaders are more often than not unpredicted. Until the Iraqi Army moved across the Kuwait border, the historical evidence suggests that our intelligence gave us almost no advance warning of this blatant aggression.

It took the United States and other members of the coalition some six months to prepare for Operation DESERT STORM. Can we count on any future aggressor being so accommodating as to give us the time we had with respect to the Iraqi aggression? Perhaps, then again, perhaps not.

After the Civil War, Confederate General Nathan Bedford Forrest was asked about his battlefield successes. His prescription was, on the surface at least, simple and straightforward—"I git thar fustest with the mostest." When the difficulties in mounting Operation DESERT SHIELD are examined, it seems clear that the United States, as well as

other nations, might be unlikely to "git there fustest with the mostest" in any future conflict.

Some may smile derisively at General Forrest's use of the English language. Yet, he succinctly put his finger on the essence of the kinds of conflict this country may face in the years ahead. Since we cannot count on future aggressors giving us time to prepare, it is eminently clear that the U.S. Army must be ready to move entire units with all their supporting equipment to far away locations on very short notice. Certainly this was done with respect to Operations DESERT SHIELD and DESERT STORM. And, it was accomplished after much confusion and in fits and starts which cost much valuable time—time we may not have in the future.

The question then arises: Are we prepared to mount such operations in the future in much less time? The answer is in the affirmative if the lessons implicit in Operations DESERT SHIELD and DESERT STORM are fully understood and acted upon.

Many in this country, including more than a few legislators at all levels, have gained their impressions of both Operation DESERT SHIELD and Operation DESERT STORM from the mass media. Unfortunately, the members of the so-called "third estate" tend to concentrate on the dramatic, the exciting and, in general, what is considered newsworthy. The dedicated work of thousands of men and women behind the scenes was almost entirely overlooked by the mass media. After all, the training of soldiers, the procurement of supplies, and the transportation of people and materiel to Southwest Asia were hardly likely to grip television viewers or newspaper readers. Thus, vital aspects of Operation DESERT SHIELD and Operation DESERT STORM remain unknown to the great mass of American people. However, the assumption that some magic wand was waved and a half-million military personnel were transported along with their equipment to Southwest Asia neglects to face the realities. A goodly part of such realities concerns the numerous problems which arose.



One almost immediate difficulty faced was in connection with mobilization. Operation DESERT SHIELD was a partial mobilization. Fort Rucker experienced planning problems from the beginning. The only mobilization plan then in effect was for a full mobilization, not a partial mobilization.

Many actions, e.g., assignment of individual mobilization augmentee personnel and activation of National Guard and U.S. Army Reserve units would have been automatically triggered by a full mobilization. Partial mobilization created difficulties because those responsible for this kind of mobilization lacked the support which would have resulted had the directive been for full mobilization. Bluntly, the USAAVNC was required to mobilize soldiers and units, but without the support personnel who would have been activated under conditions of full mobilization.

It is impossible to be certain that the lack of specific directives covering only a partial mobilization was necessarily a handicap. The precise and ordered procedures developed in elaborate planning may or may not work well in practice. Lacking such directives, it was necessary for the soldiers and civilians concerned to improvise and develop ways and means of meeting goals. Calling upon men and women to deal with situations not covered by directives certainly worked well with respect to Operation DESERT SHIELD and, later, Operation DESERT STORM. When directives are highly detailed, there is a tendency to follow them somewhat slavishly which, in more than a few historically recorded instances, can result in disaster.

One such instance concerns the Battle of Isandhlwana, at which forces of Imperial Britain suffered as serious a defeat as a relatively modern army has ever met at the hands of people armed largely only with spears and shields. General Chelmsford faced some 20,000 Zulus with approximately 1900 British soldiers, 950 Europeans and 850 Natal Kaffirs.

This was the battle everyone had wanted with "savage Zulu power immolating itself on the Imperial volley fire."<sup>1</sup>

At first, all went well. Regular volleys from the Imperials held the Zulus in check inflicting terrible casualties. Then, the fire began to slacken as ammunition became scarce. There was plenty of ammunition available, some 480,000 rounds.<sup>2</sup> Getting it was something else again. The ammunition was packed in heavy wooden boxes and the lid of each case was held down by two copper bands, each fastened with nine large screws. One commander sent natives back for ammunition, but their pantomimed requests were refused by the quartermasters. One quartermaster even complained when an officer broke open a box and began taking ammunition without the proper requisitions.<sup>3</sup>

Seeing that the fire of the Imperials was slackening, the Zulus began to press forward and the rout was on (which resulted in the deaths of almost the entire British force). This stunning defeat can be traced almost directly to those in charge of the reserve ammunition who insisted on observance of the rules and regulations for obtaining shells for the guns. The quartermasters were required to account for each round of ammunition expended.<sup>4</sup> This, rather than the immediate conditions of the battle being waged, was their chief concern—a concern which cost their lives as well as those of their comrades in arms.

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<sup>1</sup> Donald R. Morris, *The Washing of the Spears*, (New York: Simon and Schuster, 1965), p. 417.

<sup>2</sup> *Ibid.*, p. 418.

<sup>3</sup> *Ibid.*, p. 419.

<sup>4</sup> *Ibid.*, p. 420.

While it is easy to dismiss the tragedy of Isandhlwana as an example of foolish bureaucratic rules, there is a lesson here which Operation DESERT SHIELD and DESERT STORM also teaches. Namely, that plans must provide for flexibility (i.e., permit commanders to exercise initiative and ingenuity when called for by situations). It can be wondered if Operation DESERT SHIELD and Operation DESERT STORM would have been as successful had detailed and specific directives existed for partial mobilization. As the preceding pages of this monograph amply illustrate, flexibility, ingenuity and, certainly, creativity abounded at Fort Rucker.

People made the difference during this mobilization. Many of the USAAVNC directorates and departments were at less than full strength in both military and civilian personnel. Because of the collapse of the Soviet Union, the U.S. Army (along with the other services), had already begun to experience a reduction in manning levels. During mobilization, few were given extra people to help and fewer still benefitted from the U.S. Army Reserve Individual Mobilization Augmentee Program. Those already employed had to roll up their sleeves and work at normal day-to-day jobs, as well as handling the extra work generated by mobilization. As the record attests, they did this with good will, skill, and energy. A considerable difference here between the men and women of Fort Rucker and the quartermasters of the British forces at the Battle of Isandhlwana.

The United States was fortunate in that the proposed serious reduction in force had only begun. Had Saddam Hussein moved into Kuwait two years later, it can be speculated that Operation DESERT SHIELD and Operation DESERT STORM might well have been impossible.

There is the oft-held view that if enough money is available, anything is possible. World War I and World War II tend to authenticate this view. However, it is useful to remember that the United States was given time to prepare...at least to some extent. Hiring large numbers of new personnel during a crisis merely adds to the time lag.

New people must be trained and gain experience before they can be expected to function effectively.

A great strength of the USAAVNC and its ancillary organization was the fact that Fort Rucker is nearly the sole source for the training of U.S. Army aviation personnel. The USAAVNC is directly responsible for the professionalism of the U.S. Army aviation community. Any diminution of the ability of the USAAVNC to perform its training and research functions will adversely impact on the ability of U.S. Army aviation forces to perform any future missions. Cautions to would-be conquerors or aggressors of any kind will not be heeded unless it is recognized by all concerned that the United States has not only the will but the ability to deal with aggression wherever and whenever it occurs or is about to occur. Growls from a fangless tiger tend to go unheeded.

There are those in this country, and other countries as well, who maintain that the victory in Southwest Asia was gained largely because the Iraqi's were not equipped to fight first-rate, technologically superior forces. There may be some truth to this. However, it is important to keep in mind that Saddam Hussein was well-equipped to deal with second- or third-rate opposition. Had we and our allies not intervened successfully, the outcome to the industrial nations of the world eventually could have been economically catastrophic. Kuwait was able to offer no more than a token resistance. On the available historical evidence, the same would have been true of the Saudis had Saddam immediately moved south.

What important findings accrue from Operations DESERT SHIELD and DESERT STORM insofar as U.S. Army Aviation is concerned? There would seem to be at least five principal lessons, to wit:

First, manning levels, both military and civilian, should be maintained sufficiently to support speedy partial mobilization for the foreseeable future. The word "speedy" is

intended to imply that we may not have six full months in which to prepare to resist aggression successfully.

Second, to the extent that precise plans for partial mobilizations are developed, such plans should provide for some freedom of command action in meeting exigencies and emergencies of any kind. Planning that prevents or hinders meeting the problems which inevitably arise could result not merely in delays, but in the inability to carry out missions.

Third, the readiness for mobilization and forthcoming combat should be emphasized in all U.S. Army Ready Reserve units up to and including the physical condition of reservists. As is noted throughout this monograph, reserve units were marked by some deficiencies. If in the future an emergency arises, and we can count on this, the United States may not have the time to remedy all the most important deficiencies.

Fourth, realistic planning and training for moving significant numbers of soldiers and materiel anywhere in the world in a much shorter time frame than for Operation DESERT SHIELD needs to be implemented.

Finally, it is oppressive to note that the world is a dangerous place. Throughout history, people have dreamed of conquests, glory, and the delights of power. We can hardly suppose that such people have disappeared. Wherever we look, be it Africa, Europe, or the dismembered Soviet Empire, we see strife of all kinds—some fratricidal. Recently, we blunted the ambitions of Saddam Hussein, possibly only temporarily. With some reason, the Iraqi dictator may be regarding the United States and its coalition partners as now being militarily incapable of inflicting any serious punishment. Or, perhaps, he senses a lack of will to use military forces.

Earlier, General Forrest's prescription of getting there "fustest with the mostest" was mentioned. Should we be unable to carry out this excellent advice for victory, it

could cost the United States dearly. We did it in Operations DESERT SHIELD and DESERT STORM. We must be prepared to do it again if necessary. However, by being prepared, we may not have to do it at all.

To conclude, it would be remiss not to mention the dedication, intelligence, hard work, and devotion to duty of those at Fort Rucker. The interviews of so many who worked at Fort Rucker, went to Southwest Asia, and became involved in action and, indeed, everyone connected with U.S. Army Aviation who worked so hard and, in some instances, risked their lives, leave those doing the interviews with a profound respect for thousands of American men and women. Those among us, and we have them, who see the United States as sunk in decadence and overly concerned with material things, should have had the opportunity to see all our people at work and in combat. It would have given them not merely hope but confidence in the future of the United States of America.

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