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**13. ABSTRACT** *(Maximum 200 words)*  
 This thesis is a study to determine if attack helicopters are needed in peace operations. It uses case studies of two peace operations in which the U.S. Army employed attack helicopters: Operation Uphold Democracy in Haiti and Operation Joint Endeavor in Bosnia. The case studies examine the doctrine, mission analysis, predeployment training, new equipment and equipment modifications, task organization, deployment, and employment of attack helicopter units in each operation. Because the operations are very recent, the study relies heavily on interviews and lessons learned from individuals who took part in each operation.

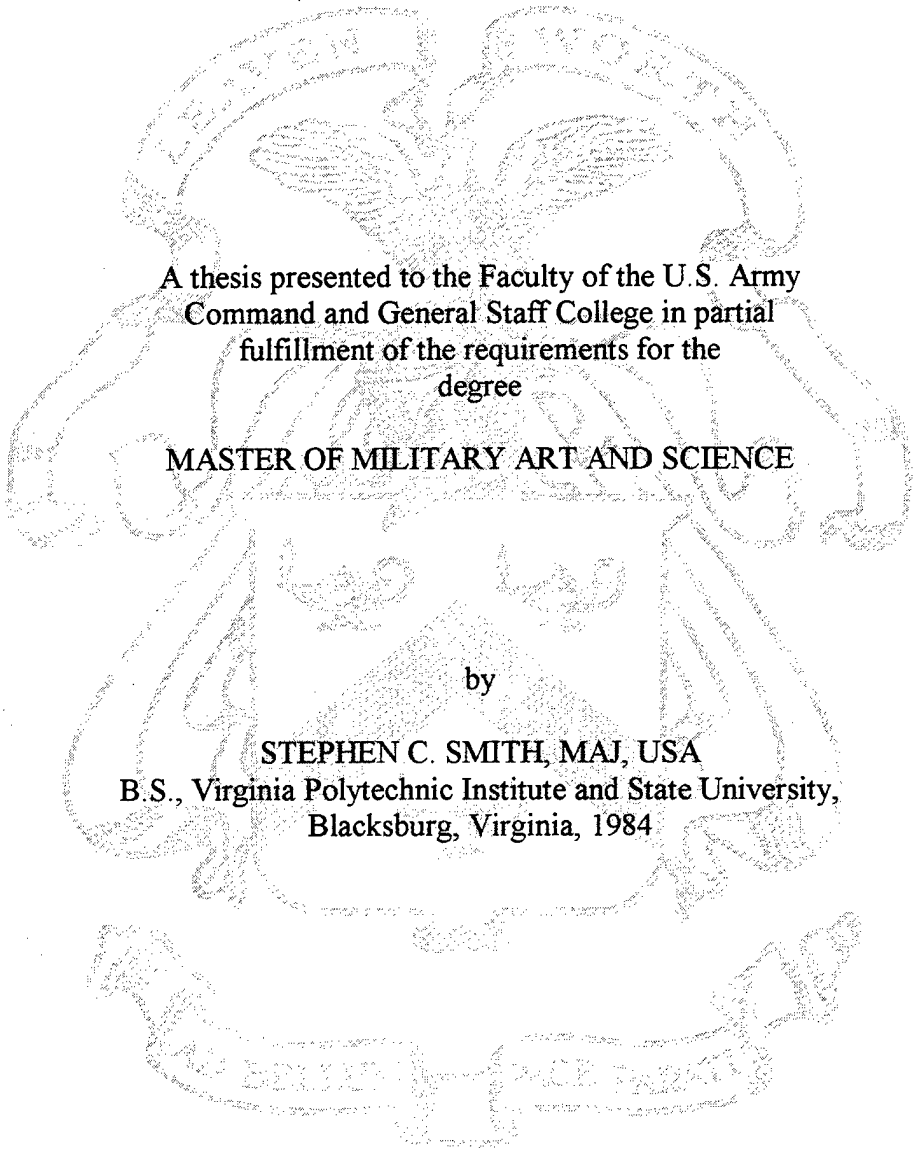
The analysis evaluated each operation using six criteria that were common to both operations. These criteria included doctrine, mission analysis, task organization, training, aircraft modifications/preparation, and employment.

This thesis concludes that there is a role for attack helicopters in peace operations. Attack helicopters were critical to the success of operations in both Haiti and Bosnia because of their ability to operate in the ground environment without restrictions due to terrain or land mines, and their psychological impact as a deterrent to the escalation of violence.

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**IS THERE A ROLE FOR ATTACK HELICOPTERS  
IN PEACE OPERATIONS?**



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

**MASTER OF MILITARY ART AND SCIENCE**

by

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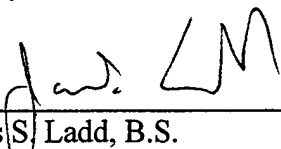
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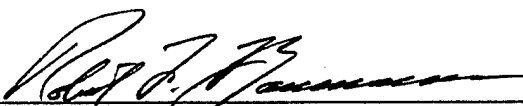
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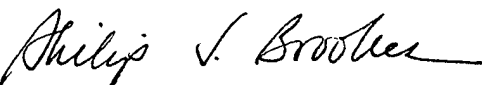
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the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

## ABSTRACT

IS THERE A ROLE FOR ATTACK HELICOPTERS IN PEACE OPERATIONS by  
MAJ Stephen C. Smith, USA, 103 pages.

This thesis is a study to determine if attack helicopters are needed in peace operations. It uses case studies of two peace operations in which the U.S. Army employed attack helicopters: Operation Uphold Democracy in Haiti and Operation Joint Endeavor in Bosnia. The case studies examine the doctrine, mission analysis, predeployment training, new equipment and equipment modifications, task organization, deployment, and employment of attack helicopter units in each operation. Because the operations are very recent, the study relies heavily on interviews and lessons learned from individuals who took part in each operation.

The analysis evaluated each operation using six criteria that were common to both operations. These criteria included doctrine, mission analysis, task organization, training, aircraft modifications/preparation, and employment.

This thesis concludes that there is a role for attack helicopters in peace operations. Attack helicopters were critical to the success of operations in both Haiti and Bosnia because of their ability to operate in the ground environment without restrictions due to terrain or land mines, and their psychological impact as a deterrent to the escalation of violence.

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## LIST OF ABBREVIATIONS AND ACRONYMS

AAR	After Action Review
ADC-M	Assistant Division Commander for Maneuver
AH	Attack Helicopter
ALSE	Aviation Life Support Equipment
ANVIS	Aviator Night Vision System
AO	Area of Operations
ARRC	Allied Rapid Reaction Corps
ATCOM	Aviation Troop Command
AVN	Aviation
BDE	Brigade
BN	Battalion
CALL	Center for Army Lessons Learned
CAV	Cavalry
CCR	Closed Circuit Refueling Device
CINC	Commander-in-Chief
CJCS	Chairman, Joint Chiefs of Staff
CMS	Combat Mission Simulator
CMTC	Combat Maneuver Training Center
CPX	Command Post Exercise
CTC	Combat Training Center
DLQ	Deck Landing Qualification
DRB	Division Ready Brigade

FLIR	Forward Looking Infra-Red
FM	Field Manual
FY	Fiscal Year
FWF	Former Warring Factions
GFAP	General Framework Agreement for Peace
GPS	Global Positioning System
GRM	Graduated Response Matrix
GS	General Support
HE	High Explosive
HEEDS	Helicopter Emergency Egress Device System
HERO	Hazard to Electromagnetic Ordnance
IFOR	Implementation Force
IN	Infantry
IPB	Intelligence Preparation of the Battlefield
ISB	Intermediate Staging (or Support) Base
JMC	Joint Military Commission
JP	Joint Publication
JTF	Joint Task Force
MD (L)	Mountain Division (Light)
METT-T	Mission, Enemy, Terrain and Weather, Troops available, Time
MILES	Multiple Integrated Laser Engagement System
MNF	Multinational Force
MOOTW	Military Operations Other Than War



MTOE	Modified Table of Organization and Equipment
MWO	Modification Work Order
NATO	North Atlantic Treaty Organization
NCO	Noncommissioned Officer
NORD-POL	Nordic-Polish Brigade
OH	Observation Helicopter
OPLAN	Operations Plan
OPORD	Operations Order
OPTEMPO	Operational Tempo
OOTW	Operations Other Than War
PEO	Peace Enforcement Operations
PKO	Peacekeeping Operations
PLL	Prescribed Load List
PNVS	Pilot's Night Vision System
PTWS	Point Target Weapon System
QRF	Quick Reaction Force
QTB	Quarterly Training Briefing
ROE	Rules of Engagement
S-3	Operations Officer
S-4	Logistics Officer
SASO	Stability and Support Operations
SATCOM	Satellite Communications System
SNORT	Short Notice Reaction Team

STX	Situational Training Exercise
TF	Task Force
TOE	Table of Organization and Equipment
TPFDL	Time, Phased, Force, Deployment List
TOW	Tube-launched, Optically-tracked, Wire-guided Missile
UAV	Unmanned Aerial Vehicle
UH	Utility Helicopter
UN	United Nations
UNOSOM	United Nations Operation in Somalia
UNPROFOR	United Nations Protection Force
USACOM	United States Atlantic Command
VCR	Video Recorder
VIP	Very Important Person
XO	Executive Officer
ZOS	Zone of Separation

## CHAPTER 1

### INTRODUCTION

During the Vietnam War, the U.S. Army determined a need to arm helicopters for self-protection. The success of these armed aircraft led the Army to use helicopters in an offensive role by providing supporting fire to troops in contact. Eventually, the Army concluded it needed a dedicated platform for this mission. The Army's answer was the AH-1 Cobra: the Army's first dedicated attack helicopter. Initially, the Army used the Cobra in a close air support role, but with the advent of the antitank missile, the Cobra's mission changed. Armed with the Tube-launched, optically-tracked, wire-guided (TOW) missile,<sup>1</sup> the Cobra became a key player in balancing the numerical tank superiority of the Warsaw Pact over North Atlantic Treaty Organization (NATO) forces. In the 1980s the Army increased its ability to counter the Soviet threat by acquiring the AH-64 Apache attack helicopter. The Apache, with its Hellfire missile,<sup>2</sup> was very effective in destroying Iraqi tanks during Operation Desert Storm. Despite being viewed primarily as an antitank platform, since the conclusion of Operation Desert Storm, the U.S. Army has employed attack helicopters in several different peace operations. In Somalia, the Army was hesitant to deploy attack helicopters because Operation Restore Hope was initially a humanitarian assistance operation. In Haiti, the U.S. Army withdrew its AH-64 Apache attack helicopters from the plan for initial combat operations (Operation Restore Democracy), yet the plan for a permissive entry operation (Operation Uphold Democracy), included attack helicopters. In the peacekeeping operation in Bosnia (Operation Joint Endeavor), the Army continues using attack helicopters extensively, in many different roles. In each of the peace operations listed above, the

Army used attack helicopters in different ways. This thesis will determine whether this was because each situation was different or because the U.S. Army is still trying to determine whether or not there is a role for attack helicopters in peace operations.

### Importance of the Problem

The study of the use of attack helicopters in peace operations is important because peace operations are becoming more prevalent for U.S. Army units.

During the Cold War, the United Nations could resort to multilateral peace operations only in the rare circumstance in which the interests of the Soviet Union and the West did not conflict. By 1989, both the United States and the Soviet Union perceived that such operations could serve as cost-effective tools in preventing, containing, or solving conflicts that threatened international peace and stability. In many instances, they would benefit from having to bear only a share of the burden. However, since 1989, territorial disputes, armed ethnic conflicts, civil wars, and total collapse of governmental authority in failed states have represented ongoing challenges to the institutional, financial, and operational capabilities of the UN system.<sup>3</sup>

Because of this international instability the UN conducted thirty peace operations since 1988 and is currently conducting sixteen peace operations worldwide.<sup>4</sup> This instability also led to an increase in the number of peace operations for the U.S. military. The U.S. Army used attack helicopters in four peace type of operations since Operation Desert Storm, and in each case the Army utilized attack helicopters in a different manner.

Based on the current policy of the U.S. Government, the trend to use U.S. forces in peace operations will probably continue. In the May 1997 National Security Strategy of the United States, there are three core objectives for the national security of the U.S. These include enhancing security, promoting prosperity, and promoting democracy. According to the strategy, the U.S. military enhances security by shaping the international environment through preventive deployments. Additionally, the U.S. military helps

promote democracy by intervening on behalf of emerging democracies, such as Operation Uphold Democracy in Haiti.<sup>5</sup> If the Army expects to continue supporting peace operations, it should determine whether or not there is a role for attack helicopters in peace operations.

### What are Attack Helicopters?

Attack helicopters are armed helicopters with the primary mission of attacking ground targets. Currently the U.S. Army has four types of attack helicopters in its active and reserve inventories. These aircraft include the AH-1 Cobra, the AH-6 Cayuse, the AH-58D Kiowa Warrior, and the AH-64 Apache.

The AH-1 Cobra was the U.S. Army's first dedicated attack helicopter. Its weapons include a 20-millimeter cannon, 2.75-inch folding fin aerial rockets (FFAR), and the TOW missile system. The U.S. Army is in the process of replacing the AH-1 in the active inventory with the AH-58D and the AH-64. The U.S. Army employed the AH-1 in Operation Uphold Democracy in Haiti and Operation Joint Endeavor in Bosnia.

The AH-6 is a special operations attack helicopter. Because the AH-6 is located only in the U.S. Army's Special Operations Aviation Regiment, it will not be included in this study.

The AH-58D is replacing the AH-1 Cobra in active cavalry squadrons and light division attack helicopter battalions. Its weapons include a mix of 50-caliber machine gun, 2.75-inch FFAR, Stinger air-to-air missiles, and Hellfire missiles. The U.S. Army employed the AH-58D in Operation Uphold Democracy in Haiti and Operation Joint Endeavor in Bosnia.

The AH-64 is the U.S. Army's primary attack helicopter. It replaced the AH-1 Cobra in all active attack helicopter battalions, except in the light divisions and the 82nd Airborne Division. Its weapons include a 30-millimeter cannon, 2.75-inch FFAR, and Hellfire missiles. The U.S. Army initially planned to employ the AH-64 in Operation Uphold Democracy in Haiti. The Army did employ the AH-64 in Operation Joint Endeavor in Bosnia.

### Defining Peace Operations

The U.S. military normally conducts peace operations as part of a multinational force with other United Nations (UN) or NATO allies. The UN is the primary agency dealing with peace operations. According to the UN Secretary General, the UN "member states attach importance to preventive diplomacy and peacemaking as the most cost effective ways of preventing disputes from occurring, stopping existing disputes from escalating into conflicts and controlling and resolving existing conflicts."<sup>6</sup>

The term peace operation can be quite confusing. This confusion may have had an impact on the way the U.S. military dealt with past peace operations. There are many different terms to consider when discussing peace operations, to include peace building, peacemaking, peacekeeping, peace enforcement, enforcement of sanctions, enforcing exclusion zones, and humanitarian assistance. As stated above, the primary agent for peace operations, since 1945, has been the UN. According to Article I of the UN Charter one of the purposes of the UN is "to maintain international peace and security."<sup>7</sup> However, the UN itself does not appear to have a clear definition of peace operations. In fact, the Norwegian representative on the UN Special Committee on Peacekeeping Operations stated in an April 1996 meeting that the UN needed to develop a common and

comprehensive set of definitions for peacekeeping and related activities.<sup>8</sup> Although the UN does not have an exact definition of peace operations, peacekeeping operations, or peace enforcement operations, the UN Secretary General outlined three principles of peacekeeping operations and the differences between peacekeeping operations and peace enforcement operations. In his final report on the evaluation of peacekeeping operations in June 1995, the UN Secretary General stated that "the three principles of peacekeeping operations are consent of the parties, impartiality, and non-use of force except in self-defense."<sup>9</sup> Additionally, according to the UN, "peacekeeping operations traditionally rely on the consent of the opposing parties and involve the deployment of peacekeepers to implement an agreement approved by those parties."<sup>10</sup> The UN defines peace enforcement as "the authority given to member states to take all necessary measures to achieve a stated objective. Consent of the parties is not necessarily required."<sup>11</sup>

The U.S. military has tried to clarify these ambiguities by establishing a definition for peace operations. Despite this, the joint staff and the Army still have slightly different views concerning peace operations. Under joint doctrine, peace operations are considered a subset of Military Operations Other Than War (MOOTW). The joint doctrine for MOOTW is found in Joint Publication (JP) 3-07, dated 16 June 95. JP 3-07 lists fifteen different types of MOOTW, with peace operations being one type. JP 3-07 defines peace operations as "military operations to support diplomatic efforts to reach a long term political settlement and categorized as peace-keeping operations [PKO] and peace enforcement operations [PEO]. Peace operations are conducted in conjunction with the various diplomatic activities necessary to secure a negotiated truce and resolve the conflict."<sup>12</sup> Peace operations are divided into two categories, PKO and PEO. PKO

are "military operations undertaken with the consent of all major parties to a dispute, designed to monitor and facilitate implementation of an agreement, (cease-fire, truce, or other such agreement) and support diplomatic efforts to reach a long term political settlement."<sup>13</sup> However, PEO are "the application of military force, or threat of its use, normally pursuant to international authorization, to compel compliance with resolutions or sanctions designed to maintain or restore peace and order."<sup>14</sup> Unlike PKO, PEO do not require the consent of the disputing parties. JP 3-07 does not categorize preventive diplomacy, peacemaking, or peace building as types of peace operations. These are diplomatic peace activities. According to JP 3-07, peace operations (PKO and PEO) support diplomatic peace activities.

The U.S. Army defines peace operations in its Field Manual (FM) 100-23, *Peace Operations*, December 1994. According to FM 100-23, "Peace operations encompass three types of activities: support to diplomacy, peacekeeping, and peace enforcement."<sup>15</sup> This does not conform to the JP 3-07 definition of peace operations. According to JP 3-07, PKO and PEO both support diplomatic activities. Despite this, the U.S. Army's definitions of PKO and PEO are consistent with the JP 3-07 definition of each term.

Achieving a clear understanding of peace operations is difficult. The primary agent for peace operations is the UN, and even the UN does not have a clear definition of peace operations, PKO, or PEO. The Joint Staff clarified the definitions, but despite this, there are still variations in interpretation between the Joint Staff and the Army. This ambiguity may be a contributing factor in why the Army is unsure of the role of attack helicopters in peace operations.



### Limitations

For the purpose of this research, the JP 3-07 definition of peace operations will be used. Therefore, this thesis will only consider PKO and PEO, as defined by JP 3-07, in the research on the use of attack helicopters in peace operations.

### Delimitations

As stated earlier, the U.S. military used or planned for the use of attack helicopters in four different peace type operations since Operation Desert Storm. These include Iraq, Somalia, Haiti, and Bosnia. This thesis will only study Operation Uphold Democracy in Haiti and Operation Joint Endeavor in Bosnia. Both of these operations fit the JP 3-07 definition of peace operations. Operation Provide Comfort in Iraq and Operation Restore Hope in Somalia will not be studied because they were humanitarian assistance operations.

### Research Methodology

The methodology for this thesis is a case study on the use of attack helicopters in two operations: Haiti and Bosnia. Chapter 2 will show U.S. Army doctrine on the use of attack helicopters in peace operations prior to operations in Haiti and Bosnia. By showing the doctrine prior to each operation, chapter 2 will reveal the Army's requirements for peace operations.

Chapters 3 and 4 will be case studies of operations in Haiti and Bosnia, respectively. The areas covered will include mission analysis, predeployment training, new equipment, deployment, employment, and redeployment.

First, chapters 3 and 4 will reveal the mission analysis conducted by the various headquarters in determining the mission and necessary training for the attack helicopters

in each operation. The research will determine if these missions were in accordance with the doctrine at the time.

Second, chapters 3 and 4 will show the home station training for each attack helicopter unit deploying to Haiti or Bosnia. The ground units deploying to Bosnia received specialized training for peace operations. The research will determine whether or not the attack helicopter units also received special training to prepare them for peace operations. If they did not, the research will determine the training they actually conducted. The research will also show how closely the predeployment training resembled actual conditions in each operation.

Third, chapters 3 and 4 will determine whether or not the units received any new equipment or equipment modifications prior to each operation. If so, the research will also show how the units determined a need for the new equipment or modifications.

Fourth, chapters 3 and 4 will show how the attack helicopter units deployed into each area of operations. The research will also determine if the units deployed with their normal structure or if they were task organized. If they were task organized, what were the reasons for the task organization?

Fifth, chapters 3 and 4 will determine how the Army employed attack helicopters in each operation? Were they successful? Did their employment techniques change over time? What caused this change? Did the mission for the attack helicopters closely resemble their training? What were the rules of engagement (ROE)<sup>16</sup> for each operation, and how did they change over time? If the ROE did change, what caused the change? How did the attack helicopter units prepare their aircrews for the ROE?

Finally, chapters 3 and 4 will determine how the units redeployed to their home station. The research will also show how the attack helicopter units in Bosnia conducted the handover of operations from the original unit to the relieving unit.

Chapter 5 will be an analysis of each operation. It will compare and contrast each operation to determine whether or not there is a role for attack helicopters in peace operations. The analysis will use criteria derived from the common traits between the two operations.

Chapter 6 will consist of conclusions and implications. The primary goal of this research is to determine if there is a role for attack helicopters in peace operations.

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<sup>1</sup> The Tube Launched Optically Tracked Wire Guided Missile (TOW) is an antitank missile that can be fired from the ground or from an attack helicopter. The maximum effective range of the current TOW missile is 3,750 meters.

<sup>2</sup> The Hellfire Missile is a laser guided antitank missile. It can be fired from the ground or from an attack helicopter. It is the primary weapon for the AH-64 Apache. The Hellfire system on the Apache is also known as the Point Target Weapon System (PTWS) and has a maximum effective range of 8,000 meters.

<sup>3</sup> Institute for National Strategic Studies. *Strategic Forum on Presidential Decision Directive 25, Multinational Peace Operations* (Washington, DC: National Defense University, July 1994), 1.

<sup>4</sup> UN Department of Public Information, "UN Peace-keeping: Some Questions and Answers" (New York: United Nations, August 1997), 1.

<sup>5</sup> U.S. President, "National Security Strategy for a New Century" (Washington DC: The White House, May 1997), 5-9.

<sup>6</sup> UN Department of Political Affairs, "Preventive Action and Peacemaking" (New York: United Nations, 1 July 1997), 1.

<sup>7</sup> UN General Assembly, "Charter of the United Nations" (San Francisco: 24 October 1945), 1.

<sup>8</sup> UN Committee on Peacekeeping Operations, "Press Release GA/PK/141, 137<sup>th</sup> Meeting" (New York: United Nations, 3 April 1996), 5.

<sup>9</sup> UN Secretary General, "Final Report on the Evaluation of Peacekeeping Operations" (New York: United Nations, June 1995), 1.

<sup>10</sup> UN Department of Public Information, "UN Peacekeeping: Some Questions and Answers" [database on-line] (New York: United Nations August 1997, accessed November 1997)); available from <http://www.un.com>; Internet.

<sup>11</sup> Ibid.

<sup>12</sup> Office of the Chairman of the Joint Chiefs of Staff. JP 3-07, *Joint Doctrine for Military Operations Other Than War* (Washington, DC: GPO, 16 June 1995), III-12.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid., III-13.

<sup>15</sup> U.S. Army. FM 100-23, *Peace Operations* (Washington, DC: Department of the Army, 30 December 1994), 2.

<sup>16</sup> U.S. Army. FM 101-5-1, *Operational Terms and Graphics* (Washington, DC: Department of the Army, 30 September 1997), 135. Rules of Engagement (ROE) are directives issued by competent military authority which delineate the circumstances and limitations under which U.S. forces will initiate and/or continue combat engagement with other forces encountered.

## CHAPTER 2

### DOCTRINE REVIEW

#### Introduction

The U.S. military's JP 1-02 defines doctrine as "a body of fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application."<sup>1</sup> Doctrine not only gives the Army a guide for conducting operations, but also sets the direction for organizational structure and training.<sup>2</sup> This chapter will review Joint, U.S. Army, and U.S. Army Aviation doctrine relating to peace operations and in particular the doctrine for the use of attack helicopters in peace operations prior to recent deployments in Haiti and Bosnia. Chapters 3 and 4 will determine how doctrine affected the mission analysis, training, and employment of attack helicopter units in Operation Uphold Democracy in Haiti and Operation Joint Endeavor in Bosnia. Chapter 5 will analyze the doctrine and the case studies to determine if there is a role for attack helicopters in peace operations.

#### Prior to Operation Uphold Democracy

Prior to the breakup of the Soviet Union, the U.S. military's participation in peace operations was limited primarily to logistical support, financial support, and observers. According to JP 3-07.3, *Joint Tactics, Techniques, and Procedures for Peacekeeping Operations*, dated 29 April 1994, "The United States is one of the few nations capable of providing the inter-theater airlift and sealift to deploy peacekeeping forces around the world."<sup>3</sup> Because the U.S. military rarely deployed large ground forces to conduct peace operations, the U.S. military's doctrine on the conduct of peace operations was limited.

Such was the case for the U.S. Army as it prepared for operations in Haiti in September 1994.

Prior to Operation Uphold Democracy, U.S. military doctrine for peace operations could be found in the following publications:

1. JP 3-07, *Military Operations Other Than War* (Final Draft), July 1994
2. JP 3-07.3, *Joint Tactics, Techniques, and Procedures for Peacekeeping Operations*, 29 April 1994
3. U.S. Army FM 100-5, *Operations*, 14 June 1993
4. U.S. Army FM 100-20, *Low Intensity Conflict*, 5 December 1990.

There are three main points that are common among these publications. These points include: the organization of units for peace operations, the missions military forces conduct during peace operations, and ROE for military forces conducting peace operations.

Because of the uncertainty of peace operations, the U.S. military could not dictate a specific organization to conduct all peace operations. According to FM 100-20, *Low Intensity Conflict*, "The basic force structure and appropriate augmentation are situation dependent."<sup>4</sup> However, the biggest factors in determining task organization for units conducting peace operations were political considerations. According to FM 100-20, "The political complexities of peacemaking [currently known as peace enforcement] require that the available force be sufficient, but its use be applied with discretion. Political considerations influence the size and composition of the force more than operational requirements."<sup>5</sup> Additionally according to FM 100-5, "These [peacekeeping] operations follow diplomatic negotiations that establish the mandate for the peacekeeping

force. The mandate describes the scope of the peacekeeping operation. Typically, it determines the size and type of force each participating nation will contribute. It also specifies the terms or conditions the host nation intends to impose on the presence of the force or mission, and it specifies a clear statement of the functions the peacekeeping force is to perform."<sup>6</sup>

The task organization of units conducting peace operations would need to provide forces capable of conducting many missions, from maintaining law and order, to conducting combat operations. The most prevalent missions listed in the doctrinal manuals included observation, surveillance, and patrolling. The doctrine also stressed the need to have aviation assets to conduct these missions as well as ground units. In fact, according to JP 3-07.3, "An air component can make a significant contribution to all peacekeeping forces and observers. Air operations are particularly useful in patrolling difficult and undeveloped terrain, areas heavily mined or containing unexploded ordnance. The air component's ability and flexibility in covering large areas in a short amount of time is an asset for both ground and maritime operations."<sup>7</sup>

The third main subject that was common to all of the doctrinal publications was ROE. According to JP 1-02, ROE are "directives issued by competent military authority which delineate the circumstances and limitations under which U.S. forces will initiate and/or continue combat engagement with other forces encountered."<sup>8</sup> According to FM 100-5, "Many factors influence ROE, including national command policy, mission, operational environments, commander's intent, and law of land warfare."<sup>9</sup> The limitations mentioned above become even more restrictive in peace operations. According to FM 100-5, "While all military force have the intrinsic right of self-defense,

the use of overwhelming force may complicate the process toward the Army's stated objectives. As a result, operational commanders may find themselves operating under restrictive ROE."<sup>10</sup>

U.S. Army Aviation doctrine for the employment of attack helicopters could be found in:

1. U.S. Army, FM 1-100, *Army Aviation in Combat Operations*, February 1989
2. U.S. Army, FM 1-111, *Aviation Brigades*, August 1990
3. U.S. Army, FM 1-112, *Attack Helicopter Battalion*, February 1991
4. U.S. Army, FM 1-114, *Regimental Aviation Squadron*, February 1991.

None of these publications specifically addressed the use of attack helicopters in peace operations. However, they did address the need for aviation support in peace operations. According to FM 1-100, "In peacekeeping, aviation can perform reconnaissance and surveillance, provide logistic support, and enhance command and control."<sup>11</sup>

#### Prior to Operation Joint Endeavor

Prior to operations in Bosnia in December 1995, the military published two doctrinal manuals that dealt directly with peace operations. These included the final JP 3-07, *Military Operations Other Than War*, dated June 1995, and the publication of a new manual, the US Army's FM 100-23, *Peace Operations*, dated December 1994. FM 100-23 made several important changes to U.S. Army doctrine and actually brought Army doctrine into agreement with JP 3-07.

Some important areas that FM 100-23 addresses include force tailoring and force training. FM 100-23 continues with the previous doctrine that political considerations are important in task organization. According to the manual, a force conducting a peace operation should be based on its ability to "contribute to achieving national interests and



objectives and the perceptions of the indigenous population, the international community, and the American public. The perception that employed forces exceed the limits of the mandate weakens legitimacy."<sup>12</sup> However, unlike FM 100-20, *Military Operations in Low Intensity Conflict*, FM 100-23 does not dictate that political considerations outweigh operational requirements. In fact, according to FM 100-23, "commanders should prepare for worst-case situations by planning for the employment of combined arms assets."<sup>13</sup> Additionally, for the first time, FM 100-23 specifically mentions the use of armored forces and attack helicopters during peace operations. According to FM 100-23, "Armored forces and attack helicopters may, for example, play major roles in preventive deployments and peace enforcement and be useful in peacekeeping for force protection, deterrence, convoy escort; for personnel transport where threats exist, or as a mobile reserve."<sup>14</sup>

The next important change in doctrine in FM 100-23 is force training. Previous doctrine on peace operations did not address how to train a force for peace operations. According to JP 3-07, "Readying forces for MOOTW requires building on the primary purposes of the Armed Forces--to fight and win the nation's wars. For most types of MOOTW, military personnel adapt their war-fighting skills to the situation."<sup>15</sup> According to FM 100-23, "the most important training for peace operations remains training for essential combat and basic soldier skills."<sup>16</sup> To prepare military forces for MOOTW, JP 3-07 and FM 100-23 both describe a two-pronged approach. "The first prong is the professional military education of all officers and noncommissioned officers [NCO]."<sup>17</sup> This allows leaders to learn the principles of MOOTW at the level applicable to their current and next grade. "The second prong is the training of individuals, units, and

staffs."<sup>18</sup> This training can be conducted at the combat training centers (CTC), during exercises, or as part of a predeployment training plan prior to a peace operation.

In addition to the changes in doctrine listed above, FM 100-23 provides greater detail than previous doctrine concerning the use of force in peace operations. As in previous doctrine, according to FM 100-23, "In peacekeeping, commanders should regard the use of force as a last resort; in peace enforcement commanders should exercise restraint in employing forces . . . In peace operations, as in all military operations, the inherent right of self defense applies."<sup>19</sup> However, according to FM 100-23, for commanders conducting peace operations, "sufficient force must be available to; achieve objectives rapidly through simultaneous application of combat power, protect the force."<sup>20</sup> The manual also lists alternatives to the use of force. These include deterrence, mediation and negotiation, population and resource control, rewards and penalties, warnings, and other measured responses specific to the commander's situation.<sup>21</sup>

An additional area receiving greater emphasis in FM 100-23 is the area of ROE. FM 100-23 stresses that "well crafted ROE can make the difference between success and failure."<sup>22</sup> According to the manual, commanders must ensure that soldiers rehearse and war-game the ROE. Additionally, commanders must issue written copies of the ROE to all personnel to ensure that every soldier understands the commander's intent.<sup>23</sup>

#### Post Operation Joint Endeavor

The U.S. Army has not released any new doctrine on peace operations since the deployment to Bosnia in December 1995. However, the Army published FM 100-20, *Stability and Support Operations*, and FM 100-5, *Operations*, in final draft form in April 1996 and August 1997, respectively. Both manuals put more emphasis on OOTW, yet

they use new terms to describe these operations. The new terms are stability and support operations (SASO). Stability operations include operations to combat terrorism, counterdrug operations, arms control, nation assistance and foreign internal defense, support to insurgencies, support to counterinsurgencies, shows of force, civil disturbance operations, operations in support of diplomatic efforts, and peace operations. Support operations include humanitarian assistance operations and environmental assistance.<sup>24</sup>

The final draft of FM 100-5 deals more with OOTW than any previous FM 100-5. An important change includes the addition of the imperatives of stability operations. These include force protection, emphasis on information operations, maximize interagency/ joint/multinational cooperation, display the capability to apply force without threatening, understand the potential for disproportionate consequences of individual and small unit actions, apply force selectively and discriminately, and act decisively to prevent escalation. Additionally, the manual adds civilian considerations to the planning factors of mission, enemy, troops, terrain & weather, and time (METT-T).<sup>25</sup>

Army aviation doctrine remained unchanged until between May 1996 and October 1997. During this period, Army aviation published the following manuals:

1. U.S. Army FM 1-100, *Army Aviation in Combat Operations*, February 1997
2. U.S. Army FM 1-111, *Aviation Brigades*, October 1997
3. U.S. Army FM 1-112, *Attack Helicopter Battalion*, April 1997.

The Army also published FM 1-114, *Air Cavalry Operations*, in draft form in May 1996. The common thread among all of these new publications is that they conform to the information concerning SASO in FM 100-5, *Operations*, and FM 100-20, *Stability and Support Operations*, even though these two publications are still in draft form.

FM 1-100, *Army Aviation in Combat Operations*, devotes an entire chapter to SASO. According to the manual, "The same principles and tenets that apply to aviation forces in combat operations, will apply to aviation in these [SASO] operations."<sup>26</sup> The manual further states, "SASO can quickly transition from peace time through conflict to war"<sup>27</sup> and "the very presence of aviation makes it a highly visible deterrent force."<sup>28</sup> Aviation can reach remote areas and provide reconnaissance, security, and combat projection. FM 1-100 specifically mentions the use of attack helicopters in peace enforcement operations. According to FM 1-100, "Aviation units can be deployed into the area of operations with early entry ground forces and can have a significant deterrent effect on the indigenous combatants, particularly if the factions have armored forces. Air Cavalry or attack units may be employed to conduct reconnaissance and surveillance over wide areas."<sup>29</sup>

FM 1-112, *Attack Helicopter Battalion*, also devotes a chapter to SASO. The manual lists seven types of SASO that could involve attack helicopters. These include "show of force, non-combatant evacuation, counter-drug, support to insurgencies/counterinsurgencies, combating terrorism, attacks/raids, and peace enforcement."<sup>30</sup> In addition, FM 1-112 depicts a sample graduated response matrix (GRM) for use by attack helicopter crews during peace operations. The Combat Maneuver Training Center (CMTC) in Hohenfels, Germany, published the matrix based on lessons learned by the attack helicopter crews in Bosnia. The matrix lists three variations of traditional attack helicopter missions. These missions include presence (reconnaissance), show of force (security), and lethal response (attack).<sup>31</sup>

## Conclusion

Prior to Operation Uphold Democracy in Haiti, doctrine did not address the use of attack helicopters in peace operations. The doctrine did address the need for Army aviation assets, but only in observation, scouting, and patrolling roles. The doctrine stressed that the peace operation force should not appear larger than required by the mandate. It also stressed that political considerations played a large role in determining the size and composition of a peace operation force. Army aviation doctrine rarely addressed peace operations and when it did, it dealt with combat support and combat service support issues. Scout aircraft would accomplish the additional missions of reconnaissance and surveillance. It appears from the doctrine that unless there was a significant threat, the Army did not intend to deploy/employ attack helicopters in peace operations.

After operations in Haiti, with the introduction of FM 100-23, the view towards peace operations changed. Commanders could still expect peace operations forces to be tailored based on political considerations and perceptions, but there was a greater emphasis placed on force protection and deterrence. FM 100-23 specifically mentions armor and attack helicopters playing important roles in peace operations. These roles included deterrence, force protection, convoy escort, and acting as a mobile reserve.

Despite the change in Army doctrine, Army Aviation doctrine did not change. The attack helicopter units that deployed to Bosnia had the same doctrine as the attack helicopter units that deployed to Haiti.

Following the initial deployment to Bosnia for Operation Joint Endeavor, the Army published emerging doctrine in draft form. This new doctrine places more

emphasis on peace operations. Although FM 100-5 and FM 100-20 do not list attack helicopters specifically, they stress the need for deterrence through superior firepower, and the need for adequate forces to protect the force. Army aviation doctrine mirrors the emerging Army doctrine and, for the first time, specifically mentions the capabilities of attack helicopters in peace operations.

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<sup>1</sup> U.S. Army. FM 101-5-1, *Operational Terms and Graphics* (Washington, DC: Department of the Army, 30 September 1997), 1-55.

<sup>2</sup> U.S. Army. FM 100-5, *Operations* (Washington, DC: Department of the Army, 14 June 1993), 1-1.

<sup>3</sup> Office of the Chairman of the Joint Chiefs of Staff. JP 3-07.3, *Joint Tactics, Techniques, and Procedures for Peacekeeping Operations* (Washington, DC: GPO, 29 April 1994), I-2.

<sup>4</sup> U.S. Army. FM 100-20, *Military Operations in Low Intensity Conflict* (Washington, DC: Department of the Army, 5 December 1990), 4-4.

<sup>5</sup> *Ibid.*, 5-7.

<sup>6</sup> FM 100-5, 13-7.

<sup>7</sup> JP 3-07.3, I-5, 6.

<sup>8</sup> FM 101-5-1, 1-35.

<sup>9</sup> FM 100-5, 2-4.

<sup>10</sup> *Ibid.*, 13-2.

<sup>11</sup> U.S. Army. FM 1-100, *Army Aviation in Combat Operations* (Washington, DC: Department of the Army, 28 February 1989), 3-3.

<sup>12</sup> U.S. Army. FM 100-23, *Peace Operations* (Washington, DC: Department of the Army, 30 December 1994), 38.

<sup>13</sup> *Ibid.*

<sup>14</sup> *Ibid.*, 40.

<sup>15</sup> JP 3-07, IV-13.

<sup>16</sup> FM 100-23, 38.

<sup>17</sup> JP 3-07, IV-13.

<sup>18</sup> Ibid.

<sup>19</sup> FM 100-23, 34.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid., 35.

<sup>23</sup> Ibid.

<sup>24</sup> U.S. Army. FM 100-20, *Stability and Support Operations* (Final Draft) (Washington, DC: Department of the Army, April 1996), 2-1 to 2-19.

<sup>25</sup> U.S. Army. FM 100-5, *Operations* (Final Draft) (Washington, DC: Department of the Army, August 1997). 15-1 to 15-18.

<sup>26</sup> U.S. Army. FM 1-100, *Army Aviation in Combat Operations* (Washington, DC: Department of the Army, February 1997), 2-24.

<sup>27</sup> Ibid., 2-22.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid., 2-27.

<sup>30</sup> U.S. Army. FM 1-112, *Attack Helicopter Battalion* (Washington, DC: Department of the Army, April 1997), 6-2 and 6-3.

<sup>31</sup> Ibid., 6-4 and 6-5.

## CHAPTER 3

### ATTACK HELICOPTER OPERATIONS IN OPERATION UPHOLD DEMOCRACY

#### Introduction

On 30 September 1991, Lieutenant General Raoul Cedras staged a military coup to unseat the democratically elected president of Haiti, Jean-Bertrand Aristide. After pressure from the UN and the Organization of American States (OAS), Lieutenant General Cedras signed the ten point Governor's Island Accord which provided "for Aristide to return by 30 October 1993, the early retirement of Lieutenant General Cedras and other military leaders, and the lifting of UN and OAS sanctions."<sup>1</sup> By mid-October 1993, Lieutenant General Cedras reneged on the Governor's Island Accord and the UN Security Council reimposed sanctions on Haiti and authorized the use of military force to enforce them. The deteriorating human rights and economic conditions in Haiti caused thousands of refugees to flee by boat in hopes of emigrating to the United States. Finally, on 31 July 1994, the UN Security Council approved resolution 940 allowing "the application of all necessary means to restore democracy to Haiti."<sup>2</sup>

To restore the democratically elected government to power in Haiti, President Bill Clinton authorized the U.S. military to execute Operation Uphold Democracy. The Chairman of the Joint Chiefs of Staff (CJCS) designated the XVIII Corps (Airborne) as the Joint Task Force (JTF) headquarters. "Two operation plans [OPLAN] were developed for contingency operations in Haiti, OPLAN 2370 and OPLAN 2380. OPLAN 2370 was a forced entry plan by JTF 180 using airborne and amphibious forces in a non-permissive environment. OPLAN 2380 was entry by JTF 190 using light infantry in permissive conditions. The two plans had different missions--an invasion



versus operations other than war (OOTW)."<sup>3</sup> During the planning process the XVIII Corps (Airborne) headquarters realized it could not handle the weight of preparing two separate operation plans. Therefore, "the CINC [Commander in Chief] USACOM [United States Atlantic Command] decided that another headquarters should devote its full energy to OPLAN 2380, so the plan was handed off to the 10th Mountain Division (Light Infantry) [10th MD (L)] on 29 July 94. The division formed the basis of the new JTF 190."<sup>4</sup> In addition, "just to be on the safe side, 10th MD (L) planners prepared for the contingency that a permissive entry might be less than completely permissive."<sup>5</sup> This plan became OPLAN 2375.

On 17 September 1994, former President Jimmy Carter led a delegation to Haiti to negotiate with the Haitian leadership to prevent the imminent invasion. The delegation included Senator Sam Nunn, the former CJCS, Colin Powell, and various State Department and National Security Council officials. "Only a phone report by a spy working for the junta in Haiti that U.S. aircraft were departing Pope Air Force Base, North Carolina, brought about the Cedras government's capitulation."<sup>6</sup> With the 82nd Airborne Division enroute to execute OPLAN 2370, the delegation brokered an agreement that allowed U.S. troops to enter Haiti unopposed, and replaced the military junta with the democratically elected president, Jean-Bertrand Aristide. Because of this agreement, at H minus three hours, 2200 hours 18 September 1994, President Clinton rescinded the execution order for OPLAN 2370 and the aircraft carrying the 82nd Airborne Division returned to Pope Air Force Base, North Carolina.<sup>7</sup> "The next day, American troops, led by Lieutenant General Hugh Shelton, commander of XVIII Airborne Corps, landed peacefully to the cheers of the Haitian people."<sup>8</sup>

The agreement reached by former President Carter's delegation drastically changed the situation for U.S. forces enroute to Haiti. The XVIII Airborne Corps fully expected to execute the forcible entry operation of OPLAN 2370. In fact, Lieutenant General Shelton stated, "never in my wildest imagination did I think I would be coming in here with the mission of cooperating and coordinating in an atmosphere of mutual respect."<sup>9</sup> Because of the rapidly changing situation, the 10th MD (L) postured itself to execute a melded plan it termed 2380(+). Operations Order 2380(+) included a combined Timed Phased Force Deployment List (TPFDL) of both OPLAN 2370 and 2380. This allowed JTF 190 to use some of the same elements originally designated for JTF 180. However, "for execution of operations, JTF 190 continued to rely on OPLAN 2380. This plan became OPORD 2380 effective on C day, 10 September 1994."<sup>10</sup>

#### OPLAN 2370 and JTF 180

The 82nd Airborne Division was the nucleus of JTF 180 for the planned invasion of Haiti. The 82nd Airborne Division planned for a forced entry operation into Haiti by conducting an airborne assault on two drop zones. "The 504th Parachute Infantry Regiment [1st Brigade] would seize the primary drop zone, Port au Prince International Airport, and follow-on objectives, including facilities that served as the seaport for lodgment. The 325th Airborne Infantry Regiment [2<sup>nd</sup> Brigade] would relieve the 504th and expand the lodgment. The 505th Parachute Infantry Regiment [3<sup>rd</sup> Brigade] would seize a second drop zone, Pegasus, a large division support command element, the aviation brigade assault command post, fuel/ammunition handlers, and a security element."<sup>11</sup> The plan was to use Pegasus Drop Zone as a forward arming and refueling point (FARP)<sup>12</sup> for the 82nd Aviation Brigade's helicopters. Their aircraft would fly

from Fort Bragg, North Carolina, to Homestead Air Force Base in Florida and then to Great Inagua, an island in the Bahamas. They would remain on Great Inagua until H hour, at which time they would begin their deployment to Port-au Prince. Upon their arrival at Pegasus Drop Zone, the crews would remove their external fuel tanks, empty after the long over-water flight, and then air assault 82nd Airborne Division troops to secure various objectives throughout Port au Prince.<sup>13</sup>

Until 12 September 1994, AH-64 attack helicopters from the 3-229th (Aviation) (Attack) would have been attached to the 82nd Aviation Brigade for Operation Uphold Democracy. The plan called for eight AH-64 Apaches to fly with the 82nd Aviation Brigade to Homestead Air Force Base, Florida, and then proceed to Great Inagua. Four of the AH-64 Apaches would depart Great Inagua at H minus one hour and thirty minutes and proceed to Port au Prince and be on station to provide P hour<sup>14</sup> security for the airborne assault on the International Airport and Pegasus Drop Zone. The remainder of the AH-64 Apaches would occupy Pegasus and then provide air assault security for three battalion level air assaults planned during the first eight hours of the operation. The Apaches would then be prepared to attack any targets threatening 82nd Airborne Division forces on the ground. The following day, the 82nd Airborne Division planned to use the Apaches as a show of force over the city to deter any additional violence. Although the 82nd Aviation Brigade did not have AH-64 Apaches in its Modified Table of Organization and Equipment (MTOE), the brigade chose the AH-64 to conduct the mission over its own AH-58D Kiowa Warriors for five reasons. These included the Apache's ability to deploy using its external fuel tanks, its ability to have an extended station time over the city, the number of point target munitions<sup>15</sup> it could carry, its

survivability to small arms fire, and because of the effect its presence would have on the populace. Despite these reasons, the chain of command took the AH-64 out of the operation because it considered the Apache excessive for the mission and to reduce the number of aircraft in the airspace over Port au Prince on D day. AH-58D Kiowa Warriors from the 4-2nd Armored Cavalry Regiment, already in theater aboard U.S. Navy vessels, replaced the AH-64 Apaches for the mission.<sup>16</sup>

For the 3-229th, notification of its possible mission with the 82nd Airborne Division did not come overnight. It was a slow realization beginning with the battalion's 3rd Quarter, Fiscal Year (FY) 94, Quarterly Training Briefing (QTB) in March 1994. Since the 82nd Airborne Division lost its organic AH-64s in a TOE change, the XVIII Airborne Corps headquarters required the 229th Aviation Regiment (Attack) (Airborne), to provide one of its AH-64 battalions to be part of the Division Ready Brigade (DRB) of the 82nd Airborne Division. When the battalion was part of the DRB, it was required to brief its QTB to not only the 229th commander, but also the 82nd Aviation Brigade commander. It was after the March 1994 QTB that the 82nd Aviation Brigade commander, Colonel Gene Lacoste, informed the 3-229th commander, Lieutenant Colonel Sam Hubbard, that the 3-229th needed to look at the possibility of starting an over-water flight training program. At the time, the 82nd Airborne Division was planning for possible operations in Haiti. However, the planning was very compartmentalized and Colonel Lacoste could not tell Lieutenant Colonel Hubbard why the 3-229th needed to implement an over-water training program. Despite this, Lieutenant Colonel Hubbard was well aware of the events taking place in Haiti. Based on his knowledge of the situation, he gave guidance to his battalion operations officer

(S-3), Captain Stephen Smith (the author), to devise a program to prepare the 3-229th for possible operations with the 82nd Aviation Brigade in Haiti.<sup>17</sup>

From early March 1994 until late August 1994, 3-229th continued gathering small amounts of information about possible operations in Haiti. As the battalion received more information it refined its training to accommodate what the staff believed its mission would be in Haiti. Because of the compartmentalization, the 82nd Aviation Brigade could not brief the 3-229th commander and S-3 on OPLAN 2370 until the first week of September 1994, approximately two weeks before the invasion date.<sup>18</sup>

#### Training

Despite not knowing the exact mission it would perform in Operation Uphold Democracy, the 3-229th determined from the location of the capital of Haiti, Port au Prince, that there would be an over-water flight to deploy to the area of operations (AO). Additionally, the battalion staff determined from previous exercises with the 82nd Airborne Division that the most likely missions for the battalion would be P hour security and air assault security for the Black Hawk helicopters of the 82nd Aviation Brigade. Based on this mission analysis, from March 1994 until August 1994 the 3-229th conducted a training program that included three major elements. These included over-water training, aerial gunnery training, and participation in the 82nd Airborne Division's Big Drop Exercises. Two of these elements, over-water training and aerial gunnery training, were planned and conducted solely by 3-229th. The third element, participation in the Big Drop exercises, was a series of division sized rehearsals for the operation.<sup>19</sup>

In March 1994, following the recommendation from the 82nd Aviation Brigade commander, the 3-229th started an over-water training program. The battalion staff

determined that the battalion needed to use the crawl, walk, run principal of training. Therefore, the battalion divided its program into four phases. These included swim training, over-water survival training, Dunker/Helicopter Emergency Egress Device System (HEEDS) qualification, and over-water flight training.<sup>20</sup>

To initiate the over-water training program the 3-229th started looking for a unit with prior experience in over-water flight. However, the battalion realized it already had an expert in its ranks. An AH-64 pilot in Charlie Company, Chief Warrant Officer Mark Bell, had been a water survival instructor in the 160th Special Operations Aviation Regiment at Fort Campbell, Kentucky, prior to attending flight school to become an army aviator. Chief Warrant Officer Bell took on the task of conducting swim training and over-water survival training for the battalion in the post swimming pools at Fort Bragg, North Carolina. He designed the training to ensure that every crewmember could pass the U.S. Navy swim test. This was a requirement for the next phase of training, Dunker/HEEDS qualification.<sup>21</sup>

For the Dunker/HEEDS qualification the 3-229th went to the U.S. Navy for assistance. The battalion conducted this training at Norfolk Naval Air Station, Norfolk, Virginia. The Dunker is a helicopter mockup that is lowered into a pool with a crew inside to simulate a crash in the water. The mockup is then rotated upside down and the crew must exit. The HEEDS is a small bottle of compressed air that the aviator wears on his chest. Should the aircraft impact the water and sink, the aviator can use the bottle to provide sufficient air to allow the crew to exit the aircraft.<sup>22</sup>

The next phase of training consisted of over-water flight training. The battalion conducted formation flight off the coast of North Carolina during day conditions initially.

Later the battalion transitioned the pilots to flying over-water using the AH-64's Pilot Night Vision System (PNVS).<sup>23</sup> The unit learned that the Forward Looking Infrared (FLIR) of the PNVS provided better visibility of the horizon while flying over-water than the ANVIS-6 night vision goggles worn by the UH-60 Black Hawk pilots.<sup>24</sup> Based on this lesson, the 82nd Aviation Brigade commander planned to have the AH-64s lead the formation of Black Hawks enroute during each leg of the deployment to Haiti.

The second element of 3-229th's training program was aerial gunnery training. The battalion already had its Table VIII aerial gunnery qualification scheduled for April 1994. Table VIII is conducted annually and requires the attack helicopter crews to engage and hit a certain percentage of targets with each organic weapon system on the attack helicopter. The battalion commander wanted his crews to do more than just crew gunnery, he also wanted the crews to conduct Table X team gunnery to prepare them for working in flights of two aircraft. This seemed the likely scenario to Lieutenant Colonel Hubbard based on the expected threat and mission. Therefore, in July 1994, 3-229th planned and conducted day and night Table X gunnery training on the BT-9 and BT-11 range complexes at Cherry Point Marine Corps Air Station in Havelock, North Carolina. BT-9 is a partially sunken ship off the coast of North Carolina and BT-11 is a peninsula that extends into Pamlico Sound. These ranges allowed the crews of 3-229th to conduct Table X in day, night, and over-water conditions.<sup>25</sup>

The third element of 3-229th's training program consisted of participation in the 82nd Airborne Division Big Drop exercises. These exercises were known as Big Drop I and II. During Big Drop I, the attack battalion conducted over-water flight off the coast of North Carolina and returned to Fort Bragg to be on station to provide P hour security

for an airborne assault. Big Drop II was similar, however, the AH-64 Apaches provided live fire P hour security into Coleman Impact Area at Fort Bragg after receiving clearance to fire from JTF 180, aboard the USS Mount Whitney, via an Airborne Command, Control, and Communications (ABCCC) aircraft.<sup>26</sup>

### Equipment

While 3-229th was trying to prepare its crews for possible operations in Haiti, it was also trying to get the proper equipment to accomplish the mission. The new equipment included auxiliary fuel tanks for its AH-64s, LPU-17 Water Wings, and HEEDS bottles.

The AH-64 can be fitted with up to four 230 gallon auxiliary fuel tanks on its wings. These tanks allow the aircraft to deploy over 1000 nautical miles without refueling. However, the U.S. Army did not purchase enough sets of wing plumbing for the entire fleet of AH-64s. The 229th Attack Helicopter Regiment equally distributed its plumbing and wing tanks between its two battalions at Fort Bragg by giving each battalion one set of plumbing and one tank per aircraft. After calculating the distances involved in an over-water flight to Haiti, the battalion determined that it needed two fuel tanks per aircraft conducting the mission. On 23 May 1994, the 3-229th submitted a request to the Aviation Troop Command (ATCOM) in St. Louis, Missouri, requesting additional sets of plumbing and auxiliary fuel tanks for possible contingency operations. The U.S. Army never filled the request. However, because of the knowledge and ingenuity of Chief Warrant Officer Steve Noe, the 229th Regimental Aviation Maintenance Officer, the battalion was able to fabricate wing tank plumbing. The



battalion was also able to acquire additional fuel tanks by conducting a lateral transfer of excess tanks from 4-2nd Armored Cavalry Regiment at Fort Bragg.<sup>27</sup>

Another important item of equipment needed by 3-229th for a long over-water flight was the LPU-17 Water Wing. LPU-17 Water Wings are individual flotation devices for aircrews. The crewmember inflates the LPU-17 after he exits the aircraft. The 3-229th acquired water wings by conducting a lateral transfer of excess items from 1-17th Cavalry, 82nd Airborne Division.<sup>28</sup>

The final item of equipment needed by 3-229th was the HEEDS bottle. HEEDS bottles are not in the U.S. Army supply system. To acquire HEEDS bottles the 229th Regimental Logistics Officer (S-4), CPT Charlie Jumper, contacted the 160th Special Operations Aviation Regiment to determine the vendor that supplies them with HEEDS bottles. CPT Jumper then made contact with the vendor and purchased enough bottles for the eight crews to deploy to Haiti.<sup>29</sup>

#### Conclusion

Although 3-229th (Aviation) (Attack) never conducted Operation Uphold Democracy, the battalion had a mission in OPLAN 2370 until six days before the invasion took place. Until two weeks before the invasion the battalion knew very little of its part in the OPLAN. Therefore, the battalion staff conducted mission analysis based on doctrine and its previous experience, rather than an order from higher headquarters. The training plan devised by the staff prepared the unit for its deployment and initial combat operations. The unit did not conduct mission analysis or training to prepare for any follow-on peace operations. In the absence of information from higher headquarters, the battalion staff relied on doctrine to determine its role in a possible invasion of Haiti.

## OPLAN 2380 and JTF 190

The 10th Mountain Division was the nucleus for JTF 190. "JTF 190's plan called for a large number of army helicopters from the 10th Mountain Division's Aviation Brigade to be positioned on a Navy carrier, a historical first, in order to air assault an infantry brigade combat team into Haiti."<sup>30</sup> JTF 190 would use "the USS Eisenhower as an air assault platform and a floating intermediate support base (ISB)."<sup>31</sup> Although a permissive option, the plan called for the aviation brigade to initially place two infantry battalions on the ground at Port au Prince International Airport. The infantry battalions would secure the airport and other outlying objectives and prepare to receive follow-on elements of the JTF via strategic air from Griffiss AFB, New York. The JTF 190 commander's intent was to "introduce the force as quickly as possible on D-Day, in various parts of the country--with focus on the main airfield and the port in Port au Prince."<sup>32</sup> The JTF designed follow-on efforts to facilitate the return of the Government of Haiti through civic action, provide support for nongovernmental agencies, and also to increase the professionalism of the Haitian military force.

### Training

The 10th Mountain Division began planning for Operation Uphold Democracy on 29 July 1994. This provided little time for the division to prepare for its operation in Haiti. Although JTF 190 had the mission to conduct a permissive entry into Haiti, it oriented almost all of its training towards combat operations. The division took part in Operation Restore Hope in Somalia only six months before. That operation began as a humanitarian assistance operation, but eventually became a combat operation. The 10th Mountain Division's combat experience in Somalia had an impact on its preparation for

Operation Uphold Democracy. According to the Center for Army Lessons Learned (CALL), "In the light of Operation Restore Hope and UNOSOM II [UN Operations in Somalia], the division focused valuable resources and time during predeployment to prepare for possible combat operations in Haiti."<sup>33</sup> The Aviation Brigade's training program also stressed combat operations. It initiated a training program that concentrated on special aviation skills, live fire training, and air assault training.

"The Aviation Brigade received a warning order the first week of August and was immediately confronted with the challenge of training its aviators to operate from the deck of a ship."<sup>34</sup> To prepare its aviators for this, the Aviation Brigade developed a special aviation skills training program. This program included Dunker/HEEDS qualification, and deck-landing qualification (DLQ).

According to CALL, "the Aviation Brigade pursued an aggressive train-up program to qualify all aviators in deck landing procedures prior to operations commencing."<sup>35</sup> It began its DLQ training by conducting ground school and flight training at Fort Drum, New York. According to the brigade commander, Colonel Lawrence Casper, "Navy instructor pilots validated the training program and provided technical assistance."<sup>36</sup> The aviators conducted the flight portion of the initial training by landing to a painting of a ship's landing pad.

Following the training at Fort Drum, the 10th Aviation Brigade deployed to Norfolk, Virginia, to conduct Dunker/HEEDS qualification and the final phase of DLQ. The final phase of DLQ was for each aviator to conduct landings on a Navy vessel. The 10th Aviation Brigade aviators flew their "UH-60 Black Hawks, AH-1 Cobras, and

OH-58 Kiowa aircraft to rendezvous with the nuclear powered aircraft carrier, USS Roosevelt, 100 nautical miles off the coast of Virginia. For four days and nights, the Army aviators had exclusive use of the Roosevelt's flight deck."<sup>37</sup> Following the DLQ, the 10th Aviation Brigade returned to Fort Drum to continue its predeployment training.

Despite the fact that OPLAN 2380 was a permissive entry option, the next area of training emphasized by the division was live fire training. The division was uncertain of what the situation would be in Haiti, therefore, it initiated a training program based on its most recent experience, Somalia. This prepared the division for the worst case scenario. Attack helicopters from the 2-25th (Aviation) (Attack) took part in maneuver brigade situational training exercises (STX) in which every company trained on the employment of live attack helicopter fires.

After the STXs, the division focused its attention on the planned D day air assault. On 30 August 1994, the division conducted a full dress rehearsal of the assault. According to the 10th Mountain Division's After Action Report (AAR), "the combined arms rehearsal at the Fort Drum Airfield included civilians on the battlefield, armed guards, police, media (to include a press conference), and everyone wore MILES<sup>38</sup> [Multiple Integrated Laser Engagement System]."<sup>39</sup> Attack helicopters from 2-25th (Aviation) (Attack) conducted reconnaissance and security missions to support the air assault dress rehearsal.

### Deployment

After the completion of the dress rehearsal the Aviation Brigade turned its attention to deploying its assets. According to Colonel Casper, "On 10 September, the brigade was alerted to self-deploy forty-eight aircraft to Norfolk, Virginia to link up with

the nuclear carrier USS Eisenhower. Simultaneously, shop sets, kits, and other equipment were shipped by commercial transport to the port facility, while twenty-five Humvee trucks self-deployed from Fort Drum to Norfolk.<sup>40</sup> 1st Brigade (-) deployed its troops by commercial aircraft from Fort Drum to Norfolk to board the USS Enterprise. Additionally, according to Colonel Casper, "Pallets of ammunition, ranging from 2.75-inch rockets to 9 millimeter rounds<sup>41</sup>, were dispatched from depots to the Eisenhower for her magazine."<sup>42</sup> With loading complete, on 14 September 1994 the USS Eisenhower set sail from Norfolk, Virginia, with fourteen AH-1 Cobra attack helicopters, twenty five UH-60L Black Hawks , three UH-60V Medevac Black Hawks, and twelve OH-58 Kiowa aircraft on board.

Enroute to Haiti the 10th Aviation Brigade personnel continued to train for their mission. On 16 and 17 September 1994, the brigade, along with 1st Brigade (-), conducted rehearsals to ensure coordinated movement of its aircraft. According to Colonel Casper, "Several turns were made flying routes over the Atlantic Ocean, southeast of the U.S., until all systems and procedures were tested."<sup>43</sup> These rehearsals also included refueling and rearming the attack helicopters on board the Enterprise. The brigade learned several lessons from these operations.

The first lesson involved the fuel nozzles on board the aircraft carrier. The U.S. Navy uses the D-1 fuel nozzle, which is compatible with the UH-60 and AH-64. However, the 10th Aviation Brigade's aircraft included the older OH-58 and AH-1. In order to allow the 2-25th (Aviation) (Attack) aircraft to conduct engine running refuel operations, the battalion sheet metal personnel devised a system to attach the army closed circuit refuel (CCR) device to the ship's hoses. According to the 10th Mountain

Division's AAR, "The modification consisted of fabricating metal fittings to allow the CCR nozzle to be fitted directly to the hose."<sup>44</sup>

The second lesson involved the use of U.S. Army ammunition on board U.S. Navy ships. The Navy requires Hazard to Electromagnetic Rated Ordnance (HERO) ammunition on board its ships. This type of ammunition is designed to prevent accidental ignition by electromagnetic energy from aircraft and carrier systems. The U.S. Army does not use HERO ammunition. For Operation Uphold Democracy, the 10th Aviation Brigade received permission from the U.S. Navy to use standard Army ammunition with certain restrictions. The ship's captain required the helicopter pilots to keep some of their aircraft systems off until the aircraft had departed the vessel. These systems included the radar altimeter, the aircraft transponder, and the aircraft survivability equipment.

#### Equipment

While the 10th Aviation Brigade's training program was taking place and during its deployment, the brigade received new equipment and had the AH-1 armament systems tested by an ATCOM team. All of the equipment received by the brigade was to facilitate its ship-board operations.

The Aviation Life Support Equipment (ALSE) that the 10th Aviation Brigade received included the LPU-17 Water Wings and HEEDS bottles. The unit needed these items in the event any of its aviators were forced to crash land in the water. The brigade S-4 received a special project code to purchase these items.

Another item of equipment the Aviation Brigade needed for carrier deck operations was ground handling wheels for its OH-58 and AH-1 aircraft. Unlike the

UH-60 and AH-64, both of these aircraft have skids instead of wheels. The brigade needed ground handling wheels for every aircraft to ensure they could be moved quickly on the carrier deck in case of mechanical failure. The brigade provided ground-handling wheels for every aircraft equipped with skids by purchasing them through the Army supply system.

In addition to new equipment, the brigade received technical support for its AH-1 Cobras from ATCOM. According to CALL, "ATCOM sent a team of experts from the Cobra Program Managers office to perform checks and maintenance on the AH-1F fleet. Because of difficulty in procuring the money to send the team, it did not arrive until the unit was already loaded on the ship. The significance of this is that to perform boresights on weapon systems a stable platform is required. It also takes up precious space on the hangar deck to complete. As a result, off angle boresights of the 20 millimeter were not completed."<sup>45</sup> This meant that the 20 millimeter cannons on the AH-1 Cobras may not have been exactly on target if they had been fired during the initial entry operations.

#### Employment

Although attack helicopters never fired a shot during Operation Uphold Democracy, they took part in many different types of missions. These missions included air assault security, crowd control/show of force, weapons cache operations, very important person (VIP) security, and quick reaction force (QRF) operations.

The first mission for the attack helicopters in the operation was air assault security. The 10th Aviation Brigade's mission was to move elements of 1st Brigade to the airport, the seaport, and a fuel storage facility. According to the 10th MD (L) After Action Review, "At 0930 on 19 September 1994 (D-Day for 2380), units consisting of

2-22 Infantry (IN) Battalion (Bn) and 1-87 IN Bn from 1st Brigade air assaulted from the USS Eisenhower and occupied Port au Prince Airport and the port complex."<sup>46</sup> "Attack helicopters circled the Port au Prince airport to give cover for the first wave of troop-carrying Black Hawks."<sup>47</sup> As the Black Hawks moved men and materiel to their objectives, the attack helicopters provided air assault security throughout the day. Since there was no opposition, it would be difficult to determine the effectiveness of the attack helicopters. However, a reporter on the scene reported that, "Just a block from the airport where the U.S. troops landed, a pick-up truck full of Haitian paramilitaries in civilian clothes watched warily, their submachine guns hoisted in the air. As the first wave of Cobra attack gunships appeared overhead, they sped away."<sup>48</sup>

The next important mission for attack helicopters in Haiti was crowd control/show of force. The 10th Aviation Brigade employed their attack helicopters using the scout/ weapon team concept. The U.S. Army developed this concept in the Vietnam War and it is still in the current FM 17-95, *Cavalry Operations*. The concept is for an observation (scout) helicopter to conduct reconnaissance while its wingman, an attack helicopter, provides security. When the scout locates a target, the crew conducts a target hand-over to the attack helicopter crew. While the attack helicopter crew is focused on engaging the target, the scout provides observation to warn the attack helicopter crew of any threats. The 10th Aviation Brigade successfully exercised this concept to support ground troops on many occasions. One such occasion occurred on 30 September 1994 when one of the political parties in Haiti, the Lavalas, sponsored a mass demonstration in Port au Prince to honor Haitians killed in the 1991 coup. The infantry brigade occupying the sector dealt with the situation as a traditional defensive operation



to protect U.S. and third country nationals and property. The unit employed all of its assets, to include attack helicopters. The brigade used scout/weapon teams to track the movement of the crowd and to be the first visual U.S. presence to the crowd. "The operation was a success--demonstrators remained peaceful and stayed on the designated routes . . . The demonstration ended predominately peacefully."<sup>49</sup>

Another mission for attack helicopters in Haiti included weapons cache operations. "Beginning on 1 October 1994, Multinational Force Haiti (MNF) began a series of weapons cache seizure operations . . . These operations were deliberate raids intended to capture weapons and munitions stored in homes or businesses, and to apprehend dangerous dissidents."<sup>50</sup> The MNF Haiti named the missions, Mountain Strikes and the missions were normally company sized with a scout/weapon team in support. The scout/weapon team provided security for the raiding forces and blocked any possible escape routes. The MNF Haiti conducted thirty-eight Mountain Strike raids between 1 October 1994 and 18 October 1994. Twenty-three of these raids resulted in successful seizures of weapons, wanted individuals, drugs, or counterfeit money.

The fourth mission typically conducted by attack helicopters in Haiti was very important person (VIP) security. Many VIPs visited Haiti during the conduct of Operation Uphold Democracy. However, one of the most important visits was the return of President Aristide on 15 October 1994. "MNF Haiti conducted security operations to protect President Aristide and his appointed officials by establishing a total force presence in Port au Prince."<sup>51</sup> The presence included scout/weapon teams from the Aviation Brigade. These teams conducted reconnaissance and screened the eastern edge

of Port au Prince. This mission was another success as President Aristide arrived without incident.

Attack aviation was also an important part of the QRF, which was the operational reserve for the Commander, MNF Haiti. The QRF included a ground combat element with a scout/weapon team and UH-60 section under task force control. The UH-60s provided rapid mobility for the light infantry elements of the QRF. The scout/weapon team provided security for the UH-60s enroute to the objective and to the troops on the ground in the objective area.

### Redeployment

The 10th Mountain Division Aviation Brigade continued its operation supporting the MNF in Haiti through the middle of November 1994, when the brigade began downsizing. Because of the diminished threat, on 24 November 1994, the 2-25th (Aviation) (Attack) was the first aviation element to redeploy to Fort Drum, New York. One company of AH-1s remained as part of 3-25th (Aviation) (Assault) until 23 January 1995 when the last of the 10th Mountain Division attack helicopters departed Haiti. The 10th Mountain Division Aviation Brigade then gave the aviation support mission to elements of the 25th Infantry Division Aviation Brigade and the 10th Aviation Brigade's mission in Haiti came to an end.

### Conclusion

Although the missions of JTF 180 and JTF 190 were very different, the attack aviation elements of each JTF trained on the same tasks. Both elements conducted over-water training, live fire operations, and air assault security operations. The only differences between the two units were the amount of time available to train and that the

10th Mountain live fire exercises included infantry companies employing the fires of the scout/weapon teams. The latter was a direct result of the 10th Mountain Division's experience in combat operations in Somalia, not a result of a change in doctrine. The 10th Mountain Division's attack aviation trained for the worst case scenario; combat operations. This allowed them to be fully capable to support the ground commander during follow-on operations in Haiti. Although the command placed many names on these operations, such as VIP security and weapons cache operations, all of these missions can be characterized as reconnaissance or security missions, both valid missions for attack helicopters according to U.S. Army doctrine. In addition, the presence of overwhelming combat power can intimidate a potential enemy. According to Lieutenant Colonel (Retired) John B. Hunt in an article in the U.S. Army's professional journal, *Military Review*, "Low level fly overs by high performance aircraft and helicopters add to the psychological effect. The belligerents must understand that they face a formidable military potential whose determination they must take seriously."<sup>52</sup> Despite the fact that OPLAN 2380 was a permissive entry operation, the presence of overwhelming combat power, to include attack aviation, seems to have had a deterring effect on potential foes in Haiti.

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<sup>1</sup> CALL Combined Arms Assessment Team. *Operation Uphold Democracy Initial Impressions, D-20 to D+40* (Ft Leavenworth, KS: Center for Army Lessons Learned, December 1994), xiv.

<sup>2</sup> Ibid. xvi.

<sup>3</sup> G-3, 10th Mountain Division. *Operation Uphold Democracy After Action Report* (Fort Drum, NY: Headquarters, 10th Mountain Division, 1997), 4.

<sup>4</sup> Ibid. 19.

<sup>5</sup> Robert F. Baumann. "Power Under Control," *Military Review* (July-August 1997): 14.

<sup>6</sup> Ibid. 15.

<sup>7</sup> H hour is the specific hour on D day at which a particular operation commences. D-Day is the day an operation commences. FM 101-5-1, 1-76 and 1-44.

<sup>8</sup> Colin Powell, *My American Journey* (New York: Random House Books, 1995), 602.

<sup>9</sup> Lieutenant General H. Hugh Shelton, CINC JTF 180, interview by Lieutenant Colonel Steve Dietrich, in *JTF 180 Uphold Democracy Interviews*, (Washington, D.C.: Center for Military History, 1996), 62.

<sup>10</sup> *Operation Uphold Democracy After Action Report*, 20.

<sup>11</sup> Anthony J. Tata. "A Fight for Lodgement: Future Joint Contingency Operations," *Joint Force Quarterly* 11 (Spring 1996): 88.

<sup>12</sup> Forward Arming and Refueling Point (FARP): A temporary facility that is organized, equipped, and deployed by an aviation commander, and is normally located in the main battle area closer to the area of operations than the aviation unit's combat service support area. It provides fuel and ammunition necessary for the employment of aviation maneuver units in combat. FM 101-5-1, 1-70.

<sup>13</sup> Captain Stephen C. Smith. Personal Journal, (Fort Bragg, NC: 11 September 1994), in the possession of the author.

<sup>14</sup> Parachute Hour (P hour): A term used by the 82nd Airborne Division to denote the specific hour when an airborne (parachute) assault begins.

<sup>15</sup> The Point Target Weapon System (PTWS) on the AH-64 and the AH-58D is also known as the Hellfire Missile System. The missile must track a LASER spot to the target. This makes the weapon system very accurate and limits any collateral damage.

<sup>16</sup> Captain Stephen C. Smith. Personal Journal, (Fort Bragg, NC: 13 September 1994), in the possession of the author.

<sup>17</sup> Ibid., 8 March 1994.

<sup>18</sup> S-3, 3-229th (Aviation) (Attack). "FY 94 Long Range Training Calendar" (Fort Bragg, NC: 22 August 1994), in the possession of the author.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Major Stephen C. Smith. "Memorandum for Record, Subject: 3-229<sup>th</sup> Command and Staff Notes" (Fort Bragg, NC: 5 July 1994), in the possession of the author.

<sup>22</sup> S-3, 3-229<sup>th</sup> (Aviation) (Attack). "FY 94 Long Range Training Calendar" (Fort Bragg, NC: 22 August 1994), in the possession of the author.

<sup>23</sup> Pilot's Night Vision System (PNVS) is a Forward Looking Infrared sensor on the AH-64 Apache used by the pilots to conduct flight at night. It relies on temperature differential instead of ambient light. Therefore, pilots can fly the aircraft without lunar or starlight illumination.

<sup>24</sup> Captain Stephen C. Smith. Personal Journal, (Fort Bragg, NC: 25 July 1994), in the possession of the author.

<sup>25</sup> S-3, 3-229<sup>th</sup> (Aviation) (Attack). "FY 94 Long Range Training Calendar" (Fort Bragg, NC: 22 August 1994), in the possession of the author.

<sup>26</sup> Ibid.

<sup>27</sup> Lieutenant Colonel Samuel J. Hubbard, "Memorandum for Commander, ATCOM, Subject: 3-229<sup>th</sup> External Fuel Tank Requirements" (Fort Bragg, NC: 23 May 94), in the possession of the author.

<sup>28</sup> Captain Stephen C. Smith. "Memorandum for Record, Subject: 3-229<sup>th</sup> Command and Staff Notes" (Fort Bragg, NC: 12 March 1994), in the possession of the author.

<sup>29</sup> Captain Stephen C. Smith. Personal Journal, (Fort Bragg, NC: 22 July 1994), in the possession of the author.

<sup>30</sup> Lawrence E. Casper. "Flexibility, Reach, and Muscle: How Army Helicopters on a Navy Carrier Succeeded in Haiti," *Armed Forces Journal International* (January 1995): 40.

<sup>31</sup> *Operation Uphold Democracy After Action Report*, 4.

<sup>32</sup> Ibid., 15.

<sup>33</sup> *Operation Uphold Democracy Initial Impressions*, 1.

<sup>34</sup> Casper., 40.

<sup>35</sup> *Operation Uphold Democracy Initial Impressions*, 12.

<sup>36</sup> Casper., 40.

<sup>37</sup> Ibid., 40.

<sup>38</sup> The Multiple Integrated Laser Engagement System (MILES) is a system LASER receptors placed on equipment and the individual soldier during simulated combat. When the receptors are engaged by a weapon with a LASER attached, the system will identify the equipment as being destroyed or killed.

<sup>39</sup> *Operation Uphold Democracy After Action Report*, 2.

<sup>40</sup> Casper., 40.

<sup>41</sup> The 2.75-inch FFAR are folding fin aerial rockets. The rocket system is an area fire weapon with a ten or seventeen pound warheads. They can be fired from helicopters or fixed wing aircraft. 9millimeter rounds are the small arms ammunition for the U.S. Army's Beretta pistol.

<sup>42</sup> Casper., 40.

<sup>43</sup> Ibid., 41.

<sup>44</sup> *Operation Uphold Democracy After Action Report*, 12.

<sup>45</sup> *Operation Uphold Democracy Initial Impressions*, 14.

<sup>46</sup> *Operation Uphold Democracy After Action Report*, 6.

<sup>47</sup> Dennis Steele, "The U.S. Army in Haiti," *Army Magazine*, November 1994, 18.

<sup>48</sup> "Cheering Crowds Welcome U.S. Troops in Haiti," *The Kansas City Star*, 20 September 1994, sec. A, p. 8.

<sup>49</sup> *Operation Uphold Democracy After Action Report*, 38.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid., 39.

<sup>52</sup> John B. Hunt, "Thoughts on Peace Support Operations," *Military Review* (10 October 1994): 80.

## CHAPTER 4

### ATTACK HELICOPTER OPERATIONS IN OPERATION JOINT ENDEAVOR

#### Introduction

Fighting began in the former Yugoslavia in June 1991 when Croatia declared its independence from the Federal Union. The fighting spread in April 1992 when Bosnia-Herzegovina also declared independence. Despite the presence of the United Nations Protection Force (UNPROFOR), fighting continued in the region until 14 December 1995 when the Former Warring Factions (FWF) signed the General Framework Agreement for Peace (GFAP) in Paris. "The mission to implement the GFAP fell to the military components of NATO, which authorized the first ground operation in its history and the largest military operation in Europe since World War II. The U.S. committed the 1st Armored Division as the nucleus of the Multinational Division-North (Task Force Eagle), one of three multinational divisions comprising the Implementing Force (IFOR), under the command and control of the NATO Allied Ready Reaction Corps (ARRC), whose headquarters was in Sarajevo."<sup>1</sup> Each multinational division was responsible for implementing the GFAP within their area of operations (AO). The primary tasks of the GFAP included: "cessation of hostilities between the FWF, ensuring cooperation of the FWF with the IFOR, separate the FWF by ensuring withdrawal from a Zone of Separation (ZOS), ensure freedom of movement for all people in Bosnia-Herzegovina, supervise the transition of control between elements of the FWF in designated Areas of Transfer (AOT), and monitor the status of forces (demilitarization, weapons stockpiles, training) throughout Bosnia-Herzegovina."<sup>2</sup>

The 1st Armored Division began planning for possible operations in Bosnia in 1993. However, division staff officers did not know exactly what mission would be called for in Bosnia. Prior to the GFAP, the CMTC at Hohenfels, Germany, geared 1st Armored Division's training program towards combat operations and missions similar to the tasks UNPROFOR had been performing in Bosnia, such as establishing checkpoints and protected areas. As news of the GFAP spread, 1st Armored Division received limited information from V Corps about its possible mission in Bosnia. According to Brigadier General Stanley Cherrie, 1st Armored Division's Assistant Division Commander for Maneuver (ADC-M), "We started hearing things like, zone of separation, have to move these people, catalog weapons, supervise demobilization. And I thought, I've never done, and nobody here has done any of this before. How do you go about doing it."<sup>3</sup>

The 1st Armored Division originally planned to deploy logistics and engineer assets early to prepare the support bases for the follow-on combat forces. Logistics assets would establish an Intermediate Staging Base (ISB) in Hungary. Engineer assets would then conduct a river crossing of the Sava River. Additional engineer assets would improve the facilities at Tuzla Air Base to provide space for the Task Force Eagle headquarters and aviation assets. When Task Force Eagle learned the specific requirements of the GFAP, it realized it only had thirty days to establish a ZOS between the FWF. The ZOS would include the territory one kilometer on either side of a line drawn between the FWF. This line meandered through Bosnia and was 310 kilometers long in the Task Force Eagle sector. To establish the ZOS, the division realized it would have to change the sequence of units deploying (TPFDL) and put a combat force into



Bosnia before the majority of the combat service support assets. The initial combat force would be 1st Brigade, 1st Armored Division, commanded by Colonel Gregory Fontenot. Colonel Fontenot's Brigade had five missions; "conduct a river crossing operation and get into Bosnia, separate the FWF, clear routes through the ZOS, move FWF heavy weapons away from the ZOS and into storage sites, and assist UN and international agencies, as required."<sup>4</sup> To support those missions, the division believed that attack helicopters would be needed primarily to attack enemy elements, if necessary. Brigadier General Cherrie believed, "what the Apaches, in my heart and mind, were going to do for me, was going to be protection."<sup>5</sup>

#### Training

The 1st Armored Division had been training for possible operations in Bosnia since 1993. However, because of the uncertainty of the mission, the division could not focus its training on a particular mission. Prior to the initiation of the Dayton Peace Talks, the 1st Armored Division conducted training solely for combat operations. Immediately following the peace talks V Corps directed the division to conduct a series of exercises at the CMTC to prepare for operations in Bosnia. These exercises were known as Mountain Eagle I and II. The CMTC designed the exercises to prepare the division, especially the commanders and staff elements of the division, brigade, and battalion headquarters, to conduct peace operations in Bosnia. The training included Command Post Exercises (CPX) and fire coordination exercises using escalating ROE. The CMTC also brought in former NATO commanders who had been in Bosnia, experts from Harvard University and the Marshall Center in Garmisch, Germany, as well as U.S. Army Yugoslavian Foreign Area Officers, to ensure the training was realistic and

prepared the division for its mission. The training turned out to be very realistic and proved important in preparing the division for eventual situations in Bosnia. In fact, one of the brigade commanders in Bosnia stated that "more often than not, I would turn to my XO [executive officer] or my S-3 and say, we've been through this one before."<sup>6</sup>

The 1st Armored Division's attack aviation assets also participated in the Mountain Eagle exercises, but the CMTC concentrated the training for the attack aviation on combat operations. According to Lieutenant Colonel James Ludowese, XO of 2-227th, "We weren't sure what exactly we were going to get into, so it's hard to train for something you didn't know what to expect."<sup>7</sup> Consequently, the 2-227th's training program from October 1995 until it deployed to Bosnia included aerial gunnery, mine awareness training, Mountain Eagle I and II, and live Hellfire missile engagements.

The first phase of 2-227th's training program was aerial gunnery qualification in October 1995. This qualification is known as Table VIII and is conducted annually. Table VIII requires the attack helicopter crews to engage and hit a certain percentage of targets with each organic weapon system on the attack helicopter. The leadership in the 1st Armored Division's Aviation Brigade believed that it was very important to complete the qualification prior to deploying to Bosnia because they fully expected to be used in a combat role and they wanted their crews ready for that mission. In fact, the brigade commander directed that "any attack pilot that did not qualify would not deploy with the division."<sup>8</sup>

The second phase of training for 2-227th included mine awareness training. Every soldier and officer in the division participated in this training. It was designed to prepare everyone for the serious mine threat in Bosnia.

The next area of concentration for 2-227th during their training period was Mountain Eagle I and II, conducted between October and November 1995. During these exercises the attack helicopter companies conducted simulated deliberate attacks and raids. The CMTC designed these missions to replicate the missions the division expected the attack aviation to perform in Bosnia.

The final phase of the 2-227th train-up included live Hellfire gunnery training for each AH-64 crew. This training would not only be a final preparation for the crews, but also a check of the Hellfire weapons systems on board each aircraft to ensure serviceability. The 2-227th was unable to conduct the gunnery because of poor weather conditions in November 1995.

Once in Bosnia, the 2-227th had very little time to conduct training because the battalion was so busy conducting actual operations. However, the Aviation Brigade commander, Colonel Webb, ensured that the battalion had time to conduct two very important training events. These included Combat Mission Simulator (CMS) training in Hanau, Germany, and Table VIII gunnery qualification at the Resolute Barbara Range Complex in Glamoc, Bosnia.

Colonel Webb realized that although his pilots were flying a large number of hours, they were not getting the training necessary to maintain their gunnery skills. In addition, the brigade departed Germany before its crews were able to complete mandatory aircrew coordination training in the CMS. To solve both of these problems, Colonel Webb allowed 2-227th to rotate small numbers of attack aviators to Hanau for five days to complete the training.

The next phase of this training came in June 1995. 2-227th coordinated to use the British artillery range in Glamoc to complete Table VIII qualification. The Aviation Brigade conducted slingload operations to emplace demolished cars into the impact area to serve as targets. The battalion could not use the normal acoustic scoring system to grade each crew because it only had high explosive (HE) ammunition. The HE ammunition would destroy the acoustic scoring system. Despite this problem, the battalion received approval from V Corps to subjectively grade each aircrew by having a single AH-64 Instructor Pilot review each videotape. The gunnery exercise not allowed the battalion to qualify its AH-64 crews, but also served as a change of pace for the attack aviators at a time when many pilots were becoming complacent from doing the same missions every day.

#### Equipment

While the 2-227th's training program was taking place and during its deployment to Bosnia, the battalion received new equipment and modified existing equipment to prepare for operations in Bosnia. The new equipment included additional auxiliary fuel tanks for the AH-64s, hand held global positioning system (GPS) receivers, and Hellfire de-ice domes.

The modification made to the weapons systems included a 30-millimeter cannon modification and the installation of an updated fire control software program. Both of these modification work orders (MWO)<sup>9</sup> were taking place throughout the AH-64 fleet in the Army. However, when 1st Armored Division was chosen for deployment, its date to receive the MWO was moved ahead of schedule. Among the improvements to the system included limiting the azimuth movement of the 30-millimeter cannon to allow

safe firing with the auxiliary fuel tanks installed on the wings. Maintenance personnel carried out this MWO when the battalion arrived at the ISB in Hungary. The disadvantage of the MWO was that the boresighting completed during its gunnery in October was no longer accurate because of the change to the fire control software. According to CPT Stuart Beltson, "consequently, all the boresighting, Table VI efforts we did in Graf [Grafenwohr, Germany] in October, went out the window. We never did get to harmonize those guns again until June, six months later."<sup>10</sup>

The new items of equipment received by 2-227th prior to deployment were all critical to the eventual success of its mission. Auxiliary fuel tanks were originally designed only to ferry aircraft to Europe from the U.S., if necessary. However, during Operation Desert Storm, the Army realized the added flexibility of auxiliary tanks and many units began using them on each aircraft to increase station time. The 2-227th did not have all of its aircraft configured for auxiliary fuel tanks. However, 2-227th's leadership realized the need for additional station time for missions in Bosnia and received permission to take the auxiliary fuel tanks and plumbing from 1-227th's AH-64s. The 1-227th inactivated in 1995 and its aircraft were still in Hanau awaiting transfer to the Netherlands as part of a Foreign Military Sales (FMS) contract.

Another very important item of equipment needed by the 2-227th was the hand held GPS receiver. The AH-64 has a Doppler Navigation System but it is not as accurate as the GPS and has a tendency to drift off course over time. The battalion did not have enough hand held GPS receivers for each aircraft and did not receive enough for each aircraft until the unit was already in Bosnia. To solve the shortage problem, many of the

pilots in 2-227th actually purchased hand held GPS receivers from mail order companies in the United States prior to deploying to Bosnia. These GPS receivers allowed the AH-64 crews to accurately navigate their routes and pinpoint FWF weapons locations.

The last important item of equipment needed by the 2-227th was the Hellfire missile de-ice dome. The de-ice dome covers the missile seeker until just prior to launch. If the aircraft is flying in icing conditions, the dome will protect the seeker from ice. When the pilot is ready to fire the missile, the dome falls away, allowing the missile seeker to track laser energy in order to hit the target. This was another piece of equipment that 2-227th needed early but did not receive until the unit had been in Bosnia for forty-five days.

The 2-227th also had the Phototelesis system already installed on some of its aircraft. The Army installed the Phototelesis system on 2-227th's aircraft to test the system in Bosnia. The battalion had six aircraft, two in each company, configured with the system. The Phototelesis system allowed the crew to download images from the on-board sensors to a computer and then relay those images to a ground station via frequency modulated radio or a satellite communications (SATCOM) radio. Using the SATCOM, an AH-64 crew could tape an image in Bosnia and send it almost instantaneously to Washington, D.C., if necessary. The big problem with the systems were "no parts, no PLL [prescribed load list], and no experts to fix them."<sup>11</sup> The battalion had such a difficult time maintaining the systems that they were able to use the system on only one mission. The battalion "was assigned a mission by the G-2 herself, in conjunction with the CIA [Central Intelligence Agency], to go do a recon of a mujahadeen base camp."<sup>12</sup> Two Apaches provided security for a Polish ground patrol

with some U.S. advisors. One Phototelesis equipped Apache filmed the entire mission and sent the images almost instantaneously to the Task Force Eagle headquarters. This allowed the G-2 and the CIA representative to observe the entire mission on a television monitor.

### Deployment

Beginning in December 1995, the 2-227th turned its attention to deploying to Bosnia as part of Task Force Eagle. The battalion's ground elements deployed by rail to Hungary and then conducted a tactical road march across the Sava River, through Croatia into Bosnia. The ultimate destination was the Task Force headquarters at Tuzla Air Base. The ground deployment occurred without incident.

The air assets were scheduled to depart Hanau, Germany on 19 December 1995. Alpha Company would depart first followed by Bravo Company the following day, and Charlie Company the day after. Each flight of AH-64s would have one UH-60 from the assault battalion trailing the formation with a maintenance team on board to repair any maintenance problems along the route. The battalion staggered the deployment to reduce the number of aircraft refueling at the small airfields along the route of flight. The aircraft would make two refuel stops in Austria and then proceed to the ISB in Kaposvar, Hungary. The battalion would remain at Kaposvar until it received orders to proceed to Bosnia.

Weather had the biggest impact on the plan. Because of poor weather conditions along the route, it took Alpha Company three days to make it to Hungary. Bravo Company caught up with Alpha Company along the route and arrived in Hungary the same day as Alpha Company. The bad weather forced Charlie Company to remain in

Germany until 26 December. Charlie Company arrived in Lenz, Austria on the afternoon of 26 December where it also had to stop because of bad weather. The following day, Charlie Company departed Lenz, Austria and arrived at the ISB in Kaposvar, Hungary.

All of 2-227th's aircraft departed Germany unarmed because Austria would not allow the AH-64s to fly through their airspace with live ammunition. The battalion staff assured the company commanders that ammunition would be available at the ISB in Hungary. This was only partially true because there was only enough ammunition in the ISB for one company. The ammunition shortage presented a problem during the initial phases of the operation because it forced the battalion to transfer ammunition between companies to fly missions into Bosnia. This not only caused extra labor for the soldiers, but also required careful planning to ensure the timely transfer of ammunition between companies.

Because of 1st Armored Division's change to the TPPFDL, the logistics and engineer assets required to build up the operating base at Tuzla were not able to deploy early in the deployment sequence. This delayed 2-227th's deployment from Hungary to Bosnia because there was not adequate space or facilities at Tuzla for the battalion. Initially, companies began flying missions from Hungary into Bosnia and then returned back to Hungary at the end of the day. According to Lieutenant Colonel Jim Ludowese, the 2-227th XO at the time, "There was such a push to get the force in place that the support [in Tuzla] hadn't really been established. They [Task Force Eagle] didn't have room at Tuzla for the battalion, but we needed to cut the distance of working out of Hungary, so we pushed a company team to Tuzla."<sup>13</sup> As facilities were improved at Tuzla, 2-227th moved Alpha Company to Tuzla on approximately 29 December 1995.



Alpha Company had difficulty maintaining their aircraft because of the high number of missions they were forced to fly. However, according to Lieutenant Colonel Ludowese, "We wouldn't move aircraft and additional people into Bosnia until we could protect them." As the facilities in Tuzla improved the battalion gradually moved more and more aircraft to Tuzla to support the high number of missions. By the end of January 1996, all 2-227th aircraft were in Tuzla except for an aircraft down for maintenance in Hungary.

### Employment

Initially, the battalion staff for 2-227th was overwhelmed with the number and types of missions the battalion had to perform. The entire chain of command expected the attack helicopters to conduct primarily combat operations, including deliberate and hasty attack missions. According to Captain Stuart Beltson, "I figured we'd be on standby for an attack or to go kill something."<sup>14</sup> Even Brigadier General Cherrie, an attack helicopter pilot himself in Vietnam, stated, "I felt that they [the Apaches] were going to be a security blanket. I did not really understand the mechanics of how valuable they were going to be as a surveillance asset. And I wouldn't have been down there flying around with unarmed scouts, because they'd shoot at you."<sup>15</sup>

The battalion actually conducted primarily reconnaissance operations, security operations, shows of force, and only one deliberate attack. Brigadier General Cherrie also stated that, "During the initial phases of the operation we had a small number of ground forces in the AO because of the time it took to move them by rail from Germany. Because of this, we were forced to use the attack helicopters in an economy of force role. We had to have a presence throughout the sector to let the FWF know we were there. The only combat forces capable of doing this was the Apaches. We used them more as a

surveillance mode than anything else, and they were invaluable. We wouldn't have come anywhere near making the D plus thirty cut without them."<sup>16</sup>

During the first two months of Operation Joint Endeavor, 2-227th's primary mission became reconnaissance in the ZOS. The 2-227th termed this mission clearing the ZOS. Clearing the ZOS entailed aerial patrolling the 310-kilometer ZOS throughout the Multi-National Division-North sector. This not only included the U.S. sectors, but also the multinational sectors. According to Captain Stuart Beltson, "A lot of times we were sent out of the U.S. sector, into the Russian zone, the NORD-POL zone, or the Turkish zone, because none of those three brigades brought helicopter assets at all."<sup>17</sup> Because of the rugged terrain and the serious mine threat "some areas were only accessible to helicopters"<sup>18</sup> "The largest thing the ground forces had to deal with initially was they didn't feel like they could get off the road, because of the mines."<sup>19</sup> According to Captain Stuart Beltson, "Division had broken it [the ZOS] into a series of boxes, and a box was probably two kilometers by five kilometers or two kilometers by ten kilometers. We'd be given five or six [ZOS] boxes to clear a day. And you'd send two aircraft out and basically what they were looking for was heavy weapons or artillery pieces, occupied bunkers, machine guns, troops, tanks, whatever. That's where I think the Apache defined itself, its role, initially in the peace enforcement operation, because we became the division commander's weapon of choice."<sup>20</sup> If the Apaches found any weapons in the ZOS they were to film the weapons using the Apache's video recording system, identify the locations, and report the information to the Task Force headquarters. The Task Force would then meet the FWF commanders in a Joint Military Commission (JMC) to force the FWF commanders to remove the weapon. In some instances the FWF denied the

presence of the weapon, at which time the Task Force representative would show the FWF commander a copy of the videotape showing the weapon, location, and time of the sighting. The FWF leaders always removed the weapons after these demonstrations. According to Captain Stuart Beltson , "What gave us our real teeth in the matter was not the fact that we were armed, although that certainly scared the Bosnians, but it was the fact that we taped everything."<sup>21</sup> According to Lieutenant Colonel Ludowese, "the VCR became a more lethal weapon than even the 30-millimeter gun throughout most of the operation."<sup>22</sup>

In addition to clearing the ZOS, the division also used attack helicopters to conduct area reconnaissance. The GFAP required the FWF to move their heavy weapons into storage sites. The FWF could not move the weapons out of the storage sites without the approval of the IFOR. As it became evident that the ZOS was clear, it became important to conduct periodic reconnaissance of the weapons storage sites within the AO. According to Brigadier General Cherrie, "We went from an economy of force role to routine surveillance in each sector. If someone noted that something was wrong the Apaches were like the policeman that went out there and took the pictures."<sup>23</sup>

The next important mission for the attack helicopters in Bosnia was security. The division used attack helicopters in a number of security operations to include screen missions, guard missions and aerial escort of lift helicopters. The first security mission for attack helicopters took place during the initial entry operations into Croatia and Bosnia. 1st Brigade conducted a river crossing operation of the Sava River. According to Colonel Greg Fontenot, "the worst case was this [the river crossing] is going to be an opposed river crossing. So I had to plan for that."<sup>24</sup> On 20 December 1995, the lead

elements of Colonel Fontenot's brigade rafted across the Sava River to establish a bridgehead. That small force was almost totally dependent on attack helicopters, artillery (located on the opposite side of the river), and U.S. Air Force Close Air Support (CAS) for security. Attack helicopters continued to provide security throughout the bridging operation.

Other security missions included the previously mentioned raid on the mujahadeen base camp and support for President Clinton's visit to Sarajevo. Despite being in the French sector, U.S. Apaches provided a continuous screen around the perimeter of Sarajevo. According to Lieutenant Colonel James Ludowese, "We [the aviation brigade] probably put thirty-four to thirty-five aircraft in the air in dedicated support of the president and his protection."<sup>25</sup>

The Task Force Eagle commander, Major General Nash, initially required attack helicopters to escort every lift helicopter flying in the Task Force Eagle AO. After June 1995 lift aircraft could fly without escort in the Tuzla valley, but still required an escort elsewhere. "In subsequent discussions with the FWF, the mere presence of an attack helicopter with a utility helicopter caused them to reevaluate courses of action. They were very much in awe of the AH-64."<sup>26</sup>

Task Force attack helicopters also escorted FWF helicopters to ensure they abided by their flight plans and did not attempt to carry any indicted war criminals or contraband. The ARRC required the FWF to notify them seventy-two hours in advance of any FWF helicopter flight. Attack helicopters escorted the FWF aircraft until they departed Bosnian airspace.

Another important mission for attack helicopters in Bosnia was as a show of force. 1st Brigade commander, Colonel Gregory Fontenot, stated, "I used attack helicopters to intimidate routinely."<sup>27</sup> Colonel Fontenot always had attack helicopters flying overhead when he conducted a JMC with any FWF leaders. He did this to show the FWF leaders how much firepower he had available at all times. Colonel Fontenot also used attack helicopters in a show of force in February 1995 when a Serb Armored Brigade was reluctant to move its vehicles in accordance with the agreed upon time schedule. Colonel Fontenot brought in attack helicopters and had U.S. Air Force CAS aircraft flying overhead. As a result, the Serbs moved in accordance with the time schedule. Colonel Fontenot stated, "I think there was no question that it was a show of force that pulled them out."<sup>28</sup>

Another form of show of force mission attack helicopters performed in Bosnia was crowd control. At the time of the incident, Army Aviation doctrinal manuals did not address the use of attack helicopters for crowd control, yet the attack aviators were able to save lives by using their aircraft rotorwash to move belligerent crowds away from protected personnel. One such incident occurred in the NORD/POL sector when an aircrew spotted a body in a minefield. The NORD/POL Brigade dispatched a team to investigate. The team sent a medic to determine if he could help the individual. The group that had chased the individual into the minefield did not want the medic to help him, so they beat the medic with clubs. The AH-64 crew hovered close to the crowd and moved its gun around, but the crowd did not respond. The aircrew then hovered over the crowd forcing them to disperse. The crew then placed the aircraft between the crowd and

the medic until the medic reached safety. The Swedish NORD/POL commander credited the AH-64 crew with saving the life of his medic.<sup>29</sup>

Attack helicopters also performed as an important member of the Task Force Eagle Quick Reaction Force (QRF). The 2-227th's contribution to the QRF included two AH-64s capable of responding to an incident in two hours. The Aviation Brigade commander, Colonel Webb, believed two hours was too long, so he had 2-227th establish a Short Notice Reaction Team (SNORT). The SNORT consisted of two additional AH-64s capable of responding to any incident in one hour.

Based on its own mission analysis and guidance from its higher headquarters, prior to deployment, 2-227th trained primarily to conduct deliberate and hasty attacks. However, the battalion planned and conducted only one attack in Bosnia, without firing a shot. This attack occurred on Mount Zep in the Serb controlled Hans Pizac region. The incident began when the Serbs removed several air defense weapons from a storage site and threatened to shoot down any IFOR helicopters in the area. The IFOR informed the Serbs to return the weapons or they would be destroyed. According to Lieutenant Colonel Ludowese, "The Mount Zep incident was the closest that the allies came to pulling the trigger. To the point of AH-64s in their battle positions, at a hover, missiles spun up, laser codes set, and ready to engage targets when they were called off."<sup>30</sup>

As stated earlier, initially the 2-227th's battalion staff was overwhelmed with the number and types of missions it had to perform. However, over time the battalion staff determined a method to compartmentalize the missions and established a weekly rotation amongst the attack companies. This provided better support to the division and allowed the company commanders to concentrate their planning effort.

The first rotation established by the battalion staff included a company doing one of three missions each week. These included clearing the ZOS, general support (GS) or Star Pack. The company with the GS mission was on call for any short notice missions and escorted lift helicopters on normal supply missions. The third company conducted what 2-227th termed the Star Pack mission. The company with this mission escorted the UH-60s designated to carry any general officers in the Task Force.

Eventually, the 2-227th's battalion staff modified the mission rotation for its attack companies. As the need to move the Task Force general officers diminished, the battalion combined the GS and Star Pack mission. This allowed the third company to conduct the SNORT and QRF missions.

#### Threats

The 2-227th's mission analysis and training program prior to its deployment to Bosnia prepared the battalion for combat operations. Because of this, the company commanders expected a hostile environment in Bosnia. They also expected their missions to be well-planned reconnaissance, attack, and air assault security missions. What they experienced when they arrived in Bosnia was almost totally opposite. The situation was very peaceful with some tense situations at times. In fact, the biggest threats to the 2-227th in Bosnia were theft from the local populace, the weather, wire obstacles, the operational tempo (OPTEMPO), and complacency.

Prior to establishing its assembly area on Tuzla Air Base, the 2-227th expected that it would receive assistance from the military police to secure the perimeter of the base. The military police had too many other commitments and were unable to provide security for the Aviation Brigade. The personnel of the aviation brigade had to not only

maintain their aircraft, but also maintain the security of most of their perimeter.

According to Lieutenant Colonel Ludowese, "To meet the force protection requirements, it wasn't uncommon to have only two to three crew chiefs per company trying to maintain the OPTEMPO that we were maintaining."<sup>31</sup> However, the biggest threat for all elements in Bosnia was theft because the Bosnians were more interested in stealing food and clothing than posing any threat to the safety of the U.S. contingent. The only option for the security force was to turn the thieves over to the local mayor if they were caught.

The next threat to 2-227th was the weather. It was in the middle of winter when 2-227th first deployed to Bosnia and crew chiefs continually removed snow and ice from the aircraft. The only piece of equipment that U.S. Army aviation units had for snow and ice removal was the auxiliary ground power unit (AGPU). An air hose from the AGPU is used to air start the AH-64 if the auxiliary power unit (APU) on the aircraft is inoperative. The hot air from the AGPU can also be used to melt ice on the aircraft. According to Captain Beltson, "De-ice usually started about four in the morning for eight o'clock missions. It took about an hour per aircraft."<sup>32</sup> Any later and the aircraft would not be ready for the mission. Any earlier and the aircraft would refreeze and the crew chiefs would have to start the process over again.

Once airborne, the weather presented another threat. The area in which the AH-64 crews were required to fly included southern Hungary, eastern Croatia, and eastern Bosnia, each with their own unique weather patterns. For example, crews would depart Hungary with a good weather forecast for Tuzla, only to be stopped by low ceilings and visibility along the Sava River and Croatia. Weather continued to be a



problem because the Aviation Brigade had to fly parts from its Support Battalion in Hungary throughout the operation.

As the seasons changed, the crews encountered yet another challenge from the terrain. When the outside air temperature increases, the power available to a turbine engine decreases. This problem is exacerbated when operating in higher elevations, like the mountainous terrain of Bosnia. This effect did not present a large problem for the AH-64s of 2-227th, but the AH-58Ds of 3-4th Cavalry in the 2nd Brigade sector could not operate effectively in the higher elevations during the summer because the AH-58D's engines are not as powerful as the AH-64s.

An additional threat in Bosnia was the construction of new power lines. Most of the electrical power lines had been destroyed in the war. According to Lieutenant Colonel Ludowese, "As the country was rebuilding itself, it developed a lot more wires than it had when it started out."<sup>33</sup> During initial operations, the Aviation Brigade commander allowed aircrews to conduct terrain flight as low as necessary to mask from any threat. After the unit experienced two wire strike incidents, without injuries or major damage, the brigade commander established a minimum enroute altitude of 300 feet for all rotary wing aircraft in Bosnia.

Yet another major threat to the AH-64s of 2-227th was the unexpected high number of missions, or high operational tempo. The leadership of 2-227th anticipated that the battalion would conduct company level operations to include reconnaissance, deliberate attacks, and air assault security missions. They expected those missions to be pre-planned and of short duration. However, the missions that emerged were quite different, with most being two aircraft missions. Often times the battalion would have

two-aircraft formations scattered all over Bosnia conducting different missions. The battalion staff can normally decentralize command and control down to a company commander if necessary, but in Bosnia even the companies were much more fragmented. That meant that lieutenants and warrant officers were usually leading these missions instead of captain company commanders. There is no formal training program in the U.S. Army to prepare young pilots for this increased responsibility. The battalion staff tried to prevent any problems by developing a graduated response matrix (GRM) and conducting a daily intelligence preparation of the battlefield (IPB) to determine the most likely trouble spots. The battalion scheduled the most experienced crews to fly these missions. The GRM outlined the steps a crew should take as a situation developed. The GRM was so successful that the CMTC in Germany adopted it for use in training follow-on units to Bosnia. Additionally, the Army Aviation Center at Ft Rucker included the GRM in its latest attack helicopter doctrinal manual, FM 1-112 (Attack Helicopter Battalion).

The daily IPB was not so successful. Almost every major incident involving an AH-64, a junior warrant officer led the section responding to the incident because of its proximity to the incident. One such incident occurred in the NORD/POL sector where an IFOR vehicle was stranded on a bridge between two angry crowds. The crowds closed in on the vehicle, began shaking it and threatened the occupants. A section of AH-64s flew to the area to render assistance. The warrant officer section leader hovered close to the crowd and used the rotorwash from his AH-64 to disperse the crowd and prevent any injury to the IFOR soldiers. As in a previously mentioned incident, the Swedish

NORD/POL commander credited the AH-64 crew with saving the lives of his personnel.<sup>34</sup>

Yet another threat to the attack pilots in Bosnia was complacency, as flying became routine. According to Captain Stuart Beltson, "The first three months you could feel it, you could feel everybody was into it, you were doing the ZOS, you were getting something done. But complacency set in after awhile. It was driven by the fact that we were doing the same thing over and over and over again."<sup>35</sup> Some of the things the leadership of the Aviation Brigade did to combat complacency included periodic aviator classes, establishing a 300-foot minimum enroute altitude and sending aviators to Germany for CMS training. Another program that helped prevent complacency was the normal permanent change of station (PCS) rotation of pilots. The brigade paired new pilots with pilots who had been in theater for an extended period of time. This increased the situational awareness of the veteran pilots.

#### Replacement of 1-1 Cavalry

Each U.S. brigade in Task Force Eagle had a cavalry (CAV) squadron with both ground and air assets under its operational control (OPCON). The 1-1 CAV was under the OPCON of 1st Brigade and 3-4 CAV was under the OPCON of 2nd Brigade. The 3-4 CAV consisted of AH-58D Kiowa Warrior aircraft. The 1-1 CAV still had unarmed OH-58 aircraft and Vietnam War vintage AH-1 Cobra attack helicopters. As part of a previously scheduled training cycle, 1-1 CAV departed Bosnia to undergo the Kiowa Warrior training program at Fort Hood, Texas.<sup>36</sup> Charlie Troop, 6-6 CAV, with eight AH-64s, replaced the sixteen aircraft of 1-1 CAV. Although the change gave Colonel Fontenot a more capable combat aircraft, it hindered his operation for at least two

reasons. Colonel Fontenot believed that he no longer had an aircraft capable of carrying him throughout his AO, and the flying hours for Charlie Troop, 6-6 CAV came from the 11th Aviation Regiment's peacetime flying hour program.

The first problem raises an issue for Army Aviation. With the retirement of the OH-58C, the only aircraft available to move ground commanders is the UH-60 Blackhawk. According to Colonel Fontenot, "When I had the OH-58C, I could justify in my mind a commander's recon once a week or more, for me. I'd spend two and a half to three hours in the left seat of an OH-58 and I'd get all over the AO, the 3500 square kilometers. I'd see every subordinate commander to include getting down to check points and talking to soldiers. Whereas, if I was on the ground, one of my check points was three hours from my base, on a good day. I could not in my mind justify me flying around in a \$2,200 per hour Blackhawk, from which you can't see. You need a utility helicopter that guys can use and can justify in their mind the expense."<sup>37</sup> In addition, Lieutenant Colonel Ludowese stated, "We need a light utility helicopter. Sending a Blackhawk every time to take one guy is not a good idea, which is a lot of what we ended up having to do because there was no other airframe to do it with."<sup>38</sup>

The second problem raises a much larger issue, namely the funding of contingency operations. When Charlie Troop, 6-6 CAV replaced 1-1 CAV, the number of aircraft OPCON to 1st Brigade was reduced from sixteen aircraft to eight aircraft. Although the Brigade had less aircraft, its mission remained unchanged. This required the 1st Brigade's eight aircraft to fly twice as many hours. In fact, Charlie Troop, 6-6 CAV flew so many hours that the 11th Aviation Regiment had to reduce the training hours of its pilots still in Germany, to support the operation in Bosnia. According to

Colonel Fontenot, "You had a guy in Europe, with a peacetime mission and a peacetime flying hour program, trying to not have us suck down all his flying hours."<sup>39</sup>

The process that the 4th Brigade, 1st Armored Division used to replace 1-1 CAV with C Troop, 6-6 CAV was so successful that it became the model for future replacement operations in Bosnia. The replacement process essentially included five phases. During phase I, the 4th Brigade sent operational and intelligence information for the personnel in Charlie Troop, 6-6 CAV to read before departing Germany. During phase II, one month prior to their deployment, the leaders of Charlie Troop, 6-6 CAV conducted a leaders reconnaissance of the AO. In phase III, Charlie Troop, 6-6 CAV deployed from Germany to the ISB in Hungary. There, some of the 4th Brigade leaders and standardization personnel met the unit and instructed them on procedures for operating in the AO. Phase IV was the actual deployment from Hungary to Bosnia. The 4th Brigade aviators actually led Charlie Troop, 6-6 CAV to Hampton Base, in 1st Brigade's sector. Phase V included a nine day train-up in the AO to ensure that Charlie Troop, 6-6 CAV was prepared to assume its mission.

#### Conclusion

The attack helicopters of 2-227th conducted many different missions during Operation Joint Endeavor and according to the leadership of Task Force Eagle the attack helicopters were critical to the success of the operation for many reasons. As a reconnaissance platform the AH-64 gave the Task Force Eagle commander the ability to have eyes throughout his sector even during bad weather. According to Captain Stuart Beltson, "We brought him [the Task Force Eagle Commander] speed to the battlefield. We were flexible, we could change in mid-stride. He could move us around the theater

faster than anybody else, particularly in a mine environment."<sup>40</sup> Ground assets were unable to patrol many areas because of the terrain and because of the danger of mines. AH-58Ds had the same ability to videotape as the AH-64, yet during the summer months the AH-58Ds were unable to conduct reconnaissance in the higher elevations because they did not have sufficient power. Additionally, AH-58Ds could not travel the distance that was required to patrol the ZOS because they were unable to accommodate an external fuel tank. Although OH-58D and AH-58D Kiowa Warrior aircraft had the capability to film, the Task Force Eagle commander ordered that only Apaches would be allowed in the ZOS. According to Lieutenant Colonel Ludowese, Major General Nash stated that he did not want single engine, unarmed, or nonvideo recorder capable aircraft in the ZOS. MG Nash did not want to risk having an aircraft forced to land in the ZOS, for fear of losing an aircraft or crew to a mine. He also wanted an aircraft that could defend itself, if fired upon. In addition, MG Nash needed an aircraft that could provide visual proof of any violations of the GFAP.

Unmanned Aerial Vehicles (UAV) could not have replaced the AH-64s for two reasons. The UAVs were unarmed and could not enforce peace. Additionally, the UAVs could not see through cloud layers during poor weather. "Most of the ZOS recon that was done the first month and a half was exclusively AH-64s. The UAVs could not go because of weather, visibility, and everything else. So the Apaches were the only thing that could get out there."<sup>41</sup> Additionally, according to Brigadier General Cherrie, "The UAV was highly useful, but the UAV was not visible to the guy on the ground."<sup>42</sup> UH-60s with auxiliary fuel tanks had the same range as the AH-64s, but they do not have organic video equipment or point target weapons to enforce peace.

As a security platform, the AH-64 provided security for all UH-60 and CH-47 aircraft moving in the AO. AH-58Ds could not accomplish this mission because they do not have the speed to keep up with the UH-60 or CH-47. The AH-64s also provided the Task Force Eagle commander with a weapon system for his QRF that could reach any portion of his AO with a point target weapon system, weapons for suppression, and a day or night capable video recording system to document events. According to Brigadier General Cherrie, "They [the FWF] knew we could get Apaches anywhere in Bosnia-Herzegovina, in our sector, instantaneously."<sup>43</sup>

According to the leadership of 2-227th, there were costs to using the AH-64s in a peacekeeping and peace enforcement role. For lack of a better method, the costs can be divided into the two categories of logistics and operations. Logistically, the AH-64 must be followed by a large logistical support structure to sustain continuous operations. The Apache is a very complex aircraft and the visionics require extensive maintenance support to keep them fully operational.

Operationally, almost all missions during Operation Joint Endeavor were flown in daylight. The AH-64's PNVS is an excellent system but requires extensive training for the pilot to maintain proficiency. The pilots of the 2-227th admitted that they would need an extensive PNVS train-up before they could be ready to conduct operations at night. Additionally, all of 2-227th's missions during Operation Joint Endeavor were two ship missions. This gave the younger pilots more responsibility and improved their individual planning and flight skills. However, the primary mission of an AH-64 battalion is to destroy enemy armor. The leadership of 2-227th admitted that the battalion's ability to plan and conduct a battalion level deliberate or deep attack was severely degraded. They

believed the battalion would require at least ninety days training prior to being ready for battalion level combat operations at night.

The 4th Brigade and the 2-227th returned from Bosnia to Hanau, Germany in November 1996. There were replaced by elements of the 11th Aviation Regiment. Based on lessons learned from attack aviation elements in Bosnia, the CMTC at Hoenfels, Germany improved the training program for attack helicopter units to better prepare them for the decentralized operations in Bosnia. The CMTC also incorporated the 2-227th's GRM into their training plan. Additionally, 4th Brigade used its experience in replacing 1-1 CAV as the model for its replacement by the 11th Aviation Regiment. The 11th Aviation Regiment arrived one month before the 4th Brigade departed Bosnia, allowing for a seamless handover of the missions from 4th Brigade to the 11th Regiment.

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<sup>1</sup> CALL Combined Arms Assessment Team. *Operation Joint Endeavor, Task Force Eagle Initial Operation* (Ft Leavenworth, Kansas: Center for Army Lessons Learned, May 1996), ix.

<sup>2</sup> Ibid.

<sup>3</sup> Brigadier General Stanley Cherrie, interview by author, tape recording, Ft Leavenworth, KS, 24 February 1998.

<sup>4</sup> Colonel Gregory Fontenot, interview by author, tape recording, Ft Leavenworth, KS, 23 February 1998.

<sup>5</sup> Cherrie interview.

<sup>6</sup> *Operation Joint Endeavor.*, 53.

<sup>7</sup> Lieutenant Colonel James Ludowese, interview by author, tape recording, Ft Leavenworth, KS, 23 January 1998.

<sup>8</sup> Beltson interview.

<sup>9</sup> A modification work order (MWO) is a scheduled improvement to a system.



<sup>10</sup> Beltson interview. Harmonizing the gun on the AH-64 Apache entails firing the gun to determine if it is accurate. If the gun does not hit the target, technicians adjust the boresight values in the fire control computer until the gun rounds hit the target consistently.

<sup>11</sup> Beltson interview.

<sup>12</sup> Beltson interview.

<sup>13</sup> Ludowese interview.

<sup>14</sup> Beltson interview.

<sup>15</sup> Cherrie interview.

<sup>16</sup> Cherrie interview.

<sup>17</sup> Beltson interview.

<sup>18</sup> Fontenot interview.

<sup>19</sup> Beltson interview.

<sup>20</sup> Beltson interview. Clearing the ZOS was a term used by Task Force Eagle. It meant ensuring that there were no FWF weapons in the ZOS. If there were weapons in the ZOS, the Apache crews would report the siting. The ground commander would then convene a Joint Military Commission (JMC) to instruct the FWF leaders to remove the weapons or the weapons would be destroyed.

<sup>21</sup> Beltson interview.

<sup>22</sup> Ludowese interview.

<sup>23</sup> Cherrie interview.

<sup>24</sup> Fontenot interview.

<sup>25</sup> Ludowese interview.

<sup>26</sup> Ludowese interview.

<sup>27</sup> Fontenot interview.

<sup>28</sup> Fontenot interview.

<sup>29</sup> Ludowese interview.

<sup>30</sup> Ludowese interview.

<sup>31</sup> Ludowese interview.

<sup>32</sup> Beltson interview.

<sup>33</sup> Ludowese interview.

<sup>34</sup> Ludowese interview.

<sup>35</sup> Beltson interview.

<sup>36</sup> The U.S. Army's 21st Cavalry at Fort Hood, Texas, is responsible for equipping, training, and evaluating cavalry units transitioning to AH-58D Kiowa Warriors.

<sup>37</sup> Fontenot interview.

<sup>38</sup> Ludowese interview.

<sup>39</sup> Fontenot interview.

<sup>40</sup> Beltson interview.

<sup>41</sup> Ludowese interview.

<sup>42</sup> Cherrie interview.

<sup>43</sup> Cherrie interview.

## CHAPTER 5

### ANALYSIS

#### Introduction

The purpose of this chapter is to compare and contrast the two case studies in chapters 3 and 4 to determine whether there is a role for attack helicopters in peace operations and thus answer the research question later in this paper. To compare and contrast the two case studies there must be criteria that serve to evaluate each operation. A review of chapters 3 and 4 show six important areas common to both operations. These areas include doctrine, mission analysis, task organization, training, aircraft modifications/preparation, and employment. The six areas become the analytical criteria that will be used to compare and contrast attack helicopter use in Operation Uphold Democracy and Operation Joint Endeavor.

Doctrine is defined as "fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgement in application."<sup>1</sup> Doctrine is important because it shows how the Army intends to conduct different types of operations. The doctrine criterion will show the Army's requirements for peace operations prior to the deployments to Haiti and Bosnia, and specifically how the Army intended to use attack helicopters in peace operations.

Mission analysis, the second criterion, is the process a staff undertakes to determine the unit's specified, implied, and essential tasks for an operation. "The result of mission analysis is defining the tactical problem and beginning the process of determining feasible solutions."<sup>2</sup> This chapter will compare the mission analysis of two

peace operation case studies from two standpoints, the JTF headquarters and the aviation headquarters. The JTF headquarters' mission analysis should show what that headquarters determined an attack helicopter would do in a peace operation. The aviation mission analysis should demonstrate how aviation units determined what tasks had to be accomplished to support the JTF headquarters' plan.

Task organization, the third criterion, is "a temporary grouping of forces designed to accomplish a particular mission. It is the process of allocating available assets to subordinate commanders and determining their command and support relationships."<sup>3</sup> The task organization of the attack helicopter units executing the two operations should reflect which attack assets the appropriate headquarters determined necessary to conduct peace operations.

Training is the preparation of individuals or units to conduct tasks to accomplish a mission. Training becomes the fourth criterion because the U.S. Army trains to conduct anticipated operations. Therefore, when units prepare specifically for peace operations they conduct training on tasks specific to those operations. Comparing and contrasting the training for the two operations should show how each unit prepared for peace operations.

The fifth criterion is aircraft modification/preparation. This criterion entails any changes made to the aircraft prior to the two operations. The aircraft modification aspect of this criterion should reflect what non-organic equipment the units determined necessary to conduct peace operations. Furthermore, the additional aircraft preparation conducted by the units should reveal common procedures that attack helicopter units take to prepare themselves for peace operations.

The final, and most important criterion, is employment. Employment is how the attack helicopters were actually used during the two operations. This criterion is critical as it demonstrates how the various headquarters employed attack helicopters in each operation. Moreover, the criterion will also show if attack helicopters were essential to the success of each operation. Additionally, this criterion can be compared with the fourth criterion, training, thus allowing a comparison of predeployment training versus employment, to see if units trained for what they actually experienced.

### Doctrine

Doctrine affected the operations in Haiti and Bosnia both operationally and tactically. At the operational level, the doctrine for each operation was a key factor in determining if the Army would deploy attack helicopters into the theater at all. At the tactical level, doctrine affected the mission analysis, task organization, training, and employment of attack helicopters because the attack helicopter battalions preparing for the two operations had very little information about what missions they would actually execute. However, as in every military operation, until the commander is in the AO, he cannot determine exactly what he needs and how he must employ his assets to accomplish the mission.

Although Army doctrine had not changed prior to the operation in Haiti, the mindset of the military leadership was in the process of changing because of the way Operation Restore Hope, in Somalia, changed from a humanitarian assistance operation into a combat operation. During the planning process for Operation Uphold Democracy, the 82nd Airborne Division requested AH-64 Apaches to be attached to the division to conduct security operations. The XVIII Airborne Corps headquarters disapproved the

division's request because the staff believed that employing the AH-64 would appear to exceed the firepower necessary to conduct the operation. The Corps staff chose to deploy the AH-58D Kiowa Warrior, an asset organic to the 82nd Airborne Division, instead of the more lethal AH-64.<sup>4</sup> Although the AH-58D is armed, it is still classified as a reconnaissance helicopter because it is found primarily in Cavalry type units. Deploying the AH-58D, would not give the appearance to the international community that U.S. forces were exceeding the mandate given by the United Nations.

The 10th Mountain Division's plan for Operation Uphold Democracy also included attack helicopters. However, deploying the division's AH-1 Cobras did not become an issue because the 10th Mountain Division was also the JTF Headquarters for OPLAN 2380 and task organized itself at the joint level according to doctrine. Therefore, the division was not required to seek outside approval to deploy its attack helicopters.

Following Operation Uphold Democracy, however, the mindset of the military leadership changed, as well as the Army's doctrine. For the first time, Army doctrine specifically addressed the need for attack helicopters and tanks during peace operations.<sup>5</sup> These assets were meant to provide security for the force and also to conduct attacks in the event the operation transitioned to combat. The doctrine specifically addressed the issues of force protection, missions, training, and ROE.<sup>6</sup>

The change in doctrine also manifested itself in a different mindset for the leadership going into Bosnia. In fact, President Clinton assured the American people that U.S. forces would deploy to Bosnia with overwhelming firepower. Because of that notion, there was never a question of whether to deploy attack helicopters. There were

high-level leader discussions on whether to deploy tanks, but in the end the 1st Armored Division deployed into Bosnia with all its combat assets, to include attack helicopters.

### Mission Analysis

Both Haiti and Bosnia show that mission analysis led to varying command views of attack helicopters. The two significant factors affecting mission analysis for operations in Haiti were doctrine and past experience. The units that planned to deploy to Haiti in 1994 prepared for two different missions. The 82nd Airborne Division prepared for a forced entry operation. The 10th Mountain Division prepared for both an uncertain and permissive entry operation. Despite the two very different missions, the attack helicopter battalions of each division derived the same missions from their mission analysis because of doctrine. These missions were, in fact, all variations of security operations.

Prior to both peace operations, Army Aviation doctrine was the same. The doctrine did not illustrate the use of attack helicopters in peace operations, as it only reflected combat operations. According to the doctrine, the mission for attack helicopters was always offensive in nature.

The 10th Mountain Division's experience in Somalia had a tremendous effect on its mission analysis. In Somalia, the 10th Mountain Division used its attack helicopters extensively in a security role and hasty attacks against hostile clans.<sup>7</sup> Many of the same aviators that had been in Somalia, also deployed to Haiti and carried their Somalia experience with them through the mission analysis.

The situation in Bosnia was unclear for the 1st Armored Division. Therefore, the division's attack aviation assets had to rely heavily on doctrine to determine their possible

missions. At the tactical level, Army Aviation doctrine had not changed since prior to Operation Uphold Democracy. The attack aviation units thus determined from their mission analysis that their primary missions would be the same as those derived by the units that prepared for Operation Uphold Democracy in Haiti. Those missions would again be primarily security operations.<sup>8</sup>

#### Training

Despite the two very different missions given to the 82nd Airborne Division and the 10th Mountain Division, their attack helicopter units trained on almost identical tasks. The attack helicopter battalions conducted most of their training for combat operations. The factors affecting training were the same as those affecting mission analysis; doctrine and the 10th Mountain Division's combat experience in Somalia.

Despite the changes in Army doctrine at the operational level after Operation Uphold Democracy, at the tactical level Army Aviation doctrine remained unchanged. The attack helicopter units deploying to Bosnia trained and deployed with the same doctrine as the aviators that deployed to Somalia and Haiti. This could be seen in the results of their mission analysis and training program prior to deploying to Bosnia. Just as the attack helicopter units that prepared for Operation Uphold Democracy, the 1st Armored Division attack aviation units also trained to conduct combat operations.<sup>9</sup>

#### Task Organization

There were three different task organizations for two peace operations due to doctrine, past experience, and the different nature of the operations. Doctrine and past experience affected task organization because AH-64 equipped attack helicopter battalions rarely used their OH-58Cs to scout directly for the AH-64s because the AH-64



possesses electronic visual systems to acquire its own targets. AH-1 Cobra equipped attack helicopter battalions doctrinally use their OH-58Cs to scout directly for the attack helicopters because the AH-1 has less capable electronics to acquire targets.

The 82nd Airborne Division's attack helicopter battalion for Operation Uphold Democracy would have deployed an attack helicopter company (+) with only AH-64 Apache helicopters and no scout aircraft. The battalion staff had determined that it did not need the OH-58C aircraft to accomplish its missions for two reasons.<sup>10</sup> First, the OH-58C aircraft did not have the fuel capacity to fly the required distances to deploy into the AO. Second, the AH-64s electronic sensors allowed it to find targets better than the OH-58C, which does not have electronic sensors.

The 10th Mountain Division staff determined it needed its scout helicopters, also for two reasons. The first reason was that the division had the AH-1 Cobra which is more vulnerable to small arms fire and does not have the electronic sensors of the AH-64. The smaller OH-58s thus allowed the Cobras to stay clear of enemy fire until the enemy had been spotted, pinpointed, and attacked. The second reason was that the 10th Mountain Division aviators had successfully used the Scout/Weapon Team concept during operations in Somalia and drew lessons from their combat experience.<sup>11</sup>

The 2-227th Attack Helicopter Battalion deployed its OH-58C aircraft to Bosnia. However, because of the OH-58's reduced fuel endurance and its vulnerability to small arms fire compared to the AH-64, the 2-227th used the aircraft in a support role instead of a scout role. Additionally, the AH-64s were the only aircraft allowed by Major General Nash to patrol the ZOS because they were more survivable, armed for self-protection, and possessed the capability to videotape GFAP violations. The OH-58Cs were

primarily used to ferry personnel and parts and turned out to be quite useful to the division for this purpose. When some of the OH-58Cs were forced to depart the theater because of a previously scheduled change to the 2-227th's MTOE, the aviation brigade was forced to fly ground commanders throughout the AO in Black Hawks. That was not very cost effective, and the aviation brigade could not always support their requests to provide a Black Hawk to fly them around their very large AOs to check on their troops. This was because of the requirement to provide transportation for the large number of general officers and VIPs in the AO.<sup>12</sup>

#### Aircraft Modifications/Preparation

There are two common areas from each operation with regards to modifications and preparations of aircraft. These areas include auxiliary fuel tanks for the AH-64 Apache and weapons preparation for both the AH-64 and the AH-1 Cobra.

The AH-64 equipped attack helicopter battalions from the 82nd Airborne Division and the 1st Armored Division, both had difficulty acquiring the necessary plumbing and auxiliary fuel tanks for their aircraft. The Army did not purchase sufficient quantities of these items to field the entire fleet and this forced the units to go to great lengths to acquire the necessary equipment. The 3-229th Attack Helicopter Battalion fabricated its own plumbing and laterally transferred fuel tanks from another aviation unit.<sup>13</sup> The 2-227th Attack Helicopter Battalion acquired the plumbing and fuel tanks from aircraft scheduled to go to the Netherlands as part of a FMS case.<sup>14</sup>

When the 10th Mountain Division deployed to Haiti, ATCOM sent a team to check the AH-1 weapon systems. Because of bureaucratic delays, the ATCOM team did not check the systems until the aircraft were aboard a Navy vessel. Because of the rolling

of the ship and the small size of the ship's hangar areas, the ATCOM team could not adequately boresight the 20-millimeter cannons on the AH-1 Cobras.<sup>15</sup> A similar situation occurred as the 2-227th deployed to Bosnia. Again, because of bureaucratic delays, the ATCOM team did not check the AH-64 weapon systems until the aircraft had already deployed to Hungary. Once the team arrived in Hungary, it made changes to the fire control software for the 30-millimeter cannon. In effect, the ATCOM team invalidated the boresight and harmonization that the unit had conducted during its gunnery only two months before.<sup>16</sup> In both operations the primary self-protection weapon on the aircraft was not properly boresighted prior to being employed in possible combat operations.

#### Employment

The final and most important criterion is the employment of attack helicopters in both operations. Attack helicopters were critical to the success of operations in both Haiti and Bosnia for two reasons. First, attack helicopters gave the JTF commander an armed platform that could operate in the ground environment, without restrictions because of terrain or land mines. Second, probably the greatest value of attack helicopters in both operations was a factor that cannot be easily measured: deterrence.

Prior to Operation Uphold Democracy, Army doctrine did not address the use of attack helicopters in peace operations. Despite this, the 10th Mountain Division used its attack helicopters because of the lessons the division learned from combat operations in Somalia. The 10th Mountain Division employed its attack helicopters primarily in a variety of security missions and the QRF mission. The attack helicopters conducted security operations for troop movements, VIPs, and weapons cache raids, but were most

versatile as a member of the JTF commander's QRF. As part of the QRF, attack helicopters gave the JTF commander a weapon system that he could employ anywhere in the theater of operations, in less than two hours. No other weapon system could consistently accomplish this for the JTF commander.

Although attack helicopters never fired a shot during any of these operations, their greatest value was their deterrent effect. According to eyewitnesses, there were numerous incidents in Haiti when the presence of attack helicopters prevented violence from escalating or occurring at all. One such incident occurred as the 10th Mountain Division initially arrived in Port au Prince. According to a reporter, "Just a block from the airport where the U.S. troops landed, a pick-up truck full of Haitian paramilitaries in civilian clothes watched warily, their submachine guns hoisted in the air. As the first wave of Cobra attack gunships appeared overhead, they sped away."<sup>17</sup>

Prior to Operation Joint Endeavor, there was a greater emphasis on protecting U.S. forces because of the loss of life during the humanitarian assistance operation in Somalia. This led to changes in doctrine that specifically addressed the need for attack helicopters and tanks in peace operations. Because of the change in doctrine and the mindset of the military leadership, there were never any questions about whether to employ attack helicopters in Bosnia.

As in Haiti, attack helicopters never fired a shot in Bosnia, but their mere presence defused many situations. Additionally, attack helicopters conducted security and QRF missions. However, unlike in Haiti, the primary mission for attack helicopters in Bosnia was reconnaissance. This mission came out of necessity, as the 1st Armored Division had not planned on attack helicopters doing most of its reconnaissance.

However, because of the size of the AO, the rugged terrain, and the danger of land mines, the division could not conduct adequate reconnaissance with ground assets alone.

Therefore, the division improvised and used attack helicopters in an economy of force role to conduct the bulk of its reconnaissance operations.<sup>18</sup>

One of the most important systems on the attack helicopter during the conduct of reconnaissance operations, was the onboard video recorder. In fact, Lieutenant Colonel Jim Ludowese stated that "the VCR became a more lethal weapon than even the 30-millimeter gun throughout most of the operation."<sup>19</sup> The VCR became so important because the division used the video footage in the JMCs to prove violations of the GFAP.

A similarity between attack helicopter operations in Haiti and Bosnia was the number of aircraft conducting the missions. During both operations, the units conducted most missions with flights of two aircraft, many times with junior warrant officers in charge. The 10th Mountain Division experienced the same types of missions in Somalia and was prepared to operate in this manner. The 2-227th did not normally operate in this manner, and its training program prior to deployment focused on battalion and company level operations. In addition, once the battalion was in theater, it did not have time to conduct a training program to prepare its junior warrant officers for the increased responsibility. Therefore, the 2-227th selected its most experienced aviators to lead missions.<sup>20</sup>

### Summary

In summary, because the attack helicopter units preparing to deploy for each operation did not have a clear mission, they had to rely on doctrine and previous experience to determine their missions and how to train for those missions. As a result,

each attack helicopter unit derived similar missions and conducted similar training programs prior to each operation. Once in theater, the attack helicopter units conducted similar missions, but their most important missions were different. These missions were the QRF mission in Haiti, and reconnaissance in Bosnia. The attack helicopter was the only asset available to the JTF commander to fulfill his requirements in these areas. Finally, although attack helicopters never fired a shot in either operation, in many cases their presence prevented escalation of hostilities.

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<sup>1</sup> U.S. Army. FM 101-5-1, *Operational Terms and Graphics* (Washington, DC: Department of the Army, 30 September 1997), 1-55.

<sup>2</sup> U.S. Army. FM 101-5, *Staff Organization and Operations* (Washington, DC: Department of the Army, 31 May 1997), 5-5.

<sup>3</sup> FM 101-5-1., 1-153.

<sup>4</sup> Major Thomas W. Kula, Deputy G-3 Plans, 82nd Airborne Division, and Major Anthony J. Tata, Chief, G-3 Plans, 82nd Airborne Division, Center for Military History group interview, 28 March 1995.

<sup>5</sup> U.S. Army. FM 100-23, *Peace Operations* (Washington, DC: Department of the Army, 30 December 1994), 40.

<sup>6</sup> *Ibid.*, 34-35.

<sup>7</sup> John T. Hansen, "The Role of the Attack Helicopter in Operations Other Than War" (M.A. diss., U.S. Army Command and General Staff College, 1995), 22.

<sup>8</sup> Brigadier General Stanley Cherrie, interview by author, tape recording, Ft Leavenworth, Kansas, 23 February 1998.

<sup>9</sup> Captain Stuart Beltson, interview by author, tape recording, Ft Leavenworth, Kansas, 21 January 1998.

<sup>10</sup> Captain Stephen C. Smith. Personal Journal, (Fort Bragg, NC: 8 September 1994), in the possession of the author.

<sup>11</sup> Commander, 2-25th (Aviation) (Attack). *Task Force Raven (2-25 Aviation Attack) After Action Report: Operation Restore Hope - Somalia* (Headquarters, 2nd Battalion (Attack), 25th Aviation Regiment: Fort Drum, NY, 26 January 1994). Appendix 4, p. 1.

<sup>12</sup> Colonel Gregory Fontenot, interview by author, tape recording, Ft Leavenworth, Kansas, 23 February 1998.

<sup>13</sup> Captain Stephen C. Smith. Personal Journal, (Fort Bragg, NC: 10 May 1994), in the possession of the author.

<sup>14</sup> Beltson interview.

<sup>15</sup> CALL Combined Arms Assessment Team. *Operation Uphold Democracy Initial Impressions, D-20 to D+40* (Ft Leavenworth, KS: Center for Army Lessons Learned, December 1994), 14.

<sup>16</sup> Beltson interview.

<sup>17</sup> "Cheering Crowds Welcome U.S. Troops in Haiti," *The Kansas City Star*, 20 September 1994, sec. A, p. 8.

<sup>18</sup> Cherrie interview.

<sup>19</sup> Lieutenant Colonel Jim Ludowese, interview by author, tape recording, Ft Leavenworth, Kansas, 22 January 1998.

<sup>20</sup> Beltson interview.

## CHAPTER 6

### CONCLUSIONS AND RECOMMENDATIONS

#### Primary Recommendations

The purpose of this study was to determine if there is a role for attack helicopters in peace operations. Based on the success of attack helicopters in the two case studies, I can conclude that attack helicopters have a role in peace operations. My research shows that the commanders in Haiti and Bosnia used attack helicopters because they were essential to accomplish their mission. Attack helicopters provided the ground commander with operational flexibility and a psychological advantage as a deterrent to violence. I make that conclusion due to the successful employment of attack helicopters in past peace operations and the unique capabilities of attack helicopters that lend themselves to peace operations.

Because of political pressures to limit the size of peacekeeping or peace enforcement forces, peace operations must be economy of force operations. Both of the operations studied had limitations on the size force the JTF commander could deploy into the AO. As with most peace operations, the AOs for the JTFs in Haiti and Bosnia were very large for the size force designated to patrol them. In both operations, attack helicopters gave the commanders the ability to see and influence their entire AO with a small number of combat forces. In Haiti, the JTF commander had Special Forces teams scattered throughout the country. Some of the teams were as far away as Cap Haitien, 150 kilometers north of the JTF headquarters, located in Port au Prince. The only weapon system, readily available to the JTF commander, that was capable of responding to a crisis situation anywhere in the AO, was the attack helicopter. In Bosnia, the JTF



commander did not have sufficient ground forces to maintain constant patrols along the 310-kilometer ZOS. In addition, many of the areas were inaccessible to ground vehicles because of land mines. The only asset capable of patrolling the entire ZOS and recording violations of the GFAP, was the attack helicopter.

In addition to giving the JTF commander flexibility, attack helicopters had a psychological effect on the warring factions in both operations. There were numerous documented incidents where the mere presence of attack helicopters kept hostilities from escalating. One such incident occurred as the 10th Mountain Division initially arrived in Port au Prince. According to a reporter, "Just a block from the airport where the U.S. troops landed, a pick-up truck full of Haitian paramilitaries in civilian clothes watched warily, their submachine guns hoisted in the air. As the first wave of Cobra attack gunships appeared overhead, they sped away."<sup>1</sup> Similar incidents occurred in Bosnia. One incident occurred in the NORD/POL sector when an aircrew spotted a body in a minefield. The NORD/POL Brigade dispatched a team to investigate. The team sent a medic to determine if he could help the individual. The group that had chased the individual into the minefield did not want the medic to help him, so they beat the medic with clubs. An AH-64 crew hovered over the crowd and placed their aircraft between the crowd and the medic until the medic reached safety. The Swedish NORD/POL commander credited the AH-64 crew with saving the life of his medic.<sup>2</sup>

The primary recommendation of this study is directly related to the research question. Because of the flexibility and deterrent effect of attack helicopters, they should be employed as part of any JTF conducting peace operations. Attack helicopters are an excellent tool during any peace or combat operation, especially when there is a limitation

on the number of troops that can be deployed into a theater of operations. Attack helicopters can conduct a variety of reconnaissance, security, and QRF missions, and it is proven that their mere presence can deter aggression among warring factions. Finally, attack helicopters give the ground commander a major weapon to transition to combat operations, if necessary.

For attack aviation units to continue to successfully support peace operations, there are some problem areas that require correcting. These areas include Army Aviation doctrine, tactics/techniques/procedures for peace operations, training, and equipment.

### Doctrine

The U.S. Army usually updates its doctrine every four to five years. Army Aviation doctrine, relating to attack helicopters, was published between 1989 and 1991 and not updated again until 1997. This meant that Army Aviation doctrine lagged behind Army doctrine during much of that period. Also, current Army Aviation doctrine reflects terminology for peace operations not yet officially adopted by the Army. The information on peace operations in Army Aviation doctrine leans very heavily on Army Aviation's experiences in Bosnia, but shows few, if any, lessons learned from any other peace-type operations. Additionally, commanders in Haiti and Bosnia were giving attack helicopter units show of force and presence missions. These terms are not defined at the tactical level for attack aviators.

I recommend that Army Aviation Branch update its doctrine in concert with Army doctrine. Army Aviation Branch should also review its current doctrine on peace operations to ensure that it conforms to current Army doctrine and that it includes lessons learned from other peace type of operations, besides Bosnia. Additionally, Army

Aviation Branch should define the terms, show of force and show of presence to ensure that army aviators know exactly what is expected of them in peace operations.

#### Tactics, Techniques, and Procedures

One of the techniques used by attack helicopter crews to disperse crowds was using the aircraft rotorwash. This was effective in several situations, but placed the aircraft in great danger. The attack helicopter pilots in each situation believed that they had no other choice. They believed the situation warranted action, but not lethal action.

I recommend that the U.S. Army study the feasibility of using non-lethal weapons on attack helicopters. Non-lethal weapons would give the pilots another tool to deter violence and protect U.S. ground troops, without having to resort to deadly force.

#### Training

In both case studies, the AH-1 Cobra equipped attack helicopter units conducted training with the ground maneuver brigades and the AH-64 Apache equipped units did not. The AH-1 Cobras in the 10th Mountain Division conducted this training based on their experiences in Somalia.<sup>3</sup> The AH-1 Cobras in the 1st Armored Division trained with 1st Brigade because the Cobra attack helicopter unit was OPCON to 1st Brigade.<sup>4</sup> The AH-64 Apaches in both the XVIII Airborne Corps and the 1st Armored Division have a primary mission of conducting deep attacks against massed enemy armor. AH-64 units throughout the Army have this as their primary mission; therefore, they train less to support ground troops in close operations.

Attack helicopter units must be integrated into the ground commander's training plan when preparing for any operation. It is in the opinion of the author that the Army Aviation community is so sensitive to the issue of close air support that attack helicopter

units do not conduct the training necessary to support ground troops during close operations.

The second training issue concerns the nature of operations in Haiti and Bosnia. The missions during each operation were normally flown by sections of two aircraft. Attack helicopter units normally conduct operations at battalion or company level. However, the large areas and timeframes the units had to cover, required the attack helicopter units to change their procedures and operate in sections. Because the Army does not have a training program for section level operations, the units developed their own procedures for selecting qualified individuals to lead the sections. Many times, junior warrant officers were leading these sections.

Army Aviation Branch should develop a training program to prepare junior officers to lead aircraft sections. This program should concentrate on the responsibilities of a flight leader and should use scenarios to prepare junior officers for the task of leading a flight in combat or peace operations. It would not be necessary to send aviators to a Training and Doctrine Command School to receive the training. Aviation Branch could include the training programs in the respective aircraft Aircrew Training Manuals and allow the units to conduct the training and tailor it to their unit's Mission Essential Task List (METL).

#### Equipment

Three subjects must be addressed concerning equipment. These include auxiliary tanks for AH-64 Apaches, weapons modifications by ATCOM, and the responsiveness of the Army supply system to deploying units.

The AH-64 units preparing for deployment to Haiti and Bosnia had a common problem. They each had to go around the Army supply system to acquire plumbing and auxiliary fuel tanks for their aircraft. This is not a new problem. AH-64 units in Operation Desert Storm realized the need for additional station time and determined that auxiliary fuel tanks could give them that station time. The AH-64 Apaches deploying to Haiti needed the additional fuel provided by the auxiliary tanks to fly from Florida to Great Inagua, and from Great Inagua to Port au Prince.<sup>5</sup> The 1st Armored Division Apaches needed the additional fuel to fly the 310-kilometer ZOS.<sup>6</sup>

The U.S. Army should install auxiliary fuel tank plumbing on every AH-64 Apache in the Army's inventory. The Army should also provide auxiliary fuel tanks for every Apache.

During the deployment phase to both Haiti and Bosnia, ATCOM dispatched a team of weapons specialists to service or modify the gun systems on the attack helicopters. In both cases, although ATCOM's intentions were good, the work they accomplished left the gun systems less accurate than before.

Prior to conducting any modifications on attack helicopter weapons systems, ATCOM personnel should ensure that the modification enhances and does not degrade the weapon system.

The final area concerning equipment is the inflexibility of the Army supply system to units preparing for possible contingency operations. The attack helicopter units preparing for Operation Uphold Democracy determined a need for HEEDS and LPU-17 life vests. These items were critical to the safety of the aircrews, yet because of the compartmentalized planning for the operation, the units had to go outside the Army

supply system to acquire the equipment. The 1st Armored Division had similar problems. Because of the uncertainty of the peace process in Bosnia, the 1st Armored Division did not know if and when it would deploy to Bosnia. The division determined it needed de-ice domes for its Hellfire missiles and Global Positioning Systems for its aviators to accurately navigate the Bosnian countryside. Both systems arrived after the unit had been in Bosnia for approximately two months. The Global Positioning Systems were so important to the aviators that many purchased their own prior to deploying to Bosnia.<sup>7</sup>

The U.S. Army must develop a system to provide necessary equipment to regular units preparing for contingency operations without sacrificing secrecy. The units must receive this equipment with sufficient time to adequately train on the systems.

#### Other Findings and Recommendations

In the process of conducting the research there were other important findings that should be enumerated.

##### Light Utility Helicopter

The 1st Armored Division initially deployed with its OH-58C aircraft because they had not completed the Aviation Restructuring Initiative (ARI), which took OH-58C aircraft away from attack helicopter battalions. Although the OH-58C was originally intended to perform the scout mission, the 2-227th utilized their aircraft in a support role because of the division commander's prohibition from flying single engine or unarmed aircraft in the ZOS. The OH-58C was quite useful in the support role during the peace operation in Bosnia.<sup>8</sup> The OH-58C was an inexpensive way to quickly move the ground maneuver brigade commanders around the AO. This allowed the ground commanders to

see their entire AO, talk to their soldiers at checkpoints throughout the AO, and not waste their limited time traveling to distant meetings.<sup>9</sup> Because of ARI, the 1st Armored Division lost its OH-58C aircraft while it was in Bosnia. This severely degraded the capability to move the ground maneuver brigade commanders around the AO because the Black Hawks were committed to other more important missions.

The U.S. Army needs a light utility helicopter to support ground commanders in peace operations. There are several options to solve this problem. In the short term, the Army can use OH-58C aircraft from the Army National Guard. A long-term solution would be to acquire an off-the-shelf aircraft. Another possible solution for peace operations would be to use a civilian contractor to provide the support, similar to the U.S. Navy's ship to ship logistics program.

#### Flying Hours

The next issue is flying hours. When 1-1 Cavalry returned to the U.S. to undergo the Kiowa Warrior transition, the 11th Aviation Regiment provided an AH-64 company (+) from 6-6 Cavalry in Germany to replace them. Because of the Army's current method of allocating flying hours, this company continued to fly hours allocated to the 11th Aviation Regiment in Germany. The flying hours the company used to support the ground commander were more than double the flying hours allocated to an AH-64 company with a peacetime mission.<sup>10</sup> As a result, the 11th Aviation Regiment significantly reduced the flying hours of its aviators in Germany to support the company in Bosnia. This reduced the combat readiness of the 11th Regiment significantly.<sup>11</sup>

Aviation units deploying to support contingency operations cannot rely on peacetime flying hour programs. They must be given their own flying hour account.

This will prevent them from draining their parent unit's flying hour program and reducing the readiness of the aviators remaining at their home station.

#### Further Study

The subject of attack helicopters in peace operations is worthy of further study. The areas recommended for further study include training for peace operations, future doctrine for the use of attack helicopters in peace operations, and non-lethal weapons for attack helicopters.

It is important to ensure that army aviators are trained to conduct the correct missions. There is not enough time for attack helicopter battalions to train for every possible contingency. That is why U.S. Army units have a METL. Based on lessons learned from Bosnia, the CMTC in Germany established a training program for attack helicopter units deploying to Bosnia. However, the Army needs to continue assessing the collective training programs it uses to prepare units for peace operations to ensure it is looking to the future and not just training for the previous operation.

Further study is also warranted to establish a section leader or mission commander training program for army aviators. The other services have such programs. These may be of value to the Army.

#### Conclusion

In conclusion, attack helicopters are still a relatively new weapon when viewed in a historical perspective. The U.S. Army is still learning new uses for this tremendous asset. The attack helicopter began as close air support platform in Vietnam and evolved into an anti-tank platform during the Cold War. Now, during this time of shrinking budgets and forces, the attack helicopter is the premier example of flexibility and



economy of force. It is a weapon system that can stand ready in the sands of Kuwait to destroy Iraqi tanks, or enforce the peace agreement in Bosnia. There is a role for attack helicopters in peace operations.

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<sup>1</sup> "Cheering Crowds Welcome U.S. Troops in Haiti," *The Kansas City Star*, 20 September 1994, sec. A, p. 8.

<sup>2</sup> Ludowese interview.

<sup>3</sup> CALL Combined Arms Assessment Team. *Operation Uphold Democracy Initial Impressions, D-20 to D+40* (Ft Leavenworth, KS: Center for Army Lessons Learned, December 1994), 1.

<sup>4</sup> COL Gregory Fontenot, interview by author, tape recording, Ft Leavenworth, Kansas, 23 February 1998.

<sup>5</sup> Captain Stephen C. Smith. Personal Journal, (Fort Bragg, NC: 11 September 1994), in the possession of the author.

<sup>6</sup> Captain Stuart Beltson, interview by author, tape recording, Ft Leavenworth, Kansas, 21 January 1998.

<sup>7</sup> Beltson Interview.

<sup>8</sup> Lieutenant Colonel James Ludowese, interview by author, tape recording, Ft Leavenworth, Kansas, 23 January 1998.

<sup>9</sup> Fontenot interview.

<sup>10</sup> Fontenot interview.

<sup>11</sup> Ludowese interview.

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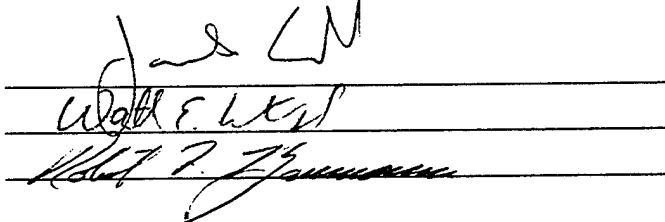
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