THE REALITIES OF WAR: ASSESSING THE OPERATIONAL RISK OF REVOKING THE COMBAT EXCLUSION POLICY

A Monograph

by

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# The Realities of War: Assessing the Operational Risk of Revoking the Combat Exclusion Policy

**In January 2013, Chairman of the Joint Chiefs of Staff General Martin E. Dempsey informed Secretary of Defense Leon Panetta of his intent to rescind the military’s gendered combat exclusion policy and fully integrate all military occupational specialties. The following study assesses the operational risk associated with this decision by comparing the assumptions made by the 1992 Presidential Commission on the Assignment of Women in the Armed Forces regarding the conditions and requirements of combat to the realities of war as experienced and reported by soldiers over the last three decades. Case study analysis indicates that while the Presidential Commission’s concerns regarding the combat environment remain valid, its assumptions regarding the performance of U.S. Army soldiers are no longer accurate. The evidence indicates that from 1982-2012, the U.S. Army: developed and incorporated advanced offensive and defensive military technologies; evolved tactics and doctrine to leverage those technologies; and, finally, expanded its understanding of how and by whom such assets would be used on the battlefield. These efforts dramatically improved the lethality and survivability of all U.S. Army soldiers in combat. More importantly, these findings demonstrate that the U.S. Army possesses both the willingness and ability to mitigate the hazards and demands posed by the modern battlefield. As a result, the operational risk posed by the revocation of the U.S. Army’s combat exclusion policy is low.**
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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.)
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In January 2013, Chairman of the Joint Chiefs of Staff General Martin E. Dempsey informed
Secretary of Defense Leon Panetta of his intent to rescind the military’s gendered combat
exclusion policy and fully integrate all military occupational specialties. Dempsey’s
announcement immediately ignited debate within the U.S. Army over the potential impact
complete gender desegregation. Many of these discussions centered on the continued validity of
the evidence used to support the original U.S. Army policy excluding female soldiers from direct
ground combat. The following study contributes to this discussion by comparing the assumptions
made by the 1992 Presidential Commission on the Assignment of Women in the Armed Forces
regarding the conditions and requirements of combat to the realities of war as experienced and
reported by soldiers over the last three decades. Specific examination of Operations Urgent Fury,
Desert Shield and Desert Storm, Allied Force and Joint Guardian, and Enduring Freedom
indicates that while the Presidential Commission’s concerns regarding the combat environment
remain valid, its assumptions regarding the performance of U.S. Army soldiers are no longer
accurate. The evidence indicates that from 1982-2012, the U.S. Army: developed and
incorporated advanced offensive and defensive military technologies; evolved tactics and doctrine
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<td>AAA</td>
<td>Anti-Aircraft Artillery</td>
</tr>
<tr>
<td>ACU</td>
<td>Army Combat Uniform</td>
</tr>
<tr>
<td>ADRP</td>
<td>Army Doctrinal Reference Publication</td>
</tr>
<tr>
<td>ANA</td>
<td>Afghan National Army</td>
</tr>
<tr>
<td>ANZUS</td>
<td>Australia, New Zealand, United States Security Treaty</td>
</tr>
<tr>
<td>AO</td>
<td>Area of Operations</td>
</tr>
<tr>
<td>AOR</td>
<td>Area of Responsibility</td>
</tr>
<tr>
<td>APC</td>
<td>Armored Personnel Carrier</td>
</tr>
<tr>
<td>AQ</td>
<td>al-Qaeda</td>
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<tr>
<td>AR</td>
<td>Army Regulation</td>
</tr>
<tr>
<td>BDU</td>
<td>Battle Dress Uniform</td>
</tr>
<tr>
<td>BFV</td>
<td>Bradley Fighting Vehicle</td>
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<tr>
<td>BOG</td>
<td>Boots on the Ground</td>
</tr>
<tr>
<td>CA</td>
<td>Civil Affairs</td>
</tr>
<tr>
<td>CAAT</td>
<td>Combined Arms Assessment Team</td>
</tr>
<tr>
<td>CALL</td>
<td>Center for Army Lessons Learned</td>
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<tr>
<td>CAS</td>
<td>Close Air Support</td>
</tr>
<tr>
<td>CCA</td>
<td>Close Combat Attack</td>
</tr>
<tr>
<td>CFC-A</td>
<td>Combined Forces Command - Afghanistan</td>
</tr>
<tr>
<td>CINCCENT</td>
<td>Commander, Central Command</td>
</tr>
<tr>
<td>CINCLANT</td>
<td>Commander, Atlantic Command</td>
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<tr>
<td>CJCS</td>
<td>Chairman of the Joint Chiefs of Staff</td>
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<td>CJTF</td>
<td>Combined Joint Task Force</td>
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<td>CMH</td>
<td>Center of Military History</td>
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<tr>
<td>COIN</td>
<td>Counterinsurgency</td>
</tr>
<tr>
<td>COP</td>
<td>Combat Outpost</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>CPF</td>
<td>Caribbean Peacekeeping Forces</td>
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<tr>
<td>CSAR</td>
<td>Combat Search and Rescue</td>
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<tr>
<td>DACOWITS</td>
<td>U.S. Department of Defense Advisory Committee on Women in the Service</td>
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<tr>
<td>DCU</td>
<td>Desert Camouflage Uniform</td>
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<td>DOD</td>
<td>Department of Defense</td>
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<td>EA</td>
<td>Eastern Alliance</td>
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<td>ETP</td>
<td>Exception to Policy</td>
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<tr>
<td>FLOT</td>
<td>Forward Line of Own Troops</td>
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<tr>
<td>FM</td>
<td>Field Manual</td>
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<tr>
<td>FMC</td>
<td>Fully Mission Capable</td>
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<tr>
<td>FOB</td>
<td>Forward Operating Base</td>
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<tr>
<td>FY</td>
<td>Fiscal Year</td>
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<tr>
<td>GCC</td>
<td>Ground Component Command</td>
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<tr>
<td>GDI</td>
<td>Ground-Directed Interdiction</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>GWOT</td>
<td>Global War on Terror</td>
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<tr>
<td>HMMWV</td>
<td>High Mobility Multipurpose Wheeled Vehicle</td>
</tr>
<tr>
<td>IED</td>
<td>Improvised Explosive Device</td>
</tr>
<tr>
<td>IRGC</td>
<td>Iraqi Republican Guard Corps</td>
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<tr>
<td>JCS</td>
<td>Joint Chiefs of Staff</td>
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<tr>
<td>JEWEL</td>
<td>Joint Effort for Welfare, Education, and Liberation</td>
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<tr>
<td>JFC-N</td>
<td>Joint Forces Command-North</td>
</tr>
<tr>
<td>JFC-E</td>
<td>Joint Forces Command-East</td>
</tr>
<tr>
<td>JTF</td>
<td>Joint Task Force</td>
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<tr>
<td>KFIA</td>
<td>King Fahd International Airport</td>
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<td>KFOR</td>
<td>Kosovo Force</td>
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<tr>
<td>KIA</td>
<td>Killed in Action</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>KTO</td>
<td>Kuwaiti Theater of Operations</td>
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<tr>
<td>LAV</td>
<td>Light Armored Vehicle</td>
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<tr>
<td>LBE</td>
<td>Load Bearing Equipment</td>
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<tr>
<td>LCM</td>
<td>Landing Craft, Mechanized</td>
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<tr>
<td>LOC</td>
<td>Line of Communication</td>
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<td>MARCENT</td>
<td>Marine Central Command</td>
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<tr>
<td>MLRS</td>
<td>Multiple-Launch Rocket System</td>
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<tr>
<td>MOS</td>
<td>Military Occupational Specialties</td>
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<tr>
<td>MRE</td>
<td>Meal, Ready-to-Eat</td>
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<tr>
<td>NA</td>
<td>Northern Alliance</td>
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<tr>
<td>NATO</td>
<td>North Atlantic Treaty Organization</td>
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<tr>
<td>NCEAS</td>
<td>National Center for Ecological Analysis and Synthesis</td>
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<tr>
<td>NDAA</td>
<td>National Defense Authorization Act</td>
</tr>
<tr>
<td>OAS</td>
<td>Organization of American States</td>
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<tr>
<td>ODA</td>
<td>Operational Detachment-Alpha</td>
</tr>
<tr>
<td>OECS</td>
<td>Organization of Eastern Caribbean States</td>
</tr>
<tr>
<td>OEF</td>
<td>Operation Enduring Freedom</td>
</tr>
<tr>
<td>OPORD</td>
<td>Operations Order</td>
</tr>
<tr>
<td>OPLAN</td>
<td>Operation Plan</td>
</tr>
<tr>
<td>POW</td>
<td>Prisoner of War</td>
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<tr>
<td>PRT</td>
<td>Provincial Reconstruction Team</td>
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<tr>
<td>PX</td>
<td>Post Exchange</td>
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<tr>
<td>ROE</td>
<td>Rules of Engagement</td>
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<tr>
<td>RPG</td>
<td>Rocket Propelled Grenade</td>
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<tr>
<td>RSOI</td>
<td>Reception, Staging, and Onward Integration</td>
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<tr>
<td>SEAD</td>
<td>Suppression of Enemy Air Defenses</td>
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<tr>
<td>SOF</td>
<td>Special Operations Forces</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>TAA</td>
<td>Tactical Assembly Area</td>
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<tr>
<td>TF</td>
<td>Task Force</td>
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<tr>
<td>TOW</td>
<td>Tube-launched, Optical-tracked, Wire-guided</td>
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<tr>
<td>UBL</td>
<td>Usama bin Ladin</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNMOVIC</td>
<td>United Nations Monitoring, Verification, and Inspection Commission</td>
</tr>
<tr>
<td>UNSCR</td>
<td>United Nations Security Council Resolution</td>
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<td>USARCENT</td>
<td>U.S. Army Central (Third U.S. Army)</td>
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<td>USF</td>
<td>U.S. Forces</td>
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<td>USCENTCOM</td>
<td>United States Army Central Command</td>
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<td>USLANTCOM</td>
<td>United States Army Atlantic Command</td>
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<tr>
<td>WIA</td>
<td>Wounded in Action</td>
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INTRODUCTION

On January 9, 2013, Chairman of the Joint Chiefs of Staff (CJCS) General Martin E. Dempsey informed Secretary of Defense Leon Panetta of his intent to “rescind the direct combat exclusion rule for women and to eliminate all unnecessary gender-based barriers to [military] service.”¹ In the same informational memorandum, Dempsey outlined a multi-year plan to validate soldier physical and occupational standards, assess the operational impact of complete gender integration, and ultimately “integrate women into the remaining restricted occupational fields within our military.”² The proposed reversal of this longstanding female assignment policy immediately ignited debate within the U.S. Army over the potential impact of complete gender-integration. Many of these discussions centered on the continued validity of the evidence used to support the U.S. Army’s 1992 policy excluding female soldiers from service in direct ground combat units.³ The importance of this issue demands more than a return to decades old data, however; it calls for a complete reevaluation of the logical underpinning of the U.S. Army’s original combat exclusion policy. What follows is a comparison of the assumptions made by the Presidential Commission on the Assignment of Women in the Armed Forces regarding the conditions and requirements of combat to the realities of war as experienced and reported by soldiers over the last three decades. This analysis enables an examination of the validity of the U.S. Army’s original combat exclusion policy and illuminates the level of operational risk associated with its revocation.

² Dempsey, “Women in the Service Implementation Plan.”
Background

Policies governing the assignment of female service members have instigated intense social and political debate since the official inclusion of women in the military in 1948.\footnote{Women’s Armed Services Integration Act of 1948, Public Law 80-625, U.S. Statutes at Large 62 (1948).} Current dialogue often centers on the existing Department of Defense (DOD) policy excluding women from service with direct ground combat units. The inception of this policy dates back to 1988, when the DOD Task Force on Women in the Military acknowledged discrepancies in the understanding and application of the combat exclusion policy among the Services. The matter became a point of legislative contention three years later, in 1991, during congressional debate over the National Defense Authorization Act (NDAA) for Fiscal Years (FY) 1992 and 1993.\footnote{U.S. Department of Defense Task Force on Women in the Military, Report (Washington D.C.: Department of Defense, 1988), 15.} As a result of this increased congressional concern, when the final version of the bill passed in December 1991 it included provisions for a Presidential Commission on the Assignment of Women in the Armed Forces (hereafter referred to as the Presidential Commission). Through the NDAA FY 92-93, Congress charged the Presidential Commission to evaluate the legal and doctrinal framework surrounding the assignment of female service members and provide recommendations on “what roles servicewomen should have in combat” to the President no later than December 1992.\footnote{United States, Presidential Commission on the Assignment of Women in the Armed Forces, Report to the President (Washington D.C.: The Commission, 1992), iii-iv.}

After conducting an extensive study, the Presidential Commission recommended the continued exclusion of women from positions within direct ground combat units on the premise that female service members were unsuited to the unique requirements of these assignments.
Specifically, the Presidential Commission highlighted the necessity of soldiers in direct ground combat units to perform their duties in conditions requiring extreme physical exertion in austere environments under the constant risk of injury, capture, or death. In support of this recommendation, the Presidential Commission cited research detailing the physiological differences between male and female soldiers and the predicted psychological impact of female soldiers on unit cohesion.

The U.S. Army also codified its prohibition on the assignment of female soldiers to units engaged in direct combat or collocated with units engaged in direct combat in 1992 with the publication of Army Regulation (AR) 600-13, Army Policy for the Assignment of Female Soldiers. Since its publication, the U.S. Army has amended this policy only once. In June 2012, in response to requirements levied by Congress and the DOD, Secretary of the Army John McHugh reviewed AR 600-13 and rescinded all items prohibiting the assignment of female soldiers to units doctrinally required to collocate with direct ground combat units. Despite this important alteration, AR 600-13 continues to preclude the assignment of female soldiers to

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7 Presidential Commission, Report to the President, 24.

8 Presidential Commission, Report to the President, 24-27 and C-1 – C-139. Significantly, the Presidential Commission readily admits, “there are no authoritative military studies of mixed-gender ground combat cohesion.” (25, emphasis added) The Presidential Commission goes on to clarify that their concerns are for “the effects that women could have on the cohesion of ground combat units,” characterizing these effects as “unknown but probably negative.” (25 and 27, emphasis added).


positions and units with the “primary mission to engage in direct combat on the ground.”

Consequently, eighteen U.S. Army Military Occupational Specialties (MOS) remain closed to female soldiers.

However, on January 9, 2013 the DOD announced its intent to remove these final barriers to the complete gender integration of the military. Specifically, CJCS General Martin E. Dempsey ordered all Services to immediately expand and enforce all existing exceptions to the combat exclusion policy, develop gender-neutral occupational standards for use in assessing and assigning all service members no later than September 2015, and assess the operational impact of complete gender integration by the first quarter of FY 2016. The following analysis complements these efforts by examining the degree of correlation between the combat conditions assumed by the Presidential Commission and the actual conditions reported by soldiers participating in U.S. Army campaigns over the last thirty years in order to determine the amount of operational risk associated with rescinding the combat exclusion policy.

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12 U.S. Department of the Army, Department of the Army Pamphlet 611-21, Military Occupational Classification and Structures (Washington, D.C.: U.S. Department of the Army, January 22, 2007), Table 13-1.


14 Within the U.S. Army there are no official or commonly accepted definitions of operational risk. However, by applying the concept of risk to the operational level of war, the following composite definition emerges: operational risk is the probability and severity of loss, linked to hazards encountered during campaigns and major operations, which impact the achievement of strategic objectives within theaters or other operational areas. For the definitions of risk and operational level of war, see U.S. Department of the Army, Field Manual (FM) 5-19, Composite Risk Management (Washington, D.C.: U.S. Department of the Army, August 2006), Glossary-7; U.S. Department of Defense, Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms (Washington, D.C.: Headquarters, U.S. Department of Defense, August 15, 2011), 254.
Thesis

The first concern listed by the Presidential Commission, the negative psychological impact of women on unit cohesion, remains unproven. As a result, it is not a valid criterion for the continued exclusion of female soldiers from ground combat units and is omitted from the remainder of this study. Evidence supporting the second concern, the physiological limitations of female soldiers, is accepted as accurate and not disputed. However, historical analysis of the


campaigns executed by the U.S. Army over the past thirty years indicates that while the Presidential Commission’s concerns regarding the hazards and demands of war remain valid, they are significantly mitigated by advances in the technology and doctrine used by the U.S. Army. As a result, the revocation of the combat exclusion policy poses a low operational risk to the U.S. Army.17

Methodology

Official military histories, published soldier memoirs and interviews, and Center for Army Lessons Learned (CALL) reports provide the main sources of data used in the following analysis. These documents establish a clear understanding of the nature of the environment and operations experienced by soldiers deployed in support of U.S. Army campaigns conducted between 1982-2012. According to former Secretaries of Defense Donald Rumsfeld and Robert Gates, the combat experiences of this period provide the best approximation of the military conflicts America will face in the future and thus offer a temporal boundary for this study.18 To ensure the relevance of the analysis to service in direct combat conditions, this study includes only those campaigns awarded a campaign ribbon for display on the Army flag staff by the U.S. Army Center of Military History (CMH). The names, locations, and dates of these campaigns are listed in Table 1, where they have also been categorized by type of operation.

Table 1. U.S. Army Campaigns, 1982-2012

<table>
<thead>
<tr>
<th>Campaign</th>
<th>Location</th>
<th>Date</th>
<th>Type of Operation</th>
</tr>
</thead>
</table>

17 For specific information regarding the U.S. Army’s process for assessing the probability and severity of risk, see U.S. Department of the Army, FM 5-19, 1-10.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Country</th>
<th>Dates</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urgent Fury</td>
<td>Grenada</td>
<td>October 25 – November 21, 1983</td>
<td>Limited Contingency</td>
</tr>
<tr>
<td>Just Cause</td>
<td>Panama</td>
<td>December 20, 1989 – January 31, 1990</td>
<td>Limited Contingency</td>
</tr>
<tr>
<td>Desert Shield</td>
<td>Saudi Arabia</td>
<td>1990-1991</td>
<td>Large-Scale Combat</td>
</tr>
<tr>
<td>and Desert Storm</td>
<td>and Kuwait</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allied Force</td>
<td>Kosovo</td>
<td>1999-present</td>
<td>Peacekeeping</td>
</tr>
<tr>
<td>and Joint Guardian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enduring Freedom</td>
<td>Afghanistan</td>
<td>2001-present</td>
<td>Counterinsurgency</td>
</tr>
<tr>
<td>Iraqi Freedom</td>
<td>Iraq</td>
<td>2003-2012</td>
<td>Counterinsurgency</td>
</tr>
</tbody>
</table>

*Source: U.S. Army Center of Military History; U.S. Department of the Army, Army Doctrinal Reference Publication (ADRP) 3-0, Unified Land Operations; U.S. Department of Defense, Joint Publication 1, Doctrine for the Armed Forces of the United States.*

In order to eliminate redundant evidence, this study includes only one representation of each type of military operation conducted during this time period. As Operations Urgent Fury and Enduring Freedom occurred nearest to the chronological beginning and end dates of the time period studied and thus allow for the broadest base of analysis, they have been selected over Operations Just Cause and Iraqi Freedom to represent limited contingency and counterinsurgency operations, respectively.¹⁹

The contextual information gleaned via case study analysis provides the means to evaluate this data set. This process enables a comparison the actual conditions reported during these campaigns to the assumptions regarding combat made by the Presidential Commission, specifically: the frequency and types of missions performed by units, the equipment issued and...

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used during operations, soldier living conditions, casualty rates, and prisoner of war (POW) capture rates and behaviors. Synthesis of these comparisons facilitates a determination of operational risk in accordance with the parameters established in U.S. Army Field Manual 5-19, *Composite Risk Management*.

**CASE STUDIES**

**Operation Urgent Fury, Grenada**

The roots of American military intervention in Grenada in 1983, code-named Operation Urgent Fury, directly emanated from the illegitimate rise to power of the left-leaning New Joint Effort for Welfare, Education, and Liberation (JEWEL) movement. Originally helmed by Maurice Bishop, New JEWEL overthrew the democratically elected government of Sir Eric Gairy in 1979 and “immediately signed trade and military agreements” with the governments of Cuba and Russia. Though noticeably lopsided, these relationships benefited both the fledgling Grenadian government and the Communist Bloc. Specifically, Cuba gained control over key American air and sea lines of communication (LOC) through the Antilles in return for subsidizing the construction of a military-grade aerial runway in the Grenadian hamlet of Point Salines.

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These developments signaled unprecedented Communist encroachment in the western hemisphere. Within the context of the Cold War, such a power play greatly concerned the small island nations of the Caribbean. Consequently, in 1981 they formed the Organization of Eastern Caribbean States (OECS) in an attempt to protect the sovereignty and stability of the region.\(^{23}\) However, when political turmoil in Grenada again intensified two years later the OECS publically abandoned their position of neutrality and welcomed American overtures to provide security assistance.\(^{24}\)

On October 12, 1983, the Grenadian crisis began in earnest. Disillusioned with Prime Minister Bishop’s promises of economic progress and assuming the public would support his decision, Grenadian Deputy Prime Minister, Bernard Coard, assisted by the Commander in Chief of the Grenadian Armed Forces, General Hudson Austin, assumed control of the government and placed Bishop under house arrest. A week later, however, the public rallied behind Bishop and freed him from confinement. The same riotous crowd that freed Bishop then attempted to overrun the Grenadian Army headquarters at Fort Rupert on Bishop’s behalf; however, soldiers loyal to Coard and Austin fought back. Maneuvering three armored personnel carriers alongside the crowd, the soldiers opened fire, slaughtering Bishop and at least ten other civilians.\(^{25}\) As word of


the murders spread throughout the country, Austin dissolved Coard’s floundering government and installed himself as President of a new Revolutionary Military Council. To instill order, Austin closed the international airport and imposed a strict curfew, warning Grenadians that “violators would be shot on sight.”

Bishop’s death also prompted a flurry of political and military activity within the United States. Increasingly concerned that the new Grenadian military regime would harm or hold hostage the hundreds of American medical students studying on the island, the Joint Chiefs of Staff sent a warning order to U.S. Atlantic Command (USLANTCOM) on October 20. The order instructed USLANTCOM planners to develop courses of action designed to “protect and evacuate U.S. and designated foreign nationals from Grenada.” However, President Reagan did not order planning for military operations to begin until October 22, after the OECS invoked the internal defense clause of their charter and officially requested American assistance.

On October 23, USLANTCOM commander (CINCLANT) Admiral Wesley L. McDonald created Joint Task Force (JTF) 120 for the purposes of executing the President’s guidance, placing Vice Admiral Joseph Metcalf III at the helm of operation Urgent Fury. McDonald allocated Metcalf one special operations force (SOF) task force (TF), one naval task group, one U.S. Army TF (known as TF 26 Beverly Bowen, “Grenadians are Shocked, Bewildered,” *The Globe and Mail*, October 21, 1983; Cole, *Operation URGENT FURY*, 11.


28 Antigua, et al., “Treaty Establishing the Organization of Eastern Caribbean States,” 102-103; Specifically, the OECS charter extends the OECS Defense and Security Committee the power to “advise the [OECS] on matters relating to external defence and on arrangements for collective security against external aggression, including mercenary aggression, with or without the support of internal of national elements.” (Emphasis added). See also: Cole, *Operation URGENT FURY*, 22 and 26.
121), and one U.S. Marine Corps TF. On October 24th—having had less than 48-hours notice—each of these elements arrived at their initial assault position.29

Operation Urgent Fury commenced at 0530 hours the following morning, October 25, 1983. CH-46 “Sea Knight” helicopters inserted the marines of the 2nd Battalion, 8th Marine Regiment (2-8 Marines) “south of Pearls Airport on the east coast of Grenada;” quickly followed by the airborne assault of 1st Battalion, 75th Ranger Regiment (1-75th) onto the Point Salines runway.30 Approximately thirty minutes later, helicopters inserted 12-man SOF teams at four separate locations:

- the Richmond Hill Prison to rescue political prisoners,
- the broadcast studio and transmitter of Radio Free Grenada to prevent the regime from calling for popular resistance to the landings,
- the headquarters of the People’s Revolutionary Army at Fort Rupert to disrupt command and control,
- the governor general’s residence to protect Sir Paul Scoon and his family.31

Once on the ground, the terrain these units encountered was as diverse as their mission sets. Near Port Salines, soldiers conducted foot movements of between 500-1000 meters over terrain that included rolling hills, as well as improved and unimproved roads. Further north, marines moved similar distances by foot, but over terrain that resembled marshy wetlands. The intensity of enemy resistance also varied by location. For example, the 1-75th required almost seven hours to secure Point Salines due to intense enemy anti-aircraft artillery (AAA) and ground

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fire, while the 2-8 Marines secured Pearls Airport in less than two hours after warding off a few half-hearted rounds from retreating Grenadian forces.32

However, while the external conditions encountered by these units varied greatly, there was an element of internal consistency in each unit. For example, each soldier met the enemy carrying roughly the same equipment. On average, they carried three-days worth of ammunition, two-days worth of water and rations, “personal issue items (extra pairs of socks, underwear, and spare uniforms), and necessities (toothpaste, hand soap, toilet paper, and razors.)”33 Additionally, they wore winter-weight battle dress uniforms (BDU), leather boots, Kevlar protective vests and helmets, and carried a weapon.34 Using the weight of modern military gear as a guide, adjusting upward for the heavier weight of military equipment in 1983, and accounting for individual deviations from the packing list, these soldiers entered the fight carrying a minimum of 85 pounds (lbs.) of gear.35 Given this preponderance of evidence, there can be no doubt that the initial


33 For a detailed summary of the packing lists for initial assault forces see Raines Jr., *The Rucksack War*, 176 and 187. Information included here specifically refers to information collected from the 1/75th and 2nd Brigade, 82nd Airborne Infantry Division (2/82), as these elements were on the ground in Grenada within eight hours of the commencement of the invasion. Additionally, for visual representation of packing list information via historical photographs taken during the operation, see Rains, Jr., *The Rucksack War*, 181, 188, 217, 244.


35 Cross-case analysis of all case studies presented in this monograph indicates that during the time period studied, the average U.S. Army soldier carried a period-appropriate version of a standard combat load. For further information, see Appendix B, Equipment Weights and Load Calculations. Specifically with regard to Operation Urgent Fury, additional evidence that this number is likely correct, if not high, was gleaned by Raines, Jr. from interviews conducted with leaders in 3rd Brigade, 82nd Airborne Division (3/82ABN), the unit that followed
assault on Grenada required soldiers to carry heavy equipment while moving relatively short
distances on foot, and facing a varied—but constant—enemy threat.

Plagued by logistical failures at the operational level, soldiers deployed to Grenada
continued to face similar hardships for the following seventy-two hours. Most notably, the TF
121 commander’s decision to deploy additional infantry forces to Grenada before reuniting the
operational support and sustainment elements of 1-75th and 2-8 Marines delayed arrival of much-
needed vehicles, supplies, and water.36 Many units compensated for these shortages by
confiscating the civilian vehicles and equipment necessary to complete their missions.37 These
expediences relieved pressure on the logistical units operating in secured areas, however, they
reportedly did not lessen the burden on combat units. In particular, JTF 120 stated in an after-
action review that the lack of combat vehicles “added to the individual soldiers [sic] load and
diminished the fighting capability of the ground force.”38 However, an objective examination of
the operations of 2nd and 3rd Battalions, 325th Infantry Regiment (2-325IN and 3-325IN,
respectively) does not entirely validate this claim. These units provide a representative sample of

2nd Brigade, 82nd Airborne Division (2/82ABN) into Grenada. Reportedly, these elements chose
to forgo use of their “A-bag” (a duffle bag usually allotted for a soldier’s personal gear and
transported separately by their associated sustainment unit) and thus would have likely deployed
with heavier rucksacks. However, these officers reported that soldiers’ rucksacks “weighed
between seventy and eighty pounds when they finished loading them.” See Raines, Jr., The
Rucksack War, 313 for further. For a comprehensive listing of the weight of individual military
equipment currently used in combat, see Task Force Devil Combined Arms Assessment Team
(CAAT), The Modern Warrior’s Combat Load: Dismounted Operations in Afghanistan, April-
May 2003 (Fort Leavenworth: Center for Army Lessons Learned, 2003), 107-111.

(June 1990): 58-60; Raines, Jr., The Rucksack War, 318, 544; JTF 120, “Grenada After Action
Review” (briefing, Center for Army Lessons Learned, n.d.).

37 Raines, Jr., The Rucksack War, 425-426, 456.

38 JTF 120, “Grenada After-Action Review” (briefing, Center for Army Lessons Learned,
n.d.).
units operating on the island from October 26-28; for reference, the experiences of 2-325IN represent the most arduous conditions reported by any unit operating in Grenada during this period, while the operations of 3-325IN represent experiences similar to those recounted by the majority of units on the island.

Having arrived in Grenada on the evening of October 25, 2-325IN and 3-325IN began to maneuver east just after dawn the following morning. As members of TF 121, these units joined the 1-75th in consolidating and expanding the defense of Point Salines. In the far northwest, B Company, 2-325IN (B/2-325IN) engaged in “the most intense close combat for any element of the 82d Airborne Division during URGENT FURY.”39 Ambushed enroute to attack an enemy-held compound north of the village of Calliste, B/2-325IN maneuvered only 800 meters in three and a half hours; ultimately suffering two soldiers killed in action (KIA) and seven soldiers wounded in action (WIA) before declaring their objective secure. On their flank, A Company, 2-325IN (A/2-325IN) pursued a small contingent of enemy soldiers attempting to escape into the jungle ahead of B Company’s advance. Despite only traveling an additional 100 meters, the combination of increasingly steep terrain and rapidly mounting temperatures quickly took a toll on the company. Per the A Company commander, the unit suffered so many heat casualties so rapidly that he “almost immediately” instructed his men to “remove their flak jackets and tie them to their rucksacks” before pursuing the enemy soldiers any further.40 Unaware of the A Company situation, B/2-325 IN completed its post-combat consolidation and re-organization at Calliste and pushed east toward its next objective—the Radio Free Grenada broadcast station south of Grand Anse Beach. Laboring under the weight of their equipment and stifled by the heat and humidity of the jungle, however, the soldiers of B Company quickly suffered the same fate as their peers.

39 Raines, Jr., *The Rucksack War*, 341.

40 Raines, Jr., *The Rucksack War*, 342.
The company required five hours to travel the one-kilometer distance to the broadcast station, losing thirty soldiers to heat injuries along the way.\textsuperscript{41}

Originally held in reserve, C Company, 2-325 IN (C/2-325IN) assumed responsibility for securing the Grenadian military complex at Frequente after the 325 IN battalion commander committed A/2-325IN to the Calliste compound fight. Able to skirt the steep terrain facing A and B Companies in the north, C Company maneuvered easily through 1800 meters of jungle to their objective. The company quickly seized Frequente, belatedly accepting the surrender of the single soldier present at the facility. Following the Frequente mission, C Company – indeed, all of 2-325IN – made contact with only one other enemy force. 2-325IN’s final direct combat engagement during Operation Urgent Fury occurred when a Cuban mounted patrol, unaware of the C/2-235IN presence at Frequente, attempted to ambush a 2-325IN reconnaissance element and instead perished in the face of C Company’s superior defenses and firepower.\textsuperscript{42}

Just south of C/2-325IN, 3-325IN was also pressing east in accordance with the TF 121 operations order (OPORD). Company-sized elements conducted limited attacks to secure key terrain near the town of Ruth Howard and True Blue Point. Also relegated to foot marches, but reaping the benefits of better topography, 3-325IN units easily traveled the one kilometer to their objectives along wide avenues of approach across relatively flat terrain. Throughout the day, they made contact with only a single enemy soldier, a sniper, which American troops killed when he refused to surrender.\textsuperscript{43} Though dramatically different from the experiences of 2-325IN, 3-325IN dealt with conditions similar to many other units involved in the operation, such as the marines

\textsuperscript{41}Raines, Jr., \textit{The Rucksack War}, 340 - 343.

\textsuperscript{42}Raines, Jr., \textit{The Rucksack War}, 340-343.

\textsuperscript{43}Raines, Jr., \textit{The Rucksack War}, 346.
maneuvering from Pearls and Grenville to St. George. Overall, the experiences of all but one battalion indicate that despite the lack of vehicular support, the majority of combat units maintained swift and unopposed movement because of the nature of the terrain on which they fought and relatively low intensity of the threat.

By October 28, U.S. and Caribbean Peacekeeping Forces (CPF) controlled the island and had begun to transition to the second phase of the operation—pacification. This change in conditions, called “dramatic” by TF 121 Chief of Staff COL Peter J. Boylan, prompted leaders to significantly downgrade uniform standards. Specifically, photographic evidence indicates that soldiers patrolled without rucksacks or Kevlar protective vests, carrying only a day’s worth of food and water, their weapon, and basic load of ammunition. Soldier mobility also improved, as the arrival of force sustainment units to the theater finally broke the JTF’s logistical logjam and expedited the arrival and distribution of tactical vehicles. Throughout the island, U.S. soldiers executed their assigned pacification missions without incident, prompting the JTF 120 commander to announce the cessation of hostilities and the dissolution of the JTF on November 2. Two days later, the U.S. forces remaining in Grenada transitioned to peacekeeping operations, the third and final phase of Operation Urgent Fury. Battalion-sized elements from the 1st Support Command-Forward (1SC-FWD) and 3rd Brigade, 82nd Airborne Division (3/82ABN) executed civil affairs assessments, provided medical assistance, completed field sanitation tasks, and

44 For descriptions of the operations conducted by SOF and the 2-8 Marines in northern Grenada see Raines Jr., The Rucksack War, 333-335 and 441-442.

45 Colonel Peter J. Boylan, quoted in Raines, Jr., The Rucksack War, 472.

46 Raines, Jr., The Rucksack War, 473

47 Raines, Jr., The Rucksack War, 324 and 367.

48 Raines, Jr., The Rucksack War, 476.
and policed the villages around their compounds. During this period—which amounted to three-quarters of the duration of Operation Urgent Fury—soldiers operated in a low-threat environment that allowed for the use of wheeled transportation, reduced personal equipment loads, and decreased mission durations.\(^49\)

On November 21, 1983, at the cost of 12 soldiers KIA and 108 WIA, Operation Urgent Fury ended.\(^50\) Rapid, successful, and decisive—Urgent Fury proved to the nation and the world that the U.S. military no longer suffered from its Vietnam-induced inferiority complex. Additionally, it confirmed the value of joint warfighting on the modern battlefield, which ushered in a new era of tactical and operational thinking within the uniformed services.\(^51\) Nearly a decade later, however, the Presidential Commission would cite the tactical missions, austere living conditions, and number of casualties experienced during Operation Urgent Fury as evidence that “ground combat is no more refined, no less barbaric and no less physically demanding than it has been throughout history.”\(^52\) However, in focusing on these extremes, the Presidential Commission marginalized evidence of the U.S. Army’s increasing dependence on wheeled transport and extensive logistical support, as well as the overall decrease in the rate of soldiers killed, wounded, or taken prisoner.\(^53\) The deliberate decision to minimize the importance of technology and its

\(^{49}\) Raines, Jr., *The Rucksack War*, 472-476, 484-513.


\(^{51}\) Stewart, *Operation Urgent Fury*, 36.


\(^{53}\) Soldier casualty rates during the 33.2 combat years between 1982-2012 were hundreds of times less than soldier casualty rates during the 35.3 combat years experienced between 1775-
associated doctrine and focus only on the limited experiences of a handful of units is representative of the cognitive dissonance that permeates the entire combat exclusion policy debate. Over ninety of the reported activity during Urgent Fury does not correspond to the conditions of combat assumed by the Presidential Commission.\(^5^4\) This is not to say that such a preponderance of evidence diminishes the importance of the remaining ten percent; however, neither should this ten percent diminish the validity of the ninety. When viewed in its entirety, Operation Urgent Fury provides little evidence that the revocation of the combat exclusion policy would pose more than a low operational risk to the U.S. Army.

**Operation Desert Shield and Desert Storm, Saudi Arabia and Kuwait**

Eight years after Operation Urgent Fury, and a short eight months after completing contingency operations in Panama, the United States found itself again embroiled in a war to protect its vital interests abroad. The conflict centered on the tiny state of Kuwait, an obscenely rich Arab nation that benefitted immensely from its geographic position as the “door to the entire oil-producing [Persian Gulf] region.”\(^5^5\) What Kuwait touted in riches, however, it sorely lacked in military strength. Consequently, its northern neighbor, the Republic of Iraq, increasingly viewed the invasion and annexation of Kuwait as a swift and lucrative method of managing its own burgeoning fiscal crisis.\(^5^6\) Thinly veiling these financial motives in a cloak of pan-Arabism, Iraqi

\(^{5^4}\) See previous discussion on the downgrading of uniform and threat levels on October 28, 1983, three days after the commencement of hostilities. Operation Urgent Fury lasted a total of 28 days; the period October 25-28 constitutes the 10% of reporting that aligns with the Presidential Commission’s assumptions.


President Saddam Hussein signaled his intent to invade Kuwait in both diplomatic and public information forums as early as February 1990. However, the launch of over 140,000 Iraqi troops and 3,000 tanks, infantry vehicles, artillery pieces, and logistical trucks across the Iraq-Kuwait border at 0200 hours on August 2, 1990, still surprised almost every nation in the world.

The U.S. response to the Iraqi aggression was immediate; President George H. W. Bush publically condemned the invasion during a press conference at 0845 hours on August 2, where he called for the “immediate and unconditional withdrawal of all... Iraqi forces [in Kuwait].” Three days later, Bush dispatched his Secretary of Defense, the Honorable Dick Cheney, U.S. Central Command (USCENTCOM) Commander-In-Chief (CINCCENT) General H. Norman Schwarzkopf, and U.S. Army Central (USARCENT) Commander Lieutenant General John J. Yeosock to the Kingdom of Saudi Arabia to persuade King Fahd bin Abdulaziz Al Saud to request U.S. assistance in defending his country from future Iraqi aggression. Fahd conceded on

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57 Dennis R. Mitzel, “When Will We Listen?” (research report, Air War College, April 1997), 6-7.


60 U.S. Army Central is alternately referred to as USARCENT and Third U.S. Army in much of the literature on Operations Desert Shield and Desert Storm. It is the same unit. For clarity, USARCENT will be used throughout the remainder of this document. Of note, the U.S.
August 6, and on August 7 Bush authorized the deployment of U.S. military forces to Southwest Asia.\textsuperscript{61} The 2\textsuperscript{nd}, 1\textsuperscript{st}, then 3\textsuperscript{rd} Brigades of the 82d Airborne Division (2/82ABN, 1/82ABN, and 3/82ABN, respectively) hastily deployed to the Kingdom from August 8-24, prepared to “deter and counter any Iraqi aggression against Saudi Arabia.”\textsuperscript{62} Simultaneously, designated U.S. Navy vessels and U.S. Air Force platforms also began making their way to the Gulf.\textsuperscript{63} These actions clearly signaled Bush’s intent to uphold the Carter Doctrine, a decade old policy that explicitly stated “An attempt by any outside force to gain control of the Persian Gulf region [would] be regarded as an assault on the vital interests of the United States of America,” and that “such an assault [would] be repelled by any means necessary, including military force.”\textsuperscript{64} In essence, despite the defensive rationale behind its initial deployment, the U.S. Army readied for war. Operation Desert Shield officially began with the deployment of ground combat troops from the United States on August 8, 1990.\textsuperscript{65} The concept of the operation was to “defend Saudi


\textsuperscript{63} United States Department of Defense, \textit{Conduct of the Persian Gulf War}, 22.


\textsuperscript{65} United States Department of Defense, \textit{Conduct of the Persian Gulf War}, 44. Of note, the CMH lists August 2, 1990 as the date Operation Desert Shield began, despite the fact that combat forces did not arrive in Saudi Arabia until August 8, 1990.
Arabia with whatever forces were on hand while a buildup of additional forces was occurring. As the Ground Component Command (GCC), USARCENT met this challenge by planning three separate operations, code named Desert Dragon I, Desert Dragon II, and Desert Dragon III. The Desert Dragons were sequential, cumulative operations designed to protect critical Saudi Arabian infrastructure and serve as a credible deterrent to further Iraqi aggression.

As the first combat unit to arrive in the Kuwaiti Theater of Operations (KTO), 2/82ABN served as the main effort for Desert Dragon I. They landed in Saudi Arabia on August 9, immediately establishing a defensive perimeter around Dhahran Air Base and the port of ad-Dammam. Uncertain of what Hussein’s reaction would be to the arrival of American combat power on his southern flank, 2/82ABN set to work fortifying these key logistical nodes to prevent Iraqi forces from moving within indirect fire range and enable U.S. follow on forces to flow into the KTO unmolested. Troops conducted much of this work at night to avoid the intense desert sun, spending their days rehydrating and attempting to rest in the only area large enough to contain them—an open field behind the U.S. Military Training Mission to Saudi Arabia. From August 9-12, the soldiers of 2/82ABN executed Desert Dragon I with the equipment and rations

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69 Schubert and Kraus, *The Whirlwind War*, 56. At some point during DESERT DRAGON I, the officers of the U.S. Military Training Mission to Saudi Arabia arranged for soldiers to be transported to and housed at a vacant Saudi military building several miles from Dhahran. However, as the field continued to be used to contain troops upon their initial arrival into the KTO, and chronological information is not available to determine exactly when this move occurred, this information is only provided as a footnote. See Schubert and Kraus, 57 for further.
they deployed with. While working, they wore desert camouflage uniforms (DCU), Kevlar helmets, and a load bearing equipment (LBE) harness. They also kept their weapons, chemical protective over-garments, and chemical protective masks at arms length. For food, they ate pre-

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70 Detailed packing lists for 82d Airborne Division units deploying in support of Operations Desert Shield and Desert Storm could not be located. However, the available evidence supports the inference that these soldiers carried the standard combat load identified in Appendix B, Equipment Weights and Load Calculations. In addition to the standard combat load, all soldiers deployed in support of Operations Desert Shield and Desert Storm carried chemical protective over-garments and chemical protective mask in order to counter the chemical weapon threat posed by Iraq; the total weight of the standard combat and chemical protective load during this period was therefore 95 lbs. See Appendix B for further. Specific support for the accuracy of these calculations can be found in Reginald R. Gooden, “Experiences during Operations Desert Shield/Storm: Operations Desert Shield/Storm, Iraq, 08/12/90 thru 04/01/91, 91B1P, Infantry Platoon Combat Line Medic, A Company, 1/505th PIR, 82d ABN DIV,” United States Army Sergeant Majors Academy Personal Experience Papers Collection, Combined Arms Research Library, Fort Leavenworth, KS. Specifically, Gooden states, “once he packed his rucksack, it weighed in excess of 90 pounds.” It is important to note that this is the weight of Gooden’s rucksack alone, indicating that his total combat load was 142.49. This number is obviously higher than the 95 lbs. weight noted earlier in this note. This discrepancy can be accounted for by the fact that Gooden was a combat line medic, who by his own account assisted his platoon in carrying enough “medical supplies [specifically intravenous (IV) fluids] to sustain [his unit] for 72 hours.” Per the TF Devil CAAT data and the current Medical Equipment Set Combat Medic Support and Consumables Handbook, the modern combat medic carries a medic bag weighing 19.5 lbs., which includes six pairs of patient examining gloves. Given the context of Gooden’s statement, we can thus infer that Gooden anticipated treating at least six patients a day for at least three days. We can additionally infer that he prepared to administer the maximum allowable dosage of IV fluids to those patients. Current Defense Health Board and Combat Medic Advanced Skills Training documents indicate that this dosage should not exceed 1000ml (1.3 lbs.) of the crystalloid fluid Hextend or 1000ml (2.4 lbs.) of the crystalloid fluid Ringers Lactate. Based on this information, Gooden likely carried at least 33.3 lbs. of IV fluids. Combined, the medic bag and additional IV fluids totaled 52.8 lbs. Deducting this total from the total weight reported by Gooden returns the non-medical combat load to 89.69 lbs., roughly conforming to the weight of the likely combat load carried by 82d Airborne Division soldiers. Medical references cited include the following: U.S. Army Medical Materiel Agency, Medical Equipment Set Combat Medic Support and Consumables Handbook: 6545-01-609-2699, UA 246C, LIN U65480 (Fort Detrick, MD: U.S. Army Medical Materiel Agency, January 2013); Hypovolemic Shock Management: Combat Medic Advanced Skills Training (brief, 10th Mountain Division, n.d.), slide 44-48; Wayne M. Lednar and Gregory A. Poland, “Recommendations Regarding the Tactical Combat Casualty Care Guidelines on Fluid Resuscitation 2010-07,” Memorandum for George Peach Taylor, Jr. M.D., December 10, 2010; Task Force Devil CAAT, The Modern Warrior's Combat Load, 109.
packaged meals, called Meal, Ready to Eat (MRE), and supplemented their dietary shortfalls with hamburger from a Hardee’s restaurant near the airport.\textsuperscript{71}

What 2/82ABN initially lacked in creature comforts, they more than made up for in firepower. Prior to their departure, XVIII Airborne Corps augmented the forces assigned to deploy with the 2/82ABN in order to mitigate the limitations inherent in the structure of any regular light infantry brigade.\textsuperscript{72} Consequently, within days of arriving, 2/82ABN received not only several of their organic tube-launched, optical-tracked, wire-guided (TOW) missile-equipped High Mobility Multipurpose Wheeled Vehicles (HMMWV), but also an additional M551 (Sheridan) tank company, battalion of Apache attack helicopters, battalion of 105mm howitzers, and Multiple-Launch Rocket System (MLRS) platoon.\textsuperscript{73} The arrival of these assets heralded the end of Desert Dragon I, as they provided 2/82ABN the capacity necessary to execute Desert Dragon II.

On August 12, 2/82ABN expanded the American “toehold” in Saudi Arabia into a “foothold” during Desert Dragon II.\textsuperscript{74} During the operation, 4\textsuperscript{th} Battalion, 325th Airborne Infantry Regiment (4-325IN) “moved north 110 miles to occupy the port of al-Jubayl in order to protect the arrival of the 7\textsuperscript{th} Marine Expeditionary Brigade,” while a second infantry battalion established Forward Operating Base (FOB) Essex near the Saudi Arabian city of An Nu’ayriyah, roughly 200 miles to the northwest.\textsuperscript{75} The establishment of FOB Essex was a key defensive move within the

\textsuperscript{71} Schubert and Kraus, \textit{The Whirlwind War}, 53, 65.

\textsuperscript{72} For an analysis of the strengths and weaknesses of the light infantry brigade, see Ray B. Johnson, Scott Campbell, Mark E. Moore, Frankie Marrero, and Sue Parnell-Smith, “The Light Infantry Division” (group paper, United States Army Sergeant Majors Academy, 2005), 6.

\textsuperscript{73} Scales, \textit{Certain Victory}, 82.

\textsuperscript{74} Scales, \textit{Certain Victory}, 84.

\textsuperscript{75} Scales, \textit{Certain Victory}, 86. For reference, 1\textsuperscript{st} Battalion, 325\textsuperscript{th} Infantry Regiment (1-325
KTO. Its size and location supported the forward deployment of U.S. Army close combat attack (CCA) aviation assets, which provided a first strike capability against any encroaching Iraqi forces and thus dramatically increased freedom of maneuver for the rapidly growing number of U.S. and coalition forces arriving at Dhahran, ad-Dammam, and al-Jubayl. Logistical relief also accompanied the influx of combat forces. On August 17, four ships containing “pre-positioned stocks of equipment” arrived in ad-Dammam, providing enough supplies to “[stabilize] most of the immediate crises” facing the troops operating within the KTO. By August 19, host nation logistical support also began to flow. During this period, Saudi Arabia provided an astounding 1.5 million gallons of water, 270,000 meals, 13,530 vehicles, 2,700 latrines, 2,250 shower units, and

IN), 2nd Battalion, 325th Infantry Regiment (2-325 IN), and 4-325 IN were the three infantry battalions subordinate to 2/82 ABN for the duration of Operations Desert Shield and Desert Storm.

Schubert and Kraus, *The Whirlwind War*, 59. Specifically, Schubert and Kraus report that these ships, which “had been anchored off the coast of Diego Garcia[,] brought rations, cots, tents, blankets, and medical supplies, as well as refrigerated trailers, reverse-osmosis water-purification units, forklifts, and tactical petroleum terminals.” Additionally, it is important to note that the personal equipment and rations arriving in theater with units who had deployed after the 82d Airborne Division were quantitatively different. These items were what U.S. Department of the Army FM 21-18 terms sustainment loads. For further information, see U.S. Department of the Army, *Foot Marches* (Washington, D.C.: U.S. Department of the Army, 1990), 5-1 – 5-17. For information on the average composition and weight of these sustainment loads, see Appendix B, Equipment Weights and Load Calculations. Specifically with regard to Operation Desert Storm, the most detailed sustainment load packing list can be found in Stephen A. Bourque and John W. Burdan III, *The Road to Safwan: The 1st Squadron, 4th Cavalry in the 1991 Persian Gulf War* (Denton, TX: University of North Texas Press, 2007), 31. Specifically, Bourque and Burdan reference the personal notes of Debra L. Anderson, who served as a member of the 1st Infantry Division G1 during the pre-deployment and deployment operations of 1st Squadron, 4th Cavalry Regiment (1-4 CAV). Bourque and Burdan’s summary of Anderson’s notes state that “each soldier had four uniforms with all patches and name tags sewn on, two pairs of boots, eight pairs of socks, six pairs of under shorts, two field jackets, his web gear to carry his pack, two canteens, a sleeping bag, shelter half, chemical protective over-garments, protective mask, helmet, and so on and so forth.” Using the data provided by the TF Devil CAAT, those items listed in addition to the standard soldier combat load totaled 25.81 lbs., increasing the 1ID soldier’s combat load to 120.81 lbs. Unlike 2/82 ABN units, however, 1ID soldiers spread their gear between “two duffel bags and a rucksack,” which they moved by truck to their housing area, where it remained for the majority of their time in Saudi Arabia.

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40,000 bundles of laundry to U.S. troops per day. Additionally, the Saudi government made available the use of large festival tents, high-rise apartment buildings, and commercial warehouses to provide soldiers respite from the brutal desert sun and sand.\textsuperscript{77} Desert Dragon II continued until September 1, when XVIII Airborne Corps “ordered the 101\textsuperscript{st} Airborne Division (Air Assault) (101 AASLT) to relieve 2/82ABN at FOB Essex.”\textsuperscript{78} In all, Desert Dragon II enabled the reception, staging, and onward integration (RSOI) of such a significant amount of combat power that the USARCENT commander declared himself “confident in [the unit’s] ability to detect and punish a major armored attack.”\textsuperscript{79}

Desert Dragon III began two days later, on September 3, when the 101 AASLT established Area of Operations (AO) Normandy, north of the re-christened FOB Bastogne (formerly FOB Essex).\textsuperscript{80} From FOB Bastogne, the attack aviation and long-range artillery of the 101 AASLT prepared to attack the forward echelons of any Iraqi forces bold enough to cross the Kuwaiti-Saudi Arabian border. Behind them, the recently arrived and heavily armored 24\textsuperscript{th} Infantry Division (24ID) positioned themselves to destroy any forces that escaped the 101 AASLT’s onslaught. The brigades of the 82d ABN DIV returned to their defensive positions around the critical infrastructure of at Dhahran, ad-Dammam, and al-Jubayl to protect the flow of logistical and combat units still arriving in theater.\textsuperscript{81} Desert Dragon III culminated in early October, having successfully established the “shield” for which the larger operation is named.

\textsuperscript{77} Schubert and Krause, \textit{The Whirlwind War}, 62.

\textsuperscript{78} Scales, \textit{Certain Victory}, 92.

\textsuperscript{79} Scales, \textit{Certain Victory}, 86. For reference, by August 30, the U.S. Army had deployed over 40,000 soldiers, 237 helicopters and 5700 vehicles to the KTO. See also Schubert and Kraus, 59 for further information on the arrival of troops and equipment during the month of August.

\textsuperscript{80} Scales, \textit{Certain Victory}, 91-92.

\textsuperscript{81} Scales, \textit{Certain Victory}, 92-93.
Over the next three months, an additional 250,000 American troops arrived, trained, and deployed to forward defensive positions under the protection established by the Desert Dragon operations. As time passed, living conditions dramatically improved throughout the KTO, most significantly for those units furthest from the Iraqi-Saudi Arabian border. For example, bases such as Camp Eagle II [located near King Fahd International Airport (KFIA)] gained thousands of tents, latrines, showers, as well as movie theaters, telephone banks, and a Post Exchange (PX). Conversely, soldiers rotating through the sandy desolation of FOB Bastogne found themselves living out of foxholes and using “MRE boxes as pillows.” Regardless of their sleeping arrangements, soldiers throughout the KTO had one thing in common—they spent the majority of their waking hours preparing to defend Saudi Arabia from the imminent threat posed by forty-three Iraqi armored and infantry divisions arrayed along southwestern borders of Iraq and Kuwait. Ultimately, no attack came from these forces; unfortunately, this did not prevent the loss of American life. According to the Defense Casualty Analysis System, as Operation Desert

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82 Bourque and Burdan, *The Road to Safwan*, 113; Schubert and Kraus, *The Whirlwind War*, 62.


Shield drew to a close on January 15, 1991, the U.S. Army had already suffered 21 soldier deaths from non-hostile causes.\textsuperscript{86}

Operation Desert Storm, the military mission to liberate Kuwait, began with the scream of HELLFIRE missiles fired by a company of U.S. Army Apache helicopters at 0238 hours on January 17, 1991.\textsuperscript{87} Immediately following the Apache onslaught, U.S. Air Force attack aircraft penetrated Iraqi airspace and proceeded to pummel exposed Iraqi military units and infrastructure.\textsuperscript{88} For the next five weeks, the U.S. Air Force executed thousands of aerial attack and bombing missions throughout Iraq in an attempt to reduce overall Iraqi combat effectiveness and mask the repositioning of U.S. Army ground combat and logistical forces. The U.S. Army prepared for the upcoming ground invasion by conducting limited reconnaissance and indirect fire operations along the Iraqi-Saudi Arabian border.\textsuperscript{89} Specifically, armored reconnaissance patrols from the 3\textsuperscript{rd} Armored Cavalry Regiment (3ACR) probed Iraqi defenses along border, while artillery batteries from the 1\textsuperscript{st} Infantry Division (1ID) and 1\textsuperscript{st} Cavalry Division (1CD) relentlessly bombarded Iraqi formations with thousands of pounds of ordnance. Additionally, just behind USARCENT’s forward line of own troops (FLOT) the 22d Support Command (22SUPCOM) “logged about 1.2 million miles per week” moving men and materiel north to


\textsuperscript{88} Schubert and Kraus, \textit{The Whirlwind War}, 155-171.

establish logistical supply bases capable of supporting continued offensive operations.⁹⁰ In all, these efforts resulted in the reduction of Iraqi frontline and reserve units to less than 50% strength and the maneuvering of more than two corps of U.S. military might into favorable assault positions by February 23, 1990.⁹¹

The “ground assault to liberate Kuwait,” began at 0400 hours on February 24, 1990 and famously lasted for just 100 hours.⁹² In accordance with the CINCCENT Operation Plan (OPLAN) for Operation Desert Storm, units attacked into Iraq as if aligned along the invisible spoke of a “Great Wheel.”⁹³ Arrayed along the southwestern border of Iraq, USARCENT forces were the furthest from the hub of the wheel. The first of its major subordinate commands, XVIII Airborne Corps, conducted “a supporting attack to block east-west LOCs...[within southern Iraq] to isolate Iraqi forces in the [KTO];” the second, VII Corps, attacked “north...along the western Kuwait border to destroy Republican Guard forces.”⁹⁴ On USARCENT’s eastern flank, Joint Forces Command-North (JFC-N), U.S. Marine Central Command (MARCENT), JFC-East (JFC-E)—each progressively closer to the hub of the wheel—attacked north to destroy Iraqi forces in

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⁹¹ For information on the attrition of Iraqi forces during the Operation Desert Storm air war, see United States Department of Defense, Conduct of the Persian Gulf War, 353; Schubert and Kraus, The Whirlwind War, 166. For information on the repositioning of U.S. combat power prior to the commencement of ground offensive operations, see United States Department of Defense, Conduct of the Persian Gulf War, 336, 341; Flanagan, Jr., Lightning, 135-147.

⁹² United States Department of Defense, Conduct of the Persian Gulf War, 358; Scales, Certain Victory, 216, 316.

⁹³ Scales, Certain Victory, 145-150.

⁹⁴ Headquarters, USCENTCOM, Riyadh, Saudi Arabia, APO NY 09852, 16 December 1990, USCINCCENT OPLAN for Operation Desert Storm, 14 and 18, quoted in Swain, Lucky War, 207. Emphasis in original.
Kuwait.\textsuperscript{95} For four days and four nights, American and coalition units throughout the KTO attacked towards their objectives in accordance with the larger USCENTCOM OPLAN.\textsuperscript{96} Notably, however, each did so using unique methods of attack and facing distinctly different amounts of enemy resistance. Specific examination of USARCENT’s air assault, obstacle breaching, and ground maneuver operations provide excellent examples of the variety of missions and equipment used by soldiers during the ground combat portion of Operation Desert Storm.

As the first major maneuver of ground invasion, the XVIII Airborne Corps ordered the 101 AASLT to seize a large clearing 100km into Iraq and establish a forward operating base (FOB) code named Cobra.\textsuperscript{97} XVIII Airborne Corps specifically chose the 101 AASLT for this mission, as the unit’s unique air assault capability would allow it to quickly mass combat power deep in enemy territory, shocking Iraqi troops in the area and deceiving the Iraqi Republican Guard Corps (IRGC) as to the location of the USCENTCOM main attack. 1\textsuperscript{st} Brigade, 101\textsuperscript{st} AASLT (1/101 AASLT) successfully executed the task, deploying roughly “200 aircraft…2050 soldiers, 50 TOWs, two artillery batteries, and [their] Command and Control people and equipment,” in less than three hours.\textsuperscript{98} Once on the ground, 1/101 AASLT’s infantry battalions cleared the 200km area allotted for FOB Cobra using a mixture of foot, vehicle, and helicopter patrols to find and destroy Iraqi troops. Simultaneously, artillery batteries emplaced their guns

\textsuperscript{95} United States Department of Defense, \textit{Conduct of the Persian Gulf War}, 338. As these units were primarily comprised of coalition and non-U.S. Army forces, they are not included in further analysis of this conflict.


\textsuperscript{97} Scales, \textit{Certain Victory}, 217.

\textsuperscript{98} Flanagan, Jr., \textit{Lightning}, 171; Bolt, “Command Report,” 25.
and sustainment soldiers established fuel and ammunition resupply points within the developing perimeter. During these operations, soldiers wore a helmet, body armor, and chemical protective suit; each also carried a chemical protective mask, a basic load of ammunition, MREs, and water, as well as their personal weapon. Within fourteen hours, FOB Cobra was secure and operational.99

The following day, 3rd Brigade, 101 AASLT (3/101 AASLT) repeated the success of 1-101 AASLT further north, establishing key blocking positions along a 300 km stretch of Iraqi Highway 8.100 3/101 AASLT used many of the same tactics as 1/101 AASLT; however, since the depth of this second penetration was well beyond the current reach of the USARCENT logistical system, 3/101 AASLT soldiers carried the added burden of two to three times their basic load of ammunition and rations.101 3/101 AASLT also operated for over 24-hours with only a portion of its assigned firepower and maneuver platforms after inclement weather delayed the deployment of over half the brigade from its Tactical Assembly Area (TAA) in Saudi Arabia.102 Despite these minor setbacks, however, the 101 AASLT operations were an unqualified success. Unfortunately, they did not come without cost.


100 Flanagan, Jr., Lightning, 181.

101 Flanagan, Jr., Lightning, 179-190; Thomas Houlanah, Gulf War: The Complete History (New London, NH: Schrenker Military Publishing, 1999), 249; 3rd Brigade, 101st Airborne Division (Air Assault), Operation DESERT SHIELD / Operation DESERT STORM Yearbook (Paducha, KY: Turner Publishing Company, 1992), 22-23 and 59. It is imperative to note that while soldiers did indeed need to carry these immense rucksacks forward in order to sustain themselves on the battlefield, they were routinely placed in vehicles or left in the care of sustainment personnel during the conduct of offensive operations. In other words, the only period in which soldiers labored under the total weight of their gear was boarding, riding in, de-boarding their aircraft. Houlanah, Gulf War, 246-247 and Swain, Lucky War, 242-243.

The highest profile losses within the 101 AASLT occurred on February 27, when Iraqi antiaircraft fire disabled a Combat Search and Rescue (CSAR) helicopter enroute to recover an F-16 pilot who had ejected over the southern Iraqi city of Basra. Having suffered extensive damage, the CSAR helicopter crashed, instantly killing five of the eight crewmembers aboard. The three remaining crewmembers sustained significant injuries and were immediately taken prisoner by Iraqi forces. Given the concerns of the Presidential Commission regarding likely discrepancies between the treatment of male and female captives, it is necessary to highlight that the single female POW taken from the CSAR crash site, Major Rhonda Cornum, was molested by an Iraqi soldier in the presence of a male POW on the first day of her capture. Per Cornum’s account, the only reason the Iraqi did not rape her was she because she screamed when he re-injured the arm she had broken in the crash. Little information is available on the treatment of the two male POWs; it is unknown whether they suffered similar sexual trauma. Iraqi forces repatriated all three POWs taken from the CSAR helicopter crash site immediately following the military cease-fire on March 3.\textsuperscript{103}

While the 101 AASLT made their “rendezvous with destiny” 300km to the north, the 1\textsuperscript{st} Infantry Division (1ID) took much more difficult path toward the enemy.\textsuperscript{104} At 0530 hours on February 24, the division crept north in mixture M1 Abrams tanks, M3A2 Bradley Fighting


\textsuperscript{104} MG William C. Lee, quoted by 101\textsuperscript{st} Airborne Division (Air Assault), “101\textsuperscript{st} Airborne Division History,” 101\textsuperscript{st} Airborne Division Homepage, http://www.campbell.army.mil/units/101st/Pages/History.aspx (accessed March 14, 2013).
Vehicles (BFV), M577 Command Post Carriers, and TOW-equipped HMMWVs and began to breach the obstacle belt emplaced by the Iraqi 26th Infantry Division along the Saudi Arabia-Iraq border.105 By 1000 hours, the division had cleared multiple 25km-long lanes into Iraqi territory; unfortunately, they had done it more than nine hours ahead of the schedule established in the VII Corps OPORD.106 In order to allow the other units along the spoke of the Great Wheel to catch up, VII Corps ordered the division to pause just 4km short of the major Iraqi defensive line.107 Some soldiers took advantage of the operational pause to adjust their uniforms, attempting to cool down by removing their DCUs or flight suits from beneath their chemical protective suit. As always, soldiers carried their Kevlars, LBEs, and chemical masks at all times.108 Finally, at 1500 this “solid wall of fire and iron” lurched forward once again.109 Determined resistance by the Iraqis meant little; the main guns and plows of 1ID’s BFVs and tanks sliced through the enemy formations, killing anything that moved and burying the rest alive. Within thirty minutes, 1ID had opened 12 dual capacity and four logistical lanes into Iraq; by 1200 hours the following day, they held battle positions north of the Iraqi trench line.110 It is important to note that during each stage of this operation, 1ID soldiers fought from their vehicles—either leveraging the superior

105 Bourque and Burdan, The Road to Safwan, 25, 47, 53, 106.

106 Bourque and Burdan, The Road to Safwan, 115, 119.

107 Bourque and Burdan, The Road to Safwan, 121.

108 David Norton, “Cecil’s Ride: A Tank Platoon Leader In Desert Storm,” Armor 113, no. 6 (November-December 1999): 35; Bourque and Burdan, The Road to Safwan, 117, photograph 7, photograph 10, photograph 12, photograph 14. For further information regarding the weight of these items, see Appendix B.

109 Bourque and Burdan, The Road to Safwan, 119-123.

firepower of the M1 and BFV or firing their personal weapons from the relative protection of an armored platform.\textsuperscript{111}

Similarly, units maneuvering to attack the main combat forces of the Iraqi Army also employed their armored vehicles to the greatest extent possible. From February 24-28, the 3d Armored Cavalry Regiment (3ACR), 24\textsuperscript{th} Infantry Division (24ID), 2d Armored Cavalry Regiment (2ACR), 1\textsuperscript{st} Armored Division (1AD), 3\textsuperscript{rd} Armored Division (3AD), and 1\textsuperscript{st} Cavalry Division (1CD) all engaged in major battles across the KTO. The number and complexity of these operations render a detailed examination of each impossible in this format; however, certain experiences were common to all engagements. Most significantly, every unit maneuvered and fought using mounted formations.\textsuperscript{112} For one hundred hours, task-organized battalions of M1 tanks, BFVs, M113 Armored Personnel Carriers (APC), and TOW-equipped HMMWVs swept across the Iraqi desert, shifting between traveling over watch and attack formations as if conducting a deadly ballet.\textsuperscript{113} Crews of three to four soldiers propelled these units forward.

\textsuperscript{111} Bourque and Burdan, \textit{The Road to Safwan}, 123-124.


\textsuperscript{113} During Operation Desert Storm, the foremost USARCENT units successfully maneuvered over 190 miles north and 70 miles east. These maneuvers also occurred rapidly; 1 AD, for example, “advanced 144 kilometers in sixteen hours of maneuver and combat, a cumulative rate of 9 kilometers an hour.” See Schubert and Kraus, \textit{The Whirlwind War}, 201 and Swain, \textit{Lucky War}, 245 for further. For a detailed discussion of U.S. Army forms of maneuver and movement techniques, see U.S. Department of the Army, \textit{Offense and Defense}, ADRP 3-90,
Crouched in the cramped cabins of their vehicles, these teams sprang into action at any sign of enemy forces—loading and reloading rounds weighing upwards of 54-pounds into the breeches of their main guns in as little as two-seconds.\textsuperscript{114} Once engaged in direct combat, the duration of the battle varied in accordance with the skill and determination of the opposing forces. At 73 Easting, for example, soldiers assigned to Eagle Troop, 2\textsuperscript{nd} Squadron, 2 ACR (E/2-2ACR) fought for only 23 minutes. Further east, the Iraqi Medina Brigade kept 1\textsuperscript{st} Brigade, 1 AD (1/1 AD) engaged for over six hours.\textsuperscript{115} Regardless, the outcome of every engagement across the KTO was the same—the surrender or destruction of the Iraqi force in contact.

Offensive ground combat operations in the KTO officially ended at 0800 hours on February 28; three days later the Republic of Iraq agreed to a military cease-fire.\textsuperscript{116} Immediately, the mission of U.S. Army units in the KTO shifted to peace enforcement and humanitarian aid. Troops worked tirelessly to destroy abandoned Iraqi ordnance and military equipment and provide aid to Iraqi refugees, as well as salvage and rebuild what remained of Kuwait’s infrastructure. They executed these missions on a rotational basis, returning frequently to the safety and comfort of their Saudi Arabian FOBs and base camps.\textsuperscript{117}

\textsuperscript{114} For two vignettes of experiences reported by tank crews during Operation Desert Storm, see Scales, \textit{Certain Victory}, 1-4, 213-215.


\textsuperscript{116} Swain, \textit{Lucky War}, 319; Scales, \textit{Certain Victory}, 322-323.

Operation Desert Storm officially ended on April 7, 1991, with the formal acceptance of the UN-cease fire conditions by the Republic of Iraq.\textsuperscript{118} Years of training, months of preparation, and hours of fighting had delivered the U.S. Army its first decisive major combat victory since World War II. It was a watershed moment, and it unquestionably heralded the benefits of incorporating technology into existing military doctrine and tactics.\textsuperscript{119} Such success remained bittersweet, however. A total of 98 U.S. Army soldiers lost their lives in direct combat during the 100-hour battle to liberate Kuwait, 354 were WIA, and five returned to duty after being taken prisoner by Iraqi forces.\textsuperscript{120} These losses served as a stark reminder of the risks continually faced by U.S. soldiers. However, the fact that these numbers were significantly lower than the tens of thousands of casualties anticipated at the outset of the campaign indicate that the U.S. Army was willing and able to effectively employ offensive technology and defensive protective measures to achieve mission success. As a result, Operation Desert Storm supports the contention that revoking the combat exclusion policy poses a low operational risk to U.S. Army operations.

\textbf{Operation Allied Force and Joint Guardian, Kosovo}

Having easily defeated the Iraqi Army in 1990-91, the U.S. Army quickly re-deployed its soldiers to the United States. However, before these troops had cleared the last of the desert sand from their rifles, the rise of another violent dictator threatened to draw America back into war. In June 1991, Serbian President Slobodan Milosevic’s longstanding attempts to exert control over

\textsuperscript{118} Scales, \textit{Certain Victory}, 393.

\textsuperscript{119} Schubert and Kraus, \textit{The Whirlwind War}, 233-234.

several former Yugoslavian provinces plunged the Balkan Peninsula into conflict. With increasing ferocity, Milosevic lead Serbia into wars of self-determination with Slovenia, Croatia, Macedonia, and Bosnia and Herzegovina. Each of these efforts ultimately proved unsuccessful; however, they introduced a level of ethnic hatred never before seen in the region. In 1998 and 1999, Milosevic capitalized on this sentiment, unleashing the Serbian military on the ethnic Albanian population of Kosovo in an effort to reassert Serbian Muslim dominance in the Balkans. For fifteen months, Serbian forces conducted a systematic campaign of ethnic cleansing throughout Kosovo. On Milosevic’s orders, they murdered thousands of Albanian Kosovars and destroyed millions of dollars in property. On March 23, 1999, after repeated attempts to find a diplomatic solution to the conflict, the North Atlantic Council of the North Atlantic Treaty Organization (NATO) agreed that military force was necessary to stop the violence.


Operation Allied Force, the NATO mission to “arrest the ability of the Serbs to brutally attack the Kosovar Albanians,” began on March 24, 1999. The United States committed 725 U.S. Air Force strike and bomber aircraft to the NATO operation, tasking them to destroy Serbian military facilities, logistical centers, and civil infrastructure.\textsuperscript{124} Ten days later, U.S. President Bill Clinton agreed to deploy of a small contingent of U.S. Army helicopters and long-range artillery assets to nearby Albania; however, Clinton expressly forbade the use of these units in direct ground combat.\textsuperscript{125} Christened Task Force (TF) Hawk by its commander, LTG John W. Hendrix, this element consisted of 24 attack helicopters, 30 utility helicopters, 27 MRLS, and 14 howitzer artillery pieces. To protect these assets, Hendrix received one mechanized infantry battalion task force (equipped with BFVs and M1 tanks), one dismounted infantry battalion task force (equipped with HMMWVs), and separate military police, engineer, and signal companies.\textsuperscript{126}


The first soldiers of TF Hawk arrived at the Tirana-Rinas Airport in Albania on April 5, 1999, followed closely by the entirety of 1st Battalion, 6th Infantry Regiment (1-6IN) on April 8. Prepared to land under fire, these soldiers were shocked to find themselves calmly disembarking their C-17 transport aircraft threatened only by the rain. Immediately, commanders set their troops to work unloading the pallets of supplies and equipment that had accompanied them on their trip. A lack of existing infrastructure at the airfield forced soldiers to perform much of the work by hand; what transport vehicles they did procure quickly turned the soft soil of the airfield into a “sea of mud.” Initial living conditions at Tirana-Rinas were no better than the working conditions. Having deliberately chosen not to bring their tents, 1-6 IN soldiers had little choice but to sleep in the rain and mud on the outskirts of the airfield. Miserable, but determined, these early arrivals labored day and night to receive the remainder of TF Hawk’s personnel and equipment. They supervised contractors delivering and emplacing road construction material from neighboring Macedonia, waded through waist deep mud bogs to shepherd vehicles from aircraft to motor pools, and provided for the physical security of the developing base camp. By April 26, conditions at Tirana-Rinas had improved dramatically, and Hendrix had enough personnel and functioning equipment on hand to declare his 5100-soldier task force fully mission capable (FMC).

127 Kirkpatrick, Ruck it Up, 477-479.


129 Kirkpatrick, Ruck it Up, 485.


131 For information on the improved living conditions at Tirana-Rinas, see Rose, II, “American Armor in Albania, A Soldier’s Mosaic,” 9, 50. For information on the task organization and FMC date of TF Hawk, see Nardulli, et al., Disjointed War, 74; Kirkpatrick,
In the final days of April, TF Hawk worked to establish the security conditions that would enable them to begin supporting the U.S. Air Force campaign in Kosovo. The two infantry battalion task forces, 1-6 IN and 2nd Brigade, 505th Parachute Infantry Regiment (2-505 PIR), “[created] a perimeter for basic security and then [maintained] regular reconnaissance patrols outside that perimeter and as far as the high ground around the airport.” For additional security, Hendrix deployed teams of tanks and BFVs to blocking positions along the major avenues of approach to the airfield. Next, Hendrix established a forward operating base (FOB) near the Albania-Kosovo border from which TF Hawk conducted mounted patrols, artillery raids and Suppression of Enemy Air Defense (SEAD) missions against Serbian forces operating in the porous border region. During each of these missions, soldiers wore a Kevlar helmet, protective vest, and carried their weapon and basic load of ammunition and water.

In the skies above these ground defensive operations, the aviation element of TF Hawk conducted regular training missions in preparation for a possible deep attack against fielded Serbian forces in Kosovo. Unfortunately, the combination of Serbian low-level air defenses,

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Ruck it Up, 513; R. Cody Phillips, Operation JOINT GUARDIAN, 15.

132 Kirkpatrick, Ruck it Up, 498.


134 Detailed packing lists for units deployed in support of Operation Allied Force could not be located. However, photographic evidence in Rose, II, “American Armor in Albania, A Soldier’s Mosaic,” 9, 50 shows that soldiers executing missions outside the perimeters of Tirana-Rinas or the FOB carried the standard combat fighting load identified in Appendix B, Equipment Weights and Load Calculations. Of note, separate photographic evidence indicates that soldiers did not wear or carry this gear while in the perimeter of Tirana-Rinas or the FOB. While in these secure areas, soldiers carried only their personal weapon and one magazine (~15 lbs. of weight). See: Angela Stafford, “U.S. Air Force Senior Airman Darren Hooper directs an aircraft landing at Rinas Airport, Tirane, Albania, during NATO Operation Allied Force on April 29, 1999,” April 29, 1999, http://www.defense.gov/photos/newspage.aspx?newsphtid=2083 (accessed March 18, 2013).
unfavorable terrain, and pilot inexperience quickly proved such an operation to be much more challenging than originally anticipated. TF Hawk confirmed the risk associated with these missions on May 1, when the crash of an Apache helicopter during a mission rehearsal exercise resulted in the first and only fatalities of Operation Allied Force.\textsuperscript{135} The aviators of TF Hawk suffered a second operational blow on May 13, when DOD further the restricted the aerial rules of engagement (ROE) within Kosovo.\textsuperscript{136} Unable to overcome these limitations, TF Hawk remained uncommitted for the duration of Operation Allied Force.\textsuperscript{137}

After 78 days of non-stop aerial bombardment, Operation Allied Force formally ended on June 9, 1999 when Serbian President Slobodan Milosevic agreed to allow a NATO peacekeeping force, known as Kosovo Force (KFOR), to assume military control of Kosovo.\textsuperscript{138} On June 10, the United Nations (UN) codified this agreement in United Nations Security Council Resolution 1244, which tasked KFOR to maintain and enforce the Kosovo-Serbian ceasefire, demilitarize

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\textsuperscript{135} Kirkpatrick, \textit{Ruck it Up}, 500-504; Nardulli, et al., \textit{Disjointed War}, 80-86; Stewart, ed., \textit{American Military History Volume II}, 448. Of note, the fatal Apache crash was the second of two aircraft accidents to occur during Operation Allied Force. The first occurred on April 26, but did not result in any casualties. Additionally, as these deaths were accidental, the U.S. DOD maintains, “Operation ALLIED FORCE was conducted without a single combat fatality.” Quote taken from U.S. Department of Defense, \textit{Report to Congress: Kosovo/Operation ALLIED FORCE After Action Report}, xxii.

\textsuperscript{136} Clark, \textit{Waging Modern War}, 304-305.

\textsuperscript{137} Nardulli, et al., \textit{Disjointed War}, 94-95; Kirkpatrick, \textit{Ruck it Up}, 412-514. Despite its lack of direct, kinetic involvement in Operation Allied Force, many historians believe the sheer presence of TF Hawk along the Albania-Kosovo border likely hastened the capitulation of Serbian forces in June 1999. For a discussion of this argument, see Phillips, \textit{Operation JOINT GUARDIAN}, 16; Nardulli, et al., \textit{Disjointed War}, 95.

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Kosovo liberation groups, and establish a safe and secure environment within Kosovo.\textsuperscript{139} In support of this new mission set, the U.S. Army disbanded TF Hawk and deployed fresh troops to Kosovo under the auspices of Operation Joint Guardian.\textsuperscript{140} Organized as TF Falcon, the newly arrived U.S. forces consisted two dismounted infantry battalion TFs, one armor battalion TF, one field artillery battalion TF, and one aviation TF.

Almost immediately, TF Falcon became immersed in a flood of retributive violence enacted by ethnic Albanians against Kosovo’s Serbian population. U.S. soldiers conducted near continuous mounted patrols throughout their assigned AO, in an attempt to “fight fires, disperse crowds, and quell violence.”\textsuperscript{141} Day after day, they cleared land mines, destroyed weapons caches, and intervened in armed conflicts between ethnic groups. While not often the intended target of violence, TF Falcon nonetheless reported “40 hostile-fire incidents, 11 mortar attacks, 3 hand grenade attacks, 3 mine strikes, and 7 riots” during their first four months in Kosovo.\textsuperscript{142} As a result, commanders continued to require their soldiers to carry a standard combat fighting load.


\textsuperscript{142} Phillips, \textit{Operation JOINT GUARDIAN}, 36-37.
when operating outside their base camp. They reported only 25 soldiers WIA and none KIA during this time period. By December 1999, the post-war surge in violence had declined to such an extent that U.S. forces were able to increasingly focus their efforts on the rebuilding Kosovo’s war-torn cities and providing humanitarian aid to returning refugees.

As the security situation improved, so too did the living conditions for U.S. Soldiers. In less than four months, civilian contractors turned an empty wheat field in eastern Kosovo into a modern, secure military installation able to house the vast majority of U.S. soldiers deployed in support of Operation Joint Guardian. Named for a Vietnam-era Medal of Honor recipient, Camp Bondsteel sprawled for over three kilometers in any direction and boasted hardstand buildings, showers, and latrines, as well as a post exchange, multiple dining and laundry facilities, a fitness center, chapel, and movie theater. Outside of Camp Bondsteel, soldiers lived in converted military bases, “factories, hotels, and old government buildings” scattered across the TF Falcon


AO. The most spartan accommodations were the tents of Outpost SAPPER.146 These satellite facilities offered only a fraction of the amenities available on Camp Bondsteel; however, in all cases, they provided soldiers protection from the elements, hygiene facilities, limited entertainment opportunities, and a modicum of privacy.147

In December 1999, the U.S. Army executed its first troop rotation in support of Operation Joint Guardian.148 New units transitioned easily “into their peace-enforcement mission,” and violence continued to decrease throughout the country.149 After this inaugural rotation, U.S. Army units rotated through Kosovo at six- to nine-month intervals in accordance with DOD guidance. However, the dramatic reduction in violence after 1999, coupled with the onset of Operations Enduring Freedom and Iraqi Freedom, resulted in quantitative and qualitative changes to the U.S. Army’s contribution to KFOR from 2003-2012. Specifically, Presidential “Letters to Congressional Leaders Reporting on Deployments of United States Combat-Equipped Armed Forces Around the World” catalogue the reduction of the U.S. Army KFOR contingent from 2,250 active duty soldiers in 2003 to 817 U.S. Army National Guard soldiers in 2012.150 Changes


147 Scott, “A Taste of Life at Outpost SAPPER,” 11-12.

148 Phillips, Operation JOINT GUARDIAN, 37. Following this inaugural rotation, units have continued to rotate through Kosovo at six- to nine-month intervals in accordance with DOD guidance. The American Forces Press Service covers the rotation of U.S. Army units to and from Kosovo; their coverage can be found at U.S. Department of Defense, s.v. “KFOR,” https://www.defense.gov (accessed March 18, 2013).


150 For information on the number and mission of U.S. forces assigned to KFOR from the
to the security environment and force structure also impacted the nature and frequency of KFOR missions. As compared to the experiences of TF Falcon in 1999, soldiers deployed during this time period routinely conducted fewer security patrols, fewer checkpoints, and fewer offensive operations. The scarcity of enemy activity also prompted many commanders to reduce force protection levels and allow soldiers conducting routine missions to operate without body armor or Kevlar helmets.\textsuperscript{151} The relative security and stability experienced by these soldiers ultimately persisted for ninety-six percent of Operation Joint Guardian.\textsuperscript{152}

From strategic resistance to the introduction of ground troops, to operational insistence on the exclusivity of the air campaign, to widespread tactical use of mounted patrols once in Kosovo—Operations Allied Force and Joint Guardian clearly demonstrate the U.S. Army’s increasing desire to leverage advanced technological platforms to improve both the survivability and lethality of its soldiers.\textsuperscript{153} The success of these tactics is evidenced by the complete absence

\textsuperscript{151} Phillips, \textit{Operation JOINT GUARDIAN}, 50.

\textsuperscript{152} By all accounts, TF Falcon’s rotation to Kosovo was the most arduous and lethal. This accounts for six months, or roughly 4\%, of the 150 total months of Operation Joint Guardian that occurred during the period analyzed.

of combat-related fatalities in either conflict. Furthermore, the U.S. Army’s ability and willingness to quickly improve quality of life for deployed soldiers indicates an inclination to address the concerns of the Presidential Commission regarding the austerity and difficulty of combat. Overall, these factors support the contention that revoking the gendered combat exclusion policy poses a low operational risk to the success of U.S. Army operations.

Operation Enduring Freedom, Afghanistan

Over the course of 102 minutes on September 11, 2001, nineteen terrorists changed the lives of American citizens forever. Acting on the orders of Usama bin Ladin (UBL), leader of the radical Islamist group al-Qaeda (AQ), these men hijacked and purposely crashed commercial airliners into three separate sites along the eastern seaboard of the United States. Their actions resulted in the death of 2,973 innocent civilians—the single largest non-combatant loss of life from hostile action on American soil in the nation’s history. On September 12, still reeling from the shock and intensity of the attacks, President George W. Bush ordered his National Security Council to “develop a strategy to eliminate terrorists and punish those who support

154 The Defense Manpower Data Center does not maintain data on Operation Joint Guardian; however, an examination of their database shows zero U.S. Army deaths from hostile action from 1999-2000. The year 2001—the same year OEF began—is the first time combat-related fatalities re-appear in the overall numbers of U.S. Army deaths. See Defense Manpower Data Center, “Active Duty Military Deaths by Year and Manner (1980-2010),” Defense Casualty Analysis System, https://www.dmdc.osd.mil/dcas/pages/report_by_year_manner.xhtml (accessed March 25, 2013). The Defense Manpower Data Center also does not maintain data on WIA or POW for Operation Joint Guardian. Phillips states that 25 soldiers were WIA in combat related incidents in 1999 and three soldiers taken POW from Macedonia in an incident that occurred during, but not in relation to, the Allied Force campaign. See Phillips, Operation JOINT GUARDIAN, 14, 39, 49.

them.” 156 Three weeks later, during an emotional address to a joint session of Congress, Bush confirmed the culpability of AQ in the September 11 attacks and announced his intent to use “all elements of national power” to not only “eliminate the AQ network,” but to find and defeat “every terrorist group of global reach.” 157 With these words, America embarked what would become known as the Global War on Terror (GWOT). In the decade following this announcement, the U.S. Army deployed soldiers to over 53 nations in support of the overall GWOT. 158 The first of these operations, and one of only two campaigns currently recognized by the U.S. Army CMH during this period, was Operation Enduring Freedom. 159

General Tommy Franks, the USCENTCOM commander from 2000-2003, quickly identified the small, landlocked country of Afghanistan as the first battlefield in the GWOT. Franks based his decision on years of intelligence reporting that indicated Afghanistan’s ruling party, the Taliban, had repeatedly and voluntarily provided sanctuary to AQ operatives. The Taliban’s refusal to sever their ties with AQ in the aftermath of 9/11 further supported Franks’


analysis and provided diplomatic justification for military action. However, “like the unconventional attack that provoked it,” the American intervention in Afghanistan quickly proved to be a “different kind of war.” Most significantly, in an effort to “signal [American] determination without provoking Afghan concerns about foreign intervention,” USCENTCOM planners chose from the outset to employ a combination of SOF teams and aerial strike and bomber platforms rather than large numbers of conventional forces. According to Franks, this force package provided the best method for the United States to quickly and efficiently “destroy AQ in Afghanistan and remove the Taliban from power.” Ten days after the 9/11 attacks, the Bush Administration approved Franks’ plan, now code-named Operation Enduring Freedom (OEF), and authorized USCENTCOM to deploy the personnel and equipment necessary for the execution of the campaign.

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160 Specifically, in his address before the joint session of Congress on September 20, 2001, Bush stated that “any nation that continues to harbor or support terrorism [would] be regarded by the United States as a hostile regime.” The international community supported Bush’s stance, as evidenced by UN Resolutions 1269 and 1368, UNSCR 1373, NATO’s invocation of Article V of the NATO treaty, the invocation of the Inter-American Treaty of Reciprocal Assistance among the Organization of American States (OAS), and Australia’s invocation of the ANZUS treaty. For further, see: Bush, “Address to a Joint Session of Congress and the American People,” (September 20, 2001); Donald P. Wright, *A Different Kind of War: The United States Army in Operation ENDURING FREEDOM, October 2001-September 2005* (Fort Leavenworth, KS: Combat Studies Institute Press, 2010), 27. For a complete discussion of the evolution of the AQ-Taliban relationship, see National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report*.

161 Wright, *A Different Kind of War*, 1.


164 The original code-name for OEF, Operation Infinite Justice, was amended by the Bush Administration after concerns regarding its religious connotations were brought to light by the American-Muslim population. See Wright, *A Different Kind of War*, 27, 45-46.
U.S. Army support to combat operations in Afghanistan began with the infiltration of multiple SOF teams, called Operational Detachment-Alphas (ODA), across the mountainous borders of Afghanistan. From October 19 to November 8, 2001, MH-47 Chinook helicopters flew eight separate missions, dropping teams of six to twelve soldiers into remote Afghan landing zones where they joined forces with members of anti-Taliban militia groups.\footnote{Wright, \textit{A Different Kind of War}, 71-105; Richard W. Stewart, \textit{Operation ENDURING FREEDOM: The United States Army in Afghanistan, October 2001 – March 2002} (Washington, D.C.: Center of Military History, 2004), 10. Of note, the air campaign in support of OEF began on October 7, 2001, twelve days prior to the arrival of the first ground troops in Afghanistan. For details on this portion of the campaign, see Wright, \textit{A Different Kind of War}, 62-64.} Uncertain how long they would be in the country, each member of the ODA reportedly carried several days worth of rations and ammunition in addition to their standard combat load. No specific information regarding the exact ODA packing list could be located; however, during a television interview one year after the invasion, a member of ODA 595 identified only as a Master Sergeant Paul recounted that his team “all had very heavy packs… just around a hundred pounds worth of equipment, and a couple of extra bags.”\footnote{The standard combat load for a SOF soldier is similar to the standard combat load identified in Appendix B. Despite photographic evidence indicating that (a) SOF soldiers occasionally opted not to wear their issued combat uniforms [BDU, DCU, or Advanced Combat Uniform (ACU)] in favor of various civilian equivalents, and (b) SOF soldiers did not don their protective gear as routinely as conventional soldiers it is unlikely that either of these alterations significantly or permanently lightened the combat load of the average SOF soldier during OEF. Furthermore, evidence indicates that due to the forward deployed nature of ODA operations in support of OEF, ODA members often carried additional rations. Specific reporting indicates that at least one ODA routinely carried two additional MREs and five additional quarts of water; the weight of these rations is 15.5 lbs. and brings the standard combat load for an ODA soldier to 100.5 lbs. See: Stewart, \textit{Operation ENDURING FREEDOM}, 12; ODA 595, unidentified interviewer, \textit{Frontline}, PBS, August 2, 2002.} Once on the ground, the ODAs embedded themselves entirely with their assigned militia counterpart. They slept in cattle stables, mud huts, or caves; they traveled entirely by horse or truck—side by side with the Afghans.\footnote{ODA 595, unidentified interviewer, \textit{Frontline}, PBS, August 2, 2002; ODA 555, unidentified interviewer, \textit{Frontline}, PBS, August 2, 2002; Wright, \textit{A Different Kind of War}, 76-}
More than simply demonstrating solidarity with the anti-Taliban cause, the ODAs quickly demonstrated their operational importance on the battlefield. At every opportunity they used “laser illuminators and Global Positioning System (GPS) equipment” to direct “precision-guided airstrikes in support of an indigenous ally against enemy forces.”

The tactic, which became known as ground-directed interdiction (GDI), enabled the ODAs to target and destroy Taliban and AQ formations while still well beyond the effective range of the enemy’s weapons systems. In essence, GDI “enabled the concentration of devastating effects without concentrating physical forces,” which allowed “US forces [to achieve] maximum effectiveness with minimal risk.”

When combined with an effective ground force, the efforts of the ODAs were overwhelmingly lethal; however, cultural differences periodically derailed even the most promising of operations. The most significant example of this misfortune was the escape of UBL from Tora Bora, a Taliban stronghold in the mountains of eastern Afghanistan. During the incident, a key Afghan militia leader abandoned his assigned ODA in favor of breaking his Ramadan-imposed fast in the safety of his own lines.

Despite periodic setbacks, the impact of “SOF-directed US air power” and ODA mentorship enabled the disparate elements of the anti-Taliban militia to seize control of the country in less than eight weeks.

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168 Wright, *A Different Kind of War*, 86. For additional information on the missions and experiences of ODAs during OEF, see also “The Liberation of Mazar-e Sharif: 5th SF Group Conducts UW in Afghanistan,” *Special Warfare* 15, no. 2 (June 2002): 34-41.

169 Wright, *A Different Kind of War*, 86.

170 Wright, *A Different Kind of War*, 80, 113-120.

171 Of note, elements of the Northern Alliance (NA) seized the major population centers of Mazar-e Sharif, Taloqan, and Konduz; while elements loosely organized under the Eastern Alliance (EA) seized Tarin Kowt, Bagram, and Kabul, and Kandahar. See Wright, *A Different Kind of War*, 88, 93.
Building upon the incredible success of the ODA operations, U.S. forces (USF) in Afghanistan moved into the second major phase of OEF—deliberate combat operations—in March of 2002. USCENTCOM supported this transition by funneling additional combat power to Afghanistan. Over the next fourteen months, the U.S. Army rotated two Combined Joint Task Force (CJTF) headquarters elements and three infantry brigade task forces (TF) through Afghanistan at six-month intervals. From the spring of 2002 to the spring of 2003, these units conducted a total of eleven major security operations, each aimed at establishing a safe and secure environment for Afghanistan’s first post-war loya jirga. The first of these operations, code named Anaconda, occurred over a three week period in early March 2002; the second to last operation, code named Valiant Strike, took place over 72-hours in April 2003. The scope, duration, and conduct of these missions provide excellent examples of the character of warfare experienced by soldiers during this phase of OEF.

TF Rakkasan, the first conventional combat forces to arrive in Afghanistan after the initial invasion, executed Operation Anaconda from March 1 – 19, 2002. With the assistance of five ODAs and two Afghan militia elements, TF Rakkasan conducted multiple attacks on large

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172 USCENTCOM arranged this deployment schedule based on U.S. Army’s experiences in the Balkans. The elements deployed included: CJTF Mountain (10th Mountain Division), CJTF 180 (82d Airborne Division), TF Rakkasan (3-101AASLT), TF Panther (3/82ABN), and TF Devil (1/82ABN). See Wright, *A Different Kind of War*, 127-218 for specific information on the composition and missions of these TFs.


concentrations of AQ and Taliban forces operating within the Shahi Kowt Valley of southern Afghanistan. While ultimately viewed as a success by the U.S. Army, Operation Anaconda exposed several significant limitations associated with the employment of ground forces in direct combat operations in Afghanistan. Most notably, TF Rakkasan quickly discovered that they had underestimated the challenge Afghanistan’s rugged terrain posed to their operations. For example, troops inserted by CH-47 Chinook helicopters found they still might have another “2,000-foot climb at altitudes of over 8,000 feet” to complete their mission; those traveling by vehicle found that a recent snowfall had turned the “dirt roads into mushy, slippery quagmires that significantly slowed movement through terrain that was difficult to negotiate in daylight.”

To further complicate matters, soldiers executed their missions carrying equipment weighing anywhere from 85 to 90 pounds. When in contact with the enemy, soldiers lightened their loads

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175 Operation Anaconda Combat Operations Brief (brief, CJTF Mountain, February 26, 2002). For a complete account of Operation Anaconda, see Wright, A Different Kind of War, 127-174.

176 Wright, A Different Kind of War, 141, 143-146, 159; P. McGuire, “Task Force Rakkasan: 3-101st, Aviation Regiment 03/02-08/02,” in Long Hard Road: NCO Experiences in Afghanistan and Iraq, ed. L.R. Arms (Fort Bliss, TX: U.S. Army Sergeants Major Academy, 2007), 19.

177 The most comprehensive collection of data regarding the modern soldier combat load can be found in Task Force Devil CAAT, The Modern Warrior’s Combat Load. Conducted from April-May 2003, the study provides detailed information on the experiences of an infantry brigade task force conducting security operations in eastern Afghanistan. Data contained within The Modern Warrior’s Combat Load provides the foundation for many of the calculations in this study; specifically, a modified version of the infantry rifleman packing list was used as the basis of the standard soldier combat load. Modifications were made based on the preponderance of equipment and weight data gleaned from all case studies and resulted in a discrepancy of roughly 6 lbs. between the standard soldier combat load depicted in Appendix B and infantry rifleman data presented in The Modern Warrior’s Combat Load. For further, see Task Force Devil CAAT, The Modern Warrior’s Combat Load, 17-19.
by discarding their assault packs; however, the 55-60 lbs. of gear they still carried significantly slowed their progress on the daunting upward slopes of the Afghan mountains.\textsuperscript{178}

Despite these challenges, U.S. Army troops found that the tactics pioneered by the ODA and Afghan militias during the first phase of OEF remained incredibly effective in destroying enemy formations. At every opportunity, TF Rakkasan incorporated close combat attack (CCA) support from the division’s AH-64 Apache helicopters and close air support (CAS) from U.S. Air Force fixed wing assets into their attacks on AQ and Taliban elements. The mobility and vantage point of these aerial platforms, combined with the incredible firepower of their onboard weapons systems, provided U.S. ground forces with an overwhelming advantage against the lightly armed enemy force. In fact, CAS and GDI tactics were so effective that USF reportedly killed over 100 enemy fighters for every one American soldier KIA during Operation Anaconda.\textsuperscript{179} This operation clearly capitalized on the successes of the initial invasion and thus contributed to maintaining the initiative for USF operating in Afghanistan. However, it also proved to be incredibly manpower and resource intensive. This fact, complicated further by the onset war in

\textsuperscript{178} For example, the unit required to make the 2,000-foot ascent described earlier in this paragraph likely only wore a fighting load of 52.49 lbs., however they still required four hours to summit and secure Takur Ghar (their objective). For the details of this maneuver, see Wright, \textit{A Different Kind of War}, 158-159. For additional evidence detailing the standard combat loads carried by soldiers during this phase of OEF, see: Wright, \textit{A Different Kind of War}, 133, 146, 149, 155; Task Force Devil CAAT, \textit{The Modern Warrior’s Combat Load}; C. Peterson, “Baptism by Fire: 705\textsuperscript{th} Ordnance Company, Afghanistan 10/02-06/03,” in \textit{Long Hard Road: NCO Experiences in Afghanistan and Iraq}, ed. L. R. Arms (Fort Bliss, TX: U.S. Army Sergeants Major Academy, 2007), 29. For evidence confirming the discarding of extra weight during firefights, see Wright, \textit{A Different Kind of War}, 153, 155.

Iraq, forced security operations in Afghanistan to dwindle in size and duration over the course of the next twelve months.

The clearest example of this reduction is Operation Valiant Strike. Conducted exactly one year after Operation Anaconda, Operation Valiant Strike included only a fraction of the combat power and operational scope of its predecessor. Specifically, the CJTF headquarters employed two infantry battalion TFs, one unit of the newly formed Afghan National Army (ANA), several Civil Affairs (CA) specialists, linguists, and a small contingent of female U.S. Army soldiers to cordon and search a string of villages in the Maruf district of Afghanistan. For three days these soldiers moved on foot through the Sami Ghar Mountains, methodically surrounding, securing, and searching any settlement they encountered. These maneuvers met with no active enemy resistance; however, they did uncover multiple weapons caches. When Operation Valiant Strike ended on March 22, 2003, U.S. troops had seized “50 rifles, two heavy machine guns, 170-mm rockets and 400 82-mm mortar rounds” without suffering a single casualty.\textsuperscript{180} Most notably, during Operation Valiant Strike commanders on the ground reported that the contributions of soldiers with non-combat related MOS were likely to be critical in ensuring the durability of these security gains. Specifically, the presence of female soldiers and CA personnel enabled USF to engage previously marginalized portions of the population, which commanders believed would contribute to the development of long-term security solutions throughout Maruf province.\textsuperscript{181} These soldiers, uniquely qualified by their gender or non-combat skill sets, established relationships that provided a vital foundation for USF to shift their focus to building the political, economic, and military capacity of the new Afghan nation.\textsuperscript{182} In all, the relative success of low-

\textsuperscript{180} Schult, “Operation Valiant Strike,” 59-60.

\textsuperscript{181} Wright, \textit{A Different Kind of War}, 217-218.

\textsuperscript{182} Franks, \textit{American Soldier}, 271; Wright; \textit{A Different Kind of War}, 237.
intensity, short-duration missions such as Operation Valiant Strike effectively punctuated the evolution of decisive combat operations during OEF and prompted USF in Afghanistan to segue into a new phase of the campaign.

Major changes accompanied the U.S. Army’s shift from security to stability operations during the final phase of OEF. The most fundamental and far-reaching of these transitions was the introduction of a coordinated counterinsurgency (COIN) campaign plan by the new USCENTCOM headquarters in Afghanistan, Combined Forces Command-Afghanistan (CFC-A). This new strategy was a drastic departure from the combat-centric mentality of the first two phases of the operation. It required units to deliberately decrease tactical operations in favor of increasing support to non-kinetic tasks such as Afghan security force development and infrastructure reconstruction.\(^{183}\)

To meet these objectives, USCENTCOM increasingly augmented troop requirements for OEF. From 2002 to 2012, the average monthly number of “boots on the ground” (BOG) in Afghanistan rose by a factor of 13—from 5,200 soldiers to a high of 63,500.\(^{184}\) Increased combat power enabled CFC-A to pursue the first of five pillars in its COIN campaign plan, sustaining area ownership.\(^{185}\) Specifically, it allowed CFC-A to expand its footprint in Afghanistan beyond

\(^{183}\) The goal of CFC-A Commander LTG David W. Barno was to “focus 80 percent of [CFC-A’s] resources on civil affairs and political initiatives and the remaining 20 percent on military actions.” Wright, A Different Kind of War, 245.


\(^{185}\) David W. Barno, “Fighting “The Other War:” Counterinsurgency Strategy in Afghanistan, 2003-2005,” Military Review (September-October 2007): 35. Of note, only three of the five pillars identified in the CFC-A COIN campaign were within the purview of the main combat forces in Afghanistan. CFC-A assigned responsibility for the second pillar, enabling Afghan security structure, to the Office of Military Cooperation-Afghanistan (OMC-A) and maintained responsibility for the fifth pillar, engaging regional states, at the CFC level.
the handful of well-equipped FOBs it operated from during 2001-2003 to hundreds of combat outposts (COP) established near key villages and infiltration routes throughout the Afghan countryside.  

These small, forward deployed camps created a physical link between U.S. Army units and the citizens in their areas of responsibility (AOR), directly contributing to the creation of a “durable security environment” throughout the country.

In many instances, however, the logistical difficulty of establishing and maintaining these far-flung COPs tempered their utility. For example, 173rd Airborne Infantry Brigade (173rd ABN) soldiers deployed to the Korengal Valley were forced to literally scratch their new homes into the sides of mountains—filling sandbags and multi-cellular defense barriers with rocks chipped from the cliffs surrounding their position. Others such as 1st Battalion, 87th Infantry Regiment (1-87IN); 2nd Battalion, 2nd Infantry Regiment (2-2IN); and 2nd Battalion, 5th Infantry Regiment (2-5IN) occupied mud huts, set up U.S. Army issue tents, or built small wooden structures from which to conduct their operations. All had limited access to electricity and hygiene facilities,

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188 Sebastian Junger, War, (New York, NY: 12, 2010), 63-64.

189 Wright, A Different Kind of War, 249, 253; D. Berry, “Establishing a Special Forces Firebase: ODA 381, 3rd Bn, 3rd SFG (Airborne),” in Long Hard Road: NCO Experiences in Afghanistan and Iraq, ed. L. R. Arms (Fort Bliss, TX: U.S. Army Sergeants Major Academy, 2007), 60; W. Forro, “Building a Forward Operating Base: 2nd Battalion, 5th Infantry Battalion” in
however none could be classified as comfortable.\textsuperscript{190} Once established, these COPs survived largely at the mercy of their supply chain. CH-47 and UH-60 helicopters airlifted pallets of MREs, water, fuel, and ammunition to the forward deployed units. When possible, they also delivered additional men and materiel to assist in expanding and improving the site.\textsuperscript{191}

Soon, COP occupants began to supplement these deliveries by contracting with local residents for the supplies and manpower necessary to complete their construction efforts.\textsuperscript{192} These business transactions paved the way for soldiers to support the second pillar of the CFC-A COIN campaign, enabling reconstruction and good governance.\textsuperscript{193} Specifically, soldiers leveraged the legitimate business opportunities provided by COP construction to establish relationships with local civic leaders and tribal elders. Units then worked with U.S. Provincial Reconstruction Teams (PRT) to develop projects specifically designed to improve the quality of life for Afghans in their AORs; they built wells, refurbished schools, and initiated agricultural projects aimed at undermining the illicit production of poppy crops. Platoon- to company-sized ground combat units oversaw these efforts, alternately providing protection and manpower to ensure mission completion.\textsuperscript{194} Over time, the successful execution of these operations created small pockets of

\textit{Long Hard Road: NCO Experiences in Afghanistan and Iraq}, ed. L. R. Arms (Fort Bliss, TX: U.S. Army Sergeants Major Academy, 2007), 68.


\textsuperscript{191} L. Hall, “Make a Way: 725\textsuperscript{st} Main Support Battalion, Afghanistan, 03/04-02/05,” in \textit{Long Hard Road: NCO Experiences in Afghanistan and Iraq}, ed. L. R. Arms (Fort Bliss, TX: U.S. Army Sergeants Major Academy, 2007), 42; Forro, “Building a Forward Operating Base,” in \textit{Long Hard Road}, 68-69.


\textsuperscript{193} Barno, “Fighting “The Other War,”” 35.

\textsuperscript{194} Wright, \textit{A Different Kind of War}, 246-247, 250, 255-261, 293-296; Jerry Meyerle,
stability and progress across Afghanistan, which degraded the base of support for enemy forces and demonstrating the long-term commitment of the United States to the reconstruction of Afghanistan.\(^{195}\)

CFC-A’s reconstruction efforts did not go unchallenged. AQ and Taliban elements remained a determined and formidable foe throughout the country, most significantly in the ungoverned spaces along the Afghanistan-Pakistan border region.\(^{196}\) To counter this threat, USF conducted security operations in support of the final operational pillar of the CFC-A COIN campaign plan, defeating terrorism and denying sanctuary to the enemy.\(^{197}\) Most commonly these efforts consisted of routine mounted and dismounted patrols that began and ended at a FOB or COP. The best resourced of these operations used HMMWVs equipped with crew-served machine guns to maneuver soldiers through the rugged Afghan terrain; more often, the extreme slope and elevation of the mountains forced soldiers to conduct their missions on foot, armed only with what weaponry they could carry.\(^{198}\) These operations placed an immense physical strain on

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\(^{195}\) Wright, *A Different Kind of War*, 285.

\(^{196}\) As recently as 2012, Regional Command-East (RC-E), located in the southeastern corner of Afghanistan, continued to report the highest levels of violence among all Afghan regional commands. For a complete account of the security situation in Afghanistan, see: U.S. Department of Defense, *Report on Progress Toward Security and Stability in Afghanistan*, 21-23.

\(^{197}\) Barno, “Fighting “The Other War,”” 35.

\(^{198}\) Center for Army Lessons Learned, *OEF Initial Impressions Report* (Fort
soldiers. Rocky terrain, drastic changes in elevation, and narrow footpaths constantly challenged the fitness and coordination of ground troops as they patrolled the mountains and valleys of Afghanistan.

Periodically, USF also conducted multi-day cordon and search operations. During these missions units employed tactics similar to those developed during the decisive combat operation phase of OEF, namely a contingent of dismounted ground troops supported extensively by vehicle and aerial platforms before, during, and after the operation.\(^{199}\) The most significant assets incorporated during these events were U.S. Air Force CAS, AH-64 Apache CCA, and long-range artillery fires. In *Vanguard of Valor*, the U.S. Army’s study of small unit actions in Afghanistan, Lieutenant Colonel John Mountcastle explains the importance of these platforms, stating

> The extreme terrain…in the Korengal, Waygal, and Chawkay valleys…usually prevented the basic tactical principles of identifying, closing with or even pursuing the enemy.

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Often, the exact location of the enemy was impossible to ascertain from the ground. As such, [soldiers] came to rely heavily on friendly aviation assets and aerial surveillance platforms. If they did not arrive already prepared to coordinate fire support missions, the [s]oldiers operating in northeastern Afghanistan would have to become adept at directing artillery and close air support. This skill was critical even for [s]oldiers at the squad level.  

As Mountcastle makes clear, throughout Afghanistan soldiers depended on technology to shift the balance of attack in their favor. On more than one occasion, CAS and CCA proved to be the critical factor which allowed an endangered unit to snatch victory from defeat.  

Beyond the dangers posed by the harsh Afghan terrain, AQ and Taliban remnants frequently attacked USF with a mixture of improvised explosive devices (IED), rocket-propelled grenades (RPG), mortars, and small arms fire. Enemy units often harassed USF patrols only briefly before retreating along hidden paths deep into the mountains. Periodically, however, these attacks evolved into coordinated, well-planned assaults on USF formations and facilities. Many attacks appeared intentionally designed to exploit the observable weaknesses in USF operations, such as deliberate ambushes emplaced on frequently used supply routes or the massing of forces to overrun lightly manned firebases. For USF, the variety and intensity of these attacks irrevocably blurred the lines between combat operations and combat support operations; over time it became clear that any soldier, at any time, could become engaged in direct ground combat. Doctrinally, the U.S. Army had anticipated this devolution in battlefield linearity.


However, it was former U.S. Army Chief of Staff General Peter Schoomaker who gave voice to its reality in a 2003 speech before members of the Association of the United States Army. Speaking to hundreds of the U.S. Army’s staunchest public advocates, Schoomaker stated:

No longer is a Soldier’s value measured by how close he or she is to the front line – there are no front lines on today’s battlefield. Every Soldier is a warrior. Every Soldier has to embody not only the Army Values every day but take to heart the Soldier’s Creed.  

In line with that creed, soldiers across Afghanistan “[stood] ready to deploy, engage, and destroy the enemies of the United States of America in close combat.”

More than any previous campaign, OEF demonstrates the cognitive dissonance between the Presidential Commission’s understanding of war and the realities faced by soldiers on the modern battlefield. Clearly, many of the challenges experienced by soldiers during a decade of war in Afghanistan correspond with the assumptions made by the Presidential Commission. Strength and stamina continue to play a part in direct ground combat. However, the evolution of the non-linear battlefield now demands that all soldiers demonstrate the fitness to survive and prevail in these conditions. In the words of COL Kevin Shwedo, U.S. Army Accessions Command operations officer at the time of Schoomaker’s statement and the officer responsible

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204 Touted as the “[U.S.] Army’s keystone operations manual,” the June 2001 version of FM 3-0, Operations, formed the foundation of U.S. Army doctrine prior to the commencement of OEF. The FM discussed the necessity of U.S. Army forces to conduct “full spectrum operations” throughout the “range of military conflict,” as well as provided guidance on the organization of operations in a “non-linear battlefield.” While it is unlikely that this version of FM 3-0 spurred significant change in the limited time available after its publication and before OEF, the number of enemy behaviors and doctrinal responses it presaged prompted units to swiftly incorporate and adapt its concepts. For source of quotations and further information, see U.S. Department of the Army, FM 3-0, Operations (Washington, D.C.: Headquarters, U.S. Department of the Army, June 2001).


for the initial integration of the Warrior Ethos and Soldier’s Creed, “Every Soldier has to be able to be an expert with his weapon. Every Soldier has to be physically fit. Every Soldier needs to know the warrior tasks and drills.”\textsuperscript{207} Given these conditions, the tactical and operational successes of OEF clearly indicate two things: first, the U.S. Army possesses the equipment and tactics to mitigate the extreme demands of direct ground combat; and second, U.S. Army soldiers—regardless of gender or MOS—are capable of leveraging those capabilities to outperform their enemies in direct ground combat. Based on this evidence, the operational risk posed to the U.S. Army by the revocation of the combat exclusion policy is low.

CONCLUSION

In the opening lines of \textit{On War}, noted military theorist Carl von Clausewitz asks, “What is War?”\textsuperscript{208} To answer his own question, Clausewitz offers to “proceed from the simple to the complex” and then begins by stating, “War is nothing but a duel on a larger scale.”\textsuperscript{209} Unfortunately, as this powerful, illustrative maxim is found on the first page of his multi-volume work, many readers default to this understanding of war and fail to grasp the nuance and complexity of the remainder of the book. These readers are not wrong; their understanding is simply incomplete. Much the same can be said for those who fail to account for both environment and performance when examining the operational risk associated with the revocation of the combat exclusion policy. In an effort to remedy this shortcoming, the following table provides a cross-tabular analysis of the assumptions made by the Presidential Commission regarding the

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\footnotetext{209} Carl von Clausewitz, \textit{On War}, 75.
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conditions and requirements of combat and the realities of war as presented in the above case studies.

Table 2. Cross-Tabular Analysis of Presidential Commission Assumptions and Case Study Evidence

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<td></td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High Rate of Casualties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>N</td>
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<td>N</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment and Behavior of POW</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Rate of Capture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gendered Treatment of POW</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Created by author.*

From the table, it is clear that a number of the environmental concerns listed by the Presidential Commission continue to exist on the modern battlefield. For example, in all cases examined, soldiers routinely lifted and carried heavy equipment loads, as well as lived and worked in austere conditions. However, support for the Presidential Commission’s assumptions in performance-oriented categories, such as casualty rates and the incidence of hand-to-hand fighting, is negligible. For instance, the total number of soldiers KIA during a hostile event in the
33.2 combat years covered by this study is 121 times less than the number of soldiers KIA during a hostile event in the 35.3 combat years from 1776-1981.²¹⁰ Viewed separately, neither the environmental data nor the performance data is wrong, just dangerously incomplete. When viewed together, however, they provide a much more nuanced understanding of the experiences of U.S. Army soldiers during this time period.

Put simply, while the conditions of combat did not change between 1982 and 2012, the way in which the U.S. Army fought did. Over the past thirty years the U.S. Army developed a number of advanced technologies designed to improve soldier survivability and lethality. Simultaneously, it evolved a warfighting doctrine that integrated the capabilities of this equipment to the fullest extent possible. Most recently, it expanded the audience for this doctrine and technology well beyond the traditional direct ground combat soldier. Afghanistan presented the ultimate test for these efforts, as the non-linear battlefield placed the majority of soldiers—regardless of MOS, gender, or physical ability—in direct ground combat situations.²¹¹ Where the Presidential Commission predicted failure; the U.S. Army instead delivered overwhelming tactical and operational success. This result is clear and compelling. The U.S. Army possesses the willingness and ability to mitigate the hazards and demands posed by the modern battlefield. Furthermore, U.S. Army soldiers are trained and ready to prevail in direct ground combat. As a result, the revocation of the U.S. Army’s combat exclusion policy poses a low operational risk to the force.

²¹⁰ See Appendix C, Casualty Rate Comparison, for full breakdown of casualty and POW rates experienced by the U.S. Army.

ISSUE K: GROUND COMBAT

Should the existing service policies restricting the assignment of servicewomen with respect to ground combat MOS/specialties be retained, modified, rescinded, or codified?

Recommendation: The sense of the Commission is that women should be excluded from direct land combat units and positions. Further, the Commission recommends that the existing service policies concerning direct land combat exclusions be codified. Service Secretaries shall recommend to the Congress which units and positions should fall under the land combat exclusion.

The issue of whether to retain, modify, rescind, or codify the policies restricting the assignment of women in ground combat specialties was statutorily required to be considered by the Commission. In addressing the issue, the Commission found the effectiveness of ground units to be the most significant criterion.

American military women are prohibited by Service policies that preclude them from serving in direct ground combat positions. Current policy excluding women from ground combat is based, in part, on Congressional intent to preclude women from serving in combat aircraft or on combatant ships. The specialties that fall under the exclusion may be grouped into four major areas: infantry, armor, artillery, and combat engineers, all of which require a soldier to be prepared to fight in direct, close-quarters combat.

Through testimony and trips, the Commission heard and observed that the daily life of the ground soldier in combat circumstances is one of constant physical exertion, often in extreme climactic conditions with the barest of amenities and the inherent risks of injury, capture and death. The Commission learned that despite technological advances, ground combat has not become less hazardous and physically demanding.

The evidence before the Commission clearly shows distinct physiological differences between men and women. Most women are shorter in stature, have less muscle mass and weigh less than men. These physiological differences place women at a distinct disadvantage when performing tasks requiring a high level of muscular strength and aerobic capacity, such as hand-to-hand fighting, digging, carrying heavy loads, lifting and other tasks central to ground combat.

The Commission also heard from women of tremendous physical ability who expressed a desire to serve in the ground combat arms. There is little doubt that some women could meet the physical standards for ground combat, but the evidence shows that few women possess the necessary physical qualifications. Further, a 1992 survey of 900 Army servicewomen shows that only 12 percent of enlisted women and ten percent of the female noncommissioned officers surveyed said they would consider serving in combat arms.
The Commission considered the effects that women could have on the cohesion of ground combat units. Cohesion is defined as the relationship that develops in a unit or group where: (1) members share common values and experiences; (2) individuals in the group conform to group norms and behavior in order to ensure group survival and goals; (3) members lose their personal identity in favor of a group identity; (4) members focus on group activities and goals; (5) members become totally dependent on each other for the completion of their mission or survival; and (6) members must meet all standards of performance and behavior in order not to threaten group survival. The evidence clearly shows that unit cohesion can be negatively affected by the introduction of any element that detracts from the need for such key ingredients as mutual confidence, commonality of experience, and equitable treatment. There are no authoritative military studies of mixed-gender ground combat cohesion, since available cohesion research has been conducted among male-only ground combat units.

One research study reviewed by the Commission indicates that the following are areas where cohesion problems might develop:

1. Ability of women to carry the physical burdens required of each combat unit member. This entails an ability to meet physical standards of endurance and stamina.
2. Forced intimacy and lack of privacy on the battlefield (e.g. washing, bathing, using latrine facilities, etc.).
3. Traditional Western values where men feel a responsibility to protect women.
4. Dysfunctional relationships (e.g. sexual misconduct).
5. Pregnancy.

Of these, the prospect of sexual relationships in land units in direct combat with the enemy was considered to be dysfunctional and would encumber small unit ground combat leaders, noncommissioned officers, lieutenants and captains, in carrying out their military missions.

Ground combat incurs a high risk of capture by the enemy. The Commission’s review of our nation’s recent wars with respect to POWs suggests that potential enemies may not accord respect for the Geneva Convention and customary rules related to protection of prisoners. During our nation’s major wars in this century, except Vietnam, the number of POWs has been greatest from the ground forces, the next largest number from downed aircraft and the least number from Navy ships. The Commission heard testimony from DoD representatives and POWs who indicated that the mistreatment of women taken as POWs could have a negative impact on male captives.

The Commission’s enabling statute required examination of public attitudes toward the assignment of women in the military. Several surveys were conducted to determine what the American public and military attitudes were toward women in ground combat. The results of these surveys indicate that members of the military are strongly against women serving in all branches of ground combat, while the public has mixed views on service in different ground combat specialties. The Roper survey of the American public showed that 57 percent of the American public polled said that women should not be assigned to the infantry, and 52 percent were against women in Marine infantry. However, 58 percent of the public surveyed were in favor of assigning women to both artillery and armor positions.
The Roper military poll reported that 74 percent of the military members surveyed did not think women should serve in the infantry, 72 percent rejected the idea of women in Marine infantry, 59 percent opposed women in tank crews, and 54 percent did not want women to serve in the artillery. When the same question was asked of military personnel who had actually served in the ground combat arms, the numbers increased to 83 percent against women in the infantry, 83 percent against women serving in Marine infantry, 71 percent against women in armor, and 64 percent against women in artillery.

Several countries have placed women in ground combat units with little success. Historically, those nations that have permitted women in close combat situations (the Soviet Union, Germany, and Israel) have done so only because of grave threats to their national survival. After the crisis passed, each nation adopted policies which excluded the employment of women in combat. In more current times, the Commission learned that countries that have tested integrating women in ground combat units have found those tests unsuccessful.

The Commission also considered the effect on registration and conscription if women were allowed in ground combat units. In 1981, the Supreme Court upheld the male-only registration provision of the Military Selective Service Act, 50 U.S.C. App. 453, against a due process equal protection challenge from men who claimed that it was discriminatory because it required men, but not women, to register for the draft. The Court’s opinion rested on the following argument: the purpose behind the registration requirement is to create a pool of individuals to be called up in the event of a draft; a draft is used to obtain combat troops; women are prevented, through law and policy, from serving in combat positions in any of the four Services; therefore, men and women are dissimilarly situated in regard to the registration requirement and it is permissible to treat them differently.

The Commission reviewed the assignment of draftees in our most recent conflicts, and according to statistics provided by DoD, 98 percent of draftees went to the Army during Vietnam, 95 percent during Korea and 83 percent during World War II. Because a draft is used to obtain combat troops and historically most draftees go into the Army, it can be deduced that the draft is used primarily to obtain a pool of ground combat troops. The Commission considered the possibility that lifting the ground combat exclusion pertaining to women may undermine the justification used by the Supreme Court to uphold the constitutionality of the all-male draft, because women would be eligible to serve in the positions which are filled through conscription.

The case against women in ground combat is compelling and conclusive. The physiological differences between men and women are most stark when compared to ground combat tasks. This is underscored by the evidence that there are few women, especially enlisted women, interested in serving in ground combat specialties. The overriding importance of small unit cohesion to ground military success, and the unknown but probably negative effect that the presence of women would have in those units were of critical concern to most Commissioners. Several polls revealed in most convincing terms that the public and military, especially the military people most familiar with its rigors, were fundamentally opposed to women in ground combat. The weight of international experience with women in ground combat units provides no conclusive evidence supporting the assignment of women in ground combat units. Finally, the legal implications of lifting the ground combat exclusion policy for the possible registration and conscription of women for ground combat were considered. The current ground combat exclusion policies, which are derived from Congressional intent to restrict the assignment of women in other Services, would be vulnerable if the remaining statute was repealed. The Commission
therefore recommends that the ground exclusion policies be enacted into law for consistency and as sound public policy.

*Commission Vote*

<p>| | |</p>
<table>
<thead>
<tr>
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<tr>
<td><strong>Yes:</strong></td>
<td>10</td>
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<tr>
<td><strong>No:</strong></td>
<td>0</td>
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<tr>
<td><strong>Abstention:</strong></td>
<td>2\textsuperscript{212}</td>
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\textsuperscript{212} Presidential Commission, *Report to the President*, 24-27.
### STANDARD U.S. ARMY FIGHTING LOAD, 1982-2012

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>WEIGHT</th>
<th>EQUIPMENT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Combat Helmet</td>
<td>3.25</td>
<td>Meal, Ready to Eat</td>
<td>1.5</td>
</tr>
<tr>
<td>Belt, Standard Issue, Black</td>
<td>0.0625</td>
<td>Multi-Tool</td>
<td>0.5</td>
</tr>
<tr>
<td>Boots, Combat Black (pair)</td>
<td>4.0625</td>
<td>MOLLE 5.56mm ammunition pouch (2 total)</td>
<td>0.1875</td>
</tr>
<tr>
<td>Canteen, 1 Quart, with water (2 total)</td>
<td>2.5 ea.</td>
<td>MOLLE canteen pouch (2 total)</td>
<td>0.375</td>
</tr>
<tr>
<td>Cup, Canteen</td>
<td>0.5</td>
<td>Rifle, M4</td>
<td>4.24</td>
</tr>
<tr>
<td>Desert Camouflage Patrol Cap</td>
<td>0.1875</td>
<td>Sling, Weapons, 3 Point Harness</td>
<td>0.375</td>
</tr>
<tr>
<td>Desert Camouflage Uniform Bottom</td>
<td>1.5625</td>
<td>Socks, Wool (pair)</td>
<td>0.1875</td>
</tr>
<tr>
<td>Desert Camouflage Uniform Top</td>
<td>1.5</td>
<td>Standard Field Dressing, with pouch</td>
<td>0.25</td>
</tr>
<tr>
<td>Drawers, Cotton</td>
<td>0.1875</td>
<td>Undershirt, Brown</td>
<td>0.375</td>
</tr>
<tr>
<td>Identification Tags</td>
<td>0.3125</td>
<td>Wrist watch</td>
<td>0.1875</td>
</tr>
<tr>
<td>Interceptor Body Armor, with 2 Small Arms Protective Inserts (SAPI) and no neck or crotch guard</td>
<td>17.5</td>
<td>Magazine, M16/M4 with 30-rounds (7 total)</td>
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<td></td>
<td></td>
<td></td>
<td>(9.625 total)</td>
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### STANDARD U.S. ARMY APPROACH MARCH LOAD, 1982-2012

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<tr>
<td>ALICE Rucksack</td>
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<td>Desert Camouflage Uniform Bottom</td>
<td>1.5625</td>
<td>Night Vision Goggle, PVS-7D</td>
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</tr>
<tr>
<td>Desert Camouflage Uniform Top</td>
<td>1.5</td>
<td>Poncho Liner</td>
<td>1.875</td>
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<td>0.1875</td>
<td>Socks, Wool (pair) (3 total)</td>
<td>0.1875</td>
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<tr>
<td>Entrenching Tool with Carrier</td>
<td>3</td>
<td>Toiletries</td>
<td>2.5</td>
</tr>
<tr>
<td>Foot Powder</td>
<td>0.1875</td>
<td>Weapons Cleaning Kit, M16</td>
<td>0.3125</td>
</tr>
<tr>
<td>Gloves, Intermediate Cold Weather (Flies)</td>
<td>0.375</td>
<td>Sun, Sand, and Dust type Goggles, ESS Model</td>
<td>0.875</td>
</tr>
<tr>
<td>Meal, Ready to Eat (3 total)</td>
<td>1.5 (4.5 total)</td>
<td>Undershirt, Brown (3 total)</td>
<td>0.375</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(1.125 total)</td>
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<td><strong>Total Weight:</strong></td>
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**Combined Total Weight, U.S. Army Soldier Combat Load, Adjusted**: 85

### STANDARD U.S. ARMY CHEMICAL PROTECTIVE LOAD, 1982-2012

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<th>EQUIPMENT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSLIST Chemical and Biological Suit</td>
<td>5.5</td>
<td>Mask, Protective M45 with Carrier</td>
<td>3.0625</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td><strong>Total Weight:</strong></td>
<td><strong>8.56</strong></td>
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</table>

**Combined Total Weight, U.S. Army Soldier Combat and Chemical Protective Load, Adjusted**: 95
<table>
<thead>
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<th>EQUIPMENT</th>
<th>WEIGHT</th>
<th>EQUIPMENT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bag, Duffle (4 total)</td>
<td>2.0038 (8.0152 total)</td>
<td>Gortex, Light Weather Top</td>
<td>2.5625</td>
</tr>
<tr>
<td>Bag, Laundry</td>
<td>0.75</td>
<td>IPFU Jacket</td>
<td>1.1688</td>
</tr>
<tr>
<td>Bag, Waterproof (2 total)</td>
<td>0.1875 (0.375 total)</td>
<td>IPFU Pants</td>
<td>1.0625</td>
</tr>
<tr>
<td>Bib Overalls, CW Fleece Black</td>
<td>1.25</td>
<td>IPFU Shirt, Short Sleeve (2 total)</td>
<td>0.40625 (0.8125 total)</td>
</tr>
<tr>
<td>Boots, Combat Black</td>
<td>4.0625</td>
<td>IPFU Shirt, Long Sleeve</td>
<td>0.5875</td>
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<tr>
<td>Cap, Synthetic Micro-Fleece</td>
<td>0.125</td>
<td>IPFU Trunks (2 total)</td>
<td>0.29375 (0.5875 total)</td>
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<tr>
<td>ECWCS Polypropylene Drawers (3 total)</td>
<td>0.5625 (1.6875 total)</td>
<td>Knee Pads (pair)</td>
<td>0.625</td>
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<tr>
<td>ECWCS Polypropylene Undershirt (3 total)</td>
<td>0.6875 (2.0625 total)</td>
<td>Mat, Sleeping, Self-Inflating</td>
<td>1.3125</td>
</tr>
<tr>
<td>ECWCS Silk Weight Drawers (2 total)</td>
<td>0.31 (0.62 total)</td>
<td>Modular Sleep Bag System</td>
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<td>ECWCS Silk Weight Undershirt (2 total)</td>
<td>0.44 (0.88 total)</td>
<td>Neck Gaiter</td>
<td>0.0625</td>
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<tr>
<td>Elbow Pads (pair)</td>
<td>0.9375</td>
<td>On-The-Move Hydration System</td>
<td>0.75</td>
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<td>Field Jacket</td>
<td>3.0875</td>
<td>Parka, Wet Weather</td>
<td>1.4313</td>
</tr>
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<td>Field Jacket Liner</td>
<td>0.7563</td>
<td>Poncho, Wet Weather</td>
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</tr>
<tr>
<td>Gortex, Cold Weather Bottom</td>
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<td>Shirt, CW Fleece Black</td>
<td>2.31</td>
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<tr>
<td>Gortex, Cold Weather Top</td>
<td>4.0625</td>
<td>Socks, Wool (pair) (2 total)</td>
<td>0.1875 (0.375 total)</td>
</tr>
<tr>
<td>Gortex, Light Weather Top</td>
<td>2.5625</td>
<td>Trousers, Wet Weather</td>
<td>1.3125</td>
</tr>
</tbody>
</table>

Total Weight: 62

**NOTES**

*6.26 lbs. have been added to the original combined total weight of 78.74 in an effort to account for variances in materials used during this time period and individual deviations from the packing list, as well as for ease of calculation.

**7.7 lbs. have been added to the original combined total weight of 87.3 lbs. in an effort to account for variances in materials used during this time period and individual deviations from the packing list, as well as for ease of calculation.

***All weights in pounds

## APPENDIX C – CASUALTY RATE COMPARISON

### U.S. ARMY CASUALTY DATA AND RATES, 1776-1981

| Conflict            | Length of Conflict (Years) | Total Hostile KIA | Total Conflict Hostile KIA | Total Conflict Hostile KIA | Total Conflict Non-Hostile KIA | Total Conflict WIA | Total Conflict POW | Annual Average Hostile KIA | Annual Average Non-Hostile KIA | Annual Average WIA | Annual Average POW |
|---------------------|----------------------------|------------------|----------------------------|---------------------------|-------------------------------|-------------------|-------------------|------------------------|--------------------------|-----------------|-----------------|----------------|
| Revolutionary War   | 8.0                        | 4,094.0          | 305.5                      | -                         | -                             | 6,004.0           | 730.5            |                        |                          |                 |                 |
| War of 1812         | 3.0                        | 1,990.0          | 630.0                      | -                         | -                             | 4,000.0           | 133.5            |                        |                          |                 |                 |
| Mexican War         | 2.0                        | 1,721.0          | 860.5                      | 11,506.0                  | 5,775.0                       | 4,102.0           | 2,051.0          |                        |                          |                 |                 |
| *Civil War*         | 4.0                        | 128,134.0        | 34,538.5                   | 221,374.0                 | 55,343.5                      | 280,040.0         | 70,010.0         |                        |                          |                 |                 |
| Spanish American War| 0.5                        | 369.0            | 369.0                      | 2,061.0                   | 2,061.0                       | 1,594.0           | 1,594.0          |                        |                          |                 |                 |
| WWI                 | 1.0                        | 50,510.0         | 50,510.0                   | 55,868.0                  | 55,868.0                      | 193,663.0         | 193,663.0        |                        |                          |                 |                 |
| **WWII**            | 5.0                        | 234,874.0        | 46,974.1                   | 83,400.0                  | 16,680.0                      | 565,361.0         | 113,172.0        | 124,079.0             | 24,815.8                 |                 |                 |
| Korean War          | 3.0                        | 27,781.0         | 9,285.7                    | 2,123.0                   | 788.5                         | 77,996.0          | 25,805.3         | 6,656.0                | 2,218.6                 |                 |                 |
| Vietnam             | 9.0                        | 30,961.0         | 3,440.3                    | 7,261.0                   | 800.8                         | 201,323.0         | 22,391.3         | 167.0                  | 18.5                    |                 |                 |

**All Conflicts**: 35.3 (17 POW)

| Conflict            | Length of Conflict (Years) | Total Hostile KIA | Total Conflict Hostile KIA | Total Conflict Hostile KIA | Total Conflict Non-Hostile KIA | Total Conflict WIA | Total Conflict POW | Annual Average Hostile KIA | Annual Average Non-Hostile KIA | Annual Average WIA | Annual Average POW |
|---------------------|----------------------------|------------------|----------------------------|---------------------------|-------------------------------|-------------------|-------------------|------------------------|--------------------------|-----------------|-----------------|----------------|
| ***URGENT FURY***   | 0.1                        | 11.0             | 11.0                       | 1.0                       | 1.0                           | 108.0             | 108.0             |                        |                          |                 |                 |
| ***JUST CAUSE***    | 0.1                        | 18.0             | 18.0                       | 0.0                       | 0.0                           | 322.0             | 322.0             |                        |                          |                 |                 |
| *****DESERT STORM***| 1.0                        | 224.0            | 224.0                      | 98.0                      | 98.0                          | 354.0             | 354.0             |                        |                          |                 |                 |
| *****ALLIED FORCE, JOINT GUARDIAN** | 13.0        | 0.0              | 0.0                        | 0.0                       | 0.0                           | 0.0               | 0.0               |                        |                          |                 |                 |
| OEF                 | 9.0                        | 2,574.0          | 286.0                      | 819.0                     | 91.0                          | 22,546.0          | 2,505.5           |                        |                          |                 |                 |
| OIF                 | 10.0                      | 1,225.0          | 122.5                      | 297.0                     | 29.7                          | 12,831.0          | 1,285.1           |                        |                          |                 |                 |

**All Conflicts**: 33.2

### U.S. ARMY CASUALTY DATA AND RATES, 1982-2012

| Conflict            | Length of Conflict (Years) | Total Hostile KIA | Total Conflict Hostile KIA | Total Conflict Hostile KIA | Total Conflict Non-Hostile KIA | Total Conflict WIA | Total Conflict POW | Annual Average Hostile KIA | Annual Average Non-Hostile KIA | Annual Average WIA | Annual Average POW |
|---------------------|----------------------------|------------------|----------------------------|---------------------------|-------------------------------|-------------------|-------------------|------------------------|--------------------------|-----------------|-----------------|----------------|
| ***URGENT FURY***   | 0.1                        | 11.0             | 11.0                       | 1.0                       | 1.0                           | 108.0             | 108.0             |                        |                          |                 |                 |
| ***JUST CAUSE***    | 0.1                        | 18.0             | 18.0                       | 0.0                       | 0.0                           | 322.0             | 322.0             |                        |                          |                 |                 |
| *****DESERT STORM***| 1.0                        | 224.0            | 224.0                      | 98.0                      | 98.0                          | 354.0             | 354.0             |                        |                          |                 |                 |
| *****ALLIED FORCE, JOINT GUARDIAN** | 13.0        | 0.0              | 0.0                        | 0.0                       | 0.0                           | 0.0               | 0.0               |                        |                          |                 |                 |
| OEF                 | 9.0                        | 2,574.0          | 286.0                      | 819.0                     | 91.0                          | 22,546.0          | 2,505.5           |                        |                          |                 |                 |
| OIF                 | 10.0                      | 1,225.0          | 122.5                      | 297.0                     | 29.7                          | 12,831.0          | 1,285.1           |                        |                          |                 |                 |

**All Conflicts**: 33.2

(0) Indicates lack of available data.

*Totals Include Union Forces Only.

**Totals Include U.S. Army Air Corps.

***WIA** Data from: Raines, Jr., The Ruck With War, 552.

*****WIA** Data includes all U.S. military; **WIA** Data from: Stewart, Operation JUST CAUSE, 44.

******POW** Totals Include All Branches of Service; POW Data from: Klein, et al., American Prisoners of War (POWs) and Missing in Action (MIA) 8.

******KIA, WIA, and POW data for this conflict not available from the Defense Manpower Data Center. Information provided from: Phillips, Operation JOINT GUARDIAN, 14, 39, 49.

Source: Defense Manpower Data Center, unless otherwise noted. Calculations completed by author.
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