U.S. Marines in the Persian Gulf, 1990-1991
WITH MARINE FORCES AFLOAT IN DESERT SHIELD AND DESERT STORM

HISTORY AND MUSEUMS DIVISION
HEADQUARTERS, U.S. MARINE CORPS
WASHINGTON, D.C.

COVER: "Air Boss." The painting captures the drama of flight operations on board the USS Nassau. *The Navy "air boss" looks on as a Marine air controller talks an AV-8B onto the flight deck. The Bumblebees of VMA-331 launched the first ever fixed-wing combat strikes from the deck of an amphibious assault ship on 20 February 1991.* (Painting by Col H. Avery Chenoweth, USMC [Ret])

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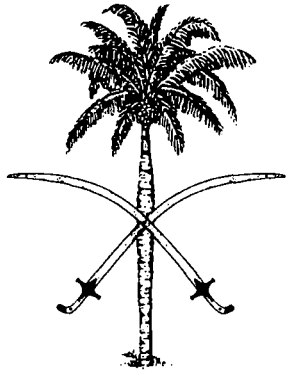

by
Lieutenant Colonel Ronald J. Brown
U.S. Marine Corps Reserve, Retired

HISTORY AND MUSEUMS DIVISION
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Foreword

This monograph presents a preliminary account of operations by the embarked Marine units under the operational control of the Commander, Naval Forces, Central Command, in the Persian Gulf from August 1990 to May 1991. It tells the story of the 4th and 5th Marine Expeditionary Brigades (MEBs) and the 13th and 11th Marine Expeditionary Units (MEUs) which comprised the Marine Forces Afloat during Operations Desert Shield and Desert Storm. The term "Marine Forces Afloat" was chosen carefully because although each of these units served in the same theater of operations, they remained separate entities capable of rapidly integrating into a single force or breaking away to conduct independent operations as the situation required.

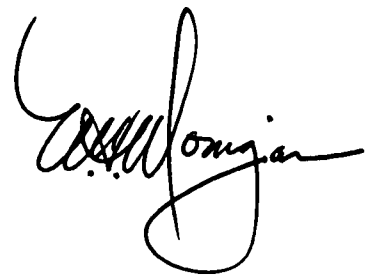
The Marine Forces Afloat came into existence early in Operation Desert Shield when the seaborne 4th MEB joined the forward-deployed 13th Marine Expeditionary Unit (Special Operations Capable) in the North Arabian Sea in mid-September. These Marines were later joined by the 5th Marine Expeditionary Brigade during what would eventually become the longest continuous shipboard deployment by a brigade-sized force in Marine Corps history. For those Marines, the major events of Desert Shield were a series of large amphibious exercises, maritime interdiction operations, and a daring evacuation of the American Embassy at Mogadishu, Somalia. During Operation Desert Storm the U.S. amphibious threat created a strategic distraction that kept Saddam Hussein's attention focused away from the main attack; Marine Aircraft Group 40 flew the first-ever fixed-wing combat strike off an amphibious assault ship; the 13th MEU made two landings; the 4th MEB conducted amphibious demonstrations off the coast of Kuwait; and the 5th MEB participated in ground combat ashore. On its way home the 5th MEB joined Operation Sea Angel, the international humanitarian effort to assist Bangladesh in dealing with the devastation of Cyclone Marian.

This work is one in a series of monographs written by members of Mobilization Training Unit (Historical) DC-7 who deployed to the Persian Gulf. The MTU is a Reserve unit composed of artists, historians, and museum specialists who support the activities of the History and Museums Division in peacetime and stand ready to deploy at a moment's notice in times of crisis. Members of the MTU have covered Operations Desert Shield and Desert Storm (Persian Gulf), Provide Comfort (Northern Iraq), Restore Hope (Somalia), Restore Democracy (Haiti), and Deny Flight (Bosnia).

While writing this monograph Lieutenant Colonel Ronald J. Brown was the commanding officer of Mobilization Training Unit (Historical) DC-7. During active service from 1968 to 1971 he was an infantry officer and served with five different Marine divisions including a combat tour in the Republic of Vietnam. Over the next two decades his travels as a Reserve historian took him to every major Marine base in the United States, and overseas to Europe, the Mediterranean, the Far East, and the Persian Gulf region. During Operation Desert Shield he was called to active duty and became Deputy Command Historian, I Marine Expeditionary Force. Rather than return to the United States

at the end of Operation Desert Storm, Lieutenant Colonel Brown volunteered to serve in northern Iraq as the Marine component historian for Combined Task Force Provide Comfort. In civilian life he was a high school history teacher and athletics coach in the Detroit area until his retirement in 1994, and he continues to be an active high school football coach. Lieutenant Colonel Brown has been a frequent contributor to professional journals and is the author of two History and Museums Division monographs, *A Brief History of the 14th Marines* and *Humanitarian Operations in Northern Iraq, 1991: With Marines in Operation Provide Comfort.*

In the pursuit of accuracy and objectivity, History and Museums Division welcomes comments from key participants, Marine Corps activities, and other interested individual.



M. F. Monigan
Colonel, U.S. Marine Corps
Director of Marine Corps History and Museums

Preface

The material in this monograph was derived from oral history interviews and official records of the U.S. Marine Corps. Unless otherwise noted, all unpublished documents consulted in preparation of this study are held by the Archives Section, Marine Corps Historical Center, Washington, D.C. Most interviews cited in this monograph were conducted by members of the Marine Corps Southwest Asia Field Historical Team and the Marine Corps Warfighting Center's Battlefield Assessment Team. Tapes of these interviews are held at either the Marine Corps Historical Center or the Marine Corps Research Center, Quantico, Virginia. Official records consulted included unit command chronologies, unit messages and journals, operations orders, and after-action reports. Most technical data were gleaned from "How They Fight" handbooks or information supplied by Mr. Kenneth L. Smith-Christmas, Curator of Material History, and the Marine Corps Air-Ground Museum staff. Background information was found in the public libraries of New Smyrna Beach, Florida, and Novi, Michigan.

The following individuals reviewed the manuscript or provided materials: General Walter E. Boomer, USMC (Ret); Lieutenant General Bernard E. Trainor, USMC (Ret); Major General Harry W. Jenkins, Jr., USMC (Ret); the late Brigadier General Peter J. Rowe, USMC (Ret); Major General John E. Rhodes, USMC; General H. Norman Schwarzkopf, USA (Ret); Admiral Stanley A. Arthur, USN (Ret); Admiral Henry H. Mauz, Jr., USN (Ret); Vice Admiral John A. LaPlante, USN; Colonel Frank G. Wickersham III, USMC; Lieutenant Colonel William N. Saunders, USMC (Ret); Lieutenant Colonel Marshall K. Snyder, USMC (Ret); Major John T. Quinn II, USMC; Major Steven M. Zimmeck, USMC; Captain William D. Horrup III, USMC; Captain David B. Crist, USMCR; and Mr. Adam B. Seigel.

I would not have been able to go on active duty without the loyal support of Southfield Public Schools Principal James I. Smyth; my excellent substitute, Ms. Marilyn Seeley; and the rest of my colleagues at Southfield-Lathrup Senior High School. Colonel Allan R. Millett's vision and firm hand at the tiller steered MTU DC-7 on the correct course for its later performance on the fields of battle. I owe a special salute to the combat historians of MTU DC-7 who served in the Persian Gulf during Desert Storm: Colonel Charles J. Quilter II; Lieutenant Colonel Charles H. Cureton; Lieutenant Colonel Dennis P. Mroczkowski; Lieutenant Colonel Frank V. Sturgeon; and combat artist Lieutenant Colonel Keith A. McConnell. We became brothers-in-arms in the sands of the Saudi desert and I owe each a greater debt than I can ever repay.

Mr. Charles R. Smith, historian at the Marine Corps Historical Center, has been my project manager, providing assistance, guidance, and deeply appreciated moral support. My most sincere gratitude goes to other current and former staff members of the History and Museums Division: Director Emeritus Brigadier General Edwin H. Simmons, USMC (Ret); Director Colonel Michael F. Monigan, USMC; Colonel Alfred J. Ponnwitz, USMC (Ret); Mr. Benis M. Frank; Dr. Jack Shulimson; Major John T. Quinn II, USMC; Major Steven M. Zimmeck, USMC;

Major Charles D. Melson, USMC (Ret); Captain David A. Dawson, USMC; Mr. Danny J. Crawford; Mr. Frederick J. Graboske; Visual Information Specialist Mr. William S. Hill; and Mr. John T. Dyer, Jr. Special thanks also go to Senior Editor Mr. Robert E. Struder, Composition Services Technician Mrs. Catherine A. Kerns, and Librarian Ms. Evelyn A. Englander.

While this monograph could not have been produced without the assistance of many people, the author is solely responsible for its content including all opinions expressed and any errors of fact or judgment.

Ronald J. Brown
Lieutenant Colonel
United States Marine Corps Reserve (Retired)

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U.S. Marines in the Persian Gulf, 1990-1991

With Marine Forces Afloat in Desert Shield and Desert Storm

Introduction

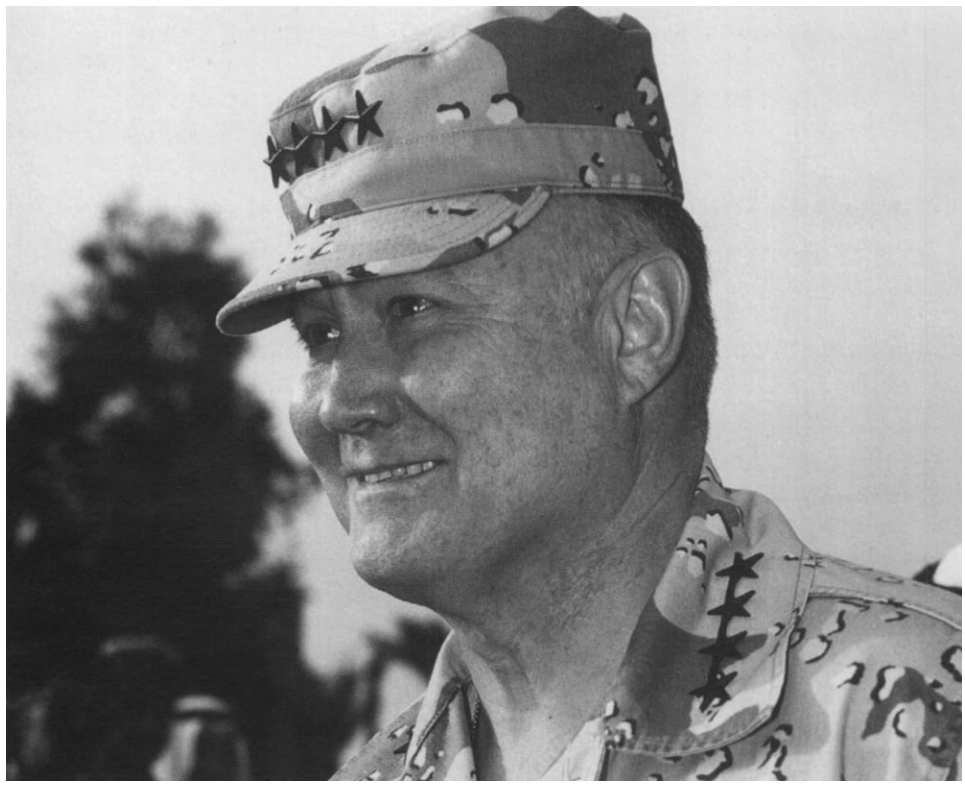
Invasion and Response

In 1990 Iraqi dictator Saddam Hussein ordered his powerful army to invade the oil-rich Emirate of Kuwait. In the years since 1979 Saddam had carefully built the most experienced and best equipped military force in the Persian Gulf. The scales of battle were tipped even farther in Saddam's favor as most of Kuwait's 16,000-man army was on leave when the Iraqi onslaught was unleashed. At about 0100 on 2 August, Iraqi armored columns overwhelmed paper-thin border defenses at Abdaly Customs Post and raced south toward Kuwait City. The attack stunned the world and caught the United States by surprise. Central Command Headquarters at MacDill Air Force Base in Florida was made aware of the Iraqi incursion at about 0400, but the first official call for American assistance came from Crown Prince Sheikh Saad Al Abdullah Al Sabah about an hour later when he pleaded with the U.S. Embassy in Kuwait for immediate help. Unfortunately, the only American support available was a promise of future aid, and Kuwait was quickly overrun.

After a series of high-level meetings and international consultations, American President George Bush authorized military action to defend the Arabian Peninsula from further Iraqi aggression. On 7 August, Secretary of Defense Richard B. Cheney ordered General Colin L. Powell, Chairman of the Joint Chiefs of Staff, to initiate Operation Desert Shield. Marine forces were to become a vital part of the U.S. defense plans. The I Marine Expeditionary Force (I MEF) in southern California, the 1st Marine Expeditionary Brigade (1st MEB) in Hawaii, the 4th Marine Expeditionary Brigade (4th MEB) on the east coast, and the 7th Marine Expeditionary Brigade (7th MEB) in California's Mojave Desert, were all alerted to be ready to deploy to southwestern Asia. Soon thereafter Seventh Fleet Amphibious Ready Group Alpha, with the 13th Marine Expeditionary Unit (Special Operations Capable) [13th MEU (SOC)] embarked, made ready to sail from the Western Pacific to the North Arabian Sea.

Central Command

In 1990, General H. Norman Schwarzkopf, USA, was Commander-in-Chief of Central Command (CentCom), the United States unified command whose area of responsibility included Afghanistan, Bahrain, Djibouti, Egypt, Ethiopia, Iran,



Department of Defense Photo (USAF) DF-ST-92-09443

Gen H. Norman Schwarzkopf, USA, was Commander-in-Chief, U.S. Central Command, during Operations Desert Shield and Desert Storm. Schwarzkopf gained amphibious experience working with the Marines in Grenada during Operation Urgent Fury in 1983.

Iraq, Jordan, Kenya, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, the United Arab Emirates, Yemen, the Red Sea, and the Persian Gulf. Central Command had five component commands: Army Forces (ArCent), Marine Forces (MarCent), Air Force Forces (CentAF), Naval Forces (NavCent), and Special Operations Command (SOCCent).

During most of Operation Desert Shield and all of Operation Desert Storm, the Marine forces ashore were under the operational control of MarCent, commanded by Lieutenant General Walter E. Boomer, USMC. Embarked Marine units, collectively known as the Marine Forces Afloat (MFA), were under the operational control of NavCent, commanded successively by Vice Admiral Henry H. Mauz, Jr., USN, and Vice Admiral Stanley R. Arthur, USN.

Geography of the Persian Gulf

The Persian Gulf is a large crescent-shaped body of water located between Iran and the Arabian Peninsula.* This region is vitally important to the industrialized

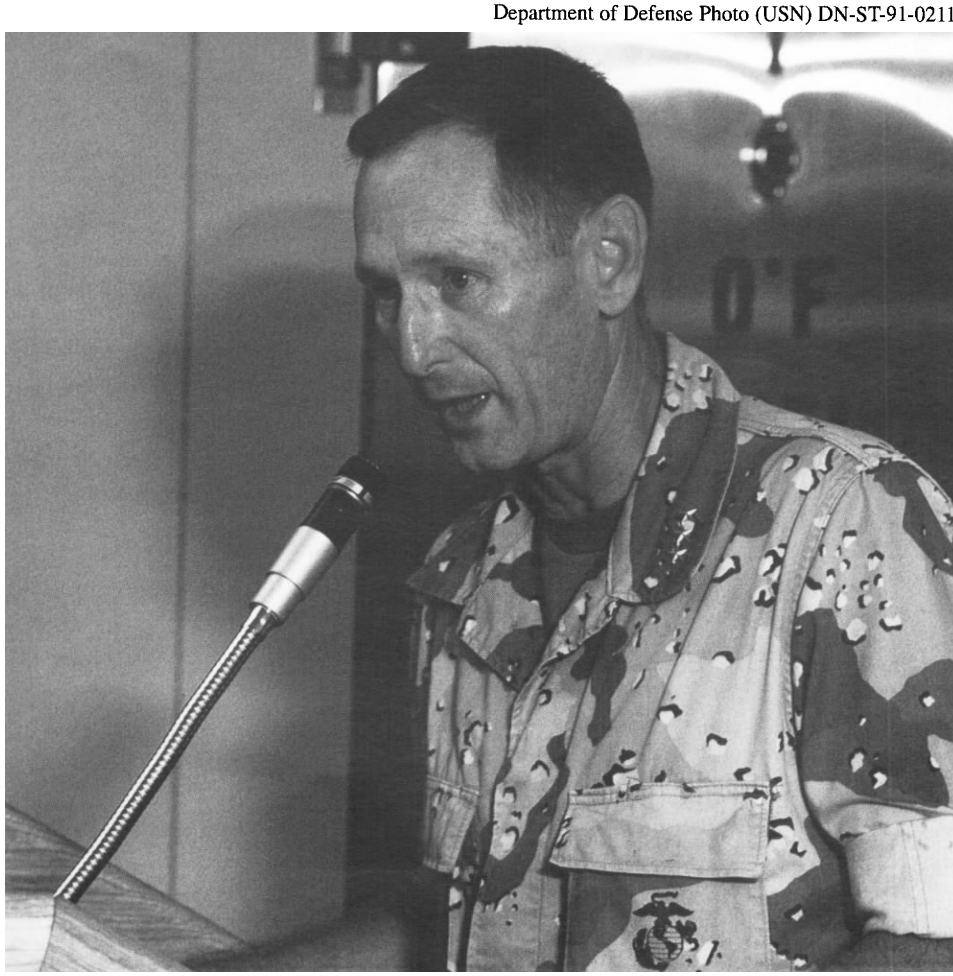
*The Persian Gulf is also often called the Arabian Gulf.

nations of the world because the countries located along the Gulf's sandy shores control almost two-thirds of the world's known oil reserves. The shallow Gulf covers an estimated 92,000 square miles. It is about 615 miles long and varies from 210 to 35 miles wide. Sea lanes enter the Gulf through the North Arabian Sea, the Gulf of Oman, and the narrow Straits of Hormuz. In the summer of 1990 the countries lining the Gulf's southwest coast included the Sultanate of Oman, whose Musandam Peninsula dominated the Straits of Hormuz; the United Arab Emirates (UAE), seven small monarchies arrayed along the southern Gulf coast; Qatar, occupying the flat peninsula jutting into the Persian Gulf; Saudi Arabia, a large country that covered most of the Arabian Peninsula; Bahrain, a tiny island nation linked to Saudi Arabia by an 18-mile causeway; the small, but very rich, emirate of Kuwait; and the powerful but nearly landlocked nation of Iraq.

The strategic importance of the Persian Gulf is that it is the primary shipping

LtGen Walter E. Boomer was dual-hatted as Commanding General, I MEF, and Marine Component Commander, Central Command (ComUSMarCent). Although the Marines afloat were never under his direct operational control, most amphibious contingency plans were generated in support of MarCent requirements.

Department of Defense Photo (USN) DN-ST-91-02119



point for most Middle East oil. Its biggest tactical limitations are: lack of maneuver space inside the Gulf; the choke point formed by the Straits of Hormuz at the mouth of the Gulf; and the shallow waters along the Gulf's southwest littoral. Because the Gulf was a hub of maritime activity, there were many fine ports available to shipping in 1990. These included Manama (Bahrain), Ad Dammam (Saudi Arabia), Al Jubayl (Saudi Arabia), Doha (Qatar), Abu Dhabi (UAE), Dubai (UAE), and Muscat (Oman).

The nations of the Gulf Cooperation Council made many key installations and bases available to arriving international forces.* The Omani island of Masirah in the North Arabian Sea was the site of a large, modern air base built by the British. Inside the Gulf, Bahrain allowed U.S. naval forces to use its port facilities at Manama and also let the U.S. Marines use Shaik Isa Airfield and Bahrain International Airport.

The Kingdom of Saudi Arabia had state-of-the-art communications and transportation infrastructures. There were modern highways, fine international airports and military airfields, and first-class port facilities. Hard-surfaced highways ran through the desert from Ad Dammam and Dhahran north to the Saudi cities of Al Jubayl, Mishab, and Al Khafji. The Marines were able to use this excellent road network as a main supply route throughout Desert Shield and Desert Storm. King Abdul Aziz Naval Air Base, Jubayl Naval Air Facility, and Tanajib Airfield were all used by Marine aircraft. The large commercial port at Jubayl and a smaller one at Mishab were used as ports of entry by the Marines.

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*The Gulf Cooperation Council included the countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and Omam.

The KTO

The prospective battle area was labeled the Kuwait Theater of Operations (KTO). The KTO included the northeast border area of Saudi Arabia, the entire country of Kuwait, and the southeast quadrant of Iraq. The small emirate of Kuwait, a country with about the same land mass as Hawaii, is mostly featureless desert broken only by an occasional oasis. The dominant land mass is Mutlah Ridge running from Al Jahrah on the western edge of Kuwait City parallel to Kuwait Bay's northern shore. The capital, Kuwait City, is located on the south side of Kuwait Bay.

As oil is the main export, the capital's suburban areas housed refineries, storage facilities, pumping stations, and protected harbors. Kuwait's most notable oil fields are Al Manaqish near the Emirate's "armpit," where the inland east-west border meets the western north-south border; the centrally located Al Burqan;

Umm Gudair at the mid-point of the western north-south border; and Al Wafrah, just east of Kuwait's southwestern "elbow." Two forested agricultural stations, the "Emir's Farm," near Al Burqan, and the "National Forest," at Al Wafrah, interrupt the barren desert landscape. Kuwait's key military installations are Al Jaber Air Base in south-central Kuwait, Ali Al Salem Air Base at Al Jahrah, and the naval base and army barracks complex near Ras Al Qulayah.

Kuwait, once a maritime power, has more than 300 miles of coastline and claimed sovereignty over all nearby islands. The largest and most important of these islands are Bubiyan and Warbah abutting Iraq's Al Faw Peninsula south of the Shatt Al Arab Waterway.* Although Bubiyan and Warbah are low-lying islands covered by uninhabited salt marshes, they block sea access to Iraq's two main ports, Basrah and Umm Qasr. Faylakah Island, once used as a naval base by Alexander the Great, controls entry into Kuwait Bay. Two small islands, Miskan and Auhah, are located at the western and eastern ends of Faylakah respectively.

The Iraqi Threat

Iraq under Saddam Hussein could be described in 1990 as a "Third World" power trying to build a first-class military. In 1990 Saddam possessed the biggest and most experienced military force in the Persian Gulf and seemed unafraid to use it for personal gain. Iraq's population was only 17 million people, but Saddam had the world's fourth largest ground force and the sixth largest air force. Much of Iraq's military equipment was the best in the world. Its long-range weapons included updated versions of Soviet Scud ballistic missiles. Saddam's arsenal also included chemical and biological weapons, both of which he had previously used against the Iranians and the Kurds. Iraq's military forces had seen combat against Israel in 1973, battled Iran from 1980 to 1988, and had been fighting Kurdish guerrillas intermittently since 1961.

Iraq's armed forces consisted of *General Headquarters*, the *Republican Guard,* a sizable *National Army*, the *Popular Army* militia, a modern air force, and a small navy. It was estimated that Iraq had more than a million men under arms by January 1991. The Iraqi Army was a curious mixture of British military traditions and Soviet-style weapons. Iraqi warfighting doctrine stressed the superiority of defense in depth using firepower attrition tactics. Mechanized forces were used to conduct counterattacks.

Saddam's ground forces consisted of two major elements, the *Republican Guard* and the *National Army*. The elite *Republican Guard* was a well-equipped land force whose loyal members were selected for political reliability. Its units operated outside of the army chain of command, serving a dual role as both Saddam's personal guard and as Iraq's offensive shock troops. The *Republican Guard Force Command* had eight divisions and was apportioned into two corps,

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Ownership of these islands had long been a sore point between Kuwait and Iraq and was one of the issues that led to Saddam's invasion.

one corps responsible for the defense of Baghdad and the other a mobile strike force. The strike force, which included the *8th Special Assault Division*, was considered the most potent Iraqi offensive threat.* It was this strike force that invaded Kuwait in August 1990 and later became Saddam's strategic reserve. The *Republican Guard* became the focus of the main U.S. military effort during Operation Desert Storm. As such, it was the target of an intense bombing campaign and its destruction was a primary objective of the U.S. VII Corps.

The Iraqi navy was a small defensive force made up of only a few combat ships, but it included modern fast missile patrol boats. Iraq's coastal defenses included large caliber guns, dual-purpose antiaircraft guns, a variety of undersea mines, and antiship missiles.[1]

The Iraqi army was divided into seven corps. On the eve of the Coalition attack

*The *8th Special Assault Division* was similar to the Soviet *Spetsnaz*; it included highly trained parachute, airmobile, amphibious, and commando units and the Iraqi equivalent of U.S. Special Forces.

in January 1991, the *II* and *III Corps* were assigned the coastal areas of Kuwait and Iraq. The *II Corps* was located on Iraq's Al Faw Peninsula and along the coast of northern Kuwait. It mustered four infantry divisions, one armored division, and one mechanized division. The coast from Kuwait City to the Saudi border was the responsibility of *III Corps,* which included nine infantry divisions, one mechanized division, and one armored division.[2]

Coastal defense was the responsibility of the Iraqi *Marine Infantry.* Although called "Marines," these forces were not elite amphibious assault units.* Instead, these units were organized very much like U.S. Marine defense battalions during World War II.[3] Their mission was to defend shore installations, coastlines, islands, and oil rigs. Each unit had a headquarters, coastal artillery, antiship missiles, antiaircraft guns and missiles, and a small mechanized infantry force. Iraqi Marine units defended Basrah and Umm QASR Naval Bases and were stationed on Warbah, Bubiyan, and Faylakah Islands and Persian Gulf oil rigs.

America's Amphibious Forces

Fighting units of the U.S. Marine Corps were organized into Marine air-ground task forces (MAGTFs), flexible combined arms teams that united command, combat, aviation, combat support, and service support elements under a single commander. Although they varied in size and composition, each MAGTF had four common elements: a command element (CE); a ground combat element (GCE); an aviation combat element (ACE); and a combat service support element (CSSE). There were four types of Marine air-ground task forces in 1990: Marine expeditionary forces (MEFs), Marine expeditionary brigades (MEBs), Marine expeditionary units (MEUs), and contingency MAGTFs (CMAGTFs).**[4] The largest of these organizations were MEFs which normally included a Marine division, a Marine aircraft wing, and a force service support group. Marine expeditionary brigades usually included a regimental landing team, a Marine aircraft group, and a brigade service support group.*** The smallest permanent MAGTFs were MEUs built around a battalion landing team, a composite helicopter squadron, and a MEU service support group. Contingency MAGTFs were special purpose forces, usually smaller than MEUs, formed for specific missions.****

Marine air-ground task forces could stand alone or be used as building blocks to create a larger combat unit. Existing doctrine called for large Marine forces to

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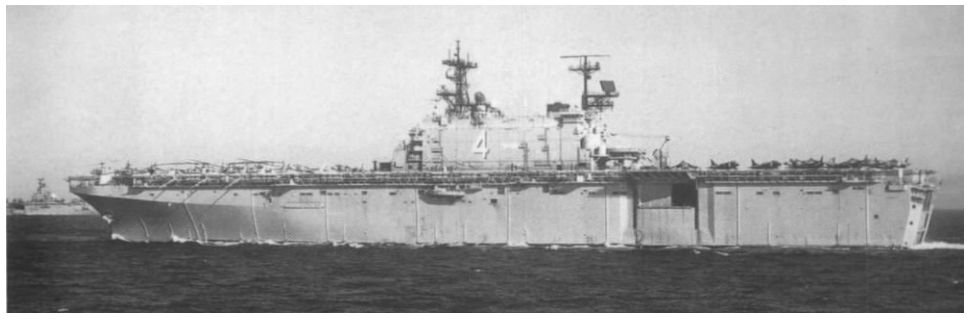
*Iraq's elite amphibious assault force was the *Special Boat Force, 8th Special Assault Division.*

**Designations have since changed, now all MAGTFs smaller than MEUs are called special purpose forces (SPFs).

***Landing teams are task organized to include ground combat and combat support units (infantry, artillery, combat engineer, armor, antitank, and assault amphibian units).

****Contingency MAGTFs were labeled using initials and numerical designations; such as CM-88 or CMAGTF 1-91.



Department of Defense Photo (USN) DN-ST-91-02119

A port view of the Tarawa*-class amphibious assault ship* Nassau *(LHA 4) includes an* Iwo Jima*-class amphibious assault ship underway. The* Nassau *would be designated the flagship of the amphibious task force.*

be created by "compositing," whereby the command elements of two or more units merged to create a single headquarters when more than one unit deployed into a single combat arena. This practice ensured unity of command and eliminated redundant command functions. It had been prior practice for Marines to deploy as brigades but to fight as expeditionary forces. This doctrine had historical precedents. In 1950 the 1st Provisional Marine Brigade joined another brigade-size element to fill out the 1st Marine Division just before landing at Inchon. In Vietnam, III Marine Amphibious Force was comprised initially of the 3d and 9th Marine Amphibious Brigades. In Saudi Arabia the 1st and 7th Marine Expeditionary Brigades were combined to form I Marine Expeditionary Force.[5]

Marines comprise only one half of the "Blue-Green Team" that constitutes America's amphibious arm. The ships and sailors that carry the Marines to the fight are collectively known as the "Gator Navy." In 1990 the Gator Navy consisted of more than 60 amphibious ships organized into three amphibious groups and eleven amphibious squadrons. Theoretically, there were enough ships in the Gator Navy for a Navy amphibious force to lift an entire Marine expeditionary force. The division of amphibious shipping between the Atlantic and Pacific Fleets to support a wide variety of operational commitments and to meet maintenance requirements, however, made such a large deployment impractical.* A Navy amphibious group of about two dozen ships was needed to transport the assault echelon of a Marine expeditionary brigade to an amphibious area of operations. It was standard peacetime practice to deploy three-to-five-ship amphibious squadrons, designated amphibious ready groups, or ARGs, when forward deployed, with Marine expeditionary units embarked to the Mediterranean and the Western Pacific.**

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*Both the Atlantic and Pacific Fleets usually had at least one amphibious squadron continuously forward deployed; amphibious groups would periodically deploy in support of major training exercises or be activated during times of crisis.

**At that time, ARGs were designated as ARG Alpha (west coast), ARG Bravo (Okinawa), and MARG (Mediterranean).

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A CH-53E Super Stallion lifts cargo from the underway Gunston Hall *(LSD 44). These Anchorage-class dock landing ships would see service with Marines in the Persian Gulf and elsewhere.*

Contemporary amphibious doctrine recognized four types of amphibious operations: assaults, landings from the sea to make forcible entry onto a hostile shore; raids, surprise attacks from the sea of short duration with limited objectives; withdrawals, the removal of friendly forces from a hostile shore; and demonstrations, actions to deceive the enemy using a seaborne show of force. The Navy-Marine Corps team was also proficient at two ancillary amphibious actions, non-combatant evacuation operations (NEOs) and sea-based humanitarian relief operations (HROs).

Amphibious ships sent to the Persian Gulf included *Tarawa*- and *Iwo Jima*-class assault ships, *Austin*- and *Raleigh*-class dock transports; *Whidbey Island*- and *Anchorage*-class dock landing ships, *Charleston*-class cargo ships, and *Newport*-class tank landing ships. Support vessels included hospital, aviation support, crane, container, cargo ships, and tankers. Navy landing craft included LCUs (landing craft, utility), LCMs (landing craft, mechanized), and LCACs (landing craft, air cushion). The newest assault craft was the high speed LCAC, a versatile turbine-driven hovercraft that could race ashore at more than 40 knots and carry one tank, four light armored vehicles (LAVs), two 155mm howitzers, or about 60 tons of cargo. Because LCACs flew over, rather than plowed through, the water they could use many beaches not suitable for other surface craft. Seventeen LCACs were deployed to the Gulf.

The Marines provided assault helicopters and amphibious vehicles. Most Marine helicopters used in the Gulf were updated versions of aircraft introduced

in the 1960s. Boeing Vertol CH-46 Sea Knight medium transport helicopters were first used during the Vietnam Conflict. Bell Textron UH-1 Huey ("Iroquois") utility helicopters, also dating from the Vietnam Era, were the primary light support aircraft. The heavy lifters were Sikorsky CH-53 Sea Stallions and their variants, the CH-53D, RH-53D, and CH-53E.* The triple-engine Sikorsky CH-53E Super Stallion was the only helicopter able to transport M198 howitzers and light armored vehicles. Close-in fire support was provided by Bell Textron AH-1 Super Cobras. Close air support came from a unique short-take-off/vertical landing airplane, the McDonnell Douglas AV-8B Harrier II "jump jet."

Marine AAV7A1-series assault amphibious vehicles—traditionally known as "LVTs" or "amtracs", but more commonly called "AAVs" or "Hogs" by Marines in the Gulf—carried assault troops to the beach and then served as armored personnel carriers while ashore. Other major Marine ground combat weapons embarked included M60A1 tanks, light armored vehicles (LAVs), M101A1 105mm and M198 155mm howitzers, and M220E4 humvee-mounted TOW anti-tank missiles.**

Raiders of the Lost ARG

Background

In the summer of 1990, the 13th Marine Expeditionary Unit (Special Operations Capable) [13th MEU(SOC)] was sailing on board the ships of Seventh Fleet Amphibious Ready Group Alpha in the Western Pacific. Unknown to these Marines at the time, the cruise would last almost four months longer than the normal six. This extended tour of duty and the vast distances the cruise would cover, coupled with the MEU's special operations raid capability and the fact it was embarked on board the ships of an amphibious ready group, earned the 13th MEU(SOC) the pseudonym "Raiders of the Lost ARG," a play on words based on a contemporary movie title—*Raiders of the Lost Ark*.[6]

The 13th MEU(SOC) was comprised of MEU Headquarters, Battalion Landing Team 1/4 (BLT 1/4), Marine Composite Helicopter Squadron 164 (HMM(C)-164), and MEU Service Support Group 13 (MSSG 13). Amphibious Squadron 5 (PhibRon 5) comprised Amphibious Ready Group Alpha during this deployment. ARG Alpha included the amphibious assault ship USS *Okinawa* (LPH 3), amphibious transport dock USS *Ogden* (LPD 5), dock landing ship USS *Fort McHenry* (LSD 43), tank landing ship USS *Cayuga* (LST 1186), and amphibious cargo ship USS *Durham* (LKA 114).[7]

Floating Marine battalions have been part of America's naval tradition since

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* These included CH-53D, RH-53D, and CH-53E models.

**Humvees were 4x4, 5,200-pound, high mobility, multipurpose, wheeled vehicles used much like their ubiquitous jeep predecessor.

1898, and at least one battalion landing team has been assigned to the Pacific Fleet since 1961.* In 1990, Marine expeditionary units shared this duty on a rotational schedule. When forward deployed, Marine forces were designated "Landing Force Seventh Fleet." Navy Amphibious Ready Group Alpha usually carried a MEU from the west coast while Amphibious Ready Group Bravo usually embarked an Okinawa- or Hawaii-based MEU. These amphibious forces cruised the Western Pacific and the Indian Ocean

Special Operations

Units carrying the designation "Special Operations Capable" were flexible combined-arms combat teams trained, equipped, and organized to conduct 18 special amphibious operations: day/night amphibious raids; limited objective attacks; non-combatant evacuations; show of force operations; reinforcement operations; security operations; mobile training team missions; civil affairs; deception operations; fire support coordination; counterintelligence; initial terminal guidance; electronic warfare; tactical recovery of aircraft and personnel; clandestine recovery operations; military operations in urban terrain; special demolitions; and *in extremis* hostage rescues.

In order to accomplish such a wide variety of tasks, Marine expeditionary units had been augmented by special units and trained for special operations since 1985. Command elements received a force reconnaissance detachment, an air and naval gunfire liaison company detachment, a counter-intelligence detachment, a force imagery interpretation unit detachment, an interrogator-translator team, and a radio battalion detachment. In 1990, the ground combat element included four rifle companies instead of the normal three. The artillery battery was armed with both M101A1 105mm and M198 155mm towed howitzers and its fire control assets were enhanced.** A wide variety of combat support units were also integrated. The aviation combat element included a composite aircraft squadron, an air defense detachment, and an air support squadron detachment to provide a "mini-DASC" for air control.*** Non-deployed fixed-wing refueler/transports and attack aircraft were placed on special standby status to support MEU operations. The combat service support element was tailored to meet anticipated logistics needs and maintained 15 days of supply called landing force operational readiness material.

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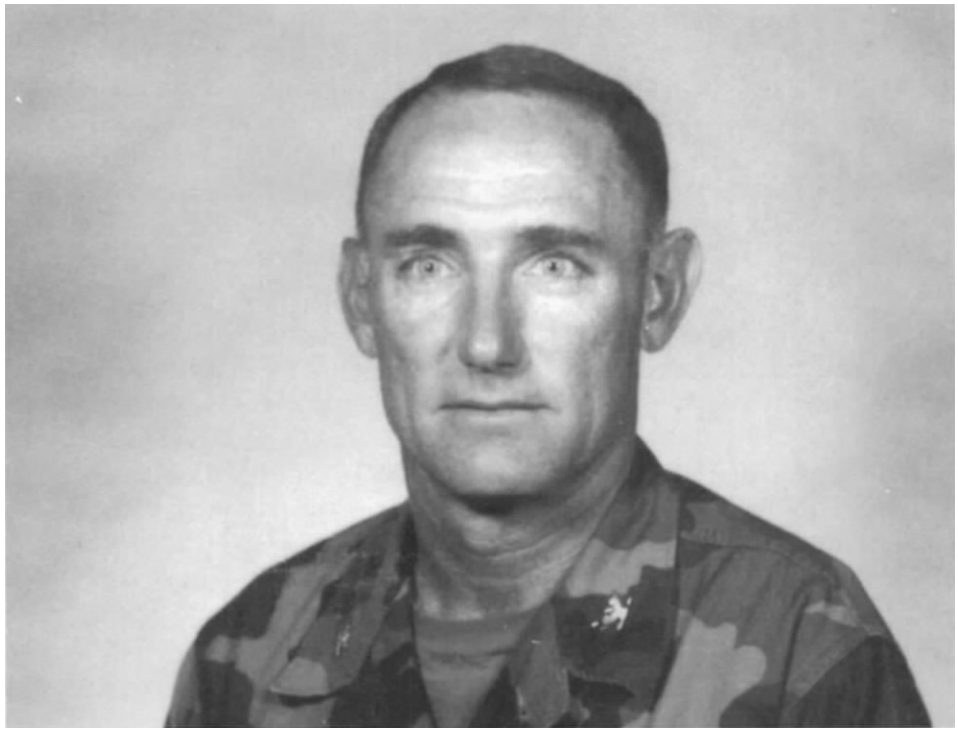
*The most famous of these were the Special Landing Forces (SLFs) used for combat and contingency operations durimg the Vietnam Conflict.

**The M101A1 105mm howitzers could be lifted by CH-46 and CH-53D helicopters; the heavier M198s had to be lifted by CH-53E.

***A DASC (direct air support center) processes air support requests, coordinates aircraft employment, and controls assigned aircraft.



Col John E. Rhodes commanded the 13th MEU(SOC) during its lengthy Persian Gulf deployment. The 13th MEU(SOC) was given the affectionate sobriquet "Raiders of the Lost ARG" to acknowledge its special operations capability, the extraordinary length of the deployment, and the long distance it traveled.

As part of the special operations package, special training and deployment schedules were put into effect. Six months of intense training was followed by a six-month deployment. The Marines refined individual and collective combat skills during the training phase. Their goal was to conduct amphibious operations during periods of limited visibility, acting without radio or electronic emissions, prepared to move after only short notice.[8] They were able to conduct day or night amphibious operations within six hours by using a special rapid planning cycle.

Organization of the 13th MEU(SOC)

In August 1990, the 13th MEU(SOC) was commanded by Colonel John E. Rhodes, a highly decorated naval aviator who flew helicopters in Vietnam in 1968-69 and participated in non-combatant evacuation Operations Eagle Pull and Frequent Wind in 1975. His previous commands included Marine Air Base Squadron 36 and Marine Medium Helicopter Squadron 163. Colonel Rhodes had commanded the 13th MEU since July 1989.[9] The ground combat element was Battalion Landing Team 1/4, commanded by Lieutenant Colonel George W. Flinn. Battalion Landing Team 1/4 included Headquarters and Service Company; Weapons Company; four rifle companies; Battery B, 1st Battalion, 11th Marines; Detachment 13, 1st Light Armored Infantry Battalion; 3d Platoon, Company A,

1st Reconnaissance Battalion; 1st Platoon, Company A, 3d Assault Amphibian Battalion; and 1st Platoon, Company A, 1st Combat Engineer Battalion.[10]

The aviation combat element was task organized to provide the MEU with the six functions of Marine aviation: air reconnaissance; antiair warfare; assault support; offensive air support; electronic warfare; and control of aircraft. It was a composite helicopter squadron built around Marine Medium Helicopter Squadron 164 (HMM-164), commanded by Lieutenant Colonel Guy M. Vanderlinden. The squadron was created using assets from Marine Aircraft Group 16 (MAG-16) at MCAS Tustin and Marine Aircraft Group 39 (MAG-39) at MCAS Camp Pendleton. The Tustin contingent included HMM-164 and detachments from Marine Heavy Helicopter Squadron 466 (HMH-466), Marine Aviation Logistics Squadron 16 (MALS-16), Marine Wing Support Squadron 374, and Marine Air Traffic Control Squadron 38. Marine Aircraft Group 39 provided detachments from Marine Light Attack Squadron 267 (HMLA-267), Marine Air Support Squadron 3, Marine Air Control Squadron 1, and a 3d Low Altitude Air Defense Battalion (3d LAAD) detachment. Embarked aircraft included 12 CH-46Es, 4 CH-53Es, 4 AH-1Ws, 4 UH-1Ns. Five Stinger missile teams were also deployed.[11]

MEU Service Support Group 13 (MSSG 13), commanded by Lieutenant Colonel Bradley M. Lott, was task organized to provide combat service support

The MEU's command element included, front row, from left: Maj Marshall K. Snyder; SgtMaj Anthony Reese; Col John E. Rhodes; LtCol Rollin G. Napier; Maj Russell O. Scherck; and Maj Steven J. Cash. Back Row, from left: Capt C. Wright; Capt Timothy M. Dunn; Maj Phillip R. Hutcherson; and LtCol John A. Clauer.

Photo courtesy of LtCol Marshall K. Snyder

Amphibious Squadron 5 underway in the Persian Gulf. PhibRon 5 carried the 13th MEU(SOC) in the ships Fort McHenry *(LSD 43),* Durham *(LKA 114),* Cayuga *(LST 1186),* Ogden *(LPD 5), and* Okinawa *(LPH 3).*

beyond the organic capabilities of the ground and aviation combat elements. This support included supply, maintenance, engineer, medical and dental, material handling, transportation, food, military police, financial, and personnel services. Formed from the 1st Force Service Support Group (1st FSSG) at Camp Pendleton, MSSG 13 included detachments from: Headquarters and Service Battalion, 7th Engineer Support Battalion, 7th Motor Transport Battalion, 7th Communications Battalion, 1st Landing Support Battalion, 1st Medical Battalion, 1st Dental Battalion, 1st Supply Battalion, and 1st Maintenance Battalion. The MSSG included combat service support equipment and sufficient supplies to support a two-week shore deployment. The logistics plan called for using a sea-based concept whereby most maintenance was conducted on board ship, only a small mobile combat service support detachment went ashore, and supply reserves remained afloat.[12]

Training and Deployment

The 13th MEU(SOC) underwent an intense training program before deploying. Phase I was 10 weeks of concentrated work on individual skills and small unit tactics. Phase II lasted six weeks and worked on staff integration using command post and joint service exercises.

On 20 June 1990, the MEU left California for the Western Pacific. On 5 July, it came under the operational control of III MEF, and on the 12th, ARG Alpha made a port call at White Beach, Okinawa, where the Marines got a chance to

stretch their legs after a 22-day trans-Pacific voyage. Four days later, the MEU arrived in the Philippines to conduct Exercise Valiant Usher 90-7 in conjunction with Contingency MAGTF 4-90, which was already there on a "presence" mission. The situation in the Philippines was tense. There had been demonstrations outside U.S. installations to protest continued American presence. Three U.S. servicemen, including Marine Sergeant John S. Fredette, had been slain by terrorists in May. This political turmoil was compounded by a natural disaster which struck at 1626 on 16 July. A severe earthquake, measuring 7.7 on the Richter Scale, rocked the island of Luzon, killing 647 people. From the 18th to the 31st, selected members of the MEU assisted disaster relief operations while the remainder continued training at Zambales.

Soon after operations began in the Persian Gulf on 7 August, Colonel Rhodes received a warning order to be ready to move to the area, but at that time the 13th MEU(SOC) was still needed in the Western Pacific because of to the situation in the Philippines. On 13 August, the MEU departed Subic Bay for a scheduled port call at Hong Kong. Two days later the MEU and PhibRon 5 were alerted to be ready to depart the Pacific and deploy to the Indian Ocean. They departed Hong Kong on the 20th for Subic Bay to load additional personnel and equipment. The five-ship flotilla sailed from Subic Bay on the 22d and arrived on station in the North Arabian Sea on 7 September. Following a temporary presence mission in the Persian Gulf to demonstrate the Coalition's amphibious capability, the MEU returned to the North Arabian Sea to meet the incoming 4th MEB in mid-September.[13]

Embarkation of the 4th MEB

Ordered to the Persian Gulf

On 1 August 1990, the 4th Marine Expeditionary Brigade was less than four weeks away from its annual deployment to northern Europe to participate in North Atlantic Treaty Organization Exercises Teamwork and Bold Guard 90. Forces had been allocated, loading plans were complete, and the ships were rapidly filling with blank ammunition and MRE (Meal, Ready-To-Eat) combat rations. Suddenly, the loading was halted and all plans were scrapped when several unanticipated international events in the next week radically changed the 4th MEB's course of action.

Although most of the Marine forces originally earmarked for duty in the Persian Gulf were from the west coast, the east coast-based 4th MEB was selected to become Central Command's amphibious strike force because it was the Marine brigade most ready to deploy by sea. After evaluating the situation in the Persian Gulf and reviewing the forces available, General Schwarzkopf requested that the 4th MEB be added to the CentCom force list. This tasking passed from the Joint Chiefs of Staff to Admiral Leon A. Edney, Commander-in-Chief, Atlantic Command, through Admiral Paul D. Miller, Commander-in-Chief, Atlantic Fleet, who in turn passed it on to Lieutenant General Carl E. Mundy, Jr., Commanding General, Fleet Marine Force Atlantic. General Mundy informed

Major General Harry W. Jenkins, Jr., Commanding General, 4th Marine Expeditionary Brigade at Norfolk to prepare for deployment. In an ironic twist of the chain of command, General Jenkins then tasked General Mundy, also the commanding general of II Marine Expeditionary Force (II MEF) at Camp Lejeune, with supplying the troops to fill out the 4th MEB.

Marines have traditionally proclaimed their ability to deploy to "every climate and every place," and the accuracy of this claim was tested in the summer of 1990. During one of the hastiest deployment redirections in history, the Marines of Norway-bound 4th MEB stowed their cold weather gear then readied themselves for sweltering desert heat virtually overnight. Ironically, it was not the invasion of Kuwait but another contingency that initially had the greatest impact

MajGen Harry W. Jenkins, Jr., commanded the 4th MEB. Jenkins was the senior Marine officer afloat throughout Operations Desert Shield and Desert Storm.

on 4th MEB planning. American citizens and other foreign nationals in the Liberian capital of Monrovia were put at risk when rebel forces tightened their noose around that embattled city. The 22d MEU(SOC) was waiting off the west African coast, but it appeared reinforcements might be needed. At 4th MEB Headquarters, Little Creek Navy Amphibious Base, Norfolk, Virginia, Lieutenant Colonel Michael M. Bullen, the MEB's intelligence officer, established a crisis action response team (CART) to monitor and evaluate events in Liberia. He prudently ordered his staff to keep an eye on developments in the Persian Gulf as well. The intelligence section worked round-the-clock, prepared daily situation briefs, and developed data files about both Liberia and the Persian Gulf. This turned out to be a fortuitous action.[14]

The 4th MEB had a proud heritage that included a distinguished combat record in World War I where it fought as the 4th Marine Brigade. In 1962 the 4th Marine Expeditionary Brigade stood ready to invade Cuba during the Cuban Missile Crisis. Three years later the 4th MEB participated in the 1965 Dominican Republic intervention. Less than a decade later the 4th Marine Amphibious Brigade (4th MAB) sortied into the Mediterranean in response to an international crisis triggered by the Arab-Israeli October War of 1973. Since the mid-1970s the 4th MEB had been earmarked for NATO service along western Europe's northern flank.

The 4th MEB was commanded by 52-year-old Major General Harry W. Jenkins, Jr. A graduate of San Jose State College in California, he held a master's degree from the University of Wisconsin. His military schooling included the Amphibious Warfare School, the Marine Command and Staff College, and the Naval War College. Commissioned in 1960, he commanded a rifle company in Vietnam, and later led the 2d Marines. In 1989, Brigadier General Jenkins was assigned concurrent duties as Commanding General, 4th MEB, and Commanding General, Landing Force Training Command Atlantic. He was promoted to Major General on 1 August 1990.[15]

At first, the invasion of Kuwait drew little attention at Norfolk because the 4th MEB staff was busy with Teamwork/Bold Guard and the possible deployment to Liberia. Movement to the Persian Gulf seemed unlikely because of the 4th MEB's historical orientation on Europe and the fact the I Marine Expeditionary Force (I MEF) at Camp Pendleton was the designated Marine contingency force for the Persian Gulf. By mid-week, however, it was apparent that large storm clouds loomed on the horizon in the Persian Gulf so Lieutenant Colonel Bullen had a Persian Gulf situation map prepared and his daily intelligence briefs included the latest information about developments in Kuwait and Iraqi movements. The 4th MEB operations section also assembled information to support contingency plans should they become necessary.[16]

On 4 August, FMFLant notified Major General Jenkins that the 4th MEB command element might be sent to Liberia. Accordingly, designated personnel were given shots and were told to be ready to depart on short notice. The next day, the 22d MEU was committed and the Liberian crisis eased, but by then the Persian

Gulf situation had worsened.* On 7 August, designated C-Day to mark the commencement of operations, Jenkins received a warning order indicating the 4th MEB might be sent to the Persian Gulf. Three days later, the 4th MEB was ordered to deploy to Southwest Asia.**

Deployment Plans

General Jenkins, his chief of staff, Colonel William W. Scheffler, and the rest of the 4th MEB staff had their work cut out. The first order of business was to make an estimate of the situation. Using a time-honored formula, General Jenkins assessed the 4th MEB's mission, enemy capabilities, terrain and weather in the objective area, the troops and fire support available, and the time allocated before issuing his concept of operations.

The 4th MEB's mission was open-ended; be prepared to conduct either amphibious operations or sustained operations ashore. After a careful review of the situation, General Jenkins directed that the 4th MEB be specifically tailored to engage a numerically superior armored force that possessed chemical and biological weapons in a desert environment.[17]

The 4th MEB command element quickly got down to the business at hand. The personnel section, headed by Major John R. Turner since 13 July, estimated requirements for units and personnel to augment the 4th MEB and prepared to handle a large influx of new arrivals. The 4th MEB's personnel strength rose from 188 to 8,442 in only 12 days. Operations officer Colonel Robert P. Mauskapf and his staff dissected the Desert Shield operations plan. Soon, the operations section was formulating plans, orders, and letters of instruction to be disseminated to the 4th MEB's major subordinate elements. The MEB's logistics section, headed by Lieutenant Colonel Gary W. Collenborne, made the difficult transition from planning for a limited training exercise in Europe to supporting a combat deployment of unknown length in the Persian Gulf. "Logistics flexibility" was the watchword as the 4th MEB geared up for the largest contingency-driven amphibious deployment since the Korean Conflict.[18]

Fielding the 4th MEB, an already arduous task, was made more difficult because the initial force list greatly exceeded the amphibious lift available. Time was also a crucial factor. Two major subordinate units did not report to Major General Jenkins until 12 August, less than a week before the first sailing date. Despite the hardships, General Jenkins reported the 4th MEB fully constituted and ready to deploy on the 14th, only four days after receiving the deployment order.

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*The Liberian contingency eventually led to non-combatant evacuation Operation Sharp Edge.

**USCinCCent Deployment Order 100600ZAug90 called for I MEF CE, 1st MEB, and 4th MEB to reinforce 7th MEB; one RLT was to be deployed on board ship.

Task Organization

II Marine Expeditionary Force was tasked to provide the necessary forces. The ground combat element of II MEF was the 2d Marine Division at Camp Lejeune. The 2d Marine Aircraft Wing was the aviation combat element. Its headquarters was located at Marine Corps Air Station Cherry Point, as were most of the fixed-wing squadrons. Most of the helicopter squadrons operated from Marine Corps Air Station New River, located near Camp Lejeune. The 2d Force Service Support Group at Camp Lejeune was the II MEF combat service support element.*

The existing 4th MEB command element received 470 additional personnel. The 2d Surveillance, Reconnaissance, and Intelligence Group provided the 2d Remotely Piloted Vehicle Company; detachments from the 2d Force Reconnaissance Company, 2d Radio Battalion; and 2d Intelligence Company teams from the Marine All-source Fusion Center, 5th Counterintelligence Team, 2d Topographic Platoon, and 2d Force Imagery Interpretation Unit. The Communications Section, headed by Lieutenant Colonel Glenn R. Williams, received new equipment and personnel to enhance its capabilities. This included a deployable world-wide Marine command and control system (WWMCCS), global positioning system (GPS), and position location reporting system (PLRS) master stations, two multi-channel satellite communications systems, and a wide variety of technical enhancement equipment.

The 2d Marine Division assigned Regimental Landing Team 2 (RLT 2) to the 4th MEB. Colonel Thomas A. Hobbs commanded RLT 2, which included Headquarters Company; the 1st Battalion, 2d Marines; the 3d Battalion, 2d Marines; the 1st Battalion, 10th Marines (Reinforced); Companies B and D, 2d Light Armored Infantry Battalion; Company A, 2d Assault Amphibian Battalion; Company A, 2d Tank Battalion; Company A, 2d Combat Engineer Battalion; Company A (-), 2d Reconnaissance Battalion; and Truck Company Detachment, Headquarters Battalion, 2d Marine Division. When embarked, RLT 2 mustered 3,526 personnel including 198 Marine officers, 3,125 enlisted Marines, 17 Navy officers, and 186 sailors. Its combat support included 22 tanks, 18 155mm howitzers, 48 AAVs, and 52 LAVs.

The 4th MEB aviation combat element was Marine Aircraft Group 40 (MAG-40). Colonel Glenn F. Burgess commanded MAG-40, which mustered 2,792 personnel when it reported to the 4th MEB on 12 August 1990. Marine Aircraft Group 40 included: Marine Attack Squadron 331 (VMA-331), the first Marine squadron assigned McDonnell Douglas AV-8B Harrier IIs; Marine Medium Helicopter Squadrons 263 and 365 (HMM-263 and -365); Marine Heavy Helicopter Squadron 461 (HMH-461); Marine Light Attack Helicopter Squadron

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*The 2d MarDiv, most of the 2d MAW, and most of 2d FSSG were deployed to the Gulf by Jan91.

269 (HMLA-269); Marine Aviation Logistics Squadron 14; Headquarters and Headquarters Squadron 28; Marine Air Control Squadron 6; Marine Wing Service Support Squadron 274; Marine Wing Communications Squadron 28; Detachment B, Marine Air Support Squadron 1; and Battery A, 2d Low Altitude Air Defense Battalion. The MAG-40 aircraft list included 20 AV-8B Harriers, 15 Bell Textron AH-1 Sea Cobras, 24 Boeing Vertol CH-46E Sea Knights, 16 Sikorsky CH-53E Sea Stallions, and 6 Bell Textron UH-1N Hueys.

The combat service support element was Brigade Service Support Group 4, commanded by Colonel James J. Doyle, Jr. It mustered 1,464 personnel.

Marine Corps Commandant Gen Alfred M. Gray, Jr., foreground, and MajGen Harry W. Jenkins, Jr. on board the Nassau *listen to a pre-sail briefing by the 4th MEB staff. Not long thereafter, the 4th MEB departed for the Persian Gulf via the Suez Canal.*

Department of Defense Photo (USMC) DM-ST-91-04421

Logistics and support detachments assigned to BSSG 4 came from 2d Military Police Company, 2d Medical Battalion, 2d Dental Battalion, 2d Maintenance Battalion, 2d Supply Battalion, 8th Communications Battalion, 8th Motor Transport Battalion, 8th Engineer Support Battalion, 2d Landing Support Battalion, and Headquarters Battalion, 2d FSSG. Brigade Service Support Group 4 was placed under the operational control of the 4th MEB on 11 August.[19]

Embarkation Issues

In the haste to accomplish so many things so fast, not all went smoothly. The 4th MEB had to address a number of sticky issues. Troop allocation, equipment lists, and task organizations had to be adjusted constantly to meet changing requirements. An amphibious shipping shortage caused problems. The limited time available caused predictable embarkation and loading problems. Aviation plans had to be completely reworked and new forces allocated. There was a shortfall of critical supplies and the existing repair parts supply allocation was inadequate for the task at hand.

Amphibious Group 2 (PhibGru 2), commanded by Rear Admiral John B. LaPlante, was designated to carry the 4th MEB to the Gulf. A shipping crisis ensued because the 4th MEB force allocation required about two dozen amphibious ships, but PhibGru 2 could only muster the nine ships originally scheduled for the Teamwork/Bold Guard exercises. Ship maintenance cycles, recent deployments, and the overall condition of the aging amphibious fleet severely limited the number of amphibious ships at hand. This ship shortfall was to have detrimental consequences throughout the 4th MEB's overseas deployment.*

After four days of intense negotiations, four more amphibious ships were finally made available.[20] Although 13 ships were better than 9, the amphibious lift available was not sufficient to embark the 4th MEB and all its gear. A shortfall of at least seven amphibious ships prevented loading all assault echelon cargo on board amphibious shipping. This forced the 4th MEB to load the overflow on board Military Sealift Command (MSC) ships. Unfortunately, these MSC ships were not intended for amphibious assaults and were neither self-sustaining nor capable of in-stream offloading. This solution provided sufficient cargo-carrying capacity, but significantly impacted potential amphibious operations because it severely limited the number of landing sites.

According to amphibious doctrine the assault follow-on echelon (AFOE) is carried on board Military Sealift Command ships, often called "black bottoms." The AFOE consists of troops, vehicles, aircraft, equipment, and supplies which—although not needed to initiate an assault—are required to sustain the assault force ashore. The AFOE must be in the objective area no later than five days after an assault begins. The black bottom ships that carry the AFOE are usually manned

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*No amphibious command ship (LCC/AGF) was assigned to the ATF and this hampered command and control and limited combat capabilities; Stewart, "PhibOps," pp. 16-19.

by civilian crews and are owned or chartered by the MSC.*

As usually happens in emergency situations, requests for support far outstripped the resources available. It was soon obvious that the 4th MEB's plans to use MSC ships to haul overflow assault and follow-on materials were not panning out. The Army and the Marines were competing for the few available common-user pool ships. There was great irony in the fact that task-organized, combat-ready units were losing ship space to units that were not organized for immediate combat. This happened because it took great attention to detail and lengthy planning sessions to determine proper loads and ship configurations for a combat deployment, but units which required only transportation and did not have to combat load could register their general needs with the joint deployment system much faster.

The reasons for the "ship crunch" were lack of time, lack of resources, and shipping priorities. The U.S. Transportation Command (TransCom), the unified command that controlled the common-user ships and planes that supported all Services, was overloaded. Contingency plans called for a minimum of 30 days' warning, but TransCom received less than six days notice. Ship schedules and loading priorities were established by matching time-phased force and deployment data with the transportation assets available and the desires of Central Command.

As part of its Teamwork/Bold Guard exercise package, the 4th MEB had requested use of MSC vehicle container ship MV *American Eagle* (T-AK 2044). Consultations with higher echelons confirmed the ship was still available so the 4th MEB planned to use the *American Eagle*'s 145,000 square feet of cargo space to carry vital equipment and supplies. On 14 August, however, the *American Eagle* was suddenly assigned to carry other forces to the Gulf. The loss of the *American Eagle* made it impossible for the 4th MEB to deploy adequate forces and supplies to sustain itself. On 16 August, only one day before the first amphibious ships sailed, the MSC-owned vehicle cargo ship MV *Cape Domingo* (T-AKR 5053) and MSC-leased vehicle cargo ship MV *Strong Texan* (T-AKR 9670) became available. Eventually, the MSC-leased ships *Bassro Polar*, *Aurora T*, and *Pheasant* also were assigned to support the 4th MEB.**

Major General Jenkins directed that the new embarkation plans were to build on the existing Teamwork/Bold Guard framework. He wanted maximum combat power loaded within the constraints of the 13-ship amphibious task force. Although the embarkation effort focused on the assault echelon, lack of space resulted in much of the assault echelon cargo and all of the assault follow-on ech-

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*Within the Strategic Sealift Command the only ships owned by the Navy are those in the Naval Inactive Fleet, fast sealift ships, and hospital ships; the Department of Transportation Maritime Administration owns the Ready Reserve Fleet and aviation support ships.

**These vehicle cargo ships were not USN vessels, hence, had no numerical designators.

Department of Defense Photo (USMC) DM-ST-91-04419

Personnel depart from two Marine UH-1N Iroquois helicopters on the flight deck of the Nassau *as it lies anchored off the coast of North Carolina near Morehead City. The* Nassau *would carry units of the 4th MEB to the Persian Gulf.*

elon cargo being relegated to commercial ships. It was recognized at that time that the assault overflow and follow-on supplies on board commercial ships would not be loaded in a manner suited to support combat operations, but there was no other choice if sailing deadlines were to be met.

Combat loading problems haunted General Jenkins for months to come. To meet the two-week target date for sailing, standard embarkation and documentation procedures had to be abbreviated, particularly in the case of late-arriving MSC-leased ships. Adding to the confusion was the wide dispersal of loading points. The amphibious ships were loaded at Morehead City, North Carolina, but the MSC ships were loaded at Sunny Point Military Ocean Terminal located near Wilmington, North Carolina, about 100 miles to the south. Lack of time and a shortage of trained embarkation personnel prevented the 4th MEB from closely supervising the loading at Sunny Point.* The hurried nature of the embarkation, combined with communications difficulties at sea, resulted in confusion about ship loading and specific-item placement that could not be resolved until the shipping reconfiguration at Jubayl in October and November.[21]

Insufficient port space at Morehead City resulted in a phased embarkation of the ATF. Amphibious Group 2 was divided into three transit groups, each with a

* 2d FSSG, not 4th MEB, embarkation personnel loaded the MSC ships at Sunny Point.

different sailing date. The requirement to move combat forces to the Gulf area as fast as possible prohibited an ATF rendezvous at sea. This, along with the uncertain tactical environment in the Persian Gulf, led General Jenkins to split the 4th MEB command element. The USS *Nassau* (LHA 4) was the ATF flagship and carried the "alpha" command group made up of General Jenkins and most of the 4th MEB staff. The USS *Guam* (LPH 9) carried the smaller "bravo" command element. Representatives from each principal staff section were assigned to the *Guam* to ensure adequate redundancy with regard to command, control, personnel, intelligence, operations, logistics, and communications matters.[22]

Aviation Issues

Marine Aircraft Group 40 was originally task organized for Exercises Teamwork/Bold Guard to be held in Norway and West Germany during September and October. The short duration and limited training opportunities dictated a small aviation package, and minimal aviation maintenance and supply packages were planned. Most fixed-wing aircraft were to fly to Europe and operate from airfields in Norway.* Ten AV-8B Harrier IIs were scheduled to deploy on board the USS *Iwo Jima* (LPH 2). Rotary-wing aircraft, 12 CH-46Es, 4 AH-1Ts, and 4 UH-1Ns, were slated for the flagship *Nassau.*

Deployment to the Persian Gulf precipitated major aviation changes and necessitated complete revision of maintenance, aviation supply, and logistics plans. Non-Harrier fixed-wing aircraft were dropped from MAG-40.** The new aircraft mix included 20 Harriers, 24 Sea Knights, 16 Super Stallions, 3 Sea Cobras, 12 Super Cobras, and 6 Hueys. Due to an urgent requirement for tank-killing helicopters in Saudi Arabia the 12 AH-1W Super Cobras of HMLA-269 were airlifted directly to the Gulf instead of being embarked as had been planned.*** At the last minute, two North American OV-10 Bronco light observation aircraft were loaded on board the *Iwo Jima* for transit to the Gulf.

Aircraft deck spaces were meted out using maintenance considerations. The Harriers, Hueys, and Sea Cobras were assigned to the *Nassau.* Both Sea Knight squadrons were placed on board the *Guam.* Twelve Super Stallions were embarked on board the *Iwo Jima,* and two of each were assigned to the USS *Trenton* (LPD 14) and the USS *Raleigh* (LPD 1). All of MAG-40's aviation command and control equipment was embarked on board the USS *Spartanburg County* (LST 1192). The aircraft maintenance support ship USNS *Wright* (T-AVB

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*These aircraft included 12 McDonnell Douglas F/A-18 Horners, 10 Grumman A-6E Intruders, and 3 Grumman EA-6B Prowlers.

**They were first absorbed by MAG-70, which later became part of the 3d MAW.

***When released by 3d MAW in Dec90, the AH-1Ws returned to MAG-40 and were embarked on board the *Raleigh* and *Shreveport.*

Department of Defense Photo (USN) DN-SC-91-00613

Adm Leon A. Edney, Commander in Chief, U.S. Atlantic Command, greets members of the 4th Marine Expeditionary Brigade as they stand in formation on the pier.

3) carried 77 rotary-wing vans, 191 fixed-wing vans, and 324 intermediate maintenance activity Marines. The *Wright* was specially configured with its rotary-wing vans accessible so in-stream maintenance support was available if aviation maintenance departments were overburdened. Operation Desert Shield marked the first time aircraft maintenance support ships were used during contingency operations.[23]

Supply Issues

One critical supply issue was the unavailability of consolidated training equipment pool (CTEP) supplies. The CTEP is used to outfit units deploying to harsh environments with special clothing, equipment, and supplies. For Desert Shield, the CTEP included "chocolate chip" desert camouflage utility uniforms, desert night clothing, and protective goggles. In spite of herculean efforts by supporting establishments, adequate supplies could not be obtained prior to embarkation. Many 4th MEB Marines left for the Gulf without desert uniforms or equipment. Fortunately, these items were not immediately needed. Critical CTEP items were later shipped with follow-on supplies.

A crucial problem was map availability. The Defense Mapping Agency Crisis Action Center was unable to meet the 4th MEB's requirements because its warehouse stocks had been depleted. The 4th MEB received a shipment of planning

Department of Defense Photo (USN) DN-SC-91-00614

Members of the 4th MEB prepare to board the Shreveport *(LPD 12) at Morehead City. The 4th MEB had less than two weeks notice to cancel a planned exercise in Northern Europe and mount out for a combat deployment to the Persian Gulf.*

maps, but it was only a fraction of the original order.* The ground combat element was hardest hit. RLT 2 had only a few maps and its subordinate units had none. Another problem was repair parts allocation. The existing repair parts supply block had been created to support Teamwork/Bold Guard and contained only specifically requested parts to support a short training deployment to northern Europe. Lack of time and ever-shifting equipment lists prevented the 4th MEB from building a new repair allocation, therefore the ATF sailed with only the original Teamwork/Bold Guard block on board. While underway the 4th MEB logisticians designed a specific repair parts supplement and requested that these additional materials be sent as part of the follow-on supplies.[24]

Major General Jenkins felt supply shortages and uncertainty about MSC ship configuration were his major concerns during the initial stages of Operation Desert Shield. He estimated about three-quarters of his time was devoted to logistics matters which were essential for the day-to-day sustainment of the 4th

*The Defense Mapping Agency was overwhelmed by requests for Gulf region maps; the agency wanted to supply 1:100,000 scale maps but was overridden by higher authority and was forced to prepare 1:50,000 scale maps, a process that required four times the material and slowed distribution. Ironically, during Desert Storm many users found 1:50,000 maps unsuitable and relied instead on captured Iraqi 1:100,000 copies of agency maps.

MEB.[25] Despite these problems, however, the 4th MEB had performed a nearly impossible task. It had formed from scratch and embarked almost 8,500 personnel in less than two weeks.

4th MEB Moves to the Persian Gulf

The 4th MEB Departs

To facilitate loading the amphibious task force at the crowded piers of Morehead City, Admiral LaPlante directed that Amphibious Group 2 be broken into three transit groups, each with a different sailing date. The problem with this was that the ATF had no plans to rendezvous at sea and would not reunite until it reached the North Arabian Sea in mid-September. At first, General Jenkins felt this sailing arrangement would be a minor annoyance, but not a major headache. Unfortunately, this was not the case. The ripple effects of this task force configuration had a major impact on 4th MEB operations for the next three months.

Transit Group 1 was composed of five amphibious ships: USS *Gunston Hall* (LSD 44); USS *Shreveport* (LPD 12); *Spartanburg County*; USS *Portland* (LSD 37); and *Trenton*. This group departed Morehead City on 17 August and sailed for the Gulf region via the Mediterranean Sea, the Suez Canal, and the Red Sea. Its final destination was Masirah Island in the North Arabian Sea just off the coast of Oman. The estimated sailing time was about two weeks. As Transit Group 1 moved east, operational control was passed to three different unified commands: Atlantic, Europe, and Central. Four-ship Transit Group 2, consisting of the *Nassau*, the *Raleigh*, the USS *Pensacola* (LSD 38), and the USS *Saginaw* (LST 1188), began sailing the same route on 20 August. Transit Group 3, made up of the *Guam*, the *Iwo Jima*, the USS *Manitowoc* (LST 1180), and the USS *LaMoure County* (LST 1194), departed the next day. The timely embarkation of the 4th MEB was a tribute to the unsung Marines, sailors, and civilians of the supporting establishments without whose hard work the ATF could not have sailed. Only 12 days passed from receipt of the movement order until the last hatch was secured and the amphibious task force was on its way.

Communications Enroute

Several days steaming time separated the transit groups, so face-to-face meetings between General Jenkins and his subordinate commanders were not practical. The only alternative was to pass important information using messages. As the transit groups spread farther apart, however, the increased distance precluded use of inter-ship messages. All ATF message traffic was then routed through one of three Naval Communications Area Master Stations (NavCAMS).*[26] Unfortunately, movement from one communications area to another necessitated

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*The ATF successively used NavCAMS Lant, NavCAMS Med, and NavCAMS WestPac as it traveled to the Gulf.

increased message handling and often resulted in significant delivery delays.

Three problems caused a communications gridlock: insufficient planning time; greatly increased intelligence traffic; and the sudden influx of many operational commands to overload the system. At one point, the Mediterranean NavCAMS had a backlog of more than 18,000 messages; "immediate" messages took four days to reach their destination, "priority" messages required 7-10 days, and some "routine" messages were not delivered for three weeks or more.[27] Many messages never arrived. Long after the 4th MEB arrived in the Gulf, missing messages continued to cause confusion. Inquiries about enroute message traffic were too often answered by quizzical looks or empty-handed shrugs from intended recipients.

The 4th MEB's communicators attacked this problem two ways. The most successful solution was to use WWMCCS, a gargantuan computer network that instantly linked the 4th MEB to any other Marine command or agency. A communications work-around was quickly established using WWMCCS operators at Fleet Marine Force Atlantic (Norfolk), Camp Lejeune and MCAS Cherry Point (North Carolina), and Headquarters Marine Corps (Washington, D.C.). WWMCCS operators at these sites became 4th MEB intermediaries using alternative communications to contact units that did not have a WWMCCS terminal. This innovative use of WWMCCS solved most communications problems with higher headquarters, but did not allow General Jenkins to keep in touch with 4th MEB's subordinate elements.

While all three ATF transit groups were in the Atlantic, Major General Jenkins used a special command channel to speak to his subordinates. This worked well until Transit Group 1 entered the Mediterranean and crossed into a new unified command zone. Transit groups were restricted to the frequencies used in their specific communications zone, hence, a transit group in one zone could not talk directly to a group in another zone. Voice transmissions were difficult and the NavCAMS was hopelessly backlogged. Effective and reliable intra-MEB communications were not restored until all three transit groups were reunited in the North Arabian Sea in mid-September.[28]

The communications gap affected the 4th MEB's personnel and logistics sections. Major John Turner, the MEB's personnel officer, was unable to receive timely, accurate personnel reports. The message backlog also hampered advising embarked Marines about births, deaths, or family emergencies, but in no case did a Marine fail to receive important family news in as timely a manner as conditions permitted.[29]

Ship Configuration Issues

Although the ATF ships had been combat loaded using the latest pre-embarkation information, the intelligence and operational pictures constantly changed as the ATF moved toward the Persian Gulf. Pre-embarkation combat loading plans were driven by the requirement to conduct a full-scale amphibious assault upon arrival in the amphibious objective area. Other amphibious missions developed

while the ATF was enroute, so new load plans had to be formulated but without detailed knowledge of existing loads, reconfiguration plans had to be general and could not progress much beyond the conceptual stage.

The five MSC ships that supported the 4th MEB were not loaded until after the ATF sailed. Embarked personnel and material reports did not provide the depth of information needed to plan reconfiguration. Lieutenant Colonel Gary Collenborne, the MEB's logistics officer, was not certain what had been loaded, where it was located, or precisely when it would arrive. The only solution was to board each ship, conduct a detailed inspection, and properly record the exact location of each item carried. This was going to be a massive job that required prior notification of each ship's master and their respective embarkation sections. This could not be done until the MSC ships arrived in the Gulf, several weeks after the ATF was already on station.

Intelligence Issues

The 4th MEB intelligence resources were pooled with those of PhibGru 2's intelligence section. Fully integrated joint intelligence centers (JICs) were activated on board the *Nassau*, the *Guam*, and the *Shreveport*. The *Nassau* JIC was the principal intelligence production center for the ATF. As such, the *Nassau* JIC fused all intelligence sources, managed intelligence collection, and constantly updated target information. Most of the Marine all-source fusion center detachment, two imagery interpreters, the 4th Interrogator-Translator Team

A Marine on board the amphibious transport dock ship Raleigh *(LPD 1) watches as the dock landing ship* Gunston Hall *(LSD 44) steams alongside.*

Department of Defense Photo (USN) DN-ST-91-02113

Headquarters and one subteam, and a six-man topographical detachment were assigned to the *Nassau* JIC.

The establishment of a "Blue-Green" JIC was nothing new, but one feature of the *Nassau* JIC was unique: the incorporation of a Marine all-source fusion center (MAFC). Operation Desert Shield provided the first time that a MAFC detachment had been assigned to a shipborne MAGTF during a combat deployment. The MAFC Marines were the 4th MEB's experts on enemy tactics and the Iraqi order of battle. They produced finished intelligence including reports and estimates, selected studies, and a daily intelligence summary. The *Nassau*'s print shop eventually reproduced 1,500 copies of the 4th MEB's recognition guide for Iraqi armored vehicles, aircraft, and weapons systems prepared by MAFC analysts, and the 4th MEB's Arab linguists made indispensable contributions to the intelligence collection effort.

A smaller version of the *Nassau* JIC was established on board the *Guam* to service the 4th MEB Bravo Command Element and Amphibious Squadron 2 (PhibRon 2). The *Guam* JIC also supported both Marine helicopter squadrons and the rifle battalion on board. A much smaller intelligence center was established on board the *Shreveport* to serve RLT 2 and PhibRon 6.

Movement to the North Arabian Sea

The two-week transit was not intended to be a sightseeing tour, but many of those embarked got rare opportunities to see parts of the world they had only dreamed of in civilian life. The first milestone for each transit group was passage through the historic Straits of Gibraltar. This was soon followed by a day-long journey through the Suez Canal, passing between Egypt's exotic and historic sights to the west and the barren Sinai Peninsula to the east. After leaving the Suez Canal, the ATF sailed down the Red Sea and through the Bab Al Mandeb Strait that passes between Yemen and Djibouti.

Admiral LaPlante requested a delay in the Red Sea to consolidate the ATF but permission was denied by Vice Admiral Henry H. Mauz, Jr., Commander, U.S. Naval Forces, Central Command (ComUSNavCent), who cited the urgent need for amphibious forces in the Persian Gulf. Separate transit groups sailed through the Gulf of Aden and into the North Arabian Sea. Transit Group 1 came under the operational control of Central Command on 3 September, Transit Group 2 followed on 6 September, and Transit Group 3 was transferred to Central Command on 9 September.* Pacific-based Amphibious Ready Group Alpha, with the 13th MEU(SOC) embarked, arrived in the North Arabian Sea on 7 September. The entire 4th MEB, including the 13th MEU(SOC), united when the last ships of the ATF closed Masirah Island on 16 September.

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*Although originally under operational control of CentCom, the ATF was later chopped to NavCent.

Department of Defense Photo (USN) DN-ST-91-02122

A CH-53E Super Stallion helicopter of HMH-464 lands on the flight deck of the Raleigh *(LPD 1) as other ships of the amphibious task force steam in formation behind.*

The MSC ships carrying some of the assault echelon and all of the assault follow-on echelon supplies arrived at Masirah between 17 September and 21 October. The MV *Cape Domingo*, carrying 63 vehicles, a 15-day supply of roundout ammunition, and other cargo, was the first MSC ship to arrive. It departed Sunny Point on 23 August and made landfall at Masirah on 17 September. The MV *Strong Texan* brought 2 M60A1 tanks, 3 M198 155mm howitzers, 68 vehicles, and other cargo on 1 October. The MV *Bassro Polar* arrived a week later with 3 AAVs, 3 M60A1 tanks, 1 M198 howitzer, 16 TOW-mounted humvees, and 39 other vehicles. On 21 October, the MV *Aurora T* and MV *Pheasant* brought ammunition, rations, lumber, and more than 10,000 pallets loaded with follow-on supplies.[30]

The Situation in Saudi Arabia

There were three probable avenues of Iraqi advance into Saudi Arabia from Kuwait. The most likely axis of attack was straight down the coastal highway that ran from Kuwait City to the Saudi industrial-port complex at Dhahran. It was the shortest route, offered the best road network, and led directly to the coastal oil fields and port cities which were Saudi Arabia's economic and strategic hearts. Southern movement along this highway threatened the resort town of Khafji, the port at Mishab, an airfield at Ras Tannurah, the vital road junction at Abu Hydriah, the modern port at Al Jubayl, King Abdul Aziz Military Air Base at Ras Al Ghar, the cities of Ad Dammam and Dhahran, and the causeway to Bahrain.

Two alternate attack routes were located farther inland. The central route went from Wadi Al Batin—located at the confluence of Kuwait, Iraq, and Saudi

Arabia—south, from where an attacking force could threaten either Riyadh or Dhahran. The other attack route featured a western approach to Riyadh through the desert. This route was the most direct for an attack on the Saudi capital, but it was the most difficult to support logistically and offered no targets of economic or military importance.

At the request of Saudi King Fahd Ibn Abdul Aziz, and acting in concert with its Western European Union allies and the forces of the Gulf Cooperation Council, the United States launched Operation Desert Shield to defend the Arabian Peninsula. The first American ground force to arrive in Saudi Arabia was the airlifted 2d Brigade, 82d Airborne Division, which began landing on 9 August. This force was first charged with the defense of Ad Dammam and Dhahran. The paratroopers of the 4th Battalion, 325th Infantry (Airborne), moved north on 12 August to defend the port city of Al Jubayl until the Marines could take over. Jubayl was located on the Gulf coast about halfway between Dhahran and the Kuwait border. It was a vital communications link and logistics hub, the site of a well-developed commercial port—reputedly the finest in the Middle East—and a modern airport. Jubayl would later become the primary Marine point of entry and the home of I MEF Headquarters.

The 7th Marine Expeditionary Brigade flew in from California and the 1st Marine Expeditionary Brigade soon followed from Hawaii. These fly-in forces linked-up with tanks, LAVs, AAVs, and other heavy equipment and supplies carried on board ships of the Maritime Prepositioning Force at the port of Jubayl. By early September the Marine forces in country included more than 30,000 personnel. The I Marine Expeditionary Force Headquarters was the command element, the 1st Marine Division was the ground combat element, the 3d Marine Aircraft Wing was the aviation combat element, and the 1st Force Service Support Group was the combat service support element.* Lieutenant General Walter E. Boomer served concurrently as Commanding General, I MEF (CG I MEF) and Central Command Marine Forces component commander (ComUSMarCent).

The Marines were assigned to defend a coastal region of Saudi Arabia from Dhahran north just south of Ras Al Mishab. These units were soon arrayed in a defensive arc north of Jubayl. General Boomer elected to use a mobile defense-in-depth. The forward tripwire was located south of Khafji. This small outpost was backed by a series of fall-back defensive positions with the main line of resistance located in an area near Manifah Bay known as Cement Ridge. He planned to use delaying tactics whereby Marine mechanized combined-arms task forces would slow the Iraqi advance and string out Saddam's combat power along the coastal highway. This would funnel attacking Iraqi armored columns into choke points where only a single road ran through the dry marsh beds, or *Sabkhas*, that were too soft to support movement by heavy vehicles. Stalled along this solitary route the Iraqis would be vulnerable to attack from the air and interdiction from

*The British 7th Armoured Brigade ("Desert Rats") also served with I MEF during most of Operation Desert Shield.

Department of Defense Photo (USN) DN-ST-91-00563

VAdm Henry H. Mauz, Jr., commander of the Seventh Fleet, assumed command of Central Command's naval forces in early August.

the sea.* General Boomer's ace in the hole would be a surprise amphibious assault.

Desert Shield Amphibious Forces

Although the first Marine units deployed by air rather than by ship, General Schwarzkopf understood an amphibious presence would threaten Saddam's exposed seaward flank. Accordingly, the 4th MEB was ordered to the Gulf where it was scheduled to join the 13th MEU(SOC) and Contingency MAGTF 6-90 to form the Marine Forces Afloat (MFA).** The amphibious task force carrying these landing forces would number more than two dozen ships and the landing force would consist of about 12,000 Marines. Major General Jenkins would be the senior Marine officer afloat.

When the ATF arrived in the region, General Jenkins reported to CentCom by message. General Schwarzkopf assumed operational control of the 4th MEB on 7 September, and on the 17th, passed it to Admiral Mauz (ComUSNavCent).[31]

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*The potential effectiveness of such a strike was shown when Iraqi armored columns near Mutlah Ridge were destroyed from the air on 27Feb91.

**The deployment order specified one brigade, one special operations capable MEU, and an RLT; Okinawa-based CMAGTF 6-90 was composed of an RLT CE and one BLT.

During most of Operation Desert Shield, the amphibious task force was designated Task Group 150.6 and the Marine landing force, Task Group 150.8. At no time during Desert Shield or Desert Storm did the 4th MEB come under the direct operational control of Lieutenant General Boomer, but much of the 4th MEB contingency planning was done in support of I MEF/MarCent requirements.

In early August, Admiral Mauz, at that time commander of the Seventh Fleet, was named Commander, Naval Forces, Central Command (ComUSNavCent). On the 14th, the USS *Blue Ridge* (LCC 19), an amphibious command ship that had been converted into the Seventh Fleet command ship, sailed from Yokosuka, Japan, for Manama, Bahrain. Admiral Mauz, accompanied by his advance command group, arrived by air in Bahrain the next day, assumed command of NavCent, and made his quarters on board the USS *LaSalle* (AGF 3) until the *Blue Ridge* arrived on 1 September. Enroute, the *Blue Ridge* stopped at Subic Bay in the Philippines where it picked up a landing force planning cell from III MEF.

The senior Marine on the NavCent staff was Colonel Frank G. Wickersham III, a combat veteran with more than three years of sea duty and two-and-a-half-years of amphibious experience. Wickersham was the Fleet Marine Officer, and although not holding flag rank, was the third senior line officer on the NavCent staff.[32] Fleet Marine Officers are special staff officers assigned to each of the numbered fleet commanders and serve as the primary embarked advisors on Marine doctrine.

The fact that MarCent and NavCent were both in the same theater of operations meant that there were two major "maritime" forces under General Schwarzkopf's operational control. Both operated with the majority of their forces inside the Northern Arabian Gulf/Kuwait Theater of Operations, but they remained independent. CentCom never published orders or assigned missions that established formal command relationships between the two, so both commanders remained co-equal throughout Desert Shield and Desert Storm. Although most inter-force issues were resolved in a satisfactory manner, all cooperative efforts were based on personal and professional relations between the commanders and their respective staffs.[33]

This chain of command created problems for the Marine Forces Afloat, since both the 4th MEB and I MEF had to work through NavCent. The ATF was often stationed in the North Arabian Sea, far from I MEF Headquarters at Jubayl and Central Command Headquarters at Riyadh, further complicating the chain of command. Although the landing force was under the operational control of NavCent, the command ship *Blue Ridge* was often located more than 400 miles away. This made face-to-face contact among Admiral Mauz, Lieutenant General Boomer, Admiral LaPlante, and Major General Jenkins difficult.

A major command relationship concern was what was termed "the missing link" by post-conflict analysts. There was no "three-star" Marine presence in Riyadh to articulate amphibious capabilities or their potential impact on tactical or strategic deployments by CentCom forces.[34] Neither the MarCent nor NavCent commanders operated from Riyadh and there was no specific amphibious representative at CentCom Headquarters. This last issue was singled out by

senior planners as a key factor in the employment of the Marine Forces Afloat. One planner likened this situation to the 4th MEB "having been swallowed up in a black hole" because it was so seldom mentioned during CentCom briefings.[35] This situation was not the result of an intentional slight or poor planning, rather it resulted from the twin dictates of place and circumstance.

Lieutenant General Boomer, the senior Marine officer, had been dual-hatted as CG I MEF/ComUSMarCent. Obviously, he was most often located at I MEF Headquarters, not at Riyadh, because his highest priority was preparing I MEF for combat, not acting as a spokesman for amphibious operations.*[36] Major General Jeremiah W. Pearson III, the MarCent Deputy Commander, was located at Riyadh, but his primary duty was to act as liaison between I MEF and CentCom, not to represent the Marine Forces Afloat which were under NavCent operational control. On the Navy side, Admiral Mauz was most often at sea and his deputy in Riyadh had many duties in addition to representing the amphibious forces.

Major General Robert B. Johnston, CentCom Chief of Staff, and Brigadier General Richard I. Neal, CentCom Deputy Chief of Staff for Operations, both Marines, kept a watchful eye on amphibious issues, but the nature of their joint responsibilities kept them from becoming outspoken advocates for the amphibious forces.** Brigadier General Neal asserted that "it became apparent there was no spokesman for...[the] Marine Forces Afloat [at CentCom]."***[37] The bottom line was that amphibious planning at Central Command took a back seat because there was no single representative in Riyadh whose primary mission was to oversee and brief amphibious options.****

Initial Desert Shield Amphibious Plans

On 31 August, Desert Shield Amphibious Operations Order 1-90 was issued. This document was the foundation upon which 4th MEB Desert Shield contingency plans were based. The Marine Forces Afloat were designated the theater reserve to be committed only at the direction of General Schwarzkopf. They were

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*This theoretical weakness was noted by both Gen Schwarzkopf and Gen Boomer but had been placed on the back burner for practical reasons, neither man wanted to interpose a new Marine three-star general between them because they enjoyed an excellent working relationship.

**This does not imply they did not take an active role, BGen Rowe asserted that BGen Neal was instrumental in getting four extra ships assigned to PhibGru 3 for the 5th MEB deployment; 5th MEB Staff intvw.

***Neal's appeal to CMC for more representation later resulted the establishment of MarCent(Fwd).

****The Seventh Fleet FMO proposed creating a functional "maritime component commander" for Navy-Marine operations. Wickersham comments.

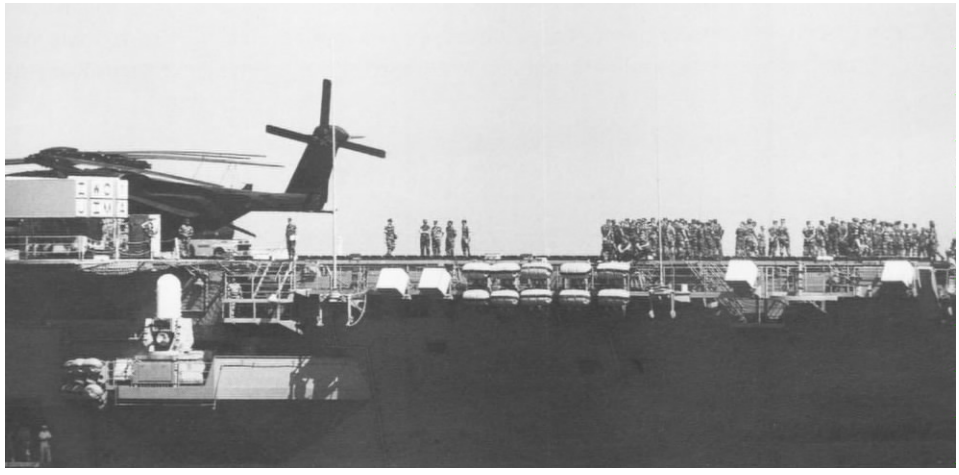
tasked to be ready to conduct independent or unified amphibious operations, or to reinforce CentCom after an administrative landing.[38]

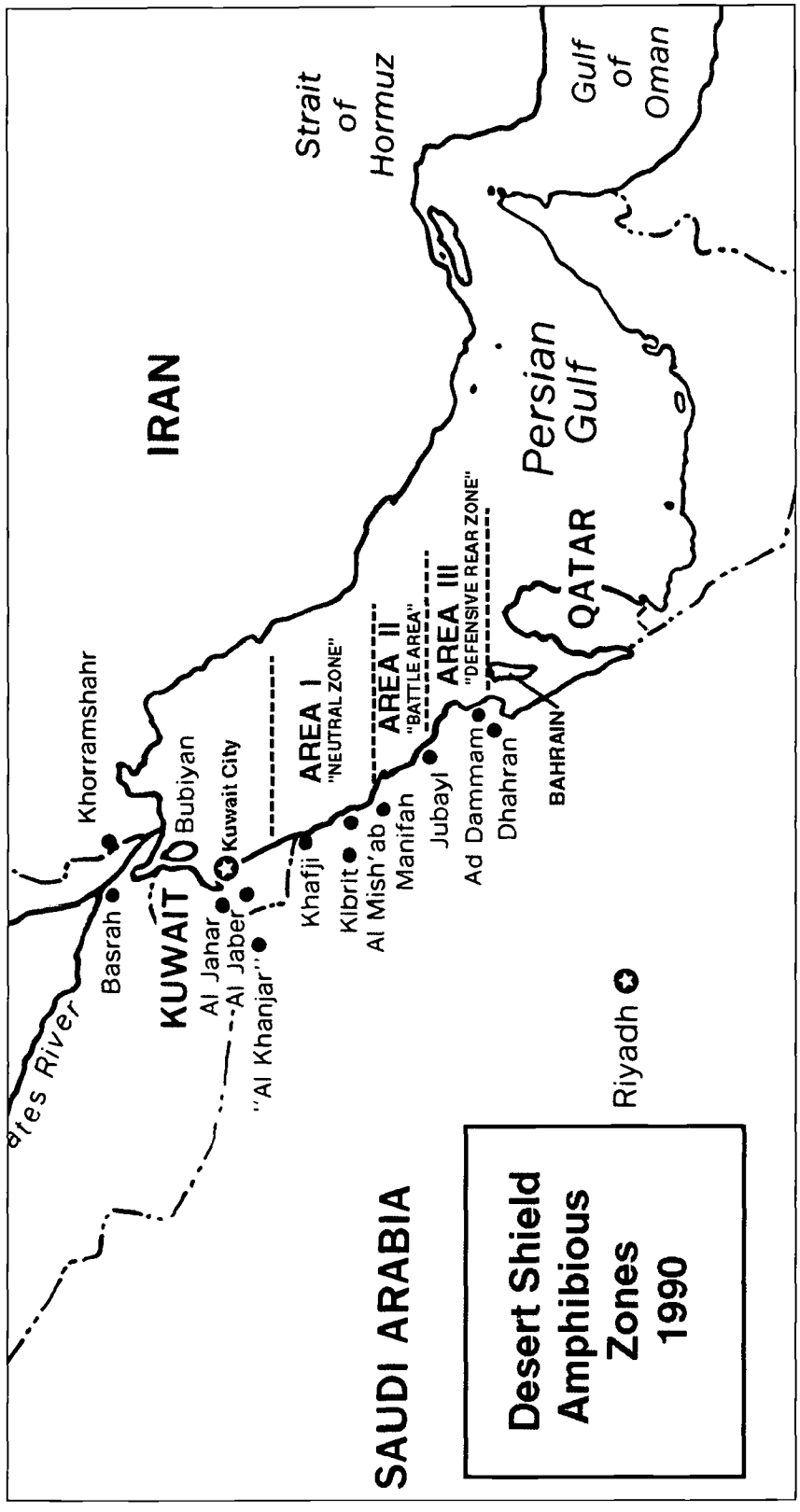
Amphibious planning actually began before the 4th MEB or the 13th MEU(SOC) arrived in Southwest Asia. On 12 August, Rear Admiral Stephen S. Clarey, Commander, Amphibious Group 3, and a small staff flew from San Diego to Bahrain from San Diego. Admiral Clarey's primary duty at the time was to oversee Maritime Prepositioning Force operations at Jubayl. Upon arrival, he reported by phone to Rear Admiral Grant A. Sharp, CentCom Director of Plans and Policies and acting commander of Central Command's naval component at Riyadh, who was filling in until Admiral Mauz could arrive from the Pacific. During the call Admiral Sharp gave Admiral Clarey an important additional duty: "I need you to press ahead and develop an amphibious deception plan."[39] He thought it was imperative to make the Iraqis believe the Americans were contemplating offensive action from the sea and he hoped an amphibious threat would slow the Iraqi advance or weaken their forces by making Saddam siphon off assault troops to defend the coast.

Admiral Sharp's tasking quickly became a joint-Service effort. A special planning cell was formed that included Admiral Clarey and Marine Brigadier General Russell H. Sutton, Director, Operations Division, Plans, Policy, and Operations, Headquarters Marine Corps. The first plan, PhibOp 1-90, called for a five-ship ARG and an embarked MEU(SOC) to be the demonstration force. Because Saddam refused to allow more than 12,000 westerners living in Iraq and Kuwait to leave, this force also had to be ready to conduct non-combatant evacuations or *in extremis* hostage rescues on short notice. These plans were, however, quickly overcome by events. Following a coordination meeting between General Boomer and Admiral Mauz on 19 September, amphibious planning took a different track. The concept of operations was changed to include a wider variety of amphibious operations by a brigade-size force and special operations, such as raids, NEO, and

Marines gather on the deck of the amphibious assault ship Iwo Jima *(LPH-2) upon the vessel's arrival at port in Bahrain.*

Department of Defense Photo (USN) DN-ST-91-03150




Strait of Hormuz
Gulf of Oman
IRAN
Persian Gulf
QATAR
BAHRAIN
KUWAIT
SAUDI ARABIA
Khorramshahr
Bubiyan
Kuwait City
Basrah
Al Jahar
Al Jaber
"Al Khanjar"
Khafji
Kibrit
Al Mish'ab
Manifah
Jubayl
Ad Dammam
Dhahran
AREA I
"NEUTRAL ZONE"
AREA II
"BATTLE AREA"
AREA III
"DEFENSIVE REAR ZONE"
Riyadh
Desert Shield
Amphibious
Zones
1990

demonstrations by smaller units.

The amphibious area of operations proposed in PhibOp 1-90 was divided into three sectors. Amphibious Area I stretched south from Mina Saud in southern Kuwait to Ras Al Mishab in northern Saudi Arabia. This area, sometimes called the "neutral zone," was the one best suited for a deep offensive strike. Amphibious Area II ran from Mishab down the coast to Manifah Bay. This was the most likely battle area and, therefore, received the most attention. Amphibious Area III, which extended from Manifah Bay to Ad Dammam, included most of Saudi Arabia's large ports and coastal urban areas. Area III was designated the defensive rear zone.

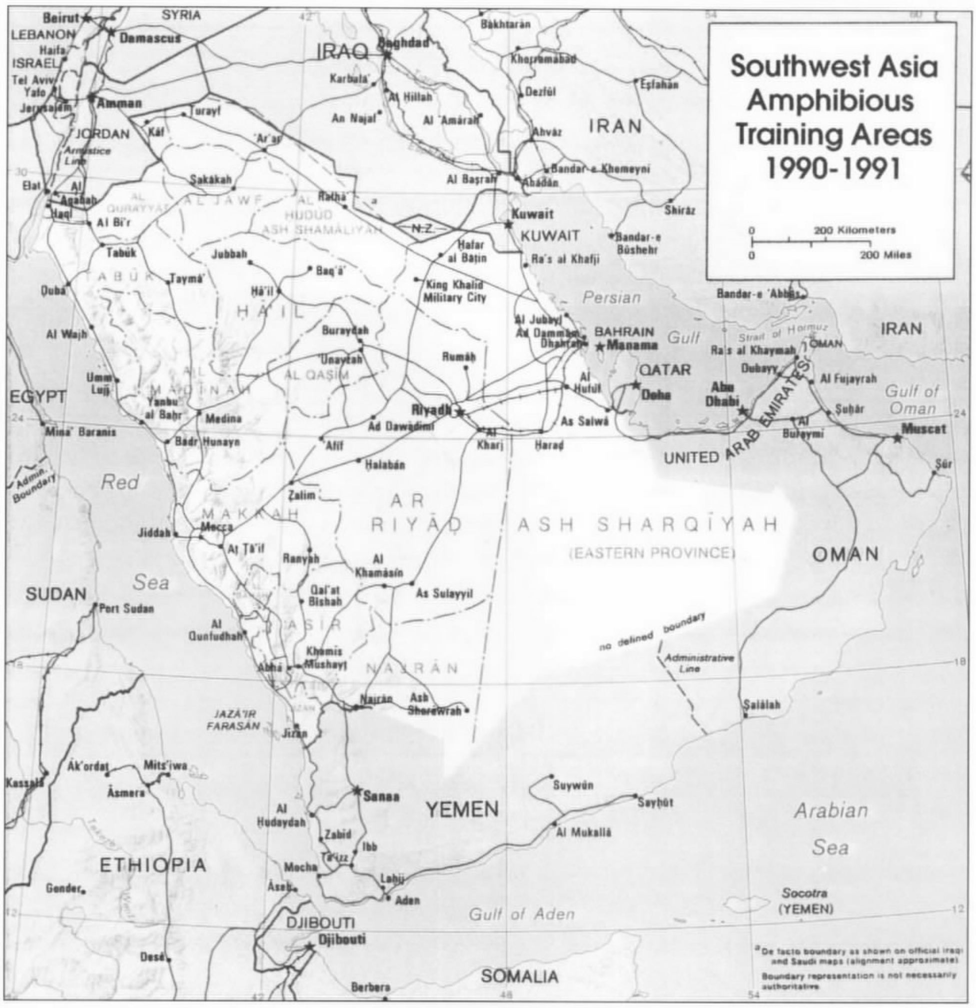
The concept of operations called for the ATF to be broken into three elements, with at least one inside the Gulf at all times. Each element had to be capable of independent action, but still had to be ready to conduct a consolidated amphibious assault with little advance notice. The 13th MEU(SOC) was assigned to Amphibious Group Alpha and was designated the theater amphibious special operations force. The remaining amphibious forces were to be split into Amphibious Groups Bravo and Charlie.

Contingency Marine Air-Ground Task Force 6-90 (CMAGTF 6-90), commanded by Colonel Ross A. Brown, sailed from Okinawa on board the ships of Pacific-based Amphibious Ready Group Bravo to provide the regimental landing team specified in the original deployment order. Brown's MAGTF was composed of Regimental Landing Team 4 Headquarters, Battalion Landing Team 1/6, and a combat service support detachment; there was no aviation combat element attached. The ships of ARG Bravo (Task Group 76.4) were the *Dubuque* (LPD 8), the *Schenectady* (LST 1185), and the *San Bernardino* (LST 1189).[40] Both ARG Alfa and ARG Bravo were placed under Admiral Mauz' operational control on 8 September.

Planners originally envisioned Regimental Landing Team 4 (RLT 4) would be incorporated into the 4th MEB and the ships of Task Group 76.4 would be transferred to PhibGru 2. This would give Major General Jenkins two regimental command elements to simplify command and control when amphibious task groups carrying elements of the 4th MEB were separated. This never happened. After arriving in the Persian Gulf, RLT 4 was sent ashore to become the I MEF rear area security force on 13 September.* The ships of TG 76.4, likewise, did not join PhibGru 2 as planned, but became sea-based mobile logistics platforms until they departed the Persian Gulf in November.**

*RLT 4 was later relieved of the RAS mission by the 24th Marines and fought as Task Force Grizzly.

**This created problems because the *Dubuque* was tasked as the mine countermeasure helicopter platform, a job that later required two ATF LPHs and significantly degraded the ATF's amphibious assault capability.


Southwest Asia
Amphibious
Training Areas
1990-1991
200 Kilometers
200 Miles
IRAQ
IRAN
KUWAIT
JORDAN
SYRIA
LEBANON
ISRAEL
EGYPT
SUDAN
ETHIOPIA
DJIBOUTI
SOMALIA
YEMEN
OMAN
QATAR
BAHRAIN
UNITED ARAB EMIRATES
Baghdad
Damascus
Beirut
Amman
Kuwait
Riyadh
Manama
Doha
Abu Dhabi
Muscat
Sanaa
Aden
Djibouti
Persian Gulf
Red Sea
Gulf of Oman
Arabian Sea
Gulf of Aden
ASH SHARQĪYAH
(EASTERN PROVINCE)
AR RIYĀD
King Khalid Military City
Ra's al Khafji
Al Jubayl
Mecca
Medina
Jiddah
Socotra (YEMEN)
no defined boundary
Administrative Line

4th MEB Contingency Plans

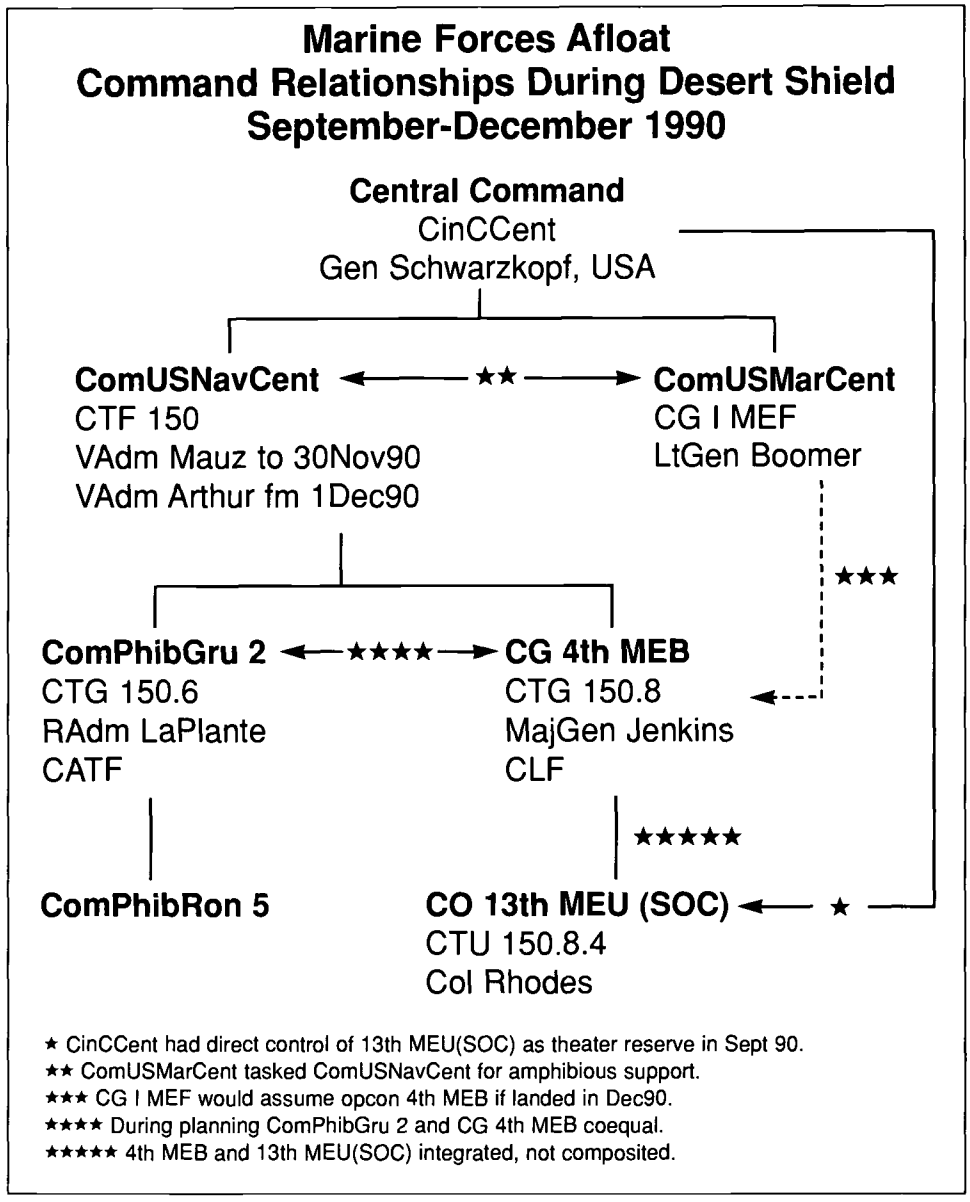
Lacking detailed knowledge of the amphibious objective area and without a clearly defined mission, General Jenkins ordered the 4th MEB staff to prepare a very general 10-option contingency amphibious package. Without adequate force lists or specific target information, these plans could only be very broad options that tried to take into account a wide variety of missions and used all possible force structures. These flexible plans were designed to demonstrate the MEB's combat capabilities, to provide a base for future training, and could be easily amended to fit actual combat situations.

Option One was a MEB-level, surface-heavy amphibious assault to be used if there was a significant antiaircraft threat. Two rifle battalions would land in assault amphibious vehicles and the LAI battalion would use LCACs. Follow-on heliborne forces would be used to reinforce and expand the beachhead. The 13th MEU(SOC) was fully integrated into the 4th MEB in this scenario. Option Two used a similar force mix, but called for a deep vertical envelopment followed by an overland link-up. This option was designed to be used if antiaircraft defenses were light or had been attrited by pre-assault bombardment. Option Three was a heliborne assault by the 13th MEU which would link-up with the surface-landed forces, then become the landing force reserve. Option Four was a MEB-level surface and heliborne raid with the 13th MEU deployed elsewhere. Option Five was a helicopter raid by one of the MEB's battalion landing teams. Option Six was a MEB-level raid by a mechanized combined arms combat team. The landing forces, which would include LAVs, would use AAVs and LCACs for ship-to-shore movement. Option Seven was a raid by the MEU reinforced by a 4th MEB BLT. Option Eight was an amphibious artillery raid using an artillery battalion command element, a mix of firing batteries, and infantry security elements. Option Nine was the independent use of the MEU to accomplish any of the 18 standard special operations capabilities. Option Ten was a MEB-controlled airfield seizure by a battalion-size force using surface and helicopter transportation. The 13th MEU was not included in this option.

Blue-Green Operational Issues

Amphibious warfare, by its very nature, is not solely a Marine operation but requires close cooperation within the Blue-Green Team. Responsibility for planning, rehearsal, and execution is shared by both Navy and Marine commanders. This was especially true in the Gulf. Within the amphibious task force there was a single joint planning cell for amphibious operations. Admiral LaPlante recalled that: "Harry Jenkins and I kept nothing from one another and collaborated fully on all planning [and] input to higher authority." He also asserted that "decisions which were even peripherally related to [amphibious warfare] were...jointly arrived at."[41]

On 25 September, the Commandant of the Marine Corps, General Alfred M. Gray, Jr., and Lieutenant General Robert F. Milligan, Commanding General, Fleet



Marine Force Pacific, visited Admiral Mauz on board the *Blue Ridge* during an inspection tour of Marine forces in the Persian Gulf. Future amphibious plans were discussed. General Gray was briefed about the upcoming landing exercise to be held at Ras Al Madrakah, Oman. He also inquired about existing NavCent contingency plans, and soon thereafter nudged Major General Jenkins to discuss this matter. The 4th MEB staff quickly began revising the 10-option generic plans created during the trip over.

Unfortunately, ATF-NavCent relations were not smooth during the initial stages of Operation Desert Shield. Probably the most controversial issue was how to employ the landing force. As Admiral Mauz asserted: "I wanted to see an

amphibious landing as much as anybody...[t]he trouble was, there was no good place to do a landing."[42] General Jenkins, on the other hand, felt NavCent "displayed little interest in developing a naval campaign that went beyond the level of presence."[43]

The first amphibious operations order was not a classic initiating directive as called for by joint amphibious doctrine. It did not state specific missions or set priorities, but simply listed the entire spectrum of amphibious operations. The 4th MEB attempted to rectify this by creating a plan that detailed 10 amphibious employment options ranging from specific special operations to major amphibious assaults. On 28 September, Admiral LaPlante and General Jenkins submitted this plan to Admiral Mauz. They heard no more about it and no initiating directive resulted.[44] Colonel Wickersham, the Fleet Marine Officer, noted that the lack of an initiating directive was due to the fact the ATF had no specific mission assigned by either CentCom or NavCent.[45]

Another problem was that the landing force was fragmented rather than unified and there seemed to be no clear vision of how to employ large amphibious forces.* The 13th MEU(SOC) was used as a separate landing force because it had undergone special operations training and was task organized for independent operations. The 4th MEB, at that time, had not yet undergone training ashore, its ships were not combat loaded, and the aviation and ground combat elements had not worked together. Thus, the 4th MEB was not yet a cohesive amphibious force. The division of the 4th MEB into two separate units, however, made less tactical sense. General Jenkins would have to create redundant command elements, fragment his ground combat element, separate the aviation combat element, and reconfigure amphibious shipping. This time-consuming process would create control, supply, and maintenance problems while reducing the 4th MEB's striking power.

Critics called this propensity to divide amphibious forces into small groups a "MEU mentality" and felt it showed a lack of understanding of the inherent power of large amphibious forces.[46] They felt it degraded combat effectiveness because it interrupted tactical integrity, required extensive reorganization, and begat a myriad of command and control difficulties. Critics also noted that there seemed to be a perception at higher headquarters that there was no viable amphibious mission in the Persian Gulf. As one naval officer asserted: "the Amphibious assault...[was always]...a supporting attack."[47] On the other hand, when the ATF arrived in the Gulf region, General Schwarzkopf's mission was the defense of Saudi Arabia, not offensive operations; the primary utility of the 4th MEB, therefore, would be to reinforce I MEF.

An offensive amphibious role was not very likely. As Admiral Mauz noted,

*Adm Mauz felt differently about this point. He claimed the function of the MFA was to be CentCom strategic reserve, pose enough of a threat to cause Saddam's resources to be diverted to coastal defense, and conduct raids once hostilities began. (Mauz comments).

there was no good place to land. Even a cursory look at the terrain of the Persian Gulf shows a lack of strategic depth. It was less than 50 miles from Kuwait's southern border to the Marine main line of resistance, not enough space for an Inchon-style amphibious turning movement. At that time, therefore, the most likely amphibious options were either raids against Iraqi communication lines or reinforcement of land forces. Small amphibious groups were well suited for such operations because they increased deployment options, eased unloading at limited dock spaces, and enhanced rotational use of the Gulf's limited maintenance facilities.

4th MEB Plans and Training

Operational Issues

While the 4th MEB was mounting out, the 13th MEU(SOC) was diverted from its planned Western Pacific cruise and ordered to the Gulf. When the two units joined forces a unique command relationship developed between the 13th MEU and the 4th MEB. Admiral Mauz wanted an independent amphibious presence in the Persian Gulf at all times, so the MEU was never actually placed under the operational control of 4th MEB.[48] Colonel Rhodes later recalled that "13th MEU(SOC) was never chopped from III MEF to 4th MEB [but this was] no problem...as I knew General Jenkins was my de facto and on-scene Marine flag."[49] The 4th MEB and the 13th MEU were "associated," rather than "composited." Instead of merging the two command elements into a single headquarters, they retained their respective command elements. When in close proximity, the 4th MEB acted as the command element for both units. The MEU's organic ground, aviation, and support elements remained on board the ships of ARG Alpha regardless of its location.

After the 4th MEB and the 13th MEU linked-up in the North Arabian Sea, there were three pressing problems: developing standard operating procedures common to both units; formulating plans to cover combat contingencies; and conducting unified training to create a hard-hitting, combat-ready amphibious strike force. To accomplish the first of these goals, General Jenkins ordered training to begin immediately after the ATF arrived at Masirah. On 16 September, the 13th MEU and the 4th MEB conducted a supporting arms coordination and communications exercise.[50]

Amphibious Plans

Amphibious plans focused on three designated amphibious objective areas: Area I, Mina Saud to Mishab; Area II, Mishab to Manifah Bay; and Area III, Manifah Bay to Dammam. Priority of planning was dedicated to Area II to support I MEF, whose the main line of resistance would be centered on a key terrain feature, "Cement Ridge," located north of Jubayl. At that time, the Marine Forces Afloat were the theater reserve and could be used for either an amphibious assault or to reinforce ground forces according to the desires of General Schwarzkopf.

According to established amphibious doctrine Admiral LaPlante and Major General Jenkins remained co-equal while planning amphibious operations in support of Operation Desert Shield. They created a joint plan that outlined two amphibious assaults, a series of raids, and an administrative offload.[51] Amphibious assaults could be used to relieve pressure on I MEF or to interdict Iraqi supply lines, raids would draw attention and force the Iraqis to divert forces to defend the vulnerable coastline, and an administrative landing at either Ad Dammam or Al Jubayl would be used if the landing force was ordered to conduct operations ashore.

Each of these plans used the same basic assumptions: there would be no naval or air threat to the ATF; Iraqi forces would not have time to prepare elaborate defensive positions; offshore mines and barriers would be cleared before the ATF entered the objective area; and outside air and naval forces would protect the ATF during its movements and operations. During the early stages of Desert Shield, it was envisioned that coalition forces would have complete control of the air space over the Kuwait Theater of Operations and that Iraqi forces would be too busy attacking to prepare defenses or plant mines.[52]

After arriving in the Gulf, the 4th MEB staff pulled out the enroute contingency plans and modified them to reflect the current situation. Amphibious Option 1 became a surface assault with helicopter reinforcement using RLT 2 and the 13th MEU(SOC). This plan was deemed the most likely to be executed because it reduced the surface-to-air threat by using the landing force to clear the beach and suppress enemy fire. After a beach lodgement was established, heliborne forces would land inside the force beachhead line to reinforce units already ashore. Combat support units would land "on call" with vehicle-mounted TOW antitank missiles coming ashore first, followed by antiaircraft missiles and field artillery. The 4th MEB forward command element would then come ashore. Ground reinforcements and other equipment and supplies were reserved for later waves.

Option 2 was a simultaneous surface/air landing by the 4th MEB and the 13th MEU(SOC). Battalion Landing Teams 1/2 and 3/2 would come ashore in AAVs and conventional landing craft. The 13th MEU would conduct a deep heliborne assault using four landing waves. The 2d LAI Detachment would use LCACs to land. Consideration was given to landing the LAI as a pre-assault force or in a scheduled wave, depending on enemy dispositions. The LAVs had three employment options: they could be used to support RLT 2; be used as a screening force; or be sent to reinforce the heliborne force quickly. Planners estimated it would take seven hours to complete the landing of all scheduled and on-call waves. The raid plans were a compilation of Amphibious Options 4, 5, 6, and 7 which called for forces that varied in strength from one company to two battalions. The planners had no specific mission, limited knowledge of enemy forces, and no assigned landing zone so their raid plans used only very general employment concepts. Hydrography problems throughout the Gulf littoral required reliance on helicopters, LCACs, and AAVs for the ship-to-shore movement of raid forces.[53]

Training Issues

The Sultanate of Oman was strategically located at the mouth of the Persian Gulf. It was a member of the pro-West Gulf Cooperation Council, and Sultan Qabus Bin Said had previously offered bases and training areas to support military exercises by Western countries.* General Jenkins immediately initiated liaison with the Sultan's Armed Forces (SAF) to make arrangements to secure training areas and to coordinate a combined training program with Arab forces. Planning sessions at Muscat were attended by Navy and Marine representatives, officers of the SAF, and the American Defense Attache's Office. Liaison meetings were held on board the *Nassau* on 17 and 18 September to work out specific plans for an upcoming landing exercise in Oman. Two locations were identified, one at As Sirab and another at Ras Al Madrakah. Although located about 95 miles south of Masirah, Madrakah was selected. The training area was populated by nomadic Bedouin tribes so detailed liaison with Arab representatives was very important to avoid misunderstandings or confrontations between the Americans and the Bedouins.[54]

It was not known how long the ATF would remain in the North Arabian Sea so amphibious rehearsals were scheduled to increase in scope and complexity using as many of the 10 amphibious options as possible. Major General Jenkins ordered that each landing would include or be followed by extensive individual and unit training, particularly live fire. Vehicle and equipment maintenance could be performed while on shore as well. The landings also presented a good opportunity to inspect, prioritize, and rearrange supplies on board the amphibious ships.

Exercise Sea Soldier I

The first scheduled exercise was named "Camel Sand" by the Americans and "Jundee Al Bahr" by the Omanis, but after it was discovered that "Jundee Al Bahr" translated as "Sea Soldier," that title was adopted for this and three subsequent exercises. Sea Soldier I was conducted from 29 September to 5 October. It was designed to test landing plans, acclimatize Marines to the harsh desert environment, fire weapons up to 25mm, improve desert navigation and survival skills, and practice night operations.

The landing plan incorporated both the 4th MEB and 13th MEU(SOC) to land a mechanized force at night using helicopters and surface craft. The assault waves went ashore as planned, but the on-call waves could not use conventional surface craft because of rough seas and poor surf conditions in the landing area. This resulted in cancellation of all surface landings except those using LCACs and helicopters, which became the primary ship-to-shore means for the rest of the exercise. Company D, BLT 1/4, 13th MEU(SOC), honed its special operations skills during a final night raid code-named "Knight Strike."

Although Sea Soldier I was difficult to organize, it challenged the MFA's flex-

*Masirah Island had been the staging base for ill-fated Operation Eagle Claw, the attempted Iranian hostage rescue by American forces in 1980.

Department of Defense Photo (USN) DN-ST-91-4032

MajGen Harry W. Jenkins, Jr., and RAdm John B. LaPlante, right, amphibious task force commander throughout the deployment to the Persian Gulf, go ashore for a first-hand look during exercise Sea Soldier.

ibility and improved its rapid response package. Helicopters flew not only the daily missions listed in the air tasking order, but they also responded to unscheduled requests to deliver rations, water, fuel, ammunition, and other supplies to the landing force. Although it was not known at the time, this experience would later prove valuable because beach gradients along the Persian Gulf littoral would not

support surface craft (LCU and LCM) displacements, therefore, future amphibious operations would have to rely on helicopters and LCACs for ship-to-shore movement.

On 6 October, General Jenkins conducted an exercise debrief on board the *Okinawa*. The conclusion was that despite unfavorable weather conditions Sea Soldier I was a success. The Marines gained valuable experience in land navigation, equipment maintenance, tactics, and desert survival skills. More than 2,400 personnel and about 390 vehicles went ashore. Logistics support problems, however, meant the CH-46s and CH-53s had been used so much they required a post-exercise maintenance stand down to ensure future availability. The inability to move large items ashore resulted in cancellation of plans to reload the ships of the ATF so this immediately became an exercise goal for Sea Soldier II which was planned for the next month.[55]

Unfortunately, the cost of realistic training is often high. Such was the case for the Marine Forces Afloat. On 8 October, two UH-1N helicopters from HMLA-267, attached to the 13th MEU(SOC)'s HMM-164 on board the *Okinawa*, collided while conducting night training. Both aircraft were lost with all hands, a total of eight Marines: Captain William D. Cronin; Captain Gary S. Dillon; Captain Kevin R. Dolvin; Captain William J. Hurley; Sergeant Kenneth T. Keller; Sergeant John R. Kilkus; Corporal Timothy W. Romei; and Lance Corporal Thomas R. Adams.*[56]

Exercise Sea Soldier II

With the lessons and shortfalls of Sea Soldier I fresh in their minds, Marine planners soon began working on Sea Soldier II. This exercise was an expanded and more complex version of Sea Soldier I that combined Amphibious Options 1 and 3. Sea Soldier II, held from 30 October to 8 November, had eight training objectives: exercise air command and control systems; integrate PLRS navigation systems into ground operations; expand night fighting ability; push combat service support forward; conduct casualty treatment and evacuation procedures in a chemically contaminated environment; broaden the scope of ship-to-shore movement; integrate carrier-based aviation into ATF fire support; and conduct field maintenance on embarked vehicles and equipment.

Sea Soldier II was a surface-heavy assault by RLT 2 to establish a beachhead then use helicopters for reinforcement. The 13th MEU(SOC) conducted a pre-assault helicopter insertion to seize a mock airfield and establish an artillery fire support base. A three-day ground exercise followed the landings. This exercise featured a series of cross-country moves, screening maneuvers by the LAVs, and night attacks against specified objectives. This was the first employment of the Mobile Electronic Warfare Support System and its operational control element in

*MAG-39 dedicated a monument honoring these eight Marines at MCAS Camp Pendleton in 1993.

Department of Defense Photo (USN) DN-ST-92-06922

M-60 battle tanks are driven off a utility landing craft from the amphibious assault ship Nassau *as 4th MEB Marines conduct an amphibious beach assault.*

support of contingency amphibious operations. The control element operated from high-mobility, multi-purpose, wheeled vehicles (HMMWVs).

This time the weather cooperated and the majority of the equipment was brought ashore, providing the opportunity to conduct much needed maintenance and to combat-load some ships. More than 3,100 Marines came ashore and 690 major end items were debarked. The decision to push operations inland necessitated special logistics considerations. Extra fuel and water had to be delivered to the assault units. The joint Navy-Marine planning staff decided to use LST-mounted causeways to get water and fuel carrying trucks ashore. Although extensive vehicle maintenance on shore was originally planned, only primary preventive maintenance could be performed because of critical repair parts shortages. The time at sea and two major exercises in two months had been hard on the equipment. At the end of Sea Soldier II, equipment readiness was at its lowest ebb and combat efficiency was suffering due to the degraded condition of many end items. Repair parts had been properly ordered, but supply channels could not move the items quickly enough to the units which needed them. The lack of repair parts and slow response by the supply pipeline were major concerns for Major General Jenkins.[57]

The tactical plans for Sea Soldier II were driven by the way the ships were loaded because it had not been practical to reconfigure them during Sea Soldier I. This created problems because supply requests could not always be met due to the way the ships had been loaded, but constant data updates and close supervision by combat cargo officers ensured the Marines ashore were provided for as soon as possible.

Working out medical evacuation procedures was one of the primary training objectives. To do this, reliable communications had to be established by means of a medical regulating net that connected the beach evacuation station, regimen-

tal and battalion aid stations, primary casualty receiving stations, and treatment ships. The biggest issue was establishing proper links between medical personnel, air controllers, and the Direct Air Support Center. Problems in this area pointed to the need for more planning and coordination to ensure dependable medical evacuation procedures.

One of the highlights during the training period was a medical civic action program (MedCAP) to service the Bedouins of the region. The Sultan and higher headquarters granted permission to conduct MedCAP operations and the Omani military liaison team furnished personnel to overcome language and cultural barriers. Two hundred and ninety-two patients were treated. The success of the MedCap resulted in plans to expand such activities in the future.[58]

Sea Soldier II was the first opportunity to integrate naval air support. Navy aircraft from the *Independence* (CV 62), airplanes from the 3d Marine Aircraft Wing at Shaikh Isa Air Base, Bahrain, and VMA-331's Harriers were all used to support Sea Soldier II. This thoroughly tested the ATF's air command and control procedures and adjustments were made where necessary.[59] The most notable logistics achievement of the exercise was the formation of mobile combat service support teams. They were composed of refuelers, recovery vehicles, and maintenance teams. These teams were able to go ashore early and provide combat service support to units in forward areas. Reembarkation did not go as smoothly as had been hoped. Deadlined equipment made the backload difficult, but embarkation officers were able to reconfigure at least some of the ships to conform with combat loading plans.[60]

Overall, Sea Soldier II was a success. The 13th MEU and the 4th MEB were able to work together, outside air resources were utilized, medical evacuation plans were tested, and limited maintenance was performed. It was obvious, however, that further training by all elements was needed. The exercise ended in uncertainty because the 13th MEU was scheduled to depart in November, so elements of the 4th MEB had to be trained to conduct special operations, heretofore assigned to the 13th MEU(SOC). The exact status of the 4th MEB was also in doubt.*

Combined Training

In addition to amphibious operations, plans were made to cross-train with Arab forces, specifically those of Oman and the United Arab Emirates (UAE). Small unit training was conducted at Al Hamra in the UAE during late October and November. Colonel Wickersham, the Fleet Marine Officer, and American Embassy representatives made initial contact with Emirate diplomats and soon liaison and reconnaissance teams were sent to the UAE. Bilateral training began

*The 11th MEU(SOC) was scheduled to replace the 13th MEU(SOC) as LF7F in late Dec90 or early Jan91; the 5th MEB was to replace the 4th MEB at an undetermined date.

Department of Defense Photo (USN) DN-ST-92-07371

A rough terrain forklift unloads supplies from a utility landing craft of the Nassau *as troops, supplies, and vehicles hit the beach during the Sea Soldier training exercises.*

on 30 October when Company B (Reinforced), BLT 1/4, embarked on board the *Cayuga*, deployed to the UAE. Lack of information about the Hamra area forced the landing force to come ashore about 30 miles from the training area. After a mechanized cross-country motor march Company B joined UAE forces for live fire, maneuver, and combined arms exercises. Aircraft from the 3d Marine Aircraft Wing at Bahrain supported these ground exercises.[61]

In mid-November, a composite rifle company from RLT 2 continued training at Al Hamra. In early December, a light armored infantry company and an artillery battery conducted extensive live fire training at Al Hamra. The training included gunnery practice, day and night field firing, artillery and mortar fire direction and control, displacement, hasty positioning and firing, tactical control of close air support and delivery aircraft, and extended night operations. In early January, the survey ship USNS *Chauvenet* (AGS 29) charted the waters at Al Hamra, allowing more extensive use of the firing ranges by MFA units. These ranges provided live fire training for tanks, artillery, and mortars that had not been fired during the preceding months. Host nation support by the government of the UAE was invaluable because the one-ship, single-unit training scheme made Marine units ashore dependent on the UAE for water, fuel, and motor transport.[62]

The training at Madrakah and Al Hamra was a vital part of the MFA preparations for combat. These opportunities smoothed the rough edges and allowed the units of the MFA to work together, forging a combat-ready integrated landing force able to conduct a wide variety of amphibious missions.

4th MEB Logistics

Background

It is a military axiom that "amateurs discuss maneuvers, but professionals talk

logistics." The 4th Marine Expeditionary Brigade deployment to the Persian Gulf is a good case in point. General Jenkins identified logistics as his number-one problem during the first three months of Operation Desert Shield.[63] Once the 4th MEB arrived in Southwest Asia, the major logistics issues became force sustainment, maintenance and repair, and ship reconfiguration. These problems were not the result of poor planning, lack of attention, or staff incompetence. They were caused by the press of time, lack of ships, supply shortages, and enroute communications problems.

The amphibious task force assembled in the North Arabian Sea between 11 and 16 September 1990. All three transit groups and ARG Alpha gathered in the vicinity of Masirah Island just off the coast of Oman.[64] Masirah was the site of several military installations, including a large, modern air base. Access to it by U.S. forces was quickly granted by the Sultan of Oman, a long-time friend of the United States. The Military Airlift Command established a logistics channel to the island when the ATF began using the modern harbor. The anchorage was a familiar sight to U.S. naval forces. Navy carrier battle groups often used it as a logistics hub, and it had been the staging point for ill-fated Operation Eagle Claw in 1980.* Marines had also used the island for small unit training in the past.

Force Sustainment

Force sustainment was an almost all-consuming task. The lack of combat logistics ships was a problem. Fleet logistics ships provided replenishment and fuel at sea. Planners wanted to earmark three such ships to support the 18 ships of the ATF, but the ship crunch made itself felt. Only two combat stores ships were available, the USS *Mars* (AFS 1) and the USS *San Jose* (AFS 7). Unfortunately, these two replenishment ships were not sufficient to sustain the entire ATF. Masirah Island, therefore, had to become the focus for supply operations.[65]

Eventually, a three-day resupply routine was hammered out using trial and error. Flight schedules were formulated after available ships and aircraft were identified. Tuesdays and Saturdays became "airhead days." At least one amphibious ship and its aircraft were assigned to move passengers, mail, and cargo from the airhead to the task force. The preceding day was routinely set aside to consolidate materials and organize the flights. The next day was used for distribution to the ATF. This system eventually became standard operating procedure in the North Arabian Sea.

The embarked helicopters of MAG-40 and HMM-164 were used to ferry supplies to the ships of the ATF from Masirah. It was necessary to create an air tasking order (ATO) to coordinate movement of transport and cargo helicopters to and from the ships of the ATF efficiently and safely. Representatives of MAG-40, 4th

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*Eagle Claw was the codename for the attempted rescue of American hostages in Iran that ended in tragedy at Desert One.

MEB air planners, and Navy Tactical Air Control Squadron 22 (TACRon 22) conducted a prolonged series of discussions over the proper control and use of aircraft and air space. Unfortunately, not all players were using the same page of the playbook, so resistance to a consolidated air tasking order took four months to resolve.[66]

At first, TACRon 22 committed Marine helicopters to resupply missions without regard for other tasks assigned them. More than 60 percent of Marine transport helicopter flight time was devoted to airhead operations, reducing the time available for other missions. The previously high state of aircrew training had deteriorated during the long transit and was being further degraded by canceled flights or when precious training time was used for resupply or transport missions.[67]

Eventually, all hands agreed a consolidated air tasking order was the only practical way to provide effective management of aircraft, time, and space. Although adopting an ATO was a good start, there were still problems. Late requests meant delays in publication of the ATO, an issue that was finally resolved by requiring 72 hours advance notice. This forced units to pre-plan training and logistics support missions carefully. Diverse demands and limited training time were then melded in the ATO. Although this requirement was never popular, air planning officers became more proficient as time went on. Soon, the best possible use was being made of limited flight deck, aircraft, and aircrew resources.[68]

A centralized process for ordering and receiving supplies was adopted because it ensured accountability while easing storage and distribution burdens. This was a real problem because when individual ships were detached from the ATF or were away from the North Arabian Sea, they could neither receive nor distribute supplies from Masirah. Virtually every 4th MEB unit was dispersed at some time, and most units had elements on board more than one ship to facilitate load spreading. The ships were so tightly packed that space was very limited and this made it difficult to receive and stow arriving materials. Confusion about the volume and type of supplies arriving at Masirah on any given day added to the logistics burden. Repeated attempts to acquire such information in a timely manner were not successful.[69]

A major improvement in logistics support was establishment of new Department of Defense supply system addresses to identify units, commands, and activities by ship. Fleet Marine Force Atlantic, II MEF, and the Marine Corps Logistics Base at Albany used these new addresses to expedite delivery of critical materials and mail. These items were sent directly to the ship in which a unit was embarked. Brigade Service Support Group 4 received supplies sent through normal channels, then made final distribution using centralized supply procedures.[70]

Maintenance and Repair

As the logistics pipeline opened up and supplies began to flow more smoothly, proper distribution and use of maintenance and repair parts became the major

logistics concerns. Requested repair parts arrived at BSSG 4, which then distributed them to requesting units on board the ships of the ATF. Unfortunately, a supply logjam was created because it was difficult or impossible to use these parts for their intended purpose. The 4th MEB had more than 4,200 end items embarked in only 13 ships. Every nook and cranny on these ships was tightly filled. This lack of adequate work space delayed or prohibited proper maintenance and repair.

Afloat equipment maintenance was a difficult task for which no real solution was ever found. As time passed, slight load shifts permitted first-echelon maintenance and vehicle ignition to be performed on a weekly basis. Second-echelon maintenance and advanced repairs, however, were virtually impossible. The only practical answer was to make maintenance the focus of combat service support efforts when the landing force was on shore or when a ship made an infrequent port call. Although these measures left much to be desired, they kept the 4th MEB's equipment operational throughout its Gulf deployment.

Reconfiguration of Shipping at Jubayl

Major General Jenkins was well aware that the short time frame from alert to departure and the lack of a well-defined mission required the 4th MEB to sail with ship-loading configurations that would have to be adjusted after arrival. The hurried departure of the 4th MEB and the lack of designated shipping resulted in less than optimum loading of supplies. Critical sustainment materials and repair parts were not combat loaded and would be inaccessible if needed for immediate combat operations. None of the five MSC ships were designed to conduct in-stream or over-the-beach operations, so port facilities were necessary for speedy unloading. Each of the MSC ships was manned by small civilian crews. Three of the five were under foreign registry, so they could not be used in a combat zone.* Unless these ships could be unloaded and their cargo reconfigured or transferred, vital supplies and equipment would be unavailable to support amphibious operations.[71]

Lieutenant Colonel Gary W. Collenborne, the 4th MEB's assistant chief of staff for logistics, was very concerned about assault echelon and assault follow-on echelon materials carried on board Military Sealift Command ships. After arrival in the Gulf, Lieutenant Colonel Collenborne ordered a study group to locate alternate shipping and determine where reconfiguration could best be accomplished. After an in-depth study, the staff recommended using Maritime Prepositioning Force (MPF) ships to replace the MSC vessels. The ships of Maritime Prepositioning Ship Squadron 2 had been previously unloaded in Saudi Arabia and were operating as part of the common-user pool. Intense negotiations and the strong support of Admiral Mauz, Lieutenant General Boomer, and Commodore Richard A. Crooks, Commander, Military Sealift Command, Southwest Asia, allowed the 4th MEB to acquire two of these ships.[72]

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*These ships were the *Aurora T*, the *Bassro Polar*, and the *Pheasant.*

Department of Defense Photo (USMC) DM-ST-92-00104

Harbor tugs maneuver a Maritime Prepositioning ship (MPS) toward a pier at the Saudi Arabian port of Al Jubayl. During Operation Desert Shield MPS ships were integral to the rapid deployment of credible combat power.

The MV *PFC William B. Baugh, Jr.* (T-AK 3001) and MV *1stLt Alex Bonnyman, Jr.* (T-AK 3003) were assigned to support the 4th MEB. Both were converted Maersk Line combination container and roll-on/roll-off (RO/RO) vehicle cargo ships. Although not combat-capable amphibious ships, these RO/ROs could conduct limited in-stream offloading. Each had 120,080 square feet of vehicle storage space and could carry 332 standard freight containers, 1,283,000 gallons of bulk fuel, and 65,000 gallons of potable water. Ramps and cranes provided limited self-unloading capabilities.[73]

The 4th MEB logistics staff looked at ports in Oman, the United Arab Emirates, Bahrain, and Saudi Arabia to find out which ones could handle the ships' size and draft. They also had to determine if there was storage and staging space to accommodate offloaded cargo. Obviously, port space was at a premium because a massive strategic lift was in mid-stream and thousands of tons of supplies and equipment were pouring into the Gulf region daily. On 9 October, the commercial port at Al Jubayl was selected and diplomatic clearances were soon obtained.

By early October, the *Bonnyman* and *Baugh* had arrived in the North Arabian Sea and the reconfiguration process could begin. Lieutenant Colonel Robert C. Dickerson, Jr., the 4th MEB's assistant logistics officer, was selected to assemble and lead a special port operations group (POG) consisting of 397 Marines and sailors. This ad hoc work group included drivers, material handling equipment operators, landing support personnel, ammunition technicians, military police, engineers, mechanics, corpsmen, cooks, and administrators. The POG headquarters was located in a warehouse at the commercial port compound. More than 200 POG personnel lived and worked in that area, and 175 more were billeted at Haii

(Camp) Five, a foreign workers cantonment located about 15 miles away.*[74]

It was planned to unload the five MSC ships, identify and inventory supplies and equipment, prioritize the cargo, then combat load the MPF ships so needed supplies and equipment would be readily accessible. From 13 October to 5 December, the POG reconfigured the *Spartanburg County*, down-loaded the *Bassro Polar*, *Strong Texan*, *Cape Domingo*, *Aurora T*, and *Pheasant*, then loaded the *Bonnyman* and *Baugh*. The *Bonnyman* was selected to become the 4th MEB's "floating warehouse" carrying sustainment supplies. The *Baugh* was tactically loaded with assault echelon supplies and equipment. Excess ammunition, fortification materials, and other supplies were transferred to I MEF.

Although the basic plan was followed, some changes in schedule and sequence occurred. The *Cape Domingo* was partially unloaded to gain access to cargo that was then loaded on the *Spartanburg County*, however, rather than finish the offload, the *Cape Domingo* was backloaded to make room for other high priority items that were transiting the port at the same time. The *Bassro Polar*, originally the last ship scheduled for offloading, was moved ahead of other ships to avoid a $30,000 per day penalty if its charter contract expired. The Marines had been unaware of this penalty until just days before it was to take effect, but the POG's flexibility and rapid response saved American taxpayers thousands of dollars.[75] To save shipping space, General Jenkins elected to move several embarked units, all their equipment, and some follow-on supplies ashore and transfer responsibility for them to I MEF. This decision allowed the remaining supplies and equipment, except for some ammunition, to fit on board the *Baugh* and *Bonnyman*.

The Joint Communications Support Element, Battery B, 2d LAAM Battalion, and 2d RPV Company were transferred to I MEF. Their personnel had been embarked on board amphibious ships and their equipment was on board MSC follow-on ships. The Marines were flown to Jubayl Naval Air Facility, then were sent to the commercial port to reunite with their equipment. Morale, recreation, and welfare equipment and about 90 percent of class IV (fortification material) supplies were transferred to I MEF. These reductions eliminated the need to lease warehouse space.[76]

The MV *Bonnyman* was designated the 4th MEB's primary sustainment platform, hence, it was the first MPF ship to be loaded. This was the first tactical backload of an MPF ship since the program's inception in 1984. The *Bonnyman*'s cargo space was dedicated to combat service support equipment and sustainment assets. The ship was configured to act as a floating warehouse, therefore, concern for ease of issue-guided decisions regarding storage of all types of supplies and equipment was no longer a factor. The POG embarkation specialists studied many possible configurations to determine which best coupled good storage and fast unloading. This proved a difficult task because most plans either wasted too much space or resulted in unsafe conditions. The *Bonnyman*'s flight deck could

*While the Marines were using it, Haii Five was dubbed "Camp Gray" to honor the Commandant.

not be used to lift supplies by helicopter because the ship's cranes could not service the landing platform, and stevedores could not safely carry loads up to it. The cranes also prohibited helicopter operations from the weather deck. This meant the only feasible access to supplies was through the side ports. The ship's cranes could lower supplies into landing craft which would then distribute them to other ships or shuttle them ashore to support amphibious operations.

To support this unique plan, the deck adjacent to the side ports was turned into the main floor of this huge sea-based warehouse. This presented some real challenges because supply containers had to be firmly secured, but still be readily available. To overcome obstacles presented by the ship's raised tie-down points, 4"x4" blocks of wood were spaced over the entire deck, then boxes were staged on top of these wooden foundations. Additional beams were attached to the box tops to provide support. These beams were affixed to the boxes so the Marines could remove front panels for easy access to their contents. Cables were also used to secure the boxes to the deck. Once the ship's master approved this plan, the new floating warehouse began to take shape.[77]

Class VII (medical) and IX (repair parts) supplies were stored in boxes that could be accessed by simply lifting their lids. Most other supplies could be easily hand-carried through the access aisles to the side ports. Secondary repairable items, such as tank and truck engines and vehicle transmissions, were heavy items that were not man-portable, so they were either crated or containerized to facilitate movement using hand jacks and forklifts.

Unfortunately, the bulk of class I (subsistence) supplies, CTEP (desert clothing and equipment) supplies, and chemical protective overgarments (CPOGs) did not permit warehouse-style storage. Instead, they were placed in 20'x8'x8' containers which were arrayed along the weather deck with their hatches facing outboard. This allowed rations, CTEP, and CPOGs to be issued directly from containers to landing craft for further distribution.

Another reconfiguration issue was backloading break-bulk supplies and storing them on board the MPF ships. Break-bulk supplies are items stored inside standard embarkation boxes or secured to 4'x4' pallets. Most of the 4th MEB's sustainment supplies were break-bulk items. Neither the *Bonnyman* nor the *Baugh* were designed to store break-bulk supplies. Carrying break-bulk cargo would hamper in-stream unloading and restrict other operations, so these assets would have to be containerized. This created a major funding problem. Most of the 273 containers removed from the MSC ships were leased, not owned, by the Marine Corps. If they were used, the Marine Corps would have to continue paying civilian contractors, a prohibitively expensive proposition. Lieutenant General Boomer directed all Marine units in Saudi Arabia to return Marine-owned containers to Jubayl, not an easy task since many of these containers had been filled with sand and were integrated into unit defensive positions. When Marine-owned containers arrived, the port operations group loaded break-bulk supplies and released the commercial containers back to their respective owners.

Supplies had to be loaded, blocked, braced, and inspected before being reembarked. As a final touch, the group ensured all equipment was cleaned and

inspected by agriculture agents, then certificates of inspection were issued to ship's masters before the containers were loaded. The entire storage and inspection process required more than a month of back-breaking labor and inventive use of limited lumber supplies, but at last 748 containers were loaded on board the *Baugh.*

Another key reconfiguration issue was ammunition storage. The 4th MEB sailed with most of its class V (ammunition) cargo inside the magazines of the amphibious ships. Bulky class V material, such as Hawk missiles, and ammunition reserves were carried on board the MSC ships. Major General Jenkins decided to retain only 15 days' ammunition on hand, therefore, only that amount was reloaded on the MPF ships at Jubayl. The remaining ammunition was turned over to I MEF for storage. The port operations group unloaded 6,083 short tons of ammunition from the MSC ships and moved it from Jubayl inland to ammunition supply points using 223 tractor-trailer loads.

The ammunition required to meet the 15-day commitment was containerized and placed on board the *Bonnyman.* This made in-stream offloading possible. To save time and labor, the group exchanged ammunition from the MSC ships with I MEF, which provided containers already filled with similar ammunition loads that had been unloaded from the MPF ships that supported the Marine fly-in echelons. For those items not already loaded, I MEF provided empty containers and work gangs made up of Marines and Seabees specially trained to block and brace ammunition loads. One hundred twenty-four ammunition containers were inventoried, secured, and loaded on board the *Bonnyman.*[78]

The reconfiguration was an excellent opportunity to check maintenance and operability of equipment. The group conducted detailed inspections and performed preventative maintenance on all major end items. The inspection teams discovered many vehicles had flat tires and most batteries were either dead or very weak after sitting dormant for more than two months. Most of the rest of the equipment was in very good shape, except for some items stored on the weather decks where they had been exposed to the elements and had rusted or corroded during the long voyage from the United States to Saudi Arabia. The worst case was a forklift that had rusted solid. Its engine refused to turn over and the transmission would not disengage. This item was removed by crane from the *Cape Domingo,* and was left with the 1st FSSG maintenance detachment at Jubayl.

When maintenance was required, group Marines did their best, but were often hampered by the lack of repair parts. The 1st Force Service Support Group, although inundated with requisitions and taxed by the needs of other Marine units in Saudi Arabia, lent a helping hand. The 4th MEB was not authorized to draw supplies or parts from 1st FSSG at Jubayl, but extenuating circumstances led to an understanding whereby critical repair parts, if available, could be "loaned" by the 1st FSSG to the 4th MEB. This allowed the 4th MEB to keep combat essential equipment in operation. The 4th MEB, however, could not back order items not on hand. This slowed port operations group maintenance until the repair part blocks carried on board the MSC ships were broken out. Luckily, the situation was rectified in December.[79]

During its stay at Jubayl, the group became adept at answering unexpected "pop-up" calls for support. Ingenuity, flexibility, and hard work enabled it to accomplish difficult tasks in surprisingly short periods of time. A total of 13 pallets of critical repair parts and three tank engines were shipped to Masirah from Jubayl. During Exercise Imminent Thunder, 11 tanks and a tank retriever were sent to Jubayl for repair. The tankers, group Marines, and mechanics from 1st FSSG teamed up to fix them in only three days. One tank could not be fixed due to a lack of repair parts, so a replacement was issued from the task force's operational readiness float. When the LCUs departed Jubayl to rejoin the ATF they carried 11 fully operational M-60 tanks and one tank retriever, each freshly painted desert tan. Two hundred gallons of desert tan paint for use on other equipment were included in the return load.[80]

The only insurmountable problem encountered by the group was deterioration of some B-rations (dry foodstuffs and staples) carried on board the *Aurora T.* These food items were stored on pallets that had been used as blocking and bracing material for other loads. During transit some plastic protective wrapping was torn, water seeped in, and the cardboard packing had deteriorated. These rations spoiled as the *Aurora T* made its long hot voyage through the Mediterranean, Red, and Arabian Seas. A medical inspection determined which rations were not suitable for repacking. These were destroyed and the remaining loose rations were used by I MEF.[81]

The group's stay at Jubayl had been an unquestioned success. For the first time, 4th MEB logisticians knew the exact location of the 4th MEB's equipment and supplies, all of which had been combat loaded for easy access. Equipment had been checked and repaired before being reembarked. Unnecessary gear had been offloaded and transferred or stored ashore. New tactical loading techniques had been pioneered. Logistically, the 4th MEB was ready to mount a fully supported amphibious assault.

Maritime Interdiction Operations

Multinational Interdiction Operations

United Nations Resolution 661 of 5 August 1990 placed a trade embargo on Iraq. To support this resolution U.S. and other coalition naval forces formed a multinational Maritime Interdiction Force (MIF). The MIF's tasks were to locate, challenge, stop, and search Iraqi ships in the Red Sea, the Arabian Sea, and the Persian Gulf. The MIF eventually numbered more than 80 ships from 17 countries. Between August 1990 and March 1991 more than 7,000 ships were challenged and more than 1,000 stopped and boarded. Marines from the 13th MEU(SOC) and the 4th MEB played an important role in these operations between October and December.[82]

The United States first proposed international maritime interdiction in August. Four days later President Bush warned Saddam not to breach the embargo. On 13 August, Great Britain and Australia joined the U.S. to form the MIF. Eight days

later other members of the Western European Union also joined the MIF. United Nations Resolution 665 of 25 August 1990 authorized the MIF to use all measures necessary to enforce the embargo.

The MIF was an impressive international collection of the free world's most modern weapons and warships including naval forces from the United States, United Kingdom, France, Denmark, the Netherlands, Norway, Spain, Italy, Greece, Belgium, Canada, Australia, Argentina, Saudi Arabia, United Arab Emirates, Bahrain, and Qatar. The U.S. contributed two carrier battle groups, two surface action groups, two Marine maritime special purpose forces, and about three dozen ships. The American interdiction force was under the operational control of the U.S. Middle East Force, commanded by Rear Admiral William M. Fogarty on board the *LaSalle*.*

On 17 August, maritime interdiction operations began. The rules of engagement dictated that ships sailing from Iraq were to return to their port of origin, while those carrying prohibited items to Iraq were given the option of returning to their port of origin or sailing to selected non-prohibited ports. The first inquiry took place when the U.S. Navy frigate *John L. Hall* (FFG 32) challenged the Iraqi tanker *Al Fao*. The ship was allowed to proceed without being stopped. The guided missile cruiser USS *England* (CG 22) made the first successful Persian Gulf intercept when she stopped two Iraq-bound ships. The USS *Reid* (FFG 30) fired the first shots of the embargo trying to stop the *Al Khanaqin* which ran to Yemen rather than be boarded.[83]

During the first few weeks there was little resistance to the interception efforts. This state of affairs came to a halt on 4 September when the master of the Iraqi cargo ship *Zanoobia* refused to cooperate. Until that time the U.S. maritime interdiction operations were being conducted by joint-Navy/Coast Guard boarding parties. The Navy contingent usually included at least one commissioned officer, a boat handling party, and a security element. The U.S. Coast Guard provided four-man Law Enforcement Detachments. Headed by a commissioned officer, these Coast Guard teams were familiar with maritime law, merchant shipping procedures, legal documents and ship's manifests, and ship search procedures. In the case of the *Zanoobia*, the boarding team had to restrain the master, take control of the helm, and divert the ship to an alternate port. This incident clearly showed the need for combat teams trained for forcible entry of a ship underway so the MIF called in the Marines.

13th MEU(SOC) Interdictions

Every MEU(SOC) includes a maritime special purpose force (MSPF), a joint-Navy/Marine team of about 50 men specially trained and equipped to conduct underway special missions. Stealthy ingress, quick deployment, and decisive

*Subordinate to CinCCent via ComUSNavCent, ComUSMEFor was responsible for air defense inside the Gulf, MIO, and combined naval activities until Jan91.

Members of the Navy/Marine Corps maritime special purpose force on board the Ogden *(LPD-5) go into action as the Iraqi ship* Al Mutanabbi *refused to stop after being challenged.*

action are the hallmarks of these teams. They are trained for small boat operations, scuba diving, close quarters battle, and fastrope insertions. Using fastrope techniques, a 10-man team can rappel from a hovering helicopter in about 30 seconds.

In October, the Iraqi ships *Al Wasitti* and *Tadmur* refused to slow or allow inspection teams to board so helicopter insertions were used to gain control of the ships. On the 6th, Admiral Mauz notified Admiral LaPlante and Major General Jenkins that elements of the ATF and the MFA were going to reinforce the MIF. Because of their special training and equipment, ARG Alpha and the 13th MEU(SOC) were tasked to provide a heliborne maritime interdiction force (HMIF). The MEU's MSPF included Marines from 1st Force Reconnaissance Company and a Navy SEAL detachment on board the *Ogden*. On 10 October, the *Ogden* detached from the ATF to plan, rehearse, and conduct boarding operations. The training program included a full-scale underway boarding exercise that was held on board the MV *Overseas Alice* (T-AOT 1203).[84]

The HMIF went into action when the Iraqi ship *Al Mutanabbi* refused to stop after being challenged on 13 October. The team made a fastrope entry, quickly gained control of the ship, and provided security for naval inspection and law enforcement teams from other ships. The next boarding came on the 22d when

the HMIF boarded the *Al Sahil Al Arabi*. This was necessary when the Iraqi master refused to return to Iraq as he had earlier promised a boarding party from the USS *O'Brien* (DD 975). When the *Al Arabi* refused to stop despite warning shots the HMIF went into action from the *Ogden*. Thereafter, the *Al Arabi*'s master became a model of cooperation.

On 28 October, the final test for the MEU's HMIF came when it took control of the 157,000-ton Iraqi ship *Amuriyah* bound from Aden to Basrah. The Australian frigate HMAS *Darwin* (F 04) made contact with the Iraqi ship near Masirah Island and was soon joined by the USS *Reasoner* (FF 1063), the *Ogden*, and the British frigate HMS *Brazen* (F 91). The Iraqi ship's master at first ignored, then later delayed, answering calls from the *Reasoner*. Finally, the *Reasoner* warned the *Amuriyah* to comply or be boarded. There was no response. Fifteen minutes later the *Darwin* and the *Reasoner* fired warning shots across the *Amuriyah*'s bow. The stubborn Iraqi ship, however, continued its course. Low-level passes by F-14s and F/A-18s failed to deter the *Amuriyah* so it was time for direct intervention.

An HMLA-267 Sea Cobra drew the Iraqis' attention when it approached the ship then hovered to provide close-in fire support. While the Iraqis focused on the gunship, a CH-46 from HMM-164 delivered the boarding team. The team descended using fastrope techniques, captured the bridge, and took control of the engineering spaces. The *Amuriyah* was brought to a halt to allow an international inspection team on board. The swift, decisive intervention of the 13th MEU(SOC) MSPF brought this incident to a conclusion without the use of deadly force. "Sound judgement and judicious use of force resulted in a successful boarding with no injuries suffered by either the crew or the boarding party."[85]

4th MEB Interdictions

An HMIF from the 4th MEB was formed in November to replace the one from the 13th MEU which was scheduled to depart. This process began on 15 October with the debrief of the *Al Mutanabbi* boarding team. Using this experience as a guide, Major General Jenkins had a new force list made and ordered that a training syllabus be developed. The Marine force reconnaissance detachment and PhibGru 2 Navy SEALs were chosen for this assignment because of their previous training in close quarters battle, fastrope experience, and organic special weapons and equipment. Both units were assigned to the *Trenton*. Two CH-46s were earmarked as fastrope insertion platforms. Two UH-1Ns were designated to provide visual aerial reconnaissance, in-flight command and control, and airborne sniper platforms.

The training period began on 16 October. The boarding force conducted two days of shipboard movement and close quarters battle training on board the *Trenton*. Training on the 19th included sniper practice, fastrope practice, and additional close quarter training. The next morning was devoted to training analysis and lessons learned were compiled. During the afternoon of the 20th, HMIF members planned a full-scale rehearsal to begin the next day.

On 24 October, a realistic exercise was held on board the amphibious cargo ship *Durham*, where an Arabic-speaking officer played the role of an uncooperative ship's master. Two days later, the USNS *Andrew J. Higgins* (T-AO 190) was the exercise target. After the HMIF insertion exercise ended, the *Higgins*' crew instructed the boarding force about methods to stop merchant vessel engines and pointed out likely tactics for obstructing a heliborne insertion. After this final rehearsal the new 4th MEB MSPF and ready to support the MIF.

During November, the 4th MEB HMIF continued proficiency training to keep its sniper, close quarters battle, and fastrope skills honed. This unit celebrated the Marine Corps' 215th birthday by conducting a full-scale interdiction exercise. The *Trenton* joined the Australian frigate HMAS *Adelaide* (F 01), the USS *Curts* (FFG 38), and the USS *Oldendorf* (DD 977) for this exercise. The USNS *Walter S. Diehl* (T-AO 193) acted as the target. During the exercise the 4th MEB HMIF was confronted by obstacles to foul primary landing points. The flight coordinator in the lead escort helicopter warned the transport commander, who quickly changed the insert point. The ship's crew relished their roles as uncooperative Iraqis. This exercise proved to be an excellent dress rehearsal for the HMIF's first takedown in December.[86]

The 4th MEB HMIF's greatest challenge interrupted the 1990 Christmas holidays. On 9 December, the Iraqi training ship *Ibn Khaldoon* sailed from Tripoli. Despite the fact it was an Iraqi warship, the *Ibn Khaldoon* had been leased by the Arab Women's League and was hailed as a "peace ship" carrying an international delegation of women activists bringing milk and medicine to the children of Iraq.* The passenger list included more than 20 reporters from various countries. Obviously, the *Ibn Khaldoon* was the focus of international attention and its capture was going to be a true test of the embargo's effectiveness.

The *Ibn Khaldoon* incident was a blatant attempt to turn world opinion against the joint efforts. The possibility of an international incident in plain view of the world press created real problems for the HMIF. It was reported that women activists, some of whom would be holding small children, intended to resist the inspection team. The HMIF was thoroughly briefed as to the dangers and importance of non-confrontational achievement of its mission. The 4th MEB HMIF aircrews would have to be alert for hostile acts which might be camouflaged by the crowd. The HMIF boarding team had to gain control of the ship quickly while minimizing contact with the crew and passengers. Restraint was going to be very important to keep this explosive situation from blossoming into a full-blown incident.

Planning began on 17 December. Two days later, the 4th MEB HMIF command element transferred from the *Nassau* to the *Shreveport* to coordinate training efficiently. Two UH-1Ns (HMLA-269) and a four-man team from the 2d Radio Battalion accompanied the command element. Three aircraft from HMM-263 transferred from the *Guam* to the *Trenton* to join the 4th MEB HMIF elements

*The post-capture search revealed several tons of contraband on board.

already on board. On Christmas day, a plenary session and intelligence update was held on board the *Shreveport*. That afternoon the *Diehl* once again acted as the target ship for another boarding exercise.

The international flotilla sent to intercept the *Ibn Khaldoon* included the *Diehl*, *Trenton*, *Shreveport*, and *Oldendorf*, as well as the USS *Fife* (DD 991) and the Australian frigate HMAS *Sydney* (F 03). At 0545 on 26 December the *Ibn Khaldoon* was warned to slow down and prepare to be inspected. As expected, the *Ibn Khaldoon* refused to cooperate. Left with no choice, the 4th MEB HMIF was launched at 0615. The first UH-1N reported a large crowd on deck, but noticed no active threat. The team made a fastrope insertion just forward of the superstructure, quickly moved to their assigned points, and took control of the bridge and engine rooms. The Marines cleared the crowd from the flight deck and moved the passengers inside the superstructure. Several altercations between the Marines and the ship's crew required the use of force, including warning shots, however, the Marines were firmly in control by 0640. A platoon from the 2d Military Police Company was brought on board to assist with crowd control. By mid-afternoon all 4th MEB HMIF personnel had been extracted. The *Ibn Khaldoon* was detained pending further diplomatic action. Saddam's great propaganda ploy was a miserable failure. In fact, the situation took a pro-Coalition turn when life preserving actions by a medical team from the *Trenton* saved a Swedish woman who suffered a heart attack.*[87]

On 30 December, the 4th MEB HMIF conducted its final boarding. The interdiction force included the *Trenton*, the *Fife*, the *Sydney*, and the British destroyer HMS *London* (D 16). At 0615 an airborne boarding party was at its orbit point about 10 miles from the Iraqi tanker *Ain Zallah*. When the ship refused to cooperate, the 4th MEB HMIF was inserted and took control without incident. Surface boarding parties soon arrived to search the ship. After no contraband was found the *Ain Zallah* was allowed to continue its journey. This incident closed the book on Marine participation in maritime interdiction operations during Desert Shield.[88]

Marine actions during this period were fraught with danger and were conducted under close scrutiny by both higher authority and the world press. The operations, particularly the capture of *Ibn Khaldoon*, were conducted with firmness and restraint and were speedily accomplished. The Marines involved in these duties earned the highest praise from Admirals Mauz and Arthur and Major General Jenkins.

4th MEB Amphibious Exercises

The 13th MEU(SOC) Departs

In late October 1990, the Marine Forces Afloat faced an uncertain future. The 13th MEU(SOC) was nearing the end of its overseas tour and was scheduled to

*An Iraqi-made propaganda film was shown in Yemen, but received no wider distribution

return to the United States. This departure would reduce Marine amphibious combat power by about one-third and meant the 4th MEB would need to formulate and practice new landing plans. Exercise Imminent Thunder gave the 4th MEB a chance to test its plans in November. A follow-up exercise, Sea Soldier III, was then conducted to rectify problems raised during Imminent Thunder.

On 29 October, General Gray and Lieutenant General Robert Milligan visited the *Okinawa* to bid the 13th MEU(SOC) farewell. The next day Colonel John Rhodes received orders for the MEU to depart the Gulf and head for home. Later, on board the *Nassau*, Gray and Milligan met with Major General Jenkins for a closed-door discussion about the status of the 4th MEB and to prepare for a Thanksgiving visit by President Bush.[89] The 4th MEB was left as the only landing force when the MEU departed the Gulf on 4 November. The 11th MEU, then training at Camp Pendleton, was scheduled to replace the 13th MEU, but it was not clear when the 11th MEU would arrive in the region. As a precaution, the 13th MEU assumed a holding position off the coast of Oman after exiting the Strait of Hormuz. Four days later the MEU sailed for the Pacific.*

On 10 November, the 13th MEU departed the CentCom operational control, but was ordered to ModLoc near the tip of India.** While there Colonel Rhodes received a three-line message from Admiral Mauz, ordering the MEU "go to Subic, obtain maintenance and upkeep on the ships and equipment, continue specialized training, [and] be prepared to return to the Gulf for combat operations."[90] The MEU arrived at Subic Bay on the 19th to conduct Exercise Valiant Usher 91-1A. While in the Philippines, ARG Alpha and the 13th MEU were placed on strategic alert and had to be ready to sail for the Gulf within 72 hours if needed.[91] Although the exact situation in the Persian Gulf remained somewhat cloudy, it was obvious to all hands that the MEU's homecoming was going to be delayed.

The departure of the 13th MEU(SOC) left Jenkins with substantially reduced combat power. The 4th MEB lost one-third of its ground maneuver units, one-third of its helicopter lift, and one-fourth of its attack helicopters. The 4th MEB, however, remained a potent force that mustered 7,996 personnel, 22 tanks, 32 TOW-mounted humvees, 18 howitzers, 52 LAVs, and 20 AV-8B Harriers. A 4th MEB maritime special purpose force was created to conduct special operations and trained with the 13th MEU(SOC) MSPF before the later unit sailed.[92]

Imminent Thunder

General Schwarzkopf directed the 4th MEB to participate in Exercise Imminent Thunder, the first major joint/combined training activity to integrate

*General Gray wanted to keep the 13th MEU(SOC) in theater to give the 11th MEU additional training time, but Navy rotation schedules conflicted with this so a compromise sent ARG Alpha to the Philippines until a final decision could be made.

**ModLoc is short for "modified location" where the ATF sails within a designated area (this procedure is called "drilling holes in the ocean" by old salts).

multinational air, ground, and naval forces fully during a single exercise. Imminent Thunder was an amphibious rehearsal to test theater-wide fire support plans, allow the 4th MEB to practice a brigade-size landing, and work out procedures for an inland link-up of Coalition forces. The training goals stressed fire support coordination, communications procedures, joint and combined interoperability, and tested landing plans.[93]

Although of limited scope and of short duration, this well-publicized exercise had an underlying diplomatic goal. Its location and intent had ominous overtones that sent an unmistakable message to Saddam that the Coalition was serious about his withdrawal from Kuwait. Imminent Thunder was first slated to take place near Ras Al Mishab, a Saudi port located less than 20 miles from Kuwait. Mishab was well within Iraqi missile range and its close proximity to Iraqi forces made Lieutenant General Boomer, the senior Marine commander, wary. He warned his subordinates not to let a small incident grow out of control. His instructions stated his intent that the Coalition, not the Iraqis, would control the agenda. These admonitions, however, became moot points when the exercise site was moved to Ras Al Ghar, located about 90 miles south of Mishab.

This change of venue shifted Imminent Thunder away from the Iraqi threat, but placed it directly in sight of the world media. Closely scrutinized by the international press, the exercise became one of the most widely reported events of Operation Desert Shield. Television viewers in the United States and Iraq watched LCACs bobbing up and down amid huge white-capped breakers, while news analysts speculated about when and where an amphibious assault would strike. This led to later accusations by members of the media that they had been duped by General Schwarzkopf and became unwilling participants in what eventually became one of the most successful deceptions in military history. While in hindsight, this claim may seem valid, such an assumption is clearly wrong when placed in proper context. An amphibious assault was still an important element

Marines of Company C, 1st Battalion, 2d Marines, move out on a mission after disembarking from an HMM-263 CH-46E Sea Knight helicopter during Exercise Imminent Thunder.

Department of Defense Photo (USAF) DF-ST-92-07534

Department of Defense Photo (USN) DN-ST-91-0619

Marines of Company A, 2d Amphibious Assault Vehicle Battalion, arrive on the beach by landing craft from the Nassau.

in Desert Storm operational plans at that time.

In addition to its political message, Imminent Thunder was important for operational reasons. Air, ground, and amphibious forces from several nations needed to hone their skills and this exercise offered a unique opportunity to practice as a team. Imminent Thunder had five phases: command and control of aircraft assets to isolate and prepare the landing area; integration of ATF and outside air assets during the amphibious assault; link-up and reinforcement operations of the landing force and ground forces; cross training by Arab and Marine forces; and a detailed critique and development of follow-up training plans.[94]

The 4th MEB was a major player in four of Imminent Thunder's five phases. General Jenkins' training objectives were to execute an over-the-horizon amphibious assault using helicopters and LCACs; develop and exercise link-up procedures with I MEF and Coalition ground forces; conduct cross-training with Coalition forces; operate smoothly in a jointcombined environment; conduct mass casualty evacuation drills; and fully integrate fire support plans with Air Force, Navy, I MEF, and Coalition forces.

The exercise began on 15 November and ended on the 21st. Phase I was a test of the 3d Marine Aircraft Wing's ability to support the L-Day air tasking order and did not directly involve the 4th MEB. Phase II merged outside support assets with those of the amphibious task force and the landing force and included 4th MEB aviation assets. This phase tested the interoperability of NavCent, MarCent, and CentAF. Fire support coordination, air control, and deconfliction procedures inside the amphibious objective area were checked, as were inter-Service over-the-horizon communications links and joint communications procedures.[95]

Plans called for landing LAVs and artillery in LCACs while a heliborne force captured an inland airfield. A battalion landing team would then make a reinforcing surface assault using AAVs. Once ashore, the seaborne force would consolidate, move inland to join the heliborne force, and secure the beachhead until a combined U.S.-Saudi mechanized force arrived from the south.

Unfortunately, not all went smoothly. On L-Day, the 4th MEB was on station and ready to execute both the helicopter and surface assaults as planned, but the weather did not cooperate. The initial launch was made in high swells and heavy surf, a dangerous sea state that could needlessly damage equipment and jeopardize personnel safety. Although a combat landing could have been made, the surface landings were canceled because the exercise objectives did not warrant the inherent risk to equipment or personnel.[96]

On 15 November, aircraft from the MEB participated in a large, 115 sortie, air effort. These actions were controlled by an airborne command and control center and were coordinated with simulated naval gunfire from the battleship USS *Missouri* (BB 63). This portion of the exercise included use of remotely piloted vehicles by air and firepower control parties on the shore. During a subsequent critique session weaknesses were identified and suggestions for improvement noted.

The mass casualty evacuation went well. This part of the exercise included casualty handling procedures, combat search and rescue missions, medical evacuation to shore facilities and the hospital ship USNS *Comfort* (T-AH 20), and tested patient tracking procedures. Follow-on training consisted of cross training by I MEF and Saudi Marines that included live firing of TOW missiles, air and ground mobility operations, and breaching operations against mock Iraqi defens-

A Marine LAV-L exits the ramp of a Navy LCAC during amphibious exercises at Ras Al Madrakah, Oman. LCAC-8, one of 17 LCACs with the Marine Forces Afloat, was assigned to the Gunston Hall.

Photo Courtesy of Captain William D. Harrop III, USMC