DESERt SHIELD/DESERT STORM

Air Force Special Operations Command (AFSOC)

In The

Gulf War
DEsert shield/desert storm

Air Force special operations command
in the Gulf war

by

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Disclaimer

The ranks reflected in this document might not match those actually worn by personnel at the time of event. Information not available at time of update.

Pages are numbered consecutively throughout the entire publication.
Foreword

The Headquarters Air Force Special Operations Command report of Air Force Special Operations Forces (SOF) participation in DESERT SHIELD/DESERT STORM was truly a monumental effort. Written by Technical Sergeant (TSgt) then Staff Sergeant (SSgt) Randy G. Bergeron this document is the most concise gathering of information that I have seen thus far.

A sincere thanks is extended to Ms Cindy Scharf, Editorial Assistant, for her efforts and commitment to putting this publication together.

Lastly but certainly not least, to the men and women of AFSOC...whom we thank for providing the information for this report. We may be the keepers of the corporate memory, but it really is “their story.”

HERBERT A. MASON, JR.
Command Historian
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CHRONOLOGY

7 Aug 90  Following the pre-dawn Iraqi invasion of Kuwait on 2 August 1990, a massive deployment of United States (U.S.) Armed Forces began to the Middle East (C-Date) to include Air Force Special Operations Forces (SOF).

13 Aug 90  Air Force SOF arrived in theater at Riyadh, Saudi Arabia, then moved to Dhahran, Saudi Arabia, later that same day, in support of Operation DESERT SHIELD.

20 Aug 90  Air Force SOF began to relocate from Dhahran, Saudi Arabia, to King Fahd International Airport (KFIA), Saudi Arabia, 22 kilometers northwest of Dhahran. The move was completed by early September 1990.

22 Aug 90  Four HC-130P/Ns of the 9th Special Operations Squadron (SOS) and four MC-130Es of the 8 SOS completed their arrival to KFIA, Saudi Arabia, in support of Operation DESERT SHIELD.

28 Aug 90  Two EC-130Es of the 193d Special Operations Group (SOG) arrived at KFIA, Saudi Arabia, in support of Operation DESERT SHIELD.

31 Aug 90  Colonel (Col) George A. Gray III arrived in theater to command Air Force SOF.

8 Sep 90  With no specific threat to Air Force SOF based at KFIA, Saudi Arabia, the threat condition was lowered from Charlie to Bravo.

8 Sep 90  Four AC-130Hs of the 16 SOS arrived at KFIA, Saudi Arabia. A fifth Spectre Gunship arrived four days later.

11 Sep 90  Eight MH-60Gs of the 55 SOS arrived at KFIA, Saudi Arabia already painted in desert camouflage.

22 Nov 90  The 193 SOG began airing “Voice of America” into the Kuwait theater of operations through a route called “Gulf Coast South” by picking up the transmission from Greece. This psychological operation...
meant Air Force Special Operations Command (AFSOC) was the first major command (MAJCOM) to support a wartime mission.

4 Jan 91  One AC-130H departed KFIA, Saudi Arabia, and provided close air support (CAS) over the U.S. Embassy in Mogadishu, Somalia. The operation known as EASTERN EXIT helped U.S. citizens to evacuate.

12 Jan 91  The 8 SOS began dropping leaflets. Air Force SOF dropped over 17 million leaflets during the war. Most surrendering Iraqi soldiers had these leaflets in hand.

Five HH-3Es of the 71 SOS arrived at KFIA, Saudi Arabia, to support the swap out of Pave Hawks already in theater.

14 Jan 91  Air Force SOF moved forward to Al Jouf, Saudi Arabia, in final preparations for the air war to begin.

17 Jan 91  At 0300 hours Saudi time (H-hour), the war began. Operation DESERT SHIELD was over—Operation DESERT STORM began.

Twenty minutes prior to H-hour, Air Force SOF led the first air combat of DESERT STORM by leading the helicopter raid to destroy Iraqi radar.

A few hours after the war actually began, the 39th Special Operations Wing (SOW) arrived at Incirlik Air Base (AB), Turkey, and their forward operating base (FOB), in support of Joint Task Force (JTF) PROVEN FORCE. Two days later, MH-53J Pave Lows began arriving at Batman, Turkey, their forward operating location (FOL) in support of JTF ELLUSIVE CONCEPT.

22 Jan 91  Air Force SOF conducted the first save of the war—a downed U.S. Navy F-14 pilot 130 miles into Iraq.

31 Jan 91  Air Force SOF suffered its only loss of the war—an AC-130H of the 16 SOS. The crew of “Spirit 03” consisted of 14 and represented the single largest air loss of the Persian Gulf War.
6 Feb 91  An MC-130E of the 8 SOS dropped the first BLU-82 munitions—the largest bomb used throughout the war (15,000 pounds). Air Force SOF dropped a total of 11 "Daisy Cutters."

7 Feb 91  Five AC-130As of the 711 SOS arrived at KFIA, Saudi Arabia, in support of Operation DESERT STORM.

17 Feb 91  Air Force Special Operations Command Central (AFSOCCENT) encountered its second and only other save during the war—a United States Air Force (USAF) F-16 pilot 40 miles into Iraq.

23 Feb 91  Iraq defied the final deadline to withdraw from Kuwait. The ground war began.

26 Feb 91  Three AC-130As from the 919 SOG attacked the Al Jahra/Basra Road, northwest of Kuwait. Fleeing Iraqi troops were using the road. It was the only actual cross-border/combat mission flown by the 919 SOG.

27 Feb 91  Iraq agreed to the allied terms for a cease-fire. President Bush ordered a halt to hostilities; exactly 100 hours after the G-day campaign began.

12 Mar 91  The Reserve Gunships redeployed from KFIA, Saudi Arabia, to Duke Field, Florida.

15 Mar 91  The 193 SOG flew its last mission in support of Operation DESERT STORM and by 26 March 1991, the redeployment back to Harrisburg International Airport (IAP), Middletown, Pennsylvania, was completed.

16 Mar 91  The Reserve helicopters redeployed from KFIA, Saudi Arabia, to Davis-Monthan Air Force Base (AFB), Arizona.

6 Apr 91  The National Command Authority (NCA) ordered humanitarian assistance to Kurdish refugees fleeing persecution in Northern Iraq after DESERT STORM. The operation, supported by the 21 SOS and later replaced by the 55 SOS in September, was officially known as PROVIDE COMFORT.
As a result of Operations DESERT SHIELD and DESERT STORM, 1,780 AFSOC members were submitted for decorations. Of these 1,154 were for Air Medals or Aerial Achievement Medals and 626 were for individual awards.
OPERATIONS DESERT SHIELD AND DESERT STORM

Introduction

Though numbering only 2,000 out of the allies' 500,000 men and women in the Persian Gulf, Air Force Special Operations Command (AFSOC) played a "spear heading" role in securing a swift victory but at a cost of 14 lives. According to General (Gen) Merrill A. McPeak, Chief of Staff of the Air Force (CSAF), "DESERT STORM is one war where analysts, historians, and strategists will finally say airpower was decisive. Why were we successful? Quality leadership, quality people, quality training, quality equipment, and the inherent flexibility of airpower give you a ready-made formula for success."\(^1\)

An integral part of the decisive airpower used in DESERT STORM was Air Force Special Operations Command Central (AFSOCCENT). Established on 22 May 1990, AFSOC would have its mettle tested in battle before celebrating its first anniversary. Following the pre-dawn Iraqi invasion of Kuwait on 2 August 1990, a massive deployment of United States (U.S.) Armed Forces began to the Middle East on 7 August 1990 (C-Date) to include Air Force Special Operations Forces (AFSOF).\(^2\)

Command Relationships and Forces

As illustrated on the following page, the National Command Authority (NCA) consisted of two key figures: President George W. Bush and Secretary of Defense Richard B. "Dick" Cheney. Through communications with the Chairman of the Joint Chiefs of Staff (JCS), Gen Colin L. Powell, the unified command responsible for Southwest Asia under Secretary Cheney was Central Command (CENTCOM) commanded by Gen H. Norman Schwarzkopf, United States Com-
mander in Chief Central (USCINCCENT). Under General Schwarzkopf were four service components: Army Central (ARCENT), Navy Central (NAVCENT), Central Air Forces (CENTAF), and Marines Central (MARCENT), and one sub-unified command—Special Operations Command Central (SOCCENT)—commanded by Colonel (Col) Jesse L. Johnson. The Army Special Operations Task Force (ARSOTF), the Naval Special Warfare Task Group (NSWTG), the 3d Special Forces Group (SFG) separate from ARSOTF, the Kuwaiti Navy, a Kuwaiti Special Forces Battalion, and AFSOCCENT commanded by Col George A. Gray
III, 1st Special Operations Wing (SOW) Commander, reported directly to Colonel Johnson.³

Units assigned to Colonel Gray during Operations DESERT SHIELD and DESERT STORM included his own 1 SOW from Hurlburt Field, Florida; the 71st Special Operations Squadron (SOS) of the 919th Special Operations Group (SOG), Air Force Reserve (AFRES), from Davis-Monthan Air Force Base (AFB), Arizona; 1720th Special Tactics Group (STGP) also from Hurlburt Field, Florida; 160th Special Operations Aviation Regiment (SOAR) from Hunter Army Airfield near Savannah, Georgia; and the U.S. Navy’s Helicopter Combat Squadron (HCS) 4/5 from the USS Saratoga.

While Headquarters (HQ) AFSOC supplied personnel for the staffs of AFSOCCENT, SOCCENT, and CENTAF, the 1 SOW comprised the bulk of AFSOCCENT. The 1 SOW consisted of the 8 SOS flying MC-130E Combat Talons and the 20 SOS flying MH-53J Pave Low helicopters, both from Hurlburt Field, Florida; the 9 SOS flying HC-130P/N Combat Shadow tankers and the 55 SOS flying MH-60G Pave Hawk helicopters, both from Eglin AFB, Florida; the 1720 STGP consisted of combat control teams (CCT) and pararescuemen (PJ) from the 1723d Special Tactics Squadron (STSQ), Hurlburt Field, Florida; the AFRES’ 71 SOS flying HH-3Es Jolly Greens; the Army’s 160 SOAR flying CH-47s Chinooks, MH-60 and UH-60V Black Hawks; and the Navy’s HCS 4/5 flying SH-60 Sea Hawks.⁴

Though technically assigned to CENTAF, other special operations forces (SOF) air assets in theater included the 16 SOS of the 1 SOW, Hurlburt Field, Florida, flying AC-130H Spectre Gunships; the 193 SOG, Air National Guard (ANG), Harrisburg International Airport, Middletown, Pennsylvania, flying EC-130E Volant Solos; and the 711 SOS also of the 919 SOG (AFRES), Duke Field, Florida, flying AC-130A Spectre Gunships. Early in the pre-planning stages between the CENTCOM, CENTAF, and SOCCENT staffs, the decision was made that CENTAF would task the
Gunships and Volant Solos while SOCCENT tasked all other SOF air assets. The planners were concerned with the AC-130 and EC-130 survivability during any Iraqi attack on Saudi Arabia.\(^5\)

Shortly after arrival in theater on 11 August 1990, Colonel Johnson set about consolidating his air assets at King Fahd International Airport (KFIA). However, the acting CENTAF Commander, Major General (Maj Gen) Thomas Olson, did not relinquish operational control (OPCON) of the AC-130s and EC-130s but did agree to Colonel Johnson’s request to relocate all the forces at KFIA which drastically reduced the number of required maintenance personnel needed to sustain operations. Thus unofficially, Colonel Gray wore a “dual-hat,” one for SOCCENT and one for CENTAF. While Colonel Gray reported directly to Colonel Johnson at SOCCENT and had all of his assets at one location, he did not have final say in all operational matters—especially those involving AC-130 and EC-130 employment missions.\(^6\)

Also in theater was the 39 SOW from Rhein-Main Air Base (AB), Germany, with MC-130E Combat Talons from the 7 SOS, also from Rhein-Main AB, Germany, and MH-53J Pave Lows from the 21 SOS and HC-130P/N Combat Shadows from the 67 SOS both from Royal Air Force (RAF) Woodbridge, United Kingdom (U.K.). The 39 SOW commander, who acted as Commander Air Special Operations Command Europe (COMAIRSOCEUR), reported to Commander Special Operations Command Europe (COMSOCEUR), but SOCCENT maintained Tactical Control (TACON). However, in reality, the 39 SOW reported to European Command (EUCOM) because the commander would not release his forces to other theater commander in chiefs (CINC).\(^7\)

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**Deployment to Theater**

**Site Survey Team**
Headquarters AFSOC was ready when called up at approximately twelve noon on 7 August 1990. Major (Maj) John M. Spier, AFSOC Contingency Plans, immediately went to United States Special Operations Command (USSOCOM), MacDill AFB, Florida, to begin liaison duties. Two days later, on 9 August 1990, as Lieutenant Colonel (Lt Col) J.V.O. Weaver, 1 SOW Chief of Operations Plans, walked into his office the phone was ringing. It was Colonel Gray. “J.V.O.,” Colonel Gray said, “you’re going to Saudi. Get ready to go. You’ve got four hours.” Up until that point, Colonel Weaver, like many others, thought the wing would not be involved because talk about the war was of conventional forces, not SOF. 8

Colonel Weaver and Captain (Capt) Thomas R.(Randy) O’Boyle, also from the 1 SOW in Contingency Operations, along with Lt Col Randy P. Durham and Maj Robert C. Stewart, both from the Director of Operations staff, HQ AFSOC, deployed to MacDill AFB, Florida, to back-fill positions within the USSOCOM staff. While at USSOCOM Colonel Durham assumed responsibility for the SOF air resources, Major Stewart and Captain O’Boyle developed a concept of operations for the combat search and rescue (CSAR) mission, and Colonel Weaver deployed to Saudi Arabia with a site survey team to find a location for AFSOF. The team was a joint party of 40 Army, Navy, and Air Force personnel, with SOCCENT as its organizational nucleus. Once in theater, the U.S. Navy Sea-Air-Land (SEAL) teams went looking for a place close to the sea from which to operate. The Army Special Forces also left to find a beddown location, and SOCCENT needed a headquarters as well. Colonel Weaver and his men had but one thing on their mind—an airfield. 9

The Discovery of King Fahd International Airport

While in Riyadh, Saudi Arabia, Colonel Weaver went to CENTCOM Headquarters and accidentally ran into an old friend, General Olson. “As long as you’re going out to find a SOF base,” said General Olson, “also
find me a place to put A-10s.” He mentioned to Colonel Weaver that the Saudis had a civilian airport under construction near Dhahran, Saudi Arabia; however, the Saudi military knew very little about it, and that he should examine its location and suitability for operation. Colonel Weaver drove for five hours to Dhahran, and surveyed KFIA, 22 kilometers northwest of Dhahran.10

When Colonel Weaver first saw KFIA he thought, “this would be perfect.” The airport had dual runways, one for the A-10’s and one for SOF air assets. The pouring of the last slab of concrete took place only a couple of days prior to Colonel Weaver’s arrival. As he first entered the airport many of the contract workers, with luggage in hand, were exiting the gate and in the process of leaving the country. Everyone believed that Iraq would attack the kingdom and soon.11

The first facility visited was the tower area. Although still under construction the complex had electrical power, running water, and plenty of space, not only for AFSSOF but for the SOCCENT Headquarters as well. However, the top of the tower was completely gutted with only a floor and windows. Moreover the facility had no ground-controlled intercept (GCI) radar or radio tower communications. Members of the 1723 STSQ who had taken part in the site survey along with Colonel Weaver felt using portable radios they could get air operations going in a matter of hours. The survey team also discovered the runway lights did not work nor was the perimeter fencing completed. The latter did not matter since drifting sand allowed individuals to walk over the finished portions anyway. After completing the site survey of KFIA in less than 24 hours, Colonel Weaver and his entourage returned to Riyadh, and briefed General Olson and Colonel Johnson on their findings.12

The “MABCO Compound” within KFIA, named after the civilian construction company previously on site, provided living quarters for the troops. A total of 16 air-conditioned trailers, 12 for personnel and 4 for
support were within the compound and vacant due to the MABCO contractors leaving as a result of the invasion. (Approximately 400 people could be accommodated if all 16 trailers had been used for billeting.) In addition, there was ample space within the concrete walls, which surrounded the compound for tents and other support type equipment. This was important since about 5,000 contract workers still remained at the airport, which posed quite a terrorist threat.\(^{13}\)

Following the briefing, General Olson said to Colonel Weaver, “Oh by the way, there’s an ADVON (advanced echelon) team in, and they’re popping around somewhere. We don’t know where they are, but I think they’re at Dhahran.” Prior to that point Colonel Weaver still thought he had 72 hours before the arrival of any Air Force SOF.\(^{14}\)

**AFSOCCENT Advanced Echelon Team**

Meanwhile back at Hurlburt Field, Florida, Colonel Gray had notified Col James A. Hassell, 1 SOW Assistant Deputy Commander of Operations, on 11 August 1990, that he would be commanding the ADVON team of four MH-53J Pave Low helicopters from the 20 SOS along with associated support equipment and personnel. Military Airlift Command (MAC) provided three aircraft (two C-141 Starlifters and one C-5 Galaxy) to transport the ADVON team from Hurlburt Field, Florida, to Riyadh, Saudi Arabia. Colonel Hassell landed at Riyadh early on 13 August 1990. The personnel at Riyadh greeted the ADVON team with such questions as, “Who are you? Who is supporting you? Why are you here? Where are you going to work?” Colonel Hassell figured “it was just the old system breaking down” and after some negotiations, AFSOCCENT received the necessary support to set up operations. Once members unloaded the first C-141 and satellite communications (SATCOM) were established, Colonel Hassell passed on his arrival report to Colonel Gray.\(^{15}\)
Next Stop: Dhahran, Saudi Arabia

First Colonel Gray asked, “Where are you?” When Colonel Hassell replied “Riyadh,” Colonel Gray said, “You’re in the wrong place.” While in route the final destination had changed to Dhahran, Saudi Arabia. Colo-
nel Hassell took immediate steps to move to the new location. However, he discovered that the just-unloaded transport had already departed stranding him and his crew. Thus, Colonel Hassell and his ADVON team had only two aircraft to move three loads of supplies and equipment to the new location at Dhahran. Undaunted he stopped the second C-141 from unloading and gave the same instruction to the C-5 crew before they landed. Next he conferred with the remaining two aircraft commanders and presented them with the problem. Although they lacked flight plans and had no direction from higher headquarters, both just asked, “How many people do you have and how many pallets do you have?” Five of the eight pallets and 28 of the 30 people from the first aircraft were consolidated onto the two aircraft that remained. The two people who remained were left to guard the other three pallets.¹⁶

“Pandemonium” greeted the ADVON team at Dhahran. Units and personnel arrived completely on their own with no support or help waiting ahead of them. Colonel Hassell had three priorities: first, to get the helicopters unloaded and assembled; second, to get his people into some type of crew rest facility; and third, to contact SOCCENT. With the exception of maintenance personnel assembling the Pave Lows, everyone else gathered into an empty C-12 aircraft hangar where the temperature was about 115 degrees. Colonel Hassell walked into the MAC terminal at Dhahran, (a Detachment [Det] of the 322d Airlift Division) looking for the officer in charge. According to Colonel Hassell:¹⁷

In walking around the MAC building, it quickly became obvious to us that it was air-conditioned. It didn’t take a brain surgeon to figure out that it was better to be in the hallways stepping over each other in an air conditioned building than it was to be in this hangar with no breeze...At that point I just said, Let’s everybody go in the building.

Colonel Hassell finally connected up with the people from the 1st
Tactical Fighter Wing (TFW) of Tactical Air Command (TAC), Langley AFB, Virginia, specifically Col David L. Peebles, Commander of the 1st Combat Support Group (CSG). Colonel Peebles, the “acting mayor” of Dhahran, had been on station for a few days, not just a few hours. He agreed to help AFSOCCENT find a place to beddown. After repeated attempts to get in touch with SOCCENT failed, Colonel Hassell turned his attention to getting assembled the two MH-53J helicopters already on the ground with two more to follow and crews into crew rest.¹⁸

**First Quarters—The Schoolhouse**

Around 1700 (still 13 August 1990), Colonel Peebles met with Colonel Hassell and said that a Saudi Prince, who also happened to be the general in charge of the base at Dhahran, had approved a schoolhouse at Dhahran for use. The elementary school for boys, shaped like the letter “E,” was vacant for summer break. Shortly thereafter, the two colonels arrived and talked with the Saudi gentleman in charge of the school. He said, “How much do you need? You can have this whole wing.” When Colonel Hassell asked for two wings he said, “Well why don’t you take the whole school.”¹⁹

Now with a beddown location, Colonel Hassell concentrated his efforts on moving his people and equipment into the school. He used buses, trucks, any means available to get the job done. The unit divided the building into two basic areas: an operational area and a living area. It was here that Colonel Weaver finally caught up with Colonel Hassell. Master Sergeant (MSgt) Gary S. Green, 1 SOW administrator, recalled Colonel Weaver’s initial brief describing KFIA to the troops, “The chow hall serves steak, even ice cream!” Having eaten meals ready-to-eat (MRE) since arrival, those words couldn’t have been more pleasing to the ear.²⁰

If deployment proved challenging, so did living conditions (even
though the schoolhouse had air conditioning). Colonel Hassell divided occupancy of the three wings in the building by squadrons. The 20 SOS, already in theater, occupied one wing and the 8 SOS and 9 SOS were scheduled to occupy the other two. However, the interruption of the SOF-dedicated airlift delayed the fixed wing aircraft, leaving Colonel Hassell with empty rooms. The increasing numbers of personnel arriving in Dhahran each day put pressure on Colonel Hassell to open up the school to all whom needed it. At one point as many as 750 people crowded inside the school. Colonel Hassell said “I felt like a slum landlord.” Occupants stepped over each other in hallways that had little more than a foot and a half isle-way to walk through. Fortunately, the 1 SOW was no stranger to deployments and knew the needs of an ADVON team—in particular a contractor, who brought $50,000 in checks and $50,000 in cash. During the second night, AFSOCCENT had hundreds of mattresses. By the fifth day, Colonel Hassell labeled life there as “not too bad.” The school even had usable showers.21

The female personnel shared the same living conditions as their male counterparts except they were segregated to one room. Men and women used the same showers on a time-sharing basis. At the dining hall in Dhahran, an hour or longer wait in line for every meal discouraged its use. Instead, most people decided on the convenience of nearby MREs to eat and bottled water to drink.22

The terrorist threat at the school also heightened concern. Telephone calls were coming in asking, “Who are the colonels? What are their names? Where do they work? And what do they do?” With no security support at the school, AFSOCCENT started its own. Once again, the 1 SOW’s experience in deployments had taught them to bring a security specialist and in this case it was MSgt Kathern L. Poling. When it came to security matters, she took charge and informed the AFSOCCENT staff on what to do and how to do it. Because of the school’s configura-
tion, she placed guards on the roof with M-16 machine guns. Fortunately, outdoor lights surrounded the school and stayed on 24 hours a day. Special tactics personnel assumed primary responsibility for the 24-hour security of the schoolhouse during the initial two weeks. Sergeant Polling briefed them on duties and responsibilities before every shift, which lasted from 8 to 12 hours. These procedures remained in effect until AFSOCCENT moved to KFIA in late August 1990.23

**Threat Conditions**

When AFSOC deployed forces arrived in theater the threat condition (Threatcon) was Charlie, based on the assumption the Iraqis could attack south into Saudi Arabia at anytime. On 8 September 1990, with no specific threat to KFIA, based on intelligence information, Colonel Gray lowered the Threatcon level to Bravo within AFSOCCENT. Until the war broke out in January 1991, the Threatcon escalated back to Charlie only once during the Christmas and New Year holidays.24

**Build-up of the MH-53J Forces**

The biggest problem threatening AFSOCCENT readiness after arrival was maintenance’s lack of tools. They had few kits with them let alone other items such as a crane used to reassemble the blades on the MH-53s. Maintenance was in a sparse, “bare bones” situation and it didn’t help that the three C-141s, which later arrived, carried only maintenance kits for the MH-60s and HC-130s. Other than the original 26 maintainers, AFSOCCENT possessed little maintenance capability. Lieutenant Colonel Alan G. George, 834th Aircraft Generation Squadron (AGS) Commander, was in charge of maintenance and Chief Master Sergeant (CMSgt) James A. Labit and MSgt Charles W. Jones were the flight line supervisors. They started finding ways to make things happen. They managed to borrow some tools and miscellaneous equipment from Brit-
ish maintenance contractors for Saudi jet fighters and a crane from the 82d Airborne Division (ABN DIV).  

On 15 August 1990, the two remaining Pave Lows that were part of the ADVON package arrived at Dhahran via C-5 airlift. This brought the total number of MH-53Js in theater to four. Within a day, all four helicopters started taking shape by working non-stop until they did. The British were kind enough to let AFSOCCENT have some space in their air conditioned hangar, and maintenance personnel went over there to take breaks from the heat, drink some water, and rest in order to keep going. In admiration, Lt Col Richard L. Comer, 20 SOS Commander, said, “None of them had more than about two hours sleep in the first 40 hours while we were there.”

As the clock ticked and Iraq didn’t attack Saudi Arabia, USCENTCOM directed the reprioritizing of airlift to increase the flow of conventional munitions, which lowered the priority for unconventional assets. Thus for approximately two weeks, MAC did not deliver any more SOF assets from Hurlburt Field, Florida, to Dhahran. Colonel Hassell found himself “strapped.” Although he had 175 people and four MH-53s in country, the aircraft were without guns, ammunitions, and other critical parts. If combat operations were to begin right away, AFSOCCENT had almost no self-defensive systems. Colonel Comer pleaded for help, “Send me parts or send me a letter bomb.” Later, Colonel Hassell would say, “It’s a tribute to maintenance that for two weeks we flew two airplanes a day plus an alert bird (to pick up the special reconnaissance teams along the Saudi border) with no WRSK (war readiness spares kits). Maintenance kept them flying. I don’t know how they did it nor do the flight crews.” On 20 August 1990, AFSOCCENT received its first shipment of guns and ammunitions when one of its own HC-130s came forward from RAF Woodbridge, England. They also brought a few critical parts that kept the four Pave Lows flying. Air Force Special Operations Com-

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mand Central received such a shipment every four days until they received their WRSK through normal MAC airlift channels. However, the remaining four MH-53s did not arrive until 4 September 1990, and the WRSK inventory did not reach 100 percent until 20 September 1990.27

On 23 September 1990, one of the B-model MH-53s had experienced some trouble with the supports that held up the auxiliary tanks known as Sponson supports. The supports had bent and the aircraft was in need of major overhaul and some structural repair. Two B-models were in theater at the time and Colonel Gray decided to swap them for two replacements so that crews would not experience the same problems of landing in the sand and trying to get the helicopters down safely. Colonel Robert H. Stephen II, 1 SOW Deputy Commander for Maintenance (DCM) and deployed chief of maintenance, arranged the swap rather quickly. On 29 September 1990, two crews and two aircraft (serial numbers 0369 and 5797) arrived and the following day two-and-a-half crews departed along with two aircraft (serial numbers 4429 and 4432).28

**AFSOC Coordination Cell Arrives at Riyadh, Saudi Arabia**

By mid August 1990, CENTAF had established its Tactical Air Control Center (TACC) at Riyadh, Saudi Arabia, from where the staff would generate the air tasking order (ATO). The daily ATO specified such items as routes, targets, and weapons load configuration for all scheduled missions, both by CENTAF and Royal Saudi Air Force (RSAF), within the area of responsibility (AOR). Accordingly, AFSOCCENT had a coordination cell within the TACC at Riyadh. Colonel Durham, Major Stewart, and others had made their way from MacDill AFB, Florida, to Riyadh, and began shifts around the clock to maintain AFSOCCENT’s portion of the ATO.29

Up until this point, AFSOCCENT had little contact with the SOCCENT staff. Before the deployment, AFSOC had been told they were
deploying to support SOCCENT who requested on short notice a Pave Low liaison officer for their staff. The tasking came down to Colonel Comer:\(^{30}\)

“I wasn’t sure if it was a critical job requiring a very experienced planner or crew member, or if it was just a clerk job. I decided to err on the safe side and sent Capt O’Boyle, a flight examiner and former chief of plans.. As it turned out, it was a good move.”

Captain O’Boyle wound up at Riyadh, Saudi Arabia, as the SOCCENT liaison to CENTAF and was the only rotary wing member at CENTAF for the initial months of Operation DESERT SHIELD. While working on the theater CSAR plan for SOCCENT, he was trained into the TOP SECRET planning cell for the “INSTANT THUNDER” offensive air campaign. As part of this cell, Captain O’Boyle also became the only SOF advisor to the conventional war planners (he is pictured in the photo gallery at the end of this study). It was he who originally recommended blowing open a hole in Iraqi radar coverage using SOF thus enabling F-15E, EF-111, and F-111 aircraft to perform the ultimate surprise over the Iraqi integrated air defense system (IADS). This became part of the primary war plan as later described under Combat Operations, “EAGER ANVIL.”\(^{31}\)

**Missions**

**Alert Response**

On 19 August 1990, during a meeting with country liaison officers, AFSOCCENT received its initial DESERT SHIELD mission—a 45-minute alert response to pick up U.S. Navy SEAL special reconnaissance teams stationed along the Saudi border. During most of Operation DESERT SHIELD, AFSOCCENT had one rotary wing and one fixed wing aircraft on 45-minute alert. The numerous alert exercises during DESERT SHIELD
paid off when on 8 January 1991 a mission was flown from alert by AFSOC aircraft. The mission was in pursuit of defecting Iraqi helicopters. The search, participated in by the 8 SOS, 20 SOS, and 55 SOS was the only alert launch other than the pickup of the CH-47 crew during DESERT SHIELD.\textsuperscript{32}

**Combat Search and Rescue**

Also on 19 August 1990, Maj Kenneth A. Black, Jr., MC-130 mission manager, other HQ AFSOC members, and special tactics liaison personnel, developed the initial CSAR plan that was implemented for use by CENTAF aircrews during the onset of Operation DESERT SHIELD. The plan laid the foundation of CSAR operations used by all U.S., and later, all coalition forces for Operations DESERT SHIELD/DESERT STORM. The CSAR sector map divided the AOR into four regions: north, west, central, and gulf. Two special tactics personnel and a United States Air Force (USAF) survival instructor established the Joint Rescue Coordination Center (JRCC) within the TACC and established the initial rescue communication network and frequencies within the AOR. After arrival of JRCC personnel, special tactics continued to provide liaisons to augment the JRCC and provide special tactics expertise to the CENTAF and SOCCENT staffs through the conclusion of the ground war.\textsuperscript{33}

It wasn’t until October that AFSOCCENT completed their portions of the primary war plans. Captain O’Boyle along with Capt Timothy R. Minish from HQ AFSOC, became the primary planners for the CSAR program. They developed “spider web route” which encompassed the entire AOR and was updated daily with the latest threats. The information was stored in the Pave Low computer to allow rapid reaction launches with minimum planning. Later Captain O’Boyle visited and briefed aircrews from each flying wing on CSAR procedures to include: aircraft call signs; frequencies; identification, friend or foe (IFF) squawks; and de-
etailed information on SOF capabilities and requirements.\textsuperscript{34}

In theory, the system worked as follows: once a crewman ejected and reached the ground, the Airborne Warning and Control System (AWACS) aircraft would identify his approximate location and send fighters, who were usually flying combat air patrol (CAP) for other missions, to the designated area. The aircraft (F-15s, A-10s, and some F-16s) would orbit the site until the downed airman turned on his locator beacon. The rescue procedures required the pilot to turn on his beacon for the first ten minutes of each hour. Once the CAP aircraft picked up the signal, they relayed the coordinates to the AWACS plane, which passed the data to the JRCC, who then alerted AFSOCCENT to execute the rescue mission. From a forward operating base (FOB) and other forward operating locations (FOL) in Saudi Arabia, the 20 SOS from Hurlburt Field, Florida, flew CSAR missions in Kuwait and southern Iraq; however, northern Iraq was 900 miles away. Thus, from Incirlik, Turkey, just 400 miles away and Batman, Turkey, less than 100 miles away, the 21 SOS from RAF Woodbridge, U.K., flew those missions in northern Iraq. A line just north of Baghdad divided their AORs. The first CSAR mission was conducted in the Gulf crisis on 30 August 1991 by AFSOCCENT. An MH-53J crew from the 20 SOS responded quickly. The crisis proved to be negative. However, valuable lessons were learned which were incorporated into the CSAR plan.\textsuperscript{35}

As the Apache mission grew and the CSAR idea became more involved and complex in how to traverse parts of Iraq to look for people, Colonel Comer gave Capt Corby L. Martin, 1 SOW Standardization and Evaluation, the northwest part of Iraq to plan along with the Apache attack mission on radar sites and join Captain Minish's intelligence gathering. Captain Minish continued to plan with the SOCCENT staff, plotting intelligence scenarios and threats throughout Iraqi and Kuwaiti airspace. He worked with intelligence people everyday, seven days a week, for two
months, making sure everything was right and as correct as possible. Captain O'Boyle returned to Riyadh following the CSAR briefings and remained on the CENTAF staff. According to Colonel Comer, "These guys managed the whole war over and over again, anticipating beddown at FOL's, deconfliction problems, supply and maintenance needs, and counter-threat planning."

**Move to King Fahd International Airport**

Having completed the site survey, deployment of an ADVON team, and determining mission requirements, the AFSOCCENT staff began the move from Dhahran to KFIA. Senior Master Sergeant (SMSgt) Robert J. Boyle of the 1723 STSQ remembered coming to KFIA to help set up a flying operation and thinking "it would be like a dirt strip," but when he got there he was "dazzled to find the facility as big as it was." Following the airfield survey on 11 August 1990, Sergeant Boyle returned to the tower the following day to see what he could do to get the facility in working order. Since the 1723 STSQ arrived not expecting to have to perform as combat controllers, Sergeant Boyle had neither radio nor other communications gear to operate the tower. Nevertheless, he borrowed two radios from the special operations contingency communications element (SOCCE), a unit that provided deployable tactical communications for SOF. Even without air traffic controllers the men of the 1723 STSQ were combat qualified for such duties. Unfortunately the elevator in the tower was inoperable, and Sergeant Boyle and his team had to carry the radios up some 30 stories. While these initial radios worked, they still did not have interconnection with Dhahran or Riyadh—KFIA was strictly a bare base operation.

Air Force Special Operations Command now had a huge facility to manage. Because the command was so new, they had never managed a base before and lacked any base support functions. Captain
Anthony F. Tino of the 1720 STGP became the first airfield manager. He went from contractor to contractor getting them to hook up the runway lights, to work the elevator issue, and to complete all other essential tasks.38

Throughout the first full day, Sergeant Boyle and his men brought up more and heavier equipment. Then as they sat at the top of the tower a C-130 suddenly appeared in the landing pattern. Sergeant Boyle recalled, “we didn’t have any published frequencies so we came up on guard (UHF worldwide signal 243.0 available to all USAF flight crews), told them who we were, and asked him what his intentions were.” He said “he was coming in to land.” Thus the first fixed wing aircraft landed at KFIA (AFSOCENT rotary wing aircraft had already previously landed). After taxiing them off the runway, Captain Tino, as airfield manager, had to find a hot cargo area for which all future flights carrying explosive materials would be parked and off-loaded at KFIA. Now acting as cargo (aerial port) handlers, members of the 1723 STSQ quickly unloaded the equipment. For men like Sergeant Boyle, the mission came first—whatever it took to get the job done. According to Sergeant Boyle:

At one time we had five C-5s on the ground, one C-141, and two C-130s. Dhahran called us and said, ‘what kind of fire trucks do you have?’ We told them what we had and they said, ‘okay, you’re only allowed to have one C-5 on the ground at a time.’ We said, ‘Right, okay that’s wonderful,’ but went right on doing our business.

Likewise he stated, “In the beginning they said we couldn’t land commercial airliners here either. That very day we brought DC-8s in full of explosives.”39

For special tactics forces these times were a real challenge; definitely not routine. Performing in a tower at 130 degrees with no air conditioning was like working in a furnace. “It got so bad at night that you couldn’t write on paper when you were taking down information
because the sweat would just soak everything,” said Sergeant Boyle. During the first month of DESERT SHIELD, special tactics combat controllers supported an air traffic count exceeding 30,000 takeoffs and landings.\textsuperscript{40}

On 18 August 1990, the 20 SOS flew Colonel Johnson from Dhahran to KFIA. It was at this time Colonel Johnson and his staff decided to locate SOCCENT Headquarters, AFSOC Headquarters, and special forces operating base (SFOB) at KFIA. Little did they know it would quickly become the largest air facility in theater—overcrowded, overburdened, and overrun.\textsuperscript{41}

By 20 August 1990, KFIA was reasonably suited for occupation. However, before AFSOCCENT could get its aircraft on to the airport, other services appeared and requested space, like the Army’s 101 ABN DIV. The 101 ABN DIV quickly made claim on ramp space for their 600 helicopters. This led Col Bennie D. Orrell, 1 SOW Deputy Commander for Operations (DO), who had just arrived at Dhahran, to come to KFIA and stake out facilities and ramp space from which AFSOF would operate. Colonel Hassell remained in Dhahran to run flying operations. The acting CENTCOM Commander, Lieutenant General (Lt Gen) Charles A. Horner, stepped in when he saw the tug-of-war going on for ramp space at KFIA and directed Colonel Johnson to make the following allocations: the USAF A-10s, who showed up by mid-August, would use the royal terminal (built specifically for the Saudi Royal Family) and its associated runway; AF SOCCENT would use the main terminal and adjacent ramp space; while the 101 ABN DIV received the ramp space northwest of the main terminal.\textsuperscript{42}

On 20 August 1990, CENTAF directed TAC’s 354 TFW from Myrtle Beach AFB, South Carolina, to assume host unit responsibilities. At first the 354 TFW demonstrated a marked lack of hospitality with AF SOCCENT in distribution of pre-positioned supplies and equipment known as HAR-
VEST FALCON. In addition to the initial difficulties with the 354 TFW, further requirements for messing, aircraft maintenance, and munitions storage also surfaced. Colonel Durham established “camel” flights from Riyadh, which brought resupply airlift directly into KFIA on a daily basis. He also pushed the CENTAF logistics staff on support issues.43

As with any operation of this magnitude, the AFSOCCCENT move from Dhahran to KFIA presented a formidable challenge. Colonel Orrell noted, “each time we thought we had one problem solved we’d find out we had another one.” Nevertheless, to logisticians like Lt Col Richard C. O’Dell, AFSOCCENT Deputy Commander for Resource Management (RM), who oversaw the preparation of KFIA and the MABCO Compound, it was a remarkable achievement.44

Living conditions during the move from Dhahran to KFIA from 20 August through 3 September 1990 were as tough as anything AFSOCCENT endured. The struggle between TAC and SOCCENT only grew which made the move more difficult for AFSOCCENT. For example, TAC distributed few generators to power the air conditioning units for the tents. Fortunately, about this time several MC-130s provided an internal airlift capability and generators were picked up from wherever they could be found in theater and brought to KFIA. This permitted approximately one generator for every seven tents. However, the generators needed diesel fuel for their 50-gallon tanks and the fuel, to be delivered by the 354 TFW Civil Engineering Squadron (CES), usually arrived about an hour after the generator ran dry, which meant AFSOCCENT ran out of power twice a day. During those times, the tents turned into ovens, disturbing valuable crew rest. Looking for fuel trucks and trying to get service out of the 354 CES consumed the most time for flying squadron commanders than any other task.45

Unfortunately, late fuel delivery was not the only real impact on AFSOCCENT. In addition to the initial difficulties with the 354 TFW, fur-
ther requirements for messing, aircraft maintenance, and munitions storage also surfaced. For example, when AFSOCCENT first arrived at KFIA, the chow hall had good food. As more and more people arrived TAC could not keep up with the demand as the lines grew and the quality of food lessened.\(^{46}\)

Likewise the fuel tank farm which needed much attention by TAC, was not receiving it. First, Colonel O'Dell got the new jet petroleum (JP4) tanks cleaned out; second, he found the JP4 fuel; and third, obtained the number of fuel trucks required to service the large air fleet expected to operate out of KFIA.\(^{47}\)

On 4 September 1990, the 834th Air Base Wing (ABW) CES Prime Base Emergency Engineering Force (BEEF) from Hurlburt Field, Florida, arrived at KFIA. They reported directly to the 354 CSG, the host unit, but worked within the MABCO Compound (AFSOCCENT quarters). Commenting on the 834 CES Colonel Gray said, “They were our saviors” in building up a tent city for preparation of AC-130 and MH-60 personnel.\(^{48}\)

From the very beginning of the KFIA build up the lack of transportation presented another major difficulty. The distance from the tower to the MABCO Compound was nearly eight miles. When the Japanese Government offered an allotment of resources as their contribution as part of the coalition to Operation DESERT SHIELD, AFSCCSCENT requested a number of four-wheel drive vehicles for the CCTs and special operations weather teams (SOWT). The 25 October 1990 request was not filled until mid-December 1990. Meanwhile Maj Raymond V. Malphurs, a U.S. Army liaison officer assigned to AFSCCSCENT, discovered a salvage yard on KFIA containing a number of vehicles. He and others using their mechanical skills got nearly a dozen vehicles running. These plus vehicles rented from local rent-a-car companies helped alleviate the vehicle shortage.\(^{49}\)

Early on security for AFSCOF was handled by a small contingent of
USAF security police forces. They provided minimum perimeter defense at KFIA until augmented by a Patriot battery of the 101 ABN DIV. The U.S. Army ground forces assumed sole responsibility for air base ground defense in late August 1990. In late January 1991, the 101 ABN DIV forward deployed at which point AFSOCCENT maintenance troops began providing security for their own flight line and ammunition storage areas.\(^5\)

Where special operators were going to live within the MABCO Compound was another "big issue." Trailers were reserved for aircrew members only, but life support, operations, and administrative specialists within each flying squadron had to live somewhere? All other commanders divided up their squadrons between the trailers and tents except Colonel Comer who didn’t like the idea of splitting up his people, so much so that all members lived in tents, including crew members. “Living together in those rooms in the schoolhouse, the crews were developing good coordination and communication among themselves,” said Colonel Comer. “I wanted the crews to live together, but there was no way to put six guys to a room in those trailers.” The tent handled up to 16 people. “With seven tents I could put two crews in each tent with six men to a crew.” This meant one tent for staffers and six tents for the crews. Colonel Comer had other reasons for this arrangement. “We intended to operate two-ship formations and I planned to bunk the two crews in a tent together. They would live together, sleep together, eat together, and be on the same schedule as far as day and night shift.” Colonel Comer also felt “...that if we could all live together and not have a bunch of walls between us, we could be able to achieve better teamwork.” The austerity of the tents versus the trailers also appealed to Colonel Comer. “I felt in my heart that the squadron wasn’t really ready for tense, enduring combat operations. I felt we could get ready for that by overcoming the obstacles and problems of living in tents.” Colonel Comer best summed
up the importance of choosing the tents when he said, “I really felt that the more I made them sweat in peace, the less they would bleed in war.”

Colonel Comer also learned a valuable lesson from the decision of where to live. “The men who contributed to the group in the tough times will perform the same function in war.” Some members of the 20 SOS responded to the tent situation by fixing things up while others sat on their bunks, sulked, and cared only for themselves. “Those who made the team a real team during DESERT SHIELD,” said Colonel Comer, “also were those who gave the most to others during DESERT STORM.”

Basically, AFSOCCENT built their camp from scratch. The first temper tent erected in the MABCO Compound at KFIA took 12 hours—the last one took only 22 minutes. Besides assembling tents, AFSOCCENT personnel got proficient in filling sandbags and building bomb shelters using sea vans buried in sand. (Pictures of the MABCO Compound are in the photo gallery at the end of this story.)

**Build Up of HC-130P/N, MC-130E, and EC-130E Forces**

Between 20-22 August 1990, Lt Col Enrique A. Oti II, 9 SOS Commander, arrived with four HC-130s, and likewise Lt Col Thomas M. Beres, 8 SOS Commander, arrived with four MC-130s, all previously awaiting at RAF Woodbridge, U.K. These aircraft became the first permanent AFSOCCENT aircraft to set up operations at KFIA. Beside their inherent combat capability they also provided AFSOCCENT with an internal airlift capability which was used to sustain operations. After many false starts since their initial inquiry on 11 August 1990, the 193 SOG (ANG) deployed two EC-130 aircraft to KFIA which arrived on 28 August 1990. Arriving with the aircraft was their first acting commander, Col Walter R. Ernst. Throughout Operation DESERT SHIELD, a different acting commander would follow about every 30 days. By 1 September 1990, the
193 SOG had received all the necessary equipment to reconfigure the EC-130 to Arabic national standards for both television and broadcast media and began sending psychological operations (PSYOP).56

**Commander Arrives**

On 31 August 1990, Colonel Gray arrived and assumed command of AFSOC CENT just as flying operations were consolidated at KFIA. Thus in less than 30 days, despite many obstacles, AFSOC CENT was ready to conduct its assigned special operations mission in defense of Saudi Arabia as required under DESERT SHIELD Operations Plans (OPLAN).57

**Build Up of AC-130H Forces**

On 30 August 1990, Lt Col Billy P. Napier, 16 SOS Commander, and five AC-130H Gunships began the move to theater. But like the HC-130s and MC-130s before them, were stalled at RAF Woodbridge, U.K., awaiting adequate crew billeting facilities at KFIA and airlift of WRSK support and maintenance people. Ten days later on 8 September 1990, four AC-130s finally arrived at KFIA. Air Force Special Operations Command Central had expected five, but one became not mission capable (NMC) at Sigonella Naval Air Station (NAS), Italy, and did not arrive until four days later on 12 September 1990 (this was the last AFSOF aircraft in the AOR to support DESERT SHIELD). On 11 October 1990, Lt Col Donn P. Kegel assumed command of the 16 SOS in a change of command ceremony held on the KFIA flight line. On 8 November 1990, one AC-130H and crew returned to Hurlburt Field, Florida, for special operations forces improvement (SOFI) modifications and was not replaced. The 16 SOS remained stable with four aircraft and six crews until the start of Operation DESERT STORM. There was a swap-out of one AC-130H (serial #6575) arriving on 6 January 1991 and the other aircraft (serial
#6576) departing on 8 January 1991 for programmed depot maintenance (PDM).\textsuperscript{58}

**Build Up of MH-60G Forces**

Like the MH-53Js, lack of airlift delayed the deployment of the 55 SOS commanded by Lt Col Jerry L. Garlington and their assigned MH-60s. Eight Pave Hawks finally arrived at KFIA painted in desert camouflage on 11 September 1990. Concurrently, AFSOCCENT maintenance personnel already in theater finished painting the first MH-53J in the desert color scheme after waiting more than a month for materials.\textsuperscript{59}

**Build Up of HH-3E Forces**

On 6 December 1990, Col Ronald L. Jones, AFSOC Deputy Chief of Staff (DCS)/Operations, requested approval from HQ USAF to swap out reserve H-3 helicopters for 55 SOS MH-60 helicopters already in theater. The general idea was to activate five HH-3s and eight crews from the 71 SOS, (AFRES), Davis-Monthan AFB, Arizona, to swap out for three 55 SOS MH-60s and five crews. At least five of the eight HH-3 aircrews were to be night tactical qualified, and all aircraft needed to be modified with global positioning system (GPS) and secure SATCOM by 1 January 1991. The reason for the swap out was to bring three MH-60 helicopters and five aircrews back to the continental United States (CONUS) to integrate forward looking infrared (FLIR) and GPS modifications. Air Force Special Operations Command reasoning behind the swap was to keep the modification line open for the MH-60 fleet, provide an improved AFSOC capability in the future, save on present and future funding, and improve home station unit training of stay behind aircrews.\textsuperscript{60}

It wasn’t until five days later, on 11 December 1990, that the 71 SOS received word of a possible deployment to the Persian Gulf when the commander attended the MH-60 configuration conference at Hurlburt
Field, Florida. On 12 December 1990, Colonel Jones again requested USAF approval to activate the 71 SOS, this time by 15 December 1990. On 14 December 1990, the 71 SOS commander called back to the squadron from Hurlburt Field, Florida, and requested that the crisis action group (CAG) be activated. On 15 December 1990, the 71 SOS outlined their shortfalls: only three night, tactically qualified crews and only two HH-3 mission ready aircraft. However, four qualified aircrews and five mission ready HH-3s were projected seven days after activation, provided two HH-3s could be obtained from another unit. Eventually the 71 SOS did obtain two aircraft from other units and seven pilots and five flight engineers from the active duty Air Rescue Service (ARS). These active duty crews accounted for 39 percent of the pilots, 29 percent of the flight engineers, and over 40 percent of the flight time in the Persian Gulf.61

On 21 December 1990, the men and women of the 71 SOS were activated by President Bush to support Operation DESERT SHIELD. The activation was significant in that it culminated a long and demanding year in which the 71 SOS participated in three major inspections achieving outstanding grades from AFRES, MAC, and AFSOC. Yet these readiness exercises were just that, training evaluations, gauging a unit’s ability to fight a war. The ultimate test waited in Saudi Arabia.62

From 21 December 1990 until 10 January 1991, which included working through the Christmas holidays, the men and women of the 71 SOS modified five helicopters with three major aircraft enhancements to make the HH-3 a viable, survivable weapon system. In less than two weeks, a FLIR, SATCOM, enhanced APR-39, and GPS were strapped onto the HH-3. Ironically, the 71 SOS remembered Twenty-Third Air Force (23 AF) as once saying, “Not one more dime will be spent on the HH-3.” Two other additional modifications, the standard M-60 machine gun (7.62) and 144 infrared countermeasure (IRCM) gear, were also added to the H-3. Unfortunately these modifications were not done until after the war
was over. While maintenance worked around the clock, aircrews trained using the new systems. Augmented with 12 active duty crew members from ARS, these men and women from all walks of life were combined together. The objective was to make a cohesive fighting unit in an extremely short period of time.63

Of significance was that several of the aircrew members flying night tactical night vision goggle (NVG) missions were over 50 years of age, slightly older than the Sikorsky H-3 itself. Ironically, just as five HH-3s were deploying to the Persian Gulf, one of the 71 SOS CH-3 helicopters, affectionately referred to as the “Black Mariah,” was being flown to Wright-Patterson AFB, Ohio, to be put in the Air Force Museum. On 10 January 1991, five HH-3s and 121 people traveled even further than halfway across the country, they traveled halfway around the world, to the hostile and dusty environment of Saudi Arabia.64

On 12 January 1991, the 71 SOS arrived at KFIA. Two days later an HH-3E completed the first functional check flight (FCF) and first flight in country. To the welcome surprise of the AFSOCCENT staff, the older, larger, less sophisticated HH-3s handled better over the waters of the Persian Gulf. As it turned out, half of the MH-60 Pave Hawks returned to the CONUS on 29 January 1991 and the other half stayed for the duration of Operation DESERT STORM. Since it took three days to assemble the H-3s, the crews only had two days of training before the start of air operations on 17 January 1991.65

**Build Up of AC-130A Forces**

Recall began on 17 January 1991 and selected AC-130A Spectre Gunship crews of the 711 SOS and 919 SOG from Duke Field, Florida, processed for active duty. The 711 SOS supplemented their active duty H-model counterpart of the 16 SOS. Appropriate staff and eight aircrews who had flown training missions prior to deployment assembled. The
deployment of five AC-130A aircraft and full crews began on 30 January 1991. Also deployed via MAC airlift were three additional aircrews, maintenance, and support personnel. A small ADVON team arrived at KFIA on 1 February 1991 and began setting up the operations and maintenance centers and the 32-tent compound located across the street from the MABCO Compound. It wasn’t until 7 February 1991 that the five AC-130As arrived at KFIA due to awaiting MAC airlift. Two days later on 9 February 1991, the first sortie for the AC-130A was flown.66

**Distinguished Visitors to KFIA**

When General Schwarzkopf visited KFIA on 6 September 1990, the AFSOCCENT staff gave him a tour of the living compound, flight line facilities, and an EC-130 capability demonstration. A month later, Gen Carl W. Stiner, Commander of USSOCOM, visited SOF units at KFIA on 10 October 1990. During a December 1990 tour of coalition forces in Saudi Arabia, Secretary Cheney and General Powell visited KFIA and spoke to the AFSCCENT troops for about 30 minutes on 21 December 1990. Just 11 days before Operation DESERT STORM, General McPeak spent a few minutes with AFSCENT personnel as he passed through KFIA on an inspection tour of USAF units on 6 January 1991. Other civilian distinguished visitors during Operation DESERT SHIELD included Bob Hope, Steve Martin, and Thomas Hears.67

**Build Up of the 39th Special Operations Wing**

Unlike the 1 SOW, which built its forces during the heat of summer in Saudi Arabia, the 39 SOW built their forces in the brutal cold offered by the Turkish mountains. After getting ready several times in September, October, November, and December, each attempt to deploy the 39 SOW failed due to the Turkish Government’s unwillingness to commit forces. “I don’t blame the Turks,” said Col Ben E. Josey, 39 SOW
Deputy Vice Commander and deployed FOL commander. They've got a common long border with the Iraqi's. Before I would open up my borders and let a significant force come in there I would have to be assured that A) it was a NATO force, and B) I'm willing to commit. Cause the Arab/Moslem mind will remember that for 300 years. My God, 150 years from now the Iraqi's could turn around and attack them and say 'Do you remember 1991?' That's the one thing I have learned about the Moslem mind, they have a sliding scale of time. It's not linear like it is to an American or a European. They can compress 300 years and make it yesterday and carry out revenge.

On 17 January 1991, a few hours after the war actually began, Colonel Josey and an ADVON team of 52 individuals arrived at the FOB of Incirlik AB, Turkey. The 39 SOW fell under the umbrella of PROVEN FORCE commanded by Gen John R. Galvin, United States Commander in Chief, European Command (USCINCEUCOM). The special operations segment of this Joint Task Force (JTF) was code-named ELUSIVE CONCEPT. Commanding the 39 SOW at the FOB was Col Eugene J. Ronsick, 39 SOW Vice Commander. Soon two MC-130E Combat Talons from the 7 SOS, three MH-53J Pave Lows from the 21 SOS, and four HC-130P/N Combat Shadows from the 67 SOS deployed to Incirlik AB, Turkey. The 39 SOW was also augmented by the 1 SOW with two MH-53Js and three crews. However, if the 39 SOW was to perform its primary mission of CSAR, the helicopters would quickly need to forward deploy. The FOL commander would have OPCON of the forces while on the ground. But as soon as the aircraft took off, OPCON went to the Joint Special Operations Task Force (JSOTF) at Incirlik AB, Turkey, primarily because of the intelligence latch-up.

**Deployment to Batman**

Because the order of battle was already in effect, the only place with
any ramp space left was Batman, Turkey, 72 miles from northern Iraq’s border compared to the 130 miles KFIA was located from southern Kuwaiti’s border. Within the next 48 hours, the 39 SOW would find themselves at Batman. While HQ AFSOC had sufficient time to properly equip the 1 SOW which had already been in theater since August 1990, unfortunately for the 39 SOW, HQ AFSOC did not spend enough money fast enough to get the precious resources available. For example, people found themselves up to their calves in mud without the proper combat boots nor with any scotch guard to propel the freezing rain from their battle dress uniform (BDU) jackets. “The poor guys who were with me...were really hurting.”

The 39 SOW had originally hoped to use Diyarbakir, Turkey, as their FOL, a place with some infrastructure. But as luck would have it, the 39 SOW was forward deployed to Batman, a tremendously austere and bare location. When Colonel Josey first arrived at the FOL he quickly felt the Turkish military “had an innate distrust of us.” The Turkish military also thought the 39 SOW would get off the plane and be ready to pitch tents, something they were not prepared to do. Thus, they had to find shelter until further equipment and supplies arrived. The Turkish military had two munitions storage areas at Batman, one old and one new. Because the Turks already had the new facility filled with bombs, the ADVON team stayed at the old, above the ground, magazine. The team rested their sleeping bags on double spring bunks located in the shelter to remain off the ground—an important aspect since it was raining and only 22 degrees Fahrenheit (F).”

The facility had no running water but luckily the 39 SOW had brought some bottled water along with their MREs. Colonel Josey had only one demand of his people, “to give themselves a combat wash.” The 39 SOW slept in that “dank, dark, scum bag bunker,” as labeled by Colonel Josey, for the first three nights.
Similar to the 1 SOW when they arrived in Saudi Arabia not knowing if Saddam Hussein’s forces would move south; the 39 SOW didn’t know if he would decide “to toss a chemical rocket” to the north. Fortunately, the 39 SOW didn’t have to worry about terrorist attacks for the Kurdish political groups located outside of Batman were very much against Saddam Hussein, unlike the people of the 1 SOW who had to worry about terrorist attacks because of the contract workers located right on KFIA.73

Colonel Josey’s “charter” was to build an operational capability to receive MH-53Js as soon as possible. Here was where Special Operations Command Europe (SOCEUR) made the difference with their complete knowledge on how to build something out of nothing. They rapidly chose the resources and pushed them forward. For example, it was “SOCEUR who was smart enough to put a point to point secure phone in so that at a moments notice we could talk to them,” something that was more than nice to have in order to be notified of a scud launch. According to Colonel Josey, they “Did an absolutely marvelous job....I was simply a catcher on a pro baseball team. All I had to do was catch what they sent, organize it, put it down on the ramp, and then get to it as we built the capability.” As a result, four Pave Lows arrived three days later on 20 January 1991 and were ready to fly that night. The fifth MH-53J was kept at Incirlik AB, Turkey, “as a we’ll fix it there and then rotate” type of airplane. However, Colonel Josey was in disagreement with the JSOTF decision to split the MH-53J force. He felt the Pave Lows needed to operate “in industrial strength...Just like a cleaner that you’re going to use on the bathroom floor. You don’t go through it with dishwashing liquid if you want to get the floor clean,” said Colonel Josey. In order to possess an effective force, Colonel Josey felt a minimum of eight Pave Lows were required to have any kind of capability for an extended period of time.74

Another problem Colonel Josey quickly ran into was that he had
no special operator trained in the particular language for the particular field he found himself at. He needed translators. As it turned out, most of the higher-ranking Turkish military personnel spoke English and many other Turkish soldiers spoke German. “I saw several times... an American speaking a broken German to a Turk speaking in a broken German,” Colonel Josey said. On 20 January 1991, the communications problem came to an end when an American Forces Group-Turkey showed up with one Turkish speaker, and more importantly, with a suitcase filled with $200,000 in impress funds, otherwise known as the international language called cash! “Were it not for him we would have gone under,” said Colonel Josey.75

The 39 SOW’s first game plan was to build seven operational tents, but they needed a foundation to lay the tents over. The first tent was put up using 463L pallets, but those were in limited supply. There was plenty of crushed rock just a quarter of a mile away, but the 39 SOW had no means of moving it. The American Forces Group “simply walked in....paid the Turks some money, and rocks began to move....but that takes cash.” The American Forces Group also went downtown and hired a restaurant to feed the 39 SOW. By the third day they were eating hot food. “It meant a hell of a lot,” concluded Colonel Josey. By the fifth day, 24 January 1991, the 39 SOW had quickly grown from its original 52 people to over 200 people.76

Living and Training in the Desert

Rotary Wing Training Operations

As quickly as four days after the 20 SOS arrived at Dhahran in August 1990, it looked as though the deployment was going to last a long time. Therefore, Colonel Jones recommended reducing the number of Pave Low crews to 12, essentially dividing the squadron in half. While still
at Dhahran, AFSOCCENT gave top priority to getting the helicopter aircrews familiar with desert operations. They did so by giving each crew a minimum of two flights: an orientation flight to familiarize aircrews with the desert environment and an operational flight to prepare them for combat missions. Landing on soft desert sand proved more difficult than the solid fields of the Southeastern U.S. Moreover, crews found the lack of moon illumination made operations more difficult even with the help of NVGs. Consequently, moon illumination became an important item during all weather forecaster briefings. In addition, the dust stirred up by the helicopters made it harder to judge the desert terrain. Although terrain varied little in the desert, crews came perilously close to 35-foot sand dunes that had the same coloration as the desert floor.\(^7\)

As far as flying operations went, AFSOCCENT found during the first two FCFs that they had a real problem with visibility. The wind blew the sand around all day in 15 to 20 knot winds. The sand was so light that it would remain suspended in air. At night, if there was no moon, the suspended sand created a haze that reduced visibility to one mile and often less. The terrain was so uniformly flat, except for some lumps, hills, or dunes, that it was hard to discern any features. This meant helicopters flying at low-level on NVGs had problems. The crews did not see the sand dunes as they undulated across the land. They could be flying at a 100-foot straight-and-level, and suddenly be flying at 10 feet across the top of a sand dune they didn’t see. Without an operating FLIR camera or a terrain following/terrain avoidance (TF/TA) radar that was extremely sensitive and could see the sand dunes, helicopter crews were in a hazardous flying situation every time they flew at night with no moon. This remained true throughout the entire Persian Gulf area and the magnification of so little light by the NVGs was almost useless.\(^8\)

Once AFSOCCENT consolidated at KFIA, they began working more closely with the SOCCENT staff and with the 5 SFG who also began to
arrive the second week in September 1990. At this point, AFSOCCENT became involved in the war plan for the air war, should the U.S. initiate combat operations against Iraq. Before this time, AFSOCCENT had mostly been concerned with getting the aircraft and crews in flying shape in such a hostile environment.  

On 26 September 1990, Colonel Gray decided to restrict MH-53 desert landings to save engines. The AFSOCCENT staff was satisfied that the MH-53J crews were properly conditioned to the environment and did not think restricting desert landings would have a major impact on readiness. Flight training continued to proceed even without desert landings. The 20 SOS had an organized schedule whereas each crew member received about three flights per week. For proficiency, the 20 SOS trained with HC-130s and MC-130s on night air refueling and also performed numerous infiltrations and exfiltrations with the 5 SFG.  

It was also about the end of September 1990 that airspace was being divided into controlled areas. Training area 19, well out to the west of KFIA, was the primary area for AFSCCENET to fly. In addition, King Fahd range, just south of Dhahran, was the only live range for air-to-ground firing in Saudi Arabia. The Pave Low was the first aircraft to fire on that range. Technical Sergeant (Tsgt) Bruce H. Grieshop, a gunner in the 16 SOS, was credited with getting the range opened up and permission to shoot. This permission to shoot on ranges was another reason working with AFSCCENET became an attractive proposition to the Apache Commander, Lt Col Dick Cody. The AC-130s, MH-60s, and then the A-10s were also allowed to use the King Fahd range.  

In early October 1990 as flying training continued in the desert, Pave Low crews also got an area for over-water training where they were able to practice night water operations. Crews prepared for infilling and exfilling SEALs with soft ducks and executed night water rescue. They also initiated ship deck landing qualification (DLQ) training on the U.S.S.
Dubuque. Colonel Gray had been very concerned about the inexperience of the 1 SOW crews to land on a ship, and the 1-4 October 1990 training was exactly what was needed. Except for a minor fuel spill prior to an on-deck hook up on 2 October 1990, the training was an unqualified success and reassured Colonel Gray that his MH-53J crews were prepared and ready to go. As it turned out, the 20 SOS didn’t need any shipboard operations for the war. The real “meat” of getting ready for the war came in conquering landing in the desert, navigating in the desert, depending on the Pave Low systems and GPS navigation, learning how to convert map coordinates into reliable GPS coordinates, utilizing intelligence, and putting together a war plan.82

At the end of October 1990, Colonel Comer returned to the CONUS and traded positions with Lt Col Gene Correll, 20 SOS Operations Officer. For nearly two months, Colonel Correll involved the squadron in other exercises to include DESERT DEFENDER and more rehearsals with the Apache battalion. Colonel Comer returned in time to celebrate Christmas with his troops.83

The 55 SOS initiated local orientation flights on 13 September 1990 when the assembling of the MH-60s was completed. On 25 September 1990 a MH-60 flew to the FOB of the U.S. Navy SEALs at Half Moon Bay, east of KFIA along the Persian Gulf coast, to conduct fast-rope training. They also toured the facilities and were briefed on SEAL operating procedures.84

On 8 October 1990, an MC-130 picked up a distress call while on a routine training mission from a CH-47 helicopter crew of the 101 ABN DIV. The Chinook had lost an engine and made an emergency landing. At the time, the 101 ABN DIV was heavily committed so AFSOCCENT launched its alert MH-60, which recovered the seven crew members—none of whom had any survival equipment.85

Just two days before Operation DESERT STORM on 15
January 1991, the 71 SOS, with its HH-3Es, flew its first local orientation flight. During late January and early February emphasis was placed on getting the 71 SOS and their H-3 helicopters up and running and participating in the war. Air Force Special Operations Command Central expressed concern over the entire fleet going down for inspection of rotor blade tips. On 26 January 1991, the 71 SOS flew its first mission directly involved in the war when the H-3s successfully supported an oil burning platform reconnaissance mission. The 71 SOS was included in a specific mission on request of the 20 SOS. The H-3s mainly sat alert at Ras Al Mishab and supported the ground offensive.\textsuperscript{66}

**Fixed Wing Training Operations**

On 17 September 1990, AFSOCCENT flew its first Gunship "live fire" mission. Since AFSOCCENT crews flew most of their missions at night, and the Saudis used the ranges during the day, "range conflict" was not as great a concern to AFSOCCENT units as compared to other units. However, on occasion it did impact scheduled training by canceling sorties. Undaunted, the 16 SOS launched its first AC-130 alert aircraft during an exercise on 28 September 1990. According to Colonel Gray, "The system worked very well."\textsuperscript{67}

On 22 November 1990, Thanksgiving Day, the 193 SOG began airing "Voice of America" into the Kuwaiti theater of operations (KTO) through a route called "Gulf Coast South" by picking up the transmission from Greece. This PSYOP meant AFSOC was the first Air Force major command (MAJCOM) to support a wartime mission. During Operation DESERT STORM, the EC-130s continued wooing defectors by broadcasting "Voice of America" along with prayers from the Koran and testimony from well treated prisoners.\textsuperscript{68}

On 12 January 1991, AFSOCCENT began a second PSYOP mission. The 8 SOS, utilizing their MC-130s, dropped one million black and
white leaflets into the southern KTO. Two days later the 8 SOS dropped another 350,000 colored leaflets. The first set of leaflets started out benignant and then got more graphic during the second drop showing the Iraqis what was going to happen if they did not surrender. At midnight on 16 January 1991, the 8 SOS once again delivered more leaflets. These basically showed the Iraqi soldiers how to surrender. The next day the war began. Throughout the war more leaflets were dropped giving the enemy a chance to surrender prior to AFSOCCENT’s bombing campaign (refer to BLU-82s discussed later under Combat Operations). These leaflets read, “Tomorrow if you don’t surrender we’re going to drop on you the largest conventional weapon in the world.” Following each bombing campaign more leaflets were usually dropped saying, “This is the first of many bombs to come. Suggest you take advantage of this safe conduct pass, lay down your weapons, and cross safely to our line.” In all, the 8 SOS and 9 SOS dropped over 17 million leaflets during the war. Most surrendering Iraqi soldiers had these leaflets in their hands. The following list summarizes each leaflet drop. Photos of various leaflets are in the photo gallery following narrative.
Leaflet Summary

<table>
<thead>
<tr>
<th>Date</th>
<th>Aircraft</th>
<th># of Leaflets</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>12 Jan 91</td>
<td>MC-130E</td>
<td>1,000,000</td>
<td></td>
</tr>
<tr>
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<td>MC-130E</td>
<td>350,000</td>
<td></td>
</tr>
<tr>
<td>16 Jan 91</td>
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</tr>
<tr>
<td>17 Jan 91</td>
<td>MC-130E</td>
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</tr>
<tr>
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<td>MC-130E</td>
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<tr>
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<tr>
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<td>MC-130E</td>
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</tr>
<tr>
<td>2 Feb 91</td>
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<td></td>
</tr>
<tr>
<td>4 Feb 91</td>
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<tr>
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<tr>
<td>12 Feb 91</td>
<td>MC-130E</td>
<td>1,000,000</td>
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</tr>
<tr>
<td>17 Feb 91</td>
<td>HC-130P/N</td>
<td>1,000,000</td>
<td></td>
</tr>
<tr>
<td>20 Feb 91</td>
<td>MC-130E</td>
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<td>21 Feb 91</td>
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</tr>
<tr>
<td>Canceled due to unfavorable winds</td>
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</tr>
<tr>
<td>22 Feb 91</td>
<td>HC-130P/N</td>
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<tr>
<td>27 Feb 91</td>
<td>MC-130E</td>
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</tbody>
</table>

Source: Rpt (U), "Psychological Operations Operation DESERT STORM," USAFSOS

Search & Rescue and Close Air Support Exercises

On 16 September 1990 the AFSOCCENT staff met with the C-130 Airborne Battlefield Command and Control Center (ABCCC) operation from Keesler AFB, Mississippi, to familiarize commanders with its capability and operating procedures prior to a scheduled mid-October 1990 Search and Rescue (SAR) Exercise (SAREX). Although the initial SAREX was very limited in scope it was quickly terminated when major communications problems were encountered.90

On 25 and 26 October 1990, the AC-130s began working with TAC A-10 Thunderbolts during Close Air Support Exercises (CASEX). A
close relationship was formed between the Spectre Gunships and Thunderbolts as the AC-130 performed air interdiction and air base ground defense missions while the A-10s performed close air support (CAS) for the MH-53s during CSAR.91

Although the AFSOCCENT staff still experienced problems in communicating with the ABCCC, the second SAREX was completed on 27 October 1990. It seemed a dead zone in the ABCCC’s orbit disrupted all communications to and from the command post. To alleviate the problem three dedicated networks and two high frequency (HF) radio networks were established for long distance communications with the ABCCC. Consequently, the AFSOCCENT operation conducted communications tests with the ABCCC in different orbit locations. Air Force Special Operations Command Central also worked with a joint communications element to establish communications for a ground SOCCENT command post. In anticipation of having to contact other AFSOCCENT forces over long distances, two more HF radios were forwarded from Hurlburt Field, Florida, to the JRCC. These were later used to monitor secondary HF air operations and served as back up for other HF networks.92

During the 27 October 1990 SAREX, AFSOCCENT had only two radios to handle two full time networks while covering three line pick ups going simultaneously; one in the Persian Gulf and two in the desert. While AFSOCCENT used the ABCCC as its primary communications platform, the dead zone in the plane’s orbit forced the staff to abort the mission and control the remainder of the exercise through KFIA. The lessons learned were many, both for the AFSOCCENT operators and the fighter pilots that participated as survivors.93

The third SAREX on 5 November 1990 was expanded to include five scenarios working simultaneously with the USAF, U.S. Army, and RSAF providing pilots to act as survivors. The exercise also included for the first time CSAR operations—three land rescues, one water rescue,
and one over both. For the CSAR exercise, SOCCCE "remoted" two SATCOM systems and one HF radio into the SOCCENT command post. The air operations networks for AFSOCCCENT were the primary ones for SOCCCE. As before, the element experienced some problems during the first couple of hours of the exercise with both SATCOM and HF radio systems. Some type of fade out of communications and radio signals were experienced daily. Another phenomenon noted was the HF frequencies that were normally too high for any reliable communications actually worked best during evening and nighttime hours.\textsuperscript{94}

The next SAREX went for three days and encompassed heavy taskings and produced a steep learning curve. Initiated on 15 November 1990, the AFSOCCENT "war room" (pictured in the photo gallery following narrative) was the primary command and control center, not the ABCCC that was used for back up. The exercise included AC-130s, MC-130s, HC-130s, MH-53s, MH-60s, CH-47s, and STSQ assets who established multiple night forward area refueling and rearming points (FARRP) and conducted rescue events in the Arabian Gulf and Eastern Saudi Arabia. Night one consisted of 19 separate scenarios.\textsuperscript{95}

During the early morning hours of 17 November 1990 the SAREX ended with the AC-130s flying five Gunship missions. The first two were in support of air base ground defense as part of exercise EMINENT THUNDER. A third AC-130 participated in a CSAR mission conducted near KFIA while a fourth Gunship completed a dry fire CASEX in the local training area with a ground party code named Serpent 67 designating targets. The fifth Gunship mission was both a dry and live fire CASEX in the local area.\textsuperscript{96}

In early December 1990, a fifth SAREX was completed. Overall, AFSOCCCENT learned a great deal about their communications limitations and recommended Communications Exercises (COMEX) in the future.\textsuperscript{97}
Visual Board Search and Seizure Operations

On 29 October 1990, AFSOCCENT supported its first visual board search and seizure (VBSS) operations with Naval Special Warfare Task Group (NSWTG). This was a direct action (DA) mission requiring a SEAL platoon to be fast-roped on a ship that refused normal Navy boarding procedures during the blockade of Iraqi shipping (Embargo).98

On 6 and 7 November 1990, AFSOCCENT rehearsed VBSS missions with two MH-60s, one HC-130, and one AC-130. Two days later AFSOCCENT performed another VBSS mission with aircrews still having some communication problems with appropriate ships. They were resolved during the “Hot Wash” and it proved to be a “great” training scenario.99

A month passed before AFSCCEN'T crews performed another VBSS mission. On 7 December 1990, the MH-60s transported the search and seizure force to the specified coordinates, but the ship could not be found. A Spectre (AC-130 Gunship) searched the area and found the ship 30 to 45 minutes from the target location. This delay forced the helicopters to refuel, so while the Gunship orbited the target, the MH-60s took on fuel from HC-130 tankers. The unplanned search and refueling delayed the hit for almost two hours. However, the subsequent successful search and seizure was credited to the flexibility, teamwork, and professionalism of the AFSCCEN'T aircrews. The end products of VBSS were a direct result of aircrew flexibility and ability to loiter and infiltrate troops in a rapidly changing environment.100

Exercise DESERT ALLIANCE

From 18 through 21 December 1990, AFSCCEN'T participated in Exercise DESERT ALLIANCE which produced 20 sorties of demanding training for aircrews supporting SOCCENT’s coalition warfare exercise with
the Kuwaiti, French, Egyptian, Saudi, British, and American special forces. The exercise put demands on aircrews, maintenance, and supply systems and increased the operations tempo to wartime levels.\textsuperscript{101}

**Real World Contingency—EASTERN EXIT**

Intervening in AFSOC\textsuperscript{CENT}’s preparation and causing a good bit of concern occurred when AFSOC\textsuperscript{CENT} forces found themselves confronted with another contingency within the AOR on 3 January 1991; the evacuation of U.S. citizens from Somalia (which is located on the east coast of Africa). All of AFSOC\textsuperscript{CENT} was alerted for EASTERN EXIT. The MH-53J crews were in their cockpits when they were canceled. However, one AC-130H Gunship departed on 4 January 1991 from KFIA to perform CAS over the U.S. Embassy in Mogadishu, the capital of Somalia. The Gunship returned to KFIA on 6 January 1991. Had the helicopters evacuated the embassy it would have taken 16 hours flying time and caused the helicopters to be scattered all over Africa and Southwest Asia. It would have been a major problem trying to get ready by 15 January 1991, the United Nations (UN) deadline for Iraq. “As it turned out, that didn’t happen,” said Colonel Comer. “The Marines got the mission. As it turned out, it was a good thing.”\textsuperscript{102}

**Special Tactics Training**

Special tactics planners provided expertise and input to the initial evacuation plans and developed the ground portion of four major CSAR exercises. Combat controllers and pararescuemen (PJ) provided communications and evasion training to aircrews during SAREXs, conducted over 85 assault zone surveys, established a theater assault zone availability report (AZAR) for over 250 sites, provided aircrew recovery training to Navy SEAL teams, and established and operated nightly special operations (SO) assault zones for aircrew upgrade training. Special tactics
personnel were the driving force in three major FARRP exercises. They coordinated airspace and ground training areas and brought together HC-130s, MC-130s, MH-53s, MH-60s, U.S. Army AH-64s, and CH-47s for critical refueling operations in remote regions at night. Pararescuemen performed double duty flying as gunner/scanner and medical aircrew members while developing casualty collection and transfer techniques used during FARRP training exercises. They also honed perishable medical skills through advanced trauma life support training with deployed flight surgeons and hospital personnel at KFIA.103

Combat controllers were assigned to the range control tower in the northern area live fire ranges located near King Khalid Military City (KKMC) and were the only U.S. personnel the Saudis would certify as range authorities. This allowed all U.S. attack aircraft to take advantage of this training area.104

A special tactics officer was assigned the responsibility as the CENTAF fuels project officer. Special tactics personnel were dispatched to three expeditionary airfields (Al Jouf, Ar’ar, and KKMC) to coordinate with multi-national work forces constructing FARRP sites. Special tactics then worked directly with logistics and fuels personnel to acquire fuel bladders and pumps in the proper quantity and size to service the type and number of aircraft projected to use each FOL. After each FARRP had been established, special tactics contracted for and oversaw the initial delivery of 810,000 pounds of jet A-1 fuel per location. They established a unique rapport with the Saudi airfield directors and assumed control of previously unmanned air traffic control towers. Because of this relationship, special tactics survey teams were able to travel throughout the entire Saudi Arabian/Jordan border region completing assault zone surveys. Prior to using Hurari landing zone, the primary dirt strip for Exercise DESERT ALLIANCE, combat controllers met with a member of the Royal Family to coordinate the movement of an entire Bedouin encampment
from the landing zone. Once the exercise began, these same controllers operated the landing zone using covert lighting to infiltrate and exfiltrate coalition special forces into the northeastern Saudi Arabia training area via C-130 aircraft. Special tactics planners and operators at these remote landing sites coordinated the airspace and provided the only command and control information networks to AFSOCCENT at KFIA. After completion of exercise DESERT ALLIANCE, the majority of U.S. forces redeployed to the south while combat controllers and PJs remained at three FOLs to upgrade facilities and establish forward area munitions/fuels storage areas. During this time, combat controllers provided 24 hour-a-day air traffic services for Saudi aircraft involved in the evacuation of hundreds of civilians, while continuing to provide aircrew night tactical training using covert lighting systems.105

Forward Operating Locations

As SOF training intensified, the AF SOCCENT staff began studying the possibility of leaning forward and establishing FOLs closer to the Iraqi border. As a result of these deliberations, Colonel Weaver and Major Malphurs conducted site surveys on 2-3 October 1990 at two airfields on the Northern Saudi/Iraqi border (Ar’ar and Rafha) for possible use as FOLs. While both were excellent locations, they could not be used for sustained operations because of their proximity to Iraq. After looking around for other potential sites, Colonel Weaver found Al Jouf, Saudi Arabia, on 28 November 1990. After evaluating all the sites surveyed, the AF SOCCENT staff agreed Al Jouf would be the primary FOL, and work began on logistics and communications assessments and what additional fuel storage, billets, and personnel would be needed to set up and sustain air operations. Consequently, Ar’ar and Rafha were used as alert FOLs where normally at least one aircraft was on station with no maintenance or support troops.106
Lieutenant Colonel Kim W. Gnader, AFSOCCENT Deputy Chief of Staff for Logistics, returned to KFIA on 22 December 1990 after completing the initial preparations for the beddown at Al Jouf, Saudi Arabia. On 7 January 1991, more than 50 additional personnel arrived at KFIA to support the upcoming FOLs. Room in the MABCO Compound got even more congested until 14 January 1991 when most troops moved forward. On 8 January 1991, AFSOCCENT placed an ADVON team at Al Jouf to make final preparations. Two days later, Colonel Orrell deployed to Al Jouf to survey and insure everything was ready. He would depart for KFIA one more time prior to commanding the FOL at the war’s commencement.\(^\text{107}\)

On 11 January 1991, AFSOCCENT held a communications exercise between KFIA and its three FOLs (Al Jouf, Ar’ar, and Rafha, all in Saudi Arabia). The exercise went better than expected as AFSOCCENT even had communications with the ABCCC that established line of sight communications with its deployed forces.\(^\text{108}\)

Three days later, all forces had closed at Al Jouf. Eight MH-53s of the 20 SOS, five MH-60s of the 55 SOS, two HC-130s of the 9 SOS, and one CH-47 of the 160 SOAR were on alert at AFSOCCENT’s primary FOL. The latter arrived the day of the war to support the radar site attack for medical support. The remaining high value assets (MC-130s) that did not have an initial ATO mission were dispersed to Thumrait, Oman. However, CENTAF did not approve dispersal of their controlled SOF assets—the AC-130s and EC-130s. Since there were no revetments at KFIA, AFSOCCENT dispersed them along the airfield.\(^\text{109}\)

By 17 January 1991, life at Al Jouf was still in transitional stages. The primary FOL was not completely up and running due to the lack of a transceiver that was loaned to SOCCE for use during power failures. All three SOWTs began transmitting observations from their northern most observation posts in the AOR. Thus AFSOCCENT, with a 24 hour opera-
tion at Al Jouf was getting the forecasts out to the field on a more timely basis.\textsuperscript{110}

By 20 January 1991, the FOLs were providing more than just forecasts as the following letter from an Air Commando who forward deployed wrote to another who stayed behind:\textsuperscript{111}

Hey good buddy how is everything going back at Fahd? I hear that everyone there has to wear their chemical gear all the time. We have had only one scud alert since I’ve been here. How many have you had? The scuds they fired on 18 Jan 91 towards Israel were fired just north of us.

Our airfield which was supposed to be low key and secret has now turned into Logan airport. We have a bunch of the Army’s attack helicopters here as well as A-10s which are going to be stationed here now. But it’s the aircraft that comes in here for fuel as well as battle damaged aircraft that’s sitting on the flightline that’s unreal. We have a bunch of F-16 going through here as well as the British Tornado.

I hope that within the next week that we’ll be able to knock out all Iraq’s scuds so we won’t have much to worry about. It’s going to be their mobile scud launchers that’s hard to locate. Iraq is really trying hard to get Israel involved in this war. Are you guys getting good intel back there. Did they tell you guys when this war was going to start? We knew about 10 hours before it started.

I missed betting on the football games this week—how did they turn out? I hope to be back before the Super Bowl but it doesn’t look promising. I guess I won that bet with CWO4 Knoop in J-6 for fifty bucks. See if he will give you the money. You’ll probably feel funny about that right, don’t worry about it I’ll get it when I get back.

We now have CNN up here in the terminal but it’s on a Saudi channel which shows CNN on the top of each hour. I don’t believe that they’ll be showing any football games tonight.

I would appreciate it if you could please send food. You ask what type. Well I would like some hot chocolate, chicken soup, small jar of mayo, bread or pita bread and some cigarettes—Marlborough lights and tea would be nice. Also some razor blades. Twin edge please. You
know I have delicate skin.
In fact, it went so well the first night that it may even be over before you read this. You know that I redeployed to a little town which is located about 400 miles northwest of my previous location. We are now located about 90 miles from the Iraqi border. We’re working at a small airfield compared to where we were working before. Working conditions are not bad. We brought everything we need to get by for two weeks. We’re working out of a Saudi prison. We have nice living quarters though. We have about 20 condominiums that are only about four years old. The condominiums all have large rooms with about six per room. Our mission dictates that we are close to the border since we’re now tasked with combat search and rescue for this mission. I will say one thing I was glad I knew when this was going to start. It really helps to be prepared for the unexpected. Our biggest concerns are the lack of security against terrorism since we arrived just two days ago with only mission essential people to do the job. The other is his chemical weapon threat which says he will use. We went operational on the afternoon of the engagement with Iraq. It was great being in the war room and seeing the mission carried out with such success. There were over 400 hundred sorties flown with everyone of them returning. We caught the Iraqis off guard or sleeping because they didn’t counterattack. This war should get easier by the day. I suspect we will control the skies within another 5 days. The tough part will be driving the Iraqis out of Kuwait if he doesn’t give up. In which case there will be a high loss of American’s lives. It is tough to take land when their dug is as deep as they are. They have miles to trenches and land mines which will be difficult to cross in addition to holding positions on top of many of the buildings.
We have been pretty busy working about 15 hours a day setting up this place and now comes the mission. Hopefully, Saddam will see the light and say that he had enough and leave Kuwait without a heavy loss of American lives.
I’m now on my third day of MREs since I left King Fahd, I’m really looking forward to a good meal back in the States. Really it’s all relative because when I make it back to King Fahd that will seem like a good meal to me. I’m doing just fine here everyone is looking out for each
other.
Is there any good news back there you care to enlighten me on. I’ll leave you with some good advice just in case you haven’t picked up a new wingman. Remember to keep your head low, weapon steady and always keep your weapon on automatic with your aim.

By the start of February 1991, the air war had slowed down enough to allow four MH-53Js and two HC-130s to return to KFIA from Al Jouf. Like Colonel Josey, Colonel Comer was against splitting up the Pave Lows. With the exception of three Pave Lows on CSAR standby at the FOLs, this meant most of AFSOCCENT was once again together at KFIA. Those who remained finally received their first hot meal at Al Jouf on 10 February 1991, as it wasn’t until then when a prime Readiness Intra-Base Services (RIBS) team arrived.112

Safe Flight Operations
On Colonel Comer’s first training flight during terminal operation, he bumped into a sand dune while in a dust out situation at the bottom of his approach. It turned out they drifted to the right, something that none of the scanners were able to see. They bumped into a sand dune on their right and the right auxiliary tank separated from the aircraft. Colonel Comer executed a “go around” and was able to get the helicopter flying again, but the auxiliary tank was missing on the right side. “It shocked my personal confidence,” said Colonel Comer, a veteran of the Mayaguez incident. “I was scared by it for myself and the other crews. We needed a cautious approach to flying out there.” The next day maintenance personnel got the auxiliary tank inside a helicopter and brought it back. Here again, the British aerospace contractors were able to help when they put a new layer of fiberglass and repaired the tank, which was back on the helicopter within 48 hours. Essentially, the accident cost no more than $300, a nominal price to pay for “No permanent harm and a valuable lesson learned about flight safety,” said Colonel Comer.113
The incident made the 20 SOS crews cautious as to how they were going to learn to fly in that environment. After the incident, each pilot and crew member was required to have at least one day flight practicing landings in the sand dunes before going out to try it at night. At that point, the 20 SOS also started developing new procedures on how to land using the hover symbology of a coupled approach all the way to the ground. Landings were made using a "heads down" maneuver. The pilots began searching for the ground with the wheels as they got into the dust-out situations. Different techniques were tried and used to define dust-out procedures. Some pilots decided they would use the infrared (IR) spotlight on the opposite side from the pilot flying in order to give them some illumination and ability to land the helicopter more safely. Other crews found another technique of doing a low approach and dropping chemical lights on the ground. Using these lights for an approach reference, the crews would then shoot an approach and landing using the chemical lights as a hover reference. Using the lights proved an effective way to get on the ground as time-after-time the 20 SOS found that they needed to use hover symbols in order to land. Because of that, the squadron suggested some new procedures on their final approach checklist or "gear down before landing" checklist. For instance, "Hover symbols should be called for so pilots can take the option of going to hover symbols, if needed, for landing," mentioned Colonel Comer. It wasn't until the beginning of October before the 20 SOS felt confident doing those landings out in that desert.\textsuperscript{114}

On 5 October 1990, the AFSOCCENT staff hosted a U.S. Army safety team investigating a series of Army helicopter flight incidents involving operations with NVGs in theater. They wanted to see how AFSOCCENT forces were able to achieve and maintain a better flight safety record in the exact same environment. The MH-53J Pave Lows routinely flew at 50 to 100 feet at night using FLIR, GPS, and TF/TA radar.
systems. The MH-60 Pave Hawks, not equipped with such systems, were restricted to 300 feet above the highest obstacles within one half mile on course during zero moon illumination and 200 feet with moon illumination. The common denominator associated with all Army helicopter incidents was the lack of FLIR on those aircraft involved. Flight operations in the AOR were still hazardous with FLIR, and navigation was more luck than skill without GPS. To expand combat employment options, the AFSOCCENT staff recommended these modifications be implemented on the arriving Pave Hawks as well.\textsuperscript{115}

On 7 October 1990, ten American servicemen were killed in three military aircraft crashes. Two United States Marine Corps (USMC) UH-1 helicopters crashed, killing eight Marines. An RF-4C, assigned to the Alabama Air National Guard, crashed in the southern Arabian peninsula, killing both crewmen. Two days later, the crash of an F-111 during a night training flight on the southern Arabian peninsula prompted General Horner to cancel training missions (from 1200 to 1700 Riyadh time) and directed units to conduct daily safety meetings. Up until that point, of the 32 U.S. servicemen who had died in accidents related to the deployment, 20 were USAF members. Since operations began on 7 August 1990, USAF had lost five aircraft: the F-111, RF-4C, an F-15E on 29 September 1990, an F-16 on 2 September 1990, and a C-5 on 28 August 1990. On 10 October 1990, CENTAF flew a reduced flying schedule to allow time for meetings emphasizing safety and training awareness. The following additional flight restrictions were established:\textsuperscript{116}

1. Minimum altitude of 1,000 feet above ground level (AGL) for low-level training. Exception—500 feet AGL for B-52s on established low-level training.

2. Minimum altitude of 5,000 feet AGL for air-to-air training.

3. No practice “gun jinking” from simulated air-to-air or surface-to-air threats.
During General Horner’s commander’s call on 13 October 1990, he noted the AC-130s as having one of the most demanding missions and yet were without a flight mishap. As a result, CENTAF exempted its Gunships, in addition to the Stratofortresses, from the 1,000 foot flight restriction. Aircraft assigned to SOCCENT continued to fly below 1,000 feet, particularly its MH-53Js, which routinely flew at 50 to 100 feet at night.117

**Intelligence**

By the end of September 1990, from a training perspective, AFSOCCENT was as ready as it was ever going to be. However, from an intelligence perspective, they were still in the “dark ages.” Since arrival, AFSOCCENT had submitted priority one requests for target imagery, but no useful products had yet been received. During the first part of October 1990, Lt Col Ellen K. Lewis, 1 SOW Chief of Intelligence (IN), and other members of her staff visited Riyadh to improve AFSOCCENT’s intelligence effort. The basic problem was lack of priority being given to AFSOCCENT by some of the people within the intelligence network at CENTCOM Headquarters. Consequently, rather than being satisfied within 24 to 48 hours, requests for various information weren’t getting handled at all. For example, on 29 November 1990, (exactly one week after the start of Volant Solos broadcasts), AFSOCCENT requested an assessment of Voice of America. Unfortunately, it took weeks before intelligence could even vaguely reply, and by then the 193 SOG (ANG) had pretty much made its own determination—effective. It took Colonel Lewis’ personal intervention with the CENTCOM J2 Collection Manager and the Assistant IN and Chief of Targets at CENTAF before finally receiving some positive feedback from CENTCOM J-2 intelligence staff.118

Some of the same problems with tactical intelligence occurred throughout Operations DESERT SHIELD and DESERT STORM that AFSOC
had seen before—the inability to get highly classified information to the shooters. For instance, AFSOCCENT could not obtain remotely piloted vehicle (RPV) film at SOCCENT, but being resourceful and knowing it existed, AFSOCCENT flew helicopters to the RPV unit and acquired the intelligence data for its customers. Finally, not all AFSOCCENT units, particularly the reserve-gained units, had acquired prior to DESERT SHIELD the Tactical Information Broadcast Service (TIBS), a mission planning system. Thus, units like the 71 SOS neither understood it nor possessed the training and ability to use it.\textsuperscript{119}

**Tactical Information Broadcast Service**

The TIBS provided timely and accurate intelligence support to AFSOCCENT missions throughout DESERT STORM. The TIBS provided near real time (30 seconds or less) multi-source (communications, electronic, radar) fused intelligence to the tactical consumer at the SECRET collateral level. During DESERT SHIELD/DESERT STORM, radar tracking from AWACS was data linked to the RC-135 Rivet Joint which fused the on board Communications Intelligence (COMINT)/Electronic Intelligence (ELINT) and broadcast the TIBS link via SATCOM. Air Force Special Operations Command Central had a TIBS receiver unit on the MC-130E Combat Talon operated by an Electronic Security Command (ESC) operator who provided the MC-130E with real time direct threat warning information. In addition to the unit on the MC-130, AFSOCCENT had a TIBS unit on the ground, which was used to provide direct threat warning to all other AFSOCCENT and JSOTF special operations aircraft. This was accomplished by flight following the ingressing/egressing SO aircraft and relaying threat warning via secure voice SATCOM or HF on the AFSOC air command network. The TIBS worked as advertised in providing fused intelligence support to both SOCCENT battle staff and AFSOC aircrews. Tactical Information Broadcast Service was operationally deployed de-
spite being a prototype system. Overall, reliability was good and data provided was excellent. In fact, AFSOC recommended to Air Force Logistics Command (AFLC), who worked to improve TIBS and related intelligence systems, to continue aggressively pursuing TIBS system upgrades and enhancements.\textsuperscript{120}

**Special Operations Contingency Communications Element**

The special operations contingency communications element (SOCCE) first deployed to Saudi Arabia on 11 August 1990. At the time, they were the northern most deployed communications element. Operating under bare base conditions at KFIA, SOCCE personnel established a command post with a multitude of communications including secure voice/data ultra high frequency (UHF) SATCOM, secure voice line of site (LOS), secure voice FM, secure voice HF, and STU-III and KY-68 secure telephones. Special operations contingency communications element personnel also established secure liaison communications at CENTAF Headquarters in Riyadh. This circuit was the conduit through which the ATO passed each day.\textsuperscript{121}

Key SOCCE personnel wrote the entire Annex K (Communications) for the AFSOCCENT portion of the DESERT SHIELD/DESERT STORM war plan. This very complex plan detailed all air-to-air, air-to-ground, and ground-to-ground communication networks, call signs, and frequencies for all AFSOCCENT aircraft and ground forces. In addition, SOCCE personnel coordinated all shipping and receipting of communications security (COMSEC) material for AFSOCCENT.\textsuperscript{122}

Operating under even barer conditions, SOCCE established an alternate command post at Al Jouf, which had the same complete communications capabilities as the primary location of KFIA. In addition, SOCCE personnel deployed to all three FOLs and provided communications for CSAR alert aircraft. Shortly after landing at Ar’ar, SOCCE person-
nel came under intense artillery fire. Due to the artillery fire the helicopters departed the area leaving SOCCE personnel scrambling for shelter. Upon arriving at Rafha, SOCCE personnel were issued AT-4 anti-tank rockets, Claymore anti-personnel mines, and fragmentation grenades. These items were necessary due to the FOL being only nine miles from enemy forces. While at Rafha, SOCCE personnel prepared to escape and evade (E&E) as approximately 90 Iraqi tanks crossed the border and headed south. The enemy tanks were just 15 miles away when finally destroyed by A-10 aircraft.\textsuperscript{123}

Medical Problems

Throughout Operation DESERT SHIELD, AFSOCCENT experienced numerous heat-related problems among its personnel. The major problems were dehydration caused from people not forcing themselves to drink enough water; foot immersion from sweat accumulated in combat boots; and bouts of gastroenteritis because of the different standards of food preparation and hygiene used in Saudi Arabia.\textsuperscript{124}

Doctor (Dr.) Mark D. Cunningham, 20 SOS flight surgeon, and MSgt Roscoe M. (Rocky) Rockwell, medical technician, began patrolling the flight line looking for signs of dehydration and exhaustion. One by one, Dr. Cunningham confined personnel to quarters and put intravenous (IV) transfusions in their arms to rehydrate them as each body became less and less functional. The heat, which reached a daytime high of 130 degrees Fahrenheit (F) and a nighttime low of only 93 degrees F, was more than maintenance personnel could handle and more than most people could understand as far as what it could do to them physically. Chief Master Sergeant Labit for instance, began to limp when he stayed in his boots and kept working all night and all day. Doctor Cunningham diagnosed him as having immersion foot problems from all the sweat in his boots which made his feet so wet that the calluses on his feet became
completely separated and tore off. He bled from his legs and in his boots. Maintenance personnel experienced lots of medical problems from the heat that they didn’t expect, particularly among those who had to work with their gloves on to touch the metal of the airplanes. After all, having left Florida in August, most of them thought they were accustomed to the heat, but the heat of Saudi Arabia was a shock—it was exhausting. Inside the helicopters, temperatures reached about 170 degrees F. Anytime operators needed to fly in the daytime, maintainers found it too hot to touch the metal parts of the aircraft.\textsuperscript{125}

Another medical problem identified at the end of October 1990 was the inability of AFSCC to track the status of its people once medically evacuated for follow-on care outside the AOR. It seemed responsibility fell upon the individual to contact the command post to update their status after arrival. To improve the reporting system, the clinic established a patient log for people hospitalized. This required daily contact with hospitals to get a count. Colonel Gray quickly dropped the suggestion that patients medically evacuated be given a self-addressed envelope with a letter to be filled out once they reached the treatment center and be mailed to AFSCC. He said, “There must be a better way.” Unfortunately, a solution was never found for this problem of patient accountability.\textsuperscript{126}

It wasn’t until 7 November 1990 that AFSCC made its first run for medical supplies to Dammam, Saudi Arabia. By mid-November 1990, the clinic renewed flu vaccines and Gama Globulin shots, due every 60 days in environments like the Middle East. Fortunately for the 39 SOW, the cold weather didn’t bring along medical problems the heat brought to the 1 SOW.\textsuperscript{127}

**Scud Alerts**

Unique to this war and theater of operations was the exposure of
all personnel to not only the unusually long hours, but the imminent threat of possible chemical attack from Iraqi scud missiles. Sleepless nights and frequent trips to the bunkers were a common and unforgettable experience shared by all. On 2 December 1990, AFSOCCENT encountered its first scud launch alert around 0800. Alarm condition red was sounded as AFSOCCENT implemented established procedures according to the newly developed Disaster Preparedness Plan. The alert showed that the plan needed some revisions in communications and notification actions. The notification process worked well within the headquarters (tower area) and on the flight line (maintenance area), but not all sections within the MABCO Compound and dining hall received notification in a timely manner. Necessary changes were immediately implemented. As it turned out, Iraqi scud missiles were indeed launched but remained within Iraqi borders as part of a test. What it did do was test AFSOCCENT response procedures and served as a reminder of the potential Iraqi threat just a few minutes away.\textsuperscript{128}

On 17 January 1991, at 0500, just two hours after H-hour, AFSOCCENT was alerted for possible scud launch. Chemical warfare gear was donned and personnel headed for shelters. However, it was a false alarm. After the first week of the war, the situation “quieted down” considerably. Air Force Special Operations Command Central went from experiencing as many as four “condition red” alerts in one day to one about every other day.\textsuperscript{129}

**Logistics Support**

Although AFSOCCENT represented the newest Air Force MAJCOM, they quickly established a reputation for having the best logistical support system of any command participating in DESERT SHIELD and DESERT STORM. From deployment in August 1990 through the build up in September 1990, the average shipping time only slipped from 3-5 days to 5-
7 days. During the same period TAC averaged 10 days.\textsuperscript{130}

However, maintenance and supply personnel still faced many problems. Yet for every problem encountered, logistics personnel were somehow able to find a solution through ingenuity, hard work, and compatible supplies. In September 1990, to reduce excessive interior flight deck temperatures maintenance personnel installed light weight covers over the exterior windows and used MA-3A air conditioners to pre-cool aircraft. Also, aerospace ground equipment (AGE) units consumed large amounts of oil due to the intense heat. As a solution, AGE personnel switched to a heavier weight oil (50W) and increased lubrication cycles. Another impact on flight line operations affecting all aircraft involved their engines and armament. The desert conditions required frequent washing of engines, cleaning of weapons, and covering when not in use.\textsuperscript{131}

Within rotary wing aircraft, the extremely high temperatures meant an additional two and one half hours to complete MH-53 build up. Maintenance personnel began performing all major maintenance in the evening hours whenever possible. Also quickly discovered, flying in dust and sand adversely affected the operation of the central display unit (CDU) of the enhanced navigation system (ENS). Maintenance personnel began sealing the indicator screen with Plexiglas and covered all push buttons with plastic. Another problem involved the fuel quality test (GTF-6) overheating. As a result maintenance personnel began shutting down the GTF-6 tester at 20-minute intervals to cool down the unit. In addition the signal data converter (SDC) air filter was not keeping out the sand as it was designed to. As a result maintenance personnel replaced the metal screen with a scrub pad sized to fit the component. More filter problems on helicopters involved the computer air filter on the radar system, which again was not keeping sand out of the component. Maintenance personnel again solved the problem by installing mosquito netting around all air vents to serve as an additional filter. Finally, the 655 SOMS adjusted the
firing sway of the M-134 mini-gun on the MH-60Gs to prevent it from hitting the aircraft's tail rotor.\textsuperscript{132}

In October 1990, technical representatives from General Electric (GE) initiated a tear-down process on all AFSOCCENT helicopter engines in hopes of improving power output. All MH-53s at DESERT SHIELD were converted to T64-100 engines versus the 700 engines. The problem was later contracted out to Dyncorp in Saudi Arabia with marginal results. The desert environment of wind, heat, and fine sand took its toll on other helicopter parts as the deployment grew in length. Also in October 1990, the AFSOCCENT staff identified FLIR dispensers (ALK-40) as becoming a problem. The command began the operation with several per aircraft but by mid-October 1990 averaged less than five per aircraft, one less than the minimum six required. The sand was simply tearing up the mechanical cards inside the dispenser.\textsuperscript{133}

Likewise, the deployment began to take its toll on fixed wing aircraft as well. For instance, aircraft were unable to back out of parking spots during day operations due to high temperatures because back-taxing of aircraft created excessive engine oil which caused the engines to over heat. Thus, maintenance personnel towed aircraft into position when required. At certain times AFSOCCENT had no spare propellers or auxiliary power units (APU). Specifically, the AC-130s were hampered by a lack of fire control inverters and signal data processors. In some instances the parts arrived into Dhahran, but when AFSOCCENT sent people to pick them up they could not be found.\textsuperscript{134}

By 15 October 1990, AFSOCCENT began experiencing problems with the Watkins Johnson 1840 antenna on its MC-130 Combat Talon force. Each time the 8 SOS aircraft landed on dirt strips the antenna was damaged. Since these were an expensive and limited supply item, AFSOCCENT needed a fix and requested immediate action take place to alleviate the problem. If the 8 SOS went into combat in its present con-
dition, the MC-130 Combat Talon would be unable to use that antenna after the first landing. In the high threat area AFSOCCENT found themselves in, this was unacceptable.\textsuperscript{135}

On 31 October 1990, maintenance conducted its first isochronal (ISO) inspection at KFIA on an MH-53J (tail number 0356). Seven days later, Sikorsky Aircraft addressed the MH-53 main and tail rotor blades’ sand erosion problem while AFSOCCENT worked the MH-60 door problems. The latter was unsuccessully resolved before combat operations began. However, a specialized "topping" developed and placed on the rotor blades solved the sand erosion problem.\textsuperscript{136}

On 26 November 1990, AFSOCCENT procured a cleaning compound but didn’t start washing its own aircraft (the first being a HC-130) until 5 December 1990 once additional supplies were on hand. On 30 November 1990, technical representatives from Rhein-Main AB, Germany, completed FLIR (Q18) modifications on the MH-53Js. In early December 1990, AFSOCCENT maintenance, in conjunction with GE representatives, tried to devise methods to break down and clean MH-60 T-700 engines that had exhibited low power symptoms. Operating in a desert environment had taken its toll on these older engines. In order to generate maximum power they had to be constantly cared for and cleaned—a very costly and time consuming process. According to U.S. Army and GE, research data indicated the T-700 engine life was 125 hours before change at KFIA.\textsuperscript{137}

From 12-13 December 1990, AFSOCCENT encountered problems with a certain MC-130 (tail number 0551) as the Talon’s engines continually overheated. Oil changes, propeller changes, and gear adjustments were all performed before correcting the situation. The event symbolized AFSOCCENT’s overall state of readiness at the time—weakened, yet still determined. Air Force Special Operations Command Central had a requirement for six propellers and had zero on-hand; power turbine mod-
ules desperately needed cleaning; sand and dust continued its relentless attack on helicopter parts; special tactics operations were critically short of batteries; and additional allocations were needed for 40mm training ammunition. These were the enemies facing AF SOCCENT at year’s end with no end in sight.\textsuperscript{138}

As the new year began, Colonel Gnader’s main objective was to “robust” AF SOCCENT’s WRSK inventory. By 5 January 1991, AF SOCCENT could be greatly appreciative of the expeditious processing and filling of requests for additional engines, parts, supplies, and equipment that improved intermediate level capability. On 7 January 1991, last minute engine parts were consolidated and shipped on an AC-130 swap-out between KFIA and Hurlburt Field, Florida. On 15 January 1991, during an AF SOCCENT staff changeover briefing, logistics support problems were obviously a thing of the past as slides depicted all aircraft mission capable and on alert. It was an impressive sight.\textsuperscript{139}

Once the war ended, the nightmare of maintaining aircraft did not end. For example, the 39 SOW experienced a vibration problem in one of their Pave Lows, which turned out to be a severe crack in the structural member where the tail broke and swung to the side. When AF SOC sent the aircraft back to get repaired, depot took a look and decided to inspect all the MH-53J helicopters. By that time, the 39 SOW had deployed back to Diyarbakir, Turkey, in support of Operation PROVIDE COMFORT I. In September 1991, the MH-60G Pave Hawks of the 55 SOS replaced the MH-53J Pave Lows of the 21 SOS in order to conduct the inspection. As of 31 December 1991, the 55 SOS was still there supporting PROVIDE COMFORT II.\textsuperscript{140}

Another example of the nightmare of maintaining aircraft following the war culminated during the 18-20 June 1991 Air Force Corrosion Conference which highlighted serious potential corrosion problems on helicopters returning from Saudi Arabia because of highly abrasive dust
covering the aircraft and settling inside them. The problem stemmed from inadequate cleaning and preparation of the aircraft prior to painting over desert camouflage scheme with European one scheme. In July 1991, the 39 SOW acquired two MH-53Js (serial numbers 69-5789 and 69-5797) that were operated in Saudi Arabia for an extended period. These aircraft had the corrosive sand sealed between painted surfaces, hidden inaccessible seams and crevices, and in system components. Because the problem had long lasting consequences on the structural integrity of all H-53s operated in Saudi Arabia, timely action was taken to treat the problem.¹⁴¹

**Personnel, Welfare, and Morale**

On 26 September 1990, AFSCCNET held its first, and what was to be its last, real rotation of personnel. Seventy-seven people who endured since all the way back to those days in the schoolhouse, gave way to 75 eagerly awaiting, fresh new faces. On 7 October 1990, the SOCCENT staff forwarded its official rotation policy recommendations to CENTCOM for approval. The bottom line was to maintain force readiness in theater and work rotation plans with service components. By mid-November 1990, continuous problems were noted in terms of rotation and what became known as the dreaded “R-word.” General Schwarzkopf rejected any rotation policy on the basis that he would rather have an experienced “A” team, though morale and fatigue were slightly down, than an inexperienced “B” team. Throughout Operation DESERT SHIELD, Colonel Gray felt morale within the troops remained high. This could partly be attributed to lessons learned during Operation JUST CAUSE when spouses were not kept informed. However, during Operation DESERT SHIELD, Maj Gen Thomas E. Eggers, AFSCC Commander, insured spouses were kept informed back at home. “When the deployed troops knew their families were being taken care of, it reflected in a boost in morale.”¹⁴²
Nevertheless, trading out crew members became a real problem. For example, Colonel Comer felt he needed the entire 20 SOS over there at one time or another to share part of the hardship and experience. However, AFSOCCENT was forbidden to trade people back and forth. The only other swaps within AFSOCCENT occurred when someone went home for emergency leave or significant family problems—there were precious few of those. After the end of September 1990 trade-out, AFSOCCENT had a stagnant group for the next two months. In order to cope with living conditions, many recreational areas were built within the MABCO Compound such as a horseshoe pit, bar-b-que pit, basketball court, volleyball court, and a pool (built with sand bags). A trailer dedicated as a “Rec Center” included a billiards room, pingpong room, and television (TV)/video cassette recorder (VCR) room. Morale for operators totally depended on how much they flew and how much they were able to avoid boredom when they weren’t flying. Most important were the flights, along with having a TV, VCR, and snack bar.¹⁴³

On 9 November 1990, Colonel Gray departed for Hurlburt Field, Florida, to attend an AFSOC Commando Rally ’90 Commanders’ Conference. Colonel Gary C. Vycital, 1 SOW Vice Commander, replaced him. Two and a half weeks later on 17 November 1990 AFSOCCENT experienced its first “day off” since arriving in theater and according to Colonel Vycital, “A well deserved down day following the large SAREX. Aircraft and personnel were regenerated.” On 18 November 1990, Colonel Orrell departed KFIA for Hurlburt Field, Florida, but would later return before the “storm.” Lieutenant Colonel John G. Taylor III replaced him.¹⁴⁴

From 12 noon on 21 November 1990 through 12 noon on 23 November 1990, AFSOCCENT operated an alert schedule with only a skeleton staff in light of the Thanksgiving holiday on 22 November 1990. The relaxation proved to be beneficial as the contract dining hall served traditional turkey, dressing, gravy, and pumpkin pie. Chaplain (Major)
Wayne Simmons (pictured in the photo gallery following narrative) worked hard to fill the day with festivities. He even saw to it that the dining hall was decorated, although some banners read “Happy Birthday.” It didn’t matter to the men and women of AFSoCCENT, for everyone appreciated and enjoyed his efforts.  

At the beginning of December 1990, AFSoCCENT was finally cleared to perform some trade-outs of people and flying squadrons were able to reduce the number of crews. For example, the 20 SOS went down to 10 crews from 11. They also kept an extra pilot, engineer, and gunner in case anyone got sick or duty not involving flying (DNIF) for medical reasons. Thus, AFSoCCENT was able to get a few people home for Christmas. Their first trade-out occurred on 7 December 1990 as generally each flying squadron swapped out a crew each week for the next five weeks. Colonel Comer gave his thoughts about the rotation,  

In my view, that was very good for the squadron for a time we started playing a game of musical chairs. If the war did start or if there was to be war, each crew in the 20th would have an equal chance to be the ones that fought it or spared having to fight it. Whoever was over there in position when it came down to a fight would be the people who fought the war, and whoever was in the states would be ready to deploy and become replacements, or augmenting forces as need be. Everyone had a chance to be there. If we didn’t go to war and DESERT SHIELD became just a long, unpleasant TDY, then no one group of guys would have to do all of it and another group of the squadron have it easier back in the States. Whatever happened I felt strongly that I had to come out of it with one squadron, sharing the training, the hardship, and the combat time.  

Any Time, Any Place, But When and Where?  

On 8 December 1990, Colonel Vycital visited the AFSoCCENT contingent at KKMC, home of the Army’s 160 SOAR. He received a tour of the facilities and a briefing on operational procedures. Colonel Vycital
left impressed saying, “Lieutenant Colonel (Dalle) Dailey and his folks had their priorities straight and their stuff together.”

By 22 December 1990, AFSCCEN'T had all its aircraft on alert. Similar to the Thanksgiving duty schedule, AFSCCEN'T relaxed over the Christmas and New Year holidays. Colonel Gray returned just in time for a Christmas Eve party, which included the contract dining hall hosting a barbecue within the confines of the MABCO Compound and a variety show with performances from troops located at KFIA.

On 12 January 1991, AFSCCEN'T received orders from SOCCEN'T to move forward to the FOLs for the war battle stations. For two days AFSCCEN'T packed to go to the base where they would fight the war, Al Jouf, a small airfield in western Saudi Arabia, and a six-hour flight by helicopter from KFIA. After organizing air refuelings, the movement on 14 January 1991 was noteworthy in that the crews packed and left in extremely bad weather. The tents were flooded. “We just figured the water will drain, and it will dry by the time we get back; we hope. We threw our stuff we were leaving behind on top of the bunks, so it would be out of the water, and we left,” said Colonel Comer. Al Jouf served as the FOL for two HC-130s, all eight MH-53Js, and four MH-60Gs as all arrived serviceable. On 15 August 1990, the people forward deployed, erected a tent to serve as an AFSCOC shelter, established communications, ensured security, and configured the aircraft. They also planned some local flights for the following day to plot a dispersal location and to set and confirm auto-rotational revolutions per minute (RPM). Colonel Orrell decided to set the RPM three percent lower than called for by the charts to ensure collective authority and give AFSCCEN'T some insurance on climb gradients.

Air Force Special Operations Command Central expected two percent losses of the fighters going into Iraq. Thus, up to 20 shoot-downs could happen each day, meaning AFSCCEN'T would probably
spend a lot of time flying around in hostile territory, "Searching for the
good guys and accidentally flying over bad guys," said Colonel Comer.
Since for every 50 Iraqi soldiers there was expected to be an SA-7 or SA-
14, AFSOCCENT anticipated some real danger and possible losses of MH-
53Js. The crews scheduled to go to Rafha to stand rescue alert. Captain
Timothy R. Minish and Capt Thomas J. Trask really were faced with the
greatest uncertainty. The four crews for the attack on the radar sites
would not face such uncertainty until they completed that mission and
took up an alert posture at Ar'ar.\textsuperscript{150}

At 0800 on 16 January 1991, the UN deadline for Iraq to with-
draw from Kuwait came and passed with Iraq not moving. It was a sad
moment, but one AFSOCCENT was ready for. During the 1930 changeover
brief, Colonel Gray gave the order to begin taking the "P" pills. Silence
then filled the air as people began recollecting an August day at Hurlburt
Field, Florida, when going through the mobility processing line. When
they were issued their chemical warfare gear, they were told, "only take
these pills by order of the commander," and now it was really happening.
The pills were designed to coat the nerves so if introduced to chemical
agents the atropine and two-pam-chloride injectors would take more of
an immediate affect. Eight and one half hours later, at 0300 (H-
hour), on 17 January 1991, the war began. Operation DESERT SHIELD
was over, Operation DESERT STORM had begun. More than 400 combat
aircraft hit targets in Iraq in the opening hours of the air war. The map on
the next page indicates the major targets.\textsuperscript{151}

\textbf{Combat Operations}

\textbf{EAGER ANVIL}

As described earlier, the plan for INSTANT THUNDER was so
secret that it was two weeks before Colonel Gray was read into the plan
at CENTAF and told the general concept for AFSOCCENT. The 5th Special
Forces Group (SFG) was initially given the job of destroying three radar sites on the northwest border of Saudi Arabia with Iraq in order to open a hole in the radar coverage, which would allow the fighters to bomb many of the strategic targets in Iraq. The 3d Battalion of the 160 SOAR was given the job of retrieving those soldiers after they destroyed the three radar sites. The 20 SOS was given the job of CSAR for any of those strike aircraft going into Iraq, and any of the special forces ground personnel if they became hurt in combat or their exfil helos got shot down. The three radar sites were all within one mile of the border. Intensive planning for that operation began 15 September 1990. A week later, the 5 SFG briefed Colonel Johnson, who in turn briefed General Schwarzkopf, on their plans for the mission. Some things that they did not have that they needed were a man-pack GPS to navigate accurately on the ground. Such equipment wasn’t readily available at that time. They also needed 72 hours prior to the hit to be across the border in order to remain concealed in that kind of land environment. They would have to dig holes, essentially, and live underground all day. They would have to maneuver at night and then dig a hole at night before the sun rose again, and they needed two or three days of movement after crossing the border in order to execute the mission. The entire INSTANT THUNDER plan had already been briefed up one entire chain to the NCA and General Schwarzkopf had signed up to being able to execute on a 60-hour string.\textsuperscript{152}

Colonel Johnson’s staff had sent out a message to the entire command informing them that without the many portable GPS sets, some extra radios, and vehicles, they would not be able to execute their portion. The message snowballed up to General Schwarzkopf who went “ballistic” having come to the realization that he was not ready to go in 60 hours—something he had told the President he could do. After a midnight session between General Schwarzkopf, Colonel Johnson, and others, the radar site mission was then scratched from the plan. When the
CENTAF staff was briefed of the cancellation, Captain O'Boyle believed that nearly the same degree of surprise and destruction could be accomplished with Pave Lows using 50-caliber machine guns with armor piercing incendiary (API). He first consulted with Colonel Orrell, who was acting AFSOCCENT commander at the time, and then advised CENTAF who then briefed the idea to General Schwarzkopf. The commander in chief then adopted the theory until the special forces could be equipped and trained.153

At the same time, however, the Iraqis began moving sites back 20 to 40 miles from the border. This would require more time on the ground and all but eliminated the special forces ground assault from the plan. General Schwarzkopf said such time was not available and asked "Who has GPS to do the mission right away?" Colonel Johnson replied, "The only aircraft with GPS are the Pave Lows of the 20 SOS." General Schwarzkopf then asked, "Is the 20 SOS able to do it with its helicopters?" Colonel Johnson replied, "Yes." Then informed of the mission, Colonel Orrell called in Colonel Comer and told him of the revised mission. Colonel Comer expressed a great deal of concern. He felt that such a night assault would endanger his crews but was possible under ocher of the no-moon blackness. The biggest problem to Colonel Comer was that there was little chance that the 20 SOS could knock out the communications to prevent even a phone call from getting out of those three sites with only side firing and ramp 50-caliber machine guns. The Iraqis were sure to hear the Pave Lows before they could even open fire. Colonel Orrell then suggested to include AH-64 Apache helicopters from the U.S. Army in order to bring firepower that would be able to destroy those sites as expeditiously as possible. Colonel Gray, who had now arrived, talked to Colonel Johnson about the suggestion and received permission at that time to invite, Colonel Cody, an Apache Battalion Commander, to talk about the mission and to see about the viability of pairing up Pave Lows
and Apaches to perform it.\textsuperscript{154}

The first flight rehearsals for the Apache mission took place the second week of October 1990. After that, the 20 SOS rehearsed once a week for the next four weeks. They worked formation procedures, how they were going to signal each other, how to do "communications out," and they married up their secure communications in order to talk to each of them on secure fox mike, "HAVE QUICK" uniform, and they got to know each other. Colonels Cody and Comer became good friends. They learned to trust each other and became close fairly quickly, thinking that the end of October or the beginning of November 1990 was the most likely time to start the war.\textsuperscript{155}

In mid-October 1990, Colonels Cody and Comer went to RSAF offices in Dhahran to receive permission to shoot with the Apaches on the King Fahd range. This included the use of missiles (costing $42,000 a piece). General Schwarzkopf at CENTCOM approved the firing of six missiles in order to practice this mission. Sergeant Grieshop went over to the range with the Saudis and picked out specific targets, took pictures of them, and showed them to the Apache pilots. It turned out that Colonels Cody and Comer were both third generation Arabs, told this to the Saudis, and learned they were both of Lebanese descent. Expecting a big argument, instead "We became good buddies with the Saudis and got a lot of tea and snacks...As it turned out, we were all patting each other on the back, shaking hands, and they signed us up to shoot on the range with anything that we want, as long as Dick Cody or I were in the formation," said Colonel Comer.\textsuperscript{156}

Also in mid-October 1990, Intelligence informed AFSOCCENT that the radar sites had again moved, this time 23 miles away from the border and inside Iraq. The relocation deep inside Iraq made the mission a bit more difficult. Captain Minish had to redo the plotting of coordinates and routes, but the good news was the Iraqis had consolidated the three sites
into two. The plan had been to hit the sites with three formations of three Apaches and one Pave Low each. Since the Iraqis went down from three sites to two, AFSOCCENT was able to use four Pave Lows and have a mission lead and a mission lead alternate in each of the formations. Instead of having nine Apaches and no spares in three formations with three each, AFSOCCENT now put four Apaches in each formation and had one spare in case any of the Apaches broke and were unable to execute the mission.  

During the last week in October 1990, Colonel Gray briefed General Schwarzkopf of the first mission in plan “EAGER ANVIL” and guaranteed 100 percent success. Four AFSOCCENT MH-53Js would lead the way for the Army’s Apache attack helicopters and blast several Soviet designed radar units including the “Spoon Rest” mobile early warning radar, the “Flat Face” early warning and target acquisition radar, and the “Squat Eye” search and target acquisition radar. The attack would require split second timing. The raid was so vital to the opening of DESERT STORM’s air campaign that the USCINCENT asked, “Colonel, are you going to guarantee me 100 percent success on this mission?” “Yes, sir,” Colonel Gray answered. “Then you get to start the war,” General Schwarzkopf replied. Colonel Comer was a little “flabbergasted” that Colonel Gray was so sure the 20 SOS could do it, and “I intended to keep from making a liar out of him...I vowed to myself that this mission had to be perfect.”

There were four pilots that Colonel Comer told would have to stay—Majors Benjamin F. Pulsifer and Robert G. (Bob) Leonik and Captains Corby Martin and Mike Kingsley. They had been the four crews in the two tents that Colonel Comer gave the mission to right when AFSOCCENT first got the plan and began getting it ready. They worked the mission from the end of September 1990 until they flew it on 16 January 1991. They had an excellent working relationship and were
good friends with many of the Apache pilots. They were professionals. "This was the best joint helicopter flying operation I've ever seen," said Colonel Comer. There was no jealousy between any one of the people over aircraft. The Apache was obviously made to shoot and destroy a target, and the Pave Low was made to take shooters to a target. "Our job was to get the shooters to the target on time. And the Apache's job was to kill the enemy," continued Colonel Comer. There was no mixing as to whom had what job. "The guys were looking forward to this mission going. We were eager for the mission to fly," concluded Colonel Comer.\textsuperscript{159}

The last Apache mission rehearsal flew just before the first week of January 1991 and everything had gone just perfectly. The team had two formations arrive at targets, geographically separated at exactly the same moment in position to fire. Although neither of the Apaches were on the range, and nobody did any live-fire, they were sure that within 30 seconds time both radar sites would go down. "We were now able to put out the communications of both radar sites simultaneously to allow the air war to begin successfully," said Colonel Comer.\textsuperscript{160}

The people at Al Jouf received the order to begin the air war at about 1400 on 16 January 1991. Colonel Comer remembers the call:\textsuperscript{161} I was at the AFSOC with Colonel Orrell who was the commanding officer at Al Jouf. He got a secure phone call from Colonel Gray at King Fahd. Colonel Orrell told me that the war was to begin that night and H-hour was set for 0300 local time. I asked him if he meant that we should be prepared to go at that time or if we were really going. He assured me that we were going in that night, no just preparing a possibility. I know it was a dumb question, but I found it hard to believe the war was really going to happen.

Time-over target (TOT) was set for 22 minutes prior to H-hour. Colonel Comer then did some quick calculations and advised Colonel Orrell
that the briefing for the crews should be set for 2230, and that takeoff would need to occur around 0100. The jet fighters could then spill through the hole in the radar coverage to hit the military targets in north-western Iraq by 0300. Colonel Orrell went across the base to talk to Colonel Cody who was working with his crews and airplanes to make sure everything was ready. A day earlier, one of the Apaches needed a generator, which came in on the morning of 16 January 1991 making all aircraft ready by the start. Colonel Cody approached Colonel Orrell’s car as he told him the time of H-hour. “Shit Hot,” Colonel Cody replied as they arranged for a 2130 briefing that night for all of the crews at the 20 SOS living quarters, otherwise known as the “Hootch.” Meanwhile, Colonel Comer arranged a squadron meeting at 1600. At that meeting he informed everyone about the mission, told them to write a letter, get a nap, and be dressed and ready at 2100 for another short meeting. “I don’t think many guys slept very much. It was pretty exciting, anticipating going to war that night.” The crews were quiet about the news but obviously excited and apprehensive. They knew they were ready, that the war was probably the only way home, but they also didn’t know how much resistance all this would encounter.162

The 3d Battalion of the 160 SOAR was then briefed and would provide the FARRP. There were several options on how to get the Apaches back out of Iraq if they weren’t able to carry enough gas for the entire mission. As originally planned the Apaches were going to carry so many munitions that they would not have had enough gas to get back across the border to a field called Ar’ar. With the amount of fuel they were able to carry, the Apaches were stretching it to the limit. The 160 SOAR had CH-47 Chinooks with FARRP equipment and could refuel the Apaches if necessary. Staff Sergeant Jeffery R. Morrison and MSgt Richard G. (Dick) Pinkowski, from AFSOCCENT, had engineered a set up to use dump tubes and some fire hoses with some nozzles procured off the local economy to
dump fuel and refuel the Apaches. This had been tested and was far from a certifiable safe operation, but if AFSOCCENT had to use it the helicopters were configured. A lot of refueling equipment was set up at Ar’ar so the Apaches could be refueled and get moving as soon as they landed. Colonel Cody, in trying to prepare for the mission, had restructured his helicopter loads. He could carry an external auxiliary fuel tank on each Apache in place of one of the racks of missiles. In so doing, he wrote new procedures on how to configure and load his helicopters so they had enough fuel to execute the mission. Still, each tank was new to his helicopter and hopefully they would all work and feed fuel. If any of them were unable to feed fuel, Colonel Cody was going to have an Apache in trouble. All the backup plans were in place to get them out of the desert if anybody got low on fuel for any reason.  

As it turned out, the tanks worked and all of the Apaches and Pave Lows flew “really quite well” on the mission. It went perfectly that night. At the 2130 briefing the Apache and Pave Low team, designated “Task Force Normandy,” stood there and said, “Here we go.” While walking out towards the aircraft, the crews did not need to tell the maintenance personnel for they knew their job was to start the war. Remember that moment, Colonel Comer said,  

There wasn’t much to say, except we were the right people for the job and we knew we had gotten ready for the job properly. We knew we were poised on the point of history of starting a pretty significant war for our country. We had nothing left to do but go fly the mission. It went exactly as planned.

At 0212 Task Force Normandy first crossed the border into Iraq. Captain Corby Martin’s flight had the western most target. Captain Kingsley with Major Leonik as the second helicopter on his wing led the eastern target. Colonel Comer flew with Major Leonik as copilot. Major Pulsifer and his crew flew as number two behind Captain Martin. The Battalion
Commander, Colonel Cody, flew the trail helicopter in the first formation led by Captain Kingsley. The two formations zigzagged around Bedouin camps to avoid being heard, ducked into wadis (desert gulches) to fly under the radar coverage, and weaved through a maze of Iraqi observation posts. A pitch-black night the Pave Low crews relied totally on the computers and sensors in their cockpit, flying no more than 50 feet over the desert. The heat, however, played havoc with communications. Major Leonik found that peering through his NVGs was like “looking through a toilet-tube roll with a green shade on it.” Sand in the air obscured the ground from the sky. All the training during DESERT SHIELD was now paying dividends.165

The Pave Lows dropped glowing chemical sticks to the ground to position the Apaches. Suddenly, an Iraqi sentry at the main ground control center spotted the helicopters and turned to run toward the bunker. He never made it. An AGM-114 Hellfire laser guided missile from an Apache ripped the compound just as he opened the door. At 0238 the site was struck simultaneously by the fired missiles and Hydra 70 rockets. Both communications vans and their early warning radars were silenced instantaneously. Within five seconds, the second radar station also vanished in a fireball. Within four minutes both sites were completely destroyed. Visual contact of the target, with one percent moon illumination, was achieved at 12 kilometers. Target identification was made at seven kilometers. Engagement took place at ranges of three to six kilometers. “They did it!” shouted Major Leonik. “I felt like I was on the 50 yard line of a football game, yelling ‘Go! Go! Go!’” recalled Major Leonik.166

Captain Martin was engaged by two SA-7 missiles inside Saudi Arabian airspace while en route back from the targets. The SA-7s looked to be accurate. Sergeants Berrett Harrison and Terry Null, crew members on the Pave Low, made the calls for the helicopter to break and to jettison some flares to decoy the missiles. The flares did not seem to be
effective, but the jinking of the helicopter plus the IRCMs and the ALQ-157s seemed to make the missiles miss the helicopter. Everyone returned safely—though a little bit frightened by the experience. Captain Kingley’s formation went to Ar’ar to refuel and stood by for SAR operations while Captain Martin’s formation refueled in the air and returned back to Al Jurf.167

As Colonel Gray promised, EAGER ANVIL was a 100 percent success. Because of the air commandos’ huge success in piercing the enemy radar screen, the initial air assault of Operation DESERT STORM was a big success as well. Going through undetected, hundreds of allied planes dropped thousands of bombs on Baghdad before the Iraqis knew what hit them. The success of AFSOCCENT during EAGER ANVIL made its primary wartime mission—CSAR—that much easier as aircraft survival was exceptional with only one aircraft, a United States Navy (USN) F/A-18, reported lost. Air Force Special Operations Command Central didn’t go untouched though during the first night of the war. While in flight from Rafha to Ar’ar, a SA-7 missile was fired at a CH-47 of the 160 SOAR by Iraqis disguised as Bedouins. In the process of trying to avoid the threat the aircraft made a rapid descent which took out its landing gear upon reaching the ground. The crew was still able to get back up into the air and back to Rafha where a combat control team from the 1723 STSQ had laid out mattresses for them to land on so as to not damage the aircraft any further. The crew recovered at Rafha with no injuries, although the aircraft (tail number 152) never saw action again for the remainder of the war. Thus, the first day of the war was nothing short of “high adventure,” said Colonel Gray. Special operations forces aircraft later flew damage assessment missions against Iraqi forces.168

Combat Search and Rescue

Once the war began on 17 January 1991, AFSOCCENT began to
take a more active approach to its CSAR role. Rather than sit on alert, AFSOCCENT launched a CSAR package to an orbit point south of the Iraqi border but convenient to pre-planned routes into Iraq. The airborne response provided a rapid recovery capability to cover the large air strike packages. Aircraft returned to the FOLs upon completion of the strike and regenerated. According to Colonel Gray, by the end of the second day "Multinational Air Forces are doing such a superb job that AFSOCCENT is getting bored. Let's hope it stays that way."  

Unfortunately, things didn't. On 19 January 1991, AFSOCCENT responded to its first CSAR opportunity and even more unfortunate, it was unsuccessful. During the first save opportunity AFSOCCENT launched two MH-53s out of Rafha and searched for a downed F-16 pilot just west of Talil Airfield. Aircrews searched for about 30 minutes, which was probably a lot longer than they should have, because beneath them were Iraqis crawling all around with search lights. The helicopters were causing quite a stir close to this big airfield in Central Iraq. Although determined to save the survivor crews they were never able to establish voice contact before Colonel Gray ordered them to depart the area after Iraqi forces spotted the helicopters. Colonel Gray wasn't positive the Pave Lows were in the right area anyway. Colonel Gray said:

All you can do is take the coordinates that are passed to you, the ones the Joint Rescue Coordination Center picks up. That's the best information we've got, and that's what we're going on, and all we can do is go there and hopefully we can establish radio communications with them.

The mission was significant in that it was the first Pave Low instrument meteorological condition (IMC) penetration of an integrated air defense system.  

The following day on 20 January 1991, AFSOCCENT finished a second CSAR effort complete with A-10 escort and F-15 CAP. Unlike the
previous attempt, the mission was conducted during the daylight hours with only one MH-53J due to poor weather conditions at Ar'ar. Upon arrival at the supposed location, again no radio contact could be established, and after 30 minutes in the area the aircraft returned to Al Jouf. An enemy helicopter had been observed in the area approximately one half hour after the crew ejected.¹²¹

The first CSAR attempt by the 39 SOW occurred the next day on 21 January 1991, just one day after the MH-53s arrived at Batman, Turkey. The mission was to pick up Corvette 03, USAF Col David E. Eberly and Lt Col Thomas E. Griffith, who were shot down in their F-15E while scud hunting. The 39 SOW got ready to launch the Corvette 03 recovery but couldn’t get to them without some political consideration (approval authorities got into the State Department levels of the different countries involved). The key factor in this delay was the length of time it took to get diplomatic clearance from Turkey for two MH-53s of the 21 SOS to take off. It took longer still to get clearance from Syria. Thus, no HC-130 tanker from the 67 SOS even went into Syria and no refueling ever took place. Instead, the MH-53s stood on alert with extra tanks on board as the Combat Shadows orbited inside Turkey. As a result of the delay the mission was canceled that night.¹²²

The 39 SOW actually flew the recovery mission the following night on 22 January 1991. The MH-53Js had F-15s and F-16s flying high cover. “It was a coordinated moving bubble if you will,” described Colonel Josey. After the fighters and helicopters arrived at the right coordinates at the same time, the F-15s and F-16s then performed a diversionary air strike or in Colonel Josey’s words, “They rolled in and bombed like hell.” The helicopters had to hold a little while for the strike to start, then made their ingress and attempted to contact Corvette 03 on the proper radio channels. As soon as they did a barrage of antiaircraft artillery (AAA) occurred. That proved that the Iraqis had already found Colonel
Eberly and Colonel Griffith and that they were just waiting on a rescue attempt. “And that’s exactly what just happened, said Colonel Josey. “It was a trap. Of course you don’t know that until you get there.”

“We built the hope that they were still in a fox hole,” continued Colonel Josey. “That was what we were given when we launched. We were told that they were down, that they had been talked to on the radio, and that for all we knew still out there when in fact they were not. They had been policed up. I think we would have picked Corvette 03 up had we been able to get out the night before,” said Colonel Josey. “But the Iraqi order of battle in the north, any time the fighters would come across they would just simply put up a wall of led. It was an awesome sight.”

To be able to get to the western part of Iraq without over-flying Syria left only one other option—to penetrate directly from the north which would have put the 39 SOW through some terrific AAA of which the Iraqi’s seemed to have an unlimited supply. This was a major point of concern. The Pave Lows of the 21 SOS had ingress routes planned but certainly preferred not to fly them. To go over major lines of communications like the Tigris and Euphrates Rivers, both of which come in from the north and where the Iraqi civilization is based, meant certain detection for the MH-53J. Doing 110 knots at ground speed in a helicopter was completely different than flying at 20,000 feet in a fighter. A Pave Low could not disappear. In fact, it was fairly easy to find making it extremely vulnerable. “If you run across a platoon size of deployed guys, they can shoot your butt right out of the sky and God only knows we couldn’t track divisions much less platoons. A squad could put maybe a couple of rounds in you. Hell, a platoon, 35 or 40 guys, would with AK-47s just eat you up...Thank God we didn’t have to actually send them into anything like that.”

Corvette 03 proved that AFSOF could do what it said it could do and could do it very well. The fact that they were unsuccessful and did
not get off in time to pick up Colonel Eberly and Colonel Griffith was not the fault of AFSOF. The 39 SOW executed exactly what they were told to do. They did it successfully even though they didn’t make the pick up. As summed up by Colonel Josey, “We did what we advertised, and we did it very well.”

The first few save opportunities were not success stories like EAGER ANVIL or the PSYOP missions. In fact, similar scenarios became increasingly “frustrating” for AFSOCCENT who went from playing a “spear heading role,” in the words of Colonel Gray, to “the Johnny come lately,” in the words of Colonel Josey. It boiled down to one common problem—fixing the coordinates. On 19 January 1991, the two MH-53Js flew over the Bedouin camp that the survivor was being held in. This was confirmed in a letter the survivor later wrote to the pilots.

Quickly, a recommendation to significantly change CSAR procedures was coordinated through SOCCENT on to CENTAF. In terms of how AFSOCCENT could better conduct CSAR missions it needed a new radio (PRC 112) to prevent any further frequency compromises permitted by the old radio (PRC 90). Whereas the PRC 112 had four (A, B, C, D) secure frequencies built in, the older radio had only two frequencies—243.0 which was the standard emergency frequency and 282.8 which was not a secure frequency. The Iraqis had these radios in-hand from the downed pilots and apparently effectively used them to find downed pilots and made them prisoners of war (POW).

Air Force Special Operations Command Central wanted to emergency requisition the PRC 112 which had a homing capability and a built-in coding device. However, it would take time for the transmitters to make their way in theater and for the receivers to get to AFSOCCENT. More importantly, AFSOCCENT needed a CAP up high, like an A-10 or F-15, also with a receiver on hand. The receiver was a double blade antenna fixed to the aircraft with the instruments inside. Flight crews could
then beacon the transmitter and pick up the approximate location of the survivor. Besides reducing the number of radio transmissions, it also allowed AFSOCCENT to fix a position and proceed to use GPS to the coordinates and make safe passage before Iraq had a chance to cover the survivor’s radio. Like Colonel Gray said, “If we can find them, we can get them.”

That was just exactly what AFSOCCENT did. On the following days and weeks ahead it rebounded from the two unsuccessful saves and rescued two pilots on two separate occasions. The first save occurred on 21 January 1991, and like the previous save, opportunities were confusing at first. The Air Force Special Operations Command Central received indications of an F-14 and A-6 shot down almost at the same time. Personnel in the war room and the rescue coordination center began working both issues simultaneously, trying to sort out what really had happened. Eventually, the AWACS found out the A-6 had recovered and the Tomcat was the only one shot down. The information was passed on to JRCC and then to the war room at KFIA that an F-14 from the USS Saratoga, Slate 46, had gone down.

The AFSOCCENT rescue coordination cell received a set of coordinates and word that two parachutes had been seen, and an A-10 pilot was in voice communications with the downed crew. With this information in hand, Colonel Garlington alerted Captain Trask, MH-53J aircraft commander, who was sleeping in a sleeping bag in the hallway. The AWACS operator who had seen the Navy fighter disappear from the screen, located his position by beacon as being about 50 miles north of Mudaysis Airfield (130 miles into Iraq), about 60 miles northwest of Baghdad.

The MH-53 launched at 0805, which meant the entire three hour round trip would be flown in daylight. Captain Trask took off into a dense fog but 15 minutes later as his copilot Maj Michael A. Homan announced to the crew that they were crossing the “fence” (Saudi/Iraqi border), the
fog suddenly lifted revealing the desert sand dunes below.\textsuperscript{182}

Yukon, the call sign for AWACS, then locked on and precisely followed the path of the helicopter in enemy territory. Should the Iraqis attempt to defeat the CSAR by air, two F-15s provided CAP. Should the Iraqis attempt to defeat the CSAR by ground, two A-10s provided close air support. At 0815, Moccasin 05 (Captain Trask’s call sign) reached the coordinates Yukon had given for Slate 46. Captain Trask combed the area for 20-25 minutes but there was no trace of the downed crew. Flashbacks of previous save opportunities drew frustration again—wrong location. At this point, with fuel desperately low, AFSOCCENT told Captain Trask to “RTB” (return to base). The A-10s and F-15s remained to continue the search.\textsuperscript{183}

The Pave Low landed at Ar’ar in Saudi Arabia on the Iraqi border and was in the process of refueling when Captain Trask received word that one of the A-10s had made a visual sighting. With that, two MH-53s, Moccasin 04 and 05, launched at 1220. While en route, AFSOCCENT directed them to hold position in order to have time to work air support. The helicopters radioed their holding position, and AFSOCCENT moved them because of a possible enemy threat 15 miles east. As it turned out, the position also became the rendezvous point for all F-15s and A-10s. Anxious for their first save, Captain Trask cheated north and arrived 30 minutes earlier than expected.\textsuperscript{184}

The original package scheduled to go up with the Pave Lows called for two F-16s and two A-10s, but bad weather in Iraq had left a number of aircraft in the area with ordnance so they “piggy backed” on the mission. Eventually, AFSOCCENT had 12 F-16s, four A-10s, and two F-15s.\textsuperscript{185}

At 1340, Captain Trask had the survivor’s exact location, but to reach him they had to cross a four-lane roadway filled with military vehicles. When the break came, he flew the helicopter diagonally through
the gap between two convoys doing nearly 140 knots with the nose of the MH-53J less than 10 feet above the asphalt. Once past the convoys, Captain Trask linked up with the A-10s and continued the search for the Navy crew.¹⁸⁶

Fifteen minutes later, “One mile now,” Slate 46 called after spotting the helicopter. “Ten o’clock,” a position 25 miles further north than when they went in the first time. “Roger,” Major Homan replied. For the first time in the entire mission, AFSOCCENT had solid voice contact with the survivor. However, their elation was quickly changed to apprehension as the Pave Lows left door gunner spoke, “We’ve got a mover to the west.” It was a mud-spattered truck with a tarpaulin cover. This had to be a radio direction finding unit.¹⁸⁷

The A-10 pilot (Sandy) shouted, “The truck is going right at him.” Major Homan then called, “Smoke the truck!” The A-10 rolled in on the truck and fired—destroying the enemy vehicle.¹⁸⁸

Captain Trask was back on course again, flying north. “Sandy, where’s the survivor now?,” Captain Trask called. “Fly right at the smoke,” Sandy radioed back. “At the smoke?,” Major Homan questioned. “Yes; fly right at the burning truck,” said the proud A-10 pilot.¹⁸⁹

Rearing the helicopter back on its tail, Captain Trask air taxied slowly toward the smoldering vehicle. To his amazement, less than 150 yards away, he saw a man in a green flight suit pop up from a hole. Lieutenant (Lt) Devon Jones of the U.S. Navy stood there with his radio in hand. As soon as the wheels touched gravel two PJs of the 1723 STSQ exited the helicopter, one to assist the downed pilot back to the helicopter, the other providing cover. Within 30 seconds the survivor was on board en route back to Al Jouf airfield. The two PJs then did a preliminary physical examination and determined that Lieutenant Jones was not injured. They delivered the rescued pilot to medical personnel, culminating an extraordinary effort in broad daylight consisting of 6.5 hours of flying
over enemy territory.\textsuperscript{190}

Having out-run the enemy all day long, Lieutenant Jones proved what fighter pilots knew all along—to survive you needed to be in great physical condition and have luck on your side. Unfortunately for Lt Larry Slade, Lieutenant Jones’ rear seater, luck was not so kind. He was captured by Iraqi soldiers in a pickup truck at about 1030 and became an Iraqi POW.\textsuperscript{191}

Though not as exciting but equally gratifying, AFSOCCENT encountered its second and only other save on 17 February 1991. A USAF F-16 pilot was shot down 40 miles across the “fence.” The AWACS operator reported him down at 1140. The first AFSOCCENT MH-60 launched at 1240 and a second helicopter a short time later. The two MH-60s penetrated Iraqi airspace and located the pilot. He was picked up at 1400 by an Army CH-47 crew from the 3d Battalion, 160 SOAR. The MH-60 helicopters were much lighter than the larger CH-47, and in this case because of the location the heavy helicopter was used to rescue the survivor. The 3d Battalion was commanded by Lt Col Dalle Dailey and in peacetime supported a U.S. Army Ranger Battalion at Hunter Army Airfield near Savannah, Georgia. The mission from picking up to recovery at the 160 SOAR’s base at KKMC took less than an hour.\textsuperscript{192}

Combat search and rescue was truly a joint operation. An Air Force helicopter crew saved a Navy pilot, and an Army helicopter crew saved an Air Force pilot. In all, AFSOCCENT forces attempted eight CSARs during DESERT STORM.\textsuperscript{193}

**BLU-82s**

The concept of using BLU-82 Daisey Cutter weapons as psychological weapons was first introduced by Lt Col Thomas M. Beres, 8 SOS Commander, around 20 January 1991. The Daisey Cutters were 15,000-pound bombs capable of destroying everything in a three-mile radius
within the flat type of terrain provided by the desert. A three-foot long nose fuse assured that the bomb would explode just high enough above the ground for its energy not to be dissipated in a crater.\textsuperscript{194}

Colonel Beres felt that the normal tactic of dropping the bomb from 6,000 feet AGL was not acceptable due to the threat. Target assessment determined that the best tactic was to drop the bomb from between 16,000 and 21,000 feet AGL. Air Force Special Operations Command Central also decided to drop more than one at a time in order to increase the psychological impact and just as important to take advantage of the tactical surprise of the first bomb going off. As a final precaution, each of the drops was to be given a force package comprising EF-111 Ravens, F-4 Wild Weasels, and EC-130 compass calls. These were to suppress radars and jam communications if threats appeared.\textsuperscript{195}

The BLU-82 proposal was staffed and coordinated through the AFSOCCENT and SOCCENT staffs, and finally Colonel Gray briefed General Schwarzkopf on 28 January 1991. General Schwarzkopf appeared interested in using the bomb to clear mine fields. Since no tests had ever been done to determine its impact against mines (the BLU-82 was used to create landing zones in Vietnam), it was decided to drop the first bombs both on mine fields and on a personnel target.\textsuperscript{196}

Out of the 27 combat sorties the 8 SOS flew during DESERT STORM, five missions were used to drop a total of 11 BLU-82s. On 3 February 1991, the first two BLU-82s arrived from Hill AFB, Utah. Overall, 18 Daisey Cutters were delivered to KFIA. During the late night and early morning hours of 6 and 7 February 1991, an MC-130E Combat Talon commanded by Maj David L.(Skip) Davenport of the 8 SOS dropped the first BLU-82 on a mine field. The first bomb blasted a safe passage through Iraqi defenses for U.S. Marines to later start the DESERT STORM ground offensive. The second bomb, against an Iraqi battalion headquarters, resulted in the commander, two intelligence officers, and a pri-
vate deserting to friendly forces. They specifically cited the bombing as influencing them, and they handed over maps that prioritized mine fields in the area. The explosion of the Daisey Cutter looked like an atomic bomb detonating. In the southwest corner of Kuwait that night an enormous mushroom cloud flared into the dark. Sound traveled for miles in the barren desert, and soon radio networks along the border crackled with traffic. In fact, a British special forces team 110 miles away radioed back to its headquarters, “Sir, Sir, the blokes! They’ve just nuked Kuwait.” According to Colonel Beres, the first drop drifted slightly away from target, but lessons learned enabled future drops to be “right on.” Colonel Gray characterized the first drop as going “beautifully,” not only because weapons reached targets and crews returned safely, but also because of an unexpected bonus. The Iraqis interpreted the BLU-82 as the start of the ground invasion and turned on all their radars. The following night allied fighters had a feast.¹⁹⁷

With confidence high, the next set of targets was in the Army Corps’ tri-border area on 14 February 1991. The double drop resulted in an Egyptian radio intercept citing massive troop casualties. Later, estimates were of 3,000 to 4,000 dead. Given these reports, a race between the Army and Marines began to submit viable targets the quickest. The Marines, as G-day approached, wanted a BLU-82 dropped in each division’s ingress route. According to Colonel Beres, “I suspected for the Marines confidence as much as to actually cause damage.” Many of the proposed targets were turned back because they were in high threat areas the Combat Talon could not operate in.¹⁹⁸

The third set of bombs was a triple drop on a 10 square mile portion of Failaka Island on 18 February 1991. Three aircraft approached the island from different directions and all bombs impacted within five seconds of each other. Prior to detonation, all three aircraft came under AAA fire—following detonation, all AAA fire stopped. Failaka Island fell to
coalition forces within hours after the ground offensive began partly due to the BLU-82s delivered by AFSOCCENT. 199

The fourth operation was against two Army division logistics points on 20 February 1991. The two bombs were dropped from 21,000 feet due to thunderstorms. Both aircraft flew into violent weather, without radars, and still successfully dropped their bombs. One of the BLU-82s was dropped in a mine-strewn wadi deep inside Kuwait, the first line of defense near a huge truck parked, that was a British objective. Due to the violent storms, CENTCOM was unable to get any bomb damage assessment from that mission, but when U.K. soldiers reached the first line of defense, no Iraqi soldiers were found. When they reached the second line of defense, there were lots of Iraqis—dead in their foxholes. 200

The fifth and final drop was a double against Marine proposed targets on 22 February 1991, the day prior to G-day. In order to make the mission look more like a leaflet drop, it was decided to split the aircraft by two hours. Both drops were on target. The first, deepest into the area, came under radar threats, but they did not launch any surface to air missiles (SAM) nor AAA. 201

Once G-day began the Army and Marines could not validate targets fast enough to keep up with the ground war. The MC-130s were tasked four times to drop BLU-82s within 24 hours. Each time the tasking was canceled prior to launch because of the uncertainty of the position of friendly forces. As a result, no bombs were dropped after the ground campaign began. Upon cessation of hostilities, explosive ordnance disposal (EOD) experts destroyed the seven remaining BLU-82s AFSOCCENT still possessed at KFIA. 202

Spirit 03

The excitement of the first save during the daylight hours of 21 January 1991 was tempered somewhat by an incident later that night.
During an armed reconnaissance mission looking for Scuds, one of the AC-130H Gunships (tail number 6572) was engaged by an SA-6 and SA-8. Both were radar guided missiles. During evasive maneuvers the aircraft literally took a nose dive and exceeded all limits to the airframe. The Spectre Gunship underwent five asymmetric Gs during flight resulting in all four engines over-torqued, all four propellers leaking fluid, and numerous popped rivets in the wings. The aircraft somehow made its way back to KFIA. A week later, after using up all spare propellers, it flew to Rhein-Main AB, Germany, for in-depth inspections, and did not return to theater until 19 February 1991. A few nights after this incident a similar one occurred, though it was less damaging to the aircraft.  

On 31 January 1991, AFSCCEN CENT suffered its only loss. An AC-130H with 14 souls from the 16 SOS represented the single largest loss in the air war suffered by any coalition member. While American losses in the war against Iraq were astoundingly low, the only other loss that claimed more casualties was the Scud missile strike on a U.S. Army barracks in Dhahran.

The U.S. Marines were engaged with a large Iraqi force in the Saudi Arabian border town of Khafji—the first major incursion of the war—when three Gunships were airborne early that morning to support them. The first two Gunships, using call signs “Spirit 01” and “Spirit 02” had destroyed numerous armored personnel carriers. “Spirit 03” was almost at the end of their block time of 0600. Their was no intelligence indications that morning of any SAMs, but as the day started to lighten, the Marines became extremely concerned about a free rocket over ground (FROG) missile battery that had moved into position nearby.

Despite the known risks of AAA being almost anywhere at any-
time (although AFSCCEN CENT had several reports of fighters going through the same area who had not picked up any AAA whatsoever), the heroic crew elected to take out the Soviet made, unguided, short range ground-
to-ground missile, because they knew the battery was capable of destroying the U.S. Marines force in Khafji. However, the mission left the Gunship crew—accustomed to working under the cover of darkness—exposed. At 0635, the last call from the airplane was “Mayday.” On 4 March 1991, a nine-man special tactics dive team organized an underwater search and recovery operation for Spirit 03. The 9 SOS flew them to the beach landing site, dispatched inflatable boats, and photographed the site before recovery operations began. They recovered a majority of the missing crewmen’s remains before a severe storm front halted the operation and forced a return to KFIA.206

The aircrew included: Major Paul J. Weaver, Jr.; Captain William D. Grimm; Captain Arthur Galvan; Captain Dixon L. Walters, Jr.; First Lieutenant Thomas C. Bland, Jr.; Senior Master Sergeant Paul G. Buege; Master Sergeant James B. May II; Technical Sergeant Robert K. Hodges; Staff Sergeant John L. Oelschlager; Staff Sergeant Timothy R. Harrison; Staff Sergeant John P. Blessinger; Staff Sergeant Damon V. Kanuha; Staff Sergeant Mark J. Schmauss; and Sergeant Barry M. Clark.207

On 15 March 1991, with a Gunship behind them and a huge American flag before them, family and friends bided farewell to the aircrew of Spirit 03 described as heroes who paid the ultimate price. “Today, we remember these heroes. Today we also begin the healing process,” said Colonel Gray. “The squadron and wing will heal quickly because tomorrow we may have to go defend freedom again. They were magnificent,” Colonel Gray continued. “You never had to ask them to go defend freedom for millions of Panamanians or Kuwaitis. These people in this squadron have built a trust and confidence in our ground forces that make them a particularly effective member of our country’s armed forces,” concluded Colonel Gray.208

General Eggers said the fallen airmen embodied patriotism, discipline, and confidence. He called them “quiet professionals.”209
Lieutenant Colonel Donn P. Kegel, 16 SOS Commander, told the mourners there was “no way” he could take away the hurt and loss, but he said he hoped his words would give comfort. He said the “heroes” of Spirit 03 were good men and soldiers, loyal and courageous with devotion to duty. Colonel Kegel said they selflessly served the cause of peace and freedom. “Our memory of them will forever be men who stepped to the front and paid the ultimate sacrifice,” said Colonel Kegel, who mentioned each crew member by name and gave his brief impression of each.\(^{210}\)

**Air Refueling Operations**

When Operation DESERT STORM struck Iraqi forces, the 9 SOS launched into action. In western Saudi Arabia, they were airborne as tanker support for the MH-53J Pave Low helicopters that guided Army attack helicopters to the first air attack of the war. Prior to H-hour, HC-130s in Saudi Arabia’s eastern Province provided tanker support for positioning of MH-60G Pave Hawk helicopters. Throughout Operation DESERT STORM, both the Combat Shadows of the 9 SOS and Combat Talons of the 8 SOS would pick up the helicopters 25 to 75 miles into Iraq to pass enough gas for them to get back to safe ground. At night it was so dark that pilots could not see the basket, hence AFSOCCENT developed IR peanut lights around the basket and along the hose which worked out well. Whether involved in CSAR, aerial refueling of helicopters, special operations or airlift, the 9 SOS crews flew bravely through 315.7 flying hours in 103 DESERT STORM sorties.\(^{211}\)

**Support of Explosive Ordnance Disposal Teams**

During the war fighters had primary and alternate targets. Although the latter was often just a “free drop” they too on occasion were not available. When this happened fighters used designated bomb dump
areas, generally out to sea, for fighters never landed with their ordnance. But in the northern theater of operations going out to sea was sometimes not an option for reasons like weather or lack of fuel. During pre-brief crews were given geographical areas “where no one had any business being at” to release their munitions. On occasion these bombs didn’t “go off high water” instead they were “duds.” For example, if a pilot released five bombs and only saw four explosions, he knew a live munitions still laid out there. Some of these dump areas were fairly close to Turkish villages. This was where the 39 SOW came into play by taking EOD teams in there and blowing up the duds. “Your first reaction to that is ‘boy, that’s a real woos mission for wartime.’ But when you consider you’re dealing with 5,000 mountains, a lot of snow, and you’re dealing with the Turks and the Kurds who live right there on the border and they’re concerned about it, those were hellish missions.” The terrain was extremely mountainous in the eastern Turkey/northern Iraq boundaries. However, near the Iraqi/Syrian border the terrain was extremely flat, but enough existed to mask effectively at 50 to 100 feet—at 300 feet the Pave Lows would show up. Getting into and out of those areas, finding the munitions that fell, slogging around in the snow, locating them, then detonating them, getting all back together, and while at the same time anywhere between one click and two clicks from the Iraqi border proved challenging.\textsuperscript{212}

Following DESERT STORM, the 39 SOW flew at 500 feet for three days, a total of 22 hours, from Incirlik AB, Turkey, to RAF Woodbridge, U.K. Two weeks later, they redeployed to Diyarbakir, Turkey, in support of Operation PROVIDE COMFORT.\textsuperscript{213}

**Special Tactics Operations**

Combat controllers continued to operate out of the three FOLs while the PJs began flying as medical crewmen aboard AFSOCCENT MH-
53s, MH-60s, CH-47s, and UH-60s. Combat controllers went into Rafha airfield to control the initial airlift flow moving the 18th Airborne Corps and the 82 ABN DIV into position and servicing more than 800 C-130 aircraft. Combat controllers at Al Jouf and Ar’ar airfields recovered and refueled hundreds of transient aircraft while operating the primary emergency airfields for battle damaged or “minimum fuel” aircraft returning from combat sorties in Iraq. Al Jouf also became the main operating base for A-10s in the northern region, while combat controllers continued providing the entire scope of airfield management services until relieved by a much larger contingency of support personnel. As combat controllers were relieved, they redeployed to forward areas to tactically place strike and navigational beacons along the northern Saudi border. These beacons were used to update navigational systems for attack aircraft flying to targets in Iraq.214

In late January 1991, a combat controller attached to a special unit of coalition forces, infiltrated within 15 kilometers of Baghdad on a classified mission to provide CAS and communications for the team. His knowledge of air strike control procedures provided the team with reasonable assurance that they could infiltrate and exfiltrate deep into Iraq with a high chance of success. The team’s mission was highly successful as it cut many lines of communications from Baghdad to outlying areas. Because of the professionalism and capability provided by the special tactics member on this mission, the special operations coalition unit requested four more special tactics personnel to conduct other clandestine missions across the border. The 1723 STSQ operators trained for five planned missions, all of which however were canceled before execution. After their cancellation, the coalition force requested the 1723 STSQ assist them in the liberation of American Embassy in the city. During the mission, a four-man special tactics team fast-roped from a hovering helicopter onto the 15-story building. They then provided command and
control communications, set up, directed, and coordinated air support between the coalition team commander and the attack aircraft. A four-man special tactics team attached to the U.S. Marine Corps’ First Division, along the Saudi/Kuwaiti border, convoyed forward with the Marines across the border up to Kuwait City International Airport. After three days of negotiating around numerous man-made and natural barriers, mine fields, unexploded ordnance, and Iraqi soldiers, the special tactics team made it safely to the airfield. Once there they assessed the situation and cleared a portion of one runway needed to land an eight-ship helicopter assault force of SOCCENT personnel.215

At the onset of the ground phase of DESERT STORM, three special tactics personnel were attached to the 5 SFG at Kafjhi, Saudi Arabia. They were tasked to augment the Battalion Aid Station and to advance with the coalition forces along the coast until reaching Kuwait City before rejoining special tactics forces at Kuwait City International Airport. In this capacity, special tactics personnel functioned as front line combat medics and were attributed with several “saves.” Two special tactics personnel were assigned to the 71 SOS (AFRES) to fly aeromedical evacuation in support of the coalition advance.216

Special tactics was included in the planning and execution of “Joint Task Force Charlie,” a medical contingency plan to provide initial medical support for Kuwait City International Airport, as a casualty collection point, triage, and air evacuation station.217

Reserve Contributions

The 919 SOG (AFRES) flew a total of 567 hours and 310 sorties in support of Operations DESERT SHIELD and DESERT STORM—367 hours and 251 sorties flown by the 71 SOS flying HH-3E Jolly Green helicopters; and 180 hours, and 59 sorties flown by the 711 SOS flying AC-130A Spectre Gunships, who also carried 268 passengers and 75 tons of cargo.
For 51 days the 71 SOS pulled alert for the night over-water combat rescue mission, performed environmental damage assessment missions, and performed eight sensitive missions in support of Army and Naval SOF. On 16 February 1991, the 71 SOS accomplished its first daytime SOF mission. A week later on 24 February 1991, the H-3s were involved in their first medical evacuation (MEDEVAC) mission. The Jolly Green helicopters redeployed on 16 March 1991 and arrived at Davis-Monthan AFB, Arizona, the following day.

One of the last missions flown by the 711 SOS marked the first and only border crossing. On 26 February 1991, call sign “Ghost 10” requested and received permission from the ABCCC to fire upon a highway near Al Jahra, Kuwait. Fleeing Iraqi troops retreating from Kuwait City were using the road. Allied fighters had been hitting the road hard, and there were numerous military vehicles backed up struggling to go north. “Ghost 10” entered the area with no observed threats and found multiple targets. Due to low fuel, the 919 SOG (AFRES) crew only made five orbits over the target area. The Gunship then attacked a stalled convoy of 15 to 20 military vehicles. Five medium sized vehicles were destroyed using 1,500 rounds of 20mm and 487 rounds of 40mm. No personnel were sighted, no ground fire ensued, and no evasive maneuvers were required.

Before departure, “Ghost 10” called “Ghost 06” and “Ghost 07” and passed on target data. Both followed into the target area. “Ghost 06” arrived over the Al Jahra road and attacked medium sized military trucks expending 1,500 rounds of 20mm and 383 rounds of 40mm. A total of 20 military vehicles were destroyed and approximately an equal number of personnel killed. Four more vehicles, armored personnel carriers (APC), were later fired upon and destroyed by direct hits. Now low on fuel (bingo fuel), “Ghost 06” departed the area and in the process experienced SA-7 and SA-14 launches. Although the two missile systems
were designed not to give a radar warning receiver (RWR) indication, the aircraft nevertheless managed to defeat them with evasive action and flares. Although more vehicles were spotted at this point, no action was taken due to lack of fuel and ammunition.221

“Ghost 07” heard “Ghost 10” and “Ghost 06” working targets north of Kuwait City. Hearing that threats were minimal the target was considered workable. “Ghost 07” entered the area and destroyed five military vehicles and killed ten personnel while using 1,500 rounds of 20mm and 96 rounds of 40mm. By now the Al Jahra road area was heating up as more threats appeared. “Ghost 07” received small arms fire, AAA, and RWR indications for possible Flap Wheel, SA-2, and Skyguard. There were no launch indications as “Ghost 07” used constant jinking to avoid threats. The Reserve Gunships began redeployment on 12 March 1991, however, didn’t complete it until 20 March 1991.222

The 100 Hour Ground War

On 23 February 1991, Iraq defied the final deadline to withdraw from Kuwait. President Bush told the nation he had ordered use of “all forces available, including ground forces, to eject the Iraqi Army from Kuwait.” Air support during the first day of the ground war included a record 1,200 allied sorties directed against Kuwait. Over a dozen of these were flown by AFSOCCENT to include six MH-53s, CH-47s and UH-60s flying infiltration/exfiltration missions, and three AC-130s flying air base ground defense missions.223

During day two of the ground war, AFSOCCENT flew four missions, two HC-130 air refueling missions and two Gunship missions. The following day on 26 February 1991, AFSOCCENT flew five more missions to include three AC-130A Spectre missions (already discussed on the previous page), one HC-130 tanker mission, and one MH-3 MEDEVAC mission.224
Air Force Special Operations Command Central concluded the ground war with another 13 missions: three from AC-130A Gunships, two from MH-3 MEDEVAC missions of the 5 SFG, one from an MC-130 assigned leaflet drop, and one from a HC-130 assigned air refueling track.225

On 27 February 1991, six MH-53Js and an eight-man special tactics team deployed SOCCENT assets into Kuwait International Airport. Air Commandos regrouped on landing and began the dangerous task of clearing a 10,000-foot runway, taxiways, and ramp space before arrival of fixed wing aircraft the next morning. The special tactics team operated a SATCOM network and continually sent situation reports back to AFSOCCENT, organized a perimeter defense plan, began clearing the airfield of debris, cleared off abandoned cars, cement barriers, and unexploded ordnance. On more than one occasion, bomblets thrown off the runway exploded on impact. With only a few EOD personnel on hand, special tactics assumed some critical building clearing duties, to include the 13-story air traffic control tower. Runway 33L and sufficient taxiways were ready to accept landing traffic on schedule. The special tactics team continued to provide all air traffic control services until a conventional combat control team accepted control a day later on 28 February 1991.226

By the end of 27 February 1991, Iraq agreed to the allied terms for a cease-fire. President Bush ordered a halt to hostilities, exactly 100 hours after the ground campaign began. He told the nation “Kuwait is liberated. The Iraqi Army is defeated. Our military objectives are met.”227

Summary

Overall, the Gulf War cost the U.S. $7.4 billion.228 Just a fraction of that cost went towards the 134.9 combat hours and 49 combat sorties flown by the 8 SOS. Likewise, the 9 SOS had 309.3 hours and 100 sorties; 20 SOS with 544.8 hours and 363 sorties; and the 55 SOS with 349.2 hours and 224 sorties; 107
hours and 169 sorties before war’s end. DESERT STORM operations for AFSOCCENT totaled nearly 3,500 combat hours and 1,300 combat sorties. When combined with DESERT SHIELD, the four months leading up to the war, AFSOCCENT accumulated approximately 10,000 hours and 5,000 sorties.229

Among the missions these hours and sorties entailed included a daring direct action mission against Iraqi early warning radar sites; MH-53Js conducting CSAR which resulted in two pilots saved; MH-60Gs performing four infiltration missions of both SOF and conventional customers; AC-130s flying air base ground defense, air interdiction, special reconnaissance, and CAS missions all in support of ground forces (the latter type mission resulting in AFSOCCENT’s only loss of one aircraft and 14 crew members); EC-130s airing PSYOP throughout the theater; HC-130s performing 47 helicopter air refueling missions; and MC-130s dropping leaflets and BLU-82 munitions on Iraqi targets. General McPeak would later commend AFSOF, “Your strength in peace and your courage in battle have earned you the respect of the free world.”157 Once Iraq agreed to the allied terms for a cease-fire on 27 February 1991, AFSOCCENT personnel began to gradually deploy back—a happy moment for those spouses waiting at home.
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See note above.

See note above.

See note above.

See note above.

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See note above.
See note above.

See note above.

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See note above.

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See note above.


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See note above.

See note above.

See note above.

See note above.

See note above.

See note above.

See note above.

See note above.
See note above.


See note above.

See note above.

See note above.

Pamphlet (U), "I have called you by name," 834 ABW/HC, 15 Mar 91.

Speech (U), "1 SOW/CC's remarks for Memorial Service (15 Mar 91) for 14 crewmembers of downed AC-130 in Kuwait on 31 Jan 91," 1 SOW/CC, 15 Mar 91.

Speech (U), "Memorial For Gunship Crew Lost in DESERT STORM 5 Mar 91," AFSOC/CC, 15 Mar 91.


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Ibid.

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Ibid.

Ibid.

Ibid.


221 Ibid.

222 Ibid.


224 See note above.


226 Rpt (U), History of Operations in Support of DESERT SHIELD/STORM, 1723rd Special Tactics Squadron (Deployed),” 720 STG/HO, 19 May 92.


229 Narrative for Presidential Unit Citation (U), “1 SOW,” May 91; Brfg (U), Maj Robert C. Stewart, HQ AFSC/DOO, “AFSOC in the Desert,” 11 Nov 91.
(Top) Private terminal at King Fadh, Saudi Arabia, built for use by the Royal family and separate from the main terminal.
(Bottom) AFSOCCENT flight (front ramp) and Army's 101st Aviation Division flight line (rear ramp) at KFIA.
(Top) The main terminal (left) & mosque (center) at KFIA. 
(Bottom) MABCO Compound.
(Top) The front and only entrance to the MABCO Compound.  
(Bottom) MABCO Compound with air conditioning units.
(Top) New trailers that were brought in to MABCO Compound and used for SOF colonels.
(Bottom) Inside a typical tent.
(Top) Chow Hall located between Tent City (TAC) & MABCO Compound (AFSOC)

(Left) Condition Red! For those who were working at HQ AFSOCCENT a reinforced tunnel ran beneath the tower.
Condition Red! For those who were sleeping in their tents at MABCO personnel either ran to in-the-ground sea vans or bunkers made of sand bags  
(Bottom) MWR Laundry services.
(Top) Some chose to do their own laundry.
(Bottom) AFSOCCENT Briefing Room.
(Top) MWR Recreation Center
(Bottom) BLU-82
تحذير!
هذه البداية فقط!
ننصح أن تكون هذه
فسأل جندب
ترغب في الحاقن
على أساس إجراءاء
ونتدرب بموضوع
طريق الدمار والموت
الضمو. تريد التأسيم
بالسفناء?
صدام هو
السبب

ومم أن السواب المعنويات الحساسة على
ندره مكانه بين هجوم ساحق في أي أن أو مكان؟
تحذير!

TRANSLATION

"Warning! This is only the beginning! This could have been a real bomb. We have no desire to harm innocent people, but Saddam is leading you to certain death and destruction. We want you to know the truth. Saddam is the cause. Yes, the Multi-National Forces have the ability to strike anywhere...and at anytime! Warning."
"The 7th Infantry Division will be bombed tomorrow. Leave this location now and save yourselves."
"Cease resistance. You are cut off"
"From HQ Joint Forces and Theater of Operations. You are invited to join the Joint Forces and enjoy full Arab hospitality, security, safety and medical care. You will return to your homes as soon as the situation that Saddam has placed us in has ended. My brother Iraqi soldier..this invitation is open to you and your comrade soldiers. We hope you will accept this invitation as soon as you have the opportunity.

Commander, Joint Forces and Theater of Operations"
TRANSLATION

"Saddam is against Peace. Save Iraq. Stop Saddam. No more war. Peace Now. Save Iraq. Iraq is against Saddam."

TRANSLATION

"Saddam is the only reason for the bombing of Iraq"
Translation

"Use the following procedure to cease resistance
- Elevate your weapons to their maximum elevation
- Traverse the gun tube over the back deck
- Expose the tank's side to the approaching forces
- Leave the tank hatches open
- Place your hands over your heads and proceed slowly
- Wave a white cloth to signal your peaceful intent or hold up this leaflet
عاصفة الصحراء وواصلة...ً وهربوا هرباً حالياً!!

**TRANSLATION**

"Desert Storm is coming to your area. Flee Immediately!"

"Iraqi citizens, Saddam’s military has placed your lives in danger. The Coalition Forces are coming. We will be striking this area soon. We do not wish to harm innocent citizens. Evacuate this area immediately and head North. Civilian areas in Baghdad will not be targeted. Flee immediately!!"
TRANSLATION

Warning!
The shelling has started, your location is next. Vacate this location and save yourselves.

Warning!
GLOSSARY

AB  air base
ABCCC  Airborne Battlefield Command and Control Center
ABN DIV  Airborne Division
ABW  air base wing
ADVON  advanced echelon
AFB  air force base
AFLC  Air Force Logistics Command
AFRES  Air Force Reserve
AFSOC  Air Force Special Operations Command
AFSOCCENT  Air Force Special Operations Command Central
AFSOF  Air Force Special Operations Forces
AGE  aerospace ground equipment
AGL  above ground level
AGS  aircraft generation squadron
ANG  Air National Guard
AOR  area of responsibility
APC  armored personnel carriers
API  armor piercing incendiary
APU  auxiliary power units
ARCENT  Army Central
ARS  Air Rescue Service
ARSOFT  Army Special Operations Task Force
ATO  air tasking order
AWACS  Airborne Warning and Control System
AZAR  assault zone availability report
BDU  battle dress uniform
BEEF  Base Emergency Engineering Force
CAG  crisis action group
CAP  combat air patrol
Capt  captain
CAS  close air support
CASEX  Close Air Support Exercises
CCT  combat control teams
CDU  central display unit
CENTAF  Central Air Forces
CENTCOM  Central Command
CES  civil engineering squadron
CINC  commander in chief
CMSgt  chief master sergeant
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>Col</td>
<td>colonel</td>
</tr>
<tr>
<td>COMAIRSOCEUR</td>
<td>Commander Air Special Operations Command Europe</td>
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<tr>
<td>COMEX</td>
<td>Communications Exercises</td>
</tr>
<tr>
<td>COMINT</td>
<td>Communications Intelligence</td>
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<td>COMSEC</td>
<td>communications security</td>
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<tr>
<td>COMSOCEUR</td>
<td>Commander Special Operations Command Europe</td>
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<tr>
<td>CONUS</td>
<td>continental United States</td>
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<tr>
<td>CSAF</td>
<td>Chief of Staff of the Air Force</td>
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<tr>
<td>CSAR</td>
<td>combat search and rescue</td>
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<tr>
<td>CSG</td>
<td>combat support group</td>
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<tr>
<td>DA</td>
<td>direct action</td>
</tr>
<tr>
<td>DCM</td>
<td>deputy commander for maintenance</td>
</tr>
<tr>
<td>DCS</td>
<td>deputy chief of staff</td>
</tr>
<tr>
<td>Det</td>
<td>detachment</td>
</tr>
<tr>
<td>DLQ</td>
<td>deck landing qualification</td>
</tr>
<tr>
<td>DNIF</td>
<td>duty not involving flying</td>
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<tr>
<td>DO</td>
<td>Operations</td>
</tr>
<tr>
<td>Dr.</td>
<td>Doctor</td>
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<tr>
<td>E&amp;E</td>
<td>escape and evade</td>
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<tr>
<td>ELINT</td>
<td>electronic intelligence</td>
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<tr>
<td>ENS</td>
<td>enhanced navigation system</td>
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<tr>
<td>EOD</td>
<td>explosive ordnance disposal</td>
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<td>ESC</td>
<td>Electronic Security Command</td>
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<td>European Command</td>
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<tr>
<td>F</td>
<td>Fahrenheit</td>
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<tr>
<td>FARRP</td>
<td>forward area refueling and rearming point</td>
</tr>
<tr>
<td>FCF</td>
<td>functional check flight</td>
</tr>
<tr>
<td>FLIR</td>
<td>forward looking infrared</td>
</tr>
<tr>
<td>FOB</td>
<td>forward operating base</td>
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<tr>
<td>FOL</td>
<td>forward operating location</td>
</tr>
<tr>
<td>FROG</td>
<td>free rocket over ground</td>
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<tr>
<td>GCI</td>
<td>ground-controlled intercept</td>
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<td>GE</td>
<td>General Electric</td>
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<tr>
<td>Gen</td>
<td>general</td>
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<tr>
<td>GPS</td>
<td>global positioning system</td>
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<tr>
<td>HCS</td>
<td>helicopter combat squadron</td>
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<tr>
<td>HF</td>
<td>high frequency</td>
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<tr>
<td>HQ</td>
<td>headquarters</td>
</tr>
<tr>
<td>IADS</td>
<td>integrated air defense system</td>
</tr>
<tr>
<td>IFF</td>
<td>identification, friend or foe</td>
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<tr>
<td>IMC</td>
<td>instrument meteorological condition</td>
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<tr>
<td>IR</td>
<td>infrared</td>
</tr>
<tr>
<td>IRCM</td>
<td>infrared countermeasure</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Definition</td>
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<td>--------------</td>
<td>------------</td>
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<tr>
<td>ISO</td>
<td>isochronal</td>
</tr>
<tr>
<td>IV</td>
<td>intravenous</td>
</tr>
<tr>
<td>JCS</td>
<td>Joint Chiefs of Staff</td>
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<tr>
<td>JP4</td>
<td>jet petroleum</td>
</tr>
<tr>
<td>JRCC</td>
<td>Joint Rescue Coordination Center</td>
</tr>
<tr>
<td>JSOFT</td>
<td>Joint Special Operations Task Force</td>
</tr>
<tr>
<td>JTF</td>
<td>Joint Task Force</td>
</tr>
<tr>
<td>KFIA</td>
<td>King Fahd International Airport</td>
</tr>
<tr>
<td>KKMC</td>
<td>King Khalid Military City</td>
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<tr>
<td>KTO</td>
<td>Kuwaiti theater of operations</td>
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<tr>
<td>LOS</td>
<td>line of site</td>
</tr>
<tr>
<td>Lt</td>
<td>lieutenant</td>
</tr>
<tr>
<td>Lt Col</td>
<td>lieutenant colonel</td>
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<tr>
<td>MAC</td>
<td>Military Airlift Command</td>
</tr>
<tr>
<td>Maj</td>
<td>major</td>
</tr>
<tr>
<td>Maj Gen</td>
<td>major general</td>
</tr>
<tr>
<td>MAJCOM</td>
<td>major command</td>
</tr>
<tr>
<td>MARCENT</td>
<td>Marines Central</td>
</tr>
<tr>
<td>MEDEVAC</td>
<td>medical evacuation</td>
</tr>
<tr>
<td>MRE</td>
<td>meals ready-to-eat</td>
</tr>
<tr>
<td>Msgt</td>
<td>master sergeant</td>
</tr>
<tr>
<td>NAS</td>
<td>naval air station</td>
</tr>
<tr>
<td>NAVCENT</td>
<td>Navy Central</td>
</tr>
<tr>
<td>NCA</td>
<td>National Command Authority</td>
</tr>
<tr>
<td>NMC</td>
<td>not mission capable</td>
</tr>
<tr>
<td>NSWWTG</td>
<td>Naval Special Warfare Task Group</td>
</tr>
<tr>
<td>NVG</td>
<td>night vision goggle</td>
</tr>
<tr>
<td>OPCON</td>
<td>operational control</td>
</tr>
<tr>
<td>OPLAN</td>
<td>operations plan</td>
</tr>
<tr>
<td>PDM</td>
<td>programmed depot maintenance</td>
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<tr>
<td>PJ</td>
<td>pararescuemen</td>
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<tr>
<td>POW</td>
<td>prisoner of war</td>
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<tr>
<td>PSYOP</td>
<td>psychological operations</td>
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<tr>
<td>RAF</td>
<td>Royal Air Force</td>
</tr>
<tr>
<td>RIBS</td>
<td>Readiness Intra-Base Services</td>
</tr>
<tr>
<td>RM</td>
<td>resource management</td>
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<tr>
<td>RPM</td>
<td>revolutions per minute</td>
</tr>
<tr>
<td>RPV</td>
<td>remotely piloted vehicle</td>
</tr>
<tr>
<td>RSAF</td>
<td>Royal Saudi Air Force</td>
</tr>
<tr>
<td>RTB</td>
<td>return to base</td>
</tr>
<tr>
<td>RWR</td>
<td>radar warning receiver</td>
</tr>
<tr>
<td>SAM</td>
<td>surface to air missile</td>
</tr>
<tr>
<td>SAR</td>
<td>search and rescue</td>
</tr>
<tr>
<td>SAREX</td>
<td>Search and Rescue Exercise</td>
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<td>SATCOM</td>
<td>satellite communications</td>
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SDC  signal data converter
SEAL  sea air land
SFG   special forces group
SFOB  special forces operating base
SMSgt senior master sergeant
SO    special operations
SOAR  special operations aviation regiment
SOCCE special operations contingency communications element
SOCCENT Special Operations Command Central
SOCEUR Special Operations Command Europe
SOF   special operations forces
SOFI  special operations forces improvement
SOG   special operations group
SOMS  special operations maintenance squadron
SOS   special operations squadron
SOW   special operations wing
SOWT  special operations weather team
STGP  special tactics group
STSQ  special tactics squadron
TACC  Tactical Air Control Center
TACON tactical control
TF/TA terrain following/terrain avoidance
TFW   tactical fighter wing
TIBS  Tactical Information Broadcast Service
TOT   time over target
TV    television
23 AF Twenty-Third Air Force
U.K.  United Kingdom
U.S.  United States
UHF   ultra high frequency
UN    United Nations
USAFL United States Air Force
USCINCENT United States Commander in Chief
USCINCEUCOM United States Commander in Chief, European Command
USMCC United States Marine Corps
USN   United States Navy
USSOCOM United States Special Operations Command
VBSS  visual board search and seizure
VCR   video cassette recorder
WRSK  war readiness spares kit
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