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TEN YEARS POST DESERT STORM: HAS ASSAULT SUPPORT LEARNED THE LESSONS OF TASK FORCE X-RAY?

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Abstract
On 24 February 1991, the First Marine Expeditionary Force penetrated Iraqi defenses to begin the ground assault of Desert Storm. Task Force X-ray, a helicopter-borne force comprised of the Marines of 1 st Battalion 3 rd Marines, was issued an order to establish a blocking position in the vicinity of Al Burqan oil field in order to protect the First Marine Divisions right flank. Essentially unprepared, unrehearsed and without appropriate leadership, the airborne assault took place with less than favorable results. This could have been the largest Marine helicopter-borne force inserted into hostile territory since the Vietnam War. Unfortunately, the mission turned out to be a terrifying flight of near mid-air collisions and chaos over the skies of Kuwait and Saudi Arabia. Although many factors contributed to the ineffectiveness of this mission, the essential element that stands out most is the lack of training our forces and leaders receive in large-scale helicopter-borne operations, and the indifference Commanders have towards leading them. In time of war, the Marine Expeditionary Brigade is the minimum force expected to conduct forcible entry operations. Ultimately, this can only be realized if the senior leadership recognizes the importance of the mission, presses forward with necessary training required to execute such a demanding task, and more importantly steps up to the challenge of commanding the assault.

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On 24 February 1991, the First Marine Expeditionary Force penetrated Iraqi defenses to begin the ground assault of Desert Storm. Task Force X-ray, a helicopter-borne force comprised of the Marines of 1st Battalion 3rd Marines, was issued an order to establish a blocking position in the vicinity of Al Burqan oil field in order to protect the First Marine Division's right flank. Essentially unprepared, unrehearsed and without appropriate leadership, the airborne assault took place with less than favorable results. This could have been the largest Marine helicopter-borne force inserted into hostile territory since the Vietnam War. Unfortunately, the mission turned out to be a terrifying flight of near mid-air collisions and chaos over the skies of Kuwait and Saudi Arabia. Although many factors contributed to the ineffectiveness of this mission, the essential element that stands out most is the lack of training our forces and leaders receive in large-scale helicopter-borne operations, and the indifference Commanders have towards leading them. In time of war, the Marine Expeditionary Brigade is the minimum force expected to conduct forcible entry operations. Ultimately, this can only be realized if the senior leadership recognizes the importance of the mission, presses forward with necessary training required to execute such a demanding task, and more importantly steps up to the challenge of commanding the assault.

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PREFACE

Those charged with developing the Operational Plans (OPLANS) for real world contingencies plan to use Marine aviation rotary wing aircraft for large regimental and battalion size operations. Forcible entry is an option. Over ten years ago, the heliborne assault of Task Force X-ray during Desert Storm marked the last attempt by Marine rotary wing aviation to air lift a battalion size unit during conflict. The mission was less than successful; many of the contributing factors were significant, but one stands out among the rest. I contend no factor was as singularly critical to each phase of the mission as the lack of senior aviation leadership (MAG CO) to take command and control of the situation. Today the Assault Support community has progressed positively since this mission took place; better defining its planning techniques and standard operating procedures, refining its briefing guide and becoming considerably more proficient in the environment it operates in. Nevertheless, it still has not learned the major lesson of Task Force X-ray: aviation leadership is more than just qualifications and proficiency. Our senior commanders must realize the importance of their command presence and authority when Marines conduct major air assault movements, and become active, engaged participants in every phase. Until this happens, we will continue to have failures such as Task Force X-ray.

My thanks to both my mentors, Colonel Darryl A. Browning, USMC, for his insight and challenging advice, and Doctor Evelyn Farkas for her encouragement and steadfast guidance. Additionally, a special thank you goes to my devoted wife, Michele, who proofread this paper until all hours of the night and corrected my not so good English. Finally, my deepest and most sincere admiration goes to the men who

participated in Task Force X-ray on the evening of 24 February 1991, their profound courage, dedication and commitment to providing Assault Support under any circumstance is a tribute to their wearing the title MARINE.

EXECUTIVE SUMMARY

Title: TEN YEARS POST DESERT STORM: Has Assault Support learned the lessons of Task Force X-ray?

Author: Major N. John Torres, United States Marine Corps

Thesis: The lack of leadership that plagued Task Force X-ray during Desert Storm will trouble assault support once again for the next major airborne assault.

Discussion: On 24 February 1991, the First Marine Expeditionary Force penetrated Iraqi defenses to begin the ground assault of Desert Storm. Task Force X-ray, a helicopter-borne force comprised of the Marines of 1st Battalion 3rd Marines, was issued an order to establish a blocking position in the vicinity of Al Burqan oil field in order to protect the First Marine Division's right flank. Essentially unprepared, unrehearsed and without appropriate leadership, the airborne assault took place with less than favorable results. This could have been the largest Marine helicopter-borne force inserted into hostile territory since the Vietnam War. Unfortunately, the mission turned out to be a terrifying flight of near mid-air collisions and chaos over the skies of Kuwait and Saudi Arabia. Although many factors contributed to the ineffectiveness of this mission, the essential element that stands out most is the lack of training our forces and leaders receive in large-scale helicopter-borne operations, and the indifference Commanders have towards leading them. Crucial senior leadership, determining the possible success or failure of the mission, at different critical periods of the mission planning, briefing and execution was nonexistent. It would be unfair to judge or lay blame on a particular individual for the lack of senior aviation leadership during this mission, the difficulties posed by the circumstances of war and all the challenges associated with it are overwhelming. However, Marine aviation learned many lessons that evening and those lessons should not be forgotten. In time of war, the Marine Expeditionary Brigade is the minimum force expected to conduct forcible entry operations. If this is true, Marine assault support assets must be ready and willing to support a large airborne assault force. Ultimately, this can only be realized if the senior leadership recognizes the importance of the mission, presses forward with necessary training required to execute such a demanding task, and more importantly steps up to the challenge of commanding the assault.

Conclusion(s) or Recommendations: The lack of training our senior commanders received is just one factor that contributes to the unwillingness to take charge of large tactical airborne assaults. Many aviation commanders must deal on a daily basis with the realities of logistic, manpower and resource shortages. These daily struggles take away from their abilities to remain proficient and current as tactical warfighters. This is an injustice to them as well as the Marines they should be leading. Tactical prowess should not end for a commander once he reaches the MAG or MAW level. A commander does not need to be proficient in conducting detail planning, but should be familiar enough with the plan to make critical, decisive decisions over all phases of the mission. There are numerous techniques and avenues to pursue this endeavor. A commander can use his

best and most qualified squadron to assist planning a mission on a quarterly or semi-annual basis. These missions can be briefed, but not flown, so as not to tax the daily aviation requirements already challenging the system. With some coordination, flight experience can be gained as guest Air Mission Commander at the WTI course conducted by MAWTS-1. Furthermore, the MAGs could schedule within their Training Exercise and Employment Plan (TEEP) events that allow the MAG Commanders to exercise their assets. To reinforce this experience the Training and Readiness Manual could have a syllabus-training sortie dedicated to achieving a level of currency and proficiency at the MAG level. The ways and means for achieving this end are available, what is required is desire by our current and future commanders.

Chapter 1: ASSAULT HELICOPTER-BORNE OPERATIONS

Everything in war is very simple, but the simplest thing is difficult.
-Carl Von Clausewitz

INTRODUCTION

The Gulf War of 1991 provided a number of opportunities for Marine Corps rotary-wing assault assets to execute administrative as well as tactical tasks. Although in the minority, tactical missions included demonstrations off the coast of Kuwait and Iraq, maritime interdiction operations, and raids of offshore Kuwaiti and Iraqi islands. Most relevant to this paper, and Marine rotary wing operations, was the unique opportunity to execute a large helicopter-borne assault into Kuwait in order to establish a blocking position for penetrating ground forces. Titled Task Force (TF) X-ray, the plan envisioned the movement of three-combined anti-armor teams (CAATs), over two treacherous Iraqi made obstacle belts, by over fifty Marine helicopters. The helicopter assault support community was being given an opportunity to participate in the long anticipated ground offensive of Operation Desert Storm. This mission would be considered the pinnacle of operations for the assault support community during the Gulf War. Additionally, this mission would demonstrate, on a large scale, Marine Corps operational air mobility, a feat not seen since the days of the Vietnam War.

Unfortunately, friction played a significant role during the planning, briefing and execution of the mission, and ineffectiveness was the end result. What could have placed the assault support community at the peak of the proverbial mountaintop, resulted in driving it into the depths of the darkest Middle Eastern night. The aviation element of the assault force could not accomplish its mission, and to make matters worse there were two aircraft mishaps in the process. What went wrong, and how could this have happened?

This paper presents an analysis of the facts of the mission based mainly on primary sources of information; several participants of the operation are still active in the Marine Corps. When studying the operation a layman could immediately point out the obvious mistakes: key individuals did not assist in the planning, some participants did not attend the mission brief, and communication was poor at all levels. Although most participants were qualified to execute this mission, in some cases some were not current or as experienced as others. While always a factor, time played a minimal role as the planners had several days to prepare for the mission, with the first idea to execute such a mission having been discussed months prior to the actual mission. So how could Marine assault support prove itself so ineffective? The answer lies in the leadership exhibited during the days prior to and during the mission.

General Charles C. Krulak, Thirty-first Commandant of the United States Marine Corps, wrote

> "Marines have long recognized the unequivocal link between battlefield success and leadership. The Corps has therefore placed a premium on those qualities of character integral to effective and positive leadership and has strived to nurture them in all Marines. There is no higher compliment than to be called a leader of Marines. It is combat leadership that defines the Corps' ethos-its cherished core values of honor, courage, and commitment."[1]

The lack of effective and positive senior aviation leadership is what is in question the days leading up to and including the failed attempt of TF X-ray. There were many senior combat leaders out in the Saudi Arabian desert deliberating the mission of TF X-ray and exhibiting their influence. Woefully, the aviation element of TF X-ray did not have a senior commander from the MAG or MAW looking out for its interests. The planning process could have benefited numerous times from the interdiction of a senior aviation

[1] David H. Freedman., *Corps Business: The 30 Management Principles of the U.S. Marines* (New York: HarperCollins, 2000), ix.

commander to ensure the rotary wing assets were being employed properly, efficiently and safely. A senior aviation commander could have stepped in when it became apparent all aircrew were not receiving an adequate brief. During the execution, the command presence of a senior commander may have made a difference when disorder threatened the integrity of the mission, and the need for authority was critical to holding the flight together through adversity. As it stands a senior aviator did not step up to take command and control of the helicopter-borne assault. As a result, TF X-ray will go down in history as a setback, insignificant and trivial when compared to the overwhelming successes and exploitation of Iraqi defenses during the ground war. The Assault Support community has learned some of the valuable lessons taught that night, however the most significant factor remains untouched and unresponsive. The MAG commanders must resist the stagnation of tactical proficiency that results from their daily challenges and step up to the task of leading their assets when called upon to do so.

The mission requested of TF X-ray was neither outside their stated mission capabilities nor something new to the Marine Corps. In fact, the mission was the very reason why helicopters were introduced into the Marine Corps; a vehicle was needed to move Marines into combat faster, farther, and with less vulnerability - a critical requirement for forty years. This paper will discuss helicopter-borne operations and the events that took place the evening of 24 February 1991. It will then discuss the major factors that led to the ineffectiveness during planning, briefing and execution of the mission. The derived lessons learned from TF X-ray and how these lessons have impacted various sources of training and information will then be explored. Additionally, a discussion of what planning, briefing, and execution items should be remembered from

the experience. Finally, the paper will make the point that command and control is not coordination alone. What TF X-ray had for leadership that fateful night was individuals qualified and well suited for coordinating large helicopter-borne operations, but not for commanding them. The individuals that led this mission did not have the authority or command presence to lead the mission; that was reserved for the officer ultimately responsible for all the assets flying, and the one tasked with the mission by higher authority.

HISTORY

United States Marine Corps helicopter assault support assets are used in a variety of tactical and administrative missions. Tactical missions include helicopter-borne assaults to seize critical terrain, isolate pockets of enemy resistance, attack the enemy's flank and/or rear, or conduct raids or patrols. Administrative/logistic missions include supply or resupply of troops, movement of equipment, non-tactical movement of troops, messenger and liaison service, and casualty and prisoner of war evacuation.[2]

The development of the helicopter opened new avenues of approach for courses of action against the enemy, and served the Marine Corps well through the Korean War and into the Vietnam War. The Vietnam War has been commonly referred to as the "helicopter war" because of the active participation of rotary wing aircraft. Conducting helicopter-borne assaults became commonplace in the Marine Corps as exhibited by the long list of assaults accomplished in 1968:[3]

- Badger Tooth (26 Dec 67- 2 Jan 68). BLT 3/1 lifted by HMM-262.

[2] Department of the Navy, *Assault Support Helicopter Tactical Manual (U)*, NWP 55-9-ASH, Volume 1, (Washington DC: CNO, 1992), 1-1.
[3] Brigadier General Edwin H. Simmons, USMC (Ret.), *Marine Corps Operations in Vietnam, 1968*, 2d rev. ed. of *The Marines in Vietnam 1954-1973: An Anthology and Annotated Bibliography* (Washington DC: History and Museums Division Headquarters, U.S. Marine Corps, 1985), 119.

- Ballistic Armor (22-26 Jan 68). BLT 2/4 landed by HMM-361.
- Badger Catch (23-26 Jan 68). BLT 3/1 lifted by HMM-165.
- Fortress Attack (27 Jan 68). BLT 2/4 lifted by HMM-265.
- Swift Saber (7-14 Jun 68). BLT 3/1 lifted by HMM-164.
- Eager Yankee (9-16 Jul 68). BLT 2/7 lifted by HMM-265.
- Swift Play (23-24 Jul 68). BLT 2/7 lifted by HMM-265.
- Proud Hunter (18-21 Aug 68). BLT 2/26 lifted by HMM-362.
- Swift Pursuit (28 Aug-19 Sept 68). BLT 2/26 lifted by HMM-362.
- Eager Hunter (25 Oct 68). BLT 2/26 lifted by HMM-363.
- Daring Endeavor (10-17 Nov 68). BLT 2/7 lifted by HMM-165.
- Swift Move (20 Nov-9 Dec 68). BLT 2/7 lifted by HMM-165.
- Valiant Hunt I (15-26 Dec 68). BLT 2/26 lifted by HMM-362.

Joint operations were also taking place at the time, in an article written for U.S. Naval Institute Proceedings in October of 1963, Lieutenant Colonel (LtCol) Archie J. Clapp repeated from his diary:

"Wednesday, 18 July: The largest helicopter lift in Vietnam to date took place today in a landing with 5th Division troops north of Saigon. The Marines led with 18 helicopters, the U.S. Army came next with 12, and the Vietnamese Air Force followed with 11."[4]

Two days after this joint operation the first helicopter night troop lift in Vietnam was accomplished successfully.

Helicopter-borne assaults have been a part of the Marines repertoire of maneuvering for decades. Marines have years of experience executing day or night, large or small, opposed or unopposed operations. The techniques are proven. So why on the night of 24 February 1991, was TF X-ray unable to accomplish their mission? One must begin with the events that took place and then dissect the critical, individual events that led to the ineffectiveness.

TASK FORCE X-RAY

[4] Lieutenant Colonel Archie J. Clapp, USMC (Ret.), *Shu-Fly Diary*, 2d rev. ed. of *The Marines in Vietnam 1954-1973: An Anthology and Annotated Bibliography* (Washington DC: History and Museums Division Headquarters, U.S. Marine Corps, 1985), 21

Operation Desert Storm provided many opportunities for Marine tactical aviation (TACAIR) to flex its muscles against the Iraqi forces. Traditionally, when discussing Marine air power one immediately thinks of TACAIR, the F/A-18 and AV-8, and the firepower it brings to the battle. However, the element not often recognized when discussing air power is the maneuver capability provided to the Ground Combat Element (GCE) by assault support assets of the Air Combat Element (ACE). Operation Desert Storm provided one unique opportunity to the assault support community when Marine Aircraft Group (MAG) 16 was ordered to conduct a helicopter-borne lift of a reinforced company in order to protect the flank of a maneuvering ground Task Force (Papa Bear). Although considered fairly clear cut at the outset, it became considerably more challenging and difficult as friction infiltrated the plan.

TF X-ray was created during February of 1991 and was initially comprised of the fighting men from C Company, 1st Battalion, 3rd Marines. Designated as the helicopter-borne company for the battalion, they were well prepared for the duties bestowed on them. They had spent much time working and training with Marine Medium Helicopter Squadron 165 in Hawaii and had spent time in the Saudi Arabian desert planning for such contingencies during Desert Shield. Well versed in assault support operations, the company was uniquely qualified to execute the mission presented to them. 1st Battalion 3rd Marines was actually part of a larger Task Force during Desert Shield called Taro. TF Taro was comprised of 1st and 3rd Battalions of the 3rd Marines, 1st Battalion of 5th Marines, and 1st Battalion of 6th Marines. It was Task Force Taro's responsibility to train for a variety of missions, including helicopter-borne operations, while other Task Forces trained for heavy mechanized operations.

The idea of conducting a regimental size helicopter-borne mission into Kuwait was discussed as early as December 1990. The initial concepts delineated two waves of helicopters, carrying a battalion size force on each wave, over the formidable Iraqi obstacle belts and into Al Jaber airfield. The objective was to hold the airfield until mechanized forces from the south could penetrate the obstacle belts and rendezvous. The ability to displace over the obstacle belts quickly and efficiently by using assault support helicopters would give the GCE a distinct advantage, and avoid, to some extent, the vulnerability the obstacle belts posed. This mission never took place.

On 13 February 1991 TF X-ray received an order to conduct a helicopter-borne assault into Al Burqan oil field.

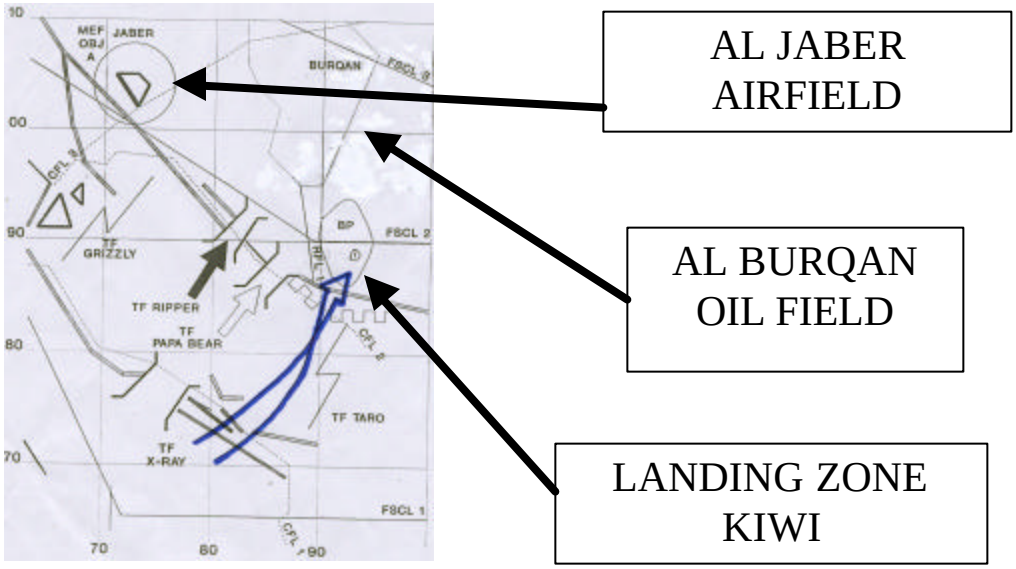

Figure 1. Al Burqan Oilfield in Kuwaiti Area of Operation.

The mission consisted of inserting a Battalion minus, in the daytime, into the vicinity of Al Burqan oil field in order to protect the division's right flank. The division wanted to reduce its vulnerability to attack if it was caught in an awkward position between obstacle belts. TF X-ray would provide the blocking force needed as the division breached the

second obstacle belt. An Artillery battalion would be positioned between the obstacle belts to support the landing of TF X-ray into landing zone (LZ) Kiwi.[5] As an "on order mission" TF X-ray would need to be prepared to launch on a moment's notice. The intentions were to have the inserted force in place four hours prior to TF Papa Bear breaching the second obstacle belt.

Planning for the mission was a challenge from the beginning due to the heavy employment of helicopters at the time and the low availability of assets. The desert environment was taking a toll on aircraft availability due to helicopter rotor blades and engines degrading from the abrasive effects of the sand. Nonetheless, the ACE (3rd MAW) first pledged 32 aircraft towards the mission, and later revised its estimate to 53 aircraft.[6] In any case this had a decisive impact on the planning for the ground scheme of maneuver of the GCE. Concerned with the limited helicopter support and the tactical situation once the forces were on the ground, the division staff deliberated on several courses of action to take. Two days prior to G-Day[7] the division staff decided its force mix for the operation and subsequently a confirmation brief was given. Three-combined anti-armor teams (CAATs) with a substantial headquarters section would make up TF X-ray: a total of 134 troops and 40 vehicles.[8]

Marine aviation assets began to assemble on 23 February, in all, 51 helicopters and several fixed-wing aircraft would participate in the mission. Every rotary wing

[5] The special instructions (SPINS) indicate LZ Kiwi to be located at 28 49.790N/47 59.232E.
[6] Major Christopher C. Conlin, USMC, "An Infantry Perspective on Task Force X-ray," *Marine Corps Gazette,* February 1996, 55.
[7] G-Day marked the day that ground troops would be committed to the war and the ground offensive would begin. This day also marked the day Task Force X-ray would be inserted into the vicinity of Al Burqan oil field. G-day for Desert Storm was 24 February 1991.
[8] Major Christopher C. Conlin, USMC, "An Infantry Perspective on Task Force X-ray," *Marine Corps Gazette,* February 1996, 55.

aircraft in the Marine Corps inventory (active and reserve) was represented at assembly area Sandy: CH-46E, CH-53D, CH-53E, AH-1W, AH-1J and UH-1N.

Figure 2. Assembly Area Sandy

An OV-10 would provide airborne tactical air coordination (TAC(A)) for close in air support in the objective area. Marine F/A-18s would also support the mission, providing close air support at night if required. The assignment of tasks for the rotary wing assets was typical of helicopter-borne operations, the attack assets would provide escort, and the medium and heavy lift assault assets would transport vehicles and personnel. There were a total of 33 assault aircraft transporting troops and vehicles. There were two varieties of vehicles transported inside the helicopters: the M-151 jeeps configured with heavy machine-gun and TOW mounts, and open back Toyota pick up trucks used for hauling supplies. Additionally, the M-105 trailers normally associated with the M-151 jeeps were also transported with the vehicle. Two UH-1N were configured as the command and control aircraft with an ASC-126 communications system installed in the cabin. The other 16 rotary wing aircraft provided escort to the assault flight.

Figure 3. M-151 inside CH-46E during TF X-ray.

A mission brief was conducted on 23 February at 1600, leading the air assault from the lead CH-46E, and the designated Air Mission Commander (AMC), was Lieutenant Colonel (LtCol) Marvin D. Hall, the squadron commander of HMM-165.[9] Assisting LtCol Hall from the command and control UH-1N was the airborne helicopter coordinator (HC (A)), Major (Maj) Raymond E. Schwartz. Maj Schwartz would be collocated with LtCol Michael V. Maloney, the overall mission commander and battalion commander for 1st battalion 3rd Marines. Maj Schwartz assisted with the mission brief and was considered a "trusted agent" by some of the pilots who had not participated in the planning[10]. His knowledge and experience was respected and judged to be sound. Unfortunately not all pilots participating in the mission attended the brief, due to the long lag time of tasking the various squadrons with the fragmentary order by higher headquarters and their ability to respond with the appropriate assets and personnel.[11]

[9] At the time AMC was a relatively new term. The term HC (A) and HTC were used for the mission. For TF X-ray LtCol Hall chose to fly in the lead CH-46 as a Helicopter Transport Commander (HTC). Ultimately, LtCol Hall chose to exert his authority as AMC from the HTC position.
[10] LtCol Preble, USMC, Executive Officer HMM-264, MCAS New River, North Carolina, telephone interview by the author, 05 April 2001.
[11] In review of a recorded audiocassette tape of the brief aircraft are often heard drowning out the briefer as they land in Assembly Area Sandy.

Concluded in the early evening, the mission brief would be reviewed and reinforced by flight leaders in the dark, under flashlights.

The mission brief covered the essentials of who, what, when and why, normally found in combined arms mission briefs. The AMC's brief was considered adequate by some, and lacking in detail by others. One of the most critical items discussed during the brief for the ACE was the "go/no-go" criterion. Go/no-go criteria are critical determinants that signify the minimum requirements to accomplish the mission. Based on these determinants the mission would be executed, delayed or scrubbed. In this case there were four go/no-go criteria:[12]

1- the mission must launch prior to 1645 to avoid a night insert.
2- sixty minutes of notice must be given prior to launch to coordinate all the fire support agencies participating.
3- all aircraft must be loaded and staged by H-hour[13] on G-day.
4- if the primary LZ was untenable the force would be inserted into a LZ on the friendly side of the second breach.

On G-day TF X-ray stood by patiently as the 1st Marine Division (MARDIV) progressed through their scheme of maneuver. The aircrewmen remained poised to configure into MOPP (Mission Oriented Protective Posture) level III in order to minimize the time it took to man the aircraft.[14] Generally fatiguing, the protective equipment must have tired the aircrewmen to some extent because they wore it throughout the day and into the night mission. It was generally thought that TF X-ray would be inserted by mid afternoon. By 1205 TF Papa Bear was through the first obstacle belt and preparing for

[12] Major Christopher C. Conlin, USMC, "An Infantry Perspective on Task Force X-ray," *Marine Corps Gazette*, February 1996, 56.
[13] H-hour is the specific time at which an operation commences or is due to commence. For this particular mission H-hour was 1740 24 February 1991 and was marked by the launching of the first AH-1W aircraft escort and the UH-1N command and control aircraft.
[14] MOPP-III indicates nuclear, chemical and biological protective gear is worn including the AR-5 mask, the only equipment not worn are the protective gloves. TF X-ray aircrews were warned of a possible chemical attack during the ground offensive.

enemy reaction; TF X-ray was given its first warning that a launch was eminent. The brevity word "Huddle" signified that the assault force was 60 minutes from being launched on the mission. TF X-ray received a call "6-0 minutes until Huddle." A poorly created execution checklist and the improper use of the checklist caused some initial confusion, however, after some more clarification it was determined that TF X-ray would continue to standby.[15] At approximately 1515 the code word "Huddle" was received, a white star cluster was dispensed signifying all involved to begin initial steps for flight operations.[16] 1st MARDIV headquarters was then required to send the next brevity code "Snap" which signified that the helicopter assault could begin. Unfortunately, after some delay, a call was received (1630) asking if "Snap" could be executed at 1730. If launched at 1730 the mission would be executed under darkness, and the aircrews were unprepared to execute such a mission, thus the intent of the go/no-go criteria.[17] The mission commander gave a negative response, however 1st MARDIV insisted that the assault would need to be executed at 1730. TF Papa Bear had already breached the second obstacle belt and was now moving into the vicinity of LZ Kiwi.[18] TF X-ray was required to relieve TF Papa Bear so they could stay on their timeline and continue the attack into Al Jaber airfield.

Hesitant to execute the mission at night for a number of reasons, LtCol Hall contacted the Helicopter Tactical Air Command Center (HTACC)[19] to see if they agreed

[15] The execution checklist is used when operating under emission control constraints and is used to reduce voice transmission time. The execution checklist for this operation was crude and lacked information necessary to make it effective (Appendix A).
[16] This included putting on the AR-5 protective mask.
[17] Aircrewmen believed this mission would not be launched at night under any circumstances. The ability to conduct training in the Saudi desert prevented NVG proficiency from being established.
[18] This was a key change in the mission that was not adequately explained to the participants.
[19] As the rotary wing MAGs were forward deployed to Lonesome Dove, the need to command and control these assets was identified. Of concern was the ability to coordinate the Air Tasking Order. The HTACC is

with the idea of assaulting the objective at night. A short time later, he received a garbled response indicating the mission was to continue. It is debatable today whether the message was interpreted correctly on the heavily trafficked communications net that night. There were many inherent dangers to executing this mission, and many did not involve the enemy. All of the aircrew understood that this would be their biggest challenge of the war and, although concerned, they would not allow the circumstances prevent them from executing as ordered. Marine bravado would take over despite what some might consider poor judgment.

At 1700 the key players gathered and LtCol Hall explained it would be an NVG mission and no AR-5 Gas Masks would be worn. By 1740 four AH-1Ws picked up from the assembly area and provided path finding and reconnaissance to the flight. Immediately following the AH-1Ws was the command and control UH-1N. For the assault force, the first casualty of the mission was realized when a CH-46E, from the fourth flight (HMM-161), rolled over on its side. At maximum gross weight and contending with a tail wind the aircraft was a victim of a brown out condition. Additionally, a CH-46E from the first flight (HMM-165) was left in the assembly area with an Auxiliary Power Unit (APU) problem. Continuing with the mission, the flight contacted the appropriate agencies and pressed forward to make the designated L-hour.[20] Flight conditions were marginal at best as the sun continued to set behind the flight, making NVG use difficult, additionally the light from the burning oil wells reduced NVG

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a concept held over from the Vietnam War. It is not a part of the doctrinal command and control structure. H&HS–28 Det manned the HTACC for the Assistant Wing Commander Brigadier General Amos and his staff. The HTACC's capability to effectively command and control was extremely degraded because of unreliable equipment. Situational awareness between the HTACC, TACC and DASC was limited.

[20] L-hour is the time at which the first helicopter of the helicopter-borne assault wave touches down in the landing zone.

visibility significantly. The flight had launched at the worst possible time for NVG use (Figure 4).

The command and control aircraft had the benefit of the AN/ASC-26 communication package and could monitor three secured frequencies. TF Papa Bear had set up terminal guidance for the flight in LZ Kiwi and had relayed that information over the radio to the mission commander. Ten minutes prior to L-hour the command and control aircraft monitored a call that enemy artillery was impacting in the vicinity of the oil fires and that TF Papa Bear was engaging the enemy to the north of its position. Reconnoitering while on the ingress route, the AH-1W aircraft confirmed activity west of the objective area and stated area looked "Hot."[21] Soon after a radio call was heard that a CH-46E was overflying the lead AH-1W. The mission commanders in the command and control UH-1N had verified the friendly and enemy fires but before they could take any action they had begun to lose control of the flight. Anxious, because he has already lost an aircraft and does not want to lead his flight into a head to head collision with the AH-1Ws, LtCol Underwood, the 4th Flight Leader, demands action by the HC (A) and HTC.[22] Discussions immediately take place and recommendations for aborts can be heard over the radios. Instantly, panic strikes the formation of aircraft as poor visibility, anxiety over the LZ hot call, and thoughts of a possible mid-air collision, take their tolls. Disoriented, it is believed the AH-1W have turned back towards the larger formation of assault aircraft and has actually under flown the assault aircraft as they transit to LZ

[21] The term "hot" is a brevity code meaning a landing zone is considered to be hostile with enemy personnel or fires.
[22] LtCol Underwood's statement is thought to be intimidating and threatening.

Kiwi.[23] Pandemonium set in as the flight of 51 aircraft executed an unplanned scatter.[24] Attempts to control the situation were forgone; by the request of Maj Schwartz, and concurrence of the AMC, Maj Schwartz transmitted the abort call.[25] It was about this time that the lead CH-46 flew over the lighted inverted crow's foot illuminating LZ Kiwi.[26]

The egress from the area grew more confusing and unmanageable by the minute; as flight leaders took control of their flights it was easily overwhelming for anyone exercising control or authority. Each division[27] of aircraft had taken individual command and control of itself and had acted to prevent any mid-air collisions from occurring. Upon return, the Air Traffic Control personnel were easily overwhelmed when numerous aircraft returned without any sequencing or controllable separation.[28] Some aircraft were able to land at Lonesome Dove (Figure 5). However, the confusion had many landing in any available area out in the desert. The second casualty of the operation occurred when a CH-53D (HMH-462) crushed its forward landing gear attempting to land at Lonesome Dove. Fortunately, only minor injuries occurred to the passengers and crew of both mishap aircraft that night.

[23] LtCol Culp, USMC, Operations Officer VMMT-204, MCAS New River, North Carolina, interview by the author, 02 February 2001.
[24] The scatter plan is a prebriefed aircraft formation breakup and rendezvous plan.
[25] It is important to note at this time for the purposes of situational awareness that Maj Schwartz, not the AMC LtCol Hall, initiated the request for abort.
[26] LtCol Culp, USMC, Operations Officer VMMT-204, MCAS New River, North Carolina, interview by the author, 02 February 2001.
[27] Three or four aircraft make up a division.
[28] In an interview with Maj Jim Armstrong, Air Traffic Control (ATC) Officer, at Lonesome Dove the ATC personnel were unable to see or track the aircraft because they did not have NVGs, and the radar used for tracking aircraft was disabled due to emission control procedures.

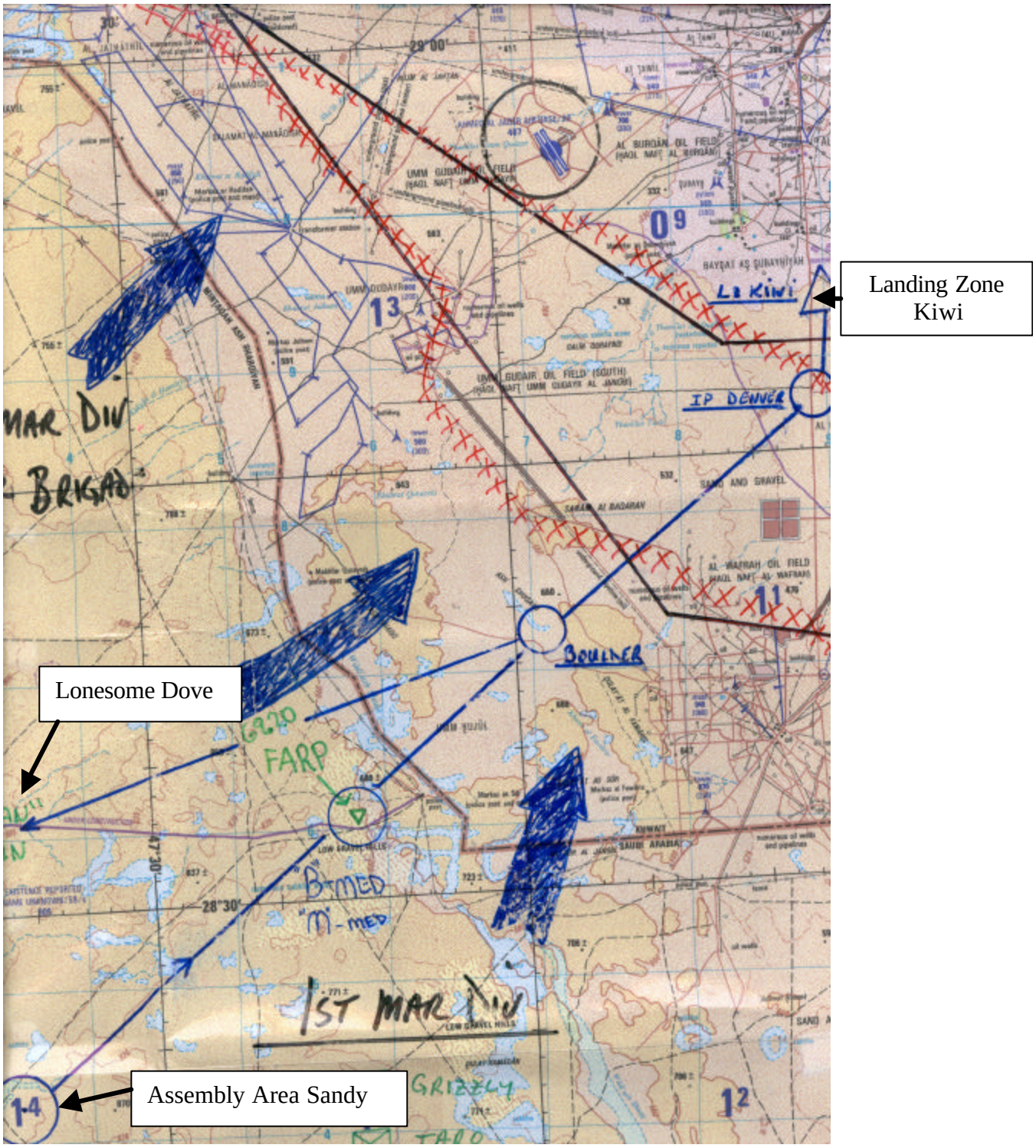

Figure 4. Route planning map.

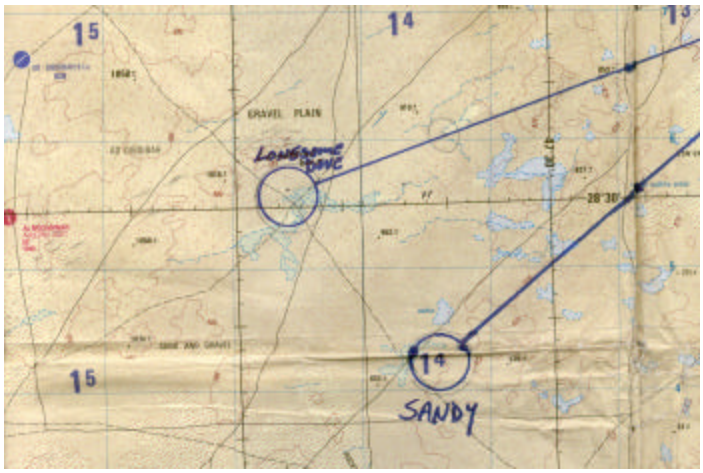

Figure 5. Lonesome Dove and Assembly Area Sandy

Unaware of what had taken place a few hours earlier the 1st MARDIV asked TF X-ray to launch again at 0400 that morning (25th of February). Aircraft were scattered throughout the operating area, there would be no way to reconstitute the flight for a dawn launch. Additionally, having been in MOPP-II equipment since 0600 in the morning, and flying the death defying mission earlier, pilots were in no condition to execute at the break of dawn. The next morning other priorities drew the escort aircraft away from the assault force, requiring a reconstitution of the flight, and a new plan and brief to be developed. A smaller flight of 30 aircraft was created and launched at 1200 on the 25th with success. This was more an administrative movement than a tactical lift because TF Papa Bear had already departed the vicinity of LZ Kiwi and was prosecuting the battle a few miles to the north.[29] The area had been cleared of the enemy.

[29] Maj Rodgers, USMC, Student Command and Staff College, MCB Quantico, Virginia, interview by the author, 10 Feburary 2001.

Chapter 2: WHAT WENT WRONG?

Responsibility and authority are two key elements of command. While a commander retains full responsibility for all aspects of his command, he may delegate authority to air mission commanders for accomplishment of specific missions. However, delegation of authority does not relieve the commander of responsibility.
-NWP 55-9-ASH, Vol. I (REV.F)

PLANNING

On 15 February 1991, 1st MARDIV, led by Major General James M. Myatt, requested assets for a helicopter-borne mission to conduct a battalion size troop lift from Major General Royal N. Moore, Commanding General of the 3rd Marine Aircraft Wing (MAW). The warning order was given to MAG-16, led by Colonel Lawrence T. Garrett. MAG-16 subsequently reassigned the Warning Order to HMM-165. Upon receipt of the order HMM-165 immediately began the planning process and preparation for the upcoming briefs. The briefing schedule was as follows:

19 February	Concept of Employment Brief	1st MARDIV
21 February	Concept of Operations Brief	MAG-16 CO
21 February	Confirmation Brief	1st MARDIV/ CG I MEF
23 February	Mission Brief	Participants
24 February	G-Day	

The designation of HMM-165 as the AMC[30] is puzzling given the fact that HMM-165 was under operational control (OPCON) of MAG-16 and not a part of its normal organization.[31] One would believe that the Commanding Officer (CO) of MAG-16, responsible for the mission, would select a squadron of its parent group to lead such a dynamic and significant mission. Given that the final organization of the TF X-ray flight

[30] The Air Mission Commander (AMC) is a qualified naval aviator or naval flight officer, he is designated when separate aircraft formations, each led by its own formation leader, are required for a common support mission or whenever a formation of four or more aircraft must perform a multiple sortie mission. The air mission commander shall direct a coordinated plan of action and shall be responsible for the effectiveness of the mission.
[31] Department of the Navy, MCRP 5-12D Organization of Marine Corps Forces (Washington, DC: HDQTR USMC, 1998), 3-6.

was a conglomerate of every shore-based unit in the area of operation (AO), it would seem logical that MAG-16 would select a squadron it had direct supervision over prior to Operations Desert Shield and Storm. Undoubtedly MAG-16 must have been postured to support the casualty evacuation (CASEVAC) missions the Commanders were concerned with at the time; a high rate of casualties was anticipated by the ground force commanders and so a large emphasis was placed on having aircraft ready for CASEVAC missions. One can only assume that the preparation for the CASEVAC missions and logistic missions must have taken away from the emphasis of the TF X-ray troop lift.[32]

Squadron	Marine Air Group	Marine Air Wing
HMM-161	16	3rd
HMM-165	24	1st
HMM-261	26	2nd
HMM-266	26	2nd
HMM-774	46	4th
HMH-462	16	3rd
HMH-465	16	3rd
HMH-466	16	3rd
HMH-772	49	4th
HMLA-367	39	3rd
HMLA-369	39	3rd
HMA-775	46	4th

Table 1. Table of TF X-ray Aviation Units

Table One delineates the squadrons that participated in TF X-ray, and their parent MAG during garrison.

Oddly enough there was no MAG-16 headquarters representation during any of the planning. HMM-165 was left on its own to coordinate and control over fifty aircraft

[32] Lieutenant Colonel Charles H. Cureton, *US Marines in the Persian Gulf with the 1st Marine Division in Desert Shield and Desert Storm* (Washington DC: History and Museums Division Headquarters, U.S. Marine Corps, 1993), 67.

provided from four different MAGs.[33] It would seem that conducting the largest helicopter-borne troop lift since the Vietnam War would certainly draw interest from those in charge, and especially from those ultimately responsible for the mission. A mission of this magnitude and complexity would rate the attention of the MAG Commander or one of his senior staff officers, if not to command the mission, then to at least assist in its planning. The authority of the MAG CO or one of his staff officers would hold greater weight during the coordination process, especially during time of crisis when influence could help smooth out adversity. The ability of a senior staff officer to utilize his experience and knowledge to intervene when necessary, or to escalate issues to the next level of command to facilitate mission success cannot be overlooked. This was most evident when the go/no-go criterion was disregarded and the flight was directed to execute. The lack of senior command and authority during the planning process played a significant role in the ineffectiveness of TF X-ray.

A rehearsal of the TF X-ray mission was discussed, however it was never designated a priority. As early as December of 1990, 1st Battalion 3rd Marines submitted a request for a battalion size troop lift rehearsal without success.[34] The demand for helicopter support for logistics movements and CASEVAC missions kept the aircraft gainfully employed. A couple of company-size airborne raids were executed for training but these operations were limited to eight or less aircraft. Nevertheless, these operations pointed to a need for a common standard operating procedure (SOP) to be created between helicopter units to ensure safe and sound operations. Although the MAW had

[33] Brigadier General Garrett felt that once he had designated LtCol Hall to lead the mission there was no need to designate anyone else in the MAG. LtCol Hall essentially became a MAG-16 headquarters representative. Additionally the MAG was heavily tasked at the time and had no one to spare.
[34] LtCol Conlin, USMC, EWTGPAC, Coronado, California, telephone interview by the author, 12 Mar 01.

developed a generic SOP, a detailed rotary wing SOP never materialized. The first time fifty-one helicopters, from several different squadrons, would fly as one flight and integrate together would be the night of 24 February: G-day. To execute this mission without a rehearsal lacked poor judgment by the operators, and was irresponsible of the senior leadership.

The formulation of go/no-go criteria is sound and makes sense from an operator's perspective. However, in time of conflict it is naive to believe that a commander would not execute a mission, unless of course he is put in an in-extremis situation where he had no choice but to cancel or delay the mission. The key word here is "in-extremis," a condition where an extreme predicament has been encountered and execution of the mission would endanger the fighting force excessively. The demands of an actual dynamic engagement between two forces require maximum flexibility in order to ensure success. In the case of TF X-ray the four go/no-go criteria were little more than robust coordinating instructions, not the in-extremis situations go/no-go criteria are supposed to represent.[35] The relevancy of go/no-go criteria must be questioned in time of conflict, and set not by the operators, but by those who will make the ultimate decision whether to execute or not execute - the senior leadership.

Command and control was also an issue within the flight. As stated earlier LtCol Hall was designated the overall air mission commander. However instead of occupying a command and control (C&C) position in the C&C UH-1N across from the overall mission commander, LtCol Maloney, he chose to fly in the pilot seat of the lead CH-46. He tasked one of his squadron's Weapons and Tactics Instructors (WTI), Maj Schwartz,

[35] Avoiding a night launch has some validity, the aircrew lacked proficiency and currency, had no rehearsal, and did not brief. However the fact that they did launch demonstrates that it was not a no-go.

to occupy the seat in the C&C UH-1N. Although considered to be a minor point of distinction, the implications of such a move is critical to the events of the mission. The ability to converse and deliberate courses of action between the two mission commanders, as the mission unfolded, did not exist. Integration between the GCE and ACE was at its worst in this situation; the two people in charge of ensuring the successful accomplishment of the mission were miles apart in two different aircraft. Additionally, LtCol Hall was now in command of a large composite flight of aircraft; his ability to keep situational awareness and control of his flight was seriously hindered while sitting in the front seat of the lead CH-46E. His poor situational awareness is illustrated by the fact that once in the air he had no knowledge that he had lost integrity of his flight when a CH-46E rolled over on takeoff in the assembly area.[36]

Furthermore, the extra radio transmissions required between Maj Schwartz and LtCol Hall caused two critical factors to happen. The first concerned the additional message traffic between the two on an already taxed radio frequency. Every pilot interviewed mentioned the alarming amount of radio traffic on the mission frequency that evening. The second, and more critical issue, was the suspicion raised among the flight members to the confidence, control, and situational awareness their air mission commander possessed over the situation. Anxiety and tensions were so high that LtCol Underwood, flight leader of the fourth flight, and executive officer of HMM-161, concerned with his flight entering a hazardous area issued a statement asking what the HC(A) was going to do in light of the CH-46E and AH-1W flights intermingling. This statement sounded more like an ultimatum than a question, which made a pressure filled

[36]LtCol Culp, USMC, Operations Officer VMMT-204, MCAS New River, North Carolina, interview by the author, 02 April 2001.

situation even worse. After receiving the abort call, LtCol Underwood scattered his flight, however it is still questionable whether there was a need to do so. Somehow, aborting the mission translated into individual flight leaders panicking and scattering their flight formations in confusion. All helicopters were briefed to return to Lonesome Dove for refueling.[37] How returning as individual divisions would be easier or safer than returning as a coordinated flight is to be debated. Once again the question of who was in command, in control and in authority of the flight is suspect.

The MAW and MAG senior leadership could delegate authority of this mission but ultimately the responsibility for the mission was theirs to ensure its success. When the senior aviation leadership did not take its justifiable position to command this mission, critical decisions (and authority) that could have prevented the ineffectiveness of the ACE during TF X-ray were not made. Thus we have a breakdown in priorities during the planning phase, with no rehearsal taking place, poor go/no-go criteria, and a misplacement of leadership and roles between the HC (A) and HTC. Leading to an even more detrimental situation where the mission commander and air mission commander have little to no direct communication to deliberate the fate of their forces because they are physically located in two separate aircraft.

BRIEFING

Properly issued and applied, the commander's intent will lead to unity of effort throughout planning, briefing, and execution. MCWP 5-1 defines commander's intent as:

> The commander's personal expression of the purpose of the operation. It must be clear, concise, and easily understood. It may also include how a commander envisions achieving a decision as well as the conditions that, when satisfied, accomplish the purpose.

[37] Clearly stated on the timeline given to participants in the mission brief, see appendix B..

The commander's intent was not clearly defined for TF X-ray. Major General Myatt's vision for achieving mission success was not conveyed to the planners of TF X-ray, and thus a significant change was made during the concept of employment brief. Instead of executing the mission in multiple waves of aircraft, Major General Myatt wanted one single wave of troops and equipment. This last minute change added more strain to an already challenging situation. In order to support his field commander, Lieutenant General Boomer ordered 2nd MAW assets to assist in the troop lift. Ninety aircraft were originally needed to lift 1st MARDIV's original plans; however, recognizing the MAW's predicament the Division needed to refine the plan. This caused General Myatt to alter his plan several times, forcing him to finally settle on inserting the CAAT force instead of C company infantrymen.[38] These late changes in the brief, and intent, justify even more the need for a senior aviator to take control of the situation and demand the resources and time required to minimize the impact of changes on the rotary-wing flight.

Prior to the confirmation brief a concept of operations brief was given to the MAG-16 CO. No changes were recommended. During the confirmation brief the four go/no-go criteria were also briefed and not challenged by the senior leadership of the GCE or ACE. Unfortunately, when the senior leadership did not question the criteria the operators assumed that the criteria were valid, and required no further discussion. The confirmation brief is the opportunity during the planning process to ensure all the operators are executing from the same plan, and are in tune with the intent of the mission.

[38] Changing the mission from an infantry assault to an anti-armor movement caused several changes to the plan. The first concerned the lifting requirements of the CH-46; many were at the limits or had exceeded maximum gross weight by carrying the TOW mounted and heavy machine-gun mounted M-151vehicle. Additionally, inserting and extracting the vehicle from the cabin of the CH-46 was not a swift evolution, it took time to ensure the vehicle or aircraft were not damaged. All the vehicles were required to "breakdown," because they stood to high inside the cabin of the CH-46E. .

The operators were rudely awakened from their assumption the go/no-go were valid, and would be honored, when they were told to launch immediately as darkness fell. Woefully unprepared and caught off guard the assault flight was unsettled by the thoughts of executing the mission at night. Once again, had there been senior leadership for the assault force this situation could have been prevented early in the process. Either the go/no-go criteria could have been better defined in the mission brief or the assault force could have been told that the criteria was invalid and that they must be prepared to execute on order. Regardless, a senior aviator, in tune with the mission planning from the beginning, could question the judgment of those dictating the execution of the mission, or could delay the execution to give the operators a chance to brief and prepare for the challenge ahead.

The Marine Corps helicopter assault community was in its infancy in regard to night vision goggle (NVG) flying in the early 1990s. Although progress was quickly being made in developing a comfort level with NVG flying, most Marine Corps helicopters aircrew were just becoming familiar with the first true NVGs for aviators: ANVIS –6. The need to conduct an extensive brief covering flight procedure with the NVGS was essential. To conduct a mission of over fifty aircraft, from different squadrons, at sunset, on NVGs would be a highly challenging evolution requiring maximum coordination. The brief would require more than the few minutes Task Force X-ray was given prior to launch.

Additionally, the circumstances and environment were lacking for an informative, well-coordinated air mission commander's brief. This was evident by the lack of

participation of some aircrews at the AMC's mission brief.[39] The summation of the events leading to the execution, and the addition of conducting the mission on NVGs, resulted in a weak understanding of the basics in a flight brief.[40] It is questionable today whether the AH-1Ws should have called a "hot" objective area, because the criteria was not clear in the brief of what constituted a "hot" area. Additionally it is debatable whether the LZ was "hot" at all. Research of the command log for the evening of the 24th revealed TF Papa Bear no significant encounters since 1615 earlier that day. At 1800 TF X-ray was observed in the area and had departed without landing. A firefight was occurring at the time of the insert, but what is unclear and cannot be supported is whether it truly was a threat to the flight of aircraft. In discussions with participants the fires could be seen but most were at a distance and not directed to the flight. Also discouraging to find is the fact that the lead CH-46E flight flew right over the landing LZ and could have landed. No enemy rounds impacted any of the aircraft; no friendly aircraft fired a round in self-defense.

A scatter plan was not covered because it was thought a flight of 51 aircraft would not scatter.[41] Other flight procedures were briefed; however, members of the flight have questioned the soundness of the procedures. The mass confusion and the major scattering of aircraft to different airfields is evidence that if there was a plan it was not going to be

[39] LtCol Culp stated they did not know which squadrons would participate in the assault before the confirmation brief. The late arrival of aircraft to AA Sandy caused additional consternation within the flight.
[40] Confusion still permeates today with flight members of HMM-266 and HMM-261 to which division was second and third in the first flight that evening.
[41] Col Schwartz, USMC, Aviation Plans and Policies HQ Marine Corps, interview by the author, 02 April 2001

executed. Additionally, overwhelming of the air traffic control personnel at Lonesome Dove demonstrates the poor coordination and poor planning on the return.[42]

It is clearly recognized that a senior commander was needed, involved and active, for this mission. Whether ensuring the commander's intent was being followed to preclude major changes during the brief, or to validate go/no-go criteria and ensure all involved are committed to them, the respect and authority a senior commander would bring to the mission cannot be overlooked. A senior commander who understood and had experienced the piecemeal process of getting the helicopter flight together, and the poor coordination resulting from the flight briefs, would have at the very least delayed the mission if not have canceled it all together. LtCol Hall and Maj Schwartz were well qualified to plan this mission, but they could only function as coordinators. To correct the factors that made TF X-ray ineffective required the presence of a commander- the MAG commander. Task Force X-ray failed before it ever got off the ground.

EXECUTION

Upon receiving the word to launch the assault, LtCol Hall immediately attempted to clarify the situation to his senior leaders in the HTACC; his apprehension with the mission went unheard. Who replied from the HTACC, whether it was General Amos or one of his staff members, is unknown, and what exactly was transmitted is also ambiguous.[43] However the fact of the matter is that LtCol Hall understood during the weak, radio relayed transmission, that he was to launch his flight immediately.[44]

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[42] In an interview with Maj Armstrong the lay-out and procedures at Lonesome Dove was not conducive to multi-aircraft operations. Additionally the ATC personnel were unaware that the flight had taken off so they were unprepared for the onslaught of traffic.

[43] They did not have direct communications with the HTACC. The AMC needed to relay through the Direct Air Support Center (DASC) to transmit and receive a message.

[44] In an interview with Col Schwartz he said the response was "HTACC passes, Negative."

Normally a member of the mission planning staff who has participated in the planning phase of the mission is positioned in a control center like the HTACC. This facilitates smoother and more efficient operations in the HTACC because someone has situational awareness of the events taking place, and goals of the mission. This was not the case for TF X-ray, in fact it is believed that no one in the HTACC was familiar with the events taking place with TF X-ray and had no concept of the go/no-go criteria. The essence of LtCol Hall's message to the HTACC was not understood.

What was the urgency to launch the mission? TF X-ray had been originally established in order to provide a blocking force for TF Papa Bear. TF Papa Bear at this point in time had already completed its breach of the two Iraqi obstacle belts and had established itself in landing zone Kiwi. TF Papa Bear was going to be providing terminal guidance and security for the helicopter-borne force. TF X-ray's mission had evolved and changed from a blocking force to a relief on station. TF X-ray was tasked with relieving TF Papa Bear so they could reconsolidate and prepare for the follow on assault to Al Jaber airfield. There was no urgency to execute this mission, and there was no longer a need to execute such a large airborne assault package.

However, TF X-ray never made this distinction. LtCol Hall was given questionable guidance, and not informed of the events as they were unfolding, nor what new role his airborne force was playing. The lack of effective communications seriously hampered the mission.[45] There was time to gather the flight leaders and pilots, and revisit the brief. A solid, less daring plan could have been formulated to reduce risk and decrease vulnerability to TF X-ray. Nonetheless, this points again to the lack of support

[45] Throughout the planning, briefing, and execution the lack of secure communications hampered the mission.

the participants of TF X-ray received and the value of having someone in charge in the HTACC or at the 1st MARDIV headquarters, senior in rank, keeping situational awareness, and coordinating issues as the mission progressed.

Once the flight commenced, LtCol Hall's situational awareness and attention were not where they needed to be as an AMC. Between the setting sun, the burning oil wells, and the layer of black soot in the air, visibility was extremely poor. Likewise, the fifth flight of escort aircraft (UH-1N) was also challenged with the CH-53Ds in the flight. Apparently the CH-53D division of aircraft arrived without NVGs. Executing the mission unaided, they kept their anti-collision lights on to the dismay of the UH-1Ns. Additionally, an engagement was taking place between ground forces, intensifying the situation. It is safe to assume LtCol Hall, the AMC and pilot at the controls of the lead CH-46E, was more concerned with flying his aircraft than commanding a flight of over fifty aircraft. Meanwhile, Maj Schwartz, the HC (A), in back of the C&C UH-1N, overwhelmed by the intensity of the mission, was attempting to keep his situational awareness high as the mission proceeded.

The way this mission was executed leads us to believe there were some fundamental differences on how missions were executed in 1991 and how Marine rotary wing trains today. Has TF X-ray had an effect on our tactics, techniques or training procedures? The next chapter will examine this issue.

Chapter 3: DO THE LESSONS ENDURE?

But in war, as in life generally, all parts of a whole are interconnected and thus the effects produced, however small their cause, must influence all subsequent military operations and modify their final outcome to some degree, however slight.
- Carl Von Clausewitz

HTC and HC (A) vs. AMC and AFL

The Helicopter Transport Commander (HTC) normally flew in the lead transport helicopter (CH-46 and CH-53), and was typically a billet held by the squadron commander, or his designated representative for a mission. Customarily the assault helicopters are the focus of effort when Marines are being carried onboard the aircraft, whether administratively or tactically. Because of this the assault helicopter pilots would lead and command most missions to insert or extract troops. This allows assault squadron commanders to lead their squadrons from the cockpit of their designated aircraft.

The Helicopter Coordinator (Airborne) (HC (A)) was used when large mixed flights of helicopters (both transport and escort) were required to accomplish a mission. The billet regularly entailed flying as a passenger in the back of a command and control aircraft, such as a UH-1, with a robust communication system. This situation allowed the ground commander, fire support coordinator and air commander to interact and discuss issues as they came up during the mission. The disadvantage from a pilot's perspective is the fact that situational awareness is not as good riding as a passenger as it is manning a pilot's seat in the cockpit. The advantage is a pilot does not have to worry about piloting an aircraft and can concentrate on the task at hand: commanding the air portion of the mission. Although an invaluable position for commanding a mission, it is often avoided by pilots.

In 1991 the assault community was making a transition from this old method of command and control to a new concept. Although a subtle change, because the actual manning positions did not alter, the names of the billets were modified. The HTC now became the Transport Flight Leader[46] (TFL) and the HC (A) became the Air Mission Commander (AMC). This was done to give the position of HC (A) more authority, instead of being just a "coordinator" the position would hold a "commander's" status. It was thought that by weighing the position more with an authoritative title it would emphasize the importance of the billet and the need for command presence.

The new concept was not well accepted and did not hold the emphasis it holds today. Unfortunately, many commanders were of the old school and did not acknowledge the new concept, which was the case in TF X-ray and answers the question of why LtCol Hall felt more comfortable flying in the lead CH-46E and Maj Schwartz was positioned in the C&C UH-1N. TF X-ray reinforces how relevant the change was from HC (A) to AMC, and how critical it could be in the future.

MARINE AVIATION WEAPONS AND TACTICS SQUADRON- ONE

Marine Aviation Weapons and Tactics Squadron - One (MAWTS-1) is a unique organization providing graduate level aviation training to the Fleet Marine Forces (FMF). Their charter is to certify selected Marine Aircrewmen and Aviation Support personnel for tactical instructor level flight and ground designations. Although they support the fleet in a number of ways, their main emphasis is conducting a biannual Weapons and Tactics Course. The development and subsequent graduation of the Weapons and Tactics Instructor (WTI) is by far their greatest achievement. Upon graduation the WTI is tasked

[46] TFL eventually changed to Assault Flight Leader (AFL) to give the position a tactical flavor over an administrative quality.

to return to his or her organization and instruct the rest of the unit on training, planning, briefing, and executing major air operations. MAWTS-1 is often described as the organization that "trains the trainers." TF X-ray had a number of pilots with the WTI certification/designation participating in the mission.

Currently the curriculum at MAWTS-1, during the WTI course, supports instruction on large (20+ aircraft) helicopter-borne movements. The students are given a variety of classes on planning and briefing, emphasizing Intelligence Preparation of the Battlefield (IPB), the Marine Corps Planning Process (MCPP), Rapid Response Planning Process (R2P2) and Objective Area Planning. Additionally they are given mission planning demonstrations, and are instructed on techniques that have been tested and proven to be effective in the field. Students are also instructed on techniques that have proven to be ineffective. Once complete with ground school the students are allowed to plan, brief and execute their own flying missions[47].

The WTI course presents a unique opportunity for aviation to execute large Marine Expeditionary Brigade (MEB) type exercises vice the traditional Marine Expeditionary Unit (MEU) operations the students are normally accustomed to in the fleet. It also presents the opportunity to exercise the command and control billet of the Tactical Air Commander (TAC).[48] MAWTS-1 often invites senior aviators/commanders to participate as TAC during the major missions. Unfortunately, command and control for these guest TACs is often scripted and only takes place from the confines of the

[47] Maj McCoy, USMC, Rotary Wing Department Head, MAWTS-1, MCAS Yuma, Arizona, telephone interview by the author, 29 February 2001.

[48] The TAC directs and controls tactical air operations and coordinates such air operations with the other services. He positions himself in the Tactical Air Command Center (TACC). The TACC is the principal United States Marine Corps air operation installation from which aircraft and air warning functions of tactical air operations are directed.

Tactical Air Command Center (TACC). Guest TACs have never been given the opportunity to exercise command and control from the cabin of a flying aircraft, where they could be closer to the actions of the mission. MAWTS-1 does this in order to give students more opportunities at commanding and controlling large numbers of aircraft.

Overall, MAWTS-1 has attempted to incorporate the lessons learned from TF X-ray, although it has been difficult since very little has been published on the subject. Recently they have invited LtCol Christopher C. Conlin to talk to the GCE and rotary wing assault community about TF X-ray. LtCol Conlin, then Captain Conlin, was a participant of the mission: riding in the back of the C&C aircraft with LtCol Maloney and Major Schwartz. The drive to pass on the lessons learned from TF X-ray remains high for the time being in those who train the trainers. Unfortunately those lessons will fade as time passes on and more individuals familiar with the operation progress to other endeavors.

MARINE AIR GROUP AND SQUADRON TRAINING

Currently MAG-16 conducts a yearly training operation that attempts to exercise its assets called “Sea Horse Wind.” This is a Training and Employment Exercise Plan (TEEP) event that strives to launch 60 aircraft but manages something less due to budget constraints and aircraft maintenance. The exercise has one main objective: to exercise the OPLAN. The MAG endeavors to lift a battalion size force at night and a regimental size force in the day. Sea Horse Wind is a result of “Desert Punch” and “Desert Lift,” both efforts originated by Col Jack Pettine, USMC (Ret.), a former MAG-16 CO and a TF X-ray participant (HMM-266).

Although making abundant strides in learning to operate large helicopter-borne forces the MAG comes up short in two areas. The first concerns the lessons learned from the operations. Lessons learned are not shared with the rest of the Marine Corps rotary wing communities. They are incorporated into the MAG-16 SOP but are not submitted to MAWTS-1 or shared with the other rotary wing MAGs where they can have a broader effect.[49] Additionally, the emphasis is placed on the squadrons and their Captains to plan, brief and execute these missions, "…the MAG COs are not the right guys…the squadrons have the qualifications and can handle it." The fact that there are no attempts to get the senior leadership to lead and it is not an objective of the exercise, points to the fact that no value is given to the authority and presence a MAG CO can bring to a mission.

MAG-29 focuses on "fighting as a group" and considers this "its primary mission."[50] The MAG reinforces this with its exercise called "Carolina Thunder." Unfortunately, similar to MAG-16 it has come up short in resources to conduct large airborne assaults, however it has been able to demonstrate ground aviation capabilities. It has found to conduct these operations the MAG must shutdown all support for a week, which puts a tremendous strain on supporting the fleet. This is not a TEEP event for the MAG and although its shares its east coast duties with MAG-26 it does not exercise with them for this particular operation.[51] The MAGs do have a combined SOP that will facilitate easier integration when the time comes for combined operations. The belief in

[49] Maj Paul LeBlanc, USMC, Asst. Operations Officer MAG-16, MCAS New River, North Carolina, telephone interview by the author, 09 April 2001.
[50] Col Tice, USMC, Commanding Officer MAG-29, MCAS New River, North Carolina, telephone interview by the author, 23 April 2001.
[51] LtCol Richardson, USMC, Operations Officer MAG-29, MCAS New River, North Carolina, telephone interview by the author, 10 April 2001.

MAG-29 is that the MAG CO leading an airborne assault is situation dependent and must be left to the best qualified. In most cases these will be the squadron commanders and not the MAG CO.

MAG-26 does not think it is essential to fight as a MAG.[52] It prepares itself to support the Marine Air Ground Task Force (MAGTF) appropriately; the mission and threat will define the specific roles and functions. Although the belief is the MAG CO must maintain a level of proficiency, the ones who will be selected to lead MAG-26 assets will be the squadron commanders. Importance is placed on SOPs to standardize the MAG and MEU aviation assets when they come together.

The common thread among the MAGs is that the MAG CO has no requirement or responsibility to lead the MAG assets. Although the importance of conducting large helicopter-borne operations has not been lost since TF X-ray, the lack of desire by MAG COs to take charge of their assets and gain proficiency at leading those assets is an indicator that the leadership lessons has been lost. Through every interview the COs referred to getting the "best qualified" or "most proficient" squadron commanders to lead the mission, but none ever mentioned the lack of authority or command presence issues these commanders would be subjected to. The squadron commanders would become coordinators (HC (A)) of the mission not commanders (AMC).

Because of the limited opportunities to plan, brief or execute large scale assault helicopter-borne operations it should be the MAG COs leading and commanding the missions while allowing their most qualified squadrons to plan the mission for them.

TRAINING AND READINESS MANUAL

[52] Col Schleining, USMC, Commanding Officer MAG-26, MCAS New River, North Carolina, telephone interview by the author, 26 April 2001

Marine Corps aviation maintains a credible and robust flight-training syllabus for its fleet aviators. Training does not end once an aircrewman advances to his tactical fleet unit. Once an aircrewman reaches the fleet this is where realistic combat preparation takes place in training. A formal syllabus guide, the Training and Readiness Manual (MCO 3500) takes an aircrewman through his combat ready, combat capable, full-combat capable training.[53] In addition to delineating piloting skills an aircrewman must achieve to demonstrate individual proficiency, it also outlines mastery skills required to conduct formation flights. Students are taken on building block approach to mastering the skills required to command and control multiple aircraft. The "section" or two aircraft is the smallest element that one would lead, followed by the division leader (three or four aircraft), and then the flight leader (multiple divisions).

The essence of the syllabus flights is based on knowledge, judgment and employment skills. Formation leaders must demonstrate mastery of command and control, and prove themselves poised to handle any number of situations. Only after completing the formal syllabus is the student eligible for designation as a formation leader by the CO of the squadron. This designation will remain with the individual throughout his or her career.

The designation of AMC surpasses that of flight leader because it encompasses the knowledge required by flight leaders (organic aircraft community) and mastery of the six functions of Marine aviation (all communities and missions that encompass Marine aviation).[54] Only a relatively few individuals hold this designation because of its

[53] Combat ready delineates an aviator who has completed 75% of his flight syllabus, combat capable delineates 90% and full combat capable delineates 100%.
[54] The six functions of Marine aviation include Assault Support, Offensive Air Support, Control of Aircraft and Missiles, Aerial Reconnaissance, Electronic Warfare, and Anti-air Warfare.

complexity and high degree of knowledge and experience. By its nature AMC requires an individual not only schooled in the techniques described by tactics manuals but also an individual with experience gained from executing dissimilar aircraft missions. On a grand scale, an AMC should be capable of command and control of multiple flights of aircraft in order to accomplish a mission. The ability to lead and direct such a mission is a responsibility of immense complexity, and not one that is often achieved due to the high demand of rotary-wing assets.

The designation for AMC has no syllabus in the training and readiness manual. Normally, the AMC is designated by the CO based on aviator experience, flight hours and tactical proficiency. The designation of AMC is left to the better judgment of the squadron CO. Unfortunately, the training and readiness manual prescribes the minimum level of proficiency required for the simplest of flight maneuvers, however, the ever complex requirements of multi-aircraft, dissimilar flight formations requires no formal training.

Without extending the imagination too far one could reason the purpose for this is to give a Commander flexibility. As discussed, these flight formations tend to demand increasing number of rotary-wing assets, opportunities, as those who have flown during the WTI course at MAWTS-1 are few in the fleet. Consequently, the CO would be restricted by lack of designated personnel if a formal requirement or syllabus were dictated for AMC. Unfortunately, what can inevitably happen is that an individual not fully qualified to man the billet of AMC can be designated to lead a mission.

Of even more concern, and relevant to TF X-ray, the opportunities to lead a mission of aircraft from multiple squadrons is even more remote. The ability to allow the

MAG Commander to exercise his MAG assets/squadrons is becoming ever increasingly more difficult. This becomes troublesome not only because of what we learned from TF X-ray during Desert Storm, but also because the Marine Corps has now reverted back to the concept of MEB. A Brigadier General (normally the Assistant Wing Commander) will command the ACE; this is unique when compared to the other Major Subordinate Elements. The next lower level of command is the squadron commanders whose squadrons comprise the MEB ACE. Although task organized, the current table of organization (T/O) for the MEB does not require a MAG CO; this has the potential of producing a span of control problem. This situation, a MAG CO not fighting MAG assets, can be setting the ACE up for the painful results and ineffectiveness of TF X-ray.

Chapter 4: WHAT HAS BEEN FORGOTTEN?

An event that is lightly touched upon, instead of being carefully detailed, is like an object seen at a great distance: it is impossible to distinguish any detail, and it looks the same from every angle.

-Carl Von Clausewitz

PLANNING

Many of the lessons of TF X-ray have been lost to the staffs of the MEFs and MEBs today. There are still top-level staffs that think nothing of planning a regimental size trooplift in their Operations Plan (OPLAN).[55] Their ideal thinking does not recognize the short falls in assets and training for such a contingency. Additionally, there is no emphasis to make this training a priority by Marine aviation or the senior leadership. Unfortunately, the Marine Corps continues to fool itself when it comes to large air assault movements.

The simplified tactics required to plan a large trooplift has also been lost. A review of the current Tactics Manuals found no evidence of guidance for planning a massive (30+ aircraft) movement of troops or equipment. The lack of documentation indicates that no real thought or analysis has been given to planning such operations.

Every mission has its own characteristics; however, there are some phases that are common to all. It is these phases, such as the assembly area arrangement, takeoff sequence, formation interval and return to force procedures that can be given a general framework. General guidance can be established without limiting flexibility. The uniqueness of a massive air assault deserves it own recognition and planning criteria. Despite what some may think, these types of operations differ tremendously from the typical operations the fleet conducts on a day-to-day basis.

[55] LtCol O'Hallaron, USMC, MAGTF MSTP Officer, MCB Quantico, interview by the author, 04 Apr 01.

The concept of an HTACC was revived for Operation Desert Storm since its demise post Vietnam War. There have been mixed reviews on the effectiveness of the HTACC during Desert Storm. Most pilots interviewed had positive comments. However, examination of the post Desert Storm Marine Corps Lessons Learned System (MCLLS) found that H&HS-28 Detachment, the unit charged with standing up the HTACC, criticized the arrangement and concluded it "was not successful."[56] "It disrupted unity of command and unnecessarily stole control from the DASC making the DASC mission more complex and less understood." The following was extracted from the 3rd MAW SOP during Desert Storm and delineates command and control relationships.

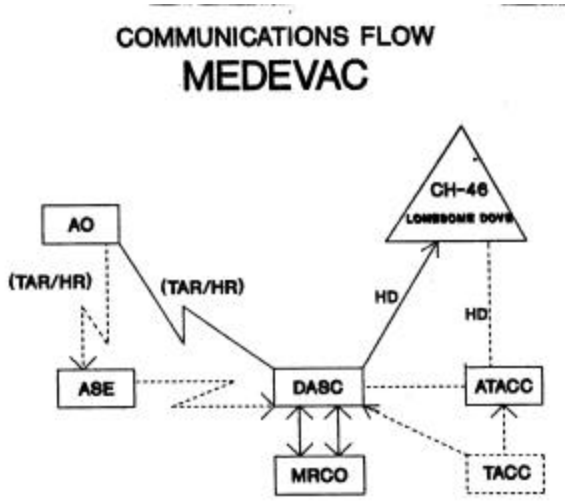


Figure 6. HTACC communications flow diagram.

It is easy to see why coordination and control could have had potential problems if robust communications did not exist between the DASC and HTACC. During the interview process a majority of the interviewees criticized the poor communications available between major commands and agencies. Especially distressing was the lack of effective

[56] H&HS-28 Detachment MCLLS after-action.

secure communications. Without effective communications between agencies it is expected that effectiveness would be low.

Nevertheless, the command echelons felt the HTACC was necessary not only during this war but also in the previous war. The fact that we do not train or acquire equipment for these functions could have something to do with the lack of effectiveness. The ACE TACC is a well-established function and has some of the best communications systems available in the Marine Corps, however its emphasis is providing a tactical picture of TACAIR operations. Rotary wing aircraft have always posed a dilemma to the TACC because of the environment (low altitude) they operate in, and because of limited communications capabilities (line of sight radios) found on rotary wing aircraft. Recognizing the limitations and the necessity for an HTACC in previous conflicts the Marine Corps should heed the lessons of Task Force X-ray and establish a requirement for a permanent HTACC.

BRIEFING

With a majority of aircrewmen not participating in the planning process it was essential that they attend the mission brief. This was not the case with TF X-ray. The piecemeal process by which participants arrived for the brief did not allow a solid foundation for this mission. In the MAG-16 MCLLS the following item was included: "The majority of missions flown in support of Operation Desert Storm did not allow enough time for a full blown MAWTS-1/ Marine Expeditionary Unit (Special Operations Capable), (MEU(SOC)), style mission brief." The indications are that the aircrewmen, strained for time, needed a different recipe for briefing flights. This is especially true when different squadrons came together to execute missions. Some simplification in

mission briefing was needed, as well as an SOP, which all rotary-wing aircraft could have followed.

There are two avenues of approach for standardizing tactical issues in the Assault Support community: Tactics Manuals and SOPs. Tactics Manuals should be the conduits for regulating the conduct of large air assault movements for all Marine Corps rotary-wing assets. This gives a basic framework each squadron and group must recognize regardless of location and disposition. However Tactics Manuals are inherently inflexible because they are reviewed every two years and require time for dissemination once published. SOPs can complement the Tactics Manuals when they are tailored to the operation embarked upon. Currently, all MAGs have some form of SOP. However there is no one SOP that bridges the differences between MAGs. An agreement established between MAGs to designate the supported MAG responsible for tailoring its SOP to the operation at hand is a possible solution. During Desert Storm MAG-16 would have been responsible. Alternatively, a composite MAG SOP could be considered and established today for the next contingency. Between the Tactics Manuals and a composite MAG SOP it is reasonable to believe that briefing will become inherently simpler and shorter, and coordination would improve.

EXECUTION

Rehearsals play a significant role in the preparation of a mission, not only for the tangible benefits derived, but also for the intangibles. A rehearsal allows the operators to become familiar not only with the plan but also with each other. For example the benefit of voice recognition cannot be overlooked when radio transmissions are being made. A pilot can develop a “feel” for who is saying what, because he recognizes the voice, and

what the perspective is within the flight. Furthermore, the pilots can learn during the rehearsal how the other aircraft in the flight will interact with his aircraft. It is the minute details like these that can build situational awareness and mean the difference between success and failure. During the TF X-ray mission the management of radio frequencies could have been better, as well as radio discipline by pilots and other agencies. The chance to rehearse would have reduced some of the radio chatter experienced that night by increasing comfort level and familiarity; it was commented that much of the discussion between LtCol Hall and Maj Schwartz was appropriate for inter-cockpit communication but not for intra-cockpit communication. The lack of rehearsal caused LtCol Hall and Maj Schwartz to converse more than necessary.

Command and control is not synonymous with coordination. Maj Schwartz although a "trusted agent" and well qualified for the task at hand was not in command of TF X-ray. Unjustifiably, Maj Schwartz planned, briefed and executed a mission in which every flight had at least one aircrew member that was of higher rank. In every case flights were being led by their respective squadron CO or executive officer (XO); it would be tough to compete in authority with the squadron COs and XOs.[57] When LtCol Underwood threatened to break his flight off it further degraded the situation by usurping what little authority Maj Schwartz had at the time. What LtCol Underwood did was defendable but inappropriate. It attacked the core of military discipline and training. The flight chain of command was undermined by his actions. What was needed for a crisis like this was an authority, a MAG CO, an individual with Command presence to keep his Marines focused and unwavering. TF X-ray did not have this leader of Marines; TF X-

[57] Maj Schwartz was the Operations Officer for HMM-165.

ray had someone that coordinated the plan, briefed it and executed it because no senior ranking officer would take the lead.

Although today many standoff weapons can become the main effort to shape the battlefield to win we must have the infantryman poised to move in to take the objective. On the ground or in the air, Marines must become the focus of effort. TF X-ray never became a focus of effort. This was demonstrated by many factors but none so blatant as the cancellation of two Remotely Piloted Vehicle (RPV) missions requested by Task Force X-ray. The area had been briefed to be teaming with enemy threats in and around the objective area. So much so that B-52s flew a support mission prior to the ground offensive in order to soften the targets. With no senior aviation leadership, the lack of rehearsal, disregard for go/no-go criteria, and cancellation of the RPV mission, it can easily be determined that this mission never received the attention it needed. The Marines of TF X-ray were never a focus of effort and never received the support they deserved.

Chapter 5: CONCLUSION

"The military services deal harshly, as they should, with failure to carry out orders in battle. The commander present on the scene is entitled to full, instant, and enthusiastic execution of orders by subordinates. Yet when faced with different situations from those anticipated, as well as in the transition from plans to orders, there sometimes comes the challenge to one's conscience, the compelling urge to oppose foolhardy operations before it is too late, before the orders are issued and lives are needlessly thrown away."
- General Matthew B. Ridgeway

CRITICAL FLIGHT LEADERSHIP

In the late 1980's and early 1990's the Marine Corps was MEU(SOC) centric in its training and forward presence. Today we still see this tendency with MAG commanders struggling to man MEU(SOC) squadrons with the proper equipment and personnel prior to deployments. The job is not easy. What has suffered is our ability to conduct large-scale operations. Flight leadership requires many tangible and intangible attributes but none so important as experience. A mission commander can be considered technically sound but lack the authority or command presence required to lead a mission. On the other hand a mission commander can be a squadron commander and not have any tactical proficiency. It is only through schooling and experience that a mission commander gains the confidence of those he leads and the mastery of the aircraft he employs. Unfortunately today our MAG COs have turned into suppliers of warfighters than warfighters themselves. Their training and experience is lacking because there is no standard to which they are held accountable as tactical warfighters.

When there is a requirement to plan, brief and execute a tactical mission the CO will normally look for his WTI. The CO knows the WTI has had extensive training and is up to date on tactical employment of aviation assets. The WTI is a tool and a resource for the commander. Unfortunately some commanders see the WTI as an opportunity to

delegate authority and responsibility for a mission by designating him or her as an AMC. It is when this occurs that aviation fails because no commander could ever delegate responsibility. The commanding officer is always ultimately responsible for the mission.

WILL WE BE READY FOR THE NEXT ONE?

Marines have been conducting helicopter-borne operations for over forty years. Most recently they attempted a 51 helicopter-borne assault on NVGs, under the worst possible conditions, during the Gulf War. Their ineffectiveness can be attributed to a number of reasons but the most critical cited by those that participated was a go/no-go criteria that was briefed and assumed to be agreed upon that was not honored. Essentially, a briefed daytime mission was conducted at night on NVGs with no planning, briefing or rehearsal. MAG-16 had been taken by the 1st MARDIV, they trusted them and now they would pay for it with the flight of their lives. Unfortunate, but most would contend a reality of war, correct?

The 1st MARDIV did what it had to do to make things happen and because MAG-16 was the supporting element of the MAGTF team it was up to them to exert their will, when necessary, to get what they needed in support. However, while TACAIR assets of 3rd MAW were practicing every one of their missions, and rehearsing their initial strikes to the point they were scripted, no one took notice of the largest helicopter-borne lift being planned by our ground brethren since Dewey Canyon during the Vietnam War.[58] The injustice did not come from 1st MARDIV but from the senior aviation leadership.

This paper has analyzed the facts of Task Force X-ray based on primary sources and has come up with some conclusions. Command and control encompasses not only

[58] Col Pettine, USMC, Former Commanding Officer MAG-16, Alexandria, Virginia, telephone interview by the author, 04 May 2001.

proficiency and the ability to coordinate operations but it also relies on Command presence and authority. Effective, positive leadership comes from the ability to command and control, whether on the ground or in the air, whether in planning or execution. For this paper all MAG COs and former MAG COs interviewed basically agreed that the situation would dictate who would be selected to command and control MAG assets. Six of six officers recognized their most qualified and proficient squadron commander as their first probable choice. The MAG CO leading was a possibility, but not probable, because he would be concerned with other matters pertinent to supporting the next higher echelon of command. Most referred to the decision of leading a mission as a "judgment call," based on many factors to include length of operation, logistics and maintenance needs. It was the contention of one MAG CO that his place was concentrating on the operational level not the tactical level.

Today the emphasis has shifted once again to the Marine Expeditionary Brigade (MEB). The MEB ACE is unique in that a Brigadier General commands it: the Assistant Wing Commander (AWC). The table of organization (T/O) shows the next level of command in the ACE is the individual squadron commander. The MAG COs are not delineated as part of the T/O. Not only does this produce a span of authority problem but also it sets the ACE up for failure, in particular the rotary wing assets. If a large helicopter-borne assault like TF X-ray must be executed it will have the same command and control issues plague it as well.

We must look for more from our AMCs than just qualified aviators when doing large airborne assaults; seniority, authority, presence all play a significant role in mission success. According to Col Pettine, USMC (Ret.) "an O-6 can get to the General when

others cannot."[59] A MAG CO who is involved and engaged in the mission can make a difference. TF X-ray sat for hours not knowing what was happening during the initial ground offensive, nor did its members know the situation had changed. When it was finally time to launch, the go/no-go criteria was in danger of being compromised. Even when the flight knew it had members unbriefed, unequipped and unprepared to fly NVGs it pressed on. In all these cases the intervention of a MAG CO could have prevented the launch from ever taking place or at a minimum could have delayed the action until a plan could have been developed. Whether an O-6 would have made a difference during execution under the circumstances is debatable; however, his presence might have quelled some of the tension between flight leaders and the AMC, and his authority could have determined an abort sooner than later.

MAG COs are tactical warfighters in every sense. We cannot execute a mission of this size without total commitment and focus from the senior leadership. The MAG COs must drive for standardization not only for their MAGs, but also for all MAGs in the form of a SOP. Additionally, they must strive to incorporate large formation tactics into our Tactics Manuals through MAWTS-1, and combine their extensive knowledge with that developed through the MAG exercises like "Sea Horse Wind" and "Carolina Thunder." Furthermore, an effort should be made by our MAG COs to incorporate an HTACC type facility to improve the communications of the rotary wing community. Finally, we must make the effort to train our MAG COs to fight their assets, whether that encompasses a planning problem or a full-blown mission, it is critical to our future assault support operations.

[59] The O-6 grade is the rank of Colonel.

APPENDIX A: EXECUTION CHECKLIST

CODEWORD	EVENT	PLANNED TIME	
PHASE III			
TIGHTEND	TF TARO IN POS WEST FLANK	TBD	G-D
SPLITEND	TF GRIZZLY IN POS EAST FLANK	TBD	G-D
HUDDLE	TF XRAY PREPARE TO LAUNCH	TBD	G-D
SNAP	TF XRAY COMMENCE HELO ASSAULT	O/O	G-D
QUARTERBACK	TF RIPPER PREPARED TO BREACH	TBD	G-D
LINEBACKER	ARTY PREPARED TO SPT BREACH	TBD	G-D
TOUCHDOWN	TF XRAY IN LZ	TBD	G-D
SAFETY	TF X-RAY SECURE BP	TBD	G-D
HAND OFF	TF RIPPER BREACHING	TBD	G-D
GUARD	TF PAPA BEAR PREPARED TO BREACH	O/O	G-D
PUNT	TF RIPPER BREACH COMPLETE	TBD	G-D
TACKLE	TF PAPA BEAR BREACHING	O/O	G-D
DRAWPLAY	KAMFSTAFFLE PASSES THRU BREACH/ PRIORITY OF LANES	TBD	G-D
FIELDGOAL	TF PAPA BEAR BREACH COMPLETE	TBD	G-D
KICKOFF	ARTY PASSES THRU BREACH/ PRIORITY OF LANES	0/0	G-D

APPENDIX B: TIMELINE

X-RAY TIMELINE ONE WAVE

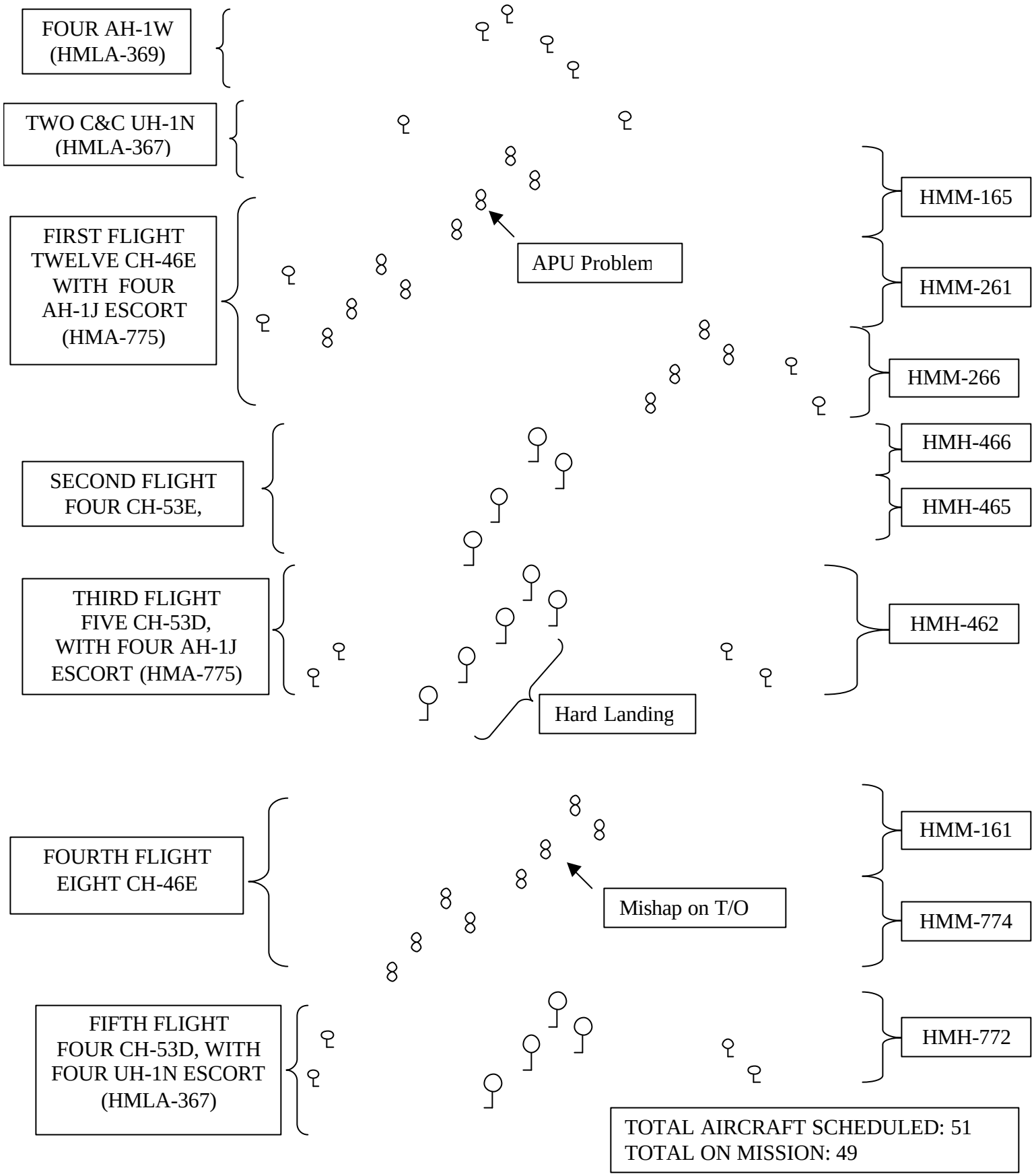
A= ALERT HOUR

TIME	EVENT
G-1	AFTER REQUIRED REFUELING AT LONESOME DOVE, ALL HELO ASSETS REPOSITION AA SANDY * SANDY 1/3 LOCATION 28 23.36N/47 24.76E
G+A	"HUDDLE" - PREPARE TO LAUNCH
A+20:00	"SNAP" -- LAUNCH HELO ASSAULT
	NOTE: MINIMUM OF 20 MIN REQUIRED BETWEEN HUDDLE & SNAP IN ORDER FOR AIRCREW TO DON AR-5 AND PAX LOAD.
A+25:00	4 AH-1W / 2 UH-1N LIFT SANDY
A+28:00	1st FLT DEPARTS SANDY (53 or 46 PACKAGE) 12 (46') → Kiwi
A+30:00	2nd FLT DEPARTS SANDY (53 or 46 PACKAGE) 8 (46') 4 (53') → Duc
A+32:00	3rd FLT DEPARTS SANDY (53 PACKAGES) 4 (53') → ~~Duck~~ Ki
	4th Flt " " 3 (53') → Duck
A+34:00	~~4 UH-1N DEPART SANDY (TRAP PACKAGE)~~ 4 (53') → Duck
	5th Flt " "
	NOTE: AH-1J DEPART AS ESCORT PACKAGES WITH TRANSPORTS
A+52:30	AH-1W ON STATION LZ GULL AREA
A+55:30	1st TRANSPORTS ARRIVE LZ's
A+65:00	LAST TRANSPORTS DEPART LZ's (EXPECT AH-1W's IN IMMEDIATE TRAIL)
A+70:00	LAST HELOS (AH-1W) CLEAR IP DENVER FOR RTB L. DOVE
A+95:00	ALL HELOS RECOVERED LONESOME DOVE

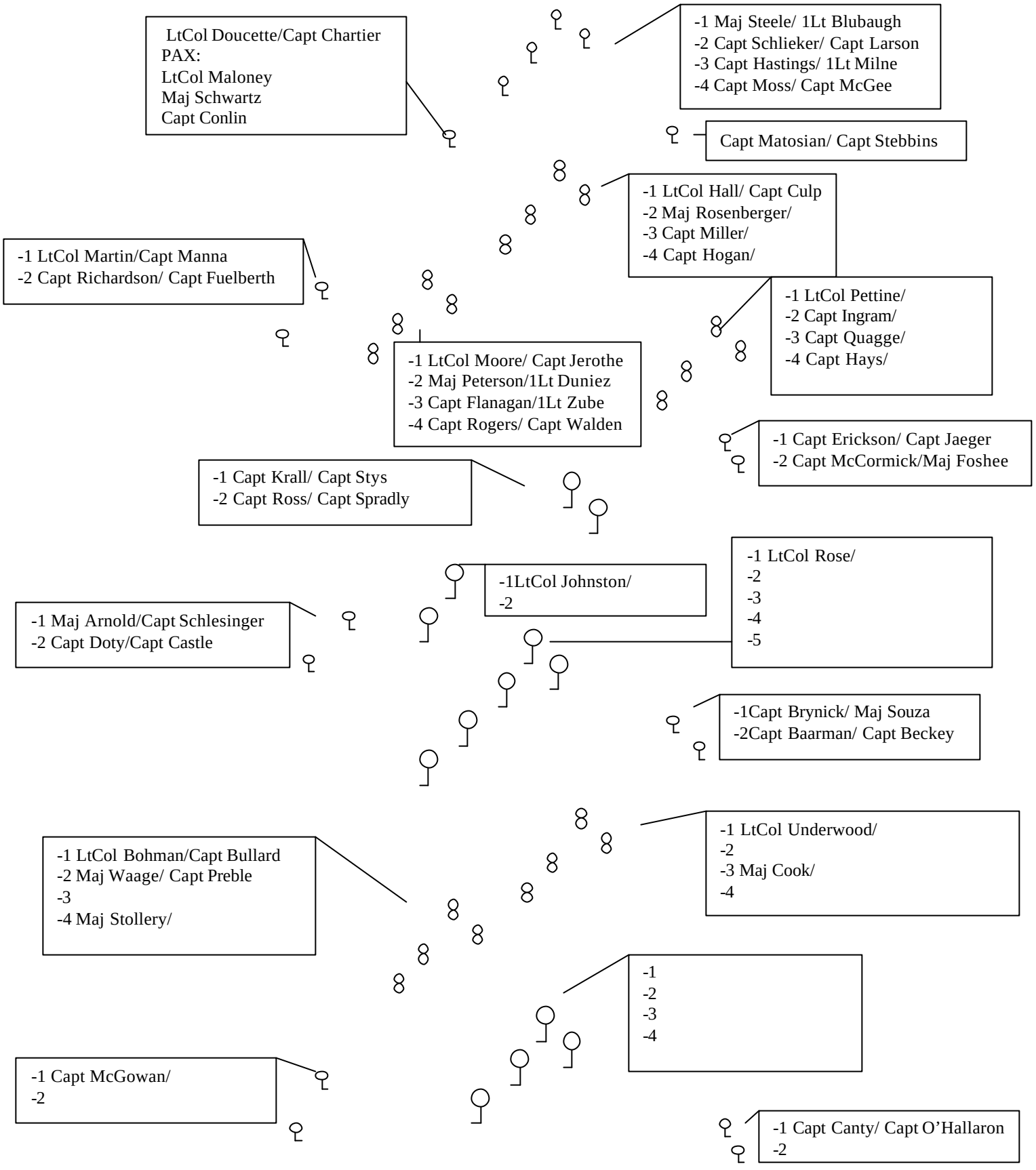
12:30 ON STATION LZ's

TOTAL FLIGHT TIME FOR TRANSPORTS IS ABOUT 1 hr 10 min

APPENDIX C: FLIGHT FORMATION



APPENDIX D: PILOT ROSTER



APPENDIX E: CHRONOLOGY

Sept 90	Colonel Admire considers helicopter-borne operations with elements of Third Marines in order to bypass Iraqi obstacle belts. Small-scale training with 6-8 helicopters takes place with 1st Battalion 3rd Marines (1/3).
Dec 90	Concept of Regimental helicopter lift is developed by 1st MARDIV to seize Al Jaber airfield.
07 Feb 91	Planning for helicopter assault to Al Jaber airfield is cancelled. 3rd MAW disagrees with plan because of threat in area and availability of aircraft.
13 Feb 91	TF X-ray is designated Division reserve and receives order to conduct helicopter-borne assault to Al Burqan oil field.
15 Feb 91	MAG-16/HMM-165 tasked with TF X-ray mission.
17 Feb 91	Mission planning begins with available MAG-16 participants.
19 Feb 91	Concept of Employment Brief given to MajGen Myatt 1st MARDIV. Mission changes from two-wave insert to a single wave of troops and equipment. Gen Boomer requests MAG-26 assets augment MAG-16.
20 Feb 91	LtCol Hall is identified as the AMC, Maj Schwartz the HC (A).
21 Feb 91	Concept of Operations Brief given to Col Garrett MAG-16. Confirmation Brief given to MajGen Myatt and Gen Boomer. Mission changes from infantry insertion to an anti-armor team blocking force.
23 Feb 91	
~1600	Sand table mission brief given to a majority of TF X-ray participants but not all. Aircraft arrive as brief is given. Aircraft begin loading vehicles.
24 Feb 91	
~0600	TF X-ray aircrews standby in MOPP level II.
~1200	Planned insert time of TF X-ray that did not take place.
~1205	"All TF Papa Bear assault BNs through the first breach. No resistance encountered." (Excerpt from TF Papa Bear's log)
~1500	"Division ordered TF Papa Bear to clear the 2nd obstacle belt and establish a beachhead. Intent was to land TF X-ray (1/3) inside TF Papa Bear's zone and daylight was running out." (Excerpt from TF Papa Bear's log)
~1515	TF X-ray receives white star cluster, aircrews man their aircraft until 1630 waiting for next signal (green star cluster). The 2nd signal never appears. (Author's note: The aircraft should launch at this point according to plan, but it is not clear why they are not activated. Perhaps the threat encountered by TF Papa Bear is thought to be too intense for the helicopter-borne assault and the ground element does not want to risk the force.
~1520	"3rd Battalion 9 Marines (3/9) begins breach of 2nd obstacle belt QS 890860." (Excerpt from TF Papa Bear's log)
~1600	"One lane open in 2nd breach." (Excerpt from TF Papa Bear's log)
~1610	"3/9 engaged by 5 T-55 tanks." (Excerpt from TF Papa Bear's log)
~1615	"3/9 incurs 10 casualties from mortar fire." "Enemy identified as 22nd BDE, 5th Mech Div."

"TOW Co, 1st TK accounted for 6 T-55/62 kills." (Excerpts from TF Papa Bear's log)

~1630 "Hundreds of EPW encountered by ground forces." (Excerpt from TF Papa Bear's log)

TF X-ray gets dated (20 Jan) intelligence photos of objective area.

TF X-ray asked if it could launch at 1730. LtCol Hall calls HTACC to discuss go/no-go criteria.

~1700 "1st Battalion 1st Marines (1/1) moves through 2nd breach." (Excerpt from TF Papa Bear's log)

LtCol Hall gathers key flight members to tell them they will be launching on NVGs and no AR-5 gas masks will be used.

~1730 TF X-ray aircraft begin turning up.

~1740 AH-1W takeoff enroute, 80-90 knots on ingress route. Visibility is poor due to setting sun, oil fires, soot in air. NVGs unusable.

HMM-165 CH-46E is left in AA Sandy due to APU problem.

HMM-161 CH-46E rolls over in AA Sandy on takeoff.

Loran navigation aid quits working in lead AH-1W.

1744 Official Sunset occurs.

THE FOLLOWING SEQUENCE OF EVENTS IS POSTULATED

-Aircrew are having difficulty with visibility, they continue to goggle and de-goggle.

-Satellite reception for GPS is intermittent and causes system to be nonfunctional in lead AH-1W and other aircraft in flight. Most navigation is done strictly off of maps.

-Visibility becomes so bad flights begin to lose track off one another and become disoriented with respect to flight formation integrity. Each flight has taken a two-minute separation leaving AA Sandy. Flights are having difficulty seeing the flights ahead of them.

-Artillery, tank, mortar and small arms fire can be seen through the NVGs, it becomes difficult to discern enemy fire from friendly fire. Depth perception difficulties from the NVGs also make discerning distance of fires difficult to estimate.

-HMM-165 CH-46E gets aircraft started in AA Sandy and attempts to rendezvous with the rest of the flight. It rendezvous with the fifth flight, a discussion ensues between aircraft. It is determined the aircraft is not following procedure. The aircraft breaks away and lands next to the Battalion aid station. It remains there overnight.

-Lead AH-1W section flies over and sees both obstacle belts, and vehicles and personnel moving between them. They intercept IP and turn north towards LZ Kiwi, they begin to slow down as they enter the objective area.

-2nd section of AH-1Ws lose sight of lead section and turn north before IP, Disoriented and without sight of lead section they decide to land northwest of IP.
-C&C UH-1N section takes up a position south of IP in the vicinity of Al-Wafrah oil field (marked by square holding facility on JOG (air) map). C&C UH-1Ns see 2nd section of AH-1Ws deviate north off of ingress route.
-Lead CH-46E has no sight of path-finding AH-1Ws or C&C UH-1Ns, but continues on ingress route. Lead CH-46E does not see the IP or the road that should be off their left shoulder. 90 knots, because of poor visibility they cannot maintain altitude and oscillate between 200-500+ feet.
- Flight members of HMM-261 feel the flight leans to the right to avoid the weapons fire taking place to the left (Northwest).
-Inside the route IP the lead AH-1W slows down and attempts to get oriented as it approaches the objective area. EFL sees fires in the vicinity of the objective area and makes a call to the effect that the area west of the LZ appears to be Hot. The concussion of the explosions can be felt in the lead AH-1W. Visibility is poor. The AH-1W section is approximately 100'; 40 knots but focusing east searching for LZ Kiwi (The navigator in the lead AH-1W was focusing on an area described as "so black the ground you could not see the LZ…I didn't know if anyone was there"). Author's note: It is questionable if the lead AH-1W was oriented correctly. If it had been it would have seen the terminal guidance lighting established for the helicopter-borne force by TF Papa Bear: an inverted crow's foot.
-The HTC attempts to contact LZ control to receive status of LZ Kiwi, no communications is established.
-Lead HMM-165 CH-46E is having difficulty staying on altitude. As the division rounds the IP and sets up for final approach it is so high it never sees the AH-1Ws ahead of it have slowed down. As the division of CH-46Es descends for final approach it actually over flies and over takes the AH-1Ws. Lead AH-1W doesn't realize it until his wingman calls to tell him of the aircraft overhead. (The aircraft come within 100' of each other).
- Author's note: I believe what happens here is the lead AH-1W was focused to the Northeast, his wingman is behind and to the right and attempts to cross over to the right of the lead. As they do this the wingman comes nose to nose with the lead CH-46E. Once the incident sinks in and the wingman realizes what just happened the wingman calls the lead AH-1W "CH-46Es are overhead." As this happens a different CH-46E overflies the lead AH-1W. Unlike some rumors that have transcended time the AH-1W had never aborted along the route, however once the 1st Flight over took them their maneuvering could have easily been perceived that way.
-Individual flight leaders hear the intermingling of AH-1W and CH-46E. The flight leader for the fourth flight, anxious because of the events that have already taken place asks HC(A) what he is going to do?

-At this point TF X-ray flight has already lost considerable integrity. The lead AH-1W (EFL) section just having avoided a mid-air collision has lost considerable situational awareness and lands to get out of the way. The 2nd section of AH-1Ws is a few miles south, safe on deck listening to what is happening on the radios. HMM-165, on the ingress route and believing they still have flight integrity, begin reeling from the fact that they think the AH-1Ws have turned back towards the flight because the LZ is to hot. They begin to lose substantial situational awareness. Crew coordination is quickly eroding in the cockpit as they continue to fly towards LZ Kiwi (Author's note: Confusion is prevalent, as HMM-165 believes the rest of the flight has left it). HMM-266 over flies LZ Kiwi. HMM-261 does not over fly LZ Kiwi but maintains flight integrity. The 4th flight leader wanting to avoid taking his flight deeper into the chaos in front of him continues to pressure the HC(A).
-HC(A) and Mission Commander discuss aborting mission.
-HC(A) transmits recommendation for abort to HTC.
-HTC agrees and transmits the mission is an abort.
-HC(A) and HTC immediately lose what is little left of command and control, flight integrity completely dissolves. Panic immediately sets in.
-Individual flight leaders take control of their divisions and begin to scatter south in hopes of avoiding a mid-air collision. Radio calls are heard between aircraft to turn on aircraft external lights.
-AH-1Ws get within a quarter mile of LZ Kiwi but never actually over fly zone. They turn east and land to avoid the traffic above them.

~1800 "TF X-ray helicopters observed in area and departing without landing." (Excerpt from TF Papa Bear's log)

1808 End of civil twilight. 76% moon obscured by overcast sky (soot) from oil fires. Ceiling ~ 2,000'.
-Divisions begin to return to Lonesome Dove, Tanijib or land in the desert to avoid collision.
-Lonesome Dove is overwhelmed, the controllers have no NVGs and can not handle the multitude of aircraft requesting sequencing and landing.
-CH-53D has a hard landing at Lonesome Dove.
-UH-1N almost lands on another already on the ground in Lonesome Dove.

~2330 "TF Papa Bear receives new mission. Directed not to move from blocking position until 1000, 25 Feb 91." (Excerpt from TF Papa Bear's log)
TF Papa Bear's new mission reflects a desire to wait for TF X-ray to get into LZ Kiwi the next morning.

~2400 All TF X-ray aircraft are accounted for.

25 February 1991

~0400 1st MARDIV requests TF X-ray to launch.

~1200 TF X-ray launches with a smaller contingent of aircraft (30) to insert TF X-ray. Alternate LZ is used.

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