

Fratricide
Operation Desert Storm

Monograph
25 June 1993

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PREFACE

This monograph is written to give an understanding of situations and occurrences that, to me, seemed related to the outcome of a fratricide incident. It is not my intention to address the political and punitive issues that occurred as a result of the incident. This paper is intended to provide insight to all combat elements of the complexity and difficulty of combined arms operations. Though we can never understand the difficulties of the aviators and soldiers actually on the mission, we can draw some valuable leadership lessons from the human mistakes they made.

I have provided a video tape with this monograph as a visual aid to help you better understand what happened as well as the pilot's perspective. It was recorded in November, 1991, as it aired on CBS' 60 Minutes.

On 2 August 1990, the Republic of Iraq invaded the Emirate of Kuwait. Saddam Hussein ordered the invasion following Iraqi grievances over oil pricing, Kuwaiti loans to Iraq, and Iraqi claims on Kuwaiti territory. The invasion, carried out by Saddam Hussein, not only infringed upon a small defenseless nation, but also gave Iraq the potential to control over 20% of the world's oil supply.

The Iraqi Army was the world's fourth largest and considered a strong military power. The Army was comprised primarily of Soviet equipment and over one million soldiers, many of whom were proven combat veterans from the recent Iran-Iraq war. The Iraqi's most elite force, the Republican Guards, was considered a military might equipped with the most modern, technologically advanced Soviet exports.

On 7 August 1990, President Bush formally ordered U. S. troops to the Gulf region as a threat to counter Hussein's invasion. Elements of the U. S. Army's rapid deployment force (RDF), the Marine's expeditionary force, some Air Force fighter squadrons, and a Naval fleet deployed to Saudi Arabia and the Persian Gulf. During this buildup and over the course of the next two months, several United Nations resolutions were passed ordering Iraq to withdraw from Kuwait.

Saddam Hussein refused to withdraw and continue to build his defensive forces along the southern Kuwaiti/Iraqi border. On 8 November 1990, President Bush then announced the deployment of the U. S. Army's VII Corps from Germany. The Corps consisted of the 1st and 3rd Armored divisions, the 2nd Armored Cavalry Regiment, and the 11th Aviation Brigade consisting of three Apache battalions. The 1st Infantry Division (Mechanized), augmented with a roundout brigade from the 2nd

Armored Division (Forward), was also deployed as an element of the VII Corps. This buildup of forces, including tanks, infantry fighting vehicles and six Apache battalions, gave the allied forces a significant tactical offensive capability.

Prior to the deployment announcement on 8 November 1990, I served as the Attack Platoon Leader for Charlie Company, 1st Battalion, 1st Aviation Regiment, 1st Infantry Division (Mechanized). The battalion was equipped with 18 AH-64A Apache helicopters, 13 OH-58C Kiowa Aeroscout helicopters, and 3 UH-60 general support helicopters. Each line company was equipped with six Apaches and four Kiowas.

As the Attack Platoon Leader, I had trained as the first team leader since October, 1989, when the battalion deployed to the Apache single-station unit training program at Fort Hood, Texas. As first team leader, I performed duties as the company's lead aircraft on all missions. During training for combat, the company's task organization consisted of three attack teams, comprised of two AH-64A Apache attack helicopters and one OH-58C Kiowa aeroscout helicopter in each team.

As the 1st Infantry Division prepared for combat, the battalion began the intensive aircraft maintenance procedures and modifications needed prior to deployment. Numerous system upgrades as well as aircraft preparations were made to contend with the Iraqi threat and desert conditions. During this time, we conducted very little flight training. The combat crews were busy learning about the tactical situation, desert flight characteristics, the nuance of the system upgrades, and Iraqi armor and air defense capabilities.

The first elements of the 1st Division began the deployment on 4 December, 1990, with the Attack Helicopter Battalion flying 34 aircraft to a port in Houston, Texas. The division's advance party soon followed, with movement prior to Christmas. The division's main body continued its deployment after Christmas and through the first week in January. Upon reaching Saudi Arabia's port of Ad Damman, the battalion quickly began unloading aircraft from the ships and preparing them for flight to our tactical assembly area (TAA). We finally left on the morning of 19 January, 1991, with a flight along Tapline Road to TAA Roosevelt. TAA Roosevelt was located about 12 miles north of Sodowiyat Airfield and 45 miles south of the tri-border area. (SEE DIAGRAM 1)

Upon reaching TAA roosevelt, our flight training escalatd due to our lack of training time prior to the deployment. As we continued our flight training and gunnery skills training, we observed the Air Force sorties inbound to Iraq to unload their payload on Iraqi positions. The division began combat operations near the end of January as we prepared to move to our new TAA located northwest of Hafir-al-Batin.

The 1-4 Cavalry Squadron, 1st Infantry Division, was conducting screen operations along the Saudi-Iraqi border northwest of Hafar-al-Batin. The Air-Cav had relatively no problems screening during daylight hours but had major difficulties at night. They were equipped with ANVIS-6 Night Vision Goggles (NVG). The NVG's are image intensifying devices reliant upon ambient light during the hours of darkness. The NVG's were an excellent night flying device stateside; however, they were ineffective at less than 100 feet above ground level (AGL). They were also ineffective acquiring or engaging targets because they were

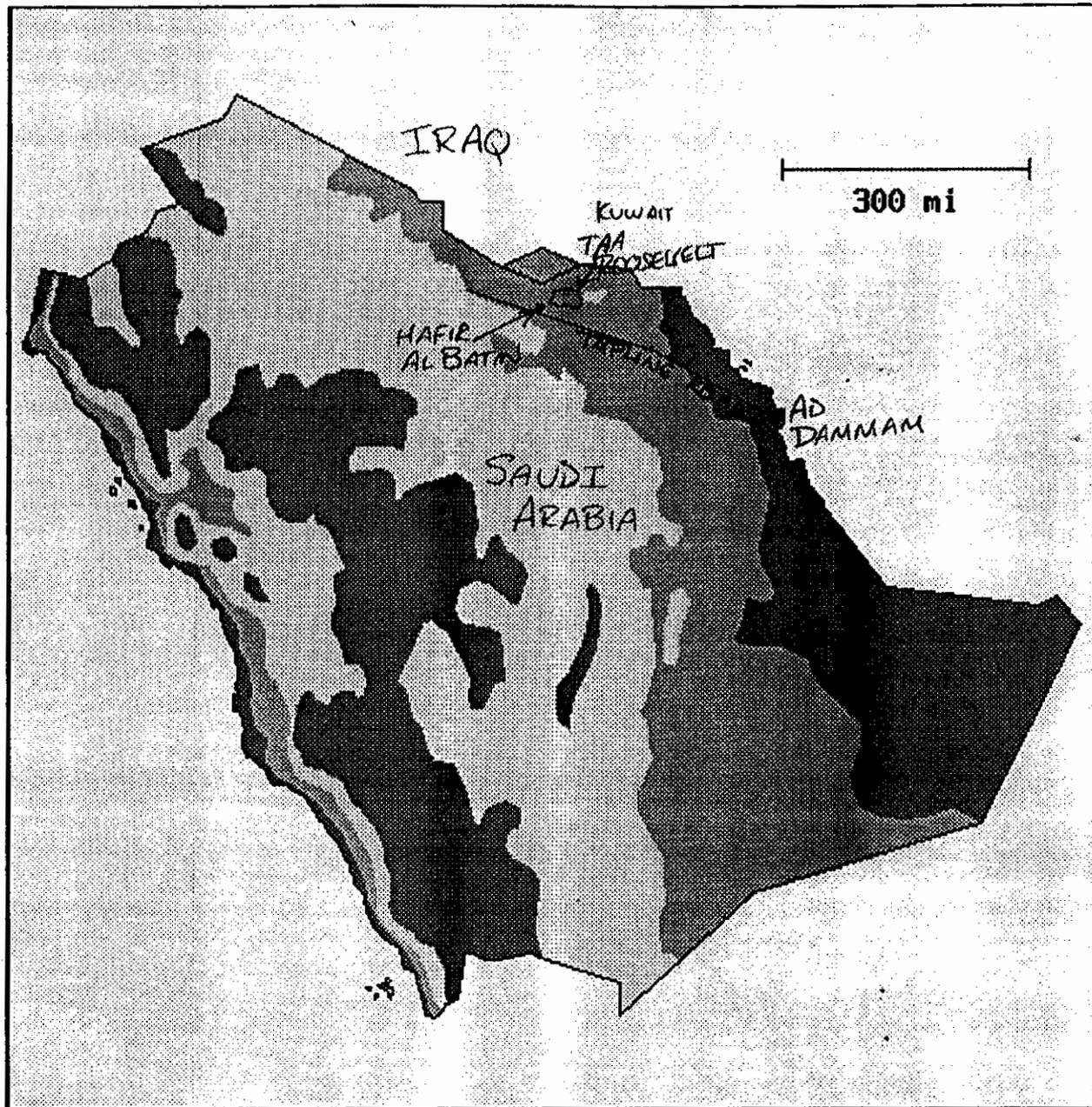


DIAGRAM 1

unable see more than 500 meters. The NVG's also proposed difficulties landing under brownout conditions (blowing sand under the rotor wash). Height judgment and distance estimation were also difficult. Thus, the division commander felt the Cavalry needed to augment their night fighting capability along the screen.

Our battalion was given the night aerial screen mission to be conducted in conjunction with the Cavalry ground elements. The AH-64A Apache was chosen because it is equipped with a Forward-Looking Infrared (FLIR) sensor for both the pilot and copilot-gunner. The FLIR senses differences in temperature. The pilot's night vision picture is displayed through his monocle in the Helmet Display Unit(HDU), and the copilot-gunner's (CPG) targeting picture is displayed on a television screen he views in the cockpit. The FLIR is equipped with flight symbology to aid the pilot with the aircraft movement and altitude and to aid the CPG with targeting and weapons employment. The symbology, coupled with the improved infrared picture, allows aviators to fly and acquire targets far more effectively at night in desert conditions. Therefore, our battalion received the night aerial screen missions.

Alpha Company was tasked with day missions and Bravo and Charlie were tasked with night missions. Charlie Company conducted the night missions in conjunction with the 1-4 Cavalry ground elements, beginning on the night of 1 February 1991.

On 1 February 1991, at 1945 hours, Charlie Company was alerted to react to possible enemy sightings along the border in the 1-4 Cavalry sector. (SEE DIAGRAM 2) Our company took off with five Apaches. From TAA Roosevelt, it was a 30 minute flight to the area of operations. Two

Apaches followed in trail with the battalion S-3, Major Landrith, and the Battalion Commander, LTC Hayles. We landed and proceeded to the jump TOC for a situation report. The Cavalry S-3 and Standardization Instructor Pilot (SIP) briefed us on the situation. The Cavalry's ground elements reported three enemy vehicles moving south in sector 3000-5000 meters to their front. Our mission was to identify and destroy the enemy formation. We cranked the aircraft at approximately 2200 hours. Of the seven Apaches on station for the mission, only two, LTC Hayles and I, were operational after crank and able to make mission time.

1 Feb 91

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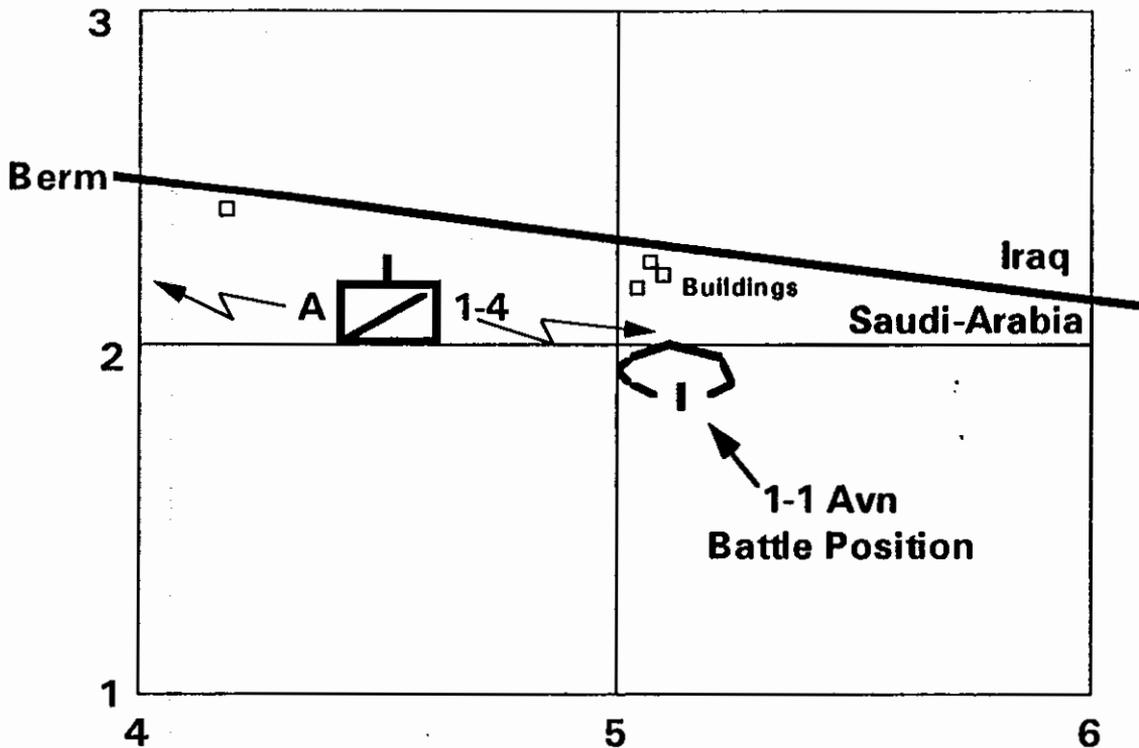
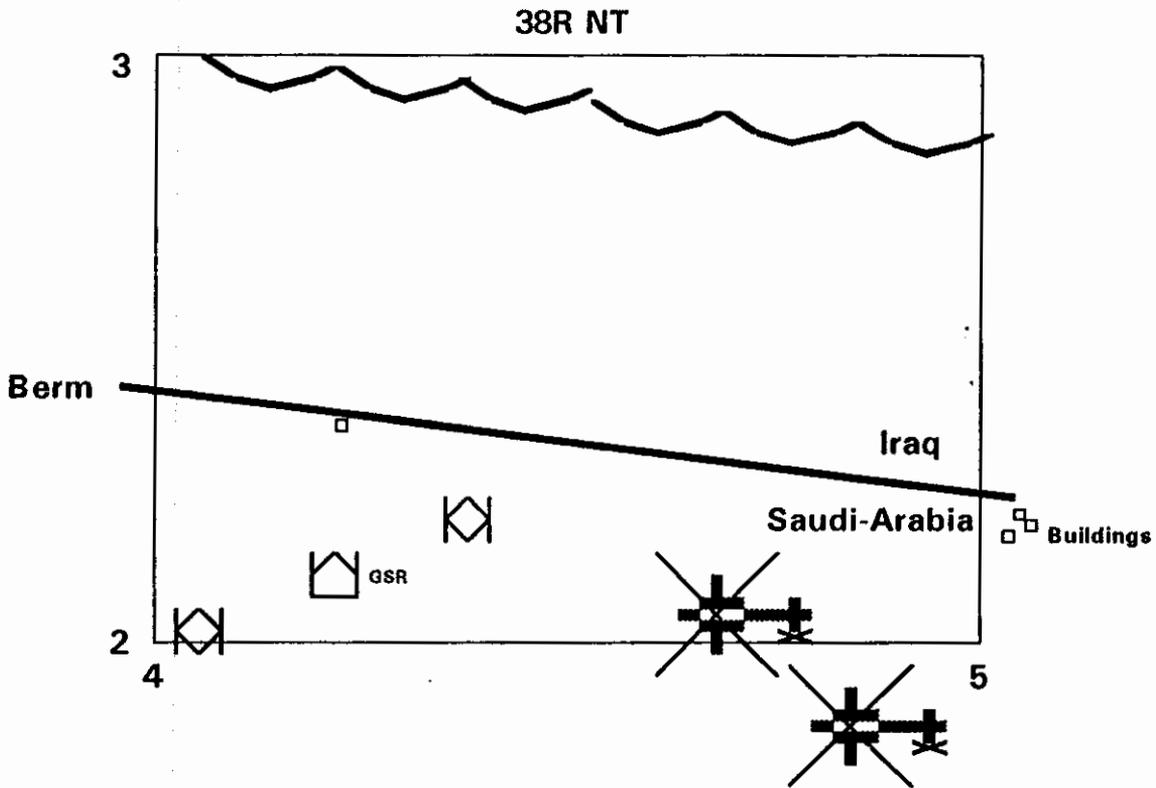


DIAGRAM 2

Upon take-off, Hayles ordered me to fly as his wing and we proceeded on the ten minute flight to the Ground-Cavalry's sector in the vicinity of the berm (the border between Saudi-Arabia and Iraq). We made contact with a village centered around a border check point building. Unable to decipher enemy activity in the village, Hayles ordered us to break contact to link up with the Ground-Cavalry elements. We moved west and found the Ground-Cavalry on a lateral screen oriented to the north. We identified three Cavalry vehicles from Bulldog (Bravo, 1-4 Cavalry) and moved to the west. As we moved, we received indications from our radar-warning receiver that a ZSU-23-4 (ZEUS) was tracking our movement. Hayles contacted me for confirmation. I received similar indications. As we proceeded west, a formation of vehicles was 3500 meters to our front. (SEE DIAGRAM 3) We sent the spot report to the Cavalry TOC, and it was confirmed that the three vehicles were in the same location as the previous enemy spot report. We continued to receive radar warning indications of a ZSU-32-4 radar tracking our movement. Hayles identified the center vehicle to be what he thought was a ZEUS and prepared to fire. He called me for target confirmation. Now on Hayles' left wing, I sighted the target and could not positively identify the vehicle to be enemy. I transmitted to Hayles that I could not confirm it was a ZEUS. We continued to receive radar tracking indications, so Hayles prepared to engage the target. At that moment, he then called me and said the vehicle was moving and asked me to confirm that it was moving. I reacquired the target. It appeared to be stationary, so I targeted the vehicle with my LASER designator and called up the position on my fire control computer. The target was

approximately 3000 meters on an azimuth of 245 degrees. I confirmed the vehicle position on my map, and it did not correlate with the tactical situation in relation to the Cavalry screen. We were north of their last reported elements and looking southwest. My crew member, Chief Warrant Officer Three (CW3) Steve Woods, was trying to maintain our aircraft position off Hayles' left wing. He noticed that Hayles' aircraft was drifting slowly to the left. Woods and I then surmised that Hayles thought the vehicle was moving due to his own aircraft's relative motion. I called Hayles and confirmed that the target was stationary and that he was drifting to the left. Then, realizing that he was drifting, Hayles ordered us to break contact to re acquire the formation from a different perspective.



As we broke right to disengage to the north and east, we turned our tail to the vehicles and began to fire out our right door. We also began to "Juke and Jive," to break the lock from the firing vehicle. The rounds continued to fly by our aircraft but miraculously missed the intended target. The gunfire was single-strand, orange tracers which led me to believe it was friendly fire. Hayles concluded the ZEUS was firing at us, but I thought it was a Cavalry Fighting Vehicle's 25mm. (If it were ZEUS gunfire, the tracers would have been green and in strands of four because it has four gun barrels). I told Hayles that I thought the rounds were from a Cavalry Fighting Vehicle (CFV). We reported the situation and returned to the jump TOC. Upon debrief, we found that we encountered Anvil (Alpha Troop, 1-4 Cavalry) elements. They were equipped with a Ground Surveillance Radar (GSR) and reported tracking and shooting at possible HIND-D aircraft in the vicinity.

Upon returning to our TOC, Hayles and I reviewed the videotape to find the vehicles could not be effectively identified from more than 3500 meters under the FLIR, and that a GSR looked similar to a ZEUS. This, coupled with the radar warning audio's synthetic voice emitting "ZU, ZU, 12 o'clock tracking", could be misconstrued to be a ZSU-23-4. The following evening, we ran test missions against a GSR and confirmed our conclusion.

During the second week of February, Hayles briefed all the leaders in the battalion on the 1st Division's breach mission. He also briefed our mission and his intent. However, his intent seemed to violate the training philosophy that we had adhered to for the last year and a half. Hayles wanted to accomplish the first few missions with three teams

consisting of at least one commissioned officer in each cockpit. He believed the commissioned officer's presence was absolutely necessary to ensure effective combat operations in a confusing battlefield environment. This philosophy is not inherently defective; however, its effects were insurmountable. He was deliberately changing and altering the combat teams and, in some cases, combat crews who had trained together. This is a critical element for Apache battle rostered crews. Now, during actual combat operations, our battalion was going to conduct missions with crews and teams who have never flown together. This violated our "train as you fight and fight as you train" doctrine. Nonetheless, we continued to prepare for the division's breach mission for the upcoming attack. We would attack known enemy targets forward of the division.

On 17 February 1991, at 1900 hours, my company commander, CPT Dan Garvey, informed me that we were to report to the tactical operations center (TOC) at 1930 hours for a mission brief from the battalion commander. As attack platoon leader and lead team leader, I prepared a warning order for the other aviators in the team. As I prepared the order, Garvey told me that LTC Hayles only wanted the two of us in the TOC for the mission brief. He did not want any of the other of the combat crews. This really did not strike me as odd because he had recently been pressing hard for missions with commissioned officers in cockpits.

CPT Garvey and I reported to the TOC at 1930 hours and received the mission brief from LTC Hayles. Task Force Iron was screening in sector. It reported enemy activity forward of the screen line, north of

the berm. Since it was evening and near the lowest illumination period, it was very dark. The sky was overcast, and the wind was between 20-25 knots. We were to move to the berm in the Task Force Iron sector and receive a target hand-off from the brigade commander to identify the unknown targets.

Upon returning to our CP and preparing for the mission, we were notified at 2130 hours that the mission had been scrubbed.

The TA-312 field-phone rang again in our CP around 2230 hours. It was Hayles. He told Garvey to "Grab your wing man and let's go, the mission is back on!" CPT Garvey then, almost in a panic, turned to me and said, "Go get my wing man, the mission is back on!" This struck me as strange. Hayles now wanted a different crew than who had been originally briefed for the mission. So, I asked Garvey if he thought Hayles wanted me as "wing man." Garvey said, "No, Hayles told me to grab my wing man, so, go get my wing man." I went to get CW2 Gulker (Garvey's habitual wing man) and his combat crew member, CW2 Grady. CW3 Woods and I could not understand why Garvey would think that Hayles wanted a different crew than briefed. But, Garvey had always taken Hayles word for word, rarely questioning any order. So, they prepared the aircraft, and Hayles issued a FRAGO on the command frequency prior to takeoff. They pulled pitch for the mission at about 2330. From our command post, I listened to the task force net from an AGR-39 remote radio set on a nearby hilltop.

Enroute to the sector, the brigade commander gave Hayles a target hand-off of some enemy vehicles moving south at grid NT 915270. Upon reaching the task force sector, the flight took up a battle position

over the friendly screen line along the berm. (SEE DIAGRAM 3). Hayles entered this grid location in his Apache's fire control computer position "1" then used his Target Acquisition/Designation System(TADS) FLIR to identify the enemy location. Unable to identify the enemy vehicles, he ordered the flight to move to the east for a better look.

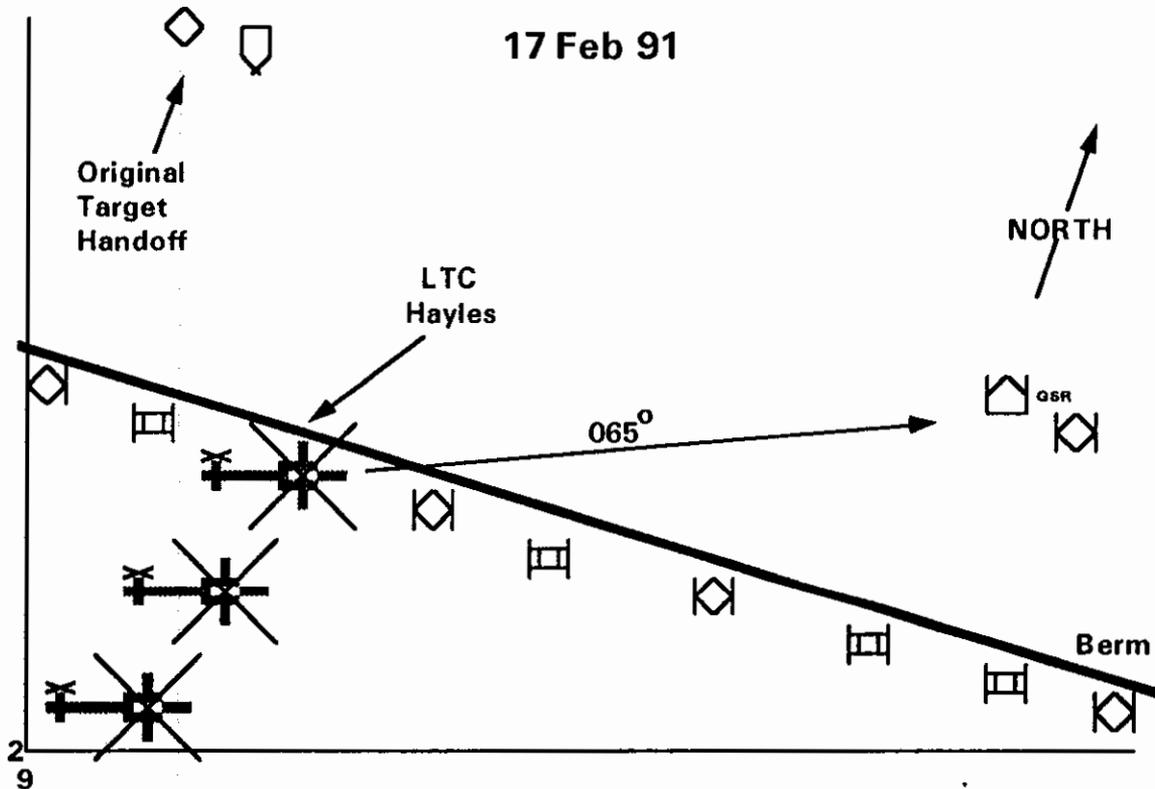


DIAGRAM 3

While flying a few hundred meters to the east, Hayles identified two stationary vehicles approximately one kilometer forward of the screen line. The ground commander had not given Hayles the position of these vehicles, which were well forward of the well defined linear screen line. He LASED the targets for a range and stored their location in the fire control computer position "0." (SEE DIAGRAM 4) The vehicles

were at grid NT 95592445. His azimuth orientation to the vehicles was now 065 degrees as he hovered in a battle position over the screen line. He reported the grid location of the two vehicles to the brigade commander, mistakenly reading the grid location of the two vehicles from the fire control computer position "1" (The same grid location given to Hayles in the target hand-off from the brigade commander).

*AH-64 Apache
Target-Navigation Page*

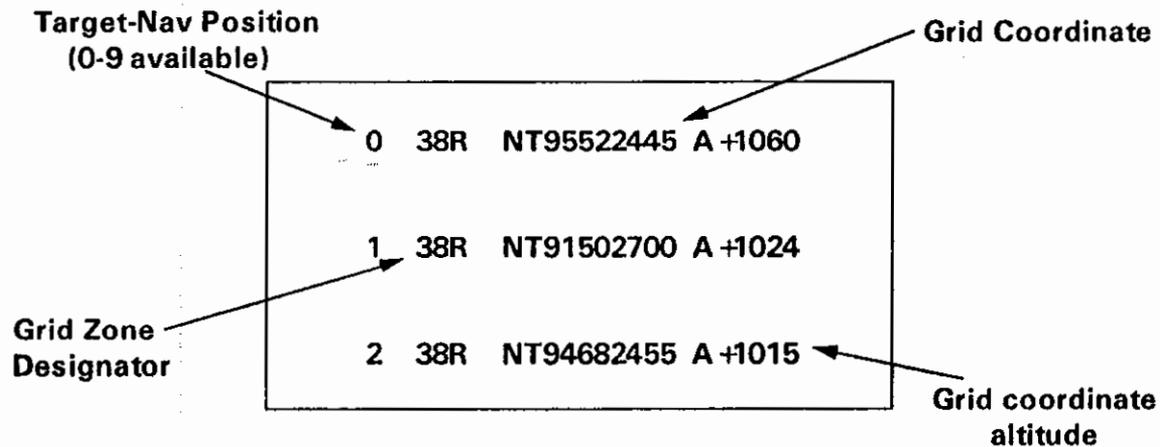


DIAGRAM 4

After a series of radio transmissions between Hayles, the ground brigade commander, and COL Mowery (Aviation Brigade Commander), Hayles called Garvey for confirmation on the target data. Unsure of his exact location, Garvey transmitted to Hayles, "I'm getting a range of about 4000 meters, but when I nav and store it, I get a grid of 95 24...it's not coming out right." The Apache was working as advertised. His aircraft position and target data were correct; however, the data did

not correlate with Hayles' data. So instead of challenging Hayles' data, he thought his aircraft was incorrect. Thus, Garvey retreated from contradicting Hayles and questioning his orientation to the target. Thus, he backed out of what he knew was right and was unable to confirm the target location.

Now believing the two vehicles Hayles targeted were at the same reported location he originally sent in the initial target handoff, the ground brigade commander cleared Hayles to engage. The targets were approximately 3700 meters on an azimuth of 065 degrees from the aircraft. Hayles decided to engage the vehicles initially with the 30mm cannon. When Hayles pulled the trigger, the gun fired two rounds and ceased firing automatically. Hayles thought the gun had jammed though it actually stopped firing due to fire control computer range software limits. Again, the Apache was working as advertised. He then tried to move closer, but the radar warning receiver warned of a "radar searching." This reinforced his belief that the vehicles were enemy. However, the radar illuminating his aircraft was a GSR.

Hayles engaged the targets with two Hellfire missiles, destroying each vehicle. They were later identified as an American BIFV and M113(GSR) from the 2nd Armored Division's Task Force Iron.

The following day, LTC Hayles was relieved of command for failure to follow the division commander's guideline that stated senior officers should direct battle, not pull the trigger.

Several lessons can be learned from this tragedy:

1. *Situational awareness* is your ability to be cognizant and informed on the location and disposition of all elements around you. This tragedy is a valued lesson learned for all leaders. LTC Hayles mistakenly reported a wrong line of information read from his fire control computer. He could have caught his mistake and prevented the mishap had he been more aware of the aircraft heading in relation to the target (70 degrees off from their original target), as well as the target grid location in the fire control computer, and how the situation fit the tactical scenario on the ground. His over reliance on technology and inability to confirm the tactical situation with his present position resulted in his lack of situational awareness. A commander's situational awareness is absolutely essential to command any unit on the battlefield.

2. The ground commanders failed to give LTC Hayles all of the information needed to complete the mission successfully. The screen line looked like a straight line on the desert floor. The ground commanders did not inform Hayles there may be friendly vehicles well forward of the berm. If they would have given him this information to help "*paint the picture*" during the situation update, Hayles could have made a more informed decision.

3. Subordinates must be *candid* with their leaders and have the backbone *to stand up for what they know is right*. CPT Garvey knew things were not right but would not question Hayles' judgment nor authority. He could have been the deciding factor that night. But, he had a history an unwillingness to question the commander.

4. You must *train as you will fight and fight as you trained.*

Hayles was an outstanding commander and ingenious tactician. He trained our battalion for well over a year to be a disciplined, aggressive fighting machine. But he changed the game plan shortly before kickoff. He wanted commissioned officer in every aircraft. This broke up our normal team integrity and combat crews were flying with wing men with whom they had not trained or did not know that well.

5. Soldiers must *utilize all the available information* to make well-informed decisions. Contrary to original reports, the Apache worked as advertised. Though the new and untested APR-39A(V)1 radar warning receiver produced erroneous ZSU-23-4 indications when painted with the U. S. GSR, the aircraft proved quite effective. The navigation system was accurate. The laser range finder/designator, fire control computer, and 30mm cannon all worked flawlessly. Neither aviator nor soldier can rely too heavily on one system. He must be able to *utilize all the available information* to include navigation systems, avionics, graphics, spot reports, and maps to decipher the tactical situation and make well-informed decisions.

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